

City of Fayetteville, Arkansas

113 West Mountain Street

Fayetteville, AR 72701

(479) 575-8323



City Council Tentative Agenda

Tuesday, December 27, 2022

4:30 PM

City Hall Room 219

City Council Members

Council Member Sonia Harvey Ward 1

Council Member D'Andre Jones Ward 1

Council Member Mark Kinion Ward 2

Council Member Mike Wiederkehr Ward 2

Council Member Sloan Scroggin Ward 3

Council Member Sarah Bunch Ward 3

Council Member Teresa Turk Ward 4

Council Member Holly Hertzberg Ward 4

Mayor Lioneld Jordan

City Attorney Kit Williams

City Clerk Treasurer Kara Paxton

Zoom Information:**Public Registration Link:****https:****Webinar ID:****CALL TO ORDER**

- 1. OATHS OF OFFICE:**
KIT WILLIAMS, CITY ATTORNEY
SONIA HARVEY, COUNCIL MEMBER WARD 1
SARAH MOORE, COUNCIL MEMBER WARD 2
SCOTT BERNA, COUNCIL MEMBER WARD 3
TERESA TURK, COUNCIL MEMBER WARD 4

(2022-273)**ROLL CALL****PLEDGE OF ALLEGIANCE****MAYOR' S ANNOUNCEMENTS, PROCLAMATIONS AND RECOGNITIONS****CITY COUNCIL MEETING PRESENTATIONS, REPORTS AND DISCUSSION ITEMS**

- 1. ELECTION OF VICE MAYOR (2022-275)**
- 2. 2023 CITY COUNCIL COMMITTEE APPOINTMENTS (2022-276)**
- 3. REPORT OF FIREMEN'S AND POLICEMEN'S PENSION AND RELIEF FUND (2022-277)**
- 4. MONTHLY FINANCIAL REPORT (2022-278)**

A. CONSENT

- A.1. APPROVAL OF DECEMBER 20, 2022 CITY COUNCIL MEETING MINUTES**
(2022-212)

A.2. RECOGNIZING REVENUE FROM THE COURT AUTOMATION FUND:

A RESOLUTION TO APPROVE A BUDGET ADJUSTMENT IN THE AMOUNT OF \$20,000.00 RECOGNIZING REVENUE FROM THE COURT AUTOMATION

FUND, TO AUTHORIZE THE PURCHASE OF TEN COURT VIDEO SECURITY CAMERAS, FOUR DESKTOP COMPUTERS AND ONE PRINTER FOR THE COURT OPERATIONS IN THE AMOUNT OF \$13,411.00, WITH THE REMAINING FUNDS TO PURCHASE EQUIPMENT AS NEEDED (2022-229)

A.3. BID #22-55 KUSSER GRANITWORKS USA, INC.:

A RESOLUTION TO AWARD BID #22-55 AND APPROVE THE PURCHASE OF MATERIALS FOR THE CIVIC PLAZA WATER FEATURE FROM KUSSER GRANITWORKS USA, INC. D/B/A KUSSER FOUNTAINWORKS IN THE AMOUNT OF \$1,102,434.00 AND TO APPROVE A BUDGET ADJUSTMENT (2022-223)

A.4. CONSTRUCTION MATERIALS AND BAD DEBT EXPENSE ACCOUNTS:

A RESOLUTION TO APPROVE A BUDGET ADJUSTMENT IN THE AMOUNT OF \$325,000.00 FOR THE CONSTRUCTION MATERIALS AND BAD DEBT EXPENSE ACCOUNTS WITHIN THE WATER AND SEWER FUND (2022-239)

A.5. TOMLINSON ASPHALT CO.:

A RESOLUTION TO AWARD BID #22-27 AND AUTHORIZE A CONTRACT WITH TOMLINSON ASPHALT CO. IN THE AMOUNT OF \$2,178,659.65 FOR CONSTRUCTION OF THE INDUSTRIAL DRIVE EXTENSION PROJECT, TO APPROVE A PROJECT CONTINGENCY IN THE AMOUNT OF \$218,000.00, AND TO APPROVE A BUDGET ADJUSTMENT (2022-252)

A.6. MCCLELLAND CONSULTING ENGINEERS, INC.:

A RESOLUTION TO APPROVE AMENDMENT NO. 2 TO THE ENGINEERING SERVICES AGREEMENT WITH MCCLELLAND CONSULTING ENGINEERS, INC. IN THE AMOUNT OF \$132,690.00 FOR BIDDING SERVICES, CONSTRUCTION PHASE SERVICES AND MATERIALS TESTING ASSOCIATED WITH THE INDUSTRIAL DRIVE EXTENSION PROJECT, AND TO APPROVE A BUDGET ADJUSTMENT (2022-253)

A.7. STRUCTURAL PRESERVATION SYSTEMS, LLC:

A RESOLUTION TO WAIVE COMPETITIVE BIDDING AND AUTHORIZE A DESIGN-BUILD CONTRACT WITH STRUCTURAL PRESERVATION SYSTEMS, LLC IN AN AMOUNT NOT TO EXCEED \$2,477,644.00 FOR ENGINEERING AND CONSTRUCTION SERVICES RELATED TO EMERGENCY TRENCHLESS REPAIR OF A 48-INCH DIAMETER SANITARY SEWER UNDER INTERSTATE 49, AND TO APPROVE A PROJECT CONTINGENCY IN THE AMOUNT OF \$375,000.00 (2022-263)

A.8. RECYCLING GRANT PROGRAM APPLICATION:

A RESOLUTION TO AUTHORIZE AN EPA SOLID WASTE INFRASTRUCTURE

FOR RECYCLING GRANT PROGRAM APPLICATION IN THE TOTAL AMOUNT OF UP TO \$4,000,000.00 FOR IMPROVEMENTS TO THE CITY'S RECYCLING PROCESSING FACILITY (2022-264)

A.9. KRAPFF REYNOLDS CONSTRUCTION CO.:

A RESOLUTION TO APPROVE A ONE YEAR EXTENSION TO THE CONTRACT WITH KRAPFF REYNOLDS CONSTRUCTION COMPANY IN THE AMOUNT OF \$590,789.00 FOR REHABILITATION OF SANITARY SEWER MANHOLES THROUGHOUT FAYETTEVILLE (2022-265)

A.10. OZARK REGIONAL TRANSIT, INC.:

A RESOLUTION TO WAIVE COMPETITIVE BIDDING AND AUTHORIZE A ONE YEAR CONTRACT BETWEEN THE CITY OF FAYETTEVILLE, ARKANSAS AND OZARK REGIONAL TRANSIT, INC. IN THE AMOUNT OF \$698,830.00 TO PROVIDE PUBLIC TRANSIT SERVICES FOR FAYETTEVILLE RESIDENTS, WITH AUTOMATIC RENEWALS FOR UP TO FOUR ADDITIONAL ONE YEAR TERMS

(2022-267)

A.11. SEVEN HILLS HOMELESS CENTER:

A RESOLUTION TO APPROVE A CONTRACT WITH SEVEN HILLS HOMELESS CENTER TO PROVIDE FUNDING ASSISTANCE IN THE AMOUNT OF \$40,000.00 FOR MAINTENANCE AND REPAIRS AT THE WALKER FAMILY RESIDENTIAL COMMUNITY COMPLEX IN 2023

(2022-270)

A.12. E.W.I. INC.:

A RESOLUTION TO AWARD BID #22-54 AND AUTHORIZE A CONTRACT WITH E.W.I. INC. IN THE AMOUNT OF \$1,536,980.00 FOR CONSTRUCTION OF THE WILSON PARK PAVILION RESTROOM FACILITIES, TO APPROVE A PROJECT CONTINGENCY IN THE AMOUNT OF \$139,725.00, AND TO APPROVE A BUDGET ADJUSTMENT (2022-230)

A.13. SEVEN HILLS HOMELESS CENTER:

AN RESOLUTION TO WAIVE THE REQUIREMENTS OF FORMAL COMPETITIVE BIDDING AND APPROVE A CONTRACT WITH SEVEN HILLS HOMELESS CENTER IN THE AMOUNT OF \$113,400.00 FOR SERVICES TO HOMELESS AND NEEDY RESIDENTS IN FAYETTEVILLE IN 2023 (2022-250)

A.14. LEASE AGREEMENT WITH THE BOARD OF TRUSTEES OF THE UNIVERSITY OF ARKANSAS:

A RESOLUTION TO APPROVE A LEASE AGREEMENT WITH THE BOARD OF TRUSTEES OF THE UNIVERSITY OF ARKANSAS FOR THE UNOCCUPIED BANQUET AREA IN THE AIRPORT TERMINAL BUILDING TO BE USED BY THE OSHER LIFELONG LEARNING INSTITUTE TO CONDUCT CLASSES FROM JANUARY 1, 2023 THROUGH DECEMBER 31, 2023, IN THE AMOUNT OF \$45.00 FOR EACH DAY THE SPACE IS USED (2022-256)

B. UNFINISHED BUSINESS

B.1. AMEND 130.39 GRAFFITI

AN ORDINANCE TO AMEND §130.39 **GRAFFITI** IN THE *FAYETTEVILLE CODE* TO CREATE A GRAFFITI ABATEMENT PROGRAM (2022-279)

AT THE DECEMBER 6, 2022 CITY COUNCIL MEETING, THIS ORDINANCE WAS AMENDED TO ADD EXHIBIT A AND OMIT LEASEHOLD TENANT. THIS ORDINANCE WAS LEFT ON THE SECOND READING AND TABLED TO THE JANUARY 3, 2023 CITY COUNCIL MEETING.

C. NEW BUSINESS

C.1. ADOPT THE RULES OF ORDER AND PROCEDURE:

A RESOLUTION TO ADOPT THE RULES OF ORDER AND PROCEDURE OF THE FAYETTEVILLE CITY COUNCIL FOR 2023 (2022-271)

C.2. DEFER WATER AND SEWER RATE INCREASES FOR 2023:

AN ORDINANCE TO AMEND § 51.136(A)(2), § 51.136(B)(2), § 51.136(C)(2), § 51.137(A)(2), § 51.137(B)(2), AND § 51.137(E)(3) OF THE FAYETTEVILLE CITY CODE TO DEFER WATER AND SEWER RATE INCREASES FOR 2023 UNTIL AFTER THE ADOPTION OF A NEW RATE STUDY, AND TO DECLARE AN EMERGENCY (2022-266)

C.3. REPEAL ORDINANCE NO. 3696:

AN ORDINANCE TO REPEAL ORDINANCE NO. 3696 AND TO AUTHORIZE THE CITY TO WAIVE ANY REQUIREMENT FOR COMPETITIVE BIDDING OR MORE THAN ONE QUOTE TO PURCHASE PLUMBING PIPES, FITTINGS, WATER METERS, FIRE HYDRANTS, MANHOLES AND THEIR COVERS, COATINGS, AND HARDWARE NEEDED BY THE WATER AND SEWER DEPARTMENT THROUGH 2026 (2022-269)

C.4. SUBRECIPIENT AGREEMENT WITH WELCOMEHEALTH:

A RESOLUTION TO AUTHORIZE MAYOR JORDAN TO SIGN A SUBRECIPIENT AGREEMENT WITH WELCOMEHEALTH TO PROVIDE NO-COST MEDICAL AND DENTAL CARE TO LOW INCOME FAYETTEVILLE RESIDENTS UTILIZING AMERICAN RESCUE PLAN ACT FUNDS IN THE

AMOUNT OF \$75,000.00, AND TO APPROVE A BUDGET ADJUSTMENT (2022-240)

C.5. MAGDALENE SERENITY HOUSE, INC.:

A RESOLUTION TO AUTHORIZE MAYOR JORDAN TO SIGN A SUBRECIPIENT AGREEMENT WITH MAGDALENE SERENITY HOUSE, INC. TO PROVIDE SUPPORTIVE RECOVERY HOUSING FOR FORMERLY INCARCERATED WOMEN UTILIZING AMERICAN RESCUE PLAN ACT FUNDS IN THE AMOUNT OF \$128,789.00, AND TO APPROVE A BUDGET ADJUSTMENT (2022-242)

C.6. VAC (MITCHELL ST.):

A RESOLUTION TO APPROVE THE VACATION OF A 16,552.8 SQUARE FOOT PORTION OF A TREE PRESERVATION EASEMENT LOCATED ALONG WEST MITCHELL STREET CONTINGENT ON THE DEDICATION OF TWO REPLACEMENT TREE PRESERVATION EASEMENTS TOTALING APPROXIMATELY 37,519 SQUARE FEET (2022-251)

C.7. AMEND SUBSECTION (B) OF §157.05 CONDITIONAL USE PERMIT:

AN ORDINANCE TO AMEND SUBSECTION (B) OF §157.05 **CONDITIONAL USE PERMIT** IN CHAPTER 157 **NOTIFICATION AND PUBLIC HEARINGS** OF THE UNIFIED DEVELOPMENT CODE TO REQUIRE PUBLIC NOTIFICATION WHEN THE DENIAL OF A CONDITIONAL USE PERMIT BY THE PLANNING COMMISSION IS APPEALED TO THE CITY COUNCIL (2022-255)

C.8. RZN 22-051 (1030 S. HOLLYWOOD AVE.):

AN ORDINANCE TO REZONE THAT PROPERTY DESCRIBED IN REZONING PETITION RZN 22-051 LOCATED AT 1030 SOUTH HOLLYWOOD AVENUE IN WARD 1 FOR APPROXIMATELY 0.61 ACRES FROM RSF-4, RESIDENTIAL SINGLE-FAMILY, 4 UNITS PER ACRE AND P-1, INSTITUTIONAL TO CS, COMMUNITY SERVICES (2022-261)

C.9. VAC 22-026 (4267 WEST LIERLY LANE):

AN ORDINANCE TO APPROVE VAC 22-026 FOR PROPERTY LOCATED AT 4267 WEST LIERLY LANE IN WARD 4 TO VACATE A PORTION OF A GENERAL UTILITY EASEMENT (2022-241)

C.10. VAC 22-025 (EAST OF NORTH STORER AVE.):

AN ORDINANCE TO APPROVE VAC 22-025 FOR PROPERTY LOCATED EAST OF NORTH STORER AVENUE IN WARD 2 TO VACATE A PORTION OF A UTILITY EASEMENT (2022-257)

C.11. VAC 22-027 (103 N. PLAINVIEW):

AN ORDINANCE TO APPROVE VAC 22-027 FOR PROPERTY LOCATED AT 103 NORTH PLAINVIEW AVENUE IN WARD 3 TO VACATE A PORTION OF A WATER AND SEWER EASEMENT (2022-258)

C.12. VAC 22-024 (RAZAORBACK RD. MAPLE ST., ETC.):

AN ORDINANCE TO APPROVE VAC 22-024 FOR PROPERTY LOCATED ALONG RAZORBACK ROAD, MAPLE STREET, GARLAND AVENUE, CLEVELAND STREET, HILL AVENUE, MARTIN LUTHER KING JUNIOR BOULEVARD AND LT. COLONEL LEROY POND AVENUE IN WARDS 1 AND 2 TO VACATE PORTIONS OF STREET RIGHTS-OF-WAY (2022-262)

PROPOSED AGENDA ADDITIONS

1. AMERICAN RESCUE PLAN ACT FUNDS FOR ARTS AND CULTURE (2022-286)

D. CITY COUNCIL AGENDA SESSION PRESENTATIONS

D.1. AGENDA SESSION PRESENTATION - SALES TAX REPORT, PAUL BECKER AND ENERGY REPORT, PETER NIERENGARTEN

(2022-280)

E. CITY COUNCIL TOUR

This is a placeholder

F. ANNOUNCEMENTS

G. ADJOURNMENT

**CITY COUNCIL COMMITTEES
2023-2024**

Transportation

Sonia Harvey		Council Member Ward 1
Sarah Moore		Council Member Ward 2
Sarah Bunch		Council Member Ward 3
Holly Hertzberg		Council Member Ward 4
Chris Brown	575-8206	Staff Contact
Terry Gulley	575-8228	Staff Contact

Water/Sewer

D'Andre Jones		Council Member Ward 1
Mike Wiederkehr		Council Member Ward 2
Scott Berna		Council Member Ward 3
Teresa Turk		Council Member Ward 4
Tim Nyander	575-8386	Staff Contact

Nominating

Sonia Gutierrez		Council Member Ward 1
Mike Wiederkehr		Council Member Ward 2
Sarah Bunch		Council Member Ward 3
Teresa Turk		Council Member Ward 4
Jonathan Ramirez	575-8323	Staff Contact

Ordinance Review

D'Andre Jones		Council Member Ward 1
Sarah Moore		Council Member Ward 2
Scott Berna		Council Member Ward 3
Holly Hertzberg		Council Member Ward 4
Kit Williams	575-8313	Staff Contact

2023-2024 Other Committee Appointments

Active Transportation Advisory Committee		Holly Hertzberg
Advertising and Promotion Commission		Sonia Harvey
		Sarah Bunch
Animal Services		Sarah Bunch
Audit Committee		D'Andre Jones
Environmental Action Committee		Teresa Turk
Washington County Regional Ambulance		Holly Hertzberg
		Chief Hardin
Equipment Committee	W1	Sonia Harvey
	W2	Sarah Moore
	W3	Scott Berna
	W4	Holly Hertzberg
Town and Gown Advisory Committee		Teresa Turk
Arts Council		Sonia Harvey
Black Heritage Preservation Commission		D'Andre Jones
Stormwater Committee Utility Study*	W1	Sonia Harvey
<i>*only selected every 2 years</i>	W2	Mike Wiederkehr
	W3	Sarah Bunch
	W4	Teresa Turk

Other Boards

NWA Regional Planning Commission		Mayor Jordan
		Chris Brown
		Jonathan Curth
Firemen's Pension and Policemen's Pension		Mayor Jordan
		Kara Paxton



MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council

THRU: Susan Norton, Chief of Staff
Casey Jones District Judge

FROM: Keith Macedo, IT Director
Dena Stockalper, District Court Administrator

DATE: December 27, 2022

SUBJECT: DISTRICT COURT AUTOMATION FUND EQUIPMENT PURCHASE

RECOMMENDATION:

Staff recommends approving the attached Budget Adjustment for the Fayetteville District Court, in the amount of \$20,000.00 to recognize and appropriate revenue from the Court Automation Fund for automation and electronic equipment upgrades for Court servers, software, computers, and related technology equipment.

BACKGROUND:

Funds will be utilized to purchase the 2023 Court Technology scheduled replacements and to upgrade ten (10) Court video security cameras. Remaining funds will be utilized to purchase miscellaneous technology equipment to support Court operations, which may include video security enhancements, desktop phone replacements, and computers, and computer peripherals.

DISCUSSION:

The Automation Fund is supported by Arkansas Statute 16-13-704 which allows the Court to collect monies from installment payments. The Fund is to be used solely for the District Court for technology equipment, automation equipment, and related training.

BUDGET/STAFF IMPACT:

The current quote to replace ten (10) Court video security cameras, replace four (4) desktop computers and one (1) printer for Court operations is \$13,411.00 with remaining funds to purchase equipment as needed. Funds are available within the Court Automation Fund to purchase the referenced technology equipment.

ATTACHMENTS: Staff Review Form, Arkansas Statute 16-13-704, 2022-229 BA Court Automation Fund, RES BUDGET ADJUSTMENT - APPROPRIATE FUNDS COURT AUTOMATION FUND, RES APPROPRIATE FUNDS FOR COURT AUTOMATION FUND

City of Fayetteville Staff Review Form

2022-0229

Item ID

1/3/2023

City Council Meeting Date - Agenda Item Only
N/A for Non-Agenda Item

Keith Macedo

12/6/2022

INFORMATION TECHNOLOGY (170)

Submitted By

Submitted Date

Division / Department

Action Recommendation:

Staff recommends approving the attached Budget Adjustment, for the Fayetteville District Court, in the amount of \$20,000.00 to recognize and appropriate revenue from the Court Automation Fund for automation and electronic equipment upgrades for Court servers, software, computers, and related technology equipment.

Budget Impact:

1010.040.0400.5210.00

General Fund

Account Number

Fund

29012.901

39012 District Court Automation

Project Number

Project Title

Budgeted Item? Yes

Total Amended Budget

\$ 7,770.24

Expenses (Actual+Encum)

\$ -

Available Budget

\$ 7,770.24

Does item have a direct cost? No

Item Cost

\$ -

Is a Budget Adjustment attached? Yes

Budget Adjustment

\$ 20,000.00

Remaining Budget

\$ 27,770.24

V20221130

Purchase Order Number: _____

Previous Ordinance or Resolution # **65-21**

Change Order Number: _____

Approval Date: _____

Original Contract Number: _____

Comments:

Document: A.C.A. § 16-13-704

A.C.A. § 16-13-704

Copy Citation

Current through all legislation of the 2020 First Extraordinary Session and the 2020 Fiscal Session
(through all legislation enacted and approved in 2020)

**AR - Arkansas Code Annotated Title 16 Practice, Procedure, And Courts Subtitle 2. Courts
and Court Officers Chapter 13 Circuit Courts Subchapter 7 — Enforcement of Fines**

16-13-704. Installment payments — Definition.

(a)

(1) If the court concludes that the defendant has the ability to pay the fine, but that requiring the defendant to make immediate payment in full would cause a severe and undue hardship for the defendant and the defendant's dependents, the court may authorize payment of the fine by means of installment payments in accordance with this subchapter.

(2)

(A) When a court authorizes payment of a fine by means of installment payments, it shall issue, without a separate disclosure hearing, an order that the fine be paid in full by a date certain and that in default of payment, the defendant must appear in court to explain the failure to pay.

(B) In fixing the date of payment, the court shall issue an order which will complete payment of the fine as promptly as possible without creating a severe and undue hardship for the defendant and the defendant's dependents.

(3) When a person is authorized to pay a fine on an installment basis, any court cost assessed under § 9-15-202(d) or § 16-10-305(h) shall be collected from the initial installment payment first.

(b)

(1)

(A) In addition to the fine and any other assessments authorized by this subchapter, an installment fee of five dollars (\$5.00) per month shall be assessed on each person who is authorized to pay a fine on an installment basis.

(B) This fee shall be collected in full each month in which a defendant makes an installment payment.

(C) This fee shall accrue each month that a defendant does not make an installment payment and the fine has not been paid in full.

(2)

(A)

(i) One-half ($\frac{1}{2}$) of the installment fee collected in circuit court shall be remitted by the tenth day of each month to the Administration of Justice Funds Section of the Office of Administrative Services of the Department of Finance and Administration, on a form provided by that office, for deposit into the Judicial Fine Collection Enhancement Fund established by § 16-13-712.

(ii) The other half of the installment fee shall be remitted by the tenth day of each month to the county treasurer to be deposited into a fund entitled the "circuit court automation fund" to be used solely for circuit court-related technology.

(B)

(i) Expenditures from the circuit court automation fund shall be approved by the administrative circuit judge of each judicial circuit and shall be authorized and paid under the state laws governing the appropriation and payment of county expenditures.

(ii) Expenditures may be made for indirect expenses related to implementation of new court-related technology, including overtime pay, personnel or travel expenses, and technology-related supplies.

(iii) Funds in each county in a judicial district may be pooled for expenditure pursuant to a circuit-wide technology plan approved by the administrative circuit judge.

(3)

(A) One-half ($\frac{1}{2}$) of the installment fee collected in district court shall be remitted by the tenth day of each month to the Administration of Justice Funds Section, on a form provided by that section, for deposit into the Judicial Fine Collection Enhancement Fund established by § 16-13-712.

(B) The other half of the installment fee collected in district court shall be remitted by the tenth day of each month to the city treasurer of the city in which the district court is located to be deposited into a fund entitled the "district court automation fund" to be used solely for district court-related technology.

(C) In any district court which is funded solely by the county, the other half of this fee shall be remitted by the tenth day of each month to the county treasurer of the county in which the district court is located to be deposited into the district court automation fund to be used solely for district court-related technology.

(D)

(i) Expenditures from the district court automation fund shall be approved by a district judge and shall be authorized and paid under state laws governing the appropriation and payment of county or municipal expenditures by the governing body or, if applicable, governing bodies, that contribute to the expenses of a district court.

(ii) Expenditures may be made for indirect expenses related to implementation of new court-related technology, including overtime pay, personnel or travel expenses, and technology-related supplies.

(E)

(i) In circuit court only, an installment fee of an additional five dollars (\$5.00) per month shall also be

assessed on the first day of each month on each person who is ordered to pay a fine on an installment

basis with the additional five dollars (\$5.00) to be remitted to the collecting official to be used to defray the cost of fine collection.

(ii) In district court only, an installment fee of an additional five dollars (\$5.00) per month shall also be assessed on the first day of each month on each person who is ordered to pay a fine on an installment basis with the additional five dollars (\$5.00) to be remitted by the tenth day of each month to the Administration of Justice Funds Section on a form provided by that section for deposit into the State Administration of Justice Fund.

(c) Any defendant who has been authorized by the court to pay a fine by installments shall be considered to have irrevocably appointed the clerk of the court as his or her agent upon whom all papers affecting his or her liability may be served, and the clerk shall forthwith notify the defendant thereof by ordinary mail at his or her last known address.

(d) "Ability to pay" means that the resources of the defendant, including all available income and resources, are sufficient to pay the fine and provide the defendant and his or her dependents with a reasonable subsistence compatible with health and decency.

History

Acts 1995, No. 1262, § 3; 2001, No. 1809, § 13; 2003, No. 1185, § 94; 2003, No. 1765, § 10; 2005, No. 1934, § 7; 2007, No. 663, § 32; 2011, No. 1138, §§ 1, 2; 2011, No. 1218, § 2; 2013, No. 282, § 9; 2017, No. 583, § 4.

Arkansas Code of 1987 Annotated Official Edition

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Content Type: Statutes and Legislation

Terms: 16-13-704

Narrow By: custom: custom Sources: AR - Arkansas Code Annotated

Date and Time: Jan 22, 2021 05:12:17 p.m. CST



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Budget Year	Division	Adjustment Number
2023 (BY)	INFORMATION TECHNOLOGY (170)	
	Requestor: Keith Macedo	

Budget Adjustment approval for the Fayetteville District Court in the amount of \$20,000.00 to recognize and appropriate revenue from the Court Automation Fund for automation and electronic equipment upgrades for Court servers, software, and computers.

	COUNCIL DATE:	1/3/2023
	ITEM ID#:	2022-229
	Kevin Springer	
	12/12/2022 5:02 PM	
	Budget Division	Date
	TYPE:	D - (City Council)
	JOURNAL #:	
	GLDATE:	
	CHKD/POSTED:	/
RESOLUTION/ORDINANCE		

[illegible]

RESOLUTION NO. _____

A RESOLUTION TO APPROVE A BUDGET ADJUSTMENT IN THE AMOUNT OF \$20,000.00 RECOGNIZING REVENUE FROM THE COURT AUTOMATION FUND, TO AUTHORIZE THE PURCHASE OF TEN COURT VIDEO SECURITY CAMERAS, FOUR DESKTOP COMPUTERS AND ONE PRINTER FOR THE COURT OPERATIONS IN THE AMOUNT OF \$13,411.00, WITH THE REMAINING FUNDS TO PURCHASE EQUIPMENT AS NEEDED

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:

Section 1: That the City Council of the City of Fayetteville, Arkansas hereby approves a budget adjustment, a copy of which is attached to this Resolution, in the amount of \$20,000.00 to recognize and allocate revenue from the Court Automation Fund, and further authorizes the purchase of ten court video security cameras, four desktop computers and one printer for Court operations in the amount of \$13,411.00, with the remaining funds to purchase equipment as needed.

PASSED and APPROVED this 3rd day of January, 2023.

APPROVED:

ATTEST:

By: _____
LIONELD JORDAN, Mayor

By: _____
KARA PAXTON, City Clerk/Treasurer

RESOLUTION NO. _____

A RESOLUTION TO APPROVE A BUDGET ADJUSTMENT IN THE AMOUNT OF \$20,000.00 RECOGNIZING REVENUE FROM THE COURT AUTOMATION FUND, TO AUTHORIZE THE PURCHASE OF TEN COURT VIDEO SECURITY CAMERAS, FOUR DESKTOP COMPUTERS AND ONE PRINTER FOR THE COURT OPERATIONS IN THE AMOUNT OF \$13,411.00, WITH THE REMAINING FUNDS TO PURCHASE EQUIPMENT AS NEEDED

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MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council
THRU: Paul Becker, Chief Financial Officer
FROM: Waylon Abernathy, Bond Projects & Construction Dir
DATE: December 27, 2022
SUBJECT: **AWARD BID #22-55 AND APPROVE THE PURCHASE OF MATERIALS FOR THE CIVIC PLAZA WATER FEATURE**

RECOMMENDATION:

Staff recommends approval of BID #22-55 KUSSER GRANITEWORKS USA, INC. DBA KUSSER FOUNTAINWORKS

BACKGROUND:

The Civic Plaza Construction Drawings are nearing completion. The Civic Plaza includes a water feature that mimics a stream that is placed diagonally through the site. It is a design/art feature that has been one of the main components of the plaza.

DISCUSSION:

This item is for the procurement of the fountain materials. This product is custom to the plaza and is manufactured overseas. The vendor fabricates the material, assembles it at the facility, then ships it in containers to the project. This process results to a very long lead item, so staff recommends procuring this material now, so when the deck is completed and construction on the plaza begins, we will not be delayed due to materials delivery.

BUDGET/STAFF IMPACT:

A Budget Adjustment for Unallocated Phase II of the 2019 Bond funds will be used for this change order.

ATTACHMENTS: 2022-223 SRF Kusser FountainWorks Civic Plaza Fountain, 2022-223 BA Kusser FountainWorks Civic Plaza Fountain, Bid 22-55 Civic Plaza Fountain Materials, RES BID 22-55 -MATERIALS CIVIC PLAZA FOUNDATION

City of Fayetteville Staff Review Form

2022-223

Item ID

1/3/2023

City Council Meeting Date - Agenda Item Only
N/A for Non-Agenda Item

Wade Abernathy

12/15/2022

FACILITIES MANAGEMENT (140)

Submitted By

Submitted Date

Division / Department

Action Recommendation:

Approval of Materials Bid 22-55 with Kusser Graniteworks USA, Inc. dba Kusser FountainWorks in the amount of \$1,102,434.00 for the materials associated with the Civic Plaza water feature and approval of a budget adjustment. This is phase II of the 2019 bond project.

Budget Impact:

4708.860.7800-5804.00

Arts Corridor Bonds

Account Number

Fund

46080.7800

Arts Corridor Improvements

Project Number

Project Title

Budgeted Item? Yes

Total Amended Budget

\$ 8,933,855.00

Expenses (Actual+Encum)

\$ 8,898,292.33

Available Budget

\$ 35,562.67

Does item have a direct cost? No

Item Cost

\$ -

Is a Budget Adjustment attached? Yes

Budget Adjustment

\$ 1,102,434.00

Remaining Budget

\$ 1,137,996.67

V20221130

Purchase Order Number: _____

Previous Ordinance or Resolution # _____

Change Order Number: _____

Approval Date: _____

Original Contract Number: _____

Comments:

Budget Year	Division	Adjustment Number
2022	FACILITIES MANAGEMENT (140)	
	Requestor: Wade Abernathy	

Staff recommends approval of Materials Bid 22-55 with Kusser Graniteworks USA, Inc. dba Kusser FountainWorks in the amount of \$1,102,434.00 for the materials associated with the Civic Plaza water feature. This is phase II of the 2019 bond project.

	COUNCIL DATE:	1/3/2023
	ITEM ID#:	2022-223
	Holly Black	
	12/15/2022 1:44 PM	
	Budget Division	Date
	D - (City Council)	
TYPE:		
JOURNAL #:		
GLDATE:		
CHKD/POSTED:	/	
RESOLUTION/ORDINANCE		

v.20221115



BID TABULATION

Bid 22-55, Spring Granite Fountain for Upper Ramble

DEADLINE: Tuesday, December 13, 2022 at 2:00 PM

				Kusser FountainWorks (Kusser Graniteworks USA, Inc.)	
				Total	\$1,102,434.00
Line #	Description	QTY	UOM	Unit	Extended
1	Total Bid for Spring Granite Fountain for Upper Ramble, meeting all the required specifications.	1	LS	<u>\$1,102,434.00</u>	\$1,102,434.00

* NOTICE: Bid award is contingent upon vendor meeting minimum specifications and formal authorization by City Officials.

Amanda Beilfuss, Sr. Purchasing Agent

Les McGaugh, Purchasing Director



Bid 22-55 Addendum 2

Kusser FountainWorks

Kusser Graniteworks USA, Inc.

Supplier Response

Event Information

Number: Bid 22-55 Addendum 2
Title: Spring Granite Fountain for Upper Ramble
Type: Invitation to Bid
Issue Date: 11/27/2022
Deadline: 12/13/2022 02:00 PM (CT)
Notes: The City of Fayetteville is seeking bids from qualified vendors for the purchase of one (1) Engineered Modular Granite Fountain System to be placed in the Cultural Arts Corridor (Upper Ramble). This bid is for the purchase of assembled equipment only; Installation will be the responsibility of the City. Any questions concerning the bidding process should be directed to Amanda Beilfuss, City of Fayetteville Sr. Purchasing Agent, at abeilfuss@fayetteville-ar.gov.

Contact Information

Contact: Amanda Beilfuss
Address: Purchasing
Room 306
City Hall
113 West Mountain Street - Room 306
Fayetteville, AR 72701
Email: abeilfuss@fayetteville-ar.gov

Kusser FountainWorks Information

Contact: Jerry Claxton
Address: 3109 East 4th Ave
Suite 204
TAMPA, FL 33605
Phone: (813) 248-3428
Email: sales@kusserusa.com
Web Address: kusserusa.com

By submitting your response, you certify that you are authorized to represent and bind your company.

Jerry Leon Claxton

Signature

Submitted at 12/12/2022 08:39:06 AM (CT)

jclaxton@kusserusa.com

Email

Requested Attachments

Bid 22-55, Bid Manual Forms

Bid 22-55, FILE #01 Bid Form - Kusser Signed-clx.pdf

Please submit the signed and completed forms from the bid manual. This can be found in the 'Attachments' tab.

Response Attachments

K4028-F01-R00-C01 Modular Granite Fountain Proposal.pdf

Kusser FountainWorks Proposal

2022-09-14 Preliminary Sketch Fayetteville, hc.pdf

Kusser FountainWorks preliminary sketch

Bid Lines

1	Total Bid for Spring Granite Fountain for Upper Ramble, meeting all the required specifications.			
	Quantity: <u>1</u>	UOM: <u>Lump Sum</u>	Price: \$1,102,434.00	Total: \$1,102,434.00

Response Total: \$1,102,434.00



CITY OF
FAYETTEVILLE
ARKANSAS

City of Fayetteville, Arkansas
Purchasing Division – Room 306
113 W. Mountain
Fayetteville, AR 72701
Phone: 479.575.8256

TDD (Telecommunication Device for the Deaf): 479.521.1316

INVITATION TO BID

INVITATION TO BID: Bid 22-55, Spring Granite Fountain for Upper Ramble

DEADLINE: Tuesday, December 13, 2022 before 2:00 PM, Local Time

PRE-BID MEETING: Wednesday, December 7, 2022 at 10:00 AM, via Zoom

PURCHASING AGENT: Amanda Beilfuss, abeilfuss@fayetteville-ar.gov

DATE OF ISSUE AND ADVERTISEMENT: 11/27/2022

INVITATION TO BID

Bid 22-55, Spring Granite Fountain for Upper Ramble

No late bids will be accepted. Bids shall be submitted in one of the following methods: (1) through the City's third-party electronic bidding platform, or (2) delivering in person via sealed envelope to the City of Fayetteville Purchasing Division. Submitting through the City's electronic bidding platform is strongly encouraged. All bids shall be submitted in accordance with the attached City of Fayetteville specifications and bid documents attached hereto. Each bidder is required to fill in every blank and shall supply all information requested; failure to do so may be used as basis of rejection.

The undersigned hereby offers to furnish & deliver the articles or services as specified, at the prices & terms stated herein, and in strict accordance with the specifications and general conditions of bidding, all of which are made a part of this offer. This offer is not subject to withdrawal unless upon mutual written agreement by the Proposer/Bidder and City Purchasing Director.

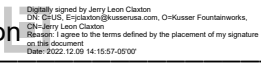
Name of Firm: Kusser Graniteworks USA, Inc. DBA: Kusser FountainWorks

Contact Person: Jerry Claxton Title: Director of Sales

E-Mail: jclaxton@kusserusa.com Phone: 813-248-3428

Business Address: 3109 E. 4th Ave.

City: Tampa State: FL Zip: 33605

Signature: Jerry Leon Claxton   Date: 12/09/22

City of Fayetteville, AR

Bid 22-55, Spring Granite Fountain for Upper Ramble

Page 1 of 21

City of Fayetteville
Bid 22-55, Spring Granite Fountain for Upper Ramble
Advertisement

City of Fayetteville, Arkansas
INVITATION TO BID
Bid 22-55, Spring Granite Fountain for Upper Ramble

The City of Fayetteville is seeking bids from qualified vendors for the purchase of one (1) Engineered Modular Granite Fountain System to be placed in the Cultural Arts Corridor (Upper Ramble). **This bid is for the purchase of assembled equipment only; Installation will be the responsibility of the City.** Any questions concerning the bidding process should be directed to Amanda Beilfuss, City of Fayetteville Sr. Purchasing Agent, at abeilfuss@fayetteville-ar.gov or by calling (479) 575-8220.

Bidding documents and addenda shall be obtained at the City of Fayetteville Purchasing Division's electronic bidding platform at www.fayetteville-ar.gov/bids. All bids shall be received by **Tuesday, December 13, 2022 before 2:00 PM, Local Time** utilizing the electronic bidding software or by submitting a sealed physical bid to the City of Fayetteville, Purchasing Division address listed below. All bids are due before the time stated. Submitting a bid electronically is strongly encouraged. A public bid opening will be conducted shortly after the deadline at City Hall and livestreamed at <https://www.youtube.com/user/cityoffayettevillear>. No late bids shall be accepted. The City of Fayetteville shall not be responsible for lost or misdirected bids, or for failure of proposer's technical equipment.

City of Fayetteville
Purchasing Division – Room 306
113 West Mountain Street
Fayetteville, AR 72701

Pursuant to Arkansas Code Annotated §22-9-203 The City of Fayetteville encourages all *qualified* small, minority and women business enterprises to bid on and receive contracts for goods, services, and construction. Also, City of Fayetteville encourages all general contractors to subcontract portions of their contract to *qualified* small, minority and women business enterprises.

The City of Fayetteville reserves the right to waive irregularities, to reject bids, and to postpone the award of the Contract for a period of time which shall not exceed beyond ninety calendar days from the bid opening date.

City of Fayetteville
By: Amanda Beilfuss, Sr. Purchasing Agent
P: 479.575.8220 abeilfuss@fayetteville-ar.gov
TDD (Telecommunications Device for the Deaf): (479) 521-1316
Date of advertisement: 11/27/2022
This publication was paid for by the Purchasing Division of the City of Fayetteville, Arkansas.
Amount paid: \$171.13

City of Fayetteville, AR
Bid 22-55, Spring Granite Fountain for Upper Ramble
Page 2 of 21

EXECUTION OF BID:

All bidders shall submit this section, executed and completed in full by an authorized agent of the bidder. Bidders shall also complete submission through the City's [online bidding portal \(www.fayetteville-ar.gov/bids\)](http://www.fayetteville-ar.gov/bids) and complete and submit all required information, which may include:

- Bid Attributes
- Bid Line Items – Bidders shall bid on all line items and not submit partial bids
- Response Attachments
 - Required Bid Form (this form, completed in its entirety)

Actual specification of any deficient item shall be noted on the bid sheet or separate attachment. If specifications of item bid differ from provided literature, deviation shall be documented and certified by the manufacturer as a regular production option.

PRICE: Bidders shall submit pricing on the City's online bidding portal (www.fayetteville-ar.gov/bids) in the format presented online.

Refer to the City's electronic bidding platform to submit bid pricing electronically.

Contact the City Purchasing Division to obtain documents necessary to submit a physical sealed bid; however, all bidders are strongly encouraged to submit on the City's online bidding portal.

Upon signing this Bid, the bidder certifies that:

1. Bidder has read and agrees to the requirements set forth in this proposal, including specifications, terms, standard conditions, and any pertinent information regarding the articles being bid on.
2. Unless otherwise noted and explained, the unit bid and listed meets or exceeds all of these requirements as specified by The City of Fayetteville.
3. Pursuant Arkansas Code Annotated §25-1-503, the Contractor agrees and certifies that they do not currently boycott Israel and will not boycott Israel during any time in which they are entering into, or while in contract, with any public entity as defined in §25-1-503. If at any time during contract the contractor decides to boycott Israel, the contractor must notify the contracted public entity in writing.

4. The Bidder can and will comply with all specifications and requirements for delivery, documentation and support as specified herein.
5. I, as an officer of this organization, or per the attached letter of authorization, am duly authorized to certify the information provided herein is accurate and true.
6. Bidder shall comply with all State and Federal Equal Opportunity and Non-Discrimination requirements and conditions of employment in addition to all federal, state, and local laws.
7. Bidder shall disclose any possible conflict of interest with the City of Fayetteville, including, but not limited to, any relationship with any City of Fayetteville employee. Response shall disclose if a known relationship exists between any principal or employee of your firm and any City of Fayetteville employee or elected City of Fayetteville official. If no relationship exists, this should also be stated in your response. Failure to disclose such a relationship may result in cancellation of a purchase and/or contract as a result of your response.

8. Bidder will perform the Work in compliance with all applicable trench safety standards set forth in Occupational Safety and Health Administration (OSHA) Part 1926 – Subpart P – Excavations.
9. As A bidder on this project, you are required to provide debarment/suspension certification indicating that you are in compliance with the below Federal Executive Order. Certification can be done by completing and signing this form.
 - a. Federal Executive Order (E.O.) 12549 “Debarment and Suspension” requires that all contractors receiving individual awards, using federal funds, and all sub-recipients certify that the organization and its principals are not debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency from doing business with the Federal Government.
 - b. Your signature below certifies that neither you nor your principal is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

Unsigned bids will be rejected. Items marked * are mandatory for consideration.

*NAME OF FIRM: Kusser Graniteworks USA, Inc.

Purchase Order/Payments shall be issued to this name

*D/B/A or Corporation Name Kusser FountainWorks

*BUSINESS ADDRESS: 3109 E. 4th Ave.

*CITY: Tampa *STATE: FL *ZIP: 33605

*PHONE: 813-248-3428 FAX: _____

*E-MAIL: jclaxton@kusserusa.com

*BY: (PRINTED NAME) Jerry Claxton

*AUTHORIZED SIGNATURE: Jerry Leon Claxton

Digitally signed by Jerry Leon Claxton
DN: cn=US, e=jclaxton@kusserusa.com, o=Kusser Fountainworks, cn=Jerry
Leon Claxton
Reason: I agree to the terms defined by the placement of my signature on this
document
Date: 2022.12.09 14:16:26-0500'

SIGN

*TITLE: Director of Sales

UNIQUE ENTITY NUMBER: _____ CAGE NUMBER: _____

*TAX ID NUMBER: 59-2338770

Acknowledge Addendums:

Addendum No. 1 Dated: 12/01/22 Acknowledged by: _____

Jerry Leon Claxton

Digitally signed by Jerry Leon Claxton
DN: cn=US, e=jclaxton@kusserusa.com,
o=Kusser Fountainworks, cn=Jerry Leon
Claxton
Reason: I agree to the terms defined by
the placement of my signature on this
document
Date: 2022.12.09 14:17:10-0500'

SIGN

Addendum No. 2 Dated: 12/06/22 Acknowledged by: _____

Jerry Leon Claxton

Digitally signed by Jerry Leon Claxton
DN: cn=US, e=jclaxton@kusserusa.com,
o=Kusser Fountainworks, cn=Jerry Leon
Claxton
Reason: I agree to the terms defined by the
placement of my signature on this document
Date: 2022.12.09 14:17:36-0500'

SIGN

Addendum No. _____ Dated: _____ Acknowledged by: _____

Addendum No. _____ Dated: _____ Acknowledged by: _____

City of Fayetteville
Bid 22-55, Spring Granite Fountain for Upper Ramble
References

The following information is required from all Bidders so all bids may be reviewed and properly evaluated.

COMPANY NAME: Kusser Graniteworks USA, Inc. DBA: Kusser FountainWorks

BUSINESS ADDRESS: 3109 E. 4th Ave., Tampa, FL 33605

NUMBER OF YEARS IN BUSINESS: 29 HOW LONG IN PRESENT LOCATION: 29

TOTAL NUMBER OF CURRENT EMPLOYEES: 11 FULL TIME 11 PART TIME

PLEASE LIST FOUR (4) REFERENCES THAT YOU HAVE PREVIOUSLY PERFORMED SIMILAR CONTRACT SERVICES FOR **WITHIN THE PAST FIVE (5) YEARS** (All fields must be completed). Bidders shall have valid experience.

1. Whiting-Turner Contracting Co.

COMPANY NAME

Herndon, VA 20171

CITY, STATE, ZIP

Joseph Lechtford

CONTACT PERSON

925-209-7930

TELEPHONE

February, 2022

DATE COMPLETED

joseph.lechtford@whiting-turner.com

E-MAIL ADDRESS

3. L.F. Jennings

COMPANY NAME

Falls Church, VA 22046

CITY, STATE, ZIP

Jeremy Lex

CONTACT PERSON

517-259-0887

TELEPHONE

September, 2021

DATE COMPLETED

jlex@lfjennings.com

E-MAIL ADDRESS

2. Millennium Pool Services

COMPANY NAME

Springfield, VA 22151

CITY, STATE, ZIP

Hank Lavery

CONTACT PERSON

703-939-5062

TELEPHONE

June 2020

DATE COMPLETED

hlavery@millenniumpool.com

E-MAIL ADDRESS

4. Alberici Corp.

COMPANY NAME

St. Louis, MO 63114

CITY, STATE, ZIP

Brent Richter

CONTACT PERSON

314-733-2531

TELEPHONE

August, 2022

DATE COMPLETED

brichter@alberici.com

E-MAIL ADDRESS

City of Fayetteville
Bid 22-55, Spring Granite Fountain for Upper Ramble
General Terms and Conditions

1. **SUBMISSION OF BID & BID EVALUATION:**

- a. Bids shall be reviewed following the stated deadline, as shown on the cover sheet of this document.
- b. Bidders shall submit bids based on documentation published by the Fayetteville Purchasing Division.
- c. Bidding documents and addenda shall be obtained at the City of Fayetteville Purchasing Division's electronic bidding platform at www.fayetteville-ar.gov/bids. All bids shall be received by the deadline, utilizing the electronic bidding software or as stated in the bid advertisement. Submitting a bid electronically is strongly encouraged. A public bid opening will be conducted shortly after the deadline at City Hall and livestreamed at <https://www.youtube.com/user/cityoffayettevillear>. No late bids shall be accepted. The City of Fayetteville shall not be responsible for lost or misdirected bids, or for failure of proposer's technical equipment.
- d. The City will not be responsible for misdirected bids. Bidder should call the Purchasing Office at 479.575.8256 to ensure correct receipt of bidding documents prior to opening time and date listed on the bid form.
- e. Bidders shall have experience in providing products and/or services of the same or similar nature.
- f. Bidder is advised that exceptions to any of the terms contained in this bid must be identified in its response to the bid. Failure to do so may lead the City to declare any such term non-negotiable. Proposer's desire to take exception to a non-negotiable term will not disqualify it from consideration for award.
- g. Local time is defined as the time in Fayetteville, Arkansas on the due date of the deadline. Bids shall be received before the time as shown by the atomic clock located in the Purchasing Division Office.
- h. Bids will be evaluated and awarded based on the best interest of the City of Fayetteville. The City reserves the right to award bids in their entirety, none, or by line item.

2. **WRITTEN REQUESTS FOR INTERPRETATIONS OR CLARIFICATION:**

No oral interpretations will be made to any firms as to the meaning of specifications or any other contract documents. All questions pertaining to the terms and conditions or scope of work of this bid must be sent in writing via e-mail to the Purchasing Agent. Responses to questions may be handled as an addendum if the response would provide clarification to the requirements of the bid. All such addenda shall become part of the contract documents. The City will not be responsible for any other explanation or interpretation of the proposed bid made or given prior to the award of the contract.

3. **DESCRIPTION OF SUPPLIES AND SERVICES:**

Any reference to a particular brand or manufacturer is done in an effort to establish an acceptable level of

quality for this project. Brands or manufacturers that are included in bid that are of at least equal quality, size, design, and specification as to what has been specified, will be acceptable for consideration only if approved by the City of Fayetteville Purchasing Division. The City of Fayetteville reserves the right to accept or reject any requested equal.

4. RIGHTS OF CITY OF FAYETTEVILLE BID PROCESS:

In addition to all other rights of the City of Fayetteville, under state law, the City specifically reserves the following:

- a. The City of Fayetteville reserves the right to select the bid that it believes will serve the best interest of the City.
- b. The City of Fayetteville reserves the right to accept or reject any or all bids.
- c. The City of Fayetteville reserves the right to cancel the entire bid.
- d. The City of Fayetteville reserves the right to remedy or waive technical or immaterial errors in the invitation to bid or in bids submitted.
- e. The City of Fayetteville reserves the right to request any necessary clarifications, additional information, or data without changing the terms of the bid.

5. COSTS INCURRED BY BIDDERS:

All expenses involved with the preparation and submission of bids to the City, or any work performed in connection therewith, shall be borne solely by the bidder(s). No payment will be made for any responses received, or for any other effort required of, or made by, the bidder(s) prior to contract commencement.

6. CONFLICT OF INTEREST:

- a. The bidder represents that it presently has no interest and shall acquire no interest, either direct or indirect, which would conflict in any manner with the performance or services required hereunder, as provided in City of Fayetteville Code Section 34.26 titled "Authority of City Employee to Contract with the City".
- b. All bidders shall promptly notify Amanda Beilfuss, City Purchasing Agent, in writing, of all potential conflicts of interest for any prospective business association, interest, or other circumstance which may influence or appear to influence the bidder's judgment or quality of services being provided. Such written notification shall identify the prospective business association, interest or circumstance, the nature of which the bidder may undertake and request an opinion to the City as to whether the association, interest or circumstance would, in the opinion of the City, constitute a conflict of interest if entered into by the bidder. The City agrees to communicate with the bidder its opinion via e-mail or first-class mail within thirty days of receipt of notification.

7. WITHDRAWAL OF PROPOSAL:

A bid may be withdrawn prior to the time set for the bid submittal, based on a written request from an authorized representative of the firm; however, a bid shall not be withdrawn after the time set for the bid unless approved by the Purchasing Division.

8. LATE PROPOSAL OR MODIFICATIONS:

Bid modifications received after the time set for the bid submittal shall not be considered. Modifications in writing received prior to the deadline will be accepted. The City will not be responsible for misdirected bids. Bidders should call the Purchasing Division at (479) 575-8220 to ensure receipt of their submittal

documents prior to opening time and date listed.

9. **LOCAL, STATE, AND FEDERAL COMPLIANCE REQUIREMENTS:**

- a. The laws of the State of Arkansas apply to any purchase made under this bid. Bidders shall comply with all local, state, and federal directives, orders and laws as applicable to this proposal and subsequent contract(s) including but not limited to Equal Employment Opportunity (EEO), Disadvantaged Business Enterprises (DBE), & OSHA as applicable to this contract.
- b. Pursuant to Arkansas Code Annotated §22-9-203 The City of Fayetteville encourages all *qualified* small, minority and women business enterprises to bid on and receive contracts for goods, services, and construction. Also, City of Fayetteville encourages all general contractors to subcontract portions of their contract to *qualified* small, minority and women business enterprises.

10. **PROVISION FOR OTHER AGENCIES:**

Unless otherwise stipulated by the bidder, the bidder agrees to make available to all Government agencies, departments, municipalities, and counties, the proposal prices submitted in accordance with said proposal terms and conditions therein, should any said governmental entity desire to buy under this proposal. Eligible Users shall mean all state of Arkansas agencies, the legislative and judicial branches, political subdivisions (counties, local district school boards, community colleges, municipalities, counties, or other public agencies or authorities), which may desire to purchase under the terms and conditions of the contract.

11. **COLLUSION:**

The Proposer, by affixing his or her signature to this proposal, agrees to the following: "bidder certifies that his or her bid is made without previous understanding, agreement, or connection with any person, firm or corporation making a proposal for the same item(s) and/or services and is in all respects fair, without outside control, collusion, fraud, or otherwise illegal action."

12. **RIGHT TO AUDIT, FOIA, AND JURISDICITON:**

- a. The City of Fayetteville reserves the privilege of auditing a vendor's records as such records relate to purchases between the City and said vendor.
- b. Freedom of Information Act: City contracts and documents prepared while performing City contractual work are subject to the Arkansas Freedom of Information Act. If a Freedom of Information Act request is presented to the City of Fayetteville, the (Contractor) will do everything possible to provide the documents in a prompt and timely manner as prescribed in the Arkansas Freedom of Information Act (A.C.A. §25-19-101 et. seq.). Only legally authorized photocopying costs pursuant to the FOIA may be assessed for this compliance.
- c. Legal jurisdiction to resolve any disputes shall be in Washington County, Arkansas with Arkansas law applying to the case.

13. **CITY INDEMNIFICATION:**

The successful bidder(s) agrees to indemnify the City and hold it harmless from and against all claims, liability, loss, damage or expense, including but not limited to counsel fees, arising from or by reason of any actual or claimed trademark, patent or copyright infringement or litigation based thereon, with respect to the goods or any part thereof covered by this order, and such obligation shall survive acceptance of the

goods and payment thereof by the City.

14. **VARIANCE FROM STANDARD TERMS & CONDITIONS:**

All standard terms and conditions stated in this request for bid apply to this contract except as specifically stated in the subsequent sections of this document, which take precedence, and should be fully understood by bidders prior to submitting a proposal on this requirement.

15. **ADA REQUIREMENT FOR PUBLIC NOTICES & TRANSLATION:**

Persons with disabilities requiring reasonable accommodation to participate in this proceeding/event, should call 479.521.1316 (telecommunications device for the deaf), not later than seven days prior to the deadline. Persons needing translation of this document shall contact the City of Fayetteville, Purchasing Division, immediately.

16. **PROCUREMENT POLICY FOR RECYCLED MATERIALS:**

The City of Fayetteville wishes to encourage its bidders to use recycled products in fulfilling contractual obligations to the City and that such practices will serve as a model for other public entities and private sector companies.

17. **PAYMENTS AND INVOICING:**

The bidder must specify in their bid the exact company name and address which must be the same as invoices submitted for payment as a result of award of this bid. Further, the successful bidder is responsible for immediately notifying the Purchasing Division of any company name change, which would cause invoicing to change from the name used at the time of the original bid. Payment will be made within thirty days of invoice received. The City of Fayetteville is very credit worthy and will not pay any interest, fees, or penalty for untimely payments. **Payments can be processed through bidder's acceptance of Visa at no additional costs to the City for expedited payment processing.** The City will not agree to any nonrefundable deposit or retainer that would remain property of the bidder even if the hourly work actually performed by the bidder would not justify such fee.

The City will pay the awarded bidder based on unit prices provided on invoicing. Progress payments will be made after approval and acceptance of work and submission of invoice. Payments will be made within 30 days of accepted invoice.

18. **CANCELLATION:**

- a. The City reserves the right to cancel this contract without cause by giving thirty (30) days prior notice to the Contractor in writing of the intention to cancel or with cause if at any time the Contractor fails to fulfill or abide by any of the terms or conditions specified.
- b. Failure of the contractor to comply with any of the provisions of the contract shall be considered a material breach of contract and shall be cause for immediate termination of the contract at the discretion of the City of Fayetteville.
- c. In addition to all other legal remedies available to the City of Fayetteville, the City reserves the right to cancel and obtain from another source, any items and/or services which have not been delivered within the period of time from the date of order as determined by the City of Fayetteville.

- d. In the event sufficient budgeted funds are not available for a new fiscal period, the City shall notify the vendor of such occurrence and contract shall terminate of the last day of the current fiscal period without penalty or expense to the City.

19. ASSIGNMENT, SUBCONTRACTING, CORPORATE ACQUISITIONS AND/OR MERGERS:

- a. The Contractor shall perform this contract. No assignment of subcontracting shall be allowed without prior written consent of the City. If a bidder intends to subcontract a portion of this work, the bidder shall disclose such intent in the bid submitted as a result of this bid.
- b. In the event of a corporate acquisition and/or merger, the Contractor shall provide written notice to the City within thirty (30) calendar days of Contractor's notice of such action or upon the occurrence of said action, whichever occurs first. The right to terminate this contract, which shall not be unreasonably exercised by the City, shall include, but not be limited to, instances in which a corporate acquisition and/or merger represent a conflict of interest or are contrary to any local, state, or federal laws. Action by the City awarding a proposal to a firm that has disclosed its intent to assign or subcontract in its response to the bid, without exception shall constitute approval for purpose of this Agreement.

20. NON-EXCLUSIVE CONTRACT:

Award of this bid shall impose no obligation on the City to utilize the vendor for all work of this type, which may develop during the contract period. This is not an exclusive contract. The City specifically reserves the right to concurrently contract with other companies for similar work if it deems such an action to be in the City's best interest. In the case of multiple-term contracts, this provision shall apply separately to each item.

21. LOBBYING:

Lobbying of selection committee members, City of Fayetteville employees, or elected officials regarding request for proposals, request for qualifications, bids or contracts, during the pendency of bid protest, by the bidder/proposer/protestor or any member of the bidder's/proposer's/protestor's staff, and agent of the bidder/proposer/protestor, or any person employed by any legal entity affiliated with or representing an organization that is responding to the request for proposal, request for qualification, bid or contract, or has a pending bid protest is strictly prohibited either upon advertisement or on a date established by the City of Fayetteville and shall be prohibited until either an award is final or the protest is finally resolved by the City of Fayetteville; provided, however, nothing herein shall prohibit a prospective/bidder/proposer from contacting the Purchasing Division to address situations such as clarification and/or questions related to the procurement process. For purposes of this provision lobbying activities shall include but not be limited to, influencing or attempting to influence action or non-action in connection with any request for proposal, request for qualification, bid or contract through direct or indirect oral or written communication or an attempt to obtain goodwill of persons and/or entities specified in this provision. Such actions may cause any request for proposal, request for qualification, bid or contract to be rejected.

22. ADDITIONAL REQUIREMENTS:

The City reserves the right to request additional services relating to this bid from the bidder. When approved by the City as an amendment to the contract and authorized in writing prior to work, the Contractor shall provide such additional requirements as may become necessary.

23. ADD OR DELETE LOCATIONS OR SERVICES:

The City reserves the right to unilaterally add or delete locations and/or services, either collectively or

individually, at the City's sole option, at any time after award has been made as may be deemed necessary or in the best interests of the City. In such case, the Contractor(s) will be required to provide services to this contract in accordance with the terms, conditions, and specifications.

24. INTEGRITY OF BID DOCUMENTS:

Bidders shall use the original bid form(s) provided by the Purchasing Division and enter information only in the spaces where a response is requested. Bidders may use an attachment as an addendum to the bid form(s) if sufficient space is not available on the original form for the bidder to enter a complete response.

Any modifications or alterations to the original documents by the bidder, whether intentional or otherwise, will constitute grounds for rejection of such response. Any such modifications or alterations a bidder wishes to propose shall be clearly stated in the bidder's response and presented in the form of an addendum to the original bid documents.

25. PRICING

- a. unless price schedules are changed by contractor's manufacturer/supplier. In the event of a general price schedule decrease during the contract period, the City shall be guaranteed full benefit of the price reduction for all undelivered orders on the effective date of the decrease and thereafter. Contractor guarantees against increases in quoted price for the first thirty (30) days of the contract period. Thereafter in the event contractor's manufacturer/supplier increases his general price schedule, he may submit a price adjustment request to the Purchasing Office (Amanda Beilfuss – abeilfuss@fayetteville-ar.gov). The price adjustment request will be accepted so long as the requested increase in prices does not exceed the direct price increases published in the manufacturer's revised general price schedule (for example if manufacturer's price increases \$.10/unit, he may request an adjustment not to exceed \$.10/unit in the contract award price). The Contractor shall submit a letter from the manufacturer certifying the increased cost with each price adjustment request. All adjusted prices must be competitive with the prevailing market price.
- b. The City reserves the right to re-evaluate bidders in their standing in the event of a vendor price increase.

26. OTHER GENERAL CONDITIONS:

- a. Bidder is presumed to be familiar with all federal, state, and city laws, ordinances, and regulations which in any manner affect those engaged or employed in the Work, or the materials or equipment used, or that in any way affect the Work and shall in all respects comply with said laws, ordinances, and regulations. No claim of misunderstanding or ignorance on the part of Bidder or Proposer will in any way serve to modify the provisions of the contract. No representations shall be binding unless embodied in the contract.
- b. Prices shall include all labor, materials, overhead, profit, insurance, shipping, freight, etc., to cover the products and services presented. ***Sales tax shall not be included in the bid price.*** Applicable Arkansas sales tax laws will apply when necessary but will not be considered in award of this project.
- c. Each bidder should state the anticipated number of days from the date of receipt of an order for delivery of services to the City of Fayetteville.
- d. Bidders must provide the City with their bids signed by an employee having legal authority to submit

bids on behalf of the bidder. The entire cost of preparing and providing responses shall be borne by the bidder.

- e. The City reserves the right to request any additional information it deems necessary from any or all bidders after the submission deadline.
- f. The request for bid is not to be construed as an offer, a contract, or a commitment of any kind; nor does it commit the city to pay for any costs incurred by bidder in preparation. It shall be clearly understood that any costs incurred by the Proposer in responding to this request for proposal is at the bidder's own risk and expense as a cost of doing business. The City of Fayetteville shall not be liable for reimbursement to the Proposer for any expense so incurred, regardless of whether or not the proposal is accepted.
- g. If products, components, or services other than those described in this bid document are proposed, the bidder must include complete descriptive literature for each. All requests for additional information must be received within five working days following the request.
- h. NOTE: Any uncertainties shall be brought to the attention to Amanda Beilfuss immediately via telephone (479.575.8220) or e-mail (abeilfuss@fayetteville-ar.gov). It is the intent and goal of the City of Fayetteville Purchasing Division to provide documents providing a clear and accurate understanding of the scope of work to be completed and/or goods to be provided. We encourage all interested parties to ask questions to enable all bidders to be on equal bidding terms.
- i. Any inquiries or requests for explanation in regard to the City's requirements should be made promptly to Amanda Beilfuss, City of Fayetteville, Sr. Purchasing Agent via e-mail (abeilfuss@fayetteville-ar.gov) or telephone (479.575.8220). No oral interpretation or clarifications will be given as to the meaning of any part of this request for proposal. All questions, clarifications, and requests, together with answers, if any, will be provided to all firms via written addendum. Names of firms submitting any questions, clarifications, or requests will not be disclosed until after a contract is in place.
- j. Any information provided herein is intended to assist the bidder in the preparation of proposals necessary to properly respond to this bid. The bid is designed to provide qualified Proposers with sufficient basic information to submit proposals meeting minimum specifications and/or test requirements but is not intended to limit a bid's content or to exclude any relevant or essential data.
- k. Bidders irrevocably consent that any legal action or proceeding against it under, arising out of or in any manner relating to this Contract shall be prevailed by Arkansas law. Proposer hereby expressly and irrevocably waives any claim or defense in any said action or proceeding based on any alleged lack of jurisdiction or improper venue or any similar basis.
- l. The successful bidder shall not assign the whole or any part of this Contract or any monies due or to become due hereunder without written consent of City of Fayetteville. In case the successful bidder assigns all or any part of any monies due or to become due under this Contract, the Instrument of assignment shall contain a clause substantially to the effect that is agreed that the right of the assignee in and to any monies due or to become due to the successful bidder shall be subject to prior liens of all persons, firms, and corporations for services rendered or materials supplied for the performance of the services called for in this contract.
- m. The successful bidder's attention is directed to the fact that all applicable Federal and State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over the services shall apply to the contract throughout, and they will be deemed to be included in the contract as though

written out in full herein. The successful bidder shall keep himself/herself fully informed of all laws, ordinances and regulations of the Federal, State, and municipal governments or authorities in any manner affecting those engaged or employed in providing these services or in any way affecting the conduct of the services and of all orders and decrees of bodies or tribunals having any jurisdiction or authority over same. If any discrepancy or inconsistency should be discovered in these Contract Documents or in the specifications herein referred to, in relation to any such law, ordinance, regulation, order or decree, s/he shall herewith report the same in writing to City of Fayetteville.

27. **INVOICING:** All invoices shall be presented to the City with the minimum information listed below.
- a. City Department that ordered the materials or services
 - b. Order Date
 - c. Delivery date or the date of services
 - d. Name of the City Employee that requested or picked up the goods, materials, or service
 - e. Bid Number that applies to the purchase and invoices. Amounts in the bid shall match invoicing.
28. **ATTACHMENTS TO BID DOCUMENTS:** N/A

BID FORM CONTINUES ON NEXT PAGE

ENGINEERED MODULAR GRANITE FOUNTAIN SYSTEM

PART 1 - GENERAL

1.1 SUMMARY

- A. Furnish all labor, materials, supplies, equipment, apparatus, tools, transportation, and perform all operations in connection with and reasonably incidental to the complete fabrication of the engineered modular granite fountain system as specified herein.

Items of work specifically included are the engineered modular granite fountain stone structure, including all labor and materials required for the furnishing and fabrication of all modular fountain stonework called for on the plans.

- B. **This bid is for the purchase of assembled equipment only; Installation will be the responsibility of the City.**
- C. Fabricator Responsibilities
1. Fountain equipment per the drawing specifications.

1.2 DESIGN STATEMENT

- A. The engineered modular granite fountain system consists of various distinct elements. The spring fed trough will be machined into 14 parts as a monolithic granite modular system. There will be a keyway CNC routed with the adjoining sections of the water trough to keep water from wicking back behind the wall system. These modules will consist of monolithic granite modular sections sitting above the outer trough and locked together with the keyway. Fountain granite structures will be sized and detailed as indicated in Kusser FountainWorks drawings. This fountain is fabricated in modules with stainless-steel tensioning brackets and "O" rings used for assembly; the unit will have multiple "O" rings joints. All modules are assembled and leveled on top of a combination of concrete support pedestals or CMU block walls resting on footers or as indicated on the plans.
- B. Plumbing and conduit connections are factory installed in the granite exterior for field attachment of pipes and conduits.
- C. No additional waterproofing, structures, or finishes are required to complete the fabrication.

- D. The water will be provided at 35 gpm from the spring and run down the various granite stone pathways to the lower pool and return to the natural system as indicated in the fountain piping plans.
- E. The engineered modular granite fountain will be fabricated in modules that are pre-assembled and bolted together at the factory. It will be tested at the factory for fit and water tightness. The assembled fountain sections will be fitted and operated at the factory.
- F. A digital video of the fountain(s) will be made at the factory and sent to the client via a secure download link for approval prior to shipping.
- G. After approval the fountain will be disassembled and packed into standard shipping containers for transport to the jobsite.
- H. Assembly of the engineered modules modular granite fountain at the jobsite is accomplished with a crane and connected using stainless steel tensioning brackets and a waterproof rubber "O" ring seal at the assembly joints.

1.3 REFERENCES

- A. The following codes, agencies, and guidelines shall be used to establish design criteria where not indicated otherwise on submittal drawings:
 - 1. Underwriter's Laboratory
 - 2. National Electric Code
 - 3. National Electrical Manufacturers Association
 - 4. Uniform Plumbing Code
 - 5. Uniform Building Code
 - 6. All state and local codes which are applicable

1.4 SUBMITTALS

- A. Samples will be reviewed for color and texture only.
 - 1. Stone Sample
 - a. Three samples for each type of stone showing a full range of color, texture, and finish expected in completed work.
 - b. Minimum of a 12-inch square.
 - 2. Sealant Samples
 - a. Sealant installed between two pieces of 4-inch x 8-inch stone for each type and finish of stone.
 - b. Mounted on suitable backing.

3. Approved Range of Stone Sample

- a. One set of approved range of stone will be returned to contractor by authorized owner representative.
- b. One set of approved range of stone will be returned to Kusser Graniteworks (fabricator) to serve as a guide for approved range of stone.

4. Design Modifications

- a. Submit for review any proposed variations in details or substitutions in materials required to meet specified performance requirements and to coordinate work.
- b. Where Fountain Contractor proposes to deviate from Contract Documents, provide drawings and calculations.

B. Materials List

1. Includes pipe, fittings, fountain components, control system components factory installed within the granite fabricated system.

C. Manufacturer's Data

1. Submit manufacturers' catalog cuts, specifications, and operating instructions for all equipment supplied.

D. Shop Drawings

1. Show modular granite fountain layout of stone.
2. Show large-scale details of anchoring and assembly instructions for each type of stone required.
3. Indicate which joints are mortar and which are sealant.
4. Indicate materials and dimensions, including adjacent materials inclusive of water feature scope.
5. Number each piece of stone on setting drawings to correspond to identification number given each stone for fabrication.
6. Include list of materials and equipment integral with the stone feature.
7. Include pipe elevations and dimensions, pipe center lines, required clearances, and modular granite fountain fitting locations.
8. Submit all shop drawings using AutoCAD or equivalent.
9. Product data: manufacturers' descriptive data and performance characteristics for granite system.

E. Quality Control Submittals

1. Certificates of Compliance from installer documenting that system was installed in accordance with requirements of Contract Documents and applicable codes, ordinances, rules, and regulations of authorities having jurisdiction.

F. Closeout Submittals

1. Operation and Maintenance Data

1.5 QUALITY ASSURANCE

A. Single Source Responsibility

1. Retain one firm or company, referred to as "Fountain Fabricator" herein, to be responsible for stone supply and fabrication.

B. Stone Fabricator Qualifications

1. Minimum 10 years in successful design and fabrication of work similar to major components of work indicated and required for this project.
2. Employs only experienced tradesmen with a minimum of 10 years successful experience in fabrication of work.

C. Fountain Fabricator Qualifications

1. Minimum 5 years [documented] experience in work of this Section.
2. Successful completion of minimum of 5 projects of similar scope and complexity within past 5 years.

D. Designer/Engineer Qualifications

1. Minimum 10 years [documented] experience in work of this Section.
2. Successful completion of minimum of 10 projects of similar scope and complexity within past 5 years.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver stone to project site in manufacturer's original packaging at times determined by the Owners Representative, using protection and handling equipment which will ensure no damage.
- B. Owners Representative will immediately inspect materials upon arrival to verify any damage incurred in shipment requiring repair or replacement and notify fabricator immediately.
- C. Owners Representative will store above grade on wood dunnage or other suitable surfaces using polyethylene film so that water accumulations will drain freely. Separate stone from wood or other supporting or protection members.
- D. The Owners Representative is to provide protection of materials in the work area and remain responsible for any damage to the work until the project is complete.

1.7 GUARANTEE AND REPLACEMENT

- A. The Fountain Fabricator shall warranty that any material found defective within one year of final acceptance shall be replaced at no cost to owners.
- B. The warranty does not extend to damage or failure caused by neglect, misuse, incorrect operation, or vandalism.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Contract Documents are based on engineered modular granite fountain fabricated by Kusser Graniteworks.

2.2 QUARRYING

- A. Provide stone from single quarry for each variety of stone required.
- B. Quarry stone in a manner to provide as-quarried block orientations which yield finished stone with required visual characteristics.

2.3 PREMANUFACTURED MODULAR GRANITE FOUNTAIN SYSTEM

- A. Provide modular granite fountain and fountain equipment by a single supplier.

2.4 GRANITE

- A. All granite shall be of standard architectural grade, free of cracks, seams, starts, or other traits which may impair its structural integrity or function.

1. Types and Sources

- a. Kusser Fürstensteiner Granite as supplied by Kusser FountainWorks (Division of Kusser Graniteworks) or approved equal by architect or owners.

2. Granite Specifications

- a. Unique identification code of this product types: 12058-FüG
- b. Type, batch, or serial number or another indicator for identifying the product:
Trade name: Fürstensteiner Granit (Diorit)
Petrographic Designation of the Stone: Diorite
Look: anthracite-dark grey; fine-/medium grainy
Quarry / Origin: Quarry Paradies
Paradies 8, 94538 Fürstenstein

Bayer. Wald, Deutschland
 Geo-coordinates (WGS 84): 13,322° öL. / 48.710 ° nB.

- c. The appearance is partly with typical white or green variations with various widths and shapes as well as brighter and darker accumulation of minerals.
- d. Intended use as foreseen by manufacturer: Floor panels and stair cladding made from natural stone for floor and stair in indoor and outdoor area according to DIN EN 12058:2015
- e. Name, registered trading name, or registered brand and contact address of the manufacturer: Kusser Granitwerke GmbH, Dreiburgenstraße 5, 94529 Aicha vorm Wald
- f. System or systems for assessment and verification of consistency of performance of the construction project according to attachment V: System 4
- g. Declaration of performance for the essential characteristics according to harmonized specification DIN EN 12058:2015:

ESSENTIAL CHARACTERISTICS	PERFORMANCE
FIRE BEHAVIOR	Class A1
BREAKING STRENGTH (Bending strength as average value / lower expected value (EL) / standard deviation)	18 / 12 / 2,7 MPa
SLIDING ABILITY (Anti-sliding-effect / Sliding resistance SRV dry/wet. Surface treatment: rough treatment (sandblasted, flamed, diamond sawn) Fine treatment (honed)	≥ 75 / ≥ 60 ≥ 65 / ≥ 30
TACTILE/VISUALLY MEASURED PROPERTIES	-
DIRECT AIRBORNE SOUND INSULATION (as bulk density average value)	2800 kg/m³
THERMAL CONDUCTIVITY	NPD
RESISTANCE TO RUST- FREEZING/THAWING- GENERAL Bending strength (average values) before / after 56 freezing/thawing cycles (technological test according to EN 12371)	18 / 18 MPa
EMISSION OF RADIOACTIVITY	< 1,0
RELEASE OF OTHER DANGEROUS SUBSTANCES	NPD

- h. The performance of the product according to the numbers 1 and 2 corresponds to the declared performances according to number 6. Responsibility for generating this declaration of performance is only the manufacturer according to number 4.

3. Finishes

- a. Apply specified finishes for each stone type.
- b. Straight backs on radial units are acceptable if not visually exposed.
- c. Finish exposed to view edges and reveals in stone to match face finish, except that sawn finish in granite reveals is acceptable.

2.5 GRANITE SPECIALTIES

- A. Modular engineered granite water table feature is fabricated in modules with required "O" rings. Includes required fittings within the unit as per Kusser FountainWorks drawings.

2.6 GRANITE ELEMENTS

- A. Material: Fürstensteiner

2.7 GRANITE ACCESSORIES

- A. Anchoring system, tension brackets, dowels, shims, and supports provided by stone fabricator in Type 304 stainless steel and as required meeting performance requirements.

END OF BID FORM

Kusser FountainWorks

3109 E 4th Ave, Tampa, FL 33605-5713,

To Amanda Beilfuss
City of Fayetteville Arkansas
113 W Mountain St
City of Fayetteville, AR 72701
United States

Phone 479-575-8220

QUOTE #	K4028-F01-R00-C01
DATE	Dec 13, 2022

ACCOUNT EXECUTIVE	Reference: Bid 22-55, Spring Granite Fountain for Upper Ramble	TERMS
Jerry Claxton	Supply Only of the granite water feature modular stone.	

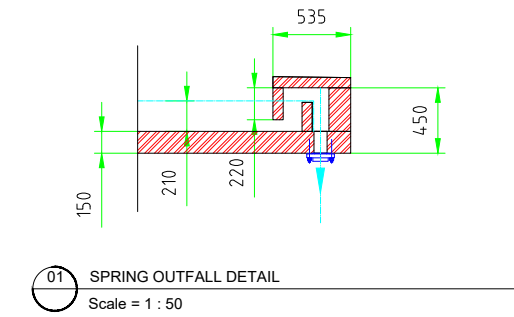
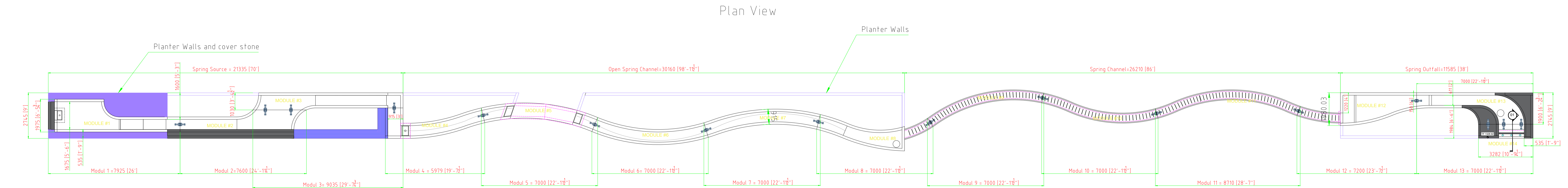
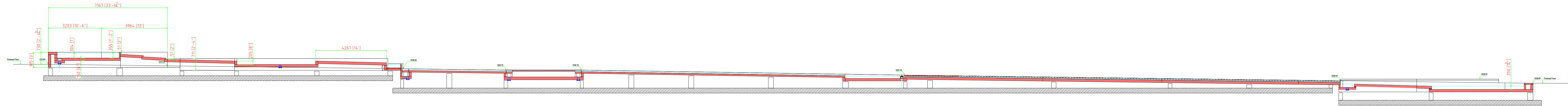
QTY	DESCRIPTION
	KUSSER FOUNTAIN WORKS IS OVER 100 YEARS OLD AND HAS BEEN ACTIVE IN THE FOUNTAIN INDUSTRY FOR OVER THE LAST 30 YEARS. WE APPRECIATE THE OPPORTUNITY TO BID THIS PROJECT AND WOULD LIKE TO SCHEDULE A TIME TO MEET AND DISCUSS HOW WE CAN DO BUSINESS WITH YOU. PLEASE CONTACT JERRY CLAXTON AT 813-520-9896 WITH ANY QUESTIONS. BUDGET BASED UPON 11/18/2022 GRANITE BID DRAWINGS SHEETS L5.50, L5.51, L5.52 ,L5.53. KUSSER'S PRICING INCLUDES DESIGN OF THE GRANITE FOUNTAIN SYSTEM, FABRICATION OF THE GRANITE FOUNTAIN SYSTEM AND DELIVERY TO THE JOB SITE. EXCLUDES ALL OF THE FOLLOWING: SITE OFFLOAD, INSTALLATION, MEP SUPPLY AND INSTALL, ALL CONCRETE WORK, FOUNDATIONS, SUPPORTS. SCHEDULE: 4-6 WEEKS - SHOP DRAWINGS 26-31 WEEKS - GRANITE FABRICATION WEEKS AFTER APPROVED SHOP DRAWINGS. 4-6 WEEKS - SHIPPING OCEAN FREIGHT TO JOB SITE **VALIDITY NOTE: Our proposal is valid for 30 days from proposal date. Within these 30 days, customer can move forward with an order for the fabrication of the granite modular fountain and equipment to secure the proposal pricing for a future installation. Kusser FountainWorks will bill the order as stored materials, plus any applicable storage fees. **SHIPPING NOTE: In consideration of current market conditions, port congestion, fuel surcharges, trucking volatility and labor shortages, Kusser cannot guarantee a firm price for shipping. Domestic and International Shipping, Custom and Duty Fees, and truck transportation from USA port to the delivery address are based on current rates (or date of the proposal). Due to the fluctuating market, these items will be invoiced at actual cost at time of shipment. Actual transportation invoices will be provided to client to issue a change order for any cost above the allowance. Allowance of \$108,000 included in this proposal.
1	GRANITE MODULAR FOUNTAIN SYSTEM MATERIALS
	01.01 MODULAR GRANITE FEATURE Factory fabricated granite runnel fountain feature consisting of 14 modules with borings and flanges for water supply, return and drainage connections. All overflow weir edges are rounded R 25 mm for smooth flow of water. Including stone bridge in one of the module. The modules are fixed to each other with stainless-steel clamps, each module is made of large natural stone elements, anchored and watertight glued together with 2 component epoxy resin glue.

QTY	DESCRIPTION
	Please note that this price is based on the drawings Landscape drawings dated November 18,2022- Spring details. Price is subjected to change in case of further change in design. Material: Fürstensteiner Granit (Diorit anthrazit-dunkelgrau; Bruch: Paradies, Fürstenstein, Bayer. Wald) Finish: Water flow surface saw cuts and textured; all visible surfaces honed otherwise sawn Dimension: 8929 x 274.5 x varies cm Module 1 = 792.5 cm x 197.5 cm x 91.5 cm Module 2 = 760 cm x 171.5 cm x 71.1 cm Module 3 = 903.5 cm x 103 cm x 71.1 cm Module 4 = 597.9 cm x 183.5 cm x 91.6 cm Module 5 = 700 cm x 91.5 cm x 60 cm Module 6 = 700 cm x 91.5 cm x 20 cm Module 7 = 700 cm x 91.5 cm x 20 cm Module 8 = 700 cm x 219.5 cm x 40 cm Module 9 = 700 cm x 61 cm x 25 cm Module 10 = 700 cm x 61 cm x 25 cm Module 11 = 871 cm x 61 cm x 25 cm Module 12 = 720 cm x 198 cm x 77.2 cm Module 13 = 700 cm x 190 cm x 77.2 cm Module 14 = 328.2 cm x 84.5 cm x 77.2 cm
	(28) 01.03 SPRING CHANNEL COVER PLATES Stone cover plates approx. 6 cm for the spring channel. Including machined slots on top surface. Finish: All visible surfaces honed otherwise sawn Dimension: 101 x 51 x 6 cm
	GRANITE SHIPPING
	GRANITE NOTES The sample of natural stone, which you will select, indicates an average of color markings and other characteristics. Stone is a product of nature; therefore, it is impossible to guarantee uniformity of color veining or any other characteristics.
	GRANITE INCLUSIONS 01. Shop Drawing 02. Duty, Broker Fee, Customs Fee, Customs Bond 03. Insurance to the jobsite 04. Crating for Seaworthy
	GRANITE ACCESSORIES Anchors: Anchoring system, tension brackets, dowels, shims and supports provided by stone fabricator in Type 304 stainless steel and as required meeting performance requirements
1	GRANITE PLANTER WALLS MATERIALS
	01.02 PLANTER WALLS Granite wall sections around the spring feature not part of the modular construction. Including SS Clamps for anchoring with modules. All parts made of large natural stone elements, anchored and watertight glued together with 2 component epoxy resin glue. Material: Fürstensteiner Granit (Diorit anthrazit-dunkelgrau; Bruch: Paradies, Fürstenstein, Bayer. Wald) Finish: All visible surfaces honed otherwise sawn
	MISC STAINLESS STEEL HARDWARE FOR ATTACHMENT TO MODULAR SYSTEM
	GRANITE NOTES The sample of natural stone, which you will select, indicates an average of color markings and other characteristics. Stone is a product of nature; therefore, it is impossible to guarantee uniformity of color veining or any other characteristics.
	GRANITE INCLUSIONS 01. Shop Drawing 02. Duty, Broker Fee, Customs Fee, Customs Bond 03. Insurance to the jobsite 04. Crating for Seaworthy

QTY	DESCRIPTION
	GRANITE ACCESSORIES Anchors: Anchoring system, tension brackets, dowels, shims and supports provided by stone fabricator in Type 304 stainless steel and as required meeting performance requirements
	SITE VISITS / SHOP DRAWINGS
1	DESIGN & VISITS FOR INSPECTIONS
	SITE INSPECTION VISITS/STARTUP (6 ONE-DAY TRIPS INCLUDED (ONLY 1 KUSSER REPRESENTATIVE)) 1. Preconstruction meeting 2. Roughins inspection 3. Mechanical install inspection 4. Startup and display adjustment 5. Final programming 6. Owner training and turnover
	SHOP FABRICATION DRAWINGS Shop fabrication drawings for water feature granite system and installation details.
	MANUALS
	WARRANTY 12 Months from date of acceptance. See manufacturers warranty detail on equipment.
	This is for the supply only of the Kusser granite modular system with adjacent planter granite walls. All other supply and scopes excluded as outlined below.
1	EXCLUSIONS**
	**All MEP equipment, ALL installation scopes, storage if required.
	**Grouting, caulking
	**Surveys, benchmarks or elevations
	**Engineering of foundations and sub slab to level working surface
	**All concrete work and foundations required for granite system
	**PE Stamped drawings (if required it will be at an additional fee)
	**Health Department requirements or permits
	**Sales tax (is the responsibility of the owner to remit applicable tax to the appropriate tax agency)
	**Proposal assumes free and clear access to construction site. All required lifting and hoisting.
	**All excavation and backfill. Import/export of fill (Note: site fill to be nominal grain material)
	**Any special limitations to gain access to site for delivery and installation of fountain equipment
	**Financial Bond unless stated otherwise within this document. Wage Scale / union rates.
	**Dewatering, tenting, heating.
	**All box voids if required, concrete foundations
	**All finishes except granite modular slabs on runnel; granite planter walls, quantity as included within proposal
	**All permits & inspections
	**All items not listed within this proposal
	TERMS:
	Payment Terms: All prices are in US Dollars. \$ 50% Deposit on acceptance of contract \$ 40% Due prior to vault shipment \$ Balance Due net 30 days after delivery.

	QTY	DESCRIPTION		
			SUBTOTAL	\$1,094,934.00
			SALES TAX	\$0.00
			SHIPPING	\$7,500.00
			TOTAL	\$1,102,434.00

Thank You For The Opportunity!



01 SPRING KEY PLAN
SCALE= 1 :100

KUSSER Fountainworks USA Dreiburgensstraße 5 Tel: 08544/9625-0 Fax: 08544/9625-93 Germany-94529 Altheim vorm Wald www.kusser.com				 KUSSER		JOB-NO: 4028		TIME LIMIT:	
						WEIGHT:		SCALE: 1:100	
						MATERIAL: Fürstensteiner			
						Fayetteville Ramble fountain			
						Preliminary Sketch			
						Kusser USA			
				Kst./Positionsnr:		-2022-09-4028-01			
						A20			
STATE	CHANGES	DATE	NAME	FILE-NAME: C:\Users\peter\Documents\Kusser\04-4028-Fayetteville-Ramble-Fountain\Kusser-Fountain-USA-2022-09-4028-01.dwg					

RESOLUTION NO. _____

A RESOLUTION TO AWARD BID #22-55 AND APPROVE THE PURCHASE OF MATERIALS FOR THE CIVIC PLAZA WATER FEATURE FROM KUSSER GRANITEWORKS USA, INC. D/B/A KUSSER FOUNTAINWORKS IN THE AMOUNT OF \$1,102,434.00 AND TO APPROVE A BUDGET ADJUSTMENT

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:

Section 1: That the City Council of the City of Fayetteville, Arkansas hereby awards Bid #22-55 and approves the purchase of materials for the Civic Plaza Water Feature from Kusser Graniteworks USA, Inc. D/B/A Kusser FountainWorks in the amount of \$1,102,434.00.

Section 2: That the City Council of the City of Fayetteville, Arkansas hereby approves a budget adjustment, a copy of which is attached to this Resolution.



MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council

THRU: Susan Norton, Chief of Staff
Kevin Springer, Budget Director

FROM: Timothy Nyander, Utilities Director

DATE: December 27, 2022

SUBJECT: **WATER AND SEWER CONSTRUCTION MATERIALS AND BAD DEBT EXPENSE ACCOUNTS**

RECOMMENDATION:

BACKGROUND:

The Construction Materials account in the Water Distribution Maintenance program will come up short on funding for the remainder of 2022 expenses. The Bad Debt Expense account in the Utilities Financial Services division also needs additional funding to cover anticipated bad debt expenses for the remainder of 2022.

DISCUSSION:

Due to high materials costs for the construction materials that supply the Water & Sewer warehouse and in-house construction jobs, the Construction Materials account within the Water Distribution Maintenance program will need additional funding to cover 2022 expenses.

Between early 2020 and late 2021, the City suspended all collection activities on delinquent utility bill balances due to the financial strain the covid-19 pandemic placed on customers – no penalties were applied to delinquent balances and no delinquent balances were placed with the City's collection agency during this time. Thus, there was a 2-year backlog in utility accounts that needed to be dropped to bad debt when the City resumed collection activities in 2022. As of August 30th, all 2020 and 2021 bad debt has been dropped/placed with the City's collection agency. The 2-year backlog exhausted all budgeted funding and thus additional funding is needed to cover 2022 bad debt that will be dropped before the end of 2022.

BUDGET/STAFF IMPACT:

Staff requests a budget amendment - \$295,000.00 from Division 730 - Wastewater Treatment Plant and \$325,000.00 from Fund Balance.

Staff recommends approval of a budget amendment for the Construction Materials and Bad Debt Expense accounts within the Water & Sewer Fund.

ATTACHMENTS: 2022-239 SRF WS Const Mat & Bad Debt, 2022-239 BA WS Const Mat & Bad Debt, RES BUDGET ADJUSTMENT FOR BAD DEBT AND CONSTRUCTION MATERIALS

Mailing address:

113 W. Mountain Street
Fayetteville, AR 72701

www.fayetteville-ar.gov

City of Fayetteville Staff Review Form

2022-239

Item ID

1/3/2023

City Council Meeting Date - Agenda Item Only
N/A for Non-Agenda Item

Tim Nyander

12/13/2022

WATER SEWER (720)

Submitted By

Submitted Date

Division / Department

Action Recommendation:

Staff recommends approval of a budget amendment for the Construction Materials and Bad Debt Expense accounts within the Water & Sewer Fund.

Budget Impact:

5400.720.4310-5216.00

5400.710.1810-5319.00

Water and Sewer

Account Number

Fund

N/A

N/A

Project Number

Project Title

Budgeted Item? Yes

Total Amended Budget

\$ 795,537.00

Expenses (Actual+Encum)

\$ 822,177.27

Available Budget

\$ (26,640.27)

Does item have a direct cost? No

Item Cost

\$ -

Is a Budget Adjustment attached? Yes

Budget Adjustment

\$ 325,000.00

Remaining Budget

\$ 298,359.73

V20221130

Purchase Order Number: _____

Previous Ordinance or Resolution # _____

Change Order Number: _____

Approval Date: _____

Original Contract Number: _____

Comments:

City of Fayetteville, Arkansas - Budget Adjustment (Agenda)

Budget Year 2022	Division /Org2 WATER SEWER (720) Requestor: Tim Nyander	Adjustment Number
--------------------------------	--	--------------------------

BUDGET ADJUSTMENT DESCRIPTION / JUSTIFICATION:

A budget amendment is needed within the Water and Sewer Fund's 2022 operations budget to fund additional water distribution-related construction materials and additional utility billing bad debt expenses anticipated throughout the remainder of 2022.

	COUNCIL DATE:	1/3/2023
	ITEM ID#:	2022-239
	<i>Holly Black</i>	
	<i>12/15/2022 8:47 AM</i>	
	Budget Division	Date
	D - (City Council)	
	TYPE:	
	JOURNAL #:	
	GLDATE:	12/31/2022
	CHKD/POSTED:	/
RESOLUTION/ORDINANCE		

TOTAL	325,000	325,000					v.20221115
	Increase / (Decrease)		Project.Sub#				
Account Number	Expense	Revenue	Project	Sub.Detl	AT	Account Name	
5400.720.4310-5216.00	100,000	-			EX	Construction Materials	
5400.710.1810-5319.00	520,000	-			EX	Bad Debt - Expense	
5400.730.5110-5315.00	(295,000)	-			EX	Contract Services	
5400.720.4000-4999.99		325,000			RE	Use Fund Balance - Current	
	-	-					
	-	-					
	-	-					
	-	-					
	-	-					
	-	-					
	-	-					
	-	-					
	-	-					
	-	-					
	-	-					
	-	-					
	-	-					
	-	-					
	-	-					

RESOLUTION NO. _____

A RESOLUTION TO APPROVE A BUDGET ADJUSTMENT IN THE AMOUNT OF \$325,000.00 FOR THE CONSTRUCTION MATERIALS AND BAD DEBT EXPENSE ACCOUNTS WITHIN THE WATER AND SEWER FUND

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:

Section 1: That the City Council of the City of Fayetteville, Arkansas hereby approves a budget adjustment, a copy of which is attached to this Resolution, in the amount of \$325,000.00 for the Construction Materials and Bad Debt Expense Accounts within the Water and Sewer Fund.



MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council
THRU: Susan Norton, Chief of Staff
FROM: Chris Brown, Public Works Director
DATE: December 27, 2022
SUBJECT: **AWARD BID #22-27 AND AUTHORIZE A CONTRACT WITH TOMLINSON ASPHALT CO.**

RECOMMENDATION:

Staff recommends approval of a construction contract subject to EDA approval in the amount of \$2,178,659.65 with Tomlinson Asphalt Co. for the Industrial Drive Extension Project, approval of a \$218,000 project contingency and approval of a budget adjustment.

BACKGROUND:

The Industrial Drive project includes the construction of approximately 2,600 feet of street extension connecting South Industrial Drive to South City Lake Road. The street section includes a 28' wide asphalt street with curb and gutter and a 5' wide sidewalk with 6' of greenspace on one side. This proposed street extension will provide access to approximately 47 acres of city-owned land, allowing the development of five parcels.

In September of 2020, the City of Fayetteville was awarded a grant from the Economic Development Administration for 80% of the design and construction of this project not to exceed \$2,000,000. The City will be responsible for the other 20% of project costs. On April 6, 2021, the City Council approved a design contract with McClelland Consulting Engineers.

DISCUSSION:

On October 19, 2022, the City received four (4) construction bids for this project. Tomlinson Asphalt Co. submitted the low bid of \$2,178,659.65. Engineering staff recommends awarding this contract to Tomlinson Asphalt. The contract time is 300 days (10 months) for substantial completion.

BUDGET/STAFF IMPACT:

The design and construction of this project will be paid for with the funds from a grant from the Economic Development Administration (\$1,742,927.72) and from the 2019 Economic Development Bonds (\$435,731.93).

PURCHASE ORDER DETAILS:

G/L ACCT	PROJECT	AMOUNT
4601.860.7600-5809.00	46060.7600	1,742,927.72
4606.860.7600-5809.00	46060.7600	435,731.93

Mailing address:

113 W. Mountain Street
Fayetteville, AR 72701

www.fayetteville-ar.gov

TOTAL

2,178,659.65

ATTACHMENTS: 2022-0252 SRF Industrial Dr Tomlinson, Tomlinson Asphalt - Industrial Drive Extension Agreement Signed, 2022-0252 BA Industrial Dr Tomlinson, Vmap, Bid 22-27, Bid Tab - AB and LM Signed, Bid 22-27, Submittal - Tomlinson Asphalt, Co. - P, Bid 22-27, Affidavit of Publication, RES BID 22-27 - TOMLINSON ASPHALT - INDUSTRIAL DRIVE - CONTINGENCY AND BA

Mailing address:

113 W. Mountain Street
Fayetteville, AR 72701

www.fayetteville-ar.gov

City of Fayetteville Staff Review Form

2022-252

Item ID

1/3/2023

City Council Meeting Date - Agenda Item Only
N/A for Non-Agenda Item

Chris Brown

12/12/2022

ENGINEERING (621)

Submitted By

Submitted Date

Division / Department

Action Recommendation:

Approval of a construction contract subject to EDA approval in the amount of \$2,178,659.65 with Tomlinson Asphalt Co. for the Industrial Drive Extension Project, approval of \$218,000 in project contingency and approval of a budget adjustment.

Budget Impact:

4601.860.7600-5809.00

4601 - Bond Program Grant Matching

4606.860.7600-5809.00

4606 - Economic Development 2019 Bonds

Account Number

Fund

46060.7600

Commerce District Industrial Corridor

Project Number

Project Title

Budgeted Item? Yes

Total Amended Budget

\$ 9,491,549.00

Expenses (Actual+Encum)

\$ 168,570.78

Available Budget

\$ 9,322,978.22

Does item have a direct cost? Yes

Item Cost

\$ 2,396,659.65

Is a Budget Adjustment attached? Yes

Budget Adjustment

\$ -

Remaining Budget

\$ 6,926,318.57

V20221130

Purchase Order Number: _____

Previous Ordinance or Resolution # _____

Change Order Number: _____

Approval Date: _____

Original Contract Number: _____

Comments: Item Cost includes contract amount of \$2,178,659.65 plus contingency of \$218,000.

DOCUMENT 00500 – AGREEMENT

BETWEEN OWNER AND CONTRACTOR

Contract Name/Title: INDUSTRIAL DRIVE EXTENSION

Contract No.: Bid # 22-27, Construction – Industrial Drive Extension

THIS AGREEMENT is dated as of the _____ day of _____ in the year 2022 by and between The City of Fayetteville, Arkansas and _____ (hereinafter called Contractor).

ARTICLE 1 - WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The work under this Contract includes, but is not limited to:

The construction of approximately 2,800 linear feet of two-lane roadway from S Industrial Drive to S City Lake Road including demolition, removal and reconstruction of an existing concrete cul-de-sac and associated earthwork, curb and gutter, sidewalk drainage and miscellaneous related items.

Any use of a third-party dumpster or roll off container shall be procured from the City of Fayetteville Recycling and Trash Collection Division. Use of a Non-City dumpster or roll off container is not allowed.

Open burning and/or blasting are not allowed on City projects.

Contractor is responsible for obtaining all applicable permits; however, fees for the City issued permits shall be waived.

The Contract includes work in City of Fayetteville Right-of-way and in General Utility Easements.

Refer to Section 00400-Bid Form for quantities.

ARTICLE 2 - ENGINEER

2.01 The Contract Documents have been prepared by McClelland Consulting Engineers, Inc. who assumes all duties and responsibilities, and has the rights and authority assigned to the Engineer by the City of Fayetteville in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

DOCUMENT 00500 – AGREEMENT (continued)

ARTICLE 3 - CONTRACT TIME

3.01 TIME OF THE ESSENCE:

- A. All time limits for milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

3.02 DATES FOR SUBSTANTIAL COMPLETION AND FINAL PAYMENT:

- A. The Work shall be Substantially Completed within 270 consecutive calendar days after the date when the Contract Times commence to run as provided in the GENERAL CONDITIONS, and final completion and ready for final payment in accordance with the GENERAL CONDITIONS within 300 consecutive calendar days after the date when the Contract Times commence to run.

3.03 LIQUIDATED DAMAGES:

- A. Owner and Contractor recognize that time is of the essence of this Agreement and that The City of Fayetteville will suffer financial loss if the Work is not completed within the time specified above, plus any extensions thereof allowed in accordance with the GENERAL CONDITIONS. The parties also recognize the delays, expense, and difficulties involved in proving the actual loss suffered by The City of Fayetteville if the Work is not Substantially Completed on time. Accordingly, instead of requiring any such proof, The City of Fayetteville and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay The City of Fayetteville Seven Hundred Fifty Dollars (\$750.00) for each calendar day that expires after the time specified above in Paragraph 3.02 for Substantial Completion until the Work is Substantially Complete. After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the time specified in Paragraph 3.02 for completion and readiness for final payment or any proper extension thereof granted by The City of Fayetteville, Contractor shall pay The City of Fayetteville Five Hundred Dollars (\$500.00) for each calendar day that expires after the time specified for completion and readiness for final payment.

ARTICLE 4 - CONTRACT PRICE

- 4.01 The CITY OF FAYETTEVILLE agrees to pay, and the CONTRACTOR agrees to accept, as full and final compensation for all work done under this agreement, the amount based on the unit prices bid in the Proposal (BID FORM) which is hereto attached, for the actual amount accomplished under each pay item, said payments to be made in lawful money of the United States at the time and in the manner set forth in the Specifications.
- 4.02 As provided in the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by ENGINEER

DOCUMENT 00500 – AGREEMENT (continued)

as provided in the General Conditions. Unit prices have been computed as provided in the General Conditions.

- 4.03 Changes, modifications, or amendments in scope, price or fees to this contract shall not be allowed without a prior formal contract amendment approved by the Mayor and the City Council in advance of the change in scope, cost or fees.
1. There shall be no changes without prior written approval of the Engineer of Record and/or the City's designated Professional Engineer.

ARTICLE 5 - PAYMENT PROCEDURES

5.01 SUBMITTAL AND PROCESSING OF PAYMENTS:

- A. Contractor shall submit Applications for Payment in accordance with the GENERAL CONDITIONS. Applications for Payment will be processed by Engineer as provided in the GENERAL CONDITIONS.

5.02 PROGRESS PAYMENTS, RETAINAGE:

- A. The City of Fayetteville shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment as recommended by Engineer, on or about the 15th day of each month during construction. All such payments will be measured by the schedule of values established in the GENERAL CONDITIONS (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements.
 1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below, but, in each case, less the aggregate of payments previously made and less such amounts as Engineer shall determine, or The City of Fayetteville may withhold, in accordance with the GENERAL CONDITIONS.
 - a. 95% of Work Completed (with the balance being retainage). If Work has been 50% completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to The City of Fayetteville and Engineer, The City of Fayetteville on recommendation of Engineer, may determine that as long as the character and progress of the Work subsequently remain satisfactory to them, there will be no additional retainage on account of Work subsequently completed, in which case the remaining progress payments prior to Substantial Completion will be an amount equal to 100% of the Work Completed less the aggregate of payments previously made; and

DOCUMENT 00500 – AGREEMENT (continued)

- b. 100% of Equipment and Materials not incorporated in the Work but delivered, suitably stored, and accompanied by documentation satisfactory to The City of Fayetteville as provided in the GENERAL CONDITIONS.

5.03 FINAL PAYMENT:

- A. Upon final completion and acceptance of the Work in accordance with the GENERAL CONDITIONS, The City of Fayetteville shall pay the remainder of the Contract Price as recommended by Engineer and as provided in the GENERAL CONDITIONS.

ARTICLE 6 - CONTRACTOR'S REPRESENTATIONS

6.01 In order to induce The City of Fayetteville to enter into this Agreement, Contractor makes the following representations:

- A. Contractor has examined and carefully studied the Contract Documents including the Addenda and other related data identified in the Bid Documents.
- B. Contractor has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, performance, and furnishing of the Work.
- C. Contractor is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, performance, and furnishing of the Work.
- D. Contractor has carefully studied all:
 - 1. Reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site; and
 - 2. Reports and drawings of a Hazardous Environmental Condition, if any, at the Site. Contractor acknowledges that The City of Fayetteville and Engineer do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Contract Documents with respect to Underground Facilities at or contiguous to the Site.
- E. Contractor has obtained and carefully studied (or assumes responsibility of having done so) all such additional supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site or otherwise which may affect cost, progress, performance, and furnishing of the Work or which relate to any aspect of the means, methods, techniques,

DOCUMENT 00500 – AGREEMENT (continued)

sequences, and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto.

- F. Contractor does not consider that any additional examinations, investigations, explorations, tests, studies, or data are necessary for the performing and furnishing of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.
- G. Contractor is aware of the general nature of work to be performed by The City of Fayetteville and others at the Site that relates to the Work as indicated in the Contract Documents.
- H. Contractor has correlated the information known to Contractor, information and observations obtained from visits to the Site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.
- I. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents and the written resolution thereof by Engineer is acceptable to Contractor.
- J. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 7 - CONTRACT DOCUMENTS

7.01 CONTENTS:

- A. The Contract Documents which comprise the entire Agreement between The City of Fayetteville and Contractor concerning the Work consist of the following and may only be amended, modified, or supplemented as provided in the GENERAL CONDITIONS:
 - 1. This Agreement.
 - 2. Exhibits to this Agreement (enumerated as follows):
 - a. Notice to Proceed.
 - b. Contractor's Bid.
 - c. Documentation submitted by Contractor prior to Notice of Award.
 - 3. Performance, Payment, and other Bonds.
 - 4. General Conditions.
 - 5. Supplementary Conditions.
 - 6. Specifications consisting of divisions and sections as listed in table of contents of Project Manual.
 - 7. Drawings consisting of a cover sheet and sheets as listed in the table of contents thereof, with each sheet bearing the following general title: **INDUSTRIAL DRIVE EXTENSION**
 - 8. Addenda numbers ____ inclusive.

DOCUMENT 00500 – AGREEMENT (continued)

9. The following which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto: All Written Amendments and other documents amending, modifying, or supplementing the Contract Documents pursuant to the GENERAL CONDITIONS.

ARTICLE 8 - MISCELLANEOUS

8.01 TERMS:

- A. Terms used in this Agreement which are defined in the GENERAL CONDITIONS shall have the meanings stated in the GENERAL CONDITIONS.

8.02 ASSIGNMENT OF CONTRACT:

- A. No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by Law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

8.03 SUCCESSORS AND ASSIGNS:

- A. The City of Fayetteville and Contractor each binds himself, his partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

8.04 SEVERABILITY:

- A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon The City of Fayetteville and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

8.05 FREEDOM OF INFORMATION ACT:

- A. City contracts and documents prepared while performing city contractual work are subject to the Arkansas Freedom of Information Act. If a Freedom of Information Act request is presented to the City of Fayetteville, the contractor will do everything possible to provide the documents in a prompt and timely manner as prescribed in the Arkansas Freedom of Information Act (A.C.A. §25-19-101 et. seq.). Only legally authorized photocopying costs pursuant to the FOIA may be assessed for this compliance.

DOCUMENT 00500 – AGREEMENT (continued)

8.06 LIENS:

- A. **No liens against this construction project are allowed.** Arkansas law (A.C.A. §§18-44-501 through 508) prohibits the filing of any mechanics' of materialmen's liens in relation to this public construction project. Arkansas law requires and the contractor promises to provide and file with the Circuit Clerk of Washington County a bond in a sum equal to the amount of this contract. Any subcontractor or materials supplier may bring an action for non-payment or labor or material on the bond. The contractor promises to notify every subcontractor and materials supplier for this project of this paragraph and obtain their written acknowledgement of such notice prior to commencement of the work of the subcontractor or materials supplier.

DOCUMENT 00500 – AGREEMENT (continued)

IN WITNESS WHEREOF, The City of Fayetteville and Contractor have signed this Agreement in quadruplicate. One counterpart each has been delivered to Contractor. Three counterparts each has been retained by The City of Fayetteville. All portions of the Contract Documents have been signed, initialed, or identified by The City of Fayetteville and Contractor.

This Agreement will be effective on _____, 20__, which is the Effective Date of the Agreement.

CONTRACTOR:

CITY OF FAYETTEVILLE

By: MARK MAHAFFEY

By: Lioneld Jordan

(Type or legibly print)

Mark Mahaffey

(Signature)

(Signature)

Title: General Manager

Title: Mayor

Contractor shall attach evidence of authority to sign.

If Contractor is a corporation, corporate entity or LLC, Contractor shall attach Corporate Resolution authorizing Contractor's signature and execution of Agreement.

Further if Contractor is a corporation, corporate entity or LLC, Contractor shall also attach a copy of the Contractor's Articles of Incorporation and a copy form the Arkansas State Secretary of State to document that the corporation, corporate entity or LLC is in current "Good Standing" with the State of Arkansas and such entity is permitted to perform work in the State of Arkansas.

Attest



(SEAL)

Attest

DOCUMENT 00500 – AGREEMENT (continued)

Address for giving notices

1411 W. VAN ASCHÉ dr.
Fayetteville, Ar. 72704

Address for giving notices

113 W. Mountain St.
Fayetteville, AR 72701

License No. 0040940823

Agent for Service of process

GERALD Tomlinson
(Type or legibly print)

Contractor shall attach evidence of authority of Agent for Service process to sign. If Contractor is a corporation, corporate entity or LLC, Contractor shall attach Corporate Resolution authorizing Agent for Service process authority to sign.

(If Contractor is a corporation, corporate entity or LLC, attach evidence of authority to sign.)

END OF DOCUMENT 00500



Tomlinson Asphalt Co., Inc.
1411 W. Van Asche Dr.
Fayetteville, AR 72704
PH: (479) 521-3179
Fax: (479) 521-6539

To whom it may concern -

March 15, 2021

This is to verify the following individuals are authorized to sign and bind Tomlinson Asphalt Company, Inc. relating to bids, and contracts for work for the Company:

John Mark Mahaffey – General Manager

David Bryon Anderson – Project Manager

Nathan Clinton Mahaffey – Project Manager

This authorization is effective today until revoked or rescinded.

A handwritten signature in blue ink that reads "Mary E. Tomlinson".

Mary E. Tomlinson

Vice President



Search Incorporations, Cooperatives, Banks and Insurance Companies

This is only a preliminary search and no guarantee that a name is available for initial filing until a confirmation has been received from the Secretary of State after filing has been processed. Please review our [NAME AVAILABILITY GUIDELINES HERE](#) prior to searching for a new entity name.

[Printer Friendly Version](#)

LLC Member information is now confidential per Act 865 of 2007

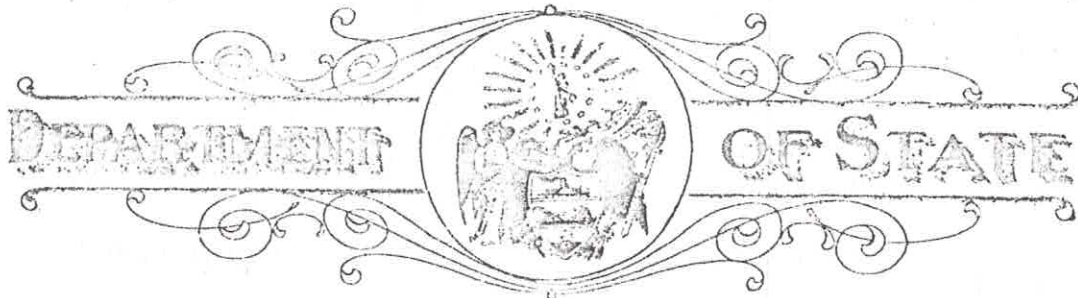
Use your browser's back button to return to the Search Results

[Begin New Search](#)

For service of process contact the [Secretary of State's office](#).

Corporation Name	TOMLINSON ASPHALT COMPANY, INC.
Fictitious Names	
Filing #	100051355
Filing Type	For Profit Corporation
Filed under Act	Dom Bus Corp; 576 of 1965
Status	Good Standing
Principal Address	
Reg. Agent	GERALD M. TOMLINSON
Agent Address	1411 VAN ASCHE DRIVE FAYETTEVILLE, AR 72704
Date Filed	06/21/1976
Officers	SEE FILE, Incorporator/Organizer ROBERT FERGUSON , Tax Preparer GERALD TOMLINSON , President BARBARA A TOMLINSON , Secretary MARY E TOMLINSON , Vice-President
Foreign Name	N/A
Foreign Address	
State of Origin	N/A
Purchase a Certificate of Good Standing for this Entity	Pay Franchise Tax for this corporation

STATE OF ARKANSAS



GEORGE O. JERNIGAN, JR., SECRETARY OF STATE

*To All to Whom These Presents Shall Come, Greeting
I, George O. Jernigan, Jr. Secretary of State of the State of
Arkansas, do hereby certify that the following and hereto attached
instrument of writing is a true and perfect copy of*

ARTICLES OF INCORPORATION

OF

TOMLINSON ASPHALT COMPANY, INC.

FILED

JUN 23 4 1:08

RUTH E. ROBERTS
CO. AND PUBLIC CLERK
WASHINGTON, CO. ARK.

Original Articles filed:
June 21, 1976

STATE OF ARKANSAS

ARTICLES OF INCORPORATION

TONLINSON ASPHALT COMPANY, INC.

I, THE UNDERSIGNED, in order to form a corporation for the purposes hereinafter stated, under and pursuant to the provisions of an Act of the General Assembly of the State of Arkansas, entitled "Arkansas Business Corporation Act", enacted by Laws of 1965, Act 576, DO HEREBY CERTIFY AS FOLLOWS:

FIRST: The name of the corporation is TONLINSON ASPHALT COMPANY, INC.

SECOND: The nature of the business of the corporation and the objects or purposes proposed to be transacted, promoted or carried on by it, are as follows, to-wit:

Section A: To engage in the general construction business of construction of private, commercial, and industrial pipeline, roadways, streets, and general civil engineering construction ~~work of all kinds~~ and types.

Section B: To apply for, procure and do all things incidental to applying for, obtaining, and retaining and renewing a General Contractor's License within any of the states, districts, territories or colonies of the United States subject to the laws of such state, district, territory, colony or country.

Section C: To acquire, purchase, own, hold, operate, develop, lease, mortgage, pledge, exchange, sell, transfer, or otherwise invest, trade or deal in, in any manner, securities, stocks, mortgages, bonds, real and personal property of every kind and description or in any interest therein.

out of the State of Arkansas, as well as within the said State. In any state or country or political division thereof in which the corporation may have qualified to do business, it shall have all the objects and powers herein set forth, but only to such extent as may be permitted by the laws of such state or country or political division thereof to any business or commercial corporation.

Section E: To do all and everything necessary and proper for the accomplishment of the objects enumerated in these Articles of Incorporation, or any amendment thereof, or necessary or incidental to the protection and benefit of this corporation; and in general to carry on any lawful business necessary or incidental to the attainment of the objects of this corporation, whether or not such business is similar in nature to the objects set forth in these Articles of Incorporation or any amendments thereof.

The foregoing clauses shall be construed both as objects and powers; and it is hereby expressly provided that the foregoing ~~enumeration of~~ specific objects or powers shall not be held to limit or restrict in any manner either the objects or powers of the corporation, and that the corporation shall possess such incidental powers as are reasonably necessary or convenient for the accomplishment of any of the objects or powers hereinbefore enumerated, either alone or in association with any government, state, Municipality, corporation, association, partnership, as a partner or otherwise, person, organization or entity whatsoever, at least to the same extent and as fully as individuals might or would do as principals, agents, contractors or otherwise.

THIRD: The period of existence of this corporation shall be perpetual.

FOURTH: The principal office or place of business of the corporation

Tomlinson, whose address is 170 E. Prospect, Fayetteville, Arkansas.

The registered office of this corporation is that of the registered agent at said address.

SIXTH: The total amount of authorized capital stock of this corporation is 100 shares, without nominal, stated or par value. Each share of said stock shall have one vote.

SEVENTH: The amount of capital with which this corporation shall begin business is \$300.00 Dollars.

EIGHTH: The name and post office address of the incorporators are as follows:

Phyllis Hall Johnson
Fayetteville, Arkansas

NINTH: The number of directors of the corporation shall be fixed by the By-laws and may be increased or decreased from time to time in the manner specified therein, provided, however, that the number of directors shall not be less than three, unless there are less than three shareholders of record, in which case the number of directors may be one or three but not less than the number of shareholders. Election of directors need not be by ballot. No director of the corporation need be a stockholder. Any director may be removed at any time, either for or without cause, so long as the stockholders are entitled to vote in respect to the corporate affairs and management of the corporation, by the affirmative vote of stockholders holding of record a majority of the outstanding shares of the stock of the corporation, which were entitled to vote at the election of such director, given at a special meeting of such stockholders called for the purpose.

TENTH: In furtherance, not in limitation, of the powers conferred upon the

privileges of the corporation or conferred by statute, and do all acts and things which may be done by the corporation, including, but without limiting the generality of the foregoing, the right:

Section A: By resolution or resolutions passed by the majority vote of all of the members of the Board of Directors as from time to time constituted to make, adopt, alter, amend and repeal from time to time the By-laws of the corporation, provided, however, the holders of the majority of the issued and outstanding stock may alter, amend, or repeal the By-laws made by the Board of Directors and may from time to time limit or define the right of the Board of Directors to alter, amend or repeal any By-laws or By-laws made or adopted; and

Section B: By resolution or resolutions passed by the affirmative vote of a majority of the number of Directors as from time to time fixed by the By-laws of the corporation, to designate one or more committees, each committee to consist of two or more of the directors of the corporation, and each such committee to the extent provided in said resolution or resolutions or in the By-laws of the corporation, shall have and may exercise the powers of the board of Directors in the management of the business affairs of the corporation, such committee or committees to have such name or names as may be determined from time to time by resolution adopted by the Board of Directors, or as may be stated in the By-laws of the corporation; and

Section C: By resolution or resolutions, passed by the affirmative vote of a majority of the number of directors as from time to time fixed by the By-laws of the corporation, to sell, assign, transfer, convey or dispose of, or to mortgage or otherwise encumber any real estate or personal property or lease of real estate or personal property to which or in which

Section D: By resolution or resolutions passed by the affirmative vote of a majority of the number of directors as from time to time fixed by the By-laws of the corporation, to authorize or approve the purchase by or on behalf of the corporation of its capital stock, bonds, debentures, warrants, rights, script or other obligations or securities of any nature, however evidenced, either pro-rata from all holders thereof or from time to time in the open market or at private sale; and

Section E: By resolution or resolutions passed by the affirmative vote of a majority of the number of directors as from time to time fixed by the By-laws of the corporation, to sell, lease or exchange any or all of the property and assets of this corporation, including its good will and its corporate franchises, upon such terms and conditions as the Board of Directors may deem expedient, and for the best interest of the corporation when and as authorized by the affirmative vote of the holders of record of at least a majority of the issued and outstanding stock, or when authorized by the written consent of the holders of record of at least a majority of the stock issued and outstanding.

IN WITNESS WHEREOF, I have hereunto set my hand on this 18th day of June, 1976.


Phyllis Hall Johnson

ACKNOWLEDGMENT

STATE OF ARKANSAS)
)SS
COUNTY OF WASHINGTON)

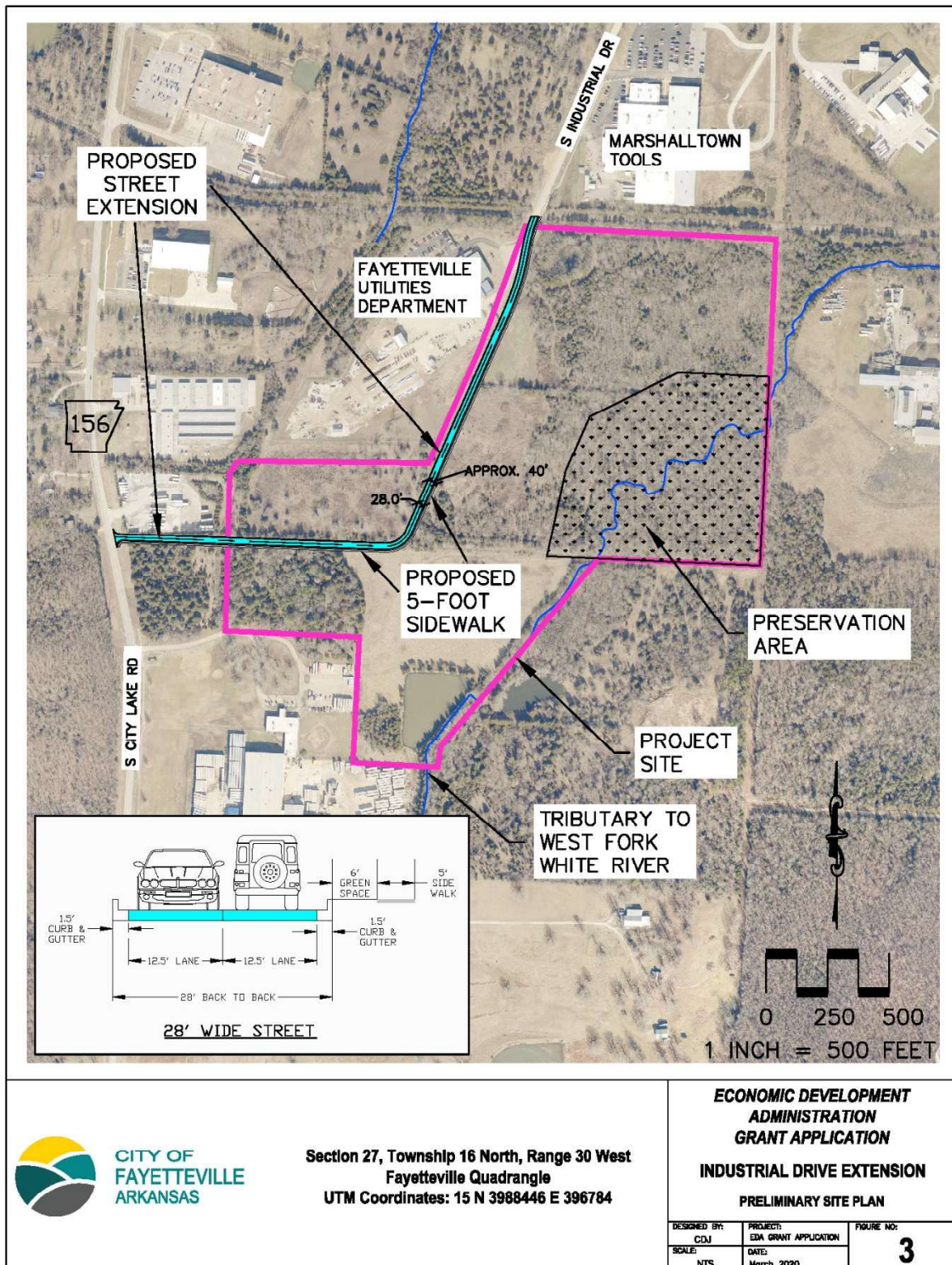
DO IT WHEREFORE that on this 18th day of June, 1976, personally came before me, the undersigned, a Notary Public within and for the State and County aforesaid, Phyllis Hall Johnson, party to the foregoing Articles of Incorporation, known to me personally as such, and acknowledged the same to be the act and deed of the signer, and that the facts stated

Budget Year	Division	Adjustment Number
2023 (BY)	ENGINEERING (621)	
	/Org2	
	Requestor: Matt Casey	

Approval of a construction contract subject to EDA approval in the amount of \$2,178,659.65 with Tomlinson Asphalt Co. for the Industrial Drive Extension Project and approval of \$218,000 in project contingency.

[illegible]

Figure 3. Proposed Project Preliminary Site Plan





BID TABULATION
Bid 22-27, Construction - Industrial Drive Extension

DEADLINE: Thursday, October 13, 2022 at 2:00 PM
 Certification of Funds: \$3,000,000.00

Line #	Description	QTY	UOM	Tomlinson Asphalt Co.		Sweetser Construction, Inc.		Boyles Construction Co., Inc.		APAC-Central, Inc.	
				Unit	Extended	Unit	Extended	Unit	Extended	Unit	Extended
			Total		\$2,178,659.65		\$2,211,615.10		\$2,549,437.80		\$3,223,544.00
1	Act 291 - Trench and Excavation Safety Systems	1	LS	\$500.00	\$500.00	\$10,000.00	\$10,000.00	\$12,000.00	\$12,000.00	\$10,000.00	\$10,000.00
2	Mobilization (Street and Drainage, 5% Max Total Bid Amount)	1	LS	\$58,600.00	\$58,600.00	\$64,400.00	\$64,400.00	\$110,000.00	\$110,000.00	\$150,000.00	\$150,000.00
3	Bonds and Insurance	1	LS	\$20,000.00	\$20,000.00	\$25,460.00	\$25,460.00	\$62,500.00	\$62,500.00	\$12,000.00	\$12,000.00
4	Total Base Bid - (DO NOT INCLUDE PRICING FOR TRENCH AND EXCAVATION SAFETY, MOBILIZATION, OR BONDS AND INSURANCE IN THIS LINE ITEM)	1	LS	\$2,099,559.65	\$2,099,559.65	\$2,111,755.10	\$2,111,755.10	\$2,364,937.80	\$2,364,937.80	\$3,051,544.00	\$3,051,544.00

* NOTICE: Bid award is contingent upon vendor meeting minimum specifications and formal authorization by City Officials.

Amanda Beilfuss Digitally signed by Amanda Beilfuss
 Date: 2022.12.09 12:23:00 -06'00'

 Amanda Beilfuss, Sr. Purchasing Agent

Les McGaugh Digitally signed by Les McGaugh
 Date: 2022.12.09 13:27:13 -06'00'

 Les McGaugh, Purchasing Director



Bid 22-27 Addendum 2

Tomlinson Asphalt co.

Supplier Response

Event Information

Number: Bid 22-27 Addendum 2
Title: Construction - Industrial Drive Extension
Type: Invitation to Bid
Issue Date: 9/18/2022
Deadline: 10/13/2022 02:00 PM (CT)
Notes:

The City of Fayetteville, AR (owner) is accepting formal, sealed bids from properly qualified, experienced, and licensed contractors for the extension of Industrial Drive. The Contract includes, but is not limited to, the construction of approximately 2,800 linear feet of two-lane roadway from S Industrial Drive to S City Lake Road including demolition, removal and reconstruction of an existing concrete cul-de-sac and associated earthwork, curb and gutter, sidewalk drainage, and miscellaneous related items. All questions during the bidding process shall be addressed to Amanda Beilfuss, Sr. Purchasing Agent, at abeilfuss@fayetteville-ar.gov.

Contact Information

Contact: Amanda Beilfuss
Address: Purchasing
Room 306
City Hall
113 West Mountain Street - Room 306
Fayetteville, AR 72701
Email: abeilfuss@fayetteville-ar.gov

Tomlinson Asphalt co. Information

Contact: Mark Mahaffey
Address: 1411 W Van Asche Dr
Fayetteville, AR 72704
Phone: (479) 521-3179
Email: mark@tomlinsonasphalt.com
Web Address: tomlinsonasphalt.com

By submitting your response, you certify that you are authorized to represent and bind your company.

Mark Mahaffey

Signature

Submitted at 10/13/2022 03:29:05 PM (CT)

mark@tomlinsonasphalt.com

Email

Requested Attachments

Bid 22-27, Required Signature Forms

Signature Page.pdf

Please attach your completed forms. These documents can be found in the Project Manual, or as a convenience file in the 'Attachments' tab titled "File #00".

Bid 22-27, Bid Bond

Bid Bond.pdf

Please attach a signed and completed copy of your bid bond. Bid bonds in the form of a cashier's check shall be delivered to City Hall, Purchasing Division before bid deadline and have a copy of the cashier's check uploaded.

Response Attachments

Physical Submittal - Tomlinson.pdf

Physical Submittal

Bid Lines

1	Act 291 - Trench and Excavation Safety Systems	Quantity: <u>1</u>	UOM: <u>Lump Sum</u>	Price: \$500.00	Total: \$500.00
2	Mobilization (Street and Drainage, 5% Max Total Bid Amount)	Quantity: <u>1</u>	UOM: <u>Lump Sum</u>	Price: \$58,600.00	Total: \$58,600.00
3	Bonds and Insurance	Quantity: <u>1</u>	UOM: <u>Lump Sum</u>	Price: \$20,000.00	Total: \$20,000.00

4

Total Base Bid - (DO NOT INCLUDE PRICING FOR TRENCH AND EXCAVATION SAFETY, MOBILIZATION, OR BONDS AND INSURANCE IN THIS LINE ITEM)

Quantity: 1 UOM: Lump Sum Price: \$2,099,559.65 Total: \$2,099,559.65

Item Notes: Bidders shall be required to submit a completed "FILE #03 - Detailed Unit Pricing"

by 5:00 PM on Thursday, October 13, 2022 to the City of Fayetteville Purchasing Division. All "FILE #03 -Detailed Unit Pricing" submitted to the City shall have a sum equal to the TOTAL BASE BID sum total submitted prior to bid deadline. Under no circumstances will a bidder be allowed to revise their bid from the TOTAL BASE BID.

Response Total: \$2,178,659.65



Project Check List

This checklist is for the Bidder's use in preparing & submitting a bid. It is not intended to include all details necessary to prepare a bid and shall not be used as a substitute for the requirements of the bid documents. Information is shown below only as a matter of convenience. Use of this checklist does not relieve the Bidder from the responsibility of meeting all requirements of the Specifications concerning the preparation of an acceptable bid. Bidders are welcome to use this form as a coversheet for a sealed envelope; however, using this form itself is NOT a requirement.



5% Bid Bond of the amount bid accompanied by required documentation (Power of Attorney, etc.)

- In lieu of a bid bond, the bidder may submit a cashier's check from a bank located in the State of Arkansas for at least five percent (5%) of the amount bid (inclusive of any deductive alternates). Cashier's checks shall be made payable to the City of Fayetteville, AR and received prior to the bid deadline by making an in-person delivery appointment with the City Purchasing Division.
- Upload 5% bid bond to the City's electronic bidding platform (preferred) OR attach bid bond with physical submittal and setting up an in-person delivery appointment with the City Purchasing Division.



All addenda shall be signed, acknowledged, and submitted on the appropriate forms (submitting the actual addendums or marking acknowledgement on other bid pages).



All line items shall be appropriately filled out and extended to reveal the line item price as well as the total bid price. Total base bid should be calculated in the provided space.



All pages provided with signature lines shall be appropriately signed, dated accordingly, and included with submitted bid documents



All bids shall be received before the stated deadline utilizing the City's electronic bidding platform or submitting a physical sealed bid to the City Purchasing Division. Submitting a bid electronically is strongly encouraged. A public bid opening will be conducted shortly after the deadline at City Hall and livestreamed at <https://www.youtube.com/user/cityoffayettevillear>. Late or misdirected bids shall not be accepted. The City of Fayetteville shall not be responsible for lost or misdirected bids, or failure of bidder's technical equipment. All bid documents shall be delivered in a sealed envelope to the address stated in the advertisement or updated deadline issued via Addenda. All bids should be delivered with the name of the bidder (contractor) on the sealed envelope as well as the bidder's Arkansas Contractor's License Number. ✓

City of Fayetteville, AR
Purchasing Division – Suite 306
113 W. Mountain
Fayetteville, AR 72701



Additional Information Required:

- List of Subcontractors: Submit form on electronic bidding portal or attach if submitting a physical bid
- AR Secretary of State Filing: CORPORATION
- Arkansas Contractor License or date of application #: 0040940823
- Pursuant Arkansas Code Annotated §25-1-503, the Contractor agrees and certifies that they do not currently boycott Israel and will not boycott Israel during any time in which they are entering into, or while in contract, with any public entity as defined in §25-1-503. If at any time during contract the contractor decides to boycott Israel, the contractor must notify the contracted public entity in writing.

○ Circle applicable answer: YES or NO

DOCUMENT 00400 – BID FORM

Contract Name: INDUSTRIAL DRIVE EXTENSION

Bid Number: 22-27, Construction – Industrial Drive Extension

BID TO:

Owner: The City of Fayetteville, Arkansas

113 West Mountain Street

Fayetteville, Arkansas 72701

BID FROM:

Bidder:

Tomlinson ASPHALT Co. Inc.
1411 W. VAN ASCH
Fry, Ar. 72704

ARTICLE 1 - INTENT

- 1.01 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with Owner in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Bid price and within the Bid time indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.

ARTICLE 2 - TERMS AND CONDITIONS

- 2.01 Bidder accepts all of the terms and conditions of the Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 90 days after the day of Bid opening. Bidder will sign and deliver the required number of counterparts of the Agreement with the Bonds and other documents required by the Bidding Requirements within 15 days after the date of Owner's Notice of Award.

DOCUMENT 00400 – BID FORM (continued)

ARTICLE 3 - BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents, as more fully set forth in the Agreement, that:

- A. Bidder has examined and carefully studied the Bid Documents, and the following Addenda, receipt of all which is hereby acknowledged:

<u>Number</u>	<u>Date</u>
<u>#1</u>	<u>Oct. 3, 2022</u>
<u>#2</u>	<u>Oct. 10, 2022</u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>

- B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, performance, and furnishing of the Work.
- C. Bidder is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, performance, and furnishing of the Work.
- D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site; and (2) reports and drawings of a Hazardous Environmental Condition, if any, at the Site. Bidder acknowledges that such reports and drawings are not Contract Documents and may not be complete for Bidder's purposes. Bidder acknowledges that Owner and Engineer do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Bid Documents with respect to Underground Facilities at or contiguous to the Site.
- E. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all such additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site or otherwise which may affect cost, progress, performance, or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder and safety precautions and programs incident thereto.
- F. Bidder does not consider that any additional examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performing and furnishing of the Work in accordance with the times, price, and other terms and conditions of the Contract Documents.

Bid 22-27, Addendum 1



CITY OF
FAYETTEVILLE
ARKANSAS

Date: Monday, October 3, 2022

To: All Prospective Vendors

From: Amanda Beilfuss – 479.575.8220 – abeilfuss@fayetteville-ar.gov

RE: Bid 22-27, Construction – Industrial Drive Extension

This addendum is hereby made a part of the contract documents to the same extent as though it were originally included therein. Bidders should indicate their receipt of same in the appropriate blank of the Bid Form. **BIDDERS SHOULD ACKNOWLEDGE THIS ADDENDUM ON THE DESIGNATED LOCATION ON THE BID FORM.**

1. A non-mandatory pre-bid meeting was held on-site at the Gulley Park in Fayetteville, Arkansas on September 20, 2022 at 2:00 PM. The sign-in sheet is attached for disclosure to all interested parties.
 - a. Attendees:
 - i. City of Fayetteville:
 1. Amanda Beilfuss, Sr. Purchasing Agent
 2. Chung Tan, Economic Vitality
 3. Leah Tomlinson, McClelland Engineering
 - ii. Vendors:
 1. Sweetser Construction
 2. SurfCo Construction
 3. APAC-Central
 4. Boyles Construction
2. CLARIFICATIONS:
 - a. Question: Can the trees and brush that are to be removed be taken to the City's mulching facility?
 - i. Answer: No, the trees and brush shall not be taken to the City's mulching facility.
 - b. Question: What is the anticipated start date?
 - i. Answer: The earliest is estimated at beginning to mid - December.

Meeting ID 87307110798
Pre-Bid Meeting: Bid 22-27, Construction - Industrial Drive Extension
Start Time 9/29/2022 1:56:14 PM
End Time 9/29/2022 2:07:27 PM
User Email abeilfuss@fayetteville-ar.gov
Duration (Minutes) 12
Participants 7

Name (Original Name)	User Email	Total Duration (Minutes)	Guest
Amanda Beilfuss	abeilfuss@fayetteville-ar.gov	12	No
Charlie Miller		12	Yes
Leah Tomlinson		11	Yes
MJ (MJ# AMBER# & MO)		11	Yes
Chung Tan	ctan@fayetteville-ar.gov	9	No
Doug Luetjen		9	Yes
Scott# Boyles Construction		5	Yes

Bid 22-27, Addendum 2



CITY OF
FAYETTEVILLE
ARKANSAS

Date: Monday, October 10, 2022

To: All Prospective Vendors

From: Amanda Beilfuss – 479.575.8220 – abeilfuss@fayetteville-ar.gov

RE: Bid 22-27, Construction – Industrial Drive Extension

This addendum is hereby made a part of the contract documents to the same extent as though it were originally included therein. Bidders should indicate their receipt of same in the appropriate blank of the Bid Form. **BIDDERS SHOULD ACKNOWLEDGE THIS ADDENDUM ON THE DESIGNATED LOCATION ON THE BID FORM.**

1. The non-mandatory pre-bid meeting was held via zoom on September 29, 2022 at 2:00 PM. The date and location originally listed in Addendum 1 were incorrect.

2. CLARIFICATIONS:

a. Question: Do you know what the engineers estimate is on this job?

i. Answer: *We don't have the engineers estimate. However, the anticipated project range is \$2,750,000 to \$3,500,000.*

b. Question: Will the City be handling construction inspections or McClelland Consulting Engineering (MCE)?

i. Answer: *This will be decided after all bids have been received and the bid deadline has passed.*

c. Question: How will the underground utilities be addressed near the end of the existing cul-de-sac?

i. Answer: *Utility relocations are being coordinated and will be conducted by the utilities or their hired contractor. The awarded contractor for this project will not be responsible for any franchise utility relocation.*

DOCUMENT 00400 – BID FORM (continued)

- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to Work for which this Bid is submitted as indicated in the Contract Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.
- J. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm, or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization, or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham bid; Bidder has not solicited or induced any person, firm, or a corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for himself any advantage over any other Bidder or over Owner.
- K. Bidder will perform the Work in compliance with all applicable trench safety standards set forth in Occupational Safety and Health Administration (OSHA) Part 1926 - Subpart P - Excavations.

ARTICLE 4 – BID PRICING REQUIREMENTS

- 4.01 The City intends to award this contract to the lowest qualified responsive responsible bidder based on the total base bid as long as the base bid amount falls within the amount of funds certified for the project plus 25%.
- 4.02 Bidder shall complete the work in accordance with the Contract Documents for the price(s) submitted by the Bidder.
- 4.03 Bidder agrees that the Work will be substantially completed and completed and ready for final payment within the number of calendar days indicated in the Agreement.
- 4.04 All bids shall be submitted to the City in a lump sum form as presented in the City's electronic bidding portal. Bidders are NOT required to submit a Detailed Unit Pricing at time of bid; however, all bidders shall provide a complete and accurate Detailed Unit Pricing within 3 hours of the bid deadline, no later than 5:00 PM, local time via email to Purchasing@Fayetteville-ar.gov.
- 4.05 Bidders have been provided an anticipated Detailed Unit Pricing with bid. This Detailed Unit Pricing file is being provided as a courtesy to aid and assist with bid preparation. The City reserves the right to modify the Detailed Unit Pricing as it deems necessary prior to requesting the final Detailed Unit Pricing from bidders.
- 4.06 Post-Bid Detailed Unit Pricing Submission Requirements: Bidders shall be required to submit a completed Detailed Unit Pricing within three (3) hours of the bid deadline, no later than 5:00 PM, local time via email to Purchasing@Fayetteville-ar.gov. All Detailed Unit

DOCUMENT 00400 – BID FORM (continued)

Pricing submitted to the City shall have a sum equal to the Total Base Bid submitted prior to the bid deadline. Bidders are strictly prohibited from modifying the Total Base Bid Amount. The sum of line items within the Detailed Unit Pricing shall fully equal the submitted Total Base Bid upon receipt to the City.

- 4.07 The City reserves the right to reject any bid response from a bidder who fails to submit a complete and acceptable Detailed Unit Pricing within the allowable post-bid time frame.
- 4.08 The final Detailed Unit Pricing shall become part of the vendor's response to the bid. The final Detailed Unit Pricing will be bound by contract and utilized for payment processing as reflected in the bid specifications and project manual.

ARTICLE 5 - CONTRACT ITEMS

- 5.01 Bidder agrees that the Work will be substantially completed and completed and ready for final payment within the number of calendar days indicated in the Agreement.
- 5.02 Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified in the Agreement.

ARTICLE 6 - BID CONTENT

- 6.01 The following documents are attached to and made a condition of this Bid:
 - A. Required Bid security in the form of a cashier's check from a bank located in the State of Arkansas or a Bid Bond in the amount of 5% of Amount Bid Dollars (\$ _____).
 - B. A tabulation of Subcontractors and other persons and organizations required to be identified in this Bid.

ARTICLE 7 - COMMUNICATIONS

- 7.01 Communications concerning this Bid shall be addressed to the Bidder as follows:

MARK MANAFFET
C Tomlinson Asphalt Co Inc
1411 W. VAN ASche, Fay, Ar. 72704
Email: mark@tomlinsonasphalt.com
Phone No. 479-521-3179
Fax No. 479-521-6539

DOCUMENT 00400 – BID FORM (continued)

ARTICLE 8 - TERMINOLOGY

- 8.01 The terms used in this Bid which are defined in the GENERAL CONDITIONS or Instructions to Bidders will have the meanings assigned to them.

Arkansas State Contractor License No. 0040940823 (Not required for Federal Aid Projects; however, Contractor must show proof that they have registered with the proper state authorities for a license.)

If Bidder is:

An Individual

Name (type or printed): _____

By: _____

(SEAL)

(Individual's Signature)

Doing business as: _____

Business address: _____

Phone No. _____ Fax No. _____

Email address: _____

A Partnership

Partnership Name: _____

(SEAL)

By: _____

(Signature of general partner - attach evidence of authority to sign)

Name (type or printed): _____

Business address: _____

Phone No. _____ Fax No. _____

Email address: _____

DOCUMENT 00400 – BID FORM (continued)

A Corporation or LLC

Corporation Name: Tomlinson Asphalt Co. Inc.
(SEAL)

State of Incorporation: Arkansas

Type (General Business, Professional, Service, Limited Liability): General Business

By: Mark Mahaffey
(Signature of general partner - attach evidence of authority to sign)

Name (type or printed): MARK MAHAFFEY

Title: General Manager

SEAL) May E. Tomlinson, sec.
Attest: (Signature of Corporate Secretary)



Phone No. 479-521-3179 Fax No. 479-521-6539

Email address: mark@tomlinsonasphalt.com

Tax ID Number (TIN): 71-0477844

Unique Entity Identifier (UEI) # _____

Cage Code: _____

DOCUMENT 00430 – LIST OF SUBCONTRACTORS

In compliance with the Instructions to Bidders and other Contract Documents, the undersigned submits the following names of Subcontractors to be used in performing the Work for:

BID # 22-27, CONSTRUCTION – INDUSTRIAL DRIVE EXTENSION

Bidder certifies that all Subcontractors listed are eligible to perform the Work.

<u>Subcontractor's Work</u>	<u>Subcontractor's Name and Address</u>	<u>Expected Percentage or Value</u>
Clearing/Demolition	<u>Whittmore Trucking</u> <u>3946 Madison Blvd, Wesley, Ar. 72773</u>	<u>< 1%</u>
SWPPP/Erosion Control	<u>—</u>	<u>—</u>
Asphalt	<u>—</u>	<u>—</u>
<u>Pavement Markings +</u> Concrete <u>signage</u>	<u>Time Striping</u> <u>5439 Arkhola Rd. Van Buren, Ar</u>	<u>1%</u>
Landscaping	<u>Professional Landscaping</u> <u>423 Oak Rd. Springdale, Ar</u>	<u>< 1%</u>
Material Testing	<u>McClelland Consulting Engr</u> <u>1580 East Stearns St, Fayetteville, Ar</u>	<u>< 1%</u>
Other (designate)	<u>Water / Fire hydrant work</u> <u>Crowder Const.</u> <u>804 SE 21st St. Bentonville, Ar</u>	<u>3%</u>

NOTE: This form must be submitted in accordance with the Instructions to Bidders.

NOTE: Per the conditions of the US Economic Development Administration grant, all subcontractors are required to purchase and maintain workman's compensation insurance and public liability insurance.


Bidder's Signature

THE
CINCINNATI INSURANCE COMPANY
CINCINNATI, OHIO

Bid Bond

KNOW ALL MEN BY THESE PRESENTS, that we Tomlinson Asphalt Company, Inc.

as Principal, hereinafter called the Principal, and THE CINCINNATI INSURANCE COMPANY, 6200 S. Gilmore Road, Fairfield, Ohio 45014-5141, a corporation duly organized under the laws of the State of Ohio, as Surety, hereinafter called the Surety, are held and firmly bound unto
City of Fayetteville

as Oblige, hereinafter called the Oblige, in the sum of Five Percent of Bid

Dollars (\$ 5% of bid),

for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for

Bid 22-27, Construction-Industrial Drive Extension

NOW, THEREFORE, if the Oblige shall accept the bid of the Principal and the Principal shall enter into a Contract with the Oblige in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Oblige the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Oblige may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this 12th day of October

2022

Tomlinson Asphalt Company, Inc.

(Principal)



By: [Signature]

PM

(Title)

THE CINCINNATI INSURANCE COMPANY

(Surety)

(Seal)

Tracy D. Fletcher
(Witness)

By: Todd Easterling

Todd Easterling

Attorney-in-Fact

The Company executing this bond vouches that this document conforms to American Institute of Architects Document A310, February 1970 Edition.

S-2000-AIA (6/08) PUBLIC

Fairfield, Ohio

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That THE CINCINNATI INSURANCE COMPANY and THE CINCINNATI CASUALTY COMPANY, corporations organized under the laws of the State of Ohio, and having their principal offices in the City of Fairfield, Ohio (herein collectively called the "Companies"), do hereby constitute and appoint

Adrian W. Luttrell; Mike A. Luttrell; Danny L. Schneider; Billy Eugene Bennett, Jr.; Steven W. Hutchins and Todd Easterling

of Springdale, Arkansas

their true and legal Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign, execute, seal and deliver on behalf of the Companies as Surety, any and all bonds, policies, undertakings or other like instruments, as follows:

Any such obligations in the United States, up to
Fifteen Million and No/100 (\$15,000,000.00).

This appointment is made under and by authority of the following resolutions adopted by the Boards of Directors of The Cincinnati Insurance Company and The Cincinnati Casualty Company, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the President or any Senior Vice President be hereby authorized, and empowered to appoint Attorneys-in-Fact of the Company to execute any and all bonds, policies, undertakings, or other like instruments on behalf of the Corporation, and may authorize any officer or any such Attorney-in-Fact to affix the corporate seal; and may with or without cause modify or revoke any such appointment or authority. Any such writings so executed by such Attorneys-in-Fact shall be binding upon the Company as if they had been duly executed and acknowledged by the regularly elected officers of the Company.

RESOLVED, that the signature of the President or any Senior Vice President and the seal of the Company may be affixed by facsimile on any power of attorney granted, and the signature of the Secretary or Assistant Vice-President and the Seal of the Company may be affixed by facsimile to any certificate of any such power and any such power of certificate bearing such facsimile signature and seal shall be valid and binding on the Company. Any such power so executed and sealed and certified by certificate so executed and sealed shall, with respect to any bond or undertaking to which it is attached, continue to be valid and binding on the Company.

IN WITNESS WHEREOF, the Companies have caused these presents to be sealed with their corporate seals, duly attested by their President or any Senior Vice President this 16th day of March, 2021.



STATE OF OHIO)SS:
COUNTY OF BUTLER)

THE CINCINNATI INSURANCE COMPANY
THE CINCINNATI CASUALTY COMPANY

Stephen A. Ventre

On this 16th day of March, 2021 before me came the above-named President or Senior Vice President of The Cincinnati Insurance Company and The Cincinnati Casualty Company, to me personally known to be the officer described herein, and acknowledged that the seals affixed to the preceding instrument are the corporate seals of said Companies and the corporate seals and the signature of the officer were duly affixed and subscribed to said instrument by the authority and direction of said corporations.

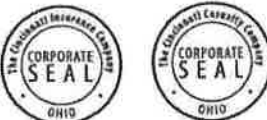


Keith Collett
Keith Collett, Attorney at Law
Notary Public – State of Ohio

My commission has no expiration date.
Section 147.03 O.R.C.

I, the undersigned Secretary or Assistant Vice-President of The Cincinnati Insurance Company and The Cincinnati Casualty Company, hereby certify that the above is the Original Power of Attorney issued by said Companies, and do hereby further certify that the said Power of Attorney is still in full force and effect.

Given under my hand and seal of said Companies at Fairfield, Ohio, this 12th day of October, 2022



Ed H

BN-1457 (3/21)



Project Check List

This checklist is for the Bidder's use in preparing & submitting a bid. It is not intended to include all details necessary to prepare a bid and shall not be used as a substitute for the requirements of the bid documents. Information is shown below only as a matter of convenience. Use of this checklist does not relieve the Bidder from the responsibility of meeting all requirements of the Specifications concerning the preparation of an acceptable bid. Bidders are welcome to use this form as a coversheet for a sealed envelope; however, using this form itself is NOT a requirement.



5% Bid Bond of the amount bid accompanied by required documentation (Power of Attorney, etc.)

- In lieu of a bid bond, the bidder may submit a cashier's check from a bank located in the State of Arkansas for at least five percent (5%) of the amount bid (inclusive of any deductive alternates). Cashier's checks shall be made payable to the City of Fayetteville, AR and received prior to the bid deadline by making an in-person delivery appointment with the City Purchasing Division.
- Upload 5% bid bond to the City's electronic bidding platform (preferred) OR attach bid bond with physical submittal and setting up an in-person delivery appointment with the City Purchasing Division.



All addenda shall be signed, acknowledged, and submitted on the appropriate forms (submitting the actual addendums or marking acknowledgement on other bid pages).



All line items shall be appropriately filled out and extended to reveal the line item price as well as the total bid price. Total base bid should be calculated in the provided space.



All pages provided with signature lines shall be appropriately signed, dated accordingly, and included with submitted bid documents



All bids shall be received before the stated deadline utilizing the City's electronic bidding platform or submitting a physical sealed bid to the City Purchasing Division. Submitting a bid electronically is strongly encouraged. A public bid opening will be conducted shortly after the deadline at City Hall and livestreamed at <https://www.youtube.com/user/cityoffayettevillear>. Late or misdirected bids shall not be accepted. The City of Fayetteville shall not be responsible for lost or misdirected bids, or failure of bidder's technical equipment. All bid documents shall be delivered in a sealed envelope to the address stated in the advertisement or updated deadline issued via Addenda. All bids should be delivered with the name of the bidder (contractor) on the sealed envelope as well as the bidders Arkansas Contractor's License Number. ✓

City of Fayetteville, AR
Purchasing Division – Suite 306
113 W. Mountain
Fayetteville, AR 72701



Additional Information Required:

- List of Subcontractors: Submit form on electronic bidding portal or attach if submitting a physical bid
- AR Secretary of State Filing: CORPORATION
- Arkansas Contractor License or date of application #: 0040940823
- Pursuant Arkansas Code Annotated §25-1-503, the Contractor agrees and certifies that they do not currently boycott Israel and will not boycott Israel during any time in which they are entering into, or while in contract, with any public entity as defined in §25-1-503. If at any time during contract the contractor decides to boycott Israel, the contractor must notify the contracted public entity in writing.

○ Circle applicable answer: YES or NO

DOCUMENT 00400 – BID FORM

Contract Name: INDUSTRIAL DRIVE EXTENSION

Bid Number: 22-27, Construction – Industrial Drive Extension

BID TO:

Owner: The City of Fayetteville, Arkansas

113 West Mountain Street

Fayetteville, Arkansas 72701

BID FROM:

Bidder:

Tomlinson ASPHALT Co. Inc.
1411 W. VAN ASCH
Fry. Ar. 72704

ARTICLE 1 - INTENT

- 1.01 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with Owner in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Bid price and within the Bid time indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.

ARTICLE 2 - TERMS AND CONDITIONS

- 2.01 Bidder accepts all of the terms and conditions of the Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 90 days after the day of Bid opening. Bidder will sign and deliver the required number of counterparts of the Agreement with the Bonds and other documents required by the Bidding Requirements within 15 days after the date of Owner's Notice of Award.

DOCUMENT 00400 – BID FORM (continued)

ARTICLE 3 - BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents, as more fully set forth in the Agreement, that:

- A. Bidder has examined and carefully studied the Bid Documents, and the following Addenda, receipt of all which is hereby acknowledged:

<u>Number</u>	<u>Date</u>
<u>#1</u>	<u>Oct. 3, 2022</u>
<u>#2</u>	<u>Oct. 10, 2022</u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>

- B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, performance, and furnishing of the Work.
- C. Bidder is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, performance, and furnishing of the Work.
- D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site; and (2) reports and drawings of a Hazardous Environmental Condition, if any, at the Site. Bidder acknowledges that such reports and drawings are not Contract Documents and may not be complete for Bidder's purposes. Bidder acknowledges that Owner and Engineer do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Bid Documents with respect to Underground Facilities at or contiguous to the Site.
- E. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all such additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site or otherwise which may affect cost, progress, performance, or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder and safety precautions and programs incident thereto.
- F. Bidder does not consider that any additional examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performing and furnishing of the Work in accordance with the times, price, and other terms and conditions of the Contract Documents.

Bid 22-27, Addendum 1



CITY OF
FAYETTEVILLE
ARKANSAS

Date: Monday, October 3, 2022

To: All Prospective Vendors

From: Amanda Beilfuss – 479.575.8220 – abeilfuss@fayetteville-ar.gov

RE: Bid 22-27, Construction – Industrial Drive Extension

This addendum is hereby made a part of the contract documents to the same extent as though it were originally included therein. Bidders should indicate their receipt of same in the appropriate blank of the Bid Form. **BIDDERS SHOULD ACKNOWLEDGE THIS ADDENDUM ON THE DESIGNATED LOCATION ON THE BID FORM.**

1. A non-mandatory pre-bid meeting was held on-site at the Gulley Park in Fayetteville, Arkansas on September 20, 2022 at 2:00 PM. The sign-in sheet is attached for disclosure to all interested parties.
 - a. Attendees:
 - i. City of Fayetteville:
 1. Amanda Beilfuss, Sr. Purchasing Agent
 2. Chung Tan, Economic Vitality
 3. Leah Tomlinson, McClelland Engineering
 - ii. Vendors:
 1. Sweetser Construction
 2. SurfCo Construction
 3. APAC-Central
 4. Boyles Construction
2. CLARIFICATIONS:
 - a. Question: Can the trees and brush that are to be removed be taken to the City's mulching facility?
 - i. Answer: No, the trees and brush shall not be taken to the City's mulching facility.
 - b. Question: What is the anticipated start date?
 - i. Answer: The earliest is estimated at beginning to mid - December.

Meeting ID 87307110798
Pre-Bid Meeting: Bid 22-27, Construction - Industrial Drive Extension
Start Time 9/29/2022 1:56:14 PM
End Time 9/29/2022 2:07:27 PM
User Email abeilfuss@fayetteville-ar.gov
Duration (Minutes) 12
Participants 7

Name (Original Name)	User Email	Total Duration (Minutes)	Guest
Amanda Beilfuss	abeilfuss@fayetteville-ar.gov	12	No
Charlie Miller		12	Yes
Leah Tomlinson		11	Yes
MJ (MJ# AMBER# & MO)		11	Yes
Chung Tan	ctan@fayetteville-ar.gov	9	No
Doug Luetjen		9	Yes
Scott# Boyles Construction		5	Yes

Bid 22-27, Addendum 2



CITY OF
FAYETTEVILLE
ARKANSAS

Date: Monday, October 10, 2022

To: All Prospective Vendors

From: Amanda Beilfuss – 479.575.8220 – abeilfuss@fayetteville-ar.gov

RE: Bid 22-27, Construction – Industrial Drive Extension

This addendum is hereby made a part of the contract documents to the same extent as though it were originally included therein. Bidders should indicate their receipt of same in the appropriate blank of the Bid Form. **BIDDERS SHOULD ACKNOWLEDGE THIS ADDENDUM ON THE DESIGNATED LOCATION ON THE BID FORM.**

1. The non-mandatory pre-bid meeting was held via zoom on September 29, 2022 at 2:00 PM. The date and location originally listed in Addendum 1 were incorrect.

2. CLARIFICATIONS:

a. Question: Do you know what the engineers estimate is on this job?

i. Answer: *We don't have the engineers estimate. However, the anticipated project range is \$2,750,000 to \$3,500,000.*

b. Question: Will the City be handling construction inspections or McClelland Consulting Engineering (MCE)?

i. Answer: *This will be decided after all bids have been received and the bid deadline has passed.*

c. Question: How will the underground utilities be addressed near the end of the existing cul-de-sac?

i. Answer: *Utility relocations are being coordinated and will be conducted by the utilities or their hired contractor. The awarded contractor for this project will not be responsible for any franchise utility relocation.*

DOCUMENT 00400 – BID FORM (continued)

- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to Work for which this Bid is submitted as indicated in the Contract Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.
- J. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm, or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization, or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham bid; Bidder has not solicited or induced any person, firm, or a corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for himself any advantage over any other Bidder or over Owner.
- K. Bidder will perform the Work in compliance with all applicable trench safety standards set forth in Occupational Safety and Health Administration (OSHA) Part 1926 - Subpart P - Excavations.

ARTICLE 4 – BID PRICING REQUIREMENTS

- 4.01 The City intends to award this contract to the lowest qualified responsive responsible bidder based on the total base bid as long as the base bid amount falls within the amount of funds certified for the project plus 25%.
- 4.02 Bidder shall complete the work in accordance with the Contract Documents for the price(s) submitted by the Bidder.
- 4.03 Bidder agrees that the Work will be substantially completed and completed and ready for final payment within the number of calendar days indicated in the Agreement.
- 4.04 All bids shall be submitted to the City in a lump sum form as presented in the City's electronic bidding portal. Bidders are NOT required to submit a Detailed Unit Pricing at time of bid; however, all bidders shall provide a complete and accurate Detailed Unit Pricing within 3 hours of the bid deadline, no later than 5:00 PM, local time via email to Purchasing@Fayetteville-ar.gov.
- 4.05 Bidders have been provided an anticipated Detailed Unit Pricing with bid. This Detailed Unit Pricing file is being provided as a courtesy to aid and assist with bid preparation. The City reserves the right to modify the Detailed Unit Pricing as it deems necessary prior to requesting the final Detailed Unit Pricing from bidders.
- 4.06 Post-Bid Detailed Unit Pricing Submission Requirements: Bidders shall be required to submit a completed Detailed Unit Pricing within three (3) hours of the bid deadline, no later than 5:00 PM, local time via email to Purchasing@Fayetteville-ar.gov. All Detailed Unit

DOCUMENT 00400 – BID FORM (continued)

Pricing submitted to the City shall have a sum equal to the Total Base Bid submitted prior to the bid deadline. Bidders are strictly prohibited from modifying the Total Base Bid Amount. The sum of line items within the Detailed Unit Pricing shall fully equal the submitted Total Base Bid upon receipt to the City.

- 4.07 The City reserves the right to reject any bid response from a bidder who fails to submit a complete and acceptable Detailed Unit Pricing within the allowable post-bid time frame.
- 4.08 The final Detailed Unit Pricing shall become part of the vendor's response to the bid. The final Detailed Unit Pricing will be bound by contract and utilized for payment processing as reflected in the bid specifications and project manual.

ARTICLE 5 - CONTRACT ITEMS

- 5.01 Bidder agrees that the Work will be substantially completed and completed and ready for final payment within the number of calendar days indicated in the Agreement.
- 5.02 Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified in the Agreement.

ARTICLE 6 - BID CONTENT

- 6.01 The following documents are attached to and made a condition of this Bid:
 - A. Required Bid security in the form of a cashier's check from a bank located in the State of Arkansas or a Bid Bond in the amount of 5% of Amount Bid Dollars (\$ _____).
 - B. A tabulation of Subcontractors and other persons and organizations required to be identified in this Bid.

ARTICLE 7 - COMMUNICATIONS

- 7.01 Communications concerning this Bid shall be addressed to the Bidder as follows:

MARK MANAFFET
C Tomlinson Asphalt Co Inc
1411 W. VAN ASche, Fay, Ar. 72704
Email: mark@tomlinsonasphalt.com
Phone No. 479-521-3179
Fax No. 479-521-6539

DOCUMENT 00400 – BID FORM (continued)

ARTICLE 8 - TERMINOLOGY

- 8.01 The terms used in this Bid which are defined in the GENERAL CONDITIONS or Instructions to Bidders will have the meanings assigned to them.

Arkansas State Contractor License No. 0040940823 (Not required for Federal Aid Projects; however, Contractor must show proof that they have registered with the proper state authorities for a license.)

If Bidder is:

An Individual

Name (type or printed): _____

By: _____

(SEAL)

(Individual's Signature)

Doing business as: _____

Business address: _____

Phone No. _____ Fax No. _____

Email address: _____

A Partnership

Partnership Name: _____

(SEAL)

By: _____

(Signature of general partner - attach evidence of authority to sign)

Name (type or printed): _____

Business address: _____

Phone No. _____ Fax No. _____

Email address: _____

DOCUMENT 00400 – BID FORM (continued)

A Corporation or LLC

Corporation Name: Tomlinson Asphalt Co. Inc.
(SEAL)

State of Incorporation: Arkansas

Type (General Business, Professional, Service, Limited Liability): General Business

By: Mark Mahaffey
(Signature of general partner - attach evidence of authority to sign)

Name (type or printed): MARK MAHAFFEY

Title: General Manager

SEAL) May E. Tomlinson, sec.
Attest: (Signature of Corporate Secretary)



Phone No. 479-521-3179 Fax No. 479-521-6539

Email address: mark@tomlinsonasphalt.com

Tax ID Number (TIN): 71-0477844

Unique Entity Identifier (UEI) # _____

Cage Code: _____

DOCUMENT 00430 – LIST OF SUBCONTRACTORS

In compliance with the Instructions to Bidders and other Contract Documents, the undersigned submits the following names of Subcontractors to be used in performing the Work for:

BID # 22-27, CONSTRUCTION – INDUSTRIAL DRIVE EXTENSION

Bidder certifies that all Subcontractors listed are eligible to perform the Work.

<u>Subcontractor's Work</u>	<u>Subcontractor's Name and Address</u>	<u>Expected Percentage or Value</u>
Clearing/Demolition	<u>Whittmore Trucking</u> <u>3946 Madison Blvd, Wesley, Ar. 72773</u>	<u>< 1%</u>
SWPPP/Erosion Control	<u>—</u>	<u>—</u>
Asphalt	<u>—</u>	<u>—</u>
<u>Pavement Markings +</u> Concrete <u>signage</u>	<u>Time Striping</u> <u>5439 Arkhola Rd. Van Buren, Ar</u>	<u>1%</u>
Landscaping	<u>Professional Landscaping</u> <u>423 Oak Rd. Springdale, Ar</u>	<u>< 1%</u>
Material Testing	<u>McClelland Consulting Engr</u> <u>1580 East Stearns St, Fayetteville, Ar</u>	<u>< 1%</u>
Other (designate)	<u>Water / Fire hydrant work</u> <u>Crowder Const.</u> <u>804 SE 21st St. Bentonville, Ar</u>	<u>3%</u>

NOTE: This form must be submitted in accordance with the Instructions to Bidders.

NOTE: Per the conditions of the US Economic Development Administration grant, all subcontractors are required to purchase and maintain workman's compensation insurance and public liability insurance.


Bidder's Signature

Bid 22-27, Construction - Industrial Park Extension

FILE #03 - Detailed Unit Pricing

Detailed Unit Pricing is due to the Purchasing Division no later than 5:00 PM on bid day.

Item	Description	Unit	Est. Qty.	Unit Price	Total Cost
1	Act 291- Trench and Excavation Safety Systems	LS	1	500 ⁰⁰	500 ⁰⁰
2	Mobilization (Street and Drainage, 5% Max Total Bid Amount)	LS	1	58,600 ⁰⁰	58,600 ⁰⁰
3	Bonds and Insurance	LS	1	20,000 ⁰⁰	20,000 ⁰⁰
4	Roadway Construction Control	LS	1	18,000 ⁰⁰	18,000 ⁰⁰
5	Clearing, Grubbing, and Demolition	LS	1	57,700 ⁰⁰	57,700 ⁰⁰
6	Erosion Control	LS	1	46,000 ⁰⁰	46,000 ⁰⁰
7	Traffic Control and Maintenance	LS	1	10,320 ⁰⁰	10,320 ⁰⁰
8	Undercut and Backfill (Allowance)	CY	2063	45 ⁰⁰	92,835 ⁰⁰
9	Rock Excavation (Allowance)	CY	200	300 ⁰⁰	60,000 ⁰⁰
10	Unclassified Excavation (Plan Quantity)	CY	8250	18 ²⁰	150,150 ⁰⁰
11	Select Embankment (Plan Quantity)	CY	6000	26 ⁷³	160,320 ⁰⁰
12	Embankment (Plan Quantity)	CY	9135	17 ⁴⁹	158,949 ⁰⁰
13	Subgrade Preparation (Plan Quantity)	SY	9000	35 ⁰⁰	31,500 ⁰⁰
14	4" Topsoil Placement	SY	7686	7 ⁰⁰	53,802 ⁰⁰
15	18" (Class III RCP) Under Pavement	LF	130	125 ⁰⁰	16,250 ⁰⁰
16	18" (Class III RCP)	LF	1167	65 ⁰⁰	75,855 ⁰⁰
17	24" (Class III RCP) Under Pavement	LF	109	153 ⁰⁰	16,677 ⁰⁰
18	24" (Class III RCP)	LF	744	108 ⁰⁰	80,352 ⁰⁰
19	24" (Class IV RCP) Under Pavement	LF	32	177 ⁰⁰	5,664 ⁰⁰
20	23" x 14" (Class IV HERCP) Under Pavement	LF	34	188 ⁰⁰	6,392 ⁰⁰
21	23" x 14" (Class IV HERCP)	LF	26	150 ⁰⁰	3,900 ⁰⁰
22	18" (RC FES)	EA	1	890 ⁰⁰	890 ⁰⁰
23	24" (RC FES)	EA	5	1,200 ⁰⁰	6,000 ⁰⁰
24	23" x 14" (RC FES)	EA	2	1,300 ⁰⁰	2,600 ⁰⁰
25	(4') Drop Inlet (Curb)	EA	10	5420 ²⁰	54,200 ⁰⁰
26	(5') Drop Inlet (Area)	EA	2	8,200 ⁰⁰	16,400 ⁰⁰
27	(5') Drop Inlet (Curb)	EA	10	5,900 ⁰⁰	59,000 ⁰⁰
28	(4') Junction Box	EA	2	4,800 ⁰⁰	9,600 ⁰⁰
29	(5') Junction Box	EA	1	5,300 ⁰⁰	5,300 ⁰⁰
30	(4') Drop Inlet Extensions	EA	13	900 ⁰⁰	11,700 ⁰⁰
31	(8') Drop Inlet Extensions	EA	3	1,600 ⁰⁰	4,800 ⁰⁰
32	Rip-Rap	SY	80	111 ⁰⁰	8,880 ⁰⁰
33	Concrete Headwalls	EA	2	4,800 ⁰⁰	9,600 ⁰⁰
34	(6") Aggregate Base Course (Class 7)	SY	9000	10.60	95,400 ⁰⁰
35	(Variable depth) Aggregate Base Course (Class 7)	CY	140	118 ⁰⁰	16,520 ⁰⁰
36	(3") Asphalt Concrete Hot Mix Binder Course (ACHMBC)	TON	1280	116 ⁰⁰	148,480 ⁰⁰

37	(2") Asphalt Concrete Hot Mix Surface Course (ACHMSC)	TON	90	134 ⁰⁰	12,060 ⁰⁰
38	(3") Asphalt Concrete Hot Mix Surface Course (ACHMSC)	TON	1260	133 ⁰⁰	167,580 ⁰⁰
39	Concrete Curb and Gutter (Inclusive of Modified Curb & Gutter)	LF	5715	19.15	109,442 ²⁵
40	4" Thick Concrete Sidewalk (5' Wide)	SY	1640	83.70	137,268 ⁰⁰
41	Concrete Driveway Aprons	SY	84	113.76	9,555 ⁸⁴
42	Concrete Driveway	SY	205	105 ⁰⁰	21,525 ⁰⁰
43	Seeding and Mulching	ACRE	1.2	4,000 ⁰⁰	4,800 ⁰⁰
44	Solid Sod	SY	1918	459	8,631 ⁰⁰
45	Additional Watering	MG	100	41 ⁰⁰	4,100 ⁰⁰
46	6" Pavement Marking (Thermoplastic)	LF	5386	1.96	10,556 ⁵⁴
47	12" Pavement Marking (Thermoplastic)	LF	12	17 ⁰⁰	204 ⁰⁰
48	24" Pavement Marking (Thermoplastic)	LF	78	28 ⁰⁰	2,184 ⁰⁰
49	Street Sign Installation	EA	10	476 ⁰⁰	4,760 ⁰⁰
50	Barbed Wire Fence	LF	331	25 ⁰⁰	8,275 ⁰⁰
51	Chain Link Fence	LF	122	58 ⁰⁰	7,076 ⁰⁰
52	Handicap Access Ramp	SY	9	267 ⁰⁰	2,403 ⁰⁰
53	Cast-in-Place Detectable Warning Panel	SF	24	28 ⁰⁰	672 ⁰⁰
54	Project Signs	EA	2	960 ⁰⁰	1,920 ⁰⁰
55	Steel Handrail (Ameristar or approved equal)	LF	13	192 ⁰⁰	2,496 ⁰⁰
56	Tree Protection Fencing (Allowance)	LF	4200	4 ⁰⁰	16,800 ⁰⁰
57	EDA Project Sign	EA	1	1,100 ⁰⁰	1,100 ⁰⁰
58	Three Way Fire Hydrant Assembly	EA	1	10,765 ⁰⁰	10,765 ⁰⁰
59	Salvage Fire Hydrant to City	EA	1	3,350 ⁰⁰	3,350 ⁰⁰
60	Abandon Valve	EA	1	5,500 ⁰⁰	5,500 ⁰⁰
61	8"X6" Tapping Sleeve	EA	1	12,000 ⁰⁰	12,000 ⁰⁰
62	Adjust Rim Elevation of Existing Sewer Manhole (Over 18")	EA	3	11,500 ⁰⁰	34,500 ⁰⁰
63	Tracer Wire Access Port	EA	3	2,000 ⁰⁰	6,000 ⁰⁰

BASE BID

\$ 2,178,659.65

THE
CINCINNATI INSURANCE COMPANY
CINCINNATI, OHIO

Bid Bond

KNOW ALL MEN BY THESE PRESENTS, that we Tomlinson Asphalt Company, Inc.

as Principal, hereinafter called the Principal, and THE CINCINNATI INSURANCE COMPANY, 6200 S. Gilmore Road, Fairfield, Ohio 45014-5141, a corporation duly organized under the laws of the State of Ohio, as Surety, hereinafter called the Surety, are held and firmly bound unto
City of Fayetteville

as Obligee, hereinafter called the Obligee, in the sum of Five Percent of Bid

Dollars (\$ 5% of bid),

for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for

Bid 22-27, Construction-Industrial Drive Extension

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this 12th day of October

2022

Tomlinson Asphalt Company, Inc.

(Principal)



By: [Signature]

PM

(Title)

THE CINCINNATI INSURANCE COMPANY

(Surety)

(Seal)

Tracy D. Fletcher
(Witness)

By: Todd Easterling

Todd Easterling

Attorney-in-Fact

The Company executing this bond vouches that this document conforms to American Institute of Architects Document A310, February 1970 Edition.

S-2000-AIA (6/08) PUBLIC

Fairfield, Ohio

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That THE CINCINNATI INSURANCE COMPANY and THE CINCINNATI CASUALTY COMPANY, corporations organized under the laws of the State of Ohio, and having their principal offices in the City of Fairfield, Ohio (herein collectively called the "Companies"), do hereby constitute and appoint

Adrian W. Luttrell; Mike A. Luttrell; Danny L. Schneider; Billy Eugene Bennett, Jr.; Steven W. Hutchins and Todd Easterling

of Springdale, Arkansas

their true and legal Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign, execute, seal and deliver on behalf of the Companies as Surety, any and all bonds, policies, undertakings or other like instruments, as follows:

Any such obligations in the United States, up to
Fifteen Million and No/100 (\$15,000,000.00).

This appointment is made under and by authority of the following resolutions adopted by the Boards of Directors of The Cincinnati Insurance Company and The Cincinnati Casualty Company, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the President or any Senior Vice President be hereby authorized, and empowered to appoint Attorneys-in-Fact of the Company to execute any and all bonds, policies, undertakings, or other like instruments on behalf of the Corporation, and may authorize any officer or any such Attorney-in-Fact to affix the corporate seal; and may with or without cause modify or revoke any such appointment or authority. Any such writings so executed by such Attorneys-in-Fact shall be binding upon the Company as if they had been duly executed and acknowledged by the regularly elected officers of the Company.

RESOLVED, that the signature of the President or any Senior Vice President and the seal of the Company may be affixed by facsimile on any power of attorney granted, and the signature of the Secretary or Assistant Vice-President and the Seal of the Company may be affixed by facsimile to any certificate of any such power and any such power of certificate bearing such facsimile signature and seal shall be valid and binding on the Company. Any such power so executed and sealed and certified by certificate so executed and sealed shall, with respect to any bond or undertaking to which it is attached, continue to be valid and binding on the Company.

IN WITNESS WHEREOF, the Companies have caused these presents to be sealed with their corporate seals, duly attested by their President or any Senior Vice President this 16th day of March, 2021.



STATE OF OHIO)SS:
COUNTY OF BUTLER)

THE CINCINNATI INSURANCE COMPANY
THE CINCINNATI CASUALTY COMPANY

Stephen A. Ventre

On this 16th day of March, 2021 before me came the above-named President or Senior Vice President of The Cincinnati Insurance Company and The Cincinnati Casualty Company, to me personally known to be the officer described herein, and acknowledged that the seals affixed to the preceding instrument are the corporate seals of said Companies and the corporate seals and the signature of the officer were duly affixed and subscribed to said instrument by the authority and direction of said corporations.



Keith Collett
Keith Collett, Attorney at Law
Notary Public – State of Ohio

My commission has no expiration date.
Section 147.03 O.R.C.

I, the undersigned Secretary or Assistant Vice-President of The Cincinnati Insurance Company and The Cincinnati Casualty Company, hereby certify that the above is the Original Power of Attorney issued by said Companies, and do hereby further certify that the said Power of Attorney is still in full force and effect.

Given under my hand and seal of said Companies at Fairfield, Ohio, this 12th day of October, 2022



Ed H

BN-1457 (3/21)



**CITY OF
FAYETTEVILLE
ARKANSAS**

City of Fayetteville, Arkansas

Purchasing Division – Room 306

113 W. Mountain

Fayetteville, AR 72701

Phone: 479.575.8256

TDD (Telecommunication Device for the Deaf): 479.521.1316

INVITATION TO BID

Bid 22-27, Construction – Industrial Drive Extension

DEADLINE: Thursday, October 13, 2022 before 2:00 PM, Local Time

PRE-BID MEETING: Thursday, September 29, 2022 at 2:00 PM, via Zoom

SR. PURCHASING AGENT: Amanda Beilfuss, abeilfuss@fayetteville-ar.gov

DATE OF ISSUE & ADVERTISEMENT: 09/18/2022 & 09/25/2022

No late bids shall be accepted. Bids shall be submitted in one of the following methods: (1) through the City's third-party electronic bidding platform or (2) delivering in person via sealed envelope to the City of Fayetteville Purchasing Division. Submitting through the City's electronic bidding platform is strongly encouraged. All bids shall be submitted in accordance with the attached City of Fayetteville specifications and bid documents attached hereto. Each bidder is required to fill in every blank and shall supply all information requested; failure to do so may be used as basis of rejection.

NOTICE TO ALL BIDDERS:

All interested parties can obtain files for this project by going to <http://fayetteville-ar.gov/bids>. Bid documents shall be distributed electronically from the City of Fayetteville Purchasing Division only.

BID PACKAGE INCLUDES THE FOLLOWING FILES WHICH SHALL BE LISTED UNDER "ATTACHMENTS":

FILE #00: REQUIRED SIGNATURE FORMS – 12 Total Pages

FILE #01: PROJECT MANUAL – 492 Total Pages

FILE #02: PLANS – 45 Plan Sheets

FILE #03: DETAILED UNIT PRICING – 2 Total Pages

*Additional files added as addendums are issued. Addendums will be uploaded and posted to the City's electronic bidding platform.

***PLAN HOLDER LISTINGS:** A listing of vendors who have received documents can be found in the City's electronic bidding platform.

Bidder shall assume all responsibility for receiving updates and any addenda issued to this project by monitoring <http://fayetteville-ar.gov/bids>. Failure to acknowledge addenda issued as instructed could result in bid rejection.

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Project Check List

This checklist is for the Bidder's use in preparing & submitting a bid. It is not intended to include all details necessary to prepare a bid and shall not be used as a substitute for the requirements of the bid documents. Information is shown below only as a matter of convenience. Use of this checklist does not relieve the Bidder from the responsibility of meeting all requirements of the Specifications concerning the preparation of an acceptable bid. Bidders are welcome to use this form as a coversheet for a sealed envelope; however, using this form itself is NOT a requirement.

- ☐ **5% Bid Bond of the amount bid accompanied by required documentation (Power of Attorney, etc.)**
 - In lieu of a bid bond, the bidder may submit a cashier's check from a bank located in the State of Arkansas for at least five percent (5%) of the amount bid (inclusive of any deductive alternates). Cashier's checks shall be made payable to the City of Fayetteville, AR and received prior to the bid deadline by making an in-person delivery appointment with the City Purchasing Division.
 - Upload 5% bid bond to the City's electronic bidding platform (preferred) OR attach bid bond with physical submittal and setting up an in-person delivery appointment with the City Purchasing Division.
- ☐ All addenda shall be signed, acknowledged, and submitted on the appropriate forms (submitting the actual addendums or marking acknowledgement on other bid pages).
- ☐ All line items shall be appropriately filled out and extended to reveal the line item price as well as the total bid price. Total base bid should be calculated in the provided space.
- ☐ All pages provided with signature lines shall be appropriately signed, dated accordingly, and included with submitted bid documents.
- ☐ All bids shall be received before the stated deadline utilizing the City's electronic bidding platform or submitting a physical sealed bid to the City Purchasing Division. Submitting a bid electronically is strongly encouraged. A public bid opening will be conducted shortly after the deadline at City Hall and livestreamed at <https://www.youtube.com/user/cityoffayettevillear>. Late or misdirected bids shall not be accepted. The City of Fayetteville shall not be responsible for lost or misdirected bids, or failure of bidder's technical equipment. All bid documents shall be delivered in a sealed envelope to the address stated in the advertisement or updated deadline issued via Addenda. All bids should be delivered with the name of the bidder (contractor) on the sealed envelope as well as the bidders Arkansas Contractor's License Number.

City of Fayetteville, AR
Purchasing Division – Suite 306
113 W. Mountain
Fayetteville, AR 72701

Additional Information Required:

- List of Subcontractors: Submit form on electronic bidding portal or attach if submitting a physical bid
- AR Secretary of State Filing: _____
- Arkansas Contractor License or date of application #: _____
- Pursuant Arkansas Code Annotated §25-1-503, the Contractor agrees and certifies that they do not currently boycott Israel and will not boycott Israel during any time in which they are entering into, or while in contract, with any public entity as defined in §25-1-503. If at any time during contract the contractor decides to boycott Israel, the contractor must notify the contracted public entity in writing.

- Circle applicable answer: YES or NO

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City of Fayetteville, Arkansas
INVITATION TO BID
Bid 22-27, Construction – Industrial Drive Extension

The City of Fayetteville, AR (owner) is accepting formal, sealed bids from properly qualified, experienced, and licensed contractors for the extension of Industrial Drive. The Contract includes, but is not limited to, the construction of approximately 2,800 linear feet of two-lane roadway from S Industrial Drive to S City Lake Road including demolition, removal and reconstruction of an existing concrete cul-de-sac and associated earthwork, curb and gutter, sidewalk, drainage, and miscellaneous related items. All questions during the bidding process shall be addressed to Amanda Beilfuss, Sr. Purchasing Agent, at abeilfuss@fayetteville-ar.gov.

A non-mandatory Pre-Bid meeting will be held on Thursday, September 29, 2022 at 2:00 PM local time, via Zoom. Information regarding the pre-bid meeting is available on the project page on the City's electronic bidding platform. All interested parties are encouraged to attend.

Bidding documents, plans, plan holders, and addenda shall be obtained at the City of Fayetteville Purchasing Division's electronic bidding platform at www.fayetteville-ar.gov/bids. All bids shall be received by Thursday, October 13, 2022 before 2:00 PM, local time utilizing the electronic bidding software or by submitting a sealed bid to the address below. All bids shall be received prior to the bid deadline. Submitting a bid electronically is strongly encouraged. A public bid opening will be conducted shortly after the deadline at City Hall and livestreamed at <https://www.youtube.com/user/cityoffayettevillear>. Late or misdirected bids shall not be accepted. The City of Fayetteville shall not be responsible for lost or misdirected bids, or failure of bidder's technical equipment.

City of Fayetteville
Purchasing Division – Room 306
113 West Mountain Street
Fayetteville, AR 72701

Each bid exceeding \$50,000 shall be accompanied by a cashier's check from a bank doing business in the State of Arkansas or a corporate bid bond in an amount not less than five (5) percent of the amount bid. In the event a bidder opts to submit a cashier's check for a bid bond, the actual physical cashier's check shall be delivered to the City prior to the deadline. A one hundred percent (100%) performance and payment bond is required with the contract awarded. A State of Arkansas Contractor's License is not required at time of bid; however, an application for licensure shall be required at time of bid and an approved contractor's license shall be required before execution of contract.

Pursuant to Arkansas Code Annotated §22-9-203 The City of Fayetteville encourages all *qualified* small, minority and women business enterprises to bid on and receive contracts for goods, services, and construction. Also, City of Fayetteville encourages all general contractors to subcontract portions of their contract to *qualified* small, minority and women business enterprises.

The City of Fayetteville reserves the right to waive irregularities, reject bids, and postpone the award of any Contract for a period which shall not exceed beyond ninety (90) days from the bid opening date.

The City hereby notifies all bidders that this contract is subject to the Code of Federal Regulations, Appendix II, Part 200, Contract Provisions for Non-Federal Entity Contracts under Federal Awards applies to this contract and includes but is not limited to termination for cause and for convenience, Equal Employment Opportunity, Davis-Bacon Act, Copeland Anti-Backpack Act, Contract Work Hours and Safety Standards Act, Clean Air Act, Debarment and Suspension regulations, Conditions under the Byrd Anti-Lobbying Amendment, applicable labor laws, non-discrimination provisions, wage rate laws, the Fair Labor Standards Act of 1938, and other federal laws as defined in the bid documents and any grant agreements between the City of Fayetteville and Grant Administrator. The Work Hours Act of 1962 and Title VI of the Civil Rights Act of

1964 also apply. Bidders are hereby notified of the NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246).

All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

The City of Fayetteville, Arkansas hereby notifies all bidders that this contract is subject to applicable labor laws, non-discrimination provisions, wage rate laws and other federal laws including the Fair Labor Standards Acts of 1938. The Work Hours Act of 1962 and Title IV of the Civil Rights Act of 1964 also apply.

Registration and good standing in the System for Award Management (SAM) will be required prior to contract execution.

City of Fayetteville

By: Amanda Beilfuss

Sr. City Purchasing Agent

P: 479.575.8220 Email: abeilfuss@fayetteville-ar.gov

TDD (Telecommunications Device for the Deaf): (479) 521-1316

Date of advertisement: 09.18.2022 & 09.25.2022

This publication was paid for by the Purchasing Division of the City of Fayetteville, Arkansas.

Amount paid: \$XXX.XX.

DIVISION 00
CONTRACT DOCUMENTS

DOCUMENT 00001 - CERTIFICATIONS

I hereby certify that the INDUSTRIAL DRIVE EXTENSION, Bid # 22-27, Project 21-2106 plans and specifications were prepared by me or under my direct supervision and that I am duly Licensed Engineer under the laws of the State of Arkansas. **Responsible for Road and Drainage Design.** (Seal)

Name: Robert Bullis, PE

Date: 09/15/2022



09-15-2022

I hereby certify that the INDUSTRIAL DRIVE EXTENSION, Bid # 22-27, Project 21-2106 plans and specifications were prepared by me or under my direct supervision and that I am duly Licensed Engineer under the laws of the State of Arkansas. **Responsible for Geotechnical Services.** (Seal)

Name: Steven Head, PE

Date: 09/15/2022



CERTIFICATION OF AUTHORIZATION BY MCCLELLAND CONSULTING ENGINEERS, INC.

END OF DOCUMENT 00001



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Appendix B U.S. Department of Commerce Economic Development Administration Standard
Terms and Conditions for Construction Projects
Appendix C U.S. Department of Commerce Economic Development Administration Summary
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END OF DOCUMENT 00010

DOCUMENT 00140 – BIDDER'S QUALIFICATION STATEMENT

Contract Name: INDUSTRIAL DRIVE EXTENSION
Bid #: 22-27, Construction – Industrial Drive Extension
Date: OCT. 13, 2022

SUBMITTED TO:

The City of Fayetteville, Arkansas
113 West Mountain Street
Fayetteville, Arkansas 72701

SUBMITTED BY:

Company Tomlinson Asphalt Co. Inc.

Name MARK MAHAFFEY

Address 1411 W. Van Asche, Fay. Ar. 72704

Principal Office _____

Corporation, partnership, individual, joint
venture, other C-Corp.

Arkansas State General Contractor's License Number
0040940823

(Type or legibly print)

EXPERIENCE STATEMENT

1. Bidder has been engaged as a General Contractor in construction for 46 years and has performed work of the nature and magnitude of this Contract for 30 years. Bidder has been in business under its present name for 48 years.
2. Bidder now has the following bonded projects under contract: (On a separate sheet, list project name, owner, name of owner contact, engineer / architect, name of engineer/architect contact, amount of contract, surety, and estimated completion date.)
3. Bidder has completed the following (list minimum of 3) contracts consisting of work similar to that proposed by this Contract: (On a separate sheet, list project name, owner, name of owner contact, engineer / architect, name of engineer/architect contact, amount of contract, surety, and date of completion and percentage of the cost of the Work performed with Bidder's own forces.)

DOCUMENT 00140 – BIDDER'S QUALIFICATION STATEMENT (continued)

4. Has Bidder ever failed to complete any project? If so, state when, where, and why. No
5. Bidder normally performs the following work with his own forces:
Earthwork, Clearing, Demo, All Concrete items,
Storm Drainage, Asphalt Paving
6. Construction experience of key individuals in the organization is as follows (continued on attached sheets if needed):
MARK MAHAFFEY, PE : 42 yrs. Constr. Exper.
Bryan Anderson : Project Manager 30 yrs. Constr. Exper.
Kaleb Mahaffey: Construction Coordinator, 22 yrs. Exper.
Nathan Mahaffey, BSCE : Project Manager : 15 yrs. Exper.
7. In the event the Contract is awarded to Bidder, the required surety Bonds will be furnished by the following surety company and name and address of agent:
Walker Bros. Insurance Through Travelers Insur
6800 ISAAC'S Orchard rd., Springdale, Ar. 72762
Todd Easterling
8. Bidder's Workmen's Compensation Experience Modifier Factor is:
.95

DOCUMENT 00140 – BIDDER'S QUALIFICATION STATEMENT (continued)

FINANCIAL STATEMENT

B. If requested by the City of Fayetteville during the evaluation of bids the bidder shall provide to the City of Fayetteville the following additional information:

Bidder possesses adequate financial resources as indicated by the following:

1. Assets and Liabilities: Attach a financial statement, audited if available, including Bidder's latest balance sheet and income statements showing the following items:
 - a. Current assets (cash, joint venture accounts, accounts receivable, notes receivable, accrued income, deposits, materials inventory, and prepaid expenses).
 - b. Net fixed assets.
 - c. Other assets.
 - d. Current liabilities (accounts payable, notes payable, accrued expenses, provision for income taxes, advances, accrued salaries, and accrued payroll taxes).
 - e. Other liabilities (capital, capital stock, authorized and outstanding shares par values, earned surplus, and retained earnings).
 - f. Name of firm preparing financial statement and date thereof:

If financial statement is not for identical organization named herein, explain relationship and financial responsibility of the organization furnished.

2. Current Judgments: The following judgements are outstanding against Bidder: *None*

	<u>Judgment Creditors</u>	<u>Where Docketed and Date</u>	<u>Amount</u>
a.	_____	_____	\$ _____
b.	_____	_____	\$ _____

DOCUMENT 00140 – BIDDER'S QUALIFICATION STATEMENT (continued)

Bidder hereby represents and warrants that all statements set forth herein are true and correct.

Date: Oct. 13th, 2022.

(OFFICIAL SEAL)

Name of Organization:

Tomlinson ASPHAET Co. Inc.

By MARK MAHAFFEY

JMM

(Type or legibly print)

By Mark Mahaffey

(Signature)

Title General Manager

(Type or legibly print)

(If Bidder is a partnership, the partnership name shall be signed, followed by the signature of at least one of the partners. If Bidder is a corporation, the corporate name shall be signed, followed by the signature of a duly-authorized officer and with the corporate seal affixed.)

DOCUMENT 00140 – BIDDER'S QUALIFICATION STATEMENT (continued)

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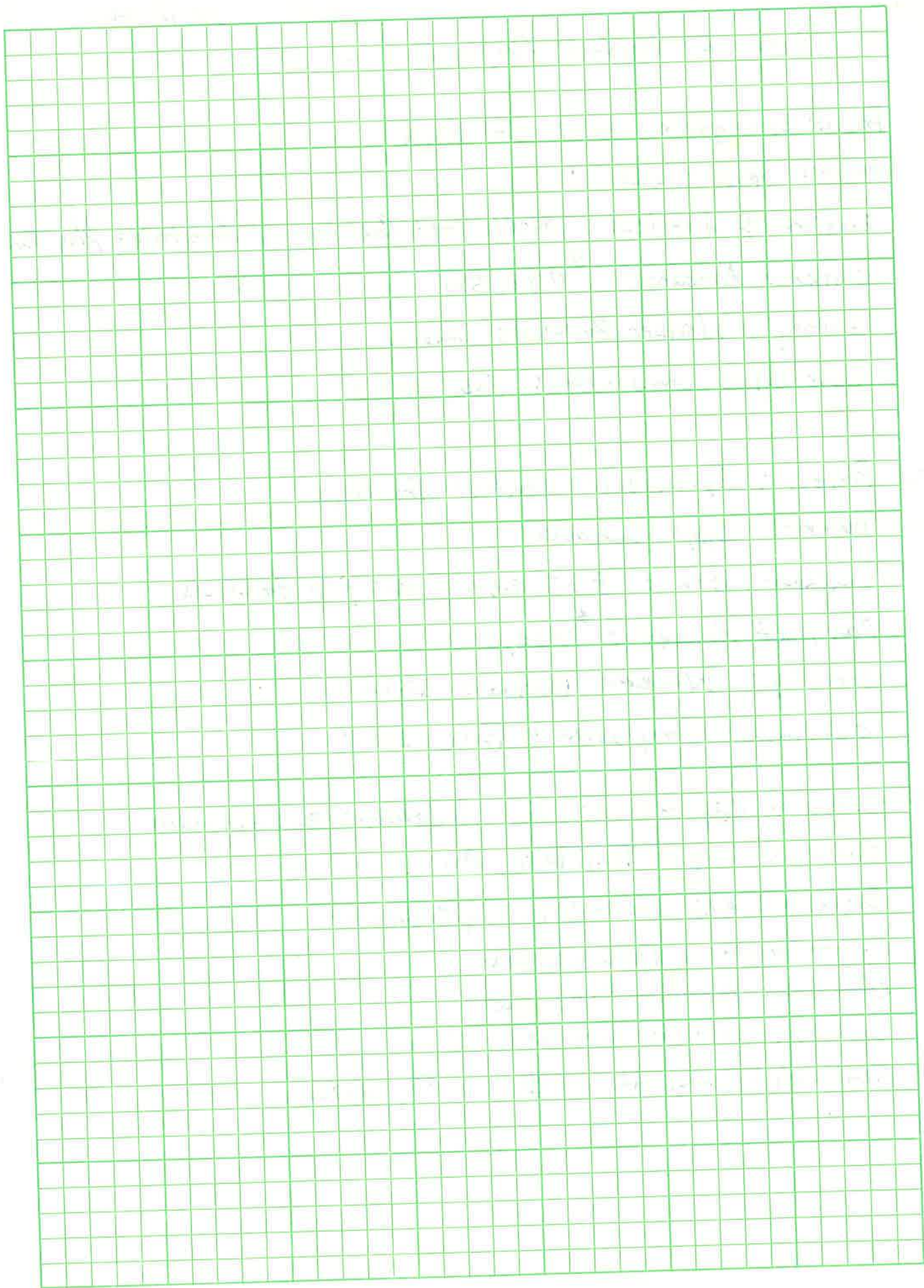
END OF DOCUMENT 00140

List of Bonded Projects :

- 1) Project: Springdale S.W. Jr. High
 owner: Spgd. Schools
 Engineer & Architect: McClelland Cons. Engr / Architecture Plus Inc.
 Contract Amount: \$ 732,500
 Surety: Walker Brothers Insur.
 Estimated Completion: Fall 2023

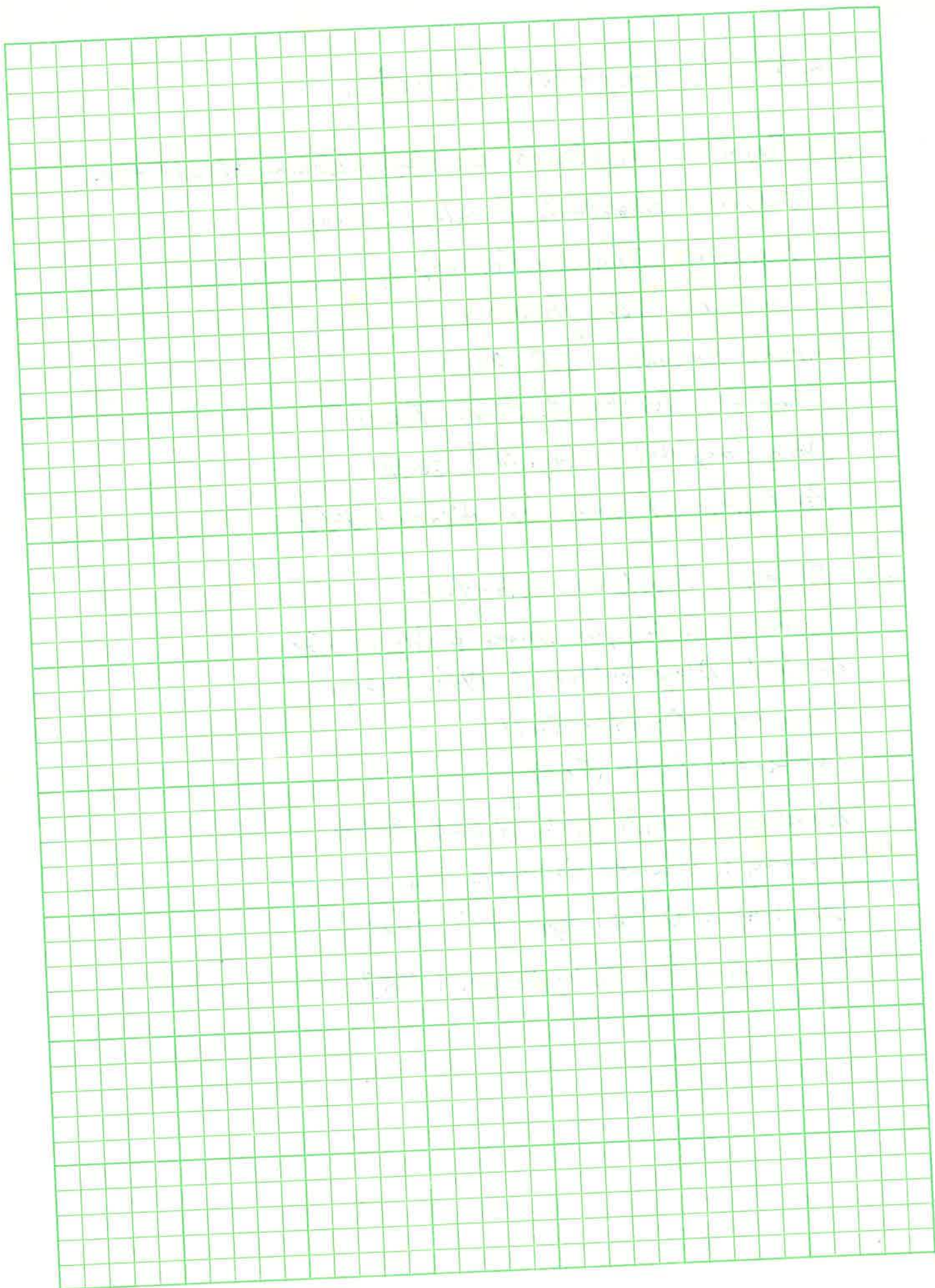
- 2) Project: Springdale Central Jr. High
 owner: Spgd. Schools
 Engineer / Arch: ESI Engr / WD & D Architects
 Contract Amount: \$ 720,500
 Surety: WALKER Brothers Insur.
 Estimated Completion: Fall 2023

- 3) Project: City of Tontitown Ardemagni Rd. extension
 owner: City of Tontitown, Ar.
 Engineer: KAS GILES Consulting Engineers
 owner CONTACT: JAMES Clark
 Contract Amount: \$ 103,600
 Surety: Walker Brothers Insur.
 Estimated Completion: Oct. 15th, 2022



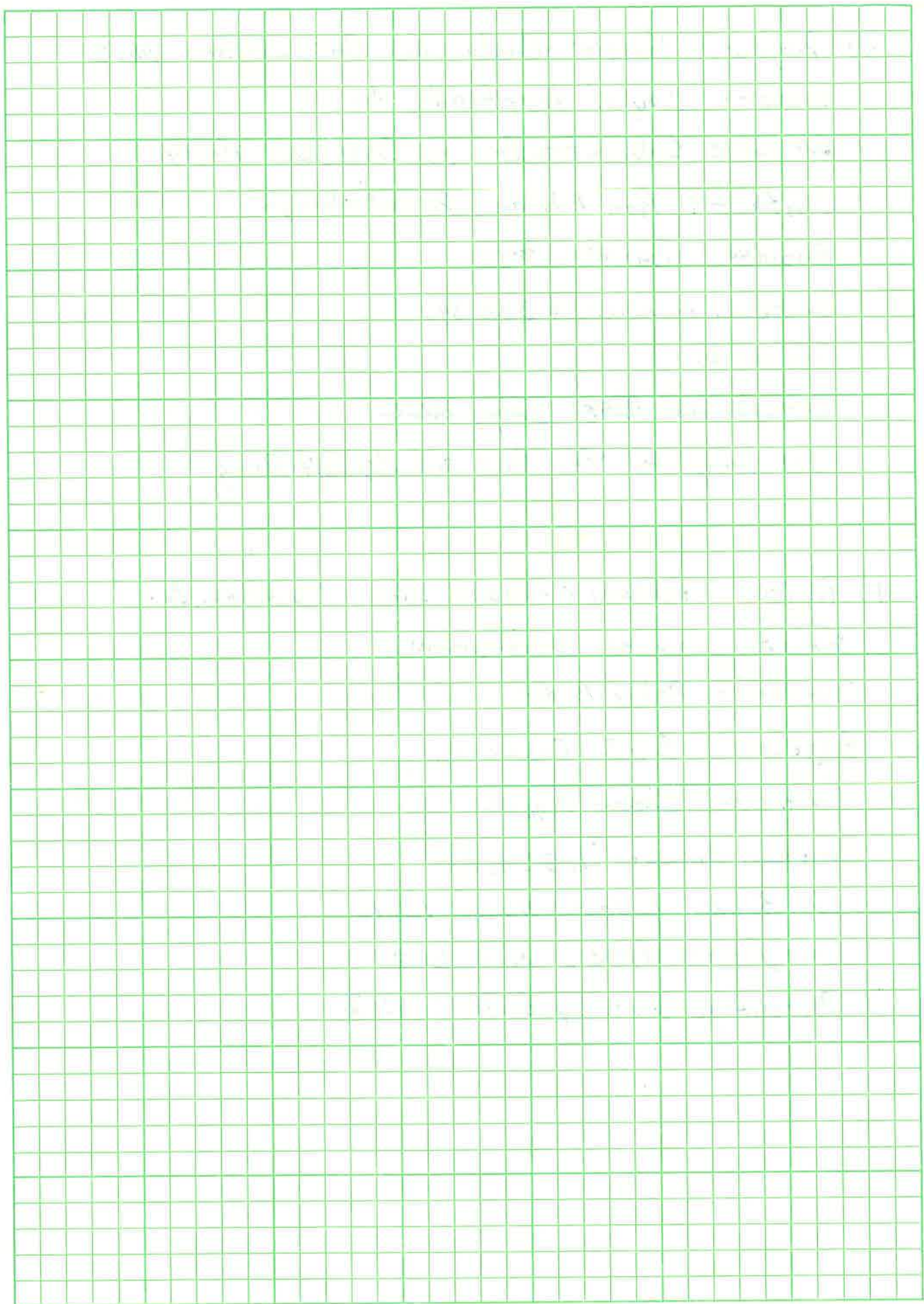
LIST of Completed Projects:

- 1) Project: Highlands Oncology Parking lot addition
Owner: Highlands Oncology Group
Engineer: Crafton Tull Engr.
Contract: Tom Hennelly
Contract Amount: \$ 356,061
Surety: Walker Brothers. Insur.
Date Completed: Aug. 18th, 2022
Percentage of work by Bidder: 84%
- 2) Project: Ruppel Rd. Extension
Owner: Buffington Homes & City of Fay.
Contact: Clay Carlton & Matt Casey
Engineer: Crafton Tull
Contact: Luke Jost
Amount of Contract: \$ 2.658 Million
Surety: Walker Brothers Ins.
Completion Date: April 9th, 2021
Percentage of work by Bidder: 75%



3) Project: Hessler Mountain Res. Park addition ph. 2
Owner: City of Fayetteville, Ar
We were Subcontractor to Crossland Heavy
Contact: Ron Edmon, Project Manager
Engineer: Garver Engr
Contract Amount: \$328,390
No Bonds
Completion DATE: July, 2022
We completed the Base and Asphalt Paving

4) Project: Hickory Meadows Subd. - Tontitown, Ar
Owner: Cascade Development
Contact: Robby Bader
Engineer: ESI Engineering
Contact: Jason Apple
Contract Amount: \$1,574,821
No Bonds Except Maint. Bonds
Completion DATE: Nov, 2021
Percentage work by Bidder: 100%



DOCUMENT 00200 – INSTRUCTIONS TO BIDDERS

ARTICLE 1 - INTRODUCTORY INFORMATION

1.01 DEFINED TERMS:

- A. Terms used in these Instructions to Bidders and which are defined in the GENERAL CONDITIONS, have the meanings assigned to them in the GENERAL CONDITIONS.
- B. Bid Documents shall include the following:
 - 1. Bidding Requirements:
 - a. Invitation to Bid.
 - b. Instructions to Bidders.
 - c. Bid Form.
 - d. Bid Bond.
 - 2. Bidder's Forms:

The Bidder's attention is called to the following additional forms which shall be completely filled out and submitted with the Bid:

 - a. Bidder's Qualifications Statement
 - b. List of Subcontractors
 - 3. Contract Forms:
 - a. Agreement Between Owner and Contractor.

The Bidder's attention is called to the evidence of authority to sign and other documents which shall be submitted with the Agreement as applicable to the Business entity and noted in the Agreement.
 - b. Performance Bond.
 - c. Labor and Material Payment Bond.
 - 4. Contract Conditions:
 - a. General Conditions.
 - b. Supplementary Conditions.
 - c. Labor-Related Regulations.
 - 5. Specifications.
 - 6. Drawings.
 - 7. Addenda issued prior to receipt of Bids.
- C. Certain additional items used in these Instructions to Bidders have the meanings indicated below which are applicable to both the singular and plural thereof.
 - 1. Bidder – one who submits a Bid directly to Owner as distinct from a sub-bidder, who submits a Bid to a Bidder.
 - 2. Issuing Office – the office from which the Bid Documents are to be issued and where the bidding procedures are to be administered.
 - 3. Successful Bidder – the lowest, responsible, and responsive Bidder to whom Owner on the basis of Owner's evaluation as hereinafter provided makes an award.

1.02 COPIES OF BID DOCUMENTS:

- A. Complete sets of the Bid Documents in the number and format as stated in the Invitation to Bid may be obtained from the City's Issuing Office.

DOCUMENT 00200 – INSTRUCTIONS TO BIDDERS (continued)

- B. Complete sets of Bid Documents shall be used in preparing Bids; neither Owner, nor Engineer assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bid Documents.
- C. Owner and Engineer in making copies of Bid Documents available on the above terms do so only for the purpose of obtaining Bids on the Work and do not confer a license or grant for any other use.

1.03

QUALIFICATION OF BIDDERS:

- A. Prequalification statements are not required. Owner will, however, evaluate the Bidder's qualifications following the opening of Bids. Evaluation criteria considered will include, but not be limited to:
 - 1. Experience and performance records on similar work.
 - 2. Financial responsibility.
 - 3. Ability to supply construction equipment and personnel to complete the Work within the Contract Time.
 - 4. Evidence of Bidder to do business in the state where the Project is located, or covenant to obtain such qualifications prior to award of the Contract.
- B. Bidders may be requested to submit financial statement and other information relating to experience and financial responsibility after bids are received and before awarding a contract.
- C. Only those Bids will be considered which are submitted by Bidders who show satisfactory completion of work of type and size comparable to the Work required by these Bid Documents.
 - 1. A list of comparable projects, including pertinent information and identification of the owners, shall be submitted with the Bid.
 - 2. See ARTICLE 5 – AWARD OF CONTRACT herein for additional requirements after opening of Bids.
- D. For all other projects, bidders must be licensed in the State of Arkansas or show proof that they have registered with the proper state authorities for a license. Failure to provide license number or proof of registration for a license could result in a non-responsive Bid.

1.04

EXAMINATION OF CONTRACT DOCUMENTS AND SITE:

- A. Before submitting a Bid, it is the responsibility of each Bidder:
 - 1. To thoroughly examine the Contract Documents and other related data identified in the Bid Documents (including "technical data" referred to below).
 - 2. To visit the Site to become familiar with and satisfy Bidder as to the general, local, and Site conditions that may in any manner affect cost, progress, and performance of the Work.
 - 3. To consider federal, state, and local laws, ordinances, rules, and regulations that may in any manner affect cost, progress, performance, and furnishing of the Work.
 - 4. To study and carefully correlate Bidder's knowledge and observations with the Contract Documents and such other related data.

DOCUMENT 00200 – INSTRUCTIONS TO BIDDERS (continued)

5. To promptly notify Engineer of all conflicts, errors, ambiguities, or discrepancies which Bidder has discovered in or between the Contract Documents and such other related documents.
- B. Before submitting a Bid, each Bidder shall be responsible to obtain such additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site or otherwise, which may affect cost, progress, performance, and furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences, or procedures of construction to be employed by Bidder, including safety precautions and programs incident thereto or which Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price, and other terms and conditions of the Contract Documents. This shall include local shipping facilities and availability of lands if applicable.
- C. In the preparation of the Contract Documents, neither reports of explorations nor tests of any Hazardous Environmental Condition at the Site of the Work have been prepared.
- D. Access to the Site:
 1. On request, Owner will provide each Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies as each Bidder deems necessary for submission of his Bid. Bidder shall fill all holes, clean up, and restore the Site to its former conditions upon completion of such explorations, investigations, tests, and studies.
 2. The lands upon which the Work is to be performed, rights-of-way, and easements for access thereto and other lands designated for use by Contractor in performing the Work are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of Materials and Equipment to be incorporated in the Work are to be obtained and paid for by Contractor. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by Owner unless otherwise provided in the Contract Documents.
 3. Property owners affected by the Work are named on the Drawings where known, but the accuracy of such ownership is not guaranteed. Bidders shall verify and make their own arrangements with such property owners for any access needed in connection with the preparation of Bids.
- E. The submission of a Bid will constitute an incontrovertible representation by the Bidder that he has complied with every requirement of this paragraph "Examination of Contract Documents and Site," and that the Bid Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

DOCUMENT 00200 – INSTRUCTIONS TO BIDDERS (continued)

1.05 INTERPRETATIONS, MODIFICATIONS, AND ADDENDA:

- A. Any Bidder who discovers ambiguities, inconsistencies, or errors or is in doubt as to the meaning or intent of any part of the Bid Documents shall promptly request an interpretation from Engineer. Interpretations or clarifications considered necessary by Engineer in response to such requests will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the Bid Documents.
- B. Addenda may also be issued to modify the Bid Documents as deemed advisable by Owner or Engineer.
- C. No Addenda will be issued within the last two (2) days before the date of opening Bids. However, an addendum that affects the time, date or location of the bid opening may be issued as little as twenty-four (24) hours before the date of opening bids.
- D. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

1.06 PREBID CONFERENCE:

A non-mandatory, pre-bid conference will be held at the City of Fayetteville Administration Building, City Hall, at 113 W. Mountain St, Fayetteville, AR 72701. All interested parties are strongly encouraged to attend. Please contact the City of Fayetteville's Purchasing Department for a date and time.

1.07 LABOR-RELATED REGULATIONS:

- A. This project will be partially funded with Federal funds from the United States Department of Commerce, Economic Development Administration and therefore is subject to the Federal laws and regulations associated with that program. Attention is called to the fact that the minimum prevailing wage rates for each craft or type of worker and the prevailing wage rate for overtime work as determined by the U.S. Department of Labor per the Davis-Bacon Act shall be paid.
- B. In accordance with 2 C.F.R. § 200.321, the City of Fayetteville will take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus areas firms are used when possible.
- C. Pursuant to Arkansas Code Annotated 22-9-203, the City of Fayetteville encourages all qualified minority and women business enterprises to bid on and receive contracts for goods, services, and construction. Also, City of Fayetteville encourages all general contractors to subcontract portions of their contract to qualified, small, minority, and women business enterprises.

1.08 BUY-AMERICAN-PREFERENCES:

- A. Strengthening Buy-American Preferences for Infrastructure Projects: Contractors are hereby notified that they are encouraged to use, to the greatest extent practicable, iron and aluminum as well as steel, cement, and other manufactured products produced in the United States in every contract,

DOCUMENT 00200 – INSTRUCTIONS TO BIDDERS (continued)

subcontract, purchase order, or sub-award that is chargeable under this Award.

ARTICLE 2 - BASIS OF BIDDING

2.01 SPECIFIED EQUIPMENT AND MATERIALS:

- A. Substitutions will be considered only after the Effective Date of the Agreement and as set forth in the GENERAL CONDITIONS.

2.02 INDIRECT COSTS:

- A. Taxes:
 - 1. All applicable sales, use, compensating, or other taxes to be paid or withheld by Bidder, now imposed by any taxing authority, on Equipment and Materials to be incorporated in the Work, and on any or all other cost items entering into the Contract Price, shall be included in the Bid price.
 - 2. The Bidder shall include all such taxes except those on Equipment and Materials, if any, furnished by Owner or others, or exempted by the state, and Bidder shall furnish taxing authorities any information or reports pertaining thereto as required.
- B. The cost of all construction licenses, building and other permits, and governmental inspections required by public authorities for performing the Work, which are applicable at the time Bids are opened and which are not specified to be obtained by Owner, shall be included in the Bid price. Fees for permits issued by the City will be waived, but permits are still required where necessary
- C. The cost of all royalties and license fees on Equipment and Materials to be furnished and incorporated in the Work shall be included in the Bid price.
- D. Tests, inspections, and related activities called for throughout the Bid Documents are a responsibility of Contractor unless specified otherwise. The Bid shall include all costs arising from such responsibility.
- E. The cost of all electrical, water, gas, telephone, sanitary, and similar facilities and services required by Contractor in performing the Work shall be included in the Bid price unless specified otherwise.

2.03 SUBCONTRACTORS:

- A. No Bid shall be based upon aggregate of Subcontractors performing more than 60 percent of the total Work.
- B. The experience, past performance, and ability of each proposed Subcontractor will be considered in the evaluation of Bids. Any Subcontractor so requested shall be required to furnish experience statements prior to the Notice of Awards.
- C. No Contractor shall be required to employ any Subcontractor, other person, or organization against whom Contractor has reasonable objection. Owner or

DOCUMENT 00200 – INSTRUCTIONS TO BIDDERS (continued)

Engineer may accept or reject Subcontractors in accordance with Paragraph 6.05 of the GENERAL CONDITIONS.

2.04 CONTRACT TIMES:

- A. The number of days within which, or the dates by which, the Work is to achieve Substantial Completion and also final completion and be ready for final payment shall be as stated in the Agreement.
- B. Provisions for liquidated damages, if any, are as set forth in the Agreement.

ARTICLE 3 - BIDDING PROCEDURE

3.01 PREPARATION OF BID:

- A. One set of unbound documents included with the officially provided set of drawings and specifications shall be used for the Bid.
- B. The Bid Forms shall be filled out in detail in black ink and signed by the Bidder. Forms shall not be removed from the bound document.
- C. Bids by partnerships shall be executed in the partnership name and signed by a partner whose title shall appear under his signature, and the official address of the partnership shall be shown below the signature.
- D. Bids by corporations and/or LLC's shall be executed in the corporate name by the president or a vice president (or other corporate officer accompanied by evidence of authority to sign), and the corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature.
- E. Names of all persons signing shall be printed below their signatures.
- F. A power of attorney shall accompany the signature of anyone not otherwise authorized to bind the Bidder.
- G. The Bid shall contain an acknowledgement of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
- H. The address to which communications regarding the Bids are to be directed shall be shown.

3.02 METHOD OF BIDDING:

- A. All bids shall be submitted to the City in a lump sum form as presented in the City's electronic bidding portal. Bidders are NOT required to submit a Detailed Unit Pricing at time of bid; however, all bidders shall provide a complete and accurate Detailed Unit Pricing within three (3) hours of the bid deadline, no later than 5:00 PM, local time via email to Purchasing@Fayetteville-ar.gov.
- B. Bidders have been provided an anticipated Detailed Unit Pricing with bid. This Detailed Unit Pricing file is being provided as a courtesy to aid and assist with bid preparation. The City reserves the right to modify the Detailed Unit Pricing as it deems necessary prior to requesting the final Detailed Unit Pricing from bidders.

DOCUMENT 00200 – INSTRUCTIONS TO BIDDERS (continued)

- C. Post-Bid Detailed Unit Pricing Submission Requirements: Bidders shall be required to submit a completed Detailed Unit Pricing within three (3) hours of the bid deadline, no later than 5:00 PM, local time via email to Purchasing@Fayetteville-ar.gov. All Detailed Unit Pricing submitted to the City shall have a sum equal to the Total Base Bid submitted prior to the bid deadline. Bidders are strictly prohibited from modifying the Total Base Bid Amount. The sum of line items within the Detailed Unit Pricing shall fully equal the submitted Total Base Bid upon receipt to the City.
- D. The City reserves the right to reject any bid response from a bidder who fails to submit a complete and acceptable Detailed Unit Pricing within the allowable post-bid time frame.
- E. The final Detailed Unit Pricing shall become part of the vendor's response to the bid. The final Detailed Unit Pricing will be bound by contract and utilized for payment processing as reflected in the bid specifications and project manual.

3.03 SUBCONTRACTORS INFORMATION SUBMITTED WITH BID:

- A. Bidders shall submit to Owner with the Bid, the List of Subcontractors contained in the Project Manual as Document 00430, completed with names of all such Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the Work for which such identification is required. The list shall be supplemented by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, person, or organization, if requested by Engineer. If, after due investigation, Owner or Engineer has reasonable objection to any proposed Subcontractor, Supplier, or other person or organization, Owner may, before the Notice of Award is given, request the apparent Successful Bidder to submit an acceptable substitute without an increase in the Bid. If the apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, and other persons and organizations. The declining to make requested substitutions will not constitute grounds for sacrificing the bid security of any Bidder. Any Subcontractor, Supplier, or other person or organization listed and to whom Owner or Engineer does not make written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to revocation as provided in Paragraph 6.05 of the General Conditions.

3.04 MANUFACTURERS SUBMITTED WITH BID:

Not applicable this specific project.

3.05 FORMS TO BE SUBMITTED:

- A. The following forms shall be completed and submitted with the Bid:
 - 1. DOCUMENT 00140 BIDDER'S QUALIFICATIONS STATEMENT
 - 2. DOCUMENT 00400 BID FORM

DOCUMENT 00200 – INSTRUCTIONS TO BIDDERS (continued)

3. Bid Security as bank cashier's check FROM A FINANCIAL INSTITUTION LOCATED IN THE STATE OF Arkansas, or Bid Bond (DOCUMENT 00410)
4. DOCUMENT 00430, LIST OF SUBCONTRACTORS

3.06 BID SECURITY:

- A. Each Bid shall be accompanied by Bid security, payable to Owner, of the amount stipulated in the Invitation to Bid.
- B. The required security shall be in the form of a bank cashier's check from a financial institution located in the state of Arkansas or a Bid Bond on the form prescribed by the AIA, Document A310, or on similar form attached.
- C. Bid Bond shall be executed by a surety meeting the requirements set forth for "Surety Bonds" in the GENERAL CONDITIONS.
- D. Bid security of the Successful Bidder will be retained until Bidder has executed the Agreement and furnished the required surety Bonds as set forth in the GENERAL CONDITIONS, whereupon Bid security will be returned. If the Successful Bidder fails to execute the Agreement and furnish the surety Bonds within 15 days after the date of Notice of Award, Owner may annul the Notice of Award, and Bid security of that Bidder will be forfeited to Owner.
- E. The Bid security of any Bidder whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of 10 days after the Effective Date of the Agreement and the required surety Bonds furnished, or the 91st day after the Bid opening. Bid security of other Bidders will be returned within 10 days of the bid opening.

3.07 SUBMISSION OF BID:

- A. Bids shall be submitted at the time and place designated in the Invitation to Bid.
- B. Bid Documents with accompanying Bid security and other required information shall be enclosed in an opaque sealed envelope marked with the following:
 1. Project name.
 2. Bid number.
 3. Name and address of Bidder.
 4. Contractor's license number (Not required for Federal Aid Projects).
- C. If the Bid is sent by mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation "Sealed Bid Enclosed" on the face thereof.

3.08 MODIFICATION OR WITHDRAWAL OF BIDS:

- A. Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.
- B. If, within 24 hours after Bids are opened, any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable

DOCUMENT 00200 – INSTRUCTIONS TO BIDDERS (continued)

satisfaction of Owner that there was a material and substantial mistake in the preparation of his Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, that Bidder will be disqualified from further bidding on the Work to be provided under the Contract Documents.

ARTICLE 4 - OPENING OF BIDS

4.01 OPENING OF BIDS:

- A. Bids will be opened and (unless obviously non-responsive) read aloud publicly at the place where Bids are to be submitted. An abstract of the amounts of the base Bids will be made available to Bidders after the opening of Bids.
- B. All Bids shall remain open for a period of 90 days after Bids are opened, but Owner may, at his sole discretion, release any Bid and return the Bid security at any time prior to that date.

ARTICLE 5 - AWARD OF CONTRACT

5.01 OWNER'S RIGHT TO REJECT BIDS:

- A. Owner reserves the right to reject any or all Bids, including without limitation the rights to reject any or all nonconforming, non-responsive, unbalanced, or conditional Bids and to reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project to make an award to that Bidder, whether because the Bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by Owner. Owner also reserves the right to waive all informalities not involving price, times, or changes in the Work and to negotiate Contract terms with the Successful Bidder. (Discrepancies between the multiplication of units of Work and Unit Prices will be resolved in favor of the Unit Prices.) Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.
- B. All Bidders must agree that such rejection shall be without liability on the part of the Owner nor shall the Bidders seek recourse of any kind against the Owner because of such rejections. The filing of any Bid shall constitute an agreement of the Bidder to these conditions.

5.02 EVALUATION OF BIDS:

- A. In evaluating Bids, Owner will consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements (and such Alternates, Unit Prices) and other data, as may be requested in the Bid Form or prior to the Notice of Award. Owner must accept Alternates in numerical order.
- B. Owner may consider the qualifications and experience of Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the Work as to which the identity of Subcontractors, Suppliers, and other persons and organizations is requested per Paragraph 5.02E of this document.

DOCUMENT 00200 – INSTRUCTIONS TO BIDDERS (continued)

- C. Owner may conduct such investigations as he deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications, and financial ability of the Bidders, proposed Subcontractors, and other persons and organizations to perform and furnish the Work in accordance with the Contract Documents to Owner's satisfaction within the prescribed time.
- D. Owner reserves the right to reject the Bid of any Bidder who does not pass any such evaluation to Owner's satisfaction.
- E. Within 10 days after Bids are opened, and if requested by the Owner or the Engineer, the apparent Successful Bidder, and any other Bidder so requested, shall submit supplemental information including an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, person, or organization, proposed by the Bidder for consideration as specified in ARTICLE 3 paragraph 3.03 above. The use of Subcontractors listed by Bidder (Document 00430) and accepted by Owner prior to the Notice of Award will be required in the performance of the Work.
- F. Within 10 days after the Bids are opened, the apparent Successful Bidder, and any other Bidder so requested, shall submit an itemized breakdown of any lump sum portion of its Bid. This breakdown must include a separate item for each major category of work and each major piece of equipment. This breakdown may or may not be reflected in subsequent time schedule submittals.
- G. The award of the Contract, if it is awarded, will be to the lowest, responsive, responsible Bidder whose evaluation by Owner indicates to Owner that the award will be in the best interest of Project and Owner.

5.03 NOTICE OF AWARD:

- A. After considering the basis of award and evaluation of Bids, if the Contract is to be awarded, Owner shall within 90 days after the date of opening Bids notify the Successful Bidder of acceptance of his Bid (indicating which, if any, Alternate Bids have been accepted).

5.04 NOTICE TO PROCEED, BONDS AND ORDERING PROCEDURES:

- A. After the contract award, the Contractor will provide the City with a 100% performance and payment bond, as required in the contract.
- B. Upon the City receiving and accepting the 100% Performance and Payment Bond, the City will issue a Purchase Order along with a Notice of Award (NOA).
 - 1. The Notice of Award shall serve as permission for the Contractor to order any materials needed to complete the project, specifically those with a long lead time.
- C. The City will coordinate with the Contractor on the timing of the Notice to Proceed being issued, which shall take into consideration the expected delivery of items with a long lead time.
- D. Calendar days for substantial and final completion shall not start until the day following the issuance of a Notice to Proceed.

DOCUMENT 00200 – INSTRUCTIONS TO BIDDERS (continued)

- E. The City will make progress payments for materials delivered on site, after verification of delivered materials by City.

ARTICLE 6 - SIGNING OF AGREEMENT

- 6.01 When Owner gives Notice of Award to Successful Bidder, Engineer will issue the required number of unbound, unsigned counterparts of the Agreement and other Contract Documents to Successful Bidder.
- 6.02 Within 15 days thereafter, Contractor (Successful Bidder) shall sign all copies of the Agreement dating the Agreement and required documents the Date of City Council Approval, insert the properly executed Bonds, power of attorney documents, and other required documents in the appropriate places, and deliver all copies to Owner.
- 6.03 Within 10 days thereafter, Owner will execute all copies of the Agreement. Owner will provide the executed Contract Documents to Engineer for binding and distribution as required. Each duly executed counterpart will be accompanied by a complete set of Drawings with appropriate identification.

DOCUMENT 00200 – INSTRUCTIONS TO BIDDERS (continued)

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END OF DOCUMENT 00200

DOCUMENT 00300 – INFORMATION AVAILABLE TO BIDDERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. See Geotechnical Investigation dated December 10, 2021, attached.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF DOCUMENT 00300

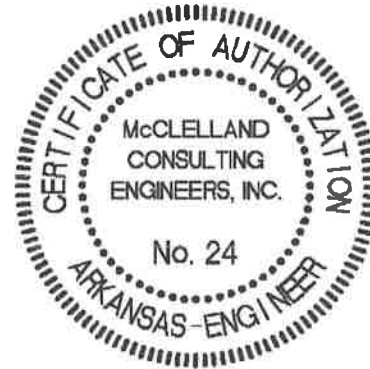
December 10, 2021



125 West Mountain Street
Fayetteville, Arkansas

ATTN: Mr. Matt Casey, P.E.
Engineering Design Manager

RE: Geotechnical Investigation for
Industrial Drive Extension
Fayetteville, Arkansas
MCE Project Number: 21-2106



Dear Mr. Casey:

We are submitting herewith the report for the Geotechnical Investigation on the above-referenced project. We appreciate the opportunity to provide this service to you. If there are any questions regarding the Geotechnical Investigation, please contact us.

Sincerely,



A handwritten signature in black ink, appearing to read "Steven J. Head".

Steven J. Head, PE
Principal | Geotechnical Department Head



12.10.2021

Enclosure: Geotechnical Report

GEOTECHNICAL INVESTIGATION

Industrial Drive Extension

Fayetteville, Arkansas

MCE Project Number

21-2106



CITY OF
FAYETTEVILLE
ARKANSAS

125 West Mountain Street
Fayetteville, Arkansas

December, 2021

MCE McCLELLAND
CONSULTING
DESIGNED TO SERVE ENGINEERS, INC.

Little Rock
Fayetteville
Fort Smith
Tulsa

1580 East Stearns Street
Fayetteville, Arkansas 72703

mce.us.com

P: (479) 443.2377 | F: (479) 443.9241

GEOTECHNICAL REPORT

Industrial Drive Extension

MCE Project Number: 21-2106

Fayetteville, Arkansas

FOR



CITY OF
FAYETTEVILLE
ARKANSAS

125 West Mountain Street
Fayetteville, Arkansas 72704

Executive Summary

This is a report of the findings of the Geotechnical Investigation relevant to the proposed extension of the existing Industrial Drive located in southeast Fayetteville, Arkansas. This report includes information on the surface materials and subsurface conditions encountered during our investigation in addition to providing recommendations for site preparation, site grading, pavement sections, and construction considerations.

The following is a summary of significant findings:

- A total of five (5) project borings were conducted across the proposed alignment. These borings had planned terminal depths of 10 feet below existing surface elevations. One project boring (B-05) encountered materials that resulted in “auger refusal” ahead of the planned terminal depth, the refusal materials were encountered at an approximate depth of 8.5 feet below existing surface elevations.
- All borings encountered a highly organic silty topsoil at the surface. This topsoil had an average field measurement of approximately three (3) inches thick. Due to the wooded nature of the unexplored portions, we anticipate that roots and rootlets could extend to deeper depths. The Contractor should anticipate an average of six (6) inches of topsoil in greenspace or expansion areas, with isolated areas extending to 12 inches.
- The shallow subgrade materials encountered by the project borings consisted of the following soil types Clayey Gravel with Sand (GC), Sandy Lean Clay (CL), Sandy Fat Clay (CH), and Fat Clay with Sand (CH).
- In-situ rock material in the form of moderately hard to hard shale and very dense sandstone was encountered by the project borings. Based on the provided grading plan, we do not expect that the encountered rock materials will have a significant impact on excavation operations within the extension dimensions; particularly in a mass grading setting.
- Sandstone materials were encountered by one (1) project boring (B-01) at an approximate depth of 8.5 feet below existing surface elevations. These materials were encountered in a highly weathered condition and are believed to indicative of the Wedington Sandstone Member.

- Shale materials were encountered by the remaining four (4) project borings (B-02 through B-05) at varying depths. Project boring B-02 encountered the shale materials underlying the surface materials and continued till the consistency of this materials resulted in refusal. The remaining three (3) borings (B-03 through B-05) encountered the sandstone materials at an approximate depth of 8.5 feet below existing surface elevations at each location.
- Groundwater was encountered at one (1) of the project boring (B-05) locations at approximately five (5) feet below the existing surface elevation at the time of drilling. Water observations were made by the on-site crew both during drilling operations and after the completion of the borings. Long-term groundwater monitoring was not included in our scope of work.
- We anticipate that stable subgrade conditions will generally be encountered at a depth of two (2) feet below the existing surface elevations across the majority of the investigated area. In the area investigated by borings B-03 and B-05, stable subgrade materials were encountered at approximately four (4) feet below existing surface elevations. Additional undercutting should be anticipated due to the high plasticity of the Sandy Fat Clay (CH) materials that were encountered at shallow depths by Borings B-03 and B-05.
- Any select fill material required for the project is recommended to be an off-site borrow material of locally available reddish-brown silty or clayey chert gravel meeting Unified Soils Classification as a GC or GM material and having a Plasticity Index of 35 or less, a Liquid Limit of 55 or less, a minimum of 30% retained on the ¾-inch sieve and a maximum of 35% passing the No. 200 sieve. Any material to be used as select fill on the project should be reviewed and approved by the Geotechnical Engineer. Compaction requirements are provided in the table below.

Type of Material	Test Specifications	Minimum Dry Density (%)	Optimum Moisture Range (%)
Select Fill	AASHTO T99 or ASTM D698	98	-3% to +3%
Base Course	AASHTO T180 or ASTM D1557	95	Near Optimum

- At the time of preparing this report, South Industrial Drive is currently a dead-end street without any city designation. It is anticipated that once extended the new roadway will be designated as a "Neighborhood Link" based on the current City of Fayetteville Minimum Street Standards. Pavement Design Data and Recommended Pavement Section can be found on pages 9 and 10 of this report. The minimum pavement section and additional details is provided in the table below.

Material Type	Thickness (in)	Layer Coefficient	Structural Number
ACHM Surface Course	3	0.44	1.32
ACHM Binder Course	3	0.44	1.32
Aggregate Base Course (Class 7)	6	0.14	0.84
Design Structural Number			3.48

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Introduction

A geotechnical investigation of subsurface soil conditions was conducted by McClelland Consulting Engineers, Inc. (MCE) for the proposed improvements to Industrial Drive in Fayetteville, Arkansas. This investigation was requested by Mr. Jack Branscum, P.E. with MCE and authorized by Mr. Matt Casey, P.E. with the City of Fayetteville to investigate subsurface soil conditions along the alignment and to amend the original report as necessary to include recommendations for site preparation & grading operations, pavement sections, and additional considerations.

Site Description

The proposed project site is located to the south of Arkansas Highway 16 (East 15th Street) and the east of Arkansas Highway 156 (South City Lake Road). The planned roadway alignment itself is generally undeveloped but is bounded by City property to the west in the northern section, and a gravel yard/parking area to the north in the southern section. The majority of the vegetation along the proposed alignment consists of mature trees, underbrush, and medium-to-high cut grass and weeds. The site can be described as having a slope to the east from the west and from the south to the north. Maximum grade differentials across the proposed alignment are anticipated to be in the order of approximately 30 feet from west to the east and 13 feet from the south to the north. Based on our experience in the area, encountered subsurface materials at the time of the investigation, and information published by the Arkansas Geological Survey, the development area is anticipated to be located within the Mississippian age Boone formation.

Project Description

At the time of preparing this report, we understand the project scope to consist of the extension of South Industrial Drive. Specifically, extending the existing Industrial Drive to the southwest where it will connect with South City Lake Road. The proposed extension will encompass approximately 2,600 linear feet; having a width of 28 feet (back of curb to back of curb). The proposed extension will be constructed of asphalt materials with concrete curb-and-guttering. In addition to the pavement improvements, a five (5) foot-wide concrete pedestrian sidewalk is proposed along the southern and eastern portions of the extension with a six (6) foot greenspace.

Field Investigation

All project borings were conducted using a Diedrich D-50 track-mounted drill rig utilizing four (4) inch diameter solid stem augers. Soil samples were obtained at the depths indicated on the boring logs by the use of a two (2) inch diameter split-spoon sampler. The split-spoon sampler was driven by blows from a 140-pound automatic hammer dropped from a fixed height of 30 inches. The number of blows required to drive the split-spoon sampler the final 12 inches of an 18-inch drive, or portion thereof, is referred to as the Standard Penetration value, N, and is recorded on the boring logs in units of blows-per-foot.

Final drilled depths are shown as the depths achieved by the split-spoon sampler. In addition to Standard Penetration Testing (SPT), the field tests performed included visual soil classifications and groundwater observations. The logs for the referenced project borings can be found in Appendix B on Plates 2 through 6.

At the time of this investigation, groundwater was encountered by one (1) of the project borings (B-05). The groundwater was encountered at an approximate depth five (5) feet below the existing grade. Long-term groundwater monitoring was not included as part of this scope of work. All project borings were backfilled following best-practice guidelines the same day they were drilled. Table 1 on the following page shows the surface material thickness, depths, and elevations that were achieved by the conducted project borings.

Table 1: Project Borings – Depths and Elevations

Boring Number	Boring Elevation (ft)	Proposed Depth (ft)	Auger Refusal Depth (ft)	Total Depth Drilled (ft)	End of Boring Elevation (ft)
B-01	1,264.7	10	-	9.6	1,255.1
B-02	1,252.7	10	-	9.6	1,243.1
B-03	1,234.1	10	-	9.7	1,224.4
B-04	1,235.2	10	-	9.3	1,225.9
B-05	1,223.9	10	8.5	8.8	1,215.1

Notes: Elevations shown in Table 1 are rounded to the nearest 0.1 foot, and based on the current Topographic Survey produced by MCE.

Laboratory Testing

Laboratory testing was performed on all soil samples recovered from the project borings. The laboratory testing was directed at determining the engineering properties of the project soil strata. The laboratory testing was conducted in accordance with the American Society for Testing and Materials (ASTM) designations. The tests performed on samples from the borings included moisture content, Atterberg Limits, and sieve analyses.

The natural soil moisture content was determined for each of the soil samples to provide a moisture profile for each boring. Atterberg Limits tests (liquid and plastic limits) and sieve analyses were performed on selected samples to determine the classification of the soils and to help evaluate the volume-change characteristics of each soil stratum. Results of laboratory testing are provided on the boring logs and the Laboratory Test Results Summary in Appendix C on Plates 17 through 19. A key to the terms and symbols used on the boring logs is also presented in Appendix B on Plates 14 through 16. Table 2 below shows the relevant test method designations performed on the soil samples.

Table 2: Laboratory Test Method Designations

Test Method	Test Designation
Standard Practice for Description and Identification of Soils (Visual)	ASTM D2488
Standard Practice for Classification of Soils for Engineering Purposes (USCS)	ASTM D2487
Standard Test Method for Lab Determination of Water Content of Soil	ASTM D2216
Standard Test Method for Particle-Size Distribution of Soils Using Sieve Analysis	ASTM D6913
Standard Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils	ASTM D4318

On-Site Soil Conditions

The following project sections provide data and analysis regarding onsite conditions at the project location, which include, On-Site Soil Types, Site Geology, and IBC Site Classification, as well as further detail regarding encountered onsite soils.

On-Site Soil Types

The project site is located in central Washington County in Northwest Arkansas. The following soil types exist in the project area according to the current United States Department of Agriculture (USDA) and Natural Resources Conservation Service (NRCS) soil maps and descriptions:

- **Leaf Silt Loam (Le) – Northern Portions of the Project Area**
The Leaf series consists of very deep, poorly drained, very slowly permeable soils on flood plains, low terraces along streams, and on broad flats in the Southern Coastal Plain and Atlantic Coast Flatwoods Major Land Resource Areas. They formed in clayey alluvial and fluvial sediments.
- **Savannah Fine Sandy Loam (SfB) – Northern Portions of the Project Area**
The Savannah series consists of very deep, moderately well-drained, moderately slowly permeable soils on uplands and terraces in the Southern Coastal Plain. They formed in loamy marine or fluvial terrace deposits.
- **Enders Stony Loam (EoD) and Enders Gravelly Loam (EnC2) – Northern and Southern Portions of the Project Area**
The Enders series consists of deep, well-drained, very slowly permeable soils that formed in loamy and clayey residuum from shale, or interbedded shale and sandstone. These soils are on nearly level to moderately steep upland mountaintops and ridges and gently sloping to very steep mountainside slopes and foot slopes. Slopes range from 1 to 65 percent.
- **Summit Silty Clay (SsA) - Northern and Southern Portions of the Project Area**
The Summit series consists of very deep, moderately well-drained, and somewhat poorly drained soils that formed in clayey colluvium or residuum weathered from shales of the Pennsylvanian age. These soils are on interfluves, divides, and hillslopes. Slope ranges from 0 to 12 percent.
- **Montevallo Soils (MoD) – Southern Portions of the Project Area**
The Montevallo series consists of deep and very deep, well-drained, moderately permeable soils that formed in loamy residuum weathered from sandstone or interbedded sandstone and shale. These soils are on broad plateaus, mountainsides, hilltops, and benches. Slopes range up to 35 percent but are dominantly 2 to 10 percent.

An image from the USDA Web Soil Survey and how it relates to the approximate project alignment is provided in Figure 1 shown below.

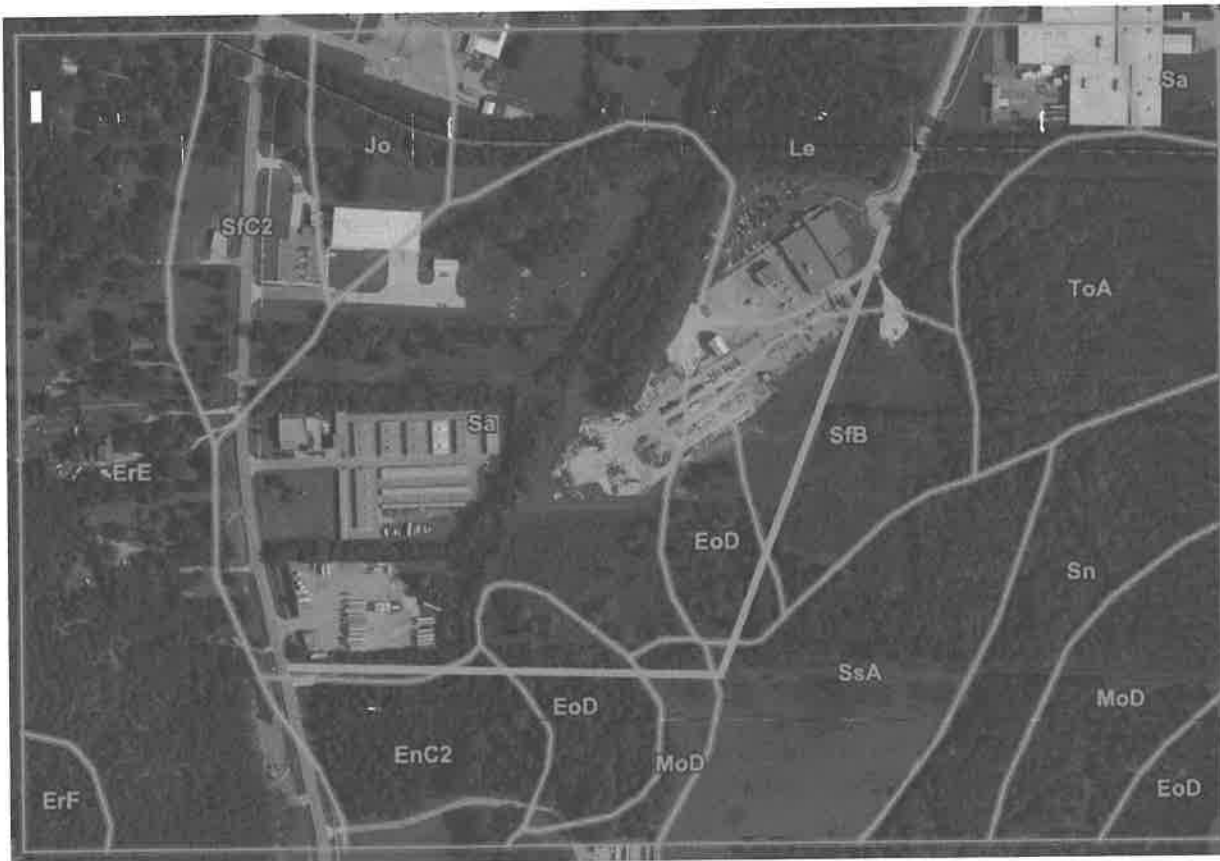


Figure 1: USDA Soil Survey Report Image.
The image was produced by the United States Department of Agriculture. The green line is the approximate project alignment.

Site Geology

According to maps and literature published by the United States Geological Survey and the Arkansas Geological Survey, the project area is underlain with deposits of both the Mississippian Age Fayetteville Shale Member and the Wedington Sandstone Member. Based on information published in the Stratigraphic Summary of Arkansas (IC-36) both members are described as:

- Fayetteville Shale Member is described as black, fissile, concretionary, clay shale. Dark gray, fine-grained limestones commonly interbed with the shales in north-central Arkansas.
- The Wedington Sandstone Member, known from west Arkansas outcrops, is composed of gray to brown, fine-grained, sometimes calcareous sandstone.

Septarian concretions are common in lower beds of the Fayetteville Shale Member but may be found throughout the formation. Fossils are abundant in some intervals and in local areas. Most of the fauna recovered is pyritic, but some silicified material is found. The Fayetteville is considered to rest conformably on the Batesville Formation. The Fayetteville Shale ranges in thickness from 10 to 400 feet. Imagery produced by the Arkansas Geological Society and the United States Geological Society is provided in Figure 2 below.

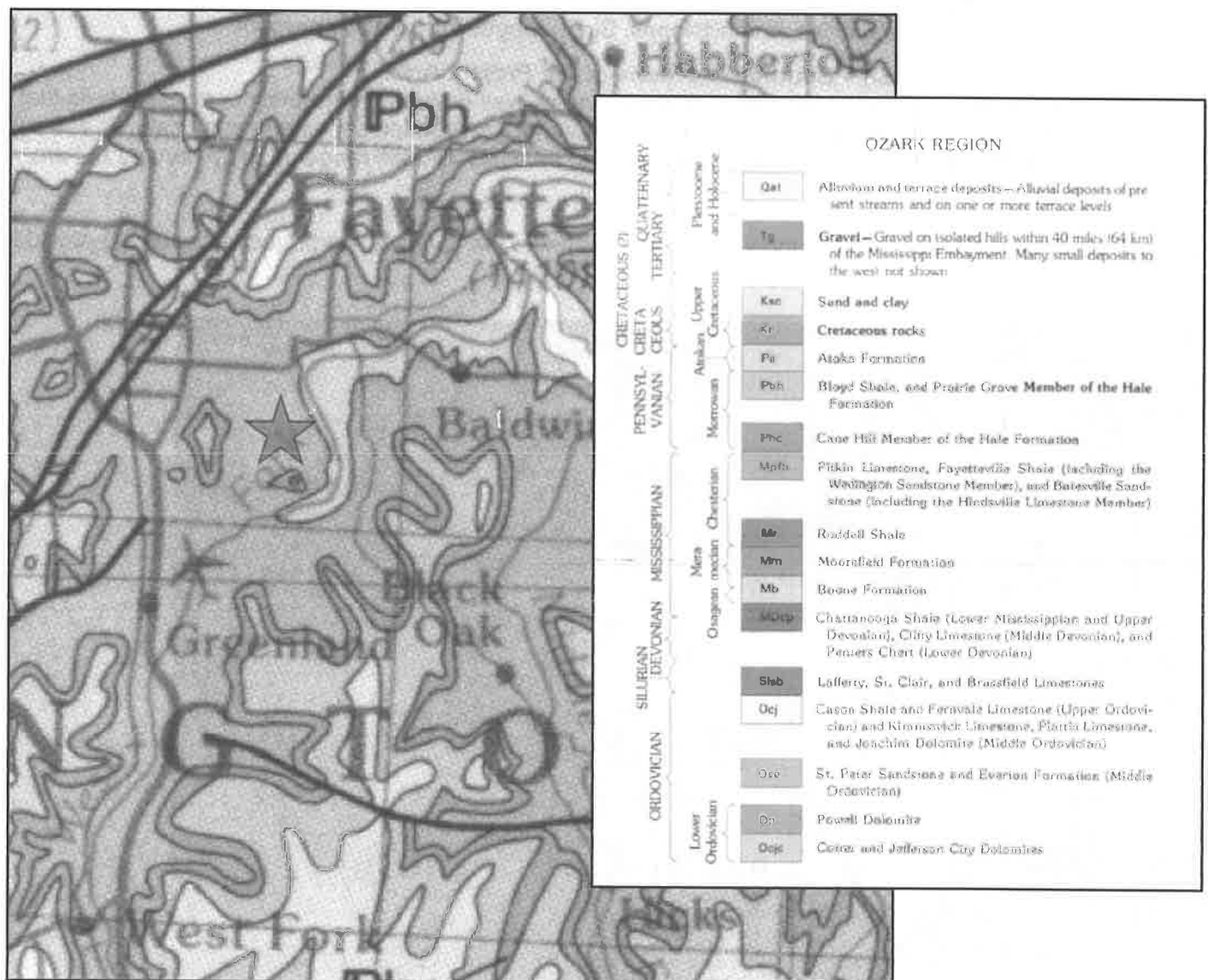


Figure 2: USGS Image and Formation Key.

This information was produced by the Arkansas Geological Survey and the United States Geological Survey. The red star is the approximate project location.

Summary of the Encountered Soil Strata

An overview of the individual stratum encountered along the project alignment is provided below:

Stratum I – Encountered Surface Materials

All project borings encountered a silty topsoil material at the surface. The thickness of the encountered topsoil was on average three (3) inches, with roots and organics extending deeper. It is our recommendation that all surface materials, rootlets, organics, and any other deleterious materials are removed full-depth from the development areas. Based on the encountered materials at the time of this investigation, we recommend that the earthwork contractor carries an allowance for initial stripping to a minimum depth of 12 inches in order to remove all surface materials along the planned alignment. Additionally, the contractor should expect that roots from the existing trees and brush extend to deeper depths in the unexplored areas of the project site, potentially to depths of three (3) or four (4) feet in areas with mature trees. Figure 3 below provides some examples of the existing surface materials encountered during this investigation.



Figure 3: Stratum I – Encountered Surface Materials

The images presented above show the surface materials encountered at a few of the boring locations. (Left) – B-02 location, (Center) – B-03 location, (Right) – B-04 location.

Stratum II – Shallow Subgrade Materials

The shallow-subgrade materials that make up Stratum II exhibited moderate-to-high plasticity characteristics and contained varying amounts of sands and gravels. The Stratum II materials are classified as the following soil types Clayey Gravel with Sand (GC), Sandy Lean Clay (CL), Sandy Fat Clay (CH), and Fat Clay with Sand (CH). The Stratum II soils are considered moisture-sensitive and may lose significant strength upon saturation and/or disturbance.

The GC materials that were encountered as dark brown, and light reddish-brown in color. Consistency values ranged from loose to medium-dense with corresponding N-values ranging from 7 to 15. The natural soil moisture content for these materials ranged from 16.4 to 17.4 percent based on ASTM D2216. The fine fraction of the coarse-grained GC materials have moderate-to-high plasticity characteristics and moderate potential for volumetric changes due to alterations in the soil's moisture content. The Liquid Limit (LL) of the GC soils was found to be 54, with a Plasticity Index (PI) value of 28. The fine fraction of these soils account for approximately 39.0 percent of the overall soil mass as indicated by the results of gradation analysis from the borings.

The CH materials that were encountered as light brown to dark brown, light reddish-brown, and reddish-brown and gray in color. Consistency values ranged from medium-stiff to very stiff with corresponding N-values ranging from 6 to 13. The natural soil moisture content for these materials ranged from 11.5 to 34.6 percent. The fine fraction of the fine-grained CH materials has moderate-to-high plasticity characteristics and moderate potential for volumetric changes due to alterations in the soil's moisture content. The LL of the CH soils ranged from 54 to 91, with PI values ranging from 29 to 53. The fine fraction of these soils make up between 70.0 and 82.0 percent of the overall soil mass as indicated by the results of gradation analysis from the borings.

The CL materials that were encountered as dark brown in color. Consistency values ranged from soft to stiff with corresponding N-values ranging from 3 to 7. The natural soil moisture content for these materials ranged from 26.7 to 27.4 percent. The fine fraction of the fine-grained CL materials has low-to-moderate plasticity characteristics and a low potential for volumetric changes due to alterations in the soil's moisture content. The LL of the CL soils was found to be 32, with a PI value of 14. The fine fraction of these soils account for approximately 50.0 percent of the overall soil mass as indicated by the results of gradation analysis from the borings.

Figure 4 below provides visual examples of some of the Stratum II materials detailed above.

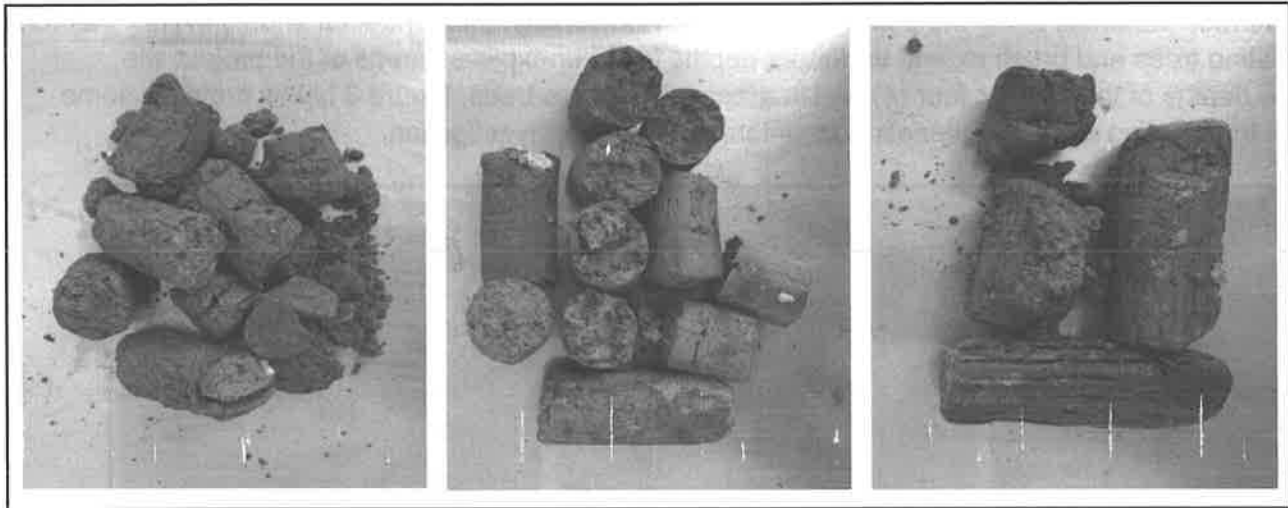


Figure 4: Stratum II – Shallow Subgrade Materials

The image on the left is an example of some of the GC soils encountered, the image in the center is an example of some of the encountered CH materials, and the image on the right is an example of some of the CL encountered materials.

Stratum III – Highly Weathered Sandstone (Wedington Sandstone Member)

The materials encountered as Stratum III are indicative of the sandstones known to exist within the Wedington Sandstone Member. A brief description of the Wedington Sandstone member is provided in the Site Geology section on page 4 of this report. The sandstone materials were encountered in a highly weathered condition and classified as a Clayey Gravel with Sand (GC).

The Stratum III materials were encountered as light brown in color. Consistency values were determined to very dense, with corresponding N-values greater than 50. The natural soil moisture content for these materials was found to be 14.4 percent. The fine fraction of the coarse-grained Stratum III materials have moderate-to-high plasticity characteristics and moderate potential for volumetric changes due to alterations in the soil's moisture content. The LL of the GC soils was found to be 41, with a PI value of 23. The fine fraction of these soils accounts for approximately 38.0 percent of the overall soil mass as indicated by the results of gradation analysis from the borings.

It should be noted that the Stratum III materials were only encountered by one of the project borings (B-01). The sandstone materials were encountered at an approximate elevation of 1256.2 feet below the existing surface elevations. Although not encountered by any of the other borings, the Stratum III materials are known to exist within unexplored portions of the project site.

Stratum IV – Shale (Fayetteville Shale Member)

The materials encountered as Stratum IV are indicative of the shales known to exist within the Fayetteville Shale Member. A brief description of the Fayetteville Shale Member is provided in the Site Geology section on page 4 of this report. The shale materials were encountered in weathered conditions and classified as a Clayey Sand with Gravel (SC) and Silty Sand with Gravel (SM).

The Stratum III materials were encountered as dark gray, dark gray, and dark brown in color. Consistency values ranged from soft to hard, with corresponding N-values ranging from 9 to greater than 50.

The natural soil moisture content for these materials ranged from 6.9 to 20.4 percent. The fine fraction of the coarse-grained Stratum III materials has negligible-to-moderate plasticity characteristic and moderate potential for volumetric changes due to alterations in the soil's moisture content. The LL of the Stratum IV soils ranged from 38 to 45, with PI values ranging from Non-Plastic (NP) to 19. The fine fraction of these soils make up between 15.0 and 42.0 percent of the overall soil mass as indicated by the results of gradation analysis from the borings.

The Stratum IV materials were encountered directly underneath the Stratum I materials by boring B-02. The consistency of the shallow Stratum IV materials was encountered as soft to moderately hard and became increasingly more competent the deeper the boring advanced. The Stratum IV materials encountered by borings B-03, B-04, and B-05 were encountered at an approximate depth of 8.5 feet below existing surface elevations. Figure 5 below provides a visual example of both the Stratum III and Stratum IV materials encountered during this investigation.

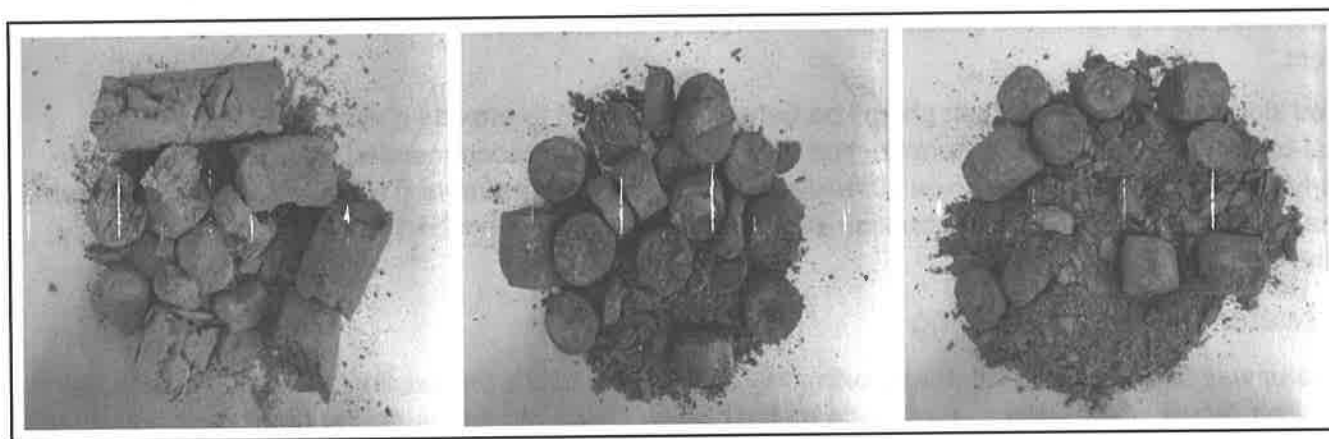


Figure 5: Stratum III and Stratum IV Materials

The image on the left is an example of the Stratum III (Weathered Sandstone) materials encountered by Boring B-01. The other two (2) images are examples of the Stratum IV (Shale) materials encountered by Borings B-02, B-03, B-04, and B-05. The material in the center image is an example of the shallow Stratum IV materials encountered by Boring B-02.

Engineer's Analysis and Recommendations

We understand the project scope includes the construction of a street extension from South Industrial Drive connecting to South City Lake Road (ARK Hwy 156) in Fayetteville, Arkansas. The proposed extension will encompass approximately 2,600 linear feet; having a width of 28 feet (back of curb to back of curb). In addition to the pavement improvements, a five (5) foot-wide concrete pedestrian sidewalk is proposed along the southern and eastern portions of the extension with a six (6) foot greenspace. At the time of preparing this report, South Industrial Drive is currently a dead-end street without any city designation. It is anticipated that once extended the new roadway will be designated as a "Neighborhood Link" based on the current City of Fayetteville Minimum Street Standards. Construction recommendations and considerations are provided in the following sections of this report.

A previous investigation of the planned Industrial Drive Extension was conducted by a separate Geotechnical firm in order to determine the adequacy of onsite materials for use as pavement subgrade. The findings from that investigation demonstrated problematic subgrade materials which were deemed insufficient for the construction of the planned extension. Taking into account the findings from the previous investigation, the purpose of this investigation and report was to provide design recommendations based on the need for import/select fill materials beneath the planned pavement sections.

Site Preparation and Grading

As previously discussed, the existing surface material was observed to contain grass, roots, and organics in the upper three (3) inches below existing ground elevations. It should be noted that the measured topsoil is only valid for the locations where these borings were conducted and could differ in the unexplored portions of the project alignment. Due to the wooded nature of the unexplored portions, we anticipate that roots and rootlets could extend to deeper depths. The contractor should anticipate an average minimum stripping depth of 12 inches, with isolated areas requiring additional removal and grubbing relevant to tree roots that may extend below this depth.

Additional care should be taken by the Contractor to prevent excessive saturation of the exposed Stratum II subgrade soils as these materials will lose significant strength upon saturation. This can be achieved by providing positive drainage during construction and covering with new select fill material soon after excavation, where applicable.

The onsite subgrade soils will be more susceptible to reduced shear strengths if construction occurs during historically wet portions of the calendar year; meaning soils that would be stable under relatively dry conditions will be otherwise during saturated conditions. This condition should be considered by bidding earthwork contractors.

Excavated slopes during construction should be benched or sloped to provide a minimum two-to-one horizontal-to-vertical (2H:1V) ratio. Construction slopes steeper than recommended may be unstable, particularly when introduced to moisture increases during precipitation events. Temporary shoring measures should be anticipated to stabilize construction slopes that are steeper than 2H:1V, particularly in the utility installation operations.

Groundwater – Site Dewatering

Groundwater was observed in B-05 at approximately five (5) feet below the existing surface elevation at the time of drilling. Water observations were made by the on-site crew both during drilling operations and after the completion of the borings. Long-term groundwater monitoring was not included in our scope of work. The installation and periodic measurement of monitoring wells would be required to establish seasonal piezometric surfaces below the project site. Perched groundwater/saturated subgrade conditions should be expected at the site above the basal shale materials, particularly during wet portions of the year and immediately following precipitation events.

Rock Excavation

In-situ rock material in the form of moderately hard to hard shale and very dense sandstone was encountered by the project borings. As previously stated, we do not expect that the encountered rock materials will have a significant impact on excavation operations based on the current grading plan at the time of this report.

If earthwork operations expose in-situ rock materials as described above, relevant excavations should extend so that a minimum of one (1) foot of select fill material may be placed between the planned pavement section and existing rock materials. The new roadway extension should not bear on a combination of select fill material and native/rock material, as this may induce differential settlement within the subgrade, resulting in premature cracking and uneven deterioration of the surface pavement. Additionally, local shale materials have been known to convey perched groundwater at the soil-to-rock interface as evidenced by project boring B-05. The recommended minimum placement of one (1) foot of select fill between rock and pavement materials will help to mitigate effects due to groundwater.

Rock removal techniques may be required when excavations extend beyond depths where the recorded N-values exceed 50, particularly in a trench excavation setting. In this case, excavation operations will likely require the use of rock removal techniques, such as a Ripper Tooth or a Hammer Hoe attachment.

Subgrade Verification

Following stripping and initial grading and prior to placement of select fill material, the pavement area subgrade should be proof-rolled with a tandem-axle fully-loaded dump truck weighing approximately 60,000 pounds, or equivalent construction equipment. The proof-rolling should be observed by the Geotechnical Engineer or his/her representative to verify stable subgrade conditions. Any soft and/or yielding subgrade materials should be replaced by undercutting and backfilling with select fill material.

The onsite portion of this investigation occurred during the month of May following a generally dry weather pattern. If earthwork operations occur during similar weather patterns as those experienced at the time of this investigation, we anticipate that subgrade conditions will be generally stable at a depth of two (2) feet below existing ground elevations throughout the planned extension. Further, these conditions could reasonably be expected between the months of May and September.

In the areas investigated by borings B-03 and B-05, stable subgrade materials from which to adequately place select fill materials were not encountered until approximately four (4) feet below existing surface elevations. Stable subgrade conditions, and ultimately the depth of required undercutting to expose stable subgrade conditions, will vary based on the in-place moisture profile of these materials at the time of construction as well as the presence of any deleterious materials/organics that may remain after initial stripping.

A correlation of N-values as they relate to relative density/consistency can be seen in Appendix B on Plate 12. Subgrade remediation practices should be anticipated if earthwork operations occur during historically wet portions of the calendar year. The extent of subgrade remediation, if required, should be verified by the Geotechnical Engineer at the time of earthwork operations.

Pavement Subgrade Recommendations

Initial grading and excavation should anticipate full-depth removal of existing surface materials in areas where new pavement sections are planned to be constructed. Based on the current grading plans, earthwork operations will range from approximately four (4) feet of cut to approximately six (6) feet of fill, with the majority of the earthwork operations consisting of two (2) to four (4) feet of fill throughout the planned extension alignment. The following subgrade recommendations consider two (2) conditions based on the current grading plans.

Condition 1: Less than four (4) feet of fill required

The subgrade recommendation for Condition 1 is relevant to areas requiring less than four (4) feet of fill placement to achieve planned finish subgrade elevations (including areas with planned cuts). In these areas, we recommend that the Contractor excavate to planned finished subgrade elevation, or as a minimum, perform initial stripping of 12 inches of the surface material as well as roots and other deleterious materials. A representative of the Geotechnical Engineer should then be requested to the site to evaluate the exposed stable subgrade materials as referenced in the Subgrade Verification section of this report. Project planning and budgeting should expect a minimum of two (2) feet of imported select fill material being present in the roadway subgrade dimensions. It may be feasible to place a minimum of one (1) foot of select fill material in locations where stable native shale material exists at a shallow elevation. This recommendation should be made at the time of construction by a representative of the Geotechnical Engineer based on site conditions, time of year, and other considerations.

Condition 2: Four (4) feet of fill required or greater

The subgrade recommendation for Condition 2 is relevant to areas requiring four (4) feet of fill placement or more to achieve planned finish subgrade elevations. In these areas, we recommend that the Contractor strip surface materials and otherwise deleterious materials as recommended in the Site Preparation and Grading section of this report. Following initial stripping operations, a 24 inch thickened bridging lift of select fill material may be installed directly above the exposed subgrade materials. Based on the in-situ strength of the subgrade materials at the time of our investigation, additional subgrade stabilization and/or undercutting is not anticipated being required for the successful installation of the thickened bridging lift. However, it is highly recommended that any areas planned to receive a bridging lift be evaluated by a representative of the Geotechnical Engineer for relative stability prior to the placement of select fill.

The top eight (8) inches of any thickened lift should be compacted and tested per project specifications. Then, a minimum of two (2) feet of select fill material should be properly placed and compacted in standard lifts above the bridging lift until the planned finish subgrade elevations have been achieved per the project design documents.

Additional undercutting should be anticipated in areas near project borings B-03 and B-05 requiring less than four (4) feet of fill placement to achieve finish subgrade elevations. This recommendation is due to the high plasticity of the Sandy Fat Clay (CH) materials that were encountered at shallow depths by these borings. In these areas, we recommend the project budget allow for potential undercut in these areas on the order of three (3) to four (4) feet below existing ground elevations.

Select Fill Material

Any select fill material required for the project is recommended to be an off-site borrow material of locally available reddish-brown silty or clayey chert gravel meeting Unified Soils Classification as a GC or GM material and having a Plasticity Index of 35 or less, a Liquid Limit of 55 or less, a minimum of 30% retained on the ¾-inch sieve and a maximum of 35% passing the No. 200 sieve. Any material to be used as select fill on the project should be reviewed and approved by the Geotechnical Engineer.

Select fill material should be placed in maximum eight (8) inch compacted lifts at a minimum density of 98 percent of the maximum dry density as determined by the Standard Proctor Test (AASHTO T99 or ASTM D698) or 95 percent of the maximum dry density as determined by the Modified Proctor Test (AASHTO T180 or ASTM D1557). Placement of select fill material should follow the guidelines of Section 302 of the Standard Specifications for Highway Construction, 2014 edition, by AHTD.

It should be noted that materials confirming to the subgrade requirements found in the City of Fayetteville Minimum Street Standards were not encountered above the basal shale material.

In general, a minimum thickness of two (2) feet of select fill material should be expected for the street design, with some areas receiving additional fill to account for final grading and potential undercutting as previously described. In no case should there be less than 12 inches of select fill material placed beneath the new roadway, even in areas where stable shale is encountered near planned finish subgrade elevation.

All fill and backfill should be placed in horizontal lifts. When placing fill on top of existing slopes, the slope face should be stripped of all vegetation and the face "benched" to allow the placement of horizontal lifts and bonding to the slope face. Table 3 on the following page provides the recommended compaction parameters for select fill and Class 7 base course to be used on the project.

Table 3: Compaction Requirements

Type of Material	Test Specifications	Minimum Dry Density (%)	Optimum Moisture Range (%)
Select Fill	AASHTO T99 or ASTM D698	98	-3% to +3%
Base Course	AASHTO T180 or ASTM D1557	98	Near Optimum

Pavement Design Data & Recommended Pavement Section

At the time of preparing this report, South Industrial Drive is currently a dead-end street without any city designation. It is anticipated that once extended the new roadway will be designated as a "Neighborhood Link" based on the current City of Fayetteville Minimum Street Standards. As such, the minimum Structural Number (SN) used for the pavement design for a street designated as a Neighborhood Link is 3.04 based on City specifications. The conducted pavement analysis was based on a 20-year design life, a subgrade resilient modulus of 6,000 psi, reliability of 75%, and an Equivalent Single 18-kip Axle Load (ESAL) of 553,845. Additionally, suitable subgrade material with CBR of 8.0 or greater is also expected being provided in the upper two (2) feet of the pavement subgrade, at a minimum.

Utilizing this design information, the minimum SN based on the specific pavement design is 3.48. Table 4 below provides pavement design data and minimum sections for asphalt pavement, as is expected to be utilized on the project. The recommended pavement section provided below exceeds City Street Design Requirements and satisfies the minimum required design SN of 3.48. The values presented in Table 4 show the minimum design pavement sections satisfying the calculated structural number requirements set by the City of Fayetteville.

Table 4: Pavement Design Data

Material Type	Thickness (in)	Layer Coefficient	Structural Number
ACHM Surface Course	3	0.44	1.32
ACHM Binder Course	3	0.44	1.32
Aggregate Base Course (Class 7)	6	0.14	0.84
Design Structural Number			3.48

As an alternative to conventional undercut and backfill with local select fill material, it is recommended that an aggregate fill and geogrid section is evaluated by the Design Team for consideration related to cost and constructability, particularly if earthwork is planned between the months of October and April. The design should consider a Tensar TX7 Geogrid (or approved equivalent) with two (2) feet of aggregate fill material above. The aggregate fill material could consist of 8-inch minus shot-rock, Class 7 base, or a B-Stone section. The shot-rock or B-Stone materials should be capped with a minimum six (6) inches of Class 7 base, or "dirty" base material, or alternatively could be covered by a filter fabric to reduce the transmission of fines from the roadway base section above. This recommendation is particularly intended to address any areas with soft/yielding soils at the time of construction that would require undercut operations in excess of three (3) feet below the existing surface elevations. Further coordination regarding this subgrade option is encouraged if desired by the Design Team and the City.

Construction Materials Testing and Special Inspections

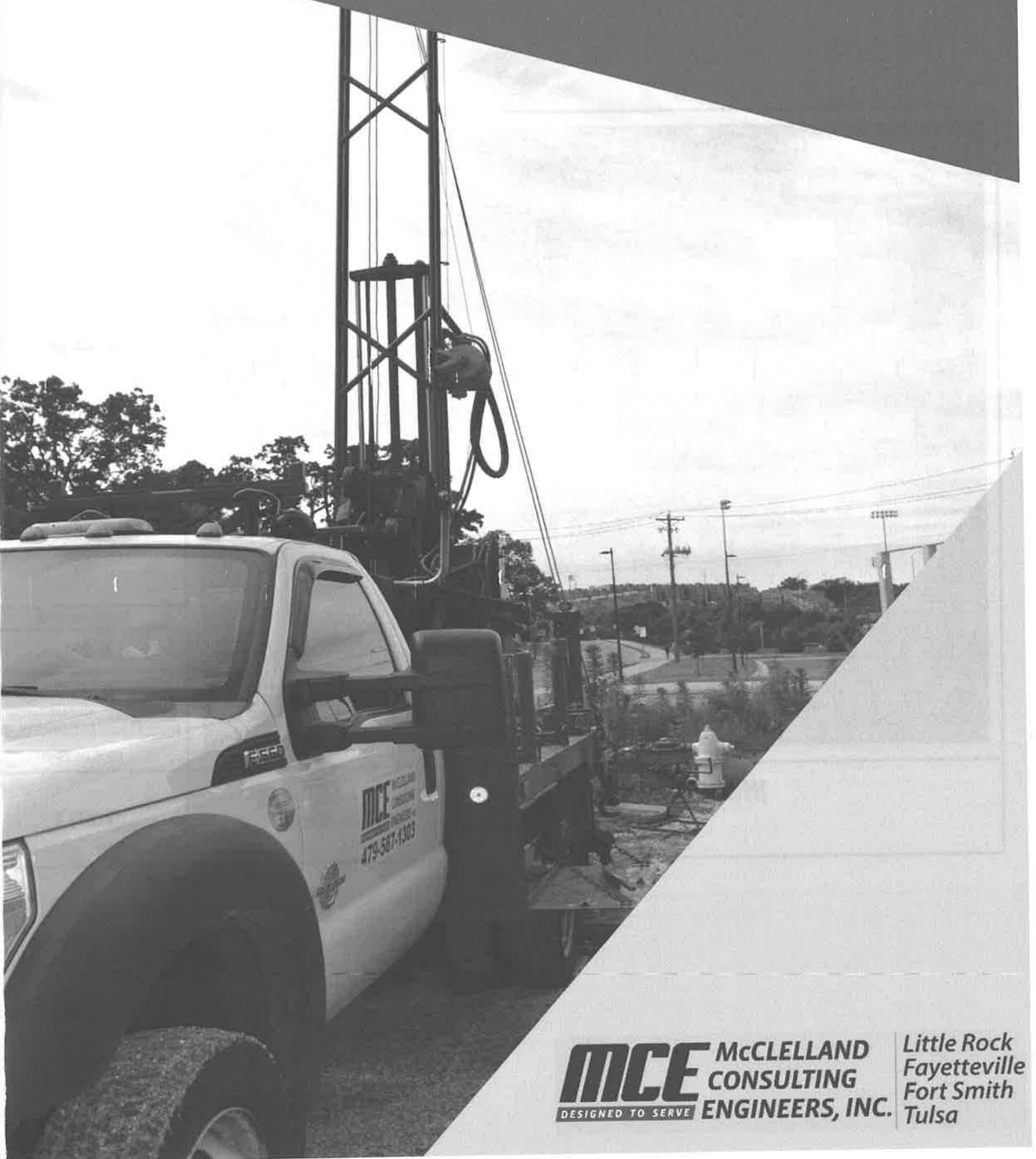
It is encouraged that construction materials testing and special inspection services are provided by MCE to deliver consistency with the recommendations in this report and the documentation of those recommendations being implemented during construction. Testing of the earthwork, concrete, paving, and other phases are recommended to be conducted and documented during construction to assure the Owner and Engineer that the construction complies with the specifications.

In particular, field verification of earthwork operations will be required to confirm the recommendations contained herein. Additionally, all trenching and excavations should be conducted in accordance with Arkansas State Law and OSHA guidelines and requirements.

Limitations and Reserved Rights

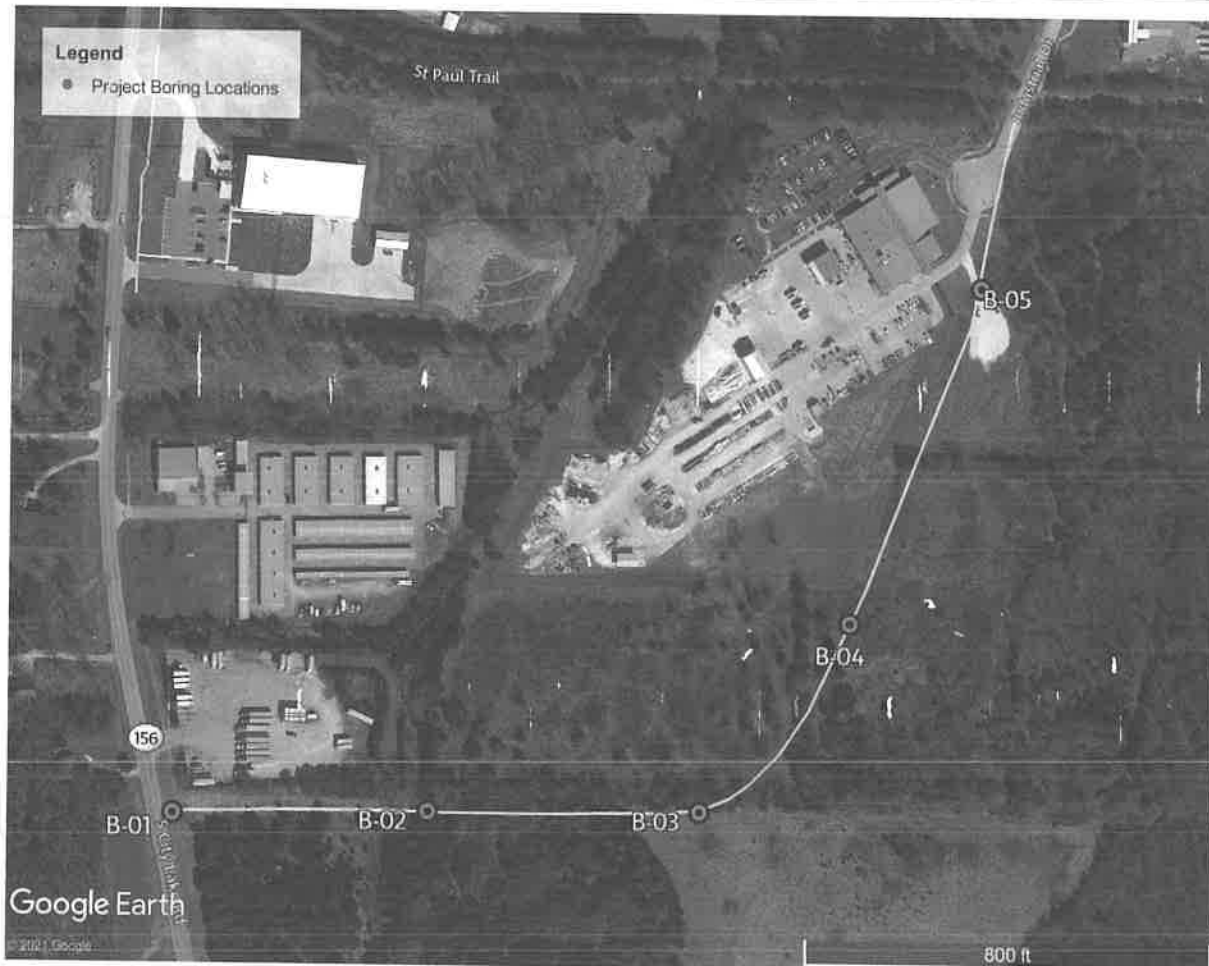
The recommendations and conclusions made in this report are based on the assumption that the subsoil conditions do not deviate appreciably from those disclosed in the subsurface exploration. Should significant subsoil variations or undesirable conditions be encountered during construction that are not described herein, the Geotechnical Engineer reserves the right to inspect these conditions for the purpose of reevaluating this report. A review of the final construction plans and specifications by this office is encouraged to ensure compliance with the intent of these recommendations.

Appendix A: Boring Layout



MCE McCLELLAND
CONSULTING
ENGINEERS, INC.
DESIGNED TO SERVE

Little Rock
Fayetteville
Fort Smith
Tulsa



INDUSTRIAL DRIVE EXTENSION

Fayetteville, Arkansas

CITY OF
FAYETTEVILLE
ARKANSAS



PROJECT NUMBER

21-2106

MCE McCLELLAND
CONSULTING
DESIGNED TO SERVE ENGINEERS, IN

mce.us.com

PLATE 1





McClelland Consulting Engineers, Inc.
1580 East Stearns Street
Fayetteville, AR 72703
Telephone: 479.581.1303

BORING NUMBER B-01

PAGE 1 OF 1

CLIENT City of Fayetteville

PROJECT NAME Industrial Drive Extension

PROJECT NUMBER 21-2106

PROJECT LOCATION Fayetteville, Arkansas

DATE STARTED 5/19/21

COMPLETED 5/19/21

GROUND ELEVATION 1264.7 ft

HOLE SIZE 6.25 inches

DRILLING CONTRACTOR McClelland Consulting Engineers, Inc.

GROUND WATER LEVELS:

DRILLING METHOD Solid Stem Auger

AT TIME OF DRILLING ---

LOGGED BY D. Bunch

CHECKED BY D. Lawrence

AT END OF DRILLING ---

NOTES See Plate 1 for Boring Location

AFTER DRILLING ---

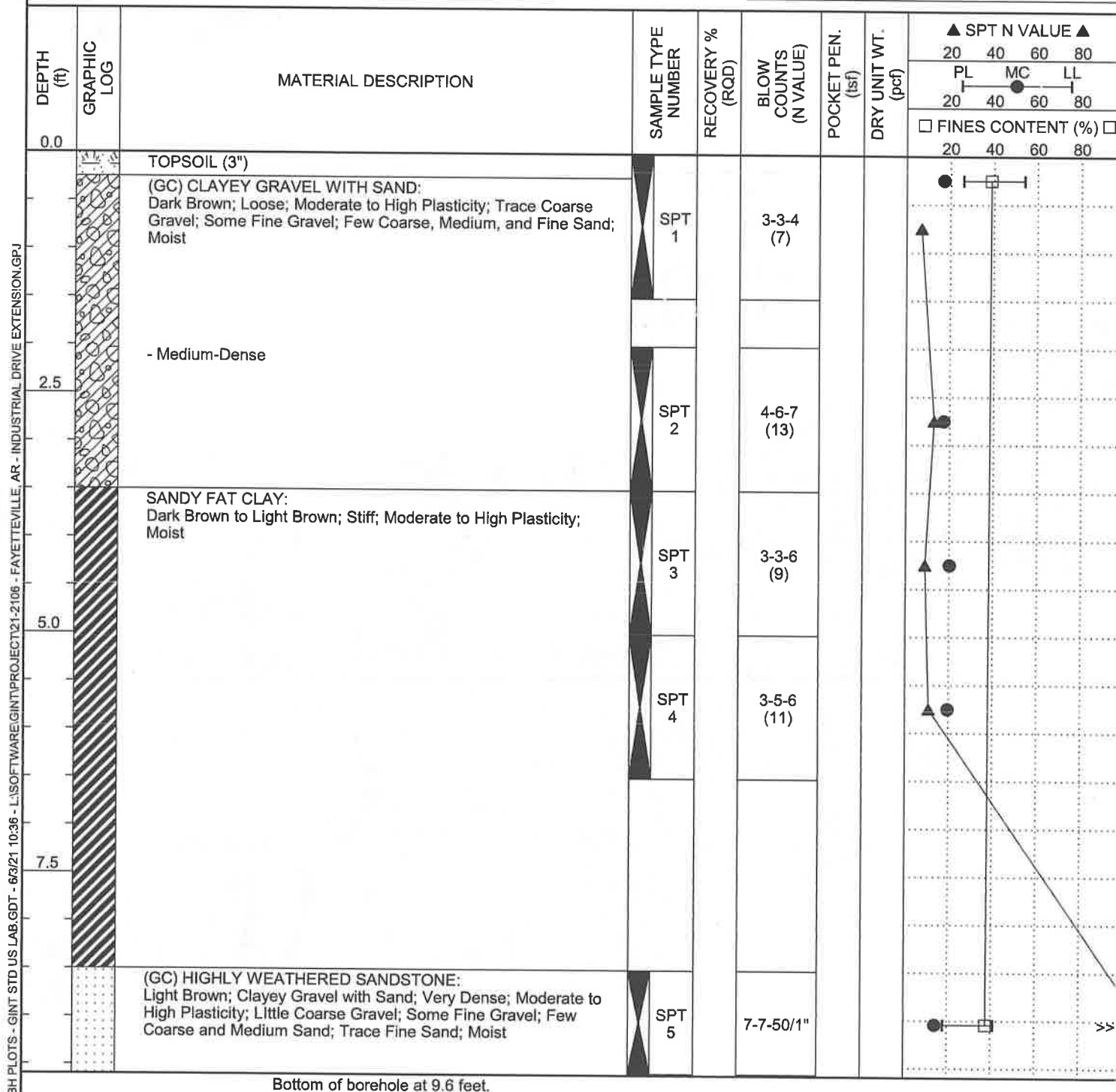


PLATE :



McClelland Consulting Engineers, Inc.
1580 East Stearns Street
Fayetteville, AR 72703
Telephone: 479.581.1303

BORING NUMBER B-02

PAGE 1 OF 1

CLIENT City of Fayetteville
PROJECT NUMBER 21-2106
DATE STARTED 5/19/21 COMPLETED 5/19/21
DRILLING CONTRACTOR McClelland Consulting Engineers, Inc.
DRILLING METHOD Solid Stem Auger
LOGGED BY D. Bunch CHECKED BY D. Lawrence
NOTES See Plate 1 for Boring Location

PROJECT NAME Industrial Drive Extension
PROJECT LOCATION Fayetteville, Arkansas
GROUND ELEVATION 1252.7 ft HOLE SIZE 6.25 inches
GROUND WATER LEVELS:
AT TIME OF DRILLING ---
AT END OF DRILLING ---
AFTER DRILLING ---

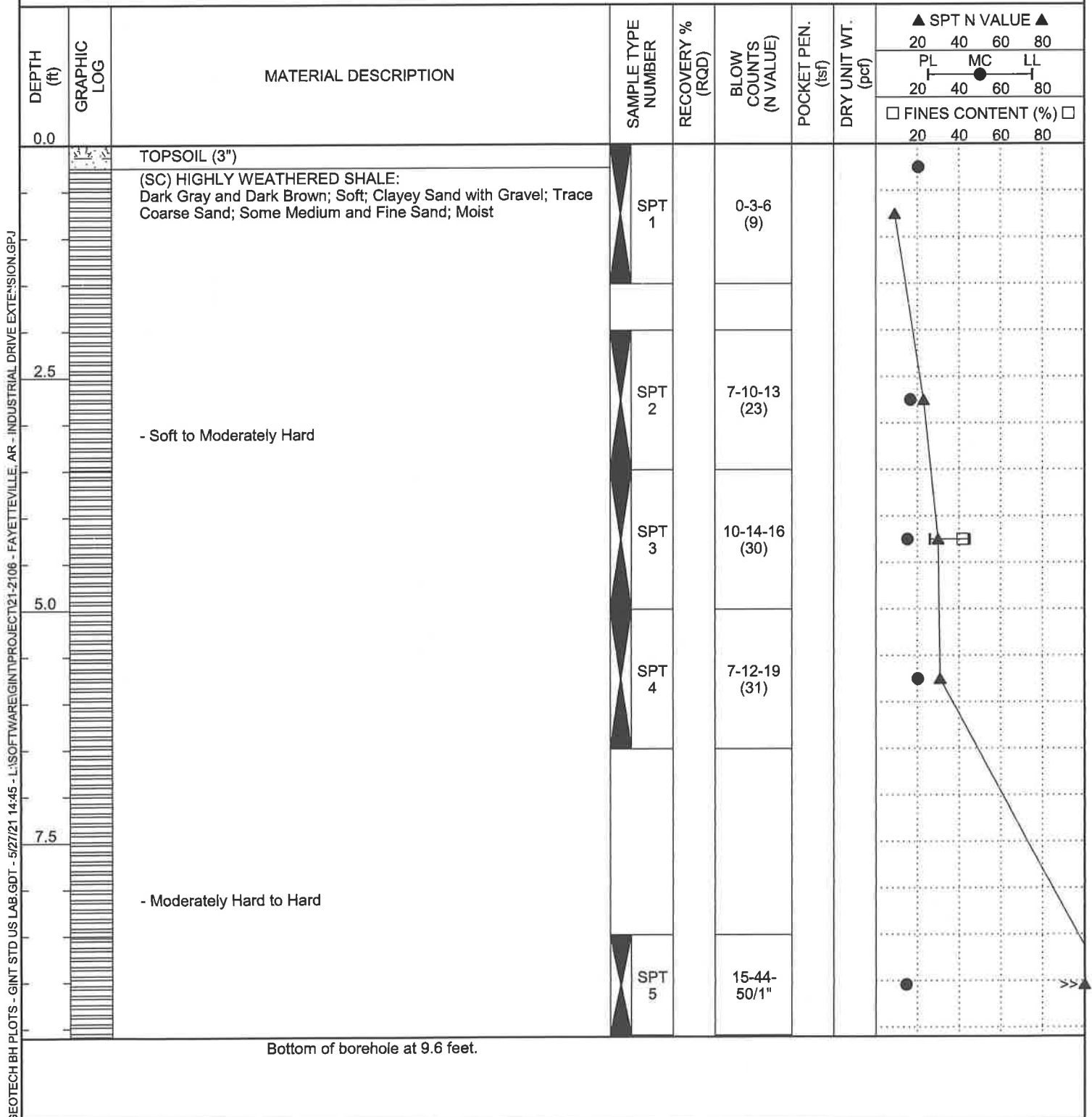


PLATE 3



McClelland Consulting Engineers, Inc.
1580 East Stearns Street
Fayetteville, AR 72703
Telephone: 479.581.1303

BORING NUMBER B-03

PAGE 1 OF 1

CLIENT City of Fayetteville

PROJECT NAME Industrial Drive Extension

PROJECT NUMBER 21-2106

PROJECT LOCATION Fayetteville, Arkansas

DATE STARTED 5/19/21

COMPLETED 5/19/21

GROUND ELEVATION 1234.1 ft

HOLE SIZE 6.25 inches

DRILLING CONTRACTOR McClelland Consulting Engineers, Inc.

GROUND WATER LEVELS:

DRILLING METHOD Solid Stem Auger

AT TIME OF DRILLING ---

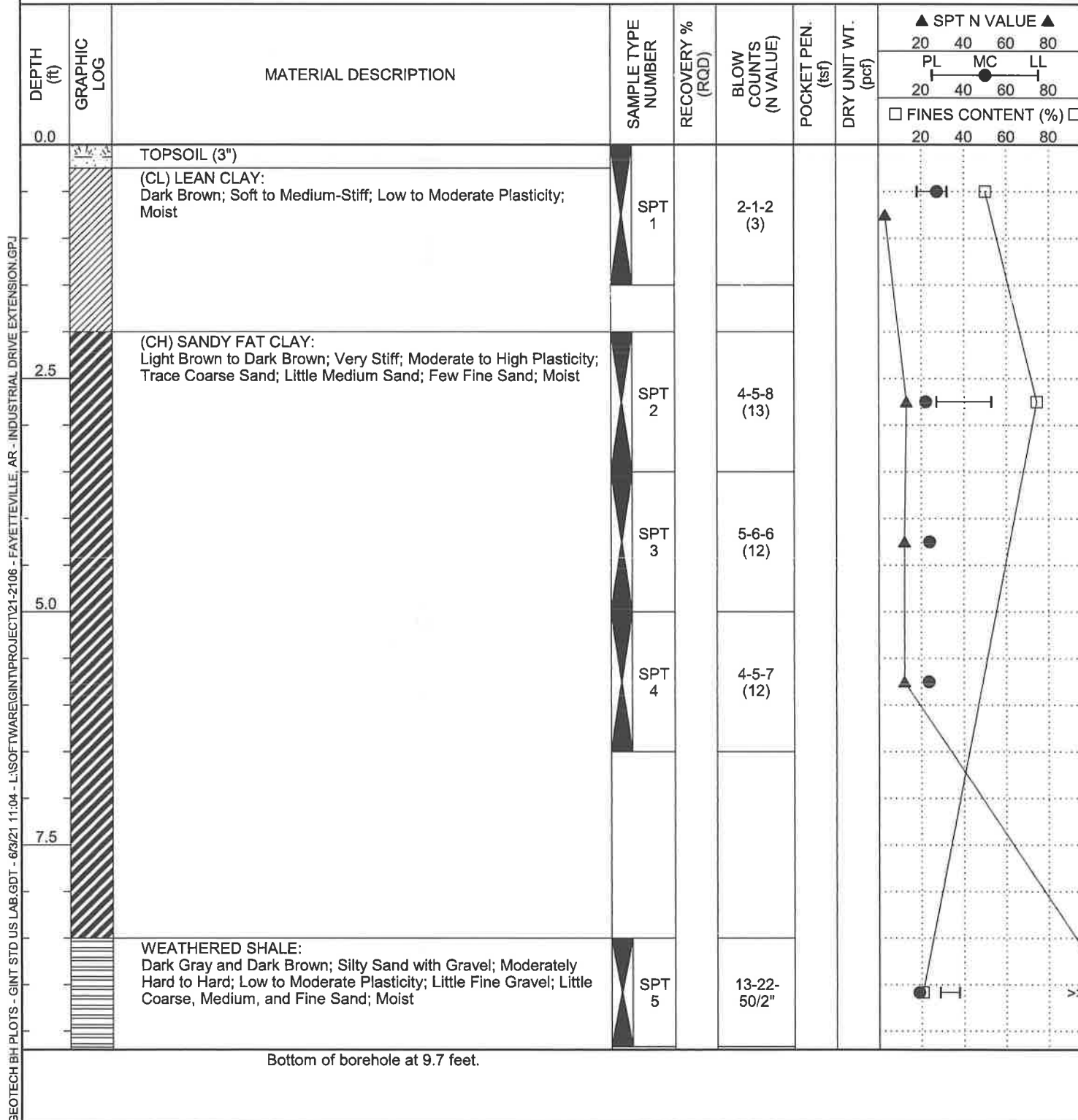
LOGGED BY D. Bunch

CHECKED BY D. Lawrence

AT END OF DRILLING ---

NOTES See Plate 1 for Boring Location

AFTER DRILLING ---





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Fayetteville, AR 72703
Telephone: 479.581.1303

BORING NUMBER B-04

PAGE 1 OF 1

CLIENT City of Fayetteville

PROJECT NAME Industrial Drive Extension

PROJECT NUMBER 21-2106

PROJECT LOCATION Fayetteville, Arkansas

DATE STARTED 5/19/21 COMPLETED 5/19/21

GROUND ELEVATION 1235.2 ft HOLE SIZE 6.25 inches

DRILLING CONTRACTOR McClelland Consulting Engineers, Inc.

GROUND WATER LEVELS:

DRILLING METHOD Solid Stem Auger

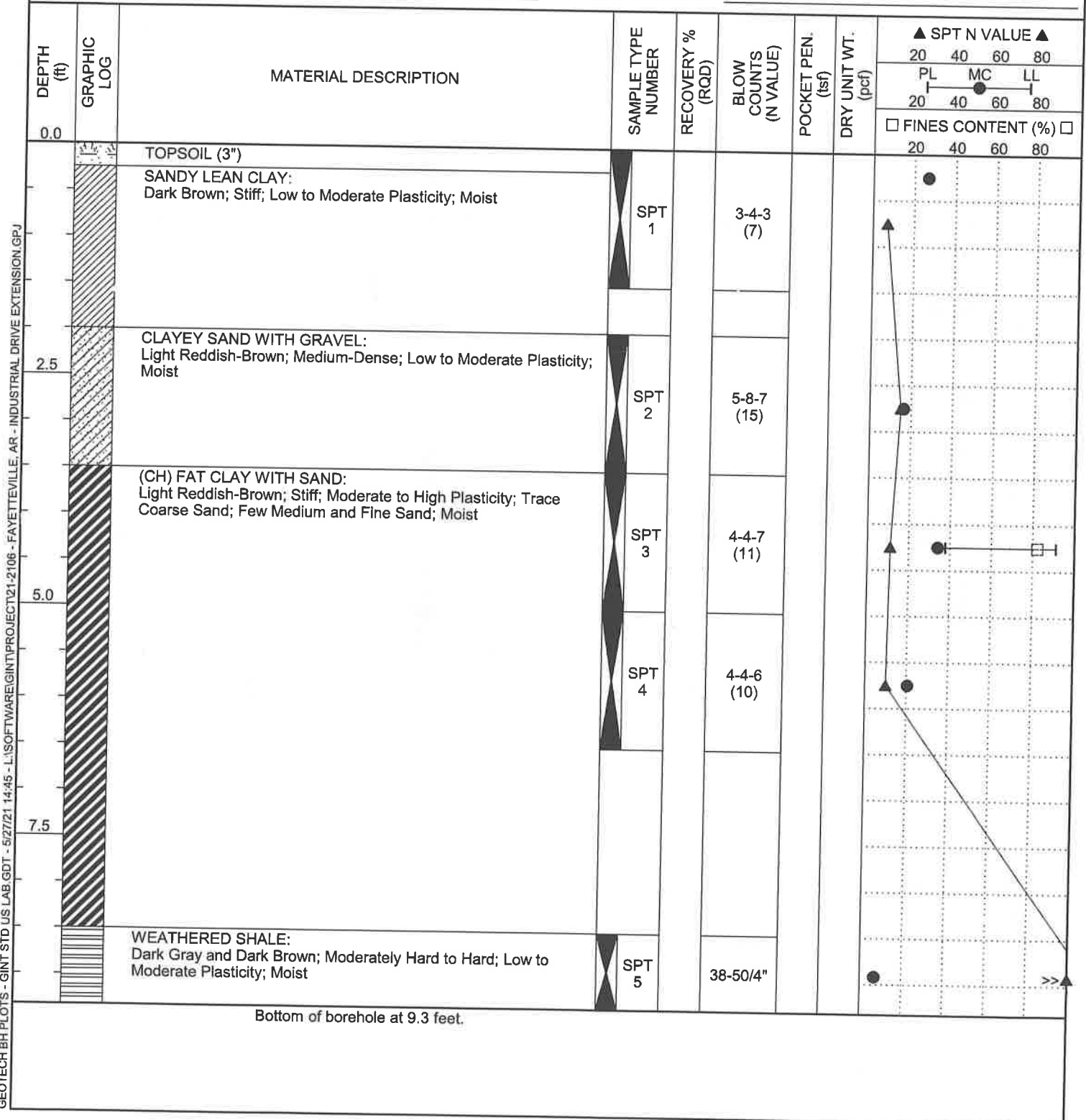
AT TIME OF DRILLING ---

LOGGED BY D. Bunch CHECKED BY D. Lawrence

AT END OF DRILLING ---

NOTES See Plate 1 for Boring Location

AFTER DRILLING ---





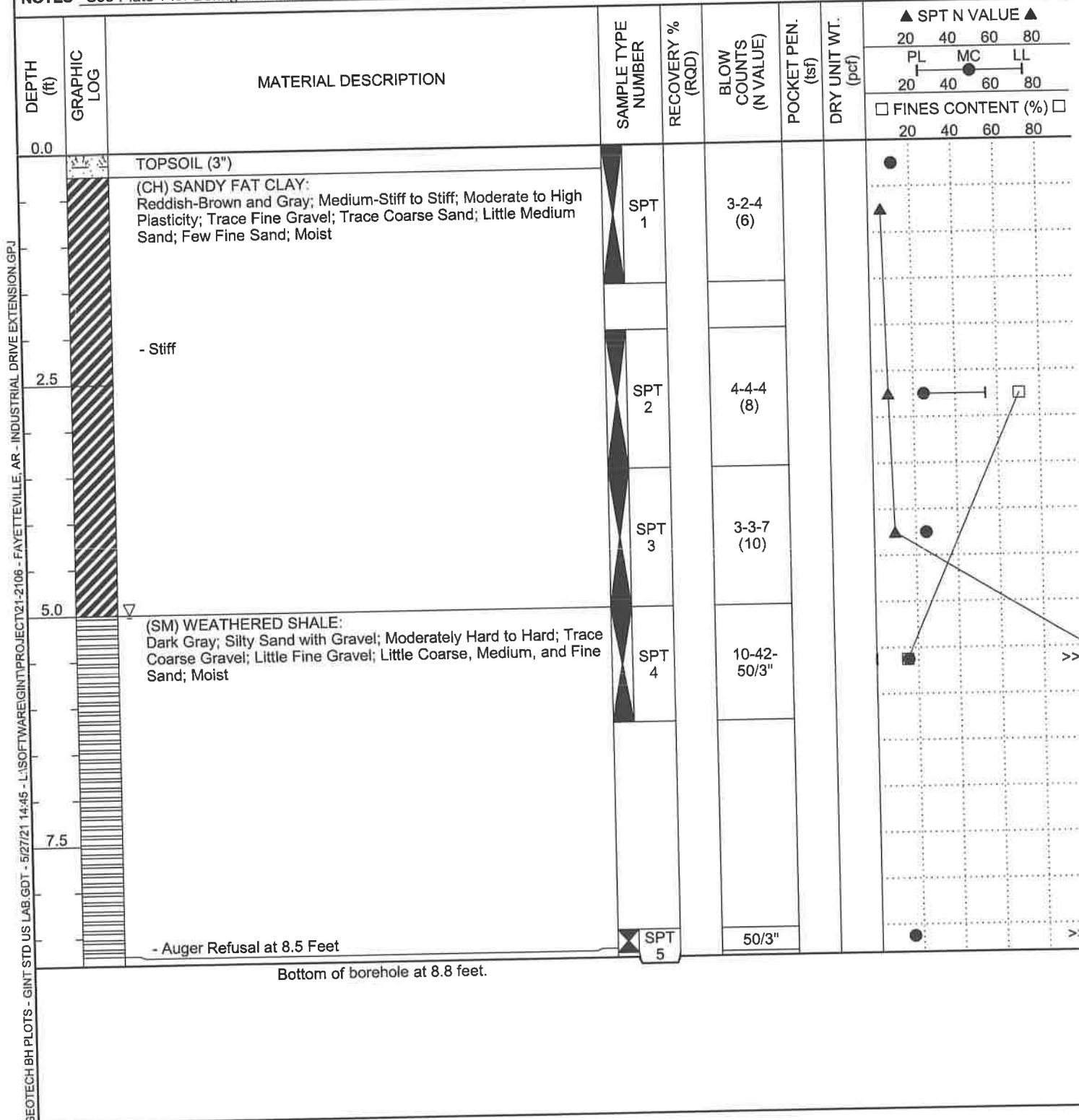
McClelland Consulting Engineers, Inc.
1580 East Stearns Street
Fayetteville, AR 72703
Telephone: 479.581.1303

BORING NUMBER B-05

PAGE 1 OF 1

CLIENT City of Fayetteville
PROJECT NUMBER 21-2106
DATE STARTED 5/19/21 COMPLETED 5/19/21
DRILLING CONTRACTOR McClelland Consulting Engineers, Inc.
DRILLING METHOD Solid Stem Auger
LOGGED BY D. Bunch CHECKED BY D. Lawrence
NOTES See Plate 1 for Boring Location

PROJECT NAME Industrial Drive Extension
PROJECT LOCATION Fayetteville, Arkansas
GROUND ELEVATION 1223.9 ft HOLE SIZE 6.25 inches
GROUND WATER LEVELS:
▽ AT TIME OF DRILLING 5.00 ft / Elev 1218.90 ft
AT END OF DRILLING ---
AFTER DRILLING ---



PLATE



McClelland Consulting Engineers, Inc.
1580 East Stearns Street
Fayetteville, AR 72703
Telephone: 479.581.1303

KEY TO SYMBOLS

CLIENT City of Fayetteville

PROJECT NAME Industrial Drive Extension

PROJECT NUMBER 21-2106

PROJECT LOCATION Fayetteville, Arkansas

LITHOLOGIC SYMBOLS

(Unified Soil Classification System)



CH: USCS High Plasticity Clay



CL: USCS Low Plasticity Clay



GC: USCS Clayey Gravel



SANDSTONE: Sandstone



SC: USCS Clayey Sand



SHALE: Shale



TOPSOIL: Topsoil

SAMPLER SYMBOLS



Standard Penetration Test

WELL CONSTRUCTION SYMBOLS

ABBREVIATIONS

LL - LIQUID LIMIT (%)
PI - PLASTIC INDEX (%)
W - MOISTURE CONTENT (%)
DD - DRY DENSITY (PCF)
NP - NON PLASTIC
-200 - PERCENT PASSING NO. 200 SIEVE
PP - POCKET PENETROMETER (TSF)

TV - TORVANE
PID - PHOTOIONIZATION DETECTOR
UC - UNCONFINED COMPRESSION
ppm - PARTS PER MILLION

▽ Water Level at Time
Drilling, or as Shown
▽ Water Level at End of
Drilling, or as Shown
▽ Water Level After 24
Hours, or as Shown

Symbols and Terms Used on Boring Logs

ASTM Soil Terminology

Coarse-Grained Soils: More than 50% retained on a #200 (0.075mm) sieve.

Fine-Grained Soils: 50% or more passes a #200 (0.075mm) sieve.

Gravel: Material passing a 3" (75mm) sieve and retained on a #4 (4.75mm) sieve.

Coarse Gravel: Material passing a 3" (75mm) sieve and retained on a 3/4" (19.0mm) sieve.

Fine Gravel: Material passing a 3/4" (19.0mm) sieve and retained on a #4 (4.75mm) sieve.

Sand: Material passing a #4 (4.75mm) sieve and retained on a #200 (0.075mm) sieve.

Coarse Sand: Material passing a #4 (4.75mm) sieve and retained on a #10 (2.00mm) sieve.

Medium Sand: Material passing a #10 (2.00mm) sieve and retained on a #40 (0.475mm) sieve.

Fine Sand: Material passing a #40 (0.475mm) sieve and retained on a #200 (0.075mm) sieve.

Clay: Material passing a #200 (0.075mm) sieve that exhibits plasticity, and strength when dry ($PI \geq 4$).

Silt: Material passing a #200 (0.075mm) sieve that is non-plastic, and little strength when dry ($PI < 4$).

AASHTO Soil Terminology

Boulders & Cobbles: Material retained on a 3" (75mm) sieve.

Gravel: Material passing a 3" (75mm) sieve and retained on a #10 (2.00mm) sieve.

Coarse Sand: Material passing a #10 (2.00mm) sieve and retained on a #40 (0.475mm) sieve.

Fine Sand: Material passing a #40 (0.475mm) sieve and retained on a #200 (0.075mm) sieve.

Silt-Clay: Material passing a #200 (0.075mm) sieve.

Silt Fraction: Material passing a #200 (0.075mm) sieve and larger than 0.002mm.

Clay Fraction: Material smaller than 0.002mm.

Silty: Material passing a #4 (4.75mm) sieve with a $PI \leq 10$.

Clayey: Material passing a #4 (4.75mm) sieve with a $PI \geq 11$.

Coarse Aggregate: Aggregate retained on the #10 (2.00mm) sieve and consisting of hard, durable particles or fragments of stone, gravel or slag.

Fine Aggregate: Aggregate passing the #10 (2.00mm) sieve and consisting of natural or crushed sand, and fine material particles passing the #200 (0.075mm) sieve. The portion passing the #40 (0.425mm) sieves shall have a $LL \leq 25$ and a $PI \leq 6$.

Symbols and Terms Used on Boring Logs

In-Situ Shear Strengths

COARSE-GRAINED SOILS			FINE-GRAINED SOILS		
Penetration (blows/foot)		In-Situ Strengths	Penetration (blows/foot)		In-Situ Strengths
Auto	Manual		Auto	Manual	
0 - 3	0 - 4	Very Loose	< 2	< 2	Very Soft
3 - 8	4 - 10	Loose	2 - 3	2 - 4	Soft
8 - 23	10 - 30	Medium-Dense	3 - 6	4 - 8	Medium-Stiff
23 - 38	30 - 50	Dense	6 - 12	8 - 15	Stiff
> 38	> 50	Very Dense	12 - 23	15 - 30	Very Stiff
			> 23	> 30	Hard

NOTE: Modified based on 80% hammer efficiency (Automatic Hammer).
In-situ strengths are based on Terzaghi, Peck & Meri, 1996.

Material Structure Descriptors

Stratified: Alternating layers of varying material or color with layers at least 1/2" thick.

Laminated: Alternating layers of varying material or color with layers at least 1/4" thick.

Fissured: Breaks along definite planes of fracture with little resistance.

Blocky: Fine-grained soils that can be broken down into small angular lumps which resist further breakdown.

Lensed: Inclusion of small pockets of different soils, such as small amount of sand scattered through a mass of clay.

Descriptor	Meaning
Trace	Less than 5%
Few	5% to 10%
Little	15% to 25%
Some	30% to 45%
Mostly	50% to 100%

Appendix C: Laboratory Test Results





McClelland Consulting Engineers, Inc.
1580 East Stearns Street
Fayetteville, AR 72703
Telephone: 479.581.1303

SUMMARY OF LABORATORY RESULTS

PAGE 1 OF 1

CLIENT City of Fayetteville

PROJECT NAME Industrial Drive Extension

PROJECT NUMBER 21-2106

PROJECT LOCATION Fayetteville, Arkansas

Borehole	Depth	Liquid Limit	Plastic Limit	Plasticity Index	Maximum Size (mm)	%<#200 Sieve	Classification	Water Content (%)	Dry Density (pcf)	Saturation (%)	Void Ratio
B-01	0.3	54	26	28	25	39	GC	17.0			
B-01	2.0							17.4			
B-01	3.5							20.1			
B-01	5.0							19.6			
B-01	8.5	41	18	23	19	38	GC	14.4			
B-02	0.3							20.4			
B-02	2.0							16.6			
B-02	3.5	45	26	19	4.75	42	SC	15.1			
B-02	5.0							20.2			
B-02	8.5							14.6			
B-03	0.3	32	18	14	9.5	50	CL	27.4			
B-03	2.0	53	27	26	9.5	75	CH	22.1			
B-03	3.5							23.9			
B-03	5.0							23.5			
B-03	8.5	38	29	9	19	21	SM	18.8			
B-04	0.3							26.7			
B-04	2.0							16.4			
B-04	3.5	91	38	53	9.5	82	CH	34.1			
B-04	5.0							20.6			
B-04	8.5							6.9			
B-05	0.3							11.5			
B-05	2.0	54	25	29	19	70	CH	25.0			
B-05	3.5							24.9			
B-05	5.0		NP	NP	25	15		15.4			
B-05	8.5							15.7			

LAB SUMMARY - GINT STD US LAB.GDT - 6/3/21 11:01 - L:\SOFTWARE\GINT\PROJECT\21-2106 - FAYETTEVILLE, AR - INDUSTRIAL DRIVE EXTENSION.GPJ

DOCUMENT 00400 – BID FORM

Contract Name: INDUSTRIAL DRIVE EXTENSION

Bid Number: 22-27, Construction – Industrial Drive Extension

BID TO:

Owner: The City of Fayetteville, Arkansas
 113 West Mountain Street
 Fayetteville, Arkansas 72701

BID FROM:

Bidder:

ARTICLE 1 - INTENT

- 1.01 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with Owner in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Bid price and within the Bid time indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.

ARTICLE 2 - TERMS AND CONDITIONS

- 2.01 Bidder accepts all of the terms and conditions of the Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 90 days after the day of Bid opening. Bidder will sign and deliver the required number of counterparts of the Agreement with the Bonds and other documents required by the Bidding Requirements within 15 days after the date of Owner's Notice of Award.

DOCUMENT 00400 – BID FORM (continued)

ARTICLE 3 - BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents, as more fully set forth in the Agreement, that:

- A. Bidder has examined and carefully studied the Bid Documents, and the following Addenda, receipt of all which is hereby acknowledged:

<u>Number</u>	<u>Date</u>
_____	_____
_____	_____
_____	_____
_____	_____

- B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, performance, and furnishing of the Work.
- C. Bidder is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, performance, and furnishing of the Work.
- D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site; and (2) reports and drawings of a Hazardous Environmental Condition, if any, at the Site. Bidder acknowledges that such reports and drawings are not Contract Documents and may not be complete for Bidder's purposes. Bidder acknowledges that Owner and Engineer do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Bid Documents with respect to Underground Facilities at or contiguous to the Site.
- E. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all such additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site or otherwise which may affect cost, progress, performance, or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder and safety precautions and programs incident thereto.
- F. Bidder does not consider that any additional examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performing and furnishing of the Work in accordance with the times, price, and other terms and conditions of the Contract Documents.

DOCUMENT 00400 – BID FORM (continued)

- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to Work for which this Bid is submitted as indicated in the Contract Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.
- J. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm, or corporation and is not submitted in conformity with any agreement or rules of any group, association, organization, or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham bid; Bidder has not solicited or induced any person, firm, or a corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for himself any advantage over any other Bidder or over Owner.
- K. Bidder will perform the Work in compliance with all applicable trench safety standards set forth in Occupational Safety and Health Administration (OSHA) Part 1926 - Subpart P - Excavations.

ARTICLE 4 – BID PRICING REQUIREMENTS

- 4.01 The City intends to award this contract to the lowest qualified responsive responsible bidder based on the total base bid as long as the base bid amount falls within the amount of funds certified for the project plus 25%.
- 4.02 Bidder shall complete the work in accordance with the Contract Documents for the price(s) submitted by the Bidder.
- 4.03 Bidder agrees that the Work will be substantially completed and completed and ready for final payment within the number of calendar days indicated in the Agreement.
- 4.04 All bids shall be submitted to the City in a lump sum form as presented in the City's electronic bidding portal. Bidders are NOT required to submit a Detailed Unit Pricing at time of bid; however, all bidders shall provide a complete and accurate Detailed Unit Pricing within 3 hours of the bid deadline, no later than 5:00 PM, local time via email to Purchasing@Fayetteville-ar.gov.
- 4.05 Bidders have been provided an anticipated Detailed Unit Pricing with bid. This Detailed Unit Pricing file is being provided as a courtesy to aid and assist with bid preparation. The City reserves the right to modify the Detailed Unit Pricing as it deems necessary prior to requesting the final Detailed Unit Pricing from bidders.
- 4.06 Post-Bid Detailed Unit Pricing Submission Requirements: Bidders shall be required to submit a completed Detailed Unit Pricing within three (3) hours of the bid deadline, no later than 5:00 PM, local time via email to Purchasing@Fayetteville-ar.gov. All Detailed Unit

DOCUMENT 00400 – BID FORM (continued)

Pricing submitted to the City shall have a sum equal to the Total Base Bid submitted prior to the bid deadline. Bidders are strictly prohibited from modifying the Total Base Bid Amount. The sum of line items within the Detailed Unit Pricing shall fully equal the submitted Total Base Bid upon receipt to the City.

- 4.07 The City reserves the right to reject any bid response from a bidder who fails to submit a complete and acceptable Detailed Unit Pricing within the allowable post-bid time frame.
- 4.08 The final Detailed Unit Pricing shall become part of the vendor's response to the bid. The final Detailed Unit Pricing will be bound by contract and utilized for payment processing as reflected in the bid specifications and project manual.

ARTICLE 5 - CONTRACT ITEMS

- 5.01 Bidder agrees that the Work will be substantially completed and completed and ready for final payment within the number of calendar days indicated in the Agreement.
- 5.02 Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified in the Agreement.

ARTICLE 6 - BID CONTENT

- 6.01 The following documents are attached to and made a condition of this Bid:
 - A. Required Bid security in the form of a cashier's check from a bank located in the State of Arkansas or a Bid Bond in the amount of _____ Dollars (\$ _____).
 - B. A tabulation of Subcontractors and other persons and organizations required to be identified in this Bid.

ARTICLE 7 - COMMUNICATIONS

- 7.01 Communications concerning this Bid shall be addressed to the Bidder as follows:

Email: _____

Phone No. _____

Fax No. _____

DOCUMENT 00400 – BID FORM (continued)

ARTICLE 8 - TERMINOLOGY

8.01 The terms used in this Bid which are defined in the GENERAL CONDITIONS or Instructions to Bidders will have the meanings assigned to them.

Arkansas State Contractor License No. _____ (Not required for Federal Aid Projects; however, Contractor must show proof that they have registered with the proper state authorities for a license.)

If Bidder is:

An Individual

Name (type or printed): _____

By: _____
(SEAL)

(Individual's Signature)

Doing business as: _____

Business address: _____

Phone No. _____ Fax No. _____

Email address: _____

A Partnership

Partnership Name: _____
(SEAL)

By: _____
(Signature of general partner - attach evidence of authority to sign)

Name (type or printed): _____

Business address: _____

Phone No. _____ Fax No. _____

Email address: _____

DOCUMENT 00400 – BID FORM (continued)

A Corporation or LLC

Corporation Name: _____
(SEAL)

State of Incorporation: _____

Type (General Business, Professional, Service, Limited Liability): _____

By: _____
(Signature of general partner - attach evidence of authority to sign)

Name (type or printed): _____

Title: _____

(CORPORATE

SEAL)

Attest: _____
(Signature of Corporate Secretary)

Phone No. _____ Fax No. _____

Email address: _____

Tax ID Number (TIN): _____

Unique Entity Identifier (UEI) # _____

Cage Code: _____

DOCUMENT 00400 – BID FORM (continued)

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END OF DOCUMENT 00400

DOCUMENT 00410 – BID BOND

KNOW ALL MEN BY THESE PRESENTS: that we

as Principal, hereinafter called the Principal, and

a corporation duly organized under the laws of the State of _____ as Surety,
hereinafter called Surety, are held and firmly bound unto

City of Fayetteville, Arkansas

113 West Mountain Street

Fayetteville, Arkansas 72701

as Obligee, hereinafter called Owner, in the sum of
_____ Dollars
(\$ _____), for the payment of which sum, well and truly to be made, Principal and
said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly
and severally, firmly by these presents.

WHEREAS, Principal has submitted a Bid for:

BID # 22-27, CONSTRUCTION – INDUSTRIAL DRIVE EXTENSION

NOW, THEREFORE, if the Owner shall accept the Bid of Principal and the Principal shall enter
into a Contract with the Owner in accordance with the terms of such Bid, and give such Bond or
Bonds as may be specified in the Bidding or Contract Documents with good and sufficient surety
for the faithful performance of such Contract and for the prompt payment of labor and material
furnished in the prosecution thereof, or in the event of the failure of Principal to enter such Contract
and give such Bond or Bonds, if the Principal shall pay to the Owner the difference not to exceed
the penalty hereof between the amount specified in said Bid and such larger amount for which
the Owner may in good faith contract with another party to perform the Work covered by said Bid,
then this obligation shall be null and void, otherwise to remain in full force and effect.

DOCUMENT 00410 –BID BOND (continued)

Signed and sealed this _____ day of _____ 20____.

PRINCIPAL

(CORPORATE SEAL)

By _____

SURETY

By _____

ATTORNEY-IN-FACT

(CORPORATE SEAL)

(This Bond shall be accompanied with
Attorney-in-Fact's authority from Surety)

END OF DOCUMENT 00410

DOCUMENT 00430 – LIST OF SUBCONTRACTORS

In compliance with the Instructions to Bidders and other Contract Documents, the undersigned submits the following names of Subcontractors to be used in performing the Work for:

BID # 22-27, CONSTRUCTION – INDUSTRIAL DRIVE EXTENSION

Bidder certifies that all Subcontractors listed are eligible to perform the Work.

<u>Subcontractor's Work</u>	<u>Subcontractor's Name and Address</u>	<u>Expected Percentage or Value</u>
Clearing/Demolition		
SWPPP/Erosion Control		
Asphalt		
Concrete		
Landscaping		
Material Testing		
Other (designate)		

NOTE: This form must be submitted in accordance with the Instructions to Bidders.

NOTE: Per the conditions of the US Economic Development Administration grant, all subcontractors are required to purchase and maintain workman's compensation insurance and public liability insurance.

Bidder's Signature

DOCUMENT 00430 – LIST OF SUBCONTRACTORS (continued)

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END OF DOCUMENT 00430

DOCUMENT 00500 – AGREEMENT

BETWEEN OWNER AND CONTRACTOR

Contract Name/Title: INDUSTRIAL DRIVE EXTENSION

Contract No.: Bid # 22-27, Construction – Industrial Drive Extension

THIS AGREEMENT is dated as of the _____ day of _____ in the year 2022 by and between The City of Fayetteville, Arkansas and _____ (hereinafter called Contractor).

ARTICLE 1 - WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The work under this Contract includes, but is not limited to:

The construction of approximately 2,800 linear feet of two-lane roadway from S Industrial Drive to S City Lake Road including demolition, removal and reconstruction of an existing concrete cul-de-sac and associated earthwork, curb and gutter, sidewalk drainage and miscellaneous related items.

Any use of a third-party dumpster or roll off container shall be procured from the City of Fayetteville Recycling and Trash Collection Division. Use of a Non-City dumpster or roll off container is not allowed.

Open burning and/or blasting are not allowed on City projects. SEE Pages 57-47

Contractor is responsible for obtaining all applicable permits; however, fees for the City issued permits shall be waived.

The Contract includes work in City of Fayetteville Right-of-way and in General Utility Easements.

Refer to Section 00400-Bid Form for quantities.

ARTICLE 2 - ENGINEER

2.01 The Contract Documents have been prepared by McClelland Consulting Engineers, Inc. who assumes all duties and responsibilities, and has the rights and authority assigned to the Engineer by the City of Fayetteville in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

DOCUMENT 00500 – AGREEMENT (continued)

ARTICLE 3 - CONTRACT TIME

3.01 TIME OF THE ESSENCE:

- A. All time limits for milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

3.02 DATES FOR SUBSTANTIAL COMPLETION AND FINAL PAYMENT:

- A. The Work shall be Substantially Completed within 270 consecutive calendar days after the date when the Contract Times commence to run as provided in the GENERAL CONDITIONS, and final completion and ready for final payment in accordance with the GENERAL CONDITIONS within 300 consecutive calendar days after the date when the Contract Times commence to run.

3.03 LIQUIDATED DAMAGES:

- A. Owner and Contractor recognize that time is of the essence of this Agreement and that The City of Fayetteville will suffer financial loss if the Work is not completed within the time specified above, plus any extensions thereof allowed in accordance with the GENERAL CONDITIONS. The parties also recognize the delays, expense, and difficulties involved in proving the actual loss suffered by The City of Fayetteville if the Work is not Substantially Completed on time. Accordingly, instead of requiring any such proof, The City of Fayetteville and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay The City of Fayetteville Seven Hundred Fifty Dollars (\$750.00) for each calendar day that expires after the time specified above in Paragraph 3.02 for Substantial Completion until the Work is Substantially Complete. After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the time specified in Paragraph 3.02 for completion and readiness for final payment or any proper extension thereof granted by The City of Fayetteville, Contractor shall pay The City of Fayetteville Five Hundred Dollars (\$500.00) for each calendar day that expires after the time specified for completion and readiness for final payment.

ARTICLE 4 - CONTRACT PRICE

- 4.01 The CITY OF FAYETTEVILLE agrees to pay, and the CONTRACTOR agrees to accept, as full and final compensation for all work done under this agreement, the amount based on the unit prices bid in the Proposal (BID FORM) which is hereto attached, for the actual amount accomplished under each pay item, said payments to be made in lawful money of the United States at the time and in the manner set forth in the Specifications.
- 4.02 As provided in the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by ENGINEER

DOCUMENT 00500 – AGREEMENT (continued)

as provided in the General Conditions. Unit prices have been computed as provided in the General Conditions.

- 4.03 Changes, modifications, or amendments in scope, price or fees to this contract shall not be allowed without a prior formal contract amendment approved by the Mayor and the City Council in advance of the change in scope, cost or fees.

1. There shall be no changes without prior written approval of the Engineer of Record and/or the City's designated Professional Engineer.

ARTICLE 5 - PAYMENT PROCEDURES

5.01 SUBMITTAL AND PROCESSING OF PAYMENTS:

- A. Contractor shall submit Applications for Payment in accordance with the GENERAL CONDITIONS. Applications for Payment will be processed by Engineer as provided in the GENERAL CONDITIONS.

5.02 PROGRESS PAYMENTS, RETAINAGE:

- A. The City of Fayetteville shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment as recommended by Engineer, on or about the 15th day of each month during construction. All such payments will be measured by the schedule of values established in the GENERAL CONDITIONS (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements.
 1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below, but, in each case, less the aggregate of payments previously made and less such amounts as Engineer shall determine, or The City of Fayetteville may withhold, in accordance with the GENERAL CONDITIONS.
 - a. 95% of Work Completed (with the balance being retainage). If Work has been 50% completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to The City of Fayetteville and Engineer, The City of Fayetteville on recommendation of Engineer, may determine that as long as the character and progress of the Work subsequently remain satisfactory to them, there will be no additional retainage on account of Work subsequently completed, in which case the remaining progress payments prior to Substantial Completion will be an amount equal to 100% of the Work Completed less the aggregate of payments previously made; and

DOCUMENT 00500 – AGREEMENT (continued)

- b. 100% of Equipment and Materials not incorporated in the Work but delivered, suitably stored, and accompanied by documentation satisfactory to The City of Fayetteville as provided in the GENERAL CONDITIONS.

5.03 FINAL PAYMENT:

- A. Upon final completion and acceptance of the Work in accordance with the GENERAL CONDITIONS, The City of Fayetteville shall pay the remainder of the Contract Price as recommended by Engineer and as provided in the GENERAL CONDITIONS.

ARTICLE 6 - CONTRACTOR'S REPRESENTATIONS

6.01 In order to induce The City of Fayetteville to enter into this Agreement, Contractor makes the following representations:

- A. Contractor has examined and carefully studied the Contract Documents including the Addenda and other related data identified in the Bid Documents.
- B. Contractor has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, performance, and furnishing of the Work.
- C. Contractor is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, performance, and furnishing of the Work.
- D. Contractor has carefully studied all:
 - 1. Reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site; and
 - 2. Reports and drawings of a Hazardous Environmental Condition, if any, at the Site. Contractor acknowledges that The City of Fayetteville and Engineer do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Contract Documents with respect to Underground Facilities at or contiguous to the Site.
- E. Contractor has obtained and carefully studied (or assumes responsibility of having done so) all such additional supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site or otherwise which may affect cost, progress, performance, and furnishing of the Work or which relate to any aspect of the means, methods, techniques,

DOCUMENT 00500 – AGREEMENT (continued)

sequences, and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto.

- F. Contractor does not consider that any additional examinations, investigations, explorations, tests, studies, or data are necessary for the performing and furnishing of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.
- G. Contractor is aware of the general nature of work to be performed by The City of Fayetteville and others at the Site that relates to the Work as indicated in the Contract Documents.
- H. Contractor has correlated the information known to Contractor, information and observations obtained from visits to the Site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.
- I. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents and the written resolution thereof by Engineer is acceptable to Contractor.
- J. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 7 - CONTRACT DOCUMENTS

7.01 CONTENTS:

- A. The Contract Documents which comprise the entire Agreement between The City of Fayetteville and Contractor concerning the Work consist of the following and may only be amended, modified, or supplemented as provided in the GENERAL CONDITIONS:
 - 1. This Agreement.
 - 2. Exhibits to this Agreement (enumerated as follows):
 - a. Notice to Proceed.
 - b. Contractor's Bid.
 - c. Documentation submitted by Contractor prior to Notice of Award.
 - 3. Performance, Payment, and other Bonds.
 - 4. General Conditions.
 - 5. Supplementary Conditions.
 - 6. Specifications consisting of divisions and sections as listed in table of contents of Project Manual.
 - 7. Drawings consisting of a cover sheet and sheets as listed in the table of contents thereof, with each sheet bearing the following general title:
INDUSTRIAL DRIVE EXTENSION
 - 8. Addenda numbers ____ inclusive.

DOCUMENT 00500 – AGREEMENT (continued)

9. The following which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto: All Written Amendments and other documents amending, modifying, or supplementing the Contract Documents pursuant to the GENERAL CONDITIONS.

ARTICLE 8 - MISCELLANEOUS

8.01 TERMS:

- A. Terms used in this Agreement which are defined in the GENERAL CONDITIONS shall have the meanings stated in the GENERAL CONDITIONS.

8.02 ASSIGNMENT OF CONTRACT:

- A. No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by Law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

8.03 SUCCESSORS AND ASSIGNS:

- A. The City of Fayetteville and Contractor each binds himself, his partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

8.04 SEVERABILITY:

- A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon The City of Fayetteville and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

8.05 FREEDOM OF INFORMATION ACT:

- A. City contracts and documents prepared while performing city contractual work are subject to the Arkansas Freedom of Information Act. If a Freedom of Information Act request is presented to the City of Fayetteville, the contractor will do everything possible to provide the documents in a prompt and timely manner as prescribed in the Arkansas Freedom of Information Act (A.C.A. §25-19-101 et. seq.). Only legally authorized photocopying costs pursuant to the FOIA may be assessed for this compliance.

DOCUMENT 00500 – AGREEMENT (continued)

8.06

LIENS:

- A. **No liens against this construction project are allowed.** Arkansas law (A.C.A. §§18-44-501 through 508) prohibits the filing of any mechanics' of materialmen's liens in relation to this public construction project. Arkansas law requires and the contractor promises to provide and file with the Circuit Clerk of Washington County a bond in a sum equal to the amount of this contract. Any subcontractor or materials supplier may bring an action for non-payment or labor or material on the bond. The contractor promises to notify every subcontractor and materials supplier for this project of this paragraph and obtain their written acknowledgement of such notice prior to commencement of the work of the subcontractor or materials supplier.

DOCUMENT 00500 – AGREEMENT (continued)

IN WITNESS WHEREOF, The City of Fayetteville and Contractor have signed this Agreement in quadruplicate. One counterpart each has been delivered to Contractor. Three counterparts each has been retained by The City of Fayetteville. All portions of the Contract Documents have been signed, initialed, or identified by The City of Fayetteville and Contractor.

This Agreement will be effective on _____, 20__, which is the Effective Date of the Agreement.

CONTRACTOR:

CITY OF FAYETTEVILLE

By: _____

By: Lioneld Jordan

(Type or legibly print)

(Signature)

(Signature)

Title: _____

Title: Mayor

Contractor shall attach evidence of authority to sign.

If Contractor is a corporation, corporate entity or LLC, Contractor shall attach Corporate Resolution authorizing Contractor's signature and execution of Agreement.

Further if Contractor is a corporation, corporate entity or LLC, Contractor shall also attach a copy of the Contractor's Articles of Incorporation and a copy from the Arkansas State Secretary of State to document that the corporation, corporate entity or LLC is in current "Good Standing" with the State of Arkansas and such entity is permitted to perform work in the State of Arkansas.

(SEAL)

(SEAL)

Attest _____

Attest _____

DOCUMENT 00500 – AGREEMENT (continued)

Address for giving notices

Address for giving notices

113 W. Mountain St.

Fayetteville, AR 72701

License No. _____

Agent for Service of process

(Type or legibly print)

Contractor shall attach evidence of authority of Agent for Service process to sign. If Contractor is a corporation, corporate entity or LLC, Contractor shall attach Corporate Resolution authorizing Agent for Service process authority to sign.

(If Contractor is a corporation, corporate entity or LLC, attach evidence of authority to sign.)

END OF DOCUMENT 00500

DOCUMENT 00550 – NOTICE TO PROCEED

TO: _____

Contract Name/Title: INDUSTRIAL DRIVE EXTENSION

Contract No: Bid # 22-27, Construction – Industrial Drive Extension

Owner: City of Fayetteville, Arkansas

You are notified that the Contract Time(s) under the above Contract will commence to run on _____. By that date, you are to start performing your obligations under the Contract Documents. In accordance with the Agreement between Owner and Contractor, the date(s) of Substantial Completion and final completion ready for final payment are _____ and _____ respectively.

Before you may start any work at the Site, the General Conditions provide that you and Owner must each deliver to the other, (with copies to Engineer and other identified additional insureds) certificates of insurance, which each is required to purchase and maintain in accordance with the Contract Documents.

Also before you may start any work at the Site, you must submit the following:

1. Preliminary construction progress schedule.
2. Preliminary schedule of Submittals.
3. Satisfactory evidence of insurance in accordance with the requirements of the General Conditions.
4. Temporary erosion control requirements as specified.
5. Maintenance of Traffic as specified.

You are required to return an acknowledgement copy of this Notice to Proceed to the Owner.

Dated _____.

DOCUMENT 00550 – NOTICE TO PROCEED (continued)

OWNER

City of Fayetteville

By: Matt Casey

Signature: _____

Title: Engineering Design Manager

Date: _____

ACCEPTANCE OF NOTICE TO PROCEED

CONTRACTOR

By: _____

Signature: _____

Title _____

Date _____, 20____

END OF DOCUMENT 00550

DOCUMENT 00610 – PERFORMANCE BOND:

KNOW ALL MEN BY THESE PRESENTS: that

as Principal, hereinafter called Contractor, and

as Surety, hereinafter called Surety, are held and firmly bound unto

City of Fayetteville, Arkansas

113 West Mountain Street

Fayetteville, Arkansas 72701

as Obligee, hereinafter called Owner, in the amount of \$_____, for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written Agreement dated _____, 20____, entered into a contract with Owner for **BID # 22-27, CONSTRUCTION - INDUSTRIAL DRIVE EXTENSION** which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Contractor shall promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the Owner. Whenever Contractor shall be, and declared by Owner to be in default under the Contract, the Owner having performed Owner's obligations, thereunder, the Surety may promptly remedy the default, or shall promptly:

- A. Complete the Contract in accordance with its terms and conditions, or
- B. Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, or, if the Owner elects, upon determination by the Owner and the Surety jointly of the lowest responsible bidder, arrange for a contract between such bidder and Owner, and make available as Work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the

DOCUMENT 00610 – PERFORMANCE BOND (continued)

Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the Contract Price," as used in this paragraph, shall mean the total amount payable by Owner to Contractor under the Contract and any amendments thereto, less the amount properly paid by Owner to Contractor.

Any suit under this Bond must be instituted before the expiration of two years from the date on which final payment under the Contract falls due.

No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Owner named herein or the heirs, executors, administrators, or successors of the Owner.

Signed and sealed this _____ day of _____ 20____.

CONTRACTOR

(CORPORATE SEAL)

By: _____

SURETY

COUNTERSIGNED: Resident Agent

State of Arkansas

By _____

By _____

ATTORNEY-IN-FACT

(CORPORATE SEAL)

(This Bond shall be accompanied with
Attorney-in-Fact's authority from Surety)

Approved as to Form:

Attorney for _____

END OF DOCUMENT 00610

DOCUMENT 00611 – LABOR AND MATERIAL PAYMENT BOND

This Bond is issued simultaneously with Performance Bond in favor of Owner conditioned on the full and faithful performance of the Contract.

KNOW ALL MEN BY THESE PRESENTS: that

as Principal, hereinafter called Contractor, and

as Surety, hereinafter called Surety, are held and firmly bound unto

City of Fayetteville, Arkansas

113 West Mountain Street

Fayetteville, Arkansas 72701

as Oblige, hereinafter called Owner, for the use and benefit of claimants as hereinbelow defined, in the amount of \$_____, for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Contractor has by written Agreement dated _____, 20____, entered into a contract with Owner for **BID # 22-27, CONSTRUCTION – INDUSTRIAL DRIVE EXTENSION** which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Contractor shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

- A. A claimant is defined as one having a direct contract with the Contractor or with a Subcontractor of the Contractor for labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental of equipment directly applicable to the Contract.

DOCUMENT 00611 – LABOR AND MATERIAL PAYMENT BOND (continued)

- B. The above named Contractor and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of 90 days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this Bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The Owner shall not be liable for the payment of any costs or expenses of any such suit.
- C. No suit or action shall be commenced hereunder by any claimant:
1. Unless claimant other than one having a direct contract with Principal, shall have given written notice to any two of the following: the Contractor, the Owner, or the Surety within 90 days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to Contractor, Owner or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid Project is located, save that such service need not be made by a public officer.
 2. After the expiration of one year following the date on which Contractor ceased Work on the Contract, it being understood, however, that if any limitation embodied in this Bond is prohibited by any Law controlling the construction hereof, such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such Law.
 3. Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the Project, or any part thereof, is situated, or in the United States District Court for the district in which the Project, or any part thereof, is situated, and not elsewhere.
- D. The amount of this Bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against this Bond.

DOCUMENT 00611 – LABOR AND MATERIAL PAYMENT BOND (continued)

Signed and sealed this _____ day of _____ 20____.

CONTRACTOR

(CORPORATE SEAL)

By _____

SURETY

COUNTERSIGNED: Resident Agent

State of Arkansas

By _____

By _____

ATTORNEY-IN-FACT

(CORPORATE SEAL)

(This Bond shall be accompanied with
Attorney-in-Fact's authority from Surety)

Approved as to Form:

Attorney for _____

DOCUMENT 00611 – LABOR AND MATERIAL PAYMENT BOND (continued)

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END OF DOCUMENT 00611

DOCUMENT 00700 – GENERAL CONDITIONS

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DOCUMENT 00700 – GENERAL CONDITIONS:

This document is based upon Engineers Joint Contract Documents Committee "Standard General Conditions of the Construction Contract," with modifications.

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.01 CONTRACT DOCUMENTS:

- A. The Contract Documents establish the rights and obligations of the parties and shall consist of the documents listed in DOCUMENT 00500, AGREEMENT.
- B. Reports and drawings of subsurface and physical conditions and approved Submittals by Contractor are not Contract Documents.
- C. Only printed or hard copies of items listed in subparagraph 1.01A are Contract Documents. Files in electronic media format of text, data, graphics, and the like that may be furnished by Owner to Contractor are not Contract Documents.

1.02 DEFINITIONS:

- A. Wherever used in these General Conditions or elsewhere in the Contract Documents, the following terms have the meanings indicated below, which are applicable to both the singular and plural thereof:
 - 1. "Addenda" - written or graphic changes or interpretations of the Contract Documents issued by Owner prior to the opening of Bids.
 - 2. "Agreement" - the written agreement between Owner and Contractor covering the Work to be performed; other Contract Documents are attached to the Agreement and made a part thereof as provided therein.
 - 3. "Application for Payment" - the form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress and final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 - 4. "Asbestos" - any material that contains more than 1% asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
 - 5. "Bid" - the formal offer of the Bidder submitted on the prescribed Bid Form together with the required Bid security and all information submitted with the Bid that pertains to performance of the Work.
 - 6. "Bidder" - any person, firm, or corporation submitting a Bid for the Work or their duly authorized representatives.
 - 7. "Change Order" - a written document signed by Owner and Engineer authorizing an addition, deletion, or revision in the Work, or an adjustment in the Contract Price or the Contract Time issued on or after execution of the Agreement.
 - 8. "Contract Drawings" - drawings and other data designated as Contract Drawings prepared by Engineer for this Contract which show the character and scope of the Work to be performed and are referred to in the Contract Documents.

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

9. "Contract Price" - the total monies payable to Contractor under the Contract Documents as stated in the Agreement.
10. "Contract Times" - the number of days or the dates stated in the Agreement to: (i) achieve Substantial Completion; and (ii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendations of final payment.
11. "Contractor" - the person, firm or corporation with whom Owner has entered into the Agreement.
12. "Date of Contract", "Effective Date of the Agreement" - the date of the City Council Approval also indicated in the Agreement.
13. "Engineer" or "Engineer-Architect" - Architect, engineer, or other licensed professional who is either employed or has contracted with Owner to serve in a design capacity and whose consultants, members, partners, employees, or agents have prepared and sealed the Drawings and Specifications.
14. "Engineer's Consultant" - an individual or entity having a contract with Engineer to furnish services as Engineer's independent professional associate or consultant with respect to the Project.
15. "Equipment" - a product with operational or nonoperational parts, whether motorized or manually operated, that requires service connections, such as wiring or piping.
16. "Field Order" - a written order issued by Engineer which orders minor changes in the Work in accordance with Paragraph 9.05 but which does not involve a change in the Contract Price or the Contract Times.
17. "General Requirements" - Sections of DIVISION 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.
18. "Hazardous Waste" - the term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
19. "Law" - law of the place of the Project which shall govern the performance hereunder.
20. "Laws and Regulations," "Laws or Regulations" - laws, rules, regulations, ordinances, codes and/or orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
21. "Lien" - charges, security interests, or encumbrances on Project funds, real property, or personal property.
22. "Materials" - products substantially shaped, cut, worked, mixed, finished, refined, or otherwise fabricated, processed, or installed to form a part of the Work.
23. "Notice of Award" - the written notice by Owner to the apparent successful Bidder stating that upon compliance by the apparent successful Bidder with the conditions precedent enumerated therein, within the time specified, Owner will sign and deliver the Agreement.
24. "Notice to Proceed" - the written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform Contractor's obligation under the Contract Documents.

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

25. "Owner" - the City of Fayetteville, Arkansas, a constitutionally chartered municipal corporation, with which the Contractor has entered into the Agreement and for whom the Work is to be provided.
26. "Partial Utilization" - placing a portion of the Work in service for the purpose for which it is intended (or a related purpose) before reaching Substantial Completion of all the Work.
27. "PCBs" - Polychlorinated biphenyls.
28. "Petroleum" - petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60° Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Wastes and crude oils.
29. "Program Manager" – NOT USED.
30. "Project" - the total construction of which the Work to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.
31. "Project Manual" - The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
32. "Radioactive Material" - source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
33. "Resident Project Representative" - the authorized representative of Engineer who is assigned to the construction Site or any part thereof.
34. "Reference Drawings" - drawings not specifically prepared for, nor a part of, this Contract, but which contain information pertinent to the Work.
35. "Samples" - physical examples of Equipment, Materials, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
36. "Shop Drawings" - all drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
37. "Site" - lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
38. "Specifications" - those portions of the Contract Documents consisting of written technical descriptions of the Work, and covering the Equipment, Materials, workmanship, and certain administrative details applicable thereto.
39. "Subcontractor" - an individual, firm, or corporation having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.
40. "Submittals" - all Shop Drawings, product data, and Samples which are prepared by Contractor, a Subcontractor, manufacturer, or Supplier,

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

- and submitted by Contractor to Engineer as a basis for approval of the use of Equipment and Materials proposed for incorporation in the Work or needed to describe proper installation, operation and maintenance, or technical properties.
41. "Substantial Completion" - the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer as evidenced by his definitive certificate of Substantial Completion, it is sufficiently complete, in accordance with the Contract Documents, so that the Work (or specified part) can be used for the purposes for which it was intended.
42. "Supplementary Conditions" – part of the Contract Documents which amends and/or supplements these General Conditions.
43. "Supplier" - a manufacturer, fabricator, supplier, distributor, material man, or vendor.
44. "Underground Facilities" - all pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems, or water.
45. "Unit Price Work" - Work to be paid on the basis of Unit Prices.
46. "Work" - the entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work is the result of performing services, the furnishing of Bonds and insurance, furnishing labor, and furnishing and incorporating Materials and Equipment into the construction, all as required by the Contract Documents.
47. "Work Change Directive" - a written directive to Contractor, issued on or after the effective Date of the Agreement and signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen physical conditions under which the Work is to be performed as provided in Article 4 or to emergencies under Paragraph 6.13. A Work Change Directive will not change the Contract Price or the Contract Times, but is evidence that the parties expect that the change directed or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times as provided in Paragraph 10.01B.
48. "Written Amendment" - a written amendment to the Contract Documents, signed by Owner and Contractor on or after the Effective Date of the Agreement, and normally dealing with the nonengineering or nontechnical rather than strictly Work-related aspects of the Contract Documents.
49. "Year 2000 Compliance" or "Year 2000 Compliant" – means that equipment, devices, items, systems, software, hardware, and firmware included in the Work or used to produce the Work shall properly, appropriately, and consistently function and accurately process date

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

and time data (including without limitation: calculating, comparing, and sequencing) on and after December 31, 1999, including leap year calculations.

1.03 TERMINOLOGY:

- A. Whenever used in these General Conditions or elsewhere in the Contract Documents, the following terminology shall have the intent and meaning specified below:
1. The words "as indicated" refer to the Drawings and "as specified" refer to the remaining Contract Documents.
 2. The terms "responsible" or "responsibility" mean that the party to which the term applies shall assume all responsibilities thereto.
 3. The term "approve", when used in response to Submittals, requests, applications, inquiries, reports and claims by Contractor, will be held to limitations of Engineer's responsibilities and duties or specified in these General Conditions. In no case will "approval" by Engineer be interpreted as a release of Contractor from responsibilities to fulfill requirements of Contract Documents.
 4. When applied to Equipment and Materials, the words "furnish", "install", and "provide" shall mean the following:
 - a. The word "provide" shall mean to furnish, pay for, deliver, assemble, install, adjust, clean and otherwise make Materials and Equipment fit for their intended use.
 - b. The word "furnish" shall mean to secure, pay for, deliver to Site, unload and uncrate Equipment and Materials.
 - c. The word "install" shall mean to assemble, place in position, incorporate in the Work, adjust, clean, and make fit for use.
 - d. The phrase "furnish and install" shall be equivalent to the word "provide."
 5. The word "day" shall constitute a calendar day of twenty-four hours measured from midnight to the next midnight.

ARTICLE 2 - PRELIMINARY MATTERS

2.01 DELIVERY OF BONDS:

- A. When Contractor delivers the executed Agreements to Owner, Contractor shall also deliver to Owner such Bonds as Contractor may be required to furnish in accordance with Paragraph 5.01.

2.02 COPIES OF DOCUMENTS:

- A. Owner will furnish to Contractor copies of the Contract Documents as stated in the General Requirements.

2.03 COMMENCEMENT OF CONTRACT TIMES; NOTICE TO PROCEED:

- A. The Contract Times will commence to run on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time mutually agreed upon by the Contractor and the Owner within 60 days after the Effective Date of the Agreement upon completion of required executed documents. In no event will

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

the Contract Times commence to run later than the 60th day after the Effective Date of the Agreement.

2.04 STARTING THE PROJECT:

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run, but no Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 BEFORE STARTING CONSTRUCTION:

- A. Before starting construction and undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby; however, Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, or discrepancy in the Contract Documents, unless Contractor had actual knowledge thereof or should reasonably have known thereof.
- B. Within twenty days after the Effective Date of the Agreement, not before Contractor starts the Work at the Site, Contractor shall submit items as noted in Document 00550 – Notice to Proceed (and as specified) to Engineer for review.
- C. Further, before any Work at the Site is started, Contractor shall deliver to Owner, with a copy to Engineer, certificates and other evidence of insurance requested by Owner which Contractor is required to purchase and maintain in accordance with Paragraph 5.02 (and Owner shall deliver to Contractor certificates and other evidence of insurance requested by Contractor which Owner is required to purchase and maintain in accordance with Paragraph 5.02).

2.06 PRECONSTRUCTION CONFERENCE:

- A. Within 20 days after the Effective Date of the Agreement, but before Contractor starts the Work at the Site, a conference attended by Contractor, Engineer, and others as appropriate will be held to discuss the schedules referred to in Paragraph 2.05B, to discuss procedures for handling Submittals, processing Applications for Payment, and to establish a working understanding among the parties as to the Work.

2.07 FINALIZING SCHEDULES:

- A. A schedule shall be finalized in accordance with Specification SECTION 01321. The finalized construction progress schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times, but such acceptance will neither impose on Engineer responsibility for the progress or scheduling of the Work nor relieve Contractor from full responsibility therefor. The finalized schedule of

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

Submittal submissions will be acceptable to Engineer if it provides a workable arrangement for processing the submissions.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 INTENT:

- A. The Contract Documents comprise the entire agreement between Owner and Contractor concerning the Work. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the Law of the place of the Project.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any Work, Materials, or Equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result will be supplied whether or not specifically called for, at no additional cost to the Owner.
 - 1. When words which have a well-known technical or trade meaning are used to describe Work, Materials, or Equipment, such words shall be interpreted in accordance with that meaning.
 - 2. Reference to standard specifications, manuals, or codes of any technical society, organization, or association, or to the Laws or Regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual, or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of Owner, Contractor, or Engineer, or any of their consultants, agents, or employees from those set forth in the Contract Documents, nor shall it be effective to assign to Engineer, or any of Engineer's consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of the Contract Documents.
 - 3. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Paragraph 9.04.
- C. If, during the performance of the Work, Contractor finds a conflict, error, or discrepancy in the Contract Documents, Contractor shall so report to Engineer in writing at once and before proceeding with the Work affected thereby shall obtain a written interpretation or clarification from Engineer, however, Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof or should reasonably have known thereof.
- D. Applicable codes and standards referenced in these Contract Documents establish minimum requirements for Equipment, Materials, and Work and are

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

superseded by more stringent requirements of Contract Documents when and where they occur.

- E. The Specifications are separated into Divisions and Sections for convenience in defining the Work. Contract Drawings are separated according to engineering disciplines and other classifications. This sectionalizing and the arrangement of Contract Drawings shall not control the Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

3.02

AMENDING AND SUPPLEMENTING CONTRACT DOCUMENTS:

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways:
 - 1. A formal Written Amendment.
 - 2. A Change Order (pursuant to Paragraph 10.01D).
- B. As indicated in Paragraphs 11.01B and 12.01A, Contract Price and Contract Times may only be changed by a Change Order or Written Amendment.
- C. In addition, the requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, in the following way:
 - 1. A Field Order (pursuant to Paragraph 9.05).
 - 2. Engineer's written interpretation or clarification (pursuant to Paragraph 9.04).

3.03

OWNERSHIP AND REUSE OF DOCUMENTS:

- A. All Contract Documents and copies thereof furnished by Engineer shall be the property of the Owner.
- B. Neither Contractor nor any Subcontractor or Supplier or other person or organization performing or furnishing any of the Work under a direct or indirect contract with Owner shall have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer; and they shall not reuse any of the documents on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.

ARTICLE 4 - AVAILABILITY OF LANDS; PHYSICAL CONDITIONS; REFERENCE POINTS

4.01

AVAILABILITY OF LANDS:

- A. Owner shall furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for the use of Contractor. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by Owner, unless otherwise provided in the Contract Documents.

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

- B. If Contractor believes that any delay in Owner's furnishing these lands, rights-of-way, or easements entitles Contractor to an extension of the Contract Times, Contractor may make a claim therefor as provided in Article 12.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.
- D. Contractor shall confine his operations to the construction limits indicated.

4.02

UNFORESEEN SUBSURFACE CONDITIONS:

- A. Contractor shall promptly notify Engineer in writing of any subsurface or latent physical conditions encountered at the Site which differ materially from those specified or indicated, or which could be reasonably interpreted from examination of the Site and available subsurface information at the time of bidding.
- B. Engineer will promptly investigate those conditions and advise Owner if further surveys or subsurface tests are necessary. Promptly thereafter, Engineer will obtain the necessary additional surveys and tests and furnish copies of results to Contractor and Owner.
- C. If Engineer and Owner find that the subsurface or latent physical conditions encountered at the Site differ materially from those specified or indicated, or which could have been reasonably interpreted from examination of the Site and available subsurface information at the time of bidding, then a Change Order will be issued by the Owner incorporating the necessary revisions.

4.03

PHYSICAL CONDITIONS - UNDERGROUND FACILITIES:

- A. Shown or Indicated: The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities or by others. Unless it is otherwise expressly provided:
 - 1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data; and,
 - 2. Contractor shall have full responsibility for reviewing and checking all such information and data, for locating all Underground Facilities shown or indicated in the Contract Documents, for coordination of the Work with the owners of such Underground Facilities during construction, for the safety and protection thereof as provided in Paragraph 6.12 and repairing any damage thereto resulting from the Work, the cost of all of which will be considered as having been included in the Contract Price.
- B. Not Shown or Indicated: If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated in the Contract Documents and which Contractor could not reasonably have been expected to be aware of, Contractor shall, promptly after becoming aware thereof and before performing any Work affected thereby (except in an emergency as permitted by Paragraph 6.13), identify the owner of such Underground Facility and give written notice thereof to that owner and Engineer. Engineer will promptly review the Underground Facility to determine the extent to which the

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

Contract Documents should be modified to reflect and document the consequences of the existence of the Underground Facility, and the Contract Documents will be amended or supplemented to the extent necessary. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility as provided in Paragraph 6.12. Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, to the extent that they are attributable to the existence of any Underground Facility that was not shown or indicated in the Contract Documents and which Contractor could not reasonably have been expected to be aware of. If the parties are unable to agree as to the amount or length thereof, Contractor may make a claim therefor as provided in Articles 11 and 12.

4.04 REFERENCE POINTS:

- A. Engineer will provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work (unless otherwise specified in the General Requirements), shall protect and preserve the established reference points, and shall make no changes or relocations without the prior written approval of Engineer. Contractor shall report to Engineer whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points by professionally qualified personnel. Contractor shall be responsible for any mistakes or loss of time that may result from their loss or disturbance.
- B. Contractor shall make such surveys as are required for establishing pay limits and determining quantities for progress pay estimates. He shall furnish Engineer with one copy each of all field notes of such surveys.

4.05 ASBESTOS, PCBS, PETROLEUM, HAZARDOUS WASTE, OR RADIOACTIVE MATERIAL:

- A. Owner shall be responsible for any Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work and which may present a substantial danger to persons or property exposed thereto in connection with the Work at the Site. Owner shall not be responsible for any such materials brought to the Site by Contractor, Subcontractor, Suppliers, or anyone else for whom Contractor is responsible.
- B. Contractor shall immediately: (i) stop all Work in connection with such hazardous condition and in any area affected thereby (except in an emergency as required by Paragraph 6.13), and (ii) notify Owner and Engineer (and thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such hazardous condition or take corrective action, if any. Contractor shall not be required to resume Work in connection with such hazardous condition or in any such affected area until after Owner has obtained any required permits related thereto and delivered to Contractor special written

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or the amount or extent of an adjustment, if any, in Contract Price or Contract Times as a result of such Work stoppage or such special conditions under which Work is agreed by Contractor to be resumed, either party may make a claim therefor as provided in Articles 11 and 12.

- C. If after receipt of such special written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order such portion of the Work that is in connection with such hazardous condition or in such affected area to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or the amount or extent of an adjustment, if any, in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a claim therefor as provided in Articles 11 and 12. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.
- D. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, Engineer, Engineer's Consultants, and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages arising out of or resulting from such hazardous condition, provided that: (i) any such claim, cost, loss or damage is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, and (ii) nothing in this subparagraph 4.05D shall obligate Owner to indemnify any person or entity from and against the consequences of that person's or entity's own negligence.
- E. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner, Engineer, Engineer's Consultants, and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages arising out of or relating to such hazardous condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this subparagraph 4.05E shall obligate Contractor to indemnify any person or entity from and against the consequences of that person's or entity's own negligence.
- F. The provisions of Paragraphs 4.02 and 4.03 are not intended to apply to Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material uncovered or revealed at the Site.

ARTICLE 5 - BONDS AND INSURANCE

5.01 PERFORMANCE AND OTHER BONDS:

- A. Contractor shall furnish performance and payment Bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all Contractor's obligations under the Contract Documents. These

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

Bonds shall remain in effect at least until two years after the date when final payment is approved by Owner, except as otherwise provided by Law or Regulation or by the Contract Documents. Contractor shall also furnish such other Bonds as are required by the Contract Documents. All Bonds shall be in the forms prescribed by Law or Regulation or by the Contract Documents and be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds shall be signed by an Arkansas Agent.

- B. The Bonds shall be automatically increased in amount and extended in time without formal and separate amendments to cover full and faithful performance of the Contract in the event of Change Orders, regardless of the amount of time or money involved. It is Contractor's responsibility to notify his surety of any changes affecting the general scope of the Work or change in the Contract Price or Contract Times.
- C. Bonds signed by an agent must be accompanied by a certified copy of the authority to act.
- D. Date of Bonds shall be the same as the Effective Date of the Agreement.
- E. If at any time during the continuance of the Contract, the surety on any Bond becomes unacceptable to Owner for financial reasons, Owner has the right to require additional and sufficient sureties which Contractor shall furnish to the satisfaction of Owner within ten days after notice to do so.
 - 1. If the surety on any Bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01A, Contractor shall within five days thereafter substitute another Bond and surety, both of which must be acceptable to Owner.

5.02 INSURANCE:

- A. Contractor's Liability Insurance:
 - 1. Contractor and all of his subcontractors shall purchase and maintain such liability and other insurance as is appropriate for the Work being furnished and performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's furnishing and performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:
 - a. Claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 - b. Claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
 - c. Claims for damages because of bodily injury, sickness, or disease, or death of any person other than Contractor's employees;

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

- d. Claims for damages insured by reasonably available personal injury liability coverage which are sustained: (i) by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or (ii) by any other person for any other reason;
 - e. Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use therefrom;
 - f. Claims arising out of operation of Laws or Regulations for damages because of bodily injury or death of any person or for damage to property; and
 - g. Claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle.
2. The insurance required by this paragraph shall include the specific coverages, and be written for not less than the limits of liability specified or required by Law, whichever is greater.
- a. Umbrella General Liability \$5,000,000
 - b. Workers' compensation Statutory (State and Federal Limits)
Employer's Liability \$500,000 each accident
 - c. Commercial General Liability
 - (1) General Aggregate \$2,000,000
 - (2) Products-Completed Operations Aggregate \$2,000,000
 - (3) Personal & Advertising Injury Limit \$1,000,000
 - (4) Each Occurrence Limit
\$1,000,000
 - (5) Fire Damage Limit \$ 100,000
 - (6) Medical Expense Limit \$
5,000
 - d. Business Automobile Liability
 - (1) Any one loss or accident \$1,000,000
- B. The policies of insurance so required by paragraph 5.02A to be purchased and maintained shall:
- 1. with respect to insurance required by Paragraphs 5.02A.1.c through 5.02A.1.g inclusive, include as additional insureds by endorsement (subject to customary exclusion in respect of professional liability) Owner, Engineer, and Engineer's Consultants, and include coverage for the respective officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
 - 2. include at least the specific coverages and be written for not less than the limits of liability specified in Paragraph 5.02A.2 or required by Laws and Regulations, whichever is greater;
 - 3. with respect to insurance required by paragraphs 5.02A1.c through 5.02A1.g inclusive, include premises/operations, products, completed operations, independent contractors, and personal injury insurance,;

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

4. include in the Commercial General Liability policy, contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.06, 6.10, and 6.16, and written for not less than the limits of liability and coverages specified above;
5. contain a provision or endorsement that the coverage afforded will not be cancelled, materially changed, or renewal refused until at least 30 days' prior written notice by certified mail has been given to Owner and Contractor and to each other additional insured to whom a certificate of insurance has been issued;
6. provide Broad Form Property Damage coverage and contain no exclusion (commonly referred to as XC&U exclusion) relative to blasting, earthquake, flood, explosion, collapse of buildings, or damage to underground property;
7. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07;
8. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment and Contractor shall furnish Owner and each other specified additional insured to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter;
9. include Independent Contractors Protective Liability coverage; and
10. with respect to the Commercial General Liability policy, the maximum deductible allowed shall be \$5, 000.
11. Owner and Contractor waive all rights against each other and their respective officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by such policies required by Paragraph 5.02A and any other liability insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, Engineer, Engineer's Consultants, and all other individuals or entities endorsed as insureds or additional insureds (and the officers, directors, partners, employees, agents and other consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. As required by Paragraph 6.05D, each subcontract between Contractor and a Subcontractor shall contain similar waiver provisions by the Subcontractor in favor of Owner, Contractor, Engineer, Engineer's Consultants, and all other parties endorsed as insureds or additional insureds. None of the above waivers shall extend to the rights that any of the insured parties may have to proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued. with respect to the Commercial General Liability policy, the maximum deductible allowed shall be \$5,000.

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

- C. Owner's Protective Liability Insurance:
1. Contractor shall be responsible for purchasing and maintaining Owner's Protective Liability insurance with Owner, and Engineer as named insureds.
 2. This insurance shall have the same limits of liability as the Commercial General Liability insurance and shall protect Owner and Engineer against any and all claims and liabilities for injury to or death of persons, or damage to property caused in whole or in part by, or alleged to have been caused in whole or in part by, negligent acts or omissions of Contractor or Subcontractors or any agent, servant, worker, or employee of Contractor or Subcontractors arising from the operations under the Contract Documents.
 3. This insurance may be provided by endorsement to Contractor's Commercial General Liability insurance policy.
- D. Property Insurance:
1. Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of the full insurable value thereof (subject to such deductible amounts as follows) or as required by Laws or Regulations. This insurance shall:
 - a. be on the completed value form and include the interests of Owner, Contractor, Subcontractors, Engineer, and Engineer's Consultants, and the officers, directors, partners, employees, agent, and other consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an additional insured;
 - b. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and Equipment and Materials, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, terrorism, and such other perils (as flood, earthquake, explosions, collapse, underground hazard) or causes of loss as may be specifically required in the Contract Documents;
 - c. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals);
 - d. cover Equipment and Materials stored at the Site or at another location that was agreed to in writing by Engineer prior to being incorporated in the Work, provided that such Equipment and Materials have been included in an Application for Payment recommended by Engineer;
 - e. allow for partial utilization of the Work by Owner;
 - f. include testing and startup;
 - g. be maintained in effect until final payment (or the Owner assumes beneficial occupancy and agrees to provide insurance coverage for

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

the facilities so occupied) is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days' written notice to each other additional insured to whom a certificate of insurance has been issued; and

h. have a deductible amount of \$ 10,000.

2. Contractor shall purchase and maintain such boiler and machinery insurance or additional property insurance as required by Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, Engineer, and Engineer's Consultants in the Work, each of whom is deemed to have an insurable interest and shall be listed as insured or additional insured parties.

3. All policies of insurance required to be purchased and maintained in accordance with Paragraph 5.02D will contain a provision or endorsement that the coverage afforded will not be cancelled or materially changed or renewal refused until at least 30 days' prior notice by certified mail has been given to Owner and Contractor and to each additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.02F below.

4. Copies of the policies shall be furnished for property insurance. Certificates will not be acceptable.

E. Transit Insurance:

1. Transit insurance shall be furnished by Contractor to protect Contractor and Owner from all risks of physical loss or damage to Equipment and Materials, not otherwise covered under other policies, during transit from point of origin to the Site of installation or erection.

2. This insurance shall be written on an "All Risk" basis with additional coverages applicable to the circumstances that may occur in the particular Work included in this Contract.

3. This insurance shall be in an amount not less than 100% of the manufactured or fabricated value of items exposed to risk in transit at any one time.

4. This insurance shall contain a waiver of rights of subrogation the insurer may have or acquire against Engineer.

F. Waiver of Rights:

1. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.02D will protect Owner, Contractor, Subcontractors, Engineer, Engineer's Consultants, and other individuals or entities endorsed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage, the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder; and if the insurers require separate waiver forms to be signed by Engineer or Engineer's Consultants, Owner will obtain

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

- the same, and if such waiver forms are required of any Subcontractor, Contractor shall obtain the same.
2. Owner and Contractor waive all rights against each other and their respective officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by such policies required by Paragraph 5.02D and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, Engineer, Engineer's Consultants, and all other individuals or entities endorsed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. As required by Paragraph 6.05D, each subcontract between Contractor and a Subcontractor shall contain similar waiver provisions by the Subcontractor in favor of Owner, Contractor, Engineer, Engineer's Consultants, and all other parties endorsed as insureds or additional insureds. None of the above waivers shall extend to the rights that any of the insured parties may have to proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.
- G. Receipt and Application of Insurance Proceeds:
1. Any insured loss under the policies of insurance required by Paragraph 5.02D will be adjusted with Owner and made payable to Owner as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.02G.2. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied to account thereof, and the Work and the cost thereof covered by an appropriate Change Order or Written Amendment.
 2. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection is made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties upon the occurrence of an insured loss.
- H. Acceptance of Insurance:
1. If Owner has any objection to the coverage afforded by or other provisions of the insurance required to be purchased and maintained by Contractor in accordance with Paragraph 5.02 on the basis of non-conformance with the Contract Documents, Owner shall so notify

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

- Contractor in writing thereof within 10 days of the date of delivery of such certificates and other evidence of insurance to Owner required by Paragraph 2.05C.
2. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.
- I. Partial Utilization, Acknowledgment of Property Insurer:
 1. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.06, no such use or occupancy shall commence before the insurers providing property insurance pursuant to Paragraph 5.02D have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be cancelled or lapse on account of any such partial use or occupancy.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.01 SUPERVISION AND SUPERINTENDENCE:

- A. Contractor shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the Work, but Contractor shall not be responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence, or procedure of construction which is indicated in and required by the Contract Documents. Contractor shall be responsible to see that the finished Work complies accurately with the Contract Documents.
- B. Contractor shall keep on the Work at all times during its progress a competent resident superintendent, who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to the superintendent shall be as binding as if given to Contractor.
- C. When manufacturer's field services in connection with the erection, installation, start-up, or testing of Equipment furnished under this Contract, or instruction of Owner's personnel thereon are specified, Contractor shall keep on the Work,

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

during its progress or as specified, competent manufacturer's field representatives and any necessary assistants.

6.02 LABOR, EQUIPMENT, AND MATERIALS:

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site. Except in connection with the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the Site shall be performed during regular working hours, and Contractor will not permit overtime work or the performance of Work on Saturday, Sunday, or any legal holiday without Engineer's written consent.
- B. Unless otherwise specified in the General Requirements, Contractor shall furnish and assume full responsibility for all Equipment and Materials, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up, and completion of the Work.
- C. All Equipment and Materials shall be of good quality and new, except as otherwise provided in the Contract Documents. If required by Engineer, Contractor shall furnish to Engineer satisfactory evidence (including reports of required tests) as to the kind and quality of Equipment and Materials. All Equipment and Materials shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with the instructions of the applicable Supplier except as otherwise provided in the Contract Documents; but no provision of any such instructions will be effective to assign to Engineer, or any of Engineer's consultants, agents, or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.10C and 9.10D.
- D. All Equipment and Materials incorporated in the Work shall be designed to meet the applicable safety standards of federal, state, and local Laws and Regulations.
- E. Domestic Product Procurement: As further specified elsewhere in these or referenced documents.

6.03 ADJUSTING PROGRESS SCHEDULE:

- A. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) adjustments in the progress schedule to reflect the impact thereon of new developments; these will conform generally to the progress schedule then in effect and additionally will comply with any provisions of the General Requirements applicable thereto.

6.04 SUBSTITUTES OR "OR-EQUAL" ITEMS:

- A. Whenever an item of Equipment or Material is specified or described in the Contract Documents by using the name of a proprietary item or the name of a

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or “or-equal” item or no substitute is permitted, other items of Equipment or Material of other Suppliers may be submitted by Contractor to Engineer for review under the circumstances described below.

1. “Or-Equal” Items: If in Engineer’s sole discretion an item of Equipment or Material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an “or-equal” item, in which case review and approval of the proposed item may, in Engineer’s sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For purposes of this Paragraph 6.04A.1, a proposed item of Equipment or Material will be considered functionally equal to an item so named if:
 - a. In the exercise of reasonable judgment Engineer determines that: (i) it is at least equal in quality, durability, appearance, strength, and design characteristics; (ii) it will reliably perform at least equally well the function imposed by the design concept of the completed Project as a functioning whole, and;
 - b. Contractor certifies that: (i) there is no increase in cost to Owner; and (ii) it will conform substantially, even with deviations, to the detailed requirements of the item named in the Contract Documents.
 - c. “Or-Equal” will not be considered until after Award of Contract.
2. Substitute Items:
 - a. If in Engineer’s sole discretion an item of Equipment or Material proposed by Contractor does not qualify as an “or-equal” item under Paragraph 6.04A.1, it will be considered a proposed substitute item.
 - b. Contractor shall submit sufficient information as provided below to allow Engineer to determine that the item of Equipment or Material proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of Equipment or Materials will not be accepted by Engineer from anyone other than Contractor.
 - c. The procedure for review by Engineer will be as set forth in Paragraph 6.04A.2.d, as may be supplemented in the General Requirements and as Engineer may decide is appropriate under the circumstances.
 - d. Contractor shall first make written application to Engineer for review of a proposed substitute item of Equipment or Material that Contractor seeks to furnish or use. The application shall certify that the proposed substitute item will perform adequately the functions and achieve the results called for by the general design, be similar in substance to that specified, and be suited to the same use as that specified. The application will state the extent, if any, to which the use of the proposed substitute will prejudice Contractor’s achievement of Substantial Completion on time; whether or not use

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for work on the Project) to adapt the design to the proposed substitute item; and whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute item from that specified will be identified in the application, and available engineering, sales, maintenance, repair, and replacement services will be indicated. The application will also contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change, all of which will be considered by Engineer in evaluating the proposed substitute item. Engineer may require Contractor to furnish additional data about the proposed substitute item.

- e. Substitute items will not be considered until after Award of Contract.
- B. If a specific means, method, technique, sequence, or procedure of construction is indicated in or required by the Contract Documents, Contractor may furnish or use a substitute means, method, sequence, technique, or procedure of construction acceptable to Engineer, if Contractor submits sufficient information to allow Engineer to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents. The procedure for review by Engineer will be similar to that provided in Paragraph 6.04A.2 as applied by Engineer and as may be supplemented in the General Requirements.
- C. Engineer will be allowed a reasonable time within which to evaluate each proposed substitute or "or-equal" item. Engineer will be the sole judge of acceptability, and no substitute or "or-equal" will be ordered, installed, or used until Engineer's review is complete, which will be evidenced by either (i) a Change Order for a substitute, or (ii) an approved Submittal for an "or-equal." Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. Engineer will record time required by Engineer and, Engineer's Consultants, in evaluating substitute proposed or submitted by Contractor pursuant to Paragraphs 6.04A.2 and 6.04B and in making changes in the Contract Documents or in the provisions of any other direct contract with Owner for work on the Project occasioned thereby. Whether or not Engineer approves a substitute item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of, Engineer, and Engineer's Consultants for evaluating each such proposed substitute.

6.05 CONEERNING SUBCONTRACTORS, SUPPLIERS, AND OTHERS:

- A. Contractor shall not employ any Subcontractor, Supplier, or other person or organization (including those acceptable to Owner and Engineer as indicated in Paragraph 6.05B), whether initially or as a substitute, against whom Owner

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

or Engineer may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other person or organization to furnish or perform any of the Work against whom Contractor has reasonable objection.

- B. If the Contract Documents require the identity of certain Subcontractors, Suppliers, or other persons or organizations (including those who are to furnish the principal items of Equipment and Materials) to be submitted to Owner within the required time after Bid opening prior to the Effective Date of the Agreement for acceptance by Owner and Engineer and if Contractor has submitted a list thereof, Owner's or Engineer's 'acceptance (either in writing or by failing to make written objection thereto) of any such Subcontractor, Supplier, or other person or organization so identified may be revoked on the basis of reasonable objection after due investigation, in which case Contractor shall submit an acceptable substitute, the Contract Price will be increased by the difference in the cost occasioned by such substitution, and an appropriate Change Order will be issued or Written Amendment signed. No acceptance by Owner or Engineer of any such Subcontractor, Supplier, or other person or organization shall constitute a waiver of any right of Owner or Engineer to reject defective Work.
- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with Contractor just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents shall create any contractual relationship between Owner, or Engineer and any such Subcontractor, Supplier, or other person or organization, nor shall it create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other person or organization except as may otherwise be required by Laws and Regulations.
- D. All Work performed for Contractor by a Subcontractor will be pursuant to an appropriate agreement between Contractor and the Subcontractor which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer and contains waiver provisions as required by Paragraph 5.02F. Contractor shall pay each Subcontractor a just share of any insurance moneys received by Contractor on account of losses under policies issued pursuant to Paragraph 5.02D.

6.06 PATENT FEES AND ROYALTIES:

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

- B. Contractor shall indemnify and hold harmless Owner and Engineer and anyone directly or indirectly employed by either of them from and against all claims, damages, losses, and expenses (including attorneys' fees and court and arbitration costs) arising out of any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents, and shall defend all such claims in connection with any alleged infringement of such rights.

6.07 PERMITS:

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of opening of Bids. Fees for permits issued by the City will be waived and the Permits issued by the City necessary for the work are required. Contractor shall pay all charges of utility owners for connections to the Work, and Owner shall pay all charges of such utility owners for capital costs related thereto such as plant investment fees.

6.08 LAWS AND REGULATIONS:

- A. Contractor shall give all notices and comply with all Laws and Regulations applicable to furnishing and performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor observes that the Specifications or Drawings are at variance with any Laws or Regulations, Contractor shall give Engineer prompt written notice thereof, and any necessary changes will be authorized by one of the methods indicated in Paragraph 3.02. If Contractor performs any Work knowing or having reason to know that it is contrary to such Laws or Regulations, and without such notice to Engineer, Contractor shall bear all costs arising therefrom; however, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with such Laws and Regulations.

6.09 TAXES:

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid or withheld by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.10 USE OF PREMISES:

- A. Contractor shall confine construction equipment, the storage of Equipment and Materials, and the operations of workers to the Project Site and land and areas identified in and permitted by the Contract Documents and other land and areas permitted by Laws and Regulations, rights-of-way, permits, and

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

easements, and shall not unreasonably encumber the premises with construction equipment or other equipment and materials. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the Work. Should any claim be made against Owner or Engineer by any such owner or occupant because of the performance of the Work, Contractor shall promptly attempt to settle with such other party by agreement or otherwise resolve the claim by arbitration or at Law. Contractor shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold Owner and Engineer harmless from and against all claims, damages, losses, and expenses (including, but not limited to, fees of engineers, architects, attorneys and other professionals, and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any such other party against Owner or Engineer to the extent based on a claim arising out of Contractor's performance of the Work.

- B. During the progress of the Work, Contractor shall keep the premises free from accumulations of waste materials, rubbish, and other debris resulting from the Work. At the completion of the Work, Contractor shall remove all waste materials, rubbish, and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials, and shall leave the Site clean and ready for occupancy by Owner. Contractor shall restore to original condition all property not designated for alteration by the Contract Documents.
- C. Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.11 RECORD DOCUMENTS:

- A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Written Amendments, Change Orders, Work Change Directives, Field Test Records, Field Orders, and written interpretations and clarifications (issued pursuant to Paragraph 9.04) in good order and annotated to show all changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Submittals shall be available to Engineer for reference. Upon completion of the Work, these record documents and Submittals shall be delivered to Engineer for Owner.
- B. Receipt and acceptance of record documents will be a prerequisite for final payment on the Contract.

6.12 SAFETY AND PROTECTION:

- A. Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. All employees on the Work and other persons and organizations who may be affected thereby;

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

2. All the Work and Materials and Equipment to be incorporated therein, whether in storage on or off the Site; and
 3. Other property at the Site or adjacent thereto, including trees shrubs, lawns, walks, pavements, roadways, structures, utilities and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property. All damage, injury or loss to any property referred to in Paragraph 6.12A.2 or 6.12A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor). Contractor's duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.09A that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).
- C. Contractor shall designate a responsible representative at the Site whose duty shall be the prevention of accidents. This person shall be Contractor's superintendent unless otherwise designated in writing by Contractor to Owner and Engineer.

6.13 EMERGENCIES:

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor, without special instruction or authorization from Engineer or Owner, is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If Engineer determines that a change in the Contract Documents is required because of the action taken in response to an emergency, a Change Order will be issued to document the consequences of the changes or variations.

6.14 SUBMITTALS:

- A. After checking and verifying all field measurements and after complying with applicable procedures specified in the General Requirements, Contractor shall submit to Engineer for review and acceptance by Engineer, in accordance with the accepted schedule of submissions, copies of Submittals which will bear the

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

required information that Contractor has satisfied Contractor's responsibilities under the Contract Documents with respect to the review of the submission. All submissions will be identified as Engineer may require. The data shown on Submittals will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to enable Engineer to review the information as required.

- B. Before submission of each Submittal, Contractor shall have determined and verified all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar data with respect thereto and reviewed or coordinated each Submittal with other Submittals and with the requirements of the Work and the Contract Documents.
- C. At the time of each submission, Contractor shall give Engineer specific written notice of each variation that the Submittal may have from the requirements of the Contract Documents, and in addition, shall cause a specific notation to be made on each Submittal submitted to Engineer for review and approval of each such variation.
- D. Engineer will review Submittals with reasonable promptness, but Engineer's review and acceptance will be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to means, methods, techniques, sequences, or procedures of construction (except where a specific means, method, technique, sequence, or procedure of construction is indicated in or required by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions. Contractor shall make corrections required by Engineer, and shall return the required number of corrected copies of Submittals and resubmit as required for review and acceptance. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.
- E. Engineer's review and acceptance of Submittals shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents. Contractor shall in writing call Engineer's attention to each and every variation at the time of submission. Engineer will show approval of each such variation by a specific written notation thereof incorporated in or accompanying the Submittal. Acceptance by Engineer shall not relieve Contractor from responsibility for errors or omissions in the Submittals.
- F. Where a Submittal is required by the Specifications, any related Work performed prior to Engineer's review and acceptance of the pertinent submission will be the sole expense and responsibility of Contractor.

6.15 CONTINUING THE WORK:

- A. Contractor shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with Engineer or Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.03 or as Contractor and Owner may otherwise agree in writing.

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

6.16 INDEMNIFICATION:

- A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner, Engineer, Engineer's Consultants, and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them from and against all claims, damages, losses and expenses, direct, indirect, or consequential (including but not limited to fees and charges of engineers, architects, attorneys and other professionals, and court and arbitration costs) arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss, or expense:
 - 1. Is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom, and
 - 2. Is caused in whole or in part by any negligent act or omission of Contractor, any Subcontractor, any person, or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder or arises by or is imposed by Laws and Regulations regardless of the negligence of any such party.
- B. In any and all claims against Owner or Engineer or any of their consultants, agents, or employees by any employee of Contractor, any Subcontractor, any person, or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.16A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor or other person or organization under workers' or workmen's compensation acts, disability benefit acts, or other employee benefit acts.
- C. The obligations of Contractor under Paragraph 6.16A shall not extend to the liability of Engineer, Engineer's Consultants, agents, or employees arising out of:
 - 1. The preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, designs, or specifications.
 - 2. The giving of or the failure to give communications by Engineer, their agents, or employees provided such giving or failure to give is the primary cause of injury or damage.
- D. If necessary for enforcement of any indemnification and hold harmless requirement herein, or if applicable law requires the Contractor to obtain specified limits of insurance to insure any indemnity obligation; then Contractor shall obtain such applicable coverage with minimum limits not less than any specified in Paragraph 5.02B herein, the cost to be recovered and included in the Contract Price, and any indemnity attributable to the negligence of any indemnified party shall be limited to such insurance.

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

ARTICLE 7 - OTHER WORK

7.01 RELATED WORK AT SITE:

- A. Owner may perform other work related to the Project at the Site by Owner's own forces, have other work performed by utility owners, or let other direct contracts therefor which shall contain General Conditions similar to these. If the fact that such other work is to be performed was not noted in the Contract Documents, written notice thereof will be given to Contractor prior to starting any such other work; and, if Contractor believes that such performance will involve additional expense to Contractor or requires additional time and the parties are unable to agree as to the extent thereof, Contractor may make a claim therefor as provided in Articles 11 and 12.
- B. Contractor shall afford each utility owner and other contractor who is a party to such a direct contract (or Owner, if Owner is performing the additional work with Owner's employees) proper and safe access to the Site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work, and shall properly connect and coordinate the Work with theirs; Contractor shall do all cutting, fitting, and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected.
- C. If any part of Contractor's Work depends for proper execution or results upon the work of any such other contractor or utility owner or Owner, Contractor shall inspect and promptly report to Engineer in writing any delays, defects, or deficiencies in such work that render it unavailable or unsuitable for such proper execution and results. Contractor's failure so to report will constitute an acceptance of the other work as fit and proper for integration with Contractor's Work except for latent or nonapparent defects and deficiencies in the other work.

7.02 COORDINATION:

- A. If Owner contracts with others for the performance of other work on the Project at the Site, the person or organization who will have authority and responsibility for coordination of the activities among the various prime contractors will be identified in the General Requirements, and the specific matters to be covered by such authority and responsibility will be itemized, and the extent of such authority and responsibilities will be provided.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 COMMUNICATIONS:

- A. Owner shall issue all communications to Contractor through Engineer.

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

8.02 CHANGE OF ENGINEER :

- A. In case of termination of the employment of Engineer, Owner shall appoint, subject to the requirements of Section 00001 CERTIFICATIONS and Arkansas State Law an engineer against whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer. Any dispute in connection with such appointment shall be addressed as discussed in Article 16.

8.03 REQUIRED DATA:

- A. Owner shall furnish the data required of Owner under the Contract Documents promptly and shall make payments to Contractor promptly after they are due as provided in Paragraphs 14.04A and 14.09A.

8.04 LANDS AND EASEMENTS:

- A. Owner's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.04.

8.05 INSURANCE:

- A. Owner's responsibilities in respect of purchasing and maintaining insurance are set forth in Paragraph 5.02.

8.06 CHANGE ORDERS:

- A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.01.

8.07 INSPECTIONS AND TESTS:

- A. Owner's responsibility in respect of certain inspections, tests and approvals is set forth in Paragraph 13.03B.

8.08 STOPPING THE WORK:

- A. In connection with Owner's right to stop Work or suspend Work, see Paragraphs 13.06 and 15.02. Paragraph 15.02A deals with Owner's right to terminate services of Contractor under certain circumstances.

8.09 LIMITATIONS ON OWNER'S RESPONSIBILITIES:

- A. Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

9.01 OWNER'S REPRESENTATIVE:

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents and shall not be extended without written consent of Owner and Engineer.
- B. Owner and Contractor are reminded of the requirements of Arkansas State Law **§22-9-101**. Observation by registered professionals required.

9.02 VISITS TO SITE:

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction to observe the progress and quality of the executed Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous on-Site inspections to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform to the Contract Documents. On the basis of such visits and on-Site observations as an experienced and qualified design professional, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defects and deficiencies in the Work.

9.03 PROJECT REPRESENTATION:

- A. Engineer may furnish Resident Project Representative and assistants to assist Owner and Engineer in observing the performance of the Work.
 - 1. Communications pertaining to Submittals, written interpretations, and Change Orders shall be directed to Engineer at his home office.
 - 2. Communications pertaining to day-to-day operations at the Site shall be directed to Resident Project Representative.
 - 3. Resident Project Representative and his assistants will conduct observations of the Work in progress to assist Engineer in determining that the Work is proceeding in accordance with the Contract Documents.
 - 4. Resident Project Representative will not have authority to permit any deviation from the Contract Documents, except with concurrence of Owner and Engineer.

9.04 CLARIFICATIONS AND INTERPRETATIONS:

- A. Engineer will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of drawings or otherwise) as Engineer may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents. If Contractor believes that a written clarification or interpretation justifies an increase in the Contract Price or an extension of the Contract Times

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

and the parties are unable to agree to the amount or extent thereof, Contractor may make a claim therefor as provided in Article 11 or Article 12.

9.05 AUTHORIZED VARIATIONS IN WORK:

- A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are consistent with the overall intent of the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner, and also on Contractor who shall perform the Work involved promptly.

9.06 REJECTING DEFECTIVE WORK:

- A. Engineer will have authority to disapprove or reject Work which Engineer believes to be defective, and will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.05B, whether or not the Work is fabricated, installed, or completed.
- B. Resident Project Representative will have authority, subject to final decision of Engineer, to disapprove or reject any defective workmanship, Equipment, or Material.

9.07 SUBMITTALS, CHANGE ORDERS, AND PAYMENTS:

- A. In connection with Engineer's responsibility for Submittals, see Paragraph 6.14.
- B. In connection with Engineer's responsibilities as to Change Orders, see Articles 10, 11, and 12.
- C. In connection with Engineer's responsibilities in respect of Applications for Payment, see Article 14.

9.08 DETERMINATIONS FOR UNIT PRICES:

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon to the Owner. Engineer will provide approval by recommendation of an Application for Payment to the Owner or return Application to Engineer for further review.
- B. Engineer's written decisions thereon will be final and binding upon Owner and Contractor, unless, within ten days after the date of any such decision, either Owner or Contractor delivers to the other party to the Agreement and to Engineer written notice of intention to appeal such a decision.

9.09 DECISIONS ON DISPUTES:

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. Claims, disputes, and other matters relating to the acceptability of the Work or the interpretation of the requirements of the Contract Documents pertaining to the performance and furnishing of the Work and claims under Articles 11 and 12 in respect of changes in the Contract Price or Contract Times will be referred

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

initially to Engineer in writing with a request for a formal decision in accordance with this Paragraph, which Engineer will render in writing within a reasonable time. Written notice of each such claim, dispute, and other matter will be delivered by the claimant to Engineer and the other party to the Agreement promptly (but in no event later than 30 days) after the occurrence of the event giving rise thereto, and written supporting data shall be delivered to Engineer and the other party within 60 days after such occurrence unless Engineer allows an additional period of time to ascertain more accurate data in support of the claim. Owner may request written review by Engineer of claims, disputes, and other matters relating to the acceptability of the Work or the interpretation of the requirements of the Contract Documents.

- B. When functioning as interpreter and judge under Paragraphs 9.08 and 9.09A, Engineer will not show partiality to Owner or Contractor and Engineer will not be liable in connection with any interpretation or decision rendered in good faith in such capacity. The rendering of a decision by Engineer with respect to any such claim, dispute, or other matter (except any which have been waived by the making or acceptance of final payment as provided in Paragraph 14.11) will be a condition precedent to any exercise by Owner or Contractor of such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any such claim, dispute, or other matter.

9.10 LIMITATIONS ON ENGINEER'S RESPONSIBILITIES:

- A. Neither Engineer's authority to act under this Article 9 or elsewhere in the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of Engineer to Contractor, any Subcontractor, any Supplier, or any other person or organization performing any of the Work, or to any surety for any of them.
- B. Whenever in the Contract Documents the terms "as directed", "as required", "as allowed", "as approved", or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper", or "satisfactory" or adjectives of like effect or import are used to describe a requirement, direction, review, or judgment of Engineer as to the Work, it is intended that such requirement, direction, review or judgment will be solely to evaluate the Work for compliance with the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign to Engineer any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraphs 9.10C or 9.10D.
- C. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform or furnish the Work in accordance with the Contract Documents.

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

- D. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.
- E. The presence or absence of Engineer, or any of their representatives will not act to relieve Contractor of any responsibility or of any guarantee of his performance. Neither will observation by Engineer, or any of their representatives in any way be understood to relieve Contractor of any responsibility for proper supervision of the Work at all times.
- F. Review by Engineer of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.08A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.
- G. The limitations upon authority and responsibility set forth in this Paragraph 9.10 shall also apply to Engineer's Consultants, Resident Project Representative, and assistants.

ARTICLE 10 - CHANGES IN THE WORK

10.01 GENERAL:

- A. Without invalidating the Agreement and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work; these will be authorized by a Written Amendment, a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which shall be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
 - 1. There shall be no changes without prior written approval of the Engineer of Record and/or the City's designated Professional Engineer.
- B. If Owner and Contractor are unable to agree as to the extent, if any, of an increase or decrease in the Contract Price or an extension or a shortening of the Contract Times that should be allowed as a result of a Work Change Directive, a claim may be made therefore as provided in Article 11 or 12.
- C. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any Work performed that is not required by the Contract Documents as amended, modified, and supplemented as provided in Paragraphs 3.02A and 3.02C, except in the case of an emergency as provided in Paragraph 6.13 and except in the case of uncovering Work as provided in Paragraph 13.05B.
- D. Owner and Contractor shall execute appropriate Change Orders (or Written Amendments) covering:
 - 1. Changes in the Work which are ordered by Owner pursuant to Paragraph 10.01A, are required because of acceptance of defective Work under Paragraph 13.09 or correcting defective Work under Paragraph 13.10, or are agreed to by the parties;

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

2. Changes in the Contract Price or Contract Times which are agreed to by the parties; and
 3. Changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 9.09A, provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the progress schedule as provided in Paragraph 6.15.
- E. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be Contractor's responsibility, and the amount of each applicable Bond will be adjusted accordingly.

ARTICLE 11 - CHANGE OF CONTRACT PRICE

11.01 GENERAL:

- A. The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to Contractor for performing the Work. All duties, responsibilities, and obligations assigned to or undertaken by Contractor shall be at his expense without change in the Contract Price.
- B. The Contract Price may only be changed by a Change Order or a Written Amendment. Any claim for an increase or decrease in the Contract Price shall be based on written notice delivered by the party making the claim to the other party and to Engineer promptly (but in no event later than 30 days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the amount of the claim with supporting data shall be delivered within 60 days after such occurrence (unless Engineer allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by claimant's written statement that the amount claimed covers all known amounts (direct, indirect, and consequential) to which the claimant is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Price shall be determined by Engineer in accordance with Paragraph 9.09A if Owner and Contractor cannot otherwise agree on the amount involved. No claim for an adjustment in the Contract Price will be valid if not submitted in accordance with this Paragraph 11.01B.
- C. The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:
 1. Where the Work involved is covered by Unit Prices contained in the Contract Documents, by application of Unit Prices to the quantities of the items involved (subject to the provisions of Paragraphs 11.05A through 11.05C, inclusive).
 2. By mutual acceptance of a lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.03A.2.a).

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

3. On the basis of the Cost of the Work (determined as provided in Paragraphs 11.02A and 11.02B) plus a Contractor's Fee for overhead and profit (determined as provided in Paragraphs 11.03A and 11.03B).

11.02 COST OF THE WORK:

- A. The term Cost of the Work means the sum of all costs necessarily incurred and paid by Contractor in the proper performance of the Work. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items and shall not include any of the costs itemized in Paragraph 11.02B.
 1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers' or workmen's compensation, health and retirement benefits, bonuses, sick leave, vacation, and holiday pay applicable thereto. Such employees shall include superintendents and foremen at the Site. The expenses of performing Work after regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
 2. Cost of all Equipment and Materials furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds, and all returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
 3. Payments made by Contractor to the Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from Subcontractors acceptable to Contractor and shall deliver such bids to Owner who will then determine, with the advice of Engineer, which bids will be accepted. If a subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work Plus a Fee, the Subcontractor's Cost of the Work shall be determined in the same manner as Contractor's Cost of the Work. All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.
 4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Costs, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost less market value of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, installation, dismantling, and removal thereof - all in accordance with terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
 - d. Sales, consumer, use, or similar taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.
 - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
 - f. Losses and damages not compensated by insurance or otherwise, to the Work or otherwise sustained by Contractor in connection with the performance and furnishing of the Work provided they have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable; shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the cost of the Work for the purpose of determining Contractor's fee. If, however, any such loss or damage requires reconstruction and Contractor is placed in charge thereof, Contractor shall be paid for services a fee proportionate to that stated in Paragraph 11.03A.2.
 - g. The cost of utilities, fuel, and sanitary facilities at the Site.
 - h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expressage, and similar petty cash items in connection with the Work.
 - i. Cost of premiums for additional Bonds and insurance required because of changes in the Work and premiums for property insurance coverage within the limits of the deductible amounts established by Owner in accordance with Paragraph 5.02D.4.
- B. The term Cost of the Work shall not include any of the following:
 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships),

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor whether at the Site or in Contractor's principal or a branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.02A.1 or specifically covered by Paragraph 11.02A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work, and charges against Contractor for delinquent payments.
4. Cost of premiums for all Bonds and for all insurance whether or not Contractor is required by the Contract Documents to purchase and maintain the same (except for the cost of premiums covered by subparagraph 11.02A.5.i above).
5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
6. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 11.02A.

11.03 CONTRACTOR'S FEE:

- A. The Contractor's Fee allowed to Contractor for overhead and profit shall be determined as follows:
 1. A mutually acceptable fixed fee; or if none can be agreed upon,
 2. A fee based on the following percentages of the various portions of the Cost of the Work:
 - a. For costs incurred under Paragraphs 11.02A.1 and 11.02A.2, the Contractor's Fee shall be 10%(negotiable with Owner);
 - b. For costs incurred under Paragraph 11.02A.3, the Contractor's Fee shall be 5%; and if a subcontract is on the basis of Cost of the Work Plus a Fee, the maximum allowable to Contractor on account of overhead and profit of all Subcontractors shall be 10%(negotiable with Owner);
 - c. Where one or more tiers of subcontracts are on the basis of the Cost of the Work Plus a Fee and no fixed fee is agreed upon, the intent of Paragraphs 11.03A and 11.02A.1 through A.3 is that the Subcontractor who actually performs or furnishes the Work, at whatever tier, will be paid a fee of ten percent (10%) of the costs incurred by such Subcontractor under Paragraphs 11.02A.1 and 11.02A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent (5%) of the amount paid to the next lower tier Subcontractor.

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

- d. No fee shall be payable on the basis of costs itemized under Paragraph 11.02A.4, 11.02A.5 and 11.02B;
- e. The amount of credit to be allowed by Contractor to Owner for any such change which results in a net decrease in cost will be the amount of the actual net decrease plus a deduction in Contractor's Fee by an amount equal to 10% of the net decrease; and
- f. When both additions and credits are involved in any one change, the adjustment in Contractor's Fee shall be computed on the basis of the net change in accordance with Paragraphs 11.03A.2.a through 11.03A.2.d, inclusive.

- B. Whenever the cost of any Work is to be determined pursuant to Paragraph 11.02A or 11.02B, Contractor will submit in form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.04 CASH ALLOWANCES:

- A. Not applicable.

11.05 UNIT PRICE WORK:

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the established Unit Prices for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer in accordance with Paragraph 9.08.
- B. Each Unit Price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- C. Where the quantity of any item of Unit Price Work performed by Contractor exceeds the estimated quantity of such item indicated in the Agreement by twenty-five percent or more and there is no corresponding adjustment with respect to any other item of Work and if Contractor believes that Contractor has incurred additional expense as a result thereof, Contractor may make a claim for an increase in the Contract Price in accordance with Article 11 if the parties are unable to agree as to the amount of any such increase.

11.06 RIGHT OF AUDIT:

- A. Owner shall have the right to inspect and audit all of Contractor's books, records, correspondence, instructions, drawings, receipts, payment records, vouchers, and memoranda relating to the Work, and Contractor shall preserve all such records and supporting documentation for a period of three years after date of Final Payment. Contractor hereby grants to Owner the authority to enter Contractor's premises for the purpose of inspection of such records and supporting documentation or, at Contractor's option, Contractor may make

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

such records and supporting documentation available to Owner at a location satisfactory to Owner.

- B. All of the records and supporting documentation shall be open to inspection and subject to audit and reproduction by Owner or its authorized representative for any and all purposes, including but not limited to (i) compliance with the Contract Documents; (ii) proper pricing of Change Orders; and (iii) claims submitted by or against Contractor or any Subcontractor or Supplier in connection with any performance under the Contract Documents.

ARTICLE 12 - CHANGE OF CONTRACT TIMES

12.01 GENERAL:

- A. The Contract Times may only be changed by a Change Order or a Written Amendment. Contractor, in undertaking to complete the Work within the Contract Times, shall take into consideration and make allowances for all of the ordinary delays and hindrances incident to such Work, whether growing out of delays in securing equipment or materials or workmen or otherwise.
- B. Adjustments to the Contract Times will be made for delays in completion of the Work from causes beyond Contractor's control, including the following:
1. Federal embargoes, priority orders, or other restrictions imposed by the United States Government.
 2. Unusual delay in fabrication or shipment of Equipment or Materials required in the Work, whether ordered by Contractor or furnished by Owner or others under separate contract.
 3. Strikes and other labor disputes.
 4. Delays caused by court proceedings.
 5. Change Orders.
 6. Neglect, delay, or default of any other contractor employed by Owner.
 7. Unusual construction delays resulting from weather conditions abnormal to the geographical area and to the season of the year such as above normal continuous days of precipitation, above normal amount of precipitation within a 24 hour period, or above normal days of extreme cold or hot temperature conditions affecting installation / application due to manufacturers or specifications limitations. These conditions will not be cause for extensions of time if abnormal weather conditions do not affect the stage of construction. All claims for extension of time due to abnormal weather conditions must be substantiated with evidence from a weather bureau or other authoritative source. Weather conditions normal to the geographical area and to the season of the year shall be taken into consideration in the Bid. Normal conditions shall be defined as the average number of days, amounts, or both over a 5-year period averaged per season.
 8. Conflicts, errors or discrepancies in the Contract Documents reported to Engineer as provided in these General Conditions.
 9. Any failure or delay by Contractor in supplying equipment, materials, work, or services that are Year 2000 compliant or failure or delay by Contractor's Subcontractors or Suppliers in providing equipment, materials, work, or services as a result of Subcontractors' or Suppliers'

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

lack of Year 2000 compliance in their own operations, systems, or processes used to provide or deliver equipment, material, work, or services shall not be considered to be caused by events beyond Contractor's control. Such Year 2000 compliance problems shall not constitute a basis for delay in completion of the Work, adjustment to the Contract Times, or an excuse for Contract nonperformance.

- C. Owner shall award extensions of the Contract Times on account of such causes of delay, provided that adequate evidence is presented to enable Engineer to determine with exactness the extent and duration of delay for each item involved.
- D. No extension to the Contract Times will be granted for delays involving only portions of the Work, or which do not directly affect the time required for completion of the entire Work.
- E. Any claim for an extension to the Contract Times shall be delivered in writing to Owner and Engineer within ten days of the occurrence of the event giving rise to the claim. All claims for adjustment to the Contract Times will be determined by Engineer if Owner and Contractor cannot otherwise agree. Any change to the Contract Times resulting from any such claim will be incorporated in a Change Order or a Written Amendment.
- F. All time limits stated in the Contract Documents are of the essence of the Agreement. The provisions of this Article 12 shall not exclude recovery for damages (including but not limited to fees and charges of engineers, architects, attorneys and other professionals, and court and arbitration costs) for delay by either party.

ARTICLE 13 - WARRANTY AND GUARANTEE; TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

13.01 WARRANTY AND GUARANTEE:

- A. Contractor warrants and guarantees to Owner and Engineer that all Work will be in accordance with the Contract Documents and will not be defective. Prompt notice of all defects shall be given to Contractor. All defective Work, whether or not in place, may be rejected, corrected or accepted as provided in this Article 13.
- B. No provision in the Contract Documents nor any specified guarantee time limit shall be held to limit Contractor's liability for defects to less than the legal limit of liability in accordance with the Law.
- C. All Equipment and Materials furnished by Contractor for the Work shall carry a written guarantee from the manufacturer or Supplier of such items when called for in the Specifications. Written guarantees shall be submitted to Engineer with other Submittals. Engineer will transmit such guarantees to Owner for review.

13.02 ACCESS TO THE WORK:

- A. Engineer and Engineer's representatives, other representatives of Owner, testing agencies, and governmental agencies with jurisdictional interests will have access to the Work at reasonable times for their observation, inspecting,

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

and testing. Contractor shall provide proper and safe conditions for such access.

13.03 TESTS AND INSPECTIONS:

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
 - 1. for inspections, tests, or approvals covered by Paragraphs 13.03C and 13.03D below;
 - 2. that costs incurred in connections with tests or inspections conducted pursuant to Paragraph 13.05B shall be paid as provided in said Paragraph 13.05B; and
 - 3. as otherwise specifically provided in the Contract Documents.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) to specifically be inspected, tested, or approved, Contractor shall assume full responsibility therefor, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection, testing, or approval.
- D. Contractor shall also be responsible for and shall pay all costs in connection with any inspection or testing required in connection with Owner's or Engineer's acceptance of a Supplier of Materials or Equipment proposed to be incorporated in the Work, or of Materials or Equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.
- E. All inspections, tests, or approvals other than those required by Laws or Regulations of any public body having jurisdiction shall be performed by organizations acceptable to Owner and Contractor (or by Engineer if so specified).
- F. If any Work (including the work of others) that is to be inspected, tested, or approved is covered without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for observation. Such uncovering shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.
- G. Neither observations by Engineer nor inspections, tests, or approvals by others shall relieve Contractor from Contractor's obligations to perform the Work in accordance with the Contract Documents.

13.04 DEFECTIVE WORK:

- A. The term "defective" is used in these documents to describe Work that is unsatisfactory, faulty, not in conformance with the requirements of the Contract Documents, or not meeting the requirements of any inspection, test, approval, or acceptance required by Law or the Contract Documents.

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- B. Any defective Work may be disapproved or rejected by Engineer at any time before final acceptance even though it may have been overlooked and included in a previous Application for Payment.
- C. Prompt notice will be given by Engineer to Contractor of defects as they become evident.

13.05 UNCOVERING WORK:

- A. If any Work is covered contrary to the written request of Engineer, it shall, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.
- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment. If it is found that such Work is defective, Contractor shall bear all direct, indirect, and consequential costs of such uncovering, exposure, observation, inspection, and testing and of satisfactory reconstruction, (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals); and Owner shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, may make a claim therefor as provided in Article 11. If, however, such Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, and reconstruction; and, if the parties are unable to agree as to the amount or extent thereof, Contractor may make a claim therefor as provided in Articles 11 and 12.

13.06 OWNER MAY STOP THE WORK:

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor or any other party.

13.07 CORRECTION OR REMOVAL OF DEFECTIVE WORK:

- A. If required by Engineer, Contractor shall promptly, as directed, either correct all defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by Engineer, remove it from the Site and replace it with nondefective Work. Contractor shall bear all direct, indirect, and consequential costs of such correction or removal (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals) made necessary thereby.

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

13.08 TWO-YEAR WARRANTY AND CORRECTION PERIOD:

- A. Before final acceptance of the project, the contractor shall provide a maintenance bond in accordance with section 158.03 of the City of Fayetteville Unified Development Code. The bond shall be in the amount of 25% of the total contract price for a period of two years from the date of Substantial Completion. If within two years after the Date of Substantial Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions, either correct such defective Work, or, if it has been rejected by Owner, remove it from the Site and replace it with nondefective Work. If Contractor does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or the rejected Work removed and replaced, and all direct, indirect, and consequential costs of such removal and replacement (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals) will be paid by Contractor. In special circumstances where a particular item of Equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Written Amendment.

13.09 ACCEPTANCE OF DEFECTIVE WORK:

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner and, prior to Engineer's recommendation of final payment, also Engineer prefers to accept it, Owner may do so. Contractor shall bear all direct, indirect, and consequential costs attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness and to include but not be limited to fees and charges of engineers, architects, attorneys, and other professionals). If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, Owner may make a claim therefor as provided in Article 11. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.10 OWNER MAY CORRECT DEFECTIVE WORK:

- A. If Contractor fails within a reasonable time after written notice of Engineer to proceed to correct and to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.07, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days' written notice to

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

Contractor, correct and remedy any such deficiency. In exercising the rights and remedies under this Paragraph, Owner shall proceed expeditiously.

- B. To the extent necessary to complete corrective and remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work, and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment, and machinery at the Site and incorporate in the Work all Equipment and Materials stored at the Site or for which Owner has paid Contractor but which are stored elsewhere.
- C. Contractor shall allow Owner, Owner's representatives, agents, and employees such access to the Site as may be necessary to enable Owner to exercise the rights and remedies under this Paragraph.
- D. All direct, indirect, and consequential costs of Owner in exercising such rights and remedies will be charged against Contractor in an amount approved as to reasonableness by Engineer,, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, Owner may make a claim therefor as provided in Article 11. Such direct, indirect, and consequential costs will include but not be limited to fees and charges of engineers, architects, attorneys and other professionals, all court and arbitration costs, and all costs of repair and replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- E. Contractor shall not be allowed an extension of the Contract Times because of any delay in performance of the Work attributable to the exercise by Owner of Owner's rights and remedies hereunder.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 SCHEDULE OF VALUES:

- A. The schedule of values established will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 APPLICATION FOR PROGRESS PAYMENT:

- A. Not later than the 15th day of each month, or on the next business day thereafter, (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.
- B. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

Contractor's legitimate obligations associated with prior Applications for Payment.

- C. If payment is requested on the basis of Equipment and Materials not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the Equipment and Materials free and clear of all liens, charges, security interests, and encumbrances (which are hereinafter in these General Conditions referred to as "Liens") and evidence that the Equipment and Materials are covered by appropriate property insurance and other arrangements to protect Owner's interest therein, all of which will be satisfactory to Owner.
- D. The amount of retainage with respect to progress payments will be as stipulated in Paragraph 14.04G.

14.03 **CONTRACTOR'S WARRANTY OF TITLE:**

- A. Contractor warrants and guarantees that title to all Work, Materials, and Equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 **REVIEW OF APPLICATION FOR PROGRESS PAYMENT:**

- A. Engineer will, within seven days after receipt of each Application For Payment, either indicate in writing a recommendation of payment and present the Application to Owner (subject to the provisions of the last sentence of Paragraph 14.04D), or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application. After the required internal reviews and processing by the Owner, the Owner will diligently proceed to make payment to the Contractor, in accordance with the approved payment request, within 30 days. All efforts will be made to make payments within the 30 day period, but the Owner cannot guarantee the 30 days maximum time.
- B. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's on-Site observations of the Work in progress as experienced and qualified design professionals and on Engineer's review of the Application for Payment and the accompanying data and schedules that the Work has progressed to the point indicated; that, to the best of Engineer's knowledge, information, and belief, the quality of the Work is in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.08, and to any other qualifications stated in the recommendation); and that Contractor is entitled to payment of the amount recommended. However, by recommending any such payment, Engineer will not thereby be deemed to have represented that exhaustive or continuous on-Site inspections have been made to check the

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

quality or the quantity of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents, or that there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or Owner to withhold payment to Contractor.

- C. Engineer's recommendation of final payment will constitute an additional representation by Engineer to Owner that the conditions precedent to Contractor's being entitled to final payment as set forth in Paragraph 14.09 have been fulfilled.
- D. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make such representations to Owner. Engineer may also refuse to recommend any such payment, or, because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any such payment previously recommended, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:
 - 1. The Work is defective, or completed Work has been damaged requiring correction or replacement.
 - 2. Written claims have been made against Owner or Liens have been filed in connection with the Work.
 - 3. The Contract Price has been reduced by Written Amendment or Change Order
 - 4. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.10,
 - 5. Of Engineer's 'actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02B.
 - 6. Of Contractor's unsatisfactory prosecution of the Work in accordance with the Contract Documents.
 - 7. Contractor's failure to make payment to Subcontractors, or for labor, Materials, or Equipment, or
 - 8. Engineer shall not certify payments requesting more than eighty (80) percent of the Contract amount until such time as all operation, maintenance, repair, and replacement manuals, and product data has been furnished by the Contractor to the Owner.
- E. Owner may refuse to make payment of the full amount recommended by Engineer because claims have been made against Owner on account of Contractor's performance of furnishing of the Work, or Liens have been filed in connection with the Work, or there are other items entitling Owner to a set-off against the amount recommended, but Owner must give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action.
- F. When all grounds for withholding payment are removed, payment will be made in the amounts withheld because of them.
- G. Progress payments will be in the amount of 95% of the amount of the Work completed and 100% of Equipment and Materials suitably stored and documented as indicated on the Application for Payment less the sum of all previous payments. The owner may forego withholding retainage of the progress payments if the construction contract is fifty-percent (50%) complete and the contractor has provided the work in a satisfactory manner.

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

14.05 SUBSTANTIAL COMPLETION:

- A. When Contractor considers the entire Work ready for its intended use, Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.
- B. Within a reasonable time thereafter, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving his reasons therefor. If Engineer considers the Work substantially complete, Engineer will prepare and deliver to Owner a tentative certificate of Substantial Completion which will fix the Date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment.
- C. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will within fourteen days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will within said fourteen days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, maintenance, heat, utilities, insurance, and warranties.
- E. Unless Owner and Contractor agree otherwise in writing and so inform Engineer prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.
- F. Owner shall have the right to exclude Contractor from the Work after the Date of Substantial Completion, but Owner shall allow Contractor reasonable access to complete or correct items on the tentative list.

14.06 PARTIAL UTILIZATION:

- A. Use by Owner of any finished part of the Work, which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and useable part of the Work that can be used by Owner without significant interference with

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

Contractor's performance of the remainder of the Work, may be accomplished prior to Substantial Completion of all the Work subject to the following:

1. Owner at any time may request Contractor in writing to permit Owner to use any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If Contractor agrees, Contractor will certify to Owner and Engineer that said part of the Work is substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.05 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
2. Owner may at any time request Contractor in writing to permit Owner to take over operation of any such part of the Work although it is not substantially complete. A copy of such request will be sent to Engineer and within a reasonable time thereafter, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion and will prepare a list of the items remaining to be completed or corrected thereon before final payment. If Contractor does not object in writing to Owner and Engineer that such part of the Work is not ready for separate operation by Owner, Engineer will finalize the list of items to be completed or corrected and will deliver such list to Owner and Contractor together with a written recommendation as to the division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, maintenance, utilities, insurance, warranties, and guarantees for that part of the Work, which will become binding upon Owner and Contractor at the time when Owner takes over such operation (unless they shall have otherwise agreed in writing and so informed Engineer). During such operation and prior to Substantial Completion of such part of the Work, Owner shall allow Contractor reasonable access to complete or correct items on said list and to complete other related Work.
3. No occupancy or separate operation of part of the Work will be accomplished prior to compliance with the requirements of Paragraph 5.021 in respect of property insurance.

14.07 FINAL INSPECTION:

- A. Upon written notice from Contractor that the Work or an agreed portion thereof is complete, Engineer will make a final inspection with Owner, Engineer, and

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to remedy such deficiencies.

14.08 FINAL APPLICATION FOR PAYMENT:

- A. After Contractor has completed all such corrections to the satisfaction of Engineer and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, marked-up record documents, and other documents - all as required by the Contract Documents, and after Engineer has indicated that the Work is acceptable (subject to the provisions of Paragraph 14.11), Contractor may make application for final payment following the procedure for progress payments.
- B. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents, together with complete and legally effective releases or waivers (satisfactory to Owner) of all Liens arising out of or filed in connection with the Work. In lieu thereof and as approved by Owner, Contractor may furnish receipts or releases in full; an affidavit of Contractor that the releases and receipts include all labor, services, Material, and Equipment for which a Lien could be filed, and that all payrolls, Equipment and Material bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible, have been paid or otherwise satisfied; and consent of the surety, if any, to final payment. If any Subcontractor or Supplier fails to furnish a release or receipt in full, Contractor may furnish a Bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

14.09 FINAL PAYMENT AND ACCEPTANCE:

- A. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation -- all as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within fourteen days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application to Owner for payment. Thereupon, Engineer will give written notice to Owner and Contractor that the Work is acceptable (subject to the provisions of Paragraph 14.11). Otherwise, Engineer will return the Application to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application. Thirty days after presentation to Owner of the Application and accompanying documentation, in appropriate form and substance, and with Engineer's recommendation and notice of acceptability, the amount recommended by Engineer will become due and will be paid by Owner to Contractor.
- B. If, through no fault of Contractor, final completion of the Work is significantly delayed and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment and recommendation of Engineer, and without

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. The written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

- C. The Final Pay Estimate will include all sums remaining to be paid.

14.10 CONTRACTOR'S CONTINUING OBLIGATION:

- A. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. Neither recommendation of any progress or final payment by Engineer, nor the issuance of a certificate of Substantial Completion, nor any payment by Owner to Contractor under the Contract Documents, nor any use or occupancy of the Work or any part thereof by Owner, nor any act of acceptance by Owner nor any failure to do so, nor any review and approval of a Submittal, nor the issuance of a notice of acceptability by Engineer pursuant to Paragraph 14.09, nor any correction of defective Work by Owner will constitute an acceptance of Work not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents (except as provided in Paragraph 14.11).

14.11 WAIVER OF CLAIMS: The making and acceptance of final payment will constitute:

- A. A waiver of all claims by Owner against Contractor, except claims arising from unsettled Liens, from defective work appearing after final inspection pursuant to Paragraph 14.07, or from failure to comply with the Contract Documents or the terms of any special guarantees specified therein; however, it will not constitute a waiver by Owner of any rights in respect of Contractor's continuing obligations under the Contract Documents; and
- B. A waiver of all claims by Contractor against Owner other than those previously made in writing and still unsettled.

14.12 INTEREST: NOT APPLICABLE.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 OWNER MAY SUSPEND WORK:

- A. Owner may, at any time and without cause, suspend the Work or any portion thereof for a period of not more than 90 days by notice in writing to Contractor, and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to any suspension if Contractor makes an approved claim therefor as provided in Articles 11 and 12.

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

15.02 OWNER MAY TERMINATE:

- A. Upon the occurrence of any one or more of the following events:
1. If Contractor commences a voluntary case under any chapter of the Bankruptcy Code (Title 11, United States Code), as now or hereafter in effect, or if Contractor takes any equivalent or similar action by filing a petition or otherwise under any other federal or state Law in effect at such time relating to the bankruptcy or insolvency;
 2. If a petition is filed against Contractor under any chapter of the bankruptcy Code as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against Contractor under any other federal or state Law in effect at the time relating to bankruptcy or insolvency;
 3. If Contractor makes a general assignment for the benefit of creditors;
 4. If a trustee, receiver, custodian, or agent of Contractor is appointed under applicable Law or under contract, whose appointment or authority to take charge of property of Contractor is for the purpose of enforcing a Lien against such property or for the purpose of general administration of such property for the benefit of Contractor's creditors;
 5. If Contractor admits in writing an inability to pay its debts generally as they become due;
 6. If Contractor persistently fails to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable Equipment or Materials or failure to adhere to the progress schedule established under Paragraph 2.07 as revised from time to time);
 7. If Contractor disregards Laws or Regulations of any public body having jurisdiction;
 8. If Contractor disregards the authority of Engineer; or
 9. If Contractor otherwise violates in any substantial way any provisions of the Contract Documents;
- B. Owner may, after giving Contractor (and the surety, if there be one) ten days' written notice and to the extent permitted by Laws and Regulations, terminate the services of Contractor, exclude Contractor from the Site and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion), incorporate in the Work all Equipment and Materials stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and finish the Work as Owner may deem expedient. In such case, Contractor shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct, indirect, and consequential costs of completing the Work (including but not limited to fees and charges of engineers, architects, attorneys and other professionals, and court and arbitration costs), such excess will be paid to Contractor. If such costs exceed such unpaid balance, Contractor shall pay the difference to Owner. Such costs incurred by Owner will be approved as to reasonableness by Engineer and incorporated in a Change Order, but when exercising any

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

rights or remedies under this Paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- C. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due to Contractor by Owner will not release Contractor from liability.
- D. Upon ten days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy, elect to abandon the Work and terminate the Agreement. In such case, Contractor shall be paid for all Work executed and any expense sustained plus reasonable termination expenses, which will include, but not be limited to, direct, indirect, and consequential costs (including, but not limited to, fees and charges of engineers, architects, attorneys and other professionals, and court and arbitration costs).

15.03 CONTRACTOR MAY STOP WORK OR TERMINATE:

- A. If, through no act or fault of Contractor, the Work is suspended for a period of more than 90 days by Owner or under an order of court or other public authority, or Engineer fails to act on any Application for Payment within 30 days after it is submitted, or Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon ten days' written notice to Owner and Engineer, terminate the Agreement and recover from Owner payment for all Work executed and any expense sustained plus reasonable termination expenses. In addition and in lieu of terminating the Agreement, if Engineer has failed to act on an Application for Payment or Owner has failed to make any payment as aforesaid, Contractor may upon ten days' written notice to Owner and Engineer stop the Work until payment of all amounts then due. The provisions of this Paragraph shall not relieve Contractor of the obligations under Paragraph 6.15 to carry on the Work in accordance with the progress schedule and without delay during disputes and disagreements with Owner.

ARTICLE 16 - RESOLUTION OF DISPUTES

16.01 RESOLUTION OF CLAIMS AND DISPUTES

- A. Contractor's claims against Owner will be reviewed by Engineer, who shall take one or more of the following actions within ten (10) days after receipt of a claim:
 - 1. Request additional supporting data from the claimant;
 - 2. Submit a schedule to Contractor indicating reasonable time within which Engineer expects to take action;
 - 3. Reject the Claim in whole or in part, stating reasons for rejection;
 - 4. Recommend approval of the claim; or
 - 5. Suggest a compromise.

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

- B. Owner's claims against Contractor will be reviewed by Contractor who shall take one or more of the following actions within ten (10) days after receipt of the Claim:
 - 1. Request additional supporting data from Engineer;
 - 2. Submit a schedule to the Engineer indicating a reasonable time within which Contractor expects to take action;
 - 3. Deny the claim in whole or in part, stating reasons for denial;
 - 4. Recommend approval of the claim; or
 - 5. Suggest a compromise.
- C. If a claim has been resolved, the Owner will prepare or obtain appropriate documentation.
- D. If a claim has been denied or if no action has been taken in the manner provided in Paragraphs 16.01A or 16.01B, then the claimant, within ten (10) days thereafter, may notify the Owner, the other party, and Contractor's surety that Engineer and Contractor have been unable to resolve the claim. In that event, the Owner, pursuant to Paragraph 16.01E shall review the claim and make a decision on the claim.
- E. If a claim is presented to the Owner, then the Owner shall review the claim and make a decision within fourteen (14) days.
- F. Disputes that cannot be settled through negotiation or the procedures in Paragraphs 16.01A through 16.01E above, shall be settled as mutually agreed or in a court of competent jurisdiction within the State of Arkansas.
- G. Arbitration shall not be used in the settlement of disputes.

ARTICLE 17 - MISCELLANEOUS

17.01 GIVING NOTICE:

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 COMPUTATION OF TIME:

- A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the Law of the applicable jurisdiction, such day will be omitted from the computation.
- B. A calendar day of 24 hours measured from midnight to the next midnight shall constitute a day.

17.03 CLAIMS, CUMULATIVE REMEDIES:

- A. Should Owner or Contractor suffer injury or damage to person or property because of any error, omission, or act of the other party or of any of the other party's employees or agents or others for whose acts the other party is legally liable, claim will be made in writing to the other party within a reasonable time

DOCUMENT 00700 – GENERAL CONDITIONS (continued)

of the first observance of such injury or damage. The provisions of this Paragraph shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or repose.

- B. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon Contractor by Paragraphs 6.16A, 13.01, 13.08, 13.10, 14.03, and 15.02A and all of the rights and remedies available to Owner and Engineer thereunder, are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents, and the provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply. All representations, warranties, and guarantees made in the Contract Documents will survive final payment and termination or completion of the Agreement.

17.04 FREEDOM OF INFORMATION ACT:

- A. City contracts and documents prepared while performing City contractual work are subject to the Arkansas Freedom of Information Act. If a Freedom of Information Act request is presented to the City of Fayetteville, the contractor shall do everything possible to provide the documents in a prompt and timely manner as prescribed in the Arkansas Freedom of Information Act (A.C.A. §25-19-101 et. seq.) Only legally authorized photocopying costs pursuant to the FOIA may be assessed for this compliance.

END OF DOCUMENT 00700

DOCUMENT 00800 – SUPPLEMENTARY CONDITIONS

ARTICLE 1 - LABOR RELATED REGULATIONS

1.01 SUPERSESSION

- A. These Supplementary Conditions supersede any conflicting provisions of the Contract Documents.

1.02 TRENCH AND EXCAVATION SAFETY

- A. Compliance with the provisions of 29 CFR Subpart P, OSHA Standard for Excavation and Trenches Safety System is required during prosecution of the project.
- B. A copy of Subpart P is included in Section 01620.

1.03 SUBMIT WITH PROGRESS PAYMENT

- A. The following items shall be submitted along with applications for progress payment:
 - 1. Current progress schedule.
 - 2. Summary of requests for extensions to the Contract Times during payment period.
 - 3. Construction photographs according to Section 01325.
 - 4. Stormwater Pollution Prevention Plan Inspection and Maintenance Report Forms completed during payment period.

1.04 CONTRACT TIMES

- A. No extension to the Contract Times will be allowed for delays on Saturday, Sunday, or any legal holiday without prior approval to work on the day.
- B. Time will be assessed for each day on which, in the judgement of the Engineer, conditions allow the Contractor to effectively utilize 60% of normal forces and equipment to prosecute the work required at that time, for at least 60% of the Contractor's normal work hours, regardless of whether the Contractor actually works.

END OF DOCUMENT 00800

DOCUMENT 00830 – GOALS FOR WOMEN AND MINORITIES IN CONSTRUCTION

General Compliance, 2 C.F.R. § 200.321 and 41 C.F.R. § 60-4

The Contractor agrees to comply with the requirements of the U.S. Economic Development Administration's Program for Small Businesses, Minority Business Enterprises and Women's Business Enterprises in procurement under assistance agreements, contained in 2 CFR § 200.321 and 41 CFR § 60-4.

Affirmative Steps

The Contractor and the City of Fayetteville agree to take the following affirmative steps whenever procuring construction, equipment, services and supplies under an EDA financial assistance agreement, **and** to require that subcontractors also comply. Records documenting compliance with the affirmative steps must be retained:

1. Placing qualified small and minority businesses and women's business enterprises on solicitation lists.
2. Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources.
3. Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises.
4. Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises.
5. Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.
6. Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in 1 through 5 above.

The Contractor accepts the applicable MBE/WBE fair share objectives/goals required by the EDA as follows:

Minority Business Enterprise:	3.3 percent
Woman Business Enterprise:	6.9 percent

Lists of MBE/WBE firms are available from:

- A. Arkansas Highway and Transportation Department, Programs and Contracts Division; Little Rock, AR; Phone (501) 569-2259; <https://www.ardot.gov/divisions/equal-employment-opportunity-disadvantaged-business-enterprise/dbel/>
- B. Arkansas Economic Development Commission, Small and Minority Business Team; Little Rock, AR; Phone (501) 682-6105; <http://www.arkansasedc.com>
- C. Arkansas Small Business Administration, Business Opportunity Section; Little Rock, AR; Phone (501) 324-7379; <https://www.sba.gov/offices/district/ar/little-rock>

The City of Fayetteville affords no preference based upon the geographical area in which a MBE/WBE firm is located.

Additional Contract Administration Requirements

1. The City of Fayetteville requires its prime contractor to pay its subcontractor for

- satisfactory performance no more than 30 days from the prime contractor's receipt of payment from the City of Fayetteville.
2. The City of Fayetteville must be notified in writing by its prime contractor prior to any termination of a MBE/WBE subcontractor for convenience by the prime contractor.
 3. If a MBE/WBE subcontractor fails to complete work under the subcontract for any reason, the City of Fayetteville requires the prime contractor to employ the affirmative steps described above if soliciting a replacement subcontractor.
 4. The City of Fayetteville requires its prime contractor to employ the affirmative steps described above even if the prime contractor has achieved its fair share objectives.
 5. The City of Fayetteville must ensure that each procurement contract it awards contains the term and condition specified in the appendix concerning compliance with the requirements of this part.

Recordkeeping Requirements

1. All prime contractors must maintain all records documenting their compliance with the requirements of this part, including documentation of its affirmative steps and data relied upon in formulating its fair share objectives. Such records must be retained in accordance with applicable record retention requirements for the City of Fayetteville's financial assistance agreement.
2. The City of Fayetteville must create and maintain a bidders list. The purpose of a bidders list is to provide the City of Fayetteville and entities receiving identified loans who conduct competitive bidding with as accurate a database as possible about the universe of MBE/WBE and non-MBE/WBE prime and subcontractors. The list must include all firms that bid or quote on prime contracts, or bid or quote subcontracts on EDA assisted projects, including both MBE/WBEs and non-MBE/WBEs. The bidders list must only be kept until the grant project period has expired and the City of Fayetteville is no longer receiving EDA funding under the grant. For entities receiving identified loans, the bidders list must only be kept until the project period for the identified loan has ended. The following information must be obtained from all prime and subcontractors:
 - (a) Entity's name with point of contact;
 - (b) Entity's mailing address, telephone number, and e-mail address;
 - (c) The procurement on which the entity bid or quoted, and when; and
 - (d) Entity's status as an MBE/WBE or non-MBE/WBE.

Contract Assurance

The Contractor will ensure that the following clause is placed in every EDA-assisted contract and subcontract:

"The contractor, sub-recipient, or subcontractor shall not discriminate on the basis of race, color, national origin or sex in the performance of this contract. The contractor shall carry out applicable requirements of 2 CFR § 200.321 and 41 CFR § 60-4 in the award and administration of contracts awarded under EDA financial assistance agreements. Failure by the contractor to carry out these requirements is a material breach of this contract which may result in the termination of this contract or other legally available remedies."

END OF DOCUMENT 00830

**NOTICE OF REQUIREMENTS FOR AFFIRMATIVE ACTION
TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY
(EXECUTIVE ORDER 11246 AND 41 CFR PART 60-4)**

The following Notice shall be included in, and shall be a part of all solicitations for offers and bids on all Federal and federally assisted construction contracts or subcontracts in excess of \$10,000.

The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Timetables	Goals for minority participation for each trade	Goals for female participation for each trade
	3.3 %	6.9%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is:

State of	<u>Arkansas</u>
County of	<u>Washington</u>
City of	<u>Fayetteville</u>

DIVISION 01 GENERAL REQUIREMENTS

DIVISION 1 – GENERAL REQUIREMENTS

SECTION 01110 – SUMMARY OF WORK

PART 1 - GENERAL

1.01 SUMMARY:

- A. This Section summarizes the Work covered in detail in the complete Contract Documents.
- B. Owner: The City of Fayetteville, Arkansas, 113 West Mountain Street, Fayetteville, AR 72701 is contracting for Work described in the Contract Documents.
 - 1. Contract Identification: **INDUSTRIAL DRIVE EXTENSION**
 - 2. Location: Fayetteville, Arkansas.
- C. Engineer: The Contract Documents were prepared by McClelland Consulting Engineers, Inc.

1.02 PROJECT DESCRIPTION:

THE WORK UNDER THIS CONTRACT INCLUDES, BUT IS NOT LIMITED TO The construction of approximately 2,800 linear feet of two-lane roadway from S Industrial Drive to S City Lake Road, Demolition, removal and reconstruction of an existing concrete cul-de-sac to serve as a parking area, and associated earthwork, curb and gutter, sidewalk drainage and miscellaneous related items.

1.03 WORK BY OTHERS:

- A. Work Under Other Contracts: None.
- B. Work by Owner: None.
- C. Other Activities: None

1.04 CONTRACTOR'S USE OF PREMISES:

- A. Exclusive Use: During the construction period, Contractor shall have full use of the premises for execution of the Work. Use of premises is limited only by Owner's right to perform duties and functions as stated in the GENERAL CONDITIONS and in this Section.

1.05 OWNER'S USE OF PREMISES:

- A. Partial Owner Occupancy: The Owner reserves the right to occupy completed areas of the contract, prior to Substantial Completion provided that such occupancy does not interfere with completion of the Work. Such partial occupancy shall not constitute acceptance of the total Work.

SECTION 01110 – SUMMARY OF WORK (continued)

1.06 WORK SEQUENCE:

- A. General: Construction sequence shall be determined by Contractor subject to Owner's need for continuous operation of existing facilities, and subject to the requirements as indicated or specified.
- B. Continuous Service of Existing Facilities: Exercise caution and schedule operations to ensure that functioning of present facilities will not be disrupted. Shutdown of Owner's operating facilities to perform the Work shall be held to a minimum length of time and shall be coordinated with Owner who shall have control over the timing and schedules of such shutdowns.

1.07 PREORDERED EQUIPMENT AND MATERIALS:

None.

1.08 MEASUREMENT AND PAYMENT:

- A. Unit Price Contracts: All Work indicated on the Contract Drawings and specified in the Contract Documents shall be included in the "Unit Price Schedule" in the Agreement. A Unit Price is an amount proposed by Contractor and stated in the Agreement as a price per unit of measurement for materials or services.
- B. Specific Items: Measurement and payment of specific items shall be as specified in each applicable Section of the TECHNICAL SPECIFICATIONS.

1.09 COPIES OF DOCUMENTS:

- A. Furnished Copies: After execution of Agreement, Contractor will be furnished at no cost, a maximum of three (3) sets of Contract Documents consisting of full-size Contract Drawings including revised Drawings and the Project Manual, in addition to those used in execution of the Agreement.
- B. Additional Copies: Additional copies of above documents will be supplied by Engineer upon request of Contractor and approval of Owner.

1.10 LIST OF DRAWINGS (AND SCHEDULES):

- A. Contract Drawings:
 - 1. Each sheet of the Contract Drawings bears the following general title:
INDUSTRIAL DRIVE EXTENSION
 - 2. Individual sheet numbers and titles are as stated on SHEET INDEX.
- B. Reference Drawings:
 - 1. Reference Drawings included with the set of Contract Drawings are as stated on SHEET INDEX.

1.11 SCHEDULE OF OWNER-SUPPLIED EQUIPMENT AND MATERIALS:

None

SECTION 01110 – SUMMARY OF WORK (continued)

PART 2 - PRODUCTS – NOT APPLICABLE.

PART 3 - EXECUTION – NOT APPLICABLE.

SECTION 01110 – SUMMARY OF WORK (continued)

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END OF SECTION 01110

SECTION 01250 – CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Minor changes in the Work.
 - 2. Proposal request.
 - 3. Work Change Directive.
- B. Related Sections:
 - 1. DOCUMENT 00700 – GENERAL CONDITIONS.
 - 2. Supplementary Conditions.

1.02 MINOR CHANGES IN THE WORK

- A. Engineer will advise Contractor of minor changes in Work not involving an adjustment to Contract Price or Contract Times as authorized by the DOCUMENT 00700 – GENERAL CONDITIONS, Subparagraph 9.05 by issuing Field Orders.

1.03 PROPOSAL REQUEST

- A. Owner-Initiated Proposal Requests:
 - 1. ENGINEER may issue a Proposal Request, including detailed descriptions of proposed changes in the Work that may require adjustment to the Contract Price or the Contract Time.
 - a. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - b. Proposal Requests issued by ENGINEER are for information only. Do not consider them instructions either to stop Work in progress or to execute the proposed change.
 - 2. CONTRACTOR shall submit cost proposal, including any request for an extension in Contract Times, within 14 days of receipt of Proposal Request.
 - 3. In order to facilitate checking of CONTRACTOR's proposals for extras or credits, all proposals, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of cost including labor, materials, and Subcontracts. Labor and materials shall be itemized in a manner acceptable to the Engineer. Where major cost items are Subcontracts, they shall be itemized also. Document each proposal for a change in cost or time with sufficient data to support computations, including the following:
 - a. Include list of quantities of Products, labor, and equipment required or eliminated and unit costs, with total amount of purchases and credits to be made.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Indicate amounts for insurance and bonds.
 - d. Indicate amounts for Contractor's overhead and profit.
 - e. Include justification for any change in Contract Time.

SECTION 01250 – CONTRACT MODIFICATION PROCEDURES (continued)

- f. Include credit for deletions from Contract, similarity documented.
- g. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship.
 - (1) Use available total float before requesting an extension of the Contract Time.
- 4. On Owner's approval of a proposal request, Engineer will issue Change Orders for signatures by Owner and Contractor as provided in the DOCUMENT 00700 – GENERAL CONDITIONS.
 - a. Upon execution of a Change Order, Contractor shall promptly revise Construction Progress Schedule and Schedule of Values accordingly.

1.04 WORK CHANGE DIRECTIVE

- A. Engineer may issue a Work Change Directive, signed by Owner and Engineer, including detailed descriptions of changes, and identifying method for determining any change in Contract Price or Contract Time, instructing Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 - 1. Contractor shall promptly execute the change.
 - 2. Work Change Directives shall be issued on Owner's standard form.
- B. Contractor shall maintain detailed records for changes in the Work performed on a time and material basis.
 - 1. Submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.
- C. Engineer will issue Change Order CONDITIONS.
- D. Upon execution of a Change Order, Contractor shall promptly revise Construction Progress Schedule and Schedule of Values for signatures by Owner and Contractor as provided in DOCUMENT 00700 – GENERAL accordingly.

PART 2 - PRODUCTS NOT USED

PART 3 – EXECUTION NOT USED

END OF SECTION 01250

Change Order

No. _____

Date of Issuance: _____ Effective Date: _____

Project: Bid # 22-27, Industrial Drive Extension	Owner: City of Fayetteville	Owner's Contract No.:
Contract:		Date of Contract:
Contractor:		Engineer's Project No.: 21-2106

The Contract Documents are modified as follows upon execution of this Change Order:

Description:

Attachments (list documents supporting change):

CHANGE IN CONTRACT PRICE:

Original Contract Price:

\$ _____

[Increase] [Decrease] from previously approved Change Orders No. _____ to No. _____

\$ _____

Contract Price prior to this Change Order:

\$ _____

[Increase] [Decrease] of this Change Order:

\$ _____

Contract Price incorporating this Change

\$ _____

CHANGE IN CONTRACT TIMES:

Original Contract Times: ☐ Working ☐ Calendar days

Substantial completion (days or date): _____

Ready for final payment (days or date): _____

[Increase] [Decrease] from previously approved Change Orders No. _____ to No. _____:

Substantial completion (days): _____

Ready for final payment (days): _____

Contract Times prior to this Change Order:

Substantial completion (days or date): _____

Ready for final payment (days or date): _____

[Increase] [Decrease] of this Change Order:

Substantial completion (days or date): _____

Ready for final payment (days or date): _____

Contract Times with all approved Change Orders:

Substantial completion (days or date): _____

Ready for final payment (days or date): _____

RECOMMENDED:

By: _____
Engineer (Authorized Signature)

Date: _____

ACCEPTED:

By: _____
Owner (Authorized Signature)

Date: _____

ACCEPTED:

By: _____
Contractor (Authorized Signature)

Date: _____

Change Order

Instructions

A. GENERAL INFORMATION

This document was developed to provide a uniform format for handling contract changes that affect Contract Price or Contract Times. Changes that have been initiated by a Work Change Directive must be incorporated into a subsequent Change Order if they affect Price or Times.

Changes that affect Contract Price or Contract Times should be promptly covered by a Change Order. The practice of accumulating Change Orders to reduce the administrative burden may lead to unnecessary disputes.

If Milestones have been listed in the Agreement, any effect of a Change Order thereon should be addressed.

For supplemental instructions and minor changes not involving a change in the Contract Price or Contract Times, a Field Order should be used.

B. COMPLETING THE CHANGE ORDER FORM

Engineer normally initiates the form, including a description of the changes involved and attachments based upon documents and proposals submitted by Contractor, or requests from Owner, or both.

Once Engineer has completed and signed the form, all copies should be sent to Owner or Contractor for approval, depending on whether the Change Order is a true order to the Contractor or the formalization of a negotiated agreement for a previously performed change. After approval by one contracting party, all copies should be sent to the other party for approval. Engineer should make distribution of executed copies after approval by both parties.

If a change only applies to price or to times, cross out the part of the tabulation that does not apply.

SECTION 01270 – UNIT PRICES

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Submission procedures.
 - 2. Changes of Contract Sum.
 - 3. Description of Unit Prices.
- B. Related Sections:
 - 1. DOCUMENT 00400– BID FORM.
 - 2. DOCUMENT 00500 –AGREEMENT.
 - 3. DOCUMENT 00700 – GENERAL CONDITIONS.

1.02 SUBMISSION PROCEDURES

- A. Insert on DOCUMENT 00400 – BID FORM, Unit Prices for Work or materials listed in this Section.
 - 1. Such Unit Prices shall apply for additions and deletions.

1.03 CHANGES TO CONTRACT SUM

- A. Unit Prices shall constitute full compensation or credit, as the case may be, for the complete provision, fabrication, and installation of each item listed in this Section based solely on Work in place, including all necessary labor, product, tools, equipment, transportation, services and incidentals, appurtenances, and connections required to complete the Work in place, and including insurance, overhead, profit and supervision.
- B. The Unit Prices are listed on DOCUMENT 00400 – BID FORM, and will apply to the net change on any given change to the scope of Work.
- C. Unit Prices accepted by the Owner and Contractor shall be identified in the Owner-Contractor Agreement.
- D. Contractor shall take measurements and compute quantities for which Unit Price items are applicable.
 - 1. Engineer will verify measurements and quantities.
 - a. Contractor shall assist Engineer by providing necessary equipment, workers, and survey personnel as the Engineer requires.
 - 2. Final payment for Work governed by Unit Prices will be made on the basis of the actual measurements and quantities accepted by the Engineer multiplied by the Unit Price for Work which is incorporated in or made necessary by the Work.
 - 3. Payment will not be made for any of the following:
 - a. Products wasted or disposed of in a manner unacceptable to Engineer.
 - b. Products which Engineer determines as unacceptable before or after installation.
 - c. Product not completely unloaded from the transporting vehicle.
 - d. Products installed beyond the lines and levels of the required Work.
 - e. Products not installed after completion of Work.

SECTION 01270 – UNIT PRICES (continued)

f. Loading, hauling, and disposing of rejected Products.

1.04 **DESCRIPTION OF UNIT PRICES**

Measurement and Payment of specific items shall be as specified in each applicable section of the TECHNICAL SPECIFICATIONS.

PART 2 – PRODUCTS

NOT USED

PART 3 – EXECUTION

NOT USED

END OF SECTION 01270

SECTION 01271 – MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. This section includes delineation of measurement and payment criteria applicable to unit price work related to water and sewer, whether the unit price items are part of a unit price contract or are part of a Stipulated Price contract.
- B. Defect assessment and non-payment for rejected work.

1.2 AUTHORITY

- A. Measurement methods are delineated for each individual bid item under this section.
- B. The Engineer will take all measurements and compute quantities accordingly.
- C. Contractor shall assist by providing necessary equipment, workers, and survey personnel as required.

1.3 UNIT QUANTITIES SPECIFIED

- A. Quantities and measurements indicated in the Bid Form are for bidding and contract purposes only. Quantities and measurements supplied or placed in the Work and verified by the Engineer shall determine payment.
- B. If the actual Work requires more or fewer quantities than those quantities indicated, provide the required quantities at the unit prices contracted.

1.4 MEASUREMENT OF QUANTITIES

- A. Measurement by Weight: Items measured by weight will use specified standard handbook weights unless otherwise specified in this section for an individual item.
- B. Measurement by Volume: Unless herein noted differently, volume shall be measured by cubic dimension using mean length, width and height or thickness with survey chain, steel tape, approved distance meter, or by use of Total Surveying Stations and Engineering Software, as approved by Engineer.
- C. Measurement by Area: Unless herein noted differently, area shall be measured by square dimension using mean length and width or radius, with survey chain, steel tape, approved distance meter, or by use of Total Surveying Stations and Engineering Software, as approved by Engineer.
- D. Linear Measurement: Unless herein noted differently, linear measurements shall be measured at the item centerline or mean chord, with survey chain, steel tape, approved distance meter, or by use of Total Surveying Stations and Engineering Software, as approved by Engineer.
- E. Stipulated Price Measurement: Items measured by weight, volume, area, or linear means or combination, as appropriate, as a completed item or unit of the Work.

1.5 PAYMENT

- A. Payment Includes: Except as modified herein, payment shall be full compensation for all required labor, products, tools, equipment, plant, transportation, services and incidentals; erection, application or installation of an item of the Work; overhead and profit.

SECTION 01271 – MEASUREMENT AND PAYMENT (continued)

- B. Final payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities accepted by the Engineer multiplied by the unit price for Work which is incorporated in or made necessary by the Work.

1.6 DEFECT ASSESSMENT

- A. Replace the Work, or portions of the Work, not conforming to specified requirements.
- B. If, in the opinion of the Engineer, it is not practical to remove and replace the Work, the Engineer will direct the following remedy:
 - 1. The defective Work will be repaired to the instructions of the Engineer, and the unit price will be adjusted to a new price at the discretion of the Engineer.
- C. The authority of the Engineer to assess the defect and identify payment adjustment is final.

1.7 NON-PAYMENT FOR REJECTED PRODUCTS

- A. Payment will not be made for any of the following:
 - 1. Products wasted or disposed of in a manner that is not acceptable.
 - 2. Products determined as unacceptable before or after placement.
 - 3. Products not completely unloaded from the transporting vehicle.
 - 4. Products placed beyond the lines, levels or boundaries of the required Work.
 - 5. Products remaining on hand after completion of the Work.
 - 6. Loading, hauling and disposing of rejected Products.
 - 7. Work performed beyond the specified limits unless authorized by the Engineer.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used

END OF SECTION 01271

SECTION 01290 – PAYMENT PROCEDURES

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Schedule of values.
 - 2. Applications for payment.
- B. Related Sections:
 - 1. DOCUMENT 00700 – GENERAL CONDITIONS.

1.02 APPLICATIONS FOR PAYMENT

- A. Format: Document 01290.01 supported by Document 01290.02 or other approved format.
 - 1. Owner will provide Contractor an electronic copy of Documents 01290.01 and 01290.02.
- B. Payment Period: As specified under DOCUMENT 00700 – GENERAL CONDITIONS Article 14.
- C. Preparation of Applications:
 - 1. Present required information in typewritten form.
 - 2. Execute application by signature of authorized officer of Contractor's firm.
 - 3. Indicate dollar value in each column of each line item for portion of Work completed through the last day of the application period, and for products properly stored in accordance with the Contract Documents through the last day of the previous application period.
 - 4. Round off dollar values to nearest dollar.
 - 5. Complete every entry on form.
 - 6. Indicate each authorized Change Order as separate items on continuation sheet.
 - a. List by appropriate Change Order Number.
 - b. Indicate dollar value breakdown of each Change Order by each applicable Project Manual Section.
- D. Submittal Procedure:
 - 1. Comply with DOCUMENT 00700 - GENERAL CONDITIONS Article 14.
 - 2. Submit 5 copies of each Application for Payment.
 - 3. Submit an updated Construction Progress Schedule with each Application for Payment.
 - 4. Submit waivers of mechanics liens from Contractor, Subcontractors, sub-subcontractors, and Material and Equipment Suppliers for amounts certified by Engineer for construction period covered by previous application for payment.
 - a. Submit on form acceptable to Owner.
 - 5. Substantiating data:
 - a. When Owner or Engineer requires substantiating information to support Contractor's application for payment, submit data justifying dollar amounts which are in question.

SECTION 01290 – PAYMENT PROCEDURES (continued)

- b. Provide 1 copy of data with cover letter for each copy of Application for Payment.
 - (1) Indicate application number and date.
 - (2) List each item in question by continuation sheet identification.
- 6. Submit application for final payment in accordance with DOCUMENT 00700 – GENERAL CONDITIONS Article 14.

PART 2 - PRODUCTS NOT USED

PART 3 - EXECUTION NOT USED

END OF SECTION 01290

APPLICATION FOR PAYMENT

PAY ESTIMATE # _____

City of Fayetteville

PROJECT NAME

Bid # 22-27, Construction - Industrial Drive Extension

Construction Period:

Date of Estimate:

NTP Issued:

Revised Substantial Completion:

Cal. Days 335

C/O Days

Total Days 335

#DIV/0! Contract Time Used
#DIV/0! Work Complete (% of Contract \$'s)

Submitted By:

The contractor certifies that (1) title to all Work, materials, and equipment incorporated in the work, or otherwise listed in or covered by this and all previous Pay Estimates will pass to the Owner at time of payment free and clear of all liens, claims, security interests and encumbrances (except such as are covered by Bond acceptable to Owner indemnifying Owner against any such lien, claim, security interest or encumbrance), and (2) all Work covered by this Pay Estimate is in accordance with the Contract Documents and is not defective.

Contractor:

Signature and Date

Approved By: City of Fayetteville (Engineering Division)

Signature and Date

Original Contract Amount:	
Approved Change Orders:	
Current Contract Amount:	\$ -

Total Work to Date:	\$ -
Initial Stored Materials:	\$ -
Less Materials Used:	\$ -
Subtotal:	\$ -

Amount Due:	\$ -
-------------	------

Retainage Previous Periods	
Retainage This Period	\$ -
Less Total Retainage (5%)	\$ -

Previous Payments	
Less Total Previous Payments	\$ -

Due and Payable This Period:	\$ -
------------------------------	------



CERTIFICATE OF SUBSTANTIAL COMPLETION

Contract Number: Bid # 22-27, Construction
Contract Title: INDUSTRIAL DRIVE EXTENSION

CONTRACTOR: _____

DATE OF ISSUANCE: _____

PROJECT OR DESIGNATED PORTION SHALL INCLUDE:

The Work performed under this Contract has been reviewed and found, to the Engineer's best knowledge, information and belief, to be substantially complete. Substantial Completion is the state in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the Work for its intended use. The date of Substantial Completion of Project or portion thereof designated above is hereby established as _____ which is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below:

A list of items to be completed or corrected is attached hereto. The failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

ENGINEER _____ BY _____ DATE _____

The Contractor will complete or correct the Work on the list of items attached hereto within _____ days from the above date of Substantial Completion.

CONTRACTOR _____ BY _____ DATE _____

The Owner accepts the Work or designated portion thereof as substantially complete and will assume full possession thereof at _____ (time) on _____ (date).

OWNER'S REPRESENTATIVE _____ BY _____ DATE _____

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END OF DOCUMENT 01290.12



**CONTRACTOR AFFIDAVIT
FOR FINAL PAYMENT**

Contract Number: Bid # 22-27, Construction
Contract Title: INDUSTRIAL DRIVE
EXTENSION

STATE OF _____)
COUNTY OF _____)SS

The Undersigned, _____ of lawful
(Name)
age, being first duly sworn, states under oath as follows:

1. I am the _____ of _____ who is the general
(Title) (Contractor)
contractor for the City on Contract No. 22-27 and Contract Name/Title: Industrial Drive Extension
2. All payrolls, material bills, use of equipment and other indebtedness connected with the Work for this Contract have been paid and all claims of whatever nature have been satisfied, as required by the Contract.
3. Contractor certifies that each Subcontractor has received full payment for its respective work in connection with the Contract.
4. This affidavit is made in behalf of the Contractor for the purpose of securing from the City of Fayetteville, Arkansas, the certification of completion of the Contract and receiving payment therefore.

CONTRACTOR _____

By _____
(Signature)

Title _____

On this _____ day of _____, _____, before me
appeared _____, to me personally known to be the
_____ of the _____,

and who executed the foregoing instrument and acknowledged that (s)he executed the same on behalf of
the _____ as its free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal on the day and year
first above written.

My commission expires:

Notary Public

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END OF DOCUMENT 01290.14



CITY OF
FAYETTEVILLE
ARKANSAS

SUBCONTRACTOR AFFIDAVIT FOR FINAL PAYMENT

Contract Number: Bid # 22-27, Construction
Contract Title: INDUSTRIAL DRIVE EXTENSION

STATE OF _____)
COUNTY OF _____)SS

The Undersigned, _____ of lawful age, being first duly sworn,
(Name)
states under oath as follows:

1. I am the _____ of _____ hereinafter "Subcontractor"
(Title) (contractor)
to _____, general contractor on BID # 22-27, CONSTRUCTION – INDUSTRIAL DRIVE EXTENSION
(Name of Contractor) (Contract Number and Title)
2. All payrolls, material bills, use of equipment and other indebtedness connected with the work for this project have been paid and all claims of whatever nature have been satisfied.
3. A total of \$ _____ has been received as full compensation for: _____
performed in connection with the contract. (area / scope of work)
4. This affidavit is made in behalf of the Contractor for the purpose of securing from Fayetteville, Arkansas, the certification of completion of the project and receiving payment therefore.

SUBCONTRACTOR _____

By _____
(Signature)

Title _____

On this _____ day of _____, _____, before me
appeared _____, to me personally known to be the
_____ of the _____,

and who executed the foregoing instrument and acknowledged that (s)he executed the same on behalf of the
_____ as its free act and deed.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal on the day and year first above written.

My commission expires:

Notary Public

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END OF DOCUMENT 01290.15

SECTION 01320 – PROJECT MEETINGS, SCHEDULES, AND REPORTS

PART 1 - GENERAL

1.01 Summary: This Section includes the following administrative and procedural requirements:

- A. Project Meetings:
 - 1. Preconstruction conference.
 - 2. Progress meetings.
- B. Schedules and Reports:
 - 1. Comply with GENERAL CONDITIONS
- C. Related Work Specified Elsewhere:
 - 1. For Schedules: SECTION 01321.

1.02 PROJECT MEETINGS:

- A. Preconstruction Conference:
 - 1. Engineer will conduct a meeting within 60 days after the Effective Date of the Agreement, to review items stated in the following agenda and to establish a working understanding between the parties as to their relationships during performance of the Work.
 - 2. Preconstruction conference shall be attended by:
 - a. Contractor and his superintendent.
 - b. Engineer and Resident Project Representative if any.
 - c. Representative(s) of Owner.
 - d. At Engineer's option, representatives of principal Subcontractors and Suppliers.
 - 3. Meeting Agenda:
 - a. Construction schedules.
 - b. Critical Work sequencing.
 - c. Designation of responsible personnel.
 - d. Project coordination.
 - e. Procedures and Processing of:
 - (1) Field decisions.
 - (2) Substitutions.
 - (3) Submittals.
 - (4) Change Orders.
 - (5) Applications for Payment.
 - (6) Proposal Requests.
 - (7) Contract Closeout.
 - (8) Requests for Interpretation.
 - (9) Field Orders.
 - (10) Work Change Directives.
 - f. Procedures for testing.
 - g. Procedures for maintaining record documents.
 - h. Use of Premises:
 - (1) Office, work, and storage areas.
 - (2) Owner's requirements.
 - i. Construction facilities, controls, and construction aids.

SECTION 01320 – PROJECT MEETINGS, SCHEDULES, AND REPORTS (continued)

- j. Temporary utilities.
- k. Safety and first-aid.
- l. Security.
- m. Requirements for start-up of equipment.
- n. Inspection and acceptance of equipment put into service during construction period.
- o. Distribution of Contract Documents
- 4. Location of Meeting: At or near the Project Site.
- 5. Reporting:
 - a. Within 7 working days after the meeting, Engineer will prepare and distribute minutes of the meeting to Owner and Contractor.
 - b. Contractor shall provide copies to Subcontractors and major Suppliers.
- B. Progress Meetings:
 - 1. Engineer shall schedule and conduct monthly meetings, or at other intervals as requested by Owner. Representatives of the Engineer, Resident Project Representative, and Contractor shall be present at each meeting. With Engineer's concurrence, Contractor may request attendance by representatives of Subcontractors, Suppliers, or other entities concerned with current program or involved with planning, coordination, or performance of future activities. All participants in the meeting shall be familiar with the Project and authorized to conclude matters relating to the Work.
 - a. Contractor and each Subcontractor represented shall be prepared to discuss the current construction progress report and any anticipated future changes to the schedule.
 - 2. Location of Meetings: At or near Project Site.
 - 3. Reporting:
 - a. Within 7 working days after each meeting, Engineer shall prepare and distribute minutes of the meeting to Owner and Contractor.
 - b. Contractor shall distribute copies to principle Subcontractors and Suppliers.

PART 2 - PRODUCTS – Not Applicable.

PART 3 - EXECUTION – Not Applicable.

END OF SECTION 01320

SECTION 01321 – SCHEDULE

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes procedural requirements for preparation, submittal, and updating of Contractor's construction progress schedules.
- B. Related Work:
 - 1. Documents affecting work of this Section include, but are not limited to: General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
 - 2. Section 01290 – Payment Procedures.
 - 3. Section 01320 – Project Meetings, Schedules, and Reports.

1.02 FORMAT

- A. Prepare Schedules as a Gantt chart with separate bar for each major portion of Work or operation, identifying first work day of each week.
- B. Sequence of Listings: The chronological order of the start of each item of Work.
- C. Scale and Spacing: To provide space for notations and revisions.
- D. Sheet Size: Minimum multiples of 8-1/2 x 11 inches.

1.03 CONTENT

- A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction. The schedule shall clearly indicate the sequence of construction for the various items that involve either existing and/or potentially relocated utilities. This schedule shall have the least negative impact on the adjacent property owners and provide an orderly sequence that will produce the least disruptive action for utilities and their customers.
- B. Identify work of separate stages and other logically grouped activities.
- C. Provide sub-schedules to define critical portions of the entire Schedule.
- D. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the cut-off date for each monthly pay estimate.

1.04 SUBMITTALS

- A. Submit a finalized construction progress schedule within fifteen (15) days after

SECTION 01321 – SCHEDULE (continued)

date of Notice of Award or at least seven (7) days prior to the pre-construction conference, whichever occurs first. After review, resubmit required revised data within ten (10) days.

- B. Submit monthly revisions with each pay estimate in the number of opaque reproductions that Engineer requires, plus two copies, which will be retained by Engineer.

1.05 REVISIONS TO SCHEDULES

- A. Indicate progress of each activity to date of submittal, and projected completion date of each activity.
- B. Identify activities modified since previous submittal, major changes in scope, and other identifiable changes.
- C. Provide narrative report to define problem areas, anticipated delays, and impact on Schedule. Report corrective action taken, or proposed, and its effect.

1.06 DISTRIBUTION

- A. Distribute copies of reviewed Schedules to project site file, Subcontractors, suppliers, and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in Schedules.

PART 2 - PRODUCTS: NOT APPLICABLE

PART 3 - EXECUTION: NOT APPLICABLE

END OF SECTION 01321

SECTION 01325 – CONSTRUCTION PHOTOGRAPHS

PART 1 - GENERAL

1.01 SUMMARY:

- A. This Section specifies administrative and procedural requirements for construction photographs.

1.02 SUBMITTALS:

- A. Submit photographs, tapes, films and electronic media as specified in SECTION 01330 - SUBMITTALS and in PART 3 – this Section.

1.03 QUALITY ASSURANCE:

- A. Photographs may be taken by Contractor personnel provided the photographs are of sufficient quality, clarity, and content to adequately indicate the status and detail of the Work. If the quality and detail of the photographs taken by Contractor personnel is not adequate to clearly show the condition of the Work, the Contractor shall retain the services of a qualified and established commercial photographer experienced in construction photography. Engineer will make the final determination of the adequacy of the photographs.
- B. Audiovisual tapes or digital recordings may be taken by Contractor personnel provided they are of sufficient quality, clarity, and content to adequately and clearly indicate the status and detail of the Work as well as conditions before and after the construction activities. If the quality and detail of the recordings is not adequate to clearly show the condition and detail of the Work as well as conditions before and after the construction activities, Contractor shall retain the services of an established professional electrographer experienced in the production of color audio/video tape documentation of the construction industry. Engineer will make the final determination of the adequacy of the tapes and recordings.

PART 2 - PRODUCTS

- 2.01 **PHOTOGRAPHIC REQUIREMENTS:** Specified in PART 3, this Section.

PART 3 - EXECUTION

3.01 PROGRESS SITE PHOTOGRAPHS:

- A. Contractor shall be responsible for photographs of the Site to show the existing and general progress of the Work. Engineer will advise as to which views are of interest. Photographs shall be taken of the following areas and at the following times.
 - 1. Existing Site conditions before Site work is started. Number of views shall be adequate to cover the Site.
 - 2. Progress of the Work from clearing throughout construction. There shall be four (4) different views taken no more than five days before the date of the periodic Payment Application.

SECTION 01325 – CONSTRUCTION PHOTOGRAPHS (continued)

3. Finished Project after completion of Work. Number of views shall be adequate to show the finished Work.
 4. If Project is not completed during the Contract Times or authorized extensions, photographs shall continue to be taken at no increase in Contract Price.
- B. Construction photographs may be either photographic prints or digital images.
- C. Photographic Prints:
1. All prints shall be color, smooth glossy finish, 5" x 7" in size taken with full frame 35 mm camera, and inserted into archival quality polypropylene photographic binder pages punched for insertion into a standard 3-ring binder. Provide binders identified by Contract name and Contract number.
- D. Digital Images:
1. Submit a complete set of digital image electronic files with each submittal of photographic prints.
 - a. Provide images in JPEG format, with minimum sensor size of 3.0 megapixels.
 - b. Submit images that have same aspect ratio as the sensor, uncropped.
- E. Print Negatives:
1. Negatives for 5" x 7" prints shall be protected by roll in negative sleeves. Negative sleeves shall be identified with Contract name and Contract number, date of exposure, roll number, or other general identifying information, and name of Contractor.
- F. Identification:
1. Identify each photographic print on the reverse side with a label which contains the Contract name and Contract number, date of exposure, and description of view. Prints shall also bear the photographer's name or trademark.
 2. Identify electronic media with date digital photographs were taken. Provide a separate reference document which contains the Contract name and Contract number, date of exposure, and description of each referenced view.
- G. Provide three prints of each view.
- H. Deliver prints and electronic media files to Engineer.
- I. Deliver photographic negatives to Engineer.

3.02

AUDIO / VIDEO TAPE RECORDINGS:

- A. Audio / video recordings shall be made of the entire Site showing the condition of the Site or terrain previous to any alterations by Contractor and before disturbing of the Site is started. Existing utilities shall be marked and construction staking shall be in place before taping begins. A second audio / video recording shall be produced after completion of all construction operations, showing the same view or views as close as possible, to illustrate "before" and "after" conditions. This is the responsibility of Contractor. Three

SECTION 01325 – CONSTRUCTION PHOTOGRAPHS (continued)

days' notice shall be given to Engineer and Owner prior to this Work to allow them to accompany electrographer.

- B. All required equipment, accessories, materials, and labor for the timely production of this documentation shall be arranged/furnished through Contractor.

The audio / video system shall be capable of producing bright, sharp, clear visual images which render accurate colors free from imperfections and distortions that might obscure recorded information during playback. The simultaneous audio record shall be made directly onto the original tapes, and shall record narration of the electrographer clearly and audibly, with adequate volume, free from unnecessary interruptions and distortions that might eliminate recorded information during playback.

- C. Zone of Influence: Unless otherwise indicated by Engineer or Owner, the area which might be affected by the construction operations and, therefore, shall be documented in these tape recordings, shall be whichever of the following includes the greatest area.

1. All areas within the temporary construction right-of-ways and grading limits, as indicated on the Contract Drawings.
2. The permanent easement for the completed improvements, as indicated on the Contract Drawings.
3. All areas within 35 feet of the proposed improvements with an additional 20 feet of supplemental coverage in residential areas.
4. All areas within the Project Site.

- D. Audio / Video Tape Production Procedures:

1. It is required that the audio / video tape recordings be produced while actually walking the construction route or site - NOT through the use of wheeled vehicles.
2. All video tape recordings shall display digital information continuously; this information shall include the current time and date, showing the month, day, and year. This information shall be audibly acknowledged by the electrographer at appropriate times during recording sequences.
3. Each recording tape shall begin with a visual of the professional electrographer's name or business trademark, followed by the current date and time on digital display, plus audible (and visual, if possible) indication of Contract name and numbers, municipality, name of Contractor, and other pertinent information. Thereafter, each recording sequence shall begin with the current time and date, followed by the location of the electrographer, direction of view, and description of the scene being recorded. Continuous updates of this information, plus other pertinent comments, shall be given throughout the recording sequence. Such audio and video records shall include, but not be limited - to, conditions of existing pavement, curbs, sidewalks, driveways, culverts, headwalls, retaining walls, ditches, roadways, mailboxes, fences, trees, shrubs and landscaping, major structural conditions of residences and commercial buildings, fences, signs, headwalls, general terrain, and similar items. Particular and detailed

SECTION 01325 – CONSTRUCTION PHOTOGRAPHS (continued)

attention shall be given to any defects noted, such as cracks, disturbed areas, damaged areas, or as may be required by Engineer.

4. Representatives of Engineer and Contractor shall accompany the electrographer during recording sessions, to assist with location of the alignment and areas of construction activity, and identification of items and conditions to be recorded.
5. All recordings shall be completed during periods of adequate lighting and visibility. Sufficient lighting must be available to provide proper illumination of shadowed areas, and proper exposure adjustments shall be made where required. No taping shall be completed during precipitation, mist, fog, or when more than 10% of the ground surface has snow cover.
6. Houses and buildings shall be identified visually by house number, when visible, in such a manner that structures of the proposed system, i.e., manholes on a sewer system and hydrants on a water system, may be located by reference.
7. Original audio / video tape recordings shall be furnished to Owner and a copy furnished to Engineer before the start of any construction. One copy shall be retained by Contractor.
8. Any portion of the videotape recording not conforming to the Specifications will be rejected.
9. Any taped coverage not acceptable to Owner shall be refilmed at no additional cost to Owner within five (5) days after notification of taping inadequacy.

E. Ownership and Authenticity of Original Tapes:

1. All original audio / video tape recordings shall become the property of Owner, plus one duplicate of each shall be provided to Engineer. Each tape shall be provided in a protective sleeve or case, identified as to Contract name and number, production date of original recording, name of Contractor, and electrographer's name or trademark. A legible copy of the log shall be included.

3.03

ADDITIONAL PHOTOGRAPHS:

- A. From time to time Engineer may issue requests for additional photographs, in addition to periodic photographs specified. Additional photographs will be paid for by Change Order, and are not included in the Contract Price or an Allowance.
 1. Engineer will give the photographer 3 days' notice, where feasible.
 2. In emergency situations, the photographer shall take additional photographs within 24 hours of Engineer's request.
 3. Circumstances that could require additional photographs include, but are not limited to:
 - a. Substantial Completion of a major phase or component of Work.
 - b. Owner's or Engineer's request for special publicity photographs.
 - c. Special events planned at Project Site.
 - d. Immediate follow-up when on-site events result in construction damage or losses.

SECTION 01325 – CONSTRUCTION PHOTOGRAPHS (continued)

- e. Photographs to be taken at fabrication locations away from Project Site.
- f. Extra record photographs at time of final acceptance.

END OF SECTION 01325

SECTION 01420 – DEFINITIONS AND STANDARDS

PART 1 - GENERAL

1.01 SUMMARY:

- A. Definitions:
 - 1. Basic contract definitions used in the Contract Documents are defined in the GENERAL CONDITIONS. Definitions and explanations are not necessarily either complete or exclusive, but are general for the Work.
 - 2. General Requirements are the provisions or requirements of DIVISION 1 Sections, and which apply to the entire Work of the Contract.
- B. Related Information Specified Elsewhere: Specification standards and associations applicable to the Work are specified in each Section.

1.02 SPECIFICATION FORMAT AND CONTENT EXPLANATIONS:

- A. Specification Format: The Specifications are organized into two (2) major divisions of CONTRACT DOCUMENTS and TECHNICAL SPECIFICATIONS.
- B. Specification Content:
 - 1. These Specifications apply certain conventions in the use of language and the intended meaning of certain terms, words, and phrases when used in particular situations or circumstances. These conventions are explained as follows:
 - a. Imperative and Streamlined Language: These Specifications are written in imperative and abbreviated form. This imperative language of the technical Sections is directed at the Contractor, unless specifically noted otherwise. Incomplete sentences shall be completed by inserting "shall," "the Contractor shall," and "shall be," and similar mandatory phrases by inference in the same manner as they are applied to notes on the Drawings. The words "shall be" shall be supplied by inference where a colon (:) is used within sentences or phrases. Except as worded to the contrary, fulfill (perform) all indicated requirements whether stated imperatively or otherwise.
 - b. Specifying Methods: The techniques or methods of specifying requirements varies throughout text, and may include "prescriptive," "compliance with standards," "performance," "proprietary," or a combination of these. The method used for specifying one unit of Work has no bearing on requirements for another unit of Work.
 - c. Overlapping and Conflicting Requirements: Where compliance with two or more industry standards or sets of requirements is specified, and overlapping of those different standards or requirements establishes different or conflicting minimums or levels of quality, notify Engineer for a decision as specified in GENERAL CONDITIONS.
 - d. Abbreviations: Throughout the Contract Documents are abbreviations implying words and meanings which shall be appropriately interpreted. Specific abbreviations have been

SECTION 01420 – DEFINITIONS AND STANDARDS (continued)

established, principally for lengthy technical terminology and in conjunction with coordination of Specification requirements with notations on Drawings and in schedules. These are normally defined at first instance of use. Organizational and association names and titles of general standards are also abbreviated.

- C. Assignment of Specialists: In certain instances, Specification text requires that specific Work be assigned to specialists in the operations to be performed. These specialists shall be engaged for performance of those units of Work, and assignments are requirements over which Contractor has no choice or option. These assignments shall not be confused with, and are not intended to interfere with, enforcement of building codes and similar regulations governing the Work, local trade and union jurisdictions, and similar conventions. Nevertheless, final responsibility for fulfillment of Contract requirements remains with Contractor.
- D. Trades: Except as otherwise specified or indicated, the use of titles such as "carpentry" in Specification text, implies neither that the Work must be performed by an accredited or unionized tradesperson of corresponding generic name (such as "carpenter"), nor that specified requirements apply exclusively to work by tradespersons of that corresponding generic name.

1.03 DRAWING SYMBOLS:

- A. Except as otherwise indicated, graphic symbols used on Drawings are those symbols recognized in the construction industry for purposes indicated. Refer instances of uncertainty to Engineer for clarification.

1.04 INDUSTRY STANDARDS:

- A. Applicability of Standards: Except where the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents. Such standards are made a part of the Contract Documents by reference and are stated in each Section.
 - 1. Referenced standards, referenced directly in Contract Documents or by governing regulations, have precedence over nonreferenced standards which are recognized in industry for applicability to the Work.
 - 2. Where compliance with an industry standard is required, standard in effect shall be as stated in GENERAL CONDITIONS.
 - 3. Where an applicable code or standard has been revised and reissued after the date of the Contract Documents and before performance of Work affected, the Engineer will decide whether to issue a Change Order to proceed with the updated standard.
 - 4. In every instance the quantity or quality level shown or specified shall be the minimum to be provided or performed. The actual installation may comply exactly, within specified tolerances, with the minimum quantity or quality specified, or it may exceed that minimum within reasonable limits. In complying with these requirements, indicated numeric values are minimum or maximum values, as noted, or

SECTION 01420 – DEFINITIONS AND STANDARDS (continued)

- appropriate for the context of the requirements. Refer instances of uncertainty to the Engineer for a decision before proceeding.
5. Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to that entity's construction activity. Copies of applicable standards are not bound with the Contract Documents.
 - a. Where copies of standards are needed for performance of a required construction activity, Contractor shall obtain copies directly from the publication source.
 - B. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. Where such acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards generating organization, authority having jurisdiction, or other entity applicable to the context of the text provision.

PART 2 - PRODUCTS – Not Applicable.

PART 3 - EXECUTION – Not Applicable.

SECTION 01420 – DEFINITIONS AND STANDARDS (continued)

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END OF SECTION 01420

SECTION 01530 – TEMPORARY BARRIERS AND CONTROLS

PART 1 - GENERAL

1.01 SUMMARY:

- A. This Section includes General Requirements for:
 - 1. Safety and protection of Work.
 - 2. Safety and protection of existing property.
 - 3. Barriers.
 - 4. Security.
 - 5. Environmental controls.
 - 6. Access roads and parking areas.
 - 7. Traffic control and use of roadways.
 - 8. Railroad service.
- B. Related Work Specified Elsewhere:
 - 1. Temporary Utilities and Facilities: SECTION 01560.

PART 2 - PRODUCTS – Not Applicable.

PART 3 - EXECUTION

3.01 SAFETY AND PROTECTION OF WORK AND PROPERTY:

- A. General:
 - 1. Provide for the safety and protection of the Work as set forth in GENERAL CONDITIONS. Provide protection at all times against rain, wind, storms, frost, freezing, condensation, or heat so as to maintain all Work and Equipment and Materials free from injury or damage. At the end of each day, all new Work likely to be damaged shall be appropriately protected.
 - 2. Notify Engineer immediately at any time operations are stopped due to conditions which make it impossible to continue operations safely or to obtain proper results.
 - 3. Construct and maintain all necessary temporary drainage and do all pumping necessary to keep excavations, floors, pits, trenches, manholes, and ducts free of water.
- B. Property Other than Owner's:
 - 1. Provide for the safety and protection of property as set forth in the GENERAL CONDITIONS. Report immediately to the owners thereof and promptly repair damage to existing facilities resulting from construction operations.
 - 2. Names and telephone numbers of representatives of agencies and utilities having jurisdiction over streets and utilities in the Work area can be obtained from Engineer for the agencies listed below. Concerned agencies or utilities shall be contacted a minimum of 24 hours prior to performing Work, closing streets and other traffic areas, or excavating near underground utilities or pole lines.
 - a. Water.
 - b. Gas.

SECTION 01530 – TEMPORARY BARRIERS AND CONTROLS (continued)

- c. Sanitary sewers.
 - d. Storm drains.
 - e. Pipeline companies.
 - f. Telephone.
 - g. Electric.
 - h. Municipal streets.
 - i. State highways.
 - j. City engineer.
 - k. Fire.
 - l. Police.
3. Operation of valves or other appurtenances on existing utilities, when required, shall be by or under the direct supervision of the owning utility.
 4. Where fences are to be breached on private property, the owners thereof shall be contacted and arrangements made to ensure proper protection of any livestock or other property thus exposed.
 5. The applicable requirements specified for protection of the Work shall also apply to the protection of existing property of others.
 6. Before acceptance of the Work by Owner, restore all property affected by Contractor's operations to the original or better condition.

3.02 BARRIERS:

- A. General:
 1. Furnish, install, and maintain suitable barriers as required to prevent public entry, protect the public, and to protect the Work, existing facilities, trees, and plants from construction operations. Remove when no longer needed or at completion of Work.
 2. Materials may be new or used, suitable for the intended purpose, but shall not violate requirements of applicable codes and standards or regulatory agencies.
 3. Barriers shall be of a neat and reasonable uniform appearance, structurally adequate for the required purposes.
 4. Maintain barriers in good repair and clean condition for adequate visibility. Relocate barriers as required by progress of Work.
 5. Repair damage caused by installation and restore area to original or better condition. Clean the area.
- B. Tree and Plant Protection:
 1. Preserve and protect existing trees and plants at the Site which are designated to remain and those adjacent to the Site.
 2. Provide temporary barriers around each, or around each group of trees and plants. Unless indicated or specified otherwise, construct to a height of 6 feet around trees, and to a height to adequately protect plants.
 3. Consult with Engineer and remove agreed-on roots and branches which will interfere with construction. Employ qualified tree surgeon to remove and to treat cuts.

SECTION 01530 – TEMPORARY BARRIERS AND CONTROLS (continued)

4. Protect root zones of trees and plants as follows:
 - a. Do not allow vehicular traffic or parking.
 - b. Do not store materials or products.
 - c. Prevent dumping of refuse or chemically injurious materials or liquids.
 - d. Prevent puddling or continuous running water.
5. Carefully supervise excavating, grading and filling, and subsequent construction operations to prevent damage.
6. Remove and replace, or suitably repair, trees and plants which are damaged or destroyed due to construction operations, and which were designated to remain.

3.03 ENVIRONMENTAL CONTROLS:

- A. Noise Control: OSHA requirements shall be adhered to for this contract.
- B. Dust Control:
 1. Provide positive methods and apply dust control materials to minimize raising dust from construction operations; and to prevent airborne dust from dispersing into the atmosphere.
 2. Clean interior spaces prior to the start of finish painting and continue cleaning on an as-needed basis until painting is finished.
 3. Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly-coated surfaces.
- C. Water and Erosion Control:
 1. Provide methods to control surface water to prevent damage to the Project, the Site, or adjoining properties.
 2. Plan and execute construction and earthwork by methods to control surface drainage from cuts and fills, and from borrow and waste disposal areas, to prevent erosion and sedimentation.
 - a. Hold the areas of bare soil exposed at one time to a minimum.
 - b. Provide temporary control measures such as berms, dikes, and drains.
 3. Control fill, grading, and ditching to direct surface drainage away from excavations, pits, tunnels, and other construction areas; and to direct drainage to proper runoff.
 4. Provide, operate, and maintain hydraulic equipment of adequate capacity to control surface and groundwater.
 5. Dispose of drainage water in a manner to prevent flooding, erosion, or other damage to any portion of the Site or to adjoining areas.
 6. Provide temporary drainage where the roofing or similar waterproof deck construction is completed prior to the connection and operation of the permanent drainage piping system.
 7. Comply with all other requirements indicated or specified.

SECTION 01530 – TEMPORARY BARRIERS AND CONTROLS (continued)

- D. Debris Control and Clean-Up:
1. Keep the premises free at all times from accumulations of debris, waste materials, and rubbish caused by construction operations and employees. Responsibilities shall include:
 - a. Adequate trash receptacles about the Site, emptied promptly when filled.
 - b. Periodic cleanup to avoid hazards or interference with operations at the Site and to maintain the Site in a reasonably neat condition.
 - c. The keeping of construction materials such as forms and scaffolding neatly stacked.
 - d. Immediate cleanup to protect the Work by removing splattered concrete, asphalt, oil, paint, corrosive liquids, and cleaning solutions from walls, floors, and metal surfaces before surfaces are marred.
 2. Prohibit overloading of trucks to prevent spillages on access and haul routes. Provide periodic inspection of traffic areas to enforce requirements.
 3. Final cleanup is specified in SECTION 01780 - CONTRACT CLOSEOUT.
- E. Pollution Control:
1. Provide methods, means, and facilities required to prevent contamination of soil, water, or atmosphere by the discharge of hazardous or toxic substances from construction operations.
 2. Provide equipment and personnel, perform emergency measures required to contain any spillages, and remove contaminated soils or liquids. Excavate and dispose of any contaminated earth off-Site in approved locations, and replace with suitable compacted fill and topsoil.
 3. Take special measures to prevent harmful substances from entering public waters, sanitary, or storm sewers.
 4. Adhere to the Spill Prevention Control and Countermeasures Plan (SPCCP) requirements as stated in 40 CFR Part 112.
- F. Archaeological and Cultural Resources:
1. If Archaeological Materials are encountered during construction, the procedures codified at 33 CFR 800.13(b) will apply and the City of Fayetteville shall contact the US Economic Development Administration, the Arkansas State Historic Preservation Office, the Cherokee Nation, the Osage Nation, and the Shawnee Tribe. Archaeological Materials consist of any items, fifty years or older, which were made or used by man. These items include, but are not limited to, stone projectile points (arrowheads), ceramic shards, bricks, worked wood, bone and stone, metal and glass objects, and human skeletal remains. The site must be protected until cleared by the appropriate authorities.

SECTION 01530 – TEMPORARY BARRIERS AND CONTROLS (continued)

G. Threatened and Endangered Species:

1. The U.S. Fish and Wildlife Service has determined that the project may affect the threatened Northern Long-eared Bat (*Myotis septentrionalis*). Where appropriate, follow the voluntary conservation measures listed below to reduce the impacts of construction activities on the Northern Long-eared Bat (NLEB):
 - a. Conduct tree removal activities outside of the NLEB pup season (June 1 to July 31) and/or the active season (April 1 to October 31).
 - b. Conduct prescribed burns outside of the pup season (June 1 to July 31) and/or the active season (April 1 to October 31).
 - c. Minimize the use of herbicides and pesticides. If necessary, spot treatment is preferred over aerial application.

H. Wetlands:

1. If wetlands or wetland areas are discovered or encountered during any stage of the project, all ground disturbing activities in the project area must be halted and the U.S. Army Corps of Engineers must be notified immediately. The site must be protected until cleared by the appropriate authorities.

3.04

ACCESS ROADS AND PARKING AREAS:

A. New Temporary On-Site Roads and Parking Areas:

1. Locate roads, drives, walks, and parking facilities to provide access to construction offices, mobilization, Work, storage areas, and other areas required for execution of the Contract.
 - a. Consult with Engineer regarding any desired deviation therefrom.
 - b. Size of parking facilities shall be adequate to provide for needs of Contractor's personnel, Resident Project Representatives, and visits to Site by Engineer and Owner.
2. Provide access for emergency vehicles. Maintain driveways a minimum of 15 feet wide between and around combustible materials in storage and mobilization areas.
3. Maintain traffic areas free of excavated materials, construction equipment, snow, ice, and debris.
4. Construct temporary bridges and culverts to span low areas and allow unimpeded drainage.
5. Keep fire hydrants and water control valves free from obstruction and accessible for use.
6. Construction:
 - a. Clear areas required.
 - b. Fill, compact, and grade areas as necessary to provide suitable support for vehicular traffic under anticipated loadings. Materials and construction shall be as indicated or specified.
 - c. Provide for surface drainage of facilities and surrounding areas.
 - d. Maintain roads, walks, and parking areas in a sound, clean condition. Repair or replace portions damaged during progress of Work.

SECTION 01530 – TEMPORARY BARRIERS AND CONTROLS (continued)

7. Removal:

- a. Completely remove temporary materials and construction when construction needs can be met by use of permanent installation, unless construction is to be integrated into permanent construction. Remove and dispose of compacted materials to depths required by various conditions to be met in completed Work.
- b. Restore areas to original, better, or specified condition at completion of Work.

3.05

TRAFFIC CONTROL AND USE OF ROADWAYS:

A. Traffic Control:

1. The Contractor shall plan and execute the work so that interference with the flow of traffic and the passage of pedestrians will be the minimum possible.
2. The Contractor shall be responsible for making provisions for the safe and free passage of persons and vehicles by, over, or around the work until the project is completed. Such provisions shall be satisfactory with the Owner and State, County and local authority having jurisdiction in the area of work.
3. Provide, operate, and maintain equipment, services, and personnel, with traffic control and protective devices, as required to expedite vehicular traffic flow on haul routes, at Site entrances, on-Site access roads, and parking areas. This includes traffic signals and signs, flagmen, flares, lights, barricades, and other devices or personnel as necessary to adequately protect the public.
4. Remove temporary equipment and facilities when no longer required. Restore grounds to original, better, or specified condition when no longer required.
5. When required by the State, County or local authority that traffic be maintained over any construction work in a public or private highway, street, road, or other vehicle traffic path, and such traffic cannot be maintained on the alignment of the original roadbed or pavement, the Contractor shall, at his own expense, provide and/or construct and maintain a detour around the work. Such detours shall be satisfactory to the Owner and to State, County, or local authority. The Contractor shall provide and maintain all barricades, signs, torches, lights and markers around the work as may be required by the various agencies having jurisdiction in the work area. The Contractor shall also provide qualified flagmen to direct traffic while working upon a highway, street or road over which traffic must pass.
6. Excavated areas within the traffic lanes of highways, streets or roads and pedestrian walkways shall be backfilled as soon as possible and the area opened to traffic.
7. Bridge over open trenches where necessary to maintain traffic.
8. Consult with governing authorities to establish public thoroughfares which will be used as haul routes and Site access. All operations shall meet the approval of owners or agencies having jurisdiction.

SECTION 01530 – TEMPORARY BARRIERS AND CONTROLS (continued)

9. The Contractor shall obtain permission from the applicable State, County or local authority(ies) before closing or obstructing any public highway, street or road. This shall include, but not necessarily be limited to, coordination with Fire Departments, 911 services, and other emergency services.
 10. The Contractor shall make the same provisions as described above for the passage of vehicular and pedestrian traffic between private property and public highways, streets and roads or other provisions that are satisfactory to the Owner and the property owners involved.
- B. Maintenance of Roadways:
1. Repair roads, walkways, and other traffic areas damaged by operations. Keep traffic areas as free as possible of excavated materials and maintain in a manner to eliminate dust, mud, and hazardous conditions.
 2. All operations and repairs shall meet the approval of owners or agencies having jurisdiction.

3.06 RAILROAD SERVICE:

- A. Maintenance:
1. Schedule operations and exercise care to avoid any interruption to continuous service over the railroads within or adjacent to the Work area.
 2. Before transporting Equipment and Materials across railroad tracks or performing Work within any railroad right-of-way, obtain permission or any necessary permits from the railroads.
 3. The Work shall be subject to all supervision, inspection, and other conditions required by the affected railroads.

END OF SECTION 01530

SECTION 01560 – TEMPORARY UTILITIES AND FACILITIES

PART 1 - GENERAL

1.01 SUMMARY:

- A. This Section includes requirements of a temporary nature not normally incorporated into final Work. It includes the following:
 - 1. Utility services.
 - 2. Construction and support facilities.
 - 3. Construction aids.
 - 4. Safety and health.
 - 5. Fire protection.
- B. Related Work Specified Elsewhere:
 - 1. Temporary Barriers and Controls: SECTION 01530.

1.02 REFERENCES:

- A. American National Standards Association (ANSI):
 - 1. A10 Series – Safety Requirements for Construction and Demolition.
- B. National Electrical Contractors Association (NECA):
 - 1. Electrical Design Library – Temporary Electrical Facilities.
- C. National Fire Protection Association (NFPA):
 - 1. 10 – Portable Fire Extinguishers.
 - 2. 70 – National Electrical Code.
 - 3. 241 – Safeguarding Construction, Alterations, and Demolition Operations.
- D. National Electrical Manufacturers Association (NEMA).
- E. Underwriters Laboratories (UL).

1.03 SUBMITTALS:

- A. Temporary Utilities: Submit reports of tests, inspections, meter readings, and similar procedures performed on temporary utilities.
- B. Implementation and Termination Schedule: Submit a schedule indicating implementation and termination of each temporary utility within 15 days of the date established for commencement of the Work.

1.04 QUALITY ASSURANCE:

- A. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction, including but not limited to:
 - 1. Building Code requirements.
 - 2. Health and safety regulations.
 - 3. Utility company regulations.
 - 4. Police, Fire Department, and rescue squad rules.
 - 5. Environmental protection regulations.

SECTION 01560 – TEMPORARY UTILITIES AND FACILITIES (continued)

- B. Standards:
 - 1. Comply with NFPA 10 and 241, and ANSI A10 Series standards "Temporary Electrical Facilities."
 - 2. Comply with NEMA, NECA, and UL standards and regulations for temporary electric service. Install service in compliance with NFPA 70.
- C. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

1.05 PROJECT CONDITIONS:

- A. Temporary Utilities: Prepare a schedule indicating dates for implementation and termination of each temporary utility. At the earliest feasible time, when acceptable to Owner, change over from use of temporary service to use of the permanent service.
- B. Conditions of Use: Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Take necessary fire prevention measures. Do not overload facilities, or permit them to interfere with progress. Do not allow hazardous, dangerous, unsanitary conditions, or public nuisances to develop or persist on the Site.

PART 2 - PRODUCTS

2.01 MATERIALS AND EQUIPMENT:

- A. Provide new materials and equipment. If acceptable to Engineer, undamaged previously used materials and equipment in serviceable condition may be used. Provide materials and equipment suitable for the use intended, of capacity for required usage, and meeting applicable codes and standards. Comply with requirements of the TECHNICAL SPECIFICATIONS.
- B. Water: Provide potable water approved by local health authorities.
- C. Water Hoses: Provide 3/4-inch (19-mm), heavy-duty, abrasion-resistant, flexible rubber hoses 100 feet (30 m) long, with pressure rating greater than the maximum pressure of the water distribution system. Provide adjustable shutoff nozzles at hose discharge.
- D. Electrical Outlets: Provide properly configured, NEMA-polarized outlets to prevent insertion of 110- to 120V plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button, and pilot light for connection of power tools and equipment.
- E. Electrical Power Cords: Provide grounded extension cords. Use hard-service cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.
- F. Lamps and Light Fixtures: Provide general service incandescent lamps of wattage required for adequate illumination. Provide guard cages or tempered-

SECTION 01560 – TEMPORARY UTILITIES AND FACILITIES (continued)

glass enclosures where exposed to breakage. Provide exterior fixtures where exposed to moisture.

- G. Heating Units: Provide temporary heating units that have been tested and labeled by UL, FM, or another recognized trade association related to the type of fuel being consumed.
- H. Fire Extinguishers: Provide hand-carried, portable, UL-rated, Class A fire extinguishers for temporary offices and similar spaces. In other locations, provide hand-carried, portable, UL-rated, Class ABC, dry-chemical extinguishers or a combination of extinguishers of NFPA-recommended classes for the exposures. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.

PART 3 - EXECUTION

3.01 TEMPORARY UTILITIES:

A. General:

1. Engage the appropriate local utility company to install temporary service or connect to existing service. Where utility company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with utility company recommendations.
2. Provide adequate utility capacity at each stage of construction. Prior to availability of temporary utilities at the site, provide trucked-in services as required for start-up of construction operations.
3. Obtain and pay for temporary easements required to bring temporary utilities to the Project Site, where the Owner's permanent easement cannot be used for that purpose.
4. Furnish, install, and maintain temporary utilities required for adequate construction, safety, and security. Modify, relocate, and extend systems as Work progresses. Repair damage caused by installation or use of temporary facilities. Grade the areas of Site affected by temporary installations to required elevations and grades, and clean the area. Remove on completion of Work or until service or facilities are no longer needed or are replaced by authorized use of completed permanent facilities.
5. The types of temporary construction utilities and facilities required include, but not by way of limitation, water distribution, drainage, dewatering equipment, enclosure of Work, heat, ventilation, electrical power distribution, lighting, hoisting facilities, stairs, ladders, and roads.
6. Inspect and test each service before placing temporary utilities in use. Arrange for required inspections and tests by governing authorities, and obtain required certifications and permits for use.
7. Materials used for temporary service shall not be used in the permanent system unless so specified or acceptable to Engineer.

SECTION 01560 – TEMPORARY UTILITIES AND FACILITIES (continued)

3.02 TEMPORARY ELECTRICITY AND LIGHTING:

A. New Service:

1. Arrange with utility company and provide service required for power and lighting.
2. Connect temporary service in a manner directed by utility company officials. Provide separate meter for metering of power used by all entities authorized to be at or perform Work at the Project Site.
3. The electric service shall be of sufficient capacity and characteristics for the various construction tools, machinery, lights, heating and air conditioning, pumps, and other tools required by Contractor and his Subcontractors.
4. Provide weatherproof, grounded, power distribution system sufficient to accommodate construction operations requiring power, use of power tools, electrical heating, and lighting. Provide overload protection. Locate multiple outlets spaced so that entire area of construction can be reached by power tools on a single extension cord of 100-foot maximum length. Supply power for electric welding, if any, from either temporary power distribution system or by engine-driven, power-generator sets at Contractor's option.
5. Provide all necessary temporary wiring, panelboards, switches, outlets, and other devices so that power and lighting is available throughout the construction area. Include meters, transformers, overload protection disconnects, automatic ground fault interrupters, and main distribution switch gear. Include overcurrent protection on all conductors of the temporary system.
6. Provide adequate artificial lighting for all areas of Work when natural light is not adequate for Work.
 - a. Sufficient light shall be provided for general construction areas and floor areas, with additional sufficient lighting for specific tasks and to meet safety requirements.

B. Use of Existing System:

1. Owner's existing system shall not be used for temporary electricity.

C. Use of Permanent System:

1. Prior to use of permanent system (facilities being constructed by Contractor) for construction purposes, obtain written permission of Owner.
2. Maintain permanent system as specified for temporary facilities.

D. Costs of Installation and Operation:

1. Pay fees and charges for permits and applications.
2. Pay costs of installation, maintenance, removal of temporary services, and restoration of any permanent facilities used.
3. Pay costs of electrical power used.
4. Obtain and pay costs for temporary easements required across properties other than that of Owner.

SECTION 01560 – TEMPORARY UTILITIES AND FACILITIES (continued)

3.03 TEMPORARY WATER:

- A. New Service:
 - 1. Arrange with utility service company to provide water for construction purposes.
 - 2. Connect service to water main in a manner directed by utility company officials. Provide with meter and shut off valve near connection to the water main.
 - 3. Size water service to provide adequate volume for all anticipated construction uses, and to maintain minimum required pressure.
 - 4. Install piping with outlets located so that water is available throughout the construction area.
 - 5. Prevent freezing of water distribution system. Maintain hose connections and outlet valves in leakproof condition.
 - 6. Sterilize temporary water piping prior to use.
- B. Use of Existing System:
 - 1. Owner's existing system may be used for temporary water.
 - 2. Make connections to existing facilities to provide water for construction purposes.
 - a. Water Source: Make connections to Owner's service located at point indicated or where instructed by Owner.
 - 3. Modify, supplement, and extend system as necessary to meet temporary water requirements and prevent overloading of existing system.
 - 4. Regulate system to prevent interference with Owner's usage.
- C. Use of Permanent System:
 - 1. Prior to use of permanent system for construction purposes, obtain written permission of Owner.
 - 2. Prior to Use of System for Drinking Water:
 - a. Disinfect piping.
 - b. Obtain inspection and approval of governing authority.
- D. Costs of Installation and Operation:
 - 1. Pay all costs for installation, maintenance, and removal.
 - 2. Pay all costs for water used.

3.04 TEMPORARY SANITARY FACILITIES:

- A. Contractor-Furnished Facilities:
 - 1. Furnish, install, and maintain temporary sanitary facilities for use through construction period. Remove on completion of Work.
 - 2. Provide for all construction workers under this Contract and representatives at the Site.
 - 3. Toilet facilities shall be of the chemical, aerated recirculation, or combustion type, properly vented, and fully enclosed with a glass- fiber-reinforced polyester shell or similar nonabsorbent material.

SECTION 01560 – TEMPORARY UTILITIES AND FACILITIES (continued)

4. Water and sewer connected facilities may be installed to extent permitted by governing regulations.
 - a. Provide lavatories, mirrors, urinals (where applicable), and water closets in water and sewer connected units. Provide only potable water at lavatories. Provide individual compartments for water closets where the unit is intended for occupancy by more than one person. Provide suitable enclosure with nonabsorbent sanitary finish materials and adequate heat, ventilation and lighting.
 - b. Provide separate toilet facilities for male and female construction personnel as required.
5. Wash Facilities: Install potable water-supplied wash facilities at locations convenient to construction personnel involved in the handling of compounds and materials where wash-up is necessary to maintain a safe, healthy and sanitary condition. Where recommended or required by governing authorities and regulations or recognized standards provide emergency safety showers, emergency eye-wash fountains, showers, and similar facilities. Dispose of drainage properly. Supply soap and other cleaning compounds appropriate for each condition.
6. Drinking Water Fixtures: Provide containerized tap-dispenser type drinking water units. Provide drinking water fountains if piped potable water is reasonably accessible from permanent or temporary lines.
7. Supply and maintain toilet tissue, paper towels, paper cups and similar disposable materials as appropriate for each facility. Provide appropriate covered waste containers for used material.

- B. Use of Existing Facilities:
1. Not applicable.

3.05 SEWERS AND DRAINAGE:

- A. General: Where sewers or drainage facilities are not available for discharge of effluent, provide containers to remove and dispose of effluent off the Site in a lawful manner. If existing sewers are available for temporary drainage near the Site prior to completion of permanent sewers, provide temporary connections to remove effluent that can be lawfully discharged into the sewers. If existing sewers cannot be used for discharge, provide drainage ditches, dry wells, waste stabilization ponds, and similar discharge facilities to remove effluent that can be lawfully discharged in that manner.
- B. Connect temporary sewers to the municipal sewer systems in the manner directed by the sewer department officials.
- C. Maintain temporary sewers and drainage facilities in a clean, sanitary condition. Following heavy usage, restore to normal conditions promptly. Provide and maintain temporary earthen embankments and similar barriers in and around construction excavations and subgrade construction, sufficient to prevent flooding by runoff of storm water from heavy rain storms.

SECTION 01560 – TEMPORARY UTILITIES AND FACILITIES (continued)

3.06 TEMPORARY CONSTRUCTION AIDS:

A. General:

1. Provide construction aids and equipment required by personnel and to facilitate the execution of the Work; scaffolds, staging, ladders, stairs, ramps, runways, platforms, railings, hoists, cranes, chutes, and other such facilities and equipment.
2. Materials may be new or used, must be suitable for the intended purpose, and meet the requirements of applicable codes, regulations, and standards.
3. When permanent stair framing is in place, provide temporary treads, platforms, and railings for use by construction personnel.

3.07 TEMPORARY SAFETY AND HEALTH:

- #### **A. General:**
- Contractor shall be responsible for development of safety and health programs for personnel at Project Site as specified in the GENERAL CONDITIONS.

3.08 TEMPORARY FIRE PROTECTION:

A. General:

1. Contractor shall be responsible for development of a fire prevention and protection program for all Work under this Contract.
2. The program shall comply with the applicable provisions for safety and protection as set forth in the GENERAL CONDITIONS and with applicable parts of the NFPA 10 and 241.
3. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor at or near such usable stairwell.
4. Store combustible materials in containers in fire-safe locations.
5. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, stairways, and other access routes for fighting fires. Prohibit smoking in hazardous fire exposure areas.
6. Provide supervision of welding operations and similar sources of fire ignition.
7. Post warning and instructions at each extinguisher location, and instruct construction personnel on proper use of extinguishers and other available facilities at Project Site. Post local fire department telephone number on or near each telephone instrument at Project Site.

B. Permanent Fire Protection:

1. Complete each fire protection facility at earliest reasonable date, place into operation, and make ready for emergency use.
2. Instruct personnel at Site on availability and proper use.

SECTION 01560 – TEMPORARY UTILITIES AND FACILITIES (continued)

3.09

INSTALLATION AND REMOVAL:

- A. Relocation: Relocate construction aids as required by progress of construction, storage limitations, or Work requirements and to accommodate requirements of Owner and other contractors at the Site.
- B. Removal: Remove temporary materials, equipment, and services when construction needs can be met and allowed by use of permanent construction, or at completion of the Project.
- C. Repair: Clean and repair damage caused by installation or by use of temporary facilities.
 - 1. Remove foundations and underground installations for construction aids.
 - 2. Grade the areas of the Site affected by temporary installations to required elevations and clean the area.

SECTION 01560 – TEMPORARY UTILITIES AND FACILITIES (continued)

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END OF SECTION 01560

SECTION 01580 – PROJECT IDENTIFICATION SIGNS

PART 1 - GENERAL

1.01 SUMMARY:

- A. This Section includes basic requirements for temporary Project identification and informational signs required during construction.
- B. Related Work Specified Elsewhere:
 - 1. Submittals: Section 105, Standard Specifications for Street and Drainage Construction
 - 2. Traffic Control signs specified elsewhere.
 - 3. EDA Site Sign Specifications

1.02 QUALITY ASSURANCE:

- A. Design sign and structure to withstand wind and environmental conditions of locality. Provide with finish adequate to withstand weathering, fading, chipping, and peeling for duration of construction.

1.03 SUBMITTALS:

- A. Submit as specified in Section 105, Standard Specifications for Street and Drainage Construction
- B. Includes, but not limited to, the following:
 - 1. Shop Drawings and product data as applicable.
 - 2. Show content, layout, lettering, colors, structure, and foundation.

PART 2 - PRODUCTS

2.01 IDENTIFICATION SIGNS:

- A. Project Identification:
 - 1. Construct structure and framing of wood or metal, structurally adequate to resist design requirements of locality.
 - 2. Construct sign surface of minimum 3/4 inch thickness exterior grade plywood with medium density overlay. Panels shall be of size to minimize joints. Overall size shall be 4' x 8'.
 - 3. Rough hardware shall be galvanized or aluminum.
 - 4. Coating: Paint-colors selected by Owner.
 - 5. Information Content:
 - a. Project title, logo, and name of Owner as shown on Contract Documents.
 - b. Names and titles of authorities.
 - c. Name, title and address of Engineer.
 - d. Name of prime Contractor and major Subcontractors.
 - e. Any additional information requested by Owner.
- B. Contractor Identification: If not part of Project identification sign, provide and install Contractor's standard sign.

SECTION 01580 – PROJECT IDENTIFICATION AND SIGNS (continued)

2.02 INFORMATIONAL SIGNS:

- A. Construction:
 - 1. This includes signs for traffic, construction workers, and general public in regards to directions, warnings, hazards, locations of areas, facilities, equipment, and others of a similar nature.
 - 2. Provide signs of design, size, color, and lettering as required by regulatory agencies. Signs shall be painted metal, wood, plastic, or fiberglass and of materials suitable for the conditions in which they are placed, such as weathering and fading.
 - 3. Construct structure and framing of wood or metal, structurally adequate to resist design requirements of area of Project.
- B. EDA Project Sign
 - 1. Contractor shall supply, erect, and maintain in good condition a project sign per the specifications and details shown on the drawings and the attached EDA Site Sign Specifications.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Project and Contractor Identification Sign:
 - 1. Install in appropriate location so as not to obstruct traffic, pedestrians, or construction operations.
 - 2. Erect on framing or foundation, and rigidly brace.
 - 3. Maintain sign in good repair, in a clean and neat condition.
 - 4. Remove upon completion of Project.
- B. Informational Signs:
 - 1. Install at appropriate locations and in sufficient quantities to assure visibility. Relocate as required by progress of Work.
 - 2. Maintain signs in good repair, in a neat, clean, readable condition.
 - 3. Remove all signs, framing, supports, and foundations upon completion of Project.

END OF SECTION 01580

EDA PROJECT SIGN

The Contractor shall supply, erect, and maintain in good condition a project sign according to the specifications set forth below:

EDA SITE SIGN SPECIFICATIONS

Size: 4' x 8' x ¾"

Materials: Exterior grade/MDO plywood (APA rating A-B)

Supports: 4" x 4" x 12' posts with 2" x 4" cross branching

Erection: Posts shall be set a minimum of three feet deep in concrete footings that are at least 12" in diameter.

Paint: Outdoor enamel

Colors: Jet Black, Blue (PMS300), and Gold (PMS7406). Specifically, on white background the following will be placed:

The U. S. Department of Commerce seal in blue, black, and gold;

"EDA" in blue;

"U. S. DEPARTMENT OF COMMERCE ECONOMIC DEVELOPMENT
ADMINISTRATION" in black;

"In partnership with" in blue;

(Actual name of the) "EDA Grant Recipient" in black;

Lettering: Specific fonts are named below; positioning will be as shown on the attached illustration.

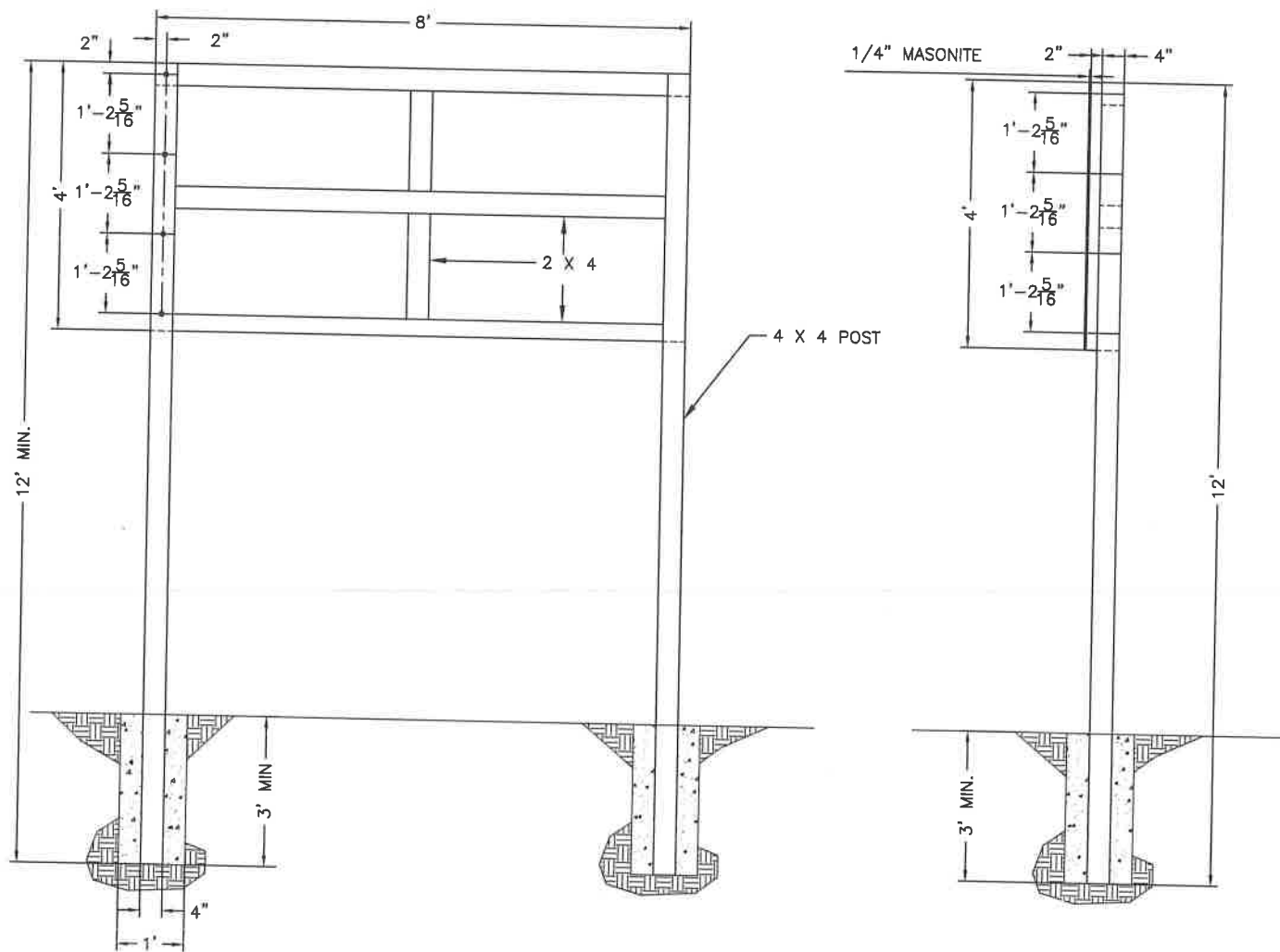
"U. S. DEPARTMENT OF COMMERCE ECONOMIC DEVELOPMENT
ADMINISTRATION" use Bank Gothic Medium - **BANK GOTHIC MED**

"In partnership with" use Univers™ 55 Oblique - **Univers 55**

(Name of) "EDA Grant Recipient" use Univers™ Extra Black 85 **Univers 85**

Project signs will not be erected on public highway rights-of-way. If any possibility exists for obstruction to traffic line of sight, the location and height of the sign will be coordinated with the agency responsible for highway or street safety in the area.

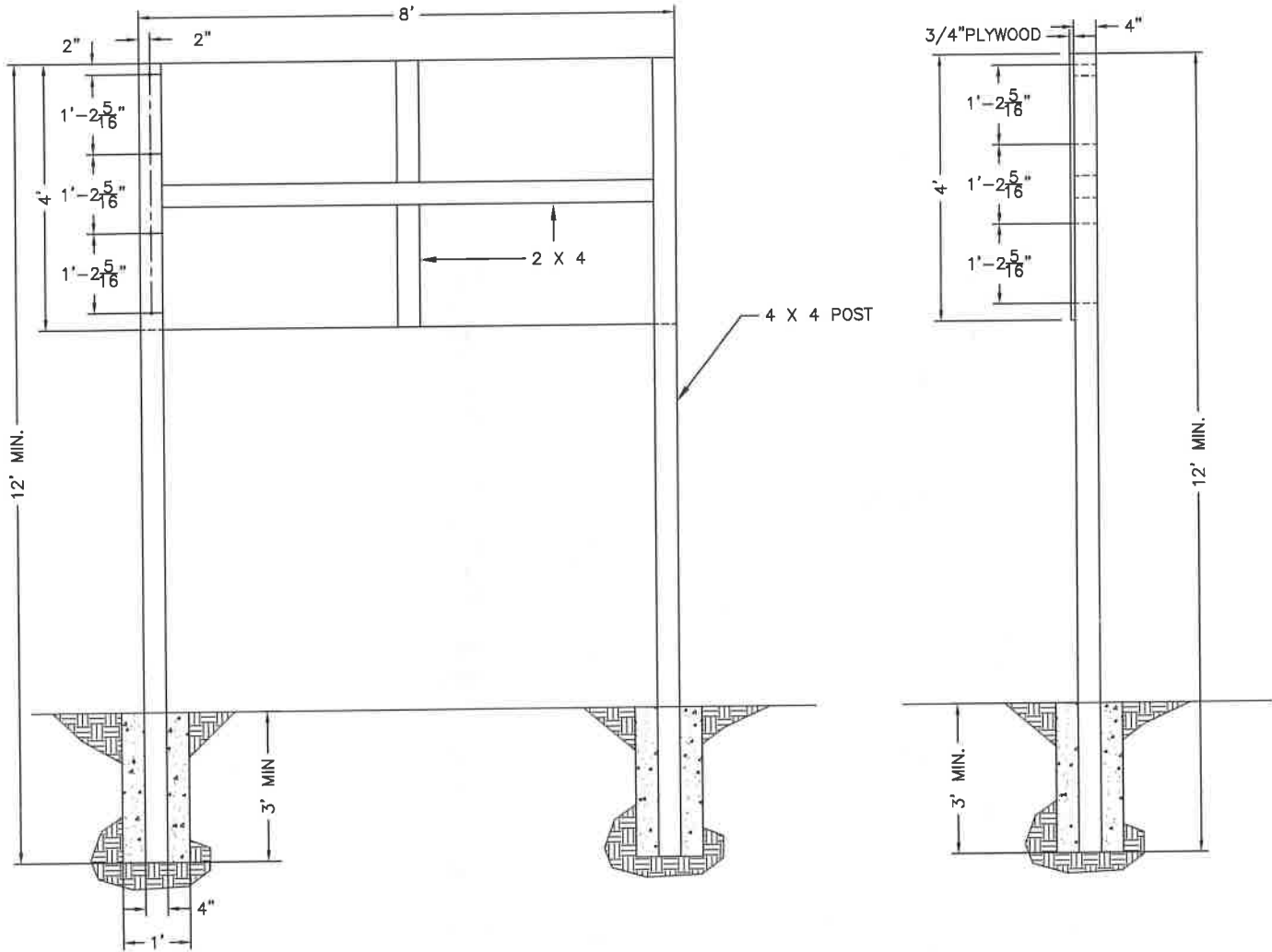
The EDA Regional Director may permit modifications to these specifications if they conflict with state law or local ordinances.



SIGN A
MASONITE SIGN
SCALE: 3/8" = 1'

PROJECT - SIGN A

ECONOMIC DEVELOPMENT ADMINISTRATION



SIGN B
PLYWOOD SIGN
SCALE: 3/8" = 1'

PROJECT - SIGN B

ECONOMIC DEVELOPMENT ADMINISTRATION

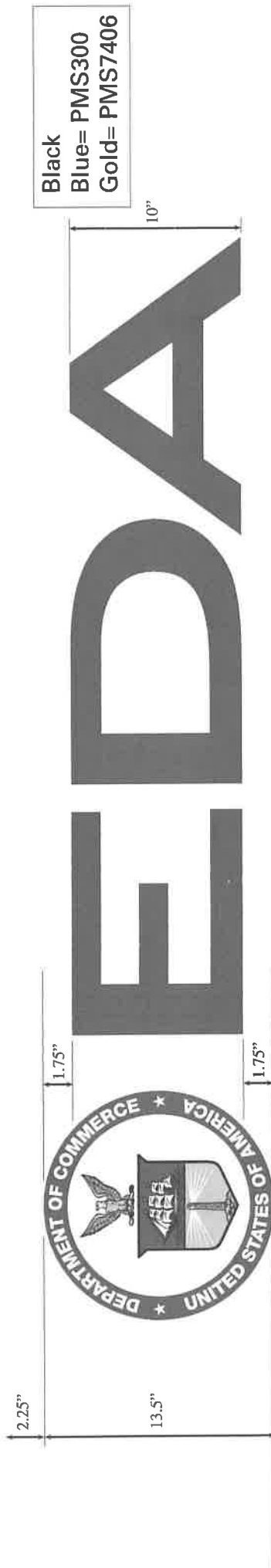


EDA

U.S. DEPARTMENT OF COMMERCE ECONOMIC DEVELOPMENT ADMINISTRATION

In partnership with

<EDA Grant Recipient Name>



Black
Blue= PMS300
Gold= PMS7406

U.S. DEPARTMENT OF COMMERCE ECONOMIC DEVELOPMENT ADMINISTRATION

In partnership with

<EDA Grant Recipient Name>

15.0"

96"

48"

SECTION 01620 – 29 CFR PART 1926 SUBPART P, OSHA STANDARDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. See OSHA Standards 29 CFR Part 1926 Subpart P, attached.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01620

25059), or 9-83 (48 FR 35736), as applicable, and 29 CFR part 1911.

SOURCE: 54 FR 45959, Oct. 31, 1989, unless otherwise noted.

§ 1926.650 Scope, application, and definitions applicable to this subpart.

(a) *Scope and application.* This subpart applies to all open excavations made in the earth's surface. Excavations are defined to include trenches.

(b) *Definitions applicable to this subpart.*

Accepted engineering practices means those requirements which are compatible with standards of practice required by a registered professional engineer.

Aluminum Hydraulic Shoring means a pre-engineered shoring system comprised of aluminum hydraulic cylinders (crossbraces) used in conjunction with vertical rails (uprights) or horizontal rails (walers). Such system is designed, specifically to support the sidewalls of an excavation and prevent cave-ins.

Bell-bottom pier hole means a type of shaft or footing excavation, the bottom of which is made larger than the cross section above to form a belled shape.

Benching (Benching system) means a method of protecting employees from cave-ins by excavating the sides of an excavation to form one or a series of horizontal levels or steps, usually with vertical or near-vertical surfaces between levels.

Cave-in means the separation of a mass of soil or rock material from the side of an excavation, or the loss of soil from under a trench shield or support system, and its sudden movement into the excavation, either by falling or sliding, in sufficient quantity so that it could entrap, bury, or otherwise injure and immobilize a person.

Competent person means one who is capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Cross braces mean the horizontal members of a shoring system installed perpendicular to the sides of the excavation, the ends of which bear against either uprights or wales.

Subpart P—Excavations

AUTHORITY: Sec. 107, Contract Worker Hours and Safety Standards Act (Construction Safety Act) (40 U.S.C. 333); Secs. 4, 6, 8, Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); Secretary of Labor's Order No. 12-71 (36 FR 8754), 8-76 (41 FR

Excavation means any man-made cut, cavity, trench, or depression in an earth surface, formed by earth removal.

Faces or sides means the vertical or inclined earth surfaces formed as a result of excavation work.

Failure means the breakage, displacement, or permanent deformation of a structural member or connection so as to reduce its structural integrity and its supportive capabilities.

Hazardous atmosphere means an atmosphere which by reason of being explosive, flammable, poisonous, corrosive, oxidizing, irritating, oxygen deficient, toxic, or otherwise harmful, may cause death, illness, or injury.

Kickout means the accidental release or failure of a cross brace.

Protective system means a method of protecting employees from cave-ins, from material that could fall or roll from an excavation face or into an excavation, or from the collapse of adjacent structures. Protective systems include support systems, sloping and benching systems, shield systems, and other systems that provide the necessary protection.

Ramp means an inclined walking or working surface that is used to gain access to one point from another, and is constructed from earth or from structural materials such as steel or wood.

Registered Professional Engineer means a person who is registered as a professional engineer in the state where the work is to be performed. However, a professional engineer, registered in any state is deemed to be a "registered professional engineer" within the meaning of this standard when approving designs for "manufactured protective systems" or "tabulated data" to be used in interstate commerce.

Sheeting means the members of a shoring system that retain the earth in position and in turn are supported by other members of the shoring system.

Shield (Shield system) means a structure that is able to withstand the forces imposed on it by a cave-in and thereby protect employees within the structure. Shields can be permanent structures or can be designed to be portable and moved along as work progresses. Additionally, shields can be either premanufactured or job-built in

accordance with § 1926.652 (c)(3) or (c)(4). Shields used in trenches are usually referred to as "trench boxes" or "trench shields."

Shoring (Shoring system) means a structure such as a metal hydraulic, mechanical or timber shoring system that supports the sides of an excavation and which is designed to prevent cave-ins.

Sides. See "Faces."

Sloping (Sloping system) means a method of protecting employees from cave-ins by excavating to form sides of an excavation that are inclined away from the excavation so as to prevent cave-ins. The angle of incline required to prevent a cave-in varies with differences in such factors as the soil type, environmental conditions of exposure, and application of surcharge loads.

Stable rock means natural solid mineral material that can be excavated with vertical sides and will remain intact while exposed. Unstable rock is considered to be stable when the rock material on the side or sides of the excavation is secured against caving-in or movement by rock bolts or by another protective system that has been designed by a registered professional engineer.

Structural ramp means a ramp built of steel or wood, usually used for vehicle access. Ramps made of soil or rock are not considered structural ramps.

Support system means a structure such as underpinning, bracing, or shoring, which provides support to an adjacent structure, underground installation, or the sides of an excavation.

Tabulated data means tables and charts approved by a registered professional engineer and used to design and construct a protective system.

Trench (Trench excavation) means a narrow excavation (in relation to its length) made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench (measured at the bottom) is not greater than 15 feet (4.6 m). If forms or other structures are installed or constructed in an excavation so as to reduce the dimension measured from the forms or structure to the side of the excavation to 15 feet (4.6 m) or less

(measured at the bottom of the excavation), the excavation is also considered to be a trench.

Trench box. See "Shield."

Trench shield. See "Shield."

Uprights means the vertical members of a trench shoring system placed in contact with the earth and usually positioned so that individual members do not contact each other. Uprights placed so that individual members are closely spaced, in contact with or interconnected to each other, are often called "sheeting."

Wales means horizontal members of a shoring system placed parallel to the excavation face whose sides bear against the vertical members of the shoring system or earth.

§ 1926.651 Specific excavation requirements.

(a) *Surface encumbrances.* All surface encumbrances that are located so as to create a hazard to employees shall be removed or supported, as necessary, to safeguard employees.

(b) *Underground installations.* (1) The estimated location of utility installations, such as sewer, telephone, fuel, electric, water lines, or any other underground installations that reasonably may be expected to be encountered during excavation work, shall be determined prior to opening an excavation.

(2) Utility companies or owners shall be contacted within established or customary local response times, advised of the proposed work, and asked to establish the location of the utility underground installations prior to the start of actual excavation. When utility companies or owners cannot respond to a request to locate underground utility installations within 24 hours (unless a longer period is required by state or local law), or cannot establish the exact location of these installations, the employer may proceed, provided the employer does so with caution, and provided detection equipment or other acceptable means to locate utility installations are used.

(3) When excavation operations approach the estimated location of underground installations, the exact location of the installations shall be determined by safe and acceptable means.

(4) While the excavation is open, underground installations shall be protected, supported or removed as necessary to safeguard employees.

(c) *Access and egress*—(1) *Structural ramps.* (i) Structural ramps that are used solely by employees as a means of access or egress from excavations shall be designed by a competent person. Structural ramps used for access or egress of equipment shall be designed by a competent person qualified in structural design, and shall be constructed in accordance with the design.

(ii) Ramps and runways constructed of two or more structural members shall have the structural members connected together to prevent displacement.

(iii) Structural members used for ramps and runways shall be of uniform thickness.

(iv) Cleats or other appropriate means used to connect runway structural members shall be attached to the bottom of the runway or shall be attached in a manner to prevent tripping.

(v) Structural ramps used in lieu of steps shall be provided with cleats or other surface treatments on the top surface to prevent slipping.

(2) *Means of egress from trench excavations.* A stairway, ladder, ramp or other safe means of egress shall be located in trench excavations that are 4 feet (1.22 m) or more in depth so as to require no more than 25 feet (7.62 m) of lateral travel for employees.

(d) *Exposure to vehicular traffic.* Employees exposed to public vehicular traffic shall be provided with, and shall wear, warning vests or other suitable garments marked with or made of reflectorized or high-visibility material.

(e) *Exposure to falling loads.* No employee shall be permitted underneath loads handled by lifting or digging equipment. Employees shall be required to stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials. Operators may remain in the cabs of vehicles being loaded or unloaded when the vehicles are equipped, in accordance with § 1926.601(b)(6), to provide adequate protection for the operator during loading and unloading operations.

(f) *Warning system for mobile equipment.* When mobile equipment is operated adjacent to an excavation, or when such equipment is required to approach the edge of an excavation, and the operator does not have a clear and direct view of the edge of the excavation, a warning system shall be utilized such as barricades, hand or mechanical signals, or stop logs. If possible, the grade should be away from the excavation.

(g) *Hazardous atmospheres—(1) Testing and controls.* In addition to the requirements set forth in subparts D and E of this part (29 CFR 1926.50–1926.107) to prevent exposure to harmful levels of atmospheric contaminants and to assure acceptable atmospheric conditions, the following requirements shall apply:

(i) Where oxygen deficiency (atmospheres containing less than 19.5 percent oxygen) or a hazardous atmosphere exists or could reasonably be expected to exist, such as in excavations in landfill areas or excavations in areas where hazardous substances are stored nearby, the atmospheres in the excavation shall be tested before employees enter excavations greater than 4 feet (1.22 m) in depth.

(ii) Adequate precautions shall be taken to prevent employee exposure to atmospheres containing less than 19.5 percent oxygen and other hazardous atmospheres. These precautions include providing proper respiratory protection or ventilation in accordance with subparts D and E of this part respectively.

(iii) Adequate precaution shall be taken such as providing ventilation, to prevent employee exposure to an atmosphere containing a concentration of a flammable gas in excess of 20 percent of the lower flammable limit of the gas.

(iv) When controls are used that are intended to reduce the level of atmospheric contaminants to acceptable levels, testing shall be conducted as often as necessary to ensure that the atmosphere remains safe.

(2) *Emergency rescue equipment.* (i) Emergency rescue equipment, such as breathing apparatus, a safety harness and line, or a basket stretcher, shall be readily available where hazardous at-

mospheric conditions exist or may reasonably be expected to develop during work in an excavation. This equipment shall be attended when in use.

(ii) Employees entering bell-bottom pier holes, or other similar deep and confined footing excavations, shall wear a harness with a life-line securely attached to it. The lifeline shall be separate from any line used to handle materials, and shall be individually attended at all times while the employee wearing the lifeline is in the excavation.

(h) *Protection from hazards associated with water accumulation.* (1) Employees shall not work in excavations in which there is accumulated water, or in excavations in which water is accumulating, unless adequate precautions have been taken to protect employees against the hazards posed by water accumulation. The precautions necessary to protect employees adequately vary with each situation, but could include special support or shield systems to protect from cave-ins, water removal to control the level of accumulating water, or use of a safety harness and lifeline.

(2) If water is controlled or prevented from accumulating by the use of water removal equipment, the water removal equipment and operations shall be monitored by a competent person to ensure proper operation.

(3) If excavation work interrupts the natural drainage of surface water (such as streams), diversion ditches, dikes, or other suitable means shall be used to prevent surface water from entering the excavation and to provide adequate drainage of the area adjacent to the excavation. Excavations subject to runoff from heavy rains will require an inspection by a competent person and compliance with paragraphs (h)(1) and (h)(2) of this section.

(i) *Stability of adjacent structures.* (1) Where the stability of adjoining buildings, walls, or other structures is endangered by excavation operations, support systems such as shoring, bracing, or underpinning shall be provided to ensure the stability of such structures for the protection of employees.

(2) Excavation below the level of the base or footing of any foundation or retaining wall that could be reasonably

expected to pose a hazard to employees shall not be permitted except when:

(i) A support system, such as underpinning, is provided to ensure the safety of employees and the stability of the structure; or

(ii) The excavation is in stable rock; or

(iii) A registered professional engineer has approved the determination that the structure is sufficiently removed from the excavation so as to be unaffected by the excavation activity; or

(iv) A registered professional engineer has approved the determination that such excavation work will not pose a hazard to employees.

(3) Sidewalks, pavements, and appurtenant structure shall not be undermined unless a support system or another method of protection is provided to protect employees from the possible collapse of such structures.

(j) *Protection of employees from loose rock or soil.* (1) Adequate protection shall be provided to protect employees from loose rock or soil that could pose a hazard by falling or rolling from an excavation face. Such protection shall consist of scaling to remove loose material; installation of protective barricades at intervals as necessary on the face to stop and contain falling material; or other means that provide equivalent protection.

(2) Employees shall be protected from excavated or other materials or equipment that could pose a hazard by falling or rolling into excavations. Protection shall be provided by placing and keeping such materials or equipment at least 2 feet (.61 m) from the edge of excavations, or by the use of retaining devices that are sufficient to prevent materials or equipment from falling or rolling into excavations, or by a combination of both if necessary.

(k) *Inspections.* (1) Daily inspections of excavations, the adjacent areas, and protective systems shall be made by a competent person for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions. An inspection shall be conducted by the competent person prior to the start of work and as needed throughout

the shift. Inspections shall also be made after every rainstorm or other hazard increasing occurrence. These inspections are only required when employee exposure can be reasonably anticipated.

(2) Where the competent person finds evidence of a situation that could result in a possible cave-in, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions, exposed employees shall be removed from the hazardous area until the necessary precautions have been taken to ensure their safety.

(l) Walkways shall be provided where employees or equipment are required or permitted to cross over excavations. Guardrails which comply with § 1926.502(b) shall be provided where walkways are 6 feet (1.8 m) or more above lower levels.

[54 FR 45959, Oct. 31, 1989, as amended by 59 FR 40730, Aug. 9, 1994]

§ 1926.652 Requirements for protective systems.

(a) *Protection of employees in excavations.* (1) Each employee in an excavation shall be protected from cave-ins by an adequate protective system designed in accordance with paragraph (b) or (c) of this section except when:

(i) Excavations are made entirely in stable rock; or

(ii) Excavations are less than 5 feet (1.52m) in depth and examination of the ground by a competent person provides no indication of a potential cave-in.

(2) Protective systems shall have the capacity to resist without failure all loads that are intended or could reasonably be expected to be applied or transmitted to the system.

(b) *Design of sloping and benching systems.* The slopes and configurations of sloping and benching systems shall be selected and constructed by the employer or his designee and shall be in accordance with the requirements of paragraph (b)(1); or, in the alternative, paragraph (b)(2); or, in the alternative, paragraph (b)(3), or, in the alternative, paragraph (b)(4), as follows:

(1) *Option (1)—Allowable configurations and slopes.* (i) Excavations shall be sloped at an angle not steeper than one and one-half horizontal to one vertical

(34 degrees measured from the horizontal), unless the employer uses one of the other options listed below.

(ii) Slopes specified in paragraph (b)(1)(i) of this section, shall be excavated to form configurations that are in accordance with the slopes shown for Type C soil in Appendix B to this subpart.

(2) *Option (2)—Determination of slopes and configurations using Appendices A and B.* Maximum allowable slopes, and allowable configurations for sloping and benching systems, shall be determined in accordance with the conditions and requirements set forth in appendices A and B to this subpart.

(3) *Option (3)—Designs using other tabulated data.* (i) Designs of sloping or benching systems shall be selected from and be in accordance with tabulated data, such as tables and charts.

(ii) The tabulated data shall be in written form and shall include all of the following:

(A) Identification of the parameters that affect the selection of a sloping or benching system drawn from such data;

(B) Identification of the limits of use of the data, to include the magnitude and configuration of slopes determined to be safe;

(C) Explanatory information as may be necessary to aid the user in making a correct selection of a protective system from the data.

(iii) At least one copy of the tabulated data which identifies the registered professional engineer who approved the data, shall be maintained at the jobsite during construction of the protective system. After that time the data may be stored off the jobsite, but a copy of the data shall be made available to the Secretary upon request.

(4) *Option (4)—Design by a registered professional engineer.* (i) Sloping and benching systems not utilizing Option (1) or Option (2) or Option (3) under paragraph (b) of this section shall be approved by a registered professional engineer.

(ii) Designs shall be in written form and shall include at least the following:

(A) The magnitude of the slopes that were determined to be safe for the particular project;

(B) The configurations that were determined to be safe for the particular project; and

(C) The identity of the registered professional engineer approving the design.

(iii) At least one copy of the design shall be maintained at the jobsite while the slope is being constructed. After that time the design need not be at the jobsite, but a copy shall be made available to the Secretary upon request.

(c) *Design of support systems, shield systems, and other protective systems.* Designs of support systems shield systems, and other protective systems shall be selected and constructed by the employer or his designee and shall be in accordance with the requirements of paragraph (c)(1); or, in the alternative, paragraph (c)(2); or, in the alternative, paragraph (c)(3); or, in the alternative, paragraph (c)(4) as follows:

(1) *Option (1)—Designs using appendices A, C and D.* Designs for timber shoring in trenches shall be determined in accordance with the conditions and requirements set forth in appendices A and C to this subpart. Designs for aluminum hydraulic shoring shall be in accordance with paragraph (c)(2) of this section, but if manufacturer's tabulated data cannot be utilized, designs shall be in accordance with appendix D.

(2) *Option (2)—Designs Using Manufacturer's Tabulated Data.* (i) Design of support systems, shield systems, or other protective systems that are drawn from manufacturer's tabulated data shall be in accordance with all specifications, recommendations, and limitations issued or made by the manufacturer.

(ii) Deviation from the specifications, recommendations, and limitations issued or made by the manufacturer shall only be allowed after the manufacturer issues specific written approval.

(iii) Manufacturer's specifications, recommendations, and limitations, and manufacturer's approval to deviate from the specifications, recommendations, and limitations shall be in written form at the jobsite during construction of the protective system. After that time this data may be stored off the jobsite, but a copy shall

be made available to the Secretary upon request.

(3) *Option (3)—Designs using other tabulated data.* (i) Designs of support systems, shield systems, or other protective systems shall be selected from and be in accordance with tabulated data, such as tables and charts.

(ii) The tabulated data shall be in written form and include all of the following:

(A) Identification of the parameters that affect the selection of a protective system drawn from such data;

(B) Identification of the limits of use of the data;

(C) Explanatory information as may be necessary to aid the user in making a correct selection of a protective system from the data.

(iii) At least one copy of the tabulated data, which identifies the registered professional engineer who approved the data, shall be maintained at the jobsite during construction of the protective system. After that time the data may be stored off the jobsite, but a copy of the data shall be made available to the Secretary upon request.

(4) *Option (4)—Design by a registered professional engineer.* (i) Support systems, shield systems, and other protective systems not utilizing Option 1, Option 2 or Option 3, above, shall be approved by a registered professional engineer.

(ii) Designs shall be in written form and shall include the following:

(A) A plan indicating the sizes, types, and configurations of the materials to be used in the protective system; and

(B) The identity of the registered professional engineer approving the design.

(iii) At least one copy of the design shall be maintained at the jobsite during construction of the protective system. After that time, the design may be stored off the jobsite, but a copy of the design shall be made available to the Secretary upon request.

(d) *Materials and equipment.* (1) Materials and equipment used for protective systems shall be free from damage or defects that might impair their proper function.

(2) Manufactured materials and equipment used for protective systems shall be used and maintained in a man-

ner that is consistent with the recommendations of the manufacturer, and in a manner that will prevent employee exposure to hazards.

(3) When material or equipment that is used for protective systems is damaged, a competent person shall examine the material or equipment and evaluate its suitability for continued use. If the competent person cannot assure the material or equipment is able to support the intended loads or is otherwise suitable for safe use, then such material or equipment shall be removed from service, and shall be evaluated and approved by a registered professional engineer before being returned to service.

(e) *Installation and removal of support—*(1) *General.* (i) Members of support systems shall be securely connected together to prevent sliding, falling, kickouts, or other predictable failure.

(ii) Support systems shall be installed and removed in a manner that protects employees from cave-ins, structural collapses, or from being struck by members of the support system.

(iii) Individual members of support systems shall not be subjected to loads exceeding those which those members were designed to withstand.

(iv) Before temporary removal of individual members begins, additional precautions shall be taken to ensure the safety of employees, such as installing other structural members to carry the loads imposed on the support system.

(v) Removal shall begin at, and progress from, the bottom of the excavation. Members shall be released slowly so as to note any indication of possible failure of the remaining members of the structure or possible cave-in of the sides of the excavation.

(vi) Backfilling shall progress together with the removal of support systems from excavations.

(2) *Additional requirements for support systems for trench excavations.* (i) Excavation of material to a level no greater than 2 feet (.61 m) below the bottom of the members of a support system shall be permitted, but only if the system is designed to resist the forces calculated for the full depth of the trench, and

there are no indications while the trench is open of a possible loss of soil from behind or below the bottom of the support system.

(ii) Installation of a support system shall be closely coordinated with the excavation of trenches.

(f) *Sloping and benching systems.* Employees shall not be permitted to work on the faces of sloped or benched excavations at levels above other employees except when employees at the lower levels are adequately protected from the hazard of falling, rolling, or sliding material or equipment.

(g) *Shield systems*—(1) *General.* (i) Shield systems shall not be subjected to loads exceeding those which the system was designed to withstand.

(ii) Shields shall be installed in a manner to restrict lateral or other hazardous movement of the shield in the event of the application of sudden lateral loads.

(iii) Employees shall be protected from the hazard of cave-ins when entering or exiting the areas protected by shields.

(iv) Employees shall not be allowed in shields when shields are being installed, removed, or moved vertically.

(2) *Additional requirement for shield systems used in trench excavations.* Excavations of earth material to a level not greater than 2 feet (.61 m) below the bottom of a shield shall be permitted, but only if the shield is designed to resist the forces calculated for the full depth of the trench, and there are no indications while the trench is open of a possible loss of soil from behind or below the bottom of the shield.

APPENDIX A TO SUBPART P OF PART 1926—SOIL CLASSIFICATION

(a) *Scope and application*—(1) *Scope.* This appendix describes a method of classifying soil and rock deposits based on site and environmental conditions, and on the structure and composition of the earth deposits. The appendix contains definitions, sets forth requirements, and describes acceptable visual and manual tests for use in classifying soils.

(2) *Application.* This appendix applies when a sloping or benching system is designed in accordance with the requirements set forth in §1926.652(b)(2) as a method of protection for employees from cave-ins. This appendix also applies when timber shoring for excavations is designed as a method of protection from cave-ins in accordance with appendix C

to subpart P of part 1926, and when aluminum hydraulic shoring is designed in accordance with appendix D. This Appendix also applies if other protective systems are designed and selected for use from data prepared in accordance with the requirements set forth in §1926.652(c), and the use of the data is predicated on the use of the soil classification system set forth in this appendix.

(b) *Definitions.* The definitions and examples given below are based on, in whole or in part, the following: American Society for Testing Materials (ASTM) Standards D653-85 and D2488; The Unified Soils Classification System, The U.S. Department of Agriculture (USDA) Textural Classification Scheme; and The National Bureau of Standards Report BSS-121.

Cemented soil means a soil in which the particles are held together by a chemical agent, such as calcium carbonate, such that a hand-size sample cannot be crushed into powder or individual soil particles by finger pressure.

Cohesive soil means clay (fine grained soil), or soil with a high clay content, which has cohesive strength. Cohesive soil does not crumble, can be excavated with vertical sideslopes, and is plastic when moist. Cohesive soil is hard to break up when dry, and exhibits significant cohesion when submerged. Cohesive soils include clayey silt, sandy clay, silty clay, clay and organic clay.

Dry soil means soil that does not exhibit visible signs of moisture content.

Fissured means a soil material that has a tendency to break along definite planes of fracture with little resistance, or a material that exhibits open cracks, such as tension cracks, in an exposed surface.

Granular soil means gravel, sand, or silt, (coarse grained soil) with little or no clay content. Granular soil has no cohesive strength. Some moist granular soils exhibit apparent cohesion. Granular soil cannot be molded when moist and crumbles easily when dry.

Layered system means two or more distinctly different soil or rock types arranged in layers. Micaceous seams or weakened planes in rock or shale are considered layered.

Moist soil means a condition in which a soil looks and feels damp. Moist cohesive soil can easily be shaped into a ball and rolled into small diameter threads before crumbling. Moist granular soil that contains some cohesive material will exhibit signs of cohesion between particles.

Plastic means a property of a soil which allows the soil to be deformed or molded without cracking, or appreciable volume change.

Saturated soil means a soil in which the voids are filled with water. Saturation does not require flow. Saturation, or near saturation, is necessary for the proper use of instruments such as a pocket penetrometer or shear vane.

Soil classification system means, for the purpose of this subpart, a method of categorizing soil and rock deposits in a hierarchy of Stable Rock, Type A, Type B, and Type C, in decreasing order of stability. The categories are determined based on an analysis of the properties and performance characteristics of the deposits and the environmental conditions of exposure.

Stable rock means natural solid mineral matter that can be excavated with vertical sides and remain intact while exposed.

Submerged soil means soil which is underwater or is free seeping.

Type A means cohesive soils with an unconfined compressive strength of 1.5 ton per square foot (tsf) (144 kPa) or greater. Examples of cohesive soils are: clay, silty clay, sandy clay, clay loam and, in some cases, silty clay loam and sandy clay loam. Cemented soils such as caliche and hardpan are also considered Type A. However, no soil is Type A if:

- (i) The soil is fissured; or
- (ii) The soil is subject to vibration from heavy traffic, pile driving, or similar effects; or
- (iii) The soil has been previously disturbed; or
- (iv) The soil is part of a sloped, layered system where the layers dip into the excavation on a slope of four horizontal to one vertical (4H:1V) or greater; or
- (v) The material is subject to other factors that would require it to be classified as a less stable material.

Type B means:

- (i) Cohesive soil with an unconfined compressive strength greater than 0.5 tsf (48 kPa) but less than 1.5 tsf (144 kPa); or
- (ii) Granular cohesionless soils including: angular gravel (similar to crushed rock), silt, silt loam, sandy loam and, in some cases, silty clay loam and sandy clay loam.
- (iii) Previously disturbed soils except those which would otherwise be classed as Type C soil.
- (iv) Soil that meets the unconfined compressive strength or cementation requirements for Type A, but is fissured or subject to vibration; or
- (v) Dry rock that is not stable; or
- (vi) Material that is part of a sloped, layered system where the layers dip into the excavation on a slope less steep than four horizontal to one vertical (4H:1V), but only if the material would otherwise be classified as Type B.

Type C means:

- (i) Cohesive soil with an unconfined compressive strength of 0.5 tsf (48 kPa) or less; or
- (ii) Granular soils including gravel, sand, and loamy sand; or
- (iii) Submerged soil or soil from which water is freely seeping; or
- (iv) Submerged rock that is not stable, or

(v) Material in a sloped, layered system where the layers dip into the excavation or a slope of four horizontal to one vertical (4H:1V) or steeper.

Unconfined compressive strength means the load per unit area at which a soil will fail in compression. It can be determined by laboratory testing, or estimated in the field using a pocket penetrometer, by thumb penetration tests, and other methods.

Wet soil means soil that contains significantly more moisture than moist soil, but in such a range of values that cohesive material will slump or begin to flow when vibrated. Granular material that would exhibit cohesive properties when moist will lose those cohesive properties when wet.

(c) *Requirements*—(1) *Classification of soil and rock deposits*. Each soil and rock deposit shall be classified by a competent person as Stable Rock, Type A, Type B, or Type C in accordance with the definitions set forth in paragraph (b) of this appendix.

(2) *Basis of classification*. The classification of the deposits shall be made based on the results of at least one visual and at least one manual analysis. Such analyses shall be conducted by a competent person using tests described in paragraph (d) below, or in other recognized methods of soil classification and testing such as those adopted by the American Society for Testing Materials, or the U.S. Department of Agriculture textural classification system.

(3) *Visual and manual analyses*. The visual and manual analyses, such as those noted as being acceptable in paragraph (d) of this appendix, shall be designed and conducted to provide sufficient quantitative and qualitative information as may be necessary to identify properly the properties, factors, and conditions affecting the classification of the deposits.

(4) *Layered systems*. In a layered system, the system shall be classified in accordance with its weakest layer. However, each layer may be classified individually where a more stable layer lies under a less stable layer.

(5) *Reclassification*. If, after classifying a deposit, the properties, factors, or conditions affecting its classification change in any way, the changes shall be evaluated by a competent person. The deposit shall be reclassified as necessary to reflect the changed circumstances.

(d) *Acceptable visual and manual tests*.—(1) *Visual tests*. Visual analysis is conducted to determine qualitative information regarding the excavation site in general, the soil adjacent to the excavation, the soil forming the sides of the open excavation, and the soil taken as samples from excavated material.

(i) Observe samples of soil that are excavated and soil in the sides of the excavation. Estimate the range of particle sizes and the relative amounts of the particle sizes. Soil that is primarily composed of fine-grained

material is cohesive material. Soil composed primarily of coarse-grained sand or gravel is granular material.

(ii) Observe soil as it is excavated. Soil that remains in clumps when excavated is cohesive. Soil that breaks up easily and does not stay in clumps is granular.

(iii) Observe the side of the opened excavation and the surface area adjacent to the excavation. Crack-like openings such as tension cracks could indicate fissured material. If chunks of soil spall off a vertical side, the soil could be fissured. Small spalls are evidence of moving ground and are indications of potentially hazardous situations.

(iv) Observe the area adjacent to the excavation and the excavation itself for evidence of existing utility and other underground structures, and to identify previously disturbed soil.

(v) Observe the opened side of the excavation to identify layered systems. Examine layered systems to identify if the layers slope toward the excavation. Estimate the degree of slope of the layers.

(vi) Observe the area adjacent to the excavation and the sides of the opened excavation for evidence of surface water, water seeping from the sides of the excavation, or the location of the level of the water table.

(vii) Observe the area adjacent to the excavation and the area within the excavation for sources of vibration that may affect the stability of the excavation face.

(2) *Manual tests.* Manual analysis of soil samples is conducted to determine quantitative as well as qualitative properties of soil and to provide more information in order to classify soil properly.

(i) *Plasticity.* Mold a moist or wet sample of soil into a ball and attempt to roll it into threads as thin as 1/8-inch in diameter. Cohesive material can be successfully rolled into threads without crumbling. For example, if at least a two inch (50 mm) length of 1/8-inch thread can be held on one end without tearing, the soil is cohesive.

(ii) *Dry strength.* If the soil is dry and crumbles on its own or with moderate pressure into individual grains or fine powder, it is granular (any combination of gravel, sand, or silt). If the soil is dry and falls into clumps which break up into smaller clumps, but the smaller clumps can only be broken up with difficulty, it may be clay in any combination with gravel, sand or silt. If the dry soil breaks into clumps which do not break up into small clumps and which can only be broken with difficulty, and there is no visual indication the soil is fissured, the soil may be considered unfissured.

(iii) *Thumb penetration.* The thumb penetration test can be used to estimate the unconfined compressive strength of cohesive soils. (This test is based on the thumb penetration test described in American Society for Testing and Materials (ASTM) Standard

designation D2488—"Standard Recommended Practice for Description of Soils (Visual—Manual Procedure).") Type A soils with an unconfined compressive strength of 1.5 tsf can be readily indented by the thumb; however, they can be penetrated by the thumb only with very great effort. Type C soils with an unconfined compressive strength of 0.5 tsf can be easily penetrated several inches by the thumb, and can be molded by light finger pressure. This test should be conducted on an undisturbed soil sample, such as a large clump of spoil, as soon as practicable after excavation to keep to a minimum the effects of exposure to drying influences. If the excavation is later exposed to wetting influences (rain, flooding), the classification of the soil must be changed accordingly.

(iv) *Other strength tests.* Estimates of unconfined compressive strength of soils can also be obtained by use of a pocket penetrometer or by using a hand-operated shearvane.

(v) *Drying test.* The basic purpose of the drying test is to differentiate between cohesive material with fissures, unfissured cohesive material, and granular material. The procedure for the drying test involves drying a sample of soil that is approximately one inch thick (2.54 cm) and six inches (15.24 cm) in diameter until it is thoroughly dry:

(A) If the sample develops cracks as it dries, significant fissures are indicated.

(B) Samples that dry without cracking are to be broken by hand. If considerable force is necessary to break a sample, the soil has significant cohesive material content. The soil can be classified as a unfissured cohesive material and the unconfined compressive strength should be determined.

(C) If a sample breaks easily by hand, it is either a fissured cohesive material or a granular material. To distinguish between the two, pulverize the dried clumps of the sample by hand or by stepping on them. If the clumps do not pulverize easily, the material is cohesive with fissures. If they pulverize easily into very small fragments, the material is granular.

APPENDIX B TO SUBPART P OF PART 1926—SLOPING AND BENCHING

(a) *Scope and application.* This appendix contains specifications for sloping and benching when used as methods of protecting employees working in excavations from cave-ins. The requirements of this appendix apply when the design of sloping and benching protective systems is to be performed in accordance with the requirements set forth in § 1926.652(b)(2).

(b) *Definitions.*

Actual slope means the slope to which an excavation face is excavated.

Distress means that the soil is in a condition where a cave-in is imminent or is likely

to occur. Distress is evidenced by such phenomena as the development of fissures in the face of or adjacent to an open excavation; the subsidence of the edge of an excavation; the slumping of material from the face or the bulging or heaving of material from the bottom of an excavation; the spalling of material from the face of an excavation; and raveling, i.e., small amounts of material such as pebbles or little clumps of material suddenly separating from the face of an excavation and trickling or rolling down into the excavation.

Maximum allowable slope means the steepest incline of an excavation face that is acceptable for the most favorable site conditions as protection against cave-ins, and is expressed as the ratio of horizontal distance to vertical rise (H:V).

Short term exposure means a period of time less than or equal to 24 hours that an excavation is open.

(c) *Requirements*—(1) *Soil classification*. Soil and rock deposits shall be classified in accordance with appendix A to subpart P of part 1926.

(2) *Maximum allowable slope*. The maximum allowable slope for a soil or rock deposit shall be determined from Table B-1 of this appendix.

(3) *Actual slope*. (i) The actual slope shall not be steeper than the maximum allowable slope.

(ii) The actual slope shall be less steep than the maximum allowable slope, when there are signs of distress. If that situation occurs, the slope shall be cut back to an actual slope which is at least $\frac{1}{2}$ horizontal to one vertical ($\frac{1}{2}$ H:1V) less steep than the maximum allowable slope.

(iii) When surcharge loads from stored material or equipment, operating equipment, or traffic are present, a competent person shall determine the degree to which the actual slope must be reduced below the maximum allowable slope, and shall assure that such reduction is achieved. Surcharge loads from adjacent structures shall be evaluated in accordance with §1926.651(i).

(4) *Configurations*. Configurations of sloping and benching systems shall be in accordance with Figure B-1.

TABLE B-1
MAXIMUM ALLOWABLE SLOPES

SOIL OR ROCK TYPE	MAXIMUM ALLOWABLE SLOPES (H:V) [1] FOR EXCAVATIONS LESS THAN 20 FEET DEEP [3]
STABLE ROCK TYPE A [2] TYPE B TYPE C	VERTICAL (90°) 3/4 : 1 (53°) 1:1 (45°) 1½: 1 (34°)

NOTES:

- Numbers shown in parentheses next to maximum allowable slopes are angles expressed in degrees from the horizontal. Angles have been rounded off.
- A short-term maximum allowable slope of 1/2H:1V (63°) is allowed in excavations in Type A soil that are 12 feet (3.67 m) or less in depth. Short-term maximum allowable slopes for excavations greater than 12 feet (3.67 m) in depth shall be 3/4H:1V (53°).
- Sloping or benching for excavations greater than 20 feet deep shall be designed by a registered professional engineer.

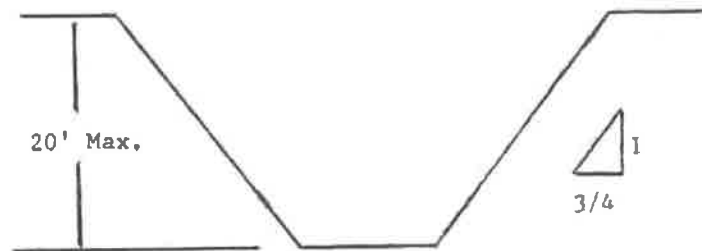
Figure B-1

Slope Configurations

(All slopes stated below are in the horizontal to vertical ratio)

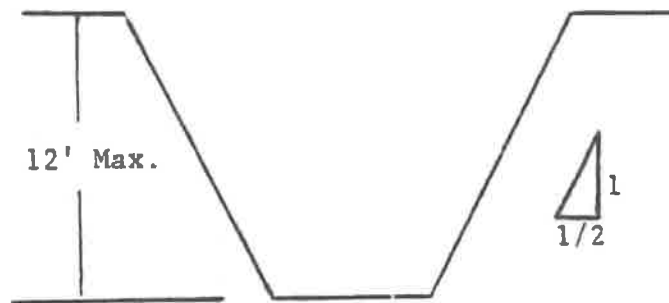
B-1.1 Excavations made in Type A soil.

1. All simple slope excavation 20 feet or less in depth shall have a maximum allowable slope of $\frac{3}{4}:1$.



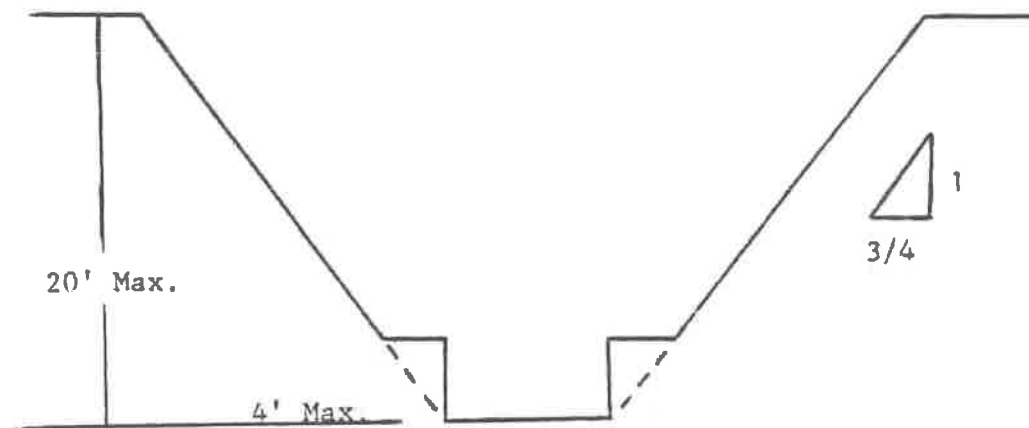
SIMPLE SLOPE—GENERAL

Exception: Simple slope excavations which are open 24 hours or less (short term) and which are 12 feet or less in depth shall have a maximum allowable slope of $\frac{1}{2}:1$.

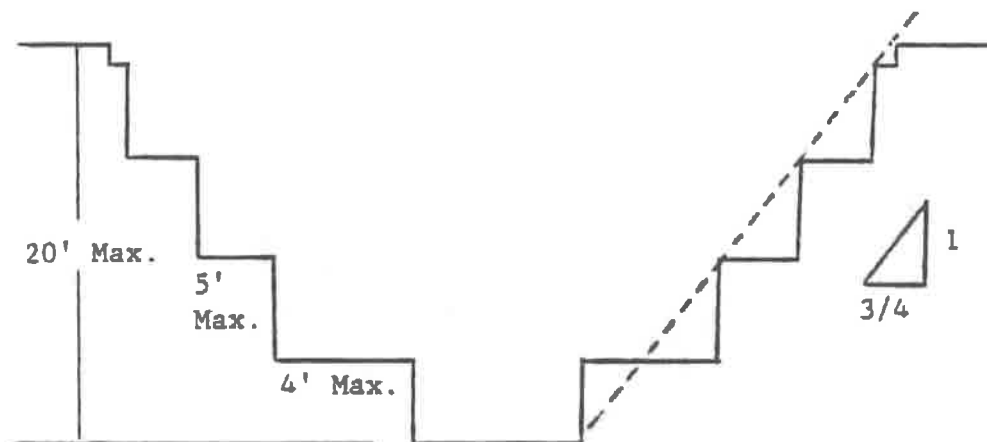


SIMPLE SLOPE—SHORT TERM

2. All benched excavations 20 feet or less in depth shall have a maximum allowable slope of $\frac{3}{4}$ to 1 and maximum bench dimensions as follows:

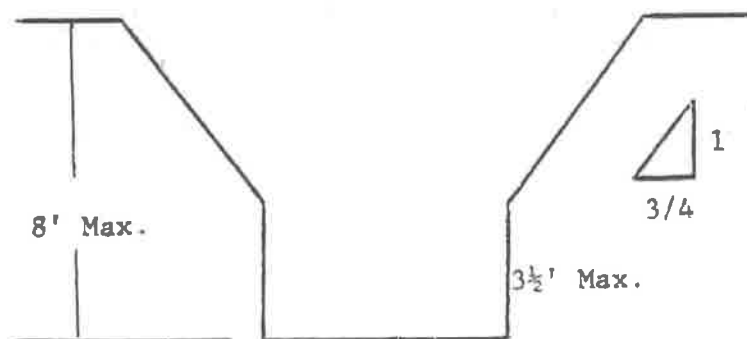


SIMPLE BENCH



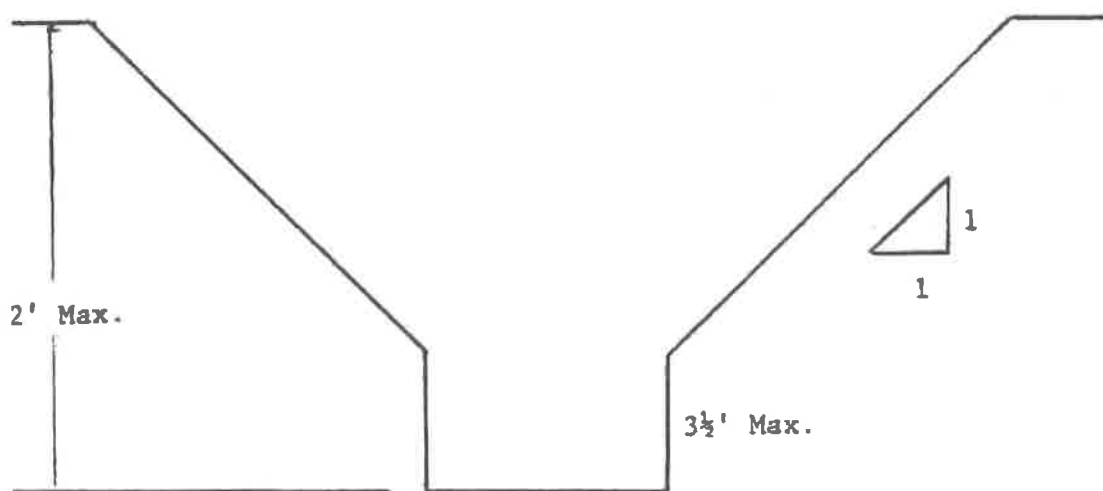
MULTIPLE BENCH

3. All excavations 8 feet or less in depth which have unsupported vertically sided lower portions shall have a maximum vertical side of $3\frac{1}{2}$ feet.



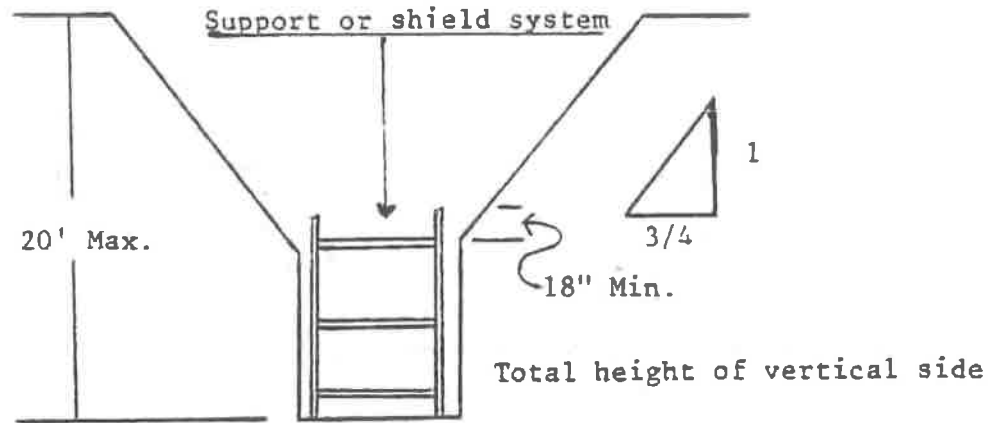
UNSUPPORTED VERTICALLY SIDED LOWER PORTION—MAXIMUM 8 FEET IN DEPTH

All excavations more than 8 feet but not more than 12 feet in depth which unsupported vertically sided lower portions shall have a maximum allowable slope of 1:1 and a maximum vertical side of $3\frac{1}{2}$ feet.



UNSUPPORTED VERTICALLY SIDED LOWER PORTION—MAXIMUM 12 FEET IN DEPTH

All excavations 20 feet or less in depth which have vertically sided lower portions that are supported or shielded shall have a maximum allowable slope of $\frac{3}{4}$:1. The support or shield system must extend at least 18 inches above the top of the vertical side.

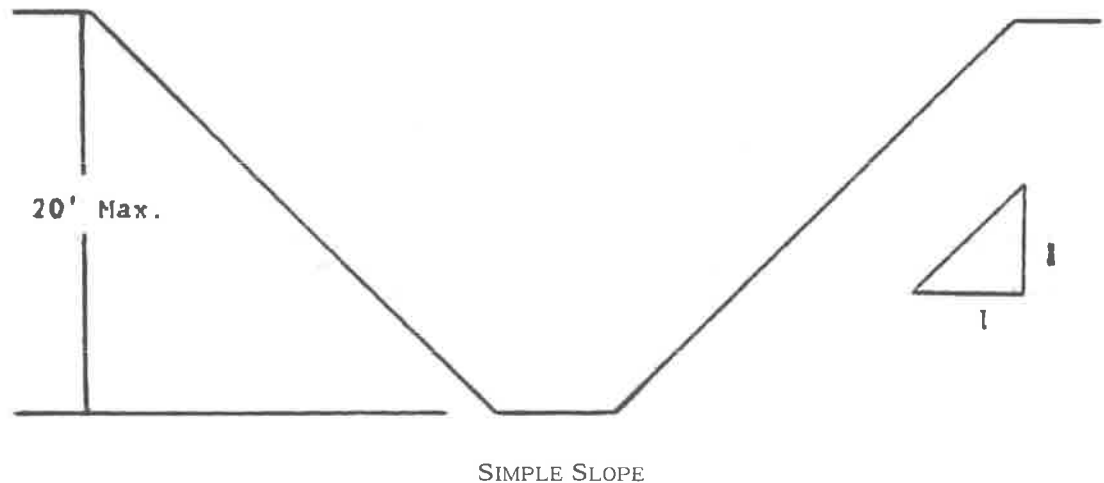


SUPPORTED OR SHIELDED VERTICALLY SIDED LOWER PORTION

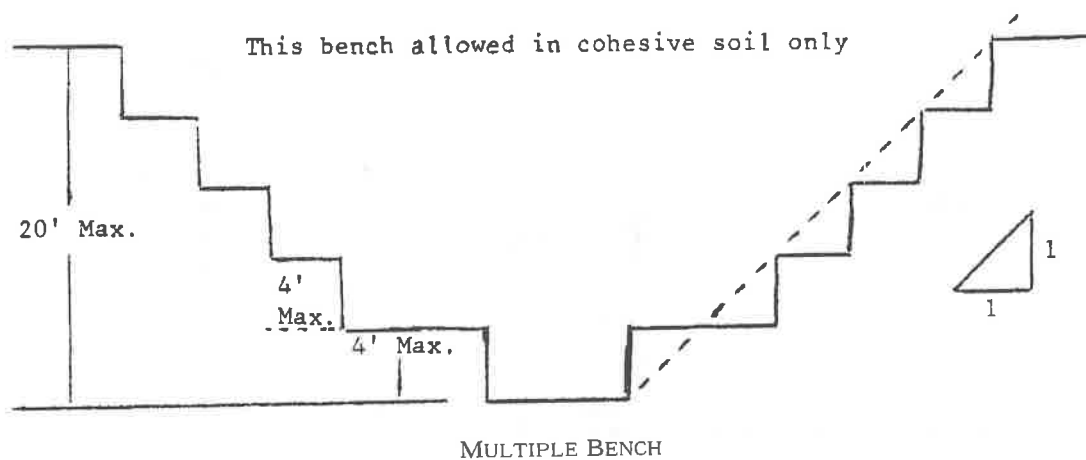
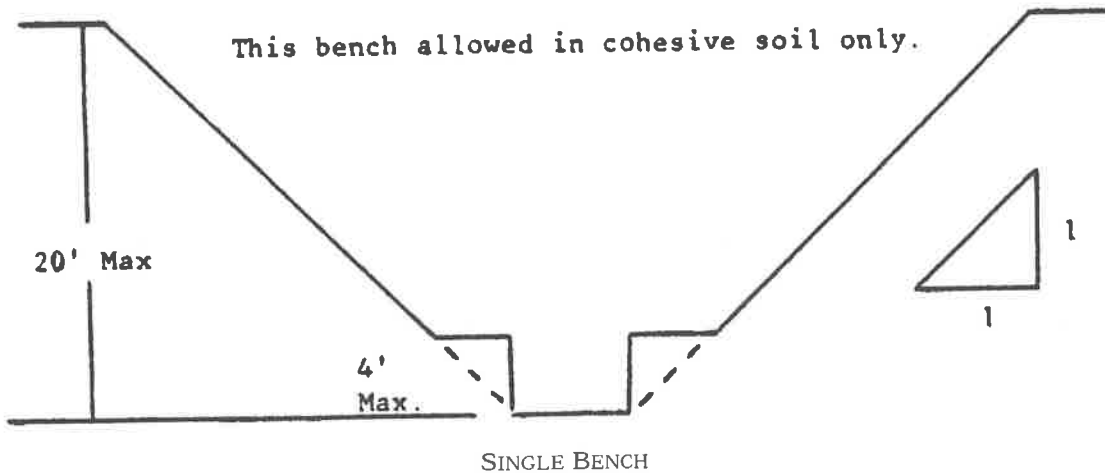
4. All other simple slope, compound slope, and vertically sided lower portion excavations shall be in accordance with the other options permitted under § 1926.652(b).

B-1.2 Excavations Made in Type B Soil

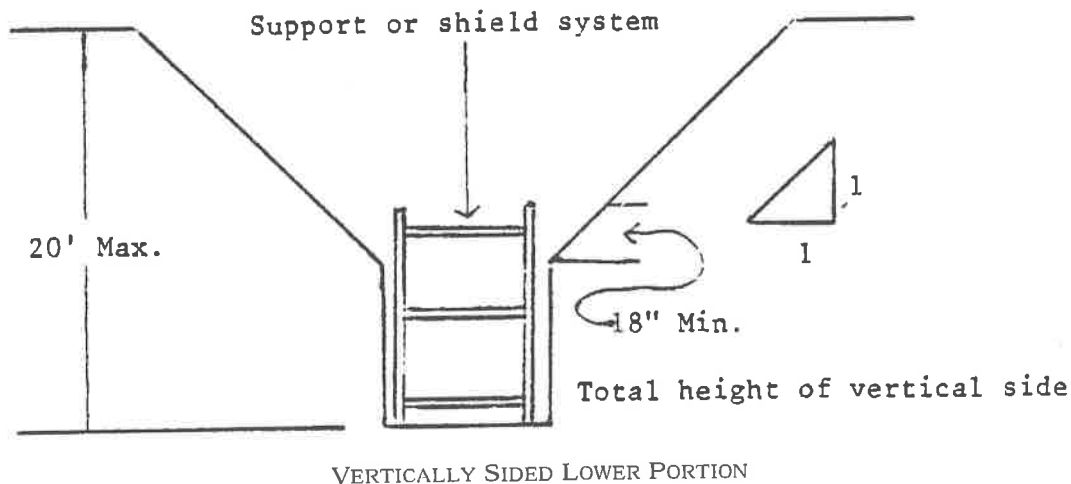
1. All simple slope excavations 20 feet or less in depth shall have a maximum allowable slope of 1:1.



2. All benched excavations 20 feet or less in depth shall have a maximum allowable slope of 1:1 and maximum bench dimensions as follows:



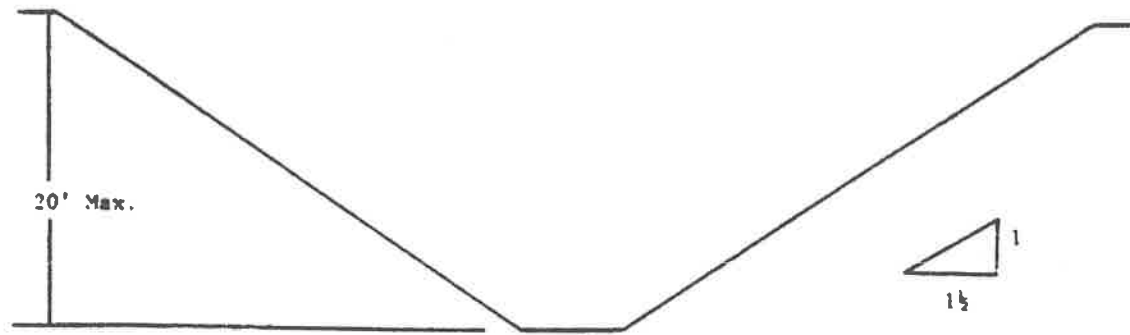
3. All excavations 20 feet or less in depth which have vertically sided lower portions shall be shielded or supported to a height at least 18 inches above the top of the vertical side. All such excavations shall have a maximum allowable slope of 1:1.



4. All other sloped excavations shall be in accordance with the other options permitted in § 1926.652(b).

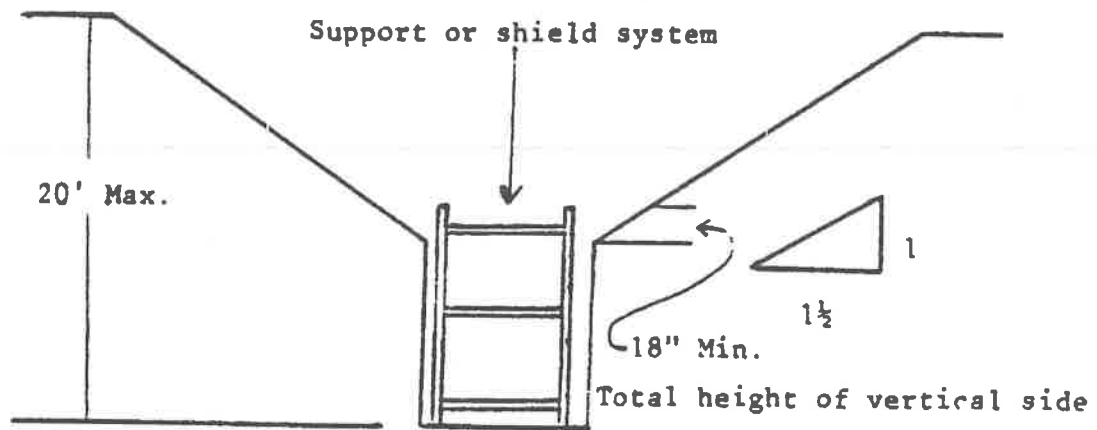
B-1.3 EXCAVATIONS MADE IN TYPE C SOIL

1. All simple slope excavations 20 feet or less in depth shall have a maximum allowable slope of 1½:1.



SIMPLE SLOPE

2. All excavations 20 feet or less in depth which have vertically sided lower portions shall be shielded or supported to a height at least 18 inches above the top of the vertical side. All such excavations shall have a maximum allowable slope of $1\frac{1}{2}:1$.

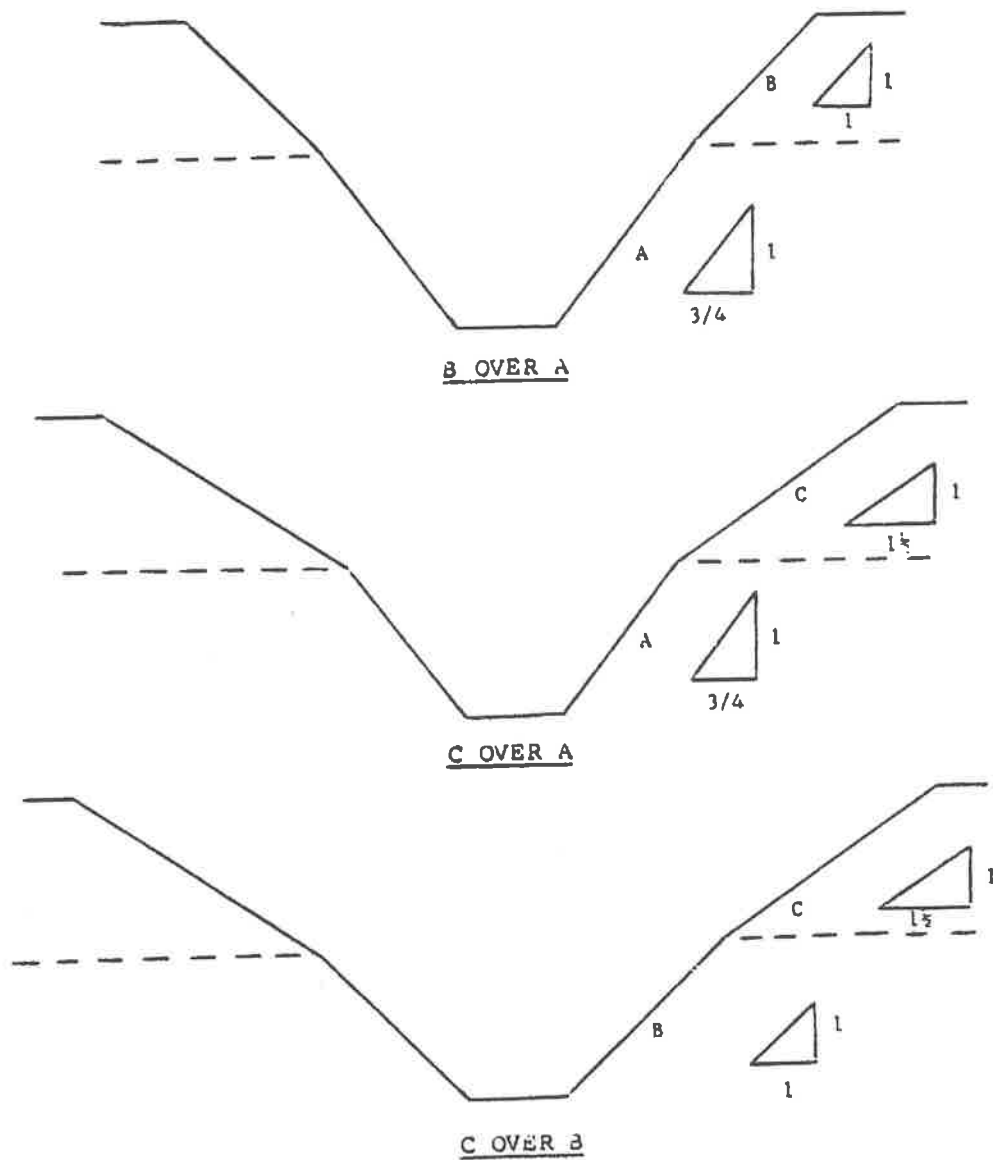


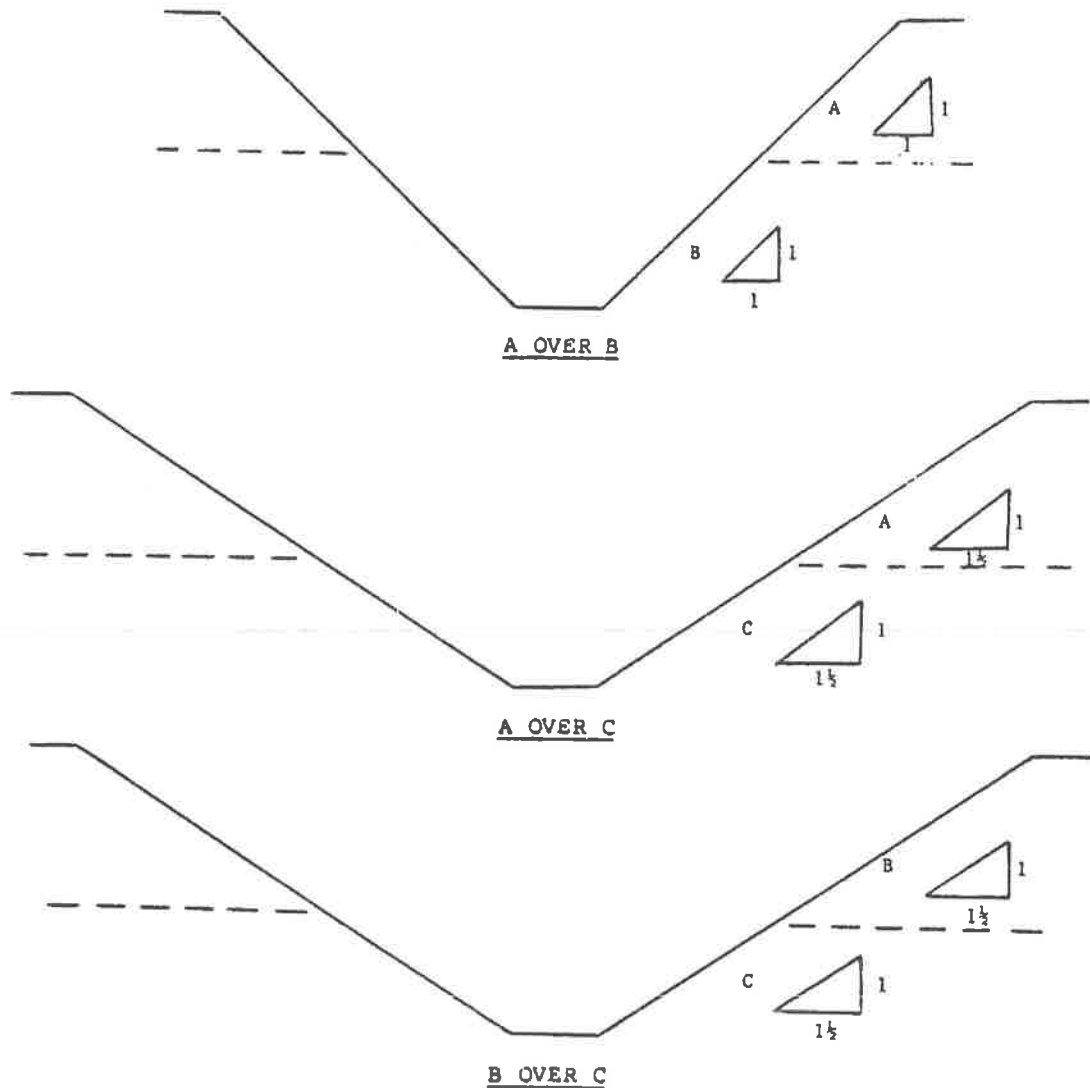
VERTICAL SIDED LOWER PORTION

3. All other sloped excavations shall be in accordance with the other options permitted in § 1926.652(b).

B-1.4 Excavations Made in Layered Soils

1. All excavations 20 feet or less in depth made in layered soils shall have a maximum allowable slope for each layer as set forth below.





2. All other sloped excavations shall be in accordance with the other options permitted in § 1926.652(b).

APPENDIX C TO SUBPART P OF PART 1926—TIMBER SHORING FOR TRENCHES

(a) *Scope.* This appendix contains information that can be used timber shoring is provided as a method of protection from cave-ins in trenches that do not exceed 20 feet (6.1 m) in depth. This appendix must be used when design of timber shoring protective systems is to be performed in accordance with § 1926.652(c)(1). Other timber shoring configurations; other systems of support such as hydraulic and pneumatic systems; and other protective systems such as sloping, benching, shielding, and freezing systems must be designed in accordance with the requirements set forth in § 1926.652(b) and § 1926.652(c).

(b) *Soil Classification.* In order to use the data presented in this appendix, the soil type or types in which the excavation is made must first be determined using the soil classification method set forth in appendix A of subpart P of this part.

(c) *Presentation of Information.* Information is presented in several forms as follows:

(1) Information is presented in tabular form in Tables C-1.1, C-1.2, and C-1.3, and Tables C-2.1, C-2.2 and C-2.3 following paragraph (g) of the appendix. Each table presents the minimum sizes of timber members to use in a shoring system, and each table contains data only for the particular soil type in which the excavation or portion of

the excavation is made. The data are arranged to allow the user the flexibility to select from among several acceptable configurations of members based on varying the horizontal spacing of the crossbraces. Stable rock is exempt from shoring requirements and therefore, no data are presented for this condition.

(2) Information concerning the basis of the tabular data and the limitations of the data is presented in paragraph (d) of this appendix, and on the tables themselves.

(3) Information explaining the use of the tabular data is presented in paragraph (e) of this appendix.

(4) Information illustrating the use of the tabular data is presented in paragraph (f) of this appendix.

(5) Miscellaneous notations regarding Tables C-1.1 through C-1.3 and Tables C-2.1 through C-2.3 are presented in paragraph (g) of this Appendix.

(d) *Basis and limitations of the data.*—(1) *Dimensions of timber members.* (i) The sizes of the timber members listed in Tables C-1.1 through C-1.3 are taken from the National Bureau of Standards (NBS) report, "Recommended Technical Provisions for Construction Practice in Shoring and Sloping of Trenches and Excavations." In addition, where NBS did not recommend specific sizes of members, member sizes are based on an analysis of the sizes required for use by existing codes and on empirical practice.

(ii) The required dimensions of the members listed in Tables C-1.1 through C-1.3 refer to actual dimensions and not nominal dimensions of the timber. Employers wanting to use nominal size shoring are directed to Tables C-2.1 through C-2.3, or have this choice under §1926.652(c)(3), and are referred to The Corps of Engineers, The Bureau of Reclamation or data from other acceptable sources.

(2) *Limitation of application.* (i) It is not intended that the timber shoring specification apply to every situation that may be experienced in the field. These data were developed to apply to the situations that are most commonly experienced in current trenching practice. Shoring systems for use in situations that are not covered by the data in this appendix must be designed as specified in §1926.652(c).

(ii) When any of the following conditions are present, the members specified in the tables are not considered adequate. Either an alternate timber shoring system must be designed or another type of protective system designed in accordance with §1926.652.

(A) When loads imposed by structures or by stored material adjacent to the trench weigh in excess of the load imposed by a two-foot soil surcharge. The term "adjacent" as used here means the area within a horizontal distance from the edge of the trench equal to the depth of the trench.

(B) When vertical loads imposed on cross braces exceed a 240-pound gravity load distributed on a one-foot section of the center of the crossbrace.

(C) When surcharge loads are present from equipment weighing in excess of 20,000 pounds.

(D) When only the lower portion of a trench is shored and the remaining portion of the trench is sloped or benched unless: The sloped portion is sloped at an angle less steep than three horizontal to one vertical; or the members are selected from the tables for use at a depth which is determined from the top of the overall trench, and not from the toe of the sloped portion.

(e) *Use of Tables.* The members of the shoring system that are to be selected using this information are the cross braces, the uprights, and the wales, where wales are required. Minimum sizes of members are specified for use in different types of soil. There are six tables of information, two for each soil type. The soil type must first be determined in accordance with the soil classification system described in appendix A to subpart P of part 1926. Using the appropriate table, the selection of the size and spacing of the members is then made. The selection is based on the depth and width of the trench where the members are to be installed and, in most instances, the selection is also based on the horizontal spacing of the crossbraces. Instances where a choice of horizontal spacing of crossbracing is available, the horizontal spacing of the crossbraces must be chosen by the user before the size of any member can be determined. When the soil type, the width and depth of the trench, and the horizontal spacing of the crossbraces are known, the size and vertical spacing of the crossbraces, the size and vertical spacing of the wales, and the size and horizontal spacing of the uprights can be read from the appropriate table.

(f) *Examples to Illustrate the Use of Tables C-1.1 through C-1.3.*

(1) *Example 1.*

A trench dug in Type A soil is 13 feet deep and five feet wide.

From Table C-1.1, for acceptable arrangements of timber can be used.

Arrangement #B1

Space 4x4 crossbraces at six feet horizontally and four feet vertically.

Wales are not required.

Space 3x8 uprights at six feet horizontally. This arrangement is commonly called "skip shoring."

Arrangement #B2

Space 4x6 crossbraces at eight feet horizontally and four feet vertically.

Space 8x8 wales at four feet vertically.

Space 2x6 uprights at four feet horizontally.

Arrangement #B3

Space 6x6 crossbraces at 10 feet horizontally and four feet vertically.

Space 8x10 wales at four feet vertically.

Space 2x6 uprights at five feet horizontally.

Arrangement #B4

Space 6x6 crossbraces at 12 feet horizontally and four feet vertically.

Space 10x10 wales at four feet vertically.

Spaces 3x8 uprights at six feet horizontally.

(2) Example 2.

A trench dug in Type B soil in 13 feet deep and five feet wide. From Table C-1.2 three acceptable arrangements of members are listed.

Arrangement #B1

Space 6x6 crossbraces at six feet horizontally and five feet vertically.

Space 8x8 wales at five feet vertically.

Space 2x6 uprights at two feet horizontally.

Arrangement #B2

Space 6x8 crossbraces at eight feet horizontally and five feet vertically.

Space 10x10 wales at five feet vertically.

Space 2x6 uprights at two feet horizontally.

Arrangement #B3

Space 8x8 crossbraces at 10 feet horizontally and five feet vertically.

Space 10x12 wales at five feet vertically.

Space 2x6 uprights at two feet vertically.

(3) Example 3.

A trench dug in Type C soil is 13 feet deep and five feet wide.

From Table C-1.3 two acceptable arrangements of members can be used.

Arrangement #B1

Space 8x8 crossbraces at six feet horizontally and five feet vertically.

Space 10x12 wales at five feet vertically.

Position 2x6 uprights as closely together as possible.

If water must be retained use special tongue and groove uprights to form tight sheeting.

Arrangement #B2

Space 8x10 crossbraces at eight feet horizontally and five feet vertically.

Space 12x12 wales at five feet vertically.

Position 2x6 uprights in a close sheeting configuration unless water pressure must be resisted. Tight sheeting must be used where water must be retained.

(4) Example 4.

A trench dug in Type C soil is 20 feet deep and 11 feet wide. The size and spacing of members for the section of trench that is over 15 feet in depth is determined using Table C-1.3. Only one arrangement of members is provided.

Space 8x10 crossbraces at six feet horizontally and five feet vertically.

Space 12x12 wales at five feet vertically.

Use 3x6 tight sheeting.

Use of Tables C-2.1 through C-2.3 would follow the same procedures.

(g) Notes for all Tables.

1. Member sizes at spacings other than indicated are to be determined as specified in § 1926.652(c), "Design of Protective Systems."

2. When conditions are saturated or submerged use Tight Sheeting. Tight Sheeting refers to the use of specially-edged timber planks (e.g., tongue and groove) at least three inches thick, steel sheet piling, or similar construction that when driven or placed in position provide a tight wall to resist the lateral pressure of water and to prevent the loss of backfill material. Close Sheeting refers to the placement of planks side-by-side allowing as little space as possible between them.

3. All spacing indicated is measured center to center.

4. Wales to be installed with greater dimension horizontal.

5. If the vertical distance from the center of the lowest crossbrace to the bottom of the trench exceeds two and one-half feet, uprights shall be firmly embedded or a mudsill shall be used. Where uprights are embedded, the vertical distance from the center of the lowest crossbrace to the bottom of the trench shall not exceed 36 inches. When mudsills are used, the vertical distance shall not exceed 42 inches. Mudsills are wales that are installed at the toe of the trench side.

6. Trench jacks may be used in lieu of or in combination with timber crossbraces.

7. Placement of crossbraces. When the vertical spacing of crossbraces is four feet, place the top crossbrace no more than two feet below the top of the trench. When the vertical spacing of crossbraces is five feet, place the top crossbrace no more than 2.5 feet below the top of the trench.

TABLE C-1.1

TIMBER TRENCH SHORING -- MINIMUM TIMBER REQUIREMENTS *

SOIL TYPE A $P_a = 25 \times H + 72 \text{ psf}$ (2 ft Surcharge)

DEPTH OF TRENCH (FEET)	SIZE (ACTUAL) AND SPACING OF MEMBERS **													
	CROSS BRACES						WALES		UPRIGHTS					
	HORIZ. SPACING (FEET)	WIDTH OF TRENCH (FEET)					VERT. SPACING (FEET)	SIZE (IN)	VERT. SPACING (FEET)	MAXIMUM ALLOWABLE HORIZONTAL SPACING (FEET)				
		UP TO 4	UP TO 6	UP TO 9	UP TO 12	UP TO 15				CLOSE	4	5	6	
5	UP TO 6	4X4	4X4	4X6	6X6	6X6	4	Not Req'd	---					
TO	UP TO 8	4X4	4X4	4X6	6X6	6X6	4	Not Req'd	---				2X6	2X8
10	UP TO 10	4X6	4X6	4X6	6X6	6X6	4	8X8	4			2X6		
	UP TO 12	4X6	4X6	6X6	6X6	6X6	4	8X8	4				2X6	
10	UP TO 6	4X4	4X4	4X6	6X6	6X6	4	Not Req'd	---					
TO	UP TO 8	4X6	4X6	6X6	6X6	6X6	4	8X8	4		2X6			
15	UP TO 10	6X6	6X6	6X6	6X8	6X8	4	8X10	4			2X6		
	UP TO 12	6X6	6X6	6X6	6X8	6X8	4	10X10	4				3X8	
15	UP TO 6	6X6	6X6	6X6	6X8	6X8	4	6X8	4	3X6				
TO	UP TO 8	6X6	6X6	6X6	6X8	6X8	4	8X8	4	3X6				
20	UP TO 10	8X8	8X8	8X8	8X8	8X10	4	8X10	4	3X6				
	UP TO 12	8X8	8X8	8X8	8X8	8X10	4	10X10	4	3X6				
OVER 20	SEE NOTE 1													

* Mixed oak or equivalent with a bending strength not less than 850 psi.

** Manufactured members of equivalent strength may be substituted for wood.

TABLE C-1.2

TIMBER TRENCH SHORING -- MINIMUM TIMBER REQUIREMENTS *

SOIL TYPE B $P_a = 45 \text{ X H} + 72 \text{ psf}$ (2 ft. Surcharge)

DEPTH OF TRENCH (FEET)	SIZE (ACTUAL) AND SPACING OF MEMBERS**												
	CROSS BRACES						WALES			UPRIGHTS			
	HORIZ. SPACING (FEET)	WIDTH OF TRENCH (FEET)					VERT. SPACING (FEET)	SIZE (IN)	VERT. SPACING (FEET)	MAXIMUM ALLOWABLE HORIZONTAL SPACING (FEET)			
		UP TO 4	UP TO 6	UP TO 9	UP TO 12	UP TO 15				CLOSE	2	3	
5	UP TO 6	4X6	4X6	6X6	6X6	6X6	5	6X8	5				
TO	UP TO 8	6X6	6X6	6X6	6X8	6X8	5	8X10	5			2X6	
10	UP TO 10	6X6	6X6	6X6	6X8	6X8	5	10X10	5			2X6	
	See Note 1												
10	UP TO 6	6X6	6X6	6X6	6X8	6X8	5	8X8	5		2X6		
TO	UP TO 8	6X8	6X8	6X8	8X8	8X8	5	10X10	5		2X6		
15	UP TO 10	8X8	8X8	8X8	8X8	8X10	5	10X12	5		2X6		
	See Note 1												
15	UP TO 6	6X8	6X8	6X8	8X8	8X8	5	8X10	5	3X6			
TO	UP TO 8	8X8	8X8	8X8	8X8	8X10	5	10X12	5	3X6			
20	UP TO 10	8X10	8X10	8X10	8X10	10X10	5	12X12	5	3X6			
	See Note 1												
OVER 20	SEE NOTE 1												

* Mixed oak or equivalent with a bending strength not less than 850 psi.

** Manufactured members of equivalent strength may be substituted for wood.

TABLE C-1.3

TIMBER TRENCH SHORING -- MINIMUM TIMBER REQUIREMENTS *

SOIL TYPE C P_a = 80 X H + 72 psf (2 ft. Surcharge)

DEPTH OF TRENCH (FEET)	SIZE (ACTUAL) AND SPACING OF MEMBERS**											UPRIGHT'S
	CROSS BRACES							VERT. SPACING (FEET)	SIZE (IN)	VERT. SPACING (FEET)	CLOSE	
	HORIZ. SPACING (FEET)	WIDTH OF TRENCH (FEET)										
		UP TO 4	UP TO 6	UP TO 9	UP TO 12	UP TO 15	UP TO 15					
5 TO 10	UP TO 6	6X8	6X8	6X8	8X8	8X8	5	8X10	5	2X6		
	UP TO 8	8X8	8X8	8X8	8X8	8X10	5	10X12	5	2X6		
	UP TO 10	8X10	8X10	8X10	8X10	10X10	5	12X12	5	2X6		
	See Note 1											
10 TO 15	UP TO 6	8X8	8X8	8X8	8X8	8X10	5	10X12	5	2X6		
	UP TO 8	8X10	8X10	8X10	8X10	10X10	5	12X12	5	2X6		
	See Note 1											
	See Note 1											
15 TO 20	UP TO 6	8X10	8X10	8X10	8X10	10X10	5	12X12	5	3X6		
	See Note 1											
	See Note 1											
	See Note 1											
OVER 20	SEE NOTE 1											

* Mixed Oak or equivalent with a bending strength not less than 850 psi.

** Manufactured members of equivalent strength may be substituted for wood.

TABLE C-2.1

TIMBER TRENCH SHORING -- MINIMUM TIMBER REQUIREMENTS *

SOIL TYPE A $P_a = 25 \text{ X H} + 72 \text{ psf}$ (2 ft. Surcharge)

DEPTH OF TRENCH (FEET)	SIZE (S4S) AND SPACING OF MEMBERS **										MAXIMUM ALLOWABLE HORIZONTAL SPACING (FEET)			
	CROSS BRACES					WALES					UPRIGHTS			
	HORIZ. SPACING (FEET)		WIDTH OF TRENCH (FEET)			VERT. SPACING (FEET)	SIZE (IN.)	VERT. SPACING (FEET)	Not Req'd	Not Req'd	MAXIMUM ALLOWABLE HORIZONTAL SPACING (FEET)			
	UP	TO	UP	TO	UP						CLOSE	4	5	6
5 TO 10	UP	TO	4	6	9	4	4X4	4	4	Not Req'd				
	UP	TO	4X4	4X4	4X4	4	4X4	4	4	Not Req'd				
	UP	TO	4X4	4X4	4X4	4	4X4	4	4	Not Req'd				
	UP	TO	4X6	4X6	4X6	4	4X6	4	4	Not Req'd				
10 TO 15	UP	TO	4X6	4X6	4X6	4	4X6	4	4	Not Req'd				
	UP	TO	4X6	4X6	4X6	4	4X6	4	4	Not Req'd				
	UP	TO	4X6	4X6	4X6	4	4X6	4	4	Not Req'd				
	UP	TO	4X6	4X6	4X6	4	4X6	4	4	Not Req'd				
15 TO 20	UP	TO	4X6	4X6	4X6	4	4X6	4	4	Not Req'd				
	UP	TO	4X6	4X6	4X6	4	4X6	4	4	Not Req'd				
	UP	TO	4X6	4X6	4X6	4	4X6	4	4	Not Req'd				
	UP	TO	4X6	4X6	4X6	4	4X6	4	4	Not Req'd				
OVER 20	UP	TO	4X6	4X6	4X6	4	4X6	4	4	Not Req'd				

SEE NOTE 1

* Douglas fir or equivalent with a bending strength not less than 1500 psi.

** Manufactured members of equivalent strength may be substituted for wood.

TABLE C-2.2

TIMBER TRENCH SHORING -- MINIMUM TIMBER REQUIREMENTS *

SOIL TYPE B P_a = 45 X H + 72 psf (2 ft. Surcharge)

DEPTH OF TRENCH (FEET)	SIZE (S4S) AND SPACING OF MEMBERS **													UPRIGHTS						
	CROSS BRACES										WALES			MAXIMUM ALLOWABLE HORIZONTAL SPACING						
	HORIZ. SPACING (FEET)	WIDTH OF TRENCH (FEET)					VERT. SPACING (FEET)	SIZE (IN)	VERT. SPACING (FEET)	MAXIMUM ALLOWABLE HORIZONTAL SPACING										
		UP TO 4	UP TO 6	UP TO 9	UP TO 12	UP TO 15				CLOSE	2	3	4	6						
5	UP TO 6	4X6	4X6	4X6	6X6	6X6	5	6X8	5											
TO	UP TO 8	4X6	4X6	6X6	6X6	6X6	5	8X8	5							3X8				
10	UP TO 10	4X6	4X6	6X6	6X6	6X8	5	8X10	5								4X8			
	See Note 1																			
10	UP TO 6	6X6	6X6	6X6	6X8	6X8	5	8X8	5							3X6	4X10			
TO	UP TO 8	6X8	6X8	6X8	8X8	8X8	5	10X10	5							3X6	4X10			
15	UP TO 10	6X8	6X8	8X8	8X8	8X8	5	10X12	5							3X6	4X10			
	See Note 1																			
15	UP TO 6	6X8	6X8	6X8	6X8	6X8	5	8X10	5							4X6				
TO	UP TO 8	6X8	6X8	6X8	8X8	8X8	5	10X12	5							4X6				
20	UP TO 10	8X8	8X8	8X8	8X8	8X8	5	12X12	5							4X6				
	See Note 1																			
OVER 20	SEE NOTE 1																			

* Douglas fir or equivalent with a bending strength not less than 1500 psi.

** Manufactured members of equivalent strength may be substituted for wood.

TABLE C-2.3

TIMBER TRENCH SHORING -- MINIMUM TIMBER REQUIREMENTS *

SOIL TYPE C $P_a = 80 \times H \div 72$ psf (2 ft. Surcharge)

DEPTH OF TRENCH (FEET)	SIZE (SIZES) AND SPACING OF MEMBERS **										UPRIGHTS	
	CROSS BRACES					WALES					MAXIMUM ALLOWABLE HORIZONTAL SPACING	
	WIDTH OF TRENCH (FEET)					VERT. SPACING (FEET)					CLOSE	
	UP TO 4	UP TO 6	UP TO 9	UP TO 12	UP TO 15	UP TO 5	SIZE (IN)	VERT. SPACING (FEET)	SIZE (IN)	VERT. SPACING (FEET)		
5	UP TO 6	6X6	6X6	6X6	8X8	5	8X8	5				
TO 10	UP TO 8	6X6	6X6	6X6	8X8	5	10X10	5				
10	UP TO 10	6X6	8X8	8X8	8X8	5	10X12	5				
	See Note 1											
10	UP TO 6	6X8	6X8	6X8	8X8	5	10X10	5				
TO 15	UP TO 8	8X8	8X8	8X8	8X8	5	12X12	5				
	See Note 1											
	See Note 1											
15	UP TO 6	8X8	8X8	8X8	8X10	5	10X12	5				
TO 20	See Note 1											
	See Note 1											
	See Note 1											
OVER 20	See Note 1											

* Douglas fir or equivalent with a bending strength not less than 1500 psi.
 ** Manufactured members of equivalent strength may be substituted for wood.

APPENDIX D TO SUBPART P OF PART 1926—ALUMINUM HYDRAULIC SHORING FOR TRENCHES

(a) *Scope.* This appendix contains information that can be used when aluminum hydraulic shoring is provided as a method of protection against cave-ins in trenches that

do not exceed 20 feet (6.1m) in depth. This appendix must be used when design of the aluminum hydraulic protective system cannot be performed in accordance with § 1926.652(c)(2).

(b) *Soil Classification.* In order to use data presented in this appendix, the soil type or types in which the excavation is made must

first be determined using the soil classification method set forth in appendix A of subpart P of part 1926.

(c) *Presentation of Information.* Information is presented in several forms as follows:

(1) Information is presented in tabular form in Tables D-1.1, D-1.2, D-1.3 and D-1.4. Each table presents the maximum vertical and horizontal spacings that may be used with various aluminum member sizes and various hydraulic cylinder sizes. Each table contains data only for the particular soil type in which the excavation or portion of the excavation is made. Tables D-1.1 and D-1.2 are for vertical shores in Types A and B soil. Tables D-1.3 and D-1.4 are for horizontal waler systems in Types B and C soil.

(2) Information concerning the basis of the tabular data and the limitations of the data is presented in paragraph (d) of this appendix.

(3) Information explaining the use of the tabular data is presented in paragraph (e) of this appendix.

(4) Information illustrating the use of the tabular data is presented in paragraph (f) of this appendix.

(5) Miscellaneous notations (footnotes) regarding Table D-1.1 through D-1.4 are presented in paragraph (g) of this appendix.

(6) Figures, illustrating typical installations of hydraulic shoring, are included just prior to the Tables. The illustrations page is entitled "Aluminum Hydraulic Shoring; Typical Installations."

(d) *Basis and limitations of the data.*

(1) Vertical shore rails and horizontal wales are those that meet the Section Modulus requirements in the D-1 Tables. Aluminum material is 6061-T6 or material of equivalent strength and properties.

(2) Hydraulic cylinders specifications. (i) 2-inch cylinders shall be a minimum 2-inch inside diameter with a minimum safe working capacity of no less than 18,000 pounds axial compressive load at maximum extension. Maximum extension is to include full range of cylinder extensions as recommended by product manufacturer.

(ii) 3-inch cylinders shall be a minimum 3-inch inside diameter with a safe working capacity of not less than 30,000 pounds axial compressive load at extensions as recommended by product manufacturer.

(3) Limitation of application.

(i) It is not intended that the aluminum hydraulic specification apply to every situation that may be experienced in the field. These data were developed to apply to the situations that are most commonly experienced in current trenching practice. Shoring systems for use in situations that are not covered by the data in this appendix must be otherwise designed as specified in § 1926.652(c).

(ii) When any of the following conditions are present, the members specified in the Ta-

bles are not considered adequate. In this case, an alternative aluminum hydraulic shoring system or other type of protective system must be designed in accordance with § 1926.652.

(A) When vertical loads imposed on cross braces exceed a 100 Pound gravity load distributed on a one foot section of the center of the hydraulic cylinder.

(B) When surcharge loads are present from equipment weighing in excess of 20,000 pounds.

(C) When only the lower portion or a trench is shored and the remaining portion of the trench is sloped or benched unless: The sloped portion is sloped at an angle less steep than three horizontal to one vertical; or the members are selected from the tables for use at a depth which is determined from the top of the overall trench, and not from the toe of the sloped portion.

(e) *Use of Tables D-1.1, D-1.2, D-1.3 and D-1.4.* The members of the shoring system that are to be selected using this information are the hydraulic cylinders, and either the vertical shores or the horizontal wales. When a waler system is used the vertical timber sheeting to be used is also selected from these tables. The Tables D-1.1 and D-1.2 for vertical shores are used in Type A and B soils that do not require sheeting, Type B soils that may require sheeting, and Type C soils that always require sheeting are found in the horizontal wale Tables D-1.3 and D-1.4. The soil type must first be determined in accordance with the soil classification system described in appendix A to subpart P of part 1926. Using the appropriate table, the selection of the size and spacing of the members is made. The selection is based on the depth and width of the trench where the members are to be installed. In these tables the vertical spacing is held constant at four feet on center. The tables show the maximum horizontal spacing of cylinders allowed for each size of wale in the waler system tables, and in the vertical shore tables, the hydraulic cylinder horizontal spacing is the same as the vertical shore spacing.

(f) *Example to Illustrate the Use of the Tables:*

(1) Example 1:

A trench dug in Type A soil is 6 feet deep and 3 feet wide. From Table D-1.1: Find vertical shores and 2 inch diameter cylinders spaced 8 feet on center (o.c.) horizontally and 4 feet on center (o.c.) vertically. (See Figures 1 & 3 for typical installations.)

(2) Example 2:

A trench is dug in Type B soil that does not require sheeting, 13 feet deep and 5 feet wide. From Table D-1.2: Find vertical shores and 2 inch diameter cylinders spaced 6.5 feet o.c. horizontally and 4 feet o.c. vertically. (See Figures 1 & 3 for typical installations.)

(3) A trench is dug in Type B soil that does not require sheeting, but does experience some minor raveling of the trench face. The

trench is 16 feet deep and 9 feet wide. From Table D-1.2: Find vertical shores and 2 inch diameter cylinder (with special oversleeves as designated by footnote #B2) spaced 5.5 feet o.c. horizontally and 4 feet o.c. vertically. plywood (per footnote (g)(7) to the D-1 Table) should be used behind the shores. (See Figures 2 & 3 for typical installations.)

(4) Example 4: A trench is dug in previously disturbed Type B soil, with characteristics of a Type C soil, and will require sheeting. The trench is 18 feet deep and 12 feet wide. 8 foot horizontal spacing between cylinders is desired for working space. From Table D-1.3: Find horizontal wale with a section modulus of 14.0 spaced at 4 feet o.c. vertically and 3 inch diameter cylinder spaced at 9 feet maximum o.c. horizontally. 3x12 timber sheeting is required at close spacing vertically. (See Figure 4 for typical installation.)

(5) Example 5: A trench is dug in Type C soil, 9 feet deep and 4 feet wide. Horizontal cylinder spacing in excess of 6 feet is desired for working space. From Table D-1.4: Find horizontal wale with a section modulus of 7.0 and 2 inch diameter cylinders spaced at 6.5 feet o.c. horizontally. Or, find horizontal wale with a 14.0 section modulus and 3 inch diameter cylinder spaced at 10 feet o.c. horizontally. Both wales are spaced 4 feet o.c. vertically. 3x12 timber sheeting is required at close spacing vertically. (See Figure 4 for typical installation.)

(g) *Footnotes, and general notes, for Tables D-1.1, D-1.2, D-1.3, and D-1.4.*

(1) For applications other than those listed in the tables, refer to § 1926.652(c)(2) for use of manufacturer's tabulated data. For trench depths in excess of 20 feet, refer to § 1926.652(c)(2) and § 1926.652(c)(3).

(2) 2 inch diameter cylinders, at this width, shall have structural steel tube (3.5x3.5x0.1875) oversleeves, or structural oversleeves of manufacturer's specification, extending the full, collapsed length.

(3) Hydraulic cylinders capacities. (i) 2 inch cylinders shall be a minimum 2-inch inside diameter with a safe working capacity of not less than 18,000 pounds axial compressive load at maximum extension. Maximum extension is to include full range of cylinder extensions as recommended by product manufacturer.

(ii) 3-inch cylinders shall be a minimum 3-inch inside diameter with a safe work capacity of not less than 30,000 pounds axial compressive load at maximum extension. Maximum extension is to include full range of cylinder extensions as recommended by product manufacturer.

(4) All spacing indicated is measured center to center.

(5) Vertical shoring rails shall have a minimum section modulus of 0.40 inch.

(6) When vertical shores are used, there must be a minimum of three shores spaced equally, horizontally, in a group.

(7) Plywood shall be 1.125 in. thick softwood or 0.75 inch. thick, 14 ply, arctic white birch (Finland form). Please note that plywood is not intended as a structural member, but only for prevention of local raveling (sloughing of the trench face) between shores.

(8) See appendix C for timber specifications.

(9) Wales are calculated for simple span conditions.

(10) See appendix D, item (d), for basis and limitations of the data.

ALUMINUM HYDRAULIC SHORING TYPICAL INSTALLATIONS

FIGURE NO. 1

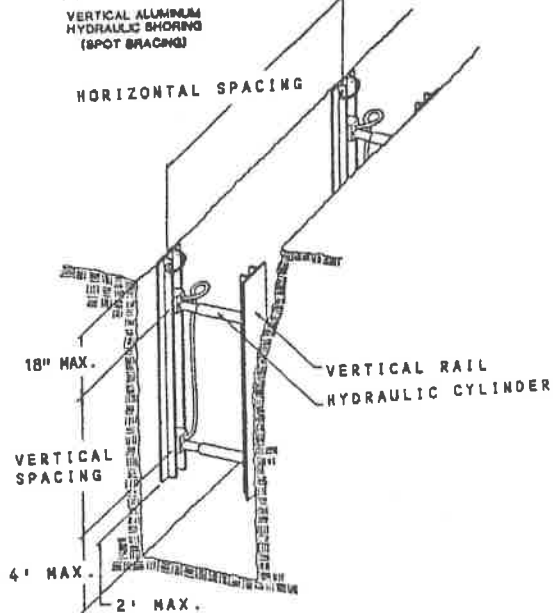


FIGURE NO. 2

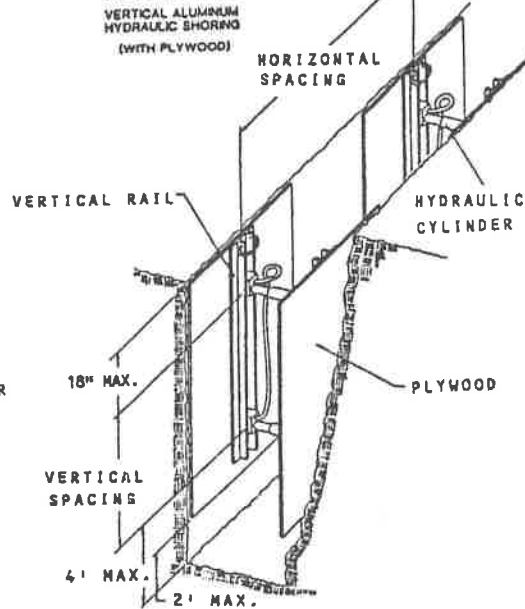


FIGURE NO. 3

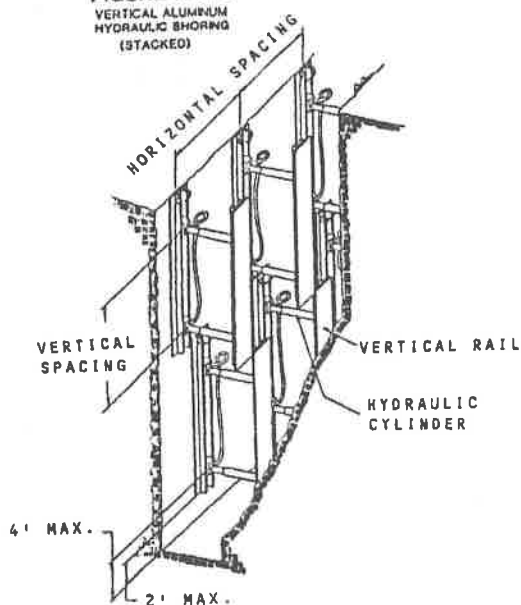


FIGURE NO. 4

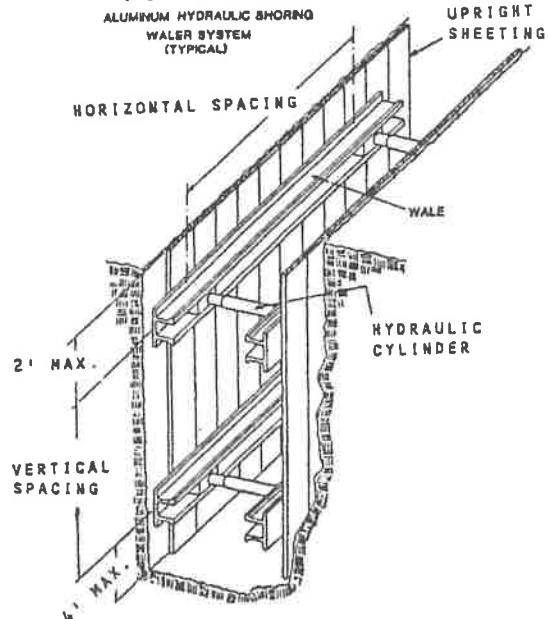


TABLE D - 1.1
ALUMINUM HYDRAULIC SHORING
VERTICAL SHORES
FOR SOIL TYPE A

HYDRAULIC CYLINDERS					
DEPTH OF TRENCH (FEET)	MAXIMUM HORIZONTAL SPACING (FEET)	MAXIMUM VERTICAL SPACING (FEET)	WIDTH OF TRENCH (FEET)		
			UP TO 8	OVER 8 UP TO 12	OVER 12 UP TO 15
OVER 5 UP TO 10	8	4	2 INCH DIAMETER	2 INCH DIAMETER NOTE (2)	3 INCH DIAMETER
OVER 10 UP TO 15	8				
OVER 15 UP TO 20	7				
OVER 20	NOTE (1)				

Footnotes to tables, and general notes on hydraulic shoring, are found in Appendix D, Item (g)

Note (1): See Appendix D, Item (g) (1)

Note (2): See Appendix D, Item (g) (2)

TABLE D - 1.2
ALUMINUM HYDRAULIC SHORING
VERTICAL SHORES
FOR SOIL TYPE B

HYDRAULIC CYLINDERS					
DEPTH OF TRENCH (FEET)	MAXIMUM HORIZONTAL SPACING (FEET)	MAXIMUM VERTICAL SPACING (FEET)	WIDTH OF TRENCH (FEET)		
			UP TO 8	OVER 8 UP TO 12	OVER 12 UP TO 15
OVER 5 UP TO 10	8	4	2 INCH DIAMETER	2 INCH DIAMETER NOTE (2)	3 INCH DIAMETER
OVER 10 UP TO 15	6.5				
OVER 15 UP TO 20	5.5				
OVER 20	NOTE (1)				

Footnotes to tables, and general notes on hydraulic shoring, are found in Appendix D, Item (g)

Note (1): See Appendix D, Item (g) (1)

Note (2): See Appendix D, Item (g) (2)

TABLE D - 1.3
ALUMINUM HYDRAULIC SHORING
WALER SYSTEMS
FOR SOIL TYPE B

DEPTH OF TRENCH (FEET)	WALES		HYDRAULIC CYLINDERS						TIMBER UPRIGHTS	
	VERTICAL SPACING (FEET)	SECTION MODULUS (IN ³)	WIDTH OF TRENCH (FEET)						MAX. HORIZ. SPACING (ON CENTER)	
			UP TO 8		OVER 8 UP TO 12		OVER 12 UP TO 15		SOLID SHEET	2 FT.
			HORIZ. SPACING	CYLINDER DIAMETER	HORIZ. SPACING	CYLINDER DIAMETER	HORIZ. SPACING	CYLINDER DIAMETER		
OVER 5 UP TO 10	4	3.5	8.0	2 IN	8.0	2 IN	8.0	3 IN		
		7.0	9.0	2 IN	9.0	NOTE(2)	9.0	3 IN		
		14.0	12.0	3 IN	12.0	3 IN	12.0	3 IN		3x12
OVER 10 UP TO 15	4	3.5	6.0	2 IN	6.0	2 IN	6.0	3 IN		
		7.0	8.0	3 IN	8.0	3 IN	8.0	3 IN		3x12
		14.0	10.0	3 IN	10.0	3 IN	10.0	3 IN		
OVER 15 UP TO 20	4	3.5	5.5	2 IN	5.5	2 IN	5.5	3 IN		
		7.0	6.0	3 IN	6.0	3 IN	6.0	3 IN	3x12	
		14.0	9.0	3 IN	9.0	3 IN	9.0	3 IN		
OVER 20	NOTE (1)									

Footnotes to tables, and general notes on hydraulic shoring, are found in Appendix D, Item (g)

Notes (1): See Appendix D, item (g) (1)

Notes (2): See Appendix D, Item (g) (2)

* Consult product manufacturer and/or qualified engineer for Section Modulus of available wales.

TABLE D - 1.4
ALUMINUM HYDRAULIC SHORING
WALER SYSTEMS
FOR SOIL TYPE C

DEPTH OF TRENCH (FEET)	WALES		HYDRAULIC CYLINDERS								TIMBER UPRIGHTS	
	VERTICAL SPACING (FEET)	SECTION MODULUS (IN ³)	WIDTH OF TRENCH (FEET)								MAX HORIZ SPACING (ON CENTER)	
			UP TO 8		OVER 8 UP TO 12		OVER 12 UP TO 15		SOLID	2 FT.	3 FT.	
												HORIZ. SPACING
OVER 5 UP TO 10	4	3.5	6.0	2 IN	6.0	2 IN NOTE(2)	6.0	3 IN	3x12	—	—	
		7.0	6.5	2 IN	6.5	NOTE(2)	6.5	3 IN				
		14.0	10.0	3 IN	10.0	3 IN	10.0	3 IN				
OVER 10 UP TO 15	4	3.5	4.0	2 IN	4.0	2 IN NOTE(2)	4.0	3 IN	3x12	—	—	
		7.0	5.5	3 IN	5.5	3 IN	5.5	3 IN				
		14.0	8.0	3 IN	8.0	3 IN	8.0	3 IN				
OVER 15 UP TO 20	4	3.5	3.5	2 IN	3.5	2 IN NOTE(2)	3.5	3 IN	3x12	—	—	
		7.0	5.0	3 IN	5.0	3 IN	5.0	3 IN				
		14.0	6.0	3 IN	6.0	3 IN	6.0	3 IN				
OVER 20	NOTE (1)											

Footnotes to tables, and general notes on hydraulic shoring, are found in Appendix D, Item (g)

Notes (1): See Appendix D, item (g) (1)

Notes (2): See Appendix D, Item (g) (2)

* Consult product manufacturer and/or qualified engineer for Section Modulus of available wales.

APPENDIX E TO SUBPART P OF PART 1926—ALTERNATIVES TO TIMBER SHORING

Figure 1. Aluminum Hydraulic Shoring

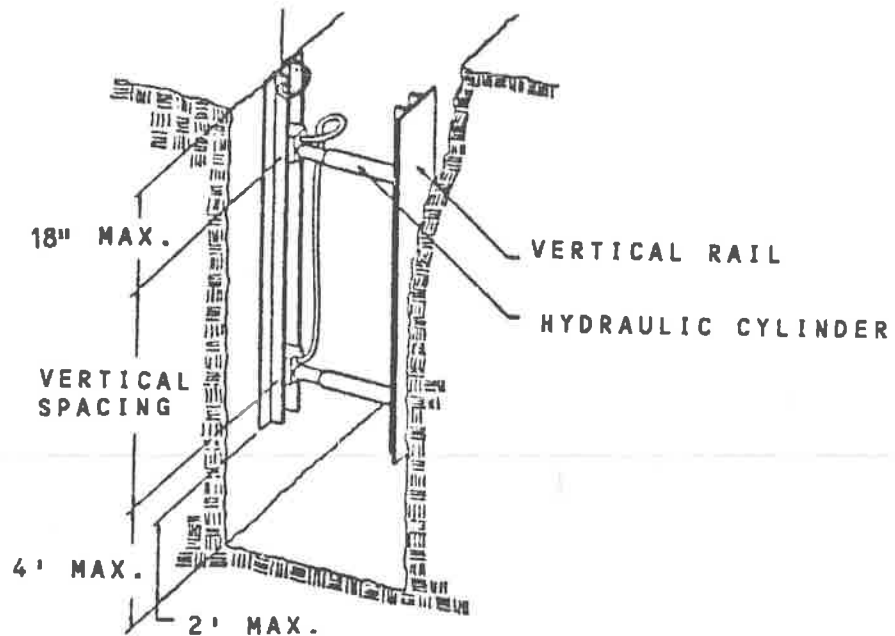


Figure 2. Pneumatic/hydraulic Shoring

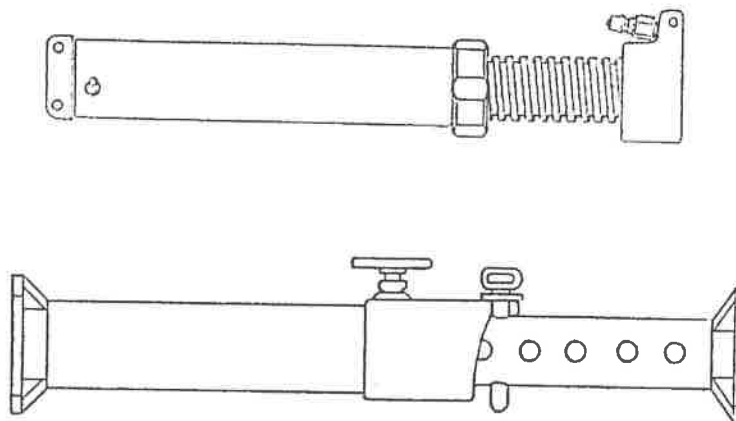


Figure 3. Trench Jacks (Screw Jacks)

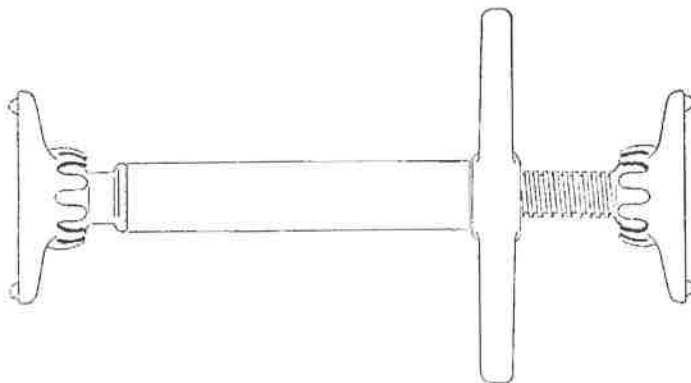
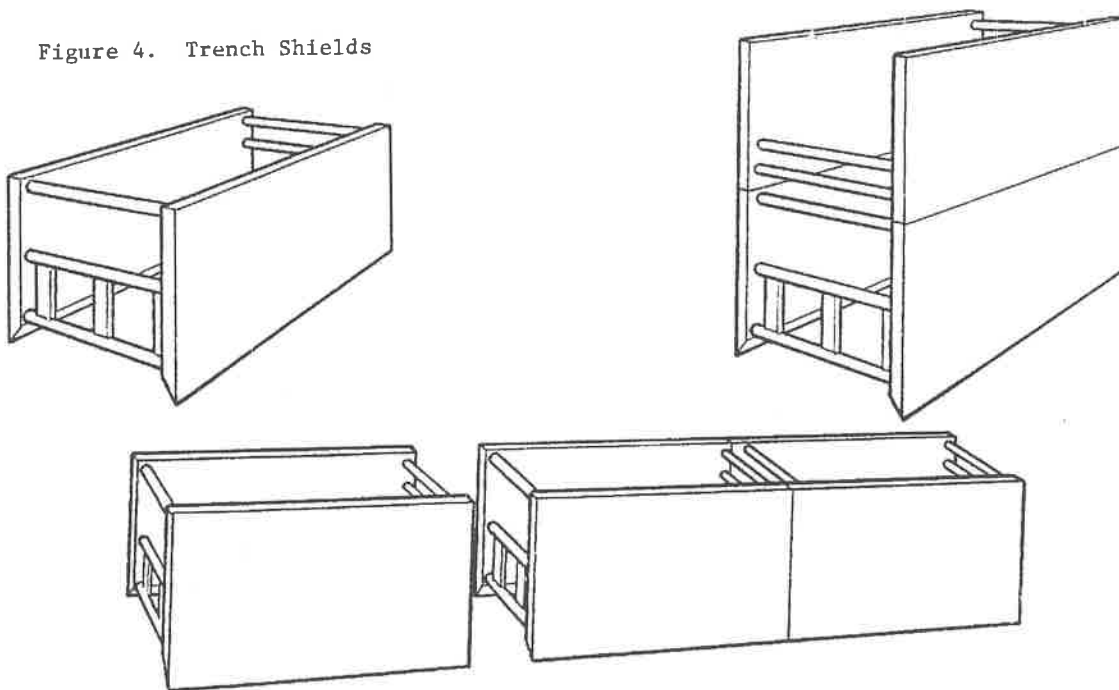


Figure 4. Trench Shields



APPENDIX F TO SUBPART P OF PART
1926—SELECTION OF PROTECTIVE
SYSTEMS

The following figures are a graphic summary of the requirements contained in sub-

part P for excavations 20 feet or less in depth. Protective systems for use in excavations more than 20 feet in depth must be designed by a registered professional engineer in accordance with § 1926.652 (b) and (c).

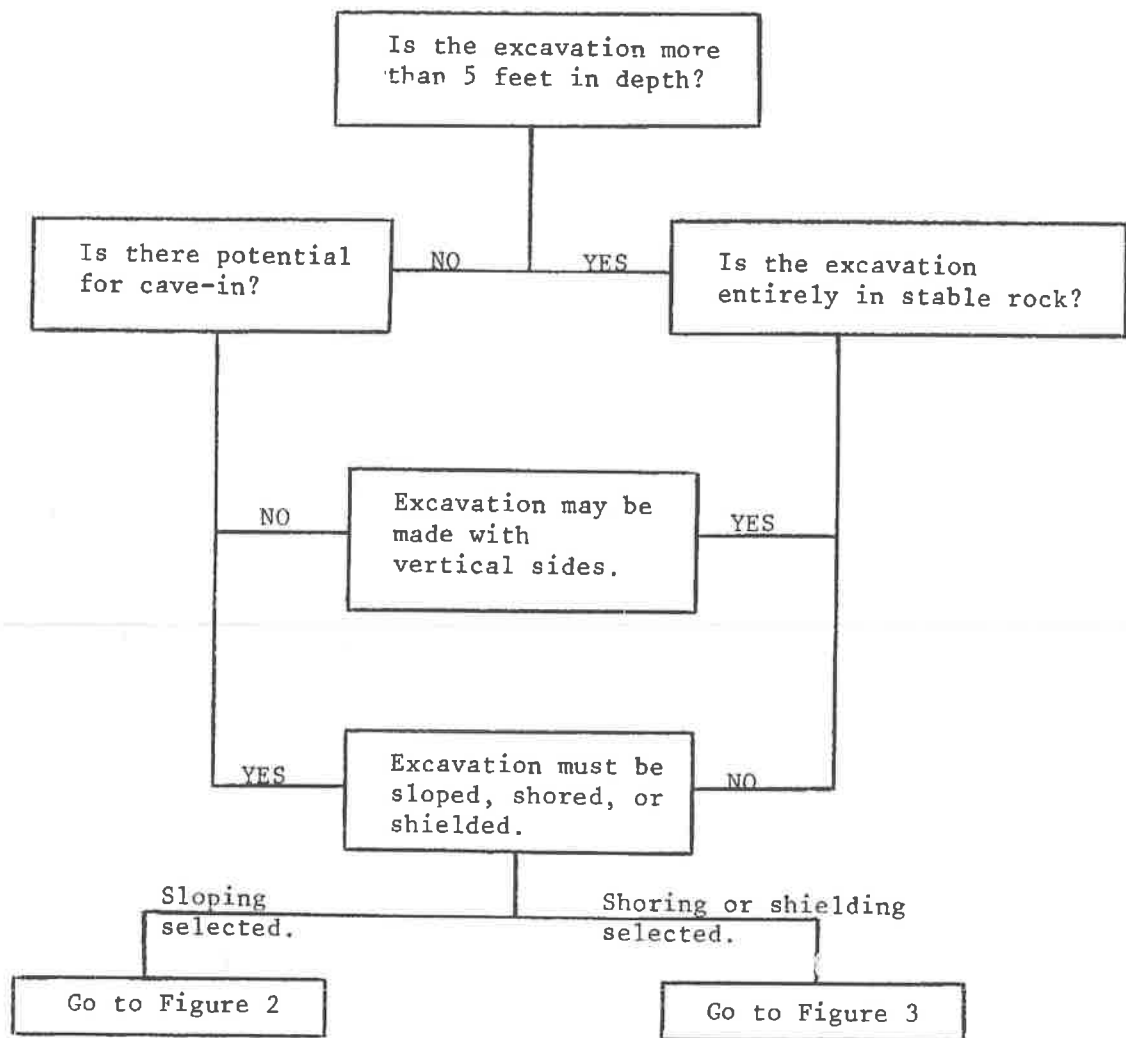
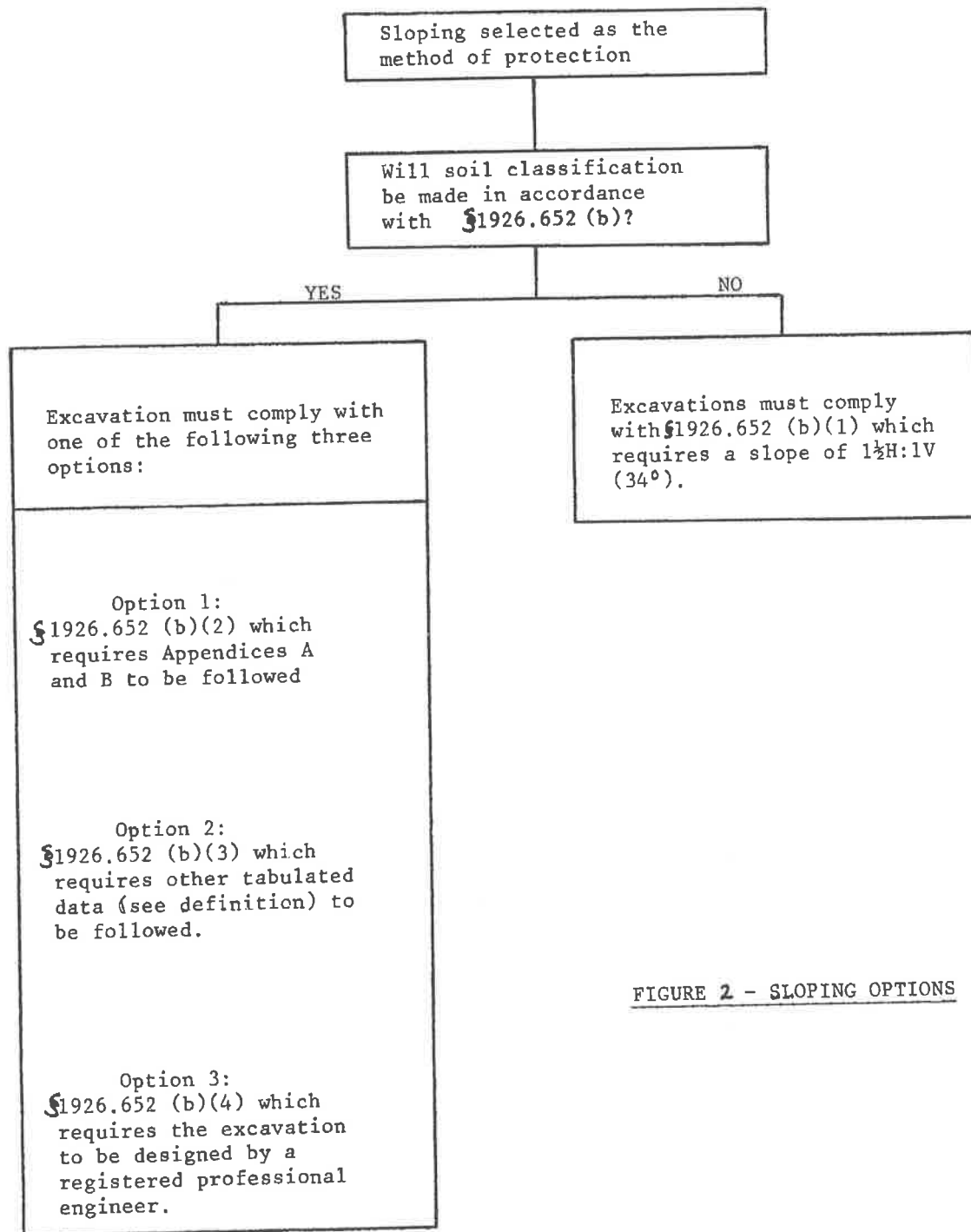
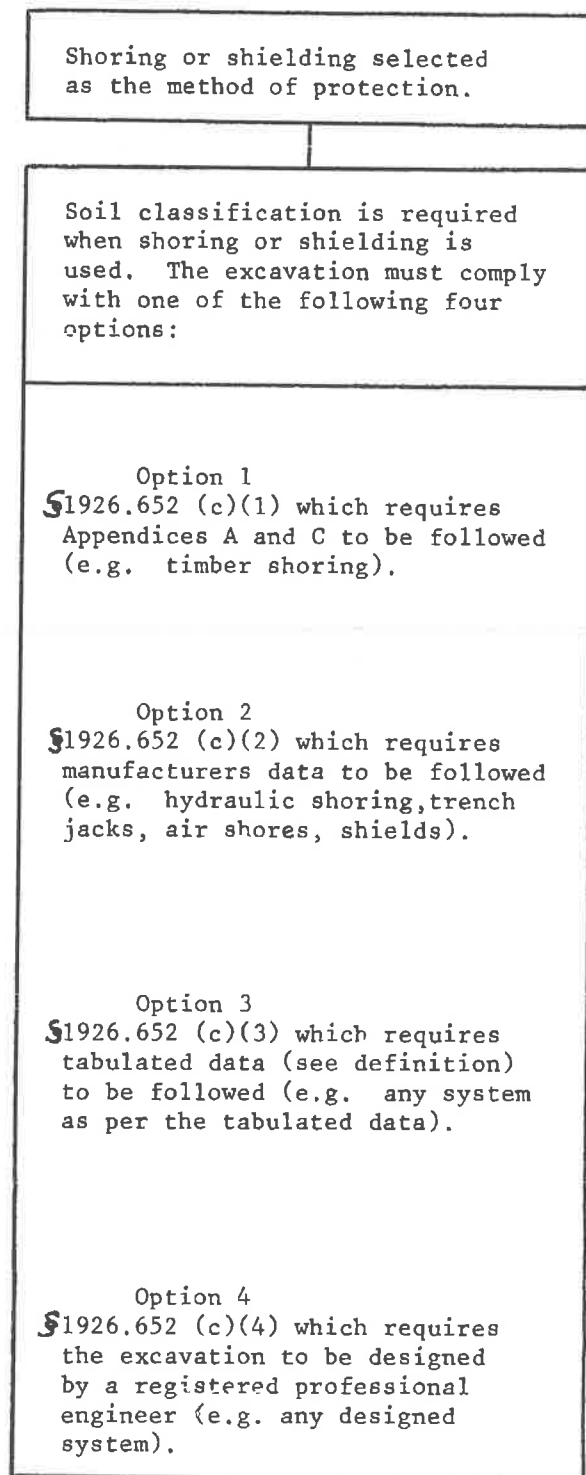


FIGURE 1 - PRELIMINARY DECISIONS

FIGURE 2 - SLOPING OPTIONS

FIGURE 3 - SHORING AND SHIELDING OPTIONS

DIVISION 33 UTILITIES

SECTION 33000 – FAYETTEVILLE WATER AND SEWER STANDARD SPECIFICATIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. City of Fayetteville Water and Wastewater Standard Specifications.

1.2 STANDARD SPECIFICATION REFERENCE

- A. The City of Fayetteville, Standard Specifications for the Design and Construction of Water Lines and Sewer Lines, 2017 Edition is hereby incorporated into these Specifications in their entirety.
- B. Specifications may be found at:

<https://www.fayetteville-ar.gov/3266/Standard-Specifications>

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 33000

**STANDARD
SPECIFICATIONS
FOR
STREET AND DRAINAGE
CONSTRUCTION**



**CITY OF
FAYETTEVILLE
ARKANSAS**

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DIVISION 100. GENERAL PROVISIONS

Section 101. Definitions and Terms

101.01 Abbreviations and Definitions. Whenever the following abbreviations are used in these specifications or on the plans, they are to be construed the same as the respective expressions represented:

(a) Industry Abbreviations.

ACI	American Concrete Institute
AASHTO	American Association of State Highway and Transportation Officials
ADPCE	Arkansas Department of Pollution Control and Ecology
AGC	Associated General Contractors of America
AHTD	Arkansas State Highway and Transportation Department
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ANSI	American National Standards Institute
ARA	American Railway Association
AREA	American Railway Engineering Association
ARTBA	American Road and Transportation Builders Association
ASCE	American Society of Civil Engineers
ASTM	American Society for Testing and Materials
ATSSA	American Traffic Safety Service Association
AWPA	American Wood Preservers Association
AWS	American Welding Society
AWWA	American Water Works Association
CoE	U.S. Army Corps of Engineers
CRSI	Concrete Reinforcing Steel Institute
FHWA	Federal Highway Administration
FSS	Federal Specifications and Standards, General
ITE	Institute of Traffic Engineers
MIL	Military Specifications
MUTCD	Manual on Uniform Traffic Control Devices for Streets and Highways
NEMA	National Electrical Manufacturers Association
OSHA	Occupational Safety and Health Administration
SAE	Society of Automotive Engineers
SSPC	Steel Structures Painting Council
UL	Underwriter's Laboratory
USC	United States Code

(b) Contract Abbreviations for Construction Work

AC	Asphalt Cement	ACHM	Asphalt Concrete Hot Mix
ACTD	Actuated	ADJ	Adjusted
AGG	Aggregate(s)	ALUM	Aluminum
APPL	Application	APPR	Approach
ASPH	Asphalt	ASSY	Assembly
AST	Asphalt Surface Treatment	AUTO	Automatic
BIND	Binder	BIT	Bituminous
BLDG	Building(s)	BLDG	Building(s)
BLKT	Blanket	BNG(S)	Bearing(s)
BR	Bridge(s)	BST	Bituminous Surface Treatment
C & G	Curb and Gutter	CA	Corrugated Aluminum
cc	cubic centimeter(s)	CD	Compacted Depth
CEM	Cement	CL	Class
CLVT(S)	Culvert(s)	CM	Corrugated Metal
CMBN	Combination	CNTL	Control, Controller
COMP	Compaction, Controller	CONC	Concrete
CONT	Continuous, Continuously	CONST	Construction
CRS	Course(s)	CORR	Corrugated
CTD	Coated	CR	Crushed
DBL	Double	CS	Corrugated Steel
DWY(S)	Driveway(s)	CU,cu	Cubic
EMUL	Emulsified	DI	Drop Inlet(s)
EXC	Excavation	EWK	Earthwork
F & I	Furnish and Install	EXP	Expansion
FES	Flared End Section(s)	FDN	Foundation
FURN	Furnish, Furnishing	FNC	Fence(s)
GA	Gage, Gauge	GALV	Galvanized
GR	Grade, Graded	GRVL	Gravel
ha	hectare(s)	HI	High Intensity
HM	Hot Mix	HMA	Hot Mix Asphalt
HMAS	Hot Mix Asphalt Stabilized		
INST	Install, Installing, Installation		
j	joule(s)		
kg	kilogram(s)	kL	kilometer(s)
km/h	kilometers per hour	KPa	kilopascal(s)
L	liter(s)	LAB	Laboratory
m	meter(s)	mm	millimeter(s)
MA	Mineral Aggregate	MAINT	Maintenance
MATL	Material(s)	MES	Mitered End Section(s)
MET	Metal	MG	1000 Gallons
MIN	Mineral	MOB	Mobilization
MOD	Modified	MPa	MegaPascal(s)

Standard Street and Drainage Specifications

MRK	Marking(s)	msta	metric station
mton	1000 kilograms		
NO	Number(s)	NON MET	Non-Metallic
NON REINF	Non-Reinforced	NPDES	National Pollutant Discharge Elimination System
		OFF	Office
OCT	Octagonal	PC	Portland Cement
Pa	Pascal(s)	PM	Plant Mixed
PIL	Piles, Piling	PRCST	Precast
ppm	parts per million	PROC	Process, Processing
PRFMD	Preformed	PVMT	Pavements(s)
PVC	Polyvinylchloride		
PVNG	Paving		
QPL	Qualified Products List	QUAD	Quadruple
QUINT	Quintuple		
R & D	Removal and Disposal	RC	Reinforced Concrete
RDWY	Roadway(s)	RECOMP	Recompact(ed), Recompaction
RECON	Reconstruct(ed)		
REFL	Reflectorized	REHAB	Rehabilitate, Rehabilitation
RFLOC	Relocate, Relocation	REMV	Removal, Removing, Removed
RELP	Replace, Replacing		
RESTOR	Restoration	RESTEEL	Reinforcing Steel
RMC	Rigid Metallic Conduit	RNMC	Rigid Non-Metallic Conduit
SCAR	Scarify, Scarifying	SGNL(S)	Signal(s)
SHLD(S)	Shoulder(s)	SPEC	Special
sq	Square	Sta	Station (100 feet)
STAB	Stabilized, Stabilization	STKPL	Stockpile, Stockpiling
STL	Steel	STN	Stone
STR(S)	Structure(s)	STRL	Structural
SURF	Surface, Surfacing	SWPPP	Storm Water Pollution Prevention Plan
SYS	System, Systems		
TEMP	Temporary	TERM	Terminal
THERMPL	Thermoplastic	TMBR	Timber
TRAF	Traffic	TRPL	Triple
TRMT	Treatment	TRTD	Treated
TY	Type		
UNCL	Unclassified	UNTRTD	Untreated
UT	Uniform Thickness	VAR	Variable
VEH	Vehicle(s)		
µm	micrometer (1 x 10 ⁻⁶ m)		

(C) Definitions. Whenever in these specifications or in other contract documents the following terms, or pronouns in place of them, are used, the intent and meaning shall be interpreted as follows:

Addenda. Written or graphic instruments issued prior to the opening of Bids which clarify, correct or change the bidding documents or the Contract Documents.

Advertisement. The public announcement, as required by law, inviting bids for work to be performed or materials to be furnished.

AHTD Standard Specifications. The Standard Specifications for HIGHWAY CONSTRUCTION, Arkansas State Highway and Transportation Department, Edition of 2003 or latest version, unless version date indicated otherwise.

Agreement. The written agreement between Owner and Contractor covering the Work to be performed; other Contract Documents are attached to the Agreement and made a part thereof as provided therein. The terms Agreement and Contract are used interchangeably.

Award. The acceptance by the City of a proposal.

Bid. The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed. The terms Bid and Proposal are used interchangeably.

Bid Bond. The security furnished with a bid to guarantee that the bidder will enter into the Contract if the bid is accepted.

Bidder. An individual, partnership, corporation or joint venture submitting a bid for the advertised work. (The terms "Bidder" and "Contractor" are frequently used synonymously.)

Bid Proposal Form. The approved form on which the Owner requires bids to be prepared and submitted for the work.

Business Day. Any calendar day except Saturdays, Sundays, and City recognized holidays. If a holiday falls on Saturday or Sunday, the observed day shall be the Friday preceding the Saturday or the Monday following the Sunday.

Calendar Day. Any day shown on the calendar, beginning and ending at midnight. If a day is not identified by any other modifier, it shall be considered a calendar day.

Change Order. A written order issued by the Owner to the Contractor, covering changes in the plans or quantities or both, within the scope of the Contract and establishing the basis of payment and time adjustments for the work affected by the changes.

City. The City of Fayetteville, Arkansas, including authorized representatives.

City Engineer. An Engineer employed by the City responsible for construction administration and inspection of projects for which the City is the Owner.

Construction Field Change. A written order issued by the Owner covering minor changes in the work, but which does not involve a change in the Contract Price or the Contract Time.

Construction Observer. The Engineer's or City's designated personnel appointed to observe the Work. Multiple construction observers may be designated.

Contract. The written agreement between the City and the Contractor setting forth the obligations of the parties thereunder, including, but not limited to, the performance of the work, the furnishing of labor and materials, and the basis of payment. (The Contract includes the contract form; the contract schedule of prices; the payment and performance bonds; specifications, supplemental specification, and special provisions; general and detailed plans; and any change orders and agreements that are required to complete the construction of the work in an acceptable manner, including authorized extensions thereof, all of which constitute one instrument.)

Contract Documents. The Contract Documents includes the executed Agreement; Addenda (which pertain to the Contract Documents); Advertisement for Bids; Information for Bidders, Contractor's Bid (including documentation accompanying the Bid and any Post-Bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement; List of proposed Subcontractors; the Bonds; the Specifications; Special Provisions, Supplementary Conditions, Certificates of Insurance; the Plans (Drawings) as the same are more specifically identified in the Agreement; together with all written modifications, Change Orders and Engineer's written interpretations and clarifications issued on or after the Effective Date of the Agreement. Approved Shop drawings and the reports and drawings of subsurface and physical conditions are not Contract Documents. Only printed or hard copies of the items listed in this paragraph are Contract Documents. Files in electronic media format of text, data, graphics and the like that may be furnished by Owner to Contractor are not Contract Documents.

Contract Item (Pay Item). A specifically described unit of work for which a price is provided in the Contract.

Contract Time. The number of working days allowed for completion of the Contract. If a fixed date of completion is shown in the proposal, the Contract shall be completed by that calendar date.

Contractor. The individual, partnership, corporation, or any combination thereof, or joint venture contraction with the City for the prescribed work. (The terms "Contractor" and "Bidder" are frequently used synonymously.)

Culvert. Any structure not classified as a bridge that provides an opening under the roadway.

Defective. An adjective which when modifying the word Work refers to Work that is unsatisfactory, faulty or deficient, or does not conform to the Contract Documents or does not meet the requirements of any inspection, test or approval referred to in the Contract Documents, or has been damaged prior to final payment.

Effective Date of Agreement. The date indicated in the Agreement on which it becomes effective, but if no such date is indicated it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

Engineer. The Engineer of record, acting directly or through duly authorized representatives, whose engineering seal appears on the plans and specifications.

Equipment. All machinery and equipment, together with the necessary supplies for upkeep and maintenance, and tools and apparatus necessary for the proper construction and acceptable completion of the work.

Extra Work. An item of work not provided for in the Contract as awarded but found essential to the satisfactory completion of the Contract within its intended scope.

Extra Work Order. A change order concerning the performance of work or furnishing of materials involving extra work. (Such extra work may be performed at agreed prices or on a force account basis as provided elsewhere in these specifications.)

Holidays. The City observes the following legal holidays: New Year's Day, Martin Luther King Jr. Day, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day and the following day, Christmas Eve, December 24; and Christmas Day, December 25. If a holiday falls on Saturday or Sunday, the observed day shall be the Friday preceding the Saturday or the Monday following the Sunday.

Incidental item. Work shown on the plans but for which there is no bid item included. This work shall not be paid for separately; rather the cost of the work is considered to be included in the contract amount bid for the project.

Laboratory. The Quality Control Testing Laboratory of the City or any other testing laboratory that may be designated by the City.

Materials. Any substances specified for use in the construction of the project and its appurtenances.

Milestone. A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work for which liquidated damages may or may not apply.

Notice of Award. The written notice by Owner to the apparent successful Bidder stating that upon timely compliance by the apparent successful Bidder with the conditions listed therein, Owner will sign and deliver the Agreement.

Notice to Contractors. The advertisement for proposals for all work or materials on which bids are required indicating with reasonable accuracy the quantity and location of the work to be done, or the character and quantity of the materials to be furnished; and the time and place of the opening of proposals.

Notice to Proceed. A written notice given by Owner to Contractor fixing the date on which the Contract Time will commence to run and on which Contractor shall start to perform his obligation under the Contract Documents. Notice to Proceed is also referred to as Work Order.

Observer. See Construction Observer.

Owner. The City of Fayetteville, Arkansas, and/or the duly authorized agent of the City of Fayetteville, Arkansas, with whom Contractor has entered in the Agreement and for whom the Work is to be performed.

Pavement Structure. The combination of subbase, base course, and surface course placed on a subgrade to support the traffic load and distribute it to the roadbed.

Payment Bond. The approved form of security, executed by the Contractor and his/her Surety or Sureties, guaranteeing the payment of all legal debts of the Contractor pertaining to the construction of the project.

Performance Bond. The approved form of security, executed by the Contractor and his/her Surety or Sureties, guaranteeing complete performance of the Contract and all supplemental agreements thereto.

Plans. The approved plans, profiles, typical cross-sections, working drawing, and supplemental drawings, or exact reproductions thereof, which show the location, character, dimensions, and details of the work to be done. (The Title Sheet of the plans is provided for general information only and is not to be taken as an all-inclusive description of the work. Other work and/or locations may be included in the Project as described by the plans, specifications, supplemental specifications, and special provisions.) The term Drawings and Plans are used interchangeably.

Profile Grade. Unless otherwise shown on the plans, the trace of a vertical plane intersecting the top surface of the proposed wearing surface, usually along the longitudinal centerline of the roadbed. (Profile grade means either the elevation or gradient of such trace according to the context.)

Project. The specific section of the highway together with all appurtenances and construction to be performed thereon under the Contract.

Proposal. The offer of a bidder, on the prescribed form, to perform the work and to furnish the labor and materials at the unit prices quoted.

Proposal Form. The approved form on which the City requires bids to be prepared and submitted for the work.

Proposal Guaranty. The security furnished with a bid to guarantee that the bidder will enter into the Contract if the bid is accepted.

Prospective Bidder. An individual, partnership, corporation, or joint venture who has requested and been issued a proposal form from the City.

Qualified Products List. A list of products that are approved for use in Highway Contracts with the Arkansas State Highway and Transportation Department. The QPL is maintained by AHTD.

Registered Professional Engineer. An Engineer registered in the State of Arkansas by the Arkansas State Board of Registration for Professional Engineers and Land Surveyors. All details, drawings, calculations, and reports submitted by the registrant as required by these specifications shall be certified, signed, and stamped with the seal or facsimile thereof as authorized by the Board.

Registered Professional Land Surveyor. A Land Surveyor registered in the State of Arkansas by the Arkansas State Board of Registration for Professional Engineers and Land Surveyors. All details, drawings, calculations, and reports submitted by the registrant as required by these specifications shall be certified, signed, and stamped with the seal or facsimile thereof as authorized by the Board.

Registered Scale Mechanic. A person registered with the Arkansas Bureau of Standards, Division of Weights and Measures, as being qualified by training and experience to make adjustments and repairs to commercial scales and performs such work as a skilled trade.

Right-of-Way. A general term denoting land, property, or interest therein, acquired for or devoted to highway purposes.

Road. A general term denoting a public way for purposes of vehicular travel, including the entire area within the right – of – way.

Roadbed. The graded portion of a highway within top and side slopes, prepared as a foundation for the pavement structure and shoulders.

Roadside. A general term denoting the area adjoining the outer edge of the roadway. (Extensive areas between the roadways of a divided highway may also be considered roadside.)

Roadway. The portion of a highway within limits of construction, or as defined in other sections.

Shop Drawings. All drawings, diagrams, illustration, schedules and other data which are specifically prepared by Contractor, Subcontractor, manufacturer, fabricator, supplier or distributor to illustrate some portion of the Work.

Shoulder. The portion of the roadway constructed primarily for the use of pedestrians.

Sidewalk. That portion of the roadway constructed primarily for the use of pedestrians.

Sieve. U.S.A. Standard Series, as defined in AASHTO M 92. Percent passing or retained is by weight.

Special Provisions. Additions and revisions to the standard and supplemental specifications covering conditions peculiar to an individual project.

Specifications. A general term applied to all directions, provisions, and requirements pertaining to performance of the work.

Standard Specifications. This printed book of Standard Specifications for Street and Drainage Construction. Unless otherwise noted, the Edition in effect on the date of advertisement.

Station. A station when used as a definition or term of measurement will be 100 linear feet measured horizontally.

Street. A general term denoting a public way for purposes of vehicular travel, including the entire area within the right – of – way.

Structures. Bridges, culverts, catch basins, drop inlets, retaining walls, cribbing, manholes, endwalls, buildings, sewers, service pipes, underdrains, foundation drains, and other features that may be encountered in the work and not otherwise classed herein.

Subcontractor. An individual, firm, or corporation to whom the Contractor sublets part of the work.

Subgrade. The top surface of a roadbed upon which the pavement structure and shoulders are constructed.

Substantial Completion. A condition upon which the work has progressed to the point that it can be utilized for the purposes intended; as evidenced by a Certificate issued by the Engineer under the authority of the City. If no such certificate is issued, Substantial Completion shall be when the work is complete and ready for final payment.

Substantial Completion Date. The time at which the Work has progressed to the point where, in the opinion of the Owner, it is sufficiently complete, in accordance with the Contract Documents, so that the Work (or specified part) can be utilized for the purposes for which it was intended without further disruption to the public or occupants of the facility.

Substructure. All of that part of the structure below the bearings of simple and continuous spans, skewbacks of arches and tops of footings of rigid frames, together with the backwalls, wingwalls, and wing protection railings.

Superintendent. The Contractor's authorized representative in responsible charge of the work, present at the work site at all times during the progress to supervise and direct

construction, to receive and fulfill instructions from the Owner's representative, and to accept orders for changed and extra work.

Superstructure. The entire structure except the substructure.

Supplemental Agreement. A written negotiated agreement constituting a modification of the originally executed Contract and covering the performance of work beyond its general scope. (The items of work contained therein will be included in an approved Change Order.)

Supplemental Specifications. Revisions to the Standard Specifications that are adopted subsequent to issuance of the printed book of Standard Specifications.

Surety. The company, other than the Contractor, executing a bond furnished by the Contractor.

Titles (Or Headings). The titles or headings of the sections and subsections herein are intended for convenience of reference and shall not be considered as having any bearing on their interpretation.

Ton. 2000 pounds.

Traveled Way. The portion of the roadway for the movement of vehicles, exclusive of shoulders and auxiliary lanes.

Unit Price Work. Work to be paid for on the basis of unit prices.

Work. The furnishing of all materials, labor, equipment, tools, and incidentals necessary or convenient to the successful completion of the project and the carrying out of the duties and obligations imposed by the Contract.

Working Day. A calendar day during which normal construction operations could proceed; normally excludes Saturdays, Sundays, and City recognized holidays.

Working Drawings. Stress sheets, shop drawings, erection plans, falsework plans, framework plans, cofferdam plans, or any other supplementary plans or similar data that the Contractor is required to submit to the Engineer for informational and record purposes or for approval.

Work Order. Written notice from the Engineer directing the Contractor to begin prosecution of the work.

101.02 Specification Language. To avoid cumbersome and confusing repetition of expressions in these specifications, it is provided that whenever anything is, or is to be, done, if, as, when, or where "contemplated, required, determined, directed, specified, authorized, ordered, given, designated, indicated, considered necessary, deemed necessary, permitted, reserved, suspended, established, approval, approved, disapproved, acceptable, unacceptable,

suitable, accepted, satisfactory, unsatisfactory, sufficient, insufficient, rejected, or condemned," it shall be understood as if the expression were followed by the words "by the Engineer/City Engineer" or "to the Engineer/City Engineer".

Section 102. Not Used

Section 103. Not Used

Section 104. Scope of Work

104.01 Intent of Contract. The intent of the Contract is to provide for the construction and completion in every detail of the work described. The Contractor shall furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work according to the plans, specifications, and terms of the Contract.

104.02 Alteration of Plans or Character of Work.

(a) General. The City shall have the right to increase or decrease the extent of the work or to change the location, gradient, or the dimensions of any part of the work, provided that the length of the improvement is not increased or decreased in excess of 25% of the contract length, or that the quantities of work to be done or the materials to be furnished are not increased or decreased in money value in excess of 25% of the total Contract. Such changes shall not be considered as a waiver of any conditions of the Contract nor invalidate any of the provisions thereof. The Contractor shall perform the work as increased or decreased within the qualifying limits named and no allowance will be made for anticipated profits on increases or decreases so incurred.

If changes in the work require an adjustment in unit prices already established, or if additional work for which unit prices have not already been established by the contract is necessary, the contract price shall be adjusted according to the General Conditions of the Contract and this Section. If additional work is performed before an adjustment is made in the contract, the additional work will be paid for at unit prices already established for similar work, if such additional work is deemed necessary by the Engineer/City Engineer. If the Contractor performs additional work without authorization from the City and without an agreed Contract adjustment for such work, no payment for such additional work will be made.

(b) Significant Changes in the Character of Work. The City reserves the right to make, in writing, at any time during the work, such changes in quantities and such alterations in the work as are necessary to satisfactorily complete the project. Such changes in quantities and

alterations shall not invalidate the Contract nor release the Surety, and the Contractor agrees to perform the work as altered.

If the alterations or changes in quantities significantly change the character of the work under the Contract, whether or not changed by any such different quantities or alterations, an adjustment, excluding loss of anticipated profits, will be agreed upon prior to the performance of the work. If a basis cannot be agreed upon, then an adjustment will be made either for or against the Contractor in such amount as the Engineer/City Engineer may determine to be fair and equitable. If the alterations or changes in quantities do not significantly change the character of the work to be performed under the Contract, the altered work will be paid for as provided elsewhere in the Contract.

The term "significant change" shall be construed to apply only to the following circumstances:

- When the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction or
- When a major item of work is increased in excess of 125 percent or decreased below 75 percent of the original contract quantity. Any adjustment due to an increase in quantity shall apply only to that portion in excess of 125 percent of original contract item quantity, or in case of a decrease below 75 percent, to the actual amount of work performed. A major item of work is defined as any bid item for which the original contract value is more than 10 percent of the total original contract value.

104.03 If and Where Directed Items. The plans and the proposal may specify one or more items to be incorporated into the project "if and where directed" by the Engineer/City Engineer. The Engineer/City Engineer shall have discretion in determining whether and to what extent such items will be incorporated into the project. The Engineer/City Engineer may order incorporation of such items at any location within the project and at any time during the work. These items may or may not be located on the plans. The estimated quantities set out in the proposal for such items are presented solely for the purpose of obtaining a representative bid price. The actual quantities employed may be only a fraction of, or many times the estimated quantities. The Contractor shall make no claim for additional compensation because of any increase, decrease, or elimination of such items.

Section 105. Control of Work

105.01 Authority and Direction.

(a) Direction and Control by the Contractor.

(1) General. The detailed manner and method of performing the work shall be under the direction and control of, and by, the Contractor, but all work performed shall at all times be subject to the observation of the Engineer/City Engineer or his authorized representative to

ascertain its conformance with the Contract Documents. The Contractor shall furnish all reasonable aid and assistance required by the Engineer for the proper observation and examination of the work and all parts thereof.

The Engineer and Owner are not responsible for the Contractor's means, methods, techniques, sequences, or procedures of construction, or safety precautions and programs incident thereto.

The Contractor shall be responsible for the proper fitting of all work and for the coordination of the operations of all trades, Subcontractors, or materialmen engaged upon this Contract. He shall be prepared to guarantee to each of his Subcontractors the locations and measurements which they may require for the fitting of their work to all surrounding work.

Observers may be appointed by the Engineer or Owner. Observers shall have no authority to permit any deviation from the Plans and Specifications except on written order from the Engineer/City Engineer and the Contractor will be liable for any deviation except on such written order. Observers shall have authority, subject to the final decision of the Engineer/City Engineer, to condemn and reject any defective work and to suspend the work when it is not being performed properly.

The observer shall in no case act as superintendent or foreman or perform other duties for the Contractor, nor interfere with the management of the work by the latter. Any advice which the observer may give the Contractor shall in no way be construed as binding to the Engineer/City Engineer or Owner in any way or releasing the Contractor from fulfilling all of the terms of the Contract.

Any defective work may be rejected by the Engineer/City Engineer at any time before final acceptance of the work, even though the same may have been previously overlooked and estimated for payment and payment therefore made by the Owner.

(2) Accident Prevention. The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of his prosecution of the work. The safety provisions of applicable laws and building and construction codes, including applicable parts of the Arkansas Department of Labor Safety Code, shall be observed. The Contractor shall take or cause to be taken such safety and health measures, additional to those herein required, as he may deem necessary or desirable. Machinery, equipment, and all hazards shall be guarded in accordance with the safety provisions of the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America, Inc., to the extent that such provisions are not in conflict with applicable local laws.

The Contractor shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under the Contract. The Contractor shall promptly furnish the Owner with reports concerning these matters.

The Contractor shall indemnify and save harmless the Owner, and the Engineer, from any claims for damages resulting from personal injury and/or death suffered or alleged to have been suffered by any person as a result of any work conducted under this Contract.

(b) Authority of the Engineer. As the direct representative of the Owner, the Engineer has immediate charge of the engineering details of each construction project; is responsible for the general administration of the Project; and has the authority to reject unacceptable material or work and to suspend any work that is being improperly performed.

The Owner, with input from the Engineer, will decide all questions that may arise as to the quality and acceptability of materials furnished and work performed and as to the rate of progress of the work; all questions that may arise as to the interpretation of the plans and specifications; and all questions as to the acceptable fulfillment of the Contract by the Contractor.

The Engineer, with concurrence by Owner, will have the authority to suspend the work wholly or in part due to the failure of the Contractor to correct conditions unsafe for the workers or the general public; for failure to carry out provisions of the Contract; for failure to carry out orders; for such periods as deemed necessary due to unsuitable weather; for conditions considered unsuitable for the prosecution of the Work; or for any other condition or reason deemed to be in the public interest.

Any unresolved disputes arising under the Contract shall be submitted by the Contractor in writing to the Engineer. Disputes claiming additional compensation shall contain the information set forth in Subsection 109.10 "Claims for Adjustment and Disputes." The Engineer shall render a written decision within 60 calendar days of receipt of the Contractor's letter and information. Should a dispute not be resolved by the written decision of the Engineer, subsequent appeal by the Contractor shall be submitted in writing within 60 calendar days of the decision of the Engineer, and shall be addressed directly to the Owner.

105.02 Plans and Submittals.

(a) Plans. Plans will show lines, grades, details of all structures, typical cross sections, and a summary of items appearing on the proposal. Work may be provided for on the Plans that is not located within the limits of the project as shown on the plan sheets. Work of this nature may include but is not limited to removal of existing items, obliteration, grading, base and surfacing, transitions, etc., and is considered a part of the project. The Plans will be supplemented by such working drawings or sketches issued by the Engineer as are necessary to adequately control the Work.

(b) Submittals. Shop drawings, mix designs, vendor data, testing reports, certifications, calculations and working drawings for structures shall be furnished by the Contractor as required herewith. They shall consist of such data and detailed plans as may be required to adequately control the work and are not included on the plans furnished by the Owner. They shall include stress sheets, shop drawings, erection plans, falsework plans, cofferdam plans, or any other supplementary plans or similar data required of the Contractor.

Where calculations, plans or design are a requirement of any submittal, such shall be prepared and sealed by a Professional Engineer competent in the applicable field of practice and Licensed in the State of Arkansas.

All submittals shall be submitted to the Engineer for informational and record purposes or for approval as specified for the item of work involved. Contractor shall, in writing, call Engineer's attention to any deviation that the Submittal may have from the requirements of the Contract Documents. The Contractor should anticipate a review period of 15 - 30 calendar days from receipt by the Engineer of submittals. The review of submittals by the Engineer will be limited to checking for general agreement with the plans and specifications, and shall in no way relieve the Contractor of responsibility for errors and omissions contained therein, nor shall such review or approval operate to waive or modify any provisions contained in the Specifications or Drawings. It is mutually agreed that the Contractor shall be responsible for agreement of dimensions and details as well as conformity of its submittal with the Contract plans and specifications.

(1) Where a Shop Drawing or sample is required by the Specifications, no related work shall commence until the submittal has been reviewed and approved by Engineer.

Any Shop Drawings submitted without the Contractor's stamp of approval will not be considered and will be returned to him for proper resubmission. If any Drawings show variations from the requirements of the Contract because of standard shop practice or other reason, the Contractor shall make specific mention of such variation in his letter of transmittal in order that, if acceptable, suitable action may be taken for proper adjustment of Contract price and/or time; otherwise, the Contractor will not be relieved of the responsibility for executing the work in accordance with the Contract even though the Drawings have been reviewed.

The review of Shop Drawings by the Engineer shall be considered an accommodation to the Contractor to assist him in the execution of the Contract. The Engineer's review of such Drawings shall not relieve the Contractor of his responsibility to perform the work in strict accordance with the Plans and Specifications, and approved changes.

If the Shop Drawing is in accordance with the Contract or involves only a minor adjustment in the interest of the Owner not involving a change in Contract price or time, the Engineer shall so stamp the Drawing and shall contain in substance the following:

"Corrections or comments made on the shop drawings during this review do not relieve Contractor from compliance with requirements of the drawings and specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the contract documents. The Contractor is responsible for: confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his work with that of all other trades; and performing his work in a safe and satisfactory manner".

(2) The Contractor shall submit all material, product, or equipment samples, descriptions, certificates, affidavits, etc., as called for in the Contract Documents or required by the Engineer, promptly after award of the Contract and acceptance of the Contractor's bond. No such material or equipment shall be manufactured or delivered to the site, except at the Contractor's own risk, until the required samples or certificates have been approved in writing by the Engineer. Any delay in the work caused by late or improper submission of samples or certificates for approval

shall not be considered just cause for an extension of the Contract time. Submit four (4) copies of data for Engineer's review.

Each sample submitted by the Contractor shall carry a label giving the name of the Contractor, the project for which it is intended, and the name of the producer. The accompanying certificate or letter from the Contractor shall state that the sample complies with Contract requirements, shall give the name and brand of the product, its place of origin, the name and address of the producer, and all specifications or other detailed information which will assist the Engineer in passing upon the acceptability of the sample promptly. It shall also include the statement that all materials or equipment furnished for use in the project will comply with the samples and/or certified statements.

Approval of any materials shall be general only and shall not constitute a waiver of the Owner's right to demand full compliance with Contract requirements. After actual deliveries, the Engineer will have such check tests made as he deems necessary in each instance and may reject materials and equipment and accessories for cause, even though such materials and articles have been given general approval. If materials, equipment or accessories which fail to meet check tests have been incorporated in the work, the Engineer will have the right to cause their removal and replacement by proper materials or to demand and secure such reparation by the Contractor as is equitable, at the Contractor's expense.

Except as otherwise specifically stated in the Contract, the costs of sampling and testing will be divided as follows:

- (a) The Contractor shall furnish without extra cost, including packing and delivery charges, all samples required for testing purposes, except those samples taken on the project by the Engineer;
- (b) The Contractor shall assume all costs of re-testing materials which fail to meet Contract requirements;
- (c) The Contractor shall assume all costs of testing materials offered in substitution for those found deficient.

The contract price will include the cost of furnishing all required working drawings, record drawings and other submittals.

105.03 Conformity with Plans and Specifications. All work performed and all materials furnished shall be in reasonably close conformity with the lines, grades, cross sections, dimensions, and material requirements, including tolerances, shown on the plans or indicated in the specifications.

Unless otherwise specified, in the event the materials or the finished product in which the materials are used is not within reasonably close conformity with the plans and specifications but reasonably acceptable work has been produced, the Engineer/City Engineer shall determine if the work shall be accepted and remain in place. If the work is accepted, the Engineer/City Engineer will document the basis of acceptance by Contract modification that will provide for an appropriate adjustment in the contract cost for such work or materials.

In the event the materials or the finished product in which the materials are used or the work performed is found not to be in reasonably close conformity with the plans and specifications and have resulted in an inferior or unsatisfactory product, the work or materials shall be removed and replaced or otherwise corrected at no cost to the City.

105.04 Coordination of Plans, Specifications, and Special Conditions. These Specifications including General Provisions and Technical Specifications, the Plans, Supplementary Conditions, Special Provisions and all other supplementary documents are essential parts of the Contract, and a requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work.

The Contractor shall be responsible for the proper fitting of all work and for the coordination of the operations of all trades, Subcontractors, or materialmen engaged upon this Contract. He shall be prepared to guarantee to each of his Subcontractors the locations and measurements which they may require for the fitting of their work to all surrounding work.

In addition, the Specifications include references to the Arkansas Highway and Transportation Department's Standard Specifications for Highway Construction Edition of 1996 and 2003 (AHTD Standard Specifications). The portions of the AHTD Standard Specifications, which are referenced in these specifications, are hereby incorporated by reference.

All work shall conform to applicable sections of the City of Fayetteville Code of Ordinances and to the City of Fayetteville Minimum Street Standards. In case of discrepancy, the most stringent requirements will apply. The City of Fayetteville Code of Ordinances and Minimum Street Standards are hereby incorporated by reference.

The Contractor shall not take advantage of any apparent error or omission on the plans or in the Contract Documents. The party discovering such error or omission shall notify the other party when the discovery is made. The Engineer will then make such corrections and interpretations as may be deemed necessary for fulfilling the intent of the plans and specifications.

105.05 Cooperation by Contractor. The Contractor will be supplied with a minimum of two sets of approved plans and Contracts, one set of which shall be kept available on the project at all times.

The Contractor shall give the work the attention necessary to facilitate the progress thereof and shall cooperate fully with the Engineer/City Engineer, inspectors, and other Contractors.

The Contractor shall have on the project at all times an agent who is a competent superintendent capable of reading and thoroughly understanding the plans and specifications and thoroughly experienced in the type of work being performed. The Superintendent shall be satisfactory to the Owner and the Engineer, on the work at all times during working hours with full authority to supervise and direct the work and who shall be the Contractor's agent responsible for the faithful discharge of the Contractor's obligations under the Contract. During

working hours, the Contractor's superintendent shall be equipped with a mobile phone or other communication device suitable to the Engineer for contact by the Engineer or Owner. The superintendent shall receive instructions from the Engineer/City Engineer and shall have full authority to execute orders or directions of the Engineer/City Engineer without delay and to promptly supply such materials, labor, equipment, tools, and incidentals as may be required. Such superintendent shall be furnished regardless of the amount of work sublet.

The Owner shall have the authority to require the Contractor to remove from the work any incompetent or insubordinate superintendent.

105.06 Coordination and Cooperation Between Contractors. The Owner reserves the right at any time to contract for and perform other or additional work on or near the work covered by the Contract.

When separate contracts are let adjacent to or within the limits of any one project, the work of each Contractor shall be conducted so as not to interfere with or hinder the progress or completion of the work being performed by other Contractors. Contractors working on the same project shall cooperate with each other.

It is understood and agreed that the Contractor considered in the bid the status of the existing Contract or Contracts at the time of bidding and will arrange to coordinate and schedule the work jointly with the other affected Contractors in order to complete the work within the time allowed in the Contract.

If, through acts of neglect or through failure to comply with any applicable Government regulations by the Contractor, any other Contractor or any Subcontractor shall suffer loss or damage on the work, the Contractor shall settle with such other Contractor or Subcontractor by agreement or arbitration, if such other Contractor or Subcontractor will so settle. If such other Contractor or Subcontractor shall assert any claim against the Owner on account of any damage alleged to have been so sustained, the Owner will notify this Contractor, who shall defend at his own expense any suit based upon such claim, and, if any judgment or claims against the Owner shall be allowed, the Contractor shall pay or satisfy such judgment or claim and pay all costs and expenses in connection therewith.

Contractors involved shall assume all liability, financial or otherwise, in connection with their own Contracts and shall protect and save harmless the City of Fayetteville from any and all damages or claims that may arise because of inconvenience, delay, or loss experienced because of the presence and operations of other Contractors working within the limits of the same project.

Contractors shall arrange their work and shall place and dispose of the materials being used so as not to interfere with the operations of the other Contractors within the limits of the same project, and shall join their work with that of the others in an acceptable manner, and shall perform it in proper sequence with that of the others.

105.07 Cooperation with Utilities. The Plans indicate various utility items, some of which are to be relocated or adjusted by the utility owner, and others that are to be relocated

or adjusted by the Contractor. The City will notify all known utility companies, all known pipe line owners, or other known parties affected, and endeavor to have all necessary adjustments of the public or private utility fixtures, pipe lines, and other appurtenances within or adjacent to the limits of construction made before construction begins.

Water lines, gas lines, wire lines, service connections, water and gas meter boxes, water and gas valve boxes, light standards, cableways, signals, and all other utility appurtenances within the limits of the proposed construction that are to be relocated or adjusted are to be moved by the owners of such facilities except as otherwise provided for in the Contract or as noted on the plans.

The Contractor shall consider in the bid all of the permanent and temporary utility facilities and appurtenances in their present, relocated, or proposed positions. No additional monetary compensation will be allowed for any delays, inconveniences, or damages sustained due to any interference from the utilities or appurtenances or from the operations of relocating them.

It is the Contractor's responsibility to have all utility lines located before construction begins. Any costs incurred due to damaged utility lines shall be borne by the Contractor with no exceptions.

All work in this contract shall be in accordance with the Arkansas Underground Facilities Damage Prevention Act. The Contractor shall abide by the most current edition of this Act.

105.08 Inspection and Observation of Work. All materials and each part or detail of the Work shall be subject to inspection by the Owner. All materials and each part or detail of the Work shall be subject to observation by the Engineer. The Engineer and Owner and their designated representatives shall be provided acceptable access to all parts of the Work and shall be furnished with such information and assistance by the Contractor as is necessary to for the Engineer's observation and/or the Owner's observation and inspection.. Neither observations by Engineer/City Engineer nor inspection, tests or approvals by others shall relieve Contractor from his obligation to perform the work in accordance with the Contract Documents.

The Contractor shall notify the Engineer sufficiently in advance of backfilling or concealing any facilities to permit proper observation. If the facilities are concealed without approval or consent of the Engineer, the Contractor shall uncover for observation and recover such facilities all at his own expense, when so requested by the Engineer.

Observation of materials and appurtenances to be incorporated in the Improvements embraced in this Contract may be made at the place of production, manufacture or shipment, whenever the quantity justifies it, and such observation and acceptance, unless otherwise stated in the Technical Specifications, shall be final, except as regards (1) latent defects, (2) departures from specific requirements of the Contract, (3) damage or loss in transit, or (4) fraud or such gross mistakes as amount to fraud. Subject to the requirements contained in the preceding sentence, the observation of materials as a whole or in part will be made at the project site.

All condemned or rejected work shall be promptly taken out and replaced by satisfactory work. Should the Contractor fail or refuse to comply with the instructions in this respect, the Owner may, upon certification by the Engineer, withhold payment, proceed to terminate the Contract, or perform work as provided herein.

When requested by the Engineer/City Engineer at any time before acceptance of the Work, the Contractor shall remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the specifications.

Should the work thus exposed or examined prove acceptable, the uncovering or removing and the replacing of the covering or making good of the parts removed will be paid for as extra work. Should the work so exposed or examined prove unacceptable, the uncovering or removing and the replacing of the covering or making good of the parts removed shall be at the Contractor's expense.

Any work performed or materials used without inspection by the Engineer/City Engineer may be ordered exposed, and/or removed and replaced, at no cost to the Owner unless the Engineer/City Engineer or inspector failed to inspect after having been given reasonable notice that the work was to be performed.

When any unit of government, political subdivision, railroad corporation, or other agency is to pay a portion of the cost of the Work covered by the Contract, its respective representatives shall have the right to inspect the Work. Such inspection shall in no sense make any unit of government, political subdivision, railroad corporation, or other agency a party to the Contract, and shall in no way interfere with the rights of either party thereunder.

105.09 Removal of Unacceptable or Unauthorized Work. All work that does not comply with the requirements of the Contract will be considered unacceptable. Unacceptable work, whether the result of poor workmanship, use of unacceptable materials, damage through carelessness, negligence, or any other cause, found to exist before the final acceptance of the Work, or during the warranty period specified in Subsection 109.18 "Warranty and Guarantee", shall be removed and replaced in an acceptable manner at no cost to the Owner. Work performed contrary to any instructions of the Engineer/City Engineer; work performed beyond the lines shown on the plans or as established, except as herein specified; or any extra work performed without authority will be considered as unauthorized and will not be paid for under the provisions of the Contract. Work so performed may be ordered removed or replaced at no cost to the Owner.

Should the Contractor fail to comply with any order of the Engineer/City Engineer, the Engineer/City Engineer will have the authority to cause unauthorized work to be removed and unacceptable work to be corrected or removed and replaced and to deduct the costs from any moneys due or to become due the Contractor.

105.10 Authorized Changes. All changes to the Plans performed in the field shall be reviewed, approved and authorized by the Owner prior to proceeding with the work. Any

changes to the Plans without authorization may result in removal of such item at the Contractor's expense and/or nonpayment for the work, at the discretion of the Owner.

Verbal authorized changes to the Plans in the field will not be considered for additional quantities or compensation, unless they are followed by written documentation within 24 hours. Any authorized changes to the Plans which are approved by the Owner for additional compensation shall be in written form indicating all items of work involved and the cost for each item, and will be submitted to the Owner prior to proceeding with the work involved.

105.11 Substitution of Materials and Equipment. If the Contractor desires to use a material, method or type of equipment other than those specified in the Contract, authority from the Engineer/City Engineer to do so must be requested. The request shall be in writing and shall include a full description of the materials, methods and equipment proposed to be used and an explanation of the reasons for desiring to make the change.

Prior to proposing any substitute material, method or type of equipment, the Contractor shall satisfy itself that the material, method or type of equipment proposed is, in fact, equal to that specified, that such material or type of equipment will fit into the space allocated, that such material or type of equipment affords comparable ease of operations, maintenance and service, that the appearance, longevity and that by reason of cost savings, reduced construction time, or similar demonstrable benefit, the substitution material, method or type of equipment will be in Owner's interest.

The burden of proof of equality of a proposed substitution for a specified material, method or type of equipment shall be upon the Contractor. Contractor shall support its request in writing with sufficient test data and other means to permit the Owner to make a fair and equitable decision on the merits of the proposal. Contractor shall submit drawings, samples, data and certificates for proposed substitute materials. Any material or type of equipment by a manufacturer other than those specified or brand name or model number or of generic species other than those specified will be considered a substitution. The Owner will be the sole judge of whether or not the substitution is equal in quality, utility and economy to that specified.

Approval of a substitution shall not relieve the Contractor from responsibility for compliance with all requirements of the Contract. Contractor shall bear the expense for any changes in the parts of the Work caused by any substitutions.

Substitutions will not be permitted in those instances where the product is intended to accommodate artistic design, specific function or economy of maintenance.

No change will be made in basis of payment for the construction items involved nor in contract time as a result of an authorized change in methods or equipment under these provisions.

105.12 Construction Layout. The Engineer/City Engineer will establish a limited number of control points and associated benchmarks for the contractor's use in establishing lines, grades, profiles, structures, and other associated items of work. In general, the control

points will be located approximately 500 feet apart along the project. All other construction staking will be the responsibility of the Contractor. The Contractor shall provide a sufficient workforce skilled in construction layout to establish all lines, slopes, profiles, and structure locations necessary to construct the project according to the plans.

When section 111, "Roadway Construction Control" is included in the proposal then the Contractor shall comply with the requirements and provisions of such.

105.13 Maintenance During Construction. The Contractor shall maintain the work during construction and until the project is accepted. This maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and forces, to the end that the roadway or structures are kept in satisfactory condition at all times.

The Contractor shall be responsible for the maintenance of existing drainage ditches and channels within the right-of-way limits, including construction easements if any, from the date all work is begun on the project to the date of its final acceptance. This is not a requirement that the Contractor improve existing drainage ditches and channels, except as shown on the plans or directed by the Engineer/City Engineer. The Contractor shall maintain waterways in such condition that damage to the work or to abutting property will not result from the Contractor's operations. Obstruction of natural flow in waterways by stockpiling or storing materials, or by placement of equipment or supplies without provision for adequate bypassing of such natural flow, will not be permitted. Collections of sediment or debris that prohibits or inhibits normal function of drainage facilities shall be removed promptly.

All costs of maintenance work during construction and before the project is accepted will not be paid for separately, but full compensation therefore will be considered included in the contract unit prices bid for the various items in the Contract.

If the Contractor, at any time, fails to comply with the provisions of this subsection, the City will immediately notify the Contractor of such noncompliance. If the Contractor fails to remedy unsatisfactory maintenance within 24 hours after receipt of such notice, the City may immediately proceed to maintain the project and the entire cost of this maintenance will be deducted from moneys due or to become due the Contractor on the Contract.

All roadway cuts shall be temporarily or permanently repaired in accordance with Section 405, "Asphalt Concrete Patching for Maintenance of Traffic" within 24 hours of the completion of trench backfill for the work, or segment of work, which required the excavation and/or cut.

Section 106. Control of Material

106.01 Quality Requirements. The materials used in the work shall meet all quality requirements of the Contract. Quality control, to insure that materials and workmanship, prior to and after, being incorporated into the work meets the requirements of the Contract, is the sole responsibility of the Contractor. Testing required for Contractor's quality control,

certificates of compliance, mix designs and manufacturing of materials, and as needed for Contractor's operations shall be provided by the Contractor and the costs therefore will not be paid separately but full compensation will be considered included in the contract unit prices bid for associated items.

All Quality Assurance testing, to insure that the materials and workmanship as a final product meets the requirements of the Contract, will be accomplished and paid for by the Owner. The costs for any retesting required in areas failing to meet the specified requirements shall be paid for by the Contractor.

The materials furnished and used shall be new, except as may be provided elsewhere in these specifications, on the plans or in the Special Conditions. The materials shall be manufactured, handled, and used in a workmanlike manner to ensure completed work in accordance with the plans and specifications.

106.02 Sources of Supply. To expedite the inspection and testing of materials, the Contractor shall notify the Engineer/City Engineer of proposed sources of materials before delivery. The Contractor shall furnish without charge such samples as may be required. Inspection and tests may be performed by the Engineer or Owner's designated testing firm, but it is understood that such inspections and tests, if made at any point other than the point of incorporation in the work, in no way shall be considered as a guarantee of acceptance of such materials nor of continued acceptance of material presumed to be similar to that upon which inspections and tests have been made.

The Contractor shall assume full responsibility for ordering materials of the quality and quantity required and for the delivered costs of such materials. Materials needed in the work shall be furnished by the Contractor unless otherwise stated in the Contract.

106.03 Samples, Tests, and Cited Specifications. All materials will be inspected and tested by the supplier or Contractor as required by these specifications before incorporation in the Work. Work in which untested materials are used without the approval or written permission of the Engineer/City Engineer shall be treated as provided in Subsection 105.09 "Removal of Unacceptable or Unauthorized Work."

Whenever a reference is made in the specifications to a Federal Specification, or to a specification or test designation of the American Association of State Highway and Transportation Officials, the American Society for Testing and Materials, American Water Works Association, or any other recognized national organization, it shall mean the year of adoption or latest revision of the specification or test designation in effect on the day the advertisement for bids is dated. When a specific reference is made to a dated specification or test designation, the revision in effect on that date shall apply.

When requested, the Contractor shall furnish a complete certified statement of the origin, composition, and/or manufacture of materials that are to be used in the Work.

106.04 Certification of Compliance. The Engineer/City Engineer may permit use of certain materials or assemblies prior to sampling and testing if accompanied by a Certificates

of Compliance stating that such materials or assemblies fully comply with the requirements of the Contract. The certificate shall be signed by the manufacturer. Each lot of such materials or assemblies delivered to the Project must be accompanied by a Certificate of Compliance and clearly identified.

Materials or assemblies used on the basis of Certificates of Compliance may be sampled and tested and if found not in conformity with Contract requirement will be subject to rejection whether in place or not.

The form and distribution of Certificates of Compliance shall be as approved by the Engineer/City Engineer.

106.05 Plant Inspection. The Engineer/City Engineer may undertake the observation of materials at the source. In the event plant observation is undertaken the following conditions shall be met:

- The Engineer/City Engineer shall have the cooperation and assistance of the Contractor and of the producers of materials for the Work.
- The Engineer/City Engineer shall have full entry at all times to such parts of the plant as may concern the manufacture or production of the materials being furnished.

Adequate safety measures shall be provided and maintained.

It is understood that the Engineer/City Engineer reserves the right to retest all materials prior to incorporation into the Work which have been tested and accepted at the source of supply after the sample have been delivered and to reject all materials which, when retested, do not meet the requirements of these specifications or contract documents.

106.06 Storage of Materials. Materials shall be so stored as to assure the preservation of their quality and fitness for the work and in accordance with requirements of the Specifications; or if not covered in the Specifications, in accordance with the manufacturer's recommendations. Stored materials, even though approved before storage, may again be inspected before their use in the work. Stored materials shall be located so as to facilitate their prompt inspection. Portions of the right-of-way not required for public travel may be used for storage purposes and for the placing of the Contractor's plant and equipment, if approved by the Engineer, but any additional space required therefore must be provided by the Contractor, and at no cost to the Owner. Private property shall not be used for storage purposes without written permission of the owner or lessee, and if requested by the Engineer, copies of such written permission shall be furnished. All storage sites shall be restored to their original condition by Contractor at his expense. Construction materials may not be stored in the roadway for more than five (5) days after unloading.

106.07 Handling Materials. All materials shall be handled in such manner as to preserve their quality and fitness for the work. Aggregates shall be transported from the storage site to the Work in tightly covered vehicles so constructed as to prevent loss or segregation of materials after loading and measuring so that there may be no inconsistencies in the

quantities of materials intended for incorporation in the Work as loaded and the quantities as actually received at the place of operations.

106.08 Unacceptable Material. All materials not conforming to the requirements of the specifications at the time they are used shall be considered as unacceptable and all such materials will be rejected and shall be removed immediately from the site of the work unless otherwise instructed by the Engineer/City Engineer. No rejected material, the defects of which have been corrected, shall be used until approval has been given.

106.09 Owner-Furnished Material. The Contractor shall furnish all materials required to complete the Work, except those specified to be furnished by the Owner. Material furnished by the Owner will be delivered or made available to the Contractor at the points specified in the Special Provisions.

The cost of handling and placing all materials after they are delivered to the Contractor will not be paid for separately, but full compensation therefore will be considered included in the contract unit price(s) bid for the item(s) with which they are used.

The Contractor will be held responsible for all material delivered by the Owner through this arrangement. Deductions will be made from any moneys due the Contractor to make good any shortages and deficiencies, from any cause whatsoever; for any damage that may occur after such delivery; and for any demurrage charges.

106.10 Salvaged Materials. All salvaged materials in reusable condition, including pavement millings, water and drainage pipe, valves, fittings and other items, remain the property of the City of Fayetteville. Contractor shall deliver items to location directed by Engineer/City Engineer or designated in specifications. Items not considered of value shall be disposed of by the Contractor at his expense.

106.11 Automatically Controlled Equipment. Whenever a breakdown or malfunction of the automatic controls occurs on scales, scale printers, batch plants, or mixing plants, the equipment may be operated manually or by other methods for a period not to exceed two working days, provided that such alternate methods of operation produce results otherwise meeting the Specifications.

Section 107. Quality Control Requirements

107.01 Description. This section shall set forth the requirements for Quality Control, including material testing and submittal requirements.

107.02 Submittal Requirements.

Submittals shall comply with subsection 105.02, "Plans and Submittals" and the following:

All submittals required by the contract shall be submitted and approved before associated work is begun. Sufficient copies shall be submitted for the Engineer to retain two copies, the City to receive two copies and the Contractor to receive a minimum of one approved copy.

The following submittals are required:

- 1) Project Schedule
- 2) Concrete Mix Design(s)
- 3) Asphalt Mix Design(s)
- 4) Concrete Pipe Certifications
- 5) Precast Box Culvert Shop Drawings and Hydraulic Design
- 6) Listings of Project Personnel and Contact Phone Numbers
- 7) Traffic Control Plan
- 8) Striping Material
- 9) Reinforcing Steel Fabrication Drawings
- 10) Signal Equipment
- 11) Other Submittals as requested by the Engineer/City Engineer

The Engineer/City Engineer will review all submittals promptly and notify the contractor of their approval or denial. The contractor shall have approved submittals before beginning any associated work. Any work accomplished before approved submittals are received is subject to rejection and removal from the job at the contractor's expense.

107.03 Material Submittals. As a minimum, the following material submittals will be required:

- 1) Samples of on-site soils, if these soils are to be used as fill in the roadway. The Engineer/City Engineer will determine the number of samples to be taken.
- 2) Samples of soils to be used as borrow material.
- 3) Samples of material to be used as aggregate base under the roadway. One sample will be required initially. Additional samples will be taken during placement of aggregate base if deemed necessary by the Engineer/City Engineer.
- 4) Samples of material to be used as topsoil. Alternatively, the Engineer/City Engineer will inspect the site from which the topsoil is to be taken to determine its acceptability. All material samples shall be taken in the presence of a representative

from the Quality Assurance (QA)/Quality Control (QC) Laboratory. Other submittals may be required as determined by the Engineer/City Engineer.

107.04 Testing, Observation and Inspection Requirements

(a) Field Observations and Inspections. The Construction Observer will be on-site during all work which is to be paid for under the contract. The contractor shall provide one person as its on-site representative to receive instructions from the Engineer/City Engineer. This person shall be qualified and experienced in job superintendence.

The Contractor's representative shall be on-site during all work that is to be paid for under the contract. If the Contractor's representative is not on-site, the Engineer/City Engineer may order all work be stopped until such time as the contractor's superintendent returns to the job site.

The Contractor shall provide at least 24 hours of advance notice for any concrete placement.

Unless otherwise specified, the City will provide, at its expense, an independent quality assurance/quality control (QA/QC) laboratory to accomplish quality assurance testing. All testing will be scheduled with the QA/QC lab and the Contractor by the City or Engineer. The Contractor shall provide or make available samples of all material as required by these specifications as well as any other materials deemed necessary by the Engineer/City Engineer.

(b) Testing Requirements. The Contractor shall inform the Construction Observer at least 24 hours in advance of any required testing. The following is the minimum sampling and testing frequency required:

- 1) **Cross Drain Backfill:** minimum of one density test per layer of material placed per pipe or box culvert location.
- 2) **Storm drain/utility pipe backfill:** minimum of one density test per 500 lineal feet of pipe or portion thereof when the pipe is located in the street or under the curb and gutter.
- 3) **Embankment:** minimum of one density test per layer per 500 lineal feet of roadway or portion thereof.
- 4) **Subgrade:** minimum of one density test per 500 feet of roadway with a minimum of three density tests per project, and one sieve analysis and plasticity index test per project per material type for subgrade soil classification.

5) Imported Embankment and Subgrade Materials.

- (1) One moisture/density relationship test (AASHTO T-99 with Note 7, or AASHTO T-180 with Note 8) shall be taken at the beginning of the project, and one additional moisture/density relationship test shall be taken for every 5000 cubic yards of imported material. ASTM testing methods for

moisture/density relationships may not be used for embankment and subgrade materials.

- (2) For every 20 density tests performed in accordance with the testing frequency for subgrade and embankments, a one-point moisture/density test shall be taken per AASHTO T 272.
 - 6) **Aggregate base course:** minimum of one density test and one depth measurement (depth sounding) per 500 lineal feet of roadway, with a minimum of three density tests and three depth measurements per project; minimum of one gradation test per project.
 - 7) **Asphalt Concrete Hot Mix.** Testing shall be as specified in Section 403. Core holes shall be filled with non-shrink grout mix by the Contractor. All holes shall be protected from traffic until the grout has cured.
 - 8) **Concrete for Drainage Structures and Sewer Manholes.** A minimum of one set of three concrete cylinders per day's concrete placement will be required for drop inlets, junction boxes, and manholes. Other placements will be sampled at the rate of 1 set of cylinders per 30 cubic yards of concrete placed. Slump and air entrainment tests will be conducted at the time of cylinder preparation. One cylinder will be broken at seven days and the other two will be broken at 28 days.
 - 9) **Concrete for Curb and Gutter.** A minimum of one set of three concrete cylinders per 500 lineal feet of curb and gutter or portion thereof. One cylinder will be broken at seven days and the other two will be broken at 28 days.
 - 10) **Concrete Pavement.** A minimum of one set of three concrete cylinders per 500 lineal feet of pavement or portion thereof, with a minimum of one set per project. The set shall be broken in seven and 28 days as described above. Also, one core and depth measurement per 500 lineal feet of complete pavement with a minimum of one per project. Core holes shall be filled with non shrink grout mix. All holes shall be protected from traffic until the grout has cured.
- (c) **Provisions for Acceptance of Nonspecification Materials.** This section provides for corrective actions to be taken when test results indicate nonspecification materials or workmanship have been incorporated into the project. Any penalties, which are assessed, will be deducted from the contract price.
- 1) **Density for Embankment, Subgrade, Pipe Backfill, and Crushed Stone Base Course:** Recompact until the minimum density is obtained.
 - 2) **Depth of Crushed Stone Base Course:** The depth of the crushed stone base shall be within plus or minus one-half inch ($\pm \frac{1}{2}$ "') of the required depth. If the deficient depth is greater than one-half inch ($\frac{1}{2}$ "'), additional material shall be added to reach the required depth. This material shall be incorporated into the existing material by the use of rippers or other equipment extending a minimum of 3 inches into the existing material.

- 3) **Depth and Density of ACHM Binder and Surface:** Depth and density requirements shall be as specified in Section 403 "Asphalt Concrete Hot Mix" of these specifications.
- 4) **Surface Tolerance of ACHM Surface:** Surface tolerance of ACHM Surface shall be as specified in Section 403 "Asphalt Concrete Hot Mix" of these specifications.
- 5) **Concrete Strength:** The average 28-day compressive strength of the two cylinders of a set shall be at least the required strength of the concrete specified. If the average strength is lower, the following penalties will be assessed:

% of Minimum Strength	% Reduction in Contract Price
92-100	10
85-92	25
Below 85%	Remove and Replace

- 6) **Concrete Pavement Depth:** The concrete pavement depths shall be within plus or minus three-eighths inch ($\pm 3/8''$) of the required depth plus any additional depth required as a result of a deficient subbase depth. The average of all depth measurements shall not be less than the required depth, and any depth in excess of plus three-eighths inch ($\pm 3/8''$) will not be used in computing the average depth. If the average depth is less than the required depth, the following penalties shall be assessed:

Deficient Depth	% Reduction in Contract Price
Req. depth to 1/8 inch	1
1/8 inch to 1/4 inch	3
1/4 inch to 3/8 inch	7
3/8 inch to 1/2 inch	15
1/2 inch to 5/8 inch	25
5/8 inch to 3/4 inch	40
More than 3/4 inch	Remove and Replace

- 7) **Concrete Pavement Surface:** The finished pavement surface shall have a maximum deviation of $1/4''$ when tested with a 10' straight edge parallel to the flow of traffic. Pavement cross slope shall vary by no more than $1/8''$ in 10' when tested with a straightedge.

Grinding shall be performed, if necessary, to remove any deviations in excess of $1/4''$. The grinding equipment shall be power driven and specifically designed to smooth and texture portland cement concrete by means of diamond blades. Areas that have been ground shall be re-grooved by grooving in accordance with subsection 601.16 for Class 7 surface finish, to provide a uniform texture equal in roughness to the surrounding pavement.

In addition to these requirements, if any individual test falls below the minimum requirements, the area represented by this test shall be assessed the appropriate penalty under the applicable section above.

107.05 Testing and Material Specification. These Specifications reference AASHTO Standards for testing and material. Unless specifically stated otherwise, the corresponding ASTM Standard will be allowed in lieu of the AASHTO Standard.

Section 108. Legal Relations and Responsibility to the Public

108.01 General. The Contractor shall keep fully informed of all Federal and State laws, all local laws, ordinances, and regulations, and all orders and decrees of bodies or tribunals having any jurisdiction or authority which in any manner affect those engaged or employed on the work, or which in any way affect the conduct of the work. Further, the Contractor shall at all times observe and comply with all such laws, ordinances, regulations, quarantines, orders, and decrees; and shall protect and indemnify the City and its representatives against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by the Contractor or the Contractor's employees.

All work pertaining to Electrical, Plumbing, and/or Building Crafts shall be performed in strict accordance with governing Federal, State, City, and Local Codes and Ordinances, with particular attention to the current editions of the Arkansas State Plumbing Code and the National Electrical Code as adopted by the National Fire Protection Association.

The Contractor shall comply with applicable Federal, State, and local laws governing safety, health, and sanitation. The Contractor shall provide safeguards, safety devices, and protective equipment and take any other action necessary to protect the life and health of employees on the project and the safety of the public and to protect property in connection with the performance of the work covered by the Contract.

Unless specified elsewhere in these specifications, the work involved or the delay or cost incident to compliance with these regulations will not be paid for separately, but full compensation therefore will be considered included in the contract unit prices bid for the various items of the Contract.

108.02 Hazardous Substance. If the release of a suspect hazardous substance has occurred, the Contractor shall notify the Engineer/City Engineer. This will not relieve the Contractor or responsible parties of the obligation to notify other appropriate agencies and will not relieve responsible parties of any liability.

Commonly used materials which could be potentially hazardous substances if they are spilled or enter waterbodies are: asphalt materials, concrete, cement, paint, solvents, petroleum products, fertilizers, concrete curing compound, lime, linseed oil, asphalt additives, and concrete additives. This list is not all inclusive.

Notification should be made if, at any time, there is an indication of a spill. Indicators could be:

- Leaking or empty containers, surface staining, chemical odors, vegetation damage, etc.
- Oil, grease or petrochemical substances, which produce residue, coat the banks and/or bottoms of a waterbody, or produce a visible, colored film on the surface.
- Distinctly visible solids, scum, or foam of a persistent nature, or slime, bottom deposits, or sludge banks in a waterbody.

108.03 Permits, Licenses, and Taxes. Unless specified otherwise in these Specifications, the Contractor shall procure all permits and licenses, pay all charges, fees and taxes, and give all notices necessary and incidental to the due and lawful prosecution of the work. These costs will not be paid for directly, but will be considered included in the contract unit prices bid for the various items of the Contract.

The Owner will obtain any railroad and Arkansas Highway and Transportation Department permits when required.

The Contractor shall obtain and pay for all permits, design fees and related costs resulting from a request by the Contractor to substitute materials or designs for those shown on the drawings or specified in these specifications.

108.04 Patented Devices, Materials, and Process. Contractors employing any design, device, material, or process covered by letters of patent or copyright shall provide for such use by suitable legal agreement with the patentee or owner. Contractors and their Sureties shall indemnify and save harmless the Owner, any affected third party, or political subdivision from any and all claims for infringement by reason of the use of any such patented design, device, material, or process, or any trademark or copyright, and shall indemnify the City of Fayetteville for any costs, legal expenses, and damages that it may incur by reason of any infringement, at any time during the prosecution of or after the completion of the work.

108.05 Restoration of Surfaces Opened by Permit. The right to construct or reconstruct any utility service in the highway or street, or to grant permits for such work, at any time, is hereby expressly reserved by the City of Fayetteville or the proper authorities of the political entity in whose jurisdiction the work is done and the Contractor shall not be entitled to any damages either for the digging up of the street or for any delay occasioned thereby.

Any individual, firm, or corporation wishing to make an opening in the roadway must secure a permit from the proper authority. The Contractor shall allow parties bearing such permits, and only those parties, to make openings in the roadway. When ordered by the Owner, the Contractor shall make in an acceptable manner all necessary surface repairs due to such

openings and such necessary work will be paid for as extra work, or as provided in these specifications, and will be subject to the same conditions as original work performed.

108.06 Sanitary Provisions. The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of the employees as may be necessary to comply with the requirements of the State and local Boards of Health, or of other bodies or tribunals having jurisdiction. Drinking water shall be provided from an approved source, so piped or transported as to keep it safe and fresh and served from single service containers or satisfactory types of sanitary drinking stands or fountains. All such facilities and services shall be furnished in strict accordance with existing and governing health regulations.

108.07 Public Safety and Convenience. The Contractor's work shall at all times be conducted so as to assure the least possible obstruction to traffic. The safety and convenience of the general public and the residents along the street and the protection of persons and property shall be provided for by the Contractor as specified by these Specifications and as directed by the Owner..

All roadway cuts shall be temporarily or permanently repaired in accordance with Section 405, "Asphalt Concrete Patching For Maintenance of Traffic" within 24 hours of the completion of trench backfill for the work, or segment of work, which required the excavation and/or cut.

The Contractor shall be responsible for providing a fence to control livestock and pets in areas where existing fencing is altered under the Contract. The City may elect to include temporary fencing as a pay item under subsection 512, "Fences" of these Specifications. If temporary fencing is not included as a pay item within the proposal, then temporary fencing that is suitable for the required use shall be supplied, shall be a subsidiary item, and no separate payment shall be made for this temporary fencing. Additionally, if temporary fencing is not included as a pay item within the proposal then permanent fence if included within the plans and/or the proposal may be constructed initially, or in lieu of temporary fencing.

The Contractor shall not create a public nuisance while performing the various operations of the work. Excessive noise between the hours of 10 P.M. and 6 A.M., dust from haul roads, County roads, or State roads, and mud tracked onto City, County or State roads or streets by equipment may be considered by the City to be a public nuisance.

The Contractor will be responsible for maintaining U.S. mailboxes within the project limits in such a manner that the public may receive continuous mail service according to U.S. Postal Service regulations. Unless otherwise provided, upon completion of the project, mailboxes will be replaced as near as practicable to their original location.

108.08 Railway Provisions. All work on railroad property shall be accomplished in strict compliance with the plans, these specifications, and such Special Provisions as are appropriate to the Contract. If the work near the railway requires a permit, the Contractor shall be responsible for acquiring this permit and adhering to the permit requirements.

All work to be performed by the Contractor in construction on the railroad right-of-way shall be performed at such times and in such manner as not to unnecessarily interfere with the movement of trains or traffic upon the track of the Railway Company. The Contractor shall use all care and precaution to avoid accidents, damage, or unnecessary delay or interference with the Railway Company's trains or other property.

Plans for all sheeting or cofferdams for foundation work adjacent to operated track, and plans of falsework, staging, protective sheeting, or other temporary construction near the operated track shall be approved by the Railway Company. The Contractor shall construct the work according to the approved plans.

108.09 Work Within Regulated Floodways. All work within regulated floodways shall be accomplished within the requirements of all permits issued by the Federal Emergency Management Agency (FEMA), Corps of Engineers (COE), The State of Arkansas, the City, or other applicable agencies, and with Section 110 of the AHTD Standards "Protection of Water Quality and Wetlands."

(a) Responsibility for FEMA Permit. Within regulatory floodways all permanent and temporary fills/structures must be in accordance with FEMA and local governmental requirements. The Owner obtains all required permits and/or variances for essential work in the regulated floodway before the Contract is awarded. The Owner will apply for Contractor requested variances which it determines are necessary. The Contractor should be aware that requested temporary fills/structures may not be approved or may require mitigation.

(b) Corps of Engineers Section 404 Permit Requirements. Placement of temporary fills/structures within a regulatory floodway may also require alteration of the existing COE 404 Permit.

(c) Compensation and Extension of Contract Time. The Contractor will not be granted additional compensation or contract time due to requested floodway variances that are considered by the Engineer/City Engineer to be for the convenience of the Contractor. If, however, due to no fault of the Contractor, a floodway variance is deemed by the Engineer/City Engineer to be necessary, additional contract time and/or compensation may be considered according to the provisions of Subsection 109.10 "Claims for Adjustment and Disputes."

All permits issued to the Contractor by the U.S. Army Corps of Engineers, or other applicable agencies, for the convenience of the Contractor in accomplishing the Work, shall be complied with in full and the Project will not be accepted until the permittor has accepted the work covered by permit. The Contractor will be responsible for obtaining a release from the permittor before acceptance.

108.10 Use of Explosives. When the use of explosives is necessary for the prosecution of the work, the Contractor shall exercise the utmost care not to endanger life or property, including new work. The Contractor shall comply with all laws and ordinances regarding the use of explosives; further, the Contractor shall be responsible for all damage resulting from the use of explosives.

All explosives shall be stored in a secure manner in compliance with all laws and ordinances, and all such storage places shall be clearly marked. Where no local laws or ordinances apply, storage shall be provided satisfactory to the City and in accordance with the Occupational Safety and Health Act of 1970, and the Safety and Health Regulations for Construction promulgated thereunder, but not closer than 1,000' from the road or from any building or camping area or place of human occupancy.

The Contractor shall notify the Fire Marshal of any explosive storage sites.

The Contractor shall notify each public utility company having structures in proximity to the site of the work of any intention to use explosives. Such notice shall be given sufficiently in advance to enable the companies to take such steps as they may deem necessary to protect their property from injury.

108.11 Protection and Restoration of Property and Landscape. The Contractor shall be responsible for the preservation of all public and private property and shall protect carefully from disturbance or damage all land monuments and property marks until the Engineer/City Engineer has witnessed or otherwise referenced their location, and shall not move them until directed.

The Contractor shall be responsible for all damage or injury to property of any character:

- 1) during the prosecution of the work, resulting from any act, omission, neglect, or misconduct in the manner or method of executing the work, or
- 2) at any time, due to defective work or materials, and said responsibility will not be released until the project has been completed and accepted.

Property shall include but not be limited to street and roadway signs, right-of-way monuments, roadway lighting, traffic signal equipment, and any conduits and wiring. Should it become evident that any item, such as listed above, is in conflict with the proposed work, the Contractor will notify the Engineer/City Engineer so that proper steps can be taken to adjust, remove, or otherwise eliminate the conflict.

Trees located outside of the easements or as indicated on the plans shall be retained and protected. Any roots 2" or larger in diameter are to be clean cut with a hand saw where they conflict with excavation work.

When or where any direct or indirect damage or injury is done to public or private property by or as a result of any act, omission, neglect, or misconduct in the execution of the work, or in consequence of the non-execution thereof, the Contractor shall restore, or bear the expense of restoring, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, rebuilding, or otherwise restoring as may be directed, or shall make good such damage or injury in an acceptable manner. Failure to do so within a period of time deemed reasonable by the Owner shall constitute noncompliance, and the City may cause the entire cost of the restoration to be deducted from moneys due or to become due the Contractor on the Contract.

108.12 Load Restrictions. The Contractor shall comply with all legal load restrictions in the hauling of materials on public roads being maintained for the traveling public. A special permit will not relieve the Contractor of liability for damage that may result from construction equipment operations. The operation of equipment of such weight or so loaded as to cause damage to structures or the roadway or to any other type of construction will not be permitted.

When hauling materials over the base or surface courses under construction, the Contractor shall limit the hauling as necessary to prevent damage. No loads will be permitted on bases, pavements, or structures before the expiration of the specified curing period controlling such operations. The Contractor shall be responsible for repair of all damage resulting from construction operations. No separate payment will be made for such repairs.

108.13 Opening Section of Roadway to Traffic. Whenever any roadway, or portion thereof, is in an acceptable condition for travel, it shall be opened to traffic, as may be directed, and such opening shall not be held to be in any way an acceptance of the roadway, or any part of it, or as a waiver of any of the provisions of these specifications and the Contract. Necessary repairs or renewals made on any section of the roadway opened to travel under instructions from the Engineer/City Engineer, due to defective material or work, or to natural causes, other than normal wear and tear, pending completion and acceptance of the roadway, shall be performed at no cost to the Owner.

If the Contractor is dilatory in completing shoulders, drainage structures, or other features of the work, the Engineer may give notification in writing and establish therein a reasonable period of time in which the work should be completed. If the Contractor is dilatory or fails to make a reasonable effort toward completion in this period of time, the Engineer/City Engineer may take action as provided in subsection 105.01 "Authority of the Engineer." On such sections that are so ordered to be opened, the Contractor shall conduct the remaining construction operations so as to cause the least obstruction to traffic and shall not receive any added compensation due to the added cost of the work by reason of opening such section to traffic.

108.14 Contractor's Responsibility for Work. Until final acceptance of the project by the City, the Contractor shall have the charge and care thereof and shall take every precaution against injury, theft, or damage to any part thereof by the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries, thefts, or damages to any portion of the work occasioned by any of the above causes before final acceptance, and shall bear the expense thereof except damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God, of the public enemy, or of governmental authorities.

In case of suspension of work from any cause whatever, the Contractor shall be responsible for the project and shall take such precautions as may be necessary to prevent damage to the project, provide for normal drainage and maintenance of the traveled way, and shall erect any necessary temporary structures, signs, or other facilities. During such period of suspension of work, the Contractor shall properly and continuously maintain in an acceptable growing

condition all living material in newly established plantings, seedings, and soddings furnished under the Contract, and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

The protection of the work shall be accomplished at no cost to the City.

In case of errors or negligence on the part of the Contractor, any expenses incurred by the City for engineering, observation, inspection, testing, design, or evaluation relative to correction of the work will be assessed against the Contractor.

108.15 Contractor's Responsibility for Utility Facilities and Services. At points where the Contractor's operations are adjacent to railroad or utility facilities, damage to which may result in loss or inconvenience, work shall not begin until all arrangements necessary for the protection thereof have been made.

The Contractor shall cooperate with the owners of any utility facilities in their removal and rearrangement operations so that these operations may progress in a reasonable manner, that duplication of rearrangement work may be reduced to a minimum, and that services rendered by those parties will not be unnecessarily interrupted.

In the event of interruption of utility services, as a result of accidental breakage or as a result of being exposed or unsupported, the Contractor shall promptly notify the proper authority and shall cooperate with the said authority in the restoration of service. If utility service is interrupted, repair work shall be continuous until the service is restored. No work shall be undertaken around fire hydrants until provisions for continued service have been approved by the Owner..

108.16 Furnishing Right-of-Way. The City will be responsible for the securing of all necessary rights of way in advance of construction within the limits indicated on the plans. Acquisition of right-of-way by the City does not include areas required by the Contractor for material sources (borrow, gravel, topsoil, sod, etc.), plant sites, equipment storage, stockpiles, disposal of waste or excess material, or any other areas required for the proper prosecution of the work. The Contractor is responsible for obtaining, at no cost to the City, areas outside the right-of-way required for such purposes and shall, at the City's request, furnish copies of agreements with the property owners. The Contractor may, with the approval of the City, use areas within the right-of-way that are outside the construction limits for these purposes. Erosion control, prevention of water pollution, and restoration of all such areas, both inside and outside the right-of-way, shall be performed by the Contractor according to the specifications and at no cost to the City.

108.17 Personal Liability of Public Officials. In carrying out any of the provisions of these specifications, or in exercising any power or authority granted to them by or within the scope of the Contract, there shall be no liability upon the City or its authorized representatives, either personally or as officials of the City, it being understood that in all such matters they act solely as agents or representatives of the City of Fayetteville.

108.18 No Waiver of Legal Rights. Final acceptance according to Subsection 109.15(b) "Final Acceptance" shall not preclude the City from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the City be precluded from recovering from the Contractor or the Surety, or both, such overpayment as it may sustain, or by failure on the part of the Contractor to fulfill obligations under the Contract. A waiver on the part of the City of any breach of any part of the Contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor, without prejudice to the terms of the Contract, shall be liable to the City for any or all of the following: fraud or such gross mistakes as may amount to fraud, the City's rights under any warranty or guaranty, or any latent defects in the work.

Section 109. Prosecution and Progress

109.01 Subletting of Contract. The Contractor will be permitted to sublet a portion of the Contract, except that work amounting to not less than 40% of the total Contract amount must be performed by the Contractor's organization. If the Bidder intends to sublet any portion of the Work, the Bidder shall furnish a list of subcontractors as a material part of his sealed proposal on the form provided, listing the description of work to be performed by each subcontractor. The experience, past performance, and ability of each proposed Subcontractor will be considered in the evaluation of bids. Upon request, the bidder shall furnish experience statements, with reference to any requested Subcontractor, prior to Notice of Award. If there being no objection in writing by the Owner to the listed subcontractors prior to the award of the Contract, the subcontractors will be deemed acceptable to the Owner. If bidder does not intend to sublet any part of the work, he shall insert the word "NONE" on the form provided. The Contractor shall not sublet, sell, transfer, assign, or otherwise dispose of the contract or any portion thereof, of his right, title, or interest therein, without prior written consent of the Owner and of the surety. The Contractor shall not remove and/or substitute the listed subcontractors without prior written consent of the Owner.

Consent to sublet, assign, or otherwise dispose of any portion of the contract shall not be construed to relieve the Contractor of his liability under the contract and bonds.

The Contractor shall perform with his own organization, unless otherwise authorized by the Special Conditions, work amounting to not less than 40% of the total Contract amount. No subcontractor shall further subcontract any portion of the work without the written consent of the Contractor and acknowledgement of the Owner.

The Owner will not recognize any subcontractor on the Work as a party to the contract. Nothing contained in any subcontract shall create any contractual relation between the subcontractor and the Owner. The Contractor will be held responsible for the progress of the subletted work in accordance with the contract progress required.

109.02 Prosecution and Progress. Contractor shall be responsible for planning, scheduling and reporting the progress of the work to ensure timely completion of the

Contract. For Contracts under \$2 million, or where specified in the Special Conditions, the following schedule requirements shall apply: Prior to or at the Preconstruction Conference, the Contractor shall submit two copies of his proposed schedule of operations for acceptance by the Engineer/City Engineer. The proposed Schedule shall be a bar chart or schematic (arrow) diagram showing the work stages and operations for all major activities required by the Contract, including the starting and completion of date of each part, and shall include dates of any proposed road closure, and any significant or required milestone events. Unless approved by the Engineer/City Engineer, activities shown on the Schedule shall not exceed 15 working days in length. The Schedule shall be of sufficient detail to allow day-to-day monitoring of Contractor's progress.

For Contracts over \$2 million, the following Critical Path Schedule requirements shall apply: Prior to or at the Preconstruction Conference, the Contractor shall submit a preliminary network analysis system defining the Contractor's planned operations during the first sixty calendar days after the date of the Notice to Proceed. The Contractor's general approach to the remainder of the Project shall be indicated. Within 30 calendar days of the Notice To Proceed, the Contractor shall submit a complete network analysis system, consisting of logic diagrams, computer mathematical analysis, calendar, and narration, to cover the Contractor's anticipated time schedule for the complete Project. As a minimum, the network analysis system shall include the following features:

- 1) Shall be time-scaled in calendar days with activities plotted on their early start and finish dates. Unless approved by the Engineer/City Engineer, activities shown on the Schedule shall not exceed 30 working days in length.
- 2) Network diagram shall show the order and interdependence of activities and the proposed sequence in which the work is to be accomplished as planned by the Contractor in coordination with all subcontractors. The sequence and logic shall be clear. The critical path activities shall be prominently distinguished.
- 3) Network diagram shall show for each activity the preceding and following activity, activity description, the total float, and the duration of the activity.
- 4) Activities shown shall include, in addition to construction activities, such tasks as submittal review and delivery times for long-lead time items, franchise utility work, subcontractor work, and owner-furnished equipment delivery.

The Contractor shall submit monthly updated Schedules with their pay estimate requests. The Contractor shall indicate on such updated Schedule actual construction progress, extra work added to Contract, and any proposed changes to the operation sequence. If the progress of the Work is significantly behind schedule, the updated Schedule shall also reflect any revised operation sequence, changes in equipment, labor forces, or working shifts, or other pertinent factors by which insufficient progress will be made up to allow the Contract completion within the time set forth in the Contract, including time extensions granted to date.

All submitted schedules and updated schedules shall be reviewed and accepted by the Engineer/City Engineer. If after review, the Engineer/City Engineer determines that the

schedule is not acceptable per the requirements listed above, the Contractor shall make adjustments and resubmit the schedule within 30 calendar days. Failure of the Contractor to submit an acceptable Schedule or monthly updated Schedule as required will be grounds for Owner to withhold an additional ten percent on the monthly progress payments, in addition to the normal retention, until Contractor is in compliance. Additional money withheld will be paid, upon compliance, in the next scheduled monthly estimate.

Acceptance of Contractor's schedules by Engineer/City Engineer shall not be construed as relieving Contractor of the obligation to complete the Work within the Contract Time; or as granting, rejecting, or in any other way acting on Contractor's requests for adjustments to the date for completing Contract Work, or claims for additional compensation. Such requests shall be processed in strict compliance with other relevant provisions of the Contract.

No measurement or direct payment will be made for Contractor costs relating to preparation and submission of schedules, updates and revisions thereto, the cost being considered as included in the prices paid for Contract items.

Contractor shall carry on the work and maintain the progress schedule during all disputes or claims with Engineer/City Engineer. No work shall be delayed or postponed pending resolution of any disputes or claims, except as Contractor and the Owner may otherwise agree in writing.

Float time is not for the exclusive use or benefit of either the Owner or Contractor. Extension of time for performance may be granted, as allowed in subsection 109.08, for delays caused solely by action or inaction by the Owner to the extent that equitable time adjustment for the activity affected exceeds the total float of the project, or where an impact on the contract completion date can be shown.

109.03 Limitations of Operations. The Contractor shall conduct the work at all times in such a manner and in such sequence as will assure the least interference with traffic and utility services. Due regard shall be given to the location of detours, bypasses, and to the provisions for handling traffic and utility services. No work shall be opened up to the prejudice or detriment of work already started. The Engineer/City Engineer may require the Contractor to finish a section on which work is in progress before work is started on any additional sections if the opening of such section is essential to public convenience. For roadway overlay projects and drainage projects, each individual street or section of drainage must be completed, including all site restoration, within 45 days of the start of work operations within that street or section, unless otherwise authorized by the Engineer/City Engineer.

Except in connection with the safety or protection of persons or the work or property at the site, and except as otherwise indicated in the Contract Documents, all work that requires inspection shall be performed during City of Fayetteville regular working hours, and Contractor will not permit overtime work or the performance of work on Saturday, Sunday, or any legal holiday as designated in Subsection 101(c) "Definitions" without Engineer/City Engineer's written consent. Contractor to submit a written request to the Engineer/City Engineer for non-regular working hours 48 hours in advance of the start of such work.

109.04 Character of Workers, Methods, and Equipment. The Contractor shall at all times provide sufficient materials, equipment, and labor to guarantee the completion of the Project according to the Plans and Specifications within the contract time. The Contractor shall advance the Work so that the available time is appropriately utilized in order to complete the Work within the contract time.

All workers shall have sufficient skill and experience to perform properly the work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform all work properly and satisfactorily.

Any person employed by the Contractor or by any subcontractor who, in the opinion of the Engineer, does not perform work in a proper and skillful manner, or is intemperate, belligerent or disorderly shall, at the written request of the Engineer, be removed forthwith by the Contractor or subcontractor employing such person, and shall not be employed again in any portion of the work without the approval of the Engineer.

Should the Contractor fail to remove such person or persons as required above, or fail to furnish suitable and sufficient personnel for the proper prosecution of the Work, the Owner may suspend the work by written notice and withhold moneys due until such orders are complied with.

All equipment that is proposed to be used on the Work shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the project shall be such that no injury to the roadway, adjacent property, or other facilities will result from its use.

When the methods and equipment to be used by the Contractor in accomplishing the construction are not prescribed in the Contract, the Contractor is free to use any methods or equipment that are demonstrated to the satisfaction of the Engineer as being capable of accomplishing the Contract work in conformity with the requirements of the Contract.

When the Contract specifies that the construction be performed by using certain methods and/or equipment, such methods and/or equipment shall be used unless others are authorized by the Engineer in accordance with Subsection 105.11 "Substitution of Materials and Equipment."

109.05 Determination of Contract Time.

(a) General. The time allowed for the completion of the Work included in the Contract will be stated in the Proposal and Contract, and will be known as the "Contract Time". The contract time will be specified as a fixed completion date or as calendar days.

The Contractor shall take into consideration all normal conditions considered unfavorable to the normal progress of the Work and place a sufficient work force and equipment on the project to ensure completion of the Work within the contract time.

The Engineer/City Engineer will determine the date upon which the Contract is substantially complete and time assessment will cease. In the event cleanup is necessary or items found at the final inspection are to be corrected, the Contractor shall complete this work in a timely manner or the Engineer/City Engineer will resume time charges.

(b) Fixed Completion Date. When the contract time is specified as a fixed date, it will be the date on which all work on the project shall be substantially complete.

(c) Calendar Day. Calendar day contract time includes delays for normal weather-related events, such as rain, snow, and freezing temperatures that may affect the progress of the construction in the following amounts on a per-month basis as hereinafter set out. Only weather-related delays in excess of these amounts will be considered for time extensions, if requested by the Contractor. Days Included in Contract Times for Normal Weather-Related Events are: (On A Monthly Basis)

Month	Normal Weather-Related Events
January	11
February	9
March	8
April	8
May	8
June	8
July	7
August	7
September	7
October	7
November	7
December	8

No changes in contract times will be allowed for any reason without a request in writing from the contractor. This request shall include reasons for the request with supporting documentation as proof of extraordinary delays beyond the contractor's control. Normal rainfall amounts and soil conditions will not be considered as reasons for extensions of time, nor will workload of the Contractor. The request must be submitted for to the Engineer/City Engineer within 5 days of the end of the month to be considered. No compensation will be made for monetary damages due to weather delay(s).

(d) Working Day. Only when the contract time is specified in working days, the provisions of Section 109.08(d) shall apply.

Time will be assessed for each day on which, in the judgment of the Engineer/City Engineer and subject to the limitations below, conditions allow the Contractor to effectively utilize 60% of normal forces and equipment to prosecute the work required at that time, for at least 60% of the Contractor's normal working hours, regardless of whether the Contractor actually works.

The Engineer/City Engineer will not assess a working day when conditions exist beyond the control and without the fault of the Contractor that prevent the utilization of forces and equipment as defined above. Also, for the purpose of assessment of working days, inaccessibility to a portion of the work due to utility conflict or utility work, either of which prevents utilization of forces and equipment as defined above, will be considered as an adverse working condition for the time exceeding that specified in the Contract for the utility services is considered within the Contractor's control for the purpose of assessment of working days.

Time from December 21 through January 15, inclusive, will not be assessed against the contract time.

Saturdays and City recognized holidays, other than those designated above, which may be declared by the City for certain special or unusual circumstances, will be optional to the Contractor as working days, and time will not be assessed unless work is performed that requires inspection. If work is performed, contract time assessment will be based upon the same conditions as a normal working day.

Contract time will not be assessed during a full suspension of the work as ordered by the Engineer/City Engineer. During a partial suspension of the work as ordered by the Engineer/City Engineer, the contract time will be assessed in direct proportion to the ratio of the money value of the items not suspended to the total contract amount.

Each pay estimate will state the each working day charged during the preceding period and the total number of working days charged to date. If the Contractor disagrees with the working days charged by the Engineer/City Engineer, then the Contractor shall, within 10 calendar days of signing the pay estimate, give the Engineer/City Engineer written notice of such disagreement and the reasons therefore. If the Contractor does not provide written notice within 10 calendar days of signing the pay estimate, no subsequent request for review will be considered.

109.06 Rights in and Use of Materials Found on the Work. The Contractor, with the approval of the Engineer, may use on the Project such stone, gravel, sand, or other material, determined suitable by the Engineer, as may be found in the planned excavation and will be paid both for the excavation of such materials at the corresponding contract unit price and for the pay item for which the excavated material is used. However, the Contractor shall replace with other acceptable material at no cost to the Owner all of that portion of the excavation material so removed and used that was needed for use in the embankments, backfills, approaches, or otherwise. No charge for the material so used will be made against the Contractor. The Contractor shall not excavate or remove any material from within the roadway location that is not within the grading limits, as indicated by the slope and grade lines, without written authorization from the Engineer.

Planned excavation, for the purposes of this subsection, is defined as all excavation shown on the plans and/or as changed by the Engineer for any purpose other than obtaining additional material lying within the planned typical sections and slopes. Planned excavation also

includes any excavation made beyond the ends of the Project for the purpose of blending the new construction into the existing roadway.

Unless otherwise provided, any material from any existing structures designated salvageable that is to remain the property of the owner, may be used temporarily by the Contractor in the erection of the new structure. Such material shall not be cut or otherwise damaged. Material thus used and subsequently cut or damaged by the Contractor's action or inaction shall be replaced in kind with new material of like dimension at no cost to the Owner.

109.07 Final Clean Up. Upon completion of the Work and before acceptance and final payment will be made, the Contractor shall remove from the right-of-way, from any temporary plant sites, and from any temporary equipment and material storage sites, all construction equipment, falsework, discarded material, rubbish, debris, temporary structures, footings, and all surplus material. The Contractor shall restore in an acceptable manner all property, both public and private, that has been damaged during the prosecution of the work and shall leave the waterways unobstructed and the roadway in a neat and presentable condition throughout the length of the work under contract.

No burning will be permitted on City of Fayetteville property, right-of-way, or easement without an approved burn permit issued by the City of Fayetteville Fire Department and concurred with by the Engineer. It is the Contractor's responsibility to determine prior to bidding whether or not a burn permit will be approved and issued. When perishable material is burned, it shall be under the constant care of a competent watcher. Burning shall be accomplished at such times and in such manner that the surrounding vegetation, adjacent property, or anything designated to remain on the right-of-way will not be jeopardized. Contractor shall cease all burning when meteorological conditions are unsuitable for burning operations. Materials and debris that cannot be burned shall be removed from the right-of-way and disposed of at locations off the project.

Contractor shall have proposed dump sites for waste material approved by the City of Fayetteville prior to disposition of any waste onto these sites.

The materials, labor, equipment, and expense of the final cleaning up of the Project will not be paid for separately, but full compensation therefore will be considered included in the contract unit prices bid for the various items in the Contract.

109.08 Failure to Complete Work on Time. Time is an essential element of the Contract and it is important that the Work be pressed vigorously to completion. The cost to the Owner of the administration of the Contract, including engineering, inspection, and supervision, will be increased as the time occupied in the Work is lengthened. The public is subject to detriment and inconvenience when full use cannot be made of the Project.

The Owner shall be entitled to recover from the Contractor all ascertainable damages arising from the delay in completion. Said damages shall include, without limitation, all engineering, inspection, supervision, and legal expenses directly incurred by the Owner because of such delay.

Additionally, Contractor agrees that the Owner and/or public will suffer other damage or financial loss if the Work is not completed on time or within any time extensions allowed in accordance with the Contract Documents. Contractor and Owner agree that proof of the exact amount of any such damage or loss is difficult to determine. Accordingly, Contractor agrees to pay the sums stated in the proposal and Contract as liquidated damages and not as penalty for each calendar day or part thereof that the Work remains uncompleted after the contract time has expired.

Should the amount otherwise due the Contractor be less than the amount of such damages provided above, the Contractor and the Surety shall be liable to the Owner for such deficiency.

Permitting the Contractor to continue and finish the Work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a waiver on the part of the Owner of any of its rights under the Contract.

Section 110. Measurement and Payment

110.01 Measurement of Quantities. Work acceptably completed under the Contract will be measured by the Engineer/City Engineer according to United States Standard measures. Only actual quantities will be paid for unless otherwise specified. Unless otherwise specified, the following listed methods will be used:

- 1) For computing volumes of excavated materials specified for measurement by the cubic yard, the average end area method will be used.
- 2) Structures will be measured to the neat lines as shown on the plans or as finally constructed at the direction of the Engineer/City Engineer.
- 3) Items that are measured by the linear foot, such as pipe culverts, guardrail, underdrains, etc., will be measured parallel to the base or foundation upon which such structures are placed.
- 4) In determining the area for items bid on a square yard or acre basis, except as noted below, the longitudinal measurement will be made along the actual surface of the item and not horizontally, and transverse measurements shall conform to the dimensions shown on the plans or as directed by the Engineer/City Engineer.
- 5) In determining the area for all seeding and mulch cover items bid on an acre basis, when the area is a strip of varying width running approximately parallel to the centerline of the roadway, the longitudinal dimension will be measured horizontally and the transverse dimension will be measured parallel to the surface of the area seeded and/or mulched. For other areas of seeding and mulch cover items, all measurements will be made parallel to the surface of the area seeded and/or mulched. The area will be computed to the nearest 0.01 acre.

- 6) Materials that are specified for measurement by the ton shall be hauled in approved vehicles bearing a plainly legible identification number and weighed on accurate, approved scales furnished by the Contractor and inspected by a registered scale mechanic at least once a year and before their use after each move. Scales shall be located at the loading point or other approved location.
- 7) The scales shall be an automatic weighing system, with digital or springless dials, and equipped with an automatic ticket printer. An automatic ticket printer is defined as a device connected to the weighing system in such manner that it automatically detects the weight determined by the system. It shall store and recall the TARE weight when the operator enters the truck identification. It shall print the following information on the ticket:
 - Gross, Tare, and Net weights.
 - Identification of the truck.
 - Current date.
 - For asphalt mixtures, the time of loading or weighing.
 - A unique ticket number (may be preprinted on the tickets).

The NET weight should be computed by the weighing system; however, it may be computed manually and keyed in for printing. When the net weight of the material is determined by batch weights, the scales used shall meet all applicable requirements specified for truck scales, including automatic ticket printing, except that the GROSS and TARE weights will not be required. The ticket shall accompany each load delivered to the project. In addition to the items shown above that must be printed by the ticket printer, the following information shall also be shown on each ticket:

- Identification of the project.
 - Identification of the material being delivered, including mix design numbers for asphalt mixtures. The ton shall be the short ton of 2000 pounds. Vehicles used to haul materials measured by weight shall be weighed empty for each load, or shall be weighed daily or from time to time during the day as the Engineer may direct, to establish the tare weight of each load. The scales furnished shall be capable of weighing the entire loaded vehicle at one time. Deduction will be made for the weight of moisture in aggregates in excess of 5% of the oven-dry weight of the material.
- 8) A station when used as a definition or term of measurement will be 100 linear feet measured horizontally.
 - 9) The term "lump sum" when used as an item of payment will mean complete payment for the work described in the Contract.
 - 10) When a complete structure or structural unit (in effect, "lump sum" work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

- 11) When mutually agreed, the plan quantity of any item may be taken as the Final Contract Quantity. Items to be paid at plan quantity shall be agreed upon in writing before work begins.

When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gage, unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.

Of necessity the items described and shown as components are discussed in a general manner only, describing the major pieces of equipment and/or materials. Any item and/or appurtenance not specifically mentioned shall be considered a portion of the bid item to which, in the opinion of the Engineer, its function is most directly related. Failure to list all items and/or appurtenances does not relieve the Contractor from furnishing all apparatus, devices, labor or materials of whatever nature required for a complete installation in accordance with the intent of the Drawings, approved Shop Drawings and these Specifications.

The successful Contractor shall, as soon as possible after award of the Contract, submit a list itemizing the components of each lump sum bid item and their respective costs to be used as an aid in the preparation of partial payments.

110.02 Scope of Payment. Payments to the Contractor will be made for the actual quantities of contract items completed and accepted according to the plans and specifications and if, upon completion of the construction, these actual quantities show either an increase or decrease from the quantities given in the proposal schedule, the contract unit prices will still prevail, except as provided in Subsection 110.03, "Payment and Compensation for Altered Quantities" below.

The Contractor will receive and accept the compensation herein provided as full payment for furnishing all materials, labor, equipment, tools, and incidentals necessary to the completed work; for performing all work contemplated and embraced under the Contract; for all loss or damage arising out of the nature of the work, or from the action of the elements, or from any unforeseen difficulties or obstructions that may arise or be encountered during the prosecution of the work until its final acceptance by the City; for all risks of every description connected with the prosecution of the work; for all expenses incurred by, or in consequence of, the temporary suspension or discontinuance of the work as herein specified; for any infringement of patent, trade mark, or copyright; for all costs of permits, licenses, fees, and taxes; and for completing the work in an acceptable manner according to the plans and specifications. The payment of current or final estimate, or of retained percentage, shall in no degree prejudice or affect the obligation of the Contractor, at no cost to the City, to repair, correct, renew, or replace any defects or imperfections in the construction of the roadway and its appurtenances, or in the strength of or quality of materials used therein or thereabouts, or relieve the Contractor from the payment of all damages due to such defects; provided such defects, imperfections, or damages shall be discovered on or before the final inspection or acceptance of the entire work. No retained percentage payable under the Contract, or any part thereof, shall become due and payable, if the City so elects, until the

City is satisfied that the Contractor has fully settled or paid for all materials and equipment used in or upon the work, and for all labor done in connection therewith, and the City, if it so elects, may pay any or all such accounts wholly or in part and deduct the amount or amounts so paid from the final estimate.

Any overpayments made to the Contractor or Surety, from whatever cause, are due and payable to the City upon receipt by the Contractor or Surety of a request setting forth the particulars, regardless of pending claims or intention of the Contractor or Surety to file a claim.

110.03 Payment and Compensation for Altered Quantities. When alterations in plans or quantities of work not requiring a change order are ordered and performed as provided in Subsection 104.02, "Alterations of Plans or Character of Work" or 104.03, "If and Where Directed Items" and when such alterations result in an increase or a decrease of the quantity of work to be performed, the Contractor shall accept payment in full at the contract unit prices for the actual quantities of work accomplished, except as provided in Subsection 104.02, "Alterations of Plans or Character of Work" or 104.03, "If and Where Directed Items", and no allowance will be made for anticipated profits, organization or overhead expense, or interest.

Increased or decreased work involving change orders will be paid for as stipulated in such change orders.

Section 111. Roadway Construction Control

111.01 Description. When this item is included in the proposal, it shall consist of furnishing and maintaining all lines, grades, and measurements necessary for the proper execution of the roadway work under the Contract, all according to the plans and specifications.

111.02 Materials. The Contractor shall furnish all stakes, templates, straightedges, surveying equipment, and other devices necessary for establishing, setting, checking, marking, and maintaining points, lines, grades, and layout of the work called for on the plans and in the specifications.

111.03 Construction Requirements.

(a) City Responsibilities. The Engineer/City Engineer will establish the benchmarks and horizontal control points referenced on the plans, certified correct by the Engineer, and furnish the data to the Contractor at the beginning of work.

Any additional information provided by the Engineer shall be verified by the Contractor before use and the Contractor shall accept full responsibility for any costs incurred as the result of the use of such additional information. Any checking performed by the

Engineer/City Engineer will not relieve the Contractor of the responsibility for the final results.

The City will be responsible for taking all measurements to establish both current estimate and final estimate pay quantities, including any horizontal and vertical control points necessary to complete such measurements. When making these measurements, the Engineer/City Engineer may use any points, stakes, lines, or elevations that have been set by the Contractor.

(b) Contractor Requirements. Roadway Construction Control shall include use by the Contractor of the plans and the vertical and horizontal control points established by the City as described above to perform all required construction surveying and layout. The Contractor shall make all necessary calculations and set all stakes including, but not limited to: centerline stakes; offset stakes; reference point stakes; additional bench marks as needed; slope stakes; pavement lines; curb lines; grade stakes; roadway drainage; pipe culverts; box culverts; underdrains; clearing and grubbing limits; guardrail; fence; blue tops for subgrade, subbase, and base courses; and any other points, lines, or elevations deemed necessary for proper control of the work.

On projects that include an ACHM overlay and/or Asphalt Surface Treatment, the Contractor shall mark the stationing by setting a stake at least every 200 feet along the roadway. These stakes shall be placed on the shoulder or slope so that they will not interfere with the construction operations, but will be usable for determining locations along the roadway. On projects with widening sections where a grade line is not shown on the plans, the Contractor shall profile the existing pavement at the centerline and edges of pavement. This profile data shall be furnished to the Engineer/City Engineer for use in the establishment of the finished grade line. This finished grade line will be furnished to the Contractor for use in computing and setting all grades required to construct the finished roadway section. The Contractor shall be responsible for joining the work to contiguous roadways and/or bridges in an acceptable manner. This shall include making minor adjustments to the plan grade and/or typical section as necessary to construct a smooth transition from the new work to match the existing roadway.

The Contractor shall provide sufficient qualified personnel to complete the work accurately. The supervision of the Contractor's surveying and personnel shall be the responsibility of the Contractor, and any errors resulting from the operations of such personnel shall be adjusted or corrected by the Contractor at no cost to the City.

The Contractor shall maintain adequate survey notes as the work progresses and make them available to the Engineer/City Engineer on request. Copies of survey notes designated by the Engineer/City Engineer shall be provided for the City's permanent project records. The Contractor shall be responsible for the accuracy and uniformity of the construction stakes, lines, grades, and layouts. Any errors in the work constructed due to errors in the Contractor's Roadway Construction Control shall be adjusted or corrected by the Contractor at no cost to the City.

111.04 Method of Measurement. Roadway Construction Control will be measured as a complete unit.

111.05 Basis of Payment. Work completed and accepted and measured as provided above will be paid for at the contract lump sum price bid for Roadway Construction Control, which price shall be full compensation for furnishing and maintaining all necessary lines, grades, and measurements; and for furnishing all engineering personnel, equipment, materials, tools, and incidentals necessary to complete the work.

No adjustments in the lump sum price bid will be made for Roadway Construction Control required due to normal increases or decreases in Contract quantities. However, if the amount of Roadway Construction Control required is increased or decreased in connection with a Change Order, compensation will be adjusted accordingly.

Partial payments for Roadway Construction Control will be made in proportion to the amount of work accomplished on this item. No additional payment will be made for re-staking needed to maintain the control.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Roadway Construction Control	LS

Section 112. Trench and Excavation Safety Systems

112.01 Description. This item covers trench and excavation safety systems required for constructing improvements that necessitate open excavations on the project. All work under this item shall be in accordance with the current edition of the "Occupational Safety and Health Administration Standard for Excavation and Trenches Safety System, 29 CFR 1926, Subpart P", a copy of which may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. This document is hereby incorporated into the Specifications.

112.02 Notifications Required. The Contractor, prior to beginning any excavation, shall notify the State Department of Labor (Safety Division) that work is commencing on a project with excavations greater than five feet.

The contractor shall notify all Utility Companies and Owners in accordance with OSHA Administration 29 CFR 1926.651(b)(2) for the purpose of locating utilities and underground installations.

112.03 Existing Structures and Utilities. Where the trench or excavation endangers the stability of a building, wall, street, highway, utilities or other installation, the Contractor shall provide support systems such as shoring, bracing, or underpinning to ensure the stability of such structure or utility.

The Contractor may elect to remove and replace or relocate such structures or utilities with the written approval of the owner of the structure or utility and the Engineer/City Engineer.

112.04 Method of Measurement. After award of the contract, the Contractor shall submit to the Engineer/City Engineer a breakdown of costs for work involved in the lump sum price bid for "Trench and Excavation Safety Systems" and shall, with each periodic payment request, submit a certification by the Contractor's "competent person" as defined in Subpart P 1926.650(b) that the Contractor has complied with the provisions of "Occupational Safety and Health Administration Standard for Excavation and Trenches Safety System", 29 CFR 1926 Subpart P for work which payment is requested.

112.05 Basis of Payment. The work required by this item will be paid for at the lump sum price for "Trench and Excavation Safety Systems".

Payment will be made under:

Pay Item

Pay Unit

Trench and Excavation Safety Systems

LS

DIVISION 200. EARTHWORK

Section 201. Clearing, Grubbing, and Demolition

201.01 Description. This work consists of clearing, grubbing, removing, and disposing of all vegetation, obstructions and debris within designated limits of the Right-of-Way and easement areas. Vegetation and objects designated to remain shall be preserved free from injury or damage.

201.02 Definitions. Clearing, Grubbing, and Demolition shall be defined as follows:

Clearing shall consist of: cutting, removing, and disposing of trees, snags, stumps, shrubs, brush, limbs, and other vegetative growth. Clearing shall also include the preservation of trees, shrubs, and vegetative growth, which are not designated for removal.

Grubbing shall consist of the removal and disposal of wood or root matter below the ground surface remaining after clearing and shall include stumps, trunks, roots, or root systems greater than 2 inches in diameter to a depth of two feet below the natural ground surface.

Demolition shall consist of: removal and disposal of existing fences, drainage structures, abandoned pipelines or utilities, paving, curbs and gutters, which are not designated to remain. The work may also include demolishing and/or removing from the site building structures or portions thereof, which are more particularly described in the plans and Special Provisions, together with all appurtenances, including canopies, porches, and awnings.

201.03 Construction Requirements. All surface objects, trees, stumps, roots, and other protruding obstructions designated for removal shall be cleared and grubbed, including required mowing. Undisturbed and sound stumps and nonperishable solid objects located more than two feet below subgrade and slope of embankments may remain in place. When authorized, stumps and nonperishable solid objects that are located more than 1 foot below the ground line may remain if they are located outside the construction limits of excavation and embankment areas.

Trees and other vegetation to be preserved shall be carefully protected from abuse, marring, or damage during construction operations. Repair of damage to bark, limbs, or roots of trees or vegetation designated to remain shall be repaired by corrective pruning or other appropriate methods.

Low hanging, unsound, or unsightly branches shall be removed from trees or shrubs designated to remain. Trees extending over the roadway shall be trimmed to provide a clear height of 18 feet about the pavement elevation. All trimming shall be accomplished with skilled workers and in accordance with good tree surgery practices. Before cutting, removing, or trimming any tree within the City of Fayetteville, the owner and supervisory personnel of each business performing commercial tree work shall obtain a city issued commercial tree pruner/service certificate.

Parking and servicing equipment under branches of trees designated to remain is not allowed.

City of Fayetteville

Existing pipes, culverts, bridges, and other drainage structures shall be removed to the natural stream bottom and those parts outside the stream shall be removed to 1 foot below natural ground surface. Materials designated as City salvaged material shall be dismantled without damage and stored at designated locations. All other structures shall be removed from the Right-of-Way.

All concrete pavement, base course, sidewalks, curbs, gutters, buildings, foundations, slabs, ballast, gravel, bituminous material, and pavement materials shall be disposed of unless specifically stated otherwise in the Plans or by the Engineer/City Engineer.

Moveable buildings to be demolished may be removed from the right of way intact if the contractor so elects.

Concrete designated for use as rip rap shall be broken into pieces not to exceed 150 pounds and stockpiled at designated locations or promptly placed where specified on the project.

Ballast, gravel, bituminous material, or other surfacing or pavement materials designated for salvage shall be stockpiled at designated locations without contaminating the material with dirt or foreign materials. Old concrete pavement, sidewalks, curbs, gutters, and similar structures to be left in place shall be sawed to a straight and true vertical line or removed to an existing joint as shown on the plans or as directed by the Engineer/City Engineer.

In embankment areas, cavities resulting from removal of obstructions shall be backfilled and compacted with suitable material under Subsection 202.03.

Disposal of material and debris shall be done under applicable Federal, State, County, and City laws, ordinances, and regulations. Perishable material if burned shall be under constant care of a watchman so the surrounding vegetation, adjacent property, and anything designated to remain is not jeopardized.

Materials and debris may be disposed of by burial at locations acceptable to the City within the project limits, if at least 12 inches of cover material is provided and the area is graded, shaped, and seeded according to these specifications or otherwise restored to present a pleasing appearance. Said burial and restoration shall be at the Contractor's expense.

201.04 Measurement and Payment. No measurement of this item will be made. Payment will be made on a lump sum basis.

<u>Pay Item</u>	<u>Pay Unit</u>
Clearing , Grubbing, and Demolition	LS

Section 202. Excavation and Embankment

202.01 Description. This work consists of excavation, hauling, disposal, placement, consolidation and compaction of all materials encountered within the limits of the work that

is not covered under another item. For purposes of this section, roadway shall be defined as all locations within 1 foot of the back of curbs and gutters that define the edges of public streets.

Excavation will be classified as one of the following:

(a) Unclassified Excavation. Unclassified Excavation consists of the removal and disposal of all material of whatever character encountered in the work not covered under other items. This shall include removal of material in existing ditch lines along roadways to a depth of 1 foot below existing grade in the ditches. This shall also include stripping and excavation of existing material as required up to a depth of one (1) foot below existing grade in embankment areas.

(b) Rock Excavation. Rock Excavation includes removal and disposal of rock material that by actual demonstration cannot be excavated with a Caterpillar Model No. 215D LC track-mounted hydraulic excavator equipped with two rippers or similarly approved equipment. Rock excavation also includes boulders one-half cubic yard or more in volume.

(c) Undercut Excavation. Undercut excavation includes removal and disposal of material not suitable for use as embankment material that is below the proposed subgrade elevation and that is more than one foot (1') below existing ground within the roadway.

Embankment will be classified as one of the following:

(a) Select Embankment. Select Embankment includes all material placed within the limits of the proposed roadway within 24 inches of the top of subgrade elevation. Select Embankment material may include approved on-site or approved off-site material meeting the requirements of section 202.02 (c) below.

(b) Embankment. Embankment includes material other than select embankment that is placed within the limits of construction to achieve planned grades.

202.02 Materials.

(a) General. Samples of material to be used as embankment material shall be submitted for approval per the requirements of these specifications. All material shall meet the requirements The City of Fayetteville Code of Ordinances.

(b) Stone backfill. Stone backfill shall be as defined and specified in subsection 205, Undercut and Stone Backfill.

(c) Embankment. Embankment shall consist of soil, or a mixture of soil and stone or gravel or other acceptable material, reasonably free from sod, stumps, logs, roots or other perishable or deleterious matter, and shall be capable of forming a stable embankment when compacted.

Material placed within 24 inches of the proposed top of subgrade elevation shall meet the following requirements.

- 1) Material classified by the AASHTO Soil Classification System as A-1, A-2, or A-3, having a maximum of 35 percent of the material passing the number 200 sieve, and having a CBR equal to or greater than 8.
- 2) Material not meeting the above requirements for AASHTO Classification and gradation, but having a CBR equal to or greater than 8 and a Liquid Limit and Plasticity Index of less than or equal to 40 and 15, respectively.
- 3) Material not meeting the above requirements for liquid limit and plasticity index may be used if chemically modified by the use of lime, fly ash, or cement. The type and amount of treatment shall be determined by a material testing lab approved by the City. The chemically modified soil must meet all requirements of Section 2 above.

202.03 Construction Requirements.

(a) General. Excavations and embankments shall be finished to smooth and uniform surfaces. No excavation material shall be wasted without permission of the Engineer/City Engineer. Excavation and embankment operations shall be conducted without disturbing material outside the staked construction limits. Before beginning excavation, grading, and embankment operations, all necessary clearing, grubbing and top soil removal in that area shall be completed.

Excess or unsuitable excavated material, including topsoil, rock and boulders, shall be disposed of at locations acceptable to the Engineer/City Engineer. All approved surplus material shall be used to uniformly widen embankments and flatten slopes within the Right-of-Way. Rocks and boulders shall be covered with a minimum of one (1) foot of embankment material.

Demolition of old roadways shall include filling of all ditches and grading to restore the original contour of the ground producing a pleasing appearance by forming natural, rounded slopes. Removal and disposal of pavements and base courses shall be performed under Section 201.

(b) Rock Excavation. Material classified as rock shall be excavated to a minimum depth of 6 inches and a maximum depth of 12 inches below proposed subgrade within the limits of the roadbed. The excavation shall be backfilled and compacted with material designated in the Contract or approved by the Engineer/City Engineer. Rock excavation removed in excess of 12 inches below subgrade will not be measured and paid for. Rock excavation backfill of the depth in excess of 12 inches below proposed subgrade is at the Contractor's expense.

Undrained pockets shall not be left in the rock surface. Depressions shall be drained. Bore holes shall be drilled along the slope line, maintaining the drill holes at the angle designated on the plans and ensuring that all drill holes are in the same plane. The diameter, spacing, and loading of presplit holes shall result in a neat break. The presplitting holes shall be drilled for the full depth of the ledge. The initial presplitting of a geological formation shall be accomplished utilizing a 100-foot test section. After drilling, loading, and shooting this test section, the material shall be removed to determine if the diameter, spacing, and loading of the presplit holes are adequate to give an acceptable backslope. If the results are

determined to be acceptable, the presplitting may continue throughout the geological formation using those methods and procedures. If the presplitting is determined to be unsatisfactory, adjustments shall be made in the spacing, diameter and loading of the presplit holes utilizing another 100-foot test section.

Presplitting holes shall be loaded with explosives as per the manufacturer's recommendations. The cost of presplitting shall be included in the unit bid price for rock excavation.

(c) Undercut Excavation. If and where directed by the Engineer/City Engineer, unsuitable material encountered at the proposed subgrade elevation shall be removed to the depth specified or directed by the Engineer/City Engineer and backfilled and compacted with approved off-site material, in accordance with this section or in accordance with subsection 205, Stone Backfill as indicated or directed. Excavation operations shall be conducted so necessary measurements can be taken before replacing unsuitable material with approved backfill.

No payment will be made for this item if:

The contractor does not notify the Engineer/City Engineer of potential areas requiring undercut before excavating these areas.

An area that was previously stable becomes unstable due to actions of the contractor. These causes include, but are not limited to, ponding of water and construction traffic.

The Contractor does not allow the Engineer/City Engineer sufficient time to measure the undercut excavation volume before placing backfill material.

In addition, no payment will be made to remove and replace any embankment material placed on unsuitable soil that subsequently requires removal and replacement.

(d) Embankment Construction. Embankment construction includes the preparation of the areas where embankments are placed, placement and compaction of approved embankment material for replacement of unsuitable material, and placement and compaction of embankment material in all cavities and depressions within the roadway area.

Rocks, broken concrete, and other solid materials shall not be placed in embankment areas where piling is to be placed or driven.

Benching shall be required when embankment is placed on hillsides or against existing embankment with slopes that are steeper than 6-to-1 when measured at right angles to the roadway and shall be continuously benched in loose lifts not to exceed 12 inches. Benching shall be wide enough to permit the operations of placement and compaction equipment. All horizontal cuts shall begin at the intersection of the ground line and the vertical side of the previous bench. Existing slopes shall also be stepped to prevent wedging action of the embankment against structures. Excavation from benching shall be compacted with the new embankment material and the cost for benching and recompaction shall be included in the unit bid price for excavation.

When natural ground is within 4 feet of the subgrade, all sod and vegetable matter shall be removed from the surface where embankment is placed. The cleared surface shall be completely broken up by plowing, scarifying, or stepping to a minimum depth of 6 inches and shall then be compacted to the specified embankment density. Sod not requiring removal shall be thoroughly disked prior to embankment construction. Wherever a compacted road surface containing granular material lies within 3 feet of the subgrade, the old road surface shall be scarified to a minimum depth of 6 inches and compacted to the specified embankment density.

If embankment can only be placed on one side of abutments, wing walls, piers, or culvert headwalls, compaction shall be accomplished without overturning of or placing excessive pressure against the structure. The fill adjacent to the end bent of a bridge shall not be placed higher than the bottom of the backwall until the superstructure is in place. When embankment is placed on both sides of a concrete wall or box-type structure, the embankment shall be brought up equally on both sides of the structure. Embankment that is adjacent to structures or inaccessible to normal compaction equipment shall be placed in 4" loose lifts and compacted with mechanical equipment to 95% of maximum density as determined by AASHTO T99.

Roadway embankment shall be placed in horizontal lifts not to exceed 8 inches (loose measurement) and compacted to the specified density before the next lift is placed. Spreading equipment shall be used to obtain uniform lift thickness prior to compaction. As the compaction progresses, leveling and manipulating shall be continuous to assure uniform density. Moisture content shall be increased or decreased as necessary to obtain the required density and stability. Construction equipment shall be routed uniformly over the entire embankment surface.

When the excavated material consists predominantly of rock too large to be placed in 8-inch lifts, the material may be placed in thicknesses up to the average rock dimension not to exceed 3 feet. Each lift shall be leveled and smoothed by distribution of spalls and finer fragments of earth. Rock shall not be end dumped directly on the previously completed lift of embankment. Rock shall be dumped in the lift of embankment being constructed and pushed into place. The lifts shall not be constructed above an elevation 2 feet below the finished subgrade.

A minimum of 2 feet of compacted embankment shall be placed over structures before rock is placed.

(e) Moisture and Density Requirements. All lifts in embankment areas shall be compacted to not less than 95 percent of the maximum density. The moisture content of the material shall be uniformly increased or decreased to within 2% of optimum moisture content before compaction.

Maximum density will be determined using AASHTO T99 (Standard Proctor). In-place field density measurements shall be determined using AASHTO T 191, T233 , or T 310.

Density requirements do not apply to portions of embankments constructed of materials such as rock that cannot be tested by approved testing methods.

202.04 Method of Measurement.

(a) Undercut and Backfill will be measured by the cubic yard of material placed and compacted according to the specifications and as directed by the Engineer/City Engineer. Measurements of the excavated area will be taken by the Engineer/City Engineer after excavation and before backfilling. The quantity of Undercut and Backfill will be measured as In Place quantities. Measurement for undercut will begin at subgrade elevation or one (1) foot below existing ground, whichever is lower.

(b) Rock Excavation will be measured by the cubic yard of rock in place actually removed according to the specifications. Measurements taken after the rock is removed and before any associated backfilling will be used to calculate rock excavation quantities.

(c) Unclassified Excavation will not be measured and the plan quantity will be considered the final quantity for purposes of final payment, unless changes to the original design are made. In such case, the revised quantity shall be agreed upon prior to beginning any work associated with the change.

(d) Embankment and Select Embankment will not be measured and the plan quantity will be considered the final quantity for purposes of final payment, unless changes to the original design are made. In such case, the revised quantity shall be agreed upon prior to beginning any work associated with the change.

202.05 Basis of Payment. Quantities of earthwork completed, accepted and measured as provided above will be paid for at the Contract Price bid as follows:

(a) Undercut Excavation shall be paid for at the Contract Price bid per cubic yard (CY) for Undercut and Backfill. Said price shall be full compensation for excavation, disposal, furnishing, hauling, placing, and compacting approved off-site material according to the plans and specifications. This price shall not include final compaction and finish grading to subgrade elevation. Final compaction and finish grading will be paid for under the item "Subgrade Preparation."

(b) Rock excavation shall be paid for at the Contract Price bid per cubic yard (CY) for Rock Excavation. Said price shall be full compensation for rock removal and disposal to the lines and depths shown on the plans and according to these specifications, and for furnishing, hauling, placing, and compacting approved material in the excavated area as required.

(c) All earthwork not paid for under other items will be paid for under the separate items (1) Unclassified Excavation or (2) Embankment as follows:

(1) Excavation shall be paid for at the Contract Price bid per cubic yard (CY) for Excavation. Said price shall be full compensation for excavation, hauling off, and disposal

of all materials on the project that are not required for completion of the project; and any other excavation, grading or other miscellaneous earthwork items not included in other items of work. The plan quantity will be considered the final quantity for purposes of final payment, unless changes to the original design are made.

(2) Embankment shall be paid for at the Contract Price bid per cubic yard (CY) for Embankment. Said price shall be full compensation for placement of materials on the jobsite, whether from on-site or off-site sources, to establish the lines and grades shown on the plans; placement of embankment as backfill for excavated areas to 1 foot below existing ground in roadway areas; and any other embankment, grading or other miscellaneous earthwork items not included in other items of work. The plan quantity will be considered the final quantity for purposes of final payment, unless changes to the original design are made.

Pay Item

Pay Unit

Undercut and Backfill
Rock Excavation
Unclassified Excavation
Select Embankment
Embankment

CY
CY
CY (Plan Quantity)
CY (Plan Quantity)
CY (Plan Quantity)

Section 203. Subgrade Preparation

203.01 Description. This work consists of preparing the subgrade for placement of the base course, curb and gutter, and asphalt courses. The intent of this specification is to provide a stable subgrade consisting of approved material compacted as specified.

203.02 Materials. Materials not specified.

203.03 Construction Requirements. Material at subgrade will receive one or a combination of the following treatments as directed by the Engineer/City Engineer:

- (a) Unsuitable material will be excavated to a depth as directed by the Engineer/City Engineer, disposed of, and replaced with off-site material approved by the Engineer/City Engineer. This material shall be placed and compacted to conform to Subsection 202.03.
- (b) If the material is acceptable for use as subgrade material, the subgrade will be scarified to a depth of 8 inches and recompacted to conform to Subsection 202.03 of these Specifications.
- (c) In areas requiring fill to achieve subgrade elevation, the subgrade shall consist of approved on-site or off-site material meeting the requirements of Subsection 202.02 and compacted in accordance with Subsection 202.03 of these Specifications.

The subgrade shall be shaped for its full width to the required grade and cross section. The finished subgrade shall not vary at any point by more than .02 foot from the prescribed elevation.

Finished sections damaged by construction operations shall be corrected by the contractor at no cost to the City.

203.04 Method of Measurement. Measurement for this item will be as follows:

(a) Excavation and backfill of any areas of subgrade requiring undercut will be measured as specified in Section 202.04.

(b) Subgrade Preparation will be measured by the square yard. Measurement will include all subgrade area including areas up to 1' behind proposed back of curbs or to the edge of the roadway pavement where curb is not specified. Measurement will include areas of undercut, areas that receive scarification and recompaction of existing acceptable material, and areas where fill material is required to achieve subgrade elevation. The plan quantity will be considered the final quantity for purposes of final payment, unless changes to the original design are made. In such case, the revised quantity shall be agreed upon prior to beginning any work associated with the change.

(c) Fill material required to achieve subgrade elevation will be measured as specified in Section 202.4.

203.05 Basis of Payment. Quantities of earthwork completed, accepted and measured as provided above will be paid for at the Contract Price bid as follows:

(a) Undercut Excavation shall be paid for as stated in Section 202.5a. This price shall not include final compaction and finish grading to subgrade elevation. Final compaction and finish grading will be paid for under the item "Subgrade Preparation."

(b) Subgrade preparation will be paid for at the Contract Price per square yard (SY) for Subgrade Preparation. Said price shall be full compensation for scarification (if required), compaction, and finish grading of subgrade areas.

<u>Pay Item</u>	<u>Pay Unit</u>
Subgrade Preparation	SY (Plan Quantity)

Section 204. Select Grading and Topsoil

204.01 Description. This work consists of excavating, placing, and compacting material between the back of the roadway curb and the limits of the work. It also includes grading and placing topsoil in this area or other disturbed areas.

204.02 Materials.

(a) General. Material used for backfilling curbs and grading for sidewalk shall be free of trash, organics, and other deleterious materials.

(b) Topsoil. Topsoil may be obtained from sources outside the right-of-way limits or from areas within the project limits that will be occupied by cuts and/or embankments. When topsoil is furnished from sources outside the right-of-way, the Contractor shall be responsible for locating and obtaining the material and for performing all work, including erosion control, prevention of water pollution, and restoration, according to the specifications. The cost of such work will be considered included in the contract unit price bid for Topsoil Furnished and Placed. At the request of the City, the Contractor shall furnish copies of agreements with the property owners.

Topsoil shall be good quality, fertile, friable, surface soil and consist of loamy sand, sandy loam, clay loam, or sandy clay loam and shall be clean, rich, dark soil that contains adequate organic material. River sand will not be accepted as topsoil. Topsoil shall be reasonably free from subsoil, slag, weeds, grasses, roots, or stones greater than:

- 1/4 inch for residential/commercial lawn areas, garden areas, or landscaped areas, or
- 1 inch for all other areas.

Topsoil shall have a pH suitable for intended use areas. Topsoil shall be obtained only from naturally well-drained sites where topsoil occurs in depths greater than 4". Topsoil shall not be obtained from bogs, marshes or steep clayey slopes. Topsoil shall not be stripped, collected, or deposited while wet.

In no case shall topsoil be excavated more than 12" from the original ground level. Brush and other vegetation that will not be incorporated with the soil during handling operations shall be cut and removed. Ordinary sods and herbaceous growth, such as grass and weeds, shall not be removed but shall be thoroughly broken up and intermixed with the soil during handling operations.

204.03 Construction Requirements.

(a) Curb Backfill and Grading. After curbs have set sufficiently, they shall be backfilled with approved material and graded so that no ponding will occur. Areas on which sidewalk or driveways are to be constructed shall be compacted to 90% of maximum density as measured by AASHTO T99 or ASTM D698 (Standard Proctor).

Upon completion of the construction of sidewalks, driveways, and other items of construction within the construction limits, all areas to receive topsoil shall be excavated, graded, backfilled and compacted as necessary to remove all depressions, ridges, soft areas, waste concrete, and other items that will interfere with placement of the topsoil layer. All slopes shall be excavated to a maximum slope of 1 vertical foot in 3 horizontal feet unless otherwise noted in the plans or directed by the Engineer.

(b) Topsoil Placement. After the areas to receive topsoil have been prepared to the satisfaction of the Engineer/City Engineer, topsoil placement may begin.

Topsoil shall be placed on all earth areas to a minimum depth of 4 inches unless shown otherwise on the plans or directed by the Engineer/City Engineer. Topsoil shall be graded to within 1 inch of finished elevation, and lightly compacted. Before placing seed all topsoiled areas shall be lightly scarified and raked to remove rocks, sticks, roots, and other undesirable materials as outlined in Section 204.02b.

204.04 Method of Measurement.

(a) **Curb Backfill and Grading.** Backfilling of curbs and grading of areas between the back of curb and the construction limits will not be measured and is considered subsidiary to excavation and embankment items.

(b) **Topsoil.** Topsoil furnished and placed will be measured by the square yard based on the location. Measurement will be made to the permanent street right-of-way or permanent easement or to the toe or top of slopes as shown on the plans. Areas outside these limits disturbed by the Contractor restored in accordance with these Specifications at no cost to the City.

204.05 Basis of Payment. Quantities completed, accepted, and measured as provided above will be paid for at the Contract Price bid as follows:

(a) Topsoil will be paid for at the unit price bid per square yard (SY). Said price shall be full compensation for excavating, stockpiling, hauling, placing, grading, and all other labor, tools, and equipment to provide a layer of topsoil in accordance with the specifications.

<u>Pay Item</u>	<u>Pay Unit</u>
4" Topsoil Placement (Yard Areas)	SY
4" Topsoil Placement (Other Areas)	SY

Section 205. Undercut and Stone Backfill

205.01 Description. This item shall consist of excavation and disposal of unsuitable materials and furnishing, hauling, placing, spreading, consolidating and compacting stone materials as specified at locations designated on the Plans or as designated by the Engineer/City Engineer.

If and where directed by the Engineer/City Engineer, unsuitable material encountered at the proposed subgrade elevation shall be removed to the depth specified or directed by the Engineer/City Engineer and backfilled with Stone Backfill as further defined herein.

205.02 Materials.

a) **Stone Backfill.** Stone for Stone Backfill shall be hard, durable, crushed stone aggregate, as manufactured by local quarries, ranging in size from 1 1/2" (40mm) minimum to 6"

(150mm) maximum. Stone Backfill shall not contain more than 5% by weight of shale, slate or other deleterious matter. The stone shall be uniformly graded and the amount passing the 1 1/2" (37.5 mm) sieve shall be not more than 10% by weight.

b) Aggregate Base Course Cap. When backfilling with Stone Backfill to subgrade elevation, or to an elevation below subgrade when directed by the Engineer/City Engineer, the top 4" to 6" (100 mm to 150 mm) shall be material complying with subsection 401, "Aggregate Base Course" for Class 7 Aggregate Base Course.

205.03 Construction Requirements.

(a) Excavation. Excavation operations shall be conducted so necessary measurements can be taken before replacing unsuitable material with approved backfill.

(b) Stone Backfill. The area shall be excavated and the Stone Backfill shall be placed within the limits shown on the Plans or as designated by the Engineer/City Engineer. The excavated materials shall be disposed of by the Contractor in compliance with these Specifications. The stone may be dumped into the areas undercut without regard to depth of layer. The stone shall be spread, shaped, and consolidated to the line and grade determined in the field by the Engineer to provide a firm and unyielding foundation for the subgrade and/or subbase course and/or base course.

(c) Aggregate Base Course Cap. The Class 7 Aggregate Base Course Cap shall be compacted per the requirements of subsection 401, "Aggregate Base Course".

205.04 Method of Measurement.

(a) Undercut and Stone Backfill will be measured by the ton of material placed and consolidated or compacted according to the specifications and as directed by the Engineer/City Engineer. Measurements of the excavated area will be taken by the Engineer/City Engineer after excavation and before backfilling. The quantity of Undercut and Backfill will be measured as In Place quantities. Measurement for undercut will begin at subgrade elevation or one (1) foot below existing ground, whichever is lower.

(b) Aggregate Base Course Cap shall not be measured for separate payment but shall be measured and paid for as Stone Backfill.

205.05 Basis of Payment.

(a) Undercut Excavation and Stone Backfill shall be paid for at the Contract Bid Price per ton for Undercut and Stone Backfill. Said price shall be full compensation for excavation and disposal of unsuitable material; for furnishing, hauling, placing, shaping and consolidating or compacting material according to the plans and specifications; and for all labor, equipment, tools, and incidentals necessary to complete the work. Excavation and backfill authorized by the Engineer/City Engineer that is in excess of the volume occupied by the Stone Backfill will be measured and paid for under the appropriate subsections of these Specifications for the appropriate classifications of material.

(b) No payment will be made for this item if:

The contractor does not notify the Engineer/City Engineer of potential areas requiring undercut before excavating these areas.

An area that was previously stable becomes unstable due to actions of the contractor. These causes include, but are not limited to, ponding of water and construction traffic.

The Contractor does not allow the Engineer/City Engineer sufficient time to measure the undercut excavation volume before placing backfill material.

In addition, no payment will be made to remove and replace any embankment material placed on unsuitable soil that subsequently requires removal and replacement.

Pay Item

Pay Unit

Undercut and Stone Backfill

Ton

DIVISION 300. STORM DRAINAGE

Section 301. Storm Drainage Pipe

301.01 Description. This work consists of the construction or reconstruction of pipe culverts, including excavation and backfill of storm sewer trenches.

301.02 Materials. All materials supplied under the requirements of this section shall meet the requirements of Section 606 of AHTD Specifications. All reinforced concrete pipe shall be Class III unless otherwise shown on the Plans or directed in the Specifications. Sizes and gauges of corrugated metal pipe shall be as shown on the plans.

301.03 Construction Requirements.

(a) **General.** Unsuitable material excavated for storm sewer placement shall be disposed of under Subsection 202.03(a). Suitable surplus excavated material shall be used in the construction of embankments. Unsuitable excavated material below the designed bottom of pipe elevation shall be replaced and compacted using approved material. Rock, hardpan, and other unyielding material shall be excavated below the designed grade for a depth of 6 inches minimum and 8 inches maximum. This extra depth excavation shall be backfilled with approved bedding material. Trenches shall be excavated to a minimum width that allows for proper jointing of the pipe and compaction of backfill material under and around the pipe. The completed trench bottom shall be firm for its full length and width.

(b) **Bedding.** All storm sewer pipe shall be bedded with a minimum of 4 inches of approved granular material. Bedding shall be placed to the required depth and shaped to conform to the bottom configuration of the pipe.

(c) **Laying Pipe.** Pipe placement shall begin at the downstream end. Pipe shall be in contact with the shaped bedding throughout its full length. Bell or groove ends of concrete pipe and outside circumferential laps of flexible pipe shall be placed facing upstream. Flexible pipe shall be placed with longitudinal laps or seams at the sides.

Paved or partially lined pipe shall be laid so the longitudinal centerline of the paved segment coincides with the flow line. Elliptical pipe shall be installed so the orientation of a vertical plane through the longitudinal axis of the conduit does not vary more than 5 degrees from the design orientation.

Pipe that is not in true alignment or that shows settlement after placement shall be removed and re-laid at no cost to the City.

(d) **Joining Pipe.** The method of joining pipe sections shall be such that the ends are fully entered and the inner surfaces are reasonably flush and even.

Pipe protruding through structure walls shall be cut off flush with the inside face of wall and grouted.

All surfaces of the joint upon or against which joint seal gaskets may bear shall be smooth, free of spalls, cracks, fractures, and imperfections that would adversely affect the performance of the joint. A primer shall be applied if recommended by the manufacturer.

When preformed rubber gasket is selected by the Contractor, the gasket shall be the sole element depended upon to make the joint flexible and watertight. The gasket shall be a continuous ring that fits snugly into the annular space between the overlapping surfaces of the assembled pipe joint to form a flexible watertight seal.

The gasket shall not be stretched more than 30% of its original circumference when seated on the spigot or tongue end of the pipe.

When bitumen/butyl plastic gasket is selected by the Contractor, the following procedure shall be used. The protective wrapping shall be removed from one side of the gasket. The gasket shall be pressed firmly to the vertical shoulder of the pipe joint, end to end continuing around the entire circumference of the joint. The remaining protective wrapping shall be removed and the pipe forced into connection until material fills the joint space.

For either type of gasket used and to ensure an even and well filled joint, the final joining of the pipe shall be accomplished by either pushing or pulling, by approved mechanical means, each joint of the pipe as it is laid. In cold weather, when directed, the joint material shall be warmed in a hot water bath, or by other approved methods, to the extent required to keep the material pliable for placement without breaking or cracking.

(e) Backfilling. The pipe shall be backfilled with bedding material in 4 inch compacted lifts to the springline. Pipe placed under roadways or driveways will then be backfilled with aggregate base material meeting the requirements of Section 401 placed in 4 inch lifts compacted to 95% of maximum density near optimum moisture as determined by AASHTO T180 or ASTM D1557. Flowable fill in accordance with these specifications may be used as an alternate to the aggregate base material. For the purpose of this section, roadway shall be defined as back of curb to back of curb.

All other areas shall be backfilled with material free from lumps or clods placed in layers not to exceed 6" at or near optimum moisture content and compacted with mechanical equipment to 90% of the maximum density, as determined by AASHTO T 99 or ASTM D698, to the limits shown on the plans. Pipe damaged during construction operations shall be replaced at no cost to the City.

When the existing material excavated for the pipe trench is declared by the Engineer/City Engineer as unsuitable for pipe backfill, this material shall be placed at other locations on the job and used to backfill behind curbs and/or placed on the fill slopes. If the Engineer/City Engineer determines that no suitable location exists on the job to utilize this material, the Engineer/City Engineer may approve the material to be wasted at an appropriate location outside the job limits. Material declared unsuitable for backfill shall be replaced with suitable material from roadway excavation and/or off-site sources.

(f) Curtain walls for Flared End Sections. The foundation for curtain walls shall be prepared to the required depth. For cast-in-place curtain walls, the forming, placement of

reinforcing steel, and placement, finishing, and curing of concrete shall be according to the applicable requirements of subsections 601' "Cast-in-Place Concrete" and 602, "Reinforcing Steel". Precast curtain walls shall be installed according to the applicable requirements for laying concrete pipe. Curtain walls shall not be measured for separate payment but shall be included with and subsidiary to Flared End Sections.

(g) Temporary Repairs for Roadway Cuts. All roadway cuts shall be temporarily or permanently repaired in accordance with Section 405, "Asphalt Concrete Patching For Maintenance of Traffic" within 24 hours of the completion of trench backfill for the work, or segment of work, which required the excavation and/or cut.

301.04 Method of Measurement. Storm drainage pipe of the type and size specified will be measured by the linear foot (LF) measured parallel to the flowline of the pipe. Where inlets, junction boxes, or other structures are included in lines of pipe, that length of pipe extending to and flush with the inside of the structure wall will be included for measurement but no other portion of the structure length or width will be so included. Whenever possible, the lengths shown on the plans may be adjusted by the Engineer/City Engineer to accommodate the pipe lengths available from the supplier that most nearly match the plan lengths. Flared end sections for pipe culverts will be measured by the unit and will include the curtain wall, complete in place.

301.05 Basis of Payment. Work completed, accepted, and measured as provided above will be paid for at the Contract Price bid as follows:

(a) Pipe will be paid for at the unit price per linear foot (LF) for each type and size of pipe and type of backfill specified; which price shall be full compensation for furnishing, hauling, and installing the pipe; for material including joint filler for concrete pipe and connection bands for metal pipe; for excavation and backfilling, including class 7 base as required, and for all other labor, tools, and equipment necessary to complete the work.

(b) Flared End Sections (FES) will be paid for at the unit price per each (EA) for the type and size of the flared end section specified; which price shall be full compensation for furnishing, hauling, and installing the flared end sections; for material including joint filler for concrete pipe and connection bands for metal flared end sections; for curtain walls complete in place; for excavation and backfilling, including compacted backfill, and for all other labor, tools, and equipment necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
__" (Pipe Type and Material) Under Pavement	LF
__" (Pipe Type and Material) LF	
__" (FES Type and Material)	EA

Section 302. Drop Inlets and Junction Boxes

302.01 Description. This item shall consist of the construction of drop inlets, junction boxes, and drop inlet extensions with rings and covers or grates and frames.

302.02 Materials.

(a) All concrete for this section shall conform to the requirements for Class A Concrete as provided in Section 601.

(b) Reinforcing steel shall conform to the requirements of Section 602.

(c) Steel for welded steel grates and frames shall conform to the requirements of ASTM A 36.

(d) Iron castings for rings and covers, grates and frames, and other appurtenances shall conform to the requirements of ASTM A 48, Class 30A. Bearing surfaces between rings and covers or grates and frames shall be cast or machined with such precision that uniform bearing shall be provided throughout the perimeter area of contact. Castings shall be of the weight shown on the plans. Minimum weight of ring and lid shall be 275 pounds. The lid shall include the standard City of Fayetteville logo according to the Standard Details.

(e) Precast concrete units of the type, size, and designation shown on the plans may not be used unless written permission is given by the City. Precast units shall be subject to the requirements of AASHTO M 199. Units so manufactured must be certified by a professional engineer registered in the State of Arkansas that they have been designed and manufactured according to AASHTO M199 and that they meet the requirements for HS20 loading. Joint materials shall conform to Subsection 301.02.

(f) Curing Materials. Curing materials shall meet the requirements of Subsection 601.15.

302.03 Construction Requirements. Drop inlets, junction boxes, and drop inlet extensions shall be constructed with either reinforced or non-reinforced concrete, as shown on the plans.

Concrete shall not be placed until the Engineer/City Engineer has inspected the forms and the placement of reinforcing steel and rings or frames.

Round monolithic drop inlets may have the floors cast monolithically with the walls. All other concrete floors shall be placed at least 24 hours before beginning construction of the walls. A longer period of time may be required if weather conditions make it necessary.

When completed, the concrete shall be cured as specified in Subsection 601.15.

Walls shall be constructed to form a tight joint with the floor and around the inlet and outlet pipes. Pipes shall be cut flush with the inside surfaces of the wall.

Utility lines that are carried through the walls shall be protected in an approved manner to avoid damage.

Faces of drop inlets and drop inlet extensions shall be placed as a part of the curb in order to preserve the proper alignment.

Precast concrete drop inlets or junction boxes may be used only by special permission of the City. Inlet and extension tops and throats will be cast-in-place with no exceptions.

Precast reinforced concrete drop inlet or junction box sections shall be carefully set with joints conforming to the requirements of Subsection 301.03(d).

Metal rings or frames shall be set accurately to the finished elevations so that no subsequent adjustments will be necessary. They shall be set in a full mortar bed with firm bearing on the walls or securely fastened to the forms so that no movement will occur when concrete is placed around them.

Welded steel grates and frames shall be welded with ¼" fillet welds, and painted in accordance with the plans.

302.04 Backfilling. Backfill around inlets and junction boxes shall be with approved material as defined in the following paragraphs. Backfilling of inlets and junction boxes shall not begin until results of concrete cylinder tests demonstrate that concrete has reached 75% of specified strength. Backfill material shall be placed in layers not to exceed 4" in depth and shall be compacted to 95% of maximum density as measured by AASHTO T 99 for soil materials or by AASHTO T 180 for aggregate base materials.

All structures or parts of structures that fall within the limits of the roadway (defined as centerline to 1' behind the backs of curbs) shall be backfilled with aggregate base material unless otherwise allowed in writing by the Engineer/City Engineer.

Structures in other areas shall be backfilled with approved material provided from on-site or off-site areas.

Structures shall be cleaned of any accumulation of silt, debris, or foreign matter of any kind, and shall be reasonably free of such accumulations at the time of final inspection.

302.05 Method of Measurement. Drop inlets, junction boxes, and drop inlet extensions will be measured by the unit. One drop inlet extension unit is measured at a 4' length. Each

unit shall consist of the concrete frame, the ring and grate, and any pipe required to form the vertical portion of the drain including a standard elbow or tee.

302.06 Basis of Payment. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid each for Drop Inlets, Drop Inlet Extensions, or Junction Boxes, of the size and type specified, which price shall be full compensation for constructing drop inlets, drop inlet extensions, or junction boxes; for furnishing, installing, and painting (if required), of rings and covers or grates and frames; for excavation and backfill; and for all materials, labor, tools, equipment, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
(Size) Drop Inlets (Type)	EA
(Size) Junction Boxes (Type)	EA
(Size) Drop Inlet Extension	EA

Section 303. Concrete Box Culverts

303.01 Description. This work consists of constructing reinforced concrete box culverts, in accordance with the details shown on the plans, and to the lines, grades, and dimensions shown on the plans. This work also includes associated wingwalls and aprons at the ends of the box culvert.

303.02 Materials. Concrete for reinforced concrete box culverts shall be class B in accordance with Section 601 unless specified otherwise. Reinforcing steel shall be in accordance with Section 602. Precast concrete box culverts shall be subject to the requirements of AASHTO M 259-98 and AASHTO M 273-00. Units so manufactured must be designed and certified by a professional engineer registered in the State of Arkansas that the precast culvert(s) have been designed and manufactured according to AASHTO M 259-988 and/or AASHTO M 273-00 for the site specific conditions and the requirements for minimum HS20 live load.

303.03 Construction Requirements. Concrete box culverts shall be constructed on firm, unyielding material. Unsuitable material found at the planned elevation of the box bottom shall be removed and replaced with material acceptable to the Engineer/City Engineer to provide an adequate foundation for construction of the box culvert. No concrete shall be placed before approval of the subgrade by the Engineer/City Engineer.

Reinforcing steel and concrete for box culverts shall be provided and placed in accordance with Sections 601 and 602 and as detailed on the plans. All concrete shall be placed in the dry unless otherwise directed by the Engineer/City Engineer.

Precast box culverts shall be placed in accordance with Section 301.03.

Backfill material placed within the roadway limits (defined as centerline of roadway to 1' behind the back of curb) or under driveways and parking lots shall be AHTD Class 7 aggregate base material or gravelly clay material, generally known as "hillside". Aggregate base shall be placed in layers not to exceed 4" loose depth and shall be compacted to 95% of maximum density as determined by AASHTO T 180 or ASTM D1557. "Hillside" material shall be placed in layers not to exceed 8" loose depth and shall be compacted to 95% of maximum density as determined by AASHTO T 99 or ASTM D698.

Backfill material placed in other areas shall be "hillside" material or other material that may be approved by the Engineer/City Engineer. Backfill in these areas shall be placed in layers not to exceed 8" loose depth and shall be compacted to 90% of maximum density as determined by AASHTO T 99 or ASTM D698.

No backfill shall be placed against box culvert walls or on box culvert tops until the concrete has cured for 14 days and until test cylinders show that the minimum specified strength has been obtained.

Backfill shall be placed and compacted on both sides of the box culvert simultaneously.

303.04 Method of Measurement. Measurement will be by one of the following methods as detailed below. The method to be used will be stated in the bid form.

(a) Lump Sum Method. No measurement will be made for this item. Payment will be on a lump sum basis.

(b) Unit Price Method. Concrete box culverts will be measured by the linear foot (LF) of box culvert constructed. Measurement will be taken at the centerline of the box culvert. Wingwalls, headwalls, and other appurtenances will not be measured under this item but will be considered as a separate lump sum item.

303.05 Basis of Payment.

(a) Lump Sum Method. Payment using this method will be on a lump sum basis. The lump sum price shall include all labor, materials, equipment, and incidentals necessary to completely construct each box culvert. Payment shall also include construction of all wingwalls, headwalls, and other appurtenances, as shown on the plans, excavation, backfill, and over excavation as necessary to provide a stable subgrade for box culvert construction.

(b) Unit Price Method. Payment using this method will be made at the per linear foot price (LF) for box culvert completed, accepted and measured as provided above. The per linear foot price shall include all labor, materials, equipment, and incidentals necessary to completely construct each box culvert. Payment shall also include excavation, backfill, and over excavation as necessary to provide a stable subgrade for box culvert construction. This per linear foot price shall not include construction of headwalls, wingwalls, and other appurtenances. They will be paid on a lump sum basis for each box culvert.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
(Size) Cast-in-Place Concrete Box Culvert	LS or LF
(Size) Precast Concrete Box Culvert	LS or LF
Wingwalls & Appurtenances	LS

Section 304. Vacant

Section 305. Open Channels

305.01 Description. This work consists of construction of open channels, including earthen and concrete channels.

305.02 Channel Excavation. Channels shall be excavated to the lines and grades shown on the plans. All constructed grades and slopes shall be within ± 0.1 feet of the plan grade. Ponding or standing water in the constructed channel will not be allowed.

305.03 Earthen Channel Finishes. Earthen channels shall receive a 4" minimum layer of topsoil meeting the requirements of Section 204. Topsoil shall be firmly compacted, then the surface scarified in preparation for seed or sod. All rocks and clods larger than 1 inch in diameter shall be removed before seeding or sodding operations begin. Seeding or sodding as specified on the plans shall be accomplished according to the requirements of Section 505.

Erosion control fabric, if specified, shall be placed according to manufacturer's specifications. Fabric shall be of the type specified unless an alternate type is approved in writing by the City. The Contractor shall submit a sample of the alternate fabric type along with specifications before such approval is granted.

305.04 Concrete Ditch Paving.

(a) **Materials.** Concrete for ditch paving shall be Class A concrete in accordance with section 601.

(b) Construction Requirements.

- 1) **Subgrade.** The subgrade shall be excavated or filled to the required grade. Soft and yielding material shall be removed and replaced with suitable material and the entire subgrade shall be thoroughly compacted.
- 2) **Forms.** Forms shall be constructed of metal or wood, free from warp, and of sufficient strength to resist springing during the process of depositing concrete. They

shall be securely staked, braced, set, and held firmly to the required line and grade. Forms shall be cleaned and oiled before concrete is placed against them.

- 3) **Placing and Finishing.** The concrete shall be deposited in the forms upon a wetted subgrade to such depth that when it is compacted and finished, the flow line shall be at the required elevation and the sides at required widths, slopes, and thicknesses. The concrete shall be thoroughly compacted and the edges along the forms spaded to prevent honeycomb. The flow lines and sides shall be struck off with a straightedge and tamped sufficiently to flush mortar to the surface, after which it shall be finished with a wood float to a smooth and even surface. Edges shall be rounded with a ¼" edger.

Transverse joints ¼" wide shall be tooled or sawed perpendicular to the flow line at intervals not greater than 15' measured longitudinally along the flow line. Joints shall continue across the bottom and up the slope to form a continuous joint. 3" diameter weepholes shall be spaced at 10' intervals along the channel. These weepholes shall be constructed in both channel walls a minimum of 6 inches and a maximum of 1 foot above the channel flowline. Weepholes will not be required if the channel wall is less than 1' tall.

When completed, the concrete shall be cured as specified in Section 601.

- 4) **Backfilling.** Immediately after the forms have been removed, the spaces on each side of the paving shall be backfilled with suitable material and compacted with mechanical equipment. Solid sodding shall be placed in conjunction with backfill when provided on the plans.
- 5) **Expansion Joints.** When a section of ditch paving terminates at a drop inlet or other structure, a space not less than ½" wide shall be left between the end of the paving and the structure. This space shall be filled with joint filler conforming to the requirements of AASHTO M 213. Expansion joints shall also be placed between successive placements or as directed by the Engineer/City Engineer.
- 6) **Placement on Slopes.** Slope paving shall begin at the toe of the slope and be constructed to the lines and dimensions as shown on the plans or as directed.
- 7) **Toewalls.** Concrete toewalls shall be constructed at the ends of all paved channels that do not terminate at a concrete structure. Toewalls shall be a minimum of 8" thick and 3' deep below the flowline of the channel, and shall be placed monolithically with the concrete channel.

305.05 Method of Measurement.

- (a) Excavation for earthen or concrete channels shall be measured by the cubic yard (CY) of material removed. Quantities will be measured by cross sections taken before and after excavation operations. Payment for plan quantity of channel excavation will be made unless a change in the channel profile or cross section is made.

(b) Concrete channels will be measured by the square yard (SY) of concrete placed.

(c) Erosion control fabric will be measured by the square yard (SY) of area covered by fabric. Overlaps, splices, and other additional fabric required for proper placement of fabric according to manufacturers' specifications will not be measured.

305.06 Basis of Payment. Work completed and accepted and measured as provided above will be paid for at the contract unit price per square yard for concrete channels and per square yard for erosion control fabric. Said price shall be full compensation for placement and finishing of concrete as specified, placement of erosion control fabric per manufacturer's specifications, and all other labor, equipment, and materials necessary for a complete installation of each item as detailed on the plans.

Excavation will be paid on a CY basis. The plan quantity will be considered the final quantity for purposes of final payment, unless changes to the original design are made. Payment for excavation shall include excavation and removal of material as required, grading to proposed elevations, and all other items of work required to prepare proposed channel areas for concrete or topsoil as required. Topsoil, seeding, and sodding as specified or shown on the plans will be paid for under other items of work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Channel Excavation	CY (Plan Quantity)
Concrete Channel Paving	SY
Erosion Control Fabric	SY

Section 306. Filter Blanket and Riprap

306.01 Description. This item consists of a protective layer of riprap, including filter blanket.

306.02 Materials. Stone for riprap shall be from an approved source and shall consist of a durable material with a percent of wear not greater than 45 by the Los Angeles Abrasion Test (AASHTO T96). Riprap stone shall have angular or fractured faces, and shall not weigh less than 140 pounds per cubic foot.

Riprap stone shall be well graded to produce a minimum of voids. The maximum size of each piece shall be no greater than 18" in any dimension, and approximately 50% of material shall consist of pieces weighing 35 pounds or more.

Filter blanket material shall consist of crushed stone reasonably well graded from coarse to fine as approved by the Engineer/City Engineer, or shall be a synthetic geotextile filter fabric meeting the requirements of AASHTO M288 for Erosion Control Class A.

306.03 Construction Requirements.

(a) **General.** Prior to placing filter blanket and riprap, the slopes shall be shaped as shown on the plans. When rock or hard shale is encountered at the toe of the slope, the riprap shall be keyed into this material the depth of the riprap.

Riprap shall be placed immediately following construction of the embankment in order to provide slope protection.

(b) **Filter Blanket.** Granular filter blanket material shall be spread uniformly on the previously prepared and approved surface to the thickness and location shown on the plans. Placement of the material by methods that will cause segregation or cause damage to the surface will not be permitted. Compaction of filter blanket will not be required, but it shall be finished to present a reasonably even surface free from mounds or windrows.

When fabric is used in lieu of granular material, it shall be placed directly on the prepared surface. Fabric sections may be placed vertically or horizontally on the slope. Adjacent fabric sections shall be joined by overlapping a minimum of 2' at the edges and pinning the overlapped strip with U-shaped wire pins, single shaped steel pins with metal disc heads, or similar fasteners. The fasteners shall be 6" or more in length and shall hold the fabric firmly in place. Fasteners shall be inserted through both strips of overlapped fabric at intervals of approximately 4' along the overlap. Additional pins shall be installed as necessary to prevent displacement of the fabric.

Fabric shall be overlapped in the direction of water flow. The fabric shall be turned down and buried approximately 12" at the exterior limits.

No construction equipment will be permitted directly on the fabric.

(c) **Dumped Riprap.** Stone or broken concrete for dumped riprap shall be placed in such a manner as to produce a reasonably well graded mass of rock with the minimum practicable percentage of voids and shall be constructed to the lines and grades shown on the plans or as directed by the Engineer/City Engineer. Unless otherwise specified, the minimum rip-rap depth shall be 18 inches. Material shall be placed in such a manner as to avoid displacing the underlying material. The larger pieces shall be well distributed throughout the entire mass and the finished riprap shall be free from objectionable pockets of small or large pieces. Hand placing, to a limited extent, may be required, but only to the extent necessary to secure the results specified above. Placing riprap by dumping into chutes or by similar methods likely to cause segregation of various sizes will not be permitted.

Riprap stone shall not be deposited in a manner that will cause damage to the filter blanket. Any damage to fabric during placement of riprap shall be corrected by the Contractor at no cost to the City prior to proceeding with the work. Damaged fabric shall be repaired by placing a piece of fabric large enough to cover the damaged area, overlapping, and pinning in accordance with this section.

306.04 Measurement and Payment. Quantities of 18" thick rip-rap will be measured by the square yard (SY). Filter blanket will not be measured.

Payment for quantities of rip-rap completed and accepted and measured as provided above will be paid for at the unit contract price bid per square yard. Said price shall be full compensation for excavation and grading, placement of filter fabric, and placement of the rip-rap to the lines, grades, and depth specified.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Rip Rap	SY

Section 307. Flowable Select Material

307.01 Description. This item shall consist of the furnishing, mixing, and placing a flowable mixture of portland cement, fly ash, sand, and water for backfilling bridge abutments, pipe culverts, box culverts, structural plate pipe and arches, or other uses as approved by the Engineer/City Engineer. The material shall be placed in close conformity with the lines, grades, dimensions, and details shown on the plans or established by the Engineer.

307.02 Materials. The materials used in the flowable select material shall conform to the applicable requirements of Section 601. The portland cement, fly ash, and chemical admixtures shall be listed on the QPL.

(a) Mix Design. The mix design will be prepared by the Contractor. The mixture will be proportioned to produce a flowable mixture without segregation. Material for one cubic yard, absolute volume, shall be as follows:

Cement 80 - 100 lbs.
 Fly ash 220 - 300 lbs.
 Sand Variable to equal one cubic yard
 Water Approximately 65 gallons

The minimum flow of the mixture shall be 8" as determined by the test method described herein. The unit weight shall be a minimum of 110 lbs./cubic foot. The mix design shall be accompanied by the following documentation:

- A listing of the weights of all components of the proposed mix (water and admixtures may be measured by volume);
- Certified test results for flow and unit weight.

When unsatisfactory results or other conditions make it necessary, a new mix design will be established.

(b) Sampling and Testing. Sampling and testing will be performed by the City. The flow test shall consist of filling a 3" diameter x 6" high open-ended cylinder to the top with the flowable material mixture. If necessary, the top of the mixture will be struck off level. The cylinder will then be pulled straight up and the flow will be measured by the approximate diameter of the mixture. There shall be no evidence of segregation in the mixture. The unit weight shall be determined according to AASHTO T 121, except that rodding and tapping shall not be done.

307.03 Construction Requirements. The Contractor shall provide sufficient supervision, labor, equipment, tools, and materials to assure proper production, delivery, and placement. When deemed necessary by the Engineer/City Engineer, the flowable select material shall be contained within the designated area by metal or wood forms that are sufficiently tight as to keep the loss of material to a minimum, or by other means as approved by the Engineer/City Engineer. The flowable select material shall be discharged from the mixer and conveyed into the space to be filled according to Section 601. The fill material shall be brought up uniformly to the fill line shown on the plans or as directed by the Engineer/City Engineer. Placing of other material over flowable select material may begin after the flowable select material has taken its initial set, is stable, and does not displace under equipment.

307.04 Method of Measurement. Flowable Select Material will be measured by the cubic yard. The quantities shown included in the proposal will be considered the final quantities and no further measurement will be made unless, in the opinion of the Engineer or upon evidence furnished by the Contractor, substantial variations exist between the planned quantities and actual quantities due to changes in alignment or dimensions or to apparent errors.

307.05 Basis of Payment. Work completed, accepted, and measured as provided above will be paid for at the contract unit price bid per cubic yard for Flowable Select Material, which price shall be full compensation for designing the mix; for furnishing, mixing, and placing the material; and for all labor, equipment, tools, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item

Pay Unit

Flowable Select Material

CY

DIVISION 400. BASE AND PAVING

Section 401. Aggregate Base Course

401.01 Description. This work consists of preparing an aggregate base course on a prepared foundation.

401.02 Materials. Materials for aggregate base course shall meet the requirements of the AHTD Standard Specifications (2014) Section 303 for Class 7.

401.03 Construction Requirements. The base course material shall be placed on a completed and approved subgrade or existing base that has been bladed to substantially conform to the grade and cross section shown on the plans.

The subgrade shall be prepared as specified in Section 203 and shall be free from an excess or deficiency of moisture at the time of placing base course material. The subgrade shall also comply, where applicable, with the requirements of other items that may be contained in the Contract that provide for the construction, reconstruction, or shaping of the subgrade or the reconstruction of the existing base course. Base course material shall not be placed on a frozen subgrade or subbase.

The aggregate shall be placed on the subgrade or other base course material and spread uniformly to such depth and lines that when compacted it will have the thickness, width, and cross section shown on the plans. Unless otherwise specified or directed, base material shall extend full depth to 1' beyond the planned back of curb line.

If the specified compacted depth of the base course exceeds 8" the base shall be constructed in two or more layers of approximately equal thickness.

The material shall be spread the same day that it is hauled. Spreading shall be performed in such a manner that no segregation of coarse and fine particles nor nests or hard areas caused by dumping the aggregate on the subgrade will exist. Care shall be taken to prevent mixing of subgrade or unspecified material with the base course material in the blading and spreading operation.

When the base course is placed adjacent to an existing or newly constructed asphalt surface course or portland cement concrete pavement, the aggregate shall not be dumped or mixed on the pavement surface. Mechanical spreading equipment shall be used, if necessary, to place the base course on the subgrade.

Each course shall be thoroughly mixed for the full depth of the course and shall be compacted by any satisfactory method that will produce the density specified. The aggregate shall be maintained substantially at optimum moisture during the mixing, spreading, and compacting operations. The specified grade and cross section shall be maintained by blading throughout the compaction operation. The material in each course shall be compacted to a density, not less than 98% of the maximum density determined in the laboratory by

AASHTO T 180 or ASTM D1557. The aggregate shall be compacted across the full width of application.

The compacted base course shall be tested for depth and any deficiencies corrected by scarifying, placing additional material, mixing, reshaping, and recompact to the specified density, as directed. The base course shall be shaped for its full width to the required grade and cross section. The finished base course layer shall not vary at any point by more than .02 foot from the prescribed elevation.

The Contractor shall maintain the base course in a satisfactory condition until accepted.

401.04 Method of Measurement. Aggregate base course will be measured in square yards of material in place per the plans. Measurement will include areas up to 1' behind the backs of curbs if required on the plans. Aggregate base course placed beyond 1' behind the back of curbs will not be measured.

401.05 Basis of Payment. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per square yard for Aggregate Base Course, which price shall be full compensation for preparing the subgrade; for furnishing material; for spreading; finishing, watering, manipulating, and compacting; and for all labor, equipment, tools, and incidentals necessary to complete the work.

Pay Item

Pay Unit

(Depth) Aggregate Base Course

SY

Section 402. Prime and Tack Coats

402.01 Description. This work consists of preparing and treating an existing surface with asphalt or emulsified petroleum products and, if required, blotter material.

402.02 Materials.

(a) **Asphalt.** Asphalt cement shall meet the requirements of AASHTO M 20 or M 226.

(b) **Emulsified Asphalt.** Emulsified asphalt shall meet the requirements of AASHTO M 140 or M 208.

(c) **Emulsified petroleum products.** Emulsified petroleum products, "EPR-1 Prime" or approved equal, may be used as the Prime Coat when indicated on the Plans or approved by the Engineer/City Engineer.

(d) **Blotter Material.** Aggregate for blotter material shall meet the requirements of AASHTO M 43 for size 10.

Asphalt will be conditionally accepted at the source. Blotter material may be accepted in the stockpile, at the source, or at the roadway prior to placement.

402.03 Construction Requirements.

(a) **Weather Limitations.** Prime and tack coats shall not be applied on a wet surface, when the surface temperature is below 45 degrees F, or when weather conditions would prevent the proper construction of the prime or tack coat.

(b) **Equipment.** The contractor shall provide equipment for heating the asphalt and uniformly applying the asphalt and blotter material. The distributor shall be capable of uniformly distributing prime and tack coats at even temperatures on variable surface widths at readily determined and controlled rates from 0.05 to 2.0 gallons per square yard. Distributor equipment shall include a tachometer, pressure gages, volume measuring devices or a calibrated tank, and a thermometer for measuring temperatures of tank contents.

(c) **Preparation of Surface.** Surfaces to be primed shall be shaped to the required grade and section, free from all ruts, corrugations, segregated material, or other irregularities and uniformly compacted and broomed. Surfaces to receive tack coat shall be free of dirt, gravel, and other debris and shall be thoroughly washed and broomed to produce a clean and dry surface.

(d) **Application of Asphalt.** Asphalt shall be applied by a pressure distributor in a uniform, continuous spread. When traffic is maintained, not more than $\frac{1}{2}$ the width of the section shall be treated in one application. Care shall be taken so the application of asphalt at the junctions of spreads is not in excess of the specified amount. Excess asphalt shall be squeegeed from the surface. Skipped areas or deficiencies shall be corrected. Building paper shall be placed over the end of the previous applications, and the joining application shall start on the building paper. Building paper used shall be removed and satisfactorily disposed of.

When traffic is maintained, one-way traffic shall be permitted on the untreated portion of the roadbed. After the asphalt has been absorbed by the surface and will not pick up, traffic shall be transferred to the treated portion and the remaining width of the section shall be primed.

The quantities, rate of application, temperatures, and areas to be treated shall be approved before application of the prime or tack coat.

(e) **Emulsified petroleum products** Emulsified petroleum products, "EPR-1 Prime" or approved equal, where indicated on the Plans or approved by the Engineer/City Engineer as the Prime Coat shall be installed per the Manufacturer's recommendations and as follows:

Required Field Dilution Rate – 3 parts water to 1 part EPR-1 PRIME (Note: Verification samples will be obtained prior to dilution); (b) Minimum required Application Rate – 0.30 gallons per square yard.

(f) Application of Blotter Material. If the prime coat fails to penetrate within the time specified and the roadway must be used by traffic, blotter material shall be spread in the quantities required to absorb any excess asphalt.

(g) Prime Coats not required. Unless indicated or directed otherwise, prime coats will not be required when the initial asphalt course placed upon the aggregate is a minimum of 4 inches in thickness.

402.04 Measurement and Payment. Prime coat, when required, will be measured and paid for per square yard of material placed at the required application rate. Tack coat will not be measured and will be subsidiary to other items. Blotter material will not be measured but will be subsidiary to other items.

Pay Item

Pay Unit

Prime Coat

SY

Section 403. Asphalt Concrete Hot Mix

403.01 Description. This item consists of furnishing and placing asphalt concrete hot mix of the type specified on a prepared foundation.

403.02 Materials, Design, and Quality Control of Superpave Mixes

(a) Materials. Materials for Asphalt Concrete Binder Course shall meet the requirements of Section 406 of the AHTD Standard Specifications Edition of 2014. Materials for Asphalt Concrete Surface Course shall meet the requirements of Section 407 of the AHTD Standard Specifications Edition of 2014, modified as follows:

All surface courses serving as wearing courses shall fully comply with Section 409 of the AHTD Standard Specifications Edition 2014. If and where so indicated in the Plans and the Bid for Unit Price Contract, and where the surface course is installed by two or more lifts, then the surface course(s) which shall be installed beneath the final lift of the wearing course may be an all limestone course aggregate mix otherwise complying with Section 409 of the AHTD Standard Specifications Edition 2014 and subject to the review and acceptance by the Engineer and Owner.

(b) Design and Quality Control Requirements. Design and quality control of Superpave mixes shall be as specified in Section 404 of the AHTD Standard Specifications Edition of 2014.

(c) Materials and Equipment for Asphalt Concrete Plant Mix Courses. Materials and equipment for asphalt concrete plant mix courses shall meet the requirements of Section 409 of the AHTD Standard Specifications Edition of 2003, except for the requirements of Section

409.04(b) ^{MTV} is at the contractor's option. If a material transfer device is used, the requirements of Section 409.04(b) shall apply.

403.03 Construction Requirements.

(a) **Description.** The methods employed in performing the work shall be at the Contractor's option. When the production and/or placement of the material does not comply with the specifications, the Contractor shall make the changes necessary to bring the work into compliance.

(b) **Pre-Placement Conference.** Unless waived by the Engineer, prior to the start of paving operations the Contractor shall conduct a Pre-Placement Conference involving the Contractor's personnel and the Engineer and City's personnel. The Contractor's proposed plant, delivery, laydown, compaction, and equipment shall be discussed and, if deemed necessary by the City, all the equipment inspected. The accepted mix designs and materials to be used shall be discussed. The proposed mixing and compaction temperatures, sampling and testing plan, haul route, rolling pattern, and other pertinent information shall be discussed. The Pre-Placement Conference and all items discussed shall be documented by the Contractor and furnished to the Engineer within ten calendar days after the Pre-Placement Conference.

(c) **Preparation of Mixture.** The aggregates, mineral filler, and asphalt binder shall be measured separately and accurately mixed in the proper proportions according to the mix design. The aggregates shall be thoroughly coated and the mixture shall not show an excess or deficiency of asphalt binder, injury or damage due to burning or overheating, or an improper combination of aggregates. The continuous production of ACHM shall be within plus or minus 25° F (14° C) of the mixing temperature shown on the approved mix design. Momentary temperature spikes shall be kept to a minimum.

(d) **Preparation of Base or Existing Surface.** Newly constructed base courses or subgrade shall be prepared as set forth in the specification item covering such items.

Prior to placing asphalt base, binder, or surface courses, all required corrections of the existing pavement or base, such as filling potholes, sags, and depressions, or alterations of the existing pavement crown, shall be made. Such corrections shall be accomplished by placing asphalt binder or surface course mixtures at the location and in a manner as directed by the Engineer/City Engineer. Asphalt material used for wedging or leveling courses, or for fillings holes, may be placed by hand, blade grader, or mechanical spreader methods. The mixture shall be featheredged to a smooth and even surface around the edges of these areas.

Prior to arrival of the mixture on the work, the prepared surface shall be cleaned of all loose and foreign materials and primed or tack coated as specified. Excessive joint and crack filler shall be removed before application of the prime or tack coat. The mixture shall not be placed on a surface that shows evidence of free moisture.

Contact surfaces of curbing, gutters, manholes, and other structures shall be painted with a thin coating of rapid curing cutback asphalt or emulsified asphalt. No direct compensation will be made for this work.

If the earlier course has been contaminated with dirt or other foreign materials, or when the time lapse between courses is in excess of 72 hours, the earlier course shall be cleaned and given a tack coat prior to placing the succeeding course. If directed by the Engineer/City Engineer, a tack coat shall be used even though the lapsed time has been less than 72 hours.

(e) Transporting. The mixture shall be transported from the mixing plant to the work in vehicles with clean tight beds.

When the mixture is being hauled more than 15 miles or when the mixture is being placed between November 1 and April 1, the beds of the vehicles shall be covered with canvas or other suitable material to retard loss of heat. The cover shall extend over the sides and ends of the truck bed and shall be securely fastened. When the mixture is being hauled less than 15 miles the cover shall be stored on the truck at all times to be utilized when overtaken by sudden rains.

No loads shall be sent so late in the day as to interfere with spreading and compacting the mixture during daylight hours unless adequate artificial lighting is provided.

Sufficient haul vehicles and plant production rate shall be maintained to the project to provide a continuous operation on the roadway.

Only non-petroleum release agents approved by the Engineer/City Engineer shall be used in haul trucks.

(f) Spreading and Finishing. The mixture shall be placed on an approved surface, spread, and struck off to the line, grade, and elevation established. The mixture shall be placed only on a base that shows no evidence of free moisture, and only when weather conditions are suitable.

The mixture from all types of plants should be delivered to the paver within the recommended compaction temperature range as shown on the approved job mix design. These recommended temperatures should be used in placing and compacting the material. In addition, surface and binder course mixtures shall not be placed on the roadway at a temperature lower than 250° F.

The paver shall uniformly distribute and compact the mixture in front of the screed for the full width being paved. The screed or strike-off assembly shall effectively produce a finished surface of smooth and uniform texture without tearing, shoving, or gouging the mixture. The paver shall be operated at forward speeds consistent with satisfactory laying of the mixture. The speed of the paver shall be matched with the plant production rate and number of hauling units. Stop and go operation of the paver is to be avoided.

The longitudinal joint in one layer shall offset that in the layer immediately below by approximately 6". In general, the joint in the top layer shall be at the centerline of the pavement if the asphalt is placed in 2 passes or less, or at lane lines if the asphalt is placed in more than 2 passes.

(g) Rolling and Density Requirements and Joints. The mixture, after being spread, shall be thoroughly compacted by rolling as soon as it will bear the weight of the rollers without undue displacement.

At the beginning of placement of each mix design, the Contractor shall establish an optimum rolling pattern that will achieve the specified density for the mix being placed. The Contractor may continue with paving operations while the optimum rolling pattern is being established. The established rolling pattern shall be used for compacting all mix placed unless a change in the job mix formula occurs or unacceptable results are obtained. Whenever a change in the job mix formula occurs, or when the compaction method or equipment is changed, or when unacceptable results are obtained, a new optimum rolling pattern shall be established.

The number, weight, and type of rollers, and the optimum rolling pattern shall be such that the specified density and surface requirements are consistently attained while the mixture is in a workable condition. Final approval of the rollers and the rolling pattern will be based upon satisfactory performance and the ability to compact the mixture to the specified density and surface requirements. Rollers that produce excessive crushing of aggregate particles will not be permitted.

When using vibratory rollers, the Contractor shall exercise due caution to prevent any deterioration of the material caused by excessive rolling or vibration. Vibratory rollers shall be operated in such a manner that overlap of adjacent passes shall be held to a minimum. Vibration shall not be used on courses less than 1 ½ " thick.

Rolling shall start longitudinally at the low edge and proceed toward the higher portion of the mat. When paving in echelon or abutting the previously placed lane, the longitudinal joint shall be rolled first followed by the regular rolling procedure. Alternate passes of the roller shall be terminated at least 3' from any preceding stop. Rolling on superelevated curves shall progress from the low side. Rollers shall not be stopped perpendicular to the centerline of the traveled way.

The speed of the roller shall be slow enough to avoid displacement of the hot mixture, and in no case more than 3 mph. The roller shall be operated in such a manner that no displacement of the mat will occur. Rolling shall proceed continuously until the required density is attained and all roller marks are eliminated, leaving the surface smooth and uniform and the required density attained. To prevent adhesion of the asphalt mixture to the rollers, the rollers shall be kept moist for the full width of the rollers, but excess water will not be permitted.

Rollers shall not pass over the unprotected end of a freshly laid mixture. Transverse joints shall be formed by cutting back on the previous run to expose the full depth of the course. A brush coat of asphalt material shall be used on contact surfaces of transverse joints just before additional mixture is placed against the previously placed material.

(h) Weather Limitations. Bituminous mixtures shall not be placed on any wet or frozen surface or when weather conditions otherwise prevent the proper handling and finishing of the mixture.

Bituminous mixtures may only be placed when either the ambient air temperature or the road surface temperature is equal to or greater than that shown in the table.

Regardless of the temperatures herein specified, paving will not be allowed unless specific density, either by percent of field mold density or by rolling procedure, can be achieved before the bituminous mixture cools to 175 degrees Fahrenheit.

Bituminous Placement Temperature Limitations:

Paving Course	Thickness (Inches)	Min. Air Temperature (Degrees F.)	Min. Road Surface Temperature (Degrees F.)
Surface	All	45	45
Subsurface	Less than 3	40	45
Subsurface	3 or more	30	35

403.04 Acceptance of Pavement and Adjustments in Payment.

(a) Superpave Mixes Acceptance of asphalt payment designed using Superpave Methods shall be according to Section 410.09 of the AHTD Standard Specifications Edition of 2003 except as modified herein.

403.05 Modifications and Augmentations of AHTD Standard Specifications. Modifications and augmentations of AHTD Standard Specifications detailed in this subsection apply to 2014 Edition of the Standard Specifications.

Samples for all properties except density, thickness, and the investigation of segregation shall be obtained from trucks at the plant. The contractor/testing agency shall clearly mark the load ticket of each sampled truck to indicate that the load has been sampled.

The Contractor shall provide the straight-edge for use in pavement smoothness testing.

Sublot sizes for density and depth measurements will be 500 tons, and lot sizes will be 3000 tons. Locations for cores to be taken for density and depth testing will be determined using AHTD Test Method #465.

Compliance, price reduction, and rejection limits for density will be in accordance with Table 410-1 of the AHTD Standard Specifications. Calculations of price reductions will be in accordance with 410.09(d)(5) of the AHTD Standard Specifications. For asphalt that is outside the limits shown as lot rejection limits but within the limits shown as sublot rejection limits in Table 410-1, the City shall determine if that mix shall be removed at the contractor's expense or left in place without pay to contractor.

All asphalt that is outside the limits shown as subplot rejection limits shall be removed in accordance with this section.

For small projects (less than 1500 tons total) price reduction amounts shall be reduced to 50% of the amounts specified in Section 410 of the AHTD Standard Specifications.

Thickness of the finished asphalt will be monitored by measuring the thickness of the density cores taken. The average of all depth measurements shall not be less than the required depth shown on the plans. Depth of any core in excess of plus three-eighths inch (+ 3/8") will not be used in computing the average depth. If the average depth is less than the required depth, it will be corrected by overlaying with additional ACHM surface, or as directed by the Engineer/City Engineer.

In addition, thickness of individual cores shall not be less than 3/8" less than the plan depth.

The method for determining the limits of removal for density or depth is as follows: If a single core test falls outside of the limits shown as "Sublot Rejection Limits" in 410-1, two additional tests shall be run in close proximity (within three feet). If the average of these three tests is within the subplot rejection limits in Table 410-1, then this average shall become the value for the density of this subplot. If the average of the three tests is still outside of the subplot rejection limits, tests shall be run at 50-foot intervals in both directions until results are found that are within the subplot rejection limits.

All asphalt that is outside of the limits shown as subplot rejection limits as determined by the above method shall be removed and replaced. After replacement, a core shall be taken in the replacement asphalt and the density determined. The average of this density test and the two isolation tests shall become the density for the subplot.

The contractor shall do all coring and testing for density and depth at no additional cost to the City. The City may require additional cores cut for verification of the contractor's test. Verification testing will be paid for by the City.

When lots and subplot divisions for initial and final courses do not coincide, the Contractor may be required to take additional samples (full-depth) at his expense to determine asphalt thickness. Locations of such cores shall be approved by the Engineer.

Section 410.10 of the AHTD Standard Specifications will not be used under this contract.

403.06 Method of Measurement. Measurement will be by one of the following methods as detailed below. The method to be used will be stated in the bid form.

Asphalt concrete hot mix (ACHM) will be measured by either:

- (a) the ton, or
- (b) the square yard (SY)

of material in place and as indicated on the Plans and the Bid for Unit Price Contract.

City of Fayetteville

Asphalt concrete hot mix (ACHM) where indicated to be measured by the ton will be substantiated by weight tickets, which shall be submitted to the City at the time of asphalt delivery. Deductions for asphalt placed in areas not designated in the plans and not directed by the Engineer/City Engineer or for asphalt placed at depths more than 1/8" over plan depth will be made at the discretion of the Engineer/City Engineer. Measurement of these deductions will be by a method deemed appropriate by the Engineer/City Engineer.

Asphalt concrete hot mix (ACHM) where indicated to be measured by the square yard (SY) will be substantiated by surface area measurements of asphalt concrete hot mix in place. Deductions for asphalt placed in areas not designated in the plans and not directed by the Engineer/City Engineer will be made at the discretion of the Engineer/City Engineer. Measurement of these deductions will be by a method deemed appropriate by the Engineer/City Engineer.

403.07 Basis of Payment. Payment will be based upon the method of measurements and by one of the following methods as detailed below.

Asphalt concrete hot mix will be paid for by either:

(a) Per ton: at the contract unit price bid per ton of material placed in plan locations; said price shall include furnishing mix designs, furnishing material, for heating, mixing, hauling, placing, rolling, finishing, and for all other labor, equipment, tools, and incidentals necessary to complete the work, or

(b) Square yard (SY): at the contract unit price bid per (depth asphalt concrete hot mix) square yard (SY) of material placed in plan locations; said price shall include furnishing mix designs, furnishing material, for heating, mixing, hauling, placing, rolling, finishing, and for all other labor, equipment, tools, and incidentals necessary to complete the work,

as indicated on the Plans and the Bid for Unit Price Contract.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Asphalt Concrete Hot Mix Binder Course (ACHMBC)	Ton
Asphalt Concrete Hot Mix Surface Course (ACHMSC)	Ton

OR

<u>Pay Item</u>	<u>Pay Unit</u>
(Depth) Asphalt Concrete Hot Mix Binder Course (ACHMBC)	SY
(Depth) Asphalt Concrete Hot Mix	SY

ST-90

Surface Course (ACHMSC)

Section 404. Asphalt Concrete Hot Mix Base Course

404.01 Description. This item shall consist of a base course constructed on an accepted course according to these specifications and in substantial conformity with the lines, grades, and typical cross sections shown on the plans.

404.02 Materials. The materials and equipment shall comply with the requirements of Asphalt Concrete Hot Mix Base Course (Section 405 of the AHTD Standard Specifications).

404.03 Construction Requirements. Construction requirements shall comply with the requirements of Asphalt Concrete Hot Mix Base Course (Section 405 of the AHTD Standard Specifications).

404.04 Method of Measurement. Measurement will be by one of the following methods as detailed below. The method to be used will be stated in the bid form.

Asphalt concrete hot mix base course will be measured by either:

- (a) the ton, or
- (b) the square yard (SY)

of material in place and as indicated on the Plans and the Bid for Unit Price Contract.

Asphalt concrete hot mix base course where indicated to be measured by the ton will be substantiated by weight tickets, which shall be submitted to the City at the time of asphalt delivery. Deductions for asphalt placed in areas not designated in the plans and not directed by the Engineer/City Engineer or for asphalt placed at depths more than 1/8" over plan depth will be made at the discretion of the Engineer/City Engineer. Measurement of these deductions will be by a method deemed appropriate by the Engineer/City Engineer.

Asphalt concrete hot mix base course where indicated to be measured by the square yard (SY) will be substantiated by surface area measurements of asphalt concrete hot mix in place. Deductions for asphalt placed in areas not designated in the plans and not directed by the Engineer/City Engineer will be made at the discretion of the Engineer/City Engineer. Measurement of these deductions will be by a method deemed appropriate by the Engineer/City Engineer.

404.05 Basis of Payment. Payment will be based upon the method of measurements and by one of the following methods as detailed below.

Asphalt concrete hot mix base course will be paid for by either:

- (a) Per ton: at the contract unit price bid per ton of material placed in plan locations; said price shall include furnishing mix designs, furnishing material, for heating, mixing,

hauling, placing, rolling, finishing, and for all other labor, equipment, tools, and incidentals necessary to complete the work, or

(b) Square yard (SY): at the contract unit price bid per (depth asphalt concrete hot mix) square yard (SY) of material placed in plan locations; said price shall include furnishing mix designs, furnishing material, for heating, mixing, hauling, placing, rolling, finishing, and for all other labor, equipment, tools, and incidentals necessary to complete the work,

as indicated on the Plans and the Bid for Unit Price Contract.

Payment will be made under:

Pay Item

Pay Unit

Asphalt Concrete Hot Mix
Base Course

Ton

OR

Pay Item

Pay Unit

(Depth) Asphalt Concrete Hot Mix
Base Course

SY

Section 405. Asphalt Concrete Patching for Maintenance of Traffic

405.01 Description. This item shall consist of an asphalt concrete material composed of mineral aggregate and asphalt binder for use in patching to maintain traffic including temporary repairs for roadway cuts. This item shall be placed for all roadway cuts unless directed otherwise by the Engineer/City Engineer. This item will be placed for other maintenance of traffic if and where directed on the plans or by the Engineer/City Engineer.

405.02 Materials and Composition. Materials and equipment shall conform to the requirements of ACHM Surface Course (Standard Specification Section 403) or Asphalt Concrete Cold Plant Mix (Section 411 of AHTD Standard Specifications).

405.03 Construction Requirements. Construction requirements shall conform, insofar as possible, to Section 406 and as follows:

All roadway cuts shall be temporarily or permanently repaired within 24 hours of the completion of trench backfill for the work, or segment of work, which required the excavation and/or cut.

Temporary roadway cut repairs shall be a minimum of two (2) inches and a maximum of three (3) inches of asphalt and shall comply with Specification Section 405 and 406.

Permanent roadway cut repairs shall comply with the plans and specifications and as directed by the Engineer/City Engineer.

Temporary roadway cut repairs shall be maintained by the contractor.

Temporary roadway cut repairs shall be removed and disposed of by the Contractor as necessary during installation of permanent roadway cut repairs or new roadway construction.

405.04 Method of Measurement. Asphalt Concrete Patching for Maintenance of Traffic will be measured by the ton of mix placed as directed by the Engineer/City Engineer. In no case shall measurement of the Temporary Repairs for Roadway Cut extend beyond the pay limit shown on the details on the Plans. Temporary Repairs for Roadway Cut with depths less than two (2) inches and all depths greater than three (3) inches shall not be measured for payment.

405.05 Basis of Payment. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per ton for Asphalt Concrete Patching for Maintenance of Traffic, which price shall be full compensation for furnishing materials; for heating, mixing, hauling, placing, and compacting; and for all labor, equipment, tools, and incidentals necessary to complete the work. No payment will be made for:

Material placed with out authorization of Engineer/City Engineer.

Material placed beyond the pay limits shown on the detail for each type of pavement repair.

Material placed to repair previously patched areas unless approved by the Engineer/City Engineer.

Payment will be made under:

Pay Item

Pay Unit

Asphalt Concrete Patching for
Maintenance of Traffic

Ton

Section 406. Asphalt Concrete Hot Mix Patching of Existing Roadway

406.01 Description. This item shall consist of patching the existing roadway using asphalt concrete material composed of mineral aggregate and asphalt binder.

406.02 Materials and Composition. Materials shall conform to the requirements of Section 402, Tack Coat and Section 403.

406.03 Construction Requirements. Unstable areas in existing roadways and shoulders, designated by the Engineer/City Engineer to be repaired, shall be removed to provide firm vertical sides and a firm, stable, bottom generally parallel with the existing surface. All loose or foreign material shall be removed from the hole. A tack coat of emulsified asphalt shall be applied to the sides of the hole. Asphalt Concrete Hot Mix Binder or Surface Course shall be placed in the hole in uniform layers, not to exceed 4 inches loose measurement. Compaction, satisfactory to the Engineer/City Engineer, shall be accomplished with a mechanical tamper or other approved methods. The finished surface shall be smooth and level with the surrounding surface.

406.04 Method of Measurement. Asphalt Concrete Hot Mix Patching of Existing Roadway will be measured by the ton of mix.

406.05 Basis of Payment. Work completed and accepted and measured as provided above, will be paid for at the contract unit price bid per ton for ACHM Patching of Existing Roadway, which price shall be full compensation for excavation of the existing roadway; for removal and disposal of excavated material; for compacting and tacking the excavated area; for furnishing materials; for heating, mixing, hauling, placing, and compacting the materials; and for all labor, equipment, tools, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Asphalt Concrete Hot Mix Patching of Existing Roadway	Ton

DIVISION 500. MISCELLANEOUS CONSTRUCTION

Section 501. Concrete Curb and Gutter

501.01 Description. This item shall consist of the construction of integral curb, concrete curb, or concrete combination curb and gutter according to these specifications and in conformity with the locations, lines, and grades shown on the plans or as directed.

501.02 Materials. The Concrete shall be Class A or B Concrete as provided in Section 601. The maximum allowable slump shall be 4 inches.

When an extrusion machine is used, the Contractor may modify the concrete mix design, upon approval of the Engineer/City Engineer, to improve workability while maintaining the requirements for Class A or B Concrete.

Material for joint filler shall comply with AASHTO M 213.

501.03 Construction Requirements.

(a) Subgrade. The subgrade shall be shaped to the required depth below the finished surface, according to the dimensions shown on the plans, and shall be compacted to a firm, even surface. Where curb is to be placed as part of a street, the compaction requirements of the street shall apply to the subgrade and base course underneath the curb.

(b) Placing and Finishing.

1) **Integral Curb.** After the concrete pavement has been struck off, the curb forms shall be clamped or otherwise securely fastened in place to the slab form and additional concrete for the curb shall then be deposited and thoroughly tamped. The concrete shall be placed within 30 minutes after the pavement slab has been finished and care shall be taken to secure monolithic construction. The concrete shall be spaded or vibrated sufficiently to eliminate voids and shall be tamped to bring the mortar to the surface. It shall then be finished smooth and even with a wood float and given a Class 6 finish according to Section 601.16. The edges shall be rounded with an approved finishing tool to the radius shown on the plans.

2) **Concrete Curb or Concrete Combination Curb and Gutter.** The concrete shall be deposited in the forms upon wetted subgrade and vibrated and spaded until mortar entirely covers the surface, after which it shall be finished smooth and even by means of a wood float and given a Class 6 finish according to Section 601.16. Edges shall be rounded as shown on the plans while the concrete is still plastic.

(c) Joints. Expansion joints for concrete curb or concrete combination of curb and gutter shall be installed at stationary structures such as catch basins, drop inlets, etc., and at ends of curb returns. Where curb and gutter is constructed adjacent to or on rigid pavements, the location and width of joints shall coincide with those in the pavement, where practicable. Expansion joints shall have a thickness of ½" and shall be filled with joint filler according to

Section 601.11 shaped to the cross section of the curb and constructed at right angles to the curb line.

Contraction joints for concrete curb or concrete combination curb and gutter shall be 1/8" to 3/8" wide x 1 1/2" deep and shall be constructed at 15' intervals. They shall be constructed at right angles to the centerline and perpendicular to the surface of the curb and gutter. Where curb and gutter is constructed adjacent to or on rigid pavements, the location and width of joints shall coincide with those in the pavement, where practicable. Contraction joints shall be formed by sawing, unless otherwise specified, and filled according to the requirements for Joint Seals as specified in Section 601.11, or with a commercially available silicone product approved by the City.

(d) **Surface Tests.** Before the concrete is given the final finishing, the surface of the gutter and the top of the curb shall be true to line and grade. The maximum variation in 10' shall not exceed 3/8".

(e) **Curing.** When completed, the concrete shall be cured as specified in Section 601.15.

(f) **Backfilling.** After the concrete has set sufficiently, the space behind the curb shall be refilled to the required elevation with suitable material, free from topsoil, leaves, twigs, or other organic material, trash, large rocks, or other deleterious materials. This material shall be firmly compacted to 90% of the material's maximum density as determined by AASHTO T99 or ASTM D698 by means of approved mechanical equipment and neatly graded.

501.04 Method of Measurement. Curbing will be measured by the linear foot (LF) along the face of the curb at the gutter line. Integral curb placed with concrete pavement will not be measured separately, but shall be included in the price bid for concrete pavement. Modified curbs across driveways and streets will be measured as curb. Curbs placed as part of commercial asphalt driveway construction will also be measured as curb.

501.05 Basis of Payment. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per linear foot (LF) for Concrete Curb or Concrete Curb and Gutter, which price shall be full compensation for furnishing materials, including joint filler; for forms; for mixing, placing, and finishing concrete; and for excavation and backfilling when not included in other items.

<u>Pay Item</u>	<u>Pay Unit</u>
Concrete Curb and Gutter	LF
Concrete Curb	LF

Section 502. Concrete Sidewalks

502.01 Description. This item shall consist of the construction of concrete walks according to these specifications and in conformity with the dimensions, locations, lines, and grade shown on the plans or as directed.

502.02 Materials. Concrete shall comply with the requirements for Class A or B Concrete as provided in Section 601. The maximum allowable slump shall be 4 inches. Aggregate base shall meet the requirements of Section 401.

502.03 Construction Requirements.

(a) **Subgrade.** The subgrade shall be excavated or filled to the required grade. Unacceptable material shall be removed and replaced with suitable material, free from topsoil, leaves, twigs, or other organic material, trash, large rocks, or other deleterious materials, and the entire subgrade shall be thoroughly compacted with approved mechanical equipment to not less than 90% of the material's maximum density as determined by AASHTO T99 or ASTM D698.

(b) **Aggregate Base Course.** Class 7 aggregate base meeting the requirements of Section 401 shall be installed on the approved subgrade to a minimum depth of 4 inches outside of driveway areas and a minimum depth of 6 inches across driveways, and compacted to 95% of Modified Proctor Density as determined by AASHTO T 180 or ASTM D1557.

(c) **Placing and Finishing.** The concrete shall be deposited in the forms upon the wetted aggregate base to such depth that when it is compacted and finished, the top shall be at the required elevation. It shall be thoroughly consolidated and the edges along the forms spaded to prevent honeycomb. The top shall then be struck off with a straightedge and tamped or vibrated sufficiently to flush mortar to the surface, after which it shall be given a Class 6 finish according to Section 601.16. Edges shall be rounded with a ¼" radius, including edges at joints.

Concrete thickness shall be 4 inches outside of driveway areas and 6 inches across driveways unless otherwise specified.

Transverse joints in the walks shall be cut with a ¼" jointer at intervals not greater than the width of the walk being constructed, or as directed. This joint pattern shall be continuous through driveways.

When completed, the concrete shall be cured as specified in Section 601.15.

(d) **Backfilling.** After the forms have been removed, the spaces on each side of the walk shall be backfilled with suitable material, which shall be firmly compacted and neatly graded. Topsoil meeting the requirements of Section 204 shall be used when areas adjacent to the sidewalk are to be seeded or sodded.

(e) **Expansion Joints.** A space not less than ½" wide shall be left between the sidewalks and adjacent structures, except that no space shall be left between the sides of the walks and adjacent curbs. This space shall be filled with approved joint filler complying with AASHTO M 213.

502.04 Method of Measurement. Concrete sidewalk of the specified thickness will be measured by the square yard (SY).

502.05 Basis of Payment. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per square yard (SY) for Concrete Sidewalks of the thickness specified, which price shall be full compensation for furnishing materials, including concrete, aggregate base, and joint filler; constructing the concrete sidewalk; for excavation and backfilling where not included in other contract items; and for all labor, equipment, tools, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
4" Thick Concrete Sidewalk	SY
6" Thick Concrete Sidewalk	SY

Section 503. Driveway Construction or Reconstruction

503.01 Description. This work consists of reconstructing existing driveways or constructing new driveways with concrete, asphalt, aggregate base course, or other materials as shown on the Plans or as directed by the Engineer/City Engineer.

503.02 Materials. Concrete for driveway reconstruction shall be Class A or B according to the requirements of Section 601. Asphalt shall be Surface Course per the requirements of Section 403. Aggregate base course shall meet the requirements of Section 401. All other materials shall be as specified or as directed by the Engineer/City Engineer.

503.03 Construction Requirements.

(a) **General.** Aprons and driveways shall be constructed in the locations, to the lines and grades, and of the material type shown on the Plans, or as directed by the Engineer/City Engineer. Construction of driveways with greater than 12% slope perpendicular to the street will not be allowed except as approved by the Engineer. Driveway widths shall match widths of existing driveways, with a minimum driveway width of 10' and a maximum width of 40' for commercial driveways and 24' for residential driveways. All driveways designated as commercial driveways shall be constructed with concrete curb and gutter along each side of the driveway.

Driveways and aprons shall be constructed on a compacted subgrade consisting of material approved by the Engineer/City Engineer.

(b) **Driveway Removal.** Existing driveways shall be removed to the locations shown on the plans or as directed by the Engineer to create a smooth transition from the roadway to the adjacent property. The back limit of the driveway shall be sawed if required to produce a neat line.

(c) **Concrete Apron.** Concrete apron shall be constructed on all driveways beginning at the back of curbs and extending to the front edge of the sidewalk. Concrete aprons shall be of a residential or commercial type as shown on the plans. The apron thickness shall be as shown on the Plans, but not less than six inches (6"). Mixing, placement, and finishing of concrete shall be as required in Section 601. Contraction joints shall be constructed so that slabs are no more than 15' in any dimension. One half-inch (1/2") expansion material meeting the requirements of Section 601.11 shall be placed between the backs of curbs and the apron. Joints shall be tooled or sawed at 10' intervals perpendicular to the street. These saw joints shall be filled with joint sealant meeting the requirements of Section 601.11.

(d) **Concrete Driveways.** Concrete driveways shall be constructed where shown on the Plans or as directed by the Engineer/City Engineer. The driveway thickness shall be as shown on the Plans, but not less than six inches (6"). Mixing, placement, and finishing of concrete shall be as required in Section 601. Contraction joints shall be constructed so that slabs are no more than 15' in any dimension. When concrete driveways are constructed monolithically with concrete apron, a contraction joint shall be constructed at the interface between the apron and the driveway. All joints shall be sealed according to Section 601.11.

(e) **Asphalt Driveways.** Asphalt driveways shall consist of approved Surface Mix. Construction of asphalt driveways shall meet the requirements of Section 403. The thickness of the asphalt driveway section shall be as shown on the Plans, but in no case shall be less than 2" of asphalt constructed on 6" of aggregate base course.

(f) **Aggregate Base Driveways.** All existing driveways constructed of soil or gravel shall be reconstructed with aggregate base meeting the requirements of Section 401. Placement of base material shall be according to the lines and grades shown on the plans or as directed by the Engineer/City Engineer. Thickness of base shall be as shown on the plans, but in no case shall be less than 6". Compaction requirements are as specified in Section 401.

503.04 Method of Measurement. If specifically included as a pay item, Asphalt or concrete driveway removal shall be measured by the square yard (SY) from the existing roadway edge to the limits of the driveway removal. Removal of other driveways will not be measured. Concrete aprons and all driveways shall be measured by the square yard (SY). Curb constructed as part of concrete aprons or concrete driveways will be measured as driveway. Curb for asphalt driveways will not be measured as part of this item.

503.05 Basis of Payment. Work completed and measured as provided above will be paid for at the contract unit price bid per square yard for the various items. This price shall be full compensation for furnishing and placing materials, for excavation and subgrade preparation; for shaping and finishing; and for all labor, equipment, tools, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item

Pay Unit

Concrete Driveway Aprons	SY
Concrete Driveway	SY
Asphalt Driveway	SY
Aggregate Base Course Driveway	SY
Asphalt/Concrete Driveway Removal	SY

Section 504. Headwalls and Retaining Walls

504.01 Description. This item consists of constructing concrete headwalls and retaining walls at the locations and to the lines and grades shown on the plans. Modular Block retaining walls, and/or Mechanically Stabilized Earth retaining structures with facing, when so indicated in the plans or the proposal shall be specified in a Special Provision supplemental to these Standard Specifications.

504.02 Materials. Concrete shall meet the requirements of Section 601 for Class A or B for headwalls, and Class B for retaining walls.

Reinforcing steel shall meet the requirements of Section 602.

504.03 Construction Requirements. The subgrade on which the footing is to be placed shall be prepared by excavating to the required grade and thoroughly compacting the existing material. If the existing material at the elevation of the bottom of the footing is soft and yielding, and the Engineer/City Engineer so directs, it shall be removed and replaced with suitable material according to Section 202.

Reinforcing steel shall be placed as shown on the plans. Weepholes of the size shown on the plans shall be set in the forms before concrete is placed.

Concrete shall be furnished, placed, finished, and cured according to the requirements of Section 601.

504.04 Method of Measurement. Concrete headwalls and concrete retaining walls will be measured by the cubic yard of concrete placed and accepted. Concrete, reinforcing steel, filter fabric, compacted drainage stone backfill, expansion joint materials, weep holes, weephole screens, compacted earth backfill and all other items indicated on the Plans or required for a complete headwall and/or retaining wall shall not be measured for separate payment but will be considered subsidiary to the items involved.

Additional undercut excavation as required under footings will be measured by the cubic yard compacted in place.

504.05 Basis of Payment. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per each for Concrete Headwalls and per linear foot for Concrete Retaining Walls. Said price shall be full compensation for furnishing all materials, including reinforcing steel; for structural excavation and compaction; for all

forming and bracing; for mixing, transporting, placing, finishing, and curing; and for all equipment, tools, labor, and incidentals necessary to complete the work.

Additional excavation and embankment under footings will be paid for at the unit price bid for Undercut Excavation. No payment for additional excavation will be made unless such excavation is directed by the Engineer/City Engineer.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Concrete Headwalls	EA
Concrete Retaining Walls	LF
Modular Block Retaining Walls	SF

Section 505. Seeding and Sodding

505.01 Description. This item shall consist of furnishing and applying lime, fertilizer, seed, mulch cover, and water according to these Specifications at locations shown on the plans or as directed.

The work under this item shall be accomplished as soon as practicable after the grading in an area has been completed in order to deter erosion of the roadway and siltation of streams.

505.02 Materials.

(a) **Lime.** Lime shall be agricultural grade ground limestone or equivalent as approved by the City.

(b) **Fertilizer.** Fertilizer shall be a commercial grade, uniform in composition, free flowing, and suitable for application with mechanical equipment. It shall be delivered to the site in labeled containers conforming to current Arkansas fertilizer laws and bearing the name, trademark, and warranty of the producer.

(c) **Seed.** Except as modified herein, the seed shall comply with the current rules and regulations of the Arkansas State Plant Board and the germination test shall be valid on the date the seed is used. It shall have a minimum of 98% pure seed and 85% germination by weight, and shall contain no more than 1% weed seeds. A combined total of 50 noxious weed seeds shall be the maximum amount allowed per pound of seed with the following exceptions: Johnson grass seed, wild onion seed, wild garlic seed, field bindweed seed, nut grass seed, sickle pod seed, sesbania seed, indigo seed, morning-glory seed, and cocklebur seed will not be allowed in any amount. Seed shall be furnished in sealed, standard containers. Seed that has become wet, moldy, or otherwise damaged in transit or in storage will not be acceptable.

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Seed planted between June 16 and August 31 may require more water than that specified in Subsection 505.03 in order to survive. Therefore, watering shall continue after germination until growth is established.

The seeding mixture may be altered if authorized or directed by the Engineer/City Engineer. The actual mix and varieties used shall be submitted to the City before seed is placed.

Seed shall be provided at the following mix and rates:

SEED TYPE	LB/AC
MARCH 15 – JUNE 15	
Turf Fescue	250
Bermuda Grass (common) unhulled	10
Annual Rye	50
JUNE 15 – AUGUST 31	
Turf Fescue	200
Bermuda Grass (common) hulled	5
Bermuda Grass (common) unhulled	10
AUGUST 31 – MARCH 15	
Turf Fescue	250
Annual Rye	50

At the Contractor's option, annual rye only may be seeded at a minimum rate of 30 pounds per acre between the dates of October 31 to March 15. The Contractor shall return between the dates of March 15 and May 1 and reseed with the mix specified for the March 15 – June 15 time period. Preparation for reseeding shall be in accordance with Section 204.

(d) Sod. Sod shall be composed of either field grown grass or approved nursery grown grass and shall consist of a densely rooted growth of grass substantially free from noxious weeds and undesirable grasses. Sod type shall be as specified on the plans. When sod is placed to repair damaged areas, the sod shall be of the same type and variety as the existing grass.

The sod shall be sufficiently thick to secure a dense stand of live grass. The sod shall be live, fresh, and uninjured at the time of placing. It shall have a soil mat of sufficient thickness adhering firmly to the roots to withstand all necessary handling. It shall be placed as soon as possible after being cut and shall be kept moist from the time it is cut until it is placed in its final position.

The source of field grown sod shall be inspected and approved by the City before being cut for use in the work. After approval, the area from which the sod is to be harvested shall be closely mowed and raked as necessary to remove excessive top growth and debris.

Approved devices, such as sod cutters, shall be used for cutting the sod and due care shall be exercised to retain the native soil intact. The sod shall be cut in uniform strips approximately

300 mm (12") in width and not less than 300 mm (12") in length, but not longer than can be conveniently handled and transported.

(e) **Mulch.** Mulch cover shall consist of straw from threshed rice, oats, wheat, barley, or rye; of wood excelsior; or of hay obtained from various legumes or grasses, such as lespedeza, clover, vetch, soybeans, bermuda, carpet sedge, bahia, fescue, or other legumes or grasses; or a combination thereof. Mulch shall be dry and reasonably free from Johnson grass or other noxious weeds, and shall not be excessively brittle or in an advanced state of decomposition. All material will be inspected and approved prior to use.

(f) **Tackifiers.** Tackifiers used in mulch anchoring shall be of such quality that the mulch cover will be bound together to form a cover mat that will stay intact under normal climactic conditions.

All tackifiers used shall have prior approval or be listed on the AHTD Qualified Products List (QPL). The type and brand of tackifier to be used shall be submitted to the City for approval.

(g) **Water.** Water shall be of irrigation quality and free of impurities that would be detrimental to plant growth.

505.03 Construction Requirements.

(a) **Seeding.** Areas to be seeded shall be dressed to the shape and section shown on the plans. A 4" layer of topsoil, if required, shall be furnished, placed, and prepared as specified in Section 204.

Fertilizer shall be applied at the rate of 800 pounds per acre of 10-20-10, or the equivalent amount of plant food. Fertilizer shall be uniformly incorporated into the soil alone or in conjunction with the required lime. If the Contractor so elects, the fertilizer may be combined with the seed in the hydro-seeding operation.

Broadcast sowing may be accomplished by hand seeders or by approved power equipment. Either method shall result in uniform distribution and no work shall be performed during high winds. The area seeded shall be lightly firmed with a cultipacker immediately after broadcasting.

If a hydro-seeder is used for seeding, fertilizer and seed may be incorporated into one operation but a maximum of 800 pounds of fertilizer shall be permitted for each 1500 gallons of water. If the Contractor so elects, the fertilizer may be applied during preparation of the seedbed. The area shall be lightly firmed with a cultipacker immediately before hydro-seeding.

Mulch cover shall be applied immediately after seeding and shall be spread uniformly over the entire area. If the Contractor so elects, an approved mulching machine may be used whereby the application of mulch cover and tackifier may be combined into one operation. Mulch shall be placed so that the ground is completely covered to a thickness of approximately 2 inches. Care shall be taken to prevent tackifier materials from discoloring

or marking structures, pavements, utilities, or other plant growth. Removal of any objectionable discoloration shall be at no cost to the City.

Immediately following or during the application of the mulch cover on seeded areas, the mulch shall be anchored by one of the following methods:

Tracking or Roller Method. The mulch shall be effectively pressed into the soil using steel cleated track or cleated roller equipment. The anchoring shall be performed so that the grooves formed are perpendicular to the flow of water down backslopes and foreslopes. The equipment and method used shall produce acceptable results.

Other Tackifiers. An approved tackifier shall be applied according to the rates recommended by the manufacturer. Asphalt tackifier will not be allowed.

The method used shall be at the Contractor's option unless otherwise specified or directed. In lieu of separate application of tackifiers, the Contractor may use equipment that combines the application of mulch and tackifier into one operation. Application shall be at the specified rates.

After application of the mulch cover, water shall be applied in sufficient quantity, as directed by the Engineer/City Engineer, to thoroughly moisten the soil to the depth of pulverization and then as necessary to germinate the seed.

When directed by the Engineer/City Engineer, the Contractor shall apply water in an amount such that, in conjunction with any rainfall, the seeded and mulched areas will receive an amount equivalent to a minimum of 1" of water each week beginning the week after seeding and continuing for a minimum of three (3) weeks. Water applied at this rate will not be paid for separately but shall be considered subsidiary to seeding. If directed by the Engineer/City Engineer, additional water shall be applied to sustain grass growth.

Failure to meet this requirement will result in a partial withholding and/or recovery of payments for the seeding and mulch cover. Additional work and materials required due to the Contractor's negligence in maintaining completed work or failure to water grass as directed shall be accomplished at no cost to the City.

For all areas seeded, final acceptance will be delayed until an acceptable stand of grass of uniform color and density is established to the satisfaction of the City. Before final acceptance, the Contractor shall repair or replace any seeding or mulching that is defective or damaged. If the defect or damage is due to the Contractor's negligence, the work shall be done at no additional cost to the City. If the damage or defect is not the Contractor's fault, the work will be measured and paid for according to these Specifications.

(b) Sod. Areas to be sodded shall be dressed to the shape and section shown on the plans and the top and bottom of slopes shall be rounded to a radius of approximately 3' unless otherwise directed. The finished slopes shall be prepared with 4" of topsoil meeting the requirements of Section 204. Water may be applied before, during, and after slope preparation, as directed by the Engineer/City Engineer, in order to maintain the desired moisture content in the soil.

Immediately before placement of sod, fertilizer shall be broadcast at the rate of 250 pounds per acre of 10-20-10, or the equivalent amount of plant food, and incorporated into the top 1" of soil.

Sod shall be moist and shall be placed on a moist earth bed. Sod strips shall be laid along contour lines, by hand, commencing at the base of the area to be sodded and working upward. The transverse joints of sod strips shall be broken, and the sod carefully laid to produce tight joints. At the top of slopes the sod shall be turned into the embankment slightly and a layer of earth placed over it and compacted to conduct surface water over and onto the sod. The sod shall be firmed, watered, and refirmed immediately after it is placed. The firming shall be accomplished by use of a lawn roller or approved tamper, with care being taken to avoid tearing end strips of sod.

When sodding is completed, the sodded areas shall be cleared of loose sod, excess soil, or other foreign material; a thin application of topsoil shall be scattered over the sod as a top dressing; and the areas thoroughly moistened. Water shall be applied as necessary at the direction of the Engineer/City Engineer for a period of at least 3 weeks. The time required for application of water will not be included in the computation of contract time for completion of the project provided all other work under the Contract has been completed.

The Contractor shall maintain sodded areas from the time of completion until final acceptance of the project by the City. Additional work and materials required because of the Contractor's negligence in maintaining the work shall be accomplished at no cost to the City.

505.04 Method of Measurement. Seeding will be measured by the acre of actual area covered. Sod will be measured by the SY yard of actual area covered. Additional watering if so directed will be measured by thousands of gallons (MG) applied.

505.05 Basis of Payment. Seeding completed and accepted and measured as provided above will be paid for at the contract unit price bid per acre for Seeding, which price shall be full compensation for seedbed preparation; for furnishing and applying fertilizer, lime, seed, mulch, and tackifier; and for all labor, equipment, tools, and incidentals necessary to complete the work.

Payments for seeding will be made according to the following schedule:

50 % On the first regularly scheduled estimate after the Seeding and Mulch Cover are completed.

25% On the next regularly scheduled estimate, provided that the Engineer/City Engineer determines that the seeded and mulched areas have received at least the amount of water specified in Section 505.03 above.

25% On the succeeding regularly scheduled estimate, provided that the Engineer/City Engineer determines that a dense lawn of permanent grass has been established.

Sodding completed and accepted and measured as provided above will be paid for at the contract unit price bid per square yard for Sodding, which price shall be full compensation

for bed preparation; for furnishing and applying fertilizer, topsoil, and sod; and for all labor, equipment, tools, and incidentals necessary to complete the work.

Additional watering above and beyond the 1" per week for the first three weeks will be paid for at the unit price per thousand gallons (M.G.) of water applied. This work will be paid for only when directed to by the Engineer/City Engineer. Any watering to be paid for under this item shall be conducted in the presence of the Engineer/City Engineer.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Seeding and Mulching	Acre
Solid Sod	SY
Additional Watering	MG

Section 506. Mailboxes

506.01 Description. This item shall consist of furnishing and erecting mailbox posts and installing existing mailboxes on the new posts. When required, it shall also include furnishing and installing new mailboxes. It shall also include maintenance of existing mailboxes during construction to ensure uninterrupted mail service in the construction limits.

506.02 Materials. The mailbox post shall be either metal or coniferous wood. All mailbox posts placed under the contract shall be of the same type. Wood posts shall be 4"x 4" square and shall be pressure treated with creosote, pentachlorophenol or chromated copper arsenate. Metal posts shall be 2" in diameter and shall be galvanized.

Mailbox support hardware, including shelf, platform and bracket shall be as shown on the plans. Anti-twist plate, clamps, spacers, nuts, bolts, and washers shall be galvanized steel.

New mailboxes, when specified on the plans or directed by the Engineer/City Engineer, shall comply with the U.S. Postal Service and shall be the same size as the existing mailbox.

506.03 Construction Methods. Mailboxes shall be constructed in the same locations as the existing mailboxes. It is the Contractor's responsibility to note the locations of existing mailboxes before construction begins. The bottom of the box shall be set at an elevation 3'-6" above the roadway surface. The roadside face of the box shall be 6" from the face of the curb. Where a mailbox is located at a driveway entrance, it shall be placed on the far side of the driveway in the direction of the delivery route. Where a mailbox is located at an intersecting road, it shall be located a minimum of 100' beyond the center of the intersecting road in the direction of the delivery route. If requested by the local postmaster, height and placement of mailboxes may vary slightly as directed by the Engineer/City Engineer.

No more than two mailboxes may be mounted on one post. Post spacing for multiple mailbox installations shall be a maximum of 36".

The mailbox post shall be embedded a minimum of 24" into the ground. A metal post shall have an anti-twist plate that extends no more than 10" below the ground surface.

The existing mailbox shall be separated from the existing post and attached to the new post. If the existing mailbox is damaged beyond repair by the Contractor, the mailbox shall be replaced at no cost to the City. If the existing mailbox cannot physically be removed from the existing post and re-used, the mailbox shall be replaced under the item Mailboxes. When a mailbox is replaced, the Contractor shall be responsible for placing identification markings on the new mailbox corresponding to the markings on the original mailbox.

Unless otherwise specified, all existing mailbox supports shall be removed and replaced with new supports. If directed by the Engineer/City Engineer the existing mailbox shall be restored under the Contract item Remove and Replace Mailboxes. If directed by the Engineer/City Engineer, the existing support and mailbox shall be removed and protected until placement in its planned location. This work shall be paid for under the item Mailbox/Support Relocation.

506.04 Method of Measurement. Mailbox Supports, Mailboxes, Remove and Replace Mailboxes, and Mailbox/Support Relocation will be measured by the unit.

506.05 Basis of Payment. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per each for Mailbox Supports of the type specified, for Mailboxes, or for Remove and Replace Mailboxes, or for Mailbox/Support Relocation; which price shall be full compensation for furnishing all materials: for setting posts; for removing and reattaching existing mailboxes; and for all labor, equipment, tools, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Mailbox Supports (single)	EA
Mailbox Supports (double)	EA
Mailboxes	EA
Remove and Replace Mailboxes	EA
Mailbox/Support Relocation	EA

Section 507. Pavement Markings

507.01 Description. This item shall consist of furnishing and placing pavement markings, including words, arrows, and emblems, of the color, type and material specified, in accordance with these specifications and to the dimensions and at the locations shown on the plans or as directed.

The markings are to be placed under existing traffic conditions. The work shall meet the requirements of the MUTCD except as modified by these specifications.

507.02 Materials. (a) Paint. Paint shall be a ready mixed white and yellow paint suitable for application on concrete and bituminous pavements. All paints used for this application shall be listed on the AHTD Qualified Products List (QPL). The manufacturer shall furnish a certification for each lot certifying that the materials supplied conform to all the requirements specified and stating that the material is formulated the same as the material tested for QPL listing.

(b) Thermoplastic Material. Thermoplastic material used shall meet all requirements of Section 719.02 of the AHTD Standard Specifications.

(c) Pavement Marking Tape. Pavement marking tape shall be a preformed tape conforming to Section 720.02 of the AHTD Standard Specifications for Type 5.

507.03 Construction Requirements.

(a) General Requirements. All pavement markings shall be applied to clean, dry surfaces. If necessary, the Contractor shall clean the surface of the pavement to receive markings before beginning marking operations. Cleaning of the pavement is considered subsidiary to other items of work and will not be paid for separately.

Pavement markings shall be placed at the locations shown on the plans, or as directed by the Engineer/City Engineer. All markings shall have well defined edges, shall be uniform in thickness, and shall be straight and true. No stripe shall be less than the specified width. Any corrections of variations in width or alignment of the stripes shall not be made abruptly. Markings that cannot be corrected to meet these requirements shall be removed at the Contractor's expense and will not be paid for.

Removal of markings shall be performed in such a manner that no conflicting pavement marking will be left in place. Removal of the pavement marking by a means that will gouge the surface will not be permitted.

(b) Reflectorized Paint. Reflectorized paint shall be applied at a minimum wet film thickness of 15 mils (a minimum of 16.5 gallons per mile of 4" line). The painted line shall be uniform in thickness and appearance across the width of the stripe. Glass beads shall be placed on the surface of the wet paint in the amount of not less than 6 pounds per gallon.

(c) Thermoplastic Markings. The thermoplastic compound shall be screed or ribbon extruded to the pavement surface unless a specific application method is specified.

The thermoplastic material shall be dispensed at a temperature recommended by the manufacturer. The applicator shall include a cutoff device remotely controlled to provide clean, square stripe ends and to provide a method for applying skip lines.

Beads applied to the surface of the completed stripe shall be applied by an automatic bead dispenser attached to the pavement marking equipment in such a manner that the beads are

immediately dispensed upon the completed line. The bead dispenser shall be equipped with an automatic cutoff control, synchronized with the cutoff of the pavement marking equipment.

Thermoplastic markings shall not be applied to the pavement surface when the pavement surface temperature is less than 50° F or when the pavement shows evidence of moisture.

On pavements where no pavement markings exist or where the existing pavement markings are paint or thermoplastic and do not conflict with the proposed pavement markings, blasting with water or sand or a combination thereof will be required to remove any curing compound, oxidized paint or thermoplastic, or dirt to ensure a good bond. This blasting is considered surface preparation and will not be paid for separately.

Conflicting pavement markings that exist shall be removed by blasting with water and/or sand or by grinding. This blasting or grinding is considered pavement marking removal.

The thickness of all thermoplastic markings above the roadway surface shall be 90 mils (a minimum of 1584 pounds per mile of 4" line). The minimum thickness will be measured in the center of the line. The minimum 1/2" from the edges shall not be less than 75% of the thickness required in the center. Maximum thickness of markings is 3/16".

On concrete pavements, paint pavement markings meeting the requirements of this section shall be applied as a primer for the thermoplastic markings, except where thermoplastic markings are to be applied over existing thermoplastic markings. Paint applied to concrete pavement solely as a primer will not be measured or paid for separately, but full compensation therefore will be considered included in the contract unit prices bid for the various items of Thermoplastic Pavement Markings. A primer other than paint may be used when recommended by the thermoplastic manufacturer.

(d) Pavement Marking Tape. The placement of the pavement marking tape shall comply with the manufacturer's recommendations.

Air temperature shall be a minimum of 60° F and rising or the road temperature shall be a minimum of 70° F before installation of marking tape will be allowed.

The roadway surface shall be cleaned by the Contractor with high pressure air or by sweeping. The roadway shall then be marked where the pavement marking polymer is to be applied.

The polymer can then be applied by hand or with a manual or mechanical highway tape applicator designed for that purpose. Only butt splices will be allowed with no overlapping.

After application, the tape shall be firmly tamped with a minimum 200 lb. Load or by slowly (2-3 mph) driving over the tape with a vehicle tire. The Contractor shall ensure that all edges are firmly adhered.

507.04 Method of Measurement and Basis of Payment. Pavement markings will be measured as follows:

(a) Center lines, skip lines, lane lines, edge lines, crosswalk bars, and stop bars will be measured by the linear foot (LF) of markings actually placed.

(b) Words, arrows, and other symbols will be measured by the unit.

(c) Pavement marking removal, when specified on the plans, will be measured by the square foot of marking actually removed.

Work completed, accepted, and measured as provided above will be paid for at the contract price bid per linear foot for lines of widths specified, per each for symbols, and per square foot for pavement marking removal.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
__" Pavement Marking (Thermoplastic)	LF
Pavement Symbols (Thermoplastic)	EA
Pavement Marking Removal	SF

Section 508. Street Signs

508.01 Description. This item shall consist of installing new signs and supports, and/or relocating existing signs, complete with posts, supports, and concrete bases, where required, according to these Specifications and to the dimensions and details and at the locations shown on the Plans or as directed by the Engineer/City Engineer.

508.02 Materials and Fabrication

(a) **Signs.** Materials used in the fabrication of street signs shall comply with the latest edition of the AHTD Standard Specifications Section 723, AHTD Standard Drawings, and the MUTCD. Signs and equipment manufactured in accordance with the above mentioned specification will not be required to be submitted for approval.

(b) **Supports.** Materials used for new and relocated street sign supports shall be U-section channel or galvanized steel pipe as indicated in the plans.

508.03 Construction Requirements. The Contractor shall install new signs at the locations as shown in the plans or as directed by the Engineer/City Engineer. The Contractor will maintain existing signs during construction, and relocate the signs to permanent locations as shown in the plans or as directed by the Engineer/City Engineer. Should the sign or support become damaged during construction, the Contractor will furnish the replacement.

Any sign not indicated to be relocated as shown on the plans, or as directed by the Engineer/City Engineer shall be salvaged and delivered to the City.

Standard Street and Drainage Specifications

Signs shall be erected at the specified location, plumb, and to the specified vertical and horizontal clearances.

Roadside directional signs shall be erected at a minimum height of 7' above the pavement edge, measured to the bottom of the sign. If a secondary sign is mounted below the primary sign, the primary sign shall be erected a minimum of 8' above the pavement edge and the secondary sign a minimum of 5' above the pavement edge. Route markers, warning signs, and regulatory signs shall be erected a minimum height of 6' above the pavement edge. All heights measured to the bottom of the sign.

The minimum horizontal clearance to any ground mounted sign shall be 2' beyond the edge of the roadway shoulder or unmountable curb face.

Signs shall normally be erected so that the sign face is vertical and at 93° away from the center of the lane that the sign serves and away from the direction of travel. Where lanes divide, or on curves, sign faces shall be oriented so as to be most effective both day and night, and to avoid the possibility of specular reflection.

Field drilling of holes in any part of the sign support structure shall be done only when specified on the plans or as directed by the Engineer.

After sign installation is complete, the signs will be inspected at night by the Engineer. If specular reflection is apparent on any sign, its position shall be adjusted by the Contractor to eliminate this condition..

508.04 Method of Measurement. Signs that are relocated or installed new shall be measured by a complete unit in place (including required footings).

No payment will be made for salvaged signs delivered to the City.

508.05 Basis of Payment. Work completed and accepted under this item and measured as provided above shall be paid for at the Contract unit price bid for each sign, which price shall be full compensation for the relocation, or erection of each sign, including support and footing; and for tools, equipment, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Street Sign Installation	EA

Section 509. Erosion Control

509.01 Description. This item shall consist of Temporary Erosion Control Measures to limit, control, and contain fill materials, soil erosion, sedimentation, and other wastes

resulting from construction activities that could result in harm to private properties as well as public properties, streams and waterways.

This item shall also include the requirement of the Contractor to implement and maintain the Stormwater Pollution Prevention Plan (SWP3/SWPPP) and to comply with all necessary approvals and permits.

509.02 Standards.

All work for this item shall comply with all Federal and State requirements including the Clean Water Act (33 U.S.C. 1251 et seq.), the National Pollutant Discharge Elimination System (NPDES), and the Arkansas Water and Air Pollution Control Act (Act 472 of 1949 , as amended, Ark. Code Ann. 8-4-101 et seq.) and the regulations, orders or decrees issues pursuant thereto.

All work for this item shall further comply with all Local and Municipal requirements including the City of Fayetteville Code Chapter 170, "STORMWATER MANAGEMENT, DRAINAGE, AND EROSION CONTROL" except as modified or augmented herein.

509.03 Application.

The City will develop the SWP3 and will obtain the permit from the Arkansas Department of Environmental Quality (ADEQ) for discharge of stormwater from construction activities for the project.

The requirements of this item shall apply to all construction activities under the Contract. The Contractor shall implement and maintain the SWP3 for all construction activities under the contract without regard to size of land area disturbance.

The Contractor's operations on lands located off the right-of-way, such as borrow pits, plant sites, waste sites, or other facilities, may require compliance with this specification and/or NPDES permit, and may require that additional permits be obtained. Any such additional permits will be the responsibility of the Contractor. Determination may be based upon location, jurisdiction and area of land disturbance.

509.02 Responsibilities of the Contractor.

(a) General.

The Contractor shall comply with City of Fayetteville Code Chapter 170, except as modified or augmented herein.

The Contractor shall comply with all applicable Federal, State, Local and Municipal regulations and requirements.

The Contractor shall stabilize the land and comply with requirements of all permits issued for the project including any additions or revisions thereto.

Upon completion of the construction activities, the Contractor shall file a Notice of Termination with the City.

(b) NPDES Requirements.

Construction activities that will disturb soil or remove vegetation on one (1) or more acres of land during the life of the construction project shall also comply with the applicable NPDES Permit requirements as administrated by ADEQ.

Construction activities authorized under NPDES GENERAL PERMIT NO. ARR150000 with the ADEQ shall comply with Section 509.02. "Responsibilities of the Contractor" (a) General (above), and the following:

The City will prepare and file the appropriate applications, information, Notice of Intent, SWP3 (SWPPP) and other information as required by NPDES GENERAL PERMIT NO. ARR150000 with the ADEQ.

The Contractor shall comply with all NPDES Permit requirements, including, but not limited to, implementation, maintenance, and modification of the SWP3 as circumstances require, and documented inspections of erosion and sediment control systems.

The City will submit to the Contractor one copy of the NPDES Permit and/or other correspondence received from ADEQ. The Contractor shall post this information on site in accordance with the NPDES Permit, and have the current SWP3, inspection logs, and other required information on site at all times and available for inspection by ADEQ, the City, or other regulatory agencies as applicable.

The Contractor shall file the Notice of Termination with ADEQ when the site has been finally stabilized and all storm water discharges from construction activities authorized by the NPDES Permit are eliminated.

509.03 Construction Methods

Where temporary erosion control measures are shown on the plans and in the SWP3, such temporary erosion control measures are provided to the Contractor as minimum controls and guidance. The Contractor shall be responsible to incorporate and expand as necessary the temporary erosion control measures where shown in the plans in accordance with the approved SWP3. The Contractor shall modify the SWP3 as necessary in order to fully comply with the NPDES Permit.

All work required due to the violation of provisions of Corps of Engineers (COE) Section 404 Permits, NPDES Permits, or other requirements of these specifications which results from Contractor negligence, carelessness, or failure to perform work as scheduled, shall be performed by the Contractor at no cost to the City. In addition, the Contractor will be assessed the amounts of any and all fines and penalties assessed against and costs incurred by

the City which are the result of the Contractor's failure to comply with a COE Section 404 Permit or NPDES Permit.

The City will not be responsible for any delays or costs due to the Contractor's failure to comply with the conditions of the COE Section 404 Permit or NPDES Permit. The Contractor will not be granted additional compensation or contract time due to loss of Permits for noncompliance.

In the event that pollutant spills occur which are the result of the Contractor's actions or negligence, the clean up shall be performed by the Contractor at no cost to the City.

509.04 Method of Measurement and Basis of Payment.

No measurement of this item will be made.

Temporary erosion control acceptably completed will be paid for at the contract lump sum price bid for "Erosion Control", which prices shall be full compensation for furnishing all materials, tools, equipment, labor, incidentals and all other items necessary to implement, maintain and complete the work. Payment for "Erosion Control" shall also include implementing, maintaining, and complying with the Stormwater Pollution Prevention Plan (SWP3/SWPPP); including design, inspections, fees, report preparation, housekeeping practices, cleaning, maintenance and all other actions necessary to execute the SWP3 (SWPPP). Periodic payments will be made under this item in proportion to the amount of work accomplished as determined by the Engineer/City Engineer.

Deductions to this item will be made in the amount of any fines levied on the City by ADEQ or other regulatory agencies as a result of the failure by the Contractor to comply with the provisions of COE Section 404 or NPDES Permits.

Payment will be made under:

Pay Item

Pay Unit

Erosion Control

LS

Section 510. Traffic Control and Maintenance

510.01 Description. This work consists of furnishing, installing, and maintaining necessary traffic signs, barricades, lights, signals, cones, concrete barriers, pavement marking, and other traffic control devices and shall include flagging, pilot car operations, and other means for guidance of traffic through the work zone. The work shall be done according to the MUTCD, AHTD Standards, The Standard Specifications and the Contractor's approved Traffic Control plan. An approved Traffic Control plan provided by the Contractor shall be required before any construction begins. This item shall also include maintenance of roadway surface.

This item shall also include the temporary relocation of traffic and street signs, the maintenance of the temporarily relocated signs through the construction of the project, and the permanent relocation of any sign relocated due to construction signage after the construction is complete. Permanent relocation of any salvaged signs shall consist of furnishing new sign post, new support hardware, and new concrete bases, where required, in accordance with the dimensions and details shown in the Plans and at the locations shown in the Plans, or as directed by the Engineer. New sign posts shall comply with the Standard Specifications and Standard Drawings.

(a) Contractor's Plan. Traffic Control or Maintenance of Traffic when shown in the Plans is provided to the Contractor as guidance. The Contractor shall prepare and submit for approval a detailed Traffic Control or Maintenance of Traffic Plan including adherence to the specified schedule of construction phases when so indicated in the Contract Documents to the Engineer and Owner. The Contractor's Traffic Control or Maintenance of Traffic Plan shall include and expand as necessary the Traffic Control or Maintenance of Traffic when indicated in the Plans and Specifications, and shall be complete with all proposed traffic control or traffic maintenance devices including proposed temporary roadway widening. The Contractor shall prepare and submit the detailed Maintenance of Traffic Plan to the Engineer and Owner 7 days prior to the preconstruction conference and in accordance with these Specifications.

Upon approval of the Contractor's Maintenance of Traffic Plan by the Owner in writing, the Contractor shall supply the City Engineer, the Fire Chief and the Police Chief one (1) copy each for their files. Two (2) copies shall be supplied to the Engineer.

The Contractor shall initiate and maintain all necessary labor and materials necessary to construct the project in a manner which will guarantee public safety with a minimum of inconvenience. Additional work, at no additional costs to the Owner, shall be performed by the Contractor during construction as directed by the Owner or Engineer if necessary to insure the above standards.

(b) Contractor personnel. The Contractor shall designate a traffic control supervisor to furnish continuous surveillance over traffic control operations. This supervisor shall be available at night and weekends to respond to calls involving traffic control. The name of the traffic control supervisor shall be provided at the preconstruction conference and to local police.

The Contractor's personnel who are used to maintain traffic flow, such as flagmen or any other person, who verbally communicates with or gives directions to the motorized public, shall speak English fluently.

(c) Driveways. Maintenance of driveways shall be as approved by the Engineer/City Engineer. Unless indicated otherwise, it shall be the Contractor's responsibility to maintain adequate access to private and commercial property at all times, except as required for construction across the driveway as approved by the Engineer. During the construction of driveways or at any time that a property owner cannot use his driveway, the Contractor shall notify the property owner

(one week in advance, minimum) when the driveway will be closed and the approximate length of time that it will be closed. The intent of this section of the Specifications is to cause as little inconvenience as possible to private property owners.

(d) Relocation and replacement of Traffic Signs and Pavement Striping. During the construction of the project, the temporary relocation of street signs and traffic control signs will be performed by the Contractor. The Contractor shall maintain the signs at highly visible locations as near as practicable to the original locations. The latest edition of the Manual of Uniform Traffic Control Devices published by the Federal Highway Administration shall be used as a guide to the placement of signs during construction.

Immediately after the construction of any part of the project reaches a stage of completion such that the relocation of the street signs and traffic control signs is no longer necessary, the Contractor shall permanently relocate the street signs and traffic control signs. Removing any construction signage must be approved by the Engineer.

Street signs and traffic control signs shall be removed from such area of work as necessary to permit work on the project. Each sign shall be temporarily relocated in a secure manner by driving the sign into the ground with equipment approved by the Engineer, or otherwise installed as approved to prevent damage to underground utilities. Street signs no longer necessary shall be salvaged in good condition and restored to their original use or returned to the Owner if no longer needed.

Existing striping shall be removed and new temporary stripes and other pavement markings shall be provided by the Contractor. Work shall be performed in accordance with SECTION 720 (for Type 4) – PERMANENT PAVEMENT MARKING TAPE of the Standard Specifications. Pavement markings not necessary to the phased construction patterns shall be removed or obliterated with black paint, as approved by the Engineer. Striping shall be maintained and restored as necessary during construction.

(e) Suspension of Work. If the Owner or the Engineer determines that provisions for safe traffic control are not being provided or maintained, the work will be suspended. In cases of serious or willful disregard for safety of the public or construction workers, the Owner will place the traffic control devices in proper condition and deduct the costs from monies due the Contractor.

510.02 Maintenance Requirements. Unless approved otherwise by the City, the road, while undergoing improvements, shall be kept open by the Contractor to all traffic. When so provided on the plans, or the Contractor's approved plan, the Contractor may bypass traffic over an approved detour route. The Contractor shall keep the portion of the project being used by public traffic, whether it is through or local traffic, in such condition that will permit the safe, continuous flow of two-way traffic at all times. When a part of the plans or when approved by the City, areas where the nature of the work restricts or prohibits two-way flow, one-way operation may be maintained by using flaggers or timed signalization. The Contractor shall also provide and maintain in a safe condition temporary approaches, crossings and intersections with trails, roads, streets, businesses, parking lots, residences, garages, farms, etc.

As part of regular traffic maintenance, the Contractor shall remove all snow and ice accumulated on the traveled roadway. Exposed soil that becomes muddy due to rains or other precipitation shall be removed or covered with aggregate base material to the satisfaction of the City. Dust shall be controlled at all times. In the event that watering does not satisfactorily control the dust, other methods of dust control will be required.

Necessary traffic control devices shall be properly placed and in operation before starting construction. When work of a progressive nature is involved, such as resurfacing, the appropriate traffic control devices shall be kept current and placed only in the areas of actual work activities. All traffic control devices shall meet the requirements of the AHTD Standard Specifications Section 604.02 and the most current version of the MUTCD.

If the City determines that provisions for safe traffic control are not being provided or maintained, the work will be suspended. In cases of serious or willful disregard for safety of the public or construction workers, the City will place the traffic control devices in proper condition and deduct the costs from monies due the Contractor.

Types of barricade supports or devices not specifically described in the MUTCD shall not be used. The methods used to control traffic for lane changes or other diversions shall meet the MUTCD and the traffic control plan.

Portable changeable message signs meeting the requirements of Section 604 of the AHTD Standard Specifications shall be used if and where directed by the City.

510.03 Method of Measurement. Aggregate base for traffic maintenance, if specifically included as a bid item, will be measured by the ton of material placed for traffic control. No payment will be made under this item unless base placement is specifically directed by the Engineer/City Engineer. No base so directed shall be placed without the Engineer/City Engineer or authorized representative present. The tonnage of material placed shall be substantiated by truck tickets delivered along with the base material and presented to the Engineer/City Engineer at the time of base placement. If an item for aggregate base for traffic control is not included, it shall be considered subsidiary to other items.

When directed or approved for use by the City, portable changeable message signs meeting the requirements of Section 604 of the AHTD Standard Specifications will be measured for payment by the number of days each sign is required and authorized by the City. Payment for a full day will be made for any portion of a day that the panel or sign is used, but the measurement shall not exceed one per sign on any calendar day.

No other traffic control items will be measured.

510.04 Basis of Payment. Payment for aggregate base for roadway maintenance as measured above will be made at the unit price bid per ton.

All other traffic control and maintenance materials and activities will be paid for at the lump sum price bid for traffic control.

Payment will be made under:

Pay Item

Pay Unit

Traffic Control and Maintenance
Aggregate Base for Roadway Maintenance
Portable Changeable Message Sign

LS
Ton
Day

Section 511. Mobilization

511.01 Description. This item shall consist of preparatory work and operations, including those necessary for the movement of personnel, equipment, supplies, and incidentals to the project site.

This item shall also include other work and operations that must be performed, or for expenses incurred, before beginning work on the various Contract items on the project site. It shall also include pre-construction costs which are necessary direct costs to the project and are of a general nature rather than directly attributable to other pay items under the Contract.

511.02 Measurement and Payment. Mobilization will be measured as a complete unit and will be paid for at the contract lump sum price bid. In computing the allowable partial payments from the schedule below, the percentage of the original Contract earned will be based on all items exclusive of the item of Mobilization, and payment for this item at any of the listed stages of completion will be made on the basis of the percentage of the item allowed less all payments made.

PARTIAL PAYMENT SCHEDULE

Percent of Original Contract Amount Earned	Percent of Bid Price for Mobilization Allowed
First Pay Estimate	25%
10%	50%
25%	100%

This item will be paid for on regular estimates. Payments on percentages of the original Contract amount other than those set out above will not be considered. No adjustment in the amount bid for this item will be made for additional quantities or items of work required to satisfactorily complete the Contract.

IN NO CASE SHALL THE AMOUNT BID FOR THE ITEM OF "MOBILIZATION" EXCEED 5% OF THE TOTAL CONTRACT AMOUNT FOR ALL OTHER ITEMS LISTED IN THE PROPOSAL. The bid shall be rejected if the amount entered for mobilization exceeds 5% of the bid amount.

Payment will be made under:

Pay Item

Pay Unit

Mobilization

Lump Sum

Section 512. Fences

512.01 Description. This item shall consist of furnishing and erecting wire fence, chain link fence, wood privacy fence and gates according to the plans and these specifications, and in reasonably close conformity to the lines, grades, and alignment shown on the plans or as directed.

512.02 Materials.

(a) General. All materials used shall be new and shall comply with the requirements for the class and type of material specified. Previously used materials will be allowed for temporary fencing.

Concrete for setting posts shall comply with Section 601 for Class A Concrete.

(b) Wire Fence. Wood posts and braces shall be pressure treated, seasoned, sound, and reasonably straight southern pine or Douglas Fir of the West Coast Region. The posts shall be round and free from excessive end splits. Before pressure treatment, the posts and braces shall have the bark removed, the knots trimmed flush, and the ends cut square. Posts that are to be driven shall have the small end tapered. Posts shall be treated by a standard empty cell or full cell process according to AWWPA practice using creosote and retaining a minimum of 8 pounds per cubic foot of wood; or using pentachlorophenol, or chromated copper arsenate and retaining a minimum of 0.4 pounds per cubic foot of wood.

Metal posts and braces shall be of good commercial quality iron or steel and may be tubular, T, U, Y, or other shape manufactured for use as fence posts or braces.

Woven Wire Farm Fence shall be AASHTO Design Number 1047-6-11 AASHTO M 279 or ASTM A116, Class 3 galvanizing.

Barbed wire shall be 12 ½ gauge with 4-point barbs and shall comply with AASHTO M 280, Class 3 galvanizing.

As an alternate to the barbed wire specified above, high tensile wire having the same galvanizing and breaking strength as Class 3, 12 ½ gauge wire, and complying with the remaining requirements of AASHTO M 280 for a four point barb may be used.

The minimum gage of the high tensile barbed wire shall be as follows:

Strand wire gage 15 ½

Barb wire gage 17

Staples used to attach the wire fencing to wood posts shall be galvanized 9 gage, 38 mm (1 ½") in length.

Steel line posts shall be galvanized or painted and comply with AASHTO M 281. Tubular steel posts shall comply with Grade 1 or Grade 2 of AASHTO M 181, or an approved alternate of Grade 2.

Hardware and fittings shall comply with ASTM F 626. Any miscellaneous hardware or fittings not mentioned in ASTM F 626 shall be galvanized according to the applicable requirements of AASHTO M 111 or M 232.

(c) Chain Link Fence. Material for chain link fence shall comply with AASHTO M 181 Types I, II, or III. Steel members for posts, rails, expansion sleeves, and gate frames may be either Grade 1 or Grade 2. The shape, size, and length of posts and rails, and the height of fabric shall be as shown on the plans.

Hardware and Fittings shall comply with ASTM F 626. Any miscellaneous hardware or fittings not mentioned shall be galvanized according to AASHTO M 111 or M 232. Tension wire shall be minimum 7 gauge.

Aluminum alloy fabric shall be used only with aluminum posts. Aluminum coated steel fabric and galvanized steel fabric, Class C, shall be used only with Grade 1 or Grade 2 steel posts. Fence fabric shall be minimum 9 gauge wire for 6' fencing and 12 gauge wire for 4' fencing.

Frames for gates shall be galvanized steel or aluminum of the type and length shown on the plans. Frames shall be Grade 1 or Grade 2. Welds shall be galvanized. Commercial gates may be used if they are equal to or better than the planned gates as determined and approved by the Engineer/City Engineer.

The gate fabric shall be of the same type material and be in accordance with the same specifications as the adjoining fence.

(d) Wood Privacy Fence All pine wood material shall be pressure treated with pentachlorophenol or chromated copper arsenate and shall retain a minimum of 0.4 pounds per cubic foot of wood. Cedar panels shall be reasonably straight and free from knots, warping, and other defects.

(e) Temporary Fencing Materials for temporary fencing shall be appropriate for the use intended.

512.03 Construction Requirements.

(a) General. The fence shall be erected parallel to the right-of-way line, or as directed. Unless otherwise specified, the fence shall be a minimum of 6" and a maximum of 1' behind the right-of-way line. The fence grade shall generally follow the ground contour, but shall present a uniform appearance. Minor grading along the fence line may be necessary to

obtain the desired uniformity in fence grade. The fence alignment may be adjusted by the Engineer/City Engineer to preserve trees, land monuments, and property corner markers.

(b) Wire Fence. Line posts and pull assemblies shall be spaced as shown on the plans. Wood corner, gate, and pull posts may be driven in place provided the driving does not damage the post; or they may be set in dug holes and set in concrete. Metal corner, gate, end, and pull posts shall be set in concrete. Wire shall not be stretched onto posts set in concrete until seven days after placement of posts. Posts shall be set plumb.

The Contractor has the option of using wood or steel posts and braces unless otherwise specified, but shall use the same material on the entire project. Wood end, corner, and pull posts may be used with steel line posts.

When solid rock is encountered, the posts shall be set into the rock a minimum of 10" for line posts and 16" for end, corner, gate, and pull posts. The hole in the rock shall have a minimum cross section dimension 1" greater than the post to be set. The posts shall be cut before setting to give the proper length above ground surface. The hole shall be filled with Concrete or a grout consisting of 1 part portland cement and 3 parts concrete sand.

Wire tension braces for wood pull, end, and corner assemblies shall consist of a 9 gauge wire passed around the posts to form a double wire. The wire shall be fastened to each post and the ends fastened together to form a continuous wire. The wires shall then be twisted together until the wire is in tension.

Where the new fence joins an existing fence, the two shall be attached in a satisfactory manner, with end posts being set as directed. Where the proposed fence intersects an existing fence, the end post shall be set for the existing fence clear of the proposed fence line as shown on the plans. The wire of the existing fence shall be stapled to the end post.

Pull post assemblies shall be placed at intervals of not more than 300' in straight alignment on level or uniformly sloping ground. Pull posts shall also be placed at all sharp vertical angle points in the line.

Corner post assemblies shall be placed at all horizontal angle points of 15° or more in the fence. When the distance from a corner post to the next corner or pull post is less than 165', one approach span on the corner assembly may be omitted.

End post assemblies at fence ends, gates, bridge abutments, and on banks of streams shall be erected in the same manner as corner construction. Extra length posts shall be provided for crossing small streams, ditches, ravines, or soft ground. Additional depth of set shall be secured in soft ground as directed.

The wire shall be attached to the face of the post away from the street. The wire shall be attached to wood line posts with staples driven at right angles to the grain and at a slight downward angle to attain the best anchorage. The staples shall not be driven tightly against the wire but shall leave free space for adjustment in tension due to changes in temperature. Wire shall be attached to steel line posts with approved galvanized clips. All barbed wire and alternate line wires of woven fabric shall be fastened to each line post. Barbed wire and

all line wires of woven fabric shall be fastened to end, corner, and pull posts by wrapping the wire around the posts and tying the wire back on itself with not less than 3 tightly wrapped twists. Splicing of barbed wire and woven wire shall be done according to the plans. Gates of the same width and material type shall be placed at locations of existing gates as shown on the plans. Gates may be re-used if they have not been damaged during the construction period. If existing gates are not in satisfactory conditions for reuse, they shall be replaced at no cost to the City.

(c) Chain Link Fence. All posts shall be set in concrete as shown on the plans, plumb, and true to line and grade. Concrete shall comply with Section 601 for Class A and shall be thoroughly tamped around the posts. The posts shall be equally spaced in the line of fence not to exceed a spacing of 10 feet. The top of the footing shall be domed to drain water away from the post. Concrete in post footings shall be at least 7 days old before stretching and securing fabric to posts, bracing, or hanging gates.

Top rails shall pass through post caps and shall be securely fastened to end, brace, pull, and corner posts. Joints in top rails shall be made with expansion sleeve couplings to provide a substantial connection and allow for expansion and contraction of the rail.

Before the fence fabric is placed, the tension wire shall be placed at the proper location; stretched taut; securely anchored to each end, corner, or intermediate brace post; and satisfactorily fastened to each line post.

The fence fabric shall be attached to the face of the post facing the street.

The end of the fabric shall be attached to the posts by means of a stretcher bar threaded through the end loops of the fabric and secured to the posts with clamps and bolts. The fabric shall be stretched to remove all slack with approved stretching equipment. The stretched fabric shall be secured to line posts, top rail, braces, and tension wire with specified fabric fasteners. Fabric fasteners shall be placed on line posts at not greater than 24" centers. Stretching operations shall be repeated at approximately every 100' for each run of fence. The use of trucks, tractors, and similar equipment will not be permitted in the stretching operation, except as anchors.

Splicing of the fabric shall be done by interweaving a wire picket through each end loop of each piece of fabric in a manner that will neatly and securely fasten the lengths of fabric together.

(d) Wood Privacy Fence Wood privacy fence shall be constructed at all locations where existing privacy fence is required to be removed, at other locations shown on the plans, or as directed by the Engineer/City Engineer.

Wood privacy fence shall be constructed as shown on the plans or shall match the existing fence in materials and configuration as closely as possible. Materials and workmanship of wood privacy fences, including gates, shall be of the same or better quality as the existing fence.

(e) **Gates.** Gates of the length and type of existing gates shall be constructed at the locations shown on the plans or as directed.

(f) **Temporary Fencing.** Temporary fencing shall be installed as required to contain livestock, pets, and to maintain safety and security of adjacent properties. Fences shall be installed and maintained that their intended purpose is accomplished.

512.04 Method of Measurement.

(a) Fence will be measured by the linear foot in place along the midpoint in height of the fence from outside to outside of the end posts. The lengths of gates will be excluded from this measurement.

(b) Gates will be measured by the Linear Foot.

(c) Temporary fencing, if included as a bid item, will be measured by the linear foot (LF). If this item is not included as a pay item, temporary fencing will be considered subsidiary to other items and will not be measured.

512.05 Basis of Payment. Work completed and accepted and measured as provided above will be paid for as follows:

Barbed Wire Fence will be paid for at the contract unit price bid per linear foot for Barbed Wire Fence. Barbed and Woven Wire Fence will be paid for at the unit contract price per linear foot for Woven and Barbed Wire Fence. Chain Link Fence will be paid for at the contract unit price bid per linear foot for Chain Link Fence of the height specified. Wood Privacy Fence will be paid for at the contract unit price bid per linear foot for Wood Privacy Fence of the height specified. Gates will be paid for at the contract unit price bid per linear foot for Gates of the type and dimensions specified. Temporary fencing will be for at the contract price per linear foot for temporary fencing of appropriate materials and heights.

The contract unit prices mentioned above shall be full compensation for clearing, grading, setting posts, erecting fence, and removing temporary fences; for excavation and backfill; for furnishing materials; and for all labor, equipment, tools, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Barbed Wire Fence	LF
Woven and Barbed Wire Fence	LF
Woven Wire Fence	LF
Chain Link Fence	LF
Chain Link Gates	LF
Wood Privacy Fence	LF
Gates for Wood Privacy Fence	LF
Temporary Fencing	LF

Section 513. Handicap Ramps

513.01 Description. This item shall consist of the construction of handicap ramps in accordance with these specifications and the Standard Drawings at the locations shown on the plans or as directed by the Engineer/City Engineer.

513.02 Materials. Concrete used shall meet the requirements for Class A or B Concrete as provided in Section 601. The maximum allowable slump shall be 4 inches. The maximum water-cement ratio for the mix selected shall not be exceeded.

Cast-in-place detectable warning panels used shall be composed of a vitrified polymer composite material. The color of the panels shall conform to Federal Color No. 33538, and shall be homogeneous throughout the product. The panels shall be cast into the wet concrete. Surface applied products shall not be allowed. The cast-in-place detectable warning panels shall meet the size and spacing requirements shown in the plans.

513.03 Construction Requirements. When a ramp is to be constructed on an existing sidewalk, any items that are planned to be retained but are damaged during the removal or construction operations shall be repaired at no cost to the City.

Handicap Ramps shall be constructed in accordance with Section 502 and the current City of Fayetteville Standard Drawings. Cast-in-place detectable warning panels shall be installed into the wet concrete per the manufacturer's specifications.

513.04 Method of Measurement. Cast-in-place detectable warning panels will be measured by the square foot. Concrete used in Handicap Ramps will be measured by the square yard. Limits of measurement will be as shown on the Plans.

513.05 Basis of Payment. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per square foot for Cast-in-Place Detectable Warning Panels and per square yard for Handicap Ramp Concrete of the type specified, which price shall be full compensation for excavation and backfilling; for furnishing materials including joint filler; for constructing the ramp, for furnishing and placing cast-in-place detectable warning panels; and for all equipment, tools, labor, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Cast-in-Place Detectable Warning Panel	SF
Handicap Access Ramp	SY

Section 514. Project Signs

514.01 Description. This item shall consist of installing new project signs and supports furnished by the Contractor as shown on the plans, or as directed by the Engineer/City Engineer. The layout of the sign must be submitted to the Engineer for approval prior to installation.

514.02 Materials and Sign Layout. The structure and frame of project signs shall be wood or metal and shall structurally adequate to support the sign. Rough hardware shall be galvanized or aluminum.

The sign surface shall be constructed of minimum 3/4 inch thickness exterior grade plywood with medium density overlay. Panels shall be of size to minimize joints. Overall size shall be 4' x 8' unless otherwise specified.

Paint colors will be selected by Owner. Information Content shall be as follows:

Project title, logo, and name of Owner as shown on Contract Documents.

Names and titles of authorities.

Name, title and address of Engineer.

Name of prime Contractor and major Subcontractors.

Any additional information requested by Owner.

514.03 Construction Requirements. The Contractor will furnish new project signs and supports and shall install the signs at the locations as shown in the plans or as directed by the Engineer/City Engineer. The Contractor will maintain the signs during construction. Should the sign or support become damaged during construction, the Contractor will furnish the replacement. The project signs shall be installed within two days after commencement of mobilization. Project signs are to be removed following the announcement of the project's Final Completion by the Engineer/City Engineer. Final payment will be withheld until project signs have been removed.

514.04 Method of Measurement and Basis of Payment. Projects signs will be measured on a per each basis. Payment will be made for each sign constructed and installed according to the Plans and Specifications in the locations designated by the City. The price bid for each sign will be full compensation for all construction, installation, and maintenance of the signs.

Payment will be made under:

Pay Item

Pay Unit

ST-125

Section 515. Handrail

515.01 Description. This item shall consist of furnishing and erecting galvanized steel handrail on box culverts, headwalls, retaining walls, sidewalks, or steps, where shown on the Plans, or as directed by the Engineer/City Engineer, in accordance with the details shown on the Plans and with these specifications.

515.02 Materials.

(a) General. All materials used shall be new and shall comply with the requirements for the class and type of material specified.

All handrail materials shall be galvanized, powder coated steel, coated at the rate of 2.0 ounces of zinc per square foot of surface coated, with a 3 mil dry film thickness of powder coating top coat suitable for exterior application. The powder coating color shall be selected by the owner from a color chart provided by the contractor.

515.03 Construction Requirements.

(a) General. All welding shall be in accordance with current provisions of Specifications for Welded Highway and Railroad Bridges, American Welding Society. Welding shall be done by the shielded arc method and shall be done only by certified welders. Welding rods shall be low hydrogen suitable for use with the metal being welded. Welds joining sections of handrail shall be ground smooth prior to touch up painting. All damaged coatings shall be repaired in accordance with paint manufacturer recommendations and to the satisfaction of the City

Other galvanizing and painting methods may be used if approved by the Engineer/City Engineer.

Prior to installation, the Contractor shall contact the Engineer/City Engineer for his inspection of the Handrail.

515.04 Method of Measurement.

(a) Galvanized steel handrail will be measured by the linear foot, completed and accepted.

515.05 Basis of Payment. Work completed and accepted and measured as provided above will be paid for as follows:

Steel handrail acceptably completed and measured as provided above, will be paid for at the contract unit price per linear foot bid for "Steel Handrail," which price shall be full compensation for furnishing and installing all materials, including sleeves with plates, grout; and for all equipment, tools, labor, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Steel Handrail	LF

Section 516. Cold Milling Pavement

516.01 Description. This item shall consist of cold milling the asphalt or concrete pavement at the locations designated on the plans or by the Engineer/City Engineer and removing the resulting material from the street right-of-way. Unless otherwise provided, the reclaimed pavement shall become the property of the Contractor. The pavement remaining after milling shall provide a surface suitable for maintaining traffic.

516.02 Equipment.. The Contractor shall provide self-propelled equipment with sufficient power, traction, and stability to maintain an accurate depth of cut and slope. The equipment shall be capable of accurately and automatically establishing profile grade along each edge of the machine by referencing from the existing pavement by means of a ski or matching shoe, or from an independent grade control and shall have an automatic system for controlling cross slope at a given rate. The milling machine shall have an effective means for preventing dust resulting from the operation from escaping into the air.

Provision shall be made, either integrally with the milling machine, or by the use of additional equipment, to remove the material being cut from the surface of the roadway.

516.03 Construction Requirements. The existing pavement shall be cold milled to a minimum depth as shown on the plans.

516.04 Method of Measurement. Cold Milling Pavement will be measured by the square yard (SY) of pavement milled to the depth specified.

No separate payment will be made for repair or replacement of manholes, valve boxes, or other appurtenances which are located and identified in advance of the cold milling operation and which are damaged by the Contractor.

516.05 Basis of Payment. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per square yard for Cold Milling Pavement, which price shall be full compensation for all work as prescribed herein, and for all labor, equipment, tools, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Cold Milling Pavement	SY

Section 517. Tree Protection Fencing

517.01 Description. This item shall consist of providing, installing, and maintaining tree protection fencing per the detail in the Drawings at all the locations indicated on the Drawings and/or as directed by the Engineer.

517.02 Materials.

517.03 Construction Requirements. Tree protection fencing shall be installed at locations shown on the Plans, or as directed by the Engineer prior to any construction operations within the vicinity. Fencing shall be installed in accordance with the details on the plans, and shall be maintained so that it provides adequate protection throughout the Project. Fencing shall be removed after all work has been completed or when directed by the Engineer.

517.04 Method of Measurement. Tree Protection Fencing shall be measured by the linear foot (LF) of Tree Protection Fencing actually installed.

517.05 Basis of Payment. Work completed and accepted and measured as provided above will be paid for at the contract unit price bid per Linear Foot for Tree Protection Fencing, which price shall be full compensation for providing, installing, maintaining, and removing tree protection fencing, and for all labor, equipment, tools, and incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
Tree Protection Fencing	LF

DIVISION 600. MATERIALS

Section 601. Cast-in-Place Concrete

601.01 Description. This item shall consist of concrete in pavements, culverts, and miscellaneous structures, prepared and constructed in accordance with these specifications and conforming to the lines, grades, dimensions, and designs shown on the plans. Concrete shall consist of approved portland cement, fine aggregate, coarse aggregate, water, and any approved chemical admixtures mixed in the proportions specified for the various classes of concrete. All concrete shall be from a supplier approved by the Arkansas State Highway and Transportation Department.

601.02 Materials. The materials used in concrete shall conform to the requirements of AHTD Standard Specifications Section 802.02. Coarse aggregate gradation shall conform to the requirements for Class A, S, S(AE), and Seal Concrete in Section 802.02.

Admixtures shall be used to improve certain characteristics of the concrete when specified on the plans. They may also be used when requested by the Contractor and approved by the City. The Contractor's request shall be supported with the manufacturer's certified formulation of the proposed admixture and with sufficient evidence that the proposed admixture has given satisfactory results on other similar work. Permission to use the admixture may be withdrawn at any time by the City when satisfactory results are not being obtained.

Admixtures shall be approved by the City. Admixtures shall be compatible with each other, as advised by the manufacturer. The admixture dosage rate range as recommended by the manufacturer shall be used. Should the dosage rate for any admixture not yield desirable characteristics in the concrete, the dosage of admixture used shall be based on test results obtained by trial batches.

Admixtures shall be added to the mixing water by means of a mechanical dispenser that will accurately meter the additive throughout the mix water cycle. The dispenser shall be constructed and connected so that the Engineer/City Engineer can readily determine the amount of admixture entering the mixing water.

Fly ash may be used as a partial cement replacement not exceeding 20% by weight of the cement when approved by the City. When fly ash is used, the total weight of both cement and fly ash will be used in design calculations. Fly ash used in concrete shall meet the requirements of ASTM C 618, Class C or F. Mixing of Class C and Class F fly ashes will not be permitted. Use of fly ash shall be discontinued immediately, as directed by the Engineer/City Engineer, when such use is determined to be causing the production of concrete that does not meet Specifications.

601.03 Classes of Concrete. Two classes of concrete are provided for in these specifications. The appropriate class of concrete shall be used as specified below or where designated by the Engineer/City Engineer.

The following requirements shall govern unless otherwise shown on the plans:

Class A concrete shall be used in curb and gutter, sidewalks, drop inlets, junction boxes, and miscellaneous concrete items.

Class B concrete shall be used in box culverts, bridges and concrete pavement.

These classes of concrete shall not be used if concrete is to be placed underwater. Concrete to be placed under water shall meet AHTD Specifications for Seal Concrete.

601.04 Classification and Proportioning. The concrete mixture shall be proportioned to insure a workable and durable concrete, as specified in the following table:

Characteristic	Class A	Class B
Minimum Compressive Strength (psi at 28 days)	3500	4000
Minimum Cement Content (bags per cu. yd.)	5.5	6.0
Maximum Net Water Content Per Bag (94 lb.) of Cement (Gallons)	6.5	5.5
Slump Range (Inches)	1-4*	1-4*
Air Content Range (%)	4-7	4-7
Maximum Fly Ash Content	20%	20%

*Maximum slump shall be 2" when slip form paving methods are used.

For all classes of concrete, the concrete materials shall be using the Absolute Volumes method in accordance with the requirements for the class specified.

The Contractor shall submit a mix design meeting the requirements of these Specifications. Certification that all materials used in the concrete mix meet the requirements of these Specifications shall be included with the mix design. No concrete shall be placed until a mix design is approved by the City.

Compressive strengths for all classes of concrete will be determined from test cylinders made in accordance with AASHTO T 23. If the strength required for the class of concrete being produced is not obtained with the minimum cement content specified, additional cement shall be used at no extra cost to the City.

601.05 Sampling and Testing. During the progress of work, concrete test specimens will be made by the City or its authorized representative in accordance with American Concrete Institute testing procedures. Sampling frequency will be as specified in Section 107.

Slump will be determined using AASHTO T 119. Air content will be determined using AASHTO T 152. Compressive strength specimens will be made in accordance with AASHTO T 23 and tested in accordance with AASHTO T 22.

Specimens for determining when forms may be removed, when a structure may be put in service, or when concrete piling may be driven will be cured, as nearly as practicable, in the same manner as the concrete in the structure and in accordance with AASHTO T 23.

601.06 Measurement of Materials. Materials will be measured by weighing, except as otherwise specified or where other methods are specifically authorized by the Engineer/City Engineer. Aggregates shall be measured separately and accurately by weight. Measuring devices shall be operated in a manner that will consistently weigh the cement within $\pm 1\%$ and the individual aggregates within $\pm 2\%$ of the required weight. Measuring devices shall be so designed and plainly marked that the weights can be accurately and conveniently verified for the quantities of each component actually being used.

Cement in standard packages (sack) need not be weighed, but bulk cement shall be weighed.

The mixing water shall be measured by weight or by volume. The water measuring device shall be accurate to within 1%.

When the aggregates contain more water than the quantity necessary to produce a saturated surface-dry condition, representative samples shall be taken and the moisture content determined for each kind of aggregate.

601.07 Mixing Concrete. Concrete shall be thoroughly mixed in a mixer of an approved size and type that will insure a uniform distribution of the materials throughout the mass.

The concrete shall be mixed only in the quantity required for immediate use. Concrete that has developed an initial set shall not be used. Re-tempering concrete will not be permitted.

Mixers and agitators shall not be charged in excess of the manufacturer's rated capacity. Concrete shall be delivered and discharged from the truck mixer or agitator into the forms within 1½ hours after the introduction of the mixing water to the cement. In hot weather, or under other conditions contributing to quick setting of the concrete, the maximum allowable time may be reduced by the Engineer/City Engineer. Each mixture shall be accompanied by a truck ticket issued at the batch plant. This ticket shall include the following information:

- Unique ticket number.
- Identification of the truck.
- Date and time of batching.
- Total weights and/or volumes of each component.
- Total volume of mix.
- Total quantity of water added after batching.
- Time of discharge.

Plants and transit mix trucks shall be equipped with adequate water storage and a device for accurately measuring and controlling the amount of water used in each batch.

Truck mixers shall be capable of combining the ingredients of the concrete into a thoroughly mixed and uniform mass, and of discharging the concrete within the specified range of

consistency. The concrete shall be mixed not less than 70 nor more than 100 revolutions of the drum or blades at the rate of rotation specified by the manufacturer as the mixing speed. The pick-up and throw-over blades in the drum of all mixers shall be maintained in satisfactory condition to assure thoroughly mixed concrete.

If additional mixing water is required to maintain the specified slump, approximately 20 revolutions of the mixer drum at mixing speed shall be required before discharge of any concrete. No additional water shall be added without approval of the Engineer/City Engineer.

601.08 Handling and Placing Concrete.

(a) General. The Contractor shall provide sufficient supervision, manpower, equipment, tools, and materials and shall assure proper production, delivery, placement, and finishing of the concrete for each placement in accordance with the specifications.

The time interval between batches of concrete in a continuous placement shall not exceed 20 minutes. The minimum placement rate shall be 20 cubic yards per hour in bridges, box culverts, and retaining walls.

In preparation for the placing of concrete, construction debris and extraneous matter shall be removed from the interior of forms. Struts, stays, and braces, serving temporarily to hold the forms in correct shape and alignment pending the placing of concrete, shall be removed when the concrete placement has reached an elevation rendering their service unnecessary.

(b) Conveying. Concrete shall be placed to avoid segregation of the materials and the displacement of the reinforcement. The use of long troughs, chutes, and pipes for conveying the concrete to the forms will be permitted only when authorized by the Engineer/City Engineer. In case an inferior quality of concrete is produced by the use of such conveyors, the Contractor shall cease the use of that conveyor until such corrections in procedure are made to insure work of the quality specified.

Open troughs and chutes shall be of metal or metal lined. Where steep slopes are required, the chutes shall be equipped with baffles or be in short lengths that reverse the direction of movement. Aluminum chutes, troughs, and pipes shall not be used for depositing concrete.

Chutes, troughs, and pipes shall be kept clean and free from coatings of hardened concrete by thoroughly flushing with water after each run. Water used for flushing shall be discharged clear of the structure.

When placing operations involve dropping the concrete more than 5', it shall be deposited through approved pipes. Walls of 10" thickness or less may be placed without the use of pipes, provided the concrete can be placed without segregation.

(c) Placing. Concrete shall be placed in horizontal layers not more than 18" thick except as hereinafter provided. When less than a complete layer is placed, it shall be terminated in a vertical bulkhead. Each layer shall be placed and consolidated before the preceding batch has taken initial set to prevent injury to the green concrete and avoid surfaces of separation

between the batches. Each layer shall be consolidated so as to avoid the formation of a construction joint with a preceding layer that has not taken initial set.

Concrete in footings shall be placed in the dry unless natural conditions prohibit. In that case, concrete shall be placed in accordance with Subsection 601.10. In order to separate water from the concrete, it will be permissible to utilize polyethylene sheeting or tarpaulins to maintain a physical barrier between the water and the concrete.

When the placing of concrete is temporarily discontinued, the concrete, after becoming firm enough to retain its form, shall be cleaned of laitance and other objectionable material to a sufficient depth to expose sound concrete. To avoid visible joints as far as possible upon exposed faces, the top surface of the concrete adjacent to the forms shall be smoothed with a trowel. Where a "feather edge" might be produced at a construction joint, an inset form shall be used to produce an edge thickness of not less than 6 inches.

Immediately following the discontinuance of placing concrete, accumulations of mortar splashed upon the reinforcing steel and the surfaces of forms should be removed. Dried mortar chips and dust shall not be puddled into the concrete. If the accumulations are not removed prior to the concrete becoming set, care shall be exercised not to damage or break the concrete-steel bond at or near the surface of the concrete while cleaning reinforcing steel.

After initial set of the concrete, the forms shall not be jarred and no strain shall be placed on the ends of projecting reinforcing bars.

Concrete in walls and top slabs of box culverts shall not be placed less than 24 hours after the concrete in previous placements has set. Provision shall be made for bonding the walls to the bottom slab or footing and the top slab to the walls by means of roughened longitudinal keys. Before concrete is placed in the walls or top slabs, the bottom slab, footing, or walls shall be thoroughly cleaned of extraneous material. No horizontal construction joints will be allowed in any wall of a box culvert unless provided on the plans or approved by the Engineer/City Engineer.

(d) Consolidating. All concrete, during and immediately after depositing, shall be thoroughly consolidated. This shall be accomplished by mechanical vibration subject to the following provisions:

The vibration shall be internal unless special authorization of other methods is given by the Engineer/City Engineer.

Vibrators shall be of a type and design approved by the Engineer/City Engineer. They shall be capable of transmitting vibration to the concrete at rated frequencies of not less than 4500 impulses per minute.

The intensity of vibration shall be such as to visibly affect a mass of concrete over a radius of at least 18 inches.

The Contractor shall provide a sufficient number of vibrators to properly compact each batch immediately after it is placed in the forms and shall have in reserve at all times sufficient

vibratory equipment to guard against shut down of the work because of the failure of the equipment in operation.

Vibrators shall be manipulated to thoroughly work the concrete around the reinforcement and embedded fixtures and into the corners and angles of the forms.

Vibration shall be applied at the point of deposit and in the area of freshly deposited concrete. The vibrators shall be inserted and withdrawn out of the concrete slowly. The vibration shall be of sufficient duration and intensity to thoroughly consolidate the concrete, but shall not be continued so as to cause segregation. Vibration shall not be continued at any one point to the extent that localized areas of grout are formed. Application of vibrators shall be at points uniformly spaced and not farther apart than twice the radius over which the vibration is visibly effective.

Vibration shall not be applied directly or through the reinforcement to sections or layers of concrete that have hardened to the degree that the concrete ceases to be plastic under vibration. It shall not be used to make concrete flow in the forms over distances so great as to cause segregation, and vibrators shall not be used to transport concrete in the forms.

Vibration shall be supplemented by such spading as is necessary to insure smooth surfaces and dense concrete along form surfaces and in corners and locations impossible to reach with the vibrators.

These provisions shall apply to precast products except that, if approved by the Engineer/City Engineer, the manufacturer's methods of vibration may be used.

601.09 Pumping. Concrete may be placed by pumping. The equipment for pumping shall be arranged and operated so that no vibrations result that might damage freshly placed concrete.

The Contractor will be permitted to furnish coarse aggregate for concrete that is to be pumped in a size smaller than that specified provided that a suitable mix can be produced that will conform to the requirements for the class specified.

Where concrete is conveyed and placed by mechanically applied pressure, the equipment shall be adequate in capacity for the work. The operation of the pump shall be such that a continuous stream of concrete without air pockets is produced. When pumping is completed, the concrete remaining in the pipe, if it is to be used, shall be ejected in such a manner that there will be no contamination of the concrete or separation of the ingredients.

Concrete for slump and air content requirements shall be obtained at the discharge end of the pipe.

The use of aluminum pipe as a conveyance for the concrete will not be permitted.

601.10 Depositing Concrete Under Water. Concrete shall not be deposited in water except when shown on the plans or with the approval of the Engineer/City Engineer. No

concrete shall be placed underwater without an approved mix design which meets the AHTD requirements for Seal Concrete.

The supply of concrete shall be maintained at the rate necessary to raise the elevation over the entire seal by a minimum of 1' per hour or an approved retarder shall be used as necessary for lesser placement rates.

For parts of structures under water, seal concrete shall be placed continuously from start to finish. The surface of the concrete shall be kept as nearly horizontal as practicable. The Contractor shall provide equipment and personnel to sound the top of the seal in the presence of the Inspector in order to verify the location of the seal at all times. Previously placed seal concrete shall not have taken its initial set prior to the placement of adjacent concrete.

Concrete shall be carefully placed by means of a tremie or other approved method. Still water shall be maintained at the point of deposit. Concrete shall be deposited in such a manner that the planned horizontal concrete flow shall be no more than 15 feet.

A tremie shall consist of a tube having a diameter of not less than 10", constructed in sections having flanged couplings fitted with gaskets and an approved foot valve. The tremie shall be supported so as to permit rapid lowering when necessary to retard or stop the flow of concrete. The discharge end shall be closed at the start of the work so as to prevent water from entering the tube and shall be entirely sealed. The tremie tube shall be kept sufficiently full to prevent the loss of the concrete seal. When a batch is dumped into the tube, the flow of concrete shall be induced by slightly raising the discharged end, always keeping it in the deposited concrete. If at any time the seal is lost, the tremie shall be raised, the discharge end closed for a new start, and then lowered into position with the discharge end in the previously deposited concrete. Aluminum tremies will not be permitted.

Dewatering may proceed when the seal concrete has been allowed to cure for a minimum of 72 hours at a water temperature above 45 degrees F. All laitance or other unsatisfactory materials shall be removed from the exposed surfaces that are to support other structural loads.

601.11 Joints.

(a) Construction joints. Construction joints shall be made only where located on plans or shown in the placement schedule, unless otherwise approved by the Engineer/City Engineer.

The placing of concrete shall be carried continuously from joint to joint. The face edges of all joints that are exposed to view shall be carefully finished true to line and elevation.

The surface of the hardened concrete shall be roughened in a manner that will not leave loosened particles of aggregates or damaged concrete at the surface. It shall be thoroughly cleaned of foreign matter and laitance and saturated with water.

If not detailed on the plans, or in the case of emergency, construction joints shall be placed as directed by the Engineer/City Engineer. Shear keys or inclined reinforcement shall be used

where necessary to transmit shear or bond the two sections together. When shear keys or inclined reinforcement is not provided, the concrete shall be roughened as directed.

(b) Expansion and Fixed Joints. Joints shall be constructed according to the details shown on the plans.

1) **Open Joints.** Open joints shall be placed in the locations shown on the plans and shall be constructed by the insertion and subsequent removal of a wood strip, metal plate, or other approved material. The insertion and removal of the template shall be accomplished without chipping or breaking the corners of the concrete. Reinforcement shall not extend across an open joint unless specified on the plans.

2) **Filled Joints.** Poured expansion joints shall be constructed similar to open joints. When premolded types are specified, the filler shall be in the correct position when the concrete on the second side of the joint is placed. An approved joint sealer meeting the requirements of Subsection 601.11(d) is required in addition to the joint filler. The cavity for the sealer shall be formed by the insertion and subsequent removal of a wood strip, metal plate, or other approved material.

All faces of the joint to be sealed shall be thoroughly cleaned by sand blasting, water blasting, or other approved methods prior to placing the joint seal material.

Preformed expansion joint filler, non-extruding and resilient types, shall meet the requirements of AASHTO M 153. Type 2 (sponge rubber) shall be required to have a minimum expansion of 125% and be within ± 0.1 " of the specified plan thickness.

Other types of joint fillers may be allowed if approved by the Engineer/City Engineer.

(c) Contraction Joints. Contraction joints shall be constructed according to the dimensions specified in the plans and these specifications. The joints shall continue continuously across the full width of the concrete surface. Contraction joints shall be 1/8" to 3/8" wide and shall extend to a depth equal to 1/4 to 1/3 of the thickness of the concrete being placed. All contraction joints shall be sealed with an approved sealant meeting the requirements of Subsection 601.11(d) for types 3, 4 or 5.

(d) Joint Materials. Materials for filling and sealing joints shall be as shown on the plans and shall comply with the following requirements, as applicable:

Type 1. A joint filler that is a uniform mixture of sawdust and asphalt material in the proportion of one part asphalt to four parts sawdust, by volume. Asphalt material used shall be either MC-250 or SS-1. When this material is specified, the joint shall be filled to within 25 mm (1") of the pavement surface. The top 1" shall be sealed with a material complying with the requirements of AASHTO M 173.

Type 2. A joint filler that is preformed, non-extruding, and resilient type, complying with AASHTO M 153 Type I (sponge rubber).

The material for filling and sealing longitudinal, warping, contraction, and other specified joints shall be as shown on the plans and shall comply with the following requirements:

Backer rod filler for Types 3, 4, and 5 joint shall be of resilient material approximately 3 mm (1/8") larger in diameter than the width of the joint to be sealed. All components of the joint sealant system, including the backer rod, shall be compatible. No bond shall occur between the backup material and the sealant system for types 3 and 4 joint sealer.

Type 3. A joint sealer that is a one part silicone formulation that does not require a primer for bond to concrete. The compound shall be compatible with concrete. Acetic acid cure sealants are not acceptable. The material shall be one that has been approved by the Engineer.

Type 4. A joint sealer that is a one part silicone formulation that does require a primer for bond to concrete. The compound shall be compatible with concrete. Acetic acid cure sealants are not acceptable. The material shall be one that has been approved by the Engineer.

Type 5. A joint sealer that is a hot poured elastomeric joint sealant. The material shall comply with AASHTO M 282. The appendix of that specification shall be considered a part of this specification.

Type 6. A joint sealer that is a 2 component, cold poured, synthetic polymer, complying with ASTM D 1850 with the exception of penetration, which shall not exceed 100, and resilience, both original cured sample and oven aged, which shall be a minimum of 70%.

Type 7. A joint sealer that is a hot poured elastic type complying with AASHTO M 173.

601.12 Forms. Forms shall be mortar-tight and of sufficient rigidity to prevent distortion due to the pressure of the concrete and other loads incident to the construction operations. Forms shall be constructed and maintained so as to prevent warping and the opening of joints due to shrinkage of the lumber.

The forms shall be substantial and unyielding and shall be so designed that the finished concrete will conform to the proper dimensions and contours. The design of the forms shall take into account the effect of vibration of concrete as it is placed.

Forms for exposed surfaces shall be made of dressed lumber or plywood of uniform thickness, steel, or other approved materials that will provide a smooth surface, and shall be mortar-tight. Forms shall have a 3/4" chamfer at all sharp corners unless otherwise directed. In the case of projections, such as girders and copings, forms shall be given a bevel or draft to insure easy removal.

Metal snap-ties within the forms shall be so constructed as to permit their removal to a depth of at least 1" from the face of the concrete. Metal inserts or anchorages within the forms shall be so constructed as to permit their removal to a depth of at least 1" from the face of the concrete or be covered by being embedded a minimum of 1" in the concrete. In case ordinary wire ties are permitted, all wires, upon removal of the forms, shall be cut back at

least ¼" from the face of the concrete. All cavities shall be filled with cement mortar and the surface left sound, smooth, even, and uniform in color.

Forms shall be set and maintained true to the line designated until the concrete is sufficiently hardened. Before depositing new concrete on or against concrete that has hardened, the forms shall be re-tightened. Forms shall remain in place for the periods specified in Subsection 601.13. When forms appear to be unsatisfactory in any way, either before or during the placing of concrete, the Engineer/City Engineer shall order the work stopped until the defects have been corrected.

The shape, strength, rigidity, watertightness, and surface smoothness of re-used forms shall be maintained at all times. Any warped or bulged lumber must be re-sized before being re-used.

Forms shall be cleaned before being set to line and grade and shall be oiled prior to placing reinforcing steel in the vicinity of the forms. Materials or methods used in oiling the forms shall not result in the discoloration of the concrete.

601.13 Removal of Forms. In the determination of the time for the removal of forms and the discontinuance of heating, consideration shall be given to the location and character of the structure, the weather and other conditions influencing the setting of the concrete, and the materials used in the mix.

Removal of forms shall be in accordance with the following schedule:

Item	Minimum Time	Strength Requirement
Top Slabs of RC Box Culverts	7 days	80% Specified
Forms for Columns and Vertical Walls	24 hours	N /A
Side Forms for Parapets, Median Barriers, and Curb Faces	6 hours	N/A

Forms on surfaces that will require a Class 2 finish in accordance with Subsection 601.16 shall be removed at the earliest time permitted under these Specifications in order to begin finishing operations.

Forms and their supports shall not be removed without the approval of the Engineer/City Engineer. Supports shall be removed in such a manner as to permit the concrete to uniformly and gradually take the stresses due to its own weight. Methods of form removal likely to cause overstressing of or damage to the concrete shall not be used.

601.14 Weather and Temperature Limitations.

(a) **Hot Weather.** When the internal temperature of the plastic concrete reaches 85° F, the Contractor shall take the necessary precautions to insure that the temperature of succeeding batches does not exceed 90° F. Concrete batches with temperatures in excess of 90° F will be rejected. The method used to control the concrete temperature shall be approved in

writing by the Engineer. The temperature of the plastic concrete shall be determined immediately prior to its being deposited in the forms by inserting a thermometer to a depth consistent with the capabilities of the thermometer being used to obtain a true reading. Prior to beginning placement, the Contractor shall insure that sufficient materials, labor, and equipment are available during placement to implement the previously approved cooling process.

(b) Cold Weather. Concreting operations will not be permitted when a descending air temperature falls below 40° F nor resumed until an ascending air temperature reaches 35° F without specific authority from the Engineer/City Engineer. Under no circumstances will the placing of concrete on a frozen subgrade be permitted. No concrete shall be placed unless the temperature of the concrete is more than 50° F when placed. If heating of the ingredients is necessary to meet this criterion, it shall be accomplished by a method such as dry heat or steam and not by direct flame. Water shall not be heated to more than 180 degrees F, and shall be combined with the aggregate before the addition of cement. Frozen aggregates may not be used.

After concrete is placed, it shall be protected by insulated forms, blankets, enclosing and heating, and/or any other method approved by the Engineer/City Engineer that will maintain the temperature adjacent to the concrete at a minimum of 50° F for at least 5 days. Concrete that has been frozen or damaged due to weather conditions shall be removed and replaced by the Contractor at no cost to the City.

(c) Protection Against Rain. In order that concrete may be properly protected against the effects of rain before the concrete is sufficiently hardened, the Contractor shall have available at all times materials for the protection of the edges and surface of the unhardened concrete. Such protective materials shall consist of standard metal forms or wood planks having a nominal thickness of not less than 2" and a nominal width of not less than the thickness of the pavement at its edge for the protection of the pavement edges, and covering material such as burlap or cotton mats, or plastic sheeting material for the protection of the surface of the pavement. When rain appears imminent, all paving operations shall stop and all available personnel shall begin protection of the sides of the pavement and covering the surface of the unhardened concrete with the protective covering. Any surface finish damaged by rain shall be repaired or replaced to the satisfaction of the City at no cost to the City.

601.15 Curing Concrete.

(a) Materials. Materials used in curing concrete shall conform to one of the following types:

Burlap-polyethylene sheeting shall meet the requirements of AASHTO M 171.

Polyethylene sheeting shall meet the requirements of AASHTO M 171.

Copolymer/synthetic blanket shall meet the requirements of AASHTO M 171. Copolymer/synthetic blankets shall be a composite of a copolymer membrane material coated over a layer of absorbent nonwoven synthetic fabric weighing at least 6 ounces per square yard, uniform in appearance, and free from visible defects.

Other approved sheeting materials shall meet the requirements of AASHTO M 171.

Membrane curing compound shall meet the requirements of AASHTO M 148, Type 1-D or Type 2.

(b) Application. The exposed concrete, immediately after finishing, shall be covered with one of the curing materials listed above and shall be kept continuously and thoroughly wet for a period of not less than 5 days after the concrete is placed. Membrane curing does not require the application of additional moisture.

Membrane curing compound shall not be used on surfaces requiring a Class 2 finish.

When membrane curing is used, the exposed concrete shall be thoroughly sealed by applying the membrane curing solution immediately after the free water has left the surface. The concrete inside the forms shall be sealed immediately after the forms are removed and necessary finishing has been done. For uniform application in the field on vertical concrete surfaces, the specified rate of application may be achieved by two coats applied at an interval of approximately 1 hour.

The Contractor shall provide satisfactory equipment and means to properly control and assure the direct application of the curing solution on the concrete surface so as to result in a uniform coverage at the rate of 1 gallon for each 125 square feet of area.

If rain falls on the newly coated concrete before the film has dried sufficiently to resist damage, or if the film is damaged in any other manner, a new coat of the solution shall be applied to the affected portions equal in curing value to that specified above.

601.16 Finishing Concrete Surfaces. Surface finishes shall be classified as follows:

- | | |
|----------|---------------------------|
| Class 1. | Ordinary Surface finish. |
| Class 2. | Rubbed finish. |
| Class 3. | Sprayed finish. |
| Class 4. | Exposed Aggregate finish. |
| Class 5. | Tined Surface finish. |
| Class 6. | Broomed finish. |
| Class 7. | Grooved finish. |

All concrete shall be given a Class 1, Ordinary Surface Finish. In addition, if further finishing is required, such other types of finish will be as specified herein.

Payment for finishes will be considered a part of the applicable item of concrete used.

The following surfaces shall be given a Class 2 finish except when a Class 3 finish is specified in the plans:

Exposed surfaces of retaining walls and box culvert wingwalls, surfaces of concrete rails, rail posts, rail end posts, rail bases, and parapets, including the outside face.

At the option of the Contractor, a Class 3 finish may be used on all surfaces requiring a Class 2 finish provided the same class of finish is used on the entire job.

Sidewalks, curbs, exposed horizontal surfaces of inlets and junction boxes, and exposed horizontal faces of miscellaneous concrete items shall be given a Class 6 finish.

Concrete pavement surfaces shall be given a Class 5 finish.

The various classes of surface finish are defined as follows:

(1) Class 1, Ordinary Surface Finish. Immediately following the removal of forms, fins and irregular projections shall be removed from all surfaces except from those that are not to be exposed or are not to be waterproofed. On all surfaces, the cavities produced by form ties and all other holes, broken corners or edges, and other defects shall be thoroughly cleaned, and after having been thoroughly saturated with water, shall be carefully pointed and trued with a mortar of cement and fine aggregate mixed in the proportion of 1:2. Mortar used in pointing shall be not more than 1 hour old. The concrete shall then be rubbed or sprayed, if required, and cured as specified under Subsection 601.15. Construction and expansion joints in the completed work shall be left carefully tooled and free of mortar and concrete. The joint filler shall be left exposed for its full length with clean and true edges.

The resulting surfaces shall be true and uniform. Repaired surfaces, the appearance of which is not satisfactory to the City, shall be rubbed as specified under Class 2 finish.

Exposed surfaces not protected by forms shall be struck off with a straightedge and finished with a wood float to a true and even surface. The use of additional mortar to provide a plastered or grout finish will not be permitted.

The tops of caps in the area of the bridge seat shall be finished with a steel trowel or by grinding to a smooth finish and true slope at the proper elevation.

(2) Class 2, Rubbed Finish. After removal of forms, the rubbing of concrete shall be started as soon as its condition will permit. Immediately before starting this work the concrete shall be thoroughly saturated with water. Sufficient time shall have elapsed before the wetting down to allow the mortar used in the pointing of rod holes and defects to thoroughly set. Surfaces to be finished shall be rubbed with a medium coarse carborundum stone, using a small amount of mortar on its face. The mortar shall be composed of cement and fine sand mixed in proportions used in the concrete being finished. Rubbing shall be continued until form marks, projections, and irregularities have been removed, voids filled, and a uniform surface has been obtained. The paste produced by this rubbing shall be left in place at this time.

After concrete above the surface being treated has been cast, the final finish shall be obtained by rubbing with a fine carborundum stone and water. This rubbing shall be continued until the entire surface is of a smooth texture and uniform color.

After the final rubbing is complete and the surface has dried, it shall be rubbed with burlap to remove loose powder and shall be left free from all unsound patches, paste, powder, and objectionable marks.

(3) Class 3, Sprayed Finish. The material furnished for sprayed finish shall be a commercial paint type texturing product produced specifically for this purpose, and shall consist of a synthetic non-alkyd resin containing mica, perlite, non-biodegradable fibers, and durable tinting pigments. The material shall be approved by the City. Unless otherwise specified in the Contract, the color of the sprayed finish shall be concrete gray, equal or close to Shade 36622 of the Federal Color Standard 595 A.

Surfaces to be coated shall be free from efflorescence, flaking, coatings, dirt, oil, and other foreign substances. The sprayed finish shall not be applied over surfaces cured with membrane curing compound until 30 days has elapsed from application of the membrane. Prior to application of spray finish, the surfaces shall be free of moisture, as determined by sight and touch, and in a condition consistent with the manufacturer's published recommendations.

The spray finish shall be applied at a rate as recommended by the manufacturer and as approved by the Engineer/City Engineer. The spray finish shall be applied with heavy duty spray equipment capable of maintaining a constant pressure as necessary for proper application.

The completed finish shall be tightly bonded to the structure and shall present a uniform appearance and texture equal to or better than that required for rubbed finish. If necessary, an additional coat or coats shall be applied to produce the desired surface texture and uniformity. Upon failure to adhere positively to the structure without chipping or cracking, or to attain the desired surface appearance, the coating shall be removed from the structure and the surface given a rubbed finish, or another approved finish satisfactory to the City.

(4) Class 4, Exposed Aggregate Finish. This type of finish shall be produced by scrubbing the surface of green concrete with stiff wire or fiber brushes, using a solution of muriatic acid in the proportion of 1 part acid to 4 parts water, or by sand blasting, until the cement film or surface is completely removed and the aggregate particles are exposed. The amount of aggregate exposure will be specified on the plans or designated by the Engineer/City Engineer. Any surface treated with muriatic acid shall be thoroughly washed with water to which a small amount of ammonia has been added to remove all traces of the acid. The resulting surface shall be an even pebbled texture.

(5) Class 5, Tined Roadway Surface Finish. The concrete roadway surface shall be given a finish with a burlap drag, followed by tining.

The surface shall be finished by dragging a seamless strip of damp burlap over the full width of the roadway surface. The burlap drag shall consist of sufficient layers of burlap and have sufficient length in contact with the concrete to slightly groove the surface, and shall be moved forward with a minimum bow of the lead edge. The drag shall be kept damp, clean, and free of particles of hardened concrete.

The final finish shall be accomplished by using the drag finish as described above with the further application of a metal tine finishing device. The tine shall be approximately 0.032" by 0.125" of steel flat wire, 2" to 5" in length, and spaced on 1/2" to 3/4" centers. The grooves produced in the concrete shall be substantially from 1/8" to 3/16" in depth. The grooves shall be transverse to the centerline of the surface. The metal tine device shall be operated by approved mechanical or manual means. Other texturing equipment may be approved by the Engineer/City Engineer provided it produces a texture equivalent to that produced by the metal tine.

The tining shall be terminated with a transition in depth 18" from the gutter line. The outer 18" of the tined surface shall receive a Class 6, broomed finish.

(6) Class 6, Broomed Finish. After the concrete has been deposited in place, it shall be consolidated and the surface shall be struck off by means of a strike board, floated, and broomed. An edging tool shall be used on edges and expansion joints. The surface shall not vary more than 1/4" under a 10' straightedge. The surface shall have a granular or matte texture.

(7) Class 7, Grooved Finish. The roadway surface shall be grooved perpendicular to the centerline with grooves extending across the slab to within 18" of the gutter line. The grooves shall be cut using a mechanical sawing device that will leave grooves 1/8" to 3/16" in depth and spaced on 1/2" to 3/4" centers.

Section 602. Reinforcing Steel

602.01 Description. This item shall consist of reinforcing steel and miscellaneous accessories of the quality, type, size, and quantity designated, which shall be furnished and placed in concrete according to these specifications and in conformity with the details shown on the plans, or as directed.

602.02 Materials.

(a) Bar Reinforcement. Bar reinforcement for concrete in sizes up to and including #18 shall conform to the requirements of AASHTO M 31 or M 53.

(b) Wire and Wire Fabric. Wire, when used as reinforcement in concrete, shall conform to the requirements of AASHTO M 32 or M 225.

(c) Bar Mat Reinforcement. Bar mat reinforcement for concrete shall conform to the requirements of AASHTO M 54.

(d) Epoxy Coating. When specified, reinforcing steel bars shall be coated according to AASHTO M 284 using a coating material that meets the requirements of Annex A1 of AASHTO M 284.

The Contractor shall supply to the Engineer a written certification that properly identifies the number of each batch of coating material used in the order; the material, quantity represented, date of manufacture, and name and address of the manufacturer; and a statement that the supplied coating material meets the requirements of Annex A1 of AASHTO M 284.

Patching material, compatible with coating material, inert in concrete, and meeting the requirements of Annex A1 of AASHTO M 284, shall be provided by the epoxy coating manufacturer.

602.03 Bar Lists and Bending Diagrams. All reinforcing steel shall be fabricated to conform to the details shown on the plans. Pins used for bending reinforcing steel shall be equal to or larger than that shown on the plans. Bar lists and bending diagrams for reinforcing steel and bar supports will not be reviewed or approved by the Engineer. The Contractor shall be responsible for the accuracy of the fabricated reinforcing steel.

602.04 Fabrication. Bar reinforcement shall be bent to the shapes shown on the plans.

Bars shall be bent cold, unless otherwise permitted by the Engineer. No bars partially embedded in concrete shall be field bent, except as shown on the plans or specifically permitted by the Engineer.

Radii for bends shall be as shown on the plans. When not shown on the plans, radii bends on the inside of bars shall be as specified below.

Bar Number	Minimum Radii
Stirrups and Ties	4 bar diameters
3,4,5,6,7, or 8	6 bar diameters
9,10, or 11	8 bar diameters
14 or 18	10 bar diameters

The Engineer/City Engineer or his representative shall have free access to the shop for inspection, and every facility shall be extended to him for this purpose. On a random basis, samples of bars, other than the additional test bars, may be taken by the Engineer.

Epoxy coating applicators shall be CRSI certified. The Contractor shall inform the Engineer, in writing, at least 10 days prior to performing any of the cleaning or coating operations. The Contractor shall furnish to the Engineer the coating applicator's certification certifying that all materials used, the preparation of the bars, coating, and curing were done according to these specifications and that no bars contain more than six holidays per yard. The certification shall include or have attached specific results of tests of coating thickness and flexibility of coating.

602.05 Shipping, Handling, and Protection of Material. Bar reinforcement shall be shipped in standard bundles, tagged and marked according to the *Code of Standard Practice* of the Concrete Reinforcement Steel Institute.

Steel reinforcement shall be protected from damage. When placed in the work, it shall be free from dirt, detrimental rust or scale, paint, oil, or other foreign substance. Steel reinforcement shall be stored above the ground on skids, platforms, or other supports. Epoxy coated reinforcing steel that is not incorporated into the work within 90 calendar days after delivery to the project shall be protected from exposure to the sun.

Epoxy coating damaged during fabrication, shipping, or installation shall be repaired according to AASHTO M 284. Damaged areas less than 0.10 square inch need not be repaired but all areas larger than 0.10 square inch shall be repaired. The maximum amount of damage shall not exceed 2% of the surface area of each bar. All damaged areas shall be repaired according to the manufacturer's instructions. Repairs will be required on all sheared or cut ends of bars, end areas left bare during the coating process, and any areas where the entire coating is removed. All repairs shall be completed as soon as practicable and, in the case of bare end areas and sheared ends, before visible oxidation of the surface occurs. Epoxy coated bars shall not be flame cut.

The Contractor shall exercise caution when placing and vibrating concrete to prevent any damage to epoxy coated bars. In order to prevent the vibrator from damaging the coated bars, the head shall be covered with a sheet of rubber or a similar material as approved by the Engineer/City Engineer.

602.06 Placing and Fastening. Steel reinforcement shall be accurately placed in the positions shown on the plans and firmly held during the placing and setting of concrete. Bars shall be tied at all intersections except where spacing is less than 12" in each direction, in which case alternate intersections shall be tied. Bundled bars shall be tied together at not more than 6' centers.

Bar positions or clearances from the forms shall be maintained by means of stays, ties, hangers, or other approved devices. Reinforcing steel shall not be welded unless detailed on the plans or authorized in writing by the Engineer. Metal bar supports that are in contact with the exterior surface of the concrete shall have protection conforming with the CRSI Specifications, Class 1 for Plastic Protected Bar Supports or Class 2 for Stainless Steel Bar Supports, with the further provision that the plastic protection may be applied either by a dipping operation or by the addition of premolded plastic tips to the legs of the supports. Epoxy Coated Bar Supports that are coated according to the provisions of AASHTO M 284 using a coating material meeting the requirements of Annex A1 of AASHTO M 284 may be substituted for Plastic Protected Bar Supports or Stainless Steel Bar Supports. All high chairs and bar bolsters shall be metal. Any bar supports that deform under foot traffic or other construction activities shall not be used.

When concrete is to rest on an excavated surface, layers of bars shall be supported above the surface by metal chairs or by precast mortar or concrete blocks. The use of rocks, pieces of stone or brick, pipe, wooden blocks, or chunks of concrete will not be permitted as bar supports or spacers.

Reinforcement shall be placed by the Contractor and inspected and approved by the Engineer/City Engineer before the placing of concrete begins. Concrete placed in violation

of this provision may be rejected and removal required. Unless otherwise shown on the plans, the spacing of supports shall conform to the recommendations of CRSI.

Epoxy coated bars shall be placed on plastic coated or epoxy coated metal supports and shall be held in place by use of plastic coated tie wires or molded plastic clips especially fabricated for this purpose. Bar supports for epoxy coated bars shall be fully coated metal supports. Epoxy coated bar supports shall be coated according to the provisions of AASHTO M 284 using a coating material meeting the requirements of Annex A1. In placing epoxy coated bars, care shall be maintained to prevent coated bars from being damaged.

After the coated bars are secured to bar supports, a final visual inspection shall be made and all uncoated or damaged areas coated or repaired as required by the Engineer/City Engineer.

602.07 Splicing. Reinforcing steel shall be furnished in the full lengths specified on the plans. Bars spliced as a result of unforeseen construction conditions or sequences will require the written approval of the Engineer. Splices shall meet the requirements of the current edition of the *AASHTO Standard Specifications for Highway Bridges*.

Secondary reinforcing used for distribution of loads, such as longitudinal bars in box culverts and retaining walls may be lapped 32 bar diameters minimum if bars are #6 or smaller. Primary reinforcing for columns and retaining walls which require splicing as a result of the lowering of footings shall be spliced at the upper end of the original bars. Required lengths of splices for primary reinforcing will be determined by the Engineer.

In lapped splices, the bars shall be placed in contact and fastened together in such a manner as to maintain the minimum distance to the surface of the concrete as shown on the plans.

Sheets of wire fabric or bar mat reinforcement shall overlap each other sufficiently to maintain a uniform strength and shall be securely fastened at the ends and edges. The lap shall be not less than one space of wire fabric or bar.

APPENDIX A

Current Prevailing Davis-Bacon Wage Rate Determination

"General Decision Number: AR20220173 02/25/2022

Superseded General Decision Number: AR20210173

State: Arkansas

Construction Type: Highway

County: Washington County in Arkansas.

HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	Executive Order 14026 generally applies to the contract. The contractor must pay all covered workers at least \$15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2022.
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If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	Executive Order 13658 generally applies to the contract. The contractor must pay all covered workers at least \$11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.
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The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Modification Number Publication Date

0 01/07/2022
1 02/25/2022

* SUAR2014-045 07/21/2014

	Rates	Fringes
CARPENTER, Includes Form Work....	\$ 15.40	0.00
CEMENT MASON/CONCRETE FINISHER...	\$ 15.33	0.00
ELECTRICIAN, Includes Traffic Signalization.....	\$ 20.40	0.00
FENCE ERECTOR.....	\$ 11.27 **	0.00
HIGHWAY/PARKING LOT STRIPING: Operator (Striping Machine).....	\$ 13.25 **	0.00
HIGHWAY/PARKING LOT STRIPING: Painter.....	\$ 21.75	0.00
INSTALLER - GUARDRAIL.....	\$ 17.12	0.00
IRONWORKER, REINFORCING.....	\$ 14.22 **	0.00
IRONWORKER, STRUCTURAL.....	\$ 17.52	0.00
LABORER: Asphalt, Includes Raker, Shoveler, Spreader and Distributor.....	\$ 14.68 **	0.00
LABORER: Common or General.....	\$ 13.17 **	0.00
LABORER: Mason Tender - Cement/Concrete.....	\$ 14.77 **	0.00
LABORER: Pipelayer.....	\$ 14.33 **	0.00
OPERATOR: Asphalt Spreader.....	\$ 15.80	0.00
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 17.01	0.00
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 16.06	0.00
OPERATOR: Broom/Sweeper.....	\$ 12.00 **	0.00
OPERATOR: Bulldozer.....	\$ 17.08	0.00
OPERATOR: Crane.....	\$ 22.58	0.00
OPERATOR: Drill.....	\$ 14.85 **	0.00
OPERATOR: Grade Checker.....	\$ 16.36	0.00
OPERATOR: Grader/Blade.....	\$ 16.67	0.00
OPERATOR: Hydroseeder.....	\$ 10.79 **	0.00
OPERATOR: Loader.....	\$ 15.01	0.00

OPERATOR: Mechanic.....	\$ 20.28	0.00
OPERATOR: Milling Machine.....	\$ 16.77	0.00
OPERATOR: Oiler.....	\$ 19.29	0.00
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 19.95	0.00
OPERATOR: Post Driver (Guardrail/Fences).....	\$ 16.97	0.00
OPERATOR: Roller.....	\$ 15.46	0.00
OPERATOR: Scraper.....	\$ 16.50	0.00
OPERATOR: Screed.....	\$ 16.90	0.00
OPERATOR: Tractor.....	\$ 17.61	0.00
TRAFFIC CONTROL: Flagger.....	\$ 15.77	0.00
TRAFFIC CONTROL: Laborer-Cones/ Barricades/Barrels - Setter/Mover/Sweeper.....	\$ 12.44 **	0.00
TRUCK DRIVER: Dump Truck.....	\$ 18.56	0.00
TRUCK DRIVER: Flatbed Truck.....	\$ 21.03	0.00
TRUCK DRIVER: Lowboy Truck.....	\$ 17.96	0.00
TRUCK DRIVER: Servicer.....	\$ 16.36	0.00
TRUCK DRIVER: Water Truck.....	\$ 14.75 **	0.00
TRUCK DRIVER: Semi/Trailer Truck.....	\$ 12.50 **	0.00

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$15.00) or 13658 (\$11.25). Please see the Note at the top of the wage determination for more information.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is

like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion

date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.

Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

APPENDIX B

U.S. Department of Commerce Economic Development Administration Standard Terms and Conditions for Construction Projects

**U.S. DEPARTMENT OF COMMERCE
ECONOMIC DEVELOPMENT ADMINISTRATION
STANDARD TERMS AND CONDITIONS FOR CONSTRUCTION PROJECTS**

Title II of the Public Works and Economic Development Act of 1965

Public Works and Economic Development Facilities
and
Economic Adjustment Assistance Construction Components



March 22, 2021

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PART I: GENERAL PROVISIONS

A. Construction Award Purpose

This financial assistance award (the Award), executed by the Economic Development Administration (EDA) and the recipient (Recipient or non-Federal entity), is awarded for the purpose of carrying out the design, engineering, or construction of certain physical infrastructure as specifically set forth in the Award's scope of work.

B. Authorities

1. In General

Recipient must administer this Award in conformance with the terms of the Award, including any properly executed amendment thereto, the EDA-approved budget and scope of work, these EDA Standard Terms and Conditions for Construction Projects (EDA Construction STCs) and the Department of Commerce (DOC) Financial Assistance Standard Terms and Conditions (DOC Standard Terms and Conditions), as well as any specific award conditions; relevant policies issued by EDA; applicable Federal statutes, regulations, and Executive Orders; and the provisions of the Office of Management and Budget (OMB) *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* codified at 2 CFR part 200 (OMB Uniform Guidance).

2. PWEDA

The Public Works and Economic Development program is authorized under section 201 and the Economic Adjustment Assistance program is authorized under section 209 of PWEDA (42 U.S.C. §§ 3141 and 3149, respectively).

3. EDA Regulations

The regulations implementing PWEDA are contained in chapter III of title 13 of the Code of Federal Regulations (CFR), and apply in full to this Award. The regulations specific to EDA construction projects can be found at 13 CFR parts 305 and 314, and subpart A to part 307.

4. Conflicts Among Authorities

Any inconsistency or conflict among the authorities governing the Recipient's administration of this Award will be resolved in the following order of precedence: Federal laws and regulations (including the OMB Uniform Guidance), applicable notices published in the *Federal Register*, Executive Orders, OMB circulars, these EDA Construction STCs, specific award conditions, and any written policy guidance issued by EDA. However, a specific award condition may amend or take precedence over a provision of these EDA Construction STCs on a case-by-case basis, when warranted by the specific circumstances of the Award. In the event of a conflict between Parts I or II of these EDA Construction STCs and Part III, which incorporates the DOC Standard Terms and Conditions, Parts I and II will control.

C. Updates to Authorities

1. Updates to Regulations and Requirements

The DOC, EDA, or OMB may issue changes from time to time to the regulations and other policies and requirements that apply to this Award. Such changes may upon occasion increase

administrative or programmatic flexibility in administering this Award in a manner that is mutually beneficial to EDA and the Recipient. In addition, if required by law, these changes may impose new requirements. The implementation of any such regulatory, administrative, or programmatic change in administering this Award requires EDA's prior written approval.

2. Applicability to the Award

These EDA Construction STCs apply to the Award as of the Federal award date, as defined at 2 CFR § 200.1, or, if attached to the Award by amendment, as of the effective date of such amendment.

D. Variances

EDA's policy is to administer all awards uniformly; however, there may be special circumstances that warrant a variance. To accommodate these circumstances and to encourage innovative and creative ways to address economic development problems, EDA will consider requests for variances to the procedures set out in these EDA Construction STCs if they do not conflict with applicable Federal statutory and regulatory requirements, are consistent with the goals of EDA's programs, and make sound economic and financial sense. Any approved variance will be implemented through a specific award condition incorporated under the Award.

E. Recipient as Trustee

The Recipient holds grant funds and any property acquired or improved with EDA assistance in trust for the public purposes of an Award. The Recipient's obligation to the Federal Government continues for the estimated useful life of the Project, as determined by EDA, during which EDA retains an undivided equitable reversionary interest (the Federal Interest) in property acquired or improved, in whole or in part, with EDA investment assistance. *See* 13 CFR § 314.2 ("Federal Interest").

If EDA determines that the Recipient fails or has failed to meet this obligation, EDA may exercise any rights or remedies with respect to its Federal Interest in the Project. However, EDA's forbearance in exercising any right or remedy in connection with the Federal Interest does not constitute a waiver thereof.

F. Additional Funding

EDA has no obligation to provide any additional funding in connection with the Award. Any change to the Award to increase funding or to extend the period of performance is at the discretion of EDA, subject to the availability of funds, via an amendment executed by the Grants Officer.

G. Definitions

Capitalized terms and acronyms used but not otherwise defined in these EDA Construction STCs have the meaning ascribed to them at 13 CFR §§ 300.3, 302.20, 307.8, and 314.1, and subpart A to 2 CFR part 200.

H. Reaffirmation of Application and Award Acceptance

By accepting this Award, the Recipient's authorized representative hereby reaffirms and states that:

1. All data in the Application were true and correct when the Application was submitted and remain

- true and correct as of the date of this Award;
2. The Application was, as of the date of submission and the date of this Award, duly authorized as required by local law by the governing body of the Recipient; and
 3. The Recipient has read, understood, and will comply with all terms of this Award, including the assurances and certifications submitted as part of the Application (including assurances submitted through the System for Award Management (SAM.gov)).

Acceptance of the Award is established by any action on the part of the Recipient indicating an intent to accept the Award, including by signing the Financial Assistance Award (Form CD-450) (either via a “wet” signature or electronically) or by requesting any disbursement of Award funds. “Application” means all forms, documentation, and any information submitted to EDA as part and in furtherance of a request for an Award and includes submissions made in response to any request by EDA after submission of the initial Application.

PART II: SPECIAL REQUIREMENTS FOR EDA CONSTRUCTION PROJECTS

A. Financial Requirements

1. Financial Reports

- a. During the period of performance, the Recipient must submit financial reports as follows, unless otherwise specified in a specific award condition.
 - i. *Reports on Award reimbursements.* In accordance with 2 CFR § 200.328 (“Financial reporting”), the Recipient must submit a “Federal Financial Report” (Form SF-425 or any successor form) on a semi-annual basis for the periods ending March 31 and September 30, or any portion thereof, unless otherwise specified in a specific award condition. Reports are due no later than 30 calendar days following the end of each reporting period, and instructions for completing and submitting Form SF-425 will be discussed during the Project kick-off meeting. Recipients may contact their EDA Project Officer with questions on how to complete or submit the report, if necessary, but they must submit reports on time and are encouraged to pose such questions sufficiently before the deadline to allow for complete, accurate, and timely submission of required reports.
 - ii. *Reports on Award advances.* While EDA generally does not advance funds, when the agency does so, the Recipient must submit Form SF-425 within 15 business days following the end of each quarter for an award where the Federal share of costs is under \$1 million. In accordance with 2 CFR § 200.328, because of increased risk and the need to ensure the appropriate use of Federal funds, where EDA advances funds under an award where the Federal share of costs is \$1 million or more the Recipient must submit Form SF-425 within 15 business days following the end of each month, or as otherwise specified in a specific award condition.
- b. The Recipient must submit a final Form SF-425 no later than 120 calendar days after the end date of the period of performance. *See also* Part II, section B.16.c “Final reporting deadline” of these EDA Construction STCs.
- c. Noncompliance with the financial reporting requirements may result in appropriate enforcement action under this Award, including but not limited to suspension of Award payments, disallowance of costs or termination of an award. A Recipient’s non-compliance with financial reporting requirements will also be taken into account in EDA’s consideration of any future applications for EDA financial assistance (*see* 2 CFR § 200.206(b)(2)(iii) and section A.06 (Unsatisfactory Performance or Non-Compliance with Award Provisions) of the DOC Standard Terms and Conditions, which are incorporated in Part III of these EDA Construction STCs).
- d. Financial reports should be submitted to the Project Officer in electronic format, unless otherwise specified in the specific award conditions.

2. Disbursements

- a. *Method of payment.* The Grants Officer determines the appropriate method of payment.

Unless otherwise specified in a specific award condition, the method of payment under this Award will be reimbursement. Payments will be made through electronic funds transfers directly to the Recipient's bank account and in accordance with the requirements of the Debt Collection Improvement Act of 1996 (31 U.S.C. § 3720B *et seq.*). The Award number must be included on all payment-related correspondence, information, and forms.

- b. *Disbursement requests.* The Recipient must use Form SF-271, "Outlay Report and Request for Reimbursement for Construction Programs," to request reimbursement under the Award. Substantiating invoices and/or vouchers also must be provided. Each request for the disbursement of funds must be made to the Project Officer. Form SF-271 can be downloaded from the Grants.gov post-award reporting forms website at <https://www.grants.gov/web/grants/forms/post-award-reporting-forms.html>.
 - i. *Initial disbursement request.* For the initial disbursement only, the Recipient must complete and submit Form SF-3881, "ACH Vendor/Miscellaneous Payment Enrollment Form," along with Form SF-271, to the Project Officer.
 - ii. *Interim disbursement requests.* All requests for interim disbursement must be submitted using Form SF-271 and include substantiating invoices and/or vouchers.
 - iii. *Final disbursement request.* See Part II, section B.16 "Project Closeout Procedures" of these EDA Construction STCs.

3. Federal and Non-Federal Cost Sharing

- a. For purposes of this Award, the Federal share is the amount of EDA funds invested under the Award, while the non-Federal share, or "Matching Share," means non-EDA funds and any in-kind contributions that are approved by EDA and provided by the Recipient or by third parties as a condition of the Award.
- b. By accepting the Award, the Recipient certifies that the Matching Share of Project costs is committed to the Project, available as needed, and not conditioned or encumbered in any way that precludes its use consistent with the requirements of the Award. See 13 CFR § 301.5 ("Matching share requirements").
- c. In the case of an overrun at the construction bid opening, the Recipient may augment the Matching Share by an amount sufficient to cover the excess cost. The Recipient must furnish a letter to EDA identifying the source of the additional funds and confirming that all Matching Share meets the requirements of 13 CFR § 301.5. See 13 CFR § 305.10 ("Bid underrun and overrun").

4. Budget Revisions and Transfer of Funds

- a. *Approved budget plan; notification of deviations.* The EDA-approved budget set forth in the specific award conditions or otherwise incorporated under the Award is the budget plan for the Project. The Recipient must notify EDA of deviations from the budget in accordance with 2 CFR § 200.308 ("Revision of budget and program plans"). If prior written approval is not required under 2 CFR § 200.308, the Recipient may request the Grants Officer's review of

and guidance on proposed revisions to the budget.

- b. *Requesting budget revisions.* Requests for budget revisions to the EDA-approved budget must be submitted through the Project Officer to the Grants Officer, who will make the final determination on such requests and notify the Recipient in writing.
- c. *Budget revisions that require an amendment.* In accordance with 2 CFR § 200.308(f) and (h), an amendment executed by the Grants Officer are required for budget revisions when:
 - i. The revision results from changes in the scope or the objective of the Project;
 - ii. The need arises for additional EDA funds to complete the Project;
 - iii. The Federal share exceeds the simplified acquisition threshold (currently set at \$250,000) and the cumulative amount of transfers among direct cost categories exceeds or is expected to exceed 10 percent of the total budget as last approved by EDA; and
 - iv. A revision is desired that involves specific costs for which prior written approval requirements may be imposed consistent with applicable cost principles listed in subpart E of 2 CFR part 200 (“Cost Principles”).
- d. *Prior approval for transfers between construction and non-construction items.* When an Award supports both construction and non-construction work, the Recipient must obtain prior written approval from the Grants Officer before making any fund or budget transfer from non-construction to construction or vice versa. See 2 CFR § 200.308(h)(5).
- e. *Project underrun amounts.* Underrun amounts will be transferred to the contingencies line item. Contingency funds are to be used to address situations resulting from unknown conditions and changes required for the fulfillment of authorized activities under this Award. EDA may approve the use of underrun funds to increase the Federal share of the Project or further improve the Project, as long as EDA determines that the use is consistent with the original purpose of the Award. See 13 CFR § 308.1 (“Use of funds in projects constructed under projected cost”).
- f. *Additional EDA funding in case of Project overrun amounts.* In accepting this Award, the Recipient agrees to fund any overrun amounts from non-Federal sources, or if the Recipient is unable or unwilling to do so, to request termination of the Award. Additional EDA assistance for the Project is at the discretion of EDA and may not be approved.

5. Indirect Costs and Facilities and Administrative Costs

- a. Indirect costs, or facilities and administrative (F&A) costs for educational institutions, are generally not applicable under this Award. See the definition of “indirect (facilities and administrative) (F&A)) costs” at 2 CFR § 200.1.
- b. When indirect costs are applicable, they will not be allowable charges against the Award unless approved under the Award and specifically included as a line item in the Award’s approved budget. See section B.06 of the DOC Standard Terms and Conditions (“Indirect or Facilities and Administrative Costs”), which are incorporated into these EDA Construction STCs in Part III.

6. Incurring Costs Prior to Award

Project activities, including the procurement of good and services, which may include construction activities, carried out prior to EDA's approval of this Award are done at the sole risk of the Recipient and at the risk of not being reimbursed by EDA. Such activity may result in the rejection of the Application, the disallowance of costs, or other adverse consequences as a result of noncompliance with EDA or Federal requirements, including but not limited to procurement requirements, civil rights requirements, Federal labor standards, or environmental and historic preservation requirements. The Grants Officer must authorize pre-award costs and activities in writing, and such costs must also be allowable under relevant Federal cost principles and the specific Award terms and be included in the EDA-approved budget. Pre-award costs not included in the authorized budget are not allowable and will not be reimbursed. *See* 13 CFR § 302.8 ("Pre-approval Investment Assistance costs").

7. Program Income

For Projects that generate revenue (*e.g.*, rent for buildings or real property constructed or improved with EDA funds, rent or fees charged for use of equipment purchased with EDA funds, fees charged by the Recipient or a third party in connection with Project operations, etc.), the Recipient agrees, for the estimated useful life of the EDA-assisted facility or equipment, to use income generated from the facility or equipment, in the following order of priority unless modified by a specific award condition:

- a. Administration, operation, maintenance, and repair of Project facilities in a manner consistent with good property management practice and in accordance with established building codes. This includes, where applicable, repayment of indebtedness resulting from any EDA-approved encumbrance (*e.g.*, approved mortgage) on the EDA-assisted facility. In the case of equipment, administration, operation, maintenance, and repair of the equipment, or the facility in which the equipment is located as required to maintain and operate the equipment, for the equipment's estimated useful life.
 - b. Economic development activities that are authorized for support by EDA, provided such activities meet the economic development purposes of PWEDA and are located within the designated Project region.
 - c. Any program income in excess of paragraphs a. and b. of this section that is generated during the period of performance must be deducted from total allowable Project costs in accordance with 2 CFR § 200.307(e)(1). *See also* 2 CFR § 200.307 ("Program income").
8. **Information on Recipient integrity.** The Recipient agrees to provide EDA with information and documentation necessary for EDA to conduct due diligence to ensure the financial integrity and responsibility of the Recipient and key individuals associated with the Recipient in the management or administration of this Award.

B. Programmatic Requirements

1. Project Progress and Performance Reporting

- a. Project progress reports must be submitted in accordance with the procedures set out in 2 CFR § 200.329 ("Monitoring and reporting program performance"), as applicable, and as

indicated below. Failure to submit required reports in a complete, accurate, and timely manner may result in the withholding of payments under this Award; deferral of processing of new awards, amendments, or supplemental funding; or other appropriate enforcement action. See 13 CFR § 302.18 ("Post-approval requirements") and section A.06 (Unsatisfactory Performance or Non-Compliance with Award Provisions) of the DOC Standard Terms and Conditions, which are incorporated in Part III of these EDA Construction STCs.

- b. Unless otherwise specified in a specific award condition, the Project progress report must contain the following information for each Project program, function, or activity:
 - i. A comparison of planned and actual accomplishments according to the timetable or list of Project objectives in this Award;
 - ii. An explanation of any delays or failures to meet the Project timetable or Project goals; and
 - iii. Any other pertinent information including, when appropriate, analysis and explanation of cost overruns or high unit costs.

Project progress reports must be submitted for each calendar quarter to the Project Officer. Each Project progress report must be submitted in accordance with the deadlines outlined in the specific award conditions, or, when not otherwise specified, Project progress reports will be due on a quarterly basis not later than January 31, April 30, July 31, and October 31 for the immediately previous quarter. The final Project progress report must be submitted to EDA no later than 120 calendar days after the end date of the period of performance. See Part II, section B.16.c "Project Closeout Procedures" of these EDA Construction STCs for more information on Project Closeout.

- c. The Recipient must submit quarterly Project progress reports to the EDA Project Officer electronically unless otherwise specified in the specific award conditions.

2. Time Extensions

- a. Unless otherwise authorized by a specific award condition, any extension of the period of performance can only be authorized by the Grants Officer in writing.
- b. The Recipient is responsible for implementing the Project in accordance with the development time schedule contained in this Award. As soon as the Recipient becomes aware that it may not be possible to meet the development time schedule, the Recipient must notify the Grants Officer. The Recipient's notice to EDA must contain the following:
 - i. An explanation of the Recipient's inability to complete work by the specified date (*e.g.*, a lengthy period of unusual weather delayed the contractor's ability to excavate the site, major re-engineering required in order to obtain State or Federal approvals, unplanned environmental mitigation required);
 - ii. A statement describing any other contemplated changes to the Project;
 - iii. Documentation that demonstrates there is still a bona fide need for the Project; and
 - iv. A statement that no further delay is anticipated and that the Project can be completed within the revised time schedule.

EDA reserves the right to withhold disbursements while the Recipient is not in compliance with the time schedule and to suspend or terminate this Award if the Recipient fails to proceed with reasonable diligence to accomplish the Project as intended.

3. Interim Reporting of Significant Project Developments

The Recipient must promptly report any event that may have a significant impact upon the Project, including delays or adverse conditions that may materially affect the ability of the Recipient to attain Project objectives within established time periods or meet the development time schedule without waiting for the next quarterly progress report. The Recipient should report such events to the Project Officer in the most time-expedient way possible and then, if the initial report was not in writing, report the event to the Project Officer in writing. Such a report must include a statement of the event or issue, a statement of the course of action taken or contemplated to resolve the matter, and any Federal assistance needed to resolve the situation. If budget changes are required, the Recipient must submit a written budget revision request. *See* 2 CFR § 200.329(e) (“Monitoring and reporting program performance”) and Part II, section A.4. “Budget Revisions and Transfers of Funds” of these EDA Construction STCs.

4. Programmatic Changes

- a. In accordance with 2 CFR § 200.308 (“Revision of budget and program plans”), the Recipient must submit a written request for any proposed programmatic changes, including all changes to the scope of the Award, to the Project Officer. *See* Part II, section A.4 “Budget Revisions and Transfers of Funds” of these EDA Construction STCs for budget revisions that may require the prior written approval of EDA. In these cases, the Project Officer will forward the request to the Grants Officer, who makes the final decision on approving the request. In addition, the Recipient must request prior written approvals for certain items of cost in accordance with 2 CFR § 200.407 (“Prior written approval (prior approval)”).
- b. Any changes made to the Project without EDA’s approval are made at the Recipient’s own risk, and may result in disallowance of costs, suspension, termination, or other EDA action with respect to the Award. *See* 13 CFR § 302.7(b) (“Amendments and changes”).
- c. *Contract Change Orders.* After construction contracts for the Project have been executed, it may become necessary to alter them through a formal contract change order that must be issued by the Recipient and accepted by the contractor. All contract change orders must be reviewed by EDA, even if EDA is not participating in the cost of the change order or the contract price is to be reduced. Work on the Project may continue pending EDA review and approval of the change order, but all such work will be at the Recipient’s risk as to whether the cost of the work is eligible for EDA reimbursement. *See* 13 CFR § 305.13 (“Contract change orders”).

5. Government Performance and Results Act

In addition to quarterly Project progress reports, EDA may require the Recipient to report on Project performance beyond the end date of the period of performance for Government Performance and Results Act (GPRA) or other purposes. In no case will the Recipient be required to submit any GPRA report more than ten years after the date of Award closeout. Data used by the Recipient in preparing reports must be accurate and, whenever possible, from independent sources. *See* 13 CFR § 302.16 (“Accountability”).

6. Beneficiary Compliance

In the event a beneficiary of the Project fails to comply in any manner with certifications, assurances, or agreements that such beneficiary has entered into in accordance with EDA's requirements, the Recipient will reimburse EDA the Award amount or an amount to be determined by the EDA pursuant to 13 CFR §§ 314.4 ("Unauthorized use of property") and 314.5 ("Federal share"). When EDA determines that the failure of a beneficiary to comply with EDA requirements affects a portion of the property benefited by the Award, the Recipient will reimburse EDA proportionately.

7. Hold Harmless

To the maximum extent permitted by law, the Recipient agrees to indemnify and hold the United States harmless from and against all liabilities that the United States may incur due to the actions or omissions of the Recipient, including to the extent that such liabilities are incurred because of toxic or hazardous contamination or groundwater, surface water, soil, or other conditions caused by actions of the Recipient or any of its predecessors (other than the United States or its agents) on the property. *See* 13 CFR § 302.19 ("Indemnification").

8. Prohibition on Use of Third Parties to Secure Award

Unless otherwise specified in the application materials supporting this Award, the Recipient warrants that no person or selling agency has been employed or retained to solicit or secure this Award upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees, or bona fide established commercial or selling agencies maintained by the Recipient for the purpose of securing business. For breach or violation of this warranty, EDA has the right to terminate this Award for material noncompliance, or at its discretion, to deduct from the Award amount, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.

9. Payment of Attorneys' or Consultants' Fees

No Award funds may be used, directly or indirectly, to reimburse attorneys' or consultants' fees incurred in connection with obtaining an award under PWEDA, such as, for example, preparing an application for EDA assistance. However, ordinary and reasonable attorneys' and consultants' fees incurred for meeting Award requirements (*e.g.*, conducting a title search or preparing plans and specifications) may be eligible Project costs and may be paid out of Award funds, provided such costs are otherwise eligible. *See* 13 CFR § 302.10 ("Attorneys' and consultants' fees, employment of expeditors, and post-employment restriction").

10. Recipient's Duty to Refrain from Employing Certain Government Employees

- a. Pursuant to section 606(2) of PWEDA (42 U.S.C. § 3216), for the two-year period beginning on the date EDA executes this Award, any Recipient that is a nonprofit organization, District Organization, or for-profit entity agrees that it will not employ, offer any office or employment to, or retain for professional services any person who:
 - i. On the date EDA executes this Award or within the one-year period ending on that date, served as an officer, attorney, agent, or employee of the Department, and
 - ii. Occupied a position or engaged in activities that the Assistant Secretary determines

involved discretion with respect to the funding of an Award.

- b. In addition to the types of Recipients noted in paragraph a. above, EDA may require another Eligible Applicant to execute an agreement to abide by the above-described post-employment restriction on a case-by-case basis—for example, when an institution of higher education implements activities under or related to the Award through a separate nonprofit organization or association.
- c. The two-year period and associated restrictions referenced above also will apply beginning on the date that EDA executes any cost amendment to this Award that provides additional funds to the Recipient.

See also 13 CFR § 302.10 (“Attorneys’ and consultants’ fees, employment of expeditors, and post-employment restriction”).

11. Commencement of Construction

- a. *Delayed construction starts.* If significant construction (as determined by EDA) is not commenced within two years of the Award date or by the date estimated for start of construction in this Award (or the expiration of any extension granted in writing by EDA), whichever is later, this Award will be automatically suspended by a written notification issued by the Grants Officer and may be terminated if EDA determines, after consultation with the Recipient, that construction to completion cannot reasonably be expected to proceed promptly and expeditiously.
- b. *Early construction starts.* The Recipient must make a written request to EDA for early construction start permission (that is, after the date of Award, but before EDA gives formal approval for construction to commence). Costs incurred under a contract are only allowable after EDA determines that the award of the contract is in compliance with all terms and conditions of the Award. If construction commences prior to EDA’s determination, the Recipient proceeds at its own risk until EDA’s review and concurrence. *See* 13 CFR § 305.11 (“Contract awards; early construction start”).

12. Project Sign and Use of EDA Logo

- a. *Project sign.* The Recipient is responsible for constructing, erecting, and maintaining in good condition throughout the construction period a sign (or signs) in a conspicuous place at the Project site indicating that the Federal Government is participating in the Project. EDA will provide specifications for the sign and may require more than one sign if site conditions so warrant. If the EDA-recommended sign specifications conflict with State or local law, the Recipient may modify such recommended specifications so as to comply with State or local law. *See* 13 CFR § 305.12 (“Project sign”).
- b. *Use of EDA logo.* With EDA’s prior written permission, the Recipient may use the EDA logo to publicize the Award as well as to amplify the impact of the Award. In such cases, the EDA logo may be displayed on Award-related materials that discuss or advertise the purpose or use of the Project (e.g. websites, social media, fliers, pamphlets, brochures). To seek permission to use the EDA logo, the Recipient must contact the EDA Project Officer and provide a written description of how the Recipient proposes to use the EDA logo. In general,

the EDA logo may be used either alone or next to Recipient's logo. The EDA logo may not be used to endorse a third party as interpreted at EDA's sole discretion. The Recipient must not use the EDA logo in a negative or defamatory manner, and the Recipient must not use the U.S. Department of Commerce (DOC) logo. EDA may rescind such permission at any time.

13. Efficient Administration of Project

The Recipient agrees to properly and efficiently administer, operate, and maintain the Project for its estimated useful life, as required by section 504 of PWEDA (42 U.S.C. § 3194). If EDA determines at any time during the estimated useful life of the facility that the Project is not being properly and efficiently administered, operated, and maintained, EDA may terminate this Award (if it is still active) and/or may take appropriate enforcement action to protect the Federal Interest in the Project, including requiring the Recipient to repay the Federal Share. *See* 13 CFR §§ 302.12 ("Project administration, operation and maintenance"), 302.18 ("Post-approval requirements"), and 314.2 ("Federal Interest") through 314.5 ("Federal Share").

14. Conflicts-of-Interest Rules

- a. An "Interested Party" is defined in 13 CFR § 300.3 ("Definitions") as "any officer, employee, or member of the board of directors or other governing board of the Recipient, including any other parties that advise, approve, recommend, or otherwise participate in the business decisions of the Recipient, such as agents, advisors, consultants, attorneys, accountants, or shareholders." An Interested Party includes the Interested Party's Immediate Family and other persons directly connected to the Interested Party by law or through a business organization. "Immediate Family" is defined in 13 CFR § 300.3 as "a person's spouse (or domestic partner or significant other), parents, grandparents, siblings, children and grandchildren, but does not include distant relatives, such as cousins, unless the distant relative lives in the same household as the person."
- b. The Recipient must disclose in writing any potential conflicts of interest to EDA or the pass-through entity as soon as practicable after the identification of such potential conflict. In addition, the Recipient must maintain written standards of conduct to establish safeguards to prohibit an Interested Party from using its position for a purpose that constitutes or presents the appearance of personal or organizational conflicts-of-interest or of personal gain in the administration of an award. *See* 13 CFR § 302.17(a) and (b) ("Conflicts of interest"), 2 CFR § 200.112 ("Conflict of interest"), as applicable, and assurances submitted as part of the Application, including assurances submitted through SAM.gov or via Form SF-424D ("Assurances – Construction Projects").
- c. An Interested Party must not receive any direct or indirect financial or personal benefit in connection with this Award or its use for payment or reimbursement of costs by or to the Recipient. A conflict of interest generally exists when an Interested Party participates in a matter that has a direct and predictable effect on the Interested Party's personal or financial interests. A conflict also may exist where there is an appearance that an Interested Party's objectivity in performing his or her responsibilities under the Project is impaired. For example, an appearance of impairment of objectivity may result from an organizational conflict where, because of other activities or relationships with other persons or entities, an Interested Party is unable to render impartial assistance, services or advice to the Recipient, a participant in the Project or to the Federal government. Additionally, a conflict of interest

may result from non-financial gain to an Interested Party, such as benefit to reputation or prestige in a professional field. *See* 13 CFR § 302.17(a) and (b).

- d. Section F.01.c of the DOC Standard Terms and Conditions, which are incorporated as Part III of these EDA Construction STCs, specifies procurement-related conflicts of interest requirements. *See also* 2 CFR §§ 200.317-200.327 (“Procurement Standards”).

15. Records-Keeping Requirements

- a. *Records.* The Recipient must maintain records that document compliance with the terms and conditions of this Award. At a minimum, the Recipient’s records must fully disclose:
 - i. The amount and disposition of all EDA funding under the Award;
 - ii. All Project expenditures and procurement actions;
 - iii. The total cost of the Project that the Award funds;
 - iv. Copies of all reports and disbursement requests submitted to EDA;
 - v. The benefits/impacts of the Project, as reported through GPRA and other reports to EDA;
 - vi. The amount and nature of the portion of Project costs provided by non-EDA sources;
 - vii. Contractor compliance with applicable Federal requirements; and
 - viii. Such other records as EDA requires the Recipient to maintain, including such records as will facilitate an effective audit.
- b. *Records retention.* In general, and in accordance with 2 CFR § 200.334 (“Retention requirements for records”), all records pertinent to this Award must be retained for a period of three years from the date of submission of the final Project expenditure report (the final Form SF-271 for disbursement). The only exceptions are the following:
 - i. If any litigation, claim, or audit is started before the expiration of the three-year period, the records must be retained until all litigation, claims, or audit findings involving the records have been resolved and final actions taken.
 - ii. When the Recipient is notified in writing by EDA, its cognizant agency for either audit or indirect costs, its oversight agency for audit, or the relevant pass-through entity to extend the retention period, it must retain the records as directed.
 - iii. Records for real property and equipment acquired with Federal funds must be retained for three years after final disposition of the relevant real property or equipment.
 - iv. When records are transferred to or maintained by EDA or pass-through entity, the three-year retention requirement is not applicable to the Recipient.
 - v. *Records for program income transactions after the period of performance.* In some cases, Recipients must report program income after the period of performance. Where there is such a requirement, the retention period for the records pertaining to the earning of the program income starts from the end of the Recipient’s fiscal year in which the program income is earned. *See also* Part II, section A.7 “Program Income” of these EDA Construction STCs.

vi. *Indirect cost rate proposals and cost allocation plans.* This paragraph applies to the following types of documents and their supporting records: indirect cost rate computations or proposals, cost allocation plans, and any similar accounting computations of the rate at which a particular group of costs is chargeable (such as computer usage chargeback rates or composite fringe benefit rates).

(1) *If submitted for negotiation.* If the proposal, plan, or other computation is required to be submitted to the Federal Government (or to the pass-through entity) to form the basis for negotiation of the rate, then the three-year retention period for its supporting records starts from the date of such submission.

(2) *If not submitted for negotiation.* If the proposal, plan, or other computation is not required to be submitted to the Federal Government (or to the pass-through entity) for negotiation purposes, then the three-year retention period for the proposal, plan, or computation and its supporting records starts from the end of the fiscal year (or other accounting period) covered by the proposal, plan, or other computation.

c. **Monitoring and reporting obligations.** The Recipient is responsible for monitoring any subrecipients and contractors to ensure their compliance with the records retention requirements. The Recipient must immediately notify the Project Officer if records are lost. See 2 CFR §§ 200.331 – 200.333 (“Subrecipient Monitoring and Management”).

16. Termination Actions

a. In accordance with 2 CFR § 200.340 (“Termination”), this Award may be terminated in whole or in part as follows:

i. *Termination by EDA for the Recipient’s failure to comply with the terms and conditions of the Award.* EDA may terminate this Award, in whole or in part, if the Recipient fails to comply with the Terms and Conditions of the Award, including but not limited to:

(1) Any representation made by the Recipient to the Federal awarding agency in connection with the Application for Federal assistance is incorrect or incomplete in any material respect;

(2) The Project has changed substantially, without EDA prior approval, so as to affect significantly the accomplishment of the Project as intended (including an unauthorized use of property as provided in 13 CFR § 314.4 (“Unauthorized use of property”));

(3) The Recipient has violated commitments it made in its Application and supporting documents or has violated any of the Terms and Conditions of the Award;

(4) The conflicts-of-interest rules at 13 CFR § 302.17 (“Conflicts of interest”) are violated; or

(5) The Recipient fails to report immediately to EDA any change of authorized representative acting in lieu of or on behalf of the Recipient.

See also section A.06 (Unsatisfactory Performance or Non-Compliance with Award Provisions) of the DOC Standard Terms and Conditions, which are incorporated in Part III of these EDA Construction STCs.

- ii. *Termination by EDA when the Award no longer effectuates program goals or agency priorities.* To the greatest extent authorized by law, EDA may terminate this Award if it no longer effectuates program goals or agency priorities.
- iii. *Termination by the Recipient.* The Recipient may terminate this Award in whole or in part upon by sending the EDA Grants Officer written notification setting forth the reasons for such termination, the effective date, and, in the case of partial termination, the portion to be terminated. However, if EDA determines in the case of partial termination that the reduced or modified portion of the EDA Award will not accomplish the purposes for which the EDA Award was made, EDA may terminate the Award in its entirety.
- iv. *Termination pursuant to Award termination provisions.* EDA or the pass-through entity may terminate this Award pursuant to termination provisions included in the Award. Any Award-specific termination provision will be included as a specific award condition.
- v. *Termination upon mutual agreement.* EDA and the Recipient may mutually agree to terminate this Award in whole or in part. In such cases, EDA and the Recipient must agree upon the termination conditions, including the effective date and, in the case of partial termination, the portion to be terminated.
- b. If the Award is wholly or partially terminated, the Recipient remains responsible for compliance with the requirements in 2 CFR §§ 200.344 (“Closeout”) and 200.345 (“Post-closeout adjustments and continuing responsibilities”).

17. Project Closeout Procedures

- a. *Project Closeout.* As defined at 2 CFR § 200.1, Project Closeout means the process by which EDA determines that all applicable administrative actions and all required work of the Award have been completed and takes actions as described at 2 CFR § 200.344 (“Closeout”). In the context of an EDA construction award, Project Closeout generally begins with the Recipient’s acceptance of the Project from the contractor(s).
- b. *Final disbursement.* When Project construction and final inspection have been completed, or substantially completed as determined by EDA, and the Recipient has accepted the Project from the contractor(s), the Recipient can begin the Closeout process by submitting the following documentation to EDA:
 - i. A request for final disbursement on an executed Form SF-271;
 - ii. A written certification that all costs charged against this Award (Federal and non-Federal shares) are for eligible activities and represent allowable costs, for which there is documentation in the Recipient’s records;
 - iii. An executed certificate of final acceptance signed by the Recipient and the Recipient’s architect/engineer;
 - iv. The Recipient’s certification that its current audit (in accordance with subpart F of 2 CFR part 200), if applicable, has been submitted to the Federal Audit Clearinghouse;

- v. The Recipient's certification that its currently valid single or program-specific audit in accordance with subpart F of 2 CFR part 200 ("Audit Requirements"), if applicable, does not contain any material findings (if the Recipient's currently valid audit does contain material findings, the Recipient must submit the applicable audit preferably via e-mail to the Project Officer, who will review with the Grants Officer); and
- vi. Other documentation as may be required by EDA.

EDA will advise the Recipient of costs determined to be allowable and unallowable. If a balance of this Award is due to the Recipient, the balance will be paid by EDA. If the Recipient has received an amount in excess of the amount due the Recipient, the Recipient must refund the excess to EDA. The Recipient must contact the Project Officer for refund instructions.

As noted above, if the Recipient's most recent audit completed pursuant to subpart F of 2 CFR part 200 contains material findings, the Recipient must submit the audit, preferably via e-mail, to the Project Officer, who will review with the Grants Officer before final disbursement. If e-mail is unavailable, the Recipient may submit a hardcopy version of the audit to the Project Officer.

- c. *Final reporting deadline.* The Recipient must submit, no later than 120 calendar days after the end date of the period of performance, all financial, performance, and other reports as required by the Terms and Conditions of this Award. The Grants Officer may extend the 120 calendar day submission period upon a written request from the Recipient.
- d. *Deadline to liquidate obligations.* Unless EDA authorizes an extension, the Recipient must liquidate all financial obligations incurred under this Award no later than 120 calendar days after the end date of the period of performance.
- e. *Post-Closeout requirements.* As noted above in section B.12 "Efficient Administration of Project" of these EDA Construction STCs, after construction is completed and the Project is closed out financially, the Recipient has an ongoing responsibility to properly administer, operate, and maintain the Project for its estimated useful life (as determined by EDA) in accordance with Award purposes. See 13 CFR § 302.12 ("Project administration, operation and maintenance"). The Recipient must comply with all Award requirements and maintain records to document such compliance, which must be made available for inspection by EDA or other Government officials as required.

In addition, in accordance with 2 CFR § 200.345 "Post-closeout adjustments and continuing responsibilities," the Closeout of this Award does not affect any of the following:

- i. The right of EDA to disallow costs and recover funds on the basis of a later audit or other Project review;
- ii. The Recipient's obligation to return any funds due as a result of later corrections or other transactions;
- iii. Audit requirements per subpart F of 2 CFR part 200; and
- iv. Requirements for property management and disposition, records retention, and

performance measurement reports. *See* subpart D of 2 CFR part 200 (“Post Federal Award Requirements”), as applicable.

- f. *GPRA reporting.* As required under GPRA and in accordance with a schedule that will be provided by EDA, the Recipient must submit additional Performance Measurement Reports, generally three, six, and nine years after the date of the Award to accurately and completely report the impacts of the Project, especially in terms of job creation and private investment leveraging.

18. Freedom of Information Act

EDA is responsible for meeting its Freedom of Information Act (“FOIA”) (5 U.S.C. § 552) responsibilities for its records. DOC regulations at 15 CFR part 4 set forth the requirements and procedures that EDA must follow in order to make the requested material, information, and records publicly available. Unless prohibited by law and to the extent required under the FOIA, contents of Applications and other information submitted by applicants and Recipients may be released in response to a FOIA request. The Recipient should be aware that EDA may make certain Application and other submitted information publicly available. Accordingly, as set forth in 15 CFR § 4.9 (“Confidential commercial information”), the Recipient should identify in its Application any “business information” it believes to be protected from disclosure pursuant to 5 U.S.C. § 552(b)(4).

C. Additional Requirements Related to Construction Projects

The Recipient and any subrecipients, must, in addition to other statutory and regulatory requirements detailed in these EDA Construction STCs and the assurances made to EDA in connection with the Award, comply and require each of its contractors and subcontractors employed in the completion of the Project to comply with all applicable Federal, State, territorial, and local laws, and in particular, the following Federal laws (and the regulations issued thereunder), executive orders, OMB circulars, OMB Uniform Guidance, and local law requirements.

1. **The Davis-Bacon Act, as amended (40 U.S.C. §§ 3141–3144, 3146, 3147; 42 U.S.C. § 3212)**, which requires minimum wages for mechanics and laborers employed on Federal Government public works projects to be based on the wages that the Secretary of Labor determines to be prevailing for the corresponding classes of laborers and mechanics employed on projects of a character similar to the contract work in the civil subdivision of the State in which the Project is to be performed, or in the District of Columbia if the Project is to be performed there.
2. **The Contract Work Hours and Safety Standards Act, as amended (40 U.S.C. §§ 3701-3708)**, which provides work hour standards for every laborer and mechanic employed by any contractor or subcontractor in the performance of a Federal public works project.
3. **The National Historic Preservation Act of 1966, as amended (54 U.S.C. § 300101 *et seq.*), and the Advisory Council on Historic Preservation Guidelines (36 CFR part 800)**, which require stewardship of historic properties in projects involving Federal funds.
4. **Preservation of Historical and Archeological Data (54 U.S.C. § 312502)**, which requires appropriate surveys and preservation efforts if a Federally licensed project may cause

irreparable loss or destruction of significant scientific, prehistorical, historical, or archeological data.

5. **The Architectural Barriers Act of 1968, as amended (42 U.S.C. § 4151 *et seq.*)**, and the regulations issued thereunder, which prescribe standards for the design and construction of any building or facility intended to be accessible to the public or that may house handicapped employees.
6. **The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (42 U.S.C. § 4601 *et seq.*)**, and implementing regulations issued at 49 CFR part 24 (“Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally Assisted Programs”), which establish uniform policies for the fair and equitable treatment of persons, businesses, or farm operations affected by the acquisition, rehabilitation, or demolition of real property acquired for a project financed wholly or in part with Federal financial assistance.
7. **The Energy Conservation and Production Act (42 U.S.C. § 6834 *et seq.*)**, which establishes energy efficiency performance standards for the construction of new residential and commercial structures undertaken with Federal financial assistance.
8. **Executive Order 13717, “Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction”**, which requires that new buildings constructed with Federal assistance comply with the earthquake-resistant design provisions of the 2015 editions of the International Building Code (IBC) or the International Residential Code (IRC), nationally recognized building codes promulgated by the International Code Council (ICC), or equivalent codes, consistent with the provisions of and to the extent required by 40 U.S.C. § 3312.
9. **Compliance with Local Construction Requirements.** The Recipient will comply with current local building codes, standards, and other requirements applicable to the Project.

D. **Non-Discrimination Requirements**

No person in the United States shall, on the ground of race, color, national origin, handicap, age, religion, or sex, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving Federal financial assistance. In addition to the non-discrimination requirements set forth in section G.02 “Non-Discrimination Requirements” of the DOC Standard Terms and Conditions, which are incorporated in Part III of these Construction STCs, the Recipient agrees to comply with Pub. L. No. 92-65, 42 U.S.C. § 3123, which proscribes discrimination on the basis of sex in assistance provided under PWEDA.

E. **Audits**

1. **General**

- a. Recipients must comply with the audit requirements set out as subpart F to 2 CFR part 200 (“Audit Requirements”). Generally, if the Recipient expends \$750,000 or more in Federal awards during the Recipient’s fiscal year, the Recipient must have a single or program-specific audit conducted for that fiscal year. The cost of preparing the audit may be

included in the Project budget.

- b. For program specific audits, EDA's Public Works and Economic Adjustment Assistance programs generally have specific audit guidelines that will be incorporated into the Award and may be found in the annual Compliance Supplement, which is Appendix XI to 2 CFR part 200 and available on OMB's website. When DOC does not have a program-specific audit guide available for the program, the auditor will follow the requirements for a program-specific audit as described in 2 CFR § 200.507 ("Program-specific audits").

2. Requirement to Submit a Copy of the Audit to EDA

If the Recipient's current audit required under subpart F of 2 CFR part 200 ("Audit Requirements") contains material findings, the Recipient must submit a copy of the audit to the Project Officer, who will review it with the Grants Officer. *See also* Part II, section B.16 "Project Closeout Procedures" of these EDA Construction STCs.

See section D "Audits" of the DOC Standard Terms and Conditions, which are incorporated in Part III of these EDA Construction STCs, for additional information related to audit requirements.

F. Tribal Employment Rights Ordinances

As set out in 31 U.S.C. § 1352, special provisions are applicable to Indian Tribes, Tribal organizations, and other Indian organizations eligible to receive Federal contracts, grants, loans, or cooperative agreements. In accordance with DOC policy, EDA recognizes Tribal Employment Rights Ordinances ("TEROs"), which may provide for preferences in contracting and employment, in connection with its financial assistance awards. Federal awards granted to American Indian and Alaska Native Tribal governments generally may provide for preference to qualified Indians in all aspects of employment, contracting, and other business activities, as well as the payment of a TERO fee. The payment of the TERO fee, which supports the Tribal employment rights office to administer the preferences, should generally be allowable as an expense that is "necessary and reasonable for the performance of the Federal award," as provided under 2 CFR § 200.403 ("Factors affecting allowability of costs").

G. EDA Contracting Provisions for Construction Projects

The Recipient must use the "*EDA Contracting Provisions for Construction Projects*" as guidance in developing all construction contracts. The "*EDA Contracting Provisions for Construction Projects*" lists applicable EDA and other Federal requirements for construction contracts.

H. Property

1. Standards

With respect to any property acquired or improved in whole or in part with Award funds, the Recipient must comply with the Property Standards set forth at 2 CFR §§ 200.310 ("Insurance coverage") through 200.316 ("Property trust relationship"), and EDA's regulations at 13 CFR part 314. Property acquired or improved in whole or in part by the Recipient under this Award may consist of real property; personal property, including equipment and supplies; and intangible property, such as money, notes, contractual rights, and security interests. Any property reports required under 2 CFR §§ 200.310 through 200.316, such as periodic inventories and requests for disposition instructions, must be submitted to the Grants Officer through the Project Officer on

Form SF-428 and/or SF-429, as applicable. *See also* section A.01.d “Real Property, Tangible Property and Intangible Property Reports and Requests for Dispositions” of the DOC Standard Terms and Conditions, which are incorporated in Part III of these EDA Construction STCs.

2. Title

- a. Title to equipment, supplies, and intangible property acquired in whole or in part under this Award generally vests upon acquisition in the Recipient. The use, management and disposition of equipment, supplies, and intangible property acquired in whole or in part under this Award must be in accordance with 2 CFR §§ 200.313 (“Equipment”), 200.314 (“Supplies”), and 200.315 (“Intangible property”), as applicable, and EDA regulations at 13 CFR part 314. *See also* section C.03 “Intellectual Property Rights” of the DOC Standard Terms and Conditions, which are incorporated in Part III of these EDA Construction STCs.
- b. Title to real property acquired in whole or in part under this Award generally vests upon acquisition in the Recipient, subject to the condition that the Recipient uses the real property for the authorized purpose of the Project. *See* 2 CFR § 200.311 (“Real property”) and EDA regulations at 13 CFR part 314.

3. EDA’s Interest in Award Property

- a. *General - evidence of title.* As stated in Part I, section E, of these EDA Construction STCs “Recipient as Trustee”, real property, equipment, and intangible property acquired or improved under this Award must be held in trust by the Recipient as trustee for the public purposes of an Award. This trust relationship exists throughout the duration of the property’s estimated useful life, as determined by EDA, during which time EDA retains an undivided, equitable reversionary interest in the property (“Federal Interest”). *See* 13 CFR § 314.2.

Before advertising for construction bids or at such other time as EDA requires, the Recipient must furnish evidence, satisfactory in form and substance to EDA, that title to real property required for the Project (other than property of the United States and as provided in 13 CFR § 314.7(c) (“Title”)) is vested in the Recipient and that such easements, rights-of-way, State or local government occupancy or use permits, long-term leases, or other property interests or access rights required for the Project have been or will be obtained by the Recipient within an acceptable time, as determined by EDA. All liens, mortgages, other encumbrances, reservations, reversionary interests, or other restrictions on title or the Recipient’s interest in the property must be disclosed to EDA. *See* 13 CFR § 314.7 (“Title”). With limited exceptions set forth at 13 CFR §§ 314.6(a) and (b) (“Encumbrances”) or as otherwise authorized by EDA, Recipient-owned property acquired or improved in whole or in part with Award funds must not be used to secure a mortgage or deed of trust or in any way otherwise encumbered. *See* 13 CFR § 314.6.

b. Recording EDA’s Interest in Real Property.

- i. For all Projects involving the acquisition, construction, or improvement of a building, infrastructure, or other real property, as determined by EDA, the Recipient must execute and furnish to EDA, prior to initial Award disbursement or at such other time as EDA requires, a lien, covenant, or other statement, satisfactory to EDA in form and substance, of EDA’s interest in the property acquired or improved in whole or in part with the funds made available under this Award. EDA may permit such statement to be recorded after

- initial Award disbursement in the event that grant funds are being used to acquire such property or for authorized costs, such as design and engineering services. The statement must specify the estimated useful life of the Project and must include the disposition, encumbrance, and the Federal Share compensation requirements, as well as any other requirements specified by EDA in its reasonable discretion. *See* 13 CFR §§ 314.1 (“Definitions”) and 314.8(a) (“Recorded statement for real property”). *See also* 2 CFR § 200.316 (“Property trust relationship”).
- ii. This lien, covenant, or other statement of the Federal interest must be perfected and placed of record in the real property records of the jurisdiction in which the property is located, all in accordance with applicable law. EDA may require an opinion of counsel for the Recipient to substantiate that the document was validly executed and properly recorded. *See* 13 CFR § 314.8(b).
 - iii. Facilities in which the EDA assistance is only a small part of a larger project, as determined by EDA, may be exempted from the requirements listed in paragraphs H.3.b.i and ii above. *See* 13 CFR § 314.8(c).
 - iv. In extraordinary circumstances and at EDA’s discretion, EDA may choose to accept another instrument to protect EDA’s interest in the Project property, such as an escrow agreement or letter of credit, provided that EDA determines such instrument is adequate and a recorded statement in accord with section H.3.b.i above is not reasonably available. The terms and provisions of the relevant instrument must be satisfactory to EDA. The costs and fees for escrow services or letters of credit must be paid by the Recipient. *See* 13 CFR § 314.8(d).
- c. *Recording EDA’s Interest in Personal Property.* For all Projects involving the acquisition or improvement of significant items of equipment or other tangible personal property, including but not limited to watercraft, motor vehicles, machinery, equipment, removable fixtures, or structural components of buildings, the Recipient must execute a security interest, covenant, or other statement of EDA’s reversionary interest in the personal property acceptable in form and substance to EDA, which statement must be perfected and placed of record in accordance with applicable law (usually accomplished by filing a Uniform Commercial Code Financing Statement (Form UCC-1), as provided by State law), with continuances re-filed as appropriate. EDA may require an opinion of counsel for the Recipient to substantiate that the Form UCC-1 or other filing was validly executed and properly recorded. *See* 13 CFR § 314.9 (“Recorded statement for Project personal property”).
 - d. *EDA’s Interest and the estimated useful life.* The Recipient acknowledges that EDA retains an undivided equitable reversionary interest in property acquired or improved in whole or in part with grant funds made available through this Award throughout the estimated useful life (as determined by EDA) of the Project, except in applicable instances set forth at 13 CFR § 314.7(c) (“Title”). *See* 13 CFR § 314.2(a) (“Federal interest”).
 - e. *Unauthorized Use of Award Property.* The Recipient agrees that if any interest in property acquired or improved in whole or in part with Award funds is disposed of, encumbered, or alienated in any manner, or no longer used for the authorized purposes of the Award during the Project’s estimated useful life without EDA’s written approval, EDA will be entitled to recover the Federal Share, as defined at 13 CFR § 314.5 (“Federal share”). Examples of

alienation of Award property include sale or other conveyance of the Recipient's interest, leasing or mortgaging the property, or granting an option for any of the foregoing.

If, during the Project's estimated useful life, the property is no longer needed for the purposes of the Award, as determined by EDA, EDA may permit its use for other acceptable purposes consistent with those authorized by PWEDA and 13 CFR Chapter III. *See* 13 CFR § 314.3(b) ("Authorized use of property") or may direct the Recipient to sell the property and remit the Federal Share of the sales proceeds to EDA. *See* 2 C.F.R. §§ 200.311, 200.313.

- f. *Calculating the Federal Share.* For purposes of any lien or security interest, the amount of the Federal Share is the portion of the current fair market value of any property (after deducting any actual and reasonable selling and repair expenses incurred to put the property into marketable condition) attributable to EDA's participation in the Project. *See* 13 CFR § 314.5 ("Federal share").

4. **Insurance and Bonding**

- a. *Insurance.* The Recipient must, at a minimum, provide the equivalent insurance coverage for real property and equipment acquired or improved with Federal funds as provided for property owned by the Recipient. Federally owned property need not be otherwise insured unless required by the Terms and Conditions of the Award. *See* 2 CFR § 200.310 ("Insurance coverage").
- b. *Bonding.* If the Award exceeds the simplified acquisition threshold as defined at 2 CFR § 200.1, EDA may accept the Recipient's or subrecipient's bonding policy and requirements if EDA or the pass-through entity determines that the Federal Interest is adequately protected. If not, the following minimum requirements will apply:
 - i. A bid guarantee from each bidder equivalent to five percent of the bid price. The "bid guarantee" must consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of the bid, execute such contractual documents as may be required within the time specified.
 - ii. A performance bond on the part of the contractor for 100 percent of the contract price. A "performance bond" is one executed in connection with a contract to secure fulfillment of all the contractor's obligations under such contract.
 - iii. A payment bond on the part of the contractor for 100 percent of the contract price. A "payment bond" is one executed in connection with a contract to ensure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract. *See* 2 CFR § 200.326 ("Bonding requirements").

5. **Leasing Restrictions.**

Leasing or renting of facilities or property is prohibited unless specifically authorized by EDA. The Recipient agrees that any leasing or renting of any facilities or property involved in this Project will be subject to the following:

- a. That said lease arrangement is consistent with the authorized general and special purpose of

the Award;

- b. That said lease arrangement is for adequate consideration;
- c. That said lease arrangement is consistent with applicable EDA requirements concerning but not limited to nondiscrimination and environmental compliance; and
- d. That all revenue derived from said leasing arrangement shall be subject to Part II, section A.7 “Program Income” of these EDA Construction STCs.

6. Eminent Domain

The Recipient will use funds solely for the authorized purpose of the Project. Pursuant to Executive Order 13406, “Protecting the Property Rights of the American People,” the Recipient agrees:

- a. Not to exercise any power of eminent domain available to the Recipient (including the commencement of eminent domain proceedings) for use in connection with the Project for the purpose of advancing the economic interests of private parties; and
- b. Not to accept title to land, easements, or other interests in land acquired by the exercise of any power of eminent domain for use in connection with the Project for such purposes. The Recipient agrees that any use of the power of eminent domain to acquire land, easements, or interests in land, whether by the Recipient or any other entity that has the power of eminent domain, in connection with the Project without the prior written consent of EDA is an unauthorized use of the Project. If the Recipient puts the Project to an unauthorized use, the Recipient must compensate EDA for the Federal Share in accordance with 13 CFR §§ 314.4 (“Unauthorized use of property”) and 314.5 (“Federal share”), as the same may be amended from time to time.

7. Disposal of Real Property

- a. During the estimated useful life of the Project, if EDA and the Recipient determine that property acquired or improved in whole or in part with Award funds is no longer needed for the original purposes of this Award, EDA may, in its discretion, approve use of the property in other Federal grant programs or in programs that have purposes consistent with those authorized by PWEDA and 13 CFR chapter III. *See* 13 CFR § 314.3(b) (“Authorized use of property”).
- b. When property is not authorized for other uses as provided in section H.7.a above, EDA will provide disposition instructions to the Recipient, which may include directing the Recipient to sell the property and remit the Federal Share of the sales proceeds to EDA.

8. Reporting on Property.

- a. *Real Property status reports and requests for disposition.* In accordance with 2 CFR § 200.330 “Reporting on real property”, the Recipient must submit reports using Form SF-429 (Real Property Status Report), including appropriate attachments, at least annually on the status of real property in which EDA retains an interest, which generally includes real property acquired or improved under the award, unless such interest extends 15 years or longer. If EDA’s interest is for a period of 15 years or longer, unless otherwise specified in a specific award condition, the Recipient must submit an annual report for the

first three years of the award and thereafter submit a real property status report every five years. If the Recipient wishes to dispose of real property acquired or improved under an EDA award, the Recipient must request disposition instructions, including the submission of Form SF-429, with appropriate attachments, from the Grants Officer in accordance with 2 CFR 200.311(c).

- b. *Tangible Personal Property status reports and requests for dispositions.* The Recipient must submit periodic reports as specified in the terms of the Award using Form SF-428 (Tangible Personal Property Report), including appropriate attachments thereto, concerning tangible personal property that is Federally owned or tangible personal property in which EDA retains an interest. In addition, if the Recipient wishes to dispose of tangible personal property acquired or improved under an EDA award, the Recipient must request disposition instructions, including the submission of Form SF-428, with appropriate attachments, from the Grants Officer in accordance with 2 CFR 200.313(e).

See also section A.01.d of the DOC Standard Terms and Conditions, which are incorporated in Part III of these EDA Construction STCs.

I. Environmental Requirements

1. **General.** In addition to the environmental statutes, executive orders, and requirements set forth in section G.04 of the DOC Standard Terms and Conditions "Environmental Requirements," which are incorporated in Part III of these EDA Construction STCs, the Recipient must comply with the following:
 - a. **Environmental Quality Improvement Act of 1970, as amended (42 U.S.C. §§ 4371-4375).** Federally supported public works facilities and activities that affect the environment must be implemented in compliance with policies established under existing law.
 - b. **The Lead-Based Paint Poisoning Prevention Act (42 U.S.C. § 4821 et seq.).** Use of lead-based paint in residential structures improved with Federal assistance is prohibited.
 - c. **The Farmland Protection Policy Act (7 U.S.C. §§ 4201-4209).** Projects are subject to review under this Act if they may irreversibly directly or indirectly convert farmland, including forest land, pastureland, cropland, or other land, to nonagricultural use.
 - d. **The Noise Control Act of 1972 (42 U.S.C. § 4901 et seq.).** Federally supported facilities and activities must comply with Federal, State, interstate, and local requirements respecting control and abatement of environmental noise to the same extent that any person is subject to such requirements.
 - e. **The Native American Graves Protection and Repatriation Act (25 U.S.C. § 3001 et seq.).** This Act provides a process for returning certain Native American cultural items to lineal descendants, culturally affiliated Indian tribes, and Native Hawaiian organizations.
2. **Compliance with Other Applicable Environmental Requirements**

The Recipient agrees to promptly notify the Grants Officer in writing of any environmental requirement or restriction, regulatory or otherwise, with which it must comply. Before Project Closeout and final disbursement of Award funds, the Recipient further agrees to provide evidence

satisfactory to the Grants Officer that any required environmental remediation has been completed: (1) in compliance with all applicable Federal, State and local regulations; and (2) in accordance with any legally enforceable restrictions related to environmental restriction on the property such as environmental easements, deed restrictions, no further action determinations, or voluntary cleanup certifications. Compliance with said laws or restrictions must be included in any contract documents for Project construction. The Recipient must certify compliance before final disbursement of grant funds.

J. American-Made Equipment and Products

Recipients are hereby notified that they are encouraged, to the greatest extent practicable, to purchase American-made equipment and products with funding provided under this Award.

See also section G.05.a (Buy-American Preferences) of the DOC Standard Terms and Conditions, which are incorporated in Part III of these EDA Construction STCs.

**PART III:
DEPARTMENT OF COMMERCE
STANDARD TERMS & CONDITIONS**

The DOC Standard Terms and Conditions dated November 12, 2020, which can be found at <https://www.commerce.gov/oam/policy/financial-assistance-policy>, are incorporated by reference herein as Part III of these Construction STCs.

In the event of a conflict between Parts I or II of these Construction STCs and Part III, which incorporates the DOC Standard Terms and Conditions, Parts I and II will control.

APPENDIX C

U.S. Department of Commerce Economic Development Administration Summary of EDA Construction Standards



**UNITED STATES DEPARTMENT OF COMMERCE
ECONOMIC DEVELOPMENT ADMINISTRATION**

SUMMARY OF EDA CONSTRUCTION STANDARDS

A REFERENCE TOOL FOR CONSTRUCTION INVESTMENTS
MADE UNDER SECTIONS 201 OR 209 OF THE
PUBLIC WORKS AND ECONOMIC DEVELOPMENT ACT OF 1965,
AS AMENDED (42 U.S.C. § 3121 *ET SEQ.*)

JULY 2018

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IX. APPENDIX31

I. PURPOSE AND SCOPE OF THIS SUMMARY

A. PURPOSE

1. This “*Summary of EDA Construction Standards*” (hereinafter referred to as “Summary”) describes the procedures for compliance, reporting, and record-keeping, and administrative requirements that apply to construction investments made by the Economic Development Administration (“EDA”) under sections 201 or 209 (42 U.S.C. §§ 3141 and 3149) of the Public Works and Economic Development Act of 1965, as amended (42 U.S.C. § 3121 *et seq.*) (“PWEDA”).
2. *Terms and Conditions*. Form CD-450, “*Financial Assistance Award*,” (the “Award”), executed by EDA and the Recipient, together with the EDA-approved project budget and scope of work, standard terms and conditions, special award conditions, and all applicable federal statutory and regulatory requirements as incorporated by reference, constitute the complete requirements, hereinafter referred to as the “Terms and Conditions,” applicable to the EDA investment. This Summary is designed to help clarify these requirements. In the event that any term or provision in this Summary conflicts with or is inconsistent with any provision contained in the Terms and Conditions, the provisions of the Terms and Conditions are controlling.

B. SCOPE

1. This Summary applies to all Awards for construction projects and is based on the Office of Management and Budget’s (“OMB”) administrative and programmatic requirements for federal grants as set forth in the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards and in EDA’s regulations implementing PWEDA. These requirements are published in the *Code of Federal Regulations* (“C.F.R.”), each as amended from time to time:
 - (a) 13 C.F.R. chapter III (*Economic Development Administration, Department of Commerce*); and
 - (b) 2 C.F.R. part 200 (*Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*).
2. This Summary supplements the requirements set out in PWEDA, EDA’s regulations at 13 C.F.R. chapter III, the Terms and Conditions of the Award, 2 C.F.R. part 200 and the applicable requirements and authorities listed in the Appendix to this Summary and the hyperlinks set out therein (*see* section IX.). This Summary should be used as a reference tool to implement various requirements that apply to EDA construction investments made under sections 201 or 209 of PWEDA (42 U.S.C. §§ 3141 and 3149). This Summary is not a comprehensive source of information. In addition to PWEDA, a list of primary sources of legal requirements is set out above in section I.B.1.

II. DEPARTMENT OF COMMERCE AND EDA POLICIES

- A. As a federal agency, EDA is obligated to promulgate regulations and establish policies and procedures applicable to Recipients of EDA investments to:
1. Ensure compliance with applicable federal requirements;
 2. Safeguard the public's interest in the grant assets; and
 3. Promote the effective use of grant funds in accomplishing the purpose(s) for which they were awarded.
- B. EDA or the Department of Commerce (the "Department" or "Departmental") may issue changes from time to time to EDA's regulations and other requirements and policies that apply to the Award. Such changes may upon occasion increase administrative or programmatic flexibility in administering the Award. The implementation of any such regulatory, administrative or programmatic change in administering the Award must have prior EDA written approval.
- C. EDA's policy is to administer all Awards uniformly; however, there may be special circumstances that warrant a variance. To accommodate these circumstances and to encourage innovative and creative ways to address economic development problems, EDA may consider requests for variances to the procedures set out in this Summary if they do not conflict with applicable federal statutory and regulatory requirements, are consistent with the goals of EDA's programs, and make sound economic and financial sense.

III. REQUIREMENTS APPLICABLE TO EDA INVESTMENTS

A. GRANT RECIPIENT AS TRUSTEE

The Recipient of an EDA investment holds grant funds and any EDA-funded project property in trust for the purpose(s) for which the Award was made. The Recipient's obligation to the Federal government continues for the estimated useful life of the project, as determined by EDA, during which EDA retains an undivided equitable reversionary interest (the "Federal Interest") in the property improved, in whole or in part, with the EDA investment. *See* 13 C.F.R. § 314.2; 2 C.F.R. §§ 200.41, 200.316.

If EDA determines that the Recipient fails or has failed to meet this obligation, the agency may exercise any rights or remedies with respect to its Federal Interest in the project. However, EDA's forbearance in exercising any right or remedy in connection with the Federal Interest does not constitute a waiver thereof.

B. THE RECIPIENT'S RESPONSIBILITIES

1. The Recipient is responsible for complying with all federal laws (and the regulations issued thereunder), federal, Departmental and EDA policies, Executive Orders, and 2 C.F.R. part 200, as referenced in the Terms and Conditions, each as may be amended from time to time. These statutes, regulations, policies, Executive Orders and 2 C.F.R. part 200 may include administrative and audit requirements, federal cost principles, programmatic requirements, financial requirements, and property management requirements. *See* 13 C.F.R. § 302.6. The Recipient is responsible for the design, bidding, construction, and operation of the project to ensure compliance with all grant requirements, including those set out at 13 C.F.R. part 305.

2. In order to facilitate timely implementation, EDA may accept the Recipient's certification, accompanied by evidence satisfactory to EDA, that it meets the requirements for receiving the Award and that it will comply with its Terms and Conditions. *See* 13 C.F.R. § 302.15; 2 C.F.R. § 200.208. EDA also may require the Recipient submit specific certifications for critical issues, such as major procurement and costs claimed in requests for disbursement of grant funds. EDA will monitor project progress and compliance with the Terms and Conditions through the:
 - (a) Recipient's written reports;
 - (b) Review of the Recipient's records during EDA visits to the project site;
 - (c) Department's Office of Inspector General audits; and
 - (d) Single or program-specific audit conducted in accordance with Subpart F of 2 C.F.R. part 200 and the related *Compliance Supplements*. *See* section VIII.A. of this Summary.
3. During the construction period, the Recipient is responsible for:
 - (a) Monitoring project progress and reporting progress to EDA;
 - (b) Providing for adequate construction inspection;
 - (c) Paying costs incurred for the project promptly; and
 - (d) Monitoring contractors' compliance with applicable local, State and federal requirements.
4. After construction is completed, the Recipient is responsible for submitting close-out documentation and properly administering, operating and maintaining the project for its estimated useful life, as determined by EDA and as set forth in the Terms and Conditions. *See* 13 C.F.R. § 302.12; 2 C.F.R. §§ 200.316, 200.343-200.344.
5. Failure to satisfy any Term or Condition may result in disallowance of costs, or suspension or termination of the Award and recovery of grant funds. In addition, such failure may have a negative impact on the Recipient's ability to receive future funding from the Department. *See* 13 C.F.R. § 302.18; 2 C.F.R. §§ 200.213, 200.338-200.342. In particular, the project development time schedule, a Term of the Award, can be extended only through the Recipient's written request for an amendment to the Award and written approval by EDA. *See* 13 C.F.R. § 302.7. The Terms and Conditions of the Award place the Recipient on notice that the grant may be suspended for not proceeding in accordance with the EDA-approved time schedule set out in the Award. No disbursement of EDA funds is permitted when a project has exceeded the EDA-approved time schedule, unless EDA has given written approval to a time schedule extension. *See* 13 C.F.R. § 305.9 regarding project phasing and investment disbursement.

C. EMINENT DOMAIN

In making a discretionary award for a construction project, EDA considers the policy on eminent domain set out in Executive Order 13406, "*Protecting the Property Rights of the American People*." The Terms and Conditions of the Award include appropriate provisions to ensure that the Recipient has agreed:

1. Not to use any power of eminent domain available to the Recipient (including the commencement of eminent domain proceedings) for use in connection with the project for the purpose of advancing the economic interests of private parties;
2. Not to accept title to land, easements or other interests in land acquired by the use of any power of eminent domain for use in connection with the project for such purposes; and

3. Any use of the power of eminent domain to acquire land, easements, or other interests in land, whether by the Recipient or any other entity that has the power of eminent domain, in connection with the project without prior written consent of EDA is an unauthorized use of the project. If the Recipient puts the project to an unauthorized use, the Recipient will be required to compensate EDA for its fair share in accordance with 13 C.F.R. §§ 314.4 and 314.5.

D. RECORD-KEEPING REQUIREMENTS

The Recipient is responsible for maintaining records that document compliance with the Terms and Conditions of the Award. At a minimum, the Recipient's records must contain documentation that fully discloses:

1. The amount and disposition of the EDA investment assistance;
2. All project expenditures and procurement actions;
3. The total cost of the project that the Award funds;
4. The amount and nature of the portion of project costs provided by non-EDA sources;
5. Contractor compliance with applicable federal requirements; and
6. Such other records as EDA determines will facilitate an effective audit.

The Recipient is responsible for retaining records for the time frame specified in the Terms and Conditions. See 13 C.F.R. § 302.14. See also 2 C.F.R. § 200.333.

E. THE FINANCIAL ASSISTANCE AWARD

The Recipient should pay particular attention to the following provisions of the Award:

1. *Description of Project.* The description of the project in the Award, together with more detailed information provided in the Award application, determines and defines the scope(s) of work to be funded under the Award.
2. *Federal Requirements.* The listed federal requirements describe applicable administrative or programmatic obligations for which the Recipient is responsible. Critical documents are listed in section IX. (Appendix) of this Summary. These publications provide important information on requirements regarding procurement, record-keeping, eligible project costs and other administrative or programmatic issues.
3. *Standard Terms and Conditions.* The standard terms and conditions are applicable to all EDA-assisted construction projects.
4. *Special Award Conditions.* The special award conditions may contain conditions that must be satisfied prior to advertisement for bids, start of construction, or disbursement of Award funds, as well as conditions unique to the Award that are ongoing for the estimated useful life of the project.

F. FINANCIAL REPORTING

1. *Semiannual financial reports.* Any Recipient whose Award has not been fully disbursed is required to submit a "Federal Financial Report" (Form SF-425 or any successor form) to EDA semiannually to report on the status of unreimbursed obligations. This report will provide information on the amount of allowable project expenses that have been incurred, but not claimed for reimbursement by the Recipient. The first report shall be as of March 31 of each year and shall be submitted to EDA no later than April 30 of each year, and the second report shall be of September 30 of each year and shall be submitted to EDA no later than October 30 of each year. Instructions for completing and submitting Form SF-425 will be furnished to the Recipient at least sixty (60) days before the report is due. While EDA generally does not advance funds, when the agency does so, the Recipient must submit Form SF- 425 within fifteen (15) business days following the end of each quarter for an award under \$1 million, fifteen

- (15) business days following the end of each month for an award totaling \$1 million or more, or as otherwise specified in a special award condition.
2. *Final financial report.* The Recipient must submit a final financial report using Form SF-425 within ninety (90) days of the expiration date of the Award (or from the date the Recipient accepts the project from the contractor, whichever occurs earlier).
3. *Noncompliance with financial reporting requirements.* Noncompliance with these requirements will result in appropriate enforcement action under this Award, including but not limited to suspension of Award payments or disallowance of costs. Financial reports are to be submitted to the Project Officer.

G. MONITORING AND REPORTING PROJECT PROGRESS

1. *Quarterly Project Progress (Performance) Reports.*

- (a) Quarterly Project Progress Reports must be submitted in accordance with the procedures set out in 2 C.F.R. § 200.328, as applicable, and as indicated below. Failure to submit required reports in a timely manner may result in the withholding of payments under the Award; deferral of processing of new awards, amendments or supplemental funding pending the receipt of the overdue report(s); or the establishment of an account receivable for the difference between the total federal share of outlays last reported and the amount disbursed. See 13 C.F.R. § 302.18.
- (b) Unless otherwise specified in the Award, the Quarterly Project Progress Reports will contain the following information for each project program, function, or activity:
 - (i) A comparison of planned and actual accomplishments according to the timetable or list of project objectives in the Award;
 - (ii) An explanation of any delays or failures to meet the project timetable or project goals; and
 - (iii) Any other pertinent information including, when appropriate, analysis and explanation of cost overruns or high unit costs.
- (c) Quarterly Project Progress Reports shall be submitted for each calendar quarter to the Project Officer. Each project progress report must be submitted in accordance with the deadlines outlined in the special award conditions, or, where not otherwise specified, project progress reports will be due on a quarterly basis not later than January 31, April 30, July 31, and October 31 for the immediate previous quarter. The final Project Progress Report shall be submitted to EDA no more than 90 days after the project closeout date. This reporting requirement begins with the Recipient's acceptance of the Award and ends when EDA approves project closeout.

The Recipient shall submit Quarterly Project Progress Reports to the Project Officer electronically, unless otherwise specified in the Special Award Conditions.

Interim performance reporting. The Recipient must report any event that will or may have a significant impact upon the project, including delays or adverse conditions that materially may affect the ability of the Recipient to attain project objectives within established time periods or meet the project development time schedule. The recipient must disclose such problems to the Project Officer in the most time-expedient way

possible and then, if the initial report was not made in writing, report the event to the Project Officer in writing. Such a report shall include a statement of the event or issue, a statement of the course of action taken or contemplated to resolve the matter, and any federal assistance needed to resolve the situation. If budget changes are required, the Recipient must submit a written budget revision request. See 2 C.F.R. § 200.308(g). Any changes made to the project without EDA's prior approval are made at the Recipient's risk of nonpayment of costs, suspension, termination, or other applicable EDA action. See 13 C.F.R. § 302.7.

2. *Government Performance and Results Act reporting.* In addition to Quarterly Project Progress Reports, EDA may require the Recipient to report on project performance beyond the project closeout date for Government Performance and Results Act ("GPRA") purposes. In no case shall the Recipient be required to submit any report more than ten years after the project closeout date. Data used by the Recipient in preparing reports shall be accurate and, whenever possible, from independent sources. See 13 C.F.R. § 302.16.
3. *Reporting on real property.* The Recipient must submit reports (using Form SF- 429 "Real Property Status Report" or any successor form) at least annually, on the status of real property in which EDA retains an interest, unless the Federal interest in the real property extends 15 years or longer. When EDA's interest extends for a period of 15 years or more, EDA, at its option, may require the Recipient to report at various multi-year frequencies (*e.g.*, every two years or every three years, not to exceed a five-year reporting period; or annual reporting for the first three years of the Award and thereafter every five years). See 2 C.F.R. § 200.329.

IV. PRE-CONSTRUCTION REQUIREMENTS

A. ENVIRONMENTAL COMPLIANCE

Each Recipient must comply with all environmental standards and shall identify to EDA any impact a proposed project may have on the environment. In some cases, Award funds can be withheld by EDA under a special award condition requiring the Recipient to submit additional environmental compliance information sufficient to enable EDA to make an assessment on any impacts that a project may have on the environment.

EDA undertakes environmental reviews of projects in accordance with the requirements of the National Environmental Policy Act of 1969, as amended (42 U.S.C. § 4321 *et seq.*, as implemented under 40 C.F.R. parts 1500-1508) ("NEPA"), and all other federal environmental statutes, regulations and Executive Orders, as listed in the Terms and Conditions of the Award. These authorities include the implementing regulations of NEPA, which require EDA to provide public notice of the availability of project-specific environmental documents, such as environmental impact statements, environmental assessments, findings of no significant impact, and records of decision, to the affected or interested public, as specified in 40 C.F.R.

§ 1506.6(b). The Recipient must pay special attention to and comply with any special environmental conditions in the Award.
See 13 C.F.R. § 302.1.

B. CIVIL RIGHTS COMPLIANCE

In accordance with the following authorities, discrimination is prohibited by a Recipient or "Other Party" (as defined in 13 C.F.R. § 302.20(b)) with respect to a project receiving EDA investment assistance under PWEDA:

1. Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*) and the Department's implementing regulations at 15 C.F.R. part 8, which prohibit discrimination on the grounds of race, color, or national origin under programs or activities receiving federal financial assistance;
2. Title IX of the Education Amendments of 1972 (20 U.S.C. § 1681 *et seq.*) prohibiting discrimination on the basis of sex under federally-assisted education programs or activities;
3. Pub. L. No. 92-65, 42 U.S.C. § 3123 (proscribing discrimination on the basis of sex in EDA assistance provided under PWEDA) and Pub. L. No. 94-369, 42 U.S.C. § 6709 (proscribing discrimination on the basis of sex under the Local Public Works Program), and the Department's implementing regulations at 15 C.F.R. §§ 8.7-8.15;
4. Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. § 794), and the Department's implementing regulations at 15 C.F.R. part 8b, which prohibit discrimination on the basis of handicap under any program or activity receiving or benefiting from federal assistance;
5. The Age Discrimination Act of 1975 (42 U.S.C. § 6101 *et seq.*), and the Department's implementing regulations at 15 C.F.R. part 20, which prohibit discrimination on the basis of age in programs or activities receiving federal financial assistance;
6. The Americans with Disabilities Act of 1990 (42 U.S.C. § 12101 *et seq.*) prohibiting discrimination on the basis of disability under programs, activities and services provided or made available by State and local governments or instrumentalities or agencies thereto, as well as public or private entities that provide public transportation; and other federal statutes, regulations and Executive Orders, as applicable. *See generally* 13 C.F.R. § 302.20.

Consistent with 2 CFR § 200.321, the Recipient and any subrecipient must take all necessary affirmative steps to ensure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible.

C. START OF CONSTRUCTION

1. *Early construction starts.* The Recipient shall make a written request to EDA for early construction start permission (that is, after the date of Award, but before EDA gives formal approval for construction to commence). For project costs to be eligible for EDA reimbursement, EDA must determine that the award of all contracts necessary for design and construction of the project facilities is in compliance with the Terms and Conditions. If construction commences prior to EDA's determination, the Recipient proceeds at its own risk until EDA's review and concurrence. *See* 13 C.F.R. § 305.11.
2. *Delayed construction starts.* If significant construction (as determined by EDA) is not commenced within two years of the Award date or by the date estimated for start of construction in the grant Award (or the expiration of any extension granted in writing by EDA), whichever is later, the EDA grant will be automatically suspended and may be terminated if EDA determines, after consultation with the Recipient, that construction to completion cannot reasonably be expected to proceed promptly and expeditiously. *See also* sections VII.B. and F. of this Summary.

D. PROJECT MANAGEMENT CONFERENCE

1. Shortly after approval of the Award, EDA may contact the Recipient to arrange a project management conference. The purpose of the project management conference is to explain to the Recipient its post-approval responsibilities for administration of the Award and applicable federal requirements.
2. Whenever practicable, the project management conference should be held when and where appropriate EDA regional office personnel will be available. The Recipient's authorized representative, architect/engineer, attorney and possibly the Recipient's financial representative should attend.

E. ARCHITECT/ENGINEER SERVICES

1. The architect/engineer agreement shall provide for all services required by the Recipient for the planning, design and engineering phases of the project. Appropriate standards or guidance developed by professional organizations, such as the American Consulting Engineers Council ("ACEC"), American Society of Civil Engineers ("ASCE"), National Society of Professional Engineers ("NSPE"), and/or the American Institute of Architects ("AIA"), may be used where the Recipient does not have standard procurement or contracting documents.

The architect/engineer agreement shall cover all services necessary for the successful execution of the project including consultations, surveys, soil investigations, supervision, travel, "as-built" or record drawings, arrow diagram ("CPM/PERT") where applicable, and incidental costs. Regardless of who furnishes the construction inspector, the architect/engineer shall be held responsible for making sufficient visits to the project site to ensure that the work proceeds in accordance with the approved plans and specifications.

2. The Recipient must select the architect/engineer in accordance with the procurement standards set forth in 2 C.F.R. part 200. Unless EDA has approved a different type of award, the compensation to the architect/engineer for basic services must be either a fixed price or a cost reimbursement with an agreed maximum to be eligible for EDA participation. The amount of EDA participation will be based on EDA's determination (subject to audit) that the compensation is reasonable. The "cost-plus-a-percentage-of-cost" and "percentage of construction cost" methods of contracting are specifically prohibited.
3. In addition to other provisions required by the Federal agency or Recipient, in accordance with 2 C.F.R. § 200.326, all contracts made by the Recipient under an Award must contain the applicable provisions set out in Appendix II to 2 C.F.R. part 200, which address various contractual requirements including remedies, termination for cause and convenience, Equal Employment Opportunity, the Davis-Bacon Act, the Contract Work Hours and Safety Standards Act, rights to inventions, environmental quality, energy efficiency, debarment and suspension, the Byrd Anti-Lobbying Amendment, and procurement of recovered materials. See Appendix II to 2 C.F.R. part 200 for a full explanation of these requirements.

F. SERVICES PERFORMED BY RECIPIENT'S OWN FORCES

The Recipient may have a portion or all of the design, construction, inspection, legal services, or other work or services in connection with the project performed by personnel who are employed by the Recipient either full-time or part-time ("in-house forces"). See 13 C.F.R. § 305.7.

EDA may approve the use of “in-house forces” subject to the following conditions:

1. The services are routinely performed by the Recipient for all construction projects performed by the Recipient;
2. The Recipient has a special skill required for the construction of the project;
3. The Recipient has made all reasonable efforts to obtain a contractor, but has failed to do so because of uncontrollable factors such as the remoteness of the project site or an overabundance of construction work in the region; or
4. The Recipient demonstrates substantial cost savings.

“In-house forces” may be considered an eligible cost for EDA reimbursement if the work or services performed are in conformance with 2 C.F.R. part 200.

G. TRIBAL EMPLOYMENT RIGHTS ORDINANCES

In accordance with Departmental policy, EDA recognizes Tribal Employment Rights Ordinances (“TEROs”), which may provide for preferences in contracting and employment, in connection with its financial assistance awards. Federal awards granted to American Indian and Alaska Native tribal governments generally may provide for preference in contracting, hiring, firing, and the payment of a TERO fee.

The payment of the TERO fee, which supports the tribal employment rights office to administer the preferences, should generally be allowable as an expense that is “necessary and reasonable for the performance of the Federal Award,” as provided under 2 C.F.R. § 200.403.

H. LAND, EASEMENTS AND RIGHTS OF WAY

1. Except as provided in 13 C.F.R. § 314.6(b) or as otherwise authorized by EDA, Recipient-owned property acquired or improved in whole or in part with investment assistance must not be used to secure a mortgage or deed of trust or in any way otherwise encumbered.
2. The Recipient must disclose to EDA all encumbrances. EDA will not accept any encumbrance that interferes with the construction, intended use, operation or maintenance of the project during its estimated useful life. Before advertising for construction bids or at such other time as EDA requires, the Recipient must furnish evidence, satisfactory in form and substance to EDA, that title to real property required for the project is vested in the Recipient and that such rights-of-way, easements, State or local government permits, long-term leases or other items required for the project have been or will be obtained by the Recipient within an acceptable time, as determined by EDA. *See* 13 C.F.R. § 314.7.

I. RELOCATION ASSISTANCE

The Recipient is subject to the provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 U.S.C. § 4601 *et seq.*) (the “Uniform Act”) and implementing regulations issued at 49 C.F.R. part 24. The Uniform Act establishes uniform policies for the fair and equitable treatment of persons, businesses, or farm operations affected by the acquisition, rehabilitation or demolition of real property acquired for a project financed wholly or in part with federal assistance funds. Recipients and any subrecipients are required to comply fully with the intent of the Uniform Act and to provide evidence of such compliance if requested. *See* 13 C.F.R. § 302.5.

J. EDA REVIEW OF PLANS AND SPECIFICATIONS

1. The Recipient (with the assistance of its architect/engineer) is responsible for the accuracy and completeness of the design, dimensions, details, proper selection of materials, and compliance with local building codes or ordinances, and is expected to use the "*EDA Contracting Provisions for Construction Projects*," which provides a list of applicable EDA and other federal requirements as guidance in developing all construction contracts.
2. Plans, specifications, and related documents must be submitted for EDA review and concurrence prior to advertising for bids. EDA's review is to ensure compliance with the Terms and Conditions of the Award and does not attest to the accuracy of design, dimensions, details, proper selection of materials, nor compliance with local building codes or ordinances. This responsibility rests with the Recipient.

EDA's review is intended to confirm that:

- (a) The project as designed complies with the scope of work as described in the project application and in the Award;
 - (b) Deductive alternates, if used, are taken in a specific order as shown in the bid documents;
 - (c) Any non-EDA funded work, if included, is identified so separate project progress and separate project costs can be determined; and
 - (d) The EDA project number and applicable EDA participation appears on the cover of all contract drawings and on the face sheet of the specification document(s).
3. EDA also will review for acceptability after advertising but before award of the contract if:
 - (a) The procurement is expected to exceed the simplified acquisition threshold (currently set at \$250,000) and is to be awarded without competition after one bid or offer is received in response to a solicitation;
 - (b) The proposed award is more than the simplified acquisition threshold and is to be awarded to other than the apparent low bidder under a sealed bid procurement;
 - (c) A proposed contract modification changes the scope of a contract or increases the contract amount above the simplified acquisition threshold;
 - (d) The Recipient's procurement procedures or operations fail to comply with the procurement standards set out in the Award; or
 - (e) The procurement, which is expected to exceed the simplified acquisition threshold, specifies a "name brand" product.
 4. Until EDA has reviewed and concurred with the Recipient's proposed contracts and related documents and determined they comply with the Terms and Conditions, the Recipient will be proceeding at its own risk regarding the eligibility of any costs incurred. *See* 13 C.F.R. § 305.11.

K. NON-EDA WORK

If the Recipient plans to include both EDA-funded and non-EDA-funded work in a single contract, the following requirements apply:

1. The plans and specifications must clearly define and separate costs included in the EDA project scope of work from other costs;

2. The Recipient may offer for bid and award work in addition to the EDA project, *provided*:
 - (a) the Recipient understands that EDA will participate only in the EDA-approved project; and
 - (b) the additional work does not adversely affect the original intent or economic impact of the EDA-approved project;
3. Plans and specifications must be drawn so that the EDA project is clearly identifiable at all times during construction; and
4. Bid underruns cannot be applied to fund work that is not a part of the EDA project. It is the responsibility of the Recipient to pay in full for all additional work beyond the scope of the EDA project. *See* 13 C.F.R. § 305.10.

Where a proposed contract includes EDA-funded and non-EDA-funded scope(s) of work, the contract will normally be awarded to the lowest bidder on all the work. EDA's participation will be determined based on the bid price for the lowest qualified bid for the EDA-funded scope of work. The Recipient must include pertinent information with the contract award documentation prior to submitting it for EDA concurrence.

L. ALTERNATE CONSTRUCTION PROCUREMENT METHODS

1. Recipients shall seek EDA's prior written approval to use alternate construction procurement methods to the traditional design/bid/build procedure (including lump sum or unit price-type construction contracts). These methods may include design/build, construction management at-risk and "in-house forces". If an alternate method is used, the Recipient shall submit to EDA for approval a construction services procurement plan and the Recipient must use a design professional to oversee the process. *See* 13 C.F.R. § 305.6.
2. If the Recipient elects to use "in-house forces", EDA will furnish specific guidance to the Recipient to determine if the cost for such work is eligible for EDA reimbursement. *See* section IV.F. of this Summary.
3. For all procurement methods, the Recipient must comply with the procedures and standards set forth in 2 C.F.R. part 200.

M. OVERRUN AT THE BID OPENING

If there is an overrun at bid opening, the Recipient may:

1. Take deductive alternatives to eliminate certain project elements in case of insufficient funds – if provided for in the bid documents – in the exact order shown on the invitation for bid until at least one of the responsive bids, less deductive alternative(s), results in a price within the budget for that item of work. It should be noted that the use of deductive alternates may result in a new low bidder. Therefore, care must be taken that the above procedure is followed exactly when deductive alternates are used to determine the lowest bid within the funds available.
2. Reject all bids and re-advertise if there is a rational basis for believing that re-advertising will result in a lower bid (*i.e.*, the Recipient will have the project redesigned or there will be wider advertising).

3. Augment the Recipient's share by an amount sufficient to cover the excess cost. If the Recipient intends to finance the overrun from its own funds, it must furnish a letter to EDA identifying the source of the additional funds and confirming that the funds are from an acceptable source, will be available as needed, and are not or will not be conditioned or encumbered in any way that would preclude its use consistent with the requirements of the Award.
4. Request in writing additional EDA financial assistance as a last resort. EDA may not approve the request for additional funds, which may require the termination of the project. *See* sections VII.C. and D. of this Summary.

V. REQUIREMENTS DURING CONSTRUCTION

A. THE RECIPIENT'S RESPONSIBILITIES

1. *General.* The Recipient (with the assistance of the architect/engineer) is responsible for:
 - (a) ensuring project completion in accordance with approved plans and specifications;
 - (b) monitoring project progress;
 - (c) keeping EDA advised of project progress;
 - (d) providing for adequate construction inspection; (e) paying costs incurred for the project promptly; and (f) monitoring the contractors' compliance with local, State and federal requirements. *See also* section III.B. of this Summary.
2. *EDA construction sign.* The Recipient is responsible for constructing, erecting and maintaining in good condition throughout the construction period a sign (or signs) in a conspicuous place at the project site indicating that the Federal government is participating in the project. EDA will provide specifications for the sign and may require more than one sign if site conditions so warrant. If the EDA-recommended sign specifications conflict with State or local law, the Recipient may modify such recommended specifications so as to comply with the State or local law. *See* 13 C.F.R. § 305.12.
3. *Inspection of construction.* The Recipient must provide competent project inspection during the construction period. The inspector may be an employee of the Recipient, an employee of the architect/engineer, or a person(s) under contract with the Recipient. EDA must review and concur with the extent of the inspection and the selection of the inspector.
4. *Occupancy prior to completion.* If the project or any part of it is to be occupied or used prior to its acceptance from the contractor, the Recipient must:
 - (a) follow the requirements of local or State law;
 - (b) notify EDA of the intent to occupy or use the facility and the effective date of the occupancy or use;
 - (c) secure the written consent of the contractor;
 - (d) secure an endorsement from the insurance carrier and consent of the surety permitting occupancy or use during the period of construction; and
 - (e) secure permanent fire and extended coverage insurance and, where applicable, grant the contractor a permit to complete construction.

Occupancy or use prior to final acceptance from the contractor is entirely at the Recipient's risk. *See* 13 C.F.R. § 305.14.

5. *Labor standards.* All contractors on EDA-assisted projects are required to perform their work in accordance with OSHA regulations and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§ 3701-3708), as supplemented by U.S. Department of Labor's regulations (29 C.F.R. parts 5 and 1926). The Recipient or its architect/engineer should periodically check the contractor's compliance. The Recipient shall notify EDA of all serious accidents and/or injuries that occur on the EDA-assisted project.
6. *Inspection for final acceptance.* The Recipient will schedule a final inspection when all construction has been completed, the architect/engineer has accomplished his/her final inspection and all deficiencies have been corrected. The project must be complete and functional before the final inspection is performed. Representatives of the Recipient, the architect/engineer and the contractor(s) will make the final inspection. EDA must be notified in advance of the final inspection so that an EDA representative also may have the opportunity to participate.
7. *Contractor payrolls.* The Recipient must require each contractor and subcontractor to maintain weekly payroll records. EDA may require that copies of payroll records be furnished to the applicable regional office.
8. *Equal employment opportunities.* The regulations at 41 C.F.R. § 60-1.7 issued pursuant to Executive Order 11246, "*Equal Employment Opportunity*", as amended, require all "prime contractors" and "subcontractors," as those terms are defined in 41 C.F.R. § 60-1.3, to submit compliance reports regarding equal employment opportunities. The purpose of the regulations at 41 C.F.R. part 60-1 is to achieve the aims of parts II, III and IV of Executive Order 11246, as amended, for promoting and ensuring equal opportunity for all persons, without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin, employed or seeking employment with Federal government contractors or with contractors performing under federally-assisted construction contracts.

B. CONTRACT CHANGE ORDERS

1. After the construction contracts have been executed, it may become necessary to alter them. This requires a formal contract change order, issued by the Recipient and accepted by the contractor. All contract change orders must be reviewed by EDA, even if EDA is not participating in the cost of the change order or the contract price is to be reduced. *See* 13 C.F.R. § 305.13.
2. The work on the project may continue pending EDA review and concurrence with the change order but the Recipient should be aware that all such work is at the Recipient's risk as to whether the cost for the work will be an eligible project cost for EDA participation until EDA concurrence is received for the change order.
3. The Recipient (or its architect/engineer) shall perform a cost or price analysis in connection with every change order that affects the contract price. Generally, change orders should be submitted to EDA for review and concurrence as such changes occur. The Recipient will prepare proposed contract change orders in sufficient quantity so that one (1) copy can be furnished to EDA for concurrence. Necessary supporting statements, estimates, specifications and plans should be attached. Before submission to the EDA regional office, the change order must be signed by the Recipient, the architect/engineer and the contractor. The Recipient will be notified in writing of EDA's concurrence if the change order is acceptable to EDA.

4. EDA will not allow changes to the authorized purpose and intent of the project. Change orders that add minimally or incidentally to the cost of the project but do not alter the project scope may be allowed by EDA, *provided*, that either:
 - (a) The Recipient has agreed in writing to fund the additional cost, in which case all work involved in the accomplishment of the change order will be an ineligible project cost and no EDA funds will be used to pay for it; or
 - (b) There are sufficient funds remaining in the project budget to cover the change order without jeopardizing the completion of the project.
5. EDA will not approve EDA financial participation in change orders that are solely for the purpose of using excess funds resulting from an underrun of one or more of the items in the EDA-approved project budget. EDA will concur with a change order if the work in the change order is within the project scope and is necessary for the proper implementation of the project.
6. Unit prices are often used as a basis on which to make a contract award. In addition, they may be used for establishing actual costs where actual quantities differ from estimated quantities. Variations will normally require a change order to the contract whether or not a change in unit price is involved. Any increase in quantity that will result in an overall project cost overrun will require a change order to the contract. Any change to a unit price shown in the contract documents will require a change order to the contract. A change order also may be required at project completion to establish final quantities for unit price contracts.

C. SPECIFIC REQUIREMENTS FOR SUBCONTRACTORS

1. The Recipient is responsible for ensuring that the contractor causes applicable provisions to be inserted in all subcontracts to bind subcontractors to EDA and Departmental requirements as contained in the Terms and Conditions of the Award and in Appendix II to 2 C.F.R. part 200, as appropriate.
2. Each subcontractor must agree to comply with all applicable federal, State, and local requirements.
3. As required by 2 C.F.R. § 200.213, the Recipient (or subrecipient) must not make any award or permit any award (sub-grant or contract) at any tier to any party which is debarred or suspended or is otherwise excluded from or ineligible for participation in federal assistance programs under 2 C.F.R. part 180 and Executive Orders 12549, "Debarment and Suspension" and 12689, "Debarment and Suspension." The Recipient may access the *System for Award Management* ("SAM"), maintained by the General Services Administration, at www.sam.gov/. See also 2 C.F.R. part 1326.
4. The Terms and Conditions of the Award may impose additional requirements, which the Recipient will be required to have the prime contractor impose on any subcontractor(s).

D. CONTRACTING STANDARDS

1. *States.* If a State is the Recipient of EDA investment assistance, when procuring property or services, the State must follow the same policies and procedures it uses for procurements from its non-federal funds. The State will comply with 2 C.F.R. § 200.322 dealing with the procurement of recovered materials and ensure that every

purchase order or other contract includes clauses required by Appendix II to 2 C.F.R. part 200.

2. *Recipients other than States.* Consistent with the requirements of 2 C.F.R. § 200.318, a Recipient of EDA investment assistance other than a State will use its own documented procurement procedures which reflect applicable State and local laws and regulations; provided that the procedures conform to applicable federal law and the standards identified in 2 C.F.R. §§ 200.318 – 200.326. A Recipient may request EDA to review its procurement system to determine whether its system meets these standards. *See* 2 C.F.R. § 200.324(c)(1).

Additionally, the Recipient or subrecipient may self-certify its procurement system. Under a self-certification procedure, EDA may rely on written assurances from the Recipient or subrecipient that it is complying with the standards in 2 C.F.R. §§ 200.318 – 200.326. The Recipient or subrecipient must cite specific policies, procedures, regulations, or standards as being in compliance with 2 C.F.R. §§ 200.318 – 200.326, and have its system available for EDA to review. *See also* section IV.G. for special provisions applicable to certain Indian Tribal Recipients.

3. *Standards of conduct.* Recipients shall maintain a written code of conduct, which shall govern the actions of any Interested Party (as defined in 13 C.F.R. § 300.3) engaged in the award and administration of contracts supported by EDA funds. No Interested Party shall participate in selection or in the award or administration of a contract supported by EDA funds if a conflict of interest, real or apparent, is or could be involved. A conflict may arise when any Interested Party has a financial or personal interest in the firms selected for award. A conflict also may exist where there is an appearance that an Interested Party's objectivity in performing his or her duties is impaired. *See* 13 C.F.R. § 302.17 and 2 C.F.R. § 200.318(c).
4. *Awards to responsible contractors.* Recipients will make awards only to responsible contractors possessing the ability to perform successfully under the terms and conditions of a proposed procurement. Consideration will be given to such matters as contractor integrity, compliance with public policy, record of past performance and financial and technical resources. *See* 2 C.F.R. § 200.318(h).
5. *Maintenance of records.* Recipients will maintain records sufficient to detail the history of each procurement transaction related to the EDA project. These records will include but are not necessarily limited to the rationale for the method of procurement, selection of contract type, contractor selection or rejection, and the basis for concluding the contract price. *See* 2 C.F.R. § 200.318(i).
6. *Settlement of issues.* Recipients alone is responsible, in accordance with good administrative practice and sound business judgment, for the settlement of all contractual and administrative issues arising out of procurements. These issues include, but are not limited to, source evaluation, protests, disputes, and claims. EDA will not substitute its judgment for that of the Recipient unless the matter, as determined in EDA's sole discretion, primarily involves a federal concern.
7. *Wage rate requirements.* Wage rates paid for labor must not be less than the prevailing area wages, as determined by the U.S. Secretary of Labor and must be embodied in the construction contract pursuant to the requirements of the Davis-Bacon Act, as amended (40 U.S.C. § 3141 *et seq.*). *See also* section IX. (Appendix) of this Summary.

E. COMPETITIVE PROCUREMENT REQUIREMENTS

1. *General.* All procurement transactions in relation to the EDA project must be conducted in a manner providing full and open competition consistent with applicable federal requirements. *See* 2 C.F.R. § 200.319.
2. *Geographic preferences.* Recipients must conduct procurements in a manner that prohibits the use of statutorily or administratively imposed in-State or local geographic preferences in the evaluation of bids or proposals, except in those cases where applicable federal statutes expressly mandate or encourage geographic preference. Nothing in this guidance preempts State licensing laws. When contracting for architectural and engineering services, geographic location may be a selection criterion, provided its application leaves an appropriate number of qualified firms (given the nature and size of the project) to compete for the contract. *See* 2 C.F.R. § 200.319.
3. *Written selection procedures.* Recipients must have written selection procedures for procurement actions. These procedures must ensure that all solicitations:

- (a) Incorporate a clear and accurate description of the technical requirements for the material, product or service to be procured. Such descriptions must not contain features that unduly restricts competition. The description may include a statement of the qualitative nature of the material, product or service to be procured and, when necessary, must set forth those minimum essential characteristics and standards to which it must conform if it is to satisfy its intended use. Detailed product specifications should be avoided if possible.
When it is impractical or uneconomical to make a clear and accurate description of the technical requirements, a "brand name or equivalent" description may be used as a means to define the performance or other salient requirements of the material, product or service. The specific features of a name brand which must be met by offerors must be clearly stated; and

- (b) Identify all requirements which offerors must fulfill and all factors to be used in evaluating bids or proposals.

See 2 C.F.R. § 200.319.

4. *Bids submitted for alternative materials.*

- (a) Should the Recipient, acting upon the advice of his/her consultant architect/engineer, desire to obtain competitive prices for differing materials, such bids should be requested on the basis of "alternate bids." As used herein, this term refers to the method used to obtain bids on more than one material to be used for the same purpose. For example, for 2,000 linear feet of sewer line, Bid A might call for the pipe material to be cast iron. Bid B might call for the pipe material to be ductile iron. Bid C might call for the material to be asbestos cement.
- (b) If bids are asked for on the basis of two or more alternate bids, the bid documents must clearly state that the contract will be awarded to the bidder having the lowest responsible bid price based upon the availability of funds.
- (c) If the Recipient wishes to use a material that will result in increased cost, EDA may permit the use of such material, but the amount of EDA's participation in the project must remain based on the lowest bid from a responsible bidder.

5. *Allowable methods of procurement and related requirements.*

- (a) *Procurement by sealed bids (formal advertising).* Bids are to be publicly solicited and a firm fixed-price contract (lump sum or unit price) is to be awarded to the bidder whose bid, conforming to all material terms and conditions of the invitation for bids, is lowest in price. The sealed bid method is the preferred method for procuring construction services if the conditions in the following sentence are met. In order for sealed bidding to be feasible, the following conditions should be present: (i) a complete, adequate, and realistic specification or purchase description is available; (ii) two or more responsible bidders are willing and able to compete effectively for the business; and (iii) the procurement lends itself to a firm fixed price contract and the selection of the successful bidder can be made principally on the basis of price.

The following requirements apply to sealed bids:

- (i) The invitation for bids is publicly advertised and bids must be solicited from an adequate number of known suppliers, providing them sufficient time prior to the date set for the opening of bids;
- (ii) The invitation for bids, which includes any applicable specifications and pertinent attachments, must adequately define the items or services, in order for the bidder to properly respond;
- (iii) All bids are publicly opened at the time and place prescribed in the invitation for bids;
- (iv) A firm fixed-price contract award will be made in writing to the lowest responsive responsible bidder. Where specified in bidding documents, factors such as discounts, transportation cost, and life cycle costs must be considered in determining which bid is lowest. Payment discounts will only be used to determine the low bid when prior experience indicates that such discounts are usually taken advantage of; and
- (v) Any or all bids may be rejected if there is a sound and properly documented reason.

See 2 C.F.R. § 200.320(c).

The advertising process for inviting bids should be in compliance with applicable State or local requirements where the project will be constructed. In the absence of State or local requirements, the advertisement should appear in publications of general circulation a minimum of four (4) times within a 30-day period prior to the opening of bids. Generally, a minimum of thirty (30) days should be allowed for submission of bids.

- (b) *Procurement by competitive proposals.* Competitive proposals are normally conducted with more than one source submitting an offer, and either a fixed price or cost-reimbursement type contract is awarded. This method generally is used when conditions are not appropriate for the use of sealed bids. The following requirements apply to competitive proposals:
- (i) Requests for proposals are publicized and identify all evaluation factors and their relative importance; any response to a publicized request for proposals must be considered to the maximum extent practical;
 - (ii) Proposals are solicited from an adequate number of qualified sources (generally, EDA requires responses from at least three responsible firms);
 - (iii) Recipients have a written method for conducting technical

- (iv) evaluations of the proposals received and for selecting awardees; Awards are made to the responsible firm whose proposal is most advantageous to the program, with price and other factors considered, as appropriate; and
- (v) Recipients may use competitive proposal procedures for qualification-based procurement of architectural/engineering professional services whereby competitors' qualifications are evaluated and the most qualified competitor is selected, subject to negotiation of fair and reasonable compensation. This method, where price is not a selection factor, can be used only for procuring architectural/engineering professional services. It cannot be used to purchase other types of services though architectural/engineering firms are a potential source to perform the proposed effort.

See 2 C.F.R. § 200.320(d).

- (c) *Procurement by noncompetitive proposals.* This technique requires EDA's prior written concurrence and is conducted by solicitation of a proposal from only one source. Procurement by noncompetitive proposals may be used only when the award of a contract is infeasible under small purchase procedures, sealed bids or competitive proposals and when one or more of the following circumstances apply:

- (i) The item is available only from a single source;
- (ii) The public exigency or emergency for the requirement will not permit a delay resulting from competitive solicitation;
- (iii) EDA expressly authorizes noncompetitive proposals in response to a written request from the Recipient; or
- (iv) After soliciting a number of sources, competition is determined inadequate.

See 2 C.F.R. § 200.320(f).

- (d) *Procurement by Micro Purchases.* Procurement by micro-purchase is the acquisition of supplies or services, the aggregate dollar amount of which does not exceed \$10,000 (or \$2,000 in the case of acquisitions for construction subject to the Davis-Bacon Act). To the extent practicable, the non-Federal entity must distribute micro-purchases equitably among qualified suppliers. Micropurchases may be awarded without soliciting competitive quotations if the non-Federal entity considers the price to be reasonable. The \$10,000 threshold is periodically adjusted for inflation. For more information, please see Uniform Guidance (2 CFR Part 200.67 and 200.320(a)).

- (e) *Procurement by Small Purchase Procedures.*

Small purchase procedures are those relatively simple and informal procurement methods for securing services, supplies, or other property that do not cost more than the Simplified Acquisition Threshold of \$250,000. If small purchase procedures are used, price or rate quotations must be obtained from an adequate number of qualified sources. The \$250,000 threshold is periodically adjusted for inflation. For more information, see *Uniform Guidance* (2 CFR Part 200.320(b)).

- (f) *Contract cost analysis.*

- (i) The Recipient must perform a cost or price analysis in connection with every procurement action in excess of \$150,000, including contract modifications. The method and degree of analysis is dependent on the facts surrounding the particular procurement situation, but as a starting point, the Recipient must make independent estimates before receiving bids or proposals.
- (ii) The Recipient must negotiate profit as a separate element of the price for each contract in which there is no price competition and in all cases where cost analysis is performed. To establish a fair and reasonable profit, consideration must be given to the complexity of the work to be performed, the risk borne by the contractor, the contractor's investment, the amount of subcontracting, the quality of its record of past performance, and industry profit rates in the surrounding geographical area for similar work
- (iii) Costs or prices based on estimated costs for contracts under grants will be allowed only to the extent that costs incurred or cost estimates included in negotiated prices are consistent with federal cost principles (*see* section VI.A.3. of this Summary). The Recipient may reference its own cost principles that comply with applicable federal cost principles.
- (iv) The cost plus a percentage of cost and percentage of construction cost methods of contracting must not be used.

See 2 C.F.R. § 200.323

- (g) *Bonding and insurance requirements.* For construction or facility improvement contracts or for subcontracts exceeding \$150,000, EDA may accept the bonding policy and requirements of the Recipient or subrecipient if EDA or the pass-through entity determines that the Federal interest is adequately protected. If such a determination has not been made, the following minimum requirements shall apply:
 - (i) A bid guarantee must be obtained from each bidder equivalent to five (5) percent of the bid price. The "bid guarantee" must consist of a firm commitment such as a bid bond, certified check or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of the bid, execute such contractual documents as may be required within the time specified.
 - (ii) A performance bond must be required from the contractor for one hundred (100) percent of the contract price. A "performance bond" is one executed in connection with a contract to secure fulfillment of all the contractor's obligations under such contract.
 - (iii) A payment bond must be required from the contractor for one hundred (100) percent of the contract price. A "payment bond" is one executed in connection with a contract to ensure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contracts.

See 2 C.F.R. § 200.325.

The Recipient shall, at a minimum, provide the equivalent insurance coverage for real property and equipment acquired or improved with EDA funds as provided for property owned by the Recipient. Federally owned property need not be otherwise insured unless required by the Terms and Conditions of the Award. *See* 2 C.F.R. § 200.310

The Recipient shall require each construction contractor and all

subcontractors to maintain, during the life of its contract, Workmen's Compensation Insurance, Public Liability Insurance, and such other types of special coverage required by applicable State or local law. Where appropriate, the Recipient shall require the prime contractor to provide Builder's Risk Insurance as part of the construction contract. In all cases, the Recipient is responsible for seeing that coverage is obtained and kept in force. When obtained by the Recipient directly, such coverage is an eligible project cost.

VI. DISBURSEMENT OF GRANT FUNDS AND FINANCIAL ADMINISTRATION

A. PRE-DISBURSEMENT REQUIREMENTS

1. *General.* The Grants Officer determines the appropriate method of payment. Unless otherwise specified in a special award condition, the method of payment will be reimbursement. Disbursements of grant funds will be made by electronic transfer based on the Recipient's actual rate of expenditure. EDA will make disbursements based on the percentage of EDA participation, but in no event for more than the total sum stated in the Award. The initial disbursement will be made only after the following conditions have been met:

- (a) EDA determines that the Recipient has satisfied all applicable Terms and Conditions of the Award (*see* 13 C.F.R. § 305.9(b));
- (b) The Recipient has completed and submitted Form SF-3881, "ACH Vendor/Miscellaneous Payment Enrollment Form;"
- (c) The Recipient has requested disbursement by submitting Form SF-271, "Outlay Report and Request for Reimbursement for Construction Programs" (OMB Control No. 0348-0002), for incurred costs that are itemized and eligible;
- (d) The Recipient certifies that its proportionate share of funds (including overruns) is on deposit; and
- (e) The Recipient meets such other requirements as EDA may establish.

Recipients shall disburse program income, rebates, refunds, contract settlements, and audit recoveries before requesting additional grant disbursements.

2. *Allowable costs.* EDA allowable costs are determined by reference to Subpart E of 2 C.F.R. part 200, "Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards. Generally, costs that are allowable include salaries, supplies and other expenses that are reasonable and necessary for the completion of the scope of work. Allowable costs must be determined in accordance with the cost principles.
3. *Acceptable costs and contributions.* In determining the amount of the non-federal share of the cost of a project, EDA may provide credit towards the non-federal share of all contributions both in cash and in-kind, fairly evaluated, including contributions of space, equipment, assumptions of debt, and services. *See* section 204(b) of PWEDA (42 U.S.C. § 3144).

The matching share may include funds from other federal agencies only if authorized by statute that allows such use, which may be determined by EDA's reasonable interpretation of such authority. *See* 13 C.F.R. § 300.3.

Neither cash nor the value of in-kind contributions may count towards satisfying a cost-sharing requirement of a grant agreement if it has been or will be counted towards

satisfying a cost-sharing requirement of another federal grant agreement, a federal procurement contract, or any other award of federal funds. The eligible applicant must show that the matching share is committed to the EDA project, will be available as needed and is not or will not be conditioned or encumbered in any way that would preclude its use consistent with the requirements of the Award. See 13 C.F.R. § 301.5.

B. INTERIM DISBURSEMENTS

After the initial disbursement has been made, the Recipient may request interim disbursements by submitting Form SF-271 and including substantiating invoices and/or vouchers, as required for reimbursement of EDA's share of eligible project costs. Interim disbursements will normally continue until ninety (90) percent of the grant funds have been disbursed, with the remaining ten (10) percent normally held pending final disbursement and project close-out.

C. FINAL DISBURSEMENT

When project construction and final inspection have been completed, or substantially completed as determined by EDA, and the Recipient has accepted the project from the contractor, the Recipient can begin the close-out process by submitting the following documentation to EDA:

1. A request for final disbursement on an executed Form SF-271;
2. A written certification that all costs charged against the Award (EDA share and non-Federal share) are for eligible activities and represent allowable costs, for which there is documentation in the Recipient's records;
3. An executed certificate of final acceptance signed by the Recipient and the Recipient's architect/engineer;
4. The Recipient's certification that its currently valid single or program-specific audit in accordance with Subpart F of 2 C.F.R. part 200, if applicable, does not contain any material findings (if the Recipient's currently valid audit does contain material findings, the Recipient shall submit the applicable audit preferably via email to the Project Officer, who will review with the Grants Officer);
5. The Recipient's certification that its currently valid audit (in accordance with Subpart F of 2 C.F.R. part 200), if applicable, has been submitted to the Federal Audit Clearinghouse; and
6. Other documentation as may be required by EDA.

The Recipient will be advised by EDA of costs found eligible, costs found ineligible and the reasons for findings of ineligibility. If a balance of the grant is due to the Recipient, the balance will be paid by wire transfer. If the Recipient has received a grant amount in excess of the amount due the Recipient, the Recipient must refund the excess to EDA. The Recipient shall contact the Project Officer for refund instructions.

VII. AWARD AMENDMENTS, APPROVALS, AND NOTIFICATIONS

Between approval and closeout of an EDA construction project, modifications to the Terms and Conditions may be necessary to resolve unforeseen problems. In most instances, the proposed modification can be accomplished only if EDA agrees to a formal amendment to the Award.

A. AMENDMENTS

In order to amend the Award, the Project Officer shall prepare Form CD-451, "Amendment to Financial Assistance Award," for execution by both the Regional Director and the Recipient's authorized representative. Form CD-451 is required for any of the following amendments to an Award:

1. Changes to project scope of work;
2. Budget revisions requiring additional EDA or non-EDA sources of funds;
3. Budget revisions that result in cumulative transfers among direct cost categories in excess of ten (10) percent of the total project cost when the federal share exceeds \$150,000;
4. The inclusion of certain costs for which EDA's prior approval is needed under 2 C.F.R. part 200, "Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards;
5. Change of site location;
6. Change to or addition of Recipient;
7. Time extensions; and
8. Modifications to the Terms and Conditions of the Award, other than time extensions.

See 2 C.F.R. § 200.308.

When Form CD-451 is required, the Recipient must submit a request for amendment in writing to the EDA regional office. If the request is approved, the EDA regional office completes and transmits the Form CD-451 to the Recipient. The Recipient's authorized representative must execute the Form CD-451 and return it to the EDA regional office.

B. TIME SCHEDULE EXTENSIONS

1. Unless otherwise authorized in 2 CFR § 200.308, or a special award condition, any extension of the period of performance can only be authorized by the Grants Officer in writing. A verbal or written assurance of funding from other than the Grants Officer, including Regional Office staff other than the Grants Officer, does not constitute authority to obligate funds for programmatic activities beyond the expiration date of the period of performance.
2. The Recipient is responsible for implementing the project in accordance with the project development time schedule contained in the Award. As soon as the Recipient becomes aware that it will not be possible to meet the project development time schedule, it must notify the EDA regional office. The Recipient's notice to EDA must contain the following information:
 - (a) An explanation of the reason for the Recipient's inability to complete work by the specified date (e.g., a lengthy period of unusual weather delayed the contractor's ability to excavate the site, major re-engineering required in order to obtain State or federal approvals, unplanned environmental mitigation required);
 - (b) A statement that no other changes to the project are contemplated;
 - (c) Documentation that demonstrates there is still a bona fide need for the project; and
 - (d) A statement that no further delay is anticipated and that the project can be completed within the revised time schedule.
3. EDA expects construction on a project to start within two (2) years from the date of grant award. In accordance with EDA policy, the maximum construction start time extension

that any region can grant is restricted to a date wherein the project will still be completed within five (5) years from the date of grant award. If the delayed construction start date might impact the project being completed within five (5) years or any extension beyond that five (5) year limit must be approved by the Assistant Secretary of Commerce for Economic Development.

4. EDA reserves the right to withhold disbursements while the Recipient is not in compliance with the time schedule and to suspend or terminate an Award if the Recipient fails to proceed with reasonable diligence to accomplish the project as intended. *See also* sections IV.C and VII.F. of this Summary.

C. BUDGET REVISIONS

1. The tabulation of estimated project costs contained in the Award (i.e., the EDA-approved budget) is the controlling budget plan for the project. The Recipient must notify EDA of any proposed deviation from the budget or program plans in accordance with 2 C.F.R. § 200.308, including any change in scope of work or the objective of the project (even if there is no associated budget revision requiring prior written approval). If prior written approval is not required under 2 C.F.R. § 200.308, the Recipient may request the Grants Officer's review of and guidance on proposed revisions to the budget.
2. The transfer of funds from line items other than the contingencies line item may be permitted, *provided* there will be no significant adverse effect on the objective of the line item from which the transfer is to be made.
3. Transfers shall not be permitted if such transfers would cause any Federal appropriation, or part thereof, to be used for purposes other than those intended. This transfer authority does not authorize the Recipient to create new budget categories within an approved budget unless the Grants Officer has provided prior written approval. *See* 2 C.F.R. § 200.308.
4. The construction line item will be revised at the time of contract award to reflect the actual contract amount(s). Underrun amounts shall be transferred to the contingencies line item. Contingency funds are to be used to address situations resulting from unknown conditions and changes required for the fulfillment of authorized project activities under the Award. EDA may approve the use of underrun funds to increase the EDA share of the project or further improve the project, as long as EDA determines that the use is consistent with the original purpose of the approved-EDA investment. *See* 13 C.F.R. § 308.1.

D. ADDITIONAL EDA FUNDING

1. In accepting financial assistance from EDA, the Recipient agreed to fund any overrun(s) from non-Federal sources. Additional EDA assistance for a project may not be approved. To be considered for approval, it must compete with other requests for scarce EDA funds.
2. If an overrun occurs as a result of the construction contract bid opening, before EDA will consider a formal request for additional EDA funds, it is necessary for the Recipient to furnish the following documentation:
 - (a) A written statement from the Recipient's architect/engineer, giving reasons for his/her professional opinion that redesign of the project within the approved scope, or using new or additional deductive alternates cannot reasonably be expected to

- (b) reduce the cost to within the available funds; and
 - (b) A written statement from the administrative head of the Recipient's organization justifying why the Recipient cannot furnish the additional funds required, why non-EDA sources of funds cannot be secured, and certifying that the Recipient's borrowing capacity has been exhausted.
3. EDA's consideration of a request for additional EDA assistance does not indicate approval.

See 13 C.F.R. § 305.10.

E. ADMINISTRATIVE APPROVALS AND NOTIFICATIONS

1. EDA shall issue a written administrative approval for budget revisions that result in the cumulative transfer among direct cost categories of *less* than 10 percent of the total project cost and to approve budget revisions that result in the transfer of funds between direct and indirect cost categories, as long as those transfers are also *less* than 10 percent of the total project cost.
2. EDA shall issue a written administrative notification upon EDA's approval and acceptance of the Recipient's documentation of compliance with special award conditions (for example, compliance with environmental or historic preservation law requirements) and upon EDA's change in the Project Officer or other administrative official assigned to the Recipient's project, if applicable.

F. TERMINATION OF INVESTMENT ASSISTANCE

1. In accordance with 2 C.F.R. § 200.339, an Award may be terminated in whole or in part as follows:
 - (a) *Termination by EDA for the Recipient's Failure to Comply with any Term or Condition of the Award.* Examples of recipient failure to comply with terms and conditions of the award include if:
 - (i) Any representation made by the Recipient to EDA in connection with the application for the Award is incorrect or incomplete in any material respect;
 - (ii) The project has changed substantially, without EDA approval, so as to affect significantly the accomplishment of the project as intended (including an unauthorized use of property as provided in 13 C.F.R. § 314.4.);
 - (iii) The Recipient has violated commitments it made in its application and supporting documents or has violated any of the terms and conditions of the Award;
 - (iv) The conflicts-of-interest rules at 13 C.F.R. § 302.17 are violated; or
 - (v) The Recipient fails to report immediately to EDA any change of authorized representative acting in lieu of or on behalf of the Recipient.
 - (b) *Termination by EDA for Cause.* EDA may terminate the Award for cause if required by a circumstance beyond EDA's control, such as a Congressional

mandate.

- (c) *Termination by the Recipient.* The Recipient may terminate the Award in whole or in part upon sending the EDA Grants Officer written notification setting forth the reasons for such termination, the effective date, and, in the case of partial termination, the portion to be terminated. However, if EDA determines in the case of partial termination that the reduced or modified portion of the EDA Award will not accomplish the purposes for which the EDA Award was made, EDA may terminate the Award in its entirety.
 - (d) *Termination Upon Mutual Agreement.* EDA and the Recipient may mutually agree to terminate the Award in whole or in part. In such cases, EDA and the Recipient must agree upon the termination conditions, including the effective date and, in the case of partial termination, the portion to be terminated.
2. If the Award is wholly or partially terminated, the Recipient remains responsible for compliance with the requirements in 2 C.F.R. §§ 200.343 and 200.344.
 3. Failure to comply with the provisions of this Award may be grounds for appropriate enforcement action pursuant to 2 C.F.R. § 200.338, including initiating suspension and debarment proceedings in accordance with 2 CFR parts 180 and 1326. *See also* 2 C.F.R. § 200.213.
 4. In taking any remedy for non-compliance, EDA will provide the Recipient an opportunity to object and provide information and documentation challenging the suspension or termination action. *See* 2 C.F.R. § 200.341.
 5. Costs resulting from obligations incurred by the Recipient during a suspension or after termination of the Award are not allowable unless EDA expressly authorizes them in the notice of suspension or termination, or subsequently. However, costs during suspension or after termination are allowable if:
 - (a) The costs result from obligations that were properly incurred by the Recipient before the effective date of the suspension or termination, are not in anticipation of it; and
 - (b) The costs would be allowable if the Award were not suspended or expired normally at the end of the period of performance in which the termination takes effect. *See* 2 C.F.R. § 200.342.
 6. When EDA terminates an award prior to the end of the period of performance due to the Recipient's material failure to comply with the Award terms and conditions, EDA must report the termination to the OMB-designated integrity and performance system accessible through SAM. *See* 2 C.F.R. § 200.339.
 7. Other Federal agencies that consider making an Award to the Recipient during the five-year period an EDA termination is available in SAM, must consider that information in judging whether the Recipient is qualified to receive the Award, when the Federal share of the Award is expected to exceed \$150,000 over the period of performance. *See* 2 C.F.R. § 200.205.

VIII. POST-CONSTRUCTION REQUIREMENTS

A. ORGANIZATION-WIDE, PROGRAM-SPECIFIC, AND PROJECT AUDIT REQUIREMENTS

1. *Requirement to have an audit performed.* Organization-wide or program-specific audits must be performed in accordance with the Single Audit Act Amendments of 1996, as implemented by subpart F of 2 C.F.R. part 200. Recipients that expend \$750,000 or more in Federal awards during their fiscal year shall have an audit conducted for that year in accordance with the requirements set forth in subpart F of 2 C.F.R. part 200.
2. *Requirement to submit audit to Federal Audit Clearinghouse.* Within the earlier of 30 calendar days after receipt of the auditor's report, or nine months after the end of the audit period, the Recipient must submit a copy of the audit to the Federal Audit Clearinghouse website at <http://harvester.census.gov/sac/>.

If it is necessary to submit using paper, the address for submission is:

Federal Audit
Clearinghouse
Bureau of the Census
1201 E. 10th Street
Jeffersonville, IN 47132

Within 90 days of the end of the fiscal year of a Recipient subject to subpart F of 2 C.F.R. part 200, the entity is responsible for notifying the Grants Officer of the amount of Federal awards, including all EDA and non-EDA awards, the Recipient expended during its fiscal year.

A Recipient that expends less than \$750,000 in Federal awards during its fiscal year is exempt from Federal audit requirements for that year, except as noted at 2 C.F.R. § 200.503, but records must be available for review and audit by EDA, DOC, or other designated Government officials.

Failure to provide audit reports within the timeframes specified may result in appropriate enforcement action, up to and including termination of the Award, and may jeopardize eligibility for receiving future awards.

3. *EDA-specific audit requirements.* EDA's Public Works and Economic Adjustment Assistance programs generally have specific audit guidelines that will be incorporated into the Award and may be found in the annual Compliance Supplement, which is Appendix XI to 2 C.F.R. part 200 and is available on OMB's website (https://www.whitehouse.gov/omb/circulars_default). When EDA does not have a program-specific audit guide available for the program, the auditor will follow the requirements for a program-specific audit as described in 2 C.F.R. § 200.507. The Recipient may include a line item in the budget for the cost of the audit for approval. A copy of the program-specific audit shall be submitted to the Grants Officer.
4. *Recipient responsibility.* Recipients are responsible for compliance with the above audit requirements and for informing the Grants Officer of the status of their audit, including when the relevant audit has been completed and submitted in accordance with the requirements of this section. In accordance with 2 C.F.R. § 200.331(d)(3), pass-through entities are responsible for issuing a management decision for any audit findings pertaining to the Award provided to a subrecipient.

5. *Requirement to submit audit to EDA.* If the Recipient's currently valid audit required under subpart F of 2 C.F.R. part 200 contains material findings, the Recipient must submit a copy of the audit to the Project Officer, who will review it with the Grants Officer.

B. DEPARTMENTAL AUDIT RESOLUTION PROCESS

1. Under the Inspector General Act of 1978, as amended (5 U.S.C. App. 3, § 1 *et seq.*), EDA or the Department's Office of the Inspector General ("OIG") may conduct an audit of the Award at any time. The Department's Inspector General, or any of his or her duly authorized representatives, shall have access to all pertinent books, documents, papers and records of the Recipient, whether written, printed, recorded, produced or reproduced by any electronic, mechanical, magnetic or other process or medium, in order to make audits, inspections, excerpts, transcripts or other examinations as authorized by law. This right also includes timely and reasonable access to the Recipient's personnel for the purpose of interview and discussion related to such documents. *See* 2 C.F.R. § 200.336 and 13 C.F.R. § 302.14.

When the OIG requires a program audit on the Award, the OIG will usually make the arrangements to audit the Award, whether the audit is performed by an independent accountant under contract with the Department, OIG personnel, or any other federal, State or local audit entity.

2. An audit of the Award may result in the disallowance of costs incurred by the Recipient and the establishment of a debt (an account receivable) due to EDA. For this reason, the Recipient should take seriously its responsibility to respond to all audit findings and recommendations with adequate explanations and supporting evidence when disputing audit determinations.
3. In accordance with the *Federal Register* notice dated January 27, 1989 (54 *Fed. Reg.* 4053), a Recipient has the following opportunities to dispute the proposed disallowance of costs and the establishment of a debt after an audit:
 - (a) The Recipient has thirty (30) business days from the date of the transmittal of the OIG's "Draft Audit Report" to submit written comments and documentary evidence.
 - (b) The Recipient has thirty (30) business days from the date of the transmittal of the "Final Audit Report" to submit written comments and documentary evidence. There will be no extension of this deadline.
 - (c) EDA will review any documentary evidence submitted by the Recipient, and will notify the Recipient of the results in an "Audit Resolution Determination Letter." The Recipient has thirty (30) business days from the date of receipt of the Audit Resolution Determination Letter to submit a written appeal. There will be no extension of this deadline. The appeal is the last opportunity for the Recipient to submit written comments and documentary evidence that dispute the validity of the Audit Resolution Determination Letter.
 - (d) An appeal of the Audit Resolution Determination Letter does not prevent the establishment of any audit-related debt nor does it prevent the accrual of interest on such debt. If the Audit Resolution Determination Letter is overruled or modified on appeal, appropriate corrective action will be taken retroactively. An appeal will stay the offset of funds owed by the Recipient against funds due to the Recipient.
 - (e) EDA or the Department, as applicable, will review the Recipient's appeal. EDA

will notify the Recipient of the results in an "Appeal Determination Letter." After the opportunity to appeal has expired or after the appeal determination has been rendered, EDA or the Department will not accept any further documentary evidence from the Recipient. No other EDA or Department administrative appeals are available.

C. PROPERTY MANAGEMENT

1. Any property that is acquired or improved, in whole or in part, with EDA investment assistance, whether through a grant or a cooperative agreement, is subject to the requirements of PWEDA and the regulations at 13 C.F.R. part 314. Requirements related to title, authorized use, successor Recipient, property disposition, and Federal Share (as defined in 13 C.F.R. § 314.5) are set out at 13 C.F.R. part 314.
2. During the estimated useful life of the project involving the acquisition, construction or improvement of a building, as determined by EDA, EDA retains a Federal Interest in the project property. *See* section III.A. of this Summary; 13 C.F.R. § 314.2; and 2 C.F.R. §§ 200.41, 200.316. The Federal Interest secures compliance with the ownership, purpose, scope and intended use of the EDA project and may be reflected by a recorded lien, covenant, statement or other recordable instrument setting forth EDA's property interest (*e.g.*, a mortgage). *See* 13 C.F.R. § 314.8.
3. A Recipient may request a release of the Federal Interest in property acquired or improved with EDA investment assistance and fully compensate EDA for its Federal Share in the property. A release pursuant to 13 C.F.R. § 314.2(b) gives the Recipient title to the property free and clear of any further governmental interest except with respect to non-discrimination requirements set forth in 13 C.F.R. § 302.20 and the inherently religious activities prohibition. *See* 13 C.F.R. §§ 302.20 and 314.10.

A Recipient may request a release of the Federal Interest in project assets where the estimated useful life has expired or for projects that are subject to an estimated useful life in excess of the statutory twenty (20) year limitation. *See* section 601(d)(2) of PWEDA (42 U.S.C. § 3211) and 13 C.F.R. § 314.10. In that case, EDA may release its Federal Interest, however, the property acquired or improved with EDA investment assistance may not be used: (a) in violation of the nondiscrimination requirements set forth in 13 C.F.R. § 302.20; or (b) for inherently religious activities prohibited by applicable federal law.

D. CLOSEOUT PROCEDURES

1. After construction is completed and the project is closed out financially, the Recipient has an ongoing responsibility to properly administer, operate and maintain the project for its estimated useful life (as determined by EDA) in accordance with its original purpose. *See* 13 C.F.R. § 302.12. The Recipient must comply with all Award requirements and maintain records to document such compliance, which shall be made available for inspection by EDA or other government officials as required. When project construction and final inspection have been completed, or substantially completed as determined by EDA, and the Recipient has accepted the project from the contractor, the Recipient may begin the closeout process by submitting the following documentation to EDA:
 - (a) A request for final disbursement on an executed SF-271.
 - (b) A written certification that all costs charged against the Award (EDA and non- EDA shares) are eligible activities and represent allowable costs, for which there is documentation in the Recipient's records.

- (c) An executed certification of final acceptance signed by the Recipient and the Recipient's architect/engineer.
 - (d) The Recipient's certification that its currently valid single or program-specific audit in accordance with subpart F of 2 C.F.R. part 200, if applicable, does not contain material findings (if the Recipient's currently valid audit does contain material findings, the Recipient shall submit the applicable audit preferably via email to the Project Officer, who will review with the Grants Officer).
 - (e) The Recipient's certification that its currently valid audit (in accordance with subpart F of 2 C.F.R. part 200), if applicable, has been submitted to the Federal Audit Clearinghouse.
 - (f) A copy of the completed "Project Close-out Checklist" available on the *Post-Approval Construction CD*.
 - (g) Other documentation as may be required by EDA.
2. If a Recipient chooses not to complete and submit the "Project Close-out Checklist" available on the *Post-Approval Construction CD*, the Recipient must provide EDA the following documentation in addition to that listed above:
- (a) Verification of compliance with all Award terms and conditions, including special award conditions (if not already provided).
 - (b) Verification of procurement of permanent insurance for above-ground facilities.
 - (c) Verification of compliance with the requirement that all changes to the project have been brought to EDA's attention.
 - (d) Verification of recipient's compliance with the requirement to retain all records pertinent to the Award for three years from the date of submission of the final expenditure report, with the following exceptions:
 - (i) If any litigation, claim, or audit begins before the expiration of the three-year period, the records shall be retained until all litigation, claims or audit findings involving the records have been resolved and final action taken;
 - (ii) Records for real property and equipment acquired with federal funds must be retained for three years after final disposition; and
 - (iii) When records are transferred or maintained by EDA, the three-year retention requirement is not applicable to the recipient.
 - (e) Verification of receipt of as-built drawings from the contractor or the architect/engineer.
 - (f) Certification that there are no outstanding Davis-Bacon Act or local labor employment violations.
 - (g) Any change, lien, mortgage, or other encumbrance relating to the ownership of the property acquired or improved with EDA assistance.
 - (h) Documentation on any unresolved contract/contractor disputes.
 - (i) Documentation verifying execution and recordation in the appropriate jurisdiction of a lien or covenant of purpose, use, and ownership in favor of EDA, if a lien or covenant of purpose has not already been executed and recorded.
 - (j) Certification that the project facility will be maintained by the recipient for its entire estimated useful life as determined by EDA, during which period the recipient shall not alienate its ownership or alter the use and purpose of the EDA-assisted facility without EDA's written permission.
 - (k) Any other documentation required by the EDA Engineer/Construction Manager or Project Officer to ensure compliance with the terms and conditions of the Award.

3. The Recipient shall submit, within ninety (90) calendar days after the project closeout date, all financial, performance and other reports as required by the Terms and Conditions of the Award. The Grants Officer may extend the ninety (90) calendar day closeout period upon a written request from the Recipient.
4. Unless EDA authorizes an extension, the Recipient must liquidate all obligations incurred under the Award no later than ninety (90) calendar days after acceptance of the project from the contractor or within ninety (90) calendar days of the expiration date of the Award, whichever occurs earlier, as specified in the Terms and Conditions of the Award.
5. The closeout of an Award does not affect any of the following:
 - (a) The right of EDA to disallow costs and recover funds on the basis of a later audit or other project review;
 - (b) The Recipient's obligation to return any funds due as a result of later corrections or other transactions;
 - (c) Requirements for property management, records retention and performance measurement reports; or
 - (d) Single or program-specific audit requirements in accordance with subpart F of 2 C.F.R. part 200 or other project review;
 - (e) The Recipient's obligation to return any funds due as a result of later corrections or other transactions;
 - (f) Requirements for property management, records retention and performance measurement reports; or
 - (g) Single or program-specific audit requirements in accordance with subpart F of 2 C.F.R. part 200.

IX. APPENDIX

The following documents are available from the Office of Management and Budget's, the Department of Commerce's, and the Government Printing Office's websites at www.whitehouse.gov/omb/, www.commerce.gov, www.gpoaccess.gov, public libraries, and other sources. Each document listed below contains a link that will take you directly to that document on the internet.

1. 2 C.F.R. part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards
2. 2 C.F.R. part 180, OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)
3. 2 C.F.R. part 1326, Department of Commerce regulations on Nonprocurement Debarment and Suspension
4. 2 C.F.R. part 182, Governmentwide Requirements for Drug-Free Workplace (Financial Assistance)
5. 13 C.F.R. Chapter III (EDA's regulations)
6. 48 C.F.R. part 31, Contract Cost Principles and Procedures
7. 49 C.F.R. part 24, Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally-Assisted Programs
8. Davis Bacon Wage Rate Determinations: www.wdol.gov/

APPENDIX D

U.S. Department of Commerce Economic Development Administration EDA Contracting Provisions for Construction Projects

**U. S. DEPARTMENT OF COMMERCE
ECONOMIC DEVELOPMENT ADMINISTRATION**



**EDA CONTRACTING PROVISIONS
FOR CONSTRUCTION PROJECTS**

These EDA Contracting Provisions for Construction Projects (EDA Contracting Provisions) are intended for use by recipients receiving federal assistance from the U. S. Department of Commerce - Economic Development Administration (EDA). They contain provisions specific to EDA and other federal provisions not normally found in non-federal contract documents. The requirements contained herein must be incorporated into all construction contracts and subcontracts funded wholly or in part with federal assistance from EDA.

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1. **DEFINITIONS**

Agreement – The written instrument that is evidence of the agreement between the Owner and the Contractor overseeing the Work.

Architect/Engineer - The person or other entity engaged by the Recipient to perform architectural, engineering, design, and other services related to the work as provided for in the contract.

Contract – The entire and integrated written agreement between the Owner and the Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

Contract Documents – Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents.

Contractor – The individual or entity with whom the Owner has entered into the Agreement.

Drawings or Plans – That part of the Contract Documents prepared or approved by the Architect/Engineer that graphically shows the scope, extent, and character of the Work to be performed by the Contractor.

EDA - The United States of America acting through the Economic Development Administration of the U.S. Department of Commerce or any other person designated to act on its behalf. EDA has agreed to provide financial assistance to the Owner, which includes assistance in financing the Work to be performed under this Contract. Notwithstanding EDA's role, nothing in this Contract shall be construed to create any contractual relationship between the Contractor and EDA.

Owner – The individual or entity with whom the Contractor has entered into the Agreement and for whom the Work is to be performed.

Project – The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

Recipient – A non-Federal entity receiving a Federal financial assistance award directly from EDA to carry out an activity under an EDA program, including any EDA-approved successor to the entity.

Specifications – That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.

Subcontractor – An individual or entity having direct contract with the Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.

Work – The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

2. **APPLICABILITY**

The Project to which the construction work covered by this Contract pertains is being assisted by the United States of America through federal assistance provided by the U.S. Department of Commerce - Economic Development Administration (EDA). Neither EDA, nor any of its departments, entities, or employees is a party to this Contract. The following EDA Contracting Provisions are included in this Contract and all subcontracts or related instruments pursuant to the provisions applicable to such federal assistance from EDA.

3. **FEDERALLY REQUIRED CONTRACT PROVISIONS**

- (a) All contracts in excess of the simplified acquisition threshold - currently fixed at \$150,000 (*see* 41 U.S.C. §§ 134 and 1908) must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as may be appropriate.
- (b) All contracts in excess of \$10,000 must address termination for cause and for convenience by the Recipient including the manner by which it will be effected and the basis for settlement.
- (c) All construction contracts awarded in excess of \$10,000 by recipients of federal assistance and their contractors or subcontractors shall contain a provision requiring compliance with Executive Order 11246 of September 24, 1965, *Equal Employment Opportunity*, as amended by Executive Order 11375 of October 13, 1967, and Department of Labor implementing regulations at 41 C.F.R. part 60.
- (d) All prime construction contracts in excess of \$2,000 awarded by Recipients must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. §§ 3141-3148) as supplemented by Department of Labor regulations at 29 C.F.R. part 5. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (18 U.S.C. § 874 and 40 U.S.C. § 3145) as supplemented by Department of Labor regulations at 29 C.F.R. part 3.
- (e) All contracts awarded by the Recipient in excess of \$100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. §§ 3702 and 3704 (the Contract Work Hours and Safety Standards Act) as supplemented by Department of Labor regulations at 29 C.F.R. part 5.
- (f) All contracts must include EDA requirements and regulations that involve a requirement on the contractor or sub-contractor to report information to EDA, the Recipient or any other federal agency.

- (g) All contracts must include EDA requirements and regulations pertaining to patent rights with respect to any discovery or invention which arises or is developed in the course of or under such contract.
- (h) All contracts must include EDA requirements and regulations pertaining to copyrights and rights in data.
- (i) All contracts and subgrants in excess of \$150,000 must contain a provision that requires compliance with all applicable standards, orders, or requirements issued under the Clean Air Act (42 U.S.C. § 7401 *et seq.*) and the Federal Water Pollution Control Act (Clean Water Act) (33 U.S.C. § 1251 *et seq.*), and Executive Order 11738, *Providing for Administration of the Clean Air Act and the Federal Water Pollution Control Act With Respect to Federal Contracts, Grants, or Loans*.
- (j) Contracts must contain mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. § 6201).
- (k) Contracts must contain a provision ensuring that contracts are not to be made to parties on the government wide Excluded Parties List System in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 C.F.R. part 180.
- (l) Contracts must contain a provision ensure compliance with the Byrd Anti-Lobbying Amendment (31 U.S.C. § 1352) under which contractors that apply or bid for an award of \$100,000 or more must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. § 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.
- (m) If the Recipient is a state agency or agency of a political subdivision of a state, any contract awarded must contain a provision ensuring compliance with section 6002 of the Solid Waste Disposal Act (42 U.S.C. § 6962), as amended by the Resource Conservation and Recovery Act related to the procurement of recovered materials.

4. **REQUIRED PROVISIONS DEEMED INSERTED**

Each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein and the contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party the contract shall forthwith be physically amended to make such insertion of correction.

5. **INSPECTION BY EDA REPRESENTATIVES**

The authorized representatives and agents of EDA shall be permitted to inspect all work, materials, payrolls, personnel records, invoices of materials, and other relevant data and records.

6. **EXAMINATION AND RETENTION OF CONTRACTOR'S RECORDS**

(a) The Owner, EDA, or the Comptroller General of the United States, or any of their duly authorized representatives shall, generally until three years after final payment under this contract, have access to and the right to examine any of the Contractor's directly pertinent books, documents, papers, or other records involving transactions related to this contract for the purpose of making audit, examination, excerpts, and transcriptions.

(b) The Contractor agrees to include in first-tier subcontracts under this contract a clause substantially the same as paragraph (a) above. "Subcontract," as used in this clause, excludes purchase orders that do not exceed \$10,000.

(c) The periods of access and examination in paragraphs (a) and (b) above for records relating to (1) appeals under the disputes clause of this contract, (2) litigation or settlement of claims arising from the performance of this contract, or (3) costs and expenses of this contract to which the Owner, EDA, or Comptroller General or any of their duly authorized representatives has taken exception shall continue until disposition of such appeals, litigation, claims, or exceptions.

7. **CONSTRUCTION SCHEDULE AND PERIODIC ESTIMATES**

Immediately after execution and delivery of the contract, and before the first partial payment is made, the Contractor shall deliver to the Owner an estimated construction progress schedule in a form satisfactory to the Owner, showing the proposed dates of commencement and completion of each of the various subdivisions of work required under the Contract Documents and the anticipated amount of each monthly payment that will become due to the Contractor in accordance with the progress schedule. The Contractor also shall furnish the Owner (a) a detailed estimate giving a complete breakdown of the contract price and (b) periodic itemized estimates of work done for the purpose of making partial payments thereon. The costs employed in making up any of these schedules will be used only to determine the basis of partial payments and will not be considered as fixing a basis for additions to or deductions from the contract price.

8. **CONTRACTOR'S TITLE TO MATERIAL**

No materials, supplies, or equipment for the work shall be purchased by the Contractor or by any subcontractor that is subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. The Contractor warrants and guarantees that he/she has good title to all work, materials, and equipment used by him/her in the Work, free and clear of all liens, claims, or encumbrances.

9. **INSPECTION AND TESTING OF MATERIALS**

All materials and equipment used in the completion of the Work shall be subject to adequate inspection and testing in accordance with accepted standards. The laboratory or inspection agency shall be selected by the Owner. Materials of construction, particularly those upon which the strength and durability of any structure may depend, shall be subject to inspection and testing to establish conformance with specifications and suitability for intended uses.

10. **"OR EQUAL" CLAUSE**

Whenever a material, article, or piece of equipment is identified in the Contract Documents by reference to manufacturers' or vendors' names, trade names, catalogue numbers, etc., it is intended merely to establish a standard. Any material, article, or equipment of other manufacturers and vendors that will perform adequately the duties imposed by the general design will be considered equally acceptable provided the material, article, or equipment so proposed is, in the opinion of the Architect/Engineer, of equal substance and function. However, such substitution material, article, or equipment shall not be purchased or installed by the Contractor without the Architect/Engineer's written approval.

11. **PATENT FEES AND ROYALTIES**

(a) Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device that is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Architect/Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by the Owner in the Contract Documents.

(b) To the fullest extent permitted by Laws and Regulations, the Contractor shall indemnify and hold harmless the Owner and the Architect/Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

12. **CLAIMS FOR EXTRA COSTS**

No claims for extra work or cost shall be allowed unless the same was done in pursuance of a written order from the Architect/Engineer approved by the Owner.

13. **CONTRACTORS AND SUBCONTRACTORS INSURANCE**

(a) The Contractor shall not commence work under this Contract until the Contractor has obtained all insurance reasonably required by the Owner, nor shall the Contractor allow any subcontractor to commence work on his/her subcontract until the insurance required of the subcontractor has been so obtained and approved.

(b) Types of insurance normally required are:

- (1) Workmen's Compensation
- (2) Contractor's Public Liability and Property Damage
- (3) Contractor's Vehicle Liability
- (4) Subcontractors' Public Liability, Property Damage and Vehicle Liability
- (5) Builder's Risk (Fire and Extended Coverage)

(c) **Scope of Insurance and Special Hazards:** The insurance obtained, which is described above, shall provide adequate protection for the Contractor and his/her subcontractors, respectively, against damage claims that may arise from operations under this contract, whether such operations be by the insured or by anyone directly or indirectly employed by him/her and also against any of the special hazards that may be encountered in the performance of this Contract.

(d) **Proof of Carriage of Insurance:** The Contractor shall furnish the Owner with certificates showing the type, amount, class of operations covered, effective dates, and dates of expiration of applicable insurance policies.

14. **CONTRACT SECURITY BONDS**

(a) If the amount of this Contract exceeds \$150,000, the Contractor shall furnish a performance bond in an amount at least equal to one hundred percent (100%) of the Contract price as security for the faithful performance of this Contract and also a payment bond in an amount equal to one hundred percent (100%) of the Contract price or in a penal sum not less than that prescribed by State, Territorial, or local law, as security for the payment of all persons performing labor on the Work under this Contract and furnishing materials in connection with this Contract. The performance bond and the payment bond may be in one or in separate instruments in accordance with local law. Before final acceptance, each bond must be approved by EDA. If the amount of this Contract does not exceed \$150,000, the Owner shall specify the amount of the payment and performance bonds.

(b) All bonds shall be in the form prescribed by the Contract Documents except as otherwise provided in applicable laws or regulations, and shall be executed by such sureties as are named in the current list of *Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies* as published in Treasury Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent must be accompanied by a certified copy of the agent's

authority to act. Surety companies executing the bonds must also be authorized to transact business in the state where the Work is located.

15. **LABOR STANDARDS - DAVIS-BACON AND RELATED ACTS**
(as required by section 602 of PWEDA)

(a) **Minimum Wages**

(1) All laborers and mechanics employed or working upon the site of the Work in the construction or development of the Project will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act at 29 C.F.R. part 3, the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at the time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor, which is attached hereto and made a part hereof, regardless of any contractual relationship that may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 C.F.R. § 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 C.F.R. § 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates determined under 29 C.F.R. § 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(2) (i) Any class of laborers or mechanics to be employed under the Contract, but not listed in the wage determination, shall be classified in conformance with the wage determination. EDA shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(A) The work to be performed by the classification requested is not performed by a classification in the wage determination;

(B) The classification is utilized in the area by the construction industry; and

(C) The proposed wage rate, including any bona fide fringe benefits, bears a

reasonable relationship to the wage rates contained in the wage determination.

(ii) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and EDA or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by EDA or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210.

(iii) In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and EDA or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), EDA or its designee shall refer the questions, including the views of all interested parties and the recommendation of EDA or its designee, to the Administrator for determination.

(iv) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(2)(ii) or (iii) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(3) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(4) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(b) **Withholding**

EDA or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Contractor under this Contract or any other federal contract with the same prime Contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the Contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper employed or working on the site of the Work in the construction or development of the Project, all or part of the wages required by the Contract, EDA or its designee may, after written notice to the Contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations

have ceased. EDA or its designee may, after written notice to the Contractor, disburse such amounts withheld for and on account of the Contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

(c) **Payrolls and basic records**

(1) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the Work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the Work in the construction or development of the Project. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 C.F.R. § 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(E) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, the plan or program is financially responsible, and the plan or program has been communicated in writing to the laborers or mechanics affected, and provide records that show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(2) (i) For each week in which Contract work is performed, the Contractor shall submit a copy of all payrolls to the Owner for transmission to EDA or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 C.F.R. part 5.5(a)(3)(i). This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose. It may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, D.C. 20402; or downloaded from the U.S. Department of Labor's website at <https://www.dol.gov/whd/forms/wh347.pdf>. The prime Contractor is responsible for the submission of copies of payrolls by all subcontractors

(ii) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the Contract and shall certify the following:

(A) That the payroll for the payroll period contains the information required to be maintained under 29 C.F.R. § 5.5(a)(3)(i) and that such information is correct and complete;

(B) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the Contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 C.F.R. part 3; and

(C) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the Contract.

(iii) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 15(c)(2)(ii) of this section.

(iv) The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under section 1001 of Title 18 and section 3729 of Title 31 of the U.S. Code.

(3) The Contractor or subcontractor shall make the records required under paragraph 15(c)(1) of this section available for inspection, copying, or transcription by authorized representatives of EDA or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, EDA or its designee may, after written notice to the Contractor or Owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 C.F.R. § 5.12.

(d) **Apprentices and Trainees.**

(1) **Apprentices.** Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training (Bureau), or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any

apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a Contractor is performing construction on a Project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) **Trainees.** Except as provided in 29 C.F.R. § 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program that has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman's hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(3) **Equal employment opportunity.** The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity

requirements of Executive Order 11246, *Equal Employment Opportunity*, as amended, and 29 C.F.R. part 30.

(e) **Compliance with Copeland Anti-Kickback Act Requirements.** The Contractor shall comply with the Copeland Anti-Kickback Act (18 U.S.C. § 874 and 40 U.S.C. § 3145) as supplemented by Department of Labor regulations (29 C.F.R. part 3, "Contractors and Subcontractors on Public Buildings or Public Works Financed in Whole or in Part by Loans or Grants of the United States"). The Act provides that the Contractor and any subcontractors shall be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which they are otherwise entitled. The Owner shall report all suspected or reported violations to EDA.

(f) **Subcontracts.** The Contractor and any subcontractors will insert in any subcontracts the clauses contained in 29 C.F.R. §§ 5.5(a)(1) through (10) and such other clauses as EDA or its designee may require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 C.F.R. § 5.5.

(g) **Contract termination; debarment.** The breach of the contract clauses in 29 C.F.R. § 5.5 may be grounds for termination of the contract, and for debarment as a Contractor and a subcontractor as provided in 29 C.F.R. § 5.12.

(h) **Compliance with Davis-Bacon and Related Act Requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 C.F.R. parts 1, 3, and 5 are herein incorporated by reference in this contract.

(i) **Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this Contract shall not be subject to the general disputes clause of this Contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 C.F.R. parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and EDA or its designee, the U.S. Department of Labor, or the employees or their representatives.

(j) **Certification of Eligibility.**

(1) By entering into this Contract, the Contractor certifies that neither it nor any person or firm that has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 C.F.R. § 5.12(a)(1).

(2) No part of this Contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 C.F.R. § 5.12(a)(1).

(3) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. § 1001.

16. **LABOR STANDARDS - CONTRACT WORK HOURS AND SAFETY STANDARDS ACT**

As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

- (a) **Overtime requirements.** No Contractor or subcontractor contracting for any part of the Contract work, which may require or involve the employment of laborers or mechanics, shall require or permit any such laborer or mechanic in any workweek in which that person is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
- (b) **Violation; liability for unpaid wages, liquidated damages.** In the event of any violation of the clause set forth in paragraph (a) of this section, the Contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (a) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (a) of this section.
- (c) **Withholding for unpaid wages and liquidated damages.** EDA or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any monies payable on account of work performed by the Contractor or subcontractor under any such Contract or any other federal contract with the same prime Contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime Contractor such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b) of this section.
- (d) **Subcontracts.** The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (a) through (c) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (a) through (c) of this section.

17. **EQUAL EMPLOYMENT OPPORTUNITY**

- (a) The Recipient hereby agrees that it will incorporate or cause to be incorporated into any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 C.F.R. chapter 60, which is paid for in whole or in part with funds obtained from EDA, the following equal opportunity clause:

During the performance of this contract, the Contractor agrees as follows:

Economic Development Administration
Contracting Provisions for Construction Projects

(1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training including apprenticeship. The Contractor agrees to post in conspicuous places available to employees and applicants for employment notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers representatives of the Contractor's commitments hereunder, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965 and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by EDA and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the Contractor's noncompliance with the nondiscrimination clauses of

this Contract or with any of the said rules, regulations, or orders, this Contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts or federally-assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation or order of the Secretary of Labor, or as otherwise provided by law.

(8) The Contractor will include the portion of the sentence immediately preceding paragraph 17(a)(1) and the provisions of paragraphs 17(a)(1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as EDA or the Secretary of Labor may direct as a means of enforcing such provisions, including sanctions for noncompliance. Provided, however, that in the event the Contractor becomes involved in or is threatened with litigation with a subcontractor or vendor as a result of such direction by EDA or the Secretary of Labor, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

(9) The Recipient further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally-assisted construction work. Provided, however, that if the Recipient so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality, or subdivision of such government that does not participate in work on or under the Contract.

(10) The Recipient agrees that it will assist and cooperate actively with EDA and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish EDA and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist EDA in the discharge of the EDA's primary responsibility for securing compliance.

(11) The Recipient further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a Contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by EDA or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the Recipient agrees that if it fails or refuses to comply with these undertakings, EDA may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this EDA financial assistance; refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case

to the Department of Justice for appropriate legal proceedings.

(b) Exemptions to Above Equal Opportunity Clause (41 C.F.R. chapter 60):

(1) Contracts and subcontracts not exceeding \$10,000 (other than Government bills of lading, and other than contracts and subcontracts with depositories of Federal funds in any amount and with financial institutions which are issuing and paying agents for U.S. savings bonds and savings notes) are exempt. The amount of the Contract, rather than the amount of the federal financial assistance, shall govern in determining the applicability of this exemption.

(2) Except in the case of subcontractors for the performance of construction work at the site of construction, the clause shall not be required to be inserted in subcontracts below the second tier.

(3) Contracts and subcontracts not exceeding \$10,000 for standard commercial supplies or raw materials are exempt.

18. **CONTRACTING WITH SMALL, MINORITY AND WOMEN'S BUSINESSES**

(a) If the Contractor intends to let any subcontracts for a portion of the work, the Contractor shall take affirmative steps to assure that small, minority and women's businesses are used when possible as sources of supplies, equipment, construction, and services.

(b) Affirmative steps shall consist of:

(1) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;

(2) Ensuring that small and minority businesses and women's business enterprises are solicited whenever they are potential sources;

(3) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses and women's business enterprises;

(4) Establishing delivery schedules, where the requirements of the contract permit, which encourage participation by small and minority businesses and women's business enterprises;

(5) Using the services and assistance of the U.S. Small Business Administration, the Minority Business Development Agency of the U.S. Department of Commerce, and State and local governmental small business agencies;

(6) Requiring each party to a subcontract to take the affirmative steps of this section; and

(7) The Contractor is encouraged to procure goods and services from labor surplus area firms.

19. **HEALTH, SAFETY, AND ACCIDENT PREVENTION**

(a) In performing this contract, the Contractor shall:

(1) Ensure that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to their health and/or safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation;

(2) Protect the lives, health, and safety of other persons;

(3) Prevent damage to property, materials, supplies, and equipment; and

(4) Avoid work interruptions.

(b) For these purposes, the Contractor shall:

(1) Comply with regulations and standards issued by the Secretary of Labor at 29 C.F.R. part 1926. Failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act (40 U.S.C. §§ 3701 – 3708); and

(2) Include the terms of this clause in every subcontract so that such terms will be binding on each subcontractor.

(c) The Contractor shall maintain an accurate record of exposure data on all accidents incident to work performed under this Contract resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment, and shall report this data in the manner prescribed by 29 C.F.R. part 1904.

(d) The Owner shall notify the Contractor of any noncompliance with these requirements and of the corrective action required. This notice, when delivered to the Contractor or the Contractor's representative at the site of the Work, shall be deemed sufficient notice of the noncompliance and corrective action required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to take corrective action promptly, the Owner may issue an order stopping all or part of the Work until satisfactory corrective action has been taken. The Contractor shall not base any claim or request for equitable adjustment for additional time or money on any stop order issued under these circumstances.

(e) The Contractor shall be responsible for its subcontractors' compliance with the provisions of this clause. The Contractor shall take such action with respect to any subcontract as EDA, or the Secretary of Labor shall direct as a means of enforcing such provisions.

20. **CONFLICT OF INTEREST AND OTHER PROHIBITED INTERESTS**

- (a) No official of the Owner who is authorized in such capacity and on behalf of the Owner to negotiate, make, accept, or approve, or to take part in negotiating, making, accepting, or approving any architectural, engineering, inspection, construction or material supply contract or any subcontract in connection with the construction of the Project, shall become directly or indirectly interested personally in this Contract or in any part hereof.
- (b) No officer, employee, architect, attorney, engineer, or inspector of or for the Owner who is authorized in such capacity and on behalf of the Owner to exercise any legislative, executive, supervisory or other similar functions in connection with the construction of the Project, shall become directly or indirectly interested personally in this Contract or in any part thereof, any material supply contract, subcontract, insurance contract, or any other contract pertaining to the Project.
- (c) The Contractor may not knowingly contract with a supplier or manufacturer if the individual or entity who prepared the Contract Documents has a corporate or financial affiliation with the supplier or manufacturer.
- (d) The Owner's officers, employees, or agents shall not engage in the award or administration of this Contract if a conflict of interest, real or apparent, may be involved. Such a conflict may arise when: (i) the employee, officer or agent; (ii) any member of their immediate family; (iii) their partner or (iv) an organization that employs, or is about to employ, any of the above, has a financial interest in the Contractor. The Owner's officers, employees, or agents shall neither solicit nor accept gratuities, favors, or anything of monetary value from the Contractor or subcontractors.
- (e) If the Owner finds after a notice and hearing that the Contractor, or any of the Contractor's agents or representatives, offered or gave gratuities (in the form of entertainment, gifts, or otherwise) to any official, employee, or agent of the Owner or EDA in an attempt to secure this Contract or favorable treatment in awarding, amending, or making any determinations related to the performance of this Contract, the Owner may, by written notice to the Contractor, terminate this Contract. The Owner may also pursue other rights and remedies that the law or this Contract provides. However, the existence of the facts on which the Owner bases such findings shall be an issue and may be reviewed in proceedings under the dispute resolution provisions of this Contract.
- (f) In the event this Contract is terminated as provided in paragraph (e) of this section, the Owner may pursue the same remedies against the Contractor as it could pursue in the event of a breach of this Contract by the Contractor. As a penalty, in addition to any other damages to which it may be entitled by law, the Owner may pursue exemplary damages in an amount (as determined by the Owner) which shall not be less than three nor more than ten times the costs the Contractor incurs in providing any such gratuities to any such officer or employee.

21. **RESTRICTIONS ON LOBBYING**

(a) This Contract, or subcontract is subject to 31 U.S.C. § 1352, regarding lobbying restrictions. The section is explained in the common rule, 15 C.F.R. part 28 (55 FR 6736-6748, February 26, 1990). Each bidder under this Contract or subcontract is generally prohibited from using federal funds for lobbying the Executive or Legislative Branches of the Federal Government in connection with this EDA Award.

(b) **Contract Clause Threshold:** This Contract Clause regarding lobbying must be included in each bid for a contract or subcontract exceeding \$100,000 of federal funds at any tier under the EDA Award.

(c) **Certification and Disclosure:** Each bidder of a contract or subcontract exceeding \$100,000 of federal funds at any tier under the federal Award must file Form CD-512, *Certification Regarding Lobbying – Lower Tier Covered Transactions*, and, if applicable, Standard Form-LLL, *Disclosure of Lobbying Activities*, regarding the use of any nonfederal funds for lobbying. Certifications shall be retained by the Contractor or subcontractor at the next higher tier. All disclosure forms, however, shall be forwarded from tier to tier until received by the Recipient of the EDA Award, who shall forward all disclosure forms to EDA.

(d) **Continuing Disclosure Requirement:** Each Contractor or subcontractor that is subject to the Certification and Disclosure provision of this Contract Clause is required to file a disclosure form at the end of each calendar quarter in which there occurs any event that requires disclosure or that materially affects the accuracy of the information contained in any disclosure form previously filed by such person. Disclosure forms shall be forwarded from tier to tier until received by the Recipient of the EDA Award, who shall forward all disclosure forms to EDA.

(e) **Indian Tribes, Tribal Organizations, or Other Indian Organizations:** Indian tribes, tribal organizations, or any other Indian organizations, including Alaskan Native organizations, are excluded from the above lobbying restrictions and reporting requirements, but only with respect to expenditures that are by such tribes or organizations for lobbying activities permitted by other federal law. An Indian tribe or organization that is seeking an exclusion from Certification and Disclosure requirements must provide EDA with the citation of the provision or provisions of federal law upon which it relies to conduct lobbying activities that would otherwise be subject to the prohibitions in and to the Certification and Disclosure requirements of 31 U.S.C. § 1352, preferably through an attorney's opinion. Note, also, that a non-Indian subrecipient, contractor, or subcontractor under an award to an Indian tribe, for example, is subject to the restrictions and reporting requirements.

22. **HISTORICAL AND ARCHAEOLOGICAL DATA PRESERVATION**

The Contractor agrees to facilitate the preservation and enhancement of structures and objects of historical, architectural or archaeological significance and when such items are found and/or unearthed during the course of project construction. Any excavation by the Contractor that uncovers an historical or archaeological artifact shall be immediately reported to the Owner and a representative of EDA. Construction shall be temporarily halted pending the notification process and further directions issued by EDA after consultation with the State Historic

Preservation Officer (SHPO) for recovery of the items. See the National Historic Preservation Act of 1966 (54 U.S.C. § 300101 *et seq.*, formerly at 16 U.S.C. § 470 *et seq.*) and Executive Order No. 11593 of May 31, 1971.

23. **CLEAN AIR AND WATER**

Applicable to Contracts in Excess of \$150,000

(a) **Definition.** "Facility" means any building, plant, installation, structure, mine, vessel, or other floating craft, location, or site of operations, owned, leased, or supervised by the Contractor or any subcontractor, used in the performance of the Contract or any subcontract. When a location or site of operations includes more than one building, plant, installation, or structure, the entire location or site shall be deemed a facility except when the Administrator, or a designee, of the United States Environmental Protection Agency (EPA) determines that independent facilities are collocated in one geographical area.

(b) In compliance with regulations issued by the EPA, 2 C.F.R. part 1532, pursuant to the Clean Air Act, as amended (42 U.S.C. § 7401 *et seq.*); the Federal Water Pollution Control Act, as amended (33 U.S.C. § 1251 *et seq.*); and Executive Order 11738, the Contractor agrees to:

(1) Not utilize any facility in the performance of this contract or any subcontract which is listed on the Excluded Parties List System, part of the System for Award Management (SAM), pursuant to 2 C.F.R. part 1532 for the duration of time that the facility remains on the list;

(2) Promptly notify the Owner if a facility the Contractor intends to use in the performance of this contract is on the Excluded Parties List System or the Contractor knows that it has been recommended to be placed on the List;

(3) Comply with all requirements of the Clean Air Act and the Federal Water Pollution Control Act, including the requirements of section 114 of the Clean Air Act and section 308 of the Federal Water Pollution Control Act, and all applicable clean air and clean water standards; and

(4) Include or cause to be included the provisions of this clause in every subcontract and take such action as EDA may direct as a means of enforcing such provisions.

24. **USE OF LEAD-BASED PAINTS ON RESIDENTIAL STRUCTURES**

(a) If the work under this Contract involves construction or rehabilitation of residential structures over \$5,000, the Contractor shall comply with the Lead-based Paint Poisoning Prevention Act (42 U.S.C. § 4831). The Contractor shall assure that paint or other surface coatings used in a residential property does not contain lead equal to or in excess of 1.0 milligram per square centimeter or 0.5 percent by weight or 5,000 parts per million (ppm) by weight. For purposes of this section, "residential property" means a dwelling unit, common areas, building exterior surfaces, and any surrounding land, including outbuildings, fences and play equipment affixed to the land, belonging to an owner and available for use by residents, but not

including land used for agricultural, commercial, industrial or other non-residential purposes, and not including paint on the pavement of parking lots, garages, or roadways.

- (b) As a condition to receiving assistance under PWEDA, recipients shall assure that the restriction against the use of lead-based paint is included in all contracts and subcontracts involving the use of federal funds.

25. **ENERGY EFFICIENCY**

The Contractor shall comply with all standards and policies relating to energy efficiency which are contained in the energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. § 6201) for the State in which the Work under the Contract is performed.

26. **ENVIRONMENTAL REQUIREMENTS**

When constructing a Project involving trenching and/or other related earth excavations, the Contractor shall comply with the following environmental constraints:

- (1) **Wetlands.** When disposing of excess, spoil, or other construction materials on public or private property, the Contractor shall not fill in or otherwise convert wetlands.
- (2) **Floodplains.** When disposing of excess, spoil, or other construction materials on public or private property, the Contractor shall not fill in or otherwise convert 100 year floodplain areas delineated on the latest Federal Emergency Management Agency (FEMA) Floodplain Maps, or other appropriate maps, i.e., alluvial soils on Natural Resource Conservation Service (NRCS) Soil Survey Maps.
- (3) **Endangered Species.** The Contractor shall comply with the Endangered Species Act, which provides for the protection of endangered and/or threatened species and critical habitat. Should any evidence of the presence of endangered and/or threatened species or their critical habitat be brought to the attention of the Contractor, the Contractor will immediately report this evidence to the Owner and a representative of EDA. Construction shall be temporarily halted pending the notification process and further directions issued by EDA after consultation with the U.S. Fish and Wildlife Service.

27. **DEBARMENT, SUSPENSION, INELIGIBILITY, AND VOLUNTARY EXCLUSIONS**

As required by Executive Orders 12549 and 12689, *Debarment and Suspension*, 2 C.F.R. Part 180 and implemented by the Department of Commerce at 2 C.F.R. part 1326, for prospective participants in lower tier covered transactions (except subcontracts for goods or services under the \$25,000 small purchase threshold unless the subrecipient will have a critical influence on or substantive control over the award), the Contractor agrees that:

- (1) By entering into this Contract, the Contractor and subcontractors certify, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared Economic Development Administration Contracting Provisions for Construction Projects

ineligible, or voluntarily excluded from participation in this Contract by any federal department or agency.

(2) Where the Contractor or subcontractors are unable to certify to any of the statements in this certification, the Contractor or subcontractors shall attach an explanation to this bid.

See also 2 C.F.R. part 180 and 2 C.F.R. § 200.342.

28. **EDA PROJECT SIGN**

The Contractor shall supply, erect, and maintain in good condition a Project sign according to the specifications provided by EDA. To the extent practical, the sign should be a free standing sign. Project signs shall not be located on public highway rights-of-way. Location and height of signs will be coordinated with the local agency responsible for highway or street safety in the Project area, if any possibility exists for obstructing vehicular traffic line of sight. Whenever the EDA site sign specifications conflict with State law or local ordinances, the EDA Regional Director will permit such conflicting specifications to be modified so as to comply with State law or local ordinance.

29. **BUY AMERICA**

To the greatest extent practicable, contractors are encouraged to purchase American-made equipment and products with funding provided under EDA financial assistance awards.

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Bid to: City of FAYETTEVILLE, AR

Project: Industrial Dr Extension

Bid No. 22-27

opens: Oct. 13th, 2022
2:00 pm

Purchasing Division Room 306

113 West Mountain St
Fay. Ar 72701

NORTHWEST ARKANSAS Democrat-Gazette

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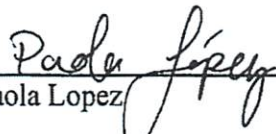
AFFIDAVIT OF PUBLICATION

I, Paola Lopez, do solemnly swear that I am the Accounting Legal Clerk of the Northwest Arkansas Democrat-Gazette, a daily newspaper printed and published in said County, State of Arkansas; that I was so related to this publication at and during the publication of the annexed legal advertisement the matter of: Notice pending in the Court, in said County, and at the dates of the several publications of said advertisement stated below, and that during said periods and at said dates, said newspaper was printed and had a bona fide circulation in said County; that said newspaper had been regularly printed and published in said County, and had a bona fide circulation therein for the period of one month before the date of the first publication of said advertisement; and that said advertisement was published in the regular daily issues of said newspaper as stated below.

City of Fayetteville
Bid 22-27

Was inserted in the Regular Edition on:
September 18 & 25, 2022

Publication Charges: \$719.06


Paola Lopez

Subscribed and sworn to before me
This 27 day of Sept, 2022.


Cathy Wiles
Notary Public
My Commission Expires: 2/20/24

****NOTE**** Please do not pay from Affidavit
Invoice will be sent.

Cathy Wiles
Benton COUNTY
NOTARY PUBLIC - ARKANSAS
My Commission Expires 02-20-2024
Commission No. 12397118

City of Fayetteville, Arkansas
INVITATION TO BID
Bid 22-27, Construction –
Industrial Drive Extension
The City of Fayetteville, AR
(owner) is accepting formal,
sealed bids from properly
qualified, experienced, and
licensed
contractors for the extension
of Industrial Drive. The
Contract includes, but is not
limited to, the construction of
approximately 2,800 linear
feet of two-lane roadway from
S Industrial Drive to S City
Lake Road including
demolition, removal and
reconstruction of an existing
concrete cul-de-sac and
associated earthwork, curb and
gutter, sidewalk
drainage, and miscellaneous
related items. All questions
during the bidding process
shall be addressed to Amanda
Beilfuss,
Sr. Purchasing Agent, at
abeilfuss@fayetteville-ar.gov.
A non-mandatory Pre-Bid
meeting will be held on
Thursday, September 29,
2022 at 2:00 PM local
time, via Zoom.
Information regarding the pre-
bid meeting is available on the
project page on the City's
electronic bidding platform.
All
interested parties are
encouraged to attend.
Bidding documents, plans,
plan holders, and addenda
shall be obtained at the City of
Fayetteville Purchasing
Division's
electronic bidding platform at
www.fayetteville-ar.gov/bids.
All bids shall be received by
Thursday, October 13, 2022
before
2:00 PM, local time utilizing
the electronic bidding
software or by submitting a
sealed bid to the address
below. All bids shall
be received prior to the bid
deadline. Submitting a bid
electronically is strongly
encouraged. A public bid
opening will be

conducted shortly after the
deadline at City Hall and
livestreamed at
<https://www.youtube.com/user/cityoffayetteville>.
Late or misdirected bids shall not
be accepted. The City of
Fayetteville shall not be
responsible for lost or
misdirected bids,
or failure of bidder's technical
equipment.
City of Fayetteville
Purchasing Division – Room 306
113 West Mountain Street
Fayetteville, AR 72701
Each bid exceeding \$50,000
shall be accompanied by a
cashier's check from a bank
doing business in the State of
Arkansas or a corporate bid bond
in an amount not less than five
(5) percent of the amount bid. In
the event a bidder opts to submit
a cashier's check for a bid bond,
the actual physical cashier's
check shall be delivered to the
City prior to the deadline. A
one hundred percent (100%)
performance and payment bond
is required with the contract
awarded. A State of Arkansas
Contractor's License is not
required at time of bid; however,
an application for licensure shall
be required at time of bid and
an approved contractor's license
shall be required before
execution of contract.
Pursuant to Arkansas Code
Annotated §22-9-203 The City
of Fayetteville encourages all
qualified small, minority and
women
business enterprises to bid on
and receive contracts for goods,
services, and construction. Also,
City of Fayetteville
encourages all general
contractors to subcontract
portions of their contract to
qualified small, minority and
women business
enterprises.
The City of Fayetteville reserves
the right to waive irregularities,
reject bids, and postpone the
award of any Contract for a
period which shall not exceed
beyond ninety (90) days from the
bid opening date.
The City hereby notifies all
bidders that this contract is

subject to the Code of Federal
Regulations, Appendix II, Part
200, Contract Provisions for Non-
Federal Entity Contracts under
Federal Awards applies to this
contract and includes but is not
limited to termination for cause
and for convenience, Equal
Employment Opportunity, Davis-
Bacon Act, Copeland Anti-
Kickback Act, Contract Work
Hours and Safety Standards Act,
Clean Air Act, Debarment and
Suspension regulations,
conditions under the Byrd
Anti-Lobbying Amendment,
applicable labor laws,
non-discrimination provisions,
wage rate laws, the Fair Labor
Standards Act of 1938, and other
federal laws as defined in the bid
documents and any grant
agreements between the City of
Fayetteville and Grant
Administrator. The Work Hours
Act of 1962 and Title VI of the
Civil Rights Act of 1964 also
apply. Bidders are hereby
notified of the NOTICE OF
REQUIREMENT FOR
AFFIRMATIVE ACTION TO
ENSURE EQUAL
EMPLOYMENT
OPPORTUNITY (EXECUTIVE
ORDER 11246).
All qualified applicants will
receive consideration for
employment without regard to
race, color, religion, sex, sexual
orientation, gender identity, or
national origin.
The City of Fayetteville, Arkansas
hereby notifies all bidders that this
contract is subject to applicable
labor laws, non-discrimination
provisions, wage rate laws and
other federal laws including the
Fair Labor Standards Acts of
1938. The Work Hours Act of
1962 and Title IV of the Civil
Rights Act of 1964 also apply.
Registration and good standing in
the System for Award
Management (SAM) will be
required prior to contract
execution.
City of Fayetteville
By: Amanda Beilfuss
Sr. City Purchasing Agent
P: 479.575.8220 Email:
abeilfuss@fayetteville-ar.gov
TDD (Telecommunications
Device for the Deaf): (479) 521-
1316
Date of advertisement: 09.18.2022
& 09.25.2022
This publication was paid for by
the Purchasing Division of the
City of Fayetteville, Arkansas.
Amount paid: \$719.06
75601483 Sept 18 & 25, 2022

RESOLUTION NO. _____

A RESOLUTION TO AWARD BID #22-27 AND AUTHORIZE A CONTRACT WITH TOMLINSON ASPHALT CO. IN THE AMOUNT OF \$2,178,659.65 FOR CONSTRUCTION OF THE INDUSTRIAL DRIVE EXTENSION PROJECT, TO APPROVE A PROJECT CONTINGENCY IN THE AMOUNT OF \$218,000.00, AND TO APPROVE A BUDGET ADJUSTMENT

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:

Section 1: That the City Council of the City of Fayetteville, Arkansas hereby awards Bid #22-27 and authorizes Mayor Jordan to sign a contract with Tomlinson Asphalt Co., a copy of which is attached to this Resolution, in the amount of \$2,178,659.65 for construction of the Industrial Drive Extension Project, and further approves a project contingency in the amount of \$218,000.00.

Section 2: That the City Council of the City of Fayetteville, Arkansas hereby approves a budget adjustment, a copy of which is attached to this Resolution.



MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council
THRU: Susan Norton, Chief of Staff
FROM: Chris Brown, Public Works Director
DATE: December 27, 2022
SUBJECT: **APPROVE AMENDMENT NO. 2 TO THE ENGINEERING SERVICES AGREEMENT WITH MCCLELLAND CONSULTING ENGINEERS, INC.**

RECOMMENDATION:

Staff recommends approval of contract amendment #2 in the amount of \$132,690 with McClelland Consulting Engineers for the Industrial Drive Extension Project and approval of a budget adjustment.

BACKGROUND:

The Industrial Drive project includes the construction of approximately 2,600 feet of street extension connecting South Industrial Drive to South City Lake Road. The street section includes a 28' wide asphalt street with curb and gutter and a 5' wide sidewalk with 6' of greenspace on one side. This proposed street extension will provide access to approximately 47 acres of city-owned land, allowing the development of five parcels.

In September of 2020, the City of Fayetteville was awarded a grant from the Economic Development Administration for 80% of the design and construction of this project not to exceed \$2,000,000. The City will be responsible for the other 20% of project costs. On April 6, 2021, the City Council approved a design contract with McClelland Consulting Engineers.

DISCUSSION:

The approved contract with MCE does not include bidding services, construction phase services and materials testing. Staff has worked with MCE to develop a scope that will include support for the contractor and city staff as needed throughout the construction of this project. In addition, they will provide as-built plans at the end of the job documenting any field changes made during construction. MCE has provided a fee in the amount of \$132,690 for this additional work. The contract will be paid based on hourly rates for work completed, up to the total contract amount.

BUDGET/STAFF IMPACT:

The design and construction of this project will be paid for with the funds from a grant from the Economic Development Administration and from the 2019 Economic Development Bonds. This contract amendment will be funded from the 2019 Economic Development Bonds.

ATTACHMENTS: 2022-0253 SRF Industrial Dr CA2, 2022-253 BA Industrial Dr MCE CA2, Industrial Drive Extension. Contract Amendment #2. Signed MCE, Vmap, RES MCCLELLAND CONSULTING ENGINEERS -

Mailing address:

113 W. Mountain Street
Fayetteville, AR 72701

www.fayetteville-ar.gov

AMENDMENT 2 - INDUSTRIAL DRIVE EXTENSION

Mailing address:
113 W. Mountain Street
Fayetteville, AR 72701

www.fayetteville-ar.gov

City of Fayetteville Staff Review Form

2022-253

Item ID

1/3/2023

City Council Meeting Date - Agenda Item Only
N/A for Non-Agenda Item

Chris Brown

12/12/2022

ENGINEERING (621)

Submitted By

Submitted Date

Division / Department

Action Recommendation:

Approval of a contract amendment in the amount of \$132,690 with McClelland Consulting Engineers for the Industrial Drive Extension Project and approval of a budget adjustment.

Budget Impact:

4606.860.7600-5860.02

Account Number

46060.7600

Project Number

4606 - Economic Development 2019 Bonds

Fund

Commerce District Industrial Corridor

Project Title

Budgeted Item? Yes

Total Amended Budget

\$ 9,491,549.00

Expenses (Actual+Encum)

\$ 168,570.78

Available Budget

\$ 9,322,978.22

Does item have a direct cost? Yes

Item Cost

\$ 132,690.00

Is a Budget Adjustment attached? Yes

Budget Adjustment

\$ -

Remaining Budget

\$ 9,190,288.22

Purchase Order Number: 2021-00000407

Previous Ordinance or Resolution # 100-21

V20221130

Change Order Number:

Approval Date:

Original Contract Number: 2021-00000022

Comments:

Budget Year 2023 (BY)	Division /Org2 ENGINEERING (621) Requestor: Matt Casey	Adjustment Number
---------------------------------	---	--------------------------

Approval of a contract amendment in the amount of \$132,690 with McClelland Consulting Engineers for the Industrial Drive Extension Project.

	COUNCIL DATE:	1/3/2023
	ITEM ID#:	2022-253
	Holly Black	
	12/13/2022 2:03 PM	
	Budget Division	Date
TYPE:	D - (City Council)	
JOURNAL #:		
GLDATE:	1/3/2023	
CHKD/POSTED:	/	
RESOLUTION/ORDINANCE		

[illegible]

INDUSTRIAL DRIVE EXTENSION

AMENDMENT TO OWNER - ENGINEER PROFESSIONAL SERVICES AGREEMENT

Amendment No. 2

1. *Background Data:*

- a. Effective Date of Owner-Engineer Agreement: July 1st, 2021
- b. Owner: The City of Fayetteville
- c. Engineer: McClelland Consulting Engineers, Inc
- d. Project: Industrial Drive Extension

2. *Description of Modifications:*

The Scope of Services currently authorized to be performed by Engineer in accordance with the Agreement and previous amendments, if any, is modified as follows: shall perform or furnish the following Additional Services:

- a. Revise ATTACHMENT 'A', SCOPE OF SERVICES, as attached.
- b. Revise ATTACHMENT 'D', COMPENSATION, as attached.

3. *Agreement Summary (Reference only)*

a. Original Agreement amount:	\$ 215,885.00
b. Net change for prior amendments:	\$ 0.00
c. This amendment amount:	\$ 132,690.00
d. Adjusted Agreement amount:	\$ 348,575.00

The foregoing Agreement Summary is for reference only and does not alter the terms of the original Agreement.

Owner and Engineer hereby agree to modify the above-referenced Agreement as set forth in this Amendment. All provisions of the Agreement not modified by this or previous Amendments remain in effect. The Effective Date of this Amendment is _____, 2022.

OWNER:

City of Fayetteville

By:

Title:

Date

Signed:

ENGINEER:

McClelland Consulting Engineers, Inc

By:

Kevin Beaumont

Title:

Vice President

Date Signed:

Date:

Kevin Beaumont 2022.10.24

18:49:39-05'00'

ATTACHMENT 'A'
Amendment No. 2

SCOPE OF SERVICES

CITY OF FAYETTEVILLE, ARKANSAS
INDUSTRIAL DRIVE EXTENSION

1) Bid/Award Phase

During the bidding phase of the project, the ENGINEER will:

- a. Make available construction documentation to CITY OF FAYETTEVILLE (CITY),
- b. Assist with preparing addenda as appropriate,
- c. Provide assistance with pre-bid meeting and,
- d. Assist with issuing of Notice of Award and Notice to Proceed documents.
- e. The CITY Purchasing Department will manage the advertisement for bids, bid opening and evaluation and further will make recommendation to City Council.

2) Construction Phase Services

During the construction phase of work, the ENGINEER will accomplish the following:

- a. Manage preconstruction meeting.
- b. Perform survey consisting of the establishment of control points for construction purposes.
- c. Attend preconstruction conferences with CITY.
- d. Review submittals.
- e. Provide partial on-site observation (maximum 40% of time as an overall average) of the construction work as it progresses for a period not to exceed 10.0 months. Should the above contract construction period be exceeded, the ENGINEER shall submit an amendment to cover additional project related costs incurred, if required.
- f. Prepare contractor pay estimates and submit to CITY for review and approval.
- g. Prepare change orders as needed.
- h. Attend final inspection and prepare punch list.
- i. Prepare as-built record drawings utilizing contractor's measurements.
- j. Represent CITY at meetings as needed pertaining to this project.
- k. Prepare and submit close out documentation.

3) Materials Testing & Special Inspection Services

- a. See scope and fee breakdown attached hereafter for construction materials testing services.

October 24, 2022



113 West Mountain Street
Fayetteville, Arkansas 72701

ATTN: Mr. Matt Casey

RE: Proposal for CMT Services
Industrial Drive Extension
Fayetteville, Arkansas

Dear Mr. Casey,

We are pleased to present a Proposal for the Construction Materials Testing relevant to the planned Industrial Drive Extension to be constructed in Fayetteville, Arkansas.

Estimated Budget

Based on the assumptions detailed in the foregoing proposal, we can provide construction materials testing and special inspections on this project for a Not-To-Exceed Without Approval amount as detailed below:

• Proof Roll / Subgrade Observation	\$4,100.00
• Soil & Base Course Density Testing	\$5,510.00
• Laboratory Soils Testing	\$575.00
• Reinforcing Bar Observation	\$2,870.00
• Cast-in-Place Concrete Testing	\$9,600.00
• Concrete Cylinder Pick-Up	\$800.00
• Asphalt Coring and Testing	\$590.00
Total Not-to-Exceed Without Approval Fee:	\$24,045.00

The information on the following pages provides further detail regarding the anticipated testing scope on the project which includes several trips for each service, time spent on-site for each service, and other anticipations which were integral in arriving at the not-to-exceed fee amount.

The project documents currently available for reference in preparing this proposal include the full bid set, dated July 20, 2022.

Project Description

The project alignment is located within four (4) Washington County Parcels (765-15312-003, 765-15312-004, 765-16577-000, 765-16578-001), and is planned to connect S. Industrial Drive in the Northeast to S. City Lake Road in the Southwest in Fayetteville, Arkansas.

The project scope is understood to consist of an approximate 0.5 extension of S. Industrial Drive to connect to S. City Lake Road. This extension is understood to include flexible asphalt pavement, two (2) concrete paved driveways, drainage improvements, a flexible asphalt cul-de-sac, and assorted site civil developments.

Scope of Work

It is expected that services for construction materials testing will include proof rolls and subgrade observations, soil and base density testing, laboratory soil testing, reinforcing bar observations, cast-in-place concrete testing, and asphalt coring and testing.

To better your understanding of our associated fees, we presented an estimated per-trip price for the services we anticipate providing on this project. The provided per-trip prices assume the following factors:

- A Geotechnical Engineer/engineering technician spending one (1) hour onsite for proof-roll observation and/or subgrade recommendations regarding the building pad and pavement areas.
 - Travel time, mileage, and report writing is factored into the unit trip price
- A certified technician spending thirty (30) minutes onsite for each soil/base density testing trip.
 - Four (4) density tests being conducted each trip
 - Travel time, mileage, and report writing is factored into the unit trip price
- A certified technician conducting laboratory testing for a Standard Proctor in accordance with AASHTO T-99 procedures.
 - Travel time for sample pickup, mileage, and report writing is factored into the unit trip price
- A certified technician conducting laboratory testing for California Bearing Ratio (CBR) Testing in accordance with AASHTO T-193.
 - Travel time for sample pickup, mileage, and report writing is factored into the unit trip price
- A Geotechnical Engineer or Engineering Technician spending one (1) hour onsite for the observation of reinforcing elements.
 - Travel time, mileage, and report writing is factored into the unit trip price
- A certified technician spending one (1) hour onsite for each cast-in-place concrete testing trip.
 - MCE assumes that one (1) set of five (5) lab-cured 4" x 8" cylinders being sampled for every 50 cubic yards of concrete will satisfy the testing frequency for the project based on project specifications
 - Travel time, mileage, and reporting fees are included in the per-trip amount for this service
- A certified technician spending two (2) hours on-site coring asphalt samples for laboratory testing.
 - Travel time, mileage, and reporting fees are included in the per-trip amount for this service

Based on the referenced project scope, it is anticipated that the duration of the project will be approximately 10 months. If this estimated duration is incorrect, please allow us to make appropriate revisions. From the assumptions and project details referenced above, the following per-trip prices and subtotals for each service anticipated to be required as estimated as below:

Proof Roll Observation/Subgrade Recommendations	\$205.00 per trip
• Industrial Drive (Subgrade)	7 trips
• Industrial Drive (Base)	2 trips
• Curb-and-Guttering	3 trips
• Cul-de-Sac (Subgrade)	3 trips
• Cul-de-Sac (Base)	1 trip
• Concrete Driveways	4 trips
Subtotal: \$4,100.00	
Soil & Base Density Testing	\$145.00 per trip
• Industrial Drive (Subgrade)	17 trips
• Industrial Drive (Base)	10 trips
• Cul-de-Sac (Subgrade)	3 trips
• Cul-de-Sac (Base)	1 trip
• Concrete Driveways (Base)	3 trips
• Concrete Sidewalk (Base)	4 trips
Subtotal: \$5,510.00	
Laboratory Testing	
• The unit price below will reflect one (1) Standard Proctor Test, in accordance with AASHTO T-99 Procedures, and one (1) test for California Bearing Ratio (CBR), in accordance with AASHTO T-193.	
Subtotal: \$575.00	
Reinforcing Bar Observations	\$205.00 per trip
• Drainage Improvements (Inlets, Extensions, Junction Boxes, etc.)	12 trips
• Concrete Headwalls	2 trips
Subtotal: \$2,870.00	
Cast-in-Place Concrete Testing	\$240.00 per trip
• Concrete Sidewalk	14 trips
• Drainage Improvements (Inlets, Extensions, Junction Boxes, etc.)	12 trips
• Flared End Sections	2 trips
• Concrete Headwalls	2 trips
• Curb-and-Guttering	6 trips
• Concrete Driveways	2 trips
• Misc. Civil Site Improvements	2 trips
Subtotal: \$9,600.00	

Concrete Cylinder Pick-Up

\$40.00 per trip

- A charge for concrete cylinder pick-up will only be applied in the event that it is the sole reason for the site visit on days where no other testing is scheduled. We have assumed that this will be required for approximately one-half (0.5) of the total concrete placements.

Subtotal: \$800.00

Asphalt Coring and Testing

\$295.00 per trip

- A certified technician will conduct the coring of asphalt samples for final laboratory acceptance testing. It is anticipated that up to eight (8) cores will be required for laboratory testing. The cores will be tested for bulk-specific gravity and thickness verification. It is anticipated that two (2) trips will be conducted for this service.

Subtotal: \$590.00

Our estimated number of trips for each testing service is based on our experience with projects of similar scope and size. Our fees are directly related to the number of trips made for each service and time spent on-site. If the project scope varies after the submittal of this document and prior to construction, please allow for the review/revision of this document.

We appreciate the opportunity to submit this Proposal for construction materials testing for the Industrial Drive Extension project located in Fayetteville, Arkansas. If this Proposal is acceptable, please sign the Work Authorization Agreement at the end of this document and return a copy to our office. If there are any questions regarding this Proposal, please do not hesitate to contact us.

Sincerely,



William Hopkins, E.I.
Project Designer



Michael Scott, E.I.
Project Designer

Work Authorization Agreement

McClelland Consulting Engineers, Inc., is authorized to proceed in accordance with this Letter of Proposal, consisting of four (4) pages.

Signature

Title

Date

ATTACHMENT 'D'
Amendment No. 2

COMPENSATION

CITY OF FAYETTEVILLE, ARKANSAS
INDUSTRIAL DRIVE EXTENSION

- The compensation as defined in Attachment 'D' of the original Contract, as well as subsequent amendments, shall remain in full effect, and shall also include compensation associated with this amendment:

Amend compensation as follows:

- CITY shall pay ENGINEER for Construction Related Services and Reimbursable Expenses rendered for an amount not exceeding \$132,690.00. Professional services shall be charged using the most recent hourly rates, unless indicated otherwise. Refer to attached schedule for 2022 rates.

Bidding Services:	\$ 5,500.00
Construction Administration:	\$ 38,645.00
Construction Observation:	\$ 59,750.00
Materials Testing & Special Inspections:	\$ 24,045.00
Reimbursables:	\$ 4,750.00
Total Construction Related Services Fee	\$ 132,690.00



Effective 8/1/2022

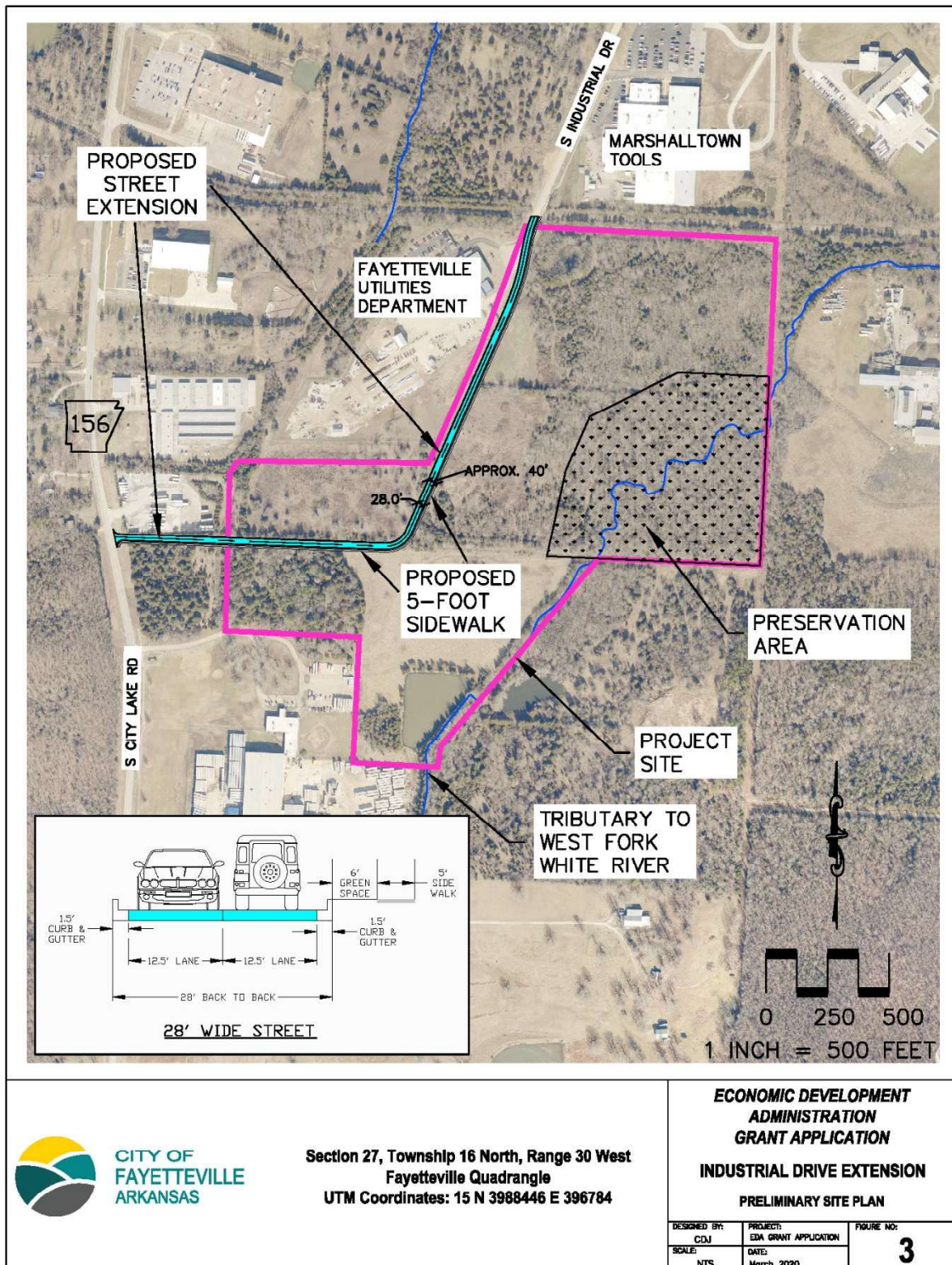
McCLELLAND CONSULTING ENGINEERS, INC.

***STANDARD HOURLY RATES**

Chief Draftsman	\$95 - \$110
Clerical	\$45 - \$75
Construction Observer	\$70 - \$145
Draftsman	\$65 - \$100
Environmental Scientist/Designer	\$105 - \$125
Geotech Engineer	\$85 - \$170
GIS Technician	\$80 - \$140
HR/Payroll Admin	\$75-\$100
Landscape Architect	\$90 - \$170
Media Specialist	\$80 - \$105
Principal	\$160 - \$240
Project Accountant	\$70 - \$155
Project Designer - Intern	\$50 - \$60
Project Designer	\$80 - \$140
Project Engineer	\$120 - \$175
Project Manager	\$120 - \$200
Registered Land Surveyor	\$95 - \$145
Soils Lab Technician	\$50 - \$140
Specification Writer	\$50 - \$90
Sr. Project Manager	\$140 - \$230
Survey (2 man or Robotic) Crew	\$115 - \$165
Survey (3 man) Crew	\$135 - \$195
Survey Field (1 Man or Rodman)	\$45 - \$110
Survey GPS	\$75 - \$130
Survey Technician	\$65 - \$95
Water Lab Supervisor	\$70 - \$120
Water Lab Tech	\$50 - \$95
Expenses	@ Cost
Mileage	.625/mi

** Standard Hourly Rates may be adjusted annually in accordance with the normal salary review practices of McClelland Consulting Engineers.*

Figure 3. Proposed Project Preliminary Site Plan



RESOLUTION NO. _____

A RESOLUTION TO APPROVE AMENDMENT NO. 2 TO THE ENGINEERING SERVICES AGREEMENT WITH MCCLELLAND CONSULTING ENGINEERS, INC. IN THE AMOUNT OF \$132,690.00 FOR BIDDING SERVICES, CONSTRUCTION PHASE SERVICES AND MATERIALS TESTING ASSOCIATED WITH THE INDUSTRIAL DRIVE EXTENSION PROJECT, AND TO APPROVE A BUDGET ADJUSTMENT

WHEREAS, on April 6, 2021, the City Council approved Resolution No. 100-21, authorizing a contract with McClelland Consulting Engineers, Inc. for the design services associated with the Industrial Drive Extension Project; and

WHEREAS, Amendment No. 2 will provide the necessary funds for bidding services, construction phase services and materials testing.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:

Section 1: That the City Council of the City of Fayetteville, Arkansas hereby approves Amendment No. 2 to the Engineering Services Agreement with McClelland Consulting Engineers, Inc. in the amount of \$132,690.00 for bidding services, construction phase services and materials testing associated with the Industrial Drive Extension Project.

Section 2: That the City Council of the City of Fayetteville, Arkansas hereby approves a budget adjustment, a copy of which is attached to this Resolution.



MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council

THRU: Susan Norton, Chief of Staff
Timothy Nyander, Utilities Director

FROM: Corey Granderson, Utilities Engineer

DATE: December 27, 2022

SUBJECT: **WAIVE COMPETITIVE BIDDING AND AUTHORIZE A DESIGN-BUILD CONTRACT WITH STRUCTURAL PRESERVATION SYSTEMS, LLC**

RECOMMENDATION:

Staff recommends approval of a resolution to waive competitive bidding and approve a Design-Build contract with Structural Preservation Systems, LLC for engineering and construction services related to emergency trenchless repair of a 48-inch diameter sanitary sewer under Interstate 49 in an amount not to exceed \$2,477,644.00 and to approve a project contingency of \$375,000.00.

BACKGROUND:

In 2021 City Water/Sewer Staff performed an inspection of the 48-inch gravity sewer line that extends from Gregg Avenue to Sunshine Road. Visual inspections of each manhole were conducted, and a 'boat' was constructed to float down each line segment and record video. Overall, the line was in excellent shape, however, one area in the vicinity of Interstate-49 has experienced damage at some point during its 15-years of service. This segment of line cannot be repaired with typical excavation techniques due to its location under the Southbound Highway-112 Exit Ramp on I-49.

DISCUSSION:

Staff has worked with Structural Preservation Systems, LLC, a national leader in trenchless pipe point repairs, to develop a plan for repairs in this location. Due to the specialized nature of this repair technique, Staff recommends a bid-waiver to allow Structural Technologies to perform Investigation-Design-Build services for this expedited repair project. The costs for bypass pumping of sewer, mobilization, rescue standby, pipe shoring, inspection, design, and installation of pipe repair materials is \$2,477,644.00. If significant groundwater is encountered, the project contingency will be utilized as needed to mitigate and create a workable environment. A contingency in the amount of \$375,000.00 is also recommended.

BUDGET/STAFF IMPACT:

Funds are available in the Sanitary Sewer Rehab account within the Water & Sewer fund.

ATTACHMENTS: Structural Preservation Systems SRF, Fayetteville Contract signed SPS only, RES BID
WAIVER-STRUCTURAL PRESERVATION SYSTEMS - SEWER UNDER I49 - CONTINGENCY

City of Fayetteville Staff Review Form

2022-263

Item ID

1/3/2023

City Council Meeting Date - Agenda Item Only
N/A for Non-Agenda Item

Tim Nyander

12/15/2022

WATER SEWER (720)

Submitted By

Submitted Date

Division / Department

Action Recommendation:

Staff recommends approval of a resolution to waive competitive bidding and approve a Design-Build contract with Structural Preservation Systems, LLC for engineering and construction services related to emergency trenchless repair of a 48-inch diameter sanitary sewer under Interstate 49 in an amount not to exceed \$2,477,644.00 and to approve a project contingency of \$375,000.00.

Budget Impact:

5400.720.5700-5815.00

Water/Sewer

Account Number

Fund

02017.1

Sanitary Sewer Rehabilitation

Project Number

Project Title

Budgeted Item? Yes

Total Amended Budget

\$ 5,603,072.33

Expenses (Actual+Encum)

\$ 418,072.91

Available Budget

\$ 5,184,999.42

Does item have a direct cost? Yes

Item Cost

\$ 2,852,644.00

Is a Budget Adjustment attached? No

Budget Adjustment

\$ -

Remaining Budget

\$ 2,332,355.42

V20221130

Purchase Order Number: _____

Previous Ordinance or Resolution # _____

Change Order Number: _____

Approval Date: _____

Original Contract Number: _____

Comments:



Vendor: **Structural Preservation Systems, LLC**

Term: 12 months from Notice to Proceed

DESIGN-BUILD CONTRACT
Project: Emergency Sewer Line Repair

THIS CONTRACT is made this _____ day of _____, 2023 by and between City of Fayetteville, Arkansas (hereinafter “City” or “Fayetteville”) and Structural Preservation Systems, LLC (hereinafter “SPS” or “Design-Builder”), a Maryland limited liability company authorized to do business in Arkansas.

WHEREAS, The City of Fayetteville operates a water and wastewater utility system and has identified a sewer line located at approximately 36°06'45.4"N 94°10'27.9"W at risk of imminent failure and which requires immediate repairs; and

WHEREAS, Structural Preservation Systems, LLC is qualified to design and construct the necessary repairs.

NOW, THEREFORE, the City and SPS hereby agree as follows:

SECTION 1 - AUTHORIZATION OF DESIGN-BUILD SERVICES

- 1.1 Services provided by SPS shall be undertaken only upon written Authorization of the CITY.
- 1.2 Changes, modifications or amendments in scope, price or fees to this contract shall **not** be allowed without a formal contract amendment approved by the CITY in accordance with City Policy IC-02, Contract Responsibilities, **in advance** of the change in scope, costs, fees, or delivery schedule.

SECTION 2 - CONTRACT DOCUMENTS

- 2.1 In addition to the terms and conditions of this Agreement, the following Appendices are incorporated into and shall be deemed an integral part of this contract:
 - Appendix A – Scope of Work and Fee Schedule
 - Appendix B – General Conditions
- 2.2 In case of any inconsistency, conflict, or ambiguity among the Contract Documents, the documents shall govern in the following order: (a) Change Orders and written amendments to this Contract which are executed by all parties; (b) this Contract; (c) General Conditions.

SECTION 3 - BASIC SERVICES OF DESIGN-BUILDER

- 3.1 Perform design-build services in connection with the Project as hereinafter stated.
 - 3.1.1 The Scope of Services to be furnished by SPS during this project is included in Appendix A attached hereto and made part of this Contract.
- 3.2 SPS shall coordinate their activities and services with the CITY. SPS and CITY agree that SPS has full responsibility for the design-build services.

SECTION 4 - RESPONSIBILITIES OF CITY OF FAYETTEVILLE

- 4.1 CITY OF FAYETTEVILLE shall, within a reasonable time, so as not to delay the services of SPS:
 - 4.1.1 Provide full information as to CITY's requirements for the Project.
 - 4.1.2 Assist SPS by placing at SPS's disposal all available information pertinent to the assignment including previous reports and any other data relative thereto.
 - 4.1.3 Obtain for SPS access to property reasonably necessary for SPS to perform its services under this Contract.
 - 4.1.4 Examine all studies, reports, cost opinions, Bid Documents, Drawings, proposals, and other documents presented by SPS and render in writing decisions pertaining thereto.
 - 4.1.5 Corey Granderson, Utilities Engineer, is the CITY OF FAYETTEVILLE's project representative with respect to the services to be performed under this Contract. Such person shall have complete authority to transmit instructions, receive information, interpret and define CITY's policies and decisions with respect to materials, equipment, elements and systems to be used in the Project, and other matters pertinent to the services covered by this Contract. CITY will provide written notification to SPS in the event the project representative changes during the term of this Contract.
 - 4.1.6 CITY will review all documents and provide written comments to SPS in a timely manner.

SECTION 5 - PERIOD OF SERVICE

- 5.1 This Contract will become effective upon the first written notice to proceed by CITY authorizing services hereunder and the services under SPS'S scope of service shall be completed within 12 months of receiving the notice to proceed from CITY.
- 5.2 The provisions of this Contract have been agreed to in anticipation of the orderly progress of the Project through completion of the services stated in the Contract. SPS will proceed with providing the authorized services within thirty (30) days of receipt of the notice to proceed from CITY.

5.3 SPS shall provide a schedule of its services and include such schedule with the scope in Appendix A.

SECTION 6 - PAYMENTS TO DESIGN-BUILDER

6.1 **The maximum not-to-exceed amount authorized for this Contract is \$2,477,644.00 US DOLLARS.**

6.2 The CITY shall compensate SPS based upon progress payments as described in Appendix A.

6.2.1 The maximum not-to-exceed amount authorized for this Contract is based upon the estimated fee scope, hours, costs and expenses per phase. The estimated fee spreadsheets shall be included in Appendix B. The amount for any phase may be more or less than the estimate, however the maximum not-to-exceed amount shall not be exceeded without a formal contract amendment.

6.3 Statements

6.3.1 Monthly statements for each calendar month shall be submitted to CITY consistent with SPS's normal billing schedule. Once established, the billing schedule shall be maintained throughout the duration of the Project. Applications for payment shall be made in accordance with a format to be developed by SPS and approved by CITY. Applications for payment shall be accompanied each month by the updated project schedule. Final payment for services shall be made upon CITY's approval and acceptance with the satisfactory completion of the services.

6.4 Payments

6.4.1 All accepted invoices are payable upon receipt and due within thirty (30) days. If a portion of SPS's statement is disputed by CITY, the undisputed portion shall be paid by CITY by the due date. CITY shall advise SPS in writing of the basis for any disputed portion of any statement.

6.5 Final Payment

6.5.1 Upon satisfactory completion of the work performed under this Contract, as a condition before final payment under this Contract, or as a termination settlement under this Contract, SPS shall execute and deliver to CITY a release of all claims against CITY arising under or by virtue of this Contract, except claims which are specifically exempted by SPS to be set forth therein. Unless otherwise provided in this Contract or by State law or otherwise expressly agreed to by the parties to this Contract, final payment under this Contract or settlement upon termination of this Contract shall not constitute a waiver of CITY's claims against SPS.

6.6 Stop Work

6.6.1 Notwithstanding anything to the contrary contained herein, payment to SPS by City for undisputed items is a material issue. If payment is not made within 60 (sixty) days of receipt of an

acceptable invoice and any required submittals, in addition to any other remedy available, SPS shall be entitled to stop work after forty-eight (48) hours written notice to CITY.

SECTION 7 - GENERAL CONSIDERATIONS

7.1 Insurance

- 7.1.1 In the course of performance of these services, SPS will maintain (in United States Dollars) the insurance coverage required by the General Conditions.

SPS will provide to CITY OF FAYETTEVILLE certificates as evidence of the specified insurance within ten calendar days of the date of this Contract and upon each renewal of coverage.

- 7.1.2 CITY and SPS waive all rights of subrogation against each other and their officers, directors, agents, or employees for damage covered by insurance during and after the completion of SPS'S services. All construction contractors and subcontractors shall be required to provide waivers of subrogation in favor of CITY and SPS for damage covered by any construction contractor's or sub-contractor's property insurance.

7.2 Professional Responsibility

- 7.2.1 SPS will exercise reasonable skill, care, and diligence ordinarily provided by professional engineers practicing in the same or similar locality under the same or similar circumstances in the performance of SPS's services and will carry out its responsibilities in accordance with customarily accepted professional engineering and construction practices, CITY OF FAYETTEVILLE Standards, and Arkansas State Law. CITY OF FAYETTEVILLE will promptly report to SPS any defects or suspected defects in SPS's services of which CITY OF FAYETTEVILLE becomes aware, so that SPS can take measures to minimize the consequent of such defect. SPS agrees not to seek or accept any compensation or reimbursements from the CITY OF FAYETTEVILLE for any work it performs to correct any errors, omissions or other deficiencies caused by SPS's failure to meet customarily accepted professional practices. CITY OF FAYETTEVILLE retains all other remedies to recover for its damages caused by any negligence of SPS.

- 7.2.2 In addition, SPS will be responsible to CITY OF FAYETTEVILLE for bodily injury or property damage caused by its negligent conduct during its activities at the Project Site to the extent covered by SPS's Commercial General Liability and Automobile Liability Insurance policies. This limitation provision shall not apply to SPS's professional responsibility in the performance of its professional services.

7.3 Cost Opinions and Projections

- 7.3.1 Cost opinions and projections prepared by SPS relating to construction costs and schedules, operation and maintenance costs, equipment characteristics and performance, and operating

results are based on SPS 's experience, qualifications, and judgment as a design professional. Since SPS has no control over weather, cost and availability of labor, material and equipment, labor productivity, construction Contractors' procedures and methods, unavoidable delays, construction Contractors' methods of determining prices, economic conditions, competitive bidding or market conditions, and other factors affecting such cost opinions or projections, SPS does not guarantee that actual rates, costs, performance, schedules, and related items will not vary from cost opinions and projections prepared by SPS.

7.4 Changes

- 7.4.1 CITY OF FAYETTEVILLE shall have the right to make changes within the general scope of SPS's services, with an appropriate change in compensation and schedule only after Fayetteville City Council approval of such proposed changes if required by City Policy IC-02, Contract Responsibilities, and upon execution of a mutually acceptable amendment or change order signed by the Mayor of the CITY OF FAYETTEVILLE and the duly authorized officer of SPS.

7.5 Termination

- 7.5.1 This Contract may be terminated in whole or in part in writing by either the CITY or SPS in the event of substantial failure by the other party to fulfill its obligations under this Contract through no fault of the terminating party, provided that no termination may be effected unless the other party is given:
- 7.5.1.1 Not less than ten (10) calendar days written notice (delivered by certified mail, return receipt requested) of intent to terminate,
 - 7.5.1.2 An opportunity for consultation with the terminating party prior to termination.
- 7.5.2 This Contract may be terminated in whole or in part in writing by CITY OF FAYETTEVILLE for its convenience, provided that SPS is given:
- 7.5.2.1 Not less than ten (10) calendar days written notice (delivered by certified mail, return receipt requested) of intent to terminate,
 - 7.5.2.2 An opportunity for consultation with the terminating party prior to termination.
- 7.5.3 If termination for default is effected by CITY OF FAYETTEVILLE, an equitable adjustment in the price provided for in this Contract shall be made, but
- 7.5.3.1 No amount shall be allowed for anticipated profit on unperformed services or other work,
 - 7.5.3.2 Any payment due to SPS at the time of termination may be adjusted to cover any additional incurred costs to CITY OF FAYETTEVILLE because of SPS's default.

7.5.4 If termination for default is effected by SPS, or if termination for convenience is effected by CITY OF FAYETTEVILLE, the equitable adjustment shall include a reasonable profit for services or other work performed. The equitable adjustment for any termination shall provide for payment to SPS for services rendered and expenses incurred prior to the termination, in addition to termination settlement costs reasonably incurred by SPS relating to commitments which had become firm prior to the termination.

7.5.5 Upon receipt of a termination action under Paragraphs 7.5.1 or 7.5.2 above, SPS shall:

7.5.5.1 Promptly discontinue all affected work (unless the notice directs otherwise),

7.5.5.2 Provided CITY has paid SPS all undisputed amounts due, deliver or otherwise make available to CITY OF FAYETTEVILLE all data, drawings, specifications, reports, estimates, summaries and such other information and materials as may have been accumulated by SPS in performing this Contract, whether completed or in process.

7.5.6 Upon termination under Paragraphs 7.5.1 or 7.5.2 above CITY OF FAYETTEVILLE may take over the work and may award another party a Contract to complete the work under this Contract.

7.5.7 If, after termination for failure of SPS to fulfill contractual obligations, it is determined that SPS had not failed to fulfill contractual obligations, the termination shall be deemed to have been for the convenience of CITY OF FAYETTEVILLE. In such event, adjustments of the Contract price shall be made as provided in Paragraph 7.5.4 of this clause.

7.6 Delays

7.6.1 In the event the services of SPS are suspended or delayed by CITY OF FAYETTEVILLE or by other events beyond SPS's reasonable control, SPS shall be entitled to additional compensation and time for reasonable costs incurred by SPS in temporarily closing down or delaying the Project.

7.7 Rights and Benefits

7.7.1 SPS's services will be performed solely for the benefit of CITY OF FAYETTEVILLE and not for the benefit of any other persons or entities.

7.8 Dispute Resolution

7.8.1 Scope of Paragraph: The procedures of this Paragraph shall apply to any and all disputes between CITY OF FAYETTEVILLE and SPS which arise from, or in any way are related to, this Contract, including, but not limited to the interpretation of this Contract, the enforcement of its terms, any acts, errors, or omissions of CITY OF FAYETTEVILLE or SPS in the performance of this Contract, and disputes concerning payment.

7.8.2 Exhaustion of Remedies Required: No action may be filed unless the parties first negotiate. If timely Notice is given under Paragraph 7.8.3, but an action is initiated prior to exhaustion of these procedures, such action shall be stayed, upon application by either party to a court of proper jurisdiction, until the procedures in Paragraphs 7.8.3 and 7.8.4 have been complied with.

7.8.3 Notice of Dispute

7.8.3.1 For disputes arising prior to the making of final payment promptly after the occurrence of any incident, action, or failure to act upon which a claim is based, the party seeking relief shall serve the other party with a written Notice;

7.8.3.2 For disputes arising within one year after the making of final payment, CITY OF FAYETTEVILLE shall give SPS written Notice at the address listed in Paragraph 7.13 within thirty (30) days after occurrence of any incident, accident, or first observance of defect or damage. In both instances, the Notice shall specify the nature and amount of relief sought, the reason relief should be granted, and the appropriate portions of this Contract that authorize the relief requested.

7.8.4 Negotiation: Within seven days of receipt of the Notice, the Project Managers for CITY OF FAYETTEVILLE and SPS shall confer in an effort to resolve the dispute. If the dispute cannot be resolved at that level, then, upon written request of either side, the matter shall be referred to the President of SPS and the Mayor of CITY OF FAYETTEVILLE or his designee. These officers shall meet at the Project Site or such other location as is agreed upon within 30 days of the written request to resolve the dispute.

7.8.5 Legal Fees: In any legal action arising from this Contract or connected herewith, the prevailing party shall be entitled to recover all costs and reasonable attorney's fees incurred (whether pre-litigation, at mediation, arbitration or trial level and in any appeals).

7.9 CITY OF FAYETTEVILLE represents that it has sufficient funds or the means of obtaining funds to remit payment to SPS for services rendered by SPS.

7.10 Publications

7.10.1 Recognizing the importance of professional development on the part of SPS's employees and the importance of SPS's public relations, SPS may prepare publications, such as technical papers, articles for periodicals, and press releases, pertaining to SPS's services for the Project. Such publications will be provided to CITY OF FAYETTEVILLE in draft form for CITY OF FAYETTEVILLE's advance review. CITY OF FAYETTEVILLE shall review such drafts promptly and provide CITY OF FAYETTEVILLE's comments to SPS. CITY OF FAYETTEVILLE may require deletion of proprietary data or confidential information from such publications, but otherwise CITY OF FAYETTEVILLE will not unreasonably withhold approval. The cost of SPS's activities pertaining to any such publication shall be at SPS's sole cost and responsibility.

7.11 Removed

7.12 Ownership of Documents

7.12.1 All documents provided by CITY OF FAYETTEVILLE including original drawings, disks of CADD drawings and cross sections, estimates, specifications, field notes, and data are and remain the property of THE CITY OF FAYETTEVILLE.

7.12.2 All documents provided by SPS including original drawings, disks of CADD drawings and cross sections, estimates, specification field notes, and data are and remain the property of SPS.

7.12.3 Any files delivered in electronic medium may not work on systems and software different than those with which they were originally produced. Neither SPS nor the CITY OF FAYETTEVILLE warrant as to the compatibility of these files with any other system or software. Because of the potential degradation of electronic medium over time, in the event of a conflict between the sealed original drawings/hard copies and the electronic files, the sealed drawings/hard copies will govern.

7.13 Notices

7.13.1 Any Notice required under this Contract will be in writing, addressed to the appropriate party at the following addresses:

CITY OF FAYETTEVILLE's address:

ATTN: Mayor's Office

113 West Mountain

Fayetteville, AR 72701

STRUCTURAL PRESERVATION SYSTEMS, LLC

ATTN: David Gibson

6955 San Tomas Road

Elkridge, MD 21075

7.14 Successor and Assigns

7.14.1 CITY OF FAYETTEVILLE and SPS each binds itself and its successors, executors, administrators, and assigns to the other party of this Contract and to the successors, executors, administrators, and assigns of such other party, in respect to all covenants of this Contract; except as above, the CITY OF FAYETTEVILLE and SPS shall NOT assign, sublet, or transfer its interest in the Contract without the written consent of the other party.

7.15 Controlling Law

7.15.1 This Contract shall be subject to, interpreted and enforced according to the laws of the State of Arkansas, in the County of Washington, without regard to any conflict of law provisions.

7.16 Entire Contract

7.16.1 This Contract represents the entire Contract between SPS and CITY OF FAYETTEVILLE relative to the Scope of Services herein. Since terms contained in purchase orders do not generally apply to professional services, in the event CITY OF FAYETTEVILLE issues to SPS a purchase order, no preprinted terms thereon shall become a part of this Contract. Said purchase order document, whether or not signed by SPS, shall be considered as a document for CITY OF FAYETTEVILLE's internal management of its operations.

SECTION 8 - SPECIAL CONDITIONS

8.1 Additional Responsibilities of SPS:

8.1.1 CITY OF FAYETTEVILLE's or any Federal or State Agency's review, approval, or acceptance of design drawings, specifications, reports and other services furnished hereunder shall not in any way relieve SPS of responsibility to its standard of care set forth in Section 6.2.1. Except as set forth in this Contract, neither CITY OF FAYETTEVILLE's nor any Federal or State Agency's review, approval or acceptance of, nor payment for any of the services shall be construed as a waiver of any rights under this Contract or of any cause of action arising out of the performance of this Contract.

8.1.2 SPS shall be and shall remain liable, in accordance with applicable law, for direct property and personal injury damages to CITY OF FAYETTEVILLE to the extent caused by SPS's negligent performance of the Services furnished under this Contract; SPS shall not be liable for errors, omissions or other deficiencies to the extent attributable to CITY OF FAYETTEVILLE or CITY OF FAYETTEVILLE-furnished data.

8.2 Remedies

8.2.1 Except as may be otherwise provided in this Contract, all claims, counter-claims, disputes and other matters in question between CITY OF FAYETTEVILLE and SPS arising out of or relating to this Contract or the breach thereof will be decided in a court of competent jurisdiction within Arkansas.

8.3 Audit: Access to Records

8.3.1 SPS shall maintain books, records, documents and other evidence directly pertinent to performance on work under this Contract and for three (3) years from the date of final payment under this Contract, in accordance with generally accepted accounting principles and practices consistently applied in effect on the date of execution of this Contract. SPS shall also maintain the financial information and data used by SPS in the preparation of support of the cost submission

required for any negotiated Contract or change order and send to CITY OF FAYETTEVILLE a copy of the cost summary submitted. CITY OF FAYETTEVILLE, the State or any of their authorized representatives shall have access to all such books, records, documents and other evidence for the purpose of inspection, audit and copying during normal business hours. SPS will provide proper facilities for such access and inspection.

8.3.2 Records under Paragraph 7.3.1 above, shall be maintained and made available during performance on assisted work under this Contract and until three years from the date of final payment for the project. In addition, those records which relate to any controversy arising out of such performance, or to costs or items to which an audit exception has been taken, shall be maintained and made available until three years after the date of resolution of such appeal, litigation, claim or exception.

8.3.3 This right of access clause (with respect to financial records) applies to:

8.3.3.1 Negotiated prime Contracts;

8.3.3.2 Negotiated change orders or Contract amendments in excess of \$10,000 affecting the price of any formally advertised, competitively awarded, fixed price Contract; and

8.3.3.3 Contracts or purchase orders under any Contract other than a formally advertised, competitively awarded, fixed price Contract. However, this right of access does not apply to a prime Contract, lower tier subcontract or purchase order awarded after effective price competition, except:

8.3.3.3.1 With respect to record pertaining directly to subcontract performance, excluding any financial records of SPS;

8.3.3.3.2 If there is any indication that fraud, gross abuse or corrupt practices may be involved;

8.3.3.3.3 If the subcontract is terminated for default or for convenience.

8.4 Covenant Against Contingent Fees

8.4.1 SPS represents that no person or selling agency has been employed or retained to solicit or secure this Contract upon an Contract of understanding for a commission, percentage, brokerage or continent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by SPS for the purpose of securing business. For breach or violation of this representation, CITY OF FAYETTEVILLE shall have the right to terminate this Contract without liability or at its discretion, to deduct from the contract price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.

8.5 Gratuities

- 8.5.1 If CITY OF FAYETTEVILLE finds after a notice and hearing that SPS or any of SPS's agents or representatives, offered or gave gratuities (in the form of entertainment, gifts or otherwise) to any official, employee or agent of CITY OF FAYETTEVILLE, in an attempt to secure an Contract or favorable treatment in awarding, amending or making any determinations related to the performance of this Contract, CITY OF FAYETTEVILLE may, by written notice to SPS terminate this Contract. CITY OF FAYETTEVILLE may also pursue other rights and remedies that the law or this Contract provides. However, the existence of the facts on which CITY OF FAYETTEVILLE bases such finding shall be in issue and may be reviewed in proceedings under the Remedies clause of this Contract.
- 8.5.2 In the event this Contract is terminated as provided in Paragraph 7.5.1, CITY OF FAYETTEVILLE may pursue the same remedies against SPS as it could pursue in the event of a breach of the Contract by SPS.

8.6 Arkansas Freedom of Information Act

- 8.6.1 City contracts and documents, including internal documents and documents of subcontractors and sub-consultants, prepared while performing City contractual work are subject to the Arkansas Freedom of Information Act (FOIA). If a Freedom of Information Act request is presented to the CITY OF FAYETTEVILLE for records kept solely and only in the possession of SPS, to the extent required by law, SPS will provide the documents in a prompt and timely manner as prescribed in the Arkansas Freedom of Information Act (A.C.A. §25-19-101 et seq.). Only legally authorized photocopying costs pursuant to the FOIA may be assessed for this compliance.

IN WITNESS WHEREOF, CITY OF FAYETTEVILLE, ARKANSAS by and through its Mayor, and SPS by its authorized officer have made and executed this Contract as of the day and year first above written.

CITY OF FAYETTEVILLE, ARKANSAS

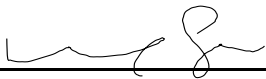
By: _____
Lioneld Jordan, Mayor

DATE: _____

ATTEST:

By: _____
Kara Paxton, City Clerk Treasurer

STRUCTURAL PRESERVATION SYSTEMS, LLC

By:  _____
Mike Szoke, Assistant Secretary

DATE: _____

END OF DESIGN-BUILD CONTRACT

STRUCTURAL PRESERVATION SYSTEMS, LLC
ACTION OF MANAGER

THE UNDERSIGNED, being the General Manager of the above-named Maryland limited liability company (the “Manager”), hereby adopts the following resolutions and actions:

Appointment of Officers

RESOLVED: That the following persons are hereby appointed to the offices of the Company indicated opposite their respective names, to hold such offices until their successors are duly appointed or elected, and qualified:

Jeffrey Venanzi	- President
Keith Eberhardt	- Vice-President
Bradley J. Holland	- Secretary
Stephen Camisa	- Treasurer
Peter H. Emmons	- Assistant Secretary
Scott M. Greenhaus	- Assistant Secretary
Michael T. Szoke	- Assistant Secretary
Timothy Crawford	- Assistant Secretary
Christopher Kingrea	- Assistant Secretary
Garry Naughton	- Assistant Secretary
Brian Willmarth	- Assistant Secretary
Jesse Cafourek	- Assistant Secretary
Colin Meneely	- Assistant Secretary
Wade Chubet	- Assistant Secretary
Matthew Frye	- Assistant Secretary
Michael Miller	- Assistant Secretary
Clifton Ruffin	- Assistant Secretary
Jonathan Howard	- Assistant Secretary
Stephen Reynolds	- Assistant Secretary
Timothy Gumina	- Assistant Secretary
Michael Wyman	- Assistant Secretary
Sharon Esposito-Mayer	- Assistant Secretary

FURTHER RESOLVED: That each person listed above in his/her capacity as an officer of the Company, severally, is hereby authorized:

- (a) To submit and negotiate bids for construction projects on behalf of the Company;
- (b) To negotiate, execute and deliver contracts on behalf of the Company upon the award of a construction project.

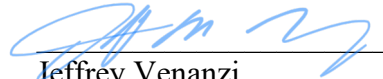
AND IT IS FURTHER RESOLVED: that the Manager of the Managing Member of the Company, (for the Managing Member or in the Managing Member’s capacity as manager of the Company) be, and is hereby

authorized and directed to take or cause to be taken any and all such other actions and to execute, deliver and file all such other agreements, amendments, instruments, reports, documents and regulatory and other notices as may be determined by such officer(s) to be necessary or appropriate to carry out the purposes of, and give effect to, the foregoing resolutions.

THIS WRITTEN CONSENT, signed by the Manager of the Company's Manager, shall be effective as of January 1, 2021, and shall be filed with the minutes of the Managing Member and the Company.

STRUCTURAL HOLDINGS, LLC
General Manager

By:



Jeffrey Venanzi
Manager



December 6, 2022

Mr. Corey W. Granderson, P.E.
Utilities Engineer
City of Fayetteville, Arkansas

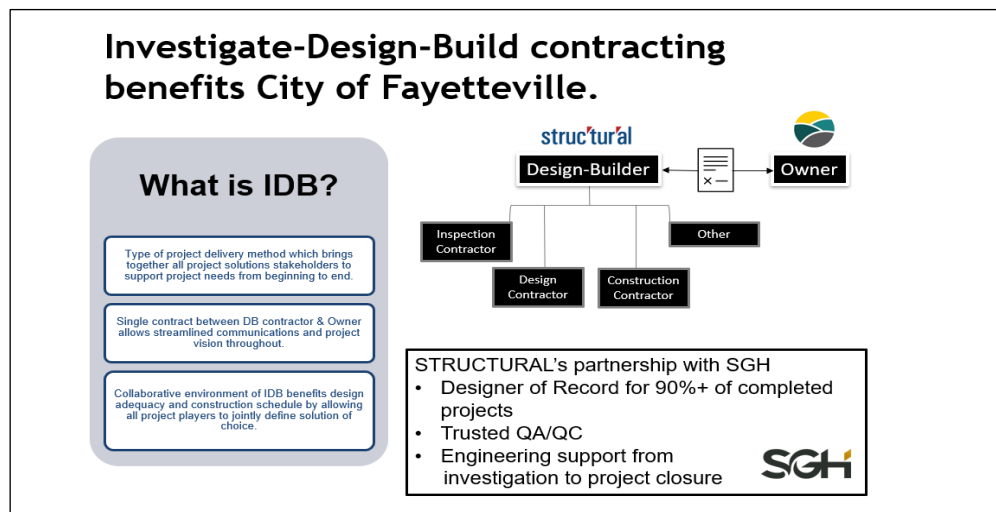
O: 479-444-3452
E: cgranderson@fayetteville-ar.gov

Subject: City of Fayetteville, Arkansas

Re: 48-inch Hobas Sewer Pipeline IDB CFRP Upgrade - Proposal r1

Dear Mr. Granderson,

Thank you for the opportunity to provide this proposal for the rehabilitation of the City of Fayetteville, Arkansas 48-inch Hobas Sewer Pipeline. This is a Turnkey Investigate Design Build (IDB) approach with collaboration with the City of Fayetteville (Owner), STRUCTURAL TECHNOLOGIES (Technical Support), STRUCTURAL PRESERVATION SYSTEMS, LLC (Contractor, herein known as STRUCTURAL) and Simpson Gumpertz & Heger (Forensic Investigation and CFRP Designer, herein known as SGH) (all-encompassing the IDB Team). The Investigate-Design-Build contracting approach benefits City of Fayetteville, the following illustrates the benefits:



STRUCTURAL has been providing infrastructure upgrade services for over 45 years and has the expertise and experience necessary to perform the requested pipe reinforcement scope. This proposal is based upon information provided by the Owner, STRUCTURAL TECHNOLOGIES and SGH.

COMPANY BACKGROUND:

The Structural Group is listed in the Engineering News Record ranking as one of the Top Specialty Contractors and is recognized as the largest structural repair and strengthening contractor in the U.S. Since its founding in 1976, STRUCTURAL has successfully completed more than 25,000 repair and remediation projects and has been recognized with more than 55 industry awards.

This unmatched level of experience and recognition has set the Structural Group apart in the market as the go-to company for some of the most difficult projects completed in the repair industry, including buried pipelines which we repair and strengthen for municipalities, fossil power plants, industrial facilities and nuclear power generation plants throughout the United States.

STRUCTURAL TECHNOLOGIES is the manufacturing and technical support division within the Structural Group. For existing pipeline infrastructure, STRUCTURAL TECHNOLOGIES products and solutions repair deterioration or damage, upgrade in order to extend lifecycle or to comply with change of use requirements such as increased pressures or new external loads.

In addition to repair systems design and supply, STRUCTURAL PRESERVATION SYSTEMS, LLC (STRUCTURAL), our construction arm provides turnkey field service with trained and certified technicians performing specialized pipeline scopes including inspection support and turnkey repair system installation.

STRUCTURAL offers the following core capabilities:

- ☑ **Safety 24/7.** A corporate culture where Safety is a value both at work and at home. Structural's *Frontline Safety Program* implements a safety-first focused, behavior-based approach that has proven to be one of the strongest safety programs in our industry. With our outstanding safety record, you can be confident that STRUCTURAL's *Frontline Safety Program* will ensure safe performance.
- ☑ **Quality.** A corporate culture where Quality is a value. STRUCTURAL's *Front-Line Quality Program* leads the infrastructure upgrade industry in that we require a Quality Plan for all pipeline projects. Workers will be informed of Quality requirements through the use of mock-ups, training programs and pre-job briefs so they understand key engineering attributes and expected quality parameters including consideration of critical actions that require the use of *Human Performance Tools*.
- ☑ **Teamwork.** STRUCTURAL's dedication to its customers and employees lays the foundation for our business practices. We understand that creating a team environment will ensure success beyond expectations. Participants involved with a project must have a clear understanding of their responsibilities, accountability, expectations, and commitments. When all the participants involved understand their responsibilities, accountabilities, and commitments the project will be executed according to the safety, quality, and performance expectations we mutually share.

- ☑ **Resources.** STRUCTURAL has successfully performed work for municipalities, fossil power plants, industrial facilities and nuclear power generation plants for many years and will self-perform this Project from our Pipeline Operations center. Subject Matter Experts are available from any of over twenty (20) regionally based offices depending on the expertise required.

STRUCTURAL's experience effectively planning and executing similar projects will allow us to meet our mutual goals in the areas of Safety, Quality, Safety Conscious Work Environment, Human Performance, and schedule/cost performance.

PROJECT OVERVIEW:

The Owner contacted STRUCTURAL TECHNOLOGIES in January 2022 to assist the Owner with brainstorming some options to rehabilitate a segment of a 48-inch Hobas Sewer Pipeline directly under the I-49 interchange lanes. The Owner conducted a visual survey of the pipeline using GoPro CCTV. The visual inspection discovered some pipe deformation in the first minute or so of the video, but specifically at about 1:45min you can see the major "rip" in the top of pipe with active infiltration. This location happens to be about 30FT deep and directly under the I-49 interchange lanes. Figure 1 is a snapshot of the GPS map provided by the Owner with the red X, marking the location for the failed pipe segment.

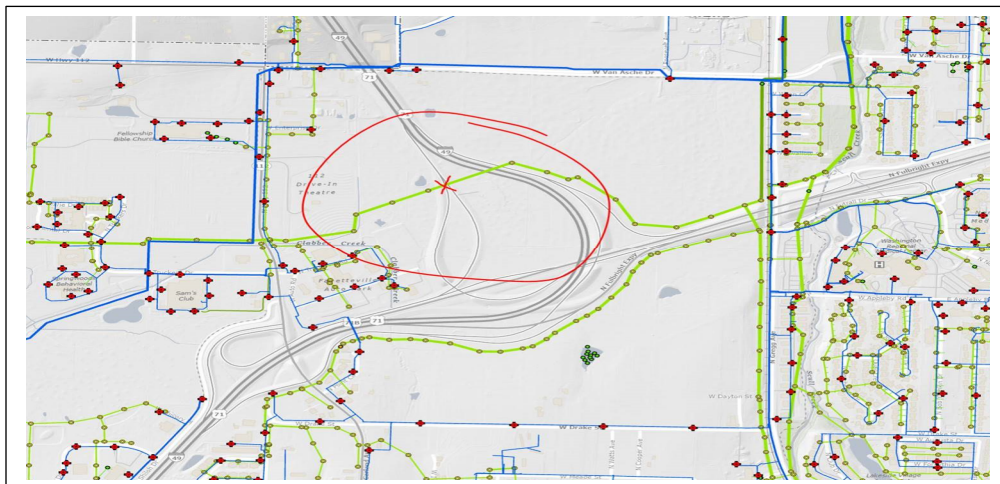


Figure 1: GPS Map of Failed Pipe Location

Figure 2 is a snapshot of the GoPro Video of the major "rip" in the top of the pipe with active infiltration.

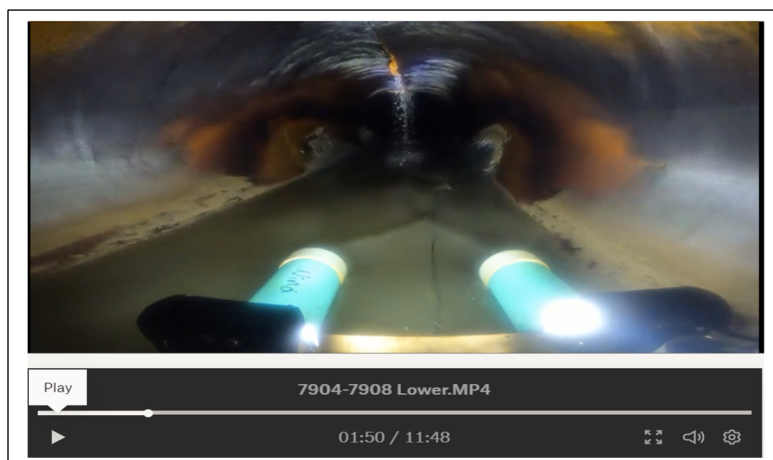


Figure 2: GoPro Video of 48-inch Hobas Sewer

The 48-inch Hobas pipeline was manufactured by Hobas Pipe USA, Houston Texas. Hobas Pipe is considered a flexible pipe. In 2006 Oscar Renda installed 913 LF of 72-inch casing by Pipe Jacking Tunnel Method. The method was hand dug and using liner plates bolted together. There were bung holes at spaced out distances and the outside void around liner plates was grouted. When the 48-inch Hobas pipe was inserted in the liner plate encasement it had adjustable jack screws curved upside down tee installed on top of the pipe and screwed out to the liner plate encasement. The voids around the 48-inch pipe were supposed to be grouted. Figure 3 are some photos of the tunneling project.



Figure 3: 2006 Photos of the Tunneling

STRUCTURAL TECHNOLOGIES engaged SGH to review the information provided by the Owner regarding the installation of the Hobas pipe to determine if the root cause of the “ripped” Hobas segment could be related to a void between the Hobas pipe and the encasement.

Upon review, there are several discrepancies between the spec book, the as-built drawings and historical information from the Owner. Discrepancies mostly relate to construction and type of the steel casing pipe, the annular space between Hobas and casing pipe being grouted or not, etc.

Based on review of the documents (GoPro footage, specs, as-builts, info from Hobas), we believe that the failure could be unconstrained buckling of Hobas due to ungrouted annular space between Hobas and casing. We considered this likely because:

- The as-built drawings stamped in 2008 clearly state not to grout the annular space.
- GoPro video shows significant infiltration into the pipe at the failure location.
- Spec book is not very clear whether grouting was in fact required (one section leaves it up to engineer, while some other sections require it)
- Hobas was designed for grouted (buried) condition to resist the gravity loads
- We understand from the Owner that the Hobas was grouted, but we did not see any evidence (photo etc.) of that.

Based on preliminary calculation, unconstrained buckling of Hobas under hydrostatic pressure from full groundwater (up to ground surface) is not necessarily verified. So, failure mechanism can be something else, bringing into question other potential factors such as:

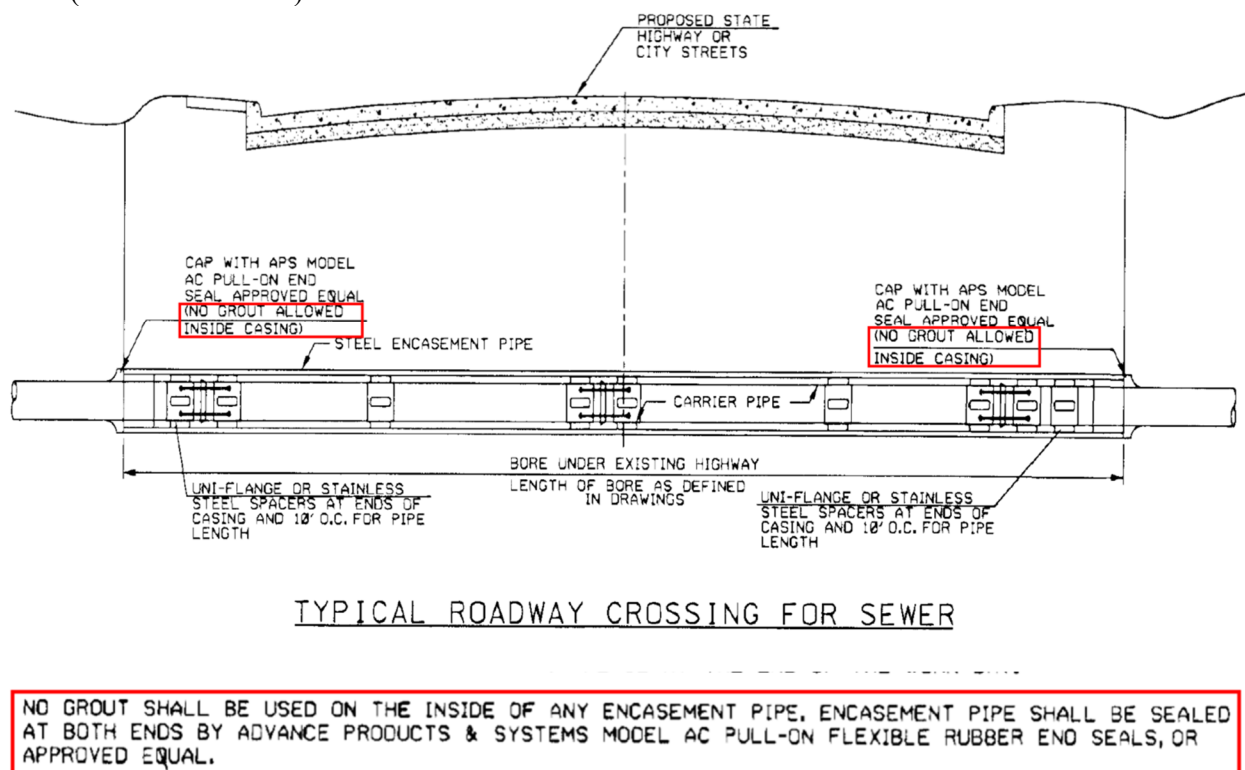
- Condition of the steel casing and its deflection
- Point loading of Hobas due to deflection of the steel casing at the stainless-steel spacer and or screw jack locations

As a result, the failure needs to be investigated further before a rehab approach can be recommended. The main challenge with investigation is man entry into the sewer, which would require significant preparation and planning.

The following action items resulted from a collaborative meeting with the Owner, STRUCTURAL and SGH:

1. Point out where the record drawings specified not to grout the annular space between Hobas and the steel liner
2. Share the information Hobas was able to locate in their records

The answer to #1 is on p31 of the provided record drawings. Also included below are excerpts from this sheet (note the red boxes).



For #2, STRUCTURAL provided a Pipe Submittal and Technical Spec Review that Hobas was able to find in their records. Page 2 of the pipe submittals shows "direct bury & casing carrier" installations, and it also shows a maximum allowable grout pressure. The technical spec review shows 48-inch SN46 pipe being used in both direct bury and casing carrier conditions. Calculations are presented only for the direct bury condition (beginning on p29 of the pipe submittal). Based on these observations, pipe in the casing appears to have been designed for grouted condition, which is consistent with Hobas's typical design approach for these conditions. It is unclear why the record drawings did not allow grout?

To develop a repair approach further investigation will need to occur. We need to understand whether the Hobas was grouted or not, where the spacers/screw jacks around the Hobas are at, and whether there is a correlation between the screw jack locations and deflected shape of the pipe.

No repair method can be performed in the wet while the line is in service without flow control and groundwater control.

For a conservative approach the IDB Team considered the following:

1. Plan for bypass and groundwater control to keep the pipe dry.
2. Coordination with the Arkansas Department of Transportation (ARDOT).
3. Traffic control.
4. Assume pipe is not grouted, and plan construction as if grouting will happen.
5. Completely dewater, pressure wash, and sanitize the pipe prior to entry.
6. Confined space entry and pipe rescue contingencies.
7. Install shoring inside the pipe.
8. Remove badly damaged Hobas sections.
9. Investigate, identify, and grout all voids behind the Hobas left in place.
10. In areas of removed Hobas sections, either form and pressure grout, or shotcrete, to bring these areas flush with adjacent areas.
11. Strengthen the pipe by applying Carbon Fiber Reinforced Polymers (CFRP) (Note that both the length of the repair zone(s) and the design in these zones would be based on assumed ovalities to be confirmed during construction).

STRUCTURAL TECHNOLOGIES will provide the internal upgrade utilizing the V-Wrap™ Carbon Fiber System. The V-Wrap™ Carbon Fiber System would be engineered by SGH as per the AWWA C305-18 Standard using the Load Resistance Factor Design (LRFD) methodology as a fully structural, stand-alone system without reliance on the host pipe with a 50-year service life, the CFRP System is NSF 61 and NSF 61 Annex G approved.

STRUCTURAL TECHNOLOGIES is the manufacturer of the system, which can provide a full structural repair meeting all design requirements. STRUCTURAL PRESERVATION SYSTEMS, LLC is the contracting arm and the certified applicator of the CFRP System. Following is our project plan and pricing.

PROJECT PLAN:

The first phase of the project will be to setup traffic control and bypass the 48-inch Hobas Sewer Pipeline from existing manholes. Figure 4 is an aerial photo showing the location of the manholes that will be utilized for the manned entry.

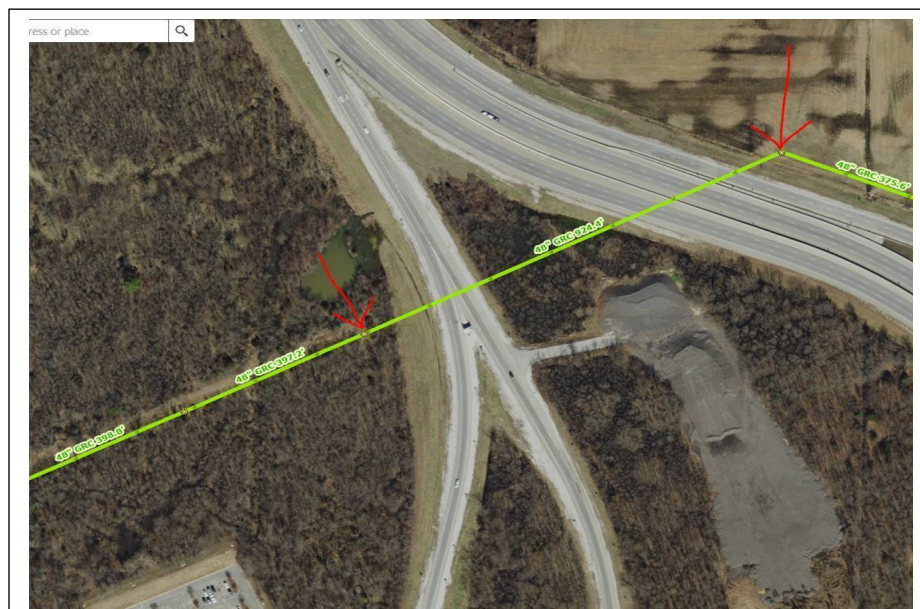


Figure 4: MH locations for Bypass System

To successfully bypass the existing 48-inch Hobas Sewer Pipeline, we will utilize (3) three 12-inch Silenced Diesel Bypass Pumps to achieve flows of 20 MGD with (1) one 12-inch Silenced Diesel Bypass Pump for redundancy. We will utilize the upstream MH as our suction point (see site map for detail on suction pit). The Primary and Standby system will utilize independent 18-inch HDPE DR17 suction tubes with 18-inch HDPE DR 26 discharge pipe conveying through a common manifold with isolating gate valves. The pumps will then utilize (2) two 18-inch HDPE DR 26 discharge pipe until reaching our downstream discharge MH (see site map).

The cone will need to be removed from the discharge and suction MH's. With the complete bypass system in place, we will perform a successful hydrostatic test of the temporary discharge piping system using clean water at 1.2 times the highest operating pressure for one hour. After a successful pressure test of the discharge piping system, we will conduct a live 24-hour test run of the bypass pumping system until the system is passed as satisfactory. A trained pump technician will perform pump watch 24/7 until the system is decommissioned, and flow is reestablished into the pipeline.

The bypass pumping system include but are not limited to the use of sound attenuated pumps, redundant system capacity, and auto start pump controls. For each bypass we will utilize our Quiet Flow™ series of bypass pumps which feature 68db sound readings at full load, 24hr run times on a single on-board tank of fuel, on board automatic activation capability, and environmental skids capable of retaining all on board fluids. We will outline the size of each pump we plan to utilize for each bypass in the bypass plans. Each standby pump will start automatically through the use of a float switch. Upon award, we will provide the detailed submittals that include TDH Calculation Sheets, System & Parallel Pump Curves, and Pump Specification Sheets to support our proposal. Figure 5 is a snapshot of the bypass pumping system site map.

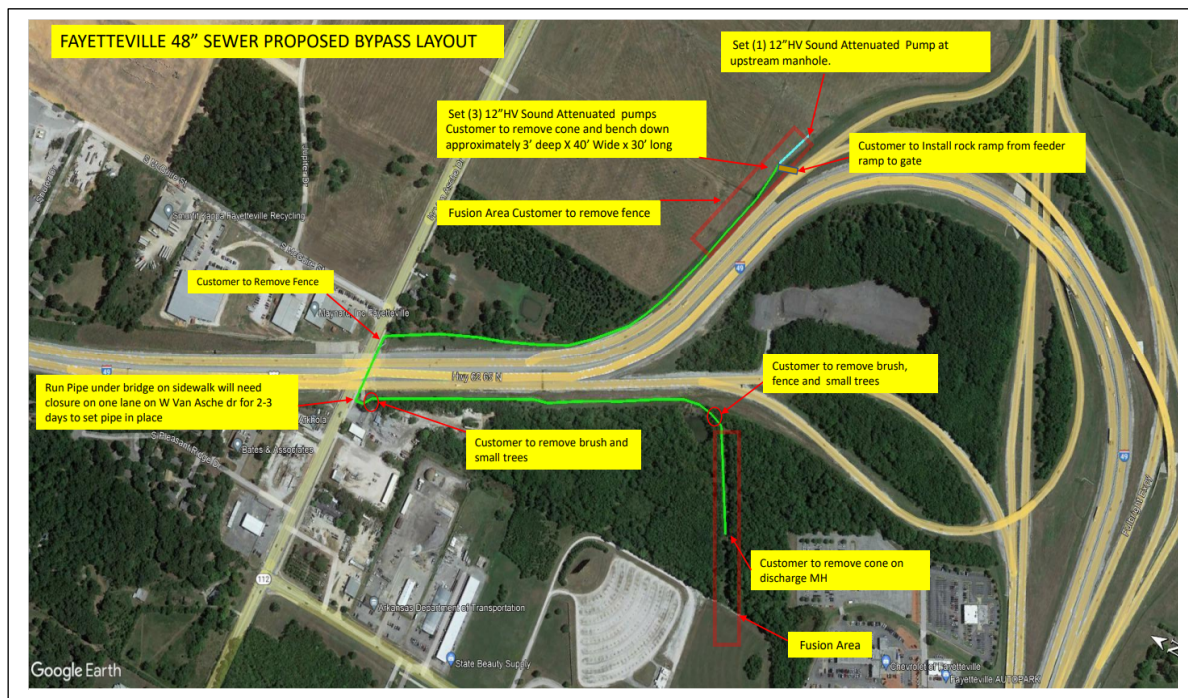


Figure 5: Bypass Pumping Site Map

The site map in figure 5 also illustrates the staging area and traffic control configuration as follows:

1. Project to access locations is assumed to come in from Van Asche (upstream) and the Drive-in Theater (downstream).
2. Traffic control has been determined and budgeted based upon 8 total signs regarding “utility work ahead” and “end road work”.
3. 18-wheelers will access per note 1 and 2 and come in from the backside down the easement and be unloaded for HDPE delivery. Approximately: Suction side – 9 Trucks - Discharge side – 7 trucks. Temporary roads and site restoration is assumed to be provided by the City of Fayetteville as per a mutually agreed to project plan.
4. A small excavator will be used to unload – 13,000LBS mini ex on each side of the highway we will use to drag pipe into place. 10,000LBS skytrak used to load the fusion machine. It will most likely start on the discharge side and be moved to the suction side once pipe is in place from the discharge MH under the bridge to the suction side. (1) track 618 fusion machine will be used to fuse the pipe. Fusion techs are certified by the manufacture.
5. A service truck and fused machine will be present to fuse pip. It will be a 3–4-man crew with a fusion machine for 3 weeks. Most likely two trucks.
6. Reverse the process a month later. Same process but only for two weeks the teardown goes quicker.
7. As per the site map attachment Fayetteville water will need to remove the fencing on the northeast side of the bypass for access of the bypass.

We will need a closure of the inside lane while we are setting the pipe on Van Asche for 1-2 days as we set the pipe on the sidewalk. The pipe will take up 36-inches of the sidewalk but looks to be wide enough not to affect pedestrians.

With the bypass pumping system in place and operational, STRUCTURAL will proceed with dewatering the 48-inch Sewer Pipeline, which may include vac trucks to pull the raw sewage from the pipeline, setting up confined space and environmental controls, pipe rescue and then pressure washing, scraping the muck off the pipe wall and sanitizing the pipeline with a chlorine water solution.

When pipe cleaning, sanitizing and confined space procedures are in place and complete, STRUCTURAL and SGH will enter the pipeline to perform the shoring and investigation phase of the project. SGH will perform a visual inspection to understand whether the Hobas was grouted or not, where the spacers/screw jacks around the Hobas are at, and whether there is a correlation between the screw jack locations and deflected shape of the pipe to develop a repair approach for the failed pipe sections.

Once the investigation is completed, SGH will advise STRUCTURAL on the remediation of the pipe deformations, which could include pressure grouting and/or full structural upgrade of the 48-inch Hobas Sewer Pipeline under I-49 utilizing the V-WrapTM Carbon Fiber System.

STRUCTURAL will provide turnkey completion of the project including:

1. Preconstruction
 - a. Detailed design by SGH as per the AWWA C305 Standard
 - b. Submittals
 - i. Materials lists

- ii. Safety plans
- iii. For-construction, P.E. signed drawings and calculations
- 2. Construction
 - a. Preparation of design and submittal package.
 - b. Safety planning.
 - c. Mobilization and set-up.
 - d. Traffic Control as per described above.
 - e. Bypass Pumping System.
 - f. Dewatering, de-mucking, pressure washing and sanitizing the pipeline under I-49.
 - g. Materials for Grouting and injection, if needed and will be performed on T&M.
 - h. Materials for V-Wrap™ CFRP System
 - i. Equipment including ventilation and power set-up.
 - j. Shoring design and pipe shoring installation with monitoring.
 - k. Pipe Investigation/Inspection.
 - l. Surface preparation of the Hobas surfaces as per manufacturers recommendations.
 - m. Remediation of Hobas Pipe failure(s).
 - n. Installation of the V-Wrap™ System as per SGH design.
 - o. Quality Assurance / Quality Control program, including adhesion testing.
 - p. Final job close-out report
 - i. Deliverables
 - 1. Manufacturer-specific QAQC package
 - 2. Photo log documenting installation
 - 3. documentation of as-constructed repairs
 - 4. Punch list, signed verification of installation
 - 5. Verification of site cleanup and demobilization

REPAIR SYSTEM:

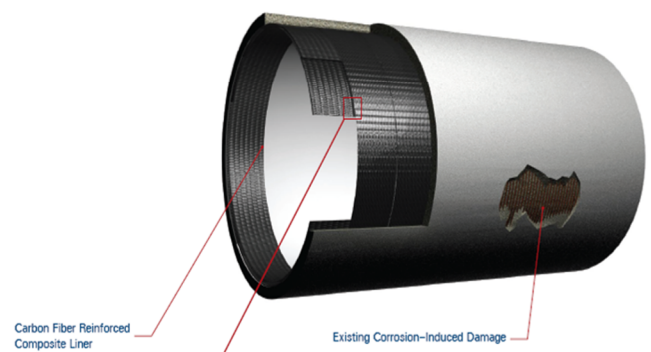
V-Wrap™ Carbon Fiber Reinforced Polymer System

V-Wrap™ Carbon Fiber System is a structural strengthening system for the restoration of damaged/weakened pressure pipe. It utilizes layers of specially designed carbon fiber reinforced polymer composite which are applied both longitudinally and circumferentially.

Carbon fiber design and number of layers are a function of the exact design requirements. The existing piping system becomes a form for the V-Wrap™ Carbon Fiber System which becomes the pipe once the system is installed.

V-Wrap™ CFRP System

structural
TECHNOLOGIES
structuraltechnologies.com
800-899-1016



The V-Wrap™ CFRP system provides the following advantages:

- Restores full function capacity of pressure pipe during very short outage duration.
- Requires no excavation as all repairs can be made with access via existing manhole points.
- Overall system thickness reduces the pipe inside diameter only slightly (0.25" to 0.75").
- Polymer finish coat surface resistance mitigates any loss in pumping head.
- Corrosion resistance provides long service life.
- Fits both straight and curved pipe sections.

DESIGN:

Loads:

- $P_w = 0$ psi (specified as open channel)
- $P_t = 40$ psi (min transient pressure)
- $P_v = 0$ psi (specified)
- $H = 25\text{-}30$ ft (specified)
- $H_w = H$ (not specified. Assumed full ground water.)
- Thrust = zero (pipe is not near bends/elbows)
- $\Delta T = \pm 50F$ (specified 50-85)
- Live load = HL93 (pipe under roadway)
- $M_s = 3000$ psi (This is the soil modulus that was used by Hobas for their design. We may choose to build in some conservatism and use a lower value)

SCHEDULE AND WORK ITEMS

- 3 weeks of mobilization for the bypass
- 40 Days of bypass rental, fueling and pump watch as well as an onsite rescue team.
- (2) Days for Dewatering and Sanitization
- (6) Days total for installation of shoring and removal of the Hobas crown pipe as necessary
- (2) Days inspection & Design by SG&H
- CFRP 100 Lineal feet of Strengthening completed in about 12-14 days
- 2 weeks of demobilization

SUPPORT BY OWNER/OTHERS:

1. Clearing, Grubbing and Excavation of cone and grade for pump staging area.
2. Site access road clearing and grading for pump and pipe placement and site restoration.
3. Establishment and restoration of roads to each of the 4 manholes that will allow vehicular, and equipment travel during inclement weather (gravel, mats, etc.).
4. Water Source for Bypass Test and Flushing and cleaning within 500' of work areas.
5. All Permits.
6. Coordination of easements for construction.
7. ARDOT Coordination.
8. Removal and replacement of manhole lids and cone at discharge manholes for bypass and manned entry.
9. The removal of cone and benched down area should be approximate 3' deep x 40' wide and 40' long. Benched down area will need to have a ramp for vehicles to drive down for pump placement.
10. Removal of approximately 10' of riser to allow access to 6' diameter riser section and max depth from benched area to bottom of pipe to 17 feet.
11. 3rd Party Inspection.
12. Disposal location for debris removed during the cleaning and sanitation process.

GENERAL NOTES:

1. Proposal based upon single phase mobilization.
2. Pricing is based upon use of non-union workforce and prevailing wages.
3. STRUCTURAL has assumed diesel fuel for equipment based upon current market as proposal date.
4. 924 lineal feet of sanitization included in base bid price.
5. Payment and Performance bond included.

6. Payment terms net 30 days.
7. No noise, work hours or lighting constraints, noise abatement, if required by others.
8. 2-year warranty included.

PRICING:

Scope Description	Qty	UOM	Price
General Conditions, Mobilization, Fencing, Laydown & Staging, Site Security, Traffic Control	1	LS	\$ 409,108.00
Bypass System with Rental, Fueling and Pump Watch	40	Days	\$ 1,069,261.00
Rescue Team	40	Days	\$143,545.00
Pipeline Sanitizing and Safety Shoring	1	LS	\$ 71,050.00
Inspection and Design	1	LS	\$ 86,275.00
CFRP Installation (based on assumed 100 LF)	1	LS	\$ 698,405.00
Total			\$ 2,477,644.00*

***If required Grouting of annular space and Water Mitigation Efforts to be performed on a Time and Expense Basis. (Attachment B) suggested (\$250,000 Add Allowance to the base bid)**

We appreciate this opportunity and look forward to working with you on this important project. We are prepared to provide technical, and operations support as required to assist in the planning process. Please don't hesitate to contact me at mlarsen@structuraltec.com or 972-210-9511 if you have questions.

Sincerely,

Mike Szoke
 Sr. Branch Director

Mike Larsen
 Senior Manager - Municipal & Energy Infrastructure Pipeline Solutions

cc: Jason Alexander, STRUCTURAL TECHNOLOGIES - VP of Operations
 Anna Pridmore, STRUCTURAL TECHNOLOGIES - VP Pipeline Solutions –Technical Manager
 Stan Boshart, STRUCTURAL TECHNOLOGIES - Senior PM
 David Gibson, STRUCTURAL - Estimator

DOCUMENT 00700 – GENERAL CONDITIONS FOR DESIGN-BUILD CONTRACTS:

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DOCUMENT 00700 – GENERAL CONDITIONS:

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.01 CONTRACT DOCUMENTS:

- A. The Contract Documents establish the rights and obligations of the parties and shall consist of the documents listed in the Design-Build Contract.
- B. Reports and drawings of subsurface and physical conditions and approved Submittals by Contractor are not Contract Documents.

1.02 DEFINITIONS:

- A. Wherever used in these General Conditions or elsewhere in the Contract Documents, the following terms have the meanings indicated below, which are applicable to both the singular and plural thereof:
 - 1. “Addenda” - written or graphic changes or interpretations of the Contract Documents issued by Owner prior to the opening of Bids.
 - 2. “Agreement” - the written agreement between Owner and Contractor covering the Work to be performed; other Contract Documents are attached to the Agreement and made a part thereof as provided therein.
 - 3. “Application for Payment” - the form acceptable to Owner which is to be used by Contractor during the course of the Work in requesting progress and final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 - 4. “Asbestos” - any material that contains more than 1% asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
 - 5. “Bid” - the formal offer of the Bidder submitted on the prescribed Bid Form together with the required Bid security and all information submitted with the Bid that pertains to performance of the Work.
 - 6. “Bidder” - any person, firm, or corporation submitting a Bid for the Work or their duly authorized representatives.
 - 7. “Change Order” - a written document signed by Owner authorizing an addition, deletion, or revision in the Work, or an adjustment in the Contract Price or the Contract Time issued on or after execution of the Agreement.
 - 8. “Contract Drawings” - drawings and other data designated as Contract Drawings prepared by Contractor for this Contract which show the character and scope of the Work to be performed and are referred to in the Contract Documents.
 - 9. “Contract Price” - the total monies payable to Contractor under the Contract Documents as stated in the Agreement.
 - 10. “Contract Times” - the number of days or the dates stated in the Agreement to: (i) achieve Substantial Completion; and (ii) complete the Work so that it is ready for final payment.
 - 11. “Contractor” - the person, firm or corporation with whom Owner has entered into the Agreement.

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

12. “Contractor’s Consultant” - an individual or entity having a contract with Contractor to furnish services as Contractor’s independent professional associate or consultant with respect to the Project.
13. “Date of Contract”, “Effective Date of the Agreement” - the date of the City Council Approval also indicated in the Agreement.
14. “Engineer” - For purposes of these General Conditions any reference to Engineer shall refer to Contractor.
15. “Equipment” - a product with operational or nonoperational parts, whether motorized or manually operated, that requires service connections, such as wiring or piping.
16. “Field Order” - a written order which orders minor changes in the Work in accordance with Paragraph 9.05 but which does not involve a change in the Contract Price or the Contract Times.
17. “General Requirements” - Sections of DIVISION 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.
18. “Hazardous Waste” - the term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
19. “Law” - law of the place of the Project which shall govern the performance hereunder.
20. “Laws and Regulations,” “Laws or Regulations” - laws, rules, regulations, ordinances, codes and/or orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
21. “Lien” - charges, security interests, or encumbrances on Project funds, real property, or personal property.
22. “Materials” - products substantially shaped, cut, worked, mixed, finished, refined, or otherwise fabricated, processed, or installed to form a part of the Work.
23. “Notice of Award” - the written notice by Owner to the apparent successful Bidder stating that upon compliance by the apparent successful Bidder with the conditions precedent enumerated therein, within the time specified, Owner will sign and deliver the Agreement.
24. “Notice to Proceed” - the written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform Contractor’s obligation under the Contract Documents.
25. “Owner” - the City of Fayetteville, Arkansas, a constitutionally chartered municipal corporation, with which the Contractor has entered into the Agreement and for whom the Work is to be provided.
26. “Partial Utilization” - placing a portion of the Work in service for the purpose for which it is intended (or a related purpose) before reaching Substantial Completion of all the Work.
27. “PCBs” - Polychlorinated biphenyls.
28. “Petroleum” - petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60° Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Wastes and crude oils.
29. “Program Manager” – NOT USED.

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

- 30. “Project” - the total construction of which the Work to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.
- 31. “Project Manual” - The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
- 32. “Radioactive Material” - source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
- 33. “Resident Project Representative” - the authorized representative of Contractor who is assigned to the construction Site or any part thereof.
- 34. “Reference Drawings” - drawings not specifically prepared for, nor a part of, this Contract, but which contain information pertinent to the Work.
- 35. “Samples” - physical examples of Equipment, Materials, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
- 36. “Shop Drawings” - all drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
- 37. “Site” - lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
- 38. “Specifications” - those portions of the Contract Documents consisting of written technical descriptions of the Work, and covering the Equipment, Materials, workmanship, and certain administrative details applicable thereto.
- 39. “Subcontractor” - an individual, firm, or corporation having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.
- 40. “Submittals” - all Shop Drawings, product data, and Samples which are prepared by Contractor, a Subcontractor, manufacturer, or Supplier for Equipment and Materials proposed for incorporation in the Work or needed to describe proper installation, operation and maintenance, or technical properties.
- 41. “Substantial Completion” - the Work (or a specified part thereof) has progressed to the point where it is sufficiently complete, in accordance with the Contract Documents, so that the Work (or specified part) can be used for the purposes for which it was intended.
- 42. “Supplementary Conditions” – part of the Contract Documents which amends and/or supplements these General Conditions.
- 43. “Supplier” - a manufacturer, fabricator, supplier, distributor, material man, or vendor.
- 44. “Underground Facilities” - all pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials:

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

- electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems, or water.
45. “Unit Price Work” - Work to be paid on the basis of Unit Prices.
46. “Work” - the entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work is the result of performing services, the furnishing of Bonds and insurance, furnishing labor, and furnishing and incorporating Materials and Equipment into the construction, all as required by the Contract Documents.
47. “Work Change Directive” - a written directive to Contractor, issued on or after the effective Date of the Agreement and signed by Owner, ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen physical conditions under which the Work is to be performed as provided in Article 4 or to emergencies under Paragraph 6.13. A Work Change Directive will not change the Contract Price or the Contract Times, but is evidence that the parties expect that the change directed or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times as provided in Paragraph 10.01B.
48. “Written Amendment” - a written amendment to the Contract Documents, signed by Owner and Contractor on or after the Effective Date of the Agreement, and normally dealing with the nonengineering or nontechnical rather than strictly Work-related aspects of the Contract Documents.
49. “Year 2000 Compliance” or “Year 2000 Compliant” – means that equipment, devices, items, systems, software, hardware, and firmware included in the Work or used to produce the Work shall properly, appropriately, and consistently function and accurately process date and time data (including without limitation: calculating, comparing, and sequencing) on and after December 31, 1999, including leap year calculations.

1.03 **TERMINOLOGY:**

- A. Whenever used in these General Conditions or elsewhere in the Contract Documents, the following terminology shall have the intent and meaning specified below:
1. The words “as indicated” refer to the Drawings and “as specified” refer to the remaining Contract Documents.
 2. The terms “responsible” or “responsibility” mean that the party to which the term applies shall assume all responsibilities thereto.
 3. The term “approve”, when used in response to Submittals, requests, applications, inquiries, reports and claims by Contractor, will be held to limitations of Owner’s responsibilities and duties or specified in these General Conditions. In no case will “approval” by Owner be interpreted as a release of Contractor from responsibilities to fulfill requirements of Contract Documents.
 4. When applied to Equipment and Materials, the words “furnish”, “install”, and “provide” shall mean the following:
 - a. The word “provide” shall mean to furnish, pay for, deliver, assemble, install, adjust, clean and otherwise make Materials and Equipment fit for their intended use.

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

- b. The word “furnish” shall mean to secure, pay for, deliver to Site, unload and uncrate Equipment and Materials.
 - c. The word “install” shall mean to assemble, place in position, incorporate in the Work, adjust, clean, and make fit for use.
 - d. The phrase “furnish and install” shall be equivalent to the word “provide.”
5. The word “day” shall constitute a calendar day of twenty-four hours measured from midnight to the next midnight.

ARTICLE 2 - PRELIMINARY MATTERS

2.01 DELIVERY OF BONDS:

- A. When Contractor delivers the executed Agreements to Owner, Contractor shall also deliver to Owner such executed and recorded Bonds as Contractor may be required to furnish in accordance with Paragraph 5.01.

2.02 COPIES OF DOCUMENTS:

- A. Owner will furnish to Contractor copies of the Contract Documents as stated in the General Requirements.

2.03 COMMENCEMENT OF CONTRACT TIMES; NOTICE TO PROCEED:

- A. The Contract Times will commence to run on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time mutually agreed upon by the Contractor and the Owner within 60 days after the Effective Date of the Agreement upon completion of required executed documents. In no event will the Contract Times commence to run later than the 60th day after the Effective Date of the Agreement.

2.04 STARTING THE PROJECT:

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run, but no Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 BEFORE STARTING CONSTRUCTION:

- A. Before starting construction and undertaking each part of the Work, Contractor shall carefully study the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. Contractor shall promptly report in writing to Owner any conflict, error or discrepancy which Contractor may discover.
- B. Within thirty (60) days after the Effective Date of the Agreement, and before Contractor starts the Work at the Site, Contractor shall submit items as noted in Document 00550 – Notice to Proceed (and as specified) to Owner for review.
- C. Further, before any Work at the Site is started, Contractor shall deliver to Owner certificates and other evidence of insurance requested by Owner which Contractor is required to purchase and maintain in accordance with Paragraph 5.02 (and Owner shall deliver to Contractor certificates and other evidence of insurance requested by Contractor which Owner is required to purchase and maintain in accordance with Paragraph 5.02).

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

2.06 PRECONSTRUCTION CONFERENCE:

- A. Within 60 days after the Effective Date of the Agreement, but before Contractor starts the Work at the Site, a conference attended by Contractor, Owner, and others as appropriate will be held to discuss the schedules referred to in Paragraph 2.05B, to discuss procedures for handling Submittals, processing Applications for Payment, and to establish a working understanding among the parties as to the Work.

2.07 FINALIZING SCHEDULES:

- A. The final schedule shall be provided in Appendix A. The finalized construction progress schedule will be acceptable to Owner if it provides an orderly progression of the Work to completion within the Contract Times, but such acceptance will not relieve Contractor from full responsibility therefor. The finalized schedule of Submittal submissions will be acceptable to Owner if it provides a workable arrangement for processing the submissions.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 INTENT:

- A. The Contract Documents comprise the entire agreement between Owner and Contractor concerning the Work. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the Law of the place of the Project.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any Work, Materials, or Equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result will be supplied whether or not specifically called for, at no additional cost to the Owner.
 - 1. When words which have a well-known technical or trade meaning are used to describe Work, Materials, or Equipment, such words shall be interpreted in accordance with that meaning.
 - 2. Reference to standard specifications, manuals, or codes of any technical society, organization, or association, or to the Laws or Regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual, or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of Owner or Contractor, or any of their consultants, agents, or employees from those set forth in the Contract Documents.
- C. If, during the performance of the Work, Contractor finds a conflict, error, or discrepancy in the Contract Documents, Contractor shall so report to Owner in writing at once and before proceeding with the Work affected thereby shall resolve such conflict, error, or discrepancy.

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

- D. Applicable codes and standards referenced in these Contract Documents establish minimum requirements for Equipment, Materials, and Work and are superseded by more stringent requirements of Contract Documents when and where they occur.
- E. The Specifications are separated into Divisions and Sections for convenience in defining the Work. Contract Drawings are separated according to engineering disciplines and other classifications. This sectionalizing and the arrangement of Contract Drawings shall not control the Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

3.02 AMENDING AND SUPPLEMENTING CONTRACT DOCUMENTS:

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof in one or more of the following ways:
 - 1. A formal Written Amendment.
 - 2. A Change Order (pursuant to Paragraph 9.01D).
- B. As indicated in Paragraphs 10.01B and 11.01A, Contract Price and Contract Times may only be changed by a Change Order or Written Amendment.

3.03 OWNERSHIP AND REUSE OF DOCUMENTS:

- A. All Contract Documents and copies thereof furnished by Contractor shall be the property of the Owner.
- B. No Subcontractor or Supplier or other person or organization performing or furnishing any of the Work under a direct or indirect contract with Owner or Contractor shall have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Contractor or Contractor's engineer; and they shall not reuse any of the documents on extensions of the Project or any other project without written consent of Owner and Contractor and specific written verification or adaptation by Contractor.

ARTICLE 4 - AVAILABILITY OF LANDS; PHYSICAL CONDITIONS; REFERENCE POINTS

4.01 AVAILABILITY OF LANDS:

- A. Owner shall furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for the use of Contractor. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by Owner, unless otherwise provided in the Contract Documents.
- B. If Contractor believes that any delay in Owner's furnishing these lands, rights-of-way, or easements entitles Contractor to an extension of the Contract Times, Contractor may make a claim therefor as provided in Article 12.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.
- D. Contractor shall confine operations to the construction limits indicated.

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

4.02 UNFORESEEN SUBSURFACE CONDITIONS:

- A. Contractor shall promptly notify Owner in writing of any subsurface or latent physical conditions encountered and observed at the Site which differ materially from those specified or indicated, or which could be reasonably interpreted from examination of the Site and available subsurface information at the time of bidding.
- B. Owner will promptly investigate those conditions and may, upon consultation with Contractor, authorize further surveys or subsurface tests as necessary. Promptly thereafter, Contractor will obtain the necessary additional surveys and tests and furnish copies of results to Owner.
- C. If Owner finds that the subsurface or latent physical conditions encountered at the Site differ materially from those specified or indicated, or which could have been reasonably interpreted from examination of the Site and available subsurface information at the time of bidding, then a Change Order will be issued by the Owner incorporating the necessary revisions.

4.03 PHYSICAL CONDITIONS - UNDERGROUND FACILITIES:

- A. Shown or Indicated: The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner by the owners of such Underground Facilities or by others. Unless it is otherwise expressly provided:
 - 1. Owner shall not be responsible for the accuracy or completeness of any such information or data; and,
 - 2. Contractor shall have full responsibility for reviewing and checking all such information and data, for locating all Underground Facilities shown or indicated in the Contract Documents, for coordination of the Work with the owners of such Underground Facilities during construction, for the safety and protection thereof as provided in Paragraph 6.12 and repairing any damage thereto resulting from the Work, the cost of all of which will be considered as having been included in the Contract Price.
- B. Not Shown or Indicated: If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated in the Contract Documents and which Contractor could not reasonably have been expected to be aware of, Contractor shall, promptly after becoming aware thereof and before performing any Work affected thereby (except in an emergency as permitted by Paragraph 6.13), identify the owner of such Underground Facility and give written notice thereof to that owner. Contractor will promptly review the Underground Facility to determine the extent to which the Contract Documents should be modified to reflect and document the consequences of the existence of the Underground Facility, and the Contract Documents will be amended or supplemented to the extent necessary. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility as provided in Paragraph 6.12. Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, to the extent that they are attributable to the existence of any Underground Facility that was not shown or indicated in the Contract Documents and which Contractor could not reasonably have been expected to be aware of. If the parties are unable to agree as to the amount or length thereof, Contractor may make a claim therefor as provided in Articles 11 and 12.

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

4.04 REFERENCE POINTS:

- A. Contractor will provide engineering surveys to establish reference points for construction which in Contractor's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work (unless otherwise specified in the General Requirements), shall protect and preserve the established reference points, and shall make no changes or relocations without the prior written approval of Engineer. Contractor shall report to Owner whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points by professionally qualified personnel. Contractor shall be responsible for any mistakes or loss of time that may result from their loss or disturbance.
- B. Contractor shall make such surveys as are required for establishing pay limits and determining quantities for progress pay estimates. Contractor shall furnish Owner with one copy each of all field notes of such surveys.

4.05 ASBESTOS, PCBS, PETROLEUM, HAZARDOUS WASTE, OR RADIOACTIVE MATERIAL:

- A. Owner shall be responsible for any Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work and which may present a substantial danger to persons or property exposed thereto in connection with the Work at the Site. Owner shall not be responsible for any such materials brought to the Site by Contractor, Subcontractor, Suppliers, or anyone else for whom Contractor is responsible.
- B. Contractor shall immediately: (i) stop all Work in connection with such hazardous condition and in any area affected thereby (except in an emergency as required by Paragraph 6.13), and (ii) notify Owner (and thereafter confirm such notice in writing). Owner shall promptly consult with Contractor concerning the necessity for Owner to retain a qualified expert to evaluate such hazardous condition or take corrective action, if any. Contractor shall not be required to resume Work in connection with such hazardous condition or in any such affected area until after Owner has obtained any required permits related thereto and delivered to Contractor special written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or the amount or extent of an adjustment, if any, in Contract Price or Contract Times as a result of such Work stoppage or such special conditions under which Work is agreed by Contractor to be resumed, either party may make a claim therefor as provided in Articles 11 and 12.
- C. If after receipt of such special written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order such portion of the Work that is in connection with such hazardous condition or in such affected area to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or the amount or extent of an adjustment, if any, in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a claim

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

therefor as provided in Articles 11 and 12. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

- D. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and the officers, directors, partners, employees, of each and any of them from and against all claims, costs, losses, and damages arising out of or resulting from such hazardous condition, provided that: (i) any such claim, cost, loss or damage is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, and (ii) nothing in this subparagraph 4.05D shall obligate Owner to indemnify any person or entity from and against the consequences of that person's or entity's own negligence.
- E. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner, and its officers, directors, partners, and employees, from and against all claims, costs, losses, and damages arising out of or relating to such hazardous condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this subparagraph 4.05E shall obligate Contractor to indemnify any person or entity from and against the consequences of that person's or entity's own negligence.
- F. The provisions of Paragraphs 4.02 and 4.03 are not intended to apply to Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material uncovered or revealed at the Site.

ARTICLE 5 - BONDS AND INSURANCE

5.01 PERFORMANCE AND OTHER BONDS:

- A. Contractor shall furnish performance and payment Bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all Contractor's obligations under the Contract Documents. These Bonds shall remain in effect at least until two years after the date when final payment is approved by Owner, except as otherwise provided by Law or Regulation or by the Contract Documents. Contractor shall also furnish such other Bonds as are required by the Contract Documents. All Bonds shall be in the forms prescribed by Law or Regulation or by the Contract Documents and be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds shall be signed by an Arkansas Agent.
- B. The Bonds shall be automatically increased in amount and extended in time without formal and separate amendments to cover full and faithful performance of the Contract in the event of Change Orders, regardless of the amount of time or money involved. It is Contractor's responsibility to notify the surety of any changes affecting the general scope of the Work or change in the Contract Price or Contract Times.
- C. Bonds signed by an agent must be accompanied by a certified copy of the authority to act.
- D. Date of Bonds shall be the same as the Effective Date of the Agreement.

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

- E. The Contractor shall file the Performance, Payment and Warranty Bonds at the Washington County Clerk's office prior to providing a file marked copy of the filed Performance, Payment and Warranty Bonds to the Owner.
- F. If at any time during the continuance of the Contract, the surety on any Bond becomes unacceptable to Owner for financial reasons, Owner has the right to require additional and sufficient sureties which Contractor shall furnish to the satisfaction of Owner within ten days after notice to do so.
 - 1. If the surety on any Bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01A, Contractor shall within five days thereafter substitute another Bond and surety, both of which must be acceptable to Owner.

5.02 INSURANCE:

- A. Contractor's Liability Insurance:
 - 1. Contractor and all subcontractors shall purchase and maintain such liability and other insurance as is appropriate for the Work being furnished and performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's furnishing and performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:
 - a. Claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 - b. Claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
 - c. Claims for damages because of bodily injury, sickness, or disease, or death of any person other than Contractor's employees;
 - d. Claims for damages insured by reasonably available personal injury liability coverage which are sustained: (i) by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or (ii) by any other person for any other reason;
 - e. Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use therefrom;
 - f. Claims arising out of operation of Laws or Regulations for damages because of bodily injury or death of any person or for damage to property; and
 - g. Claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle.
 - 2. The insurance required by this paragraph shall include the specific coverages, and be written for the limits of liability specified or required by Law, whichever is greater.
 - a. Umbrella General Liability \$5,000,000
 - b. Workers' compensation Statutory (State and Federal Limits)
 - Employer's Liability \$500,000 each accident

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

- c. Commercial General Liability
 - (1) General Aggregate \$2,000,000
 - (2) Products-Completed Operations Aggregate \$2,000,000
 - (3) Personal & Advertising Injury Limit \$1,000,000
 - (4) Each Occurrence Limit \$1,000,000
 - (5) Fire Damage Limit \$ 100,000
 - (6) Medical Expense Limit \$ 5,000
 - d. Business Automobile Liability
 - (1) Any one loss or accident \$1,000,000
- B. The policies of insurance so required by paragraph 5.02A to be purchased and maintained shall:
 - 1. with respect to insurance required by Paragraphs 5.02A.1.c through 5.02A.1.g inclusive, include as additional insureds by endorsement (subject to customary exclusion in respect of professional liability) Owner and include coverage for its officers, directors, partners, employees, and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
 - 2. include the specific coverages and be written for the limits of liability specified in Paragraph 5.02A.2 or required by Laws and Regulations, whichever is greater;
 - 3. with respect to insurance required by paragraphs 5.02A1.c through 5.02A1.g inclusive, include premises/operations, products, completed operations, independent contractors, and personal injury insurance,;
 - 4. include in the Commercial General Liability policy, contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.06, 6.10, and 6.16, and written for not less than the limits of liability and coverages specified above;
 - 5. contain a provision or endorsement that the coverage afforded will not be cancelled, materially changed, or renewal refused until at least 30 days' prior written notice by certified mail has been given to Owner and Contractor and to each other additional insured to whom a certificate of insurance has been issued;
 - 6. provide Broad Form Property Damage coverage and contain no exclusion (commonly referred to as XC&U exclusion) relative to blasting, earthquake, flood, explosion, collapse of buildings, or damage to underground property;
 - 7. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 12.07;
 - 8. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment and Contractor shall furnish Owner and each other specified additional insured to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter;
 - 9. include Independent Contractors Protective Liability coverage; and
 - 10. with respect to the Commercial General Liability policy, the maximum deductible allowed shall be \$200,000.
 - 11. Owner and Contractor waive all rights against each other and their respective officers, directors, partners, employees, agents, and other consultants and

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

subcontractors of each and any of them for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by such policies required by Paragraph 5.02A and any other liability insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, Contractor's Consultants, and all other individuals or entities endorsed as insureds or additional insureds (and the officers, directors, partners, employees, agents and other consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. As required by Paragraph 6.05D, each subcontract between Contractor and a Subcontractor shall contain similar waiver provisions by the Subcontractor in favor of Owner, Contractor, Contractor's Consultants, and all other parties endorsed as insureds or additional insureds. None of the above waivers shall extend to the rights that any of the insured parties may have to proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued. With respect to the Commercial General Liability policy, the maximum deductible allowed shall be \$200,000.

C. Owner's Protective Liability Insurance:

1. Contractor shall be responsible for purchasing and maintaining Owner's Protective Liability insurance with Owner as named insured.
2. This insurance shall have the same limits of liability as the Commercial General Liability insurance and shall protect Owner against any and all claims and liabilities for injury to or death of persons, or damage to property caused in whole or in part by, or alleged to have been caused in whole or in part by, negligent acts or omissions of Contractor or Subcontractors or any agent, servant, worker, or employee of Contractor or Subcontractors arising from the operations under the Contract Documents.
3. This insurance may be provided by endorsement to Contractor's Commercial General Liability insurance policy.

D. Property Insurance:

1. Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of the full insurable value thereof (subject to such deductible amounts as follows) or as required by Laws or Regulations. This insurance shall:
 - a. be on the completed value form and include the interests of Owner, Contractor, Subcontractors, Contractor's Consultants, and the officers, directors, partners, employees, agent, and other consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an additional insured;
 - b. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and Equipment and Materials, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, terrorism, and such other perils (as flood, earthquake, explosions, collapse, underground hazard) or causes of loss as may be specifically required in the Contract Documents;

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

- c. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals);
 - d. cover Equipment and Materials stored at the Site or at another location that was agreed to in writing prior to being incorporated in the Work, provided that such Equipment and Materials have been included in an Application for Payment;
 - e. allow for partial utilization of the Work by Owner;
 - f. include testing and startup;
 - g. be maintained in effect until final payment (or the Owner assumes beneficial occupancy and agrees to provide insurance coverage for the facilities so occupied) is made unless otherwise agreed to in writing by Owner and Contractor with 30 days' written notice to each other additional insured to whom a certificate of insurance has been issued; and
 - h. have a deductible amount of \$25,000
 - 2. Contractor shall purchase and maintain such boiler and machinery insurance or additional property insurance as required by Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, Consultant's Consultants in the Work, each of whom is deemed to have an insurable interest and shall be listed as insured or additional insured parties.
 - 3. All policies of insurance required to be purchased and maintained in accordance with Paragraph 5.02D will contain a provision or endorsement that the coverage afforded will not be cancelled or materially changed or renewal refused until at least 30 days' prior notice by certified mail has been given to Owner and Contractor and to each additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.02F below.
 - 4. Copies of the policies shall be furnished for property insurance. Certificates will not be acceptable.
- E. Transit Insurance:
 - 1. Transit insurance shall be furnished by Contractor to protect Contractor and Owner from all risks of physical loss or damage to Equipment and Materials, not otherwise covered under other policies, during transit from point of origin to the Site of installation or erection.
 - 2. This insurance shall be written on an "All Risk" basis with additional coverages applicable to the circumstances that may occur in the particular Work included in this Contract.
 - 3. This insurance shall be in an amount not less than 100% of the manufactured or fabricated value of items exposed to risk in transit at any one time.
- F. Waiver of Rights:
 - 1. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.02D will protect Owner, Contractor, Subcontractors, Contractor's Consultants, and other individuals or entities endorsed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such

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policies shall contain provisions to the effect that in the event of payment of any loss or damage, the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder; and if the insurers require separate waiver forms to be signed by Contractor's Consultants or any Subcontractor, Contractor will obtain the same.

2. Owner and Contractor waive all rights against each other and their respective officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by such policies required by Paragraph 5.02D and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, Contractor's Consultants, and all other individuals or entities endorsed as insureds or additional insureds (and the officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. As required by Paragraph 6.05D, each subcontract between Contractor and a Subcontractor shall contain similar waiver provisions by the Subcontractor in favor of Owner, Contractor, Contractor's Consultants, and all other parties endorsed as insureds or additional insureds. None of the above waivers shall extend to the rights that any of the insured parties may have to proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

G. Receipt and Application of Insurance Proceeds:

1. Any insured loss under the policies of insurance required by Paragraph 5.02D will be adjusted with Owner and made payable to Owner as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.02G.2. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied to account thereof, and the Work and the cost thereof covered by an appropriate Change Order or Written Amendment.
2. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection is made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties upon the occurrence of an insured loss.

H. Acceptance of Insurance:

1. If Owner has any objection to the coverage afforded by or other provisions of the insurance required to be purchased and maintained by Contractor in accordance with Paragraph 5.02 on the basis of non-conformance with the Contract Documents, Owner shall so notify Contractor in writing thereof

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- within 10 days of the date of delivery of such certificates and other evidence of insurance to Owner required by Paragraph 2.05C.
2. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.
- I. Partial Utilization, Acknowledgment of Property Insurer:
 1. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.06, no such use or occupancy shall commence before the insurers providing property insurance pursuant to Paragraph 5.02D have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be cancelled or lapse on account of any such partial use or occupancy.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.01 SUPERVISION AND SUPERINTENDENCE:

- A. Contractor shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the Work, but Contractor shall not be responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence, or procedure of construction which is indicated in and required by the Contract Documents. Contractor shall be responsible to see that the finished Work complies accurately with the Contract Documents.
- B. Contractor shall keep on the Work at all times during its progress a competent resident superintendent, who shall not be replaced without written notice to Owner except under extraordinary circumstances. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to the superintendent shall be as binding as if given to Contractor.
- C. When manufacturer's field services in connection with the erection, installation, start-up, or testing of Equipment furnished under this Contract, or instruction of

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Owner's personnel thereon are specified, Contractor shall keep on the Work, during its progress or as specified, competent manufacturer's field representatives and any necessary assistants.

6.02 LABOR, EQUIPMENT, AND MATERIALS:

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site. Except in connection with the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the Site shall be performed during regular working hours, and Contractor will not permit overtime work or the performance of Work on Saturday, Sunday, or any legal holiday without Owner's written consent.
- B. Unless otherwise specified in the General Requirements, Contractor shall furnish and assume full responsibility for all Equipment and Materials, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up, and completion of the Work.
- C. All Equipment and Materials shall be of good quality and new, except as otherwise provided in the Contract Documents. If required by Owner, Contractor shall furnish to Owner satisfactory evidence (including reports of required tests) as to the kind and quality of Equipment and Materials. All Equipment and Materials shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with the instructions of the applicable Supplier except as otherwise provided in the Contract Documents; but no provision of any such instructions will be effective to assign to Owner, or any of Owner's consultants, agents, or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.10C and 9.10D.
- D. All Equipment and Materials incorporated in the Work shall be designed to meet the applicable safety standards of federal, state, and local Laws and Regulations.
- E. Domestic Product Procurement: As further specified elsewhere in these or referenced documents.

6.03 ADJUSTING PROGRESS SCHEDULE:

- A. Contractor shall submit to Owner for acceptance (to the extent indicated in Paragraph 2.07) adjustments in the progress schedule to reflect the impact thereon of new developments; these will conform generally to the progress schedule then in effect and additionally will comply with any provisions of the General Requirements applicable thereto.

6.04 SUBSTITUTES OR "OR-EQUAL" ITEMS:

- A. Whenever an item of Equipment or Material is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or

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is followed by words reading that no like, equivalent, or “or-equal” item or no substitute is permitted, other items of Equipment or Material of other Suppliers may be submitted by Contractor to Owner for review under the circumstances described below.

1. “Or-Equal” Items: If in Contractor’s sole discretion an item of Equipment or Material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered as an “or-equal” item. For purposes of this Paragraph 6.04A.1, a proposed item of Equipment or Material will be considered functionally equal to an item so named if:
 - a. In the exercise of reasonable judgment Contractor determines that: (i) it is at least equal in quality, durability, appearance, strength, and design characteristics; (ii) it will reliably perform at least equally well the function imposed by the design concept of the completed Project as a functioning whole, and;
 - b. Contractor certifies that: (i) there is no increase in cost to Owner; and (ii) it will conform substantially, even with deviations, to the detailed requirements of the item named in the Contract Documents.
 - c. “Or-Equal” will not be considered until after Award of Contract.
 2. Substitute Items:
 - a. If an item of Equipment or Material proposed by Contractor does not qualify as an “or-equal” item under Paragraph 6.04A.1, it will be considered a proposed substitute item.
 - b. Contractor shall first certify that the proposed substitute item will perform adequately the functions and achieve the results called for by the general design, be similar in substance to that specified, and be suited to the same use as that specified. The certification will state the extent, if any, to which the use of the proposed substitute will prejudice Contractor’s achievement of Substantial Completion on time; whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for work on the Project) to adapt the design to the proposed substitute item; and whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. Substitute items will not be considered until after Award of Contract.
- B. If a specific means, method, technique, sequence, or procedure of construction is indicated in or required by the Contract Documents, Contractor may furnish or use a substitute means, method, sequence, technique, or procedure of construction if Contractor certifies that the substitute proposed is equivalent to that indicated or required by the Contract Documents.
- C. Owner may require Contractor to furnish at Contractor’s expense a special performance guarantee or other surety with respect to any substitute.

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

6.05 CONCERNING SUBCONTRACTORS, SUPPLIERS, AND OTHERS:

- A. Contractor shall not employ any Subcontractor, Supplier, or other person or organization (including those acceptable to Owner as indicated in Paragraph 6.05B), whether initially or as a substitute, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other person or organization to furnish or perform any of the Work against whom Contractor has reasonable objection.
- B. If the Contract Documents require the identity of certain Subcontractors, Suppliers, or other persons or organizations (including those who are to furnish the principal items of Equipment and Materials) to be submitted to Owner within the required time after Bid opening prior to the Effective Date of the Agreement for acceptance by Owner and if Contractor has submitted a list thereof, Owner's acceptance (either in writing or by failing to make written objection thereto) of any such Subcontractor, Supplier, or other person or organization so identified may be revoked on the basis of reasonable objection after due investigation, in which case Contractor shall submit an acceptable substitute, the Contract Price will be increased by the difference in the cost occasioned by such substitution, and an appropriate Change Order will be issued or Written Amendment signed. No acceptance by Owner of any such Subcontractor, Supplier, or other person or organization shall constitute a waiver of any right of Owner to reject defective Work.
- C. Contractor shall be fully responsible to Owner for all acts and omissions of the Subcontractors, Suppliers, and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with Contractor just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents shall create any contractual relationship between Owner and any such Subcontractor, Supplier, or other person or organization, nor shall it create any obligation on the part of Owner to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other person or organization except as may otherwise be required by Laws and Regulations.
- D. All Work performed for Contractor by a Subcontractor will be pursuant to an appropriate agreement between Contractor and the Subcontractor which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of Owner and contains waiver provisions as required by Paragraph 5.02F. Contractor shall pay each Subcontractor a just share of any insurance moneys received by Contractor on account of losses under policies issued pursuant to Paragraph 5.02D.

6.06 PATENT FEES AND ROYALTIES:

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

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- B. Contractor shall indemnify and hold harmless Owner and anyone directly or indirectly employed by either of them from and against all claims, damages, losses, and expenses (including attorneys' fees and court and arbitration costs) arising out of any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents, and shall defend all such claims in connection with any alleged infringement of such rights.
- 6.07 PERMITS:
- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of opening of Bids. Fees for permits issued by the City will be waived and the Permits issued by the City necessary for the work are required. Contractor shall pay all charges of utility owners for connections to the Work, and Owner shall pay all charges of such utility owners for capital costs related thereto such as plant investment fees.
- 6.08 LAWS AND REGULATIONS:
- A. Contractor shall give all notices and comply with all Laws and Regulations applicable to furnishing and performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, Owner shall not be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor or subcontractor observes that the Specifications or Drawings are at variance with any Laws or Regulations, Contractor shall Owner prompt written notice thereof, and any necessary changes will be authorized by one of the methods indicated in Paragraph 3.02. If Contractor performs any Work knowing that it is contrary to such Laws or Regulations, and without such notice to Owner, Contractor shall bear all costs arising therefrom.
- 6.09 TAXES:
- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid or withheld by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.
- 6.10 USE OF PREMISES:
- A. Contractor shall confine construction equipment, the storage of Equipment and Materials, and the operations of workers to the Project Site and land and areas identified in and permitted by the Contract Documents and other land and areas permitted by Laws and Regulations, rights-of-way, permits, and easements, and shall not unreasonably encumber the premises with construction equipment or other equipment and materials. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the Work. Should any claim be made against Owner by any such owner or occupant because of the performance of the Work, Contractor shall promptly attempt to settle with such other party by agreement or otherwise resolve the claim by arbitration or at Law. Contractor shall,

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to the fullest extent permitted by Laws and Regulations, indemnify and hold Owner harmless from and against all claims, damages, losses, and expenses (including, but not limited to, fees of engineers, architects, attorneys and other professionals, and court and arbitration costs) arising out of any action, legal or equitable, brought by any such other party against Owner to the extent based on a claim arising out of Contractor's negligent performance of the Work.

- B. During the progress of the Work, Contractor shall keep the premises free from accumulations of waste materials, rubbish, and other debris resulting from the Work. At the completion of the Work, Contractor shall remove all waste materials, rubbish, and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials, and shall leave the Site clean and ready for occupancy by Owner. Contractor shall restore to original condition all property not designated for alteration by the Contract Documents.
- C. Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.11 RECORD DOCUMENTS:

- A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Written Amendments, Change Orders, Work Change Directives, Field Test Records, Field Orders, and written interpretations and clarifications (issued pursuant to Paragraph 9.04) in good order and annotated to show all changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Submittals shall be available to Owner for reference. Upon completion of the Work, these record documents and Submittals shall be delivered to Owner.
- B. Receipt and acceptance of record documents will be a prerequisite for final payment on the Contract.

6.12 SAFETY AND PROTECTION:

- A. Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. All employees on the Work and other persons and organizations who may be affected thereby;
 - 2. All the Work and Materials and Equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. Other property at the Site or adjacent thereto, including trees shrubs, lawns, walks, pavements, roadways, structures, utilities and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and utility owners when prosecution of the Work may affect

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them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property. All damage, injury or loss to any property referred to in Paragraph 6.12A.2 or 6.12A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor). Contractor's duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed and Owner has accepted the Work (except as otherwise expressly provided in connection with Substantial Completion).

- C. Contractor shall designate a responsible representative at the Site whose duty shall be the prevention of accidents. This person shall be Contractor's superintendent unless otherwise designated in writing by Contractor to Owner.

6.13 EMERGENCIES:

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor, without special instruction or authorization from Owner, is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Owner prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If Owner and Contractor determine that a change in the Contract Documents is required because of the action taken in response to an emergency, a Change Order will be issued to document the consequences of the changes or variations.

6.14 SUBMITTALS:

- A. After checking and verifying all field measurements and after complying with applicable procedures specified in the General Requirements, Contractor shall submit to provide to Owner copies of Submittals which will bear the required information that Contractor has satisfied Contractor's responsibilities under the Contract Documents. All submissions will be identified as Owner may require. The data shown on Submittals will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to enable Owner to review the information at Owner's discretion.
- B. Before submission of each Submittal, Contractor shall have determined and verified all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar data with respect thereto and reviewed or coordinated each Submittal with other Submittals and with the requirements of the Work and the Contract Documents.
- C. At the time of each submission, Contractor shall give Owner specific written notice of each variation that the Submittal may have from the requirements of the Contract Documents, and in addition, shall cause a specific notation to be made on each Submittal submitted to Owner for review and approval of each such variation.
- D. Owner may review Submittals but is not required to approve such Submittals.

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- E. Owner's review of Submittals shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents. Contractor shall in writing call Owner's attention to each and every variation at the time of submission.
- 6.15 CONTINUING THE WORK:
- A. Contractor shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 14.03 or as Contractor and Owner may otherwise agree in writing.
- 6.16 INDEMNIFICATION:
- A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner, and the officers, directors, partners, employees, of Owner and any of them from and against all claims, damages, losses and expenses, (including but not limited to fees and charges of engineers, architects, attorneys and other professionals, and court and arbitration costs) to the extent arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss, or expense:
 - 1. Is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom, and
 - 2. Is caused in whole or in part by any negligent act or omission of Contractor, any Subcontractor, any person, or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder or arises by or is imposed by Laws and Regulations regardless of the negligence of any such party. Contractor's indemnification obligation is limited to Contractor's proportionate share of liability to the extent caused by the Contractor's negligent acts or omissions.
 - B. In any and all claims against Owner or any of its consultants, agents, or employees by any employee of Contractor, any Subcontractor, any person, or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.16A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor or other person or organization under workers' or workmen's compensation acts, disability benefit acts, or other employee benefit acts.
 - C. If necessary for enforcement of any indemnification and hold harmless requirement herein, or if applicable law requires the Contractor to obtain specified limits of insurance to insure any indemnity obligation; then Contractor shall obtain such applicable coverage with limits not less than any specified in Paragraph 5.02B herein, the cost to be recovered and included in the Contract Price, and any indemnity attributable to the negligence of any indemnified party shall be limited to such insurance.

ARTICLE 7 - OTHER WORK

7.01 RELATED WORK AT SITE:

- A. Owner may perform other work related to the Project at the Site by Owner's own forces, have other work performed by utility owners, or let other direct contracts therefor which shall contain General Conditions similar to these. If the fact that such other work is to be performed was not noted in the Contract Documents, written notice thereof will be given to Contractor prior to starting any such other work; and, if Contractor believes that such performance will involve additional expense to Contractor or requires additional time and the parties are unable to agree as to the extent thereof, Contractor may make a claim therefor as provided in Articles 11 and 12.
- B. Contractor shall afford each utility owner and other contractor who is a party to such a direct contract (or Owner, if Owner is performing the additional work with Owner's employees) proper and safe access to the Site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work, and shall properly connect and coordinate the Work with theirs; Contractor shall do all cutting, fitting, and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of Owner and the others whose work will be affected.
- C. If any part of Contractor's Work depends for proper execution or results upon the work of any such other contractor or utility owner or Owner, Contractor shall inspect and promptly report to Owner in writing any delays, defects, or deficiencies in such work that render it unavailable or unsuitable for such proper execution and results. Contractor's failure so to report will constitute an acceptance of the other work as fit and proper for integration with Contractor's Work except for latent or nonapparent defects and deficiencies in the other work.

7.02 COORDINATION:

- A. If Owner contracts with others for the performance of other work on the Project at the Site, the person or organization who will have authority and responsibility for coordination of the activities among the various prime contractors will be identified in the General Requirements, and the specific matters to be covered by such authority and responsibility will be itemized, and the extent of such authority and responsibilities will be provided.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 COMMUNICATIONS:

Owner shall issue all communications to Contractor in accordance with the Contract.

8.02 REQUIRED DATA:

Owner shall furnish the data required of Owner under the Contract Documents promptly and shall make payments to Contractor promptly after they are due as provided in Paragraphs 13.04A and 13.09A.

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8.03 **LANDS AND EASEMENTS:**

Owner's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.04.

8.04 **INSURANCE:**

Owner's responsibilities in respect of purchasing and maintaining insurance are set forth in Paragraph 5.02.

8.05 **CHANGE ORDERS:**

Owner is obligated to execute Change Orders as indicated in Paragraph 9.01.

8.06 **INSPECTIONS AND TESTS:**

Owner's responsibility in respect of certain inspections, tests and approvals is set forth in Paragraph 12.03B.

8.07 **STOPPING THE WORK:**

In connection with Owner's right to stop Work or suspend Work, see Paragraphs 12.06 and 14.02. Paragraph 14.02A deals with Owner's right to terminate services of Contractor under certain circumstances.

8.08 **LIMITATIONS ON OWNER'S RESPONSIBILITIES:**

Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

ARTICLE 9 - CHANGES IN THE WORK

9.01 **GENERAL:**

- A. Without invalidating the Agreement and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work; these will be authorized by a Written Amendment, a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which shall be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
 - 1. There shall be no changes without prior written approval of the the City's designated Professional Engineer.
- B. If Owner and Contractor are unable to agree as to the extent, if any, of an increase or decrease in the Contract Price or an extension or a shortening of the Contract Times that should be allowed as a result of a Work Change Directive, a claim may be made therefore as provided in Article 11 or 12.

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

- C. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any Work performed that is not required by the Contract Documents as amended, modified, and supplemented as provided in Paragraphs 3.02A and 3.02C, except in the case of an emergency as provided in Paragraph 6.13 and except in the case of uncovering Work as provided in Paragraph 13.05B.
- D. Owner and Contractor shall execute appropriate Change Orders (or Written Amendments) covering:
 - 1. Changes in the Work which are ordered by Owner pursuant to Paragraph 9.01A, are required because of acceptance of defective Work under Paragraph 12.09 or correcting defective Work under Paragraph 12.10, or are agreed to by the parties; and
 - 2. Changes in the Contract Price or Contract Times which are agreed to by the parties.
- E. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be Contractor's responsibility, and the amount of each applicable Bond will be adjusted accordingly.

ARTICLE 10 - CHANGE OF CONTRACT PRICE

10.01 GENERAL:

- A. The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to Contractor for performing the Work. All duties, responsibilities, and obligations assigned to or undertaken by Contractor shall be at the Contractor's expense without change in the Contract Price.
- B. The Contract Price may only be changed by a Change Order or a Written Amendment. Any claim for an increase or decrease in the Contract Price shall be based on written notice delivered by the party making the claim to the other party promptly (but in no event later than 30 days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the amount of the claim with supporting data shall be delivered within 60 days after such occurrence (unless Owner allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by claimant's written statement that the amount claimed covers all known amounts to which the claimant is entitled as a result of the occurrence of said event. No claim for an adjustment in the Contract Price will be valid if not submitted in accordance with this Paragraph 10.01B.
- C. The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:
 - 1. Where the Work involved is covered by Unit Prices contained in the Contract Documents, by application of Unit Prices to the quantities of the items involved (subject to the provisions of Paragraphs 9.05A through 9.05C, inclusive).
 - 2. By mutual acceptance of a lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 9.03A.2.a.

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

3. On the basis of the Cost of the Work (determined as provided in Paragraphs 9.02A and 9.02B) plus a Contractor's Fee for overhead and profit (determined as provided in Paragraphs 9.03A and 9.03B).

10.02 **COST OF THE WORK:**

- A. The term Cost of the Work means the sum of all costs necessarily incurred and paid by Contractor in the proper performance of the Work. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items and shall not include any of the costs itemized in Paragraph 10.02B.
 1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers' or workmen's compensation, health and retirement benefits, bonuses, sick leave, vacation, and holiday pay applicable thereto. Such employees shall include superintendents and foremen at the Site. The expenses of performing Work after regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
 2. Cost of all Equipment and Materials furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds, and all returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
 3. Payments made by Contractor to the Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from Subcontractors acceptable to Contractor and shall deliver such bids to Owner who will then determine which bids will be accepted. If a subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work Plus a Fee, the Subcontractor's Cost of the Work shall be determined in the same manner as Contractor's Cost of the Work. All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.
 4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
 5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Costs, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the Site, and hand tools not owned by the workers, which are

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

consumed in the performance of the Work, and cost less market value of such items used but not consumed which remain the property of Contractor.

- c. Rentals of all construction equipment and machinery and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner, and the costs of transportation, loading, unloading, installation, dismantling, and removal thereof - all in accordance with terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
- d. Sales, consumer, use, or similar taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages not compensated by insurance or otherwise, to the Work or otherwise sustained by Contractor in connection with the performance and furnishing of the Work provided they have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable; shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the cost of the Work for the purpose of determining Contractor's fee. If, however, any such loss or damage requires reconstruction and Contractor is placed in charge thereof, Contractor shall be paid for services a fee proportionate to that stated in Paragraph 10.03A.2.
- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expressage, and similar petty cash items in connection with the Work.
- i. Cost of premiums for additional Bonds and insurance required because of changes in the Work and premiums for property insurance coverage within the limits of the deductible amounts established by Owner in accordance with Paragraph 5.02D.4.

B. The term Cost of the Work shall not include any of the following:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor whether at the Site or in Contractor's principal or a branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 10.02A.1 or specifically covered by Paragraph 10.02A.4, all of which are to be considered administrative costs covered by the Contractor's fee.
- 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

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3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work, and charges against Contractor for delinquent payments.
4. Cost of premiums for all Bonds and for all insurance whether or not Contractor is required by the Contract Documents to purchase and maintain the same (except for the cost of premiums covered by subparagraph 10.02A.5.i above).
5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
6. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 10.02A.

10.03 CONTRACTOR'S FEE:

- A. The Contractor's Fee allowed to Contractor for overhead and profit shall be determined as follows:
 1. A mutually acceptable fixed fee; or if none can be agreed upon,
 2. A fee based on the following percentages of the various portions of the Cost of the Work:
 - a. For costs incurred under Paragraphs 10.02A.1 and 10.02A.2, the Contractor's Fee shall be 10%(negotiable with Owner);
 - b. For costs incurred under Paragraph 10.02A.3, the Contractor's Fee shall be 5%; and if a subcontract is on the basis of Cost of the Work Plus a Fee, the maximum allowable to Contractor on account of overhead and profit of all Subcontractors shall be 10%(negotiable with Owner);
 - c. Where one or more tiers of subcontracts are on the basis of the Cost of the Work Plus a Fee and no fixed fee is agreed upon, the intent of Paragraphs 10.03A and 10.02A.1 through A.3 is that the Subcontractor who actually performs or furnishes the Work, at whatever tier, will be paid a fee of ten percent (10%) of the costs incurred by such Subcontractor under Paragraphs 10.02A.1 and 10.02A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent (5%) of the amount paid to the next lower tier Subcontractor.
 - d. No fee shall be payable on the basis of costs itemized under Paragraph 10.02A.4, 10.02A.5 and 10.02B;
 - e. The amount of credit to be allowed by Contractor to Owner for any such change which results in a net decrease in cost will be the amount of the actual net decrease plus a deduction in Contractor's Fee by an amount equal to 10% of the net decrease; and
 - f. When both additions and credits are involved in any one change, the adjustment in Contractor's Fee shall be computed on the basis of the net change in accordance with Paragraphs 10.03A.2.a through 10.03A.2.d, inclusive.
- B. Whenever the cost of any Work is to be determined pursuant to Paragraph 10.02A or 10.02B, Contractor will submit in form acceptable to Owner an itemized cost breakdown together with supporting data.

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

10.04 CASH ALLOWANCES:

Not applicable.

10.05 UNIT PRICE WORK:

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the established Unit Prices for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Contractor with approval by Owner.
- B. Each Unit Price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- C. Where the quantity of any item of Unit Price Work performed by Contractor exceeds the estimated quantity of such item indicated in the Agreement by twenty-five percent or more and there is no corresponding adjustment with respect to any other item of Work and if Contractor believes that Contractor has incurred additional expense as a result thereof, Contractor may make a claim for an increase in the Contract Price in accordance with Article 10 if the parties are unable to agree as to the amount of any such increase.

10.06 RIGHT OF AUDIT:

- A. Owner shall have the right to inspect and audit all of Contractor's books, records, correspondence, instructions, drawings, receipts, payment records, vouchers, and memoranda relating to the Work, and Contractor shall preserve all such records and supporting documentation for a period of three years after date of Final Payment. Contractor hereby grants to Owner the authority to enter Contractor's premises for the purpose of inspection of such records and supporting documentation or, at Contractor's option, Contractor may make such records and supporting documentation available to Owner at a location satisfactory to Owner.
- B. All of the records and supporting documentation shall be open to inspection and subject to audit and reproduction by Owner or its authorized representative for any and all purposes, including but not limited to (i) compliance with the Contract Documents; (ii) proper pricing of Change Orders; and (iii) claims submitted by or against Contractor or any Subcontractor or Supplier in connection with any performance under the Contract Documents.

ARTICLE 11 - CHANGE OF CONTRACT TIMES

11.01 GENERAL:

- A. The Contract Times may only be changed by a Change Order or a Written Amendment. Contractor, in undertaking to complete the Work within the Contract Times, shall take into consideration and make allowances for all of the ordinary

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

delays and hindrances incident to such Work, whether growing out of delays in securing equipment or materials or workmen or otherwise.

- B. Adjustments to the Contract Times will be made for delays in completion of the Work from causes beyond Contractor's control, including the following:
1. Federal embargoes, priority orders, or other restrictions imposed by the United States Government.
 2. Unusual delay in fabrication or shipment of Equipment or Materials required in the Work, whether ordered by Contractor or furnished by Owner or others under separate contract.
 3. Strikes and other labor disputes.
 4. Delays caused by court proceedings.
 5. Change Orders.
 6. Neglect, delay, or default of any other contractor employed by Owner.
 7. Unusual construction delays resulting from weather conditions abnormal to the geographical area and to the season of the year such as above normal continuous days of precipitation, above normal amount of precipitation within a 24 hour period, or above normal days of extreme cold or hot temperature conditions affecting installation / application due to manufacturers or specifications limitations. These conditions will not be cause for extensions of time if abnormal weather conditions do not affect the stage of construction. All claims for extension of time due to abnormal weather conditions must be substantiated with evidence from a weather bureau or other authoritative source. Weather conditions normal to the geographical area and to the season of the year shall be taken into consideration in the Bid. Normal conditions shall be defined as the average number of days, amounts, or both over a 5-year period averaged per season.
 8. Conflicts, errors or discrepancies in the Contract Documents reported to Owner as provided in these General Conditions.
 9. Any failure or delay by Contractor in supplying equipment, materials, work, or services that are Year 2000 compliant or failure or delay by Contractor's Subcontractors or Suppliers in providing equipment, materials, work, or services as a result of Subcontractors' or Suppliers' lack of Year 2000 compliance in their own operations, systems, or processes used to provide or deliver equipment, material, work, or services shall not be considered to be caused by events beyond Contractor's control. Such Year 2000 compliance problems shall not constitute a basis for delay in completion of the Work, adjustment to the Contract Times, or an excuse for Contract nonperformance.
- C. Owner shall award extensions of the Contract Times on account of such causes of delay, provided that adequate evidence is presented to enable Owner to determine with exactness the extent and duration of delay for each item involved.
- D. No extension to the Contract Times will be granted for delays involving only portions of the Work, or which do not directly affect the time required for completion of the entire Work.
- E. Any claim for an extension to the Contract Times shall be delivered in writing to Owner within ten days of the occurrence of the event giving rise to the claim. All claims for adjustment to the Contract Times will be determined by mutual agreement of Owner and Contractor. Any change to the Contract Times resulting from any such claim will be incorporated in a Change Order or a Written Amendment.

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- F. All time limits stated in the Contract Documents are of the essence of the Agreement. The provisions of this Article 11 shall not exclude recovery for damages (including but not limited to fees and charges of engineers, architects, attorneys and other professionals, and court and arbitration costs) for delay by either party.

ARTICLE 12 - WARRANTY AND GUARANTEE; TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

13.01 WARRANTY AND GUARANTEE:

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Prompt notice of all defects shall be given to Contractor. All defective Work, whether or not in place, may be rejected, corrected or accepted as provided in this Article 12.
- B. No provision in the Contract Documents nor any specified guarantee time limit shall be held to limit Contractor's liability for defects to less than the legal limit of liability in accordance with the Law.
- C. All Equipment and Materials furnished by Contractor for the Work shall carry a written guarantee from the manufacturer or Supplier of such items when called for in the Specifications. Written guarantees shall be submitted to Owner with other Submittals for review.

12.02 ACCESS TO THE WORK:

- A. Owner and Owner's representatives, testing agencies, and governmental agencies with jurisdictional interests will have access to the Work at reasonable times for their observation, inspecting, and testing. Contractor shall provide proper and safe conditions for such access.

12.03 TESTS AND INSPECTIONS:

- A. Contractor shall give Owner timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
1. for inspections, tests, or approvals covered by Paragraphs 12.03C and 12.03D below;
 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 12.05B shall be paid as provided in said Paragraph 12.05B; and
 3. as otherwise specifically provided in the Contract Documents.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) to specifically be inspected, tested, or approved, Contractor shall assume full responsibility therefor, pay all costs in connection therewith, and furnish Owner the required certificates of inspection, testing, or approval.
- D. Contractor shall also be responsible for and shall pay all costs in connection with any inspection or testing required in connection with Owner's acceptance of a Supplier of

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

Materials or Equipment proposed to be incorporated in the Work, or of Materials or Equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

- E. All inspections, tests, or approvals other than those required by Laws or Regulations of any public body having jurisdiction shall be performed by organizations acceptable to Owner and Contractor).
- F. If any Work (including the work of others) that is to be inspected, tested, or approved is covered it must, if requested by Owner, be uncovered for observation. Such uncovering shall be at Contractor's expense unless Contractor has given Owner timely notice of Contractor's intention to cover the same and Owner has not acted with reasonable promptness in response to such notice.
- G. Neither observations by Owner nor inspections, tests, or approvals by others shall relieve Contractor from Contractor's obligations to perform the Work in accordance with the Contract Documents.

12.04 DEFECTIVE WORK:

- A. The term "defective" is used in these documents to describe Work that is unsatisfactory, faulty, not in conformance with the requirements of the Contract Documents, or not meeting the requirements of any inspection, test, approval, or acceptance required by Law or the Contract Documents.
- B. Any defective Work may be disapproved or rejected by Owner at any time before final acceptance even though it may have been overlooked and included in a previous Application for Payment.
- C. Prompt notice will be given by Owner to Contractor of defects as they become evident.

12.05 UNCOVERING WORK:

- A. If any Work is covered contrary to the written request of Owner, it shall, if requested by Owner, be uncovered for Owner's observation and replaced at Contractor's expense.
- B. If Owner considers it necessary or advisable that covered Work be observed by Owner or inspected or tested by others, Contractor, at Owner's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Owner may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment. If it is found that such Work is defective, Contractor shall bear all costs of such uncovering, exposure, observation, inspection, and testing and of satisfactory reconstruction, (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals); and Owner shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, may make a claim therefor as provided in Article 11. If, however, such Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, and reconstruction; and, if the parties are unable to agree as to the amount or extent thereof, Contractor may make a claim therefor as provided in Articles 10 and 11.

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

12.06 OWNER MAY STOP THE WORK:

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor or any other party.

12.07 CORRECTION OR REMOVAL OF DEFECTIVE WORK:

If required by Owner, Contractor shall promptly, as directed, either correct all defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by Owner, remove it from the Site and replace it with nondefective Work. Contractor shall bear all costs of such correction or removal (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals) made necessary thereby.

12.08 TWO-YEAR WARRANTY AND CORRECTION PERIOD:

- A. Before final acceptance of the project, the contractor shall provide a maintenance bond in accordance with section 158.03 of the City of Fayetteville Unified Development Code. The bond shall be in the amount of 25% of the total contract price for a period of two years from the date of Substantial Completion. If within two years after the Date of Substantial Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions, either correct such defective Work, or, if it has been rejected by Owner, remove it from the Site and replace it with nondefective Work. If Contractor does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or the rejected Work removed and replaced, and all costs of such removal and replacement (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals) will be paid by Contractor. In special circumstances where a particular item of Equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Written Amendment. THERE ARE NO OTHER REMEDIES, LIABILITIES (INCLUDING NEGLIGENCE) OR WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE APPLICABLE TO THE MATERIAL AND/OR SERVICES. Contractor's sole responsibility and Owner's exclusive remedy hereunder, shall be limited to such repair or replacement as provided herein.

12.09 ACCEPTANCE OF DEFECTIVE WORK:

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner may accept the defective Work. Contractor shall bear all costs attributable to Owner's evaluation of and determination to accept such defective Work (such costs

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

to be approved in Owner's sole discretion as to reasonableness and to include but not be limited to fees and charges of engineers, architects, attorneys, and other professionals). If any such acceptance occurs prior to final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, Owner may make a claim therefor as provided in Article 11. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

12.10 OWNER MAY CORRECT DEFECTIVE WORK:

- A. If Contractor fails within a reasonable time after written notice of Owner to proceed to correct and to correct defective Work or to remove and replace rejected Work as required by Owner in accordance with Paragraph 12.07, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days' written notice to Contractor, correct and remedy any such deficiency. In exercising the rights and remedies under this Paragraph, Owner shall proceed expeditiously.
- B. To the extent necessary to complete corrective and remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work, and suspend Contractor's services related thereto, incorporate in the Work all Equipment and Materials stored at the Site for which Owner has paid Contractor or which are stored elsewhere.
- C. Contractor shall allow Owner, Owner's representatives, agents, and employees such access to the Site as may be necessary to enable Owner to exercise the rights and remedies under this Paragraph.
- D. All costs of Owner in exercising such rights and remedies will be charged against Contractor in reasonable amount and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, Owner may make a claim therefor as provided in Article 11. Such direct, indirect, and consequential costs will include but not be limited to fees and charges of engineers, architects, attorneys and other professionals, all court and arbitration costs, and all costs of repair and replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- E. Contractor shall not be allowed an extension of the Contract Times because of any delay in performance of the Work attributable to the exercise by Owner of Owner's rights and remedies hereunder.

ARTICLE 13 - PAYMENTS TO CONTRACTOR AND COMPLETION

13.01 SCHEDULE OF VALUES:

The schedule of values established will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Owner. Progress payments on account of Unit Price Work will be based on the number of units completed.

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

13.02 APPLICATION FOR PROGRESS PAYMENT:

- A. Not later than the 15th day of each month, or on the next business day thereafter, (but not more often than once a month), Contractor shall submit to Owner for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.
- B. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
- C. If payment is requested on the basis of Equipment and Materials not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the Equipment and Materials free and clear of all liens, charges, security interests, and encumbrances (which are hereinafter in these General Conditions referred to as "Liens") and evidence that the Equipment and Materials are covered by appropriate property insurance and other arrangements to protect Owner's interest therein, all of which will be satisfactory to Owner.
- D. The amount of retainage with respect to progress payments will be as stipulated in Paragraph 14.04G.

13.03 CONTRACTOR'S WARRANTY OF TITLE:

Contractor warrants and guarantees that title to all Work, Materials, and Equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

13.04 REVIEW OF APPLICATION FOR PROGRESS PAYMENT:

- A. Owner may refuse to make the whole or any part of any payment if, in Owner's sole discretion it is necessary to protect Owner from loss because:
 - 1. The Work is defective, or completed Work has been damaged requiring correction or replacement.
 - 2. Written claims have been made against Owner or Liens have been filed in connection with the Work.
 - 3. The Contract Price has been reduced by Written Amendment or Change Order.
 - 4. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 12.10,
 - 5. Of Owner's actual knowledge of the occurrence of any of the events enumerated in Paragraph 14.02B.
 - 6. Of Contractor's unsatisfactory prosecution of the Work in accordance with the Contract Documents.
 - 7. Contractor's failure to make payment to Subcontractors, or for labor, Materials, or Equipment, or
 - 8. Owner shall not approve any Application for Payment requesting more than eighty (80) percent of the Contract amount until such time as all operation,

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

maintenance, repair, and replacement manuals, and product data has been furnished by the Contractor to the Owner.

- B. Owner may refuse to make payment of the full amount because claims have been made against Owner on account of Contractor's performance of furnishing of the Work, or Liens have been filed in connection with the Work, or there are other items entitling Owner to a set-off against the amount recommended, but Owner must give Contractor immediate written notice stating the reasons for such action.
- C. When all grounds for withholding payment are removed, payment will be made in the amounts withheld because of them.
- D. Progress payments will be in the amount of 95% of the amount of the Work completed and 100% of Equipment and Materials suitably stored and documented as indicated on the Application for Payment less the sum of all previous payments. The owner may forego withholding retainage of the progress payments if the construction contract is fifty-percent (50%) complete and the contractor has provided the work in a satisfactory manner.

13.05 SUBSTANTIAL COMPLETION:

- A. When Contractor considers the entire Work ready for its intended use, Contractor shall notify Owner in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and shall issue a certificate of Substantial Completion.
- B. Within a reasonable time thereafter, Contractor, and Owner shall make an inspection of the Work to determine the status of completion. If Owner does not consider the Work substantially complete, Owner will notify Contractor in writing giving the reasons therefor. If Owner considers the Work substantially complete, Contractor will prepare and deliver to Owner a tentative certificate of Substantial Completion which will fix the Date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment.
- C. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Contractor as to any provisions of the certificate or attached list.
- D. Owner shall have the right to exclude Contractor from the Work after the Date of Substantial Completion, but Owner shall allow Contractor reasonable access to complete or correct items on the tentative list.

13.06 PARTIAL UTILIZATION:

- A. Use by Owner of any finished part of the Work, which has specifically been identified in the Contract Documents, or which Owner and Contractor agree constitutes a separately functioning and useable part of the Work that can be used by Owner without significant interference with Contractor's performance of the remainder of the Work, may be accomplished prior to Substantial Completion of all the Work subject to the following:
 - 1. Owner at any time may request Contractor in writing to permit Owner to use any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If Contractor agrees, Contractor will certify to Owner that said part of the Work is substantially complete and will issue a certificate of Substantial Completion for that part of the Work. Contractor at

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

any time may notify Owner in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete issue a certificate of Substantial Completion for that part of the Work. Within a reasonable time after either such request, Owner or Contractor shall make an inspection of that part of the Work to determine its status of completion. If Owner does not consider that part of the Work to be substantially complete, Owner will notify Contractor in writing giving the reasons therefor. If Owner considers that part of the Work to be substantially complete, the provisions of Paragraph 13.05 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

2. Owner may at any time request Contractor in writing to permit Owner to take over operation of any such part of the Work although it is not substantially complete. Owner and Contractor shall make an inspection of that part of the Work to determine its status of completion and will prepare a list of the items remaining to be completed or corrected thereon before final payment. If Contractor does not object in writing to Owner that such part of the Work is not ready for separate operation by Owner, Contractor will finalize the list of items to be completed or corrected and will deliver such list to Owner together with a written recommendation as to the division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, maintenance, utilities, insurance, warranties, and guarantees for that part of the Work, which will become binding upon Owner and Contractor at the time when Owner takes over such operation (unless they shall have otherwise agreed in writing). During such operation and prior to Substantial Completion of such part of the Work, Owner shall allow Contractor reasonable access to complete or correct items on said list and to complete other related Work.
3. No occupancy or separate operation of part of the Work will be accomplished prior to compliance with the requirements of Paragraph 5.02I in respect of property insurance.

13.07 FINAL INSPECTION:

- A. Upon written notice from Contractor that the Work or an agreed portion thereof is complete, Owner will make a final inspection with Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to remedy such deficiencies.

13.08 FINAL APPLICATION FOR PAYMENT:

- A. After Contractor has completed all such corrections to the satisfaction of Owner and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, marked-up record documents, and other documents - all as required by the Contract Documents, and after Owner has indicated that the Work is acceptable (subject to the provisions of Paragraph 13.11), Contractor may make application for final payment following the procedure for progress payments.
- B. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents, together with complete and legally effective releases

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

or waivers (satisfactory to Owner) of all Liens arising out of or filed in connection with the Work. In lieu thereof and as approved by Owner, Contractor may furnish receipts or releases in full; an affidavit of Contractor that the releases and receipts include all labor, services, Material, and Equipment for which a Lien could be filed, and that all payrolls, Equipment and Material bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible, have been paid or otherwise satisfied; and consent of the surety, if any, to final payment. If any Subcontractor or Supplier fails to furnish a release or receipt in full, Contractor may furnish a Bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

13.09 FINAL PAYMENT AND ACCEPTANCE:

- A. If, on the basis of Owner's observation of the Work during construction and final inspection, and Owner's review of the final Application for Payment and accompanying documentation -- all as required by the Contract Documents, Owner is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Owner will, within fourteen days after receipt of the final Application for Payment, indicate in writing Owner's approval. Otherwise, Owner will return the Application to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application. Thirty days after presentation to Owner of the Application and accompanying documentation, in appropriate form and substance, the amount of the final payment agreed upon by Owner and Contractor will become due and will be paid by Owner to Contractor.
- B. If, through no fault of Contractor, final completion of the Work is significantly delayed and if Owner so confirms, Owner shall, upon receipt of Contractor's final Application for Payment, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. The written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Owner with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.
- C. The Final Pay Estimate will include all sums remaining to be paid.

13.10 CONTRACTOR'S CONTINUING OBLIGATION:

- A. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. Neither the issuance of a certificate of Substantial Completion, nor any payment by Owner to Contractor under the Contract Documents, nor any use or occupancy of the Work or any part thereof by Owner, nor any act of acceptance by Owner nor any failure to do so, nor any review and approval of a Submittal, nor the issuance of a notice of acceptability by Owner pursuant to Paragraph 13.09, nor any correction of defective Work by Owner will constitute an acceptance of Work not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents (except as provided in Paragraph 13.11).

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

13.11 WAIVER OF CLAIMS: The making and acceptance of final payment will constitute:

- A. A waiver of all claims by Owner against Contractor, except claims arising from unsettled Liens, from defective work appearing after final inspection pursuant to Paragraph 13.07, or from failure to comply with the Contract Documents or the terms of any special guarantees specified therein; however, it will not constitute a waiver by Owner of any rights in respect of Contractor's continuing obligations under the Contract Documents; and
- B. A waiver of all claims by Contractor against Owner other than those previously made in writing and still unsettled.

13.12 INTEREST: NOT APPLICABLE.

ARTICLE 14 - SUSPENSION OF WORK AND TERMINATION

14.01 OWNER MAY SUSPEND WORK:

- A. Owner may, at any time and without cause, suspend the Work or any portion thereof for a period of not more than 90 days by notice in writing to Contractor, and Owner which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to any suspension if Contractor makes an approved claim therefor as provided in Articles 10 and 11.

14.02 OWNER MAY TERMINATE:

- A. Upon the occurrence of any one or more of the following events:
 - 1. If Contractor commences a voluntary case under any chapter of the Bankruptcy Code (Title 11, United States Code), as now or hereafter in effect, or if Contractor takes any equivalent or similar action by filing a petition or otherwise under any other federal or state Law in effect at such time relating to the bankruptcy or insolvency;
 - 2. If a petition is filed against Contractor under any chapter of the bankruptcy Code as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against Contractor under any other federal or state Law in effect at the time relating to bankruptcy or insolvency;
 - 3. If Contractor makes a general assignment for the benefit of creditors;
 - 4. If a trustee, receiver, custodian, or agent of Contractor is appointed under applicable Law or under contract, whose appointment or authority to take charge of property of Contractor is for the purpose of enforcing a Lien against such property or for the purpose of general administration of such property for the benefit of Contractor's creditors;
 - 5. If Contractor admits in writing an inability to pay its debts generally as they become due;
 - 6. If Contractor persistently fails to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable Equipment or Materials or failure to

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

- adhere to the progress schedule established under Paragraph 2.07 as revised from time to time);
7. If Contractor disregards Laws or Regulations of any public body having jurisdiction;
 8. If Contractor disregards the authority of Owner; or
 9. If Contractor otherwise violates in any substantial way any provisions of the Contract Documents;
- B. Owner may, after giving Contractor (and the surety, if there be one) ten days' written notice and to the extent permitted by Laws and Regulations, terminate the services of Contractor, exclude Contractor from the Site and take possession of the Work incorporate in the Work all Materials stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and finish the Work as Owner may deem expedient. In such case, Contractor shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the costs of completing the Work (including but not limited to fees and charges of engineers, architects, attorneys and other professionals, and court and arbitration costs), such excess will be paid to Contractor. If such costs exceed such unpaid balance, Contractor shall pay the difference to Owner. Such reasonable costs incurred by Owner will be incorporated in a Change Order, but when exercising any rights or remedies under this Paragraph, Owner shall not be required to obtain the lowest price for the Work performed.
- C. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due to Contractor by Owner will not release Contractor from liability.
- D. Upon ten days' written notice to Contractor, Owner may, without cause and without prejudice to any other right or remedy, elect to abandon the Work and terminate the Agreement. In such case, Contractor shall be paid for all Work executed and any expense sustained plus reasonable termination expenses, which will include, but not be limited to, costs (including, but not limited to, fees and charges of engineers, architects, attorneys and other professionals, and court and arbitration costs).

14.03 **CONTRACTOR MAY STOP WORK OR TERMINATE:**

- A. If, through no act or fault of Contractor, the Work is suspended for a period of more than 90 days by Owner or under an order of court or other public authority, or Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon ten days' written notice to Owner, terminate the Agreement and recover from Owner payment for all Work executed and any expense sustained plus reasonable termination expenses. In addition to and in lieu of terminating the Agreement, if Owner has failed to make any payment as aforesaid, Contractor may upon ten days' written notice to Owner stop the Work until payment of all amounts then due. The provisions of this Paragraph shall not relieve Contractor of the obligations under Paragraph 6.15 to carry on the Work in accordance with the progress schedule and without delay during disputes and disagreements with Owner.

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

ARTICLE 15 - MISCELLANEOUS

15.01 GIVING NOTICE:

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

15.02 COMPUTATION OF TIME:

- A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the Law of the applicable jurisdiction, such day will be omitted from the computation.
- B. A calendar day of 24 hours measured from midnight to the next midnight shall constitute a day.

15.03 CLAIMS, CUMULATIVE REMEDIES:

- A. Should Owner or Contractor suffer injury or damage to person or property because of any error, omission, or act of the other party or of any of the other party's employees or agents or others for whose acts the other party is legally liable, claim will be made in writing to the other party within a reasonable time of the first observance of such injury or damage. The provisions of this Paragraph shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or repose.
- B. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon Contractor by Paragraphs 6.16A, 12.01, 12.08, 12.10, 13.03, and 14.02A and all of the rights and remedies available to Owner and Engineer thereunder, are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents, and the provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply. All representations, warranties, and guarantees made in the Contract Documents will survive final payment and termination or completion of the Agreement.

15.04 FREEDOM OF INFORMATION ACT:

- A. City contracts and documents prepared while performing City contractual work are subject to the Arkansas Freedom of Information Act. If a Freedom of Information Act request is presented to the City of Fayetteville, the contractor shall do everything possible to provide the documents in a prompt and timely manner as prescribed in the Arkansas Freedom of Information Act (A.C.A. §25-19-101 et. seq.) Only legally

DOCUMENT 00700 – GENERAL CONDITIONS – DESIGN-BUILD CONTRACT: (continued)

authorized photocopying costs pursuant to the FOIA may be assessed for this compliance.

15.05 **LIMITATION OF LIABILITY:**

- A. Notwithstanding anything herein to the contrary contained in this Contract, in no event shall Contractor or Owner be liable for any special, indirect, incidental, consequential, or punitive damages of any character, including but not limited to damages claimed for loss of use of productive facilities or equipment, lost profits, governmental fines or penalties, lost production, or non-operation or increased expense of operation, irrespective of whether claims or actions for such damages are based upon contract, the warranty, tort (including negligence), strict liability or otherwise. Whether attributable to contract, warranty, tort (including negligence), strict liability or otherwise, Contractor's responsibility for any claims, damages, losses or liabilities arising out of or related to its performance of this Contract, including but not limited to any correction of defects under the warranty, shall not exceed the greater of \$3,000,000 (three million dollars) or the payable proceeds of insurance, per the limits required to be maintained under Article 5.02 above.

END OF DOCUMENT 00700

RESOLUTION NO. _____

A RESOLUTION TO WAIVE COMPETITIVE BIDDING AND AUTHORIZE A DESIGN-BUILD CONTRACT WITH STRUCTURAL PRESERVATION SYSTEMS, LLC IN AN AMOUNT NOT TO EXCEED \$2,477,644.00 FOR ENGINEERING AND CONSTRUCTION SERVICES RELATED TO EMERGENCY TRENCHLESS REPAIR OF A 48-INCH DIAMETER SANITARY SEWER UNDER INTERSTATE 49, AND TO APPROVE A PROJECT CONTINGENCY IN THE AMOUNT OF \$375,000.00

WHEREAS, during an inspection of the 48-inch gravity sewer line that extends from Gregg Avenue to Sunshine Road, staff determined that one area in the vicinity of Interstate 49 has experienced damage; and

WHEREAS, staff worked with Structural Preservation Systems, LLC, a national leader in trenchless pipe joint repairs, to develop a plan for the repairs in this location and, due to the specialized nature of this repair technique, Staff recommends a bid waiver to allow Structural Technologies to perform Investigation-Design-Build services for this expedited repair project.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:

Section 1: That the City Council of City of Fayetteville, Arkansas hereby determines an exceptional situation exists in which competitive bidding is deemed not feasible or practical and therefore waives the requirements of formal competitive bidding and authorizes Mayor Jordan to sign a Design-Build contract between the City of Fayetteville, Arkansas and Structural Preservation Systems, LLC. in an amount not to exceed \$2,477,644.00 for engineering and construction services related to emergency trenchless repair of a 48-inch diameter sanitary sewer under Interstate 49, and further approves a project contingency in the amount of \$375,000.00.

MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council
THRU: Susan Norton, Chief of Staff
FROM: Peter Nierengarten, Environmental Director
DATE: December 27, 2022
SUBJECT: **EPA SOLID WASTE INFRASTRUCTURE FOR RECYCLING GRANT APPLICATION**

RECOMMENDATION:

Ultimately, staff in consultation with Hawkins-Weir and Kessler Consulting determined that option 3 which expands the existing RPF to the south and west is the most feasible and useful over the long-term. This option expands existing bale storage space and tip floor and replaces the existing 30-year old bailer with a new bailer equipped with a conveyor and sort line.

If the City were selected, the EPA SWIFR grant would fund up to \$4M would be utilized to pay for the RPF expansion project.

BACKGROUND:

In 2020 the EPA announced the national recycling goal to “increase the U.S. recycling rate by 50 percent by 2030 and to galvanize efforts to strengthen the U. S. recycling system”. One year later the EPA released the National Recycling Strategy: Building a Circular Economy for All, the same day funding was made available to support this strategy when the 2021 Bipartisan Infrastructure Law (BIL) was signed into law. The National Recycling Strategy proposes building a circular economy to reduce material use, redesign materials to be less resource intensive, and recapturing waste as a resource to manufacture new materials and products.

The SWIFR grant program is funded through the 2021 BIL and is designed to fund a wide variety of projects to transform solid waste infrastructure in the United States to equitably reduce waste and manage materials to achieve a circular economy, reduce greenhouse gas emissions, and create cleaner, resilient, and healthier communities. It is anticipated that projects will enable the EPA to help eligible partners advance from “where they are” to significantly transform their post-consumer materials management infrastructure. Projects will create new capacity for, optimize existing capacity of, or identify strategies that result in an increase in management of post-consumer materials. The EPA also recognizes and encourages applications that demonstrate innovative solutions and programs that provide or increase access to reuse, recycling, and composting opportunities to areas and populations that currently do not have access.

EPA SWIFR grant awards are designed for capital improvement projects and cities may request up to \$4M with no matching requirement.

DISCUSSION:

The City Council passed Resolution No.282-21 on November 16, 2021 approving a contract agreement with

Mailing address:

113 W. Mountain Street
Fayetteville, AR 72701

www.fayetteville-ar.gov

Hawkins-Weir Engineering for design and bidding services for improvements to the City's Recycling Processing Facility.

In 2022 Hawkins-Weir Engineers performed on-site inspection of the existing facilities to evaluate and design improvements and repairs for the City transfer station and to further consider improvements, retrofits, and expansion options for the adjacent recycling processing facility (RPF). Kessler Consulting, Inc. (KCI) was brought onto the project to assess the RPF, estimate future quantities of recyclables and RPF sizing requirements, identify sorting and processing equipment needs, develop conceptual layouts for RPF expansions and improvements, and develop a planning level financial assessment of capital and operating costs for RPF options.

Hawkins-Weir Engineers developed three conceptual facility expansion layout options and presented the City with a Technical Memorandum detailing the advantages and disadvantages of the options. The Technical Memorandum addressed RPF sizing requirements and sorting and processing options, possible phasing and financial assessments of the three options.

BUDGET/STAFF IMPACT:

There is not a match requirement associated with the \$4,000,000 EPA SWIFR grant request, however, Recycling and Trash Division proposes utilizing \$1,400,000 from CIP funds and \$2,247,000 from fund balance to fully fund the expansion of the City's Recycling Processing Facility for a complete project cost of \$7,647,000.

Item/Description	Amount
Cost	
Site Development	\$ 766,000
Buildings	\$ 3,280,000
Equipment	\$ 1,452,000
Mobilization & General Conditions	\$ 687,000
Design & Development Fees	\$ 912,000
Contingency	\$ 550,000
Total RPF Improvements Cost	\$ 7,647,000
Funding	
Recycling & Trash CIP	\$ 1,400,000
Recycling & Trash Fund Balance	\$ 2,247,000
EPA Grant Match Request	\$ 4,000,000
TOTAL RPF Funding	\$ 7,647,000

ATTACHMENTS: Staff Review Form, EPA Grant SWIFR Request for Applications, Fayetteville Recycling Processing Facility Expansion – Conceptual Layouts and Financial Assessment (Kessler Consulting/Hawkins-

Mailing address:

113 W. Mountain Street
Fayetteville, AR 72701

www.fayetteville-ar.gov

Weir Engineers), RESOLUTION- APPLICATION FOR EPA SWIFR GRANT

City of Fayetteville Staff Review Form

2022-264

Item ID

1/3/2023

City Council Meeting Date - Agenda Item Only
N/A for Non-Agenda Item

Peter Nierengarten

12/15/2022

RECYCLING/TRASH COLLECTION (750)

Submitted By

Submitted Date

Division / Department

Action Recommendation:

Approval to submit a Solid Waste Infrastructure For Recycling (SWIFR) Grant Program for Political Subdivisions of States and Territories grant application in the amount of up to \$4,000,000 with a City match of up to \$3,647,000 to fund the improvements to the Recycling Processing Facility.

Budget Impact:

Account Number

Fund

Project Number

Project Title

Budgeted Item? No

Total Amended Budget

\$ -

Expenses (Actual+Encum)

\$ -

Available Budget

\$ -

Does item have a direct cost? No

Item Cost

\$ -

Is a Budget Adjustment attached? No

Budget Adjustment

\$ -

Remaining Budget

\$ -

V20221130

Purchase Order Number:

Previous Ordinance or Resolution #

Change Order Number:

Approval Date:

Original Contract Number:

Comments:

AGENCY: ENVIRONMENTAL PROTECTION AGENCY (EPA)

TITLE: Solid Waste Infrastructure For Recycling (SWIFR) Grant Program for Political Subdivisions of States and Territories.

ACTION: Request for Applications (RFA)

FUNDING OPPORTUNITY NUMBER: EPA-I-OLEM-ORCR-23-03

Assistance Listing No: 66.920

KEY DATES:

Nov. 14, 2022	RFA OPENS
Dec. 5 and 7, 2022	INFORMATION SESSION SERIES #1
Dec. 13 and 19, 2022	INFORMATION SESSION SERIES #2
Jan. 16, 2023	RFA CLOSING – APPLICATIONS DUE BY 11:59 PM (EST)
April 2023	ANTICIPATED NOTIFICATION OF FUNDING SELECTION
Oct. 2023	ANTICIPATED AWARD

APPLICATION SUBMISSION DEADLINE: Application packages must be submitted electronically to the EPA through [Grants.gov](https://www.grants.gov) (www.grants.gov) no later than **January 16, 2023, at 11:59 p.m. (EST)** in order to be considered for funding.

To allow for efficient management of the competitive process, the EPA requests submittal of an informal Notice of Intent to Apply by **December 15, 2022** to SWIFR@epa.gov. Please include your approximate funding amount, the track under which you are applying (refer to *Section I.F: Program Tracks* for more information), and one to two sentences about the scope of your project. Submission of an Intent to Apply is optional; it is a process management tool that will allow the EPA to better anticipate the total staff time required for efficient review, evaluation, and selection of submitted applications.

Note - Prior to naming a contractor (including consultants) or subrecipient in your application as a “partner”, please carefully review Appendix A of [EPA’s Contracts and Subawards Solicitation Clause](#) that are incorporated by reference in this announcement (refer to *Section III.D: Named Contractors and Subrecipients*). EPA expects recipients of funding to comply with competitive procurement contracting requirements as well as EPA’s rule on Participation by Disadvantaged Business Enterprises in EPA Programs in 40 CFR Part 33. The Agency does not accept justifications for sole source contracts for services or products available in the commercial marketplace based on a contractor’s role in preparing an application or prior relationships with the contractor that were not established in compliance with competitive procurement requirements. Note that these competitive procurement requirements apply with equal force to contractual relationships established prior to or after the award of EPA funds.

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SECTION I. FUNDING OPPORTUNITY DESCRIPTION

A. Background

Approximately half of global greenhouse gas emissions are the result of natural resource extraction and processing.¹ Increasing recycling reduces climate, environmental, and social impacts of materials use, and keeps valuable resources in use instead of in landfills. Municipal solid waste management has long suffered from a lack of investment. Some communities that lack waste management infrastructure do not have curbside waste collection services, recycling, or composting programs, which increases the burden on our landfills, decreases their capacity, and increases greenhouse gas emissions. For example, more than one-third (nearly 100 million tons) of the U.S. municipal waste stream is organic waste. The production and current management of organics contributes to a broad range of environmental impacts, including climate change, air pollutants, water scarcity, biodiversity loss, and soil and water quality degradation. For example, producing, grading, packing, processing, distributing, retailing, and preparing the amount of food that is currently wasted annually in the U.S. contributes greenhouse gas (GHG) emissions equivalent to that of 42 coal-fired power plants and requires enough water and energy to supply more than 50 million homes each year.² When food waste and other organics go to the landfill, they release methane, a powerful greenhouse gas. In 2020, 14.5% of human-related methane emissions came from landfills.³ Mismanaged waste also can compound health, economic, and undesirable social conditions in historically underserved and overburdened communities.

To reduce the impacts of materials and strengthen the U.S. recycling system, the EPA and others have undertaken significant efforts to advance the circular economy in the United States. In 2015, the EPA and USDA announced the [U.S. 2030 Food Loss and Waste Reduction Goal](#), seeking to cut food loss and waste in half by the year 2030. In 2020, the EPA announced the [National Recycling Goal](#) to increase the U.S. recycling rate to 50 percent by 2030 and to galvanize efforts to strengthen the U.S. recycling system. One year later, the EPA released the [National Recycling Strategy: Part One of a Series on Building a Circular Economy for All](#), the same day that funding was made available to support the strategy when the [2021 Bipartisan Infrastructure Law \(BIL\)](#) was signed into law. The National Recycling Strategy proposes building a circular economy to reduce material use, redesign materials to be less resource intensive, and recapturing “waste” as a resource to manufacture new materials and products. This vision and strategy for a circular economy aligns with the language and the goals identified in the Save Our Seas 2.0 Act regarding solid waste infrastructure and management in the United States.

The Solid Waste for Infrastructure (SWIFR) grant program funded through the BIL is an historic investment in the health, equity, and resilience of American communities. The unprecedented funding provided by the BIL through the SWIFR grants will assist local waste management authorities by supporting improvements to local post-consumer materials management, including municipal recycling programs, and assisting local waste management authorities in making improvements to local waste management systems. The SWIFR grant program provides a critical opportunity to fund a range of high-

¹ Data from the 2019 Global Resources Outlook Report published by UN Environment.

<https://www.resourcepanel.org/reports/global-resources-outlook>

² More information available in the EPA’s 2021 Report titled From Farm to Kitchen: The Environmental Impacts of Food Waste (Part 1), available at https://www.epa.gov/system/files/documents/2021-11/from-farm-to-kitchen-the-environmental-impacts-of-u.s.-food-waste_508-tagged.pdf

³ <https://www.epa.gov/lmop/frequent-questions-about-landfill-gas#:~:text=MSW%20landfills%20are%20the%20third,use%20a%20significant%20energy%20resource.>

impact projects to increase recycling, reduce contamination, and promote a circular economy for sustainable materials management by making much-needed investments in solid waste management infrastructure.

The SWIFR Grant Program is a covered program under the Justice40 Initiative, which aims to deliver 40 percent of the overall benefits of climate, clean energy, affordable and sustainable housing, clean water, and other investments to disadvantaged communities. More information on Justice40 at the EPA can be found at: www.epa.gov/environmentaljustice/justice40-epa.

There are three types of grants within the SWIFR program, which are designed to fund a range of projects that will enable EPA to help states, territories, tribes, local governments, and communities advance from “where they are” to significantly transform their recycling and materials management infrastructure.

1. **SWIFR Grants for States and Territories** will provide states and territories with capacity building grants to support their long-term planning and data collection needs to demonstrate progress toward the National Recycling Goal and Food Loss and Waste Reduction Goal and advance a Circular Economy for materials. Territories also will be able to utilize funds for equipment and construction related costs as part of their implementation of plans.
2. **SWIFR Grants for Tribes and Intertribal Consortia** will provide funds for tribes and intertribal consortia to develop or update plans focused on encouraging environmentally sound post-consumer materials management; establish, increase, or expand materials management infrastructure, and identify, establish, or improve end-markets for the use of recycled materials.
3. **SWIFR Grants for Political Subdivisions** will establish, increase, expand, or optimize collection and improve materials management infrastructure; reduce contamination in the recycled materials stream; and identify, establish, or improve end-markets for the use of recycled materials.

This RFA is for the SWIFR sub-grant program for Political Subdivisions. This RFA is only applicable to the first round of funding described under this document and does not pertain to the entire three-year grant program. The total estimated funding for this competitive opportunity is approximately \$40,000,000. The EPA anticipates awarding approximately 25 assistance agreements, with at least one award per EPA Region, depending on the quality of applications received. The minimum individual award amount is \$500,000 and the maximum individual award is \$4,000,000 for the grant period, which is up to three years. Refer to *Section II: Award Information* of this announcement for more information. In alignment with the [Biden Administration’s Justice40 Initiative](#), up to 40%, or \$16,000,000, of the benefits, which in this program is defined as investments, will be set-aside specifically for awards to disadvantaged communities (refer to *Section III.A: Eligible Applicants* for more information).

Materials and waste streams considered under this announcement include: municipal solid waste (MSW), including plastics, organics, paper, metal, glass, etc. and construction and demolition (C&D) debris. In addition, materials and waste streams considered include the management pathways of source reduction, reuse, sending materials to material recovery facilities, composting, industrial uses (e.g., rendering, anaerobic digestion (AD)), and feeding animals.

B. Statutory/Regulatory Authority Criteria

The Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (BIL), provides \$275,000,000 for grants authorized under Section 302(a) “Post-Consumer Materials Management Infrastructure Grant Program” of the Save Our Seas 2.0 Act ([Public Law 116-224](#)) as codified at 33 U.S.C. 4282(a). The BIL funds will be available to EPA at \$55,000,000 per year from Fiscal Year 2022 to Fiscal Year 2026. Congress appropriated an additional \$2,500,000 for grants authorized under Section 302(a) of Save Our Seas Act 2.0 in EPA’s Fiscal Year 2022 Appropriation Act ([Public Law 117-103](#)).

Pursuant to Section 302(a) of the Save Our Seas Act 2.0, the SWIFR grant program must:

- Implement the series of strategies on building a circular economy for all;
- Support improvements to local post-consumer materials management, including municipal recycling programs; and
- Assist local waste management authorities in making improvements to local waste management systems.

C. Key Definitions

Circular economy: As defined in the Save Our Seas Act 2.0, the term means an economy that uses a systems-focused approach and involves industrial processes and economic activities that are restorative or regenerative by design; enable resources used in such processes and activities to maintain their highest values for as long as possible; and aim for the elimination of waste through the superior design of materials, products, and systems (including business models). A circular economy is embraced within the sustainable materials management (SMM) approach that the United States federal government has pursued since 2009.

Coalitions: Groups of two or more eligible applicants (political subdivisions of states) may choose to form a coalition and submit a single application under this RFA; however, one entity **must** be responsible for the grant. Coalitions **must** identify which eligible organization will be the recipient of the grant and which eligible organization(s) will be subrecipients of the recipient (the “pass-through entity”). *Subawards must* be consistent with the definition of that term in 2 CFR 200.1 and comply with the [EPA’s Subaward Policy](#). The pass-through entity that administers the grant and subawards will be accountable to the EPA for proper expenditure of the funds and reporting and will be the point of contact for the coalition. As provided in 2 CFR 200.332, subrecipients are accountable to the pass-through entity for proper use of EPA funding. Any contracts for services or products funded with EPA financial assistance must be awarded under the competitive procurement procedures of 2 CFR Part 200 and/or 2 CFR Part 1500, as applicable. The regulations at 2 CFR 1500.10 contain limitations on the extent to which EPA funds may be used to compensate individual consultants. Refer to the [Best Practice Guide for Procuring Services, Supplies, and Equipment Under EPA Assistance Agreements](#) for guidance on competitive procurement requirements and consultant compensation. **Do not name a procurement contractor (including a consultant) as a “partner” or otherwise in your application unless the contractor has been selected in compliance with competitive procurement requirements.**

Disadvantaged community: Under this announcement, a disadvantaged community is defined as a community that meets at least one of the following criteria:

1. is located in a U.S. Territory (Puerto Rico, Virgin Islands, Guam, American Samoa, Commonwealth of Northern Mariana Islands);
2. meets one or more of the eight disadvantaged categories identified in the [Climate and Economic Justice Screening Tool](#) (CEJST) developed by the Council on Environmental Quality;
3. is a Census-defined rural community that is at or above the 65th percentile for low income AND 80% or more of individuals 15 or older are not enrolled in higher education; or
4. is located in Indian country, is a former Indian reservation in Oklahoma (as determined by the Secretary of the Interior), or is an Alaskan Native Villages as defined in Public Law 92–203.

EPA has different tools available to help determine whether a community meets this definition. For example:

- Under criterion 2, an applicant can use a screenshot of CEJST along with a brief narrative to illustrate that the proposed project will benefit a disadvantaged community.
- Under criterion 3, an applicant can use screenshots of the map in this link (<https://www.epa.gov/rcra/grants-political-subdivisions>) along with a brief narrative to illustrate that their proposed project will benefit disadvantaged communities. Areas that are eligible are highlighted in blue. Applicants may use their street address, city, or ZIP code to search and should take a screenshot to demonstrate that they are located in or their project will benefit a rural area.

If you are unable to use the resources mentioned above or have other technical issues when determining eligibility, please email SWIFR@epa.gov for assistance.

Environmental justice (EJ): The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies. Fair treatment means no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental and commercial operations or policies. Meaningful involvement means people have an opportunity to participate in decisions about activities that may affect their environment and/or health; the public's contribution can influence the regulatory agency's decision; community concerns will be considered in the decision-making process; and decision makers will seek out and facilitate the involvement of those potentially affected.

Political subdivisions: Local governments are generally political subdivisions of states and differ from state and federal governments in that their authority is not based directly on a constitution. Each state constitution or other law describes in detail a procedure for establishing local governments as political subdivisions. In most cases the state legislature must approve the creation or incorporation of a local government. The local government then receives a charter defining its organization, authority and responsibilities, including the means for electing governing officials. Local government units bear a variety of names, such as city, county, township, village, parish, district, etc. The legal significance of

these terms may vary from state to state. The authority of local governments varies greatly. Generally, a local government has the authority to:

- Impose taxes
- Try people accused of breaking local laws or ordinances
- Administer local programs within its boundaries

Depending on state law, political subdivisions may include other types of entities including those identified in the definition of *Local government* at 2 CFR 200.1 and state institutions of higher education.

Post-consumer materials management: As defined in the Save Our Seas Act 2.0, the term refers to the systems, operation, supervision and long-term management of processes and equipment used for post-use material (including packaging, goods, products, and other materials), including collection; transport; and systems and processes related to post-use materials that can be recovered, reused, recycled, repaired, or refurbished.

When considering post-consumer materials management, it is important to include municipal solid waste (MSW), including plastics, food, paper, metal, glass, etc., and construction and demolition (C&D) debris), as well as the management pathways of source reduction and reuse, sending materials to material recovery facilities, composting, industrial uses (e.g., rendering and anaerobic digestion (AD)), and feeding animals.

D. Program Vision and Goals

This RFA has the following goals:

- Fund a range of projects that will help local governments and communities advance from “where they are” to significantly transform their post-consumer materials management infrastructure.
- Fund projects that will result in a significant decrease in the generation of MSW and/or an increase in the diversion of MSW from landfills and incineration.
- Fund innovative solutions and programs that provide or increase access to prevention, reuse, mechanical recycling, anaerobic digestion, and composting.

This program aims to deliver 40 percent of the overall benefits of climate, clean energy, affordable and sustainable housing, clean water, and other investments to disadvantaged communities. More information on Justice40 at the EPA can be found

at: <https://www.epa.gov/environmentaljustice/justice40-epa>.

E. Project Labor Agreements

The EPA encourages project labor agreements (i.e., pre-hire collective bargaining agreements between unions and contractors that govern terms and conditions of employment for all workers on a construction project); the use of an appropriately trained workforce (i.e., through registered apprenticeships and other joint labor-management training programs that serve all workers, particularly those historically excluded); the use of an appropriately credentialed workforce (i.e., requirements for appropriate and relevant professional training, certification, and licensure); and neutrality with respect to union organizing (i.e., BIL funds should not support or oppose union organizing).

F. Program Tracks

Under this RFA, EPA will fund projects under two tracks:

- **Track 1:** Projects that benefit disadvantaged communities as defined under *Section I.C: Key Definitions* of this RFA. EPA anticipates that approximately 40% (or \$16,000,000) of the funding will be awarded to projects that benefit disadvantaged communities.
- **Track 2:** Projects that benefit all other communities that do not meet the definition of disadvantaged communities as defined under *Section I.C: Key Definitions* of this RFA.

Applications must clearly indicate if the proposed project(s) fall under Track 1 or Track 2. To qualify for Track 1, applications must demonstrate that the proposed project or project(s) will benefit a community that meets the definition of disadvantaged community as defined under *Section I.C: Key Definitions* of this RFA. EPA has different tools available to help determine whether a community meets this definition. For example, an application can include a screenshot of CEJST along with a brief narrative to illustrate that the proposed project will benefit disadvantaged communities. EPA reserves the right to determine under which track the application falls under based on the justification provided in the application.

There is no cost match requirement associated with this grant program.

G. Scope of Work

The EPA is soliciting applications for a wide variety of projects that are designed to build and transform solid waste infrastructure in the United States to equitably reduce waste and manage materials to achieve a circular economy, reduce greenhouse gas emissions, and create cleaner, resilient, and healthier communities. It is anticipated that projects will enable the EPA to help eligible partners advance from “where they are” to significantly transform their post-consumer materials management infrastructure. Projects will create new capacity for, optimize existing capacity of, or identify strategies that result in an increase in management of post-consumer materials. The EPA also recognizes and encourages applications that demonstrate innovative solutions and programs that provide or increase access to prevention, reuse, recycling, anaerobic digestion, and composting opportunities in areas that currently do not have access.

In addition, the EPA is seeking post-consumer materials management projects that address environmental justice concerns and focus predominantly on addressing the disproportionate and adverse (see below) human health, environmental, climate-related and other cumulative impacts, as well as the accompanying economic challenges of such impacts, resulting from industrial, governmental, commercial and/or other actions that have affected and/or currently affect people/communities of color, low income, tribal, and indigenous populations, and if applicable other vulnerable populations such as the elderly, children, and those with pre-existing medical conditions.

All applications must address one or more of the following objectives, as they relate to the track under which the application is applying:

- Establish, increase, expand, or optimize collection and improve materials⁴ management infrastructure⁵;
- Fund the creation and construction of tangible infrastructure, technology, or other improvements to reduce contamination in the recycled materials stream;
- Establish, increase, expand, or optimize capacity for materials management;
- Establish, improve, expand, or optimize end-markets for the use of recycled commodities; or
- Demonstrate a significant and measurable increase in the diversion,⁶ recycling rate,⁷ and quality of materials collected for municipal solid waste.

Applications **may include (but are not limited to)** projects that fund:

- Innovative solutions and/or programs that provide or increase access to prevention, reuse, and recycling in areas that currently do not have access; including development of and/or upgrades to drop-off and transfer stations (including but not limited to a hub-and-spoke model in rural communities), etc.
- The purchase of recycling equipment, including but not limited to sorting equipment, waste metering, trucks, processing facilities, etc.;
- Upgrades to material recovery facilities (MRFs) such as optical sorters, artificial intelligence, etc.;
- Development of and/or upgrades to composting facilities or anaerobic digesters to increase capacity for organics recycling;
- Development of and/or upgrades to curbside collection programs or drop-off stations for organics;
- Development of and/or upgrades to reuse infrastructure such as online reuse platforms, community repair spaces, technology and equipment to improve materials management reuse options, food donation, and upcycling, staging areas for material reuse/donation, reuse warehouses, and reuse centers, and electronic waste and computer recycling and refurbishing.
- Other activities that the applicant believes will further the objectives of the RFA.

H. General Environmental Results and EPA Strategic Plan Information

Pursuant to Section 6.a. of EPA Order 5700.7A1, “Environmental Results under EPA Assistance Agreements,” EPA must link proposed assistance agreements with the Agency’s Strategic Plan. EPA also requires that grant applicants and recipients adequately describe environmental outputs and outcomes to be achieved under assistance agreements (see [EPA Order 5700.7A1, Environmental Results under Assistance Agreements](#)).

The activities to be funded under this solicitation support the [FY 2022-2026 EPA Strategic Plan](#). Awards made under this solicitation will support the following goals and objectives of the [Strategic Plan](#).

- **Goal 1: Tackle the Climate Crisis;**
 - Objective 1.1: Reduce Emissions that Cause Climate Change

⁴ Materials and waste streams considered under SWIFR include: municipal solid waste (MSW), including plastics, organics, paper, metal, glass, etc., and construction and demolition (C&D) debris. In addition, materials and waste streams considered include the management pathways of source reduction, reuse, sending materials to material recovery facilities, composting, industrial uses (e.g., rendering, anaerobic digestion (AD)), and feeding animals.

⁵ Examples of materials management infrastructure includes but is not limited to: recycling/composting facilities, secondary processing facilities, and other facilities that manage MSW.

⁶ Measured in tons of material diverted from landfill disposal or incineration.

⁷ As defined by the Modeling Recycling Program Toolkit, available on the [EPA’s website](#).

- Objective 1.3: Advance International and Subnational Climate Efforts
- **Goal 2: Take Decisive Action to Advance Environmental Justice and Civil Rights;**
 - Objective 2.1: Promote Environmental Justice and Civil Rights at the Federal, Tribal, State, and Local Levels
 - Objective 2.2: Embed Environmental Justice and Civil Rights into the EPA's Programs, Policies, and Activities
- **Goal 5: Ensure Clean and Safe Water for All Communities;**
 - Objective 5.2: Protect and Restore Waterbodies and Watersheds
- **Goal 6: Safeguard and Revitalize Communities**
 - Objective 6.1: Clean Up and Restore Land for Productive Uses and Healthy Communities
 - Objective 6.2: Reduce Waste and Prevent Environmental Contamination

All applications must be for projects that support at least one of the goals and objectives identified above.

I. National Recycling Strategy Plan Linkage

The activities to be funded under this solicitation support the [National Recycling Strategy](#) (NRS). Awards made under this solicitation will support the following objectives of the NRS:

- a) improve markets for recycled commodities,
- b) increase collection and improve materials management infrastructure,
- c) reduce contamination in the recycled materials stream,
- d) enhance policies and programs to support circularity, and
- e) standardize measurement and increase data collection.

J. Additional Provisions for Applicants Incorporated into the Solicitation

Additional provisions that apply to *Section III: Eligibility Information*, *Section IV: Application and Submission Information*, *Section V: Application Review Information*, and *Section VI: Award Administration Information* of this solicitation and/or awards made under this solicitation, can be found at the [EPA Solicitation Clauses](#). These provisions are important for applying to this solicitation and applicants must review them when preparing applications for this solicitation. If you are unable to access these provisions electronically at the website above, please contact the EPA point of contact listed in this solicitation (in *Section VII: Agency Contact*) to obtain the provisions.

K. Minority Serving Institutions

Under the SOS 2.0 Act, entities eligible to apply for funding under this solicitation include political subdivisions of states. State colleges and universities, including those that are state Minority Serving Institutions (MSIs), may be eligible for funding and must include in their applications proof of eligibility as an entity that is a political subdivision of the state. Examples of acceptable forms of proof include legal opinions from the state Attorney General or equivalent or from the Chief Legal Officer of the state college or university. Eligibility to apply for funding under this solicitation are discussed in more detail in *Section III.A: Eligible Applicants*.

The EPA recognizes that it is important to engage all available minds to address the environmental challenges the nation faces. At the same time, the EPA seeks to expand the environmental conversation

by including members of communities which may have not previously participated in such dialogues to participate in the EPA’s programs. For this reason, the EPA strongly encourages all eligible applicants identified in *Section III: Eligibility Information*, including minority serving institutions (MSIs), to apply under this opportunity.

For purposes of this solicitation, the following are considered MSIs:

1. Historically Black Colleges and Universities, as defined by the Higher Education Act (20 U.S.C. § 1061(2)). A list of these schools can be found at [Historically Black Colleges and Universities](#);
2. Tribal Colleges and Universities (TCUs), as defined by the Higher Education Act (20 U.S.C. § 1059c(b)(3) and (d)(1)). A list of these schools can be found at [American Indian Tribally Controlled Colleges and Universities](#);
3. Hispanic-Serving Institutions (HSIs), as defined by the Higher Education Act (20 U.S.C. § 1101a(a)(5)). A list of these schools can be found at [Hispanic-Serving Institutions](#)
4. Asian American and Native American Pacific Islander-Serving Institutions; (AANAPISIs), as defined by the Higher Education Act (20 U.S.C. § 1059g(b)(2)). A list of these schools can be found at [Asian American and Native American Pacific Islander-Serving Institutions](#); and
5. Predominately Black Institutions (PBIs), as defined by the Higher Education Act of 2008, 20 U.S.C. § 1059e(b)(6). A list of these schools can be found at [Predominately Black Institutions](#).

L. Measuring and Reporting Environmental Results: Outputs and Outcomes

Pursuant to [EPA Order 5700.7A1, Environmental Results under Assistance Agreements](#), ” EPA requires that all grant applicants and recipients adequately address environmental outputs and outcomes. Outputs and outcomes differ both in their nature and in how they are measured. The EPA requires that all grant applicants and recipients adequately address environmental outputs and outcomes.

Outputs. The term “output” means an environmental activity, effort, and/or associated work product related to an environmental goal and objective that will be produced or provided over a specified period of time or by a specified date. Outputs may be quantitative or qualitative but must be measurable during an assistance agreement funding period.

Outcomes. The term “outcome” means the result, effect, or consequence that will occur from carrying out an environmental program or activity that is related to an environmental or programmatic goal or objective. Outcomes may be qualitative and environmental, behavioral, health-related, or programmatic in nature. Applications must include a description of anticipated project outcomes resulting from the project outputs, even if the outcome to be achieved is beyond the assistance agreement funding period. Include the quantitative target associated with the outcome, as appropriate.

Applicants must discuss the following environmental outputs and outcomes in the Project Narrative Application (see Appendix B). Grant recipients must report the following:

Activity Funded	Output/Outcome
Purchase, develop or enhance infrastructure; develop or enhance markets	Number of infrastructure investments/enhancements made spanning the spectrum of collection through end market development (e.g., bins purchased, post-consumer materials management systems created, technology improvements made).

	• Tons of MSW/C&D collected, recycled, composted, or managed via other management pathways in the community in which the project serves. • Tons of MSW/C&D generated per material type and source in the community in which the project serves (e.g., plastic and food waste). • Number of temporary or permanent jobs created
Establish, increase, expand, or optimize collection	• Tons of MSW/C&D collected, recycled, composted, or managed via other management pathways in the community in which the project serves. • Tons of MSW/C&D generated per material type and source in the community in which the project serves (e.g., plastic and food waste). • GHG reduced (in MTCO₂e) from collection, recycling, composting or management via other management pathways • Number of temporary or permanent jobs created. • Percentage of political subdivisions served as a result of establishing, increasing, expanding, or optimizing collection. • Number of disadvantaged communities served (as defined by this solicitation) as a result of establishing, increasing, expanding, or optimizing collection.

M. Additional Provisions For Applicants Incorporated Into The Solicitation

Additional provisions that apply to sections III, IV, V, and VI of this solicitation and/or awards made under this solicitation, can be found at [EPA Solicitation Clauses](#). These provisions are important for applying to this solicitation and applicants must review them when preparing applications for this solicitation. If you are unable to access these provisions electronically at the website above, please contact the EPA point of contact listed in this solicitation *Section VII: Agency Contact* to obtain the provisions.

SECTION II. AWARD INFORMATION

A. What is the amount of available funding?

It is anticipated that approximately \$40,000,000 will be awarded under this announcement, depending on the availability of funds, quantity and quality of applications received, and other applicable considerations.

Additionally, because Justice40 sets a goal that 40% of program benefits flow to disadvantaged communities, which is defined in *Section I.C: Key Definitions* for the purposes of this RFA, the EPA expects to award approximately 40% of the total funding available, or \$16,000,000, to projects that benefit disadvantaged communities.

The EPA reserves the right to reject all applications and make no awards. The EPA reserves the right to make additional awards under this solicitation, consistent with Agency policy and guidance, if additional funding becomes available after the original selections are made. Any additional selections for awards will be made no later than 6 months after the original selection decisions.

B. Funding Structure and Program Tracks

The total estimated funding for this competitive opportunity is approximately \$40,000,000. The EPA anticipates awarding at least one award per EPA Region, depending on the availability of funds, quantity and quality of the applications received, and other applicable considerations. The minimum individual award is \$500,000 and the maximum individual award is \$4,000,000 for the grant period, which is up to three years. Refer to *Section II: Award Information*, of this announcement for more information.

EPA has a goal of awarding up to 40%, or approximately \$16,000,000 to projects that benefit disadvantaged communities (refer to *Section I.F: Program Tracks* and *Section II.A: What is the amount of available funding?* for more information), depending on the quality of the applications received. There is no cost match requirement associated with this grant program.

C. How many agreements will EPA award in this competition?

The EPA anticipates awarding approximately 25 assistance agreements, with at least one award per EPA Region, depending on the quality of the applications received. The minimum individual award is \$500,000 and the maximum individual award is \$4,000,000 for the grant period, subject to availability of funds and the quality of eligible applications received. Applicants may submit separate applications for one or more of the projects described in *Section I.G: Scope of Work*.

D. Type of Award

The EPA intends to award cooperative agreements under this solicitation. Cooperative agreements provide for substantial involvement between the EPA Project Officer and the selected applicant(s) in the performance of the work supported. Although the EPA will negotiate precise terms and conditions relating to substantial involvement as part of the award process, the anticipated substantial federal involvement for these projects may include:

- close monitoring of the successful applicant's performance to verify the results proposed by the applicant;
- collaboration during performance of the scope of work;
- in accordance with 2 CFR 200.325, review of proposed procurement;
- approving qualifications of key personnel (the EPA will not select employees or contractors employed by the award recipient); and
- review and comment on reports prepared under the cooperative agreement (the final decision on the content of reports rests with the recipient).

The EPA does not have the authority to select employees or contractors employed by the recipient or subrecipients. The final decision on the content of reports rests with the recipient.

E. Will applications be partially funded?

In appropriate circumstances, the EPA reserves the right to partially fund applications by funding discrete portions or phases of proposed projects. If the EPA decides to partially fund an application, it will do so in a manner that does not prejudice any applicants or affect the basis upon which the application, or portion thereof, was evaluated and selected for award, and therefore maintains the integrity of the competition and selection process.

F. What is the project period for awards resulting from this solicitation?

The estimated start date for projects resulting from this solicitation is **October 2023**. All project activities must be completed within the negotiated project performance period of three years.

G. Changing the Ratio of Awards When There are Multiple Priorities In A Competition

The actual award amounts and number of projects awarded described in *Section I: Funding Opportunity Description* may differ from the estimated amounts for many reasons, including the number of quality applications received, agency priorities, and funding availability. The EPA reserves the right to increase or decrease (including decreasing to zero) the total number and amount of awards under each track or change the ratio of assistance agreements it awards among the tracks.

SECTION III. ELIGIBILITY INFORMATION

Note: Additional provisions that apply to this section can be found at [EPA Solicitation Clauses](#).

A. Eligible Applicants

Under this announcement, applications will be accepted from **political subdivisions of states and territories**. The EPA considers counties, cities, towns, parishes, and similar units of governments that have executive and legislative functions to be political subdivisions of states.

Local governments are generally political subdivisions of states and differ from state and federal governments in that their authority is not based directly on a constitution. Each state constitution describes in detail a procedure for establishing local governments. In most cases the state legislature must approve the creation or incorporation of a local government. The local government then receives a charter defining its organization, authority and responsibilities, including the means for electing governing officials. Local government units bear a variety of names, such as city, county, township, village, parish, district, etc. The legal significance of these terms may vary from state to state. The authority of local governments varies greatly. Generally, a local government has the authority to:

- Impose taxes
- Try people accused of breaking local laws or ordinances
- Administer local programs within its boundaries

Other entities (e.g., **state or territorial institutions of higher education, special districts, housing authorities**) must provide documentation that the state or territory in which they are located considers these entities to be a political subdivision of the state. Documentation must cite applicable state or territorial law. Examples of acceptable forms of proof include legal opinions from the state Attorney General or equivalent or from the Chief Legal Officer of the state college or university.

EPA has a goal of awarding up to 40% of the estimated total, or approximately \$16,000,000, to projects that benefit disadvantaged communities, depending on the quality of the applications received (refer to *Section I.F: Program Tracks* for more information).

Tribes and intertribal consortia are not eligible entities under this announcement but will be eligible entities under the SWIFR tribal grant solicitation. For more information on the SWIFR Tribal grant solicitation, visit: <https://www.epa.gov/rcra/bipartisan-infrastructure-law-transforming-us-recycling-and-waste-management>.

States are not eligible entities under this announcement but are eligible entities under the SWIFR States and Territories grant program. For more information on the SWIFR States and Territories grant program, visit: <https://www.epa.gov/rcra/bipartisan-infrastructure-law-transforming-us-recycling-and-waste-management>

Individuals, for-profit, and non-profit organizations are not eligible entities under this announcement but may participate in projects as contractors and subrecipients provided the transactions apply with applicable regulatory policy requirements. More information can be found in the [EPA's Subaward Policy](#).

Coalitions: Groups of two or more eligible applicants (political subdivisions of states) may choose to form a coalition and submit a single application under this RFA; however, one entity **must** be responsible for the grant. Reference *Section I.C.: Key Definitions* for more information on coalitions.

B. Leveraging or Matching Funds

No matching funds are required under this competition. Although cost-sharing/matching is not required as a condition of eligibility under this competition, under *Section V: Application Review Information* of this announcement the EPA will evaluate applications based on a leveraging criterion (refer to *Section V.A: Evaluation Criteria*).

In order to be considered for evaluation, any leveraged funds/resources, and their source, must be identified in the proposal (See *Section IV.D: Application Materials*). Leveraged funding or other resources need not be for eligible and allowable project costs under the EPA assistance agreement unless the Applicant proposes to provide a voluntary cost share as its form of leveraging (see below). Leveraging other than voluntary cost share is not included in the project budget on the grant forms but should be included in the grant workplan in the form of a statement to the effect that the applicant is expected to produce the proposed leveraging consistent with the terms of the announcement and their proposal.

If EPA accepts an offer for a voluntary cost share, applicants must meet their sharing commitment as a condition of receiving EPA funding. The recipient is legally obligated to meet any proposed voluntary cost share that is included in the approved project budget because the grant agreement includes the voluntary cost share. Applicants may use their own funds or other resources for a voluntary cost share if the standards at 2 CFR 200.306 are met. Only eligible and allowable costs may be used for voluntary cost shares. Other Federal grants may not be used as voluntary cost shares without specific statutory authority (e.g. HUD's Community Development Block Grants).

C. Threshold Eligibility Criteria

These are requirements that if not met by the time of application submission, will result in elimination of the application from consideration for funding. Only applications from eligible applicants (refer to *Section III.A: Eligible Applicants* of this RFA) that meet all of these criteria will be evaluated against the ranking criteria in *Section V: Application Review Information* of this RFA. If necessary, the EPA may contact applicants to clarify threshold eligibility questions prior to making an eligibility determination. Applicants deemed ineligible for funding consideration due to the threshold eligibility review will be notified within 15 calendar days of the ineligibility determination.

The threshold eligibility criteria are:

1. Applications must address at least one of the mandatory objectives described in *Section I.G: Scope of Work*, of this announcement:

- Establish, increase, expand, or optimize collection and improve materials⁸ management infrastructure;⁹
 - Fund the creation and construction of tangible infrastructure, technology, or other improvements to reduce contamination in the recycled materials stream;
 - Establish, increase, expand, or optimize capacity for materials management;
 - Establish, improve, expand, or optimize end-markets for the use of recycled commodities; or
 - Demonstrate a significant and measurable increase in the diversion,¹⁰ recycling rate,¹¹ and quality of materials collected for municipal solid waste.
2. Applicants must be eligible, as described in *Section III.A: Eligible Applicants*, of this announcement.
 3. **Named Contractors and Subrecipients.** The EPA does not require or encourage applicants to name procurement contractors (including consultants) or subrecipients in applications for SWIFR grant funding. However, if an applicant chooses to identify a procurement contractor(s) or subrecipient(s) to conduct work proposed in this application, the applicant must demonstrate compliance with applicable regulatory requirements even if the entity is referred to as a “partner” in the application as described under *Section III.D: Named Contractors and Subrecipients* for more information.
 4. Federal funds requested must be between \$500,000 and \$4,000,000, inclusive. Applications requesting federal assistance funding below or in excess of this value will not be considered.
 5. **Qualification for Program Track.** Applicants must indicate if their application qualifies for track 1 or track 2 as defined under *Section I.F: Program Tracks* and include information demonstrating that the application qualifies.
 6. Applications must be for projects that support at least one of the goals and objectives from the EPA’s FY 2022-2026 Strategic Plan identified in *Section I.H: General Environmental Results and EPA Strategic Plan Information* above.
 7. Applications must substantially comply with the application submission instructions and requirements set forth in *Section IV.B: Submission Instructions* of this announcement or else they will be rejected. This includes submitting all of the mandatory application materials. **Please note, the budget table and description is separate from the SF424A form. Both are required to be completed submitted as part of the application.** In addition, where a page limit is expressed in *Section IV.D: Application Materials* with respect to the application, pages in excess of the page limitation will not be reviewed.

⁸ Materials and waste streams considered under SWIFR include: municipal solid waste (MSW), including plastics, organics, paper, metal, glass, etc. In addition, materials and waste streams considered include the management pathways of source reduction, reuse, sending materials to material recovery facilities, composting, industrial uses (e.g., rendering, anaerobic digestion (AD)), and feeding animals.

⁹ Examples of materials management infrastructure includes but is not limited to: recycling/composting facilities, secondary processing facilities, and other facilities that manage MSW.

¹⁰ Measured in tons of material diverted from landfill disposal or incineration.

¹¹ As defined by the Modeling Recycling Program Toolkit, available on the [EPA’s website](#).

8. Initial applications must be submitted through [Grants.gov](https://www.grants.gov) as stated in *Section IV: Application and Submission Information* of this solicitation (except in the limited circumstances where another mode of submission is specifically allowed for as explained in *Section IV: Application and Submission Information*) on or before the application submission deadline published in *Section IV: Application and Submission Information* of this solicitation. Applicants are responsible for following the submission instructions in Section IV of this solicitation to ensure that their application is timely submitted. Please note that applicants experiencing technical issues with submitting through [Grants.gov](https://www.grants.gov) should follow the instructions provided in *Section IV: Application and Submission Information*, which include both the requirement to contact [Grants.gov](https://www.grants.gov) and email a full application to EPA prior to the deadline.
9. Applications submitted outside of [Grants.gov](https://www.grants.gov) will be deemed ineligible without further consideration unless the applicant can clearly demonstrate that it was due to EPA mishandling or technical problems associated with [Grants.gov](https://www.grants.gov) or [SAM.gov](https://www.sam.gov). An applicant's failure to timely submit their application through [Grants.gov](https://www.grants.gov) because they did not timely or properly register in [SAM.gov](https://www.sam.gov) or [Grants.gov](https://www.grants.gov) will not be considered an acceptable reason to consider a submission outside of [Grants.gov](https://www.grants.gov).

If an application is submitted that includes any ineligible tasks or activities, that portion of the application will be ineligible for funding and may, depending on the extent to which it affects the application, render the entire application ineligible for funding.

In addition, if necessary, the EPA may clarify threshold eligibility issues with applicants prior to making an eligibility determination.

Questions and answers will be posted on [EPA's Bipartisan Infrastructure Law website](https://www.epa.gov/bipartisan-infrastructure-law).

D. Named Contractors and Subrecipients

The EPA does not require or encourage applicants to name procurement contractors (including consultants) or subrecipients in applications for grant funding. However, if an applicant chooses to identify a procurement contractor(s) or subrecipient(s) to conduct work proposed in this application, the applicant must comply with the following requirements even if the entity is referred to as a “partner” in the application.

Note – Successful applicants that do not name procurement contractors or subrecipients in their applications must also comply with the requirements described below, regardless of if the contractor was procured before or after the EPA cooperative agreement is awarded. For example, firms or individual consultants that develop or draft specifications, requirements, statements of work, or invitations for bids or requests for proposals must be excluded from competing for such procurements as provided in [2 CFR Part 200.319\(b\)](https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-200/subpart-319/section-200.319(b)).

- **Contractors.** Applicants that identify a procurement contractor(s) in their application where the amount of the contract will be more than the micro-purchase threshold in [2 CFR Part 200.320\(a\)\(1\)](https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-200/subpart-320/section-200.320(a)(1)) (\$10,000 for most applicants) must demonstrate, in their application, how the

contractor (including consultants) was selected in compliance with the fair and open competition requirements in 2 CFR Part 200 and 2 CFR Part 1500. The EPA provides guidance on complying with the competition requirements in the [Best Practice Guide for Procuring Services, Supplies, and Equipment Under EPA Assistance Agreements](#). For example, the EPA will not accept sole source justifications for proposed procurement contracts for services such as environmental consulting and engineering that are available in the commercial marketplace.

Applicants must describe the procurement procedures that were followed to hire the contractor(s) that is named in this application and include information in where and when the Request for Proposals/Request for Qualifications was posted. Alternatively, state “n/a” or “not applicable” if a contractor is not named in this application.

- **Subrecipients.** All applicants must demonstrate that the named subrecipient is eligible for a subaward in compliance with [Appendix A of EPA’s Subaward Policy](#). This policy provides, among other things, that transactions between recipients and for-profit firms and individual consultants are procurement contracts rather than subawards when the transaction involves the acquisition of services from the firm or individual.

Refer to the EPA’s Contracts and Subawards Solicitation Clause for additional guidance on these requirements which must be met for all contractors (except for micro-purchases) and/or subrecipients specifically named in the application. Describe how the named subrecipient is eligible for subaward (e.g., is a nonprofit organization). Alternatively, state “n/a” or “not applicable” if a subrecipient is not named.

Failure to demonstrate compliance with these requirements in the application will result in rejection of the application under Threshold Criterion 3. EPA staff may contact the applicant to clarify issues or obtain additional information before making a final determination of compliance and rejection of the application.

E. Ineligible Costs or Activities and Other Considerations

Prohibition on Use of Funds

EPA funds (directly paid by EPA or from the recipient’s cost-share) cannot be used to design nor administer the collection of identical information from 10 or more parties, and EPA personnel may not participate in such activities. Reasonable costs for analyzing and publishing the independently collected information are allowable to the extent authorized in the EPA approved budget for this agreement.

All costs must meet the requirements for allowability in 2 CFR Part 200, Subpart E and applicable provisions of 2 CFR Part 1500.

SECTION IV. APPLICATION AND SUBMISSION INFORMATION

Note: Additional provisions that apply to this section can be found in the [EPA Solicitation Clauses](#).

A. Requirements to Submit through Grants.gov and Limited Exception Procedures

Applicants must apply electronically through [Grants.gov](#) under this funding opportunity based on the [Grants.gov](#) instructions in this announcement. If your organization has no access to the internet or access is very limited, you may request an exception for the remainder of this calendar year by following the procedures outlined [here](#). Please note that your request must be received at least 15 calendar days before the application due date to allow enough time to negotiate alternative submission methods. Issues with submissions with respect to this opportunity only are addressed in *Section IV.C: Technical Issues with Submission* below.

B. Submission Instructions

1. SAM.gov (System for Award Management) Registration Instructions

Organizations applying to this funding opportunity must have an active [SAM.gov](#) registration. If you have never done business with the Federal Government, you will need to register your organization in [SAM.gov](#). If you do not have a [SAM.gov](#) account, then you will create an account using [login.gov](#) to complete your [SAM.gov](#) registration. [SAM.gov](#) registration is FREE. The process for entity registrations includes obtaining Unique Entity ID (UEI), a 12-character alphanumeric ID assigned an entity by [SAM.gov](#), and requires assertions, representations and certifications, and other information about your organization. Please review the [Entity Registration Checklist](#) for details on this process.

If you have done business with the Federal Government previously, you can check your entity status using your government issued UEI to determine if your registration is active. [SAM.gov](#) requires you renew your registration every 365 days to keep it active.

Please note that [SAM.gov](#) registration is different than obtaining a UEI only. Obtaining an UEI only validates your organization's legal business name and address. Please review the [Frequently Asked Question](#) on the difference for additional details.

Organizations should ensure that their [SAM.gov](#) registration includes a current e-Business (EBiz) point of contact name and email address. The EBiz point of contact is critical for [Grants.gov](#) Registration and system functionality.

Contact the [Federal Service Desk](#) for help with your [SAM.gov](#) account, to resolve technical issues or chat with a help desk agent: (866) 606-8220. The Federal Service desk hours of operation are Monday – Friday 8am – 8pm ET.

2. Grants.gov Registration Instructions

Once your [SAM.gov](#) account is active, you must register in [Grants.gov](#). [Grants.gov](#) will electronically receive your organization information, such as e-Business (EBiz) point of contact email address and UEI. Organizations applying to this funding opportunity must have an active [Grants.gov](#) registration. [Grants.gov](#) registration is FREE. If you have never applied for a federal grant before, please review the [Grants.gov Applicant Registration](#) instructions. As part of the [Grants.gov](#) registration process, the EBiz point of contact is the only person that can affiliate and assign applicant roles to members of an organization. In addition, at least one person must be assigned as an Authorized Organization Representative (AOR). Only person(s) with the AOR role can submit applications in [Grants.gov](#). Please review the [Intro to Grants.gov-Understanding User Roles](#) and [Learning Workspace – User Roles and Workspace Actions](#) for details on this important process.

Please note that this process can take a month or more for new registrants. Applicants must ensure that all registration requirements are met in order to apply for this opportunity through [Grants.gov](#) and should ensure that all such requirements have been met well in advance of the application submission deadline.

Contact [Grants.gov](#) for assistance at 1-800-518-4726 or support@grants.gov to resolve technical issues with [Grants.gov](#). Applicants who are outside the U.S. at the time of submittal and are not able to access the toll-free number may reach a [Grants.gov](#) representative by calling 606-545-5035. The [Grants.gov](#) Support Center is available 24 hours a day 7 days a week, excluding federal holidays.

3. Application Submission Process

To begin the application process under this grant announcement, go to [Grants.gov](#) and click the red “Apply” button at the top of the view grant opportunity page associated with this opportunity.

The electronic submission of your application to this funding opportunity must be made by an official representative of your organization who is registered with [Grants.gov](#) and is authorized to sign applications for Federal financial assistance. If the submit button is grayed out, it may be because you do not have the appropriate role to submit in your organization. Contact your organization’s EBiz point of contact or contact [Grants.gov](#) for assistance at 1-800-518-4726 or support@grants.gov

Applicants need to ensure that the Authorized Organization Representative (AOR) who submits the application through [Grants.gov](#) and whose UEI is listed on the application is an AOR for the applicant listed on the application. Additionally, the UEI listed on the application must be registered to the applicant organization's [SAM.gov](#) account. If not, the application may be deemed ineligible.

4. Application Submission Deadline

Your organization's AOR must submit your complete application package electronically to the EPA through [Grants.gov](https://www.epa.gov/grants) no later than **January 16, 2023 at 11:59 PM ET**. Please allow for enough time to successfully submit your application and allow for unexpected errors that may require you to resubmit.

Applications submitted through [Grants.gov](https://www.epa.gov/grants) will be time and date stamped electronically. Please note that successful submission of your application through [Grants.gov](https://www.epa.gov/grants) does not necessarily mean your application is eligible for award. Any application submitted after the application deadline time and date deadline will be deemed ineligible and not be considered.

5. Releasing Copies of Applications

In concert with the EPA's commitment to conducting business in an open and transparent manner, copies of applications submitted under this solicitation may be made publicly available on the EPA's Office of Resource Conservation and Recovery Bipartisan Infrastructure Law website or other public website for a period of time after the selected applications are announced. The EPA recommends that applications not include trade secrets or commercial or financial information that is confidential or privileged, or sensitive information, if disclosed, that would invade another individual's personal privacy (e.g., an individual's salary, personal email addresses, etc.). However, if such information is included, it will be treated in accordance with 40 CFR Part 2.203. (Review *Section IV.G: Confidential Business Information* for more information.)

Clearly indicate which portion(s) of the application you are claiming as confidential, privileged, or sensitive information, or state 'n/a' or 'not applicable' if the application does not have confidential, privileged, or sensitive information. As provided at 40 CFR § 2.203(b) if no claim of confidential treatment accompanies the information when it is received by the EPA, it may be made available to the public by the EPA without further notice to the submitter.

C. Technical Issues with Submission

If applicants experience technical issues during the submission of an application that they are unable to resolve, follow these procedures **before** the application deadline date:

- 1) Contact [Grants.gov](https://www.epa.gov/grants) Support Center **before** the application deadline date.
- 2) Document the [Grants.gov](https://www.epa.gov/grants) ticket/case number.
- 3) Send an email with the "EPA-I-OLEM-ORCR-23-03" in the subject line to SWIFR@epa.gov **before** the application deadline time and date and **must** include the following:
 - a) [Grants.gov](https://www.epa.gov/grants) ticket/case number(s)

- b) Description of the issue
- c) The entire application package in PDF format.

Without this information, the EPA may not be able to consider applications submitted outside of [Grants.gov](https://www.epa.gov/grants). Any application submitted after the application deadline time and date deadline will be deemed ineligible and **not** be considered.

Please note that successful submission through [Grants.gov](https://www.epa.gov/grants) or email does not necessarily mean your application is eligible for award.

The EPA will make decisions concerning acceptance of each application submitted outside of [Grants.gov](https://www.epa.gov/grants) on a case-by-case basis. The EPA will only consider accepting applications that were unable to submit through [Grants.gov](https://www.epa.gov/grants) due to [Grants.gov](https://www.epa.gov/grants) or relevant [SAM.gov](https://www.sam.gov) system issues or for unforeseen exigent circumstances, such as extreme weather interfering with internet access. Failure of an applicant to submit prior to the application submission deadline date because they did not properly or timely register in [SAM.gov](https://www.sam.gov) or [Grants.gov](https://www.epa.gov/grants) is **not** an acceptable reason to justify acceptance of an application outside of [Grants.gov](https://www.epa.gov/grants).

Training opportunities related to grants management can be found on the [EPA's Grants Website](https://www.epa.gov/grants).

D. Application Materials

The following forms and documents are required under this announcement:

Mandatory Documents:

1. Application for Federal Assistance (SF-424);
2. Budget Information for Non-Construction Programs (SF-424A);
3. EPA Key Contacts Form 5700-54;
4. EPA Form 4700-4 Preaward Compliance Review Report; and
5. Project Narrative Attachment Form: Use this to submit your Project Narrative, prepared as described in *Section IV.E: Content of Application Submission*.

Optional Documents:

1. Other Attachments, if applicable. This includes Milestones (reference Appendix D for an example). These may also include references/works cited, letters of support, staff CV/resumes, documentation demonstrating that competitive procurement was followed if specific names of contractors or equipment is mentioned in the application, documentation demonstrating that institutes of higher education are political subdivisions of states (please combine each of these individual items into one PDF. E.g., all the letters of support should be in one combined PDF, all the references should be in another combined PDF).

E. Content of Application Submission

In accordance with the mandatory documents listed in *Section IV.D: Application Materials*, all applications must contain the "Project Narrative Attachment Form" which is composed of the

“Summary Information Cover Letter,” the “Narrative Proposal,” and the “Budget Table and Description.”

The “Summary Information Cover Letter,” a maximum of 1 page in length, summarizes the overall project.

The “Narrative Proposal,” a maximum of 10 pages in length, must **explicitly** describe the applicant’s proposed project and specifically address each of the evaluation criteria disclosed in *Section V.A: Evaluation Criteria* and the threshold eligibility criteria in *Section III.C: Threshold Eligibility Criteria*.

The “Budget Table and Description” is described in more detail in *Section IV.E.v.: Budget and Expenditure of Awarded Grant Funds*, below, and must not exceed 4 pages in length. It provides a response to Criterion 5: Budget and Expenditure of Awarded Grant Funds.

Project Narrative Attachment Form. Project narratives should be concise and well organized. The following requirements apply.

- Must not exceed the above-mentioned page limits on the “Summary Information Cover Letter,” the “Narrative Proposal,” and the “Budget Table and Description.” Pages must be 8 1/2 x 11” typed pages.
- Must be single-line spaced, 12-point Times New Roman font, one column per page, and no indenting paragraphs.
- Must provide the information detailed in this section and **include responses to all *Section III.C, Threshold Eligibility Criteria; Section V.A, Evaluation Criteria*; as well as the information identified in *Section I: Funding Opportunity Description***. Factual information about your proposed project must be provided. Do not include discussions of broad principles that are not specific to the proposed work or project covered by your application. Responses to evaluation criteria should include the criteria number and title but need not restate the entire text of the criteria. Sufficient detail must be provided to allow for an evaluation of the merits of the proposal. **Vague descriptions, redundancy, and failure to address each of the evaluation criteria will result in a lower ranking.**

Note: Applicants may, but are not required to, use the Optional Template for The Project Narrative Attachment Form included in Appendix B. Applicants that do not use the template will not be penalized.

- a. **The Summary Information Cover Letter** (maximum of one page) must include:
 - i. **Project Title.**
 - ii. **Applicant Name.** Identify the name of the organization submitting the application.
 - iii. **Eligible Entity Type.** Identify your organization’s organization type from *Section III.A: Eligible Applicants*.

- iv. **Qualification for Program Track.** Applicants must indicate if their application qualifies for track 1 or track 2 as defined under *Section I.F: Program Tracks* and include information demonstrating that the application qualifies.
 - v. **UEI Number.** List the organization's UEI number.
 - vi. **Project Summary.** Briefly describe the project in two to four sentences.
 - vii. **Contact Information.** Include name, title, address, email address, phone number. You can list both a primary and an administrative contact.
 - viii. **Project Location.** Include the location where the project will be taking place. If project will occur in more than one location, indicate the city and state associated with the primary location.
 - ix. **Total Project Cost.** Specify total cost of the project. Identify funding from other sources, including leveraging or in-kind resources.
 - x. **EPA Funding Requested.** Specify the amount you are requesting from the EPA.
 - xi. **Project Period.** Provide estimated beginning and ending dates.
 - xii. **Program Objective Elements.** State the mandatory program objective elements addressed from *Section I.G: Scope of Work*.
 - xiii. **Strategic Plan Elements.** State the goals and objectives from the EPA's FY 2022-2026 Strategic Plan identified above in *Section I.H: General Environmental Results and EPA Strategic Plan Linkage*.
 - xiv. **Cooperative Partners.** Provide names and phone numbers of individuals and organizations that have agreed to participate in the implementation of the project, if any. Note that any transactions with partners financed with EPA funding must comply with applicable regulatory requirements.
- b. **The Narrative Proposal** (maximum of ten pages). Provide the information below on how the applicant will implement and conduct its project by addressing each of the evaluation criteria in *Section V: Application Review Information* of this announcement. The Narrative Proposal must include:
- i. **Project Summary and Approach.** The summary shall contain the following components:
 - a. **Detailed project summary, description of specific actions and methods to be undertaken, including estimated timeline for each task.**

- Provide a well-conceived strategy for addressing the requirements and plan for achieving project results in *Section I.G: Scope of Work*.
 - Provide a well-conceived strategy for addressing the requirements and plan for achieving project results in *Section I.H: General Environmental Results and EPA Strategic Plan Information* (with emphasis on results linked to the EPA's Goal 1: Tackle the Climate Crisis) and *Section I.I: National Recycling Strategy Plan Linkage*.
 - Clearly identify the goals and objectives of the project and includes an effective, easily understood plan with well-reasoned steps and milestones to meet the stated objectives.
 - Provide a reasonable time schedule for the execution of the tasks associated with the project and for achieving the project goals and objectives by project end. Provide a schedule indicating start times and completion dates of significant tasks and responsibilities under your program. For efficiency, it is suggested that project milestones be coordinated with important events (e.g., budget cycle, meetings). Reference *Appendix D* for an example you may wish to use.
 - Clearly describe each task and/or activity for the project.
- ii. Environmental Justice.** Applications will be evaluated based on the extent to which they demonstrate how the project will address the disproportionate and adverse (see below) human health, environmental, climate-related and other cumulative impacts, as well as the accompanying economic challenges of such impacts, resulting from industrial, governmental, commercial and/or other actions that have affected and/or currently affect the communities the project would benefit. As part of this evaluation, applications will be evaluated based on:
- a. How the project benefits communities including those that have experienced a lack of resources or other impediments to addressing the impacts identified above that affect their community; and
 - b. The extent to which the project addresses engagement with, local residents in these communities who will be affected by the project, to ensure their meaningful participation with respect to the design, project planning, and performance of the project.

Disproportionate and adverse environmental, human health, climate-related and other cumulative impacts, as well the accompanying economic challenges of such impacts, may result when greater pollution burdens and/or consequences, and the impact of them, are more likely to affect or have affected the communities described in this solicitation. The impacts may result from various factors including but not limited to being a function of historical trends and policy decisions.

Factors that may indicate disproportionate and adverse impacts as referenced above include: differential proximity and exposure to adverse environmental hazards; greater

susceptibility to adverse effects from environmental hazards (due to causes such as age, chronic medical conditions, lack of health care access, or limited access to quality nutrition); unique environmental exposures because of practices linked to cultural background or socioeconomic status (for example, subsistence fishing or farming); cumulative effects from multiple stressors; reduced ability to effectively participate in decision-making processes (due to causes such as lack of or ineffective language access programs, lack of programs to make processes accessible to persons with disabilities, inability to access traditional communication channels, or limited capacity to access technical and legal resources); and degraded physical infrastructure, such as poor housing, poorly maintained public buildings (e.g., schools), or lack of access to transportation.

The application must include relevant information such as demographics, geographic location, and community history. The EPA encourages the use of the EPA's [EJSCREEN tool](#), the [Climate and Economic Justice Screening Tool](#) (or other EJ-based mapping tool) to help you characterize and describe your target community. Data from other sources (e.g., studies, census, and third-party reports) can also be included to give a more complete picture of the impacted communities and populations. Instructions and resources on how to use EJSCREEN are included at the hyperlink above. For any questions you have about EJSCREEN, please use this [webform](#) to contact the EPA.

- iii. **Measuring Environmental Results: Anticipated Outputs and Outcomes.** Provide a well-conceived strategy for addressing the requirements and plan for achieving project results in *Section I.L: Measuring Environmental Results: Anticipated Outputs and Outcomes*.
 - a. **Anticipated Outcomes.** Specify the expected environmental outcomes including those described in *Section I.L: Measuring Environmental Results: Anticipated Outputs and Outcomes* of this announcement. Discuss how you propose to track and measure your progress towards achieving the project outcomes and results. Include quantitative targets for outcomes when applicable (*Refer to Section V.A: Evaluation Criteria*).
 - b. **Anticipated Outputs.** Identify the expected project outputs, including those described in *Section I.L: Measuring Environmental Results: Anticipated Outputs and Outcomes* of this announcement and describe how you will track and measure your progress towards achieving the expected project outputs. Outputs, quantitative or qualitative, must be measurable during the project performance period. Include quantitative targets for outputs when applicable.
- iv. **Programmatic Capability and Past Performance.** Submit a list of federally and/or non-federally funded assistance agreements (assistance agreements include Federal grants and cooperative agreements but not Federal contracts) that your organization performed within the last three years (no more than 5 agreements, and preferably EPA agreements) and describe:

- a. past performance in successfully completing and managing the assistance agreements identified in response to *Section IV: Application and Submission Information* of the solicitation;
- b. history of meeting the reporting requirements under the assistance agreements identified in response to Section IV of the solicitation including whether the applicant submitted acceptable final technical reports under those agreements and the extent to which the applicant adequately and timely reported on their progress towards achieving the expected outputs and outcomes under those agreements and if such progress was not being made whether the applicant adequately reported why not;
- c. organizational experience and plan for timely and successfully achieving the objectives of the proposed project; and,
- d. staff expertise/qualifications, staff knowledge, and resources or the ability to obtain them, to successfully achieve the goals of the proposed project.

In evaluating applicants under these factors in *Section V: Application Review Information*, the EPA will consider the information provided by the applicant and may also consider relevant information from other sources, including information from EPA files and from current/prior grantors (e.g., to verify and/or supplement the information provided by the applicant). If you do not have any relevant or available past performance or past reporting information, please indicate this in the application and you will receive a neutral score for these factors (a neutral score is half of the total points available in a subset of possible points). If you do not provide any response for these items, you may receive a score of 0 for these factors.

- v. **Budget and Expenditure of Awarded Grant Funds.** Describe your organization's procedures, and controls for ensuring that awarded grant funds will be expended in a timely and efficient manner.

Budget Table and Description. Include a detailed budget narrative which clearly explains how funds will be used. The budget table and description should not exceed 4 pages (*Refer to Appendix C: Example Budget Table and Description*). Please note, the budget table and description is different than the SF424A form. Both are required to be completed as part of this RFA. The successful applicant's budget description should identify (1) specific tasks for which EPA funding will be used, (2) the costs associated with each task, (3) the costs that the applicant or other partners will fund for each task, if appropriate, and (4) what outputs will be produced as a result of each task. Refer to *Section I.L: Measuring and Reporting Environmental Results: Outputs and Outcomes* for a definition of outputs and outcomes.

If the project budget includes any voluntary cost-share, the Budget Detail portion of the project narrative must include a detailed description of how the applicant will obtain the cost-share and how the cost-share funding will be used. **If the EPA accepts an offer**

for a voluntary cost-share, applicants must meet their sharing commitment as a legal condition of receiving EPA funding. If the proposed cost-share is to be provided by a third-party, a letter of commitment is required. Any form of cost-share included in the Budget Detail must also be include on the SF-424 and SF-424A. Please refer to *Section III.B: Leveraging or Matching Funds* of this RFA for more detailed information on cost-share.

Applicants should be aware that if their proposals include using Federal funds for a project that includes the purchase of goods, products, and materials on any form of construction, alteration, maintenance, or repair of infrastructure in the United States for identified EPA financial assistance funding programs, they must comply with the Build America, Buy America [Term and Condition](#) if they are selected for award. Please refer to *Section VI.F: Build America, Buy America* of this RFA for additional information and consider this information when preparing your budget.

Applicants must **itemize** costs related to personnel, fringe benefits, travel, equipment, supplies, contractual costs, other direct costs, indirect costs, and total costs.

Applicants should use the following instructions, budget object class descriptions, and example table (*see Appendix C, Example Budget Table and Description*) to complete the Budget Detail section of the work plan. Applicants should refer to the EPA's [Interim General Budget Development Guidance for Applicants and Recipients of EPA Financial Assistance](#) for additional information relating to cost categories.

- **Personnel - List all staff positions by title. Give annual salary, percentage of time assigned to the project, and total cost for the budget period.** This category includes only direct costs for the salaries of those individuals who will perform work directly for the project (paid employees of the applicant organization as reflected in payroll tax records). If the applicant organization is including staff time (in-kind services), this should be included as Personnel costs. Personnel costs do not include: (1) costs for services of contractors (including individual consultants), which are included in the “Contractual” category; (2) costs for employees of subrecipients under subawards, or non-employee program participants (e.g., interns or volunteers) which are included in the “Other” category; or (3) effort that is not directly in support of the proposed project, which may be covered by the organization’s negotiated indirect cost rate. The budget detail must identify the personnel category type by Full Time Equivalent (FTE), including percentage of FTE for part-time employees, number of personnel proposed for each category, and the estimated funding amounts.

If budget information is not provided on requested personnel costs, applications should include in their narrative how they expect to manage the administrative components of the grant.

- **Fringe Benefits - Identify the percentage used, the basis for its computation, and the types of benefits included.** Fringe benefits are allowances and services provided by employers to their employees as compensation in addition to regular salaries and wages. Fringe benefits may include, but are not limited to the cost of leave, employee

insurance, pensions, and unemployment benefit plans. If the applicant's fringe rate does not include the cost of leave, and the applicant intends to charge leave to the agreement, it must provide supplemental information describing its proposed method(s) for determining and equitably distributing these costs.

- **Travel - Specify the mileage, per diem, estimated number of trips in-State and out-of-State, number of travelers, and other costs for each type of travel.** Travel may be integral to the purpose of the proposed project (e.g., inspections) or related to proposed project activities (e.g., attendance at meetings). Only include travel costs for employees in the travel category. Travel costs do not include: (1) costs for travel of contractors (including individual consultants), which are included in the "Contractual" category; (2) travel costs for employees of subrecipients under subawards, and non-employee program participants (e.g., trainees) which are included in the "Other" category. Further, travel does not include bus rentals for group trips, which would be covered under the contractual category. Finally, if the applicant intends to use any funds for travel outside the United States, it must be specifically identified. All proposed foreign travel must be approved by the EPA's Office of International and Tribal Affairs prior to being taken.
- **Equipment** - Identify each item to be purchased and owned by the applicant which has an estimated acquisition cost of \$5,000 or more per unit and a useful life of more than one year. Equipment also includes accessories necessary to make the equipment operational. Note: If your organization has written procurement procedures that define a threshold for equipment costs that is lower than \$5,000, then that threshold takes precedence. Refer to the [EPA's Best Practice Guide for Procuring Services, Supplies, and Equipment Under EPA Assistance Agreements](#) for the EPA's policies on competitive procurements and the Build America, Buy America provisions outlined in *Section VI.F Build America, Buy America*. When evaluating the budget criterion, the EPA will take into consideration costs necessary to successfully manage the project. This includes ensuring that your budget includes costs for the management of funds, reporting on outcomes/outputs, etc., in addition to the cost of equipment. Please include an explanation of this matter in the Budget Table and Description.
- **Supplies - "Supplies" means all tangible personal property other than "equipment."** The budget detail should identify categories of supplies to be procured (e.g., laboratory supplies or office supplies). Non-tangible goods and services associated with supplies, such as, occasional photocopy services, and rental costs should be included in the "Other" category.
- **Contractual - Identify each type of proposed contract and specify its purpose and estimated cost.** Contractual services (including consulting services) are those services to be carried out by an individual or organization, other than the applicant, in the form of a procurement relationship. The EPA's [Subaward Policy and Supplemental Frequent Questions](#) has detailed guidance available for differentiating between contractors and subrecipients. Leased or rented goods (equipment or supplies) should be included in the "Other" category.

If the application includes a subaward to a recipient (the “pass-through entity”), the applicant must explain how the pass-through entity will provide adequate resources to manage the award, including providing required financial and programmatic reports to the EPA, and for monitoring subrecipients as required by [2 CFR 200.332](#).

The EPA does not require applicants to identify specific contractors. The applicant should list the proposed contract activities along with a brief description of the anticipated scope of work or services to be provided, proposed duration, and proposed procurement method (competitive or non-competitive), if known. Any proposed non-competed/sole-source contracts in excess of \$10,000 must include a justification. Note that it is unlikely that the EPA will accept proposed sole source contracts for goods and services (e.g., consulting) that are widely available in the commercial market. Refer to the [EPA’s Best Practice Guide for Procuring Services, Supplies, and Equipment Under EPA Assistance Agreements](#) for the EPA’s policies on competitive procurements and encouraging the use of small and disadvantaged business enterprises.

- **Eligible Construction Costs.** Construction excludes the cost of land acquisition and off-site improvements unless authorized by statute. (e.g., the definition of “construction” in section 1004(2) of the Solid Waste Disposal Act includes acquisition of interests in lands).

Construction costs may include site preparation, demolishing and building facilities, making permanent improvements to facilities or other real property, major renovations of existing facilities, remediation of contamination and related architectural or engineering services. With very few exceptions, recipients carry out construction projects by hiring contractors which typically include a general contractor and an architectural or engineering firm for design work and in some cases purchasing equipment for installation at the site.

The recipient should provide a list of planned construction contracts along with a brief description of the scope of work or services to be provided, planned duration, and planned procurement method (competitive or non-competitive), if known. Recipients should consult the guidance on contracting in *Section VI: Award Administration Information* for additional information on competition requirements. The cost plus percentage of construction cost method of contracting is prohibited by [2 CFR 200.324\(d\)](#).

Categorizing Construction Costs. Construction costs are to be categorized on the SF 424A budget table as follows:

- Anticipated costs for hiring general contractors and other contractors performing activities described in the DBE Rule’s definition of *Construction* will be categorized as “Construction”.

- Anticipated costs for pre-construction architectural and engineering *Services* as defined in the DBE rule for design and specifications documents will be categorized as “Contractual”.
- Anticipated costs for separately purchased *Equipment* as defined in the DBE Rule that will be installed in a facility or used to remediate contamination will be categorized as “Equipment”.
- Anticipated costs for land acquisition or relocation assistance paid to individuals or businesses will be categorized as “Other”.
- Force Account – If recipient personnel or equipment are to be used to perform eligible construction project work (e.g., engineering, inspection, waste removal) under force account, approval must be obtained from an Authorized EPA Official either at time of award or in response to a post-award written request. Force account work must be more economical than contracting the work out or necessitated by emergency. Recipients must demonstrate that recipient personnel have the necessary competence to do the work. Force account costs for personnel are budgeted in the “Personnel” and “Fringe Benefit” categories. Costs for equipment purchased for the project are budgeted in the “Equipment” category. Usage charges for equipment in recipients’ existing inventory is categorized as “Other”. All force account costs must be supported by adequate financial records as required by 2 CFR 200.302, 2 CFR 200.430 and 2 CFR 200.431. Note that recipients must maintain records demonstrating that equipment usage charges are reasonable based on lease rates for similar equipment in the relevant market.
- **Other - List each item in sufficient detail for the EPA to determine the reasonableness and allowability of its cost.** This category should include only those types of direct costs that do not fit in any of the other budget categories. Examples of costs that may be in this category are: insurance; rental/lease of equipment or supplies; occasional photocopying; participant support costs such as non-employee training stipends and travel; subsidies or rebates for purchases of pollution control equipment; and subaward costs. Applicants should describe the items included in the “Other” category and include the estimated amount of participant support costs (e.g., stipends to encourage participation in community meetings) in a separate line item. Please refer to [EPA Guidance on Participant Support Costs](#) for additional information.

Subawards (e.g., subgrants) are a distinct type of cost under this category. The term *Subaward* is defined in 2 CFR 200.1. Subcontracts are not subawards and belong in the contractual category. Applicants must provide the aggregate amount they propose to issue as subaward work as a separate line item in the “Other” category and a description of the types of activities to be supported. Refer to the [EPA’s Subaward Policy and supplemental Frequent Questions](#) for additional guidance.

- **Indirect Charges - If indirect charges are budgeted, indicate the approved rate and base.** Indirect costs are those incurred by the grantee for a common or joint purpose that benefit more than one cost objective or project and are not readily assignable to specific cost objectives or projects as a direct cost. In order for indirect costs to be allowable, the applicant must have a federal negotiated indirect cost rate (e.g., fixed, predetermined, final or provisional or 10% de-minimis). Additional information is available in the [EPA's Indirect Cost Guidance for Recipients of EPA Assistance Agreements](#). Examples of Indirect Cost Rate calculations are shown below:

- Personnel: $(\text{Indirect Rate} \times \text{Personnel}) = \text{Indirect Costs}$
- Personnel and Fringe: $(\text{Indirect Rate} \times \text{Personnel \& Fringe}) = \text{Indirect Costs}$
- Modified Total Direct Costs: $(\text{Indirect Rate} \times \text{Modified Total direct costs}) = \text{Indirect Costs}$
- Direct Costs minus distorting or other factors such as contracts and equipment: $(\text{Indirect Rate} \times (\text{total direct cost} - \text{distorting factors})) = \text{Indirect Costs}$

Selected applicant(s) will need to submit a copy of their current indirect cost rate that has been negotiated with a federal cognizant agency prior to award.

- **Management Fees:** When formulating budgets for applications, applicants must not include management fees or similar charges in excess of the direct costs and indirect costs at the rate approved by the applicant's cognizant audit agency, or at the rate provided for by the terms of the agreement negotiated with the EPA. The term "management fees or similar charges" refers to expenses added to the direct costs in order to accumulate and reserve funds for ongoing business expenses, unforeseen liabilities, or for other similar costs that are not allowable under EPA assistance agreements. Management fees or similar charges may not be used to improve or expand the project funded under this agreement, except to the extent authorized as a direct cost of carrying out the scope of work.

Fundraising: EPA financial assistance under this RFA cannot be used for fundraising without prior approval. Therefore, any costs associated with fundraising may not be included in the budget for your application or charged to the resultant cooperative agreement.

Applicants should clearly identify any anticipated program income in their proposal.

- vi. **Project Sustainability.** Describe your organization's plan to promote and continue efforts to support post-consumer materials management after EPA funding for this project has ended. Include how the project will continue to sustain the outputs and outcomes as well as any direction for future results. Please note, the "sustainability" here refers to sustaining the project over time as opposed to overall environmental

sustainability.

vii. Innovative Approaches and Solutions. Describe how the proposed project includes innovative approaches (e.g., not usual, routine or established practices) to support the development of infrastructure for post-consumer materials management. Examples of innovative approaches and solutions include but are not limited to new or novel services, purchase or installation of emerging technologies, creating and encouraging the development of emerging markets, and solving local challenges around collection or operations.

viii. Project Replicability. Under this criterion, the Agency will evaluate the application based on the extent and quality to which the application identifies and explains how results from the project can be replicated in other communities.

ix. Leveraging. Under this criterion, applicants will be evaluated based on the extent they demonstrate that they will leverage additional funds/ resources beyond the grant funds awarded to support the proposed project activities and how these funds/resources will be used to contribute to the performance and success of the proposed project. This includes but is not limited to funds and other resources leveraged from businesses, labor organizations, non-profit organizations, education and training providers, and/or Federal, state, tribal, and local governments, as appropriate. Applicants will also be evaluated based on the amount and type of leveraged resources to be provided, how they will obtain the leveraged resources, the likelihood the leveraging will materialize during grant performance, the strength of the leveraging commitment, and the role the leveraged funds/resources will play to support the proposed project activities.

(Optional) Other Attachments. The applicant can provide additional attachments such as references/works cited, milestones, letters of support, or CV/Resume. Letters of support should include the names and phone numbers of persons to contact at the organization providing the letter of support along with a description of what involvement (e.g., assistance, role) the organization has or will have with your organization/project. Applicants may include letters confirming commitments.

F. Pre-Application Assistance

In accordance with the EPA's Assistance Agreement Competition Policy (EPA Order 5700.5A1), EPA staff will not meet with individual applicants to discuss draft applications, provide informal comments on draft applications, or provide advice to applicants on how to respond to ranking criteria. Applicants are responsible for the contents of their applications/applications. However, consistent with the provisions in the announcement, the EPA will respond to questions from individual applicants regarding threshold eligibility criteria, administrative issues related to the submission of the application, and requests for clarification about any of the language or provisions in the announcement. Please note that applicants should raise any questions they may have about the solicitation language to the contact identified in *Section VII: Agency Contacts* as soon as possible so that any questions about the solicitation language may be resolved prior to submitting an application.

In addition, if necessary, the EPA may clarify threshold eligibility issues with applicants prior to making an eligibility determination.

Questions and answers will be posted on [EPA's Bipartisan Infrastructure Law website](#).

The Office of Resource Conservation and Recovery will conduct two series of virtual webinar sessions entitled “**Solid Waste Infrastructure For Recycling Grants**” **Parts One and Two** to assist potential applicants under this competitive funding opportunity. The first series of webinars will be held on December 5 and 7, 2022, and the second series on December 13 and 19, 2022. The webinars will review the funding opportunity, key sections of the application, and the application process. Potential applicants seeking funding under this competitive announcement (EPA-I-OLEM-ORCR-23-03) are encouraged to participate.

To access the virtual webinar, you must register online using the site below. After registration, you will receive a link with instructions on how to access/attend the webinar. For those unable to attend, the webinar will be recorded and posted on the Office of Resource Conservation and Recovery (ORCR) Bipartisan Infrastructure Law website and may be used as a reference, as needed.

For additional information on registering for the webinar, other EPA Resources related to the circular economy, sustainable materials management, and new funding opportunities under the IIJA, please visit the [EPA's Bipartisan Infrastructure Law website](#).

G. Confidential Business Information

The EPA recommends that you do not include confidential business information (CBI) in your application. However, if CBI is included, it will be treated in accordance with [40 CFR 2.203](#). Applicants must clearly indicate which portion(s) of their application they are claiming as CBI. The EPA will evaluate such claims in accordance with [40 CFR Part 2](#). If no claim of confidentiality is made, the EPA is not required to make the inquiry to the applicant otherwise required by [40 CFR 2.204\(c\)\(2\)](#) prior to disclosure. The agency protects competitive applications from disclosure under applicable provisions of the Freedom of Information Act (FOIA) prior to the completion of the competitive selection process.

H. Intergovernmental Review Act

Executive Order 12372, Intergovernmental Review of Federal Programs, may be applicable to awards resulting from this announcement. The EPA implemented the Executive Order in 40 CFR Part 29. EPA may require applicants selected for funding to provide a copy of their application to their State Point of Contact (SPOC) for review as provided at 40 CFR 29.7 and 40 CFR 29.8. The SPOC list can be found on the webpage below:

- [Office of Federal Financial Management Resources and Other Information](#)

EPA may require successful applicants from states that do not have a SPOC to provide a copy of their application for review to directly affected state, area-wide, regional and local government entities as provided at 40 CFR 29.7 and 40 CFR 29.8. These reviews are not required before submitting an application. Only applicants that EPA selects for funding under this announcement are subject to the Intergovernmental Review requirement.

SECTION V – APPLICATION REVIEW INFORMATION

Note: Additional provisions that apply to this section can be found at [EPA Solicitation Clauses](#).

A. Evaluation Criteria

Eligible entities whose applications meet the threshold criteria in *Section III: Eligibility Information* of this announcement will be reviewed according to the evaluation criterion set forth below. Applicants must directly and explicitly address these criteria as described in *Section IV.D: Application Materials*. Please reference *Appendix B* for an optional template for the Project Narrative Attachment Form. The information provided must be easily identifiable and clearly described to ensure the content of the application is clearly laid out for reviewers. Each application will be rated under a points system, with a total of 105 points possible. **To assist the EPA reviewers, applicants are strongly encouraged to reference the numbers and titles of the evaluation criteria in their project narratives to help identify where the criteria are being addressed.**

Evaluation Criteria and Description	Maximum Points per Criterion
1. Project Summary and Approach. Under this criterion, the Agency will evaluate: a. Project Narrative includes a clearly written description of the overall project (5 points); b. Project meets the requirements in <i>Section I.G: Scope of Work, Section I.H: General Environmental Results and Strategic Plan Information</i> (15 points); c. Project Narrative clearly identifies the goals and objectives of the project and includes an effective, easily understood plan with well-reasoned steps and milestones to meet the stated objectives (10 points); d. Project Narrative sets forth a reasonable time schedule for the execution of the tasks associated with the project and for achieving the project goals and objectives by project end (5 points).	35
2. Environmental Justice. Applications will be evaluated based on the extent to which they demonstrate how the project will address the disproportionate and adverse (see below) human health, environmental, climate-related and other cumulative impacts, as well as the accompanying economic challenges of such impacts, resulting from industrial, governmental, commercial and/or other actions that have affected and/or currently affect the communities the project would benefit. As part of this evaluation, applications will be evaluated based on: a. How the project benefits communities including those that have experienced a lack of resources or other impediments to addressing the impacts identified above that affect their community (10 points); and,	15

Evaluation Criteria and Description	Maximum Points per Criterion
b. The extent to which the project addresses engagement with, local residents in these communities who will be affected by the project, to ensure their meaningful participation with respect to the design, project planning, and performance of the project (5 points). Disproportionate and adverse environmental, human health, climate-related and other cumulative impacts, as well the accompanying economic challenges of such impacts, may result when greater pollution burdens and/or consequences, and the impact of them, are more likely to affect or have affected the communities described in this solicitation. The impacts may result from various factors including but not limited to being a function of historical trends and policy decisions. Factors that may indicate disproportionate and adverse impacts as referenced above include: differential proximity and exposure to adverse environmental hazards; greater susceptibility to adverse effects from environmental hazards (due to causes such as age, chronic medical conditions, lack of health care access, or limited access to quality nutrition); unique environmental exposures because of practices linked to cultural background or socioeconomic status (for example, subsistence fishing or farming); cumulative effects from multiple stressors; reduced ability to effectively participate in decision-making processes (due to causes such as lack of or ineffective language access programs, lack of programs to make processes accessible to persons with disabilities, inability to access traditional communication channels, or limited capacity to access technical and legal resources); and degraded physical infrastructure, such as poor housing, poorly maintained public buildings (e.g., schools), or lack of access to transportation.	
3. Measuring Environmental Results: Anticipated Outputs and Outcomes. Outputs and outcomes must be quantitative or qualitative and must measure environmental improvement described in <i>Section I.L: Measuring and Reporting Environmental Results: Outputs and Outcomes</i> or should be directly linked to environmental improvement. Include quantitative targets as appropriate.	10
4. Programmatic Capability and Past Performance. Under this criterion, applications will be evaluated based on their ability to successfully complete and manage the proposed project considering their: a. past performance in successfully completing and managing the assistance agreements identified in response to Section IV: <i>Application and Submission Information</i> of the solicitation (2.5 points); b. history of meeting the reporting requirements under the assistance agreements identified in response to Section IV: <i>Application and Submission Information</i> of the solicitation including whether the applicant	10

Evaluation Criteria and Description	Maximum Points per Criterion
submitted acceptable final technical reports under those agreements and the extent to which the applicant adequately and timely reported on their progress towards achieving the expected outputs and outcomes under those agreements and if such progress was not being made whether the applicant adequately reported why not (2.5 points); c. organizational experience and plan for timely and successfully achieving the objectives of the proposed project (2.5 points); and, d. staff expertise/qualifications, staff knowledge, and resources or the ability to obtain them, to successfully achieve the goals of the proposed project (2.5 points). Note: In evaluating applications under item a. and b. of this criterion, the Agency will consider the information provided by the applicant and may also consider relevant information from other sources including agency files and prior/current grantors (e.g., to verify and/or supplement the information supplied by the applicant). If you do not have any relevant or available past performance or past reporting information, please indicate this in the application and you will receive a neutral score for these subfactors (items i and ii above-a neutral score is half of the total points available in a subset of possible points). If you do not provide any response for these items, you may receive a score of 0 for these factors.	
5. Budget and Expenditure of Awarded Grant Funds. Under this criterion, applications will be evaluated based on their approach, procedures, and controls for ensuring that awarded grant funds will be expended in a timely and efficient manner. The Agency will evaluate the proposed project budget and narrative to determine the extent and quality to which: a. Costs are reasonable to accomplish the proposed goals, objectives, and measurable environmental outcomes. (3 points) b. The proposed budget provides a detailed breakout of the approximate funding used for each major activity. (4 points) c. The application conveys the approach, procedures, and controls for ensuring that awarded grant funds will be expended in a timely and efficient manner. (3 points) Please provide the response to this criterion as part of your budget table and description (see <i>Appendix C</i> for example).	10
6. Project Sustainability. Under this criterion, the Agency will evaluate the application based on the extent and quality to which the application continues to	10

Evaluation Criteria and Description	Maximum Points per Criterion
promote efforts to support post-consumer materials management after EPA funding for this project has ended. This may include a description of how new and expanded infrastructure and new programs will be funded following the EPA funding period. Please note, the “sustainability” here refers to sustaining the project over time as opposed to overall environmental sustainability.	
7. Innovative Approaches and Solutions. Under this criterion, the Agency will evaluate the application based on the extent to which the application proposes a project that includes innovative approaches (e.g., not usual, routine or established practices) to support the development of infrastructure for post-consumer materials management. Examples of innovative approaches and solutions include but are not limited to: new or novel services, purchase or installation of emerging technologies, creating and encouraging the development of emerging markets, solving local challenges around collection or operations, and others.	5
8. Project Replicability. Under this criterion, the Agency will evaluate the application based on the extent and quality to which the application identifies and explains how results from the project can be replicated in other communities.	5
9. Leveraging. Under this criterion, applicants will be evaluated based on the extent they demonstrate that they will leverage additional funds/ resources beyond the grant funds awarded to support the proposed project activities and how these funds/resources will be used to contribute to the performance and success of the proposed project. This includes but is not limited to funds and other resources leveraged from businesses, labor organizations, non-profit organizations, education and training providers, and/or Federal, state, tribal, and local governments, as appropriate. Applicants will also be evaluated based on the amount and type of leveraged resources to be provided, how they will obtain the leveraged resources, the likelihood the leveraging will materialize during grant performance, the strength of the leveraging commitment, and the role the leveraged funds/resources will play to support the proposed project activities	5
Total points possible	105

B. Review and Selection Process

1. Threshold Eligibility Screening Process - All applications received by the submission deadline will first be screened by the EPA using the threshold eligibility criteria in *Section III.C: Threshold Eligibility Criteria*. Applications that do not pass the threshold eligibility review will not be evaluated further or considered for funding. Applicants deemed ineligible for funding consideration as a result of the threshold eligibility review will be notified within 15 calendar days of the ineligibility determination. Applications meeting the threshold eligibility criteria will be reviewed through a regional review process by an EPA panel, including SMM program staff.

- 2. Panel Review and Evaluation Process** - All applications that meet the Threshold Eligibility Criteria after the screening review will be forwarded to the appropriate EPA Region (where the project will be performed) for technical review based on the criteria in *Section V: Application Review Information*. Separate ranking lists for Track 1 and Track 2 will be developed by each review group. Those ranking lists will also clearly identify projects eligible for track consideration, as described in *Section II.A: What is the amount of available funding?*
- 3. Final Selection Process and Other Factors** – Final rankings and selection recommendations from the regional review panels based on the ranking lists will be presented to the Headquarters Selection Official who will then make the final selections for award based on the ranking lists. The EPA anticipates selecting at least one grant per EPA region, depending on the quality of the applications received. The EPA expects to select applications in Track 1 to meet the 40% Justice40 goal as described in *Section II: Award Information*. In addition to the ranking lists, the Selection Official may also consider any of the following other factors in making final selection decisions among the high-ranking applications from the regional lists:
- a. **Geographic Diversity** – The EPA may consider the mix of high-ranking projects located in urban and rural areas or different regions of the country when making final selections, as well as the geographical nature or impact of the project.
 - b. **Programmatic Priorities** – ORCR priorities that may focus on certain SMM, environmental, and/or public health issues. These overarching priorities may be considered when making final selections among high-ranking applications.
 - c. **Diversity of Project Types** – The EPA may consider the mix of high-ranking project types when making final selections to ensure that project types vary among those being awarded.
 - d. **Diversity of Organization Types** – The EPA may consider the mix of high-ranking projects from various types of organizations when making final selections to ensure that project types vary among those being awarded.
 - e. **“Shovel-Ready” Projects** – The EPA may consider projects that can be implemented in six to 12 months when making final selections.
 - f. **Impactful Projects** – EPA may consider projects that will result in a substantial shift in the management pathways within the community, including a significant and measurable change in the diversion (in tons of material diverted from disposal) and/or recycling rate for municipal solid waste, including but not limited to food and organics waste and packaging materials.
 - g. **Availability of funds.**

After final selections are made, the EPA will then make the awards. While the EPA expects to make awards of approximately \$40,000,000 in total, including approximately \$16,000,000 placed into a track specifically for awards that benefit eligible disadvantaged communities, these amounts may be increased or decreased subject to the number of quality applications received and other relevant

considerations. The EPA reserves the right to reject all applications and make no awards under this announcement.

SECTION VI – AWARD ADMINISTRATION INFORMATION

Note: Additional provisions that apply to this section can be found at [EPA Solicitation Clauses](#).

A. Award Notification

The EPA anticipates notification to successful applicants will be made via electronic mail by April 2023. The notification will be sent to the original signer of the application or the project contact listed in the application. This notification, which informs the applicant that its application has been selected and is being recommended for award, is not an authorization to begin work. The official notification of an award will be made by the EPA's Grants and Interagency Agreement Management Division. Applicants are cautioned that only a grants officer is authorized to bind the Government to the expenditure of funds; selection does not guarantee an award will be made. For example, statutory authorization, funding or other issues discovered during the award process may affect the ability of the EPA to make an award to an applicant. The award notice, signed by an EPA grants officer, is the authorizing document and will be provided through electronic or postal mail. The successful applicant may need to prepare and submit additional documents and forms (e.g., work plan), which must be approved by the EPA, before the grant can officially be awarded. The time between notification of selection and award of a grant can take up to 90 days or longer.

B. Combining Applications into One Award

If an applicant submits applications for multiple tasks/activities under this competition, and is selected for multiple tasks/activities, the EPA may award a single assistance agreement that combines separate applications for different tasks/activities.

C. Administrative and National Policy Requirements

1. Applicants selected for award will be required to submit a final cooperative agreement proposal package to the EPA. This package will include an EPA-approved final work plan that describes the work to be performed, a final budget, and the required certification forms. Programmatic terms and conditions will be negotiated with the selected recipient.
2. Approved cooperative agreements will include terms and conditions that will be binding on the grant recipient. Terms and conditions specify what grantees must do to ensure that grant-related and program-related requirements are met. Terms and conditions may be viewed at: [Grant Terms and Conditions](#). A listing and description of general EPA Regulations applicable to the award of assistance agreements may be viewed at: [Introduction to Regulations, Policies and Guidance for EPA Grants](#).
3. **Reimbursement Limitation.** If the recipient expends more than the amount of funding in its EPA approved budget in anticipation of receiving additional funds from the EPA, it does so at its own risk. The EPA is not legally obligated to reimburse the recipient for costs incurred in excess of the EPA approved budget.

D. Use of Funds

An applicant that receives an award under this announcement is expected to manage cooperative agreement funds efficiently and effectively and make sufficient progress towards completing the project activities described in the work plan in a timely manner. The cooperative agreement will include terms/conditions implementing this requirement. The Agency expects timely drawdown of funds and a yearly financial report. In addition to quarterly reports, other required financial reports will provide the Agency with information regarding progress being made.

E. Program Income

In accordance with 2 CFR Part 200.307(e)(2) and 2 CFR 1500.8(b), the recipient is hereby authorized to retain program income earned during the project period.

The program income shall be added to funds committed to the project by the EPA and used for the purposes and under the conditions of the assistance agreement.

The recipient must provide as part of its quarterly performance report, a description of how program income is being used. Further, a report on the amount of program income earned during the award period must be submitted with the quarterly Federal Financial Report, Standard Form 425.

F. Build America, Buy America

Applicants should be aware that if their proposals include using Federal funds for a project that includes the purchase of goods, products, and materials on any form of construction, alteration, maintenance, or repair of infrastructure in the United States for identified EPA financial assistance funding programs, they must comply with the following Term and Condition if they are selected for award. Please consider this information when preparing budget information. Applicants should direct questions about this requirement to the program Point of Contact listed in *Section VII: Agency Contact* for the Notice of Funding Opportunity Notice.

- a. The recipient is subject to the Buy America Sourcing requirements under the Build America, Buy America provisions of the [Infrastructure Investment and Jobs Act](#) for the types of infrastructure projects under the EPA program and activities specified in the chart, [“Environmental Protection Agency's Identification of Federal Financial Assistance Infrastructure Programs Subject to the Build America Buy America Provisions of the Infrastructure Investment and Jobs Act.”](#) None of the funds provided under this award may be used for a project of infrastructure unless all iron and steel, manufactured products, and construction materials that are consumed in, incorporated into, or affixed to an infrastructure project are produced in the United States. The Buy America preference requirement applies to an entire infrastructure project, even if it is funded by both Federal and non-Federal funds. The recipient must implement these requirements in its procurements, and these requirements must flow down to all subawards and contracts at any tier. For legal definitions and sourcing requirements, the recipient must consult EPA's [Build America, Buy America website](#) and the Office of Management and Budget's (OMB) [Memorandum M-22-11, Initial Implementation Guidance on Application of Buy America Preference in Federal Financial Assistance Programs for Infrastructure](#).

- b. When supported by rationale provided in IIJA § 70914, the recipient may submit a waiver request to EPA. Recipients should request guidance on the submission instructions of an EPA waiver request from the EPA Project Officer for this agreement. A list of approved EPA waivers (general applicability and project specific) is available on the [EPA Build America, Buy America website](#).

G. Disputes

Assistance agreement competition-related disputes will be resolved in accordance with the dispute resolution procedures published in 70 FR (Federal Register) 3629, 3630 (January 26, 2005) which can be found at [Grant Competition Dispute Resolution Procedures](#). Copies of these procedures may also be requested by contacting the person listed in *Section VII: Agency Contact* of the announcement. Note, the FR notice references regulations at 40 CFR Parts 30 and 31 that have been superseded by regulations in 2 CFR parts 200 and 1500. Notwithstanding the regulatory changes, the procedures for competition-related disputes remains unchanged from the procedures described at 70 FR 3629, 3630, as indicated in 2 CFR Part 1500, Subpart E.

H. Reporting Requirements

Quarterly progress reports and a detailed final report will be required. The quarterly progress reports will be submitted to the EPA Project Officer within thirty days after each reporting period. These reports shall cover work status, work progress, difficulties encountered, preliminary data results and a statement of activity anticipated during the subsequent reporting period. A discussion of expenditures along with a comparison of the percentage of the project completed to the project schedule and an explanation of significant discrepancies shall be included in the report. The report shall also include any changes of key personnel concerned with the project.

Applicants should describe how they plan to meet the requirement to provide as part of its quarterly performance report, a description of how program income is being used. Applicants should also indicate how they plan to meet the requirement to submit a report on the amount of program income earned during the award period must be submitted with the quarterly Federal Financial Report, Standard Form 425.

At the close of the grant, the successful applicant will submit a final technical report to the EPA Project Officer within 90 calendar days of completion of the period of performance. The final technical report shall include a summary of the project or activity, advances or goals achieved, and costs of the project or activity. In addition, the final technical report should discuss the problems, successes, and lessons learned during the project period.

SECTION VII – AGENCY CONTACT

Dan Halpert, U.S. EPA, Office of Resource Conservation and Recovery (MC 5306P), 1200 Pennsylvania Avenue, NW, Washington, DC 20460; e-mail: SWIFR@epa.gov.

APPENDIX A: NARRATIVE PROPOSAL CHECKLIST AND HELPFUL HINTS

Disclaimer: This Narrative Proposal Checklist does not supersede the requirements in the Request for Applications (RFA). Applicants should address all criteria outlined in the RFA. This abbreviated checklist is intended to provide a streamlined representation of the RFA and to offer helpful hints to address a few select criterion that have presented challenges to past applicants.

Threshold Criteria

Applicants must address **all** threshold criteria. Applications that fail to meet any one of the threshold criteria will not be considered further.

1. Applications must address at least one of the mandatory objectives described in *Section I.G, Scope of Work*, of this announcement.
2. Applicants must be eligible, as described in *Section III.A: Eligible Applicants*, of this announcement.
3. If an applicant chooses to identify a procurement contractor(s) or subrecipient(s) to conduct work proposed in this application, the applicant must comply with the requirements listed under *Section III.A: Eligible Applicants* of this RFA, even if the entity is referred to as a “partner” in the application.
4. Federal funds requested must be between \$500,000 and \$4,000,000, inclusive. Applications requesting federal assistance funding below or in excess of this value will not be considered.
5. Qualification for Program Track. Applications must indicate if it qualifies for track 1 or track 2 as defined under *Section I.F: Program Tracks*. Include information demonstrating that you qualify.
6. Applications must be for projects that support at least one of the goals and objectives from the EPA’s FY 2022-2026 Strategic Plan identified in *Section I.H: General Environmental Results and EPA Strategic Plan Linkage*
7. Applications must substantially comply with the application submission instructions and requirements set forth in *Section IV.B: Submission Instructions* of this announcement.
8. Applications must be submitted through [Grants.gov](https://www.grants.gov) as specified in *Section IV.B: Submission Instructions* of this announcement.
9. Applications submitted after the submission deadline will be considered late and deemed ineligible without further consideration unless the applicant can clearly demonstrate that it was late due to the EPA mishandling or because of technical problems associated with [Grants.gov](https://www.grants.gov) or relevant [SAM.gov](https://www.sam.gov) system issues.

Summary Information Cover Letter

The Project Narrative Attachment Form must include a Summary Information Cover Letter with the following information:

- i. **Project Title.**
- ii. **Applicant Name.** Identify the name of the organization submitting the application.
- iii. **Eligible Entity Type.** Identify your organization's organization type from *Section III.A: Eligible Entities*.
- iv. **Qualification for Program Track.** Applicants must indicate if their application qualifies for track 1 or track 2 as defined under *Section I.F: Program Tracks* and include information demonstrating that the application qualifies.
- v. **UEI Number.** List the organization's UEI number.
- vi. **Project Summary.** Briefly describe the project in two to four sentences.
- vii. **Contact Information.** Include name, title, address, email address, phone number. You can list both a primary and an administrative contact.
- viii. **Project Location.** Include the location where the project will be taking place. If project will occur in more than one location, indicate the city and state associated with the primary location.
- ix. **Total Project Cost.** Specify total cost of the project. Identify funding from other sources, including leveraging or in-kind resources.
- x. **EPA Funding Requested.** Specify the amount you are requesting from the EPA. Federal funds requested must be between \$500,000 and \$4,000,000, inclusive.
- xi. **Project Period.** Provide estimated beginning and ending dates.
- xii. **Program Objective Elements.** State the mandatory program objective elements addressed from *Section I.G: Scope of Work*.
- xiii. **Strategic Plan Elements.** Specify the goals and objectives from the EPA's FY 2022-2026 Strategic Plan.
- xiv. **Cooperative Partners.** Provide names and phone numbers of individuals and organizations that have agreed to participate in the implementation of the project, if any.

Evaluation Criteria

Applicants must thoroughly address each of the following Evaluation Criteria.

**Helpful Hint: An excellent application will use the title of each criterion as a label or section header within the narrative. This will help ensure you address each criterion in the narrative.*

- **Project Summary and Approach (35 points)**

Applicants must address four elements under the project description criterion:

- ✓ Project Narrative includes a clearly written description of the overall project (5 points);
 - ✓ Project meets the requirements in *Section I.G: Scope of Work* and *Section I.H: General Environmental Results and Strategic Plan Information* (15 points);
 - ✓ Project Narrative clearly identifies the goals and objectives of the project and includes an effective, easily understood plan with well-reasoned steps and milestones to meet the stated objectives (10 points); and
 - ✓ Project Narrative sets forth a reasonable time schedule for the execution of the tasks associated with the project and for achieving the project goals and objectives by project end (5 points).
- **Environmental Justice (15 points)**
Applicants must address two elements under the environmental justice criterion:
 - ✓ How the project benefits communities including those that have experienced a lack of resources or other impediments to addressing the impacts identified above (10 points); and,
 - ✓ The extent to which the project addresses engagement with, local residents in these communities who will be affected by the project, to ensure their meaningful participation with respect to the design, project planning, and performance of the project (5 points).
- **Performance Measure: Anticipated Outputs and Outcomes (10 points)**
Outputs and outcomes must be quantitative or qualitative and must measure environmental improvement described in *Section I.L: Measuring and Reporting Environmental Results: Outputs and Outcomes* or should be directly linked to environmental improvement. Include quantitative targets as appropriate.
- **Programmatic Capability and Environmental Results Past Performance (10 points)**
Under this criterion, applications will be evaluated based on their ability to successfully complete and manage the proposed project considering their:
 - ✓ past performance in successfully completing and managing the assistance agreements identified in response to *Section IV: Application and Submission Information* of the solicitation (2.5 points);
 - ✓ history of meeting the reporting requirements under the assistance agreements identified in response to *Section IV: Application and Submission Information* of the solicitation including whether the applicant submitted acceptable final technical reports under those agreements and the extent to which the applicant adequately and timely reported on their progress towards achieving the expected outputs and outcomes under those agreements and if such progress was not being made whether the applicant adequately reported why not (2.5 points);
 - ✓ organizational experience and plan for timely and successfully achieving the objectives of the proposed project (2.5 points); and,

- ✓ staff expertise/qualifications, staff knowledge, and resources or the ability to obtain them, to successfully achieve the goals of the proposed project (2.5 points).

- **Budget and Expenditure of Awarded Grant Funds (10 points)**

Describe how the project meets each of the three elements under budget and expenditure:

- ✓ Costs are reasonable to accomplish the proposed goals, objectives, and measurable environmental outcomes. (3 points)
- ✓ The proposed budget provides a detailed breakout of the approximate funding used for each major activity. (4 points)
- ✓ The application conveys the approach, procedures, and controls for ensuring that awarded grant funds will be expended in a timely and efficient manner. (3 points)

- **Project Sustainability (10 points)**

Under this criterion, the Agency will evaluate the application based on the extent and quality to which the application continues to promote efforts to support post-consumer materials management after the EPA funding for this project has ended. This may include a description of how new and expanded infrastructure and new programs will be funded following the EPA funding period. Please note, “sustainability” refers to sustaining the project over time as opposed to overall environmental sustainability.

- **Innovative Approaches and Solutions (5 points)**

Under this criterion, the Agency will evaluate the application based on the extent to which the application proposes a project that includes innovative approaches (e.g., not usual, routine or established practices) to support the development of infrastructure for post-consumer materials management. Examples of innovative approaches and solutions include but are not limited to: new or novel services, purchase or installation of emerging technologies, creating and encouraging the development of emerging markets, solving local challenges around collection or operations, and others.

- **Project Replicability (5 points)**

Under this criterion, the Agency will evaluate the application based on the extent and quality to which the application identifies and explains how results from the project can be replicated in other communities.

- **Leveraging (5 points)**

Under this criterion, applicants will be evaluated based on the extent they demonstrate that they will leverage additional funds/ resources beyond the grant funds awarded to support the proposed project activities and how these funds/resources will be used to contribute to the performance and success of the proposed project. This includes but is not limited to funds and other resources leveraged from businesses, labor organizations, non-profit organizations, education and training providers, and/or Federal, state, tribal, and local governments, as appropriate. Applicants will also be evaluated based on the amount and type of leveraged resources to be provided, how they will obtain the leveraged

resources, the likelihood the leveraging will materialize during grant performance, the strength of the leveraging commitment, and the role the leveraged funds/resources will play to support the proposed project activities

APPENDIX B: OPTIONAL TEMPLATE FOR THE PROJECT NARRATIVE ATTACHMENT FORM

All portions of the Project Narrative Attachment Form must substantially comply with the specific instructions, format, and content defined in the RFA. Page counts refer to one-side of a single-spaced typed page. Pages in excess of the identified limits will not be considered. The milestones, and budget table, and narrative have separate page limits and will be considered in the evaluation.

Instructions: The Project Narrative Attachment Form includes a Summary Information page, the Narrative Proposal, and the Budget Table and Description. The application's Summary Information page should follow the format below. **Italicized and bracketed text should be deleted before submission.**

All portions of the narrative proposal must substantially comply with the specific instructions, and content defined in the RFA. **Applicants may, but are not required to, use the Template for The Project Narrative Attachment Form here in Appendix B. Applicants that do not use the template will not be penalized.** Page counts refer to one-side of a single-spaced typed page. Pages more than the identified limits will not be considered. The milestones, and budget table, and narrative have separate page limits and will be considered in the evaluation.

Template for Summary Information Cover Letter

[The Summary Information should appear on the first page of the Proposal Attachment Form and should not exceed one page.]

ENVIRONMENTAL PROTECTION AGENCY (EPA) Solid Waste Infrastructure For Recycling Cooperative Agreement 2022 EPA-I-OLEM-ORCR-23-03

- i. **Project Title:** *[Project title]*
- ii. **Applicant Name:** *[Name of organization]*
- iii. **Eligible Entity Type:** *[Eligible entity type]*
- iv. **Qualification for Program Track:** *[Include information demonstrating that your application qualifies for Track 1 (e.g., describe how the proposed project(s) benefit disadvantaged communities as defined in this solicitation) or Track 2].*
- v. **UEI Number:** *[UEI number]*
- vi. **Project Summary:** *[Briefly describe your project in two to four sentences]*
- vii. **Contact Information:** *[Include name of contact person(s), title, address, e-mail address, phone number. An administrative and a primary contact can be listed]*
- viii. **Project Location:** *[Location where the project will be taking place]*

- ix. **Total Project Cost:** *[Specify the total cost of the project]*
- x. **EPA Funding Requested:** *[Specify the amount of funding requested from EPA]*
- xi. **Project period:** *[Provide anticipated project start date and anticipated project completion date]*
- xii. **Program Objective Elements:** *[Mandatory program objective elements in Section I.G: Scope of Work]*
- xiii. **Strategic Plan Elements:** *[Specify the goals and objectives from the EPA's FY 2022-2026 Strategic Plan]*
- xiv. **Cooperative Partners:** *[Provide names and phone numbers of individuals and organizations that have agreed to participate in the implementation of the project, if any.]*

Template for Narrative Proposal

[Applicants may use the following template for their Narrative Proposal and should not exceed 10 pages in length. Text that is italicized and bracketed should be deleted when submitting the application. Applicants are encouraged to use subheadings under each criterion to aid the reviewers in effectively reviewing your application.]

Criterion 1: Project Summary and Approach (35 points)

- a. Project Narrative including a clearly written description of the overall project: *[Applicant's text goes here]*
- b. Application identifies and explains how project meets the requirements in Section I.G: Scope of Work and Section I.H: General Environmental Results and EPA Strategic Plan Linkage: *[Applicant's text goes here]*
- c. Project Narrative clearly identifies the goals and objectives of the project and includes an effective, easily understood plan with well-reasoned steps and milestones to meet the stated objectives: *[Applicant's text goes here]*
- d. Project Narrative sets forth a reasonable time schedule for the execution of the tasks associated with the project and for achieving the project goals and objectives by project end: *[Applicant's text goes here]*

Criterion 2: Environmental Justice (15 points)

- a. How the project benefits communities including those that have experienced a lack of resources or other impediments to addressing the impacts identified above that affect their community: *[Applicant's text goes here]*
- b. The extent to which the project addresses engagement local residents in communities who will be affected by the project, to ensure their meaningful participation with respect to the design, project planning, and performance of the project: *[Applicant's text goes here]*

Criterion 3: Performance Measure – Anticipated Outputs and Outcomes (10 points)

[Applicant's text goes here]

Criterion 4: Programmatic Capability and Past Performance (10 points)

- a. Past performance in successfully completing and managing the assistance agreements identified in response to Section IV: Application and Submission Information of the solicitation: *[Applicant's text goes here]*
- b. History of meeting the reporting requirements under the assistance agreements identified in response to Section IV: Application and Submission Information of the solicitation including whether the applicant submitted acceptable final technical reports under those agreements and the extent to which the applicant adequately and timely reported on their progress

towards achieving the expected outputs and outcomes under those agreements and if such progress was not being made whether the applicant adequately reported why not:
[Applicant's text goes here]

- c. Organizational experience and plan for timely and successfully achieving the objectives of the proposed project: *[Applicant's text goes here]*
- d. Staff expertise/qualifications, staff knowledge, and resources or the ability to obtain them, to successfully achieve the goals of the proposed project: *[Applicant's text goes here]*

Criterion 5: Budget and Expenditure of Awarded Grant Funds (10 points)

Please see Budget Table and Description *[Applicant's text goes in the 4-page Budget Table and Description. Please reference Appendix C for an example.]*

Criterion 6: Project Sustainability (10 points)

[Applicant's text goes here]

Criterion 7: Innovative Approaches and Solutions (5 points)

[Applicant's text goes here]

Criterion 8: Replicability (5 points)

[Applicant's text goes here]

Criterion 9: Leveraging (5 points)

[Applicant's text goes here]

List of Attachments:

[List all attachments (budget table and description, timeline with milestones, letters of support) that are being submitted with this package.]

*[You **do not** need to list the following mandatory documents:*

- *Standard Form 424: Application for Federal Assistance,*
- *Standard Form 424A: Budget Information for Non-Construction Programs*
- *EPA Key Contacts Form 5700-54*
- *EPA Form 4700-4: Pre-Award Compliance Review Report]*

APPENDIX C: EXAMPLE BUDGET TABLE AND DESCRIPTION

Applications should include a detailed budget table and a detailed budget description, providing more detail than what is found in SF-424A. An applicant's budget narrative must account for both federal funds and any non-federal federal funds.

The budget description should clearly convey cost calculations, purpose of the costs, and correlate the costs to activities identified in the application. Where possible, the budget description should be keyed to tasks and deliverables from the proposal narrative. The Budget Table and Description **should not exceed 4 pages.**

The following budget tables and descriptions are provided as examples to follow. For additional guidance and examples, please see <https://www.epa.gov/grants/rain-2019-g02>. Other formats are also acceptable if total costs per category and specific descriptions of costs are included. Applicants who do not use this optional format will not be penalized in the evaluation process.

Budget Table:

I. Salary and Wages for Organization X Employees (Monthly Rate x Months x FTE)						
Name	Hourly Rate	Yr 1 Hours	Yr 2 Hours	Year 1	Year 2	Total
PM	\$60.00/hr	300	200	\$18,000	\$12,000	\$30,000
SLE 1	\$35.00/hr	200	100	\$7,000	\$3,500	\$10,500
SLE 2	\$35.00/hr	200	100	\$7,000	\$3,500	\$10,500
TOTAL SALARY AND WAGES				\$32,000	\$19,000	\$51,000
II. Fringe Benefits	Fringe Rate			Year 1	Year 2	Total
PM + 2 SLE	28%			\$8,960	\$5,320	\$14,280
TOTAL FRINGE BENEFITS				\$8,960	\$5,320	\$14,280
III. Travel				Year 1	Year 2	Total
See budget justification				\$660	\$1,660	\$2,320
TOTAL TRAVEL				\$660	\$1,660	\$2,320
IV. Equipment				Year 1	Year 2	Total
See budget justification				\$1,209,500	\$0	\$1,209,500
TOTAL EQUIPMENT				\$1,209,500	\$0	\$1,209,500
V. Supplies				Year 1	Year 2	Total
See budget justification				\$2,000	\$2,000	\$4,000
TOTAL SUPPLIES				\$2,000	\$2,000	\$4,000
VI. Contractual				Year 1	Year 2	Total

Engineering support and design	\$30,000	\$15,000	\$45,000
TOTAL CONTRACTUAL	\$30,000	\$15,000	\$45,000
TOTAL DIRECT	\$1,408,120	\$42,980	\$1,451,100
INDIRECT 0%	\$0	\$0	\$0
TOTAL	\$1,408,120	\$42,980	\$1,451,100

Budget Description:

TOTAL PROJECT COST: \$1,451,100

TOTAL EPA FUNDING REQUESTED: \$1,451,100

I. Senior Personnel:

The County has requested 300 hours for Year 1 and 200 hours for Year 2. These costs are reasonable because the County pays the Project Manager (PM) at the same rate for activities that are not federally funded, and the Project Manager's salary is consistent with the market rates for County employees in STEM fields.

	Personnel	Rate	Hours	Total
Year 1	PM	\$60.00/hr	300	\$18,000
Year 2	PM	\$60.00/hr	200	\$12,000

Other Personnel:

Funds are requested to provide compensation for two staff-level employees (SLE) for 18 months of the project (1 year and six months) and will be managed by the Project Manager. These costs are reasonable because the County pays staff-level employees this rate regardless of the source of funding.

	Personnel	Rate	Hours	Total
Year 1	SLE 1	\$35.00/hr	200	\$7,000
Year 1	SLE 2	\$35.00/hr	200	\$7,000
Year 2	SLE 1	\$35.00/hr	100	\$3,500
Year 2	SLE 2	\$35.00/hr	100	\$3,500

TOTAL PERSONNEL: \$51,000

II. Fringe Benefits:

Fringe benefits (to cover insurances, social security, and retirement) are requested at 28% of PM and two SLE salaries.

	Personnel	Total Salary	Fringe Rate	Fringe
Year 1	PM & 2 SLE	\$32,000	28%	\$8,960
Year 2	PM & 2 SLE	\$19,000	28%	\$5,320

TOTAL FRINGE: \$14,280

III. Travel

Travel funds requested are for trips to *X* and *Y*. These funds include daytrips and overnight trips. Travel will allow us to complete Tasks *(insert task number or description here)* and the deliverables *(insert deliverables name/number here)*.

Purpose	Location(s)	Item	# of Travelers	Rates	Cost
2 daytrips to research XXX: Task 1 and 2	Insert locations here	Mileage	1	\$0.545/mile x 606 miles	\$660
2 overnight trips to conduct XXX: Task 3, Deliverable 1	Insert locations here	Lodging	4	\$91/night x 2	\$1,092
		Mileage	4	trips (3 rooms)	\$ 242
		Per diem	4	\$0.545/mile x 222 miles x 2 trips \$42/day x 2 days	\$ 336

TOTAL TRAVEL: \$2,320

IV. Equipment

The equipment costs to purchase equipment upgrades to the County Materials Recovery Facility (MRF) is necessary because X.

	Item	Cost
Year 1	AI/Robotic Sorting	\$600,000
Year 1	Glass Breaker Screen	\$150,000
Year 1	Glass Sorting Equipment	\$100,000
Year 1	Controls and Wiring	\$90,000
Year 1	Supports, Platforms, and Stairs	\$100,000
Year 1	HVAC and Building Modifications	\$44,500
Year 1	Equipment Installation	\$125,000
Year 2	N/A	\$0
Total		\$1,209,500

Equipment installation is characterized as equipment because it is part of the purchase price.

Build America, Buy America Act Compliance: We have confirmed that all iron, steel, manufactured products, and construction materials used as part of the optical sorter is produced in the US.

TOTAL EQUIPMENT: \$1,134,500

V. Supplies

Funds are requested for supplies in the amount of \$2,000 for Year 1 and \$2,000 for Year 2. Supplies will be utilized for Tasks (insert task number or description here) and the following deliverables (insert deliverables name/number here). These costs are reasonable because X.

TOTAL SUPPLIES: \$4,000

VI. Contractual

\$45,000 is requested for contractual costs, which includes both engineering design for MRF upgrades and ongoing support during and after equipment installation. These costs are reasonable because the consulting contract will be awarded competitively under the County's purchase procedures. Price will be one factor in determining which consultant offers the best value for the project. We understand that the consultant rate must comply with the restrictions on consultant fees described in 2 CFR 1500.10.

Build America, Buy America Act Compliance: We have confirmed that all iron, steel, manufactured products, and construction materials used as part of the optical sorter is produced in the US.

Year 1	Engineering Support/Design	\$30,000
Year 2	Engineering Support/Design	\$15,000
	Total	\$45,000

TOTAL CONTRACTUAL: \$45,000

VII. Indirect

There are no indirect costs associated with the Count.

	Total Direct Costs	Total Indirect Costs	Total Costs
Year 1	\$1,408,120	\$0	\$1,408,120
Year 2	\$42,980	\$0	\$42,980
Total	\$1,451,100	\$0	\$1,451,100

TOTAL INDIRECT COSTS: \$0

APPENDIX D: TIMELINE AND MILESTONES

*[Provide a schedule indicating start times and completion dates of significant tasks and responsibilities under your program. The following table is an **example** of a format from EPA's Underground Storage Tank Program applicants may review when developing their own timelines and milestone chart that includes information that is specific to their proposed project. Other formats that clearly list the milestones and timelines are also acceptable. The Milestones **should not exceed one page. This Milestones page does not count towards the 11-page limit.**]*

Timeline and Milestones:

Timeline / Workflow New actions for this Project Existing program actions into which this project will be incorporated 	Winter 2018	2019												2020								
		Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
Outreach to businesses to participate in Cohorts																						
EcoData Tracking Workshops																						
Cohort site visits + technical assistance/P2 recommendations + assessment for tanks & supplies																						
Permit guidance created																						
BMP toolkits produced (incl. Metrics Calculator)																						
Issue tanks RFP																						
Contracts issued for tanks																						
Permit assistance																						
Training on tracking waste stream impacts																						
Cohort Meetings																						
Cohort tracking and implementation period																						
Asset management training																						
3 training videos; 1 of which will be on side-streaming																						
Reimbursements for tanks																						
Cohort follow-up site visits																						
Green Manufacturing training																						
Results analysis, review, & report writing																						

DATE: November 1, 2022

TO: Chris Morris, P.E., Hawkins-Weir Engineers, Inc.
Josh Durham, P.E., Hawkins-Weir Engineers, Inc.

FROM: Peter Engel, Kessler Consulting, Inc.

SUBJ: Fayetteville Recycling Processing Facility – Conceptual Layouts and Financial Assessment

PROJ #: 173-01.00

Introduction

Hawkins-Weir Engineers, Inc. (HWEI) was engaged by the City of Fayetteville (City) to evaluate and design improvements and repairs for the City transfer station (TS) and to further consider improvements, retrofits, and expansion options for the adjacent recycling processing facility (RPF). Kessler Consulting, Inc. (KCI) was brought onto the project to assess the RPF, estimate future quantities of recyclables and RPF sizing requirements, identify sorting and processing equipment needs, develop conceptual layouts for RPF expansions and improvements, and develop a planning-level financial assessment of capital and operating costs for RPF options.

On April 25th, KCI submitted a technical memorandum with sizing requirements and descriptions of four conceptual site layouts for the RPF, two based on developing to the south of the existing RPF and two based on developing to the east of the RPF/TS. Discussions with HWEI and the City identified refinements to the layouts and select two preferred layouts for consideration in the financial assessment. Based on discussions with the City in July and September and capital budgetary constraints, a third, phased development option was identified. The three options described in greater detail later in this memorandum are:

- Option 1: develop a new RPF south and west of the current RPF and continue to utilize the existing container pad to receive plastic, metal and glass.
- Option 2: develop a new RPF east of the current RPF that eliminates the need for the container pad and develops a receiving area for glass only south of the current RPF.
- Option 3: expand the existing RPF south and west of the current RPF in two phases and continue to utilize the existing container pad.

It is important to note that for Options 1 and 2, the existing RPF is no longer used for recycling function and becomes part of the transfer station operation. Option 3 continues to utilize and expands the existing RPF in phases in order to spread out the capital cost over several years.

This technical memorandum addresses the following:

- RPF sizing requirements and sorting and processing options.
- Presents the three refined conceptual layouts and process flow diagrams.
- Presents the financial assessment of the three options.

Future Quantity Estimates and RPF Sizing Requirements

KCI utilized the results of the recycling tonnage and load assessment detailed in its March 15th tech memo as the basis for projecting future sizing requirements. An annual population growth rate of 2.47% was used to project the recyclables tonnage and inbound truck traffic volume the RPF may expect to handle for a 20-year planning period of 2025 – 2045. Based on the prior assessment, KCI determined that daily quantities and traffic volume peak at about 130% of daily averages based on a 90th percentile analysis. This “peaking factor” was utilized as a contingency factor in the sizing calculations. Table 1 summarizes results of these calculations.

Table 1 – Projected RPF Inbound Tons and Loads (2025 and 2045)

Annual Quantity				Design Capacity			
(tons/year)		(loads/year)		(tons/hour)		(loads/day)	
Yr 2025	Yr 2045	Yr 2025	Yr 2045	Yr 2025	Yr 2045	Yr 2025	Yr 2045
6,073	9,893	5,091	8,294	4	7	25	41

Based on discussions with City staff, KCI identified the following RPF sorting and processing programming needs to be incorporated in a future RPF:

- Increased space for tipping and storing recyclables prior to baling, especially cardboard and mixed paper.
- Increased maneuvering room and tipping efficiency for collection trucks.
- Ability to efficiently inspect recyclables prior to baling to remove contamination.
- Ability to consider sorting mixed metals (aluminum and steel) and/or mixed plastics (PET and HDPE).
- Consolidated bale storage with greater protection from inclement weather.

Based on this, KCI contacted equipment vendors to obtain generic designs, area requirements, and cost estimates for a recycling processing system comprised of:

- In-ground feed conveyor.
- Elevated sorting conveyor with manual sort station chutes to three ground-level bunkers.
- Space to allow addition of a magnetic separator and eddy current separator.
- Baling of recyclables.

Such a processing system would increase materials handling efficiency and safety of RPF staff to inspect recyclables and remove contamination. In addition, a basic sorting conveyor and bunkers provides the flexibility to further grade recyclables (e.g., separate HDPE-natural and HDPE-pigments, aluminum beverage containers and off-spec aluminum, and PET bottles and PET thermoform). It would also make it possible for the City to consider blending metals or plastics during curbside collection and drop-off convenience which would increase collection efficiency.

Using the quantity estimates in Table 1 and the general programming needs, KCI estimated floor area requirements for the RPF functions:

- Tipping lanes for inbound trucks (curbside collection and drop-off).
- Tip floor storage to provide sufficient area for two days of capacity.

- Sorting and processing recyclables.
- Bale storage for an average 1.5 truckloads per commodity.
- Other operations area for internal traffic flow, materials handling, parts storage, & workshop.
- Additional area for contingency.

Area requirements are summarized in Table 2. Once the City has made decisions regarding the project scope and RPF programming, building dimensions and site layouts can be more accurately defined.

Table 2 – Projected RPF Sizing Requirements for 2040 Design Year

Section of RPF	Option 1	Option 2	Option 3
Tipping Area Storage	2,400	4,200	2,400
Truck Tipping Area	2,400	5,600	2,400
Processing Area	6,250	9,300	6,975
Bale Storage Area	3,200	3,200	3,200
Operations Area	3,200	3,800	3,000
Additional Area	2,925	2,200	1,775
Total Building Area	20,375	28,300	19,750

Summary of Layout Options

Site Constraints

All layout options need to take into consideration the constraints posed by the City's multi-stream collection system and its curb-sort collection fleet. The City program collects seven separate materials (cardboard, mixed paper, PET, HDPE, aluminum, steel, and glass). A large tipping floor is required to accommodate separate dumping and storage of each material. In addition, the curb-sort collection trucks side-dump plastics and end-dump other recyclables. Recycling facility tip floors are typically designed to handle end-dumping only and not able to easily handle side-dumping, especially compacted plastics located directly behind the cab.

Option 1 – Southwestern Location for New RPF

The existing TS/RPF site presents several features that significantly restrict the ability to develop a new facility near the current RPF. The below-grade ramps associated with the TS loading bay restrict RPF expansion to the east, while the TS tipping floor prevents expansion to the north. Therefore, any RPF development would need to be towards the south and west. Expansion to the south and west are constrained by the existing entrance road and Happy Hollow Rd., respectively. Based on these limitations and the sizing requirements in Table 2, the available expansion area is not large enough to fully house all RPF functions without incurring significant site work and cost to relocate the south entrance road.

Option 2 – Eastern Location for New RPF

Area to the east of the existing TS/RPF is currently used for fleet parking, the container pad, and employee parking. The area is relatively open and level and could potentially be used to develop a new RPF if parking could be relocated and tipping area for recyclable container is incorporated into the RPF. East of the container pad there is a major sewer easement and the composting facility which present significant challenges to any further eastward use for recycling activities.

In general, existing utilities can be relocated, however the difficulty of doing so needs to be considered. A grease interceptor pit is located at the southwest corner of the existing TS/RPF building and is connected by pipe to the sanitary sewer to the west at Happy Hollow Rd. A 30-inch concrete storm water pipe runs under the site from Happy Hollow Rd. to an outfall channel southeast of the TS/RPF.

Option 3 – Southwestern Location for Expanded RPF

As noted for Option 1 above, expansion options for the current TS/RPF site are limited. Because Option 3 continues to use the current TS/RPF, the new footprint requirement is less than Option 1. The available expansion area to the south and west is large enough and therefore the existing south entrance road can continue to be used.

Process Flow and Conceptual Layouts

Option 1 (New RPF Southwest Location)

This option develops a new RPF south and west of the current facility. Figure 1 (page 12) provides a schematic process flow diagram of the operation. Recyclables will be received in the same manner as currently, i.e., fiber in the RPF and containers at the container pad. Each recyclable is sorted and baled separately. Fiber is sorted and baled first so that the RPF tip floor can be cleared for containers, which are brought from the container pad by roll-off trucks. If recyclables are being sorted into separate commodities, the commodity(s) and contaminants will be picked off the sorting conveyor into separate bunkers while the predominant commodity will be fed into the baler. For example, when handling mixed paper, staff would sort out cardboard, other recyclables, and contamination into separate bunkers and allow mixed paper to fall off the end into the baler. Another example is if the City decided to sort HDPE into two commodities (HDPE-natural and HDPE-pigmented) in which case the bunkers would be utilized for one grade of HDPE, other recyclables, and contamination. Commodities that accumulate in bunkers are then fed back onto the sorting conveyor and fed directly into the baler. Contaminants can accumulate in one bunker until it is necessary to bring them to the transfer station for disposal.

This option increases the RPF function and footprint to include (a) larger tip floor for receiving and stockpiling recyclables, (b) a sort line for removing contamination and sorting recyclable commodities, and (c) consolidated and increased bale storage (see Figure 2 on page 13). As previously mentioned, the sort line consists of an elevated manual sorting conveyor over three ground-level bunkers, which allows for flexible use depending on the recyclable material being handled. Small mesh roll-off containers or self-dumping hoppers would be placed in the bunkers under the sort chutes and then removed for later baling or disposal.

The existing RPF is freed up to be converted to TS functions. For example, the existing baler pit could be filled and the space dedicated to handling self-haul loads thereby separating that traffic from City and commercial tipping. KCI estimates a building in the range of 20,000 – 21,000 sf will provide ample space to accommodate future growth.

Traffic flow, tipping, and materials handling activities remain similar to current operations. The one notable exception is that the tip floor would open to the north, which would require reconfiguring incoming traffic flow. For example, curbside trucks would queue on Happy Hollow Rd. south of the scale, pull in toward the existing RPF, and then back into one of the two tipping lanes.

Major design and operational aspects:

- The reoriented tip floor creates cross traffic and limits access to the existing RPF tip floor. However, if it's used for self-haul loads, the impact would be relatively limited based on historical data which indicate less than 10 self-haul loads per day.
- The tip floor has two tipping lanes and area for stockpiling, which increases efficiency and safety of receiving.
- The sort line significantly increases materials handling efficiency and staff working conditions.
- An elevated sort line enables the City to further sort plastics and metals into specific market commodities as well as more efficiently remove contamination from all recyclables handled in the RPF.
- Additional electrical load may require upgrading the current power supply.
- The combination of expanded building area and the sort line increases the potential throughput of the RPF thereby allowing the City to (a) handle more recyclables and (b) consider accepting recyclables from other sources.
- Once construction is complete, the existing RPF's interior space could be repurposed for other functions.

Major construction impacts:

- The southern access road to the RPF/TS needs to be relocated further to the south prior to construction.
- Existing bale storage areas need to be removed and a temporary storage area established prior to construction.
- Commodity loading needs to be removed and a temporary storage area established prior to construction.

Option 2 (New RPF East Location)

This option develops a new RPF east of the current facility that consolidates all RPF functions into a single building except for glass tipping (discussed further below). Figure 3 (page 14) provides a schematic process flow diagram of the operation. Six recyclables (PET, HDPE, aluminum, steel, cardboard and mixed paper) are received and stockpiled separately then loaded sequentially into the sorting/baling system. Glass continues to be received outside, tipped directly into roll-off containers and hauled to market. Providing separate areas to stockpile the six recyclables in the RPF increases materials handling efficiency and flexibility (e.g., it eliminates the need to use roll-offs for plastic and metal and allows flexibility in sequencing how recyclables are sorted). The sorting process provides the same flexibility to sort recyclables into separate commodities as well as remove contamination.

Like the previous option, this option increases the RPF function and footprint to include (a) larger tip floor for receiving and stockpiling recyclables, (b) a sort line for removing contamination and sorting recyclable commodities, and (c) consolidated and increased bale storage. The RPF tip floor is significantly expanded to receive and stockpile six (6) categories of recyclables (see Figure 4 on page 15). As noted previously, the tip floor has been configured to handle side-dumping of plastics and end-dumping of other recyclables. The in-feed conveyor has a long in-ground section to allow stockpiled materials to be pushed directly from the tipping areas onto the conveyor. Since glass is received in roll-off containers and hauled directly to market without sorting or further processing, it is proposed that an area to the south of the existing RPF be converted to a glass pad. KCI estimates a building size in the range of 28,000 – 29,000 sf will provide ample space to accommodate future growth and planned RPF functions.

This option places the new RPF where the container pad and employee parking are currently located. Curbside trucks enter from Happy Hollow Rd. at the south and travel counterclockwise around the RPF, tipping recyclables on the western side. They then proceed to the relocated glass pad before exiting the site. Inbound containers from drop-off sites would follow the same sequence although plastics would be end-dumped.

Major design and operational aspects:

- Specific location of the building and access roads in relation to the sewer easement, compost facility, and transfer trailer traffic need to be evaluated.
- The RPF has six separate tipping lanes and area for stockpiling, which significantly increases efficiency for collection trucks and RPF operations, allowing it to safely receive multiple materials at the same time.
- The sort line significantly increases materials handling efficiency and staff working conditions.
- An elevated sort line enables the City to further sort plastics and metals into specific market commodities as well as more efficiently remove contamination from all recyclables handled in the RPF.
- Additional electrical load may require upgrading the current power supply.
- Once construction is complete, the existing RPF's interior space can be repurposed for other functions.

Major construction impacts:

- Employee parking needs to be relocated prior to construction.
- The container pad needs to be removed and a temporary receiving area established prior to construction.
- Current RPF operations (cardboard and mixed paper receiving, baling, bale storage, and shipping) would not be interrupted.
- Utilities needs to be extended to the site.

Option 3 (Expanded RPF Southwest Location)

This option expands the existing RPF in three construction phases toward the west and south of the current facility.

Phase 1 – Bale Storage Building

Figures 5 and 6 (pages 16 and 17) provide a schematic process flow diagram and conceptual layout for Phase 1, which entails expanding the RPF to the south to provide a covered bale storage for all commodities and installing a new baler in place of the existing one. Other operational aspects of the RPF remain the same as currently.

Major design and operational aspects:

- The installation of a new baler and feed conveyor address the fact that the current system has reached the end of its service life and critical need for reliable baling operations.
- The bale storage building enables the City to consolidate all commodity storage, protect them from inclement weather, and efficiently manage inventory and shipping.
- The building will include a high-bay overhead door on the south so that collection vehicles can exit the RPF to the south until completion of Phase 2.
- Roll-off containers located south of the RPF will need to be moved to another location.

- During design, the floor elevation of the bale storage building will need to be determined taking into account how best to accommodate operations considering the existing slope to the south of the RPF.
- Also, until Phase 2 is complete, bales should be stored so that a vehicle lane is kept open for collection vehicles exiting the RPF. Trailers on existing loading docks and other options can help provide back-up storage capacity as needed.

Major construction impacts:

- The existing RPF's southern overhead door will need to be abandoned for some time during construction. In addition, the existing bale storage sheds will be removed.
- Baled commodities will need to be either direct loaded at the existing loading docks or taken out through the existing RPF tip floor to outside storage areas or trailers.

Phase 2 – Tip Floor Expansion and Sort Line

Figures 7 and 8 (pages 18 and 19) provide a schematic process flow diagram and conceptual layout for Phase 2. Phase 2 addresses the need for (a) expanded tip floor to separate collection vehicles from processing activities and (b) installing an elevated sorting line and bunkers to increase the RPF's ability to produce high quality recyclables and flexibility to handle blended materials. Other aspects of RPF operations remain similar to current operations.

Major design and operational aspects:

- The tip floor is accessed from the south which separates RPF and TS traffic.
- The tip floor has two tipping lanes and area for stockpiling, which increases efficiency and safety of receiving. This will reduce wait times for collection trucks and provide more interim storage for paper and cardboard prior to baling.
- The sort line significantly increases materials handling efficiency and staff working conditions.
- An elevated sort line enables the City to further sort plastics and metals into specific market commodities as well as more efficiently remove contamination from all recyclables handled in the RPF.
- Additional electrical load is expected to require upgrading the current power supply.
- The combination of expanded building area and the sort line increases the potential throughput of the RPF thereby allowing the City to handle expanded City recycling collection services and materials from other sources.

Major construction impacts:

- Structural fill will be needed to raise the elevation of the new tipping floor to match the existing RPF slab elevation.
- The existing western access to the existing RPF tip floor will need to be abandoned at some point during construction and all inbound materials will need to be received through the RPF's southern overhead door. This will significantly impact bale storage operations since the same overhead door is used for that.
- While the RPF may be able to continue operations at least partially during construction of the new tipping floor, it will need to stop operations and divert recyclables to an alternate facility when the sorting line is installed.

- Sorting installation will require filling the existing conveyor pit, constructing a new larger conveyor pit, and retrofitting the feed conveyor installed in Phase 1.

Financial Assessment

Please note that the estimates presented in this section are planning-level cost estimates based on a conceptual site designs and assumptions regarding RPF operational parameters.

Cost estimate notes:

- All costs are rough order of magnitude (ROM) based on planning-level unit costs and the generic conceptual layouts. Actual costs will depend greatly on the design development process and actual unit costs at the time of construction.
- It is assumed that the site has no significant, unknown encumbrances or subsurface conditions that require remediation or excessive site work to provide a suitable base for development.
- Detailed site grading requirements and surface water management system structural requirements have not been determined.
- Unit costs are based on current, local conditions at the time of this assessment for comparable project elements and include allowances for fire protection, plumbing, electrical, low voltage, HVAC, interior finishes, and furnishing, where applicable.
- Capital cost include the transfer station expansion to accommodate an excavator to compact waste in transfer trailers.
- Equipment costs for the sorting system and baler are based on estimates obtained from vendors for similar systems at the time of this assessment.
- Annualized capital cost is based on 20 years and 5.0% cost of capital.
- It is assumed that the RPF would be operated by the City who would be responsible for operating the MRF, supplying labor and rolling stock, maintaining and repairing the MRF, and marketing recycled commodities.
- Labor requirements are based on manual sort labor for quality control and material separation supplemented with mechanical separation. A full-time staff of four (4) is assumed once the sorting line is operational.
- Operating costs include labor, annualized capital cost for rolling stock (loader, skid steer, and forklift), utilities, fuel, maintenance and repair, supplies, and residue disposal.
- It is assumed that the City retains all revenue from recycled commodity sales.
- Development costs are escalated to the projected year of construction. Escalation for Options 1 and 2 is for 3 years (2025). Escalations for Option 3 are timed for 1 and 3 years, respectively, for the two construction phases. The annual cost escalation rate is assumed to be 5.0%

Table 3 (see next page) on the following page summarizes estimated development costs for Options 1 and 2. Costs differ significantly and represent a major capital commitment of \$13.1 and \$17.6 million for Options 1 and 2, respectively, when escalated to 2025 dollars. Due to the high capital investment required, it was determined in discussions with the City that Options 1 and 2 are not financially viable. Based on this, Option 3 (phased expansion of the existing RPF) was identified so that capital improvement could be spread out over several years and reduce the overall development cost while still addressing design and operational needs (expanded tipping, increased bale storage, increased

maneuvering, improved efficiency, increased design capacity, and ability to sort).

Table 3: Planning-Level Development Cost Estimates for New RPF – Options 1 and 2

Item	Option 1	Option 2
Site Development	\$884,000	\$1,114,000
Buildings	\$4,933,000	\$6,887,000
Equipment	\$1,484,000	\$1,744,000
Mobilization & General Conditions	\$989,000	\$1,360,000
Design & Development Fees	\$1,577,000	\$2,162,000
Contingency	\$1,460,000	\$1,949,000
Estimated Capital Cost	\$11,326,000	\$15,216,000
Escalation to 2025	\$13,112,000	\$17,615,000
Estimated Annualized Capital Cost	\$1,052,100	\$1,413,400

Note: numbers may not appear to add due to rounding.

Table 4 summarizes the estimated development costs for each phase and the total for Option 3. Estimated capital costs (in current dollars) for each phase are \$2.8 and \$5.4 million and total \$8.2 million. The total cost escalated to development years is \$9.2 million.

Table 4: Planning-Level Development Cost Estimates for Existing RPF Expansion – Option 3

Item	Phase 1	Phase 2	Total
Site Development	\$187,000	\$579,000	\$766,000
Buildings	\$1,092,000	\$2,188,000	\$3,280,000
Equipment	\$725,000	\$727,000	\$1,452,000
Mobilization & General Conditions	\$217,000	\$470,000	\$687,000
Design & Development Fees	\$220,000	\$692,000	\$912,000
Contingency	\$401,000	\$699,000	\$1,100,000
Estimated Capital Cost	\$2,842,000	\$5,354,000	\$8,196,000
Annualized Capital Cost	\$228,000	\$430,000	
Cumulative Annualized Capital Cost	\$228,000	\$658,000	
Escalated Capital Cost	\$2,984,000	\$6,198,000	\$9,182,000
Escalated Annualized Capital Cost	\$239,400	\$497,400	
Escalated Cumulative Annualized Cost	\$239,400	\$736,800	

Note: numbers may not appear to add due to rounding.

Phase 1 and 2 costs are escalated to 2023 and 2025 dollars, respectively.

As noted previously, after completion of Phase 2, the RPF will have capacity to handle more recyclables from expanded City recycling services (e.g., multi-family and townhouses) or other sources. By increasing throughput, the RPF should be able to spread capital costs over more tons, reduce per ton operating costs, and increase commodity sales revenue.

Estimated annual operating costs for Option 3 are provided in Table 5. KCI estimates that RPF throughput can be increased by 25% after Phase 2 construction due to the increased facility footprint combined with ability to sort mixed materials. Costs are presented in current year dollars without escalation so that the two Phases can be compared on equal footing. Phase 2 estimate operating costs (\$503,000) are higher than Phase 1 due to additional staffing and direct costs (electricity, operations, residue disposal, maintenance and repair).

Table 6 provides planning level estimates of revenue from sales of recycled commodities based on 10-year historical average index prices. Revenues are presented in current year dollars to facilitate comparison and also because commodities have historically traded within established price boundaries independent of general inflation.

Estimated net annual cost for the two phases range from net revenue of \$203,000 for Phase 1 to net cost of \$99,000 for Phase 2 (see Table 7).

Table 5: Planning-Level Operating Cost Estimates for Existing RPF Expansion – Option 3

Item	Phase 1	Phase 2
Labor & Benefits	\$221,000	\$248,000
Rolling Stock Annualized Cost	\$38,000	\$38,000
Direct Cost	\$142,000	\$212,000
Transfer & Disposal	\$4,000	\$6,000
Total Annual Operating Cost	\$405,000	\$503,000

Note: numbers may not appear to add due to rounding.

Table 6: Planning-Level Revenue Estimate – Option 3

Item	Phase 1	Phase 2
Commodity Sales	\$836,000	\$1,062,000

Table 7: Annual Financial Summary – Option 3

Item	Phase 1	Phase 2
Cumulative Annualized Capital Cost	\$228,000	\$658,000
Total Annual Operating Cost	\$405,000	\$503,000
Total Net Revenue	(\$836,000)	(\$1,062,000)
Net Annual Cost (Revenue)	(\$203,000)	\$99,000

Note: numbers may not appear to add due to rounding.

Summary and Recommendation

This memorandum provides information to support the City's decision whether to proceed with a RPF development project and, if so, which conceptual layout option. During discussions in July, the City determined that estimated development costs for Options 1 and 2 are not financially viable at the current time. Based on further work and discussions, Option 3 was developed so that RPF development could be completed in two phases with the first phase meeting the City's planned \$3 million for initial development. In summary, Phase 1 replaces the current baler and adds a new bale storage building south of the RPF, while Phase 2 expands the RPF to the east and south with a larger tip floor and sorting and quality control line. The total estimated development cost of Option 3 is less than Options 1 and 2 (\$8.2 million versus \$11.3 and \$15.2 million in current dollars).

Based on results of this assessment and discussions with City staff, KCI recommends that the City proceed with design and engineering cost estimates for Option 3. If costs for Phase 1 can be covered by existing City capital improvement budgets, it is recommended that the City proceed with development. In addition, based on the design and cost estimates for Phase 2, the City will be able to prepare capital improvement plans, develop a schedule for future Phase development, and plan future recycling program expansion efforts.

Figure 1: Fayetteville, AR RPF Process Flow Diagram – Option 1 (New RPF Southwest)

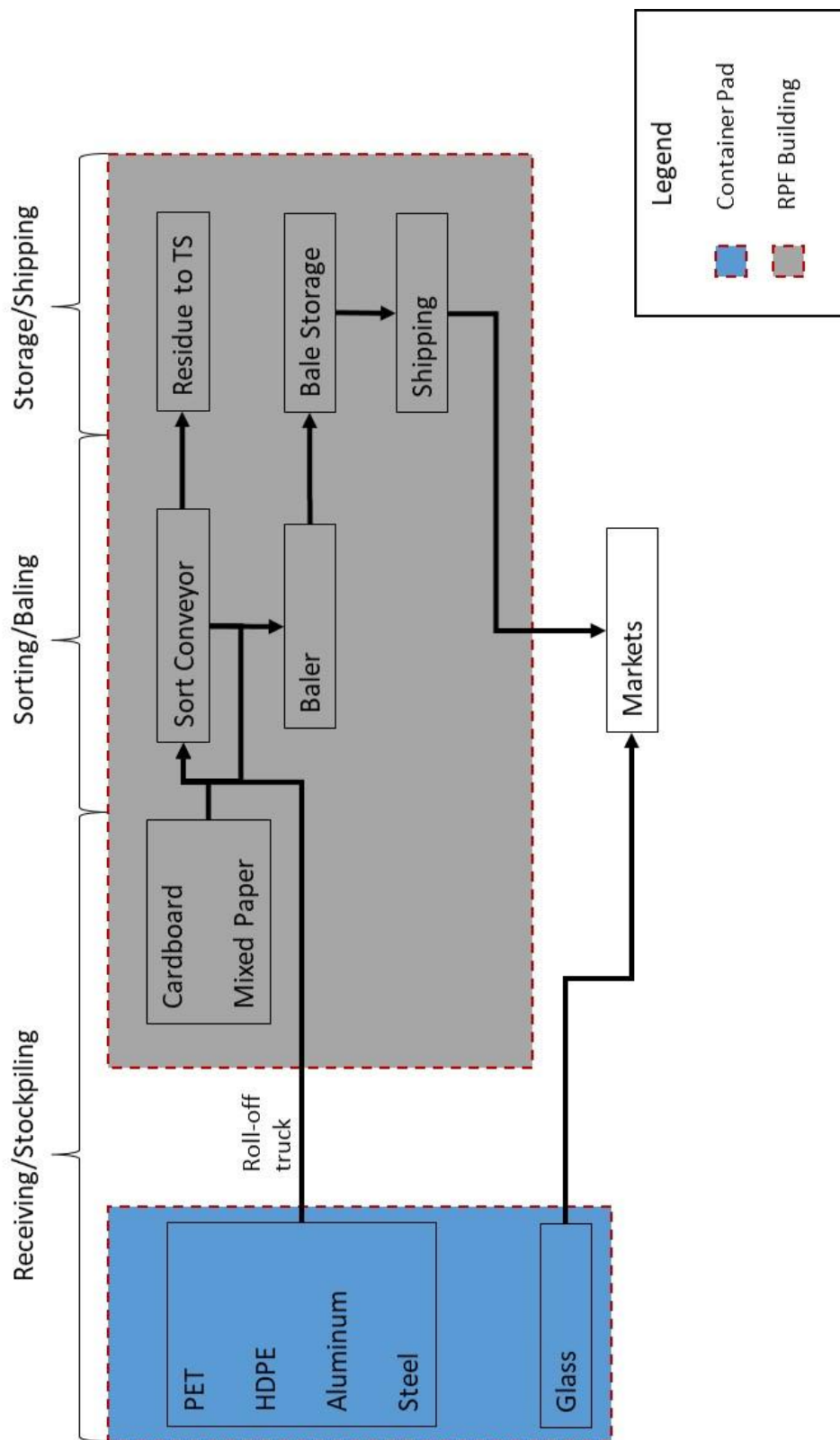


Figure 2: Fayetteville, AR RPF Conceptual Site Plan – Option 1 (New RPF Southwest)

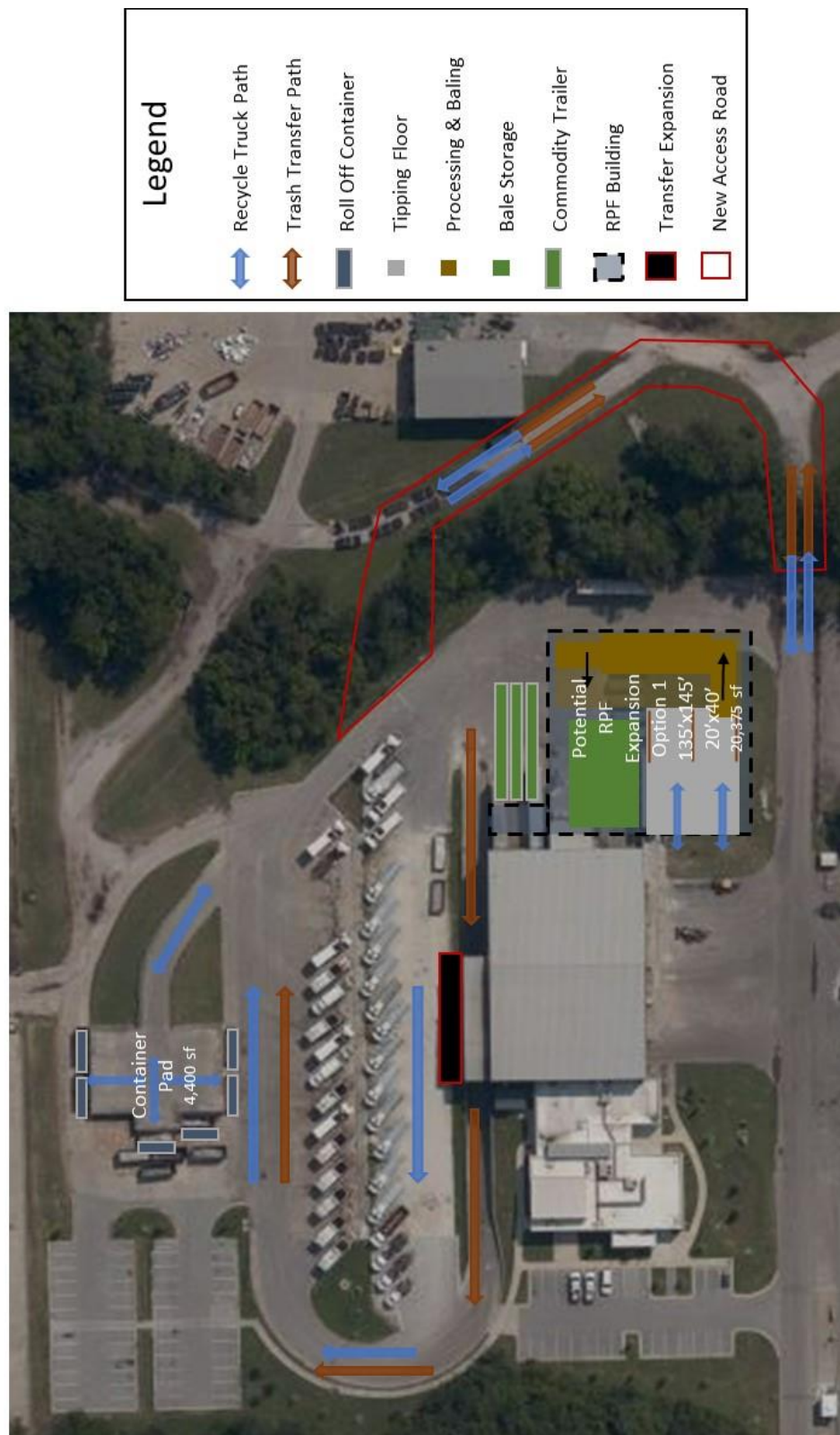


Figure 3: Fayetteville, AR RPF Process Flow Diagram – Option 2 (New RPF East)

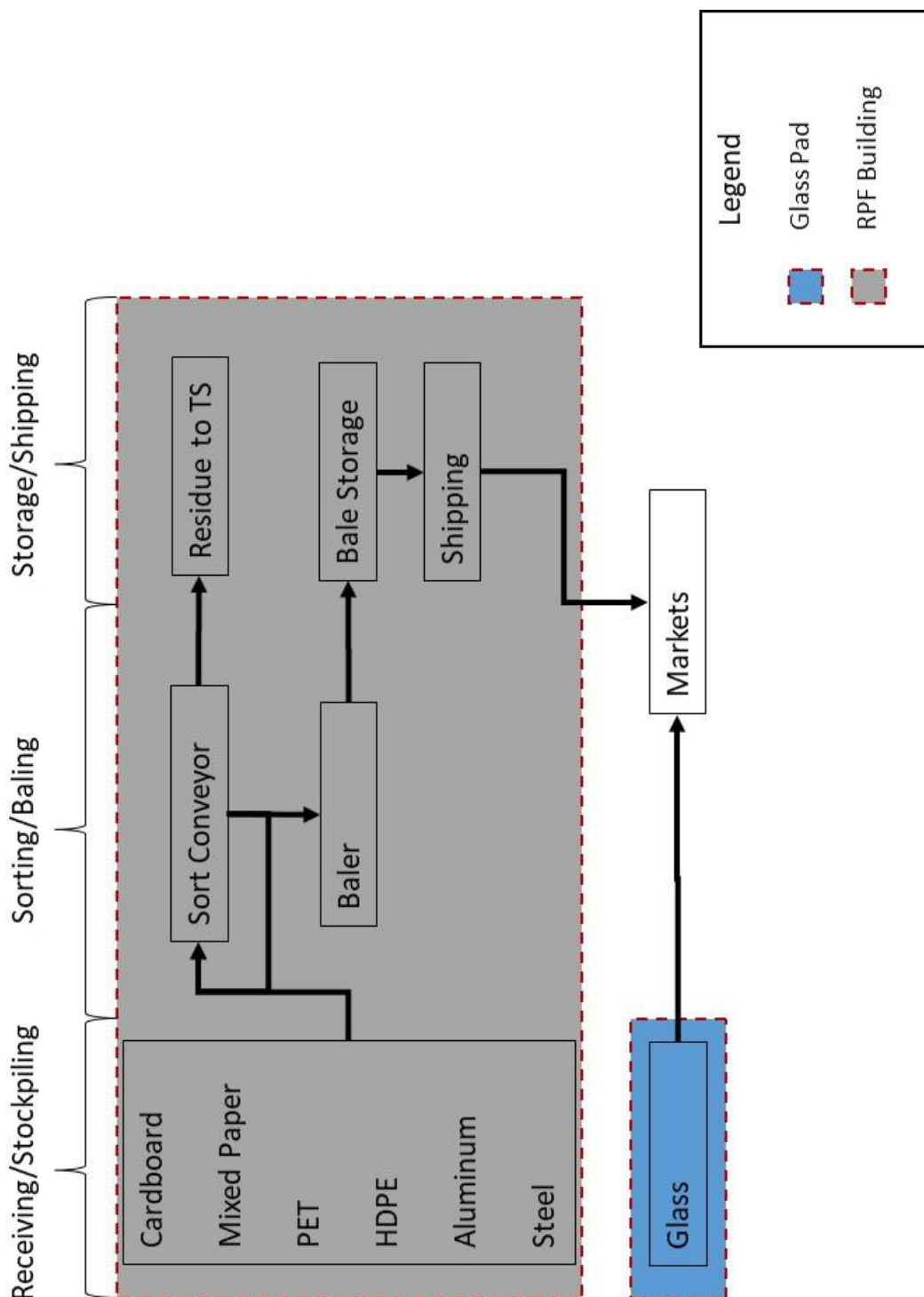


Figure 4: Fayetteville, AR RPF Conceptual Site Plan – Option 2 (New RPF East)



Figure 5: Fayetteville, AR RPF Process Flow Diagram – Option 3 (Expanded Bale Storage)

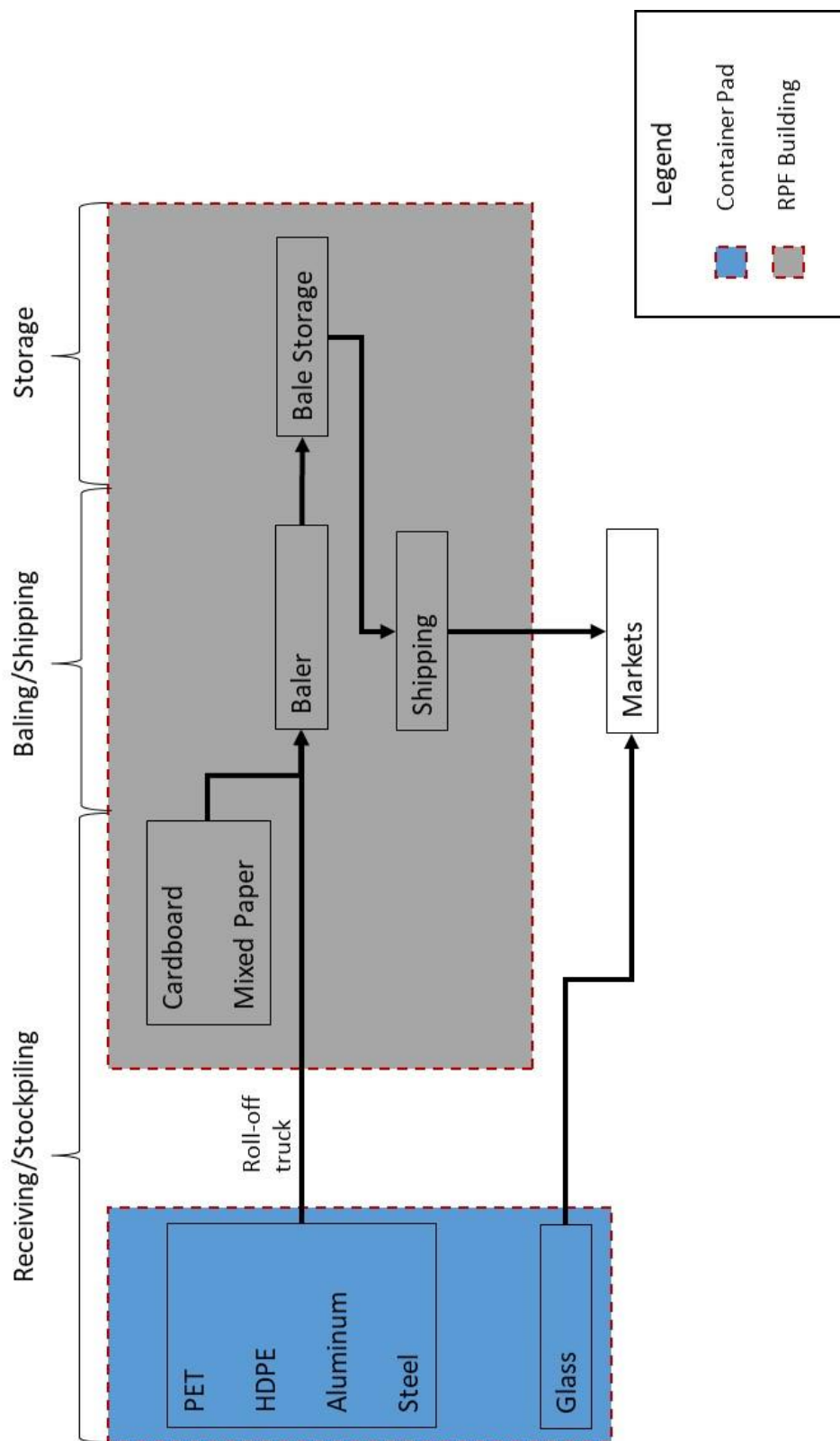




Figure 6: Fayetteville, AR RPF Conceptual Site Plan – Option 3 (Expanded Bale Storage)



Legend	
	Recycle Truck Path
	Trash Transfer Path
	Roll Off Container
	Tipping Floor
	Processing & Baling
	Bale Storage
	Commodity Trailer
	RPF Building
	Transfer Expansion

Figure 7: Fayetteville, AR RPF Process Flow Diagram – Option 3 (Expanded Tipping & Sorting)

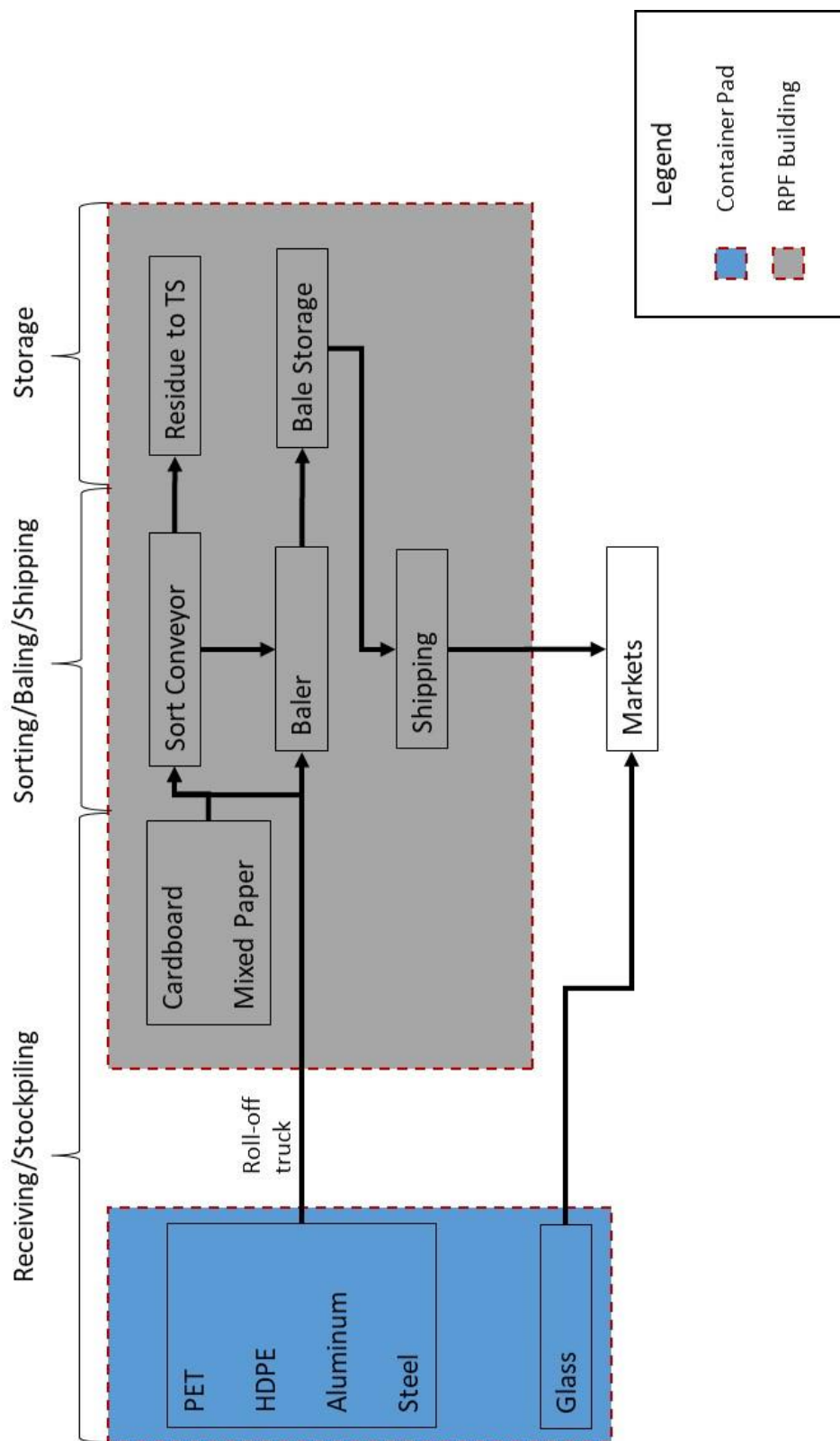




Figure 8: Fayetteville, AR RPF Conceptual Site Plan – Option 3 (Expanded Tipping & Sorting)



RESOLUTION NO. _____

A RESOLUTION TO AUTHORIZE AN EPA SOLID WASTE INFRASTRUCTURE FOR RECYCLING GRANT PROGRAM APPLICATION IN THE TOTAL AMOUNT OF UP TO \$4,000,000.00 FOR IMPROVEMENTS TO THE CITY'S RECYCLING PROCESSING FACILITY

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:

Section 1: That the City Council of the City of Fayetteville, Arkansas hereby authorizes an EPA Solid Waste Infrastructure for Recycling Grant Program application in the total amount of up to \$4,000,000.00 for improvements to the City's Recycling Processing Facility.



MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council
THRU: Susan Norton, Chief of Staff
FROM: Timothy Nyander, Utilities Director
DATE: December 27, 2022
SUBJECT: **KRAPFF REYNOLDS CONSTRUCTION COMPANY SEWER MANHOLE REHAB**

RECOMMENDATION:

Staff recommends approval of a one-year extension and change order to the term-maintenance contract with Krapff Reynolds Construction Co. in the amount of \$590,789.00 for rehabilitation of sanitary sewer manholes throughout Fayetteville in 2023 as identified in previous investigations and by operations staff.

BACKGROUND:

On December 10, 2019 the City of Fayetteville accepted sealed competitive bids for manhole rehabilitation utilizing various techniques. Krapff Reynolds Construction Co. submitted the lowest bid (Resolution 74-20, Bid #19-53). The bid schedule includes unit pricing for various items of work in order to complete the annual rehabilitation program.

DISCUSSION:

Direct contracting with Krapff Reynolds Construction Co. allows the City to execute its sanitary sewer rehabilitation program efficiently. Manholes being repaired under this contract are either identified through normal City maintenance operations or by consultants during Sanitary Sewer Evaluation Studies (i.e., Smoke Testing). Engineering and administrative costs are minimized as these services are handled by city staff. This work is an integral part of the City's ongoing program to maintain its sewer system in the most long-term yet cost effective fashion. This will be the 4th year of a 5-year renewable contract with Krapff Reynolds.

A no-cost change order is also included in this renewal to increase pay item costs by 5% due to increases in material cost impacts nation-wide. This increase is recommended by staff and is permissible based on the original contract renewal language in the agreement.

BUDGET/STAFF IMPACT:

Funds are available for this project in the Sanitary Sewer Rehabilitation account.

ATTACHMENTS: Krapff Reynolds 2023 SRF, Signed Change Order # 2 (Fayetteville 2023), RES BID 19-53 KRAPFF CONSTRUCTION MANHOLE REHAB 2023

City of Fayetteville Staff Review Form

2022-265

Item ID

1/3/2023

City Council Meeting Date - Agenda Item Only
N/A for Non-Agenda Item

Tim Nyander

12/15/2022

WATER SEWER (720)

Submitted By

Submitted Date

Division / Department

Action Recommendation:

Staff recommends approval of a one-year extension and change order to the term-maintenance contract with Krapff Reynolds Construction Co. in the amount of \$590,789.00 for rehabilitation of sanitary sewer manholes throughout Fayetteville in 2023 as identified in previous investigations and by operations staff.

Budget Impact:

5400.720.5700-5815.00

Water and Sewer

Account Number

Fund

02017.1

Sanitary Sewer Rehabilitation

Project Number

Project Title

Budgeted Item? Yes

Total Amended Budget

\$ 5,603,072.33

Expenses (Actual+Encum)

\$ 3,270,716.91

Available Budget

\$ 2,332,355.42

Does item have a direct cost? Yes

Item Cost

\$ 590,789.00

Is a Budget Adjustment attached? No

Budget Adjustment

\$ -

Remaining Budget

\$ 1,741,566.42

V20221130

Purchase Order Number:

Previous Ordinance or Resolution # 74-20

Change Order Number:

Approval Date:

Original Contract Number:

Comments:



**CITY OF
FAYETTEVILLE
ARKANSAS**

CHANGE ORDER

Contract Title:

2023 Sewer Manhole Rehabilitation

Change Order No.

2

Date of Issuance:

December 6, 2022

To Contractor: Krapff Reynolds Construction Company

ORDINANCE/RESOLUTION:

111-21

Effective:

April 6, 2021

The Contract is changed as follows:

Bid	Bid	Previous	Unit	Contract	Revised	Revised		Previous	Revised
Item	Item	Estimated	of	Unit	Estimated	Unit		Estimated	Estimated
No.	Description	Quantity	Measure	Price	Quantity	Price		Cost	Cost
1	Mobilization (May not exceed 5% of total bid)	1	LS	\$28,055.55	1	\$28,056.81		\$28,055.55	\$28,056.81
2	Replace Manhole Frame and Cover (Paved Areas)	60	EA	\$1,155.00	70	\$1,212.75		\$69,300.00	\$84,892.50
3	Replace Manhole Frame and Cover (NON-Paved Areas)	100	EA	\$525.00	100	\$551.25		\$52,500.00	\$55,125.00
4	Replace/Raise to Grade, Manhole Frame Grade Adjustments	50	VF	\$525.00	50	\$551.25		\$26,250.00	\$27,562.50
5	Replace Manhole Bench and Trough	9	EA	\$1,050.00	9	\$1,102.50		\$9,450.00	\$9,922.50
6	Chemical Grout Pipe Seals and Lower 18"	130	EA	\$315.00	130	\$330.75		\$40,950.00	\$42,997.50
7	Apply Internal Manhole Adjustment Seal	60	VF	\$462.00	60	\$485.10		\$27,720.00	\$29,106.00
8	Apply Cementitious Coating to Entire Manhole (0 - 6 FT Depth)	27	EA	\$800.10	46	\$840.11		\$21,602.70	\$38,644.83
9	Additional VF of Cementitious Coating to Entire Manhole (> 6 FT Depth)	45	VF	\$133.35	42	\$140.02		\$6,000.75	\$5,880.74
10	Apply Epoxy Coating to Entire Manhole	60	VF	\$252.00	55	\$264.60		\$15,120.00	\$14,553.00
11	Repair Epoxy Coating	50	SF	\$52.50	45	\$55.13		\$2,625.00	\$2,480.63
12	Complete Replacement w/ 4 foot diameter manhole in PAVED areas (0 - 6 FT Depth)	4	EA	\$8,662.50	4	\$9,095.63		\$34,650.00	\$36,382.50

13	Complete Replacement w/ 4 foot diameter manhole in NON-PAVED areas (0 - 6 FT Depth)	14	EA	\$7,612.50	8	\$7,993.13		\$106,575.00	\$63,945.00
14	Additional VF of manhole replacement (> 6 FT Depth)	50	VF	\$210.00	50	\$220.50		\$10,500.00	\$11,025.00
15	QSR patch	69	EA	\$210.00	69	\$220.50		\$14,490.00	\$15,214.50
16	Trench Safety; Comply with OSHA Standards 29 CFR 1926 Safety and Health Regulations for Construction Subpart P	1	LS	\$125,000.00	1	\$125,000.00		\$125,000.00	\$125,000.00

Sum: \$590,789.00 \$590,789.00
Net Cost for this Change Order: \$0.00

Not valid until signed by the Owner

The original Contract Price was	\$	590,789.00
Net change by previously authorized change orders	\$	-
The Contract Price prior to this Change Order was	\$	590,789.00
The Contract Price will [increase by][decrease by][remain unchanged]	\$	-
The new Contract Price including this Change Order will be	\$	590,789.00
The Contract Time(s) will [increased by][decreased by][remain unchanged]		End of 2023
Required dates of Completion as of the date of this Change Order therefore are:		
Substantial Completion		End of 2023
Final Completion		End of 2023

NOTE: This summary does not reflect changes in the Contract Price or Time(s) which have been authorized by Work Change Directives not incorporated in this or previous Change Orders.

Krapff Reynolds Construction Company

CITY OF FAYETTEVILLE

BY *Joe P. King* DATE 12/6/2022
President

BY _____ DATE _____

RESOLUTION NO. _____

A RESOLUTION TO APPROVE A ONE YEAR EXTENSION TO THE CONTRACT WITH KRAPFF REYNOLDS CONSTRUCTION COMPANY IN THE AMOUNT OF \$590,789.00 FOR REHABILITATION OF SANITARY SEWER MANHOLES THROUGHOUT FAYETTEVILLE

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:

Section 1: That the City Council of the City of Fayetteville, Arkansas hereby approves a one year extension to the contract with Krapff Reynolds Construction Company in the amount of \$590,789.00 for rehabilitation of sanitary sewer manholes throughout Fayetteville as identified in previous sanitary sewer evaluation studies.



MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council
THRU: Susan Norton, Chief of Staff
FROM: Peter Nierengarten, Environmental Director
DATE: December 27, 2022
SUBJECT: **OZARK REGIONAL TRANSIT SERVICE CONTRACT**

RECOMMENDATION:

Approval of a resolution to enter into an agreement with Ozark Regional Transit, Inc. (ORT) for a one-year contract, renewable for up to four additional one-year terms for transit service. City Council appropriations for 2023 include \$698,830 for this contract. Future contract renewals are subject to amounts appropriated by City Council for each budget year.

BACKGROUND:

Ozark Regional Transit (ORT) is a regional transit system providing general public fixed route transit, on demand service, and Americans with Disabilities Act (ADA) complementary paratransit service in Northwest Arkansas (NWA). ORT serves Benton, Carroll, Madison, and Washington counties and has provided transit service within the City of Fayetteville since 1999. All agency related matters are overseen and administered by the ORT Board of Directors (Board) – Fayetteville currently holds three seats on the ORT Board.

DISCUSSION:

The current five-year contract for transit service with Ozark Regional Transit expires at the end of 2022 and the recommendation is for a new one-year contract with up to four one-year renewable terms. Subsequent renewals are subject to the amounts appropriate by the City Council for each budget year. Payments will be made at the beginning of each quarter.

BUDGET/STAFF IMPACT:

The 2023 contract amount is \$698,830. This amount has been appropriated in Fayetteville's 2023 budget.

ATTACHMENTS: Staff Review Form, Contract for Services between the City of Fayetteville and Ozark Regional Transit 2023 – 2027 Contract for Service between the City of Fayetteville an, RES BID WAIVER-ORT

City of Fayetteville Staff Review Form

2022-267

Item ID

1/3/2023

City Council Meeting Date - Agenda Item Only
N/A for Non-Agenda Item

Peter Nierengarten

12/15/2022

RECYCLING/TRASH COLLECTION (750)

Submitted By

Submitted Date

Division / Department

Action Recommendation:

Approval of a resolution to waive the requirements of formal competitive bidding and to enter into an agreement with Ozark Regional Transit, Inc. (ORT) for a one-year contract, renewable for up to four additional one-year terms for transit service. City Council appropriations for 2023 include \$698,830 for this contract. Future contract renewals are subject to amounts appropriated by City Council for each budget year.

Budget Impact:

2100.410.4100-5723.00

Street

Account Number

Fund

40901.4001

Outside Agencies Funding / Ozark Regional
Transit

Project Number

Project Title

Budgeted Item? Yes

Total Amended Budget

\$ 698,830.00

Expenses (Actual+Encum)

Available Budget

\$ 698,830.00

Does item have a direct cost? Yes

Item Cost

\$ 698,830.00

Is a Budget Adjustment attached? No

Budget Adjustment

Remaining Budget

\$ -

V20221130

Purchase Order Number: _____

Previous Ordinance or Resolution # **6031**

Change Order Number: _____

Approval Date: _____

Original Contract Number: _____

Comments:



**CITY OF
FAYETTEVILLE
ARKANSAS**

**Contract for Services
Between the City of Fayetteville, AR
and the Ozark Regional Transit
Term: One year with four one-year renewals**

This agreement is entered into on this 14 day of December, 2022 between the City of Fayetteville, hereinafter known as the "City" and the Ozark Regional Transit, Inc., hereinafter known as "ORT".

WHEREAS, the City has determined that a public need exists for public transit services within the city limits of Fayetteville;

WHEREAS, the Ozark Transit Authority was created in 2002 by Washington, Benton, Carroll and Madison counties and the cities of Fayetteville, Springdale, Rogers, and Bentonville;

WHEREAS, the City has an interlocal agreement providing for participation for the City of Fayetteville with Ozark Regional Transit Authority;

WHEREAS, the Ozark Regional Transit Authority contracts with Ozark Regional Transit, Inc. (ORT) for public transportation services;

WHEREAS, ORT is dedicated to providing safe, reliable and affordable public transportation to both the rural and urban residents of the four-county area within its jurisdiction; AND

NOW, THEREFORE, in consideration of the mutual covenants contained herein, the City and ORT agree as follows:

1. This agreement shall cover the period of January 3, 2023 through December 31, 2027 unless terminated or amended.
2. ORT agrees to develop, operate and maintain a fixed route and on-demand public transit system and allow Fayetteville residents use of the same system. ORT reserves the right to refuse service to anyone for violation of transit service rules. ORT reserves the right to determine the route structure of the transit system.
3. ORT agrees to provide written annual reports to the City that describe the activities undertaken during the preceding period concerning its public transit system and also report on the following performance measure: estimated number of passengers by route. The annual reports to be submitted to the Project Coordinator as soon as practical after the end of the year. The data will be reported for the current year and prior year.
4. ORT agrees to make available all records pertaining to public transit fixed route and paratransit service, except those restricted by federal regulations, for review by the City and City auditors as requested. ORT agrees to comply with the Arkansas Freedom of Information Act as applicable.
5. For the purpose of the Agreement, the Project Coordinator for the City will be the Mayor or his/her designee. The Project Coordinator for ORT will be the ORT Executive Director or his/her designee. Communications pertaining to this agreement will be through the respective Project Coordinators for the City and ORT.
6. **Terms of performance.** The term of performance for this agreement will expire December 31, 2023 but will automatically be renewed and extended for up to an additional four one- year terms if the City's budget containing funding for the service is approved by the City Council for the next year and the ORT agrees to continue the service.

1 | Page

Amended Contract per City Council meeting 01/02/2018
01.08.2018

7. **Budget.** The City agrees to pay ORT and ORT agrees to accept as payment in full for its services \$698,830 for 2023. **The amounts to be paid for services in future budget years shall be dependent on the amounts appropriated by City Council for each budget year.** It is understood that a reduction in City funding may require a reduction in transit service. Payments shall be made on a **quarterly** basis.
8. ORT shall provide and maintain in force at all times during the term of the agreement, for its own employees, coverage for worker's compensation to the extent required by law.
9. ORT shall render to the City a Request for Payment at the beginning of each quarter and the City shall pay the invoice within thirty (30) calendar days of invoice acceptance.
10. **Notices.** All notices required or permitted under this agreement will be submitted in writing to the other party in this agreement by personal delivery or the address below, or by certified mail, return receipt requested, in which case notice will be effective three (3) business days after deposit therein address to the following:

City of Fayetteville, AR
Attn: Mayor
113 Mountain
Fayetteville, AR 72701

Ozark Regional Transit
Attn: Executive Director
2423 E. Robinson Ave.
Springdale, AR 72764

11. Neither party may assign any of its rights or obligations under this agreement without the express written consent of the other, nor shall this agreement be construed to bestow any rights or benefits upon anyone other than ORT and the City.
12. The parties agree and understand that this Agreement is exclusive of any and all other agreements, and that it in no way alters, amends or abridges any rights, obligations or duties of the parties contained in such agreements.
13. A waiver by either party of any of the terms or conditions herein shall be limited to that particular instance and shall not be construed as a general waiver of any other breeches by either party.
14. This Agreement constitutes the entire understanding of the parties, and no modification or variation of the terms of this agreement shall be valid unless made in writing and signed by the duly authorized agents of ORT and the City.
15. **Severability.** Each paragraph of this agreement is severable from all other paragraphs. If any paragraph or subparagraph is found to be invalid or unenforceable for any reason, all remaining paragraphs and subparagraphs will remain in full force and effect.
16. **Interpretation.** The contract shall be interpreted according to and enforced under the laws of the State of Arkansas, in Washington County.
17. **Non -Appropriation.** The parties recognize that performance of the Agreement by ORT may be dependent in whole or in part upon the appropriation of state or federal funds. If a state of federal legislative body fails to appropriate the necessary funds, then by written notice to City, ORT may cancel all or the remaining portion of the Agreement without further duty or obligation. In the event this agreement must be terminated prior to the end of the term pursuant to this clause, the amounts due to ORT by City shall be prorated. The parties recognize and understand the appropriation is a legislative act and is beyond the control of ORT.

18. If Ozark Transit Authority or ORT or its transit unit receives new or additional funding from a local sales tax, both parties shall meet to determine whether this agreement should be mutually terminated or amended because of this new funding source. The City may elect to discontinue funding called for in this contract and terminate this contract without penalty if a new or additional local sales tax provides at least \$698,830 annualized funding to ORT.

19. The City or ORT may cancel this contract within thirty (30) calendar day notice.

IN WITNESS WHEREOF, we have hereunto set our hands on the date first written above.

CITY OF FAYETTEVILLE, ARKANSAS

By: _____
LIONELD JORDAN, MAYOR

ATTEST:

By: _____
Kara Paxton, City Clerk, Treasurer

Date: _____

OZARK REGIONAL TRANSIT, INC.

By: _____

Printed Name: Joe Farmer

ATTEST:

By: _____

Printed Name: Mindy Campbell

Title: CFO

Date: 12/14/22

RESOLUTION NO. _____

A RESOLUTION TO WAIVE COMPETITIVE BIDDING AND AUTHORIZE A ONE YEAR CONTRACT BETWEEN THE CITY OF FAYETTEVILLE, ARKANSAS AND OZARK REGIONAL TRANSIT, INC. IN THE AMOUNT OF \$698,830.00 TO PROVIDE PUBLIC TRANSIT SERVICES FOR FAYETTEVILLE RESIDENTS, WITH AUTOMATIC RENEWALS FOR UP TO FOUR ADDITIONAL ONE YEAR TERMS

WHEREAS, Ozark Regional Transit, Inc. has operated a transit system in the City of Fayetteville since 1999 when the City Council authorized the transfer and sale of City trolleys in exchange for transportation services for Fayetteville residents; and

WHEREAS, in 2002, the City of Fayetteville first entered into an interlocal agreement with other cities and counties in Northwest Arkansas which allowed the City to become part of the Ozark Transit Authority, which is served by Ozark Regional Transit, Inc. and which is the only provider of public transit services connecting Fayetteville residents with other parts of Northwest Arkansas.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:

Section 1: That the City Council of City of Fayetteville, Arkansas hereby determines an exceptional situation exists in which competitive bidding is deemed not feasible or practical and therefore waives the requirements of formal competitive bidding and authorizes Mayor Jordan to sign a contract between the City of Fayetteville, Arkansas and Ozark Regional Transit, Inc. in the amount of \$698,830.00 to provide public transit services for Fayetteville residents, with automatic renewals for up to four additional one year terms.



MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council

THRU: Waylon Abernathy, Bond Projects & Construction Dir
Paul Becker, Chief Financial Officer

FROM: Quin Thompson, Facilities & Bldg Maint Manager

DATE: December 27, 2022

SUBJECT: **SEVEN HILLS MAINTENANCE CONTRACT FOR MAINTENANCE AND REPAIRS AT THE WALKER FAMILY RESIDENTIAL COMMUNITY COMPLEX IN 2023**

RECOMMENDATION:

Staff recommends approval of a contract with Seven Hills Homeless Center in the amount of \$40,000 for the 2023 fiscal year for capital improvements at the Walker Family Residential Community.

BACKGROUND:

Each year since 2017 the City Council has passed resolutions approving contracts to provide funding assistance for repairs at the Walker Family Residential Community. As in previous years. Seven Hills and Facilities Management have outlined several items for repair or replacement to help support their programs. Improvements completed in 2022 include renovation of two family units, replacement of 20 interior and 2 exterior doors, and one HVAC compressor.

DISCUSSION:

A request for capital improvements at the WFRC was included in the 2023 CIP budget approved by City Council. The amount of that request totaled \$40,000. The contract provides for the disbursement of this appropriation upon evidence of a contract or purchase commitment for work as approved by the Facilities Maintenance Manager. This will ensure that the projects funded will be those identified and agreed upon by both Seven Hills and the City. Items identified for 2023 include renovation of one family unit, security upgrades to doors and camera systems, and two new HVAC systems. It is recommended that Seven Hills generally follow City selection rules for third party contracts.

BUDGET/STAFF IMPACT:

This project is funded by Sales Tax Capital Improvement funds.

ATTACHMENTS: SRF 7-hills 2023, 2023 CONTRACT WITH SEVEN HILLS HOMELESS CENTER FOR MAINTENANCE, RES CONTRACT WITH SEVEN HILLS - FUNDING FOR MAINTENANCE AND REPAIRS IN 2023

City of Fayetteville Staff Review Form

2022-270

Item ID

1/3/2023

City Council Meeting Date - Agenda Item Only
N/A for Non-Agenda Item

Quin Thompson

12/16/2022

FACILITIES MANAGEMENT (140)

Submitted By

Submitted Date

Division / Department

Action Recommendation:

Staff recommends approval of a contract with Seven Hills Homeless Center in the amount of \$40,000 for the 2023 fiscal year for capital improvements at the Walker Family Residential Community.

Budget Impact:

4470.140.8900-5400.00

Sales Tax Capital

Account Number

Fund

18004.1

7-Hills Walker Family residential Facility

Project Number

Project Title

Budgeted Item? Yes

Total Amended Budget

\$ 40,000.00

Expenses (Actual+Encum)

\$ -

Available Budget

\$ 40,000.00

Does item have a direct cost? Yes

Item Cost

\$ 40,000.00

Is a Budget Adjustment attached? No

Budget Adjustment

\$ -

Remaining Budget

\$ -

V20221130

Purchase Order Number:

Previous Ordinance or Resolution #

Change Order Number:

Approval Date:

Original Contract Number:

Comments:

CONTRACT

FOR BUILDING REPAIR AND MAINTENANCE

Between the City of Fayetteville, Arkansas and Seven Hills Homeless Center

THIS CONTRACT is made by and between the City of Fayetteville, Arkansas (“City”) and Seven Hills Homeless Center (“Seven Hills”), and the parties agree as follows:

1. **Term.** The term of this contract shall begin January 3, 2023 and end December 31, 2023.

2. **City of Fayetteville’s Rights and Responsibilities.**

- a. City shall provide the amount of \$40,000.00 for building repair and maintenance subject to the following conditions:
 - i. Funds shall be used only for items critically needed as identified and approved by the City’s Facilities & Building Construction Manager.
 - ii. City may disburse funds prior to commencement of a repair or maintenance project only upon a request that is supported by a valid contract or purchase order with a third party vendor on as needed basis approved in writing by the City’s Facilities & Building Construction Manager or the City’s Chief Financial Officer.
 - iii. City may reimburse Seven Hills for completed repair or maintenance work that was approved in writing prior to commencement of the work by the City’s Facilities & Building Construction Manager or the City’s Chief Financial Officer
 - iv. Repair and maintenance work funded by the City shall be limited to the Walker Family Residential Community complex.
- b. City, through its Purchasing Division, will be available for consultation by Seven Hills to ensure City policies for quotes and bids are followed correctly.

3. **Seven Hills Homeless Center’s Rights and Responsibilities.**

- a. Seven Hills shall comply with the City’s purchasing policies for contracts and expenditures of \$1,000.00 or more, including:
 - i. Obtaining at least three written quotes for any contract or expenditure between \$1,000.00 and \$20,000.00; and
 - ii. Advertising for bids for any contract or expenditure over \$20,000.00.
- b. Seven Hills shall use the funds provided by the City only for the uses set forth in paragraph 2 above.
- c. Seven Hills shall submit quarterly reports (due no later than March 31, June 30, September 30 and December 31, 2023) to the City’s Facilities & Building Construction Manager detailing:
 - i. The status of repair and maintenance projects being funded by the City; and
 - ii. A full accounting of the funds received by Seven Hills from the City pursuant to this contract through the date of the report.

- d. Seven Hills shall run its facilities and programs in an appropriate manner and shall continue to provide the same level of services to the community as has been provided during year prior to the execution of this contract.
 - e. Seven Hills shall promptly notify the City of any repair or maintenance issues of which it becomes aware during the term of this contract.
4. **Contract Amendments.** Changes, modifications or amendments to the scope, price or fees dictated by this Contract shall not be allowed without a prior formal Contract amendment approved by the Mayor and the City Council of Fayetteville and by the authorized agent of Seven Hills Homeless Center **in advance** of the change.

IN WITNESS WHEREOF, the parties hereto have caused their signatures to be set by their authorized representative effective the date set forth below.

SEVEN HILLS HOMELESS CENTER

**CITY OF FAYETTEVILLE,
ARKANSAS**

Mike Williams, Chief Executive Officer

Lioneld Jordan, Mayor

Date: _____

Date: _____

ATTEST:

Kara Paxton City Clerk

RESOLUTION NO. _____

A RESOLUTION TO APPROVE A CONTRACT WITH SEVEN HILLS HOMELESS CENTER TO PROVIDE FUNDING ASSISTANCE IN THE AMOUNT OF \$40,000.00 FOR MAINTENANCE AND REPAIRS AT THE WALKER FAMILY RESIDENTIAL COMMUNITY COMPLEX IN 2023

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:

Section 1: That the City Council of the City of Fayetteville, Arkansas hereby approves a contract with Seven Hills Homeless Center to provide funding assistance in the amount of \$40,000.00 for maintenance and repairs at the Walker Family Residential Community complex in 2023.



MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council
THRU: Paul Becker, Chief Financial Officer
FROM: Waylon Abernathy, Bond Projects & Construction Dir
DATE: December 27, 2022
SUBJECT: **AWARD BID #22-54 AND AUTHORIZE A CONTRACT WITH E.W.I., INC.**

RECOMMENDATION:

To award BID #22-54 and authorize a contract with E.W.I. Inc. in the amount of \$1,536,980.00 for construction of the Wilson Park Pavilion restroom facilities.

BACKGROUND:

In September 2019, a resolution was approved by the City Council for Architectural Services for a new restroom/pavilion for Wilson Park.

DISCUSSION:

The existing restroom facilities have long past their lifecycle and are in need of replacement. This contract includes the demolition of the existing restrooms and replacement with a new facility that will include 5 new individual restrooms, 2 of them fully ADA compliant and all 5 gender neutral. The new facility will also include a storage and mechanical space to store Parks' equipment and a large pavilion that will have many uses. Expected completion is Fall 2023.

BUDGET/STAFF IMPACT:

The contract amount includes a 10% contingency in the amount of \$139,725.00.

PURCHASE ORDER DETAILS:

ACCOUNT	PROJECT	AMOUNT
4705.860.7560-5806.00	46050.7560	1,050,000.00
2250.520.9255-5806.00	46050.7560	211,510.00
2250.520.9256-5806.00	46050.7560	275,470.00
TOTAL		1,536,980.00

ATTACHMENTS: Copy of 2022-0230 SRF E.W.I. Wilson Park Pavilion, 2022-0230 BA E.W.I. Wilson Park

Mailing address:

113 W. Mountain Street
Fayetteville, AR 72701

www.fayetteville-ar.gov

Pavilion, E.W.I Bid 22-54 Wilson Park Pavilion Contract Signed, Bid 22-54, FILE #01 - Project Manual - WM, Bid 22-54, FILE #03 - Addendum 1 - 11.16.22 - WM, Bid 22-54, FILE #02 - Plans - WM, RES BID 22-54 - EWI INC. WILSON PARK PAVILION - CONTINGENCY AND BA, RES BID 22-54 - EWI INC. WILSON PARK PAVILION - CONTINGENCY AND BA

Mailing address:

113 W. Mountain Street
Fayetteville, AR 72701

www.fayetteville-ar.gov

City of Fayetteville Staff Review Form

2022-0230

Item ID

1/3/2023

City Council Meeting Date - Agenda Item Only
N/A for Non-Agenda Item

Wade Abernathy

12/8/2022

FACILITIES MANAGEMENT (140)

Submitted By

Submitted Date

Division / Department

Action Recommendation:

Resolution to award a construction contract for Bid 22-54 Wilson Park Pavilion in the amount of \$1,536,980.00 to E.W.I., Inc. and to approve a budget adjustment. The contract amount includes a 10% contingency in the amount of \$139,725.00.

Budget Impact:

4705.860.7560-5806.00
2250.520.9255-5806.00
2250.520.9256-5806.00

Parks Projects 2022 Bonds
Parks Development

Account Number

Fund

46050.7560

Parks Projects - Wilson Hub Improvements

Project Number

Project Title

Budgeted Item? Yes

Total Amended Budget

\$ 16,014,746.00

Expenses (Actual+Encum)

\$ 3,686,593.30

Available Budget

\$ 12,328,152.70

Does item have a direct cost? Yes

Item Cost

\$ 1,536,980.00

Is a Budget Adjustment attached? Yes

Budget Adjustment

\$ 275,470.00

Remaining Budget

\$ 11,066,642.70

V20221130

Purchase Order Number: _____

Previous Ordinance or Resolution # _____

Change Order Number: _____

Approval Date: _____

Original Contract Number: _____

Comments:

City of Fayetteville, Arkansas - Budget Adjustment (Agenda)

Budget Year	Division	Adjustment Number
2023 (BY)	/Org2 FACILITIES MANAGEMENT (140)	
	Requestor: Wade Abernathy	

BUDGET ADJUSTMENT DESCRIPTION / JUSTIFICATION:

Resolution to award a construction contract for Bid 22-54 Wilson Park Pavilion in the amount of \$1,536,980.00 to E.W.I., Inc. and to approve a budget adjustment. The contract amount includes a 10% contingency in the amount of \$139,725.00.

	COUNCIL DATE: 1/3/2023
	ITEM ID#: 2022-0230
	<i>Holly Black</i>
	<i>12/13/2022 1:51 PM</i>
	Budget Division Date
	D - (City Council)
	TYPE:
	JOURNAL #:
	GLDATE: 1/3/2023
	CHKD/POSTED: /
RESOLUTION/ORDINANCE	

TOTAL	275,470	275,470					v.20221115
	Increase / (Decrease)		Project.Sub#				
Account Number	Expense	Revenue	Project	Sub.Detl	AT	Account Name	
4705.860.7560-5806.00	1,050,000	-	46050	7560	EX	Improvements - Park	
4705.860.7999-5899.00	(1,050,000)	-	46050	7999	EX	Unallocated - Budget	
2250.520.9256-4419.02	-	275,470	46050	7560	RE	Greenspace Fees - SW	
2250.520.9256-5806.00	275,470	-	46050	7560	EX	Improvements - Park	
2250.520.9255-5806.00	211,510	-	46050	7560	EX	Improvements - Park	
2250.520.9255-5806.00	(211,510)	-	13001	1902	EX	Improvements - Park	
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THIS AGREEMENT is made this _____ day of _____, 2022, by and between City of Fayetteville, Arkansas, acting by and through its Mayor (hereinafter called CITY OF FAYETTEVILLE or CITY) and **E.W.I., Inc.** (Vendor or **E.W.I.**), and

CITY OF FAYETTEVILLE from time to time requires professional construction services in connection with construction projects. Therefore, CITY OF FAYETTEVILLE and **E.W.I.** in consideration of their mutual covenants agree as follows:

Work performed by **E.W.I.** shall be performed under valid, active, current license with the Arkansas Contractor's Licensing Board. **E.W.I.** shall follow all federal, state, and local laws at all times.

1. Contracted parties and relationship:

- a. This agreement shall be binding between all parties. Fees shall be provided as identified in appendices.
 - i. **E.W.I.** Tax identification number (TIN) ending in 1498
 - ii. **E.W.I.** Arkansas Contractor License No. 0022980423
 - iii. **E.W.I.** Secretary of State Filing No. 100018255
- b. Parties agree to act on the basis of mutual trust, good faith, and fair dealing, and perform in a fiscally responsible and timely manner. Parties shall each endeavor to promote harmony and cooperation among all Project participants.

2. Entire Agreement and Exhibits: This Agreement sets forth the entire agreement and understanding between the parties on the subject matter of this Agreement. Neither party shall be bound by any conditions, definitions, representations or warranties with respect to the subject matter of this Agreement other than those as expressly provided herein.

- a. Appendices included under this agreement include the following:
 - i. **Appendix A:** Bid package identified as **Bid 22-54 Wilson Park Pavilion** with the specifications and conditions typed thereon inclusive of all bidding documents, plans and drawings and issued addenda.
 - ii. **Appendix B:** **E.W.I.'s** bid submittal
 - iii. **Appendix C:** **Bid 22-54 Recommendation for Award, inclusive of the bid tabulation**
 - iv. **Appendix D:** **E.W.I.'s** Certificate of Insurance
 - v. **Appendix E:** **E.W.I.'s** 100% Performance and Payment Bonds
 1. **Appendix D and E** shall be submitted to the City within the time frame identified in the bid documents or 10 (ten) calendar days after fully executed contract.
- b. This agreement may be modified only by a duly executed written instrument signed by the CITY and **E.W.I.**.
- c. ORDER OF PRECEDENCE: In case of any inconsistency, conflict, or ambiguity among the Contract Documents, the documents shall govern in the following order: (a) Change Orders and written

amendments to this Agreement which are executed by all parties; (b) the Agreement; (c) E.W.I.'s bid submittal (d) City's published bid and associated Addenda.

3. Notices: Any notice required under this Agreement shall be in writing, address to the appropriate party at the following addresses:

- a. City of Fayetteville: Attention: Mayor Lioneld Jordan, 113 W. Mountain, Fayetteville, AR 72701
- b. Vendor: E.W.I., Inc. 220 Knoxville Ave, Russellville, AR 72801

4. General Provisions:

- i. **ETHICS:** All parties shall perform with integrity. Each shall avoid conflicts of interest and promptly disclose to any other part any conflicts that may arise. All parties warrant that it has not and shall not pay or receive any contingent fees or gratuities to or from any other party, including agents, officer's employers, Subcontractors, Suppliers, Volunteers, Elected Officials, or Others to secure preferential treatment.
- ii. **Workmanship:** The Work shall be executed in accordance with the Contract Documents in a workmanlike manner. All materials used in the Work shall be furnished in sufficient quantities to facilitate the proper and expeditious execution of the Work and shall be new except as otherwise provided in the Contract Documents.
- iii. **MATERIALS FURNISHED BY OWNER OR OTHERS:** If the Work includes installation of materials or equipment furnished by City or Others, it shall be the responsibility of the vendor to examine the items so provided and thereupon handle, store, and install the items, unless otherwise provided in the Contract Documents, with such skill and care as to provide a satisfactory and proper installation. Loss or damage due to acts or omissions of the vendor shall be the responsibility of vendor and may be deducted from any amounts due or to become due. Any defects discovered in such materials or equipment shall be reported at once to the City and the City's contracted third-party Design Professional. Following receipt of written notice from vendor of defects, City and Design Professional shall promptly inform the City what action, if any, vendor shall take with regard to the defects.
- iv. **WORKSITE VISIT:** Vendor acknowledges that it has visited, or has had the opportunity to visit, the Worksite to visually inspect the general and local conditions which could affect the Work.
- v. Vendor shall perform all duties and responsibilities necessary to coordinate the various parts of the Work and to prepare its Work for the work of City or Others.
 - 1. Cutting, patching, or altering the work of City or Others shall be done with the prior written approval of City and Design Professional. Such approval shall not be unreasonably withheld.
- vi. **COMPLIANCE WITH LAWS:** Vendor shall comply with all the Law at its own cost. Vendor shall be liable to City for all loss, cost, or expense attributable to any acts or omissions by Vendor its employees, subcontractors, suppliers, and agents for failure to comply with Laws, including fines, penalties, or corrective measures.
- vii. **COST OF CORRECTING DAMAGED OR DESTROYED WORK:** With regard to damage or loss attributable to the acts or omissions of City or Others and not to Vendor, City may either (a) promptly remedy the damage or loss and assume affected warranty responsibilities, (b) accept the damage or loss, or (c) issue a Change Order to remedy the damage or loss. If Vendor incurs costs or is delayed due to such loss or damage, Vendor may seek an equitable adjustment in the

Cost of the Work, Date of Substantial Completion or Date of Final Completion. Any equitable adjustment shall be approved by all parties.

- viii. Taxes and Permits: Vendor shall give public authorities all notices required by law and shall obtain and pay for all necessary permits, licenses, and renewals pertaining to the Work. Vendor shall provide to City copies of all notices, permits, licenses, and renewals required under this Agreement.
 - 1. Vendor shall pay applicable taxes and permit fees associated with the entire project.
- ix. DISCOUNTS: All discounts for prompt payment shall accrue to City. All trade discounts, rebates, and refunds, and all returns from sale of surplus materials and equipment, shall be credited to the Cost of the Work, or directly to the City after final payment.
- x. City may occupy or use completed or partially completed portions of the Work when (a) the portion of the Work is designated in a Certificate of Substantial Completion, (b) appropriate insurer(s) consent to the occupancy or use, and (c) public authorities authorize the occupancy or use. Vendor shall not unreasonably withhold consent to partial occupancy or use.
- xi. JOINT DRAFTING: All Parties expressly agree that this Agreement was jointly drafted, and that both had opportunity to negotiate its terms and to obtain the assistance of counsel in reviewing its terms before execution. Therefore, this Agreement shall be construed neither against nor in favor of either Party but shall be construed in a neutral manner.
- xii. EXTENT OF AGREEMENT: Except as expressly provided, this Agreement is for the exclusive benefit of all Parties, and not the benefit of any third party. This Agreement represents the entire and integrated agreement between the Parties, and supersedes all prior negotiations, representations, or agreements, either written or oral. This Agreement and each and every provision is for the exclusive benefit of all Parties and not for the benefit of any third party.
- xiii. ASSIGNMENT: Except as to the assignment of proceeds, no Party shall assign their interest in this Agreement without the written consent of the other Party. The terms and conditions of this Agreement shall be binding upon all Parties, their partners, successors, assigns, and legal representatives. No Party shall assign the Agreement without written consent of the other.
- xiv. Where figures are given, they shall be preferred to scaled dimensions.
- xv. The drawings and specifications are complementary. If Work is shown only on one but not on the other, Vendor shall perform the Work as though fully described on both. Vendor shall seek clarification from the City or the City's third-party Design Professional for any discrepancies.
- xvi. In case of conflicts between the drawings and specifications, the specifications shall govern unless otherwise stated in the bidding documents. In any case of omissions or errors in figures, drawings, or specifications, Vendor shall immediately submit the matter to City and Design Professional for clarification. The City's clarifications are final and binding, which may include third-party Design Professional content.
- xvii. DEBARMENT AND SUSPENSION: By execution of this agreement, Vendor certifies that to the best of its knowledge and belief that the Vendor and its principals:

1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
2. Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
3. Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (2) of this certification; and
4. (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.
5. Vendor understands that a false statement on certification regarding debarment and suspension may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine. I further certify that I will obtain a similar certification for each subcontract awarded in excess of \$25,000.
6. Certifications for subcontracts or subsubcontracts executed under this agreement shall include all language in this section.

5. Definitions:

- a. Unless otherwise specifically defined in this Agreement, any terms that have well-known technical or trade meanings shall be interpreted in accordance with their well-known meanings.
- b. "Business Day" means all Days, except weekends and official federal or state holidays where the Project is located.
- c. A "Change Order" is a written order signed by all Parties after execution of this Agreement, indicating changes in the scope of the Work, and Date of Substantial Completion or Date of Final Completion.
- d. "Contract Time" is the period between the Date of Notice to Proceed and the total time authorized to achieve Final Completion.
- e. "Cost of the Work" means the total costs and discounts charged to the City.
- f. The "Vendor" is the person or entity identified in this contract and includes Vendor's Representative.
- g. "Day" means a calendar day unless otherwise specified.
- h. "Defective Work" is any portion of the Work that that does not conform with the requirements of the Contract Documents.
- i. "Design Professional" means the licensed architect retained by the City and its subconsultants, to perform design services for the Project.
- j. "Final Completion" occurs on the date when Vendor's obligations under this Agreement are complete and accepted by City and final payment becomes due and payable. This date shall be confirmed by a Certificate of Final Completion signed by all Parties.
- k. "Hazardous Material" is any substance or material identified now or in the future as hazardous under the Law, or any other substance or material that may be considered hazardous or otherwise subject to statutory or regulatory requirement governing handling, disposal, or cleanup.

- l. "Interim Directive" is a written order containing change to the Work directed by and in consultation with City and Design Professional after execution of this Agreement and before Substantial Completion. Interim Directives shall be consolidated and formalized in a change order to be signed by all parties.
- m. "Law" means federal, state, or local laws, ordinances, codes, rules, and regulations applicable to the Work with which Vendor must comply that are enacted as of the Agreement date.
- n. "Others" means City's other: (a) contractors/constructors, (b) suppliers, (c) subcontractors, subsubcontractors, or suppliers of (a) and (b); and others employed directly or indirectly by (a), (b), or (c) or any by any of them or for whose acts any of them may be liable.
- o. "Overhead" means (a) payroll costs, burden, and other compensation of Vendor's employees in Vendor's principal and branch offices for work associated with this project.
- p. "Owner" is the City of Fayetteville, Arkansas (City).
- q. The "Owner's Program" is an initial description of Owner's objectives, including budgetary and time criteria, space requirements and relationships, flexibility and expandability requirements, special equipment and systems, site requirements, and any requirements for phased occupancy.
- r. The "Parties" are collectively City and Vendor.
- s. The "Project," is the building, facility, or other improvements for which Vendor is to perform Work under this Agreement. It may also include construction by Owner or Others.
- t. The "Schedule of the Work" is the document prepared by Vendor that specifies the dates on which Vendor plans to begin and complete various parts of the Work, including dates on which information and approvals are required from City.
- u. "Subcontractor" is a person or entity retained by Vendor as an independent contractor to provide the labor, materials, equipment, or services necessary to complete a specific portion of the Work. The term Subcontractor does not include Design Professional or Others.
- v. "Substantial Completion" of the Work, or of a designated portion, occurs on the date when the Work is sufficiently complete in accordance with the Contract Documents so that City may occupy or utilize the Work, or a designated portion, for the use for which it is intended, without unapproved disruption. This date shall be confirmed by a certificate of Substantial Completion signed by all Parties.
- w. A "Subsubcontractor" is a person or entity who has an agreement with a Subcontractor or another subsubcontractor or Supplier to perform a portion of the Subcontractor's Work or supply material or equipment.
- x. A "Supplier" is a person or entity retained by Vendor to provide material or equipment for the Work.
- y. "Terrorism" means a violent act, or an act that is dangerous to human life, property, or infrastructure, that is committed by an individual or individuals and that appears to be part of an effort to coerce a civilian population or to influence the policy or affect the conduct of any government by coercion. Terrorism includes, but is not limited to, any act certified by the United States government as an act of terrorism pursuant to the Terrorism Risk Insurance Act, as amended.
- z. "Work" means the construction services necessary or incidental to fulfill Vendor's obligations for the Project in accordance with and reasonably inferable from the Contract Documents. The Work may refer to the whole Project or only a part of the Project if work is also being performed by Owner or Others.
- aa. "Worksite" means the area of the Project where the Work is to be performed.
- bb. "Bi-monthly basis" means every fourteen to sixteen calendar days.

6. Contract Document Review and Administration

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- a. Before commencing the Work, Vendor shall examine and compare the drawings and specifications with information furnished by the City and Design Professional that are considered Contract Documents, relevant field measurements made by Vendor, and any visible conditions at the Worksite affecting the Work.
- b. Should Vendor discover any errors, omissions, or inconsistencies in the Contract Documents, Vendor shall promptly report them to the City and Design Professional. Following receipt of written notice from Vendor of defects, City shall promptly inform Vendor what action, if any, Vendor shall take with regard to the defect.
- c. Nothing in this section shall relieve VENDOR of responsibility for its own errors, inconsistencies, or omissions.
- d. COST REPORTING: Vendor shall maintain complete, accurate, and current records that comply with generally accepted accounting principles and calculate the proper financial management under this Agreement. Vendor shall maintain a complete set of all books and records prepared or used by Vendor with respect to the Project. City shall be afforded access to all of Vendor's records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to this Agreement. Vendor shall preserve all such records for a period of three years after the final payment or longer where required by Law.

7. Warranty

- a. Vendor warrants all materials and equipment furnished under the Construction Phase of this Agreement will be new unless otherwise specified, of good quality, in conformance with the Contract Documents, and free from defective workmanship and materials. At City or Design Professional request, Vendor shall furnish satisfactory evidence of the quality and type of materials and equipment furnished. Vendor further warrants all Work shall be free from material defects not intrinsic in the design or materials required in the Contract Documents. Vendor's warranty does **not include** remedies for defects or damages caused by normal wear and tear during normal usage beyond the warranty period, use for a purpose for which the Project was not intended, improper or insufficient maintenance, modifications performed by the City or others, or abuse. Vendor's warranty shall commence on the Date of Final Completion of the Project.
- b. To the extent products, equipment, systems, or materials incorporated in the Work are specified and purchased by the City, they shall be covered exclusively by the warranty of the manufacturer. There are no warranties which extend beyond the description on the face of any such warranty. For such incorporated items, ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING THE WARRANTY OF MERCHANTABILITY AND THE WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED.
- c. Vendor shall obtain from its Subcontractors and Suppliers any special or extended warranties required by the Contract Documents. Vendor's liability for such warranties shall be limited to the one-year correction period, as further defined in this Agreement. After that period Vendor shall provide full and comprehensive assistance to the City in enforcing the obligations of Subcontractors or Suppliers for such extended warranties.
- d. Correction of Work
 - i. If before Substantial Completion or within two-years after the date of Final Completion of the Work any Defective Work is found, City shall promptly notify Vendor in writing. Unless City provides written acceptance of the condition, Vendor shall promptly correct the Defective Work

at its own cost and time and bear the expense of additional services required for correction of any Defective Work for which it is responsible. If within the two-year correction period City discovers and does not promptly notify Vendor or give Vendor an opportunity to test or correct Defective Work as reasonably requested by Vendor, City waives Vendor's obligation to correct that Defective Work as well as City's right to claim a breach of the warranty with respect to that Defective Work.

- ii. If Vendor fails to correct Defective Work within a reasonable time after receipt of written notice from City before final payment, City may correct it in accordance with Owner's right to carry out the Work. In such case, an appropriate Change Order shall be issued deducting the cost of correcting the Defective Work from payments then or thereafter due Vendor. If payments then or thereafter due Vendor are not sufficient to cover such amounts, Vendor shall pay the difference to City.
- iii. Vendor's obligations and liability, if any, with respect to any Defective Work discovered after the two-year correction period shall be determined by the Law. If, after the two-year correction period but before the applicable limitation period has expired, City discovers any Work which City considers Defective Work, City shall, unless the Defective Work requires emergency correction, promptly notify Vendor and allow Vendor an opportunity to correct the Work if Vendor elects to do so. If Vendor elects to correct the Work it shall provide written notice of such intent within fourteen (14) Days of its receipt of notice from City and shall complete the correction of Work within a mutually agreed timeframe. If Vendor does not elect to correct the Work, City may have the Work corrected by itself or Others, and, if City intends to seek recovery of those costs from Vendor, City shall promptly provide Vendor with an accounting of the actual correction costs.
- iv. If Vendor's correction or removal of Defective Work causes damage to or destroys other completed or partially completed work or existing building, Vendor shall be responsible for the cost of correcting the destroyed or damaged property.
- v. The two-year period for correction of Defective Work does not constitute a limitation period with respect to the enforcement of Vendor's other obligations under the Contract Documents.
- vi. Before final payment, at City option and with Vendor's agreement, City may elect to accept Defective Work rather than require its removal and correction. In such cases the contract shall be equitably adjusted for any diminution in the value, as determined by City, of the Project caused by such Defective Work via formal written change order.

8. Safety of Persons and Property

- a. SAFETY PROGRAMS: Vendor holds overall responsibility for safety programs. However, such obligation does not relieve Subcontractors of their safety responsibilities and to comply with the Law. Vendor shall prevent against injury, loss, or damage to persons or property by taking reasonable steps to protect: (a) its employees and other persons at the Worksite; (b) materials and equipment stored at onsite or offsite locations for use in performing the Work; and (c) property located at the Worksite and adjacent to work areas, whether or not the property is part of the Worksite.
- b. VENDOR'S SAFETY REPRESENTATIVE: Vendor shall designate an individual at the Worksite in its employ as its safety representative. Unless otherwise identified by Vendor in writing to City, Vendor's project superintendent shall serve as its safety representative. Vendor shall report promptly in writing all

recordable accidents and injuries occurring at the Worksite. When Vendor is required to file an accident report with a public authority, Vendor shall furnish a copy of the report to City.

- c. Vendor shall provide City with copies of all notices required of Vendor by the Law. Vendor's safety program shall comply with the requirements of governmental and quasi-governmental authorities having jurisdiction.
 - i. Damage or loss not insured under property insurance that may arise from the Work, to the extent caused by negligent or intentionally wrongful acts or omissions of Vendor, or anyone for whose acts Vendor may be liable, shall be promptly remedied by Vendor.
- d. If City deems any part of the Work or Worksite unsafe, City, without assuming responsibility for Vendor's safety program, may require Vendor to stop performance of the Work, take corrective measures satisfactory to City. If Vendor does not adopt corrective measures, City may perform them and deduct their cost from the GMP. Vendor agrees to make no claim for damages, or an increase in the GMP, or for a change in the Dates of Substantial or Final Completion based on Vendor's compliance with City's reasonable request.

9. Subcontracts:

- a. BINDING OF SUBCONTRACTORS AND SUPPLIERS: Vendor agrees to bind every Subcontractor and Supplier and require every Subcontractor to so bind its subcontractors and significant supplier, to the Contract Documents as they apply to the Subcontractor's or Supplier's applicable provisions to that portion of the Work.
- b. Vendor agrees not to subcontract Vendor at risk related services without prior written consent from the City.

10. Fees, Expenses, and Payments:

- a. **E.W.I.** at its own cost and expense shall furnish all labor, materials, supplies, machinery, equipment, tools, supervision, bonds, insurance, tax permits, and all other accessories and services necessary to complete items bid per **Bid 22-54** as stated in **E.W.I.** bid response, and in accordance with specifications attached hereto and made a part hereof under **Bid 22-54**, all included herein as if spelled out word for word.
- b. This turn-key project providing labor and materials shall be provided to the City for a not to exceed fee of **\$1,536,980.00** US Dollars.
- c. The City of Fayetteville shall pay **E.W.I.** for completion of the project based on a percentage of work completed. At no point shall payment exceed the percentage of work completed, as determined by the City.
- d. Payments will be made after approval and acceptance of work and submission of invoice. Payments will be made approximately 30 days after approval of invoice. The City of Fayetteville reserves the right to request receipts for materials purchased for the City of Fayetteville from suppliers, subcontractors, or other sources. The City of Fayetteville does not agree to any interest or penalty for "untimely" payments.
- e. The City reserves the right to withhold five percent (5%) retainage from all payments until project is completed in full.
- f. Not to exceed pricing shall include but not be limited to:

1. Labor wages directly employed by Vendor in performing of the Work.
2. Salaries of Vendor's employees when stationed at the field office, in whatever capacity employed, employees engaged on the road expediting the production or transportation of material and equipment, and employees from the principal or branch office as mutually agreed by the Parties in writing.
3. Cost of all employee benefits and taxes, including but not limited to, workers' compensation, unemployment compensation, social security, health, welfare, retirement, and other fringe benefits as required by law, labor agreements, or paid under Vendor's standard personnel policy, insofar as such costs are paid to employees of Vendor who are included in the Cost of the Work.
4. Transportation, travel, hotel, and moving expenses of Vendor's personnel incurred in connection with the Work.
5. Cost of all materials, supplies, and equipment incorporated in the Work, including costs of inspection and testing if not provided by City, transportation, storage, and handling.
6. Payments made by Vendor to Subcontractors for work performed under this Agreement.
7. Cost, including transportation and maintenance of all materials, supplies, equipment, temporary facilities, and hand tools not owned by the workers that are used or consumed in the performance of the Work, less salvage value or residual value; and cost less salvage value on such items used, but not consumed that remain the property of Vendor.
8. Rental charges of all necessary machinery and equipment, exclusive of hand tools owned by workers, used at the Worksite, whether rented from Vendor or others, including installation, repair, and replacement, dismantling, removal, maintenance, transportation, and delivery costs at competitive market rates.
9. Cost of the premiums for all insurance and surety, performance or payment bonds which Vendor is required to procure or deems necessary and approved by City.
10. Sales, use, gross receipts, or other taxes, tariffs, or duties related to the Work for which Vendor is liable.
11. Permits, taxes, fees, licenses, tests, royalties.
12. Losses, expenses, or damages to the extent not compensated by insurance or otherwise, and the cost of corrective work during the Construction Phase and for the warranty period.
13. Costs associated with establishing, equipping, operating, maintaining, mobilizing and demobilizing the field office and site.
14. Water, power, and fuel costs necessary for the Work.
15. Cost of removal of all nonhazardous substances, debris, and waste materials.

16. Costs incurred due to an emergency affecting the safety of persons or property.

17. Costs directly incurred in the performance of the Work or in connection with the Project, and not included in Vendor's Fee, which are reasonably inferable from the Contract Documents.

- g. **STORED MATERIALS AND EQUIPMENT:** Unless otherwise provided in the contract documents, applications for payment may include materials and equipment not yet incorporated into the Work but delivered to and suitably stored onsite or offsite including applicable insurance, storage, and costs incurred transporting the materials to an offsite storage facility. Approval of payment applications for stored materials and equipment stored offsite shall be conditioned on a submission by Vendor of bills of sale and proof of required insurance, or such other documentation satisfactory to City to establish the proper valuation of the stored materials and equipment, City's title to such materials and equipment, and to otherwise protect City's interests therein, including transportation to the Worksite. Materials and equipment stored offsite shall be in a bonded and insured secure facility.
- h. **Final Payment:** Upon satisfactory completion of the work performed under this Agreement, as a condition before final payment under this Agreement, or as a termination settlement under this Agreement, VENDOR shall execute and deliver to CITY OF FAYETTEVILLE a release of all claims against CITY OF FAYETTEVILLE arising under or by virtue of this Agreement, except claims which are specifically exempted by VENDOR to be set forth therein.
 - i. Unless otherwise provided in this Agreement or by State law or otherwise expressly agreed to by the parties to this Agreement, final payment under this Agreement or settlement upon termination of this Agreement shall not constitute a waiver of CITY OF FAYETTEVILLE's claims against VENDOR or sureties under this Agreement.

11. Project Bonding - Performance and payment bonding: After execution of this contract by all parties, VENDOR shall provide a 100% **separate** performance and payment bond from a bonding company, licensed to do business in the state of Arkansas, to the City of Fayetteville after being file marked at the Washington County Circuit Clerk's Office. Bonds shall be provided within ten (10) calendar days after this contract has been executed by all parties.

- a. All bonds shall be listed with the U.S. Treasury Department listing of approved surety's (T-List) and shall be rated A+ minimum by A. M. Best.

12. Time:

- a. **SUBSTANTIAL and FINAL COMPLETION:** Date of Substantial Completion and the Date of Final Completion shall be established in the contract documents as a hard not to exceed date. If such dates are not established upon the execution of this Agreement, a Date of Substantial Completion and Date of Final Completion of the Work shall be established via Change Order.
- b. Time is of the essence with regard to the obligations of the Contract Documents.
- c. Unless instructed by City in writing, Vendor shall not knowingly commence the Work before the effective date of Vendor's required insurance and bonds and formal written and signed Purchase Order issued by the City of Fayetteville Purchasing Division.
- d. **Schedule of Work:** Before submitting its first application for payment, Vendor shall submit to City and, if directed, Design Professional a Schedule of the CONTRACT: CONTRACT Work showing the dates on which Vendor plans to begin and complete various parts of the Work, including dates on which information and approvals are required

from City. Except as otherwise directed by City, Vendor shall comply with the approved Schedule of the Work or Vendor.

- i. City may determine the sequence in which the Work shall be performed, provided it does not unreasonably interfere with the approved project schedule. City may require Vendor to make reasonable changes in the sequence at any time during the performance of the Work in order to facilitate the performance of work by City or Others. If Vendor consequently incurs costs or is delayed, the Dates of Substantial or Final Completion, or both, Vendor may seek equitable adjustment.
- e. NOTICE OF DELAY CLAIMS: If Vendor requests an equitable extension of the Contract Time or an equitable adjustment contract as a result of a delay described, Vendor shall give City written notice of the claim. If Vendor causes delay in the completion of the Work, City shall be entitled to recover its additional costs.

13. Substantial Completion:

- a. Vendor shall notify City and, if directed, Design Professional when it considers Substantial Completion of the Work or a designated portion to have been achieved. City, with the assistance of its Design Professional, shall promptly conduct an inspection to determine whether the Work or designated portion can be occupied or used for its intended use by City without excessive interference in completing any remaining unfinished Work. If City determines the Work or designated portion has not reached Substantial Completion, City, with the assistance of its Design Professional, shall promptly compile a list of items to be completed or corrected so City may occupy or use the Work or designated portion for its intended use. Vendor shall promptly and accurately complete all items on the list.
- b. When Substantial Completion of the Work or a designated portion is achieved, Vendor shall prepare a Certificate of Substantial Completion establishing the date of Substantial Completion and the respective responsibilities of each Party for interim items such as security, maintenance, utilities, insurance, and damage to the Work, and fixing the time for completion of all items on the list accompanying the Certificate. The Certificate of Substantial Completion shall be submitted by Vendor to City and, if directed, to Design Professional for written acceptance of responsibilities assigned in the Certificate of Substantial Completion.
- c. Unless otherwise provided in the Certificate of Substantial Completion, warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or a designated portion.
- d. Upon City's written acceptance of the Certificate of Substantial Completion, City shall pay to Vendor the remaining retainage held by City for the Work described in the Certificate of Substantial Completion less a sum equal to one hundred and fifty percent (150%) of the estimated cost of completing or correcting remaining items on that part of the Work, as agreed to by the Parties as necessary to achieve Final Completion, including all close outs. Uncompleted items shall be completed by Vendor in a mutually agreed upon timeframe.

14. Final Completion:

- i. Upon notification from Vendor that the Work is complete and ready for final inspection and acceptance, City, with the assistance of its Design Professional shall promptly conduct an inspection to determine if the Work has been completed and is acceptable under the Contract Documents.

- ii. When the Work is complete, Vendor shall prepare for City's written acceptance a final application for payment stating that to the best of Vendor's knowledge, and based on City's inspections, the Work has reached Final Completion in accordance with the Contract Documents.
 - iii. Final payment shall be made to Vendor within thirty (30) Days after Vendor has submitted an application for final payment, pending the application has been approved by the City, including submissions required, and a Certificate of Final Completion has been executed by all Parties.
 - iv. Final payment shall be due on Vendor's submission of the following to the City:
 - 1. an affidavit declaring any indebtedness connected with the Work, to have been paid, satisfied, or to be paid with the proceeds of final payment, so as not to encumber City property;
 - 2. as-built drawings, manuals, copies of warranties, and all other close-out documents required by the Contract Documents;
 - 3. release of any liens, conditioned on final payment being received;
 - 4. consent of any surety; and
 - 5. any outstanding known and unreported accidents or injuries experienced by Vendor or its Subcontractors at the Worksite.
 - v. If, after Substantial Completion of the Work, the Final Completion of a portion of the Work is materially delayed through no fault of Vendor. If approved by City, they shall pay the balance due for any portion of the Work fully completed and accepted. If the remaining contract balance for Work not fully completed and accepted is less than the retained amount before payment, Vendor shall submit to City and, if directed, Design Professional the written consent of any surety to payment of the balance due for portions of the Work that are fully completed and accepted. Such payment shall not constitute a waiver of claims, but otherwise shall be governed by this section.
 - vi. ACCEPTANCE OF FINAL PAYMENT: Unless Vendor provides written identification of unsettled claims with an application for final payment, its acceptance of final payment constitutes a waiver of such claims.
- b. **E.W.I.** shall ensure that the City of Fayetteville receives lien waivers from all material suppliers, subcontractors and sub-subcontractors and **before** work begins on the project. The contractor shall give written notice to the material suppliers, subcontractors and sub-subcontractors providing work on the project that states the following:
- i. *'According to Arkansas law, it is understood that no liens can be filed against public property if valid and enforceable payment and performance bond is in place. Regarding this Project and Agreement, the valid and enforceable bonds are with (National American Insurance Company).'*
 - ii. **E.W.I.** shall have each subcontractor, sub-subcontractor and material supplier execute a written receipt evidencing acknowledgment of this statement prior to commencement of the work of the subcontractor or material supplier.

- 15. Notices:** Any notice required to be given under this Agreement to either party to the other shall be sufficient if addressed and mailed, certified mail, postage paid, delivery, fax or e-mail (receipt confirmed), or overnight courier.
- 16. Jurisdiction:** Legal jurisdiction to resolve any disputes shall be Arkansas with Arkansas law applying to the case.
- 17. Venue:** Venue for all legal disputes shall be Washington County, Arkansas.
- 18. Freedom of Information Act:** City of Fayetteville contracts and documents prepared while performing contractual work are subject to the Arkansas Freedom of Information Act. If a Freedom of Information Act request is presented to the City of Fayetteville, the VENDOR shall do everything possible to provide the documents in a prompt and timely manner as prescribed in the Arkansas Freedom of Information Act (A.C.A. 25-19-101 et. Seq.). Only legally authorized photo copying costs pursuant to the FOIA may be assessed for this compliance.
- 19. Changes in Scope or Price:** Changes, modifications, or amendments in scope, price or fees to this contract shall not be allowed without a prior formal contract amendment approved by the Mayor and the City Council **in advance** of the change in scope, cost or fees.
- 20. Insurance:**
- a. Before starting the Work and as a condition precedent to payment, Vendor shall procure and maintain in force Workers' Compensation Insurance, Employers' Liability Insurance, Business Automobile Liability Insurance, and Commercial General Liability Insurance ("CGL"). The CGL policy shall include coverage for liability arising from premises, operations, independent contractors, products-completed operations, personal injury and advertising injury, contractual liability, pollution coverage, and broad form property damage. Vendor shall maintain completed operations liability insurance for one year after Substantial Completion, or as required by the Contract Documents, whichever is longer. Vendor's Employers' Liability, Business Automobile Liability and CGL policies shall be written with at least the limits of liability presented in **Appendix D**.
 - b. Employers' Liability, Business Automobile Liability, and CGL coverages required may be provided by a single policy for the full limits required or by a combination of underlying policies with the balance provided by excess or umbrella liability policies.
 - c. Vendor shall maintain in effect all insurance coverage required with insurance companies lawfully authorized to do business in the jurisdiction in which the Project is located. If Vendor fails to obtain or maintain any insurance coverage required under this Agreement, City may purchase such coverage and charge the expense to Vendor or terminate this Agreement.
 - d. To the extent commercially available to Vendor from its current insurance company, insurance policies required shall contain a provision that the insurance company or its designee shall give City written notice transmitted in paper and electronic format: (a) 30 Days before coverage is nonrenewed by the insurance company and (b) within 10 Business Days after cancelation of coverage by the insurance company. Before commencing the Work and upon renewal or replacement of the insurance policies, Vendor shall furnish City with certificates of insurance until one year after Substantial Completion or longer if required by the Contract Documents. In addition, if any insurance policy required is not to be immediately replaced without lapse in coverage when it expires, exhausts its limits, or is to be cancelled, Vendor shall give City prompt written notice upon actual or constructive knowledge of such condition.
 - e. Certificates of Insurance shall list the City as Additional Insured Parties.
 - f. **PROPERTY INSURANCE:**

- i. At no time shall any policy be covered by self-insurance or in a self-insured format. All policies shall be covered by an approved commercial insurance professional properly licensed to do business in Arkansas.
- ii. Unless otherwise directed in writing by City, before starting the Work, **E.W.I.** shall obtain and maintain a Builder's Risk Policy upon the entire Project for the full cost of replacement at the time of loss, including existing structures. This insurance shall also (a) name Vendor, Subcontractors, Subsubcontractors, and Design Professional as named insureds; (b) be written in such form to cover all risks of physical loss except those specifically excluded by the policy; and (c) insure at least against and **not** exclude:
 - 1. the perils of fire, lightning, explosion, windstorm, hail, smoke, aircraft (except aircraft, including helicopter, operated by or on behalf of Vendor) and vehicles, riot and civil commotion, theft, vandalism, malicious mischief, debris removal, flood, earthquake, earth movement, water damage, wind damage, testing if applicable, collapse, however caused;
 - 2. damage resulting from defective design, workmanship, or material;
 - 3. coverage extension for damage to existing buildings, plant, or other structures at the Worksite, when the Project is contained within or attached to such existing buildings, plant or structures. Coverage shall be to the extent loss or damage arises out of Constructor's activities or operations at the Project;
 - 4. equipment breakdown, including mechanical breakdown, electrical injury to electrical devices, explosion of steam equipment, and damage to steam equipment caused by a condition within the equipment;
 - 5. testing coverage for running newly installed machinery and equipment at or beyond the specified limits of their capacity to determine whether they are fit for their intended use; and
 - 6. physical loss resulting from Terrorism.
- iii. The Party that is the primary cause of a Builder's Risk Policy claim shall be responsible for any deductible amounts or coinsurance payments. If no Party is the primary cause of a claim, then the Party obtaining and maintaining the Builder's Risk Policy shall be responsible for the deductible amounts or coinsurance payments. This policy shall provide for a waiver of subrogation. This insurance shall remain in effect until final payment has been made or until no person or entity other than City has an insurable interest in the property to be covered by this insurance, whichever is sooner. Partial occupancy or use of the Work shall not commence until City has secured the consent of the insurance company or companies providing the coverage required in this subsection. Before commencing the Work, City shall provide a copy of the property policy or policies obtained.
- iv. If City elects to purchase the property insurance required by this Agreement, including all of the coverages and deductibles for the same durations specified, City shall give written notice to Vendor before the Work is commenced and provide a copy of the property policy or policies obtained in compliance with this agreement. City may then provide insurance to protect its

interests and the interests of the Constructor, Subcontractors, Suppliers, and Subsubcontractors. The cost of this insurance shall be paid by City in a Change Order. If City gives written notice of its intent to purchase property insurance required by this Agreement and fails to purchase or maintain such insurance, City shall be responsible for costs reasonably attributed to such failure.

- v. The Parties each waive all rights against each other and their respective employees, agents, contractors, subcontractors, suppliers, subsubcontractors, and design professionals for damages caused by risks covered by the property insurance, except such rights as they may have to the proceeds of the insurance.
 - 1. To the extent of the limits of Vendor's Commercial General Liability Insurance, Vendor shall indemnify and hold harmless City against any and all liability, claims, demands, damages, losses, and expenses, including attorneys' fees, in connection with or arising out of any damage or alleged damage to any of City's existing adjacent property, including personal property, that may arise from the performance of the Work, to the extent caused by the negligent or intentionally wrongful acts or omissions of Vendor, Subcontractor, Supplier, Subsubcontractor, or anyone employed directly or indirectly by any of them or by anyone for whose acts any of them may be liable.
- g. RISK OF LOSS: Except to the extent a loss is covered by applicable insurance, risk of loss from damage to the Work shall be upon the Party obtaining and maintaining the Builder's Risk until the Date of Final Completion.
- h. ADDITIONAL GENERAL LIABILITY COVERAGE: City shall require Vendor to purchase and maintain additional liability coverage. Vendor shall provide:
 - i. Additional Insured. City shall be named as an additional insured on Vendor's Commercial General Liability (CGL) specified, for on-going operations and completed operations, excess/umbrella liability, commercial automobile liability, and any required pollution liability, but only with respect to liability for bodily injury, property damage, or personal and advertising injury to the extent caused by the negligent acts or omissions of Vendor, or those acting on Vendor's behalf, in the performance of Vendor's work for Owner at the Worksite. The insurance of the Vendor and its Subcontractors (both primary and excess) shall be primary to any insurance available to the Additional Insureds. Any insurance available to the Additional Insureds shall be excess and non-contributory.
 - ii. OCP. Vendor shall provide an Owners' and Contractors' Protective Liability Insurance ("OCP") policy with limits equal to the limits on CGL specified, or limits as otherwise required by Owner.
- i. Any documented additional cost in the form of a surcharge associated with procuring the additional liability coverage in accordance with this subsection shall be paid by VENDOR. Before commencing the Work, Vendor shall provide either a copy of the OCP policy, or a certificate and endorsement evidencing that City has been named as an additional insured, as applicable.
 - i. ROYALTIES, PATENTS, AND COPYRIGHTS: Vendor shall pay all royalties and license fees which may be due on the inclusion of any patented or copyrighted materials, methods, or systems selected by Vendor and incorporated in the Work. Vendor shall defend, indemnify, and hold City harmless from all suits or claims for infringement of any patent rights or copyrights arising out of such

selection.

- j. **PROFESSIONAL LIABILITY INSURANCE:** To the extent Vendor is required to procure design services, Vendor shall require its design professionals to obtain a commercial professional liability insurance for claims arising from the negligent performance of professional services under this Agreement, with a company reasonably satisfactory to City, including coverage for all professional liability caused by any consultants to Vendor's design professional, written for not less than one million US dollars (\$1,000,000) per claim and in the aggregate. Vendor's design professional shall pay the deductible. The Professional Liability Insurance shall contain a retroactive date providing prior acts coverage sufficient to cover all Services performed by the Constructor's design professional for this Project. Coverage shall be continued in effect for the entire warranty period.

21. Professional Responsibility: VENDOR will exercise reasonable skill, care, and diligence in the performance of services and will carry out its responsibilities in accordance with customarily accepted professional practices. CITY OF FAYETTEVILLE will promptly report to VENDOR any defects or suspected defects in services of which CITY OF FAYETTEVILLE becomes aware, so VENDOR can take measures to minimize the consequences of such a defect. CITY OF FAYETTEVILLE retains all remedies to recover for its damages caused by any negligence of VENDOR.

22. Responsibility of the City of Fayetteville

- a. CITY OF FAYETTEVILLE shall, within a reasonable time, so as not to delay the services of VENDOR:
 - i. Provide full information as to the requirements for the Project.
 - ii. Assist **E.W.I.** by placing at **E.W.I.** disposal all available information pertinent to the assignment including previous reports and any other data relative thereto.
 - iii. Assist **E.W.I.** in obtaining access to property reasonably necessary for **E.W.I.** to perform its services.
 - iv. Examine all studies, reports, sketches, cost opinions, proposals, and other documents presented by **E.W.I.** and render in writing decisions pertaining thereto.
 - v. Review all documents and provide written comments to **E.W.I.** in a timely manner.
 - vi. The City of Fayetteville Facilities Director is the project representatives with respect to the services to be performed under this Agreement. The Facilities Director Representative shall have complete authority to transmit instructions, receive information, interpret and define policies and decisions with respect to materials, equipment, elements and systems to be used in the Project, and other matters pertinent to the services covered by this Agreement.

23. Cost Opinions and Projections: Cost opinions and projections prepared by the **E.W.I.** relating to construction costs and schedules, operation and maintenance costs, equipment characteristics and performance, cost estimating, and operating results are based on **E.W.I.'s** experience, qualifications, and judgment as a **E.W.I.** professional.

24. Period of Service: This Agreement will become effective upon the first written notice by CITY OF FAYETTEVILLE authorizing services hereunder.

- a. The provisions of this Agreement have been agreed to in anticipation of the orderly progress of the Project through completion of the services stated in the Agreement. VENDOR shall proceed with providing the authorized services immediately upon receipt of written authorization from CITY OF FAYETTEVILLE. Said authorization shall include the scope of the services authorized and the time in which the services are to be completed.

25. Termination:

- a. This Agreement may be terminated in whole or in part in writing by either party in the event of substantial failure by the other party to fulfill its obligations under this Agreement through no fault of the terminating party, provided that no termination may be effected unless the other party is given:
 - i. Not less than ten (10) calendar days written notice (delivered by certified mail, return receipt requested) of intent to terminate,
 - ii. An opportunity for consultation with the terminating party prior to termination.
- b. This Agreement may be terminated in whole or in part in writing by CITY OF FAYETTEVILLE for its convenience, provided that VENDOR is given:
 - i. Not less than ten (10) calendar days written notice (delivered by certified mail, return receipt requested) of intent to terminate,
 - ii. An opportunity for consultation with the terminating party prior to termination.
- c. If termination for default is effected by CITY OF FAYETTEVILLE, an equitable adjustment in the price provided for in this Agreement shall be made, but
 - i. No amount shall be allowed for anticipated profit on unperformed services or other work,
 - ii. Any payment due to VENDOR at the time of termination may be adjusted to cover any additional costs to CITY OF FAYETTEVILLE because of VENDOR's default.
- d. If termination for default is effected by VENDOR, or if termination for convenience is effected by CITY OF FAYETTEVILLE, the equitable adjustment shall include a reasonable profit for services or other work performed. The equitable adjustment for any termination shall provide for payment to VENDOR for services rendered and expenses incurred prior to the termination, in addition to termination settlement costs reasonably incurred by VENDOR relating to commitments which had become firm prior to the termination.
- e. Upon receipt of a termination action under Paragraphs above, VENDOR shall:
 - i. Promptly discontinue all affected work (unless the notice directs otherwise),
 - ii. Deliver or otherwise make available to CITY OF FAYETTEVILLE all data, drawings, specifications, reports, estimates, summaries and such other information and materials as may have been accumulated by VENDOR in performing this Agreement, whether completed or in process.
- f. Upon termination under sections above CITY OF FAYETTEVILLE may take over the work and may award another party an agreement to complete the work under this Agreement.
- g. If, after termination for failure of VENDOR to fulfill contractual obligations, it is determined that VENDOR had not failed to fulfill contractual obligations, the termination shall be deemed to have been for the convenience of CITY OF FAYETTEVILLE. In such event, adjustments of the agreement price shall be made as provided in this agreement.

26. Delays

- a. In the event the services of **E.W.I.** are suspended or delayed by CITY OF FAYETTEVILLE, or by other events beyond VENDOR's reasonable control, VENDOR shall be entitled to additional compensation and time for reasonable documented costs incurred by VENDOR in temporarily closing down or delaying the Project.
- b. In the event the services are suspended or delayed by VENDOR, CITY shall be entitled to compensation and time for reasonable costs incurred in temporarily closing down or delaying the Project.

27. Rights and Benefits

- a. **E.W.I.'s** services shall be performed solely for the benefit of CITY OF FAYETTEVILLE and not for the benefit of any other persons or entities.

28. Dispute Resolution

- a. **Scope of Paragraph:** The procedures of this Paragraph shall apply to any and all disputes between CITY OF FAYETTEVILLE and VENDOR which arise from, or in any way are related to, this Agreement, including, but not limited to the interpretation of this Agreement, the enforcement of its terms, any acts, errors, or omissions of CITY OF FAYETTEVILLE or VENDOR in the performance of this Agreement, and disputes concerning payment.
- b. **Exhaustion of Remedies Required:** No action may be filed unless the parties first negotiate. If timely Notice is given as described in this agreement, but an action is initiated prior to exhaustion of these procedures, such action shall be stayed, upon application by either party to a court of proper jurisdiction, until the procedures in this agreement have been complied with.
- c. **Notice of Dispute**
 - i. For disputes arising prior to the making of final payment promptly after the occurrence of any incident, action, or failure to act upon which a claim is based, the party seeking relief shall serve the other party with a written Notice.
 - ii. For disputes arising within one year after the making of final payment, CITY OF FAYETTEVILLE shall give VENDOR written Notice at the address listed in this agreement within thirty (30) calendar days after occurrence of any incident, accident, or first observance of defect or damage. In both instances, the Notice shall specify the nature and amount of relief sought, the reason relief should be granted, and the appropriate portions of this Agreement that authorize the relief requested.
 - iii. **Negotiation:** Within seven (7) calendar days of receipt of the Notice, the Project Managers for CITY OF FAYETTEVILLE and VENDOR shall confer in an effort to resolve the dispute. If the dispute cannot be resolved at that level, then, upon written request of either side, the matter shall be referred to the President of VENDOR, and the Mayor of CITY OF FAYETTEVILLE or his or her designee. These officers shall meet at the Project Site or such other location as is agreed upon within 30 calendar days of the written request to resolve the dispute.

29. Sufficient Funds: The CITY represents to have sufficient funds or the means of obtaining funds to remit payment to **E.W.I.** for services rendered by **E.W.I.**. All parties agree if funding should become insufficient to complete the project, VENDOR shall be notified in a timely manner.

30. Publications:

- a. Recognizing the importance of professional services on the part of VENDOR's employees and the importance of VENDOR's public relations, VENDOR may prepare publications, such as technical papers, articles for periodicals, promotional materials, and press releases, in electronic or other format, pertaining to VENDOR's services for the Project. Such publications will be provided to CITY OF FAYETTEVILLE in draft form for CITY OF FAYETTEVILLE's advance review. CITY OF FAYETTEVILLE shall review such drafts promptly and provide CITY OF FAYETTEVILLE's comments to VENDOR, CITY OF FAYETTEVILLE may require deletion of proprietary data or confidential information from such publications, but otherwise CITY OF FAYETTEVILLE will not unreasonably withhold approval. Approved materials may be used in a variety of situations and do not require additional review or approval for each use. The cost of VENDOR's activities pertaining to any such publication shall be for VENDOR's account.

31. Indemnification:

- a. The CITY requires the VENDOR to indemnify, defend and hold harmless the CITY OF FAYETTEVILLE for any loss caused by negligence and from and against any and all loss where loss is caused or incurred or alleged to be caused or incurred in whole or in part as a result of the negligence or other actionable fault of the VENDOR, or their employees, agents, Subcontractors, sub consultant and Suppliers of the VENDOR.

32. Ownership of Documents:

- a. All documents provided by CITY OF FAYETTEVILLE including original drawings, CAD drawings, estimates, field notes, and project data are and remain the property of CITY OF FAYETTEVILLE. Vendor may retain reproduced copies of drawings and copies of other documents.
- b. Engineering and architectural documents, computer models, drawings, specifications and other hard copy or electronic media prepared by Vendor as part of the Services shall become the property of CITY OF FAYETTEVILLE when VENDOR has been compensated for all Services rendered, provided, however, that Vendor shall have the unrestricted right to their use. Vendor shall, however, retain its rights in its standard drawings details, specifications, databases, computer software, and other proprietary property. Rights to intellectual property developed, utilized, or modified in the performance of the Services shall remain the property of Vendor.
- c. Any files delivered in electronic medium may not work on systems and software different than those with which they were originally produced. Vendor makes no warranty as to the compatibility of these files with any other system or software. Because of the potential degradation of electronic medium over time, in the event of a conflict between the sealed original drawings/hard copies and the electronic files, the sealed drawings/hard copies will govern.

33. Additional Responsibilities of VENDOR:

- a. Review, approval, or acceptance of design drawings, specifications, reports and other services furnished hereunder by CITY shall not in any way relieve Vendor of responsibility for the technical adequacy of the work. Review, approval or acceptance of, or payment for any of the services by CITY shall not be construed as a waiver of any rights under this Agreement or of any cause of action arising out of the performance of this Agreement.
- b. Vendor shall be and shall remain liable, in accordance with applicable law, for all damages to CITY OF FAYETTEVILLE caused by Vendor's negligent performance, except beyond the Vendor's normal standard of care, of any of the services furnished under this Agreement, and except for errors, omissions or other deficiencies to the extent attributable to CITY OF FAYETTEVILLE or CITY OF FAYETTEVILLE-furnished data.
- c. Vendor's obligations under this clause are in addition to Vendor's other express or implied assurances under this Agreement or State law and in no way diminish any other rights that CITY OF FAYETTEVILLE may have against VENDOR for faulty materials, equipment, or work.

34. Audit and Access to Records:

- a. Vendor's shall maintain books, records, documents and other evidence directly pertinent to performance on work under this Agreement in accordance with generally accepted accounting principles and practices consistently applied in effect on the date of execution of this Agreement.
- b. Vendor's shall also maintain the financial information and data used by Vendor's in the preparation of support of the cost submission required for any negotiated agreement or change order and send to CITY OF FAYETTEVILLE a copy of the cost summary submitted. CITY OF FAYETTEVILLE, the State or any of their authorized representatives shall have access to all such books, records, documents and other evidence for the purpose of inspection, audit and copying during normal business hours. VENDOR will provide proper facilities for such access and inspection.

- c. Records shall be maintained and made available during performance on assisted work under this Agreement and until three years from the date of final payment for the project. In addition, those records which relate to any controversy arising out of such performance, or to costs or items to which an audit exception has been taken, shall be maintained and made available until three years after the date of resolution of such appeal, litigation, claim or exception.
- d. This right of access clause (with respect to financial records) applies to:
 - i. Negotiated prime agreements
 - ii. Negotiated change orders or agreement amendments affecting the price of any formally advertised, competitively awarded, fixed price agreement
 - iii. Agreements or purchase orders under any agreement other than a formally advertised, competitively awarded, fixed price agreement. However, this right of access does not apply to a prime agreement, lower tier sub agreement or purchase order awarded after effective price competition, except:
 - 1. With respect to record pertaining directly to sub agreement performance, excluding any financial records of VENDOR;
 - 2. If there is any indication that fraud, collusion, gross abuse or corrupt practices may be involved;
 - 3. If the sub agreement is terminated for default or for convenience.

35. Covenant Against Contingent Fees:

- a. VENDOR warrants that no person or selling agency has been employed or retained to solicit or secure this Agreement upon an agreement of understanding for a commission, percentage, brokerage or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by VENDOR for the purpose of securing business. For breach or violation of this warranty, CITY OF FAYETTEVILLE shall have the right to annul this Agreement without liability or at its discretion, to deduct from the contract price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.

36. Gratuities:

- a. If CITY OF FAYETTEVILLE finds after a notice and hearing that VENDOR or any of VENDOR agents or representatives, offered or gave gratuities (in the form of entertainment, gifts or otherwise) to any official, employee or agent of CITY OF FAYETTEVILLE or related third party contractor associated with this project, in an attempt to secure an agreement or favorable treatment in awarding, amending or making any determinations related to the performance of this Agreement, CITY OF FAYETTEVILLE may, by written notice to VENDOR terminate this Agreement. CITY OF FAYETTEVILLE may also pursue other rights and remedies that the law or this Agreement provides. However, the existence of the facts on which CITY OF FAYETTEVILLE bases such finding shall be in issue and may be reviewed in proceedings under the Remedies clause of this Agreement.
- b. The CITY may pursue the same remedies against VENDOR as it could pursue in the event of a breach of the Agreement by VENDOR. As a penalty, in addition to any other damages to which it may be entitled by law, CITY OF FAYETTEVILLE may pursue exemplary damages in an amount, as determined by CITY, which shall be not less than three nor more than ten times the costs VENDOR incurs in providing any such gratuities to any such officer or employee.

37. Clarification and Understanding of all parties:

- a. The citizens of Fayetteville voted to authorize the Fayetteville City Council to issue bonds to fund this project.
- b. All parties agree and acknowledge that all funds derived from the City's sale of the bonds may only be spent or used for purposes authorized by the City voters and applicable state laws.

IN WITNESS WHEREOF, **CITY OF FAYETTEVILLE, ARKANSAS** by and through its Mayor, and E.W.I., INC. through its authorized officer have made and executed this Agreement as of the day and year first above written.

CITY OF FAYETTEVILLE, ARKANSAS

E.W.I., Inc.

By: _____
Lionel Jordan, Mayor

By: _____
Jim Woker, President

ATTEST:

By: _____
Kara Paxton, City Clerk

Date Signed: _____

Date Signed: 12/5/2022



Bid 22-54 Addendum 1

EWI, Inc.

Supplier Response

Event Information

Number: Bid 22-54 Addendum 1
Title: Construction - Wilson Park Pavilion
Type: Invitation to Bid
Issue Date: 10/30/2022
Deadline: 11/22/2022 02:00 PM (CT)

Contact Information

Contact: Amanda Beilfuss
Address: Purchasing
Room 306
City Hall
113 West Mountain Street - Room 306
Fayetteville, AR 72701
Email: abeilfuss@fayetteville-ar.gov

EWI, Inc. Information

Contact: Addison Woker
Address: 220 N Knoxville Ave
Russellville, AR 72801
Phone: (479) 968-5432
Email: awoker@ewiconstructors.com
Web Address: https://ewiconstructors.com/

By submitting your response, you certify that you are authorized to represent and bind your company.

Addison Woker

Signature

Submitted at 11/22/2022 01:30:37 PM (CT)

awoker@ewiconstructors.com

Email

Requested Attachments

Bid 22-54, Required Signature Forms

EWI Wilson Park Bid Documents.pdf

Please attach your completed forms. These documents can be found in the Project Manual, or as a convenience file in the 'Attachments' tab titled "FILE #00".

Bid 22-54, Bid Bond

EWI Wilson Park Bid Bond.pdf

Please attach a signed and completed copy of your bid bond. Bid bonds in the form of a cashier's check shall be delivered to City Hall, Purchasing Division before bid deadline and have a copy of the cashier's check uploaded.

Bid Lines

1	Bonds and Insurance Quantity: <u>1</u> UOM: <u>Lump Sum</u> Price: \$32,404.00 Total: \$32,404.00
2	Mobilization (Maximum 5% of Total Bid) Quantity: <u>1</u> UOM: <u>Lump Sum</u> Price: \$1,000.00 Total: \$1,000.00
3	Trench and Excavation Safety Quantity: <u>1</u> UOM: <u>Lump Sum</u> Price: \$500.00 Total: \$500.00
4	Wilson Park Restroom/Pavilion - Total Lump Sum (DO NOT INCLUDE PRICING FOR TRENCH AND EXCAVATION SAFETY, MOBILIZATION, OR BONDS AND INSURANCE IN THIS LINE ITEM) Quantity: <u>1</u> UOM: <u>Lump Sum</u> Price: \$1,363,351.00 Total: \$1,363,351.00 Item Notes: <i>This bid is being bid as a total lump sum. This line item shall include the total construction price for the entire scope of work for this bid.</i>
5	DEDUCTIVE ALTERNATE 1 - Omit east and west planter front wall and associated details; price as stone veneered retaining wall as shown in the drawings. (Line excluded from response total) Quantity: <u>1</u> UOM: <u>Lump Sum</u> Price: \$12,100.00 Total: \$12,100.00 Item Notes: Please input final Deductive Alternate 1 pricing as the difference that needs to be deducted from total bid.

6 DEDUCTIVE ALTERNATE 2 -

Price decking as pressure treated pine 2x6, stained; over 12" O.C. framing re: Structural

(Line excluded from response total)

Quantity: 1 UOM: Lump Sum Price: Total:

Item Notes: **Please input final Deductive Alternate 2 pricing as the difference that needs to be deducted from total bid.**

Response Total: \$1,397,255.00

BID BOND

CONTRACTOR:

(Name, legal status and address)

E.W.I., Inc.

220 N. Knoxville

Russellville, AR 72801

SURETY:

(Name, legal status and principal place of business)

National American Insurance Company

1010 Manvel Avenue

Chandler, OK 74834

OWNER:

(Name, legal status and address)

City of Fayetteville (AR)

113 West Mountain St, Fayetteville, AR 72701

BOND AMOUNT: Five Percent (5%) of the Amount Bid-----

PROJECT:

(Name, location or address, and Project number, if any)

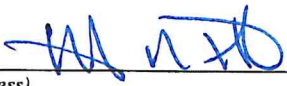
New Restroom & Pavilion at Wilson Park Project No. 51119

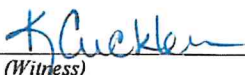
The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 22nd day of November, 2022


(Witness)


(Witness)

E.W.I., Inc.

(Principal)

(Seal)

(Title)

National American Insurance Company

(Surety)

(Seal)

(Title) Miki Rogers, Attorney-in-Fact

BXS Insurance Service • P. O. Box 251510 • Little Rock, AR 72225

Ph: 501-614-1599 Fax: 501-614-1440



NATIONAL AMERICAN INSURANCE COMPANY
CHANDLER, OKLAHOMA
POWER OF ATTORNEY

Number: CBB0061190

DUPLICATES SHALL HAVE THE SAME FORCE AND EFFECT AS AN ORIGINAL ONLY WHEN ISSUED IN CONJUNCTION WITH THE ORIGINAL.

KNOW ALL MEN BY THESE PRESENTS: That the National American Insurance Company, a corporation duly organized under the laws of the State of Oklahoma, having its principal office in the city of Chandler, Oklahoma, pursuant to the following resolution, adopted by the Board of Directors of the said Company on the 8th day of July, 1987, to wit:

"Resolved, that any officer of the Company shall have authority to make, execute and deliver a Power of Attorney constituting as Attorney-in-fact, such persons, firms, or corporations as may be selected from time to time.

Resolved that nothing in this Power of Attorney shall be construed as a grant of authority to the attorney(s)-in fact to sign, execute, acknowledge, deliver or otherwise issue a policy or policies of insurance on behalf of National American Insurance Company.

Be It Further Resolved, that the signature of any officer and the Seal of the Company may be affixed to any such Power of Attorney or any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such powers so executed and certified by facsimile signature and facsimile seal shall be valid and binding upon the Company in the future with respect to any bond and documents relating to such bonds to which it is attached."

National American Insurance Company does hereby make, constitute and appoint

Brian A. Boyd, Miki Rogers, J. Alan Rogers,
Shana Meyer, Christy Long

its true and lawful attorney(s)-in-fact, with full power and authority hereby conferred in its name, places and stead, to sign, execute, acknowledge and deliver in its behalf, and its act and deed, as follows:

To bind the company for bonds, not to exceed \$4,000,000.00 for any single bond. And to bind National American Insurance Company thereby as fully and to the same extent as if such bonds and documents relating to such bonds were, signed by the duly authorized officer of the National American Insurance Company, and all the acts of said Attorney(s) pursuant to the authority herein given, are hereby ratified and confirmed.

IN WITNESS WHEREOF, the National American Insurance Company has caused these presents to be signed by any officer of the Company and its Corporate Seal to be hereto affixed.



NATIONAL AMERICAN INSURANCE COMPANY

W. Brent LaGere

W. Brent LaGere, Chairman & Chief Executive Officer

STATE OF OKLAHOMA)
COUNTY OF LINCOLN) SS:

On this 26th day of September, A.D. 2017, before me personally came W. Brent LaGere, to me known, who being by me duly sworn, did depose and say; that he resides in the County of Lincoln, State of Oklahoma; that he is the Chairman and Chief Executive Officer of the National American Insurance Company, the corporation described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation and that he signed his name, thereto by like order.



Janet Taylor

Notary Public
My Commission Expires April 8, 2022
Commission #02006203

STATE OF OKLAHOMA)
COUNTY OF LINCOLN) SS:

I, the undersigned, Secretary of the National American Insurance Company, an Oklahoma Corporation, DO HEREBY CERTIFY that the foregoing and attached POWER OF ATTORNEY remains in full force.

Signed and Sealed at the City of Chandler.

Dated the 22nd day of November, 2022



R. Patrick Gilmore

R. Patrick Gilmore, Secretary



Project Check List

This checklist is for the Bidder's use in preparing & submitting a bid. It is not intended to include all details necessary to prepare a bid and shall not be used as a substitute for the requirements of the bid documents. Information is shown below only as a matter of convenience. Use of this checklist does not relieve the Bidder from the responsibility of meeting all requirements of the Specifications concerning the preparation of an acceptable bid. Bidders are welcome to use this form as a coversheet for a sealed envelope; however, using this form itself is NOT a requirement.



5% Bid Bond of the amount bid accompanied by required documentation (Power of Attorney, etc.)

- In lieu of a bid bond, the bidder may submit a cashier's check from a bank located in the State of Arkansas for at least five percent (5%) of the amount bid (inclusive of any deductive alternates). Cashier's checks shall be made payable to the City of Fayetteville, AR and received prior to the bid deadline by making an in-person delivery appointment with the City Purchasing Division.
- Upload 5% bid bond to the City's electronic bidding platform (preferred) OR attach bid bond with physical submittal and setting up an in-person delivery appointment with the City Purchasing Division.



All addenda shall be signed, acknowledged, and submitted on the appropriate forms (submitting the actual addendums or marking acknowledgement on other bid pages).



All line items shall be appropriately filled out and extended to reveal the line item price as well as the total bid price. Total base bid should be calculated in the provided space.



All pages provided with signature lines shall be appropriately signed, dated accordingly, and included with submitted bid documents



All bids shall be received before the stated deadline utilizing the City's electronic bidding platform or submitting a physical sealed bid to the City Purchasing Division. Submitting a bid electronically is strongly encouraged. A public bid opening will be conducted shortly after the deadline at City Hall and livestreamed at <https://www.youtube.com/user/cityoffayettevillear>. Late or misdirected bids shall not be accepted. The City of Fayetteville shall not be responsible for lost or misdirected bids, or failure of bidder's technical equipment. All bid documents shall be delivered in a sealed envelope to the address stated in the advertisement or updated deadline issued via Addenda. All bids should be delivered with the name of the bidder (contractor) on the sealed envelope as well as the bidders Arkansas Contractor's License Number.

City of Fayetteville, AR
Purchasing Division – Suite 306
113 W. Mountain
Fayetteville, AR 72701



Additional Information Required:

- List of Subcontractors: Submit form on Ion Wave or attach if submitting a physical bid
- AR Secretary of State Filing: 100018255
- Arkansas Contractor License or date of application #: 0022980423
- Pursuant Arkansas Code Annotated §25-1-503, the Contractor agrees and certifies that they do not currently boycott Israel and will not boycott Israel during any time in which they are entering into, or while in contract, with any public entity as defined in §25-1-503. If at any time during contract the contractor decides to boycott Israel, the contractor must notify the contracted public entity in writing.

○ Circle applicable answer: YES or NO

CITY OF FAYETTEVILLE, ARKANSAS:
PARKS RESTROOM RENOVATIONS AND MODIFICATIONS

SECTION 00 41 00
BID FORM

Bid 22-54, Construction - Wilson Park Pavilion
675 N. Park Ave.
Fayetteville, AR 72701

As bidder ENI, Inc.
(Insert name of corporation, partnership or individual)

Contractor's Licence Number: 0022980423
(Insert License number under which work would be completed)

In accordance with the invitation for bids for construction of the above-identified project, having examined all pricing documents and the site of the proposed work, and being familiar with all of the conditions surrounding construction of the proposed project including availability of materials and labor, hereby proposes that furnishing all labor, materials, and supplies and to construct the project in accordance with the pricing documents documents, within the time we set forth therein, can occur at the price set forth below. Such price(s) shall cover all expenses incurred in performing the work required by the Bid Documents.

\$1,397,255.00

One million three hundred ninety seven two hundred fifty five & 00/100

The bidder acknowledges receipt of the following addendum: #1 11-16-2022

Ded. Alt. #1: \$12,100.00
Ded. Alt. #2: \$10,766.00

DEMX ARCHITECTURE
104 N. East Ave. Fayetteville, AR

BID FORM
00 41 00 - 1

CITY OF FAYETTEVILLE, ARKANSAS:
PARKS RESTROOM RENOVATIONS AND MODIFICATIONS

Total Completion Time and Liquidated Damages Including Alternative: 330 consecutive calendar days of the date established in a written notice to proceed. The bidder must agree also to pay as liquidated damages, the sum of **\$200.00** for each consecutive calendar day thereafter.

Indicate the Name(s), of each entity performing the listed work:

MECHANICAL:

NAME: American Mechanical LICENSE NO. 0126600323

PLUMBING:

NAME: American Mechanical LICENSE NO. 0126600323

ELECTRICAL:

NAME: NABCO LICENSE NO. 0025860423

ROOFING AND SHEET METAL:

NAME: EWI LICENSE NO. 0022980423

The bidder understands that the Owner reserves the right to reject any or all bids and to waive any informalities in the bidding.

The bidder agrees that this bid shall be good and may not be withdrawn for a period of 60 calendar days after the bid opening.

Upon receipt of written notice of acceptance of this bid, bidder will execute the formal contract attached within 10 days and deliver a Surety Bond or Bonds as required by the General Conditions.

The bid security attached in the sum of \$ 5% Bid Bond \$27,404.00 is to become the property of the Owner in the event the contract and bond are not executed within the time set forth above, as liquidated damages for the delay and additional expense to the Owner caused thereby.

Respectfully submitted:

By: 
(Signature)

Addison Woker 71-0355732
(Please Print Name of Owner/Contractor) Individual/Company Tax ID Number

DEMX ARCHITECTURE
104 N. East Ave. Fayetteville, AR

BID FORM
00 41 00 - 2

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

Section 00 41 18

VENDOR REFERENCES

Bid 22-54, Construction - Wilson Park Pavilion

The following information is required from all Bidders so all bids may be reviewed and properly evaluated.

COMPANY NAME:

EWI, Inc.

BUSINESS ADDRESS:

220 North Knoxville Ave., Russellville, AR. 72801

NUMBER OF YEARS IN BUSINESS: 60 HOW LONG IN PRESENT LOCATION: 60

TOTAL NUMBER OF CURRENT EMPLOYEES: 7 FULL TIME 0 PART TIME

NUMBER OF EMPLOYEES YOU PLAN TO USE TO SERVICE THIS CONTRACT:

2 FULL TIME 0 PART TIME

PLEASE LIST FOUR (4) LOCAL COMMERCIAL AND/OR GOVERNMENTAL REFERENCES THAT YOU HAVE PREVIOUSLY PERFORMED SIMILAR CONTRACT SERVICES FOR WITHIN THE PAST FIVE (5) YEARS (All fields must be completed). Contractors shall have valid experience.

1. Blue Chip Ice
COMPANY NAME

Russellville, AR 72801
CITY, STATE, ZIP

Gordon Shirron
CONTACT PERSON

479-968-6666
TELEPHONE

9-15-2022
DATE COMPLETED

wgshirron@gmail.com
E-MAIL ADDRESS

2. Key Architecture
COMPANY NAME

Fayetteville, AR 72701
CITY, STATE, ZIP

Eric Pace
CONTACT PERSON

479-444-1445 ext. 107
TELEPHONE

9-15-2022
DATE COMPLETED

epace@keyarchitecture.com
E-MAIL ADDRESS arch.net

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

Bid 22-54, Construction - Wilson Park Pavilion

3. Arkansas Tech Univ.
COMPANY NAME

Russellville, AR 72801
CITY, STATE, ZIP

Sandra Mabry
CONTACT PERSON

501-514-0946
TELEPHONE

8-10-2022
DATE COMPLETED

smabry1@atu.edu
E-MAIL ADDRESS

4. MBL Architecture
COMPANY NAME

Fayetteville, AR 72701
CITY, STATE, ZIP

Roger Boskus
CONTACT PERSON

TELEPHONE

DATE COMPLETED

E-MAIL ADDRESS



Page 837 of 1625

DEADLINE: Tuesday, November 22, 2022 at 2:00 PM

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les McGaugh, Purchasing Director



CITY OF
FAYETTEVILLE
ARKANSAS

City of Fayetteville, Arkansas

Purchasing Division – Room 306

113 W. Mountain

Fayetteville, AR 72701

Phone: 479.575.8256

TDD (Telecommunication Device for the Deaf): 479.521.1316

INVITATION TO BID

Bid 22-54, Construction – Wilson Park Pavilion

DEADLINE: TUESDAY, November 22, 2022 before 2:00 PM, Local Time

PRE-BID MEETING: Wednesday, November 9, 2022 at 2:00 PM on-site at Wilson Park,
675 N. Park Ave., Fayetteville, AR 72701

SR. PURCHASING AGENT: Amanda Beilfuss, abeilfuss@fayetteville-ar.gov

DATE OF ISSUE & ADVERTISEMENT: 10/30/2022 & 11/6/2022

No late bids shall be accepted. Bids shall be submitted in one of the following methods: (1) through the City's third-party electronic bidding platform or (2) delivering in person via sealed envelope to the City of Fayetteville Purchasing Division. Submitting through the City's electronic bidding platform is strongly encouraged. All bids shall be submitted in accordance with the attached City of Fayetteville specifications and bid documents attached hereto. Each bidder is required to fill in every blank and shall supply all information requested; failure to do so may be used as basis of rejection.

NOTICE TO ALL BIDDERS:

All interested parties can obtain files for this project by going to <http://fayetteville-ar.gov/bids>. Bid documents shall be distributed electronically from the City of Fayetteville Purchasing Division only.

BID PACKAGE INCLUDES THE FOLLOWING FILES WHICH SHALL BE LISTED UNDER "ATTACHMENTS":

FILE #00: REQUIRED SIGNATURE FORMS – 5 Total Pages

FILE #01: PROJECT MANUAL – 507 Total Pages

FILE #02: PLANS – 34 Plan Sheets

*Additional files added as addendums are issued. Addendums will be uploaded and posted to the City's electronic bidding platform.

*PLAN HOLDER LISTINGS: A listing of vendors who have received documents can be found in the City's electronic bidding platform.

Bidder shall assume all responsibility for receiving updates and any addenda issued to this project by monitoring <http://fayetteville-ar.gov/bids>. Failure to acknowledge addenda issued as instructed could result in bid rejection.

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Bid 22-54,
Appendix A:
City Bid Documents



Project Check List

This checklist is for the Bidder's use in preparing & submitting a bid. It is not intended to include all details necessary to prepare a bid and shall not be used as a substitute for the requirements of the bid documents. Information is shown below only as a matter of convenience. Use of this checklist does not relieve the Bidder from the responsibility of meeting all requirements of the Specifications concerning the preparation of an acceptable bid. Bidders are welcome to use this form as a coversheet for a sealed envelope; however, using this form itself is NOT a requirement.

☐

5% Bid Bond of the amount bid accompanied by required documentation (Power of Attorney, etc.)

- In lieu of a bid bond, the bidder may submit a cashier's check from a bank located in the State of Arkansas for at least five percent (5%) of the amount bid (inclusive of any deductive alternates). Cashier's checks shall be made payable to the City of Fayetteville, AR and received prior to the bid deadline by making an in-person delivery appointment with the City Purchasing Division.
- Upload 5% bid bond to the City's electronic bidding platform (preferred) OR attach bid bond with physical submittal and setting up an in-person delivery appointment with the City Purchasing Division.

☐

All addenda shall be signed, acknowledged, and submitted on the appropriate forms (submitting the actual addendums or marking acknowledgement on other bid pages).

☐

All line items shall be appropriately filled out and extended to reveal the line item price as well as the total bid price. Total base bid should be calculated in the provided space.

☐

All pages provided with signature lines shall be appropriately signed, dated accordingly, and included with submitted bid documents

☐

All bids shall be received before the stated deadline utilizing the City's electronic bidding platform or submitting a physical sealed bid to the City Purchasing Division. Submitting a bid electronically is strongly encouraged. A public bid opening will be conducted shortly after the deadline at City Hall and livestreamed at <https://www.youtube.com/user/cityoffayettevillear>. Late or misdirected bids shall not be accepted. The City of Fayetteville shall not be responsible for lost or misdirected bids, or failure of bidder's technical equipment. All bid documents shall be delivered in a sealed envelope to the address stated in the advertisement or updated deadline issued via Addenda. All bids should be delivered with the name of the bidder (contractor) on the sealed envelope as well as the bidders Arkansas Contractor's License Number.

City of Fayetteville, AR
Purchasing Division – Suite 306
113 W. Mountain
Fayetteville, AR 72701

☐

Additional Information Required:

- List of Subcontractors: Submit form on Ion Wave or attach if submitting a physical bid
- AR Secretary of State Filing: _____.
- Arkansas Contractor License or date of application #: _____.
- Pursuant Arkansas Code Annotated §25-1-503, the Contractor agrees and certifies that they do not currently boycott Israel and will not boycott Israel during any time in which they are entering into, or while in contract, with any public entity as defined in §25-1-503. If at any time during contract the contractor decides to boycott Israel, the contractor must notify the contracted public entity in writing.

- Circle applicable answer: YES or NO

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Bid #2-54,
Appendix A:
City Bid Documents

City of Fayetteville, Arkansas
INVITATION TO BID
Bid 22-54, Construction – Wilson Park Pavilion

The City of Fayetteville is accepting sealed bids from properly licensed firms for the construction of a new restroom area and pavilion at Wilson Park. Questions should be addressed to Amanda Beilfuss, Sr. Purchasing Agent at abeilfuss@fayetteville-ar.gov or by calling (479) 575-8220.

A non-mandatory Pre-Bid meeting will be held **Wednesday, November 9, 2022 at 2:00 PM**, on-site at Wilson Park, 675 N. Park Ave., Fayetteville, AR 72701. Information regarding the pre-bid meeting is available on the project page on the City's electronic bidding platform. All interested parties are encouraged to attend.

Bidding documents, plans, plan holders, and addenda shall be obtained at the City of Fayetteville Purchasing Division's electronic bidding platform at www.fayetteville-ar.gov/bids. All bids shall be received by **Tuesday, November 22, 2022 before 2:00 PM, local time** utilizing the electronic bidding software or by submitting a sealed bid to the address below. All bids shall be received prior to the bid deadline. Submitting a bid electronically is strongly encouraged. A public bid opening will be conducted shortly after the deadline at City Hall and livestreamed at <https://www.youtube.com/user/cityoffayettevillear>. Late or misdirected bids shall not be accepted. The City of Fayetteville shall not be responsible for lost or misdirected bids, or failure of bidder's technical equipment.

City of Fayetteville
Purchasing Division – Room 306
113 West Mountain Street
Fayetteville, AR 72701

Each bid exceeding \$50,000 shall be accompanied by a cashier's check from a bank doing business in the State of Arkansas or a corporate bid bond in an amount not less than five (5) percent of the amount bid. In the event a bidder opts to submit a cashier's check for a bid bond, the actual physical cashier's check shall be delivered to the City prior to the deadline. A one hundred percent (100%) performance and payment bond is required with the contract awarded. A State of Arkansas Contractor's License is required for all bids exceeding \$50,000 and license shall be valid at the time of bid deadline.

Pursuant to Arkansas Code Annotated §22-9-203 The City of Fayetteville encourages all *qualified* small, minority and women business enterprises to bid on and receive contracts for goods, services, and construction. Also, City of Fayetteville encourages all general contractors to subcontract portions of their contract to *qualified* small, minority and women business enterprises.

The City of Fayetteville reserves the right to waive irregularities, reject bids, and postpone the award of any Contract for a period which shall not exceed beyond ninety (90) days from the bid opening date.

City of Fayetteville
By: Amanda Beilfuss
City Sr. Purchasing Agent
P: 479.575.8220 Email: abeilfuss@fayetteville-ar.gov
TDD (Telecommunications Device for the Deaf): (479) 521-1316
Date of advertisement: 10.30.22 & 11.06.22
This publication was paid for by the Purchasing Division of the City of Fayetteville, Arkansas.
Amount paid: \$XXX.XX.

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Bid 22-54,
Appendix A:
City Bid Documents

CITY OF FAYETTEVILLE, ARKANSAS:

NEW RESTROOM & PAVILLION AT WILSON PARK

675 N PARK AVE
FAYETTEVILLE, AR 72701

COMM. NO. 51119

OCTOBER 07, 2022 – FINAL BID SPECS



DEMIX
ARCHITECTURE

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

CITY OF FAYETTEVILLE, AR SPECIFICATIONS

GENERAL PROJECT INFORMATION
PROJECT CHECK LIST
INVITATION TO BID

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00 21 13	INSTRUCTIONS TO BIDDERS
00 31 00	AVAILABLE PROJECT INFORMATION
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-	SUBSTITUTION REQUEST FORM CSI 13.1A
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CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

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CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

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CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

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NOT USED

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NOT USED

APPENDIX

OSHA Part 1926 Subpart B

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

DOCUMENT 00 01 01
PROJECT TITLE PAGE

1.1 PROJECT MANUAL VOLUME 1

- A. Project Title: Bid 22-54, Construction - Wilson Park Pavilion
- B. Owner: City of Fayetteville
Parks and Recreation
- C. Owner's representative:
Wade Abernathy
(479) 575-8361
wabernathy@fayetteville-ar.gov
- D. Parks and Recreation representative:
Ted Jack
(479) 444-3469
tjack@fayetteville-ar.gov
- E. Architect: DEMX architecture
- F. Architects Project Manager:
Jordan Lemaster
104 N. East Avenue, Fayetteville, AR
(479) 966-4871
jordan@demxarch.com
- G. Architects Project No. 51119
- H. Issued October 07, 2022
- I. Copyright 2021, City of Fayetteville, New Restroom and Pavilion at Wilson Park,
DEMX architecture. All rights reserved.

END OF DOCUMENT

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

SECTION 00 01 07
SEALS

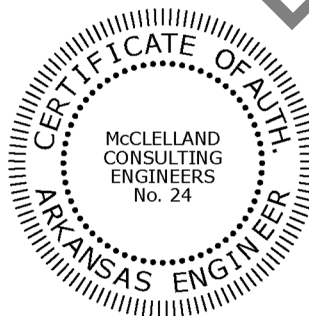
ARCHITECTURAL



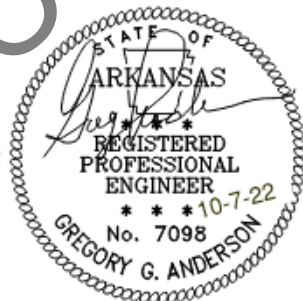
STRUCTURAL



CIVIL



MECHANICAL/ PLUMBING/ELECTRICAL



DEMX ARCHITECTURE
FAYETTEVILLE, AR

SEALS
00 01 07-1

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

SECTION 00 01 15
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CIVIL

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- C0.1 TOPOGRAPHIC SURVEY
- C1.0 GENERAL NOTES
- C2.0 DEMOLITION PLAN
- C3.0 SITE UTILITY PLAN
- C4.0 GRADING & EROSION CONTROL PLAN
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- C5.1 DETAILS

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STRUCTURAL

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CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

SECTION 00 21 13
INSTRUCTIONS TO BIDDERS

PART ONE - DEFINED TERMS

- 1.1 Terms used in these Instructions to Bidders which are defined in the General Conditions have the meanings assigned to them in the General Conditions. Certain additional terms used in these Instructions to Bidders have the meanings indicated below which are applicable to both the singular and plural thereof.
- 1.2 Bidder - one who submits a Bid directly to City of Fayetteville as distinct from a sub-bidder, who submits a bid to a Bidder.
- 1.3 Issuing Office - the office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.
- 1.4 Successful Bidder - the lowest, responsible, and responsive Bidder to whom the City of Fayetteville (on the basis of the City of Fayetteville's evaluation as hereinafter provided) makes an award.
- 1.5 Local Time - Local time is defined as the time in Fayetteville, Arkansas on the due date of the deadline. Bids shall be received before the deadline time as shown by the atomic clock located in the Purchasing Division Office.

PART TWO - COPIES OF BIDDING DOCUMENTS

- 2.1 Complete sets of the Bidding Documents in the number and for the deposit sum, if any, stated in the Advertisement for Bids may be obtained from the Issuing Office.
- 2.2 Complete sets of Bidding Documents must be used in preparing Bids. Neither City of Fayetteville nor Project Manager assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.3 City of Fayetteville and Project Manager in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

PART THREE - EXAMINATION OF SITE AND CONTRACT DOCUMENTS

- 3.1 Bidders are advised that the Drawings and Specifications are on file at the City of Fayetteville Parks and Recreation Department and shall constitute all the information which the City of Fayetteville shall furnish. No other information given or sounding made by the City of Fayetteville or any official thereof, prior to the execution of said contract, shall ever become a part of, or change the contract, drawings, specifications, and estimates, or be binding on City of Fayetteville.

Prior to submitting any Bid, Bidders are required to: read carefully the Specifications, contract, and Bonds; examine carefully all Drawings; visit the site of the Work to carefully examine local conditions; inform themselves by their independent research and sounding of the difficulties to be encountered, and all attending circumstances affecting the cost of doing the work, and the time specified for its completion; and obtain all information required to make an intelligent bid.

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

- 3.2 Bidders shall rely exclusively upon their surveys, estimates, investigations, and other things which are necessary for full and complete information upon which the bid may be made and for which a contract is to be awarded. The Bid Form, providing for unit and lump sum prices bid by the Contractor, contains a statement that all bids are made with the full knowledge of the difficulties and conditions that may be encountered, the kind, quality and quantity of the plans, work to be done, excavation, and materials required and with full knowledge of the drawings, profiles, specifications, and estimates and all provisions of the contract and Bonds.
- 3.3 Bidders shall promptly notify Project Manager of all conflicts, errors, ambiguities, or discrepancies which Bidder has discovered in or between the Contract Documents and such other related documents.
- 3.4 Information and data shown or indicated in the Contract Documents with respect to existing underground facilities at or contiguous to the site is based upon information and data furnished to City of Fayetteville and Project Manager by City of Fayetteville's of such underground facilities or others, and City of Fayetteville and Project Manager do not assume responsibility for the accuracy or completeness thereof unless it is expressly provided otherwise in the Supplementary Conditions.
- 3.5 On request, City of Fayetteville will provide each Bidder access to the site to conduct such examinations, investigations, explorations, tests, and studies as each Bidder deems necessary for submission of a Bid. Bidder must fill all holes and clean up and restore the site to its former conditions upon completion of such explorations, investigations, tests, and studies.
- 3.6 Reference is made to the General Requirements for the identification of the general nature of work that is to be performed at the site by City of Fayetteville or others (such as utilities and other prime contractors) that relates to the work for which a Bid is to be submitted. On request, and as available, City of Fayetteville will provide to each Bidder, for examination, access to or copies of Contract Documents (other than portions thereof related to price) for such work.
- 3.7 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 3, that without exception the Bid is premised upon performing and furnishing the Work required by the Contract Documents and applying the specific means, methods, techniques, sequences, or procedures of construction (if any) that may be shown or indicated or expressly required by the Contract Documents, that Bidder has given Project Manager written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Contract Documents and that the written resolutions thereof by Project Manager are acceptable to Bidder, and that the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.
- 3.8 Mobilization shall not exceed 5% of bid.

PART FOUR - AVAILABILITY OF LANDS FOR WORK AND WORK BY OTHERS

- 4.1 The lands upon which the Work is to be performed, rights-of-way and easements for access thereto and other lands designated for use by Contractor in performing the Work are identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by Contractor. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by City of Fayetteville unless otherwise provided in the Contract Documents.

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

PART FIVE - INTERPRETATION OF CONTRACT DOCUMENTS AND ADDENDA

- 5.1 If any person contemplating submitting a bid for construction of the Work is in doubt as to the true meaning of any part of the proposed Contract Documents or finds discrepancies in or omissions from any part of the proposed Contract Documents, he should submit a written request for interpretation thereof to the Project Manager not later than seven days before the date set for bid opening. The person submitting the request shall be responsible for its prompt delivery.
- 5.2 Interpretation or correction of proposed Contract Documents will be made only by Addendum to all holders of Bidding Documents. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect. City of Fayetteville will not be responsible for any other explanations or interpretations of the proposed Contract Documents.
- 5.3 Addenda may also be issued to modify the Bidding Documents as deemed advisable by City of Fayetteville or Project Manager.
- 5.4 Bidder assumes all responsibility for checking the City's website at www.accessfayetteville.org for updates and addenda issued to this project.

PART SIX - APPROXIMATE ESTIMATE OF QUANTITIES

- 6.1 Estimated quantities, on file at the City Parks and Recreation office, are approximate only and shall be the basis for receiving unit price bids for each item but shall not be considered by Bidders as actual quantities that may be required for the completion of the proposed work. However, such quantities, at the unit and lump sum prices bid for each item, shall determine the amount of each bid for comparison of Bids and aid in determining the low and responsive Bidder for the purpose of awarding the contract, and will be used as basis for fixing the amount of the required Bonds.

PART SEVEN - UNIT PRICES

- 7.1 Bidders must state a price for each item of work named in the Bid Form. Unit and Lump Sum prices shall include amounts sufficient for the furnishing of all labor, materials, tools, equipment, and apparatus of every description to construct, erect, and finish completely all the work as called for in the Specifications or indicated on the Drawings.
- 7.2 Prices bid on the various items in the Bid Form shall bear a fair relationship to the cost of the work to be done. Bids which appear unbalanced and are deemed not to be in the best interest of City of Fayetteville may be rejected at the discretion of City of Fayetteville.
- 7.3 By submission of a Bid, Bidder represents that Bidder has considered the entire Project and the Work required and has reviewed the Drawings and Specifications to verify the full scope of the Work.

PART EIGHT - BID FORM

- 8.1 Bids are due as indicated in the Advertisement for Bids.
- 8.2 BLANK

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

- 8.3 Bids which are incomplete, unbalanced, conditional, or obscure or which contain additions not called for, erasures, alterations, or irregularities of any kind or which do not comply with these Instructions to Bidders may be rejected as informal or non-responsive at the option of City of Fayetteville. However, City of Fayetteville reserves the right to waive technicalities as to changes, alterations, or revisions and to make the award in the best interest of City of Fayetteville.
- 8.4 BLANK
- 8.5 Acceptance of Alternate Bids is at the City of Fayetteville's discretion, as best services the City of Fayetteville's interest. Each deductive alternate is provided for on the Bid Form. The price of the Bid for each alternate will be the amount to be deducted from the price of the Total Base Bid if the City of Fayetteville selects any of the alternates. The unit price amount for each alternate shall be the same as the unit price amount listed in the Bid.
- 8.6 No Bidder shall divulge the information in the Bid to any person whomsoever, except those having a partnership or other financial interest with him in the Bid, until after the bids have been opened.
- 8.7 All bids shall include all costs including but not limited to sales tax, use tax, permits, insurance, etc. The contractor on this project is defined by the Arkansas Revenue Laws as the user and is responsible for the appropriate taxes. There are NO provisions in this bid for a contractor to avoid taxes. The City of Fayetteville is not a tax-exempt entity.

PART NINE - SIGNATURE ON BIDS

- 9.1 If the Bid is made by an individual, the firm name must be given, and the Bid Form signed by the individual or a duly authorized agent. If the Bid is made by a partnership, the firm name and the names of each member must be given, and the Bid signed by a member of the partnership, or a person duly authorized. If the Bid is made by a company or corporation, the company or corporate name must be given, and the Bid signed by an officer or agent duly authorized. The corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation must be shown below the signature.
- 9.2 All names must be typed or printed in black ink below the signature.
- 9.3 The address and telephone number for communications regarding the Bid must be shown.
- 9.4 Powers of attorney, properly certified, for agents and others to sign Bids must be in writing and filed with City of Fayetteville.
- 9.5 The Bid shall also contain a signed acknowledgment of receipt of all Addenda.
- 9.6 Contractor License shall be valid at time of bid.
- 9.7 Vendor shall not be debarred.

PART TEN - BID SECURITY

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

- 10.1 A five percent (5%) bid security, in the form of a bid bond, or cashier's check from a bank located in the State of Arkansas, as stated in the Advertisement for Bids, shall accompany each bid. Bid bonds for the difference in price between low bidder and second low bidder shall not be acceptable. The Successful Bidder's security will be retained until City of Fayetteville receives a signed Agreement and required Bonds and Certificates of Insurance. If the Successful Bidder fails to execute and deliver the Agreement and furnish the required contract security within fifteen days after the Notice of Selection, City of Fayetteville may annul the Notice of Selection and the Bid security of that Bidder will be forfeited.
- 10.2 The City of Fayetteville reserves the right to retain the security of the three low bidders until the Successful Bidder enters into the Contract or until sixty (60) days after bid opening, whichever is sooner. Cash equivalent security of the second and third low bidder may be exchanged for an equivalent bid bond after bid tabulations are complete or thirty (30) days after bid opening, whichever is sooner. If any Bidder refuses to enter into an Agreement, City of Fayetteville may retain Bidder's bid security as liquidated damages but not as a penalty.

PART ELEVEN - PERFORMANCE BOND AND PAYMENT BOND

11.0 NOTICE TO PROCEED, BONDS AND ORDERING PROCEDURES

1. After contract award, the Contractor will provide the City with a 100% performance and payment bond, as required in the contract.
 2. Upon the City receiving and accepting the 100% Performance and Payment Bond, the City will issue a Purchase Order along with a Notice of Award (NOA).
 - a. The Notice of Award shall serve as permission for the Contractor to order any materials needed to complete the project, specifically those with a long lead time.
 3. The City will coordinate with the Contractor on the timing of the Notice to Proceed being issued, which shall take into consideration the expected delivery of items with a long lead time.
 4. Calendar days for substantial and final completion shall not start until the day following the issuance of a Notice to Proceed.
 5. The City will make progress payments for materials delivered on site, after verification of delivered materials by City.
- 11.1 After the Notice of Award has been issued, Contractor shall furnish two original surety performance bonds and payment bonds, equal to one hundred percent of the contract price.
- 11.2 If Required -- Contractor shall include provisions in the bonds which will guarantee the faithful performance of the prevailing hourly wage clause as required by the Arkansas Prevailing Wage Law, Arkansas Code Annotated § 22-9-308(d).
- 11.3 Contractor shall pay all expenses in connection with the obtaining of said Bonds. The Bonds shall be conditioned that Contractor shall faithfully perform the contract and shall pay all indebtedness for labor and materials furnished or performed in the construction of such alterations and additions as prescribed in this contract.
- 11.4 The surety company issuing the Bonds must be a solvent company on the "Surety Companies Annual List" issued by the U.S. Department of the Treasury, and the Bonds are not to be issued in an amount greater than the underwriting limitations for the surety company as set out therein.
- 11.5 In Arkansas, prevailing law requires that performance and payment Bonds on public works contracts shall be executed by a resident local agent who is licensed by the Insurance Commissioner to represent the surety company executing said Bonds and filing with such

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

Bonds his Power of Attorney as his authority. The mere countersigning of the Bonds will not be sufficient.

- 11.6 The date of the Bonds, and of the Power of Attorney, must not be prior to the date of the contract. At least two originals of the Bonds shall be furnished, each with Power of Attorney attached. The performance and payment bond shall be furnished to the City of Fayetteville accompanied by a receipt stamped by the Washington County Circuit Clerk's Office. Before any work is performed under this contract, the bond shall be filed with the clerk of the circuit court of Washington County, Arkansas and accepted by the City of Fayetteville Project Manager.
- 11.7 Bonds are to be approved by City of Fayetteville. If any Bonds contracted for become unsatisfactory or unacceptable to City of Fayetteville after the acceptance and approval thereof, Contractor, upon being notified to that effect, shall promptly execute and furnish acceptable Bonds in the amounts herein specified. Upon presentation of acceptable Bonds, the unsatisfactory Bonds may be canceled at the discretion of Contractor.

PART TWELVE - CONTRACT TIME

- 12.1 The number of days within which, or the dates by which the Work is to be substantially completed and also completed and ready for final payment is outlined in the Bid Form.

PART THIRTEEN - LIQUIDATED DAMAGES

- 13.1 Provisions for liquidated damages, if any, are set forth in the Bid Form.

PART FOURTEEN - SUBCONTRACTORS SUPPLIERS AND OTHERS

- 14.1 Contractor shall not assign or sublet all or any part of this contract without the prior written approval of City of Fayetteville nor shall Contractor allow such subcontractor to commence work until approval of workman's compensation insurance and public liability insurance as may be required. Approval of each subcontract by City of Fayetteville will in no manner release Contractor from any obligations as set out in the Drawings, Specifications, contract, and Bonds.

PART FIFTEEN - SUBSTITUTE AND "OR EQUAL" ITEMS

- 15.1 Any reference to a particular brand or manufacture is in an effort to establish an acceptable level of quality for this purchase. Brands or manufacturers that are included in a bid that are of at least equal quality, size, and specification as to what has been specified, will be acceptable for consideration. All requests for approved equals shall be submitted by e-mail. Such request to obtain a pre-approved equal shall be made in writing to Andrea Foren, Purchasing Agent, at aforen@ci.fayetteville.ar.us. The Purchasing Agent will forward any such requests to the City of Fayetteville Parks & Recreation Department for review. Approval of all submittals will be made only by Addendum to all holders of Bidding Documents by the City of Fayetteville Purchasing Division.

PART SIXTEEN - NOT USED

PART SEVENTEEN - QUALIFICATIONS AND RESPONSIBILITY OF BIDDERS

- 17.1 To demonstrate qualifications to perform the Work, each Bidder must be prepared to submit within five days after bid opening, upon City of Fayetteville's or Project Manager's request, detailed written evidence such as financial data, present commitments, and other such data as

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

may be called for. Each Bid must contain evidence of Bidder's qualification to do business in the State of Arkansas.

17.2 Regarding Certification of Funds

Notice: bidders are required to provide pricing for all line items. Failure to provide deductive alternate pricing can result in bid rejection.

The City intends to award this contract to the lowest qualified responsive responsible bidder based on the lump sum bid as long as such bid falls within the amount of funds certified for the project, plus 25%.

- In the event no bid falls within the amount of funds certified for the project, plus 25%, the City will utilize the deductive alternates in order until bids can be compared within the amount certified, plus 25%. In the event all deductive alternates are subtracted and no bid falls within the amount certified, plus 25%, all bids will be rejected.
- The City shall have the authority to negotiate an award with the apparent responsive responsible low bidder but only if the low bid is within twenty-five percent (25%) of the certification of funds.

PART EIGHTEEN - DISQUALIFICATIONS OF BIDDERS

- 18.1 Any one or more of the following may be considered as sufficient for the disqualification of bidders and the rejection of Bids.
- 18.2 More than one Bid Form for the same work from an individual, firm, partnership, or corporation under the same or different names.
- 18.3 Evidence of collusion among bidders. Participants in such collusion may receive no recognition as bidders for any future work.
- 18.4 Unbalanced Bid Forms in which the prices for some items are out of proportion to the prices for other items, or changes written in, or amendments by letter, or failure to submit a unit price for each item of work for which a bid price is required by the Bid Form, or failure to include all required contract documents.
- 18.5 Lack of competency as revealed by the financial statement, experience, plant, and equipment statements submitted. Lack of responsibility as shown by past work judged from the standpoint of workmanship and progress.
- 18.6 Uncompleted work which, in the judgment of City of Fayetteville, might hinder or prevent the prompt completion of additional work if awarded.
- 18.7 Being in arrears on existing contracts, in litigation with City of Fayetteville, or having defaulted on a previous contract.

PART NINETEEN - OPENING OF BIDS

- 19.1 Bids will be opened and read aloud publicly at the place where Bids are to be submitted in a room to be designated by City of Fayetteville the day of the bid opening. An abstract of the amounts of the base Bids and major alternates (if any) will be made available to Bidders after the opening of Bids.

PART TWENTY - CONSIDERATION OF BIDS

CITY OF FAYETTEVILLE, ARKANSAS:
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- 20.1 After the bids are opened and read, the quantities will be extended and totaled in accordance with the bid prices of the accepted Bids. This review of the Bids will confirm the low bidder.
- 20.2 In evaluating Bids, City of Fayetteville will consider the qualifications of Bidders, whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data as may be requested in the Bid Form or prior to the Notice of Selection. Note: All Bidders shall be required to have performed a minimum of four (4) contracts of similar scope or other equivalent landscape work within the past five (5) years.
- 20.3 City of Fayetteville may consider the qualifications and experience of Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the Work as to which the identity of Subcontractors, Suppliers, and other persons and organizations must be submitted as provided in the Supplementary Conditions. City of Fayetteville also may consider the operating costs, maintenance requirements, performance data, and guarantees of major items of materials and equipment proposed for incorporation in the Work when such data is required to be submitted prior to the Notice of Selection.

PART TWENTY-ONE - RIGHT TO REJECT BIDS

- 21.1 City of Fayetteville reserves the right to reject any and all Bids, to waive technicalities, and to advertise for new bids. All Bids are subject to this reservation. City of Fayetteville reserves to itself the right to decide which shall be deemed the lowest responsive and responsible Bid. Due consideration will be given to the reputation, financial ability, experience and equipment of the Bidder.
- 21.2 City of Fayetteville also reserves the right to waive informalities not involving price, time or changes in the Work and to negotiate contract terms with the Successful Bidder.

PART TWENTY-TWO - AWARDING OF CONTRACT

- 22.1 City of Fayetteville reserves the right to withhold the awarding of a contract a reasonable period of time from the date of opening bids, not to exceed sixty (60) days except with the consent of the Successful Bidder. The awarding of a contract upon a successful Bid shall give the Bidder no right to action or claim against City of Fayetteville upon the contract until the contract is reduced to writing and signed by the contracting parties. The letting of a contract shall not be complete until the contract is executed and the necessary Bonds approved.

PART TWENTY-THREE - RETAINAGE

- 23.1 Provisions concerning retainage and Contractor's rights to deposit securities in lieu of retainage are set forth in the Agreement.

PART TWENTY-FOUR - SIGNING OF AGREEMENT

- 24.1 When City of Fayetteville gives a Notice of Selection to the Successful Bidder, it will be accompanied by the number of unsigned counterparts of the Agreement as indicated in the Supplementary Conditions, with all other written Contract Documents attached. Within ten (10) days thereafter, Contractor shall sign and deliver the required number of counterparts of the Agreement and attached documents to City of Fayetteville with the required Bonds & Certificate of Insurance. Within ten (10) days thereafter City of Fayetteville shall deliver one fully signed counterpart to Contractor.

PART TWENTY-FIVE - MATERIALS GUARANTY

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

- 25.1 Before any contract is awarded Bidder may be required to furnish a complete statement of the origin, composition, or manufacture of any or all materials proposed to be used in the construction of the Work, together with samples, which may be subjected to tests provided for in the Specifications to determine their quality and fitness for the Work.

PART TWENTY-SIX - FAMILIARITY WITH LAWS

- 26.1 Bidder is presumed to be familiar with all federal, state, and city laws, ordinances, and regulations which in any manner affect those engaged or employed in the Work, or the materials or equipment used, or that in any way affect the Work and shall in all respects comply with said laws, ordinances, and regulations. No claim of misunderstanding or ignorance on the part of Contractor will in any way serve to modify the provisions of the contract. No representations shall be binding unless embodied in the contract.

PART TWENTY-SEVEN - ADDITIONAL LAWS AND REGULATIONS

Bidders' attention is called to the following laws and regulations which may have an impact on the Work and on the preparation of the Bid.

- 27.1 Americans with Disabilities Act
- 27.2 Storm water discharge regulations, enacted under the Clean Water Act and administered by the Arkansas Department of Environmental Quality (ADEQ) under a general permits program. Contractor may be required to obtain coverage under general permit ARR001000 prior to commencing work at the site.
- 27.3 If Required -- Arkansas Prevailing Wage Law, Arkansas Code Annotated §§ 22-9-301 to 22-9-315 and the administrative regulations promulgated thereunder. (See Section 01 41 13 - Regulatory Requirements for PREVAILING WAGE DETERMINATION for this project.)

End of Section 00 21 13

CITY OF FAYETTEVILLE, ARKANSAS:
PARKS RESTROOM RENOVATIONS AND MODIFICATIONS

DOCUMENT 00 31 00
AVAILABLE PROJECT INFORMATION

1.1 AVAILABLE PROJECT INFORMATION

This Document and its referenced attachments are part of the Procurement and Contracting Requirements for Project. They provide Owner's information for the Bidder's convenience and are intended to supplement rather than serve in lieu of the Bidder's own investigations. They are made available for the Bidder's convenience and information but are not a warranty of existing conditions. This Document and its attachments are not part of the Contract Documents.

- A. GEOTECHNICAL ENGINEERING REPORT – PLANNED RESTROOM PAVILION
WILSON PARK

END OF DOCUMENT

Bid 22-54,
Appendix A:
City Bid Documents

Geotechnical Engineering Report

Planned Restroom Pavilion

Wilson Park
Fayetteville, Arkansas
GTS Project No. 21-1-5-065

May 10, 2021



Prepared For:

DEMX Architecture

104 North East Avenue
Fayetteville, Arkansas 72701



www.gtsconsulting.net

www.gtsconsulting.net

May 10, 2021

DEMX Architecture
104 North East Avenue
Fayetteville, Arkansas 72701

Attn: Mr. Ben Cruce, AIA

RE: Geotechnical Engineering Report
Planned Restroom Pavilion
Wilson Park
Fayetteville, Arkansas
GTS Project No. 21-1-5-065

Mr. Cruce:

This report provides the results of the subsurface exploration, laboratory testing, and geotechnical engineering analysis performed for a new restroom pavilion planned in the central portion of Wilson Park located in Fayetteville, Arkansas. The approximate boundaries of the project site are shown in Figure 1 within this report.

We appreciate the opportunity to be of assistance to you on this project. We encourage retaining GTS, Inc. (GTS) to be involved in pre-bid and pre-construction meetings to allow GTS to discuss the following findings and recommendations.

Please contact us if further explanation or clarification is required for portions of the report.

Sincerely,



Jeremy Hoffman
Geotechnical Project Manager

Andrew N. Beekman, P.E.
Arkansas No. 14967

JDH:ANB

Copies: Addressee (email-ben@demxarch.com)

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EXECUTIVE SUMMARY

This report uses the terms “existing grade” and “finished subgrade”. Existing grade describes the site elevations at the time of our field drilling and sampling. “Finished subgrade” is used in this report to describe the future design elevation of the soil in the building area.

Based on the soil types and in-place shear strength encountered at the two (2) sample borings performed at the project site by GTS as well as our current understanding of the site development plans, summary geotechnical engineering considerations for development of the project site are provided below. The below information should not be used separately from the more comprehensive discussion provided in the body of this report.

Subsurface Conditions

Existing fill soils, consisting of a combination of silt and silty sand, with variable sand and gravel (chert) content, were encountered underlying the surface organics at Boring B-2, only. The fill soils extended to a depth of 2 feet below existing grades, where encountered and had generally low shear strength. Presumed native, silt-based soils (i.e., “topsoil”) were encountered underlying the surface organics at Boring B-1, only. These soils extended to depths of about 10 inches below existing grades at the performed boring location and had generally moderate shear strength during drilling and sampling.

A combination of sand- and gravel-based soils, with variable clay, sand, and gravel (sandstone) content, was encountered underlying the native silts at Boring B-1 and the existing fill at Boring B-2. These soils extended to depths of 8 and 5¾ feet below existing grades, respectively. These soils had consistent, moderate to high shear strength during drilling and sampling at Boring B-1; and very low to low shear strength, with a general trend of shear strength increasing with depth, during drilling and sampling at Boring B-2.

A combination of shale, limestone, and sandstone was encountered underlying the native sands and gravels at both boring locations. The on-site rock had high shear strength and extended to the terminal depths of the boring locations. Hard drilling conditions were encountered at both borings within the on-site shale, limestone, and sandstone beginning at depths of about 5¾ to 8 feet below existing grades. Auger refusal material was also encountered at both boring locations, within these materials, at depths of about 9½ to 14½ feet below existing grades.

Geotechnical Considerations

GTS has no information regarding the placement and compaction history of the existing fill materials encountered at Boring B-2. It appears that the fill was not placed and compacted following standard construction industry practices, based on the composition and in-place shear strength measured in and below the fill. Because there can be variations in the thickness, quality and composition of existing fill and the potential for unsuitable materials to

be buried in or near the existing fill, it should be recognized that there is a potential risk of unpredictable settlement and performance by supporting foundations, floor slabs-on-grade and pavements above the existing fill. To remove these risks to future foundations, GTS recommends that all foundation loads be transmitted on to moderate shear strength, native soils encountered below the existing fill material at the project site.

Additionally, very low to low shear strength native soils were encountered below the existing fill (from about 2 to 5 feet below the ground surface) at Boring B-2. These soils are highly compressible and will consolidate under typical loading from foundations, floor slabs, and the compaction of new fill material. Recommendations are provided in this report to reduce the potential settlement of the planned structure due to these on-site weak soils.

Foundation Recommendations

The planned addition may be supported on a shallow foundation system bearing directly on native, relatively undisturbed, medium dense to dense sands and gravels, and/or on flowable fill material placed above the described native bearing soils. The recommended bearing soils are anticipated to be exposed beginning at depths of about 1 to 5 feet below existing grades near our performed boring locations.

Foundations supported on the described soils may be designed using net allowable bearing capacities of 2,000 pounds per square foot (psf) and 2,500 psf for continuous and individual, column foundations, respectively.

Seismic Site Classification

The subsurface conditions at this project site are anticipated to be consistent with a Site Class C per the International Building Code (IBC), 2012 Edition.

Floor Slab-on-Grade and Pavement Support

We recommend the planned concrete floor slabs-on-grade be supported on a minimum of 1 foot of select fill material, placed, and compacted above stable on-site soils.

Rock Excavation Potential

Based on the results of our borings, we anticipate rock excavation means and methods may be intermittently required to penetrate seams, layers, and/or boulders of shale, limestone, and sandstone beginning at depths of about 5¾ to 8 feet below existing grades.

PROJECT DESCRIPTION and INFORMATION

Project Site

The project site is located within the existing Wilson Park, immediately north of the tennis courts, in Fayetteville, Arkansas. The project site is currently occupied by an existing restroom structure as well as a concrete storm sewer culvert.

The general boundaries of the project site are shown in yellow in Figure 1 below. Figure 1 is a satellite image provided by Google.

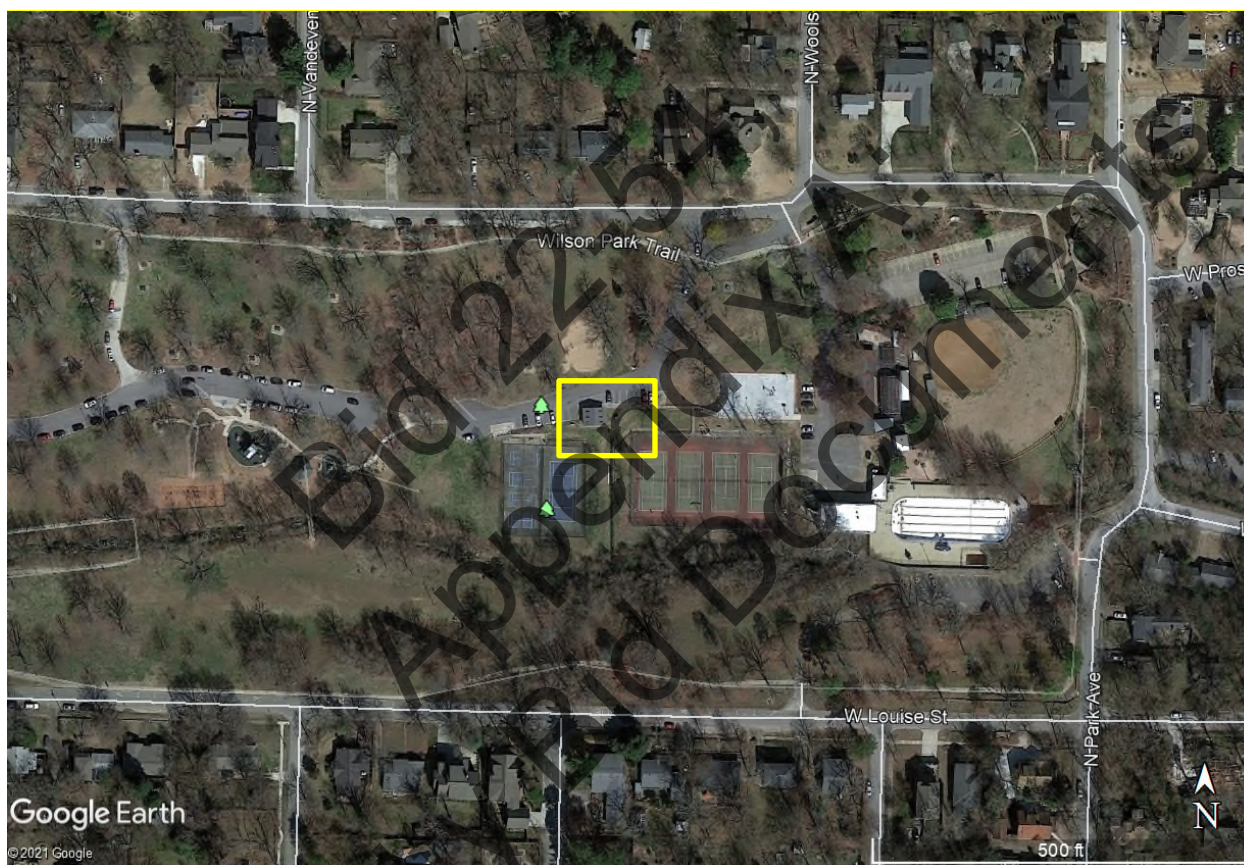


Figure 1: General Boundaries of the Project Site

Planned Development

Development plans are understood to include a new pavilion structure that will include new restroom facilities, a wooden canopy, and a wooden terrace. It is our understanding that the existing restroom structure at the site will be demolished prior to construction.

No information was provided to GTS, prior to the issuance of this report, concerning the total footprint area or any specific loading information for the planned structure.

However, we anticipate the new building structure will consist of structural steel framing or concrete masonry unit (CMU) framing. We further anticipate the new structure will utilize a partial concrete slab-on-grade and a partial elevated slab.

Planned Pavements

Development plans are also anticipated to consist of new parking areas and/or drives located primarily in areas where paved parking currently exists. However, providing pavement support recommendations is outside of our scope of services for this project.

Planned Site Grading

Based on Sheet 103 of the client-provided architectural documents titled "New Restroom Pavilion @ Wilson Park" (dated 01/28/21 and unsigned), we anticipate the finish floor elevation (FFE) of the new restroom structure will be at approximately EL 1355' – 9 $\frac{3}{8}$ " and that the FFE for the planned wooden terrace will be at approximately 1353' - 9 $\frac{3}{8}$ ". However, specific grading plans were not provided to GTS for the planned development at the time of this report.

For the purposes of this report, GTS assumes maximum cut and fill depths of 3 feet or less will be required to reach plan finished subgrade elevations in the vicinity of the planned new pavilion.

Bid 22-504X
Appendix A
City Bid Documents

SUMMARY of SUBSURFACE FINDINGS

Surface

The ground surface at both boring locations consisted of grass cover. The root mat associated with the surface organics was measured to be 4 to 5 inches in thickness at the two boring locations.

Photographs showing general surface conditions at the project site during drilling and sampling are provided below and on the following page.





Subsurface Soils

Existing Fill

Existing fill soils, consisting of a combination of silt and silty sand, with variable sand and gravel (chert) content, were encountered at the surface of Boring B-2, only. The fill soils extended to a depth of 2 feet below existing grades, where encountered.

The existing fill soils had moderate to low shear strength, where encountered, with a general trend of shear strength decreasing with depth. A Standard penetration test (SPT) N-value of 7 blows per foot (bpf) was recorded for these soils.

Stratum I – Silts

Presumed native silt-based soils (i.e., - "topsoil") were encountered underlying the surface organics at Boring B-1, only. These soils extended to depths of about 10 inches below existing grades at the performed boring location.

The Stratum I silt-based soils had generally moderate shear strength during drilling and sampling.

Stratum II – Sands and Gravels

A combination of sands and gravels, with variable clay, sand, and gravel (sandstone) content, was encountered underlying the native silts at Boring B-1 and underlying the existing fill material at Boring B-2. The Stratum II soils extended to depths ranging from about 8 and 5¾ feet below existing grades at Borings B-1 and B-2, respectively.

The Stratum II soils had very low to high shear strength during drilling and sampling. Specifically, the Stratum II soils encountered at Boring B-1 had moderate to high shear strength, while the Stratum II soils encountered at Boring B-2 had very low to low shear strength. SPT N-values of 2 to 53 bpf were recorded for these soils at the performed boring locations.

Stratum III – Sandstone, Shale, and Limestone

Weathered shale with sand was encountered underlying the Stratum II soils at Boring B-1, only. The shale extended to a depth of 13 feet below existing grades, where it was underlain by hard limestone rock. The limestone extended to the terminal depth of Boring B-1 at 14½ feet below existing grades. Sandstone was encountered underlying the Stratum II soils at Boring B-2, only. The sandstone extended to the terminal depth of Boring B-2 at 9½ feet below existing grades.

The Stratum III shale, limestone, and sandstone had high shear strength during drilling and sampling. SPT N-values of 50 blows per 5 inches of penetration to 50 blows per 1 inch of penetration were recorded for the Stratum III rock.

Hard Drilling Conditions/Auger Refusal

Hard drilling conditions were first encountered within the Stratum III shale, limestone, and sandstone beginning at depths of about 8 to 5¾ feet below existing grades at Borings B-1 and B-2, respectively. Additionally, auger refusal material was also encountered at the two boring locations at depths of about 14½ and 9½ feet, respectively.

Water Measurements

Water observations were made by the drill crew both during drilling and at completion of drilling. Groundwater was not observed at either of the performed boring locations during or at completion of drilling and sampling. The borings were backfilled upon completion of drilling for safety, and further groundwater observations were not possible. The water observations made by the drilling crew are at the bottom of each boring log.

The depths to water are intended as isolated measurements of groundwater levels at the time of drilling. The installation and periodic measurement of monitoring wells would be required to establish seasonal piezometric surfaces below the project site.

GEOTECHNICAL ENGINEERING ANALYSIS

Geotechnical Considerations

Existing Fill

Existing fill material, predominantly consisting of a combination of silts and sands, with variable silt and gravel (chert) content, was encountered to a depth of about 2 feet below existing grades at Boring B-2, only.

GTS has no information regarding the placement and compaction history of the existing fill material. However, based on the composition of the existing fill and the generally low in-place shear strength, we anticipate the fill was not placed and compacted using standard construction industry practices.

Because there can be variations in the thickness, quality, and composition of the existing fill (and the potential for unsuitable materials to be buried in or near the existing fill), it should be recognized that there is a potential risk of unpredictable settlement and performance of foundations and floor slabs-on-grade supported above existing fill material.

Due to this risk, GTS recommends that all foundation loads be transmitted onto suitable, moderate shear strength, native soils encountered below the existing fill material at the project site. Additionally, recommendations are provided in this report for supporting new floor slabs-on-grade on a minimum volume of new, select fill material placed and compacted above thoroughly tested (and approved) on-site soils.

Low Shear Strength Soils

Very low-to-low shear strength soils (SPT N-values of 6 bpf or less) were encountered at Boring B-2 beginning at a depth of about 2 feet and extending to a depth of about 5 feet below existing grades. The very-low-to-low-shear-strengths were encountered within presumed native clayey sands (portion of Stratum II soils).

Supporting foundation loads, floor slabs-on-grade, and/or the placement and compaction of new fill soils above these weak soils will result in soil consolidation, which will result in relatively large settlement of the planned building structure. Recommendations are provided in this report to reduce the potential settlement of the planned structure. Generally, we recommend removing the Stratum II weak soils full depth, where encountered, from the planned foundation trenches and replacing them with flowable fill material.

Foundation Recommendations

The planned structure may be supported on a shallow foundation system. The foundations should be designed as conventional, open-trench foundations supported directly on tested and approved, native, relatively undisturbed, medium dense to dense sands and gravels (Stratum II soils), weathered shale or sandstone (Stratum III rock). Based on the results of the sample boring locations, foundation trench over-excavations of up to 5½ feet below existing grades may be required to expose the recommended bearing material.

Shallow foundations for the planned building structure may be designed using the information provided in Table 1, below.

Table 1: Shallow Foundation Recommendations

Net Allowable Bearing Capacity (psf)	Bearing Soil Description	Depth to Bearing Soils
2,000 (continuous)	Native, Tested and Approved Sands and Gravels (Strata II soils) *	Generally Anticipated within 2 to 5½ Feet Below Existing Grades
2,500 (square/round, column)		

* The recommended bearing soils should be relatively undisturbed and have moderate shear strength. Foundations may also be supported on flowable fill material placed above the recommended bearing material and up to plan bottom of foundation elevations.

An allowable passive pressure of 550 psf may be used for footings cast directly against near-vertical sides in native Stratum II soils or select fill or for select fill compacted against the vertical footing face. Passive resistance for exterior footings should be neglected in the upper 2 feet of the soil profile unless pavement is constructed directly against the building exterior. We recommend an ultimate coefficient of sliding friction of 0.32 for the interaction between the base of footing and approved bearing material.

Uplift loads for the planned canopy can be resisted by the dead weight of the foundation plus the weight of the fill constructed above the foundation. We recommend using a total unit weight of 115 pounds per cubic foot (pcf) for approved backfill constructed above the canopy foundation. Additional uplift resistance can be developed using an allowable skin friction value of 200 psf between the perimeter of the foundation and the soils beginning at a depth of at least 2 feet below plan finished subgrade elevation.

Total long-term and differential movement of shallow foundations, designed and constructed as recommended in this report and per the Mass Grading Recommendations section of this report, is estimated to be less than 1 inch (total) and ½ inch in 50 feet (differential).

Foundation Construction Recommendations

General Dimensions

Continuous formed and isolated column foundations should have minimum widths of 18 inches and 30 inches, respectively. A minimum foundation depth of 18 inches below lowest adjoining final grades should be used to protect against frost heave and seasonal variations in moisture content.

Allowable Backfill Materials

Flowable fill (i.e., "lean concrete") may be used to backfill foundation over-excavations, where required, to reach suitable bearing soils in the building footprint. Specifications regarding the flowable fill material is shown in the Geotechnical Report Requirements and Specifications section of this report. Alternatively, foundation over-excavations may also be overpoured full depth with concrete.

Evaluation of Supporting Material and Over-excavation Recommendations

Foundation excavations should be cleaned of loose soils, debris, and water. Soils exposed at plan bearing depths should be evaluated by GTS prior to placement of approved fill, reinforcing bar and concrete.

Where flowable fill is used to backfill foundation trenches, the flowable fill should be placed as soon as possible after foundation trench over-excavations are completed and have been evaluated for bearing suitability. Flowable fill should be sampled in the field and laboratory tested for strength every day of placement.

Floor Slab Support Recommendations

New floor slabs-on-grade should be supported on a minimum of 1 foot of new, approved select fill material, placed, and compacted above stable on-site soils.

Risks associated with supporting new floor slabs above existing fill material are discussed in the beginning of the Geotechnical Engineering Analysis section of this report. Specific recommendations concerning construction of the floor slab subgrade, including the potential need for additional select fill to stabilize unstable subgrade soils, are provided in the Mass Grading Recommendations section of this report.

Floor Slab-On-Grade Design

Concrete floor slabs constructed as slab-on-grade and supported on subgrade prepared as recommended in this report can be designed using a modulus of subgrade reaction (k) value of 100 pounds per square inch, per inch.

We recommend a minimum of 4 inches of free-draining gravel or sand be placed beneath the slab-on-grade to act as a capillary break. These layers are termed a “subbase” layer.

To be effective as a capillary break, the subbase should have a maximum of 5 percent by dry weight passing the No. 200 sieve. The modulus of subgrade reaction value applies to the top of the subbase layer. The top of the subbase should be compacted using a vibratory plate.

If rutting of the subbase layer is a concern for concrete placement, the subbase layer may be topped with an additional 2 to 4 inches of gravel or sand having sufficient fines to allow compaction. The optional topping layer is termed the “base” layer. The base layer, if used, should be compacted to a minimum of 95 percent Standard Proctor Value (ASTM D 698) at a workable moisture content that allows the density to be achieved. The base layer should have a percent passing the No. 100 sieve ranging from 10 to 30 percent by dry weight. ARDOT Class 7 Aggregate Base Course material is acceptable to use in the base layer.

A vapor barrier having a minimum thickness of 10 mil is recommended immediately below the concrete unless otherwise recommended by the finished flooring manufacturer or other members of the design team.

The general components of a floor slab, inclusive of the optional base course, are shown in Figure 2, below. The shown reinforcing steel location provides general guidance only. The location and composition of reinforcing steel should be determined by a structural engineer.

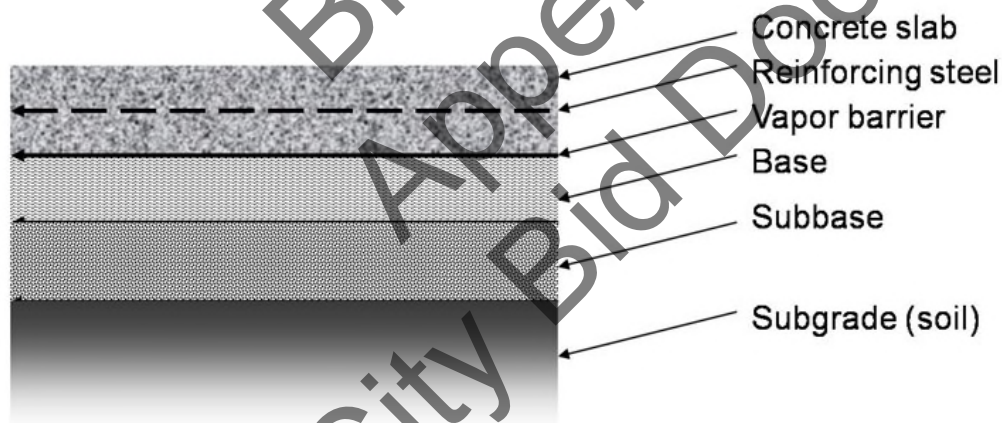


Figure 2: General Floor Slab-on-Grade Section Detail

IBC Site Classification

The subsurface conditions at this project site are anticipated to be consistent with a Site Class C per the International Building Code (IBC), 2012 Edition.

MASS GRADING RECOMMENDATIONS

Stripping of Surface Organics

Mass grading should extend a minimum of 5 feet outside of the building footprint in all directions, where practical.

At a minimum, surface organics, where present, should be removed from the planned development area. Also, any in-place concrete, sidewalks, asphalt paving, and any underlying crushed gravel should be removed full depth from areas of planned development. Any asphalt, concrete, and crushed gravel may be stockpiled for reuse as fill material at the discretion of the design team.

Buried utility lines should be relocated or abandoned, as necessary. Excavations, after removing buried utilities, should be backfilled with new select fill material that is placed and compacted per project specifications. Abandoned utility lines to be left in place should be grouted and plugged.

Evaluation of Existing Fill Material

If the owner is allowing a portion of the existing fill material to remain in place below the planned floor slab-on-grade for the new building (as recommended in this report), the exposed existing fill material should be evaluated for the presence of deleterious material during mass grading and excavation. We recommend excavating test pits prior to or during mass grading to evaluate the extent and composition of the existing fill and provide additional recommendations during mass grading.

Portions of the existing fill material that contain deleterious materials should be removed full depth from areas of planned development.

General Mass Grading

Elevated Deck Areas

In areas where an elevated deck is planned, no further grading is required after the organics have been removed from the site.

Floor Slab-on-Grade

After removal of the surface organics (and/or the existing structure/pavements), we recommend further undercuts be performed to reach a minimum of 1 foot below plan finished subgrade elevations. After the recommended undercuts are completed, the exposed subgrade soils should be evaluated by GTS for the presence of debris/deleterious materials and should also be evaluated for stability through proof-rolling with a loaded, tandem-axle dump truck weighing at least 25 tons.

If the exposed soils are stable, they are suitable for directly supporting the placement and compaction of new, approved select fill material up to plan finished subgrade elevations.

Where unstable soils are identified by proofrolling, they should be scarified, moisture conditioned, and compacted; or removed and replaced full depth with new select fill. Other ground improvement methods could be provided during construction based on the actual site conditions at that time. The appropriate method of improvement, if required, would depend on factors such as schedule, weather, the size of area to be improved, and the nature of the instability. Performing site grading operations during warm, dry periods would help reduce the amount of subgrade stabilization required.

If the prepared subgrade should become saturated, desiccated, frozen, or otherwise damaged prior to construction of the floor slab and pavements, the affected subgrade material should be scarified, moisture-conditioned, and compacted prior to placing the base course. Final conditioning of the finished subgrade should be performed immediately prior to placement of the floor slab and pavement section aggregate base course material.

Potential instabilities when on-site soils at the undercut depth are moist to wet are considered in the Weather and Instability Related Considerations report section.

Weather and Instability Related Considerations

Soil instability is directly related to the moisture within and below the exposed soils. If the exposed soils or newly placed fill are moist to wet, or have undergone freeze-thaw cycles, we anticipate the surface portion of the soils may be unstable.

If the soils exposed during mass grading are unstable, but otherwise suitable to remain in-place based on their classification, they may be scarified, allowed to dry, and recompact to achieve stability if the construction timeframe and prevailing weather conditions allow. Alternatively, further undercuts may be performed to expose stable soils. For budgeting purposes, we anticipate average undercut depths of about 2 feet below existing grades may be required to reach stable soils if the on-site soils are moist to wet and unstable during mass grading.

Bridging lifts may be considered to stabilize the project site; however, their potential use should be overseen by GTS at the time of mass grading.

Fill Placement

Lifts of fill material required to reach plan finished subgrade elevations should be composed of tested and approved fill material and placed per the specifications shown in this report. Fill should be placed in near-horizontal lifts beginning in areas requiring the deepest amount of fill. The fill should be benched into the native soils each lift. Fill should not be placed on frozen, saturated, or unstable soils.

We recommend the fill material placed within the top 1 foot of the building subgrade consist of select fill material. We recommend the foundation trench backfill material consist of flowable fill, aggregate base course or select fill material. The requirements for general fill material, select fill material, aggregate base course and flowable fill material are provided in the Geotechnical Report Requirements and Specifications section of this report.

Re-Use of On-Site Soils as Fill

The on-site asphalt, concrete, and crushed gravel may be reused as fill material provided that all asphalt, concrete, and gravel are mechanically broken such that all fragments measure less than 3 inches in all dimensions.

On-site silts (Stratum I) soils are not suitable for reuse as general fill material at the project site. These soils may be reused in landscaping areas at the discretion of the design team.

On-site sands and gravels (Stratum II) are anticipated to be suitable for reuse as general fill material. Portions of these soils and rock are also anticipated to be suitable for select fill material, provided the material has a high enough percentage of sand and gravel.

On-site shale, sandstone, and limestone (Stratum III) are anticipated to be suitable for reuse as general or select fill material.

Portions of the existing fill material are anticipated to be suitable for reuse as general fill material at the project site. However, other portions of the existing fill are not anticipated to be suitable for reuse as fill material.

Soil classifications discussed in this report are based on approximately 2-inch diameter samples obtained during our field sampling. This type of sampling follows industry standards; however, this type of sampling can under- or over-estimate the amount of gravel within a soil formation.

Additionally, we anticipate the existing fill and native soils will likely be intermixed during mass grading and construction. Therefore, larger, bulk samples of the on-site soils proposed for reuse as fill material should be obtained in the field during mass grading to confirm the apparent classification of these soils and to thoroughly evaluate these soils for the presence of debris and/or unsuitable materials, prior to reuse.

We recommend all on-site soils to be reused as fill and all imported fill soils be thoroughly tested and evaluated by GTS before reuse. All rock fragments will need to be mechanically crushed such that all particles measure 3 inches or less in any dimension before reuse.

Utility Trench Backfill

All trench excavations should be made with working space sufficient to permit construction including backfill placement and compaction. Utility trenches are a common source of water infiltration and migration. If utility trenches are backfilled with relatively clean granular material, they should be capped with at least 18 inches of cohesive fill to reduce the infiltration and conveyance of surface water through the trench backfill.

Grading and Drainage

During construction, grades should be developed to direct surface water flow away from or around the site. Exposed subgrade should be sloped to provide positive drainage so that saturation of the subgrade is avoided. Surface water should not be permitted to accumulate on the site to reduce the potential for strength loss of the subgrade soils.

Final grades should be sloped away from the building and pavements on all sides to promote effective drainage and prevent water from ponding. Downspouts should discharge water a minimum of 10 feet beyond the footprint of the building.

Rock Excavation Potential

Rock excavation means and methods are anticipated to be required to penetrate very dense gravelly soils and seams, layers and/or boulders of shale, sandstone, and/or limestone beginning at depths of about 5¾ to 8 feet below existing grades. The depths where rock excavation techniques are anticipated to be required correspond with the top of hard drilling conditions, encountered at the boring locations, discussed on Page 11 of this report.

In general, track hoes and dozers with rock excavation attachments are expected to be required below the depths where we encountered hard drilling. The use of hydraulic or pneumatic hammers, rock breakers, rock saws and controlled blasting could be required in isolated areas and near and below the depths where we encountered competent rock and auger refusal. Greater rock excavation effort is expected in limited access excavations, such as for foundations and utility trenches.

GEOTECHNICAL REPORT REQUIREMENTS and SPECIFICATIONS

Unless otherwise stated, the recommendations contained in this report are based on the compaction specifications and material types noted in Table 2, Table 3, and the following paragraphs.

Table 2: Recommended Soil Compaction

Type of Material	Moisture-Density Specification	Minimum Dry Density (percentage of proctor)	Range from Optimum Moisture Content (%)
Soil Fill Material	ASTM D-698 (Standard Proctor)	98	-3 to +3
Flowable Fill Material	AHTD Section 206	Not applicable	

Table 3: Soil Fill Material Requirements

Type of Soil Fill	Location/Use	Maximum LL	Maximum PI	USCS Classifications
Select	All Areas <u>May not</u> be used as foundation trench backfill material	40 ^A	18 ^A	GM, GC, GW, GP, SP, SC, CL, Chert, Sandstone, Shale
General	Areas 1 Foot below Building Subgrade <u>May not</u> be used as bridging lift material <u>May not</u> be used as foundation trench backfill material	45 ^B	20 ^B	GM, GC, GW, GP, SP, SC, CL, Chert, Sandstone, Shale

^A Plasticity requirements may be waived provided the fill has a minimum of 65% retained on the No. 200 sieve.

^B Plasticity requirements may be waived if the fill has a minimum of 50% retained on the No. 200 sieve.

Fill material should have a maximum nominal aggregate size of 3 inches or less after placement and compaction.

Fill needed for site grading should be placed in loose lifts not exceeding 9 inches in thickness (compacted lift thickness of approximately 6 to 7 inches). We recommend every lift of fill be tested

for density during mass grading, with a minimum of one test every 2,500 square feet of building area.

Where flowable fill is used to backfill foundation trench over-excavations up to plan bottom of foundation elevations, the flowable fill should have a minimum unconfined compressive strength of 400 pounds per square inch (psi). Flowable fill should be tested for compressive strength each day of placement.

The recommended moisture content and compaction of the fill should be maintained until fills are completed and the floor slab is constructed.

Design and construction plans should provide for rapid, positive drainage away from the building area both during construction and at completion of the project, including any planned irrigation lines.

Bid 22-54,
Appendix A:
City Bid Documents

SUBSURFACE EXPLORATION and PROCEDURES

The subsurface exploration consisted of evaluating and sampling two (2) sample boring locations to planned depths of 15 feet below existing grade or to auger refusal depths, whichever was least.

The boring locations were established in the field by GTS using a recreation-grade hand-held GPS unit. The approximate locations of the performed borings are shown on the attached Boring Location Diagram. The results of the borings are attached to this report.

The borings were drilled with a Geoprobe 7720DT track-mounted drill rig. Disturbed samples and estimates of the in-situ shear strengths of the soil were obtained using an automatic-hammer-driven split-barrel sampler in general accordance with the SPT procedure at the boring locations.

The soil samples obtained in the field were sealed to reduce moisture loss and taken to the GTS soil laboratory for further examination, testing, and classification. The results of laboratory tests on select samples are shown on the boring logs and are attached to this report.

Field logs were prepared during the drilling and sampling of the borings. These logs report sampling methods, sampling intervals, soil and groundwater conditions, and notes regarding soil and drilling conditions observed between sample depths. The final boring logs, included in this report, have been prepared based on the field logs and have been modified, where appropriate, based on the results of the laboratory observation.

LABORATORY TESTING and PROCEDURES

The soil samples were examined in the laboratory by an experienced Geotechnical Engineer and classified based on the soil's texture and plasticity, in accordance with the Unified Soil Classification System. The estimated Unified Soil Classification System group symbols are shown on the boring logs.

The laboratory testing was performed by GTS in general accordance with the American Society for Testing and Materials (ASTM) test designations shown in the Table 4, below.

Table 4: Laboratory Test Method Designations

Laboratory Test	Test Designation	Method (if applicable)
Moisture Content of Soil and Rock	ASTM D 2216-10	Method A
Visual Classification of Soil Types	ASTM D 2488	
USCS Classification	ASTM D 2487	

GEOTECHNICAL REPORT LIMITATIONS

The recommendations contained in this report are based on our interpretation of subsurface conditions encountered at the discrete boring locations. Variations between the subsurface conditions anticipated in this report and actual project site conditions may occur away from the boring locations.

If significant differences between the findings of the borings and site conditions are observed, GTS should be contacted to assess the variation and, if necessary, reevaluate the recommendations contained in this report.

ENVIRONMENTAL EXCLUSION

A Geotechnical Engineering report assesses the engineering properties of soil and rock. No environmental assessment of a project site is performed during a geotechnical exploration. If the owner is concerned about the potential for environmental hazards at the project site, additional studies should be performed by GTS.

APPENDIX A

Boring Location Diagram

Boring Logs

Bid 22-54,
Appendix A:
City Bid Documents



Boring Location Diagram

LOG OF BORING NO.B-1

Planned New Restroom
Wilson Park, Fayetteville, Arkansas

GTS, Inc.

Geotechnical & Testing Services

Fayetteville, AR

Project No.: 21-1-5-065

Location: Shown on Boring Location Diagram

DEPTH, FT	SYMBOL	SAMPLES	SAMPLE No.	RECOVERY (in.)	DESCRIPTION OF MATERIAL	USCS	%<#200	HAND PENETROMETER, TSF ■				BLOWS PER FT	PI
								LAB. COHESION, TSF ▲					
								WATER CONTENT, % ●					
					Surface Description = Grass Cover Rootmat- 5 Inches			0.4	0.8	1.2	1.6		
								PL	LL				
								20	40	60	80		
0					<u>SILT</u> medium dense, dark brown, with organics	ML							
		1	18		<u>CLAYEY GRAVEL</u> , with sand dense, brown, tan and orange, with sandstone fragments							47	
2.5		2	5									36	
		3	12			GC						41	
5		4	15									53	
7.5													
		5	5		<u>SHALE</u> , with sand hard, sightly weathered, gray							50/5"	
10													
12.5													
		6	3		<u>LIMESTONE</u> hard, light gray							50/3"	
15					AUGER REFUSAL AT 14½ FEET								
17.5													

COMPLETION DEPTH: 14.5 ft.

DEPTH TO WATER: DURING DRILLING: Dry



DATE: 4/23/2021

AT COMPLETION: Dry



RIG: Geoprobe 7720DT, Track-Mounted, Auto-Hammer Assisted

AT 24 HOURS: Backfilled



Page 1 of 1

LOG OF BORING NO.B-2

Planned New Restroom
Wilson Park, Fayetteville, Arkansas

GTS, Inc.

Geotechnical & Testing Services

Fayetteville, AR

Project No.: 21-1-5-065

Location: Shown on Boring Location Diagram

DEPTH, FT	SYMBOL	SAMPLES	SAMPLE No.	RECOVERY (in.)	DESCRIPTION OF MATERIAL	USCS	%<#200	HAND PENETROMETER, TSF ■				BLOWS PER FT	PI	
								LAB. COHESION, TSF ▲						
								WATER CONTENT, % ●						
								0.4	0.8	1.2	1.6			
								PL	LL					
								20	40	60	80			
0		1	15		EXISTING FILL - predominantly 4 inches of silt overlying silty sand with gravel medium dense to loose, dark brown and orange, with organics and chert fragments	FILL							7	
2.5		2	12		CLAYEY SAND loose, dark brown, with trace sandstone fragments, moist	SC							2	
		3	12		CLAYEY SAND, with gravel loose, brown and tan, with sandstone fragments, moist	SC							6	
5		4	13		- medium dense below 5 feet									11/6"
					SANDSTONE moderately to well cemented, fine grained, brown and tan								50/4"	
7.5														
		5	2										50/2"	
		6	1		AUGER REFUSAL AT 9½ FEET								50/1"	
10														
12.5														
15														
17.5														

COMPLETION DEPTH: 9.5 ft.

DEPTH TO WATER: DURING DRILLING: Dry



DATE: 4/23/2021

AT COMPLETION: Dry



RIG: Geoprobe 7720DT, Track-Mounted, Auto-Hammer Assisted

AT 24 HOURS: Backfilled



Page 1 of 1



SUBSTITUTION REQUEST

(After the Bidding/Negotiating Phase)

Project: _____ Substitution Request Number: _____

From: _____
To: _____ Date: _____

A/E Project Number: _____
Re: _____ Contract For: _____

Specification Title: _____ Description: _____
Section: _____ Page: _____ Article/Paragraph: _____

Proposed Substitution: _____
Manufacturer: _____ Address: _____ Phone: _____
Trade Name: _____ Model No: _____
Installer: _____ Address: _____ Phone: _____

History: ☐ New product ☐ 1-4 years old ☐ 5-10 years old ☐ More than 10 years old

Differences between proposed substitution and specified product: _____

☐ Point-by-point comparative data attached — REQUIRED BY A/E

Reason for not providing specified item: _____

Similar Installation:

Project: _____ Architect: _____
Address: _____ Owner: _____
Date Installed: _____

Proposed substitution affects other parts of Work: ☐ No ☐ Yes; explain _____

Savings to Owner for accepting substitution: _____ (\$ _____).

Proposed substitution changes Contract Time: ☐ No ☐ Yes [Add] [Deduct] _____ days.

Supporting Data Attached: ☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ _____

CITY OF FAYETTEVILLE, ARKANSAS:
PARKS RESTROOM RENOVATIONS AND MODIFICATIONS

SECTION 00 41 00
BID FORM

Bid 22-54, Construction - Wilson Park Pavilion
675 N. Park Ave.
Fayetteville, AR 72701

As bidder _____,
(Insert name of corporation, partnership or individual)

Contractor's Licence Number: _____
(Insert License number under which work would be completed)

In accordance with the invitation for bids for construction of the above-identified project, having examined all pricing documents and the site of the proposed work, and being familiar with all of the conditions surrounding construction of the proposed project including availability of materials and labor, hereby proposes that furnishing all labor, materials, and supplies and to construct the project in accordance with the pricing documents documents, within the time we set forth therein, can occur at the price set forth below. Such price(s) shall cover all expenses incurred in performing the work required by the Bid Documents.

The bidder acknowledges receipt of the following addendum:

CITY OF FAYETTEVILLE, ARKANSAS:
PARKS RESTROOM RENOVATIONS AND MODIFICATIONS

Total Completion Time and Liquidated Damages Including Alternative: 330 consecutive calendar days of the date established in a written notice to proceed. The bidder must agree also to pay as liquidated damages, the sum of **\$200.00** for each consecutive calendar day thereafter.

Indicate the Name(s), of each entity performing the listed work:

MECHANICAL:

NAME: _____ LICENSE NO. _____

PLUMBING:

NAME: _____ LICENSE NO. _____

ELECTRICAL:

NAME: _____ LICENSE NO. _____

ROOFING AND SHEET METAL:

NAME: _____ LICENSE NO. _____

The bidder understands that the Owner reserves the right to reject any or all bids and to waive any informalities in the bidding.

The bidder agrees that this bid shall be good and may not be withdrawn for a period of 60 calendar days after the bid opening.

Upon receipt of written notice of acceptance of this bid, bidder will execute the formal contract attached within 10 days and deliver a Surety Bond or Bonds as required by the General Conditions.

The bid security attached in the sum of \$ _____ is to become the property of the Owner in the event the contract and bond are not executed within the time set forth above, as liquidated damages for the delay and additional expense to the Owner caused thereby.

Respectfully submitted:

By: _____
(Signature)

(Please Print Name of Owner/Contractor)

Individual/Company Tax ID Number

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

Section 00 41 16

BID BOND

STATE OF ARKANSAS

KNOW ALL PERSONS BY THESE PRESENTS, that we:

Principal and Contractor, and _____

hereinafter called Surety, are held and firmly bound unto the City of Fayetteville , Arkansas and represented by its Mayor and City Council, hereinafter called Owner, in the sum of

_____ DOLLARS (\$ _____)

lawful money of the United States of America, for the payment of which well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, by these presents.

WHEREAS, the Principal contemplates submitting or has submitted a bid to the Owner for the furnishing of all labor, materials (except those to be specifically furnished by the Owner), equipment, machinery, tools, apparatus, means of transportation for, and the performance of the work covered in the Bid and the detailed Drawings and Specifications, entitled:

Bid 22-54, Construction - Wilson Park Pavilion
City of Fayetteville, Arkansas

WHEREAS, it was a condition precedent to the submission of said bid that a cashier's check or bid bond in the amount of 5 percent of the base bid be submitted with said bid as a guarantee that the Bidder would, if awarded the Contract, enter into a written Contract with the Owner for the performance of said Contract within twelve (12) consecutive calendar days after written notice having been given of the award of the Contract. Cashier's check if submitted shall be from a bank located in the State of Arkansas.

NOW, THEREFORE, the conditions of this obligation are such that if the Principal within Twelve (12) consecutive calendar days after written notice of such acceptance enters into a written Contract with the Owner and furnishes a Contract Surety Bond in an amount equal to 100 percent of the base bid, satisfactory to the Owner, then this obligation shall be void; otherwise the sum herein stated shall be due and payable to the Owner and the Surety herein agrees to pay said sum immediately upon demand of the Owner in good and lawful money of the United States of America, as liquidated damages for failure thereof of said Principal.

IN WITNESS WHEREOF, the said _____, as Principal herein,

has caused these presents to be signed in its name by its _____

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

and attested by its _____ under its corporate seal, and the said
_____ as Surety herein, has
caused these presents to be signed in its name by its _____.

_____ under its corporate seal, this _____ day of _____ A.D., 2013.

Signed, sealed and delivered
in the presence of:

Principal-Contractor

By _____

As to Principal

Title

Surety

Attorney-in-Fact (Power-of-Attorney
to be Attached)

As to Surety

By _____

Resident Agent

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

Section 00 41 18

VENDOR REFERENCES

Bid 22-54, Construction - Wilson Park Pavilion

The following information is required from all Bidders so all bids may be reviewed and properly evaluated.

COMPANY NAME:

BUSINESS ADDRESS:

NUMBER OF YEARS IN BUSINESS: _____ HOW LONG IN PRESENT LOCATION: _____

TOTAL NUMBER OF CURRENT EMPLOYEES: _____ FULL TIME _____ PART TIME

NUMBER OF EMPLOYEES YOU PLAN TO USE TO SERVICE THIS CONTRACT:
_____ FULL TIME _____ PART TIME

PLEASE LIST FOUR (4) LOCAL COMMERCIAL AND/OR GOVERNMENTAL REFERENCES THAT YOU HAVE PREVIOUSLY PERFORMED SIMILAR CONTRACT SERVICES FOR WITHIN THE PAST FIVE (5) YEARS (All fields must be completed). Contractors shall have valid experience.

1. _____ 2. _____
COMPANY NAME COMPANY NAME

CITY, STATE, ZIP CITY, STATE, ZIP

CONTACT PERSON CONTACT PERSON

TELEPHONE TELEPHONE

DATE COMPLETED DATE COMPLETED

E-MAIL ADDRESS E-MAIL ADDRESS

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

Bid 22-54, Construction - Wilson Park Pavilion

3. _____
COMPANY NAME

CITY, STATE, ZIP

CONTACT PERSON

TELEPHONE

DATE COMPLETED

E-MAIL ADDRESS

4. _____
COMPANY NAME

CITY, STATE, ZIP

CONTACT PERSON

TELEPHONE

DATE COMPLETED

E-MAIL ADDRESS

Bid 22-54,
Appendix A:
City Bid Documents

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

DOCUMENT 00 61 13

ARKANSAS PERFORMANCE AND PAYMENT BOND (14-604 Arkansas Statutes)

KNOW ALL PERSONS BY THESE PRESENT: That we (1)

(2) _____, hereinafter called "Principal" and

(3) _____ of _____, State of _____

_____, hereinafter called the "Surety," are held and firmly bound unto (4) The City of Fayetteville, Arkansas, hereinafter called "Owner" in the penal sum of _____ dollars (\$_____), in lawful money of the United States for the payment of which sum well and truly to be made, said principals and Surety bind themselves, their heirs, administrators, executors, successors and assigns, jointly and severally by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the Owner, dated the _____ day of _____, a copy of which is attached and made a part hereof for

NOW THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreement of said contract during the original term thereof, and any extensions thereof which may be granted by the Owner, with or without notice to the Surety, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and safe harmless the Owner from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the Owner all outlay and expense which the Owner may incur in making good any default, and shall promptly make payment to all persons, firms, subcontractors and corporations furnishing material for or performing labor in the prosecution of the work provided for in such contract, and any authorized extension or modification thereof, all amounts due for, but not limited to, materials, lubricants, oil, gasoline, coal and coke, repair on machinery, equipment and tools consumed or used in connection with the construction of said work, fuel oil, camp equipment, food for people, feed for animals, premium for bonds and liability and worker's compensation insurance, rentals on machinery, equipment and draft animals; also

for taxes or payments due the State of Arkansas or any political subdivisions thereof which shall have arisen on account of, or in connection with, the wages earned by workers covered

by the bond; and for all labor performed in such work whether by subcontractor or

otherwise, then this obligation shall be void, otherwise to remain in full force and effect.

The Surety agrees the terms of this bond shall cover the payment by the principal of not less than the prevailing hourly rate of wages as determined by the United States Department of Labor Prevailing Wage Law to all workmen performing work under the contract.

PROVIDED, FURTHER, that the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the contract or to the work to be performed there under of the specifications accompanying the same, shall in any wise affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract as to the work or to the specifications.

PROVIDED, FURTHER, that no final settlement between the Owner and the contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

DEMX architecture
104 N. East Ave. Fayetteville, AR

ARKANSAS PERFORMANCE AND PAYMENT BOND
00 61 13-1

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

IN WITNESS WHEREOF, this instrument is executed in six (6) counterparts, each of which shall be deemed an original, this ____ day of _____, 20__.

ATTEST:

(Principal)

Secretary (Principal)

(SEAL)

(Address) _____ Witness as to Principal _____
(Address)

ATTEST:

(Address) _____ Secretary (Surety)

(SEAL)

Witness as to Attorney-in-Fact

By _____

(Title) _____

(Surety)

By _____ (6)

Attorney-in-Fact

NOTE: Date of Bond must not be prior to date of Contract.

- (1) Correct name of Contractor
- (2) A Corporation, a Partnership, or an individual, as case may be
- (3) Correct name of Surety
- (4) Correct name of Owner
- (5) If Contractor is Partnership, all partners should execute bond
- (6) Must be executed by Arkansas Local Resident Agency for Surety

Section 00 61 13.13

Exhibit A

PERFORMANCE BOND
Only required after award

Bid 22-54,
Appendix A:
City Bid Documents

Section 00 61 13.16

Exhibit B

PAYMENT BOND
Only required after award

Bid 22-54,
Appendix A:
City Bid Documents

Section 00 62 16

Exhibit C

CERTIFICATES OF INSURANCE
Only required after award

Bid 22-54,
Appendix A:
City Bid Documents

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

Section 00 72 00
GENERAL CONDITIONS

ARTICLE 1 -- GENERAL PROVISIONS

1.1 DEFINITIONS

- 1.1.1 Contract Documents:** Contract Documents consist of Agreement; Invitation to Bid; Instruction to Bidders; the Bid Form; the Bid and the Performance and Payment bonds; General and Supplementary Conditions; Specifications; Drawings; Addenda issued prior to execution of the Contract; all Owner approved Change Orders; other documents listed or referred to in the Agreement; and modifications issued after execution of the Contract and signed by Contractor and Owner.
- 1.1.2 Contract:** The Contract Documents form the Contract for construction. The Contract Documents will not be construed to create a contractual relationship between the Design Professional and Contractor, between the Owner and a subcontractor, between the Owner and Design Professional, or between entities other than the Owner and Contractor.
- 1.1.3 Work:** Construction and services required by the Contract Documents whether completed or partially completed, include tools, labor, equipment, supplies, transportation, handling, and incidentals provided by the Contractor.
- 1.1.4 Project:** The total capital improvement project described in the Contract Documents.
- 1.1.5 Drawings:** Graphic and textual portions of the Contract Documents showing the design, location, and dimensions and size of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.
- 1.1.6 Specifications:** Written requirements for materials, equipment, systems, standards, and workmanship for the Work, and performance of related services.
- 1.1.7 Project Manual:** Volume, which may include the bidding requirements, forms, contracting requirements, and the Specifications.
- 1.1.8 Owner:** The person or entity identified as such in the Contract Agreement, referred to throughout the Contract Documents as singular in number. The term Owner means the Owner and the Owner-authorized representative.
- 1.1.9 Contractor:** The person or entity identified as such in the Contract Agreement, referred to throughout the Contract Documents as singular in number. The term Contractor means the Contractor or the Contractor-authorized representative.
- 1.1.10 Design Professional (Architect/Engineer/Consultant):** The person or entity identified as such in the Agreement, lawfully licensed to practice architecture or engineering or another field of expertise and under contract to Owner to provide design service, advice, and consultation, referred to throughout the Contract Documents as if singular in number. The term Design Professional means the Architect/Engineer/ Consultant or the authorized representative.
- 1.1.11 Subcontractor:** Any person, firm, or corporation with a direct contract with the Contractor who acts for or in behalf of the Contractor in executing a portion of the Work. The term subcontractor is referred to as singular in number and means the subcontractor or the subcontractor-authorized representative.
- 1.1.12 Inspector:** A duly authorized representative of the Owner, and Design Professional, designated for detailed inspection of materials, construction, workmanship, and methods of construction.

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

1.1.13 Site: The particular location of that part of the project being considered.

1.1.14 State: The Owner.

1.2 INTENT

1.2.1 The intent of the Contract Documents is to set forth the standards of construction, the quality of materials and equipment, the guarantees that are to be met, and to include items necessary for proper execution and completion of the Work. The Contract Documents are complementary and what is required by one will be as binding as if required by all. Performance by the Contractor shall be required to the extent consistent with the Contract Documents and reasonably inferable as necessary to produce indicated results.

1.2.2 Organization of the Specifications into divisions, sections, and articles, and arrangement of Drawings will not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

1.2.3 Unless otherwise stated in the Contract Documents, words which have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

1.3 CAPITALIZATION

1.3.1 Terms capitalized in the Contract Documents include those which are specifically defined, the titles to numbered sections and articles, identified references to paragraphs, and the titles of other published documents.

1.4 INTERPRETATION

1.4.1 Whenever in these Contract Documents the words "as ordered", "as directed", "as required", "as permitted", "as allowed", or words or phrases of like import are used, it shall be understood that the order, direction, requirement, permission, or allowance of the Owner and Design Professional is intended.

1.4.2 Whenever in these Contract Documents the word "product" is used, it shall be understood that the materials, systems, and equipment will be included.

1.4.3 Whenever in these Contract Documents the word "provide" is used, it shall be understood that it means to "furnish and install".

1.4.4 The Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an", but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

ARTICLE 2 -- OWNER

2.1 LAND

2.1.1 The Owner will provide the lands shown on the Drawings upon which the Work shall be performed. The Owner will provide a right-of-way for access to the project site.

2.1.2 The Owner will provide base lines for the location of the principal component parts of the Work with a suitable number of bench marks adjacent to the Work.

2.2 RIGHT OF ENTRY BY OWNER

DEMX Architecture
104 N. East Ave. Fayetteville, AR

GENERAL CONDITIONS
00 72 00-2

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

- 2.2.1 The Owner and his authorized representative will have the right to enter the property or location on which the Work shall be constructed. The Owner further reserves the right to construct or have his authorized agents construct such work as the Owner will desire, so long as these operations do not interfere with or delay the work being constructed under this Contract.

2.3 OWNER'S RIGHT TO CARRY OUT THE WORK

- 2.3.1 If the Contractor defaults or neglects to perform the Work in accordance with the Contract Documents, including the requirements with respect to the schedule of completion, and fails after ten days written notice from the Owner to correct the deficiencies, the Owner may deduct the cost thereof from the payment then or thereafter due the Contractor.

ARTICLE 3 -- CONTRACTOR

3.1 GENERAL

- 3.1.1 The Contractor shall perform the Work in accordance with the Contract Documents.
- 3.1.2 The Contractor shall furnish labor, materials, equipment, and transportation necessary for the proper execution of the work unless specifically noted otherwise. The Contractor shall do all the work shown on Drawings and described in Specifications and all incidental work considered necessary to complete the project in a substantial and acceptable manner, and to fully complete the work or improvement, ready for use, occupancy and operation by the Owner. Drawings and Specifications shall be interpreted by the Design Professional or the Owner if no Design Professional exists for the project.
- 3.1.3 The Contractor shall cooperate with the Owner, Design Professional, inspectors, and with other contractors on the Project. Contractor shall allow inspectors acting in an official capacity, to have access to the project site.
- 3.1.4 The Contractor shall determine that the final and completed work on the project is in accordance with the Contract Documents. The failure of the Design Professional to find or correct errors or omissions in the use of materials or work methods during the progress of the work shall not relieve the Contractor from his responsibility to correct all the defects in the project.
- 3.1.5 The Contractor shall assist in making final inspections and shall furnish such labor and equipment as may be required for the final tests of equipment, piping, and structures.

3.2 REVIEW OF FIELD CONDITIONS

- 3.2.1 Before ordering material or doing Work, the Contractor shall verify all measurements involved and shall be responsible for the correctness of same. No extra charge or compensation will be allowed on account of difference between actual dimensions and the measurements indicated on Drawings; differences which may be found, shall be submitted to Design Professional for consideration before proceeding with the Work.
- 3.2.2 Drawings may show the location or existence of certain exposed and buried utilities as well as existing surface and subsurface structures. The Owner assumes no responsibility for failure to show any or all such utilities and structures on the Drawings or to show such in the exact location. It is mutually agreed such failure will not be considered sufficient basis for claims for extra work or for increasing the pay quantities in any manner unless the obstruction encountered necessitates substantial changes in the lines or grades or requires the building of a special structure.

3.3 REVIEW OF CONTRACT DOCUMENTS

- 3.3.1 The Contractor shall study and compare Drawings, Specifications, and other instructions and shall report to the Design Professional at once any error, inconsistency, or omission discovered.

CITY OF FAYETTEVILLE, ARKANSAS:
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3.3.2 In the event of conflict among the Contract Documents, interpretations will be based on the following order of precedence, stated highest to lowest:

- a. The Agreement
- b. This Division Zero (0) shall control in the event of conflict between this Division Zero (0) and other Divisions 1 through 16
- c. Addenda to Drawings and Specifications with those of later date having precedence.
- d. Drawings and Specifications

3.3.3 Since the Contract Documents are complementary, the Contractor shall take no advantage of any apparent error or omission in the Drawings and Specifications. The Owner or Design Professional shall furnish interpretations as deemed necessary for the fulfillment of the intent of the Drawings and Specifications.

3.3.4 Discrepancies found between the Drawings and Specifications and actual site conditions or any errors or omissions in the Drawings or Specifications shall be immediately reported to the Design Professional or in the case where a Design Professional is not on the Project, the Owner shall be notified, who shall address such error or omission in writing. Work done by the Contractor after discovery of such discrepancies, errors, or omissions shall be at the Contractor's risk and expense.

3.4 REQUEST FOR SUPPLEMENTARY INFORMATION

3.4.1 The Contractor shall make timely requests of the Owner or Design Professional for additional information required for the planning and production of the Work. Such requests shall be submitted as required but shall be filed in ample time to permit appropriate action to be taken by all parties involved so as to avoid delay. Contractor understands and agrees that it is Contractor's duty to determine the need for, and to request said additional information in writing from the Design Professional by such date as allows Design Professional to provide the information to the Contractor by a date that will not adversely affect Contractor's ability to complete the Work by the date specified in the Contract.

3.4.2 Additional instructions may be issued by the Design Professional during the progress of the Work to clarify the Drawings and Specifications or as may be necessary to explain or illustrate changes in the Work.

3.5 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

3.5.1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

3.5.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

3.5.3 Samples are physical examples that illustrate materials, equipment, or workmanship and establish standards by which the Work will be judged.

3.5.4 The Contractor shall provide shop drawings and other submittals, settings, schedules, and other drawings as may be necessary for the prosecution of the Work in the shop and in the field as required by the Drawings, Specifications, or Design Professional instructions.

3.6 LABOR AND MATERIALS

3.6.1 Except as otherwise specifically stated in the Contract, the Contractor shall provide, but not be limited to, all materials, labor, tools, equipment, water, light, heating and cooling, power, transportation, superintendence,

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temporary construction of every nature, taxes legally collectible because of the work, and all other services and facilities of every nature whatsoever necessary to complete the Work in accordance with the Contract Documents in an orderly and efficient manner. The sequence of construction operations shall follow the schedule of construction as approved by the Design Professional. The Work shall not be discontinued by the Contractor without approval of the Design Professional. Should prosecution of the Work be discontinued for any reason, the Contractor shall notify the Design Professional at least twenty-four hours in advance of resuming the Work.

- 3.6.2 Materials and equipment furnished under this Contract will be subject to inspection by the Owner's authorized representative or by independent laboratories. Defective material, equipment, or workmanship may be rejected at any time before the acceptance of the Work even though the defective material, equipment, or workmanship may have been previously overlooked and estimated for payment. The Contractor shall replace defective equipment and material in accordance with the Contract Documents at no additional cost to the Owner.
- 3.6.3 The Contractor shall provide materials and supplies not subject to conditional sales agreements, or other agreement reserving unto the seller any right, title, or interest therein. All materials and supplies shall become the property of the Owner upon final acceptance of this Contract by the Owner.
- 3.6.4 If shop tests are to be conducted, the Contractor shall notify the Owner of such tests so a representative may witness tests, if desired.
- 3.6.5 The Contractor may make substitutions only with the consent of the Owner, after evaluation by the Design Professional, and in accordance with a Change Order.

3.7 UNAUTHORIZED WORK

- 3.7.1 Work done without lines and grades having been given or work done beyond the lines or not in conformity with the grades shown on the Drawings or as provided by the Owner, except as provided herein, and work completed without proper inspection and supervision or any extra or unclassified work completed without written authority and prior agreement shall be at the Contractor's risk. Such unauthorized work, at the option of the Design Professional, may not be measured and paid for and may be ordered removed at the Contractor's expense.

3.8 SUPERINTENDENCE

- 3.8.1 The Contractor shall supervise and direct the Work. The Contractor shall be solely responsible for construction means, methods, techniques, sequences, and procedures and for coordinating portions of the Work under the Contract.
- 3.8.2 The Contractor shall employ a qualified superintendent during the duration of the Project who is acceptable to the Owner and the Design Professional. The superintendent shall be maintained on the Project site and shall be present on the site at all times work is in progress. The superintendent shall be capable of reading and understanding the Drawings and Specifications and shall have full authority to act in behalf of the Contractor. All directions and instructions given to the Superintendent shall be considered as given to the Contractor and shall be as binding as if given to the Contractor.
- 3.8.3 Workmanship shall be performed by workmen experienced in their trade and skilled and experienced for the class of work to which assigned. Any person, including supervisory personnel, who does not show and exhibit skill and proficiency in said work shall be removed by the Contractor and replaced by a competent and experienced workman.
- 3.8.4 The Contractor shall, at all times, be responsible for the conduct and discipline of his employees and all Subcontractors and their employees. Disorderly, incompetent or intemperate persons, or persons who commit any crimes or trespass on public or private property in the vicinity of the Work must not be allowed to continue working upon the project which the Contractor has with the State. Any superintendent, foreman or workman employed by the Contractor or a Subcontractor who unreasonably refuses or neglects to comply with the

CITY OF FAYETTEVILLE, ARKANSAS:
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instructions of the Owner, Design Professional, or inspector, shall, at the written request of the Owner or Design Professional, be removed from the work site and shall not be allowed to work further on any portion of the work without the approval of the Owner.

- 3.8.5 The Contractor shall coordinate Work by the various trades to provide uniform and symmetrical layout and spacing of the exposed components which will affect the finished design and appearance. Where spacing and related locations are not specifically shown on Drawings or where in doubt, the Contractor shall consult the Design Professional prior to installation of that part of the Work.

3.9 PERMITS, FEES, AND NOTICES

- 3.9.1 The Contractor shall purchase and secure all applicable permits and licenses and give all notices necessary and incidental to the prosecution of the Work. However, in accordance with Ark. Code Ann. §22-9-213, public works construction projects conducted by the Owner, a state agency, are exempt from permit fees or inspection requirements of county or municipal ordinances.

- 3.9.2 When new construction under the Contract crosses highways, railroads, streets or utilities under the jurisdiction of the state, county, city, or other public agency, public utility, or private entity, the Contractor shall secure written permission from the proper authority before executing such new construction. A copy of this written permission shall be filed with the Owner before any work is completed. The Contractor shall furnish a release from the proper authority before final acceptance of the Work. Any bonds required for this Work shall be secured and paid for by the Contractor.

3.10 SAMPLES AND TESTS

- 3.10.1 The Contractor shall provide samples, materials, and equipment necessary or required for testing as outlined in the various sections of the Specifications or as directed by the Owner. The Contractor shall pay all costs for testing. Should materials, methods, or systems fail to meet specified standards, the Contractor shall pay all costs for additional testing as required by the Owner.
- 3.10.2 All tests shall be made by a laboratory approved by the Owner.

3.11 LOCATION, GRADIENT, AND ALIGNMENT

- 3.11.1 Based upon the site information provided by the Owner, the Contractor shall develop and make detailed surveys necessary for construction including slope stakes, batter boards, and other working points, lines, and elevations.
- 3.11.2 The Contractor shall report any errors, inconsistencies, or omissions to the Design Professional as a request for information.
- 3.11.3 The Contractor shall preserve benchmarks, reference points and stakes, and in the case of destruction thereof by the Contractor, shall be responsible for damage or mistakes resulting from unnecessary loss or disturbance.

3.12 LAND

- 3.12.1 Additional land and access thereto not shown on Drawings that may be required for temporary construction facilities or for storage of materials shall be provided by the Contractor at his expense with no liability to the Owner. The Contractor shall confine his equipment and storage of materials and the operation of his workmen to those areas shown on the Drawings and described in the Specifications, and such additional areas which he may provide or secure as approved by the Owner.
- 3.12.2 The Contractor shall not enter upon private property for any purpose without first obtaining permission.

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- 3.12.3 The Contractor shall be responsible for the preservation of and prevent damage or injury to all trees, monuments, and other public property along and adjacent to the street and right-of-way. The Contractor shall prevent damage to pipes, conduits and other underground structures, and shall protect from disturbance or damage all monuments and property marks until an authorized agent has witnessed or otherwise referenced their location and shall not remove monuments or property marks until directed.

3.13 LIMITS OF WORK

- 3.13.1 The Contractor shall conduct Work and operations so as to cause a minimum of inconvenience to the public. At any time when, in the opinion of the Owner or Design Professional, the Contractor is obstructing a larger portion of a road, street, or other public right-of-way than is necessary for the proper execution of the Work, the Design Professional may require the Contractor to finish the sections on which work is in progress before work is commenced on any new sections.

3.14 WARRANTY

- 3.14.1 The Contractor shall warrant that all Work, materials, and equipment furnished will be free from defects in design, materials, and workmanship and will give successful service under the conditions required. The warranty period for Work, materials, and equipment furnished by the Contractor shall be one year from the date of the written acceptance of the Work as stated in the Substantial Completion Form approved by the Contractor, Owner and the Design Professional, unless a longer period is agreed upon.

3.15 PATENTS AND ROYALTIES

- 3.15.1 If the Contractor is required or desires to use any design, device, material or process covered by letters, patent, or copyright, he shall provide for such use by suitable legal agreement with the patents or Owner. It is mutually understood and agreed that without exception the Contract Sum shall include all royalties or costs arising from patents, trademarks, and copyrights in any way involved in the Work. The Contractor and the surety shall defend, indemnify, and save harmless the Owner and all its officers, agents and employees from all suits, actions, or claims of any character, name and description brought for or on account of infringement or alleged infringement by reason of the use of any such patented design, device, material or process of any trademark or copyright used in connection with the Work agreed to be performed under this Contract, and shall indemnify the Owner for any cost, expense, or damage which it may be obliged to pay by reason of any action or actions, suit or suits which may be commenced against the Owner for any such infringement or alleged infringement at any time during the prosecution or after the completion of the Work contracted for herein. It is mutually agreed that the Owner may give written notice of any such suit to the Contractor, and thereafter, the Contractor shall attend to the defense of the same and save and keep harmless the Owner from all expense, counsel fees, cost liabilities, disbursements, recoveries, judgments, and executions in any manner growing out of, pertaining to, or connected therewith.

3.16 CLEANING UP

- 3.16.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove from and about the Project waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials.
- 3.16.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so, and the cost thereof shall be charged to the Contractor.

ARTICLE 4 -- ADMINISTRATION OF CONTRACT

4.1 DESIGN PROFESSIONAL AUTHORITY

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- 4.1.1 The Design Professional will interpret the requirements of the Contract Documents and decide matters concerning performance thereunder on request of the Owner or Contractor.
- 4.1.2 The Design Professional will provide administration of the Contract as described in the Contract Documents and will be the Owner's representative. The Design Professional will decide any and all questions as to the acceptability of materials or equipment furnished, work performed, interpretation of the Drawings and Specifications, rate of progress of the Work, acceptability of the quality of workmanship provided, and other questions as to the fulfillment of the Contract by the Contractor.
- 4.1.3 The Design Professional will prepare all change orders on the form specified by the Owner. The Design Professional may authorize minor changes in the Work not involving adjustment in Contract Sum or extension of Contract Time and not inconsistent with the intent of the Contract Documents.
- 4.1.4 The Design Professional Design Professional and his authorized representatives and the Owner will have the right to enter the property or location on which the Work shall be constructed.

4.2 CLAIMS

- 4.2.1 Definition: A claim is a demand or assertion by one of the parties seeking adjustment, or interpretation of Contract terms, payment of money, extension of time, or other relief with respect to the terms of the Contract. The term includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. Claims will be initiated by written notice. The responsibility to substantiate claims shall rest with the party making the claim.
- 4.2.2 Claims of the Contractor or the Owner: Claims regarding the Work of the Contract shall be referred initially to the Design Professional for a decision. The Design Professional will review claims, and 1) reject in whole or in part; 2) approve the claim; 3) suggest a compromise; 4) advise the parties that the Design Professional is unable to resolve the claim.
- 4.2.3 Claims for Concealed or Unknown Conditions: If new and unforeseen items of work are discovered, which cannot be covered by any item or combination of items for which there is a Contract Sum, then the Contractor shall notify the Design Professional as quickly as reasonably possible and shall not continue working on the discovered new or unforeseen items without express written permission from the Design Professional. The Contractor shall complete such work and furnish such materials as may be required for the proper completion or construction of the work contemplated upon written Change Order from the Design Professional as approved by the Owner. Work shall be performed in accordance with the Contract Documents.
- 4.2.4 Claims for Extensions of Time: The Contractor shall provide written notice to Design Professional within ten days stating the cause of the delay and request an extension of Contract Time. The Design Professional will act on the request in writing. The extension of time shall be for a period equivalent to the time lost by reasons indicated. No extension of time shall be effective until included in a Change Order approved by the Owner and Design Professional.
- 4.2.5 Claims for Changes in the Work: The Contractor shall provide written notice to Design Professional within ten calendar days after the receipt of instructions from the Owner, as approved by the Design Professional, to proceed with changes in the Work and before such Work is commenced. Changes in the Work shall not be commenced before the claim for payment has been approved, except in emergencies endangering life or property. The Contractor's itemized estimate sheets showing labor and material shall be submitted to the Design Professional. The Owner's order (Change Order) for changes in the Work shall specify any extension of the Contract Time and one of the following methods of payment:
 - a. Unit prices or combinations of unit prices, which formed the basis of the original Contract.
 - b. A lump sum fee based on the Contractor's estimate, approved by the Design Professional and accepted by the Owner.

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NEW RESTROOM AND PAVILION AT WILSON PARK

- c. The actual cost of the Work plus an allowance of 12 percent and 5 percent for the General Contractor and Subcontractor, respectively.
- 4.2.6 Claims for Additional Costs: In case of an emergency which threatens loss or injury of property or safety of life, the Contractor shall be allowed to act, without previous instructions from the Design Professional, in a diligent manner. The Contractor shall notify the Design Professional immediately thereafter. Any claim for compensation by the Contractor due to such extra work shall be promptly submitted, but in no case more than 7 calendar days following the event causing the emergency, to the Design Professional for consideration. The amount of reimbursement claimed by the Contractor on account of any emergency action shall be determined in the manner provided under these General Conditions. No agreement to pay costs for additional work shall be effective until included in a Change Order approved by the Owner, Contractor and the Design Professional.

ARTICLE 5 -- SUBCONTRACTORS

5.1 ASSIGNMENT OF CONTRACT

- 5.1.1 Neither the Owner nor the Contractor shall have the right to sublet, sell, transfer, assign, or otherwise dispose of the "Contract" or any portion thereof without written consent of the other party. No assignment, transfer, or subletting, even with the proper consent, shall relieve the Contractor of his liabilities under this Contract. Should any Assignee or Subcontractor fail to perform the work undertaken by him in a satisfactory manner, the Owner, has the right to annul and terminate the Assignee's or Subcontractor's contract on the project.

5.2 SUBCONTRACTS

- 5.2.1 The subcontracting of the whole or any part of the Work to be done under this Contract will not relieve the Contractor of his responsibility and obligations. All transactions of the Owner or Design Professional shall be with the Contractor. Subcontractors will be considered only in the capacity of employees or workmen and shall be subject to the same requirements as to character and competency.
- 5.2.2 The Contractor shall discharge or otherwise remove from the project any Subcontractor that the Owner or the Design Professional has reasonably determined as incompetent or unfit.
- 5.2.3 The Contractor may not change those Subcontractors listed on the proposal without the written approval of the Owner and Design Professional. The Contractor shall not be relieved of any liabilities under this Contract, but shall be fully responsible for any Subcontractor or work by said Subcontractor where Subcontractor is employed by the Contractor to perform work under this Contract. Nothing contained in the Contract Documents shall create contractual relations between any Subcontractor and the State.
- 5.2.4 No officer, agent, or employee of the Owner, including the Design Professional, shall have any power or authority to bind the Owner or incur any obligation in his behalf to any Subcontractor, material supplier or other person in any manner whatsoever.

ARTICLE 6 - CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

6.1 OTHER CONTRACTS

- 6.1.1 The Owner reserves the right to award other contracts in connection with the Project. The Contractor shall cooperate with the other contractors with regard to the storage of materials and equipment, access to the site, and execution of their work. It shall be the Contractor's responsibility to inspect the work of other contractors which will affect the work of this Contract and to report to the Owner irregularities which will not permit him to complete his work in a satisfactory manner or in the time allotted. Failure to so report shall constitute an acceptance of the work of other contractors.

6.2 DEPENDENCE ON OTHERS

- 6.2.1 If any part of the Contractor's work depends for proper execution or results upon the work of the Owner or any separate contractor, the Contractor shall, prior to proceeding with the work, promptly report to the Design Professional any apparent discrepancies or defects in such other work that render it suitable for such proper execution and results. Failure of the Contractor to so report shall constitute an acceptance of the work.

ARTICLE 7 -- CHANGES IN THE WORK

7.1 GENERAL

- 7.1.1 The Owner may, as the need arises, without invalidating the Contract, order changes in the work in the form of additions, deletions, or modifications. Compensation to the Contractor for additional work or to the Owner for deductions in the work and adjustments for the time of completion shall be adjusted at the time of ordering such change.
- 7.1.2 Additional work shall be done as ordered in writing by the Owner. The order shall state the location, character, and amount of extra work. All such work shall be executed under the conditions of the Contract, subject to the same inspections and tests.
- 7.1.3 The Design Professional and the Owner reserve and shall have the right to make changes in the Contract Documents and the character or quantity of the work as may be considered necessary or desirable to complete fully and acceptably the proposed construction in a satisfactory manner.

7.2 CHANGE ORDERS

- 7.2.1 A Change Order is a written instrument, prepared by the Design Professional and approved by the Owner stating their agreement upon the following, separately or in any combination thereof:
- a. Description and details of the work.
 - b. Amount of the adjustment in the Contract Sum.
 - c. Extent of the adjustment in the Contract Time.
 - d. Terms and conditions of the Contract Documents.
- 7.2.2 Change Order requests by the Contractor shall be submitted in a complete itemized breakdown, acceptable to the Owner and the Design Professional.
- 7.2.2.1 Where unit prices are stated in the Contract, Contractor should submit an itemized breakdown showing each unit price and quantities of any changes in the Contract Amount. The value of all such additions and deductions shall then be computed as set forth in Paragraph 7.2.2.3.
- 7.2.2.2 The Contractor shall present an itemized accounting together with appropriate supporting data for the purposes of considering additions or deductions to the Contract Amount. Supporting data shall include but is not limited to the following:
- a. Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and worker or workmen's compensation insurance;
 - b. Cost of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;

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- c. Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- d. Costs of premiums for all bonds and insurance, permit fees, and sales, use of similar taxes related to the Work; and
- e. Additional costs of supervision and field office personnel directly attributable to the change.

The burden of proof of cost rests upon the Contractor. Contractor agrees that Owner or Owner's Representative shall have the right, at reasonable times, to inspect and audit the books and records of Contractor to verify the propriety and granting of such cost.

7.2.2.3 When unit prices are stated in the contract, compute requests for changes be they additions or deductions as follows:

- a. For work performed by the Contract:

Net Cost of Materials	a
State Sales Tax	b
Net Placing Cost	c
W.C. Insurance Premium and FICA Tax	d
	a+b+c+d
Overhead and Profit, 12% x (a+b+c+d)	e
Allowable Bond Premium	f
TOTAL COST	a+b+c+d+e+f

- b. Credit for work deleted shall be computed as outlined in 7.2.2.3 a. through e., except the Contractor's share of overhead and profit percentage is seven percent.
- c. For added work performed by Subcontractors: Subcontractors shall compute their work as outlined in 7.2.2.3 a. through e. To the cost of that portion of the work (Change) that is performed by the Subcontractor, the Contractor shall add an Overhead and Profit Change of five percent plus the Allowable Bond Premium.
- d. For work deleted by a Subcontractor: Subcontractors shall compute their work as outlined in 7.2.2.3 a. through e, except that the overhead and profit shall be seven percent and the Contractor's overhead and profit shall be five percent.

7.3 PAYMENT FOR CHANGES IN THE WORK

- 7.3.1 All changes in the Work will be paid for in the manner indicated in Article 4, Paragraph 4.2, and the compensation thus provided shall be accepted by the Contractor as payment in full for the use of small tools, superintendent's services, premium on bond, and all other overhead expenses incurred in the prosecution of such work.
- 7.3.2 The Owner shall not be deemed to have agreed to any costs for additional work, to have agreed to additional time for completion, or to have agreed to any other change in the terms and conditions of the Contract Documents until Owner, Design Professional and Contractor have executed a Change Order to this Contract.

ARTICLE 8 -- TIME

8.1 DEFINITIONS

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- 8.1.1 Contract Time is the period of time identified in the Contract Documents for Substantial Completion of the Work, including authorized adjustments made as part of Change Orders agreed to by the Owner, the Design Professional and the Contractor.
- 8.1.2 Date for commencement of the Work is the fifth calendar day following the date of mailing, by regular mail, of the Notice to Proceed, unless otherwise stated in the Contract.
- 8.1.3 Date of Substantial Completion is the date certified by the Design Professional and the Owner.

8.2 PROGRESS

- 8.2.1 Time limits identified in the Contract Documents are of the essence of the Contract. The Contractor confirms that the Contract Time is a reasonable period of time for performing the Work.

8.3 HOLIDAYS

- 8.3.1 New Year's Day, Robert E. Lee/Dr. Martin Luther King's Birthday, President's Birthday, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day and the day thereafter, Christmas Eve and Christmas Day will be considered as being legal holidays; no other days will be considered unless declared by the Governor of the State of Arkansas through an Executive Order or Proclamation. No Design Professional clarifications, observations, or State inspections will be provided on legal holidays, Saturdays and Sundays, and no work shall be performed on these days except in an emergency or with written approval in advance by the Design Professional and Owner.

8.4 DELAYS

- 8.4.1 Delays beyond the Contractor's control occasioned by an act or omission on the part of the Owner, strikes, fires, additions to the work, delays by any separate contractor employed by the Owner, extremely abnormal weather conditions, or other delays beyond the Contractor's control may, if agreed to by Change Order by the Contractor, Owner and Design Professional entitle the Contractor to an extension of time in which to complete the work. While such delays may be just cause for an extension of the Contract Time, the Contractor shall not have a claim for damages for any such cause or delay.

ARTICLE 9 -- PAYMENTS AND COMPLETION

9.1 CONTRACT SUM

- 9.1.1 The Contractor shall accept the compensation, as herein provided, in full payment for furnishing all materials, equipment, labor, tools, and incidentals necessary to complete the Work and for performing all Work contemplated and embraced under the Contract; also for loss or damage arising from the nature of the Work, from the action of the elements or from any unforeseen difficulties which may be encountered during the prosecution of the Work until the final acceptance by the Design Professional and Owner and for all risks of every description connected with the prosecution of the Work, for all expenses incurred in consequence of the suspension or discontinuance of the Work as specified, for any infringement of patent, trademark, or copyright, and for completing the Work according to the Contract Documents. Neither the payment of any estimate nor of any retained percentage shall relieve the Contractor of any obligation to make good any defective work or material.
- 9.1.2 No moneys payable under Contract or any part thereof, except the estimate for the first month or period, shall become due and payable if the Owner so elects until the Contractor shall satisfy the said Owner that he has fully settled or paid for all materials and equipment used in or on the Work and labor done in connection therewith, and the Owner, if he so elects, may pay any or all such bills wholly or in part and deduct the amount or amounts so paid from any monthly or final estimate excepting the first estimate.

- 9.1.3 In the event the surety on any contract or payment bond given by the Contractor becomes insolvent, or is placed in the hands of a receiver, or has the right to do business in a state revoked as provided by law, the Owner may at its election withhold payment of any estimate filed or approved by the Design Professional until the Contractor shall give a good and sufficient bond in lieu of the bond so executed by such surety. Any and all subsequent bonds shall be filed with the Circuit Clerk of the County in which the Work is being performed.

9.2 SCHEDULE OF VALUES

- 9.2.1 The Contractor shall submit to the Design Professional a schedule of values for each part of the Work. The schedule shall be a complete breakdown of labor and materials for the various parts of the Work including an allowance for profit and overhead. The total of these amounts shall equal the Contract Sum. The approved schedule of values shall be used as a basis for the monthly payments to the Contractor. In applying for the monthly payment, the Contractor shall show a detailed account of work accomplished in conformity with the schedule.

9.3 MEASUREMENT OF QUANTITIES

- 9.3.1 The Contractor shall be paid for all Work performed under the Contract based on Design Professional computations of as-built quantities and the Contractor's Contract Sum. This payment shall be full compensation for furnishing all supplies, materials, tools, equipment, transportation, and labor required to do the Work; for all loss or damage, because of the nature of the Work, from the action of the elements or from any unforeseen obstruction or difficulty which may be encountered in the prosecution of the Work and for which payment is not specifically provided for all or any part of the Work; and for well and faithfully completing the Work in accordance with the Contract Documents. The method of computation and payment for each item shall be as set forth in the Specifications or the Supplementary Conditions.

9.4 REQUESTS FOR PAYMENT

- 9.4.1 The Contractor may submit periodically, but not more often than once each month, a Request for Payment for work completed. When unit prices are specified in the Contract Documents, the Request for Payment shall be based on the quantities completed.
- 9.4.2 Unless otherwise provided in the Contract Documents, payments will be made on account of materials or equipment not incorporated in the Work but delivered and suitably stored at the site, and if approved in advance by the Owner, payments may similarly be made for materials or equipment suitably stored at some other location agreed upon in writing. Payments for materials or equipment stored on or off the site shall be conditioned upon submission by the Contractor of bills of sale or such other procedures satisfactory to the Owner and the Design Professional to establish the Owner's title to such materials or equipment or otherwise protect the Owner's interest including applicable insurance and transportation to the site for those materials and equipment stored off the site.
- 9.4.3 The Contractor shall furnish the Design Professional all reasonable facilities and job tickets required for obtaining the necessary information relative to the progress and execution of the Work and the measurement of quantities. Each Request for Payment shall be computed from the work completed on all items listed in the approved schedule of values less 5 percent of the adjusted Contract Sum and less previous payments to the Contractor on the Contract.

9.5 PERIODIC ESTIMATES FOR PAYMENT

- 9.5.1 Unless otherwise stated in the Specifications or Supplementary Conditions, the Owner shall cause the Design Professional to prepare an Estimate for Payment to the Contractor each month. The Design Professional will make the estimate for the materials complete in place and the amount of work performed in accordance with the Contract between the twenty-fifth day of the month and the fifth day of the succeeding month.

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- 9.5.2 From the total of the amount estimated to be paid, the contractor shall be entitled to payment of ninety-five percent (95%) of the earned progress payments when due, with the owner retaining five percent (5%) to assure faithful performance of the contract.

If the construction contract allows for phased work in which completion may occur on a partial occupancy, any retention proceeds withheld and retained under this section shall be partially released within thirty (30) days under the same conditions under this section in direct proportion to the value of the part of the capital improvement completed.

All sums withheld by the owner shall be paid to the contractor within thirty (30) days after the construction contract has been completed.

In the event the construction contract requires the contractor to purchase and furnish materials or equipment that will be stored on the job site or in a bonded warehouse by the contractor and used in the job as required by the construction contract, no retainage will be withheld on that amount of the submitted progress payment pertaining to the cost of these stored materials or equipment

9.6 PAYMENT FOR INCREASED OR DECREASED QUANTITIES

- 9.6.1 When alterations in the quantities of work not requiring Contract modifications are ordered and performed, the Contractor shall accept payment in full at the Contract Sum, for the actual quantities of work accomplished. No allowance will be made for anticipated profits. Increased or decreased work involving Contract modifications shall be paid for as stipulated in such Contract modifications

9.7 DESIGN PROFESSIONAL'S ACTION ON A REQUEST FOR PAYMENT (See also 9.9)

- 9.7.1 The Owner shall cause the Design Professional to, within five working days plus time required for transmittal from one party to another, act on a Request for Payment by the Contractor in one of the following:
- Approve the Request for Payment as submitted by the Contractor and transmit same to the Owner.
 - Approve an adjusted amount as the Design Professional will decide is due the Contractor informing the Contractor in writing of the reason for the adjusted amount and transmit same to the Owner.
 - Withhold the Request for Payment submitted by the Contractor informing the Contractor and the Owner in writing of the reason for withholding the request.

9.8 OWNER'S ACTION ON A REQUEST FOR PAYMENT (See also 9.9)

- 9.8.1 The Owner will, within ten working days plus transmittal time between the various state agencies involved, act on a Request for Payment after approval by the Design Professional by one of the following:
- Approve the Request for Payment as approved by the Design Professional and forward the Pay Request to the Owner's Contract Administrator in Finance for review and approval prior to submission to Owner's Accounts Payable for payment.
 - Approve payment of an adjusted amount as the Owner will decide is due the Contractor, informing the Contractor and the Design Professional in writing of the reason for the adjusted amount of payment.
 - Withhold the Request for Payment informing the Contractor and the Design Professional in writing of the reason for withholding the payment.

9.9 ARKANSAS STATE AGENCIES ACTION ON A REQUEST FOR PAYMENT

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- 9.9.1 The State shall process payments in accordance with Ark. Code Ann. §19-4-1411, or as modified by subsequent law, which establishes the time limits for the Design Professional, the Owner and the Department of Finance and Administration. It also authorizes the Chief Fiscal Officer of the State to investigate any complaints of late payments and assess penalties for late payment. Complaints shall be addresses to "Chief Fiscal Officer of the State: Department of Finance and Administration; 1509 West Seventh Street, Suite 401; Post Office Box 3278; Little Rock, AR 72203-3278.

9.10 WITHHOLDING PAYMENT

- 9.10.1 The Design Professional or the Owner may withhold payment for contested issues, including but not limited to, defective work on the project; evidence indicating the probable filing of claims by other parties against the Contractor related to the project; damage caused to another contractor; reasonable evidence that Work cannot be completed for the unpaid balance of the Contract Sum or within Contract Time or failure of the Contractor to make payments on materials, equipment or labor to subcontractors. It is the responsibility of the contesting party to notify the Contractor in writing that payment has been contested and the reasons why. The notification must be done within the timeframe specified for processing of payment under Ark. Code Ann. §19-4-1411.

9.11 PAYMENT FOR UNCORRECTED WORK

- 9.11.1 Should the Design Professional direct the Contractor not to correct work that has been damaged or that was not performed in accordance with the Contract Documents, an equitable deduction from the Contract Sum shall be made to compensate the Owner for the uncorrected work. The Design Professional shall determine the amount of the equitable deduction.

9.12 PAYMENT FOR REJECTED MATERIALS AND WORK

- 9.12.1 The removal of rejected Work and materials and the re-execution of acceptable work by the Contractor shall be at the expense of the Contractor. The Contractor shall pay the cost of replacing the work of other contractors destroyed or damaged by the removal of the rejected work or materials and the subsequent replacement with acceptable work.

9.13 DATE OF SUBSTANTIAL COMPLETION

- 9.13.1 A Certificate of Substantial Completion, which shall establish the Date of Substantial Completion, shall state the responsibilities of the Owner and the Contractor for security, maintenance, heat, utilities, damage to work, and insurance and shall fix the time within which the Contractor shall complete the items listed therein. Warranties required by the Contract Documents shall commence on the Date of Substantial Completion, unless another timeframe is stated in the Certificate of Substantial Completion. The Certificate of Substantial Completion shall not become effective until approved by the Owner and the Design Professional.

9.14 FINAL COMPLETION AND PAYMENT BY OWNER

- 9.14.1 The Contractor shall furnish a letter from the Design Professional attached to the Contractor's final estimate, which shall include all retainage withheld, certifying that the Design Professional has received and approved all guarantees, bonds, maintenance and operation manuals, air balance data, shop drawings, catalog data, and record documents specified in the Contract Documents.
- 9.14.2 Before final payment, the Contractor shall furnish to the Design Professional executed copies of the Release of Claims and Consent of the Performance and Payment Bond Surety for Final Payment. Items listed in this Section Nine (9) shall be submitted with and at the same time as the final estimate to the Design Professional and shall be promptly delivered by the Design Professional to the Owner. No final payment or release of retained amounts shall be made without complete compliance with this Section Nine (9), and approval by the Owner of the Final Pay Request, which shall include payment of all retained amounts,

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9.14.3 Any claim by the Contractor to the Owner for interest on a delinquent final payment shall only be made pursuant to Ark. Code Ann. § 22-9-205.

9.15 PARTIAL OCCUPANCY OR USE

9.15.1 The Owner may occupy or use any completed or partially completed portion of the Work provided such use or occupancy is consented to by the insurer and authorized. The Contractor will prepare a list of items to be completed or corrected before partial acceptance. Upon receipt of the Contractor's list, the Design Professional will make an inspection to determine whether the Work or portion thereof is substantially complete. No portion of the work shall be considered substantially complete unless described in a Certificate of Substantial Completion Form approved by the Contractor, Owner and the Design Professional.

9.15.2 The Design Professional will prepare a Certificate of Substantial Completion which shall establish the date of Substantial Completion, shall state the responsibilities of the Owner and the Contractor for security, maintenance, heat, utilities, damage to Work and insurance, identify work items to be corrected or completed by the contractor and shall fix the time within which the Contractor shall complete the items listed therein. Warranties required by the Contract Documents shall commence on the Date of Substantial Completion, unless another timeframe is stated in the Certificate of Substantial Completion. No retained amounts shall be paid until the Contractor, Design Professional and the Owner approve a Certificate of Substantial Completion for all of the Work unless specifically provided for by this contract, and all other conditions for final acceptance of this Work are met to the satisfaction of the Owner.

9.15.3 Instances where some of the Work is "sectioned" out and substantially completed, the retained amounts shall not be paid until the final Certificate of Substantial Completion of the entire Work is approved by the Contractor, Design Professional, and the Owner and all other conditions of this Section Nine (9) are met by the Contractor.

9.16 FINAL INSPECTION

9.16.1 Tests, inspections, and approvals of portions of the Work required by the Contract Documents, laws, ordinances, or any public authority having jurisdiction shall be made at the appropriate time. The Contractor shall give the Design Professional timely notice of when and where tests and inspections shall be made so that the Design Professional may be present. The Contractor shall make arrangements for the testing and inspection with an independent testing laboratory.

9.16.2 The Contractor shall ensure that the final completed work is in accordance with the Contract Documents. Required certificates of testing and inspection shall be secured by the Contractor and delivered to the Design Professional, unless otherwise required by the Contract Documents.

9.17 ASSIGNMENT OF WARRANTIES

9.17.1 All warranties of materials and workmanship running in favor of the Contractor shall be transferred and assigned to the Owner on completion of the Work and at such time as the Contractor receives final payment.

9.17.2 In case of warranties covering work performed by subcontractors, such warranties shall be addressed to and in favor of the Owner. The Contractor shall be responsible for delivery of such warranties to the Owner prior to final acceptance of the work.

9.17.3 Delivery of guarantees or warranties shall not relieve the Contractor from any obligation assumed under any provision of the Contract. All warranties shall be for one year from the date of Substantial Completion of the Project, unless extended otherwise.

9.18 ACCEPTANCE AND FINAL PAYMENT

9.18.1 Upon receipt of written notice that the Work is ready for final inspection, the Design Professional together with the Owner will conduct such inspection and when the Design Professional determines the work is acceptable to the Design Professional and the Owner, the Design Professional shall certify his acceptance to the Owner.

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Final Payment shall be the Contract Sum plus approved Change Order additions less approved Change Order deductions and less previous payments made. The Contractor shall furnish evidence that he has fully paid all debts for labor, materials, and equipment incurred in connection with the Work. The Owner, upon approval by the Design Professional of all documentation to be provided by the contractor in accordance with this Section 9, and approval by the Design Professional, Contractor and Owner of the Certificate of Substantial Completion will accept the Work and release the Contractor, except as to the conditions of the Performance and Maintenance Bond, any legal rights of the Owner, required guarantees and correction of faulty work after Final Payment, and shall authorize payment of the Contractor's final Request for Payment. The Contractor must allow sufficient time between the time of completion of the work and approval of the final Request for Payment for the Design Professional to assemble and check the necessary data.

- 9.18.2 Acceptance of final payment by the Contractor shall constitute waiver of all claims by the Contractor except those previously made in writing and identified by the Contractor as unsettled at the time of the final Request for Payment. Any claims for interest on delinquent payments shall be made pursuant to Ark. Code Ann. § 22-9-205.

ARTICLE 10 -- PROTECTION OF PERSONS AND PROPERTY

10.1 GENERAL

- 10.1.1 The Contractor shall at all times exercise precaution for the safety of employees on the Project and of the public, and shall comply with all applicable provisions of federal, state and municipal safety laws and applicable building and construction codes. The Contractor shall provide and maintain passageways, guard fences, lights, and other facilities for protection required by all applicable laws. All machinery, equipment, and other physical hazards shall be guarded in accordance with all federal, state or municipal laws or regulations.
- 10.1.2 The Work, from commencement to completion, and until written acceptance by the Design Professional, and the Owner or to such earlier date or dates when the Owner may take possession and control in accordance with Section Nine (9) of these General Conditions, shall be under the charge and control of the Contractor and during such period of control by the Contractor, all risks in connection therewith shall be borne by the Contractor. The Contractor shall make good and fully repair all damages to the Project by reason of the Contractor's negligence, and make good on all injuries to persons caused by any casualty or cause by reason of the Contractor's negligence. The Contractor shall adequately protect adjacent Property as provided by law and the Contract Documents. The Contractor shall hold the Owner harmless from any and all claims for injuries to persons or for damage to property during the control by the Contractor of the project or any part thereof.
- 10.1.3 The Contractor shall at all times so conduct the Work as to ensure the least possible obstruction to traffic, to the general public, and the residents in the vicinity of the Work, and to ensure the protection of persons and property. No road, street, or highway shall be closed to the public except with the permission of the Owner and proper governmental authority. Fire hydrants on or adjacent to the Work shall be kept accessible to fire fighting equipment at all times. The local fire department shall be notified of the temporary closing of any street.

10.2 ENVIRONMENTAL

- 10.2.1 The University of Arkansas is a member of the Northwest Arkansas Storm Water Compliance Group, a consortium of counties, cities, towns, and campuses dedicated to maintaining watershed quality in the White and Illinois River drainages. Accordingly, The Contractor shall at all times assure that hazardous substances are kept clear of storm water drains, including, but not limited to, roof drains, and that no hazardous materials are released either directly, or via the campus storm drain system into streams, ponds, or other waterways.
- 10.2.2 The Contractor is required to use "Best Management Practices" to avoid concrete washout to assure that all waterways remain silt free, and to comply with the National Clean Water Act, Phase II Storm Water Regulations.

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- 10.2.3 The Contractor may be subject to fines by Arkansas Department of Environmental Quality (ADEQ) in the event of illicit discharge.

ARTICLE 11 -- INSURANCE AND BONDS

11.1 CONTRACTOR'S LIABILITY INSURANCE

- 11.1.1 The Contractor shall secure and maintain in force during this Contract such insurance as is specified within the Contract Documents, from an insurance company authorized to write the prescribed insurance in the jurisdiction where the Project is located as will protect the Contractor, his subcontractors, and the Owner from claims for bodily injury, death, or property damage which may arise from operations under this Contract. The Contractor shall not commence work under this Contract until he has obtained all the insurance required, has filed the Certificate of Insurance with the Owner, and the certificate has been approved by the Owner. Each insurance policy shall contain a clause providing that it shall not be canceled by the insurance company without written notice to the Owner of intention to cancel.
- 11.1.2 Workman's Compensation and Employer's Liability Insurance in statutory limits shall be secured and maintained as required by the laws of the State of Arkansas. This insurance shall cover all employees who have performed any of the obligations assumed by the Contractor under these Contract Documents including Employer's Liability Insurance. This insurance shall protect the Contractor against any and all claims resulting from injuries, sickness, disease, or death to employees engaged in work under this Contract.
- 11.1.3 Comprehensive General Liability Insurance, including automobile and truck liability. Prior to blasting, the Contractor shall furnish Certificate of Insurance, which shall certify that damage caused by blasting is within the coverage of his Comprehensive General Liability Insurance to the full limits thereof. Hired and non owned automobile insurance for automobiles and trucks shall include hired and non owned automobile coverage.
- 11.1.4 Contractor's Protective Liability Insurance: The Contractor shall indemnify and save harmless the Owner from and against all losses and all suits, claims, demands, judgments, actions, and payments of every description and nature brought or recovered against him by reason of any omission or act of the Contractor, his agents, or employees in the execution of the Work or in the guarding of it. The Contractor shall secure and maintain protective liability insurance in the name of the Owner and the Contractor covering them from contingent liability under this Contract.
- 11.1.5 Builder's Risk and Fire Insurance: The Contractor shall procure and maintain during the life of this Contract Builder's Risk Insurance fire, lightning, extended coverage, vandalism, and property theft on the insurable portion of the Project on a 100 percent completed value basis against damage to the equipment, structures, or material. The Owner and the Contractor, as their interests may appear, shall be named as the Insured.
- 11.1.6 Proof of Insurance: The Contractor shall maintain the insurance coverages required by this contract (**see Supplemental Conditions for required coverages**) throughout the term of this contract, and shall furnish the Owner with certificates showing the type, amount, class of operations covered, effective dates and dates of expiration of policies. Such certificates shall also contain substantially the following statement: "The insurance covered by this certificate will not be canceled, or materially altered except after 15 days prior written notice has been received by the Owner."

11.2 BONDS

- 11.2.1 Performance and Payment Bond: The Contractor shall, at the time of execution of the Contract, furnish a bond covering faithful performance of the Contract and the payment of obligations. The Performance and Payment bonds, and any amendments thereto, shall be filed with the circuit clerk office in the County Courthouse of the county where the work shall be performed. For any increases to the contract amount, scope of work, time for completion or other terms relating to the Change Order, the Contractor may be required by Owner to furnish an amendment to the Bond agreement in which the Surety has agreed to amend the Performance and Payment Bond to reflect such revisions.

ARTICLE 12 -- UNCOVERING AND CORRECTION OF WORK

12.1 EXAMINATION OF COMPLETED WORK

- 12.1.1 If any portion of the work should be covered contrary to the request of the Owner, Design Professional, or Inspector or to requirements specifically expressed in the Contract Documents, it must, if required in writing by the Owner, Design Professional, or Inspector, be uncovered for his observation and replaced at the Contractor's expense.

12.2 DEFECTIVE WORK

- 12.2.1 Defective work, whether through the use of defective materials, the result of poor workmanship, or any other cause, shall be removed within ten days after notice is given by the Owner or Design Professional. The Work and affected materials and equipment shall be removed and replaced as necessary to comply with the Contract Documents without additional cost to the Owner. The fact that the defective work may have been previously overlooked by the Design Professional shall not constitute acceptance.

12.3 REJECTED MATERIALS

- 12.3.1 Materials which do not conform to the requirements of the Contract Documents, are not equal to samples approved by the Design Professional, or are in any way unsuited or unsatisfactory for the purpose for which intended, shall be rejected. Defective materials shall be removed within ten days after notice by the Design Professional. The materials shall be replaced with new materials as necessary to comply with the Contract Documents at no additional cost to the Owner. The fact that the defective material may have been previously overlooked by the Design Professional shall not constitute acceptance.
- 12.3.2 Should the Contractor fail to remove and replace rejected material within the specified ten days after written notice to do so, the Owner may remove and replace the material and deduct the cost from the Contract Sum.

12.4 CORRECTION OF FAULTY WORK AFTER FINAL PAYMENT

- 12.4.1 The approval of the final Contractor's Request for Payment by the Design Professional and the making of the final payment by the Owner to the Contractor shall not relieve the Contractor of responsibility to correct faulty materials or workmanship promptly after receipt of written notice from the Owner. The Owner shall give such notice of faulty materials or workmanship promptly, after discovery of the condition. If the Contractor fails to correct the defects, promptly, after receipt of written notice from Owner, the Owner may have the work corrected at the Contractor's expense.

ARTICLE 13 -- MISCELLANEOUS PROVISIONS

13.1 GOVERNING LAW

- 13.1.1 The Contract shall be governed by the laws and regulations of the STATE OF ARKANSAS. Venue for any administrative action or judicial proceedings shall be Pulaski County, Arkansas. Nothing in these General Conditions shall be construed to waive the sovereign immunity of the STATE OF ARKANSAS or any entities thereof.
- 13.1.2 The Contractor shall give all notices and comply with all federal, state, and local laws, ordinances, and regulations in any manner affecting the conduct of the Work. The Contractor shall indemnify and save harmless the Owner against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree whether by himself or his employees.

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13.1.3 The Contractor shall comply with the laws of the local, state, and federal government regarding wages and hours of labor.

13.2 WRITTEN NOTICE

13.2.1 Consider as served when delivered in person or sent by certified or registered mail to the individual, firm, or corporation or to the last business address of such known to him who serves the notice.

13.2.2 The written Notice to Proceed with the Work shall be issued by the Design Professional after the execution of the Contract by the Owner. The Contractor shall begin and prosecute the Work and uninterruptedly in a manner that will complete the Work within the time limits stated in the Contract.

13.3 TESTS AND INSPECTIONS

13.3.1 All materials and each and every part of the Work shall be subject at all times to inspection by the Owner, Design Professional, or the Inspector. The Contractor shall be held to the intent of the Contract Documents in regard to quality of materials, equipment, and workmanship, and the diligent execution of the Contract. The inspection may extend to and include plant, shop, or factory inspection of material furnished. The Contractor agrees to allow Federal or State inspectors, acting in an official capacity, to have access to the job site.

13.3.2 The Owner, Design Professional, and Inspectors shall be allowed access to all parts of the Work and shall be furnished with such information and assistance by the Contractor as is required to make a complete and detailed inspection for ascertaining if the Work as performed is in accordance with the requirements and the Contract Documents.

13.3.3 Inspectors shall only have authority to suspend any work in a life threatening situation which is being improperly done, subject to the final decision of the Owner or Design Professional. Inspectors shall have no authority to permit deviations, or to relax provisions of the Contract Documents without the written permission or instruction of the Owner and the Design Professional, or delay the Contractor by failing to work with reasonable promptness.

13.4 VERBAL AGREEMENTS

13.4.1 No verbal objection, order, claim, or notice by any of the parties involved to the other parties shall affect or modify any of the terms or obligations contained in the Contract Documents. None of the terms or provisions of the Contract Documents shall be considered waived or modified unless the waiver or modification thereof is in writing and agreed upon by the parties in the form of a Change Order approved by the Owner, Design Professional and the Contractor and no evidence shall be introduced in any proceeding of any other waiver or modification.

13.5 TOBACCO POLICY

13.5.1 Smoking and the use of tobacco products (including cigarettes, cigars, pipes, smokeless tobacco, and other tobacco products) shall be limited to designated areas not accessible to general public. All tobacco use related debris shall be properly disposed of in trash collection receptacles.

ARTICLE 14 -- TERMINATION OR SUSPENSION OF THE CONTRACT

14.1 SUSPENSION OF WORK

14.1.1 The work or any portion thereof may be suspended at any time by the Owner provided that the Owner gives the Contractor written notice of the suspension. The notice shall set forth the date on which the work is to be suspended and the date on which the work is to be resumed. The Contractor shall resume the work upon written notice from the Owner within ten days after the date set forth in the notice of suspension.

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14.1.2 The Owner will have the authority to suspend the work, wholly or in part, for such period of time as deemed necessary. The suspension may be due to unsuitable weather, or such other conditions as are considered unfavorable for the proper prosecution of the work, or the failure on the part of the Contractor to fulfill the provisions of the Contract. Failure to supply material, equipment, or workmanship meeting the requirements of the Contract Documents shall be just cause for suspension of the Work. The Contractor shall not have the right to suspend operations without the Design Professional or Owner's permission.

14.2 TERMINATION BY OWNER FOR CAUSE

14.2.1 The Owner will have the right to terminate the Contract upon giving ten days written notice of the termination to the Contractor and the Contractor's surety, in the event of any default by the Contractor and upon written notice from the Design Professional to the Owner that sufficient cause exists to justify such action. In the event of termination of the Contract, the Owner may take possession of the Work and of all materials, tools, and equipment and construction equipment and machinery thereon and may finish the work by whatever method they may select. If the Owner does not elect to use their own forces, the surety shall furnish a competent licensed contractor within 10 working days from the written notice to the surety.

14.2.2 It shall be considered a default by the Contractor whenever they shall become insolvent; declare bankruptcy assigns assets for the benefit of their creditors; fails to provide qualified superintendence, proper materials, competent subcontractors, competent workmen; fails to make prompt payments for labor, materials, or equipment; disregards or violates provisions of the Contract Documents; disregards the Owner's or the Design Professional's instructions; fails to prosecute the Work according to the approved schedule of completion, including extensions thereof as provided for by approved Change Orders; and fails to start the Work on the date established in the Notice to Proceed.

ARTICLE 15 – ALTERNATIVE DISPUTE RESOLUTION

15.1 MEDIATION

15.1.1 In the event of any dispute regarding the Contractor, Architect, Engineer, and/or Owner (hereinafter referred to as party/parties for this section only) under this Agreement, the party shall notify the appropriate Owner's Administrator in writing. The Owner's Administrator or his designee will then attempt to negotiate a settlement of the dispute between the parties.

15.1.2 If the Owner's Administrator, or designee, determines he is unable to negotiate a settlement between the parties, the parties may participate in mediation. A request for mediation must be made in writing to the Owner and the parties shall agree upon the location of the mediation. A Mediator mutually agreed upon by the parties shall conduct the mediation process. Mediation shall be voluntary, non-binding and all proceedings in connection with such shall be subject to this Agreement and applicable provisions of Arkansas law. Any mediation fees shall be borne equally between the parties. The parties shall coordinate mediation and the Owner shall notify the University of Arkansas System Office of any mediation prior to it taking place. The Owner's Administrator or his designee may view any and all mediation proceedings. Any settlements arising out of the mediation process must be approved by the University of Arkansas System Office.

15.1.3 Notwithstanding anything to the contrary contained herein, if any dispute arises between the Parties, whether or not it requires at any time the use of dispute resolution procedures described above, in no event, nor for any reason, shall the Contractor, Architect, or Engineer interrupt the provision of services/performance to the Owner, or perform any other action that prevents, slows down, or reduces, in any way, the provisions of the Agreement unless: (a) authority to do so is granted by the Owner or (b) the Agreement has been terminated by the Owner. Nothing in these contract documents, including the use of mediation, shall be construed to waive the sovereign immunity of the State of Arkansas or any entities thereof.

Section 00 73 13

SUPPLEMENTARY CONDITIONS

LIST OF SUBJECTS

SC-1.01	<i>Defined Terms</i>
SC-2.02	<i>Copies of Documents</i>
SC-2.05.B	<i>Preliminary Schedules:</i>
SC-2.05.C	<i>Evidence of Insurance:</i>
SC-4.02	<i>Subsurface and Physical Conditions</i>
SC-4.04	<i>Underground Facilities</i>
SC-5.01	<i>Performance, Payment, and Other Bonds</i>
SC-5.02	<i>Licensed Sureties and Insurers</i>
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SC-5.04	<i>CONTRACTOR'S Liability Insurance</i>
SC-5.04.B.1	<i>Identification of Additional Insureds</i>
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SC-5.05	<i>OWNER'S Liability Insurance</i>
SC-5.06	<i>Property Insurance</i>
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SC-6.08	<i>Permits</i>
SC-6.19	<i>CONTRACTOR'S General Warranty and Guarantee</i>
SC-7.01	<i>Related Work at the Site</i>
SC-7.03	<i>Separate Contractor Claim</i>
SC-8.06	<i>Insurance</i>
SC-9.03	<i>Project Representative</i>
SC-10.06	<i>Authority for Changes in the Work</i>
SC-11.03	<i>Unit Price Work</i>
SC-12.03	<i>Delays Beyond CONTRACTOR'S Control</i>
SC-14.02	<i>Progress Payments</i>
SC-14.02.B	<i>Review of Applications</i>
SC-14.02.C	<i>Payment Becomes Due</i>
SC-14.04	<i>Substantial Completion</i>
SC-14.05	<i>Partial Utilization</i>

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (EJCDC No. 1910-8, 1996 Edition) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect. Paragraph numbers in these Supplementary Conditions correspond to the paragraph numbers in the General Conditions, except with the designation "SC".

SC-1.01 *Defined Terms*

The terms used in the Supplementary Conditions which are defined in the Standard General Conditions of the Construction Contract (No. 1910-8, 1996 Edition) have the meanings assigned

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to them in the General Conditions. In addition to the provisions of paragraph 1.01, the following supplemental definitions apply:

"1.01.30. **"OWNER"** shall mean the **City of Fayetteville**, Arkansas, acting through its duly authorized representatives. Address - City of Fayetteville Parks and Recreation Department, 1445 South Happy Hollow Rd., Fayetteville, AR 72701."

Add the following definitions to paragraph 1.01 of the General Conditions:

"1.01.51. **"Surety"** or **"sureties"** shall mean the bondsmen or party or parties who have made the fulfillment of the contract by Bonds, and whose signatures are attached to such Bonds.

1.01.52. **"Advertisement"** shall mean the legal publications pertaining to the work of this contract.

1.01.53. **"Plans"** shall mean, collectively, all of the Drawings pertaining to the contract and made a part thereof, and also such supplementary drawings as Project Manager may issue from time to time in order to clarify the Drawings, or for the purpose of showing changes in the work as authorized under the General Requirements, or for the showing of details which are not shown thereon.

1.01.54. **"Grade"** shall mean and indicate the established elevations of the paving, flow lines of sewers and other appurtenances as shown on the Drawings."

SC-2.02 *Copies of Documents*

Delete paragraph 2.02.A of the General Conditions in its entirety and insert the following in its place:

"A. PROJECT MANAGER shall furnish to CONTRACTOR FOUR (4) bound copies of the Agreement and other Contract Documents, the Bond or Bonds properly executed. CONTRACTOR shall execute the Agreement and submit all copies to the OWNER for execution. The date of contract on the Agreement, Bond forms, and power of attorney shall be left blank for filling in by OWNER. These documents will be dated the day the OWNER executes the contract.

OWNER shall furnish to CONTRACTOR up to four (4) copies of the Contract Documents as are reasonably necessary for the execution of the Work. Additional copies will be furnished, upon request, at the cost of reproduction."

SC-2.05.C. *Evidence of Insurance*

Delete all references to OWNER supplied and OWNER delivered insurance.

SC-4.02 *Subsurface and Physical Conditions*

No subsurface investigation has been conducted within the project site areas, and PROJECT MANAGER has not used any technical data related to subsurface and physical conditions in the preparation of Drawings and Specifications.

SC-4.04 *Underground Facilities*

Add a new paragraph 4.04.B.3 immediately following paragraph 4.04.B.2 of the General Conditions which shall read as follows:

"3. Paragraphs 4.04.B.1 and 4.04.B.2 do not apply to Underground Facilities that are being relocated by others as part of the Project. OWNER does not control the schedule of the owners of those Underground Facilities, and cannot determine whether those Underground Facilities will be relocated prior to, simultaneous to, or after the Work under these Contract Documents. CONTRACTOR shall advise PROJECT MANAGER of Underground Facilities that have been relocated, but may not make a claim for changes in the Contract Price or Contract Times as a result of any such relocation. If the relocation of Underground Facilities presents an obstacle to the Work continuing, CONTRACTOR shall inform OWNER and PROJECT MANAGER of the obstacle, and PROJECT MANAGER will determine if a change in the Work is required. If the change in the Work results in a change in the quantity of Unit Price Work, CONTRACTOR will be paid for the actual Unit Price Work installed."

SC-5.01 *Performance, Payment and Other Bonds*

Delete paragraph 5.01.C of the General Conditions in its entirety and insert the following new paragraph in its place:

"C. If at any time a surety on any such Bond is declared bankrupt or loses its right to do business in the State of Arkansas or is removed from the above list of surety companies, the CONTRACTOR shall within ten (10) days after notice from the bond company that conditions are as described in this sentence and/or after notice from the OWNER to do so, substitute an acceptable Bond or Bonds in such form and sum and signed by other surety or sureties as may be satisfactory to the OWNER. The premiums on such Bonds shall be paid by CONTRACTOR. No further payment shall be deemed due nor shall be made until the new surety or sureties shall have furnished an acceptable Bond to the OWNER."

Add the following new paragraphs immediately after paragraph 5.01.C of the General Conditions which read as follows:

"D. *Resident or non-resident Agent:* CONTRACTOR shall furnish performance and payment Bonds as provided for by Article 5 of the General Conditions executed by a resident or non-resident agent who is licensed by the Arkansas State Insurance Commissioner to represent the surety company executing said Bonds, and filing with such Bonds his power-of-attorney."

"E. *If Required* -- CONTRACTOR shall include provisions in bonds which will guarantee the faithful performance of the prevailing hourly wage clause as required by the Arkansas Prevailing Wage Law, Arkansas Code Annotated § 22-9-308(d)."

"F. *Additional Information:* CONTRACTOR shall provide the Bonds as described in these sections within ten (10) days after the receipt of a Notice of Selection."

For contracts in excess of \$100,000 the Bonds shall be issued by a bonding company listed by the A.M. BEST Rating Book as follows:

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- (1) Contracts in excess of \$100,000, but less than \$1,000,000 - "B+" rating or higher and contract amount may not exceed 2.0 percent of the policyholder's surplus.
- (2) Contracts in excess of \$1,000,000 - "A" rating or higher and contracts may not exceed 2.0 percent of the policyholder's surplus.

The expense of all Bonds shall be borne by CONTRACTOR."

SC-5.02 *Licensed Sureties and Insurers*

Add the following new paragraphs immediately after paragraph 5.02.A of the General Conditions which read as follows:

"B. CONTRACTOR shall furnish performance and payment Bonds as provided for by Article 5 of the General Conditions executed by a resident or non-resident agent who is licensed by the Arkansas State Insurance Commissioner to represent the surety company executing said Bonds, and filing with such Bonds his power-of-attorney.

"C. No employers' liability, public liability or workmen's collective insurance policy shall be written in any casualty company not authorized to do business in the State of Arkansas. These policies shall likewise be issued by a resident or non-resident agent licensed by the Insurance Commission of the State of Arkansas."

SC-5.03 *Certificates of Insurance*

Delete the second sentence of paragraph 5.03.A ("OWNER shall deliver to Contractor. . .") in its entirety.

SC-5.04 *CONTRACTOR'S Liability Insurance*

The limits for liability for the insurance required by paragraph 5.04 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

Workers Compensation, etc. under paragraphs 5.04.A.1 and 5.04.A.2 of the General Conditions:

- | | |
|--------------------------|------------------------------|
| 1) State: | Statutory |
| 2) Applicable Federal: | Statutory |
| 3) Employer's Liability: | \$100,000.00 each occurrence |

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Comprehensive General Liability Insurance, under paragraphs 5.04.A.3 through 5.04.A.5 of the General Conditions:

\$1,000,000.00 Combined Single Limit

Policies will include premise/operations, products, completed operations, independent contractors, explosions, collapse, underground hazard, Broad Form contractual, personal injury, with employment exclusion deleted and broad form property damage.

Comprehensive Automobile Liability under paragraph 5.04.A.6 of the General Conditions:

(1) Bodily Injury:

\$,500,000.00 Each person

\$1,000,000.00 Each occurrence

Property Damage:

\$500,000.00 Each occurrence or

(2) a combined single limit of \$1,000,000.00.

SC-5.04.B.1. Identification of Additional Insureds

Additional insureds with respect to insurance required by paragraph 5.04 of the General Conditions shall include: the **City of Fayetteville, Arkansas** (OWNER and PROJECT MANAGER).

SC-5.04.B.5. Notice of Cancellation of Liability Insurance

Add the following language at the end of paragraph 5.04.B.5 of the General Conditions:

"any wording such as "will endeavor" or "but failure to mail such notice shall impose no obligation or liability of any kind upon the [insurance] Company" shall be deleted from the policies and insurance certificates."

SC-5.05 OWNER'S Liability Insurance

Delete paragraph 5.05 of the General Conditions in its entirety and insert the following in its place:

"5.05 OWNER'S and PROJECT MANAGER'S *Contingent Protective Liability Insurance*

"A. CONTRACTOR shall indemnify and hold harmless OWNER and PROJECT MANAGER and their agents and employees from and against all losses and claims, demands, payments, suits, actions, recoveries, judgments of every nature and description brought or recovered against them by reason of omission or act of CONTRACTOR, his agent(s), employees, Subcontractor, Supplier, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, in the execution of the Work or guarding of it. CONTRACTOR shall obtain in the name of OWNER and PROJECT

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MANAGER (either as co-insured or by endorsement), and shall maintain and pay the premiums for such insurance in an amount not less than \$1,000,000.00 for property damage and bodily injury limits, and with such provisions as shall protect OWNER and PROJECT MANAGER from contingent liability under this contract."

SC-5.06 *Property Insurance*

Delete paragraph 5.06.A of the General Conditions in its entirety and insert the following in its place:

"A. CONTRACTOR shall purchase and maintain, until final payment, property insurance upon the Work at the site to the full insurable value thereof (subject to deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations) but not less than an amount equal to the total bid price. This insurance shall include the interest of OWNER, CONTRACTOR, Subcontractors, ENGINEER and ENGINEER'S consultants in the Work (all of whom shall be listed as insured or additional insured parties), shall insure against the perils of fire and extended coverage, shall include "all-risk" insurance for physical loss and damage including theft, vandalism and malicious mischief, collapse, flood, and water damage, and such other perils as may be provided in the Supplementary Conditions, and shall include damages, losses and expenses arising out of or resulting from any insured loss or incurred in the repair or replacement of any insured property (including but not limited to the fees and charges of engineers, architects, attorneys and other professionals). If not covered under the "all-risk" insurance or otherwise provided in these Supplementary Conditions, CONTRACTOR shall purchase and maintain similar property insurance on portions of the Work stored on and off the site or in transit when such portions of the Work are to be included in an application for payment. The policies of insurance required to be purchased and maintained by the CONTRACTOR in accordance with this paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to the OWNER by certified mail and will contain waiver provisions in accordance with General Condition paragraph 5.07.B."

Delete paragraph 5.06.B of the General Conditions in its entirety and insert the following in its place:

"B. CONTRACTOR shall protect OWNER against all loss during the course of the contract. If, due to the nature of the Project, insurance coverage other than that specified is needed by CONTRACTOR to protect OWNER against all losses, CONTRACTOR shall be responsible for the determination of and procurement of any additional insurance needed."

Delete paragraph 5.06.C of the General Conditions in its entirety and insert the following in its place:

"C. Policies shall also specify that insurance provided by CONTRACTOR will be considered primary and not contributory to any other insurance available to OWNER or PROJECT MANAGER.

All policies will provide for 30 days written notice (certified mail shall be required) prior to any cancellation or non-renewal of insurance policies required under the Contract. Any

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such wording as "will endeavor" or "but failure to mail such notice shall impose no obligation or liability of any kind upon the Company..." shall be deleted from the policies and certificates."

Delete paragraph 5.06.E of the General Conditions in its entirety.

SC-5.08 *Receipt and Application of Insurance Proceeds*

Delete paragraph 5.08 of the General Conditions in its entirety.

SC-6.04 *Progress Schedules*

Add a new paragraph 6.04.A.3 immediately following paragraph 6.04.A.2 of the General Conditions which shall read as follows:

"3. An updated schedule, in the format specified in the Specifications, shall be required with each submittal for progress payment by CONTRACTOR. Failure to provide an accurate schedule (and/or updated schedule) shall be reason for OWNER to refuse progress payment to CONTRACTOR."

SC-6.08 *Permits*

Add a new paragraph 6.08.B immediately after paragraph 6.08.A of the General Conditions which shall read as follows:

"B. CONTRACTOR shall obtain, and maintain on the job-site, any necessary permits to complete the project including but not limited to grading permits, sign permits, and building permits from the appropriate state, federal or local agency.

CONTRACTOR shall obtain, and maintain on the job-site an NPDES Storm Water Discharge Permit, if needed, from the NPDES Branch of the Water Division of the Arkansas Department of Environmental Quality (ADEQ). CONTRACTOR shall request the necessary forms and instructions by writing to the following address:

Arkansas Department of Environmental Quality
NPDES Branch, Water Division
8001 National Drive
P.O. Box 8913
Little Rock, Arkansas 72219-8913
Phone 501-682-0628"

SC-6.19 *CONTRACTOR'S General Warranty and Guarantee*

Add a new paragraph 6.19.C immediately after paragraph 6.19.B of the General Conditions which shall read as follows:

"C. For a period one year, or longer if specified by special guarantees or by law, the CONTRACTOR shall at the CONTRACTOR'S expense make all repairs and replacements necessitated by defects in the materials, workmanship or prosecution of the Work under this contract, and pay for any damage to other works or property resulting from such defects. The CONTRACTOR shall submit a **Maintenance Bond** in

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the amount of 100% of the total project construction cost **excluding grass restoration** to the PROJECT MANAGER to cover the above specified one year warranty period. The CONTRACTOR shall hold the OWNER and PROJECT MANAGER harmless from any liability of any kind arising from said defects. The effective date for the beginning of the one (1) year warranty period will be as decided by the PROJECT MANAGER and will be either the date of the PROJECT MANAGER'S recommendation for Final Payment in accordance with paragraph 14.07.B, *Review of Application and Acceptance*, or the date of Substantial Completion as specified in paragraph 14.04. CONTRACTOR shall make all repairs or replacements promptly upon receipt of written order for the repairs or replacements from OWNER. If the CONTRACTOR fails to make the repairs or replacements promptly, OWNER may perform the work and the CONTRACTOR and the CONTRACTOR'S Surety shall be liable for all costs thereof."

SC-7.01 *Related Work at the Site*

Delete paragraph 7.01.A of the General Conditions in its entirety and insert the following in its place:

"A. The Work is part of a Capital Improvements Program. As a result of the City's proposed improvements, additional right-of-way and/or easements may or may not be obtained by the City. Some utilities in the area may have to undertake various relocation and demolition in the Project area. Known utilities being required to relocate are water and some sewer. The known scope of each of these is indicated in the Summary of Work. However, OWNER and PROJECT MANAGER do not have all information concerning the proposed relocations of other utilities, nor is the proposed schedule for relocating these utilities known. Also, OWNER and PROJECT MANAGER cannot be certain that each and every utility requiring relocation has been identified as to type and owner. It is likely that conditions at the site could vary according to work done by other utility owners prior to the start of the Work under these Contract Documents. CONTRACTOR shall have no right to make a claim for changes in the Contract Price or Contract Time as a result of the work of other utility owners being done by those owners as a result of this Project, other than the right for additional quantities of Unit Price Work, if applicable."

Delete the first sentence of paragraph 7.01.B of the General Conditions and insert the following sentence in its place:

"B. CONTRACTOR shall afford each utility owner and proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work and shall properly connect and coordinate the Work with theirs."

Delete the last sentence of paragraph 7.01.B of the General Conditions in its entirety.

SC-7.03 *Separate Contractor Claim*

Add a new paragraph 7.03 immediately after paragraph 7.02 of the General Conditions which shall read as follows:

"7.03 *Separate Contractor Claim*

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- A. Should CONTRACTOR cause damage to the Work or property of any separate contractor (or separate party) at the site, or should any claim arising out of CONTRACTOR'S performance of the Work at the site be made by any separate contractor (or separate party) against CONTRACTOR, OWNER or PROJECT MANAGER, or any such person, CONTRACTOR shall promptly attempt to settle with such other separate contractor (or separate party) by agreement or otherwise resolve the dispute by arbitration or at law. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold OWNER and PROJECT MANAGER harmless from and against all claims, damages, losses and expenses (including, but not limited to, fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any separate contractor (or separate party) against OWNER or PROJECT MANAGER to the extent based on a claim arising out of CONTRACTOR'S performance of the Work. Should a separate contractor (or separate party) cause damage to the Work or property of CONTRACTOR or should the performance of Work by any separate contractor (or separate party) at the site give rise to any other claim, CONTRACTOR shall not institute any action, legal or equitable, against OWNER or PROJECT MANAGER or permit any action against them to be maintained and continued in CONTRACTOR'S name for benefit in any court or before any arbitrator which seeks to impose liability on, or recover damages from OWNER or PROJECT MANAGER on account of such damage or claim. If CONTRACTOR is delayed at any time in performing or furnishing Work by any act or neglect of a separate contractor (or separate party) and OWNER and CONTRACTOR are unable to agree as to the extent of any adjustment in Contract Time attributable thereof, CONTRACTOR may make a claim for an extension of time in accordance with Article 12 of the General Conditions. An extension of the Contract Time shall be the CONTRACTOR'S exclusive remedy with respect to OWNER and PROJECT MANAGER for any delay, disruption, interference or hindrance caused by any separate contractor (or separate party). This paragraph does not prevent recovery from OWNER or PROJECT MANAGER for activities that are their respective contractual responsibilities."

SC-8.06 Insurance

Delete paragraph 8.06 of the General Conditions in its entirety.

SC-9.03 Project Representative

Paragraph 9.03 of the General Conditions is herein modified to include the furnishing of a Resident Project Representative by PROJECT MANAGER. The responsibilities and authority and limitations thereon of the Resident Project Representative are as provided in paragraph 9.10 of the General Conditions.

SC-10.06 Authority for Changes in the Work

Add a new paragraph 10.06 immediately following paragraph 10.05 of the General Conditions to read:

"10.06 *Authority for Changes in the Work*

- A. CONTRACTOR shall note and abide by the following limits of authority of OWNER and PROJECT MANAGER for changes in the Work which require a change in the Contract

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Price or Contract time. Except in the case of extreme emergency to protect public safety, public welfare or substantial Work, the following limits of Authority to the OWNER and PROJECT MANAGER shall apply:

Project manager's Representative - No authority.
Project manager - No authority.
Mayor – Up to the contingency amount.

All accumulative changes which result in Contract Price changes in excess of the contingency amount shall require the formal approval of the Fayetteville City Council."

SC-11.03 *Unit Price Work*

Paragraph 11.03.C of the General Conditions is hereby deleted in its entirety and the following is substituted in its place:

"C. The unit price of an item of Unit Price Work shall be subject to re-evaluation and adjustment under the following conditions:

1. if the total cost of a particular item of Unit Price Work amounts to 25 percent or more of the Contract Price and the variation of the quantity of that particular item of Unit Price Work performed by CONTRACTOR differs by more than 25 percent from the estimated quantity of such item indicated in the Agreement; and
2. if there is no corresponding adjustment with respect to any other item of Work; and
3. if CONTRACTOR believes that CONTRACTOR has incurred additional expense as a result thereof; or
4. if OWNER believes that the quantity variation entitles OWNER to an adjustment in the unit price; then
5. either OWNER or CONTRACTOR may make a claim for an adjustment in the Contract Price in accordance with Article 11 of the General Conditions if the parties are unable to agree as to the effect of any such variations in the quantity of Unit Price Work performed."

SC-12.03 *Delays Beyond CONTRACTOR'S Control*

Delete the words "abnormal weather conditions" from the second sentence of paragraph 12.03.A of the General Conditions, and add the following sentences at the end of paragraph 12.03.A:

"Contractor will be allowed delays for weather conditions, based on the concurrence of Contractor and Owner or Project Manager, for two circumstances: 1) isolated inclement weather, wherein the project site is determined to be unworkable for days of precipitation and days following for short times between otherwise good weather; and 2) sustained inclement weather, wherein the project site is determined to be unworkable for a sustained period of time, such as the winter months, with only an occasional working day within the sustained unworkable conditions. If Contractor believes either condition applies, a request

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shall be made to Engineer or Owner for a site meeting and a joint determination of the site conditions and approval of the delay. Engineer will catalog these approved delays, and will incorporate them into a Change Order for signature of Owner and Contractor."

SC-14.02 *Progress Payments*

Paragraph 14.02.A of the General Conditions is hereby deleted in its entirety and the following substituted in its place:

"A. Applications for Payments

1. Monthly estimates will be prepared to include all work accomplished for the period ending the third Friday of each month, or
2. Progress payments will be prepared at regular intervals, as scheduled by joint consent of CONTRACTOR and PROJECT MANAGER at the pre-construction conference.
3. PROJECT MANAGER, based upon data gathered during the construction process, will make an estimate of the value of the Work done and materials furnished in place during the previous estimate period. CONTRACTOR shall furnish to PROJECT MANAGER such detailed information including invoices from material suppliers as PROJECT MANAGER may request to aid in the preparation of the progress payment estimate. All payment requests are subject to retainage as indicated in the Agreement. If OWNER or PROJECT MANAGER shall at any time fail to make CONTRACTOR a monthly estimate at the time herein specified, such failure shall not be held to violate or void the contract. Note that the failure of CONTRACTOR to provide an accurate and current schedule update shall be reason to reject CONTRACTOR'S request for progress payment.
4. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice or other documentation warranting that OWNER has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect OWNER'S interest therein, all of which will be satisfactory to OWNER.
5. The amount of retainage with respect to progress payments will be as stipulated in the Agreement."

SC-14.02.B. *Review of Applications*

Insert the following new paragraphs 14.02.B.5.c and 14.02.B.5.d to paragraph 14.02.B.5 of the General Conditions, as additional reasons for PROJECT MANAGER to reduce CONTRACTOR'S request for progress payment, and renumber paragraphs 14.02.B.5.c and 14.02.B.5.d as 14.02.B.5.e and 14.02.B.5.f:

"c. liability for liquidated damages has been incurred by CONTRACTOR;

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- d. CONTRACTOR has failed to maintain record documents as required by paragraph 6.12;"

SC-14.02.C. Payment Becomes Due

Delete paragraph 14.02.C.1 of the General Conditions and replace with the following:

- "1. After the required internal reviews and processing by OWNER, OWNER will diligently proceed to make payment to CONTRACTOR, in accordance with the approved payment request, within 30 days. All efforts will be made to make payments within the 30 day period, but OWNER cannot guarantee the 30 days maximum time."

SC-14.04 Substantial Completion

The following shall be added at the end of paragraph 14.04.A of the General Conditions:

- "1. The Work will be considered substantially complete when the following work items are complete and ready for continuous use by the OWNER:
- a. All drainage structures have been properly constructed, inspected and approved for use.
 - b. All pavement work has been completed, along with appurtenant items such as curb & gutter, sidewalks, striping, and signage.
 - c. CONTRACTOR has essentially completed the record documents required by paragraph 6.12, and, in PROJECT MANAGER'S judgment, these are accurate and complete and will be ready for delivery to OWNER prior to Final Payment being made.
2. The following items need not be completed for the Work to be considered substantially complete:
- a. Final cleanup of project area and final dressing of grassy/earthen areas behind curbs.
 - b. Determination of quality of growth resulting from sodding and seeding & mulching.
 - c. Other minor items identified for correction on the final punch list."

SC-14.05 Partial Utilization

Insert the following new paragraph 14.05.A.2 in the General Conditions, and renumber existing paragraph 14.05.A.2 as 14.05.A.3:

- "2. OWNER may at any time request CONTRACTOR in writing to permit OWNER to take over operation of any such part of the Work although it is not substantially complete. A copy of such request will be sent to PROJECT MANAGER and within a reasonable time thereafter OWNER, CONTRACTOR and PROJECT MANAGER shall make an inspection of that part of the Work to determine its status of completion and will prepare

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a list of the items remaining to be completed or corrected thereon before final payment. If CONTRACTOR does not object in writing to OWNER and PROJECT MANAGER that such part of the Work is not ready for separate operation by OWNER, PROJECT MANAGER will finalize the list of items to be completed or corrected before final payment. PROJECT MANAGER will furnish OWNER and CONTRACTOR together with a written recommendation as to the division of responsibilities pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, maintenance, utilities, insurance, warranties and guarantees for that part of the Work which will become binding upon OWNER and CONTRACTOR at the time when OWNER takes over such operation (unless they shall have otherwise agreed in writing and so informed PROJECT MANAGER). During such operation and prior to Substantial Completion of such part of the Work, OWNER shall allow CONTRACTOR reasonable access to complete or correct items on said list and to complete other related Work."

End of Section 00 73 13

Bid 22-54,
Appendix A:
City Bid Documents

SECTION 01 11 00
SUMMARY OF WORK

PART 1- GENERAL

1.1 WORK UNDER THIS CONTRACT:

The work included in this project includes the Removal of Existing Restrooms and repair/replace existing utilities to reuse for New Restrooms, Storage, and Exterior Pavilion with metal roofing. There will be new Accessible Walkways to various Covered Seating Areas and Deck surfaces. New Facias and Soffits, new interior and exterior Light Fixtures, new Exhaust Fans, and other Retaining Walls and Planters as noted in contract documents.

1.2 OWNER PROVIDED AND INSTALLED ITEMS

A. None

1.5 COORDINATION

A. Provide administrative and supervisory requirements necessary for coordination of work, including meetings, administrative and supervisory personnel, records, reports, limitations for use of site, installation provisions, cutting and patching, cleaning, protection, and conservation.

1 Coordinate construction activities included under various sections of these specifications to assure efficient and orderly installation of each part of the work. Coordinate construction operations included under different sections of the specification that are dependent upon each other for proper installation, connection, and operation.

a. Where installation of one part of the work is dependent on other installation of other components, either before or after its own installation, schedule construction activities in the sequence required to obtain its best results.

b. Where availability of space is limited, coordinate installation of different components to assure maximum accessibility for required maintenance, service, and repair.

c. Make adequate provisions to accommodate items scheduled for later installation.

2 Where necessary, prepare memoranda for distribution to each party involved outlining special procedures required for coordination. Include such items as required notices, reports and attendance meetings.

1.6 BOUNDARIES AND BECHMARKS: The Owner will employ a professional Civil Engineer or Land Surveyor registered in the State of Arkansas, and approved by Construction Manager and Architect, to confirm or define site boundaries and/or facility lines. Erect substantial benchmarks and preserve them throughout Work.

1.7 INDUSTRY STANDARDS

- A. Applicability of Standards: Except where more explicit or stringent requirements are written into the contract documents, applicable construction industry standards have the same force and effect as if bound or copied directly into the contract documents. Such industry standards are made a part of the contract documents by reference. Individual specification sections indicate which codes and Standards the Contractors must keep available at the project site for reference.
- B. Publication Dates: Except as otherwise indicated: where compliance with an industry standard is required, comply with standards in effect as of the date of the contract documents.
- C. Conflicting Requirements: Where compliance with two or more standards is specified, and where these standards establish different or conflicting requirements for minimum quantities or quality levels, the most stringent requirement will be enforced, unless the contract documents specifically indicate otherwise. Refer requirements that are different, but apparently equal, and uncertainties as to which quality level is more stringent to the Construction Manager/ Architect for a decision before proceeding.
- D. Copies of Standards: The Contract Documents require that each entity performing work be experienced in that part of the work being performed. Each entity is also required to be familiar with industry standards applicable to that part of the work. Copies of applicable standards are not bound with the contract documents. Where copies of standards are needed for proper performance of the work, the Contractor is required to obtain such copies directly from the publication source.
- E. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. Where acronyms or abbreviations are used in the specifications or other contract documents, they are defined to mean the recognized name of the trade association, standards generating organization, governing authority, or other entity applicable to the context of the text provisions.

1.8 PROJECT MEETINGS:

- A. Pre-Construction Meeting: Within 15 days after execution of agreement, the Construction Manager will prepare an agenda and schedule a pre-construction meeting. Written notice of meeting date, time and place, and agenda items will be sent to Owner, Architect/ Engineers, and Contractors. The Contractors shall be responsible for notifying subcontractors of meeting.
- B. Progress Meetings: The Construction Manager shall schedule and hold regular monthly progress meetings and subsequent meetings as needed to coordinate, expedite, and schedule work of all contracts. Superintendent will hold weekly meetings on Fridays with current contractors working on project and contractors who will begin work within the following two weeks. Send written notice of meeting date, time and place, and agenda of meeting to the Owner, Architect/ Engineers, Contractors, vendors, and others as pertinent to agenda. Record results of meetings and distribute copies to everyone in attendance and to others affected by the decisions or actions resulting from each meeting.

PART 2- PRODUCTS (Not Applicable)

PART 3- EXECUTION (Not Applicable)

END OF SECTION

Bid 22-54,
Appendix A:
City Bid Documents

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**SECTION 01 23 00
ALTERNATES**

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for alternates.

1.2 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
1. The credit for each alternate is the net deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.3 PROCEDURES

- A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A Schedule of Alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 – EXECUTION

3.1 SCHEDULE OF ALTERNATES

This bid includes two (2) deductive alternates. Bidders shall submit fair, marketable representation for bid pricing for all deductive alternates. Failure to submit fair, marketable representation pricing for deductive alternates can result in rejection of bid at the discretion of the City. If deductive alternates are utilized, they shall be taken in order.

- A. Deductive Alternate No. 1:
OMIT EAST AND WEST PLANTER FRONT WALL AND ASSOCIATED DETAILS; PRICE AS STONE VENEERED RETAINING WALL AS SHOWN IN THE DRAWINGS
- B. Deductive Alternate No. 2:
PRICE DECKING AS PRESSURE TREATED PINE 2x6, STAINED; OVER 12" O.C.
FRAMING re: STRUCTURAL

END OF SECTION

**DEMx ARCHITECTURE
FAYETTEVILLE, AR**

**ALTERNATES
01 23 00 -1**

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SECTION 01 25 00
SUBSTITUTION PROCEDURES

PART 1 – GENERAL

1.1 SUBSTITUTION PROCEDURES

- A. Substitutions include changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
- B. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Substitution Request Form: Use **CSI Form 13.1A**.
 - 2. Submit requests within 15 days after **the Notice to Proceed**.
 - 3. Identify product to be replaced and show compliance with requirements for substitutions. Include a detailed comparison of significant qualities of proposed substitution with those of the Work specified, a list of changes needed to other parts of the Work required to accommodate proposed substitution, and any proposed changes in the Contract Sum or the Contract Time should the substitution be accepted.
- C. Architect will review proposed substitutions and notify Contractor of their acceptance or rejection. If necessary, Architect will request additional information or documentation for evaluation.
 - 1. Architect will notify Contractor of acceptance or rejection of proposed substitution within **15** days of receipt of request, or **7** days of receipt of additional information or documentation, whichever is later.
- D. Do not submit unapproved substitutions on Shop Drawings or other submittals.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION

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SECTION 01 26 00
CONTRACT MODIFICATION PROCEDURES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General terms and Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for handling and processing Contract modifications.
- B. Related Sections:
 - 1. Division 1 Section "Product Requirements" for administrative procedures for handling requests for substitutions made after Contract award

1.3 MINOR CHANGES IN THE WORK

- A. Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions."

1.3 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Architect will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
 - 1. not instructions either to stop work in progress or to execute the proposed change. Provide Information Only.
 - 2. Within 10 calendar days after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.
 - d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- B. Contractor-Initiated Proposals: If latent or changed conditions require modifications to the Contract, Contractor may initiate a claim by submitting a request for a change to Architect.
 - 1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.

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2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Include costs of labor and supervision directly attributable to the change.
5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
6. Comply with requirements in Division 1 Section "Substitution Procedures" if the proposed change requires substitution of one product or system for product or system specified.
7. Proposal Request Form: Use CSI Form 13.6A "Change Order Request (Proposal)" with attachments CSI Form 13.6B "Proposal Worksheet Summary" and 13.6C "Proposal Worksheet Detail"

1.4 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G701.

1.5 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Architect may issue a Construction Change Directive on AIA Document G714. Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
 1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

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SECTION 01 31 00
PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. General project coordination procedures.
 - 2. Coordination Drawings.
 - 3. Administrative and supervisory personnel.
 - 2. Project meetings
- B. Related Sections:
 - 1. See Division 1 Section "Execution Requirements" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
 - 2. See Division 1 Section "Construction Progress Documentation" for preparing and submitting the Contractor's Construction Schedule
 - 3. See Division 1 Section "Closeout Procedures" for coordinating Contract closeout.

1.2 DEFINITIONS

- A. RFI: Request from Contractor seeking interpretation or clarification of the Contract Documents.

1.3 COORDINATION

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
 - 4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
 - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - 1. Preparation of Contractor's Construction Schedule.

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2. Preparation of the Schedule of Values.
 3. Installation and removal of temporary facilities and controls.
 4. Delivery and processing of submittals.
 5. Progress meetings.
 6. Preinstallation conferences.
 7. Project closeout activities.
 8. Startup and adjustment of systems
 9. Commissioning
- D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials.

1.4 SUBMITTALS

- A. Coordination Drawings: Prepare Coordination Drawings of critical systems to maximize utilization of space for efficient installation of different components or if coordination is required for installation of products and materials fabricated by separate entities.
1. Indicate relationship of components shown on separate Shop Drawings.
 2. Indicate required installation sequences.
- B. Staff Names: Within 15 days of starting construction operations, submit a list of principal staff assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities, list addresses and telephone numbers, including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.
1. Post copies of list in Project meeting room, in temporary field office, and by each temporary telephone.

1.5 COORDINATION DRAWINGS

- A. Coordination Drawings, General: Prepare coordination drawings in accordance with requirements in individual Sections, where installation is not completely shown on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.
1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
 - a. Use applicable Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
 - b. Coordinate the addition of trade-specific information to the coordination drawings by multiple contractors in a sequence that best provides for coordination of the information and resolution of conflicts between installed components before submitting for review.
 - c. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
 - d. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
 - e. Show location and size of access doors required for access to concealed dampers, valves, and other controls.
 - f. Indicate required installation sequences.
 - g. Indicate dimensions shown on the Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and

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minimum clearance requirements. Provide alternate sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.

- B. Coordination Drawing Organization: Organize coordination drawings as follows:
1. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire protection, fire alarm, and electrical Work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid. Supplement plan drawings with section drawings where required to adequately represent the Work.
 2. Plenum Space: Indicate subframing for support of ceiling and wall systems, mechanical and electrical equipment, and related Work. Locate components within ceiling plenum to accommodate layout of light fixtures indicated on Drawings. Indicate areas of conflict between light fixtures and other components.
 3. Mechanical Rooms: Provide coordination drawings for mechanical rooms showing plans and elevations of mechanical, plumbing, fire protection, fire alarm, and electrical equipment.
 4. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
 5. Slab Edge and Embedded Items: Indicate slab edge locations and sizes and locations of embedded items for metal fabrications, sleeves, anchor bolts, bearing plates, angles, door floor closers, slab depressions for floor finishes, curbs and housekeeping pads, and similar items.
 6. Mechanical and Plumbing Work: Show the following:
 - a. Sizes and bottom elevations of ductwork, piping, and conduit runs, including insulation, bracing, flanges, and support systems.
 - b. Dimensions of major components, such as dampers, valves, diffusers, access doors, cleanouts and electrical distribution equipment.
 - c. Fire-rated enclosures around ductwork.
 7. Electrical Work: Show the following:
 - a. Runs of vertical and horizontal conduit 1-1/4 inch diameter and larger.
 - b. Light fixture, exit light, emergency battery pack, smoke detector, and other fire alarm locations.
 - c. Panel board, switch board, switchgear, transformer, busway, generator, and motor control center locations.
 - d. Location of pull boxes and junction boxes, dimensioned from column center lines.
 8. Fire Protection System: Show the following:
 - a. Locations of standpipes, mains piping, branch lines, pipe drops, and sprinkler heads.
 9. Review: Architect will review coordination drawings to confirm that the Work is being coordinated, but not for the details of the coordination, which are the Contractor's responsibility. If the Architect determines that the coordination drawings are not being prepared in sufficient scope or detail, or are otherwise deficient, the Architect will so inform the Contractor, who shall make changes as directed and resubmit.
 10. Coordination Drawing Prints: Prepare coordination drawing prints in accordance with requirements of Division 01 Section "Submittal Procedures."

1.6 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

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- A. General: In addition to Project superintendent, provide other administrative and supervisory personnel as required for proper performance of the Work.
 - 1. Include special personnel required for coordination of operations with other contractors.

1.7 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
 - 1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
 - 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 - 3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner and Architect, within three days of the meeting.
- B. Preconstruction Conference: Schedule a preconstruction conference before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after execution of the Agreement. Hold the conference at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.
 - 1. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; manufacturers; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 - 2. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Phasing.
 - c. Critical work sequencing.
 - d. Designation of responsible personnel.
 - e. Procedures for processing field decisions and Change Orders.
 - f. Procedures for processing Applications for Payment.
 - g. Distribution of the Contract Documents.
 - h. Submittal procedures.
 - j. Preparation of Record Documents.
 - k. Responsibility for temporary facilities and controls.
 - l. Parking availability.
 - m. Office, work, and storage areas.
 - n. Equipment deliveries and priorities.
 - o. First aid.
 - p. Security.
 - q. Progress cleaning.
 - r. Working hours.
 - s. Commissioning
- C. Preinstallation Conferences: Conduct a preinstallation conference at Project site before each construction activity that requires coordination with other construction.
 - 1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with

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- other materials and installations that have preceded or will follow, shall attend the meeting. Advise Architect of scheduled meeting dates.
2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. Contract Documents.
 - b. Options.
 - c. Related Change Orders.
 - d. Purchases.
 - e. Deliveries.
 - f. Submittals.
 - g. Review of mockups.
 - h. Possible conflicts.
 - i. Compatibility problems.
 - j. Time schedules.
 - k. Weather limitations.
 - l. Manufacturer's written recommendations.
 - m. Warranty requirements.
 - n. Compatibility of materials.
 - o. Acceptability of substrates.
 - p. Temporary facilities and controls.
 - q. Space and access limitations.
 - r. Regulations of authorities having jurisdiction.
 - s. Testing and inspecting requirements.
 - t. Required performance results.
 - u. Protection of construction and personnel.
 3. Record significant conference discussions, agreements, and disagreements.
 4. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- D. Progress Meetings: Conduct progress meetings at intervals agreed upon by Project Team including Architect and Owner. Coordinate dates of meetings with preparation of payment requests.
1. Attendees: In addition to representatives of Owner, Contractor, and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

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- b. Review present and future needs of each entity present, including the following:
 - 1 Interface requirements.
 - 2 Sequence of operations.
 - 3 Status of submittals.
 - 5 Deliveries.
 - 6 Off-site fabrication.
 - 7 Access.
 - 8 Site utilization.
 - 9 Temporary facilities and controls.
 - 10 Work hours.
 - 11 Hazards and risks.
 - 12 Progress cleaning.
 - 13 Quality and work standards.
 - 14 Change Orders.
 - 15 Documentation of information for payment requests.
 - 3. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present. Include a brief summary, in narrative form, of progress since the previous meeting and report.
 - a. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.
- E. Mechanical/Electrical/Plumbing (MEP) Coordination Meetings: Conduct Project MEP coordination meetings at intervals agreed upon by Project Team including Architect and Owner. Project coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and preinstallation conferences.
- 1. Attendees: In addition to representatives of Owner, Contractor, and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work
 - 2. Agenda: Review and correct or approve minutes of the previous coordination meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Combined Contractor's Construction Schedule: Review progress since the last coordination meeting. Determine whether each contract is on time, ahead of schedule, or behind schedule, in relation to Combined Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - b. Schedule Updating: Revise Combined Contractor's Construction Schedule after each coordination meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with report of each meeting.
 - c. Review present and future needs of each contractor present, including the following:

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- 1 Interface requirements.
- 2 Sequence of operations.
- 3 Status of submittals.
- 4 Deliveries.
- 5 Off-site fabrication.
- 6 Access.
- 7 Site utilization.
- 8 Temporary facilities and controls.
- 9 Work hours.
- 10 Hazards and risks.
- 11 Progress cleaning.
- 12 Quality and work standards.
- 13 Change Orders.

F. Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:

1. Project name.
2. Date.
3. Name of Contractor.
4. Name of Architect
5. RFI number, numbered sequentially.
6. Specification Section number and title and related paragraphs, as appropriate.
7. Drawing number and detail references, as appropriate.
8. Field dimensions and conditions, as appropriate.
9. Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
10. Contractor's signature.
11. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.

G. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

Bid 22-54,
Appendix A:
City Bid Documents

SECTION 01 32 00
CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Startup construction schedule.
 - 2. Contractor's Construction Schedule.
 - 3. Construction schedule updating reports.
 - 4. Daily construction reports.
 - 5. Material location reports.
 - 6. Site condition reports.
 - 7. Unusual event reports.

1.2 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction Project. Activities included in a construction schedule consume time and resources.
 - 1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
 - 2. Predecessor Activity: An activity that precedes another activity in the network.
 - 3. Successor Activity: An activity that follows another activity in the network.
- B. Cost Loading: The allocation of the schedule of values for completing an activity as scheduled. The sum of costs for all activities must equal the total Contract Sum.
- C. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.
- D. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.
- E. Event: The starting or ending point of an activity.
- F. Float: The measure of leeway in starting and completing an activity.
 - 1. Float time is not for the exclusive use or benefit of either Owner or Contractor, but is a jointly owned, expiring Project resource available to both parties as needed to meet schedule milestones and Contract completion date.
 - 2. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
 - 3. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.
- G. Resource Loading: The allocation of manpower and equipment necessary for completing an activity as scheduled.

1.3 INFORMATIONAL SUBMITTALS

- A. Format for Submittals: Submit required submittals in the following format:
 - 1. Working electronic copy of schedule file, where indicated.
 - 2. PDF file.
 - 3. Cloud Based software delivery
- B. Startup construction schedule.
 - 1. Submittal of cost-loaded, startup construction schedule will not constitute approval of schedule of values for cost-loaded activities.

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- C. Startup Network Diagram: Of size required to display entire network for entire construction period. Show logic ties for activities.
- D. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
 - 1. Submit a working digital copy of schedule, using software indicated, and labeled to comply with requirements for submittals.
- E. CPM Reports: Concurrent with CPM schedule, submit each of the following reports. Format for each activity in reports shall contain activity number, activity description, cost and resource loading, original duration, remaining duration, early start date, early finish date, late start date, late finish date, and total float in calendar days.
 - 1. Activity Report: List of activities sorted by activity number and then early start date, or actual start date if known.
 - 2. Logic Report: List of preceding and succeeding activities for each activity, sorted in ascending order by activity number and then by early start date, or actual start date if known.
 - 3. Total Float Report: List of activities sorted in ascending order of total float.
 - 4. Earnings Report: Compilation of Contractor's total earnings from **commencement of the Work** until most recent Application for Payment.
- F. Construction Schedule Updating Reports: Submit with Applications for Payment.
- G. Daily Construction Reports: Submit at **weekly (minimum)** intervals.
- H. Material Location Reports: Submit at **weekly** intervals.
- I. Site Condition Reports: Submit at time of discovery of differing conditions.
- J. Unusual Event Reports: Submit at time of unusual event.
- K. Qualification Data: For scheduling consultant.

1.4 QUALITY ASSURANCE

- A. Scheduling Consultant Qualifications: An experienced specialist in CPM scheduling and reporting, with capability of producing CPM reports and diagrams within 24 hours of Architect's request.
- B. Prescheduling Conference: Conduct conference at Project site to comply with requirements in Section 013100 "Project Management and Coordination." Review methods and procedures related to the preliminary construction schedule and Contractor's Construction Schedule, including, but not limited to, the following:
 - 1. Review software limitations and content and format for reports.
 - 2. Verify availability of qualified personnel needed to develop and update schedule.
 - 3. Discuss constraints, including **phasing, work stages, area separations, interim milestones.**
 - 4. Review delivery dates for Owner-furnished products.
 - 5. Review schedule for work of Owner's separate contracts.
 - 6. Review submittal requirements and procedures.
 - 7. Review time required for review of submittals and resubmittals.
 - 8. Review requirements for tests and inspections by independent testing and inspecting agencies.
 - 9. Review time required for Project closeout and Owner startup procedures
 - 10. Review and finalize list of construction activities to be included in schedule.
 - 11. Review procedures for updating schedule.

1.5 COORDINATION

- A. Coordinate Contractor's Construction Schedule with the schedule of values, **list of subcontracts**, submittal schedule, progress reports, payment requests, and other required schedules and reports.

1. Secure time commitments for performing critical elements of the Work from entities involved.
2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

1.6 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Computer Scheduling Software: Prepare schedules using current version of a program that has been developed specifically to manage construction schedules.
 1. Use Contractor's preferred operating system.
- B. Scheduling Consultant: Engage a consultant to provide planning, evaluation, and reporting using CPM scheduling.
 1. In-House Option: Owner may waive requirement to retain a consultant if Contractor employs skilled personnel with experience in CPM scheduling and reporting techniques. Submit qualifications.
 2. Meetings: Scheduling consultant shall attend all meetings related to Project progress, alleged delays, and time impact.
- C. Time Frame: Extend schedule from date established for **commencement of the Work**.
 1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- D. Activities: Treat each floor or separate area as a separate numbered activity for each main element of the Work. Comply with the following:
 1. Activity Duration: Define activities so no activity is longer than **20** days, unless specifically allowed by Architect.
 2. Procurement Activities: Include procurement process activities for the following long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 3. Submittal Review Time: Include review and resubmittal times indicated in Section 013300 "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with submittal schedule. Submit Submittal Schedule to Architect within 20 days of Commencement of Work.
 4. Startup and Testing Time: Include no fewer than **[15]** days for startup and testing.
 5. Substantial Completion: Project shall have **300 consecutive calendar days** of the date established in a written notice to proceed timeline for substantial completion. Indicate completion in advance of date established for Substantial Completion and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
 6. Punch List and Final Completion: Include not more than **[30 calendar]** days for completion of punch list items and final completion.
- E. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule and show how the sequence of the Work is affected.
 1. Phasing: Arrange list of activities on schedule by phase.
 2. Work under More Than One Contract: Include a separate activity for each contract.
 3. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.

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4. Products Ordered in Advance: Include a separate activity for each product. Include delivery date indicated in Section 011000 "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
5. Owner-Furnished Products: Include a separate activity for each product. Include delivery date indicated in Section 011000 "Summary." Delivery dates indicated stipulate the earliest possible delivery date.
6. Work Restrictions: Show the effect of the following items on the schedule:
 - a. Coordination with existing construction.
 - b. Limitations of continued occupancies.
 - c. Uninterruptible services.
 - d. Partial occupancy before Substantial Completion.
 - e. Use-of-premises restrictions.
 - f. Provisions for future construction.
 - g. Seasonal variations.
 - h. Environmental control.
7. Work Stages: Indicate important stages of construction for each major portion of the Work, including, but not limited to, the following:
 - a. Subcontract awards.
 - b. Submittals.
 - c. Purchases.
 - d. Mockups.
 - e. Fabrication.
 - f. Sample testing.
 - g. Deliveries.
 - h. Installation.
 - i. Tests and inspections.
 - j. Adjusting.
 - k. Curing.
 - l. Building flush-out.
 - m. Startup and placement into final use and operation.
 - n. Commissioning.
8. Construction Areas: Identify each major area of construction for each major portion of the Work. Indicate where each construction activity within a major area must be sequenced or integrated with other construction activities to provide for the following:
 - a. Structural completion.
 - b. Temporary enclosure and space conditioning.
 - c. Permanent space enclosure.
 - d. Completion of mechanical installation.
 - e. Completion of electrical installation.
 - f. Substantial Completion.
- F. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and final completion **and the following interim milestones.**
 1. Temporary enclosure and space conditioning.
 2. **Equipment Installation.**
- G. Cost Correlation: Superimpose a cost correlation timeline, indicating planned and actual costs. On the line, show planned and actual dollar volume of the Work performed as of planned and actual dates used for preparation of payment requests.
 1. See Section 012900 "Payment Procedures" for cost reporting and payment procedures.

- H. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:
 - 1. Unresolved issues.
 - 2. Unanswered Requests for Information.
 - 3. Rejected or unreturned submittals.
 - 4. Notations on returned submittals.
 - 5. Pending modifications affecting the Work and the Contract Time.
- I. Contractor's Construction Schedule Updating: At **monthly** intervals and with each pay application, update schedule to reflect actual construction progress and activities. Issue schedule **one week** before each regularly scheduled progress meeting. Issue updated schedule with each Pay Application.
 - 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 - 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 - 3. As the Work progresses, indicate final completion percentage for each activity.
- J. Recovery Schedule: When periodic update indicates the Work is [14] or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule. Indicate changes to working hours, working days, crew sizes, equipment required to achieve compliance, and date by which recovery will be accomplished.
- K. Distribution: Distribute copies of approved schedule to Architect/Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
 - 1. Post copies in Project meeting rooms and temporary field offices.
 - 2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

1.7 STARTUP CONSTRUCTION SCHEDULE

- A. Gantt-Chart Schedule: Submit startup, horizontal, Gantt-chart-type construction schedule within [seven] days of date established for **commencement of the Work**.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line. Outline significant construction activities for first [90] days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.

1.8 GANTT-CHART SCHEDULE REQUIREMENTS

- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal, Gantt-chart-type, Contractor's Construction Schedule within **30** days of date established for **commencement of the Work**
 - 1. Base schedule on the startup construction schedule and additional information received since the start of Project.
- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
 - 1. For construction activities that require three months or longer to complete, indicate an estimated completion percentage in [10] percent increments within

time bar.

1.9 CPM SCHEDULE REQUIREMENTS

- A. General: Prepare network diagrams using AON (activity-on-node) format.
- B. Startup Network Diagram: Submit diagram within [4 days of date established for **commencement of the Work**] Outline significant construction activities for the first [90] days of construction. Include skeleton diagram for the remainder of the Work and a cash requirement prediction based on indicated activities.
- C. CPM Schedule: Prepare Contractor's Construction Schedule using a **cost- and resource-loaded**, time-scaled CPM network analysis diagram for the Work.
 - 1. Develop network diagram in sufficient time to submit CPM schedule so it can be accepted for use no later than [60] days after date established for **commencement of the Work**
 - a. Failure to include any work item required for performance of this Contract shall not excuse Contractor from completing all work within applicable completion dates.
 - 2. Conduct educational workshops to train and inform key Project personnel, including subcontractors' personnel, in proper methods of providing data and using CPM schedule information.
 - 3. Establish procedures for monitoring and updating CPM schedule and for reporting progress. Coordinate procedures with progress meeting and payment request dates.
 - 4. Use "one workday" as the unit of time for individual activities. Indicate nonworking days and holidays incorporated into the schedule to coordinate with the Contract Time.
- D. CPM Schedule Preparation: Prepare a list of all activities required to complete the Work. Using the startup network diagram, prepare a skeleton network to identify probable critical paths.
 - 1. Activities: Indicate the estimated time duration, sequence requirements, and relationship of each activity in relation to other activities. Include estimated time frames for the following activities:
 - a. Preparation and processing of submittals.
 - b. Mobilization (not to exceed 5% of Bid) and demobilization.
 - c. Purchase of materials.
 - d. Delivery.
 - e. Fabrication.
 - f. Utility interruptions.
 - g. Installation.
 - h. Work by Owner that may affect or be affected by Contractor's activities.
 - i. Testing and inspection.
 - j. Commissioning.
 - k. Punch list and final completion.
 - l. Activities occurring following final completion.
 - 2. Critical Path Activities: Identify critical path activities, including those for interim completion dates. Scheduled start and completion dates shall be consistent with Contract milestone dates.
 - 3. Processing: Process data to produce output data on a computer-drawn, time-scaled network. Revise data, reorganize activity sequences, and reproduce as often as necessary to produce the CPM schedule within the limitations of the Contract Time.
 - 4. Format: Mark the critical path. Locate the critical path near center of network; locate paths with most float near the edges.

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- a. Subnetworks on separate sheets are permissible for activities clearly off the critical path.
5. Cost- and Resource-Loading of CPM Schedule: Assign cost to construction activities on the CPM schedule. Do not assign costs to submittal activities. Obtain Architect's approval prior to assigning costs to fabrication and delivery activities. Assign costs under main subcontracts for testing and commissioning activities, operation and maintenance manuals, punch list activities, Project record documents, and demonstration and training (if applicable), in the amount of [5] percent of the Contract Sum.
 - a. Each activity cost shall reflect an appropriate value subject to approval by Architect.
 - b. Total cost assigned to activities shall equal the total Contract Sum.
- E. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using a network fragment to demonstrate the effect of the proposed change on the overall Project schedule.
- F. Initial Issue of Schedule: Prepare initial network diagram from a sorted activity list indicating straight "early start-total float." Identify critical activities. Prepare tabulated reports showing the following:
 1. Contractor or subcontractor and the Work or activity.
 2. Description of activity.
 3. Main events of activity.
 4. Immediate preceding and succeeding activities.
 5. Early and late start dates.
 6. Early and late finish dates.
 7. Activity duration in workdays.
 8. Total float or slack time.
 9. Average size of workforce.
 10. Dollar value of activity (coordinated with the schedule of values).
- G. Schedule Updating: Concurrent with making revisions to schedule, prepare tabulated reports showing the following:
 1. Identification of activities that have changed.
 2. Changes in early and late start dates.
 3. Changes in early and late finish dates.
 4. Changes in activity durations in workdays.
 5. Changes in the critical path.
 6. Changes in total float or slack time.
 7. Changes in the Contract Time.
- H. Value Summaries: Prepare two cumulative value lists, sorted by finish dates.
 1. In first list, tabulate activity number, early finish date, dollar value, and cumulative dollar value.
 2. In second list, tabulate activity number, late finish date, dollar value, and cumulative dollar value.
 3. In subsequent issues of both lists, substitute actual finish dates for activities completed as of list date.
 4. Prepare list for ease of comparison with payment requests, coordinate timing with progress meetings.
 - a. In both value summary lists, tabulate "actual percent complete" and "cumulative value completed" with total at bottom.
 - b. Submit value summary printouts **one week** before each regularly scheduled progress meeting.

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1.10 REPORTS

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
1. List of subcontractors at Project site.
 2. List of separate contractors at Project site.
 3. Approximate count of personnel at Project site.
 4. Equipment at Project site.
 5. Material deliveries.
 6. High and low temperatures and general weather conditions, including presence of rain or snow.
 7. Testing and inspection.
 8. Accidents.
 9. Meetings and significant decisions.
 10. Unusual events.
 11. Stoppages, delays, shortages, and losses.
 12. Meter readings and similar recordings.
 13. Emergency procedures.
 14. Orders and requests of authorities having jurisdiction.
 15. Change Orders received and implemented.
 16. **[Construction]** or **[Work]** Change Directives received and implemented.
 17. Services connected and disconnected.
 18. Equipment or system tests and startups.
 19. Partial completions and occupancies.
 20. Substantial Completions authorized.
- B. Material Location Reports: At **[weekly]** intervals, prepare and submit a comprehensive list of materials delivered to and stored at Project site. List shall be cumulative, showing materials previously reported plus items recently delivered. Include with list a statement of progress on and delivery dates for materials or items of equipment fabricated or stored away from Project site. Indicate the following categories for stored materials:
1. Material stored prior to previous report and remaining in storage.
 2. Material stored prior to previous report and since removed from storage and installed.
 3. Material stored following previous report and remaining in storage.
- C. Site Condition Reports: Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.
- D. Unusual Event Reports: When an event of an unusual and significant nature occurs at Project site, whether or not related directly to the Work, prepare and submit a special report. List chain of events, persons participating, responses by Contractor's personnel, evaluation of results or effects, and similar pertinent information. Advise Owner in advance when these events are known or predictable.
1. Submit unusual event reports directly to Owner within **[one]** day(s) of an occurrence. Distribute copies of report to parties affected by the occurrence.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 33 00
SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Sections:
 - 1. Division 1 Section "Payment Procedures" for submitting Applications for Payment and the schedule of values.
 - 2. Division 01 Section "Project Management and Coordination" for submitting Coordination Drawings.
 - 3. Division 01 Section "Quality Requirements" for submitting test and inspection reports and Delegated-Design Submittals and for erecting mockups.
 - 4. Division 01 Section "Closeout Procedures" for submitting warranties, Project Record Documents and operation and maintenance manuals.
 - 5. Division 01 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
 - 6. Division 01 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action. Action submittals are those submittals indicated in individual Specification Sections as action submittals.
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as informational submittals.

1.4 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
 - b. Submittals Schedule: Comply with requirements in Division 01 Section "Construction Progress Documentation" for list of submittals and time requirements for scheduled performance of related construction activities.
- B. Processing Time: Allow enough time (2 week minimum) for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt

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of submittal, and allow for the minimum of the time described below, not to exceed the time demonstrated in the Submittal Look-Ahead Schedule

C. Electronic Submittal:

1. Shop drawing and product data submittals shall be transmitted to Architect in electronic (PDF) format using Cloud Based Software approved by Architect and Owner, a website service designed specifically for transmitting submittals between construction team members.
2. The intent of electronic submittals is to expedite the construction process by reducing paperwork, improving information flow, and decreasing turnaround time.
3. The electronic submittal process is not intended for color samples, color charts, or physical material samples.

D. Electronic Submittal Procedures:

1. Create submittal log in Cloud Based Software approved by Architect and Owner by inserting required submittals listed in individual specification sections.
2. Submittal Preparation - Contractor may use any or all of the following options:
 - a. Subcontractors and Suppliers provide electronic (PDF) submittals to Contractor via the Cloud Based Software approved by Architect and Owner website.
 - b. Subcontractors and Suppliers provide electronic (PDF) submittals to Contractor via email.
 - c. Subcontractors and Suppliers provide paper submittals to Scanning Service which electronically scans and converts to PDF format.
 - d. Printed Submittals: Provide two printed sets of submittals for shop drawings for structural framing in addition to electronic submittals if required by architect.
 - e. Contractor shall review and apply electronic stamp certifying that the submittal complies with the requirements of the Contract Documents including verification of manufacturer product, dimensions and coordination of information with other parts of the work.
 - f. Contractor shall transmit each submittal to Architect using the Cloud Based Software approved by Architect and Owner
 - g. Architect / Engineer review comments will be made available on the Cloud Based Software approved by Architect and Owner website for downloading. Contractor will receive email notice of completed review.
 - h. Distribution of reviewed submittals to subcontractors and suppliers is the responsibility of the Contractor.
 - i. Submit paper copies of any reviewed submittals not submitted electronically at project closeout for record purposes in accordance with Section 01 77 19 – Contract Closeout.
 - j. Contractor will provide Owner/Architect with complete backup of information gathered and stored with Cloud Based Software including but not limited to submittals, project photos, correspondence, RFI, ASI, Project documents, etc.

E. Costs:

1. General Contractor shall include the full cost of Cloud Based Software approved by Architect and Owner project subscription in their proposal. This cost is included in the Contract Amount.
2. The intent is for the Cloud Based Software such as Submittal Exchange or Procore service cost to be in lieu of postage or shipping costs typically paid for paper submittals. Service cost is a net cost savings to Contractor because submittals sent electronically do not need to be shipped physically.

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3. Internet Service and Equipment Requirements:
 - a. Email address and Internet access at Contractor's main office.
 - b. Adobe Acrobat (www.adobe.com), Bluebeam PDF Revu (www.bluebeam.com), or other similar PDF review software for applying electronic stamps and comments

F. General:

1. Prepare and submit Action Submittals required by individual Specification Sections.
2. Electronic copies: Post electronic submittals as PDF electronic files In Submittal Exchange
 - a. Architect will return annotated file. Annotate and retain one copy of file as an electronic Project record document file. Do not use, or allow others to use, submittals marked "Rejected – Resubmit as Specified" at the Project Site or elsewhere where Work is in progress
5. "Action Not Taken" - Where a submittal is for information or record purposes or special processing or other activity, the Architect will return the submittal marked "Action Not Taken"
 - a. Informational Submittals: Architect will review each submittal and will not return it, or will reject and return it if it does not comply with requirements. Architect and Construction Manager will forward each submittal to appropriate party.
 - b. Submittals not required by the Contract Documents will not be reviewed and may be discarded.

2.0 FORMS DESCRIPTION

- A. Requests for Information (RFI): Submit requests to the Architect for information or interpretation of Contract Documents on RFI form. Establish and maintain a RFI Log, and number each RFI sequentially.

END OF SECTION

SECTION 01 40 00
QUALITY REQUIREMENTS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Sections:
 - 1. Division 1 Section "Construction Progress Documentation" for developing a schedule of required tests and inspections.
 - 2. Divisions 2 through 16 Sections for specific test and inspection requirements.

1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect
- C. Mockups: Full size physical assemblies that are constructed on-site. Mockups are constructed to verify selections made under sample submittals; to demonstrate aesthetic effects and, where indicated, qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mockups are not Samples. Unless otherwise indicated, approved mockups establish the standard by which the Work will be judged.
 - 1. Integrated Exterior Mockups: Mockups of the exterior envelope erected separately from the building but on the project site, consisting of multiple products, assemblies and subassemblies.
 - 2. Room Mockups: Mockups of typical interior spaces complete with wall, floor, and ceiling finishes, doors, windows, millwork, casework, specialties, furnishings and equipment, and lighting.
- D. Preconstruction Testing: Tests and inspections performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.

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- E. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- F. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.
- G. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- I. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
 - 1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade or trades.
- J. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 CONFLICTING REQUIREMENTS

- A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.5 ACTION SUBMITTALS

- A. Shop Drawings: For integrated exterior mockups, provide plans, sections, and elevations, indicating materials and size of mockup construction.
 - 1. Indicate manufacturer and model number of individual components.
 - 2. Provide axonometric drawings for conditions difficult to illustrate in two dimensions.

1.6 INFORMATIONAL SUBMITTALS

- A. Contractor's Quality-Control Plan: For quality-assurance and quality-control activities and responsibilities.
- B. Contractor's Quality-Control Manager Qualifications: For supervisory personnel.
- C. Contractor's Statement of Responsibility: When required by authorities having jurisdiction, submit copy of written statement of responsibility sent to authorities having jurisdiction before starting work on the following systems.
- D. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- E. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
 - 1. Specification Section number and title.

2. Entity responsible for performing tests and inspections.
3. Description of test and inspection.
4. Identification of applicable standards.
5. Identification of test and inspection methods.
6. Number of tests and inspections required.
7. Time schedule or time span for tests and inspections.
8. Requirements for obtaining samples.
9. Unique characteristics of each quality-control service.

1.7 CONTRACTOR'S QUALITY-CONTROL PLAN

- A. Quality-Control Plan, General: Submit quality-control plan within 10 days of Notice of Award and not less than five days prior to preconstruction conference. Submit in format acceptable to Architect. Identify personnel, procedures, controls, instructions, tests, records, and forms to be used to carry out Contractor's quality-assurance and quality-control responsibilities. Coordinate with Contractor's construction schedule.
- B. Quality-Control Personnel Qualifications: Engage qualified full-time personnel trained and experienced in managing and executing quality-assurance and quality-control procedures similar in nature and extent to those required for Project.
 1. Project quality-control manager may also serve as Project superintendent.
- C. Submittal Procedure: Describe procedures for ensuring compliance with requirements through review and management of submittal process. Indicate qualifications of personnel responsible for submittal review.
- D. Testing and Inspection: Include in quality-control plan a comprehensive schedule of Work requiring testing or inspection, including the following:
 1. Contractor-performed tests and inspections including subcontractor-performed tests and inspections. Include required tests and inspections and Contractor-elected tests and inspections.
 2. Special inspections required by authorities having jurisdiction and indicated on the "Statement of Special Inspections."
 3. Owner-performed tests and inspections indicated in the Contract Documents, including tests and inspections indicated to be performed by the Commissioning Authority.
- E. Continuous Inspection of Workmanship: Describe process for continuous inspection during construction to identify and correct deficiencies in workmanship in addition to testing and inspection specified. Indicate types of corrective actions to be required to bring work into compliance with standards of workmanship established by Contract requirements and approved mockups.
- F. Monitoring and Documentation: Maintain testing and inspection reports including log of approved and rejected results. Include work Architect has indicated as nonconforming or defective. Indicate corrective actions taken to bring nonconforming work into compliance with requirements. Comply with requirements of authorities having jurisdiction.

1.8 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
 1. Date of issue.
 2. Project title and number.
 3. Name, address, and telephone number of testing agency.
 4. Dates and locations of samples and tests or inspections.
 5. Names of individuals making tests and inspections.
 6. Description of the Work and test and inspection method.
 7. Identification of product and Specification Section.
 8. Complete test or inspection data.

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9. Test and inspection results and an interpretation of test results.
 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 12. Name and signature of laboratory inspector.
 13. Recommendations on retesting and re-inspecting.
- B. Manufacturer's Technical Representative's Field Reports: Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, and telephone number of technical representative making report.
 2. Statement on condition of substrates and their acceptability for installation of product.
 3. Statement that products at Project site comply with requirements.
 4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 6. Statement whether conditions, products, and installation will affect warranty.
 7. Other required items indicated in individual Specification Sections.
- C. Factory-Authorized Service Representative's Reports: Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:
1. Name, address, and telephone number of factory-authorized service representative making report.
 2. Statement that equipment complies with requirements.
 3. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 4. Statement whether conditions, products, and installation will affect warranty.
 5. Other required items indicated in individual Specification Sections.
- D. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.9 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- C. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.

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- F. Specialists: Certain Specification Sections require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
1. Requirements of authorities having jurisdiction shall supersede requirements for specialists.
- G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 329 and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
 2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
- H. Manufacturer's Technical Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- J. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
1. Contractor responsibilities include the following:
 - a. Provide test specimens representative of proposed products and construction.
 - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
 - c. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
 - d. Build site-assembled test assemblies and mockups using installers who will perform same tasks for Project.
 - e. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed Work.
 - f. When testing is complete, remove test specimens, assemblies, mockups do not reuse products on Project.
 2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.
- K. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:
1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.
 2. Notify Architect seven days in advance of dates and times when mockups will be constructed.
 3. Employ supervisory personnel who will oversee mockup construction. Employ workers that will be employed during the construction at the Project.
 4. Demonstrate the proposed range of aesthetic effects and workmanship.
 5. Obtain Architect's approval of mockups before starting work, fabrication, or construction.

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- a. Allow seven days for initial review and each re-review of each mockup.
- 6. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
- 7. Demolish and remove mockups when directed, unless otherwise indicated.
- L. Integrated Exterior Mockups: Construct integrated exterior mockup in accordance with approved Shop Drawings or as indicated on Drawings. Coordinate installation of exterior envelope materials and products for which mockups are required in individual specification sections, along with supporting materials.

1.10 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.
 - 1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 - 2. Payment for these services will be made from testing and inspecting allowances, as authorized by Change Orders.
 - 3. Costs for retesting and re-inspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
 - 1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
 - 2. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 - 3. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
 - 4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 - 5. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 - 6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 1 Section "Submittal Procedures."
- D. Manufacturer's Technical Services: Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.
- E. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- F. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.

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1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 6. Do not perform any duties of Contractor.
- G. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 7. Security and protection for samples and for testing and inspecting equipment at Project site.
- H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.
- I. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents as a component of the Contractor's quality-control plan. Coordinate and submit concurrently with Contractor's construction schedule. Update as the Work progresses.
1. Distribution: Distribute schedule to Owner, Architect testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

1.11.1 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: Contractor will Engage a qualified testing agency to conduct special tests and inspections required by authorities having jurisdiction as indicated in Statement of Special Inspections attached to this Section, and as follows:
- B. Special Tests and Inspections: Conducted by a qualified testing agency as required by authorities having jurisdiction, as indicated in individual Specification Sections, and as follows:
1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
 2. Notifying Architect and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.

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3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.
4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
6. Retesting and re-inspecting corrected work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 ACCEPTABLE TESTING AGENCIES

- A. Contractor shall submit credentials of testing agency to architect/ engineer for approval prior to testing.

3.2 TEST AND INSPECTION LOG

- A. Prepare a record of tests and inspections. Include the following:
 1. Date test or inspection was conducted.
 2. Description of the Work tested or inspected.
 3. Date test or inspection results were transmitted to Architect.
 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.

3.3 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Division 1 Section "Execution Requirements."
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION

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PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Architect's action on Contractor's submittals, applications, and requests, "approved" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": Furnish and install, complete and ready for the intended use.
- I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.3 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents unless otherwise indicated.
- C. Copies of Standards: Each entity engaged in construction on Project should be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
 - 1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source.

1.4 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Thomson Gale's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S."
- B. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the

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following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

AA	Aluminum Association, Inc. (The) www.aluminum.org	(703) 358-2960
AAADM	American Association of Automatic Door Manufacturers www.aaadm.com	(216) 241-7333
AABC	Associated Air Balance Council www.aabchq.com	(202) 737-0202
AAMA	American Architectural Manufacturers Association www.aamanet.org	(847) 303-5664
AASHTO	American Association of State Highway and Transportation Officials www.transportation.org	(202) 624-5800
AATCC	American Association of Textile Chemists and Colorists www.aatcc.org	(919) 549-8141
ABAA	Air Barrier Association of America www.airbarrier.org	(866) 956-5888
ABMA	American Bearing Manufacturers Association www.abma-dc.org	(202) 367-1155
ACI	American Concrete Institute www.concrete.org	(248) 848-3700
ACPA	American Concrete Pipe Association www.concrete-pipe.org	(972) 506-7216
AEIC	Association of Edison Illuminating Companies, Inc. (The) www.aeic.org	(205) 257-2530
AF&PA	American Forest & Paper Association www.afandpa.org	(800) 878-8878 (202) 463-2700
AGA	American Gas Association www.aga.org	(202) 824-7000
AGC	Associated General Contractors of America (The) www.agc.org	(703) 548-3118
AHA	American Hardboard Association (Now part of CPA)	
AHAM	Association of Home Appliance Manufacturers www.aham.org	(202) 872-5955
AI	Asphalt Institute	(859) 288-4960

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	www.asphaltinstitute.org	
AIA	American Institute of Architects (The) www.aia.org	(800) 242-3837 (202) 626-7300
AISC	American Institute of Steel Construction www.aisc.org	(800) 644-2400 (312) 670-2400
AISI	American Iron and Steel Institute www.steel.org	(202) 452-7100
AITC	American Institute of Timber Construction www.aitc-glulam.org	(303) 792-9559
ALCA	Associated Landscape Contractors of America (Now PLANET - Professional Landcare Network)	
ALSC	American Lumber Standard Committee, Incorporated www.alsc.org	(301) 972-1700
AMCA	Air Movement and Control Association International, Inc. www.amca.org	(847) 394-0150
ANSI	American National Standards Institute www.ansi.org	(202) 293-8020
AOSA	Association of Official Seed Analysts, Inc. www.aosaseed.com	(405) 780-7372
APA	Architectural Precast Association www.archprecast.org	(239) 454-6989
APA	APA - The Engineered Wood Association www.apawood.org	(253) 565-6600
APA EWS	APA - The Engineered Wood Association; Engineered Wood Systems (See APA - The Engineered Wood Association)	
API	American Petroleum Institute www.api.org	(202) 682-8000
ARI	Air-Conditioning & Refrigeration Institute www.ari.org	(703) 524-8800
ARMA	Asphalt Roofing Manufacturers Association www.asphaltroofing.org	(202) 207-0917
ASCE	American Society of Civil Engineers www.asce.org	(800) 548-2723 (703) 295-6300
ASCE/SEI	American Society of Civil Engineers/Structural Engineering Institute	

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(See ASCE)

ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers www.ashrae.org	(800) 527-4723 (404) 636-8400
ASME	ASME International (American Society of Mechanical Engineers International) www.asme.org	(800) 843-2763 (973) 882-1170
ASSE	American Society of Sanitary Engineering www.asse-plumbing.org	(440) 835-3040
ASTM	ASTM International (American Society for Testing and Materials International) www.astm.org	(610) 832-9500
AWCI	Association of the Wall and Ceiling Industry www.awci.org	(703) 534-8300
AWCMA	American Window Covering Manufacturers Association (Now WCMA)	
AWI	Architectural Woodwork Institute www.awinet.org	(571) 323-3636
AWPA	American Wood Protection Association (Formerly: American Wood Preservers' Association) www.awpa.com	(205) 733-4077
AWS	American Welding Society www.aws.org	(800) 443-9353 (305) 443-9353
AWWA	American Water Works Association www.awwa.org	(800) 926-7337 (303) 794-7711
BHMA	Builders Hardware Manufacturers Association www.buildershardware.com	(212) 297-2122
BIA	Brick Industry Association (The) www.bia.org	(703) 620-0010
BICSI	BICSI, Inc. www.bicsi.org	(800) 242-7405 (813) 979-1991
BIFMA	BIFMA International (Business and Institutional Furniture Manufacturer's Association International) www.bifma.com	(616) 285-3963
BISSC	Baking Industry Sanitation Standards Committee www.bissc.org	(866) 342-4772

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BWF	Badminton World Federation (Formerly: IBF - International Badminton Federation) www.internationalbadminton.org	6-03-9283 7155
CCC	Carpet Cushion Council www.carpetcushion.org	(610) 527-3880
CDA	Copper Development Association www.copper.org	(800) 232-3282 (212) 251-7200
CEA	Canadian Electricity Association www.canelect.ca	(613) 230-9263
CEA	Consumer Electronics Association www.ce.org	(866) 858-1555 (703) 907-7600
CFFA	Chemical Fabrics & Film Association, Inc. www.chemicalfabricsandfilm.com	(216) 241-7333
CGA	Compressed Gas Association www.cganet.com	(703) 788-2700
CIMA	Cellulose Insulation Manufacturers Association www.cellulose.org	(888) 881-2462 (937) 222-2462
CISCA	Ceilings & Interior Systems Construction Association www.cisca.org	(630) 584-1919
CISPI	Cast Iron Soil Pipe Institute www.cispi.org	(423) 892-0137
CLFMI	Chain Link Fence Manufacturers Institute www.chainlinkinfo.org	(301) 596-2583
CRRC	Cool Roof Rating Council www.coolroofs.org	(866) 465-2523 (510) 485-7175
CPA	Composite Panel Association www.pbmdf.com	(301) 670-0604
CPPA	Corrugated Polyethylene Pipe Association www.cppa-info.org	(800) 510-2772 (202) 462-9607
CRI	Carpet and Rug Institute (The) www.carpet-rug.com	(800) 882-8846 (706) 278-3176
CRSI	Concrete Reinforcing Steel Institute www.crsi.org	(847) 517-1200
CSA	Canadian Standards Association	(800) 463-6727 (416) 747-4000
CSA	CSA International	(866) 797-4272

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	(Formerly: IAS - International Approval Services) www.csa-international.org	(416) 747-4000
CSI	Cast Stone Institute www.caststone.org	(717) 272-3744
CSI	Construction Specifications Institute (The) www.csinet.org	(800) 689-2900 (703) 684-0300
CSSB	Cedar Shake & Shingle Bureau www.cedarbureau.org	(604) 820-7700
CTI	Cooling Technology Institute (Formerly: Cooling Tower Institute) www.cti.org	(281) 583-4087
DHI	Door and Hardware Institute www.dhi.org	(703) 222-2010
EIA	Electronic Industries Alliance www.eia.org	(703) 907-7500
EIMA	EIFS Industry Members Association www.eima.com	(800) 294-3462 (770) 968-7945
EJCDC	Engineers Joint Contract Documents Committee www.ejdc.org	(703) 295-5000
EJMA	Expansion Joint Manufacturers Association, Inc. www.ejma.org	(914) 332-0040
ESD	ESD Association (Electrostatic Discharge Association) www.esda.org	(315) 339-6937
ETL SEMCO	Intertek ETL SEMCO (Formerly: ITS - Intertek Testing Service NA) www.intertek.com	(800) 967-5352
FIBA	Federation Internationale de Basketball (The International Basketball Federation) www.fiba.com	41 22 545 00 00
FIVB	Federation Internationale de Volleyball (The International Volleyball Federation) www.fivb.ch	41 21 345 35 35
FM Approvals	FM Approvals LLC www.fmglobal.com	(781) 762-4300
FM Global	FM Global (Formerly: FMG - FM Global) www.fmglobal.com	(401) 275-3000

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 01 42 00-6

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

FMRC	Factory Mutual Research (Now FM Global)	
FRSA	Florida Roofing, Sheet Metal & Air Conditioning Contractors Association, Inc. www.floridarooft.com	(407) 671-3772
FSA	Fluid Sealing Association www.fluidsealing.com	(610) 971-4850
FSC	Forest Stewardship Council www.fsc.org	49 228 367 66 0
GA	Gypsum Association www.gypsum.org	(202) 289-5440
GANA	Glass Association of North America www.glasswebsite.com	(785) 271-0208
GRI	(Part of GSI)	
GS	Green Seal www.greenseal.org	(202) 872-6400
GSI	Geosynthetic Institute www.geosynthetic-institute.org	(610) 522-8440
HI	Hydraulic Institute www.pumps.org	(973) 267-9700
HI	Hydronics Institute www.gamanet.org	(908) 464-8200
HMMA	Hollow Metal Manufacturers Association (Part of NAAMM)	
HPVA	Hardwood Plywood & Veneer Association www.hpva.org	(703) 435-2900
HPW	H. P. White Laboratory, Inc. www.hpwhite.com	(410) 838-6550
IAS	International Approval Services (Now CSA International)	
IBF	International Badminton Federation (Now BWF)	
ICEA	Insulated Cable Engineers Association, Inc. www.icea.net	(770) 830-0369
ICRI	International Concrete Repair Institute, Inc.	(847) 827-0830

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FAYETTEVILLE, AR

REFERENCES
01 42 00-7

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

	www.icri.org	
IEC	International Electrotechnical Commission www.iec.ch	41 22 919 02 11
IEEE	Institute of Electrical and Electronics Engineers, Inc. (The) www.ieee.org	(212) 419-7900
IESNA	Illuminating Engineering Society of North America www.iesna.org	(212) 248-5000
IENT	Institute of Environmental Sciences and Technology www.ient.org	(847) 255-1561
IGCC	Insulating Glass Certification Council www.igcc.org	(315) 646-2234
IGMA	Insulating Glass Manufacturers Alliance www.igmaonline.org	(613) 233-1510
ILI	Indiana Limestone Institute of America, Inc. www.iliai.com	(812) 275-4426
ISO	International Organization for Standardization www.iso.ch	41 22 749 01 11
	Available from ANSI www.ansi.org	(202) 293-8020
ISSFA	International Solid Surface Fabricators Association www.issfa.net	(877) 464-7732 (702) 567-8150
ITS	Intertek Testing Service NA (Now ETL SEMCO)	
ITU	International Telecommunication Union www.itu.int/home	41 22 730 51 11
KCMA	Kitchen Cabinet Manufacturers Association www.kcma.org	(703) 264-1690
LMA	Laminating Materials Association (Now part of CPA)	
LPI	Lightning Protection Institute www.lightning.org	(800) 488-6864
MBMA	Metal Building Manufacturers Association www.mbma.com	(216) 241-7333
MFMA	Maple Flooring Manufacturers Association, Inc. www.maplefloor.org	(888) 480-9138

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

MFMA	Metal Framing Manufacturers Association, Inc. www.metalframingmfg.org	(312) 644-6610
MH	Material Handling (Now MHIA)	
MHIA	Material Handling Industry of America www.mhia.org	(800) 345-1815 (704) 676-1190
MIA	Marble Institute of America www.marble-institute.com	(440) 250-9222
MPI	Master Painters Institute www.paintinfo.com	(888) 674-8937 (604) 298-7578
MSS	Manufacturers Standardization Society of The Valve and Fittings Industry Inc. www.mss-hq.com	(703) 281-6613
NAAMM	National Association of Architectural Metal Manufacturers www.naamm.org	(630) 942-6591
NACE	NACE International (National Association of Corrosion Engineers International) www.nace.org	(800) 797-6623 (281) 228-6200
NADCA	National Air Duct Cleaners Association www.nadca.com	(202) 737-2926
NAGWS	National Association for Girls and Women in Sport www.aahperd.org/nagws/	(800) 213-7193, ext. 453
NAIMA	North American Insulation Manufacturers Association www.naima.org	(703) 684-0084
NBGQA	National Building Granite Quarries Association, Inc. www.nbgqa.com	(800) 557-2848
NCAA	National Collegiate Athletic Association (The) www.ncaa.org	(317) 917-6222
NCMA	National Concrete Masonry Association www.ncma.org	(703) 713-1900
NCPI	National Clay Pipe Institute www.ncpi.org	(262) 248-9094
NCTA	National Cable & Telecommunications Association www.ncta.com	(202) 775-2300
NEBB	National Environmental Balancing Bureau www.nebb.org	(301) 977-3698

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CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

NECA	National Electrical Contractors Association www.necanet.org	(301) 657-3110
NeLMA	Northeastern Lumber Manufacturers' Association www.nelma.org	(207) 829-6901
NEMA	National Electrical Manufacturers Association www.nema.org	(703) 841-3200
NETA	InterNational Electrical Testing Association www.netaworld.org	(888) 300-6382 (269) 488-6382
NFHS	National Federation of State High School Associations www.nfhs.org	(317) 972-6900
NFPA	NFPA (National Fire Protection Association) www.nfpa.org	(800) 344-3555 (617) 770-3000
NFRC	National Fenestration Rating Council www.nfrc.org	(301) 589-1776
NGA	National Glass Association www.glass.org	(866) 342-5642 (703) 442-4890
NHLA	National Hardwood Lumber Association www.natlhardwood.org	(800) 933-0318 (901) 377-1818
NLGA	National Lumber Grades Authority www.nlga.org	(604) 524-2393
NOFMA	NOFMA: The Wood Flooring Manufacturers Association (Formerly: National Oak Flooring Manufacturers Association) www.nofma.com	(901) 526-5016
NOMMA	National Ornamental & Miscellaneous Metals Association www.nomma.org	(888) 516-8585
NRCA	National Roofing Contractors Association www.nrca.net	(800) 323-9545 (847) 299-9070
NRMCA	National Ready Mixed Concrete Association www.nrmca.org	(888) 846-7622 (301) 587-1400
NSF	NSF International (National Sanitation Foundation International) www.nsf.org	(800) 673-6275 (734) 769-8010
NSSGA	National Stone, Sand & Gravel Association www.nssga.org	(800) 342-1415 (703) 525-8788
NTMA	National Terrazzo & Mosaic Association, Inc. (The)	(800) 323-9736

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FAYETTEVILLE, AR

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CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

	www.ntma.com	(540) 751-0930
NTRMA	National Tile Roofing Manufacturers Association (Now TRI)	
NWWDA	National Wood Window and Door Association (Now WDMA)	
OPL	Omega Point Laboratories, Inc. (Now ITS)	
PCI	Precast/Prestressed Concrete Institute www.pci.org	(312) 786-0300
PDCA	Painting & Decorating Contractors of America www.pdca.com	(800) 332-7322 (314) 514-7322
PDI	Plumbing & Drainage Institute www.pdionline.org	(800) 589-8956 (978) 557-0720
PGI	PVC Geomembrane Institute http://pgi-tp.ce.uiuc.edu	(217) 333-3929
PLANET	Professional Landcare Network (Formerly: ACLA - Associated Landscape Contractors of America) www.landcarenetwork.org	(800) 395-2522 (703) 736-9666
PTI	Post-Tensioning Institute www.post-tensioning.org	(602) 870-7540
RCSC	Research Council on Structural Connections www.boltcouncil.org	
RFCI	Resilient Floor Covering Institute www.rfci.com	(301) 340-8580
RIS	Redwood Inspection Service www.redwoodinspection.com	(888) 225-7339 (415) 382-0662
SAE	SAE International www.sae.org	(877) 606-7323 (724) 776-4841
SDI	Steel Deck Institute www.sdi.org	(847) 458-4647
SDI	Steel Door Institute www.steeldoor.org	(440) 899-0010
SEFA	Scientific Equipment and Furniture Association www.sefalabs.com	(877) 294-5424 (516) 294-5424
SEI/ASCE	Structural Engineering Institute/American Society of Civil	

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CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

	Engineers (See ASCE)	
SGCC	Safety Glazing Certification Council www.sgcc.org	(315) 646-2234
SIA	Security Industry Association www.siaonline.org	(866) 817-8888 (703) 683-2075
SIGMA	Sealed Insulating Glass Manufacturers Association (Now IGMA)	
SJI	Steel Joist Institute www.steeljoist.org	(843) 626-1995
SMA	Screen Manufacturers Association www.smacentral.org	(561) 533-0991
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association www.smacna.org	(703) 803-2980
SMPTE	Society of Motion Picture and Television Engineers www.smpte.org	(914) 761-1100
SPFA	Spray Polyurethane Foam Alliance (Formerly: SPI/SPFD - The Society of the Plastics Industry, Inc.; Spray Polyurethane Foam Division) www.sprayfoam.org	(800) 523-6154
SPIB	Southern Pine Inspection Bureau (The) www.spib.org	(850) 434-2611
SPRI	Single Ply Roofing Industry www.spri.org	(781) 647-7026
SSINA	Specialty Steel Industry of North America www.ssina.com	(800) 982-0355 (202) 342-8630
SSPC	SSPC: The Society for Protective Coatings www.sspc.org	(877) 281-7772 (412) 281-2331
STI	Steel Tank Institute www.steeltank.com	(847) 438-8265
SWI	Steel Window Institute www.steelwindows.com	(216) 241-7333
SWRI	Sealant, Waterproofing, & Restoration Institute www.swrionline.org	(816) 472-7974
TCA	Tile Council of America, Inc. (Now TCNA)	

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01 42 00-12

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

TCNA	Tile Council of North America, Inc. www.tileusa.com	(864) 646-8453
TIA/EIA	Telecommunications Industry Association/Electronic Industries Alliance www.tiaonline.org	(703) 907-7700
TMS	The Masonry Society www.masonrysociety.org	(303) 939-9700
TPI	Truss Plate Institute, Inc. www.tpinst.org	(703) 683-1010
TPI	Turfgrass Producers International www.turfgrasssod.org	(800) 405-8873 (847) 649-5555
TRI	Tile Roofing Institute www.tilerroofing.org	(312) 670-4177
UL	Underwriters Laboratories Inc. www.ul.com	(877) 854-3577 (847) 272-8800
UNI	Uni-Bell PVC Pipe Association www.uni-bell.org	(972) 243-3902
USAV	USA Volleyball www.usavolleyball.org	(888) 786-5539 (719) 228-6800
USGBC	U.S. Green Building Council www.usgbc.org	(800) 795-1747
USITT	United States Institute for Theatre Technology, Inc. www.usitt.org	(800) 938-7488 (315) 463-6463
WASTEC	Waste Equipment Technology Association www.wastec.org	(800) 424-2869 (202) 244-4700
WCLIB	West Coast Lumber Inspection Bureau www.wclib.org	(800) 283-1486 (503) 639-0651
WCMA	Window Covering Manufacturers Association www.wcmanet.org	(212) 297-2122
WCSC	Window Covering Safety Council (Formerly: WCMA - Window Covering Manufacturers Association) www.windowcoverings.org	(800) 506-4636 (212) 297-2109
WDMA	Window & Door Manufacturers Association (Formerly: NWWDA - National Wood Window and Door Association) www.wdma.com	(800) 223-2301 (847) 299-5200

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

WI	Woodwork Institute (Formerly: WIC - Woodwork Institute of California) www.wicnet.org	(916) 372-9943
WIC	Woodwork Institute of California (Now WI)	
WMMPA	Wood Moulding & Millwork Producers Association www.wmmpa.com	(800) 550-7889 (530) 661-9591
WSRCA	Western States Roofing Contractors Association www.wsrca.com	(800) 725-0333 (650) 570-5441
WWPA	Western Wood Products Association www.wwpa.org	(503) 224-3930

- A. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

IAPMO	International Association of Plumbing and Mechanical Officials www.iapmo.org	(909) 472-4100
ICC	International Code Council www.iccsafe.org	(888) 422-7233
ICC-ES	ICC Evaluation Service, Inc. www.icc-es.org	(800) 423-6587 (562) 699-0543
UBC	Uniform Building Code (See ICC)	

- B. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

CE	Army Corps of Engineers www.usace.army.mil	(202) 761-0011
CPSC	Consumer Product Safety Commission www.cpsc.gov	(800) 638-2772 (301) 504-7923
DOC	Department of Commerce www.commerce.gov	(202) 482-2000
DOD	Department of Defense http://.dodssp.daps.dla.mil	(215) 697-6257
DOE	Department of Energy www.energy.gov	(202) 586-9220

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

EPA	Environmental Protection Agency www.epa.gov	(202) 272-0167
FAA	Federal Aviation Administration www.faa.gov	(866) 835-5322
FCC	Federal Communications Commission www.fcc.gov	(888) 225-5322
FDA	Food and Drug Administration www.fda.gov	(888) 463-6332
GSA	General Services Administration www.gsa.gov	(800) 488-3111
HUD	Department of Housing and Urban Development www.hud.gov	(202) 708-1112
LBL	Lawrence Berkeley National Laboratory www.lbl.gov	(510) 486-4000
NCHRP	National Cooperative Highway Research Program (See TRB)	
NIST	National Institute of Standards and Technology www.nist.gov	(301) 975-6478
OSHA	Occupational Safety & Health Administration www.osha.gov	(800) 321-6742 (202) 693-1999
PBS	Public Buildings Service (See GSA)	
PHS	Office of Public Health and Science www.osophs.dhhs.gov/ophs	(202) 690-7694
RUS	Rural Utilities Service (See USDA)	(202) 720-9540
SD	State Department www.state.gov	(202) 647-4000
TRB	Transportation Research Board http://gulliver.trb.org	(202) 334-2934
USDA	Department of Agriculture www.usda.gov	(202) 720-2791
USPS	Postal Service www.usps.com	(202) 268-2000

- C. Standards and Regulations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and

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FAYETTEVILLE, AR**

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CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

regulations in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

ADAAG	Americans with Disabilities Act (ADA) Architectural Barriers Act (ABA) Accessibility Guidelines for Buildings and Facilities Available from U.S. Access Board www.access-board.gov	(800) 872-2253 (202) 272-0080
CFR	Code of Federal Regulations Available from Government Printing Office www.gpoaccess.gov/cfr/index.html	(866) 512-1800 (202) 512-1800
DOD	Department of Defense Military Specifications and Standards Available from Department of Defense Single Stock Point http://dodssp.daps.dla.mil	(215) 697-2664
DSCC	Defense Supply Center Columbus (See FS)	
FED-STD	Federal Standard (See FS)	
FS	Federal Specification Available from Department of Defense Single Stock Point http://dodssp.daps.dla.mil Available from Defense Standardization Program www.dps.dla.mil Available from General Services Administration www.gsa.gov Available from National Institute of Building Sciences www.wbdg.org/ccb	(215) 697-2664 (202) 619-8925 (202) 289-7800
FTMS	Federal Test Method Standard (See FS)	
MIL	(See MILSPEC)	
MIL-STD	(See MILSPEC)	
MILSPEC	Military Specification and Standards Available from Department of Defense Single Stock Point http://dodssp.daps.dla.mil	(215) 697-2664
UFAS	Uniform Federal Accessibility Standards Available from Access Board www.access-board.gov	(800) 872-2253 (202) 272-0080

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

- D. State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web sites are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

CBHF	State of California, Department of Consumer Affairs Bureau of Home Furnishings and Thermal Insulation www.dca.ca.gov/bhfti	(800) 952-5210 (916) 574-2041
CCR	California Code of Regulations www.calregs.com	(916) 323-6815
CPUC	California Public Utilities Commission www.cpuc.ca.gov	(415) 703-2782
TFS	Texas Forest Service Forest Resource Development http://txforestservice.tamu.edu	(979) 458-6650

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SCHEDULE OF SPECIAL INSPECTION SERVICES (STRUCTURAL)

Prepared by:
JLA ENGINEERS INC.

Project:

**WILSON PARK
PAVILION**

JLA JOB# 3112

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Bid 22-54,
Appendix A:
City Bid Documents

SCHEDULE OF SPECIAL INSPECTION SERVICES (STRUCTURAL)	
PROJECT	WILSON PARK PAVILION, FAYETTEVILLE, AR, JLA JOB #3112
This Schedule of Special Inspection Services (Structural) has been prepared by JLA Engineers Inc. (Structural Engineer of Record) and shall be included in the Statement of Special Inspections which the applicant (not JLA Engineers Inc.) shall submit to the Building Official at time of permit application in accordance with Section 1704 of the 2012 Arkansas Fire Prevention Code. Special Inspection is the monitoring of the materials and workmanship critical to the integrity of the building structure. It is a review of the work of the contractors and their employees to ensure that the approved plans and specifications are being followed and that the relevant codes and referenced standards are being observed. The Special Inspection process is in addition to the inspections conducted by the Building Official or authority having jurisdiction and Structural Observation by the Design Professional. Special inspections and tests are required to be performed by qualified, independent agents (not JLA Engineers Inc.) with special expertise as approved by the Building Official. The qualified, independent agents shall be retained by the owner or the registered design professional in responsible charge acting as the owner's agent (not JLA Engineers Inc.) to complete the special inspections noted in this document. Refer to Section 1704 of the 2012 Arkansas Fire Prevention Code. Special Inspections per 2012 Arkansas Fire Prevention Code Section 1704 are required to be provided on all professionally designed projects not meeting the exceptions described in Section 1704.2 or as determined by the Building Official. As part of the general requirements Section 1704 of the 2012 Arkansas Fire Prevention Code, Special Inspections, Contractor Responsibility and Structural Observations, a Statement of Special Inspections including a Schedule of Special Inspection Services prepared by the Registered Design Professional in Responsible Charge (not JLA Engineers Inc.) shall be submitted to the Building Official, by the applicant, at time of permit application.	

SCHEDULE OF SPECIAL INSPECTION SERVICES (STRUCTURAL)					
PROJECT	WILSON PARK PAVILION, FAYETTEVILLE, AR, JLA JOB #3112				
MATERIAL / ACTIVITY	SERVICE	APPLICABLE TO THIS PROJECT			
		Y/N	EXTENT	AGENT*	DATE COMPLETED
1704.2.5 Inspection of Fabricators					
Verify fabrication/quality control procedures	In-plant review (3)	Y	Periodic		
1705.1.1 Special Cases (work unusual in nature, including but not limited to alternative materials and systems, unusual design applications, materials and systems with special manufacturer's requirements)	Submittal review, shop (3) and/or field inspection	N			

Bid 22-54,
Appendix A:
City Bid Documents

SCHEDULE OF SPECIAL INSPECTION SERVICES (STRUCTURAL)					
PROJECT	WILSON PARK PAVILION, FAYETTEVILLE, AR, JLA JOB #3112				
MATERIAL / ACTIVITY	SERVICE	APPLICABLE TO THIS PROJECT			
		Y/N	EXTENT	AGENT*	DATE COMPLETED
1705.2 Steel Construction					
1. Fabricator and erector documents (Verify reports and certificates as listed in AISC 360, chapter N, paragraph 3.2 for compliance with construction documents)	Submittal Review	Y	Each submittal		
2. Material verification of structural steel	Shop (3) and field inspection	Y	Periodic		
3. Embedments (Verify diameter, grade, type, length, embedment. See 1705.3 for anchors)	Field inspection	Y	Periodic		
4. Verify member locations, braces, stiffeners, and application of joint details at each connection comply with construction documents	Field inspection	Y	Periodic		
5. Structural steel welding (Inspection tasks prior to welding)					
a. Welding procedure specifications (WPSs) available	Submittal Review	Y	Perform (4)		
b. Manufacturer certifications for welding consumables available	Submittal Review	Y	Perform (4)		
c. Material identification (type/grade)	Shop (3) and field inspection	Y	Observe (4)		
d. Welder identification system (6)	Shop (3) and field inspection	Y	Observe (4)		
e. Fit-up of groove welds (including joint geometry): Joint preparation; Dimensions (alignment, root opening, root face, bevel); Cleanliness (condition of steel surfaces); Tacking (tack weld quality and location); Backing type and fit (if applicable)	Shop (3) and field inspection	Y	Observe (4)		
f. Configuration and finish of access holes	Shop (3) and field inspection	N	Observe (4)		
g. Fit-up of fillet welds: Dimensions (alignment, gaps at root); Cleanliness (condition of steel surfaces); Tacking (tack weld quality and location)	Shop (3) and field inspection	Y	Observe (4)		
6. Structural steel welding (Inspection tasks during welding)					
a. Use of qualified welders	Shop (3) and field inspection	Y	Observe (4)		
b. Control and handling of welding consumables: Packaging; Exposure control	Shop (3) and field inspection	Y	Observe (4)		
c. No welding over cracked tack welds	Shop (3) and field inspection	Y	Observe (4)		
d. Environmental conditions: Wind speed within limits; Precipitation and temperature	Shop (3) and field inspection	Y	Observe (4)		
e. WPS followed: Settings on welding equipment; Travel speed; Selected welding materials; Shielding gas type/flow rate; Preheat applied; Interpass temperature maintained (min./max.); Proper position (F, V, H, OH)	Shop (3) and field inspection	Y	Observe (4)		

SCHEDULE OF SPECIAL INSPECTION SERVICES (STRUCTURAL)					
PROJECT	WILSON PARK PAVILION, FAYETTEVILLE, AR, JLA JOB #3112				
MATERIAL / ACTIVITY	SERVICE	APPLICABLE TO THIS PROJECT			
		Y/N	EXTENT	AGENT*	DATE COMPLETED
f. Welding techniques: Interpass and final cleaning; Each pass within profile limitations; Each pass meets quality requirements	Shop (3) and field inspection	Y	Observe (4)		
7. Structural steel welding (Inspection tasks after welding)					
a. Welds cleaned	Shop (3) and field inspection	Y	Observe (4)		
b. Size, length and location of welds	Shop (3) and field inspection	Y	Perform (4)		
c. Welds meet visual acceptance criteria: Crack prohibition; Weld/base-metal fusion; Crater cross section; Weld profiles; Weld size; Undercut; Porosity	Shop (3) and field inspection	Y	Perform (4)		
d. Arc strikes	Shop (3) and field inspection	Y	Perform (4)		
e. k-area (7)	Shop (3) and field inspection	Y	Perform (4)		
f. Backing removed and weld tabs removed (if required)	Shop (3) and field inspection	Y	Perform (4)		
g. Repair activities	Shop (3) and field inspection	Y	Perform (4)		
h. Document acceptance or rejection of welded joint or member	Shop (3) and field inspection	Y	Perform (4)		
8. Nondestructive testing (NDT) of welded joints:					
a. Complete penetration groove welds 5/16" or greater in <i>risk category III</i> or <i>IV</i>	Shop (3) or field ultrasonic testing - 100%	N	Periodic		
b. Complete penetration groove welds 5/16" or greater in <i>risk category II</i>	Shop (3) or field ultrasonic testing - 10% of welds minimum	Y	Periodic		
c. Thermally cut surfaces of access holes when the flange thickness exceeds 2" for rolled shapes, or when the web thickness exceeds 2" for built-up shapes.	Shop (3) or field magnetic Partical or Penetrant testing	N	Periodic		
d. Welded joints subject to fatigue when required by AISC 360, Appendix 3, Table A-3.1	Shop (3) or field radiographic or Ultrasonic testing	Y	Periodic		
e. Fabricator's NDT reports when fabricator performs NDT	Verify reports	Y	Each submittal (5)		
9. Structural steel bolting (Inspection tasks prior to bolting)					
a. Manufacturer's certifications available for fastener materials	Shop (3) and field inspection	Y	Perform (4)		
b. Fasteners marked in accordance with ASTM requirements	Shop (3) and field inspection	Y	Observe (4)		
c. Proper fasteners selected for the joint detail (grade, type, bolt length if threads are to be excluded from shear plane)	Shop (3) and field inspection	Y	Observe (4)		
d. Proper bolting procedure selected for joint detail	Shop (3) and field inspection	Y	Observe (4)		
e. Connecting elements, including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements	Shop (3) and field inspection	Y	Observe (4)		

SCHEDULE OF SPECIAL INSPECTION SERVICES (STRUCTURAL)					
PROJECT	WILSON PARK PAVILION, FAYETTEVILLE, AR, JLA JOB #3112				
MATERIAL / ACTIVITY	SERVICE	APPLICABLE TO THIS PROJECT			
		Y/N	EXTENT	AGENT*	DATE COMPLETED
f. Pre-installation verification testing by installation personnel observed and documented for fastener assemblies and methods used					
1) Snug-tight joints	Shop (3) and field inspection	Y	Observe (4)		
2) Pre-tensioned and slip-critical joints	Shop (3) and field inspection	Y	Observe (4)		
g. Proper storage provided for bolts, nuts, washers and other fastener components	Shop (3) and field inspection	Y	Observe (4)		
10. Structural steel bolting (Inspection tasks during bolting)					
a. Fastener assemblies, of suitable condition, placed in all holes and washers (if required) are positioned as required					
1) Snug-tight joints	Field inspection	Y	Observe (4)		
2) Pre-tensioned and slip-critical joints	Field inspection	Y	Observe (4)		
b. Joint brought to the snug-tight condition prior to the pretensioning operation					
1) Snug-tight joints	Field inspection	Y	Observe (4)		
2) Pre-tensioned and slip-critical joints					
a) Turn-of-nut with matching markings	Field inspection	Y	Observe (4) (8)		
b) Direct tension indicator	Field inspection	Y	Observe (4) (8)		
c) Twist-off type tension control bolt	Field inspection	Y	Observe (4) (8)		
d) Turn-of-nut without matching markings	Field inspection	Y	Observe (4) (9)		
e) Calibrated wrench	Field inspection	Y	Observe (4) (9)		
c. Fastener component not turned by the wrench prevented from rotating	Field inspection	Y	Observe (4)		
d. Fasteners are pretensioned in accordance with the RCSC Specification, progressing systematically from the most rigid point toward the free edges	Field inspection	Y	Observe (4)		
11. Structural steel bolting (Inspection tasks after bolting)					
a. Document acceptance or rejection of bolted connections		Y	Perform (4)		
12. Inspection of steel elements of composite construction prior to concrete placement					
a. Placement and installation of steel deck (10)	Field inspection	N	Perform (4)		
b. Placement and installation of steel headed stud anchors (11)	Field inspection	N	Perform (4)		
c. Document acceptance or rejection of steel elements		N	Perform (4)		

SCHEDULE OF SPECIAL INSPECTION SERVICES (STRUCTURAL)					
PROJECT	WILSON PARK PAVILION, FAYETTEVILLE, AR, JLA JOB #3112				
MATERIAL / ACTIVITY	SERVICE	APPLICABLE TO THIS PROJECT			
		Y/N	EXTENT	AGENT*	DATE COMPLETED
1705.2.2 Steel Construction Other Than Structural Steel					
1. Material verification of cold-formed steel deck:					
a. Identification markings	Field inspection	Y	Periodic		
b. Manufacturer's certified test reports	Submittal Review	Y	Each submittal		
2. Connection of cold-formed steel deck to supporting structure:	Shop (3) and field inspection				
a. Welding		Y	Periodic		
b. Other fasteners (in accordance with AISC 360, Section N6)					
1) Verify fasteners are in conformance with approved submittal		Y	Periodic		
2) Verify fastener installation is in conformance with approved submittal and manufacturer's recommendations		Y	Periodic		
3. Reinforcing steel	Shop (3) and field inspection				
a. Verification of weldability of steel other than ASTM A706		N	Periodic		
b. Reinforcing steel resisting flexural and axial forces in intermediate and special moment frames, boundary elements of special concrete structural walls and shear reinforcement		N	Continuous		
c. Shear reinforcement		N	Continuous		
d. Other reinforcing steel		N	Periodic		
4. Cold-formed steel trusses spanning 60 feet or greater					
a. Verify temporary and permanent restraint/bracing are installed in accordance with the approved truss submittal package	Field inspection	N	Periodic		

SCHEDULE OF SPECIAL INSPECTION SERVICES (STRUCTURAL)					
PROJECT	WILSON PARK PAVILION, FAYETTEVILLE, AR, JLA JOB #3112				
MATERIAL / ACTIVITY	SERVICE	APPLICABLE TO THIS PROJECT			
		Y/N	EXTENT	AGENT*	DATE COMPLETED
1705.4 Masonry Construction					
Level B Quality Assurance:					
1. Verify compliance with approved submittals	Field Inspection	Y	Periodic		
2. Verification of f'm and f'AAC prior to construction	Testing by unit strength method or prism test method	Y	Periodic		
3. Verification of Slump Flow and Visual Stability Index (VSI) of self-consolidating grout as delivered to the project	Field testing	Y	Continuous		
4. As masonry construction begins, verify that the following are in compliance:					
a. Proportions of site-prepared mortar	Field Inspection	Y	Periodic		
b. Construction of mortar joints	Field Inspection	Y	Periodic		
c. Grade and size of prestressing tendons and anchorages	Field Inspection	N	Periodic		
d. Location of reinforcement, connectors, and prestressing tendons and anchorages	Field Inspection	Y	Periodic		
e. Prestressing technique	Field Inspection	N	Periodic		
f. Properties of thin-bed mortar for AAC masonry (required for the first 5000 square feet of ACC masonry)	Field Inspection	N	Continuous		
g. Properties of thin-bed mortar for AAC masonry (required after the first 5000 square feet of ACC masonry)	Field Inspection	N	Periodic		
5. Prior to grouting, verify that the following are in compliance:					
a. Grout space	Field Inspection	Y	Periodic		
b. Grade, type, and size of reinforcement and anchor bolts, and prestressing tendons and anchorages	Field Inspection	Y	Periodic		
c. Placement of reinforcement, connectors, and prestressing tendons and anchorages	Field Inspection	Y	Periodic		
d. Proportions of site-prepared grout and prestressing grout for bonded tendons	Field Inspection	Y	Periodic		
e. Construction of mortar joints	Field Inspection	Y	Periodic		
6. Verify during construction:					
a. Size and location of structural elements	Field Inspection	Y	Periodic		
b. Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames, or other construction	Field Inspection	Y	Periodic		
c. Welding of reinforcement	Field Inspection	Y	Continuous		
d. Preparation, construction, and protection of masonry during cold weather (temperature below 40°F (4.4°C)) or hot weather (temperature above 90 F (32.2°C))	Field Inspection	Y	Periodic		
e. Application and measurement of prestressing force	Field Inspection	N	Continuous		

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PROJECT	WILSON PARK PAVILION, FAYETTEVILLE, AR, JLA JOB #3112				
MATERIAL / ACTIVITY	SERVICE	APPLICABLE TO THIS PROJECT			
		Y/N	EXTENT	AGENT*	DATE COMPLETED
f. Placement of grout and prestressing grout for bonded tendons is in compliance	Field Inspection	Y	Continuous		
g. Placement of AAC masonry units and construction of thin-bed mortar joints (required for the first 5000 square feet of AAC masonry)	Field Inspection	N	Continuous		
h. Placement of AAC masonry units and construction of thin-bed mortar joints (required after the first 5000 square feet of AAC masonry)	Field Inspection	N	Periodic		
7. Observe preparation of grout specimens, mortar specimens, and/or prisms	Field Inspection	Y	Periodic		

Bid 22-54,
Appendix A:
City Bid Documents

SCHEDULE OF SPECIAL INSPECTION SERVICES (STRUCTURAL)					
PROJECT	WILSON PARK PAVILION, FAYETTEVILLE, AR, JLA JOB #3112				
MATERIAL / ACTIVITY	SERVICE	APPLICABLE TO THIS PROJECT			
		Y/N	EXTENT	AGENT*	DATE COMPLETED
1705.5 Wood Construction					
1. Inspection of the fabrication process of wood structural elements and assemblies in accordance with Section 1704.2.5	In-plant review (3)	Y	Periodic		
2. For high-load diaphragms, verify grade and thickness of structural panel sheathing agree with approved building plans	Field inspection	N	Periodic		
3. For high-load diaphragms, verify nominal size of framing members at adjoining panel edges, nail or staple diameter and length, number of fastener lines, and that spacing between fasteners in each line and at edge margins agree with approved building plans	Field inspection	N	Periodic		
4. Metal-plate-connected wood trusses spanning 60 feet or greater: verify temporary and permanent restraint/bracing are installed in accordance with the approved truss submittal package	Field inspection	N	Periodic		

SCHEDULE OF SPECIAL INSPECTION SERVICES (STRUCTURAL)					
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MATERIAL / ACTIVITY	SERVICE	APPLICABLE TO THIS PROJECT			
		Y/N	EXTENT	AGENT*	DATE COMPLETED
1705.6 Soils					
1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	Field inspection	Y	Periodic		
2. Verify excavations are extended to proper depth and have reached proper material.	Field inspection	Y	Periodic		
3. Perform classification and testing of controlled fill materials.	Field inspection	Y	Periodic		
4. Verify use of proper materials, densities, and lift thicknesses during placement and compaction of controlled fill	Field inspection	Y	Continuous		
5. Prior to placement of controlled fill, observe subgrade and verify that site has been prepared properly	Field inspection	Y	Periodic		

Bid 22-54,
Appendix A:
City Bid Documents

SCHEDULE OF SPECIAL INSPECTION SERVICES (STRUCTURAL)		
PROJECT	WILSON PARK PAVILION, FAYETTEVILLE, AR, JLA JOB #3112	
* INSPECTION AGENTS FIRM	ADDRESS	TELEPHONE NO.
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
Notes (all notes may not be applicable for this project): 1. The inspection and testing agent(s) shall be engaged by the Owner or the Owner's Agent, and not by the Contractor or Subcontractor whose work is to be inspected or tested. Any conflict of interest must be disclosed to the Building Official prior to commencing work. The qualifications of the Special Inspector(s) and/or testing agencies may be subject to the approval of the Building Official and/or the Design Professional. 2. The list of Special Inspectors may be submitted as a separate document, if noted so above. 3. Special Inspections as required by Section 1704.2.5 are not required where the fabricator is approved in accordance with AFPC Section 1704.2.5.2 4. Observe on a random basis, operations need not be delayed pending these inspections. Perform these tasks for each welded joint, bolted connection, or steel element. 5. NDT of welds completed in an approved fabricator's shop may be performed by that fabricator when approved by the AHJ. Refer to AISC 360, N7. 6. The fabricator of erector, as applicable, shall maintain a system by which a welder who has welded a joint or member can be identified. Stamps, if used, shall be the low-stress type. 7. When welding of doubler plates, continuity plates or stiffeners has been performed in the k-area, visually inspect the web k-area for cracks within 3 in. (75 mm) of weld. 8. QAI (quality assurance inspector) need not be present during the installation of fasteners when these methods are used by the installer. 9. QAI (quality assurance inspector) shall be engaged in their assigned inspection duties during installation of fasteners when these methods are used by the installer. 10. Refer to AISC 360, N6 for additional information regarding welding of steel deck or steel deck attached by fastening systems other than welding. 11. For welding of steel headed stud anchors, the provisions of AWS D1.1/D1.1M, Structural Welding Code - Steel, apply.		
Are Requirements for Seismic Resistance included in the Statement of Special Inspections?		NO
Are Requirements for Wind Resistance included in the Statement of Special Inspections?		NO

CITY OF FAYETTEVILLE, ARKANSAS:
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SECTION 01 50 00
TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other
- B. Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Sections:
 - 1. Division 1 Section "Summary" for limitations on work restrictions and utility interruptions.
 - 2. Division 2 Section "Dewatering" for disposal of ground water at Project site.

1.3 USE CHARGES

- A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated.
- B. Sewer Service: Contractor will pay for sewer service use charges for sewer usage by all entities for construction operations.
- C. Water Service: Contractor will pay for water service use charges for water used by all entities for construction operations.
- D. Electric Power Service: Contractor will pay for electric power service use charges for electricity used by all entities for construction operations.

1.4 INFORMATIONAL SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.
- B. Erosion- and Sedimentation-Control Plan: Show compliance with requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.
- C. Moisture-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage, including delivery, handling, and storage provisions for materials subject to water absorption or water damage, discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water damaged Work.
 - 1. Indicate sequencing of work that requires water, such as sprayed fire-resistive materials, plastering, and terrazzo grinding, and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.
- D. Dust-Control and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust-control and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Identify further options if proposed measures are later determined to be inadequate. Include the following:
 - 1. Locations of dust-control partitions at each phase of the work.
 - 2. HVAC system isolation schematic drawing.
 - 3. Location of proposed air filtration system discharge.
 - 4. Other dust-control measures.
 - 5. Waste management plan.

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1.5 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- C. Accessible Temporary Egress: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1 if requested by Owner.

1.6 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Engage installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Chain-Link Fencing: Minimum 2-inch (50-mm), 0.148-inch- (3.8-mm-) thick, galvanized steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized steel pipe posts; minimum or as directed by the **City of Fayetteville**.
- B. Wood Enclosure Fence: Plywood, 6 feet (1.8 m) or 8 feet (2.4 m) high, framed with four 2-by-4-inch (50-by-100-mm) rails, with preservative-treated wood posts spaced not more than 8 feet (2.4 m) apart.
- C. Polyethylene Sheet: Reinforced, fire-resistive sheet, 10 mils (0.25 mm) minimum thickness, with flame-spread rating of 15 or less per ASTM E 84.
- D. Dust Control Adhesive-Surface Walk-off Mats: Provide mats minimum 36 by 60 inches (914 by 1624 mm).
- E. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.

2.2 TEMPORARY FACILITIES

- A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature
- B. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
 - 1. Store combustible materials apart from building.

2.3 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. HVAC Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control..
 - 1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
 - 2. Heating Units: Listed and labeled for type of fuel being consumed, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
 - 3. Permanent HVAC System: If Owner authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of 8 at each return air grille in system and remove at end of construction

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- C. Air Filtration Units: HEPA primary and secondary filter-equipped portable units with four-stage filtration. Provide single switch for emergency shutoff. Configure to run continuously.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
 - 1. Locate facilities to limit site disturbance as specified in Division 1 Section "Summary."
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
 - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.
 - 1. Connect temporary sewers to municipal system as directed by authorities having jurisdiction.
- C. Water Service: Install water service and distribution piping in sizes and pressures adequate for construction.
- D. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
- E. Heating: Provide temporary heating required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.
- F. Ventilation and Humidity Control: Provide temporary ventilation required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce ambient condition required and minimize energy consumption.
 - 1. Provide dehumidification systems when required to reduce substrate moisture levels to level required to allow installation or application of finishes.
- G. Electric Power Service: Connect to Owner's existing electric power service. Maintain equipment in a condition acceptable to Owner.
- H. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.
 - 1. Install electric power service overhead or underground, unless otherwise indicated.
- I. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
 - 1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
 - 2. Install lighting for Project identification sign.
- J. Telephone Service: Provide temporary telephone service for use by all construction personnel.
 - 1. At each telephone, post a list of important telephone numbers.

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- a. Police and fire departments.
 - b. Ambulance service.
 - c. Contractor's home office.
 - d. Architect's office.
 - e. Engineers' offices.
 - f. Owner's office.
 - g. Principal subcontractors' field and home offices.
2. Provide superintendent with cellular telephone or portable two-way radio for use when away from field office.

3.3 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
 1. Provide construction for temporary offices, shops, and sheds located within construction area or within 30 feet (9 m) of building lines that is noncombustible according to ASTM E 136. Comply with NFPA 241.
 2. Maintain support facilities until Architect schedules Substantial Completion inspection. Remove before Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to Owner.
- B. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations. Locate temporary roads and paved areas within construction limits indicated on Drawings.
 1. Provide dust-control treatment that is nonpolluting and non-tracking. Reapply treatment as required to minimize dust.
- C. Temporary Use of Permanent Roads and Paved Areas: Locate temporary roads and paved areas in same location as permanent roads and paved areas. Construct and maintain temporary roads and paved areas adequate for construction operations. Extend temporary roads and paved areas, within construction limits indicated, as necessary for construction operations.
 1. Coordinate elevations of temporary roads and paved areas with permanent roads and paved areas.
 2. Prepare subgrade and install subbase and base for temporary roads and paved areas according to Division 2 Section "Earthwork."
 3. Recondition base after temporary use, including removing contaminated material, regrading, proofrolling, compacting, and testing.
 3. Delay installation of final course of permanent hot-mix asphalt pavement until immediately before Substantial Completion. Repair hot-mix asphalt base-course pavement before installation of final course according to Division 2 Section "Asphalt Paving."
- D. Traffic Controls: Comply with requirements of authorities having jurisdiction.
 1. Protect existing site improvements to remain including curbs, pavement, and utilities.
 2. Maintain access for fire-fighting equipment and access to fire hydrants.
- E. Parking: Provide temporary parking areas for construction personnel.
- F. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
 1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties nor endanger permanent Work or temporary facilities.
 2. Remove snow and ice as required to minimize accumulations.
- G. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.
 1. Identification Signs: Provide Project identification signs for the project.
 2. Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.

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- a. Provide temporary, directional signs for construction personnel and visitors.
- 3. Maintain and touchup signs so they are legible at all times.
- H. Waste Disposal Facilities: Comply with requirements specified in Division 1 Section "Construction Waste Management."
- I. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with Division 1 Section "Execution Requirements" for progress cleaning requirements.
- J. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.
 - 1. Truck cranes and similar devices used for hoisting materials are considered "tools and equipment" and not temporary facilities.
- K. Temporary Elevator Use: Use of elevators is not permitted
- L. Temporary Stairs: Until permanent stairs are available, provide temporary stairs where ladders are not adequate.
- M. Existing Stair Usage: Use of Owner's existing stairs will be permitted, provided stairs are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore stairs to condition existing before initial use.
 - 1. Provide protective coverings, barriers, devices, signs, or other procedures to protect stairs and to maintain means of egress. If stairs become damaged, restore damaged areas so no evidence remains of correction work.
- N. Temporary Use of Permanent Stairs: Use of new stairs for construction traffic will be permitted, provided stairs are protected and finishes restored to new condition at time of Substantial Completion.

3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
 - 1. Comply with work restrictions specified in Division 1 Section "Summary."
- B. Temporary Erosion and Sedimentation Control: Comply with requirements of 2003 EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent and requirements specified in Division 2 Section "Site Clearing."
- C. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings or requirements of 2003 EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.
 - 1. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross tree- or plant- protection zones.
 - 2. Inspect, repair, and maintain erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
 - 3. Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from the project site during the course of the project.
 - 4. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.
- D. Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- E. Tree and Plant Protection: Comply with requirements of **City of Fayetteville**.

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- F. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
- G. Pest Control: Engage pest-control service to recommend practices to minimize attraction and harboring of rodents, roaches, and other pests and to perform extermination and control procedures at regular intervals so Project will be free of pests and their residues at Substantial Completion. Obtain extended warranty for Owner. Perform control operations lawfully, using environmentally safe materials.
- H. Site Enclosure Fence: Prior to commencing earthwork, furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering site except by entrance gates.
 - 1. Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations
 - 2. Maintain security by limiting number of keys and restricting distribution to authorized personnel. Furnish one set of keys to Owner.
- I. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each work day.
- J. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- K. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.
- L. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress and completed, from exposure, foul weather other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.
 - 1. Where heating or cooling is needed and permanent enclosure is not complete, insulate temporary enclosures.
- M. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.
 - 1. Prohibit smoking in construction areas.
 - 2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
 - 3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
 - 4. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

3.5 MOISTURE AND MOLD CONTROL

- A. Contractor's Moisture-Protection Plan: Avoid trapping water in finished work. Document visible signs of mold that may appear during construction.
- B. Exposed Construction Phase: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:
 - 1. Protect porous materials from water damage.
 - 2. Protect stored and installed material from flowing or standing water.

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3. Keep porous and organic materials from coming into prolonged contact with concrete.
4. Remove standing water from decks.
5. Keep deck openings covered or dammed.
- C. Partially Enclosed Construction Phase: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
 1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
 2. Keep interior spaces reasonably clean and protected from water damage.
 3. Periodically collect and remove waste containing cellulose or other organic matter.
 4. Discard or replace water-damaged material.
 5. Do not install material that is wet.
 6. Discard, replace or clean stored or installed material that begins to grow mold.
 7. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.
- D. Controlled Construction Phase of Construction: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:
 1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
 2. Use permanent HVAC system to control humidity.
 3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.
 - a. Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for 48 hours are considered defective.
 - b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record daily readings over a forty-eight hour period. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.
 - c. Remove materials that can not be completely restored to their manufactured moisture level within 48 hours.

3.6 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Operate Project-identification-sign lighting daily from dusk until 12:00 midnight.
- D. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- E. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.

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2. Remove temporary roads and paved areas not intended for or acceptable for integration into permanent construction. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.
3. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Division 1 Section "Closeout Procedures."

END OF SECTION

Bid 22-54,
Appendix A:
City Bid Documents

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SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products.
- B. Related Sections:
 - 1. Division 1 Section "Alternates" for products selected under an alternate.
 - 2. Division 1 Section "Substitution Procedures" for requests for substitutions.
 - 3. Division 1 Section "References" for applicable industry standards for products specified.

1.3 DEFINITIONS

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
 - 3. Comparable Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Basis-of-Design Product Specification: A specification in which a specific manufacturer's product is named and accompanied by the words "basis-of-design product," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the specification.

1.2 ACTION SUBMITTALS

- A. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
 - 1. Include data to indicate compliance with the requirements specified in "Comparable Products" Article.
 - 2. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product request within **15** days of receipt of request, or **seven** days of receipt of additional information or documentation, whichever is later.

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- a. Form of Approval: As specified in Division 1 Section "Submittal Procedures."
 - b. Use product specified if Architect does not issue a decision on use of a comparable product request within time allocated.
- B. Basis-of-Design Product Specification Submittal: Comply with requirements in Division 1 Section "Submittal Procedures." Show compliance with requirements.

1.3 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.
 - 1. Each contractor is responsible for providing products and construction methods compatible with products and construction methods of other contractors.
 - 2. If a dispute arises between contractors over concurrently selectable but incompatible products, Architect will determine which products shall be used.

1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
 - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
 - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 - 4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.
- C. Storage:
 - 1. Store products to allow for inspection and measurement of quantity or counting of units.
 - 2. Store materials in a manner that will not endanger Project structure.
 - 3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
 - 4. Store foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
 - 5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
 - 6. Protect stored products from damage and liquids from freezing.
 - 7. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

1.5 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.

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1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 2. Specified Form: When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.
 3. Refer to Divisions 2 through 16. Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Division 1 Section "Closeout Procedures."

PART 2 - PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
 1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 4. Where products are accompanied by the term "as selected," Architect will make selection.
 5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
- B. Product Selection Procedures:
 1. Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
 2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
 3. Products:
 - a. Restricted List: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements. Comparable products or substitutions for Contractor's convenience **will** be considered
 - b. Nonrestricted List: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product.
 4. Manufacturers:
 - a. Restricted List: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies

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with requirements. Comparable products or substitutions for Contractor's convenience **will** be considered, BUT MUST BE APPROVED BY ARCHITECT.

5. Basis-of-Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product by one of the other named manufacturers.
- C. Visual Matching Specification: Where Specifications require "match Architect's sample", provide a product that complies with requirements and matches Architect's sample. Architect's decision will be final on whether a proposed product matches.
 1. If no product available within specified category matches and complies with other specified requirements, comply with requirements in Division 1 Section "Substitution Procedures" for proposal of product.
- D. Visual Selection Specification: Where Specifications include the phrase "as selected by Architect from manufacturer's full range" or similar phrase, select a product that complies with requirements. Architect will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

2.2 COMPARABLE PRODUCTS

- A. Conditions for Consideration: Architect will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect may return requests without action, except to record noncompliance with these requirements:
 1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
 2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 3. Evidence that proposed product provides specified warranty.
 4. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
 5. Samples, if requested.

PART 3 - EXECUTION

(Not

Used)

END OF SECTION

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SECTION 01 73 00
EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.
- B. Trench Excavation & Safety:
 - 1. Bidder shall perform the Work in compliance with all applicable trench safety standards set forth in Occupational Safety and Health Administration (OSHA) Part 1926 - Subpart P - Excavations.
- C. **SUMMARY**
- D. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout.
 - 2. Field engineering and surveying.
 - 3. Installation of the Work.
 - 4. Cutting and patching.
 - 5. Coordination of Owner-installed products.
 - 6. Progress cleaning.
 - 7. Starting and adjusting.
 - 8. Protection of installed construction.
 - 9. Correction of the Work.
- E. Related Sections:
 - 1. Division 1 Section "Submittal Procedures" for submitting surveys.
 - 2. Division 1 Section "Selective Demolition" for demolition and removal of selected portions of the building.
 - 3. Division 1 Section "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.
 - 4. Division 7 Section "Through-Penetration Firestop Systems" for patching penetrations in fire-rated construction.

1.2 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other work.
- B. Patching: Fitting and repair work required to restore construction to original conditions after installation of other work.

1.3 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For [land surveyor] [professional engineer].
- B. Certificates: Submit certificate signed by [land surveyor] [professional engineer] certifying that location and elevation of improvements comply with requirements.
- C. Cutting and Patching Plan: Submit plan describing procedures at least [10] days prior to the time cutting and patching will be performed. Include the following information:
 - 1. Extent: Describe reason for and extent of each occurrence of cutting and patching.
 - 2. Changes to In-Place Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building appearance and other significant visual elements.
 - 3. Products: List products to be used for patching and firms or entities that will perform patching work.

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4. Dates: Indicate when cutting and patching will be performed.
5. Utilities and Mechanical and Electrical Systems: List services and systems that cutting and patching procedures will disturb or affect. List services and systems that will be relocated and those that will be temporarily out of service. Indicate how long services and systems will be disrupted.
- D. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous waste disposal.
- E. Certified Surveys: Submit [2] copies signed by **[land surveyor] [professional engineer]**.
- F. Final Property Survey: Submit [10] copies showing the Work performed and record survey data.

1.4 QUALITY ASSURANCE

- A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.
- B. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction elements.
 1. Structural Elements: When cutting and patching structural elements, notify Architect of locations and details of cutting and await directions from the Architect before proceeding. Shore, brace, and support structural element during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection
 2. Operational Elements: Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety. **[Operational elements include the following:]**
 - a. Primary operational systems and equipment.
 - b. Fire separation assemblies.
 - c. Air or smoke barriers.
 - d. Fire-suppression systems.
 - e. Mechanical systems piping and ducts.
 - f. Control systems.
 - g. Communication systems.
 - h. Conveying systems.
 - i. Electrical wiring systems.
 - j. Operating systems of special construction.
 3. Other Construction Elements: Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. **[Other construction elements include but are not limited to the following:]**
 - a. Water, moisture, or vapor barriers.
 - b. Membranes and flashings.
 - c. Exterior curtain-wall construction.
 - d. Equipment supports.
 - e. Piping, ductwork, vessels, and equipment.
 - f. Noise- and vibration-control elements and systems.
 4. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.
- C. Cutting and Patching Conference: Before proceeding, meet at Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential

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interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

- D. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products and equipment.

1.5 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.
- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
 - 1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to the Architect for the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, **[mechanical and electrical systems,]** and other construction affecting the Work.
 - 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services, and other utilities.
 - 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- B. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
 - 1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - a. Description of the Work.
 - b. List of detrimental conditions, including substrates.
 - c. List of unacceptable installation tolerances.
 - d. Recommended corrections.
 - 2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 - 3. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
 - 4. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
 - 5. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

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3.2 PREPARATION

- A. Existing Utility Information: Furnish information to **[local utility]** **[Owner]** that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- D. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of the Contractor, submit a request for information to Architect according to requirements in Division 1 Section "Project Management and Coordination."
- E. Surface and Substrate Preparation: Comply with manufacturer's recommendations for preparation of substrates to receive subsequent work.

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect **[and Construction Manager]** promptly.
- B. General: Engage a **[land surveyor]** **[professional engineer]** to lay out the Work using accepted surveying practices.
 - 1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
 - 2. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
 - 3. Inform installers of lines and levels to which they must comply.
 - 4. Check the location, level and plumb, of every major element as the Work progresses.
 - 5. Notify Architect **[and Construction Manager]** when deviations from required lines and levels exceed allowable tolerances.
 - 6. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.
- C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.
- D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.
- E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect **[and Construction Manager]**.

3.4 FIELD ENGINEERING

- A. Identification: Owner will identify existing benchmarks, control points, and property corners.
- B. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.

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1. Do not change or relocate existing benchmarks or control points without prior written approval of Architect **[or Construction Manager]**. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Architect **[and Construction Manager]** before proceeding.
2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.
- C. Benchmarks: Establish and maintain a minimum of **[2]** permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
 1. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
 2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
 3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.
- D. Certified Survey: On completion of foundation walls, major site improvements, and other work requiring field-engineering services, prepare a certified survey showing dimensions, locations, angles, and elevations of construction and sitework.
- E. Final Property Survey: Engage a **[land surveyor] [professional engineer]** to prepare a final property survey showing significant features (real property) for Project. Include on the survey a certification, signed by **[land surveyor] [professional engineer]**, that principal metes, bounds, lines, and levels of Project are accurately positioned as shown on the survey.
 1. Show boundary lines, monuments, streets, site improvements and utilities, existing improvements and significant vegetation, adjoining properties acreage, grade contours, and the distance and bearing from a site corner to a legal point.
 2. Recording: At Substantial Completion, have the final property survey recorded by or with authorities having jurisdiction as the official "property survey."

3.5 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 1. Make vertical work plumb and make horizontal work level.
 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
 4. Maintain minimum headroom clearance of **[96 inches (2440 mm)]** in occupied spaces and **[90 inches (2300 mm)]** in unoccupied spaces.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.
- G. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.

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1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
 2. Allow for building movement, including thermal expansion and contraction.
 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.6 CUTTING AND PATCHING

- A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Temporary Support: Provide temporary support of work to be cut.
- C. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- D. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching in accordance with requirements of Division 1 Section "Summary."
- E. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to **[minimize]** **[prevent]** interruption to occupied areas.
- F. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 3. **[Concrete]** **[and]** **[Masonry]**: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 4. Excavating and Backfilling: Comply with requirements in applicable Division 2 Sections where required by cutting and patching operations.
 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 6. Proceed with patching after construction operations requiring cutting are complete.
- G. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.
1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.

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2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.
 - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
 - b. Restore damaged pipe covering to its original condition.
 3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
 4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
 5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition.
 - H. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.
 - I.
- 3.7 OWNER-INSTALLED PRODUCTS**
- A. Site Access: Provide access to Project site for Owner's construction personnel.
 - B. Coordination: Coordinate construction and operations of the Work with work performed by Owner's construction personnel.
 1. Construction Schedule: Inform Owner of Contractor's preferred construction schedule for Owner's portion of the Work. Adjust construction schedule based on a mutually agreeable timetable. Notify Owner if changes to schedule are required due to differences in actual construction progress.
 2. Preinstallation Conferences: Include Owner's construction personnel at preinstallation conferences covering portions of the Work that are to receive Owner's work. Attend preinstallation conferences conducted by Owner's construction personnel if portions of the Work depend on Owner's construction.
- 3.8 PROGRESS CLEANING**
- A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
 2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F (27 deg C).
 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
 - a. Utilize containers intended for holding waste materials of type to be stored.
 4. Coordinate progress cleaning for joint-use areas where more than one installer has worked.
 - B. Site: Maintain Project site free of waste materials and debris.
 - C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
 1. Remove liquid spills promptly.

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2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area, as appropriate.
 - D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
 - E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
 - F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
 - G. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways. Comply with waste disposal requirements in [Division 1 Section "Temporary Facilities and Controls."] [Division 1 Section "Construction Waste Management."]
 - H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
 - I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
 - J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.
- 3.9 STARTING AND ADJUSTING**
- A. Coordinate startup and adjusting of equipment and operating components with requirements in Division 1 Section "General Commissioning Requirements."
 - B. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
 - C. Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
 - D. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
 - E. Manufacturer's Field Service: Comply with qualification requirements in Division 1 Section "Quality Requirements."
- 3.10 PROTECTION OF INSTALLED CONSTRUCTION**
- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
 - B. Comply with manufacturer's written instructions for temperature and relative humidity.
- 3.11 CORRECTION OF THE WORK**
- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
 - B. Restore permanent facilities used during construction to their specified condition.
 - C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
 - D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
 - E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

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END OF SECTION

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SECTION 01 73 29
CUTTING AND PATCHING

PART 1 GENERAL

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements for cutting and patching.

1.2 SUBMITTALS

- A. Cutting and Patching Proposal: Where approval of cutting and patching is required submit a proposal describing procedures well in advance of the time cutting and patching will be performed and request approval to proceed. Include the following information, as applicable, in the proposal:
1. Describe the extent of cutting and patching required and how it is to be performed; indicate why it cannot be avoided.
 2. Describe anticipated results in terms of changes to construction; include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.
 3. List utilities that will be disturbed or affected, including those that will be relocated and those that will be temporarily out of service. Indicate how long service will be disrupted.
 4. Where cutting and patching involves addition of reinforcement to structural elements, submit details and engineering calculations to show how reinforcement is integrated with the original structure.
 5. Approval by the Architect to proceed with cutting and patching does not waive the Architect's right to later require complete removal and replacement of a part of the Work found to be unsatisfactory.

1.3 QUALITY ASSURANCE

- A. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would reduce their load carrying capacity or load deflection ratio.
1. Obtain approval of the cutting and patching proposal before cutting and patching the following structural elements:
 - a. Foundation construction.
 - b. Bearing and retaining walls.
 - c. Structural concrete.
 - d. Structural steel.
 - e. Lintels.
 - f. Structural decking.
 - g. Stair systems.
 - h. Miscellaneous structural metals.
 - i. Equipment supports.
 - j. Piping, ductwork and equipment.
- B. Operational and Safety Limitations: Do not cut and patch operating elements or safety related components in a manner that would result in reducing their capacity to perform as intended, or result in increased maintenance, or decreased operational life or safety.
- C. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces, in a manner that would, in the Architect's opinion, reduce the building's aesthetic qualities, or result in visual evidence of cutting and patching. Remove and replace Work cut and patched in a visually unsatisfactory manner.

PART 2 PRODUCTS

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2.1 MATERIALS

- A. Use materials that are identical to existing materials.

PART 3 EXECUTION

3.1 INSPECTION

- A. Before cutting existing surfaces, examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed. Take corrective action before proceeding, if unsafe or unsatisfactory conditions are encountered.
 - 1. Before proceeding, meet at the site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

3.2 PREPARATION

- A. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
- B. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

3.3 PERFORMANCE

- A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.

3.4 CLEANING

- A. Thoroughly clean areas and spaces where cutting and patching is performed or used as access. Remove completely paint, mortar, oils, putty and items of similar nature. Thoroughly clean piping, conduit and similar features before painting or other finishing is applied. Restore damaged pipe covering to its original condition.

END OF SECTION

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SECTION 01 74 19
CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 – GENERAL

1.1 SECTION REQUIREMENTS

- A. Action Submittals:
 - 1. Waste Management Plan: Submit plan within **30** days of date established for commencement of the Work.
 - 2. If a dumpster is needed for the project, the vendor is required to obtain a dumpster from Fayetteville Recycling & Trash.
- B. Informational Submittals:
 - 1. Waste Reduction Progress Reports: Submit concurrent with each Application for Payment. Include total quantity of waste, total quantity of waste salvaged and recycled, and percentage of total waste salvaged and recycled.
 - 2. Records of Donations and Sales: Receipts for salvageable waste donated or sold to individuals and organizations. Indicate whether organization is tax exempt.
 - 3. Recycling and Processing Facility Records: Manifests, weight tickets, receipts, and invoices.
 - 4. Landfill and Incinerator Disposal Records: Manifests, weight tickets, receipts, and invoices.
 - 5. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations.
- C. Refrigerant Recovery Technician Qualifications: Certified by EPA-approved certification program.
- D. Waste Management Conference: Conduct conference at Project site to comply with requirements in Section 013000 "Administrative Requirements." Review methods and procedures related to waste management.
- E. Waste Management Plan: Develop a waste management plan consisting of waste identification, waste reduction work plan, and cost/revenue analysis. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.
 - 1. Salvaged Materials for Reuse: Identify materials that will be salvaged and reused.
 - 2. Salvaged Materials for Sale: Identify materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
 - 3. Salvaged Materials for Donation: Identify materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
 - 4. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
 - 5. Cost/Revenue Analysis: Indicate total cost of waste disposal as if there was no waste management plan and net additional cost or net savings resulting from implementing waste management plan.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Achieve end-of-Project rates for salvage/recycling of **50** percent by weight of total nonhazardous solid waste generated by the Work.

PART 3 - EXECUTION

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3.1 PLAN IMPLEMENTATION

- A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
- B. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.
 - 1. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.

3.2 RECYCLING WASTE

- A. General: Recycle paper and beverage containers used by on-site workers.
- B. Packaging:
 - 1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
 - 2. Polystyrene Packaging: Separate and bag materials.
 - 3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
 - 4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.
- C. Asphaltic Concrete Paving: Break up and transport paving to asphalt-recycling facility.
- D. Concrete: Remove reinforcement and other metals from concrete and sort with other metals.
- E. Masonry: Remove metal reinforcement, anchors, and ties from masonry and sort with other metals.
 - 1. Clean and stack undamaged, whole masonry units on wood pallets.
- F. Wood Materials:
 - 1. Sort and stack reusable members according to size, type, and length. Separate lumber, engineered wood products, panel products, and treated wood materials.
 - 2. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
 - 3. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.
- G. Metals: Separate metals by type.
- H. Asphalt Shingle Roofing: Remove and dispose of nails, staples, and accessories.
- I. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry location. Remove edge trim and sort with other metals. Remove and dispose of fasteners.
- J. Acoustical Ceiling Panels and Tile: Stack large clean pieces on wood pallets and store in a dry location.
- K. Metal Suspension System: Separate metal members including trim, and other metals from acoustical panels and tile and sort with other metals.
- L. Piping: Reduce piping to straight lengths and store by type and size. Separate supports, hangers, valves, sprinklers, and other components by type and size.
- M. Conduit: Reduce conduit to straight lengths and store by type and size.

3.3 DISPOSAL OF WASTE

- A. Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
- B. Do not burn waste materials.

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END OF SECTION

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SECTION 01 77 00
CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures.
 - 2. Final completion procedures.
 - 3. Warranties.
 - 4. Final cleaning.
- B. Related Sections:
 - 1. Division 1 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
 - 2. Division 1 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
 - 3. Division 1 Section "Demonstration and Training" for requirements for instructing Owner's personnel.
 - 4. Divisions 2 through 16 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

1.3 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete with request.
 - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 - 2. Advise Owner of pending insurance changeover requirements.
 - 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 - 4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 - 5. Prepare and submit Project Record Documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information. Include full back-up of Project information from contractor's Cloud Based management software related to this project.
 - 6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
 - 7. Make final changeover of permanent locks and deliver keys to Owner. Advise Owner's personnel of changeover in security provisions.
 - 8. Complete startup testing of systems.
 - 9. Submit test/adjust/balance records.
 - 10. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 - 11. Advise Owner of changeover in heat and other utilities.

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12. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
 13. Complete final cleaning requirements, including touchup painting.
 14. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 2. Results of completed inspection will form the basis of requirements for final completion.

1.4 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining final completion, complete the following:
1. Submit a final Application for Payment according to Division 1 Section "Payment Procedures."
 2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 4. Submit pest-control final inspection report and warranty.
 5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems. **Submit demonstration and training video recordings.**
- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction. **Use CSI Form 14.1A or other form approved by Architect and Owner.**
1. Organize list of spaces in sequential order, **starting with exterior areas first and proceeding from lowest floor to highest floor.**
 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 3. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Page number.
 4. Submit list of incomplete items in the following format:
 - a. PDF electronic file.

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1.6 WARRANTIES

- A. Submittal Time: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated..
- B. Partial Occupancy: Submit properly executed warranties within **15** days of completion of designated portions of the Work that are completed and occupied or used by Owner during construction period by separate agreement with Contractor.
- C. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
 - 1. Bind warranties and bonds in heavy-duty, three-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive **8-1/2-by-11-inch (215-by-280-mm)** paper.
 - 2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
 - 3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
 - 1. Use cleaning products that meet Green Seal GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable VOC levels.

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
 - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
 - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
 - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
 - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
 - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
 - e. Remove snow and ice to provide safe access to building.
 - f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural

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- weathering of exterior surfaces. Restore reflective surfaces to their original condition.
- g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
 - h. Sweep concrete floors broom clean in unoccupied spaces.
 - i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
 - j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
 - k. Remove labels that are not permanent.
 - l. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
 - 1) Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates.
 - m. Wipe surfaces of mechanical and electrical equipment, **elevator equipment**, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
 - n. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
 - o. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
 - p. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
 - q. Clean ducts, blowers, and coils if units were operated without filters during construction or that display contamination with particulate matter upon inspection.
 - 1) Clean HVAC system in compliance with NADCA Standard 1992-01. Provide written report upon completion of cleaning.
 - r. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
 - s. Leave Project clean and ready for occupancy.
- C. Pest Control: Engage an experienced, licensed exterminator to make a final inspection and rid Project of rodents, insects, and other pests. Prepare a report.
- D. Construction Waste Disposal: Comply with waste disposal requirements in **Division 1 Section "Temporary Facilities and Controls."** **Division 1 Section "Construction Waste Management."**

END OF SECTION

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SECTION 01 78 23
OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:
1. Operation and maintenance documentation directory.
 2. Emergency manuals.
 3. Operation manuals for systems, subsystems, and equipment.
 4. Maintenance manuals for the care and maintenance of **products, materials, and finishes, systems and equipment.**
- B. Related Sections include the following:
1. Division 1 Section "Closeout Procedures" for submitting operation and maintenance manuals.
 2. Division 1 Section "Project Record Documents" for preparing Record Drawings for operation and maintenance manuals.
 3. Divisions 2 through 16 Sections for specific operation and maintenance manual requirements for the Work in those Sections.

1.3 DEFINITIONS

- A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.
- B. Subsystem: A portion of a system with characteristics similar to a system.

1.4 SUBMITTALS

- A. Initial Submittal: Submit digital copies of each manual at least **15** days before requesting inspection for Substantial Completion. Include a complete operation and maintenance directory. Architect will return digital copy of draft and mark whether general scope and content of manual are acceptable.
- B. Final Submittal: Submit digital copy and one copy of each manual in final form at least **15** days before final inspection. Architect will return copy with comments within **15** after final inspection.
1. Correct or modify each manual to comply with Architect's comments. Submit digital copies of each corrected manual within **15** days of receipt of Architect's comments.

1.5 COORDINATION

- A. Where operation and maintenance documentation includes information on installations by more than one factory-authorized service representative, assemble and coordinate information furnished by representatives and prepare manuals.

PART 2 - PRODUCTS

2.1 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

- A. Organization: Include a section in the directory for each of the following:
1. List of documents.
 2. List of systems.
 3. List of equipment.

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4. Table of contents.
- B. List of Systems and Subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.
- C. List of Equipment: List equipment for each system, organized alphabetically by system. For pieces of equipment not part of system, list alphabetically in separate list.
- D. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.
- E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

2.2 MANUALS, GENERAL

- A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:
 1. Title page.
 2. Table of contents.
 3. Manual contents.
- B. Title Page: Enclose title page in transparent plastic sleeve. Include the following information:
 1. Subject matter included in manual.
 2. Name and address of Project.
 3. Name and address of Owner.
 4. Date of submittal.
 5. Name, address, and telephone number of Contractor.
 6. Name and address of Architect.
 7. Cross-reference to related systems in other operation and maintenance manuals.
- C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.
 1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.
- D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.
 1. Binders (if requested by Owner): Heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold **8-1/2-by-11-inch (215-by-280-mm)** paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.
 - a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
 - b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents. Indicate volume number for multiple-volume sets.
 2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section. Mark each tab to indicate contents. Include typed list of products and major components

of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.

3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software diskettes for computerized electronic equipment.
4. Supplementary Text: Prepared on 8-1/2-by-11-inch (215-by-280-mm) white bond paper.
5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
 - a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
 - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

2.3 EMERGENCY MANUALS

A. Content: Organize manual into a separate section for each of the following:

1. Type of emergency.
2. Emergency instructions.
3. Emergency procedures.

B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:

1. Fire.
2. Flood.
3. Gas leak.
4. Water leak.
5. Power failure.
6. Water outage.
7. System, subsystem, or equipment failure.

C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.

D. Emergency Procedures: Include the following, as applicable:

1. Instructions on stopping.
2. Shutdown instructions for each type of emergency.
3. Operating instructions for conditions outside normal operating limits.
4. Required sequences for electric or electronic systems.
5. Special operating instructions and procedures.

2.4 OPERATION MANUALS

A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:

1. System, subsystem, and equipment descriptions.
2. Performance and design criteria if Contractor is delegated design responsibility.
3. Operating standards.
4. Operating procedures.
5. Operating logs.
6. Wiring diagrams.
7. Control diagrams.
8. Piped system diagrams.
9. Precautions against improper use.
10. License requirements including inspection and renewal dates.

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B. Descriptions: Include the following:

1. Product name and model number.
2. Manufacturer's name.
3. Equipment identification with serial number of each component.
4. Equipment function.
5. Operating characteristics.
6. Limiting conditions.
7. Performance curves.
8. Engineering data and tests.
9. Complete nomenclature and number of replacement parts.

C. Operating Procedures: Include the following, as applicable:

1. Startup procedures.
2. Equipment or system break-in procedures.
3. Routine and normal operating instructions.
4. Regulation and control procedures.
5. Instructions on stopping.
6. Normal shutdown instructions.
7. Seasonal and weekend operating instructions.
8. Required sequences for electric or electronic systems.
9. Special operating instructions and procedures.

D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.

E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

2.5 PRODUCT MAINTENANCE MANUAL

A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.

B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.

C. Product Information: Include the following, as applicable:

1. Product name and model number.
2. Manufacturer's name.
3. Color, pattern, and texture.
4. Material and chemical composition.
5. Reordering information for specially manufactured products.

D. Maintenance Procedures: Include manufacturer's written recommendations and the following:

1. Inspection procedures.
2. Types of cleaning agents to be used and methods of cleaning.
3. List of cleaning agents and methods of cleaning detrimental to product.
4. Schedule for routine cleaning and maintenance.
5. Repair instructions.

E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.

F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

2.6 SYSTEMS AND EQUIPMENT MAINTENANCE MANUAL

- A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.
- B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.
- C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:
1. Standard printed maintenance instructions and bulletins.
 2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
 3. Identification and nomenclature of parts and components.
 4. List of items recommended to be stocked as spare parts.
- D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:
1. Test and inspection instructions.
 2. Troubleshooting guide.
 3. Precautions against improper maintenance.
 4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 5. Aligning, adjusting, and checking instructions.
 6. Demonstration and training videotape, if available.
- E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.
1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
 2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.
- F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.
- G. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.
- H. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.
1. Include procedures to follow and required notifications for warranty claims.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

- A. Operation and Maintenance Documentation Directory: Prepare a separate manual that provides an organized reference to emergency, operation, and maintenance manuals.
- B. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.

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- C. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.
- D. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.
 - 1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
 - 2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.
- E. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.
 - 1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.
- F. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in Record Drawings to ensure correct illustration of completed installation.
 - 1. Do not use original Project Record Documents as part of operation and maintenance manuals.
 - 2. Comply with requirements of newly prepared Record Drawings in Division 1 Section "Project Record Documents."
- G. Comply with Division 1 Section "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION

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SECTION 01 78 39
PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
 - 3. Record Product Data.
- B. Related Sections include the following:
 - 1. Division 1 Section "Closeout Procedures" for general closeout procedures.
 - 2. Division 1 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
 - 3. Divisions 2 through 16 Sections for specific requirements for Project Record Documents of the Work in those Sections.

1.3 SUBMITTALS

- A. Record Drawings: Comply with the following:
 - 1. Number of Copies: Contractor to Submit **one** copy of marked-up Record Prints.
 - 2. Number of Copies: Submit copies of Record Drawings as follows:
 - a. Initial Submittal: Submit set of marked-up Record Prints. Architect will initial and date each page and mark whether general scope of changes, additional information recorded, and quality of drafting are acceptable. Architect will return and Contractor will provide prints for organizing into sets, printing, binding, and final submittal.
 - b. Final Submittal: Submit marked-up Record Drawings, Print each Drawing (if requested by Owner), mark whether or not changes and additional information were recorded.
- B. Record Specifications: Submit Project's Specifications, including addenda and contract modifications.
- C. Record Product Data: Submit Product Data submittal.
 - 1. Where Record Product Data is required as part of operation and maintenance manuals, submit marked-up Product Data as an insert in manual instead of submittal as Record Product Data.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

- A. Record Prints: Maintain one set of blue- or black-line white prints of the Contract Drawings and Shop Drawings.
 - 1. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.

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- b. Accurately record information in an understandable drawing technique.
 - c. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
2. Content: Types of items requiring marking include, but are not limited to, the following:
 - a. Dimensional changes to Drawings.
 - b. Revisions to details shown on Drawings.
 - c. Depths of foundations below first floor.
 - d. Locations and depths of underground utilities.
 - e. Revisions to routing of piping and conduits.
 - f. Revisions to electrical circuitry.
 - g. Actual equipment locations.
 - h. Duct size and routing.
 - i. Locations of concealed internal utilities.
 - j. Changes made by Change Order or **Construction** Change Directive.
 - k. Changes made following Architect's written orders.
 - l. Details not on the original Contract Drawings.
 - m. Field records for variable and concealed conditions.
 - n. Record information on the Work that is shown only schematically.
3. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.
4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at same location.
5. Mark important additional information that was either shown schematically or omitted from original Drawings.
6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.

2.2 RECORD SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
 4. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.
 5. Note related Change Orders, **Record Product Data**, and Record Drawings where applicable.

2.3 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.

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3. Note related Change Orders, **Record Specifications**, and Record Drawings where applicable.

2.4 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of Project.
- B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Architect's reference during normal working hours.

END OF SECTION

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SECTION 01 79 00
DEMONSTRATION AND TRAINING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for instructing Owner's personnel, including the following:
 - 1. Demonstration of operation of systems, subsystems, and equipment.
 - 2. Training in operation and maintenance of systems, subsystems, and equipment.
 - 3. Demonstration and training videotapes.
- B. Related Sections include the following:
 - 1. Division 1 Section "Project Management and Coordination" for requirements for preinstruction conferences.
 - 2. Divisions 2 through 16 Sections for specific requirements for demonstration and training for products in those Sections.

1.3 SUBMITTALS

- A. Instruction Program: Submit outline of instructional program for demonstration and training, including a schedule of proposed dates, times, length of instruction time, and instructors' names for each training module. Include learning objective and outline for each training module.
 - 1. At completion of training, submit complete training manual(s) for Owner's use.
- B. Qualification Data: For **facilitator, instructor, photographer**.
- C. Attendance Record: For each training module, submit list of participants and length of instruction time.
- D. Evaluations: For each participant and for each training module, submit results and documentation of performance-based test.
- E. Demonstration and Training Videotapes: Submit within **seven** days of end of each training module.
 - 1. Identification: On each copy, provide an applied label with the following information:
 - a. Name of Project.
 - b. Name and address of photographer.
 - c. Name of Architect.
 - d. Name of Contractor.
 - e. Date videotape was recorded.
 - f. Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.

1.4 QUALITY ASSURANCE

- A. Facilitator Qualifications: A firm or individual experienced in training or educating maintenance personnel in a training program similar in content and extent to that indicated for this Project, and whose work has resulted in training or education with a record of successful learning performance.
- B. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Division 1 Section "Quality Requirements," experienced in operation and maintenance procedures and training.
- C. Photographer Qualifications: A professional photographer who is experienced photographing construction projects.

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- D. Preinstruction Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination." Review methods and procedures related to demonstration and training including, but not limited to, the following:
1. Inspect and discuss locations and other facilities required for instruction.
 2. Review and finalize instruction schedule and verify availability of educational materials, instructors' personnel, audiovisual equipment, and facilities needed to avoid delays.
 3. Review required content of instruction.
 4. For instruction that must occur outside, review weather and forecasted weather conditions and procedures to follow if conditions are unfavorable.

1.5 COORDINATION

- A. Coordinate instruction schedule with Owner's operations. Adjust schedule as required to minimize disrupting Owner's operations.
- B. Coordinate instructors, including providing notification of dates, times, length of instruction time, and course content.
- C. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction program until operation and maintenance data has been reviewed and approved by Architect.

PART 2 - PRODUCTS

2.1 INSTRUCTION PROGRAM

- A. Program Structure: Develop an instruction program that includes individual training modules for each system and equipment not part of a system, as required by individual Specification Sections, and as follows:
1. Motorized doors, including **automatic entrance doors**.
 2. Equipment>.
 3. Fire-protection systems, including **fire alarm and fire-extinguishing systems**.
 4. Intrusion detection systems.
 5. Conveying systems, including **elevators**
 6. HVAC systems
 7. HVAC instrumentation and controls.
 8. Electrical service and distribution
 9. Lighting equipment and controls.
- B. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following
1. Basis of System Design, Operational Requirements, and Criteria: Include the following:
 - a. System, subsystem, and equipment descriptions.
 - b. Performance and design criteria if Contractor is delegated design responsibility.
 - c. Operating standards.
 - d. Regulatory requirements.
 - e. Equipment function.
 - f. Operating characteristics.
 - g. Limiting conditions.
 - h. Performance curves.
 2. Documentation: Review the following items in detail:

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- a. Emergency manuals.
- b. Operations manuals.
- c. Maintenance manuals.
- d. Project Record Documents.
- e. Identification systems.
- f. Warranties and bonds.
- g. Maintenance service agreements and similar continuing commitments.
3. Emergencies: Include the following, as applicable:
 - a. Instructions on meaning of warnings, trouble indications, and error messages.
 - b. Instructions on stopping.
 - c. Shutdown instructions for each type of emergency.
 - d. Operating instructions for conditions outside of normal operating limits.
 - e. Sequences for electric or electronic systems.
 - f. Special operating instructions and procedures.
4. Operations: Include the following, as applicable:
 - a. Startup procedures.
 - b. Equipment or system break-in procedures.
 - c. Routine and normal operating instructions.
 - d. Regulation and control procedures.
 - e. Control sequences.
 - f. Safety procedures.
 - g. Instructions on stopping.
 - h. Normal shutdown instructions.
 - i. Operating procedures for emergencies.
 - j. Operating procedures for system, subsystem, or equipment failure.
 - k. Seasonal and weekend operating instructions.
 - l. Required sequences for electric or electronic systems.
 - m. Special operating instructions and procedures.
5. Adjustments: Include the following:
 - a. Alignments.
 - b. Checking adjustments.
 - c. Noise and vibration adjustments.
 - d. Economy and efficiency adjustments.
6. Troubleshooting: Include the following:
 - a. Diagnostic instructions.
 - b. Test and inspection procedures.
7. Maintenance: Include the following:
 - a. Inspection procedures.
 - b. Types of cleaning agents to be used and methods of cleaning.
 - c. List of cleaning agents and methods of cleaning detrimental to product.
 - d. Procedures for routine cleaning.
 - e. Procedures for preventive maintenance.
 - f. Procedures for routine maintenance.
 - g. Instruction on use of special tools.
8. Repairs: Include the following:
 - a. Diagnosis instructions.
 - b. Repair instructions.
 - c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 - d. Instructions for identifying parts and components.
 - e. Review of spare parts needed for operation and maintenance.

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PART 3 - EXECUTION

3.1 PREPARATION

- A. Assemble educational materials necessary for instruction, including documentation and training module. Assemble training modules into a combined training manual.
- B. Set up instructional equipment at instruction location.

3.2 INSTRUCTION

- A. Facilitator: Engage a qualified facilitator to prepare instruction program and training modules, to coordinate instructors, and to coordinate between Contractor and Owner for number of participants, instruction times, and location.
- B. Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
- C. Scheduling: Provide instruction at mutually agreed on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.
 - 1. Schedule training with Owner with advance notice.
- D. Cleanup: Collect used and leftover educational materials. Remove instructional equipment. Restore systems and equipment to condition existing before initial training use.

3.3 DEMONSTRATION AND TRAINING VIDEOTAPES

- A. General: Engage a qualified commercial photographer to record demonstration and training videotapes. Record each training module separately. Include classroom instructions and demonstrations, board diagrams, and other visual aids, but not student practice.
 - 1. At beginning of each training module, record each chart containing learning objective and lesson outline.
- B. Videotape Format: Provide high-quality VHS color videotape in full-size cassettes.
- C. Recording: Mount camera on tripod before starting recording, unless otherwise necessary to show area of demonstration and training. Display continuous running time.

END OF SECTION

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SECTION 02 41 00
DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY:

- A. Selective demolition work, complete, as indicated, specified, and required for new Work, including removal and disposal of demolished materials and capping of existing utilities. Demolition includes concrete cutting for new plumbing. Demolition of sections of wall, door and frames, interior window, existing light fixtures and ceiling tile.
- B. Removal, protection, and storage of items designated to be reused. This includes interior doors and frames.
- C. Removal, protection, and delivery of items designated as Owner salvage to location on site as directed by Owner. Storage racks to be salvaged and relocated by Owner. Contractor to cut bolts flush to grind flush to floor
- D. Prepare for new construction and new finishes.

1.2 SUBMITTALS:

- A. Before commencing selective demolition work, submit for review and approval of the Architect, a schedule showing the commencement, order, and completion dates for the various parts of this work. Include details for dust, noise and weathertight protection.
- B. Before starting any work relating to existing utilities that will temporarily discontinue service to existing and adjacent buildings, notify the Architect 72 hours in advance and obtain approval before proceeding with work. Do not disconnect or disrupt service without Architect's prior approval.

1.4 PROJECT CONDITIONS:

- A. Condition of Structure: Owner assumes no responsibility for actual condition of items or portions of structure to be demolished.
- B. Salvageable Items:
 - 1. Salvage items indicated. Store at location on-site as directed by Owner.
 - 2. Items indicated to be removed, and not designated for Owner's salvage or for reuse, may be salvaged by the Contractor. Transport salvaged items from site as they are removed. Storage or sale of removed items on site will not be permitted.
- C. Protections:
 - 1. Provide protective measures as required to protect personnel and general public from injury due to selective demolition work.
 - 2. Provide interior and exterior shoring, bracing, and support to prevent movement, settlement, and collapse of structure or element to be demolished, and adjacent facilities and work to remain.
 - 3. Provide adequate fire protection in accordance with local Fire Department requirements.
 - 4. Cover and protect existing floors, equipment, fixtures, and other items to remain from soiling or damage during demolition work.
 - 5. Provide temporary weather protection during interval between demolition and removal of existing construction on exterior surfaces, and installation of new

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construction to insure that no water leakage or damage occurs to structure of the existing area.

- D. Damages: Promptly repair, to the satisfaction of the Architect, damages caused to contents by demolition work or due to insufficiency of protection provided, at no cost to Owner. Replace damaged work, as directed by the Architect, if repair not satisfactory.
- E. Traffic: Conduct selective demolition operations and debris removal in a manner to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities.
- F. Explosives: Use of explosives will not be permitted.
- G. Environmental Controls: Use water sprinkling, temporary enclosures, and other suitable methods to limit dust and dirt rising and scattering in air to lowest practicable level. Comply with governing regulations pertaining to environmental protection.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 DEMOLITION:

- A. Provide demolition as indicated and as required for new work.
- B. Proceed in a systematic manner. Use such methods as required to complete work in accordance with demolition schedule and governing regulations.
- C. Demolish concrete and masonry in small sections. Cut concrete and masonry at junctures with construction to remain using power-driven masonry saw or hand tools; do not use power driven impact tools.

3.2 DISPOSAL OF DEMOLISHED MATERIALS:

- A. Remove debris, rubbish, and other materials resulting from demolition operations as the work progresses. Transport and legally dispose of materials off site. Burning of debris will not be permitted on site.

3.3 CLEAN UP AND REPAIR:

- A. Upon completion of selective demolition work, remove tools, equipment and demolished materials from site. Remove protections and leave interior areas broom clean.
- B. Repair demolition performed in excess of that required. Return structures and surfaces to remain to condition existing prior to commencement of selective demolition work. Repair construction or surfaces soiled or damaged by selective demolition work.

END OF SECTION

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SECTION 02 41 13
SELECTIVE SITE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

- A. Selective demolition work, complete, as indicated, specified, and required for new work, including removal and disposal of demolished materials.
- B. Removal, protection, and storage of items designated to be reused.
- C. Removal, protection, and delivery of items designated as Owner's salvage to location as directed by Owner.

1.2 RELATED WORK

- A. Not in this Phase

1.3 SUBMITTALS: Comply with Section 01 33 00

- A. Before commencing selective demolition work, submit for review and approval of the Architect, a schedule showing the commencement, order, and completion dates for the various parts of this work. Include coordination for shut-off, capping, and continuation of utility services as required, together with details for dust and noise protection.
- B. Before starting any work relating to existing utilities that will temporarily discontinue service to adjacent buildings, notify the Architect / Owner 72 hours in advance and obtain approval before proceeding with work. Do not disconnect or disrupt service without Architect's prior approval.

1.4 PROJECT CONDITIONS:

- A. Condition of Structure: Owner assumes no responsibility for actual condition of items or portions of structures to be demolished.
- B. Salvageable Items:
 - 1. Salvage items indicated. Store at location as directed by Owner.
 - 2. Items indicated to be removed, and not designated for Owner's salvage or for reuse, may be salvaged by the Contractor. Transport salvaged items from site as they are removed. Storage or sale of removed items on site will not be permitted.
- C. Protections:
 - 1. Provide protective measures as required to protect personnel and general public from injury due to selective demolition work.
 - 2. Provide adequate fire protection in accordance with local Fire Department requirements.
- D. Damages: Promptly repair, to the satisfaction of the Architect, damages caused to contents by demolition work or due to insufficiency of protection provided, at no cost to Owner. Replace damaged work, as directed by the Architect, if not satisfactory.
- E. Traffic: Conduct selective demolition operations and debris removal in a manner to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities.
- F. Explosives: Use of explosives will not be permitted.
- G. Environmental Controls: Use water sprinkling, temporary enclosures, and other suitable methods to limit dust and dirt rising and scattering in air to lowest practicable level. Comply with governing regulations pertaining to environmental protection.

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PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 DEMOLITION

- A. Refer to drawings and provide selective demolition as indicated and as required for new work.
- B. Proceed in a systematic manner. Use such methods as required to complete work in accordance with demolition schedule and governing regulations.
- C. Demolish concrete in small sections. Cut concrete at junctures with construction to remain using power-driven masonry saw or hand tools: do not use power driven impact tools.

3.2 DISPOSAL OF DEMLOISHED MATERIAL

- A. Remove debris, rubbish, and other materials resulting from demolition operations as the work progresses. Transport and legally dispose of materials off site. Burning of debris will not be permitted on site.

3.3 CLEAN UP AND REPAIR

- A. Upon completion of selective demolition work, remove tools, equipment and demolished materials from site. Remove protections.
- B. Repair demolition performed in excess of that required. Return structures and surfaces to remain to condition existing prior to commencement of selective demolition work. Repair construction or surfaces soiled or damaged by selective demolition work.

END OF SECTION

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SECTION 03 20 00
CONCRETE REINFORCEMENT

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials, equipment, and incidentals for concrete reinforcement to complete the Work as indicated on the Drawings and as specified herein.

1.02 RELATED SECTIONS

- A. Section 01 30 00 - Administrative Requirements.
- B. Section 01 40 00 - Quality Requirements.
- C. Section 03 30 00 - Cast-in-Place Concrete.

1.03 REFERENCES

- A. ACI 301 - Specifications for Structural Concrete for Buildings; American Concrete Institute International; 2010.
- B. ACI 318 - Building Code Requirements For Structural Concrete and Commentary; American Concrete Institute International; 2011.
- C. ACI SP-66 - ACI Detailing Manual; American Concrete Institute International; 2004.
- D. ASTM A 185/A 185M - Standard Specification for Steel Welded Wire Reinforcement, Plain, for Concrete; 2007.
- E. ACI 350 - Code Requirements for Environmental Engineering Concrete Structures and Commentary; 2006.
- F. ASTM A 615/A 615M - Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement; 2015.
- G. CRSI (DA4) - Manual of Standard Practice; Concrete Reinforcing Steel Institute; 2009.
- H. CRSI (P1) - Placing Reinforcing Bars; Concrete Reinforcing Steel Institute; Ninth Edition.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Shop drawings for reinforcement for fabrication, bending, and placement of concrete reinforcement. Comply with ACI SP-66 (2004), "ACI Detailing Manual," showing bar schedules, stirrup spacing, diagrams of bent bars, and arrangement of concrete reinforcement. Include special reinforcement required for openings through concrete structures. Include locations of construction joints and additional reinforcing for construction joints.
- C. Review of these drawings is mandatory by the Structural Engineer of Record prior to fabrication.
- D. Manufacturer's Certificate: Certify that reinforcing steel and accessories supplied for this project meet or exceed specified requirements.

1.05 QUALITY ASSURANCE

- A. Perform work of this section in accordance with ACI 301.
- B. Provide Engineer with access to fabrication plant to facilitate inspection of reinforcement. Provide notification of commencement and duration of shop fabrication in sufficient time to allow inspection.

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PART 2 PRODUCTS

2.01 REINFORCEMENT

- A. Reinforcing Steel: ASTM A 615/A 615M Grade 60 (420).
 - 1. Plain billet-steel bars.
 - 2. Unfinished.
- B. Welded Wire Fabric: ASTM A185
 - 1. Plain welded steel wire fabric.
 - 2. Unfinished.
- C. Reinforcement Accessories:
 - 1. Tie Wire: Annealed, minimum 16 gage.
 - 2. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for adequate support of reinforcement during concrete placement.
 - a. For slabs-on-grade, use supports with sand plates or horizontal runners where base material will not support chair legs.
 - b. For exposed-to-view concrete surfaces where legs of supports are in contact with forms provide supports with legs that are plastic protected (CRSI, Class 1) or stainless steel protected (CRSI, Class 2).

2.02 FABRICATION

- A. Fabricate concrete reinforcing in accordance with CRSI (DA4) - Manual of Standard Practice.
- B. Welding of reinforcement is not permitted.
- C. Locate reinforcing splices not indicated on drawings at point of minimum stress.
 - 1. Submit locations of splices to Engineer.

PART 3 EXECUTION

3.01 PLACEMENT

- A. General: Comply with the Concrete Reinforcing Steel Institute's recommended practice for "Placing Reinforcing Bars." for details and methods of reinforcement placement and supports and as specified herein.
- B. Avoid cutting or puncturing vapor retarder during reinforcement placement and concreting operations.
- C. Accurately place, support and secure reinforcement against displacement. Do not deviate from required position.
- D. Clean reinforcement of loose rust and mill scale, earth, ice, and other materials that remove or destroy bond with concrete.
- E. Accommodate placement of formed openings.
- F. Place reinforcement to obtain at least minimum coverages for concrete protection and within tolerances permitted by ACI 318 unless noted otherwise on the drawings. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement operations. Set wire ties so ends are directed into concrete, not toward exposed concrete surfaces.

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- G. Install welded wire fabric in as long lengths as practical. Lap adjoining pieces at least two full mesh lengths and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction.
- H. Verify that anchors, seats, plates, reinforcement and other items to be cast into concrete are accurately placed, positioned securely, and will not interfere with concrete placement.

3.02 FIELD QUALITY CONTROL

- A. An independent testing agency will perform field quality control inspection and testing as indicated on the Drawings.

END OF SECTION

Bid 22-54,
Appendix A:
City Bid Documents

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SECTION 03 30 00
CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. Furnish all labor, materials, equipment and incidentals for cast-in-place concrete required to complete the Work as indicated on the Drawings and as specified herein.

1.02 RELATED SECTIONS

- A. Section 03 20 00 - Concrete Reinforcement.

1.03 REFERENCES

- A. ACI 211.1 - Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete; American Concrete Institute International; 1991 (Reapproved 2009).
- B. ACI 301 - Specifications for Structural Concrete for Buildings; American Concrete Institute International; 2010.
- C. ACI 305R - Hot Weather Concreting; American Concrete Institute International; 2010.
- D. ACI 306R - Cold Weather Concreting; American Concrete Institute International; 2010.
- E. ACI 308R - Guide to Curing Concrete; American Concrete Institute International; 2001. (Reapproved 2008).
- F. ACI 350 - Code Requirements For Environmental Engineering Concrete Structures; American Concrete Institute International; 2006.
- G. ACI 318 - Building Code Requirements for Structural Concrete and Commentary; American Concrete Institute International; 2011.
- H. ASTM A 615/A 615M - Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement; 2015.
- I. ASTM C 33 - Standard Specification for Concrete Aggregates; 2011.
- J. ASTM C 39/C 39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2014.
- K. ASTM C 94/C 94M - Standard Specification for Ready-Mixed Concrete; 2014.
- L. ASTM C 150 - Standard Specification for Portland Cement; 2012.
- M. ASTM C 171 - Standard Specification for Sheet Materials for Curing Concrete; 2013.
- N. ASTM C 173/C 173M - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method; 2014.
- O. ASTM C 260 - Standard Specification for Air-Entraining Admixtures for Concrete; 2010.
- P. ASTM C 309 - Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete; 2011.
- Q. ASTM C 494/C 494M - Standard Specification for Chemical Admixtures for Concrete; 2013.
- R. ASTM C 685/C 685M - Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing; 2014.
- S. ASTM C 881/C 881M - Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete; 2014.
- T. COE CRD-C 572 - Corps of Engineers Specifications for Polyvinylchloride Waterstop; Corps of Engineers; 1974.

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1.04 SUBMITTALS

- A. See Section 01300 - Administrative Requirements, for submittal procedures.
- B. Product data for proprietary materials and items, including reinforcement and forming accessories, admixtures, patching compounds, dry-shake finish materials, and others as requested by the Architect.
- C. Shop drawings for reinforcement, prepared under the supervision of a registered Professional Engineer for fabrication, bending, and placement of concrete reinforcement. Comply with ACI SP-66 (04), "ACI Detailing Manual," showing bar schedules, stirrup spacing, diagrams of bent bars, and arrangement of concrete reinforcement. Include special reinforcement required for openings through concrete structures. Include locations of construction joints and additional reinforcing for construction joints.
- D. Shop drawings and calculations for formwork, shoring and reshoring, prepared by a registered Professional Engineer, for fabrication erection of forms for specific finished concrete surfaces. Show for construction including jointing, special for joint or reveals, location and pattern of form tie placement, and other items that affect exposed concrete visually. Formwork, shoring and reshoring shop drawings, and calculations must bear the seal and signature of an engineer registered in the jurisdiction where the project is being constructed.
 - 1. Engineer's review is for general architectural applications and features only. Design of formwork for structural stability and efficiency is Contractor's responsibility.
- E. Laboratory test reports for concrete materials and mix design test.
- F. Minutes of pre-construction conference.
- G. Manufacturer's Installation Instructions: Indicate installation procedures and interface required with adjacent construction for concrete accessories.

1.05 QUALITY ASSURANCE

- A. Perform work of this section in accordance with ACI 301 and ACI 318.
 - 1. Maintain one copy of each document on site.
- B. Follow recommendations of ACI 305R when concreting during hot weather.
- C. Follow recommendations of ACI 305R when concreting during cold weather.

PART 2 PRODUCTS

2.01 FORM MATERIALS

- A. Forms for Exposed Finish Concrete: Plywood, metal, metal-framed plywood faced, or other acceptable panel-type materials, to provide continuous, straight, smooth, exposed surfaces. Furnish in largest practicable sizes to minimize number of joints and to conform to joint system shown on drawings.
- B. Forms for Unexposed Finish Concrete: Plywood, lumber, metal, or other acceptable material. Provide lumber dressed on at least 2 edges and one side for tight fit.
- C. Form Coatings: Provide commercial formulation form-coating compounds with a maximum VOC (Volatile Organic Compounds) of 350 mg/l that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.
- D. Form Ties: Factory-fabricated, adjustable-length, removable or snap-off metal form ties, designed to prevent form deflection and to prevent spalling concrete upon removal. Provide units that will leave no metal closer than 1-1/2 inches to exposed surface.
 - 1. Provide ties that, when removed, will leave holes not larger than 1 inch diameter in concrete surface.

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2.02 REINFORCEMENT

- A. Comply with requirements of Section 03200.

2.03 CONCRETE MATERIALS

- A. Cement: ASTM C 150, Type I - Normal Portland type.
1. Use one brand of cement throughout project unless otherwise acceptable to Engineer.
- B. Fine and Coarse Aggregates: ASTM C 33. Provide aggregates from a single source for exposed concrete.
1. Do not use fine or coarse aggregates containing spalling-causing deleterious substances.
 2. Local aggregates not complying with ASTM C33 but that special tests or actual service have shown to produce concrete of adequate strength and durability may be used when approved by the Engineer.
- C. Fly Ash: ASTM C 618, Class C or F.
- D. Calcined Pozzolan: ASTM C 618, Class N.
- E. Water: Clean and not detrimental to concrete.

2.04 CHEMICAL ADMIXTURES

- A. General: Do not use chemicals that will result in soluble chloride ions in excess of 0.05 percent by weight of cement.
- B. Air-Entraining Admixture: ASTM C 260, certified by manufacturer to be compatible with other required admixtures.
1. Products: Subject to compliance with requirements, provide one of the following:
 - a. "Air-Mix" or "AEA 92", Euclid Chemical Co.
 - b. "Darex AEA" or "Daravair", W.R. Grace & Co.
 - c. "MB-VR" or "Micro-Air," Master Builders, Inc.
 - d. "Sika AER," Sika Corp.
- C. Water-Reducing Admixture: ASTM C 494, Type A.
1. Products: Subject to compliance with requirements, provide one of the following:
 - a. "Eucon WR-75" or "Eucon WR-91" or "Eucon MR", Euclid Chemical Co.
 - b. "WRDA with Hycol", W.R. Grace & Co.
 - c. "Pozzolith 200N" or "Polyheed 997", Master Builders, Inc.
- D. High-Range Water-Reducing Admixture (Super Plasticizer): ASTM C 494, Type F or Type G. The admixture shall not contain more than 0.05 percent Chloride ions.
1. Products: Subject to compliance with requirements, provide one of the following:
 - a. "Eucon 37", "Eucon 1037", or "Plastol 5000", Euclid Chemical Co.
 - b. "WRDA 19" or "Daracem 100", W.R. Grace & Co.
 - c. "Rheobuild 1000" or "Rheobuild 716", Master Builders, Inc.
 - d. "Sikament 300," Sika Corp.
- E. Water Reducing, Non-Corrosive, and Non-Chloride Accelerating Admixture: ASTM C 494, Type C or Type E, and not contain more than 0.05% chloride ions.

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1. The admixture manufacturer must have long-term non-corrosive test data from an independent testing laboratory (of at least one year duration) using an acceptable accelerated corrosion test method such as electrical potential measures.
 2. Products: Subject to compliance with requirements, provide one of the following:
 - a. "Accelguard 80", "Accelguard 90", or "Eucon NCA", Euclid Chemical Co.
 - b. "Daraset," W.R. Grace & Co.
 - c. "Pozzutec 20," Master Builders, Inc.
- F. Water-Reducing, Retarding Admixture: ASTM C 494, Type D.
1. Products: Subject to compliance with requirements, provide one of the following:
 - a. "Eucon Retarder 75, "Euclid Chemical Co.
 - b. "Daratard-17," W.R. Grace & Co.
 - c. "Pozzolith 300-R," Master Builders, Inc.
 - d. "Plastiment," Sika Corporation.
- G. Prohibited Admixtures: Calcium chloride, thiocyanates or admixtures containing more than 0.05% chloride ions are not permitted
- H. Certification: Written conformance to the requirements and the chloride ion content of the admixture will be required from the admixture manufacturer prior to the mix design review by the Engineer.

2.05 ACCESSORY MATERIALS

- A. Non-Shrink Grout: ASTM C 1107; premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents. In addition, the grout manufacturer shall furnish test data from an independent laboratory indicating that the grout, when placed at a fluid consistency, shall achieve 95% bearing under a 48" x 48" base plate.
1. Products: Subject to compliance with requirements, provide one of the following:
 - a. "Euco NS", Euclid Chemical Co.
 - b. "Masterflow 713," Master Builders, Inc.
 - c. "Crystex," L&M Construction Chemicals, Inc.
 2. Where high fluidity and/or increased placing time are required, use high flow grout. In addition, the grout manufacturer shall furnish test data from an independent laboratory indicating that the grout, when placed at a fluid consistency, shall achieve 95% bearing under and 18" x 36" base plate.
 - a. Available Products: Subject to compliance with requirements, products which may be incorporated in the work include, but are not limited to the following:
 - 1) "High-Flow Grout," Euclid Chemical Co.
 - 2) "Masterflow 928," Master Builders, Inc.
 - 3) Minimum Compressive Strength at 48 Hours: 2,400 psi.
 - 4) Minimum Compressive Strength at 28 Days: 7,000 psi.
- B. Waterstops: Provide centerbulb-type waterstops at construction joints and other joints as indicated. Size to suit joints.
- C. Polyvinyl Chloride Waterstops: Corps of Engineers CRD-C 572.
1. Manufacturers: Subject to compliance with requirements, provide products of one of the following:
 - a. The Burke Co.
 - b. Greenstreak Plastic Products Co.
 - c. W. R. Meadows, Inc.

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- D. Vapor Retarder: Provide vapor retarder cover over prepared base material where indicated below slabs on grade. Use only materials that are resistant to deterioration when tested in accordance with ASTM E 154, as follows:
 - 1. Polyethylene sheet not less than 10 mils thick.
- E. Absorptive Cover: Burlap cloth made from jute or kenaf, weighing approximately 9 oz. per sq. yd., complying with AASHTO M 182, Class 2.
- F. Moisture-Retaining Cover: One of the following, complying with ASTM C 171.
 - 1. Waterproof paper.
 - 2. Polyethylene film.
 - 3. Polyethylene-coated burlap.
- G. Curing and Sealing Compound (VOC Compliant, 700 g/l): Liquid type membrane-forming curing compound, clear styrene acrylate type, complying with ASTM C1315, Type I, Class B, 25% solids content minimum. Moisture loss shall be no more than 0.30 Kg/m² when applied at 300 sq. ft./gal. Manufacturer's certification is required.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. "Super Rez Seal," Euclid Chemical Co.
 - b. "Masterseal 30," Master Builders.
 - c. "Kure N Seal 30," Sonneborn.
- H. Evaporation Control: Monomolecular film-forming compound applied to exposed concrete slab surfaces for temporary protection from rapid moisture loss.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. "Eucobar," Euclid Chemical Co.
 - b. "E-Con," L&M Construction Chemicals, Inc.
 - c. "Confilm," Master Builders, Inc.

2.06 CONCRETE SURFACE SEALER

- A. Apply silane or siloxane, penetrating sealer to all building interior concrete slab surfaces as specified below:
 - 1. Minimum 40 percent solids by weight.
 - 2. Products: Subject to compliance with requirements, provide one of the following:
 - a. "Isoflex 618," LymTal International Inc.
 - b. "Pentane 40," L & M Construction Chemicals, Inc.
 - c. "Euco-Guard VOX," Euclid Chemical Co.
 - d. "Environseal," Hydrozo Co.

2.07 BONDING AND JOINTING PRODUCTS

- A. Joint Filler: Nonextruding, resilient asphalt impregnated fiberboard or felt, complying with ASTM D 1751, 1/4 inch thick and 4 inches deep; tongue and groove profile.
- B. Joint Filler: Compressible asphalt mastic with felt facers, complying with ASTM D 994, 1/4 inch thick and 4 inches deep.
- C. Bonding Compound: Polyvinyl acetate or acrylic base.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Polyvinyl Acetate (Interior Only):
 - 1) "Euco Weld," Euclid Chemical Co.
 - 2) "Everweld," L&M Construction Chemicals, Inc.

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- b. Acrylic or Styrene Butadiene:
 - 1) "SBR Latex," Euclid Chemical Co.
 - 2) "Daraweld C," W.R. Grace & Co.
 - 3) "Everbond," L&M Construction Chemicals, Inc.
 - 4) "Acryl-Set," Master Builders, Inc.
- D. Epoxy Adhesive: ASTM C 881, two-component material suitable for use on dry or damp surfaces. Provide material "Type," "Grade," and "Class" to suit project requirements.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. "Euco Epoxy System #452MV or Eucopoxy LPC," Euclid Chemical Co.
 - b. "Concresive 1001," Master Builders, Inc.
 - c. "Sikadur 32 Hi-Mod," Sika Corp.

2.08 CONCRETE MIX DESIGN

- A. Prepare design mixes for each type and strength of concrete by either laboratory trial batch or field experience methods as specified in ACI 301, Section 4.2.3. If trial batch method used, use an independent testing facility acceptable to Engineer for preparing and reporting proposed mix designs. The testing facility shall not be the same as used for field quality control testing.
- B. Submit written reports to Engineer of each proposed mix for each class of concrete at least 15 days prior to start of work. Do not begin concrete production until proposed mix designs have been reviewed by Engineer.
- C. The exact percentage of supplementary cementitious material used shall be based on a successful test placement on-site.
 - 1. Fly Ash Content: Maximum 15 percent of cementitious materials by weight.
 - 2. Calcined Pozzolan Content: Maximum 10 percent of cementitious materials by weight.
- D. Design mixes to provide normal weight concrete with as indicated on drawings and schedules:
- E. Adjustment to Concrete Mixes: Mix design adjustments may be requested by Contractor when characteristics of materials, job conditions, weather, test results, or other circumstances warrant, as accepted by Engineer. Laboratory test data for revised mix design and strength results must be submitted to and accepted by Engineer before using in work.
- F. Water-Cement Ratio: Provide concrete for following conditions with maximum water-cement (W/C) ratios as follows:
 - 1. Subjected to freezing and thawing; W/C 0.45.
 - 2. Subjected to deicers/watertight; W/C 0.40.
 - 3. Reinforced concrete subjected to brackish water, salt spray, or deicers; W/C 0.40.
 - 4. Trowel finish interior floors subjected to small hard wheel traffic; W/cm 0.50.
- G. Slump Limits: Proportion and design mixes to result in concrete slump at point of placement as follows:
 - 1. Ramps, slabs, and sloping surfaces: Not more than 4 inches.
 - 2. Reinforced foundation systems: Not less than 1 inch and not more than 6 inches.
 - 3. Concrete containing HRWR admixture (Superplasticizer): 7 to 9 inch range after addition of HRWR to verified 2-inch to 3-inch slump concrete (3" to 4" for concrete receiving a dry shake hardener).
 - 4. Other concrete: Not more than 4 inches.

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2.09 ADMIXTURES

- A. Use water-reducing admixture or high-range water-reducing admixture (Superplasticizer) in concrete as required for placement and workability.
- B. Use nonchloride accelerating admixture in concrete slabs placed at ambient temperatures below 50 deg F (10 deg C).
- C. Use high-range water-reducing admixture (HRWR) in pumped concrete, concrete for industrial slabs, architectural concrete, parking structure slabs, concrete required to be watertight, and concrete with water/cement ratios below 0.50.
- D. Use air-entraining admixture in exterior exposed concrete unless otherwise indicated. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having total air content with a tolerance of plus or minus 1-1/2 percent within following limits:
 - 1. Concrete structures and slabs exposed to freezing and thawing, deicer chemicals, or hydraulic pressure:
 - a. 5.0 percent for 1-1/2-inch max aggregate.
 - b. 5.5 percent for 1-inch max aggregate.
 - c. 5.5 percent for 3/4-inch max aggregate.
 - d. 6.0 percent for 1/2-inch max aggregate.
 - 2. Other concrete (not exposed to freezing, thawing, or hydraulic pressure) or to exposed interior steel troweled finished subjected to vehicular traffic: maximum 3 percent air.
- E. Use admixture for water reduction and set controls in strict compliance with manufacturer's directions.

2.10 MIXING

- A. Job-Site Mixing: Mix materials for concrete in appropriate drum-type batch machine mixer. For mixers of one cu. yd. or smaller capacity, continue mixing at least 1-1/2 minutes, but not more than 5 minutes after ingredients are in mixer, before any part of batch is released. For mixers of capacity larger than one cu. yd., increase minimum 1-1/2 minutes of mixing time by 15 seconds for each cu. yd. or fraction thereof.
- B. Provide batch ticket for each batch discharged and used in work, indicating project identification name and number, date, mix type, mix time, quantity, and amount of water introduced.
- C. Ready-Mix Concrete: Comply with requirements of ASTM C 94, and as specified.
 - 1. When air temperature is between 85 deg F (30 deg C) and 90 deg F (32 deg C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes, and when air temperature is above 90 deg F (32 deg C), reduce mixing and delivery to 60 minutes.

2.11 PRE-CONCRETE CONFERENCE

- A. This conference shall be held at least 7-14 days prior to the beginning of the installation of foundations. The Contractor shall hold a meeting to review the detailed requirements for the concrete, including the concrete mix designs, placing techniques, finishing techniques, curing techniques and, the equipment required for these procedures.
- B. The Contractor shall require responsible representatives of every party who is concerned with the concrete work to attend the conference, including, but not limiting to, the following:
 - 1. Contractor's superintendent.
 - 2. Laboratory responsible for the contract design mix.
 - 3. Laboratory responsible for field quality control.
 - 4. Concrete subcontractor.

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5. Ready-mix concrete producer(s).
 6. Admixture manufacturer.
 7. Concrete pumping contractor.
 8. Architect
 9. Owner project manager
- C. Minutes of the meeting shall be recorded, typed and printed by the Contractor and distributed by him to all parties concerned within 5 days of the meeting. One copy of the minutes shall also be transmitted to the following for information purposes:
1. Owners representative.
 2. Resident engineer.
 3. Structural engineer.
- D. The minutes shall include a statement by the concrete contractor indicating that the proposed mix design and placing techniques can produce the concrete quality required by these specifications.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify lines, levels, and dimensions before proceeding with work of this section.
- B. Coordinate the installation of joint materials and vapor retarder with placement of forms and reinforcing steel.

3.02 PREPARATION

- A. Where new concrete is to be bonded to previously placed concrete, prepare existing surface by cleaning with steel brush and applying bonding agent in accordance with manufacturer's instructions.

3.03 FORMS

- A. General: Design, erect, support, brace, and maintain formwork to support vertical and lateral, static and dynamic loads that might be applied until concrete structure can support such loads. Construct formwork so concrete members and structures are of correct size, shape, alignment, elevation, and position. Maintain formwork construction tolerances complying with ACI 347.
- B. Construct forms to sizes, shapes, lines, and dimensions shown and to obtain accurate alignment, location, grades, level, and plumb work in finished structures. Provide for openings, offsets, sinkages, keyways, recesses, moldings, rustications, reglets, chamfers, blocking, screeds, bulkheads, anchorages, inserts, and other features required in work. Use selected materials to obtain required finishes. Solidly butt joints and provide backup at joints to prevent leakage of cement paste.
- C. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush plates or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces where slope is too steep to place concrete with bottom forms only. Kerf wood inserts for forming keyways, recesses, and the like, for easy removal.
- D. Provide temporary openings where interior area of formwork is inaccessible for cleanout, for inspection before concrete placement, and for placement of concrete. Securely brace temporary openings and set tightly to forms to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.

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- E. Chamfer exposed corners and edges as indicated, using wood, metal, PVC, or other rubber chamfer strips fabricated to produce uniform smooth lines and tight edge joints.
- F. Provisions for other Trades: Provide openings in concrete formwork to accommodate work of other trades. Determine size and location of openings, recesses, and chases from trades providing such items. Accurately place and securely support items built into forms.
- G. Cleaning and Tightening: Thoroughly clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, or other debris just before concrete is placed. Retighten forms and bracing before concrete placement as required to prevent mortar leaks and maintain proper alignment.
- H. Tolerances for formed surfaces shall conform to the following:
 - 1. Variation from plumb:
 - a. In the lines and surfaces of columns, piers, walls, and in arises:
 - 1) In any 10 ft. of length 1/4 in.
 - 2) Maximum for the entire length 1/2 in.
 - b. For exposed corner columns, control-joint grooves and other conspicuous lines:
 - 1) In any 20 ft. length 1/4 in.
 - 2) Maximum for the entire length 1/2 in.
 - 2. Variation from the level or from the grades specified in the contract documents:
 - a. In slab soffits, ceilings, beam soffits and in arises, measured before removal of supporting shores:
 - 1) Maximum for the entire length 3/8 in.
 - b. In exposed lintels, sills, parapets, horizontal grooves and other conspicuous lines:
 - 1) Maximum for the entire length 1/2 in.
 - 2) Refer to section regarding monolithic slab finishes for F(F) and F(L) numbers.
 - 3. Variation of the linear building lines from established position in plan and related position of columns, walls and partitions:
 - a. In any bay 1/4 in.
 - b. In any 20 ft. of length 3/8 in.
 - c. Maximum for the entire length 1/2 in.
 - 4. Variation in the sizes and locations of:
 - a. Sleeves, floor openings and wall openings 1/4 in.
 - 5. Variation in cross sectional dimensions columns and beams and in the thickness of slabs and walls:
 - a. Minus 1/4 in.
 - b. Plus 1/4 in.
 - 6. Footings
 - a. Variations in dimensions in plan:
 - 1) Minus 1/2 in.
 - 2) Footings 2 in.
 - b. Misplacement or eccentricity:
 - 1) 2 percent of the footing width in the direction of the misplacement, but not more than 2 in.

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- c. Thickness:
 - 1) Decrease in specified thickness 5 %
 - 2) Increase in specified thickness No limit
- 7. Variation in steps:
 - a. In a flight of steps:
 - 1) Rise+ 1/8 in.
 - 2) Tread+ 1/4 in.
 - b. In consecutive steps:
 - 1) Rise+ 1/16 in.
 - 2) Tread+ 1/8 in.
- 8. Construct edges of slabs to tolerance that is compatible with the connections of the architectural finishes.

3.04 VAPOR RETARDER INSTALLATION

- A. General: Following leveling and tamping of granular base for slabs on grade, place vapor retarder sheeting with longest dimension parallel with direction of pour.
- B. Lap joint 6 inches and seal vapor retarder joints with manufacturers' recommended mastic and pressure-sensitive tape.

3.05 INSTALLING REINFORCEMENT

- A. A. General: Comply with requirements of Section 03200 Concrete Reinforcement.

3.06 JOINTS

- A. Construction Joints: Locate and install construction joints as indicated or, if not indicated, locate so as not to impair strength and appearance of the structure, as acceptable to Engineer. Submit locations of construction joints with shop drawings showing reinforcement.
- B. Place construction joints perpendicular to main reinforcement. Continue reinforcement across construction joints except as otherwise indicated.
- C. Use bonding agent on existing concrete surfaces that will be joined with fresh concrete.
- D. Waterstops: Provide waterstops in construction joints as indicated. Install waterstops to form continuous diaphragm in each joint. Make provisions to support and protect exposed waterstops during progress of work. Field-fabricate joints in waterstops in accordance with manufacturer's printed instructions.
- E. Isolation Joints in Slabs-on-Ground: Construct isolation joints in slabs-on-ground at points of contact between slabs-on-ground and vertical surfaces, such as column pedestals, foundation walls, grade beams, and elsewhere as indicated.
 - 1. Joint filler and sealant materials are specified in Division 7 Sections of these specifications.
- F. Contraction (Control) Joints in Slabs-on-Grade: Construct contraction joints in slabs-on-ground to form panels of patterns as shown.
 - 1. If joints are formed by saw cuts, saw cut joints immediately after slab finishing and as may be safely done without dislodging aggregate using a Soff-Cut machine or equal to a depth of 1.25 inches deep or as indicated on the Drawings.
 - 2. If joints are formed by preformed inserts, insert premolded plastic, hardboard or fiberboard strip into fresh concrete until top surface of strip is flush with slab surface. Tool slab edges

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round on each side of insert. After concrete has cured, remove inserts and clean groove of loose debris.

3. Joint sealant material is specified in Division 7 Sections of these specifications.

3.07 INSTALLATION OF EMBEDDED ITEMS

- A. General: Set and build into work anchorage devices and other embedded items required for other work that is attached to or supported by cast-in-place concrete. Use setting drawings, diagrams, instructions, and directions provided by suppliers of items to be attached thereto.
- B. Forms for Slabs: Set edge forms, bulkheads, and intermediate screed strips for slabs to obtain required elevations and contours in finished surfaces. Provide and secure units to support screed strips using strike-off templates or compacting-type screeds.

3.08 PREPARATION OF FORMS SURFACES

- A. Clean re-used forms of concrete matrix residue, repair and patch, as required, to return forms to acceptable surface condition.
- B. General: Coat contact surfaces of forms with an approved, nonresidual, low-VOC, form-coating compound before reinforcement is placed.
- C. Do not allow excess form-coating material to accumulate in forms or to come into contact with in-place concrete surfaces against which fresh concrete will be placed. Apply in compliance with manufacturer's instructions.
- D. Coat steel forms with a nonstaining, rust-preventative material. Rust-stained steel formwork is not acceptable.

3.09 PLACING CONCRETE

- A. Inspection: Before placing concrete, inspect and complete formwork installation, reinforcing steel, and items to be embedded or cast in. Notify other crafts to permit installation of their work; cooperate with other trades in setting such work.
- B. General: Comply with ACI 304, "Recommend Practice for Measuring, Mixing, Transporting, and Placing Concrete," and as herein specified.
- C. All water in the concrete mix shall be added at the mix plant. Water shall not be added at the jobsite.
- D. Notify Engineer not less than 24 hours prior to commencement of placement operations.
- E. Deposit concrete continuously or in layers of such thickness that no concrete will be placed on concrete that has hardened sufficiently to cause formation of seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as herein specified. Deposit concrete to avoid segregation at its final location.
- F. Placing Concrete in Forms: Deposit concrete in forms in horizontal layers not deeper than 24 inches and in a manner to avoid inclined construction joints. Where placement consists of several layers, place each layer while the preceding layer is still plastic to avoid cold joints.
 1. Consolidate placed concrete by mechanical vibrating equipment supplemented by hand-spading, rodding, or tamping. Use equipment and procedures for consolidation of concrete in accordance with ACI 309.
 2. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations no farther than visible effectiveness of machine. Place vibrators to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have not begun to set. At each insertion limit duration of vibration to time necessary to consolidate concrete and

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complete embedment of reinforcement and other embedded items without causing segregation of mix.

- G. Placing Concrete Slabs: Deposit and consolidate concrete slabs in a continuous operation, within limits of construction joints, until the placing of a panel or section is completed.
 - 1. Consolidate concrete during placing operations so that concrete is thoroughly worked around reinforcement and other embedded items and into corners.
 - 2. Bring slab surfaces to correct level with straightedge and strike off. Use highway bull floats or darbies to smooth surface, free of humps or hollows. Do not disturb slab surfaces prior to beginning finishing operations.
 - 3. Maintain reinforcing in proper position during concrete placement.
- H. Cold-Weather Placing: Comply with provisions of ACI 306 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
- I. When air temperature has fallen to or is expected to fall below 40 deg F (4 deg C), uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 deg F (10 deg C) and not more than 80 deg F (27 deg C) at point of placement.
 - 1. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
 - 2. Only the specified non-corrosive non-chloride accelerator shall be used.
- J. Hot-Weather Placing: When hot weather conditions exist that would seriously impair quality and strength of concrete, place concrete in compliance with ACI 305 and as herein specified.
 - 1. Cool ingredients before mixing to maintain concrete temperature at time of placement below 90 deg F (32 deg C). Mixing water may be chilled, or chopped ice may be used to control temperature provided water equivalent of ice is calculated to total amount of mixing water. Use of liquid nitrogen to cool concrete is Contractor's option.
 - 2. Cover reinforcing steel with water-soaked burlap if it becomes too hot, so that steel temperature will not exceed the ambient air temperature immediately before embedment in concrete.
 - 3. Fog spray forms, reinforcing steel, and subgrade just before concrete is placed.
 - 4. Use water-reducing retarding admixture when required by high-temperatures, low humidity, or other adverse placing conditions, when acceptable to the Engineer.
 - 5. Special hot weather concreting practices for watertight concrete in addition to other items specified:
 - a. When low humidity or windy conditions exist, construct a temporary wind barrier around the concrete pour.
 - b. Fog spray the entire placement during and for 3 hours after, final finishing with approved compressed air or mist foggers. Fog the air above the slab until a sheen appears on the slab surface, but do not allow standing water to build up on the slab surface.
 - c. Immediately after bull floating, apply a monomolecular film-forming compound for evaporation control

3.10 FINISH OF FORMED SURFACES

- A. Rough Form Finish: For formed concrete surfaces not exposed to view in the finish work or concealed by other construction. This is the concrete surface having texture imparted by form-facing material used, with tie holes and defective areas repaired and patched, and fins and other projections exceeding 1/4 inch in height rubbed down or chipped off.

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- B. Smooth Form Finish: For formed concrete surfaces exposed to view or to be covered with a coating material applied directly to concrete, or a covering material applied directly to concrete, such as waterproofing, dampproofing, veneer plaster, painting, or other similar system. This is an as-cast concrete surface obtained with selected form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch defective areas with fins and other projections completely removed and smoothed.
- C. Related Unformed Surfaces: At top of walls, horizontal offsets, and similar unformed surfaces occurring adjacent to formed surfaces, strike-off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated.
- D. Grout-Cleaned Finish: Provide grout-cleaned finish to scheduled concrete surfaces that have received smooth form finish treatment.
 - 1. Combine one part portland cement to 1-1/2 parts fine sand by volume, and a 50: 50 mixture of acrylic or styrene butadiene-based bonding admixture and water to consistency of thick paint. Blend standard portland cement and white portland cement, amounts determined by trial patches, so that final color of dry grout will match adjacent surfaces.
 - 2. Thoroughly wet concrete surfaces, apply grout to coat surfaces, and fill small holes. Remove excess grout by scraping and rubbing with clean burlap. Keep damp by fog spray for at least 36 hours after rubbing.

3.11 MONOLITHIC SLAB FINISHES

- A. Trowel Finish: Apply trowel finish to monolithic slab surfaces to be exposed to view and slab surfaces to be covered with resilient flooring, carpet, ceramic or quarry tile, paint, or other thin film finish coating system.
 - 1. After floating, begin first trowel finish operation using a power driven trowel. Begin final troweling when surface produces a ringing sound as trowel is moved over surface. Consolidate concrete surface by final hand-troweling operation, free of trowel marks, uniform in texture and appearance, and with surface leveled to tolerances of Ff 25 - FL 20. Grind smooth surface defects that would telegraph through applied floor covering system.
 - 2. Note Areas requiring quick-dry concrete.
- B. Trowel and Fine Broom Finish: Where ceramic or quarry tile is to be installed with thin-set mortar, apply initial a single trowel finish as specified, then immediately follow with slightly scarifying surface by fine brooming. Texture shall be as approved by Engineer from sample panel.
 - 1. Apply nonslip broom finish to exterior concrete platforms, steps, and ramps, and elsewhere as indicated.
 - a. Immediately after float finishing, slightly roughen concrete surface by brooming with a fiber-bristle broom perpendicular to main traffic route. Coordinate required final finish with Owner project manager before application.
 - b. After curing, lightly work surface with a steel wire brush, or an abrasive stone, and water to expose nonslip aggregate.

3.12 CURING AND PROTECTION

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. In hot, dry, and windy weather, protect concrete from rapid moisture loss before and after finishing operations with an evaporation-control material. Apply in accordance with

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manufacturer's instructions after screening and bull floating, but before power floating and troweling.

- B. Start initial curing as soon as free water has disappeared from concrete surface after placing and finishing. Cure continuously for not less than 7 days.
- C. Curing Methods: Perform curing of concrete by curing and sealing compound, by moist curing, by moisture-retaining cover curing, and by combinations thereof, as herein specified. Cure watertight concrete by moist curing or moisture cover curing for a minimum of 7 days.
- D. Provide moisture-retaining cover curing by following methods.
 - 1. Keep concrete surface continuously wet by covering with water.
 - 2. Use continuous water-fog spray.
 - 3. Cover concrete surface with specified absorptive cover, thoroughly saturate cover with water, and keep continuously wet. Place absorptive cover to provide coverage of concrete surfaces and edges, with 4-inch lap over adjacent absorptive covers.
- E. Provide moisture-cover curing as follows:
 - 1. Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practical width with sides and ends lapped at least 3 inches and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
- F. Provide curing and sealing compound to all exposed interior slabs, not receiving a liquid densifier, and troweled slabs receiving mastic applied adhesives or "shake on" hardeners. Exterior slabs, sidewalks, curbs, and architectural concrete, not receiving a penetrating sealer, shall be cured with the specified clear, non-yellowing curing and sealing compound. Maximum coverage shall be 400 ft²/gallon on floated or broomed surfaces for the curing/sealing compound.
 - 1. Apply specified curing and sealing compound to concrete slabs as soon as final finishing operations are complete (within 2 hours and after surface water sheen has disappeared). Apply uniformly in continuous operation by power spray or roller in accordance with manufacturer's directions. Recoat areas subjected to heavy rainfall within 3 hours after initial application. Maintain continuity of coating and repair damage during curing period.
- G. The curing process must begin immediately after final finishing.
- H. Curing Formed Surfaces: Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces, by moist curing with forms in place for full curing period or until forms are removed. If forms are removed, continue with curing with methods specified above, as applicable.
- I. Curing Unformed Surfaces: Cure unformed surfaces, such as slabs, floor topping, and other flat surfaces, by application of appropriate curing method.

3.13 REMOVAL OF FORMS

- A. General: Formwork not supporting weight of concrete, such as sides of beams, walls, columns, and similar parts of the work, may be removed after cumulatively curing at not less than 50 deg F (10 deg C) for 24 hours after placing provided concrete is sufficiently hard to not be damaged by form-removal operations, and provided curing and protection operations are maintained.
- B. Formwork supporting weight of concrete, such as beam soffits, joists, slabs, and other structural elements, may not be removed until concrete has attained at least 75% of design minimum 28 day compressive strength but not less than the following time limits:
 - 1. Beams, joists and one-way slabs - 7 days.
 - 2. Two-way slabs - 14 days.

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3. Post-tensioned concrete - approval of stressing records.
- C. Determine potential compressive strength of in-place concrete by testing field-cured specimens representative of concrete location or members.
- D. Form-facing material may be removed 4 days after placement only if shores and other vertical supports have been arranged to permit removal of form-facing material without loosening or disturbing shores and supports.

3.14 REUSE OF FORMS

- A. Clean and repair surfaces of forms to be reused in work. Split, frayed, delaminated, or otherwise damaged form-facing material will not be acceptable for exposed surfaces. Apply new form-coating compound as specified for new formwork.
- B. When forms are extended for successive concrete placement, thoroughly clean surfaces, remove fins and laitance, and tighten forms to close joints. Align and secure joint to avoid offsets. Do not use "patched" forms for exposed concrete surfaces except as acceptable to Engineer.

3.15 MISCELLANEOUS CONCRETE ITEMS

- A. Filling In: Fill in holes and openings left in concrete structures for passage of work by other trades, unless otherwise shown or directed, after work of other trades is in place. Mix, place, and cure concrete as herein other miscellaneous concrete filling shown or required to complete work.
- B. Equipment Bases and Foundations: Provide machine and equipment bases and foundations as shown on drawings. Set anchor bolts for machines and equipment to template at correct elevations, complying with certified diagrams or templates of manufacturer furnishing machines and equipment.
- C. Reinforced Masonry: Provide concrete grout for reinforced masonry lintels and bond beams where indicated on drawings and as scheduled. Maintain accurate location of reinforcing steel during concrete placement.
- D. Grout base plates and foundations, as indicated, using specified non-shrink grout. Where high fluidity and/or increased placing time is required use the specified high flow grout. This grout shall be used for all base plates larger than 10 square feet.

3.16 CONCRETE SURFACE REPAIRS

- A. Patching Defective Areas: Repair and patch defective areas with cement mortar immediately after removal of forms, when acceptable to Engineer.
 1. Cut out honeycomb, rock pockets, and voids over 1/4 inch in any dimension, and holes left by tie rods and bolts, down to solid concrete but in no case to a depth of less than 1 inch. Make edges of cuts perpendicular to the concrete surface. Thoroughly clean, dampen with water, and brush-coat the area to be patched with specified bonding agent. Place patching mortar before bonding compound has dried.
 2. For exposed-to-view surfaces, blend white portland cement and standard portland cement so that, when dry, patching mortar will match color surrounding. Provide test areas at an inconspicuous location to verify mixture and color match before proceeding with patching. Compact mortar in place and strike-off slightly higher than surrounding surface.
- B. Repair of Formed Surfaces: Remove and replace concrete having defective surfaces if defects cannot be repaired to satisfaction of Engineer. Surface defects, include color and texture irregularities, cracks, spalls, air bubbles, honeycomb, rock pockets, fins, and other projections

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on surface, and stains and other discoloration's that cannot be removed by cleaning. Flush out form tie holes, fill with dry-pack mortar, or precast cement cone plugs secured in place with bonding agent.

1. Repair concealed formed surfaces, where possible, that contain defects that affect the durability of concrete. If defects cannot be repaired, remove and replace concrete
- C. Repair of Unformed Surfaces: Test unformed surfaces, such as monolithic slabs, for smoothness and verify surface plane to tolerances specified for each surface and finish. Correct low and high areas as herein specified. Test unformed surfaces sloped to drain for trueness of slope and smoothness by using a template having required slope.
 1. Repair finished unformed surfaces that contain defects that affect durability of concrete. Surface defects, as such, including crazing and cracks in excess of 0.01 inch wide or that penetrate to reinforcement or completely through nonreinforced sections regardless for width, spalling, popouts, honeycomb, rock pockets, and other objectionable conditions.
 2. Correct high areas in unformed surfaces by grinding after concrete has cured at least 14 days.
 3. Correct low areas in unformed surfaces during or immediately after completion of surface finishing operations by cutting out low areas and replacing them with underlayment compound or repair topping. Finish repaired areas to blend into adjacent concrete. Proprietary underlayment compounds may be used when acceptable to Owner project manager.
 4. Repair defective areas, except random cracks and single holes not exceeding 1 inch in diameter, by cutting out and replacing with fresh concrete. Remove defective areas to sound concrete with clean, square cuts and expose reinforcing steel with at least 3/4-inch clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding compound. Mix patching concrete of same materials to provide concrete of same type or class as original concrete. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.
- D. Repair isolated random cracks and single holes not over 1 inch in diameter by dry-pack method. Groove top of cracks and cut out holes to sound concrete and clean of dust, dirt, and loose particles. Dampen cleaned concrete surfaces and apply bonding compound. Mix dry-pack, consisting of one part portland cement to 2-1/2 parts fine aggregate passing a No. 16 mesh sieve, using only enough water as required for handling and placing. Place dry-pack mixture in place and finish to match adjacent concrete. Keep patched area continuously moist for not less than 72 hours.
- E. Perform structural repairs with prior approval of Engineer for method and procedure, using specified epoxy adhesive and mortar.
- F. Repair methods not specified above may be used, subject to acceptance of Engineer.
- G. Bonding Compound Usage: The specified bonding compound shall be used in interior uses not subject to moisture. In moist conditions, a bonding grout, including the specified bonding admixture or the specified epoxy adhesive, must be used. The patching mortar or new concrete must then be placed while the bonding grout or epoxy adhesive is still tacky.

3.17 APPLICATION OF SILANE SEALER

- A. Apply two coats of silane or siloxane sealer to areas required to be sealed.
- B. Provide a 5 foot by 5 foot test area before starting general application. Obtain Engineer's approval of application rate before general application.

3.18 FIELD QUALITY CONTROL

- A. An independent testing agency will perform field quality control inspection and testing as indicated on Drawings.
- B. Provide free access to concrete operations at project site and cooperate with appointed firm.
- C. Submit proposed mix design of each class of concrete to inspection and testing firm for review prior to commencement of concrete operations.
- D. Tests of concrete and concrete materials may be performed at any time to ensure conformance with specified requirements.
- E. Sampling and testing for quality control during placement of concrete may include the following, as directed by Engineer.
 - 1. Sampling Fresh Concrete: ASTM C 172, except modified for slump to comply with ASTM C 94.
 - 2. Slump: ASTM C 143; one test at one point of discharge for each set of compressive strength test cylinders; additional tests when concrete consistency seems to have changed.
 - 3. Air Content: ASTM C 173, volumetric method for lightweight or normal weight concrete; ASTM C 231 pressure method for normal weight concrete; one for each set of compressive strength test cylinders for each type of air-entrained concrete.
 - 4. Water Content: The water content of freshly mixed concrete will be tested each time cylinders are made and as directed by the Architect in accordance with ASSHTO T318 Measurement of Water Content of Fresh Concrete Using the Microwave Oven.
 - 5. Concrete Temperature: Test hourly when air temperature is 40 deg F (4 deg C) and below, when 80 deg F (27 deg C) and above, and each time a set of compression test specimens is made.
 - 6. Compression Test Specimen: ASTM C 31. Mold and store cylinders for laboratory-cured test specimens except when field-cure test specimens are required. Cylinders shall be 4 by 8 in.
 - 7. Compressive Strength Tests: The following number of concrete test cylinders shall be cast for each class of concrete for each day's work (pour), 75 cubic yards, or 5000 square feet or greater:
 - a. For Footings and Other Structural Concrete:
 - 1) 2 @ 7 Days, Lab Cured
 - 2) 3 @ 28 Days, Lab Cured
 - b. For Columns and Walls:
 - 1) 2 @ 7 Days, Lab Cured
 - 2) 3 @ 7 Days, Field Cured
 - 3) 3 @ 28 Days, Lab Cured
 - 4) 3 @ 28 Days, Field Cured
 - 8. When additional test specimens shall be performed as directed by the Engineer or Engineer of Record with three (3) specimens required for a test. To establish break data, three (3) cylinders must be broken and averaged.
 - 9. NOTE: All field cured test cylinders shall be cast and cured in the field in the concrete placement and under environmental conditions similar as possible to the conditions to which the pour is subjected.
 - 10. When frequency of testing will provide fewer than 5 strength tests for a given class of concrete, conduct testing from at least 5 randomly selected batches or from each batch if fewer than 5 are used.

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- F. Test results will be reported in writing to Engineer, Ready-Mix Producer, and Contractor within 24 hours after tests. Reports of compressive strength tests shall contain the project identification name and number, date of concrete placement, name of concrete testing service, concrete type and class, location of concrete batch in structure, design compressive strength at 28 days, concrete mix proportions and materials, compressive breaking strength, and type of break for both 7-day tests and 28-day tests.

3.19 DEFECTIVE CONCRETE

- A. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances or specified requirements.
- B. Repair or replacement of defective concrete will be determined by the Engineer. The cost of additional testing shall be borne by Contractor when defective concrete is identified.
- C. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Engineer for each individual area.

3.20 SCHEDULE - CONCRETE TYPES AND FINISHES

- A. See structural drawings for minimum 28 day compressive strength.

END OF SECTION

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SECTION 04 20 00
CLAY UNIT MASONRY

PART 1 - PRODUCTS

1.1 SUMMARY: Brick masonry work includes:

- A. Brick
- B. Mortar and grout
- C. Ties and Anchors
- D. Embedded Flashing
- E. Weepholes
- F. Miscellaneous masonry accessories.

1.2 RELATED WORK SPECIFIED IN OTHER SECTIONS:

- A. Concrete Unit Masonry, Section 04 22 00

1.3 SUBMITTALS:

- A. Certification: Submit certification that each type of unit complies with specified requirements.
- B. Product Data: Submit manufacturer's technical data and installation instructions for insulation material.
- C. Shop Drawings: Submit expansion and control joint layout.
- D. Samples: Submit samples of brick units proposed for use for verification by Architect.

1.4 QUALITY ASSURANCE:

- A. Codes and Standards: Provide material and work complying with referenced codes, regulations and standards.
- B. Manufacturer: Obtain each type of unit from one manufacturer, cured by one process, and of uniform texture and color.
- C. Field Construction Mock-Ups: Prior to installation of masonry work, erect sample wall panels to verify selections made for color and textural characteristics, under sample submittals of masonry units and mortar, and to represent completed masonry work for qualities of appearance, materials and construction; build mock-ups to comply with the following requirements:
 - 1. Locate mock-ups as directed by Architect.
 - 2. Build mock-ups for each type of exposed unit masonry work, in sizes of approximately 6' long by 4' high by full thickness, including face and back-up wythes as well as accessories.
 - 3. Obtain Architect's acceptance of visual qualities of mock-up before start of masonry work. Retain mock-up and use as quality standard until work is completed. When directed, demolish mock-ups and remove from site.
 - 4. Use sample panels to test proposed cleaning procedures.
 - 5. Use sample panels to test water repellent coating.

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1.5 DELIVERY, STORAGE, AND HANDLING:

- A. Deliver masonry materials to project in undamaged condition.
- B. Store and handle masonry units to prevent their deterioration or damage due to moisture, temperature changes, contaminants, corrosion and other causes.
- C. Store cementitious materials off ground, under cover and in dry location.
- D. Store aggregates when grading and other required characteristics can be maintained.
- E. Store masonry accessories including metal items to prevent deterioration by corrosion and accumulation of dirt.

1.6 PROJECT CONDITIONS:

- A. Protect masonry materials during storage and construction from wetting by rain, snow or ground water and from soilage or intermixture with earth or other materials. Do not use metal reinforcing or ties having loose rust or other coatings, including ice, which will reduce or destroy bond.
- B. During erection, cover top of wall with heavy waterproof sheeting at end of each day's work. Cover partially completed structures when work is not in progress. Extend cover a minimum of 24 inches down both sides and hold cover securely in place.
- C. Do not apply uniform floor or roof loading for at least 12 hours after building masonry walls or columns. Do not apply concentrated loads for at least 3 days after building masonry walls or columns.
- D. Prevent grout or mortar from staining the face of masonry to be left exposed. Immediately remove grout or mortar in contact with masonry. Protect sills, ledges and projections from droppings of mortar.
- E. Do not lay masonry when the temperature of outside air is below 40°F, unless means are provided to heat and maintain temperature of masonry materials and protect completed work from freezing. Protection shall consist of heating and maintaining temperature of masonry materials to at least 40°F, and maintaining an air temperature above 40°F on both sides of masonry at least 48 hours.

PART 2 - PRODUCTS

2.1 FACING BRICK:

- A. Manufacturer: Endicott Brick
- B. Color: Manganese Ironspot
- C. Texture: Velour
- D. Size: Modular

Substitutions: Architect approved substitutions are acceptable, see Section 01 25 00.

2.2 MORTAR AND GROUT MATERIALS:

- A. Portland Cement: ASTM C150 Type I, except Type III may be used for cold weather construction.
 - 1. Color as selected by Architect from manufacturer's entire color selection to match existing upper level.
- B. Hydrated Lime: ASTM C207, Type S.

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- C. Aggregate for Mortar: Sand, conforming to ASTM C144 or ASTM C404, Size No. 2.
- D. Aggregate For Grout: ASTM C 404, Size No. 8 or Size No. 89.
- E. Water: Clean, drinkable.
- F. Integral Waterproofing (mortar at exterior): Aqua Stop Plus, AcmeShield, Sonneborn "Hydrocide Powder", or approved equal.

2.3 MASONRY ACCESSORIES: Hohmann & Barnard is specified. Equivalent products from Dur-O-Wal and AA Wire Products are acceptable.

- A. Wall Ties and Anchors:
 - 1. At Masonry Backup Walls: Dur-O-Wall DW-10 Veneer Anchor, Hot Dip Galvanized with appropriate Dur-O-Wal fastener.
 - 2. At Concrete Foundation Walls: Dur-O-Wall DW-10 Veneer Anchor, Hot Dip Galvanized with appropriate Dur-O-Wal fastener.

2.4 CONCEALED FLASHING: 32 mil self-adhesive rubberized asphalt, complete and integrally bonded to 8 mils of high density, cross laminated polyethylene film to provide a minimum 40 mil thick membrane. Membrane shall be interleaved with disposable silicone-coated release paper until installed; W. R. Grace "Perm-A-Barrier".

- A. Provide surface conditioner, termination mastic, primer as recommended by manufacturer for project conditions.

2.5 SEALANT CONTROL JOINT MATERIALS: Specified and furnished in Section 079200, installed under this section.

2.6 WEEPVENTS: 3/8" x 2-1/2" x 3-3/8", height to produce 2-1/2" exposure on exterior. Constructed of Polypropylene tested in conformance with ASTM D2240, D790B, D638 and D1238B

- 1. Color as selected by Architect from manufacturer's standard colors.

2.7 MASONRY CLEANER: Manufacturer's standard strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product expressly approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned.

- A. Available Products: Subject to compliance with requirements, products that may be used to clean unit masonry surfaces, provide one of the following:
 - 1. Cleaners Not Subject to Metallic Staining with Mortar Not Subject to Bleaching: Diedrich Technologies, Inc. "202 New Masonry Detergent" or ProSoCo, Inc. "Sure Klean No. 600 Detergent".
 - 2. Cleaners Subject to Metallic Staining: Diedrich Technologies, Inc. "202V Vana-Stop" or ProSoCo, Inc. "Sure Klean Vana Trol".

2.8 MORTAR AND GROUT MIXTURES:

- A. Mortar Mix: ASTM C 270, Type S; at exterior use integral waterproofing admixture; mortar color to match existing.
- B. Grout Mix: ASTM C 476.
- C. Measure and batch materials either by volume or weight, such that required proportions can be accurately controlled and maintained. Measurement of sand exclusively by shovel will not be permitted. Mix mortars with the maximum amount of water consistent with

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workability to provide maximum tensile bond strength within the capacity of mortar. Mix ingredients for a minimum of 5 minutes in a mechanical mixer. Do not use mortar or grout which has begun to set, or if more than 2 1/2 hours has elapsed since initial mixing. Retemper mortar during 2-1/2 hour period as required to restore workability. Do not add air-entraining agents or other admixtures to mortar or grout materials.

PART 3 - EXECUTION

3.1 EXAMINATION: Examine the areas and conditions under which masonry is to be installed. Do not proceed with the work until unsatisfactory conditions have been corrected.

3.2 PREPARATION:

- A. Brick: Wet clay brick having ASTM C67 absorption rates greater than 0.025 oz. per sq. in./minute.
- B. Cleaning Reinforcing: Before placing, remove loose rust, ice and other coatings from reinforcing.

3.3 CONSTRUCTION TOLERANCES:

- A. Variation from Plumb: For vertical lines and surfaces of columns, walls and arrises do not exceed 1/4" in 10', or 3/8" in a story height not to exceed 20', nor 1/2" in 40' or more. For external corner, expansion joints, control joints and other conspicuous lines, do not exceed 1/4" in any story of 20' maximum, nor 1/2" in 40' or more.
- B. Variation from Level: For lines of exposed lintels, sills, parapets, horizontal grooves and other conspicuous lines, do not exceed 1/4" in any bay or 20' maximum, nor 3/4" in 40' or more.
- C. Variation of Linear Building Line: For position shown in plan and related portion of columns, walls, and partitions, do not exceed 1/2" in any bay or 20' maximum, nor 3/4" in 40' or more.
- D. Variation in Cross-Sectional Dimensions: For columns and thickness of walls, from dimensions shown, do not exceed minus 1/4" nor plus 1/2".

3.4 INSTALLATION, GENERAL:

- A. Thickness: Build single wythe walls to actual thickness of masonry units, using units of nominal thickness indicated.
- B. Build chases and recesses as indicated and required for work of other trades. Provide not less than 8" of masonry between chases or recess and jamb openings, and between adjacent chases and recessed.
- C. Leave openings for equipment to be installed before completion of masonry work. After installation of equipment, complete masonry work to match work immediately adjacent to the opening.
- D. Cut masonry units using motor-driven saws to provide clean, sharp, unchipped edges. Cut units as required to fit adjoining work neatly. Use full-side units without cutting wherever possible.
- E. Keep cavities clean of mortar droppings and other materials during wall construction. Strike joints flush facing cavity.
- F. Provide weepholes in exterior wythes of walls located immediately above ledges and flashing, spacing as indicated.

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- G. Flashing: Comply with the manufacturer's instructions for handling and installation of flashing to provide a complete membrane over area to be flashed. Seal projections through sheet and lap and seal seams. Bond as recommended by manufacturer.
 - 1. Do not expose flashing membrane to sunlight for more than 30 days prior to enclosure.
- H. Coordinate work with work of other trades.

3.5 LAYING MASONRY WALLS:

- A. Lay walls plumb and true to comply with specified tolerances, with courses level, accurately spaced and coordinated with other work.
- B. Lay brick with completely filled bed, head and collar joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not slush head joints. Lay in running bond with vertical joint in each course centered on units in course above and below, except where other coursing is indicated.
- C. Do not tooth corners.
- D. Build-in items specified under this and other sections of this specification. Fill in solidly with masonry around built-in items. Fill space between hollow metal frames and masonry solidly with mortar.
- E. Joints: Lay walls with 3/8" joints. Use as dry a mortar mix as practicable and compress joints as much as possible to produce a dense tight joint.
 - 1. Exposed brick joints: **RAKED**.

3.6 ANCHORING MASONRY WORK: Spacing of anchors as indicated or specified, or if not indicated, as directed by Architect.

- A. Anchor single wythe masonry veneer to concrete with specified dovetail anchors and triangles.
- B. At Steel: Place adjustable weld-on anchor for attachment of beam tie at 16" o.c.
- C. At Metal Framing: Anchor single wythe masonry veneer to metal studs backup with specified anchors.
- D. Metal ties anchored to sheathing to be located at 16" on center vertically and 24" on center horizontally and within 8" of a corner or opening.

3.7 CONTROL AND EXPANSION JOINTS: Install vertical expansion control and isolation joints as indicated, at maximum 30' o.c. at long wall runs, and at large openings in wall. Build-in related items as masonry work progresses. Refer to Section 079200 for sealants.

3.8 REPAIR, POINTING AND CLEANING:

- A. Remove and replace masonry units which are loose, chipped, broken, stained or otherwise damaged, or if units do not match adjoining units as intended. Provide new units to match adjoining units and install in fresh mortar or grout, pointed to eliminate evidence of placement.
- B. Pointing: During the tooling of joints, enlarge and voids or holes, except weep holes, and completely fill with mortar. Point-up joints at corners, openings and adjacent work to provide a neat, uniform appearance, properly prepared for application of caulking or sealant compounds.
- C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.

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- D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:
1. Clean masonry with specified masonry cleaner applied according to manufacturer's written instructions.
 2. Clean concrete masonry by cleaning method indicated in NCMA TEK 8-2 applicable to type of stain on exposed surfaces.

END OF SECTION

Bid 22-54,
Appendix A:
City Bid Documents

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SECTION 04 22 00
CONCRETE UNIT MASONRY

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section

1.2 SUMMARY

- A. This section specifies CMU unit masonry; including reinforcing, grout, mortar, placement procedures, and finishes.
- B. Brick veneer is specified in other Division 4 Sections.

1.3 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specifications Sections.
- B. Product Data: Provide data for masonry units, fabricated wire reinforcement, grout, and mortar.
- C. Material Certificates: Include statements of material properties indicating compliance with requirements including compliance with standards and type designations within standards. Provide for each type and size of the following:
 - 1. Masonry units:
 - a. Include material test reports substantiating compliance with requirements.
 - b. For masonry units used in structural masonry, include data and calculations establishing average net-area compressive strength of units.
 - 2. Cementitious materials. Include brand, type, and name of manufacturer.
 - 3. Grout mixes. Include description of type and proportions of ingredients.
 - 4. Reinforcing bars.
 - 5. Joint reinforcement.
 - 6. Anchors, ties, and metal accessories.
- D. Shop Drawings: For the following:
 - 1. Masonry Units: Show sizes, profiles, coursing, and locations of special shapes.
 - 2. Reinforcement: Reinforcing bars, bar positioners, and horizontal joint reinforcement. Detail bending and placement of unit masonry reinforcing bars and joint reinforcement.
 - 3. Accessories: Flashings, weeps, and vents.
- D. Mix Designs: For each type of mortar and grout. Include description of type and proportions of ingredients.
 - 1. Include test reports, per ASTM C 1019, for grout mixes required to comply with compressive strength requirement.
- E. Cold-weather construction procedures evidencing compliance with requirements specified in referenced unit masonry standard.
- F. Hot-weather construction procedures evidencing compliance with requirements specified in referenced unit masonry standard.

1.4 QUALITY ASSURANCE:

- A. Codes and Standards: Provide material and work complying with provisions of ACI 530/ASCE 5/TMS 402 and ACI 530.1/ASCE 6/TMS602, except where exceeded by requirements of the contract documents.

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- B. Manufacture: Obtain each type of unit from one manufacturer, cured by one process, and of uniform texture and color.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver masonry materials to project in undamaged condition.
- B. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install.
- C. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- D. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.
- E. Store masonry reinforcing and accessories in dry locations to prevent corrosion and accumulation of dirt and oil.

1.6 JOB CONDITIONS:

- A. Protect masonry materials during storage and construction from rain, snow or ground water and from spoilage or intermixture with earth or other materials. Do not use metal ties having loose rust or other coatings, including ice, which will reduce or destroy bond.
- B. During erection, cover top of wall with heavy waterproof sheeting at end of each day's work. Cover partially completed structures when work is not in progress. Extend cover a minimum of 24 inches down both sides and hold cover securely in place.
- C. Do not apply uniform floor or roof loading for at least 12 hours after building masonry walls or columns. Do not apply concentrated loads for at least 3 days after building masonry walls or columns.
- D. Prevent grout and mortar from staining the face of masonry to be left exposed. Immediately remove grout and mortar in contact with masonry. Protect sills, ledges and projections from droppings of mortar.
- E. Cold Weather Requirements: Comply with recommendations of IMIABC (CW).
 - 1. Maintain materials and surrounding air temperature to a minimum of 40 degrees F prior to, during, and after completion of masonry work.
 - 2. Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions.
 - 3. Cold Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 degrees F and above and will remain so until masonry has dried, but not less than 7 days after completing cleaning.
- F. Hot Weather Requirements: Comply with IMIABC (HW).
 - 1. Maintain materials and surrounding air temperature to maximum 90 degrees F prior to, during, and 48 hours after completion of masonry work.

PART 2 – PRODUCTS

2.1 CONCRETE MASONRY UNITS:

- A. General:
 - 1. Comply with referenced standards and other specified requirement for each type of masonry unit required.
 - 2. Provide special shapes where required for corners, bonding, cap, and other special conditions.

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B. Concrete Block: Provide units complying with characteristics specified below for grade, type, face size, exposed face, and weight classifications.

1. Hollow Loadbearing Block: ASTM C 90, lightweight.
2. Size: Manufacturer's standard units with nominal face dimensions of 16" long X 8" high X thickness indicated. **(SEE DRAWINGS FOR THICKNESSES)**
3. Type I, moisture-controlled units; cure units to meet specified requirements, including average dry shrinkage of 0.03% when tested in compliance with ASTM C 426.
4. Exposed Face and Finish: **SEE DRAWINGS FOR LOCATIONS AND SIZES AND FINISHES**

2.2 MORTAR AND COLORED GROUT MATERIALS:

COLOR TO BE SELECTED BY ARCHITECT. Provide samples for approval Coloring pigment: Provide pure ground mineral oxides, non-fading and alkali proof, as approved by the Architect.

- A. Portland Cement: ASTM C150 Type I, except Type III may be used for cold weather construction.
- B. Hydrated Lime: ASTM C207, Type S.
- C. Aggregate for Mortar: Sand, conforming to ASTM C144 or ASTM C404, Size No. 2.
- D. Aggregate For Grout: ASTM C404, Size No. 8 or Size No. 89.
- E. Water: Clean drinkable.
- F. Waterproofing: Spray on after installation.

2.3 MASONRY ACCESSORIES:

- A. Steel Reinforcing Bars: ASTM A615/A 615M, Grade 60 (Grade 420).
- B. Dur-O-Wal, AA Wire Products, National, Hohmann & Barnard, or approved equal (except as otherwise specified).
- C. Continuous Masonry Wire Reinforcing:
 1. Provide welded wire units prefabricated in straight lengths of not less than 10', with matching corner and tee units. Fabricate from cold-drawn steel wire complying with ASTM A 82, with deformed continuous side rods and plain cross rods, and a unit width of 1-1/2" to 2' less than thickness of wall or partition. Provide manufacturer's standard mill galvanized finish.
 2. Use truss type fabricated with single pair of 9 gage side rods, and 9 gage continuous diagonal cross rods spaced not more than 16" o.c.
- D. Wall Ties and Anchors:
 1. At Steel: 9" long X 3/4" wide, 12 gage, flat continuous adjustable weld-on anchor, mill galvanized, and 3/16" gage square nosed beam tie, mill galvanized.
 2. At Metal Framing: Hohmann & Barnard DW-10, mill galvanized, 14 gage, with vee wall type, mill galvanized, 1/4" diameter. Attach anchors to metal framing with #10 self tapping corrosion-resistant screws.

2.4 CONCEALED FLASHING:

- A. Nervastral HD or Wasco Type 20. Flexible sheet flashings formulated from virgin polyvinyl chloride with plasticizers and other modifiers to remain flexible and waterproof in concealed masonry applications, black in color; 20 mils thick.

2.5 SEALANT CONTROL JOINTS MATERIALS:

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- A. Specified and furnished in Section 07900, installed under this section. Do not start sealant work until joints and joint preparation has been inspected and approved as acceptable for sealant work.

2.6 WEEPHOLES:

- A. 1/4" X 4" medium density polyethylene tubing.

2.7 MORTAR AND COLORED GROUT MIXTURES: COLOR TO BE SELECTED BY ARCHITECT.

- A. Mortar Mix: Comply with ASTM C 270, Proportion Specification. Provide the following types of mortar for applications stated unless another type is indicated or needed to provide required strength of masonry.
 - 1. For masonry below grade or in contact with earth, use Type M.
 - 2. For exterior masonry above grade, use Type S
- B. Grout Mix: Comply with ASTM C 476.
 - 1. Use grout of type indicated or, if not otherwise indicated, of coarse type that will comply with Table 1.15.1 in ACI 530.1/ASCE 6/TMS 602 for dimensions of grout spaces and pour height.
 - 2. Grout shall develop a compressive strength of 2,000 psi at 28 days.
 - a. Aggregate: Conform to ASTM C 144; maximum size coarse aggregate shall be 1/2 inch.
 - b. Slump: 8 to 11 inches as measured according to ASTM C 143/C 143 M.
- C. Measure and batch materials either by volume or weight, such that required proportions can be accurately controlled and maintained. Measurement of sand exclusive by shovel will not be permitted. Mix mortars with the maximum amount of water consistent with workability to provide maximum tensile bond strength within the capacity of mortar. Mix ingredients for a minimum of 5 minutes in a mechanical mixer. Do not use mortar or grout which has begun to set, or if more than 2-1/2 hours has elapsed since initial mixing. Re-temper mortar during 2-1/2 hour period as required to restore workability. Do not add air-entraining agents or other admixtures to mortar or grout materials.

2.8 MASONRY CLEANERS

- A. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces.
 - 1. Use product expressly approved for intended use by cleaner manufacturer and by manufacturer of masonry units being cleaned.
 - a. Available Manufacturers:
 - 1) Diedrich Technologies, Inc.
 - 2) EaCo Chem, Inc.
 - 3) ProSoCo, Inc.
- B. Proprietary Detergent Cleaners: Manufacturer's standard strength concrete masonry cleaner designed for removing mortar/grout stains from new masonry.
 - 1. Use only products expressly approved by manufacturer of CMU units.
 - a. Available Manufacturers
 - 1) Sure-Klean 600.
 - 2) Vanitrol.

PART 3 – EXECUTION

3.1 EXAMINATION:

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- A. Verify that field conditions are acceptable and ready to receive masonry.
- B. Verify that related items provided by other sections are properly sized and located
- C. Verify that built-in items are in proper location, and ready for roughing into masonry work.

3.2 PREPARATION:

- A. Direct and coordinate place of metal anchors supplied for installation under other sections.
- B. Provide temporary bracing during installation of masonry work.
- C. CMU: Do not wet concrete masonry units.
- D. Cleaning Reinforcing: Before placing, remove loose rust, ice and other coatings from reinforcing.

3.3 COURSING

- A. Establish lines, levels, and coursing indicated. Protect from displacement.
- B. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints to uniform thickness.
- C. CMU:
 - 1. Bond: Running
 - 2. Coursing: One unit and one mortar joint to equal 8 inches.
 - 3. Mortar Joints: Concave.

3.4 CONSTRUCTION TOLERANCES:

- A. Variation from Plumb: For vertical lines and surfaces of columns, walls and arises do not exceed 1/4" in 10', or 3/8" in a story height not to exceed 20', nor 1/2" in 40' or more. For external corners, expansion joints, control joints and other conspicuous lines, do not exceed 1/4" in any story of 20' maximum, nor 1/2" in 40' or more.
- B. Variation from Level: For lines of exposed lintels, sills, parapets, horizontal grooves and other conspicuous lines, do not exceed 1/4" in any bay or 20' maximum, nor 3/4" in 40' or more.
- C. Variation of Linear Building Line: For position shown in plan and related portion of columns, walls and partitions, do not exceed 1/2" in any bay or 20' maximum, not 3/4" in 40' or more.
- D. Variation in Cross-Sectional Dimensions: For columns and thickness of walls, from dimensions shown, do not exceed minus 1/4" nor plus 1/2".

3.5 INSTALLATION, GENERAL:

- A. Thickness: Build single wythe walls to the actual thickness of the masonry units, using units of normal thickness indicated.
- B. Build chases and recesses as indicated or required for the work of other trades. Provide not less than 8" of masonry between chases or recess and jamb openings, and between adjacent chases and recesses.
- C. Leave openings for equipment to be installed before completion of masonry work. After installation of equipment, complete masonry work to match work immediately adjacent to the opening.
- D. Cut masonry units using motor-driven saws to provide clean, sharp, unchipped edges. Cut units as required to fit adjoin work neatly. Use full-size units without cutting wherever possible.
- E. Keep cavities clean of mortar droppings and other materials during wall construction. Strike joints facing cavity flush.

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- F. Provide weepholes in exterior wythes of walls located immediately above ledges and flashing, spaced 16" o.c, unless otherwise indicated.
- G. Flashing:

1. Comply with the manufacturer's instructions for handling and installation of flashing to provide a complete membrane over area to be flashed. Seal projections through sheet and lap and seal seams. Bond as recommended by manufacturer.

3.6 HORIZONTAL JOINT REINFORCING:

- A. Reinforce walls with continuous horizontal reinforcing. Fully embed longitudinal side rods in mortar for their entire length. Lap reinforcement a minimum of 6" at ends of units. Do not bridge control joints with reinforcing. Provide continuity at corners and wall intersections by use of prefabricated "L" and "T" sections. Cut and bend reinforcing as directed by manufacturer for special conditions. Space reinforcing 16" o.c. vertically, except as otherwise specified.
- B. Reinforce masonry openings greater than 12' wide and horizontal joint reinforcing placed in 2 horizontal joints approximately 8" apart, both immediately above the lintel and below the sill. Extend reinforcing a minimum of 2' beyond jambs of opening bridging control joints where provided.

3.06 CONTROL AND EXPANSION JOINTS:

- A. Install vertical expansion control and isolation joints as indicated, and at maximum 30' o.c. at long wall runs, and at large openings in wall. Build-in related items as masonry work progresses. Refer to Section 07900 for sealants.

3.07 REPAIR, POINTING AND CLEANING:

- A. Remove and replace masonry units which are loose, chipped, broken, stained or otherwise damaged, or if units do not match adjoining units as intended. Provide new units to match adjoining units and install in fresh mortar or grout, pointed to eliminate evidence of placement.
- B. Pointing: During the tooling of joints, enlarge any voids or holes, except weep holes, and completely fill with mortar. Point-up joints at corners, openings and adjacent work to provide a neat, uniform appearance, properly prepared for application of caulking or sealant compounds.
- C. Clean exposed CMU masonry by using Sure Klean Masonry Cleaner. Removes concrete splashes, excess mortar, mud, retarders, heavy efflorescence, embedded stains, rust, and surface soiling from textured custom masonry surfaces. Prosoco representative, Lance Escue of M.W. Escue Company, Memphis, TN (901)-758-2381 or mobile (901)-277-9077 or website www.prosoco.com.

3.08 Field Quality Control

- A. The Owner will engage an independent testing agency will perform field quality control inspection and testing indicated on Drawings.

END OF SECTION

SECTION 04 43 13
NATURAL STONE VENEER

PART 1 GENERAL

1.1 SUMMARY

- a. Section Includes:
 - 1) Stone masonry anchored to concrete backup.
 - 2) Stone masonry anchored to unit masonry backup.

1.2 PREINSTALLATION MEETINGS

- a. Preinstallation Conference: Conduct conference at **Project site**.

1.3 ACTION SUBMITTALS

- a. Product Data: For each variety of stone, stone accessory, and manufactured product.
- b. Samples for Initial Selection: For items involving color selection.
- c. Samples for Verification:
 - 1) For each stone type indicated. Include at least **three** Samples in each set and show the full range of color and other visual characteristics in completed Work.

1.4 INFORMATIONAL SUBMITTALS

- a. Qualification Data: For Installer.
- b. List of Materials Used in Constructing Mockups: List generic product names together with manufacturers, manufacturers' product names, supply sources, and other information as required to identify materials used. Include mix proportions for mortar and source of aggregates.
 - 1) Neither receipt of list nor approval of mockups constitutes approval of deviations from the Contract Documents contained in mockups unless Architect approves such deviations in writing.
- c. Material Test Reports:
 - 1) Stone Test Reports: For stone variety proposed for use on Project, by a qualified testing agency, indicating compliance with required physical properties, other than abrasion resistance, according to referenced ASTM standards. Base reports on testing done within previous **five** years.
 - 2) Sealant Compatibility and Adhesion Test Report: From sealant manufacturer indicating that sealants will not stain or damage stone. Include interpretation of test results and recommendations for primers and substrate preparation needed for adhesion.

1.5 QUALITY ASSURANCE

- a. Installer Qualifications: A qualified installer who employs experienced stonemasons and stone fitters.
- b. Mockups: Build mockups to demonstrate aesthetic effects and to set quality standards for materials and execution.
 - 1) Build mockups for **each type of stone masonry** in sizes approximately **48 inches** long by **48 inches** high by full thickness, including face and backup wythes and accessories.
 - a) Include stone coping at top of mockup.

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- b) Include masonry backup wall, veneer anchors, flashing, and weep holes in exterior masonry-veneer wall mockup.
- 2) Protect accepted mockups from the elements with weather-resistant membrane.
- 3) Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.

1.6 PRECONSTRUCTION TESTING

- a. Preconstruction Sealant Compatibility and Adhesion Testing: Submit to joint-sealant manufacturers, for compatibility and adhesion testing according to sealant manufacturer's standard testing methods and Section 079200 "Joint Sealants," Samples of materials that will contact or affect joint sealants.

1.7 DELIVERY, STORAGE, AND HANDLING

- a. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- b. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.
- c. Deliver preblended, dry mortar mix in moisture-resistant containers designed for use with dispensing silos. Store preblended, dry mortar mix in delivery containers on elevated platforms, under cover, in a dry location, or in covered weatherproof dispensing silos.
- d. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.8 FIELD CONDITIONS

- a. Protection of Stone Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed stone masonry when construction is not in progress.
 - 1) Extend cover a minimum of 24 inches down both sides and hold cover securely in place.
- b. Stain Prevention: Immediately remove mortar and soil to prevent them from staining stone masonry face.
 - 1) Protect base of walls from rain-splashed mud and mortar splatter using coverings spread on the ground and over the wall surface.
 - 2) Protect sills, ledges, and projections from mortar droppings.
 - 3) Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
 - 4) Turn scaffold boards near the wall on edge at end of each day to prevent rain from splashing mortar and dirt on completed stone masonry.
- c. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace stone masonry damaged by frost or freezing conditions. Comply with cold-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.
 - 1) Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F and above and will remain so until masonry has dried, but not less than seven days after completing cleaning.
- d. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.

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1.9 COORDINATION

- a. Advise installers of adjacent Work about specific requirements for placement of reinforcement, veneer anchors, flashing, and similar items to be built into stone masonry.
- b. Coordinate locations of dovetail slots installed in concrete that are to receive stone anchors.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- a. Source Limitations for Stone: Obtain stone from single quarry with resources to provide materials of consistent quality in appearance and physical properties.
- b. Source Limitations for Mortar Materials: Obtain mortar ingredients of uniform quality for each cementitious component from single manufacturer and each aggregate from single source or producer.

2.2 NATIVE FIELDSTONE

- a. Material Standards:
 - 1) Maximum Absorption per ASTM C97/C97M: **1.9- 2.8** percent.
 - 2) Minimum Compressive Strength per ASTM C170/C170M: **15,300 psi**.
- b. Varieties and Sources: (Basis-if-design):
 - 1) Schwartz Stone Company, Native Fieldstone, 4" bed depth, ashlar pattern.
 - 2) Rainbow Stone Company, Native Fieldstone, 4" bed depth, ashlar pattern

2.3 MORTAR MATERIALS

- a. Portland Cement: ASTM C150/C150M, Type I or Type II, except Type III may be used for cold-weather construction; natural color or white cement may be used as required to produce mortar color indicated.
 - 1) Low-Alkali Cement: Not more than 0.60 percent total alkali when tested according to ASTM C114.
- b. Hydrated Lime: ASTM C207, Type S.
- c. Portland Cement-Lime Mix: Packaged blend of portland cement and hydrated lime containing no other ingredients.
 - 1) Manufactures: Subject to compliance with requirements, provide products by one of the following:
 - a) Cemex S.A.B. de C.V.
 - b) Lafarge North America Inc.
 - c) Lehigh Hanson: Heidelberg Cement Group
 - d) National Cement Company Inc.
- d. Mortar Cement: ASTM C1329.
 - 1) Manufactures: Subject to compliance with requirements, provide products by one of the following:
 - a) Cemex S.A.B. de C.V.
 - b) Lafarge North America Inc.
 - c) Lehigh Hanson: Heidelberg Cement Group
 - d) National Cement Company Inc.
- e. Aggregate: ASTM C144 and as follows:
 - 1) For pointing mortar, use aggregate graded with 100 percent passing No. 16 sieve.

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- f. Water: Potable.

2.4 VENEER ANCHORS

- a. Materials:
- 1) Stainless Steel Wire: ASTM A580/A580M, **Type 316**.
- b. Size: Sufficient to extend at least halfway, but not less than 1-1/2 inches, through stone masonry and with at least a 5/8-inch cover on exterior face.
- c. Wire Veneer Anchors: Wire ties formed from W1.7 or 0.148-inch diameter, **stainless** steel wire.
- 1) Ties are bent in the form of loops with legs not less than 15 inches in length and with last 2 inches bent at 90 degrees.

2.5 MISCELLANEOUS MASONRY ACCESSORIES

- a. Compressible Filler: Premolded filler strips complying with ASTM D1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from **neoprene**.
- b. Cementitious Dampproofing: Cementitious formulation recommended by ILI and nonstaining to stone, compatible with joint sealants, and noncorrosive to veneer anchors and attachments.
- c. Weep/Vent Products:
- 1) Mesh Weep Holes/Vents: Free-draining mesh; made from polyethylene strands, full width of head joint and 2 inches high by thickness of stone masonry; in color selected from manufacturer's standard.
- d. Setting Buttons: Resilient plastic buttons, nonstaining to stone, sized to suit joint thicknesses and bed depths of stone units without intruding into required depths of pointing materials.

2.6 MASONRY CLEANERS

- a. Cleaner: Use cleaner expressly approved by the stone producer that is designed for removing mortar and grout stains, efflorescence, and other new construction stains from stone masonry surfaces without discoloring or damaging masonry surfaces.

2.7 FABRICATION

- a. **Cut** and **Split** stone to produce pieces of thickness, size, and shape indicated, including details on Drawings and pattern specified in "Setting Stone Masonry" Article.
- 1) Shape stone specified to be laid in three-course, random range ashlar pattern
- b. Dress joints (bed and vertical) straight and at right angle to face unless otherwise indicated. Shape beds to fit supports.
- c. Cut and drill sinkages and holes in stone for anchors and supports.
- d. Carefully inspect stone at quarry or fabrication plant for compliance with requirements for appearance, material, and fabrication. Replace defective units before shipment.
- 1) Clean sawed backs of stone to remove rust stains and iron particles.
- e. Thickness of Stone: Provide thickness indicated, but not less than the following:
- 1) Thickness: 4 inches plus or minus 1/4 inch
- f. Finish exposed stone faces and edges to comply with requirements indicated for finish and to match approved samples **and mockups**.
- 1) Finish: **Mixed split face and seam face**.
 - a) Finish exposed ends of copings same as front and back faces.

2.8 MORTAR MIXES

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- a. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures, unless otherwise indicated.
 - 1) Do not use calcium chloride.
 - 2) Use **portland cement-lime or mortar cement** mortar unless otherwise indicated.
- b. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in the form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.
- c. Mortar for Stone Masonry: Comply with ASTM C270, **Property** Specification.
 - 1) Mortar for Setting Stone: **Type N**.

PART 3 EXECUTION

3.1 EXAMINATION

- a. Examine surfaces indicated to receive stone masonry, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of stone masonry.
- b. Examine substrate to verify that dovetail slots, inserts, reinforcement, veneer anchors, flashing, and other items installed in substrates and required for or extending into stone masonry are correctly installed.
- c. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- a. Coat concrete and unit masonry backup with asphalt dampproofing.
- b. Clean dirty or stained stone surfaces by removing soil, stains, and foreign materials before setting. Clean stone by thoroughly scrubbing with fiber brushes and then drenching with clear water. Use only mild cleaning compounds that contain no caustic or harsh materials or abrasives.

3.3 SETTING STONE MASONRY

- a. Perform necessary field cutting and trimming as stone is set.
 - 1) Use power saws to cut stone that is fabricated with saw-cut surfaces. Cut lines straight and true, with edges eased slightly to prevent snipping.
 - 2) Use hammer and chisel to split stone that is fabricated with split surfaces. Make edges straight and true, matching similar surfaces that were shop or quarry fabricated.
- b. Sort stone before it is placed in wall to remove stone that does not comply with requirements relating to aesthetic effects, physical properties, or fabrication, or that is otherwise unsuitable for intended use.
- c. Arrange stones in range ashlar pattern with course heights as indicated, **random** lengths, and uniform joint widths, with offset between vertical joints as indicated.
- d. Arrange stones with color and size variations uniformly dispersed for an evenly blended appearance.
- e. Install supports, fasteners, and other attachments indicated or necessary to secure stone masonry in place.
- f. Set stone accurately in locations indicated with edges and faces aligned according to established relationships and indicated tolerances.

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- g. Install steel lintels where indicated. Provide minimum bearing of 8 inches at each jamb unless otherwise indicated.
- h. Maintain uniform joint widths except for variations due to different stone sizes and where minor variations are required to maintain bond alignment if any. Lay walls with joints not less than **3/8 inch** at narrowest points or more than **1/2 inch** at widest points.
- i. Provide sealant joints of widths and at locations indicated.
 - 1) Keep sealant joints free of mortar and other rigid materials.
 - 2) Sealant joints are specified in Section 079200 "Joint Sealants."
- j. Install embedded flashing **and weep holes** at shelf angles, lintels, ledges, other obstructions to downward flow of water in wall, and where indicated.
- k. Place weep holes and vents in joints where moisture may accumulate, including at base of cavity walls, above shelf angles, and at flashing.

3.4 INSTALLATION OF ANCHORED STONE MASONRY

- a. Anchor stone masonry to unit masonry with wire anchors unless otherwise indicated. Connect anchors to masonry joint reinforcement with vertical rods inserted through anchors and through eyes of masonry joint reinforcement projecting from unit masonry.
- b. Embed veneer anchors in mortar joints of stone masonry at least halfway, but not less than 1-1/2 inches, through stone masonry and with at least a 5/8-inch cover on exterior face.
- c. Space anchors not more than 16 inches o.c. vertically and 24 inches o.c. horizontally. Install additional anchors within 12 inches of openings, sealant joints, and perimeter at intervals not exceeding 12 inches.
- d. Set stone in full bed of mortar with full head joints unless otherwise indicated. Build anchors into mortar joints as stone is set.
- e. Fill **space between back of stone masonry and backup masonry wall** with mortar as stone is set.

3.5 ADJUSTING AND CLEANING

- a. Remove and replace stone masonry of the following description:
 - 1) Broken, chipped, stained, or otherwise damaged stone. Stone may be repaired if methods and results are approved by Architect.
 - 2) Defective joints.
 - 3) Stone masonry not matching approved samples and mockups.
 - 4) Stone masonry not complying with other requirements indicated.
- b. Replace in a manner that results in stone masonry matching approved samples and mockups, complying with other requirements, and showing no evidence of replacement.
- c. In-Progress Cleaning: Clean stone masonry as work progresses. Remove mortar fins and smears before tooling joints.
- d. Final Cleaning: After mortar is thoroughly set and cured, clean stone masonry as follows:
 - 1) Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
 - 2) Test cleaning methods on mockup; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before cleaning stone masonry.
 - 3) Protect adjacent stone and nonmasonry surfaces from contact with cleaner by covering them with liquid strippable masking agent, polyethylene film, or waterproof masking tape.
 - 4) Wet wall surfaces with water before applying cleaner; remove cleaner promptly by rinsing thoroughly with clear water.

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- 5) Clean stone masonry with proprietary cleaner applied according to manufacturer's written instructions.

3.6 EXCESS MATERIALS AND WASTE

- a. Excess Stone: Stack excess stone where directed by Owner for Owner's use.
- b. Excess Masonry Waste: Remove excess clean masonry waste, and legally dispose of off Owner's property.

END OF SECTION

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SECTION 05 12 00
STRUCTURAL STEEL FRAMING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Structural steel framing members.
- B. Base plates, shear stud connectors and expansion joint plates.
- C. Grouting under base plates.

1.02 RELATED REQUIREMENTS

- A. Section 05 12 13 - Architecturally-Exposed Structural Steel Framing: Additional requirements for structural steel members designated as architecturally-exposed structural steel (AESS).
- B. Section 05 31 00 - Steel Decking: Support framing for small openings in deck.
- C. Section 05 50 00 - Metal Fabrications: Steel fabrications affecting structural steel work.

1.03 REFERENCE STANDARDS

- A. AISC (MAN) - Steel Construction Manual; 2017.
- B. AISC 303 - Code of Standard Practice for Steel Buildings and Bridges; 2016.
- C. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2014.
- D. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2018.
- E. ASTM A108 - Standard Specification for Steel Bar, Carbon and Alloy, Cold Finished; 2013.
- F. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2017.
- G. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2016a.
- H. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength; 2014 (Editorial 2017).
- I. ASTM A500/A500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes; 2013.
- J. ASTM A563 - Standard Specification for Carbon and Alloy Steel Nuts; 2015.
- K. ASTM A563M - Standard Specification for Carbon and Alloy Steel Nuts (Metric); 2007 (Reapproved 2013).
- L. ASTM A992/A992M - Standard Specification for Structural Steel Shapes; 2011 (Reapproved 2015).
- M. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength; 2017.
- N. ASTM E164 - Standard Practice for Contact Ultrasonic Testing of Weldments; 2013.
- O. ASTM E165/E165M - Standard Test Method for Liquid Penetrant Examination for General Industry; 2012.
- P. ASTM F3125/F3125M - Standard Specification for High Strength Structural Bolts, Steel and Alloy Steel, Heat Treated, 120 ksi (830 MPa) and 150 ksi (1040 MPa) Minimum Tensile Strength, Inch and Metric Dimensions; 2015a.
- Q. ASTM F436/F436M - Standard Specification for Hardened Steel Washers Inch and Metric Dimensions; 2016.
- R. ASTM F1554 - Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength; 2015, with Editorial Revision (2018).
- S. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination; 2012.

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- T. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2015, with Errata (2016).
- U. RCSC (HSBOLT) - Specification for Structural Joints Using High-Strength Bolts; Research Council on Structural Connections; 2014, with Errata (2015).
- V. SSPC-Paint 15 - Steel Joist Shop Primer/Metal Building Primer; 1999 (Ed. 2004).
- W. SSPC-SP 3 - Power Tool Cleaning; 1982, with Editorial Revision (2004).

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings:
 - 1. Indicate profiles, sizes, spacing, locations of structural members, openings, attachments, and fasteners.
 - 2. Indicate welded connections with AWS A2.4 welding symbols. Indicate net weld lengths.
- C. Manufacturer's Mill Certificate: Certify that products meet or exceed specified requirements.
- D. Mill Test Reports: Indicate structural strength, destructive test analysis and non-destructive test analysis.
- E. Fabricator Test Reports: Comply with ASTM A1011/A1011M.
- F. Welders Certificates: Certify welders employed on the Work, verifying AWS qualification within the previous 12 months.
- G. Fabricator's Qualification Statement: Provide documentation showing steel fabricator is certified to AISC "Standard for Building Structures"

1.05 QUALITY ASSURANCE

- A. Fabricate structural steel members in accordance with AISC (MAN) "Steel Construction Manual."
- B. Structural steel members designated as architecturally-exposed structural steel (AESS) to also comply with Section 05 12 13.
- C. Fabricator Qualifications: A qualified fabricator who participates in the AISC Certification program and is designated an AISC Certified Plant, Category BU at time of bid.
- D. Erector: Company specializing in performing the work of this section with minimum 5 years of documented experience.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Steel Angles and Plates: ASTM A36/A36M.
- B. Steel W Shapes and Tees: ASTM A992/A992M.
- C. Cold-Formed Structural Tubing: ASTM A500/A500M, Grade B.
- D. Pipe: ASTM A53/A53M, Grade B, Finish black.
- E. Shear Stud Connectors: Made from ASTM A108 Grade 1015 bars.
- F. High-Strength Structural Bolts, Nuts, and Washers: ASTM F3125/F3125M, Type 1, with matching compatible ASTM A563 or ASTM A563M nuts and ASTM F436/F436M washers.
- G. Tension Control Bolts: Twist-off type; ASTM F3125/F3125M.
- H. Unheaded Anchor Rods: ASTM F1554, Grade 36, plain, with matching ASTM A563 or ASTM A563M nuts and ASTM F436/F436M Type 1 washers.
- I. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.
- J. Grout: ASTM C1107/C1107M; Non-shrink; premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents.
 - 1. Minimum Compressive Strength at 48 Hours: 2,000 pounds per square inch.
 - 2. Minimum Compressive Strength at 28 Days: 7,000 pounds per square inch.

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- K. Shop and Touch-Up Primer: Fabricator's standard, complying with VOC limitations of authorities having jurisdiction.
- L. Touch-Up Primer for Galvanized Surfaces: Fabricator's standard, complying with VOC limitations of authorities having jurisdiction.

2.02 FABRICATION

- A. Shop fabricate to greatest extent possible.
- B. Continuously seal joined members by continuous welds. Grind exposed welds smooth.
- C. Fabricate connections for bolt, nut, and washer connectors.

2.03 FINISH

- A. Prepare structural component surfaces in accordance with SSPC-SP 3.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that conditions are appropriate for erection of structural steel and that the work may properly proceed.

3.02 ERECTION

- A. Erect structural steel in compliance with AISC 303.
- B. Allow for erection loads, and provide sufficient temporary bracing to maintain structure in safe condition, plumb, and in true alignment until completion of erection and installation of permanent bracing.
- C. Do not field cut or alter structural members without approval of Architect.
- D. After erection, prime welds, abrasions, and surfaces not shop primed, except surfaces to be in contact with concrete.
- E. Grout solidly between column plates and bearing surfaces, complying with manufacturer's instructions for nonshrink grout. Trowel grouted surfaces smooth, splaying neatly to 45 degrees.

3.03 TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch per story, non-cumulative.
- B. Maximum Offset From True Alignment: 1/4 inch.

3.04 FIELD QUALITY CONTROL

- A. An independent testing agency will perform field quality control inspection and testing as indicated on Drawings.

END OF SECTION

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SECTION 05 21 00
STEEL JOIST FRAMING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Open web steel joists and shear stud connectors, with bridging, attached seats and anchors.
- B. Loose bearing members, such as plates or angles, and anchor bolts for site placement.
- C. Supplementary framing for floor and roof openings greater than 18 inches.

1.02 RELATED REQUIREMENTS

- A. Section 05 12 00 - Structural Steel Framing: Superstructure framing.
- B. Section 05 31 00 - Steel Decking: Support framing for openings less than 18 inches in decking.

1.03 REFERENCE STANDARDS

- A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2014.
- B. ASTM A108 - Standard Specification for Steel Bar, Carbon and Alloy, Cold Finished; 2013.
- C. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2017.
- D. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2016a.
- E. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength; 2014 (Editorial 2017).
- F. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2015, with Errata (2016).
- G. SJI (SPEC) - Catalog of Standard Specifications and Load Tables for Steel Joists and Joist Girders; Steel Joist Institute; 2011.
- H. SJI Technical Digest No. 9 - Handling and Erection of Steel Joists and Joist Girders; Steel Joist Institute; 2008.
- I. SSPC-Paint 15 - Steel Joist Shop Primer/Metal Building Primer; 1999 (Ed. 2004).
- J. SSPC-SP 3 - Power Tool Cleaning; 1982, with Editorial Revision (2004).

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate standard designations, joist coding, configurations, sizes, spacings, cambers, locations of joists, joist leg extensions, bridging, and connections.
- C. Welders' Certificates: Submit manufacturer's certificates, certifying welders employed on the Work, verifying AWS qualification within the previous 12 months.

1.05 QUALITY ASSURANCE

- A. Design connections not detailed on the drawings under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the jurisdiction where the project is located.
- B. Joists shall be designed for the uplift load indicated on the Drawings. Additional bridging / bracing required shall be indicated on the shop drawings.
- C. Perform Work, including that for headers and other supplementary framing, in accordance with SJI Standard Specifications Load Tables and SJI Technical Digest No.9.

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- D. Manufacturer Qualifications: Company specializing in performing the work of this section with minimum five years documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Transport, handle, store, and protect products to SJI requirements.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Steel Joists:
 - 1. Any member of the SJI

2.02 MATERIALS

- A. Open Web Joists: SJI Type K Joists:
 - 1. Provide bottom and top chord extensions as indicated.
 - 2. Finish: primed
- B. Anchor Bolts, Nuts and Washers: ASTM A 307, hot-dip galvanized per ASTM A 153/A 153M, Class C.
- D. Structural Steel For Supplementary Framing and Joist Leg Extensions: ASTM A 36/A 36M.
- E. Welding Materials: AWS D1.1; type required for materials being welded.
- F. Shop and Touch-Up Primer: Fabricator's standard, complying with VOC limitations of authorities having jurisdiction.

2.03 FABRICATION

- A. Fabrication shall be done only from shop drawings that have been approved by the Engineer.

2.04 FINISH

- A. Shop primed joists as specified.
- B. Prepare structural component surfaces in accordance with SSPC-SP 3.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions prior to beginning work.

3.02 ERECTION

- A. Erect joists with correct bearing on supports.
- B. Allow for erection loads. Provide sufficient temporary bracing to maintain framing safe, plumb, and in true alignment.
- C. Coordinate the placement of anchors for securing loose bearing members furnished as part of the work of this section.
- D. After joist alignment and installation of framing, field weld joist seats to steel bearing surfaces.
- E. After joist alignment and installation of framing, field weld joist seats to bearing plates.

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- F. Position and field weld joist chord extensions and wall attachments as detailed.
- G. Install supplementary framing for floor and roof openings greater than 18 inches.
- H. Do not permit erection of decking until joists are braced bridged, and secured or until completion of erection and installation of permanent bridging and bracing.
- I. Do not field cut or alter structural members without approval of joist manufacturer.

3.03 TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch.
- B. Maximum Offset From True Alignment: 1/4 inch.

3.04 FIELD QUALITY CONTROL

- A. An independent testing agency will perform field quality control inspections.

END OF SECTION

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SECTION 05 31 00
STEEL DECKING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Roof deck.
- C. Supplementary framing for openings up to and including 18 inches.

1.02 RELATED REQUIREMENTS

- C. Section 05 12 00 - Structural Steel Framing: Support framing for openings larger than 18 inches and shear stud connectors.
- D. Section 05 12 00 - Structural Steel Framing: Placement of embedded steel anchors for bearing plates in cast-in-place concrete.
- E. Section 05 50 00 - Metal Fabrications: Steel angle concrete stops at deck edges.

1.03 REFERENCE STANDARDS

- A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2014.
- B. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2017.
- C. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2017.
- D. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2015, with Errata (2016).
- E. AWS D1.3/D1.3M - Structural Welding Code - Sheet Steel; 2018.
- F. ICC-ES AC708 - Acceptance Criteria for Fasteners Power Driven into Concrete, Steel and Masonry Elements; 2016.
- G. SDI (DM) - Publication No.30, Design Manual for Composite Decks, Form Decks, and Roof Decks; 2007.
- H. SSPC-Paint 20 - Zinc-Rich Primers (Type I, "Inorganic," and Type II, "Organic"); 2002 (Ed. 2004).

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittals procedures.
- B. Shop Drawings: Indicate deck plan, support locations, projections, openings, reinforcement, pertinent details, and accessories.
- C. Product Data: Provide deck profile characteristics, dimensions, structural properties, and finishes.
- D. Certificates: Certify that products furnished meet or exceed specified requirements.
- E. Submit manufacturer's installation instructions.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing the work of this Section approved by manufacturer.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Cut plastic wrap to encourage ventilation.

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- B. Separate sheets and store deck on dry wood sleepers; slope for positive drainage.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Steel Deck:
 - 1. Any good standing member of Steel Deck Institute.

2.02 STEEL DECK

- A. Roof Deck: Non-composite type, fluted steel sheet:
 - 1. Galvanized Steel Sheet: ASTM A653/A653M, Structural Steel (SS) Grade 33/230, with G90/Z275 galvanized coating.

2.03 ACCESSORY MATERIALS

- A. Powder Actuated Mechanical Fasteners: Steel, with knurled shank and forged ballistic point. Comply with applicable requirements of ICC-ES AC70.
- B. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20, complying with VOC limitations of authorities having jurisdiction.
- C. Flute Closures: Closed cell foam rubber, 1 inch thick; profiled to fit tight to the deck.

2.04 FABRICATED DECK ACCESSORIES

- A. Sheet Metal Deck Accessories: Metal closure strips, wet concrete stops, and cover plates, 22 gage, 0.0299 inch thick sheet steel; of profile and size as indicated; finished same as deck.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions prior to beginning work.

3.02 INSTALLATION

- A. Erect metal deck in accordance with SDI Design Manual and manufacturer's instructions. Align and level.
- B. On concrete and masonry surfaces provide minimum 4 inch bearing.
- C. On steel supports provide minimum 1-1/2 inch bearing.
- D. Placing Deck Units:
 - 1. Position deck units on supporting steel framework and adjust to final position with ends bearing on supporting members and accurately aligned end to end before being permanently fastened.
 - 2. Lap ends not less than 2 1/2 inches. Laps shall occur at a support.
 - 3. Do not stretch or compress the side lap interlocks.
 - 4. Place deck units flat and square, secure to adjacent framing without warp or deflection.
- E. Fastening Deck units
 - 1. Secure deck units to supporting members with fasteners and spacings as noted on structural drawings.

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2. Fasten side laps between each support as noted on structural drawings.
- F. At deck openings from 6 inches to 18 inches in size, provide 2 by 2 by 1/4 inch steel angle reinforcement. Place angles perpendicular to flutes; extend minimum two flutes beyond each side of opening and fusion weld to deck at each flute.
- G. At deck openings greater than 18 inches in size, provide steel angle reinforcement. as specified in Section 05 12 00.
- I. At openings between deck and walls, columns, and openings, provide sheet steel closures and angle flashings to close openings.
- J. Close openings above walls and partitions perpendicular to deck flutes with single row of foam cell closures.
- K. Immediately after welding deck and other metal components in position, coat welds, burned areas, and damaged surface coating, with touch-up primer.

3.03 SPECIAL INSPECTIONS

- A. An independent testing agency will perform field quality control inspection and testing as indicated on drawings.

END OF SECTION

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SECTION 05 40 00
COLD-FORMED METAL FRAMING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Formed steel stud exterior wall and interior wall framing.
- B. Exterior wall sheathing.
- C. Water-resistive barrier over sheathing.

1.02 RELATED REQUIREMENTS

- A. Section 04 20 01 - Masonry Veneer: Veneer masonry supported by wall stud metal framing.
- B. Section 04 42 00 - Exterior Stone Cladding: Stone veneer supported by wall stud metal framing.
- C. Section 05 31 00 - Steel Decking.
- D. Section 06 10 00 - Rough Carpentry: Wood blocking and miscellaneous framing.
- E. Section 06 10 00 - Rough Carpentry: Roof and wall sheathing.
- F. Section 07 21 00 - Thermal Insulation: Insulation within framing members.
- G. Section 07 25 00 - Weather Barriers: Weather barrier over sheathing.
- H. Section 07 62 00 - Sheet Metal Flashing and Trim: Head and sill flashings.
- I. Section 07 92 00 - Joint Sealants.
- J. Section 09 21 16 - Gypsum Board Assemblies: Lightweight, non-load bearing metal stud framing.
- K. Section 09 21 16 - Gypsum Board Assemblies: Gypsum-based sheathing.
- L. Section 09 22 16 - Non-Structural Metal Framing.
- M. Section 09 51 00 - Acoustical Ceilings: Ceiling suspension system.

1.03 REFERENCE STANDARDS

- A. AISI S100-12 - North American Specification for the Design of Cold-Formed Steel Structural Members; American Iron and Steel Institute; 2012.
- B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2016a.
- C. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2017.
- D. ASTM A1003/A1003M - Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-coated for Cold-Formed Framing Members; 2015.
- E. ASTM A1008/A1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable; 2016.
- F. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength; 2017.
- G. ASTM C955 - Standard Specification for Load-Bearing (Transverse and Axial) Steel Studs, Runners (Tracks), and Bracing or Bridging for Screw Application of Gypsum Panel Products and Metal Plaster Bases; 2017.
- H. ASTM C1007 - Standard Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories; 2011a (Reapproved 2015).
- I. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2015, with Errata (2016).

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- J. PS 1 - Structural Plywood; 2009.
- K. SSPC-Paint 20 - Zinc-Rich Primers (Type I, "Inorganic," and Type II, "Organic"); 2002 (Ed. 2004).

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate with work of other sections that is to be installed in or adjacent to the metal framing system, including but not limited to structural anchors, cladding anchors, utilities, insulation, and firestopping.

1.05 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on standard framing members; describe materials and finish, product criteria, limitations.
- C. Product Data: Provide manufacturer's data on factory-made framing connectors, showing compliance with requirements.
- D. Shop Drawings: Indicate component details, framed openings, bearing, anchorage, loading, welds, and type and location of fasteners, and accessories or items required of related work.
 - 1. Indicate stud and ceiling joist layout.
 - 2. Describe method for securing studs to tracks and for bolted framing connections.
- E. Manufacturer's Installation Instructions: Indicate special procedures, conditions requiring special attention.

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the types of products specified in this section, and with minimum three years of documented experience.
- B. Installer Qualifications: Company specializing in performing the work of this section with minimum three years documented experience.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Metal Framing:
 - 1. ClarkDietrich Building Systems; _____: www.clarkdietrich.com/#sle.
 - 2. Marino; ____: www.marinoware.com/#sle.
 - 3. The Steel Network, Inc; ____: www.SteelNetwork.com/#sle.
 - 4. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Framing Connectors and Accessories:
 - 1. ClarkDietrich Building Systems; _____: www.clarkdietrich.com/#sle.
 - 2. Simpson Strong Tie; ____: www.strongtie.com/#sle.
 - 3. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 FRAMING SYSTEM

- A. Provide primary and secondary framing members, bridging, bracing, plates, gussets, clips, fittings, reinforcement, and fastenings as required to provide a complete framing system.

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2.03 FRAMING MATERIALS

- A. Studs and Track: ASTM C955; studs formed to channel, "C", or "Sigma" shape with punched web; U-shaped track in matching nominal width and compatible height.
 - 1. Gage and Depth: As indicated on drawings.
 - 2. Galvanized in accordance with ASTM A653/A653M, G90/Z275 coating.
 - 3. Provide components fabricated from ASTM A1008/A1008M, Designation SS (structural steel).
- B. Framing Connectors: Factory-made, formed steel sheet.
 - 1. Material: ASTM A653/A653M SS Grade 40 (minimum), with G90/Z275 hot dipped galvanized coating for base metal thickness less than 10 gage, 0.1345 inch, and factory punched holes and slots.
 - 2. Structural Performance: Maintain load and movement capacity required by applicable code, when evaluated in accordance with AISI S100-12.
 - 3. Movement Connections: Provide mechanical anchorage devices that accommodate movement using slotted holes, shouldered screws or screws and anti-friction or stepped bushings, while maintaining structural performance of framing. Provide movement connections where indicated on drawings.
 - a. Where top of stud wall terminates below structural floor or roof, connect studs to structure in manner allowing vertical movement of slab without affecting studs; allow for minimum movement of 1/2 inch.
 - b. Provide top track preassembled with connection devices spaced to fit stud spacing indicated on drawings; minimum track length of 12 feet.
 - 4. Fixed Connections: Provide non-movement connections for tie-down to foundation, floor-to-floor tie-down, roof-to-wall tie-down, joist hangers, gusset plates, and stiffeners.
 - 5. Wall Stud Bridging Connections: Provide mechanical load-transferring devices that accommodate wind load torsion and weak axis buckling induced by axial compression loads. Provide bridging connections where indicated on the drawings.

2.04 FASTENERS

- A. Self-Drilling, Self-Tapping Screws, Bolts, Nuts and Washers: Hot dip galvanized per ASTM A153/A153M.
 - 1. Products:
 - a. ITW Commercial Construction North America; ITW CCNA-Buildex Tek's Select Series; _____: www.ITWBuildex.com/#sle.
 - b. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Anchorage Devices: Powder actuated.

2.05 WALL SHEATHING

- A. Plywood; PS 1, Grade C-D, Exposure I.
- B. Gypsum Board Wall Sheathing: See Section 09 21 16.

2.06 ACCESSORIES

- A. Bracing, Furring, Bridging: Formed sheet steel, thickness determined for conditions encountered; finish to match framing components.

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- B. Plates, Gussets, Clips: Formed Sheet Steel, thickness determined for conditions encountered; finish to match framing components.
- C. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20, Type I - Inorganic, complying with VOC limitations of authorities having jurisdiction.
- D. Water-Resistive Barrier: As specified in Section 07 25 00.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that substrate surfaces are ready to receive work.
- B. Verify field measurements and adjust installation as required.

3.02 INSTALLATION OF STUDS

- A. Install components in accordance with manufacturers' instructions and ASTM C1007 requirements.
- B. Align floor and ceiling tracks; locate to wall layout. Secure in place with fasteners at maximum 24 inches on center. Coordinate installation of sealant with floor and ceiling tracks.
- C. Place studs at 16 inches on center; not more than 2 inches from abutting walls and at each side of openings. Connect studs to tracks using clip and tie method.
- D. Construct corners using minimum of three studs. Install double studs at wall openings, door and window jambs.
- E. Install load bearing studs full length in one piece. Splicing of studs is not permitted.
- F. Install load bearing studs, brace, and reinforce to develop full strength and achieve design requirements.
- G. Coordinate placement of insulation in multiple stud spaces made inaccessible after erection.
- H. Install intermediate studs above and below openings to align with wall stud spacing.
- I. Provide deflection allowance in stud track, directly below horizontal building framing at non-load bearing framing.
- J. Attach cross studs to studs for attachment of fixtures anchored to walls.
- K. Install framing between studs for attachment of mechanical and electrical items, and to prevent stud rotation.
- L. Touch-up field welds and damaged galvanized surfaces with primer.

3.03 INSTALLATION OF WALL SHEATHING

- A. Install wall sheathing with long dimension perpendicular to wall studs, with ends over firm bearing and staggered, using self-tapping screws.
 - 1. Provide plywood wall sheathing at least 48 inches wide at building corners, measured horizontally.
 - 2. Place water-resistive barrier horizontally over wall sheathing, weather lapping edges and ends.

3.04 TOLERANCES

- A. Maximum Variation from True Position: 1/8 inch in 10 feet (3 meters).
- B. Maximum Variation of any Member from Plane: 1/8 inch in 10 feet (3 meters).

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3.05 FIELD QUALITY CONTROL

- A. An independent testing agency will perform field quality control inspection and testing as indicated on Drawings.

END OF SECTION

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SECTION 05 50 00
METAL FABRICATION AND MISCELLANEOUS METALS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. The types of miscellaneous metal items include, but are not limited to the following:
1. Rough hardware and anchorage
 2. Loose bearing plates
 3. Loose steel lintels
 4. Shelf and relieving angles
 5. Miscellaneous framing and supports where framing and supports are not specified in other sections
 6. Pipe bollards

1.2 SUBMITTALS

- A. Submit manufacturer's specifications, anchor details and installation instructions for products to be used in the fabrication of miscellaneous metal work, including paint products.
- B. Submit shop drawings for fabrication and erection of each metal fabrication. Include plans, elevations, sections and details of metal fabrications and their connections. Show anchorage and accessory items. Provide templates for anchor and bolt installation.
- C. Welder certificates signed by Contractor certifying that welders comply with requirements under "Quality Assurance" article.

1.3 QUALITY ASSURANCE

- A. Shop Assembly: Preassemble items in shop to greatest extent possible to minimize field splicing and assembly. Disassemble units as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.
- B. References to ASTM and Federal standards shall mean the latest edition of that standard.
- C. Welding Standards: Comply with applicable provisions of AWS D1.1 "Structural Welding Code - Steel," AWS D1.2 "Structural Welding Code - Aluminum," and AWS D1.3 "Structural Welding Code - Sheet Steel."
1. Certify that each welder has satisfactorily passed AWS qualification tests for welding processes involved and, if pertinent, has undergone recertification.

1.4 PROJECT CONDITIONS

- A. Field Measurements: Check actual locations of walls and other construction to which metal fabrications must fit by accurate field measurements before fabrication. Show recorded measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
1. Where field measurements cannot be made without delaying the Work, guarantee dimensions and proceed with fabricating products without field measurements. Coordinate construction to ensure that actual dimensions correspond to guaranteed dimensions. Allow for trimming and fitting.

1.5 PRODUCT DELIVERY, STORAGE AND HANDLING

Materials shall be delivered to the site in a dry and undamaged condition, stored out of contact with the ground, and under a watertight covering, permitting good air circulation. Red lead primer touch-up paint shall be used wherever necessary to prevent formation of rust on ferrous metal items.

PART 2 - PRODUCTS

2.1 MATERIALS AND COMPONENTS

- A. Metal Surfaces, General: For metal fabrications exposed to view upon completion of the Work, provide materials selected for their surface flatness, smoothness, and freedom from surface blemishes. Do not use materials whose exposed surfaces exhibit pitting, seam marks, roller marks, rolled trade names, roughness, and, for steel sheet, variations in flatness exceeding those permitted by reference standards for stretcher-leveled sheet.
- B. Steel Plates, Shapes and Bars: ASTM A 36.
- C. Steel Plates to be Bent or Cold Formed: ASTM A 283, Grade C.
- D. Steel Tubing: Hot-formed, welded or seamless, ASTM A 501.
 - 1. For exterior installations, provide tubing with hot-dip galvanized coating per ASTM A 53.
- E. Steel Bars and Bar-Size Shapes: ASTM A 306, Grade 65, or ASTM A 36.
- F. Cold-Finished Steel Bars: ASTM A 108, grade as selected by fabricator.
- G. Cold-Rolled Carbon Steel Sheets: ASTM A 366.
- H. Galvanized Carbon Steel Sheets: ASTM A 526, with ASTM A 525, G 90 zinc coating.
- I. Gray Iron Castings: ASTM A 48, Class 30.
- J. Malleable Iron Castings: ASTM A 47, grade 32510.
- K. Steel Pipe: ASTM A-53; Type S, Grade A; Schedule 40, black finish unless galvanizing is indicated.
- L. Cast-in-Place Anchors in Concrete: Anchors of type indicated below, fabricated from corrosion-resistant materials capable of sustaining, without failure, the load imposed within a safety factor of 4, as determined by testing per ASTM E 488, conducted by a qualified independent testing agency.
 - 1. Threaded or wedge type; galvanized ferrous castings, either ASTM A 47 malleable iron or ASTM A 27 cast steel. Provide bolts, washers, and shims as required, hot-dip galvanized per ASTM A 153.
- M. Welding Rods and Bare Electrodes: Select according to AWS specifications for the metal alloy to be welded.
- N. Nonshrink Nonferrous Grout: CE CRD-C 621-81.
- O. Steel Wire Rope: ASTM A 475; zinc-coated steel wire strand; size and number of wires as shown. Provide "Common" grade with Class B zinc-coating.
- P. Aluminum:
 - 1. Extruded Shapes and Tubes: ASTM B 221 or B 308.
 - 2. Extruded Pipe: ASTM B 429.
 - 3. Plate & Sheet: ASTM B 209, alloy 3003-H16. Use alloy 5005-H16 where anodic coating will be applied.
 - 4. Bars, Rods and Wire: ASTM B 211.

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5. Seamless tube: ASTM B 210.
6. Castings: ASTM B 26 or B 108; alloy 214 for natural anodized finish, and alloy 43 for color anodized or baked enamel finish.
7. Forgings: ASTM B 247, alloy 6061-T6.
- Q. Stainless Steel:
 1. Type: AISI Type 302/304.
 2. Bar Stock: ASTM A 276, Type 302/304.
 3. Plate: ASTM A 167, Type 302/304.
 4. Tube: ASTM A 269.
 5. Castings: ASTM A 296, iron-chromium-nickel alloy.

2.2 FASTENERS

- A. General: Provide plated fasteners complying with ASTM B 633, Class Fe/Zn 25 for electrodeposited zinc coating, for exterior use and where built into exterior walls. Select fasteners for the type, grade and class required.
- B. Bolts and Nuts: Regular hexagon head type, ASTM A 307, Grade A, with hex nuts, ASTM A 563 and flat washers.
- C. Lag Bolts: ANSI B18.2.1
- D. Machine Screws: Cadmium plated steel, ANSI B18.6.3.
- E. Wood Screws: Flat head carbon steel, ANSI B18.6.1.
- F. Plain Washers: Round, carbon steel, ANSI B18.22.1.
- G. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capacity to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing agency.
 1. Material: Carbon steel components zinc-plated to comply with ASTM B 633, Class Fe/Zn 5.
 2. Material: Group 1 alloy 304 or 316 stainless-steel bolts and nuts complying with ASTM F 593 and ASTM F 594.
- H. Toggle Bolts: Tumble-wing type, FS FF-B-588, type, class and style as required.
- I. Lock Washers: Helical spring type carbon steel, ANSI B18.21.1.

2.3 PAINT

- A. Shop Primer for Ferrous Metal: Manufacturer's or Fabricators fast-curing, lead and chromate-free, "universal" modified alkyd primer selected for good resistance to normal atmospheric corrosion, for compatibility with finish paint systems and for capability to provide a sound foundation for field-applied topcoats despite prolonged exposure; complying with performance requirements of FS TT-P-644.
 1. Primer selected must be compatible with finish coats of paint. Coordinate selection of metal primer with finish paint requirements specified in Section 09900.
- B. Galvanizing Repair Paint: High zinc dust content paint for regalvanizing welds in galvanized steel, with dry film containing not less than 94 percent zinc dust by weight, and complying with DOD-P-21035 or SSPC-Paint-20.

2.4 FABRICATION, GENERAL

- A. Form metal fabrications from materials of size, thickness, and shapes indicated but not less than that needed to comply with performance requirements indicated. Work to dimensions indicated or accepted on shop drawings, using proven details of fabrication and support. Use type of materials indicated or specified for various components of each metal fabrication.
- B. Workmanship:
 - 1. Form work true to line and level with accurate angles and surfaces and straight edges. Ease exposed edges to a radius of 1/32". Form bent-metal corners to smallest radius possible without causing grain separation.
 - 2. Weld corners and seams continuously to comply with AWS recommendations and the following:
 - a. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - b. Obtain fusion without undercut or overlap.
 - c. Remove welding flux immediately.
 - d. At exposed connections, finish exposed welds and surfaces smooth and blended so that no roughness shows after finishing and contour of welded surface matches those adjacent.
 - 3. Shear and punch metals cleanly and accurately. Remove burrs.
 - 4. Form exposed connections with hairline joints flush and smooth, using concealed fasteners wherever possible. Provide Phillips flat head (countersunk) screws and bolts for exposed fasteners. Locate joints where least conspicuous.
 - 5. Coordinate type of anchorage with supporting structure. Fabricate and space anchoring devices to secure metal fabrications rigidly in place and to support indicated loads.
 - 6. Cut, reinforce, drill and tap miscellaneous metal work to receive finish hardware screws similar items.
- C. Galvanizing:
 - 1. Provide a zinc coating for those items shown or specified to be galvanized, as follows:
 - a. ASTM A 153 for galvanizing iron and steel hardware.
 - b. ASTM A 123 for galvanizing both fabricated and unfabricated iron and steel products made of uncoated rolled, pressed, and forged shapes, plates, bars, and strip 0.0299 inch thick and heavier.
- D. Fabricate joints which will be exposed to weather in a manner to exclude water or provide weep holes where water may accumulate.
- E. Shop Painting:
 - 1. Shop paint miscellaneous metal work, except members or portions of members to be embedded in concrete or masonry, surfaces and edges to be field welded, and galvanized surfaces.
 - 2. Surface Preparation: Prepare ferrous metal surfaces to comply with minimum requirements indicated below for SSPC surface preparation specifications and environmental exposure conditions of installed metal fabrications:
 - a. Exteriors (SSPC Zone 1B): SSPC-SP6 "Commercial Blast Cleaning."
 - b. Interiors (SSPC Zone 1A): SSPC-SP3 "Power Tool Cleaning."
 - 3. Remove oil, grease and similar contaminants in accordance with SSPC SP-1 "Solvent

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Cleaning."

4. Apply shop primer to uncoated surfaces of metal fabrications, except those with galvanized finish or to be embedded in concrete, sprayed-on fireproofing, or masonry, unless otherwise indicated. Comply with requirements of SSPC-PA1 "Paint Application Specification No. 1" for shop painting.

2.5 MISCELLANEOUS METAL FABRICATIONS

- A. Loose Bearing and Leveling Plates:
 1. Provide plates made flat, free from warps or twists, and of required thickness and bearing area.
 2. Drill plates to receive anchor bolts and for grouting.
 3. Galvanize after fabrication.
- B. Loose Steel Lintels:
 1. Provide structural steel lintels for openings and recesses as required. Weld adjoining members together to form a single unit.
 2. Size loose lintels for equal bearing of 1 inch per foot of clear span but not less than 8 inches bearing at each side of openings unless otherwise indicated.
 3. Galvanize lintels to be installed in exterior walls.
- C. Miscellaneous Framing and Supports:
 1. Provide steel framing and supports which are not a part of structural steel framework, as required to complete work.
 2. Fabricate units to sizes, shapes and profiles indicated or, if not indicated, of required dimensions to receive adjacent other work to be retained by framing. Cut, drill, and tap units to receive hardware, hangers and similar items. Fabricate from structural steel shapes, plates and steel bars of welded construction using mitered joints for field connection.
 3. Equip units with integrally welded anchors for casting into concrete or building into masonry. Furnish inserts if units must be installed after concrete is placed.
 4. Galvanizing:
 - a. Galvanize exterior frames and supports.
 - b. Galvanize frames and supports where indicated.
- D. Miscellaneous Steel Trim:
 1. Provide shapes and sizes for profiles shown. Use concealed field splices wherever possible.
 2. Provide cutouts, fittings and anchorages as required for coordination of assembly and installation with other work.
 3. Galvanizing:
 - a. Galvanize exterior steel trim.
 - b. Galvanize steel trim where indicated.
- E. Shelf Angles:
 1. Provide structural steel shelf angles of sizes shown for attachment to concrete framing. Provide slotted holes to receive 3/4" bolts, spaced not more than 6" from ends and not more than 24" o.c.
 2. Galvanize shelf angles to be installed on exterior concrete framing.
 3. Furnish wedge-type concrete inserts, complete with fasteners, for attachment of shelf angles to cast-in-place concrete.

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F. Pipe Bollards:

1. Fabricate pipe bollards from Schedule 80 steel pipe. Cap bollards with 1/4-inch minimum steel plate.
2. Fabricate sleeves for bollard anchorage from steel pipe with 1/4-inch thick steel plate welded to bottom of sleeve.

PART 3 - EXECUTION

3.1 GENERAL

- A. Coordinate and furnish anchorages, setting drawings, diagrams, templates, instructions, and directions for installation of anchorages, such as concrete inserts, sleeves, anchor bolts and miscellaneous items having integral anchors, which are to be embedded in concrete or masonry construction. Coordinate delivery of such items to project site so as not to delay construction.

3.2 INSTALLATION

A. General:

1. Fastening to In-Place Construction: Provide anchorage devices and fasteners where necessary for securing miscellaneous metal fabrications to in-place construction; including threaded fasteners for concrete and masonry inserts, toggle bolts, through bolts, lag bolts, wood screws and other connectors as required.
2. Cutting, Fitting and Placement: Perform cutting, drilling and fitting required for installation of miscellaneous metal fabrications. Set work accurately in location, alignment and elevation, plumb, level, true and free of rack, measured from established lines and levels. Provide temporary bracing or anchors in formwork for items which are to be built into concrete, masonry or similar construction.
3. Fit exposed connections accurately together to form tight hairline joints. Weld connections which are not to be left as exposed joints, but cannot be shop welded because of shipping size limitations. Grind exposed joints smooth and touch up shop paint coat. Do not weld, cut or abrade the surfaces of exterior units which have been hot-dip galvanized after fabrication, and are intended for bolted or screwed field connections.
4. Field Welding: Comply with AWS Code for procedures of manual shielded metal-arc welding, appearance and quality of welds made, and methods used in correcting welding work.
5. Dissimilar Metals: Where dissimilar and incompatible metals or other materials may come in contact, they shall be permanently separated by means of gaskets or other approved methods. Aluminum surfaces in contact with concrete shall have a 16 mil coating of asphalt base paint.

B. Setting Loose Plates:

1. Clean concrete and masonry bearing surfaces of any bond-reducing materials, and roughen to improve bond to surfaces. Clean bottom surface of bearing plates.
2. Set loose leveling and bearing plates on wedges, or other adjustable devices. After the bearing members have been positioned and plumbed, tighten the anchor bolts. Do not remove wedges or shims, but if protruding, cut off flush with the edge of the bearing plate before packing with grout. Pack grout solidly between bearing surfaces and plates to ensure that no voids remain.

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- C. Installing Pipe Bollards:
 - 1. Anchor bollards in concrete with pipe sleeves preset and anchored into concrete. After bollards have been inserted into sleeves, fill annular space between bollard and sleeve solidly with nonshrink, nonmetallic grout, mixed and placed to comply with grout manufacturer's directions.
 - 2. Fill bollards solidly with concrete, mounding top surface.
- D. Touch-up Painting: Cleaning and touch-up painting of field welds, bolted connections and abraded areas of the shop paint on miscellaneous metal is specified in Section 09900 of these specifications.
- E. For Galvanized Surfaces: Clean field welds, bolted connections and abraded areas and apply 2 coats of galvanizing repair paint to comply with ASTM A 780.

END OF SECTION

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SECTION 06 10 00
ROUGH CARPENTRY

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Structural dimension lumber framing.
- B. Exposed timber structural framing.
- C. Non-structural dimension lumber framing.
- D. Sheathing.
- E. Roof-mounted curbs.
- F. Roofing nailers.
- G. Roofing cant strips.
- H. Preservative treated wood materials.
- I. Miscellaneous framing and sheathing.
- J. Concealed wood blocking, nailers, and supports.
- K. Wall sheathing with factory applied water-resistive and air barrier sheet.
- L. Roof sheathing with factory applied roofing underlayment.

1.02 RELATED REQUIREMENTS

- A. Section 03 30 00 - Cast-in-Place Concrete: Setting anchors in concrete.
- B. Section 05 12 00 - Structural Steel Framing: Prefabricated beams and columns for support of wood framing.
- C. Section 05 50 00 - Metal Fabrications: Miscellaneous steel connectors and support angles for wood framing.
- D. Section 07 25 00 - Weather Barriers: Air barrier over sheathing.
- E. Section 07 25 00 - Weather Barriers: Water-resistive barrier over sheathing.
- F. Section 07 62 00 - Sheet Metal Flashing and Trim: Sill flashings.
- G. Section 31 31 16 - Termite Control: Field-applied termiticide and mildewcide for wood materials.

1.03 REFERENCE STANDARDS

- A. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2016a.
- B. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2017.
- C. ASTM E2178 - Standard Test Method for Air Permeance of Building Materials; 2013.
- D. ASTM E2357 - Standard Test Method for Determining Air Leakage of Air Barrier Assemblies; 2017.
- E. AWPA U1 - Use Category System: User Specification for Treated Wood; 2017.
- F. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- G. PS 1 - Structural Plywood; 2009.
- H. PS 2 - Performance Standard for Wood-Based Structural-Use Panels; 2010.
- I. PS 20 - American Softwood Lumber Standard; 2015.
- J. SPIB (GR) - Grading Rules; 2014.

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1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide technical data on insulated sheathing, wood preservative materials, and application instructions.
- C. Structural Composite Lumber: Submit manufacturer's published structural data including span tables, marked to indicate which sizes and grades are being used; if structural composite lumber is being substituted for dimension lumber or timbers, submit grading agency structural tables marked for comparison.
- D. Samples: For rough carpentry members that will be exposed to view, submit two samples, ____by____ inch in size illustrating wood grain, color, and general appearance.
- E. ABAA Field Quality Control Submittals: Submit third-party reports of testing and inspection required by ABAA QAP.
- F. Manufacturer's Certificate: Certify that wood products supplied for rough carpentry meet or exceed specified requirements.
- G. ABAA Manufacturer Qualification: Submit documentation of current evaluation of proposed manufacturer and materials.
- H. ABAA Installer Qualification: Submit documentation of current contractor accreditation and current installer certification. Keep copies of all contractor accreditation and installer certification on site during and after installation. Present on-site documentation upon request.

1.05 QUALITY ASSURANCE

- A. Air Barrier Association of America (ABAA) Quality Assurance Program (QAP); www.airbarrier.org/#sle:
 - 1. Installer Qualification: Use accredited contractor, certified installers, evaluated materials, and third-party field quality control audit.
 - 2. Manufacturer Qualification: Use evaluated materials from a single manufacturer regularly engaged in air barrier material manufacture. Use secondary materials approved in writing by primary material manufacturer.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
 - 1. Species: Southern Pine, unless otherwise indicated.

2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

- A. Grading Agency: Southern Pine Inspection Bureau, Inc; SPIB (GR).
- B. Sizes: Nominal sizes as indicated on drawings, S4S.
- C. Moisture Content: S-dry or MC19.
- D. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
 - 1. Lumber: S4S, No. 2 or Standard Grade.

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2. Boards: Standard or No. 3.

2.03 EXPOSED DIMENSION LUMBER

- A. Grading Agency: Southern Pine Inspection Bureau, Inc; SPIB (GR).
- B. Sizes: Nominal sizes as indicated on drawings.
- C. Surfacing: S4S.
- D. Moisture Content: S-dry or MC19.

2.04 CONSTRUCTION PANELS

- A. Roof Sheathing: Any PS 2 type, rated Structural I Sheathing.
 1. Bond Classification: Exposure 1.
 2. Span Rating: 40/20.
 3. Performance Category: 19/32 PERF CAT.
- B. Wall Sheathing: Any PS 2 type.
 1. Bond Classification: Exposure 1.
 2. Grade: Structural I Sheathing.
 3. Span Rating: 32/16.
 4. Performance Category: 15/32 PERF CAT.
 5. Edge Profile: Square edge.

2.05 ACCESSORIES

- A. Fasteners and Anchors:
 1. Metal and Finish: Hot-dipped galvanized steel complying with ASTM A153/A153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.
 2. Drywall Screws: Bugle head, hardened steel, power driven type, length three times thickness of sheathing.
- B. Joist Hangers: Hot dipped galvanized steel, sized to suit framing conditions.
 1. For contact with preservative treated wood in exposed locations, provide minimum G185 galvanizing complying with ASTM A653/A653M.
- C. Sill Flashing: As specified in Section 07 62 00.

2.06 FACTORY WOOD TREATMENT

- A. Treated Lumber and Plywood: Comply with requirements of AWWA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
 1. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWWA standards.
- B. Preservative Treatment:
 1. Preservative Pressure Treatment of Lumber Above Grade: AWWA U1, Use Category UC3B, Commodity Specification A using waterborne preservative.
 - a. Kiln dry lumber after treatment to maximum moisture content of 19 percent.
 - b. Treat lumber exposed to weather.
 - c. Treat lumber in contact with masonry or concrete.

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- d. Treat lumber less than 18 inches above grade.
- e. Treat lumber in other locations as indicated.
- 2. Preservative Pressure Treatment of Plywood Above Grade: AWP A U1, Use Category UC2 and UC3B, Commodity Specification F using waterborne preservative.
 - a. Kiln dry plywood after treatment to maximum moisture content of 19 percent.
 - b. Treat plywood in contact with masonry or concrete.
 - c. Treat plywood less than 18 inches above grade.
 - d. Treat plywood in other locations as indicated.
- 3. Preservative Pressure Treatment of Lumber in Contact with Soil: AWP A U1, Use Category UC4A, Commodity Specification A using waterborne preservative.
 - a. Preservative for Field Application to Cut Surfaces: As recommended by manufacturer of factory treatment chemicals for brush-application in the field.
 - b. Restrictions: Do not use lumber or plywood treated with chromated copper arsenate (CCA) in exposed exterior applications subject to leaching.

PART 3 EXECUTION

3.01 PREPARATION

- A. Where wood framing bears on cementitious foundations, install full width sill flashing continuous over top of foundation, lap ends of flashing minimum of 4 inches and seal.
- B. Install sill gasket under sill plate of framed walls bearing on foundations; puncture gasket cleanly to fit tightly around protruding anchor bolts.
- C. Coordinate installation of rough carpentry members specified in other sections.

3.02 INSTALLATION - GENERAL

- A. Select material sizes to minimize waste.
- B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.
- C. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.

3.03 FRAMING INSTALLATION

- A. Set structural members level, plumb, and true to line. Discard pieces with defects that would lower required strength or result in unacceptable appearance of exposed members.
- B. Make provisions for temporary construction loads, and provide temporary bracing sufficient to maintain structure in true alignment and safe condition until completion of erection and installation of permanent bracing.
- C. Install structural members full length without splices unless otherwise specifically detailed.
- D. Comply with member sizes, spacing, and configurations indicated, and fastener size and spacing indicated, but not less than required by applicable codes.
- E. Install horizontal spanning members with crown edge up and not less than 1-1/2 inches of bearing at each end.
- F. Construct double joist headers at floor and ceiling openings and under wall stud partitions that are parallel to floor joists; use metal joist hangers unless otherwise detailed.
- G. Provide bridging at joists in excess of 8 feet span as detailed. Fit solid blocking at ends of members.
- H. Frame wall openings with two or more studs at each jamb; support headers on cripple studs.

3.04 BLOCKING, NAILERS, AND SUPPORTS

- A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.
- B. In metal stud walls, provide continuous blocking around door and window openings for anchorage of frames, securely attached to stud framing.
- C. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more studs or other method of support is explicitly indicated.
- D. Where ceiling-mounting is indicated, provide blocking and supplementary supports above ceiling, unless other method of support is explicitly indicated.
- E. Provide the following specific non-structural framing and blocking:
 - 1. Cabinets and shelf supports.
 - 2. Wall brackets.
 - 3. Handrails.
 - 4. Grab bars.
 - 5. Towel and bath accessories.
 - 6. Wall-mounted door stops.
 - 7. Chalkboards and marker boards.
 - 8. Wall paneling and trim.
 - 9. Joints of rigid wall coverings that occur between studs.

3.05 ROOF-RELATED CARPENTRY

- A. Coordinate installation of roofing carpentry with deck construction, framing of roof openings, and roofing assembly installation.

3.06 INSTALLATION OF CONSTRUCTION PANELS

- A. Roof Sheathing: Secure panels with long dimension perpendicular to framing members, with ends staggered and over firm bearing.
 - 1. Nail panels to framing; staples are not permitted.
- B. Wall Sheathing: Secure with long dimension perpendicular to wall studs, with ends over firm bearing and staggered, using nails, screws, or staples.
 - 1. Use plywood or other acceptable structural panels at building corners, for not less than 96 inches, measured horizontally.
 - 2. Place water-resistive barrier horizontally over wall sheathing, weather lapping edges and ends.

3.07 TOLERANCES

- A. Framing Members: 1/4 inch from true position, maximum.
- B. Variation from Plane (Other than Floors): 1/4 inch in 10 feet maximum, and 1/4 inch in 30 feet maximum.

3.08 FIELD QUALITY CONTROL

- A. An independent testing agency will perform field quality control inspection and testing as indicated on Drawings.

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3.09 CLEANING

- A. Waste Disposal: Comply with the requirements of Section 01 74 19 - Construction Waste Management and Disposal.
 - 1. Comply with applicable regulations.
 - 2. Do not burn scrap on project site.
 - 3. Do not burn scraps that have been pressure treated.
 - 4. Do not send materials treated with pentachlorophenol, CCA, or ACA to co-generation facilities or "waste-to-energy" facilities.
- B. Do not leave any wood, shavings, sawdust, etc. on the ground or buried in fill.
- C. Prevent sawdust and wood shavings from entering the storm drainage system.

END OF SECTION

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Appendix A:
City Bid Documents

SECTION 06 20 13
EXTERIOR FINISH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. **Lumber** soffits.
 - 2. Other Trim
- B. Related Requirements:
 - 1. Section 05 40 00 - Cold-Formed Metal Framing
 - 2. Section 06 10 00 - Rough Carpentry
 - 3. Section 07 62 00 - Sheet Metal Flashings and Trim

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials, dimensions, profiles, textures, and colors and include construction and application details.
 - 1. Include data for wood-preserved treatment from chemical-treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained. Include chemical-treatment manufacturer's written instructions for finishing treated material.
 - 2. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced before shipment to Project site to levels specified.
- B. Samples: For each exposed product and for each color and texture specified.
- C. Samples for Initial Selection: For each type of product involving selection of colors, profiles, or textures.
- D. Samples for Verification:
 - 1. For each species and cut of lumber and panel products, with half of exposed surface finished; 50 sq. in. for lumber and 8 by 10 inches for panels.

1.3 INFORMATIONAL SUBMITTALS

- A. Compliance Certificates:
 - 1. For lumber that is not marked with grade stamp.
 - 2. For preservative-treated wood that is not marked with treatment-quality mark.
- B. Evaluation Reports: For the following, from ICC-ES:
 - 1. Wood-preserved-treated wood.
- C. Sample Warranties: For manufacturer's warranties.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber, plywood, and other panels flat with spacers between each bundle to provide air circulation.
 - 1. Protect materials from weather by covering with waterproof sheeting, securely anchored.
 - 2. Provide for air circulation around stacks and under coverings.

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1.5 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecast weather conditions permit work to be performed and at least one coat of specified finish can be applied without exposure to rain, snow, or dampness.
- B. Do not install finish carpentry materials that are wet, moisture damaged, or mold damaged.
 - 1. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 - 2. Indications that materials are mold damaged include, but are not limited to, fuzzy or blotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, comply with applicable rules of any rules-writing agency certified by the American Lumber Standard Committee's (ALSC) Board of Review. Grade lumber by an agency certified by the ALSC's Board of Review to inspect and grade lumber under the rules indicated.
 - 1. Factory mark each piece of lumber with grade stamp of inspection agency, indicating grade, species, moisture content at time of surfacing, and mill.
 - 2. For exposed lumber, mark grade stamp on end or back of each piece, **or omit grade stamp and provide certificates of grade compliance issued by inspection agency.**
- B. Softwood Plywood: DOC PS 1.
- C. Hardboard: ANSI A135.4.

2.2 WOOD-PRESERVATIVE-TREATED MATERIALS

- A. Water-Repellent Preservative Treatment by Nonpressure Process: AWPAN1; dip, spray, flood, or vacuum-pressure treatment.
 - 1. Preservative Chemicals: 3-iodo-2-propynyl butyl carbamate (IPBC), **combined with an insecticide containing chlorpyrifos (CPF)**
 - 2. Use chemical formulations that do not bleed through or otherwise adversely affect finishes. Do not use colorants in solution to distinguish treated material from untreated material.
 - 3. Application: **Items not required to be pressure-preservative treated, Exterior trim, and wood siding**
- B. Preservative Treatment by Pressure Process: AWPAN1; Use Category [UC3a] [UC3b].
 - 1. Kiln dry lumber and plywood after treatment to a maximum moisture content of 19 and 18 percent, respectively.
 - 2. Preservative Chemicals: Acceptable to authorities having jurisdiction[**and containing no arsenic or chromium**].
 - 3. For exposed items indicated to receive transparent finish, do not use chemical formulations that contain colorants or that bleed through or otherwise adversely affect finishes.
 - 4. Do not use material that is warped or does not comply with requirements for untreated material.
 - 5. Mark lumber with treatment-quality mark of an inspection agency approved by the ALSC's Board of Review.

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- a. For exposed lumber indicated to receive a stained or natural finish, **mark end or back of each piece or omit marking and provide certificates of treatment compliance issued by inspection agency**
6. Mark plywood with appropriate classification marking of an inspection agency acceptable to authorities having jurisdiction.
 - a. For exposed plywood indicated to receive a stained or natural finish, mark back of each piece.

2.3 EXTERIOR TRIM

- A. Lumber Trim for **Semitransparent-Stained Finish**
 1. Species and Grade: Pine; Select Grade C & Bette
 2. Maximum moisture content for seasoned or kiln-dried, board-size lumber varies depending on species, grade, and grading agency. See the Evaluations. Pressure-preservative-treated lumber is usually specified to have a maximum moisture content of 19 percent.
 3. Maximum Moisture Content: **[15] percent**
 4. Finger Jointing: not allowed
 5. Face Surface: **Surfaced (smooth)**

2.4 LUMBER SOFFITS AND TRIM

- A. Provide kiln-dried lumber siding complying with DOC PS 20
- B. Species and Grade: Pine; Select Grade C & Better
- C. Pattern: square edge, smooth-faced tongue and groove, actual face width (coverage) and thickness of **[3-1/8 by 21/32 inch]** or other size as approved by architect.

2.5 MISCELLANEOUS MATERIALS

- A. Fasteners for Exterior Finish Carpentry: Provide nails or screws, in sufficient length to penetrate not less than 1-1/2 inches into wood substrate.
 1. For face-fastening siding, provide ringed-shank siding nails **or hot-dip galvanized-steel siding nails unless otherwise indicated.**
 2. For redwood and cypress provide **stainless steel or hot-dip galvanized-steel** fasteners.
 3. For prefinished items, provide matching prefinished aluminum fasteners where face fastening is required.
 4. For pressure-preservative-treated wood, provide **stainless steel or hot-dip galvanized-steel** fasteners.
 5. For applications not otherwise indicated, provide **stainless steel or hot-dip galvanized-steel** fasteners.
- B. Wood Glue: Waterproof resorcinol glue recommended by manufacturer for exterior carpentry use.
- C. Flashing: Comply with requirements in Section 076200 "Sheet Metal Flashing and Trim" for flashing materials installed in exterior finish carpentry.
 1. Horizontal Joint Flashing for Panel Siding: Preformed, **-aluminum** Z-shaped flashing.

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2.6 FABRICATION

- A. Back out or kerf backs of standing and running trim wider than 5 inches, except members with ends exposed in finished work.
- B. Ease edges of lumber less than 1 inch in nominal thickness to 1/16-inch radius and edges of lumber 1 inch or more in nominal thickness to 1/8-inch radius.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine finish carpentry materials before installation. Reject materials that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean substrates of projections and substances detrimental to application.
- B. Prime lumber and moldings to be painted, including both faces and edges, unless factory primed.
 - 1. Cut to required lengths and prime ends.
 - 2. Comply with requirements in Section 099113 "Exterior Painting."

3.3 INSTALLATION, GENERAL

- A. Do not use materials that are unsound, warped, improperly treated or finished, inadequately seasoned, or too small to fabricate with proper jointing arrangements.
 - 1. Do not use manufactured units with defective surfaces, sizes, or patterns.
- B. Install exterior finish carpentry level, plumb, true, and aligned with adjacent materials.
 - 1. Use concealed shims where necessary for alignment.
 - 2. Scribe and cut exterior finish carpentry to fit adjoining work.
 - 3. Refinish and seal outs as recommended by manufacturer.
 - 4. Install to tolerance of 1/8 inch in 96 inches for level and plumb. Install adjoining exterior finish carpentry with 1/32-inch maximum offset for flush installation and 1/16-inch maximum offset for reveal installation.
 - 5. Coordinate exterior finish carpentry with materials and systems in or adjacent to it.
 - 6. Provide cutouts for mechanical and electrical items that penetrate exterior finish carpentry.

3.4 STANDING AND RUNNING TRIM INSTALLATION

- A. Install flat-grain lumber with bark side exposed to weather.
- B. Install trim with minimum number of joints as is practical, using full-length pieces from maximum lengths of lumber available. Do not use pieces less than 24 inches long, except where necessary.
 - 1. Use scarf joints for end-to-end joints.
 - 2. Stagger end joints in adjacent and related members.
- C. Fit exterior joints to exclude water.

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1. Cope at returns and miter at corners to produce tight-fitting joints, with full-surface contact throughout length of joint.
2. Plane backs of casings to provide uniform thickness across joints, where necessary for alignment.
- D. Where face fastening is unavoidable, countersink fasteners, fill surface flush, and sand unless otherwise indicated.
- E. Flashing: Install metal flashing as indicated on Drawings and as recommended by siding manufacturer.
- F. Finish: Apply finish within two weeks of installation.

3.5 ADJUSTING

- A. Replace exterior finish carpentry that is damaged or does not comply with requirements.
 1. Exterior finish carpentry may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing.
- B. Adjust joinery for uniform appearance.

3.6 CLEANING

- A. Clean exterior finish carpentry on exposed and semiexposed surfaces.
- B. Touch up factory-applied finishes to restore damaged or soiled areas.

3.7 PROTECTION

- A. Protect installed products from damage from weather and other causes during construction.
- B. Remove and replace finish carpentry materials that are wet, moisture damaged, and mold damaged.
 1. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 2. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION

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SECTION 06 20 23
INTERIOR FINISH CARPENTRY

PART - 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 RELATED DOCUMENTS

- A. This Section includes wood trim, wood railings and other mill items.

1.03 RELATED WORK SPECIFIED ELSEWHERE

- Section 05 50 00 - Miscellaneous Metals
- Section 05 40 00 - Cold-Formed Metal Framing
- Section 06 10 00 - Rough Carpentry

1.04 STANDARDS

- A. Except as otherwise shown or specified comply with provisions of Architectural Woodwork Institute (AWI) "Quality Standards".

1.05 SUBMITTALS

- A. Submit shop drawings and manufacturer's product data. Shop drawings shall show location of each item, dimensioned plans and elevations, large scale details, attachment devices and other components.
- B. Submit fabricator's certification stating that the fabricated work meets the woodwork grades specified.

1.06 PROTECTION

- A. Protect woodwork during transit, delivery, storage and handling to prevent damage, soiling and deterioration.
- B. Do not deliver woodwork until painting, wet work and similar operations which could damage, soil or deteriorate woodwork have been completed in installation areas. If, due to unforeseen circumstances, woodwork must be stored in other than installation areas, store only in areas which meet the requirements specified for installation areas.
- C. Maintain temperature and humidity in installation area as required to maintain moisture content of installed woodwork within a 1.0 percent tolerance of the optimum moisture content, from the date of installation through the remainder of the Construction period. The fabricator of the woodwork shall determine the optimum moisture content and required temperature and humidity conditions.

1.07 QUALITY STANDARDS

- A. For the following types of architectural woodwork comply with the indicated standards:
 - Standing and running trim and rails - AWI Section 300
 - Miscellaneous work - AWI Section 700

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Provide kiln-dried lumber with an average moisture content range of 6% to 11% interior work. Maintain temperature and relative humidity during fabrication, storage and finishing operations so that moisture content values for woodwork at time of installation do not exceed 5% to 10% for interior wood finish.
- B. Interior wood for painted finish:
 - 1. Solid wood - Poplar complying with requirements for specified woodwork grade.
 - 2. Plywood – Sanded pine with exterior glue, PS 1.
- C. Screws: Select material, type, size and finish required for each use. Comply with FS FF-S-111 for applicable requirements. For attachment of wood trim to interior steel framing use USG Type S Trim Head Screws, or equal.
- D. Nails: Select material, type, size and finish required for each use. Comply with FS FF-N-105 for applicable requirements.

2.02 WOODWORK DESIGN AND FABRICATION

- A. Comply with the details shown for profile and construction of architectural woodwork and, where not otherwise shown, comply with applicable Quality Standards, with alternate details at Fabricator's option.
- B. Machine and sand woodwork to comply with requirements of Standards for specified grade.
- C. Before proceeding with fabrication of woodwork required to be fitted to other construction, obtain measurements and verify dimensions and shop drawing details as required for accurate fit. Where sequence of measuring substrates before fabrication would delay the project, proceed with fabrication (without field measurements) and provide ample borders and edges to allow for subsequent scribing and trimming of woodwork for accurate fit.

2.01 INTERIOR ARCHITECTURAL WOODWORK

- A. Fabricate interior woodwork to dimensions, profiles and details shown. Rout or groove reverse side (backed-out) of trim members to be applied to flat surface, except for members with ends exposed in finish work.
- B. Interior woodwork will have either a transparent finish or painted finish as noted on the Drawings for each condition.
- C. Standing and Running Trim, Rails, and Miscellaneous Items - Custom Grade.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Condition woodwork to average prevailing humidity conditions in installation areas prior to installing.
- B. Install the work plumb, level, true and straight with no distortions. Shim as required using concealed shims. Install to a tolerance of 1/8" in 8'-0" for plumb and level; and with 1/16" maximum offset in flush adjoining surfaces, 1/8" maximum offsets in revealed adjoining surfaces.
- C. Scribe and cut work to fit adjoining work and refinish cut surfaces or repair damaged finish at cuts.
- D. Anchor woodwork to anchors or blocking built-in or directly attached to substrates. Secure with

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countersunk, concealed fasteners and blind nailing for a complete installation. Use fine finishing nail for exposed nailings, countersunk and filled flush with woodwork, and matching finish where transparent finish is indicated.

- E. Install standing and running trim with minimum number of joints possible, using full- length pieces (from maximum length of lumber available) to the greatest extent possible. Stagger joints in adjacent and related members. Cope at returns, miter at corners, and comply with Quality Standards for joinery.
- F. Repair damaged and defective woodwork wherever possible to eliminate defects functionally and visually; where not possible to repair properly, replace woodwork. Adjust joinery for uniform appearance.

END OF SECTION

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City Bid Documents

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SECTION 06 73 00
COMPOSITE DECKING

PART - 1 GENERAL

1.01 SUMMARY

- A. Section Includes"
 - 1. Composite decking
- B. Related sections:
 - 1. Section 06 10 00 – Rough Carpentry

1.02 REFERENCE STANDARDS

- A. ASTM International (ASTM)
 - 1. ASTM D2395 – Standard Test Methods for Specific Gravity of Wood and Wood-Based Materials.
 - 2. ASTM D7032 – Standard Specification for Establishing Performance Ratings for Wood-Plastic Composite and Plastic Lumber Deck Boards, Stair Treads, Guards, and Handrails.
 - 3. ASTM G154 – Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials.

1.03 SUBMITTALS

- A. Product Data: Standard specifications, and descriptive literature for primary and secondary products, including:
 - 1. Spec-Data product information sheets
 - 2. Catalog cut-sheets
 - 3. Color charts
 - 4. Safety data sheets (sds)
 - 5. Building code evaluation reports
 - 6. Sample warranty forms
- B. Shop Drawings: Graphic information specifically prepared for this project, including:
 - 1. Dimensioned plans, elevations, and construction details indicating full extent of composite decking work complete with substrate construction, decking patterns, attachments, accessories, conditions at adjacent materials, perimeters, and penetrations.
 - 2. Verified field dimensions
- C. Selection Samples: Color chips for initial color selection prepared on same material as specified products.
- D. Verification Samples: Actual decking and trim pieces, 12 inches (305 mm) long, illustrating color, texture and finish selected by architect
- E. Manufacturers Instruction, including:
 - 1. Delivery, storage, and handling
 - 2. preparation and installation
 - 3. Maintenance
- F. Commercial Product Warranties: Manufacturer's commercial series of prorated limited warranties including 10-years against manufacturing defects of composite decking, 20-years against manufacturing defects of metal clips, and 25-years against staining and fading of

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composite decking.

1.04 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized dealer-installer.
- B. Installation Documents: Maintain manufacturer's installation instructions, approved submittals, and related documents on-site throughout construction period, to confirm proper installation, until Final Inspection and acceptance by Owner and Architect.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Deliver, store, and handle composite decking in accordance with manufacturer's instructions.

PART 2 - PRODUCTS

2.01 COMPOSITE DECKING BOARDS

- A. Manufacturer: NewTechWood, Ltd.; 19111 Walden Forest Dr., Suite B; Humble, TX 77346; Tel: 281-570-6450; Fax: 281-661-1167; Email: richard@newtechwood.com; Website: www.newtechwood.com .
 - 1. Single Source Responsibility: Furnish primary products, secondary products, and warranty for work of this Section from same source
 - 2. Substitutions: Architect approved substitutions are permitted, see Section 01 25 00.
- B. Description: Ultrashield Nature Composite Decking composed of recycled hardwood fiber and high-density polyethylene (HDPE) core, encased in 1/64 inch (0.5 mm) to 1/32 inch (0.7 mm) thick UV and stain resistant plastic shell with core and shell coextruded under high temperature forming a single combined product; meeting ASTM D7032 and ASTM G154.
 - 1. Board size: 5 1/2 inches (138 mm) wide by 9/10 inch (22.5 mm) thick by 16 feet (4.87 m) long.
 - 2. Profile: US01 Magellan Series & US33 Columbus Series deck edges and stair nosings.
 - 3. Color: Architect to select from full color line.
 - 4. Texture: straight wood grain
 - 5. Properties:
 - a. Density: 7.2 lb/ft³ (115.3 kg/m³); meeting ASTM D2395.
 - 6. Installation method: Concealed fasteners and exposed composite screws.

2.02 ACCESSORIES

- A. Concealed Fasteners: PCHFS-50, T-Clip System for concealed attachment of decking boards with 1/4 inch (6.4 mm) gap between boards
- B. Concealed Fasteners: MGS-50, Mini Gap System for concealed attachment of decking boards with 1/16 inch (1.6 mm) gap between boards
- C. Starter Clips: SC-25 for concealed attachment of decking boards at front edges of stair treads, exposed outside edges of decks, and butted up against vertical walls, barriers, or penetrations.
- D. Exposed Fasteners: Type and size composite screws recommended by composite decking manufacturer.

PART 3 - EXECUTION

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3.01 EXAMINATION

- A. Verify that conditions of work previously installed under other sections or contracts are acceptable for installation of composite decking in accordance with manufacturer's instructions and approved submittals.
 - 1. Notify [Architect] of unacceptable conditions upon discovery.
 - 2. Do not proceed with preparation and installation until unacceptable conditions have been corrected

3.02 PREPERATION

- A. Prepare substrate to receive composite decking in accordance with manufacturer's instructions, and approved submittals.

3.03 INSTALLATION

- A. Install composite decking in accordance with manufacturer's instructions, and approved submittals.

3.04 CLEANING

- A. Clean-up packaging, waste material, and construction debris daily during installation; legally dispose of in accordance with authorities having jurisdiction.
- B. Upon completion, remove surplus materials, remaining debris, tools and equipment.

3.05 PROTECTION

- A. Protect installed products from damage during subsequent construction until Final Inspection and acceptance by Owner and Architect.
- B. Repair damage to adjacent materials caused by installation of composite decking.

END OF SECTION

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SECTION 07 21 14
FOAMED-IN-PLACE INSULATION

PART 1 - GENERAL

1.02 SUMMARY

- A. Extent of insulation work is shown on drawings and indicated by provisions of this section.
- B. Applications of insulation specified in this section include the following:
 - 1. Foamed-In-Place masonry insulation for thermal, sound and fire resistance values.

1.03 SUBMITTALS

- A. Product and technical presentation as provided by the manufacturer.
- B. Certified Test Reports: With product data, submit copies of certified test reports showing compliance with specified performance values, including R-values, fire performance and sound abatement characteristics.
- C. Material Safety Data Sheet: Submit Material Safety Data Sheet complying with OSHA Hazard Communication Standard, 29 CFR 1910.1200.

1.04 QUALITY ASSURANCE

- A. Manufacturing Standards: Provide insulation produced by a single and approved manufacturer. The product must come from the manufacturer pre-mixed to ensure consistency.
- B. Installer Qualifications for Foamed-In-Place Masonry Insulation: Engage an experienced dealer/applier who has been trained and licensed by the product manufacturer and which has not less than three years direct experience in the installation of the product used.
- C. Warranty: Upon request, a one year product and installation warranty will be issued by both the manufacturer and installer.
- D. Fire Performance Characteristics: Provide insulation materials which are identical to those whose fire performance characteristics, as listed for each material or assembly of which insulation is a part, have been determined by testing, per methods indicated below, by a testing agency acceptable to authorities having jurisdiction.

Product must be classified by Underwriters Laboratory ("UL") as to Surface Burning Characteristics

Surface Burning Characteristics: ASTM E-84

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Manufacturers of Foamed-In-Place Masonry Insulation: Subject to compliance with requirements, provide products from the following:
 - 1. **"Core-Fill 500TM"**; Tailored Chemical Products,
P.O. Box 4186, Hickory, N.C. 28603, (800) 627-1687
 - 2. Substitutions allowed.

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2.02 INSULATING MATERIALS

- A. General: Provide insulating materials which comply with requirements indicated for materials, compliance with referenced standards, and other characteristics.
- B. Foamed-In-Place Masonry Insulation: Two component thermal insulation produced by combining a plastic resin and catalyst foaming agent surfactant which, when properly ratioed and mixed, together with compressed air produce a cold-setting foam insulation in the hollow cores of hollow unit masonry walls.
 - 1. Surface Burning Characteristics: Maximum flame spread, smoke developed and fuel contributed of 0, 5 and 0 respectively.
 - 2. Combustion Characteristics: Must be noncombustible, Class A building material.
 - 3. Thermal Values: "R" Value of 4.91/inch @ 32 degrees F mean; ASTM C-177.
 - 4. Sound Abatement: Minimum Sound Transmission Class ("STC") rating of 53 and a minimum Outdoor Indoor Transmission Class ("OITC") rating of 44 for 8" wall assembly (ASTM E 90-90).

PART 3 - EXECUTION

3.01 INSPECTION AND PREPARATION

- A. Application Assemblies:
 - Block Walls: 6", 8", 10" or 12" concrete masonry units
 - Cavity Walls: 2" cavity or greater

3.05 INSTALLATION OF FOAMED-IN-PLACE INSULATION

- A. General: Install foamed-in-place insulation from interior, or as specified, prior to installation of interior finish work and after all masonry and structural concrete work is in place; comply with manufacturer's instructions.
- B. Installation: Fill all open cells and voids in hollow concrete masonry walls where shown on drawings. The foam insulation shall be pressure injected through a series of 5/8" to 7/8" holes drilled into every vertical column of block cells (every 8" on center) beginning at an approximate height of four (4) feet from finished floor level. Repeat this procedure at an approximate height of ten (10) feet above the first horizontal row of holes (or as needed) until the void is completely filled. Patch holes with mortar and score to resemble existing surface.

END OF SECTION

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SECTION 07 21 16
BLANKET INSULATION

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes: Fiber Glass thermal and insulation.
- B. Related Sections:
 - 1. Section 07 92 00 - Joint Sealants.
 - 2. Section 05 40 00 - Cold-Formed Metal Framing
 - 3. Section 04 22 00 - Concrete Unit Masonry

1.2 REFERENCES

- A. ASTM International:
 - 1. ASTM C165 Standard Test Method for Measuring Compressive Properties of Thermal Insulations.
 - 2. ASTM C356 Standard Test Method for Linear Shrinkage of Preformed High-Temperature Thermal Insulation Subjected to Soaking Heat.
 - 3. ASTM C411 Standard Test Method for Hot-Surface Performance of High-Temperature Thermal Insulation.
 - 4. ASTM C423 Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
 - 5. ASTM C518 Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
 - 6. ASTM C612 Standard Specification for Mineral Fiber Block and Board Thermal Insulation.
 - 7. ASTM C665 Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.
 - 8. ASTM C764 Standard Specification for Mineral Fiber Loose-Fill Thermal Insulation.
 - 9. ASTM C991 Standard Specification for Flexible Fibrous Glass Insulation for Metal Buildings
 - 10. ASTM C1014 Standard Specification for Spray-Applied Mineral Fiber Thermal and Sound Absorbing Insulation.
 - 11. ASTM C1015 Standard Practice for Installation of Cellulosic and Mineral Fiber Loose-Fill Thermal Insulation.
 - 12. ASTM C1104 Standard Test Method for Determining the Water Vapor Sorption of Unfaced Mineral Fiber Insulation.
 - 13. ASTM C1149 Standard Specification for Self-Supported Spray Applied Cellulosic Thermal Insulation
 - 14. ASTM C1304 Standard Test Method for Assessing the Odor Emission of Thermal Insulation Materials.
 - 15. ASTM C1320 Standard Practice for Installation of Mineral Fiber Batt and Blanket Thermal Insulation for Light Frame Construction.
 - 16. ASTM C1338 Standard Test Method for Determining Fungi Resistance of Insulation Materials and Facings.
 - 17. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials.
 - 18. ASTM E90 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.

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19. ASTM E96 Standard Test Methods for Water Vapor Transmission of Materials.
20. ASTM E119 Standard Test Methods for Fire Tests of Building Construction and Materials.
21. ASTM E136 Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C.
22. ASTM E736 Standard Test Method for Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members.
23. ASTM E759 Standard Test Method for Effect of Deflection on Sprayed Fire-Resistive Material Applied to Structural Members.
24. ASTM E970 Standard Test Method for Critical Radiant Flux of Exposed Attic Floor Insulation Using a Radiant Heat Energy Source.

1.3 SYSTEM DESCRIPTION

- A. Design Requirements: Provide [Products/systems] that have been manufactured, fabricated and installed to the following criteria:
 1. Thermal Performance (ASTM C518): [R-38].
- B. Performance Requirements: Provide [Products/systems] that have been manufactured, fabricated, and installed to the following criteria:
 1. Surface Burning Characteristics, Unfaced (ASTM E84): Flamespread index 25, smoke developed 50.
 2. Recycled Glass Content: 30% post-consumer.
 3. Combustibility (ASTM E136): Noncombustible.
 4. Formaldehyde Content: Free of formaldehyde.

1.4 SUBMITTALS

- A. General: Submit listed submittals in accordance with provisions of Section 01300 Administrative Requirements.
- B. Product Data: Submit manufacturer's product data and installation instructions, including manufacturer's SPEC-DATA® sheets.
- C. Samples: Submit manufacturer's standard selection and verification samples.
- D. Quality Assurance/Control Submittals: Submit the following:
 1. Certificates: Submit manufacturer's certificate that products meet or exceed specified requirements.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Utilize an installer having demonstrated experience on projects of similar size and complexity.

1.6 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 1 Product Requirement Section.
- B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- C. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.

PART 2 PRODUCTS

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2.1 FIBERGLASS BUILDING INSULATION

- A. Manufacturer: Johns Manville.
 - 1. Contact: 717 17th Street 80202, Denver, CO 80217-5108; Telephone: (303) 978-2434; E-mail: Jeffrey.job@jm.com; website: www.JM.com.
- B. Fiberglass building insulation:
 - 1. JM Formaldehyde-free™ Unfaced Batts:
 - a. Thermal Resistance (R-Value) (ASTM C518): [R-38].
 - b. Combustion Characteristics (ASTM E136): Pass.
 - c. Critical Radiant Flux (ASTM E970): Greater than 0.11 Btu/ft² × s (0.12 W/cm²).
 - d. Water Vapor Sorption (ASTM C1104): 5% or less.
 - e. Odor Emission (ASTM C1304): Pass.
 - f. Corrosiveness (ASTM C665): Pass.
 - g. Fungi Resistance (ASTM C1338): Pass.
 - h. Recycled Content: Certified by Scientific Certification Systems to contain minimum of 30% post-consumer on average of manufacturer's products.
 - i. GREENGUARD GOLD Certification.
 - j. Thickness: [12 inches].
 - k. Flamespread (ASTM E84): 25, maximum.
 - l. Smoke Developed (ASTM E84): 50, maximum.
 - m. Material Standard: ASTM C665, Type I.
- C. Insulating Materials:
 - 1. General: Provide insulating materials that comply with requirements and referenced standards.
 - a. Preformed Units: Sizes to fit applications indicated; selected from manufacturer's standard thicknesses, widths and lengths.

2.4 PRODUCT SUBSTITUTIONS:

- A. Substitutions: substitutions permitted.

2.5 ACCESSORIES

- A. Tape: Self-adhesive vapor retarder tape with flamespread index of 25 or less, smoke developed index of 50 or less.

PART 3 EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

- A. Comply with the instructions and recommendations of the building insulation manufacturer.

3.2 EXAMINATION

- A. Site Verification of Conditions:
 - 1. Verify that site conditions are acceptable for installation of building insulation.
 - 2. Do not proceed with installation of building insulation until unacceptable conditions are corrected.

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3.3 PREPARATION

- B. Protection: Protect adjacent work areas and finish surfaces from damage during product installation.

3.4 INSTALLATION

- C. General: Comply with insulation manufacturer's written instructions applicable to products and application indicated.
1. Install insulation that is undamaged, dry and unsoiled and that has not been left exposed at any time to ice and snow.
 2. Extend insulation in thickness indicated to envelop entire area to be insulated. Cut and fit tightly around obstructions and fill voids with insulation.
 3. Water Piping Coordination: If water piping is located on inside of insulated exterior walls, coordinate location of piping to ensure that it is placed on warm side of insulation and insulation encapsulates piping.
 4. Apply single layer of insulation to produce thickness indicated, unless multiple layers are otherwise shown or required to make up total thickness.
- D. Installation of General Building Insulation:
1. Seal joints between closed-cell (non-breathing) insulation units by applying adhesive, mastic or sealant to edges of each unit to form a tight seal as units are shoved into place. Fill voids in completed installation with adhesive, mastic or sealant as recommended by insulation manufacturer.
 2. Install glass-fiber blankets in cavities formed by framing members according to the following requirements:
 - a. Use blanket widths and lengths that fill the cavities formed by framing members. If more than one length is required to fill cavity, provide lengths that will produce a snug fit between ends.
 - b. Place blankets in cavities formed by framing members to produce a friction fit between edges of insulation and adjoining framing members.
 - c. For metal-framed wall cavities where cavity heights exceed 96 inches (2438 mm), support unfaced blankets mechanically and support faced blankets by taping stapling flanges to flanges of metal studs.

3.5 PROTECTION

- A. Protect installed work from damage due to subsequent construction activity on the site. Repair damage to installed products prior to installation of finish materials.

END OF SECTION

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PARKS RESTROOM RENOVATIONS AND MODIFICATIONS

SECTION 07 26 16
UNDER SLAB VAPOR BARRIER

PART 1 – GENERAL

1.1 SUMMARY

- A. Products supplied under this section:
 - 1. Vapor barrier and installation accessories for installation under concrete slabs.
- B. Related sections:
 - 1. Section 03 30 00 Cast-in-Place Concrete
 - 2. Section 07 26 00 Vapor Retarders

1.2 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 - 1. ASTM E1745- 11Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs.
 - 2. ASTM E1643- 11Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs.
- B. Technical Reference - American Concrete Institute (ACI):
 - 1. ACI 302.2R-06 Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials.
 - 2. ACI 302.1R-15 Guide to Concrete Floor and Slab Construction.

1.3 SUBMITTALS

- A. Quality control/assurance:
 - 1. Summary of test results per paragraph 9.3 of ASTM E1745.
 - 2. Manufacturer's samples and literature.
 - 3. Manufacturer's installation instructions for placement, seaming, penetration prevention and repair, and perimeter seal per ASTM E1643.
 - 4. All mandatory ASTM E1745 testing must be performed on a single production roll per ASTM E1745 Section 8.1.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Vapor barrier shall have all of the following qualities:
 - 1. Maintain permeance of less than 0.01 Perms [grains/(ft² · hr · inHg)] as tested in accordance with mandatory conditioning tests per ASTM E1745 Section 7.1 (7.1.1-7.1.5).
 - 1. Other performance criteria:
 - a. Strength: ASTM E1745 Class A.
 - b. Thickness: 15 mils minimum

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2. Provide third party documentation that all testing was performed on a single production roll per ASTM E1745 Section 8.1
- B. Vapor barrier products:
 1. Basis of Design: Stego Wrap Vapor Barrier (15-mil) by Stego Industries LLC., (877) 464-7834 www.stegoindustries.com.
 2. Submit substitutions in accordance with section 01 25 00 substitution procedures

2.2 ACCESSORIES

- A. Seams:
 1. Stego Tape by Stego Industries LLC
- B. Sealing Penetrations of Vapor barrier:
 1. Stego Mastic by Stego Industries.
 2. Stego Tape by Stego Industries LLC
- C. Perimeter/edge seal:
 1. Stego Crete Claw by Stego Industries LLC
 2. Stego Term Bar by Stego Industries LLC
 3. StegoTack Tape (double-sided sealant tape) by Stego Industries LLC
- D. Penetration Prevention:
 1. Beast Foot by Stego Industries LLC, (877) 464-7834
 2. Beast Form Stake by Stego Industries LLC
- E. Vapor Barrier-Safe Screed System
 1. Beast Screed by Stego Industries, LLC

PART 3 – EXECUTION

3.1 PREPARATION

- A. Ensure that subsoil is approved by Architect or Geotechnical Engineer.
 1. Level and compact base material.

3.2 INSTALLATION

- A. Install vapor barrier in accordance ASTM E1643.

Unroll vapor barrier with the longest dimension parallel with the direction of the concrete placement and face laps away from the expected direction of the placement whenever possible.

2. Extend vapor barrier to the perimeter of the slab. If practicable, terminate it at the top of the slab, otherwise (a) at a point acceptable to the structural engineer or (b) where obstructed by impediments, such as dowels, waterstops, or any other site condition requiring early termination of the vapor barrier. At the point of termination, seal vapor barrier to the foundation wall, grade beam or slab itself.
 - a. Seal vapor barrier to the entire slab perimeter using Stego Crete Claw, per manufacturer's instructions.
 - OR
 - b. Seal vapor barrier to the entire perimeter wall or footing/grade beam with double sided StegoTack Tape, or both Stego Term Bar and StegoTack Tape,

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- per manufacturer's instructions. Ensure the concrete is clean and dry prior to adhering tape.
3. Overlap joints 6 inches and seal with manufacturer's seam tape.
 4. Apply seam tape/Crete Claw to a clean and dry vapor barrier.
 5. Seal all penetrations (including pipes) per manufacturer's instructions.
 6. For interior forming applications, avoid the use of non-permanent stakes driven through vapor barrier. Use Beast Form Stake and Beast Foot as a vapor barrier-safe forming system. Ensure Beast Foot's peel-and-stick adhesive base is fully adhered to the vapor barrier.
 7. If non-permanent stakes must be driven through vapor retarder, repair as recommended by vapor retarder manufacturer.
 8. Use reinforcing bar supports with base sections that eliminate or minimize the potential for puncture of the vapor barrier.
 9. Repair damaged areas with vapor barrier material of similar (or better) permeance, puncture and tensile.
 10. For vapor barrier-safe concrete screeding applications, install Beast Screed (vapor barrier-safe screed system) per manufacturer's instructions prior to placing concrete.

END OF SECTION

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SECTION 07 41 13
STANDING SEAM METAL ROOF

PART 1 – GENERAL

1.1 DESCRIPTION OF WORK

- A. This section covers the pre-finished, pre-fabricated Architectural standing seam roof system. All metal trim, accessories, fasteners, insulation, and sealants indicated on the drawings as part of this section.
- B. Drawings and general provisions of the Contract, including general and Supplementary Conditions and Division 01 Specifications, apply to this section.
- C. Related Work Specified Elsewhere
 - 1. Roof Deck, structural steel, perimeter edge systems. Roof hatches, firestopping not included in this section.

1.2 SUMMARY

- A. Section Includes
 - 1. Factory formed Standing Seam metal roof panels
- B. Related work specified elsewhere
 - 1. Section 05 12 00 - Structural Steel Framing
 - 2. Section 05 21 00 - Steel Joist Framing
 - 3. Section 05 21 00 - Steel Decking
 - 4. Section 07 62 00 - Sheet Flashing and Sheet Metal
 - 5. Section 07 92 00 - Joint Sealants

1.3 DEFINITIONS

- A. Metal Roof Panel Assembly: Metal roof panels, attachment system components, miscellaneous metal framing, thermal, and accessories necessary for a complete weathertight roofing system.
- B. References:
 - 1. American Society for Testing and Materials (ASTM)
 - a. ASTM A 653: Steel Sheet, Zinc Coated by the Hot Dip Process
 - b. ASTM A 792: Steel Sheet, Aluminum-Zinc Alloy Coated by the Hot Dip Process
 - c. ASTM B 209: Aluminum and Aluminum Alloy Sheet and Plate
 - d. ASTM B370 Standard Specification for Copper Sheet and Strip for Building Construction
 - 2. Sheet Metal and Air Conditioning Contractors National Association (SMACNA)
 - a. SMACNA Architectural Sheet Metal Manual, 1993 edition
 - 3. American Iron and Steel Institute (AISI)
 - a. AISI Cold Formed Steel Design Manual
 - 4. Aluminum Association
 - a. Aluminum Design Manual
 - 5. Metal Construction Association
 - a. Preformed metal Wall Guidelines
 - 6. Code References
 - a. ASCE, Minimum Loads for Buildings and Other Structures

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- b. BOCA National Building Codes
- c. UBC Uniform Building Code
- d. SBC Standard Building Code

1.4 QUALITY ASSURANCE

- A. Petersen Aluminum Corp, Tyler, TX, 800-441-8661 products establish a minimum of quality required.
- B. Manufacturer and erector shall demonstrate experience of a minimum of five (5) years in this type of project.
- C. Panels shall be factory-produced only. No portable, installer-owned or installer-rented machines will be permitted.

1.5 SUBSTITUTIONS

- A. The material, products and equipment specified in this section establish a standard for required function, dimension, appearance, and quality to be met by any proposed substitution.

1.6 SYSTEM DESCRIPTION

- A. Material to comply with:
 - 1. ASTM A 653 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot-Dip Process

1.7 ROOF SYSTEM PERFORMANCE TESTING

- A. General Performance: Metal roof panels shall comply with performance requirements without failure due to defective manufacture, fabrication, installation or other defects in construction.
- B. Roof System shall be designed to meet Standard Building Code Wind Load requirements.
- C. Panels to meet:
 - 1. Water Penetration: When tested per ASTM E-283/1680 and ASTM E-331/1646 there shall be no uncontrolled water penetration or air infiltration through the panel joints.
 - 2. Roof System shall be designed to meet a UL Class 90 wind uplift in accordance with UL standard 580 and panel system shall be ASTM 1592 Tested and approved
 - 3. UL 2218 - Impact Resistance rated.

1.8 SUBMITTALS

- A. Furnish detailed drawings showing profile and gauge of exterior sheets, location and type of fasteners, location, gauges, shape and method of attachment of all trim locations and types of sealants, and any other details as may be required for a weather-tight installation.
- B. Provide finish samples of all colors specified.
- C. Shop drawings: Show fabrication and installation layouts of metal roof panels, metal wall panels or metal soffit panels, details of edge conditions, side-seam joints, panel profiles, corners, anchorages, trim, flashings, closures and accessories, and special details. Distinguish between factory and field-assembled work
- D. Coordination Drawings: Roof plans, drawn to scale, on which the following are shown and coordinated with each other, based on input from installer of the items involved:
 - 1. Roof panels and attachments
 - 2. Metal trusses, bracings and supports
 - 3. Roof-mounted items including snow guards and items mounted on roof curbs.

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1.9 DELIVERY, STORAGE AND HANDLING

- A. Ordering: Comply with manufacturer's ordering instruction and lead time requirements to avoid construction delays.
- B. Deliver components, sheets, metal roof panels and other manufactured items so as not to be damaged or deformed. Package metal roof panels for protection during transportation and handling.
- C. Unload, store and erect metal roof panels in a manner to prevent bending, warping, twisting and surface damage.
- D. Stack metal roof panels on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal roof panels to ensure dryness. Do not store metal roof panels in contact with other materials that might cause staining, denting or other surface damage.
- E. Protect strippable protective coating on any metal coated product from exposure to sunlight and high humidity, except to the extent necessary for material installation.

1.10 PROJECT CONDITIONS

- A. Weather Limitations: proceed with installation only when existing and forecasted weather conditions permit metal roof panel work to be performed.
- B. Field Measurements: Verify actual dimensions of construction contiguous with metal roof panels by field measurements before fabrication.

1.11 COORDINATION

- A. Coordinate sizes and locations of roof curbs, equipment supports and roof penetrations with actual equipment provided.
- B. Coordinate metal roof panels with rain drainage work, flashing, trim and construction of decks, parapet walls and other adjoining work to provide a leakproof, secure and noncorrosive installation.

1.12 WARRANTY

- A. Special Warranty: Warranty form at the end of this Section in which Installer agrees to repair or replace components of sheet metal roofing that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures, including but not limited to rupturing, cracking, or puncturing.
 - b. Wrinkling or buckling.
 - c. Loose parts.
 - d. Failure to remain weathertight, including uncontrolled water leakage.
 - e. Deterioration of metals, metal finishes, and other materials beyond normal weathering, including non-uniformity of color or finish.
 - f. Galvanic action between sheet metal roofing and dissimilar materials.
 - 2. Warranty Period. **Two** years from date of Substantial Completion.
- B. Special Warranty on Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace sheet metal roofing that shows evidence of deterioration of factory-applied finishes within specified warranty period.
 - 1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
 - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
 - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.

2. Finish Warranty Period: **30** years from date of Substantial Completion.

PART 2 – PRODUCTS

2.1 PANEL DESIGN

- A. General: Provide factory-formed metal roof panels designed to be installed by lapping and inter-connecting raised side edges of adjacent panels with joint type indicated and mechanically attaching panels to supports using concealed clips in side laps. Include clips, cleats, pressure plates and accessories required for a weathertight installation.
- B. Roof panels shall be standing seam Tite-Loc in 12" widths with 2" high seams that are mechanically seamed together @ 90 degrees.
- C. Panels to be produced with Factory supplied hot melt mastic in the seams.
- D. Panels to be produced Smooth - Factory Standard.
- E. Panels to be designed for attachment with concealed fastener clips, spaced as required by the manufacturer to provide for both positive and negative design loads, while allowing for the expansion and contraction of the entire roof system resulting from variations in temperature.
- F. Forming: Use continuous end rolling method. No end laps on panels. No portable rollforming machines will be permitted on this project, no installer-owned or installer-rented machines will be permitted. It is the intent of the Architect to provide Factory-Manufactured panel systems only for this project.

2.2 ACCEPTABLE MANUFACTURERS

- A. This project is detailed around the roofing product of Petersen Aluminum Corporation Petersen Aluminum Corp, Tyler, TX, 800-441-8661, Tite-Loc.

2.3 MATERIALS AND FINISHES

- A. Preformed roofing panels shall be fabricated of 24 GA Steel
- B. Color shall be *Standard Pac-Clad Finish
- C. Finish shall be Kynar 500 or Hylar 5000 Fluorocarbon coating with a top side film thickness of 0.70 to 0.90 mil over a 0.25 to 0.3 mil prime coat to provide a total dry film thickness of 0.95 to 1.25 mil, to meet AAMA 621. Bottom side shall be coated with a primer with a dry film thickness of 0.25 mil. Finish shall conform to all tests for adhesions, flexibility and longevity as specified by Kynar 500 or Hylar 5000 finish supplier.
- D. If Strippable coating to be applied on the pre-finished panels to the top side to protect the finish during fabrication, shipping and handling, film shall be removed before installation.
- E. Trim: Trim shall be fabricated of the same material and finish to match the profile, and will be press broken in lengths of 10 to 12 feet. Trim shall be formed only by the manufacturer of their approved dealer. Trim to be erected in overlapped condition. Use lap strips only as indicated on drawings. Miter conditions shall be factory welded material to match the sheeting.
- F. Closures: use composition or metal profiled closures at the top of each elevation to close ends of the panels. Metal closures to be made in the same material and finish as face sheet.
- G. Fasteners: Fasteners shall be of type, material, size, corrosion resistance, holding power and other properties required to fasten miscellaneous framing members to substrates.
- H. Substrate shall be corrugated metal roof deck
- I. Roofing Underlayment
 1. On all surfaces to be covered with roofing material, furnish and install a 40 mil Peel & Stick membrane, required as outlined by metal panel manufacturer. Membrane to be a

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minimum of 40 mil thickness, smooth, non-granular, high temperature. Basis of design: Carlisle WIP 300 HT High Temperature Protection Self Adhering Roofing Underlayment. Other acceptable manufacturers include:

- a. W.R Grace "Ice & water Shield"
 - b. Interwrap Titanium PSU-30
 - c. Carlisle CCW WIP 300HT
 - d. Interwrap Titanium PSU
 - e. Tamko TW Tile and Metal Underlayment
2. Underlayment shall be laid in horizontal layers with joints lapped toward the eaves a minimum of 6, and well secured along laps and at ends as necessary to properly hold the felt in place. All underlayment shall be preserved unbroken and whole.
 3. Peel and Stick Underlayment shall lap all hips and ridges at least 12 to form double thickness and shall be lapped 6 over the metal of any valley or built-in gutters and shall be installed as required by the Standing Seam Panel Manufacturer to attain the desired 20 Year Weathertightness Warranty.
- J. Sealants
1. Provide two-part polysulfide class B non-sag type for vertical and horizontal joints or
 2. one part polysulfide not containing pitch or phenolic extenders or
 3. Exterior grade silicone sealant recommended by roofing manufacturer or
 4. One part non-sag, gun grade exterior type polyurethane recommended by the roofing manufacturer.

2.4 FABRICATION

- A. Comply with dimensions, profile limitations, gauges and fabrication details shown and if not shown, provide manufacturer's standard product fabrication.
- B. Fabricate components of the system in factory, ready for field assembly.
- C. Fabricate components and assemble units to comply with fire performance requirements specified.
- D. Apply specified finishes in conformance with manufacturer's standard, and according to manufacturer's instructions.

PART 3 – EXECUTION

3.1 INSPECTION

- A. Examine alignment of structural steel and related supports, primary and secondary roof framing, solid roof sheathing, prior to installation.
- B. For the record, prepare written report, endorsed by installer, listing conditions detrimental to performance of the Work.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 FASTENERS

- A. Secure units to supports
- B. Place fasteners as indicated in manufacturer's standards.

3.3 INSTALLATION

- A. Panels shall be installed plumb and true in a proper alignment and in relation to the structural framing. The erector must have at least five years successful experience with similar applications.

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- B. Install metal panels, fasteners, trim and related sealants in accordance with approved shop drawings and as may be required for a weather-tight installation.
- C. Remove all strippable coating and provide a dry-wipe down cleaning of the panels as they are erected.

3.4 DAMAGED MATERIAL

- A. Upon determination of responsibility, repair or replace damaged metal panels and trim to the satisfaction of the Architect and Owner.

END OF SECTION

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SECTION 07 46 46
FIBER CEMENT SIDING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Fiber cement lap siding, panels, shingle, trim, fascia, moulding and accessories; James Hardie HZ10 Engineered for Climate Siding.

1.2 RELATED SECTIONS

- A. Section 05 40 00 – Cold-Formed Metal Framing
- B. Section 06 10 00 – Rough Carpentry
- C. Section 07 62 00 – Sheetmetal Flashings and Trims
- D. Section 07 92 00 – Joint Sealants
- E. Section 09 91 13 – Exterior Painting

1.3 REFERENCES

- A. AS D3359 - Standard Test Method for Measuring Adhesion by Tape Test, Tool and Tape.
- B. AS E136 - Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 degrees C.

1.4 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- B. Shop Drawings: Provide detailed drawings of atypical non-standard applications of cementitious siding materials which are outside the scope of the standard details and specifications provided by the manufacturer.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Minimum of 2 years experience with installation of similar products.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store siding on edge or lay flat on a smooth level surface. Protect edges and corners from chipping. Store sheets under cover and keep dry prior to installing.
- C. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

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1.8 WARRANTY

- A. Product Warranty: Limited, non-pro-rated product warranty.
 - 1. HardiPanel HZ10 vertical siding for 30 years.
- B. Workmanship Warranty: Application limited warranty for 2 years.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: James Hardie Building Products, Inc., which is located at: 26300 La Alameda Suite 400 ; Mission Viejo, CA 92691; Toll Free Tel: 866-274-3464; Tel: 949-367-4980; Fax: 949-367-4981; Email: [request info \(info@jameshardie.com\)](mailto:info@jameshardie.com); Web: www.jameshardiepros.com.
- B. Substitutions: Permitted.

2.2 SIDING AND TRIM

- A. Vertical Siding: HardiePanel HZ10 siding
 - 1. Type: Smooth Vertical siding panel 4 feet by 8 feet (1219 mm by 2438 mm).
 - 2. Type: Smooth Vertical siding panel 4 feet by 9 feet (1219 mm by 2743 mm).
 - 3. Type: Smooth Vertical siding panel 4 feet by 10 feet (1219 mm by 3048 mm).

2.3 FASTENERS

- A. Metal Framing:
 - 1. 1 inch (25 mm) No. 8-18 by 0.323 inch (8.2 mm) head self-drilling, corrosion resistant ribbed buglehead screws.

2.4 FINISHES

- A. Factory Primer: Provide factory applied universal primer.
 - 1. Primer: Factory primed by James Hardie.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If framing preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C. Nominal 2 inch by 4 inch (51 mm by 102 mm) wood framing selected for minimal shrinkage and complying with local building codes, including the use of water-resistive barriers or vapor barriers where required. Minimum 1-1/2 inches (38 mm) face and straight, true, of uniform dimensions and properly aligned.
 - 1. Install water-resistive barriers and claddings to dry surfaces.
 - 2. Repair any punctures or tears in the water-resistive barrier prior to the installation of the siding.
 - 3. Protect siding from other trades.

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3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Install a water-resistive barrier is required in accordance with local building code requirements.
- D. The water-resistive barrier must be appropriately installed with penetration and junction flashing in accordance with local building code requirements.

3.3 INSTALLATION

- A. Install materials in strict accordance with manufacturer's installation instructions.
- B. Block framing between studs where HardiePanel siding horizontal joints occur.
- C. Install metal Z flashing and provide a 1/4 inch (6 mm) gap at horizontal panel joints.
- D. Place fasteners no closer than 3/8 inch (9.5 mm) from panel edges and 2 inches (51 mm) from panel corners.
- E. Allow minimum vertical clearance between the edge of siding and any other material in strict accordance with the manufacturer's installation instructions.
- F. Maintain clearance between siding and adjacent finished grade.
- G. Specific framing and fastener requirements refer to Tables 2 and 3 in National Evaluation Service Report No. NER-405.

3.4 FINISHING

- A. Factory Prime siding to be painted as specified in section 09 91 13 – Exterior Painting

3.5 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

SECTION 07 62 00
SHEET METAL FLASHING AND TRIM

PART 1- GENERAL

1.1 DESCRIPTION

- A. Include all labor, materials and equipment necessary to complete all sheet metal work as shown on the drawings and as specified herein. Briefly, this includes:
 - 1. Flashing.
 - 2. Counter-flashing (including counter-flashing at all roof-mounted HVAC equipment). See National Roofing contractors Detail BUR-14.
 - 3. Metal copings.
 - 5. Through-wall scuppers.
 - 6. Incidental caulking.
 - 7. Sill flashing at windows.

1.2 WORK SPECIFIED ELSEWHERE

- A. Duct work.
- B. Flashing around plumbing vent stacks through roof.
- C. Base flashing.
- D. Cavity wall flashing.

1.3 PERFORMANCE REQUIREMENTS

- A. General: Provide manufactured roof specialties capable of withstanding wind loads, structural movement, thermally induced movement, and exposure to weather without failing.
 - 1. Provide manufactured roofing specialties, incorporating roof edge treatment that complies with recommendations of FMRC Loss Prevention Data Sheet 1-49 for the wind loads indicated in the General Notes on the Structural Drawings.
- B. Roof edge flashings shall be certified by the manufacture to comply with the following test standards:
 - 1. ANSI/SPRI ES-1-98 Test Method RE-2 "Pull-Off Test for Fascia": Fascia system shall be tested in accordance with the ANSI/SPRI test using the current edition of "Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems."
 - 2. ANSI/SPRI ES-1-98 Test RE-3 for Coping: Wind Design Guide for Edge Systems Use with Low Slope Roofing Systems (current edition). Coping systems shall be tested simultaneously on horizontal and vertical surfaces and shall exceed horizontal and vertical design wind pressure as calculated in accordance with the ANSI/SPRI test method.

1.4 SUBMITTALS

- A. Prior to fabrication, submit copies of shop drawings to Architect for approval. Drawings shall show sizes, bends, joints, anchorage and metal gauges.
- B. Full size samples may be required in addition to shop drawings on particular items of work.

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- C. Product Data, including manufacturer's material and finish data, installation instructions, and general recommendations for each specified flashing material and fabrication product.
- D. Qualification data for firms and persons specified in the "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of Architects and Owners, and other information specified.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experience Installer who has completed sheet metal flashing and trim work similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance.
- B. Mockups: Prior to installing sheet metal flashing and trim, construct mockups indicated to verify selections made under Sample submittals and to demonstrate aesthetic effects as well as qualities of materials and execution. Build mockups to comply with the following requirements, using materials indicated for final unit of Work.
 - 1. Locate mockups on-site in the location and of the size indicated or, if not indicated, as directed by Architect.
 - 2. Notify Architect one week in advance of the dates and times when mockups will be constructed.
 - 3. Demonstrate the proposed range of aesthetic effects and workmanship.
 - 4. Construct mockups for the following type of sheet metal flashing and trim:
 - a. Gutters and downspouts.
 - b. Conductor heads.
 - c. Scuppers.
 - d. Exposed trim.
 - e. Copings.
 - 5. Obtain Architect's approval of mockups before start of final unit of Work.
 - 6. Retain and maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
 - a. When directed, demolish and remove mockups from Project site.
 - b. Approved mockups in an undisturbed condition at the time of Substantial Completion may become part of the completed Work

1.6 PROTECTION

- A. The flashing subcontractor shall advise the Contractor of required procedures for surveillance and protection of the completed flashing and trim. Furnish such advice for period of installation of other work, and for the remainder of the construction period.

1.7 WARRANTY

- A. Contractor shall guarantee sheet metal work to be free from defects in materials and workmanship for a period of two (2) years from date of acceptance of building. Should any

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leaks or defects occur within the period of guarantee, Contractor shall repair leaks or defects immediately upon notification by Owner, at his own expense.

- B. Special Warranty on Flashing and Trim Component Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace flashings and trim components that show evidence of deterioration of factory-applied finishes within specified warranty period.
 - 1. Fluoropolymer Finish: Deterioration includes, but is not limited to, the following:
 - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
 - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
 - 2. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2-PRODUCTS

2.1 MATERIALS

- A. Sheet metal for each item shall be as specified under each heading and as shown on the drawings
 - 1. Sheet Metal at Copings: Vincent Brass and Aluminum Co., "Colorklad" or equal, prefinished 24 gauge galvanized steel, commercial quality, Armco Zincgrip, ASTM A446, Grade A, primed and finished one side with fluoropolymer coating 1.0 plus or minus 0.1 mil total dry thickness, PPG Duranar 200 with a strippable plastic film applied for protection during fabrication and a wash coat of 0.3 - 0.4 mil dry film thickness applied to reverse side. Color to be selected by Architect from manufacturer's metallic colors.
 - 2. Two Piece Counter flashings: Prefinished 24 ga. galvanized steel.
 - 3. Through Wall Scuppers: 16 ounce copper.
 - 4. Sheet Metal Expansion Joints: 16 ounce copper.
 - 5. Window Sill Flashings: Prefinished .040 aluminum sheet. Finish shall be the same as window frame.
 - 6. Gutters: Stainless steel, minimum 0.0187 inch thick.
- B. Screws and Rivets: Same material as flashing sheet, or other as recommended by manufacturer of flashing sheet.
- C. Nails: Long enough to penetrate back 1", #12gauge diameter, flat head, annular thread aluminum nails. Use neoprene washers under the heads where exposed to the weather.
- D. Cleats: Same metal and gage as sheet being anchored, unless specified otherwise.
- E. Bituminous Coating: FS TT-C-494 or SSPC Paint 12, cold-applied solvent-type bituminous mastic coating for application in dry film thickness of 15 mills per coat.
- F. Roofing Felt: Asphalt saturated, unperforated felt, complying with ASTM D226, #15 type.
- G. Sealant: Refer to Section 07 92 00 "Joint Sealants".

2.2 GALVANIZED STEEL FINISHES

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

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- D. High-Performance Organic Finish: Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
 - 1. Fluoropolymer Two-Coat System: Manufacturer's standard two-coat, thermocured system consisting of specially formulated inhibitive primer and fluoropolymer color topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight, with a minimum total dry film thickness of 1.0 mil; complying with physical properties and coating performance requirements of AAMA 621, except as modified below:
 - a. Humidity Resistance: 2000 hours.
 - b. Salt-Spray Resistance: 2000 hours.
 - 2. Concealed Finish: Apply pretreatment and manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with a minimum total dry film thickness of 0.9 mil.
 - 3. Color: To be selected by Architect from manufacturer's metallic finishes.
 - 4. Resin Manufacturers: Subject to compliance with requirements, provide fluoropolymer coating systems containing resins produced by one of the following manufacturers:
 - a. Arkema, Inc. (Kynar 500)
 - b. Solvay Solexis, Inc. (Hylar 5000)

2.3 FABRICATION

- A. Except as otherwise shown or specified, comply with applicable recommendations and details of the most current edition "Architectural Sheet Metal Manual" by SMACNA and the manufacturer of the sheet metal being installed.
- B. Provide for thermal expansion of flashing and other items exposed for more than 15'-0" continuous length. Maintain a water-tight installation at expansion seams. Locate expansion seams with the following maximum spacings for each general flashing use:
 - 1. Flashing and Trim: At 10'-0" intervals and 2'-0" each side corners and intersections.
 - 2. Gutter Expansion: In accordance with SMACNA, 4th Ed., Plate 6, "E" value chart.
- C. Fixed joints and seams shall be flat lock seams, soldered, unless otherwise indicated, with minimum of 1/2" wide hooked flanges.
- D. Clean exposed metal surfaces of substances which would interfere with uniform oxidation and weathering.
- E. Fabricate and install work with lines and corners of exposed unit true and accurate. Form exposed faces flat and

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- of buckles, excessive waves and avoidable tool marks. Provide uniform, neat seams with minimum exposure of solder, welds and sealant. Except as otherwise shown, fold back the sheet metal to form a hem on the concealed side of exposed edges.
- F. Conceal fasteners and expansion provisions wherever possible in exposed work and locate as to minimize the possibility of leakage. Cover and seal work as required for a watertight installation. Provide cleat-type anchorages for metal flashing and trim wherever practical.
- G. On vertical surfaces lap 2-piece flashings a minimum of 3". On sloping surfaces for slopes of not less than 6" in 12", lap unsealed flashings a minimum of 6". For embedment of metal flashing flanges in roofing, extend flanges for a minimum of 4" embedment.
- H. PITCH PAN AND STORM COLLAR
1. Penetration pans fabricated from .040 aluminum with leak proof corners shall be not more than 3" high and sized to the penetration with a minimum 2" clearance all sides.
 2. Set pans on a bead of melted down modified bitumen.
 3. Fill pan to within 1/2" of top with Foam Urethane and top cover with Lion Oil Co., W. R. Meadows or other approved (Two Component) Pitch Pans Sealer sloped to shed water. Note to prime, as well as paint, steel supports.
 4. Storm Collar to be 24 GA prefinished "Colorklad" steel with stainless steel screw type clamp ring. Storm Collars, where used, should be set high enough above pitch pans to visibly check sealers during routine roof maintenance.

PART 3- EXECUTION

3.1 INSTALLATION

- A. Copings: Install one-piece sheet metal coping on parapet walls as indicated on Drawings, with joints not more than 10'-0" o.c. Secure to wall with continuous 20 ga. galvanized steel cleats on exterior face and with screws through neoprene washers not more than 12" o.c. on back face. At joints lap the exterior and back faces at least 1" and seal the laps with sealant. On the top, fold the ends and join with a locking strip. Turn the locking strip ends down 3/4" over the front and back faces. Install a 6" wide backing plate under the joint and apply sealant where the coping ends overlap the backing plate. Joints are not to be soldered.
- B. Installation of Sheet Metal: Counterflashing at junction between roof and vertical surfaces shall be two-piece as detailed on Drawings. Where shown, receiver flashing shall extend into walls and turn up 1-1/2". The masonry joint shall then be filled with mortar to within 1/4" of the face of the wall. Fill the remaining 1/4" with sealant. Upper edge of counterflashing shall be locked into receiver. Hem lower edge of counterflashing and set close to base flashing to prevent entrance of wind-blown water. Make corners tight with special formed and soldered corner pieces.
- C. Through wall scupper as detailed on Drawings and similar to SMACNA Plate 30, Fig. A.
- D. Miscellaneous Sheet Metal Work: Provide sheet metal angles and closures, and other items of sheet metal work shown on Drawings and not specifically mentioned in this Specification, making each item complete and watertight.

3.2 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces, removing substances that might cause corrosion of metal or deterioration of finishes.
- B. Provide final protection and maintain conditions that ensure sheet metal flashing and trim Work during construction is without damage or deterioration other than natural weathering at the time of Substantial Completion.

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END OF SECTION

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SECTION 07 92 00
JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Silicone joint sealants.
 - 2. Nonstaining silicone joint sealants.
 - 3. Urethane joint sealants.
 - 4. Immersible joint sealants.
 - 5. Silyl-terminated polyether joint sealants.
 - 6. Mildew-resistant joint sealants.
 - 7. Polysulfide joint sealants.
 - 8. Butyl joint sealants.
 - 9. Latex joint sealants.

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

- A. Product Data: For each joint-sealant product.
- B. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- C. Samples for Verification: For each kind and color of joint sealant required, provide Samples with joint sealants in 1/2-inch-wide joints formed between two 6-inch-long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
- D. Joint-Sealant Schedule: Include the following information:
 - i. Joint-sealant application, joint location, and designation.
 - ii. Joint-sealant manufacturer and product name.
 - iii. Joint-sealant formulation.
 - iv. Joint-sealant color.

1.2 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified testing agency.
- B. Product Test Reports: For each kind of joint sealant, for tests performed by a qualified testing agency.
- C. Preconstruction Laboratory Test Schedule: Include the following information for each joint sealant and substrate material to be tested:
 - 1. Joint-sealant location and designation.
 - 2. Manufacturer and product name.
 - 3. Type of substrate material.
 - 4. Proposed test.
 - 5. Number of samples required.

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- D. Preconstruction Laboratory Test Reports: From sealant manufacturer, indicating the following:
 - 1. Materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with joint sealants.
 - 2. Interpretation of test results and written recommendations for primers and substrate preparation are needed for adhesion.
- E. Preconstruction Field-Adhesion-Test Reports: Indicate which sealants and joint preparation methods resulted in optimum adhesion to joint substrates based on testing specified in "Preconstruction Testing" Article.
- F. Field-Adhesion-Test Reports: For each sealant application tested.
- G. Sample Warranties: For special warranties.

1.3 QUALITY ASSURANCE

- A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.
- B. Product Testing: Test joint sealants using a qualified testing agency.
 - 1. Testing Agency Qualifications: Qualified according to ASTM C 1021 to conduct the testing indicated.
- C. Mockups: Install sealant in mockups of assemblies specified in other Sections that are indicated to receive joint sealants specified in this Section. Use materials and installation methods specified in this Section.

1.4 PRECONSTRUCTION TESTING

- A. Preconstruction Laboratory Testing: Submit to joint-sealant manufacturers, for testing indicated below, samples of materials that will contact or affect joint sealants.
 - 1. Adhesion Testing: Use ASTM C 794 to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.
 - 2. Compatibility Testing: Use ASTM C 1087 to determine sealant compatibility when in contact with glazing and gasket materials.
 - 3. Stain Testing: Use ASTM C 1248 to determine stain potential of sealant when in contact with [stone] [masonry] or cultured masonry substrates.
 - 4. Submit manufacturer's recommended number of pieces of each type of material, including joint substrates, joint-sealant backings, and miscellaneous materials.
 - 5. Schedule sufficient time for testing and analyzing results to prevent delaying the Work.
 - 6. For materials failing tests, obtain joint-sealant manufacturer's written instructions for corrective measures, including use of specially
 - 7. Testing will not be required if joint-sealant manufacturers submit data that are based on previous testing, not older than 24 months, of sealant products for adhesion to, staining of, and compatibility with joint substrates and other materials matching those submitted.
- B. Preconstruction Field-Adhesion Testing: Before installing sealants, field test their adhesion to Project joint substrates as follows:
 - 1. Locate test joints where indicated on Project or, if not indicated, as directed by Architect.
 - 2. Conduct field tests for each kind of sealant and joint substrate.
 - 3. Notify Architect seven days in advance of dates and times when test joints will be erected.

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4. Arrange for tests to take place with joint-sealant manufacturer's technical representative present.
 - a. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1.1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.
 - 1) For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
5. Report whether sealant failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each kind of product and joint substrate. For sealants that fail adhesively, retest until satisfactory adhesion is obtained.
6. Evaluation of Preconstruction Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing, in absence of other indications of noncompliance with requirements, will be considered satisfactory. Do not use sealants that fail to adhere to joint substrates during testing.

1.5 FIELD CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
 1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer [or are below 40 deg F].
 2. When joint substrates are wet.
 3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
 4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

1.6 WARRANTY

- A. Special Installer's Warranty: Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
 1. Warranty Period: [Two] years from date of Substantial Completion.
- B. Special Manufacturer's Warranty: Manufacturer agrees to furnish joint sealants to repair or replace those joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
 1. Warranty Period: [Five] years from date of Substantial Completion.
- C. Special warranties specified in this article exclude deterioration or failure of joint sealants from the following:
 1. Movement of the structure caused by stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression.
 2. Disintegration of joint substrates from causes exceeding design specifications.
 3. Mechanical damage caused by individuals, tools, or other outside agents.
 4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

PART 2 - PRODUCTS

2.1 JOINT SEALANTS, GENERAL

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- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer, based on testing and field experience.
- B. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

2.2 SILICONE JOINT SEALANTS

- A. Silicone, S, NS, 100/50, NT: Single-component, nonsag, plus 100 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 100/50, Use NT.
- B. Silicone, S, NS, 50, NT: Single-component, nonsag, plus 50 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 50, Use NT.
- C. Silicone, S, NS, 35, NT: Single-component, nonsag, plus 35 percent and minus 35 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 35, Use NT.
- D. Silicone, S, NS, 25, NT: Single-component, nonsag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 25, Use NT.
- E. Silicone, Acid Curing, S, NS, 25, NT: Single-component, nonsag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, acid-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 25, Use NT.
- F. Silicone, S, NS, 100/50, T, NT: Single-component, nonsag, plus 100 percent and minus 50 percent movement capability, traffic- and nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 100/50, Uses T and NT.
- G. Silicone, S, NS, 50, T, NT: Single-component, nonsag, plus 50 percent and minus 50 percent movement capability, traffic- and nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 50, Uses T and NT.
- H. Silicone, S, NS, 25, T, NT: Single-component, nonsag, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 25, Uses T and NT.
- I. Silicone, S, P, 100/50, T, NT: Single-component, pourable, plus 100 percent and minus 50 percent movement capability, traffic- and nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade P, Class 100/50, Uses T and NT.
- J. Silicone, S, P, 25, T, NT: Single-component, pourable, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade P, Class 25, Uses T and NT.
- K. Silicone, M, P, 100/50, T, NT: Multicomponent, pourable, plus 100 percent and minus 50 percent movement capability, traffic- and nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type M, Grade P, Class 100/50, Uses T and NT.

2.3 NONSTAINING SILICONE JOINT SEALANTS

- A. Nonstaining Joint Sealants: No staining of substrates when tested according to ASTM C 1248.
- B. Silicone, Nonstaining, S, NS, 100/50, NT: Nonstaining, single-component, nonsag, plus 100 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 100/50, Use NT.

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- C. Silicone, Nonstaining, S, NS, 50, NT: Nonstaining, single-component, nonsag, plus 50 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 50, Use NT.
- D. Silicone, Nonstaining, S, NS, 100/50, T, NT: Nonstaining, single-component, nonsag, plus 100 percent and minus 50 percent movement capability, traffic- and nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 100/50, Uses T and NT.
- E. Silicone, Nonstaining, M, NS, 50, NT: Nonstaining, multicomponent, nonsag, plus 50 percent and minus 50 percent movement capability, nontraffic-use, neutral-curing silicone joint sealant; ASTM C 920, Type M, Grade NS, Class 50, Use NT.

2.4 URETHANE JOINT SEALANTS

- A. Urethane, S, NS, 25, NT: Single-component, nonsag, nontraffic-use, plus 25 percent and minus 25 percent movement capability, urethane joint sealant; ASTM C 920, Type S, Grade NS, Class 25, Use NT.
- B. Urethane, S, NS, 100/50, T, NT: Single-component, nonsag, plus 100 percent and minus 50 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C 920, Type S, Grade NS, Class 100/50, Uses T and NT.
- C. Urethane, S, NS, 25, T, NT: Single-component, nonsag, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C 920, Type S, Grade NS, Class 25, Uses T and NT.
- D. Urethane, S, P, 35, T, NT: Single-component, pourable, plus 35 percent and minus 35 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C 920, Type S, Grade P, Class 35, Uses T and NT.
- E. Urethane, S, P, 25, T, NT: Single-component, pourable, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C 920, Type S, Grade P, Class 25, Uses T and NT.
- F. Urethane, M, NS, 50, NT: Multicomponent, nonsag, plus 50 percent and minus 50 percent movement capability nontraffic-use, urethane joint sealant; ASTM C 920, Type M, Grade NS, Class 50, Use NT.
- G. Urethane, M, NS, 25, NT: Multicomponent, nonsag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, urethane joint sealant; ASTM C 920, Type M, Grade NS, Class 25, Use NT.
- H. Urethane, M, NS, 50, T, NT: Multicomponent, nonsag, plus 50 percent and minus 50 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C 920, Type M, Grade NS, Class 50, Uses T and NT.
- I. Urethane, M, NS, 25, T, NT: Multicomponent, nonsag, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C 920, Type M, Grade NS, Class 25, Uses T and NT.
- J. Urethane, M, P, 50, T, NT: Multicomponent, pourable, plus 50 percent and minus 50 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C 920, Type M, Grade P, Class 50, Uses T and NT.
- K. Urethane, M, P, 25, T, NT: Multicomponent, pourable, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C 920, Type M, Grade P, Class 25, Uses T and NT.

2.5 IMMERSIBLE JOINT SEALANTS

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- A. Immersible Joint Sealants. Suitable for immersion in liquids; ASTM C 1247, Class 1 tested in deionized water unless otherwise indicated
- B. Urethane, Immersible, S, NS, 100/50, NT, I: Immersible, single-component, nonsag, plus 100 percent and minus 50 percent movement capability, nontraffic-use, urethane joint sealant; ASTM C 920, Type S, Grade NS, Class 100/50, Uses NT, and I.
- C. Urethane, Immersible, S, NS, 35, NT, I: Immersible, single-component, nonsag, plus 35 percent and minus 35 percent movement capability, nontraffic-use, urethane joint sealant; ASTM C 920, Type S, Grade NS, Class 35, Use NT and I.
- D. Urethane, Immersible, S, NS, 50, T, NT, I: Immersible, single-component, nonsag, plus 50 percent and minus 50 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C 920, Type S, Grade NS, Class 50, Uses T, NT, and I.
- E. Urethane, Immersible, S, NS, 35, T, NT, I: Immersible, single-component, nonsag, plus 35 percent and minus 35 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C 920, Type S, Grade NS, Class 35, Uses T, NT, and I.
- F. Urethane, Immersible, S, NS, 25, T, NT, I: Immersible, single-component, nonsag, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C 920, Type S, Grade NS, Class 25, Uses T, NT, and I.
- G. Urethane, Immersible, S, P, 50, T, NT, I: Immersible, single-component, pourable, plus 50 percent and minus 50 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C 920, Type S, Grade P, Class 50, Uses T, NT, and I.
- H. Urethane, Immersible, S, P, 25, T, NT, I: Immersible, single-component, pourable, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C 920, Type S, Grade P, Class 25, Uses T, NT, and I.
- I. Polysulfide, Immersible, M, NS, 25, NT, I: Immersible, multicomponent, nonsag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, polysulfide joint sealant; ASTM C 920, Type M, Grade NS, Class 25, Uses NT and I.
- J. Urethane, Immersible, M, NS, 50, T, NT, I: Immersible, multicomponent, nonsag, plus 50 percent and minus 50 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C 920, Type M, Grade NS, Class 50, Uses T, NT, and I.
- K. Urethane, Immersible, M, NS, 25, T, NT, I: Immersible, multicomponent, nonsag, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C 920, Type M, Grade NS, Class 25, Uses T, NT, and I.
- L. Polysulfide, Immersible, M, NS, 25, T, NT, I: Immersible, multicomponent, nonsag, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, polysulfide joint sealant; ASTM C 920, Type M, Grade NS, Class 25, Uses T, NT, and I.
- M. Urethane, Immersible, M, P, 25, T, NT, I: Immersible, multicomponent, pourable, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, urethane joint sealant; ASTM C 920, Type M, Grade P, Class 25, Uses T, NT, and I.

2.6 SILYL-TERMINATED POLYETHER (STPE) JOINT SEALANTS

- A. STPE, S, NS, 50, NT: Single-component, nonsag, plus 50 percent and minus 50 percent movement capability, nontraffic-use, silyl-terminated polyether joint sealant; ASTM C 920, Type S, Grade NS, Class 50, Use NT.
- B. STPE, S, NS, 35, NT: Single-component, nonsag, plus 35 percent and minus 35 percent movement capability, nontraffic-use, silyl-terminated polyether joint sealant; ASTM C 920, Type S, Grade NS, Class 35, Use NT.
- C. STPE, S, NS, 25, NT: Single-component, nonsag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, silyl-terminated polyether joint sealant; ASTM C 920, Type S, Grade NS, Class 25, Use NT.

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- D. STPE, S, NS, 100/50, T, NT: Single-component, nonsag, plus 100 percent and minus 50 percent movement capability, traffic- and nontraffic-use, silyl-terminated polyether joint sealant; ASTM C 920, Type S, Grade NS, Class 100, Uses T and NT.
- E. STPE, S, NS, 50, T, NT: Single-component, nonsag, plus 50 percent and minus 50 percent movement capability, traffic- and nontraffic-use, silyl-terminated polyether joint sealant; ASTM C 920, Type S, Grade NS, Class 50, Uses T and NT.
- F. STPE, S, NS, 35, T, NT: Single-component, nonsag, plus 35 percent and minus 35 percent movement capability, traffic- and nontraffic-use, silyl-terminated polyether joint sealant; ASTM C 920, Type S, Grade NS, Class 35, Uses T and NT.
- G. STPE, S, NS, 25, T, NT: Single-component, nonsag, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, silyl-terminated polyether joint sealant; ASTM C 920, Type S, Grade NS, Class 25, Uses T and NT.
- H. STPE, S, P, 25, T, NT: Single-component, pourable, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, silyl-terminated polyether joint sealant; ASTM C 920, Type S, Grade P, Class 25, Uses T and NT.

2.7 MILDEW-RESISTANT JOINT SEALANTS

- A. Mildew-Resistant Joint Sealants: Formulated for prolonged exposure to humidity with fungicide to prevent mold and mildew growth.
- B. Silicone, Mildew Resistant, Acid Curing, S, NS, 25, NT: Mildew-resistant, single-component, nonsag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, acid-curing silicone joint sealant; ASTM C 920, Type S, Grade NS, Class 25, Use NT.
- C. STPE, Mildew Resistant, S, NS, 50, NT: Mildew-resistant, single-component, nonsag, plus 50 percent and minus 50 percent movement capability, nontraffic-use, silyl-terminated polyether joint sealant; ASTM C 920, Type S, Grade NS, Class 50, Use NT.

2.8 POLYSULFIDE JOINT SEALANTS

- A. Polysulfide, S, NS, 25, NT: Single-component, nonsag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, polysulfide joint sealant; ASTM C 920, Type S, Grade NS, Class 25, Use NT.
- B. Polysulfide, M, NS, 25, T, NT: Multicomponent, nonsag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, polysulfide joint sealant; ASTM C 920, Type M, Grade NS, Class 25, Use NT.
- C. Polysulfide, M, P, 25, T, NT: Multicomponent, pourable, plus 25 percent and minus 25 percent movement capability, traffic- and nontraffic-use, polysulfide joint sealant; ASTM C 920, Type M, Grade P, Class 25, Uses T and NT.

2.9 BUTYL JOINT SEALANTS

- A. Butyl-Rubber-Based Joint Sealants: ASTM C 1311.

2.10 LATEX JOINT SEALANTS

- A. Acrylic Latex: Acrylic latex or siliconized acrylic latex, ASTM C 834, Type OP, Grade NF.

2.11 JOINT-SEALANT BACKING

- A. Sealant Backing Material, General: Nonstaining; compatible with joint substrates, sealants, primers, and other joint fillers; and approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

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- B. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin) Type O (open-cell material) Type B (bicellular material with a surface skin) or any of the preceding types, as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
- C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint. Provide self-adhesive tape where applicable.

2.12 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.
- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
 - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
 - 2. Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:
 - a. Concrete.
 - b. Masonry.
 - c. Unglazed surfaces of ceramic tile.
 - d. Exterior insulation and finish systems.
 - e. Wood Soffit

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3. Remove laitance and form-release agents from concrete.
4. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
 - a. Metal.
 - b. Glass.
 - c. Porcelain enamel.
 - d. Glazed surfaces of ceramic tile
 - e. plastics.
- B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
 1. Do not leave gaps between ends of sealant backings.
 2. Do not stretch, twist, puncture, or tear sealant backings.
 3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
- D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
 1. Place sealants so they directly contact and fully wet joint substrates.
 2. Completely fill recesses in each joint configuration.
 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
 1. Remove excess sealant from surfaces adjacent to joints.
 2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
 3. Provide concave joint profile per Figure 8A in ASTM C 1193 unless otherwise indicated.

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4. Provide flush joint profile at locations indicated on Drawings according to Figure 8B in ASTM C 1193.
5. Provide recessed joint configuration of recess depth and at locations indicated on Drawings to Figure 8C in ASTM C 1193.
 - a. Use masking tape to protect surfaces adjacent to recessed tooled joints.

3.4 FIELD QUALITY CONTROL

- A. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:
 1. Extent of Testing: Test completed and cured sealant joints as follows:
 - a. Perform [10] tests for the first [1000 feet] of joint length for each kind of sealant and joint substrate.
 - b. Perform one test for each [1000 feet] of joint length thereafter or one test per each floor per elevation.
 2. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C 1193 or Method A, Tail Procedure, in ASTM C 1521.
 - a. For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
 3. Inspect tested joints and report on the following:
 - a. Whether sealants filled joint cavities and are free of voids.
 - b. Whether sealant dimensions and configurations comply with specified requirements.
 - c. Whether sealants in joints connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each kind of product and joint substrate. Compare these results to determine if adhesion complies with sealant manufacturer's field-adhesion hand-pull test criteria.
 4. Record test results in a field-adhesion-test log. Include dates when sealants were installed, names of persons who installed sealants, test dates, test locations, whether joints were primed, adhesion results and percent elongations, sealant material, sealant configuration, and sealant dimensions.
 5. Repair sealants pulled from test area by applying new sealants following same procedures used originally to seal joints. Ensure that original sealant surfaces are clean and that new sealant contacts original sealant.
- B. Evaluation of Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

3.5 CLEANING

- A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.6 PROTECTION

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- A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out, remove, and repair damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

3.7 JOINT-SEALANT SCHEDULE

- A. Joint-Sealant Application: Exterior joints in horizontal traffic surfaces.
1. Joint Locations:
 - a. Isolation and contraction joints in cast-in-place concrete slabs.
 - b. Joints between different materials listed above.
 - c. Other joints as indicated on Drawings.
 2. Joint Sealant: [Urethane, M, P, 50, T, NT]
 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors
- B. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal nontraffic surfaces.
1. Joint Locations:
 - a. Construction joints in cast-in-place concrete.
 - b. Joints between plant-precast architectural concrete units.
 - c. Joints in masonry assemblies.
 - d. Joints in exterior insulation and finish systems.
 - e. Joints between metal panels.
 - f. Joints between different materials listed above.
 - g. Perimeter joints between materials listed above and frames of [doors] [windows] [and] [louvers].
 - h. Control and expansion joints in [ceilings] [and other] [overhead surfaces].
 - i. Other joints as indicated on Drawings.
 2. Joint Sealant: [Silicone, nonstaining, S, NS, 50, NT]
 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors
- C. Joint-Sealant Application: Interior joints in horizontal traffic surfaces.
1. Joint Locations:
 - a. Isolation joints in cast-in-place concrete slabs.
 - b. Control and expansion joints in tile flooring.
 - c. Other joints as indicated on Drawings.
 2. Joint Sealant: [Urethane, S, P, 25, T, NT]
 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors
- D. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal nontraffic surfaces.
1. Joint Locations:
 - a. Control and expansion joints on exposed interior surfaces of exterior walls.
 - b. Tile control and expansion joints.
 - c. Vertical joints on exposed surfaces of [concrete] [walls]

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- d. Other joints as indicated on Drawings.
- 2. Joint Sealant: [Urethane, S, NS, 25, NT]
- 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors
- E. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal nontraffic surfaces not subject to significant movement
 - 1. Joint Locations:
 - a. Control joints on exposed interior surfaces of exterior walls.
 - b. Perimeter joints between interior wall surfaces and frames of [interior doors] [windows] Insert type of joint sealant in "Joint Sealant" Subparagraph below; coordinate with Part 2. First option is example only.
 - 2. Joint Sealant: Acrylic latex
 - 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors
- F. Joint-Sealant Application: Mildew-resistant interior joints in vertical surfaces and horizontal nontraffic surfaces.
 - 1. Joint Locations:
 - a. Joints between plumbing fixtures and adjoining walls, floors, and counters.
 - b. Tile control and expansion joints where indicated.
 - c. Other joints as indicated on Drawings.
 - 2. Joint Sealant: [Silicone, mildew resistant, acid curing, S, NS, 25, NT]
 - 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors
- G. Joint-Sealant Application: Concealed mastics.
 - 1. Joint Locations:
 - a. Aluminum thresholds.
 - b. Sill plates.
 - c. Other joints as indicated on Drawings.
 - 2. Joint Sealant: [Butyl-rubber based]
 - 3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

END OF SECTION

SECTION 08 11 13
HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Interior standard steel doors and frames.
 - 2. Exterior standard steel doors and frames.
 - 3. Interior custom hollow-metal doors and frames.
 - 4. Exterior custom hollow-metal doors and frames.
 - 5. Interior split frames for pocket doors
- B. Related Requirements:
 - 1. Section 087100 "Door Hardware" for door hardware

1.2 DEFINITIONS

- A. Minimum Thickness: Minimum thickness of base metal without coatings according to NAAMM-HMMA 803 or SDI A250.8.

1.3 COORDINATION

- A. Coordinate anchorage installation for hollow-metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.
- B. Coordinate requirements for installation of door hardware, electrified door hardware, and access control and security systems.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, core descriptions, fire-resistance ratings and finishes.
- B. Shop Drawings: Include the following:
 - 1. Details of each different wall opening condition.
- C. Samples for Verification:
 - 1. Finishes: For each type of exposed finish required, prepared on Samples of not less than 3 by 5 inches.
 - 2. Fabrication: Prepare Samples approximately **8 by 10 inches** to demonstrate compliance with requirements for quality of materials and construction:
 - a. Frames: Show profile, corner joint, floor and wall anchors, and silencers. Include separate section showing fixed hollow-metal panels and glazing if applicable.
- D. Product Schedule: For hollow-metal doors and frames, prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with final door hardware schedule.

1.5 INFORMATIONAL SUBMITTALS

- A. Product Test Reports: For each type of hollow-metal door and frame assembly, for tests performed by a qualified testing agency.
- B. Oversize Construction Certification: For assemblies required to be fire-rated and exceeding limitations of labeled assemblies.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Provide additional protection to prevent damage to factory-finished units.
- B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.
- C. Store frames vertically under cover at Project site with head up. Place on minimum 4-inch-high wood blocking. Provide minimum 1/4-inch space between each stacked door to permit air circulation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Apex Industries, Inc.
 - 2. Baron Metal Industries Inc.; an Assa Abloy Group company.
 - 3. Ceco Door; ASSA ABLOY.
 - 4. Curries Company; ASSA ABLOY.

2.2 PERFORMANCE REQUIREMENTS

- A. Fire-Rated Assemblies: Complying with NFPA 80 and listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction for fire-protection ratings and **temperature-rise limits** indicated, based on testing at positive pressure according to NFPA 252 or UL 10C.
 - 1. Smoke- and Draft-Control Assemblies: Provide assemblies with gaskets listed and labeled for smoke and draft control by a qualified testing agency acceptable to authorities having jurisdiction, based on testing according to UL 1784 and installed in compliance with NFPA 105.
 - 2. Temperature-Rise Limit: **At vertical exit enclosures and exit passageways**, provide doors that have a maximum transmitted temperature end point of not more than 450 deg F above ambient after 30 minutes of standard fire-test exposure.
- B. Fire-Rated, Borrowed-Lite Assemblies: Complying with NFPA 80 and listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on testing according to NFPA 257 or UL 9.

2.3 INTERIOR STANDARD STEEL FRAMES

- A. Construct frames to comply with standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.
- B. Standard-Duty Frames: SDI A250.8, Level 1; SDI A250.4, Level C. **At locations indicated in the Door and Frame Schedule**
 - 1. Frames:
 - a. Materials: steel sheet, minimum thickness of 0.042 inch.
 - b. Construction: **FULLY WELDED**
 - 2. Exposed Finish: Prime.

2.4 FRAME ANCHORS

- A. Jamb Anchors:
 - 1. Type: Anchors of minimum size and type required by applicable door and frame standard, and suitable for performance level indicated.
 - 2. Quantity: Minimum of three anchors per jamb, with one additional anchor for frames with no floor anchor. Provide one additional anchor for each 24 inches of frame height above 7 feet.

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3. Postinstalled Expansion Anchor: Minimum 3/8-inch-diameter bolts with expansion shields or inserts, with manufacturer's standard pipe spacer.
- B. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor.
- C. Floor Anchors for Concrete Slabs with Underlayment: Adjustable-type anchors with extension clips, allowing not less than 2-inch height adjustment. Terminate bottom of frames at top of underlayment.
- D. Material: ASTM A 879/A 879M, Commercial Steel (CS), 04Z coating designation; mill phosphatized.
 1. For anchors built into exterior walls, steel sheet complying with ASTM A 1008/A 1008M or ASTM A 1011/A 1011M; hot-dip galvanized according to ASTM A 153/A 153M, Class B.

2.5 MATERIALS

- A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.
- B. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.
- C. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B.
- D. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.
- E. Power-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hollow-metal frames of type indicated.
- F. Mineral-Fiber Insulation: ASTM C 665, Type I (blankets without membrane facing); consisting of fibers manufactured from slag or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively; passing ASTM E 136 for combustion characteristics.
- G. Glazing: Comply with requirements in Section 088000 "Glazing."

2.6 FABRICATION

- A. Hollow-Metal Frames: Fabricate in one piece except where handling and shipping limitations require multiple sections. Where frames are fabricated in sections, provide alignment plates or angles at each joint, fabricated of metal of same or greater thickness as frames.
 1. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
 2. Door Silencers: Except on weather-stripped frames, drill stops to receive door silencers as follows. Keep holes clear during construction.
 - a. Single-Door Frames: Drill stop in strike jamb to receive three door silencers.
- B. Hardware Preparation: Factory prepare hollow-metal doors and frames to receive templated mortised hardware, and electrical wiring; include cutouts, reinforcement, mortising, drilling, and tapping according to SDI A250.6, the Door Hardware Schedule, and templates.

2.7 STEEL FINISHES

- A. Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.
 1. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with SDI A250.10; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces. Touch up factory-applied finishes where spreaders are removed.

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- B. Drill and tap doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.

3.2 INSTALLATION

- A. General: Install hollow-metal doors and frames plumb, rigid, properly aligned, and securely fastened in place. Comply with approved Shop Drawings and with manufacturer's written instructions.
- B. Hollow-Metal Frames: Comply with [SDI A250.11] [NAAMM-HMMA 840].
 - 1. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces without damage to completed Work.
 - a. Where frames are fabricated in sections, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces. Touch-up finishes.
 - b. Install frames with removable stops located on secure side of opening.
 - 2. Fire-Rated Openings: Install frames according to NFPA 80.
 - 3. Floor Anchors: Secure with postinstalled expansion anchors.
 - a. Floor anchors may be set with power-actuated fasteners instead of postinstalled expansion anchors if so indicated and approved on Shop Drawings.
 - 4. Solidly pack mineral-fiber insulation inside frames.
 - 5. Installation Tolerances: Adjust hollow-metal frames to the following tolerances:
 - a. Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
 - b. Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.
 - c. Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
 - d. Plumbness: Plus or minus 1/16 inch, measured at jambs at floor.

3.3 CLEANING AND TOUCHUP

- A. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.
- B. Metallic-Coated Surface Touchup: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.
- C. Factory-Finish Touchup: Clean abraded areas and repair with same material used for factory finish according to manufacturer's written instructions.
- D. Touchup Painting: Cleaning and touchup painting of abraded areas of paint are specified in painting Sections.

END OF SECTION

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**SECTION 08 71 00
DOOR HARDWARE**

PART 1 – GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Hardware schedule and keying schedule.

PART 2 - PRODUCTS

2.1 HARDWARE

- A. Fire-Resistance-Rated Assemblies: Provide products that comply with NFPA 80 and are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction for applications indicated. On exit devices provide label indicating "Fire Exit Hardware."
- B. Hinges:
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Bommer Industries, Inc.
 - b. Hager Companies.
 - c. Ives; an Allegion brand.
 - d. Stanley Commercial Hardware; a division of Stanley Security Solutions.
 2. Stainless-steel hinges with stainless-steel pins for exterior.
 3. Nonremovable hinge pins for exterior and public interior exposure.
 4. Ball-bearing hinges for doors with closers and entry doors.
 5. Two hinges for 1-3/8-inch- (35-mm-) thick wood doors.
 6. Three hinges for 1-3/4-inch- (45-mm-) thick doors 90 inches (2300 mm) or less in height; four hinges for doors more than 90 inches (2300 mm) in height.
- C. Locksets and Latchsets:
1. Manufacturers: Subject to compliance with requirements, provide products by Schlage w/ Falcon restricted cylinders:
 - a. Falcon; an Allegion Brand.
 - b. Schlage; an Allegion brand.
 2. BHMA A156.2, Series 4000, for bored locks and latches.
 3. BHMA A156.3, Grade 1 for exit devices.
 4. BHMA A156.5, for auxiliary locks.
 5. BHMA A156.12, Series 5000, for interconnected locks and latches.
 6. BHMA A156.13, Series 1000, for mortise locks and latches.
 7. Lever handles on locksets and latchsets.
 8. Provide trim on exit devices matching locksets.
- D. Key locks to Owner's existing master-key system.
1. Cylinders with six-pin tumblers.
 2. Provide cylinders for storefront doors, and other locking doors that do not require other hardware.
 3. Provide construction keying.
 4. Provide key control system, including cabinet.
- E. Closers:
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Arrow USA; an ASSA ABLOY Group company.

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- b. Corbin Russwin, Inc.; an ASSA ABLOY Group company.
- c. DORMA Americas.
- d. LCN; an Allegion brand.
- e. Norton Door Controls; an ASSA ABLOY Group company.
- f. SARGENT Manufacturing Company; ASSA ABLOY.
- g. Yale Security Inc; an ASSA ABLOY Group company.
- 2. Mount closers on interior side (room side) of door opening. Provide regular-arm, parallel- arm, or top-jamb-mounted closers as necessary.
- 3. Adjustable delayed opening (accessible to people with disabilities) feature on closers.
- F. Provide wall stops or floor stops for doors without closers.
- G. Hardware Finishes:
 - 1. Hinges: Matching finish of lockset/latchset.
 - 2. Locksets, Latchsets, and Exit Devices: Satin chrome plated.
 - 3. Closers: Matching finish of lockset/latchset.
 - 4. Other Hardware: Matching finish of lockset/latchset.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Mount hardware in locations required to comply with governing regulations and according to SDI A250.8 and DHI WDHS.3.
- B. Key Control System: Tag keys and place them on markers and hooks in key control system cabinet.
- C. Deliver keys to Owner.

3.2 HARDWARE SCHEDULE

SET #1		SET #2	
DOORS 104, 105, 106, 107 & 108		DOORS 103	
H	3 EACH HINGES BB1199 4.5 X 4.5 X US32D X NRP	H	3 EACH HINGES BB1279 4.5 X 4.5 X US26D
S	1 EACH DEADLOCK B633JP X 626	S	1 EACH DEADLOCK B633JP X 626
S	1 EACH CLYINDER 23-030 X 626	S	1 EACH CLYINDER 23-030 X 626
L	1 EACH CLOSER 4040XP S-CUSH X SNB X AL	S	1 EACH CYLINDRICAL LOCK ND10SRHO X 626
H	1 EACH PUSH PLATE 30S X 4 X 16 X US32D	L	1 EACH CLOSER 4040XP RWPA X SNB X AL
H	1 EACH PULL PLATE 33E X 4 X 16 X US32D	H	1 EACH KICK PLATE 190S X 10" X 2" LDW X US32D
H	1 EACH KICK PLATE 190S X 15" X 2" LDW X US32D	H	1 EACH STOP 236W X US32D
N	1 EACH THRESHOLD 425HD X DW X AL	N	1 SET SEALS 5050 X BLACK X SIZE REQUIRED
N	1 EACH DOOR DRIP/SWEEP 100V X DW X AL		
N	1 SET SEALS 5050 X BLACK X SIZE REQUIRED		
H	1 EACH STOP 236W X US32D		

MANUFACTURES

- H HAGER
- L LCN
- N NATIONAL GUARD
- S SCHLAGE

END OF SECTION

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SECTION 09 24 13
CEMENT STUCCO

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Exterior horizontal and nonvertical plasterwork (stucco).

1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: Show locations and installation of control and expansion joints, including plans, elevations, sections, details of components, and attachments to other work.
- C. Samples for Initial Selection: For each type of factory-prepared finish coat and for each color and texture specified.

1.4 QUALITY ASSURANCE

- A. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.
 - 1. Build mockups for each substrate and finish texture indicated for cement plastering, including accessories.
 - a. Size: 4'x4'in surface area.
 - 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 - 3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store materials inside under cover, and keep them dry and protected against damage from weather, moisture, direct sunlight, surface contamination, corrosion, construction traffic, and other causes.

1.6 FIELD CONDITIONS

- A. Comply with ASTM C 926 requirements.
- B. Exterior Plasterwork:
 - 1. Apply and cure plaster to prevent plaster drying out during curing period. Use procedures required by climatic conditions, including moist curing, providing coverings, and providing barriers to deflect sunlight and wind.
 - 2. Apply plaster when ambient temperature is greater than 40 deg F.
 - 3. Protect plaster coats from freezing for not less than 48 hours after set of plaster coat has occurred.

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PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Fire-Resistance Ratings: Where indicated, provide cement plaster assemblies identical to those of assemblies tested for fire resistance according to ASTM E 119 by a qualified testing agency.

2.2 METAL LATH

- A. Expanded-Metal Lath: ASTM C 847, cold-rolled carbon-steel sheet with ASTM A 653/A 653M, G60, hot-dip galvanized-zinc coating.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Alabama Metal Industries Company; a Gibraltar Industries company.
 - b. ClarkDietrich Building Systems.
 - c. MarinoWARE.
 2. Diamond-Mesh Lath: [Flat] or [Self-furring], [2.5 lb/sq. yd.] [3.4 lb/sq. yd.]

2.3 ACCESSORIES

- A. General: Comply with ASTM C 1063, and coordinate depth of trim and accessories with thicknesses and number of plaster coats required.
- B. Metal Accessories:
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Alabama Metal Industries Company; a Gibraltar Industries company.
 - b. ClarkDietrich Building Systems.
 - c. MarinoWARE.
 2. Foundation Weep Screed: Fabricated from hot-dip galvanized-steel sheet, ASTM A 653/A 653M, G60 zinc coating.
 3. Cornerite: Fabricated from metal lath with ASTM A 653/A 653M, G60, hot-dip galvanized-zinc coating.
 4. External- (Outside- Corner Reinforcement: Fabricated from metal lath with ASTM A 653/A 653M, G60, hot-dip galvanized-zinc coating.
 5. Cornerbeads: Fabricated from [zinc] [or] [zinc-coated (galvanized) steel].
 - a. Smallnose cornerbead with expanded flanges; use unless otherwise indicated.
 - b. Smallnose cornerbead with perforated flanges; use on curved corners.
 - c. Smallnose cornerbead with expanded flanges reinforced by perforated stiffening rib; use on columns and for finishing unit masonry corners.
 - d. Bullnose cornerbead, radius 3/4 inch minimum, with expanded flanges; use at locations indicated on Drawings.
 6. Casing Beads: Fabricated from [zinc] [or] [zinc-coated (galvanized) steel]; square-edged style, with expanded flanges.
 7. Control Joints: Fabricated from [zinc] [or] [zinc-coated (galvanized) steel]; one-piece-type, folded pair of unperforated screeds in M-shaped configuration; with perforated flanges and removable protective tape on plaster face of control joint.
 8. Expansion Joints: Fabricated from [zinc] [or] [zinc-coated (galvanized) steel]; folded pair of unperforated screeds in M-shaped configuration; with expanded flanges.
 9. Two-Piece Expansion Joints: Fabricated from [zinc] [or] [zinc-coated (galvanized) steel]; formed to produce slip-joint and square-edged reveal that is adjustable from 1/4 to 5/8 inch wide; with perforated flanges.

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2.4 MISCELLANEOUS MATERIALS

- A. Water for Mixing and Finishing Plaster: Potable and free of substances capable of affecting plaster set or of damaging plaster, lath, or accessories.
- B. Fiber for Base Coat: Alkaline-resistant glass or polypropylene fibers, 1/2 inch long, free of contaminants, manufactured for use in cement plaster.
- C. Bonding Compound: ASTM C 932.
- D. Fasteners for Attaching Metal Lath to Substrates: ASTM C 1063.
- E. Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, not less than 0.0475-inch diameter unless otherwise indicated.
- F. Sound-Attenuation Blankets: ASTM C 665, Type I (blankets without membrane facing) produced by combining thermosetting resins with mineral fibers manufactured from glass, slag wool, or rock wool.
 - 1. Fire-Resistance-Rated Assemblies: Comply with mineral-fiber requirements of assembly.

2.5 PLASTER MATERIALS

- A. Portland Cement: ASTM C 150/C 150M, [Type I]
 - 1. Color for Finish Coats: [Gray].
- B. Masonry Cement: ASTM C 91, Type N.
 - 1. Color for Finish Coats: [Gray].
- C. Plastic Cement: ASTM C 1328.
- D. Colorants for Job-Mixed Finish Coats: Colorfast mineral pigments that produce finish plaster color [to match Architect's sample]
- E. Lime: ASTM C 206, Type S; or ASTM C 207, Type S.
- F. Sand Aggregate: ASTM C 897.
 - 1. Color for Job-Mixed Finish Coats: [In color matching Architect's sample].
- G. Perlite Aggregate: ASTM C 35.
- H. Ready-Mixed Finish-Coat Plaster: Mill-mixed portland cement, aggregates, coloring agents, and proprietary ingredients.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Florida Stucco.
 - b. Omega Products International, Inc.
 - c. QUIKRETE.
 - d. Shamrock Stucco LLC.
 - 2. Color: As selected by Architect
- I. Acrylic-Based Finish Coatings: Factory-mixed acrylic-emulsion coating systems formulated with colorfast mineral pigments and fine aggregates; for use over cement plaster base coats. Include manufacturer's recommended primers and sealing topcoats for acrylic-based finishes.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Finestone; BASF Corp.
 - b. Master Wall Inc.
 - c. Senergy; BASF Corp.
 - d. Shamrock Stucco LLC.
 - e. SonoWall, BASF Corp.
 - f. Stuc-O-Flex International, Inc.

2.6 PLASTER MIXES

- A. General: Comply with ASTM C 926 for applications indicated.
 - 1. Fiber Content: Add fiber to base-coat mixes after ingredients have mixed at least two minutes. Comply with fiber manufacturer's written instructions for fiber quantities in mixes, but do not exceed 1 lb of fiber/cu. yd. of cementitious materials.
- B. Base-Coach Mixes for Use over Metal Lath: Scratch and brown coats for three-coat plasterwork as follows:
 - 1. Portland Cement Mixes:
 - a. Scratch Coat: For cementitious material, mix 1 part portland cement and [0 to 3/4] or [3/4 to 1-1/2] parts lime. Use 2-1/2 to 4 parts aggregate per part of cementitious material.
 - b. Brown Coat: For cementitious material, mix 1 part portland cement and [0 to 3/4] or [3/4 to 1-1/2] parts lime. Use 3 to 5 parts aggregate per part of cementitious material, but not less than volume of aggregate used in scratch coat.
 - 2. Masonry Cement Mixes:
 - a. Scratch Coat: Mix 1 part masonry cement and 2-1/2 to 4 parts aggregate.
 - b. Brown Coat: Mix 1 part masonry cement and 3 to 5 parts aggregate, but not less than volume of aggregate used in scratch coat.
 - 3. Portland and Masonry Cement Mixes:
 - a. Scratch Coat: For cementitious material, mix 1 part portland cement and 1 part masonry cement. Use 2-1/2 to 4 parts aggregate per part of cementitious material.
 - b. Brown Coat: For cementitious material, mix 1 part portland cement and 1 part masonry cement. Use 3 to 5 parts aggregate per part of cementitious material, but not less than volume of aggregate used in scratch coat.
 - 4. Plastic Cement Mixes:
 - a. Scratch Coat: Mix 1 part plastic cement and 2-1/2 to 4 parts aggregate.
 - b. Brown Coat: Mix 1 part plastic cement and 3 to 5 parts aggregate, but not less than volume of aggregate used in scratch coat.
 - 5. Portland and Plastic Cement Mixes:
 - a. Scratch Coat: For cementitious material, mix 1 part plastic cement and 1 part portland cement. Use 2-1/2 to 4 parts aggregate per part of cementitious material.
 - b. Brown Coat: For cementitious material, mix 1 part plastic cement and 1 part portland cement. Use 3 to 5 parts aggregate per part of cementitious material, but not less than volume of aggregate used in scratch coat.
- C. Factory-Prepared Finish-Coat Mixes: For [acrylic-based finish coatings], comply with manufacturer's written instructions.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

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3.2 PREPARATION

- A. Protect adjacent work from soiling, spattering, moisture deterioration, and other harmful effects caused by plastering.
- B. Prepare smooth, solid substrates for plaster according to ASTM C 926.

3.3 INSTALLATION, GENERAL

- A. Fire-Resistance-Rated Assemblies: Install components according to requirements for design designations from listing organization and publication indicated on Drawings.
- B. Sound-Attenuation Blankets: Where required, install blankets before installing lath unless blankets are readily installed after lath has been installed on one side.

3.4 INSTALLING METAL LATH

- A. Metal Lath: Install according to ASTM C 1063.
 - 1. Partition Framing and Vertical Furring: Install [flat-diamond-mesh] lath.

3.5 INSTALLING ACCESSORIES

- A. Install according to ASTM C 1063 and at locations indicated on Drawings.
- B. Reinforcement for External (Outside) Corners:
 - 1. Install [lath-type, external-corner reinforcement] [cornerbead] at exterior locations.
 - 2. Install cornerbead at interior locations.
- C. Control Joints: Locate as approved by Architect for visual effect and as follows:
 - 1. As required to delineate plasterwork into areas (panels) of the following maximum sizes:
 - a. Vertical Surfaces: 144 sq. ft..
 - b. Horizontal and Other Nonvertical Surfaces: 100 sq. ft..
 - 2. At distances between control joints of not greater than 18 feet o.c.
 - 3. As required to delineate plasterwork into areas (panels) with length-to-width ratios of not greater than 2-1/2:1.
 - 4. Where control joints occur in surface of construction directly behind plaster.
 - 5. Where plasterwork areas change dimensions, to delineate rectangular-shaped areas (panels) and to relieve the stress that occurs at the corner formed by the dimension change.

3.6 CLEANING AND PROTECTION

- A. Remove temporary protection and enclosure of other work after plastering is complete. Promptly remove plaster from door frames, windows, and other surfaces not indicated to be plastered. Repair floors, walls, and other surfaces stained, marred, or otherwise damaged during plastering.

END OF SECTION

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SECTION 09 90 00
PAINTING AND COATING

PART 1 GENERAL

1.1 SUMMARY

- A. This Section includes surface preparation, painting, and finishing of exposed interior and exterior items and surfaces.
 - 1. Surface preparation, priming, and finish coats specified in this section are in addition to shop priming and surface treatment specified under other sections.
- B. Paint exposed surfaces whether or not colors are designated in "schedules," except where a surface or material is specifically indicated not to be painted or is to remain natural. Where an item or surface is not specifically mentioned, paint the same as similar adjacent materials or surfaces. If color or finish is not designated, the Architect will select from standard colors or finishes available.
 - 1. Painting includes field painting exposed bare and covered pipes and ducts (including color coding), hangers, exposed steel and iron work, and primed metal surfaces of mechanical and electrical equipment.

1.2 DEFINITIONS

- A. "Paint" includes coating systems materials, primers, emulsions, enamels, stains, sealers and fillers, and other applied materials whether used as prime, intermediate, or finish coats.

1.3 SUBMITTALS

- A. Product Data: Manufacturer's technical information, label analysis, and application instructions for each material proposed for use.
 - 1. List each material and cross-reference the specific coating and finish system and application. Identify each material by the manufacturer's catalog number and general classification.
- B. Samples for initial color selection in the form of manufacturer's color charts.
 - 1. After color selection, the Architect will furnish color chips for surfaces to be coated.
- C. Samples for verification purposes: Provide samples of selected color and material to be applied, with texture to simulate actual conditions, on representative samples of the actual substrate. Define each separate coat, including block fillers and primers. Use representative colors when preparing samples for review. Resubmit until required sheen, color, and texture are achieved.
 - 1. Provide a list of material and application for each coat of each sample. Label each sample as to location and application.
 - 2. Submit samples on the following substrates for the Architect's review of color and texture only:
 - a. Concrete: Provide two 4inchsquare samples for each color and finish.
 - b. Stained or Natural Wood: Provide two 4 by 8 inch samples of natural and stained wood finish on actual wood surfaces.

1.4 QUALITY ASSURANCE

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- A. Single-Source Responsibility: Provide primers and undercoat paint produced by the same manufacturer as the finish coats.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to the job site in the manufacturer's original, unopened packages and containers bearing manufacturer's name and label.
 - 1. Product name or title of material.
 - 2. Product description (generic classification or binder type).
 - 3. Federal Specification number, if applicable.
 - 4. Manufacture's stock number and date of manufacturing.
 - 5. Contents by volume, for pigment and vehicle constituents.
 - 6. Thinning instructions.
 - 7. Application instructions.
 - 8. Color name and number.
- B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F. Maintain containers used in storage in a clean condition, free of foreign materials and residue.
 - 1. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily. Take necessary measures to ensure that workers and work areas are protected from fire and health hazards resulting from handling, mixing, and application.

1.6 JOB CONDITIONS

- A. Apply water based paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 50 deg F and 90 deg F.
- B. Apply solvent thinned paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 45 deg F and 95 deg F.
- C. Do not apply paint in snow, rain, fog, or mist, when the relative humidity exceeds 85 percent, at temperatures less than 5 deg F above the dew point, or to damp or wet surfaces.
 - 1. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by the manufacturer during application and drying periods.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturer: Subject to compliance with requirements, provide products of one of the following or equal:
 - 1. The Sherwin-Williams Company (S-W)
 - 2. PPG Industries, Pittsburgh Paints (Pittsburgh)
 - 3. Pratt and Lambert (P&L)

2.2 PAINTING SYSTEMS

- A. Exterior Metal:

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Surfaces - Exterior steel, iron and galvanized items such as roof top equipment, metal frames, for exterior doors, exterior hollow metal doors, uninsulated piping systems, and other exterior ferrous metal not otherwise specified.

Primer for Bare Steel & Iron - Red Metal Primer

Primer for Galvanized Metal - Galvanized Metal Primer

Finish - Exterior Alkyd Enamel (2 coats)

B. Interior Wood: (Semi-gloss finish)

Surfaces - Ceilings

Primer - Alkyd enamel undercoat

Finish - Interior Latex Enamel (2 coats)

C. Interior Metal:

Surfaces - Metal Doors and frames; Grilles, Registers

Spot prime cemented and taped joints with Promar latex wall primer and

Primer for Bare Steel & Iron - Gray Metal Primer

Primer for Galvanized Metal - Galvanized Metal Primer

Finish - Egg Shell Alkyd System (2 coats)

D. Interior Concrete: (Epoxy)

Surfaces - Floors

Etching - H&C Etching Solutions

Finish - 2 coats Sherwin Williams Porch and Floor Enamel (Water-Based)

E. Interior Masonry Blocks: (Semi-gloss)

Surfaces - Walls

Primer - 1 coat Sherwin-Williams Promar Block Filler

Finish - 2 coats Sherwin-Williams Promar 200

F. Exterior Wood

Surfaces - Walls and Soffits

Primer - 1 coat Sherwin-Williams Woodscapes Exterior Acrylic Solid Color House Stain

Finish - 1 coats Sherwin-Williams Woodscapes Exterior Acrylic Solid Color House Stain

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions under which painting will be performed for compliance with requirements for application of paint. Do not begin paint application until unsatisfactory conditions have been corrected.

1. Start of painting will be construed as the Applicator's acceptance of surfaces and conditions within a particular area.

3.2 PREPARATION

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- A. General Procedures: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items in place that are not to be painted, or provide surface-applied protection prior to surface preparation and painting. Remove these items if necessary for complete painting of the items and adjacent surfaces. Following completion of painting operations in each space or area, have items reinstalled by workers skilled in the trades involved.
 - 1. Clean surfaces before applying paint or surface treatments. Remove oil and grease prior to cleaning. Schedule cleaning and painting so that dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.
- B. Surface Preparation: Clean and prepare surfaces to be painted in accordance with the manufacturer's instructions for each particular substrate condition and as specified.
 - 1. Provide barrier coats over incompatible primers or remove and reprime. Notify Architect in writing of problems anticipated with using the specified finish coat material with substrates primed by others.
 - 2. Cementitious Materials: Prepare concrete, concrete masonry block surfaces to be painted. Remove efflorescence, chalk, dust, dirt, grease, oils, and release agents. Roughen as required to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods of surface preparation.
 - a. Clean concrete floors to be painted with a 5 percent solution of muriatic acid or other etching cleaner. Flush the floor with clean water to remove acid, neutralize with ammonia, and rinse, allow to dry and vacuum before painting.
 - 3. Wood: Clean surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sand surfaces exposed to view smooth and dust off.
 - a. Scrape and clean small, dry, seasoned knots and apply a thin coat of white shellac or other recommended knot sealer before application of primer. After priming, fill holes and imperfections in finish surfaces with putty or plastic wood filler. Sand smooth when dried.
 - b. Prime, stain, or seal wood to be painted immediately upon delivery. Prime edges, ends, faces, undersides, and backsides of wood, including cabinets, counters, cases, and paneling.
 - c. When transparent finish is required, back prime with spar varnish.
 - d. Seal tops, bottoms, and cutouts of unprimed wood doors with a heavy coat of varnish or sealer immediately upon delivery.
 - 4. Ferrous Metals: Clean no galvanized ferrous metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with recommendations of the Steel Structures Painting Council.
- C. Materials Preparation: Carefully mix and prepare paint materials in accordance with manufacturer's directions.
 - 1. Maintain containers used in mixing and application of paint in a clean condition, free of foreign materials and residue.
 - 2. Stir material before application to produce a mixture of uniform density; stir as required during application. Do not stir surface film into material. Remove film and, if necessary, strain material before using.
 - 3. Use only thinners approved by the paint manufacturer, and only within recommended limits.
- D. Tinting: Tint each undercoat a lighter shade to facilitate identification of each coat where multiple coats of the same material are applied. Tint undercoats to match the color of the

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finish coat, but provide sufficient differences in shade of undercoats to distinguish each separate coat.

3.3 APPLICATION

- A. Apply paint in accordance with manufacturer's directions. Use applicators and techniques best suited for substrate and type of material being applied.
- B. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
- C. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
- D. Minimum Coating Thickness: Apply materials at not less than the manufacturer's recommended spreading rate. Provide a total dry film thickness of the entire system as recommended by the manufacturer.
- E. Prime Coats: Before application of finish coats, apply a prime coat of material as recommended by the manufacturer to material that is required to be painted or finished and has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to assure a finish coat with no burn through or other defects due to insufficient sealing.
- F. Stipple Enamel Finish: Roll and redistribute paint to an even and fine texture. Leave no evidence of rolling such as laps, irregularity in texture, skid marks, or other surface imperfections.
- G. Pigmented (Opaque) Finishes: Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.
- H. Transparent (Clear) Finishes: Use multiple coats to produce a glass smooth surface film of even luster. Provide a finish free of laps, cloudiness, color irregularity, runs, brush marks, orange peel, nail holes, or other surface imperfections.
 - 1. Provide satin finish for final coats.
- I. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not in compliance with specified requirements.

3.4 CLEANING

- A. Cleanup: At the end of each work day, remove empty cans, rags, rubbish, and other discarded paint materials from the site.
- B. Upon completion of painting, clean glass and paint spattered surfaces. Remove spattered paint by washing and scraping, using care not to scratch or damage adjacent finished surfaces.

3.5 PROTECTION

- A. Protect work of other trades, whether to be painted or not, against damage by painting. Correct damage by cleaning, repairing or replacing, and repainting, as acceptable to Architect.
- B. Provide "wet paint" signs to protect newly painted finishes. Remove temporary protective wrappings provided by others for protection of their work after completion of painting operations.
 - 1. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

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END OF SECTION

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SECTION 10 28 00
TOILET, BATH AND OTHER ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Public-use washroom accessories.
 - 2. Childcare accessories
 - 3. Custodial accessories

1.2 COORDINATION

- A. Coordinate accessory locations with other work to prevent interference with clearances required for access by people with disabilities, and for proper installation, adjustment, operation, cleaning, and servicing of accessories.
- B. Deliver inserts and anchoring devices set into concrete or masonry as required to prevent delaying the Work.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
 - 2. Include anchoring and mounting requirements, including requirements for cutouts in other work and substrate preparation.
- B. Samples: Full size, for each exposed product and for each finish specified.
 - 1. Approved full-size Samples will be returned and may be used in the Work.
- C. Product Schedule: Indicating types, quantities, sizes, and installation locations by room of each accessory required.
 - 1. Identify locations using room designations indicated.
 - 2. Identify accessories using designations indicated.

1.4 INFORMATIONAL SUBMITTALS

- A. Sample Warranty: For manufacturer's special warranty.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For accessories to include in maintenance manuals.

1.6 WARRANTY

- A. Manufacturer's Special Warranty for Mirrors: Manufacturer agrees to repair or replace mirrors that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, visible silver spoilage defects.

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PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

2.2 PUBLIC-USE WASHROOM ACCESSORIES

Source Limitations: Obtain public-use washroom accessories from single source from single manufacturer.

A. Toilet Tissue Dispenser

1. Basis of Design: Bobrick B-3588
2. Description: Multi-roll dispenser
3. Mounting: Surface Mount
4. Operation: Locking with two roll dispensing
5. Capacity: Designed for up to 5-1/8 inch-diameter tissue rolls.
6. Material: 20 gauge stainless steel, satin-finish

B. Grab Bars

1. Basis of Design: Bobrick B-5806
2. Mounting: Flanges with concealed fasteners.
3. Material: 18 gauge stainless steel
 - a. Finish: Smooth, No. 4 finish (satin) on ends and slip-resistant texture in grip area.
4. Outside Diameter: 1-1/4 inches
5. Configuration and Length: As indicated on Drawings

C. Soap Dispenser

1. Basis of Design- Bobrick B4112In
2. Mounting: Surface mounted.
3. Capacity: 40 oz.
4. Materials: 20 gauge stainless steel, satin finish stainless steel with black molded plastic push button.
5. Refill Indicator: Window type.

D. Mirror

1. Basis of Design: Bobrick B-1556
2. Mounting: (4) #8 oval head screws
3. Material: 20 gauge stainless steel polished
 - a. Finish: #8 mirror finish
4. Backing: 1/4" tempered masonite
5. Width and Height: W 17 1/2" x H 23 1/4"

E. Automatic Hand Dryer

1. Basis of Design: Bobrick B1728
2. Mounting: Surface mounted
3. Motor: 1/7hp, 8000rpm
4. Power: 115V, 1725Watta, 50/60 Hz, singlephase
5. Materials: 22 gauge galvanized steel with stainless steel cover
6. Controls: Infrared sensor

F. Utility Hook

1. Basis of Design: Bobrick B6707
2. Mounting: Surface mounted

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- 3. Materials: 22 gauge stainless steel, satin finish
- G. Substitutions: Permitted

2.3 CHILDCARE ACCESSORIES

- A. Baby Changing Station
 - 1. Basis of Design: Koala Kare KB311-SSWM
 - 2. Description: Multi-roll dispenser
 - 3. Mounting: Surface Mount, vertical
 - 4. Operation: Concealed pneumatic cylinder
 - 5. Interior Material: Antimicrobial injection molded polypropylene, gray
 - 6. Exterior Material: Stainless steel, satin finish

2.4 CUSTODIAL ACCESSORIES

- A. Mop and Broom Holder
 - 1. Basis of Design: Bobrick B1728
 - 2. Mounting: Surface mounted
 - 3. Material: 22 gauge stainless steel, satin finish
 - 4. Holders: Spring-loaded rubber cam holders with anti-slip coating

PART 3 - EXECUTION

3.1 INSTALLATION

Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.

3.2 ADJUSTING AND CLEANING

- A. Adjust accessories for unencumbered, smooth operation. Replace damaged or defective items.
- B. Remove temporary labels and protective coatings.
- C. Clean and polish exposed surfaces according to manufacturer's written instructions.

END OF SECTION

SPECIFICATIONS
EXTERIOR SUN CONTROL DEVICES

Part 1 – General

1.01 WORK INCLUDED:

Provision, fabrication and installation of **Extruded Aluminum Sun Control Devices**, as shown on drawings and specified herein, and as needed for a complete and proper installation.

1.02 RELATED WORK:

1. Section 01-03-00 Alternates
2. Section 07-60-00 Flashing
3. Section 07-90-00 Sealants
4. Section 03-30-00 Concrete
5. Section 05-12-00 Structural Steel

1.03 REFERENCE STANDARDS: (Specifications for)

1. The Aluminum Association – Aluminum Design Manual 2010
2. American Welding Society- AWS D1.2/D1.2M: 2008
3. ASTM B 209 Aluminum & Aluminum Alloy Sheet and Plate
4. ASTM B 221 Aluminum & Aluminum Alloy Extruded Bars, Rods, Wire, Shapes, and Tubes

1.04 SAMPLES:

1. Submit samples in accordance with Section 01-30-00
2. Product data: manufacturer's brochures, manuals and literature.
3. Shop Drawings:
 - a. Includes the complete layout, sections, details, components, finishes, sizing, spacing, and fasteners specific to the project. The site-specific shop drawings shall show reactions at surface attachment points and bear the seal of a Registered Structural Engineer.
 - b. General Contractor shall submit shop drawings for approval by the Architect prior to fabrication of any materials.
 - c. General Contractor to verify all dimensions and elevations prior to submittal to Architect.
 - d. Manufacturer shall field verify dimensions prior to fabrication.
4. Finishes: samples of canopy finishes.

1.05 QUALITY ASSURANCE:

1. Canopy shall be designed to comply with state and local building codes.
2. Canopy manufacturer shall have a minimum of 10 years' experience in designing and installing the specified system.
3. The installation of the canopy shall be performed by the manufacturer to assure single source responsibility.

1.06 MATERIALS:

1. Delivery, Storage, and Handling: protect components from one another during shipping, storage and handling. Exercise care when unloading, storing, and erecting to prevent damage.

1.07 WARRANTY:

1. Provide manufacturer's 1-year warranty against defects in material and workmanship.

Part 2 – Products

2.01 MANUFACTURER QUALIFICATIONS:

1. Acceptable manufacturer for Extruded Aluminum Walkway Covers & Canopies: Subject to strict compliance with the specified requirements and the plans, the following manufacturer is acceptable:

AVAdex Walkway Cover Systems & Canopies

12130 Galveston Road, Building 1
Webster, Texas 77598-1539
(713) 944-0988 or (800) 777-4031

2.02 MATERIALS:

1. Components: all components shall be 6063, 6061, or 6005 alloy extruded aluminum.
2. Design Criteria: all components shall be sized to comply with live load and wind load requirements of the project and shall not be less than the dimensions shown on the plan.

2.02 COMPONENTS:

1. Configuration: as shown on the drawings
2. Sizes: minimum sizing as shown on the drawings
3. Columns: all columns shall have radius corners
4. Shading components: thickness shall be at least .080" thick
5. Flashing: flashing thickness shall be at least .040" thick

2.03 FASTENERS, CONNECTIONS, AND FITTINGS:

1. Bolted Connections: All bolts, nuts, washers, and screws used in joining the members shall be stainless steel up to 3/8" diameter. Over 3/8" diameter may be Hot Dipped Galvanized.
2. General Contractor shall provide structural attachment points flush with the outside surface of the building.
3. Rafters shall be heliarc welded to wall mounting plates which are bolted to walls.
4. Beams are fastened to Rafters with Concealed Clips.
5. Blades are mechanically fastened to structure with Stainless Steel Screws, concealed where able.

2.04 FINISH:

1. **Satin etched Clear Anodized** – Aluminum Association Specification AA-M10-C22-A31
- (1 year finish warranty)
2. **Satin etched Bronze Anodized** – Aluminum Association Specifications AA-M10-C22-A44
- (1 year finish warranty)
3. **Super Dynapon: AAMA 2604-21, Super-Polyester 1-Coat System** / Color: Per Color Schedule
- (5 year finish warranty)
4. **Super Dynapon: AAMA 2604-21, Super-Polyester 2-Coat System** / Color: Per Color Schedule
- (10 year finish warranty)
5. **Fluoropon 70% PVDF: AAMA 2605-17 Fluoropolymer 3-Coat System** / Color: Per Color Schedule
- (10 year finish warranty)

Part 3 – Execution

3.01 INSTALLATION:

1. The components and accessories are to be supplied and installed by the manufacturer.
2. Install canopy in strict accordance to manufacturer's recommendations.
3. Erect canopy after concrete and masonry work in the vicinity is completed and washed down.

3.02 WORKMANSHIP:

1. Take extreme care to prevent damage or scratching. Replace damaged components prior to installation. All workmanship must be top quality with meat miters and fitted joints.

3.03 CLEANING:

1. Just prior to completion of project, strip protective coatings of covering from aluminum and clean all parts. Repair to new condition to replace any materials damaged during installation.

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DOMESTIC WATER PIPING SYSTEM
SECTION 22 11 16

PART I - GENERAL

1.01 WORK INCLUDED:

- A. Water Service Piping
- B. Hot and Cold Water Piping
- C. Temperature and Pressure (T&P) Relief Piping
- D. Valves
- E. Shock Suppressors

1.02 RELATED WORK:

- A. Section 23 01 00 General Mechanical Requirements
- B. Section 23 07 00 HVAC Insulation
- C. Section 22 40 00 Plumbing Fixtures

1.03 SUBMITTALS:

- A. Submit manufacturer's data sheets on valves and shock suppressors.
- B. Submit list of piping products to be used and state their manufacturers, classes or types, and other applicable data.
- C. Submit Shop Drawings of shock suppressors layout proposed.
- D. Submit record drawings indicating actual location and routing of installed piping.
- E. Submit certificate of completion of chlorination.

PART 2 - PRODUCTS

2.01 PIPING:

- A. For underground water service piping outside building to water meter:
 - 1. ASTM B88 type as indicated on drawings hard copper tubing with wrought copper fittings and joints made with 95-5 solder.
 - 2. Thickness Class 50, cement lined, seal coated, hub and spigot type ductile iron with joints made with rubber compression rings manufactured for the purpose. (Optional)
- B. For underground water piping inside building and to five feet outside building:
 - 1. 1" and smaller - ASTM B88 type as indicated on drawings soft copper tubing with no fittings or joints permitted under slab. Make connections above slab using wrought copper fittings and 95-5 solder.

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- 2. 1-1/4" and larger - ASTM B88 type as indicated on drawings hard copper tubing with wrought copper fittings and joints make with Sil-Fos Solder (15% silver content).
- C. For exposed piping in toilet rooms and other finished areas, use chrome plated brass pipe with threaded fittings.
- D. For above ground water and T&P relief piping inside building, use ASTM B88 type as indicated on drawings hard copper tubing with wrought copper fittings and joints made with 95-5 solder.
- E. Solder containing lead shall not be used on potable water systems.

2.02 VALVES:

- A. Provide valves with suitable materials including discs, plugs, balls, gaskets, linings, and lubricants for the service, temperature, and pressure to which they will be exposed. Furnish with solder or screwed connections.
- B. Gate Valves: Bronze, non-rising stem, inside screw, double wedge.
- C. Globe or Angle Valves: Bronze, rising stem, inside screw, renewable composition disc.
- D. Check Valves: Bronze with swing disc.
- E. Standard Hose Bibbs (HB): Bronze, replaceable disc, hose thread outlet with vacuum breaker.
- F. Freeze Proof Hose Bibbs (FPHB): 3/4" anti-siphon non-freeze type with bronze casing and box with loose key handle. Furnish for proper wall thickness.
- G. Garbage Can Wash Valve (GCWV): 3/4" non-freeze mixing type with hot and cold water connections, bronze casing and deep box with loose key handle. Provide vacuum breaker and furnish for proper wall thickness. Wade W-8606-HC.
- H. Pressure Reducing Valves (PRV): Bronze with 125 psig inlet pressure and 50 psig adjustable outlet pressure. Furnish same size as pipe.
- I. Temperature and Pressure Relief Valve (T&P): Bronze with test lever. Size to handle BTU/hr. rating of water heater.

2.03 SHOCK SUPPRESSORS:

- A. Provide Wade "Shockstops" of all stainless steel construction with welded nested bellows and pre-charged with nitrogen. Size and locate in accordance with PDI-WH201.

PART 3 - EXECUTION

3.01 PREPARATION:

- A. Ream pipes and tubing and thoroughly clean inside and outside prior to connecting.

3.02 INSTALLATION:

- A. Slope water piping minimum of 1 inch in 40 feet and arrange to drain at all low points.
- B. Bury all underground outside piping a minimum of 3 feet below finished grade.

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**DOMESTIC WATER PIPING
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- C. Use electrically insulating type connections for joining dissimilar metals such as brass valves or adapters or insulating couplings.
- D. Use proper adapters for screwed valves to copper piping.
- E. Use teflon tape or other approved joint compound to connect threaded pipe.
- F. Connect to T&P relief valve and extend full size to approved discharge point.
- G. Where pipe passes through finished wall, ceiling, or floor, provide chrome plated escutcheon plate securely anchored to pipe. Install pipe so that no threads show.
- H. Arrange with local utility for water tap and meter installation. Pay all costs to establish water services.
- I. Install gate valve to isolate or shut-off equipment or branch lines. Use globe valves where adjustable flow or throttling is required.
- J. Install hose bibbs centerline, 2 feet above floor or grade. Install garbage can wash valve 4 feet above floor or drain.
- K. Provide PRV to limit maximum static pressure at plumbing fixtures to 70 psig. Submit pressure data taken at different times as approved or install PRV at service connection or in building. Provide PRV at other separate fixtures when shown on Drawings.
- L. Make provisions necessary to prevent cross connections with sanitary drainage system or other non-potable sources. Provide reduced pressure type backflow preventers when required.
- M. Provide thermostatic mixing valve equal to Symmons 7-225 at all sinks, lavatories, tubs and showers.

3.03 TESTING:

- A. Before concealing or insulating, test domestic water piping and prove leak free. Subject system to minimum hydrostatic pressure of 100 psig and hold for one hour.

3.04 STERILIZATION:

- A. After tests have been successfully completed, thoroughly flush and sterilize the completed domestic water system in accordance with AWWA C601.
- B. Flush entire system after sterilization until residual chlorine content is no greater than 0.2 parts per million.
- C. Chlorinate only when the building is unoccupied.

END OF SECTION

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SANITARY WASTE AND VENT PIPING SYSTEM
SECTION 22 13 16

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. Underground drain and vent piping
- B. Above ground drain, waste, and vent piping
- C. Sanitary sewer service piping
- D. Condensation drip and overflow piping
- E. Cleanouts
- F. Floor Drains
- G. Manholes

1.02 RELATED WORK:

- A. Section 23 01 00 Operation and Maintenance of HVAC Systems
- B. Section 22 40 00 Plumbing Fixtures

1.03 SUBMITTALS:

- A. Submit manufacturer's data sheets on cleanouts and floor drains.
- B. Submit list of piping products to be used for the listed services and state their manufacturers, classes or types, and other applicable data.
- C. Submit record drawings indicating actual location and routing of installed piping.
- D. Submit Shop Drawings on manholes indicating manufactured items, reinforcing steel requirements, etc.

PART 2 - PRODUCTS

2.01 PIPING:

- A. Underground drain and vent piping inside building and to five feet outside building:
 - 1. Service Weight (SV) cast iron hub and spigot pipe and fittings, coated inside and outside with coal tar varnish, and joints made with compression type molded neoprene gaskets.
 - 2. Schedule 40 PVC
- B. Above ground drain and vent piping:

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1. Service Weight (SV) cast iron "No-Hub" pipe and fittings, and joints made with standard weight stainless steel/neoprene couplings.
- C. Waste arms for lavatories, sinks, and urinals:
 1. DWV copper pipe with cast brass adapters and wrought copper fittings and joints made with 50-50 solder.
 2. Schedule 40 galvanized steel pipe with screwed fittings (optional).
 3. Schedule 40 PVC
- D. Underground sewer piping outside building to sewer main:
 1. Service Weight (SV) cast iron hub and spigot pipe and fittings, coated inside and outside with coal tar varnish, and joints made with compression type molded neoprene gaskets.
 2. Vitrified slat glaze clay hub and spigot pipe fittings and joints made with compression type molded neoprene gaskets. (Optional)
 3. Schedule 40 PVC.
- E. Condensation drip and overflow piping: solvent-cement weld.
- F. Acid Resistant Piping:
 1. Schedule 40 polypropylene with mechanical joint couplings equal to orlon type II "Blueline" for above ground piping and "Brownline" for below ground piping.

2.02 CLEANOUTS:

- A. Provide cleanouts compatible with type of drain piping to which it is connected. Provide covers compatible with type of floor or wall finish with consideration given to traffic conditions. Make cleanouts same size as pipe through 4 inches.
- B. Floor Cleanout (FCO): Cast iron with tapered brass plug, threaded adjustable housing, and round nickel bronze scoriated top. J. R. Smith 4111 series or equal.
- C. Cleanout to Grade (COTG) Same as FCO except with heavy duty cast iron scoriated top. Set COTG in 18-inch diameter concrete base 4 inches thick and flush with finished grade.
- D. Wall Cleanout (WCO): Cast iron with tapered brass plug and stainless steel access cover. Wade W-8450 or equal.
- E. Stack cleanout (SCO): Formed with cleanout tee or other approved fitting of cast iron with brass plug and stainless steel access cover. Wade W-460 or equal.

2.03 FLOOR DRAINS:

- A. Standard Floor Drain (FD): Lacquered cast iron body with flange, clamping collar with seepage openings, and adjustable square satin bronze strainer. Floor drains are 2 inches unless shown otherwise.
- B. Safe Waste Drain (SWD): Same As FD except provide funnel of same material as strainer.
- C. Drain with Backwater Valve (BWV): Same as FD except furnish with integral BWV Wade No. 31 or equal. Provide for all drains installed below grade or where drain flooding may occur.
- D. Garbage Can Wash Drain: Cast iron with flange, sediment bucket, and heavy duty hinged grate. Wade W-1740 or equal.

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2.04 TRAPS:

- A. Provide water seal trap for all connections to drain, waste, and vent system. Provide deep seal traps for all floor drains. Floor drain traps to be cast iron, varnish coated inside and out and compatible with type of drain pipe to which it is connected. Provide Proset trapguard for specified drain.
- B. Provide traps enameled on inside for janitor's sinks.
- C. Provide chrome plated brass traps for plumbing fixtures in finished spaces.

2.05 MANHOLES:

- A. Provide heavy-duty cast iron covers with mounting ring suitable for supporting truck traffic.

PART 3 - EXECUTION

3.01 PREPARATION:

- A. Swab pipes and clean joints and fittings inside and out prior to making connections. Use proper lubricants on compression gaskets.

3.02 INSTALLATION:

- A. Unless indicated otherwise on the Drawings, slope horizontal drain and vent piping in accordance with the following:

<u>Size</u>	<u>Minimum Slope</u>
3" and smaller	1/4" per foot
4" and larger	1/8" per foot

- B. Slope condensation drip and overflow piping a minimum of 1/16" per foot. Extend to approved discharge point.
- C. Bury all underground outside sewer pipe a minimum of 2 feet from finished grade.
- D. On condensate drain for each cooling coil, provide deep seal trap of same material as drip piping. Make trap water seal 2" greater than rated static pressure of fan associated with cooling coil but no less than 3" deep.
- E. Form manholes with steel reinforced concrete to required depths. Provide one inch steel ladder rungs 12 inches on center firmly set in concrete. Provide heavy cast iron cover in mounting ring formed in concrete with steel re-bar around ring.
- F. Make floor drains and cleanouts free from leaks. Lubricate cleanout plugs with mixture of graphite and linseed oil and do not over tighten.
- G. Arrange with local utility for sewer tap and pay all costs to establish sewer service.

3.03 TESTING:

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- A. Before concealing, test drain, waste, and vent system and prove leak free:
1. Water test - Subject system to at least 10 feet of hydrostatic head for 30 minutes.
 2. Air test - Subject system to at least 5 psig air pressure for 30 minutes. (Optional)

END OF SECTION

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Appendix A:
City Bid Documents

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

ELECTRIC WATER HEATERS – COMMERCIAL GRADE
SECTION 22 33 30

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. Electric storage water heaters
- B. Electric point of use water heaters
- C. Electric instantaneous water heater

1.02 RELATED WORK:

- A. Section 23 01 00 General Mechanical Requirements
- B. Section 22 11 16 Domestic Water Piping System

1.03 SUBMITTALS:

- A. Submit Manufacturer's Data Sheets on POU water heaters, boiler, storage tank, and thermostatic mixing valve.
- B. Submit Shop Drawings required for rough in coordination.

1.04 QUALITY ASSURANCE:

- A. Furnish products fully approved and certified by UL. Comply with ASME code for both fired and unfired pressure vessels. Comply with ASHRAE Standard 90 on standby losses.

PART 2 - PRODUCTS

2.01 ELECTRIC WATER HEATERS (Commercial Grade):

- A. Furnish with insulated and jacketed glass lined steel tank for working pressure of 125 PSI. Include anode rod.
- B. Provide immersion type electric heating elements with stainless steel sheath and automatic temperature control set at 105°F. Include high limit cut off and low water cut off.
- C. Unit shall be pre-wired with immersion thermostat, magnetic contactor, 120V pre-wired control circuit with transformer.

2.02 ELECTRIC POINT OF USE WATER HEATERS:

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- A. Furnish with insulated and jacketed glass lined steel tank for working pressure of 150 PSI. Include anode rod.
- B. Provide immersion type electric heating elements with automatic temperature control set at 105°F. Include high limit cut off.
- C. Unit shall be pre-wired with surface mounted thermostat, 120V control circuit with transformer.

2.03 ELECTRIC INSTANTANEOUS WATER HEATER:

- A. The heater shall be an in-line non-storage type with cast aluminum alloy casing and plastic housing with stainless steel parts.
- B. Provide flow switch and flow control.
- C. Unit shall be U.L. approved.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Provide temperature and pressure relief valve properly sized for Btu capacity ratings. Pipe to floor drain or janitors sink.
- B. Adjust controls for storage water temperatures stated herein.

END OF SECTION

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PLUMBING FIXTURES
SECTION 22 40 00

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. Plumbing fixtures, trim, and accessories.

1.02 RELATED WORK:

- A. Section 23 01 00 Operation and Maintenance of HVAC Systems
- B. Section 22 13 16 Sanitary Waste and Vent Piping
- C. Section 22 11 16 Domestic Water Piping

1.03 SUBMITTALS:

- A. Submit Manufacturer's Data Sheets including rough-in requirements and installation instructions for all fixtures and accessories.

PART 2 - PRODUCTS

2.01 PLUMBING FIXTURES:

- A. Provide only new fixtures and trim free from blemishes, scratches, discoloration or other flaws.
- B. Provide fixtures and trim as scheduled on the Drawings. Include all mounting accessories and incidental items for a complete installation.

PART 3 - EXECUTION

3.01 PREPARATION:

- A. Verify rough-in arrangement and clean mounting surfaces prior to installation.
- B. Provide sturdy support for all fixtures and proper anchors for rough-in connections. Provide additional wood blocking as required for adequate support.

3.02 INSTALLATION:

- A. Install each fixture with proper water seal trap. Furnish water closets and urinals with integral traps. Provide chrome plated brass traps, waste arms, tailpieces, and wall escutcheon plates, for all other fixtures set above floor level.

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- B. Provide each fixture with an accessible chrome plated brass supply with screw driver or loose key stop, reducer, and escutcheon.
- C. Furnish drinking fountains, urinals, water closets, and other wall mounted fixtures with heavy duty approved wall carriers designed for the purpose and compatible with wall construction and thickness.
- D. Provide concealed lavatory support equal to J. R. Smith model 0700 with floor mount, rectangular 1' x 3" "Pro-Set" upright, 4" square base welded to upright adjustable sleeve, thread concealed arm. Assemblies shall be covered with manufacturer's acid resistant coating. Miscellaneous parts shall be coated with high quality enamel paint. Locate support inside plumbing wall or chase. Provide manufacturer's arm extension adapters as required to extend through stud or concrete wall. See manufacturer for adapter sizes for the appropriate wall.
- E. Install fixtures at the following mounting heights above finished floor unless indicated otherwise:
- | | | |
|----|---------------------------------------|-----------------------------|
| 1. | Water Closet: | |
| | Standard | 15" to top of seat |
| | Handicapped | 17"-19" to top of seat |
| 2. | Urinal: | |
| | Standard | 22" to top of rim |
| | Handicapped | 17" to top of rim |
| 3. | Wall Hung Lavatory: | |
| | Standard | 31" to top of rim |
| | Handicapped | 34" to top of rim |
| 4. | Drinking Fountain: | |
| | Standard | 40" to top of water orifice |
| | Handicapped | 36" to top of water orifice |
| * | Flush Controls shall be 44" max. AFF. | |
- F. Where fixtures come in contact with wall, counter, or other mounting surface, caulk with fine dental plaster or approved material for clean waterproof joint.

3.03 FIXTURE ROUGH-IN SCHEDULE:

- A. Provide rough-in piping connections for the following minimum sizes or as required for particular fixture.

Waste	Vent	Cold Water	Hot Water
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1.	Water Closets (Flush Valve)	3"	2"	1"	----
2.	Urinals (Flush Valve)	2"	1-1/2"	3/4"	----
3.	Lavatories & Small Sinks	1-1/2"	1-1/4"	1/2"	1/2"
4.	Janitor's Sinks	3"	1-1/2"	1/2"	1/2"
5.	Drinking Fountains		1-1/4"	1-1/4"	1/2" ----
6.	Shower Mixing Valves	ee Floor Drain	----		1/2" 1/2"
7.	Bathtubs	1-1/2"	1-1/4"	1/2"	1/2"
8.	Utility Boxes (Washing Mach.)	2"	1-1/4"	1/2"	1/2"

- B. Where lavatories are supplied with cold water only, connect cold water supply to both hot and cold connections of lavatory fitting.

3.04 ADJUSTING:

- A. Adjust each flush valve for minimum water usage to obtain specified performance and for minimum noise.

END OF SECTION

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GENERAL MECHANICAL REQUIREMENTS
SECTION 23 01 00

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

- A. Comply with the Conditions of the Contract, General and Supplementary Conditions, and any other applicable requirements contained herein or issued under separate cover.
- B. Perform other work related to or necessary for the mechanical installation in accordance with the applicable Specification Division or Section contained herein.
- C. In Mechanical Specification Sections, items under "RELATED WORK" are listed for convenience only and are not guaranteed to be a complete listing of all applicable work.

1.02 CODES, REGULATIONS AND STANDARDS:

- A. Comply with the latest edition of applicable codes including the following:
 - 1. International Building Code
 - 2. Arkansas State Plumbing Code
 - 3. Arkansas State Gas Code
 - 4. Life Safety Code (NFPA 101)
 - 5. National Electrical Code (NFPA 70)
 - 6. Arkansas State Fire Prevention Code
 - 7. Arkansas Gas Pipeline Code
 - 8. Arkansas Energy Code
- B. Comply with applicable Regulations as amended, including the following:
 - 1. Arkansas State Department of Health Regulations
 - 2. Current Arkansas Rules and Regulations for Energy Efficiency Standards for New Building Construction
 - 3. Arkansas Department of Labor Regulations
 - 4. Occupational Safety and Health Act (OSHA)
 - 5. Utility Company Regulations and Requirements
 - 6. Other State and Federal Laws and Regulations
 - 7. Local Ordinances
- C. Furnish products and perform installation conforming to the latest accepted Standards published by the following organizations:
 - 1. Underwriter's Laboratories, Inc. (UL)
 - 2. National Fire Protection Association (NFPA)
 - 3. National Electrical Manufacturer's Association (NEMA)
 - 4. American Society of Testing Materials (ASTM)
 - 5. American National Standards Institute (ANSI)
 - 6. Air Movement and Control Association (AMCA)
 - 7. American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)

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8. American Society of Mechanical Engineers (ASME)
9. American Water Works Association (AWWA)
10. American Refrigeration Institute (ARI)
11. American Gas Association (AGA)
12. Cast Iron Soil Pipe Institute (CISPI)
13. Midwest Insulation Contractors Association (MICA)
14. Sheet Metal and Air Conditioning Contractor's National Association (SMACNA)
15. Insurance Service Office (ISO)
16. Factory Insurance Association (FIA)
17. Factory Mutual (FM)
18. Institute of Boiler and Radiator Manufacturers (IBR)
19. National Environmental Balancing Bureau (NEBB)
20. Associated Air Balance Council (AABC)
21. American Society of Sanitary Engineers (ASSE)
22. Plumbing and Drainage Institution (PDI)
23. National Sanitation Foundation (NSF)

- D. In case of discrepancy or conflict between Codes, Regulations, Standards, Drawings and/or Specifications, the requirement yielding the higher(est) quality of work shall govern.

1.03 ADMINISTRATIVE FEES:

- A. Obtain and maintain all necessary licenses, permits and inspections and pay all fees including taxes and penalties, if any, required by the Administrative Authority. Refundable deposits will be paid by the Contractor.

1.04 PRE-CONSTRUCTION SUBMITTALS:

- A. Submit for approval, Manufacturer's technical data sheets including performance specifications for all equipment and air devices shown on the schedules. Also provide data on all system accessories and all materials. Include all piping, ductwork and insulation materials. Accessories to be submitted on shall include valves and all piping accessories, and all duct accessories including extractors, turning vanes, control dampers and balancing dampers.
- B. Submit for approval, Contractor's original Shop Drawings of all assemblies of manufactured items including control diagrams. Submit all items called out in individual sections, in addition to those called for in this section.
- C. Indicate all pertinent dimensions on scale drawings necessary for clarity and or coordination of the installation between trades.
- D. Provide complete electrical data and wiring diagrams.
- E. Make Submittals on all work contained in Division 15, Mechanical at one time except by special permission.
- F. Bind Submittals in durable cover(s) with contents conveniently organized and properly indexed with index tabs.
- G. Obtain approval on product manufacturers not specifically named prior to making submittals.

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- H. Each Mechanical Section contains a listing of required Submittals only for convenience.
- I. Submit for approval a schedule of nameplates and manufacturer's data sheets and Shop Drawings on special supports and seals.
- J. Provide performance data on all substituted items to demonstrate equality to those scheduled. Include all sound level, rpm, velocity and other data as it is applicable.
- K. Submit proposed changes in ducts, pipes or equipment lay out before ordering or fabrication as stated below under "Intent".

1.05 INTENT:

- A. It is intended that the Contractor provide a complete and operating mechanical system including all incidental items, and connections necessary for proper operation or customarily included even though each and every item may not be indicated.
- B. The Drawings indicate the general layout requirements for equipment, fixtures, piping, ductwork, etc. Final layout will be governed by actual field conditions with all measurements verified at the site. Contractor shall verify that all equipment, ducts, pipes and all other components will fit in the space provided before fabrication or ordering. Contractor shall submit any proposed changes to the Engineer for approval before ordering or fabrication.
- C. It is intended that the mechanical installation be safe, reliable, energy efficient, and easily maintained with adequate provisions allowed for access to equipment.
- D. It is intended that the mechanical system operate quietly with noise levels below the criteria recommended for the application by ASHRAE. Provide corrective action as required to reduce objectionable noise or vibration.

PART 2 - PRODUCTS

2.01 PRODUCT REQUIREMENTS:

- A. Furnish only new standard products of a manufacturer regularly engaged in the production of said products.
- B. Support all products by service organizations with adequate spare parts inventory and personnel located reasonably close to the site.
- C. Where multiple units of the same type or class of products are required, provide all units of the same manufacturer.

2.02 PRODUCT HANDLING:

- A. Store products in the original containers and shelter in a suitable environment at an approved location. Make readily accessible for inspections and inventory accounting.

2.03 PRODUCT SUBSTITUTIONS:

- A. For products specified by generic reference standard, select any product meeting such standard.

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- B. For products specified by naming one or more products or manufacturers, select any named. Submit request, in writing, for substitution of any product or manufacturer not specifically named and obtain approval at least five working days prior to bid date.
- C. Provide all information required to support claim of "equality" of product proposed for substitution. Substitutions will be considered only if equivalent in quality, efficiency, performance, size, weight, reliability, appearance, and ease of maintenance to the specified product or manufacturer.
- D. Where approved product substitutions alter the design, space requirements, electrical requirements, connections, or etc., include all work necessary to provide a complete installation of quality equal to or better than that which would have been achieved with products or manufacturers as specified.

2.04 MECHANICAL IDENTIFICATION:

- A. Identify each major component as to manufacturer's name, address, model number, serial number, and pertinent ratings on a durable plate attached to the component in a conspicuous place.
- B. Identify each major component as it is named on the Drawings or referred to herein with engraved nameplates made from laminated plastic sheets.
 - 1. Furnish with white letters on black background except for other color coded requirements.
 - 2. Provide appropriate size nameplates with information easily readable.
 - 3. Submit for approval, a schedule of nameplates to be affixed to each major component.
 - 4. Attach nameplates with approved adhesive on factory baked enameled surfaces only. Attach nameplates with proper screws on field painted and all other surfaces.
- C. Identify outdoor underground lines with continuous strip of plastic utility marker tape as manufactured by Seton stating at regular intervals "CAUTION (state utility) PIPE BELOW." Install one foot directly above pipe before backfilling to grade.

2.05 ANCHORS:

- A. Size anchors for minimum safety factor of two times recommended load. Use only corrosion resistant materials.
- B. In new concrete, use malleable iron inserts set prior to pouring concrete.
- C. In existing concrete or solid masonry, use Phillips "Redhead" expansion shields or Elcen self drilling expansion shields. Use power driven fasteners only for light loads and with specific approval.
- D. In hollow masonry, use steel toggle bolts.
- E. On structural steel, use approved beam clamps or direct weld.
- F. In wood, use wood screws or lag screws or through bolt with nuts and washers.
- G. In sheet metal, use self tapping sheet metal screws or machine bolts with washers and nuts.
- H. In bar joists, use hanger rod between bottom angles secured with washers and nuts.

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2.06 HANGERS AND SUPPORTS:

- A. Generally, support piping in accordance with ANSI B31.1 and support ducts in accordance with SMACNA duct construction standards.
- B. Support horizontal steel and copper pipe as follows:
 - 1. For pipe sizes 2" and smaller, use adjustable wrought steel ring or clevis hanger spaced at 5 feet on center with 3/8" steel hanger rod.
 - 2. For pipe sizes 2-1/2" through 4", use adjustable wrought steel clevis spaced at 10 feet on center with 5/8" steel hanger rod.
 - 3. Support high temperature pipe with pipe roller hangers to allow for expansion.
- C. Support cast iron soil pipe 4" and smaller with adjustable wrought steel ring or clevis hanger spaced at 5 feet on center with 5/8" steel hanger rod.
- D. Support PVC pipe with approved hangers at 4 feet on center.
- E. Provide trapeze hangers consisting of steel angles or channels with spacers and steel hanger rods for multiple piping or duct runs.
- F. Provide copper plated hangers if in contact with copper piping.
- G. Provide 18 gauge galvanized saddles for insulated pipe and size hanger to accommodate pipe and insulation.
- H. Use steel riser clamps for vertical piping support through floors. Provide steel bracket and wrought steel clamp for support from walls.
- I. Support ducts with steel bands, steel angles, or steel channels near each transverse joint.
- J. Support piping and ductwork on roof with pipe hangers that do not require roof penetrations, supplemental flashing or damage to roofing material. The system shall consist of high-density polyethylene plastic bases, structural steel frame and pipe hangers and supports as indicated below:
 - a. Gas lines:
 - 1. Up to 2-1/2" model PP10 with roller
 - 2. 3" to 8" model PS-1-2 with roller.
 - b. Water lines (OD with insulation)
 - 1. Up to 2-1/2" model PP10 with strut and hanger
 - c. Gas and water:
 - 1. Above 8" use model PSE-2-2 with clevis hanger.
 - d. Ductwork: All ductwork is to be mounted on model PPH-D supports.

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2.07 EQUIPMENT SUPPORTS

- A. All roof mounted equipment where support is not specified elsewhere in this specification shall use model RTU-20 equipment supports.
- B. All roof supports shall be manufactured by Portable Pipe Hangers.

2.08 CONCRETE BASES:

- A. Provide concrete bases for floor mounted equipment indicated on the Drawings and all exterior equipment mounted on grade. Use proper cement-sand mix to achieve strength of 3000 psi after 28 days.
- B. Provide steel reinforcing bars as required and provide proper ties and support during pouring.
- C. Establish sizes of bases required to accommodate equipment. Generally, make bases extend 3" larger than equipment.
- D. Provide properly sized anchor bolts held in position with templates. Where anchor bolts cannot be held in sufficient alignment, provide adjustable bolts in pipe sleeves.
- E. Prior to pouring, set steel re-bar dowels in holes drilled in existing slab for proper anchorage of base. Install near each corner and at other intervals not to exceed 24 inches.
- F. Trowel finish and rub smooth. Form edges with 3/4" chamfer.
- G. Grout bases for pumps and other vibrating equipment with non-shrink grout.

2.09 SLEEVES:

- A. For pipes or round ducts through dry floors above grade or interior walls, form sleeves with 18 gauge galvanized sheet metal. Sleeves are not required in non fire rated dry wall construction nor slab on grade.
- B. For pipes through outside walls, firewalls, concrete beams, footings or potentially wet floors, provide schedule 40 galvanized steel pipe sleeves. Provide integral waterstop in outside wall sleeves.
- C. For rectangular ducts through walls or floors, form sleeves with steel angles or channels or galvanized sheet metal.
- D. Extend sleeves through floors one inch above floor and seal watertight. For core drilled penetrations in existing floors, provide one inch angle rings set in sealant in lieu of sleeves. Make wall sleeves flush with wall.
- E. Size sleeves to allow for movement due to expansion and to provide for pipe insulation run continuous through sleeves.
- F. Where pipes or ducts pass through sleeves, completely fill space with insulation or approved fire

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barrier materials. Provide tight fitting escutcheon plates on both sides of wall sleeves as follows:

1. Galvanized sheet metal caps for ducts.
2. Galvanized or cad plated plates for pipes in mechanical spaces or unfinished areas.
3. Chrome plated brass for pipes in finished areas.

2.10 FLASHING AND SEALS:

- A. Where piping penetrates roof membrane, provide 30 inch square sheet of 5 lb/sq. ft. lead or 18 gauge copper. Extend flashing into top of open vent pipes one inch or provide flashing assembly or pitch pan as recommended by roofing manufacturer.
- B. Flash floor drains, except in slab on grade, with copper sheet flashing. Extend flashing under tile or floor finish to 6 inches up wall in showers or 2 feet from floor drain. Clamp flashing to auxiliary drain collar on floor drain.
- C. Provide curbs for all roof mounted equipment. Make curbs minimum of 4 inches above flood level of roof. Flash and counter flash with galvanized sheet metal, soldered and properly waterproofed.
- D. Where piping penetrates outside walls, make watertight with approved sealant or provide modular rubber seal designed for the purpose.

2.11 AIR FILTRATION

- A. General - Air filter shall be equal to Camfil-Farr Aeropleat III, 2" deep pleated media disposable type. Each filter shall consist of a synthetic media blend incorporating an electret charge; a welded wire media support grid, and a high wet-strength beverage board frame. The filter shall be rated by Underwriters Laboratories as Class 1.
- B. Filter Media – Filter media shall be a blend of cotton and synthetic fibers, multi-layered incorporating mechanical efficiency. The media shall be formed in a radial pleat design to assure full utilization of the media area. When tested in accordance with ASHRAE Standard 52.2-1999, the filter shall have a minimum efficiency reporting value (MERV) of 6.

2-inch - The filter face area shall not be less than 10 pleats per linear foot. Initial resistance at 500 feet per minute shall not exceed 0.23" W.G.

PART 3 - EXECUTION

3.01 MANUFACTURER'S DIRECTIONS:

- A. Handle, install, connect, test, and operate all products, assemblies, and systems in accordance with manufacturer's recommendations.
- B. In case of conflicting requirements between the manufacturer's directions and the Contract Documents, obtain instructions before proceeding with the work.

3.02 INSPECTIONS:

- A. Arrange with the Administrative Authority for inspections of all work required and obtain approval prior to concealing or proceeding with the work.

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- B. Give adequate notice before concealing any work for inspections by the Architect or Owner's representatives. Obtain instructions to proceed before concealing the work.

3.03 CLEANING:

- A. Keep the premises clean and free from debris, dirt, etc.
- B. Upon completion of the work, clean and polish all fixtures, equipment, etc.
- C. All ductwork shall be sealed during construction to prevent construction dust from entering ductwork.

3.04 WORKMANSHIP:

- A. Perform all work in accordance with the best practices of the trade and provide a "neat" installation by mechanics skilled in their respective trades and properly licensed.
- B. Accurately install piping, ductwork, and other equipment, plumb, level, and true to line with runs parallel or perpendicular to building lines. Make bends or offsets uniform.
- C. Carefully perform all cutting, drilling, digging, etc., and patch or refinish the disturbed area to the condition of adjoining or similar surfaces in an approved manner. Do not cut any structural member without specific approval. Do not cut any electrical or mechanical lines that may be concealed.
- D. Conceal piping, ductwork, etc. in chases, furrings, or above ceilings unless indicated otherwise. Flush mount equipment required in finished walls where possible.
- E. Coordinate with other trades work and install all work so that all systems and components can be easily maintained and can be removed for replacement in the future.
- F. Provide access to all equipment. Do not locate components that must be serviced, maintained, or replaced above hard ceilings. Where these components absolutely must be above hard ceilings or in side walls, provide access doors equal to Acudor 5050. Provide fire rated access doors equal to Acudor FW5050 in fire rated ceilings or walls.

3.05 FLAME AND SMOKE CONSIDERATIONS:

- A. In ducts or other enclosures used for transporting environmental air, including return air plenums above ceilings, use only products conforming to NFPA and UL composite classifications not exceeding 25 for flame spread and 50 for smoke developed ratings. This requirement applies to all materials including adhesives, finishes, etc.
- B. Completely seal penetrations through fire and/or smoke rated walls, ceilings, floors, or other barriers for the passage of piping, ductwork, etc. with a UL listed material to preserve the fire/smoke rating of the barrier.
- C. Provide approved fire dampers in air ducts penetrating fire barriers requiring a fire construction rating one hour or greater. Maintain access to fire damper fusible link.

3.06 FAN SHUTDOWN CONTROLS:

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- A. Provide smoke detector in supply of units greater than or equal to 2000 CFM. If the entire area served by the unit is not protected by smoke detectors, then provide a smoke detector in the return also of units greater than 2000 CFM. The smoke detectors shall shut the unit down. Provide a smoke detector in the supply of any unit serving a building egress corridor, regardless of unit size.
- B. For system greater than 15000 CFM serving more than one floor, provide smoke detector at each floor in return air duct prior to connect to the common return duct and prior to connection any outside air duct.
- C. If the building contains a fire alarm system, the smoke detectors shall be furnished by fire alarm system supplier. The smoke detectors shall also signal the fire alarm panel. If the building does not contain a fire alarm system, then provide remote indicators in a readily visible location.
- D. Mechanical contractor shall install the smoke/fire detector in the ductwork as appropriate. The controls contractor shall provide a set of dry contact on the outside of each unit to shut the unit down, and the fire alarm contractor shall wire detector to dry contacts and to his own system. Mechanical contractor shall provide smoke detectors if they are not provided by fire alarm contractor.
- E. In exhaust only systems, the smoke detectors shall not be required.

3.07 COORDINATION:

- A. Coordinate the mechanical work with the work of related trades to avoid interference's. Determine the exact route of piping and ductwork prior to fabrication and the exact location of each outlet and equipment connection prior to installation.
- B. Study the Architectural, Structural, Mechanical and Electrical Drawings, and Specifications including Shop Drawings and manufacturer's technical data sheets, and compare to actual site conditions and constraints. In case of conflicts or interference, obtain clarification or instructions before performing any work.
- C. Piping or equipment requiring slope or specific mounting elevations will generally have right of way over products whose elevations can be changed.
- D. Carefully plan the sequence of work as required to minimize disruptions and installation time.

3.08 EQUIPMENT CONNECTIONS:

- A. Make all required utility connections to each item of equipment shown or specified including equipment furnished by Owner, and make operational.
- B. Connect overflows, relief discharges, blowdowns, drain valves, etc. with approved piping and extend to floor drains or other approved discharge points.
- C. Make all electrical connections to equipment including power supply and control wiring in accordance with Division 16, Electrical.

3.09 PROTECTION REQUIREMENTS:

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- A. Locate existing utility lines and adequately identify and protect during the execution of the work.
- B. Protect public and private property against damage.
- C. Protect all work including building finishes against damage due to dirt, water, chemicals, frost, heat, handling, theft, etc. Keep openings in piping and ductwork and equipment closed with suitable plugs or caps during installation.
- D. Provide necessary warning devices, barricades, or coverings required for safety around moving parts, sharp objects or high temperature surfaces.

3.10 CHASES AND OPENINGS:

- A. Provide templates or details for chases and other openings required through floors, walls, ceilings, etc. to accommodate piping or ductwork.

3.11 TRENCHING AND BACKFILLING:

- A. Excavate bottoms of trenches to required depth and grade for proper slope with uniform and solid bearing for piping. Do not lay pipe on mud, rocks, or unstable soil. Remove unsuitable bearing material and backfill to proper depth with sand or other approved material. If limestone products are used, protect all copper piping from contact with the limestone using sealed insulation or approved sleeving material.
- B. After piping has been satisfactorily leak tested and approved, backfill trench to a depth of one foot above top of pipe with sand or fine pea gravel. Install continuous strip of plastic "CAUTION" tape over pipe and sand. Use suitable material for remaining backfill to finished grade, tamped to 95% compaction.
- C. Before beginning any trenching, locate and determine elevation of all affected piping. Verify that drain lines to be connected to are deep enough to allow sufficient slope before starting trenching.

3.12 PIPING INSTALLATION:

- A. Erect piping without forcing or springing and allow for proper clearance and headroom.
- B. Provide for expansion and contraction with piped loops, changes in direction, or approved expansion couplings.
- C. Install all piping in a manner to prevent freezing. If necessary to install water piping in unheated spaces or outdoors above the frost line, provide electric heat tracing around pipe prior to insulating.

3.13 PAINTING:

- A. Paint ductwork, piping, equipment, etc. exposed in finished areas to match adjacent surfaces as directed. Paint items flat black or as directed if visible through grilles or other openings.
- B. Paint all exposed piping and equipment in mechanical spaces for uniform appearance or identification as directed.

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- C. Paint ferrous piping, equipment, hangers, etc. exposed outdoors or subject to rusting, with one coat primer and two coats of approved exterior enamel based paint.
- D. Not used.
- E. Paint plywood backboards used for mounting equipment.

3.14 LABELING

- A. For any fresh air vents located on the roofs, the vents shall be properly marked with the word "intake" permanently attached to the vent.

3.15 TESTING, ADJUSTING, AND BALANCING (Only RTUs and other units with ceiling mounted diffusers):

- A. After systems are completed and fully operational, perform Testing, Adjusting, and Balancing (TAB) in accordance with procedures recommended in ASHRAE Systems volume, AABC Standards, and NEBB Standards on the following systems:
 - 1. Supply Air System
 - 2. Return Air System
 - 3. Exhaust Air System
 - 4. Outside Air System
- B. Furnish all test equipment, tools and instrumentation required for TAB. Submit proof of calibration when required.
- C. Before beginning TAB, submit forms to be used to the Engineer for approval or use the attached forms.
- D. Adjust fan speeds, dampers, valves, and other controls to achieve design ratings. Balance each air device or valve to within plus or minus 10 percent of indicated flow rates. Perform TAB for each possible mode of operation.
- E. Notify Engineer 24 hours prior to taking final readings and arrange for Engineer to be present for final readings.
- F. Obtain and record all measurements required for final TAB report. Include at least the following data:
 - 1. Running amperes and voltage at each motor 3/4 horsepower or larger. Indicate rpm and direction of rotation.
 - 2. Air flow rates (cfm) at each supply air outlet, return and outside air intake.
 - 3. Dry bulb air temperatures in each conditioned space and at entrance and exit of all coils with corresponding outside air temperature. Record refrigerant pressures at the same time.
 - 4. Static pressures in each control zone relative to outdoors and across each fan, air filter, major component, and major duct run.
- G. TAB shall be performed by a qualified TAB specialist approved by the Engineer.

3.16 POST CONSTRUCTION SUBMITTALS:
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- A. Deliver special tools, lubricants, and other products necessary for proper operation and maintenance of the mechanical systems.
- B. Deliver spare parts as called for under other Mechanical Sections contained herein or on the Drawings.
- C. Submit Project Record Documents indicating all changes from the Contract Documents made during construction.
- D. Submit Certificates of Final Inspections from the Administrative Authority.
- E. Per the State Energy Code, prior to issuance of a certificate of occupancy submit Operation and Maintenance Manuals covering all phases of equipment and systems provided. Include complete spare parts data with current prices and sources of supply. Include copy of manufacturing data sheets, shop drawings required in pre-construction submittals, HVAC system control maintenance and calibration information, wiring schematics, controls sequence descriptions and set points, and a complete written narrative of how each system is intended to operate.
- F. Submit extended warranties in excess of the standard one year warranty where required by other Mechanical Sections contained herein or on the Drawings.
- G. Submit TAB report on approved record forms.

3.17 INSTRUCTIONS TO OWNER:

- A. Provide competent instruction to Owner's personnel covering operation and maintenance of all mechanical systems. Provide specialized instruction by manufacturer's technical representatives when required.
- B. Provide close out documents to owner per Section 15785.

END OF SECTION

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MECHANICAL INSULATION
SECTION 23 07 00

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. Interior air duct acoustical/thermal liner
- B. Exterior duct wrap insulation
- C. Refrigerant piping insulation
- D. Cooling condensate drain insulation

1.02 RELATED WORK:

- A. Section 23 01 00 General Mechanical Requirements
- B. Section 23 30 00 Low Pressure Ductwork and Accessories

1.03 SUBMITTALS:

- A. Submit Manufacturer's Data Sheets on each type of insulation to be used.

1.04 QUALITY ASSURANCE:

- A. Perform installation in accordance with MICA, Commercial and Industrial Insulation Standards.
- B. Follow manufacturer's directions on adhesive application, fastener spacing, etc.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Glass fiber type equal to Owens-Corning Fiberglass 23ASJ\SSL for 1/2" and greater thickness.
 - 1. K-factor no greater than 0.24
 - 2. Jacket permeance no greater than 0.02 perms.
 - 3. Self sealing laps on longitudinal and transverse joints of all service jacket.
 - 4. J-M "Zeston" PVC fitting covers over Fiberglass inserts for valves and fittings. Provide 25/50 flame/smoke rating when used in air plenums.
- B. Flexible elastomeric pipe insulation equal to Armstrong "Armaflex" for 1/2" and less thickness.
 - 1. Use proper adhesive.
 - 2. Use sheets cut and molded around valves and fittings.
 - 3. Do not use in air plenums unless 25/50 flame/smoke rated.
- C. Acoustical Fiberglass interior duct liner with 1-1/2 lb. density and coated face. Meet UL 181 on erosion tests and NFPA 90A on flame/smoke rating.

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- D. Flexible Fiberglass exterior duct wrap equal to FRK-25.
 - 1. K-factor no greater than 0.3.
 - 2. 3/4 lb. density.
 - 3. Foil reinforced kraft (FRK) vapor barrier.
- E. Foam/vinyl safety covers for drains & supply lines equal to Plumberex "Handy-Shield."
 - 1. White vinyl cover over insulating foam liner.
 - 2. Locking strap with recloseable sealing strips and weep seam.
 - 3. Meet Federal Std. 4.19.4 GSA and ANSI A117-1-1980.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Successfully perform all leak tests prior to applying insulation.
- B. Provide approved coating of mastic over piping insulation jackets installed underground and make waterproof and puncture resistant.
- C. Insure surfaces are clean and dry prior to installing insulation.
- D. Neatly finish insulation at hangers or other protrusion. Seal vapor barrier joints in duct wrap with FRK duct tape.
- E. Ducts 18" upstream and 30" downstream from electric resistance and fuel burning heaters located within duct system will be wrapped externally with fiberglass duct wrap. (See Specification Section 15250, Mechanical Insulation Part 2-2.01-D)
- F. All supply and return air systems installed in any unconditioned space shall be insulated with a minimum of 2" thickness, 3/4 density wrap, or 1" thickness, 1-1/2 lb density liner.

3.02 INSULATION SCHEDULE:

See drawings for insulation schedule.

END OF SECTION

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LOW PRESSURE DUCTWORK AND ACCESSORIES
SECTION 23 30 00

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. Sheet metal ductwork including plenums

1.02 RELATED WORK:

- A. Section 23 01 00 General Mechanical Requirements
- B. Section 23 07 00 Mechanical Insulation

1.03 SUBMITTALS:

- A. Submit Manufacturer's Data Sheets on air devices, dampers, louvers, flexible duct, take-off fittings, and other manufactured items.
- B. Submit Shop Drawings of ductwork layouts, fittings, and air devices.

1.04 QUALITY ASSURANCE:

- A. Fabricate ductwork in compliance with 2006 SMACNA Duct Standard and NFPA 90A.
- B. Provide kitchen grease ducts and hood in compliance with NFPA 96.

PART 2 - PRODUCTS

2.01 SHEET METAL DUCTS:

- A. Use galvanized steel lock forming quality with 1.25 ounces per square foot zinc coating on each side.
- B. Use rivets or sheet metal screws for fasteners.
- C. Use NFPA approved water and fire resistant sealant.

PART 3 - EXECUTION

3.01 FABRICATION:

- A. Provide proper duct reinforcing with angles or cross breaks per SMACNA Standard, insulate per duct insulation schedule.
- B. Lap metal ducts in direction of air flow.
- C. Make transitions gradually with divergence no greater than 30°.
- D. Rigidly construct ducts with tight joints free from vibration, rattles, or air noise. Audible leaks shall be sealed with SMACNA approved sealant.

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- E. Construct plenums of galvanized panels suitably reinforced and diagonally braced.

3.02 INSTALLATION:

- A. Use flexible duct (6 feet or less) for final connection to supply air devices only in lay-in ceilings. Connect with strap or clamp. Do not use flex duct on return ducts.
- B. Use flexible connections at each fan and air handling device if fans are not internally isolated.
- C. Verify locations required of outlets and make adjustments to coordinate with architectural features, lighting fixtures, etc.
- D. Adjust air devices for proper throw distance and direction.
- E. Provide at least either two lined rectangular elbows or 15 feet of lined, rectangular straight duct at the supply and return connection of all forced air units.
- F. Seal all longitudinal and transverse joints with mastic type duct tape as required by State and local AHJ.

END OF SECTION

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HVAC FANS
SECTION 23 34 00 (15860)

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. Centrifugal cabinet fans
- B. Fan accessories

1.02 RELATED WORK:

- A. Section 23 01 00 General Mechanical Requirements
- B. Section 23 31 00 Low Pressure Ducts and Accessories

1.03 SUBMITTALS:

- A. Submit Manufacturer's Data Sheets on all fans and accessories. Indicate operating point(s) on fan curve and noise data.

PART 2 - PRODUCTS

2.01 SCHEDULED ITEMS:

- A. Provide fans and accessories as scheduled on the Drawings or equal. Equivalent fan substitutions shall not increase horsepower or noise level for specified air volume.
- B. Provide fans capable of accommodating static pressure variations of plus or minus 10%.
- C. Provide adjustable sheaves and belt guards on belt driven fans.
- D. Provide guards or safety screens on exposed blades or wheels.
- E. Statically and dynamically balance fans for minimum vibration. Resiliently mount centrifugal wheels.
- F. Provide rattle free backdraft dampers with lined edges except for kitchen hood exhausters.
- G. Provide roof curb, birdscreen, and cord and plug disconnect for roof mounted fans except kitchen hood exhausters.
- H. Provide solid state speed controller for direct driven fans where indicated or required to achieve specified performance.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Follow manufacturer's directions. Verify correct rotation of fan wheels.
- B. Provide shutdown controls per Section 23 01 00 (15010).

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3.02 BALANCING:

- A. Balance each fan to specified flow rate for the actual static pressure. Adjust or replace sheaves on belt drives or adjust speed controls. Provide balancing dampers when required.

END OF SECTION

Bid 22-54,
Appendix A:
City Bid Documents

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ELECTRIC CEILING HEATERS
SECTION 23 64 18

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. Electric ceiling heaters.
- B. Unit controls and safety devices
- C. Accessories

1.02 RELATED WORK:

- A. Section 23 01 00 General Mechanical Requirements

1.03 SUBMITTALS:

- A. Submit Manufacturer's Data Sheets on each furnace including all accessories. Clearly indicate optional features to be furnished. Include detailed instructions and dimensions.
- B. Submit extended warranties required herein.

1.04 QUALITY ASSURANCE:

- A. Furnish units complying with ANSI Standards for safety and efficiency and shall be UL Listed.

1.05 EXTENDED WARRANTIES:

- A. Provide one year unconditional warranty on parts and labor.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS:

- A. Indeeco.
- B. King

2.02 Housing shall be 20 gage steel. Finish in epoxy/polyester powder paint. Outlet grill shall be 22 gage steel.

2.03 Provide elements as scheduled.

2.04 Install in v-shaped recessed box.

2.05 Fan motor shall be quiet, permanently lubricate axial type.

2.06 Provide remote thermostat and all required control wiring, transformer, and accessories.

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PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Provide complete installation and connect electrical power and control wiring for proper operation. Observe all manufacturer recommended minimum dimensions and clearances.
- B. Remote thermostat shall be placed so as to properly control space temperature and not to be affected by ambient conditions.

END OF SECTION

Bid 22-54,
Appendix A:
City Bid Documents

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GENERAL ELECTRICAL REQUIREMENTS
SECTION 26 01 00

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

- A. Comply with the Conditions of the Contract, General and Supplementary Conditions, and any other applicable requirements contained herein or issued under separate cover.
- B. Perform other work related to or necessary for the electrical installation in accordance with the applicable Specification Division or Section contained herein.
- C. In Electrical Specification Sections, items under "RELATED WORK" are listed for convenience only and are not guaranteed to be a complete listing of all applicable work.

1.02 CODES, REGULATIONS, AND STANDARDS:

- A. Comply with the latest edition of applicable codes including the following:
 - 1. International Building Code
 - 2. Life Safety Code (NFPA 101)
 - 3. National Electrical Code NEC (NFPA 70)
 - 4. State Fire Prevention Code
- B. Comply with applicable Regulations as amended, including the following:
 - 1. State Department of Health Regulations
 - 2. Rules and Regulations for Energy Efficiency Standards for New Building Construction
 - 3. State and Federal Department of Labor Regulations
 - 4. Occupational Safety and Health Act (OSHA)
 - 5. Utility Company Regulations and Requirements
 - 6. Other State and Federal Laws and Regulations
 - 7. Local Ordinances
 - 8. State Department of Education Minimum Schoolhouse Construction Standards
- C. Furnish products and perform installation conforming to the latest accepted Standards published by the following organizations:
 - 1. Underwriter's Laboratories, Inc. (UL)
 - 2. National Fire Protection Association (NFPA)
 - 3. National Electrical Manufacturer's Association (NEMA)
 - 4. American Society of Testing Materials (ASTM)
 - 5. American National Standards Institute (ANSI)
 - 6. Institute of Electrical and Electronic Engineers (IEEE)
 - 7. Insulated Power Cable Engineer's Association (IPCEA)
 - 8. Certified Ballast Manufacturer (CBM)
 - 9. Electrical Testing Laboratories (ETL)
 - 10. Illuminating Engineering Society (IES)
 - 11. Insurance Service Office (ISO)
 - 12. Factory Insurance Association (FIA)
 - 13. Factory Mutual (FM)

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- 14. National Sanitation Foundation (NSF)
- 15. Electronic Industry Association/Telecommunications Industry Association (EIA/TIA)

- D. In case of discrepancy or conflict between Codes, Regulations, Standards, Drawings and/or Specifications, the requirement yielding the higher(est) quality of work shall govern.

1.03 PERMITS AND ADMINISTRATIVE FEES:

- A. Obtain and maintain all necessary licenses, permits and inspection certificates and pay all fees including connection fees, taxes and penalties, if any, required by the Administrative Authority. Refundable deposits will be paid by the Owner.

1.04 PRE-CONSTRUCTION SUBMITTALS:

- A. Refer to each Electrical Section for a listing of required Submittals under that Section. Refer to Section entitled Shop Drawings, Product Data, and Samples for submittal procedure and requirements.
- B. Submit for approval, Manufacturer's technical data sheets including performance specifications for all equipment, major materials, and other manufactured items. Obtain approval on product manufacturers not specifically named prior to making submittals.
- C. Submit for approval, Contractor's original Shop Drawings of all assemblies of manufactured items including complete wiring diagrams. Indicate all pertinent dimensions on scale drawings necessary for clarity and for coordination of the installation between trades.
- D. Submit for approval, a schedule of nameplates and test report forms.
- E. Bind Submittals in durable cover(s) with contents conveniently organized and properly indexed.
- F. Make Submittals on all work contained in Division 16, Electrical, at one time except by special permission.

1.05 TEMPORARY LIGHTING AND POWER:

- A. Provide as required.

1.06 INTENT:

- A. It is intended that the Contractor provide a complete and operating electrical system including all incidental items and connections necessary for proper operation or customarily included even though each and every item may not be indicated.
- B. The Drawings indicate the general layout requirements for equipment, fixtures, conduit, devices, etc. Final layout will be governed by actual field conditions with all measurements verified at the site.
- C. Conduit and wiring shown on the Drawings are diagrammatic unless noted otherwise, and are intended to indicate switching and branch circuit arrangements, phase balance, and general wiring connection requirements.
- D. It is intended that the electrical installation be safe, reliable, energy efficient, and easily maintained with adequate provisions for access to equipment.

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- E. It is intended that the electrical system operate quietly with noise levels below the criteria recommended for the application by NEMA. Provide corrective action as required to reduce objectionable hum or vibration. Acoustically insulate between outlet boxes in common wall serving different rooms.
- F. The Drawings indicate diagrammatically the number and function of the conductors required for the conduit routing as shown. The Contractor has the option of changing the routing or combining circuits in one conduit run, providing the installation does not interfere with work of other trades, the system functions as intended, the ampacity of the conductors is derated in accordance with the NEC, and none of the loads require a dedicated circuit or isolated ground. Indicate actual conduit routing and conductor arrangement on record drawings. Neutrals for circuits serving non-linear loads are considered a current carrying conductor.
- G. Lighting and general purpose 20-ampere branch circuits may share a common neutral, provided each branch circuit is derived from a different phase leg. Isolated ground circuits as well as circuits serving non-linear loads and those served with ground fault circuit breakers must have their own neutral or isolated ground. Branch circuits serving computers shall have a separate neutral for each circuit. Panelboards serving mostly computer loads shall have a double neutral feeder.
- H. "Home runs" are indicated on the Drawings with arrows from the branch circuit outlets pointing in the general direction of the panelboards to which they connect, complete with the panelboard and circuit number designations. Continue "home runs" to the designated panelboards as though the conduit runs were shown in their entirety.

PART 2 - PRODUCTS

2.01 PRODUCT REQUIREMENTS:

- A. Furnish only new standard products of a manufacturer regularly engaged in the production of said products.
- B. Support all products by service organizations with adequate spare parts inventory and personnel located reasonably close to the site.
- C. Where multiple units of the same type or class of products are required, provide all units of the same manufacturer.

2.02 PRODUCT HANDLING:

- A. Store products in the original containers and shelter in a suitable environment at an approved location.
- B. Make products readily accessible for inspections and inventory accounting.

2.03 PRODUCT SUBSTITUTIONS:

- A. For products specified by generic reference standard, select any product meeting such standard.
- B. For products specified by naming one or more products or manufacturers, select any named. Submit request for substitution of any manufacturer not specifically named and obtain approval prior to bidding.

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- C. Provide all information required to support claim of "equality" of product proposed for substitution. Substitutions will be considered only if equivalent in quality, efficiency, performance, size, weight, reliability, appearance, and ease of maintenance to the specified product or manufacturer.
- D. Where approved product substitutions alter the design, space requirements, electrical requirements, connections, cooling loads, or etc., include all work necessary to provide a complete installation of quality equal to or better than that which would have been achieved with products of manufacturers as specified.

2.04 PRODUCT APPLICATION:

- A. Furnish products that are UL listed for their intended use and environment. For example, use only rain tight products suitable for wet locations when installed outdoors or where indicated on the Drawings to be weatherproof (WP).

PART 3 - EXECUTION

3.01 MANUFACTURER'S DIRECTIONS:

- A. Handle, install, connect, test, and operate all products, assemblies, and systems in accordance with manufacturer's recommendations.
- B. In case of conflicting requirements between the manufacturer's directions and the contract documents, obtain instructions before proceeding with the work.

3.02 INSPECTIONS:

- A. Arrange with the Administrative Authority for inspections of all work required and obtain approval prior to concealing or proceeding with the work.
- B. Give adequate notice before concealing any work for inspections by the Owner's representatives. Obtain instructions to proceed before concealing the work.

3.03 CLEANING:

- A. Keep the premises clean and free from debris, dirt, and etc.
- B. Upon completion of the work, clean and polish all fixtures, equipment, and etc.

3.04 WORKMANSHIP:

- A. No person shall perform electrical work on the contract without possessing a Master or Journeyman License from the State Electrical Examiners Board. All electrical work and apprentice electricians shall be supervised by a Master or Journeyman Electrician on a one to one ratio.
- B. Perform all work in accordance with the best practices of the trade and provide a "neat" installation by technicians skilled in their respective trades and properly licensed.
- C. Accurately install conduit, and other equipment plumb, level, and true to line with runs parallel or perpendicular to building lines. Make bends or offsets uniform.

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- D. Carefully perform all cutting, drilling, digging, and etc., and patch or refinish the disturbed area to the condition of adjoining or similar surfaces in an approved manner. Do not cut any structural member without specific approval. Do not cut any electrical or mechanical lines that may be concealed.
- E. Conceal conduit in chases, furrings, or above ceilings unless indicated otherwise. Flush mount equipment where shown in finished walls where possible.

3.05 FLAME AND SMOKE CONSIDERATIONS:

- A. In ducts or other enclosures used for transporting environmental air, including return air plenums above ceilings, use only products conforming to NFPA and UL composite classifications not exceeding 25 for flame spread and 50 for smoke developed ratings, or install in conduit or approved enclosure. This requirement applies to all materials including signal cable insulation jackets, finishes, and etc.
- B. Completely seal penetrations made through fire and/or smoke rated walls, ceilings, floors, or other barriers for the passage of conduit with a UL listed material to preserve the fire/smoke rating of the barrier.

3.06 COORDINATION:

- A. Coordinate the electrical work with the work of related trades to avoid interference. Determine the exact route of conduit prior to fabrication and the exact location of each outlet and equipment enclosure prior to installation.
- B. Study the Architectural, Structural, Mechanical and Electrical Drawings, and Specifications including Shop Drawings and manufacturer's technical data sheets, and compare to actual site conditions and constraints. In case of conflicts or interference, obtain clarification or instructions before performing any work.
- C. Piping or equipment requiring slope or specific mounting elevations will generally have right of way over conduit and other products whose elevations can be changed.
- D. Carefully plan the sequence of work as required to minimize disruptions and installation time.

3.07 EQUIPMENT CONNECTIONS:

- A. Make all required electrical connections to each item of equipment shown or specified including equipment furnished by Owner, and make operational.

3.08 PROTECTION REQUIREMENTS:

- A. Locate existing utility lines and adequately identify and protect during the execution of the work.
- B. Protect public and private property against damage.
- C. Protect all work including building finishes against damage due to dirt, water, chemicals, frost, heat, handling, theft, and etc. Keep openings in conduit and equipment closed with suitable plugs or caps during installation.
- D. Provide necessary warning devices, barricades, or coverings required for safety around exposed "live" parts or high temperature surfaces.

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3.09 CHASES AND OPENINGS:

- A. Provide templates or details for chases and other openings required through floors, walls, ceilings, and etc. to accommodate conduit.
- B. Provide any necessary cutting or drilling for required openings, and patch and refinish as directed.

3.10 PAINTING:

- A. Painting shall be performed in accordance with the painting section of these specifications.
- B. Paint conduit, equipment, and etc. exposed in finished areas to match adjacent surfaces as directed.
- C. Paint conduit flat black, or as directed, if visible through grilles or other openings.
- D. Paint all exposed conduit and equipment on outside of building or in equipment rooms for uniform appearance or identification as directed.
- E. Paint plywood backboards used for mounting equipment prior to installing equipment.
- F. Touch-up scratches in factory finished surfaces with an approved paint to match the surface.

3.11 TESTING AND ADJUSTING:

- A. Test the completed electrical systems and prove free from short circuits, poor connections, and improper grounding.
- B. Maintain on the premises a first class voltmeter, ammeter, milli-ohmmeter, and meggar insulation tester in proper calibration and provide test measurements as required.
 - 1. Meggar all 600 volt rated wiring at 1000 volts minimum before applying power. Prove resistance in excess of 10 megohms.
 - 2. Test metal conduit and grounds for continuity and prove resistance less than one ohm to farthest outlet from system ground.
 - 3. Test system ground to earth per the NEC.
- C. Align, adjust, calibrate, and test all systems to assure safe and proper operation.
- D. Verify proper taps on motors and transformers for rated performance.

3.12 POST CONSTRUCTION SUBMITTALS:

- A. Deliver special tools, and other products necessary for proper operation and maintenance of the electrical systems.
- B. Deliver spare parts as called for under other Electrical Sections contained herein or on the Drawings.
- C. Submit Project Record Documents indicating all changes from the Contract Documents made during construction.
- D. Submit Certificates of Final Inspections from the Administrative Authority.

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- E. Submit Operation and Maintenance Manuals covering all phases of equipment and systems provided. Include complete spare parts data with current prices and sources of supply. Include copy of manufacturing data sheets and shop drawings required in pre-construction submittals.
- F. Submit extended warranties in excess of the standard one year warranty where required by other Electrical Sections contained herein or on the Drawings.
- G. Assemble all post construction documents for electrical system in 3-ring binder(s) with divider tabs labeled and properly indexed. Submit the number of sets and arranged as required by Architect.
- H. Submit all closeout documents in accordance with Division 1 of these specifications.

3.13 INSTRUCTIONS TO OWNER:

- A. Provide competent instruction to Owner's personnel covering operation and maintenance of all electrical systems. Provide specialized instruction by manufacturer's technical representatives when required.

3.14 USE OF EQUIPMENT:

- A. The contractor shall not use the permanent electrical system for construction activity except by special permission.
- B. If permitted, the contractor's use of any equipment shall not reduce warranty time specified for the equipment.
- C. If permitted, lamps, ballasts and other such items used during construction shall be replaced by the contractor prior to acceptance if used for more than 5% of their rated life.

3.15 GENERAL WARRANTY:

- A. Warrant the electrical installation against defects in products and/or workmanship for a period of one (1) year from the date of substantial completion in accordance with architect's specifications.
- B. Provide all labor, replacement parts, services, transportation, and incidental costs necessary for the proper operation of all electrical systems during the warranty period.
- C. Make good any damage to the building or grounds or other equipment resulting from defects in products and/or workmanship during the warranty period.

END OF SECTION

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GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS
SECTION 26 05 26

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. Equipment grounding and bonding
- B. System grounding
- C. Transformer secondary grounding

1.02 RELATED WORK:

- A. Section 26 01 00 General Electrical Requirements
- B. Section 26 05 33 Boxes and Enclosures

1.03 SUBMITTALS:

- A. Submit certified test report of grounding electrode resistance.

PART 2 - PRODUCTS

2.01 GROUNDING ELECTRODES:

- A. Provide 5/8 inch x 10 feet "copperweld" ground rods and accessories as required to achieve proper system ground.

2.02 GROUNDING WIRES:

- A. Provide insulated grounding conductors and jumpers sized in accordance with the NEC but no smaller than #12 AWG. Identify with continuous green insulation or with green tape at each termination.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Bond the entire metal raceway system including conduit, boxes, enclosures, equipment frames, motor housings, and etc. System to be mechanically and electrically continuous throughout installation.
- B. Bond grounding conductor to conduit at the entrance and exit from that conduit containing only the grounding conductor.
- C. Install grounding jumper from connector bushings to equipment grounding bars. Bond grounding bars and lugs to housing, except where an isolated ground is indicated.

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- D. Install separate grounding conductor in all raceway systems.
- E. Bond the grounding wires to each box and enclosure through which they pass, except where an isolated ground is indicated.
- F. Where an isolated grounding (IG) system is indicated, maintain electrical isolation between the grounding conductors and the metal raceway system from the grounding terminals of IG receptacles back to the system grounding point.
- G. Install grounding electrode in accordance with the NEC. Prior to connecting to system, measure ground resistance under "normal dry weather" conditions. If the electrode to ground resistance is not less than 25 ohms, install additional grounding electrode as required by the NEC.
- H. Establish the system ground (grounding bar) at the service entrance. Bond this bar to all of the following:
 - 1. Metal raceway system.
 - 2. Grounding conductors, including those for isolated grounding systems.
 - 3. The service entrance neutral conductor. Keep neutral conductors isolated from ground throughout electrical system except at the system ground.
 - 4. The grounding electrode.
 - 5. Domestic water service pipe. Provide grounding jumper across water meter connections.
 - 6. The building steel including steel reinforcing in concrete foundations and steel frames as applicable.
 - 7. Interior metal gas piping.
- I. Ground neutrals derived from dry-type transformers to building steel or domestic cold water pipe in accordance with the NEC, and bond to the metal raceway system. Keep neutral conductors isolated from ground throughout the transformer's secondary distribution system except at the derived source.

END OF SECTION

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

RACEWAYS
SECTION 26 05 31

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. Conduit and fittings
- B. Wireways
- C. Sleeves
- D. Seals

1.02 RELATED WORK:

- A. Section 26 01 00 General Electrical Requirements
- B. Section 26 05 32 Wires and Cables
- C. Section 26 05 51 Supporting Devices
- D. Section 26 05 53 Electrical Identification

1.03 SUBMITTALS:

- A. Submit Manufacturer's data sheets on each manufactured assembly such as special fittings, modular seals, fire-stop material, and etc.

1.04 QUALITY ASSURANCE:

- A. Use only materials that are UL listed for the application and that bear the UL label.

PART 2 - PRODUCTS

2.01 CONDUIT AND FITTINGS:

- A. Rigid Metal Conduit (RMC):
 - 1. Heavy wall steel pipe, hot dipped galvanized inside and out, and with ends factory threaded prior to galvanizing (except at terminations).
 - 2. Use only steel or malleable iron fittings.
 - 3. Use box connectors with "biting" type locknuts. Use insulated bushings where wire is larger than #8 AWG. Provide approved watertight hubs in wet locations.
 - 4. Use threaded couplings or approved unions.
 - 5. Use factory elbows, long sweep where possible. Provide watertight "LB" fittings with gasketed covers where required.
- B. Electrical Metallic Tubing (EMT) (the term "conduit" also applies to EMT):

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1. Zinc electroplated inside and out, and with threadless ends.
2. Use set screw type fittings where concealed in walls, ceilings, etc., and use watertight and concrete tight gland and ring compression fittings where exposed or in concrete.
3. Use box connectors with "biting" type locknuts. Use insulated bushings where wire is larger than #8 AWG.

C. Non-metallic Conduit (NMC):

1. Schedule 40 polyvinyl chloride (PVC) electrical conduit with smooth straight ends.
2. Use couplings and connectors of same material as conduit, and joined with solvent-cement specifically manufactured for the purpose.
3. Use only RMC or IMC elbows with PVC-NMC adapters. PVC-NMC elbows are not acceptable unless specifically allowed on the Drawings.
4. Use PVC-NMC box connectors only where allowed, such as for floor boxes.

D. Liquidtight Flexible Metal Conduit (LFMC):

1. Electroplated steel tubing with extruded PVC jacket equal to "sealtight."
2. Use steel or malleable iron LFMC box connectors with insulated throats and a threaded grounding cone.

F. Flexible Metal Conduit (FMC):

1. Electroplated steel tubing equal to "Greenfield."
2. Use steel or malleable iron FMC box connectors with insulated throats and of type that threads into conduit convolutions.

G. Rigid Aluminum Conduit (RAC)

1. Heavy wall aluminum pipe with factory threaded ends.
2. Conduit and fittings shall comply with ANSI C80.5
Use factory elbows, long sweep where possible

2.02 WIREWAYS:

- A. Provide wireways properly sized to accommodate the conductors or as shown on the Drawings.
- B. Provide wireways of code gauge steel with baked enamel finish. Furnish all necessary hardware and accessories.

2.03 SLEEVES:

- A. Provide Schedule 40 galvanized steel pipe sleeves sized to accommodate the outside dimension of conduit.
- B. Provide integral waterstop collar on sleeves in outside walls.

2.04 SEALS:
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RACEWAYS
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- A. Where conduit penetrates roof membrane, provide flashing assembly or pitch pan as recommended by roofing manufacturer.
- B. Where conduit penetrates outside walls, make watertight with approved sealant or provide modular rubber seal designed for the purpose.
- C. Use conduit sealing compound equal to "Ductseal" or use approved modular sealing fittings to seal between conductors and conduit where conduit passes from warm to cold spaces, as well as from the outside.
- D. Use 3M "Fire Barrier" or non-shrinking grout to seal between the conduit and sleeve through fire/smoke barriers.

PART 3 - EXECUTION

3.01 CONDUIT APPLICATIONS:

- A. Use RMC for the following applications:
 - 1. Above grade and exposed outdoors
 - 2. Wet locations
 - 3. Risers from under slab or underground, including underground elbows
 - 4. Locations subject to mechanical injury.
- B. Use EMT for above ground, inside, dry locations not subject to mechanical injury.
- C. Use NMC only for underground or under slab.
- D. Use LFMC for the final connection to motors, transformers and other adjustable or vibrating equipment exposed in finished areas or installed in wet or damp locations.
- E. Use FMC for the final connection to adjustable or vibrating equipment in dry, unfinished locations and to lighting fixtures and any other equipment in lay-in ceilings. Maximum length of any runs shall be six (6) feet except by special permission.

3.02 INSTALLATION:

- A. Size raceways for the number, AWG, and type of conductors to be installed therein in accordance with the NEC, but no smaller than $\frac{3}{4}$ " for homeruns and $\frac{1}{2}$ " for branches.
- B. Install conduit in standard 10 foot lengths except where a shorter section is required. Make required field cuts square and ream until all burrs are removed. Field cut threads required for RMC shall be coated with a high zinc dust content galvanizing repair compound with high electrical conductivity.
- C. Make field bends in EMT with an approved bending machine or device, and make free from kinks, dents, or flattened surfaces. Field bends in RMC are not allowed. Do not exceed 90° in any individual bend nor exceed 360° of total bends or elbows in any one conduit run.
- D. Maintain at least 6 inches clearance between conduit and hot piping or equipment.
- E. Where conduit crosses a building expansion joint, provide a junction box on each side of the joint

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RACEWAYS
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CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

- and connect with a slack section of FMC, or provide approved expansion fitting with integral ground jumper.
- F. The diameter of conduit installed in structural slabs shall not exceed 20% of the thickness of the slab, and shall be installed as close to the center plane of the slab as possible.
 - G. Provide sleeves for conduit through masonry or concrete walls, foundation walls, or concrete beams prior to laying up or pouring. Make wall sleeves flush with wall.
 - H. Provide sleeves for conduit through structural slabs above grade prior to pouring. Make floor sleeves extend one inch above floor and seal watertight. For core drilled penetrations in existing floors, provide one inch angle rings or escutcheons set in sealant in lieu of floor sleeves.
 - I. Where outlets serving different rooms are mounted back-to-back or side-by-side in the same wall, sound insulate the boxes from each other with batt insulation. If the boxes are connected to each other through conduit, seal the conduit (after wiring) with "Ductseal."
 - J. The Drawings indicate diagrammatically branch circuits and feeders required. Install conduit runs to accommodate the wiring requirements.

3.03 EMPTY CONDUIT SYSTEMS:

- A. Where indicated on the Drawings, provide empty conduit of types as specified herein for future installation of wire or cable.
- B. Leave fish wire or rope in conduit with proper labels attached.

END OF SECTION

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

WIRES AND CABLES
SECTION 26 05 32

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. Power wiring and connectors, 600 volts or less
- B. Control and signal wiring and connectors
- C. Miscellaneous materials

1.02 RELATED WORK:

- A. Section 26 01 00 General Electrical Requirements
- B. Section 26 05 31 RACEWAYS
- C. Section 26 05 51 Supporting Devices
- D. Section 26 05 53 Electrical Identification

1.03 SUBMITTALS:

- A. Submit Manufacturers data sheets for fixture whips and for each type of wiring connector proposed for use.

PART 2 - PRODUCTS

2.01 POWER WIRING AND CONNECTORS:

- A. For service entrance, feeders and branch circuits, use single conductor annealed copper with 600-volt code type THHN insulation for above ground dry locations and dual rated THHN/THWN insulation for wet locations or underground or under slab locations unless noted otherwise.
- B. For lighting fixture whips, it is permissible to use code type MC cable with copper conductors and metal jacket with wire gauge and type complying with the NEC for fixture wire. Maximum length of fixture whips shall be 6 feet and shall include integral green insulated grounding conductor.
- C. Minimum wire size is #12 AWG except for fixture whips. Where developed distance from panelboard to first outlet exceeds the following, increase minimum size to #10 AWG.
 - 1. 65 ft. for 120 volt circuits
 - 2. 115 ft. for 208-240 volt circuits
 - 3. 150 ft. for 277 volt circuits
 - 4. 265 ft. for 480 volt circuits
- D. #12 and #10 AWG wire used for lighting, receptacles, and other non-vibrating equipment may be solid conductor. All other wiring including wiring connecting to motors, transformers, and special grounding systems shall be stranded conductor.
- E. Make splices required in #12 and #10 AWG wire with insulated "Scotchlok" connectors.

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WIRES AND CABLES
26 05 32-1

CITY OF FAYETTEVILLE, ARKANSAS:
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- F. Make splices in all wire #8 AWG or larger with approved crimp-on or bolted pressure connectors with snap-on or bolt-on insulated caps.
- G. The voltage and temperature ratings of the connector insulator shall be at least equal to that required of the conductor insulation.
- H. Furnish wire with color coding conforming to the following:

<u>Conductor</u>	<u>250V or Less</u>	<u>480V/277V</u>
Phase A	Black	Brown
Phase B	Red	Orange
Phase C	Blue	Yellow
Neutral	White	Gray
Ground	Green	Green

Color coding may be solid or striped-colored insulation. Colored plastic tape may be used at terminations on #8 AWG and larger conductors with black insulation.

2.02 CONTROL AND SIGNAL WIRING AND CONNECTORS:

- A. Use stranded annealed copper conductors with insulation suitable for the purpose.
- B. For applications, 50 volts and greater, use #14 AWG minimum size conductor with 600 volt insulation and approved for the application.
- C. For power limited wiring and less than 50 volts, use #18 AWG minimum size conductor except for multi-conductor cable recommended or required by the system manufacturer.
- D. For power limited wiring in air plenums, use type CLP, CMP or FPLR if not in conduit for signal, communication, or fire alarm, respectively.
- E. For power limited wiring not in air plenums or installed in conduit and used for fire alarm and detection systems, use type FPL.
- F. Make splices required in #14 through #10 AWG wire with insulated "Scotchlok" connectors.
- G. Make splices required in #16 AWG and smaller wire with insulated crimp-on terminals screw connected to numbered terminal strips, or use approved cable connectors.
- H. Provide RG-6 coax cable with type "F" connectors for TV cable where shown.

2.03 MISCELLANEOUS MATERIALS:

- A. Where required, use wire lubricating compound suitable for the wire insulation and conduit and that does not harden nor become adhesive. Do not use on wiring for isolated power systems.
- B. Use plastic tape that is flame retardant and cold and weather resistant equal to Scotch #33.

PART 3 - EXECUTION

3.01 INSTALLATION:

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- A. Thoroughly clean conduit prior to pulling-in wires. Do not install wire until the raceway can be maintained in a dry condition.
- B. Use non-metallic pulling ropes attached to the conductors by means of woven basket grips or pulling eyes. Pull all conductors for a conduit run in together in such a manner as to avoid damage to the conductors, insulation, or conduit.
- C. Neatly trim and nest multiple conductors and cables in boxes and enclosures and hold in place with "tie-wraps." Where conductors terminate in panelboards, arrange conductors to be perpendicular or parallel to circuit breaker line-up.
- D. Make splices and terminations mechanically and electrically secure. Splices shall only be made in a suitable accessible junction box.
- E. Where multiple paralleled conductor make-ups are indicated on the Drawings for large feeders, the conductors shall be identical in length, gauge, code type, and etc., and shall be terminated exactly alike.

END OF SECTION

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Appendix A:
City Bid Documents

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

BOXES AND ENCLOSURES
SECTION 26 05 33

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. Junction and pull boxes
- B. Outlet boxes
- C. Enclosures

1.02 RELATED WORK:

- A. Section 26 01 00 General Electrical Requirements
- B. Section 26 05 32 Wires and Cables
- C. Section 26 05 51 Supporting Devices
- D. Section 26 05 53 Electrical Identification

1.03 SUBMITTALS:

- A. Submit Manufacturer's data sheets on special enclosures.

PART 2 - PRODUCTS

2.01 JUNCTION AND PULL BOXES:

- A. In dry locations, provide boxes of code gauge steel with galvanized or baked enamel finish and with bolted or screw attached covers.
- B. In damp or wet locations, provide cast metal type FS or FD boxes with gasketed covers. For underground locations, provide Quazite composition type boxes with watertight gasketed covers.

2.02 OUTLET BOXES:

- A. In dry locations, provide outlet boxes of code gauge galvanized steel. Install concealed outlet boxes so that work is flush with finished surfaces with no gaps.
- B. In unplastered masonry walls, use 3 1/2" deep solid or sectional type boxes with square corners.
- C. For empty conduit system outlets, provide 4" square boxes with single gang adapter ring unless noted otherwise.
- D. For surface mounted lighting fixtures and equipment, provide 4" octagonal boxes with rings except where smaller boxes are required for fixtures or equipment.

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BOXES AND ENCLOSURES
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- E. Provide Hubbell PFBRG boxes for floor outlets. Furnish with flush bronze cover with flip lids or concentric plugs as applicable. Provide type of cover compatible with floor finish.
- F. Provide galvanized extension rings, plaster rings, fixture studs, and etc. as required by conditions.
- G. In damp or wet locations, provide cast metal type FS or FD boxes with gasketed covers and watertight flip lids as required by device.

2.03 ENCLOSURES:

- A. Provide code gauge steel enclosures with baked enamel finish as manufactured by Hoffman to facilitate the installation of multiple components such as small motor starters, contactors, equipment controls, and etc.
- B. Furnish with hinged door and captive fasteners.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Properly size boxes in accordance with the NEC to accommodate the number and size of conductors and conduits entering the boxes.
- B. Size enclosures to adequately accommodate the equipment with space for wiring and maintenance.
- C. Provide junction or pull boxes to facilitate pulling or splicing of conductors so that no one conduit run will exceed the allowable bends of 360°.
- D. Outlet boxes installed in structural slabs shall be of the proper depth to avoid bends in conduit from the center plane of the slab.
- E. All boxes shall be accessible at all times. Provide approved access panels where required to maintain accessibility.
- F. Close any unused knockouts or openings in boxes or enclosures with suitable caps or covers.
- G. Wall switch boxes for room lights and other devices shall be installed within 8 inches of door jamb except by special permission.

END OF SECTION

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

WIRING DEVICES
SECTION 26 05 34

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. Wall switches
- B. Receptacles
- C. Cover plates
- D. Power poles
- E. Lighting controls

1.02 RELATED WORK:

- A. Section 26 01 00 General Electrical Requirements
- B. Section 26 05 32 Wires and Cables
- C. Section 26 05 51 Supporting Devices
- D. Section 26 05 53 Electrical Identification

1.03 SUBMITTALS:

- A. Submit Manufacturer's data sheets on each type of device proposed for use.

PART 2 - PRODUCTS:

2.01 WALL SWITCHES:

- A. Provide single pole, double pole, three way, four way, pilot light, and etc., toggle or key operated as indicated on the Drawings.
- B. Furnish switches of the mechanically silent type rated for 120/277 volts, 20 amperes, with fluorescent or incandescent loads. Use high capacity silver alloy for switch contacts.
- C. The color of switch handles shall be as directed by the Architect.
- D. Furnish switches equal to Hubbell Specification Grade Series HBL122 switches with screw terminals and an approved grounding device.

2.02 RECEPTACLES:

- A. See the schedule on the plans.
- B. For ground fault circuit interrupter (GFCI) receptacles, see the plans.

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- C. The color of receptacle face plates shall be as directed by the Architect unless shown otherwise. Furnish emergency power receptacles with red face plates.

2.03 COVER PLATES:

- A. For outdoor or other wet location receptacles subject to long term or permanent continuous unattended use, provide weatherproof enclosure, the integrity of which is not compromised when the attachment plug is inserted, per NEC 410-57 (b). Cover shall be equal to Carlon E9U Series.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Adjust switches and receptacles to mount flush and plumb.
- B. Provide cover plates that fit the devices securely and completely cover wall openings. Properly fill and patch oversized wall openings. For outdoor receptacles, provide covers with orientation to match receptacle installation, i.e., vertical covers for vertical receptacles and horizontal covers for horizontal receptacles.
- C. Properly identify red emergency power receptacles with plastic nameplates or directly engraved in the red cover plate. Identify with the letters "EMERGENCY" and the "panelboard and circuit number" supplying them.
- C. For outlets of empty conduit systems such as telephone, television, computer terminals, and etc., provide cover plates compatible with outlet and cable/connector to be installed. Provide blank cover plates on all unused outlets.

END OF SECTION

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

SUPPORTING DEVICES
SECTION 26 05 51

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. Anchors
- B. Hangers and supports
- C. Plywood backboards
- D. Concrete bases

1.02 RELATED WORK:

- A. Section 26 01 00 General Electrical Requirements
- B. Section 26 05 32 Wires and Cables
- C. Section 26 05 51 Supporting Devices
- D. Section 26 05 53 Electrical Identification

1.03 SUBMITTALS:

- A. Submit for approval Contractor's shop drawings indicating shape and dimensions of plywood backboards and concrete bases when necessary for clarity and coordination with other trades.

PART 2 - PRODUCTS:

2.01 ANCHORS:

- A. Size anchors for minimum safety factor of two times recommended load. Use only corrosion resistant materials.
- B. In new concrete, use malleable iron inserts set prior to pouring concrete.
- C. In existing concrete or solid masonry, use Phillips "Redhead" expansion shields or Elcen self-drilling expansion shields. Use power driven fasteners only for light loads and with specific approval.
- D. In hollow masonry, use steel toggle bolts.
- E. On structural steel, use approved beam clamps or direct weld.
- F. In wood, use wood screws or lag screws or through-bolt with nuts and washers.
- G. In sheet metal, use self tapping sheet metal screws or machine bolts with washers and nuts.
- H. In bar joists, use threaded hanger rod between bottom angles secured with washers and nuts.

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SUPPORTING DEVICES
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2.02 HANGERS AND SUPPORTS:

- A. For multiple conduit runs, use trapeze hangers consisting of P-1000 "Unistrut" channels with pipe clamps and steel hanger rods where suspended. Anchor "Unistrut" to wall where multiple runs are wall mounted.
- B. Support individual conduits with malleable iron one-hole conduit clamps, steel two-hole pipe straps, or split ring steel conduit clamps. Wire, perforated iron strap, or steel one-hole clamps will not be acceptable.
- C. For free standing boxes and enclosures, provide steel angle frame constructed to prevent any strain on conduits entering box.
- D. Support conduit through floors with steel riser clamps.
- E. Support conduit on flat roofs with 4"x4"x2' redwood blocks with steel straps loosely clamped to conduit, or a pipe supporting assembly approved by the roofing manufacturer.
- F. Support outlet boxes occurring in lay-in ceilings with approved bar hangers clamped to ceiling grid to prevent any weight from bearing on ceiling tile.
- G. Where hospital grade receptacles or multi-gang outlet boxes occur in metal stud walls, provide "caddy bar" hanger spanned between studs with each outlet box securely bolted to bar hanger. Single outlet boxes may be attached to the steel stud with approved spring steel brackets.
- H. Support lighting fixtures and other equipment located in lay-in ceilings with #12 gauge galvanized steel hanger wire attached to all four (4) corners of fixture.
- I. Support conductors in vertical raceways with approved split-wedge type cable supports. Support multiple conductors with approved cable clamps and "tie-wraps."
- J. Where called for on the drawings, provide communications cable supports equal to B-line 4" cable hooks with quick latch retainers.

2.03 PLYWOOD BACKBOARDS:

- A. Use softwood plywood conforming to PS-1 of the American Plywood Association for the intended application. Generally, provide 3/4" thickness for backboards.

2.04 CONCRETE BASES:

- A. Provide concrete bases for floor mounted equipment indicated on the Drawings and all exterior equipment mounted on grade. Use proper cement/sand mix to achieve strength of 3000 psi after 28 days.
- B. Provide steel reinforcing bars as required and provide proper ties and support during pouring.
- C. Provide properly sized anchor bolts held in position with templates. Where anchor bolts cannot be held in sufficient alignment, provide adjustable bolts in pipe sleeves.

CITY OF FAYETTEVILLE, ARKANSAS:
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PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Install anchors in accordance with manufacturer's recommendations but sized to accommodate at least twice the actual load. Oversized holes that may weaken the installation will not be acceptable.
- B. Support all boxes and equipment enclosures directly by the building structure independently of the conduit.
- C. Support conduit independently by the building structure at intervals complying with the NEC. Do not support conduit from piping, ductwork, or suspended ceiling hangers.
- D. Support conduit without sagging to provide drainage of condensation.
- E. Permanently and securely support conduit, boxes, and enclosures before installing any wiring.
- F. Provide plywood backboards for all equipment mounted to masonry or concrete walls. Provide backboards for any type wall for installation of multiple enclosures or products such as contactors, timers, motor starters, automatic controls, telephone equipment, and etc. Generally, size backboards to accommodate the equipment plus a 3" border on all sides.
- G. Establish sizes of concrete bases required to accommodate equipment. Generally, make bases extend 3" larger than equipment on all sides. Prior to pouring on existing slab, set steel re-bar dowels in holes drilled in existing slab for proper anchorage of base. Install near each corner and at other intervals not to exceed 24 inches. Trowel finish and rub smooth. Form edges with 3/4" chamfer.

END OF SECTION

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

ELECTRICAL IDENTIFICATION
SECTION 26 05 53

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. Equipment nameplates
- B. Name tags
- C. Circuit directories
- D. Utility marker tape
- E. Self-adhering labels
- F. Wire markers

1.02 RELATED WORK:

- A. Section 26 01 00 General Electrical Requirements

1.03 SUBMITTALS:

- A. Submit for approval, Manufacturer's data sheets on each manufactured identifying device.
- B. Submit for approval, a schedule of nameplates to be affixed to each item.

1.04 QUALITY ASSURANCE:

- A. Approved manufacturers are Seton and Brady.

PART 2 - PRODUCTS

2.01 NAMEPLATES:

- A. Identify each major component and controller (except light switches) as it is named on the Drawings with engraved nameplates made from laminated plastic sheets equal to Seton Style 2060.
 - 1. Furnish with white letters on black background except for other color coded requirements.
 - 2. Provide appropriate size nameplates with information easily readable. Generally, furnish 3/4" high nameplates with 3/8" letters for major equipment such as switchboards, panelboards, transformers; and 1/2" high nameplates with 1/4" letters for minor equipment such as disconnect switches, contactors, starters, emergency power receptacles and etc.
- B. Identify entry location of each underground utility by providing an engraved brass nameplate equal to Seton Style EBS permanently attached on the outside wall directly above conduit where it enters building.
 - 1. Furnish 1" high nameplate of .025" or greater thickness.
 - 2. Indicate the type of utility such as "electric service entrance" or "telephone service entrance."

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2.02 NAMETAGS:

- A. Identify each outlet box of empty conduit system by affixing a write-on vinyl name tag equal to Seton Style PTOB to each end of pull wire installed in each conduit. Indicate purpose of empty outlet box such as "telephone" with location of pull wire termination such as "main terminal board."
- B. Identify conductors terminated in junction box or outlet box intended for future connection. Provide write-on vinyl name tags indicating panelboard and circuit number or location of source.

2.03 CIRCUIT DIRECTORIES:

- A. Fill out circuit directory cards for cardholder slots inside panelboard doors. Provide typewritten directory indicating function and location served for each circuit used.
- B. Identify undesignated spare circuit breakers by writing the word "spare" in soft pencil in the blank for that circuit number. Leave blank the description line for uninstalled circuit breakers (spaces).
- C. Identify circuits feeding battery backup emergency or exit lighting fixtures.

2.04 UTILITY MARKER TAPE:

- A. For all conduit or direct burial cable installed underground and outside of building, provide continuous plastic tape directly above underground services.
- B. Provide orange or red tape with contrasting letters at regular intervals equal to Seton No. 210 Series.
- C. For multiple underground conduit runs, provide two strips of marking tape; one over each outside conduit.

2.05 LABELS:

- A. Identify each junction box and conduit exposed in equipment rooms or accessible above lay-in ceilings or behind access doors with permanent self-adhering orange labels equal to Seton "Opti-Code."
- B. Indicate voltage class such as "120/208 volts" or the type of signal cable installed therein such as "telephone."

2.06 WIRE MARKERS:

- A. Provide permanent self-adhesive wire markers on each conductor in panelboards or other equipment enclosures.
- B. Indicate the circuit number or terminal number to which the wire is connected.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Attach nameplates with approved adhesive on plastic surfaces and factory baked enameled surfaces only. Attach nameplates with proper screws on all other surfaces.

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

- B. Where shown, identify emergency system receptacles as to panelboard and circuit number supplying them.
- C. Install nameplates identifying utility service entrance 6" above finished grade.
- D. Attach name tags to pull wires or conductors with nylon cord or other approved method.
- E. Install typewritten circuit directories in appropriate card slots.
- F. Install continuous strip of utility marker tape 12" above conduit or direct burial cable it is identifying. Do not backfill to grade until tape installation is approved.
- G. Install identifying labels on conduit where it enters or leaves a wall or floor and at other intervals not to exceed 20 feet.
- H. Install wire markers so that information is easily visible.

END OF SECTION

Bid 22-54,
Appendix A:
City Bid Documents

CITY OF FAYETTEVILLE, ARKANSAS:
NEW RESTROOM AND PAVILION AT WILSON PARK

DISCONNECT SWITCHES
SECTION 26 18 13

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. Fused and non-fused disconnect switches

1.02 RELATED WORK:

- A. Section 26 01 00 General Electrical Requirements
- B. Section 26 05 32 Wires and Cables
- C. Section 26 05 51 Supporting Devices
- D. Section 26 05 53 Electrical Identification

1.03 SUBMITTALS:

- A. Submit Manufacturer's data sheets on each type of disconnect switch proposed for use.

PART 2 - PRODUCTS

2.01 DISCONNECT SWITCHES:

- A. For applications requiring 30-1200 amperes rating or for any two or three pole application, provide NEMA type "HD" (heavy duty) horsepower rated disconnects with enclosures suitable for the applications, such as NEMA 3R for outdoor installations.
 - 1. Provide interlock to prevent door operating with switch in "ON" position.
 - 2. Furnish with grounding block.
 - 3. Provide for padlocking switch in "OFF" position.
 - 4. Furnish with terminals UL listed for 75°C wires.
 - 5. Provide Class R, J, or L fuse provisions as applicable for fusible switches. Provide feature to reject Class H fuses.
 - 6. Furnish with factory baked enamel finish.
- B. For fractional horsepower 120 volt motors with integral overload protection, as well as other 120 volt equipment protected at 20 amperes or less, use specification grade single pole switch in outlet box with minimum ratings as follows:
 - 1. Horsepower rated for one horsepower
 - 2. 120/277 AC volts
 - 3. 20 amperes

PART 3 - EXECUTION

3.01 INSTALLATION:

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- A. Provide disconnect switch for each fixed appliance or motor load indicated on the Drawings or required by the NEC. Install switch in sight of and within 50 feet maximum of equipment it serves.
- B. Install 20 ampere rated switches with center 4 feet above floor.

END OF SECTION

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SURGE PROTECTION DEVICES
SECTION 26 23 01

PART 1. GENERAL

1.1 SECTION INCLUDES

- A. SPDs for electrical power service at the Main Switchboard and Distribution Panels
- B. Provide external SPDs where possible.

1.2 SUBMITTALS

- A. Submit under provisions of Section 26 01 00.
- B. Submit shop drawings of catalog data with complete description of materials and performance data.
- C. Submit a single impulse surge current test report issued by a nationally recognized testing facility & an ANSI/IEEE Category C3 (20KV, 10KA) life cycle test report. The test reports should demonstrate that each SPD unit can withstand, in its installed configuration, the specified values (up to 200K transient amps per mode) without failure of any internal component (MOVs, wiring, printed circuit board, fusing and disconnect).
- D. Substitutions are permitted as long as they meet the specification requirements.

1.3 COMPLIANCE REQUIREMENTS

- A. UL 1449, 3rd Edition listing as a Type 1 SPD with a 20KA nominal discharge current.
- B. UL 1283 listing for EMI/RFI filters

PART 2. PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. Raceway and Fittings: Rigid steel conduit as specified in other sections.
- B. Wire & Cable: Single conductor Type THHN, stranded copper, as specified in other sections.
- C. SPD for Main Switchboard (>1200 amps): SPD shall protect in all seven modes for a wye configuration (L-N, L-G, all phases & N-G). Tested surge current capacity of 200,000 amps per protection mode (L-N & L-G). SPD shall be a **Current Technology Model CGP200**. Use a 100-amp breaker in the panel for connection to the bus.
- D. SPD for Main Switchboard (400A – 1200A): SPD shall protect in all seven modes for a wye configuration (L-N, L-G, all phases & N-G). Tested surge current capacity of 150,000 amps per protection mode (L-N & L-G). SPD shall be a **Current Technology Model CGP150**. Use a 100-amp breaker in the panel for connection to the bus.

- E. SPD for Main Switchboard (<400A): SPD shall protect in all seven modes for a wye configuration (L-N, L-G, all phases & N-G). Tested surge current capacity of 100,000 amps per protection mode (L-N & L-G). SPD shall be a **Current Technology Model CGP100**. Use a 100-amp breaker in the panel for connection to the bus.
- F. SPD for Branch Panel: SPD shall protect in all seven modes for a wye configuration (L-N, L-G, all phases & N-G). Tested surge current capacity of 60,000 amps per protection mode (L-N & L-G). SPD shall be a **Current Technology Model CGP60**. Use a 60-amp breaker in the panel for connection to the bus.
- G. Each SPD unit shall be capable of surviving at least the following Category C3 (20KV, 10KA) impulses without failing or degrading the UL 1449 surge suppression rating more than 10%:

Main Switchboard (>1200A)	6,500 impulses
Main Switchboard (400A - 1200A)	5,500 impulses
Main Switchboard (<400A)	4,500 impulses
Branch Panel	3,500 impulses

- H. Diagnostic Monitoring System: Each SPD shall include an audible alarm system, Form C Contacts, a surge counter and phase indicator lights.

2.2 WARRANTY

- A. The SPD system shall have a **FIFTEEN YEAR** limited product warranty from date of shipment against transient failure, when installed in compliance with applicable national/local electrical codes and manufacturer's installation manual.

PART 3. EXECUTION

3.1 INSTALLATION

- A. Install in strict accordance with the manufacturer's printed instructions.
- B. Have a factory-authorized representative inspect installation and verify that the SPD system is working to factory specifications before building final inspection.
- C. The contractor shall fire seal all raceway openings between each SPD and the electrical gear it is protecting to prevent any air born particles from migrating to the electrical gear.
- D. Do not perform insulation resistance tests of the distribution wiring equipment with the TVSS installed. Disconnect before conducting insulation resistance tests, and reconnect immediately after the testing is over.

END OF SECTION

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CIRCUIT BREAKER DISTRIBUTION PANELS
SECTION 26 24 13

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. Distribution panelboards rated 225 through 1200 amperes.
- B. Circuit breakers and accessories.

1.02 RELATED WORK:

- A. Section 26 01 00 Electrical Requirements
- B. Section 26 05 51 Supporting Devices
- C. Section 26 05 53 Electrical Identification
- D. Section 26 05 26 Grounding

1.03 SUBMITTALS:

- A. Submit Manufacturer's data sheets for each panelboard and each type of circuit breaker proposed for use. Submit schedule of engraved name plates and panelboard circuit directories.

1.04 QUALITY ASSURANCE:

- A. Approved Manufacturer's are Square D, Siemens, G.E and Cutler-Hammer for comparable and competitive product lines as applicable. Additions to existing panelboards shall be made with circuit breakers and accessories from the same manufacturer as the existing panelboard.

PART 2 - PRODUCTS

2.01 PANELBOARDS:

- A. Furnish with distributed phase sequence type bussing with approved plating. Provide circuit breaker connections as scheduled on the Drawings.
- B. Furnish with wiring terminals UL listed for 75°C and for copper wire.
- C. Enclose bus assembly in galvanized steel cabinet of required gauge and gutter sizes.
- D. Provide "dead front" construction of code gauge steel with flush doors, concealed hinges, and flush cylinder tumbler-type locks. Key all panelboard locks in the building alike and also key like any existing panelboards where possible.

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- E. Provide fronts of same size as the cabinets.
- F. Provide solid neutral terminal block that is isolated from the cabinet unless used for a service entrance panelboard.
- G. Provide a grounding terminal block that is bonded to the cabinet plus an additional isolated block if used for an isolated grounded panelboard.
- H. Furnish panelboards with either a main circuit breaker (MCB) or main lugs only (MLO) as scheduled on the Drawings.
- I. Provide molded case circuit breakers of quick-make, quick-break, thermal-magnetic type with trip indication and common trip on all multi-pole breakers.
- J. Provide UL listed HACR type circuit breakers for HVAC equipment marked for use with HACR type circuit breakers.
- K. Where shown, provide shunt trip type circuit breakers with coil clearing contacts and auxiliary relays as required.
- L. Rate each panelboard in accordance with UL Standard 67 for the integrated equipment short circuit rating indicated on the panel schedules. Where MLO is provided, each branch breaker shall have the required interrupting capacity (AIC). MCB may be provided with lower rated AIC branch breakers as long as the UL recognized and tested combinations of the series connected interrupting ratings meet the required integrated equipment short circuit rating indicated on the panel schedules.
- M. Panelboards shall be equal to Square D type I-Line with circuit breaker types compatible with mounting arrangement, trip ratings, interrupting capacity, and etc.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Where floor mounted, mount panelboards on concrete housekeeping pad.
- B. Support and identify as specified in "Related Work", Paragraph 1.02 contained herein.

END OF SECTION

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LIGHTING
SECTION 26 50 00

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. Work under this section includes furnishing and installing the following:
 - 1. Exterior lighting fixtures with lamps, ballasts, accessories and mounting hardware.
 - 2. Exterior fixture poles including mast arms, brackets, anchor bolts, concrete bases, accessories and mounting hardware.
- B. The term "fixture" in this section shall pertain to lighting fixtures or luminaires.

1.02 RELATED WORK:

- A. Section 26 01 00 General Electrical Requirements
- B. Section 26 05 31 Raceways
- C. Section 26 05 32 Wires and Cables
- D. Section 26 05 51 Supporting Devices for Electrical Systems

1.03 SUBMITTALS:

- A. Submit manufacturer's product data sheets on each fixture scheduled, arranged in order of fixture designation complete with the following:
 - 1. Description of fixture including dimensions, materials, finishes and verification of indicated parameters. State total connected fixture watts and power factor.
 - 2. Ballast manufacturer and model including electrical and energy efficiency data.
 - 3. Lamp manufacturer and model number with ANSI code including rated watts, lumens, lamp life and color temperature.
 - 4. Photometric data of fixture assembly with lamp/ballast combination as specified.
- B. Submit schedule of extra materials as required in paragraph 1.06 below including quantities of each type to be furnished to the owner upon substantial completion.

1.04 QUALITY ASSURANCE:

- A. All fixtures shall be listed and labeled as defined in article 100 of the NEC by a testing agency acceptable to the authorities having jurisdiction and marked for its intended use. Fixtures installed in damp or wet locations shall be listed and labeled as such.
- B. The manufacturer shall have a qualified responsive service organization with a proven record of successful in-service performance and contractor support during installation and warranty period.

1.05 SPECIAL WARRANTY

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- A. Submit a warranty, mutually executed by manufacturer and installer agreeing to replace defective materials or workmanship within five (5) years from date of substantial completion for the items specified below. This warranty is in addition to, and not a limitation of other rights and remedies the owner may have under the Contract Documents.
 - 1. Electronic drivers or ballasts
 - 2. Rechargeable batteries
 - 3. Metal parts exhibiting corrosion
 - 4. Metal or plastic parts exhibiting color fading, staining, cracking or peeling.
- B. Replace any and all lamps, ballasts and fuses that fail within twelve (12) months from date of substantial completion. This is in addition to the stock of "Extra Materials" described below.

1.06 EXTRA MATERIALS

- A. Furnish and deliver to the Owner extra materials matching the installed products as described below, packaged for storage and properly labeled describing contents. Furnish at least one of each type and rating.
 - 1. Lamps: 5 for each 100 of each type and rating installed.
 - 2. Ballasts: 1 for each 100 of each type and rating installed.
 - 3. Glass or plastic lenses and covers: 1 for each 100 of each type and rating installed.

PART 2 - PRODUCTS

2.01 FIXTURES AND COMPONENTS:

- A. Comply with the following UL Standards as applicable:
 - 1. UL 8750 LED Lighting Fixtures
 - 2. UL 1572, High Intensity Discharge Lighting Fixtures
 - 3. UL 1571, Incandescent Lighting Fixtures
 - 4. UL 1574, Track Lighting Systems
- B. Fixtures shall be furnished with all mounting and suspension accessories, brackets, covers and hardware for a complete operating installation in the intended location and mounting configuration.
- C. Metal parts shall be corrosion resistant and shall be rigidly formed and supported to prevent warping and sagging.
- D. Doors, frames and other access trim shall be smooth operating, free of light leaks and capable of relamping without tools.
 - 1. Use resilient non-hardening gaskets to seal damp or wet location fixture doors or to prevent light leaks.
- E. Sheet metal surfaces required to be painted shall be painted after fabrication using non-yellowing, non-fading paint. Reflecting surfaces shall have minimum reflectance values as follows:
 - 1. White surfaces: 90 percent
 - 2. Specular surfaces: 95 percent
 - 3. Diffusing specular surfaces: 85 percent

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- F. Lenses, diffusers, covers and globes shall be 100 percent virgin acrylic plastic or annealed crystal glass.
 - 1. Plastic diffusers shall be highly resistant to yellowing or other changes due to aging, exposure to heat and ultra-violet radiation.
 - 2. Nominal lens thickness for fluorescent troffers shall be .125" minimum.
- G. Indirect fixtures shall be designed for uniform brightness on the ceiling and free from "hot spots" when installed in accordance with manufacturer's recommendations. Optical efficiency of indirect fixtures shall be 85 percent or greater.
- H. Wiring and connectors within the fixture shall have insulation suitable for the voltage, current and temperature to which it will be subjected. Lamp sockets shall comply with UL 542.

2.02 LED LIGHT FIXTURES:

- A. General requirements shall include the following:
 - 1. Comply with UL 8750 , LED LIGHT FIXTURES.

2.03 HIGH INTENSITY DISCHARGE (H.I.D.) LAMP BALLASTS:

- A. General requirements shall include the following:
 - 1. Comply with UL 1029, High Intensity Discharge Lamp Ballasts.
 - 2. Magnetic constant wattage autotransformer (CWA) type or regulator, high power factor type unless scheduled otherwise on the drawings. If pulse start type is scheduled, it shall specifically match the lamp supplied.
 - 3. Contain no PCB's.
 - 4. Open circuit operation will not reduce average life.
 - 5. Reliable operation in temperature environments from -20° F to 130° F.
 - 6. Power factor of greater than 90 percent.
 - 7. Universal voltage taps to field adapt to the available voltage.
 - 8. Sound rating "A" for interior fixtures and "A or B" for exterior fixtures.
- B. Auxiliary, instant-on quartz system, where scheduled on the drawings, shall have the following features:
 - 1. Automatically switch quartz lamp on when fixture is initially energized and after momentary power outages occur.
 - 2. Automatically turn off quartz lamp when lamp reaches approximately 60 percent full light output.
 - 3. Power for quartz lamp shall be supplied from ballast assembly regardless of ballast rated input voltage so that separate auxiliary power circuit is not required.
- C. Instant restrike device, where scheduled on the drawings, shall maintain ignitor with a self-contained rechargeable battery as specified above for instant restarting after power outage.

2.04 LAMPS:

- A. General requirements include the flowing:

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1. Comply with ANSI Standard C78 series applicable to each type of lamp.
2. Comply with Energy Codes including current revisions.
3. Lamps of specified type shall be the product of a single manufacturer.
4. All lamps used in same area shall have similar color temperature unless scheduled otherwise on the drawings.

2.05 POLES:

A. General requirements are as follows:

1. Comply with AASHTO LTS-1, Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals.
2. Steel poles, when scheduled, shall comply with ASTM A500, Grade B, carbon steel with minimum yield of 46,000 psi.
3. Aluminum poles, where scheduled, shall comply with ASTM B 429, Standard Specifications of Aluminum-Alloy Extruded Structural Pipe and Tube. Use 6063-T6 alloy for poles 16' or less. Use 5052-H34 alloy conforming to ASTM 13209 for poles over 16'.
4. Design for wind load strength of 80 mph and 1.3 gust factor for total support assembly including pole, base, anchors, fixtures and appurtenances at the indicated heights above grade without undue deflection or whipping.
5. Provide internal wireway and underground cable entry.
6. Provide access hand hole near pole base.
7. Provide threaded grounding lug or bus bar accessible through hand hole.
8. Arm, brackets and tenon mount materials shall match the poles.
9. Provide factory applied finish as scheduled with color selected by Architect.

B. Provide concrete foundations to support entire pole/fixture assembly under design wind load.

1. Use 3000 psi, 28-day concrete mixture complying with Division 3 Section "Cast-in-Place Concrete" of these specifications.
2. Comply with details and manufacturer's recommendations for steel reinforcing, anchor bolts, hardware and grout.
3. Provide smooth finish with chamfered edges on exposed part of foundations.

PART 3 - EXECUTION

3.01 INSTALLATION:

A. The Contractor shall study the finished conditions.

1. Furnish fixtures compatible with the type of ceiling or wall in which they are to be installed including all required mounting accessories.
2. Relocate any fixture which, after installation, is found to interfere with other equipment or is otherwise located to conflict with proper performance or maintenance as intended.
3. Inspect each installed fixture for damage. Replace damaged fixtures and components.
4. Install lamps in each fixture. Verify normal operation in all modes.

B. Support and connect fixtures per manufacturer's recommendations.

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1. Final wiring connections to fixtures located in lay-in ceilings shall be through Flexible Metal Conduit (FMC) or MC cable whips.
2. All light fixtures and lamps shall be LED type unless indicated otherwise on the plans.
3. Recessed fixtures installed in lay-in ceiling panels shall be provided with bar hangers attached to the T-bar grid and supported with a minimum of two #12 AWG galvanized steel hanger wires and shall support fixture with no force on the ceiling panels.
4. Trim rings shall completely cover openings in ceilings.
5. Exposed sides of surface mounted fixtures shall have no visible knock-out indentations.
6. Support suspended fixtures with stem hangers, rods or aircraft cable per manufacturer's details. Where pendants are longer than 48", brace to limit sway.

3.02 CLEANING AND ADJUSTING:

- A. Upon completion of the work, thoroughly clean and polish all fixtures inside and out, and clean all lamps. Use methods and materials recommended by the manufacturer. Adjustable fixtures shall be carefully aimed and positioned in the presence of the Architect.

END OF SECTION

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SECTION 31 10 00
SITE CLEARING AND DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
1. Protecting existing trees to remain.
 2. Removing existing trees, shrubs, groundcovers, plants and grass.
 3. Clearing and grubbing.
 4. Stripping and stockpiling topsoil.
 5. Demolition and removal of buildings.
 6. Removing above- and below-grade site improvements.
 7. Disconnecting, capping or sealing, and abandoning site utilities in place or removing site utilities, as indicated.
 8. Temporary erosion and sedimentation control measures.
- B. Related Sections include the following:
1. Section 003143 "Environmental Compliance."
 2. Section 312000 "Earthwork" for soil materials, excavating, backfilling, and site grading.

1.3 DEFINITIONS

- A. Demolish: Completely remove and legally dispose of off-site. Select material may be disposed of on-site, as directed by the Owner.
- B. Recycle: Recovery of demolition waste for subsequent processing in preparation for reuse.
- C. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches (50 mm) in diameter; and free of subsoil and weeds, roots, toxic materials, or other non-soil materials.
- D. Tree Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction and defined by the drip line of individual trees or the perimeter drip line of groups of trees, unless otherwise indicated.

1.4 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste designated by the Owner to be disposed of off-site becomes the property of the Contractor. Stripped topsoil and demolition waste designated by the Owner to be disposed of on-site shall remain the property of the Owner.
1. Contractor shall obtain approval from authorities having jurisdiction prior to any burning of any materials on-site.
 2. Contractor shall comply with all local, state and federal guidelines for disposal of waste materials offsite. Contractor shall provide any information or documentation required by the Engineer for materials disposed of offsite.

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- B. Previously abandoned equipment, piping, appurtenances, historic items, relics, antiques, similar objects and other items of interest or value to the Owner that may be uncovered during demolition remain the property of the Owner.
 - 1. Contractor shall carefully salvage in a manner to prevent damage and promptly return to Owner.

1.5 SUBMITTALS

- A. Photographs or videotape, sufficiently detailed, of existing conditions of trees and plantings, adjoining construction, and site improvements that might be misconstrued as damage caused by site clearing.
- B. Record drawings, according to Section "Contract Closeout," identifying and accurately locating capped utilities and other subsurface structural, electrical, and mechanical conditions.
- C. Copies of all applicable federal, state and local permits.
- D. Proposed Protection Measures: Submit informational report, including drawings, that indicates the measures proposed for protecting individuals, property and existing structures during clearing and excavation activities. Indicate proposed locations and construction of barriers.
 - 1. Adjacent Buildings/Structures: Detail special measures proposed to protect adjacent buildings to remain.
- E. Schedule of Any Demolition Activities: Indicate the following:
 - 1. Detailed sequence of demolition work, with starting and ending dates for each activity.
 - 2. Temporary interruption of utility services.
 - 3. Shutoff and capping or rerouting of utility services.

1.6 QUALITY ASSURANCE

- A. Preinstallation Conference: Conduct conference at Project site prior to initiating clearing activities.
- B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning demolition. Comply with hauling and disposal regulations of authorities having jurisdiction. C. Standards: Comply with ANSI A10.6 and NFPA 241.
- C. Pre-Demolition Conference: Conduct conference at Project site. Review methods and procedures related to building demolition including, but not limited to, the following:
 - 1. Inspect and discuss condition of construction to be demolished.
 - 2. Review structural load limitations of existing structures.
 - 3. Review and finalize demolition schedule and verify availability of demolition personnel, equipment, and facilities needed to make progress and avoid delays.
 - 4. Review and finalize protection requirements.
 - 5. Review procedures for noise control and dust control.
 - 6. Review procedures for protection of adjacent buildings.
 - 7. Review items to be salvaged and returned to Owner.

1.7 PROJECT CONDITIONS

- A. Buildings/structures to be demolished will be vacated and their use discontinued before start of the Work.
- B. Buildings/structures immediately adjacent to demolition areas will be in use. Conduct building/structure demolition to minimize disruptions.
 - 1. Provide not less than 2 days' notice of activities that will affect operations of adjacent roadways.
 - 2. Maintain access to existing walkways, exits, and other facilities.

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- C. Owner assumes no responsibility for buildings and structures to be demolished.
 - 1. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- D. On-site storage or sale of items or materials designated by the Owner to be disposed of off-site is not permitted.
- E. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner, authorities having jurisdiction, and Engineer.
 - 2. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
- F. Salvable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises where indicated.
- G. Utility Locator Service: Contractor shall engage a utility locator service for the Project area before site clearing.
 - 1. All existing utilities shall be marked prior to surface disturbance.
 - 2. The locations of existing underground utilities shown in the Drawings are approximate and based on the best information available and may not reflect all existing utilities in the Project area. The Contractor is responsible for coordinating with the utility companies for locating existing utilities prior to construction and for protection of services during construction.
- H. Existing Utilities: Contractor shall protect existing utilities. Damage of the existing utilities shall be repaired by the Contractor at no cost to the Owner.
- I. Do not commence site clearing operations until tree protection and temporary erosion and sedimentation control measures are in place.
- J. Do not commence site clearing operations until all applicable federal, state and local permits have been acquired.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

- A. Satisfactory Soil Materials: Requirements for satisfactory soil materials are specified in Section 031200 "Earthwork."
 - 1. Obtain approved borrow soil materials off-site when satisfactory soil materials are not available on-site.

PART 3 – EXECUTION

3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Locate and clearly flag trees and vegetated areas to remain or to be relocated.
- C. Protect existing site improvements to remain from damage during construction.
 - 1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties, waterways, and

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walkways, according to Section 003143 "Environmental Compliance," the "Sediment Control Plan," in the Drawings and all applicable federal, state and local requirements.

- B. Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established.
- C. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

3.3 DUST CONTROL

- A. Use water mist and other suitable methods to limit spread of dust and dirt. Comply with governing environmental-protection regulations. Do not water when it may damage adjacent construction or create hazardous or objectionable conditions, such as ice, flooding, and pollution.

3.4 TREE PROTECTION

- A. Erect and maintain temporary fencing around tree protection zones before starting site clearing. Remove fence when construction is complete.

3.5 UTILITIES

- A. Locate, identify, disconnect, and seal or cap off utilities indicated to be removed.
 - 1. Arrange with utility companies to shut off indicated utilities.
 - 2. Cut off pipe or conduit a minimum of 24 inches below grade
 - 3. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing according to requirements of authorities having jurisdiction.
 - B. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Notify Engineer not less than two days in advance of proposed utility interruptions.
 - 2. Do not proceed with utility interruptions without Engineer's written permission.
- Excavate for and remove underground utilities indicated to be removed.

3.6 CLEARING AND GRUBBING

- A. Stockpile existing topsoils removed during clearing and grubbing on-site for reuse.
- B. Remove obstructions, trees, shrubs, grass, and other vegetation to permit installation of new construction.
 - 1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
 - 2. Cut minor roots and branches of trees indicated to remain in a clean and careful manner where such roots and branches obstruct installation of new construction.
 - 3. Grub stumps and remove roots, obstructions, and debris extending to a depth of 18 inches (450 mm) below exposed subgrade.
 - 4. Use only hand methods for grubbing within tree protection zone.
 - 5. Protect and trim existing trees to remain.
- C. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
 - 1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches (200 mm), and compact each layer to a density equal to adjacent original ground.

3.7 TOPSOIL STRIPPING

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- A. Strip topsoil to whatever depths are encountered in a manner to prevent intermingling with underlying subsoil or other waste materials.
 - 1. Remove subsoil and nonsoil materials from topsoil, including trash, debris, weeds, roots, and other waste materials.
- B. Stockpile topsoil materials where indicated on the Drawings, away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust. Comply with Division 1 requirements and as follows:
 - 1. Limit height of topsoil stockpiles if required by any permit.
 - 2. Do not stockpile topsoil within tree protection zones.
 - 3. Dispose of excess topsoil as specified for waste material disposal.

3.8 DEMOLITION, GENERAL

- A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction. Work within limitations of governing regulations.
 - 1. Above Grade: Proceed with demolition from top to bottom of existing structure. Complete building demolition operations above each floor before disturbing supporting members on the next lower level.
 - 2. Below Grade: Demolish foundation wall and other below-grade construction that is within footprint of new construction and extending 10 feet outside footprint indicated for new construction.
 - a. Where new construction does not exist above demolition efforts, structure shall be demolished to a depth of 4 feet below final grade.
 - 3. Contractor shall finish grade all disturbed areas according to the Site Grading Plan.
 - 4. Contractor shall be responsible for all temporary retaining structures necessary for containment of extents of excavation necessary for demolition activities.
 - 5. Owner shall not be responsible for damage to other structures as a result of demolition efforts.
- B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.
 - 1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut length of existing pavement to remain before removing existing pavement. Saw-cut faces vertically.
 - 2. Paint cut ends of steel reinforcement in concrete to remain to prevent corrosion.

3.9 SITE RESTORATION

- A. Below-Grade Areas:
 - 1. Rough grade below-grade areas ready for further excavation or new construction.
 - 2. Completely fill below-grade areas and voids resulting from building demolition operations with satisfactory soil materials, recycled pulverized concrete, or recycled pulverized masonry according to backfill requirements in Section 031200 "Earthwork."
- B. Site Grading: Uniformly rough grade area of demolished construction to a smooth surface, free from irregular surface changes. Provide a smooth transition between adjacent existing grades and new grades.

3.10 REPAIRS

- A. Promptly repair damage to adjacent buildings/structures caused by demolition operations.

3.11 DISPOSAL

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- A. Disposal: Remove and dispose of offsite all surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris as determined by Owner.
- B. Disposal shall comply with all applicable federal, state and local requirements.

END OF SECTION

Bid 22-54,
Appendix A:
City Bid Documents

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SECTION 31 20 00
EARTHWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Preparing subgrades for foundations, slabs-on-grade, walks, pavements and lawns.
 - 2. Excavating and backfilling for structures.
 - 3. Subbase course for pavements.
 - 4. Subsurface drainage course for pavements and storm water infiltration systems.
 - 5. Excavating and backfilling for utility trenches.
 - 6. Permanent soil stabilization materials.

1.3 DEFINITIONS

- A. Backfill: Soil material, crushed stone aggregate material, lean concrete, or controlled low strength material used to fill an excavation.
- B. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
- C. Final Backfill: Backfill placed over initial backfill to fill a trench.
- D. Pipe Bedding Material: Course placed over the excavated subgrade in a trench before laying pipe.
- E. Borrow Soil: Soil imported from off-site for use as fill or backfill as approved by Engineer.
- F. Drainage Backfill: Graded coarse aggregate material used to allow free flow of groundwater.
- G. Aggregate Drainage Course: Continuous layer of drainage backfill used to allow free flow of groundwater under a structure.
- H. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
- I. Fill: Soil or rock materials used to raise existing grades.
- J. Rock: Naturally occurring mineral materials, igneous, metamorphic, and sedimentary material in beds, ledges, unstratified masses, conglomerate deposits, and boulders of rock material that exceed 1/2 cu. yd. that cannot be excavated without systematic drilling, ram hammering, or blasting, when permitted.
- K. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks and similar, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
- L. Subbase Course: Course placed between the subgrade and pavements, sidewalks, concrete slabs on grade, or footings.
- M. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase or topsoil materials.
- N. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

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- O. AHTD Standard Specifications: "Standard Specifications for Highway Construction, published by the Arkansas State Highway and Transportation Department.
 - 1. Edition of 2003.
 - 2. Edition of 1996.
- P. Blasting: Material-removal procedure utilizing explosive charges. Not allowed unless otherwise approved by Engineer, Owner, and local authority having jurisdiction.
- Q. Permanent Erosion Control Matting: Machine woven blanket used to provide erosion resistance while supporting growth and development of vegetation and ultimately biodegrade.
- R. Permanent Erosion Control Wattle: Machine knotted cylindrical log of natural materials used to provide permanent protection of slope edges or waterways while supporting growth and development of adjacent vegetation and ultimately biodegrade.
- S. Permanent Erosion Control Block: Machine woven blanket surrounding a dense coil of natural materials used to provide permanent soil lift, or stream channel check dam while supporting growth and development of adjacent vegetation and ultimately biodegrade.

1.4 SUBMITTALS

- A. Product Data: For the following:
 - 1. Geotextile.
 - 2. Controlled low-strength material, including design mixture.
 - 3. Permanent erosion control materials.
- B. Samples: 12-by-12-inch (300-by-300-mm) Sample of subdrainage and separation geotextile.
- C. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated:
 - 1. Classification according to ASTM D 2487 of each on-site and borrow soil material proposed for fill and backfill.
 - 2. Laboratory compaction curve according to ASTM D 698 for each on-site and borrow soil material.
 - 3. Gradation for each crushed stone material proposed for fill and backfill.
 - 4. Laboratory compaction curve according to ASTM D-1557 for aggregate and crushed stone material proposed for fill and backfill.
 - 5. California Bearing Ratio (CBR) test results for subgrade materials.
- D. Dewatering Plan: Plans showing location and controls for site excavation and stormwater dewatering systems. Contractor shall submit dewatering plan for review by Engineer in accordance with requirements of Specification Section 312319 Dewatering.
- E. Blasting Plan: If blasting is approved in writing. For record purposes, approved by authorities having jurisdiction, Owner and Engineer.
- F. Seismic Survey Report: For record purposes; from seismic survey agency.
- G. Pre-excavation Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces, which might be misconstrued as damage caused by earthwork operations. Submit before earthwork begins.
- H. Qualification Data: For testing agency.

1.5 QUALITY ASSURANCE

- A. Blasting: Comply with applicable requirements in NFPA 495, "Explosive Materials Code," and prepare a blasting plan reporting the following:

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1. Types of explosive and sizes of charge to be used in each area of rock removal, types of blasting mats, sequence of blasting operations, and procedures that will prevent damage to site improvements and structures on Project site and adjacent properties.
2. Seismographic monitoring during blasting operations.
- B. Seismic Survey Agency: An independent testing agency, acceptable to authorities having jurisdiction, experienced in seismic surveys, and blasting procedures to perform the following services:
 1. Report types of explosive and sizes of charge to be used in each area of rock removal, types of blasting mats, sequence of blasting operations, and procedures that will prevent damage to site improvements and structures on Project site and adjacent properties.
 2. Seismographic monitoring during blasting operations.
- C. Geotechnical Testing Agency Qualifications: The Contractor shall provide an independent testing agency qualified according to ASTM E 329 to conduct soil materials and rock-definition testing, as documented according to ASTM D 3740 and ASTM E 548. The qualified testing agency shall be acceptable to the Owner and Engineer. Further qualifications include:
 1. Geotechnical Engineer licensed in the State of Arkansas.
 2. The Contractor's qualified testing agency shall be approved in writing by the Engineer.

1.6 PROJECT CONDITIONS

- A. The project site associated with this project is adjacent to an existing residential neighborhood. Contractor shall maintain access to any existing structures to remain.
- B. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Engineer and then only after arranging to provide temporary utility services according to requirements indicated.
 1. Notify Engineer not less than two days in advance of proposed utility interruptions.
 2. Do not proceed with utility interruptions without Engineer's written permission.
 3. Contact utility locator service for area where Project is located before excavating.
- C. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies to shut off services if lines are active.
- D. Project Site Information:
 1. Certain subsurface information has been obtained at, or in the vicinity of, the Site of the Work.
 2. Copies of such subsurface information will be issued only to prospective Bidders who request such subsurface information and sign a receipt therefor.
 3. There is no express or implied guarantee as to the accuracy or completeness of the subsurface information, nor of the interpretation thereof by the Owner, Engineer, or any of their representatives.
 4. The subsurface information or copies thereof do not form a part of this, or any Contract Document issued by the Owner or Engineer.
 5. Each prospective Bidder shall make its own interpretation of subsurface information issued to it and shall, at its own expense, make surveys and investigations as it may deem necessary to evaluate conditions which will affect performance of the work.
 6. Reports used in preparation of Contract Documents:
 - a. In the preparation of the Contract Documents, the following reports of explorations and tests of subsurface conditions at or contiguous to the Site of the Work were used:
 - 1) See Section 003100 "ADDITIONAL PROJECT INFORMATION."

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7. Contractor shall make additional test borings and conduct other exploratory operations necessary for earthwork at no additional expense to Owner.
8. Owner shall not be responsible for interpretation or conclusions drawn from this data.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

- A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
- B. Satisfactory Soils: ASTM D 2487 Soil Classification Groups GC, SC, and CL which have a liquid limit less than 40 or a combination of these groups. Local "hillside" cherty clay borrow with a liquid limit greater than 40 is acceptable, provided it is classified as GC and has less than 35 percent passing the No. 200 sieve and has a CBR value equal to or greater than eight (8), and is approved for the specific application by the qualified testing agency and the Engineer. The borrow material should be free of debris, waste, frozen materials, vegetation, and other deleterious material. It should be free of rock fragments larger than 6 inches (150 mm) and the upper 18 inches of the backfill or subbase course should have a maximum particle size of 1.5 inches.
- C. Subbase Material:
 1. Subbase material for foundations shall be Aggregate Base Course or Aggregate Drainage Course defined in paragraphs D and H below.
 2. Subbase material for concrete floor slabs-on-grade shall be Granular Fill and Fine Graded Granular Material defined in paragraphs I and J below.
- D. Aggregate Base Course: Class 7 or Class 8 aggregate base course (ABC) as specified by Section 303 of the AHTD Standard Specifications.
- E. Engineered Fill: Borrow material as defined in Paragraph B above.
- F. Pipe Bedding Material:
 1. Crushed limestone complying with Division 2, Section 02524-2.1 "Pipe Laying," as indicated.
 2. Class 7 ABC for storm drainage, as indicated.
- G. Drainage Backfill: Narrowly graded mixture of crushed limestone coarse-aggregate with 100 percent passing a 1-inch (25-mm) sieve and 0 to 5 percent passing a 3/4-inch sieve. Alternatively, No. 57 stone (ASTM D448) may be used.
- H. Aggregate Drainage Course: Material meeting the requirements for the previously mentioned drainage backfill.
- I. Granular Fill: Clean mixture of crushed stone or crushed or uncrushed gravel; ASTM D 448, Size 57, with 100 percent passing a 1-1/2 inch (34.5-mm) sieve and 0 to 5 percent passing a No. 8 (2.36-mm) sieve.
- J. Fine-Graded Granular Material: Clean mixture of crushed stone, crushed gravel, and manufactured or natural sand; ASTM D 448; Size 10, with 100 percent passing a 3/8-inch (9.5mm) sieve, 10 to 30 percent passing a No. 100 (0.15-mm) sieve, and at least 5 percent passing a No. 200 (0.075-mm) sieve; complying with deleterious substance limits of ASTM C 33 for fine aggregates.
- K. Filter Material: Narrowly graded mixture of natural or crushed gravel, or crushed stone and natural sand; ASTM D 448; coarse-aggregate grading Size 67; with 100 percent passing a 1-inch (25-mm) sieve and 0 to 5 percent passing a No. 4 (4.75-mm) sieve. L. Sand: ASTM C 33; fine aggregate, natural, or manufactured sand.
- M. Impervious Fill: Clayey gravel and sand mixture capable of compacting to a dense state.

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2.2 GEOTEXTILES

- A. Subsurface Drainage Geotextile: Nonwoven needle-punched geotextile, manufactured for subsurface drainage applications, made from polyolefins or polyesters; with elongation greater than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:
1. Survivability: Class 2; AASHTO M 288.
 2. Grab Tensile Strength: 157 lbf (700 N); ASTM D 4632.
 3. Sewn Seam Strength: 142 lbf (630 N); ASTM D 4632.
 4. Tear Strength: 56 lbf (250 N); ASTM D 4533.
 5. Puncture Strength: 56 lbf (250 N); ASTM D 4833.
 6. Apparent Opening Size: No. 70 (0.212-mm) sieve, maximum; ASTM D 4751.
 7. Permittivity: 0.1 per second, minimum; ASTM D 4491.
 8. UV Stability: 50 percent after 500 hours' exposure; ASTM D 4355.
- B. Filter Fabric Geotextile: Nonwoven needle-punched fabric, manufactured for subsurface drainage applications, made from polypropylene; with elongation greater than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:
1. Survivability: Class 2; AASHTO M 288.
 2. Grab Tensile Strength: 90 lbf (400 N); ASTM D 4632.
 3. Tear Strength: 40 lbf (175 N); ASTM D 4533.
 4. Puncture Strength: 55 lbf (240 N); ASTM D 4833.
 5. Apparent Opening Size: No. 70 (0.212-mm) sieve, maximum; ASTM D 4751.
 6. Permittivity: 2.1 per second, minimum; ASTM D 4491.
 7. Flow Rate: 155 gal/min/ft² (6300 L/min/m²); ASTM D 4491.
 8. UV Stability: 70 percent after 500 hours' exposure; ASTM D 4355.
- C. Geogrid pavement subgrade reinforcement: Continuous reinforcement grid of individual punch polypropylene cords fused at knuckle joints with heat. Grid shall have cords oriented in three directions, at 60-degree angles from each other.
1. Rib pitch: 40mm longitudinal, 40mm diagonal
 2. Mid-rib depth: 1.2mm diagonal, 1.2mm transverse
 3. Mid-rib width: 1.1mm diagonal, 1.1mm transverse
 4. Rib shape: rectangular
 5. Aperture shape: triangular
 6. Junction efficiency: 93% ultimate tensile strength, according to GRI-GG2-87 and GRIGG1-87.
 7. Aperture stability: 3.0kg-cm/deg@5.0kg-cm, according to US Army Corps of Engineers Methodology for measurement of Torsional Rigidity, Aperture stability Modulus ref 3.3.1.2000.
 8. Radial stiffness at low strain: 225Kn/m@0.5% strain according to ASTM D6637-01.
 9. Chemical degradation: 100% resistance according to EPA 9090.
 10. Ultra-violet light and weathering: 100% resistance according to ASTM D4355-05.

2.3 CONTROLLED LOW-STRENGTH MATERIAL

- A. Controlled Low-Strength Material: Low-density, self-compacting, flowable concrete material as follows:
1. Portland Cement: ASTM C 150, Type I or III.

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2. Fly Ash: ASTM C 618, Class C.
 3. Normal-Weight Aggregate: ASTM C 33, 3/8-inch (10-mm) nominal maximum aggregate size.
 4. Water: ASTM C 94/C 94M.
 5. Air-Entraining Admixture: ASTM C 260.
- B. Produce conventional-weight, controlled low-strength material with 200-psi compressive strength when tested according to ASTM C 495.

2.4 LEAN CONCRETE

- A. Lean Concrete: Binder, secondary cementitious materials, aggregates and admixtures shall be as follows:
1. Portland Cement: ASTM C 150, Type I or III.
 2. Fly Ash: ASTM C 618, Class C.
 3. Normal-Weight Aggregate: ASTM C 33, 3/8-inch (10-mm) nominal maximum aggregate size.
 4. Water: ASTM C 94/C 94M.
 5. Air-Entraining Admixture: ASTM C 260.
- B. Produce conventional-weight, lean concrete material with 2,500-psi compressive strength when tested according to ASTM C 39.

2.5 ACCESSORIES

- A. Detectable Warning Tape: Acid- and alkali-resistant polyethylene film warning tape manufactured for marking and identifying underground utilities, a minimum of 3 inches wide and 5.0 mils thick, solid colored with black lettering, continuously inscribed with a description of the utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches deep, colored and labeled as follows:
1. Red: Electric – "Caution - Buried Electric Line Below."
 2. Orange: Telephone and other communications.
 3. Blue: Potable water systems.
 4. Green: Sewer systems.
- B. Tracer Wire: 10-gauge coated copper wire, specifically designed for use as an underground utility tracer wire.

2.6 PERMANENT SOIL STABILIZATION MATERIALS

- A. Matting
1. Semi-permanent machine woven coconut bristle coir mat made from twisted coir twines, 100% biodegradable, with manufacturer rated field longevity of 4-6years minimum. Matting shall have open weave to allow for seeding over the installed mat. Matting shall conform to the following specifications.
 - a. Weight – Minimum 29 oz/SY ASTM D 3776
 - b. Tensile Strength
 - 1) Wet
 - a) Machine Direction - Minimum 1776lbs/ft ASTM D 4595*
 - b) Cross Direction – Minimum 936lbs/ft*
 - 2) Dry
 - a) Machine Direction – Minimum 2024lbs/ft*

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- b) Cross Direction – Minimum 1160lbs/ft*
 - c. Elongation at failure wet
 - 1) Machine Direction – 52%*
 - 2) Cross Direction – 24%*
 - d. Open area – Minimum 38% Calculated
 - e. Thickness – Minimum 0.35 inch ASTMD 1777
 - f. Recommended shear stress – 5lbs/SF
 - g. Recommended flow – 16fps
 - h. Recommended Slope – 1:1
 - i. Minimum twine count/foot – 39x18
 - 2. Recommend Products:
 - a. BioD-Mat 90, as manufactured by Rolanka International, Inc. of Stockbridge, GA. b.
Or equal.
- B. Wattle
- 1. Densely packed coconut coir bristle in a cylindrical shaped knotted outer netting, 100% biodegradable, with manufacturer rated field longevity of the outer netting of minimum 2 years. The filler mattress coir fiber will not reduce in volume, but become a part of the soil with time. Wattle shall conform to the following specifications.
 - a. Outer netting – 2" x 2" knotted, manufactured from minimum 90lbs strength machine spun bristle coir twines.
 - b. Inner filling – 100% coconut fiber (mattress coir)
 - c. Density – Minimum 9lbs/ft³
 - d. Unit Weight – Minimum 7lbs/ft
 - e. Manufactured length – Minimum 10ft
 - f. Manufactured diameter – Minimum 12" 2. Recommended Products:
 - 1) BioD-Roll 30H, as manufactured by Rolanka International, Inc. of Stockbridge, GA.
 - 2) Or equal.
- C. Block
- 1. Densely pack coconut coir bristle in a rectangular shape with woven bristle coir fabric attached to the outer layer on three sides. 100% biodegradable. Both ends of the woven fabric are loose and allow for installation of the block. The filler mattress coir fiber shall not reduce in volume but become a part of the soil with time. Block shall conform to the following specifications.
 - a. Outer fabric – woven fabric from twisted bristle coir twines
 - 1) Machine Direction Dry Tensile Strength – Minimum 1740lbs/ft
 - 2) Cross Direction Dry Tensile Strength – Minimum 1176lbs/ft
 - b. Inner filling – 100% coconut fiber (mattress coir)
 - c. Unit Weight – 7.7lbs/ft
 - d. Minimum Block Height – 16"
 - e. Minimum Block Thickness – 9"
 - f. Minimum Block Length – 10ft
 - g. Minimum Fabric Length Top – 48"
 - h. Minimum Fabric Length Bottom – 75"
 - i. Minimum Fabric Length at female end – 6" 2.

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2 Recommended Products:

- a. BioD-Block 16-400, as manufactured by Rolanka International, Inc. of Stockbridge, GA.
- b. Or equal.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
- B. Preparation of subgrade for earthwork operations, including removal of vegetation, topsoil, debris, obstructions, and deleterious materials from ground surface, is specified in Section 311000 "Site Clearing and Demolition."
- C. Protect and maintain erosion and sedimentation controls, which are specified in Section 003143 "Environmental Compliance" during earthwork operations.
- D. Provide protective insulating materials to protect subgrades and foundation soils against freezing temperatures or frost where recommended by qualified testing agency during construction.

3.2 DEWATERING

- A. Comply with requirements of Specification Section 312319 "Dewatering", approved Dewatering Plan, requirements of Specifications Section 003143 "Environmental Compliance" and any other applicable Federal, State or local requirement.
- B. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- C. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
 2. Install a dewatering system to keep subgrades dry and convey ground water away from excavations. Maintain until dewatering is no longer required.

3.3 EXPLOSIVES

- A. Explosives: **NOT ALLOWED** unless blasting has been approved by Owner, Engineer, and local authority having jurisdiction. Obtain written permission from authorities having jurisdiction before bringing explosives to Project site or using explosives on Project site.
 1. Perform blasting without damaging adjacent structures, property, or site improvements.
 2. Perform blasting without weakening the bearing capacity of rock subgrade and with the least-practicable disturbance to rock to remain.
 3. Comply with all Federal, State and local regulations, laws and requirements.
 4. Blasting shall be performed in accordance with Specification Section 02320.

3.4 EXCAVATION, GENERAL

- A. Excavation shall comply with the requirements of OSHA Standard 29 CFR Part 1926 – Safety and Health Regulations for Construction.

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- B. Unclassified Excavation: Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, soil materials, and obstructions. No changes in the Contract Sum or the Contract Time will be authorized for rock excavation or removal of obstructions.
1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.
 2. Remove rock to lines and grades indicated to permit installation of permanent construction. Unless indicated or approved otherwise remove rock as follows:
 - a. 36 inches (900 mm) outside of concrete forms other than at footings.
 - b. 12 inches (300 mm) outside of concrete forms at footings.
 - c. 0 inches (0 mm) outside of drilled pier foundations.
 - d. 6 inches (150 mm) outside of minimum required dimensions of concrete cast against grade.
 - e. Outside dimensions of concrete walls indicated to be cast against rock without forms or exterior waterproofing treatments.
 - f. 6 inches (150 mm) beneath bottom of concrete slabs on grade.
 - g. 6 inches (150 mm) beneath storm drainage pipe in trenches, and the greater of 24 inches (600 mm) wider than pipe or 42 inches (1065 mm) wide.
 - h. Undercut as specified or directed.

3.5 EXCAVATION AND FILL FOR STRUCTURES

- A. General:
1. Contractor is reminded to comply with all Federal, State, and local requirements and regulations, including, and not limited to, all OSHA requirements.
 2. Excavation and fill for structures, as specified, shall be coordinated, and integrated with the requirements for all adjacent and/or contiguous structures or features.
 3. The term "as directed" shall mean as directed by the qualified testing agency or the Engineer.
 4. Required in situ subgrade shall mean the minimum acceptable subgrade and shall be field verified by either: (1) the Engineer, or (2) the qualified testing agency, with concurrence of the Engineer.
 5. Actual excavation depths, soils, suitability of subgrade, requirements for undercut and suitability of fill materials shall be determined by either: (1) the Engineer, or (2) the qualified testing agency with concurrence of the Engineer.
 6. Excavation for structures and/or undercut shall be stepped with relatively level excavated surfaces. Sloped excavation for structures and/or undercut will not be permitted.
 7. Contractor shall perform all excavation and fill as necessary to meet all requirements for construction of the project based upon actual site conditions at no additional costs to the Owner.
 8. Where groundwater or other wet conditions prohibit proper placement of engineered fill, the Contractor may use a method of B stone and Class 7 ABC beneath the engineered fill, subject to review and approval by both the qualified testing agency and the Engineer.
 9. Controlled low-strength material may be used for fill only where approved by either:
(1) the Engineer, or (2) the qualified testing agency with concurrence of the Engineer.
 10. Excavations for structures in materials other than rock shall extend horizontally, as indicated or directed by the Engineer, beyond the exterior structure or building line(s) in all directions. The excavation shall be to a depth that produces a suitable bearing material

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as determined by either: (1) the Engineer, or (2) the qualified testing agency with concurrence of the Engineer.

- a. All fill within this excavation beyond the structure shall be engineered fill compacted to the requirements of the contiguous structure unless the excavation and fill requirements of the adjacent structure, feature or pavement are more stringent.
- 11. Class 7 ABC shall be used for fill where indicated. The Contractor may substitute Class 7 ABC for engineered fill only where approved by either: (1) the Engineer, or (2) the qualified testing agency with concurrence of the Engineer.
- 12. Class 8 ABC shall be used for fill where indicated.
- 13. Minimum required undercut (excavation) shall be three (3) feet for structures and heavy-duty pavements, unless directed otherwise. Additional undercut depth where noted or directed. Other undercut as directed.
- 14. Trenching for water and sewer pipe shall comply with Section 332000 "Standard Specifications for Design and Construction of Water Lines and Sewer Lines."
- 15. Compaction of engineered fill for structures shall be 95% Standard Proctor Density (ASTM D-698).
- 16. Compaction of Class 7 ABC and Class 8 ABC for structures shall be 98% Modified Proctor Density (ASTM D-1557).
- 17. In situ materials require scarification and recompaction if directed by the qualified testing agency or the Engineer.
- 18. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1-inch (25 mm).

3.6 EXCAVATION AND FILL FOR WALKS AND LIGHT-DUTY PAVEMENTS

- A. Bearing: Walks and light duty pavements shall be founded on compacted subbase or engineered fill.
- B. Excavate surfaces under areas to receive fill to indicated lines, cross sections, elevations, and subgrades. Minimum required undercut is 1 foot. Additional localized undercut on the order of 1-2 feet is possible.
- C. Proof-Roll: Proof-roll and/or probe as directed (as directed by the qualified testing agency or the Engineer). Undercut (excavate) any unsuitable areas or unsuitable materials as directed. If directed, repeat proof-roll and/or probe and undercut.
- D. Fill/Backfill: Provide compacted engineered fill materials as specified to the elevations required.
- E. Subbase: Provide a minimum of 6 inches of compacted Class 7 Aggregate Base Course (ABC) as specified and located between the sidewalk or pavement and the suitable bearing material or engineered fill, as applicable.

3.7 EXCAVATION FOR UTILITY TRENCHES

- A. Excavate trenches to indicated gradients, lines, depths, and elevations.
 - 1. Beyond building perimeter, excavate trenches to allow installation of top of pipe below frost line.
- B. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to 12 inches (300 mm) higher than top of pipe or conduit, unless otherwise indicated.
 - 1. Clearance: 12 inches (300 mm) each side of pipe or conduit as indicated.
- C. Trench Bottoms: Excavate trenches 6 inches (100 mm) deeper than bottom of pipe/conduit elevation to allow for bedding course. Hand excavate for bell of pipe/conduit.

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3.8 EXCAVATION FOR AREAS TO RECEIVE FILL

- A. Excavate surfaces under areas to receive fill to indicated lines, cross sections, elevations and subgrades.
- B. Excavate to suitable materials as determined by either: (1) the Engineer, or (2) the qualified testing agency, with concurrence of the Engineer.

3.9 SUBGRADE INSPECTION

- A. Notify Engineer and qualified testing agency when excavations have reached required subgrade.
- B. If either (1) Engineer or (2) qualified testing agency, with concurrence of the Engineer, determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
- C. Proof-roll subgrade below structures, pavements, and as directed, with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
 - 1. Proof-roll in the presence of the qualified testing agency and the Engineer.
 - 2. Completely proof-roll subgrade. Limit vehicle speed to 3 mph.
 - 3. Proof-roll with a loaded 10-wheel tandem-axle dump truck weighing not less than 15 tons (13.6 tonnes).
 - 4. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by qualified testing agency, with concurrence of the Engineer, and replace with compacted backfill or fill, as directed.
- D. When, in the judgment of the qualified testing agency, with concurrence of the Engineer, proofrolling is not an acceptable method to examine subgrade, then the qualified testing agency may probe the excavation using a method standard to the qualified testing agency and approved by the Engineer.
- E. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, dryness or construction activities, as directed by qualified testing agency without additional compensation.

3.10 UNAUTHORIZED EXCAVATION

- A. Fill unauthorized excavation under foundations or wall footings by extending bottom elevation of concrete foundation or footing to excavation bottom, without altering top elevation. Lean concrete fill may be used when approved by Engineer.
 - 1. Fill unauthorized excavations under other construction or utility pipe, as directed by Engineer.

3.11 STORAGE OF SOIL MATERIALS

- A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - 1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.
 - 2. Protect and maintain erosion and sedimentation controls, comply with Division 1 and Division 2 requirements.

3.12 BACKFILL

- A. Place and compact backfill in excavations promptly, but not before completing the following:

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1. Construction below finish grade including, where applicable, drainage backfill, subdrainage, dampproofing, waterproofing, and perimeter insulation.
2. Surveying locations of underground utilities for Record Documents.
3. Testing and inspecting underground utilities.
4. Removing concrete formwork.
5. Removing trash and debris.
6. Removing temporary shoring and bracing, and sheeting.
7. Installing permanent or temporary horizontal bracing on horizontally supported walls. B. Place backfill on subgrades free of mud, frost, snow, or ice.

3.13 UTILITY TRENCH BACKFILL

- A. Place backfill on subgrades free of mud, frost, snow, or ice.
- B. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.
- C. Backfill trenches excavated under footings and within 18 inches (450 mm) of bottom of footings with concrete to elevation of bottom of footings. Concrete is specified in Division 3 Section "Cast-in-Place Concrete."
- D. Place and compact initial backfill of subbase material or satisfactory soil, free of particles larger than 1-inch (25 mm) in any dimension, to a height of 12 inches (300 mm) over the utility pipe or conduit.
 1. Carefully compact initial backfill under pipe haunches and compact evenly up on both sides and along the full length of utility piping or conduit to avoid damage or displacement of piping or conduit. Coordinate backfilling with utilities testing.
- E. Controlled Low-Strength Material:
 1. Where indicated or approved by Engineer, place initial backfill of controlled low-strength material to a height of 12 inches (300 mm) over the utility pipe or conduit.
 2. Where indicated or approved by Engineer, place final backfill of controlled low-strength material to final subgrade elevation.
- F. Backfill voids with satisfactory soil while installing and removing shoring and bracing.
- G. Place and compact final backfill of satisfactory soil to final subgrade elevation.
- H. Install tracer wire and warning tape directly above utilities and piping 12 inches (300 mm) below finished grade, except 6 inches (150 mm) below subgrade under pavements and slabs.
- I. Lean Concrete:
 1. Where indicated or approved by Engineer, place initial backfill of controlled low-strength material to a height of 12 inches (300 mm) over the utility pipe or conduit.
 2. Where indicated or approved by Engineer, place final backfill of controlled low-strength material to final subgrade elevation.

3.14 SOIL FILL

- A. Soil fill shall be utilized to raise existing grades where indicated.
- B. Place soil fill on subgrades free of mud, frost, snow, or ice.
- C. Bench sloped surfaces at structures so fill material will bond with existing material.
- D. At locations other than structures, plow, scarify, bench or break up sloped surfaces steeper than one (1) vertical to four (4) horizontal so fill material will bond with existing material.

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- E. Place and compact fill material in layers to required elevations as specified, shown in the Drawings, or as follows:
1. Under grass and planted areas, use satisfactory soil material.
 2. Under walks and pavements, use engineered fill and/or subbase, as indicated.
 3. Under steps and ramps, use engineered fill and/or subbase, as indicated.
 4. Under structures and building slabs, use engineered fill and/or subbase, as indicated.
 5. Under footings and foundations separate from structure slabs and foundation slabs, use engineered fill, unless indicated otherwise.

3.15 SOIL MOISTURE CONTROL

- A. Where necessary and directed by the qualified testing agency, uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within two (2) percent of optimum moisture content.
1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
 2. Remove and replace, or scarify and air dry otherwise satisfactory soil material that exceeds optimum moisture content by two (2) percent and is too wet to compact to specified dry unit weight.

3.16 COMPACTION OF SOIL BACKFILLS AND FILLS

- A. Place backfill and fill soil materials in layers not more than eight (8) inches (200 mm) in loose depth for material compacted by heavy compaction equipment, and not more than four (4) inches (100 mm) in loose depth for material compacted by hand-operated tampers.
- B. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
- C. Hand-compaction equipment shall be used for compaction of utility trench backfill and within 5 feet of below-grade walls.
- D. Compact soil materials to not less than the following percentages of maximum densities:
1. Under structures, building slabs, and building areas as indicated or directed, all nonaggregate fill, non-aggregate backfill and recompacted soils shall be compacted to at least 98 percent of the Standard Proctor (ASTM D-698) maximum dry density at a water content within two (2) percent of the optimum value.
 2. Under pavements, walks, steps and ramps and retaining wall backfill areas, all nonaggregate fill, non-aggregate backfill and recompacted soils shall be compacted to at least 95 percent of the Standard Proctor (ASTM D-698) maximum dry density at a water content within two (2) percent of the optimum value.
 3. Under berms contiguous to structural or building fill zones, retaining walls, or as indicated, all non-aggregate fill, non-aggregate backfill and recompacted soils shall be compacted to at least 95 percent of the Standard Proctor (ASTM D-698) maximum dry density at a water content within two (2) percent of the optimum value.
 4. Under lawns and other unpaved areas not specified elsewhere, all fill, backfill and recompacted soils shall be compacted to at least 92 percent of the Standard Proctor (ASTM D-698) maximum dry density at a water content within two (2) percent of the optimum value.

3.17 COMPACTION OF AGGREGATE BACKFILL AND AGGREGATE FILL

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- A. Place aggregate backfill and aggregate fill materials in layers not more than 6 inches (150 mm) in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches (100 mm) in loose depth for material compacted by hand-operated tampers.
- B. Place aggregate backfill and aggregate fill materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
- C. All aggregate backfill and aggregate fill shall be AHTD Class 7 ABC or AHTD Class 8 ABC, or Owner Provided Aggregate Fill, as indicated.
- D. Compact aggregate backfill and aggregate fill to not less than the following percentages of maximum densities:
 - 1. Under structures, building slabs, pavements, retaining walls, and as indicated or directed, all aggregate fill and aggregate backfill shall be compacted to at least 98 percent of the Modified Proctor (ASTM D-1557) maximum dry density at a water content within two (2) percent of the optimum value.
 - 2. Under sidewalks, all aggregate backfill and aggregate fill shall be compacted to at least 95 percent of the Modified Proctor (ASTM D-1557) maximum dry density at a water content within two (2) percent of the optimum value.

3.18 CONSOLIDATION OF DRAINAGE BACKFILL

- A. Place drainage backfill materials in layers not more than 6 inches (150 mm) in loose depth for material consolidated by heavy compaction equipment, and not more than 4 inches (100 mm) in loose depth for material consolidated by hand-operated tampers.
- B. Place drainage backfill materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
- C. All drainage backfill shall be consolidated to a relative maximum dry density determined in the field by rolling and subsequent density measurements. Determination of target maximum density shall be by geotechnical engineer. Once target density is defined, all drainage backfill shall be consolidated to the same effort.
- D. Hand-compaction equipment shall be used within 5 feet of below-grade walls.

3.19 GRADING

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
 - 1. Provide a smooth transition between adjacent existing grades and new grades.
 - 2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
- B. Site Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
 - 1. Lawn or Unpaved Areas: Plus or minus 1-inch (25 mm).
 - 2. Walks: Plus or minus 1-inch (25 mm).
 - 3. Pavements: Plus or minus 1/2-inch (13 mm).
- C. Grading inside Building Lines: Finish subgrade to a tolerance of 1/2-inch (13 mm) when tested with a 10-foot (3-m) straightedge.

3.20 SUBBASE COURSE

- A. Place subbase course on subgrades free of mud, frost, snow, or ice.
- B. On prepared subgrade, place subbase course under pavements, walks, structures and slabs and where indicated, as follows:

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1. Where indicated, install separation geotextile on prepared subgrade according to manufacturer's written instructions, overlapping sides and ends.
2. Shape subbase course to required elevations and cross-slope grades.
3. Place subbase course 6 inches (150 mm) or less in compacted thickness in a single layer.
4. Place subbase course that exceeds 6 inches (150 mm) in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches (150 mm) thick or less than 3 inches (75 mm) thick.
5. Compact subbase course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than the compaction requirements as follows:
 - a. Under structures and slabs and where indicated, compact to not less than 98 percent of the Modified Proctor (ASTM D-1557) maximum dry density.
 - b. Under aprons, compact to not less than 95 percent of the Modified Proctor (ASTM D-1557) maximum dry density.
 - c. Under walks (includes steps and ramps) compact to not less than 95 percent of the Modified Proctor (ASTM D-1557) maximum dry density.
- C. Pavement Shoulders: Place shoulders along edges of subbase course to prevent lateral movement. Construct shoulders of satisfactory soil materials and compact simultaneously with each subbase layer to not less than 98 percent of the Modified Proctor maximum dry unit weight according to ASTM D-1557.

3.21 PERMANENT SOIL STABILIZATION MATERIALS

- A. Place materials on finished grades free of mud, frost, snow, or ice.
- B. On prepared finished grades, place materials under topsoil.
- C. Place materials starting at the top of slope working down, or the upstream end of flow areas working downstream.
 1. Key in upper edge of materials into soil a minimum of 6" x 6" continuous. Anchor at intervals as recommended by the manufacturer.
 - a. Anchor with 2" x 2" square, 12" long wooden anchor stakes with nail or hook to catch material.
- D. Place matting first, then wattles, then blocks.
- E. Place materials continuous across flow lines, stagger joints and overlap as recommended by material manufacturer.
- F. Matting
 1. Remove loose rocks, roots and other obstructions. Apply soil amendments and seed mix as required, see Landscape Specifications.
 2. Key in upper edge of material and unroll downstream laying matting loosely over the ground.
 3. Push matting into soils to ensure good continuous matting to soil contact.
 4. Construct matting a minimum of 2ft past top of bank or top of slope.
 5. Anchor matting with minimum 8" long steel stakes, or minimum 12" long wooden stakes at spacing intervals as recommended by manufacturer for slope and application.
 6. Place anchors in a staggered pattern
 7. Overlap edges of adjacent mats a minimum of 12 inches. Anchor overlapping seam with a two rows of anchors spaced 6-inches apart.
 8. Complete matting installation by burying the end of the mat in a key slot; minimum 6" x 6", anchor with 12" long wooden stakes.
- G. Wattle

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1. Construct wattles as continuous barriers at tops and toes of slopes.
2. Construct wattles at each outlet or inlet and at 30ft intervals along concentrated flow areas.
 - a. Wattles in flow areas shall extent up side slopes to a point where flow must overtop wattle to pass it.
3. Construct wattle on top of erosion control matting, as shown.
4. Anchor wattles every 3ft with minimum 24" long wooden wedges with a nail on the top to secure wattle to the ground.

H. Block

1. Lay blocks on top of erosion control matting, as shown.
2. Anchor with minimum 8" long steel stakes or 12" long wooden stakes at spacing intervals as recommended by manufacturer.

3.22 FIELD QUALITY CONTROL

- A. Testing Agency: The Owner shall provide a qualified independent Geotechnical Engineering testing agency to perform field quality-control testing. The qualified testing agency shall be acceptable to the Owner and Engineer. Further qualifications include:
 1. The Geotechnical Engineer shall be licensed in the State of Arkansas.
- B. Test results shall be reported in writing to Owner, Engineer and Contractor within 48 hours of testing.
- C. Prior to beginning of construction and periodically during construction, any proposed fill or backfill material shall have soil classification, Proctors and California Bearing Ratio (CBR) testing completed to verify compliance with Part 2 – Products, of this Specification. Soil shall be classified in accordance with the AASHTO System (AASHTO M 145) and the Unified Soil Classification System (ASTM D 2487). CBR testing shall be in accordance with ASTM D 1883 and the subbase shall have a minimum CBR value of eight (8).
 1. Soil classification, Proctor testing and CBR testing shall be at an interval to match any apparent change in materials or change in source, or as directed by the qualified testing agency or Engineer.
- D. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earthwork only after test results for previously completed work comply with requirements.
- E. Footing Subgrade: At footing subgrades, at least one (1) test of each soil stratum will be performed to verify design bearing capacities. Subsequent verification and approval of other footing subgrades may be based on a visual comparison of subgrade with tested subgrade when approved by either: (1) the Engineer, or (2) the qualified testing agency with concurrence of the Engineer.
- F. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies:
 1. Structures and Building Slab Areas: At subgrade and at each compacted fill and backfill layer, at least one (1) test for every 2000 sq. ft. (186 sq. m) or less of structure area or building slab, but in no case fewer than three (3) tests.
 2. Foundation Wall Backfill: At each compacted backfill layer, at least one (1) test for each 100 feet (30 m) or less of wall length, but no fewer than two (2) tests.
 3. Pavement: At subgrade and at each compacted fill and backfill layer, at least one (1) test for each 500 feet of street or portion thereof.

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4. Other areas: At subgrade and at each compacted fill and backfill layer, at least one (1) test for every 2,000 sq. ft., but in no case fewer than two (2) tests.
5. Trench Backfill: At subgrade and at each compacted fill and backfill layer, at least one (1) test every 200 feet of trench or portion thereof, no fewer than two (2) tests with one (1) additional test at crossings under pavement.
- G. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil to depth required; recompact and retest until specified compaction is obtained.
- H. Testing agency will perform additional testing on street, drive and parking area construction, as follows:
 1. Subgrade:
 - a. One (1) liquid limit and one (1) plasticity index according to ASTM D 4318 for each 500 feet (153 m) of street, or portion thereof.
 - b. One (1) gradation and soil classification according to ASTM D 2487 for each 500 feet (153 m) of street or portion thereof.
 - c. One (1) CBR according to ASTM D 1883 for each 500 feet (153 m) of street or portion thereof.
 2. Subbase Course:
 - a. The depth of the crushed stone base shall be within plus or minus 1/2-inch of the required depth. If the deficient depth is greater than 1/2-inch, the existing material represented by the test(s) will be ripped up, new added and recompact to the proper density. If the average of all depth measurements is less than the required depth, the deficient depth will be added to the required depth of the binder or surface course or concrete pavement. Any depth in excess of plus 1/2-inch will not be used in computing the average depth.

3.23 PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
 1. Scarify or remove and replace soil material to depth as directed by qualified testing agency or Engineer; reshape and recompact.
- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.24 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Disposal: Transport surplus satisfactory soil to designated storage areas on Owner's property. Stockpile or spread soil as directed by Engineer and Owner.
 1. Remove waste material, including unsatisfactory soil, trash, and debris, and legally dispose of it off Owner's property. Disposal of materials shall be in compliance with the requirements of these Specifications and all applicable Local, State, and Federal regulations.
 2. Remove surplus satisfactory soils not needed or desired by Owner or required for the completion of the project and legally dispose of it off Owner's property. Disposal of

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materials shall be in compliance with the requirements of these Specifications and all applicable Local, State, and Federal regulations.

END OF SECTION

Bid 22-54,
Appendix A:
City Bid Documents

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SECTION 31 23 19
DEWATERING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes construction dewatering.

1.3 PERFORMANCE REQUIREMENTS

- A. Dewatering Performance: Design, furnish, install, test, operate, monitor, and maintain dewatering system of sufficient scope, size, and capacity to control ground-water flow into excavations and permit construction to proceed on dry, stable subgrades.
 - 1. Maintain dewatering operations to ensure erosion control, stability of excavations and constructed slopes, that excavation does not flood, and that damage to subgrades and permanent structures is prevented.
 - 2. Prevent surface water from entering excavations by grading, dikes, or other means.
 - 3. Accomplish dewatering without damaging existing buildings adjacent to excavation.
 - 4. Remove dewatering system if no longer needed.

1.4 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with water disposal requirements of authorities having jurisdiction.

1.5 PROJECT CONDITIONS

- A. Interruption of Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Engineer and then only after arranging to provide temporary utility services according to requirements indicated.
- B. Survey adjacent structures and improvements, employing a qualified professional engineer or land surveyor, establishing exact elevations at fixed points to act as benchmarks. Clearly identify benchmarks and record existing elevations.
 - 1. During dewatering, regularly re-survey benchmarks, maintaining an accurate log of surveyed elevations for comparison with original elevations. Promptly notify Engineer if changes in elevations occur or if cracks, sags, or other damage is evident in adjacent construction.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PREPARATION

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- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by dewatering operations.
 - 1. Prevent surface water and subsurface or ground water from entering excavations, from ponding on prepared subgrades, and from flooding site and surrounding area.
 - 2. Protect subgrades and foundation soils from softening and damage by rain or water accumulation.
- B. Install dewatering system to ensure minimum interference with roads, streets, walks, and other adjacent occupied and used facilities.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.

3.2 INSTALLATION

- A. Install dewatering system utilizing wells, well points, or similar methods complete with pump equipment, standby power and pumps, filter material gradation, valves, appurtenances, water disposal, and surface-water controls.
- B. Before excavating below ground-water level, place system into operation to lower water to specified levels. Operate system continuously until drains, sewers, and structures have been constructed and fill materials have been placed, or until dewatering is no longer required.
- C. Provide an adequate system to lower and control ground water to permit excavation, construction of structures, and placement of fill materials on dry subgrades. Install sufficient dewatering equipment to drain water-bearing strata above and below bottom of foundations, drains, sewers, and other excavations.
 - 1. Do not permit open-sump pumping that leads to loss of fines, soil piping, subgrade softening, and slope instability.
- D. Reduce hydrostatic head in water-bearing strata below subgrade elevations of foundations, drains, sewers, and other excavations.
- E. Dispose of water removed by dewatering in a manner that avoids endangering public health, property, and portions of work under construction or completed. Dispose of water in a manner that avoids inconvenience to others. Provide sumps, sedimentation tanks, and other flowcontrol devices as required by authorities having jurisdiction.
 - 1. Comply with "Environmental Specifications."
- F. Provide standby equipment on-site, installed and available for immediate operation, to maintain dewatering on continuous basis if any part of system becomes inadequate or fails. If dewatering requirements are not satisfied due to inadequacy or failure of dewatering system, restore damaged structures and foundation soils at no additional expense to Owner.
 - 1. Remove dewatering system from Project site on completion of dewatering. Plug or fill well holes with sand or cut off and cap wells a minimum of 36 inches (900 mm) below overlying construction.
- G. Damages: Promptly repair damages to adjacent facilities caused by dewatering operations.

END OF SECTION

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SECTION 32 12 16
HOT-MIX ASPHALT PAVING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Hot-mix asphalt paving.
 - 2. Hot-mix asphalt paving overlay.
- B. Related Sections include the following:
 - 1. Division 2 Section "Earthwork" for aggregate subbase and base courses and for aggregate pavement shoulders.

1.3 DEFINITIONS

- A. Hot-Mix Asphalt Paving Terminology: Refer to ASTM D 8 for definitions of terms.
- B. AHTD Standard Specifications: "Standard Specifications for Highway Construction," 2014 Edition, published by the Arkansas State Highway and Transportation Department. C. DOT: Department of Transportation.

1.4 SYSTEM DESCRIPTION

- A. Provide hot-mix asphalt paving according to materials, workmanship, and other applicable requirements of AHTD standard specifications.
 - 1. Standard Specification: Sections 401, 402, 403, 404, 406, 407, 409, and 410, of the AHTD Standard Specifications.
 - 2. Measurement and payment provisions and safety program submittals included in standard specifications do not apply to this Section.

1.5 SUBMITTALS

- A. Product Data: For each type of product indicated. Include technical data and tested physical and performance properties.
- B. Job-Mix Designs: Certification, by authorities having jurisdiction, of approval of each job mix proposed for the Work.
- C. Shop Drawings: Indicate pavement markings, lane separations, and defined parking spaces. Indicate, with international graphics symbol, spaces dedicated to people with disabilities.
- D. Qualification Data: For manufacturer.
- E. Material Test Reports: For each paving material.
- F. Material Certificates: For each paving material, signed by manufacturers.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified manufacturer.
 - 1. Manufacturer shall be a paving-mix manufacturer registered with and approved by the AHTD.

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- B. Testing Agency Qualifications: Qualified according to ASTM D 3666 for testing indicated, as documented according to ASTM E 548.
- C. Regulatory Requirements: Comply with the AHTD Standard Specifications for asphalt paving work.
- D. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Meetings, Schedules, and Reports."

1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Do not apply asphalt materials if subgrade is wet or excessively damp or if the following conditions are not met:
 - 1. Prime and Tack Coats: Minimum surface temperature of 60 deg F (15.5 deg C).
 - 2. Asphalt Base and Binder Courses: Minimum surface temperature of 40 deg F (4 deg C) and rising at time of placement.
 - 3. Asphalt Surface Course: Minimum surface temperature of 40 deg F (4 deg C) at time of placement.

PART 2 - PRODUCTS

2.1 AGGREGATES

- A. General: Use materials and gradations that have performed satisfactorily in previous installations.
- B. Coarse Aggregate, Fine Aggregate, and Mineral Filler: As specified by Section 409 of the AHTD Standard Specifications.

2.2 ASPHALT MATERIALS

The following materials shall meet the Specifications for their respective sections of the AHTD Standard Specifications:

- 1. Asphalt Binder: Section 409.
- 2. Prime Coat: Section 403.
- 3. Tack Coat: Section 403.

2.3 ADMIXTURES

- A. Admixtures shall comply with AHTD specifications.

2.4 MIXES

- A. Hot-Mix Asphalt: Dense, hot-laid, hot-mix asphalt plant mixes as specified by Section 406 for Asphalt Concrete Hot-Mix Binder Course and Section 407 for Asphalt Concrete Hot-Mix Surface Course.
 - 1. Provide mixes with a history of satisfactory performance in geographical area where Project is located.
 - 2. Provide mixes complying with composition, grading, and tolerance requirements in AHTD Standard Specification for the following mix designs:
 - a. Binder Course
 - 1) 25mm SuperPave mix.
 - 2) PG 70-22
 - b. Surface Course
 - 1) 12.5mm SuperPave mix.
 - 2) PG 70-22

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that base course is dry and in suitable condition to support paving and imposed loads.
- B. Proceed with paving only after unsatisfactory conditions have been corrected.

3.2 REPAIRS

- A. Crack and Joint Filling for Overlay: Remove existing joint filler material from cracks or joints to a depth of 1/4 inch (6 mm).
 - 1. Clean cracks and joints in existing hot-mix asphalt pavement.
 - 2. Use hot-applied joint sealant to seal cracks and joints more than 1/4 inch (6 mm) wide. Fill flush with surface of existing pavement and remove excess.

3.3 SURFACE PREPARATION

General: Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces. Ensure that prepared subgrade is ready to receive paving.

- 1. Sweep loose granular particles from surface of unbound-aggregate base course. Do not dislodge or disturb aggregate embedded in compacted surface of base course.
- B. Prime Coat: Apply uniformly over surface of compacted unbound-aggregate base course at a rate of 0.15 to 0.50 gal./sq. yd. (0.7 to 2.3 L/sq. m). Apply enough material to penetrate and seal but not flood surface. Allow prime coat to cure for 72 hours minimum, unless otherwise directed by the Engineer.
 - 1. If prime coat is not entirely absorbed within 24 hours after application, spread sand over surface to blot excess asphalt. Use enough sand to prevent pickup under traffic. Remove loose sand by sweeping before pavement is placed and after volatiles have evaporated.
 - 2. Protect primed substrate from damage until ready to receive paving.
- C. Tack Coat: Apply uniformly to surfaces of existing pavement at a rate of 0.05 to 0.15 gal./sq. yd. (0.2 to 0.7 L/sq. m).
 - 1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
 - 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.

3.4 HOT-MIX ASPHALT PLACING

- A. Hot-mix asphalt shall be placed as specified by Section 410 of the AHTD Standard Specifications.
- B. Machine-place hot-mix asphalt on prepared surface, spread uniformly, and strike off. Place asphalt mix by hand to areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness when compacted.
 - 1. Place hot-mix asphalt binder course in a minimum 3 inch (80 mm) lift and thickness indicated.
 - 2. Place hot-mix asphalt surface course in single lift.
 - 3. Spread mix at minimum temperature of 250 deg F (121 deg C).
 - 4. Begin applying mix along centerline of crown for crowned sections and on high side of one-way slopes, unless otherwise indicated.
 - 5. Regulate paver machine speed to obtain smooth, continuous surface free of pulls and tears in asphalt-paving mat.

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- C. Place paving in consecutive strips not less than 10 feet (3 m) wide unless infill edge strips of a lesser width are required.
 - 1. After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips. Complete a section of asphalt binder course before placing asphalt surface course.
- D. Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot-mix asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.

3.5 JOINTS

Construct joints to ensure a continuous bond between adjoining paving sections. Construct joints free of depressions with same texture and smoothness as other sections of hot-mix asphalt course.

- 1. Clean contact surfaces and apply tack coat to joints.
- 2. Offset transverse joints, in successive courses, a minimum of 24 inches (600 mm).
- 3. Compact joints as soon as hot-mix asphalt will bear roller weight without excessive displacement.

3.6 COMPACTION

- A. General: Hot-mix asphalt shall be compacted as specified by Section 410 of the AHTD Standard Specifications. Begin compaction as soon as placed hot-mix paving will bear roller weight without excessive displacement. Compact hot-mix paving with hot, hand tampers or vibratory-plate compactors in areas inaccessible to rollers.
- B. Breakdown Rolling: Complete breakdown or initial rolling immediately after rolling joints and outside edge. Examine surface immediately after breakdown rolling for indicated crown, grade, and smoothness. Correct laydown and rolling operations to comply with requirements.
- C. Intermediate Rolling: Begin intermediate rolling immediately after breakdown rolling while hot-mix asphalt is still hot enough to achieve specified density. Continue rolling until hot-mix asphalt course has been uniformly compacted to the following density:
 - 1. Average Density: 92 percent of reference maximum theoretical density according to AASHTO T 209, but not less than 90 percent nor greater than 96 percent.
- D. Finish Rolling: Finish roll paved surfaces to remove roller marks while hot-mix asphalt is still warm.
- E. Edge Shaping: While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while asphalt is still hot; compact thoroughly.
- F. Repairs: Remove paved areas that are defective or contaminated with foreign materials and replace with fresh, hot-mix asphalt. Compact by rolling to specified density and surface smoothness.
- G. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.
- H. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

3.7 INSTALLATION TOLERANCES

- A. Thickness: Compact each course to produce the thickness indicated within the following tolerances:
 - 1. Binder Course: Plus or minus 1/2 inch (13 mm).
 - 2. Surface Course: Plus or minus 1/4 inch (6 mm).

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- B. Surface Smoothness: Compact each course to produce a surface smoothness within the following tolerances as determined by using a 10-foot (3-m) straightedge applied transversely or longitudinally to paved areas:
 - 1. Binder Course: 3/16 inch (5 mm).
 - 2. Surface Course: 1/8 inch (3 mm).

3.8 FIELD QUALITY CONTROL

- A. Testing Agency: The Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections and to prepare test reports.
 - 1. Testing agency will conduct and interpret tests and state in each report whether tested Work complies with or deviates from specified requirements. Test results shall be reported in writing to Engineer, Owner, asphalt manufacturer, and Contractor within 48 hours of testing.
- B. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
- C. Thickness: In-place compacted thickness of hot-mix asphalt courses will be determined according to ASTM D 3549.
 - 1. One core sample will be taken for every 500 feet (153 m) or less of completed binder course, with no fewer than 3 cores taken.
 - 2. One core sample will be taken for every 500 feet (153 m) or less of completed surface course, with no fewer than 3 cores taken.
- D. Surface Smoothness: Finished surface of each hot-mix asphalt course will be tested for compliance with smoothness tolerances.
- E. In-Place Density: Testing agency will take samples of uncompacted paving mixtures and compacted pavement according to AASHTO T 168.
 - 1. Reference maximum theoretical density will be determined by averaging results from four samples of hot-mix asphalt-paving mixture delivered daily to site, prepared according to AASHTO T 209 and compacted according to job-mix specifications.
 - 2. In-place density of compacted pavement will be determined by testing core samples according to AASHTO T 166 or AHTD 461.
 - a. One core sample will be taken for every 500 feet (153 m) or less of completed binder course, with no fewer than 3 cores taken.
 - b. One core sample will be taken for every 500 feet (153 m) or less of completed surface course, with no fewer than 3 cores taken.
- F. Provisions for Acceptance of Non-Specification Materials
 - 1. Depth of ACHM Binder: The depth of the binder course shall be within plus or minus 1/2 inch (13 mm) of the required depth. If the average of all depth measurements is less than the required depth, the deficient depth will be added to the required depth of the surface course at no additional cost to the Owner. Any depth in excess of plus 1/2 inch (13 mm) will not be used in computing the average depth.
 - 2. Depth of ACHM Surface: The depth of the surface course shall be within plus or minus 1/4 inch (6 mm) of the required depth plus any additional depth(s) required due to deficient depths in the base and binder courses. The average of all depth measurements shall not be less than the required depth, and any depth in excess of plus 1/2 inch (13mm) will not be used in computing the average depth. If the average depth is less than the required depth, it will be corrected by overlaying with additional ACHM surface, or as directed by the Engineer at no additional cost to the Owner.
 - 3. Minimum Asphalt Density: Minimum asphalt density shall be 92 percent of the maximum theoretical density. No density of less than 90 percent shall be acceptable. The asphalt where

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densities less than 92 percent and more than 90 percent shall be left in place and a penalty of 2 percent of the in-place construction cost of the deficient asphalt shall be paid to the Owner for each 0.10 percent deviation from the required density up to a maximum penalty of 40 percent. Where densities are less than 90 percent, the asphalt paving shall be removed and replaced. The asphalt density used for the purpose of computing the penalty shall be the average density over the entire street. No densities less than 90 percent shall be used in the average. All areas of less than 90 percent shall be removed and replaced using the AHTD criteria for determining the area of replacement.

3.9 DISPOSAL

- A. Except for material indicated to be recycled, remove excavated materials from Project site and legally dispose of them in an EPA-approved landfill.
 - 1. Do not allow excavated materials to accumulate on-site.

END OF SECTION

Bid 22-54,
Appendix A:
City Bid Documents

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SECTION 32 13 13
CEMENT CONCRETE PAVEMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes exterior cement concrete pavement and concrete walkways as indicated on the Drawings.

1.3 DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of blended hydraulic cement, fly ash and other pozzolans, and ground granulated blast-furnace slag.
- B. AHTD Standard Specification: "Standard Specifications for Highway Construction," Edition of 2014, published by the Arkansas State Highway and Transportation Department.

1.4 SUBMITTALS

- A. Product Data: For each type of manufactured material and product indicated.
- B. Design Mixtures: For each concrete pavement mixture. Include alternate mixture designs when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.
- C. Qualification Data: For manufacturer and testing agency.
- D. Material Certificates: Signed by manufacturers certifying that each of the following materials complies with requirements:
 - 1. Cementitious materials.
 - 2. Steel reinforcement and reinforcement accessories.
 - 3. Admixtures.
 - 4. Curing compounds.
 - 5. Joint fillers.
- E. Field quality-control test reports.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer of ready-mixed concrete products who complies with ASTM C 94/C 94M requirements for production facilities and equipment.
- B. Testing Agency Qualifications: An independent agency qualified according to ASTM C 1077 and ASTM E 329 for testing indicated, as documented according to ASTM E 548. The testing agency shall also be certified by the AHTD.
 - 1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-01 or an equivalent certification program. They should also be certified by the AHTD.
- C. ACI Publications: Comply with ACI 301, "Specification for Structural Concrete," unless modified by requirements in the Contract Documents.

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1.6 PROJECT CONDITIONS

- A. Maintain access for vehicular and pedestrian traffic as required for normal plant operation and other construction activities.

PART 2 - PRODUCTS

2.1 CAST-IN-PLACE CONCRETE

- A. Conform to the requirements of Section 033000 "Cast-In-Place Concrete" of these Specifications.

2.2 RELATED MATERIALS

- A. Expansion- and Isolation-Joint-Filler Strips: AASHTO M 153, sponge rubber.
- B. Contraction-Joint-Filler: Sonneborn, Sonolastic SL 1, or equal.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine exposed subgrades and subbase surfaces for compliance with requirements for dimensional, grading, and elevation tolerances.
- B. Proof-roll prepared subbase surface below concrete aprons and pavements with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding.
 - 1. Completely proof-roll subbase. Limit vehicle speed to 3 mph (5 km/h).
 - 2. Proof-roll with a loaded 10-wheel tandem-axle dump truck weighing not less than 15 tons (13.6 tonnes).
 - 3. Subbase with soft spots and areas of pumping or rutting require correction according to requirements in Section 031200 "Earthwork."
- C. Proceed with concrete driveway operations only after nonconforming conditions have been corrected and subgrade is ready to receive pavement.

3.2 PREPARATION

- A. Remove loose material from compacted subbase surface immediately before placing concrete.

3.3 EDGE FORMS AND SCREED CONSTRUCTION

- A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides for pavement to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.
- B. Clean forms after each use and coat with form-release agent to ensure separation from concrete without damage.

3.4 STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, or other bond-reducing materials.
- C. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement. Maintain minimum cover to reinforcement.

3.5 JOINTS

- A. General: Form construction, expansion, isolation, and contraction joints and tool edgings true to line with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline, unless otherwise indicated.
 - 1. Contractor shall submit jointing plan to be approved by Engineer prior to pavement construction.
 - 2. When joining existing pavement, place transverse joints to align with previously placed joints, unless otherwise indicated.
 - 3. All joints shall be sealed.
- B. Construction Joints: Set construction joints at side and end terminations of pavement and at locations where pavement operations are stopped for more than one-half hour unless pavement terminates at isolation joints.
 - 1. Continue steel reinforcement across construction joints, unless otherwise indicated. Do not continue reinforcement through sides of pavement strips, unless otherwise indicated.
 - 2. Provide tie bars at sides of pavement strips where indicated.
 - 3. Doweled Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or asphalt-coat one-half of dowel length to prevent concrete bonding to one side of joint.
- C. Isolation and Expansion Joints: Form joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, walks, other fixed objects, and where indicated.
 - 1. Locate expansion joints at intervals as indicated in approved submittal materials.
 - 2. Extend joint fillers full width and depth of joint.
 - 3. Terminate joint filler not less than 1/2 inch (13 mm) or more than 1 inch (25 mm) below finished surface if joint sealant is indicated.
 - 4. Furnish joint fillers in one-piece lengths. Where more than one length is required, lace or clip joint-filler sections together.
 - 5. Protect top edge of joint filler during concrete placement with metal, plastic, or other temporary preformed cap. Remove protective cap after concrete has been placed on both sides of joint.
- D. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated in approved submittal materials. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness, as follows to match jointing of existing adjacent concrete pavement:
 - 1. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- (3-mm-) wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before developing random contraction cracks. Saw-cut joints within 12 hours of placing concrete.
 - 2. Doweled Contraction Joints: Install dowel bars and support assemblies at joints where indicated in approved submittal materials. Lubricate or asphalt coat one-half of dowel length to prevent concrete bonding to one side of joint.
- E. Edging: Tool edges of pavement, gutters, curbs, and joints in concrete after initial floating with an edging tool to a 3/8-inch (10-mm) radius. Repeat tooling of edges after applying surface finishes. Eliminate tool marks on concrete surfaces.

3.6 PAVEMENT TOLERANCES

- A. Comply with tolerances of ACI 117 and as follows:
 - 1. Elevation: 1/4 inch (6 mm).
 - 2. Thickness: Plus 3/8 inch (10 mm), minus 1/4 inch (6 mm).

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3. Surface: Gap below 10-foot- (3-m-) long, unlevelled straightedge not to exceed 1/4 inch (6 mm).
4. Lateral Alignment and Spacing of Tie Bars and Dowels: 1 inch (25 mm).
5. Vertical Alignment of Tie Bars and Dowels: 1/4 inch (6 mm).
6. Alignment of Tie-Bar End Relative to Line Perpendicular to Pavement Edge: 1/2 inch (13 mm).
7. Alignment of Dowel-Bar End Relative to Line Perpendicular to Pavement Edge: Length of dowel 1/4 inch per 12 inches (6 mm per 300 mm).
8. Joint Spacing: 3 inches (75 mm).
9. Contraction Joint Depth: Plus 1/4 inch (6 mm), no minus.
10. Joint Width: Plus 1/8 inch (3 mm), no minus.

3.7 REPAIRS AND PROTECTION

- A. Drill test cores, where directed by Engineer, when necessary to determine thickness or the magnitude of cracks or defective areas. Fill drilled core holes in satisfactory pavement areas with Portland cement concrete bonded to pavement with epoxy adhesive.
- B. Protect concrete from damage. Exclude traffic from pavement for at least 14 days after placement or as directed by the Engineer. When construction traffic is permitted, maintain pavement as clean as possible by removing surface stains and spillage of materials as they occur.
- C. Maintain concrete pavement free of stains, discoloration, dirt, and other foreign material. Sweep concrete pavement not more than two days before date scheduled for Substantial Completion inspections.

3.8 FIELD QUALITY CONTROL

- A. Field quality control requirements for concrete pavements shall be as noted in Specification Section 033000, unless otherwise approved in writing by the Engineer.

END OF SECTION

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SECTION 33 05 00
COMMON WORK RESULTS FOR UTILITIES

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Piping joining materials.
 - 2. Transition fittings.
 - 3. Dielectric fittings.
 - 4. Sleeves.
 - 5. Identification devices.
 - 6. Grout.
 - 7. Flowable fill.
 - 8. Piped utility demolition.
 - 9. Piping system common requirements.
 - 10. Equipment installation common requirements.
 - 11. Painting.
 - 12. Concrete bases.
 - 13. Metal supports and anchorages.

1.3 DEFINITIONS

- A. Exposed Installations: Exposed to view outdoors or subject to outdoor ambient temperatures and weather conditions.
- B. Concealed Installations: Concealed from view and protected from weather conditions and physical contact by building occupants but subject to outdoor ambient temperatures. Examples include installations within unheated shelters.
- C. ABS: Acrylonitrile-butadiene-styrene plastic.
- D. CPVC: Chlorinated polyvinyl chloride plastic.
- E. PE: Polyethylene plastic.
- F. PVC: Polyvinyl chloride plastic.

1.4 ACTION SUBMITTALS

- A. Product Data: For the following:
 - 1. Dielectric fittings.
 - 2. Identification devices.

1.5 INFORMATIONAL SUBMITTALS

- A. Welding certificates.

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1.6 QUALITY ASSURANCE

- A. Steel Support Welding: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."
- B. Steel Piping Welding: Qualify processes and operators according to ASME Boiler and Pressure Vessel Code: Section IX, "Welding and Brazing Qualifications."
 - 1. Comply with provisions in ASME B31 Series, "Code for Pressure Piping."
 - 2. Certify that each welder has passed AWS qualification tests for welding processes involved and that certification is current.
- C. Comply with ASME A13.1 for lettering size, length of color field, colors, and viewing angles of identification devices.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver pipes and tubes with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe end damage and to prevent entrance of dirt, debris, and moisture.
- B. Store plastic pipes protected from direct sunlight. Support to prevent sagging and bending.

1.8 COORDINATION

- A. Coordinate installation of required supporting devices and set sleeves in poured-in-place concrete and other structural components as they are constructed.
- B. Coordinate installation of identifying devices after completing covering and painting if devices are applied to surfaces.
- C. Coordinate size and location of concrete bases. Formwork, reinforcement, and concrete requirements are specified in Section 033000 "Cast-in-Place Concrete".

PART 2 - PRODUCTS

2.1 PIPING JOINING MATERIALS

- A. Pipe-Flange Gasket Materials: Suitable for chemical and thermal conditions of piping system contents.
 - 1. ASME B16.21, nonmetallic, flat, asbestos free, 1/8-inch (3.2-mm) maximum thickness, unless otherwise indicated.
 - a. Full-Face Type: For flat-face, Class 125, cast-iron and cast-bronze flanges.
 - b. Narrow-Face Type: For raised-face, Class 250, cast-iron and steel flanges.
 - 2. AWWA C110, rubber, flat face, 1/8 inch (3.2 mm) thick, unless otherwise indicated; and full-face or ring type, unless otherwise indicated.
- B. Flange Bolts and Nuts: ASME B18.2.1, carbon steel, unless otherwise indicated.
- C. Plastic, Pipe-Flange Gasket, Bolts, and Nuts: Type and material recommended by piping system manufacturer, unless otherwise indicated.
- D. Solder Filler Metals: ASTM B 32, lead-free alloys. Include water-flushable flux according to ASTM B 813.
- E. Brazing Filler Metals: AWS A5.8, BCuP Series, copper-phosphorus alloys for general-duty brazing, unless otherwise indicated; and AWS A5.8, BAg1, silver alloy for refrigerant piping, unless otherwise indicated.

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- F. Welding Filler Metals: Comply with AWS D10.12/D10.12M for welding materials appropriate for wall thickness and chemical analysis of steel pipe being welded. G. Solvent Cements for Joining Plastic Piping:
 - 1. ABS Piping: ASTM D 2235.
 - 2. CPVC Piping: ASTM F 493.
 - 3. PVC Piping: ASTM D 2564. Include primer according to ASTM F 656.
 - 4. PVC to ABS Piping Transition: ASTM D 3138.
- H. Fiberglass Pipe Adhesive: As furnished or recommended by pipe manufacturer.

2.2 TRANSITION FITTINGS

- A. Transition Fittings, General: Same size as, and with pressure rating at least equal to and with ends compatible with, piping to be joined.
- B. Transition Couplings NPS 1-1/2 (DN 40) and Smaller:
 - 1. Underground Piping: Manufactured piping coupling or specified piping system fitting.
 - 2. Aboveground Piping: Specified piping system fitting.
- C. AWWA Transition Couplings NPS 2 (DN 50) and Larger:
 - 1. Description: AWWA C219, metal sleeve-type coupling for underground pressure piping.
- D. Plastic-to-Metal Transition Fittings:
 - 1. Description: CPVC and PVC one-piece fitting with manufacturer's Schedule 80 equivalent dimensions; one end with threaded brass insert, and one solvent-cement-joint or threaded end.
- E. Plastic-to-Metal Transition Unions:
 - 1. Description: MSS SP-107, CPVC and PVC four-part union. Include brass or stainless-steel threaded end, solvent-cement-joint or threaded plastic end, rubber O-ring, and union nut.
- F. Flexible Transition Couplings for Underground Nonpressure Drainage Piping:
 - 1. Description: ASTM C 1173 with elastomeric sleeve, ends same size as piping to be joined, and corrosion-resistant metal band on each end.

2.3 DIELECTRIC FITTINGS

- A. Dielectric Fittings, General: Assembly of copper alloy and ferrous materials or ferrous material body with separating nonconductive insulating material suitable for system fluid, pressure, and temperature.
- B. Dielectric Unions:
 - 1. Description: Factory fabricated, union, NPS 2 (DN 50) and smaller.
 - a. Pressure Rating: 150 at 180° F (82° C).
 - b. End Connections: Solder-joint copper alloy and threaded ferrous; threaded ferrous.
- C. Dielectric Flanges:
 - 1. Description: Factory-fabricated, bolted, companion-flange assembly, NPS 2-1/2 to NPS 4 (DN 65 to DN 100) and larger.
 - a. Pressure Rating: 300.
 - b. End Connections: Solder-joint copper alloy and threaded ferrous; threaded solderjoint copper alloy and threaded ferrous.
- D. Dielectric Couplings:

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1. Description: Galvanized-steel coupling with inert and noncorrosive, thermoplastic lining, NPS 3 (DN 80) and smaller.
 - a. Pressure Rating: 300 psig (2070 kPa) at 225° F (107° C).
 - b. End Connections: Threaded.
- E. Dielectric Nipples:
 1. Description: Electroplated steel nipple with inert and noncorrosive, thermoplastic lining.
 - a. Pressure Rating: 300 psig (2070 kPa) at 225° F (107° C).
 - b. End Connections: Threaded or grooved.

2.4 SLEEVES

- A. Mechanical sleeve seals for pipe penetrations are specified in Section 220517 "Sleeves and Sleeve Seals for Plumbing Piping."
- B. Galvanized-Steel Sheet Sleeves: 0.0239-inch (0.6-mm) minimum thickness; round tube closed with welded longitudinal joint.
- C. Steel Pipe Sleeves: ASTM A 53/A 53M, Type E, Grade B, Schedule 40, galvanized, plain ends.
- D. Cast-Iron Sleeves: Cast or fabricated "wall pipe" equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop, unless otherwise indicated.
- E. Molded PVC Sleeves: Permanent, with nailing flange for attaching to wooden forms.
- F. PVC Pipe Sleeves: ASTM D 1785, Schedule 40.
- G. Molded PE Sleeves: Reusable, PE, tapered-cup shaped, and smooth outer surface with nailing flange for attaching to wooden forms.

2.5 IDENTIFICATION DEVICES

- A. General: Products specified are for applications referenced in other utilities Sections. If more than single type is specified for listed applications, selection is Installer's option.
- B. Equipment Nameplates: Metal permanently fastened to equipment with data engraved or stamped.
 1. Data: Manufacturer, product name, model number, serial number, capacity, operating and power characteristics, labels of tested compliances, and essential data.
 2. Location: Accessible and visible.
- C. Stencils: Standard stencils prepared with letter sizes complying with recommendations in ASME A13.1. Minimum letter height is 1-1/4 inches (30 mm) for ducts, and 3/4 inch (20 mm) for access door signs and similar operational instructions.
 1. Material: Brass.
 2. Stencil Paint: Exterior, oil-based, alkyd-gloss black enamel, unless otherwise indicated. Paint may be in pressurized spray-can form.
 3. Identification Paint: Exterior, oil-based, alkyd enamel in colors according to ASME A13.1, unless otherwise indicated.
- D. Snap-on Plastic Pipe Markers: Manufacturer's standard preprinted, semirigid, snap-on type. Include color-coding according to ASME A13.1, unless otherwise indicated.
- E. Pressure-Sensitive Pipe Markers: Manufacturer's standard preprinted, color-coded, pressuresensitive-vinyl type with permanent adhesive.
- F. Pipes with OD, Including Insulation, Less Than 6 Inches (150 mm): Full-band pipe markers, extending 360 degrees around pipe at each location.
- G. Pipes with OD, Including Insulation, 6 Inches (150 mm) and Larger: Either full-band or striptype pipe markers, at least three times letter height and of length required for label. H. Lettering: Manufacturer's standard preprinted captions as selected by Architect.

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- I. Lettering: Use piping system terms indicated and abbreviate only as necessary for each application length.
 - 1. Arrows: Either integrally with piping system service lettering to accommodate both directions of flow, or as separate unit on each pipe marker to indicate direction of flow.
- J. Plastic Tape: Manufacturer's standard color-coded, pressure-sensitive, self-adhesive vinyl tape, at least 3 mils (0.08 mm) thick.
 - 1. Width: 1-1/2 inches (40 mm) on pipes with OD, including insulation, less than 6 inches (150 mm); 2-1/2 inches (65 mm) for larger pipes.
 - 2. Color: Comply with ASME A13.1, unless otherwise indicated.
- K. Valve Tags: Stamped or engraved with 1/4-inch (6.4-mm) letters for piping system abbreviation and 1/2-inch (13-mm) sequenced numbers. Include 5/32-inch (4-mm) hole for fastener.
 - 1. Material: 0.032-inch- (0.8-mm-) thick, brass.
 - 2. Material: 0.0375-inch- (1-mm-) thick stainless steel.
 - 3. Material: 3/32-inch- (2.4-mm-) thick plastic laminate with 2 black surfaces and a white inner layer.
 - 4. Material: Valve manufacturer's standard solid plastic.
 - 5. Size: 1-1/2 inches (40 mm) in diameter, unless otherwise indicated.
 - 6. Shape: As indicated for each piping system.
- L. Valve Tag Fasteners: Brass, wire-link or beaded chain; or brass S-hooks.
- M. Engraved Plastic-Laminate Signs: ASTM D 709, Type I, cellulose, paper-base, phenolic-resin laminate engraving stock; Grade ES-2, black surface, black phenolic core, with white melamine subcore, unless otherwise indicated. Fabricate in sizes required for message. Provide holes for mechanical fastening.
 - 1. Engraving: Engraver's standard letter style, of sizes and with terms to match equipment identification.
 - 2. Thickness: 1/8 inch (3 mm), unless otherwise indicated.
 - 3. Thickness: 1/16 inch (1.6 mm), for units up to 20 sq. in. (130 sq. cm) or 8 inches (200 mm) in length, and 1/8 inch (3 mm) for larger units.
 - 4. Fasteners: Self-tapping, stainless-steel screws or contact-type permanent adhesive.
- N. Plastic Equipment Markers: Manufacturer's standard laminated plastic, in the following color codes:
 - 1. Green: Cooling equipment and components.
 - 2. Yellow: Heating equipment and components.
 - 3. Brown: Energy reclamation equipment and components.
 - 4. Blue: Equipment and components that do not meet criteria above.
 - 5. Hazardous Equipment: Use colors and designs recommended by ASME A13.1.
 - 6. Terminology: Match schedules as closely as possible. Include the following:
 - a. Name and plan number.
 - b. Equipment service.
 - c. Design capacity.
 - d. Other design parameters such as pressure drop, entering and leaving conditions, and speed.
 - 7. Size: 2-1/2 by 4 inches (65 by 100 mm) for control devices, dampers, and valves; 4-1/2 by 6 inches (115 by 150 mm) for equipment.
- O. Plasticized Tags: Preprinted or partially preprinted, accident-prevention tags, of plasticized card stock with mat finish suitable for writing.
 - 1. Size: 3-1/4 by 5-5/8 inches (83 by 143 mm).

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2. Fasteners: Brass grommets and wire.
 3. Nomenclature: Large-size primary caption such as DANGER, CAUTION, or DO NOT OPERATE.
- P. Lettering and Graphics: Coordinate names, abbreviations, and other designations used in piped utility identification with corresponding designations indicated. Use numbers, letters, and terms indicated for proper identification, operation, and maintenance of piped utility systems and equipment.
1. Multiple Systems: Identify individual system number and service if multiple systems of same name are indicated.

2.6 GROUT

- A. Description: ASTM C 1107, Grade B, nonshrink and nonmetallic, dry hydraulic-cement grout.
1. Characteristics: Post hardening, volume adjusting, nonstaining, noncorrosive, nongaseous, and recommended for interior and exterior applications.
 2. Design Mix: 5000-psi (34.5-MPa), 28-day compressive strength.
 3. Packaging: Premixed and factory packaged.

2.7 FLOWABLE FILL

- A. Description: Low-strength-concrete, flowable-slurry mix.
1. Cement: ASTM C 150, Type I, portland.
 2. Density: 115- to 145-lb/cu. ft. (1840- to 2325-kg/cu. m).
 3. Aggregates: ASTM C 33, natural sand, fine and crushed gravel or stone, coarse.
 4. Aggregates: ASTM C 33, natural sand, fine.
 5. Admixture: ASTM C 618, fly-ash mineral.
 6. Water: Comply with ASTM C 94/C 94M.
 7. Strength: 100 to 200 psig (690 to 1380 kPa) at 28 days.

PART 3 - EXECUTION

3.1 PIPED UTILITY DEMOLITION

- A. Refer to Section 311000 "Site Clearing and Demolition" for general demolition requirements and procedures.
- B. Disconnect, demolish, and remove piped utility systems, equipment, and components indicated to be removed.
1. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
 2. Piping to Be Abandoned in Place: Drain piping. Fill abandoned piping with flowable fill, and cap or plug piping with same or compatible piping material.
 3. Equipment to Be Removed: Disconnect and cap services and remove equipment.
 4. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make operational.
 5. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.
- C. If pipe, insulation, or equipment to remain is damaged in appearance or is unserviceable, remove damaged or unserviceable portions and replace with new products of equal capacity and quality.

3.2 DIELECTRIC FITTING APPLICATIONS

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- A. Dry Piping Systems: Connect piping of dissimilar metals with the following:
 - 1. NPS 2 (DN 50) and Smaller: Dielectric unions.
 - 2. NPS 2-1/2 to NPS 12 (DN 65 to DN 300): Dielectric flanges.
- B. Wet Piping Systems: Connect piping of dissimilar metals with the following:
 - 1. NPS 2 (DN 50) and Smaller: Dielectric couplings.
 - 2. NPS 2-1/2 to NPS 4 (DN 65 to DN 100): Dielectric nipples.
 - 3. NPS 2-1/2 to NPS 8 (DN 65 to DN 200): Dielectric nipples.
 - 4. NPS 10 and NPS 12 (DN 250 and DN 300): Dielectric flange kits.

3.3 PIPING INSTALLATION

- A. Install piping according to the following requirements and utilities Sections specifying piping systems.
- B. Drawing plans, schematics, and diagrams indicate general location and arrangement of piping systems. Indicated locations and arrangements were used to size pipe and calculate friction loss, expansion, pump sizing, and other design considerations. Install piping as indicated unless deviations to layout are approved on the Coordination Drawings.
- C. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.
- D. Install piping to permit valve servicing.
- E. Install piping at indicated slopes.
- F. Install piping free of sags and bends.
- G. Install fittings for changes in direction and branch connections.
- H. Select system components with pressure rating equal to or greater than system operating pressure.
- I. Sleeves are not required for core-drilled holes.
- J. Permanent sleeves are not required for holes formed by removable PE sleeves.
- K. Install sleeves for pipes passing through concrete and masonry walls and concrete floor and roof slabs.
 - 1. Cut sleeves to length for mounting flush with both surfaces.
 - a. Exception: Extend sleeves installed in floors of equipment areas or other wet areas 2 inches (50 mm) above finished floor level.
 - 2. Install sleeves in new walls and slabs as new walls and slabs are constructed.
 - a. PVC Pipe Sleeves: For pipes smaller than NPS 6 (DN 150).
 - b. Steel Sheet Sleeves: For pipes NPS 6 (DN 150) and larger, penetrating gypsumboard partitions.
- L. Verify final equipment locations for roughing-in.
- M. Refer to equipment specifications in other Sections for roughing-in requirements.

3.4 PIPING JOINT CONSTRUCTION

- A. Join pipe and fittings according to the following requirements and utilities Sections specifying piping systems.
- B. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.
- C. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.
- D. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:

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1. Apply appropriate tape or thread compound to external pipe threads unless dry seal threading is specified.
2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds.
- E. Welded Joints: Construct joints according to AWS D10.12/D10.12M, using qualified processes and welding operators according to Part 1 "Quality Assurance" Article.
- F. Flanged Joints: Select appropriate gasket material, size, type, and thickness for service application. Install gasket concentrically positioned. Use suitable lubricants on bolt threads.
- G. Grooved Joints: Assemble joints with grooved-end pipe coupling with coupling housing, gasket, lubricant, and bolts according to coupling and fitting manufacturer's written instructions.
- H. Soldered Joints: Apply ASTM B 813 water-flushable flux, unless otherwise indicated, to tube end. Construct joints according to ASTM B 828 or CDA's "Copper Tube Handbook," using leadfree solder alloy (0.20 percent maximum lead content) complying with ASTM B 32.
- I. Brazed Joints: Construct joints according to AWS's "Brazing Handbook," "Pipe and Tube" Chapter, using copper-phosphorus brazing filler metal complying with AWS A5.8.
- J. Pressure-Sealed Joints: Assemble joints for plain-end copper tube and mechanical pressure seal fitting with proprietary crimping tool to according to fitting manufacturer's written instructions.
- K. Plastic Piping Solvent-Cemented Joints: Clean and dry joining surfaces. Join pipe and fittings according to the following:
 1. Comply with ASTM F 402 for safe-handling practice of cleaners, primers, and solvent cements.
 2. ABS Piping: Join according to ASTM D 2235 and ASTM D 2661 appendixes.
 3. CPVC Piping: Join according to ASTM D 2846/D 2846M Appendix.
 4. PVC Pressure Piping: Join schedule number ASTM D 1785, PVC pipe and PVC socket fittings according to ASTM D 2672. Join other-than-schedule-number PVC pipe and socket fittings according to ASTM D 2855.
 5. PVC Nonpressure Piping: Join according to ASTM D 2855.
 6. PVC to ABS Nonpressure Transition Fittings: Join according to ASTM D 3138 Appendix. L. Plastic Pressure Piping Gasketed Joints: Join according to ASTM D 3139.
- M. Plastic Nonpressure Piping Gasketed Joints: Join according to ASTM D 3212.
- N. Plastic Piping Heat-Fusion Joints: Clean and dry joining surfaces by wiping with clean cloth or paper towels. Join according to ASTM D 2657.
 1. Plain-End PE Pipe and Fittings: Use butt fusion.
 2. Plain-End PE Pipe and Socket Fittings: Use socket fusion.
- O. Bonded Joints: Prepare pipe ends and fittings, apply adhesive, and join according to pipe manufacturer's written instructions.

3.5 PIPING CONNECTIONS

- A. Make connections according to the following, unless otherwise indicated:
 1. Install unions, in piping NPS 2 (DN 50) and smaller, adjacent to each valve and at final connection to each piece of equipment.
 2. Install flanges, in piping NPS 2-1/2 (DN 65) and larger, adjacent to flanged valves and at final connection to each piece of equipment.
 3. Install dielectric fittings at connections of dissimilar metal pipes.

3.6 EQUIPMENT INSTALLATION

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- A. Install equipment level and plumb, unless otherwise indicated.
- B. Install equipment to facilitate service, maintenance, and repair or replacement of components. Connect equipment for ease of disconnecting, with minimum interference with other installations. Extend grease fittings to an accessible location.
- C. Install equipment to allow right of way to piping systems installed at required slope.

3.7 PAINTING

- A. Painting of piped utility systems, equipment, and components is specified in Section 099113 "Exterior Painting," Section 099123 "Interior Painting," and Section 099600 "High-Performance Coatings."
- B. Damage and Touchup: Repair marred and damaged factory-painted finishes with materials and procedures to match original factory finish.

3.8 IDENTIFICATION

- A. Piping Systems: Install pipe markers on each system. Include arrows showing normal direction of flow.
 - 1. Stenciled Markers: According to ASME A13.1.
 - 2. Plastic markers, with application systems. Install on insulation segment if required for hot noninsulated piping.
 - 3. Locate pipe markers on exposed piping according to the following:
 - a. Near each valve and control device.
 - b. Near each branch, excluding short takeoffs for equipment and terminal units. Mark each pipe at branch if flow pattern is not obvious.
 - c. Near locations where pipes pass through walls or floors or enter inaccessible enclosures.
 - d. At manholes and similar access points that permit view of concealed piping.
 - e. Near major equipment items and other points of origination and termination.
- B. Equipment: Install engraved plastic-laminate sign or equipment marker on or near each major item of equipment.
 - 1. Lettering Size: Minimum 1/4 inch (6.4 mm) high for name of unit if viewing distance is less than 24 inches (610 mm), 1/2 inch (13 mm) high for distances up to 72 inches (1800 mm), and proportionately larger lettering for greater distances. Provide secondary lettering two-thirds to three-fourths of size of principal lettering.
 - 2. Text of Signs: Provide name of identified unit. Include text to distinguish among multiple units, inform user of operational requirements, indicate safety and emergency precautions, and warn of hazards and improper operations.
- C. Adjusting: Relocate identifying devices that become visually blocked by work of this or other Divisions.

3.9 CONCRETE BASES

- A. Concrete Bases: Anchor equipment to concrete base according to equipment manufacturer's written instructions and according to seismic codes at Project.
 - 1. Construct concrete bases of dimensions indicated, but not less than 4 inches (100 mm) larger in both directions than supported unit.
 - 2. Install dowel rods to connect concrete base to concrete floor. Unless otherwise indicated, install dowel rods on 18-inch (450-mm) centers around the full perimeter of base.

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3. Install epoxy-coated anchor bolts for supported equipment that extend through concrete base, and anchor into structural concrete floor.
4. Place and secure anchorage devices. Use supported equipment manufacturer's setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
5. Install anchor bolts to elevations required for proper attachment to supported equipment.
6. Install anchor bolts according to anchor-bolt manufacturer's written instructions.
7. Use 3000-psi (20.7-MPa), 28-day compressive-strength concrete and reinforcement as specified in Section 033000 "Cast-in-Place Concrete".

3.10 ERECTION OF METAL SUPPORTS AND ANCHORAGES

- A. Refer to Section 055000 "Metal Fabrications" for structural steel.
- B. Cut, fit, and place miscellaneous metal supports accurately in location, alignment, and elevation to support and anchor piped utility materials and equipment. C. Field Welding: Comply with AWS D1.1/D1.1M.

3.11 GROUTING

- A. Mix and install grout for equipment base bearing surfaces, pump and other equipment base plates, and anchors.
- B. Clean surfaces that will come into contact with grout.
- C. Provide forms as required for placement of grout.
- D. Avoid air entrapment during placement of grout.
- E. Place grout, completely filling equipment bases.
- F. Place grout on concrete bases and provide smooth bearing surface for equipment.
- G. Place grout around anchors.
- H. Cure placed grout.

END OF SECTION

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SECTION 33 20 00
WATER AND SEWER STANDARD SPECIFICATIONS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. All materials and construction shall comply with the latest edition of the "Standard Specifications for Design and Construction of Water Lines and Sewer Lines," 2012 Edition, as published by the Utilities Department of the City of Fayetteville, Arkansas. This specification, which is hereby incorporated by reference, is available from the City of Fayetteville website at <http://www.fayetteville-ar.gov/445/Standard-Specs-Details>. If conflicts exist between the Utility Department specifications and other specifications incorporated in these contract documents, the more stringent requirement shall govern.

END OF SECTION

Bid 22-54,
Appendix A:
City Bid Documents

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SECTION 33 41 00
STORM DRAINAGE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Related Sections include the following:
 - 1. Earthwork – Section 312000.
 - 2. Cast-in-Place Concrete – Section 033000.

1.2 SUMMARY

- A. Gravity-flow, nonpressure storm drainage, with the following components:
 - 1. Pipe.
 - 2. Underdrain.
 - 3. Flared end sections.
 - 4. Precast concrete drainage structures.
 - 5. Cast-in-place concrete drainage structures.
- B. Underdrain.

1.3 RELATED DOCUMENTS:

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.4 DEFINITIONS

- A. RCP: Reinforced concrete pipe.
- B. FES: Flared end section.
- C. PVC: Polyvinyl chloride plastic.

1.5 PERFORMANCE REQUIREMENTS

- A. Gravity-Flow, Nonpressure, Drainage-Piping Pressure Rating: 10-foot head of water. Pipe joints shall be silttight, unless otherwise indicated.
- B. Gravity-flow, nonpressure, drainage piping with perforated walls for infiltration of waters into subsurface soils. Pipe joints shall be silttight.

1.6 SUBMITTALS

- A. Product Data: For the following:
 - 1. Pipe.
 - 2. Pipe jointing material(s).
 - 3. Manhole ring and lid.
 - 4. Precast flared end section.
 - 5. Precast subdrain inlet/outlet structure.
 - 6. Drainage backfill.

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7. Underdrain.
 8. Geotextile fabric.
 9. Concrete.
 10. Grout.
 - B. Shop Drawings: For the following:
 1. Precast Concrete Drainage Structures: Include drawings, elevations, sections, details, and frames and covers along with the design calculations.
 2. Cast-in-Place Drainage Structures: Comply with submittal requirements of Section 03300 Cast-in-Place Concrete.
 - C. Coordination Drawings: Show pipe sizes, locations, and elevations. Show other piping in same trench and clearances from storm drainage system piping. Indicate interface and spatial relationship between manholes, piping, and proximate structures.
 - D. Profile Drawings: Show system piping in elevation. Draw profiles at horizontal scale of not less than 1 inch equals 50 feet (1:500) and vertical scale of not less than 1 inch equals 5 feet (1:50). Indicate manholes and piping. Show types, sizes, materials, and elevations of other utilities crossing system piping.
 - E. Product Certificates: For each type of cast-iron soil pipe and fitting, from manufacturer.
 - F. Material test reports.
 1. Test reports shall not be more than 12 months old. G. Field quality-control test reports.
 - H. Shop Drawings:
 1. Manholes: Include plans, elevations, sections, details, frames, and covers.
 2. Stormwater Inlets: Include plans, elevations, sections, details, frames, covers, and grates.
 3. Stormwater Detention Structures: Include plans, elevations, sections, details, frames, covers, design calculations, and concrete design-mix reports.
- 1.7 DELIVERY, STORAGE, AND HANDLING**
- A. Protect pipe, pipe fittings, and seals from dirt and damage.
 - B. Handle precast drainage structures according to manufacturer's written rigging instructions.
 - C. Protect stockpiled materials on site to prevent erosion, dust, and loss of material.
- 1.8 PROJECT CONDITIONS**
- A. Interruption of Existing Storm Drainage Service: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary service according to requirements indicated:
 1. Notify Engineer no fewer than two days in advance of proposed interruption of service.
 2. Do not proceed with interruption of service without Engineer's written permission.
 - B. Flood Protection: Contractor shall maintain all stormwaters scheduled onsite and offsite that contribute to flow in the vicinity of the proposed stormwater piping during construction, without flooding building, adjacent properties, fleet parking areas, or material storage areas, and maintain compliance with all applicable environmental permits, laws and regulations.

PART 2 - PRODUCTS

2.1 PIPE AND FITTINGS

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- A. Reinforced-Concrete Storm Sewer Pipe (RCP) and Fittings: ASTM C 76 (ASTM C 76M), with groove and tongue ends and sealant joints with ASTM C 990 (ASTM C 990M), bitumen or butylrubber sealant, Class III, Wall B.
- B. PVC Corrugated Storm Sewer Piping:
 - 1. Pipe: ASTM F 949, PVC, corrugated pipe with bell-and-spigot ends for gasketed joints.
 - 2. Fittings: ASTM F 949, PVC molded or fabricated, socket type.
 - 3. Gaskets: ASTM F 477, elastomeric seals.
- C. PVC Underdrain: ASTM A 2000.
 - 1. Perforated-Wall Pipes and Fittings:
 - a. Perforated PVC Pipe and Fittings: PVC A-2000 – ASTM F 949, bell-and-spigot ends, for soil-tight joints, AASHTO Standard Specifications for Highway Bridges, Section 26.4.2.4.
 - 1) Piping shall be designed in accordance with AASHTO Section 12, Buried Structures and Tunnel Liners.
 - 2) Piping shall be manufactured from 12454 cell class material per ASTM D 1784.
 - 3) Pipe and fittings shall have a minimum pipe thickness of 46 lbs./in./in., according to test method ASTM D 2412.
 - b. Perforated underdrain shall be constructed under, landscaped areas, stormwater infiltration systems, and as shown or called for in the Drawings.
 - 2. Solid-Wall Pipes and Fittings:
 - a. Solid-wall PVC Pipe and Fittings: PVC A-2000 – ASTM F 949, bell-and-spigot ends, for soil-tight joints, AASHTO Standard Specifications for Highway Bridges, Section 26.4.2.4.
 - 1) Piping shall be designed in accordance with AASHTO Section 12, Buried Structures and Tunnel Liners.
 - 2) Piping shall be manufactured from 12454 cell class material per ASTM D 1784.
 - 3) Pipe and fittings shall have a minimum pipe thickness of 46 lbs./in./in., according to test method ASTM D 2412.
 - b. Solid-wall underdrain shall be constructed under walks, pavements, building slabs, and as shown or called for in the Drawings.

2.2 SPECIAL PIPE COUPLINGS

- A. Comply with ASTM C 1173, elastomeric, sleeve-type, reducing or transition coupling, for joining underground nonpressure piping. Include ends of same sizes as piping to be joined and corrosionresistant metal tension band and tightening mechanism on each end.
 - 1. Sleeve Materials:
 - a. For Cast-Iron Soil Pipes: ASTM C 564, rubber.
 - b. For Plastic Pipes: ASTM F 477, elastomeric seal or ASTM D 5926, PVC.
 - c. For Dissimilar Pipes: ASTM D 5926, PVC or other material compatible with pipe materials being joined.

2.3 GEOTEXTILE FILTER FABRICS

- A. Description: Fabric of PP or polyester fibers or combination of both, with flow rate range from 110 to 330 gpm/sq. ft. (4480 to 13 440 L/min. per sq. m) when tested according to ASTM D 4491.
 - 1. Structure Type: Nonwoven, needle-punched continuous filament.
 - 2. Style(s): Flat and no sock.

2.4 PIPE INLETS/OUTLETS

- A. Head Walls: Cast-in-place reinforced concrete, with apron and tapered sides.
- B. Flared End Sections: Precast concrete.
- C. Stone Inlet/Outlet: Concrete inlet/outlet as detailed in the Drawings with broken, irregular size and shape, graded stone according to NSSGA's "Quarried Stone for Erosion and Sediment Control."
 - 1. Average Size: NSSGA No. R-7, screen opening 12 inches (305 mm).
 - 2. Type: Native sandstone.
 - 3. Provide rodent screen on all outlets.

2.5 GRATE INLETS AND JUNCTION BOXES

- A. Standard Precast Concrete Manholes: ASTM C 478 (ASTM C 478M), precast, reinforced concrete, of depth indicated, with provision for grout seal of piping penetrations.
 - 1. Diameter: 48 inches (1200 mm) minimum, unless otherwise indicated.
 - 2. Ballast: Increase thickness of precast concrete sections or add concrete to base section, as required to prevent flotation.
 - 3. Base Section: 6-inch (150-mm) minimum thickness for floor slab and 4-inch (102-mm) minimum thickness for walls and base riser section, and having separate base slab or base section with integral floor.
 - 4. Riser Sections: 4-inch (102-mm) minimum thickness, and lengths to provide depth indicated.
 - 5. Top Section: Eccentric-cone type unless concentric-cone or flat-slab-top type is indicated. Top of cone of size that matches grade rings.
 - 6. Joint Sealant: Grout; see Section 03315 "Grouts."
 - 7. Steps: Individual FRP steps wide enough to allow worker to place both feet on 1 step and designed to prevent lateral slippage off of step. Cast or anchor steps into sidewalls at 12- to 16-inch (300- to 400-mm) intervals. Omit steps if total depth from floor of manhole to finished grade is less than 48 inches (1220 mm).
 - 8. Adjusting Rings: Interlocking rings with level or sloped edge in thickness and diameter matching manhole frame and cover. Include sealant recommended by ring manufacturer.
 - 9. Grade Rings: Reinforced-concrete rings, 2- to 12-inch (50- to 305-mm) total thickness, to match diameter of manhole frame and cover.
 - 10. Manhole Frames and Covers: Include indented top design with lettering cast into cover as indicated on the Drawings.
- B. Cast-in-Place Concrete Manholes: Construct of reinforced-concrete bottom, walls, and top of depth, shape, dimensions, and appurtenances indicated.
 - 1. Ballast: Increase thickness of concrete, as required to prevent flotation.
 - 2. Steps: Shall not be allowed.
 - 3. Adjusting Rings: Interlocking rings with level or sloped edge in thickness and diameter matching manhole frame and cover. Include sealant recommended by ring manufacturer.
 - 4. Manhole Frames and Covers: Include indented top design with lettering cast into cover, as indicated on the Drawings.
 - a. Material: ASTM A 48, Class 35B gray iron, unless otherwise indicated.
- C. PVC Grate Inlet/Junction Box for Underdrain: ASTM A 2000.
 - 1. ASTM F 949, bell-and-spigot connections, for soil-tight joints, AASHTO Standard Specifications for Highway Bridges, Section 26.2.4.

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2. Designed in accordance with AASHTO Section 12, Buried Structures and Tunnel Liners
3. Shall be manufactured from 12454 cell class material per ASTM D 1784.
4. Minimum wall thickness of 46 lbs./in./in. per ASTM D 2412.
5. Connect to underdrain system as called for or shown in the Drawings for a complete and functioning underdrain system.

2.6 CAST IRON CLEANOUTS

- A. Cast-Iron Cleanouts: Heavy-duty, cast-in-place cast style iron ring and lid.
 1. Description: ASME A112.36.2M, round, gray-iron housing with clamping device and round, secured, scoriated, gray-iron cover. Include gray-iron ferrule with inside calk or spigot connection and countersunk, tapered-thread, brass closure plug.
 2. Top-Loading Classification(s): Heavy duty.

2.7 CONCRETE

- A. Cast-in-place concrete according to Section 033000 of these Specifications.

2.8 GROUT

- A. Grout in accordance with Section 033150 "Grouts."

2.9 PIPE INLETS/OUTLETS

- A. Curtain Walls: Cast-in-place reinforced concrete, with apron and tapered sides.
- B. Flared End Sections: Precast concrete, AHTD.
- C. Riprap Basins: Broken, irregular size and shape, graded stone according to NSSGA's "Quarried Stone for Erosion and Sediment Control."
 1. Average Size: NSSGA No. R-7, screen opening 12 inches (305 mm).
 2. Type: Native sandstone.

2.10 DRAINAGE BACKFILL

- A. In accordance with Section 031200 "Earthwork."

PART 3 - EXECUTION

3.1 EARTHWORK

- A. Excavation, trenching, and backfilling are specified in Section 032100 "Earthwork."

3.2 PIPING INSTALLATION

- A. General Locations and Arrangements: Drawings and details indicate general location and arrangement of underground storm drainage piping. Required field adjustments shall be reviewed by the Engineer.
- B. Install piping beginning at low point, true to grades and alignment indicated with unbroken continuity of invert. Place groove ends of piping facing upstream. Install gaskets, seals, sleeves, and couplings according to manufacturer's written instructions for use of lubricants, cements, and other installation requirements. Pipe which is not in true alignment or which shows settlement after laying shall be taken up and re-laid by the Contractor without extra compensation. Pipe shall not be laid in water or in unsuitable weather conditions. Control of surface and subsurface water is required so dry conditions will exist during excavation and pipe laying.

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- C. Install manholes (junction boxes) for changes in direction unless fittings are indicated. Use fittings for branch connections unless direct tap into existing sewer is indicated.
- D. Install proper size increasers, reducers, and couplings where different sizes or materials of pipes and fittings are connected. Reducing size of piping in direction of flow is prohibited.
- E. Install gravity-flow, nonpressure drainage piping according to the following:
 - 1. Install piping pitched down in direction of flow, at minimum slope of 0.5 percent, unless otherwise indicated.
 - 2. Install piping with 24-inch (610-mm) minimum cover, unless otherwise indicated.

3.3 JOINING PIPE

- A. The method of joining pipe sections shall be such that the ends are fully entered and the inner surfaces are reasonably flush and even.
- B. Concrete Pipe:
 - 1. Cold-Applied Preformed Plastic Gasket: The pipe joint surface shall be cleaned and the primer (if recommended by the manufacturer) brushed on and allowed to dry. The protective wrapping shall be removed from one side of the rope. The rope shall be laid strip side up on the surface of the pipe joint and the strip pressed firmly to surface of pipe joint end-to-end continuing around the entire circumference of the joint. The remaining protective wrapping shall be removed and pipe forced into connection until material fills the joint space.
 - a. To ensure an even and well-filled joint, the final joining of the pipe shall be accomplished by either pushing or pulling by mechanical means each joint of the pipe as it is laid in an approved manner.
 - b. In cold weather, when directed, the joint material shall be warmed in a hot-water bath, or by other approved methods, to the extent required to keep the material pliable for placement without breaking or cracking.
- C. PVC Pipe: Join PVC sewer piping according to ASTM D 2321 and ASTM D 3034 for elastomeric-seal joints or ASTM D 3034 for elastomeric gasket joints.

3.4 CLEANOUT INSTALLATION

- A. Install cleanouts and riser extensions from sewer pipes to cleanouts at grade. Use cast-iron soil pipe fittings in sewer pipes at branches for cleanouts and cast-iron soil pipe for riser extensions to cleanouts. Install piping so cleanouts open in direction of flow in sewer pipe.
 - 1. Heavy-Duty, top-loading classification cleanouts.
- B. Set cleanout frames and covers in earth in cast-in-place concrete block, 18 by 18 by 16 inches deep. Set with tops 2 inches above surrounding earth grade.
- C. Set cleanout frames and covers in concrete pavement and roads with tops flush with pavement surface.

3.5 STORMWATER INLET AND OUTLET INSTALLATION

- A. General: Install inlet structure, complete with appurtenances and accessories indicated.
- B. Install precast concrete inlet structure sections according to ASTM C 891.
- C. Construct inlet head walls, curtain walls, aprons, and sides of reinforced concrete, as indicated, and in accordance with Section 03300 "Cast-In-Place Concrete."
- D. Construct riprap of broken stone, as indicated.
- E. Install outlets that spill onto grade, anchored with concrete, where indicated.
- F. Install outlets that spill onto grade, with reinforced concrete curtain walls, where indicated.

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- G. Install outlets that spill onto grade, with flared end sections that match pipe, where indicated.
- H. Construct energy dissipaters at outlets, as indicated.
- I. Where specific manhole construction is not indicated, follow manhole manufacturer's written instructions.
- J. Set tops of frames and covers flush with finished surface of manholes that occur in pavements. Set tops 3 inches above finished surface elsewhere unless otherwise indicated.

3.6 UNDERDRAIN INSTALLATION

- A. Underdrains shall be connected into drainage structures as shown in the Drawings. Outlets shall be positioned a minimum of 6 inches above the bottom of structure. A minimum of 18 inches of cover over the pipe shall be maintained.
- B. Construct perforated underdrains under grass, landscaped, or otherwise pervious surface cover. Construct solid wall underdrains under pavements, slabs, sidewalks and other impervious surface cover, unless otherwise noted.
- C. Place impervious fill on subgrade and compact to dimensions indicated, but not less than 6 inches (150 mm) deep and 12 inches (300 mm) wide.
- D. Lay flat-style geotextile filter fabric in trench and overlap trench sides.
- E. Place supporting layer of drainage course over compacted subgrade and geotextile filter fabric, to compacted depth of not less than 4 inches (100 mm).
- F. Install drainage piping as indicated in Part 3 "Piping Installation."
- G. Add drainage course to width of at least 6 inches (150 mm) on sides and to top of pipe to perform tests.
- H. Wrapping pipe in silt sock or textile is prohibited.
- I. Observation wells/cleanouts of 6-inch non-perforated pipe shall be placed vertically in the infiltration facility as shown on the Drawings. The wells/cleanouts shall be connected to the perforated underdrain with the appropriate manufactured connections as shown on the Drawings. The wells/cleanouts shall extend to the top elevation of the bioretention facility mulch, and shall be capped with a screw cap. Cap shall be removable for cleaning. Observation wells/cleanouts shall be constructed with cast-on-place concrete collar and cast iron ring and lid.

3.7 CONCRETE PLACEMENT

- A. Place cast-in-place concrete according to ACI 318 and in accordance with Section 03300 of these Specifications.

3.8 IDENTIFICATION

- A. Materials and their installation are specified in Section 02300 "Earthwork." Arrange for installation of green warning tape directly over piping and at outside edge of underground structures.
 - 1. Use detectable warning tape over ferrous piping.
 - 2. Use detectable warning tape over nonferrous piping and over edges of underground structures.

3.9 FIELD QUALITY CONTROL

- A. Inspect interior of piping to determine whether line displacement or other damage has occurred. Inspect after approximately 24 inches (610 mm) of backfill is in place, and again at completion of Project.
 - 1. Submit separate reports for each system inspection.
 - 2. Defects requiring correction include the following:

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- a. Alignment: Less than full diameter of inside of pipe is visible between structures.
 - b. Crushed, broken, cracked, or otherwise damaged piping.
 - c. Infiltration: Water leakage into piping.
 - d. Exfiltration: Water leakage from or around piping.
3. Replace defective piping using new materials, and repeat inspections until defects are within allowances specified.
4. Re-inspect and repeat procedure until results are satisfactory.
- B. Test new piping systems, and parts of existing systems that have been altered, extended, or repaired, for leaks and defects.
 1. Do not enclose, cover, or put into service before inspection and approval.
 2. Test completed piping systems according to requirements of authorities having jurisdiction.
 3. Schedule tests and inspections by authorities having jurisdiction with at least 24 hours' advance notice.
 4. Submit separate report for each test.
 5. Gravity-Flow Storm Drainage Piping: Test according to requirements of authorities having jurisdiction, UNI-B-6, and the following:
 - a. Exception: Piping with soiltight joints unless required by authorities having jurisdiction.
 - b. Option: Test plastic piping according to ASTM F 1417.
 - c. Option: Test concrete piping according to ASTM C 924 (ASTM C 924M).
- C. Underdrain Piping - Testing: After installing drainage course to top of piping, test drain piping with water to ensure free flow before backfilling. Remove obstructions, replace damaged components, and repeat test until results are satisfactory.
- D. Leaks and loss in test pressure constitute defects that must be repaired. Replace leaking piping using new materials, and repeat testing until leakage is within allowances specified.
- E. Test stormwater infiltration systems by completely filling with potable water and measuring the amount of time it takes for the system to drain. Systems that do not completely drain within 48 hours constitute a failure that shall be repaired or replaced as necessary, and testing repeated until system performs as specified.
 1. Alternatively, Contractor may use uncontaminated stormwater for this test, as approved by the Engineer.

3.10 CLEANING

- A. Clean interior of piping of dirt and superfluous materials.

3.11 SEDIMENT "TRAPS" AND CONTROLS

- A. Provide sediment barriers and controls to filter storm waters prior to entry into constructed storm water conveyance systems.
- B. Contractor shall maintain control until final stabilization is achieved in accordance with the ADEQ Stormwater Discharge Permit.
- C. Contractor shall remove controls when final stabilization is achieved.

3.12 WARRANTY

- A. Contractor shall provide cleanout services as necessary for a period of one year after final acceptance.

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- B. Contractor shall provide all services, equipment, and manpower to flush and/or repair any obstructed subsurface drains.

END OF SECTION

Bid 22-54,
Appendix A:
City Bid Documents

25059), or 9-83 (48 FR 35736), as applicable, and 29 CFR part 1911.

SOURCE: 54 FR 45959, Oct. 31, 1989, unless otherwise noted.

§ 1926.650 Scope, application, and definitions applicable to this subpart.

(a) *Scope and application.* This subpart applies to all open excavations made in the earth's surface. Excavations are defined to include trenches.

(b) *Definitions applicable to this subpart.*

Accepted engineering practices means those requirements which are compatible with standards of practice required by a registered professional engineer.

Aluminum Hydraulic Shoring means a pre-engineered shoring system comprised of aluminum hydraulic cylinders (crossbraces) used in conjunction with vertical rails (uprights) or horizontal rails (walers). Such system is designed, specifically to support the sidewalls of an excavation and prevent cave-ins.

Bell-bottom pier hole means a type of shaft or footing excavation, the bottom of which is made larger than the cross section above to form a belled shape.

Benching (Benching system) means a method of protecting employees from cave-ins by excavating the sides of an excavation to form one or a series of horizontal levels or steps, usually with vertical or near-vertical surfaces between levels.

Cave-in means the separation of a mass of soil or rock material from the side of an excavation, or the loss of soil from under a trench shield or support system, and its sudden movement into the excavation, either by falling or sliding, in sufficient quantity so that it could entrap, bury, or otherwise injure and immobilize a person.

Competent person means one who is capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Cross braces mean the horizontal members of a shoring system installed perpendicular to the sides of the excavation, the ends of which bear against either uprights or wales.

Subpart P—Excavations

AUTHORITY: Sec. 107, Contract Worker Hours and Safety Standards Act (Construction Safety Act) (40 U.S.C. 333); Secs. 4, 6, 8, Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); Secretary of Labor's Order No. 12-71 (36 FR 8754), 8-76 (41 FR

Excavation means any man-made cut, cavity, trench, or depression in an earth surface, formed by earth removal.

Faces or sides means the vertical or inclined earth surfaces formed as a result of excavation work.

Failure means the breakage, displacement, or permanent deformation of a structural member or connection so as to reduce its structural integrity and its supportive capabilities.

Hazardous atmosphere means an atmosphere which by reason of being explosive, flammable, poisonous, corrosive, oxidizing, irritating, oxygen deficient, toxic, or otherwise harmful, may cause death, illness, or injury.

Kickout means the accidental release or failure of a cross brace.

Protective system means a method of protecting employees from cave-ins, from material that could fall or roll from an excavation face or into an excavation, or from the collapse of adjacent structures. Protective systems include support systems, sloping and benching systems, shield systems, and other systems that provide the necessary protection.

Ramp means an inclined walking or working surface that is used to gain access to one point from another, and is constructed from earth or from structural materials such as steel or wood.

Registered Professional Engineer means a person who is registered as a professional engineer in the state where the work is to be performed. However, a professional engineer, registered in any state is deemed to be a “registered professional engineer” within the meaning of this standard when approving designs for “manufactured protective systems” or “tabulated data” to be used in interstate commerce.

Sheeting means the members of a shoring system that retain the earth in position and in turn are supported by other members of the shoring system.

Shield (Shield system) means a structure that is able to withstand the forces imposed on it by a cave-in and thereby protect employees within the structure. Shields can be permanent structures or can be designed to be portable and moved along as work progresses. Additionally, shields can be either premanufactured or job-built in

accordance with §1926.652 (c)(3) or (c)(4). Shields used in trenches are usually referred to as “trench boxes” or “trench shields.”

Shoring (Shoring system) means a structure such as a metal hydraulic, mechanical or timber shoring system that supports the sides of an excavation and which is designed to prevent cave-ins.

Sides. See “Faces.”

Sloping (Sloping system) means a method of protecting employees from cave-ins by excavating to form sides of an excavation that are inclined away from the excavation so as to prevent cave-ins. The angle of incline required to prevent a cave-in varies with differences in such factors as the soil type, environmental conditions, of exposure, and application of surcharge loads.

Stable rock means natural solid mineral material that can be excavated with vertical sides and will remain intact while exposed. Unstable rock is considered to be stable when the rock material on the side or sides of the excavation is secured against caving-in or movement by rock bolts or by another protective system that has been designed by a registered professional engineer.

Structural ramp means a ramp built of steel or wood, usually used for vehicle access. Ramps made of soil or rock are not considered structural ramps.

Support system means a structure such as underpinning, bracing, or shoring, which provides support to an adjacent structure, underground installation, or the sides of an excavation.

Tabulated data means tables and charts approved by a registered professional engineer and used to design and construct a protective system.

Trench (Trench excavation) means a narrow excavation (in relation to its length) made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench (measured at the bottom) is not greater than 15 feet (4.6 m). If forms or other structures are installed or constructed in an excavation so as to reduce the dimension measured from the forms or structure to the side of the excavation to 15 feet (4.6 m) or less

(measured at the bottom of the excavation), the excavation is also considered to be a trench.

Trench box. See "Shield."

Trench shield. See "Shield."

Uprights means the vertical members of a trench shoring system placed in contact with the earth and usually positioned so that individual members do not contact each other. Uprights placed so that individual members are closely spaced, in contact with or interconnected to each other, are often called "sheeting."

Wales means horizontal members of a shoring system placed parallel to the excavation face whose sides bear against the vertical members of the shoring system or earth.

§ 1926.651 Specific excavation requirements.

(a) *Surface encumbrances.* All surface encumbrances that are located so as to create a hazard to employees shall be removed or supported, as necessary, to safeguard employees.

(b) *Underground installations.* (1) The estimated location of utility installations, such as sewer, telephone, fuel, electric, water lines, or any other underground installations that reasonably may be expected to be encountered during excavation work, shall be determined prior to opening an excavation.

(2) Utility companies or owners shall be contacted within established or customary local response times, advised of the proposed work, and asked to establish the location of the utility underground installations prior to the start of actual excavation. When utility companies or owners cannot respond to a request to locate underground utility installations within 24 hours (unless a longer period is required by state or local law), or cannot establish the exact location of these installations, the employer may proceed, provided the employer does so with caution, and provided detection equipment or other acceptable means to locate utility installations are used.

(3) When excavation operations approach the estimated location of underground installations, the exact location of the installations shall be determined by safe and acceptable means.

(4) While the excavation is open, underground installations shall be protected, supported or removed as necessary to safeguard employees.

(c) *Access and egress*—(1) *Structural ramps.* (i) Structural ramps that are used solely by employees as a means of access or egress from excavations shall be designed by a competent person. Structural ramps used for access or egress of equipment shall be designed by a competent person qualified in structural design, and shall be constructed in accordance with the design.

(ii) Ramps and runways constructed of two or more structural members shall have the structural members connected together to prevent displacement.

(iii) Structural members used for ramps and runways shall be of uniform thickness.

(iv) Cleats or other appropriate means used to connect runway structural members shall be attached to the bottom of the runway or shall be attached in a manner to prevent tripping.

(v) Structural ramps used in lieu of steps shall be provided with cleats or other surface treatments on the top surface to prevent slipping.

(2) *Means of egress from trench excavations.* A stairway, ladder, ramp or other safe means of egress shall be located in trench excavations that are 4 feet (1.22 m) or more in depth so as to require no more than 25 feet (7.62 m) of lateral travel for employees.

(d) *Exposure to vehicular traffic.* Employees exposed to public vehicular traffic shall be provided with, and shall wear, warning vests or other suitable garments marked with or made of reflectorized or high-visibility material.

(e) *Exposure to falling loads.* No employee shall be permitted underneath loads handled by lifting or digging equipment. Employees shall be required to stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials. Operators may remain in the cabs of vehicles being loaded or unloaded when the vehicles are equipped, in accordance with § 1926.601(b)(6), to provide adequate protection for the operator during loading and unloading operations.

(f) *Warning system for mobile equipment.* When mobile equipment is operated adjacent to an excavation, or when such equipment is required to approach the edge of an excavation, and the operator does not have a clear and direct view of the edge of the excavation, a warning system shall be utilized such as barricades, hand or mechanical signals, or stop logs. If possible, the grade should be away from the excavation.

(g) *Hazardous atmospheres—(1) Testing and controls.* In addition to the requirements set forth in subparts D and E of this part (29 CFR 1926.50–1926.107) to prevent exposure to harmful levels of atmospheric contaminants and to assure acceptable atmospheric conditions, the following requirements shall apply:

(i) Where oxygen deficiency (atmospheres containing less than 19.5 percent oxygen) or a hazardous atmosphere exists or could reasonably be expected to exist, such as in excavations in landfill areas or excavations in areas where hazardous substances are stored nearby, the atmospheres in the excavation shall be tested before employees enter excavations greater than 4 feet (1.22 m) in depth.

(ii) Adequate precautions shall be taken to prevent employee exposure to atmospheres containing less than 19.5 percent oxygen and other hazardous atmospheres. These precautions include providing proper respiratory protection or ventilation in accordance with subparts D and E of this part respectively.

(iii) Adequate precaution shall be taken such as providing ventilation, to prevent employee exposure to an atmosphere containing a concentration of a flammable gas in excess of 20 percent of the lower flammable limit of the gas.

(iv) When controls are used that are intended to reduce the level of atmospheric contaminants to acceptable levels, testing shall be conducted as often as necessary to ensure that the atmosphere remains safe.

(2) *Emergency rescue equipment.* (i) Emergency rescue equipment, such as breathing apparatus, a safety harness and line, or a basket stretcher, shall be readily available where hazardous at-

mospheric conditions exist or may reasonably be expected to develop during work in an excavation. This equipment shall be attended when in use.

(ii) Employees entering bell-bottom pier holes, or other similar deep and confined footing excavations, shall wear a harness with a life-line securely attached to it. The lifeline shall be separate from any line used to handle materials, and shall be individually attended at all times while the employee wearing the lifeline is in the excavation.

(h) *Protection from hazards associated with water accumulation.* (1) Employees shall not work in excavations in which there is accumulated water, or in excavations in which water is accumulating, unless adequate precautions have been taken to protect employees against the hazards posed by water accumulation. The precautions necessary to protect employees adequately vary with each situation, but could include special support or shield systems to protect from cave-ins, water removal to control the level of accumulating water, or use of a safety harness and lifeline.

(2) If water is controlled or prevented from accumulating by the use of water removal equipment, the water removal equipment and operations shall be monitored by a competent person to ensure proper operation.

(3) If excavation work interrupts the natural drainage of surface water (such as streams), diversion ditches, dikes, or other suitable means shall be used to prevent surface water from entering the excavation and to provide adequate drainage of the area adjacent to the excavation. Excavations subject to runoff from heavy rains will require an inspection by a competent person and compliance with paragraphs (h)(1) and (h)(2) of this section.

(i) *Stability of adjacent structures.* (1) Where the stability of adjoining buildings, walls, or other structures is endangered by excavation operations, support systems such as shoring, bracing, or underpinning shall be provided to ensure the stability of such structures for the protection of employees.

(2) Excavation below the level of the base or footing of any foundation or retaining wall that could be reasonably

expected to pose a hazard to employees shall not be permitted except when:

(i) A support system, such as underpinning, is provided to ensure the safety of employees and the stability of the structure; or

(ii) The excavation is in stable rock; or

(iii) A registered professional engineer has approved the determination that the structure is sufficiently removed from the excavation so as to be unaffected by the excavation activity; or

(iv) A registered professional engineer has approved the determination that such excavation work will not pose a hazard to employees.

(3) Sidewalks, pavements, and appurtenant structure shall not be undermined unless a support system or another method of protection is provided to protect employees from the possible collapse of such structures.

(j) *Protection of employees from loose rock or soil.* (1) Adequate protection shall be provided to protect employees from loose rock or soil that could pose a hazard by falling or rolling from an excavation face. Such protection shall consist of scaling to remove loose material; installation of protective barricades at intervals as necessary on the face to stop and contain falling material; or other means that provide equivalent protection.

(2) Employees shall be protected from excavated or other materials or equipment that could pose a hazard by falling or rolling into excavations. Protection shall be provided by placing and keeping such materials or equipment at least 2 feet (.61 m) from the edge of excavations, or by the use of retaining devices that are sufficient to prevent materials or equipment from falling or rolling into excavations, or by a combination of both if necessary.

(k) *Inspections.* (1) Daily inspections of excavations, the adjacent areas, and protective systems shall be made by a competent person for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions. An inspection shall be conducted by the competent person prior to the start of work and as needed throughout

the shift. Inspections shall also be made after every rainstorm or other hazard increasing occurrence. These inspections are only required when employee exposure can be reasonably anticipated.

(2) Where the competent person finds evidence of a situation that could result in a possible cave-in, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions, exposed employees shall be removed from the hazardous area until the necessary precautions have been taken to ensure their safety.

(l) Walkways shall be provided where employees or equipment are required or permitted to cross over excavations. Guardrails which comply with §1926.502(b) shall be provided where walkways are 6 feet (1.8 m) or more above lower levels.

[54 FR 45959, Oct. 31, 1989, as amended by 59 FR 40730, Aug. 9, 1994]

§ 1926.652 Requirements for protective systems.

(a) *Protection of employees in excavations.* (1) Each employee in an excavation shall be protected from cave-ins by an adequate protective system designed in accordance with paragraph (b) or (c) of this section except when:

(i) Excavations are made entirely in stable rock; or

(ii) Excavations are less than 5 feet (1.52m) in depth and examination of the ground by a competent person provides no indication of a potential cave-in.

(2) Protective systems shall have the capacity to resist without failure all loads that are intended or could reasonably be expected to be applied or transmitted to the system.

(b) *Design of sloping and benching systems.* The slopes and configurations of sloping and benching systems shall be selected and constructed by the employer or his designee and shall be in accordance with the requirements of paragraph (b)(1); or, in the alternative, paragraph (b)(2); or, in the alternative, paragraph (b)(3), or, in the alternative, paragraph (b)(4), as follows:

(1) *Option (1)—Allowable configurations and slopes.* (i) Excavations shall be sloped at an angle not steeper than one and one-half horizontal to one vertical

(34 degrees measured from the horizontal), unless the employer uses one of the other options listed below.

(ii) Slopes specified in paragraph (b)(1)(i) of this section, shall be excavated to form configurations that are in accordance with the slopes shown for Type C soil in Appendix B to this subpart.

(2) *Option (2)—Determination of slopes and configurations using Appendices A and B.* Maximum allowable slopes, and allowable configurations for sloping and benching systems, shall be determined in accordance with the conditions and requirements set forth in appendices A and B to this subpart.

(3) *Option (3)—Designs using other tabulated data.* (i) Designs of sloping or benching systems shall be selected from and be in accordance with tabulated data, such as tables and charts.

(ii) The tabulated data shall be in written form and shall include all of the following:

(A) Identification of the parameters that affect the selection of a sloping or benching system drawn from such data;

(B) Identification of the limits of use of the data, to include the magnitude and configuration of slopes determined to be safe;

(C) Explanatory information as may be necessary to aid the user in making a correct selection of a protective system from the data.

(iii) At least one copy of the tabulated data which identifies the registered professional engineer who approved the data, shall be maintained at the jobsite during construction of the protective system. After that time the data may be stored off the jobsite, but a copy of the data shall be made available to the Secretary upon request.

(4) *Option (4)—Design by a registered professional engineer.* (i) Sloping and benching systems not utilizing Option (1) or Option (2) or Option (3) under paragraph (b) of this section shall be approved by a registered professional engineer.

(ii) Designs shall be in written form and shall include at least the following:

(A) The magnitude of the slopes that were determined to be safe for the particular project;

(B) The configurations that were determined to be safe for the particular project; and

(C) The identity of the registered professional engineer approving the design.

(iii) At least one copy of the design shall be maintained at the jobsite while the slope is being constructed. After that time the design need not be at the jobsite, but a copy shall be made available to the Secretary upon request.

(c) *Design of support systems, shield systems, and other protective systems.* Designs of support systems shield systems, and other protective systems shall be selected and constructed by the employer or his designee and shall be in accordance with the requirements of paragraph (c)(1); or, in the alternative, paragraph (c)(2); or, in the alternative, paragraph (c)(3); or, in the alternative, paragraph (c)(4) as follows:

(1) *Option (1)—Designs using appendices A, C and D.* Designs for timber shoring in trenches shall be determined in accordance with the conditions and requirements set forth in appendices A and C to this subpart. Designs for aluminum hydraulic shoring shall be in accordance with paragraph (c)(2) of this section, but if manufacturer's tabulated data cannot be utilized, designs shall be in accordance with appendix D.

(2) *Option (2)—Designs Using Manufacturer's Tabulated Data.* (i) Design of support systems, shield systems, or other protective systems that are drawn from manufacturer's tabulated data shall be in accordance with all specifications, recommendations, and limitations issued or made by the manufacturer.

(ii) Deviation from the specifications, recommendations, and limitations issued or made by the manufacturer shall only be allowed after the manufacturer issues specific written approval.

(iii) Manufacturer's specifications, recommendations, and limitations, and manufacturer's approval to deviate from the specifications, recommendations, and limitations shall be in written form at the jobsite during construction of the protective system. After that time this data may be stored off the jobsite, but a copy shall

be made available to the Secretary upon request.

(3) *Option (3)—Designs using other tabulated data.* (i) Designs of support systems, shield systems, or other protective systems shall be selected from and be in accordance with tabulated data, such as tables and charts.

(ii) The tabulated data shall be in written form and include all of the following:

(A) Identification of the parameters that affect the selection of a protective system drawn from such data;

(B) Identification of the limits of use of the data;

(C) Explanatory information as may be necessary to aid the user in making a correct selection of a protective system from the data.

(iii) At least one copy of the tabulated data, which identifies the registered professional engineer who approved the data, shall be maintained at the jobsite during construction of the protective system. After that time the data may be stored off the jobsite, but a copy of the data shall be made available to the Secretary upon request.

(4) *Option (4)—Design by a registered professional engineer.* (i) Support systems, shield systems, and other protective systems not utilizing Option 1, Option 2 or Option 3, above, shall be approved by a registered professional engineer.

(ii) Designs shall be in written form and shall include the following:

(A) A plan indicating the sizes, types, and configurations of the materials to be used in the protective system; and

(B) The identity of the registered professional engineer approving the design.

(iii) At least one copy of the design shall be maintained at the jobsite during construction of the protective system. After that time, the design may be stored off the jobsite, but a copy of the design shall be made available to the Secretary upon request.

(d) *Materials and equipment.* (1) Materials and equipment used for protective systems shall be free from damage or defects that might impair their proper function.

(2) Manufactured materials and equipment used for protective systems shall be used and maintained in a man-

ner that is consistent with the recommendations of the manufacturer, and in a manner that will prevent employee exposure to hazards.

(3) When material or equipment that is used for protective systems is damaged, a competent person shall examine the material or equipment and evaluate its suitability for continued use. If the competent person cannot assure the material or equipment is able to support the intended loads or is otherwise suitable for safe use, then such material or equipment shall be removed from service, and shall be evaluated and approved by a registered professional engineer before being returned to service.

(e) *Installation and removal of support.* (1) *General.* (i) Members of support systems shall be securely connected together to prevent sliding, falling, kickouts, or other predictable failure.

(ii) Support systems shall be installed and removed in a manner that protects employees from cave-ins, structural collapses, or from being struck by members of the support system.

(iii) Individual members of support systems shall not be subjected to loads exceeding those which those members were designed to withstand.

(iv) Before temporary removal of individual members begins, additional precautions shall be taken to ensure the safety of employees, such as installing other structural members to carry the loads imposed on the support system.

(v) Removal shall begin at, and progress from, the bottom of the excavation. Members shall be released slowly so as to note any indication of possible failure of the remaining members of the structure or possible cave-in of the sides of the excavation.

(vi) Backfilling shall progress together with the removal of support systems from excavations.

(2) *Additional requirements for support systems for trench excavations.* (i) Excavation of material to a level no greater than 2 feet (.61 m) below the bottom of the members of a support system shall be permitted, but only if the system is designed to resist the forces calculated for the full depth of the trench, and

there are no indications while the trench is open of a possible loss of soil from behind or below the bottom of the support system.

(ii) Installation of a support system shall be closely coordinated with the excavation of trenches.

(f) *Sloping and benching systems.* Employees shall not be permitted to work on the faces of sloped or benched excavations at levels above other employees except when employees at the lower levels are adequately protected from the hazard of falling, rolling, or sliding material or equipment.

(g) *Shield systems*—(1) *General.* (i) Shield systems shall not be subjected to loads exceeding those which the system was designed to withstand.

(ii) Shields shall be installed in a manner to restrict lateral or other hazardous movement of the shield in the event of the application of sudden lateral loads.

(iii) Employees shall be protected from the hazard of cave-ins when entering or exiting the areas protected by shields.

(iv) Employees shall not be allowed in shields when shields are being installed, removed, or moved vertically.

(2) *Additional requirement for shield systems used in trench excavations.* Excavations of earth material to a level not greater than 2 feet (.61 m) below the bottom of a shield shall be permitted, but only if the shield is designed to resist the forces calculated for the full depth of the trench, and there are no indications while the trench is open of a possible loss of soil from behind or below the bottom of the shield.

APPENDIX A TO SUBPART P OF PART 1926—SOIL CLASSIFICATION

(a) *Scope and application*—(1) *Scope.* This appendix describes a method of classifying soil and rock deposits based on site and environmental conditions, and on the structure and composition of the earth deposits. The appendix contains definitions, sets forth requirements, and describes acceptable visual and manual tests for use in classifying soils.

(2) *Application.* This appendix applies when a sloping or benching system is designed in accordance with the requirements set forth in §1926.652(b)(2) as a method of protection for employees from cave-ins. This appendix also applies when timber shoring for excavations is designed as a method of protection from cave-ins in accordance with appendix C

to subpart P of part 1926, and when aluminum hydraulic shoring is designed in accordance with appendix D. This Appendix also applies if other protective systems are designed and selected for use from data prepared in accordance with the requirements set forth in §1926.652(c), and the use of the data is predicated on the use of the soil classification system set forth in this appendix.

(b) *Definitions.* The definitions and examples given below are based on, in whole or in part, the following: American Society for Testing Materials (ASTM) Standards D653–85 and D2488; The Unified Soils Classification System, The U.S. Department of Agriculture (USDA) Textural Classification Scheme; and The National Bureau of Standards Report BSS-121.

Cemented soil means a soil in which the particles are held together by a chemical agent, such as calcium carbonate, such that a hand-size sample cannot be crushed into powder or individual soil particles by finger pressure.

Cohesive soil means clay (fine grained soil), or soil with a high clay content, which has cohesive strength. Cohesive soil does not crumble, can be excavated with vertical sideslopes, and is plastic when moist. Cohesive soil is hard to break up when dry, and exhibits significant cohesion when submerged. Cohesive soils include clayey silt, sandy clay, silty clay, clay and organic clay.

Dry soil means soil that does not exhibit visible signs of moisture content.

Fissured means a soil material that has a tendency to break along definite planes of fracture with little resistance, or a material that exhibits open cracks, such as tension cracks, in an exposed surface.

Granular soil means gravel, sand, or silt, (coarse grained soil) with little or no clay content. Granular soil has no cohesive strength. Some moist granular soils exhibit apparent cohesion. Granular soil cannot be molded when moist and crumbles easily when dry.

Layered system means two or more distinctly different soil or rock types arranged in layers. Micaceous seams or weakened planes in rock or shale are considered layered.

Moist soil means a condition in which a soil looks and feels damp. Moist cohesive soil can easily be shaped into a ball and rolled into small diameter threads before crumbling. Moist granular soil that contains some cohesive material will exhibit signs of cohesion between particles.

Plastic means a property of a soil which allows the soil to be deformed or molded without cracking, or appreciable volume change.

Saturated soil means a soil in which the voids are filled with water. Saturation does not require flow. Saturation, or near saturation, is necessary for the proper use of instruments such as a pocket penetrometer or shear vane.

Soil classification system means, for the purpose of this subpart, a method of categorizing soil and rock deposits in a hierarchy of Stable Rock, Type A, Type B, and Type C, in decreasing order of stability. The categories are determined based on an analysis of the properties and performance characteristics of the deposits and the environmental conditions of exposure.

Stable rock means natural solid mineral matter that can be excavated with vertical sides and remain intact while exposed.

Submerged soil means soil which is underwater or is free seeping.

Type A means cohesive soils with an unconfined compressive strength of 1.5 ton per square foot (tsf) (144 kPa) or greater. Examples of cohesive soils are: clay, silty clay, sandy clay, clay loam and, in some cases, silty clay loam and sandy clay loam. Cemented soils such as caliche and hardpan are also considered Type A. However, no soil is Type A if:

- (i) The soil is fissured; or
- (ii) The soil is subject to vibration from heavy traffic, pile driving, or similar effects; or
- (iii) The soil has been previously disturbed; or
- (iv) The soil is part of a sloped, layered system where the layers dip into the excavation on a slope of four horizontal to one vertical (4H:1V) or greater; or
- (v) The material is subject to other factors that would require it to be classified as a less stable material.

Type B means:

- (i) Cohesive soil with an unconfined compressive strength greater than 0.5 tsf (48 kPa) but less than 1.5 tsf (144 kPa); or
- (ii) Granular cohesionless soils including: angular gravel (similar to crushed rock), silt, silt loam, sandy loam and, in some cases, silty clay loam and sandy clay loam.
- (iii) Previously disturbed soils except those which would otherwise be classed as Type C soil.
- (iv) Soil that meets the unconfined compressive strength or cementation requirements for Type A, but is fissured or subject to vibration; or
- (v) Dry rock that is not stable; or
- (vi) Material that is part of a sloped, layered system where the layers dip into the excavation on a slope less steep than four horizontal to one vertical (4H:1V), but only if the material would otherwise be classified as Type B.

Type C means:

- (i) Cohesive soil with an unconfined compressive strength of 0.5 tsf (48 kPa) or less; or
- (ii) Granular soils including gravel, sand, and loamy sand; or
- (iii) Submerged soil or soil from which water is freely seeping; or
- (iv) Submerged rock that is not stable, or

(v) Material in a sloped, layered system where the layers dip into the excavation or a slope of four horizontal to one vertical (4H:1V) or steeper.

Unconfined compressive strength means the load per unit area at which a soil will fail in compression. It can be determined by laboratory testing, or estimated in the field using a pocket penetrometer, by thumb penetration tests, and other methods.

Wet soil means soil that contains significantly more moisture than moist soil, but in such a range of values that cohesive material will slump or begin to flow when vibrated. Granular material that would exhibit cohesive properties when moist will lose those cohesive properties when wet.

(c) *Requirements*—(1) *Classification of soil and rock deposits.* Each soil and rock deposit shall be classified by a competent person as Stable Rock, Type A, Type B, or Type C in accordance with the definitions set forth in paragraph (b) of this appendix.

(2) *Basis of classification.* The classification of the deposits shall be made based on the results of at least one visual and at least one manual analysis. Such analyses shall be conducted by a competent person using tests described in paragraph (d) below, or in other recognized methods of soil classification and testing such as those adopted by the American Society for Testing Materials, or the U.S. Department of Agriculture textural classification system.

(3) *Visual and manual analyses.* The visual and manual analyses, such as those noted as being acceptable in paragraph (d) of this appendix, shall be designed and conducted to provide sufficient quantitative and qualitative information as may be necessary to identify properly the properties, factors, and conditions affecting the classification of the deposits.

(4) *Layered systems.* In a layered system, the system shall be classified in accordance with its weakest layer. However, each layer may be classified individually where a more stable layer lies under a less stable layer.

(5) *Reclassification.* If, after classifying a deposit, the properties, factors, or conditions affecting its classification change in any way, the changes shall be evaluated by a competent person. The deposit shall be reclassified as necessary to reflect the changed circumstances.

(d) *Acceptable visual and manual tests.*—(1) *Visual tests.* Visual analysis is conducted to determine qualitative information regarding the excavation site in general, the soil adjacent to the excavation, the soil forming the sides of the open excavation, and the soil taken as samples from excavated material.

(i) Observe samples of soil that are excavated and soil in the sides of the excavation. Estimate the range of particle sizes and the relative amounts of the particle sizes. Soil that is primarily composed of fine-grained

material is cohesive material. Soil composed primarily of coarse-grained sand or gravel is granular material.

(ii) Observe soil as it is excavated. Soil that remains in clumps when excavated is cohesive. Soil that breaks up easily and does not stay in clumps is granular.

(iii) Observe the side of the opened excavation and the surface area adjacent to the excavation. Crack-like openings such as tension cracks could indicate fissured material. If chunks of soil spall off a vertical side, the soil could be fissured. Small spalls are evidence of moving ground and are indications of potentially hazardous situations.

(iv) Observe the area adjacent to the excavation and the excavation itself for evidence of existing utility and other underground structures, and to identify previously disturbed soil.

(v) Observe the opened side of the excavation to identify layered systems. Examine layered systems to identify if the layers slope toward the excavation. Estimate the degree of slope of the layers.

(vi) Observe the area adjacent to the excavation and the sides of the opened excavation for evidence of surface water, water seeping from the sides of the excavation, or the location of the level of the water table.

(vii) Observe the area adjacent to the excavation and the area within the excavation for sources of vibration that may affect the stability of the excavation face.

(2) *Manual tests.* Manual analysis of soil samples is conducted to determine quantitative as well as qualitative properties of soil and to provide more information in order to classify soil properly.

(i) *Plasticity.* Mold a moist or wet sample of soil into a ball and attempt to roll it into threads as thin as 1/8-inch in diameter. Cohesive material can be successfully rolled into threads without crumbling. For example, if at least a two inch (50 mm) length of 1/8-inch thread can be held on one end without tearing, the soil is cohesive.

(ii) *Dry strength.* If the soil is dry and crumbles on its own or with moderate pressure into individual grains or fine powder, it is granular (any combination of gravel, sand, or silt). If the soil is dry and falls into clumps which break up into smaller clumps, but the smaller clumps can only be broken up with difficulty, it may be clay in any combination with gravel, sand or silt. If the dry soil breaks into clumps which do not break up into small clumps and which can only be broken with difficulty, and there is no visual indication the soil is fissured, the soil may be considered unfissured.

(iii) *Thumb penetration.* The thumb penetration test can be used to estimate the unconfined compressive strength of cohesive soils. (This test is based on the thumb penetration test described in American Society for Testing and Materials (ASTM) Standard

designation D2488—"Standard Recommended Practice for Description of Soils (Visual—Manual Procedure).") Type A soils with an unconfined compressive strength of 1.5 tsf can be readily indented by the thumb; however, they can be penetrated by the thumb only with very great effort. Type C soils with an unconfined compressive strength of 0.5 tsf can be easily penetrated several inches by the thumb, and can be molded by light finger pressure. This test should be conducted on an undisturbed soil sample, such as a large clump of spoil, as soon as practicable after excavation to keep to a minimum the effects of exposure to drying influences. If the excavation is later exposed to wetting influences (rain, flooding), the classification of the soil must be changed accordingly.

(iv) *Other strength tests.* Estimates of unconfined compressive strength of soils can also be obtained by use of a pocket penetrometer or by using a hand-operated shear vane.

(v) *Drying test.* The basic purpose of the drying test is to differentiate between cohesive material with fissures, unfissured cohesive material, and granular material. The procedure for the drying test involves drying a sample of soil that is approximately one inch thick (2.54 cm) and six inches (15.24 cm) in diameter until it is thoroughly dry:

(A) If the sample develops cracks as it dries, significant fissures are indicated.

(B) Samples that dry without cracking are to be broken by hand. If considerable force is necessary to break a sample, the soil has significant cohesive material content. The soil can be classified as a unfissured cohesive material and the unconfined compressive strength should be determined.

(C) If a sample breaks easily by hand, it is either a fissured cohesive material or a granular material. To distinguish between the two, pulverize the dried clumps of the sample by hand or by stepping on them. If the clumps do not pulverize easily, the material is cohesive with fissures. If they pulverize easily into very small fragments, the material is granular.

APPENDIX B TO SUBPART P OF PART 1926—SLOPING AND BENCHING

(a) *Scope and application.* This appendix contains specifications for sloping and benching when used as methods of protecting employees working in excavations from cave-ins. The requirements of this appendix apply when the design of sloping and benching protective systems is to be performed in accordance with the requirements set forth in § 1926.652(b)(2).

(b) *Definitions.*

Actual slope means the slope to which an excavation face is excavated.

Distress means that the soil is in a condition where a cave-in is imminent or is likely

to occur. Distress is evidenced by such phenomena as the development of fissures in the face of or adjacent to an open excavation; the subsidence of the edge of an excavation; the slumping of material from the face or the bulging or heaving of material from the bottom of an excavation; the spalling of material from the face of an excavation; and raveling, i.e., small amounts of material such as pebbles or little clumps of material suddenly separating from the face of an excavation and trickling or rolling down into the excavation.

Maximum allowable slope means the steepest incline of an excavation face that is acceptable for the most favorable site conditions as protection against cave-ins, and is expressed as the ratio of horizontal distance to vertical rise (H:V).

Short term exposure means a period of time less than or equal to 24 hours that an excavation is open.

(c) *Requirements*—(1) *Soil classification*. Soil and rock deposits shall be classified in accordance with appendix A to subpart P of part 1926.

(2) *Maximum allowable slope*. The maximum allowable slope for a soil or rock deposit shall be determined from Table B-1 of this appendix.

(3) *Actual slope*. (i) The actual slope shall not be steeper than the maximum allowable slope.

(ii) The actual slope shall be less steep than the maximum allowable slope, when there are signs of distress. If that situation occurs, the slope shall be cut back to an actual slope which is at least $\frac{1}{2}$ horizontal to one vertical ($\frac{1}{2}$ H:1V) less steep than the maximum allowable slope.

(iii) When surcharge loads from stored material or equipment, operating equipment, or traffic are present, a competent person shall determine the degree to which the actual slope must be reduced below the maximum allowable slope, and shall assure that such reduction is achieved. Surcharge loads from adjacent structures shall be evaluated in accordance with §1926.651(i).

(4) *Configurations*. Configurations of sloping and benching systems shall be in accordance with Figure B-1.

TABLE B-1
MAXIMUM ALLOWABLE SLOPES

SOIL OR ROCK TYPE	MAXIMUM ALLOWABLE SLOPES (H:V) ^[1] FOR EXCAVATIONS LESS THAN 20 FEET DEEP ^[3]
STABLE ROCK TYPE A ^[2] TYPE B TYPE C	VERTICAL (90°) 3/4 : 1 (53°) 1 : 1 (45°) 1½ : 1 (34°)

NOTES:

- Numbers shown in parentheses next to maximum allowable slopes are angles expressed in degrees from the horizontal. Angles have been rounded off.
- A short-term maximum allowable slope of $1\frac{1}{2}$ H:1V (63°) is allowed in excavations in Type A soil that are 12 feet (3.67 m) or less in depth. Short-term maximum allowable slopes for excavations greater than 12 feet (3.67 m) in depth shall be $3\frac{3}{4}$ H:1V (53°).
- Sloping or benching for excavations greater than 20 feet deep shall be designed by a registered professional engineer.

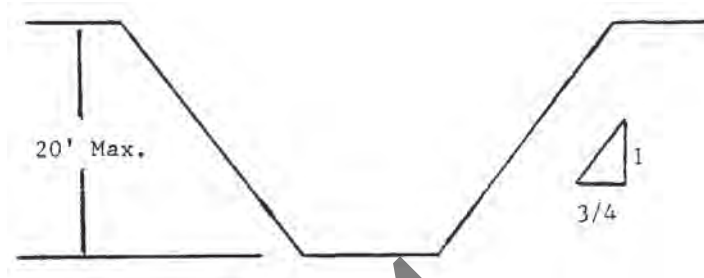
Figure B-1

Slope Configurations

(All slopes stated below are in the horizontal to vertical ratio)

B-1.1 Excavations made in Type A soil.

1. All simple slope excavation 20 feet or less in depth shall have a maximum allowable slope of $\frac{3}{4}$:1.



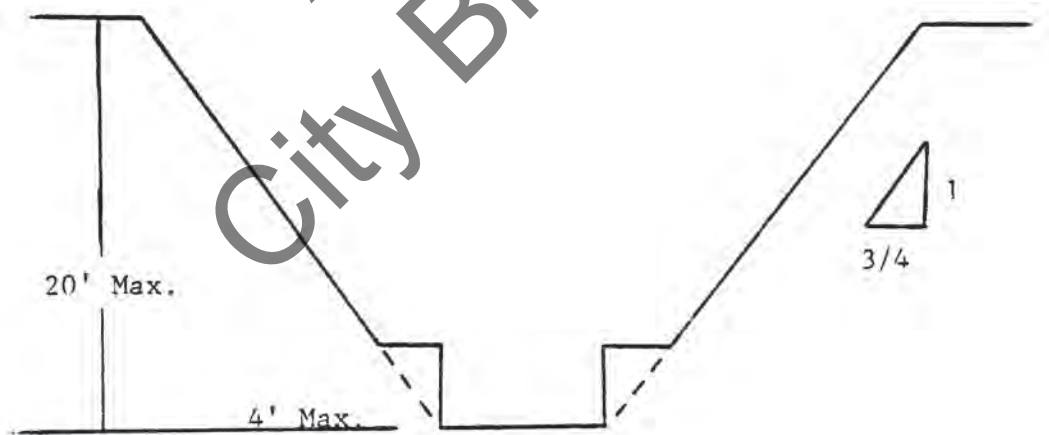
SIMPLE SLOPE—GENERAL

Exception: Simple slope excavations which are open 24 hours or less (short term) and which are 12 feet or less in depth shall have a maximum allowable slope of $\frac{1}{2}$:1.

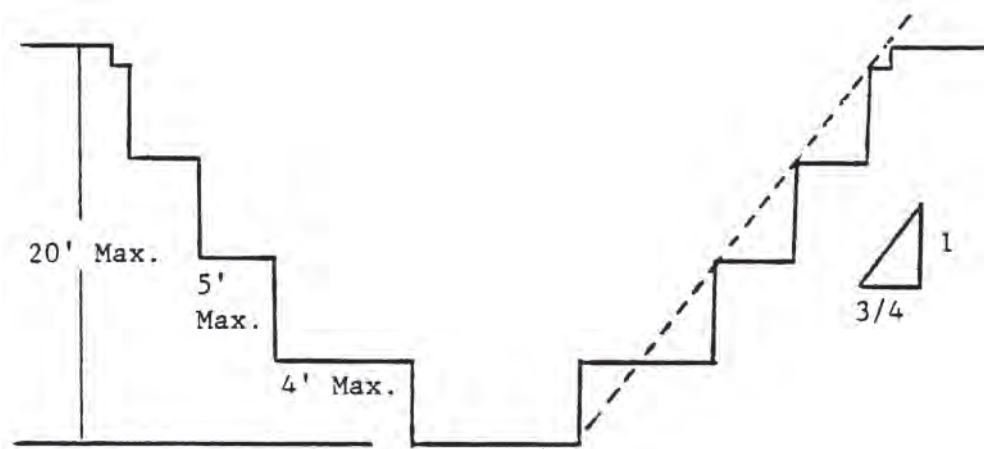


SIMPLE SLOPE—SHORT TERM

2. All benched excavations 20 feet or less in depth shall have a maximum allowable slope of $\frac{3}{4}$ to 1 and maximum bench dimensions as follows:



SIMPLE BENCH



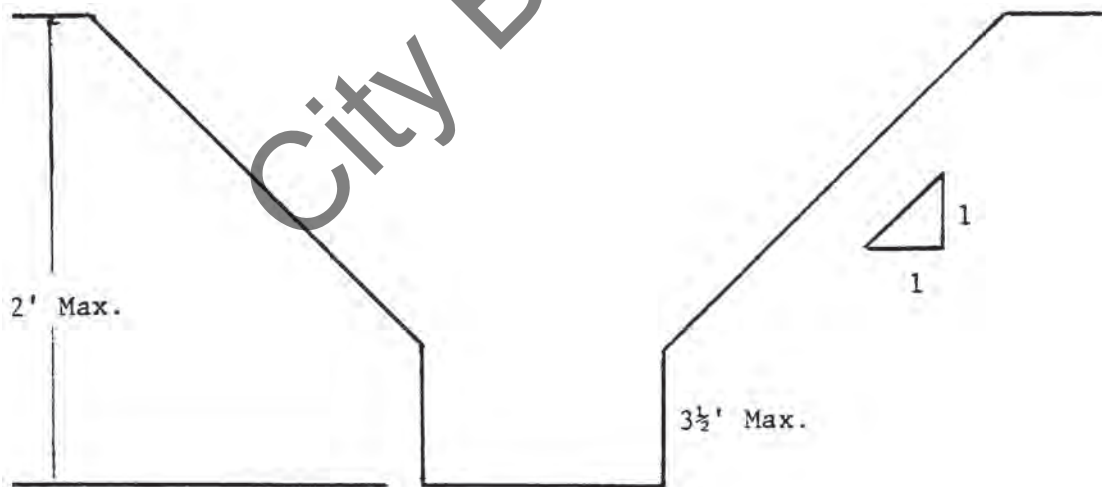
MULTIPLE BENCH

3. All excavations 8 feet or less in depth which have unsupported vertically sided lower portions shall have a maximum vertical side of 3½ feet.



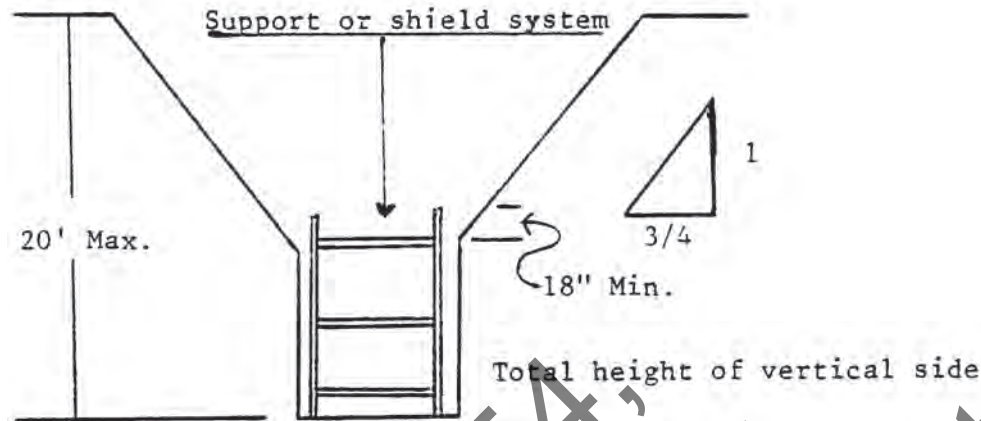
UNSUPPORTED VERTICALLY SIDED LOWER PORTION—MAXIMUM 8 FEET IN DEPTH

All excavations more than 8 feet but not more than 12 feet in depth which unsupported vertically sided lower portions shall have a maximum allowable slope of 1:1 and a maximum vertical side of 3½ feet.



UNSUPPORTED VERTICALLY SIDED LOWER PORTION—MAXIMUM 12 FEET IN DEPTH

All excavations 20 feet or less in depth which have vertically sided lower portions that are supported or shielded shall have a maximum allowable slope of $\frac{3}{4}$:1. The support or shield system must extend at least 18 inches above the top of the vertical side.

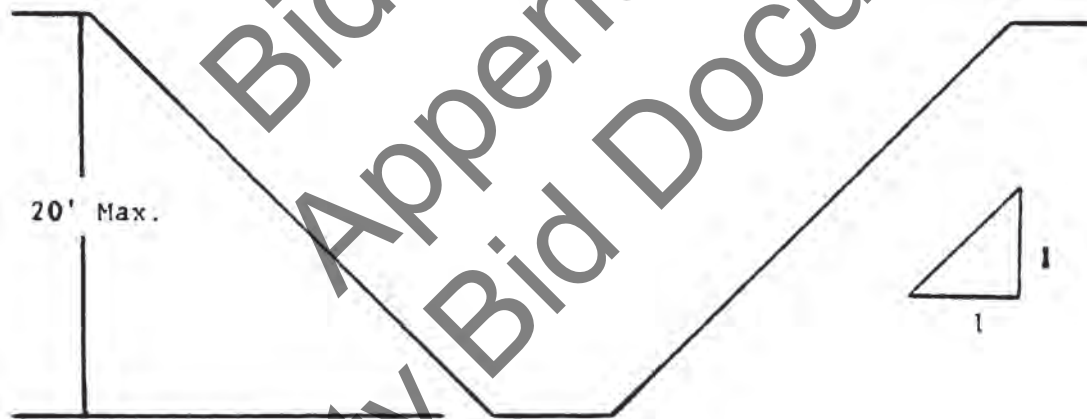


SUPPORTED OR SHIELDED VERTICALLY SIDED LOWER PORTION

4. All other simple slope, compound slope, and vertically sided lower portion excavations shall be in accordance with the other options permitted under § 1926.652(b).

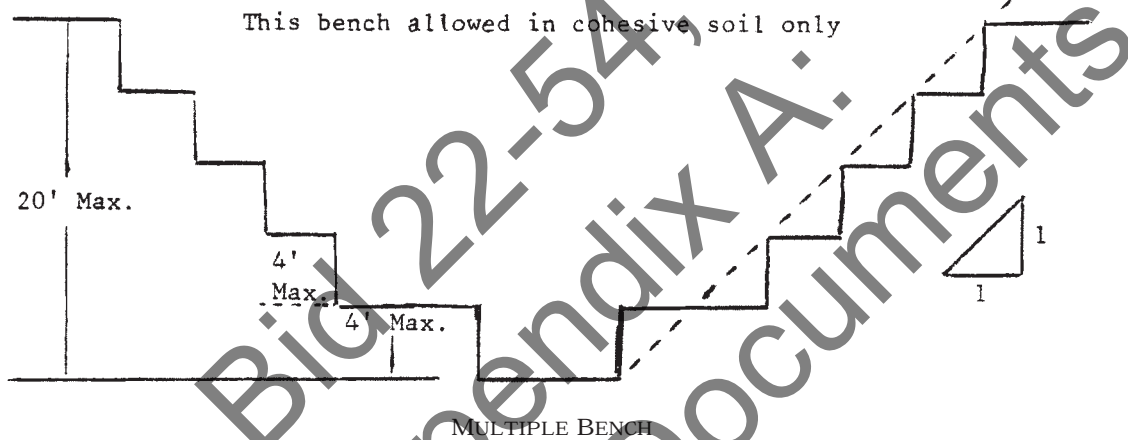
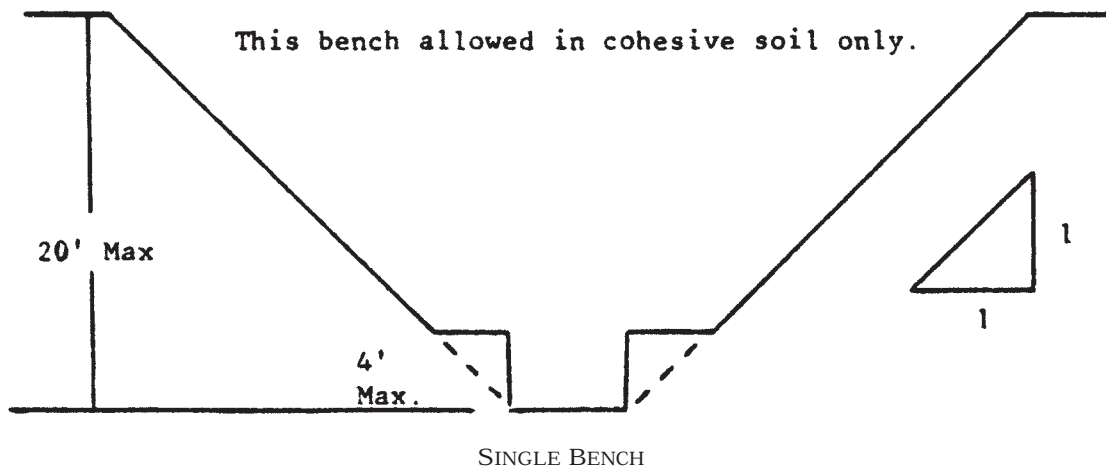
B-1.2 Excavations Made in Type B Soil

1. All simple slope excavations 20 feet or less in depth shall have a maximum allowable slope of 1:1.

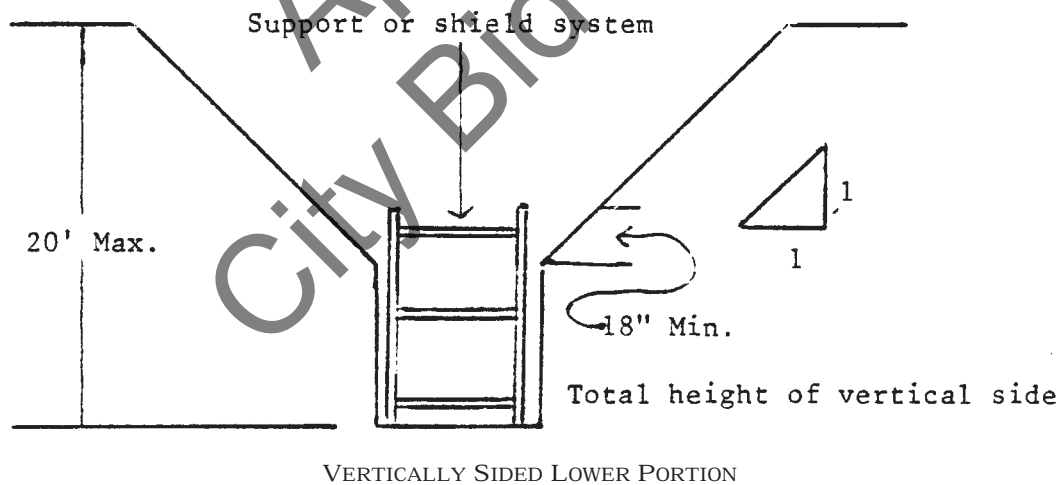


SIMPLE SLOPE

2. All benched excavations 20 feet or less in depth shall have a maximum allowable slope of 1:1 and maximum bench dimensions as follows:



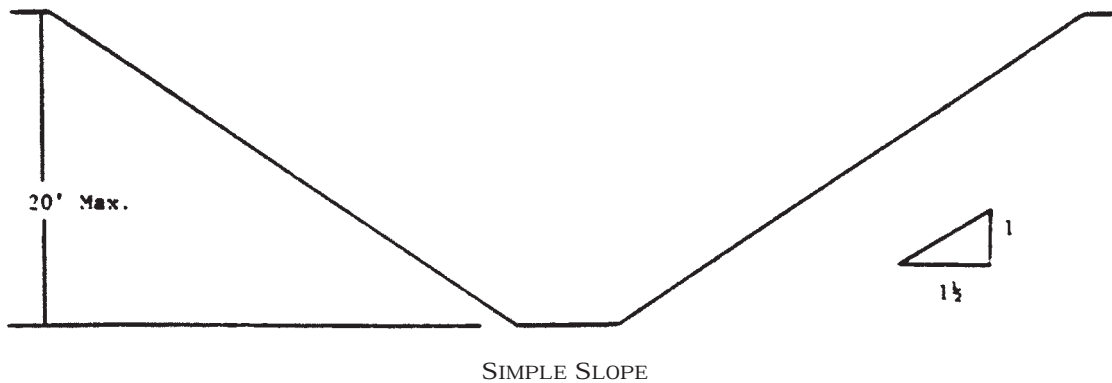
3. All excavations 20 feet or less in depth which have vertically sided lower portions shall be shielded or supported to a height at least 18 inches above the top of the vertical side. All such excavations shall have a maximum allowable slope of 1:1.



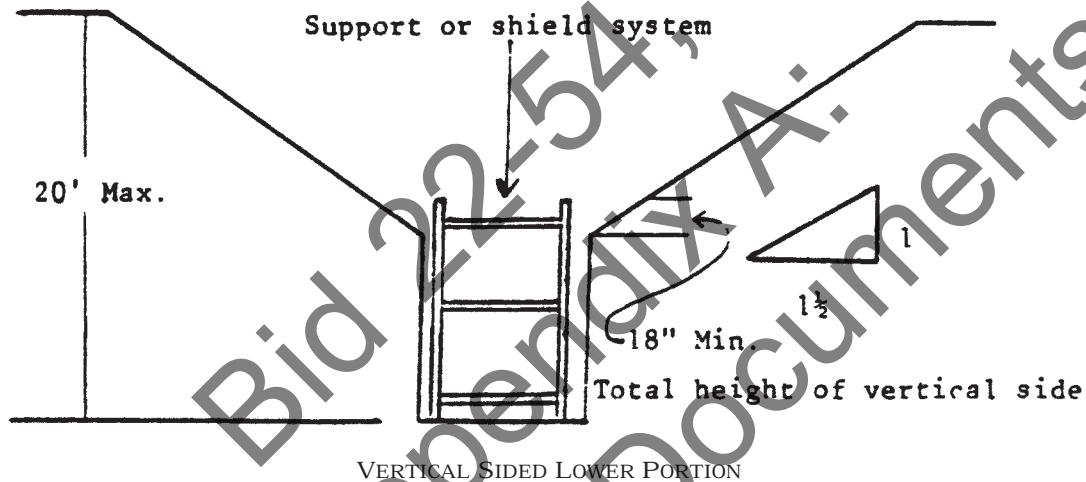
4. All other sloped excavations shall be in accordance with the other options permitted in §1926.652(b).

B-1.3 EXCAVATIONS MADE IN TYPE C SOIL

1. All simple slope excavations 20 feet or less in depth shall have a maximum allowable slope of 1½:1.



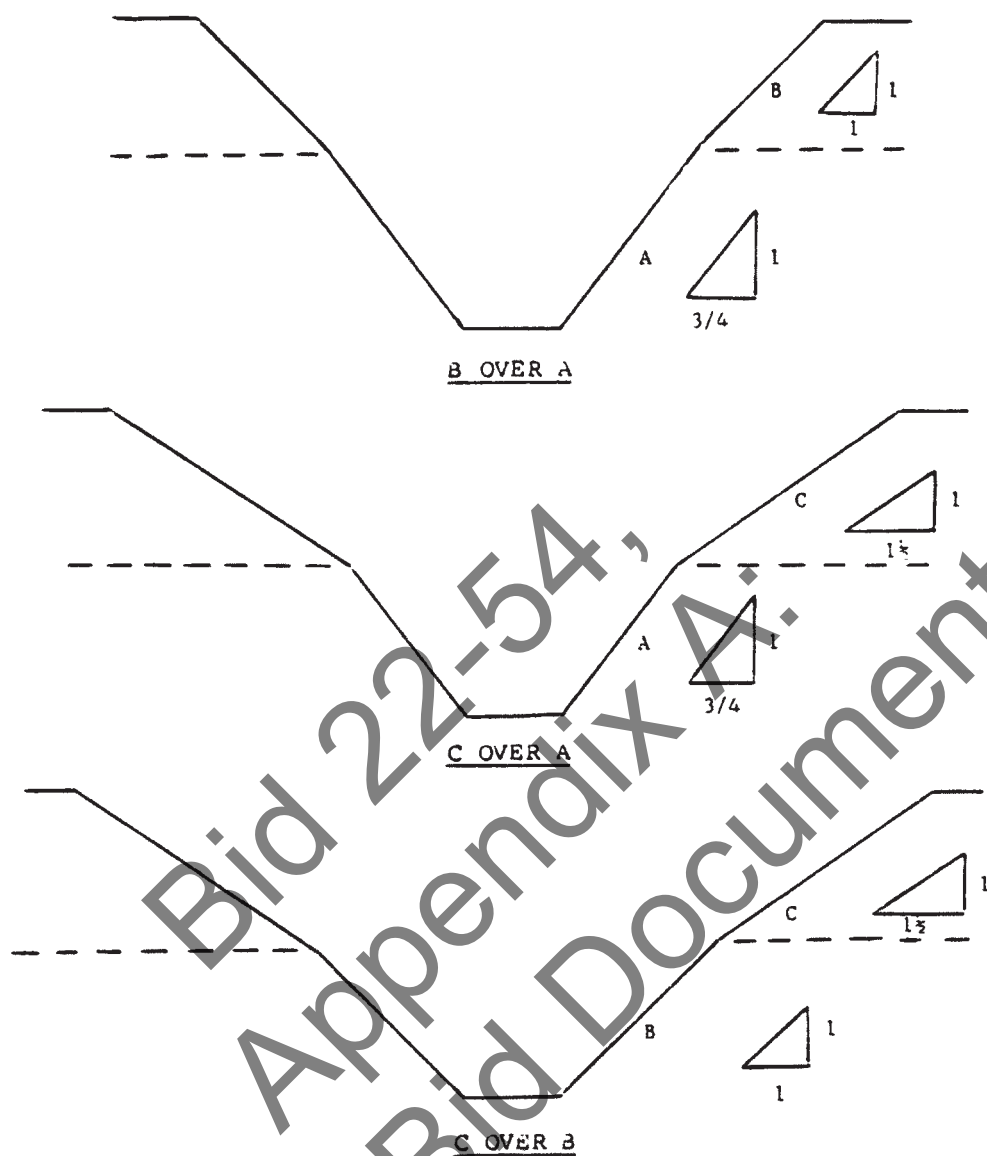
2. All excavations 20 feet or less in depth which have vertically sided lower portions shall be shielded or supported to a height at least 18 inches above the top of the vertical side. All such excavations shall have a maximum allowable slope of $1\frac{1}{2}$:1.

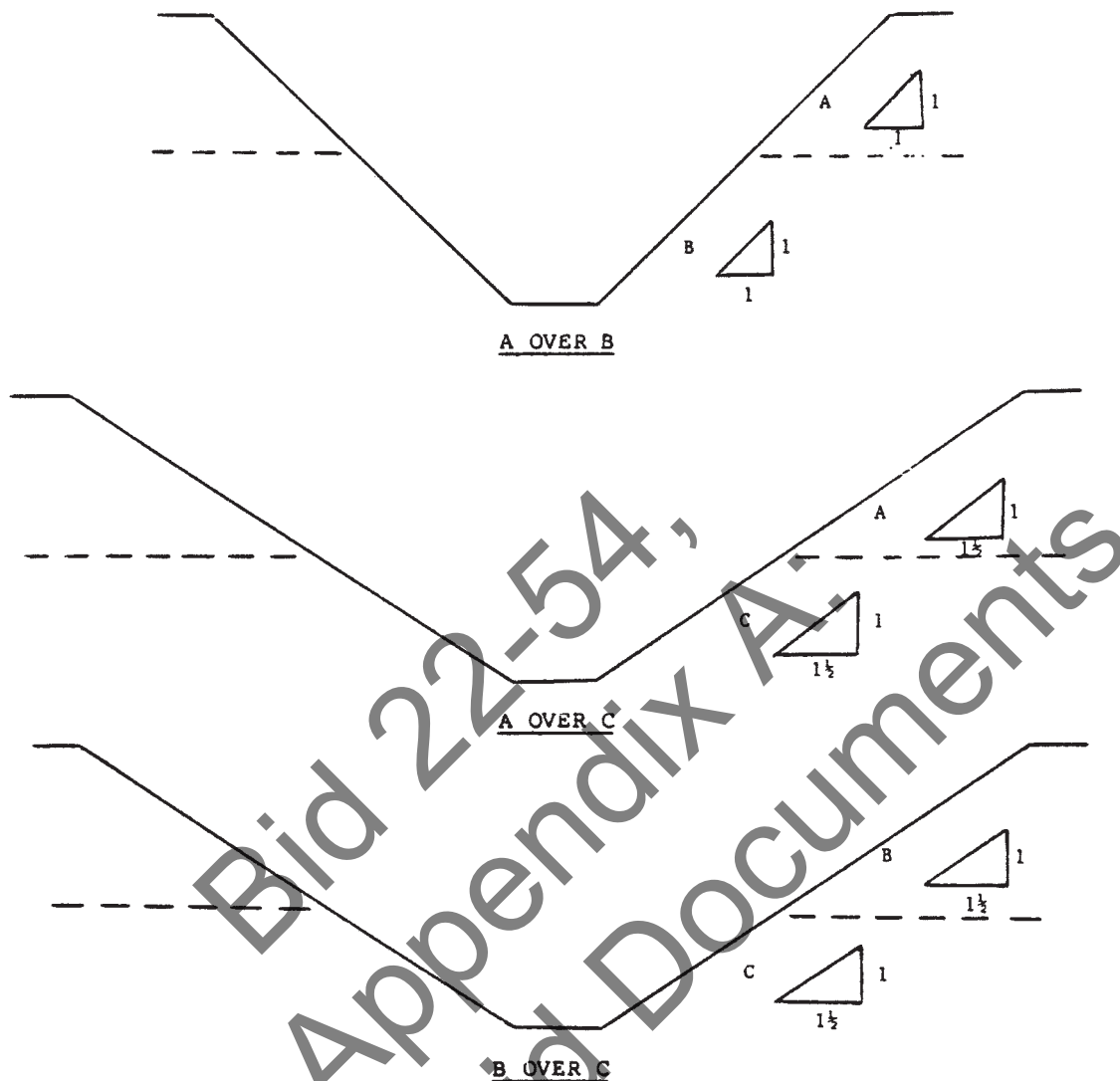


3. All other sloped excavations shall be in accordance with the other options permitted in §1926.652(b).

B-1.4 Excavations Made in Layered Soils

1. All excavations 20 feet or less in depth made in layered soils shall have a maximum allowable slope for each layer as set forth below.





2. All other sloped excavations shall be in accordance with the other options permitted in §1926.652(b).

APPENDIX C TO SUBPART P OF PART 1926—TIMBER SHORING FOR TRENCHES

(a) *Scope.* This appendix contains information that can be used timber shoring is provided as a method of protection from cave-ins in trenches that do not exceed 20 feet (6.1 m) in depth. This appendix must be used when design of timber shoring protective systems is to be performed in accordance with §1926.652(c)(1). Other timber shoring configurations; other systems of support such as hydraulic and pneumatic systems; and other protective systems such as sloping, benching, shielding, and freezing systems must be designed in accordance with the requirements set forth in §1926.652(b) and §1926.652(c).

(b) *Soil Classification.* In order to use the data presented in this appendix, the soil type or types in which the excavation is made must first be determined using the soil classification method set forth in appendix A of subpart P of this part.

(c) *Presentation of Information.* Information is presented in several forms as follows:

(1) Information is presented in tabular form in Tables C-1.1, C-1.2, and C-1.3, and Tables C-2.1, C-2.2 and C-2.3 following paragraph (g) of the appendix. Each table presents the minimum sizes of timber members to use in a shoring system, and each table contains data only for the particular soil type in which the excavation or portion of

the excavation is made. The data are arranged to allow the user the flexibility to select from among several acceptable configurations of members based on varying the horizontal spacing of the crossbraces. Stable rock is exempt from shoring requirements and therefore, no data are presented for this condition.

(2) Information concerning the basis of the tabular data and the limitations of the data is presented in paragraph (d) of this appendix, and on the tables themselves.

(3) Information explaining the use of the tabular data is presented in paragraph (e) of this appendix.

(4) Information illustrating the use of the tabular data is presented in paragraph (f) of this appendix.

(5) Miscellaneous notations regarding Tables C-1.1 through C-1.3 and Tables C-2.1 through C-2.3 are presented in paragraph (g) of this Appendix.

(d) *Basis and limitations of the data.*—(1) *Dimensions of timber members.* (i) The sizes of the timber members listed in Tables C-1.1 through C-1.3 are taken from the National Bureau of Standards (NBS) report, "Recommended Technical Provisions for Construction Practice in Shoring and Sloping of Trenches and Excavations." In addition, where NBS did not recommend specific sizes of members, member sizes are based on an analysis of the sizes required for use by existing codes and on empirical practice.

(ii) The required dimensions of the members listed in Tables C-1.1 through C-1.3 refer to actual dimensions and not nominal dimensions of the timber. Employers wanting to use nominal size shoring are directed to Tables C-2.1 through C-2.3, or have this choice under § 1926.652(c)(3), and are referred to The Corps of Engineers, The Bureau of Reclamation or data from other acceptable sources.

(2) *Limitation of application.* (i) It is not intended that the timber shoring specification apply to every situation that may be experienced in the field. These data were developed to apply to the situations that are most commonly experienced in current trenching practice. Shoring systems for use in situations that are not covered by the data in this appendix must be designed as specified in § 1926.652(c).

(ii) When any of the following conditions are present, the members specified in the tables are not considered adequate. Either an alternate timber shoring system must be designed or another type of protective system designed in accordance with § 1926.652.

(A) When loads imposed by structures or by stored material adjacent to the trench weigh in excess of the load imposed by a two-foot soil surcharge. The term "adjacent" as used here means the area within a horizontal distance from the edge of the trench equal to the depth of the trench.

(B) When vertical loads imposed on cross braces exceed a 240-pound gravity load distributed on a one-foot section of the center of the crossbrace.

(C) When surcharge loads are present from equipment weighing in excess of 20,000 pounds.

(D) When only the lower portion of a trench is shored and the remaining portion of the trench is sloped or benched unless: The sloped portion is sloped at an angle less steep than three horizontal to one vertical; or the members are selected from the tables for use at a depth which is determined from the top of the overall trench, and not from the toe of the sloped portion.

(e) *Use of Tables.* The members of the shoring system that are to be selected using this information are the cross braces, the uprights, and the wales, where wales are required. Minimum sizes of members are specified for use in different types of soil. There are six tables of information, two for each soil type. The soil type must first be determined in accordance with the soil classification system described in appendix A to subpart P of part 1926. Using the appropriate table, the selection of the size and spacing of the members is then made. The selection is based on the depth and width of the trench where the members are to be installed and, in most instances, the selection is also based on the horizontal spacing of the crossbraces. Instances where a choice of horizontal spacing of crossbracing is available, the horizontal spacing of the crossbraces must be chosen by the user before the size of any member can be determined. When the soil type, the width and depth of the trench, and the horizontal spacing of the crossbraces are known, the size and vertical spacing of the crossbraces, the size and vertical spacing of the wales, and the size and horizontal spacing of the uprights can be read from the appropriate table.

(f) *Examples to Illustrate the Use of Tables C-1.1 through C-1.3.*

(1) *Example 1.*

A trench dug in Type A soil is 13 feet deep and five feet wide.

From *Table C-1.1*, for acceptable arrangements of timber can be used.

Arrangement #B1

Space 4 4 crossbraces at six feet horizontally and four feet vertically.

Wales are not required.

Space 3 8 uprights at six feet horizontally. This arrangement is commonly called "skip shoring."

Arrangement #B2

Space 4 6 crossbraces at eight feet horizontally and four feet vertically.

Space 8 8 wales at four feet vertically.

Space 2 6 uprights at four feet horizontally.

Arrangement #B3

Space 6 6 crossbraces at 10 feet horizontally and four feet vertically.

Space 8 10 wales at four feet vertically.

Space 2 6 uprights at five feet horizontally.

Arrangement #B4

Space 6 6 crossbraces at 12 feet horizontally and four feet vertically.

Space 10 10 wales at four feet vertically.

Spaces 3 8 uprights at six feet horizontally.

(2) Example 2.

A trench dug in Type B soil in 13 feet deep and five feet wide. From Table C-1.2 three acceptable arrangements of members are listed.

Arrangement #B1

Space 6 6 crossbraces at six feet horizontally and five feet vertically.

Space 8 8 wales at five feet vertically.

Space 2 6 uprights at two feet horizontally.

Arrangement #B2

Space 6 8 crossbraces at eight feet horizontally and five feet vertically.

Space 10 10 wales at five feet vertically.

Space 2 6 uprights at two feet horizontally.

Arrangement #B3

Space 8 8 crossbraces at 10 feet horizontally and five feet vertically.

Space 10 12 wales at five feet vertically.

Space 2 6 uprights at two feet vertically.

(3) Example 3.

A trench dug in Type C soil is 13 feet deep and five feet wide.

From Table C-1.3 two acceptable arrangements of members can be used.

Arrangement #B1

Space 8 8 crossbraces at six feet horizontally and five feet vertically.

Space 10 12 wales at five feet vertically.

Position 2 6 uprights as closely together as possible.

If water must be retained use special tongue and groove uprights to form tight sheeting.

Arrangement #B2

Space 8 10 crossbraces at eight feet horizontally and five feet vertically.

Space 12 12 wales at five feet vertically.

Position 2 6 uprights in a close sheeting configuration unless water pressure must be resisted. Tight sheeting must be used where water must be retained.

(4) Example 4.

A trench dug in Type C soil is 20 feet deep and 11 feet wide. The size and spacing of members for the section of trench that is over 15 feet in depth is determined using Table C-1.3. Only one arrangement of members is provided.

Space 8 10 crossbraces at six feet horizontally and five feet vertically.

Space 12 12 wales at five feet vertically.

Use 3 6 tight sheeting.

Use of Tables C-2.1 through C-2.3 would follow the same procedures.

(g) Notes for all Tables.

1. Member sizes at spacings other than indicated are to be determined as specified in §1926.652(c), "Design of Protective Systems."

2. When conditions are saturated or submerged use Tight Sheeting. Tight Sheeting refers to the use of specially-edged timber planks (e.g., tongue and groove) at least three inches thick, steel sheet piling, or similar construction that when driven or placed in position provide a tight wall to resist the lateral pressure of water and to prevent the loss of backfill material. Close Sheeting refers to the placement of planks side-by-side allowing as little space as possible between them.

3. All spacing indicated is measured center to center.

4. Wales to be installed with greater dimension horizontal.

5. If the vertical distance from the center of the lowest crossbrace to the bottom of the trench exceeds two and one-half feet, uprights shall be firmly embedded or a mudsill shall be used. Where uprights are embedded, the vertical distance from the center of the lowest crossbrace to the bottom of the trench shall not exceed 36 inches. When mudsills are used, the vertical distance shall not exceed 42 inches. Mudsills are wales that are installed at the toe of the trench side.

6. Trench jacks may be used in lieu of or in combination with timber crossbraces.

7. Placement of crossbraces. When the vertical spacing of crossbraces is four feet, place the top crossbrace no more than two feet below the top of the trench. When the vertical spacing of crossbraces is five feet, place the top crossbrace no more than 2.5 feet below the top of the trench.

TABLE C-1.1
TIMBER TRENCH SHORING -- MINIMUM TIMBER REQUIREMENTS *

SOIL TYPE A $P_a = 25 \times H + 72 \text{ psf}$ (2 ft Surcharge)

SIZE (ACTUAL) AND SPACING OF MEMBERS **																			
DEPTH OF TRENCH (FEET)	CROSS BRACES										WALES		UPRIGHTS						
	HORIZ. SPACING (FEET)					WIDTH OF TRENCH (FEET)					VERT. SPACING (FEET)	SIZE (IN)	VERT. SPACING (FEET)	MAXIMUM ALLOWABLE HORIZONTAL SPACING (FEET)					
	UP TO 4	UP TO 6	UP TO 8	UP TO 10	UP TO 12	UP TO 4	UP TO 6	UP TO 8	UP TO 10	UP TO 12				UP TO 15	CLOSE	4	5	6	8
5	UP TO 6	4X4	4X4	4X4	4X6	6X6	4	Not Req'd	---										
TO	UP TO 8	4X4	4X4	4X4	4X6	6X6	4	Not Req'd	---							2X6			
10	UP TO 10	4X6	4X6	4X6	4X6	6X6	4	8X8	4					2X6					
	UP TO 12	4X6	4X6	4X6	6X6	6X6	4	8X8	4								2X8		
10	UP TO 6	4X4	4X4	4X4	4X6	6X6	4	Not Req'd	---										
TO	UP TO 8	4X6	4X6	4X6	6X6	6X6	4	8X8	4					2X6					
15	UP TO 10	6X6	6X5	6X6	6X6	6X8	4	8X10	4							3X8			
	UP TO 12	6X6	6X6	6X6	6X6	6X8	4	10X10	4					2X6					
15	UP TO 6	6X6	6X6	6X6	6X6	6X8	4	6X8	4	3X6									
TO	UP TO 8	6X6	6X6	6X6	6X6	6X8	4	8X8	4	3X6									
20	UP TO 10	8X8	8X8	8X8	8X8	8X10	4	8X10	4	3X6									
	UP TO 12	8X8	8X8	8X8	8X8	8X10	4	10X10	4	3X6									
OVER 20	SEE NOTE 1																		

* Mixed oak or equivalent with a bending strength not less than 850 psi.

** Manufactured members of equivalent strength may be substituted for wood.

TABLE C-1.2

TIMBER TRENCH SHORING --- MINIMUM TIMBER REQUIREMENTS *

SOIL TYPE B $P_a = 45 \text{ X H} + 72 \text{ psf (2 ft. Surcharge)}$

DEPTH OF TRENCH (FEET)	SIZE (ACTUAL) AND SPACING OF MEMBERS**										UPRIGHTS		
	CROSS BRACES					WALES		MAXIMUM ALLOWABLE HORIZONTAL SPACING					
	HORIZ. SPACING (FEET)	WIDTH OF TRENCH (FEET)					VERT. SPACING (FEET)	SIZE (IN)	VERT. SPACING (FEET)	CLOSE			
5 TO 10	UP TO 6	4	UP TO 4	UP TO 6	UP TO 9	UP TO 12	UP TO 15				2	3	
	6	4X6	4X6	6X6	6X6	6X6	6X6	5	6X8	5		2X6	
	8	6X6	6X6	6X6	6X6	6X8	6X8	5	8X10	5		2X6	
10 TO 15	UP TO 10	6X6	6X6	6X6	6X6	6X8	6X8	5	10X10	5		2X6	
	See Note 1												
	UP TO 6	6X6	6X6	6X6	6X6	6X8	6X8	5	8X8	5	2X6		
15 TO 20	UP TO 8	6X8	6X8	6X8	6X8	8X8	8X8	5	10X10	5	2X6		
	UP TO 10	8X8	8X8	8X8	8X8	8X8	8X10	5	10X12	5	2X6		
	See Note 1												
20 TO OVER 20	UP TO 6	6X8	6X8	6X8	6X8	8X8	8X8	5	8X10	5	3X6		
	UP TO 8	8X8	8X8	8X8	8X8	8X8	8X10	5	10X12	5	3X6		
	UP TO 10	8X10	8X10	8X10	8X10	8X10	10X10	5	12X12	5	3X6		
	See Note 1												
	SEE NOTE 1												

* Mixed oak or equivalent with a bending strength not less than 850 psi.

** Manufactured members of equivalent strength may be substituted for wood.

TABLE C-1.3

TIMBER TRENCH SHORING -- MINIMUM TIMBER REQUIREMENTS *
 SOIL TYPE C $P_a = 80 \text{ X H} + 72 \text{ psf (2 ft. Surcharge)}$

DEPTH OF TRENCH (FEET)	SIZE (ACTUAL) AND SPACING OF MEMBERS**										UPRIGHTS	
	CROSS BRACES					VERT. SPACING (FEET)					MAXIMUM ALLOWABLE HORIZONTAL SPACING (FEET) (See Note 2)	
	HORIZ. SPACING (FEET)	UP TO 4	UP TO 6	UP TO 9	UP TO 12	UP TO 15	VERT. SPACING (FEET)	SIZE (IN)	VERT. SPACING (FEET)	CLOSE		
5	UP TO 6	6X8	6X8	6X8	8X8	8X8	5	8X10	5	2X6		
TO 8	UP TO 8	8X8	8X8	8X8	8X8	8X10	5	10X12	5	2X6		
TO 10	UP TO 10	8X10	8X10	8X10	8X10	10X10	5	12X12	5	2X6		
	See Note 1											
10	UP TO 6	8X8	8X8	8X8	8X8	8X10	5	10X12	5	2X6		
TO 8	UP TO 8	8X10	8X10	8X10	8X10	10X10	5	12X12	5	2X6		
15	See Note 1											
	See Note 1											
15	UP TO 6	8X10	8X10	8X10	8X10	10X10	5	12X12	5	3X6		
TO 8	See Note 1											
20	See Note 1											
OVER 20	SEE NOTE 1											

* Mixed Oak or equivalent with a bending strength not less than 850 psi.
 ** Manufactured members of equivalent strength may be substituted for wood.

TIMBER TRENCH SHORING -- MINIMUM TIMBER REQUIREMENTS *

SOIL TYPE A $P_a = 25 \text{ X H} \div 72 \text{ psf (2 ft. Surcharge)}$

DEPTH OF TRENCH (FEET)	SIZE (S4S) AND SPACING OF MEMBERS **																
	CROSS BRACES										MALES		UPRIGHTS				
	HORIZ. SPACING (FEET)	WIDTH OF TRENCH (FEET)					VERT. SPACING (FEET)	SIZE (IN)	VERT. SPACING (FEET)	MAXIMUM ALLOWABLE HORIZONTAL SPACING (FEET)							
		UP TO 4	UP TO 6	UP TO 9	UP TO 12	UP TO 15				CLOSE	4	5	6				
5	UP TO 6	4X4	4X4	4X4	4X4	4X6	4	4	Not Req'd								8
TO	UP TO 8	4X4	4X4	4X4	4X6	4X6	4	4	Not Req'd							4X8	
10	UP TO 10	4X6	4X6	4X6	6X6	6X6	4	4	4			4X6					
	UP TO 12	4X6	4X6	4X6	6X6	6X6	4	4	4								
10	UP TO 6	4X4	4X4	4X4	6X6	6X6	4	4	Not Req'd						4X10		
TO	UP TO 8	4X6	4X6	4X6	6X6	6X6	4	4	4			4X6					
15	UP TO 10	6X6	6X6	6X6	6X6	6X6	4	4	4					4X8			
	UP TO 12	6X6	6X6	6X6	6X6	6X6	4	4	4						4X10		
15	UP TO 6	6X6	6X6	6X6	6X6	6X6	4	4	4								
TO	UP TO 8	6X6	6X6	6X6	6X6	6X6	4	4	4					4X12			
20	UP TO 10	6X6	6X6	6X6	6X6	6X8	4	4	4								
OVER	UP TO 12	6X6	6X6	6X6	6X8	6X8	4	4	4								
SEE NOTE 1																	

* Douglas fir or equivalent with a bending strength not less than 1500 psi.
 ** Manufactured members of equivalent strength may be substituted for wood.

TABLE C-2.2

TIMBER TRENCH SHORING -- MINIMUM TIMBER REQUIREMENTS *
 SOIL TYPE B P_a = 45 X H + 72 psf (2 ft. Surcharge)

DEPTH OF TRENCH (FEET)	SIZE (S4S) AND SPACING OF MEMBERS **												
	CROSS BRACES					WALES		UPRIGHTS					
	HORIZ. SPACING (FEET)	WIDTH OF TRENCH (FEET)					VERT. SPACING (FEET)	SIZE (IN.)	VERT. SPACING (FEET)	MAXIMUM ALLOWABLE HORIZONTAL SPACING (FEET)			
		UP TO 4	UP TO 6	UP TO 9	UP TO 12	UP TO 15				CLOSE	2	3	4
5	UP TO 6	4X6	4X6	4X6	6X6	6X6	5	6X8	5			3X12 4X8	
TO	UP TO 8	4X6	4X6	6X6	6X6	6X6	5	8X8	5		3X8		4X8
10	UP TO 10	4X6	4X6	6X6	6X6	6X8	5	8X10	5			4X8	
	See Note 1												
10	UP TO 6	6X6	6X6	6X6	6X8	6X8	5	8X8	5	3X6	4X10		
TO	UP TO 8	6X8	6X8	6X8	8X8	8X8	5	10X10	5	3X6	4X10		
15	UP TO 10	6X8	6X8	8X8	8X8	8X8	5	10X12	5	3X6	4X10		
	See Note 1												
15	UP TO 6	6X8	6X8	6X8	6X8	8X8	5	8X10	5	4X6			
TO	UP TO 8	6X8	6X8	6X8	8X8	8X8	5	10X12	5	4X6			
20	UP TO 10	8X8	8X8	8X8	8X8	8X8	5	12X12	5	4X6			
	See Note 1												
OVER 20	SEE NOTE 1												

* Douglas fir or equivalent with a bending strength not less than 1500 psi.

** Manufactured members of equivalent strength may be substituted for wood.

TABLE C-2.3
TIMBER TRENCH SHORING -- MINIMUM TIMBER REQUIREMENTS *
SOIL TYPE C $P_a = 80 \times H + 72$ psf (2 ft. Surcharge)

DEPTH OF TRENCH (FEET)	SIZE (S4S) AND SPACING OF MEMBERS **											
	CROSS BRACES						WALES			UPRIGHTS		
	WIDTH OF TRENCH (FEET)						VERT. SPACING (FEET)			MAXIMUM ALLOWABLE HORIZONTAL SPACING (FEET)		
	UP TO 4	UP TO 6	UP TO 9	UP TO 12	UP TO 15	UP TO 15	VERT. SPACING (FEET)	SIZE (IN)	VERT. SPACING (FEET)	CLOSE		
5	UP TO 6	6X6	6X6	6X6	8X8	8X8	5	8X8	5	3X6		
TO 8	UP TO 8	6X6	6X6	8X8	8X8	8X8	5	10X10	5	3X6		
TO 10	UP TO 10	6X6	8X8	8X8	8X8	8X8	5	10X12	5	3X6		
	See Note 1											
10	UP TO 6	6X8	6X8	8X8	8X8	8X8	5	10X10	5	4X6		
TO 15	UP TO 8	8X8	8X8	8X8	8X8	8X8	5	12X12	5	4X6		
	See Note 1											
	See Note 1											
15	UP TO 6	8X8	8X8	8X10	8X10	8X10	5	10X12	5	4X6		
TO 20	See Note 1											
	See Note 1											
	See Note 1											
OVER 20	See Note 1											

* Douglas fir or equivalent with a bending strength not less than 1500 psi.
** Manufactured members of equivalent strength may be substituted for wood.

APPENDIX D TO SUBPART P OF PART 1926—ALUMINUM HYDRAULIC SHORING FOR TRENCHES

(a) *Scope.* This appendix contains information that can be used when aluminum hydraulic shoring is provided as a method of protection against cave-ins in trenches that

do not exceed 20 feet (6.1m) in depth. This appendix must be used when design of the aluminum hydraulic protective system cannot be performed in accordance with § 1926.652(c)(2).

(b) *Soil Classification.* In order to use data presented in this appendix, the soil type or types in which the excavation is made must

first be determined using the soil classification method set forth in appendix A of subpart P of part 1926.

(c) *Presentation of Information.* Information is presented in several forms as follows:

(1) Information is presented in tabular form in Tables D-1.1, D-1.2, D-1.3 and D-1.4. Each table presents the maximum vertical and horizontal spacings that may be used with various aluminum member sizes and various hydraulic cylinder sizes. Each table contains data only for the particular soil type in which the excavation or portion of the excavation is made. Tables D-1.1 and D-1.2 are for vertical shores in Types A and B soil. Tables D-1.3 and D-1.4 are for horizontal waler systems in Types B and C soil.

(2) Information concerning the basis of the tabular data and the limitations of the data is presented in paragraph (d) of this appendix.

(3) Information explaining the use of the tabular data is presented in paragraph (e) of this appendix.

(4) Information illustrating the use of the tabular data is presented in paragraph (f) of this appendix.

(5) Miscellaneous notations (footnotes) regarding Table D-1.1 through D-1.4 are presented in paragraph (g) of this appendix.

(6) Figures, illustrating typical installations of hydraulic shoring, are included just prior to the Tables. The illustrations page is entitled "Aluminum Hydraulic Shoring; Typical Installations."

(d) *Basis and limitations of the data.*

(1) Vertical shore rails and horizontal wales are those that meet the Section Modulus requirements in the D-1 Tables. Aluminum material is 6061-T6 or material of equivalent strength and properties.

(2) Hydraulic cylinders specifications. (i) 2-inch cylinders shall be a minimum 2-inch inside diameter with a minimum safe working capacity of no less than 18,000 pounds axial compressive load at maximum extension. Maximum extension is to include full range of cylinder extensions as recommended by product manufacturer.

(ii) 3-inch cylinders shall be a minimum 3-inch inside diameter with a safe working capacity of not less than 30,000 pounds axial compressive load at extensions as recommended by product manufacturer.

(3) Limitation of application.

(i) It is not intended that the aluminum hydraulic specification apply to every situation that may be experienced in the field. These data were developed to apply to the situations that are most commonly experienced in current trenching practice. Shoring systems for use in situations that are not covered by the data in this appendix must be otherwise designed as specified in §1926.652(c).

(ii) When any of the following conditions are present, the members specified in the Ta-

bles are not considered adequate. In this case, an alternative aluminum hydraulic shoring system or other type of protective system must be designed in accordance with §1926.652.

(A) When vertical loads imposed on cross braces exceed a 100 Pound gravity load distributed on a one foot section of the center of the hydraulic cylinder.

(B) When surcharge loads are present from equipment weighing in excess of 20,000 pounds.

(C) When only the lower portion or a trench is shored and the remaining portion of the trench is sloped or benched unless: The sloped portion is sloped at an angle less steep than three horizontal to one vertical; or the members are selected from the tables for use at a depth which is determined from the top of the overall trench, and not from the toe of the sloped portion.

(e) *Use of Tables D-1.1, D-1.2, D-1.3 and D-1.4.* The members of the shoring system that are to be selected using this information are the hydraulic cylinders, and either the vertical shores or the horizontal wales. When a waler system is used the vertical timber sheeting to be used is also selected from these tables. The Tables D-1.1 and D-1.2 for vertical shores are used in Type A and B soils that do not require sheeting, Type B soils that may require sheeting, and Type C soils that always require sheeting are found in the horizontal wale Tables D-1.3 and D-1.4. The soil type must first be determined in accordance with the soil classification system described in appendix A to subpart P of part 1926. Using the appropriate table, the selection of the size and spacing of the members is made. The selection is based on the depth and width of the trench where the members are to be installed. In these tables the vertical spacing is held constant at four feet on center. The tables show the maximum horizontal spacing of cylinders allowed for each size of wale in the waler system tables, and in the vertical shore tables, the hydraulic cylinder horizontal spacing is the same as the vertical shore spacing.

(f) *Example to Illustrate the Use of the Tables:*

(1) Example 1:

A trench dug in Type A soil is 6 feet deep and 3 feet wide. From Table D-1.1: Find vertical shores and 2 inch diameter cylinders spaced 8 feet on center (o.c.) horizontally and 4 feet on center (o.c.) vertically. (See Figures 1 & 3 for typical installations.)

(2) Example 2:

A trench is dug in Type B soil that does not require sheeting, 13 feet deep and 5 feet wide. From Table D-1.2: Find vertical shores and 2 inch diameter cylinders spaced 6.5 feet o.c. horizontally and 4 feet o.c. vertically. (See Figures 1 & 3 for typical installations.)

(3) A trench is dug in Type B soil that does not require sheeting, but does experience some minor raveling of the trench face. The

trench is 16 feet deep and 9 feet wide. From Table D-1.2: Find vertical shores and 2 inch diameter cylinder (with special oversleeves as designated by footnote #B2) spaced 5.5 feet o.c. horizontally and 4 feet o.c. vertically, plywood (per footnote (g)(7) to the D-1 Table) should be used behind the shores. (See Figures 2 & 3 for typical installations.)

(4) Example 4: A trench is dug in previously disturbed Type B soil, with characteristics of a Type C soil, and will require sheeting. The trench is 18 feet deep and 12 feet wide. 8 foot horizontal spacing between cylinders is desired for working space. From Table D-1.3: Find horizontal wale with a section modulus of 14.0 spaced at 4 feet o.c. vertically and 3 inch diameter cylinder spaced at 9 feet maximum o.c. horizontally. 3 12 timber sheeting is required at close spacing vertically. (See Figure 4 for typical installation.)

(5) Example 5: A trench is dug in Type C soil, 9 feet deep and 4 feet wide. Horizontal cylinder spacing in excess of 6 feet is desired for working space. From Table D-1.4: Find horizontal wale with a section modulus of 7.0 and 2 inch diameter cylinders spaced at 6.5 feet o.c. horizontally. Or, find horizontal wale with a 14.0 section modulus and 3 inch diameter cylinder spaced at 10 feet o.c. horizontally. Both wales are spaced 4 feet o.c. vertically. 3 12 timber sheeting is required at close spacing vertically. (See Figure 4 for typical installation.)

(g) *Footnotes, and general notes, for Tables D-1.1, D-1.2, D-1.3, and D-1.4.*

(1) For applications other than those listed in the tables, refer to §1926.652(c)(2) for use of manufacturer's tabulated data. For trench depths in excess of 20 feet, refer to §1926.652(c)(2) and §1926.652(c)(3).

(2) 2 inch diameter cylinders, at this width, shall have structural steel tube (3.5 3.5 0.1875) oversleeves, or structural oversleeves of manufacturer's specification, extending the full, collapsed length.

(3) Hydraulic cylinders capacities. (i) 2 inch cylinders shall be a minimum 2-inch inside diameter with a safe working capacity of not less than 18,000 pounds axial compressive load at maximum extension. Maximum extension is to include full range of cylinder extensions as recommended by product manufacturer.

(ii) 3-inch cylinders shall be a minimum 3-inch inside diameter with a safe work capacity of not less than 30,000 pounds axial compressive load at maximum extension. Maximum extension is to include full range of cylinder extensions as recommended by product manufacturer.

(4) All spacing indicated is measured center to center.

(5) Vertical shoring rails shall have a minimum section modulus of 0.40 inch.

(6) When vertical shores are used, there must be a minimum of three shores spaced equally, horizontally, in a group.

(7) Plywood shall be 1.125 in. thick softwood or 0.75 inch. thick, 14 ply, arctic white birch (Finland form). Please note that plywood is not intended as a structural member, but only for prevention of local raveling (sloughing of the trench face) between shores.

(8) See appendix C for timber specifications.

(9) Wales are calculated for simple span conditions.

(10) See appendix D, item (d), for basis and limitations of the data.

ALUMINUM HYDRAULIC SHORING TYPICAL INSTALLATIONS

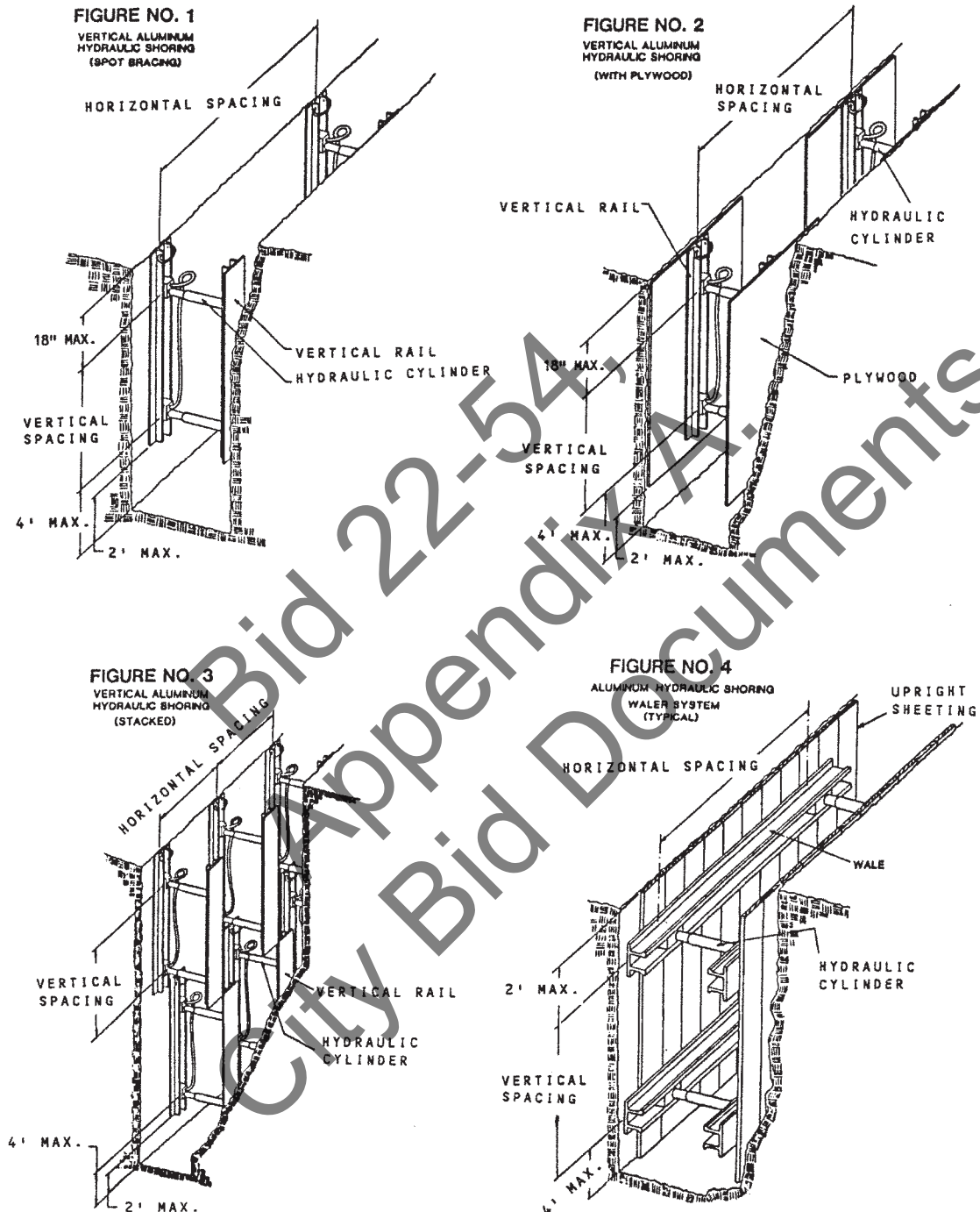


TABLE D - 1.1
ALUMINUM HYDRAULIC SHORING
VERTICAL SHORES
FOR SOIL TYPE A

HYDRAULIC CYLINDERS				
DEPTH OF TRENCH (FEET)	MAXIMUM HORIZONTAL SPACING (FEET)	MAXIMUM VERTICAL SPACING (FEET)	WIDTH OF TRENCH (FEET)	
			UP TO 8	OVER 8 UP TO 15
OVER 5 UP TO 10	8	4	2 INCH DIAMETER, NOTE (2)	3 INCH DIAMETER
OVER 10 UP TO 15	8			
OVER 15 UP TO 20	7			
OVER 20	NOTE (1)			

Footnotes to tables, and general notes on hydraulic shoring, are found in Appendix D, Item (g)

Note (1): See Appendix D, Item (g) (1)

Note (2): See Appendix D, Item (g) (2)

TABLE D - 1.2
ALUMINUM HYDRAULIC SHORING
VERTICAL SHORES
FOR SOIL TYPE B

HYDRAULIC CYLINDERS				
DEPTH OF TRENCH (FEET)	MAXIMUM HORIZONTAL SPACING (FEET)	MAXIMUM VERTICAL SPACING (FEET)	WIDTH OF TRENCH (FEET)	
			UP TO 8	OVER 8 UP TO 12
OVER 5 UP TO 10	8	4	2 INCH DIAMETER, NOTE (2)	3 INCH DIAMETER
OVER 10 UP TO 15	6.5			
OVER 15 UP TO 20	5.5			
OVER 20	NOTE (1)			

Footnotes to tables, and general notes on hydraulic shoring, are found in Appendix D, Item (g)

Note (1): See Appendix D, Item (g) (1)

Note (2): See Appendix D, Item (g) (2)

TABLE D - 1.3
ALUMINUM HYDRAULIC SHORING
WALER SYSTEMS
FOR SOIL TYPE B

DEPTH OF TRENCH (FEET)	WALES		HYDRAULIC CYLINDERS						TIMBER UPRIGHTS	
	VERTICAL SPACING (FEET)	SECTION MODULUS (IN ³)	WIDTH OF TRENCH (FEET)						MAX. HORIZ. SPACING (ON CENTER)	
			UP TO 8		OVER 8 UP TO 12		OVER 12 UP TO 15		SOLID SHEET	2 FT. 3 FT.
			HORIZ. SPACING	CYLINDER DIAMETER	HORIZ. SPACING	CYLINDER DIAMETER	HORIZ. SPACING	CYLINDER DIAMETER		
OVER 5 UP TO 10	4	3.5	8.0	2 IN	8.0	NOTE(2)	8.0	3 IN		
		7.0	9.0	2 IN	9.0	NOTE(2)	9.0	3 IN		3x12
		14.0	12.0	3 IN	12.0	3 IN	12.0	3 IN		
OVER 10 UP TO 15	4	3.5	6.0	2 IN	6.0	NOTE(2)	6.0	3 IN		
		7.0	8.0	3 IN	8.0	3 IN	8.0	3 IN		3x12
		14.0	10.0	3 IN	10.0	3 IN	10.0	3 IN		
OVER 15 UP TO 20	4	3.5	5.5	2 IN	5.5	NOTE(2)	5.5	3 IN		
		7.0	6.0	3 IN	6.0	3 IN	6.0	3 IN	3x12	
		14.0	9.0	3 IN	9.0	3 IN	9.0	3 IN		
OVER 20			NOTE (1)							

Footnotes to tables, and general notes on hydraulic shoring, are found in Appendix D, Item (g)

Notes (1): See Appendix D, item (g) (1)

Notes (2): See Appendix D, Item (g) (2)

* Consult product manufacturer and/or qualified engineer for Section Modulus of available wales.

TABLE D - 1.4
ALUMINUM HYDRAULIC SHORING
WALER SYSTEMS
FOR SOIL TYPE C

DEPTH OF TRENCH (FEET)	WALES		HYDRAULIC CYLINDERS								TIMBER UPRIGHTS	
	VERTICAL SPACING (FEET)	SECTION MODULUS (IN ³)	WIDTH OF TRENCH (FEET)								MAX. HORIZ. SPACING (ON CENTER)	
			UP TO 8		OVER 8 UP TO 12		OVER 12 UP TO 15		OVER 15 UP TO 20		SOLID SHEET	3 FT. 3 FT.
			HORIZ. SPACING	CYLINDER DIAMETER	HORIZ. SPACING	CYLINDER DIAMETER	HORIZ. SPACING	CYLINDER DIAMETER	HORIZ. SPACING	CYLINDER DIAMETER		
OVER 5 UP TO 10	4	3.5	6.0	2 IN	6.0	2 IN	6.0	3 IN	6.0	3 IN		
		7.0	6.5	2 IN	6.5	NOTE(2)	6.5	3 IN	6.5	3 IN	3x12	—
		14.0	10.0	3 IN	10.0	3 IN	10.0	3 IN	10.0	3 IN		
OVER 10 UP TO 15	4	3.5	4.0	2 IN	4.0	2 IN	4.0	3 IN	4.0	3 IN		
		7.0	5.5	3 IN	5.5	NOTE(2)	5.5	3 IN	5.5	3 IN	3x12	—
		14.0	8.0	3 IN	8.0	3 IN	8.0	3 IN	8.0	3 IN		
OVER 15 UP TO 20	4	3.5	3.5	2 IN	3.5	2 IN	3.5	3 IN	3.5	3 IN		
		7.0	5.0	3 IN	5.0	NOTE(2)	5.0	3 IN	5.0	3 IN	3x12	—
		14.0	6.0	3 IN	6.0	3 IN	6.0	3 IN	6.0	3 IN		
OVER 20			NOTE (1)									

Footnotes to tables, and general notes on hydraulic shoring, are found in Appendix D, Item (g)

Notes (1): See Appendix D, item (g) (1)

Notes (2): See Appendix D, Item (g) (2)

* Consult product manufacturer and/or qualified engineer for Section Modulus of available wales.

APPENDIX E TO SUBPART P OF PART 1926—ALTERNATIVES TO TIMBER SHORING

Figure 1. Aluminum Hydraulic Shoring

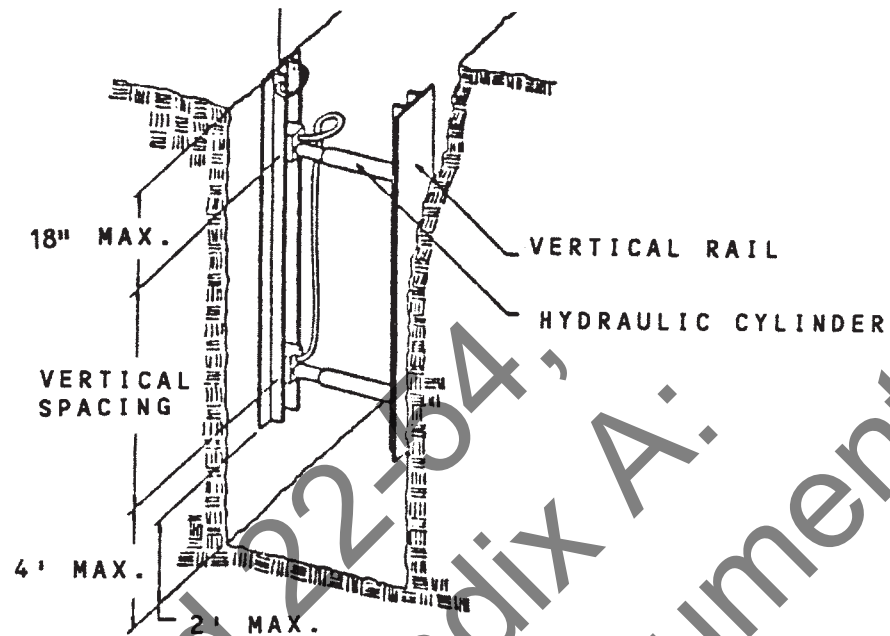


Figure 2. Pneumatic/hydraulic Shoring

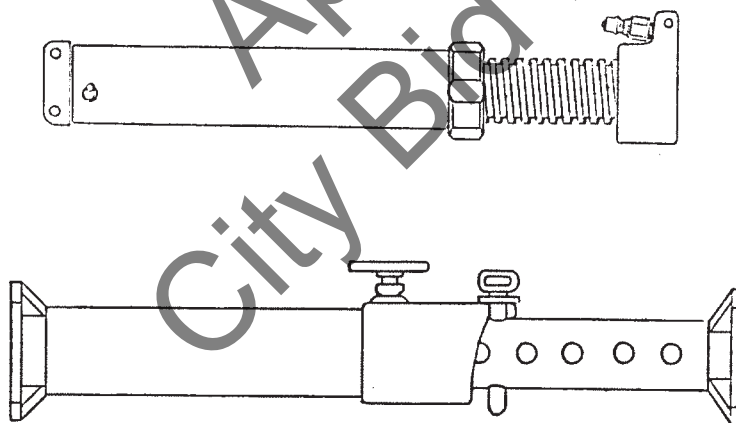


Figure 3. Trench Jacks (Screw Jacks)

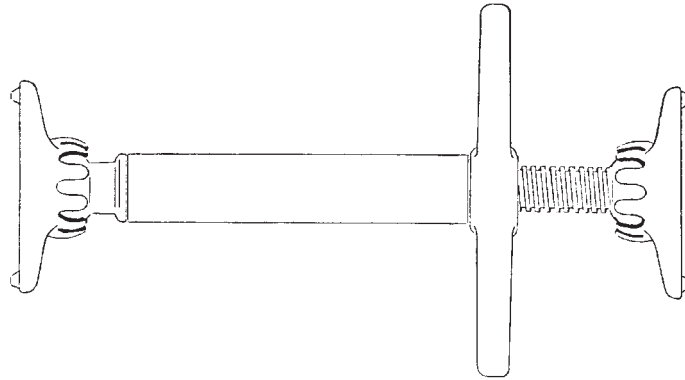
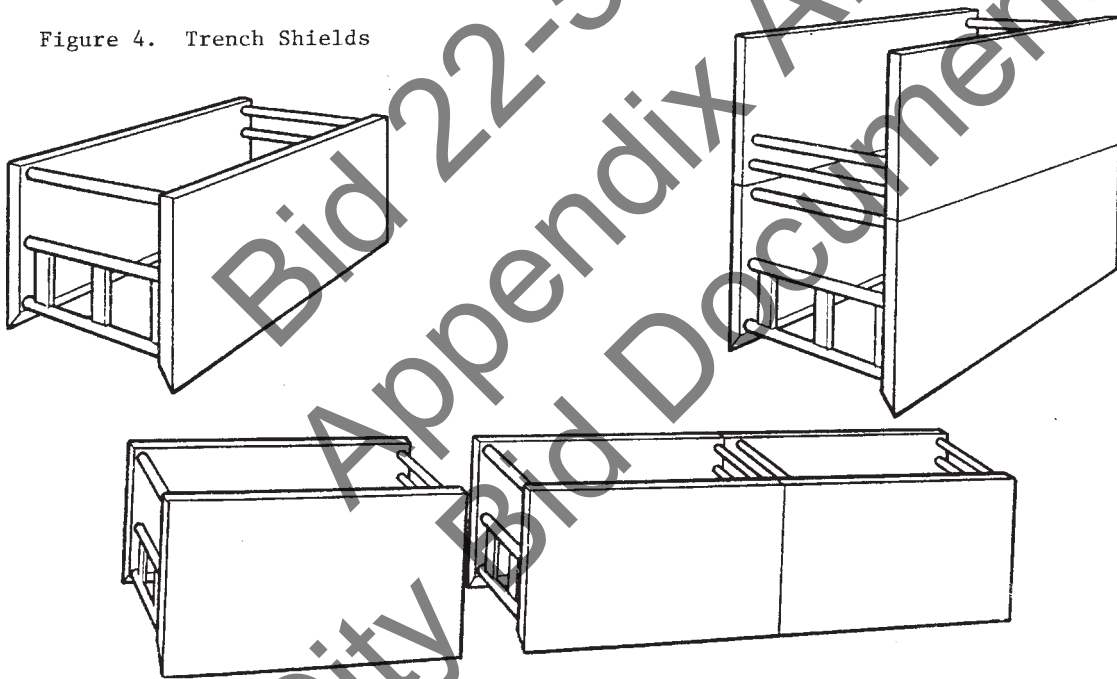


Figure 4. Trench Shields



APPENDIX F TO SUBPART P OF PART 1926—SELECTION OF PROTECTIVE SYSTEMS

The following figures are a graphic summary of the requirements contained in sub-

part P for excavations 20 feet or less in depth. Protective systems for use in excavations more than 20 feet in depth must be designed by a registered professional engineer in accordance with §1926.652 (b) and (c).

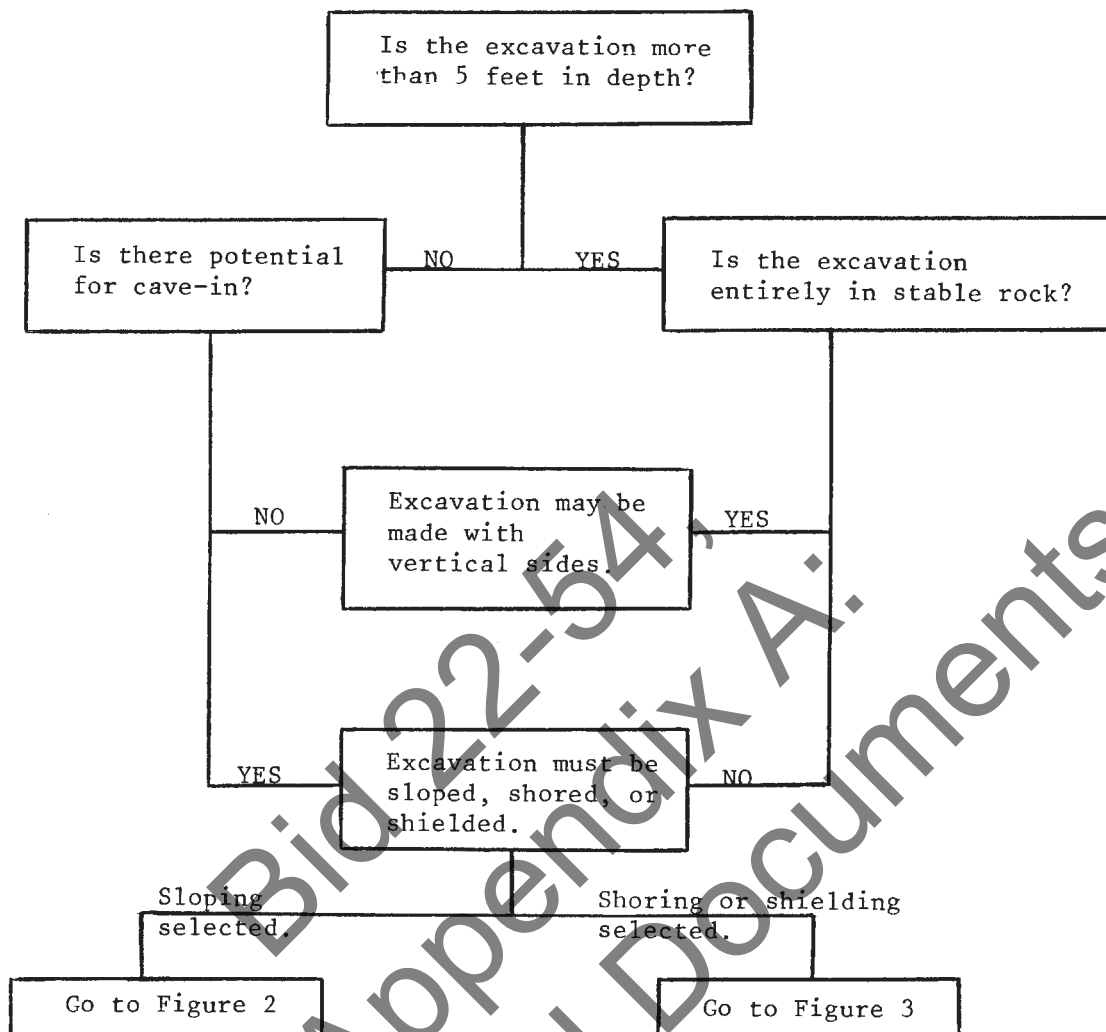


FIGURE 1 - PRELIMINARY DECISIONS

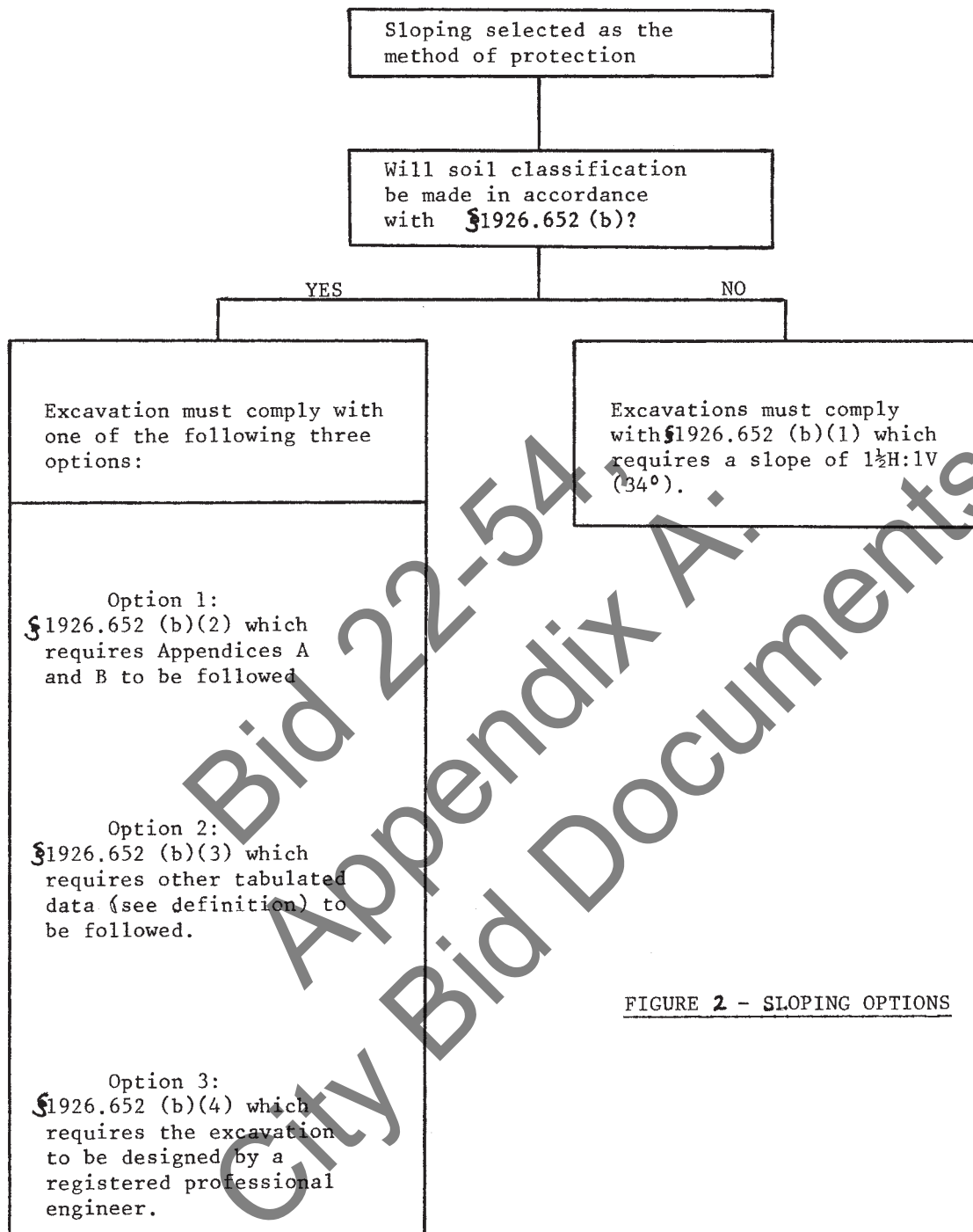


FIGURE 2 - SLOPING OPTIONS

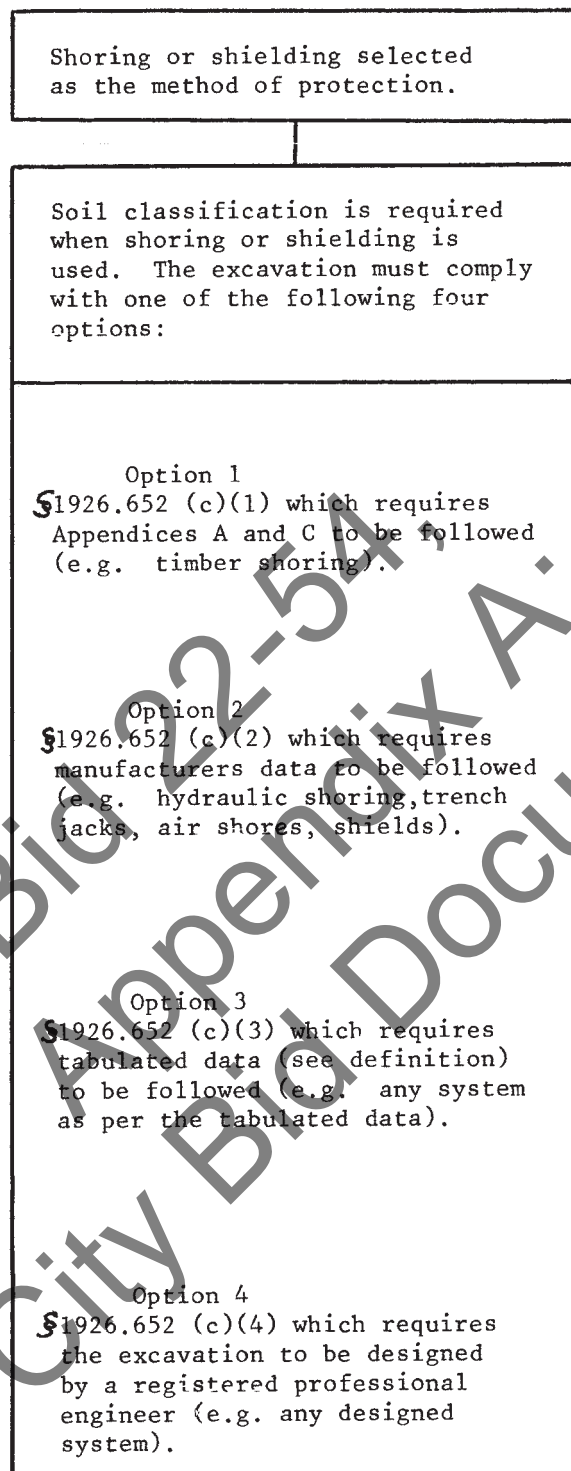


FIGURE 3 - SHORING AND SHIELDING OPTIONS

Bid 22-54, Addendum 1



CITY OF
FAYETTEVILLE
ARKANSAS

Date: Wednesday, November 16, 2022

To: All Prospective Vendors

From: Amanda Beilfuss – 479.575.8220 – abeilfuss@fayetteville-ar.gov

RE: Bid 22-54, Construction – Wilson Park Pavilion

This addendum is hereby made a part of the contract documents to the same extent as though it were originally included therein. Interested parties should indicate their receipt of same in the appropriate blank of the Bid.
BIDDERS SHALL ACKNOWLEDGE THIS ADDENDUM ON THE DESIGNATED LOCATION ON THE BID FORM.

1. A non-mandatory Pre-Bid meeting was held on-site at Wilson Park in Fayetteville, Arkansas on Wednesday, November 9, 2022 at 2:00 PM. The listing of attendees is also attached for disclosure to all interested parties.

- a. Attendees:

- i. City of Fayetteville:

1. Amanda Beilfuss, Sr. Purchasing Agent
 2. Les McGaugh, Purchasing Director
 3. Quin Thompson, Facilities Manager
 4. Ted Jack, Park Planning Superintendent
 5. Jordan Lemaster, Project Manager – DEMX Arch.
 6. Tim Maddox, Principal – DEMX Arch.

- ii. Vendors:

1. Milestone Construction
 2. CDI Contractors
 3. EWI Constructors
 4. Pick It Construction

2. CLARIFICATIONS

- a. Question: What is the budget for this project?

- i. Answer: While we don't have the budget, the anticipated project range is 1,150,000 – 1,650,000.

- b. Question: Is there a staging area?

- i. Answer: The lower parking lot shall be fenced off, closed to the public, and to be used for construction only. Please refer to the map attached to this addendum.

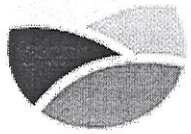
- c. Question: Are tennis/pickleball courts to remain open?

- i. Answer: Yes, all courts shall remain open and accessible to park patrons.

- d. Question: Who will be responsible for providing temporary facilities for the public?
 - i. Answer: *The City of Fayetteville will provide temporary facilities for public use.*
- e. Question: Is the General Contractor responsible for water/sewer impact fees, or any other permit costs?
 - i. Answer: *The Contractor will not be responsible for water/sewer impact fees. Please refer to page 69 of the Project Manual for additional permit information.*
- f. Question: Is the General Contractor responsible for the Performance & Payment bonds?
 - i. Answer: *Yes, the awarded Contractor is responsible for obtaining 100% Performance and Payment Bonds (contracted amount inclusive of approved contingency) within 10 days of contract award.*
- g. Question: Plan Sheet a1.2 refers to various sizing of aluminum tubing. Is there a thickness requirement for this aluminum tubing?
 - i. Answer: *AvaDeck Tubing was used as basis for design. The thickness shown varies but is 1/8" wall thickness for the largest sizes.*
- h. Question: Plan Sheet a1.2 refers to a 'Kynar' finish on some of the aluminum tubing. Is this a finish that goes on before by the supplier or after by the contractor?
 - i. Answer: *'Kynar' is an industry standard multi-layered factory applied finish. Different manufacturers have different names for similar factory prefinished products. The finish holds up well for a very long time.*

3. ADDITIONAL INFORMATION

- a. An aerial map has been provided to assist with placement of construction fencing through the duration of the project. The Contractor shall also place signage at the drive entrance indicating that the area is for construction vehicles only. The Contractor shall also place signage along the construction fencing indicating "Construction Area - Keep Out". This map showing the construction fencing placement is attached to this addendum.
- b. To better assist in the bidding process, bidders shall be aware that the existing restroom building is constructed of concrete.
- c. Saniflo hand dryer (model #M17ACS-UL) in a stainless finish is approved as an equal.



CITY OF
FAYETTEVILLE
ARKANSAS

City of Fayetteville, Arkansas

Attendance Sheet

BID/RFP/RFQ #: 22-54

Description: Construction - Wilson Park Pavilion

Function: Pre-Bid Meeting Bid Opening, Selection Committee Meeting, Interviews

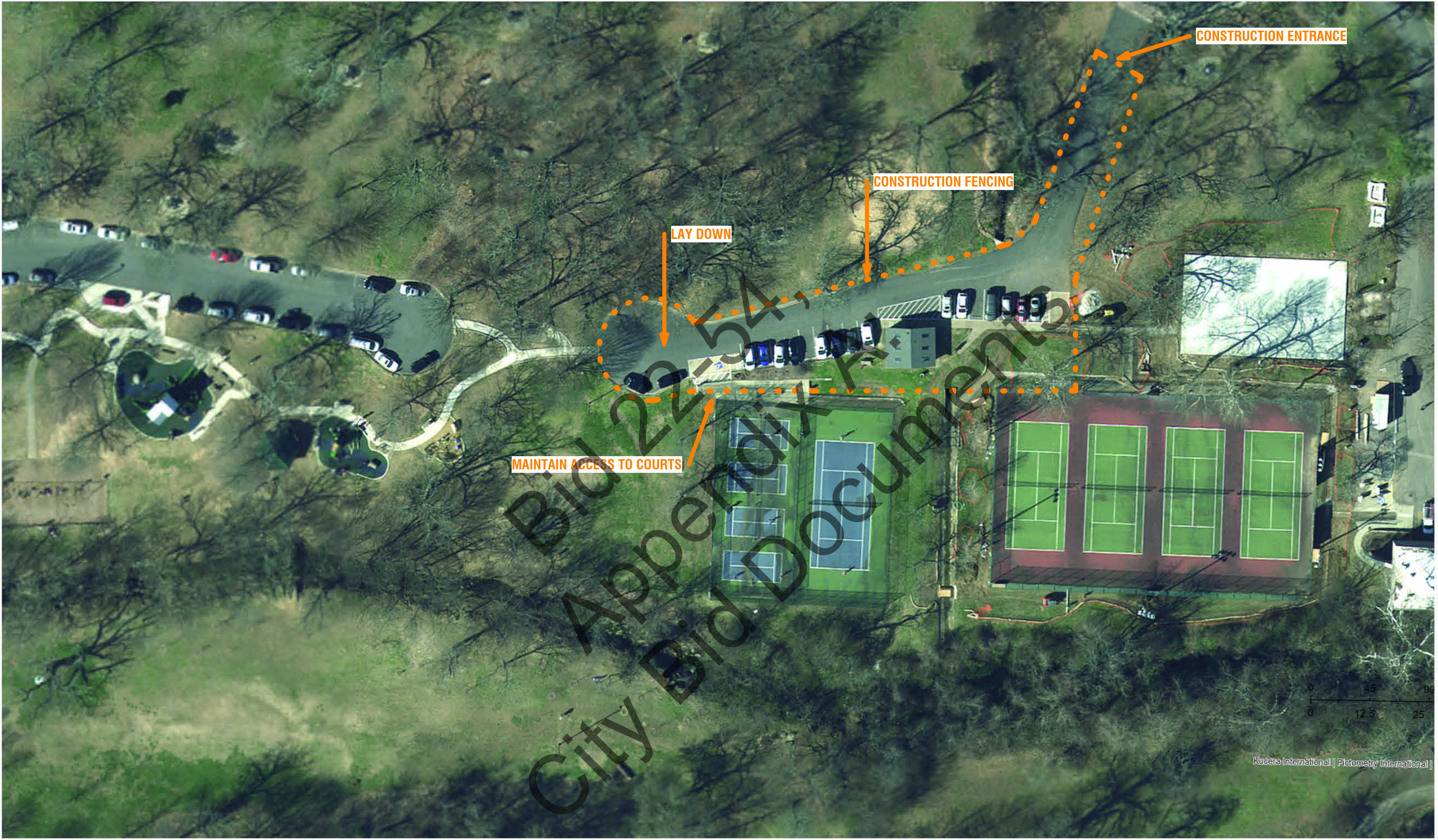
Date: 11 / 09 / 2022

Start Time: 2:00 pm

City staff e-mail includes "@fayetteville-ar.gov"

	Name	Company	Title	Phone	Email
1	Amanda Beilfuss	CoF	Sr. Purch. Agent	575-8220	abeilfuss@f
2	Lance Norrworthy	Milestone	Manager	225-0881	lnorrworthy@milestonecc.com
3	Erin Metcalf	Milestone	PM	479-957-9195	emetcalf@milestonecc.com
4	Quin Thompson	City of Fayetteville	FACILITIES MGMT	479-575-8346	jthompson@fayetteville-ar.gov
5	Zach Fischer	CDI	PE	479-435-4976	Zachary.fischer@cdicon.com
8	Bob Smith	CDI	PM	501-690-9014	ROBERT.SMITH@CDICON.COM
9	Stanley Hunt	EWI	PM/Est.	479-970-3483	shunt@ewiconsructors.com
10	Assison Woker	EWI	PM	479-264-5494	awoker@ewiconsructors.com
11	Bryn Woker	EWI	PM	479-857-2440	bwoker@ewiconsructors.com
12	TEW JACK	COF	Park Planning Supt		tjack@fayetteville-ar.gov
13	TIM MADDOX	DEMx	PRINCIPAL	479-966-4871	mad@demxarch.com
14	Jordan CAMASTER	DEMx	PROJECT MANAGER	"	jordan@demxarch.com
15	VIA SIRONIAD	Pickit Const	Proj mgr	479-276-3339	Via@PickitConstruct.com
16					
17					
18					
19					
20					

*All bid openings are livestreamed on the City's YouTube page: <https://www.youtube.com/user/cityoffayettevillear>
Meeting Notes, Decision, Description of Handouts, etc.:





NEW RESTROOM AND PAVILLION AT WILSON PARK
675 N PARK AVE, FAYETTEVILLE, ARKANSAS 72701

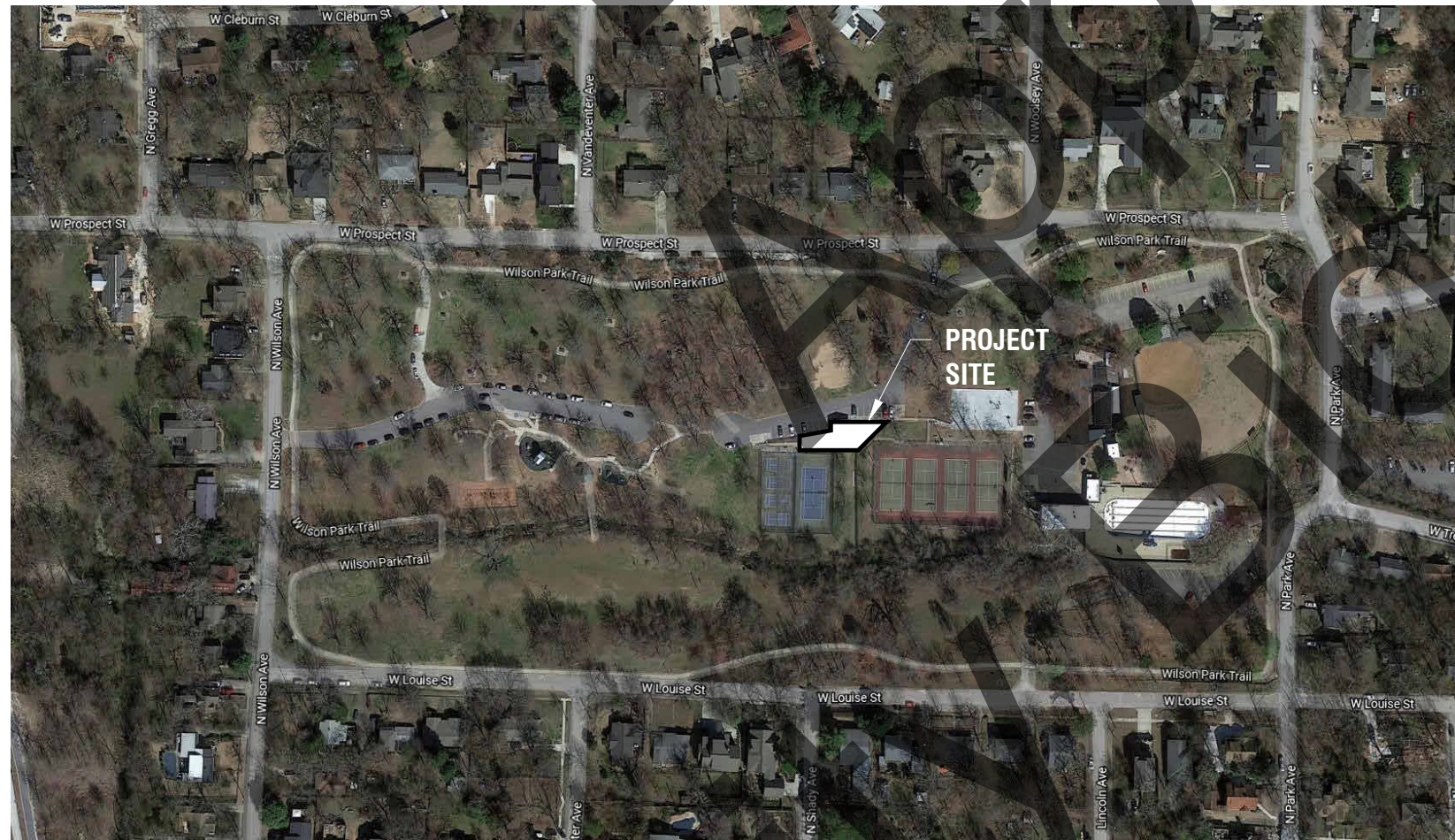


PERMITS & APPLICABLE CODES

All construction and methods will meet standard acceptable practice and comply to all applicable ordinances and restrictions adopted by the City of Fayetteville, Arkansas, and the Arkansas State Fire Prevention Code.

GENERAL NOTES

- Contractor shall verify all dimensions and conditions prior at the job site prior to commencing construction. Discrepancies shall be brought to the attention of the architect before proceeding with the work.
- Contractor shall obtain the latest set of drawings, including any revisions, before starting construction.
- No changes or substitutions shall be made without prior written approval of the architect.
- All construction shall meet the requirements of local ordinances, the International Building Code & the International Residential Code, current editions.
- All dimensions must be verified in the field. Any major discrepancies or discrepancies precipitating a material change of the intended design must be brought to the attention of the architect immediately.
- Written dimensions take precedence over scaled dimensions. Do not scale reproductions as it may not accurately reflect the published scale of the drawings.
- This project has been drawn using Autodesk Revit 2020. Precise measurements, not included in the published set, may be obtained by contacting the architect.
- The architect, on behalf of the owner, reserves the right to reject any work that is defective or of poor workmanship or work that deviates from the specifications of these documents.
- Drawings are to be issued to subcontractors in complete sets so that all architectural details affect their work is included.
- The architect reserves the right to check and approve all shop drawings and does not accept any responsibility for the interpretation of these plans by others.
- Shop drawings of all specialty items including, but not limited to, cabinetry, steelwork, etc. shall be submitted to the architect for approval prior to fabricating these items.
- All sections and details shall be considered typical and apply for the same and similar situations throughout the building, unless otherwise noted.
- Should the contractor or subcontractor require details not provided in these documents, the architect should be contacted immediately. The architect will provide clarification in written or graphic form as necessary.



VICINITY MAP
12" = 1'-0"

"I HEREBY CERTIFY THAT THESE PLANS AND SPECIFICATIONS HAVE BEEN PREPARED BY ME, OR UNDER MY SUPERVISION. I FURTHER CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THESE PLANS AND SPECIFICATIONS ARE AS REQUIRED BY LAW AND IN COMPLIANCE WITH THE ARKANSAS FIRE PREVENTION CODE FOR THE STATE OF ARKANSAS 2012 EDITION."

TIM MADDOX

CONTACTS

ARCHITECT DEMx ARCHITECTURE BEN CRUCE, AIA PROJECT ARCHITECT 104 N EAST AVE. FAYETTEVILLE, AR 72701 PHONE: (479) 966-467 EMAIL: ben@demxarch.com	CIVIL ENGINEERING CONSULTANT MCLELLAND CONSULTING ENGINEERS CHRIS BAKUNAS 1580 E STEARNS, FAYETTEVILLE, AR 72703 PHONE: (479) 443-2377 EMAIL: cbakunas@mce.us.com	MEP ENGINEERING CONSULTANT GA ENGINEERS 506 E DOUBLE EAGLE PL, FAYETTEVILLE, AR 72701 PHONE: 479-601-3333	FIRE DEPARTMENT CITY OF FAYETTEVILLE 303 W. CENTER STREET, FAYETTEVILLE, AR 72701 BRIAN SLOAT, FIRE CAPTAIN PHONE: (479) 575-8365	WATER AND SEWER CITY OF FAYETTEVILLE 113 W. MOUNTAIN STREET, FAYETTEVILLE, AR 72701 PHONE: (479) 575-8387
OWNERS REP CITY OF FAYETTEVILLE TED JACK PARKS & RECREATION TITLE: PARK PLANNING SUPERINTENDENT PHONE: (479) 444-3469 EMAIL: tjack@fayetteville-ar.gov	STRUCTURAL ENGINEERING CONSULTANT JLA ENGINEERS INC. 213 W MONROE AVE, SUITE J LOWELL, AR 72745 PHONE: (479) 770-6650	PLANNING CITY OF FAYETTEVILLE 125 W. MOUNTAIN STREET, FAYETTEVILLE, AR 72701 JESSICA MASTERS DEVELOPMENT REVIEW MANAGER PHONE: (479) 575-8239 EMAIL: jmasters@fayetteville-ar.gov	CITY ENGINEER CITY OF FAYETTEVILLE 125 W. MOUNTAIN STREET, FAYETTEVILLE, AR 72701 CHRIS BROWN PHONE: (479) 575-8207 EMAIL: cbrown@fayetteville-ar.gov	

SHEET INDEX

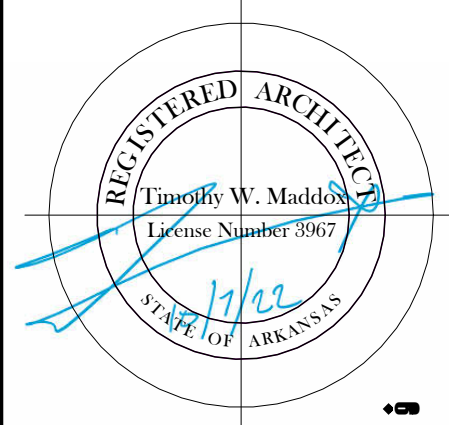
1.0	COVER SHEET
1.1	ACCESSIBILITY REQUIREMENTS
c0.0	COVER SHEET
c0.1	TOPOGRAPHIC SURVEY
c1.0	GENERAL NOTES
c2.0	DEMOLITION PLAN
c3.0	SITE UTILITY PLAN
c4.0	GRADING & EROSION CONTROL PLAN
c5.0	DETAILS
c5.1	DETAILS
a1.1	FLOOR PLAN, SCHEDULES & ENLARGED PLAN
a1.2	ENLARGED PLANS, REFLECTED CEILING PLAN, ROOF PLAN AND DETAILS
a2.1	EXTERIOR ELEVATIONS
a3.1	BUILDING SECTIONS & DETAILS
a4.1	WALL SECTIONS & ENLARGED DETAILS
a5.1	ENLARGED DETAILS
a5.2	RAILING & HAND RAIL ELEVATIONS
a6.1	DEDUCTIVE ALTERNATE
a8.1	3D VIEWS
s0	STRUCTURAL NOTES & DETAILS
s1	FOUNDATION PLAN
s2	DECK & ROOF FRAMING PLANS
s3	FRAMING DETAILS
s4	FRAMING DETAILS
p1.1	PLUMBING DRAIN PLAN
p2.1	PLUMBING SUPPLY PLAN
p3.1	PLUMBING NOTES AND DETAILS
p3.2	PLUMBING SCHEDULES
m1.1	MECHANICAL HVAC PLAN
m2.1	MECHANICAL SCHEDULES AND DETAILS
e1.1	ELECTRICAL POWER PLAN
e2.1	ELECTRICAL LIGHTING PLAN
e3.1	ELECTRICAL NOTES AND DETAILS
e3.2	ELECTRICAL SCHEDULES

MATERIAL LEGEND

	FACEBRICK
	MASONRY BLOCK
	PLYWOOD
	WOOD (FINISH OR STUD WALL)
	WOOD (BLOCKING)
	INSULATION (BATT)
	INSULATION (RIGID)
	GYP. BOARD OR PLASTER
	METAL
	METAL STUDS
	CONCRETE

SYMBOL LEGEND

	SECTION	
	DETAIL #	
	WALL ELEVATION	
	DOOR TAG	
	WINDOW/STOREFRONT TAG	
	WALL TAG	
	GENERAL NOTE	
	FIXTURE TAG	
	LEVEL CHANGE	
	NORTH ARROW	

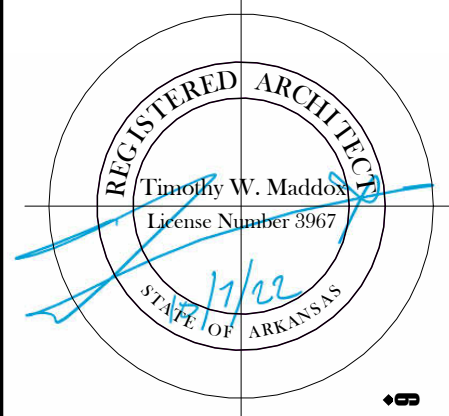
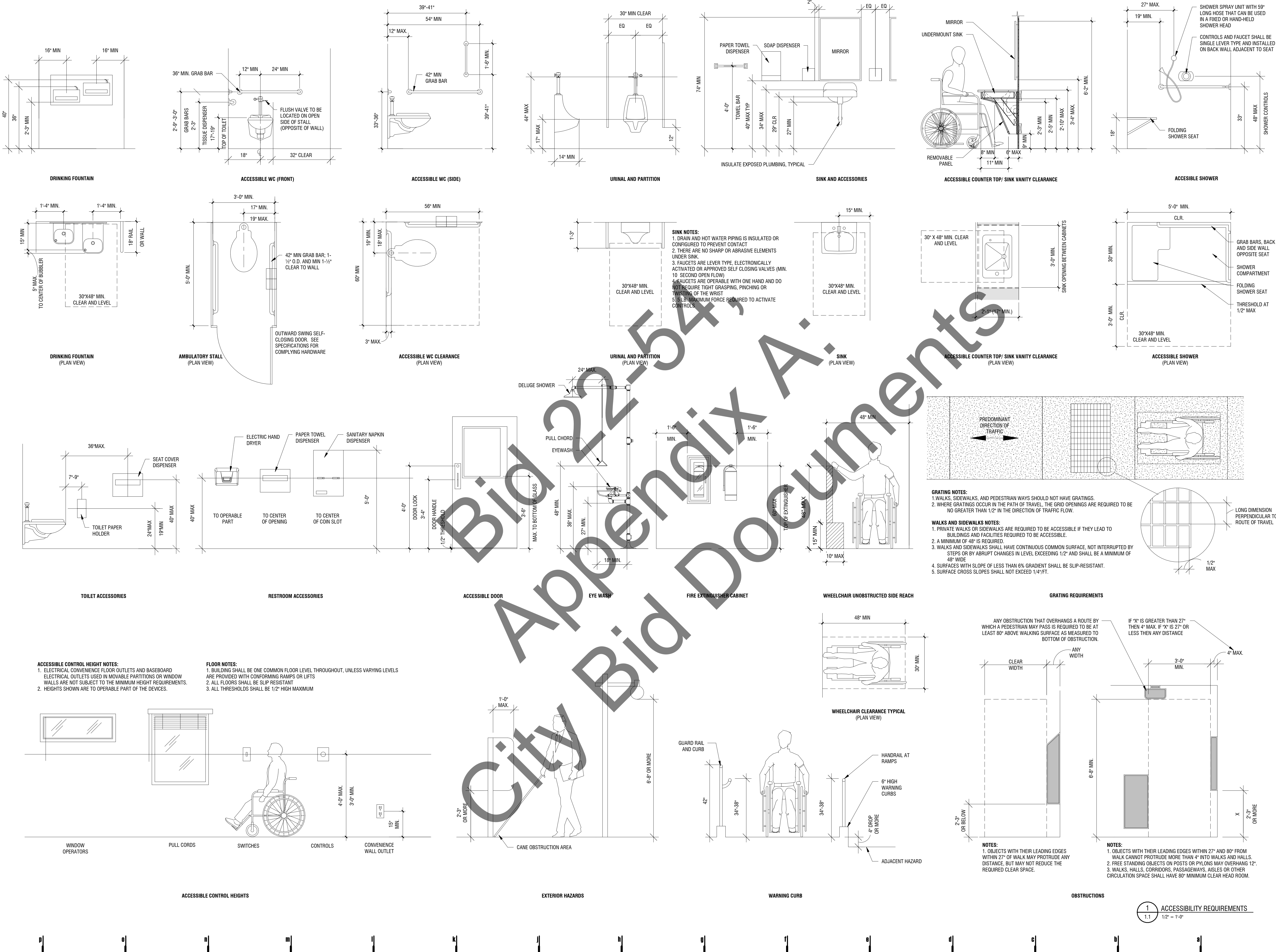


DEMx ARCHITECTURE
104 N EAST AVENUE | FAYETTEVILLE, ARKANSAS 72701 | 479.966.4671

NEW RESTROOM & PAVILLION | WILSON PARK | 675 N PARK AVE, FAYETTEVILLE, AR 72701



1.0

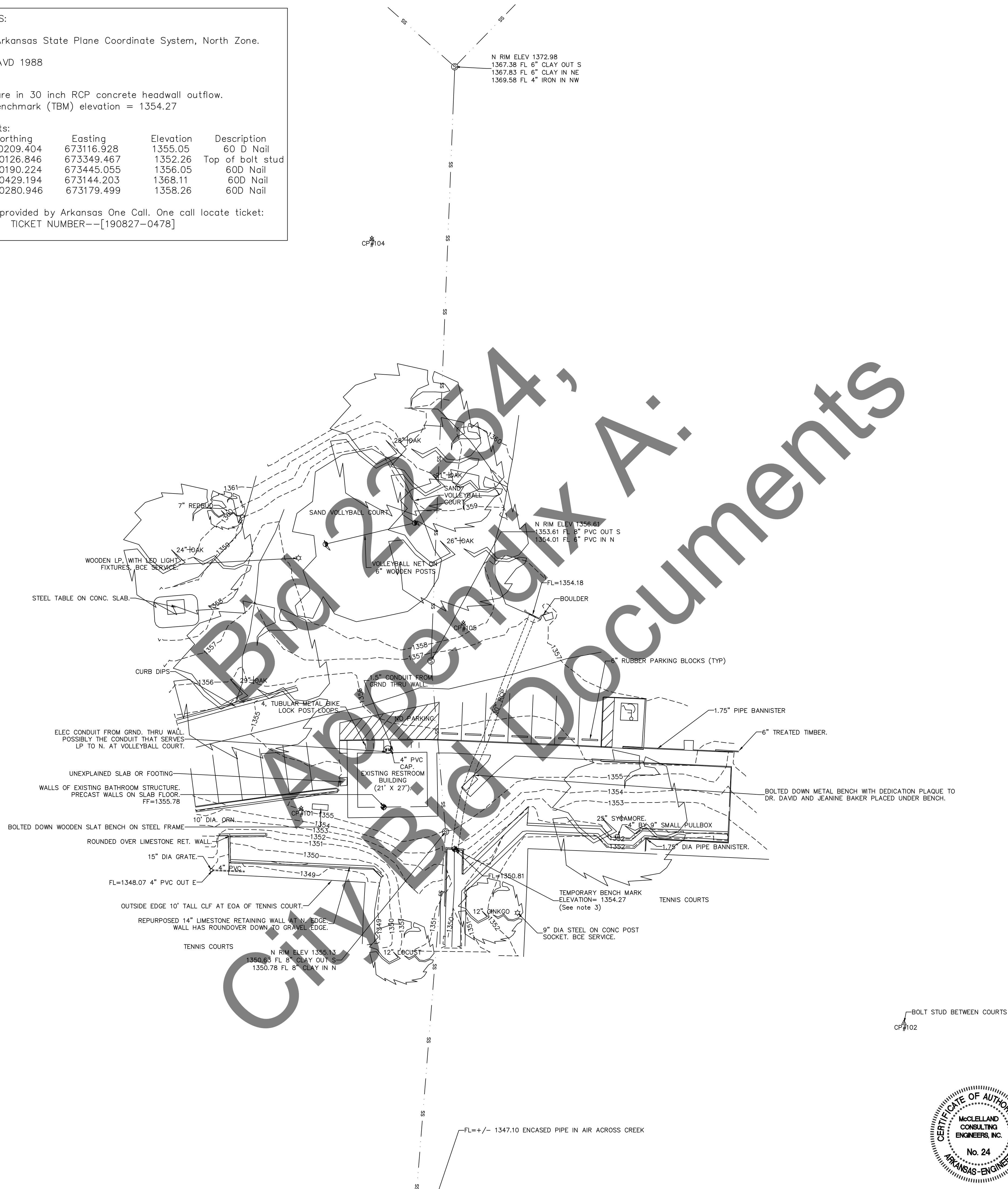


675 N PARK AVE, FAYETTEVILLE, AR
100% CONSTRUCTION DOCUMENTS

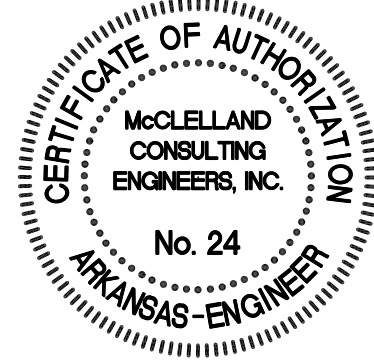
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-----SS-----	SANITARY SEWER LINE
-----W-----	WATER LINE
-----G-----	GAS LINE
---UT---URD---UTV---UE---	UNDERGROUND CABLE
-----OHC-----	OVERHEAD ELECTRIC
-----X-----X-----	FENCE
-----	ROAD CENTERLINE
-----	DITCH FLOWLINE
	FIRE HYDRANT
	WATER METER
	WATER VALVE
	WATER FAUCET
	SANITARY SEWER MH
	CLEAN-OUT
	DRAINAGE MH
	POWER POLE
	GUY WIRE WITH ANCHOR
	GAS METER
	GAS RISER
	STREET LIGHT POLE
	TELEPHONE PEDESTAL
	CABLE TV PEDESTAL
	SIGN (AS NOTED)
	POST (AS NOTED)
	BENCHMARK
	FOUND IRON PIN (AS NOTED)
	CONTROL POINT
	RR SPIKE
	BUSH
	TREE

- 1) Basis of Bearings: Arkansas State Plane Coordinate System, North Zone.
- 2) Elevation Datum: NAVD 1988
- 3) Project Benchmark:
Chiseled square in 30 inch RCP concrete headwall outflow.
Temporary benchmark (TBM) elevation = 1354.27
- 4) Project control points:

Point Number	Northing	Easting	Elevation	Description
101	640209.404	673116.928	1355.05	60 D Nail
102	640126.846	673349.467	1352.26	Top of bolt stud
103	640190.224	673445.055	1356.05	60D Nail
104	640429.194	673144.203	1368.11	60D Nail
105	640280.946	673179.499	1358.26	60D Nail
- 5) Utility locales were provided by Arkansas One Call. One call locate ticket:
TICKET NUMBER--[190827-0478]



IMPORTANT NOTE:
DESCRIPTION AND SIZE OF ALL ABOVEGROUND AND UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN DETERMINED WITH DUE CARE AND DILIGENCE, USING CURRENT TECHNIQUES, EQUIPMENT AND PROPER ACCURACY CONTROL PROCEDURES. HOWEVER, INFORMATION SHOWN HEREON IS NOT WARRANTED TO BE CORRECT IN EVERY DETAIL. THERE ARE ACCURACIES IN OR LACK OF EXISTING DATA, MAPS AND THE INABILITY TO VERIFY IN THE FIELD. PERSONS USING INFORMATION CONTAINED HEREON ARE HEREBY CAUTIONED ACCORDINGLY.



MCE McCLELLAND
CONSULTING
ENGINEERS, INC.

1810 N. College
Fayetteville, AR 72703
PHF 479.443.7268

7902 Kains Road
Fayetteville, AR 72703
PHF 501.371.0272

4606 S. Clarendon Rd., Ste 401
Fayetteville, AR 72703
PHF 908.619.6803

<http://www.mce-us.com>

ORIGINAL SIGNATURE ON FILE

TOPOGRAPHIC SURVEY OF THE
WILSON PARK RESTROOMS
FOR
THE CITY OF FAYETTEVILLE
PARKS DEPARTMENT

T:\2014 update\NEW ARK ONE CALL\811Eng_ver_R08.jpg

[illegible]

TOPOGRAPHIC
SURVEY

PROJECT ENGR:	DRAWN BY:
NAME	ICH
DATE:	
AUGUST 2019	
SCALE:	JOB NUMBER:
1"=20'	FY192715

W:\2021\21-2132 - Fayetteville, Ar - Wilson Park Restroom\design Drawings\21-2132-PROJ.dwg, PRINTED ON: October 6, 2022 @ 2:38 PM

CITY OF FAYETTEVILLE STANDARD NOTES

1.

THE REVIEW BY THE ENGINEERING DIVISION WAS FOR GENERAL COMPLIANCE AND DOES NOT WARRANT YOUR DESIGN AND DOES NOT RELIEVE THE OWNER FROM ANY ITEMS DISCOVERED DURING CONSTRUCTION OR FURTHER REVIEW, WHICH ARE DEEMED NECESSARY TO COMPLY WITH CITY ORDINANCES AND CRITERIA. THE APPROVAL OF THE ENGINEERING ITEMS ON THE PLANS FOR WATER, SEWER, DRAINAGE, AND GRADING IS NOT A GUARANTEE OF APPROVAL OF THIS PROJECT BY OTHER CITY DIVISIONS.
2.

ANY DAMAGE TO THE EXISTING PUBLIC STREET OR OTHER PUBLIC INFRASTRUCTURE DUE TO CONSTRUCTION SHALL BE REPAIRED/REPLACED AT THE OWNER/DEVELOPERS EXPENSE.
3.

ALL MATERIAL DELIVERIES, CONSTRUCTION STAGING, AND WORKER PARKING MUST OCCUR ON YOUR SITE AND OUTSIDE THE PUBLIC STREETS DURING ALL PHASES OF THE PROJECT.
4.

ALL PUBLIC SIDEWALKS AND RAMPS MUST MEET ADA GUIDELINES. **ANY EXISTING SIDEWALKS THAT DO NOT CONFORM TO ADA GUIDELINES MUST BE REMOVED AND REPLACED TO CORRECT THE ISSUE.** COORDINATE WITH THE ENGINEERING DEPARTMENT FOR INSPECTION OF EXISTING SIDEWALKS TO DETERMINE ADA COMPLIANCE.
5.

PRIOR TO ANY CLEARING TO INSTALL EROSION CONTROL STRUCTURES, TREE PRESERVATION FENCING MUST BE INSTALLED BY THE CONTRACTOR AND INSPECTED BY THE URBAN FORESTER (444-3469)
6.

WATER AND SEWER IMPACT FEES WILL APPLY FOR THE ADDITIONAL IMPACT TO THE SYSTEM. THE FEES WILL BE BASED ON THE PROPOSED METER SIZE AND WILL BE CHARGED AT THE TIME OF METER SET.
7.

FIRE LINE MONTHLY FEES WILL BE APPLIED BASED ON THE SIZE OF THE RISER PENETRATING THE SLAB. SEE CHAPTER 51.136 OF THE UNIFIED DEVELOPMENT CODE FOR TABLE OF FEES ASSOCIATED WITH PIPE DIAMETER.
8.

THE ENGINEER OF RECORD SHALL PROVIDE "FULL TIME" INSPECTION FOR UTILITIES AND "PART TIME" INSPECTION FOR THE STORM DRAINAGE AND ROADWAY CONSTRUCTION FOR THIS PROJECT. THE ENGINEER OF RECORD SHALL ALSO REVIEW AND APPROVE MATERIAL SUBMITTALS (APPROVED SUBMITTALS SHALL BE SUBMITTED TO THE CITY FOR CONCURRENCE BEFORE PRECONSTRUCTION MEETING AND BEFORE MATERIAL IS ORDERED) - DAILY INSPECTION REPORTS SHOULD BE SUBMITTED WEEKLY TO THE CITY OF FAYETTEVILLE'S PUBLIC WORKS INSPECTOR (PWI).
9.

ALL MATERIALS AND CONSTRUCTION SHALL COMPLY WITH THE CITY OF FAYETTEVILLE'S REQUIREMENTS. IN THE CASE OF CONFLICTS, THE CITY'S CRITERIA SHALL GOVERN.
10.

THE PUBLIC WORKS INSPECTOR SHALL BE NOTIFIED NO LESS THAN 48 HOURS PRIOR TO THE INSTALLATION OF PUBLIC UTILITIES, INFRASTRUCTURE, ROADWAY, ETC. TESTING SHALL BE COORDINATED WITH THE PWI BY THE ENGINEER OF RECORD.
11.

CONTACT BRENT RUTHERFORD (ADA ADMINISTRATOR 575-8291) AND REQUEST AN INSPECTION PRIOR TO:

A.

POURING ANY SIDEWALK, TRAIL, OR DRIVEWAY IN THE RIGHT-OF-WAY OR PUBLIC EASEMENTS.

B.

PLACING ANY PAVEMENT FOR ADA ACCESSIBLE PARKING/LOADING AREAS.

C.

POURING ANY SIDEWALK THAT IS A CONNECTION FROM ADA ACCESSIBLE PARKING AREAS TO THE STRUCTURE.
12.

CONTRACTOR SHALL BE CONFINED TO THE LIMITS OF CONSTRUCTION SHOWN ON THIS GRADING PERMIT APPLICATION. ADJACENT PROPERTY SHALL NOT BE USED WITHOUT MODIFYING THE GRADING AND EROSION CONTROL PLAN THROUGH THE ENGINEER OF RECORD AND OBTAINING WRITTEN APPROVAL FROM THE CITY ENGINEERING DIVISION.

CITY OF FAYETTEVILLE STANDARD REQUIREMENTS

1.

COMMERCIAL STRUCTURES THAT MAY REQUIRE A FIRE SPRINKLER SYSTEM MUST OBTAIN A FIRE FLOW STUDY SUBMITTED AND APPROVED BY THE FIRE DEPARTMENT PRIOR TO APPROVAL OF THE PROJECT.
2.

PRIOR TO ENGINEERING APPROVAL OF THE **BUILDING PERMIT**, EITHER THE REQUIRED PUBLIC IMPROVEMENTS MUST BE INSTALLED AND ACCEPTED, OR PERFORMANCE BONDS IN THE AMOUNT OF 150% OF THE CONSTRUCTION COSTS FOR ALL PUBLIC IMPROVEMENTS MUST BE SUBMITTED, ACCOMPANIED BY A UNIT PRICE ESTIMATE APPROVED BY THE ENGINEERING DIVISION AND ALL EASEMENTS MUST BE DEDICATED AND OR VACATED.
3.

A GRADING AND DRAINAGE PERMIT WILL NOT BE ISSUED UNTIL:

A.

A COPY OF THE SWPPP IS PROVIDED TO THE CITY. THE SWPPP WILL BECOME PART OF THE GRADING AND DRAINAGE PERMIT. (IN PDF FORMAT)

B.

THE PERIMETER EROSION CONTROLS, CONSTRUCTION EXIT, AND SWPPP/GRADING PERMIT BOX HAVE BEEN INSPECTED AND APPROVED BY THE ENGINEERING DIVISION. (APPLICANT IS RESPONSIBLE FOR CONTACTING AND SCHEDULING THE EROSION CONTROL INSPECTION BY CALLING THE ASSIGNED PWI)

C.

THE ENGINEER OF RECORD SHALL REVIEW AND APPROVE MATERIAL SUBMITTALS (APPROVED SUBMITTALS SHALL BE SUBMITTED TO THE CITY FOR CONCURRENCE BEFORE PRECONSTRUCTION CONFERENCE AND MATERIAL IS ORDERED)

D.

A PRECONSTRUCTION CONFERENCE HAS TAKEN PLACE.

E.

CONTACT DOUGLAS SHARP OF THE CITY OF FAYETTEVILLE METER OPERATIONS DIVISION (575-8384) PRIOR TO THE PRECONSTRUCTION MEETING TO DISCUSS THE DOMESTIC AND/OR IRRIGATION WATER SERVICE DEMAND TO VERIFY SIZE OF METER PROPOSED.

F.

PROVIDE ONE BOUND SET OF WATER & SEWER SPECIFICATIONS INCLUDING DETAILS FOR EACH THE INSPECTOR AND THE CONTRACTOR'S USE TO BE STAMPED BY ENGINEERING AT THE PRE-CONSTRUCTION CONFERENCE.

G.

ALL CONTRACTORS/SUBS INSTALLING PUBLIC INFRASTRUCTURE (INCLUDING FIRELINE) MUST BE PRESENT ALONG WITH THE INSPECTOR FROM ENGINEER OF RECORD.

H.

IF THE SUPERINTENDENT ON SITE CHANGES AFTER THE CITY OF FAYETTEVILLE PRE-CONSTRUCTION MEETING, AN ADDITIONAL PRE-CONSTRUCTION MEETING WILL BE REQUIRED WITH THE NEW SUPERINTENDENT.
4.

A COPY OF THE APPROVAL LETTER FROM THE ARKANSAS DEPARTMENT OF HEALTH SHOULD BE OBTAINED AND FORWARDED TO THE ENGINEERING DIVISION.
5.

PRIOR TO **PROJECT ACCEPTANCE** (CERTIFICATE OF OCCUPANCY, OR TEMPORARY CERTIFICATE OF OCCUPANCY) THE FOLLOWING ITEMS MUST BE PERFORMED OR PROVIDED TO THE SATISFACTION OF THE ENGINEERING DEPARTMENT:

A.

THE WORK SHOWN ON THE CIVIL SITE PACKAGE MUST BE COMPLETE AND THE ITEMS ON THE FINAL PUNCH LIST COMPLETED.

B.

VEGETATION MUST BE ESTABLISHED IN ACCORDANCE WITH SECTION 169.06 OF THE UDC AND PERIMETER CONTROLS REMOVED.

C.

ONE (1) SET OF AS-BUILT DRAWINGS OF THE COMPLETE PROJECT (EXCLUDING DETAILS) AS A HARD COPY, DIGITAL FILE .DWG, AND PDF FORMAT;

1.

PROFESSIONAL SURVEYOR SHALL PROVIDE STAMP DRAWINGS SPECIFICALLY IDENTIFYING THE LIMITS OF AS-BUILT SURVEY PERFORMED.

2.

PUBLIC INFRASTRUCTURE AND SERVICES SHALL BE SURVEYED AFTER INSTALLATION IN RELATION TO EASEMENTS, PROPERTY LINES, AND RIGHTS-OF-WAY.

A.

MORE THAN 2 FT DEVIATION OF DESIGN ALIGNMENT OF SHALL REQUIRE NEW EASEMENT DEDICATION OR ADJUSTMENT OF THE UTILITY/STORM DRAIN.

3.

ADEQUATE VERIFICATION SURVEY TO CONFIRM ACCURACY OF DRAINAGE REPORT.

A.

UNIT PRICE CONSTRUCTION COSTS FOR REVIEW AND APPROVAL AND A SINGLE 2 YEAR MAINTENANCE BONDS IN THE AMOUNT OF 25% OF THE PUBLIC IMPROVEMENTS

B.

CERTIFICATION THAT THE STREETS, SIDEWALK, STORM SEWER, WATER, FIRE LINE, AND SEWER LINES, ETC., WERE INSTALLED PER APPROVED PLANS AND CITY OF FAYETTEVILLE REQUIREMENTS;

1.

PROVIDE ALL INSPECTION REPORTS; APPROVED SUBMITTALS; DATA FORMS FROM UTILITY SPECIFICATIONS

A.

SURVEYOR'S CERTIFICATION OF COMPLIANCE FOR MONUMENTS AND PROPERTY PINS.

THE CONTRACTOR IS RESPONSIBLE TO CONTACT EACH DISCIPLINE BELOW AND REQUEST A CERTIFICATE OF OCCUPANCY INSPECTION AND APPROVAL AT LEAST A WEEK IN ADVANCE:

BUILDING SAFETY	DENNIS SANDERS	575-8229	dsanders@fayetteville-ar.gov
ENGINEERING	JONATHAN ELY	575-8206	jely@fayetteville-ar.gov
	JOSH BOCCACCIO	575-8206	jboccaccio@fayetteville-ar.gov
FIRE	JEREMY ASHLEY	718-7620	jashley@fayetteville-ar.gov
BACKFLOW PREVENTION	RANDY BOLINGER	575-8382	rbolinger@fayetteville-ar.gov
METER OPERATIONS	JAYCE BRANSON	684-4723	jbranson@fayetteville-ar.gov
PLANNING	JESSIE MASTERS	575-8267	jmasters@fayetteville-ar.gov
	RYAN UMBERGER	575-8267	rumberger@fayetteville-ar.gov
	GRETCHEN HARRISON	575-8267	gharrison@fayetteville-ar.gov
SIDEWALK	ENGINEERING	575-8206	engineering@fayetteville-ar.gov
RECYCLING AND TRASH	DREW COOK	575-8398	acook@fayetteville-ar.gov
TREE & LANDSCAPE	MELISSA EVANS	444-3486	mevans@fayetteville-ar.gov

ORIGINAL SIGNATURE ON FILE

WILSON PARK
RESTROOM
675 N PARK AVE,
FAYETTEVILLE, AR

REVISONS		DATE	DESCRIPTION
REV			

FAYETTEVILLE GENERAL NOTES	
DESIGNED BY: JPS	DRAWN BY: JPS
DATE: 10/7/2022	REVISION: REV-0
SCALE: 10	JOB NUMBER: 21-2132

C1.0

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ENGINEERS, INC.

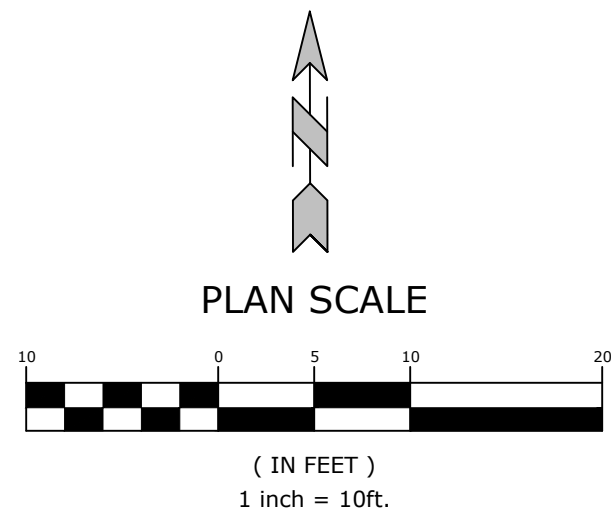
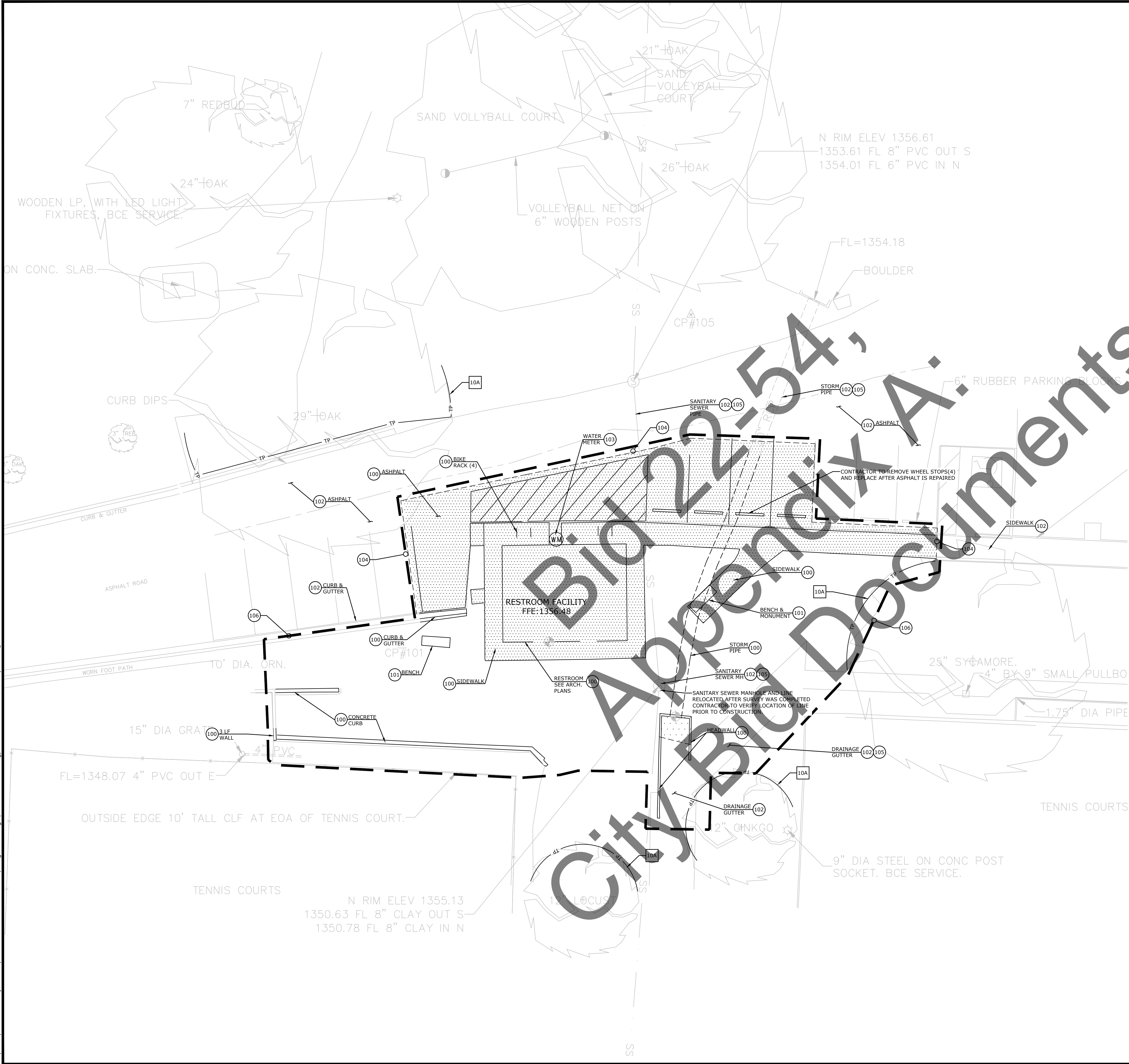
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EXISTING LEGEND

---	PROPERTY LINE	⊙	SANITARY SEWER MH
---	RIGHT OF WAY	⊙	CLEAN-OUT
---	SANITARY SEWER LINE	⊙	DRAINAGE MH
---	WATER LINE	⊙	POWER POLE
---	GAS LINE	⊙	GUY WIRE w/ ANCHOR
---	UGT	⊙	GAS METER
---	UGE	⊙	GAS RISER
---	UGTV	⊙	STREET LIGHT POLE
---	UFD	⊙	TELEPHONE PEDESTAL
---	OHE	⊙	CABLE TV PEDESTAL
---	FENCE	⊙	SIGN (AS NOTED)
---	ROAD CENTERLINE	⊙	POST (AS NOTED)
---	DITCH FLOWLINE	⊙	BENCHMARK
---	EASEMENT LINE	⊙	FOUND IRON PIN (AS NOTED)
---	GRAVEL LINE	⊙	CONTROL POINT
---	FIRE HYDRANT	⊙	RR SPIKE
---	WATER METER	⊙	BUSH
---	WATER VALVE	⊙	TREE
---	WATER FAUCET	⊙	

PROPOSED LEGEND

---	LIMITS OF PAVEMENT AND / OR STRUCTURE DEMOLITION
---	TREE PROTECTION
---	LIMITS OF DEMOLITION

GENERAL DEMOLITION NOTES

- ALL AREAS WITHIN THE LIMITS OF DISTURBANCE TO BE DEMOLISHED AND REMOVED UNLESS OTHERWISE NOTED ON THIS PLAN.
- THE CONTRACTOR IS REQUIRED TO NOTIFY THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS PRIOR TO EXCAVATING IN ORDER THAT UNDERGROUND UTILITIES IN THE AREA CAN BE LOCATED.
- THIS PLAN SHOULD BE USED IN CONJUNCTION WITH THE TOPOGRAPHICAL SURVEY FOR REFERENCE. THE LOCATION OF KNOWN SUBSURFACE STRUCTURES, PIPES, POWER, GAS, PHONE, ETC. ARE SHOWN ON THE PLANS. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING INFORMATION AND SATISFYING HIMSELF TO AS TO THE LOCATION OF THE AFOREMENTIONED ITEMS, SHOWN AND NOT SHOWN. ALL REPAIRS OR RELOCATIONS NECESSARY SHALL BE MADE AS REQUIRED BY THE OWNER OF THE UTILITY OR STRUCTURE. THE COST OF SUCH REPAIRS OR RELOCATIONS NECESSARY SHALL BE BORNE BY THE CONTRACTOR.
- CONTRACTOR SHALL DISPOSE OF ALL MATERIALS RESULTING FROM DEMOLITION IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS THAT GOVERN SUCH OPERATIONS.
- ALL ABANDONED SERVICE LINES SHALL BE DISCONNECTED AND CAPPED PER UTILITY COMPANIES REQUIREMENTS. COORDINATE ALL DISCONNECTIONS WITH UTILITY COMPANIES.
- CONTRACTOR IS TO BRING TO THE ATTENTION OF THE CIVIL ENGINEER ANY AREA OF DEMOLITION IN QUESTION BEFORE PROCEEDING WITH WORK.
- CONTRACTOR TO REVIEW AND COORDINATE DEMOLITION LIMITS WITH PROPOSED CONSTRUCTION PLANS.
- EXISTING CLEAN TOPSOIL TO BE STOCKPILED FOR FUTURE USE ON THIS SITE AND IS TO BE COORDINATED BY THE GENERAL CONTRACTOR.
- ALL EXISTING WATER, GAS AND / OR ELECTRICAL METERS AS NOTED TO BE REMOVED WITHIN THE PROJECT AREA ARE TO BE RETURNED TO THE APPROPRIATE AUTHORITY.

DEMOLITION KEYNOTES

- 100 EXISTING TO BE REMOVED AND / OR DEMOLISHED
101 EXISTING TO BE SALVAGED AND RETURNED TO THE OWNER
102 EXISTING TO REMAIN
103 EXISTING TO BE RELOCATED
104 LIMITS OF SAWCUT AND PAVEMENT REMOVAL
105 PROTECT EXISTING STRUCTURES AND / OR PIPES DURING DEMOLITION AND CONSTRUCTION PHASES
106 LIMITS OF DISTURBANCE

DEMOLITION DETAILS

- 10A CITY OF FAYETTEVILLE TREE PROTECTION FENCE

MCE McCLELLAND CONSULTING ENGINEERS, INC.
1580 E STEARNS ST
FAYETTEVILLE, ARKANSAS 72703
(479) 443-2377
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REGISTERED LANDSCAPE ARCHITECT
CHRISTOPHER M. BAUMING
License Number 2985
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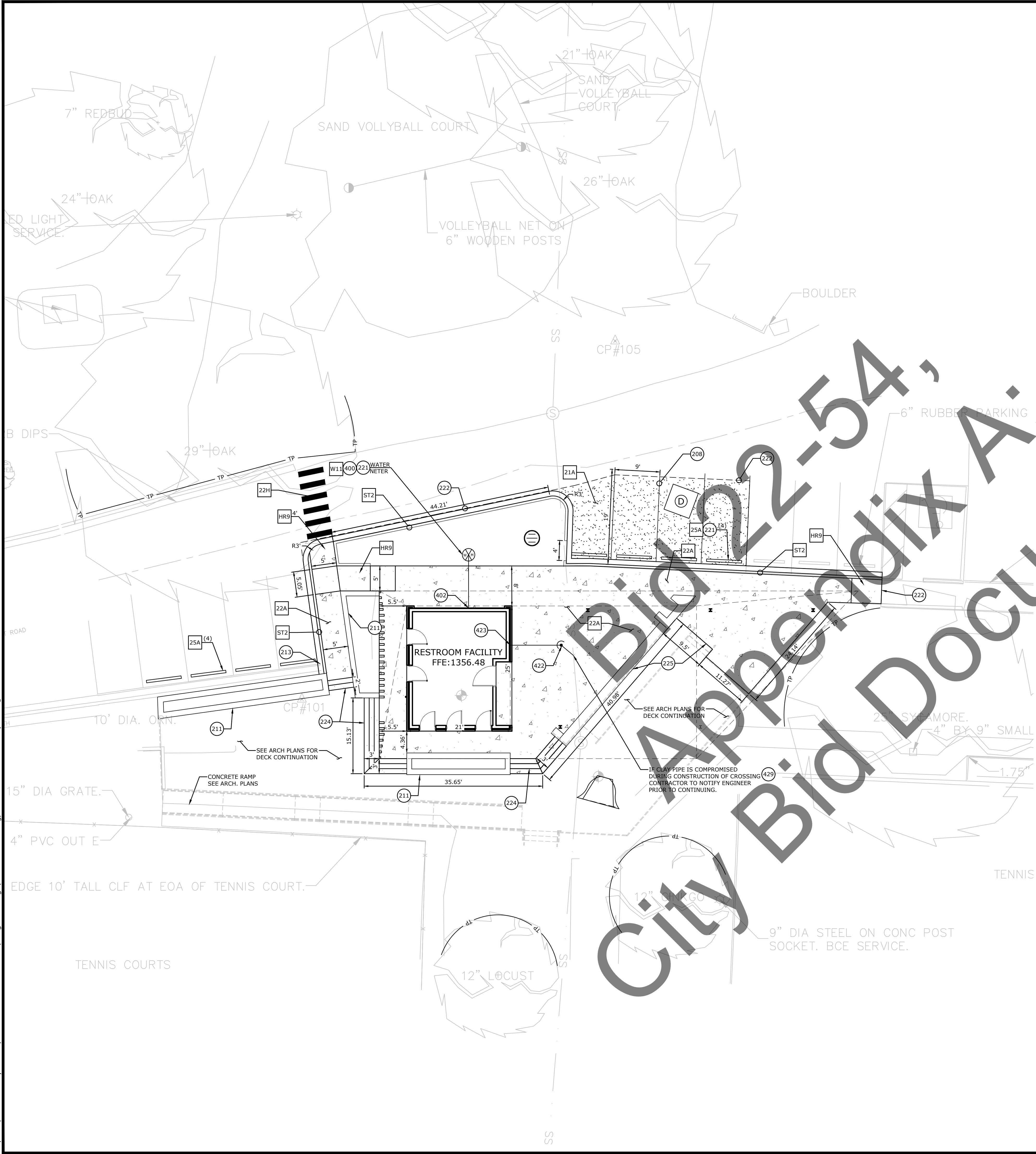
REV	DATE	DESCRIPTION

DEMOLITION PLAN

DESIGNED BY: JPS	DRAWN BY: JPS
DATE: 10/7/2022	REVISION: REV-0
SCALE: 10	JOB NUMBER: 21-2132

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GENERAL UTILITY NOTES

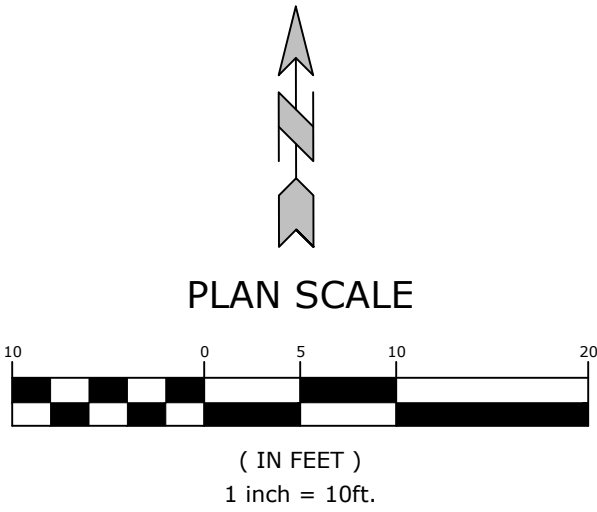
- ALL DOMESTIC WATER SERVICE LINES SHALL BE TYPE K COPPER PIPE, UNLESS OTHERWISE SPECIFIED ON THE PLANS. SIZE AS NOTED ON THE PLANS AND TO MAINTAIN 36" OF COVER (MINIMUM).
- ALL DOMESTIC SANITARY SEWER SERVICE LINES SHALL BE PVC (SCH.40), OR OTHERWISE SPECIFIED ON THE PLANS. SIZE AS NOTED ON THE PLANS AND TO MAINTAIN 36" OF COVER (MINIMUM).
- EXISTING UTILITIES SHOWN ON PLANS HAVE BEEN SHOWN IN THEIR APPROXIMATE LOCATIONS PER AVAILABLE INFORMATION.
- CONTRACTOR SHALL NOT OPEN, TURN OFF, INTERFERE WITH, OR ATTACH ANY PIPE OR HOSE TO OR TAP ANY WATER MAIN UNLESS DULY AUTHORIZED TO DO SO BY THE CITY. ANY ADVERSE CONSEQUENCES OF ANY SCHEDULED OR UNSCHEDULED DISRUPTIONS OF SERVICE TO THE PUBLIC ARE TO BE THE LIABILITY OF THE CONTRACTOR. MCCLELLAND CONSULTING ENGINEERS, INC. AND THE OWNER ARE TO BE HELD HARMLESS.
- ALL TRENCHING, BACKFILLING AND PIPE LAYING IS TO MEET ALL OSHA REQUIREMENTS.
- THE LOCATION, DESCRIPTION AND SIZE OF ALL ABOVE-GROUND AND UNDER-GROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN DETERMINED WITH DUE CARE AND DILIGENCE, USING CURRENT TECHNIQUES, EQUIPMENT AND PROPER ACCURACY CONTROL PROCEDURES. HOWEVER, INFORMATION SHOWN HEREON IS NOT WARRANTED TO BE CORRECT IN EVERY DETAIL BECAUSE OF INACCURACIES IN OR LACK OF EXISTING DATA OR MAPS AND THE INABILITY TO VERIFY IN THE FIELD. PERSONS USING INFORMATION CONTAINED HEREON ARE HEREBY CAUTIONED ACCORDINGLY.
- REFER TO BUILDING PLANS FOR SITE LIGHTING ELECTRICAL PLANS.
- ALL WATER & SEWER DESIGNS ARE SUBJECT TO THE CITY'S LATEST DESIGN CRITERIA (2017 EDITION OF THE WATER & SEWER STANDARD SPECIFICATIONS AVAILABLE). REVIEW FOR PLAT APPROVAL IS NOT APPROVAL OF PUBLIC IMPROVEMENTS, AND ALL PROPOSED IMPROVEMENTS ARE SUBJECT TO FURTHER REVIEW AT THE TIME CONSTRUCTION PLANS ARE SUBMITTED.
- ALL CONDUITS PLACED BY CONTRACTOR MUST HAVE 24" OF COVER AT FINAL GRADE AND MARKED WITH POSTS TO INDICATE THE ENDS OF CONDUITS. THERE MUST BE A MINIMUM SEPARATION OF 12" BETWEEN ELECTRICAL CONDUITS AND CONDUITS FOR OTHER UTILITIES.
- SERVICE TAPS ON UTILITY MAINS (PROPOSED AND / OR EXISTING) SHALL BE MADE BY THE CITY, AND FEES PAID BY CONTRACTOR.
- ALL UNDERGROUND LINES SHALL BE INSPECTED BY THE ENGINEER, OR HIS REPRESENTATIVE, PRIOR TO BACK FILLING.
- DOMESTIC SANITARY SEWER SERVICE LINE TRENCHING AND BEDDING SHALL BE INSTALLED PER DETAIL S2.
- DOMESTIC WATER SERVICE LINE TRENCHING AND BEDDING SHALL BE INSTALLED PER DETAIL W2.
- ALL WATER LINE DIMENSIONS SHOWN ARE TO CENTER OF PIPE OR FITTING; ALL SEWER LINE DIMENSIONS ARE SHOWN TO CENTER OF MANHOLE OR CENTER OF PIPE.
- TESTING OF WATER AND SEWER LINES SHALL BE AT THE CONTRACTOR'S EXPENSE.
- TOPS OF EXISTING MANHOLES SHALL BE RAISED AS NECESSARY TO BE EITHER FLUSH WITH FINISHED GRADES IN PAVED AREAS, OR 4" ABOVE FINISHED GRADES IN UNPAVED AREAS.
- TOPS OF PROPOSED MANHOLES SHALL BE FLUSH WITH FINISHED GRADES IN PAVED AREAS, OR 4" ABOVE FINISHED GRADES IN UNPAVED AREAS.
- ALL UTILITIES UNDER PAVED AREAS SHALL RECEIVE CLASS 7 BASE BACKFILL FULL DEPTH.
- MAINTAIN MINIMUM HORIZONTAL SEPARATION OF 10' BETWEEN WATER AND SEWER MAINS AND 5' BETWEEN OTHER UNDERGROUND UTILITIES SUCH AS STORM SEWER, ELECTRICAL, GAS, DOMESTIC WATER / SEWER SERVICE LINES, AND CONDUITS.
- ALL EXISTING WATER, GAS AND / OR ELECTRICAL METERS AS NOTED TO BE ABANDONED AND / OR REMOVED PER THE DEMOLITION PLAN WITHIN THE PROJECT AREA ARE TO BE RETURNED TO THE APPROPRIATE AUTHORITY.
- COORDINATION OF ALL CONDUIT PLACEMENT SHALL BE MADE WITH UTILITY PROVIDERS.
- PROPOSED UTILITIES THAT ARE TO BE BURIED IN THE SAME TRENCH SHALL BE COORDINATED WITH, AND APPROVED BY, THE INVOLVED UTILITIES PRIOR TO INSTALLATION.
- CONTRACTOR SHALL FIELD VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION OF PROPOSED UTILITIES.
- ALL PROPOSED UTILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH GOVERNING AGENCY.
- CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT AND STAKING.

UTILITY KEYNOTES

- 400 POINT OF CONNECTION - WATER SERVICE
- 402 DOMESTIC WATER SERVICE BUILDING ENTRY (SEE ARCH. / MEP PLANS)
- 422 SANITARY SEWER CLEAN OUT
- 423 SANITARY SEWER SERVICE BUILDING ENTRY (SEE ARCH. / MEP PLANS)
- 429 SANITARY SEWER SERVICE CONNECTION (PER LOCAL CODES)

UTILITY DETAILS

W11 WATER METER SETTINGS



EXISTING LEGEND

- | | | | |
|------|------------------------|---|---------------------------|
| --- | PROPERTY LINE | ⊙ | SANITARY SEWER MH |
| R/W | RIGHT OF WAY | ⊙ | CLEAN-OUT |
| SS | SANITARY SEWER LINE | ⊙ | DRAINAGE MH |
| W | WATER LINE | ⊙ | POWER POLE |
| --- | GAS LINE | ⊙ | GUY WIRE w/ ANCHOR |
| UGT | UNDERGROUND TELEPHONE | ⊙ | GAS METER |
| UGE | UNDERGROUND ELECTRIC | ⊙ | GAS RISER |
| UGTV | UNDERGROUND TELEVISION | ⊙ | STREET LIGHT POLE |
| UFD | UNDERGROUND FIBER | ⊙ | TELEPHONE PEDESTAL |
| OHE | OVERHEAD ELECTRIC | ⊙ | CABLE TV PEDESTAL |
| X-X | FENCE | ⊙ | SIGN (AS NOTED) |
| --- | ROAD CENTERLINE | ⊙ | POST (AS NOTED) |
| --- | DITCH FLOWLINE | ⊙ | BENCHMARK |
| --- | EASEMENT LINE | ⊙ | FOUND IRON PIN (AS NOTED) |
| --- | GRAVEL LINE | ⊙ | CONTROL POINT |
| --- | FIRE HYDRANT | ⊙ | RR SPIKE |
| --- | WATER METER | ⊙ | BUSH |
| --- | WATER VALVE | ⊙ | TREE |
| --- | WATER FAUCET | ⊙ | |

PROPOSED LEGEND

- | | |
|-----|-------------------|
| --- | CURB AND GUTTER |
| --- | ASPHALT PAVEMENT |
| --- | CONCRETE PAVEMENT |
| --- | CATCH BASIN |

GENERAL SITE NOTES

- CONTRACTOR SHALL RETAIN A FULL SET OF LATEST APPROVED CONSTRUCTION PLANS ON SITE DURING CONSTRUCTION ACTIVITIES.
- CONSTRUCTION METHODS AND MATERIALS NOT SPECIFIED IN THESE PLANS ARE TO MEET OR EXCEED THE CITY OF FAYETTEVILLE STANDARD SPECIFICATIONS.
- PUBLIC CONVENIENCE AND SAFETY: THE CONTRACTOR SHALL CONDUCT THE WORK IN A MANNER THAT WILL INSURE, AS FAR AS PRACTICABLE, THE LEAST OBSTRUCTION TO TRAFFIC AND SHALL PROVIDE FOR THE CONVENIENCE AND SAFETY OF THE GENERAL PUBLIC AND RESIDENTS ALONG AND ADJACENT TO HIGHWAYS IN THE CONSTRUCTION AREA IN AN ADEQUATE AND SATISFACTORY MANNER IN ACCORDANCE WITH THE ARKANSAS DOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
- UNLESS OTHERWISE NOTED, ALL CURBING INDICATED SHALL BE 18" CONCRETE CURB AND GUTTER.
- ALL DIMENSIONS, UNLESS OTHERWISE NOTED, ARE FROM THE FACE OF CURB, FACE OF BUILDING, OR CENTERLINE OF STRIPE.
- CONTRACTOR SHALL REFER TO ARCHITECT PLANS FOR EXACT BUILDING LOCATION, DIMENSIONS, AND UTILITY ENTRANCE LOCATIONS.
- ALL RADII FOR CURBS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- GENERAL CONTRACTOR SHALL COORDINATE AND COMPLY WITH ALL UTILITY COMPANIES INVOLVED IN PROJECT AND PAY ALL REQUIRED FEES AND COSTS.
- ALL WORK TO BE DONE IN STRICT ACCORDANCE WITH THE CITY OF FAYETTEVILLE STANDARD SPECIFICATIONS.
- CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT AND STAKING.

SITE KEYNOTES

- 208 4" WIDE PAINTED WHITE PARKING STRIPES
- 211 RAISED PLANTER (SEE ARCH. PLAN)
- 213 TAPER CURB TO MATCH EXISTING
- 221 POINT OF RELOCATION
- 222 LIMITS OF SAWCUT AND PAVEMENT REMOVAL
- 224 CONCRETE STAIRS (SEE ARCH. PLAN)
- 225 RETAINING WALL (SEE ARCH. PLAN)

SITE DETAILS

- 21A STANDARD DUTY ASPHALT PAVEMENT
- 22A CONCRETE SIDEWALK
- 22H CROSSWALK STRIPING
- 25A WHEEL STOP
- 25G CONCRETE STAIRS
- ST2 FAYETTEVILLE TYPE 'A' CURB & GUTTER
- HR9 FAYETTEVILLE STANDARD HANDICAP RAMP

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SITE & UTILITY
PLAN

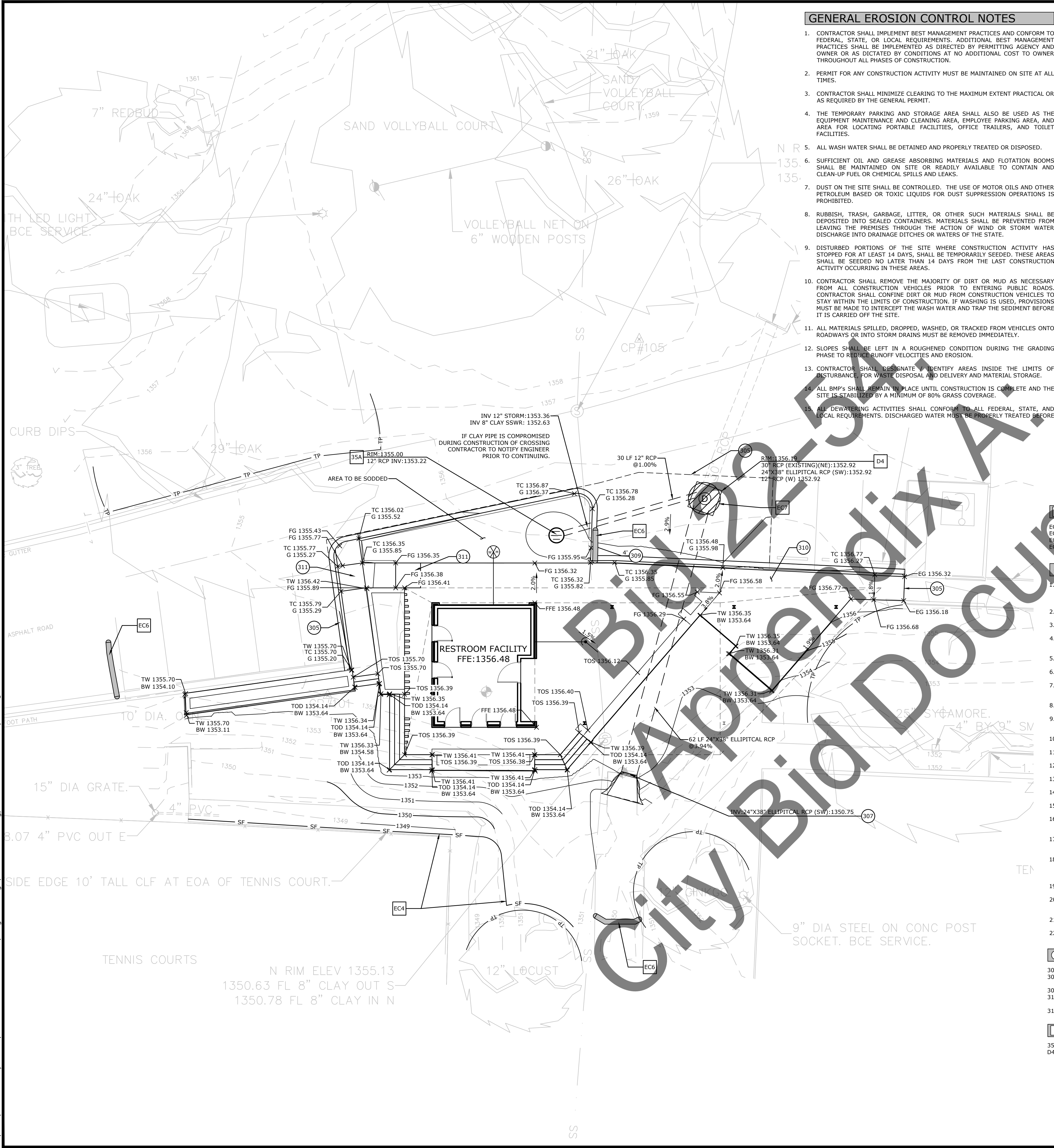
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GENERAL EROSION CONTROL NOTES

- CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AND CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DIRECTED BY PERMITTING AGENCY AND OWNER OR AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST TO OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
- PERMIT FOR ANY CONSTRUCTION ACTIVITY MUST BE MAINTAINED ON SITE AT ALL TIMES.
- CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
- THE TEMPORARY PARKING AND STORAGE AREA SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.
- ALL WASH WATER SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
- SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
- DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
- RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
- DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 14 DAYS, SHALL BE TEMPORARILY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.
- CONTRACTOR SHALL REMOVE THE MAJORITY OF DIRT OR MUD AS NECESSARY FROM ALL CONSTRUCTION VEHICLES PRIOR TO ENTERING PUBLIC ROADS. CONTRACTOR SHALL CONFINED DIRT OR MUD FROM CONSTRUCTION VEHICLES TO STAY WITHIN THE LIMITS OF CONSTRUCTION. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.
- ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
- SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
- CONTRACTOR SHALL DESIGNATE AND IDENTIFY AREAS INSIDE THE LIMITS OF DISTURBANCE FOR WASTE DISPOSAL AND DELIVERY AND MATERIAL STORAGE.
- ALL BMP'S SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED BY A MINIMUM OF 80% GRASS COVERAGE.
- ALL DEWATERING ACTIVITIES SHALL CONFORM TO ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS. DISCHARGED WATER MUST BE PROPERLY TREATED BEFORE

BMP MAINTENANCE

- RELEASING FROM THE SITE.
- THE CONTRACTOR SHALL IMPLEMENT ALL MEASURES SHOWN ON THE EROSION CONTROL PLAN AND IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) TO THE FULLEST EXTENT PRACTICAL. THE CONTRACTOR SHALL HAVE CHECKED ALL SEDIMENT AND EROSION CONTROL MEASURES BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS OR EVERY FOURTEEN (14) DAYS AND WITHIN 24 HOURS OF THE END OF A RAINFALL EVENT EXCEEDING 0.25". ALL SITE BMP'S SHALL BE MAINTAINED IN A FULLY FUNCTIONAL CONDITION UNTIL FINAL STABILIZATION OF THE SITE HAS OCCURRED. ALL SITE BMP'S SHALL BE REPAIRED AND / OR CLEANED IN ACCORDANCE WITH THE FOLLOWING:
- THE CONTRACTOR SHALL MAINTAIN THE CONSTRUCTION ENTRANCE(S) IN A SUCH A CONDITION THAT WILL PREVENT MUD BEING TRACKED INTO ANY PUBLIC RIGHT OF WAY(S). THIS MAY REQUIRE PERIODIC TOP DRESSING OF ALL CONSTRUCTION ENTRANCE(S) AS NECESSARY.
 - THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION. THIS MAY REQUIRE PERIODIC TOP DRESSING OF ALL PARKING AND STORAGE AREA(S) AS NECESSARY.
 - CONTRACTOR SHALL REPAIR ALL SILT FENCING TO THEIR ORIGINAL CONDITION IF DAMAGED; SEDIMENT SHALL BE REMOVED FROM ALONG THE FENCE WHEN SEDIMENT REACHES NO MORE THAN ONE-HALF THE HEIGHT OF THE SILT FENCE.
 - INLET BMP'S SHALL BE REPAIRED AND/OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING. CONTRACTOR SHALL REPLACE IF THEY SHOW SIGNS OF DETRIORATION.
 - ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. CONTRACTOR SHALL FERTILIZE AND RESEED THESE AREAS AS NECESSARY.
 - IF THE GRAVEL FOUND IN ANY SEDIMENT FILTER(S) BECAME CLOGGED WITH SEDIMENT, CONTRACTOR SHALL PULL THE GRAVEL AWAY, CLEAN THE GRAVEL, AND REPLACE IN THE SEDIMENT FILTER(S).
 - OUTFALL STRUCTURES IN SEDIMENT BASINS SHALL BE KEPT IN OPERATIONAL CONDITIONS AT ALL TIMES AND DURING ALL PHASES OF CONSTRUCTION. ANY SEDIMENT FOUND IN THE BASIN SHALL NOT EXCEED THE DEPTH OF THE CLEAN-OUT LEVEL (SITE SPECIFIC).
 - THE EMBANKMENT OF THE SEDIMENT BASIN(S) AND/OR TEMPORARY SEDIMENT TRAPS AND THEIR OUTFALL STRUCTURES SHALL BE CHECKED REGULARLY TO ENSURE THEY ARE STRUCTURALLY SOUND AND HAS NOT BEEN DAMAGED DUE TO EROSION OR CONSTRUCTION (SITE SPECIFIC).
 - ALL SEDIMENT FOUND IN THE TEMPORARY SEDIMENT TRAP SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS REACHED NO MORE THAN ONE-HALF THE DEPTH OF THE TEMPORARY SEDIMENT TRAP (SITE SPECIFIC).

SEQUENCE OF CONSTRUCTION

- INSTALL PERIMETER EROSION CONTROL MEASURES AND TEMPORARY CONSTRUCTION ENTRANCES AND EXITS.
- EXCAVATION AND EMBANKMENT TO FORM THE PAVEMENT OR GRADED AREAS.
- INSTALL STORM SEWER (ADJUST EXISTING SEDIMENT BARRIERS AS NECESSARY TO MAINTAIN SEDIMENT CONTROL).
- INSTALL UNDERGROUND UTILITIES (ADJUST EXISTING SEDIMENT BARRIERS AS NECESSARY TO MAINTAIN SEDIMENT CONTROL); ADDITIONAL SEDIMENT BARRIERS SHALL BE UTILIZED AS REQUIRED TO BOUND THE DOWN SLOPE SIDE OF UTILITY CONSTRUCTION AND SOIL STOCKPILES.
- INSTALL BUILDING.
- FINAL GRADING (SEDIMENT BARRIERS SHALL BE MAINTAINED DOWN SLOPE FROM DISTURBED SOIL DURING THIS OPERATION).
- INSTALL PAVING.
- COMPLETION OF ONSITE STABILIZATION.
- REMOVE PERIMETER EROSION CONTROL MEASURES.

EROSION CONTROL DETAILS

- EC3 TEMPORARY CONCRETE WASHOUT (CONTRACTOR TO LOCATE)
- EC4 SILT FENCE
- EC6 BARRIER BAG
- EC7 TEMPORARY GRATE INLET, JUNCTION BOX, & OPEN LID SEDIMENT FILTER

GENERAL GRADING/DRAINAGE NOTES

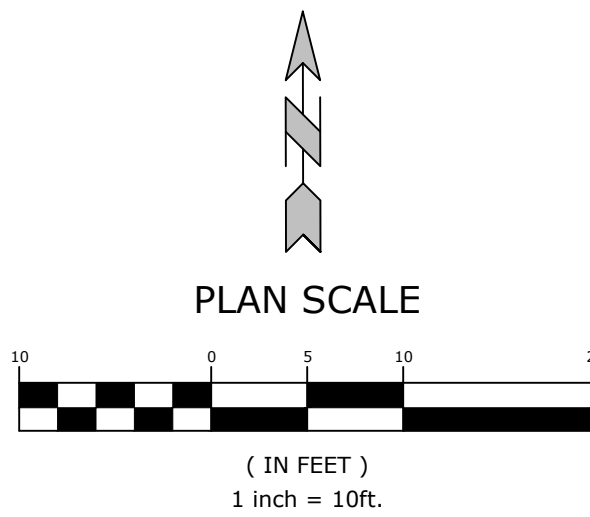
- INFORMATION PERTAINING TO UNDER GROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS AND FIELD LOCATIONS WHEN POSSIBLE, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS IN ADVANCE OF MACHINE TRENCHING. IF CLEARANCES ARE LESS THAN SPECIFIED ON THESE PLANS OR 18", WHICH EVER IS LESS, CONTACT THE ENGINEER AND THE OWNER / DEVELOPER PRIOR TO PROCEEDING WITH CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATION OR REMOVAL OF EXISTING UNDERGROUND UTILITIES SHOWN OR NOT SHOWN AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES ON ADJUSTING EXISTING UTILITY LINE AS REQUIRED BY CUT AND FILL AT NO ADDITIONAL COST TO THE OWNER.
- CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF SHEETING, SHORING, BRACING, AND SPECIAL EXCAVATION MEASURES REQUIRED TO MEET ALL OSHA, FEDERAL, STATE AND LOCAL REGULATIONS PURSUANT TO THE INSTALLATION OF THE WORK INDICATED ON THESE DRAWINGS.
- ALL STORM DRAIN PIPES ARE MEASURED FROM CENTER OF STRUCTURES AND END OF FLARED END SECTIONS.
- ALL DRAINAGE STRUCTURES SHALL BE CAST-IN-PLACE (UNLESS OTHERWISE SPECIFIED OR APPROVED BY THE ENGINEER OF RECORD).
- ALL DISTURBED AREAS AND SLOPES OUTSIDE OF THE LANDSCAPE BEDS AND UNDER THE DECK SHALL BE GRADED SMOOTH AND (4") OF TOP SOIL APPLIED. THE AREA SHALL BE SEEDED AND WATERED UNTIL HARDY GRASS GROWTH HAS BEEN ESTABLISHED.
- STORM SEWER TRENCHING AND BEDDING SHALL BE INSTALLED PER DETAIL D11.
- CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL EROSION AND SEDIMENTATION CONTROL PRACTICES IN ACCORDANCE WITH THE EROSION CONTROL PLAN AND CONSTRUCTION SCHEDULE. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR IMPLEMENTING THE SWPPP.
- REMOVE GOOD TOPSOIL FROM AREAS TO BE GRADED AND FILLED, AND PRESERVE IT FOR USE IN FINISHING THE GRADING OF ALL CRITICAL AREAS.
- SCARIFY AREAS TO RECEIVE TOPSOIL TO A MINIMUM DEPTH OF 3 INCHES BEFORE PLACING TOPSOIL CITY STANDARDS AND SPECIFICATIONS.
- CLEAR AND GRUB AREAS TO BE FILLED, REMOVE TREES, VEGETATION, ROOTS, DEBRIS, AND OTHER MATERIALS THAT WOULD AFFECT THE STABILITY OF THE FILL.
- ENSURE THAT FILL MATERIAL IS FREE OF BRUSH, RUBBISH, ROCKS, LOGS, STUMPS, BUILDING DEBRIS, AND OTHER MATERIALS INAPPROPRIATE FOR CONSTRUCTING STABLE FILLS.
- DO NOT INCORPORATE FROZEN MATERIAL OR SOFT, MUCK, OR HIGHLY COMPRESSIBLE MATERIALS INTO FILL SLOPES.
- KEEP DIVERSIONS AND OTHER WATER CONVEYANCE MEASURES FREE OF SEDIMENT DURING ALL PHASES OF DEVELOPMENT.
- PERMANENTLY STABILIZE ALL GRADED AREAS AFTER FINAL GRADING IS COMPLETED ON EACH AREA OF THE GRADING PLAN. APPLY TEMPORARY STABILIZATION MEASURES ON ALL GRADED AREAS WHEN WORK IS TO BE INTERRUPTED OR DELAYED (SEE EROSION CONTROL PLAN(S)).
- CONTRACTOR SHALL MATCH TOP OF PROPOSED DRAINAGE STRUCTURES WITH PROPOSED GRADES. IF A DISCREPANCY OCCURS BETWEEN PROPOSED GRADES AND PROPOSED STRUCTURE TOPS, THE GRADING SHALL GOVERN. IF THE DISCREPANCY IS MORE THAN 4 INCHES, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD.
- ALL UTILITIES, INCLUDING STORM SEWER, SHOWN WITHIN PUBLIC EASEMENTS OR RIGHT-OF-WAYS SHALL BE CONSTRUCTED TO THE GOVERNING AGENCY'S SPECIFICATIONS. ALL OTHER UTILITIES SHALL BE CONSTRUCTED TO THE CLIENT'S OR THE GOVERNING AGENCY'S SPECIFICATIONS, WHICHEVER IS MORE STRINGENT. IF THERE IS A QUESTION AS TO WHICH SPECIFICATIONS SHOULD APPLY, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD.
- ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADING AND BE INSTALLED ACCORDINGLY.
- CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES HAVING UNDERGROUND UTILITIES ON SITE OR IN RIGHT-OF-WAY PRIOR TO EXCAVATION. CONTRACTOR SHALL CONTACT UTILITY LOCATING COMPANY (STATE ONE CALL SYSTEM) AND LOCATE ALL UTILITIES PRIOR TO GRADING START.
- SITE GRADING SHALL NOT PROCEED UNTIL PERIMETER EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
- CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT AND STAKING.

GRADING/DRAINAGE KEYNOTES

- 305 MATCH EXISTING PAVEMENT ELEVATIONS
- 307 FLARED END SECTION (SHALL MATCH CONNECTING PIPE MATERIAL / SIZE; OR TO BE APPROVED BY THE ENGINEER OF RECORD IF DIFFERENT)
- 309 CURB OPENING (SEE WIDTH OF OPENING AT SYMBOL)
- 310 ADA PATH. NO MORE THAN 5% SLOPE ALONG THE PATH OF TRAVEL, AND 2% CROSS SLOPE
- 311 ADA LANDING / LOADING AREA. NO MORE THAN 2% SLOPE IN ANY DIRECTION

GRADING/DRAINAGE DETAILS

- 35A 12" NYLOPLAST DRAINAGE STRUCTURE
- D4 CITY OF FAYETTEVILLE JUNCTION BOX



EXISTING LEGEND

- | | | | |
|------|------------------------|---|---------------------------|
| --- | PROPERTY LINE | ⊙ | SANITARY SEWER MH |
| R/W | RIGHT OF WAY | ⊙ | CLEAN-OUT |
| SS | SANITARY SEWER LINE | ⊙ | DRAINAGE MH |
| W | WATER LINE | ⊙ | POWER POLE |
| GAS | GAS LINE | ⊙ | GUY WIRE w/ ANCHOR |
| UGT | UNDERGROUND TELEPHONE | ⊙ | GAS METER |
| UGE | UNDERGROUND ELECTRIC | ⊙ | GAS RISER |
| UGTV | UNDERGROUND TELEVISION | ⊙ | STREET LIGHT POLE |
| UFO | UNDERGROUND FIBER | ⊙ | TELEPHONE PEDESTAL |
| OHE | OVERHEAD ELECTRIC | ⊙ | CABLE TV PEDESTAL |
| X-X | FENCE | ⊙ | SIGN (AS NOTED) |
| --- | ROAD CENTERLINE | ⊙ | POST (AS NOTED) |
| --- | DITCH FLOWLINE | ⊙ | BENCHMARK |
| --- | EASEMENT LINE | ⊙ | FOUND IRON PIN (AS NOTED) |
| --- | GRAVEL LINE | ⊙ | CONTROL POINT |
| --- | FIRE HYDRANT | ⊙ | RR SPIKE |
| --- | WATER METER | ⊙ | BUSH |
| --- | WATER VALVE | ⊙ | TREE |
| --- | WATER FAUCET | ⊙ | |

PROPOSED LEGEND

- | | | | |
|-----|------------------------|---|----------------------|
| --- | GRADE BREAK | ⊙ | SPOT ELEVATIONS |
| --- | FLOWLINE | ⊙ | FG = FINISHED GRADE |
| --- | CONTOUR ELEVATION | ⊙ | EG = EXISTING GRADE |
| --- | STORM DRAIN | ⊙ | FFE = FINISHED FLOOR |
| --- | CATCH BASIN | ⊙ | BW = BOTTOM OF WALL |
| --- | SANITARY SEWER MANHOLE | ⊙ | FINISHED GRADE |
| --- | FLARED END SECTION | ⊙ | BW = BOTTOM OF WALL |
| --- | FLOW ARROW | ⊙ | FINISHED GRADE |
| --- | | ⊙ | THT = THROAT |
| --- | | ⊙ | ELEVATION |
| --- | | ⊙ | TC = TOP OF DECK |
| --- | | ⊙ | TOS = TOP OF STEP |
| --- | | ⊙ | HP = HIGH POINT |
| --- | | ⊙ | LP = LOW POINT |

MCE McCLELLAND CONSULTING ENGINEERS, INC.
1580 E STEARNS ST
FAYETTEVILLE, ARKANSAS 72703
(479) 443-2377
HTTP://WWW.MCE.US.COM

REGISTERED LANDSCAPE ARCHITECT
CHRISTOPHER M. BAUMING
License Number 2985
10/07/2022
ORIGINAL SIGNATURE ON FILE

WILSON PARK RESTROOM
675 N PARK AVE,
FAYETTEVILLE, AR

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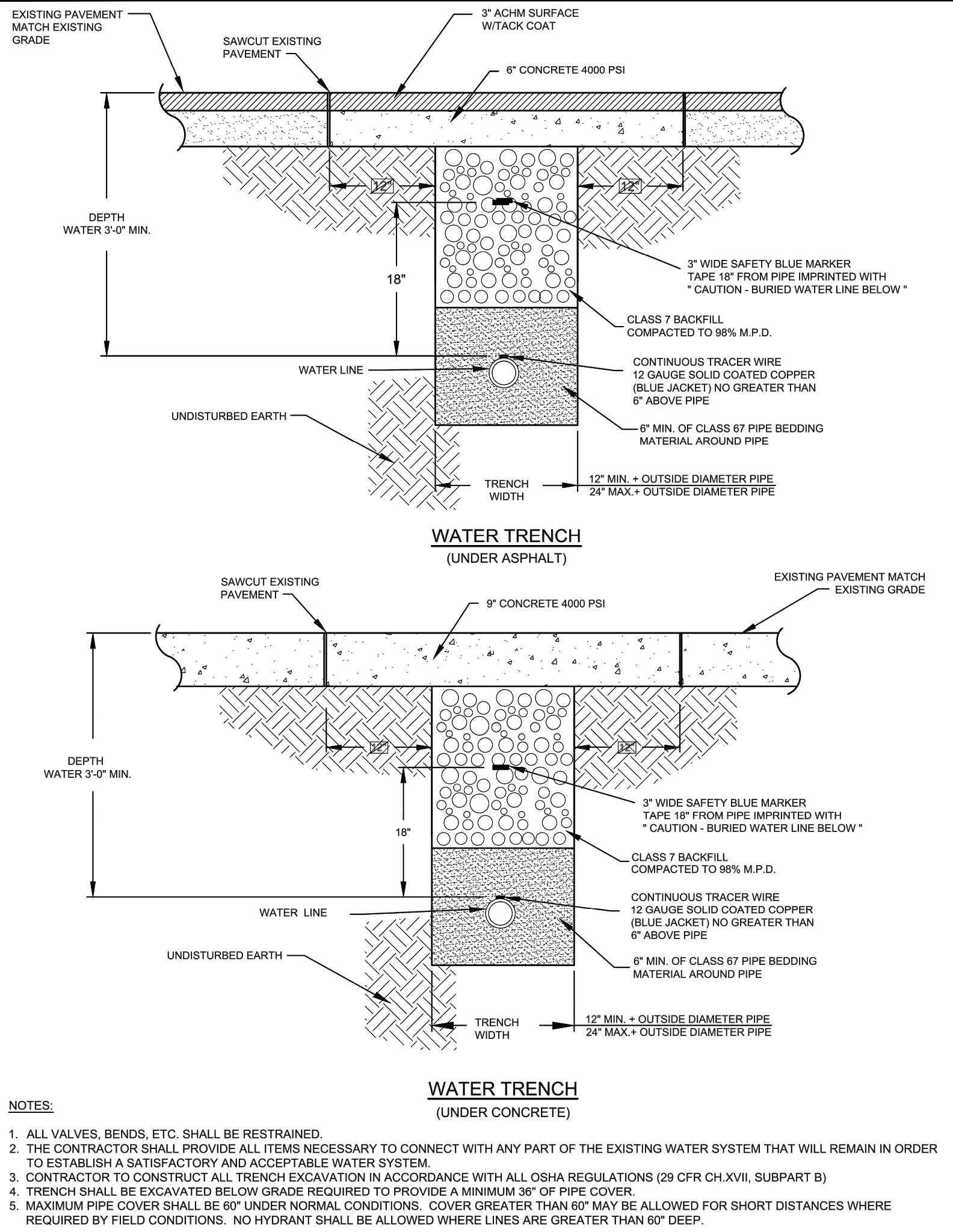
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GRADING & EROSION CONTROL PLAN

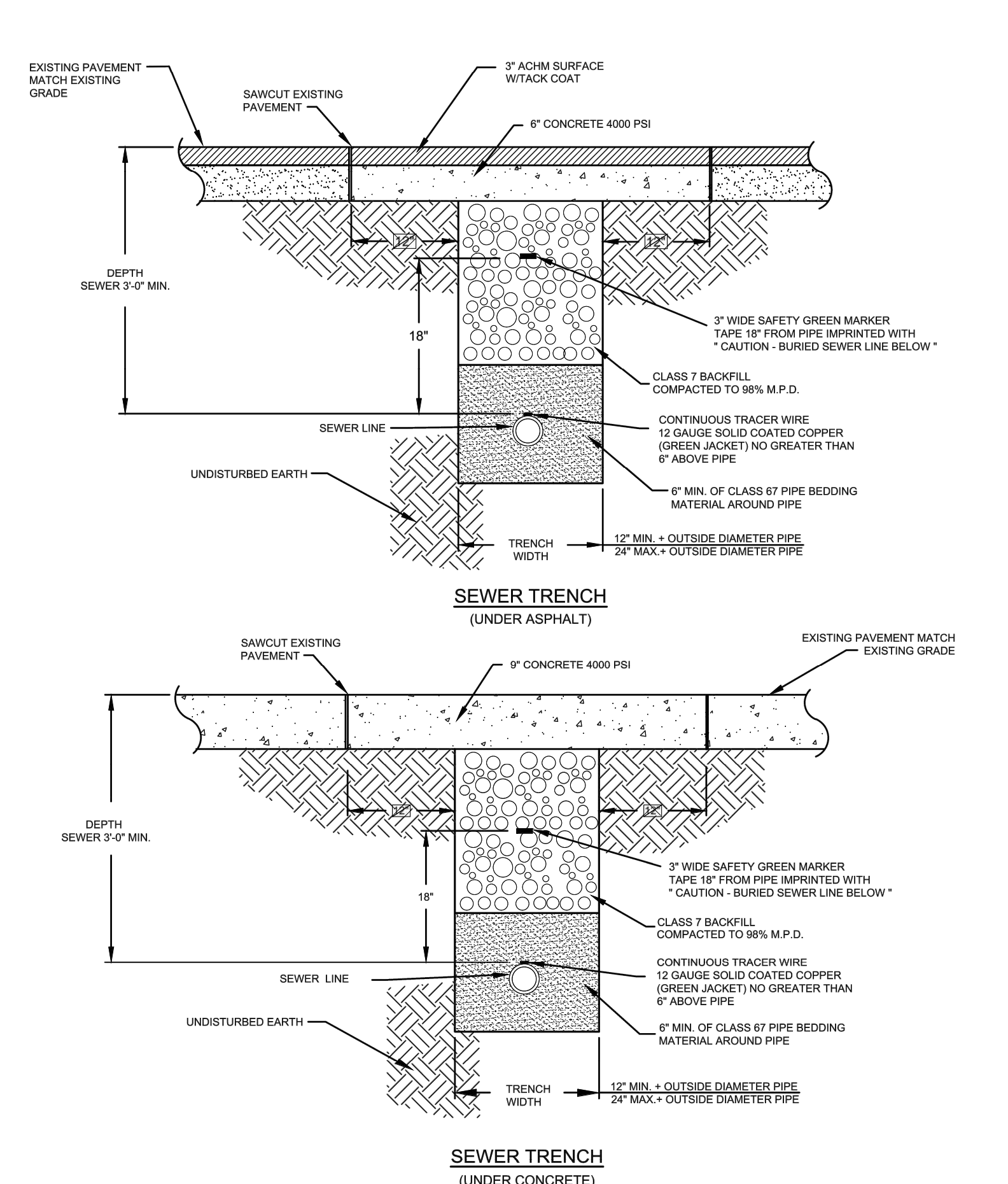
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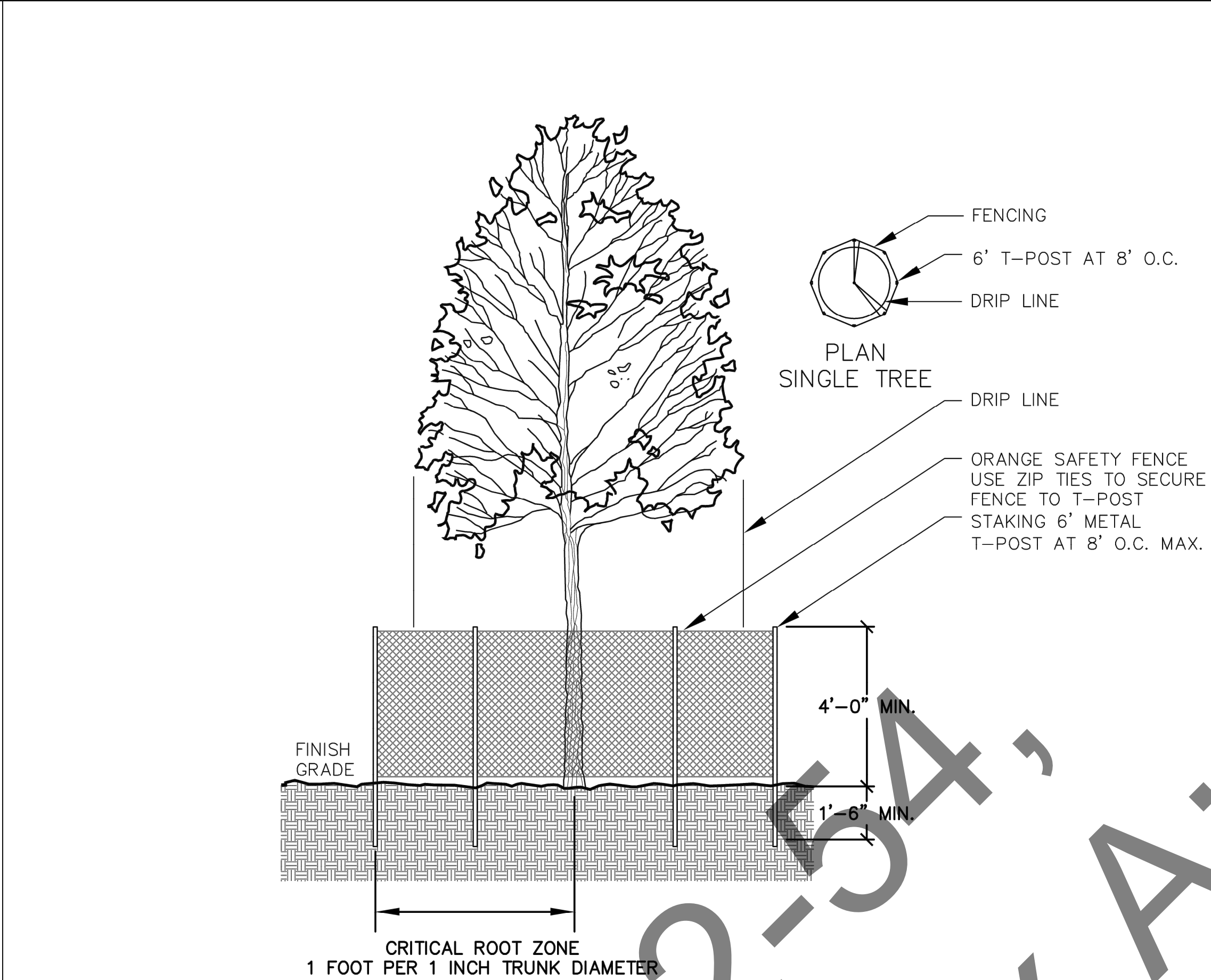
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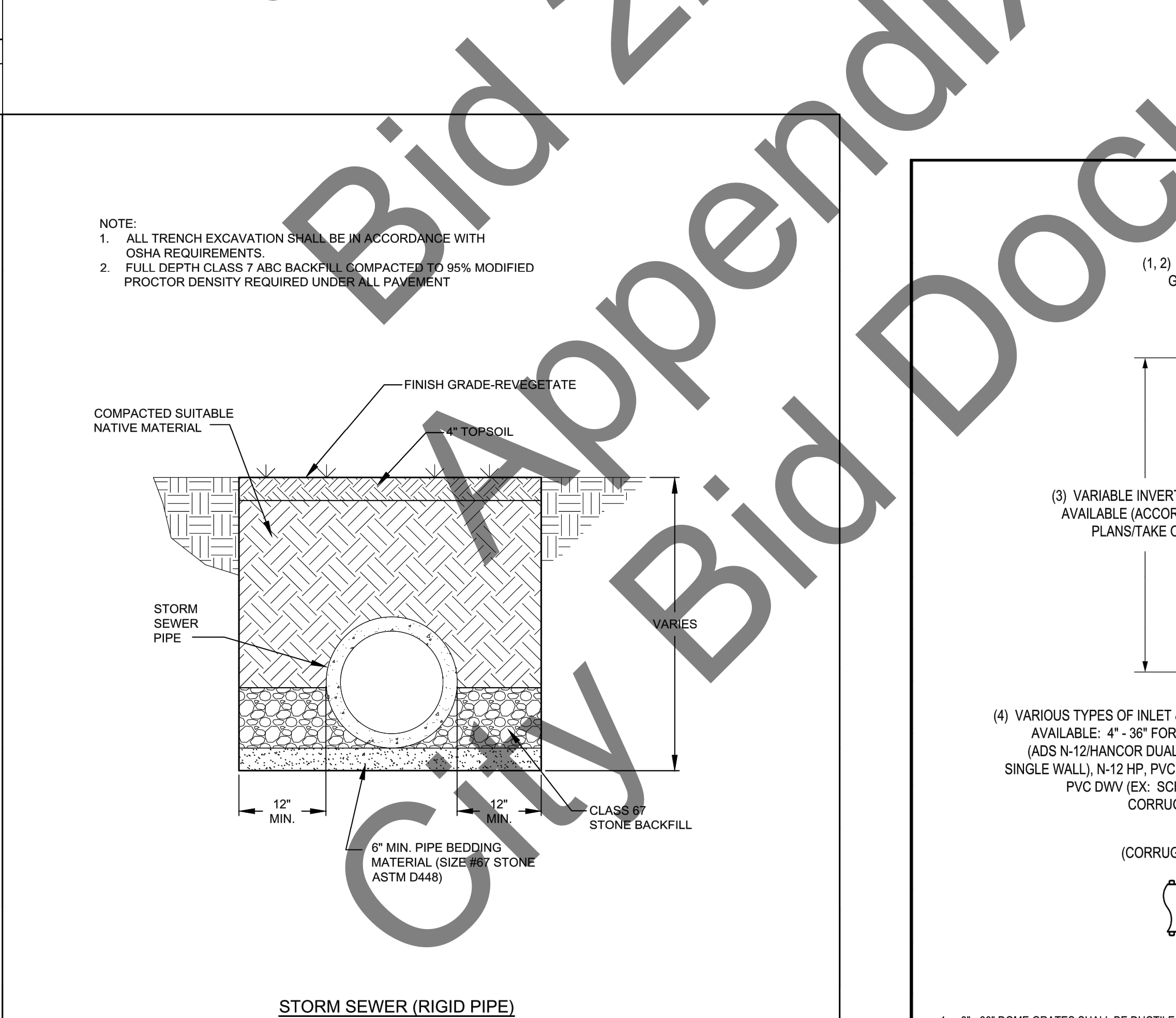
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			DESCRIPTION: WATER TRENCH (UNDER PAVEMENT)	SHEET: W2



	CITY OF FAYETTEVILLE ARKANSAS	ENGINEERING DIVISION 113 W. MOUNTAIN STREET PHONE: (479) 675-6555 FAX: (479) 675-6555	TITLE: SEWER DETAILS	DATE: JUN. 1, 2021
			DESCRIPTION: SEWER TRENCH (UNDER PAVEMENT)	SHEET: S2



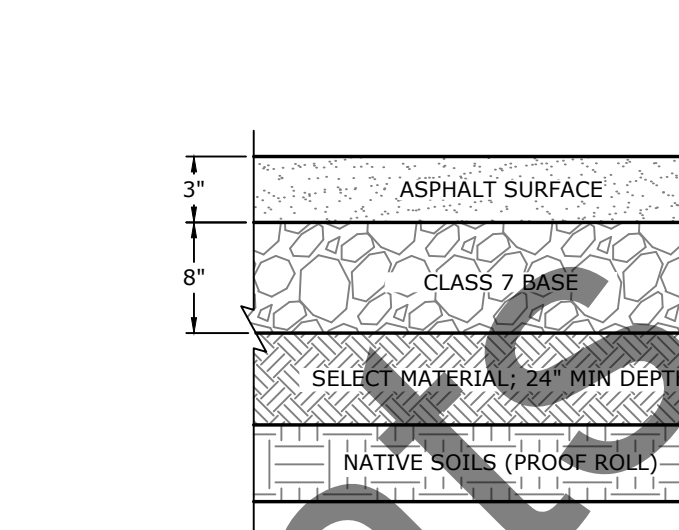
	CITY OF FAYETTEVILLE ARKANSAS	ENGINEERING DIVISION 113 W. MOUNTAIN STREET PHONE: (479) 675-6555 FAX: (479) 675-6555	TITLE: DRAINAGE DETAILS	DATE: MAY 26, 2017
			DESCRIPTION: STORM SEWER (Rigid Pipe)	SHEET: D11



	CITY OF FAYETTEVILLE ARKANSAS	ENGINEERING DIVISION 113 W. MOUNTAIN STREET PHONE: (479) 675-6555 FAX: (479) 675-6555	TITLE: DRAINAGE DETAILS	DATE: MAY 26, 2017
			DESCRIPTION: STORM SEWER (Rigid Pipe)	SHEET: D11

- NOTES:**
- CONCRETE FOR SIDEWALK SHALL HAVE A COMPRESSIVE STRENGTH OF 3,500 PSI AT 28 DAYS (MIN).
 - ALL SIDEWALKS SHALL HAVE A BROOMED FINISHED UNLESS OTHERWISE SPECIFIED.
 - ALL JOINTING TO BE LOCATED PER SIDEWALK JOINTING (DETAIL 22C).
 - CURING COMPOUND IS REQUIRED UNLESS TEMPERATURES STAY BELOW 50° FAHRENHEIT FOR 7 DAYS. CURING COMPOUND MUST BE COLORED WHITE, RED, OR PINK. CLEAR CURING COMPOUND IS UNACCEPTABLE. IF CONCRETE IS NOT CURED WHEN REQUIRED, IT WILL BE CONSIDERED GROUNDS FOR REMOVAL AND REPLACEMENT.
 - ALL CONTROL JOINTING TO BE SAWCUT OR TOOLED JOINTED PER SIDEWALK JOINTING (DETAIL 22C).

A	SEE SITE PLAN
B	A
C	Bx5

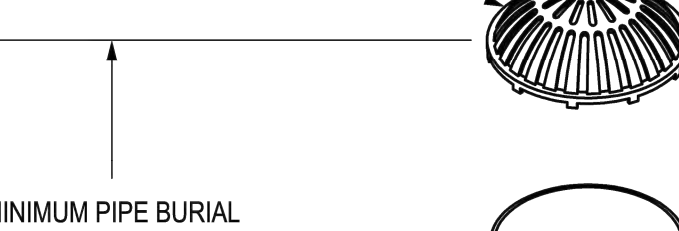


- NOTES:**
- MATERIALS TO BE COMPACTED AT OPTIMAL MOISTURE CONTENT.
 - ACHM SURFACING COURSE SHALL ADHERE TO SECTION 407, TABLE 407-1 (TYPE II), AHTD STANDARD SPECIFICATIONS, 1996 EDITION.
 - REFER TO CITY OF FAYETTEVILLE STANDARD SPECIFICATIONS.

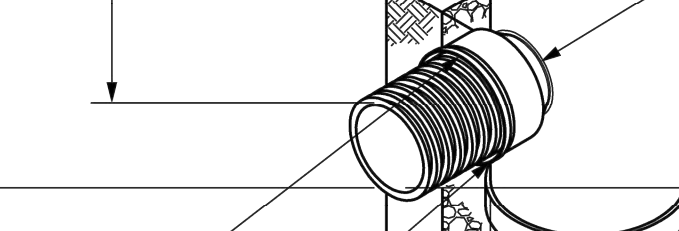
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			DESCRIPTION: STANDARD DUTY ASPHALT PAVING	SHEET: W2



	CITY OF FAYETTEVILLE ARKANSAS	ENGINEERING DIVISION 113 W. MOUNTAIN STREET PHONE: (479) 675-6555 FAX: (479) 675-6555	TITLE: SEWER DETAILS	DATE: JUN. 1, 2021
			DESCRIPTION: SEWER TRENCH (UNDER PAVEMENT)	SHEET: W2



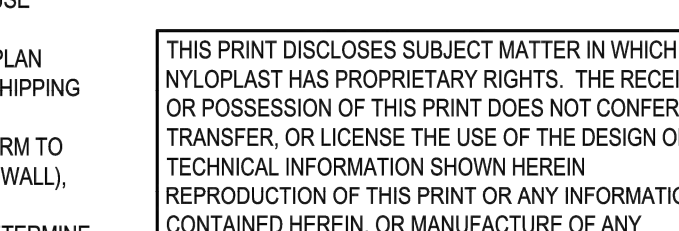
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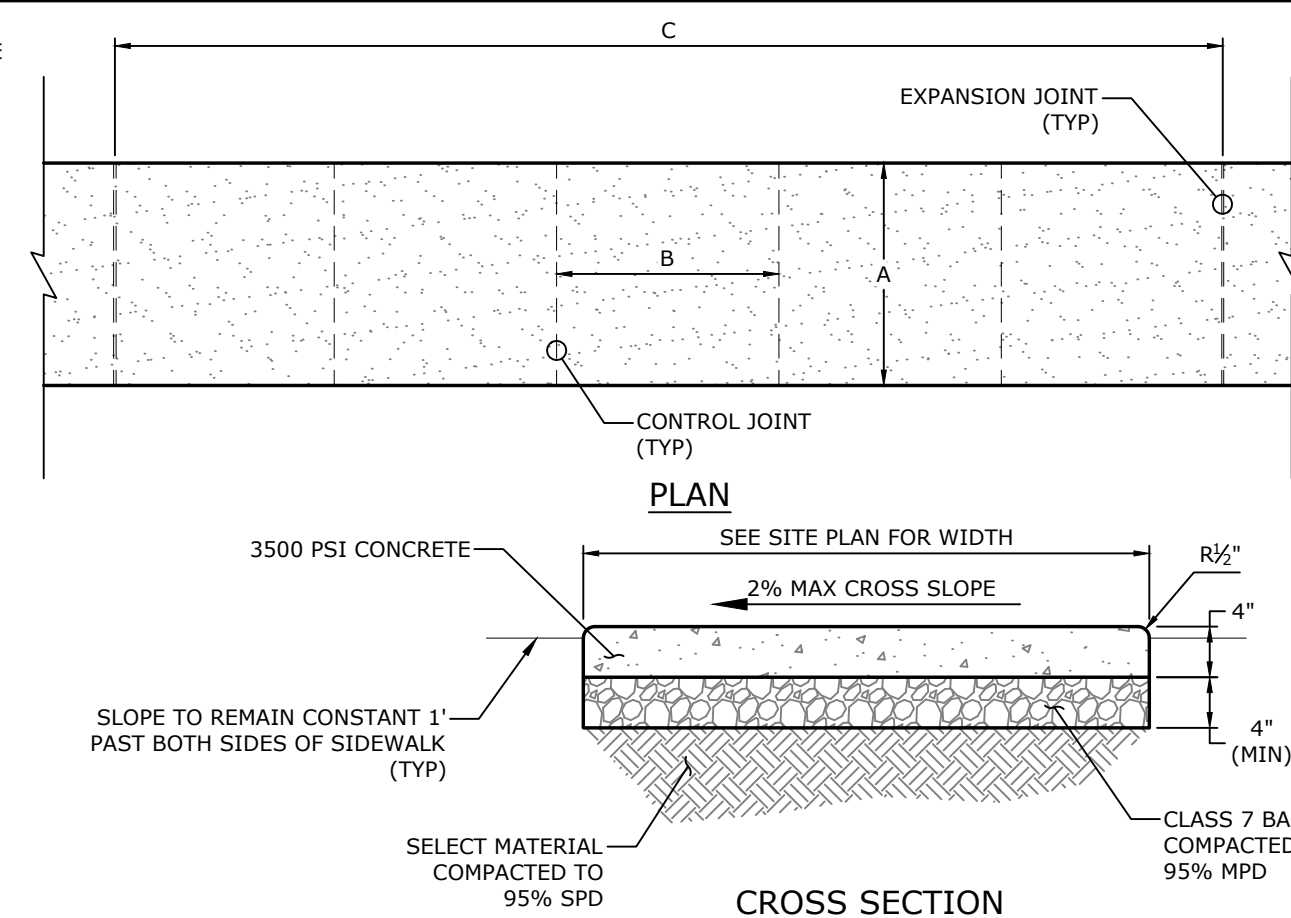
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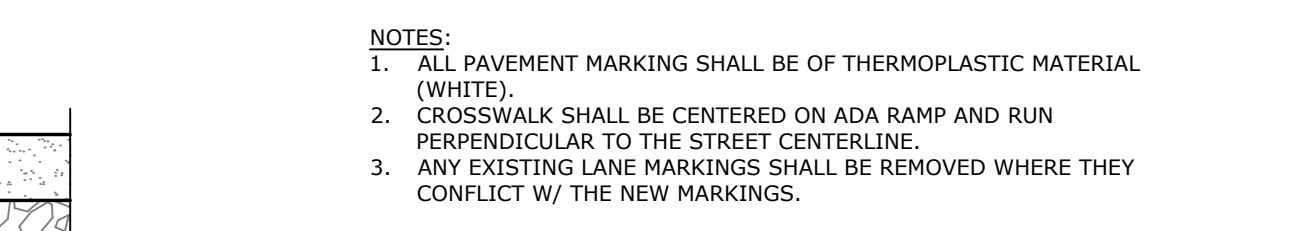
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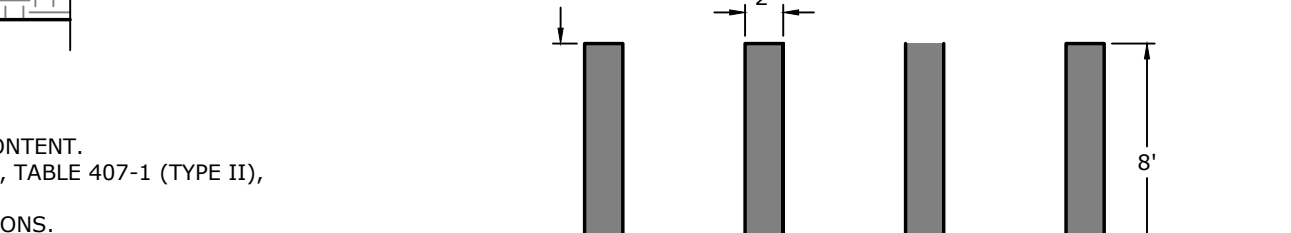
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			DESCRIPTION: SEWER TRENCH (UNDER PAVEMENT)	SHEET: W2



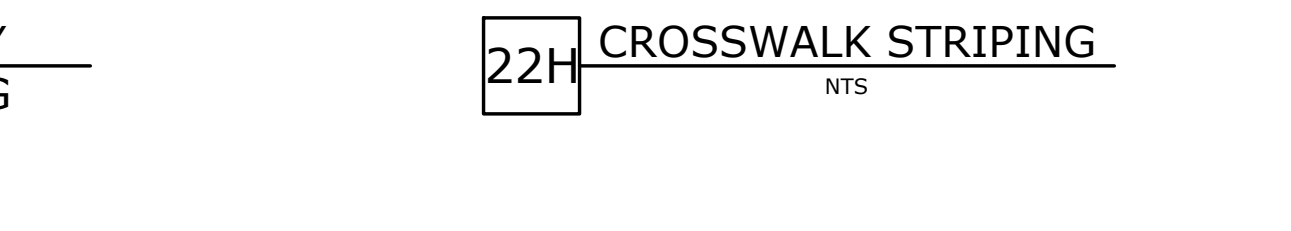
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			DESCRIPTION: STANDARD DUTY ASPHALT PAVING	SHEET: W2



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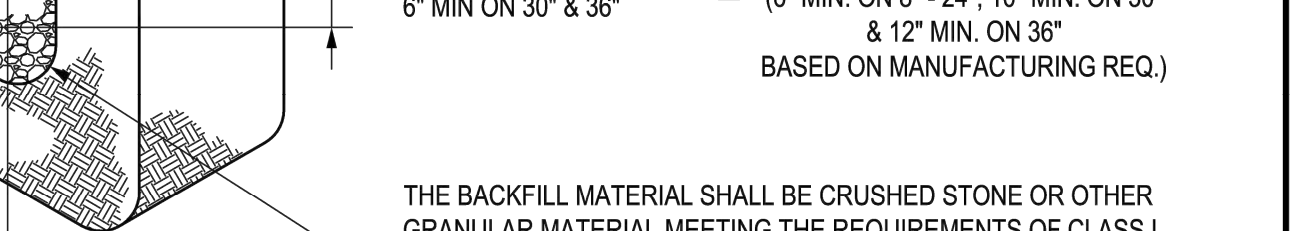
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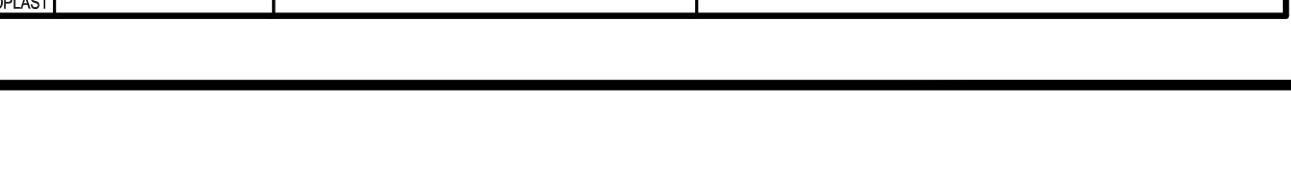
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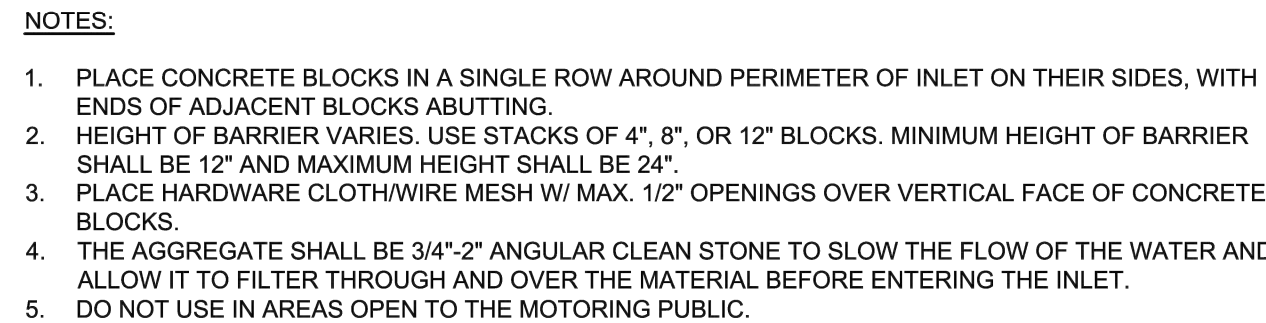
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REV	DATE	DESCRIPTION

DETAIL SHEET 1

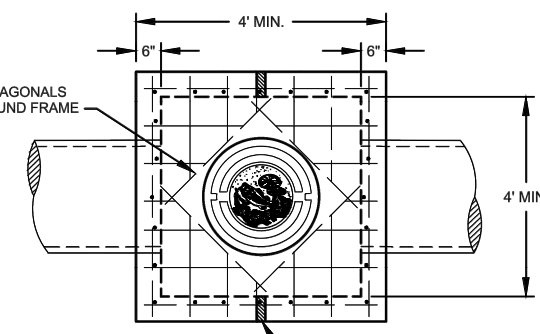
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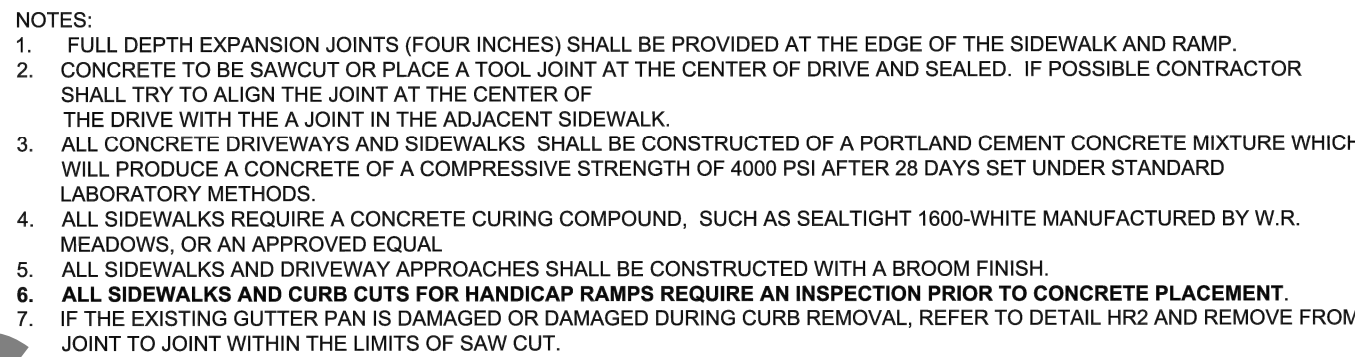


1. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
2. ALL REINFORCEMENT BARS SHALL BE GRADE 60 AND SHALL HAVE A MINIMUM 2" COVER UNLESS OTHERWISE NOTED.
3. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI - TOP 16" BARS BE CAST-IN-PLACE.
4. INVERTS SHALL BE POURED MONOLITHICALLY WITH FOOTING.
5. PIPES MAY EXTERIOR FROM ANY ANGLE OF ELEVATION AS DIRECTED BY THE ENGINEER. REINFORCING BARS SHALL BE CUT TO CLEAR PIPE BY 6".
6. STEPS ARE REQUIRED IN STORM DRAIN MANHOLES THAT ARE AT A FT OF DEPTH AND GREATER (FROM INVERT TO RIM). CENTERLINE OF MANHOLE LID SHALL BE 2 FT FROM THE WALL WHERE STEPS ARE LOCATED. STEPS (6" x 12") SHALL BE COPOLYMER POLYPROPYLENE PLASTIC WITH STEEL CORE AT 16" APART.
7. LIMIT DEFLECTION TO 60 DEGREES. IF GREATER, USE NEXT LARGER MANHOLE DIAMETER/SIZE.

INSIDE DIMENSION	DIAMETER OF OUTLET PIPE	MIN. WALL THICKNESS	*TOP CONCRETE SLAB REINFORCING	MIN. WALL THICKNESS
4"	15" - 18"	6"	#4S @ 8" O.C. E.W.	6"
5"	24" - 42"	8"	#4S @ 7" O.C. E.W.	8"
6"	48" - 54"	8"	#5S @ 5" O.C. E.W.	8"



1. CONTRACTION JOINTS SHALL BE 1/8" TO 3/8" X 1/2" AT 15 FT. INTERVALS. ALL CONTRACTION JOINTS AND COLD JOINTS SHALL BE FILLED WITH JOINT SEALANT TO FINISHED GRADE.
2. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI.
3. JOINT SEALANT MATERIAL SHALL BE APPLIED TO ALL STATISTICAL STRUCTURES AND END CURBS RETURNS. THE EXPANSION MATERIAL SHALL BE 1/2" ASPHALT IMPREGATED FIBERBOARD CONFORMING TO ASTM D4212. EXPANSION JOINT MATERIAL SHALL BE LEFT 1/2" LOWER THAN FINISHED GRADE. MINIMUM 100' MAXIMUM 150'.
4. EXPANSION JOINTS SHALL BE FILLED WITH JOINT SEALANT SHAPED TO THE CROSS SECTION OF THE CURBS AND CONSTRUCTED AT RIGHT ANGLES WITH THE CURB LINE.
5. FINISH SHALL BE MEDIUM BROOM FINISH.
6. CONCRETE CURING COMPOUND SHALL BE SEAL-TIGHT 1600-WHITE MANUFACTURED BY W.R. MEADOWS, OR AN APPROVED EQUAL.
7. CONCRETE JOINT SEALANT SHALL BE BONSOREN "MONOLASTIC SCL" OR APPROVED EQUAL.
8. JOINT SEALANT LAYERS SHALL NOT BE USED IN DEEP JOINTS, AS NEEDED, ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.
9. GUTTER SHALL MATCH THE CROSS SLOPE OF THE ROAD WIDTH $\pm .05\%$. GUTTER DRAINING THE



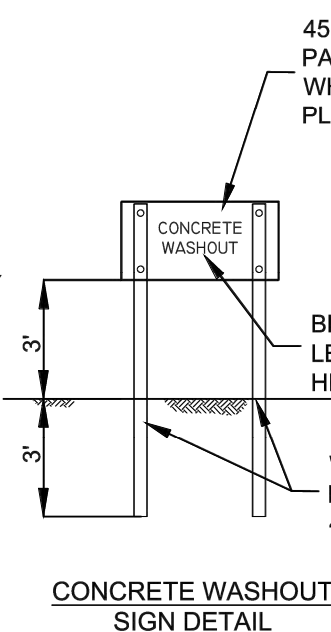
 CITY OF FAYETTEVILLE ARKANSAS	ENGINEERING DIVISION 113 W. MOUNTAIN STREET	TITLE: HANDICAP RAMP DETAILS DESCRIPTION: STANDARD HANDICAP RAMP (SMALLER RADIUS WITH CURBED SIDES)	DATE: May 28, 2017 REVISED MAY 30, 2021	SHEET: HRS
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|---|---|--|---------------------------------------|------------|
|  CITY OF FAYETTEVILLE
ARKANSAS | ENGINEERING DIVISION
113 W. MOUNTAIN STREET | TITLE: EROSION CONTROL DETAILS | DATE: May 24, 2011 | SHEET: |
| | | DESCRIPTION: BARRIER BAG CURB INLET PROTECTION
(SUMP CONDITION ONLY) (N.T.S.) | REVISED
August 1, 2016
4-7-2020 | EC6 |
| PHONE: (479) 575-8206 | FAX NO: (479) 575-8202 | DRAWN BY: JTS CHECKED BY: GEN FILE: E06-Barrier Bag Curb Inlet Protection.dwg | | |



1. NO WASHING OUT OF CONCRETE TRUCKS OR WASHING OF SWEEPINGS FROM EXPOSED AGGREGATE CONCRETE INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS IS ALLOWED.
2. EXCESS CONCRETE IS NOT ALLOWED TO BE DUMPED ON-SITE, EXCEPT IN DESIGNATED TEMPORARY CONCRETE WASHOUT PIT AREAS.
3. ON-SITE TEMPORARY CONCRETE WASHOUT AREAS SHALL BE LOCATED AT LEAST 50 FEET FROM STORM DRAINS, OPEN DITCHES, OR WATER BODIES.
4. TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
5. WASHOUT FACILITIES SHALL BE CLEANED OUT OR REPLACED ONCE THE WASHOUT IS 75% FULL. PLASTIC LINING MATERIAL SHALL BE MINIMUM OF 10 MIL POLYETHYLENE SHEETING AND SHALL BE FREE OF HOLES, TEARS, OR OTHER DEFECTS.
6. WHEN WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR WORK, THE HARDENED CONCRETE SHALL BE REMOVED FROM THE FACILITY. EXCESS MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES WILL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY (i.e. PERMITTED FACILITY OR RECYCLED).



1. BAGS OF WOVEN GEOTEXTILE FABRIC, FILLED WITH 1/4" CLEAN GRAVEL. MUST BE LAYERED SUCH THAT NO GAPS ARE EVIDENT.
2. LEAVE ONE ROCK BARRIER GAP IN THE TOP ROW ON THE SIDE AWAY FROM FLOW, TO PROVIDE A SPILLWAY; OR IN THE CENTER IF FLOWING IS NEEDED ON BOTH SIDES.
3. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT, SEDIMENT AND GRAVEL LOCATED IN THE TRAVELED WAY MUST BE REMOVED IMMEDIATELY.
4. APPLICATION OF THE DEVICE MUST BE APPROVED BY THE CITY BEFORE USE IN AREAS OPEN TO THE MOTORING PUBLIC.

10/07/2022
ORIGINAL SIGNATURE ON FILE

**WILSON PARK
RESTROOM**
675 N PARK AVE,
FAYETTEVILLE, AR



REVISIONS		
REV	DATE	DESCRIPTION

DETAIL SHEET
2

DESIGNED BY: JPS	DRAWN BY: JPS
DATE: 10/7/2022	REVISION: REV-0
SCALE: 10	JOB NUMBER: 21-2132

C5.1

DOOR SCHEDULE							
MARK	WIDTH	HEIGHT	DOOR TYPE	FRAME TYPE	HEAD/JAMB	HW SET	COMMENTS
103	4'-0"	7'-0"	HM	HM	B/B	2	4 3/4" JAMB DEPTH
106	3'-0"	7'-0"	HM	HM	A/A	1	
107	3'-0"	7'-0"	HM	HM	A/A	1	
108	3'-0"	7'-0"	HM	HM	A/A	1	
104	3'-0"	7'-0"	HM	HM	A/A	1	
105	3'-0"	7'-0"	HM	HM	A/A	1	

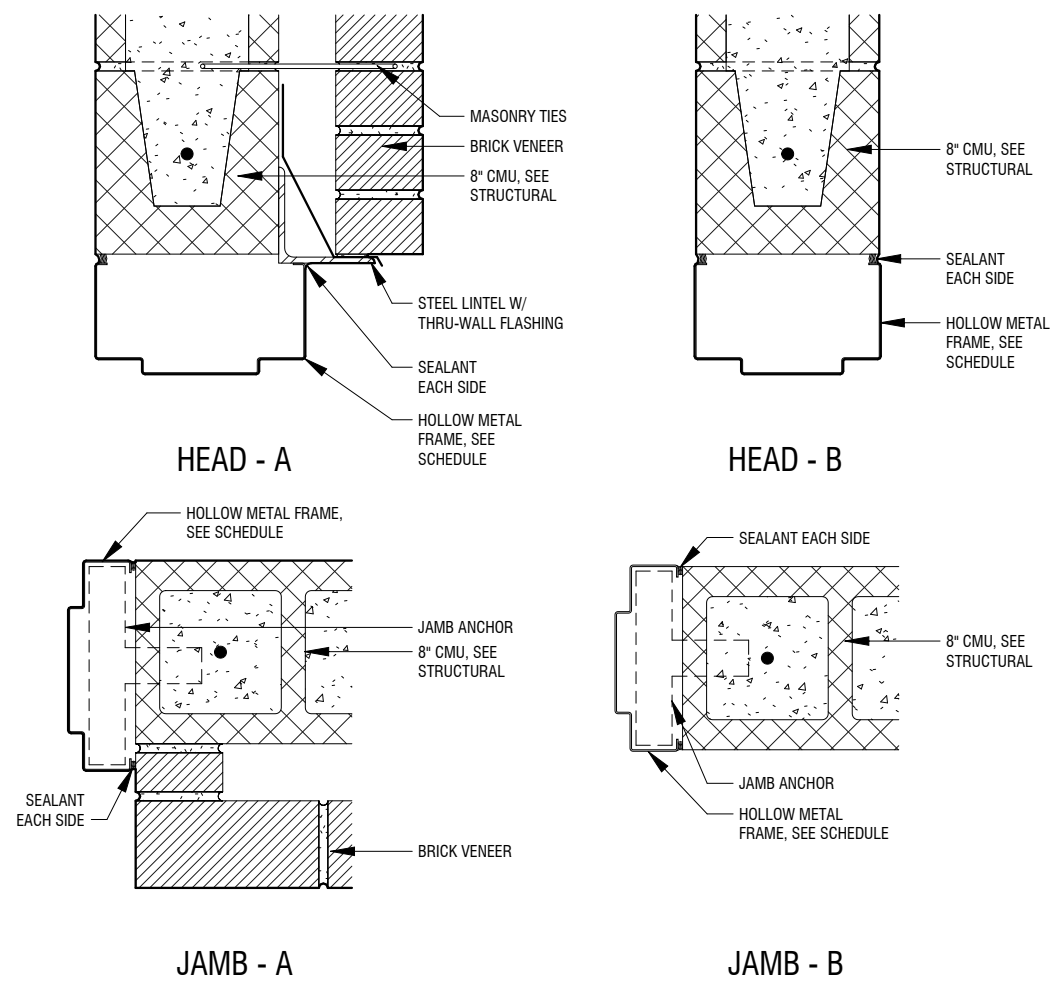
DOOR SCHEDULE GENERAL NOTES

1. COORDINATE WALL AND FLOOR STOPS IN FIELD
2. DOORS AND FRAMES TO BE PAINTED, SATIN FINISH, ARCHITECT TO SELECT COLOR
3. DOOR FRAMES TO BE WELDED HOLLOW METAL MASONRY FRAMES, 8 3/4" JAMB DEPTH W/ 4" HEAD & 2" JAMBS UNLESS NOTED OTHERWISE
4. SEE SPECS FOR HARDWARE SETS

DOOR SCHEDULE KEY

HM - HOLLOW METAL
HW - HARDWARE

FRAME DETAILS



LEGEND

	BRICK VENEER
	CMU WALLS
	CONCRETE SLAB
	COMPOSITE DECK BOARDS
	KEY NOTE TAG
	ROOM TAG
	DOOR TAG
	WALL TYPE TAG

GENERAL NOTES: NEW FLOOR PLAN

MARK	DESCRIPTION
1	ALL DIMENSIONS TO BE FIELD VERIFIED, ANY DISCREPANCIES ARE TO BE COORDINATED W/ ARCHITECT
2	4" GRAVEL BASE OVER GEOTEXTILE FABRIC UNDER ENTIRE WOOD DECK STRUCTURE

KEY NOTES: FLOOR PLAN

MARK	DESCRIPTION
1	NEW CROSSWALK STRIPING TO VOLLEYBALL COURT
2	NEW CURB AND GUTTER, SEE CIVIL
3	EXISTING PARKING LOT
4	EXISTING SIDEWALK AND RAILING
5	NEW SIDEWALK RAMP TO EXISTING SIDEWALK AND/OR EXISTING FINISH GRADE, SEE CIVIL
6	EXISTING TREE, PROVIDE TREE PRESERVATION FENCING AND SILT FENCE AS REQUIRED BY CITY OF FAYETTEVILLE
7	EXISTING CONCRETE DRAINAGE SWALE
8	NEW STORM DRAIN PIPE W/ FLARED END, SEE CIVIL
9	EXISTING TENNIS COURTS
10	EXISTING CONCRETE LANDING
11	NEW PARKING LOT PLANTER, SEE CIVIL
12	NEW RAISED PLANTER; SEE DEDUCTIVE ALT A6.1
13	CUSTOM ALUMINUM TUBE SCREEN RE-ARCH FINISH
14	LINE OF CEILING/ROOF ABOVE
15	STEEL COLUMN PAINTED RE-ARCH, TYP. SEE STRUCTURAL
16	BUILT-IN BENCH SEAT
17	BUILT-IN TRASH/RECYCLING NICHES
18	BULO DRINKING FOUNTAIN W/ BOTTLE FILLER
19	LINE OF DECK APRON WALL BELOW
20	NATURAL STONE BOULDER STEP AT BASE OF STAIR
21	NEW JUNCTION BOX AND MAN HOLE BTW EXISTING AND NEW STORM DRAIN PIPE, SEE CIVIL

FINISH SCHEDULE

MARK	NAME	FLOOR	BASE	WALL	CEILING	COMMENTS
101	COVERED OPEN AIR PAVILION	C2/CWD	-	-	WD1	
102	DRINK FOUNTAIN	C2	-	CMU/PT2	FC/PT2	
103	STORAGE/MECH	C1	-	CMU/PT1	WD2/PT1	
104	ADA TLT	C1	-	CMU/PT1	WD2/PT1	
105	ADA TLT	C1	-	CMU/PT1	WD2/PT1	
106	TLT	C1	-	CMU/PT1	WD2/PT1	
107	TLT	C1	-	CMU/PT1	WD2/PT1	
108	TLT	C1	-	CMU/PT1	WD2/PT1	

FINISH SCHEDULE GENERAL NOTES

1. ARCHITECT TO SELECT PANT COLOR
2. ALL PAINTED SURFACE TO HAVE SATIN FINISH
3. ARCHITECT TO SELECT STAIN COLOR
4. ALL EXPOSED STRUCTURAL STEEL TO BE PAINTED,
ARCHITECT TO SELECT COLOR
5. STEEL RAILINGS TO BE GALV.

FINISH SCHEDULE KEY

- | | |
|------|--|
| C1 | CONCRETE, BUFFED & SEALED |
| C2 | CONCRETE, LIGHT BROOM FINISH |
| CMU | CONCRETE MASONRY UNITS |
| WD1 | CLEAR PINE TONGUE & GROOVE, STAINED & SEALED |
| WD2 | SANDED PLYWOOD |
| CWD | COMPOSITE WOOD DECK |
| PT1 | EPOXY PAINT |
| PT2 | EPOXY PAINT |
| FC | FIBER CEMENT SOFFIT PANEL |
| PTWD | PRESSURE TRTD 2X WOOD DECK |
| GALV | GALVANIZED STEEL |

TOILET ACCESSORY SCHEDULE

MARK	MANUFACTURER	MODEL #	DESCRIPTION
1	BOBRICK	B-358	SURFACE MOUNTED MULTI-ROLL TOILET TISSUE DISPENSER
2	BOBRICK	B-508	STAINLESS STEEL GRAB BARS - INSTALL PER ADA REQUIREMENTS
3	BOBRICK	B-4112	SURFACE MOUNTED SOAP DISPENSER
4	BOBRICK	B-1556	FRAMELESS STAINLESS STEEL MIRROR
5	BOBRICK	B-7128	SURFACE MOUNTED HAND DRYER
6	KOALA KARE	KB311-SSWM	STAINLESS STEEL SURFACE MOUNTED BABY CHANGING STATION, VERTICAL
7	BOBRICK	B-6707	SURFACE MOUNTED UTILITY HOOK
8	BOBRICK	B-223	STAINLESS STEEL MOP AND BROOM HOLDER
9	BEST ACCESS DOORS	BA-MDS	MEDIUM SECURITY ACCESS DOOR, CUSTOM SIZE 36"x 24"

NOTES:

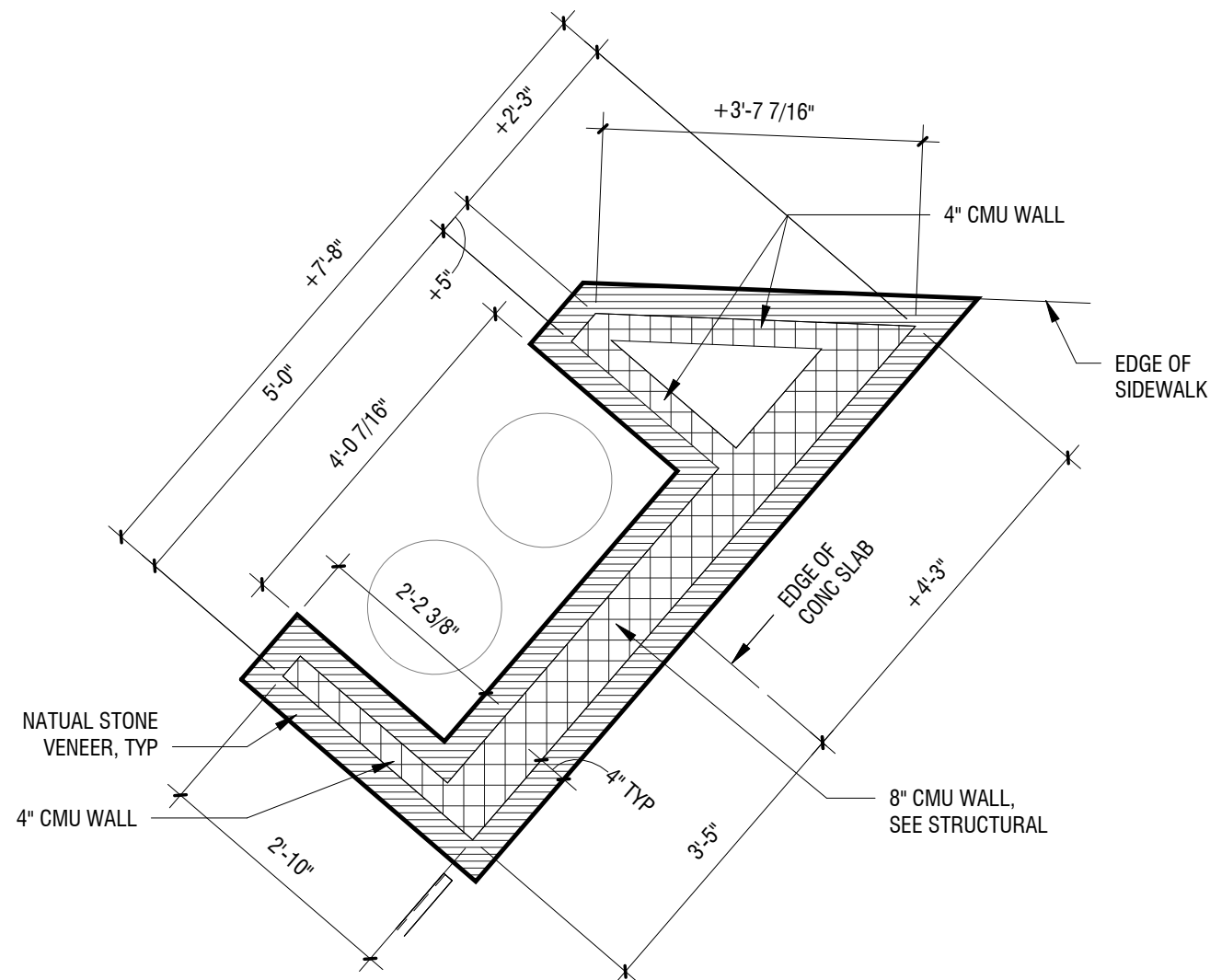
1. SEE ENLARGED RESTROOM FLOOR PLAN 2/a1.2
2. ACCESS DOOR SILL TO BE AT 8" AFF.

WALL TYPE SCHEDULE

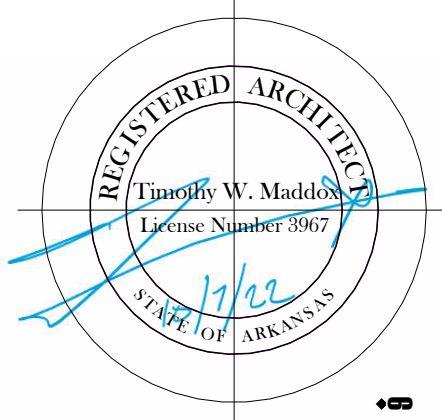
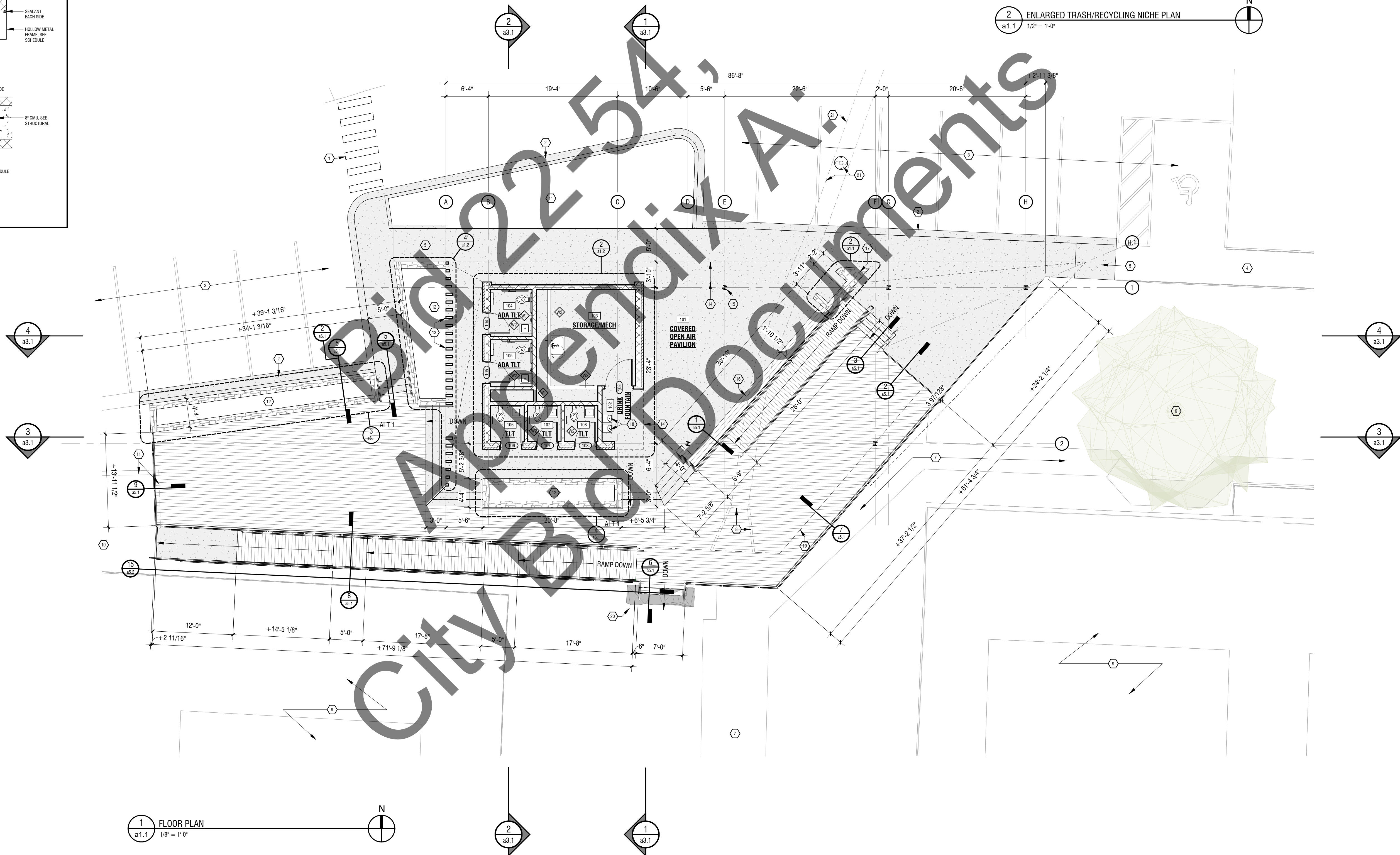
MARK	DESCRIPTION
W1	8x8x16 CONCRETE MASONRY UNIT WALL
W2	6x8x16 CONCRETE MASONRY UNIT WALL

NOTES:

1. SEE WALL SECTIONS AND STRUCTURAL FOR MORE INFORMATION
2. ALL OPEN CMU CELLS TO FILLED WITH LOOSE FILL INSULATION



NOTE: TOP OF STONE CAP TO ALIGN WITH TOP OF RAIL AT BUILT-IN BENCH, +/- 42" AFF

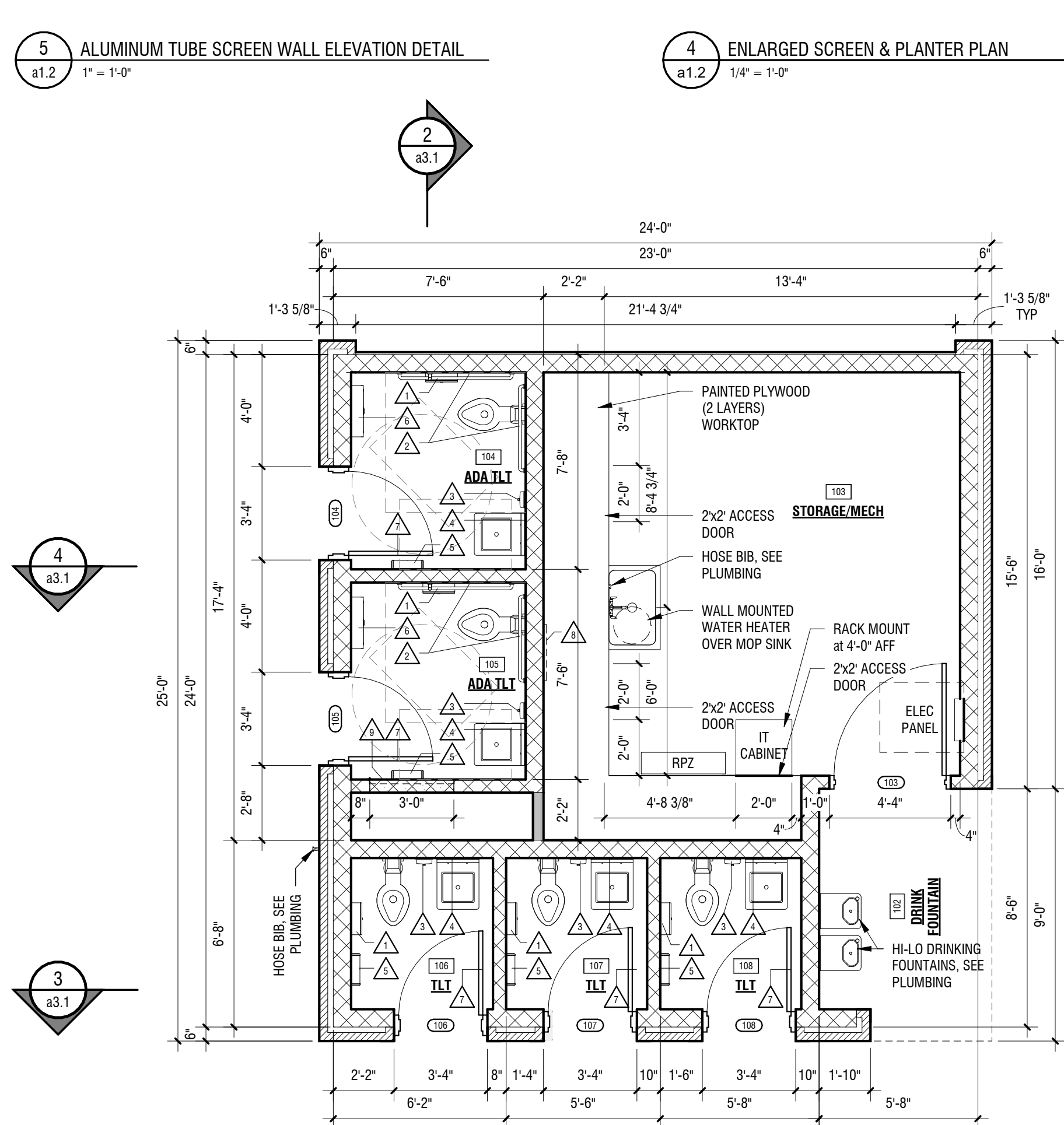
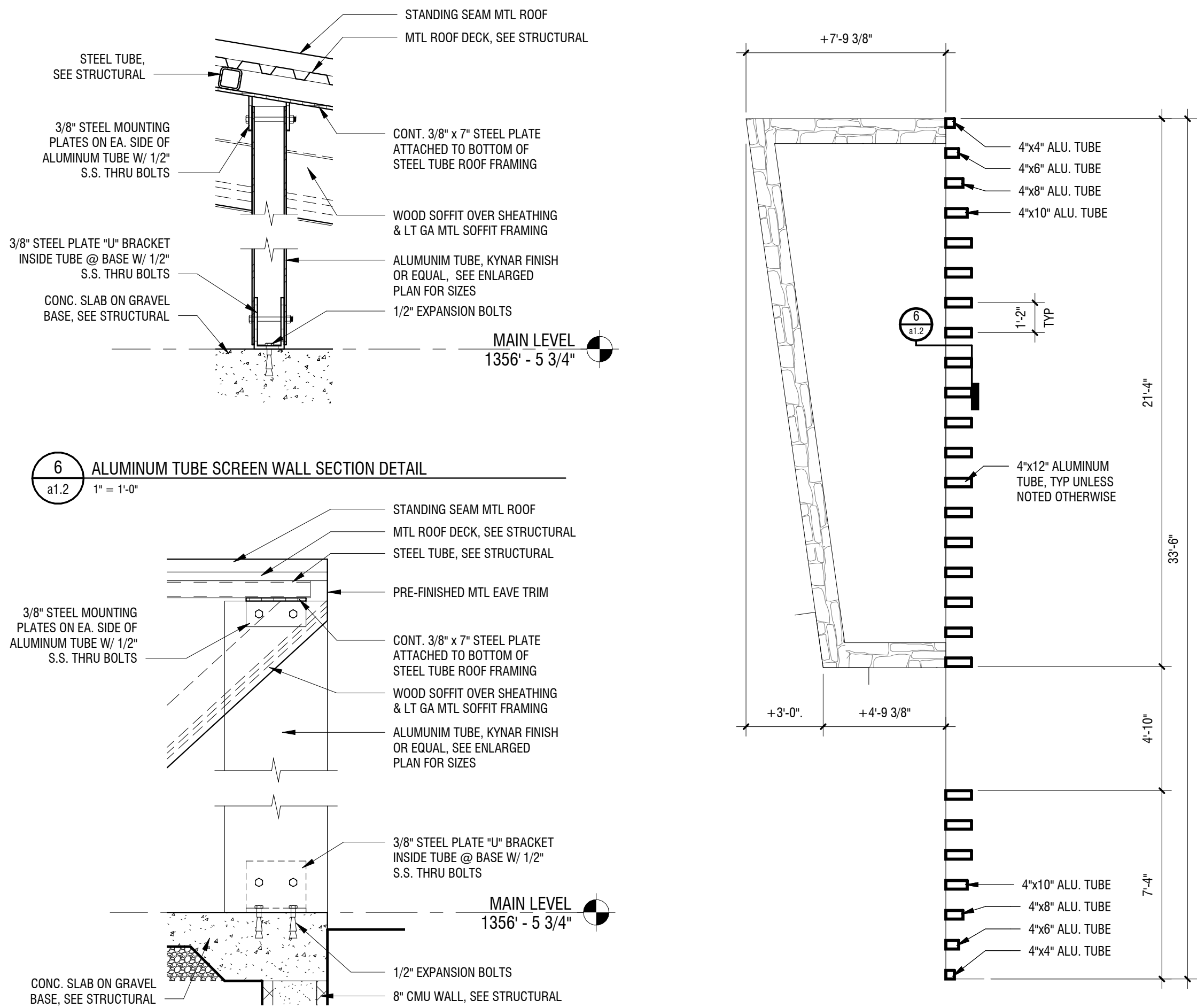


DEMX ARCHITECTURE
104 N EAST AVENUE | FAYETTEVILLE, ARKANSAS 72701 | 479.966.4871

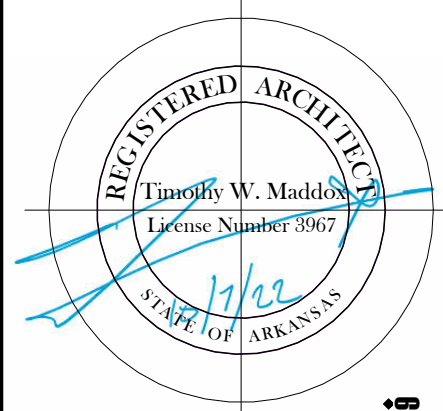
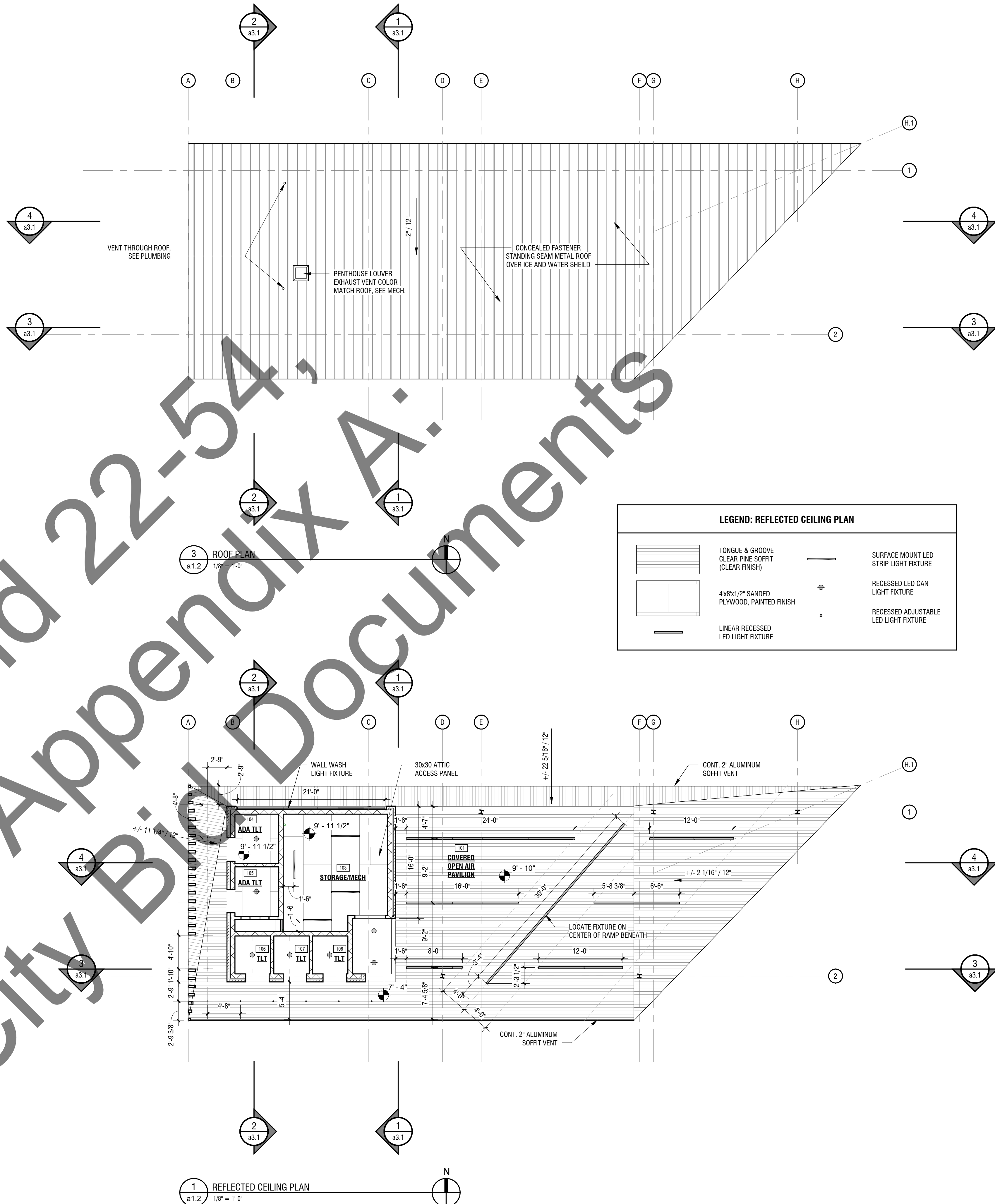
NEW RESTROOM & PAVILLION | WILSON PARK | 675 N PARK AVE, FAYETTEVILLE, AR 72701



a1.1



NOTE: SEE TOILET ACCESSORY SCHEDULE ON a1.1

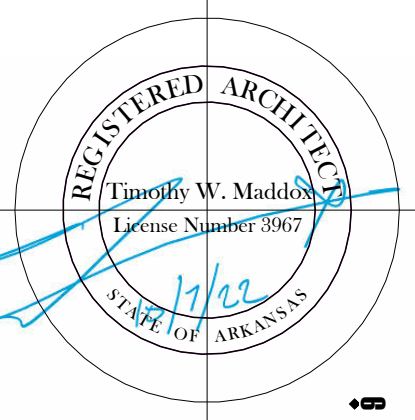
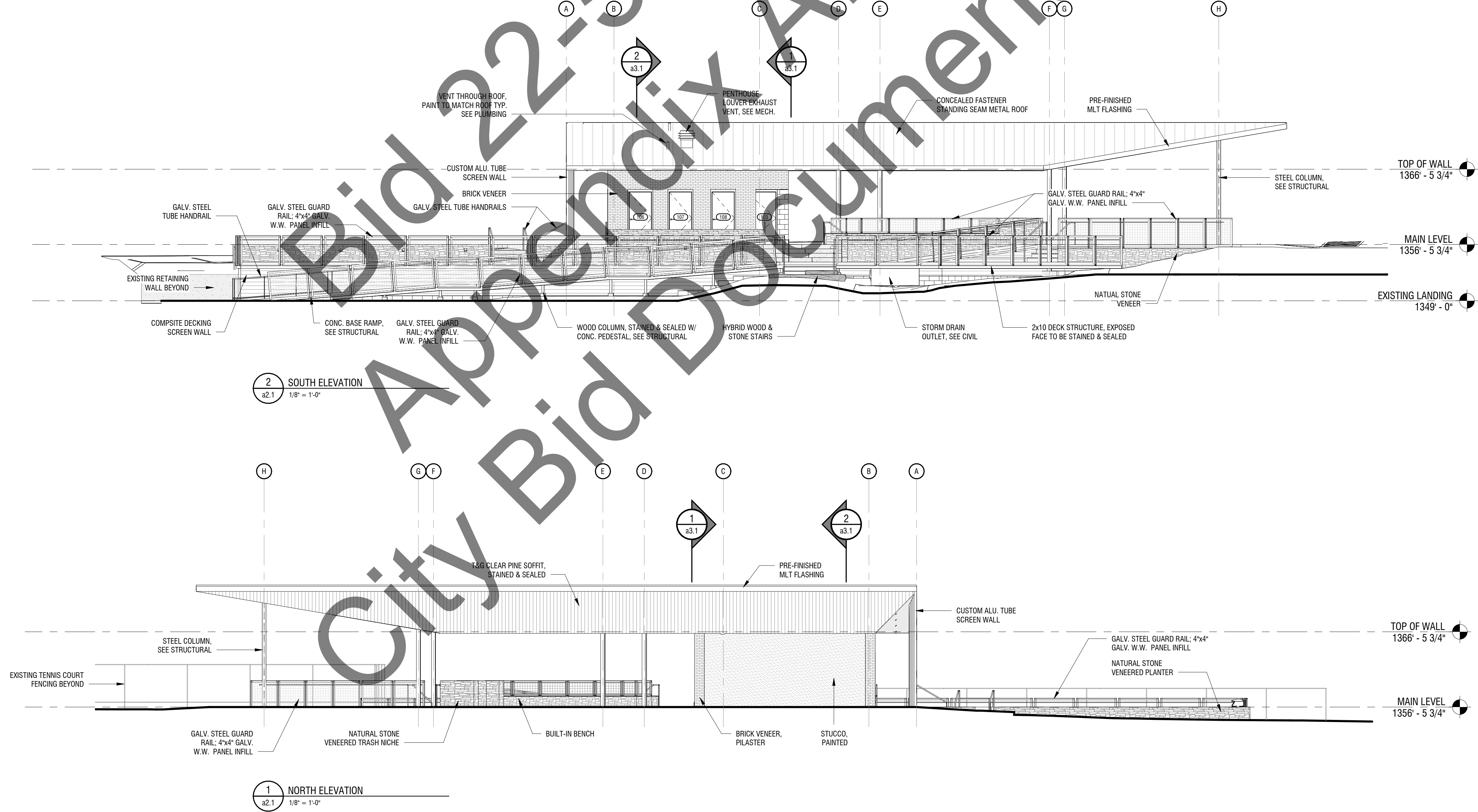
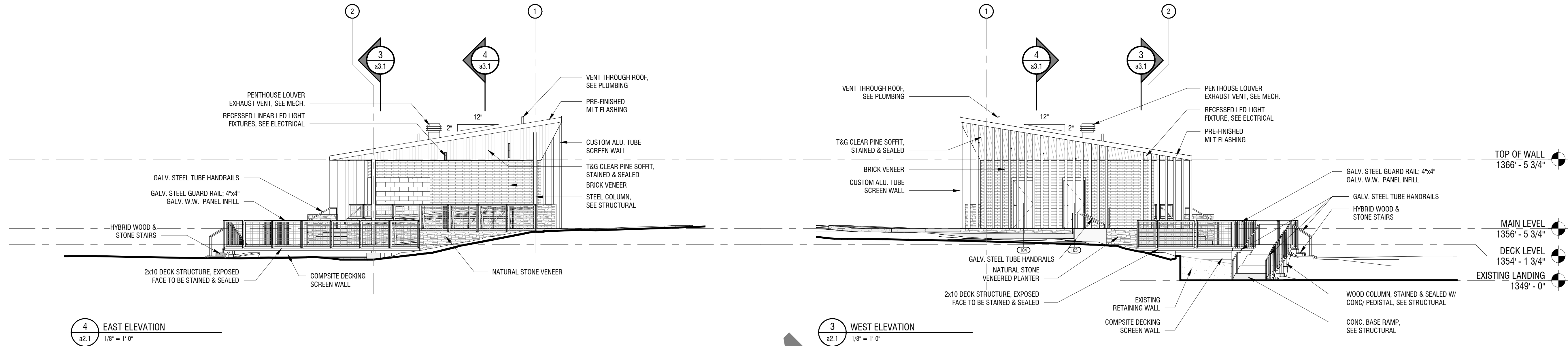


DEMEX ARCHITECTURE
104 N EAST AVENUE | FAYETTEVILLE, ARKANSAS 72701 | 479.966.4871



NEW RESTROOM & PAVILLION | WILSON PARK | 675 N PARK AVE, FAYETTEVILLE, AR 72701

a1.2



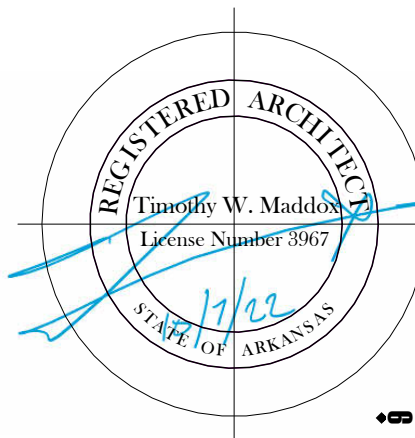
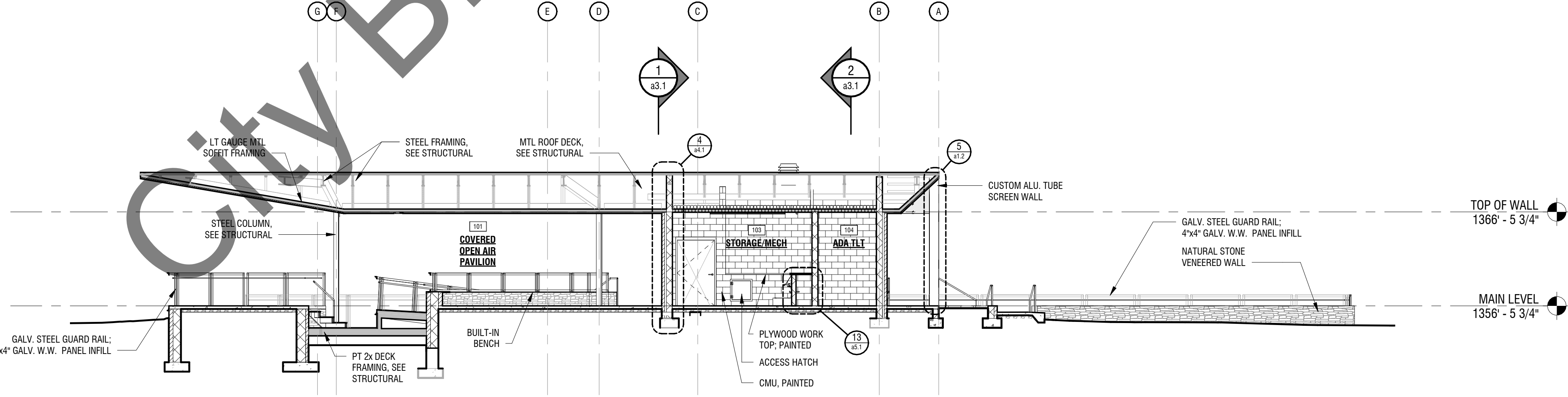
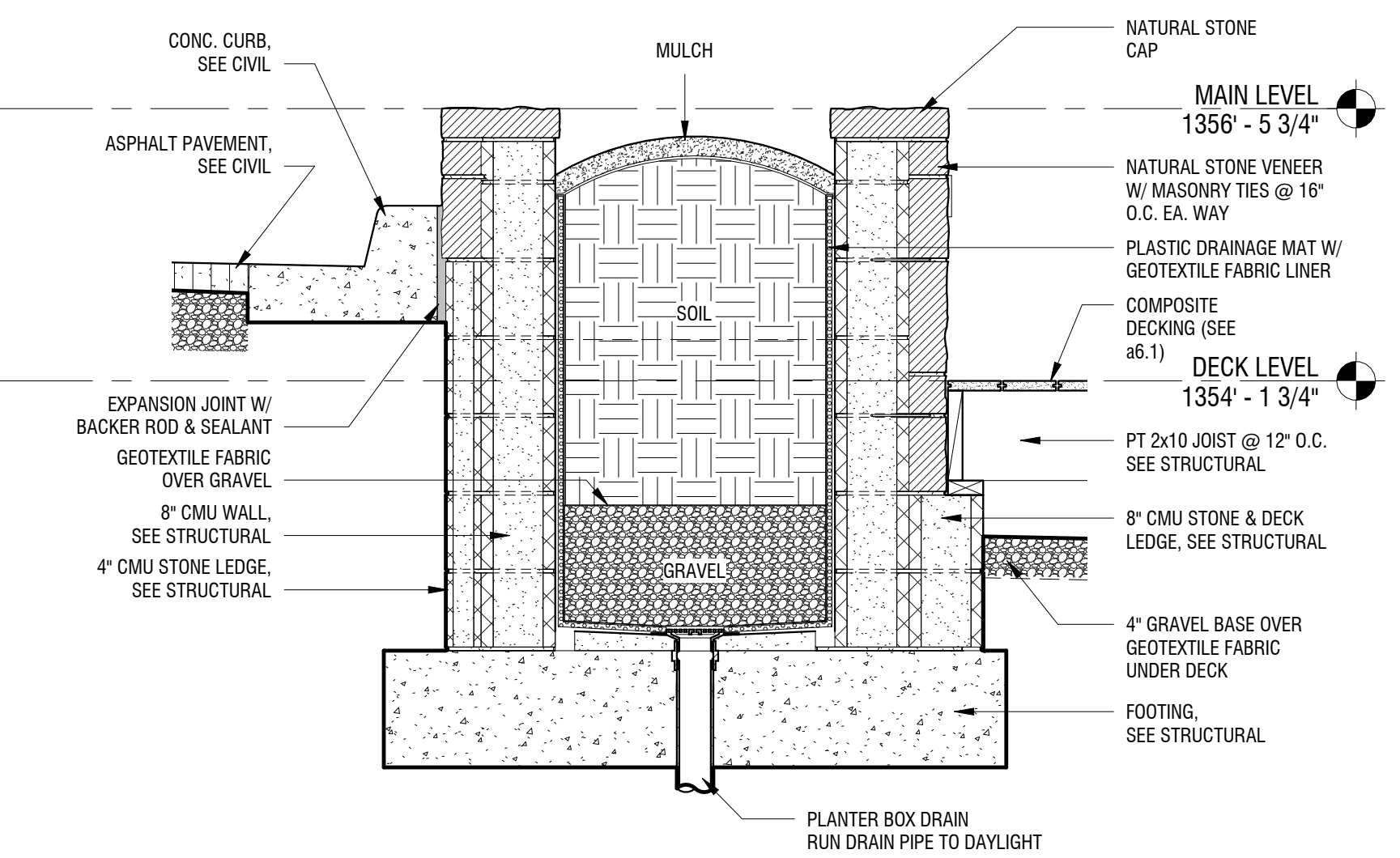
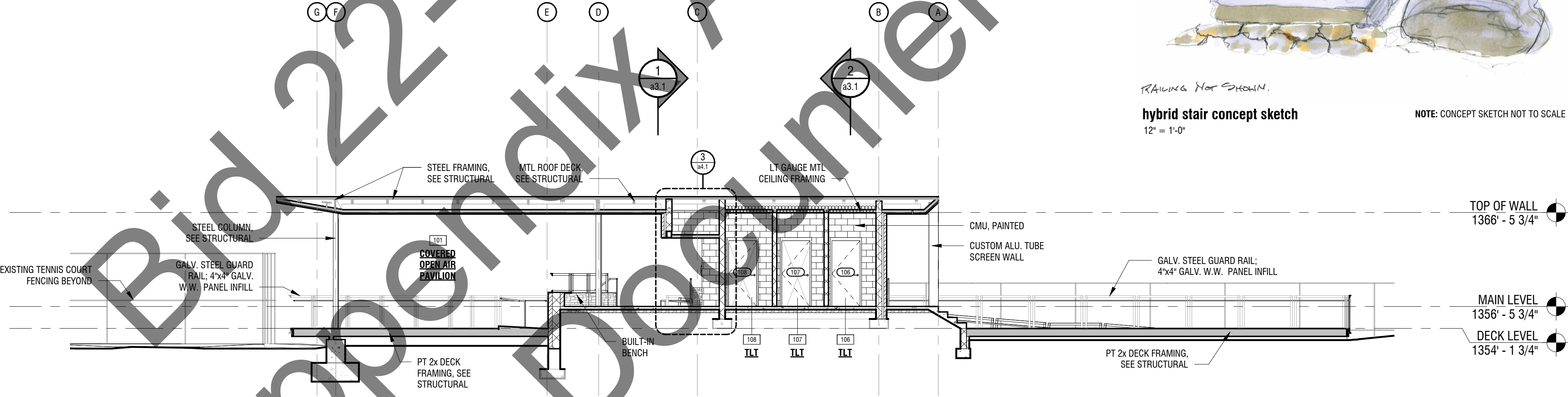
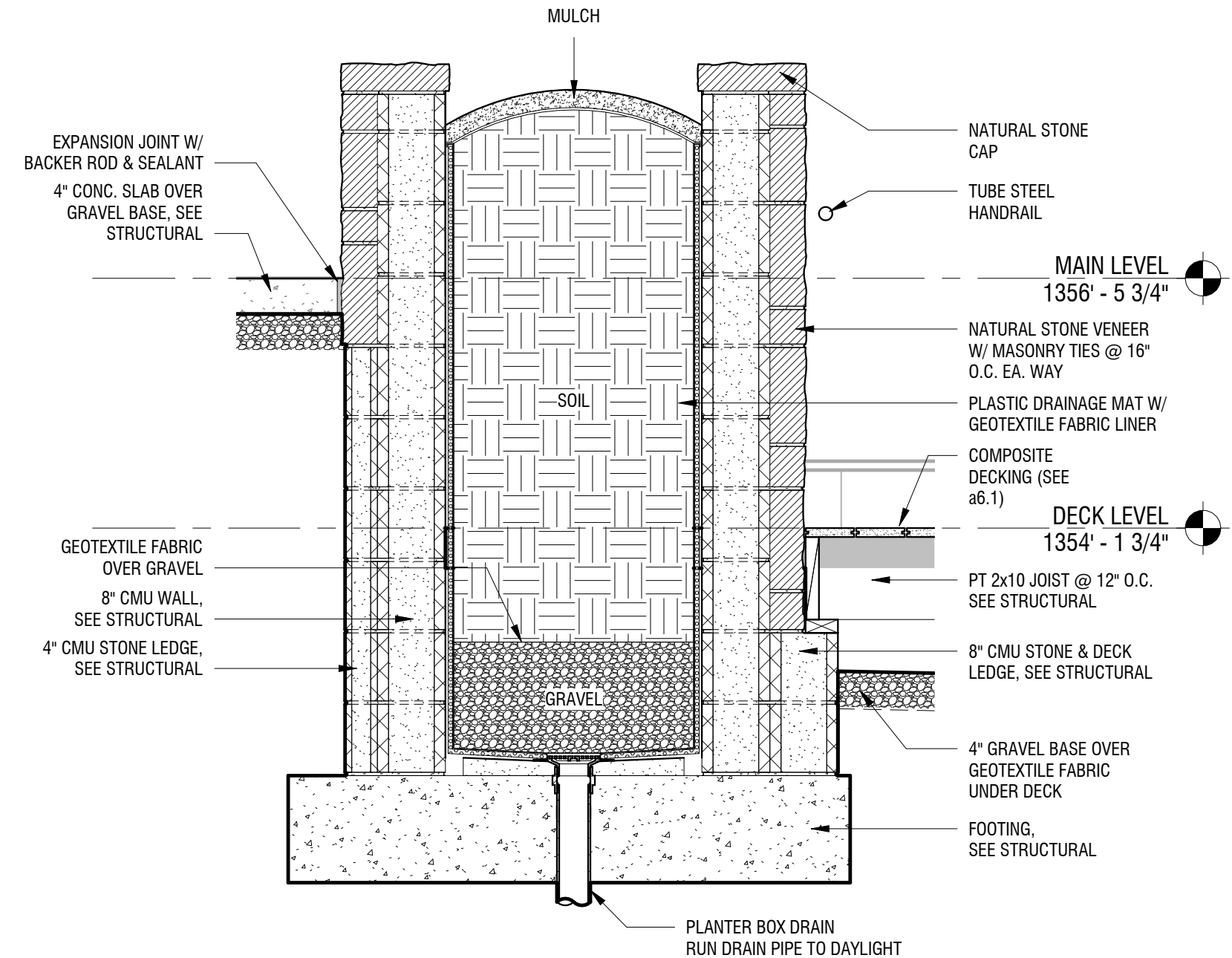
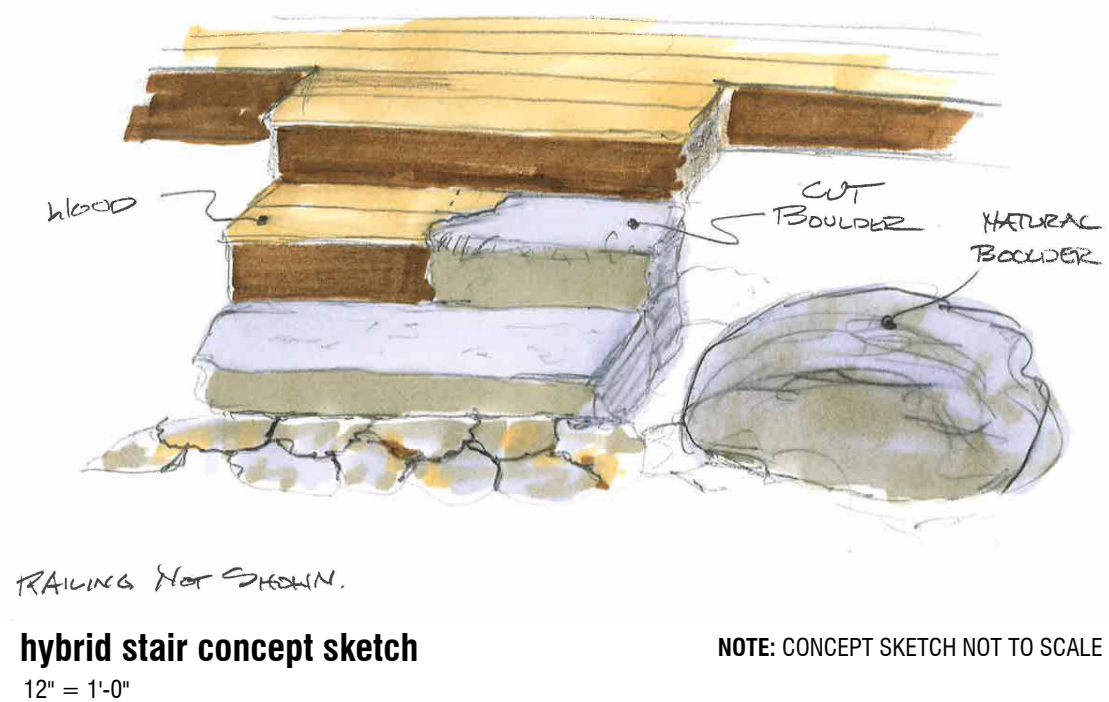
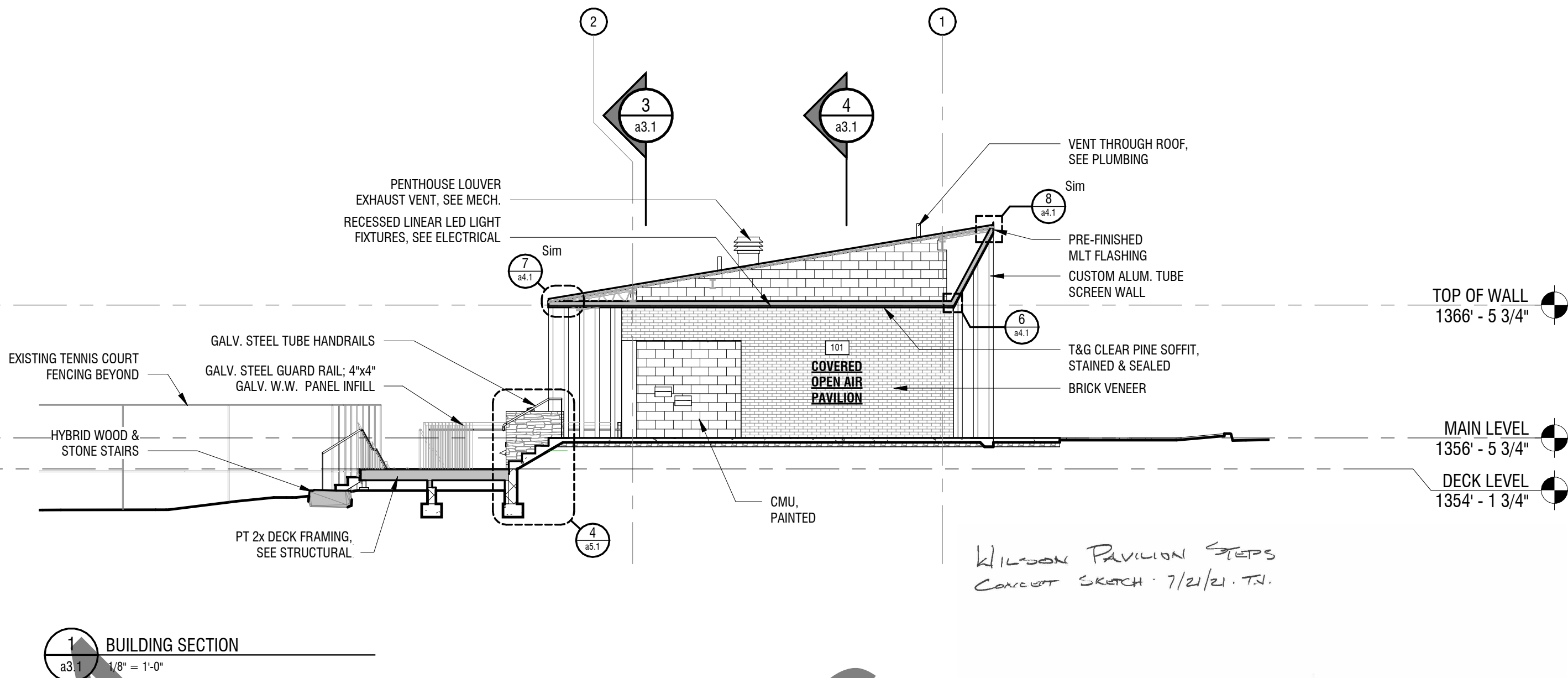
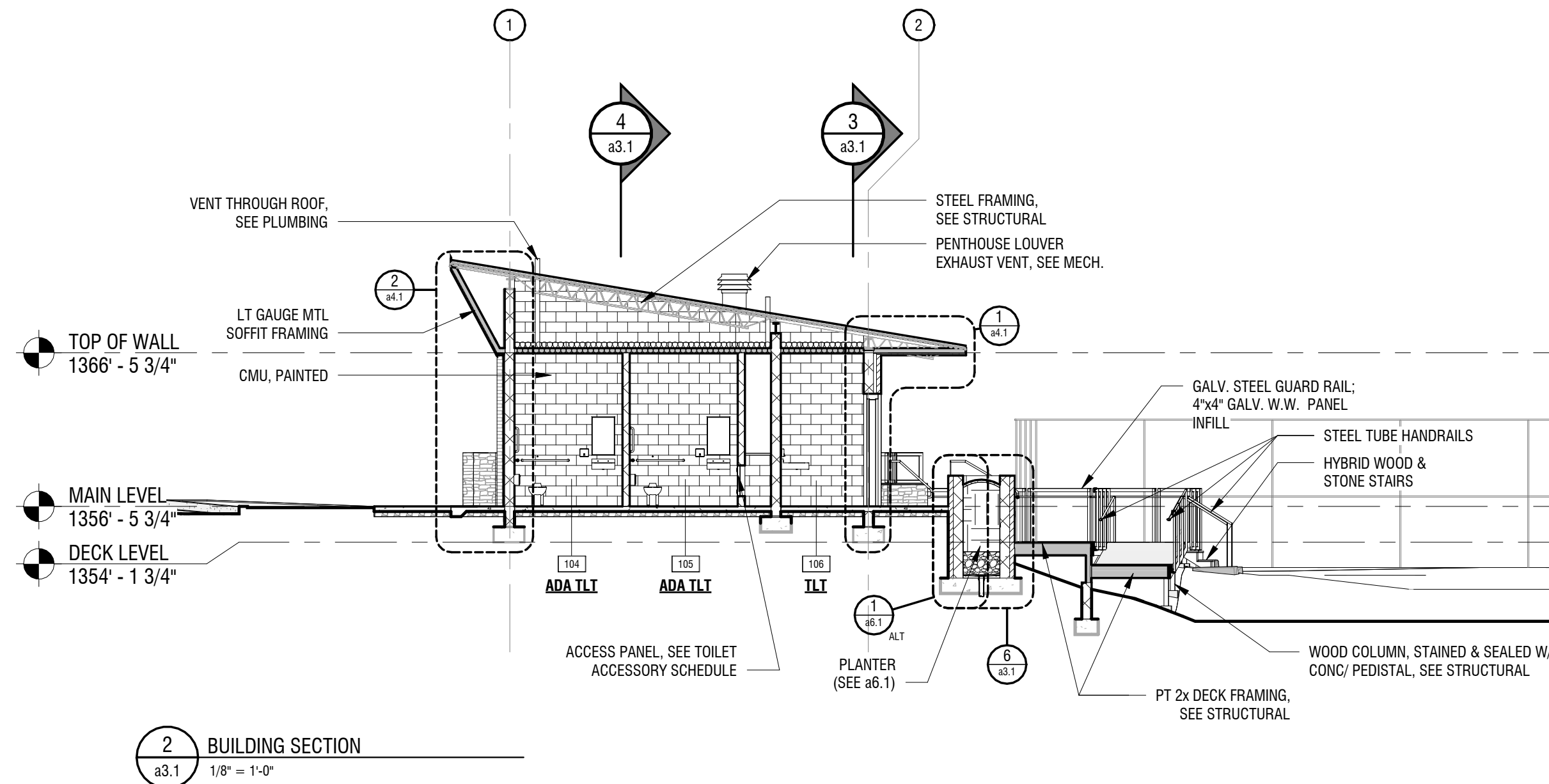
DEMEX ARCHITECTURE
104 N EAST AVENUE | FAYETTEVILLE, ARKANSAS 72701 | 479.966.4871

CITY OF
FAYETTEVILLE
ARKANSAS



NEW RESTROOM & PAVILLION | WILSON PARK | 675 N PARK AVE, FAYETTEVILLE, AR 72701

a2.1

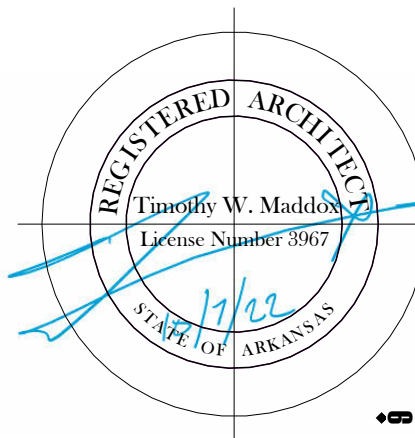
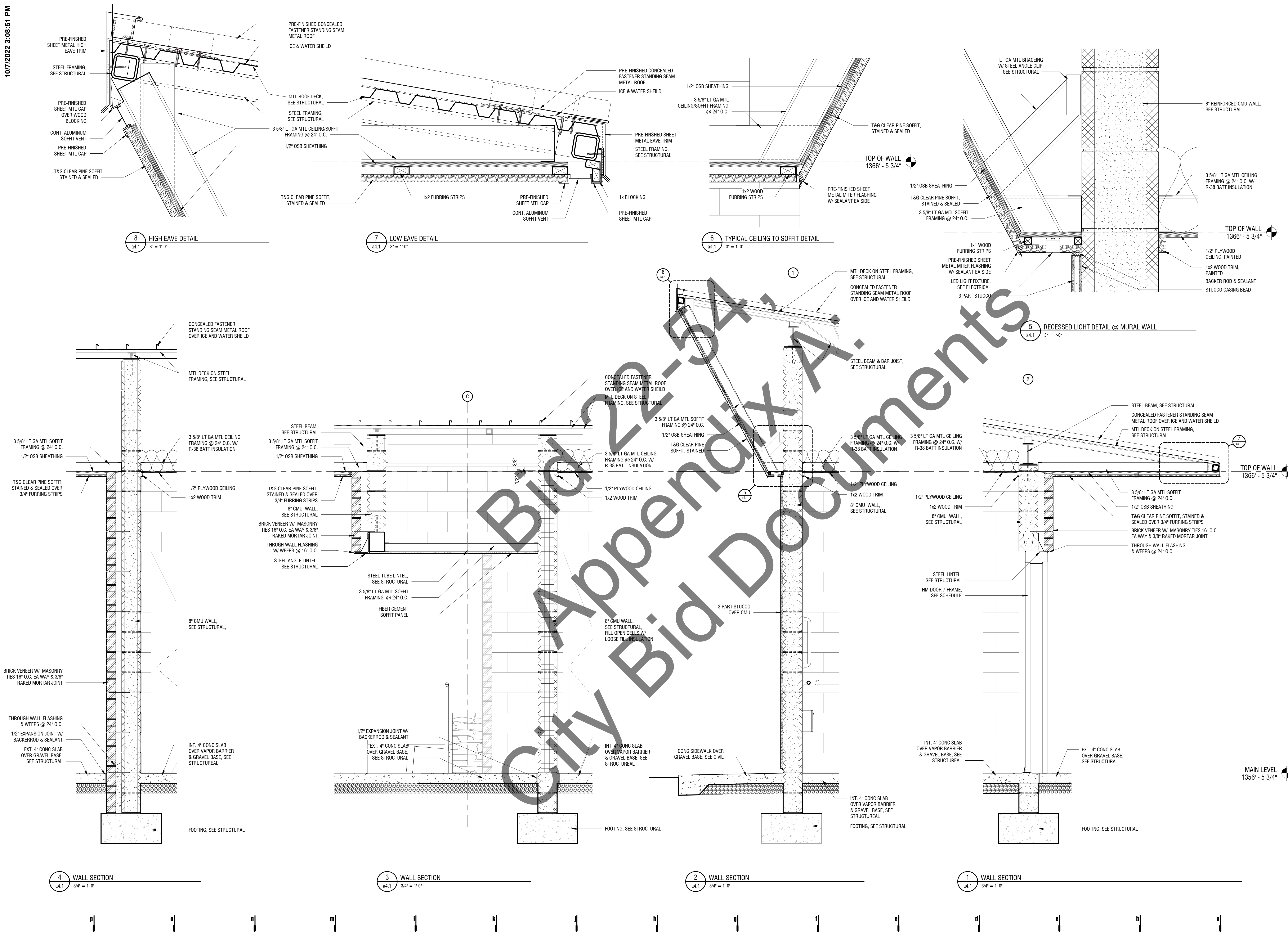


DEMEX ARCHITECTURE
104 N EAST AVENUE | FAYETTEVILLE, ARKANSAS 72701 | 479.966.4871



NEW RESTROOM & PAVILLION | WILSON PARK | 675 N PARK AVE, FAYETTEVILLE, AR 72701

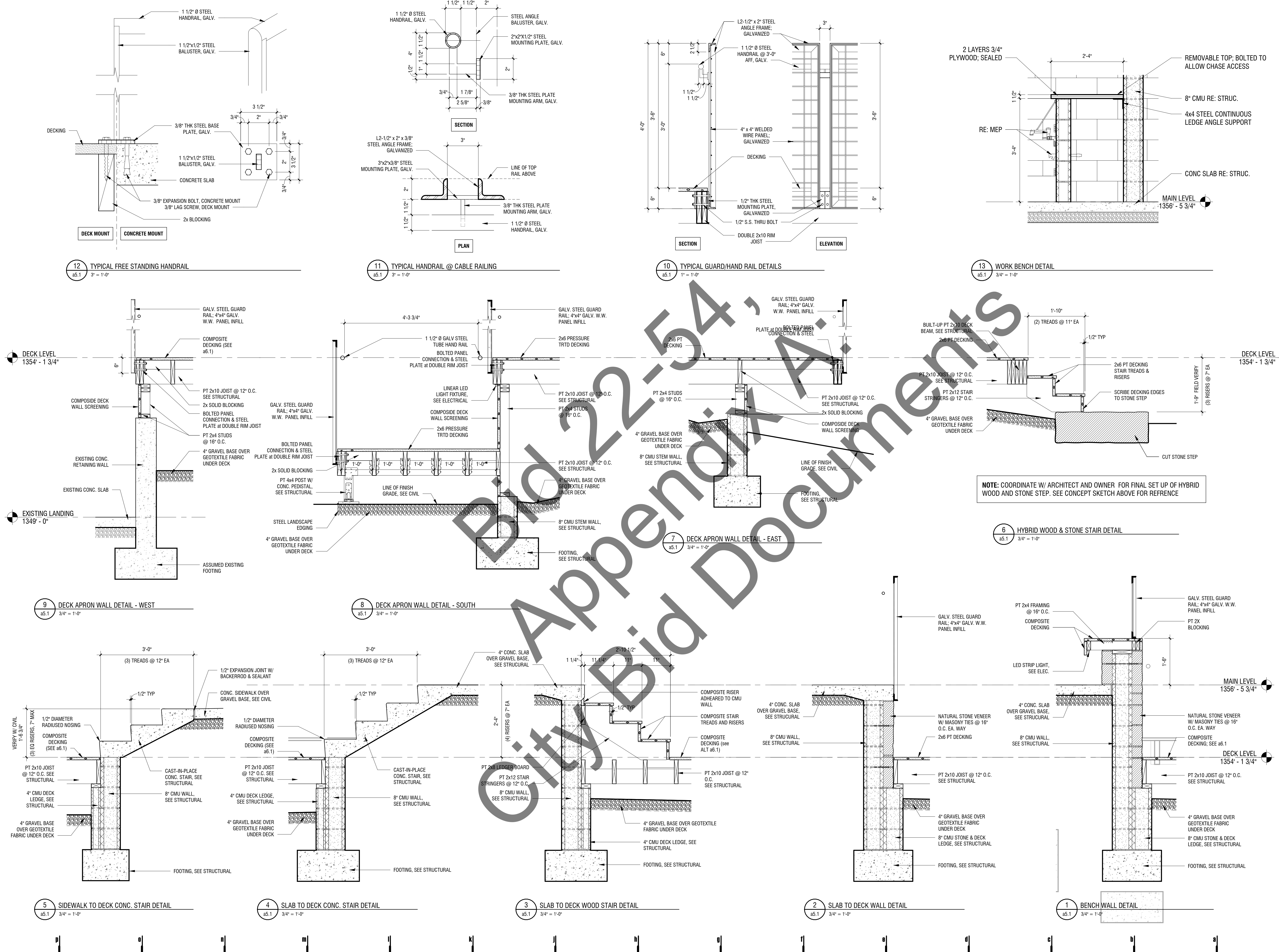
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DEMEX ARCHITECTURE
104 N EAST AVENUE | FAYETTEVILLE, ARKANSAS 72701 | 479.966.4871

CITY OF FAYETTEVILLE ARKANSAS
NEW RESTROOM & PAVILLION | WILSON PARK | 675 N PARK AVE, FAYETTEVILLE, AR 72701





REGISTERED ARCHITECT

Timothy W. Maddox

License Number 38067

10/1/22

STATE OF ARKANSAS

104 N EAST AVENUE | FAYETTEVILLE, ARKANSAS 72701 | 479.966.4871

DEMEX

ARCHITECTURE

CITY OF FAYETTEVILLE ARKANSAS

NEW RESTROOM & PAVILLION | WILSON PARK | 675 N PARK AVE, FAYETTEVILLE, AR 72701

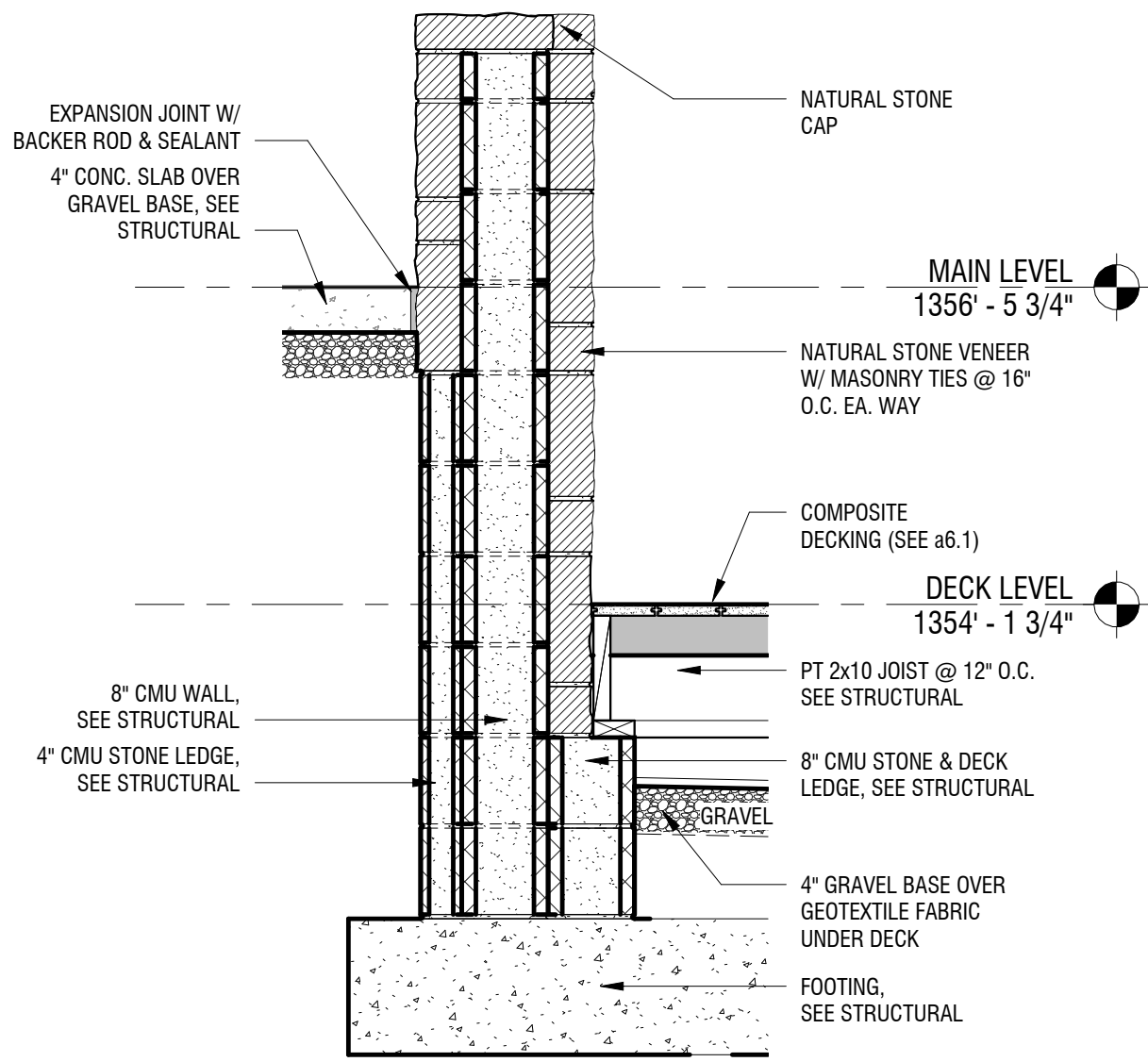
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BID SET 51119

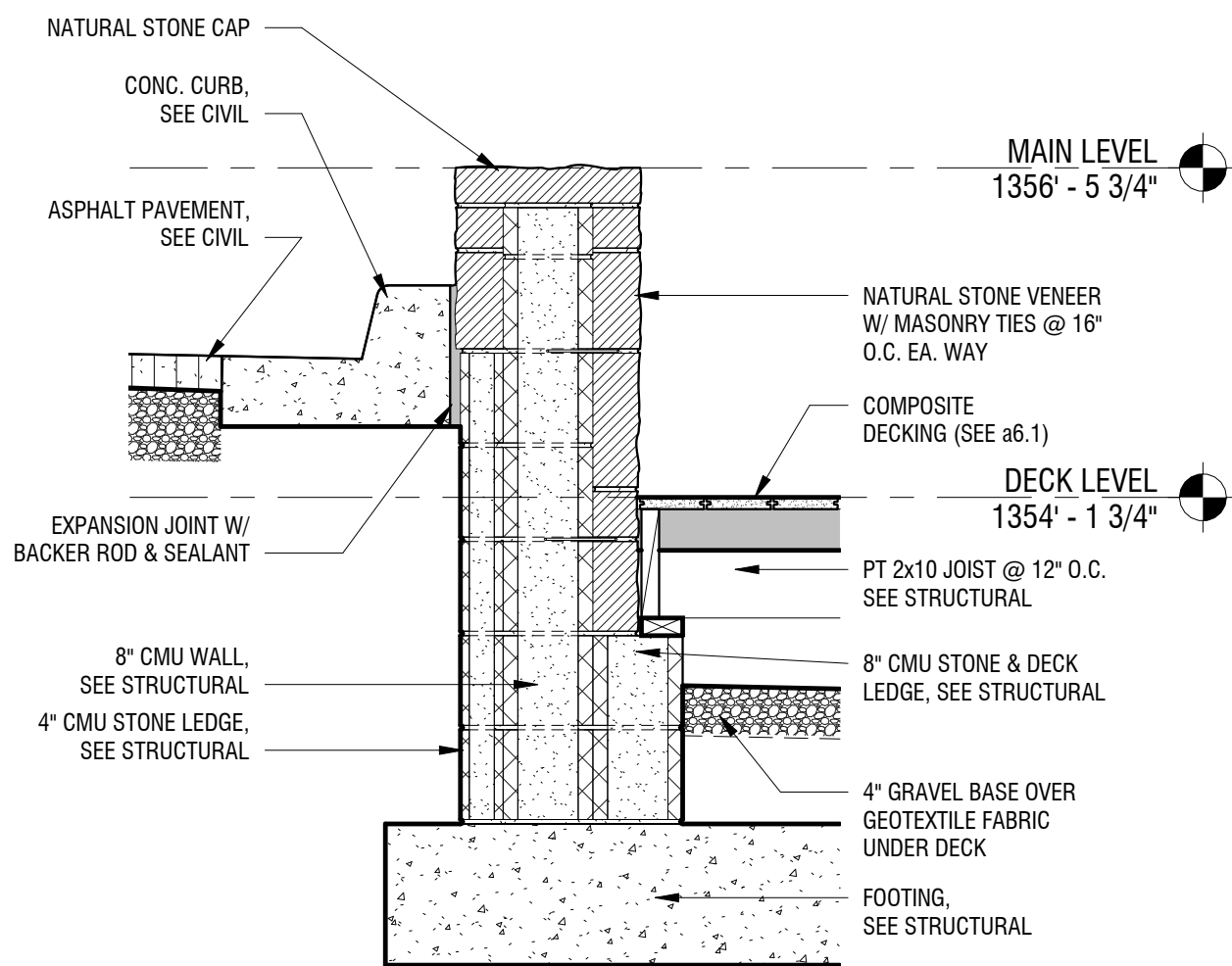
2022.10.07

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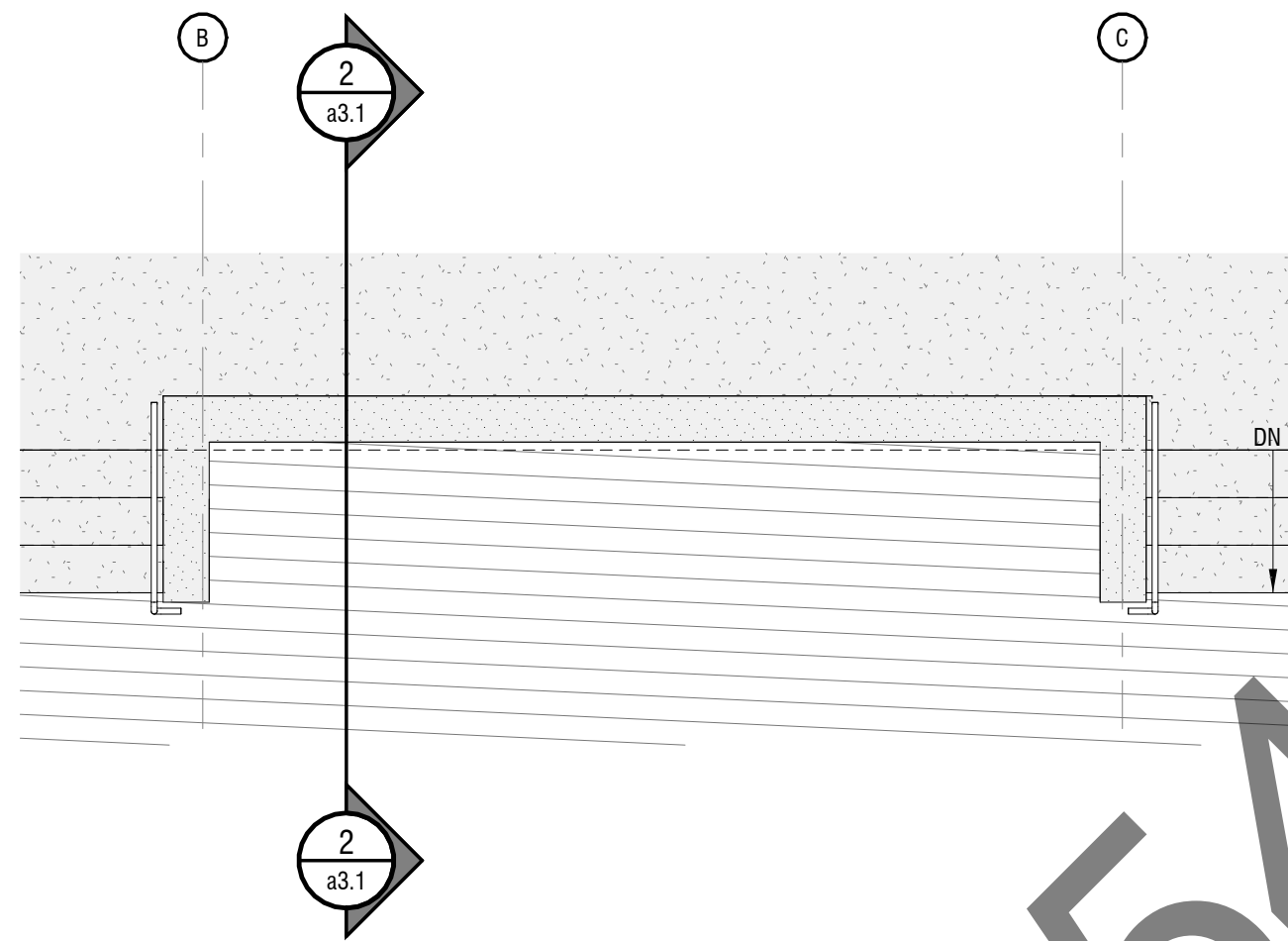




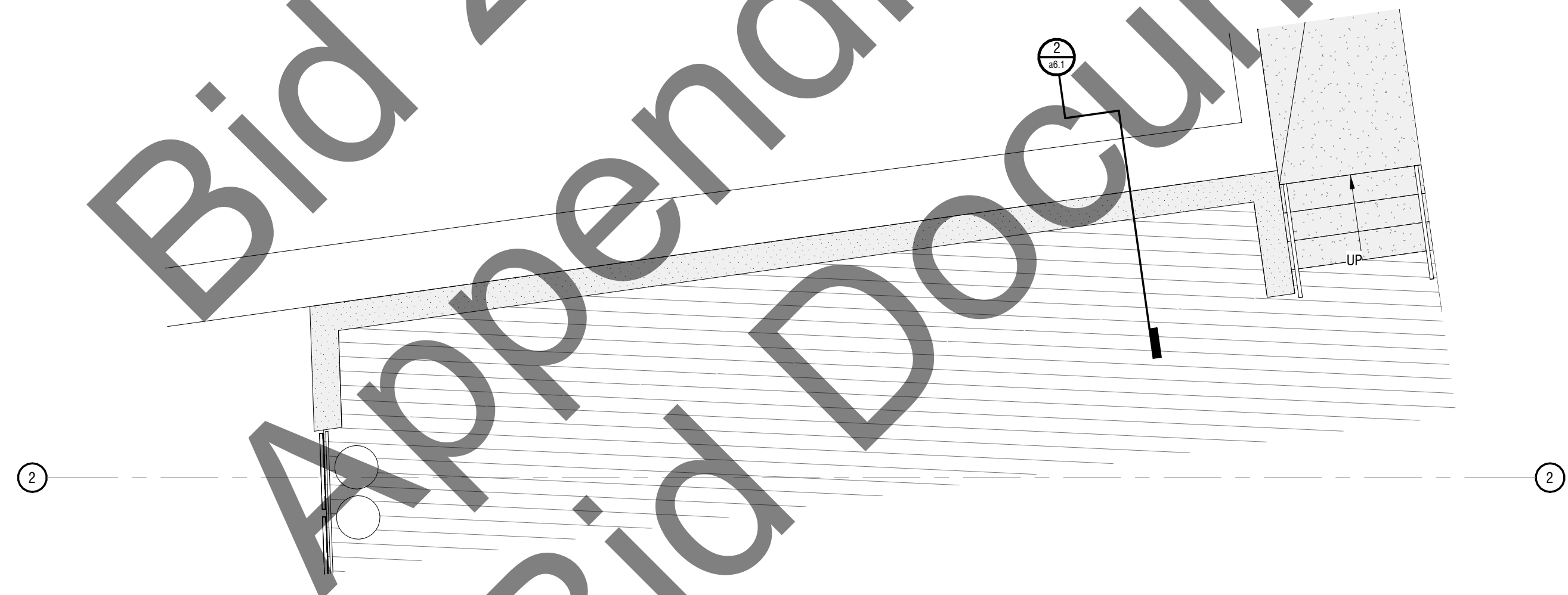
1 PLANTER DETAIL - SOUTH DEDUCT ALTERNATE 1
a6.1 3/4" = 1'-0"



2 PLANTER DETAIL - WEST DEDUCT ALTERNATE 1
a6.1 3/4" = 1'-0"



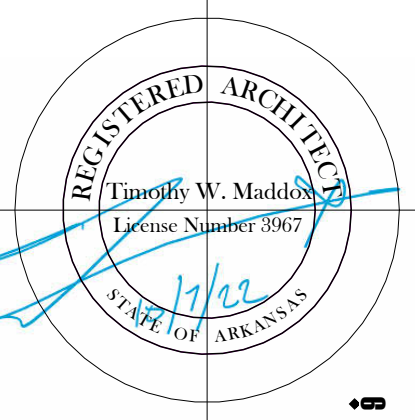
4 FLOOR PLAN - SOUTH PLANTER DEDUCT
a6.1 1/4" = 1'-0"



3 FLOOR PLAN - WEST PLANTER DEDUCT
a6.1 1/4" = 1'-0"

DEDUCTIVE ALTERNATE 1 - OMIT PLANTER FRONT WALL AND ASSOCIATED DETAILS; PRICE AS VENEERED RETAINING WALL

DEDUCTIVE ALTERNATE 2 - PRICE DECKING AS PRESSURE TREATED PINE 2x6, STAINED; OVER 12" O.C. FRAMING RE: STRUC.



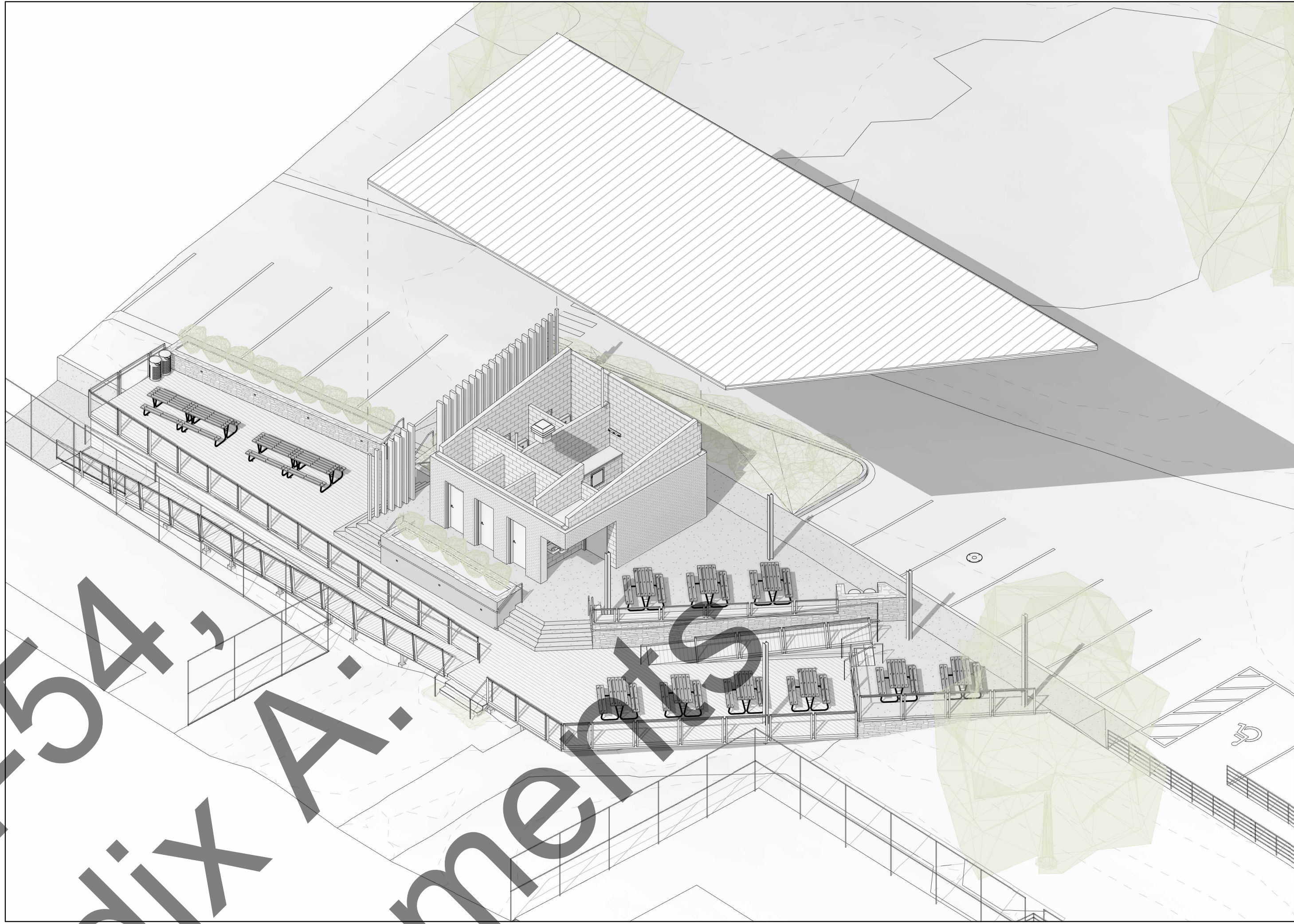
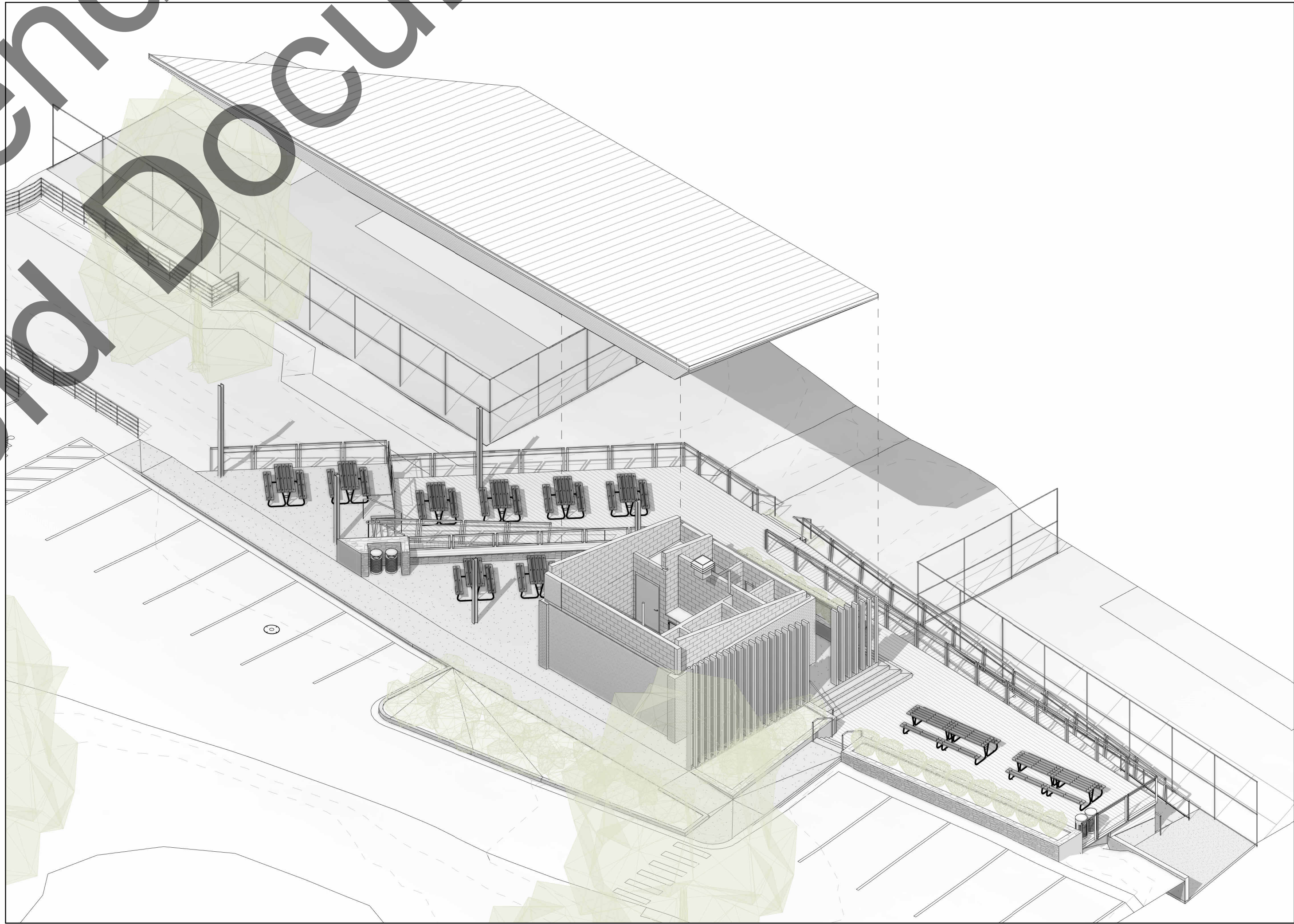
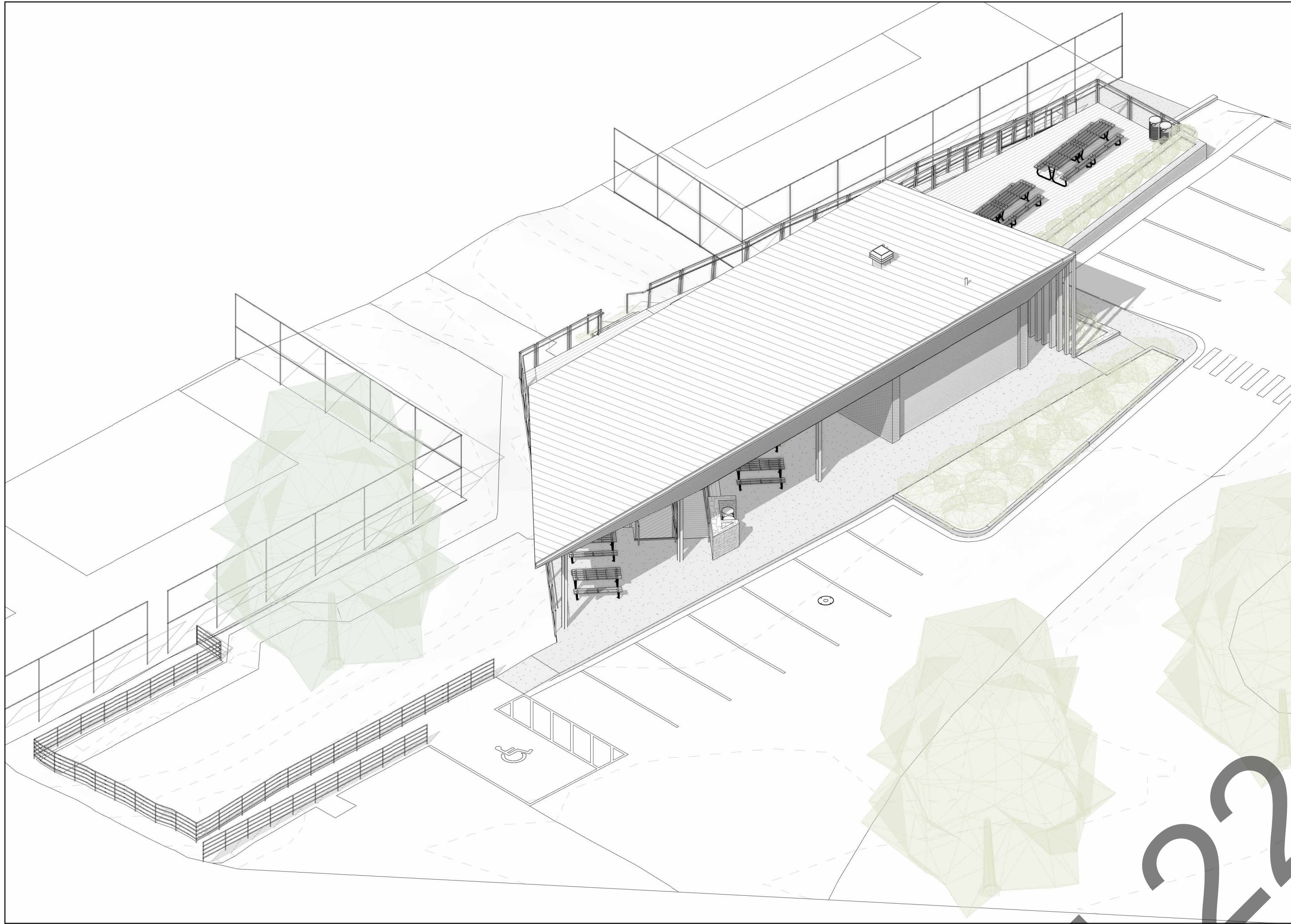
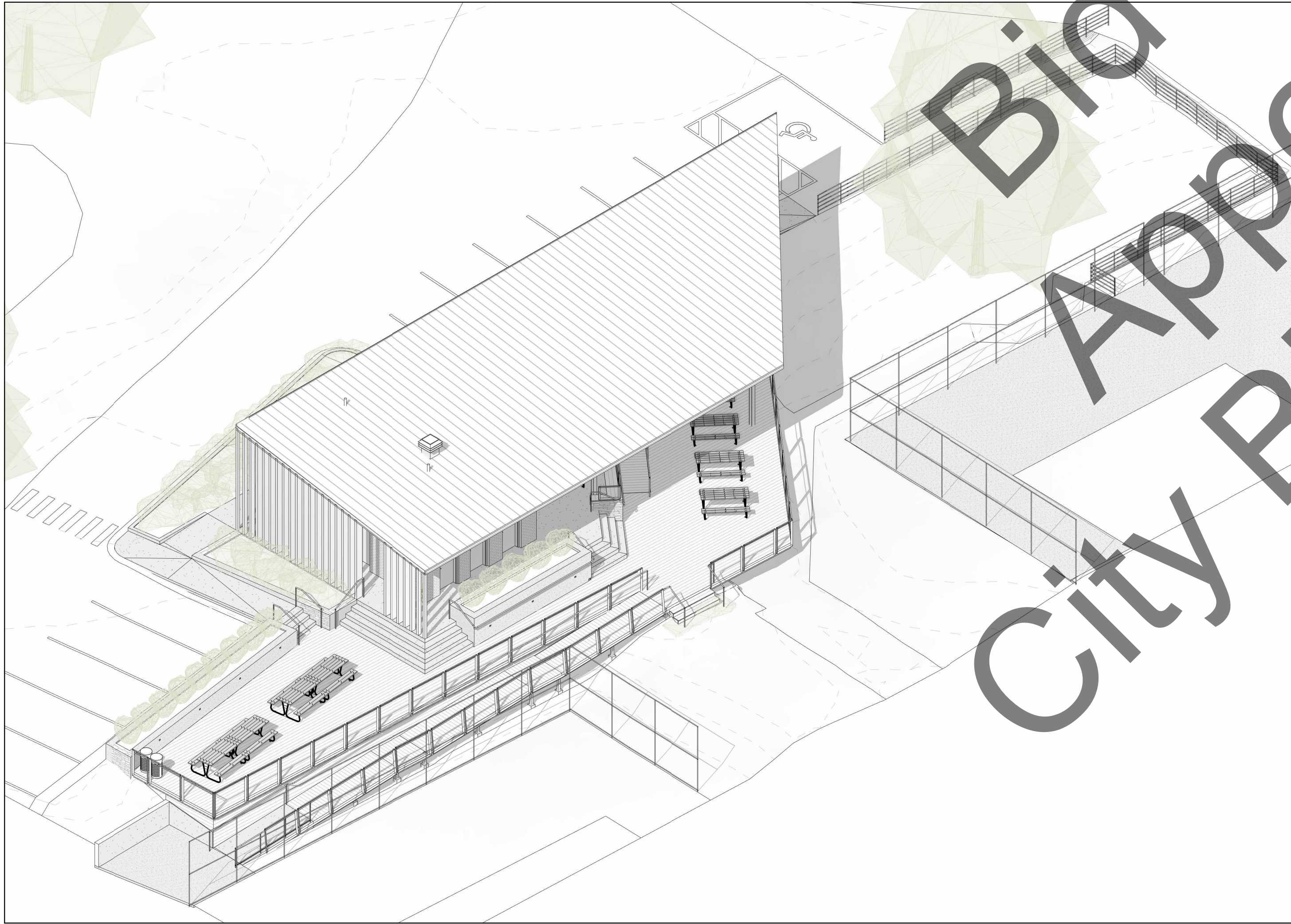
DEMEX ARCHITECTURE
104 N EAST AVENUE | FAYETTEVILLE, ARKANSAS 72701 | 479.966.4871

CITY OF
FAYETTEVILLE
ARKANSAS



NEW RESTROOM & PAVILLION | WILSON PARK | 675 N PARK AVE, FAYETTEVILLE, AR 72701

a6.1

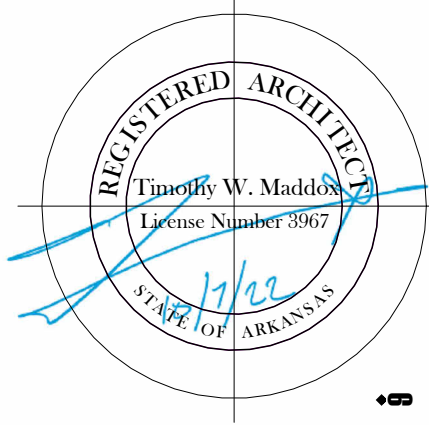


Bid 22-54,
City Appendix A:
City Bid Documents



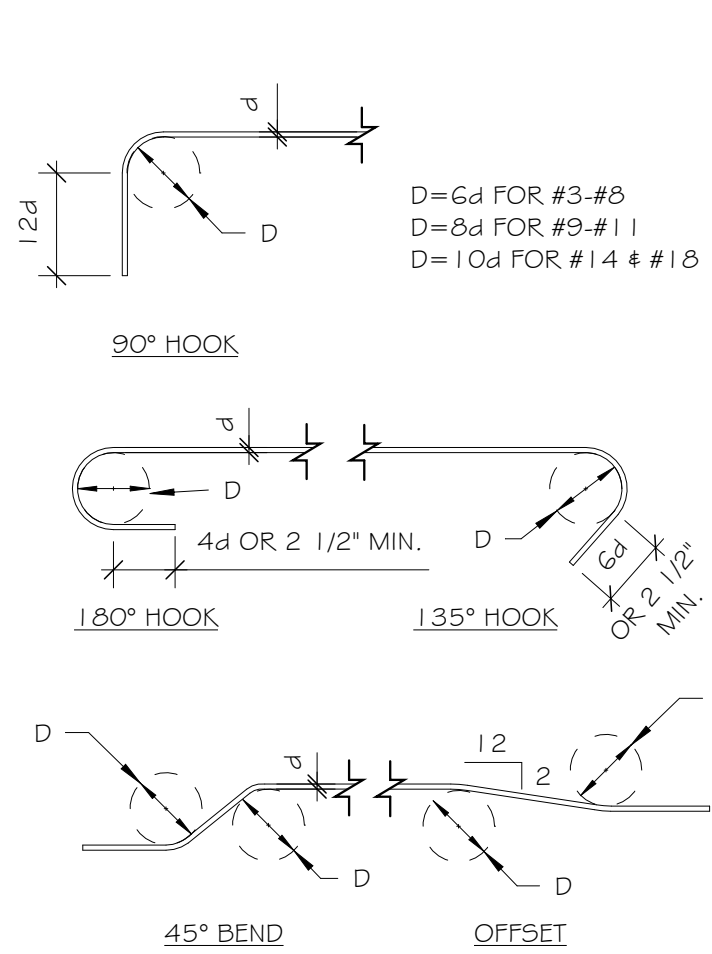
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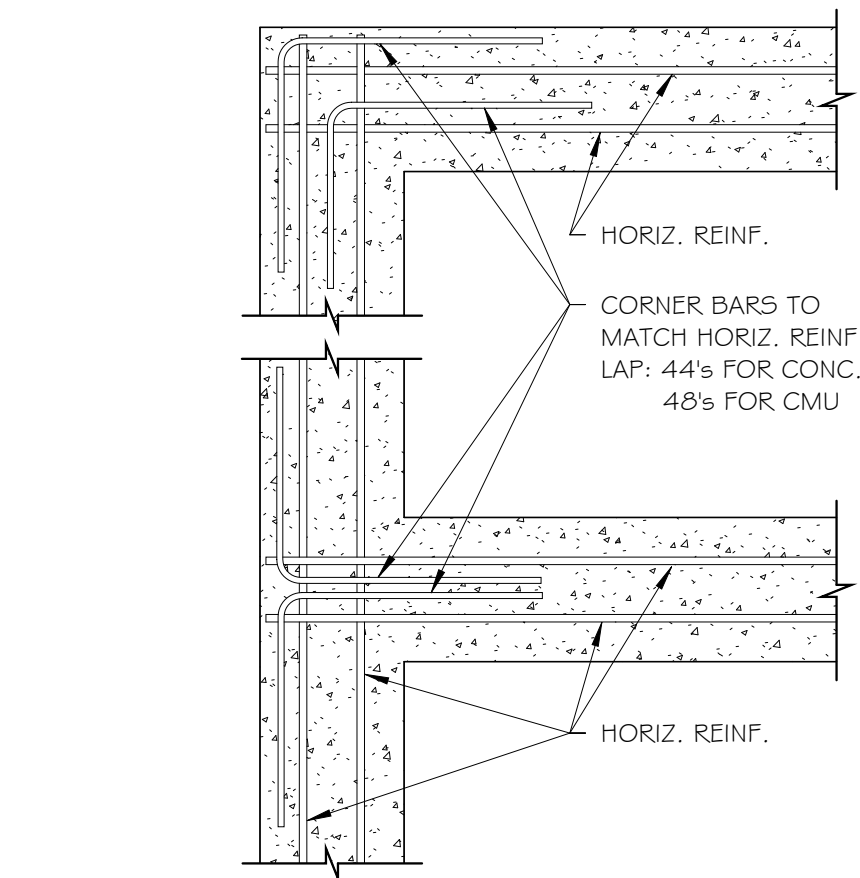


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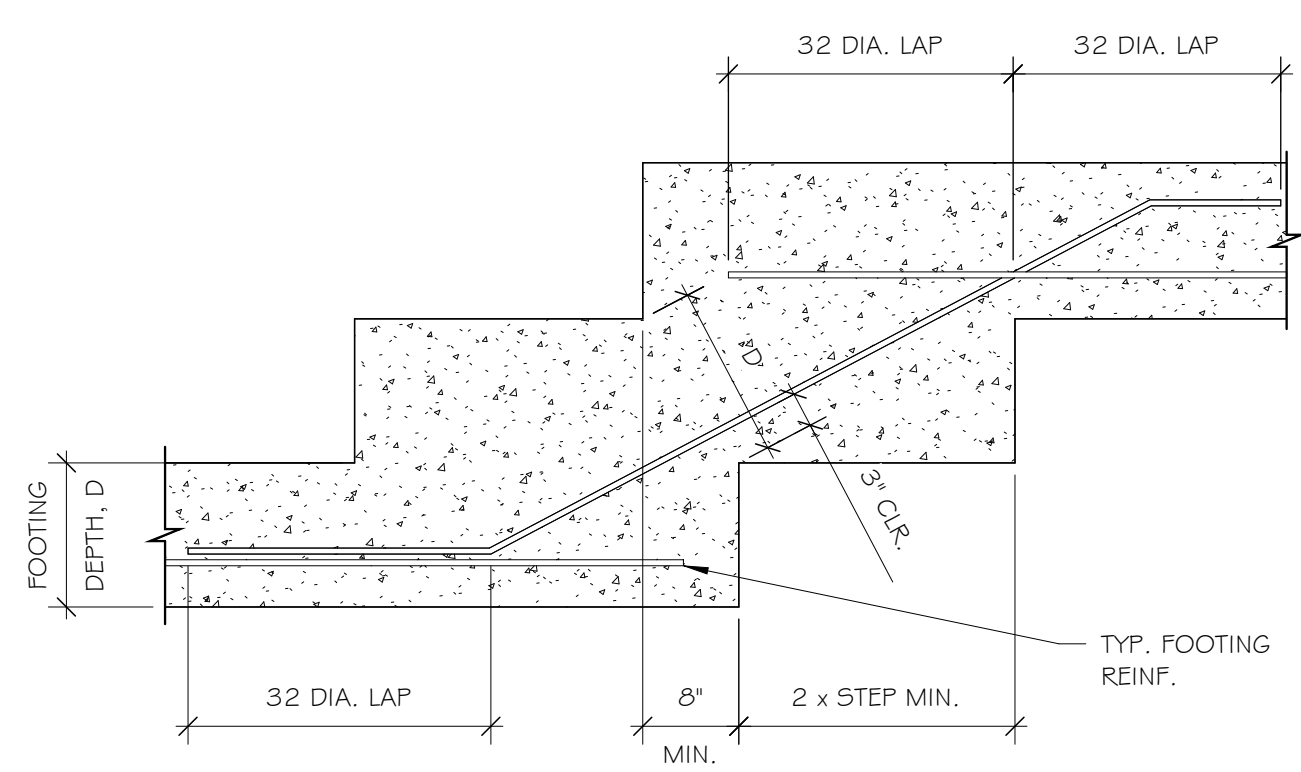
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1 TYP. RE-BAR BEND DETAIL
3/4" = 1'-0"

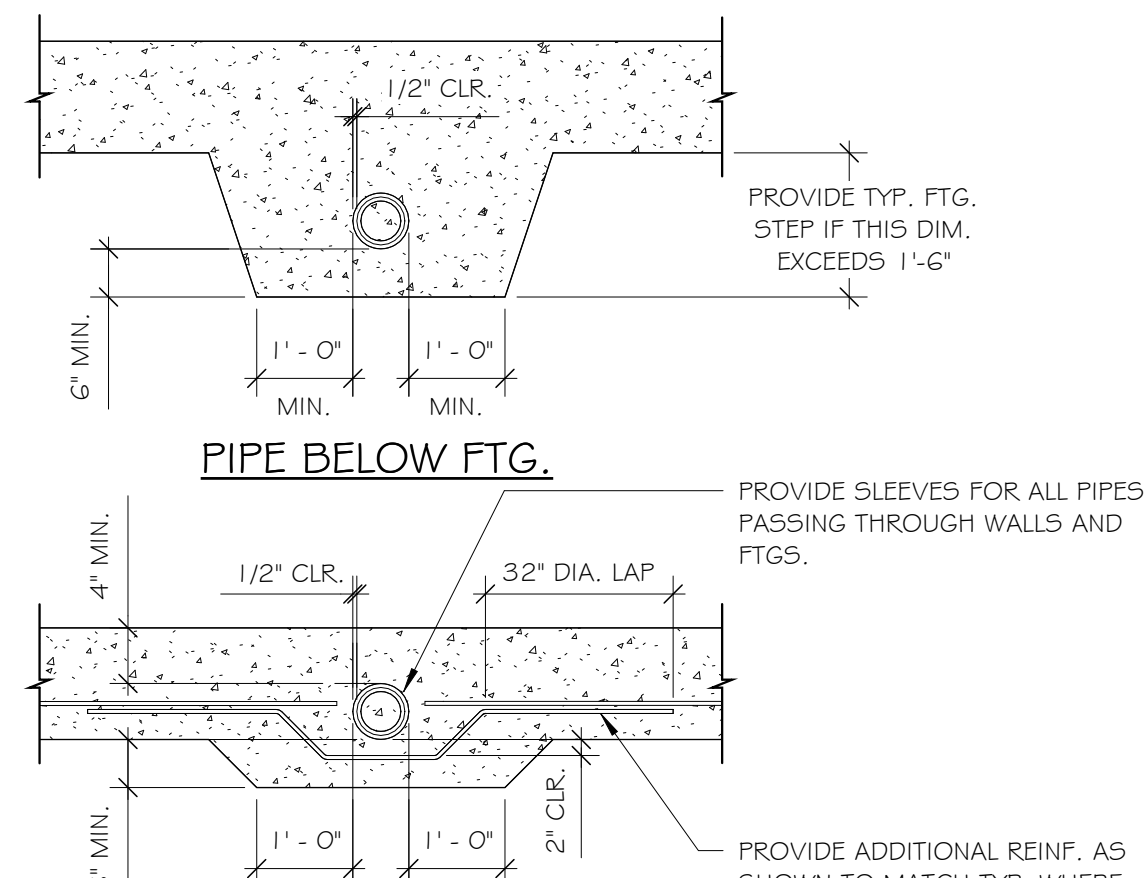


2 TYP. CORNER BARS FOR WALLS AND FTGS.
3/4" = 1'-0"

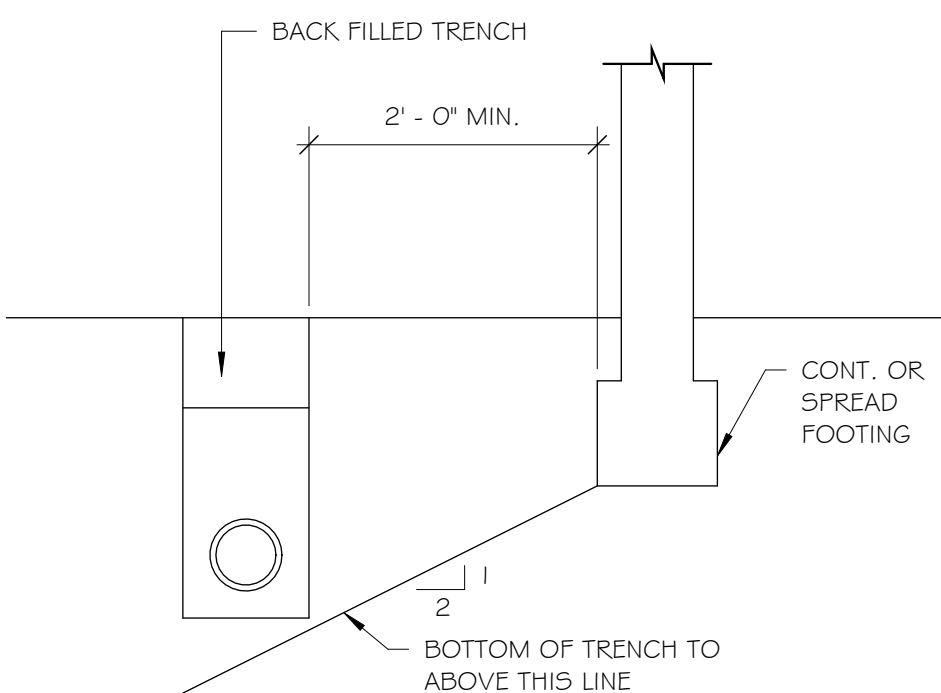


STEPS NOT REQUIRED WHERE SLOPE IS FLATTER THAN 1:1.0

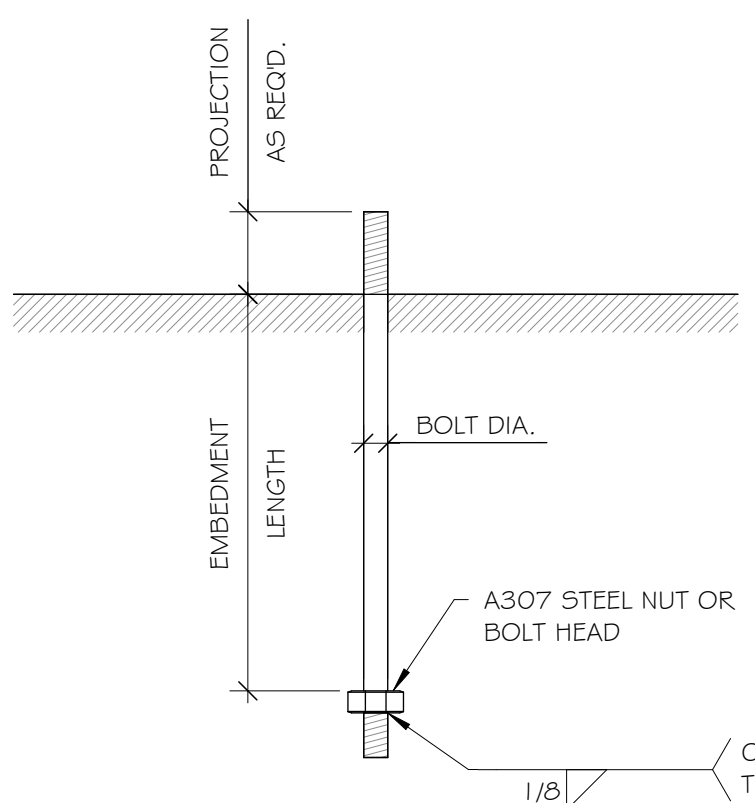
3 TYPICAL STEPPED FOOTING
3/4" = 1'-0"



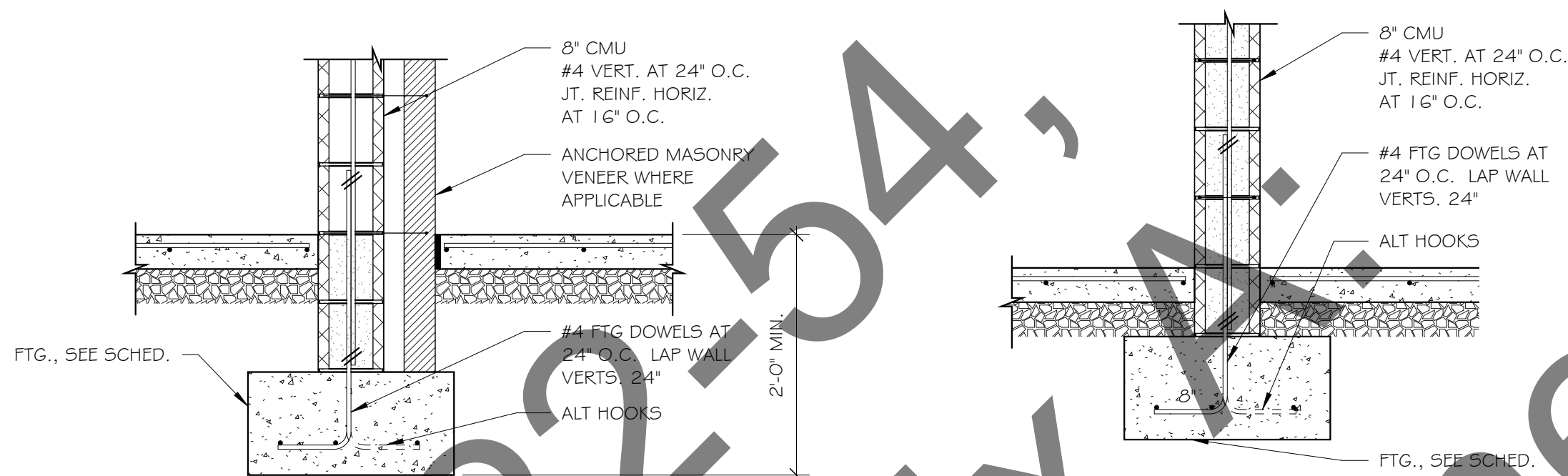
4 PIPE PERPENDICULAR TO FTG.
1/2" = 1'-0"



5 TRENCHES PARALLEL TO FTG.
3/4" = 1'-0"

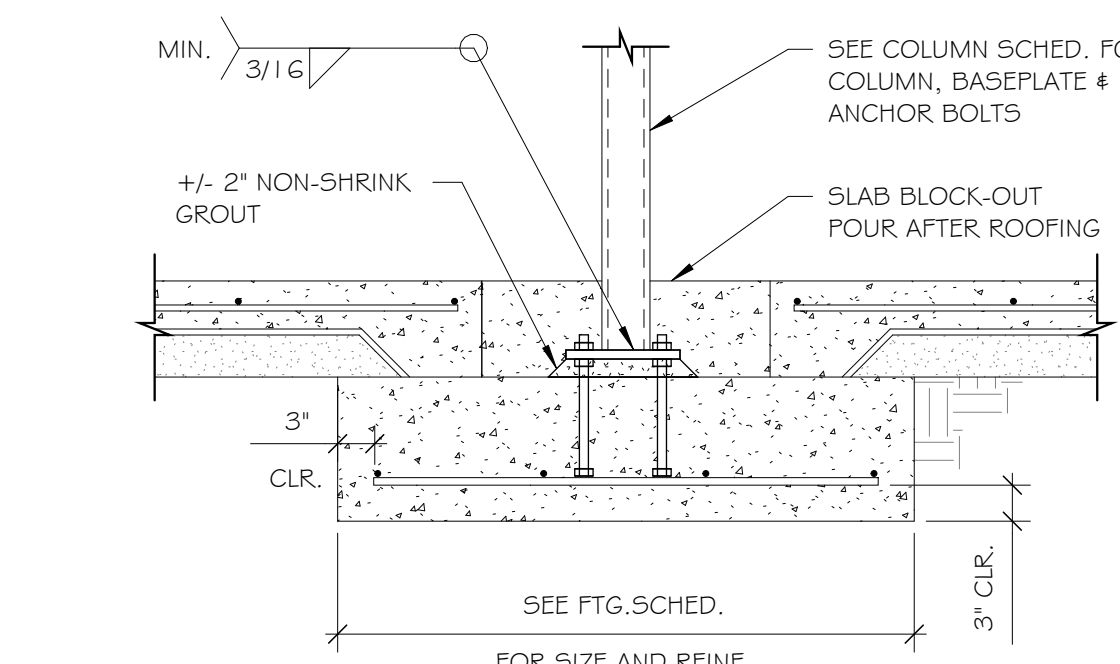


6 TYPICAL ANCHOR BOLT
3/4" = 1'-0"

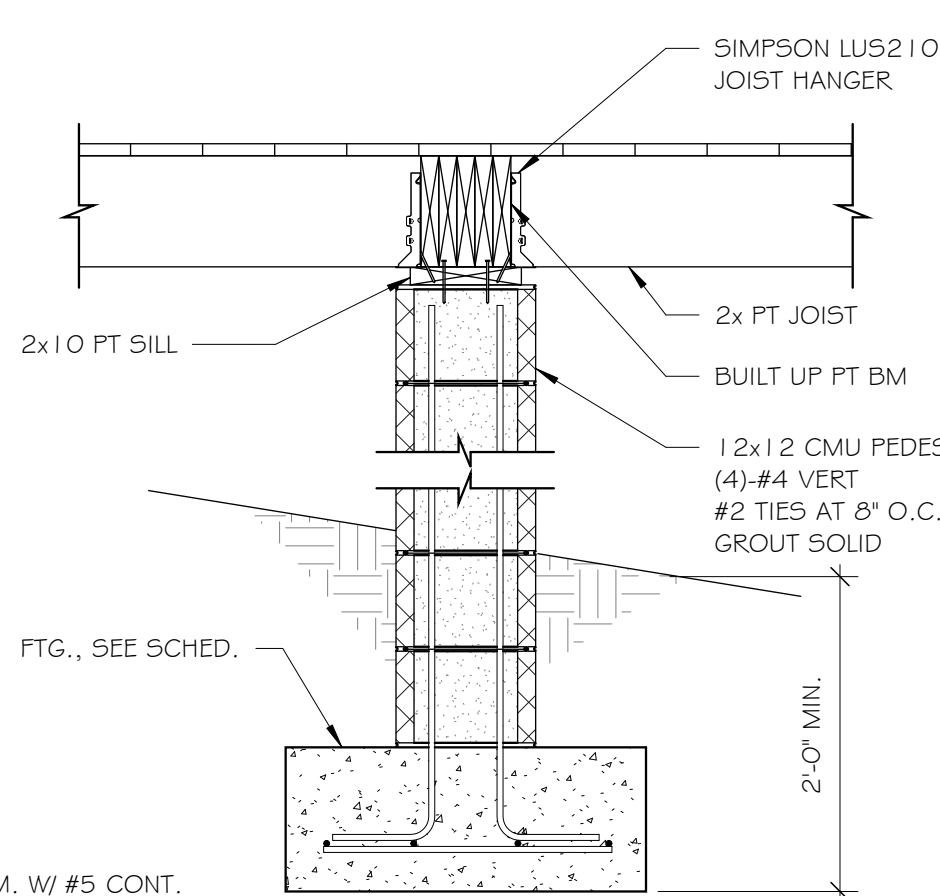


7 EXTERIOR FTG. AT TOILET
3/4" = 1'-0"

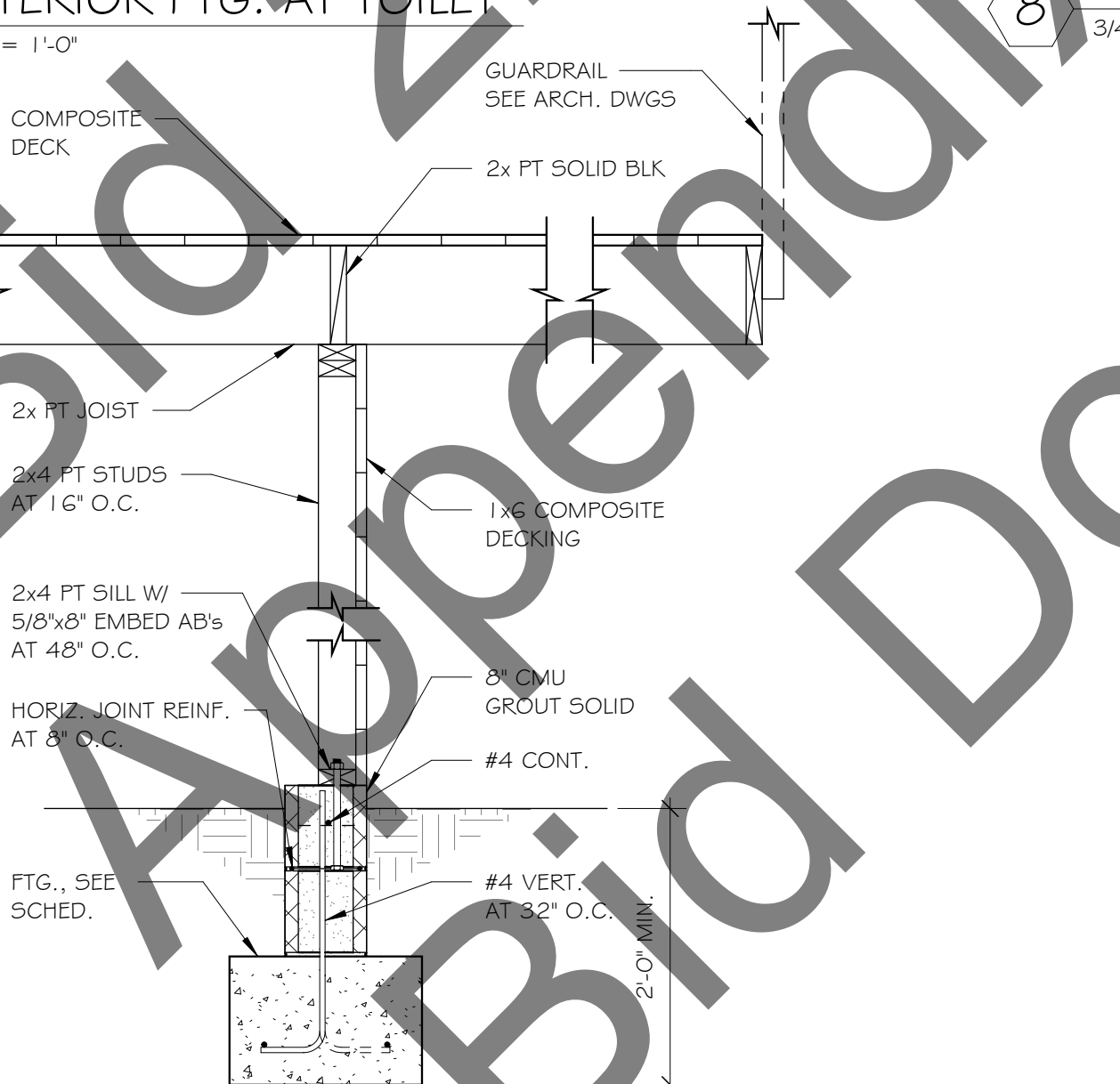
8 INTERIOR FTG. AT TOILET
3/4" = 1'-0"



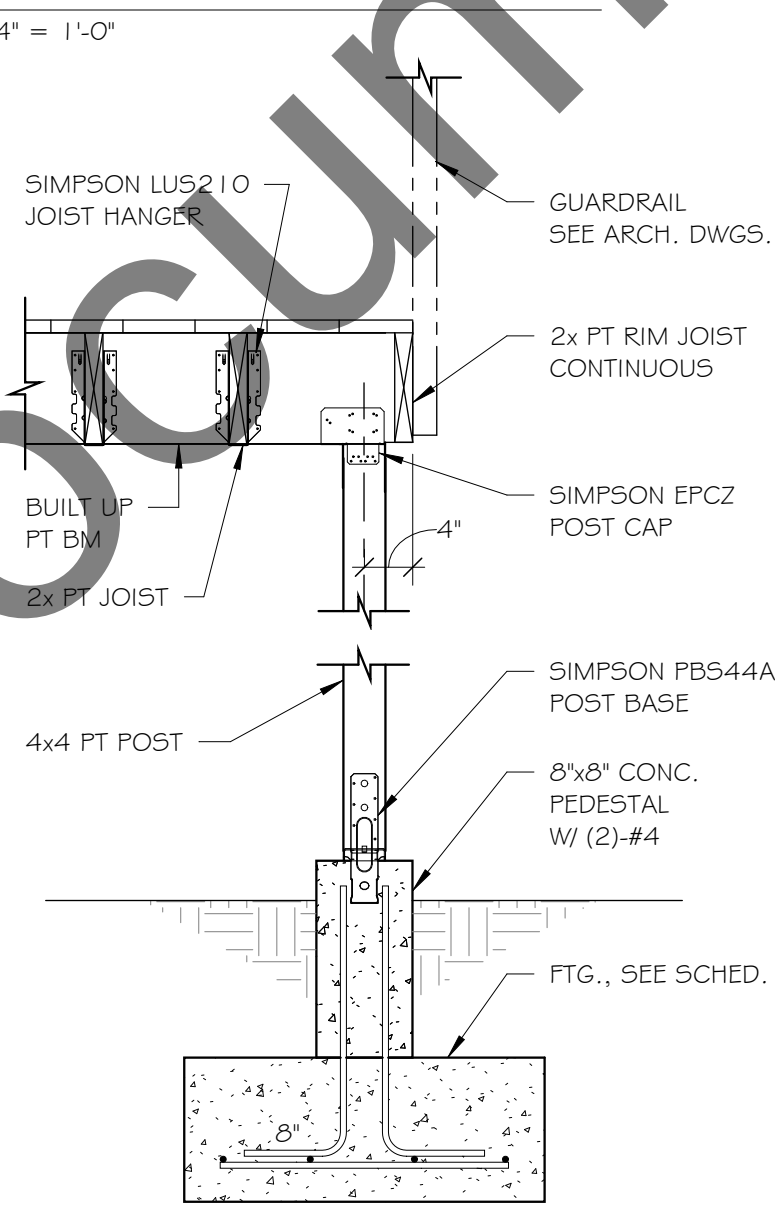
9 COLUMN FOOTING
3/4" = 1'-0"



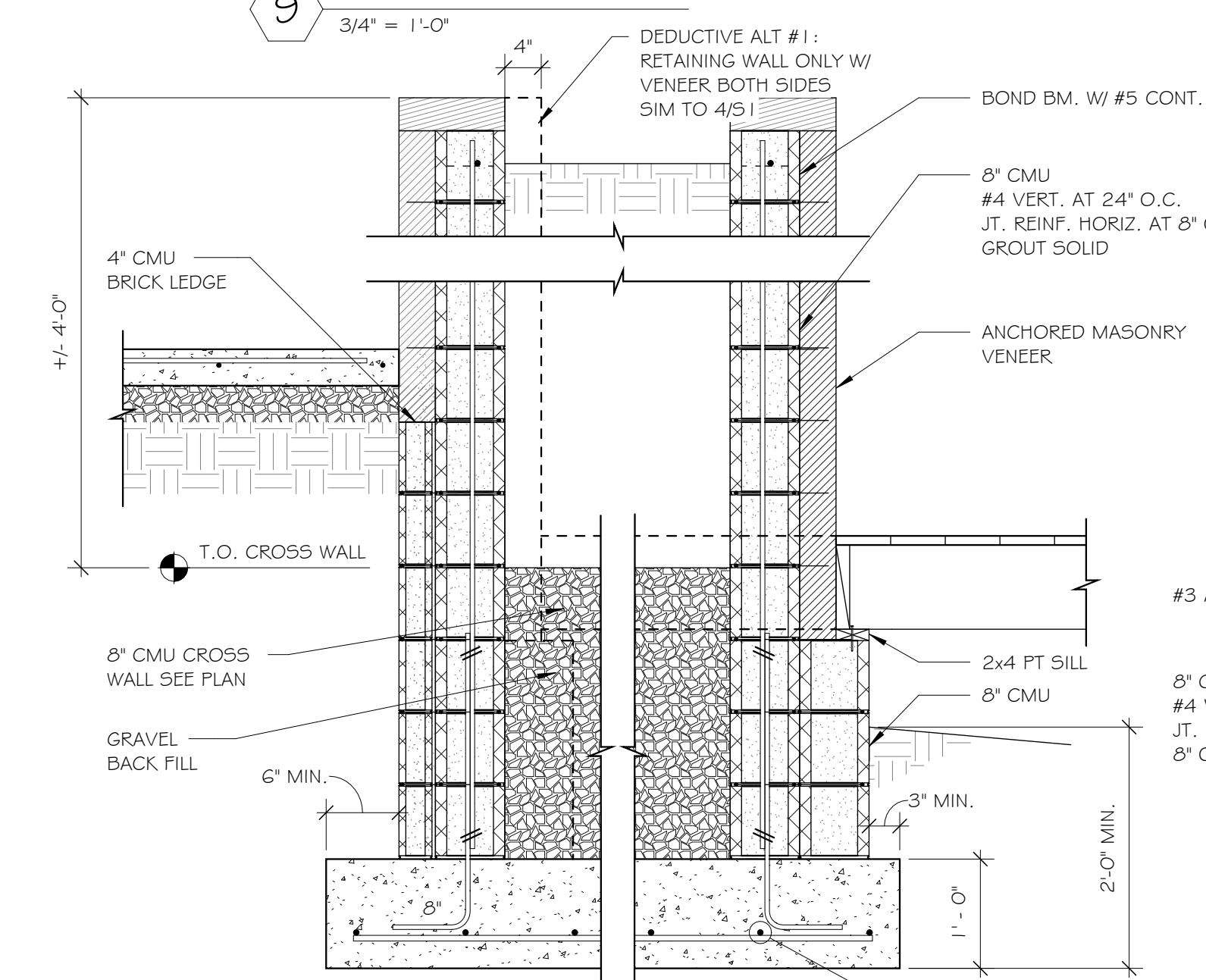
10 DECK FTG.
3/4" = 1'-0"



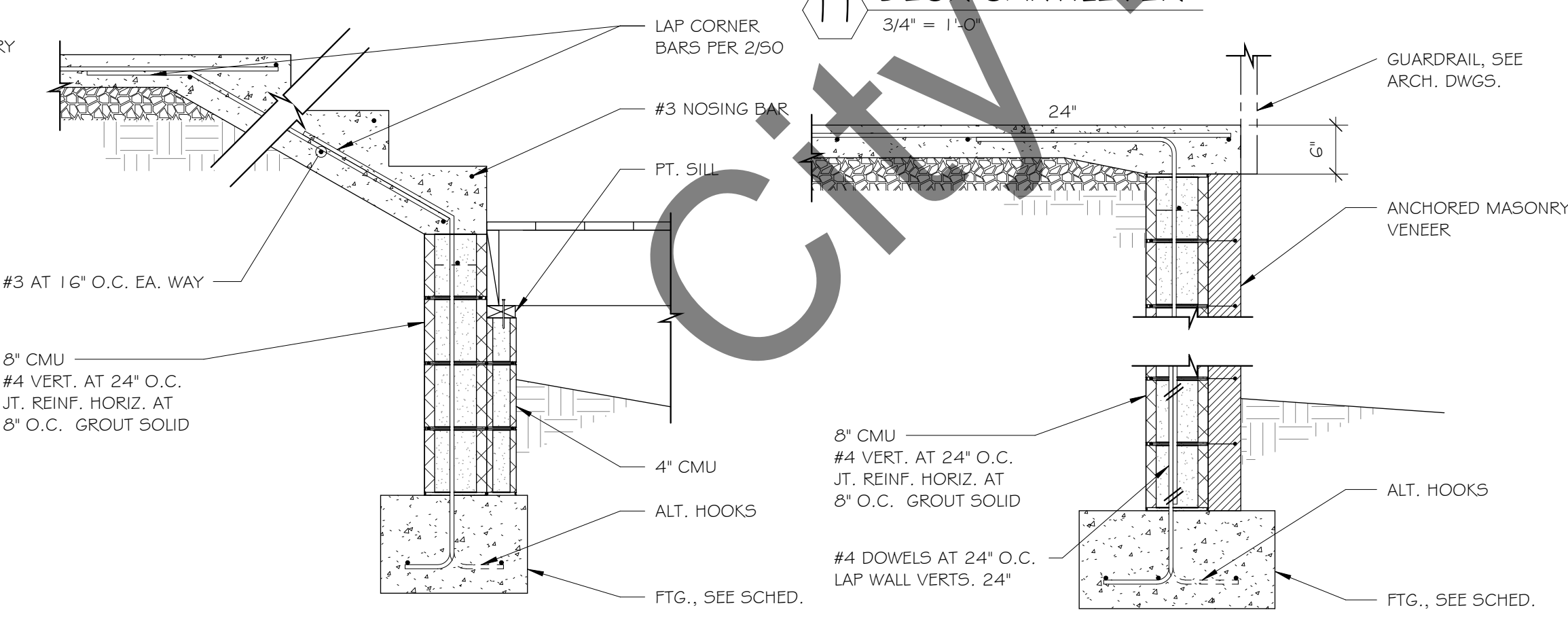
11 DECK CANTILEVER
3/4" = 1'-0"



12 RAMP
3/4" = 1'-0"



13 PLANTER
3/4" = 1'-0"



15 SECTION
3/4" = 1'-0"

SPECIAL INSPECTIONS	
STRUCTURAL SPECIAL INSPECTIONS ARE REQUIRED PER SECTION 1705 OF THE 2012 ARKANSAS FIRE PREVENTION CODE. REFER TO THE DOCUMENT "SCHEDULE OF SPECIAL INSPECTION SERVICES (STRUCTURAL)" LOCATED UNDER SEPARATE COVER FOR THE FOLLOWING INFORMATION REGARDING THE REQUIREMENTS OF SPECIAL INSPECTIONS:	
1. THE MATERIALS, SYSTEMS, COMPONENTS AND WORK REQUIRED TO HAVE SPECIAL INSPECTION OR TESTING BY THE BUILDING OFFICIAL OR BY THE REGISTERED DESIGN PROFESSIONAL RESPONSIBLE FOR EACH PORTION OF THE WORK.	
2. THE TYPE AND EXTENT OF EACH SPECIAL INSPECTION.	
3. THE TYPE AND EXTENT OF EACH TEST.	
4. ADDITIONAL REQUIREMENTS FOR SPECIAL INSPECTION OR TESTING FOR WIND OR SEISMIC RESISTANCE AS SPECIFIED IN SECTIONS 1705.10, 1705.11 AND 1705.12 (WHEN APPLICABLE)	
5. FOR EACH TYPE OF SPECIAL INSPECTION, IDENTIFICATION AS TO WHETHER IS WILL BE CONTINUOUS SPECIAL INSPECTION OR PERIODIC SPECIAL INSPECTION.	
JLA ENGINEERS INC. DOES NOT PERFORM SPECIAL INSPECTIONS.	

16 SPECIAL INSPECTIONS
1/8" = 1'-0"

STRUCTURAL NOTES

- ALL ELEVATIONS ARE GIVEN WITH REFERENCE TO FINISH FLOOR DATUM 1'00'-0".
- ALL STRUCTURAL FILL WITHIN THE BUILDING FOOTPRINT SHALL BE APPROVED MATERIAL PLACED IN 9" LOOSE LIFTS AND COMPACTED TO 98% OF THE MAXIMUM DRY DENSITY PER STANDARD PROCTOR TEST.
- FOOTINGS ARE TO BEAR ON NATIVE RELATIVELY UNDISTURBED MEDIUM DENSE TO DENSE SANDS AND GRAVELS WEATHERED SHALE OR SANDSTONE. IF OVER EXCAVATION IS NECESSARY TO REACH THE BEARING STRATA THEN BACKFILL TO BOTTOM OF FOOTING ELEVATION WITH 400 PSI FLOWABLE FILL OR THICKEN FOOTING ACCORDINGLY. ALL EXCAVATIONS SHALL BE CLEAN CUT AND SQUARE.
- FOOTING ELEVATIONS NOTED ARE FOR BIDDING PURPOSES AND SHALL BE LOWERED AS NECESSARY TO OBTAIN THE SPECIFIED BEARING CAPACITY AND COVER.
- THE FOUNDATION IS DESIGNED FOR A BEARING CAPACITY OF 2000 PSF FOR CONTINUOUS FOOTINGS AND 2500 PSF FOR ISOLATED COLUMN FOOTINGS BASED ON GEOTECHNICAL REPORT DATED 5/10/2021 BY GTS, INC. PROVIDE 2'-0" FROM FINISH GRADE OR PAVING TO BOTTOM OF FOOTING AT EXTERIOR CONDITIONS. FOOTING EXCAVATIONS SHALL BE APPROVED BY OWNERS GEOTECHNICAL CONSULTANT PRIOR TO PLACING RE-BAR.
- CONCRETE SHALL HAVE A 28 DAY STRENGTH. MAXIMUM SLUMP AND MAXIMUM AGGREGATE SIZE AS FOLLOWS:

FOOTINGS AND STEMWALLS:	3000 PSI - 6" SLUMP - 1 1/2" AGG.
INTERIOR SLAB:	3000 PSI - 4" SLUMP - 1" AGG.
EXTERIOR SLAB:	3500 PSI - 4" SLUMP - 1" AGG.

ALL CONCRETE EXPOSED TO FREEZE/THAW SHALL HAVE APPROX. 5% AIR ENTRAINMENT. REINF. STEEL SHALL CONFORM TO GRADE 60 ASTM A-615. LAP ALL CONCRETE REINFORCING 44 BAR DIAMETERS, 12" MINIMUM, UNLESS NOTED OTHERWISE.
- VERIFY ALL DIMENSIONS, SLOPES, DEPRESSIONS, EMBEDMENTS ETC. BEFORE PLACING CONCRETE.
- PROVIDE SLAB CONTROL JOINTS (C.J.) WHERE INDICATED ON PLAN. C.J.'s SHALL BE APPROX. 1/4 OF THE SLAB DEPTH AND SHALL BE ONE OF THE FOLLOWING:

A. SAWCUT AS SOON AS POSSIBLE (WITHIN 12 HOURS OF POUR).
B. ZIP CAP TYPE JOINT FORMER.
C. TOOLED JOINTS FOR EXTERIOR SLAB.

CONST. JOINTS W/ 1/4"x4 1/2" PNA DIAMOND DOWELS AT 18" O.C. MAY BE SUBSTITUTED FOR ANY CONTROL JOINT AND SHALL BE USED WHERE INDICATED ON THE PLAN.

9. ALL CONCRETE MASONRY UNITS SHALL BE ASTM C-90 GRADE N LIGHT WT. ABOVE FLOOR SLAB, NORMAL WT. BELOW. COMPRESSION STRENGTH, Fm', SHALL BE 1500 PSI. CMU MORTAR SHALL BE ASTM TYPE S WITH A MINIMUM COMPRESSION STRENGTH OF 1800 PSI. CMU GROUT SHALL HAVE A MINIMUM COMPRESSION STRENGTH OF 2000 PSI AT 28 DAYS. CMU REINFORCING SPLICES SHALL BE LAPPED 48 BAR DIA. UNLESS NOTED OTHERWISE.

10. STRUCTURAL STEEL SHALL MEET THE FOLLOWING CRITERIA:
- | | |
|--------------------------|--------------------|
| STEEL SHAPES: | ASTM A-36, 50 KSI |
| SHAPES, BARS AND PLATES: | ASTM A-36, 50 KSI |
| STRUCTURAL PIPE: | ASTM A-53, 35 KSI |
| STRUCTURAL TUBING: | ASTM A-500, 46 KSI |

ALL BOLTED STEEL CONNECTIONS SHALL BE MADE USING ASTM A-325N H.S. BOLTS UNLESS NOTED OTHERWISE. CONCRETE ANCHOR BOLTS SHALL BE ASTM A-307 UNLESS NOTED OTHERWISE. WELDING SHALL MEET LATEST AWS CODE, E70 ELECTRODES. GROUT BENEATH COLUMN BASE PLATES SHALL BE NON-METALLIC MEETING ASTM C-827, 5000 PSI AT 28 DAYS.

11. OPEN WEB JOISTS & JOIST GIRDERS
DESIGN, FABRICATION AND ERECTION OF STEEL JOISTS SHALL CONFORM WITH THE LATEST EDITION OF THE STEEL JOIST INSTITUTE SPECIFICATION. USE "SPECIAL" JOISTS AT ROOF TOP UNITS. PREFER TO FRAMING PLAN FOR WEIGHTS AND LOCATIONS. ROOF TOP UNIT WEIGHTS MUST BE ADDED TO THE TOTAL LOAD ON THE JOISTS. COORDINATE WITH MECHANICAL DRAWINGS. WELD EACH JOIST TO BEAM, JOIST GIRDER OR WELD PLATE WITH A 1/8" FILLET WELD EACH SIDE OF JOIST. WELD LENGTH SHALL BE A MINIMUM OF 2" UNLESS NOTED OTHERWISE. USE BRIDGING AS INDICATED ON THE DRAWINGS OR AS REQUIRED BY THE STEEL JOIST INSTITUTE. CONTINUE ALL BRIDGING TO ROLLED STEEL SHAPES AND/OR WALLS WHICH ARE PARALLEL TO THE JOISTS AND ANCHOR IN ACCORDANCE WITH STEEL JOIST INSTITUTE SPECIFICATIONS. ALL BRIDGING SHALL BE SECURED TO TOP AND BOTTOM OF ALL JOISTS AND BEAMS AND SHALL BE IN ACCORDANCE WITH STEEL JOIST INSTITUTE SPECIFICATIONS. JOISTS SHALL BEAR 4" MINIMUM ON MASONRY AND 2 1/2" MINIMUM ON STEEL. PROVIDE ANCHORAGE AT MASONRY BEARING IN ACCORDANCE WITH STEEL JOIST INSTITUTE SPECIFICATIONS. JOIST MANUFACTURER MUST CHECK ROOF JOISTS AND JOIST GIRDERS FOR A 15 PSF NET UPLIFT PRESSURE (30 PSF AT 5 FOOT WIDE ZONE AT ROOF PERIMETER), AND PROVIDE BRIDGING AND BOTTOM CHORD EXTENSIONS AS REQUIRED TO ADEQUATELY BRACE THE BOTTOM CHORDS AGAINST LATERAL MOVEMENT.

12. ALL COLD-FORMED STEEL FRAMING SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND IN ACCORDANCE WITH THE LATEST EDITION OF "SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS" BY THE AMERICAN IRON AND STEEL INSTITUTE. STEEL FOR 14 AND GAGE STUDS SHALL HAVE A MINIMUM YIELD STRENGTH OF 40 KSI. STEEL FOR ALL 18 AND 20 GAGE STUDS, JOISTS, AND FOR ALL GAGE TRACK, ACCESSORIES AND BRIDGING SHALL HAVE A MINIMUM YIELD STRENGTH OF 33 KSI. STEEL SHALL BE GALVANIZED WITH A MINIMUM G-60 COATING. ALL STUDS SHALL BE SECURELY SEATED FOR FULL END BEARING ON TOP AND BOTTOM TRACK. UNLESS NOTED OTHERWISE, PROVIDE DOUBLE STUDS AT JUNCTIONS, CORNERS AND INTERSECTIONS. BRIDGING SHALL BE INSTALLED PER RECOMMENDATIONS WITH THE FOLLOWING MINIMUM REQUIREMENTS: PROVIDE BRIDGING AT MID-HEIGHT FOR WALLS LESS THAN OR EQUAL TO 10'-0" HIGH, AND 4'-0" O.C. MAXIMUM FOR WALLS GREATER THAN 10'-0" HIGH. IN ADDITION, BRIDGING SHALL BE PROVIDED AT ROOF LINES AND ELSEWHERE AS NOTED ON THE DRAWINGS. SOLID BLOCKING SHALL BE INSTALLED IN LIEU OF BRIDGING WHERE NOTED ON THE DRAWINGS.

13. STEEL DECKING:
ROOF DECK SHALL BE 1/2x22 GAGE TYPE E PAINTED. CONNECT TO ALL SUPPORTS W/ 5/8" DIA. PUDDLE WELDS AT 12" O.C. (4" O.C. AT ALL BOUNDARY ELEMENTS). CONNECT SIDELAPS W/ (3)-#10 TKS PER SPAN.

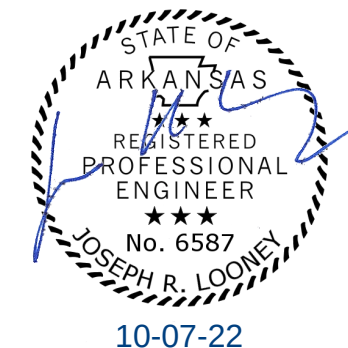
14. DESIGN CRITERIA
- | | |
|------------------|------------------------------------|
| CODE: | 2012 ARKANSAS FIRE PREVENTION CODE |
| ROOF LIVE LOAD: | 20 PSF |
| ROOF DEAD LOAD: | 20 PSF |
| FLOOR LIVE LOAD: | 100 PSF |

SNOW LOAD	
GROUND SNOW LOAD, Pg:	20 PSF
FLAT ROOF SNOW LOAD, Pf:	14 PSF
SNOW EXPOSURE FACTOR, Ce:	1.0
SNOW LOAD IMPORTANCE FACTOR, Is:	1.0
THERMAL FACTOR, Ct:	1.0

WIND LOAD	
DESIGN WIND SPEED, Vult:	115 MPH
DESIGN WIND SPEED, Vasd:	90 MPH
RISK CATEGORY:	II
WIND EXPOSURE CATEGORY:	C
INTERNAL PRESSURE COEFF.:	+0.18, -0.18
COMPONENTS & CLADDING (ASD):	21.5 PSF

SEISMIC LOAD	
RISK CATEGORY:	II
IMPORTANCE FACTOR, Ie:	1.0
MAPPED SPECTRAL RESPONSE COEFF.:	Ss=0.17, S1=0.093 JLA JOB #3112
DESIGN SPECTRAL RESPONSE COEFF.:	Sds=0.136, Sd1=0.106
SITE CLASS:	C
DESIGN CATEGORY:	B
BASIC SEISMIC FORCE RESISTING SYSTEM:	MIXED
DESIGN BASE SHEAR:	V=0.039W
SEISMIC RESPONSE COEFF., C:	0.039
RESPONSE MODIFICATION COEFF., R:	3.5
ANALYSIS PROCEDURE:	EQUIV. LATERAL FORCE

THIS DESIGN COMPLIES WITH THE ARKANSAS SEISMIC STANDARDS.



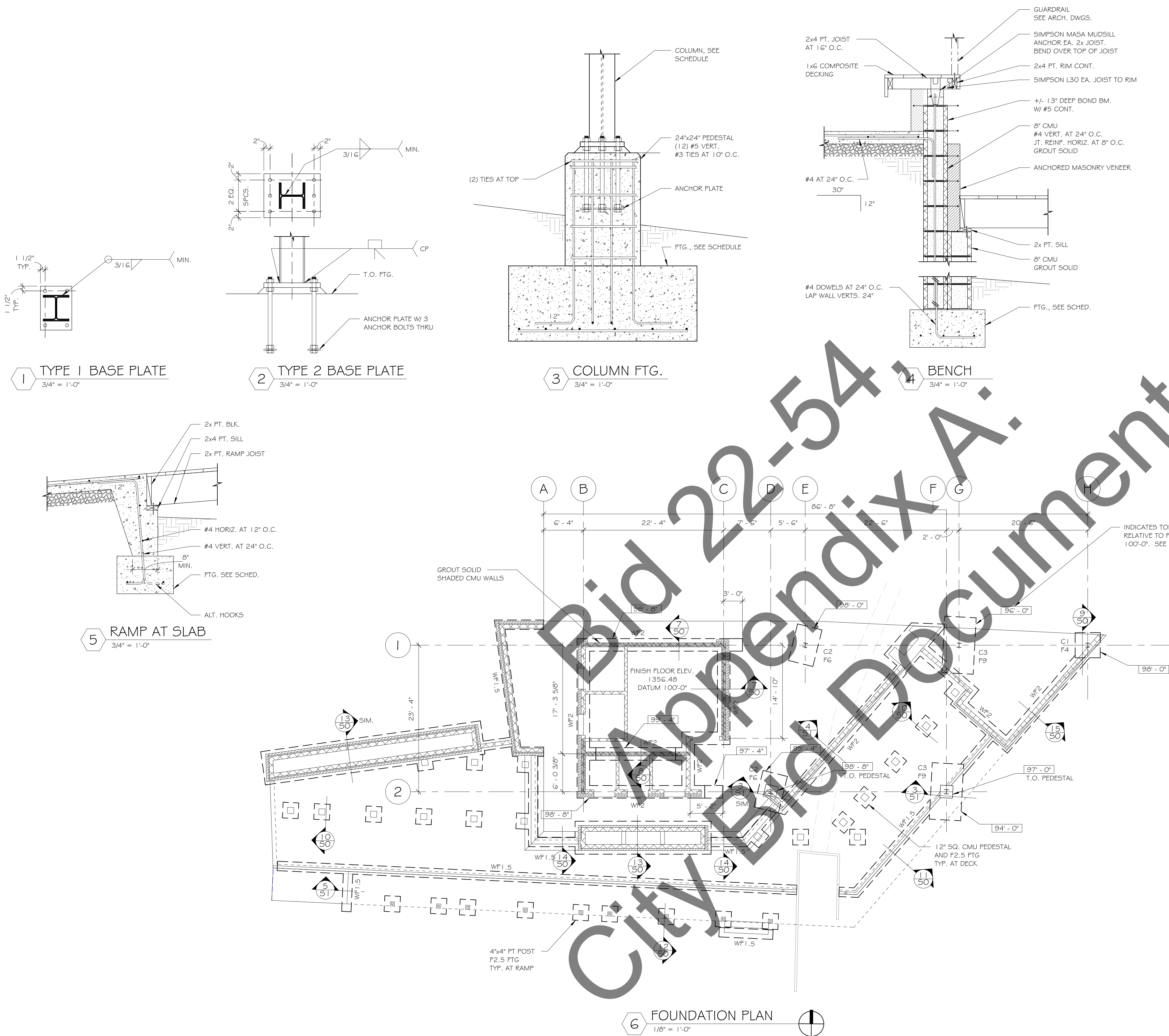
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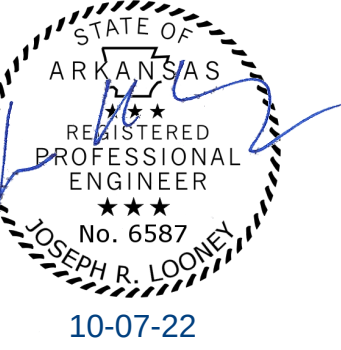
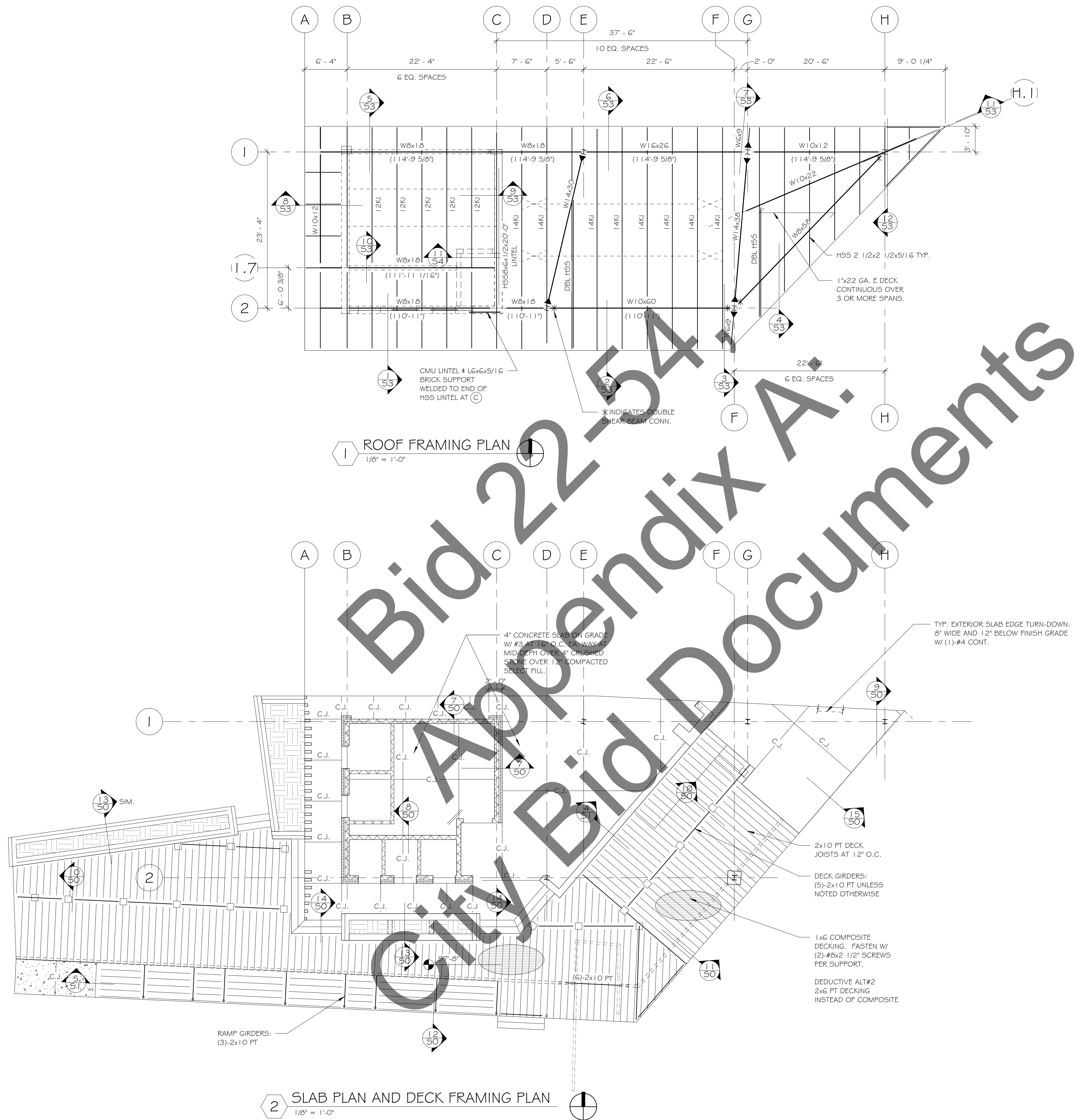
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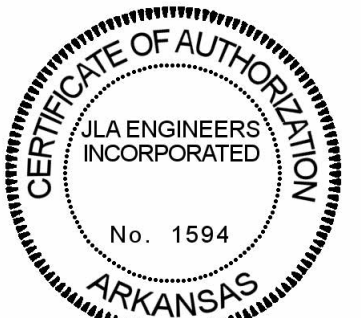
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S1



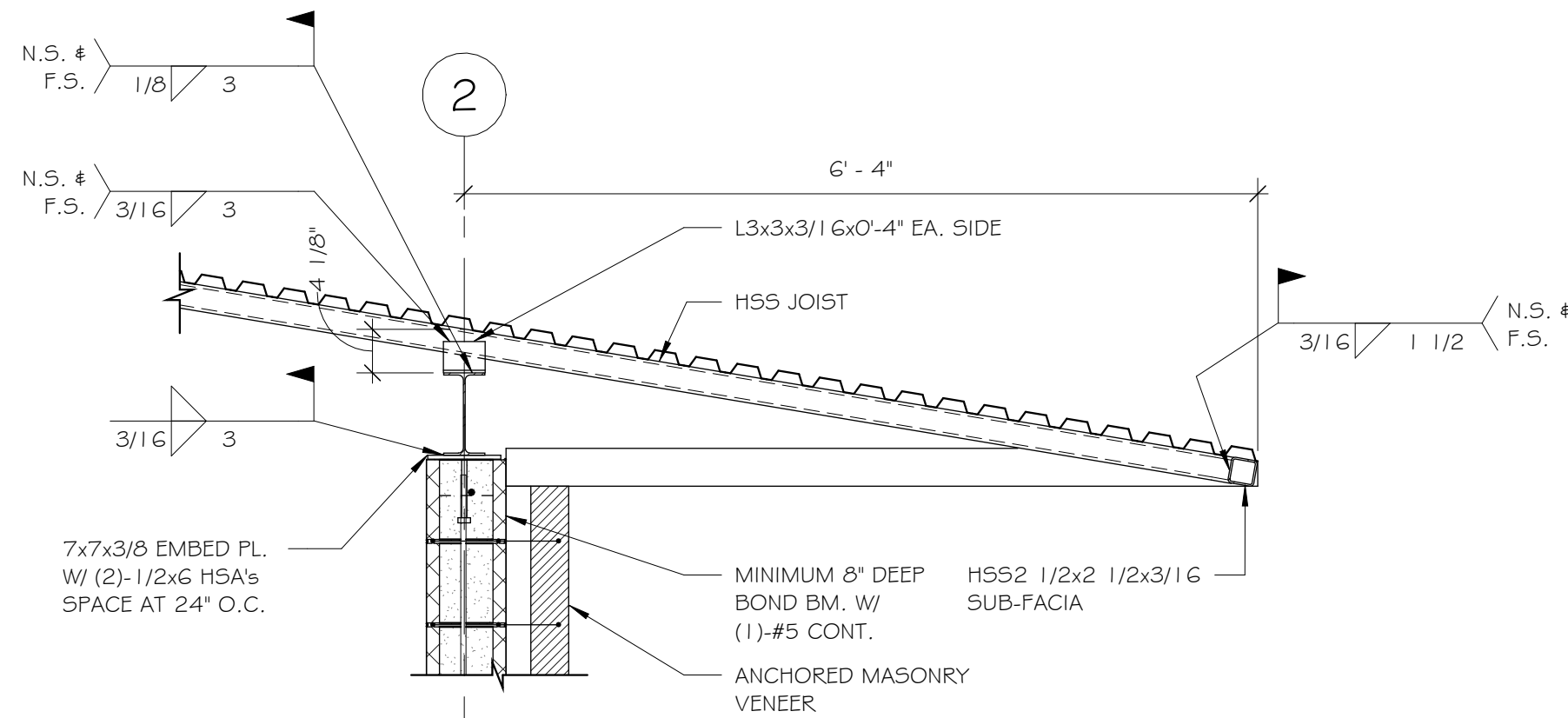
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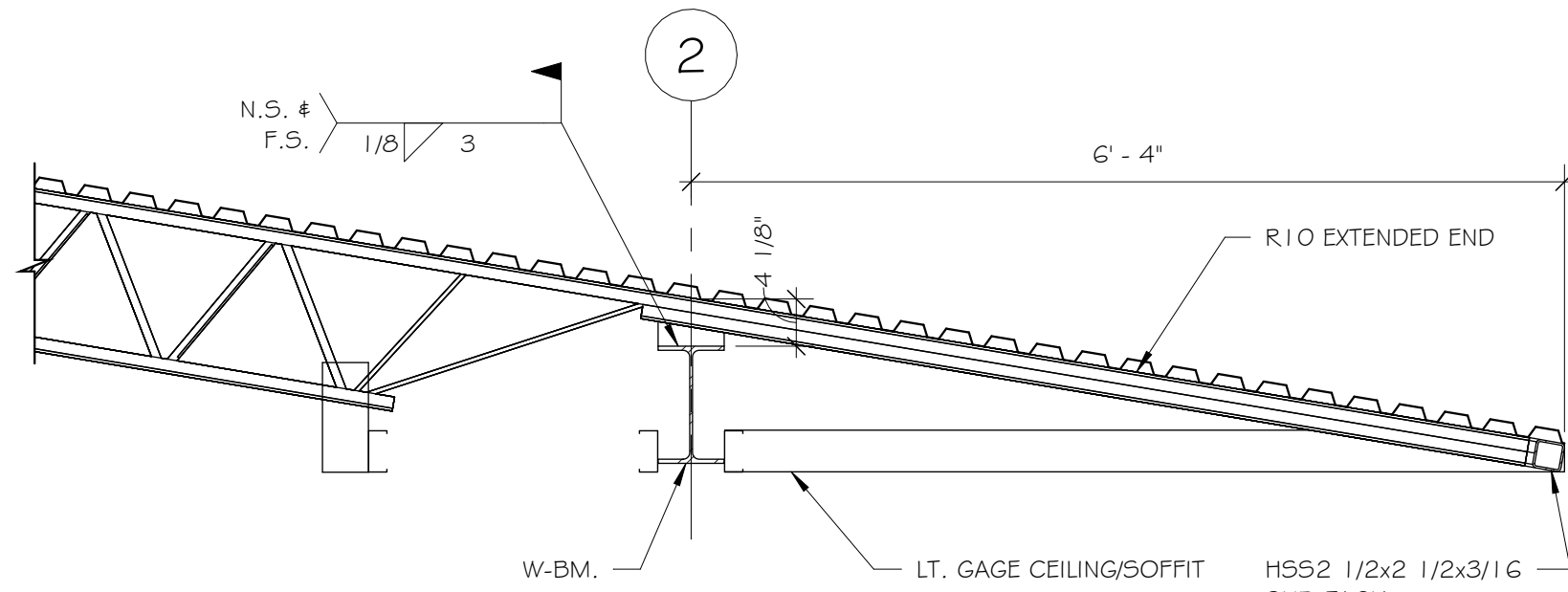


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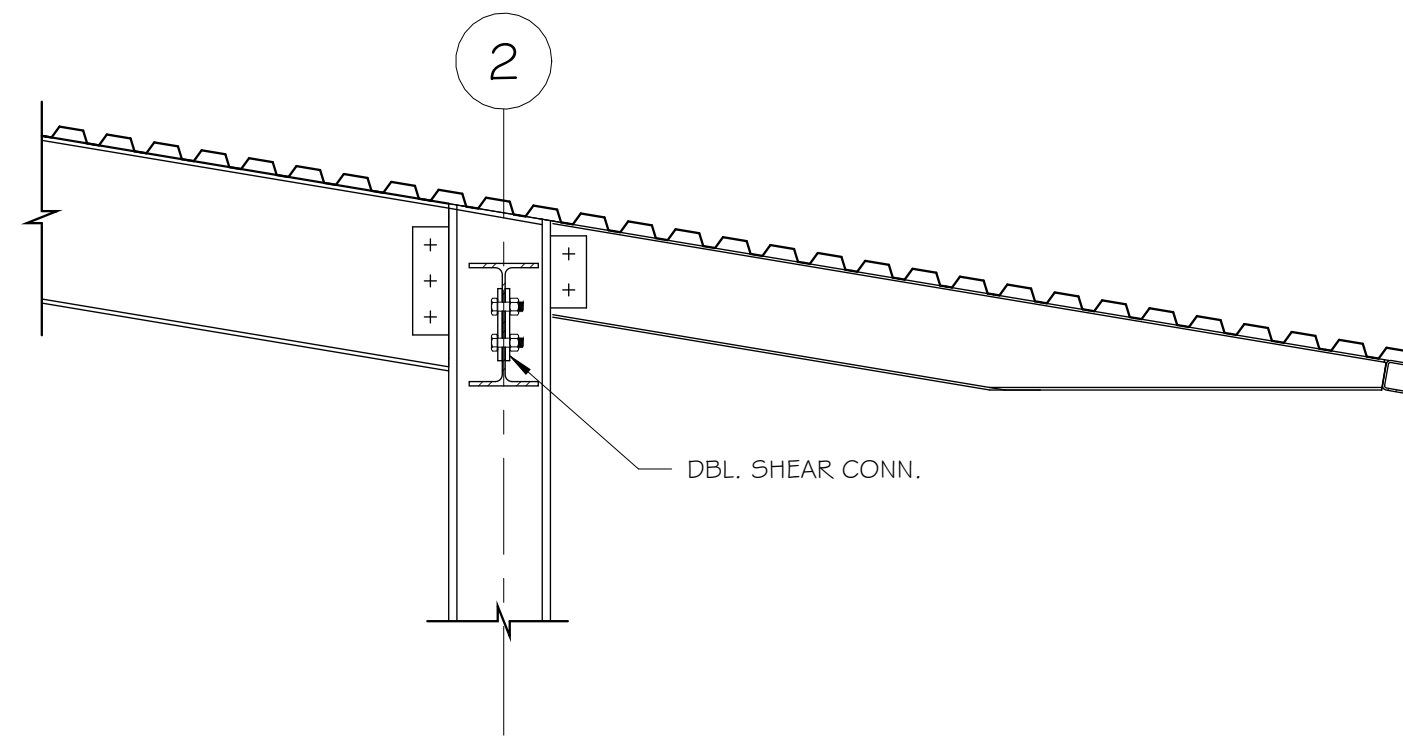
S2



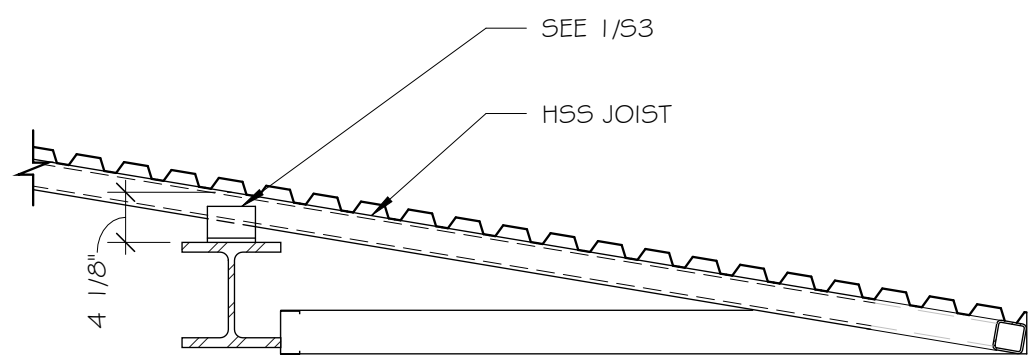
1 LOW EAVE AT TOILETS
3/4" = 1'-0"



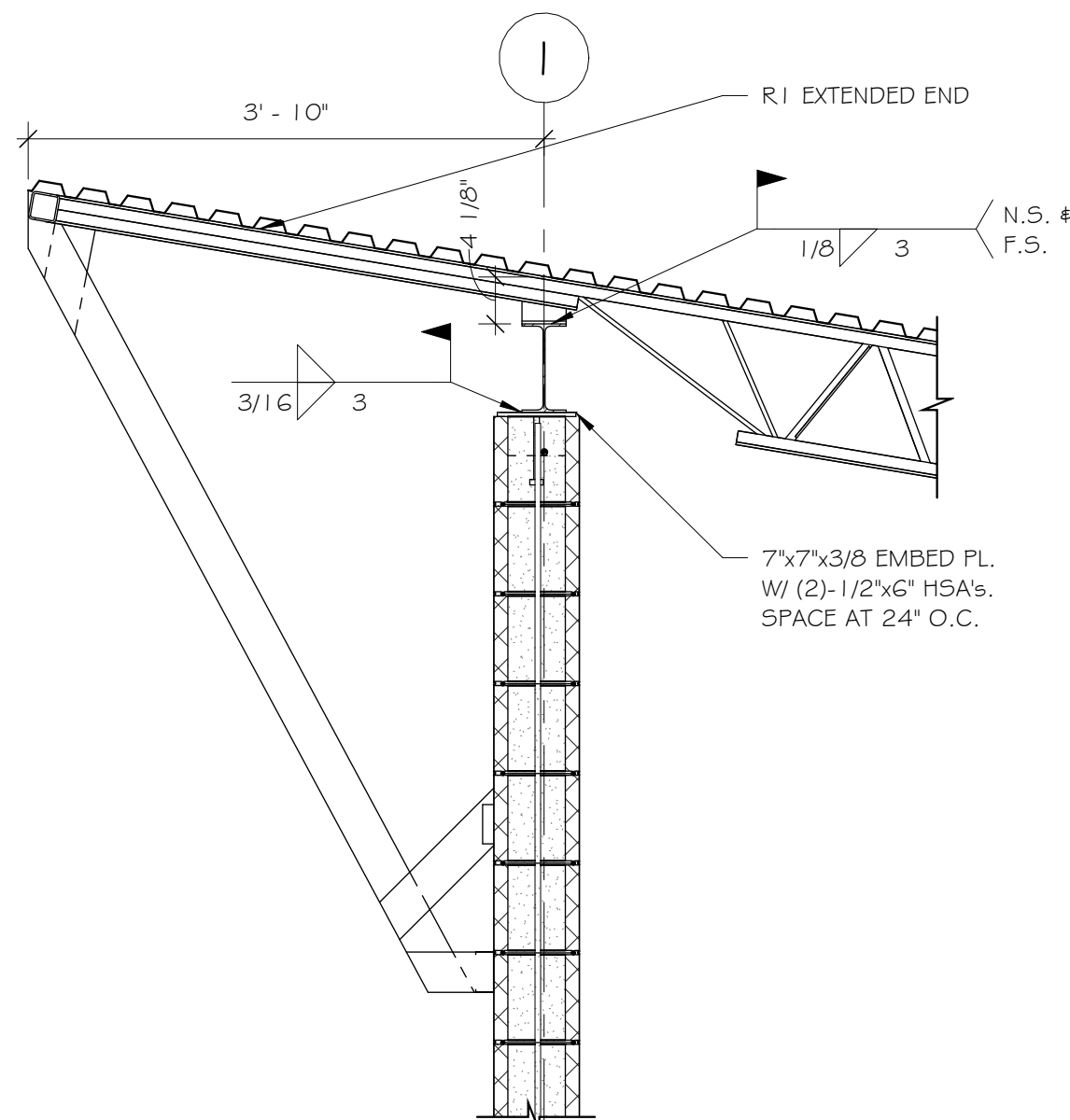
2 LOW EAVE
3/4" = 1'-0"



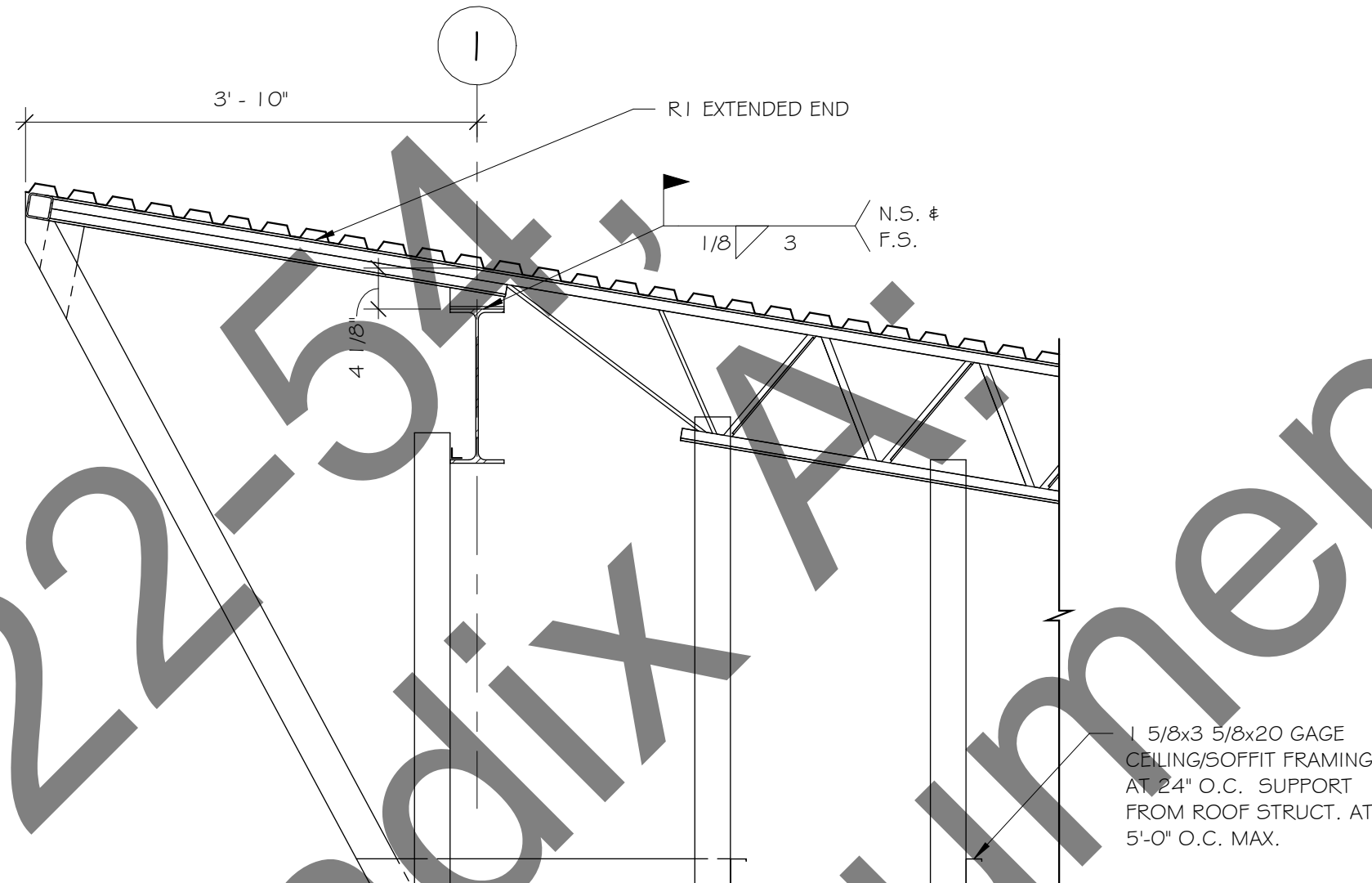
3 LOW EAVE AT PORTAL FRAME
3/4" = 1'-0"



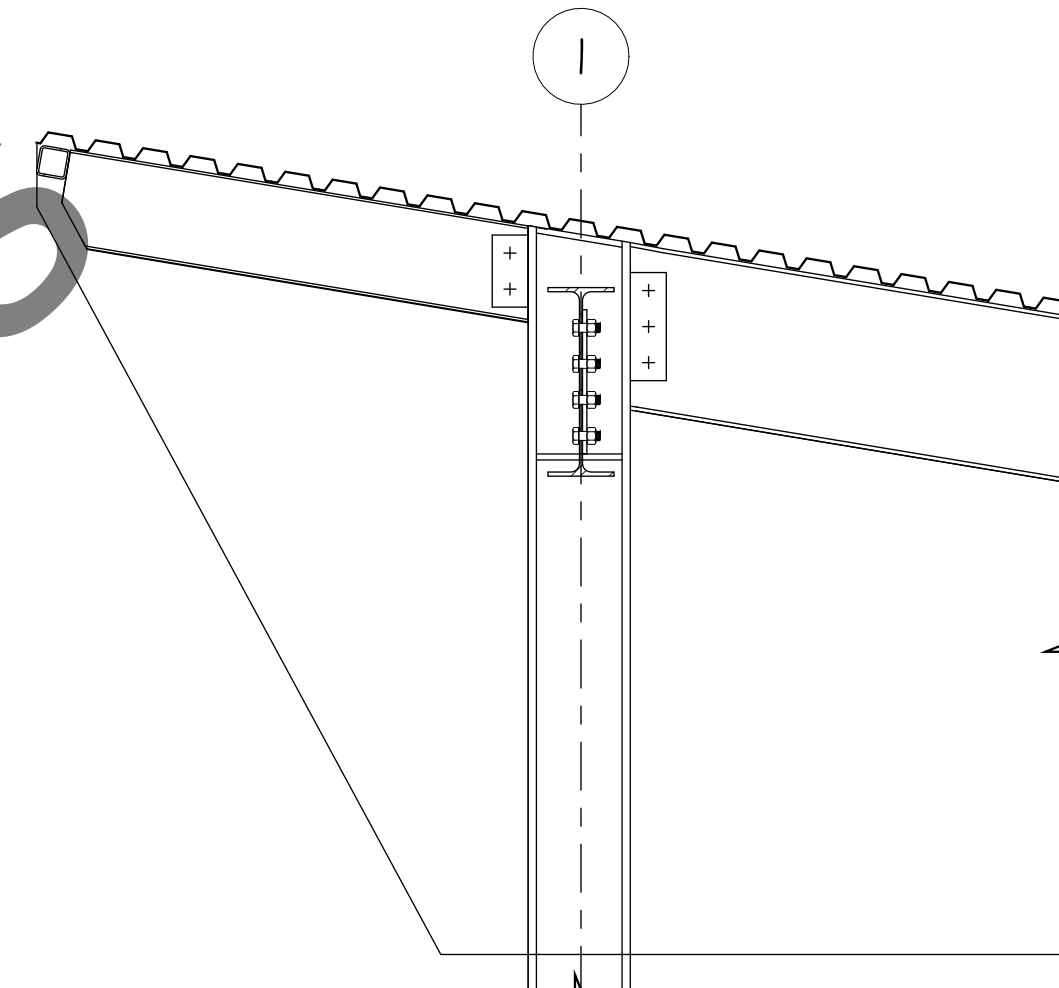
4 LOW EAVE AT EAST SIDE
3/4" = 1'-0"



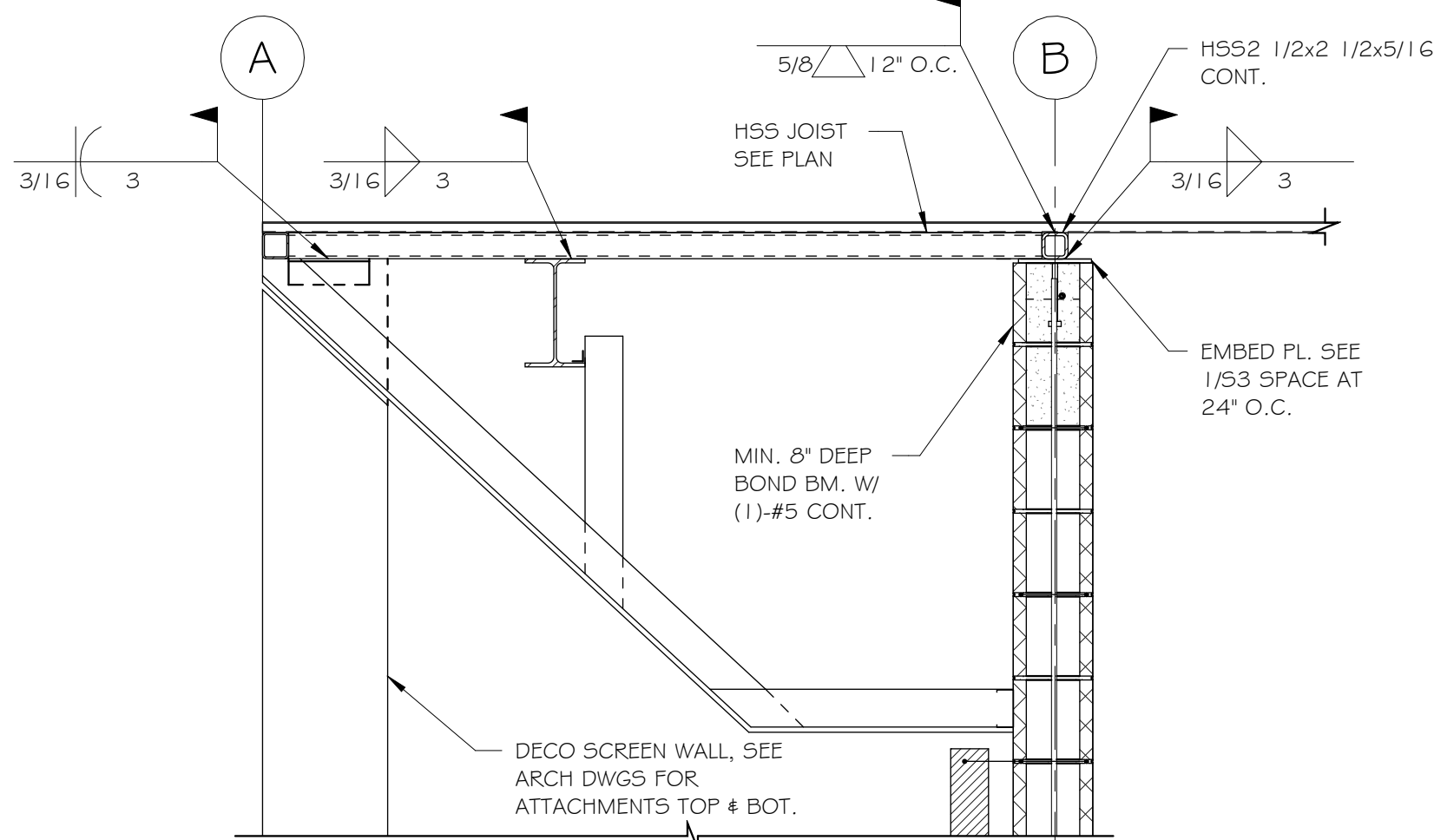
5 HIGH EAVE AT STORAGE
3/4" = 1'-0"



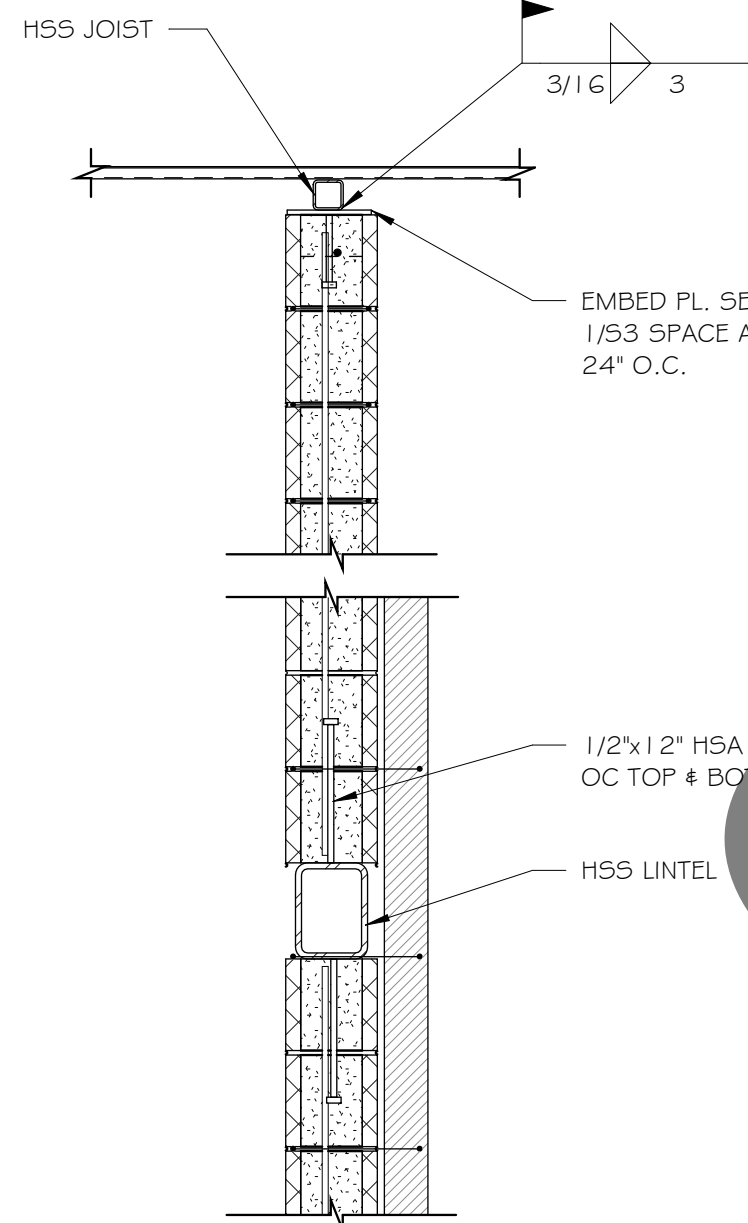
6 HIGH EAVE
3/4" = 1'-0"



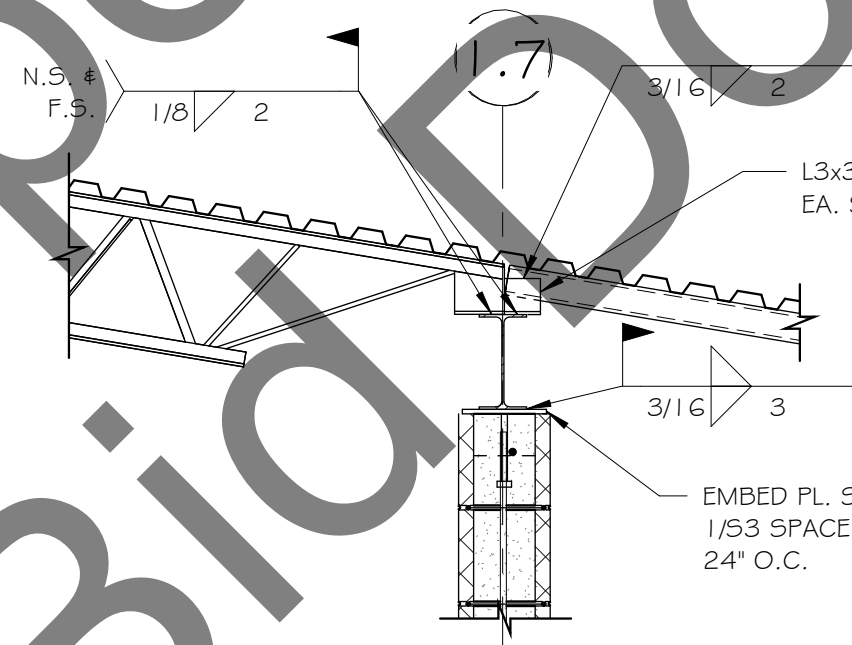
7 HIGH EAVE AT PORTAL FRAME
3/4" = 1'-0"



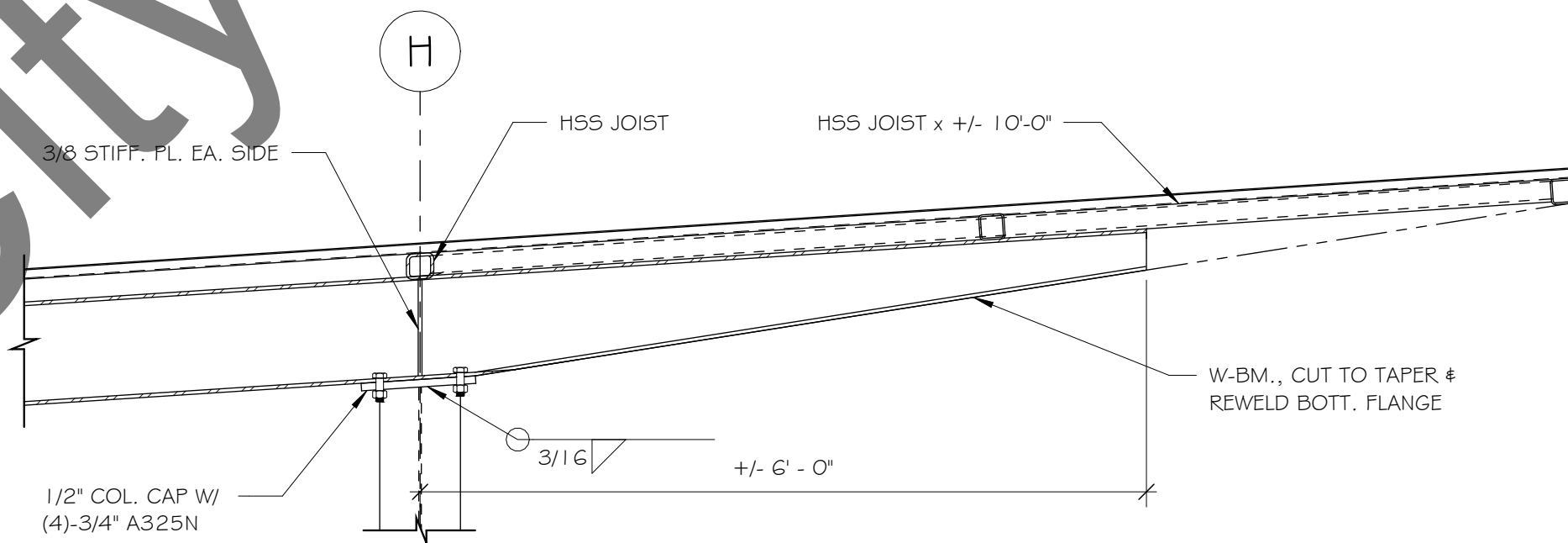
8 WEST EAVE
3/4" = 1'-0"



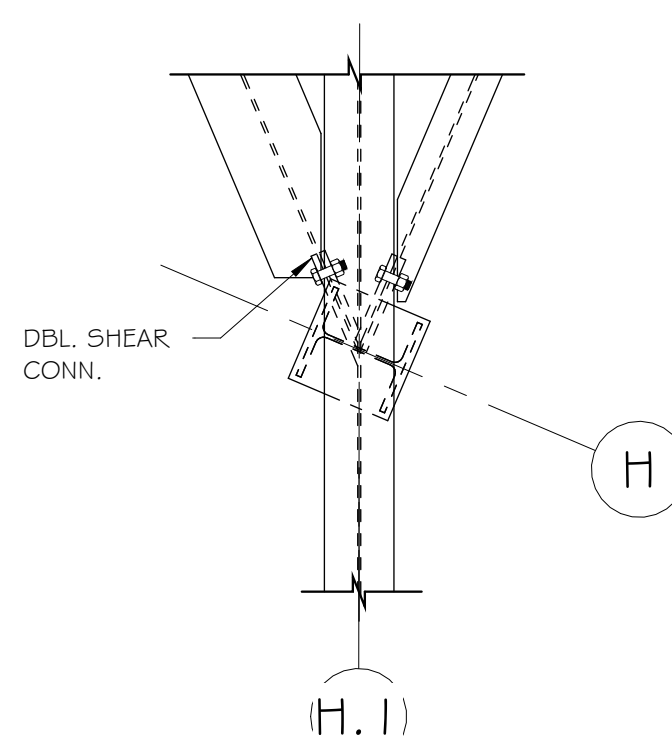
9 SHEAR WALL
3/4" = 1'-0"



10 SHEAR WALL AT GRID 1.7
3/4" = 1'-0"



11 EAST COLUMN
3/4" = 1'-0"



12 SECTION AT BRACE
3/4" = 1'-0"

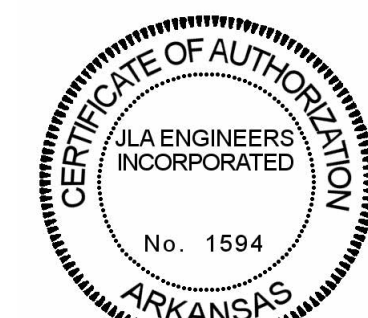


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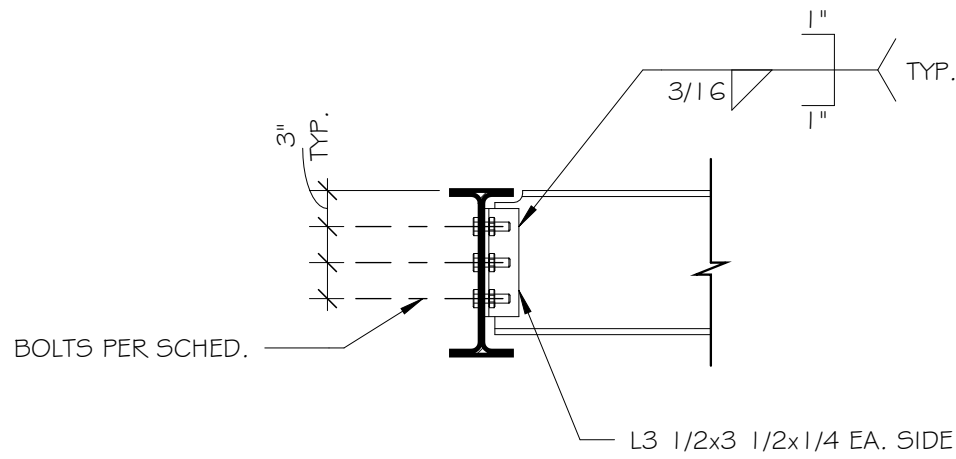
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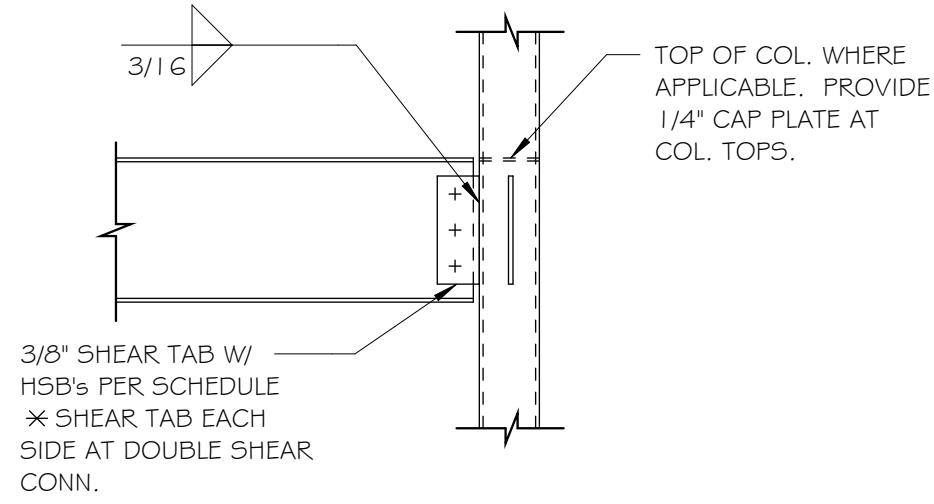
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JLA JOB #3112



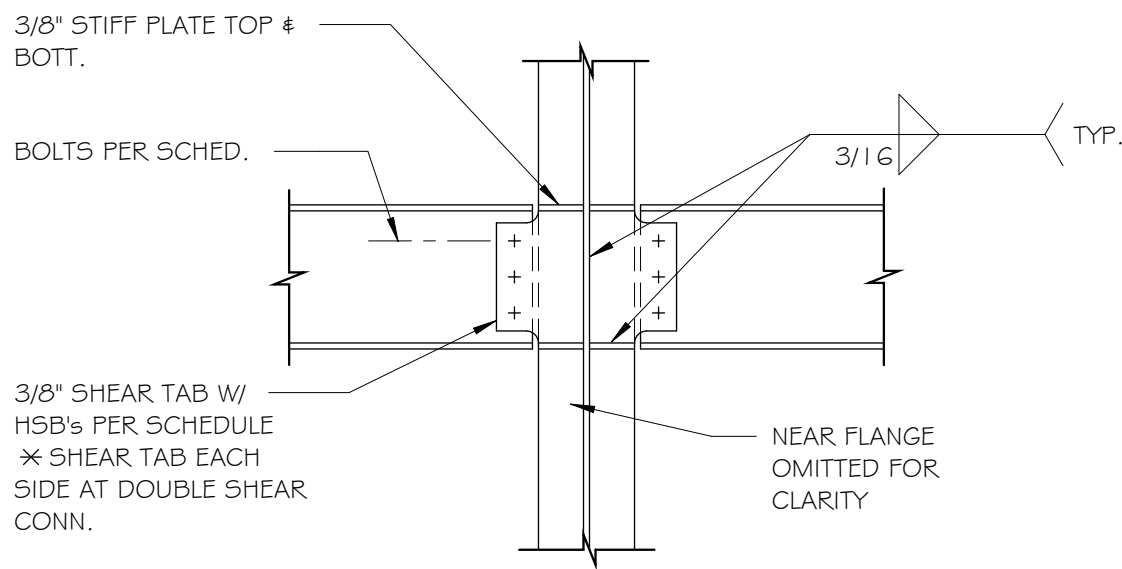
BOLTING SCHEDULE	
BEAM SIZE	# ROWS
W8, W10	2
W12, W14	3
W16	4
W18	5



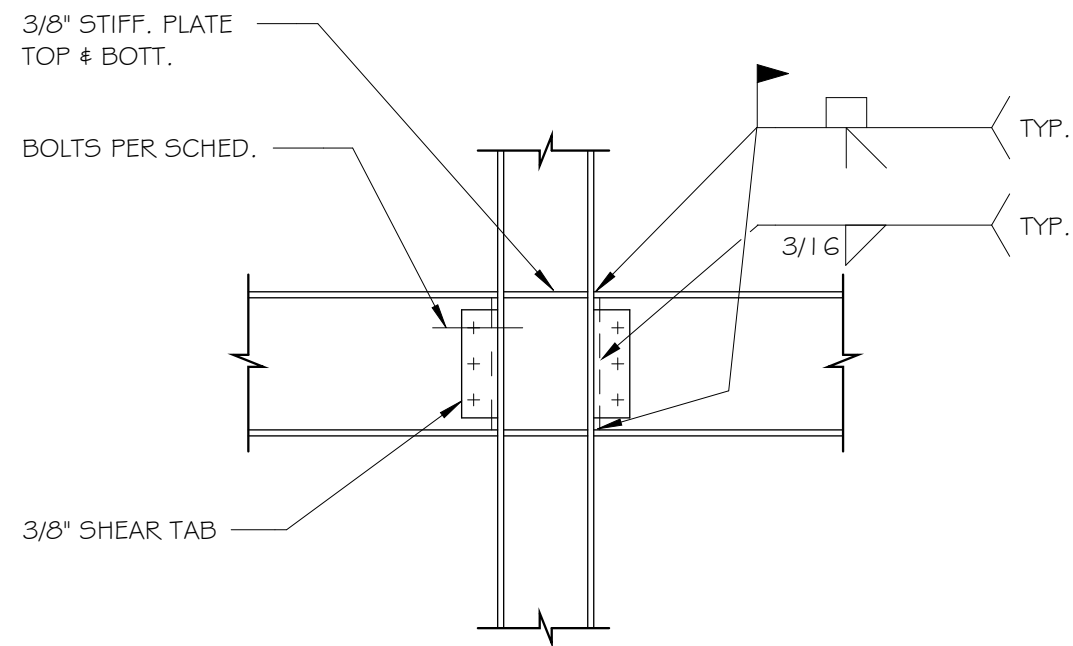
1 TYP. W-BM. TO GIRDER
3/4" = 1'-0"



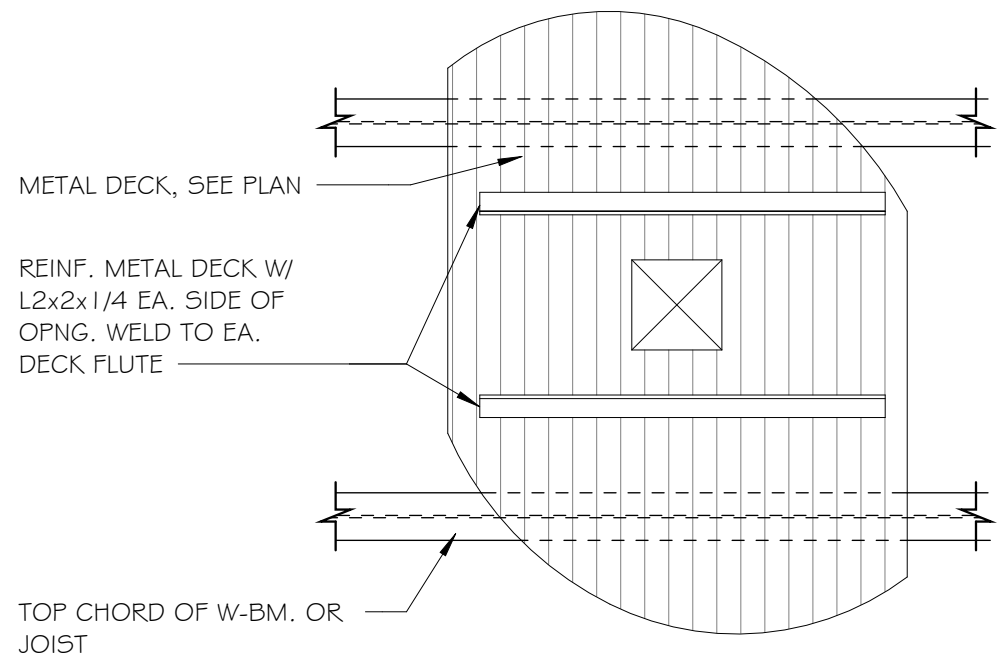
2 W-BEAM TO COLUMN
3/4" = 1'-0"



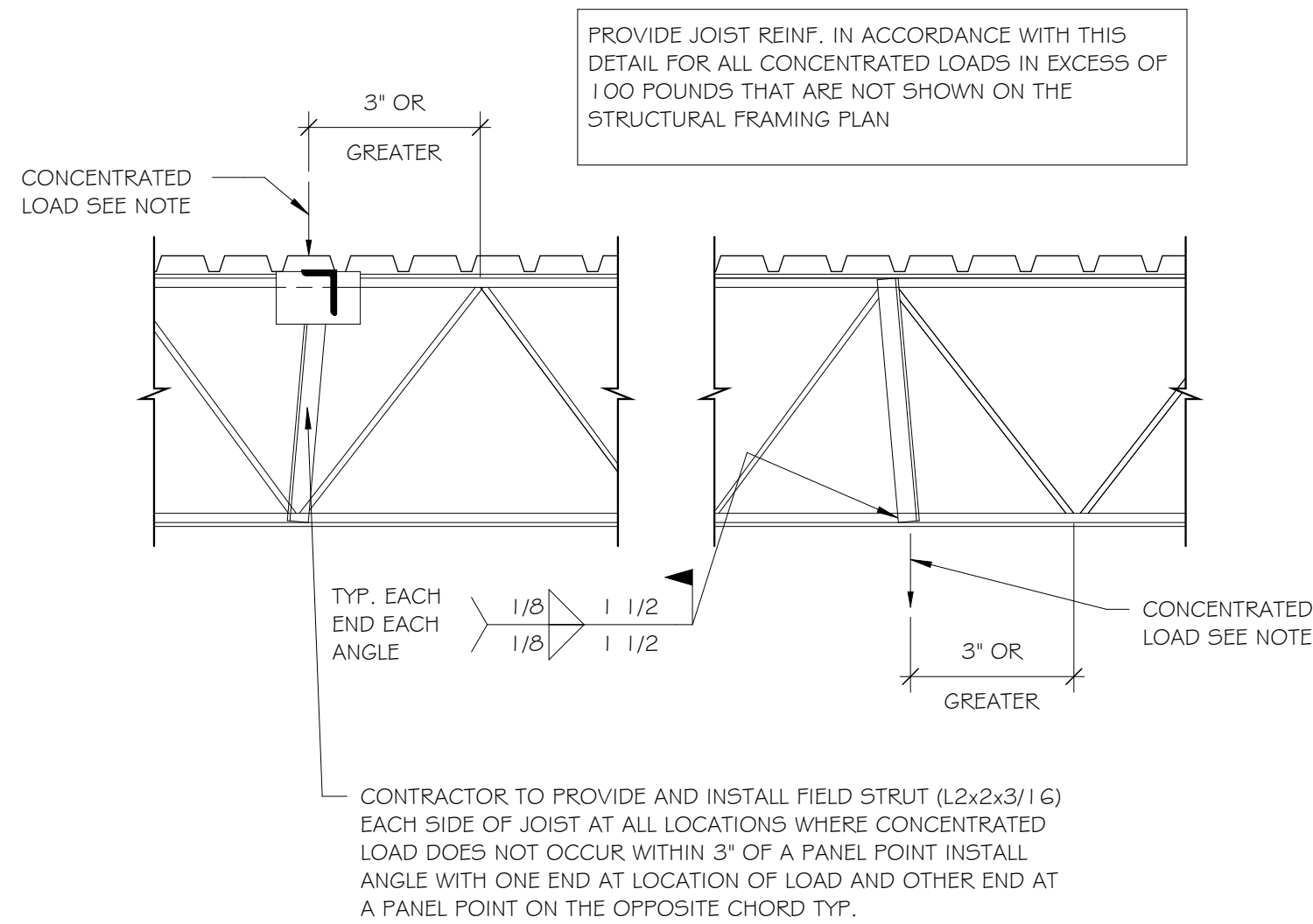
3 ALTERNATIVE W-BM. TO COLUMN WEB
3/4" = 1'-0"



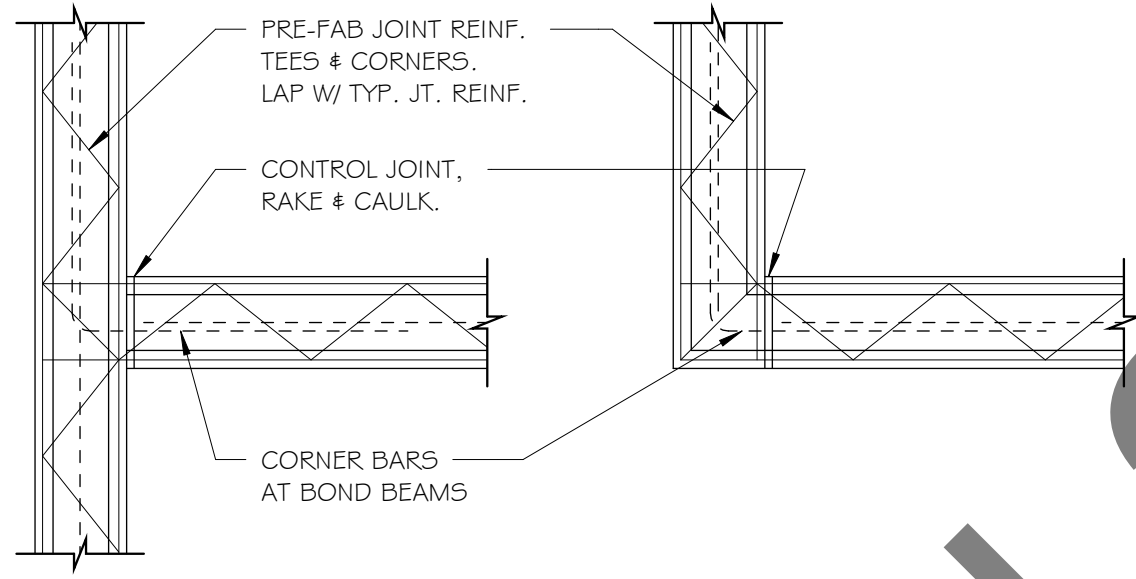
4 TYP. MOMENT RESIST. BM TO W-COL.
3/4" = 1'-0"



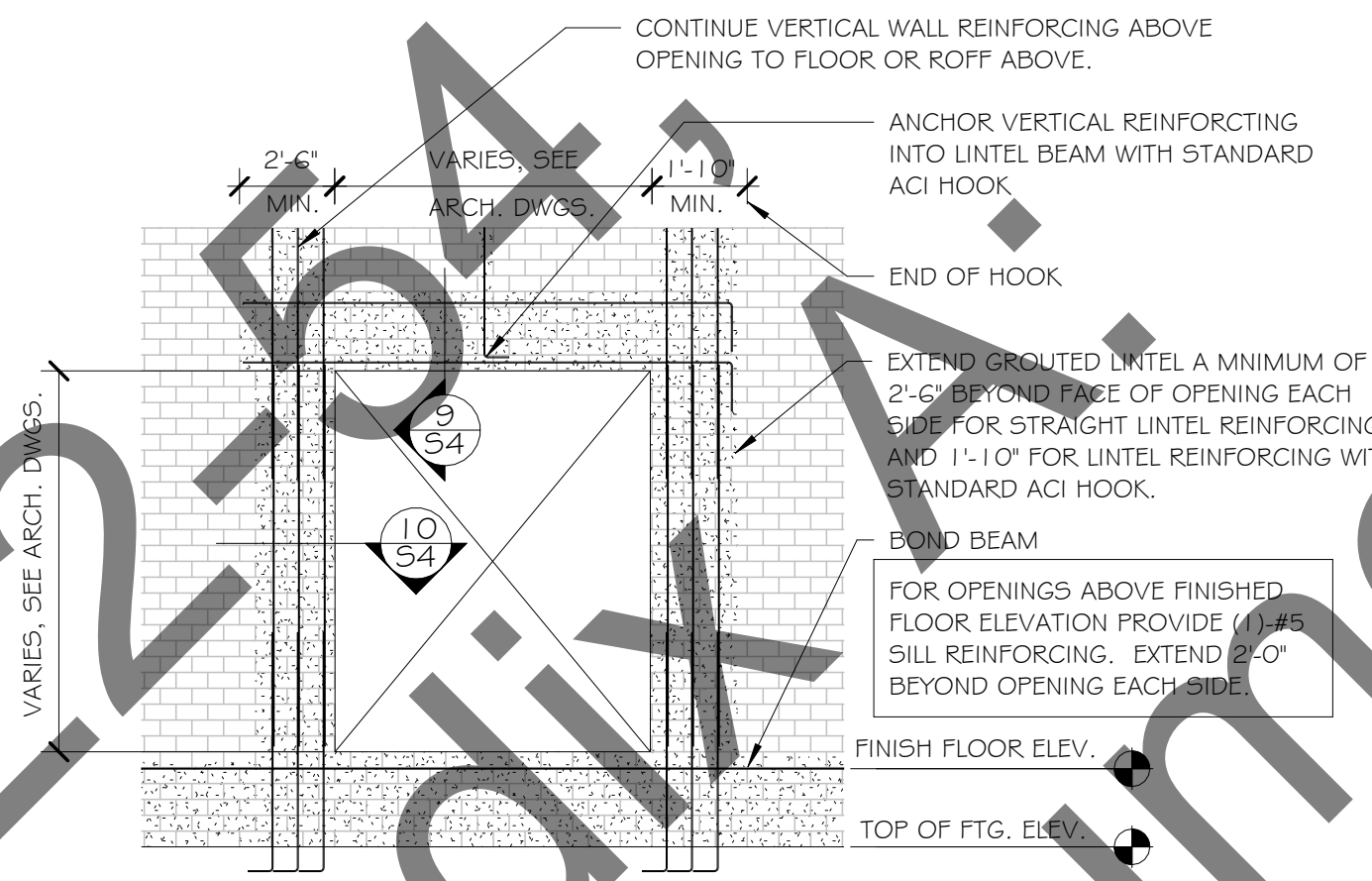
5 SMALL ROOF OPENING DETAIL
3/4" = 1'-0"



6 JOIST REINFORCING
3/4" = 1'-0"



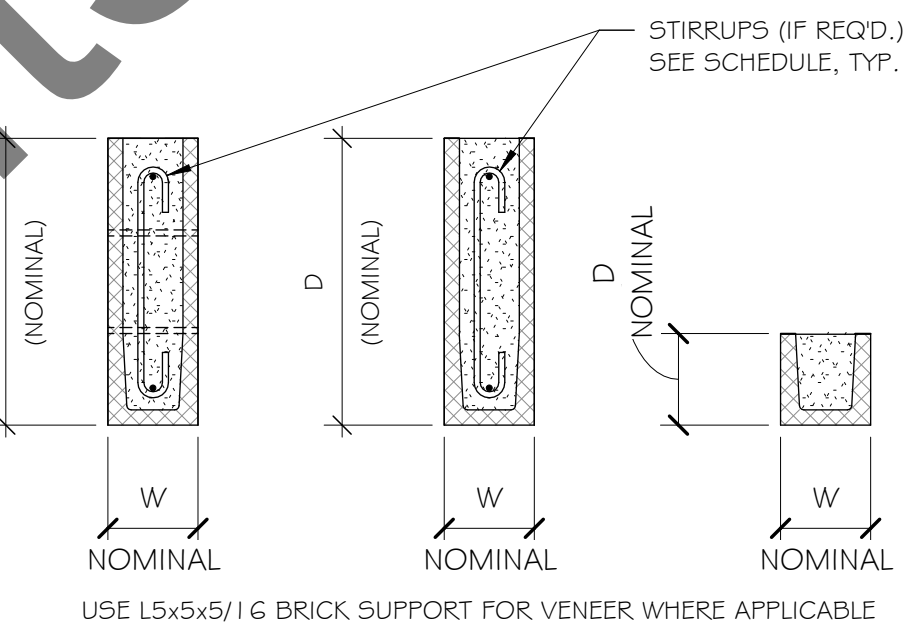
7 TYPICAL CMU WALL INTERSECTIONS
3/4" = 1'-0"



8 CMU OPENING ELEVATION
1/8" = 1'-0"

CMU LINTEL SCHEDULE				
CLEAR SPAN	DEPTH *	BOTT. REINF.	TOP REINF.	STIRRUPS
UP TO 4'-0"	16"	(1)-#5	NONE	NONE
UP TO 6'-0"	24"	(1)-#5	(1)-#5	NONE

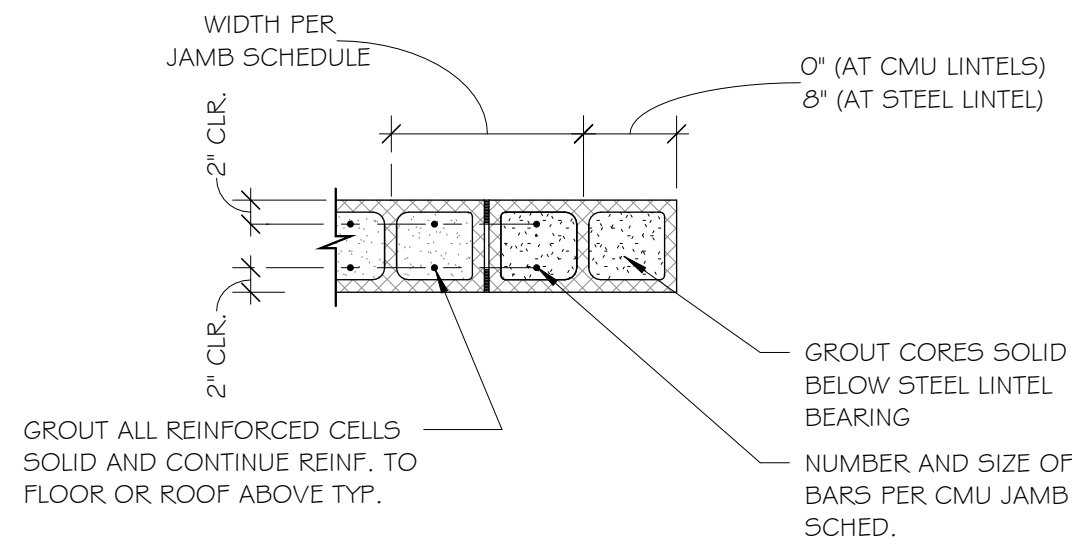
ALL REINFORCING BARS TO BE 1/2" CLEAR TO FACE SHELL.



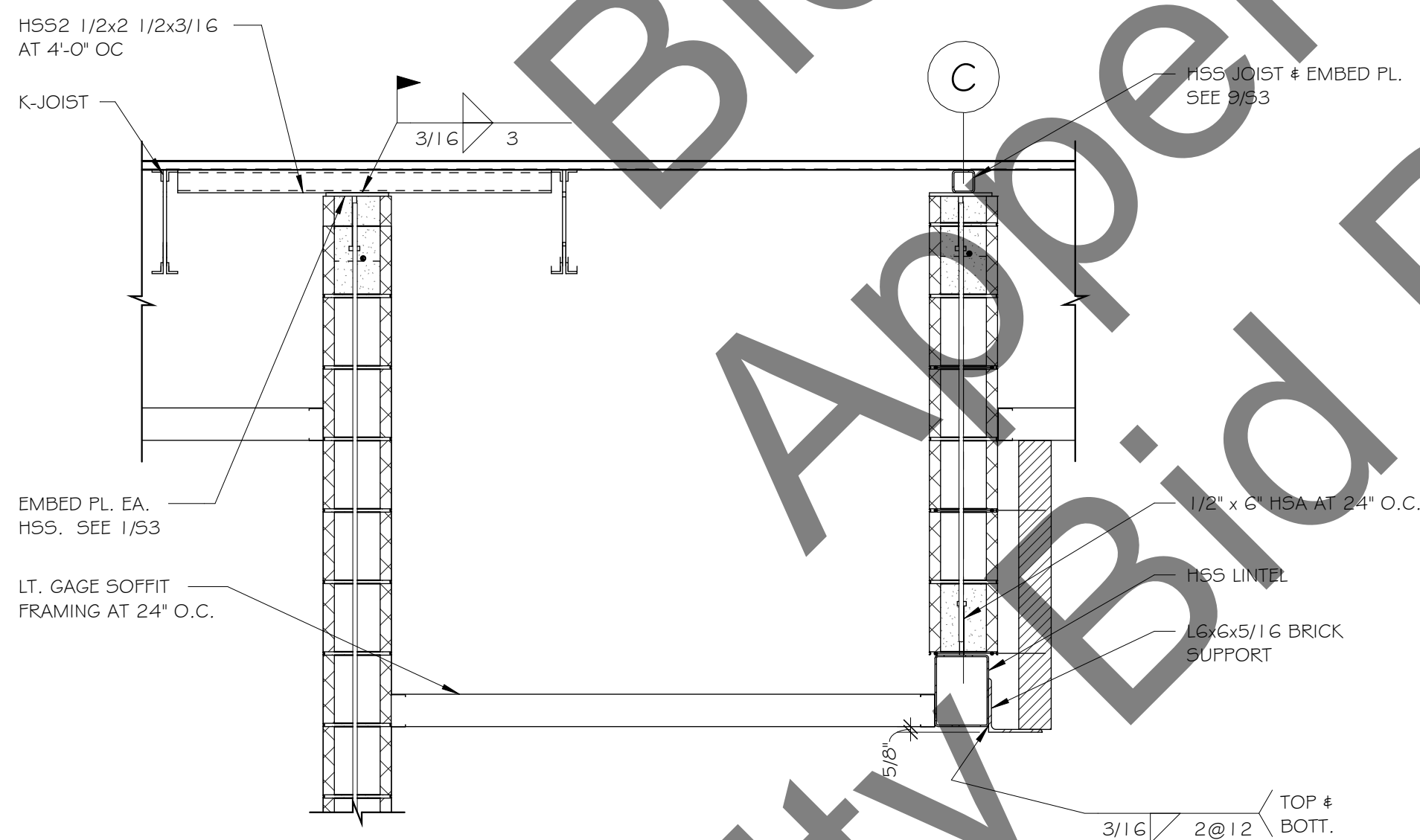
9 LINTEL DETAILS
3/4" = 1'-0"

CMU JAMB SCHEDULE		
OPENING WIDTH	JAMB WIDTH	REINFORCEMENT
UP TO 4'-0"	16"	(2)-#5 VERT. EA. CELL
UP TO 6'-0"	24"	(2)-#5 VERT. EA. CELL

ALL REINFORCING BARS TO BE 1/2" CLEAR TO FACE SHELL.



10 JAMB DETAILS
3/4" = 1'-0"



11 SECTION AT NICHE
3/4" = 1'-0"



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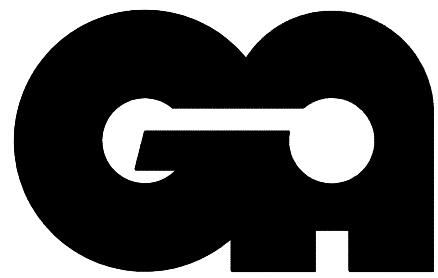
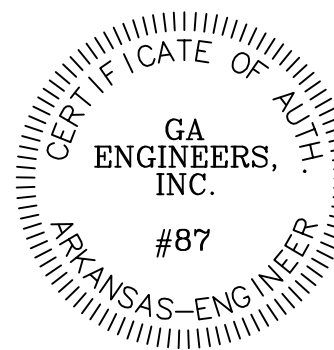


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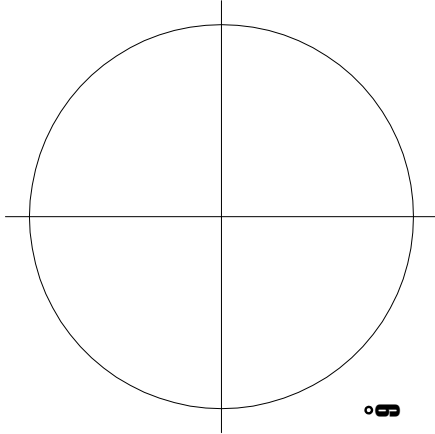


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S4



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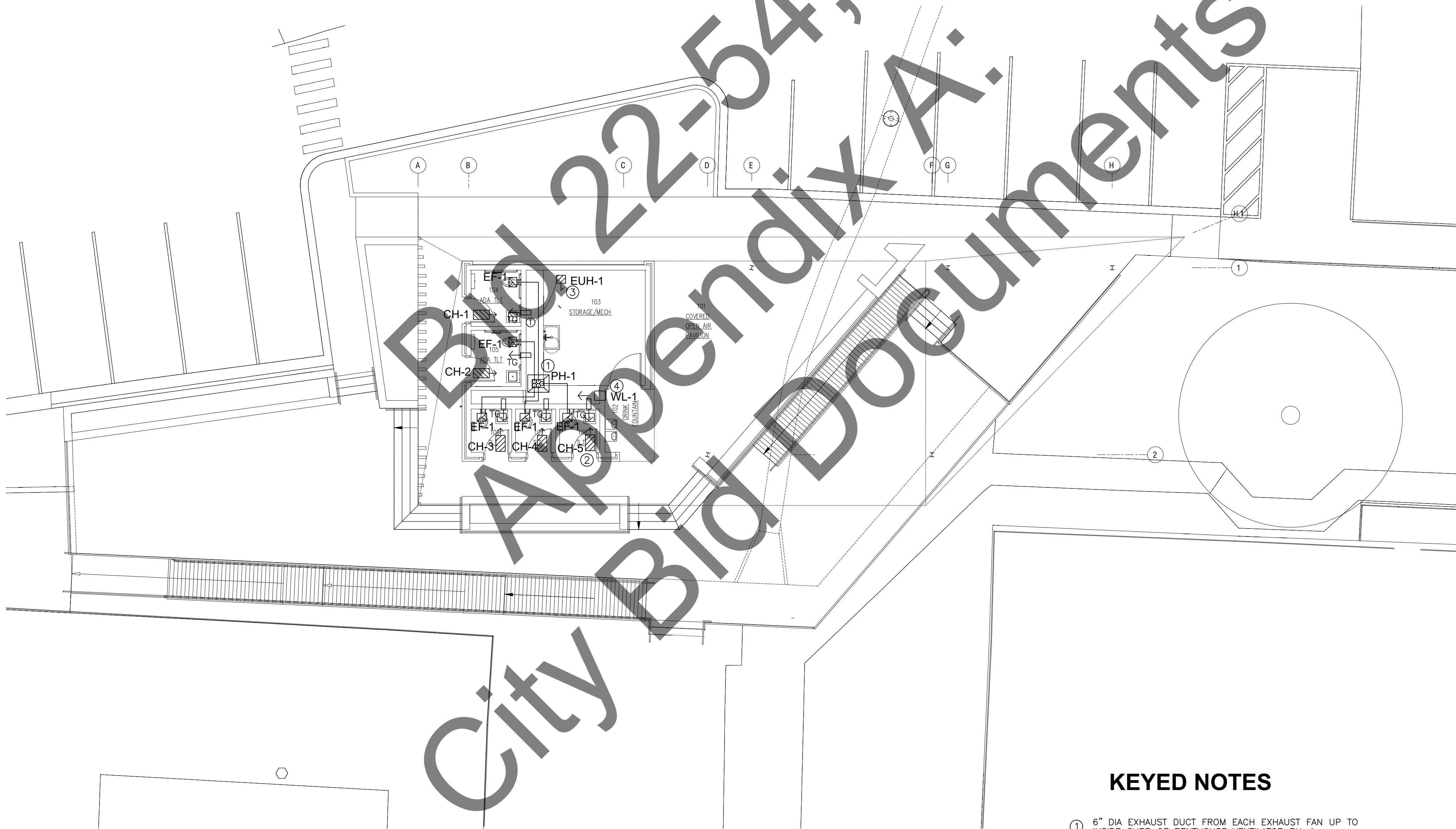
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MECHANICAL HVAC PLAN

m1.1

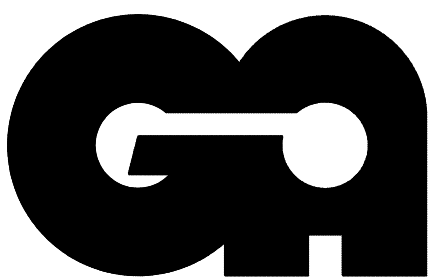
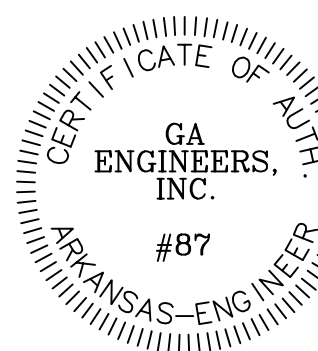
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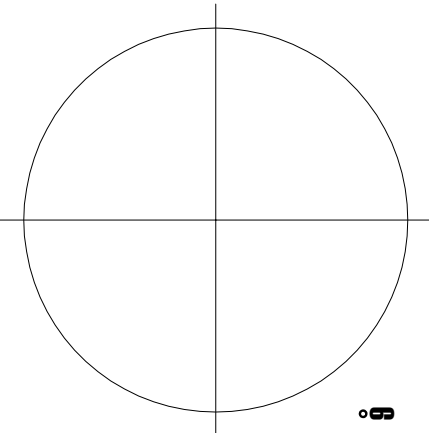
A MECHANICAL HVAC PLAN
Scale: 1/8" = 1'-0"

KEYED NOTES

- ① 6" DIA EXHAUST DUCT FROM EACH EXHAUST FAN UP TO INSIDE CURB OF PENTHOUSE VENTILATOR PH-1.
- ② CEILING MOUNTED VANDAL PROOF ELECTRIC HEATER WITH FACTORY INSTALLED THERMOSTAT. TYPICAL OF 5.
- ③ SUSPENDED ELECTRIC UNIT HEATER WITH REMOTE THERMOSTAT.
- ④ PROVIDE DUCT CONNECTION AT BACK OF LOUVER AND TRANSITION TO BACKDRAFT DAMPER SIZE. PROVIDE SPRING LOADED BACKDRAFT DAMPER EQUAL TO GREENHECK WDR-53 5" DIA AT TG AND 8" DIA. AT WL-1.



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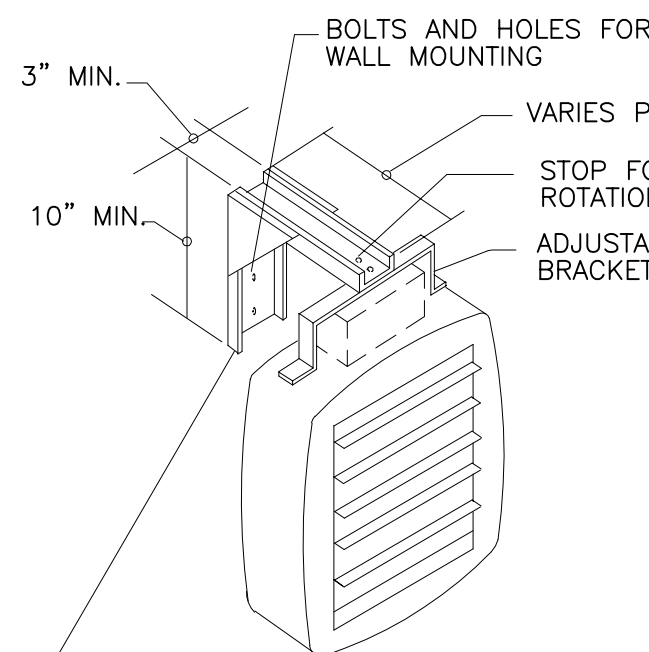
MECHANICAL
SCHEDULES & DETAILS

m2.1

NOTES:

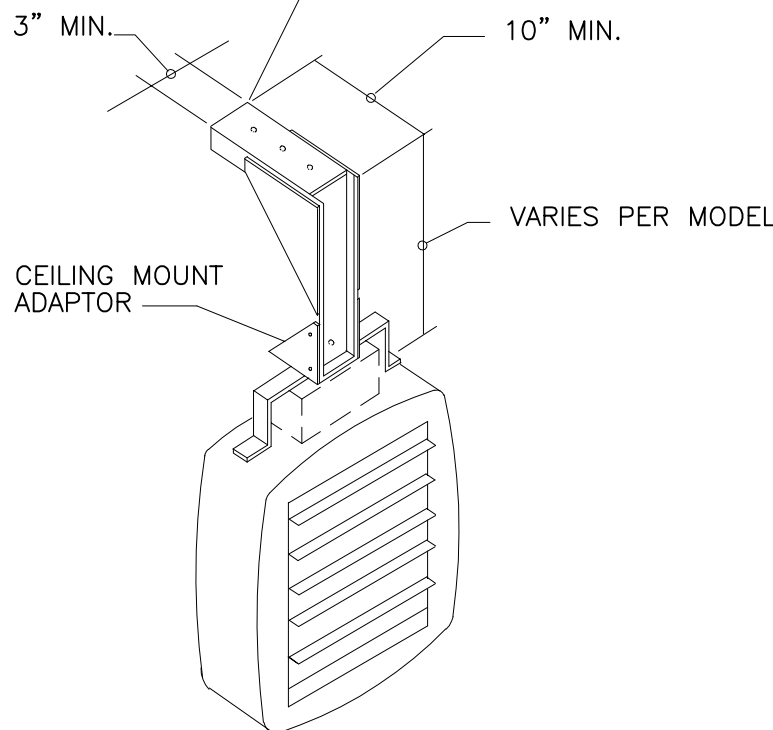
1. HEATER TO BE CONTROLLED FROM UNIT MOUNTED THERMOSTAT UNLESS OTHERWISE SHOWN.

TWO (2) HANGER RODS MAY BE SUBSTITUTED FOR BRACKET



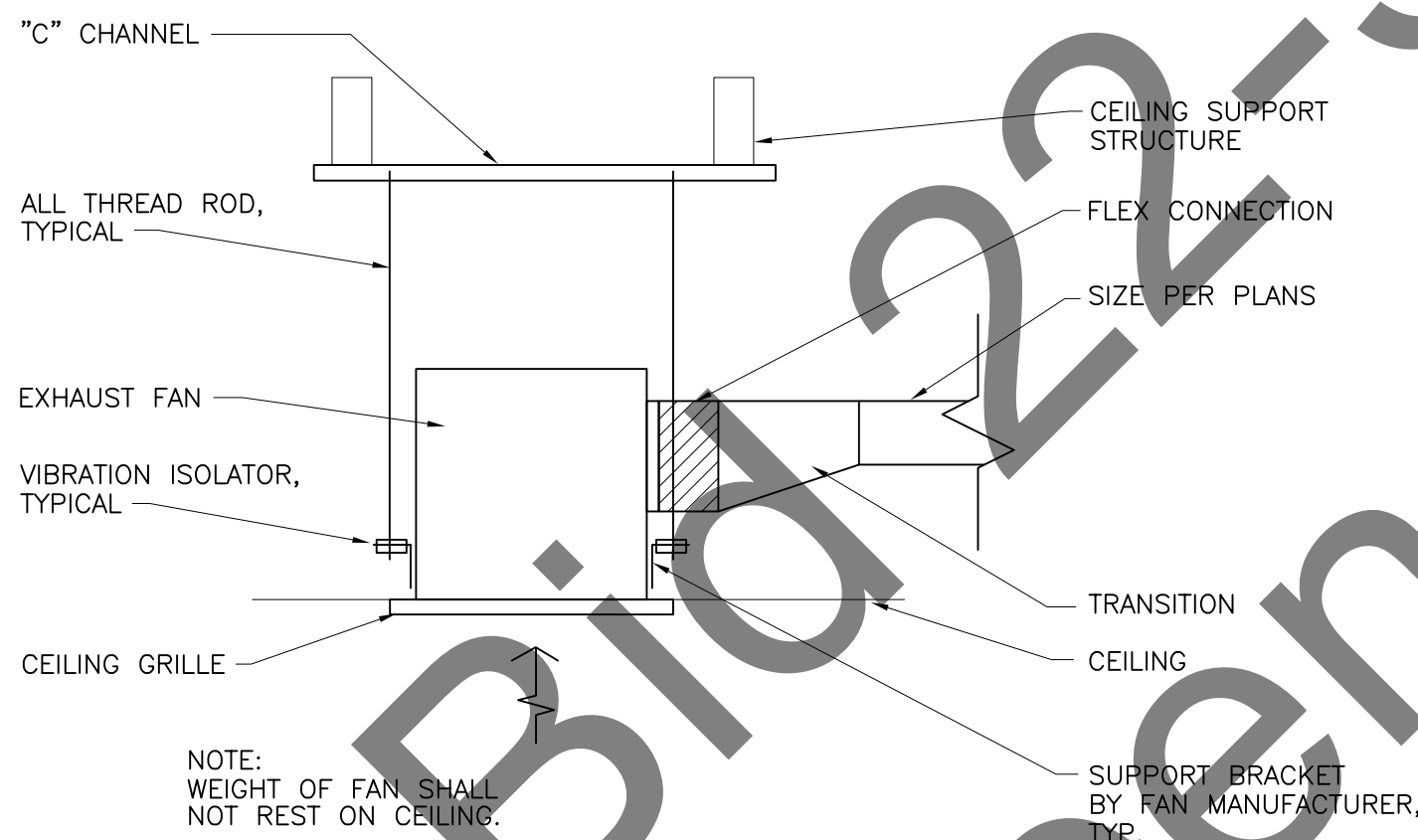
MANUFACTURER'S STEEL BRACKET

WALL MOUNTING POSITION

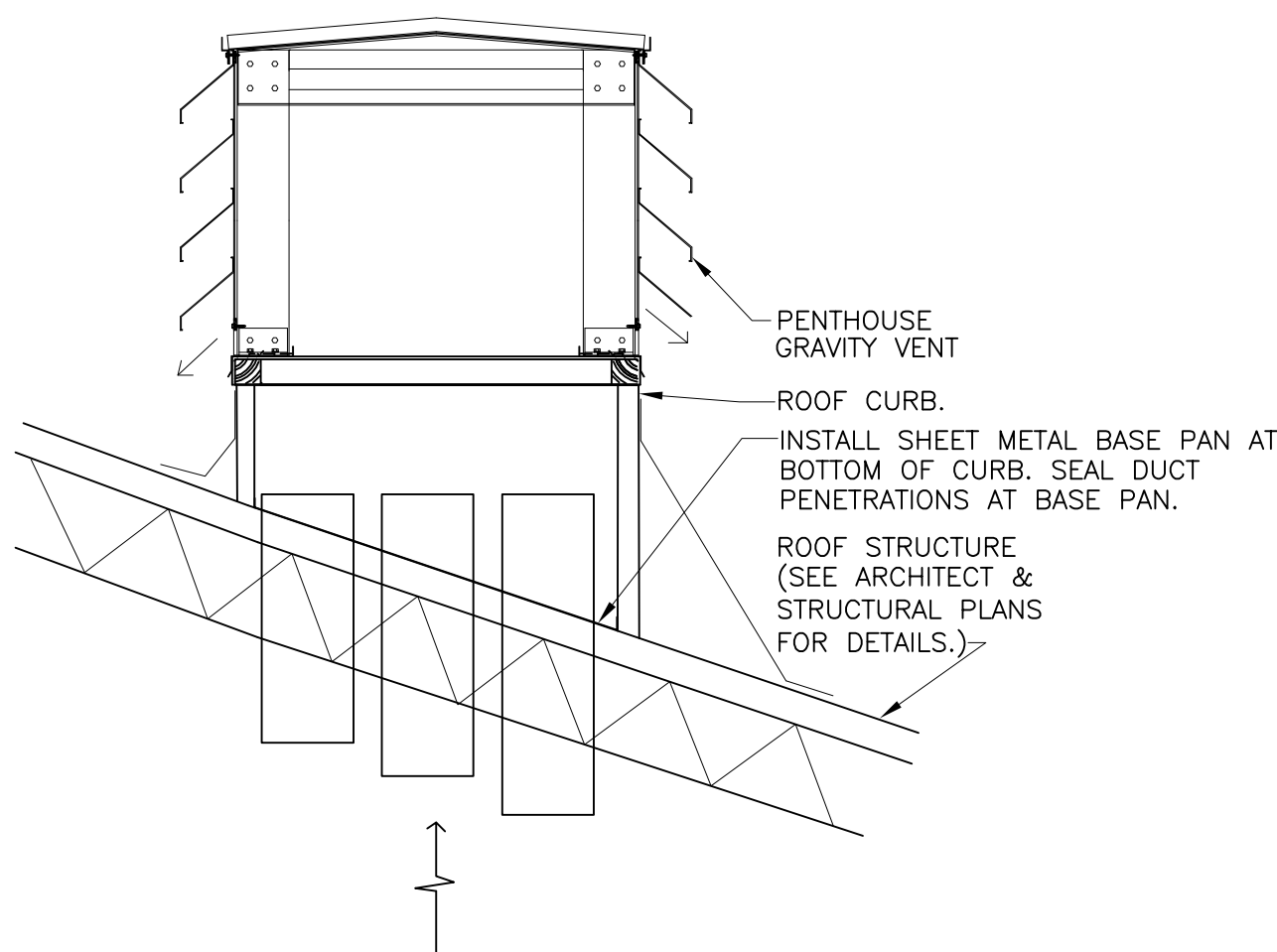


CEILING MOUNTING POSITION

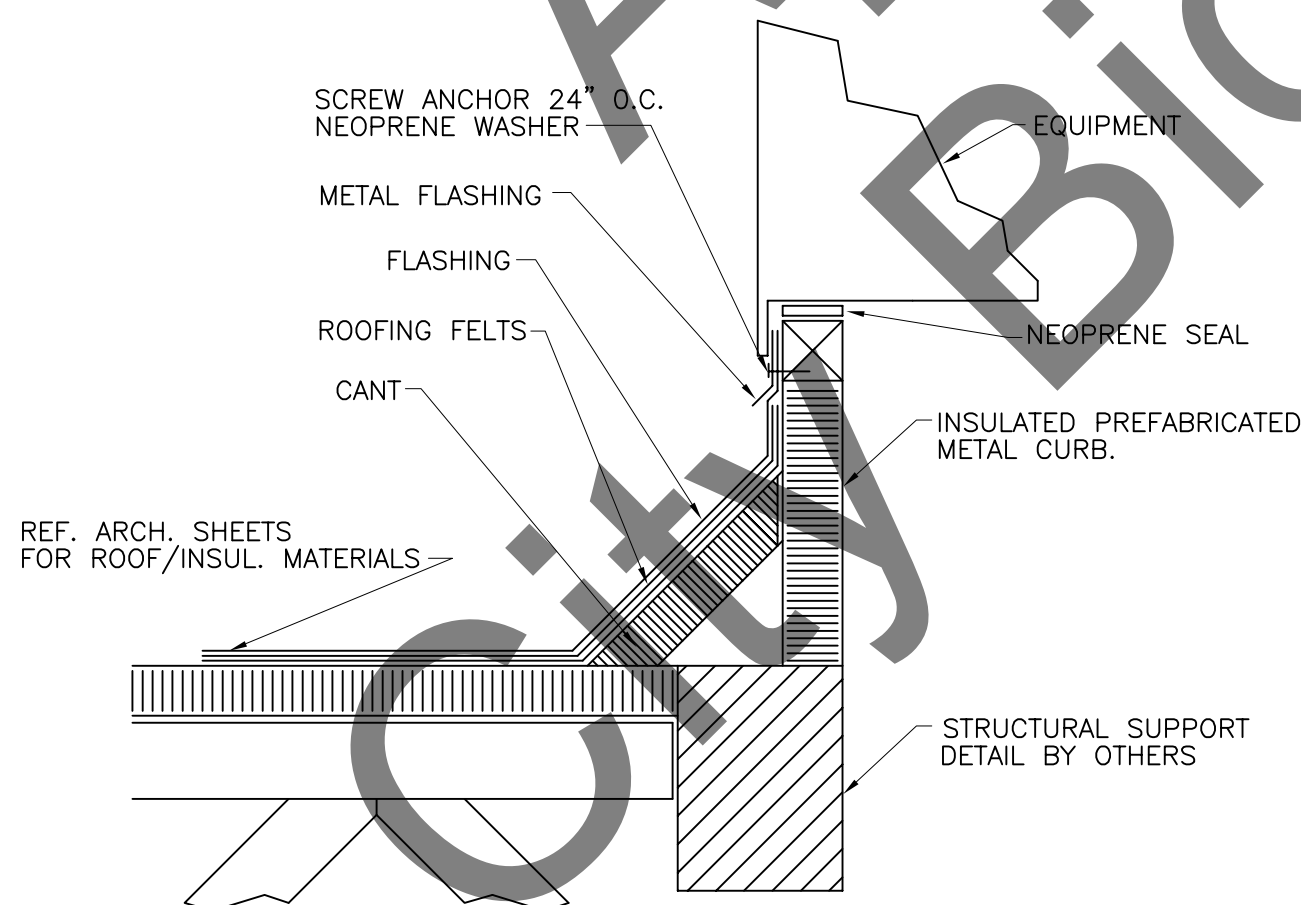
D ELECTRIC UNIT HEATER
NTS



C CEILING MOUNTED CABINET FAN
N.T.S.



A ROOF MOUNTED PENTHOUSE EXHAUST VENT
SCALE: N.T.S.



B ROOF CURB
N.T.S.

GENERAL MECHANICAL NOTES

- ALL DUCT SIZES SHOWN ARE THE METAL DIMENSIONS. ALLOWANCES HAVE BEEN MADE FOR THE LINER WHERE APPLICABLE IN THE RECTANGULAR DUCTS. AT DUAL WALL DUCTS, THE DIMENSION SHOWN IS THE OUTSIDE METAL DUCT SIZE.
- ALL DIMENSIONS AND SIZES IN INCHES UNLESS OTHERWISE NOTED.
- THE DRAWINGS INDICATE THE GENERAL LAYOUT REQUIREMENTS FOR EQUIPMENT, FIXTURES, PIPING, DUCTWORK, ETC. FINAL LAYOUT SHALL BE GOVERNED BY ACTUAL FIELD CONDITIONS WITH ALL MEASUREMENTS VERIFIED AT THE SITE.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING THAT ALL SYSTEMS AND COMPONENTS WILL FIT BEFORE FABRICATION OR ORDERING. INSTALLED DUCTS MAY BE RESIZED BY THE CONTRACTOR TO FIT FIELD CONDITIONS. THE INSTALLED DUCTS SHALL HAVE EQUAL FRICTION LOSS TO THOSE SHOWN. RECTANGULAR DUCTS SHALL NOT BE CHANGED TO ROUND DUCTS. PROVIDE COMPLETE SHEET METAL SHOP DRAWINGS TO ENGINEER SHOWING ALL ACTUAL DUCT SIZES, ARRANGEMENTS, AND UNIT LOCATIONS TO BE INSTALLED. THIS SHALL BE DONE PRIOR TO FABRICATION OR INSTALLATION.
- THE CONTRACTOR SHALL PROVIDE A COMPLETE AND OPERATING MECHANICAL SYSTEM, INCLUDING ALL INCIDENTAL ITEMS AND CONNECTIONS NECESSARY FOR PROPER OPERATION OR CUSTOMARILY INCLUDED, EVEN THOUGH EACH AND EVERY ITEM MAY NOT BE INDICATED.
- THE MECHANICAL INSTALLATION SHALL BE SAFE, RELIABLE, ENERGY EFFICIENT AND EASILY MAINTAINED WITH ADEQUATE PROVISIONS ALLOWED FOR ACCESS TO EQUIPMENT.
- THE MECHANICAL SYSTEM SHALL OPERATE QUIETLY WITH NOISE LEVELS BELOW THE CRITERIA RECOMMENDED FOR THE APPLICATION BY ASHRAE. PROVIDE CORRECTIVE ACTION AS REQUIRED TO REDUCE OBJECTIONABLE NOISE OR VIBRATION.

AIR DEVICE SCHEDULE

MARK	DESCRIPTION	MFGR., MODEL	SIZE	NECK*	MATERIAL, FINISH	COMMENTS
PH-1	PENTHOUSE LOUVER GRAVITY EXHAUST VENT	GREENHECK WRH	12x14 THROAT 20x26 CURB 26x32 LOUVER	12x14	ALUMINUM, ANODIZED W/ COLOR BY ARCHITECT	UP TO 500 CFM 12" HEIGHT, 3 TIERS OF BLADES, PROVIDE INSECT SCREEN 14" HIGH ROOF CURB
TG	TRANSFER GRILL SIGHT PROOF HEAVY GA BLADES 1-3/4" DEEP	PRICE ATGH	6x4 FACE 8x6 FRAME	6x4	HEAVY DUTY ALUMINUM, COORD. W/ ARCH	SIDEWALL MOUNTED WITH INTEGRAL FRAME AND INSECT SCREEN UP TO 100 CFM BUTTERFLY BACKDRAFT DAMPER
WL-1	TRANSFER GRILL SIGHT PROOF HEAVY GA BLADES 1-3/4" DEEP	PRICE ATGH	12x8 FACE 14x10 FRAME	12x8	HEAVY DUTY ALUMINUM, COORD. W/ ARCH	SIDEWALL MOUNTED WITH INTEGRAL FRAME AND INSECT SCREEN UP TO 200 CFM BUTTERFLY BACKDRAFT DAMPER

FAN SCHEDULE

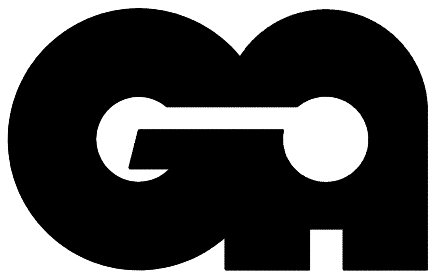
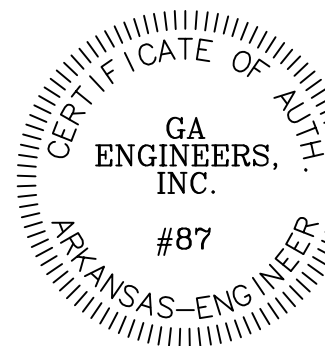
MARK	DESCRIPTION	MFGR., MODEL	DRIVE TYPE	AREA SERVED	CFM, SP	TS, FRPM	HP/W.	VOLTS /PH	SONES	CONTROL	REMARKS
EF-1	EXHAUST FAN CEILING CABINET VANDAL RESISTANT	GREENHECK SP-B150	DIRECT	SEE PLANS	100 .375	759	128 W	120V/1PH	1.5	SWITCH W LIGHTS	
GENERAL REQUIREMENTS - ALL FANS											
1. PROVIDE PREWIRED FACTORY MOUNTED INTEGRAL DISCONNECT DEVICE (NEMA 3R FOR EXTERIOR). 2. PROVIDE PREWIRED VARIABLE SPEED CONTROLLER ON DIRECT DRIVE FANS.											
FAN ACCESSORIES LEGEND											
a. PROVIDE BACK DRAFT DAMPER. d. ROOF CURB TO MATCH ROOF TYPE AND SLOPE b. PROVIDE MANUFACTURER'S ROOF VENT. e. PROTECTIVE POWDER COATING. c. PROVIDE ISOLATOR KIT f. WALL HOUSING, MOTORIZED DAMPER, WEATHER HOOD. g. WALL HOUSING, BACKDRAFT DAMPER, WEATHER PROOF LOUVER. h. GALVANIZED STEEL SCROLL AND HOUSING. POLISHED STAINLESS STEEL GRILL. ALUMINUM WHEEL.											

ELECTRIC CEILING HEATER SCHEDULE

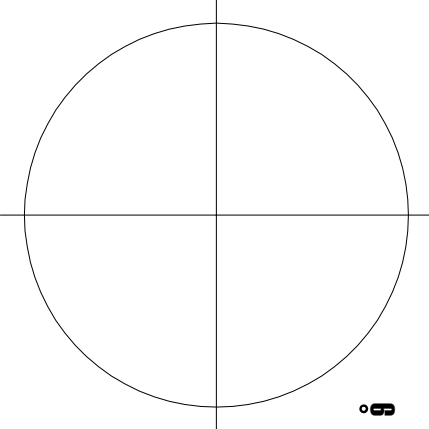
MARK	DESCRIPTION	MFGR., MODEL	AREA SERVED	KW, MBH	HEAT CFM	HP, RPM	VOLTS /PH	MCA, MOCP	WT/LBS	CONTROL TYPE	ACCESSORIES
CH-1-CH-5	ELECTRIC CEILING HEATER RECESSED VANDAL RESISTANT WHITE	KING LPW2410	REST ROOMS	1 3.4	160	N/A	120	8.3 FLA 20	24	BUILT-IN T-STAT	3/16\"/>

ELECTRIC UNIT HEATER SCHEDULE

MARK	DESCRIPTION	MFGR./MODEL	KW	MBH	HEAT CFM	HP	RPM	VOLTS	PHASE	FLA	MCA	MOCP	WEIGHT (LBS.)	CONTROL TYPE	ACCESSORIES
EUH-1	ELEC. UNIT HEATER	REZNOR EGEB	3	10.2	310	1/125	1550	240	1	14.4	15.5	20	39	T-STAT, RELAY REQUIRED	WALL BRACKET



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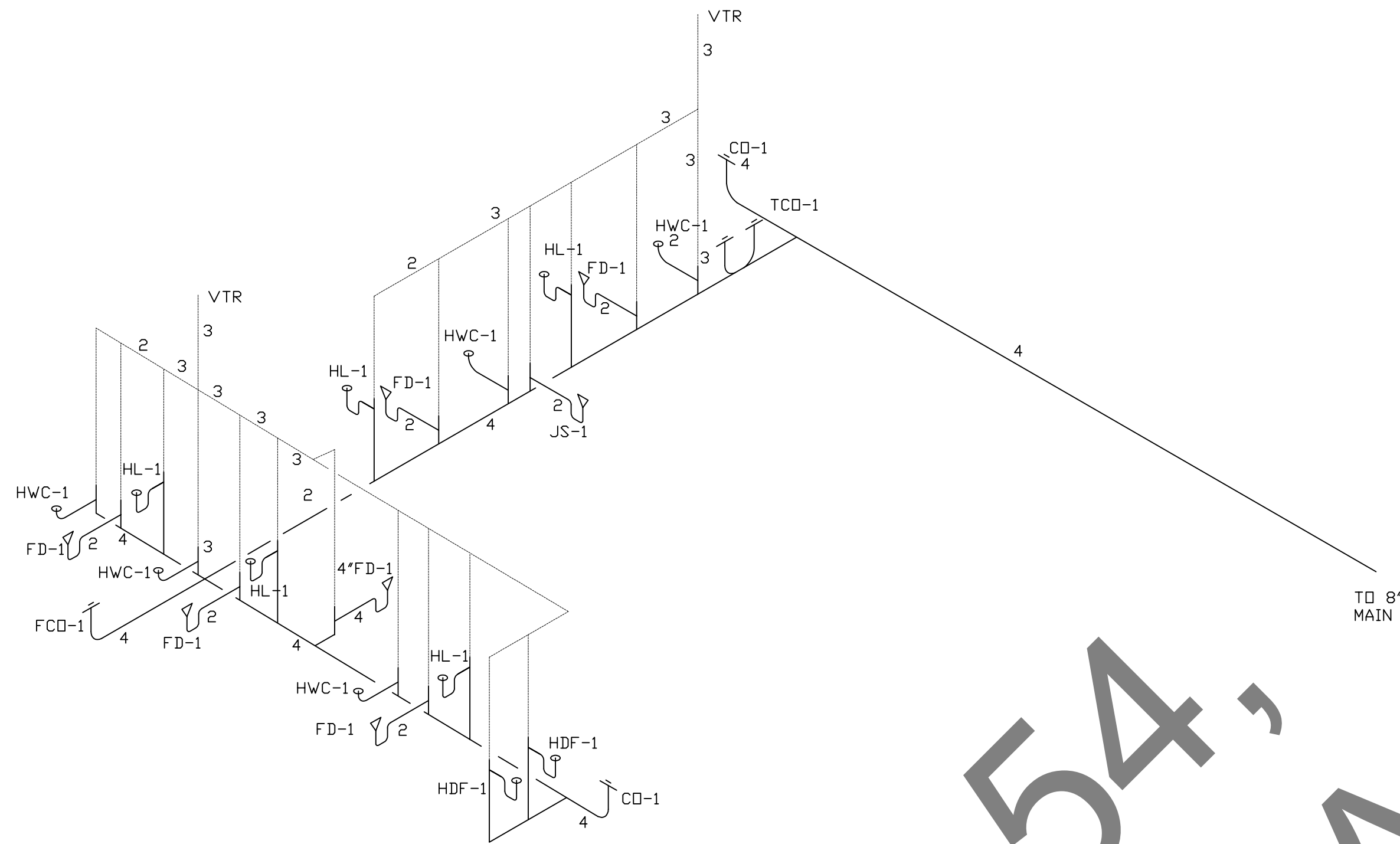
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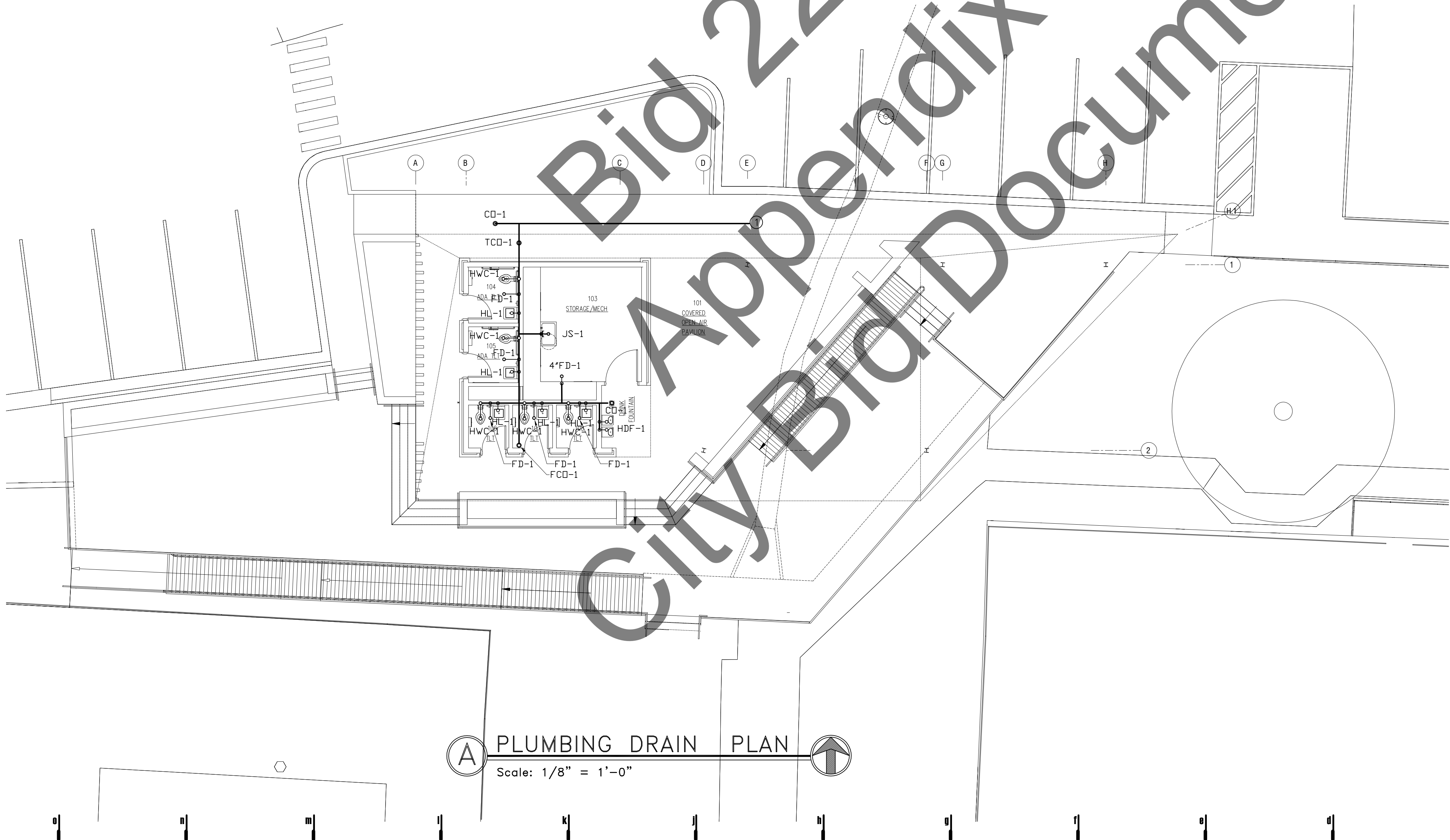


PLUMBING DRAIN PLAN

p1.1



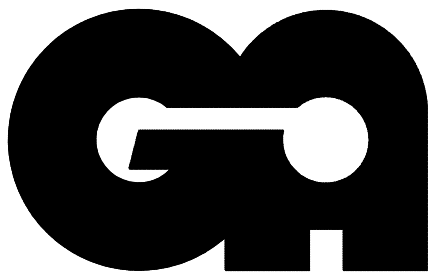
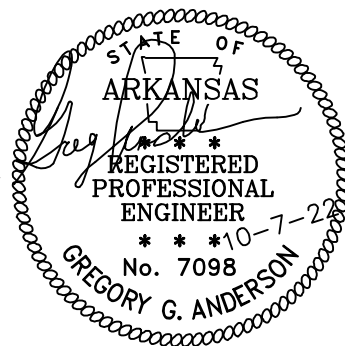
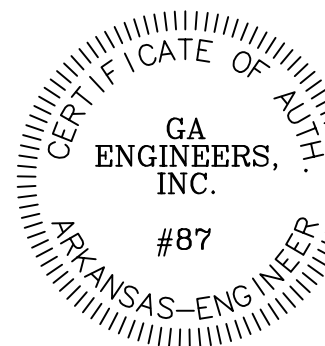
B PLUMBING DRAIN ISOMETRIC DIAGRAM
NTS



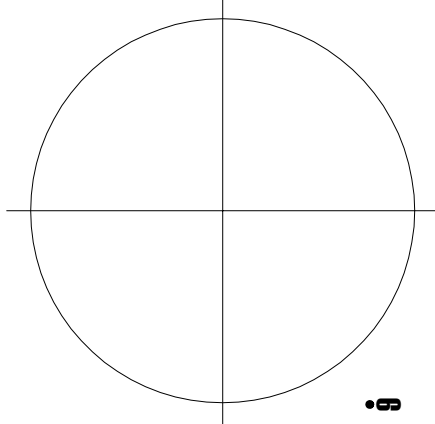
A PLUMBING DRAIN PLAN
Scale: 1/8" = 1'-0"

KEYED PLUMBING NOTES

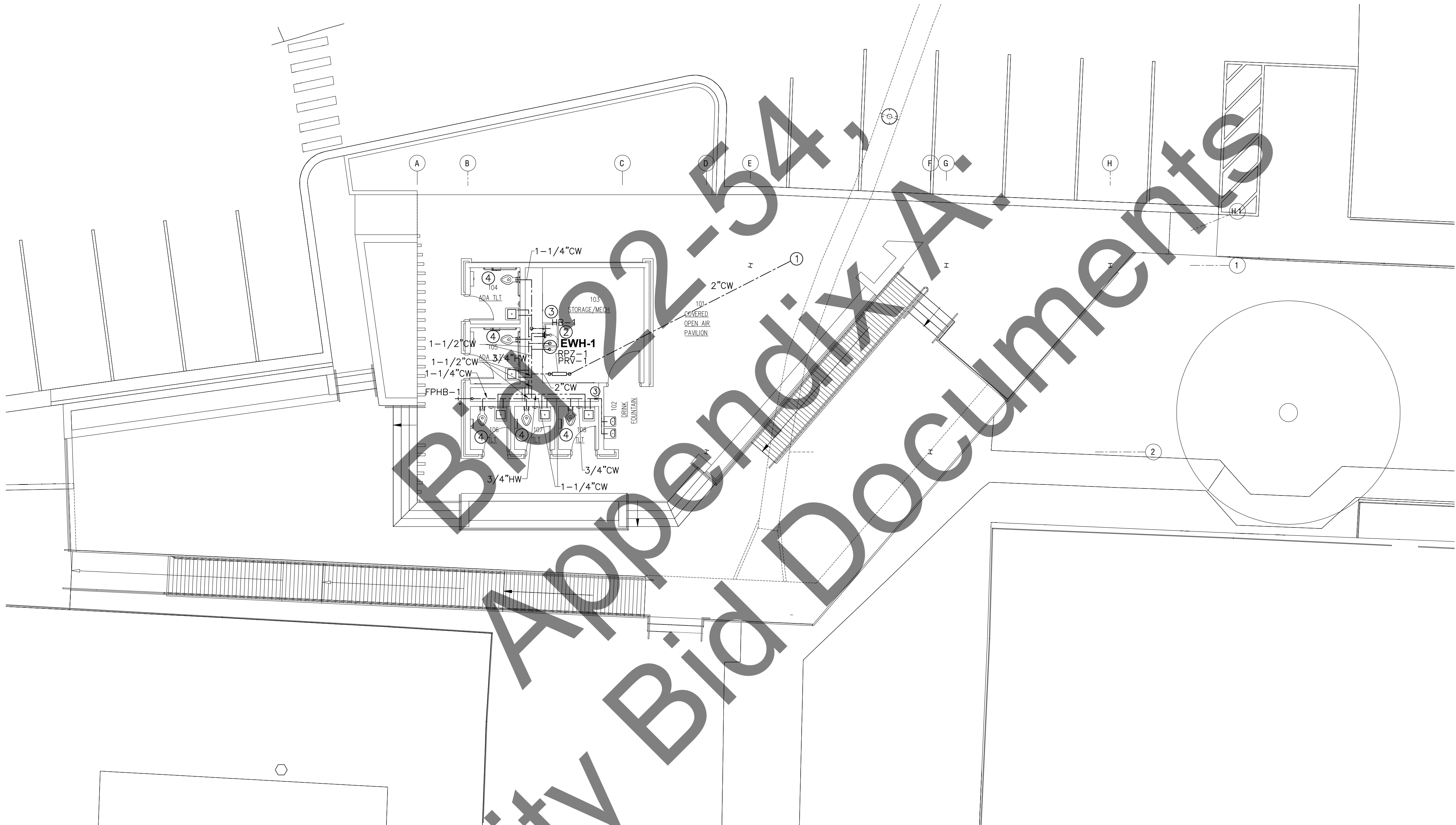
- 1 CONNECT NEW 4" BUILDING SEWER LINE TO EXISTING 8" SANITARY MAIN.



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A PLUMBING SUPPLY PLAN
Scale: 1/8" = 1'-0"

KEYED NOTES

- ① 2" DW SUPPLY PIPE TO METER. REF SITE PLAN FOR CONTINUATION.
- ② 3/4" CW, AND 3/4" HW PIPING TO CONNECTION AT WATER HEATER.
- ③ 3/4" CW TO HB. PROVIDE ACCESSIBLE SHUT OFF VALVE IN MECH ROOM.
- ④ ALL FLUSH VALVES AND LAVATORY VALVES SHALL BE MOUNTED ON THE BACK SIDE OF THE WALL.

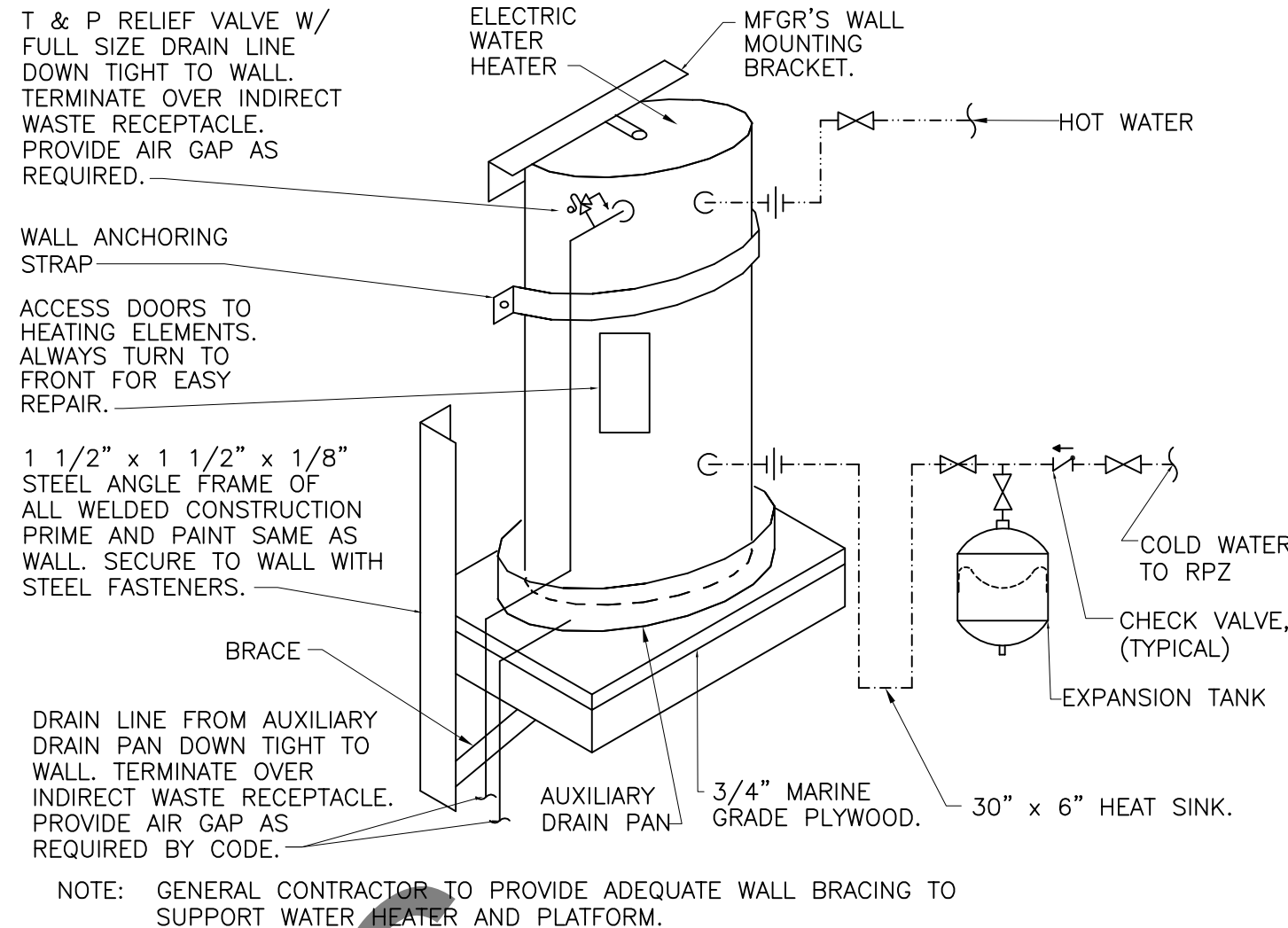
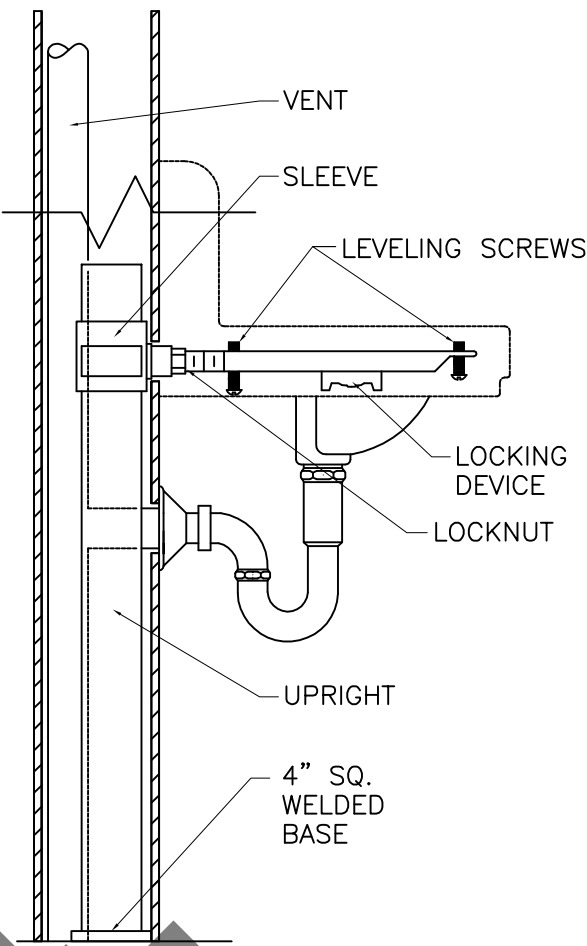
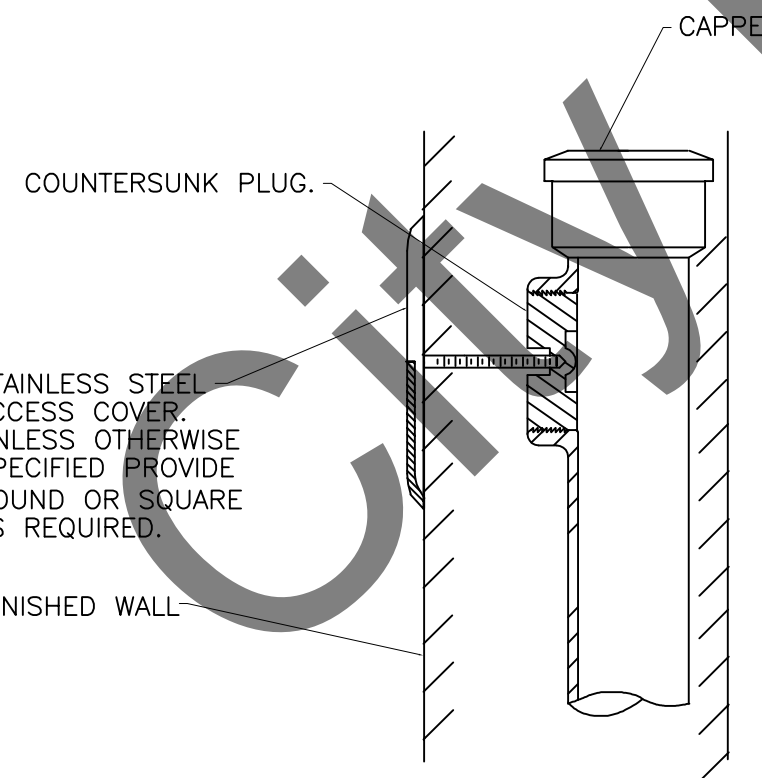
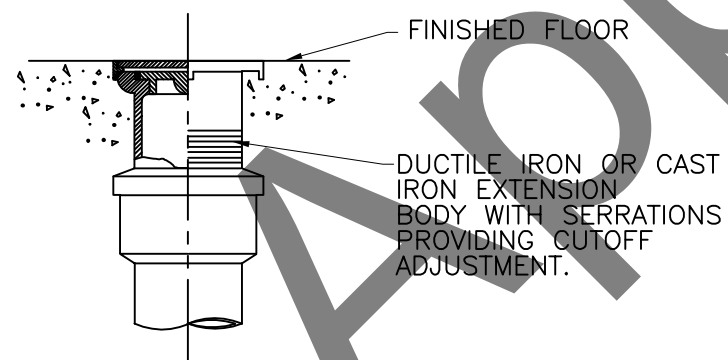
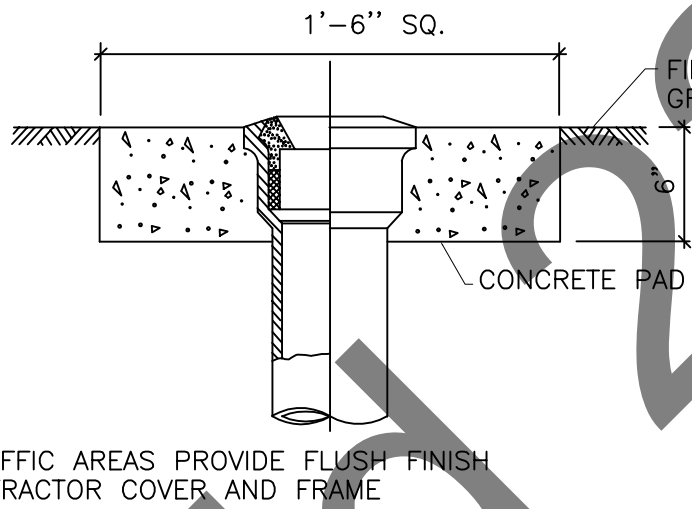
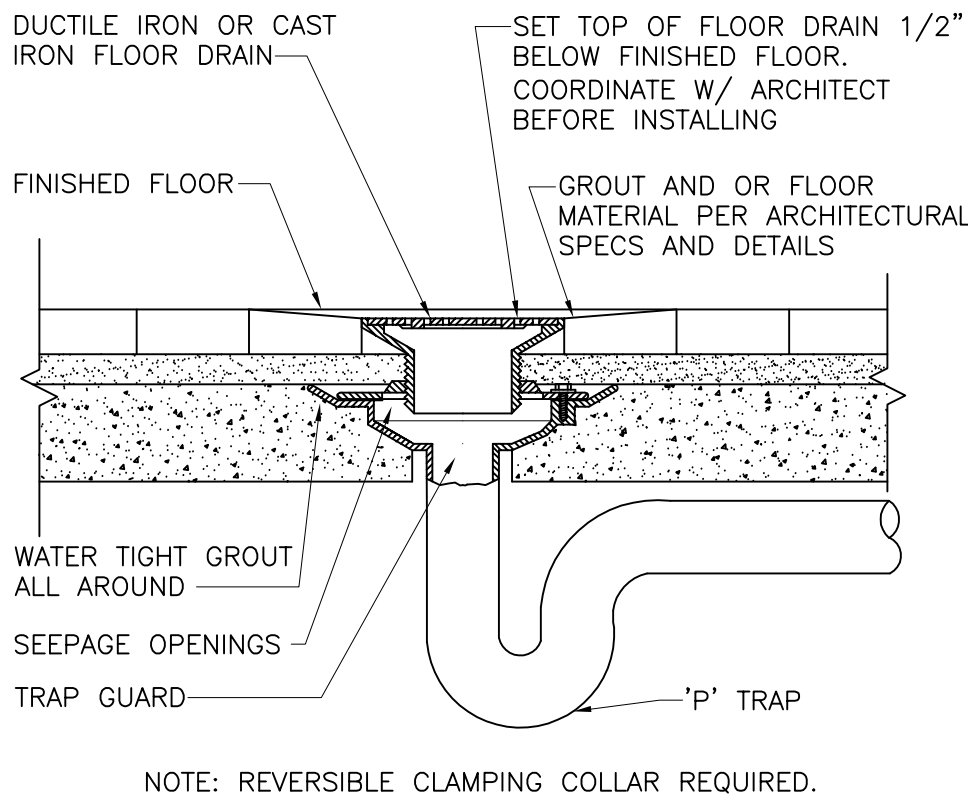
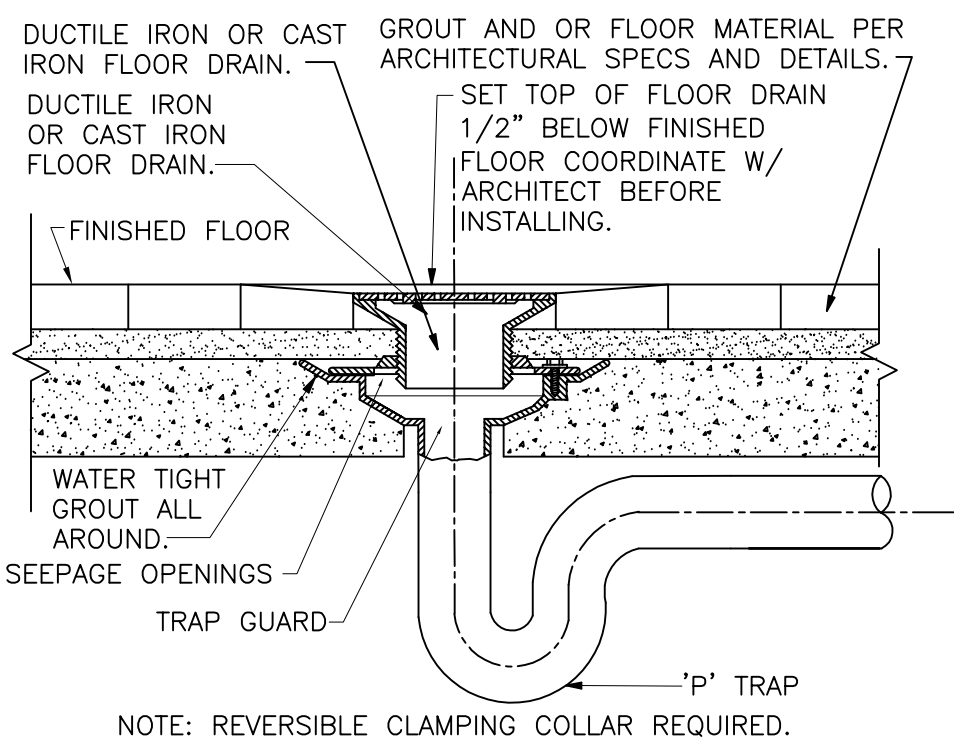
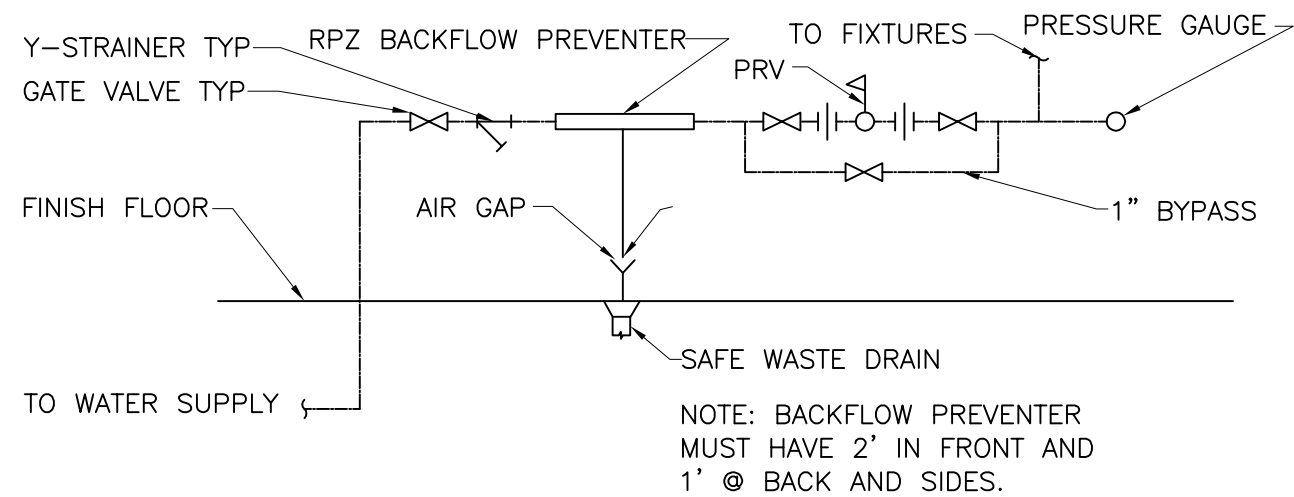
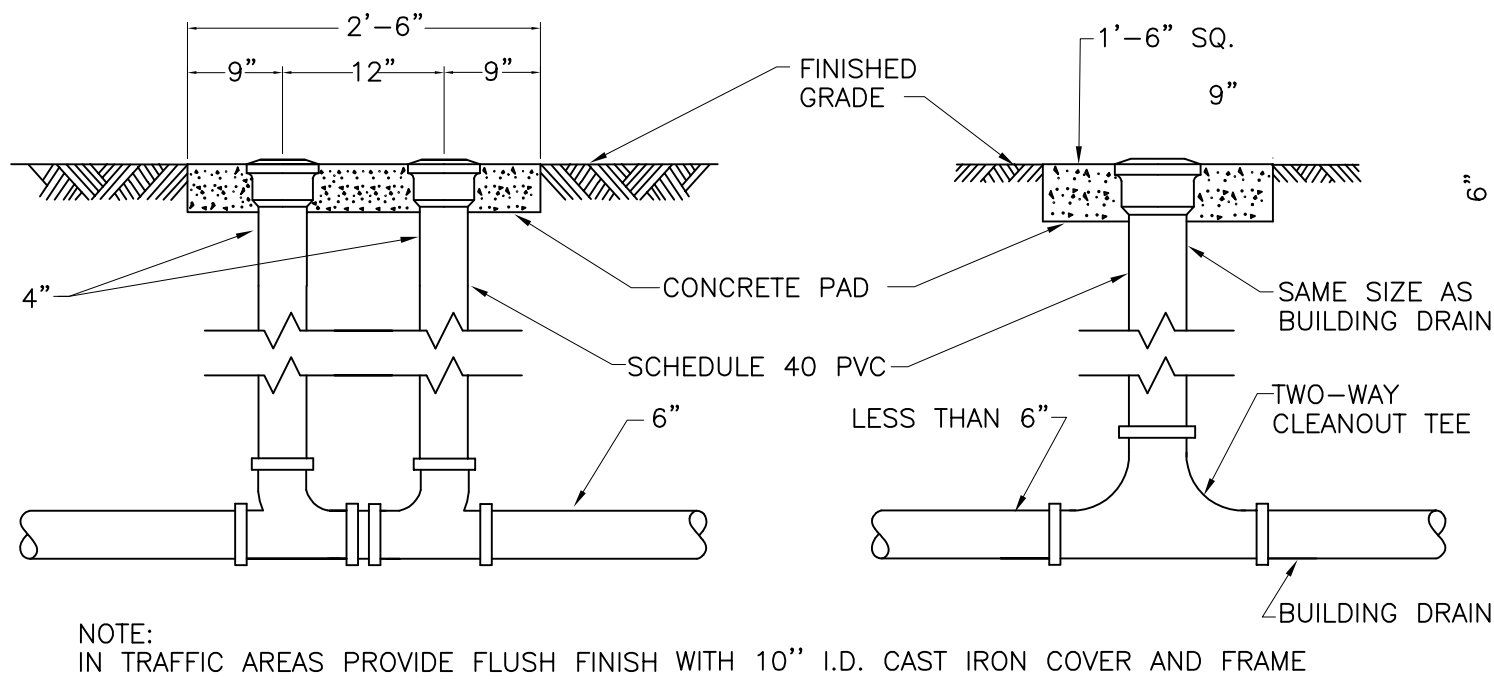
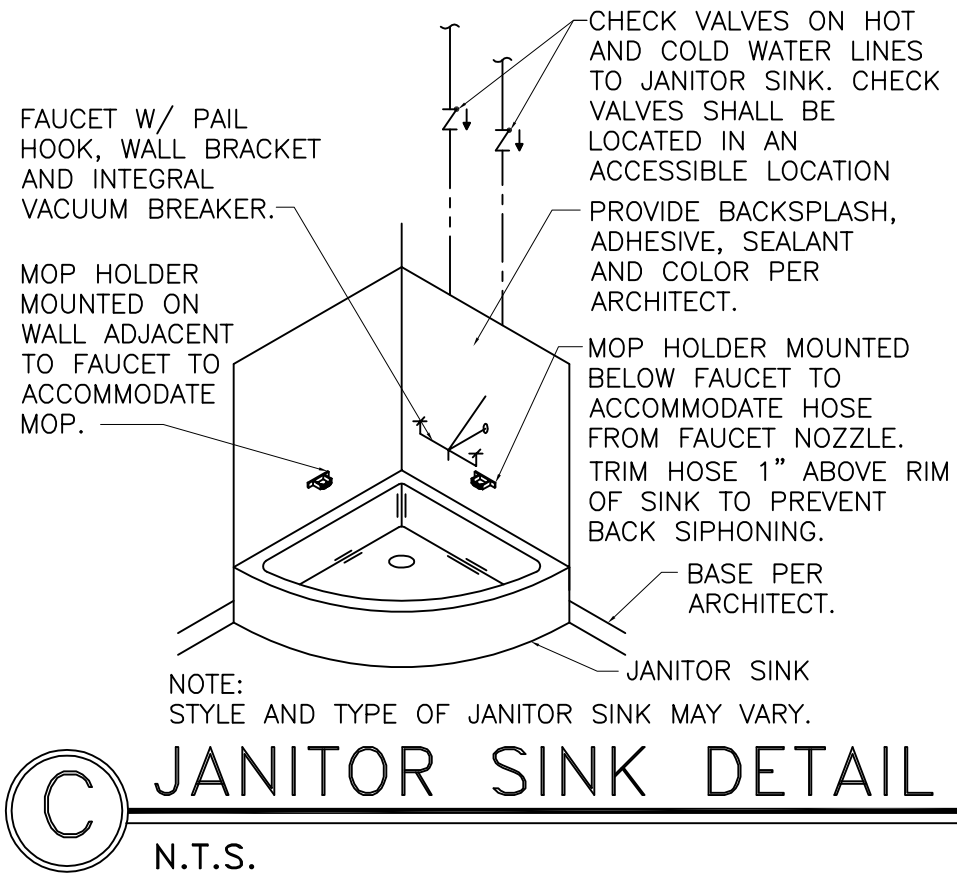
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PLUMBING SUPPLY PLAN

p2.1



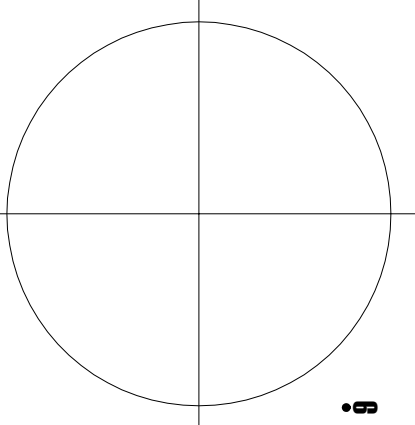
GENERAL PLUMBING NOTES

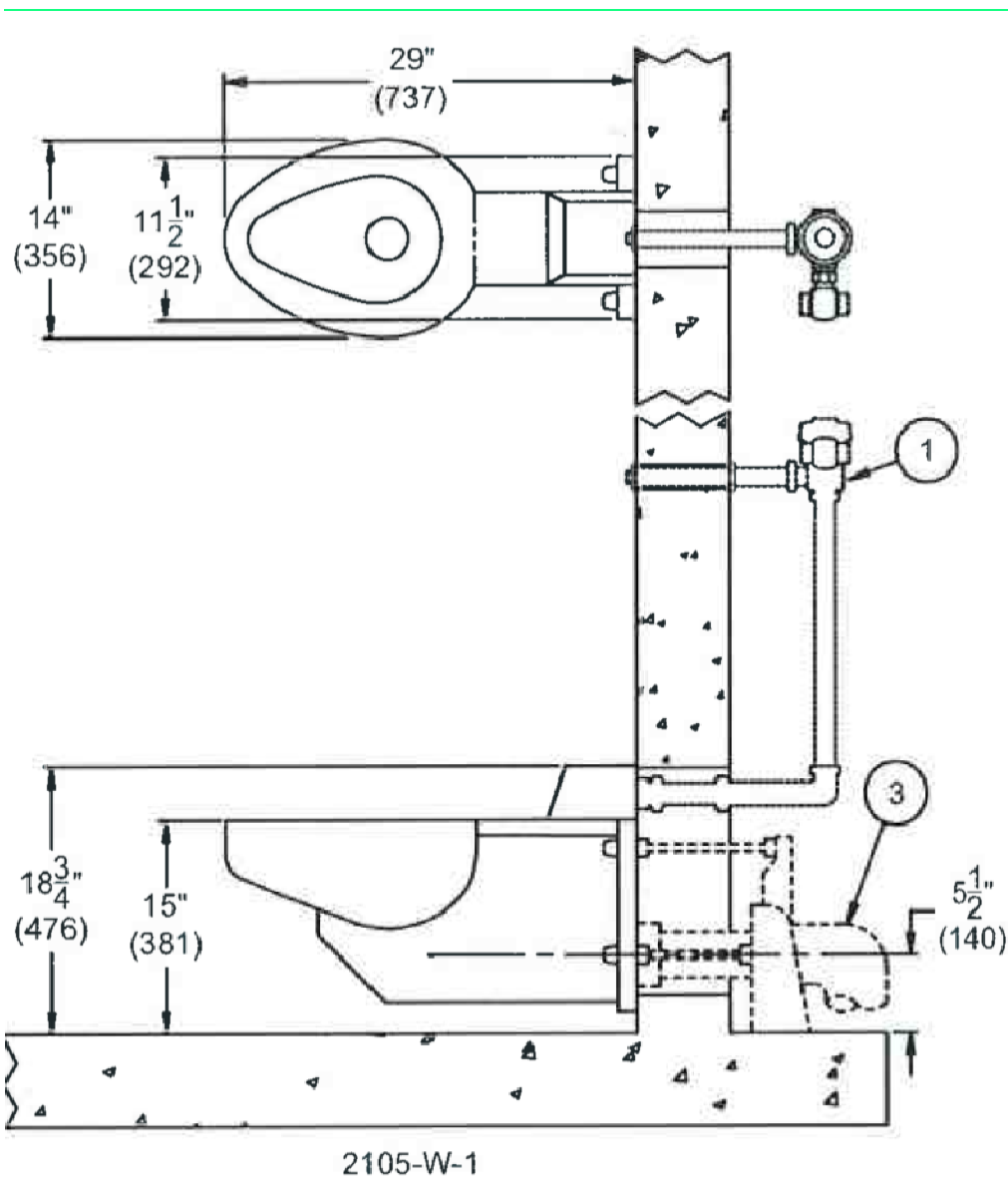
*GENERAL PLUMBING NOTES PERTAIN TO ALL PLUMBING SHEETS.

1. ALL WORK SHALL COMPLY WITH APPLICABLE PLUMBING CODES. REQUIREMENTS OF THE STATE HEALTH DEPARTMENT AND LOCAL ORDINANCES.
2. PLUMBING SUPPLY AND DRAIN PLANS ARE DIAGRAMMATICAL IN NATURE. REGARDLESS OF HOW SHOWN ON THE PLANS, CONTRACTOR SHALL INSTALL ALL PIPING IN A CONCEALED LOCATION UNLESS OTHERWISE DIRECTED. THE FINAL LAYOUT SHALL BE GOVERNED BY ACTUAL FIELD CONDITIONS WITH ALL MEASUREMENTS VERIFIED AT THE SITE AND COORDINATED WITH OTHER TRADES. DURING CONSTRUCTION, ANY CONFLICT BETWEEN ARCHITECT'S INTENT AND THE CONTRACTOR'S INTERPRETATION OF PLUMBING PLANS SHALL BE RESOLVED SO AS TO MAINTAIN THE ARCHITECTS AESTHETIC EXPECTATIONS OF THE PROJECT.
3. INSTALL WATER HAMMER ARRESTOR AT END OF EACH BRANCH ON HOT AND COLD WATER PIPING, EACH BATTERY OF WATER CLOSETS AND AT OTHER PLACES AS PER MANUFACTURER'S SIZING GUIDE.
4. WHETHER SHOWN OR NOT ON THESE PLANS, INSTALL ISOLATION VALVES IN EVERY SUPPLY FIXTURE BANK OR GROUP AND AT ALL HOT WATER RETURN BRANCHES. PROVIDE ACCESS PANEL EQUAL TO ACCUDOR MODEL FW5050 WHERE REQUIRED TO ALLOW ADEQUATE ACCESS TO VALVES. CONTRACTOR SHALL NOT INSTALL ANY MAINTENANCE ITEMS ABOVE HARD CEILINGS UNLESS ACCESS IS PROVIDED. THIS SHALL INCLUDE VALVES, TRAP PRIMER VALVES AND ANY OTHER ITEMS THAT REQUIRE ACCESS AFTER CONSTRUCTION IS COMPLETED.
5. AT FREEZE PROOF HOSE BIBBS, PIPING TO AND AROUND VALVE PORTION OF HOSE BIBBS SHALL BE INSIDE THE INSULATION. SEAL AIR TIGHT AT SHEATHING PENETRATION.
6. NOT USED
7. ANCHOR ALL PIPING ON ROOF TO STEEL RIBS WITH FASTENERS APPROVED BY THE ROOF MANUFACTURER. USE MANUFACTURERS APPROVED METHOD OF MOUNTING FOR HARDWARE.
8. FLOOR DRAINS ON THIS PROJECT ARE THE SAME SIZE AS THE DRAIN LINE TO WHICH THEY ARE CONNECTED UNLESS OTHERWISE NOTED. IF DRAIN LINES ARE NOT MARKED, THE MINIMUM SIZE PER SPECIFICATION IS 2". ALSO THE SMALLEST DRAIN LINE THAT IS ALLOWED BY CODE TO BE BELOW SLAB IS 2". FOR INDIVIDUAL DRAIN LINES NOT SIZED ON PLANS, REFER TO PLUMBING ROUGH-IN MOUNTING HEIGHT SCHEDULE. A 4" DRAIN, AS INDICATED ON PLANS, SHALL BE PROVIDED AT ALL RPZ'S 3" AND BELOW. A 6" DRAIN SHALL BE PROVIDED AT ALL RPZ'S OVER 3".
9. VENT THROUGH ROOF (VTR) SHALL NOT BE LOCATED WITHIN 10' OF A FRESH AIR INTAKE OR IN LOW SPOTS OF VALLEYS. CONTRACTOR TO OFFSET AS REQUIRED TO MEET THESE REQUIREMENTS. PAINT VENT SAME COLOR AS ROOF OR CLAD IN MEDAL SAME COLOR. VENTS TO BE ANCHORED TO STRUCTURE.
10. OUTSIDE OF FOOTING, MAINTAIN 10' BETWEEN SEWER AND DOMESTIC WATER LINES UNLESS WRITTEN PERMISSION IS OBTAINED FROM LOCAL ADMINISTRATIVE AUTHORITY.
11. CONTRACTOR TO REVIEW ALL PLAN SHEETS FOR FIXTURE TAGS. MOST FIXTURE TAGS ARE LOCATED ON THE FIRST PLAN SHEET. FIXTURES THAT DO NOT APPEAR ON THE FIRST SHEET WILL BE TAGGED ON OTHER SHEETS.
12. PLUMBING CONTRACTOR SHALL NOT USE PENETRATIONS THRU FIRE WALLS WHICH HAVE BEEN INSTALLED FOR POWER, COMMUNICATION AND DATA WIRING.
13. CONTRACTOR TO COORDINATE BUILDING DRAIN AND SEWER WITH ALL MECHANICAL CONDENSATE WATER PIPING BELOW SLAB.
14. CONTRACTOR TO PAINT ALL VENTS TO MATCH ROOF OR WALL. VENTS MAY ME CLAD IN METAL SAME COLOR AS ROOF.
15. ALL VENT PIPING SHALL BE SECURELY ANCHORED TO STRUCTURE.
16. COORDINATE ELEVATION OF HOSE BIBBS IN RESTROOMS WITH HANDICAP GRAB BAR HEIGHT TO AVOID CONFLICT.
17. PROVIDE THERMOSTATIC MIXING VALVE EQUAL TO SYMMONS 5-120 AT ALL SINKS AND LAVATORIES. SET AT 98 DEGREES F.

PLUMBING LEGEND

NEW BUILDING DRAIN		EXIST'G SANITARY SEWER	SS
BUILDING SEWER		EXISTING AREA DRAIN	AD
STORM SEWER	ST	GREASE LINE	GL
AREA DRAIN	AD	MEDIUM PRESSURE GAS (MPG) (NATURAL)	MPG
COLD / DOMESTIC WATER SUPPLY (CW)		LOW PRESSURE GAS (GAS) (NATURAL)	GAS
HOT WATER SUPPLY (HW)		ROOF DRAIN	RD
HOT WATER RETURN (HWR)		EXIST'G ROOF DRAIN	RD
VENT		OVERFLOW ROOF DRAIN	OD
NEW FIRE MAIN	F	OVERFLOW ROOF DRAIN	CD
VENT THRU ROOF (VTR)		TEMPERATURE & PRESSURE (T&P) RELIEF VALVE	
HOSE BIBB (HB)		FROST PROOF HOSE BIBB (FPHB)	
CLEANOUT TO GRADE (COTG)/ TWO WAY CLEANOUT (TWC)/ FLOOR CLEANOUT (FCO)		WALL CLEANOUT (WCO)/ STACK CLEANOUT (SCO)/ END OF STRAIGHT LINE CLEANOUT (CO)	
FLOOR DRAIN (FD) FLOOR SINK (FS) SAFE WASTE DRAIN (SWD)		UNION	
CIRCULATING PUMP		LINE CAP	
UTILITY BOX (UB) SUPPLY BOX (SB)		GATE VALVE	
PIPE TURNING DOWN		"Y" STRAINER	
PIPE TURNING UP		REDUCE PRESSURE PRINCIPLE BACKFLOW PREVENTER (RPZ)	
TEE UP		METER	
CROSS AND RISER		REGULATOR	
DROP AND RUN		DROP AND TURN	
FINISHED FLOOR LEVEL	F.F.E.	TEE OFF TOP	
PLAN OR DETAIL SHEET NUMBER	X XXX	TEE OFF BOTTOM	
GALLONS PER MINUTE	G.P.M.	TEE DOWN	
		FLOW LINE INVERT ELEVATION	F.I.
		DRAIN FIXTURE UNITS	D.F.U.
		BALL VALVE	

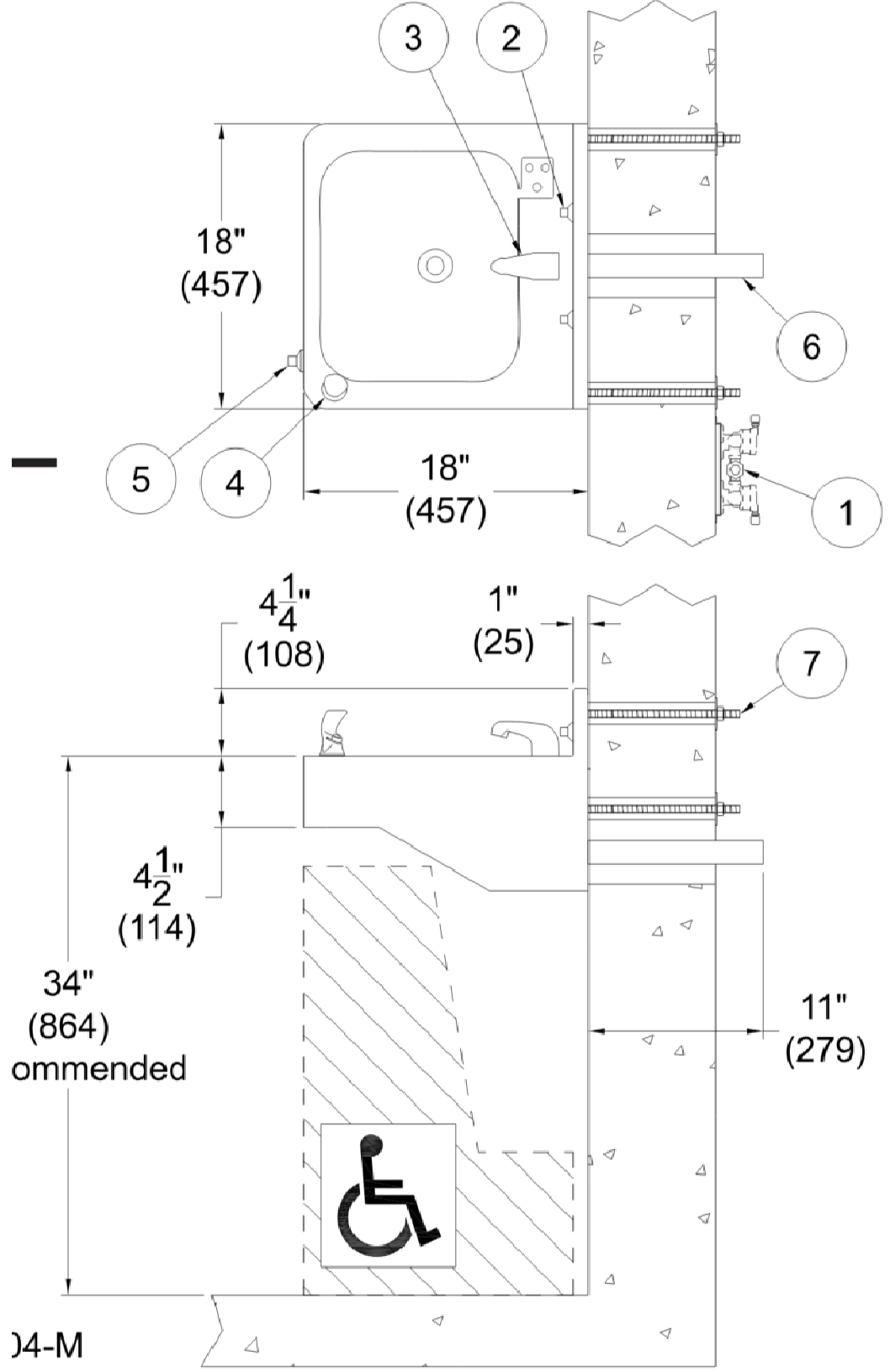




NOTES:

- 1. Optional -FV Flush Valve - Wall Supply
- 2. Optional -FV Flush Valve - Top Supply
- 3. Mounting Carrier (By Others)
- 4. Optional -CN Cap Nuts

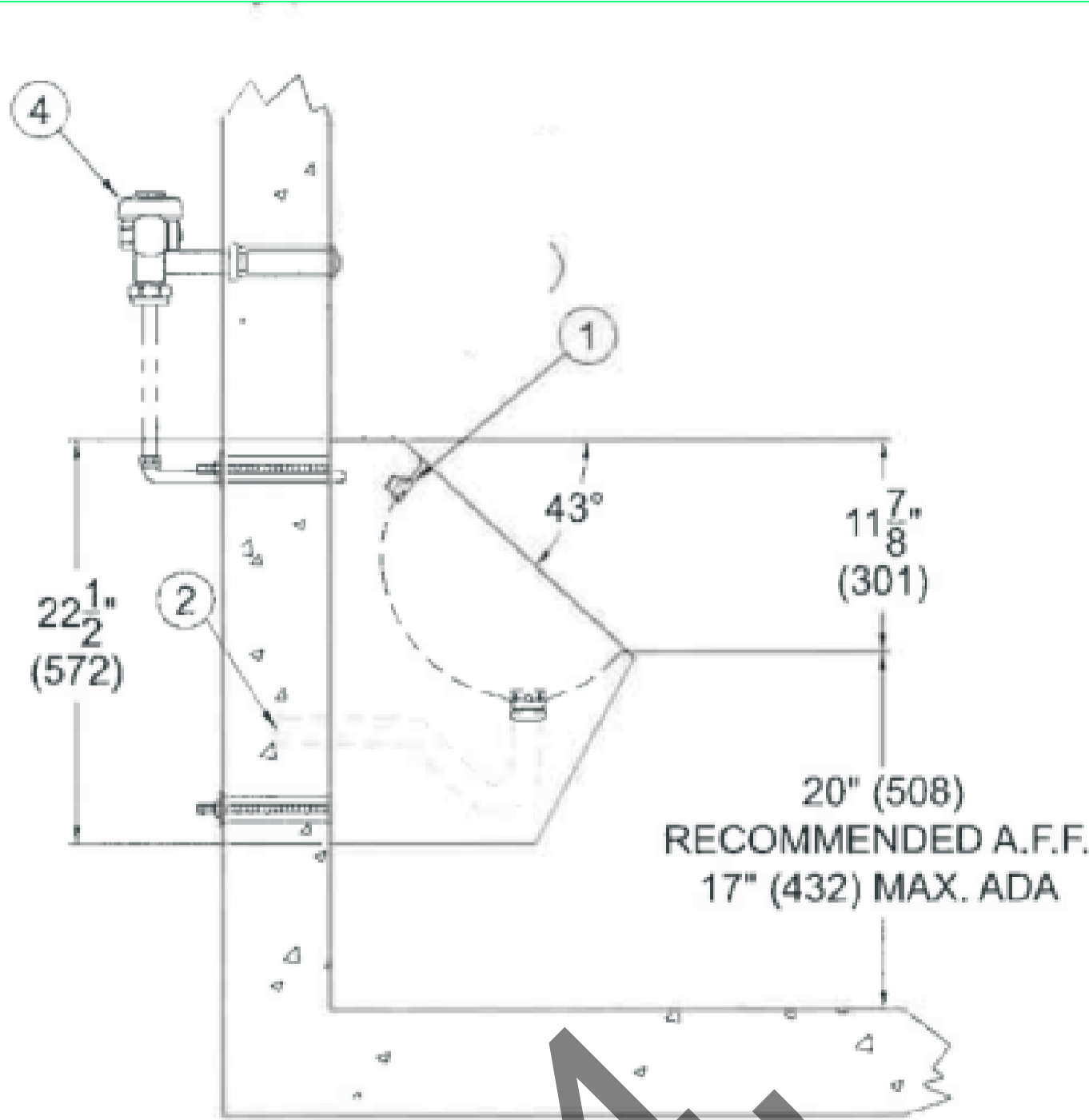
HWC-1 DETAIL



NOTES:

- 1. Optional -4 Air-Control Valve
- 2. Lavy Valve Pushbuttons
- 3. Lavy Bubbler
- 4. Optional -DMB Deck Mounted Bubbler
- 5. Pushbutton for option -DMB
- 6. Lavy Waste Outlet, Extended 11" Beyond Fixture
- 7. Wall Mounting Hardware

HL-1 DETAIL



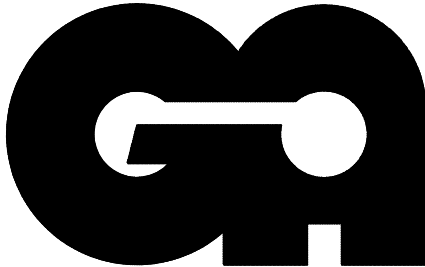
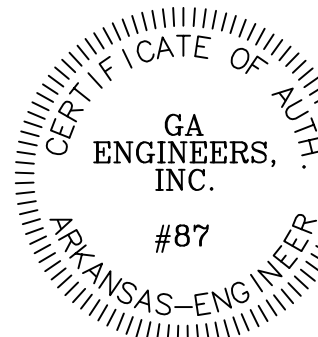
- 1. Flush Nozzle
- 2. 1-1/2" O.D. Stainless Steel P-Trap Assembly
- 3. Optional -T Top Supply -FV Flush Valve
- 4. Optional -W Wall Supply -FV Flush Valve
- 5. 3/4" NPT Flushing Inlet Connection

UR-1 DETAIL

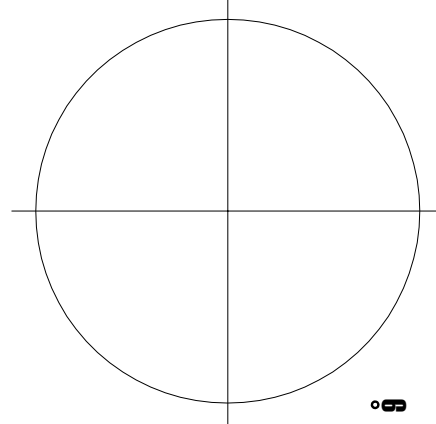
PIPING MATERIALS SCHEDULE	
SERVICE	MATERIAL
ABOVE GROUND DOMESTIC WATER	TYPE L HARD COPPER WITH WROUGHT COPPER FITTINGS AND 95-5 LEAD FREE SOLDER.
UNDERGROUND WATER INSIDE AND OUTSIDE	1" AND SMALLER: ASTM B88 TYPE L SOFT COPPER NO JOINTS OR FITTINGS UNDER SLAB. MAKE CONNECTIONS ABOVE SLAB WITH WROUGHT COPPER FITTINGS AND LEAD FREE SOLDER. 1-1/4" AND LARGER: ASTM B88 TYPE L HARD COPPER WROUGHT COPPER FITTINGS MAKE JOINTS WITH SIL-FOS (15% AG).
UNDERGROUND SANITARY SEWER AND VENT PIPING INSIDE BLDG AND OUTSIDE BLDG	PVC SCHEDULE 40 PIPE AND FITTINGS.
ABOVE GROUND SANITARY SEWER AND VENT	PVC SCHEDULE 40 PIPE AND FITTINGS EXCEPT IN PLENUM RETURN AREAS. IN PLENUM RETURN AREAS PROVIDE SERVICE WEIGHT (SV) CAST IRON "NO-HUB" PIPE AND FITTINGS, AND JOINTS OF STANDARD WEIGHT STAINLESS / NEOPRENE COUPLINGS.
UNDERGROUND GAS	APPROVED PLASTIC WITH FUSED FITTING.
ABOVE GROUND GAS	SCH. 40 BLACK STEEL WITH MALLEABLE IRON FITTINGS OR WELDED JOINTS WITH BUTT WELD FITTINGS.
STORM DRAIN PIPING, ROOF DRAIN PIPING ABOVE GROUND	PVC SCHEDULE 40 PIPE AND FITTINGS EXCEPT IN PLENUM RETURN AREAS. IN PLENUM RETURN AREAS PROVIDE SERVICE WEIGHT (SV) CAST IRON "NO-HUB" PIPE AND FITTINGS
STORM DRAIN PIPING UNDER GROUND	SCHEDULE 40 PVC PIPE AND FITTINGS

PLUMBING ROUGH-IN & MOUNTING HEIGHT SCHEDULE						
FIXTURE	WASTE	VENT	COLD WATER	HOT WATER	INSTALLATION HEIGHT	
WATER CLOSETS (FLUSH VALVE)	3"	2"	1"	---	STANDARD 15" TO TOP OF SEAT HANDICAPPED 17" TO TOP OF SEAT	
URINALS (FLUSH VALVE)	2"	1-1/2"	3/4"	---	STANDARD 22" TO TOP OF RIM HANDICAPPED 17" TO TOP OF RIM 44" MAX. TO FLUSH LEVER	
LAVATORIES & SMALL SINKS	1-1/2"	1-1/4"	1/2"	1/2"	STANDARD 31" TO TOP OF RIM HANDICAPPED 34" TO TOP OF RIM	
JANITOR'S SINKS	3"	1-1/2"	1/2"	1/2"		
HOSE BIBB	---	---	3/4"	---	18" ABOVE GRADE OUTSIDE, 18" A.F.F. INSIDE	
UTILITY BOX	2"	1-1/2"	1/2"	1/2"	42" TO BOTTOM OF BOX.	
SUPPLY BOX	---	---	1/2"	---	42" TO BOTTOM OF BOX.	
NOTES: VENT SIZES SHOWN ARE MINIMUM UNLESS SHOWN LARGER ON RISER DIAGRAMS. SIZES SHOWN FOR WASTE ARE FOR RISERS ONLY. ALL DRAIN AND VENT LINES BELOW SLAB SHALL BE 2" OR LARGER.						

PLUMBING INSULATION SCHEDULE		
DESCRIPTION	INSULATION TYPE	THICKNESS
DOMESTIC COLD AND HOT WATER PIPING ABOVE OR BELOW GRADE	ELASTOMERIC (FIRE RATED IN PLENUMS) MASTIC COATING UNDERGROUND	1/2"
WATER COOLERS TRAPS, TAILPIECES, HANDICAPPED LAVATORY TRAPS, AND HOT WATER SUPPLIES.	ANTIMICROBIAL VINYL EQUAL TO TRUEBRO BRAND LAV-GUARD	1/8"
ROOF DRAIN PIPING ABOVE CEILING	FIBERGLASS ASJ	1/2"



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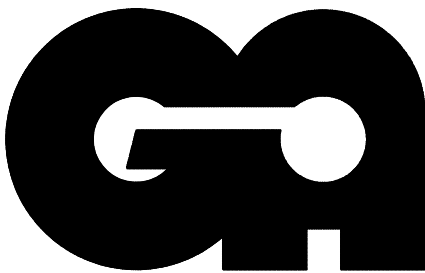
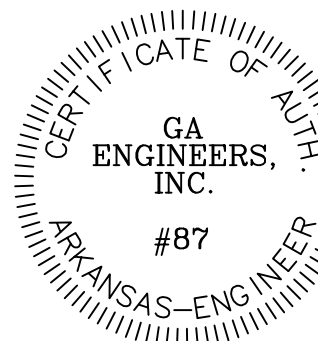
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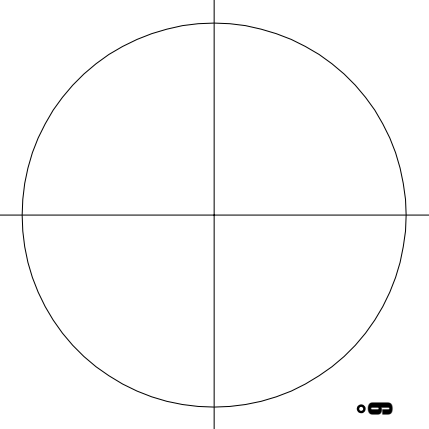


PLUMBING SCHEDULES

p3.2



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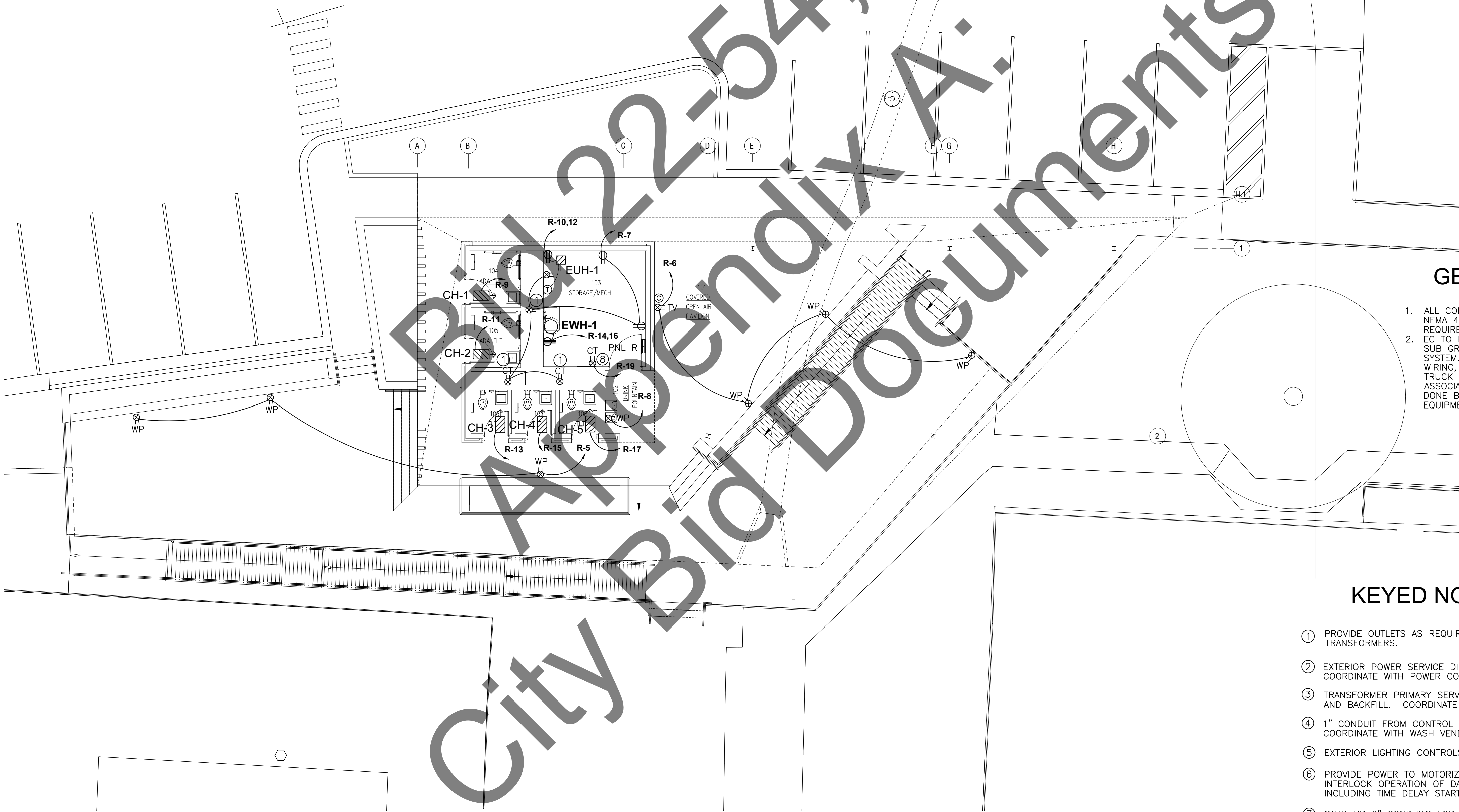


ELECTRICAL POWER PLAN

e1.1

POWER PLAN NOTES

- 1.) **OUTLET ROUGH-IN COORDINATION:** COORDINATE EXACT LOCATIONS OF ALL OUTLETS IN AREAS WITH MILLWORK WITH ARCHITECTS MILLWORK ELEVATIONS PRIOR TO ROUGH-IN.
- 2.) **CABLE/ COMMUNICATIONS OUTLETS:** PROVIDE TWO 3/4" CONDUITS, 4" SQUARE BOX WITH SINGLE GANG DEVICE RING FOR ALL TV CABLE AND COMMUNICATIONS OUTLETS INDICATED ON THE ELECTRICAL DRAWINGS. ROUTE CONDUIT FROM BOX UP WALL AND TURN OUT TO ACCESSIBLE CEILING CAVITY. PROVIDE PLASTIC BUSHINGS ON CONDUIT ENDS. PROVIDE PULL STRING IN ALL EMPTY CONDUIT SYSTEMS.
- 3.) **WATER HEATER:** MAKE CONNECTIONS AS REQUIRED. VERIFY REQUIREMENTS AND LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION. PROVIDE CORD AND PLUG AS REQUIRED.
- 4.) **EXISTING EQUIPMENT:** FIELD VERIFY LOCATIONS OF EXISTING ELECTRICAL EQUIPMENT, INCLUDING POWER POLES, TELEPHONE PEDESTALS, OVERHEAD AND UNDERGROUND FEEDERS, METERS, PANELS, DEVICES, ETC. PROVIDE FOR COORDINATION WITH EXISTING EQUIPMENT.
- 5.) **THERMOSTAT CONDUITS:** PROVIDE 3/4" CONDUIT, AND 4" SQUARE BOX WITH SINGLE GANG DEVICE RING FOR ALL THERMOSTAT LOCATIONS INDICATED ON THE MECHANICAL DRAWINGS. ROUTE CONDUIT FROM BOX TO ACCESSIBLE CEILING CAVITY. PROVIDE PLASTIC BUSHINGS ON EXPOSED CONDUIT ENDS. PROVIDE PULL STRING IN ALL EMPTY CONDUIT SYSTEMS. COORDINATE EXACT LOCATIONS AND MOUNTING HEIGHTS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
- 6.) **MECHANICAL EQUIPMENT CONNECTIONS:** COORDINATE MECHANICAL EQUIPMENT CONNECTION REQUIREMENTS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN. LOCATE FEEDERS, DISCONNECTS AND MAINTENANCE RECEPTACLES SO THAT THEY WILL NOT INTERFERE WITH OPERATION OR MAINTENANCE OF MECHANICAL EQUIPMENT.



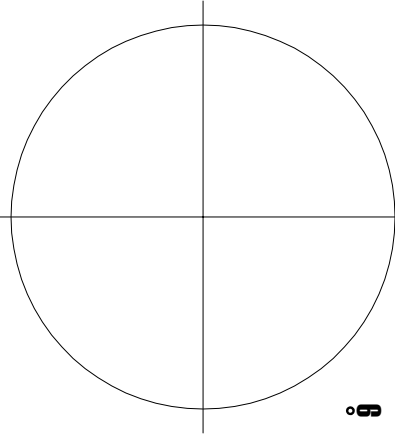
GENERAL NOTES

1. ALL COMPONENTS IN WET AREAS TO BE RATED NEMA 4X. PROVIDE GFI PROTECTION WHERE REQUIRED.
2. EC TO PROVIDE POWER SERVICE, PANEL A AND ALL SUB GRADE CONDUIT SERVING THE TRUCK WASH SYSTEM. EC SHALL ALSO PROVIDE ALL CONDUIT, WIRING, AND COMPONENTS NOT CONNECTED TO THE TRUCK WASH SYSTEMS. ALL CONDUIT AND WIRING ASSOCIATED WITH THE WASH EQUIPMENT WILL BE DONE BY WHITING SYSTEMS (WSI), THE WASH EQUIPMENT VENDOR.

KEYED NOTES

- ① PROVIDE OUTLETS AS REQUIRED TO PLUG IN FLUSH VALVE TRANSFORMERS.
- ② EXTERIOR POWER SERVICE DISCONNECT AND METER. COORDINATE WITH POWER COMPANY.
- ③ TRANSFORMER PRIMARY SERVICE. PROVIDE CONDUITS, TRENCHING AND BACKFILL. COORDINATE WITH SWEPCO POWER COMPANY.
- ④ 1" CONDUIT FROM CONTROL BOX TO WASH EQUIPMENT CONTROL BOX. COORDINATE WITH WASH VENDOR. WIRING WILL BE INSTALLED BY WSI.
- ⑤ EXTERIOR LIGHTING CONTROLS.
- ⑥ PROVIDE POWER TO MOTORIZED DAMPER AT WL-1. INTERLOCK OPERATION OF DAMPER WITH WSF-1 INCLUDING TIME DELAY START OF FAN.
- ⑦ STUB UP 2" CONDUITS FOR DISCONNECT ON METAL STAND FOR RECLAIM PUMP. DISCONNECT AND WIRING TO BE BY WSI.
- ⑧ PROVIDE POWER TO IT CABINET. COORDINATE WITH OWNER.

A ELECTRICAL POWER PLAN
Scale: 1/8" = 1'-0"



DEMX ARCHITECTURE
104 N EAST AVENUE | FAYETTEVILLE, ARKANSAS 72701 | 479.966.4871

NEW RESTROOM & PAVILLION | WILSON PARK | 675 N PARK AVE, FAYETTEVILLE, AR 72701



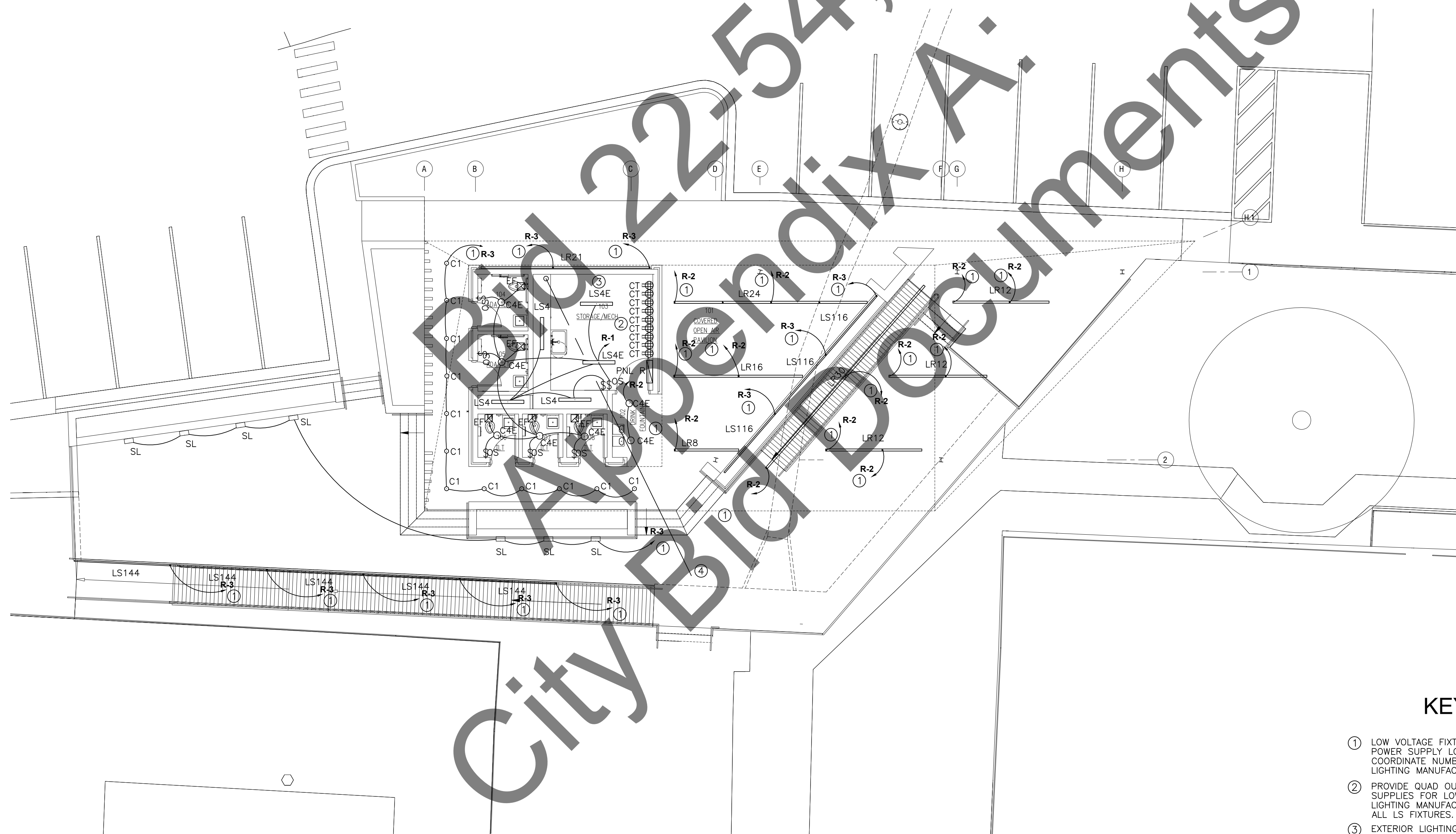
ELECTRICAL LIGHTING PLAN

e2.1

BID SET	
10/07/2022	51119

LIGHTING GENERAL NOTES

- 3.) EXTERIOR LIGHTING CONTROLS: PROVIDE ASTRONOMICAL TIMECLOCK AND PE LIGHTING CONTROLS PER DETAIL.
- 4.) INDOOR FIXTURE LOCATIONS ARE SCHEMATIC IN NATURE; LOCATION ADJUSTMENTS DUE TO INSTALLATION SHALL BE MADE AT THE COST TO OWNER. COORDINATE EXACT LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLAN. VERIFY IN FIELD.
- 5.) EMERGENCY LIGHTS: EMERGENCY LIGHTS ARE INDICATED WITH AN E. PROVIDE EMERGENCY BATTERY. PROVIDE "HOT" WIRE TO EMERGENCY FIXTURES.
- 6.) CEILING COORDINATION: COORDINATE ALL CEILING MOUNTED ELECTRICAL ITEMS WITH OTHER DEPENDENCIES AND WITH CEILING GRID & BAR JOISTS. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN AND STRUCTURAL PLANS.
- 7.) OCCUPANCY SENSOR LIGHT SWITCHES: AT ALL SPACES WITH OCCUPANCY SENSORS, PROVIDE MANUAL OVERRIDE WALL SWITCH.
- 8.) SEE SHEET E3.2 FOR LIGHT FIXTURE SCHEDULE
- 9.) FIELD VERIFY LENGTHS OF ALL FIXTURES AND COORDINATE WITH THE MANUFACTURER.
- 10.) ALL COMPONENTS IN WET AREAS TO BE RATED NEMA 4X. PROVIDE GFI PROTECTION WHERE REQUIRED.



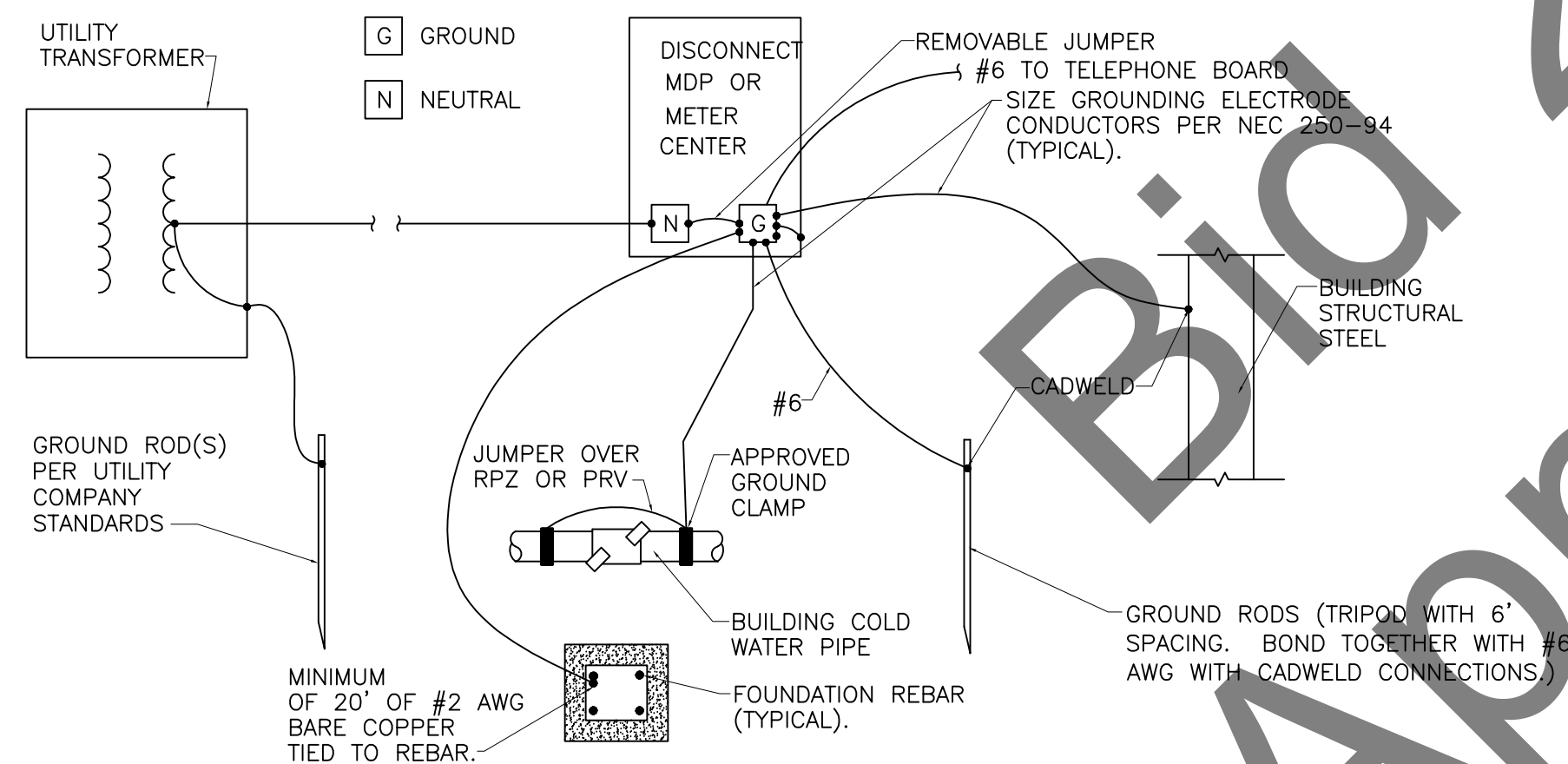
KEYED NOTES

- ① LOW VOLTAGE FIXTURES. WIRE TO PANEL VIA REMOTE POWER SUPPLY LOCATED IN THE MECHANICAL ROOM. COORDINATE NUMBER OF CIRCUITS AND WIRE SIZES WITH LIGHTING MANUFACTURER.
- ② PROVIDE QUAD OUTLETS AS REQUIRED FOR POWER SUPPLIES FOR LOW VOLTAGE LIGHTING. COORDINATE WITH LIGHTING MANUFACTURER. PROVIDE DIMMER SWITCHES FOR ALL FIXTURES.
- ③ EXTERIOR LIGHTING TO BE CONTROLLED BY ASTRONOMICAL TIME CLOCK IN EQUIPMENT ROOM.
- ④ PROVIDE 1" SPARE CONDUIT FROM ACCESSIBLE LOCATION BELOW DECK TO ELECTRICAL BOX THAT FEEDS THIS BUILDING.

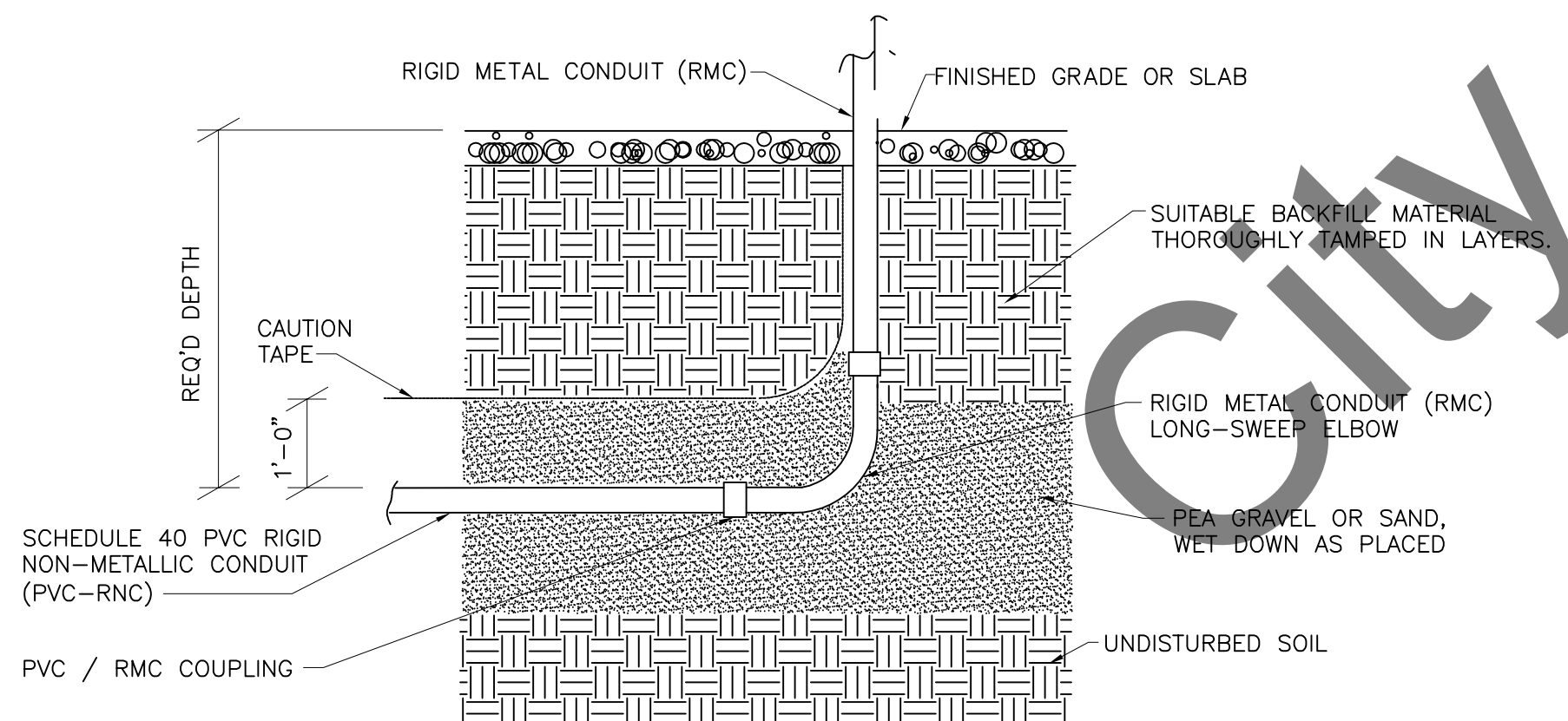
ELECTRICAL LIGHTING PLAN
Scale: 1/8" = 1'-0"

GENERAL ELECTRICAL NOTES

- 1 PROVIDE A COMPLETE AND OPERATING ELECTRICAL SYSTEM INCLUDING ALL INCIDENTAL ITEMS AND CONNECTIONS NECESSARY FOR PROPER OPERATION.
- 2 FINAL PULLING SHALL BE GOVERNED BY ACTUAL FIELD CONDITIONS WITH ALL MEASUREMENTS VERIFIED AT THE SITE AND COORDINATED WITH OTHER TRADES.
- 3 PROVIDE CIRCUITS AND MAKE FINAL CONNECTIONS TO ALL MECHANICAL EQUIPMENT, APPLIANCES, AND OTHER DEVICES REQUIRING ELECTRICAL POWER THAT ARE INDICATED ON ANY OF THE DRAWINGS OR SPECIFICATIONS CONTAINED HEREIN.
- 4 ALL WORK SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC) CURRENT EDITION AND ALL PRODUCTS SHALL BE NEW AND LISTED AND LABELED BY UNDERWRITERS LABORATORIES (UL). COMPLY WITH ALL APPLICABLE REGULATIONS AND LAWS.
- 5 WIRING AND CABLES SHALL BE SINGLE CONDUCTOR COPPER WITH 600 VOLT CODE TYPE THW OR THHN INSULATION. MINIMUM WIRE SIZE IS #12 AWG. INSTALL ALL POWER WIRING IN CONDUIT.
- 6 UNDERGROUND OR OUTSIDE CONDUIT SHALL BE SCHEDULE 40 PVC CONDUIT AND FITTINGS.
- 7 ABOVE GROUND CONDUIT INSIDE BUILDING SHALL BE EMT WITH SET SCREW OR COMPRESSION FITTINGS.
- 8 MAKE FINAL CONNECTIONS TO MOTORS, PUMPS, OR OTHER VIBRATING EQUIPMENT WITH "SEALTIGHT" FLEXIBLE CONDUIT.
- 9 JUNCTION AND OUTLET BOXES SHALL BE OF CODE GAUGE GALVANIZED STEEL.
- 10 RIGIDLY SUPPORT CONDUIT AND BOXES FROM THE BUILDING STRUCTURE PER THE NEC PRIOR TO PULLING IN THE CONDUCTORS.
- 11 SAFETY DISCONNECT SWITCHES SHALL BE HEAVY DUTY "HD" TYPE IN NEMA 1 ENCLOSURE OF RATINGS AS SHOWN ON THE DRAWINGS OR REQUIRED BY EQUIPMENT SERVED. FUSED DISCONNECT SWITCHES SHALL BE COMPLETE WITH CURRENT LIMITING FUSES.
- 12 LEAVE PULL WIRE IN EMPTY CONDUIT WITH IDENTIFYING LABELS FOR FUTURE WIRE INSTALLATION.
- 13 IDENTIFY ELECTRICAL EQUIPMENT, SUCH AS PANELS, STARTERS, AND SPECIAL SWITCHES WITH PLASTIC NAMEPLATES. FILL OUT CIRCUIT DIRECTORIES COMPLETELY IN EACH PANEL.
- 14 PAY ALL PERMITS AND INSPECTION FEES REQUIRED.
- 15 PROVIDE CONTROL WIRING, AS WELL AS POWER WIRING FOR HVAC EQUIPMENT.



B GROUNDING DETAIL – TYPICAL
N.T.S.



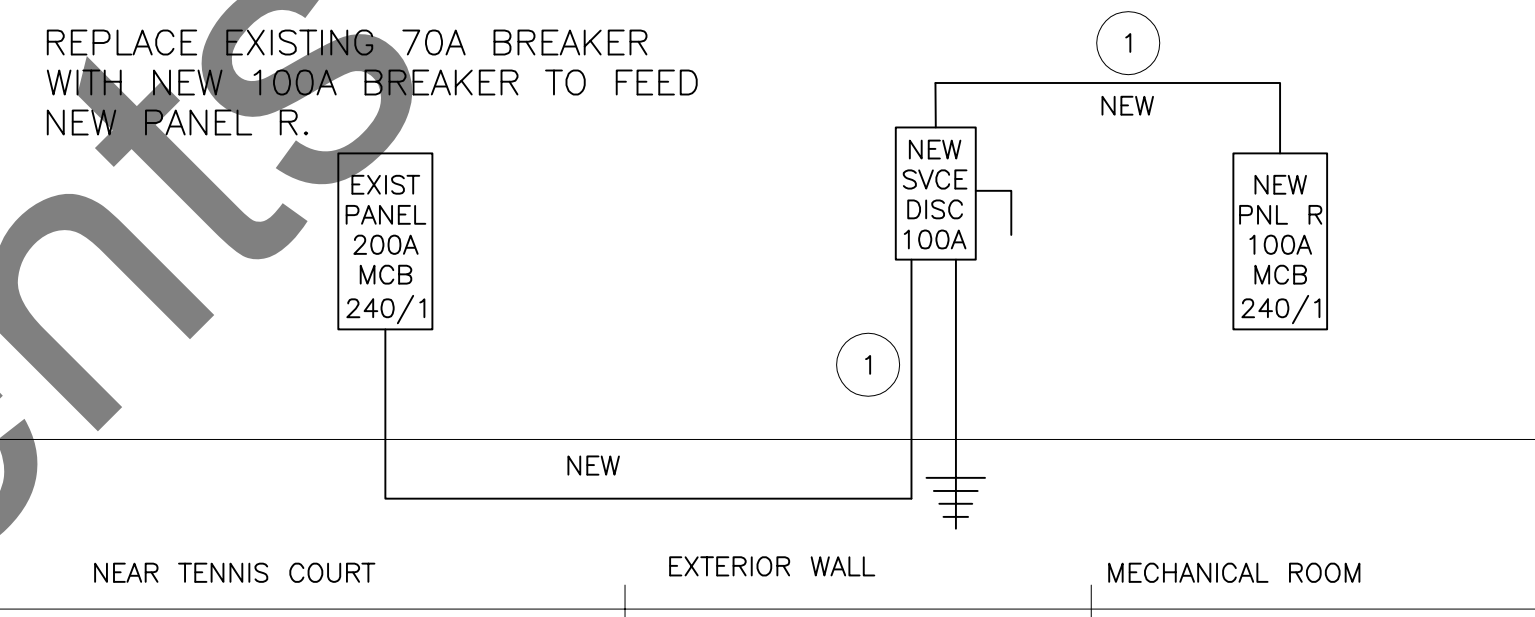
 UNDERGROUND CONDUIT DETAIL
N.T.S.

RISER DIAGRAM NOTES

- 1.) ELECTRICAL SERVICE:
 - A. FURNISH AND INSTALL MATERIALS FOR A TEMPORARY CONSTRUCTION SERVICE AS REQUIRED.
 - B. FURNISH AND/OR INSTALL ALL REQUIRED MATERIAL AND LABOR IN COMPLIANCE WITH CITY AND CODE REQUIREMENTS TO PROVIDE A COMPLETE ELECTRICAL SERVICE, INCLUDING TRENCHING AND BACK FILLING, PRIMARY CONDUIT AND CABLES, AND GROUNDING SYSTEM.
- 2.) PANELBOARD "AS-BUILT SCHEDULES"

IT IS THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO PROVIDE TYPE-WRITTEN CIRCUIT DIRECTORIES PER NEC 408.4 FOR PANEL BOARD(S).

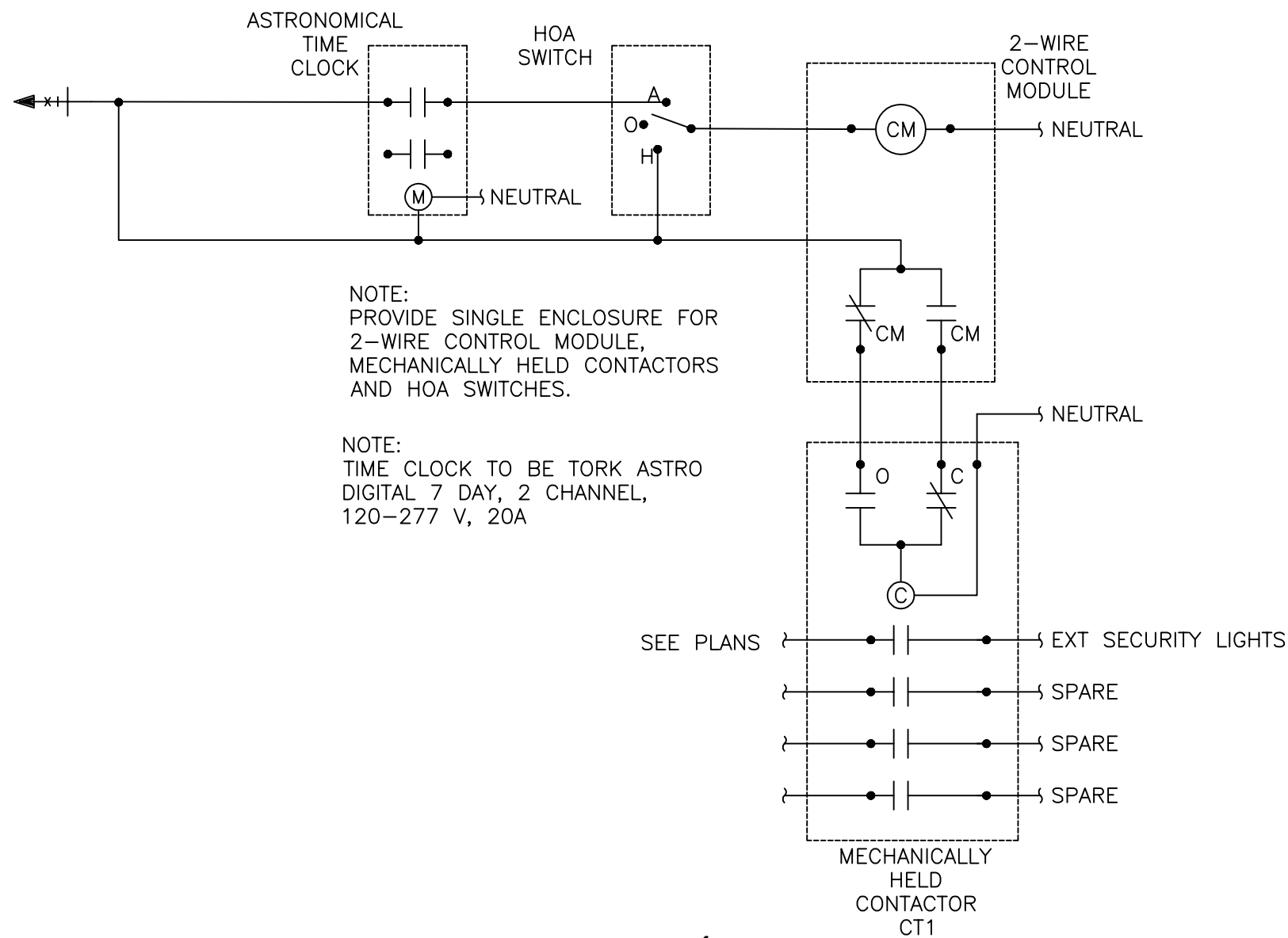
FEEDER SCHEDULE			
MARK	AMPACITY / PHASE / WIRES	LOAD SERVED	CONDUIT AND WIRE (COPPER)
1	100A 1PH 3W	PANEL	1-1/2" C, 3-#1, 1#6 GND



NOTE: ALL CONDUCTORS ARE TO BE COPPER.

A ELECTRICAL RISER DIAGRAM
N.T.S.

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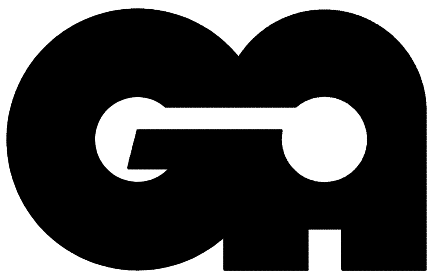
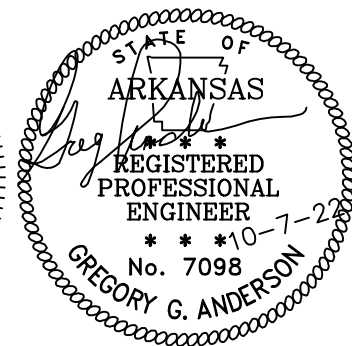
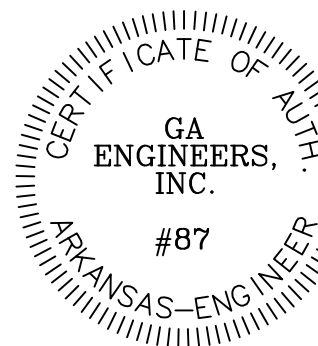
LIGHTING CONTROL (P.E. SWITCH & TIME CLOCK) WIRING DIAGRAM

N.T.S.

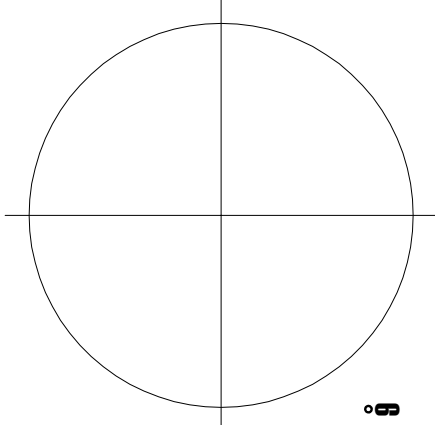
SWITCH SCHEDULE						
SYMBOL	DESCRIPTION	MFGR.	MODEL	VOLTAGE RATING	AMPS	REMARKS
\$	SINGLE POLE	HUBBELL	HBL1221	120-277V	20	4'-0" TO TOP AFF PROVIDE HIGH CAPACITY SILVER ALLOY SWITCH CONTACTS
\$ _D	SINGLE POLE DIMMABLE	SENSOR-WORK	SWX-823 XX	120-277V	20	4'-0" TO TOP AFF PROVIDE HIGH CAPACITY SILVER ALLOY SWITCH CONTACTS FOR 0-10V DIMMABLE LED FIXTURES
\$ ₃	THREE-WAY	HUBBELL	HBL1223	120-277V	20	4'-0" TO TOP AFF PROVIDE HIGH CAPACITY SILVER ALLOY SWITCH CONTACTS
\$ _{3D}	THREE-WAY DIMMABLE	SENSOR-WORK	SWX-823 XX	120-277V	20	4'-0" TO TOP AFF PROVIDE HIGH CAPACITY SILVER ALLOY SWITCH CONTACTS FOR 0-10V DIMMABLE LED FIXTURES
\$ _{OR}	OCCUPANCY SENSOR OVERRIDE SWITCH	HUBBELL	HBL1221	120-277V	20	4'-0" TO TOP AFF PROVIDE HIGH CAPACITY SILVER ALLOY SWITCH CONTACTS
\$ _{OS}	OCCUPANCY SENSOR WALL SWITCH	SENSOR-WORK	SWX-101 XX	120-277V	20	4'-0" TO TOP AFF PROVIDE HIGH CAPACITY SILVER ALLOY SWITCH CONTACTS
\$ _{DOS}	OCCUPANCY SENSOR WALL SWITCH WITH DIMMER	SENSOR-WORK	SWX-101 D-XX	120-277V	20	4'-0" TO TOP AFF PROVIDE HIGH CAPACITY SILVER ALLOY SWITCH CONTACTS, 0-10V DIMMING FOR LED LIGHT FIXTURES.
	OCCUPANCY SENSOR	SENSOR-WORK	SWX-202 1-AR W/ SWX900 POWER PACK	20-24V	20	CEILING MOUNTED DUAL TECHNOLOGY INFRA RED AND ULTRASONIC MOTION SENSOR, LOW VOLTAGE
NOTE: 1. PROVIDE COVER PLATE AND ANY ACCESSORIES NEED FOR COMPLETE INSTALATION OF SWITCHING DEVICE. 2. COORDINATE COLOR OF DEVICE AND COVER PLATES WITH ARCHITECT. 3. PROVIDE OCCUPANCY SENSORS WITH POWER AS REQUIRED. SET DELAY TO 15 MINUTES. PROVIDE POWER TO SENSORS FROM NEAREST 120V UNSWITCHED CIRCUIT.						

RECEPTACLE SCHEDULE						
SYMBOL	DESCRIPTION	MFGR.	MODEL	NEMA	MOUNTING HEIGHT AFF	REMARKS
	DUPLEX W/ BACK & SIDE WIRE	HUBBELL	HBL 5352	5-20R	1'-6" TO TOP	-
WP	WATER PROOF DUPLEX W/ BACK & SIDE WIRE	HUBBELL	HBL 5352	5-20R	1'-6" TO TOP	-
CT	ABOVE COUNTER DUPLEX	HUBBELL	HBL 5352	5-20R	3'-6" TO TOP OR AS SPECIFIED ON DRAWINGS	COORDINATE MOUNTING HEIGHT WITH ARCHITECT
GFCI	DUPLEX GFCI W/ BACK & SIDE WIRE, TEST & RESET BUTTON	HUBBELL	GFRST20	5-20R	1'-6" TO TOP	SET TRIP POINT AT 5 MA FAULT CURRENT.
	RECESSED FLOOR MOUNTED DUPLEX OUTLET	HUBBELL	HBL 5352	5-20R	1'-6" TO TOP	-
	QUAD W/ BACK & SIDE WIRE	HUBBELL	HBL 5352	5-20R	1'-6" TO TOP	-
	DUPLEX TAMPER PROOF W/ BACK & SIDE WIRE	HUBBELL	HBL 5362TR	5-20R	1'-6" TO TOP	PROVIDE AT ALL OUTLETS IN RESIDENTIAL SPACES.
NOTE: 1. PROVIDE COVER PLATE AND ANY ACCESSORIES NEEDED FOR COMPLETE INSTALLATION OF RECEPTACLE. 2. COORDINATE COLOR OF ALL DEVICE AND COVER PLATES WITH ARCHITECT. 3. COORDINATE ALL MOUNTING HEIGHTS WITH ARCHITECT						

LIGHTING FIXTURE SCHEDULE														
MARK	DESCRIPTION	MFGR.	MODEL	FINISH	LAMPS					FIXTURE				REMARKS
					DESCRIPTION	COLOR TEMP,K	LUMENS	WATTS	QTY	BALLAST	LUMENS	WATTS	VOLTS	
C1	RECESSED CAN 2" EXTERIOR ROUND ADJUSTABLE LED	CSL	A2-RM-R-ST-10-S-SHB/A2-3590-RSTBK-ST-BK-MP-80	BLACK	LED	3500K	972	10	1	LED	972	10	120	80 DEGREE BEAM REMOTE DRIVER 100' MAX 16GA WIRE
C4	RECESSED CAN 4" EXTERIOR LED VANDAL PROOF ENCLOSED	LITON	DL34R-W-PC-T35/DL34R-FRM	WHITE	LED	3500K	1500	23	1	LED	1500	23	120	50 DEGREE BEAM HARD CEILING
C4E	RECESSED CAN 4" EXTERIOR LED VANDAL PROOF ENCLOSED EMERGENCY	LITON	DL34R-W-PC-T35/DL34R-FRM/LD512-25EM-V120AC	SILVER WHITE?	LED	3500K	1500	23	1	LED	1500	23	120	50 DEGREE BEAM HARD CEILING 90 MIN BATTERY INTEGRAL TEST
LR6 L	CEILING RECESSED STRIP LIGHT ALUM EXTRUSION 6 FEET LONG 3.6"Wx1.4"H	ACOLYTE	CHAR33-M-SV-RB-90-SWS265-2.235-FI WITH DIMMABLE DRIVER	SILVER	LED	3500K	279L/F	2.2 W/F	6.5'	LED	1674L	14.3W	24V	RECESS MOUNTED WITH SCREWS PER ARCHITECT'S DETAIL SWITCH PER PLANS POWER SUPPLY IN MECH ROOM
LR8 L	CEILING RECESSED STRIP LIGHT ALUM EXTRUSION 8 FEET LONG 3.6"Wx1.4"H	ACOLYTE	CHAR33-M-SV-RB-90-SWS265-2.235-FI WITH DIMMABLE DRIVER	SILVER	LED	3500K	279L/F	2.2 W/F	8'	LED	2232L	17.6W	24V	RECESS MOUNTED WITH SCREWS PER ARCHITECT'S DETAIL SWITCH PER PLANS POWER SUPPLY IN MECH ROOM
LR12 L	CEILING RECESSED STRIP LIGHT ALUM EXTRUSION 12 FEET LONG 3.6"Wx1.4"H	ACOLYTE	CHAR33-M-SV-RB-90-SWS265-2.235-FI WITH DIMMABLE DRIVER	SILVER	LED	3500K	279L/F	2.2 W/F	12'	LED	3348L	26.4W	24V	RECESS MOUNTED WITH SCREWS PER ARCHITECT'S DETAIL SWITCH PER PLANS POWER SUPPLY IN MECH ROOM
LR16 L	CEILING RECESSED STRIP LIGHT ALUM EXTRUSION 16 FEET LONG 3.6"Wx1.4"H 2-8' LED STRIPS	ACOLYTE	CHAR33-M-SV-RB-90-SWS265-2.235-FI WITH DIMMABLE DRIVER	SILVER	LED	3500K	279L/F	2.2 W/F	16	LED	4464L	35.2W	24V	RECESS MOUNTED WITH SCREWS PER ARCHITECT'S DETAIL SWITCH PER PLANS POWER SUPPLY IN MECH ROOM
LR21 L	CEILING RECESSED STRIP LIGHT ALUM EXTRUSION 20'6" FEET LONG 3.6"Wx1.4"H 2-10'3" LED STRIPS	ACOLYTE	CHAR33-M-SV-RB-90-SWS265-5.035-FI WITH DIMMABLE DRIVER	SILVER	LED	3500K	675L/F	5 W/F	21	LED	7114L	105W	24V	RECESS MOUNTED WITH SCREWS PER ARCHITECT'S DETAIL SWITCH PER PLANS POWER SUPPLY IN MECH ROOM
LR24 L	CEILING RECESSED STRIP LIGHT ALUM EXTRUSION 24 FEET LONG 3.6"Wx1.4"H 2-12' LED STRIPS	ACOLYTE	CHAR33-M-SV-RB-90-SWS265-2.235-FI WITH DIMMABLE DRIVER	SILVER	LED	3500K	279L/F	2.2 W/F	2	LED	6696L	96W	24V	RECESS MOUNTED WITH SCREWS PER ARCHITECT'S DETAIL SWITCH PER PLANS POWER SUPPLY IN MECH ROOM
LR30 L	CEILING RECESSED STRIP LIGHT ALUM EXTRUSION 30 FEET LONG 3.6"Wx1.4"H 2-15' LED STRIPS	ACOLYTE	CHAR33-M-SV-RB-90-SWS265-2.235-FI WITH DIMMABLE DRIVER	SILVER	LED	3500K	279L/F	2.2 W/F	2	LED	8370L	115.4W	24V	RECESS MOUNTED WITH SCREWS PER ARCHITECT'S DETAIL SWITCH PER PLANS POWER SUPPLY IN MECH ROOM
LS4	NARROW LED STRIP ROUND LENSED 4 FT	COLUMBIA	MPS4-35LW-CW-E-U	WHITE	LED	3500	4000	27.3	1	LED	4000	27.3	120 UNIVERSAL	SURFACE MOUNTED
LS4E	NARROW LED STRIP ROUND LENSED 4 FT EMERGENCY	COLUMBIA	MPS4-35LW-CW-E-U-ELL14	WHITE	LED	3500	4000	27.3	1	LED	4000	27.3	120 UNIVERSAL	SURFACE MOUNTED 90 MIN BATTERY INTEGRAL TEST
LS116 D	UNDER COUNTER STRIP LIGHT VANDAL RESISTANT 116 INCHES LONG	ALUZ	A1-ZAKY-STN-SF-2W-10V-35K-IP67-FINISH-9.67' / WITH A1-ZAKY-STN-MC	SILVER	LED	3500K	216L/F	2 W/F	9.67'	LED	2089L	19.3W	24V	SWITCH PER PLANS END TO END CONNECTIONS. MAX 35'/SYSTEM. POWER SUPPLY AND DIMMER SWITCH IN MECH ROOM
LS144 D	UNDER COUNTER STRIP LIGHT VANDAL RESISTANT 144 INCHES LONG	ALUZ	A1-ZAKY-STN-SF-2W-10V-35K-IP67-FINISH-12' / WITH A1-ZAKY-STN-MC	SILVER	LED	3500K	216L/F	2 W/F	12'	LED	2592L	24W	24V	SWITCH PER PLANS END TO END CONNECTIONS. MAX 35'/SYSTEM. POWER SUPPLY AND DIMMER SWITCH IN MECH ROOM
SL	STEP LIGHT RECESSED VANDAL RESISTANT	WE-EF	ST1259LED-133 0405-RAL9004	BLACK	LED	3500K	178	5.6	1	LED	178	5.6	120	-
NOTES: - FIELD VERIFY LENGTHS OF ALL FIXTURES AND COORDINATE WITH THE MANUFACTURER. - SEE MOUNTING DETAILS ON ARCHITECTURAL SHEETS. - ALL FIXTURES SHALL BE PROVIDED WITH ALL ACCESSORIES FOR A COMPLETE INSTALLATION, INCLUDING MOUNTING HARDWARE. - CONTRACTOR SHALL VERIFY FIXTURE MOUNTING TYPE IS COMPATIBLE WITH CEILING TYPE AND STRUCTURAL CONDITIONS. - FINISHES SHALL BE COORDINATED WITH ARCHITECT OR OWNER BEFORE ORDERING. - PROVIDE BATTERIES AND CHARGER AT EMERGENCY FIXTURES. - PROVIDE 0 DEGREES F RATED FIXTURES AT OUTDOOR INSTALLATIONS. - PROVIDE SAFETY CABLES AND WIRE GUARDS WHERE REQUIRED.														



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EMAIL: ga@gaengr.com



DEMEX ARCHITECTURE
104 N EAST AVENUE | FAYETTEVILLE, ARKANSAS 72701 | 479.966.4871

CITY OF
FAYETTEVILLE
ARKANSAS



ELECTRICAL
SCHEDULES

e3.2

NEW RESTROOM & PAVILLION | WILSON PARK | 675 N PARK AVE, FAYETTEVILLE, AR 72701

RESOLUTION NO. _____

A RESOLUTION TO AWARD BID #22-54 AND AUTHORIZE A CONTRACT WITH E.W.I. INC. IN THE AMOUNT OF \$1,536,980.00 FOR CONSTRUCTION OF THE WILSON PARK PAVILION RESTROOM FACILITIES, TO APPROVE A PROJECT CONTINGENCY IN THE AMOUNT OF \$139,725.00, AND TO APPROVE A BUDGET ADJUSTMENT

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:

Section 1: That the City Council of the City of Fayetteville, Arkansas hereby awards Bid #22-54 and authorizes Mayor Jordan to sign a contract with E.W.I., Inc., a copy of which is attached to this Resolution, in the amount of \$1,536,980.00 for construction of the Wilson Park Pavilion Restroom Facilities, and further approves a project contingency in the amount of \$139,725.00.

Section 2: That the City Council of the City of Fayetteville, Arkansas hereby approves a budget adjustment, a copy of which is attached to this Resolution.

PASSED and **APPROVED** this 3rd day of January, 2023.

APPROVED:

ATTEST:

By: _____
LIONELD JORDAN, Mayor

By: _____
KARA PAXTON, City Clerk/Treasurer

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MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council
THRU: Susan Norton, Chief of Staff
FROM: Paul Becker, Chief Financial Officer
DATE: December 27, 2022
SUBJECT: **WAIVE THE REQUIREMENTS OF FORMAL COMPETITIVE BIDDING AND APPROVE A CONTRACT WITH SEVEN HILLS HOMELESS CENTER**

RECOMMENDATION:

To approve additional funds be allocated to maintain the operations of the day center by Seven Hills.

BACKGROUND:

The Seven Hills Homeless Center has provided services to homeless and needy residents in Fayetteville for over 20 years. Seven Hills is a not-for-profit organization that has relied almost exclusively on private donations for operational funding during that period.

DISCUSSION:

The City Council approved the 2023 budget which appropriated funding for the 2023 fiscal year to maintain the operations of the day center by Seven Hills in the amount of \$113,400. Although funding for the center by generous donors has improved, a shortfall still exists.

BUDGET/STAFF IMPACT:

The contractual amount would be paid in monthly disbursements of \$9,450 each month beginning in January 2023. Attached is a contract for services with Seven Hills.

This contract funding has been approved in the 2023 budget by the City Council.

ATTACHMENTS: 7Hills 2023 Staff Review Form, 2023 Contract, RES BID WAIVER - SEVEN HILLS - 2023

City of Fayetteville Staff Review Form

2022-250

Item ID

1/3/2023

City Council Meeting Date - Agenda Item Only
N/A for Non-Agenda Item

Paul Becker

12/12/2022

CHIEF FINANCIAL OFFICER (110)

Submitted By

Submitted Date

Division / Department

Action Recommendation:

An ordinance to waive competitive bidding, to approve a monthly funding agreement with Seven Hills Homeless Center contingent on satisfactory contractual performance for the period of January 1, 2023 through December 31, 2023.

Budget Impact:

1010.090.6600-5721.00

Account Number

Fund

Project Number

Project Title

Budgeted Item? Yes

Total Amended Budget

\$ 113,400.00

Expenses (Actual+Encum)

\$ -

Available Budget

\$ 113,400.00

Does item have a direct cost? Yes

Item Cost

\$ 113,400.00

Is a Budget Adjustment attached? No

Budget Adjustment

\$ -

Remaining Budget

\$ -

V20221130

Purchase Order Number:

Previous Ordinance or Resolution # 6524

Change Order Number:

Approval Date:

Original Contract Number: 2022-07

Comments:

CONTRACT

THIS **CONTRACT** is made by and between the City of Fayetteville, Arkansas (hereinafter "City") and Seven Hills Homeless Center, which is an Arkansas nonprofit corporation which filed its corporate documents with the Secretary of State in 2001 (hereinafter "Seven Hills") on this 1st day of January 2023.

Whereas, the Board of Directors of Seven Hills has operated a daytime facility to serve numerous homeless and needy Fayetteville residents for over 20 years relying upon the support of several local churches, charities and charitable persons, as well as some governmental support (for veterans, etc.); and

Whereas, the Fayetteville City Council has approved a funding request for the 2023 fiscal year to maintain the operations of the Seven Hills day center. Although funding for the center by donors has improved, a shortfall still exists to continue to offer vital services to Fayetteville's homeless residents; and

Whereas, if Seven Hills could no longer operate its Walker Family Residential Community transitional housing facility, currently housed citizens might become homeless again and have to live on the streets or in the woods; and

Whereas, if Seven Hills could no longer operate its day time facility, the large number of homeless residents who depend upon this facility for showers and washing, hot food, a warm place to stay during the day, as well as access to a telephone and other job assistance services could not find such comparable services elsewhere; and

Whereas, the facilities and services provided by Seven Hills are required to be continued and should continue to be supported by the City in order to prevent our homeless and needy residents from suffering undue hardship and deprivation.

NOW, THEREFORE, The City of Fayetteville and the Board of Directors of Seven Hills Homeless Center agree as follows:

1. The **term** of this contract shall be January 1, 2023 until December 31, 2023 unless ended earlier by the City for failure of Seven Hills to comply with all provisions and requirements of this contract.

2. **Seven Hills Homeless Center** agrees to and shall provide all necessary personnel, supplies, utilities and maintenance of its facility to serve all Fayetteville's needy homeless residents who are utilizing and will continue to need to utilize the daytime facility. Seven Hills agrees to continue to offer all programs and services which Seven Hills has been normally supplying in the past in its daytime facility.
3. **Seven Hills Homeless Center** further agrees to and shall provide all necessary personnel, supplies, utilities and maintenance of the Walker Family Residential Community transitional facility to serve the transitional housing occupants. Seven Hills is authorized to use some of the City revenue for these purposes where appropriately authorized by the earlier agreement between the City and Seven Hills. Seven Hills agrees to continue to offer all programs and services to these Fayetteville transitional housing tenants as it has normally been providing in the past.
4. **Seven Hills Homeless Center** further agrees to make diligent efforts to regain its financial footing by increasing its revenues and/or reducing its expenses so Seven Hills Homeless Center can once again pay all of its own bills and will not need further financial support from the City of Fayetteville.
5. **Seven Hills Homeless Center** further agrees to make a report to the Mayor on its financial status on a monthly basis. Seven Hills also agrees to present any other report as requested by the Mayor or City Council.
6. **The City of Fayetteville** agrees to pay the sum of NINE THOUSAND FOUR HUNDRED FIFTY (\$9,450.00) on the first Wednesday of each month beginning in January while this contract is effective as long as the Finance Director and the City Administration are satisfied that Seven Hills is satisfactorily complying with all terms and conditions of this contract.

IN WITNESS WHEREOF, the parties hereto have caused their signatures to be set by their authorized representatives effective the date signed by the Mayor after approval by the Fayetteville City Council.

**SEVEN HILLS HOMELESS
CENTER**



Read Hudson
Chair of the Seven Hills Homeless
Center Board



Mike Williams, CEO

Date: 12/12/22

**CITY OF FAYETTEVILLE,
ARKANSAS**

Lioneld Jordan, Mayor

Date: _____

ATTEST:

Kara Paxton
City Clerk/Treasurer

RESOLUTION NO. _____

AN RESOLUTION TO WAIVE THE REQUIREMENTS OF FORMAL COMPETITIVE BIDDING AND APPROVE A CONTRACT WITH SEVEN HILLS HOMELESS CENTER IN THE AMOUNT OF \$113,400.00 FOR SERVICES TO HOMELESS AND NEEDY RESIDENTS IN FAYETTEVILLE IN 2023

WHEREAS, the Board of Directors of Seven Hills has operated a day time facility to serve numerous homeless and needy Fayetteville residents for over 18 years relying upon the support of several local churches, charities and charitable persons, as well as some governmental support (for veterans, etc.); and

WHEREAS, the Fayetteville City Council approved a funding request for the 2023 fiscal year to maintain the operations of the Seven Hills day center and, although funding for the center by donors has improved, a shortfall still exists that jeopardizes its ability to continue to offer vital services to Fayetteville's homeless residents; and

WHEREAS, if Seven Hills could no longer operate its Walker Family Residential Community transitional housing facility, currently housed citizens might become homeless again and have to live on the streets or in the woods; and

WHEREAS, if Seven Hills could no longer operate its day time facility, the large number of homeless residents who depend upon this facility for showers and washing, hot food, a warm place to stay during the day, as well as access to a telephone and other job assistance services could not find such comparable services elsewhere; and

WHEREAS, the facilities and services provided by Seven Hills are required to be continued and should continue to be supported by the City in order to prevent our homeless and needy residents from suffering undue hardship and deprivation.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:

Section 1: That the City Council of City of Fayetteville, Arkansas hereby determines an exceptional situation exists in which competitive bidding is deemed not feasible or practical and therefore waives the requirements of formal competitive bidding and approves a contract between the City of Fayetteville, Arkansas and Seven Hills Homeless Center in the amount of \$113,400.00 for services to homeless and needy Fayetteville residents and authorizes Mayor Jordan to sign this contract.



MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council
THRU: Susan Norton, Chief of Staff
FROM: Jared Rabren, Airport Director
DATE: December 27, 2022
SUBJECT: **AIRPORT TERMINAL BANQUET AREA OLLI LEASE AGREEMENT**

RECOMMENDATION:

The aviation division recommends approval and signature of the Mayor on a lease agreement between the City of Fayetteville and the University of Arkansas Osher Lifelong Learning Institute (OLLI) from January 1st, 2023 through December 31st, 2023.

BACKGROUND:

The University of Arkansas Osher Lifelong Learning Institute was founded by the Bernard Osher Foundation and provides affordable education opportunities to its members. They host several classes on life skills and other topics.

DISCUSSION:

The University of Arkansas Osher Lifelong Learning Institute requests space in the Airport Terminal Building to conduct classes for 2023. The space occupied by Osher consists of 3,924 square feet. OLLI has expressed interest in a permanent lease, but has to get U of A approval, which thus far has not been forthcoming. Due to their continued interest, we have agreed to lease them the space for a daily fee of forty-five dollars, with the understanding that they will have to vacate if a permanent tenant is procured. This arrangement has worked well in the past. OLLI has allowed us to use their furnishings, tables, and chairs when other groups have used this space when classes were not being taught. This agreement has been successful for both the Airport and OLLI while providing some funds for utilities and displaying our airport and its services to a section of the public that would not normally be exposed to Drake Field.

BUDGET/STAFF IMPACT:

The University of Arkansas Osher Lifelong Learning Institute will pay rent of \$45 per day to use the space based on the Airport's standard meeting room rental rate.

ATTACHMENTS: 2023 OLLI Lease Agreement SRF , 2023 Signed OLLI Lease Agreement, RES - LEASE AGREEMENT - UNIVERSITY OF ARKANSAS OSHER LIFELONG LEARNING INSTITUTE - 2023

City of Fayetteville Staff Review Form

2022-256

Item ID

1/3/2023

City Council Meeting Date - Agenda Item Only
N/A for Non-Agenda Item

Jared Rabren

12/13/2022

AIRPORT SERVICES (760)

Submitted By

Submitted Date

Division / Department

Action Recommendation:

The aviation division recommends approval and signature of the Mayor on a lease agreement between the City of Fayetteville and the University of Arkansas Osher Lifelong Learning Institute (OLLI) from January 1st, 2023 through December 31st, 2023.

Budget Impact:

Account Number

Fund

Project Number

Project Title

Budgeted Item? No

Total Amended Budget

\$ -

Expenses (Actual+Encum)

\$ -

Available Budget

\$ -

Does item have a direct cost? No

Item Cost

\$ -

Is a Budget Adjustment attached? No

Budget Adjustment

\$ -

Remaining Budget

\$ -

V20221130

Purchase Order Number:

Previous Ordinance or Resolution #

Change Order Number:

Approval Date:

Original Contract Number:

Comments:

Lease Agreement
between The City of Fayetteville, Arkansas
And
University of Arkansas, OSHER Lifelong Learning Institute

The purpose of this Lease Agreement is to establish an agreement between the City of Fayetteville, Arkansas (“City”) and the Board of Trustees of the University of Arkansas, acting for and on behalf of the University of Arkansas, OSHER Lifelong Learning Institute (“OLLI”) for the use of space available in the City’s Drake Field terminal building to conduct classes for the 2023 semesters.

1. **Leased Premises.** For and in consideration of the rents, covenants and agreements herein entered into and agreed upon by OLLI as obligations to the City, the City lets, leases and demises unto OLLI, subject to the terms and conditions contained herein, the following described property situated in Washington, County, Arkansas: Drake Field Terminal Building banquet area.

2. **Term.** This term shall commence on January 1, 2023, and shall end on December 31, 2023. The term of this lease may be terminated early by the City without cause only upon sixty (60) days prior written notice. The term of this lease may be extended only upon the mutual agreement of OLLI and the City.

3. **Rent.** OLLI agrees to pay to City of Fayetteville as rental for the term of this lease the sum of \$45.00 for each day it schedules the Leased Premises. OLLI is not required to use the Leased Premises for any minimum number of days each month. The Airport Administration Office will prepare an invoice following the end of each calendar month based on the number of days the Leased Premises are used by OLLI. Each monthly payment is due on or before the last day of the month in which the invoice is received. A late fee shall be imposed, at the highest rate allowable by law, on all payments which are not received by City of Fayetteville within sixty (60) business days from the due date.

4. **Use.** OLLI agrees to use the lease premises for classes, seminars or other events during regular operating hours of the Airport Terminal, which are 6:00 a.m – 10:00 p.m. Monday through Friday and 8:00 a.m – 8:00 p.m Saturday through Sunday. OLLI shall coordinate with the Airport Administration Office if the Leased Premises are required after 4:00 p.m Monday through Thursday or at any time Friday through Sunday. Classes and events shall be scheduled through the Airport Administration Office at least two weeks in advance. OLLI will notify the Airport Administration Office of any cancelled classes as soon as possible. Canceled classes more than 48 hours in advance will be removed with no charge. If the administration is not notified at least 48 hours in advance, OLLI will be charged for the classroom rental. An OLLI staff member or representative will be present at the beginning of a day’s classes to set up needed items and at the end of the day to clean up. OLLI is not required to dismantle or move its tables and chairs at the end of the day unless notified by the Airport Administration Office.

5. **Preemptive Use or Access by the City.** OLLI acknowledges that the Transportation Security Administration may require use of the Leased Premises for certain chartered flights that may interfere with OLLI's use. In the event of such preemption, the Airport Administration Office will make every effort to locate an alternative site at no additional cost to OLLI but makes no guarantees. OLLI shall not be responsible for the payment of rent for any days the Leased Premises are unavailable for a previously scheduled class or event, nor shall the City be liable to OLLI for any costs or expenses involved in rescheduling or relocating a class when the Leased Premises are required for use by the Transportation Security Administration or for maintenance issues.

6. **Access to Airport Terminal Amenities.** OLLI agrees that its tables and chairs may be used by the City or other organizations utilizing the Leased Premises at times not scheduled for OLLI's use. The City agrees to allow storage of media and other electronic equipment in the secured closet area in the Airport Terminal storage room as space allows. OLLI agrees that the City shall not be responsible for theft or damage of any OLLI property that is stored at the Airport Terminal. The restrooms near the post office are available for OLLI use.

7. **Restricted Areas.** Access by OLLI faculty, staff, students and guests to the Airport Flight Line (including but not limited to the apron, runway, hangars) is strictly prohibited.

OLLI faculty, staff, students and guests shall not enter any offices, rooms or areas not specifically designated for their use in paragraphs 4 and 6 above. This includes, but is not limited to, the flight planning area, pilot lounge areas, TV lounge and beverage station.

OLLI staff and students are not allowed the use the restrooms in the lobby area. OLLI staff and students will not gather or loiter in the Airport Terminal lobby area and shall enter into the Leased Premises as expeditiously as possible.

8. **Cleaning and Maintenance.** The City shall provide regular janitorial and maintenance services for the Leased Premises.

9. **Assignment.** OLLI shall not assign this lease or sublet the Leased Premises without prior written consent of the City of Fayetteville. Consent for any assignment or subletting shall only be considered at the same rates as established in Paragraph 3 above. Any such assignment or subletting shall in no way relieve OLLI from liability for the obligations imposed by this lease. OLLI may only be released from liability by a specific written release executed by the City.

10. **Holdover.** OLLI hereby agrees that upon termination of this lease by expiration or by earlier termination for any reason whatsoever, it will remove its property from the Airport Terminal immediately.

11. **Termination.** The City hereby reserves the right to terminate this lease at any time during the term of this lease if payment of rent in accordance with Paragraph 3 above is not received within five (5) business days from the due date. If the lease is terminated, OLLI will remove its property from the Airport Terminal immediately.

12. **Non-Waiver.** It is agreed that the failure of City to invoke any of the available remedies under this lease or under law in the event of one or more breaches or defaults by OLLI under the lease shall not be construed as a waiver of such provisions and conditions and shall not prevent the City from invoking such remedies in the event of any future breach or default.

13. **Succession.** This lease agreement shall inure to the benefit of and be binding upon the parties hereto and their respective heirs, successors and assigns.

14. **Severability.** Each paragraph of this lease agreement is severable from all other paragraphs. In the event any court of competent jurisdiction determines that any paragraph or subparagraph is invalid or unenforceable for any reason, all remaining paragraphs and subparagraphs will remain in full force and effect.

15. **Interpretation.** This lease agreement shall be interpreted according to and enforced under the laws of the State of Arkansas.

16. **Entire Agreement.** This lease agreement contains the entire agreement of both parties hereto, and no other oral or written agreement shall be binding on the parties hereto. This lease agreement supersedes all prior agreements, contracts and understandings of any kind between the parties relating to the subject matter hereof. This agreement may be executed in all or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

CITY OF FAYETTEVILLE:

BOARD OF TRUSTEES OF THE UNIVERSITY
OF ARKANSAS, ACTING FOR AND ON
BEHALF OF THE UNIVERSITY OF ARKANSAS,
OSHER LIFELONG LEARNING INSTITUTE

By: _____
LIONELD JORDAN, Mayor

By: _____

Printed Name: _____

Title: _____

Digitally signed by Ellen
Ferguson, Agency
Procurement Official, on
behalf of Board of Trustees
of the University of
Arkansas, acting for and on
behalf of the University of
Arkansas, Fayetteville
Date: 2022.11.30 16:03:02
-06'00'

ATTEST:

By: _____
KARA PAXTON, City Clerk Treasurer

RESOLUTION NO. _____

A RESOLUTION TO APPROVE A LEASE AGREEMENT WITH THE BOARD OF TRUSTEES OF THE UNIVERSITY OF ARKANSAS FOR THE UNOCCUPIED BANQUET AREA IN THE AIRPORT TERMINAL BUILDING TO BE USED BY THE OSHER LIFELONG LEARNING INSTITUTE TO CONDUCT CLASSES FROM JANUARY 1, 2023 THROUGH DECEMBER 31, 2023, IN THE AMOUNT OF \$45.00 FOR EACH DAY THE SPACE IS USED

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:

Section 1: That the City Council of the City of Fayetteville, Arkansas hereby approves a lease agreement with the Board of Trustees of the University of Arkansas for the unoccupied banquet area in the Airport Terminal building to be used by the Osher Lifelong Learning Institute to conduct its classes in 2023 in the amount of \$45.00 for each day the space is used.



MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council
THRU: Kit Williams, City Attorney
FROM: Blake Pennington, Assistant City Attorney
DATE: December 27, 2022
SUBJECT: **AMEND 130.39 GRAFFITI**

RECOMMENDATION:

BACKGROUND:

Council Member Turk has sponsored an item to amend §130.39 Graffiti of the Fayetteville Code to create a graffiti abatement program.

DISCUSSION:

BUDGET/STAFF IMPACT:

ATTACHMENTS: Agenda Request Amend 130.39 Graffiti, EXHIBIT A - 120622 ADDITIONAL INFORMATION HAND OUT 2022-1051, ORD REPEAL §130.39 GRAFFITI ENACT NEW

Legistar ID No.: 2022- 1051

AGENDA REQUEST FORM

FOR: Council Meeting of December 6, 2022

FROM: Council Member Teresa Turk

ORDINANCE OR RESOLUTION TITLE AND SUBJECT:

AN ORDINANCE TO AMEND §130.39 **GRAFFITI** IN THE *FAYETTEVILLE CODE* TO
CREATE A GRAFFITI ABATEMENT PROGRAM

APPROVED FOR AGENDA:



City Council Member
Teresa Turk

11/10/22

Date



Asst. City Attorney Blake Pennington
Approved as to form

11/14/22

Date

ORDINANCE NO. _____

AN ORDINANCE TO AMEND §130.39 **GRAFFITI** IN THE *FAYETTEVILLE CODE* TO
CREATE A GRAFFITI ABATEMENT PROGRAM

WHEREAS, the existence of graffiti on buildings, structures, such as fences or walls, or utility poles or boxes, located upon public or privately owned property viewable from a public or quasi-public place within the city is detrimental to property values, degrades the community, causes an increase in crime, is inconsistent with the city's property maintenance and aesthetic standards, and is a nuisance; and

WHEREAS, establishing a graffiti abatement program will enable the City to remove graffiti from public and privately owned property in addition to other remedies available to the City and to property owners.

**NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF
FAYETTEVILLE, ARKANSAS:**

Section 1: That the City Council of the City of Fayetteville, Arkansas hereby repeals §130.39 **Graffiti** of the *Fayetteville Code* in its entirety and enacts a new §130.39 **Graffiti** as shown in Exhibit A attached hereto and made a part hereof.

PASSED and APPROVED this 6th day of December, 2022.

APPROVED:

ATTEST:

By: _____
LIONELD JORDAN, Mayor

By: _____
KARA PAXTON, City Clerk/Treasurer

(A) *Definitions.*

- (1) Graffiti: For purposes of this section, the term "graffiti" shall mean any inscription, word, figure, design, symbol or insignia which is marked, etched, scratched, drawn, painted or otherwise affixed to or placed upon public or private property located within the city to the extent that the same is not approved by the owner.
- (2) Quasi-public place: Any place, privately owned, but to which the public is invited, which shall include, but is limited to, the following: commercial, industrial and business properties, stores, restaurants, bars, retail business establishments, multi-family housing complexes containing 24 units of more, and their adjoining or related parking areas.

(B) *Unlawful to Apply Graffiti; Penalty.* It shall be unlawful for any person to apply graffiti upon any public and privately owned structure located on public or privately owned real property within the city. Nothing contained herein shall prevent the city from pursuing any other remedy available for redress of any damage or injury caused by the action of any such person.

(C) *Declaration of graffiti as unsightly and a nuisance.* The existence of graffiti on buildings, structures, such as fences or walls, or utility poles or boxes, located upon public or privately owned property viewable from a public or quasi-public place within the city is detrimental to property values, degrades the community, causes an increase in crime, is inconsistent with the city's property maintenance and aesthetic standards, and is declared to be a nuisance.

(D) *Right of city to remove*

- (1) Whenever the city becomes aware, or is notified and determines that graffiti is so located on the exterior of a building or structure (including fences and walls), or utility box or pole, on public or privately owned property viewable from a public or quasi-public place within the city, the city shall be authorized to use public funds for the removal of graffiti from the entire exterior of the building or structure affected, or for the painting of graffiti from the entire exterior of the building affected, but shall not authorize or undertake to provide for the painting of any more extensive area than where the graffiti is located, unless the City determines that a more extensive area is required to be repainted in order to avoid an aesthetic disfigurement to the neighborhood or community.
- (2) All incidents of graffiti should be reported to the Police Department, who may investigate the crime and notify the owner of the property or the property owner's agent and/or any leasehold tenant or utility company, concerning the city's graffiti removal program. The Police Department may also provide information on how to contact the appropriate division or department for the removal of the graffiti. The Police Department may also notify the appropriate division or department of the exact location of the graffiti and the name of the person to be contacted. In the event the owner

- of the property or the property owner's agent and/or leasehold tenant or utility company cannot be reached after a period of two (2) business days since receiving the complaint, the city will then have the right to enter upon private property to the extent necessary to take corrective action.
- (3) Upon notification by the Police Department concerning the necessity to remove the graffiti, the city may make contact with the owner of the property or the property owner's agent, and/or any leasehold tenant and request that they sign a graffiti abatement identification and permission form allowing the city to enter on the property and remove the graffiti. The document will release the city, its officers, agents, and employees of and from any and all liability, claims, demands, causes of action, or obligations of whatsoever arising out of or in any way related to entry upon the property and for the removal of the graffiti. In the event the owner of the property or the property owner's agent and/or leasehold tenant or utility company cannot be reached after a period of two (2) business days since receiving the complaint and after contact has been attempted, the city will then have the right to enter upon private property to the extent necessary to take corrective action.
- (4) In the event the owner of the property or the property owner's agent, and/or any leasehold tenant refuses to sign the document which authorizes the city to remove the graffiti, the city may give or cause to be given notice to the owner of the property or the property owner's agent, and/or any leasehold tenant, to take corrective action and remove the graffiti from the property within two (2) business days from the date the notice is served. If the graffiti is not removed within two (2) business days after receipt of notice, then the city shall have the right to enter upon private property to the extent necessary to take corrective action to abate the nuisance.
- (5) In the event that graffiti is discovered and reported on private property such as buildings, structures, fences, walls, or utility poles/boxes, and after thorough documentation by the city, where it is not reasonable to find the property owner or the property owner's agent and/or leasehold tenant or utility company, or in cases where immediate removal of graffiti is deemed necessary (due to profanity, location, etc.), and since removal of graffiti in a timely manner is necessary, the city will then have the right to enter upon private property to the extent necessary to take corrective action.
- (6) In any case in which the city enters upon private property for the removal of graffiti without actual notice to the owner of the property or the property owner's agent and/or leasehold tenant, the city shall post a notice upon the front of the residence regarding the actions taken by the city to abate the nuisance.

(E) *Other remedies available to the city.* This section does not preclude the city from seeking the removal of graffiti through other available remedies, including those under the Arkansas criminal mischief statutes and the *International Property Maintenance Code*.

EXHIBIT A

130.39 - Graffiti

D 2
Additional Information
received during 12/6/22
City Council meeting

(A) Definitions.

(1) Graffiti: For purposes of this section, the term "graffiti" shall mean any inscription, word, figure, design, symbol or insignia which is marked, etched, scratched, drawn, painted or otherwise affixed to or placed upon any public right-of-way or public or private property located within the City to the extent that the same is not approved by the owner, owner's agent, or leasehold tenant.

(2) Quasi-public place: Any place, privately owned, but to which the public is invited, which shall include, but is not limited to, the following: commercial, industrial and business properties, stores, restaurants, bars, retail business establishments, multi-family housing complexes containing 24 units or more, and their adjoining or related parking areas.

(B) *Unlawful to apply graffiti.* It shall be unlawful for any person to apply graffiti upon any right-of-way or upon any public or privately owned structure located on public right-of-way or public or privately owned real property within the City. Nothing contained herein shall prevent the city from pursuing any other remedy available for redress of any damage or injury caused by the action of any such person.

(C) *Declaration of graffiti as unsightly and a nuisance.* The existence of graffiti on buildings, structures, such as fences or walls, or utility poles or boxes, located upon public right-of-way or public or privately owned property viewable from a public right-of-way or public or quasi-public place within the City is detrimental to property values, degrades the community, causes an increase in crime, is inconsistent with the City's property maintenance and aesthetic standards, and is declared to be a nuisance.

(D) *Right of city to remove graffiti.*

(1) Whenever the city becomes aware or is notified and determines that graffiti is located on the exterior of a building or structure (including fences and walls), or utility box or pole, on public right-of-way or on public or privately owned property viewable from a public, quasi-public place, or public right-of-way within the City, the City shall be authorized to use public funds for the removal of graffiti from the entire exterior of the building or structure affected, or for the painting over of graffiti from the entire exterior of the building affected.

(2) All incidents of graffiti should be reported to the Police Department, who may investigate the crime and notify the owner of the property or the property owner's agent and/or any leasehold tenant or utility company, concerning the City's graffiti removal program. The Police Department may also provide information on how to contact the appropriate division or

department for the removal of the graffiti. The Police Department may also notify the appropriate division or department of the exact location of the graffiti and the name of the person to be contacted.

- (3) Upon notification by the Police Department concerning the necessity to remove the graffiti, the City should contact the owner of the property or the property owner's agent, and/or any leasehold tenant and request that they sign a graffiti abatement identification and permission form allowing the City to enter on the property and remove the graffiti.
 - (4) In the event the City verifies that the owner of the property or the property owner's agent, and/or any leasehold tenant has not approved the graffiti but refuses to sign the document which authorizes the City to remove the graffiti, the City should give or cause to be given notice to the owner of the property or the property owner's agent, and/or any leasehold tenant to take corrective action and remove the graffiti from the property within two (2) business days from the date the notice is served. If the graffiti is not removed within two (2) business days after service of notice, and the owner, tenant or their agent has not filed a written objection to the removal of the graffiti with the City Clerk within two business days after notice, then the City shall have the right to enter upon private property to the extent necessary to take corrective action to abate the nuisance.
 - (5) If the owner, tenant, or their agent has filed a written objection to the City's removal of the graffiti including accurate contact information within two (2) business days with the City Clerk, the Chief of Staff or designee shall hold a due process hearing within a week after attempted notice to the appellant using the provided accurate contact information. The Chief of Staff or designee shall inform the appellant of the reasons for the planned graffiti removal during the due process hearing and give the appellant an opportunity to respond and justify the non-removal of the suspected graffiti.
- (E) *Other remedies available to the City.* This section does not preclude the city from seeking the removal of graffiti through other available remedies, including those under the Arkansas criminal mischief statutes and the *International Property Maintenance Code*.

ORDINANCE NO. _____

AN ORDINANCE TO AMEND §130.39 **GRAFFITI** IN THE *FAYETTEVILLE CODE* TO
CREATE A GRAFFITI ABATEMENT PROGRAM

WHEREAS, the existence of graffiti on buildings, structures, such as fences or walls, or utility poles or boxes, located upon public or privately owned property viewable from a public or quasi-public place within the city is detrimental to property values, degrades the community, causes an increase in crime, is inconsistent with the city's property maintenance and aesthetic standards, and is a nuisance; and

WHEREAS, establishing a graffiti abatement program will enable the City to remove graffiti from public and privately owned property in addition to other remedies available to the City and to property owners.

**NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF
FAYETTEVILLE, ARKANSAS:**

Section 1: That the City Council of the City of Fayetteville, Arkansas hereby repeals §130.39 **Graffiti** of the *Fayetteville Code* in its entirety and enacts a new §130.39 **Graffiti** as shown in Exhibit A attached hereto and made a part hereof.



MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council
THRU: Kit Williams, City Attorney
FROM: Blake Pennington, Assistant City Attorney
DATE: December 27, 2022
SUBJECT: **ADOPT THE 2023 RULES OF ORDER AND PROCEDURE**

RECOMMENDATION:

BACKGROUND:

The City Council re-adopts the Rules of Order and Procedure of the Fayetteville City Council at the beginning of every year as recommended by the Arkansas Municipal League.

DISCUSSION:

The City Attorney's Office has drafted the appropriate Resolution to do so again on January 3, 2023. The *Rules of Order and Procedure* of the Fayetteville City Council were last revised on December 6, 2022 by Resolution 289-22.

BUDGET/STAFF IMPACT:

N/A

ATTACHMENTS: Rules of Order and Procedure - Last Revised December 6, 2022 by Res 289-22, RES ADOPT RULES OF ORDER AND PROCEDURE FOR 2023, SRF - Rules of Order

RULES OF ORDER AND PROCEDURE OF THE FAYETTEVILLE CITY COUNCIL

A. CITY COUNCIL MEETINGS

1. Regular Meetings

The City Council shall meet in regular session on the first and third Tuesday of each month at 5:30 P.M. When a holiday or general election occurs on any such Tuesday, the regular meeting shall be held on the following Thursday at the same hour unless otherwise provided for by motion. The regular meeting time may be rescheduled by the City Council in special circumstances, but when so done the change must be made far enough in advance to allow normal public notification.

2. Location

The place of City Council meetings shall be in the City Council Chambers in the City Hall unless another place has been previously set by the City Council.

3. Special Meetings

Special meetings may be called by three or more members of the City Council or by the Mayor. Notification of a special meeting, including specific items to be considered, shall be at least two hours prior to the meeting. Such notification shall be by personal service to each member or by telephone, specifying time and place of meeting.

4. Executive Session

An executive session may be requested by any member of the City Council or the Mayor. A majority vote by the City Council is required to convene in executive session. Executive sessions will be permitted only for the purpose of considering the employment, appointment, promotion, demotion, disciplining, or resignation of any public officer or employee.

5. Quorum

A majority of the City Council shall be necessary to constitute a quorum to do business at a City Council meeting. The concurring vote of a majority of those attending a meeting shall be sufficient to pass procedural motions except a Motion to Suspend the Rules which requires six affirmative votes. Ordinances and Resolutions require five affirmative votes to pass.

6. Public Notification

The City will go further than legally required in order to inform citizens of the items to be considered by the City Council. The means used may include press releases or advertisements in a local newspaper, special notice to citizens who have shown a direct interest in matters to be

considered, Government Channel announcements and presentation, and agenda copies available at City Council meetings.

7. Presentation of Agenda Items at City Council Meetings

a. Agenda Items not Included Within the Tentative Agenda Packet.

(1) Staff Agenda Items. If the City staff requests to “walk-on” an agenda item for the City Council Agenda during the City Council Agenda Session, the memo from the City staff shall begin with a clear and compelling reason why this proposed agenda item could not have been included within the Tentative Agenda and cannot wait for City Council consideration at a later City Council meeting. Any member of the City Council including the Mayor can then place this item on the Final Agenda.

(2) Council Member Agenda Items. Council Members should also strive to include any agenda item a Council Member wishes the City Council to consider within the Tentative Agenda. If that is not possible, the Council Member should explain during the Agenda Session why the proposed agenda item should be included in the Final Agenda rather than postponed to the next meeting. Any member of the City Council including the Mayor can then place this item on the Final Agenda.”

b. Agenda Additions. A new item which is requested to be added to the agenda at a City Council meeting should only be considered if it requires immediate City Council consideration and if the normal agenda setting process is not practical. The City Council may only place such new item on the City Council meeting’s agenda by suspending the rules by two-thirds vote. Such agenda addition shall be heard prior to the Consent Agenda.

c. Consent Agenda. Consent Agenda items shall be read by the Mayor and voted upon as a group without discussion by the City Council. If a Council Member wishes to comment upon or discuss a Consent Agenda item that item shall be removed and considered immediately after the Consent Agenda has been voted upon.

d. Unfinished Business and New Business.

(1) Overview Period. Agenda items at a City Council meeting shall be introduced by the Mayor and, if an ordinance, read by the City Attorney. City staff shall then present a report. An agenda applicant (city contractor, rezoning or development applicant, etc.) may present its proposal only during this presentation period, but may be recalled by a Council Member later to answer questions. City staff, Council Members and applicants may use electronic visual aids in the City Council meeting as part of the presentation of the agenda item. City staff’s presentation and an Applicant’s presentation whether presented by one or more than one presenter shall each be limited to a maximum of ten (10) minutes unless the City Council by unanimous consent or majority vote allows additional time.

(2) **Public Comments.** Public comment at a City Council meeting shall be allowed for all members of the audience who have signed up prior to the beginning of the agenda item they wish to address being opened for public comment. Speakers present in the City Council Chambers shall be recognized before speakers participating by electronic means. Speakers shall be limited to a maximum of five (5) minutes to discuss the agenda item being considered by the City Council. Amendments may receive public comments only if approved by the City Council by unanimous consent or majority vote. If public comment is allowed for an amendment, speakers will only be allowed to speak for three (3) minutes. The City Council may allow both a speaker additional time and an unsigned-up person to speak by unanimous consent or majority vote. As part of a person's public comments allowed above, the speaker may use electronic visual aids during their five (5) minutes presentation period concerning the agenda item being considered by the City Council.

e. **Courtesy and Respect.** All members of the public, all city staff and elected officials shall accord the utmost courtesy and respect to each other at all times. All shall refrain from comments that are harassing or amount to a personal attack against any identifiable individual including abusive comments and derogatory remarks about integrity or offer any other comments that are also not limited to the discussion of the specific agenda item being considered by the City Council. Any member of the public who violates these standards shall be ruled out of order by the Mayor, must immediately cease speaking and shall leave the podium.

8. **Smoking Prohibited.**

There will be no smoking allowed in the City Council Chambers during City Council meetings.

9. **Cell Phones and Pagers.**

Cell phones must be turned off or put in silent mode and not used within the City Council Chambers during City Council meetings. Pagers must be turned off or put in silent mode within the City Council Chambers during City Council meetings. These restrictions also apply during Agenda Sessions.

10. **Virtual City Council Meetings Authorized**

After proper notice has been provided to the public, City Council Members are authorized to assemble, gather, meet, and conduct open public meetings (including speaking, voting and passing ordinances and resolutions) through appropriate electronic means which ensure the public's right to attend by being able to listen to the proceedings and discussions. These open public meetings include City Council meetings and agenda sessions as well as City Council Member Committee meetings.

B. DUTIES AND PRIVILEGES OF COUNCIL MEMBERS AT CITY COUNCIL MEETINGS

1. Seating

Members shall occupy the respective seats in the City Council Chambers assigned by position number. The Mayor (or Assistant Mayor in the Mayor's absence) shall be seated near the center of the City Council table.

2. Conduct

During City Council meetings, Council Members shall preserve order and decorum and shall neither by conversation or otherwise delay or interrupt the proceedings. Neither shall they refuse to obey the orders of the Mayor or the rules of the City Council.

Every member of the City Council desiring to speak shall address the chair and, upon recognition by the Mayor, shall confine herself or himself to the question under debate and shall avoid all personalities and indecorous language. A Council Member once recognized shall not be interrupted while speaking unless called to order by the Mayor, unless a point of order is raised by another member or unless the member chooses to yield to questions from another member.

If a member is called to order while he or she is speaking, the member shall cease speaking immediately until the question of order is determined. If ruled to be not in order, the member shall remain silent or shall alter his or her remark so as to comply with the rules of the City Council.

All members of the City Council shall accord the utmost courtesy to each other, to city employees, and to members of the public appearing before the City Council, and shall refrain at all times from rude or derogatory remarks, reflections as to integrity, abusive comments and statements as to motives and personalities. Council Members shall confine their questions as to the particular matters before the City Council and in debate shall confine their remarks to the issues before the City Council.

3. Financial Interest

No member of the City Council with a direct or indirect financial interest in any items before the City Council shall participate in the discussion of or voting on such matter.

4. Voting

Every member present when a question is put to a vote shall vote either "yes" or "no", except that a member may abstain from voting if he or she has not participated in the preceding discussion of the question and if that member has previously stated the reason for the abstention. Except for a question necessary to clarify the meaning of the motion, resolution or ordinance being voted upon, no questions or comments by members of the City Council including the Mayor shall be made

during the voting on the pending motion, resolution or ordinance. The Council Members will vote at City Council meetings in the order of their position number, but with a progressively different position voting first at each meeting.

5. Roll Call

Upon every vote the affirmative and negative votes shall be called and shall be recorded on every motion, resolution and ordinance; however, items which may be approved by motion, or contracts and leases which can be approved by resolution, may be grouped together and approved simultaneously with one roll call, under a "Consent Agenda.

C. MAYOR & VICE MAYOR

1. Mayor

a. General Power to Preside and Vote

The Mayor is the presiding officer and ex officio president of the City Council. The Mayor may vote to establish a quorum or to pass an ordinance, resolution or motion if the Mayor's vote is needed for passage. The Mayor does not have the right to vote for an Emergency Clause on an ordinance. An Emergency Clause requires six affirmative votes by the City Council to pass.

b. Mayor's Veto Power

The Mayor has the power to veto any ordinance, resolution or order, or part thereof, adopted by the City Council within five (5) days (Sundays excluded) of the City Council vote. Before the next City Council meeting, the Mayor shall file in the City Clerk's office a written statement of reasons for the veto. At the first City Council meeting following the veto, the City Council can override the veto by two-thirds majority (6 affirmative votes).

2. Vice Mayor

The City Council shall at the time of organizing, in public session, elect one of its members as Vice Mayor. Any Council Member may nominate himself or herself or any other member of the City Council for Vice Mayor, and no second of a nomination is required. Each Council Member shall vote by naming his or her choice by voice vote if there is more than one nominee for a position. A majority vote of the City Council shall be required for election. In the absence of the Mayor, the Vice Mayor shall preside at the City Council meeting.

3. Privileges of the Vice Mayor

The Vice Mayor acting as the Mayor may move, second and debate from the chair and shall not be deprived of the rights and privileges of being a member of the City Council by reason of her or his acting as the Vice Mayor.

D. PROCEDURES AND PARLIAMENTARY RULES

1. Agenda

The City Council's agenda order shall be coordinated by the Mayor. All items for discussion or action at the regular council meeting shall be included in a Tentative Agenda provided to City Council prior to an Agenda Session where the City Council shall determine the final arrangement of the Agenda. Any item the Mayor or a Council Member wishes to include on the Final Agenda that was not included on the Tentative Agenda may only be added to the Final Agenda during the Agenda Session. At the regular meeting of the City Council, the Council, by majority vote, may rearrange the order of the Agenda. An item may be added to the Agenda at the City Council meeting only by a Motion to Suspend the Rules.

2. Precedence of Motions

The City Council shall follow the precedence and classification of motions as given in the most recent edition of the Arkansas Municipal League's 'Procedural Rules for Arkansas Municipal Officials.' In the event a matter is not covered by the 'Procedural Rules for Arkansas Municipal Officials,' the most recent edition of Robert's Rules of Order shall apply. On questions of appeal, a majority of those present is required to overturn a ruling by the chair."

3. Motions to be Stated by the Chair/Withdrawal

When a motion is made and seconded, it shall be stated by the Mayor before debate. After being stated by the Mayor, a motion may not be withdrawn by the mover without the consent of the member seconding it and approval of the City Council.

4. Reconsideration

After the decision of any question, any member of the prevailing side may request a reconsideration of any action at the same or the next succeeding meeting; provided, however, that a resolution authorizing or relating to any contract may be reconsidered at any time before final execution thereof. A motion to reconsider requires a simple majority for passage. After a motion for reconsideration has once been acted on, no other motion for reconsideration thereof shall be made without unanimous consent.

5. Readings

All ordinances shall be read aloud at three different meetings unless the City Council votes to suspend the rules.

The following guidelines for reading ordinances are recommended:

- ◆ After the ordinance's first reading, a Council Member may briefly point out potential concerns or benefits from the proposed ordinance, but should refrain from attempting to persuade each other or arrive at a final consensus.
- ◆ Unless there is clearly no opposition or concern about the ordinance, it should be read and open for public discussion during at least two City Council meetings.
- ◆ Complex ordinances that need further clarification or drafting work should be referred to the Ordinance Review Committee.

6. Items Tabled Indefinitely

Any item tabled indefinitely may be taken from the table by majority vote of the City Council during the calendar year in which it was tabled indefinitely. All items tabled indefinitely and remaining on the table at the end of the calendar year shall be deemed denied and rejected for appellate and all other purposes on December 31st and shall not be considered by the City Council in the future unless brought forward as a new item.

E. INTERNAL BOARDS, COMMITTEES, COMMISSIONS AND APPOINTMENTS

1. Membership of Internal Boards, Committees, Commissions and Appointments

a. Standing City Council Committees.

The five standing committees of the City Council are: Equipment, Nominating, Ordinance Review, Streets, and Water and Sewer. Each committee shall have four Council Members appointed by the Mayor in January after every regular election. All Council Members shall serve on at least two of these five committees. Each committee shall elect a chair and vice chair during the first committee meeting after the Council Members are appointed.

b. Other Committees (See also Section H. Citizens Committees)

Council Members may volunteer or request to serve on any of the various other committees which have City Council slots. The Mayor may appoint a Council Member to the other committees pursuant to their request.

c. Appeal Right to City Council

Any Council Member who is dissatisfied with his or her committee assignments can appeal to the whole City Council who can determine by majority vote which Council Member will be appointed to a specific committee.

d. Ad Hoc Committees.

Ad hoc committees may be appointed either by the Mayor or by a majority vote of the City Council to study special problems and projects of the City.

2. Notification and Attendance

All Council Members, representatives of the news media who have requested notification, and other persons who have shown a direct interest in matters to be considered at a committee meeting shall be notified of City Council committee meetings.

Committee meetings shall be held when possible at times that allow all members of the committee to attend. In order for a committee to make an official recommendation to the City Council, a majority of the committee members must agree on that recommendation. Council Members who are not members of a particular City Council committee may generally participate in the meeting of that committee except for voting on committee recommendations, but the chairperson may rule otherwise.

3. City Council Representation on Other Governmental Groups

When it is necessary to appoint a Council Member to an external board, commission or committee, selection of that Council Member shall be made by a majority vote of the City Council. That selection shall be made by nomination and vote in a public session. Any Council Member may nominate himself or herself or (any other member of the City Council), and no second is required. Each Council Member shall vote by naming his or her choice by voice vote if there is more than one nominee for a position. A majority vote of the City Council shall be required for election.

F. MAYOR RELATIONSHIP

1. Definition of Authority

In exercising its legislative responsibilities, the City Council may approve policy which represents broad statements of its intentions, approve plans and programs, and manage the financial aspects of the city through its budgetary powers. The Mayor is empowered to hire capable personnel within the approved wage and salary policy, to plan and establish schedules and to train, supervise and terminate employees.

2. Definition of Responsibilities

The Mayor has the principal responsibility for directing the operations of the city government, and for advising and assisting the City Council in its deliberations. In connection with this latter responsibility, the City Council expects and requests the Mayor shall furnish the City Council with whatever data, information and material it may need to properly carry out its functions in an informed manner. The City Council also expects the Mayor to abide by the City of Fayetteville Code of Ethics.

3. City Council/Mayor Cooperation

Efficient management of the city can exist only through mutual understanding and complete cooperation between the City Council and the Mayor. The Mayor's performance cannot be of the best unless the Mayor is given the latitude to exercise independent judgment in executing policies of the City Council. The City Council acknowledges that obligation and gives the Mayor the latitude of judgment and discretion, and expects faithful performance in carrying out the policies of the City Council.

While open communication between the City Council and City personnel is encouraged, it shall be understood that administrative authority for the management of the City rests with the Mayor. Members of the City Council should refrain, as individuals, from giving specific direction or instruction to City personnel pertaining to the discharge of assigned duties.

G. CODE OF ETHICS

1. General

As the governing authority of the City of Fayetteville, Arkansas we, the Mayor and Council Members, adhere to the following ethics principles and pledge to conduct our affairs accordingly:

- Serve others, not ourselves.
- Use resources with efficiency and economy.
- Treat all people fairly.
- Use the power of our position for the well-being of our constituents.
- Create an environment of honesty, openness and integrity.

2. Business Transactions

Members of the City Council and the Mayor occupy positions of public trust. All business transactions of such officials dealing in any manner with public funds, either directly or

indirectly, must be subject to the scrutiny of public opinion both as to the legality and to the propriety of such transactions.

3. Conflict of Interest

Members of the City Council and the Mayor shall refrain from making use of special knowledge or information before it is made available to the general public; shall refrain from making or influencing decisions involving business associates, customers, clients, competitors and immediate family members and shall comply with all lawful actions, directives and orders of duly constituted municipal officers as such may be issued in the normal and lawful discharge of the duties of these municipal officers. Nothing herein, however, shall serve to deny the members of the City Council and the Mayor of the legal rights and privileges available to all Fayetteville citizens.

4. Responsibility to All Citizens

Members of the City Council and the Mayor shall conduct themselves so as to bring credit upon the city as a whole and so as to set an example of good ethical conduct for all citizens of the community. The members of the City Council and the Mayor shall bear in mind at all times that their responsibility is to the entire electorate, citizens and residents of Fayetteville, shall refrain from actions benefiting special interest groups at the expense of the citizens, residents and the city as a whole, and shall do everything in their power to ensure equal and impartial law enforcement throughout the city without respect to race, creed, color, gender, sexual orientation, religion, gender identity or the economic or social position of individual citizens.

In an effort to allow the public full knowledge of financial and personal interests, the Members of the City Council and the Mayor are expected to disclose annually all real estate holdings in Fayetteville and the Fayetteville planning area, and any business or financial interest which could affect or be affected by decisions of the City Council. Such disclosure should be made in writing to the City Clerk in January of each year.

H. CITIZEN COMMITTEES

1. Authorization by the City Council

The City Council may authorize citizen advisory boards, committees and commissions to assist the City Council in discharging its responsibilities more effectively. Authorization will be made by majority vote of the City Council.

2. Selecting of Members

The Nominating Committee shall have the responsibility of coordinating the selection process of members for the citizen advisory groups prior to the final City Council decision. The objectives of the selection process shall be as follows: To provide a broad diversity of qualified individuals for

service on the appointed bodies; and to provide an opportunity for participation in city affairs by interested citizens.

The selection process shall follow these procedures:

- a. Periodic news releases and articles, generally at least two weeks in advance of appointments, requesting interested individuals to notify the City Clerk's office of their interest in being considered for appointment. Application forms should be completed by each person who expresses an interest in a position.
- b. Council Members, city staff members and interested individuals and organizations who know of qualified persons should encourage them to apply for appointment.
- c. Cable television should be used to notify citizens of vacancies in citizen committees.
- d. The City website, accessfayetteville.org, should list vacancies in citizen committees.
- e. Any person who has served two consecutive full terms on any City commission or board shall not be eligible for reappointment to the same commission or board until one full term of office has expired, unless there is an insufficient number of qualified applicants to fill all vacancies. Service of a partial term shall not count against the two terms that are allowed.

Prior to any appointment, the City Clerk's office will circulate to the full City Council copies of applications of the individuals on file for the appointive body. Council Members may recommend applicants or offer comments to the Nominating Committee prior to their scheduled meeting.

The Nominating Committee will narrow the list of prospective appointees to no more than two individuals for each position. This decision will be made in an open meeting. The recommendations will be submitted to the full City Council for final decision. The committee's first choice may be indicated. All positions shall be decided by majority vote of the City Council. In instances where there is more than one nominee for a position, either by Nominating Committee recommendation or by other nominations, each Council Member shall vote by naming his or her choice for that position. The City Council will act officially on all appointments in public session.

I. Vacancy in the Office of a Council Member

A vacancy in the office of a Council Member shall be filled pursuant to the requirements of Ark. Code Ann. § 14-43-411.

J. Orientation of New Council Members

1. **Orientation Meeting Scheduled.** The City Council, Mayor, City Attorney, City Clerk/Treasurer and appropriate City Staff shall meet with and conduct one or more orientation sessions with newly elected Council Member's in December after each General Election or within one month after a

Special Election in which a new Council Member is elected. Each newly elected Council Member shall attend the orientation session(s).

2. **Content of Orientation.** The City Council, Mayor and other members of the orientation group shall explain:

- a. Rights and duties of Council Members;
- b. Organizational structure of city government;
- c. Role of the City Council Committees;
- d. How to initiate Resolutions and Ordinances;
- e. The purpose and procedure for the City Council Agenda session;
- f. Reasons to approve or disapprove land use and development issues;
- g. Council tours to view and discuss land proposed for rezoning or development;
- h. City Council Rules of Order and Procedure;
- i. Freedom of Information Act requirements.

3. **Ongoing Orientation.**

- a. Within the first week of a Council Member's term, the administration should provide an administrative and human resources orientation to include issuing parking permits, fobs, and other necessary equipment for the Council Member, as well as assistance for the completion of all necessary state and federal documents.
- b. Within the first quarter of a Council Member's term, the administration should arrange for a budget overview and tours of all major city facilities and functional areas.

RESOLUTION NO. _____

A RESOLUTION TO ADOPT THE RULES OF ORDER AND PROCEDURE OF THE
FAYETTEVILLE CITY COUNCIL FOR 2023

**BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE,
ARKANSAS:**

Section 1: That the City Council of the City of Fayetteville, Arkansas hereby adopts the **Rules
of Order and Procedure of the Fayetteville City Council** for 2023 as attached to this
Resolution.

City of Fayetteville Staff Review Form

2022-271

Item ID

1/3/2023

City Council Meeting Date - Agenda Item Only
N/A for Non-Agenda Item

Blake Pennington

12/20/2022

CITY ATTORNEY (021)

Submitted By

Submitted Date

Division / Department

Action Recommendation:

City Council approval of a resolution adopting the Rules of Order and Procedure of the Fayetteville City Council for 2023

Budget Impact:

Account Number

Fund

Project Number

Project Title

Budgeted Item? No

Total Amended Budget

\$ -

Expenses (Actual+Encum)

\$ -

Available Budget

\$ -

Does item have a direct cost? No

Item Cost

\$ -

Is a Budget Adjustment attached? No

Budget Adjustment

\$ -

Remaining Budget

\$ -

V20221130

Purchase Order Number:

Previous Ordinance or Resolution #

Change Order Number:

Approval Date:

Original Contract Number:

Comments:



MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council
THRU: Susan Norton, Chief of Staff
FROM: Timothy Nyander, Utilities Director
Paul Becker, Chief Financial Officer
DATE: December 27, 2022
SUBJECT: DEFER WATER AND SEWER RATE INCREASES FOR 2023

RECOMMENDATION:

Recommendations will be brought to the City Council in the spring of 2023.

BACKGROUND:

An automatic 3% annual cost increase in water and sewer rates is required by the current Water and Sewer Rate Ordinance. The City Administration, through the Water and Sewer Committee, is currently working on a new Water and Sewer Rate Study which is being conducted by Black and Veatch consultants.

DISCUSSION:

Although the rate study has not yet been finalized, it is anticipated that recommendations will be brought to the City Council in the spring of 2023 for consideration. The automatic annual increase and rate study recommendations would result in two separate rate changes in a short time period on City utility system water and sewer customers. Therefore, to avoid confusion and multiple financial adjustments, it is recommended that the annual 3% cost adjustment for January 2023 be waived. Water and Sewer rates would then be changed later in 2023 in accordance with the new study as adopted by the City Council.

BUDGET/STAFF IMPACT:

This request would maintain water and sewer revenue at current levels in 2023 until new water and sewer rates are adopted and become effective.

ATTACHMENTS: 2022-266 SRF WS Rate Increase Waive, ORD AMEND SECTIONS 51.136 AND 51.137 TO DELAY RATE INCREASES FOR 2023

City of Fayetteville Staff Review Form

2022-266

Item ID

1/3/2023

City Council Meeting Date - Agenda Item Only
N/A for Non-Agenda Item

Tim Nyander & Paul Becker

12/15/2022

CHIEF FINANCIAL OFFICER (110)

Submitted By

Submitted Date

Division / Department

Action Recommendation:

REQUEST TO AMEND TITLE V PUBLIC WORKS ORDINANCE SECTION 51.136 MONTHLY WATER RATES AND SECTION 51.137 MONTHLY SEWER RATES TO WAIVE ANNUAL 3% RATE INCREASE FOR JANUARY 2023

Budget Impact:

Account Number

Fund

Project Number

Project Title

Budgeted Item? No

Total Amended Budget

\$ -

Expenses (Actual+Encum)

\$ -

Available Budget

\$ -

Does item have a direct cost? No

Item Cost

\$ -

Is a Budget Adjustment attached? No

Budget Adjustment

\$ -

Remaining Budget

\$ -

V20221130

Purchase Order Number:

Previous Ordinance or Resolution #

Change Order Number:

Approval Date:

Original Contract Number:

Comments:

ORDINANCE NO. _____

AN ORDINANCE TO AMEND § 51.136(A)(2), § 51.136(B)(2), § 51.136(C)(2), § 51.137(A)(2), § 51.137(B)(2), AND § 51.137(E)(3) OF THE FAYETTEVILLE CITY CODE TO DEFER WATER AND SEWER RATE INCREASES FOR 2023 UNTIL AFTER THE ADOPTION OF A NEW RATE STUDY, AND TO DECLARE AN EMERGENCY

WHEREAS, various provisions within § 51.136 **Monthly Water Rates** and § 51.137 **Monthly Sewer Rates** provide for an automatic 3% cost increase in water and sewer rates at the beginning of each year; and

WHEREAS, the new Water and Sewer Rate Study which is being conducted by Black and Veatch consultants is expected to be brought before the City Council in the Spring of 2023; and

WHEREAS, to avoid the potential of making two financial adjustments on utility system water and sewer customers within a few months staff recommends that the City Council defer the annual 3% cost adjustment that would take effect in January 2023 until the Black and Veatch rate study.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:

Section 1: That the City Council of the City of Fayetteville, Arkansas hereby amends §51.136(A)(2), § 51.136(B)(2), § 51.136(C)(2), § 51.137(A)(2), § 51.137(B)(2), and § 51.137(E)(3) by adding the following sentence to the end of each subsection as follows:

“No rate or service charge adjustment shall occur in 2023 until after the completion of a new rate study.”

Section 2: That the City Council of the City of Fayetteville, Arkansas hereby determines that this ordinance should become effective without delay because of the potential burden rate increases could place on the City’s water and sewer customers and to avoid water cutoffs that could occur as a result of rate increases, which is necessary for the public peace as well as the health and safety of Fayetteville residents. Therefore, the City Council hereby declares an emergency exists such that this ordinance shall become effective immediately upon its passage and approval.



MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council
THRU: Susan Norton, Chief of Staff
FROM: Timothy Nyander, Utilities Director
DATE: December 27, 2022
SUBJECT: **REPEAL ORD 3696/WAIVE COMPETITIVE BIDDING FOR UTILITIES DEPARTMENT PURCHASES**

RECOMMENDATION:

Staff recommends approving an ordinance to repeal Ordinance No. 3696 and to waive formal competitive bidding and the requirement to obtain three quotes for pipes, pipe fittings, hardware, coating, water meters, fire hydrants, manholes and their covers and fittings through December 31, 2026.

BACKGROUND:

The Water & Sewer Department must quickly react to the unforeseen need for many types and sizes of plumbing repair fittings, hardware, and pipes in order to immediately repair water and sewer mains throughout Fayetteville, Farmington, Greenland, Johnson, and certain areas of the county. The Water & Sewer Department has been operating pursuant to Ordinance No. 3696 passed in 1993 which waived competitive bidding for such pipes, fittings, and hardware because suppliers would not provide a reasonable price for such items on an annual basis.

DISCUSSION:

Ordinance No. 3696 did not cover all of the different pipes, pipe fittings, hardware made from numerous materials now needed by the Water & Sewer Department and the original Ordinance should be repealed and replaced with this proposed ordinance.

Suppliers for these emergency repair items will not agree to long term pricing, so competitive bidding is not feasible and some parts might be available only from a single source so obtaining more than one quote might be impossible. Supplies of these items in storage can be exhausted by large repair projects such that their replenishment must be accomplished quickly to be ready for the next required repair project.

BUDGET/STAFF IMPACT:

Staff recommends an ordinance to repeal Ordinance No. 3696 and to authorize the City to waive any requirement for competitive bidding or more than one quote to purchase plumbing pipes, fittings, water meters, and hardware needed by the Water and Sewer Department through 2026.

ATTACHMENTS: ORD - REPEAL ORDINANCE NO. 3696

Mailing address:

113 W. Mountain Street
Fayetteville, AR 72701

www.fayetteville-ar.gov

ORDINANCE NO. _____

AN ORDINANCE TO REPEAL ORDINANCE NO. 3696 AND TO AUTHORIZE THE CITY TO WAIVE ANY REQUIREMENT FOR COMPETITIVE BIDDING OR MORE THAN ONE QUOTE TO PURCHASE PLUMBING PIPES, FITTINGS, WATER METERS, FIRE HYDRANTS, MANHOLES AND THEIR COVERS, COATINGS, AND HARDWARE NEEDED BY THE WATER AND SEWER DEPARTMENT THROUGH 2026

WHEREAS, the Water and Sewer Department must quickly react to the unforeseen need for many types and sizes of plumbing repair fittings, hardware and pipes in order to immediately repair water and sewer mains throughout Fayetteville, Farmington, Greenland, Johnson, and certain areas of the county; and

WHEREAS, suppliers for these emergency repair items will not agree to long term pricing so competitive bidding is not feasible and some parts might be available only from a single source so obtaining more than one quote might be impossible; and

WHEREAS, supplies of these items in storage can be exhausted by large repair projects such that their replenishment must be accomplished quickly to be ready for the next required repair project; and

WHEREAS, the Water and Sewer Department has been operating pursuant to Ordinance No. 3696 passed in 1993 which waived competitive bidding for such pipes, fittings and hardware because suppliers would not provide a reasonable price for such items on an annual basis; and

WHEREAS, Ordinance No. 3696 did not cover all of the different pipes, pipe fittings, hardware made from numerous materials now needed by the Water and Sewer Department and should be repealed and replaced with this ordinance.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:

Section 1: That the City Council of the City of Fayetteville, Arkansas hereby repeals Ordinance No. 3696.

Section 2: That the City Council of the City of Fayetteville, Arkansas hereby determines that an exceptional situation exists for the emergency purchase of repair products by the Water and Sewer Department for which competitive bidding and/or obtaining multiple quotes are deemed not feasible or practical and therefore waives the requirements for formal competitive bidding and/or obtaining multiple quotes for pipes, pipe fittings, hardware, coating, water meters, fire hydrants, manholes and their covers and fittings through December 31, 2026.



MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council
THRU: Kit Williams, City Attorney
FROM: Blake Pennington, Assistant City Attorney
DATE: December 27, 2022
SUBJECT: **WELCOMEHEALTH SUBRECIPIENT AGREEMENT**

RECOMMENDATION:

BACKGROUND:

Council Member D'Andre Jones is sponsoring a resolution to approve ARPA funding for WelcomeHealth to provide no-cost medical and dental care to low-income, uninsured Fayetteville residents.

DISCUSSION:

BUDGET/STAFF IMPACT:

Budget adjustment attached

ATTACHMENTS: WelcomeHealth - ARPA Funds - Council Member Jones-signed, BUDGET ADJUSTMENT

AGENDA REQUEST FORM

FOR: Council Meeting of January 3, 2023

FROM: Council Member D'Andre Jones

ORDINANCE OR RESOLUTION TITLE AND SUBJECT:

A RESOLUTION TO AUTHORIZE MAYOR JORDAN TO SIGN A SUBRECIPIENT AGREEMENT WITH WELCOMEHEALTH TO PROVIDE NO-COST MEDICAL AND DENTAL CARE TO LOW INCOME FAYETTEVILLE RESIDENTS UTILIZING AMERICAN RESCUE PLAN ACT FUNDS IN THE AMOUNT OF \$75,000.00, AND TO APPROVE A BUDGET ADJUSTMENT

APPROVED FOR AGENDA:

Approved by email

12/16/22

City Council Member
D'Andre Jones

Date

Blake Pennington
Asst. City Attorney Blake Pennington
Approved as to form

12/16/2022

Date

RESOLUTION NO. _____

A RESOLUTION TO AUTHORIZE MAYOR JORDAN TO SIGN A SUBRECIPIENT AGREEMENT WITH WELCOMEHEALTH TO PROVIDE NO-COST MEDICAL AND DENTAL CARE TO LOW INCOME FAYETTEVILLE RESIDENTS UTILIZING AMERICAN RESCUE PLAN ACT FUNDS IN THE AMOUNT OF \$75,000.00, AND TO APPROVE A BUDGET ADJUSTMENT

WHEREAS, the City of Fayetteville has received funding from the American Rescue Plan Act (ARPA) and invited non-profit organizations to submit proposals for projects to fund with the available ARPA funding; and

WHEREAS, WelcomeHealth submitted an application requesting \$75,000.00 in American Rescue Plan Act funds to provide 1,818 no-cost medical and dental services to 361 low income, uninsured Fayetteville residents to aid them in regaining their health and wellbeing.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:

Section 1: That the City Council of the City of Fayetteville, Arkansas hereby authorizes Mayor Jordan to sign a Subrecipient Agreement with WelcomeHealth utilizing American Rescue Plan Act funds in the amount of \$75,000.00 to provide no-cost medical and dental care to low income, uninsured Fayetteville residents.

Section 2: That the City Council of the City of Fayetteville, Arkansas hereby approves a budget adjustment, a copy of which is attached to this Resolution.

PASSED and **APPROVED** this 3rd day of January, 2023.

APPROVED:

ATTEST:

By: _____
LIONELD JORDAN, Mayor

By: _____
KARA PAXTON, City Clerk/Treasurer



**CITY OF FAYETTEVILLE
AMERICAN RESCUE PLAN ACT
2022 SUBRECIPIENT GRANT APPLICATION**

NOTE: Submission of a Subrecipient Grant Application provides no guarantee that the applicant will receive funding. All organizations selected to receive funds will be subject to entering into a contract with the City of Fayetteville and subject to the rules and regulations pertaining to the American Rescue Plan Act.

Please review the City of Fayetteville American Rescue Plan Act 2022 Subrecipient Grant Application Guide for more information on the required items listed in this application.

PART 1 APPLICANT IDENTIFICATION	
Total Amount of Funding Requested (whole dollar) [Minimum \$25,000]	\$75,000
Applicant/Organization Name	WelcomeHealth
Mailing Address (street, city, zip)	1100 N. Woolsey Avenue, Fayetteville, 72703
Organization Website	www.welcomehealthnwa.org
SAM Unique Entity ID Number	pending since 4/7/22 (see supporting documentation)
Organization FEIN/SSN	58-1691790
PART 2 APPLICANT CONTACT INFORMATION	
Contact for Project (name & title)	Brittney Gulley, Director of Development
Contact Phone Number	479-444-6033
Contact Email	bgulley@welcomehealthnwa.org
Signature Authority (name, title & email address)	Monika Fischer-Massie, Executive Director mfischerm@welcomehealthnwa.org
PART 3 PROJECT INFORMATION	
Project Name	Providing no-cost medical and dental care to low-income citizens
Project Address (street, city, zip)	1100 N. Woolsey Avenue, Fayetteville, 72703

PART 3 PROJECT INFORMATION continued

Is anyone with control over the Organization (i.e. owner, manager, director, board member, or other) or any member of that person's immediate family, an employee or elected official of the City of Fayetteville	☐ Yes ☒ No
If Yes, above, please identify person and position with the City	
Project Summary (brief synopsis of proposed project)	The effects of Covid-19 have been widespread and disproportionately affected low-income individuals. WelcomeHealth is continuing its mission to provide access to free medical and urgent dental care to low-income, uninsured or underinsured residents. Our medical clinic offers primary care, health promotion, disease prevention, patient education, mental health counseling, patients drug assistance and some specialty care. Our dental clinic provides emergency dental extractions, oral health education, x-rays, exams and limited dental cleanings and fillings.
Describe previous experience in providing similar services	WelcomeHealth was founded in 1986 and has been providing medical care since the beginning and dental care since 1986. It provides services three days and one evening a week. The demand for our services is continuous, as we are the only free health and dental clinic in the Fayetteville and Springdale area. We are constantly looking for ways to expand our services to accommodate the growing needs of our patients and their families.
Programs will typically be funded for a time period not to exceed 12 months from the signed date of the subrecipient agreement. Please describe your organization's ability to plan and utilized requested funds within that timeframe.	WelcomeHealth will budget and spend requested funds over a period of 12 months from signed date. The majority of WelcomeHealth's support comes from grants that need to be budgeted, spent and reported on within one year. Thus far, WelcomeHealth did not have to reimburse a grantor for funds not spent within a 12-month grant period.

PART 4 PROJECT BENEFICIARIES

Projected number of
Fayetteville beneficiaries 361

Because the federal rules vary depending on the type of project for which funds are being requested, the city has grouped project requests in 3 focus categories: Social Services, Economic, and Environmental. Please choose the corresponding category below that most closely identifies your project.

PART 4A SOCIAL SERVICES APPLICATIONS ONLY

Will **ALL** beneficiaries live, work and/or go to school in Fayetteville

☒ Yes

☐ No

Will **ALL** beneficiaries meet US Treasury Low to Moderate Income (LMI) Guidelines (please see Application Guide, Exhibit A).

☒ Yes

☐ No

Will **ALL** beneficiaries have been negatively impacted by COVID-19

☒ Yes

☐ No

Does this request respond to a **negative COVID-19 impact**?

☒ Yes

☐ No

If answering Yes to the **question above**, please describe the COVID-19 impact and how this proposal will aid in responding to the impact

Prior to the pandemic, there were 60,000 people, living in poverty and without health insurance in Northwest Arkansas. We suspect these numbers have increased as many individuals lost their employment and health benefits. Our demand for services increased, and support from ARPA will help us serve those individuals.

Please indicate how the proposed project meets eligibility standards and requirements described in the U.S. Department of the Treasury's Final Rule for Coronavirus State and Local Fiscal Recovery Funds

WelcomeHealth is a 501(c)(3) corporation that has been facing significant challenges due to an increased demand for its services and changing operational needs. It has been challenging to cover operating costs to continue services to those who have been hit with an economic hardship and inability to pay for their health and dental care. To sustain operations, we had to discontinue two of our programs and terminate the employment of four employees.

American Rescue Plan Act

PART 4B ENVIRONMENTAL APPLICATIONS ONLY

Please describe the effect of the proposed environmental impact or benefit. Please indicate how the proposed project meets eligibility standards under the EPA's Clean Water State Revolving Fund (CWSRF), Drinking Water State Revolving Fund (DWSRF), or eligible projects as described in the U.S. Department of the Treasury's Final Rule for Coronavirus State and Local Fiscal Recovery Funds. See Subrecipient Application Guide for more information.

PART 4C ECONOMIC APPLICATIONS ONLY

Please describe the residents or industry sector this grant request is intended to serve or benefit. Please indicate how the proposed project meets eligibility standards and requirements described in the U.S. Department of the Treasury's Final Rule for Coronavirus State and Local Fiscal Recovery Funds.

Does this request respond to a negative COVID-19 impact

☐ Yes

☒ No

If yes, please describe the COVID-19 impact and how this proposal will aid in the City's economic recovery

PART 5 FAYETTEVILLE BUSINESS LICENSE

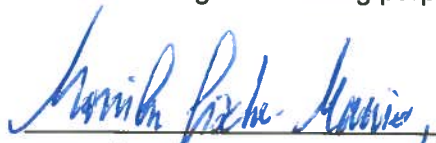
City Code Chapter 118 Business Registry and Licenses delineates what businesses are required to have a Fayetteville Business License. Submission of this grant application indicates that, if required, a current business license is in place.

PART 6 SIGNATURE OF SIGNATURE AUTHORITY AND DATE

I am an authorized employee/agent of the applicant organization and I am authorized to submit this application.

I have read and reviewed the American Rescue Plan Act documentation. I understand that as a subrecipient of the City of Fayetteville's American Rescue Plan Act funds, I will be responsible for maintaining records, complying with provisions of the subrecipient agreement, and providing any/all records and information necessary for the City of Fayetteville to report on this award.

All applications and documentation are subject to disclosure pursuant to the Arkansas Freedom of Information Act. All documentation may be provided to Federal and/or State government agencies for accounting and auditing purposes.


Name/Title/Date
MONIKA FISCHER-MASSIE, EXECUTIVE DIRECTOR
4/21/2022

PART 7 ORGANIZATION DESCRIPTION Provide a brief description of your organization and the services offered.	
Year of Incorporation	1985
Philosophy, Purpose and/or Mission Statement	WelcomeHealth provides quality medical care, dental care and support services in partnership with other community resources to low-income individuals regardless of their ability to pay. WelcomeHealth provides opportunities for and encourages a spirit of volunteerism and service to the community.

Provide a brief description of your organization including information about programs and/or services other than the proposed project.

Since 1986, WelcomeHealth has been providing free medical care to low-income families in our community. We celebrate and are thankful for the small group of concerned citizens who, under the leadership of local icon Ms. Jessie Bryant, recognized the imperative need for affordable medical care for their uninsured neighbors. The dire necessity for dental care was prevalent as well; thus, Dr. JB Hays started our dental extraction clinic in 1988.

The growing demand for our services and limited space necessitated four moves in our history. Our name changed from Northwest Arkansas' Free Health Center to WelcomeHealth in 2015; however, our mission to help those in need stayed the same. WelcomeHealth remains true to its original vision of Ms. Bryant and her supporters!

In the beginning, our clinic was volunteer based and offered services only one evening a week. Now, WelcomeHealth provides services three days and one evening a week. General medical care is provided by our part-time staff nurse practitioner and RN Monday through Wednesday, and specialty medical and dental care by our volunteer doctors and dentists on Thursday evening. We are grateful for our army of professional volunteers from the community who help us carry out our mission; WelcomeHealth would not survive without them!

PART 7 ORGANIZATION DESCRIPTION continued

The medical services we offer include primary and preventive care, gynecology, pediatrics, physical therapy, diabetes and nutrition education, indigent prescription drug program enrollment, mental health and education in COVID-19 infection prevention. WelcomeHealth is the only health clinic in Northwest Arkansas that does not charge its patients, even on a sliding scale based on income.

WelcomeHealth also receives referrals from other healthcare providers and from offices of our professional volunteers, partner non-profits, social organizations or family/friends of our current patients.

We are fortunate to have a collaboration with Quest Diagnostics and NWA Pathology Associates which conduct labs, and WRMC which offer imaging for our uninsured patients free of charge. In addition, several of our volunteer doctors provide follow-up care for our patients at their own clinics at a reduced rate.

In 2020, at the beginning of the pandemic, we made the tough decision to discontinue our restorative dental and dental hygiene program due to budgetary constraints. We continued to offer emergency dental extractions and oral surgery. We started a new oral health education class in 2021. Thanks to the dedication of our loyal dental volunteers who saw the need to do more than extractions, we are now offering limited restorative dental and dental hygiene during our Thursday evening dental clinic. Saving patients' teeth rather than extracting them is a better solution to dental problems, and we are committed to doing that in hopes to reinstate our full restorative program in the near future.

WelcomeHealth strives to be a stepping stone to better health and quality of life to those who cannot afford or access care elsewhere. Regardless of income or insurance status, we are happy to provide 100% FREE healthcare as long as one's household income is not more than 200% of the federal poverty level, but the majority of our patients are at the 100% level of poverty.

PART 8 PROJECT BUDGET Provide a descriptive line-item budget for the entire project including the American Rescue Plan Act (ARPA) funds being requested. **Provide specific information on how American Rescue Plan Act funds will be used and include any necessary supporting documentation. Please indicate whether any American Rescue Plan Act funds have been requested or received from other sources, and if so, provide detailed information on the source and proposed use of those funds. Please indicate how you will spend all awarded ARPA funding by the project end date.**

WelcomeHealth
Budget 2022

Expenses		Income ARPA Funding	Other
Bank Service Charge	\$ 500		\$ 500
Conference/Workshops/Meetings	\$ 3,000		\$ 3,000
Contract Labor/Computer	\$ 3,500		\$ 3,500
Dues and Subscriptions	\$ 1,200		\$ 1,200
Fringe Benefits	\$ 25,300		\$ 25,300
Fundraising Expense	\$ 16,000		\$ 16,000
Insurance	\$ 8,450	\$ 2,000	\$ 6,450
Licenses and Permits	\$ 1,100		\$ 1,100
Maintenance	\$ 7,300	\$ 2,550	\$ 4,750
Dental and Medical Supplies	\$ 14,700	\$ 2,500	\$ 12,200
Mileage	\$ 1,500		\$ 1,500
Office Supplies	\$ 3,500		\$ 3,500
Payroll & Payroll Taxes	\$ 369,889	\$ 59,750	\$ 310,139
Postage and Delivery	\$ 1,400		\$ 1,400
Prof. Fees, Payroll Services	\$ 15,776		\$ 15,776
Recruiting	\$ 600		\$ 600
Rent	\$ 12,000	\$ 5,000	\$ 7,000
Software Licensure	\$ 6,720		\$ 6,720
Supplies Volunteers	\$ 1,200	\$ 500	\$ 700
Telephone, Internet	\$ 5,400	\$ 2,700	\$ 2,700
	\$ 499,035	\$ 75,000	\$ 449,035

*Other funding (foundations, corporations, civic clubs, churches, special events and individuals) is projected and not guaranteed.

Received PPP loan on 4/17/20 which was forgiven on 5/17/21.
Funds were spent on payroll, fringe benefits, rent, utilities.

PART 9 PROJECT DESCRIPTION Describe the proposed project and provide the information requested under PART 9 of the American Rescue Plan Act 2022 Subrecipient Application Guide. Please provide any additional information that will assist in evaluating the project.

What will the proposed project do?

The project will provide access to no-cost medical and dental care to uninsured or underinsured, low-income families who live in the City of Fayetteville.

Providing access to preventive medical and emergency dental services will reduce complications that could lead to additional and more severe problems. Furthermore, it gives families from low-income backgrounds and those disproportionately affected by the COVID-19 pandemic an alternative to emergency room care which may have been their only option in the past.

Adults who are sick cannot work to support their families. Sick children have elevated school absenteeism rates and low academic achievement which can affect high school graduation and ultimately success in life. By being a resource for our community, we help patients stay and get healthy so they do not miss work or school due to illness.

How will it be executed?

Our part-time staff nurse practitioner and RN, assisted by our army of professional volunteers and pre-med students, will provide free services Monday through Thursday to help our medical patients return to and stay at an optimal level of health which affects their economic prosperity, quality of life and well-being.

Our professional dental volunteers and pre-dental students will staff our Thursday evening dental clinics to give patients an option for relief of pain and suffering caused by infected teeth or long-time neglected oral care. At our clinic, treatment plans will be set-up for each patient and follow-up appointments will be scheduled until patients are feeling better and report they are out of pain.

How will beneficiaries be assisted and selected?

Providing low-income residents within the City of Fayetteville access to quality medical and dental care is a worthwhile investment in our community. Healthy residents contribute to a healthy and productive community! Individuals who are healthy make better employees, better students/learners, better parents and better neighbors.

PART 9 PROJECT DESCRIPTION continued

Patients can call or walk-in to receive an appointment. Income verification is required for all new and returning patients. In addition, demographic info and past medical history is obtained. Finally, all patients will be asked during intake if they have been negatively impacted by COVID-19. When patients have submitted all required paperwork and provided evidence that they meet the clinic's income guidelines (household cannot make more than 200% above Federal Poverty Level), their enrollment process is complete.

Supporting WelcomeHealth's proposed project will enable us to treat/serve our most vulnerable families in our community. By giving our low-income, uninsured residents a medical home, we allow them to concentrate on their other basic life necessities (roof over their heads, food on their table, clothing on their back, etc.) instead of worrying where the funds for a health or dental care visit will come from. This eliminates the decision of skipping payment on something else, like rent, utilities, food, etc. which ultimately affects their entire family. WelcomeHealth offers a long-term solution to the lack of affordable health and dental care for low-income families.

Our clinic's mission and purpose is to help those in need which is achieved by providing free health and dental care to low-income families. We plan to serve 2,400 patients within the next year. Funding of \$75,000 from ARPA will allow us to provide 1,818 services to 361 Fayetteville residents. Our assistance will aid them in regaining their health and wellbeing.

PART 10 PROJECT TIMELINE Provide a complete and specific timeline for all activities related to proposed project.

	ACTIVITY	April 2022	April – June 2022	July – Sept 2022	Oct – Dec 2022	Jan – March 2023
1	Apply for ARPA funds (April '22).	X				
2	Conduct annual fundraising campaign with foundations and other donors.	X	X	X	X	X
3	Provide free medical and dental care to 361 uninsured, low income persons who reside in Fayetteville.		X	X	X	X
5	Pay for medical and dental expenses, including staff salaries and other overhead expenses.		X	X	X	X
6	Request reimbursement for ARPA expenses (approximate date).			X	X	X
7	Provide quarterly Sub-recipient Beneficiary Reports.			X	X	X

PART 11 DATA COLLECTION, RECORD MAINTENANCE, AND REPORTING Describe how the organization will collect data and maintain records to track program activities and eligibility verification. Please also describe your organization's ability to produce required documentation including financial reports, performance reports, progress reports, expenditure information, etc.

WelcomeHealth will collect and track the project in the following manner:

Data Collection/Tracking –

All patient information is entered into our two electronic records systems, eClinicalWorks for medical and Dentrix for dental. This will include all patient demographic information, household size, income verification and place of residence. In addition, every service provided and patient visit will be recorded.

Record Maintenance –

All patient information and services are recorded in eClinicalWorks and Dentrix as mentioned above. Additionally, our intake forms will include a question asking patients if they have been negatively impacted by COVID-19.

Our executive director tracks expenditures, and a volunteer accountant enters bills and payments into QuickBooks once a month. Our Board of Directors reviews expenses, income and all financial reports for each month at their board meetings held every other month. WelcomeHealth pays a CPA firm to audit its financial records every year.

Reporting -

Within our medical records systems, staff can pull reports and run queries for each of the project participants at any given time. In addition, the executive director can submit financials and progress reports whenever requested.

PART 12 PROJECT EVALUATION | OBJECTIVES AND OUTCOMES List the objectives (not activities) of the proposed project. Describe how each objective will be measured to determine if it has been met.

Use the following format

Objective #:

Outcome(s):

Method of Measurement:

Objective: Provide 1,818 FREE medical and dental services to 361 low-income patients who live, work or attend school in the City of Fayetteville.

Outcome(s): Success is measured by the number of happy comment cards and testimonies we receive on a monthly basis, as well as the number of patients we serve and number of services we provide.

When patients report they are feeling better, they are free from pain or their four key health numbers improved (blood pressure, glucose, cholesterol, weight) and are in a healthy range, we know that we were successful and the resource the patients needed to improve their health!

Patients are educated about how to maintain optimal health and assured that we are here for them if they need us in the future. Regular check-ups and maintenance exams are encouraged and our front desk staff will schedule follow-ups as needed for each patient.

At the onset of COVID-19, we had patients who were apprehensive of seeking care due to the fear of contracting the virus. Our staff has worked hard to insure our patients of all safety and health protocols and regained their trust in visiting our clinic for care. In the process, we educate our patients on how to stay healthy and prevent the spread of COVID-19.

Method of Measurement: All patient information including demographics, place of residence, income verification and services provided are entered into our electronic records systems, eClinicalWorks for medical and Dentrix for dental. Those databases can be queried at any time to determine if project objectives are being met. Furthermore, our intake forms will provide a place for every patient to record if he/she has been negatively impacted by COVID-19.

PART 13 PARTIAL FUNDING Indicate whether the project can proceed with partial funding. If **YES**, indicate the minimum amount the applicant will accept with line items arranged from highest to lowest priority. Describe the impact that partial funding will have on the project. If **NO**, the project will not be considered for partial funding.

YES – There is no minimum amount that we would not accept as we are grateful for any extra support we may receive from the American Rescue Plan Act! However, partial funding may affect the number of patients we can serve. Funding priorities below are listed from highest to lowest level of acceptance.

Any partial funding will go toward the following line items (highest to lowest priority):

1. Payroll - this is an important line item because our nurse practitioner, RN and support staff are paid to serve the patients we see.
2. Rent
3. Telephone
4. Maintenance
5. Dental and Medical Supplies
6. Insurance
7. Volunteer Supplies

PART 14 ADDITIONAL DOCUMENTATION CHECKLIST

Please provide these items with your application. See page 10 of the 2022 American Rescue Plan Act Subrecipient Application Guide for more information

☒	Accessibility Narrative
☒	Board of Directors
☒	Bylaws
☒	Certificate of Good Standing
☒	Financial Audit (see Application Guide for more information)
☒	Intake Forms
☒	Non-Profit Status Verification [IRS 501(c)(3) letter, IRS form 990 or 990-EZ, etc.]
☒	Resumes
☒	System Award Management (SAM) registration <i>See supporting documentation</i>
☒	Status of Funding (if applicable)
☒	Additional Documentation Checklist (this page)
☒	Additional Information <i>Clinic flyer</i>

Budget Year	Division	Adjustment Number
2022	Non-Departmental (800)	
	Requestor: Alderman, D'Andre Jones	

A RESOLUTION TO AUTHORIZE MAYOR JORDAN TO SIGN A SUBRECIPIENT AGREEMENT WITH WELCOMEHEALTH TO PROVIDE NO-COST MEDICAL AND DENTAL CARE TO LOW INCOME FAYETTEVILLE RESIDENTS UTILIZING AMERICAN RESCUE PLAN ACT FUNDS IN THE AMOUNT OF \$75,000.00, AND TO APPROVE A BUDGET ADJUSTMENT

	COUNCIL DATE:	1/3/2022
	ITEM ID#:	2022-240
		<i>Kevin Springer</i>
		<i>12/9/2022 4:29 PM</i>
	Budget Division	Date
	TYPE:	D - (City Council)
	JOURNAL #:	
	GLDATE:	
	CHKD/POSTED:	/
RESOLUTION/ORDINANCE		

[illegible]



MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council
THRU: Kit Williams, City Attorney
FROM: Blake Pennington, Assistant City Attorney
DATE: December 27, 2022
SUBJECT: **MAGDALENE SERENITY HOUSE SUBRECIPIENT AGREEMENT**

RECOMMENDATION:

BACKGROUND:

Council Member Wiederkehr is sponsoring a resolution to authorize an ARPA subrecipient agreement with Magdalene Serenity House, Inc. to provide supportive housing for formerly incarcerated women.

DISCUSSION:

BUDGET/STAFF IMPACT:

Budget Adjustment attached

ATTACHMENTS: Res Magdalene Serenity House - ARPA Funds - Council Member Wiederkehr51-signed, BUDGET ADJUSTMENT

AGENDA REQUEST FORM

FOR: Council Meeting of January 3, 2023

FROM: Council Member Mike Wiederkehr

ORDINANCE OR RESOLUTION TITLE AND SUBJECT:

A RESOLUTION TO AUTHORIZE MAYOR JORDAN TO SIGN A SUBRECIPIENT AGREEMENT WITH MAGDALENE SERENITY HOUSE, INC. TO PROVIDE SUPPORTIVE RECOVERY HOUSING FOR FORMERLY INCARCERATED WOMEN UTILIZING AMERICAN RESCUE PLAN ACT FUNDS IN THE AMOUNT OF \$128,789.00, AND TO APPROVE A BUDGET ADJUSTMENT

APPROVED FOR AGENDA:

<u><i>Mike Wiederkehr</i></u>	<u>12 - 9 - 2022</u>
City Council Member	Date
Mike Wiederkehr	

<u><i>Blake Pennington</i></u>	<u>12/09/2022</u>
Asst. City Attorney Blake Pennington	Date
Approved as to form	

RESOLUTION NO. _____

A RESOLUTION TO AUTHORIZE MAYOR JORDAN TO SIGN A SUBRECIPIENT AGREEMENT WITH MAGDALENE SERENITY HOUSE, INC. TO PROVIDE SUPPORTIVE RECOVERY HOUSING FOR FORMERLY INCARCERATED WOMEN UTILIZING AMERICAN RESCUE PLAN ACT FUNDS IN THE AMOUNT OF \$128,789.00, AND TO APPROVE A BUDGET ADJUSTMENT

WHEREAS, the City of Fayetteville has received funding from the American Rescue Plan Act (ARPA) and invited non-profit organizations to submit proposals for projects to fund with the available ARPA funding; and

WHEREAS, the Magdalene Serenity House submitted an application requesting \$128,789.00 in American Rescue Plan Act funds to renovate a house that will be used to provide supportive recovery housing to formerly incarcerated women; and

WHEREAS, the project will provide access to safe and affordable housing through an Aftercare Program for residents who have successfully completed a two-year residential program, increasing the total number served from 8 to 12 residents; and

WHEREAS, the Subrecipient Agreement would provide funding in the amount of \$128,789.00 for renovations to the house and the addition of two bedrooms, bathroom, and living space to increase capacity.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:

Section 1: That the City Council of the City of Fayetteville, Arkansas hereby authorizes Mayor Jordan to sign a Subrecipient Agreement with Magdalene Serenity House, Inc. to provide the amount of \$128,789.00 in American Rescue Plan Act funds to fund renovations to supportive recovery housing for formerly incarcerated women.

Section 2: That the City Council of the City of Fayetteville, Arkansas hereby approves a budget adjustment, a copy of which is attached to this Resolution.

PASSED and **APPROVED** this 3rd day of January, 2023.

APPROVED:

ATTEST:

By: _____
LIONELD JORDAN, Mayor

By: _____
KARA PAXTON, City Clerk/Treasurer



CITY OF
FAYETTEVILLE
ARKANSAS

**CITY OF FAYETTEVILLE
AMERICAN RESCUE PLAN ACT
2022 SUBRECIPIENT GRANT APPLICATION**

NOTE: Submission of a Subrecipient Grant Application provides no guarantee that the applicant will receive funding. All organizations selected to receive funds will be subject to entering into a contract with the City of Fayetteville and subject to the rules and regulations pertaining to the American Rescue Plan Act.

Please review the City of Fayetteville American Rescue Plan Act 2022 Subrecipient Grant Application Guide for more information on the required items listed in this application.

PART 1 APPLICANT IDENTIFICATION	
Total Amount of Funding Requested (whole dollar) [Minimum \$25,000]	\$128,789.00
Applicant/Organization Name	Magdalene Serenity House
Mailing Address (street, city, zip)	P.O. Box 3394 Fayetteville, AR 72702
Organization Website	www.lovehealsnwa.org
SAM Unique Entity ID Number	CHAYZYKV6HC9
Organization FEIN/SSN	47-1870017
PART 2 APPLICANT CONTACT INFORMATION	
Contact for Project (name & title)	April Bachrodt LCSW, PhD - Executive Director
Contact Phone Number	479-313-1502
Contact Email	april@lovehealsnwa.org
Signature Authority (name, title & email address)	April Bachrodt LCSW, PhD - Executive Director april@lovehealsnwa.org
PART 3 PROJECT INFORMATION	
Project Name	Supportive Recovery Housing for Formerly Incarcerated Women
Project Address (street, city, zip)	1029 N Gregg Street Fayetteville, AR 72701

American Rescue Plan Act

PART 3 PROJECT INFORMATION continued	
Is anyone with control over the Organization (i.e. owner, manager, director, board member, or other) or any member of that person's immediate family, an employee or elected official of the City of Fayetteville	☒ Yes ☐ No
If Yes, above, please identify person and position with the City	Our Executive Director's husband, Stefan Bachrodt, works in the IT Department at the City of Fayetteville as a Network Analyst.
Project Summary (brief synopsis of proposed project)	The goal of the project is to increase access to safe and affordable housing for residents who have successfully completed our two-year residential program. In this new Aftercare Program, residents will pay low-cost rent, establish a positive rental history, repair their credit score, and save money to help achieve full independence. Funding is requested to help us complete important repairs to the house including essential upgrades to the plumbing and electrical systems and the addition of two bedrooms, a bathroom, and a living space to increase capacity.
Describe previous experience in providing similar services	Magdalene Serenity House opened on September 29, 2017. We provide a comprehensive, collaborative, and structured residential program that can comfortably house up to 8 women for two years at no cost to them. The proposed project is a much needed addition to our two-year program due to the lack of safe and affordable housing for our program graduates.
Programs will typically be funded for a time period not to exceed 12 months from the signed date of the subrecipient agreement. Please describe your organization's ability to plan and utilized requested funds within that timeframe.	Our goal is to renovate and open the Aftercare House by December 2022. We have hired our contractor, have a detailed budget and project plan. We have already raised \$102,555 for the renovation and are ready to begin once additional funding has been secured.

PART 4 PROJECT BENEFICIARIES

Projected number of
Fayetteville beneficiaries

4 direct Fayetteville beneficiaries/year.

Because the federal rules vary depending on the type of project for which funds are being requested, the city has grouped project requests in 3 focus categories: Social Services, Economic, and Environmental. Please choose the corresponding category below that most closely identifies your project.

PART 4A SOCIAL SERVICES APPLICATIONS ONLY

Will **ALL** beneficiaries live, work and/or go to school in Fayetteville

☒ Yes

☐ No

Will **ALL** beneficiaries meet US Treasury Low to Moderate Income (LMI) Guidelines (please see Application Guide, Exhibit A).

☒ Yes

☐ No

Will **ALL** beneficiaries have been negatively impacted by COVID-19

☒ Yes

☐ No

Does this request respond to a **negative COVID-19 impact**?

☒ Yes

☐ No

If answering Yes to the **question above**, please describe the COVID-19 impact and how this proposal will aid in responding to the impact

COVID-19 directly impacts our resident population. According to the CDC: "While nearly all states' overdose deaths increased during the pandemic, Arkansas sits higher than the national average." Expanding MSH will improve access to housing for recovering, formerly-incarcerated women at an increased risk for housing insecurity—reducing overdose and homelessness rates.

Please indicate how the proposed project meets eligibility standards and requirements described in the [U.S. Department of the Treasury's Final Rule for Coronavirus State and Local Fiscal Recovery Funds](#)

MSH proposed expansion would meet eligibility standards by providing residence in recovery housing, behavioral health care, and long-term recovery support for women living below the median income. Formerly incarcerated women are already at a high risk for homelessness, facing "more than 1,300 criminal-record related barriers to housing" (NICCC). The pandemic is estimated to further increase homelessness rates, reinforcing the need to improve access to supportive housing.

American Rescue Plan Act

PART 4B ENVIRONMENTAL APPLICATIONS ONLY	
Please describe the effect of the proposed environmental impact or benefit. Please indicate how the proposed project meets eligibility standards under the EPA's Clean Water State Revolving Fund (<u>CWSRF</u>), Drinking Water State Revolving Fund (<u>DWSRF</u>), or eligible projects as described in the <u>U.S. Department of the Treasury's Final Rule for Coronavirus State and Local Fiscal Recovery Funds</u>. See Subrecipient Application Guide for more information.	
PART 4C ECONOMIC APPLICATIONS ONLY	
Please describe the residents or industry sector this grant request is intended to serve or benefit. Please indicate how the proposed project meets eligibility standards and requirements described in the <u>U.S. Department of the Treasury's Final Rule for Coronavirus State and Local Fiscal Recovery Funds</u>.	
Does this request respond to a negative COVID-19 impact	☐ Yes ☐ No
If yes, please describe the COVID-19 impact and how this proposal will aid in the City's economic recovery	

PART 5 FAYETTEVILLE BUSINESS LICENSE

City Code Chapter 118 Business Registry and Licenses delineates what businesses are required to have a Fayetteville Business License. Submission of this grant application indicates that, if required, a current business license is in place.

PART 6 SIGNATURE OF SIGNATURE AUTHORITY AND DATE

I am an authorized employee/agent of the applicant organization and I am authorized to submit this application.

I have read and reviewed the American Rescue Plan Act documentation. I understand that as a subrecipient of the City of Fayetteville's American Rescue Plan Act funds, I will be responsible for maintaining records, complying with provisions of the subrecipient agreement, and providing any/all records and information necessary for the City of Fayetteville to report on this award.

All applications and documentation are subject to disclosure pursuant to the Arkansas Freedom of Information Act. All documentation may be provided to Federal and/or State government agencies for accounting and auditing purposes.

Oprie Bachrodtt, Executive Director, 4.28.22
Name/Title/Date

PART 7 ORGANIZATION DESCRIPTION Provide a brief description of your organization and the services offered.	
Year of Incorporation	2014
Philosophy, Purpose and/or Mission Statement	We help rebuild the lives of women who have experienced trauma, sexual exploitation, addiction, and incarceration through safe housing, long-term support, and community partnerships. We provide a comprehensive, collaborative, and structured residential program that can comfortably house up to 8 women for two years, at no cost to them.

Provide a brief description of your organization including information about programs and/or services other than the proposed project.

Free Long-term, Safe Housing: MSH provides free housing in our Residential Program for up to two years for a total of 8 residents. Residents do not pay any rent, fees, or bills to live in our residential property. In addition, we provide feminine hygiene items, cleaning products, and laundry detergent/softener for our residents to use at no cost.

Aftercare Program: We purchased a second property for an Aftercare Program for our residential program graduates. This program will house a total of 4 residents for up to one year. In this program, residents will be required to pay an affordable, fixed fee of \$500 for rent/utilities and still receive supportive services from the staff at MSH. Our goal is to give MSH graduates the opportunity to apply real-world skills in a safe and supportive home environment.

Financial/Material Assistance: Almost all of our residents come into our program with nothing but the clothes on their backs. We provide financial assistance to purchase clothing, hygiene products, undergarments, toiletries, shoes, and any other necessary item the resident may need to feel comfortable to begin the program. We also purchase food for our residents until they are eligible for food stamps. Each resident receives a \$20.00 stipend per week to spend at their discretion until they obtain employment (typically after 90 days in our program).

Case Management/Personal Advocacy: All of our residents meet with our Executive Director, who is a Licensed Certified Social Worker, on a weekly basis. In these weekly sessions, our Executive Director develops a treatment plan with individualized goals and action steps for each of our residents.

PART 7 ORGANIZATION DESCRIPTION continued

Peer Support/Personal Advocacy: All of our residents are able to meet with our Peer Recovery Specialist (PRS) on a weekly basis to receive one-on-one assistance in meeting their goals and to connect the resident with resources in their community. Our PRS has shared experience with our residents and is able to use her personal experiences and training to directly support our residents and help them meet their needs.

On-Site Groups: We provide a weekly on-site Resident Support Program to support our residents in healing from trauma and recovering from substance abuse. All of our residents are required to participate in at least 15 hours of supportive programming per week. Each group tailors to the requests and needs of our residents per assessment from our Program Team. We also provide life-skills groups such as financial management and job skills training.

Therapy: All of our residents are matched with a licensed therapist in the community to meet their specific mental health needs. We partner with private practitioners and Community Clinic for mental health and therapy services.

Court/Legal Advocacy: We provide court/legal advocacy for all of our residents. Many of our residents come into our program with outstanding legal issues and require our help.

Medical and Dental Care: We connect our residents with medical, dental, vision, and other specialty care as needed. We cover all costs for any medical or dental care that is not covered by a resident's insurance plan.

Matched Savings Program: All of our residents are eligible to participate in our matched savings program. Residents who save \$600 will receive an additional match of \$600 from MSH. Residents are eligible for this match twice for a total of \$1200 contributed by MSH.

Transportation: We provide free transportation for our residents to all appointments, court dates, AA/NA meetings, group outings, and to and from work for the first 6 months of employment.

Aftercare Support: We provide aftercare support to all of our graduates. This support includes meeting with our Executive Director on an as-needed basis.

Family Reunification Services: We support our residents in reunifying with their children when appropriate. We will connect our residents with an attorney to request visitation with their minor children and supervise visitation on site.

PART 8 PROJECT BUDGET Provide a descriptive line-item budget for the entire project including the American Rescue Plan Act (ARPA) funds being requested. **Provide specific information on how American Rescue Plan Act funds will be used and include any necessary supporting documentation. Please indicate whether any American Rescue Plan Act funds have been requested or received from other sources, and if so, provide detailed information on the source and proposed use of those funds.** Please indicate how you will spend all awarded ARPA funding by the project end date.

Budget Item & Description	Total
Permit & Site Setup - Building Permits	800.00
Demo - Demo and waste/port a potty	6,700.00
Foundation - Foundation/waterproofing	22,200.00
Concrete - Concrete patching/report patio & walkway	8,000.00
Framing - Framing	8,300.00
Electrical & Lighting - Electrical rough in / trimout	10,000.00
Plumbing - Plumbing rough in / topout / trimout	18,000.00
HVAC - Heating & Cooling - ductwork and basement units	9,250.00
Insulation - Batt insulation in basement walls, and blown attic insulation	1,800.00
Windows - Windows - 5 casement	2,300.00
Doors - Doors & Trim	3,500.00
Drywall - Drywall	10,000.00
Cabinets - Cabinets	4,750.00
Trim & Millwork - Millwork & Trim	10,000.00
Paint - Interior Paint	11,500.00
Concrete - Fix interior concrete cracks	1,800.00
Floor Coverings - Floor Coverings	10,160.00
Cabinets - Countertops	3,500.00
Miscellaneous - Tub surround	600.00
Plumbing - Plumbing fixtures	2,400.00
Electrical & Lighting - Electrical fixtures	700.00
Appliances - Appliance installation	300.00
Vanities - Kitchen backsplash	960.00
Hardware - Hardware	1,350.00
Exterior Trim & Decks - Fence	17,850.00
Cleanup - Final clean	300.00
Contingency - Contingency	21,000.00
Gutter - Gutter guard	600.00
Contractor fee - \$5,000 to start, then 20% of cost plus labor	42,724.00
TOTAL BUDGET	\$231,344.00
TOTAL PRIVATE FUNDS RAISED	\$102,555.00
ARPA FUNDS REQUESTED	\$128,789.00

PART 9 PROJECT DESCRIPTION Describe the proposed project and provide the information requested under PART 9 of the American Rescue Plan Act 2022 Subrecipient Application Guide. Please provide any additional information that will assist in evaluating the project.

Service Provided - The objective of the proposed project is to increase access to safe, affordable, and supportive recovery housing to residents who have successfully completed our two-year residential program. In December 2020, we purchased a second house to expand our program services. Once renovated, this new house will have the capacity to house four of our residential program graduates for up to one-year, increasing our total number served from 8 to 12 residents. Unfortunately, the current structure of the house is limited to two occupants and we would like to undergo renovations to add additional bedrooms, a bathroom, and living space to increase our capacity. Also, due to the age of the house it is in need of several repairs. Thus, this funding would be used to help us complete these important repairs and expand our program services to meet the housing needs of our program graduates. In this new Aftercare Program, residents will pay low-cost rent and receive weekly one-on-one support from our program team. This program will ensure that our program graduates maintain a close connection to the supportive environment of Magdalene Serenity House (MSH): promoting a sober lifestyle, empowering community with fellow residents, and allowing for the maintenance of direct contact with our staff. This is especially important in the event of an emergency or risk of relapse. Moreover, this program will allow our program graduates to establish a positive rental history, repair their credit score, and save money to help them achieve full independence as they work toward fully reintegrating into the community.

Applicant Screening - All residents who have successfully completed our two-year residential program will be eligible to reside at our Aftercare House and participate in our Aftercare Program. Residents in this program will fill out an Aftercare Program application and agree to comply with the Aftercare Program Handbook policies and Leasing Agreement.

Income Verification - All project beneficiaries are in the low-moderate income bracket. We verify this designation on their Aftercare House Application and through a monthly review of their income.

Project Benefit - Women remain the fastest growing prison population nationwide. Since 1980, the number of women in Arkansas jails (1,456%) and prisons (1,213%) has dramatically increased. Incarcerated women are disproportionately affected by health issues including substance abuse, medical problems, and mental health needs. The addition of our Aftercare Program prevents both reincarceration and homelessness of women who are already at a high risk to experience this. In a 2020 Marshall Project survey of currently incarcerated people across the country, "when respondents were asked what could have kept them out of prison, among the top answers were access to affordable housing and living wages." Another research study conducted by the Prison Policy Initiative states that "formerly incarcerated people are 10 to 13 times more likely to experience homelessness than people who have not been incarcerated."

PART 9 PROJECT DESCRIPTION continued

The addition of our Aftercare Program would allow our program to take action in reducing these statistics as we provide access to dependable living quarters while simultaneously promoting both lifestyle and psychological wellness—attributing to lower rates of re-incarceration and homelessness of women who have experienced trauma, sexual exploitation, addiction, and incarceration. By expanding our capabilities to house and connect with MSH residents, our program is able to maintain a productive relationship over a longer period of time as we move from a program that traditionally lasts two years to a projected length of up to three years. More thorough access to care allows our staff increased time to positively benefit the lives of our resident population and further improve upon the challenging difficulties they face as they work toward achieving self-sufficiency and successfully reintegrating into the community.

Fit with Organizational Philosophy - Our mission is to rebuild the lives of women who have experienced trauma, sexual exploitation, addiction, and incarceration through safe-housing, long-term support, and community partnerships. As we have celebrated the graduation of women from our two-year program, we have lamented the lack of affordable, safe housing in Northwest Arkansas. Rental costs continue to increase and many landlords will not rent to felons. In December of 2020 we successfully raised the total purchase price of the Aftercare House and have raised an additional \$102,555 for renovations. Unfortunately COVID-19, substantial supply cost increases, and labor shortages have forced us to put the renovation project on hold. We have three graduation candidates who will be eligible for our Aftercare House by the end of 2022. The proposed Aftercare House is a bridge to independence and will allow our residents to continue to heal and recover in a supportive environment as they work toward successfully reintegrating into the community.

PART 10 PROJECT TIMELINE Provide a complete and specific timeline for all activities related to proposed project.

Proposed schedule:

June 1, 2022: Apply for building permit

June-July: Site prep
 French drain installation and basement wall waterproofing
 Galvanized water line replacement
 Sewer line replacement
 Interior demo
 Interior framing

August: Rough-ins for plumbing, electrical, HVAC
 Window replacement at basement

September.: Rough-in completion
 Insulation and sheet rock
 Front walkway
 Fence repair and installation

October: Finish out with trim, doors, fixtures, flooring, paint.

End of Nov 2022: Project completion

January 2023: Aftercare House ready for full occupancy.

PART 11 DATA COLLECTION, RECORD MAINTENANCE, AND REPORTING Describe how the organization will collect data and maintain records to track program activities and eligibility verification. Please also describe your organization's ability to produce required documentation including financial reports, performance reports, progress reports, expenditure information, etc

We will use the following means to collect data, maintain records, and track program activities.

Renovation Work - A spreadsheet will be developed to track each project activity in the renovation project. Receipts and invoices for all project activities will be securely stored in our accounting database and documented in Quickbooks. Project spreadsheet, receipts, invoices, and financial reports will be included in funding release requests.

Aftercare House/Program - Upon completion of the renovation work, graduates from our two-year program will be eligible to reside in our Aftercare House and participate in our Aftercare Program. All resident applications will be stored on our secure agency Dropbox. We will document all resident progress and verify monthly income in our secure agency Dropbox case management system. Data will be made available when requested to track the appropriate use of the ARPA funds.

PART 12 PROJECT EVALUATION | OBJECTIVES AND OUTCOMES List the objectives (not activities) of the proposed project. Describe how each objective will be measured to determine if it has been met.

Use the following format

Objective #:

Outcome(s):

Method of Measurement:

Objective # 1: By December 1, 2022, the Aftercare House will be fully renovated as detailed in the project plan/budget.

Outcome(s): By January 1, 2023, the MSH Aftercare House will be able to provide safe, affordable, and recovery supportive housing to approximately four MSH program graduates for up to one year.

Method of Measurement: Completion of items on project plan/budget.

PART 13 PARTIAL FUNDING Indicate whether the project can proceed with partial funding.
 If **YES**, indicate the minimum amount the applicant will accept with line items arranged from highest to lowest priority. Describe the impact that partial funding will have on the project. If **NO**, the project will not be considered for partial funding.

Yes, the project can proceed with partial funding. The minimum amount for the project to proceed would be approximately \$64,140.00 to help us cover a significant portion of the safety-related renovation costs. The partial funding will still make a significant impact on our organization and move us closer to opening our one-year Aftercare House.

Budget Item & Description	TOTAL
Permit & Site Setup - Building Permits	800.00
Demo - Demo and waste/port a potty	6,700.00
Framing - Framing	8,300.00
Electrical & Lighting - Electrical rough in / trimout	10,000.00
HVAC - Heating & Cooling - ductwork and basement units	9,250.00
Insulation - Batt insulation in basement walls, and blown attic insulation	1,800.00
Doors - Doors & Trim	3,500.00
Drywall - Drywall	10,000.00
Plumbing - Plumbing fixtures	2,400.00
Electrical & Lighting - Electrical fixtures	700.00
Contractor fee	\$10,690.00
TOTAL PARTIAL FUNDS REQUESTED	\$64,140.00

PART 14 ADDITIONAL DOCUMENTATION CHECKLIST

Please provide these items with your application. See page 10 of the 2022 American Rescue Plan Act Subrecipient Application Guide for more information

☒	Accessibility Narrative
☒	Board of Directors
☒	Bylaws
☒	Certificate of Good Standing
☒	Financial Audit (see Application Guide for more information)
☒	Intake Forms
☒	Non-Profit Status Verification [IRS 501(c)(3) letter, IRS form 990 or 990-EZ, etc.]
☒	Resumes (Executive Director and Project Coordinator)
☒	System Award Management (SAM) UEI registration
☒	Status of Funding (if applicable)
☒	Additional Documentation Checklist (this page)
☒	Additional Information



Accessibility Narrative

EXISTING

The existing entry door is 36" wide. Interior hallways of the main level are either 42" or 48" wide.

The route through public spaces of the main level of the house meets Fair Housing Act accessibility standards.

PROPOSED

The proposed remodel creates a new paved accessible path to the front door from the sidewalk at the street and driveway.

The kitchen on the main level will meet Fair Housing Act accessibility standards.

Bedroom door hinges will be replaced with offset hinges to meet Fair Housing Act minimum door width requirements.

In the main level bathroom, new receptacles will be at an accessible height.

Grab bars will be installed at the toilet and tub in the main bathroom.



Board of Directors 2022

Name	Phone #	Email	Occupation	Term Expiration
Lowell Grisham - President	479-387-1972	lowellgrisham@gmail.com	Retired Rector of St. Paul's Episcopal Church	February 2024
Suzanne Stoner	479-409-6625	suzanne@stpaulsfay.org	Associate Rector of St. Paul's Episcopal Church	February 2024
Anne O'Leary-Kelly - Secretary	479-387-5469	AO'leary-kelly@walton.uark.edu	Associate Dean, Walton College of Business	February 2024
Stacey Park	479-530-5560	stacey@parkco.net	Architect and owner of Parkco Architects	February 2024
Haley Hixson	479-304-9648	haley@mountsequoyah.org	Accountant at Mt. Sequoyah Center	February 2023
Rogelio Garcia-Contreras	303-229-3212	RGarciaContreras@walton.uark.edu	Director of the Social Innovation Initiative at the Office of Entrepreneurship and Innovation in the Walton College of Business.	February 2023
Jane Gearhart - Vice President	479-841-0122	jbgear@aol.com	Retired	February 2024
Casey Jones	479-957-5566	cjones@fayetteville-ar.gov	Washington County District Judge	February 2024
Brooke Smith	501-416-8981	brookesmith1218@gmail.com	Deputy Public Defender	February 2023
Kristi Palmer	501-940-1591	kristipalmer2016@gmail.com	Physician	February 2023
Pat Schram - Treasurer	479-409-8788	pschram55@yahoo.com	Retired	February 2025

BYLAWS OF
Magdalene Serenity House, Inc.

ARTICLE I

NAME; OFFICES AND REGISTERED AGENT; BOOKS AND RECORDS

Section 1.1. Corporate Name. The name of the Corporation is Magdalene Serenity House, Inc. (the "Corporation").

Section 1.2. Principal Office. The Corporation has and will continuously maintain a principal office in the City of Fayetteville or in Washington County, Arkansas. The Corporation may maintain additional offices at such other place or places as the Board (defined below) shall from time to time designate.

Section 1.3. Registered Office and Agent. The Corporation has and will continuously maintain a registered office and agent in the State of Arkansas in accordance with the requirements of Arkansas law. The registered office may, but need not, be identical to the principal office of the Corporation.

Section 1.4. Books and Records. The books and records of the Corporation are to be kept at its principal office or at such other place or places as the directors of the Corporation shall from time to time determine. The board of directors of the Corporation shall sometimes be collectively referred to as the "Board" or the "Directors" and, individually, as a "Director".

ARTICLE II

PURPOSES

Section 2.1. Purposes. The Corporation is organized exclusively for charitable, educational, religious, or scientific purposes within the meaning of Section 501(c)(3) of the Internal Revenue Code. Without limiting the generality of the foregoing, the Corporation is organized and will be operated for the purposes of providing housing, assistance in accessing food, medical, dental, addiction recovery, mental health care, and/or prescription medicine needs for women with a history of trauma, sexual exploitation, addiction, and incarceration in the Fayetteville-Springdale-Rogers Metropolitan Statistical Area.

ARTICLE III

MEMBERS

Section 3.1. Members. The Corporation has no members.

ARTICLE IV

BOARD OF DIRECTORS

Section 4.1. Authority. The affairs of the Corporation are managed by the Board. The Board may exercise all powers, rights and privileges of the Corporation, whether expressed or implied in the Articles of Incorporation or conferred by law or otherwise, and do all such acts and things which may be done by the Corporation not otherwise prohibited by the Articles, these bylaws, or state law.

Section 4.2. Number and Term. The Board shall consist of at least five Directors but no more than twenty-one Directors. The full term of office of elected Directors shall be three years, and to the extent practical, taking into account increases or decreases in the number of Directors constituting the Board of Directors, one third of the Directors shall be elected each year, in a self perpetuating manner, at the Annual Meeting of the Board of Directors, the Directors so elected filling the place of retiring Directors. In the event of a change in the number of Directors or in establishing the first full Board of Directors, the resolution effectuating such change or electing the first full Board of Directors shall specify the years in which the terms of the directorship thereby created shall first expire. Vacancies occurring in the Board of Directors, including vacancies due to an increase in the number of Directors, may be filled by the Directors then in office. Any Director may succeed herself or himself indefinitely.

Section 4.3. Qualifications. At all times, Directors must be at least 18 years of age.

Section 4.4. Attendance. Directors are expected to attend every regular, special, and annual meeting. The attendance of a Director at any meeting shall constitute a waiver of notice of such meeting unless such attendance is for the purpose of disputing the legality of the meeting.

Section 4.5. Vacancies. Any vacancy occurring on the Board due to the death, resignation, removal or other disqualification of a Director shall be filled by the Board for the unexpired portion of the term.

Section 4.6. Resignation, Removal. A Director may resign by delivering a written resignation to the President or Secretary, or to the Board of Directors, or to the Corporation at its principal office. Such

resignation is effective upon receipt, unless specified to be effective at some other time, and acceptance thereof is not necessary to make it effective unless the resignation so states. Any Director may be removed from the Board of Directors, with or without cause, by the affirmative vote of at least two-thirds of the Board.

Section 4.7. Inactive Directors. A Director is considered inactive if he or she is absent from fifty percent (50%) or more of the meetings within a six-month period. Inactive Directors may be suspended or removed by the Board, but only after reasonable notice and an opportunity to be heard. Provided, however, a Director who requests, and receives, from the Board or the President an excused absence regarding one or more meetings, shall not be deemed absent, for purposes of such inactive status, with respect to such meeting(s).

Section 4.8. Annual Meetings. The annual meeting of the Board is held on the afternoon of the first Sunday of each February or at such other time within sixty (60) days of that date as determined by a vote of the Board of Directors. Written notice of the annual meeting shall be sent at least 30 days before the meeting.

Section 4.9. Regular Meetings. Regular meetings of the Board are held at such places and at such times as the Board may determine. There are a minimum of three regular meetings per year, in addition to the annual meeting. With the prior consent of the President or his/her designee, a Director may participate in a particular regular meeting of the Board by means of a conference telephone call, videoconferencing, web-based conferencing, or any other comparable means of communication.

Section 4.10. Special Meetings. Special meetings of the Board for any purpose may be called at any time by any Officer or any two Directors. Notice shall be sent to each Director at least 24 hours prior to the meeting, except in cases of emergency, in which case only the notice which is reasonable under the circumstances is required. Said notice shall specify the purpose of the special meeting. A Director is deemed present at a special meeting when, by means of a conference telephone, video-conferencing, web-conferencing or any other means of communication all persons participating in the meeting can hear each other simultaneously.

Section 4.11. Notice. Notice stating the place, day and hour of any special or annual meeting shall be delivered to each Director either personally (including by telephone), by electronic mail or by regular mail using the address listed in the Corporation's records. Notice is effective at the earliest of the following: (i) when given, if given in person or by electronic mail; or (ii) 3 days after its deposit in the United States mail, as evidenced by the postmark, if mailed with first-class postage affixed, or if sent by registered or certified mail, return receipt requested.

Section 4.12. Quorum. A majority of the Board constitutes a quorum. Directors present at a meeting who abstain from voting are counted toward the quorum, but such abstention constitutes neither an affirmative nor negative vote. Any act by a quorum of the Board shall be an act by the Board, unless such

act requires a greater number of Directors by law or by these bylaws.

Section 4.13. Voting. When a quorum is present at any meeting, a majority of the Directors present and voting shall decide any question unless provided otherwise by law, the Articles of Incorporation, or other provisions of these bylaws. Voting may take place in person or by telephone or videoconference or web-conferencing during the meeting.

Section 4.14. Written Consent in Lieu of Meeting. Any action required or permitted to be taken at any meeting of the Board may be taken without a meeting if three-quarters of the Board unanimously consents to the action in writing, which consent may be evidenced by e mail messages or other electronic communication. The written consents must be filed with the records of the meetings of the Directors. Such consents shall be treated for all purposes as a record of who attended and voted.

Section 4.15. Deferred Voting. During any meeting or proposed electronic vote, a majority of the Officers, or one third of the Directors present, may elect to defer the vote on any matter being discussed. Where less than a majority of the Officers are present at the meeting or available for written consent, the choice to defer the vote may be made by any Officer present, provided he or she has previously obtained written approval (by either US mail or email) of enough other Officers to constitute a majority of Officers. Such request during any meeting must be made prior to any vote on the matter. The deferred vote shall be taken at a subsequent meeting or by unanimous written consent.

Section 4.16. Compensation. Directors shall not receive any compensation in their capacities as Directors, although they may be reimbursed for reasonable expenses associated with their position.

Section 4.17. Personnel. The Board is responsible for approving new positions and the hiring and firing the Executive Director of the Corporation. The Board in conjunction with the Executive Director shall determine if there is a need for paid employees. The Executive Director will be responsible for the hiring and firing of paid staff members.

Section 4.18. Dues. The Corporation shall not assess dues.

ARTICLE V

WORK GROUPS

Section 5.1. Generally. The Board may designate and create one or more work groups, each of which shall have at least one Director and each of which may include non-Directors. Each work group, to the extent authorized by the Board, may exercise the authority of the Board in the management of the Corporation, but only to the extent authorized by the Board. Said work groups can propose but shall not

have the authority to do the following: make, alter or amend the Articles of Incorporation or the bylaws; elect, appoint or remove any member of any such work group, or any Director or Officer of the Corporation; adopt a plan of merger, consolidation or dissolution; or authorize the sale, lease, exchange or mortgage of all, or any portion of, the property and assets of the Corporation. The designation and appointment of any such work group and the delegation thereto of authority shall not operate to relieve the Board, or any individual Director, of any responsibility imposed by law.

Section 5.2. Standing Work Groups. The Corporation and the Board shall be assisted in carrying out its functions by the use of the following work groups. No individual may serve as the chairperson of more than one work group. Each board member shall be responsible to being an active member in at least one working group.

5.2.A. Executive Work Group. The four officers serve as the members of the Executive Work Group. Except for the power to amend the articles of incorporation and bylaws, the Executive Work Group shall have all the powers and authority of the board of directors in the intervals between meetings of the board of directors, and is subject to the direction and control of the full board.

5.2.B. Finance Work Group. The Finance Work Group shall be responsible for monitoring the financial status of the Corporation. In addition, the Finance Work Group shall create annual accounting budgets, provide financial reports, quarterly reviews and reconciliation of the Corporation's records, advise the Corporation and its Directors regarding accounting and IRS procedures, and implement policies for cash control, reporting and auditing. The Finance Chairperson is the Treasurer of the Corporation.

5.2.C. Property Management Work Group. The Property Management Work Group shall be responsible for planning and organizing all activities related to the Corporation's physical properties including renovation, furniture and appliance acquisition, and maintenance.

5.2.D. Other Work Groups. Other Work Groups which the Directors are likely to call into existence, and shape their mission and tasks, may include, but are not limited to, the following:

- Fundraising/Development Work Group – to assist Executive Director and Development Director with fundraising and development efforts including event planning, fundraising strategy, meetings with prospective donors, and other tasks as assigned.
- Speaker's Bureau Work Group – to identify local community groups and others interested in learning more about Magdalene Serenity House. Connecting program staff with interested parties.
- Statistics/Economics Work Group – to explore different strategies for measuring the impact of the MSH program and how to present this data to different stakeholders.

- Transition/Graduation Work Group – to discuss strategies and identify resources for helping residents successfully transition and reintegrate into the community upon graduation from MSH.

ARTICLE VI OFFICERS

Section 6.1. Officers. The Officers of the Corporation shall consist of a President, a Vice-President, a Secretary, and a Treasurer.

Section 6.2. Election. The Officers are elected from the membership of the Board of Directors, by the Board of Directors, at the Annual Meeting of the Board. Officers serve one-year terms. An Officer may be re-elected at the Annual Meeting each year until his or her term on the Board expires.

Section 6.3. Vacancies. Where a vacancy occurs in an office, the Board shall elect a replacement, and the replacement shall hold office for the unexpired remainder of the vacant term.

Section 6.4. Removal. The Board may remove any Officer elected by the Board with or without cause.

Section 6.5. Resignation. Any Officer may resign by delivering his or her written resignation to any other Officer of the Corporation, or to the principal office. Such resignation shall be effective upon receipt, unless specified to be effective at some other time, and acceptance thereof shall not be necessary to make it effective unless the resignation so states.

ARTICLE VII DUTIES OF OFFICERS

Section 7.1. President. The President is the chief executive officer of the Corporation. He or she presides over meetings of the Board, plans and prepares agendas for each meeting, and supervises and controls all corporate business and affairs.

Section 7.2. Vice-President. The Vice-President, in the absence of the President or in the event of the President's inability or refusal to act, the Vice-President shall perform the duties of the office and, when so acting, shall have all the powers of and be subject to all the restrictions upon the President.

Section 7.3. Secretary. The Secretary keeps the minutes of meetings of the Board, sees that all notices are given in accordance with the bylaws or as provided by the law, and distributes minutes to the

Board. The Secretary is the custodian of all official documents and papers of the Corporation. The Secretary shall have such other duties and powers as designated by the Board.

Section 7.4. Treasurer. The Treasurer shall be the chief financial officer and the chief accounting officer of the Corporation. He or she shall also be the Chairperson of the Finance Committee. He or she shall be in charge of its financial affairs, funds, securities and valuable papers and shall keep full and accurate records thereof. The Treasurer shall have such other duties and powers as designated by the Board.

ARTICLE VIII

FISCAL YEAR

Section 8.1. Fiscal Year. The fiscal year of the Corporation ends December 31.

ARTICLE IX

INDEMNIFICATION AND INSURANCE

Section 9.1. Indemnification. The Corporation shall, to the extent legally permissible, indemnify each person who may serve or who has served at any time as an officer, Director, or employee of the Corporation against all expenses and liabilities, including, without limitation, counsel fees, judgments, fines, excise taxes, penalties and settlement payments, reasonably incurred by or imposed upon such person in connection with any threatened, pending or completed action, suit or proceeding in which he or she may become involved by reason of his or her service in such capacity; provided that no indemnification shall be provided for any such person with respect to any matter as to which he or she shall have been finally adjudicated in any proceeding not to have acted in good faith in the reasonable belief that such action was in the best interests of the Corporation; and further provided that any compromise or settlement payment shall be approved by a majority vote of a quorum of Directors who are not at that time parties to the proceeding. The Corporation may, but is not required to, purchase and maintain insurance on all persons or classes of persons it may indemnify to the full extent permitted by law.

Section 9.2. Heirs, Administrators; Amendment of Bylaws. The indemnification provided hereunder shall inure to the benefit of the heirs, executors and administrators of persons entitled to indemnification hereunder. The right of indemnification under this Article shall be in addition to and not exclusive of all other rights to which any person may be entitled. No amendment or repeal of the provisions of this Article which adversely affects the right of an indemnified person under this Article shall apply to such person with respect to those acts or omissions which occurred at any time prior to such amendment or repeal, unless such amendment or repeal was voted by or was made with the written consent of such indemnified person.

Section 9.3. Contract for Indemnification. This Article constitutes a contract between the corporation and the indemnified officers, Directors, and employees. No amendment or repeal of the provisions of this Article which adversely affects the right of an indemnified officer, Director, or employee under this Article shall apply to such officer, Director, or employee with respect to those acts or omissions which occurred at any time prior to such amendment or repeal.

Section 9.4 Other Insurance. The Board shall have the power to acquire any insurance deemed necessary or proper in the conduct of the affairs of the Corporation.

ARTICLE X

CONTRACTS, LOANS, CHECKS, AND DEPOSITS

Section 10.1. Contracts and Loans. Unless authorized by the Board, no Officer, agent or employee shall have the power or authority to bind the Corporation by any contract or promissory note or to render it liable for any purposes. The Board may authorize any Officer(s) or agent(s) to enter into any contract or execute and deliver any instrument in the name of and on behalf of the Corporation. Such authority may be general or confined to specific instances.

Notwithstanding anything else in this Section 10.1, for any contract or loan obligation under \$2,500, no general or specific authorization of the Board is required; instead, any two Officers have the Board-delegated authority to authorize such a contract or loan obligation.

Section 10.2. Checks. All checks, drafts, or other orders for the payment of money, notes, or other evidences of indebtedness issued in the name of the Corporation shall be signed by the Executive Director if the amount of payment does not exceed Five hundred dollars, \$500. All checks, drafts, or other orders for the payment of money, notes, or other evidences of indebtedness issued in the name of the Corporation in excess of Five hundred dollars, \$500, shall be signed by the Treasurer and the Executive Director, unless otherwise authorized by the Board.

Section 10.3. Deposits. All funds of the Corporation not otherwise employed shall be deposited from time to time to the credit of the Corporation in such banks, trust companies, or other depositories as the Board may select.

ARTICLE XI

CONFLICT OF INTEREST

Section 11.1. Purpose. The purpose of this policy is to protect the interests of Magdalene Serenity House, Inc., when it is contemplating entering into a Transaction which might benefit the personal, business, or professional interests of a director or officer of the Organization, or when it might result in an excess benefit Transaction.

Section 11.2. Duty to Disclose. With respect to any proposed Transaction in which a conflict of interest may be present, a Director must disclose any Financial Interest that he or she has regarding the proposed Transaction.

Section 11.3. Whether a Conflict of Interest Exists. The Disinterested Directors shall decide whether a conflict of interest exists. The minutes of the meeting should reflect the disclosure of the Financial Interest and the absence of the Interested Person during discussion and voting.

Section 11.4. Process. If no other more advantageous alternative Transaction is reasonably possible under the circumstances, the Disinterested Directors may vote to authorize the proposed Transaction if the proposed Transaction is: (a) in the Organization's best interests, (b) for the Organization's own benefit, and (c) fair and reasonable.

ARTICLE XII

AMENDMENTS

Section 12.1. Amendments. The bylaws of the Corporation may be amended or repealed and new bylaws may be adopted by the affirmative vote of the Board at any annual, regular, or special meeting of the Board with notice setting forth the terms of the proposed amendment or repeal.

Adopted: _____

Secretary

Corporation Name	MAGDALENE SERENITY HOUSE, INC.
Fictitious Names	
Filing #	811061874
Filing Type	Nonprofit Corporation
Filed under Act	Dom Nonprofit Corp. 1147 of 1993
Status	Good Standing
Principal Address	624 W ADAMS STREET FAYETTEVILLE, AR 72701
Reg. Agent	APRIL BACHRODT
Agent Address	624 W. ADAMS STREET FAYETTEVILLE, AR 72701
Date Filed	09/30/2014
Officers	LOWELL GRISHAM , Incorporator/Organizer SUZANNE STONER , Incorporator/Organizer KAREN MCSPADDEN , Incorporator/Organizer HALEY HIXSON , Director JANE GEARHART , Director LOWELL GRISHAM , Director ANNE O'LEARY-KELLY , Director
Foreign Name	N/A
Foreign Address	
State of Origin	AR
Purchase a Certificate of Good Standing for this Entity	Submit a Nonprofit Annual Report

[Change this Corporation's Address](#)



October 7, 2021

To the Board of Directors
Magdalene Serenity House, Inc.

We have audited the financial statements of Magdalene Serenity House, Inc. for the year ended December 31, 2020, and have issued our report thereon dated August 25, 2021. Professional standards require that we provide you with information about our responsibilities under generally accepted auditing standards, as well as certain information related to the planned scope and timing of our audit. We have communicated such information in our letter to you dated January 23, 2021. Professional standards also require that we communicate to you the following information related to our audit.

Significant Audit Matters

Qualitative Aspects of Accounting Practices

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by the Organization are described in Note 1 to the financial statements. As described in Note 1, the Organization adopted Accounting Standards Update No. 2016-01, *Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Liabilities*, and Accounting Standards Update No. 2018-13, *Fair Value Measurement* (Topic 820). We noted no transactions entered into by the Organization during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimate affecting the financial statements was:

Management's estimate of the lives of fixed assets is based on standards and trends in the industry, as well as the House's maintenance practices and policy regarding replacement of fixed assets. We evaluated the key factors and assumptions used to develop the lives of fixed assets and in determining when depreciation should begin and found that an adjustment was needed to the date in which leasehold improvements should have started to be depreciated.

Management's functional allocation of expenses to the programs is based on management's experience and knowledge of the Organization's programs and utilization of resources to serve the programs. We evaluated the key factors and assumptions used to develop these estimates in determining that they are reasonable in relation to the financial statements taken as a whole.

Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. The most sensitive disclosure(s) affecting the financial statements are the details for the loan and fixed assets.

The disclosure of fair value measurement in Note 5 to the financial statements. The FASB defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When measuring a fair value, a fair value hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). Inputs are broadly defined assumptions market participants would use in pricing an asset or liability. Note 5 goes into great detail as to the definitions of levels within the hierarchy as well as the valuation techniques used.

The financial statement disclosures are neutral, consistent, and clear.

Difficulties Encountered in Performing the Audit

We encountered no significant difficulties in dealing with management in performing and completing our audit.

Corrected and Uncorrected Misstatements

Professional standards require us to accumulate all misstatements identified during the audit, other than those that are clearly trivial, and communicate them to the appropriate level of management. Management has corrected all such misstatements.

Disagreements with Management

For purposes of this letter, a disagreement with management is a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

Management Representations

We have requested certain representations from management that are included in the management representation letter dated August 25, 2021.

Management Consultations with Other Independent Accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the Club's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

Other Audit Findings or Issues

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the House's auditors.

However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

Bank reconciliations should be monitored monthly to ensure that the bank records and the QuickBook records match, which they do in regards to the bank, but the register balance in the reconciliations do not always match the general ledger like it should. This is, generally, caused by the reconciliation being completed and then a change of a transaction prior to the date of the reconciliation is recorded, and the reconciliation was not redone. We noticed this on the December 2020 reconciliation. Transactions that are over a year old that have not cleared should be cleared in the reconciliation and then a journal entry should be made to reverse the entry as if it hadn't happened. This helps keep the reconciliation free of transactions that will likely never clear.

In summary, the records are kept well. There are a few adjustments, which we have sent for approval, acceptance and signature. We feel that the policies and procedures that are in place are mostly being followed except where noted above.

This information is intended solely for the use of Board of Directors and management of the House and is not intended to be, and should not be, used by anyone other than these specified parties.

Very truly yours,

A handwritten signature in cursive script that reads "Przybysz & Associates".

Przybysz & Associates, CPAs, P.C.

MAGDALENE SERENITY HOUSE, INC.

AUDITED FINANCIAL STATEMENTS

DECEMBER 31, 2020 AND 2019



MAGDALENE SERENITY HOUSE, INC.
DECEMBER 31, 2020 AND 2019

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Independent Auditors' Report

To the Board of Directors
Magdalene Serenity House, Inc.
Fayetteville, Arkansas 72701

Opinion

We have audited the accompanying financial statements of the Magdalene Serenity House, Inc. (a nonprofit), which comprise the statement of financial position as of December 31, 2020, and the related statements of activities, functional expenses, and cash flows for the year then ended, and the related notes to the financial statements.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Magdalene Serenity House, Inc. as of December 31, 2020, and the changes in net assets and its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of Magdalene Serenity House, Inc. and to meet our other ethical responsibilities in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events considered in the aggregate, that raise substantial doubt about Magdalene Serenity House Inc's ability to continue as a going concern within one year after the date that the financial statements are available to be issued.

2594 E. Joyce Blvd., Ste. 1
Fayetteville, Arkansas 72703
Ph: 479.444.8200 email: marcel@selectlanding.com
www.selectcpa.com

Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with generally accepted auditing standards will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements, including omissions, are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with generally accepted auditing standards, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of Magdalene Serenity House, Inc.'s internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about Magdalene Serenity House, Inc.'s ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control related matters that we identified during the audit.



Przybysz & Associates, CPAs, P.C.
Fayetteville, Arkansas
August 25, 2021

FINANCIAL STATEMENTS

MAGDALENE SERENITY HOUSE, INC.

STATEMENTS OF FINANCIAL POSITION

AS OF DECEMBER 31,	2020	2019
Assets		
Current Assets		
Cash and cash equivalents	\$ 303,003	\$ 275,721
Pledges receivable	79,844	11,104
Prepaid expenses	6,516	982
Investments	39,659	39,101
Total Current Assets	429,022	326,908
Noncurrent Assets		
Property and Equipment		
Land	39,226	-
Building and improvements	783,431	593,464
Equipment	10,032	10,032
Furniture and fixtures	24,433	24,433
Vehicles	24,080	24,080
Accumulated depreciation	(168,075)	(116,829)
Net Property and Equipment	713,127	535,180
Total Assets	\$ 1,142,149	\$ 862,088
Liabilities and Net Assets		
Liabilities		
Accounts payable	\$ 1,198	\$ 2,119
Accrued liabilities	1,893	753
Paycheck Protection Program loan	31,800	-
Note payable	67,185	83,287
Total Liabilities	102,076	86,159
Net Assets		
Without donor restrictions	965,513	773,654
With donor restrictions	74,560	2,275
Total Net Assets	1,040,073	775,929
Total Liabilities and Net Assets	\$ 1,142,149	\$ 862,088

See accompanying notes to financial statements.

MAGDALENE SERENITY HOUSE, INC.

STATEMENT OF ACTIVITY

FOR THE YEAR ENDED DECEMBER 31, 2020

	Without Donor Restrictions	With Donor Restrictions	Total
Revenue and Other Support			
Contributions and grants	\$ 281,166	\$ 330,026	\$ 611,192
In-kind revenue	51,688	-	51,688
Interest and dividends, net of fees	651	-	651
Unrealized gain on investments	658	-	658
Other income	198	-	198
Net assets released from restrictions	257,741	(257,741)	-
Total Revenue and Other Support	592,102	72,285	664,387
Expenses			
Program service	251,730	-	251,730
Management and general	85,031	-	85,031
Fund raising	63,482	-	63,482
Total Expenses	400,243	-	400,243
Change in Net Assets	191,859	72,285	264,144
Net Assets, Beginning of Year	773,654	2,275	775,929
Net Assets, End of Year	\$ 965,513	\$ 74,560	\$ 1,040,073

See accompanying notes to financial statements.

MAGDALENE SERENITY HOUSE, INC.

STATEMENT OF ACTIVITY

FOR THE YEAR ENDED DECEMBER 31, 2019

	Without Donor Restrictions	With Donor Restrictions	Total
Revenue and Other Support			
Contributions and grants	\$ 396,328	\$ 2,724	\$ 399,052
In-kind revenue	51,000	-	51,000
Interest and dividends, net of fees	347	-	347
Unrealized gain on investments	904	-	904
Other income	370	-	370
Net assets released from restrictions	11,972	(11,972)	-
Total Revenue and Other Support	460,921	(9,248)	451,673
Expenses			
Program service	244,341	-	244,341
Management and general	47,347	-	47,347
Fund raising	46,160	-	46,160
Total Expenses	337,848	-	337,848
Change in Net Assets	123,073	(9,248)	113,825
Net Assets, Beginning of Year	650,581	11,523	662,104
Net Assets, End of Year	\$ 773,654	\$ 2,275	\$ 775,929

See accompanying notes to financial statements.

MAGDALENE SERENITY HOUSE, INC.

STATEMENT OF FUNCTIONAL EXPENSES

FOR THE YEAR ENDED DECEMBER 31, 2020

	Program Service	Management & General	Fund Raising	Total
Compensation and Related Expenses				
Salaries and wages	\$ 87,789	\$ 46,287	\$ 43,437	\$ 177,513
Employee benefits	4,593	2,421	2,273	9,287
Payroll taxes	7,775	4,098	3,847	15,720
Total compensation & related expenses	100,157	52,806	49,557	202,520
Occupancy				
Rent	43,860	3,682	3,458	51,000
Repair and maintenance	1,093	-	-	1,093
Telephone	2,849	239	225	3,313
Utilities	12,677	1,064	999	14,740
Total Occupancy	60,479	4,985	4,682	70,146
Administration				
Bank and credit card fees	-	2,288	-	2,288
Computer expenses	828	1,756	1,368	3,952
Conferences and training	1,130	-	-	1,130
Fundraising	-	-	3,288	3,288
In-kind	688	-	-	688
Insurance	5,667	3,125	447	9,239
Interest expense	2,876	241	227	3,344
Miscellaneous expense	-	4,450	-	4,450
Office expense	1,083	571	536	2,190
Postage	389	205	193	787
Professional fees	60	9,695	-	9,755
Program expenses				
Resident needs	22,032	-	-	22,032
Household operations	5,832	-	-	5,832
Garden	1,722	-	-	1,722
Other	2,984	-	-	2,984
Security	630	-	-	630
Service fees	-	1,516	-	1,516
Vehicle	504	-	-	504
Total Administration	46,425	23,847	6,059	76,331
Total Expenses Before Depreciation	207,061	81,638	60,298	348,997
Depreciation	44,669	3,393	3,184	51,246
Total Expenses	\$ 251,730	\$ 85,031	\$ 63,482	\$ 400,243

See accompanying notes to financial statements.

MAGDALENE SERENITY HOUSE, INC.

STATEMENT OF FUNCTIONAL EXPENSES

FOR THE YEAR ENDED DECEMBER 31, 2019

	Program Service	Management & General	Fund Raising	Total
Compensation and Related Expenses				
Salaries and wages	\$ 91,721	\$ 22,633	\$ 17,900	\$ 132,254
Employee benefits	1,692	418	330	2,440
Payroll taxes	7,884	1,946	1,539	11,369
Total compensation & related expenses	101,297	24,997	19,769	146,063
Occupancy				
Rent	43,860	2,550	4,590	51,000
Repair and maintenance	404	-	-	404
Telephone	2,712	1,559	2,508	6,779
Utilities	4,055	236	424	4,715
Total Occupancy	51,031	4,345	7,522	62,898
Administration				
Bank and credit card fees	-	2,246	-	2,246
Computer expenses	2,822	640	2,823	6,285
Commissions and fees	240	-	-	240
Conferences and training	887	-	-	887
Fundraising	-	-	9,283	9,283
Insurance	9,211	536	964	10,711
Interest expense	3,637	211	381	4,229
Office expense	1,019	586	943	2,548
Postage	173	100	161	434
Professional fees	-	9,500	-	9,500
Program expenses				
Resident needs	13,923	-	-	13,923
Household operations	4,013	-	-	4,013
Garden	8,290	-	-	8,290
Other	812	-	-	812
Security	1,224	-	-	1,224
Service fees	-	1,494	-	1,494
Vehicle	610	-	-	610
Total Administration	46,861	15,313	14,555	76,729
Total Expenses Before Depreciation	199,189	44,655	41,846	285,690
Depreciation	45,152	2,692	4,314	52,158
Total Expenses	\$ 244,341	\$ 47,347	\$ 46,160	\$ 337,848

See accompanying notes to financial statements.

MAGDALENE SERENITY HOUSE, INC.

STATEMENTS OF CASH FLOWS

FOR THE YEARS ENDED DECEMBER 31,	2020	2019
Cash Flows From Operating Activities		
Change in net assets	\$ 264,144	\$ 113,825
Items not affecting cash		
Depreciation	51,246	52,158
Unrealized loss on investments	(658)	(904)
(Increase) / decrease in:		
Accounts receivable	(68,740)	(11,104)
Prepaid expenses	(5,534)	1,453
Increase / (decrease) in:		
Accounts payable	(921)	(2,498)
Accrued liabilities	1,140	368
Net Cash Provided By Operating Activities	240,677	153,298
Cash Flows From Investing Activities		
Net investment activity	100	36
Purchase of Aftercare house	(229,193)	-
Net Cash Provided (Used) By Investing Activities	(229,093)	36
Cash Flows From Financing Activities		
Proceeds from the Paycheck Protection Program loan	31,800	-
Principal payments on note payable	(16,102)	(15,383)
Net Cash Provided (Used) By Financing Activities	15,698	(15,383)
Net Increase In Cash and Cash Equivalents	27,282	137,951
Cash and Cash Equivalents, Beginning of Year	275,721	137,770
Cash and Cash Equivalents, End of Year	\$ 303,003	\$ 275,721

Supplemental Disclosure of Cash Flow Information

Interest paid	\$ 3,344	\$ 4,229
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See accompanying notes to financial statements.

MAGDALENE SERENITY HOUSE, INC.

NOTES TO FINANCIAL STATEMENTS

FOR YEARS ENDED DECEMBER 31, 2020 AND 2019

Nature of Operations

Magdalene Serenity House, Inc. (the Organization) is a non-profit established in 2016. The Organization is residential program that helps rebuild the lives of women who have experienced trauma, sexual exploitation, addiction and incarceration by providing safe housing, long-term support and community partnerships. The Organization provides a collaborative, comprehensive two-year residential program that can comfortably house eight women, free of charge. The women must commit to achieve and maintain a sober lifestyle, regain control of their lives and achieve financial independence.

In December 2020, the Organization purchased a house for an Aftercare program to help graduates successfully reintegrate into the community through safe, supportive affordable housing. The new house can accommodate up to four persons. Residents are charged monthly rent at below market rates and the lease term is six months.

The Organization's primary source of revenue is derived from contributions and support from individuals, private foundations and organizations.

1. Summary of Significant Accounting Policies

a. Recently Issued Accounting Standards

The Organization adopted the following standards during the year ended December 31, 2020:

In August 2018, the Financial Accounting Standards Board (FASB) issued ASU 2018-13, *Fair Value Measurement (Topic 820)*. This ASU amends the disclosure requirements for recurring and nonrecurring fair value measurements by removing, modifying, and adding certain disclosures. Adoption of this ASU did not have any effect on the financial statements.

In April 2019, the FASB issued ASU 2019-04, *Codification Improvements to Topic 326, Financial Instruments- Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825, Financial Instruments*, portions of which became effective in 2020. This ASU was issued to clarify and improve guidance within the recently issued standards on credit losses, hedging and recognition and measurement of financial instruments. Adoption of this ASU did not have any effect on the financial statements.

The Organization adopted the following standards during the year ended December 31, 2019:

In May 2014, the FASB issued Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*. The core principle of this guidance is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for goods and services. This ASU requires entities to make new judgements and estimates and provide expanded disclosures about revenue. Adoption of this ASU did not have any effect on the financial statements.

MAGDALENE SERENITY HOUSE, INC.

NOTES TO FINANCIAL STATEMENTS

FOR YEARS ENDED DECEMBER 31, 2020 AND 2019

1. Summary of Significant Accounting Policies (continued)

a. Recently Issued Accounting Standards (continued)

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Liabilities*. This ASU requires entities to measure most investments at fair value with changes in fair value recognized through net income, as well additional financial statement presentation and disclosure requirements. Adoption of this ASU did not have any effect on the financial statements.

In June 2018, the FASB issued Accounting Standards Update No. 2018-08, *Not-For-Profit Entities (Topic 958): Clarifying the Scope and Guidance for Contributions Received and Contributions Made*. This ASU establishes standards for characterizing grants and similar contracts with resource providers as either exchange transactions or contributions with or without conditions. Adoption of this ASU did not have any effect on the financial statements.

b. Basis of Accounting

The financial statements of the Organization have been prepared on the accrual basis of accounting in accordance with U.S. Generally Accepted Accounting Principles (GAAP) whereby revenues are recognized as earned and expenses are recognized as obligations are incurred.

c. Financial Statement Presentation

Net assets of the Organization and changes therein are classified and reported as follows:

Net assets without donor restrictions - net assets that are not subject to or are no longer subject to donor-imposed stipulations.

Net assets with donor restrictions - these net assets result from contributions or grant awards of cash or other assets that are received with donor stipulations that limit the use of the donated assets, either temporarily or permanently, until the donor restriction expires either with the passage of time or by action of the Organization.

Revenues are reported as increases in net assets without donor restriction unless use of the related assets is limited by donor-imposed stipulations. Expenses are reported as decreases in net assets without donor restrictions. Gains and losses on investments and other assets or liabilities are reported as increases or decreases in net assets without donor restrictions unless their use is restricted by explicit donor stipulation or by law. Expirations of donor restrictions on the net assets (i.e., the donor-stipulated purposes has been fulfilled and/or the passage of time has elapsed) are reported as reclassifications between the applicable classes of net assets. The Organization has adopted a policy to classify donor restricted contributions as without donor restrictions to the extent that donor restrictions were met in the year the contribution was received.

MAGDALENE SERENITY HOUSE, INC.

NOTES TO FINANCIAL STATEMENTS

FOR YEARS ENDED DECEMBER 31, 2020 AND 2019

1. Summary of Significant Accounting Policies (continued)

d. Financial Instruments

The Organization's financial instruments include cash and cash equivalents, pledges receivable and accounts payable. The Organization's estimate of the fair value of all financial instruments does not differ materially from the aggregate carrying value of its financial instruments recorded in the accompanying statement of financial position. The carrying amount of these financial instruments approximate fair value because of the short maturity of these instruments. Other financial instruments held at year-end are investments which are stated at fair value.

e. Cash and Cash Equivalents

For purposes of the Statements of Cash Flows, the Organization considers all highly liquid investments with a maturity of three months or less when purchased to be cash equivalents, excluding investment sweep accounts.

f. Pledges Receivable

Unconditional pledges receivable that are expected to be collected within one year are recorded at net realizable value. Unconditional pledges that are expected to be collected in future years are recorded at the present value of their future cash flows. All of the Organization's pledges are due within one year. The Organization believes that all pledges receivable are collectible and no allowance for doubtful accounts is necessary at December 31, 2020 and 2019.

g. Prepaid Expenses

Payments made to vendors for services that will benefit future periods are recorded as prepaid expenses using the consumption method by recording a current asset for the prepaid amount at the time of purchase and reflecting the expense in the year which services are consumed.

h. Investments

Investments are carried at fair value. Investment income and gains that are initially restricted by donor stipulation and for which the restriction will be satisfied in the same year are included in net assets without donor restrictions. Other investment income, gains and losses are reflected in the statements of activities as net assets without donor restrictions or net assets with donor restrictions based upon the existence and nature of any donor or legally imposed restrictions.

MAGDALENE SERENITY HOUSE, INC.

NOTES TO FINANCIAL STATEMENTS

FOR YEARS ENDED DECEMBER 31, 2020 AND 2019

1. Summary of Significant Accounting Policies (continued)

i. Donated Property and Equipment

Donations of property and equipment, if material, are recorded as support at their estimated fair value. Such donations are reported as support without donor restrictions unless the donor has restricted the donated asset for a specific purpose. Contributions of cash that must be used to acquire property and equipment are reported as support with donor restrictions. Absent donor stipulations regarding how long those donated assets must be maintained, the Organization reports expirations of donor restrictions when the donated or acquired assets are placed in service as instructed by the donor. The Organization reclassifies net assets with donor restrictions to net assets without donor restrictions at that time.

j. Property and Equipment

The Organization records purchases of fixed assets at original cost. Expenditures for maintenance and repairs are expensed as incurred. Depreciation is calculated using the straight-line method with estimated useful lives as follows:

	Years
Building and improvements	5 - 40
Equipment	3
Furniture and fixtures	3 - 7
Vehicles	5

It is the Organization's policy to capitalize all asset purchases with a cost greater than \$1,500.

The Organization's depreciation expense for the years ended December 31, 2021 and 2019 was \$51,328 and \$52,158.

k. Compensated Absences

Employees earn paid time off (PTO) in varying amounts based upon full or part time employment status with the Organization. Unused accrued PTO can carryforward from year to year, but can only be used for parental or family medical leave. No unused accrued PTO is paid upon termination from the Organization. Therefore no accrual for compensated absences is necessary at December 31, 2020 and 2019.

MAGDALENE SERENITY HOUSE, INC.

NOTES TO FINANCIAL STATEMENTS

FOR YEARS ENDED DECEMBER 31, 2020 AND 2019

1. Summary of Significant Accounting Policies (continued)

l. Revenue Recognition

Conditional contributions and grants are those that contain a barrier that must be overcome before the Organization is entitled to the assets transferred and a right of return of assets transferred or a right of release of the donor's obligation to transfer assets exists. Conditional contribution and grant revenue is recognized when all barriers have been overcome. All other contributions and grants are recognized when the donor makes a promise to give to the Organization that is, in substance, unconditional. Contributions that are restricted by the donor are reported as increases in net assets without donor restrictions if the restrictions expire in the fiscal year in which the contributions are recognized. All other donor-restricted contributions are reported as increases in net assets with donor restrictions. When a restriction expires, net assets with donor restrictions are reclassified to net assets without donor restrictions.

m. In-Kind Contributions

The Organization regularly receives contributions of supplies and other household items from various donors. The Organization records these items at their estimated fair value when received.

n. Donated Services

Contributed services are recorded in the financial statements to the extent that those services create or enhance a nonfinancial asset or meet the following criteria: a) the service requires specialized skills, b) the service provided by individuals who possess those skills, and c) the service would typically need to be purchased if not contributed. For the years ended December 31, 2020 and 2019, there were no amounts recorded that met the criteria for recognition as described above, despite the considerable value of donated time by volunteers to the mission of the Organization.

o. Functional Allocation of Expenses

The costs of providing the various programs and activities have been summarized on a functional basis in the Statement of Activities and in the Statement of Functional Expenses. Directly identifiable expenses are charged to programs and supporting activities. Expenses related to more than one function are allocated to programs and supporting services. Expenses were allocated using a variety of methods including employee time estimates, square footage and usage estimates.

p. Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

MAGDALENE SERENITY HOUSE, INC.

NOTES TO FINANCIAL STATEMENTS

FOR YEARS ENDED DECEMBER 31, 2020 AND 2019

1. Summary of Significant Accounting Policies (continued)

q. Reclassifications

Certain 2019 amounts have been reclassified in order to conform with the 2020 financial statement presentation. Net assets and changes in net assets are unchanged due to these reclassifications.

2. Federal Income Tax

The Organization is exempt from federal income taxes under Section 501(c)(3) of the Internal Revenue Code and a similar section of Arkansas statutes. Accordingly, no provision or liability for federal or state income taxes has been included in the accompanying financial statements. In addition, the Organization has been determined by the Internal Revenue Service not to be a private foundation within the meaning of Section 509(a) of the Code.

Additionally, the Organization qualifies for the charitable contribution deduction under Section 170(b)(1)(A).

Generally accepted accounting principles require tax effects from an uncertain tax position to be recognized in the financial statements only if the position is more likely than not to be sustained if the position were to be challenged by a taxing authority. The assessment of the tax position is based solely on the technical merits of the position, without regard to the likelihood that the tax position may be challenged. If an uncertain tax position meets the more-likely-than-not threshold, the largest amount of tax benefit that is greater than 50% likely to be recognized upon ultimate settlement with the taxing authority is recorded. The Organization's primary tax positions relate to its status as a not-for-profit entity exempt from income taxes and classification of activities related to its exempt purpose.

The Organization has analyzed its tax positions taken for filings with the Internal Revenue Service. It believes that its filing positions will be sustained upon examination and does not anticipate any adjustments that would result in a material adverse effect on its financial condition, results of operations, or cash flows.

3. Bank Deposits

The Organization maintains its operating bank accounts in two local financial institutions. The Federal Deposit Insurance Corporation (FDIC) insures accounts at each institution up to \$250,000. The Organization's cash balances may, at times, exceed these insured limits. At December 31, 2020 and 2019, the Organization had \$60,383 and \$14,596, respectively, in uninsured cash deposits. The Organization does not believe that there is any significant risk associated with the concentrations of credit nor has the Organization experienced any losses in such accounts.

MAGDALENE SERENITY HOUSE, INC.

NOTES TO FINANCIAL STATEMENTS

FOR YEARS ENDED DECEMBER 31, 2020 AND 2019

4. Investments

The Organization maintains an account with an investment firm that contains cash and cash equivalents, securities and other investments. Only the cash and cash equivalents in the account are FDIC insured up to \$250,000. The remaining investment balances are not insured by the FDIC or any other federal government agency, nor are they protected against market losses on investments.

Investments are stated at fair value, which are estimated based on quoted market prices. Fair values and unrealized appreciation (depreciation) is summarized as follows:

As of December 31, 2020	Cost	Fair Value
Cash and cash equivalents	\$ 36,363	\$ 36,263
Equities	1,972	3,396
Total	\$ 38,335	\$ 39,659

As of December 31, 2019	Cost	Fair Value
Cash and cash equivalents	\$ 36,363	\$ 36,363
Equities	1,972	2,738
Total	\$ 38,335	\$ 39,101

Investment expense is reflected on the statement of activities netted with interest and dividends. Investment expense was \$150 for both years ended December 31, 2020 and 2019.

5. Fair Value Measurements

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Generally accepted accounting principles establish a framework for measuring fair value that includes a hierarchy that categorizes and prioritizes the sources used to measure and disclose fair value. When measuring a fair value, a fair value hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). Inputs are broadly defined as assumptions market participants would use in pricing an asset or liability. The three levels of the fair value hierarchy are described below:

Level 1 - Quoted prices in active markets for identical assets or liabilities.

Level 2 - Observable inputs other than Level 1 prices such as quoted prices for similar assets or liabilities, quoted prices in inactive markets, or other inputs that are observable or can be corroborated by observable market data.

Level 3 - Unobservable inputs that reflect a reporting entity's own assumptions about the assumptions that market participants would use in pricing an asset or liability.

MAGDALENE SERENITY HOUSE, INC.

NOTES TO FINANCIAL STATEMENTS

FOR YEARS ENDED DECEMBER 31, 2020 AND 2019

5. Fair Value Measurements (continued)

Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs. The valuation methods used may produce a fair value calculation that may not be indicative of the net realizable value or reflective of future fair values. Furthermore, although the Organization believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date. There have been no changes in the methodologies used at December 31, 2020.

The following table represents the Trust's investments that are measured at fair value on a recurring basis at December 31, 2020:

	Level 1	Level 2	Level 3	Total
Cash and equivalents	\$ 36,263	\$ -	\$ -	\$ 36,263
Equities	3,396	-	-	3,396
Total	\$ 39,659	\$ -	\$ -	\$ 39,659

Equities are valued at market value as reported by the external investment fund manager.

6. Property and Equipment

Activity of property and equipment consists of the following:

As Of	January 1, 2020	Additions	Retirements	December 31, 2020
Land	\$ -	\$ 39,226	\$ -	\$ 39,226
Building and improvements	593,464	189,967	-	783,431
Equipment	10,032	-	-	10,032
Furniture and fixtures	24,433	-	-	24,433
Vehicles	24,080	-	-	24,080
Total	\$ 652,009	\$ 229,193	\$ -	\$ 881,202

In December 2020, the Organization purchased a house for its new Aftercare program. The house was purchased in cash with donations received. The house is ready for occupancy, but the Organization does have plans for future renovation of the basement which will cost approximately \$115,000.

MAGDALENE SERENITY HOUSE, INC.

NOTES TO FINANCIAL STATEMENTS

FOR YEARS ENDED DECEMBER 31, 2020 AND 2019

6. Property and Equipment (continued)

As Of	January 1, 2019	Additions	Retirements	December 31, 2019
Building and improvements	\$ 593,464	\$ -	\$ -	\$ 593,464
Equipment	10,032	-	-	10,032
Furniture and fixtures	24,433	-	-	24,433
Vehicles	24,080	-	-	24,080
Total	\$ 652,009	\$ -	\$ -	\$ 652,009

7. Paycheck Protection Program Loan

On May 8, 2020, the Organization received a loan of \$31,800 from the Paycheck Protection Program (PPP) under Division A, Title 1 of the CARES Act, which was enacted March 27, 2020. The loans and accrued interest are forgivable after eight weeks as long as the borrower uses the loan proceeds for eligible purposes, including payroll, benefits, rent and utilities, and maintains its payroll levels. In April 2021, the Organization was granted 100% loan forgiveness by the Small Business Administration.

8. Note payable

In 2016, the Organization financed the remodeling of their facilities for \$527,000. On December 29, 2017 the balance of the note was re-financed. The new note is due upon demand, but if no demand is made, the Organization will make monthly payments of \$1,621 including interest at 4.35% with the final unpaid principal balance due December 29, 2022. The note is secured by the property and an assignment of all rents on the property. The outstanding loan balance at December 31, 2020 and 2019 was \$67,185 and \$83,287 respectively.

Debt is scheduled to be repaid as follows:

December 31,	Principal	Interest	Total
2021	\$ 16,815	\$ 2,631	\$ 19,446
2022	50,370	1,872	52,242
Total	\$ 67,185	\$ 4,503	\$ 71,688

The activity of long-term debt is summarized below:

As of	January 1, 2020	Debt Additions	Debt Retirements	December 31, 2020
Promissory note	\$ 83,287	\$ -	\$ 16,102	\$ 67,185
Total	\$ 83,287	\$ -	\$ 16,102	\$ 67,185

MAGDALENE SERENITY HOUSE, INC.

NOTES TO FINANCIAL STATEMENTS

FOR YEARS ENDED DECEMBER 31, 2020 AND 2019

8. Note payable (continued)

As of	January 1, 2019	Debt Additions	Debt Retirements	December 31, 2019
Promissory note	\$ 98,670	\$ -	\$ 15,383	\$ 83,287
Total	\$ 98,670	\$ -	\$ 15,383	\$ 83,287

9. Rental Agreement / Related Party

The Organization's facilities are owned by St. Paul's Episcopal Church. St. Paul's Episcopal church leases the facilities to the Organization free of charge under a verbal agreement that commenced in June 2016. The Organization has recorded in-kind revenue of \$51,000 for both years ended December 31, 2020 and 2019 to reflect the value of the annual rent. The Organization rents the facilities on a month to month basis and could cancel the lease at any time, although there is no intent to do so as of the date of these financial statements.

10. Net Assets with Donor Restrictions

Net assets with donor restrictions were available for the following purposes:

As of December 31,	2020	2019
Aftercare program house renovations	\$ 54,957	\$ -
Dental services	8,675	2,175
Resident food, hygiene products and mortgage	7,375	-
Lawncare	3,000	-
Tablets for telehealth	453	-
Artwork	100	100
Total	\$ 74,560	\$ 2,275

11. Retirement Plan

The Organization sponsors a SIMPLE IRA plan for all employees who anticipate earning \$5,000 during the calendar year and have received at least \$5,000 in compensation during the prior calendar year. Employees can make pre-tax contributions to the plan with up to a 3% company matching provision. Employer contributions to the plan for the years ended December 31, 2020 and 2019 were \$4,368 and \$2,440, respectively.

MAGDALENE SERENITY HOUSE, INC.

NOTES TO FINANCIAL STATEMENTS

FOR YEARS ENDED DECEMBER 31, 2020 AND 2019

12. Concentrations

Generally accepted accounting principles require disclosure of current vulnerabilities due to certain concentrations. The Organization receives a significant amount of revenues from donations from individuals and Organizations. Any large reduction in the level of support from these donations could negatively impact the Organization. In addition, two donors accounted for approximately 41% and 44% of total revenues and support during the years ended December 31, 2020 and 2019, respectively.

In addition, one different donor represented approximately 94% and 90% of the total pledges receivable balance at December 31, 2020 and 2019, respectively,

13. COVID-19

On March 11, 2020, the World Health Organization categorized Coronavirus Disease 2019 (COVID-19) as a pandemic. The spread of COVID-19 continues to cause global economic uncertainty as of the date of this report. Due to the pandemic, the Organization was unable to hold any fundraising or other special events and was limited in its ability to solicit individual donors. Staffing changes were made due to a loss of volunteers and interns which was necessary for the safety of both the staff and residents. The Organization also implemented social distancing practices as well as resident housing changes such as maintaining an isolation bedroom and bathroom for any residents potentially exposed to the virus. In addition, the Organization incurred additional expenditures for personal protection equipment, cleaning supplies, training, and other costs necessary to ensure Center of Disease Control safety guidelines. All of this had a negative impact on the Organization's operations. The Organization received a \$31,800 PPP loan (see Note 7), and additional funding from other sources totaling approximately \$95,000 to help minimize the loss of revenues. The Organization continues to monitor its operations, liquidity, and capital resources to minimize the current and future impact of this unprecedented situation.

14. Liquidity and Availability of Financial Assets

The Organization manages liquidity and reserves by operating within a prudent range of financial responsibility, maintaining adequate liquidity to fund near-term operations and maintaining sufficient reserves to provide reasonable assurance that long-term obligations will be met. The following reflects the Organization's financial assets, reduced by amounts not available for general use within one year because of contractual or donor-imposed restrictions or internal designations.

MAGDALENE SERENITY HOUSE, INC.

NOTES TO FINANCIAL STATEMENTS

FOR YEARS ENDED DECEMBER 31, 2020 AND 2019

14. Liquidity and Availability of Financial Assets (continued)

As of December 31,	2020	2019
Cash and cash equivalents	\$ 303,003	\$ 275,721
Accounts receivable	79,844	11,104
Investments	39,659	39,101
Total financial assets available	422,506	325,926
Contractual or donor imposed restrictions:		
Cash restricted for:		
Aftercare program house renovations	54,957	-
Dental services	8,675	2,175
Resident food, hygiene products and mortgage	7,375	-
Lawncare	3,000	-
Tablets for telehealth	453	-
Artwork	100	100
Financial Assets Available to Meet Cash Needs for Expenditures Within One Year	\$ 347,946	\$ 323,651

15. Subsequent Events

The Organization has evaluated events and transactions for subsequent events that would impact the financial statements for the year ended December 31, 2020 through August 25, 2021, the date the financial statements were available to be issued. There were no subsequent events that require recognition or disclosure in the financial statements.

Aftercare House Application



Basic Information

Applicant Name: _____

Date of Birth: _____ Age: _____ Phone: _____

Race: _____ Ethnicity: _____

Email Address: _____

Are you currently on parole? ☐ Yes ☒ No

Are you currently on probation? ☐ Yes ☒ No

Supervising Officer Contact Info: _____

Mental & Physical Health:

Do you have any physical disabilities or limitations? ☒ Yes ☐ No

If yes, can you please describe your physical disability and/or limitation(s)?

Are you currently on any medications? ☐ Yes ☒ No

If yes, please list medications: _____

Current Employer

Name of Employer: _____

Dates of Employment: From: _____ To: _____

Position: _____ Wage: _____

Attached Monthly Budget: ☐ Yes ☒ No

INTERNAL REVENUE SERVICE
P. O. BOX 2508
CINCINNATI, OH 45201

DEPARTMENT OF THE TREASURY

Date: **JUN 03 2016**

MAGDALENE SERENITY HOUSE INC
224 N EAST AVE
FAYETTEVILLE, AR 72701

Employer Identification Number:
47-1870017
DLN:
17053082315026
Contact Person:
HAROLD J FODOR ID# 31675
Contact Telephone Number:
(877) 829-5500
Accounting Period Ending:
December 31
Public Charity Status:
170(b)(1)(A)(vi)
Form 990/990-EZ/990-N Required:
Yes
Effective Date of Exemption:
September 30, 2014
Contribution Deductibility:
Yes
Addendum Applies:
No

Dear Applicant:

We're pleased to tell you we determined you're exempt from federal income tax under Internal Revenue Code (IRC) Section 501(c)(3). Donors can deduct contributions they make to you under IRC Section 170. You're also qualified to receive tax deductible bequests, devises, transfers or gifts under Section 2055, 2106, or 2522. This letter could help resolve questions on your exempt status. Please keep it for your records.

Organizations exempt under IRC Section 501(c)(3) are further classified as either public charities or private foundations. We determined you're a public charity under the IRC Section listed at the top of this letter.

If we indicated at the top of this letter that you're required to file Form 990/990-EZ/990-N, our records show you're required to file an annual information return (Form 990 or Form 990-EZ) or electronic notice (Form 990-N, the e-Postcard). If you don't file a required return or notice for three consecutive years, your exempt status will be automatically revoked.

If we indicated at the top of this letter that an addendum applies, the enclosed addendum is an integral part of this letter.

For important information about your responsibilities as a tax-exempt organization, go to www.irs.gov/charities. Enter "4221-PC" in the search bar to view Publication 4221-PC, Compliance Guide for 501(c)(3) Public Charities, which describes your recordkeeping, reporting, and disclosure requirements.

Letter 947

MAGDALENE SERENITY HOUSE INC

We sent a copy of this letter to your representative as indicated in your power of attorney.

Sincerely,

A handwritten signature in dark ink, appearing to read 'JVC', is written over the printed name of Jeffrey V. Cooper.

Jeffrey V. Cooper
Director, Exempt Organizations
Rulings and Agreements

Letter 947

APRIL BACHRODT

LCSW, PHD

SKILLS

- Non-profit administration
- Program design and evaluation
- Fundraising and development
- Data analytics & report writing
- Clinical care and case management
- Legal advocacy
- Web design, social media and marketing
- Public speaking and grant writing
- Staff and intern supervision
- Trained in Emotionally Focused Therapy (EFT)
- Smart Recovery Facilitator

EDUCATION

University of Kansas
August 2009-2014
PhD in Social Welfare

University of Kansas
June 2008-May 2009
Master's in Social Work

University of Kansas
August 2003-May 2008
Bachelor's in Social Work

CONTACT

Phone (479) 313-1502
Email aprilbachrodt@gmail.com

WORK EXPERIENCE

EXECUTIVE DIRECTOR

Magdalene Serenity House | Sep 2018 - Present

- Administration, program design and management
- Social media, marketing, web design, and management
- Resident care, case management, and treatment planning
- Community outreach, education, and training
- Fundraising, grant writing, and development
- Strategic planning, financial management, human resources
- Legal advocacy and Board management

FIELD INSTRUCTOR

University of Arkansas | May 2017 - Present

- Supervision of BSW, Advanced MSW, Clinical Counseling, English, and Occupational Therapy interns.

PROGRAM DIRECTOR

Magdalene Serenity House | May 2017 - Sep 2018

- Administration, program design, and management
- Resident care, case management, and treatment planning
- Legal advocacy

ADJUNCT FACULTY

University of Arkansas | May 2017 - Sep 2018

- Taught Research Methods, Advanced Research Methods, Community Practice, and Field Seminar

ASSISTANT PROFESSOR

University of Arkansas | Aug 2014 - May 2017

- Taught core research courses
- Conducted grant funded research projects
- Grant writing, publication, and report writing
- Conference presentations and training
- Curriculum design, implementation, and evaluation

EDUCATION AND OUTREACH SPECIALIST

MOCSA | August 2009 - May 2010

- Designed and provided community education in schools on topics including sexual assault, gender stereotypes, healthy relationships, dating violence, and sexual harassment

Entity Information

Magdalene Serenity House, Inc. • Active Registration

Unique Entity ID
CHAYZYKV6HC9

Your registration was activated on 2022-03-14. It expires on 2023-03-10 which is one year after you submitted it for processing.

	Core Data Completed		Assertions Completed		Reps & Certs Completed		POCs Completed		Submit Completed		Processing Completed		Active Completed
--	-------------------------------	--	--------------------------------	--	--------------------------------------	---	--------------------------	--	----------------------------	--	--------------------------------	--	----------------------------



To Whom it May Concern,

Magdalene Serenity House has not requested or received American Rescue Plan Act funds from other sources.

With gratitude,

April Bachrodt

Dr. April Bachrodt, LCSW, PhD

Executive Director

Magdalene Serenity House april@lovehealsnwa.org



PO BOX 3394 // FAYETTEVILLE. AR 72702 // 479 301 2326 // APRIL@LOVEHEALSNWA.ORG

**D&W CONTRACTORS**

NORTHWEST ARKANSAS • USA

P.O. BOX 382
 TONTITOWN, AR 72770
 479-263-7263

Estimate

4/25/2022

MAGDALENE AFTERCARE HOUSE
 1029 N GREGG ST
 FAYETTEVILLE AR

Item	Description	Total
Permit & Site Setup	Building Permits	800.00
Demo	Demo and waste/port a potty	6,700.00
Foundation	Foundation/waterproofing	22,200.00
Concrete	Concrete patching/report patio & walkway	8,000.00
Framing	Framing	8,300.00
Electrical & Lighting	Electrical rough in / trimout	10,000.00
Plumbing	Plumbing rough in / topout / trimout	18,000.00
HVAC	Heating & Cooling - ductwork and basement units	9,250.00
Insulation	Insulation - batt insulation in basement walls, and blown attic insulation	1,800.00
Windows	Windows - 5 casement	2,300.00
Doors	Doors & Trim	3,500.00
Drywall	Drywall	10,000.00
Cabinets	Cabinets	4,750.00
Trim & Millwork	Millwork & Trim	10,000.00
Paint	Interior Paint	11,500.00
Concrete	Fix interior concrete cracks	1,800.00
Floor Coverings	Floor Coverings	10,160.00
Cabinets	Countertops	3,500.00
Miscellaneous	Tub surround	600.00
Plumbing	Plumbing fixtures	2,400.00
Electrical & Lighting	Electrical fixtures	700.00
Appliances	Appliance installation	300.00
Vanities	Kitchen backsplash	960.00
Hardware	Hardware	1,350.00
Exterior Trim & Decks	Fence	17,850.00
Cleanup	Final clean	300.00
Contingency	Contingency	21,000.00
Gutter	Gutter guard	600.00
Contractor fee	Contractor fee - \$5,000 to start, then 20% of cost plus labor	42,724.00

Thank you,
 Walter Potapov
 D & W Contractors, Inc.

Total: \$231,344.00

Budget Year	Division	Adjustment Number
2022	Non-Departmental (800)	
	Requestor: Alderman, Mike Wiederkehr	

A RESOLUTION TO AUTHORIZE MAYOR JORDAN TO SIGN A SUBRECIPIENT AGREEMENT WITH MAGDALENE SERENITY HOUSE, INC. TO PROVIDE SUPPORTIVE RECOVERY HOUSING FOR FORMERLY INCARCERATED WOMEN UTILIZING AMERICAN RESCUE PLAN ACT FUNDS IN THE AMOUNT OF \$128,789.00, AND TO APPROVE A BUDGET ADJUSTMENT

	COUNCIL DATE:	1/3/2022
	ITEM ID#:	2022-242
	Kevin Springer	
	12/9/2022 4:20 PM	
	Budget Division	Date
	D - (City Council)	
TYPE:		
JOURNAL #:		
GLDATE:		
CHKD/POSTED:	/	
RESOLUTION/ORDINANCE		

[illegible]



MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council

THRU: Susan Norton, Chief of Staff
Jonathan Curth, Development Services Director
Jessica Masters, Development Review Manager

FROM: Melissa Evans, Urban Forester

DATE: December 27, 2022

SUBJECT: **TREE PRESERVATION EASEMENT VACATION (W. MITCHELL ST.)**

RECOMMENDATION:

Staff recommends denial of the vacation of the tree preservation easement on parcel 765-07564-000 as shown in Exhibit B. While the applicant intends to dedicate two additional tree preservation easements in exchange (Exhibits C and D), Urban Forestry finds that the loss of canopy in this commercial area would be detrimental to the health of the local ecosystem, and would undermine the integrity of the tree preservation ordinance.

BACKGROUND:

The tree preservation easement on parcel number 765-07564-000 was dedicated as part of the development of JD China restaurant Large Scale Development when it was built in 2001. The trees were placed in a tree preservation easement to meet the development requirements on the 1.76-acre lot to build the restaurant.

After the restaurant closed, Raising Cane's purchased and subdivided the lot. In 2016, the lot split (LSP 16-5311) was submitted and approved. The lot split created two lots, one with 1.09 acres that was sold to Raising Cane's, and the other with 0.67 acres, 0.38 acres of which is encumbered with the tree preservation easement in question. In exchange for the vacation, the applicant intends to dedicate two additional tree preservation easements off-site as described in Exhibits C and D.

City Council received a vacation request from the previous property owner in 2019 which was tabled indefinitely with additional input requested from the applicant which was not provided. Planning and Urban Forestry staff received inquiries about this property from a realtor and the prospective buyers in the last few months and informed them of the tree preservation easement.

The applicant wishes to vacate the tree preservation easement to facilitate developing the property. According to UDC code, 167.04(L)(2), "The geographic extent and location of tree preservation easements, once recorded, may only be modified, or abolished with the express approval of City Council. Applicants requesting such action shall bear the burden of proving to the City Council's satisfaction that such modification or abolition is in the best interest of the City of Fayetteville."

DISCUSSION:

After the lot split (LSP 16-5311) that created two separate parcels, the existing tree preservation easement

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Fayetteville, AR 72701

www.fayetteville-ar.gov

rendered the lot virtually unbuildable in a valuable commercial area. Though the creation of the lot met standard requirements for land subdivision (such as underlying zoning requirements, and access to water and sewer), the lot is inherently unbuildable due to the existing tree preservation easement. Since this lot split, Urban Forestry staff and Planning staff are mindful of lot splits that involve tree preservation easements and would like to avoid any similar situations in the future.

Staff visited all three properties and determined that the two proposed tree preservation easements do not offer more benefit or environmental services than the existing tree preservation easement. The proposed easements are both on relatively unbuildable lots in the streamside protection zone and flood areas which are protected by Code, making development inherently difficult.

The 0.2 acre parcel #765-16157-000 that is proposed as a new tree preservation easement is located on the west side of the city along Owl Creek and adjacent to existing Harmony Pointe Park (Exhibit C). Half of this site is in Flood Zone A.

The 0.6 acre parcel #765-15229-000 that is proposed as a new tree preservation easement is located on the east side of the city near S. Ray Ave. in an industrial area close to a residential neighborhood (Exhibit D). The property runs behind Fire Station #3, CR Crawford Construction, and Promo Life. There is a drainage area running through the site that drains directly into the West Fork of the White River which is part of the Beaver Lake Watershed and is in the streamside protection zone. This parcel is adjacent to an existing tree preservation easement (0.34 acre) that was dedicated as part of the project to build the new Promo Life facility.

The current tree preservation easement is in a commercial district and surrounded by rental housing units and fast food restaurants. The current location offers eco system services such as air cleaning and wildlife habitat. However, it is not directly associated with a creek or drainage area. The site currently collects debris and is a site for illegal trash deposits. Some of the canopy has been removed and red clay has been deposited on the site as well.

Tree canopy for each site

- 16,552.8 sq. ft. of tree canopy at current easement 765-07564-000 (Exhibit B)
- 8,712 sq. ft. of tree canopy at proposed easement 765-16157-000 (Exhibit C)
- 28,707.8 sq. ft. of tree canopy at proposed easement 765-15229-000 (Exhibit D)
- The combined tree canopy for both proposed easements is 37,519 sq. ft. The difference is an increase of 20,966 sq. ft. or ~0.48 acre.

Staff believes that two proposed easements do not offer more eco system services as they are already fairly undevelopable and unbuildable, and large areas of the lots are protected by the streamside protection zone. Fayetteville would be losing eco-system services in a highly developed area of our city if this vacation is approved (see Exhibits E). While many of the existing trees in the Tree Preservation Easement have been damaged and removed, there are still several left and the site could be reforested to allow it to return to its previous condition and ultimately as a healthy forested area. The canopy has been thinned over the years, especially from 2015 to 2022 (as shown in Exhibits F), by the property owner at the time removing trees. Chapter 167.04(K)(3) of the Unified Development Code states that "Property owners wishing to remove diseased or dead trees from within a recorded tree preservation easement shall seek prior approval from the Urban Forester, who shall determine if such removal is consistent with sound arboricultural and horticultural practices, as well as the intent of this chapter. Any tree so removed shall be replaced with a tree of like or similar species, unless the Urban Forester determines that natural replacements of sufficient health and vigor are already present in the tree preservation easement." Additional trees have not been planted in the existing Tree Preservation Easement to replace those removed.

Another consideration is the precedent this vacation may set if approved. Tree Preservation Easements are

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intended to remain in perpetuity, not until they are no longer viable due to degradation or the owner has a wish to develop.

BUDGET/STAFF IMPACT:

There is not a budget impact for this request.

ATTACHMENTS: SRF, Exhibit A - Property Owner Request, Exhibit B - Existing Tree Preservation Easement, Exhibit B1 - Original Tree Preservation Easement Plat JD China, Exhibit B2 - Property Legal Descriptions, Exhibit C - Proposed Tree Pres Easement Harmony Park, Exhibit C1 - Flood Plain map 1 Harmony Park, Exhibit D - Proposed Tree Pres Easement Ray Ave, Exhibit D1 - Flood plain map 2 Ray Ave, Exhibit E - 2000 area pic, Exhibit E1 - 2022 area pic, Exhibit F - 2000 Tree Pres Lot Prior to development, Exhibit F1 - 2015 Tree Pres Lot Prior to Cane's, Exhibit F2 - 2022 Tree Pres Lot current conditions, RES - VAC - TREE PRESERVATION - MITCHELL STREET

Mailing address:

113 W. Mountain Street
Fayetteville, AR 72701

www.fayetteville-ar.gov

City of Fayetteville Staff Review Form

2022-0251

Legistar File ID

1/3/2022

City Council Meeting Date - Agenda Item Only
N/A for Non-Agenda Item

Melissa Evans

12/16/2022

DEVELOPMENT REVIEW (630)

Submitted By

Submitted Date

Division / Department

Action Recommendation:

Vacation Request for a Tree Preservation Easement. Request to vacate a Tree Preservation Easement on Parcel 765-07564-000 located along W. Mitchell Street behind Raising Cane's and across the street from Lewis Plaza. The request also includes the creation of two new Tree Preservation Easements on Parcel 765-16157-000 and 765-15229-000.

Budget Impact:

Account Number		Fund	
Project Number		Project Title	
Budgeted Item?	No	Current Budget	\$ -
		Funds Obligated	\$ -
		Current Balance	\$ -
Does item have a cost?	No	Item Cost	\$ -
Budget Adjustment Attached?	No	Budget Adjustment	\$ -
		Remaining Budget	\$ -

V20210527

Purchase Order Number: _____

Previous Ordinance or Resolution # _____

Change Order Number: _____

Approval Date: _____

Original Contract Number: _____

Comments:

Exhibit A - Property Owner Request

From: Payton Sims <psims@firststarnwa.com>

Sent: Friday, December 2, 2022 12:16 PM

To: Scott, John <jscott@fayetteville-ar.gov>; willginger11@yahoo.com

Subject: Tree Pres. Transfer (Mitchell St. Project)

Good afternoon,

Wild Card ventures, LLC will be appearing before the city council regarding the tree preservation on a prime development site in Fayetteville; Ward 1. We are proposing that the city lift a tree preservation on a site located off Mitchell St. The parcel ID is 765-07564-000 and if lifted it would allow us to develop the area for multifamily housing. This would clean up the trash that is constantly on site, reduce the crime rate in the area and bring more housing for young professionals and students near the University. The green marked area in the attachment named Tree Pres Exhibit A is what currently sits in the preservation. Many of the trees in this area are dead or dying as there is no water source and the area is constantly covered in trash.

We would like to propose the tree preservation be moved to 765-15229-000 and 765-16157-000. We would then deed these two parcels of land to the city of Fayetteville or urban forestry which ever makes most sense for the city. These two parcels have significantly more tree canopy coverage and better habitat to maintain the tree population. Both these parcels adjoin existing city of Fayetteville land. The coverage is broken out below.

Tree Canopy for each site.

Exhibit A: Parcel ID- 765-07564-000 Washington County

Mitchel Street property: +/- .68 Acres total and roughly .38 acres is in the tree preservation. Roughly 8,412 sqft of tree canopy within the tree preservation.

Exhibit B: Parcel ID- 765-15229-000 Washington County

S. Ray Avenue property: +/- .60 Acres total. Roughly 25,102 sqft of tree canopy.

Exhibit C: Parcel ID- 765-16157-000 Washington County

Next to Fayetteville Park (Legacy pointe Ph1): +/- .21 Acres total. Roughly 8,720 sqft of tree canopy

If the city will vacate and transfer the tree preservation off 765-07564-000 to the other two properties (765-15229-000 and 765-16157-000) it would add +/- 25,410 sqft of tree canopy to the city of Fayetteville's tree preservation. It would also add +/- .81 acres of property to the city of Fayetteville and/or who they would like to assign the property to.

Owners' remarks:

I believe this swap would be a great deal for both the city and the people in which call Fayetteville their home. The Eco system around Mitchell Street has change so much over the years and the new proposed eco system would allow for 4X the amount of tree canopy with water on both properties to help insure the livelihood of the trees. Continuous protected tree canopy in drainage areas offers more benefits to the city and the wildlife than the current tree preservation easement. Also, by deeding this property over it will allow for Fayetteville to better maintain the health and wellness of the trees.

I appreciate you for considering this proposal,

Payton Sims

Wild Card Ventures, LLC

479-799-5240

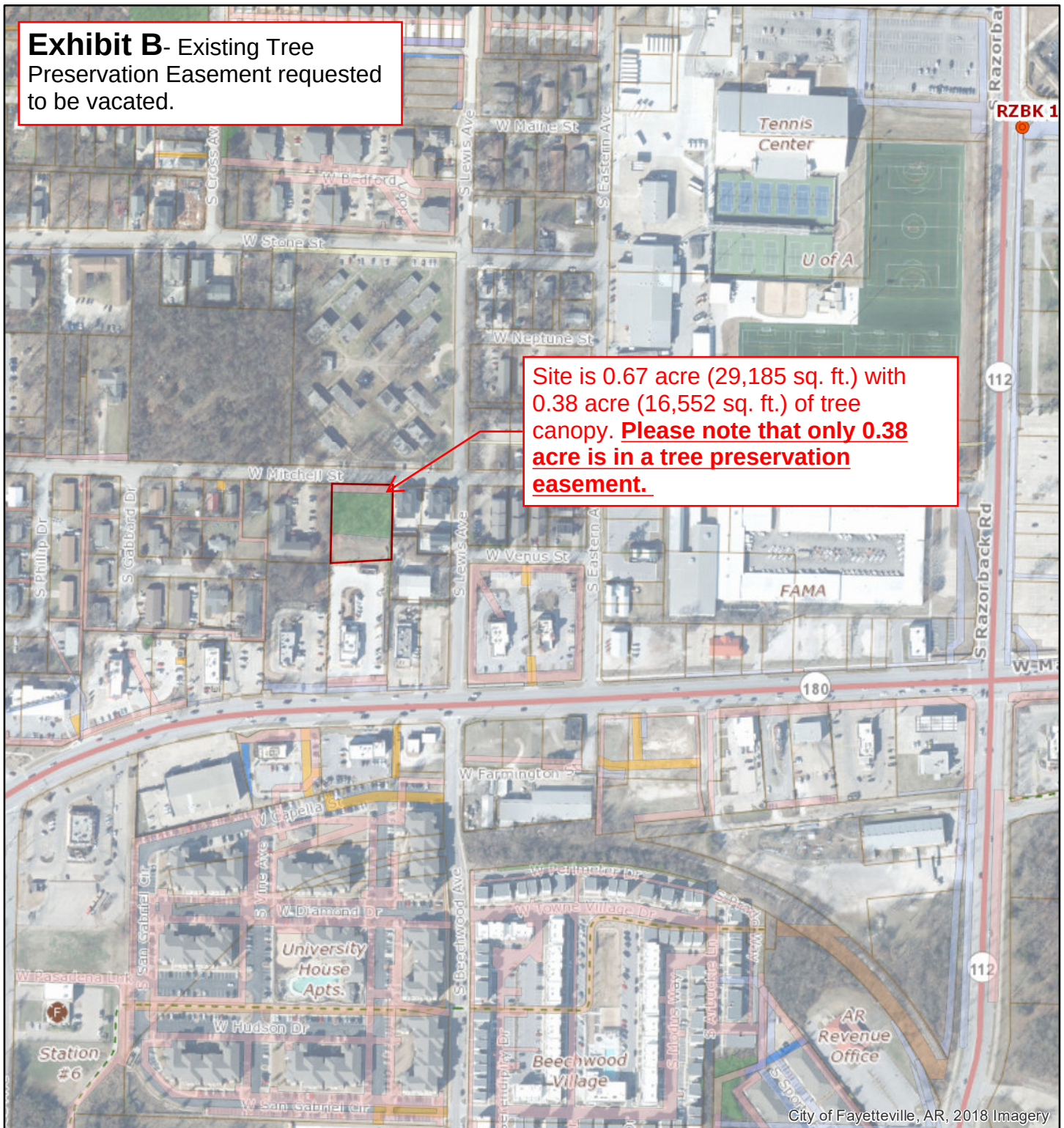
Psims@firststarnwa.com

GO HOGS!!!!

Fayetteville, AR

Exhibit B- Existing Tree Preservation Easement requested to be vacated.

Site is 0.67 acre (29,185 sq. ft.) with 0.38 acre (16,552 sq. ft.) of tree canopy. **Please note that only 0.38 acre is in a tree preservation easement.**



4/23/2019 9:26:53 AM

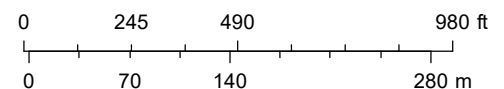
1:5,266

Survey Monument

- Section Corner
- 1/4 Corner
- QQ Corner
- City Ref
- Corner By GPS
- Destroyed

- Error
- GPS Point
- Ref
- General Utility Easement
- Access Easement
- Avigation Easement
- Drainage Easement

- Conservation Easement
- Landscape Easement
- Trail Easement
- Tree Preservation Area
- Water/Sewer Easement
- Other Easement



The data contained herein was compiled from various sources for the sole use and benefit of the City of Fayetteville Geographic Information System and the public agencies it serves. Any use of the data by anyone other than the City of Fayetteville is at the sole risk of the user; and by acceptance of this data, the user does hereby agree to indemnify the City of Fayetteville and hold the City of Fayetteville harmless from and without liability for any claims, actions, cost for damages of any nature, including the city's cost of defense, asserted by user or by another arising from the use of this data. The City of Fayetteville makes no express or implied warranties with reference to the data. No word, phrase, or clause found herein shall be construed to waive that tort immunity set forth under Arkansas law.

LEGEND:

- MONUMENT FOUND AS NOTED
- MONUMENT SET AS NOTED

Exhibit B1 - Original Tree Preservation Easement Plat for JD China



Doc ID: 016738640001
 Kind: PLAT
 Recorded: 01/15/2002 at 11:08:12 AM
 Fee Amt: Page 1 of 1
 Washington County, AR
 Kyle Sylvester Circuit Clerk

CERTIFICATE OF APPROVAL OF UTILITY EASEMENTS:

We hereby certify that all utility easements plotted in this development are shown as required and were approved by the undersigned utilities of the City of Fayetteville, Arkansas.

Electric: Allen Jensen 10/11/01
 Gas Service: Johnny Boles 10/9/01
 Telephone: Susan K. Clouser 10-12-01
 Cable Television: Don D. Selm 10/12/01
 City of Fayetteville: Jim Brown P.E. 10-26-01

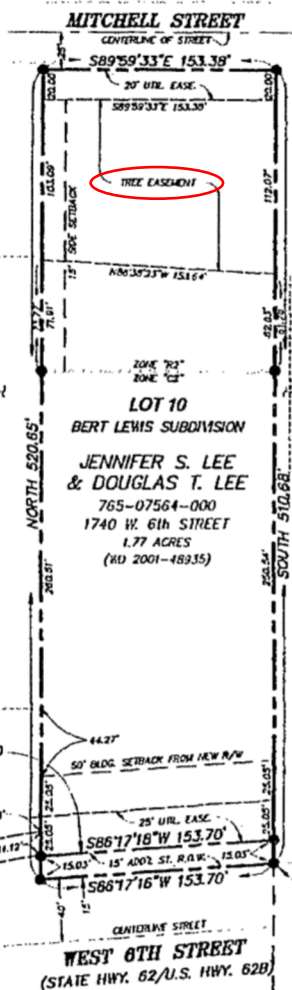
FLOOD CERTIFICATION:

I certify that this property lies within Flood Zone "X" (unshaded), areas determined to be outside 500-year flood-plain, according to the Federal Emergency Management Agency's (FEMA's) Flood Insurance Rate Map (FIRM) No. 05143C0092 D, revised: July 21, 1999.

SURVEYOR'S DECLARATION:

I hereby declare that this plat does not represent an actual ground survey, performed under my supervision, the information shown hereon, is the result of a plot of survey by G. Alan Reid, AR PLS No. 1003, dated May 01, 2000, for the Hickett-Hill Group (Job No. 00115).

Michael B. Moore 10-15-01
 Michael B. Moore, AR PLS No. 1174



WILLIAM WARD REVOCABLE TRUST
 u/w/d April 5, 1992
 765-07571-001

CKM ENTERPRISES, LLC
 765-07571-000

Tree Preservation Area

The Tree Preservation Areas as indicated on this easement plat constitute a covenant running with the title of the subject property and is denoted for the property owners and their future successors, assignees or transferees to preserve, protect and maintain existing tree canopy. No tree removal or land disturbance as defined within the City of Fayetteville Unified Development Code may occur within the Tree Preservation Area unless approved by the City of Fayetteville. Persons seeking removal of such Tree Preservation Areas, or requesting to modify the property in such a way as to effect the canopy within, must seek approval from the City Council through a request made by the Landscape Administrator of the City of Fayetteville.

Approved by: Kim J. Glesse
 Date: 10-19-01
 City of Fayetteville Landscape Administrator

CERTIFICATE OF OWNERSHIP & DEDICATION:

We the undersigned owners, representing one hundred percent ownership of the real estate shown and described herein, do hereby dedicate to the City of Fayetteville and to the public utility companies (including any cable television company holding a franchise granted by the City of Fayetteville) the easements as shown on this plat for the purpose of installation of new facilities and the repair of existing facilities.

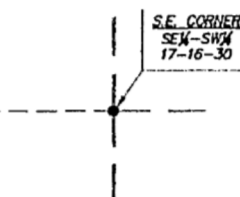
Also established hereby is the right of ingress and egress to said easements, the right to prohibit the erection of buildings, structures, or fences within said easements, and the right to remove or trim trees within said easements.

by: Jennifer Lee 10/4/01
 by: Douglas T. Lee 10/4/01

CERTIFICATE OF APPROVAL FOR RECORDING:

I hereby certify that the Large Scale Development Plan for this project was approved by the Fayetteville Planning Commission at a meeting held on

3-26 2001.
[Signature] 10-29-01
 City Planner date



SURVEY DESCRIPTION:

A portion of Lot 10 of Bert Lewis Subdivision to the City of Fayetteville, being situated in the Southeast Quarter (SE 1/4) of the Southwest Quarter (SW 1/4) of Section 17, Township 16 North, Range 30 West of the 5th Principal Meridian, Washington County, Arkansas, being more particularly described as follows, to-wit:

Beginning at a point at the intersection of the Easterly line of said Lot 10 and the Northerly right-of-way line of West 6th Street, said point being 200.18 feet West and 210.39 feet North of the Southeast Corner of the SE 1/4 of the SW 1/4 of said Section 17, thence along said right-of-way S86°17'16"W 153.70 feet to a point along the Westerly line of said Lot 10; thence along the Westerly line of Lot 10, North 520.65 feet to a point along the Southerly right-of-way of Mitchell Street; thence along said right-of-way S89°59'33"E 153.38 feet to a point along the Easterly line of said Lot 10; thence along the Easterly line of Lot 10, South 510.68 feet to the Point-of-Beginning, containing 1.81 acres (79,092 sq. ft.), more or less, subject to all rights-of-way, servitudes and/or easements, of record or

File 018A-00000002

EASEMENT PLAT	
J.D. CHINA RESTAURANT Fayetteville, Arkansas	
EDAA Consulting Engineering Landscape Architecture Land Surveying	DRAWN BY: MBM CHECKED BY: AWF
Engineering Design Associates, P.A. 114 West Emma Avenue Springdale, Arkansas 72764 Tel: (501) 756-1266 Fax: (501) 756-2179	DATE: 6-15-01
DESCRIPTION: C:\Land Projects\aed\0181\ndag\0491EASE.dwg	SCALE: 1"= 100'
	JOB NUMBER: 0491
	FILE NAME: 0411EASE.DWG
	SHEET 1 OF 1

FILED FOR RECORD

WASHINGTON CO. AR
 B. STAMPS
 02 JUN 15 PM 12 08

Exhibit B2 - Property Legal Descriptions

Type: REAL ESTATE
Kind: WARRANTY DEED
Recorded: 10/13/2022 10:29:25 AM
Fee Amt: \$35.00 Page 1 of 5
Washington County, AR
Kyle Sylvester Circuit Clerk

File# 2022-00033602

After recording please return to:
Waco Title Company
2592 S. 48th St.
Springdale, AR 72762

**WARRANTY DEED
MARRIED PERSONS**

File #: 2215034-144

KNOW ALL MEN BY THESE PRESENTS:

That we, **Yuta Chang and Ching Hui Chen Chang, a married couple**, hereinafter called GRANTOR(S), for and in consideration of the sum of ---One AND 00/100--- DOLLARS---(\$1.00)---and other good and valuable consideration in hand paid by **NWARECO LLC**, an Arkansas limited liability company, and **Wild Card Ventures LLC**, an Arkansas limited liability company, as tenants in common, with **NWARECO LLC holding a thirty-three percent (33%) interest and Wild Card Ventures LLC holding a sixty-seven percent (67%) interest**, hereinafter called GRANTEE(S), the receipt of which is hereby acknowledged, do hereby grant, bargain, sell and convey unto GRANTEE(S), and unto its successors and assigns forever, the following lands lying in **Washington County, Arkansas** to-wit:

SEE ATTACHED EXHIBIT "A"

TO HAVE AND TO HOLD the same unto the said GRANTEE(S), and unto its successors and assigns forever, with all appurtenances thereunto belonging.

And GRANTOR(S) hereby covenant with said GRANTEE(S) that we will forever warrant and defend the title to the said lands against all claims whatsoever.

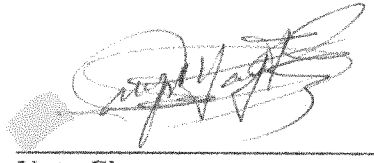
And GRANTOR(S), for and in consideration of the said sum of money, do hereby release and relinquish unto the said Grantee(s) all our rights of curtesy, dower and homestead in and to the said lands.

Prepared under the supervision of
Buckley Bridges, Attorney
2592 S. 48th St.
Springdale, AR. 72762

WITNESS our hands and seals on this 12 day of October, 2022

I certify under penalty of false swearing that documentary stamps
or a documentary symbol in the legally correct amount has been
placed on this instrument.

GRANTEE OR AGENT: Waco Title as Agent



Yuta Chang

GRANTEE'S ADDRESS: 11651 E Rockwood
Fayetteville, AR 72701


Ching Hui Chen Chang

ACKNOWLEDGMENT

STATE OF Arkansas)
) SS.
COUNTY OF Washington)

On this day, before the undersigned, a Notary Public, duly commissioned, qualified and acting,
within and for the said County and State, appeared in person the within named **Yuta Chang and Ching
Hui Chen Chang** known to me (or satisfactorily proven) to be the persons whose names are subscribed to
the foregoing instrument and acknowledged that they had executed the same for the consideration, uses
and purposes therein set forth.

IN TESTIMONY WHEREOF, I have hereunto set my hand and official seal this 12 day of
October, 2022.


Notary Public

My Commission Expires:

4/29/31

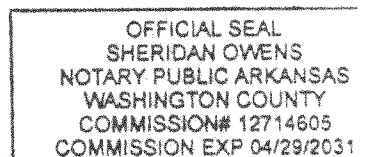


EXHIBIT "A"

TRACT 1:

A PART OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 17, TOWNSHIP 16 NORTH, RANGE 30 WEST, WASHINGTON COUNTY, ARKANSAS, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS, TO WIT: BEGINNING AT A SET IRON PIN WHICH IS NORTH 87°00'51" WEST 200.18 FEET, AND NORTH 02°59'09" EAST 536.07 FEET FROM THE SOUTHEAST CORNER OF SAID FORTY ACRE TRACT AND RUNNING THENCE SOUTH 89°16'25" WEST 153.53 FEET TO A SET IRON PIN, THENCE NORTH 03°01'05" EAST 194.86 FEET TO FOUND IRON PIN, THENCE SOUTH 87°02'38" EAST 153.10 FEET TO A FOUND IRON PIN; THENCE SOUTH 02°59'09" WEST 185.00 FEET TO THE POINT OF BEGINNING, CONTAINING 0.67 ACRES, MORE OR LESS, SAID LANDS ALSO BEING PART OF LOT 10 OF BERT LEWIS SUBDIVISION AS PER PLAT FILED IN/AS PLAT BOOK 4 AT PAGE 196.

TRACT 2:

Part of the East Half of the Northwest Quarter of Section 23, Township 16 North, Range 30 West of the 5th P.M., Washington County, Arkansas, more particularly described as follows, to-wit: Beginning 1102 feet 5 inches North and 416 feet East of the Southwest corner of the said E 1/2 of the NW 1/4 of said Section 23, thence East to the West line of Ray Avenue, thence North 120 feet, more or less to the South line of property owned by Mary Samples, thence West 150 feet, along the South line of property owned by Mary Samples, thence North along the West line of property owned by Mary Samples, to the North line of the SE 1/4 NW 1/4 23-16-30, thence West to a point due North of the Point of beginning, thence South to the point of beginning.

LESS AND EXCEPT:

A part of the W1/2 of the SE1/4 of the NW1/4 of Section 23, T-16-N, R-30-W, Washington County, Arkansas, being more particularly described as follows: Commencing at the SE corner of said 20 acre tract; thence N 00°14'44" W, along the East line of said 20 acre tract 932.73 feet to the point of beginning; thence N 00°14'44" W, 224.77 feet; thence N 89°30'52" W, 247.79 feet, thence N 00°46'00" W, 46.33 feet to an existing iron; thence S 89°53'59" W, 400.00 feet to the East right-of-way of Highway 16 E (Happy Hollow Road); thence S 00°12'02" W along said right-of-way 253.32 feet; thence S 84°02'10" E, 143.06 feet; thence S 89°30'52" E, 508.42 feet to the point of beginning, and containing 3.74 acres, more or less. Also known as Tract E on a Plat of Survey by Alan Reid and Associates, recorded July 13, 1995 as Land Document #95-34670.

TRACT 3:

PART OF THE SOUTHEAST QUARTER (SE1/4) OF THE SOUTHEAST QUARTER (SE1/4) OF SECTION 10, TOWNSHIP 16 NORTH, RANGE 31 WEST, WASHINGTON COUNTY, ARKANSAS, DESCRIBED AS FOLLOWS, TO WIT: BEGINNING AT THE SOUTHWEST CORNER OF SAID 40 ACRE TRACT AND RUNNING THENCE EAST 80 RODS; THENCE NORTH 80 RODS; THENCE WEST 57 RODS; THENCE SOUTH 5 RODS TO BANK OF CREEK; THENCE SOUTHWEST WITH SAID CREEK 26 RODS; THENCE WEST 10 RODS; THENCE SOUTH 54 RODS TO PLACE OF BEGINNING, CONTAINING 37 ACRES, MORE OR LESS.

LESS AND EXCEPT: A PART OF THE SE1/4 OF THE SE1/4 OF SECTION 10, TOWNSHIP 16 NORTH, RANGE 31 WEST IN WASHINGTON COUNTY, ARKANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT A POINT 429.0 FEET SOUTH OF THE NW CORNER OF THE ABOVE DESCRIBED 40 ACRE TRACT AND RUNNING THENCE EAST 50 FEET; THENCE SOUTH 70 FEET; THENCE WEST 50 FEET; THENCE

NORTH 70 FEET TO THE POINT OF BEGINNING, CONTAINING 0.08 ACRES, MORE OR LESS.

ALSO LESS & EXCEPT: ALL OF LEGACY POINT PH 1, A SUBDIVISION OF THE CITY OF FAYETTEVILLE, ARKANSAS AS PER PLAT FILED IN/AS PLAT BOOK AT PLAT 23A AT PAGE 53.

ALSO LESS & EXCEPT: A PART OF THE SOUTHEAST QUARTER (SE1/4) OF THE SOUTHEAST QUARTER (SE1/4) OF SECTION 10 IN TOWNSHIP 16 NORTH, RANGE 31 WEST OF THE 5TH P.M., WASHINGTON COUNTY, ARKANSAS AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHWEST CORNER OF SAID 40 ACRE TRACT, AND RUNNING THENCE EAST 23 RODS; THENCE SOUTHEAST 5 RODS TO THE SOUTH BANK OF THE CREEK; THENCE SOUTHWEST WITH THE CREEK 26 RODS, THENCE WEST 10 RODS, THENCE NORTH 26 RODS TO THE PLACE OF BEGINNING, CONTAINING 3 ACRES, MORE OR LESS.

ALSO LESS & EXCEPT: A PART OF THE SE1/4 OF THE SE1/4 OF SECTION 10, T16N, R31W, WASHINGTON COUNTY, ARKANSAS, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: STARTING AT THE SE CORNER OF SECTION 10; THENCE N 89°19'30" W ALONG THE SOUTH LINE THEREOF A DISTANCE OF 1265.24 FEET TO A POINT ON THE EASTERLY R-O-W LINE OF DOUBLE SPRINGS RD FOR THE POINT OF BEGINNING; THENCE N 89°19'30" W 30.01 FEET; THENCE N 01°58'39" E 220.06 FEET; THENCE IN A NORTHWESTERLY DIRECTION ALONG SAID EXISTING R-O-W LINE ON A CURVE TO THE LEFT HAVING A RADIUS OF 620.55 FEET A DISTANCE OF 213.95 FEET TO A POINT ON THE WEST LINE OF THE SE1/4 OF THE SE1/4 OF SECTION 10; THENCE N 01°06'15" E ALONG THE WEST LINE A DISTANCE OF 218.05 FEET TO A POINT ON THE EASTERLY PROPOSED R-O-W LINE OF DOUBLE SPRINGS RD; THENCE S 09°23'45" E 176.54 FEET; THENCE S 07°59'01" E 162.42 FEET; THENCE S 02°12'29 E 94.96 FEET; THENCE S 01°58'39" W 219.38 FEET TO THE POINT OF BEGINNING, CONTAINING 0.40 ACRE, MORE OR LESS.

ALSO LESS & EXCEPT: A PART OF THE SE1/4 OF THE SE1/4 OF SECTION 10, T16N, R31W, WASHINGTON COUNTY, ARKANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS: STARTING AT THE SE CORNER OF SECTION 10, THENCE N 89°19'30" W ALONG THE SOUTH LINE THEREOF 1325.21 FEET TO A POINT ON THE SW CORNER OF THE SE 1/4 OF SECTION 10; THENCE N 01°05'15" E ALONG THE WEST LINE THEREOF 729.11 FEET TO THE POINT OF BEGINNING; THENCE N 01°06'15" E ALONG SAID WEST LINE 94.14 FEET TO A POINT ON THE EASTERLY PROPOSED R-O-W LINE OF DOUBLE SPRINGS RD; THENCE S 89°15'26" E 50.00 FEET; THENCE S 23°09'18" W 43.93 FEET; THENCE S 33°02'46" W 63.33 FEET TO THE POINT OF BEGINNING, CONTAINING 0.06 ACRES, MORE OR LESS.

ALSO LESS AND EXCEPT: ALL OF LEGACY POINTE PHASES 2 & 3 AS PER PLAT FILED IN/AS PLAT BOOK 23A AT PAGE 71.

ALSO LESS AND EXCEPT: ANY PORTION IN THE RIGHT OF WAY OF S. DOUBLE SPRINGS ROAD.

Subject to easements, rights-of-way, and protective covenants of record, if any.
Subject to all prior mineral reservations and oil and gas leases.



STATE OF ARKANSAS
DEPARTMENT OF FINANCE AND ADMINISTRATION
MISCELLANEOUS TAX SECTION
P.O. BOX 896, LITTLE ROCK, AR 72203-0896

Real Estate Transfer Tax Stamp

Proof of Tax Paid



File Number: 2215034-144

Grantee: NWARECO LLC
Mailing Address: 1651 E ROCKWOOD TRL
FAYETTEVILLE AR 727010000

Grantor: YUTA AND CHING CHANG
Mailing Address: 3153 N ELIZABETH AVE
FAYETTEVILLE AR 727030000

Property Purchase Price: \$185,000.00
Tax Amount: \$610.50
County: WASHINGTON
Date Issued: 10/13/2022
Stamp ID: 567957504

Washington County, AR
I certify this instrument was filed on
10/13/2022 10:29:25 AM
and recorded in REAL ESTATE

File# 2022-00033602
Kvle Sylvester - Circuit Clerk

I certify under penalty of false swearing that documentary stamps or a documentary symbol in the legally correct amount has been placed on this instrument

Grantee or Agent Name (printed): NWARECO LLC

Grantee or Agent Name (signature): WACO Title as Agent Date: 10/13/22

Address: _____

City/State/Zip: _____

Fayetteville, AR

Exhibit C - 0.20 acres site, a proposed new Tree Preservation Easement

The site is 0.20 acres and all of it is tree canopy covered.



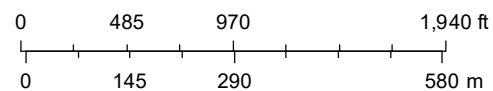
4/23/2019 9:27:40 AM

1:10,533

Survey Monument

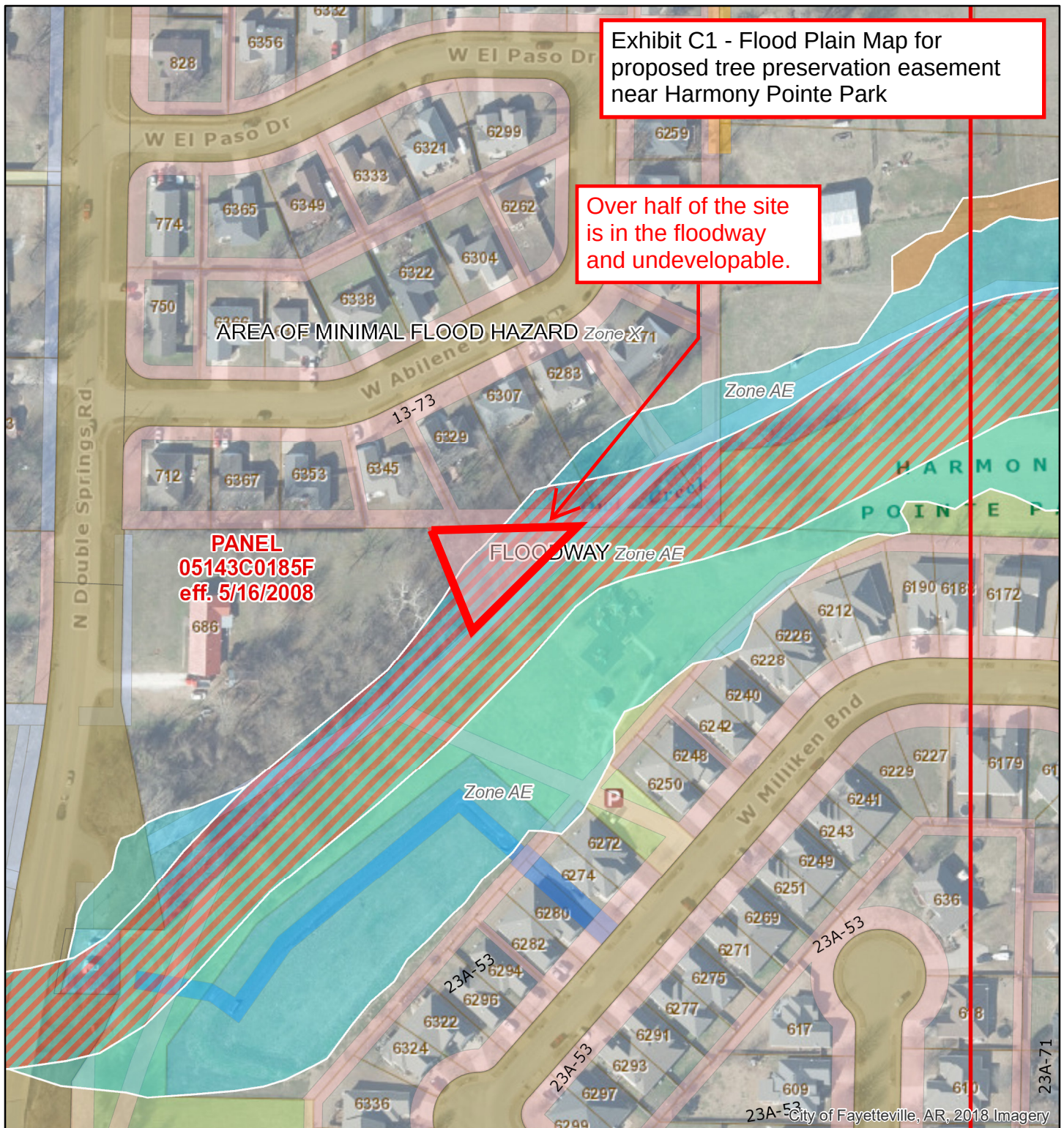
- | | |
|---|----------------|
|  | Section Corner |
|  | 1/4 Corner |
|  | QQ Corner |
|  | City Ref |

-  Corner By GPS
-  Destroyed
-  Error
-  GPS Point
-  Ref



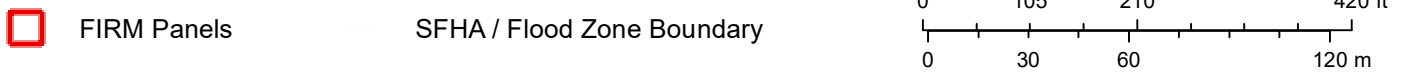
The data contained herein was compiled from various sources for the sole use and benefit of the City of Fayetteville Geographic Information System and the public agencies it serves. Any use of the data by anyone other than the City of Fayetteville is at the sole risk of the user; and by acceptance of this data, the user does hereby agree to indemnify the City of Fayetteville and hold the City of Fayetteville harmless from and without liability for any claims, actions, cost for damages of any nature, including the city's cost of defense, asserted against the City of Fayetteville, its officers, employees, agents, or contractors, whether or not express or implied warranties with reference to the data. No word, phrase, or clause found herein shall be construed to waive that tort immunity set forth under Arkansas law.

Fayetteville, AR



6/5/2019 8:27:48 AM

1:2,257



- FIRM Panels
- Cross-Sections
- SFHA / Flood Zone Boundary

Flood Hazard Boundaries

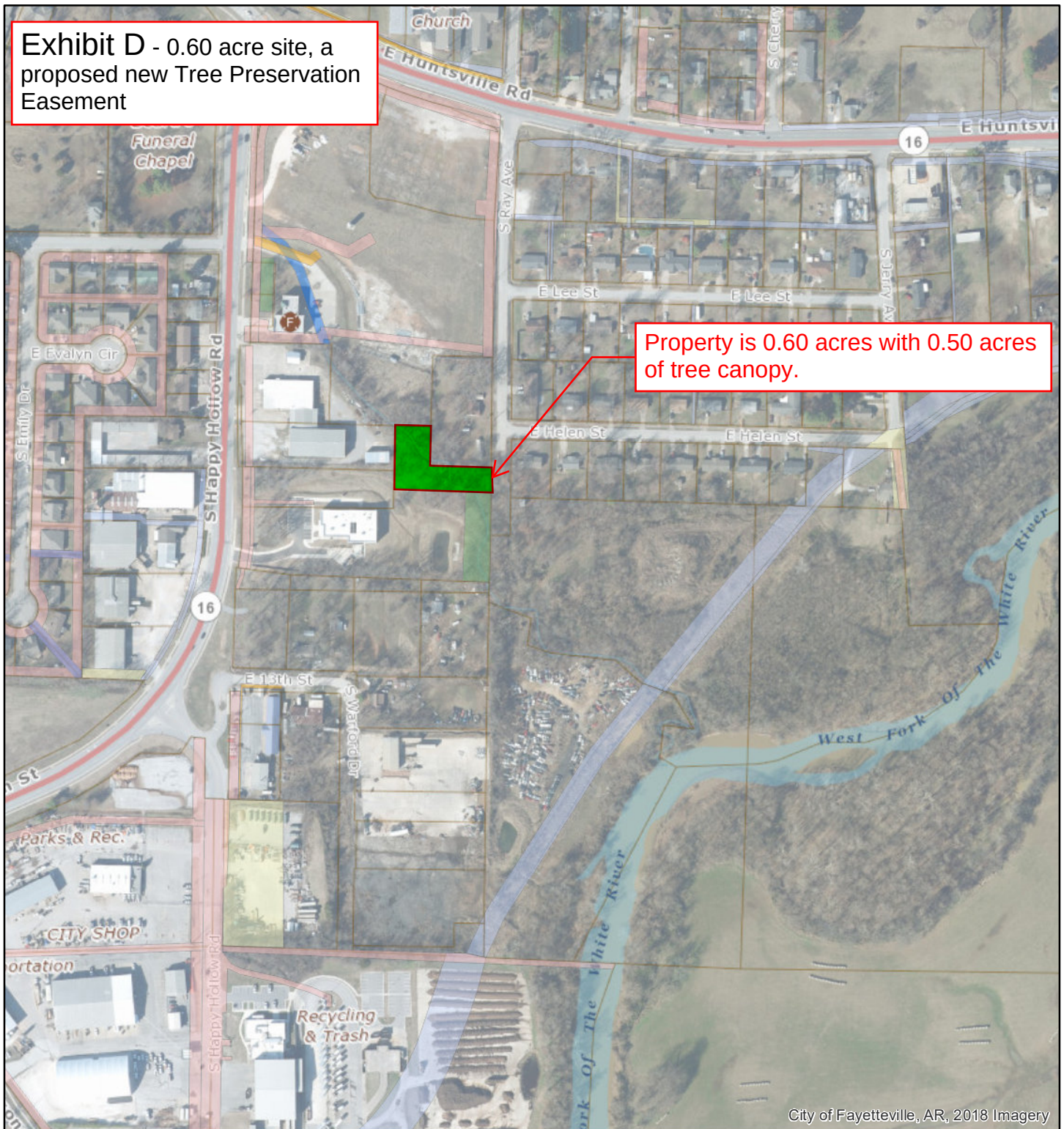
- Other Boundaries
- Limit Lines

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Fayetteville, AR

Exhibit D - 0.60 acre site, a proposed new Tree Preservation Easement

Property is 0.60 acres with 0.50 acres of tree canopy.



4/23/2019 9:24:58 AM

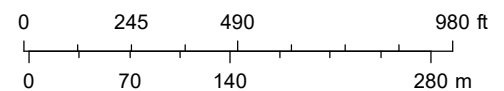
1:5,266

Survey Monument

- Section Corner
- 1/4 Corner
- QQ Corner
- City Ref
- Corner By GPS
- Destroyed

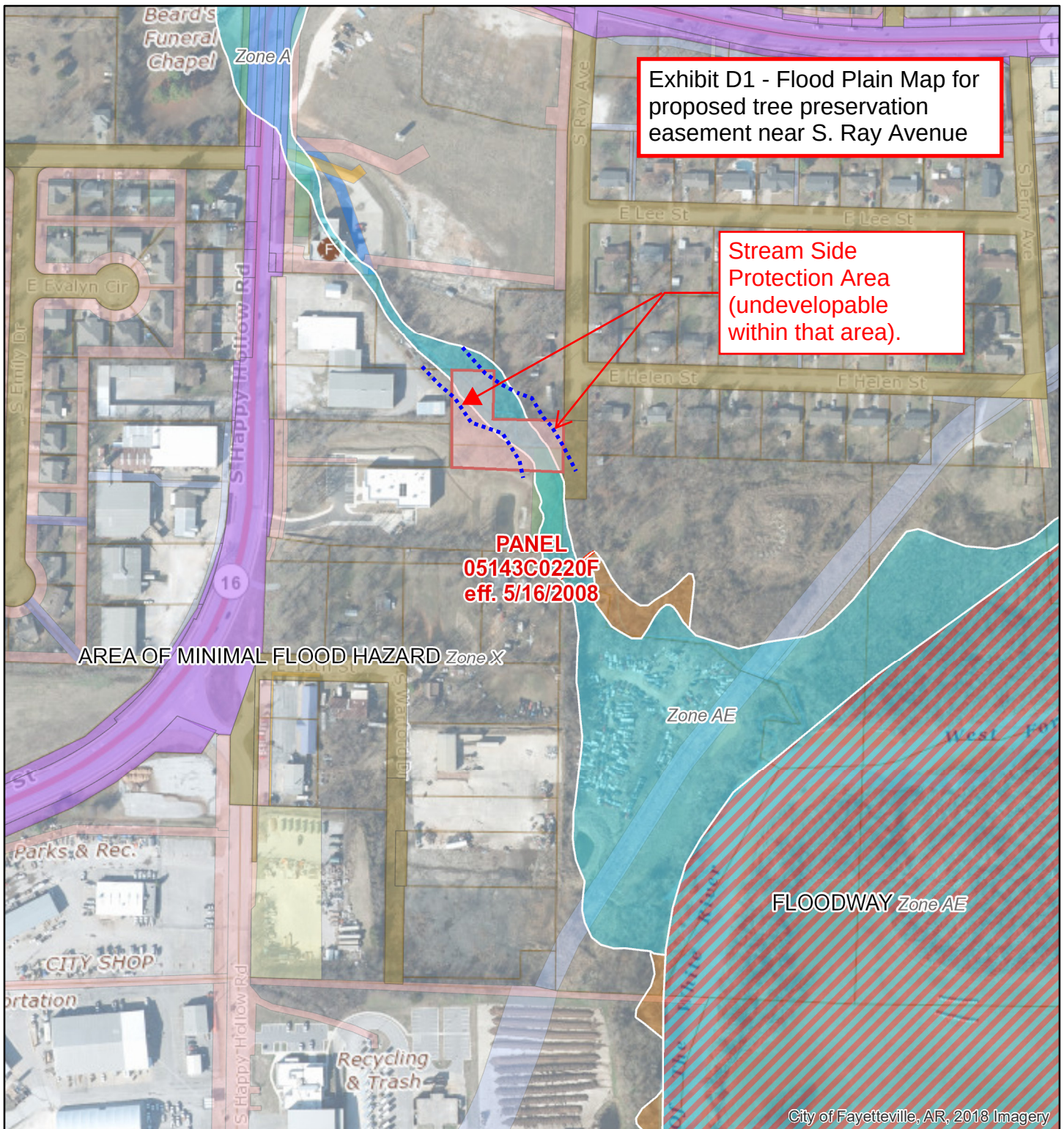
- Error
- GPS Point
- Ref
- General Utility Easement
- Access Easement
- Avigation Easement
- Drainage Easement

- Conservation Easement
- Landscape Easement
- Trail Easement
- Tree Preservation Area
- Water/Sewer Easement
- Other Easement



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Fayetteville, AR



6/5/2019 8:30:28 AM

FIRM Panels

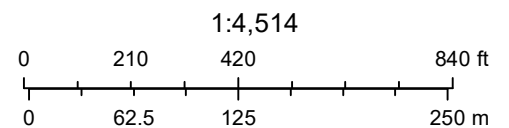
SFHA / Flood Zone Boundary

— Cross-Sections

Flood Hazard Boundaries

— Other Boundaries

— Limit Lines



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Exhibit E - Year 2000 Area
Photograph showing
development and tree canopy
in the area NW of MLK and
I-49.

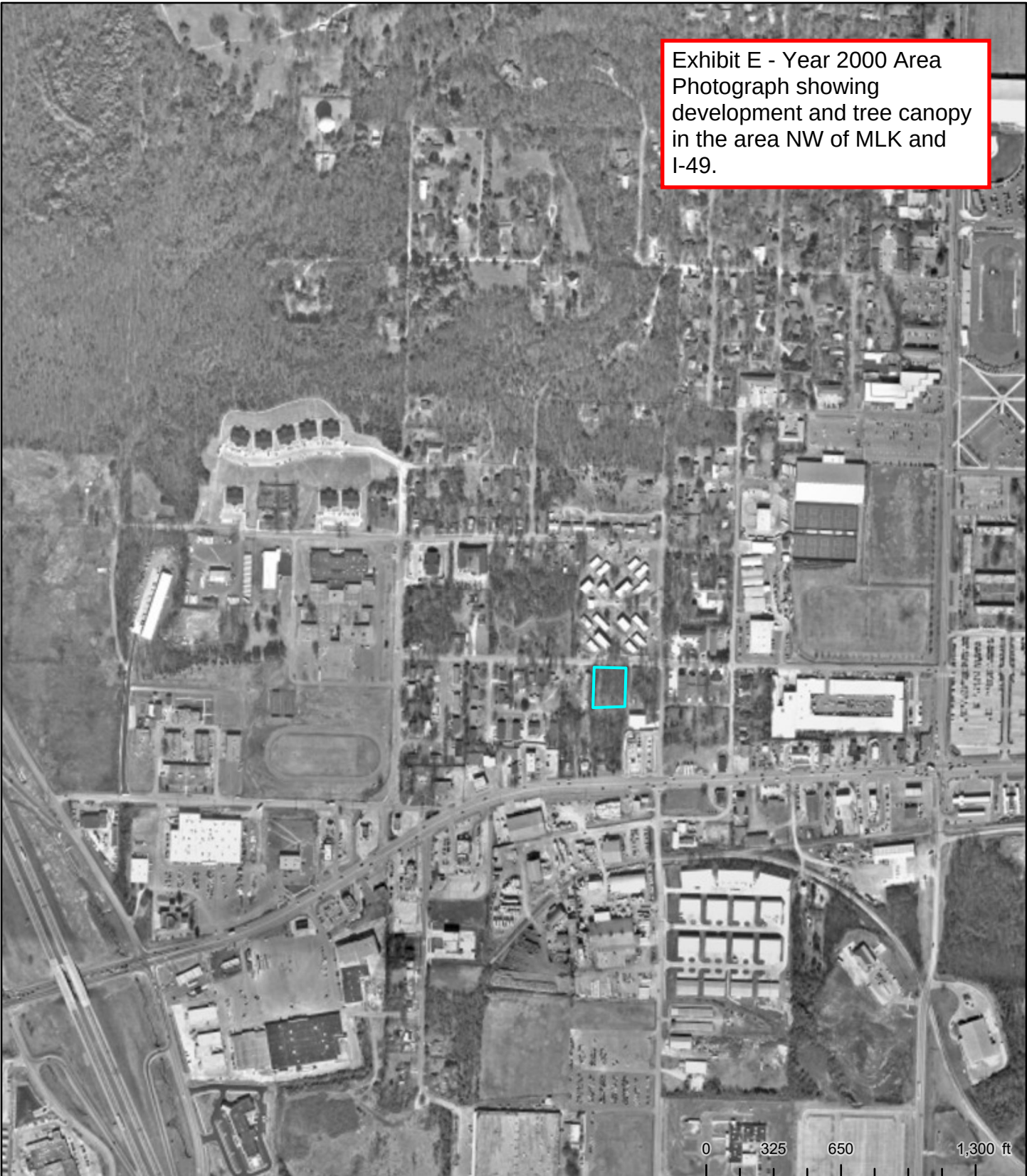


Exhibit
Fayetteville, AR

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Created: 12/8/2022
Credits: City of Fayetteville, AR, 2000 Imagery
Map Author:

Exhibit E1 - Year 2022 Area Photograph showing development and tree canopy in the area NW of MLK and I-49.



Exhibit
Fayetteville, AR

The data contained herein was compiled from various sources for the sole use and benefit of the City of Fayetteville Geographic Information System and the public agencies it serves. Any use of the data by anyone other than the City of Fayetteville is at the sole risk of the user; and by acceptance of this data, the user does hereby agree to indemnify the City of Fayetteville and hold the City of Fayetteville harmless from and without liability for any claims, actions, cost for damages of any nature, including the city's cost of defense, asserted by user or by another arising from the use of this data. The City of Fayetteville makes no express or implied warranties with reference to the data. No word, phrase, or clause found herein shall be construed to waive that tort immunity set forth under Arkansas law.

Created: 12/8/2022
Credits: City of Fayetteville, AR, 2022 Imagery | EagleView Technologies | Surdex Corporation
Map Author:

Exhibit F - Year 2000 Tree
Preservation Easement Area
prior to JD China
development.

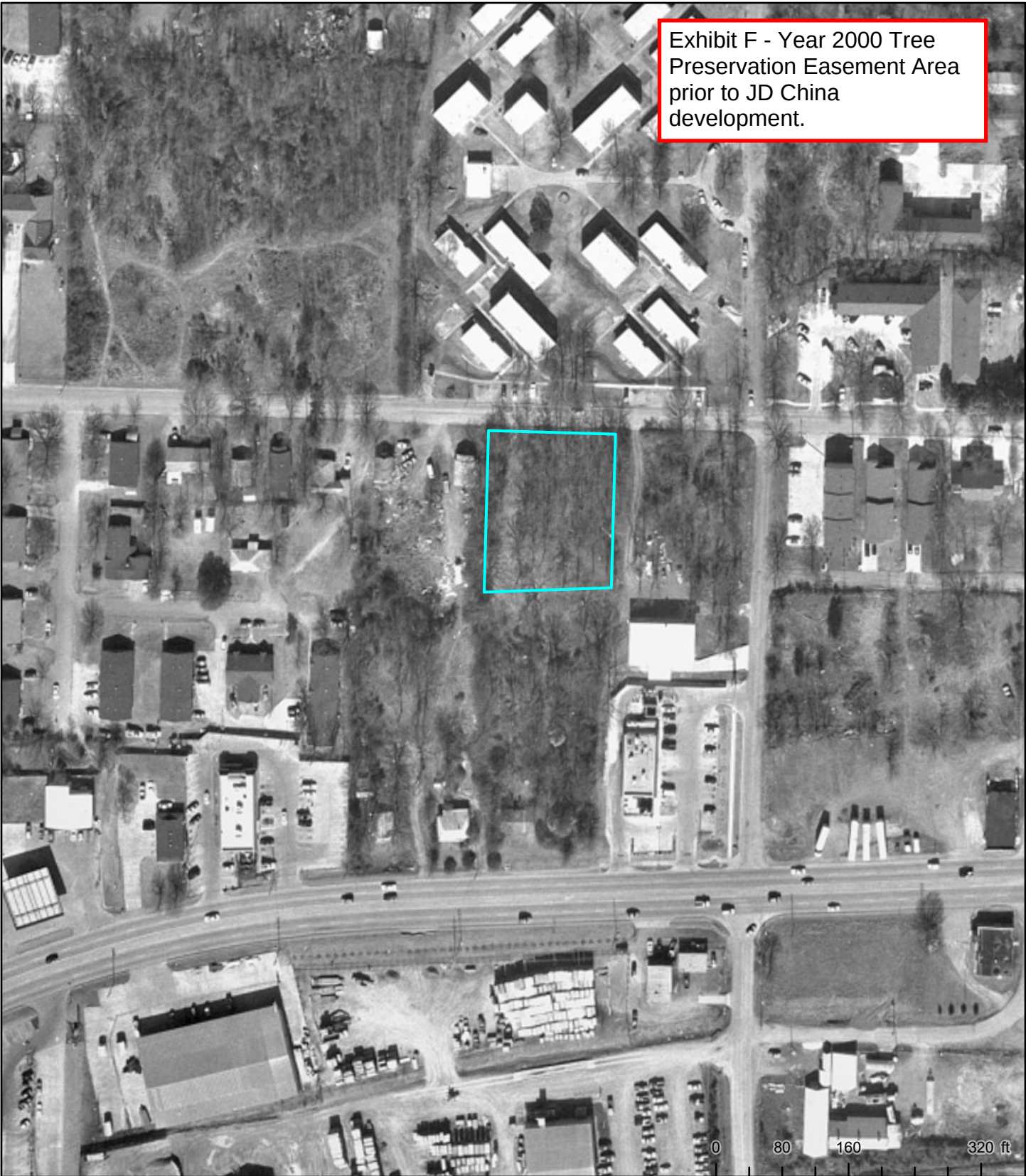


Exhibit
Fayetteville, AR

The data contained herein was compiled from various sources for the sole use and benefit of the City of Fayetteville Geographic Information System and the public agencies it serves. Any use of the data by anyone other than the City of Fayetteville is at the sole risk of the user; and by acceptance of this data, the user does hereby agree to indemnify the City of Fayetteville and hold the City of Fayetteville harmless from and without liability for any claims, actions, cost for damages of any nature, including the city's cost of defense, asserted by user or by another arising from the use of this data. The City of Fayetteville makes no express or implied warranties with reference to the data. No word, phrase, or clause found herein shall be construed to waive that tort immunity set forth under Arkansas law.

Created: 12/8/2022
Credits: City of Fayetteville, AR, 2000 Imagery
Map Author:

Exhibit F1 - Year 2015 Tree Preservation Easement Area prior to Raising Cane's development.



Exhibit
Fayetteville, AR

The data contained herein was compiled from various sources for the sole use and benefit of the City of Fayetteville Geographic Information System and the public agencies it serves. Any use of the data by anyone other than the City of Fayetteville is at the sole risk of the user; and by acceptance of this data, the user does hereby agree to indemnify the City of Fayetteville and hold the City of Fayetteville harmless from and without liability for any claims, actions, cost for damages of any nature, including the city's cost of defense, asserted by user or by another arising from the use of this data. The City of Fayetteville makes no express or implied warranties with reference to the data. No word, phrase, or clause found herein shall be construed to waive that tort immunity set forth under Arkansas law.

Created: 12/8/2022
Credits: City of Fayetteville, AR, 2015 Imagery | Pictometry International
Map Author:



Exhibit F2 - Year 2022 Tree Preservation Easement Area post Raising Cane's development and Lot Split.

Exhibit
Fayetteville, AR

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Created: 12/8/2022
Credits: City of Fayetteville, AR, 2022 Imagery | EagleView Technologies | Surdex Corporation
Map Author:

RESOLUTION NO. _____

A RESOLUTION TO APPROVE THE VACATION OF A 16,552.8 SQUARE FOOT PORTION OF A TREE PRESERVATION EASEMENT LOCATED ALONG WEST MITCHELL STREET CONTINGENT ON THE DEDICATION OF TWO REPLACEMENT TREE PRESERVATION EASEMENTS TOTALING APPROXIMATELY 37,519 SQUARE FEET

WHEREAS, the owner would like to vacate approximately 16,552.8 square feet of the existing tree preservation easement located along West Mitchell Street behind Raising Cane's for the purpose of developing the property; and

WHEREAS, the owner has offered to dedicate an additional 37,519 square feet of tree preservation easement which will result in a net increase of approximately 20,966 square feet of tree preservation.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:

Section 1: That the City Council of the City of Fayetteville, Arkansas hereby determines that the owner of the 16,552.8 square feet covered by a dedicated tree preservation easement has proven to the City Council's satisfaction that such vacation of that portion of the tree preservation easement is in the best interest of the City of Fayetteville and therefore grants the land owner's request to vacate the existing tree preservation easement as to those 16,552.8 square feet.

Section 2: The vacation and abolishment of the tree preservation easement is conditioned upon the dedication of an additional 37,519 square feet of tree preservation easement, as shown in Exhibits C and D to the staff memo attached to this Resolution.



MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council

THRU: Susan Norton, Chief of Staff
Jonathan Curth, Development Services Director

FROM: Britin Bostick, Long Range Planning/Special Projects Manager

DATE: December 27, 2022

SUBJECT: **AMEND §157.05 CONDITIONAL USE PERMIT**

RECOMMENDATION:

City staff and the Planning Commission recommend approval of an amendment to the Unified Development Code amending § 157.05, Conditional Use Permit in Chapter 157, Notification and Public Hearings to add § 157.05(B)(3) to require written and posted notification when a Planning Commission denial of a Conditional Use Permit application is appealed to the City Council.

BACKGROUND:

Section 157.05 of the Unified Development Code specifies notification requirements for Conditional Use Permits (CUPs). Although the denial or partial denial of a Conditional Use Permit request by the Planning Commission may be appealed to the City Council, there is not currently a requirement for an appeal to the City Council, which requires a public hearing, to also have public notification.

On July 20, 2021 the Fayetteville City Council approved Ordinance No. 6459 amending Section 157.03 of the Unified Development Code (UDC) to require public notification when the denial of a rezoning request by the Planning Commission is appealed to the City Council. The notification requirements for this appeal are both written and posted notice, with posted notice required at least 15 days prior to the City Council meeting and written notice by first class mail to landowners and residents within 200 feet of the subject property. The proposed amendment would implement a similar requirement for the appeal of CUPs denied by the Planning Commission.

The City's Planning Commission considered 101 CUP applications in 2022, 70 of which were for Type 2 short-term rentals. 133 CUP applications have been submitted this year as of December 14, 2022. 8 CUP applications have been denied by the Planning Commission thus far in 2022, with 5 being appealed to the City Council.

DISCUSSION:

The purpose of this amendment is to add a requirement for public notification when the City Council holds a public hearing on the appeal of a denied CUP application. The initial public hearing for a CUP requires posted and written notification, which alerts neighbors to the consideration of a proposed use that may have impacts on adjacent or neighboring properties. The primary consideration for approval of a CUP is compatibility, and

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the public hearing plays a role in that consideration. In evaluating whether to remove the CUP requirement for Type 2 short-term rentals the Council has expressed a preference to retain the requirement, at least in residential zoning districts, for the purpose of the notification and public hearing requirements attached to that application. By requiring the same notification when a CUP denial is appealed, neighbors to the subject property have the opportunity to be made aware of the second public hearing on the item and comment if they choose.

The appeal of an approved CUP to the City Council would not require notification, consistent with the appeal notification requirement for rezonings. Should an applicant appeal a decision to deny a CUP, they would be responsible for the required notification. Should neighbors to the subject property appeal the approval of a CUP, notification would not be required.

When the Planning Commission considered the item in their December 12, 2022 meeting there was unanimous support for the item and Commissioner Garlock commented on the need for neighborhoods to be notified in the event a denied application was appealed. Commissioner Garlock then made the motion to recommend approval of the item, seconded by Commissioner Canada. A vote of 7-0-0 followed. No public comment was received either prior to or during the public hearing.

BUDGET/STAFF IMPACT:

N/A

ATTACHMENTS: SRF, Proposed Ordinance – Exhibit “A”, Proposed Ordinance Amendment in Strikeout/Highlight, Ord AMEND 157.05 CONDITIONAL USE PERMIT NOTIFICATION

City of Fayetteville Staff Review Form

2022-255

Item ID

1/3/2023

City Council Meeting Date - Agenda Item Only
N/A for Non-Agenda Item

Britin Bostick

12/16/2022

LONG RANGE PLANNING (634)

Submitted By

Submitted Date

Division / Department

Action Recommendation:

ADM-2022-0060: Administrative Item (Amend UDC Chapter 157.05/City Staff): Submitted by CITY OF FAYETTEVILLE STAFF. The request is an amendment to 157.05 – Conditional Use Permit. The proposed code change would amend public notification requirements to require notification when the denial of a Conditional Use Permit by the Planning Commission is appealed to the City Council.

Budget Impact:

Account Number

Fund

Project Number

Project Title

Budgeted Item? No

Total Amended Budget

\$ -

Expenses (Actual+Encum)

\$ -

Available Budget

\$ -

Does item have a direct cost? No

Item Cost

\$ -

Is a Budget Adjustment attached? No

Budget Adjustment

\$ -

Remaining Budget

\$ -

V20221130

Purchase Order Number:

Previous Ordinance or Resolution # 6212

Change Order Number:

Approval Date: 8/6/2019

Original Contract Number:

Comments:

EXHIBIT 'A'
ADM-2022-0060

157.05 - Conditional Use Permit

Notification of public hearings for conditional use permits shall occur as follows:

- (A) *Public Hearing Required.* A public hearing shall be held by the Planning Commission for consideration of a conditional use permit.
- (B) *Notice of Public Hearing.* The applicant shall provide the following notice:
 - (1) *Who Gets Notice.* Notice of the proposed action shall be given to all landowners and residents with separate addresses within 200 feet of the boundary line of the property on which the use is proposed. Residents with separate addresses shall be notified by first class letter addressed to the 'current resident' to each address found in the city's address point file.
 - (2) *Methods of Notice.* Notice shall be provided by the following methods, as required by this chapter:
 - (a) *Written Notice.* Written notice shall be provided at least fifteen (15) days prior to Planning Commission. Proof of notice shall be provided as required by this chapter.
 - (b) *Posted Notice.* The applicant shall post notice at least fifteen (15) days prior to the Planning Commission meeting. Proof of notice shall be provided as required by this chapter.
 - (3) *Appeal of Planning Commission Denial of Conditional Use Permit Request.* Applicants for a Conditional Use Permit denied by the Planning Commission must give both the written and posted notice of the appeal to the City Council as specified in this section at least fifteen (15) days prior to the City Council meeting. Proof of notice shall be provided as required by this chapter.
- (C) *Special Uses.* The following conditional use permits require more stringent notification. Applicants applying for consideration of the following uses must meet the following additional notification criteria:
 - (1) Dance halls; Facilities emitting odors and facilities handling explosives; wireless communication facilities; carnival, circus, amusement park or similar temporary open-air enterprise; outdoor music establishments; sexually oriented business;
 - (a) *Who Gets Notice.* All landowners within 500 feet of the boundary line of the property on which the use is proposed.

157.05 - Conditional Use Permit

Notification of public hearings for conditional use permits shall occur as follows:

- (A) *Public Hearing Required.* A public hearing shall be held by the Planning Commission for consideration of a conditional use permit.
- (B) *Notice of Public Hearing.* The applicant shall provide the following notice:
 - (1) *Who Gets Notice.* Notice of the proposed action shall be given to all landowners and residents with separate addresses within 200 feet of the boundary line of the property on which the use is proposed. Residents with separate addresses shall be notified by first class letter addressed to the 'current resident' to each address found in the city's address point file.
 - (2) *Methods of Notice.* Notice shall be provided by the following methods, as required by this chapter:
 - (a) *Written Notice.* Written notice shall be provided at least fifteen (15) days prior to Planning Commission. Proof of notice shall be provided as required by this chapter.
 - (b) *Posted Notice.* The applicant shall post notice at least fifteen (15) days prior to the Planning Commission meeting. Proof of notice shall be provided as required by this chapter.
 - (3) Appeal of Planning Commission Denial of Conditional Use Permit Request. Applicants for a Conditional Use Permit denied by the Planning Commission must give both the written and posted notice of the appeal to the City Council as specified in this section at least fifteen (15) days prior to the City Council meeting. Proof of notice shall be provided as required by this chapter.
- (C) *Special Uses.* The following conditional use permits require more stringent notification. Applicants applying for consideration of the following uses must meet the following additional notification criteria:
 - (1) Dance halls; Facilities emitting odors and facilities handling explosives; wireless communication facilities; carnival, circus, amusement park or similar temporary open-air enterprise; outdoor music establishments; sexually oriented business;
 - (a) *Who Gets Notice.* All landowners within 500 feet of the boundary line of the property on which the use is proposed.

(Code 1965, §18-15; Ord. No. 1685, 7-7-69; Ord. No. 1898, 1-16-73; Code 1991, §98.13; Ord. No. 3925, §1, 10-3-95; Ord. No. 4100, §2 (Ex. A), 6-16-98; Ord. No 1779, 2-01-71; Ord. No. 5127, 4-1-08; Ord. No. 5183, 10-7-08; Ord. No. [6212](#), §§2, 3, 8-6-19)

ORDINANCE NO. _____

AN ORDINANCE TO AMEND SUBSECTION (B) OF §157.05 CONDITIONAL USE PERMIT IN CHAPTER 157 NOTIFICATION AND PUBLIC HEARINGS OF THE UNIFIED DEVELOPMENT CODE TO REQUIRE PUBLIC NOTIFICATION WHEN THE DENIAL OF A CONDITIONAL USE PERMIT BY THE PLANNING COMMISSION IS APPEALED TO THE CITY COUNCIL

WHEREAS, both City staff and the Planning Commission recommend the adoption of an amendment to require public notification when the City Council holds a public hearing on the appeal of a denied conditional use permit application.

NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:

Section 1: That the City Council of the City of Fayetteville, Arkansas hereby amends §157.05 (B) by enacting subsection (B)(3) as follows:

“(B)(3) Appeal of Planning Commission Denial of Conditional Use Permit Request. Applicants for a Conditional Use Permit denied by the Planning Commission must give both the written and posted notice of the appeal to the City Council as specified in this section at least fifteen (15) days prior to the City Council meeting. Proof of notice shall be provided as required by this chapter.”



MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council
THRU: Susan Norton, Chief of Staff
Jonathan Curth, Development Services Director
FROM: Jessica Masters, Development Review Manager
DATE: December 27, 2022
SUBJECT: **RZN 22-051 (1030 S. HOLLYWOOD AVE.)**

RECOMMENDATION:

City Planning staff and the Planning Commission recommend approval of a request to rezone the subject property as described and shown in the attached Exhibits 'A' and 'B'.

BACKGROUND:

The subject property is located on S. Hollywood Avenue, south of W. Martin Luther King Jr. Boulevard and approximately .25 miles east of I-49. The area in question contains two lots, parcels 765-12173-000 and 765-12172-000, the first of which was acquired by the applicant from the City of Fayetteville on September 23, 2022 for \$80,085.00 per City Council resolution 197-22. The property is currently developed with a single-family dwelling that was constructed in 1993, and is zoned RSF-4, Residential Single-Family, 4 Units per Acre, and P-1, Institutional. The street has recently seen other rezoning activity with other portions of the block being rezoned to CS, Community Services as recently as October 2020 and December 2020.

Request: The request is to rezone both parcels to CS, Community Services. The applicant has not submitted any specific development plans to City staff.

Public Comment: Staff has not received any public comment on the request.

Land Use Compatibility: Staff finds the request to be compatible with surrounding land uses. The property is well-served by ample city-services, such as Fire Station #6 approximately 300 feet to the north, as well as water and sewer currently located in S. Hollywood Avenue. Additionally, the Tsa-La-Gi Trail, a paved trail that offers connections to the wider network of trails throughout the city and region borders the property to the east. The property is also close to a commercial shopping center to the west, multi-family to the south, and a large acreage of CS-zoned property to the east. Rezoning the property as requested would bring the property into better compatibility with the surrounding land uses than maintaining the current zoning district.

Land Use Plan Analysis: Staff believes that the proposal is compatible with the goals in City Plan 2040, adopted land use policies, and the future land use designation for this location. This area is designated as an Urban Center, which encourages high density, mixed-use structures to allow people to live, work, and shop in the same area. Staff finds that this rezone request closes the gap between commercial- and high-density zoning and brings the area into compliance with City Plan 2040. The infill score for the property is also high,

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much in response to the available alternative transportation networks through proximity to trails and public transportation lines. Encouraging a form-based district in the area also allows for a higher scrutiny of design standards than would typically be involved with more traditional commercial zoning districts in the City of Fayetteville, such as C-1 or C-2, and the build-to-zone requirement allows for more walkable development forms.

CITY PLAN 2040 INFILL MATRIX: City Plan 2040's Infill Matrix indicates a score of 8-9 for this site. The following elements of the matrix contribute to the score:

- Adequate Fire Response (Station #6, 990 S. Hollywood Avenue)
- Near Sewer Main (6", S. Hollywood Avenue)
- Near Water Main (6", S. Hollywood Avenue)
- Near Public School (Ramay Jr. High School)
- Near University of Arkansas Campus (Located within 1/2 mile)
- Near City Park (Greathouse Park)
- Near Paved Trail (Tsa-La-Gi Trail)
- Near Razorback Bus Stop (Route 48)
- Appropriate Future Land Use (Urban Center Area)

DISCUSSION:

At the December 12, 2022 Planning Commission meeting, members of the Planning Commission voted to forward the item to City Council with a recommendation of approval with a vote of 8-0-0. Commissioner Winston made the motion and Commissioner Brink seconded. Commissioners offered little comment, finding that the request was compatible with the future land use map and city goals for the area. No members of the public offered any comment on the request.

BUDGET/STAFF IMPACT:

N/A

ATTACHMENTS: RZN-2022-0051 SRF, Exhibit A, Exhibit B, Planning Commission Staff Report, Ord RZN 22-051 1030 HOLLYWOOD RSF4 AND P1 TO CS

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113 W. Mountain Street
Fayetteville, AR 72701

www.fayetteville-ar.gov

City of Fayetteville Staff Review Form

2022-0261

File ID

1/3/2022

City Council Meeting Date - Agenda Item Only
N/A for Non-Agenda Item

Jonathan Curth

12/16/2022

DEVELOPMENT REVIEW (630)

Submitted By

Submitted Date

Division / Department

Action Recommendation:

RZN-2022-0051: Rezoning (1030 S. HOLLYWOOD AVE/PAYNELESS, LLC, 559): Submitted by PAYNELESS, LLC for property located at 1030 S. HOLLYWOOD AVE in WARD 1. The properties are zoned RSF-4, RESIDENTIAL SINGLE-FAMILY, FOUR UNITS PER ACRE and P-1, INSTITUTIONAL and contains approximately 0.61 acres. The request is to rezone the two subject properties to CS, COMMUNITY SERVICES.

Budget Impact:

Account Number

Fund

Project Number

Project Title

Budgeted Item? No

Current Budget

\$ -

Funds Obligated

\$ -

Current Balance

\$ -

Does item have a cost? No

Item Cost

\$ -

Budget Adjustment Attached? No

Budget Adjustment

\$ -

Remaining Budget

\$ -

V20210527

Purchase Order Number:

Previous Ordinance or Resolution #

Change Order Number:

Approval Date:

Original Contract Number:

Comments:

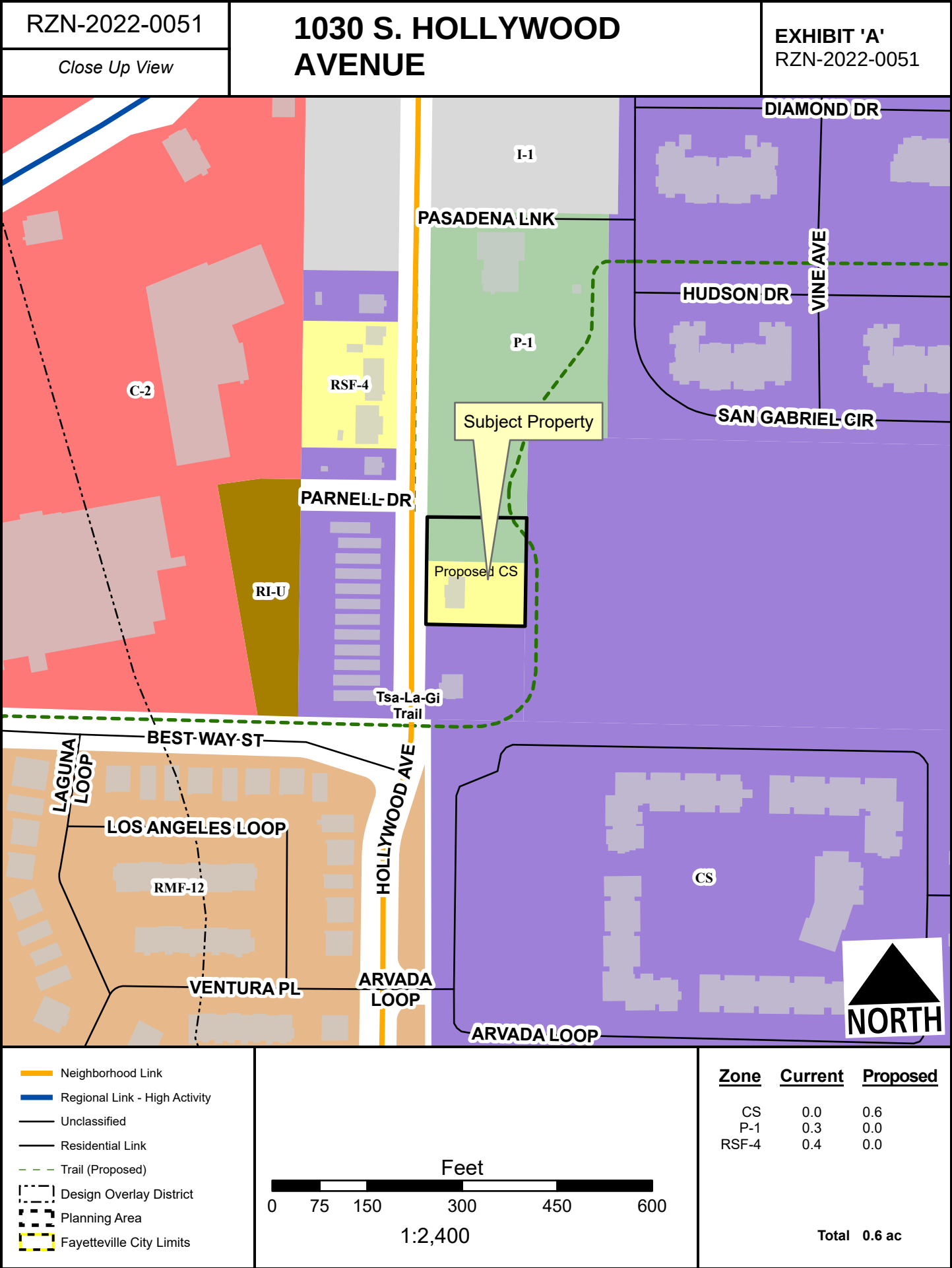


EXHIBIT 'B'
RZN-2022-0051

LEGAL DESCRIPTIONS

PARCEL #765-12173-000

A part of the Northeast Quarter (NE ¼) of the Northwest Quarter (NW ¼) of Section Twenty (20), Township Sixteen (16) North, Range Thirty (30) West, also known as part of Block Numbered Seven (7) and a part of Block Numbered Four (4) in the Re-plat of Westwood Addition to the City of Fayetteville, Arkansas, as shown upon the recorded plat thereof, on file in the office of the Circuit Clerk and Ex-Officio Recorder of Washington County, Arkansas, more particularly described as follows, to-wit: Commencing at the Southwest corner of said NE ¼ of the NW ¼ said point being an existing stone; thence South 86 degrees 57 minutes 34 seconds East 200.13 feet to a found ½" rebar on the East right of way line of Hollywood Avenue; thence North 02 degrees 31 minutes 55 seconds East along said East right of way 250.01 feet to a found ½" rebar and the POINT OF BEGINNING; thence continuing North 02 degrees 31 minutes 55 seconds East along said East right of way line 68.91 feet to a set 5/8" rebar with cap COF #1514; thence leaving said East right of way line South 87 degrees 26 minutes 43 seconds West 157.35 feet to a set 5/8" rebar with cap COF #1514; thence South 02 degrees 46 minutes 26 seconds West 70.24 feet to a found iron pin with cap #1005; thence North 86 degrees 57 minutes 34 seconds West 157.06 feet to the POINT OF BEGINNING, containing 0.251 acres, more or less.

PARCEL #765-12172-000

A part of the Northeast Quarter (NE ¼) of the Northwest Quarter (NW ¼) of Section 20 (20), Township Sixteen (16) North, Range Thirty (30) West of the Fifth Principal Meridian, Washington County, Arkansas, Also known as a part of Block Numbered Seven (7) in the Re-plat of Westwood Addition to the City of Fayetteville, Arkansas, as shown upon the recorded plat on file in the land records of Washington County, Arkansas, and being more particularly described as follows: Commencing at the Southwest Corner of said 40 acre tract, said point being an existing stone monument; thence South 88 degrees 50 minutes 34 seconds East 199.79 feet to an existing magnetic nail on the East right-of-way line of Hollywood Avenue; thence North 0 Degrees 38 minutes 13 seconds East 150.18 feet along said right-of-way line to an existing iron rebar for the true point of beginning; thence North 0 degrees 32 minutes 4 seconds East 99.81 feet to an existing iron rebar; thence South 88 degrees 57 minutes 19 seconds East 157.28 feet to an existing iron rebar; thence South 0 degrees 48 minutes 58 seconds West 100.00 feet to an existing iron rebar; thence North 88 degrees 53 minutes 11 seconds West 156.79 feet to the point of beginning, containing 0.36 acres, more or less.



TO: Fayetteville Planning Commission

FROM: Jessie Masters, Development Review Manager

MEETING DATE: December 12, 2022 Updated with PC hearing results from 12/12/2022

SUBJECT: **RZN-2022-0051: Rezoning (1030 AND 1038 S. HOLLYWOOD AVE/PAYNELESS, LLC, 559):** Submitted by PAYNELESS, LLC for property located at 1030 AND 1038 S. HOLLYWOOD AVE. The properties are zoned RSF-4, RESIDENTIAL SINGLE-FAMILY, FOUR UNITS PER ACRE and P-1, INSTITUTIONAL and contains approximately 0.61 acres. The request is to rezone the two subject properties to CS, COMMUNITY SERVICES.

RECOMMENDATION:

Staff recommends forwarding **RZN-2022-0051** to City Council with a recommendation of approval.

RECOMMENDED MOTION:

"I move to forward **RZN-2022-0051** to City Council with a recommendation of approval."

BACKGROUND:

The subject property is located on S. Hollywood Avenue, south of W. Martin Luther King Jr. Boulevard and approximately .25 miles east of I-49. The area in question contains two lots, parcels 765-12173-000 and 765-12172-000, the first of which was acquired by the applicant from the City of Fayetteville on September 23, 2022 for \$80,085.00 per City Council resolution 197-22. The property is currently developed with a single-family dwelling that was constructed in 1993, and is zoned RSF-4, Residential Single-Family, 4 Units per Acre, and P-1, Institutional. The street has recently seen other rezoning activity with other portions of the block being rezoned to CS, Community Services as recently as October 2020 and December 2020. Surrounding land uses and zoning is depicted in *Table 1*.

Table 1
Surrounding Land Use and Zoning

Direction	Land Use	Zoning
North	Institutional/Fire Station #6	P-1, Institutional
South	Single-Family Residential	CS, Community Services
East	Parking Lot	CS, Community Services
West	Single-Family Residential	CS, Community Services

Request: The request is to rezone both parcels to CS, Community Services. The applicant has not submitted any specific development plans to City staff.

Public Comment: Staff has not received any public comment on the request.

INFRASTRUCTURE AND ENVIRONMENTAL REVIEW

- Streets:** The subject area has frontage along east side of S. Hollywood Avenue, which is a partially improved Neighborhood Link street with asphalt paving and open ditches. Any street improvements required in these areas would be determined at the time of development proposal.
- Water:** Public water is available to the subject area. An existing 6-inch water main is present on the east side of S. Hollywood Avenue.
- Sewer:** Sanitary sewer is available to the subject area. An existing 6-inch sewer main is present on the west side of S. Hollywood Avenue.
- Fire:** Fire apparatus access and fire protection water supplies will be reviewed for compliance with the Arkansas Fire Prevention Code at the time of development. Station 6, located at 990 S. Hollywood Ave., protects this site. The property is located approximately 0.09 miles from the fire station with an anticipated drive time of approximately 1 minutes using existing streets. The anticipated response time would be approximately 3.2 minutes. Fire Department response time is calculated based on the drive time plus 1 minute for dispatch and 1.2 minutes for turn-out time. Within the City Limits, the Fayetteville Fire Department has a response time goal of 6 minutes for an engine and 8 minutes for a ladder truck.
- Police:** The Police Department expressed no concerns with this request.
- Drainage:** Any additional improvements or requirements for drainage will be determined at time of development. No portion of the site is located within the Hillside-Hilltop Overlay District, nor within a FEMA floodplain. There are no protected streams on the subject property.

There are hydric soils present on the southeast side of the property. Hydric soils are a known indicator of wetlands. However, for an area to be classified as wetlands, it may also need other characteristics such as hydrophytes (plants that grow in water), and shallow water during parts of the year. Hydric Soils can be found across many areas of Fayetteville, including valleys, floodplains, and open prairies. It's important to identify these natural resources during development, so when these soils are identified on a property, further environmental studies will be required at the time of development. Before permits will be issued for the property a statement/report from an environmental professional must be provided summarizing the existence of wetlands on the property. If this statement/report indicates that wetlands may be present on site, a USACE Determination of Jurisdictional Wetlands will be required at the time of development submittal.

Tree Preservation:

The existing zoning districts of P-1, Institutional and RSF-4, Residential Single-Family, 4 Units per Acre both require **25% minimum canopy preservation**. The requested zoning district of CS, Community Services requires **20% minimum canopy preservation**.

CITY PLAN 2040 FUTURE LAND USE PLAN: City Plan 2040 Future Land Use Plan designates the property within the proposed rezone as **Urban Center Area**.

Urban Center Areas contain the most intense and dense development patterns within the City and allow for the tallest and greatest variety of buildings. Urban Center accommodates rowhouses, apartments, local and regional retail, hotels, clean technology industries and entertainment uses. These areas are typified by their location adjacent to major thoroughfares with high visibility. Although Urban Center Areas recognize the conventional big box and strip retail centers existing along major arterials, it is expected that vacant properties will be developed into traditional mixed-use centers, allowing people to live, work and shop in the same area. Additionally, infill of underperforming or undervalued existing big box and strip centers should be strongly encouraged since there is a greater return on investment for redevelopment of these areas that have existing public infrastructure such as streets, sidewalks, trails, water, sewer and parklands.

CITY PLAN 2040 INFILL MATRIX: City Plan 2040's Infill Matrix indicates a score of **8-9** for this site, with a weighted score of **11**. The following elements of the matrix contribute to the score:

- Adequate Fire Response (Station #6, 990 S. Hollywood Avenue)
- Near Sewer Main (6", S. Hollywood Avenue)
- Near Water Main (6", S. Hollywood Avenue)
- Near Public School (Ramay Jr. High School)
- Near University of Arkansas Campus (Located within 1/2 mile)
- Near City Park (Greathouse Park)
- Near Paved Trail (Tsa-La-Gi Trail)
- Near Razorback Bus Stop (Route 48)
- Appropriate Future Land Use (Urban Center Area)

FINDINGS OF THE STAFF

1. A determination of the degree to which the proposed zoning is consistent with land use planning objectives, principles, and policies and with land use and zoning plans.

Finding: ***Land Use Compatibility:*** Staff finds the request to be compatible with surrounding land uses. The property is well-served by ample city-services, such as Fire Station #6 approximately 300 feet to the north, as well as water and sewer currently located in S. Hollywood Avenue. Additionally, the Tsa-La-Gi Trail, a paved trail that offers connections to the wider network of trails throughout the city and region borders the property to the east. The property is also close to a commercial shopping center to the west, multi-family to the south, and a large acreage of CS-zoned property to the east. Rezoning the property as requested would bring the property into better compatibility with the surrounding land uses than maintaining the current zoning district.

Land Use Plan Analysis: Staff believes that the proposal is compatible with the goals in City Plan 2040, adopted land use policies, and the future land use designation for this location. This area is designated as an Urban Center, which encourages high density, mixed-use structures to allow people to live, work, and shop in the same area. Staff finds that this rezone request closes the gap between commercial- and high-density zoning and brings the area

into compliance with City Plan 2040. The infill score for the property is also high, much in response to the available alternative transportation networks through proximity to trails and public transportation lines. Encouraging a form-based district in the area also allows for a higher scrutiny of design standards than would typically be involved with more traditional commercial zoning districts in the City of Fayetteville, such as C-1 or C-2, and the build-to-zone requirement allows for more walkable development forms.

2. A determination of whether the proposed zoning is justified and/or needed at the time the rezoning is proposed.

Finding: A rezone from P-1 and RSF-4 to CS is justified to meet the goals of City Plan 2040, such as goal #1 of added appropriate infill, and goal #3 of compact, complete, and connected development.

3. A determination as to whether the proposed zoning would create or appreciably increase traffic danger and congestion.

Finding: Rezoning the property as the applicant is requesting would not likely appreciably increase traffic danger or congestion. The property has access to alternative transportation through the existing trail and a Razorback transit stop. Further, given the size, the number of units that could reasonably be added would not negatively impact traffic congestion.

4. A determination as to whether the proposed zoning would alter the population density and thereby undesirably increase the load on public services including schools, water, and sewer facilities.

Finding: Rezoning the property from P-1 and RSF-4 to CS would not undesirably increase the load on public services. This area has been called out as an Urban Center Area, much in part due to the available infrastructure that already exists.

5. If there are reasons why the proposed zoning should not be approved in view of considerations under b (1) through (4) above, a determination as to whether the proposed zoning is justified and/or necessitated by peculiar circumstances such as:

- a. It would be impractical to use the land for any of the uses permitted under its existing zoning classifications;
- b. There are extenuating circumstances which justify the rezoning even though there are reasons under b (1) through (4) above why the proposed zoning is not desirable.

Finding: N/A

RECOMMENDATION: Planning staff recommends approval of RZN-2022-0051.

PLANNING COMMISSION ACTION: Required <u>YES</u>			
Date: <u>December 12, 2022</u>	☐ Tabled	☒ Forwarded	☐ Denied
Motion: Winston	with a recommendation of approval		
Second: Brink			
Vote: 8-0-0			

BUDGET/STAFF IMPACT:

None

Attachments:

- Unified Development Code:
 - §161.32 District P-1, Institutional
 - §161.22 - Community Services
- Applicant Request Letter
- One Mile Map
- Close-up Map
- Current Land Use Map
- Future Land Use Map

161.32 District P-1, Institutional

(A) *Purpose.* The Institutional District is designed to protect and facilitate use of property owned by larger public institutions and church related organizations.

(B) *Uses.*

(1) *Permitted Uses.*

Unit 1	City-wide uses by right
Unit 4	Cultural and recreational facilities
Unit 5	Government facilities
Unit 46	Short-term rentals

(2) *Conditional Uses.*

Unit 2	City-wide uses by conditional use permit
Unit 3	Public protection and utility facilities
Unit 26	Multi-family dwellings
Unit 36	Wireless communications facilities
Unit 42	Clean technologies

(C) *Density.* None.

(D) *Bulk and Area Regulations.* None.

(E) *Setback Regulations.*

Front	30 feet
Front, if parking is allowed between the right-of-way and the building	50 feet
Side	20 feet
Side, when contiguous to a residential district	25 feet
Rear	25 feet
Rear, from center line of public alley	10 feet

- (F) *Height Regulations.* There shall be no maximum height limits in P-1 Districts, provided, however, if a building exceeds the height of two (2) stories, the portion of the building that exceeds two (2) stories shall have an additional setback from any boundary line of an adjacent residential district. The amount of additional setback for the portion of the building over two (2) stories shall be equal to the difference between the total height of that portion of the building, and two (2) stories.
- (G) *Building Area.* On any lot the area occupied by all buildings shall not exceed 60% of the total area of such lot. Accessory ground mounted solar energy systems shall not be considered buildings.

(Code 1965, App. A., Art. 5(XI); Ord. No. 2603, 2-19-80; Ord. No. 2621, 4-1-80; Ord. No. 1747, 6-29-70; Code 1991, §160.042; Ord. No. 4100, §2 (Ex. A), 6-16-98; Ord. No. 4178, 8-31-99; Ord. No. 5073, 11-06-07; Ord. No. 5195, 11-6-08; Ord. No. 5312, 4-20-10; Ord. No. 5800, §1(Exh. A), 10-6-15; Ord. No. 5945, §§5, 7, 1-17-17; Ord. No. 6015, §1(Exh. A), 11-21-17; Ord. No. 6245, §2, 10-15-19; Ord. No. 6521, §8, 1-18-22)

161.22 Community Services

- (A) *Purpose.* The Community Services District is designed primarily to provide convenience goods and personal services for persons living in the surrounding residential areas and is intended to provide for adaptable mixed use centers located along commercial corridors that connect denser development nodes. There is a mixture of residential and commercial uses in a traditional urban form with buildings addressing the street. For the purposes of Chapter 96: Noise Control, the Community Services district is a commercial zone. The intent of this zoning district is to provide standards that enable development to be approved administratively.
- (B) *Uses.*
- (1) *Permitted Uses.*

Unit 1	City-wide uses by right
Unit 4	Cultural and recreational facilities
Unit 5	Government facilities
Unit 8	Single-family dwellings
Unit 9	Two-family dwellings
Unit 10	Three (3) and four (4) family dwellings
Unit 13	Eating places
Unit 15	Neighborhood Shopping goods
Unit 24	Home occupations
Unit 25	Offices, studios and related services
Unit 26	Multi-family dwellings
Unit 40	Sidewalk Cafes
Unit 41	Accessory dwellings
Unit 44	Cluster Housing Development
Unit 45	Small scale production
Unit 46	Short-term rentals

Note: Any combination of above uses is permitted upon any lot within this zone. Conditional uses shall need approval when combined with pre-approved uses.

- (2) *Conditional Uses.*

Unit 2	City-wide uses by conditional use permit
Unit 3	Public protection and utility facilities
Unit 14	Hotel, motel and amusement services
Unit 16	Shopping goods
Unit 17	Transportation, trades and services
Unit 18	Gasoline service stations and drive-in/drive-through restaurants
Unit 19	Commercial recreation, small sites
Unit 28	Center for collecting recyclable materials
Unit 34	Liquor stores
Unit 35	Outdoor music establishments
Unit 36	Wireless communication facilities*
Unit 42	Clean technologies

(C) *Density.* None.

(D) *Bulk and Area Regulations.*

(1) *Lot Width Minimum.*

Dwelling	18 feet
All others	None

(2) *Lot Area Minimum.* None.

(E) *Setback regulations.*

Front:	A build-to zone that is located between 10 feet and a line 25 feet from the front property line.
Side and rear:	None
Side or rear, when contiguous to a single-family residential district:	15 feet

(F) *Building Height Regulations.*

Building Height Maximum	5 stories
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(G) *Minimum Buildable Street Frontage.* 50% of the lot width.

(Ord. No. 5312, 4-20-10; Ord. No. 5339, 8-3-10; Ord. No. 5462, 12-6-11; Ord. No. 5592, 6-18-13; Ord. No. 5664, 2-18-14; Ord. No. 5735, 1-20-15; Ord. No. 5800 , §1(Exh. A), 10-6-15; Ord. No. 5921 , §1, 11-1-16; Ord. No. 5945 , §§5, 7—9, 1-17-17; Ord. No. 6015 , §1(Exh. A), 11-21-17; Ord. No. 6223 , §1, 9-3-19; Ord. No. 6409 §1, 2-2-21; Ord. No. 6427 , §§1(Exh. C), 2, 4-20-21; Ord. No. 6497 , §1, 10-19-21)

Ord. No. 6427 , § 2, adopted April 20, 2021, "determines that this ordinance and all amendments to Code sections ordained or enacted by this ordinance shall automatically sunset, be repealed, terminated, and become void twenty (20) months after the passage and approval of this ordinance, unless prior to that date, the City Council amends this ordinance to repeal this sunset, repeal and termination section."

November 14, 2022

City of Fayetteville

Planning and Zoning Department

113 West Mountain Street

Fayetteville, AR 72701

RE: Rezoning Application for 1030 S Hollywood Avenue in Fayetteville, AR 72701

To whom it may concern,

I am writing this letter as part of the rezoning application for 1030 S Hollywood Avenue in Fayetteville, Arkansas 72701. The property is currently zoned RSF-4 & P-1 and I am requesting the city change the zoning classification to Community Services (CS). The proposed zoning is compatible with existing land uses, particularly to the south and east where The University House, The Cottages and Aspen Heights apartments are located. The southern portion of this land and the property across the street were both rezoning to CS in 2020. I feel that changing the zoning classification will conform to the surrounding zoning and use plans and should not adversely affect or conflict with surrounding properties in any way.

I appreciate your assistance.

Sincerely,

Payne Phillips

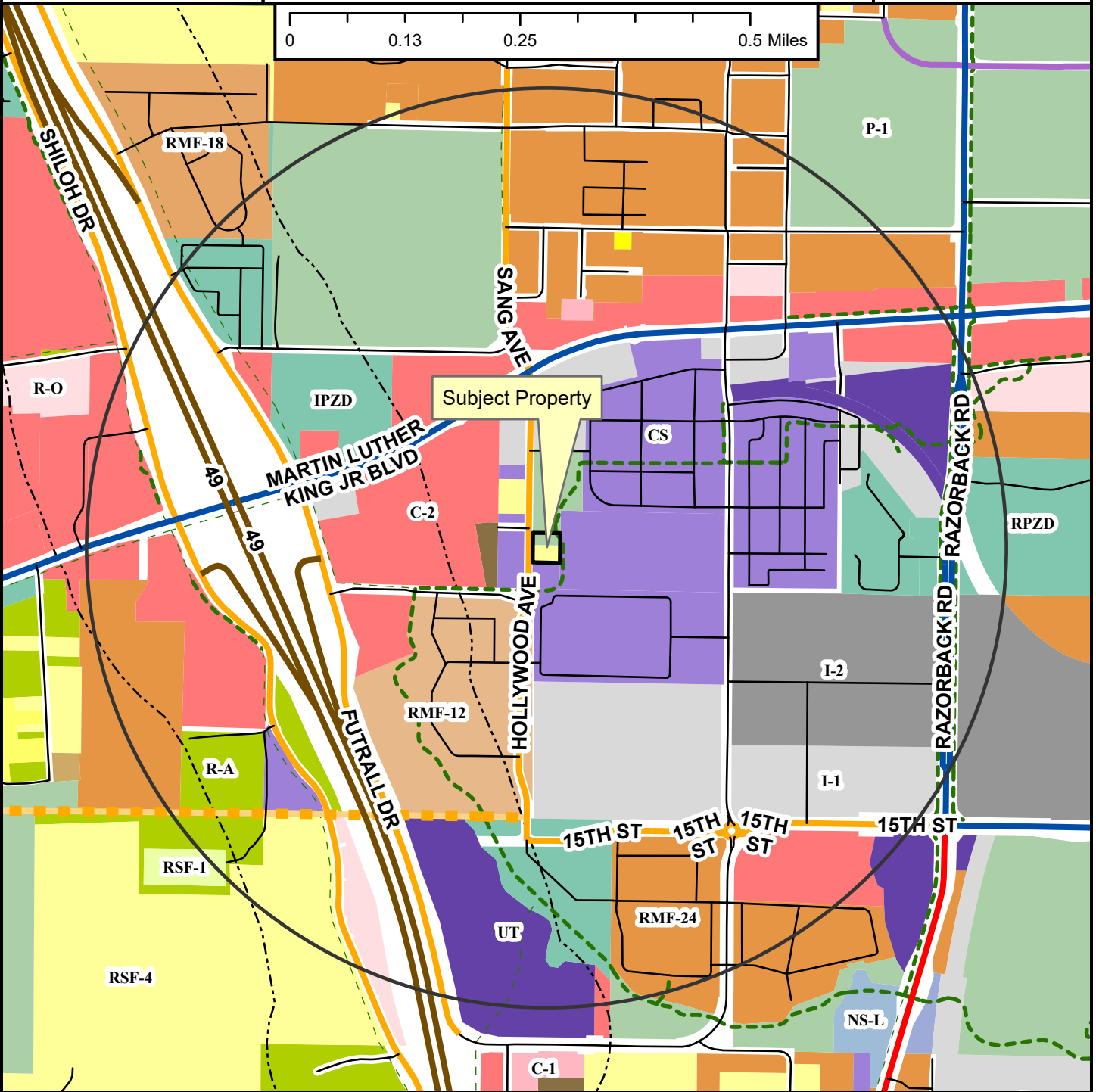
RZN-2022-0051

One Mile View

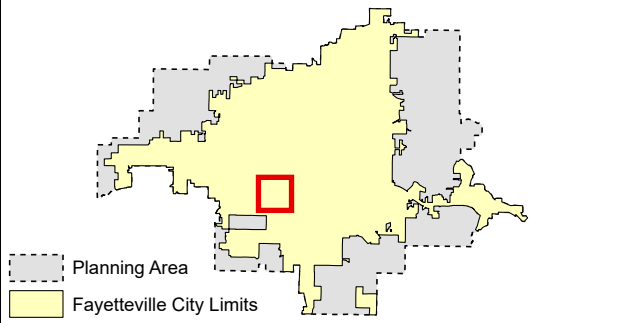
1030 AND 1038 S. HOLLYWOOD AVE



0 0.13 0.25 0.5 Miles

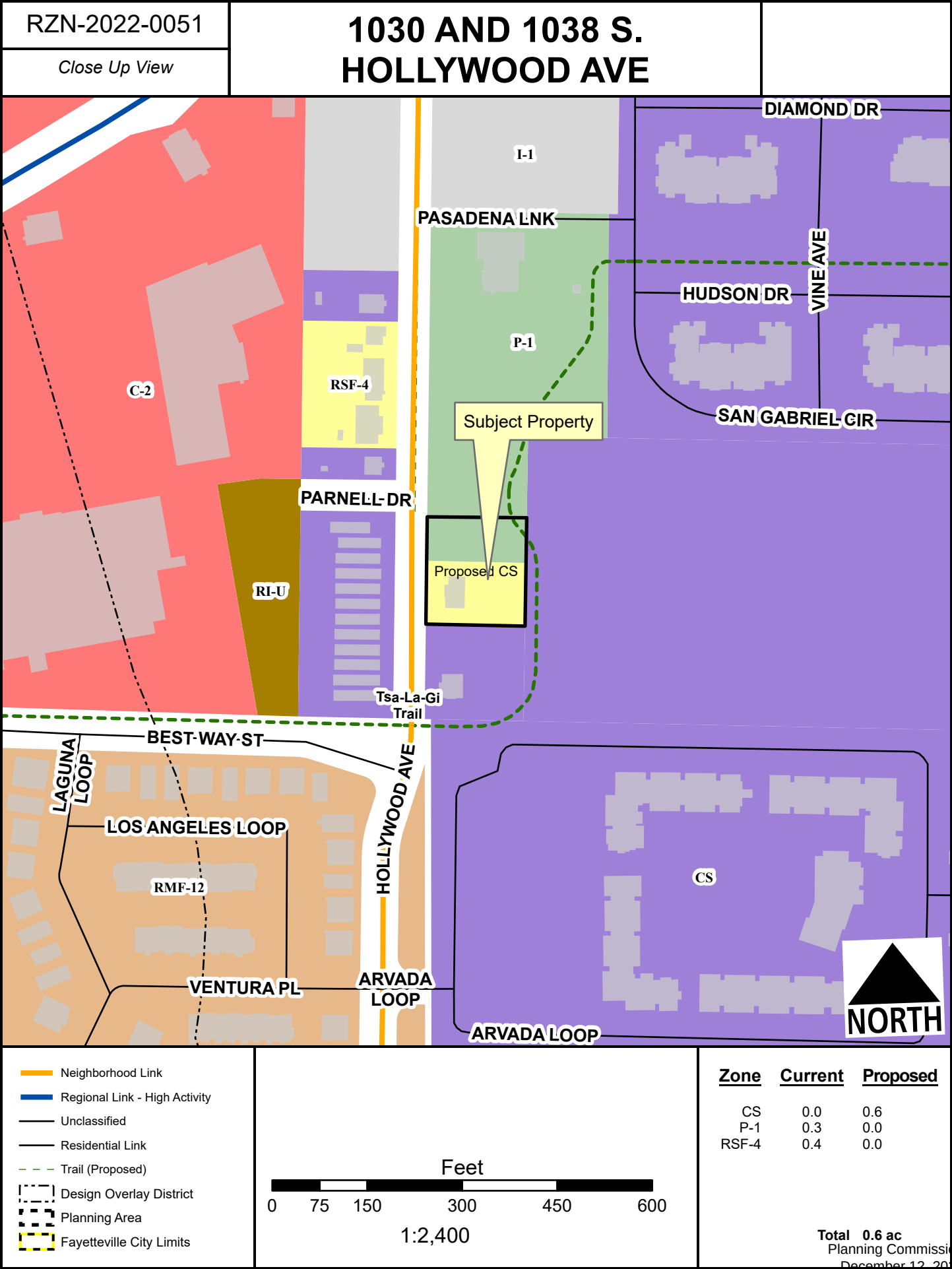


- Regional Link
- Neighborhood Link
- Institutional Master Plan
- Regional Link - High Activity
- Freeway/Expressway
- Unclassified
- Residential Link
- Planned Neighborhood Link
- Shared-Use Paved Trail
- Trail (Proposed)
- Design Overlay District
- Fayetteville City Limits
- Planning Area



- Zoning**
- RESIDENTIAL SINGLE-FAMILY**
- NS-G
- RH-U
- RI-12
- NS-L
- Residential-Agricultural
- RSF-5
- RSF-2
- RSF-4
- RSF-7
- RSF-8
- RSF-18
- RESIDENTIAL MULTI-FAMILY**
- RMF-6
- RMF-12
- RMF-13
- RMF-24
- RMF-40
- INDUSTRIAL**
- I-1 Heavy Commercial and Light Industrial
- I-2 General Industrial
- EXTRACTION**
- E-1
- COMMERCIAL**
- Residential-Office
- C-1
- C-2
- C-3
- FORM BASED DISTRICTS**
- Downtown Core
- Urban Thoroughfare
- Main Street Center
- Downtown General
- Community Services
- Neighborhood Services
- Neighborhood Conservation
- PLANNED ZONING DISTRICTS**
- Commercial, Industrial, Residential
- INSTITUTIONAL**
- P-1

Planning Commission
December 12, 2022



RZN-2022-0051

Current Land Use

1030 AND 1038 S. HOLLYWOOD AVE



- Neighborhood Link
- Regional Link - High Activity
- Freeway/Expressway
- Unclassified
- Residential Link
- Trail (Proposed)
- Planning Area
- Fayetteville City Limits
- Design Overlay District



FEMA Flood Hazard Data

- 100-Year Floodplain
- Floodway

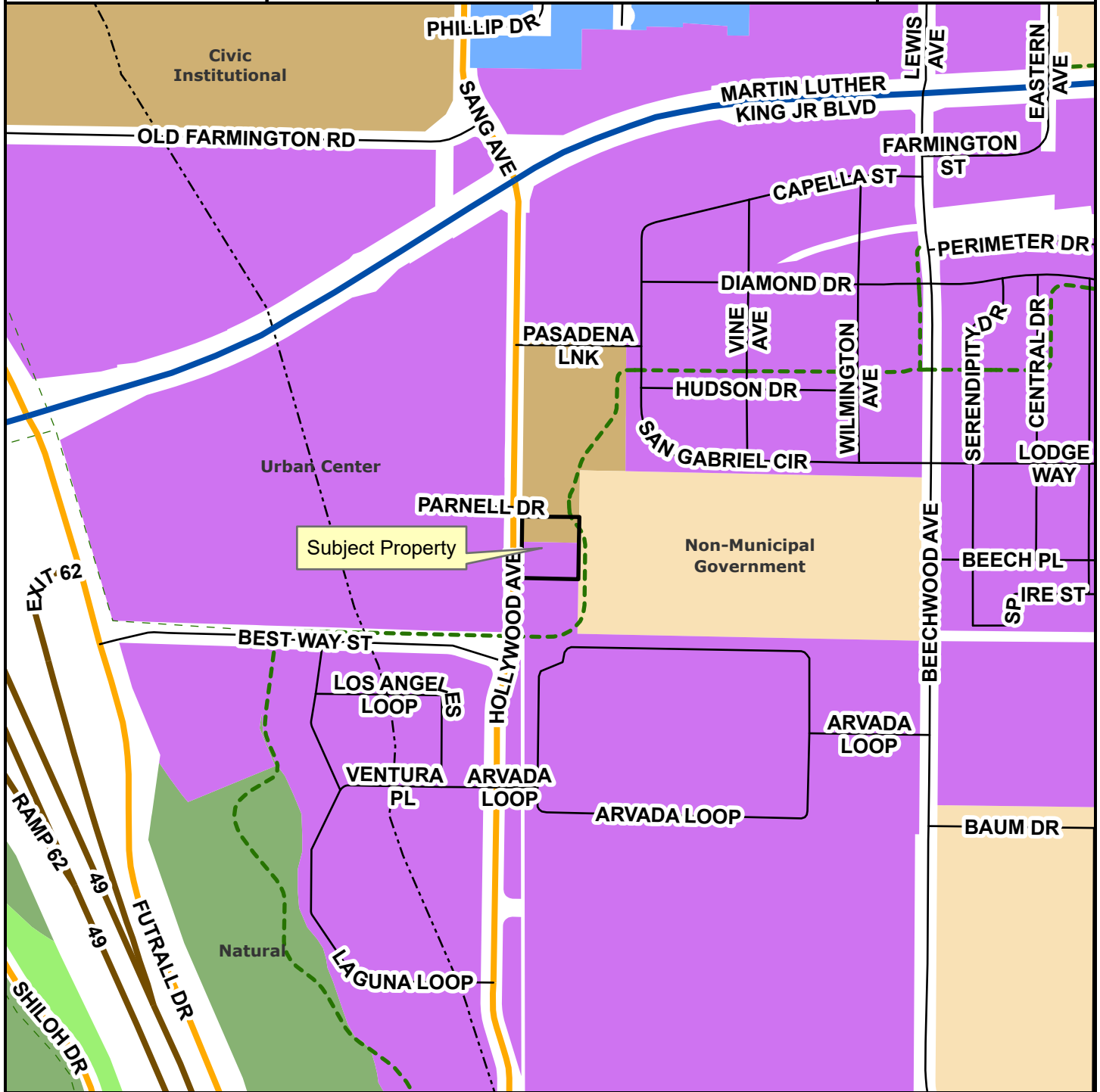
Planning Commission
December 12, 2022

Agenda Item 5

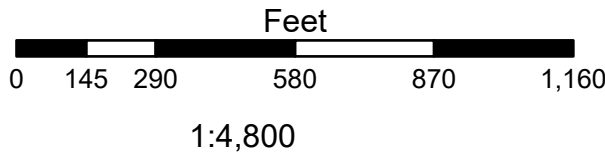
1030 AND 1038 S. HOLLYWOOD AVE



Future Land Use



- Neighborhood Link
- Regional Link - High Activity
- Freeway/Expressway
- Unclassified
- Residential Link
- Planned Neighborhood Link
- Planning Area
- Fayetteville City Limits
- - - Trail (Proposed)
- Design Overlay District



- City Neighborhood
- Civic Institutional
- Civic and Private Open Space
- Industrial
- Natural
- Non-Municipal Government
- Residential Neighborhood
- Rural Residential
- Urban Center

ORDINANCE NO. _____

AN ORDINANCE TO REZONE THAT PROPERTY DESCRIBED IN REZONING PETITION RZN 22-051 LOCATED AT 1030 SOUTH HOLLYWOOD AVENUE IN WARD 1 FOR APPROXIMATELY 0.61 ACRES FROM RSF-4, RESIDENTIAL SINGLE-FAMILY, 4 UNITS PER ACRE AND P-1, INSTITUTIONAL TO CS, COMMUNITY SERVICES

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:

Section 1: That the City Council of the City of Fayetteville, Arkansas hereby changes the zone classification of the property shown on the map (Exhibit A) and the legal description (Exhibit B) both attached to the Planning Department's Agenda Memo from RSF-4, Residential Single-Family, 4 Units Per Acre and P-1, Institutional to CS, Community Services.

Section 2: That the City Council of the City of Fayetteville, Arkansas hereby amends the official zoning map of the City of Fayetteville to reflect the zoning change provided in Section 1.



MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council

THRU: Susan Norton, Chief of Staff
Jonathan Curth, Development Services Director
Jessica Masters, Development Review Manager

FROM: Gretchen Harrison, Planner

DATE: December 27, 2022

SUBJECT: **VAC 22-026 (4267 W. LIERLY LANE)**

RECOMMENDATION:

Staff recommends approval of VAC-2022-0026 as shown in the attached Exhibits 'A' and 'B' and with the following conditions of approval:
Any damage or relocation of existing facilities will be at the applicant's expense; and
Easements over any existing telephone lines need to remain or new easements need to be provided for AT&T.
There are no lines within the section of easement that is proposed to be vacated.

BACKGROUND:

The subject property is in the Lierly Lane subdivision in northwest Fayetteville just south of city limits on Lierly Lane. The property is zoned RSF-4, Residential Single-Family, 4 Units per Acre and totals approximately 0.33 acres. The property is currently developed with one single-family dwelling which Washington County records indicate was built in 1995.

Request: The applicant proposes to vacate a portion of an existing utility easement as indicated in the attached exhibits and totaling approximately 0.064 acres.

DISCUSSION:

The applicant has submitted the required approvals from adjacent property owners and public utility and service providers with conditions as noted above. With submittal of the required vacation forms and utility consent, staff recommends approval.

BUDGET/STAFF IMPACT:

N/A

ATTACHMENTS: SRF, Exhibit A, Exhibit B, Applicant Request Letter, Petition to Vacate, Survey, ORD VAC - 22-026 4267 LIERLY - UTILITY EASEMENT

City of Fayetteville Staff Review Form

2022-241

Item ID

1/3/2023

City Council Meeting Date - Agenda Item Only
N/A for Non-Agenda Item

Jonathan Curth

12/16/2022

DEVELOPMENT REVIEW (630)

Submitted By

Submitted Date

Division / Department

Action Recommendation:

VAC-2022-0026: Vacation (4267 W. LIERLY LN./ATKINSON, 244): Submitted by HALBERT LAW OFFICE for property located at 4267 W. LIERLY LN. in WARD 4. The property is zoned RSF-4, RESIDENTIAL SINGLE-FAMILY, 4 UNITS PER ACRE and contains approximately 0.33 acres. The request is to vacate a 0.064-portion of a utility easement.

Budget Impact:

Account Number

Fund

Project Number

Project Title

Budgeted Item? No

Total Amended Budget

\$ -

Expenses (Actual+Encum)

\$ -

Available Budget

\$ -

Does item have a direct cost? No

Item Cost

\$ -

Is a Budget Adjustment attached? No

Budget Adjustment

\$ -

Remaining Budget

\$ -

V20221130

Purchase Order Number: _____

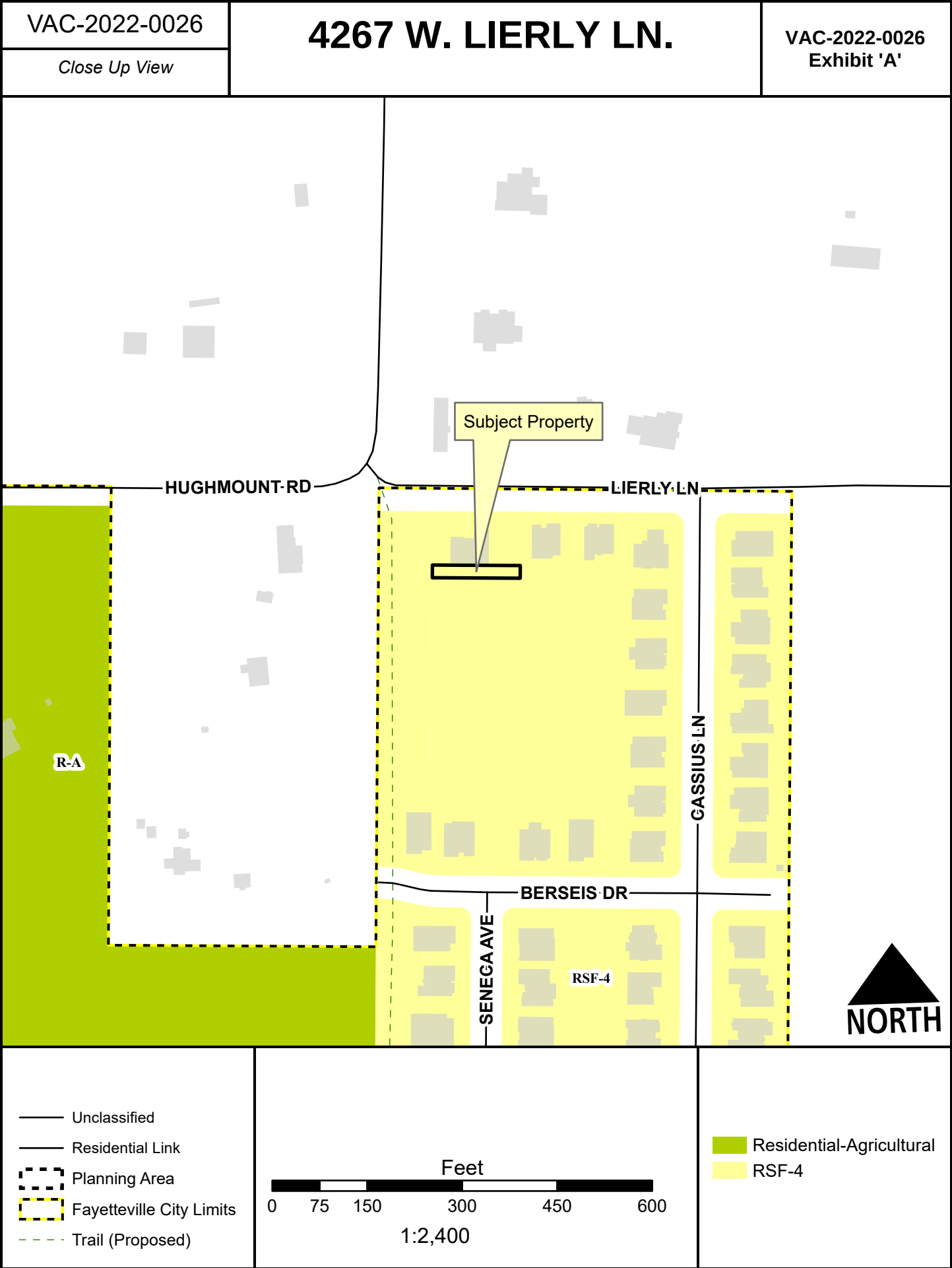
Previous Ordinance or Resolution # _____

Change Order Number: _____

Approval Date: _____

Original Contract Number: _____

Comments:



20' UTILITY EASEMENT DESCRIPTION

BEING A PART OF LOT 60, LIERLY LANE SUBDIVISION, TO THE CITY OF FAYETTEVILLE, ARKANSAS, AS SHOWN IN PLAT RECORD BOOK 23A AT PAGE 278, ON FILE IN THE OFFICE OF THE CIRCUIT CLERK AND EX-OFFICIO RECORDER OF WASHINGTON COUNTY, ARKANSAS, BEING DESCRIBED AS FOLLOWS:

BEGINNING AT A FOUND 5/8" REBAR MARKING THE SOUTHEAST CORNER OF SAID LOT 60; THENCE N87°40'16"W 138.69' TO A FOUND 5/8" REBAR; THENCE N02°25'02"E 20.00'; THENCE S87°40'16"E 138.68'; THENCE S02°22'29"W 20.00' TO THE POINT OF BEGINNING, CONTAINING 0.064 ACRES, MORE OR LESS.

HALBERT LAW OFFICES

ATTORNEYS AT LAW

PO BOX 1272

FAYETTEVILLE, AR 72702

PHONE (479) 571-0014

FAX (877) 450-0781

tripp@halbertlaw.net

November 29, 2022

City of Fayetteville
City Council
113 West Mountain Street
Fayetteville, AR 72701

Re: 4267 Lierly Ln (Vacate Easement)

Dear Council Members:

Please find enclosed the necessary documents for my client's Easement Vacation Request and application regarding a Utility Easement being vacated at my client's primary residence located at 4267 W. Lierly Ln. As you will note all utility companies have agreed to the vacation due to the easement not being in use. Additionally, we reached out to property owners adjacent to the easement to be vacated and received no objections. The legal description of the easement and graphic representation of what is being vacated is also enclosed. My client wishes to vacate that abuts against the south side of the residence to allow her to improve the subject property with a back porch.

Should you have any questions, please don't hesitate to contact me.

Sincerely,

Halbert Law Offices



Charles E. Halbert III

CEH/hdc
Enclosures

HALBERT LAW OFFICES

ATTORNEYS AT LAW

PO BOX 1272

FAYETTEVILLE, AR 72702

PHONE (479) 571-0014

FAX (877) 450-0781

tripp@halbertlaw.net

November 29, 2022

PETITION TO VACATE

PETITION TO VACATE A general utility/water & sewer EASEMENT LOCATED IN Lot 60, Lierly Lane subdivision, CITY OF FAYETTEVILLE, ARKANSAS

**TO: The Fayetteville City Planning Commission and
The Fayetteville City Council**

We, the undersigned, being all the owners of the real estate abutting the easement hereinafter sought to be abandoned and vacated, lying in (lot, block, subdivision), City of Fayetteville, Arkansas, a municipal corporation, petition to vacate an easement which is described as follows:

“SEE ATTACHED EXHIBIT A”

That the abutting real estate affected by said abandonment of the alley are (lot, block, subdivision of each adjoining lot to the area requested to be vacated) City of Fayetteville used by the public for a period of many years, and that the public interest and welfare would not be adversely affected by the abandonment of the portion of the above described easement.

The petitioners pray that the City of Fayetteville, Arkansas, abandon and vacate the below-described real estate, subject, however, to the existing utility easements and sewer easements as required, and that the below-described real estate be used for their respective benefit and purpose as now approved by law.

The petitioners further pray that the below-described real estate be vested in the abutting property owners as provided by law.

WHEREFORE, the undersigned petitioners respectfully pray that the governing body of the City of Fayetteville, Arkansas, abandon and vacate the above described real estate, subject to said utility and sewer easements, and that title to said real estate sought

to be abandoned be vested in the abutting property owners as provided by law, and as to that particular land the owners be free from the easements of the public for the use of said alley.

Dated this 1st day of December 2022

Tripp Halbert

Charles E. Halbert, III
Attorney in Fact

BLEW & ASSOCIATES, PA
CIVIL ENGINEERS & LAND SURVEYORS

20' UTILITY EASEMENT DESCRIPTION

BEING A PART OF LOT 60, LIERLY LANE SUBDIVISION, TO THE CITY OF FAYETTEVILLE, ARKANSAS, AS SHOWN IN PLAT RECORD BOOK 23A AT PAGE 278, ON FILE IN THE OFFICE OF THE CIRCUIT CLERK AND EX-OFFICIO RECORDER OF WASHINGTON COUNTY, ARKANSAS, BEING DESCRIBED AS FOLLOWS:

BEGINNING AT A FOUND 5/8" REBAR MARKING THE SOUTHEAST CORNER OF SAID LOT 60; THENCE N87°40'16"W 138.69' TO A FOUND 5/8" REBAR; THENCE N02°25'02"E 20.00'; THENCE S87°40'16"E 138.68'; THENCE S02°22'29"W 20.00' TO THE POINT OF BEGINNING, CONTAINING 0.064 ACRES, MORE OR LESS.

EXHIBIT A

ZONING INFORMATION

RS-4, RESIDENTIAL, SINGLE FAMILY
SETBACK REQUIREMENTS SHOWN PER FINAL PLAT
OF LIERLY LANE SUBDIVISION:
FRONT - 25'
SIDE - 8'
REAR - 20'

LAND AREA

14487 SQ. FT. ±
0.333 ACRES ±

MISCELLANEOUS NOTES

COMPLETED FIELD WORK:
JULY 13, 2022

REFERENCE DOCUMENTS:

1. QUIT-CLAIM DEED RECORDED AS FILE NO. 2021-00019789.
2. FINAL PLAT OF LIERLY LANE SUBDIVISION RECORDED AS FILE NO. 023A-00000278.

THE BASIS OF BEARING OF THIS SURVEY IS GRID NORTH, BASED ON ARKANSAS STATE PLANE COORDINATE SYSTEM, NORTH ZONE 14083.

SCALE FEATURES SHOWN ON THIS PLAT MAY BE SHOWN OUT OF SCALE FOR CLARITY.

DIMENSIONS ON THIS PLAT ARE EXPRESSED IN FEET AND DECIMAL PARTS THEREOF UNLESS OTHERWISE NOTED. MONUMENTS WERE FOUND AT POINTS WHERE INDICATED.

EXCEPT AS SPECIFICALLY STATED OR SHOWN ON THIS PLAT, THIS SURVEY DOES NOT PURPORT TO REFLECT OF ANY OF THE FOLLOWING WHICH MAY BE APPLICABLE TO THE SUBJECT PROPERTY: EASEMENTS, OTHER THAN POSSIBLE EASEMENTS IN CONNECTION WITH THE SUBDIVISION, EASEMENTS COVENANTS, SUBDIVISION RESTRICTIONS OR OTHER LAND USE REGULATIONS, AND ANY OTHER FACTS WHICH AN ACCURATE TITLE SEARCH MAY DISCLOSE.

UTILITY INFORMATION

THE LOCATION OF UTILITIES SHOWN HEREON ARE FROM OBSERVED EVIDENCE OF ABOVE GROUND UTILITIES, AND NOT FROM ANY RECORDS. THE LOCATION OF ANY SUBTERRANEAN UTILITIES IS NOT SHOWN AND PLANS OF SURFACE GROUND MARKINGS TO DETERMINE THE LOCATION OF ANY SUBTERRANEAN UTILITIES.

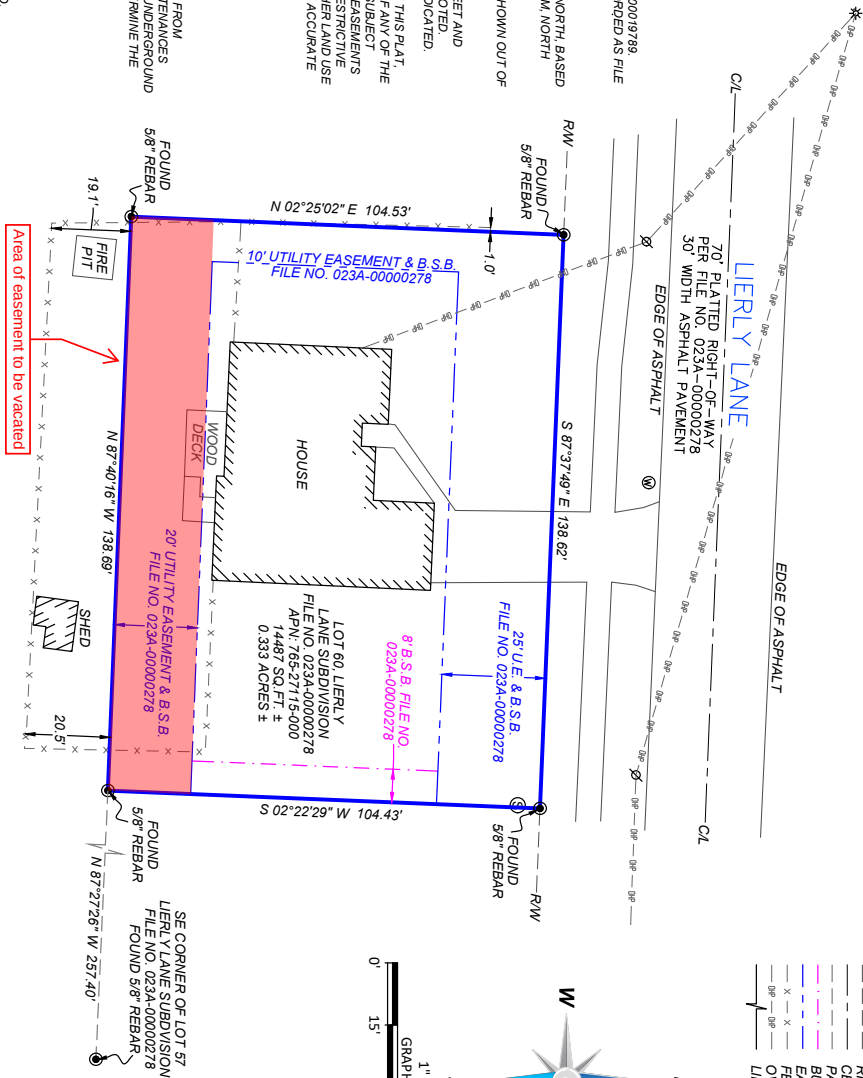
SURVEY DESCRIPTION

LOCUT CLAIM DEED RECORDED AS INSTRUMENT NO. 2021-00019789.

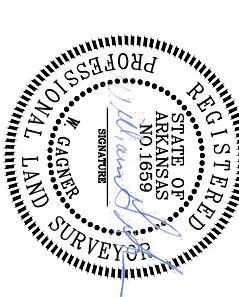
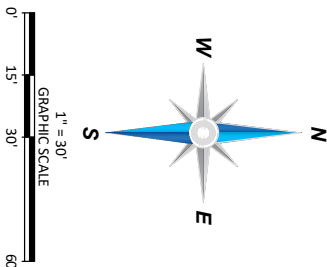
LOT 60, LIERLY LANE SUBDIVISION, TO THE CITY OF FAYETTEVILLE, ARKANSAS, AS SHOWN IN PLAT RECORD BOOK 23A AT PAGE 278, ON FILE IN THE OFFICE OF THE CIRCUIT CLERK AND EX-OFFICIO RECORDER OF WASHINGTON COUNTY, ARKANSAS.

LOT SURVEY

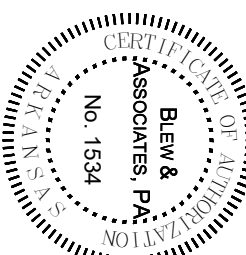
4267 W. LIERLY LN., FAYETTEVILLE,
COUNTY OF WASHINGTON,
STATE OF ARKANSAS, 72704



- LEGEND OF SYMBOLS
- FOUND MONUMENT AS NOTED
 - RW, RIGHT-OF-WAY
 - CL, CENTERLINE OF ROAD
 - ⊗ STORM MAIN/HOLE
 - ⊙ LIGHT POLE
 - ⊗ OVERHEAD POWER POLE
 - ⊗ WATER METER
 - PROPERTY LINE
 - RIGHT-OF-WAY
 - CENTERLINE OF ROAD
 - PARCEL LINE
 - BUILDING SETBACK
 - EASEMENT LINE
 - FENCE
 - OVERHEAD POWERLINE
 - LINE NOT TO SCALE



IF THE SIGNATURE ON THIS SEAL IS NOT AN ORIGINAL AND NOT BLUE IN COLOR THEN IT SHOULD BE ASSUMED THAT THIS PLAT MAY HAVE BEEN ALTERED. THE BOARD OF SURVEYORS SHALL NOT BE RESPONSIBLE FOR ANY ALTERATIONS THAT DO NOT BEAR AN ORIGINAL SEAL AND SIGNATURE.



SHEET 1 OF 1

BLEW & ASSOCIATES, P.A.

Surveying
Engineering
Mapping

3825 N. SHILOH DRIVE - FAYETTEVILLE, AR 72703
OFFICE: 479.454.5006 FAX: 479.582.1883
EMAIL: SURVEY@BLEWNC.COM WWW.BLEWNC.COM

SURVEYOR JOB NUMBER:
22-6774

SURVEY REVIEWED BY:
TPN

SURVEY DRAWN BY:
CB - 07/19/2022

SCALE:
1" = 30'

FOR THE USE AND BENEFIT OF:
KATHY ATKINSON

ORDINANCE NO. _____

AN ORDINANCE TO APPROVE VAC 22-026 FOR PROPERTY LOCATED AT 4267 WEST LIERLY LANE IN WARD 4 TO VACATE A PORTION OF A GENERAL UTILITY EASEMENT

WHEREAS, the City Council has the authority under A.C.A. § 14-54-104 to vacate public grounds or portions thereof which are not required for corporate purposes; and

WHEREAS, the City Council has determined that the following described portion of a general utility easement is not required for corporate purposes.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:

Section 1: That the City Council of the City of Fayetteville, Arkansas hereby vacates the portion of a general utility easement as described in Exhibit B attached to the Planning Department's memo.

Section 2: A copy of this Ordinance duly certified by the City Clerk along with the map attached as Exhibit A to the Planning Department's memo shall be filed in the office of the Washington County Circuit Clerk.

Section 3: This vacation approval is subject to the following conditions:

1. Any damage to or relocation of existing facilities will be at the applicant's expense; and
2. Easements over any existing telephone lines shall remain in place or the applicant must dedicate new easements for use by AT&T.



MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council

THRU: Susan Norton, Chief of Staff
Jonathan Curth, Development Services Director
Jessica Masters, Development Review Manager

FROM: Ryan Umberger, Senior Planner

DATE: December 27, 2022

SUBJECT: **VAC 22-025 (EAST OF N. STORER AVE.)**

RECOMMENDATION:

Staff recommends approval of VAC-2022-0025 as shown in the attached Exhibits 'A' and 'B' and with the following conditions of approval:

A 10-foot-wide utility easement is platted as requested by SWEPCO in the attached exhibit;

Retain the east 11 feet of the north 15 feet for sanitary sewer easement;

A 20-foot easement centered on the existing north-south sanitary sewer line along the east property line is dedicated; and

Any damage or relocation of existing facilities will be at the applicant's expense.

BACKGROUND:

The subject property is in central Fayetteville, roughly ¼ mile north of the University of Arkansas campus on the east side of N. Storer Avenue. The property is zoned RMF-40, Residential Multi-family, 40 Units per Acre and totals approximately 0.30 acres. The property is undeveloped and largely covered by mature tree canopy. A two-family residential structure previously occupied the site. A demolition permit was approved in February of 2022 to raze the structure.

Request: The applicant proposes to vacate a portion of an existing utility easement as indicated in the attached exhibits and totaling approximately 0.05 acres.

DISCUSSION:

The applicant has submitted the required approvals from adjacent property owners and public utility and service providers with conditions as noted above. With submittal of the required vacation forms and utility consent, staff recommends approval.

BUDGET/STAFF IMPACT:

N/A

ATTACHMENTS: SRF, Exhibit A, Exhibit B, Exhibit C - AEP/SWEPCO Utility Easement Condition 1, Exhibit D - Water Sewer Easement Condition 2, Applicant Request Letter, Petition to Vacate, Survey, VAC - 22-025
NORTH STORER - UTILITY EASEMENT

Mailing address:

113 W. Mountain Street
Fayetteville, AR 72701

www.fayetteville-ar.gov

City of Fayetteville Staff Review Form

2022-257

Item ID

1/3/2023

City Council Meeting Date - Agenda Item Only
N/A for Non-Agenda Item

Jonathan Curth

12/16/2022

DEVELOPMENT REVIEW (630)

Submitted By

Submitted Date

Division / Department

Action Recommendation:

VAC-2022-0025: Vacation (EAST OF N. STORER AVE/CURLEE PROPERTIES LLC, 444): Submitted by CASEY CURLEE for property located at EAST OF N. STORER AVE. The property is zoned RMF-40, RESIDENTIAL MULTI-FAMILY, FORTY UNITS PER ACRE and contains approximately 0.30 acres. The request is to vacate a 0.05-acre utility easement.

Budget Impact:

Account Number

Fund

Project Number

Project Title

Budgeted Item? No

Total Amended Budget

\$ -

Expenses (Actual+Encum)

\$ -

Available Budget

\$ -

Does item have a direct cost? No

Item Cost

\$ -

Is a Budget Adjustment attached? No

Budget Adjustment

\$ -

Remaining Budget

\$ -

V20221130

Purchase Order Number: _____

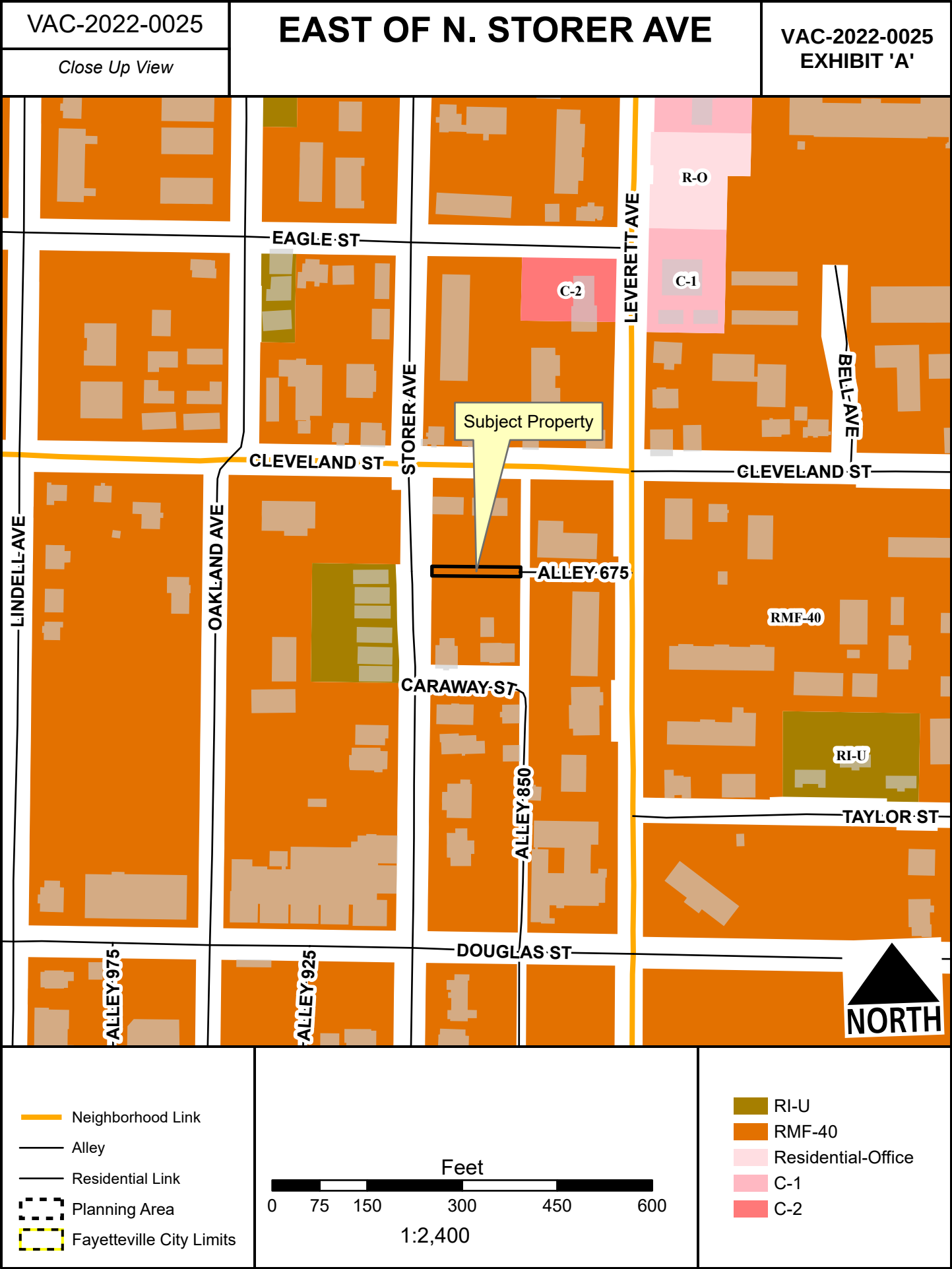
Previous Ordinance or Resolution # _____

Change Order Number: _____

Approval Date: _____

Original Contract Number: _____

Comments:



Fwd: Easement Vacation Legal

majesticcustomh.../Inbox



Casey Curlee <majesticcustomhomes@yahoo.com>
To: Casey Curlee <majesticcustomhomes@yahoo.com>

Nov 28 at 2:06 PM

**VAC-2022-0025
EXHIBIT 'B'**

Sent from my iPhone

Begin forwarded message:

From: derrick@batesnwa.com
Date: November 28, 2022 at 2:04:50 PM CST
To: Casey Curlee <Majesticcustomhomes@yahoo.com>
Subject: Easement Vacation Legal
Reply-To: derrick@batesnwa.com

Let us know if you need anything else.

15' GENERAL U.E. VACATION DESCRIPTION:

A 15' WIDE GENERAL UTILITY EASEMENT DEDICATED PER CITY OF FAYETTEVILLE ORDINANCE #4142, SAID EASEMENT BEING LOCATED ADJACENT TO AND SOUTH OF LOTS 5 AND 6, BLOCK 3 OF LEVERETT'S 3RD ADDITION AND ADJACENT TO AND NORTH OF LOTS 7 AND 8, BLOCK 3 OF LEVERETT'S 3RD ADDITION TO THE CITY OF FAYETTEVILLE, ARKANSAS, AS PER PLAT THEREOF ON FILE IN THE OFFICE OF THE CIRCUIT CLERK AND EX-OFFICIO RECORDER OF WASHINGTON COUNTY, ARKANSAS, SAID EASEMENT BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS, TO WIT: BEGINNING AT A POINT ON THE EAST RIGHT-OF-WAY OF NORTH STORER AVENUE WHICH IS S02°25'37"W 49.86' FROM AN EXISTING REBAR MARKING THE NORTHWEST CORNER OF THE SOUTH 50' OF SAID LOT 6 AND RUNNING THENCE S87°34'11"E 140.03', THENCE S02°23'05"W 15.00', THENCE N87°34'11"W 140.04' TO THE EAST RIGHT-OF-WAY OF NORTH STORER AVENUE, THENCE ALONG SAID RIGHT-OF-WAY N02°25'37"E 15.00' TO THE POINT OF BEGINNING, CONTAINING 0.05 ACRES, MORE OR LESS.

Thanks,

Derrick Thomas PLS
President of Surveying
Bates & Associates, Inc.
7230 S. Pleasant Ridge Dr.
Fayetteville, AR 72704
479-442-9350
www.batesnwa.com



Virus-free www.avast.com

Casey Curlee
1188 North Washington Ave.
Fayetteville, AR 72703
479/601/6000
Majesticcustomhomes@yahoo.com

11/22/22

Fayetteville City Council
113 West Mountain Street
Fayetteville, AR 72701

Dear Council Members,

I am representing Curlee Properties LLC. and Moldenhauer Real Estate INC. It is our collective decision by both parties to vacate the Utility Easement on Parcel # 765-07532-000. The nature of this request is to improve the property for development and to protect tree # 54. An agreement and covenant have been written between (Buyers), Curlee Properties LLC., Moldenhauer Real Estate INC. and (Sellers), Unitarian Universalist Fellowship of Fayetteville Arkansas to protect tree # 54. It is our intention to construct three thousand two hundred square foot condominiums utilizing setbacks needed for tree protection and adequate parking.

Sincerely,
Casey Curlee

Petition To Vacate Utility Easement

Petition to Vacate A general utility Easement Located IN (Lot 5,6,7 and 8, Block 3 Of Leverette's 3rd Addition to the City of Fayetteville, Arkansas).

To: The Fayetteville City Planning Commission and
The Fayetteville City Council

We, the undersigned, Being all the owners of the real estate abutting the easement hereinafter sought to be abandoned and vacated lying in (lot 5,6,7,and 8, Block 3 Of Leverette's 3rd Addition), City of Fayetteville Arkansas, a municipal corporation, petition to vacate a Utility Easement which is described as follows:

(See Attached Survey Exhibit)

That the abutting real estate affected by said abandonment of the alley are (Lot 5,6,7 and 8, Block 3 Of Leverette's 3rd Addition), City of Fayetteville used by the Utility contractors for a period of many years, and that the public interest and welfare would not be adversely affected by the abandonment of the portion of the described easement.

The petitioners pray that the City of Fayetteville, Arkansas abandon and vacate the above described real estate, subject, however, to the Utility easements requested by Arkansas Electric Power Company and City of Fayetteville Water and Sewer as required, and that the above described real estate be used for their respective benefit and purpose as now approved by law.

The petitioners further pray that the above described real estate be vested in the abutting property owners as provided by law.

WHEREFORE, the undersigned petitioners respectfully pray that the governing body of the City of Fayetteville, Arkansas, abandon and vacate the above described real estate, subject to said utility and sewer easements, and that title to said real estate sought to be abandoned be vested in the abutting property owners as provided by law, and, as to that particular land the owners be free the easements of the public for the use of said alley.

Dated this 18 day of November, 2022

Printed Name Casey Corlee Signature Casey Corlee

Printed Name Tim Moldenhauer Signature Tim Moldenhauer

ORDINANCE NO. _____

AN ORDINANCE TO APPROVE VAC 22-025 FOR PROPERTY LOCATED EAST OF NORTH STORER AVENUE IN WARD 2 TO VACATE A PORTION OF A UTILITY EASEMENT

WHEREAS, the City Council has the authority under A.C.A. § 14-54-104 to vacate public grounds or portions thereof which are not required for corporate purposes; and

WHEREAS, the City Council has determined that the following described portion of a utility easement is not required for corporate purposes.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:

Section 1: That the City Council of the City of Fayetteville, Arkansas hereby vacates the portion of a utility easement as described in Exhibit B attached to the Planning Department's memo.

Section 2: A copy of this Ordinance duly certified by the City Clerk along with the map attached as Exhibit A to the Planning Department's memo shall be filed in the office of the Washington County Circuit Clerk.

Section 3: This vacation approval is subject to the following conditions:

1. A 10-foot-wide utility easement requested by AEP/SWEPCO shall platted as shown in attached Exhibit C;
2. An 11-foot water/sewer easement shall be dedicated as shown in attached Exhibit D;
3. A 20-foot easement centered on the existing north-south sanitary sewer line along the east property line is dedicated; and
4. Any damage to or relocation of existing facilities will be at the applicant's expense.



MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council
THRU: Susan Norton, Chief of Staff
Jonathan Curth, Development Services Director
FROM: Jessica Masters, Development Review Manager
DATE: December 27, 2022
SUBJECT: **VAC 22-027 (103 N. PLAINVIEW)**

RECOMMENDATION:

Staff recommends approval of VAC-2022-0027 as shown in the attached Exhibits 'A' and 'B', and with the following condition of approval:

1. Any damage or relocation of any existing facilities will be at the applicant's expense.

BACKGROUND:

The subject property is located in north Fayetteville, where N. Plainview Avenue dead-ends into the existing Fiesta Square Shopping center. The property contains an incomplete structure that aerial imagery suggests was partially razed in 2013.

Request: The applicant proposes to vacate a portion of an existing water and sewer easement in the northwest portion of the property, as indicated in the attached exhibits and totaling approximately 0.05 acres.

DISCUSSION:

The applicant submitted the required approvals with no objections. With submittal of the required vacation forms and utility consent, staff recommends approval.

BUDGET/STAFF IMPACT:

N/A

ATTACHMENTS: SRF, Exhibit A, Exhibit B, Applicant Request Letter, Petition to Vacate, Survey, ORD VAC - 22-027 103 PLAINVIEW - UTILITY EASEMENT

City of Fayetteville Staff Review Form

2022-258

Item ID

1/3/2023

City Council Meeting Date - Agenda Item Only
N/A for Non-Agenda Item

Jonathan Curth

12/16/2022

DEVELOPMENT REVIEW (630)

Submitted By

Submitted Date

Division / Department

Action Recommendation:

VAC-2022-0027: Vacation (103 N. PLAINVIEW AVE./MCMAHON, 213) Submitted by TIM MCMAHON for portions of a water and sewer easement located at 103 N. PLAINVIEW AVE in WARD 3. The property is zoned RI-12, RESIDENTIAL INTERMEDIATE – TWELVE UNITS PER ACRE and contains approximately 3.16 acres. The request is to vacate a 0.05-acre portion of a utility easement.

Budget Impact:

Account Number

Fund

Project Number

Project Title

Budgeted Item? No

Total Amended Budget

\$ -

Expenses (Actual+Encum)

\$ -

Available Budget

\$ -

Does item have a direct cost? No

Item Cost

\$ -

Is a Budget Adjustment attached? No

Budget Adjustment

\$ -

Remaining Budget

\$ -

V20221130

Purchase Order Number: _____

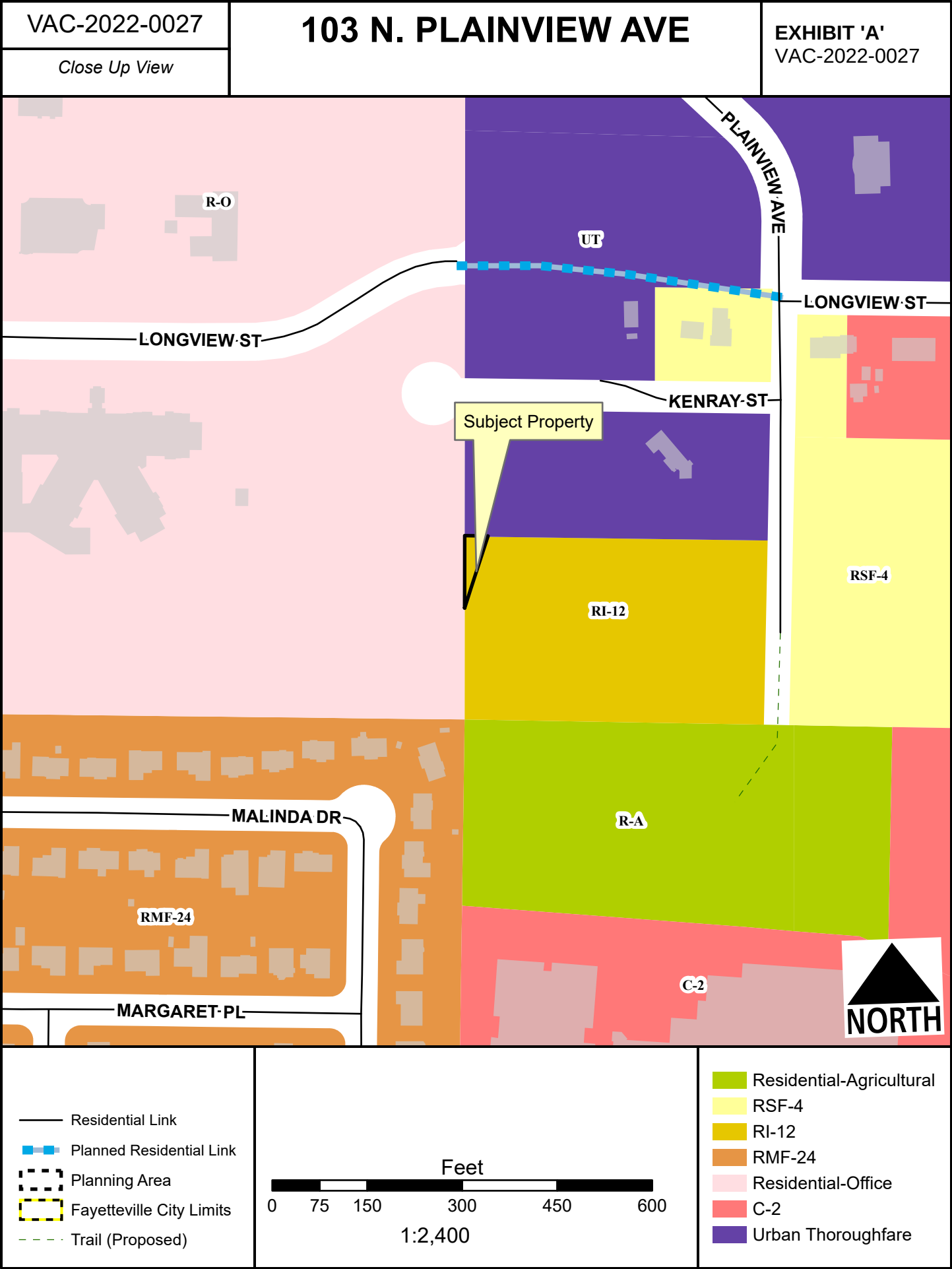
Previous Ordinance or Resolution # _____

Change Order Number: _____

Approval Date: _____

Original Contract Number: _____

Comments:





**Bates &
Associates, Inc.**
Civil Engineering - Land Surveying - Landscape Architecture

7230 S. Pleasant Ridge Dr. Fayetteville, AR 72704
PH: 479-442-9350 * FAX: 479-521-9350
www.nwabatesinc.com

RE: LEGAL DESCRIPTION

35' WATER EASEMENT TO BE ABANDONED DESCRIPTION:

A 35' WATER EASEMENT FILED FOR RECORD IN BOOK 451 AT PAGE 377 IN THE OFFICE OF THE CIRCUIT CLERK AND EX-OFFICIO RECORDER OF WASHINGTON COUNTY, ARKANSAS, WHICH IS LOCATED IN A PART OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 26, TOWNSHIP 17 NORTH, RANGE 30 WEST, WASHINGTON COUNTY, ARKANSAS, SAID EASEMENT BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS, TO-WIT: BEGINNING AT A POINT WHICH IS N02°02'21"E 175.81' FROM AN EXISTING STATE MONUMENT MARKING THE SOUTHWEST CORNER OF SAID FORTY ACRE TRACT AND RUNNING THENCE N02°02'21"E 114.27' TO AN EXISTING REBAR, THENCE S87°09'23"E 36.97', THENCE S20°02'38"W 119.61' TO THE POINT OF BEGINNING, CONTAINING 0.05 ACRES, MORE OR LESS.

December 1, 2022

Dear Members of the Planning Commission and City Council,

Concerning property located at : 103 N. Plainview Drive

This is a request to have an easement that contains an abandoned water main vacated.

Your consideration of this request is very much appreciated.

Very respectfully,

Tim McMahon

Tim McMahon

SAMPLE PETITION*

PETITION TO VACATE A water & sewer EASEMENT LOCATED IN (103 N Plainview Ave.), CITY OF FAYETTEVILLE, ARKANSAS

TO: The Fayetteville City Planning Commission and
The Fayetteville City Council

We, the undersigned, being all the owners of the real estate abutting the easement hereinafter sought to be abandoned and vacated, lying in (103 N. Plainview Ave.), City of Fayetteville, Arkansas, a municipal corporation, petition to vacate an easement which is described as follows: A 35' WATER EASEMENT FILED FOR RECORD IN BOOK 451 AT PAGE 377 IN THE OFFICE OF THE CIRCUIT CLERK AND EX-OFFICIO RECORDER OF WASHINGTON COUNTY, ARKANSAS, WHICH IS LOCATED IN A PART OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 26, TOWNSHIP 17 NORTH, RANGE 30 WEST, WASHINGTON COUNTY, ARKANSAS, SAID EASEMENT BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS, TO-WIT: BEGINNING AT A POINT WHICH IS N02°02'21"E 175.81' FROM AN EXISTING STATE MONUMENT MARKING THE SOUTHWEST CORNER OF SAID FORTY ACRE TRACT AND RUNNING THENCE N02°02'21"E 114.27' TO AN EXISTING REBAR, THENCE S87°09'23"E 36.97', THENCE S20°02'38"W 119.61' TO THE POINT OF BEGINNING, CONTAINING 0.05 ACRES, MORE OR LESS., TO-WIT: BEGINNING AT A

The petitioners pray that the City of Fayetteville, Arkansas, abandon and vacate the above described easement.

WHEREFORE, the undersigned petitioners respectfully pray that the governing body of the City of Fayetteville, Arkansas, abandon and vacate the above described easement.

Tim McMahon

Printed Name

Tim McMahon

Date: 12/01/2022

Signature

Jennifer McMahon

Printed Name

Jennifer McMahon

Date: 12/01/2022

Signature

ORDINANCE NO. _____

AN ORDINANCE TO APPROVE VAC 22-027 FOR PROPERTY LOCATED AT 103 NORTH PLAINVIEW AVENUE IN WARD 3 TO VACATE A PORTION OF A WATER AND SEWER EASEMENT

WHEREAS, the City Council has the authority under A.C.A. § 14-54-104 to vacate public grounds or portions thereof which are not required for corporate purposes; and

WHEREAS, the City Council has determined that the following described portion of a water and sewer easement is not required for corporate purposes.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:

Section 1: That the City Council of the City of Fayetteville, Arkansas hereby vacates the portion of a water and sewer easement as described in Exhibit B attached to the Planning Department's memo.

Section 2: A copy of this Ordinance duly certified by the City Clerk along with the map attached as Exhibit A to the Planning Department's memo shall be filed in the office of the Washington County Circuit Clerk.

Section 3: This vacation approval is subject to the condition that any relocation of or damage to existing utilities or existing facilities shall be at the owner/developer's expense.



MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council

THRU: Susan Norton, Chief of Staff
Jonathan Curth, Development Services Director

FROM: Jessica Masters, Development Review Manager

DATE: December 27, 2022

SUBJECT: **VAC 22-024 (RAZORBACK ROAD, MAPLE STREET, ETC.)**

RECOMMENDATION:

City staff and Planning Commission recommend approval of VAC-2022-0024 as shown in the attached Exhibits 'A' and 'B', and with the following conditions of approval:

1. Easements shall be dedicated for any existing facilities associated with this right-of-way vacation request, with review and coordination by the applicant with the utility provider, including the client properly identifying utilities in the field by means of surveying, pot holing, and coordinating with representatives.
2. Adequate accommodation for pedestrian access must be maintained whether through easement or agreement.
3. The applicant must dedicate right-of-way to the back of curb in any areas where right of way does not currently exist
4. The applicant must dedicate a pedestrian access easement to the existing back of sidewalk or master street plan right of way in areas where sidewalk does not currently exist.
5. Signal poles and appurtenances must remain in the right-of-way, or an easement be dedicated over the areas where poles and appurtenances are located.
6. Drainage easements must be dedicated in areas of existing drainage facilities.
7. An agreement will need to be developed establishing responsibility (or lack thereof) for repairs to non-typical features behind the curb due to maintenance, installation, and repair of any city facilities located within vacated rights of way, including drainage facilities and water/sewer lines. The City will not be responsible for maintenance or repair of anything except a standard sidewalk.
8. Any damage or relocation of existing facilities will be at the property owner/developer's expense.
9. All easements and agreements required as a condition of this vacation shall be reviewed by the City and signed by the Mayor.

BACKGROUND:

The subject property includes 6.54 acres of right-of-way spread along portions of seven public streets adjacent to University of Arkansas Property (see attached survey). Most prominently, the right-of-way includes:

- Arts District: Three separate areas of right-of-way behind street curbs on the north, west, and east borders of the new Arts District, along W. Martin Luther King Jr. Boulevard, S. Hill Avenue, and S. LT. Col. Leroy Pond

Mailing address:

113 W. Mountain Street
Fayetteville, AR 72701

www.fayetteville-ar.gov

Avenue.

- Former Highway 112: Multiple areas of right-of-way behind the curb along both the east and west sides of Razorback Road, north and south sides of W. Maple Street, and east and west sides of Garland Avenue.
- Cleveland Street: Two areas of right-of-way along the south side of W. Cleveland Street, between N. Lindell Avenue to the east and N. Razorback Road to the west.

Given the large number of properties associated with the right-of-way, adjacent zoning district information is not provided. All properties adjacent to the request are owned by the University of Arkansas with uses varying from parking and athletic facilities to housing and classrooms. A similar proposal was heard by the Planning Commission in late 2021, but was tabled indefinitely at the applicant's request to allow time to coordinate with the City Attorney's office. The applicant is bringing back a new request, with an additional portion of right-of-way for consideration.

Proposal: The applicant proposes to vacate 18 separate pieces of public right of way totaling 6.54 acres along seven streets. In turn, a dedication of right-of-way totaling 1.43 acres is proposed along Razorback Road and between W. Nolan Richardson Drive to the south and W. Maple Street to the north. With this request, the applicant noted in their letter that existing utilities will be protected through easement dedication. Additionally, the applicant asserts that vacating the right-of-way will remove current and future sections of Senior Walk, landscaping, lights, and trees from the City's responsibility.

DISCUSSION:

At the December 12, 2022 Planning Commission meeting, Commissioners voted to forward the item to City Council with a recommendation of approval, with a vote of 8-0-0. Commissioner Garlock made the motion, and Commissioner Winston seconded. Finding that the conditions of approval covered previous concerns about pedestrian access and maintenance, Commissioners found the request to vacate the right-of-way to be acceptable. No public comment was offered on the item.

BUDGET/STAFF IMPACT:

N/A

ATTACHMENTS: SRF, Exhibit A, Exhibit B, Applicant Request Letter, Petition to vacate, Survey, Planning Commission Staff Report, VAC - 22-024 RAZORBACK-MAPLE-GARLAND-CLEVELAND-HILL -RIGHT OF WAY

Mailing address:

113 W. Mountain Street
Fayetteville, AR 72701

www.fayetteville-ar.gov

City of Fayetteville Staff Review Form

2022-0262

Legistar File ID

1/3/2022

City Council Meeting Date - Agenda Item Only
N/A for Non-Agenda Item

Jonathan Curth

12/16/2022

DEVELOPMENT REVIEW (630)

Submitted By

Submitted Date

Division / Department

Action Recommendation:

VAC-2022-0024: Vacation (RAZORBACK RD., MLK BLVD., MAPLE ST., GARLAND AVE., CLEVELAND ST., HILL AVE., & LT. COL. LEROY POND AVE./UA-ARTS ROW VACATION, 482/521/522): Submitted by DCI for portions of right-of-way located along Razorback Rd./Maple St./Garland Ave/Cleveland St./Hill Ave./MLK Blvd./Lt. Col. Leroy Pond Ave in WARDS 1 and 2. The rights-of-way are within or adjacent to property belonging to the University of Arkansas. The request is to vacate portions of existing street rights of way totaling approximately 6.54 acres.

Budget Impact:

Account Number		Fund	
Project Number		Project Title	
Budgeted Item?	No	Current Budget	\$ -
		Funds Obligated	\$ -
		Current Balance	\$ -
Does item have a cost?	No	Item Cost	\$ -
Budget Adjustment Attached?	No	Budget Adjustment	\$ -
		Remaining Budget	\$ -

V20210527

Purchase Order Number: _____

Previous Ordinance or Resolution # _____

Change Order Number: _____

Approval Date: _____

Original Contract Number: _____

Comments:

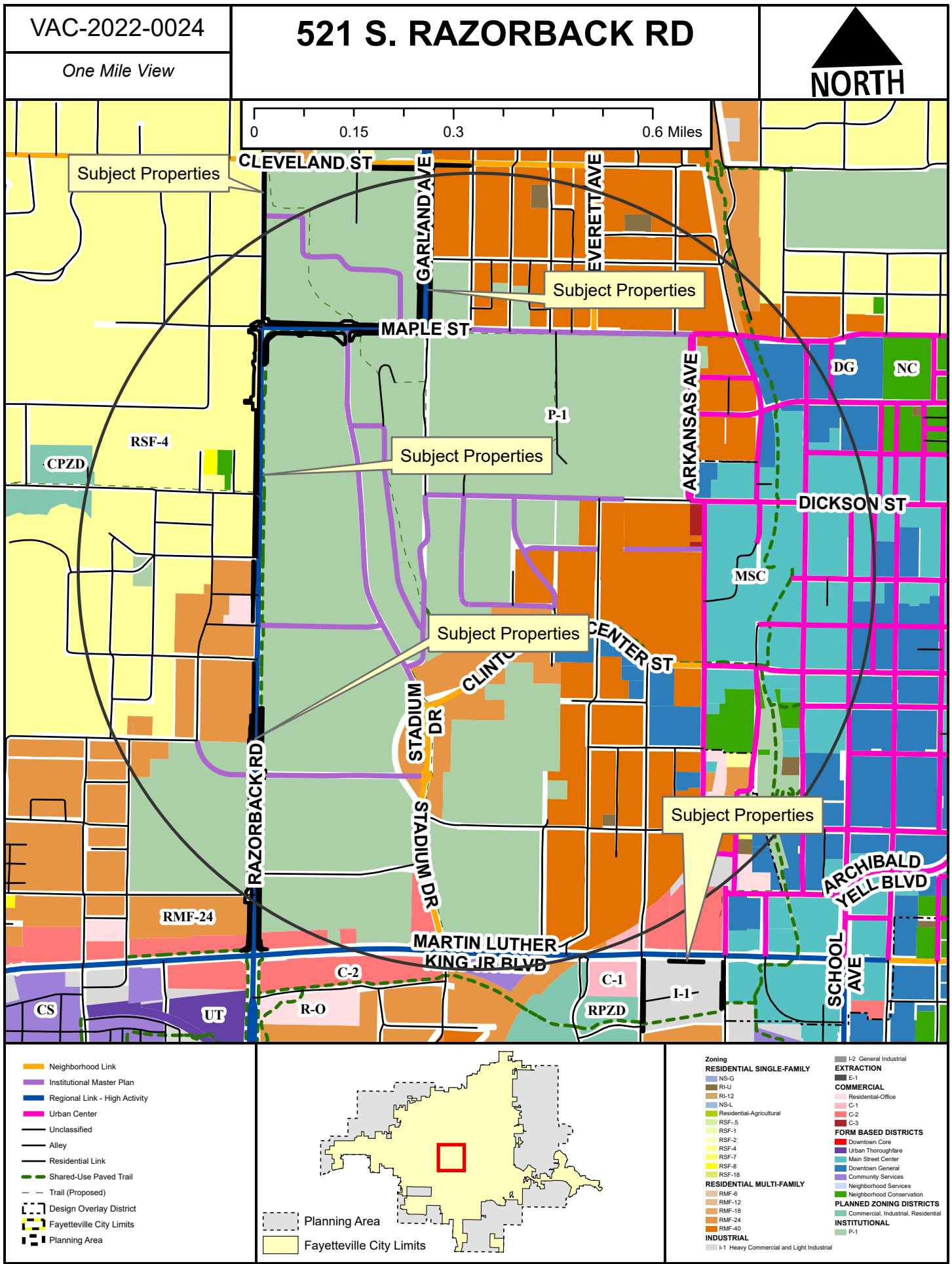


EXHIBIT 'B'
VAC-2022-0024

ROW Vacation Description

#1

Part of the NE1/4 NW1/4 of Section 21, Township 16 North, Range 30 West, City of Fayetteville, Arkansas, being more particularly described as follows:

Commencing at the NW corner of the said NE1/4 NW1/4; Thence S 60°00'27" E, a distance of 525.14 feet to the Easterly right of way line of Hill Avenue and the Point of Beginning; Thence S 02°40'45" W along the Easterly right of way line of said Hill Avenue, a distance of 36.68 feet; Thence S 82°20'08" W, a distance of 11.08 feet to a point on the Easterly back of curb line of Hill Avenue; Thence N 02°52'05" E along the said Easterly back of curb line, a distance of 36.70 feet; Thence N 82°20'08" E, a distance of 10.96 feet to the Point of Beginning, containing 0.01 acres more or less.

#2

Part of the NE1/4 NW1/4 of Section 21 and part of the SE1/4 SW1/4 of Section 16 all in Township 16 North, Range 30 West, City of Fayetteville, Arkansas, being more particularly described as follows:

Commencing at the NW corner of the said NE1/4 NW1/4; Thence S 64°05'15" E, a distance of 507.77 feet to a point on the Easterly right of way line of Hill Avenue and the Point of Beginning; Thence S 82°20'08" W, a distance of 10.82 feet to a point on the Easterly back of curb line of said Hill Avenue; Thence N 02°52'05" E along the said Easterly back of curb line, a distance of 132.06 feet; Thence N 02°41'12" E along the said Easterly back of curb line, a distance of 362.61 feet; Thence S 87°10'32" E, a distance of 6.48 feet to the Easterly right of way line of said Hill Avenue; Thence along the Easterly right of way line of said Hill Avenue the following three courses: S 02°32'37" W, a distance of 184.79 feet; S 01°43'05" W, a distance of 193.23 feet; S 02°40'45" W, a distance of 114.72 feet to the Point of Beginning, containing 0.09 acres more or less.

#3

Part of the SE1/4 SW1/4 of Section 16, Township 16 North, Range 30 West, City of Fayetteville, Arkansas, being more particularly described as follows:

Commencing at the NW corner of the NE1/4 NW1/4 of Section 21. Thence N 68°47'51" E, a distance of 718.90 feet to a point of the Southerly right of way line of M.L.K. JR Boulevard; Thence S 86°32'38" E, a distance of 277.65 feet to a point on the Southerly right of way line of M.L.K. JR Boulevard; Thence along the Southerly right of way line of M.L.K. JR Boulevard the following three courses: S 03°27'22" W, a distance of 10.00

feet; N 86°32'38" W, a distance of 277.52 feet; N 02°42'49" E, a distance of 10.00 feet to the Point of Beginning, containing 0.06 acres more or less.

#4

Part of the NE1/4 NW1/4 of Section 21 and part of the SE1/4 SW1/4 of Section 16 all in Township 16 North, Range 30 West, City of Fayetteville, Arkansas, being more particularly described as follows:

Commencing at the NW corner of the said NE1/4 NW1/4; Thence N 77°59'30" E, a distance of 1124.85 feet the intersection of the Southerly right of way line of M.L.K. JR Boulevard and the Westerly right of way line of Government Avenue and the Point of Beginning; Thence S 86°32'38" E, a distance of 8.00 feet to a point on the Westerly back of curb line of said Government Avenue; Thence S 02°28'13" W along the said Westerly back of curb line, a distance of 370.23 feet; Thence S 82°19'51" W, a distance of 19.56 feet to the Westerly right of way line of said Government Avenue; Thence along the Westerly right of way line of said Government Avenue the following three courses: N 02°31'09" E, a distance of 208.36 feet; S 87°04'21" E, a distance of 11.07 feet; N 02°28'13" E, a distance of 165.53 feet to the Point of Beginning, containing 0.13 acres more or less.

#5

Part of the SE1/4 of Section 8 and part of the NE1/4 NE1/4 of Section 17 all in Township 16 North, Range 30 West, City of Fayetteville, Washington County, Arkansas, being more particularly described as follows:

Commencing at the SE corner of said Section 8; Thence N 02°53'25" E along the East line of said Section 8, a distance of 1260.95 feet; Thence N 87°09'15" W, a distance of 117.56 feet to a point on the Southerly right of way line of Cleveland Street and the Point of Beginning; Thence along the Southerly right of way line of said Cleveland Street the following bearings and distances: N 87°09'15" W, a distance of 478.83 feet; N 02°50'45" E, a distance of 12.44 feet; N 87°09'15" W, a distance of 715.54 feet to a point on the proposed Southerly back of curb line of said Cleveland Street; Thence along the Southerly back of curb line of said Cleveland Street the following bearings and distance: Northeasterly along a 29.50 feet radius curve to the right, thru a central angle of 57°21'17", for a distance of 29.53 feet, said curve having a chord bearing of N 63°53'14" E, and distance of 28.31 feet; S 87°26'07" E, a distance of 805.77 feet to the beginning of a circular curve to the right; Southeasterly along a 5.00 feet radius curve to the right, thru a central angle of 90°00'00", for a distance of 7.85 feet, said curve having a chord bearing of S 42°26'07" E, and distance of 7.07 feet; S 02°33'53" W, a distance of 6.83 feet; S 87°26'07" E, a distance of 386.19 feet to the beginning of a circular curve

to the right, said point being at the intersection of the Southerly back of curb line of said Cleveland Street and the Westerly back of curb line of Garland Avenue; Thence along the Westerly back of curb line of said Garland Avenue the following bearings and distances: Southeasterly along a 37.50 feet radius curve to the right, thru a central angle of 89°49'41", for a distance of 58.79 feet, said curve having a chord bearing of S 42°31'16" E, and distance of 52.95 feet; Thence S 02°23'34" W, a distance of 736.30 feet; Thence S 03°10'11" W, a distance of 391.26 feet; Thence S 03°10'11" W, a distance of 61.13 feet to the beginning of a circular curve to the right at the intersection of the Westerly back of curb line of said Garland Avenue and the Northerly back of curb line of West Maple Street; Thence along the Northerly back of curb line of said West Maple Street the following bearings and distances: Southwesterly along a 39.50 feet radius curve to the right, thru a central angle of 89°20'08", for a distance of 61.59 feet, said curve having a chord bearing of S 47°50'15" W, and distance of 55.54 feet; N 87°29'41" W, a distance of 1184.55 feet to the beginning of a circular curve to the right at the intersection of the Northerly back of curb line of said West Maple Street and the Easterly back of curb line of Razorback Road; Thence along the Easterly back of curb line of said Razorback road the following bearings and distances: Northwesterly along a 30.00 feet radius curve to the right, thru a central angle of 89°59'12", for a distance of 47.12 feet, said curve having a chord bearing of N 42°30'05" W, and distance of 42.42 feet; N 02°29'30" E, a distance of 20.32 feet; Thence leaving the Easterly back of curb line of said Razorback Road and along the Northerly right of way line of said West Maple Street the following bearings and distance: S 87°16'56" E, a distance of 36.71 feet; S 32°16'27" E, a distance of 12.21 feet; S 02°43'04" W, a distance of 15.00 feet; S 85°50'33" E, a distance of 196.14 feet; S 86°17'43" E, a distance of 367.01 feet; N 58°48'06" E, a distance of 43.32 feet; S 87°56'08" E, a distance of 61.00 feet; S 53°43'12" E, a distance of 30.23 feet; S 87°56'08" E, a distance of 15.00 feet; S 02°03'52" W, a distance of 10.00 feet; S 87°56'08" E, a distance of 128.00 feet; S 80°44'15" E, a distance of 27.21 feet; S 87°49'55" E, a distance of 27.57 feet; N 02°03'52" E, a distance of 10.46 feet; S 87°56'08" E, a distance of 141.43 feet; S 78°00'34" E, a distance of 29.74 feet; S 87°43'15" E, a distance of 93.43 feet to the intersection of the Northerly right of way line of said West Maple Street and the Westerly right of way line of said Garland Avenue; Thence along the Westerly right of way line of said Garland Avenue the following bearings and distances: N 51°46'34" E, a distance of 53.54 feet; N 08°37'03" E, a distance of 7.95 feet; N 03°14'28" E, a distance of 238.68 feet; N 41°45'32" W, a distance of 6.15 feet; N 03°14'28" E, a distance of 77.00 feet; N 48°14'28" E, a distance of 6.15 feet; N 03°14'28" E, a distance of 136.61 feet; N 02°31'16" E, a distance of 701.38 feet; N 58°12'33" W, a distance of 51.84 feet to the Point of Beginning, containing 1.67 Acres more or less.

#6

Part of the SW1/4 of Section 9, Township 16 North, Range 30 West, City of Fayetteville, Washington County, Arkansas, being more particularly described as follows:

Commencing at the SW corner of said Section 9; Thence N 74°45'30" E, a distance of 95.94 feet to a point lying on the Northerly right of way line of West Maple Street and the Point of Beginning; Thence S 03°06'30" W, a distance of 9.11 feet to the intersection of the Northerly back of curb line of said West Maple Street and the Easterly back of curb line of Garland Avenue; Thence along the Easterly back of curb line of said Garland Avenue the following bearings and distances: N 86°53'30" W, a distance of 36.05 feet to the beginning of a circular curve to the right; Northwesterly along a 39.50 feet radius curve to the right, thru a central angle of 90°03'41", for a distance of 62.09 feet, said curve having a chord bearing of N 41°51'40" W, and distance of 55.89 feet; N 03°10'11" E, a distance of 65.85 feet; N 03°10'11" E, a distance of 381.32 feet; N 02°23'34" E, a distance of 10.44 feet; Northeasterly along a 19.50 feet radius curve to the right, thru a central angle of 51°14'11", for a distance of 17.44 feet, said curve having a chord bearing of N 28°00'40" E, and distance of 16.86 feet; Thence leaving the Easterly back of curb line of said Garland Avenue and along the Easterly right of way line of said Garland Avenue, S 02°53'25" W, a distance of 465.30 feet to the intersection of the Easterly right of way line of said Garland Avenue and the Northerly right of way line of aforesaid West Maple Street; Thence along the Northerly right of way line of said West Maple Street the following bearings and distances: S 42°55'49" E, a distance of 43.49 feet; S 74°15'21" E, a distance of 35.89 feet to the Point of Beginning, containing 0.12 Acres more or less.

#7

Part of the SW1/4 of Section 9, Township 16 North, Range 30 West, City of Fayetteville, Washington County, Arkansas, being more particularly described as follows:

Commencing at the SW corner of said Section 9; Thence N 02°53'25" E along the West line of said Section 9, a distance of 1297.88 feet; Thence S 87°06'35" E, a distance of 44.78 feet to the intersection of the Southerly right of way line of Cleveland Street and the Easterly right of way line of Garland Avenue and the Point of Beginning; Thence along the Easterly right of way line of said Garland Avenue the following bearings and distances: S 48°20'03" W, a distance of 27.69 feet; S 02°53'40" W, a distance of 707.66 feet to the Easterly back of curb line of said Garland Avenue; Thence along the Easterly back of curb line of said Garland Avenue the following bearings and distances: Northwesterly along a 19.50 feet radius curve to the right, thru a central angle of 52°26'46", for a distance of 17.85 feet, said curve having a chord bearing of N 23°49'49" W, and distance of 17.23 feet; N 02°23'34" E, a distance of 250.85 feet; Thence leaving the Easterly back of curb line of said Garland Avenue N 02°23'34" E, a distance of 209.31 feet to a point on the Easterly back of curb line of said Garland Avenue; Thence N 02°23'34" E along the Easterly back of curb line of said Garland Avenue, a distance of 229.09 feet to the intersection of the Easterly back of curb line of said Garland Avenue and the Southerly back of curb line of aforesaid Cleveland Street and the beginning of a circular curve to the right; Thence along the Southerly right of way line of said Cleveland Street the following bearings and distances: Northeasterly along a 31.50 feet radius curve to the right, thru a central angle of 91°00'58", for a distance of 50.04 feet, said curve having a chord bearing of N 47°54'03" E, and distance of 44.94 feet; S 86°35'28" E, a distance of 276.96 feet; Thence leaving the Southerly back of curb line of

said Cleveland Street, S 02°53'25" W, a distance of 6.72 feet to a point lying on the Southerly right of way line of said Cleveland Street; Thence N 87°07'28" W along the Southerly right of way line of said Cleveland Street, a distance of 275.22 feet to the Point of Beginning, containing 0.24 Acres more or less.

#8

Part of the NE1/4 NE1/4 of Section 17, Township 16 North, Range 30 West, City of Fayetteville, Washington County, Arkansas, being more particularly described as follows:

Commencing at the NE corner of said Section 17; Thence S 02°41'08" W along the East line of said Section 17, a distance of 44.57 feet to a point lying on the Southerly right of way line of West Maple Street and the Point of Beginning; Thence along the Southerly right of way line of said West Maple Street the following bearings and distances: N 87°56'08" W, a distance of 529.41 feet; S 02°03'52" W, a distance of 10.00 feet; N 87°56'08" W, a distance of 45.09 feet; S 29°02'41" W, a distance of 50.50 feet; S 79°37'29" W, a distance of 17.72 feet to the Easterly back of curb line of Stadium Drive; Thence N 02°37'28" E along the Easterly back of curb line of said Stadium Drive, a distance of 49.69 feet to the beginning of a circular curve to the right at the intersection of the Easterly back of curb line of said Stadium Drive and the Southerly back of curb line of West maple Street; Thence along the Southerly back of curb line of said West Maple Street the following bearings and distances: Northeasterly along a 30.00 feet radius curve to the right, thru a central angle of 89°52'51", for a distance of 47.06 feet, said curve having a chord bearing of N 47°33'53" E, and distance of 42.38 feet; S 87°29'41" E, a distance of 584.19 feet; S 02°41'08" W, a distance of 16.09 feet to the Point of Beginning, containing 0.31 Acres more or less.

#9

Part of the NE1/4 NE1/4 of Section 17, Township 16 North, Range 30 West, City of Fayetteville, Washington County, Arkansas, being more particularly described as follows:

Commencing at the NW of the said NE1/4 NE1/4; Thence S 02°43'18" W along the West line of said NE1/4 NE1/4, a distance of 309.18 feet; Thence S 87°16'42" E, a distance of 23.76 feet to a point lying on the Easterly right of way line of Razorback Road and the Easterly back of curb line of said Razorback Road and the Point of Beginning; Thence N 02°58'57" E along the Easterly back of curb line of said Razorback Road, a distance of 160.23 feet to the beginning of a circular curve to the right at the intersection of the Easterly back of curb line of said Razorback Road and the Southerly back of curb line of West Maple Street; Thence Northeasterly along the Southerly back of curb line of said West Maple Street along a 100.00 feet radius curve to the right, thru a central angle of 89°31'22", for a distance of 156.25 feet, said curve having a chord bearing of N 47°44'38" E, and distance of 140.83 feet; Thence S 87°29'41" E along the Southerly back of curb line of said West Maple Street, a distance of 514.79 feet to the

beginning of a circular curve to the right at the intersection of the Southerly back of curb line of said West Maple Street and the Westerly back of curb line of Stadium Drive; Thence Southeasterly along the Westerly back of curb line of said Stadium Drive along a 30.00 feet radius curve to the right, thru a central angle of 90°07'09", for a distance of 47.19 feet, said curve having a chord bearing of S 42°26'07" E, and distance of 42.47 feet; Thence S 02°37'28" W along the Westerly back of curb line of said Stadium Drive, a distance of 57.35 feet to a point lying on the Southerly right of way line of said West Maple Street; Thence along the Southerly right of way line of said West Maple Street the following bearings and distances: S 79°37'29" W, a distance of 17.02 feet; N 43°37'28" W, a distance of 44.19 feet; N 43°37'28" W, a distance of 22.24 feet; N 54°03'02" W, a distance of 48.45 feet; N 85°43'19" W, a distance of 137.52 feet; N 71°49'55" W, a distance of 7.76 feet; N 86°45'54" W, a distance of 94.00 feet; S 03°14'11" W, a distance of 14.50 feet; N 86°45'49" W, a distance of 26.00 feet; Thence N 03°14'11" E, a distance of 14.50 feet; N 86°45'50" W, a distance of 178.59 feet; S 54°43'02" W, a distance of 69.92 feet; S 36°42'58" W, a distance of 24.53 feet to the intersection of the Southerly right of way line of said West Maple Street and the Easterly right of way line of said Razorback Road; Thence S 02°43'04" W along the Easterly right of way line of said Razorback Road, a distance of 168.40 feet; Thence S 57°28'29" W along the Easterly right of way line of said Razorback Road, a distance of 34.08 feet to the Point of Beginning, containing 0.43 Acres more or less.

#10

Part of the NE1/4 SE1/4 of Section 17, Township 16 North, Range 30 West, City of Fayetteville, Washington County, Arkansas, being more particularly described as follows:

Commencing at the NW corner of the said NE1/4 SE1/4; Thence S 02°43'27" W along the West line of said NE1/4 SE1/4, a distance of 401.69 feet; Thence S 88°04'02" E, a distance of 19.28 feet to a point lying on the Easterly right of way line of Razorback Road and the Point of Beginning; Thence along the Easterly right of way line of said Razorback Road the following bearings and distances: S 88°04'02" E, a distance of 26.98 feet; S 02°34'31" W, a distance of 474.04 feet; S 47°17'49" E, a distance of 35.62 feet; S 07°31'38" W, a distance of 17.21 feet to a point lying on the Northerly back of curb line of Nolan Richardson Drive; Thence N 87°28'31" W along the Northerly back of curb line of said Nolan Richardson Drive, a distance of 17.76 feet to the beginning of a circular curve to the right at the intersection of the Northerly back of curb line of said Nolan Richardson Drive and the Easterly back of curb line of said Razorback Road; Thence along the Easterly back of curb line of said Razorback Road the following bearings and distances: Northwesterly along a 29.00 feet radius curve to the right, thru a central angle of 90°07'05", for a distance of 45.61 feet, said curve having a chord bearing of N 42°24'59" W, and distance of 41.05 feet; N 02°38'34" E, a distance of 84.03 feet; N 02°30'46" E, a distance of 51.67 feet; N 00°20'35" E, a distance of 158.49 feet; N 02°30'46" E, a distance of 132.04 feet; N 02°54'25" E, a distance of 58.72 feet to the Point of Beginning, containing 0.30 Acres more or less.

#11

Part of the NE1/4 SE1/4 and part of the SE1/4 SE1/4 of Section 17, Township 16 North, Range 30 West, City of Fayetteville, Washington County, Arkansas, being more particularly described as follows:

Commencing at the NW corner of the said NE1/4 SE1/4; Thence S 02°43'27" W along the West line of the said NE1/4 SE1/4, a distance of 990.51 feet; Thence S 87°16'33" E, a distance of 41.41 feet to a point lying on the Easterly right of way line of Razorback Road and the Point of Beginning; Thence along the Easterly right of way line of said Razorback Road the following bearings and distances: S 02°37'57" W, a distance of 191.59 feet; S 02°37'57" W, a distance of 503.00 feet; S 32°48'03" E, a distance of 15.96 feet; S 02°37'57" W, a distance of 40.50 feet; N 87°22'03" W, a distance of 8.46 feet; S 02°32'57" W, a distance of 201.50 feet; S 02°46'05" W, a distance of 308.48 feet; S 87°22'03" E, a distance of 9.23 feet; S 04°29'42" E, a distance of 54.63 feet; S 45°45'33" E, a distance of 15.96 feet; S 76°34'38" E, a distance of 36.68 feet; Thence S 88°32'28" W, a distance of 64.27 feet to the Easterly back of curb line of said Razorback Road and the beginning of a circular curve to the right; Thence along the Easterly back of curb line of said Razorback Road the following bearings and distances: Northwesternly along a 40.00 feet radius curve to the right, thru a central angle of 51°46'46", for a distance of 36.15 feet, said curve having a chord bearing of N 23°14'49" W, and distance of 34.93 feet; N 02°38'34" E, a distance of 245.78 feet; N 00°39'11" E, a distance of 172.82 feet; N 02°38'34" E, a distance of 113.63; Thence leaving the Easterly back of curb line of said Razorback Road N 02°38'34" E, a distance of 86.00 feet to the Easterly back of curb line of said Razorback Road; Thence N 02°38'34" E along the Easterly back of curb line of said Razorback Road, a distance of 35.14 feet; Thence leaving the Easterly back of curb line of said Razorback Road N 02°38'34" E, a distance of 157.12 feet to the Easterly back of curb line of said Razorback Road; Thence along the Easterly back of curb line of said Razorback Road the following bearings and distances: N 02°38'34" E, a distance of 215.84; N 04°46'38" E, a distance of 161.08 feet; N 02°38'34" E, a distance of 125.51 feet to the beginning of a circular curve to the right; Northeasterly along a 34.50 feet radius curve to the right, thru a central angle of 89°52'55", for a distance of 54.12 feet, said curve having a chord bearing of N 47°35'01" E, and distance of 48.74 feet; S 87°28'31" E, a distance of 4.65 feet; Thence S 02°31'29" W, a distance of 17.24 feet to a point lying on the Southerly right of way line of Nolan Richardson Drive; Thence S 44°34'24" W along the Southerly right of way line of said Nolan Richardson Drive, a distance of 36.39 feet to the Point of Beginning, containing 0.64 Acres more or less.

#12

Part of the NW1/4 SE1/4 and part of the SW1/4 SE1/4 of Section 17, Township 16 North, Range 30 West, City of Fayetteville, Washington County, Arkansas, being more particularly described as follows:

Commencing at the NE corner of the said NW1/4 SE1/4; Thence S 02°43'27" W, a distance of 954.57 feet; Thence N 87°21'26" W, a distance of 48.50 feet to a point lying on the Westerly right of way line of Razorback Road and the Point of Beginning; Thence along the Westerly right of way line of said Razorback Road the following bearings and distances: S 02°41'40" W, a distance of 885.85 feet; S 42°59'26" W, a distance of 26.15 feet; S 11°00'02" W, a distance of 60.47 feet; S 02°30'15" W, a distance of 30.08 feet; S 87°22'03" E, a distance of 31.00 feet; S 02°37'57" W, a distance of 240.00 feet; S 07°12'24" W, a distance of 75.24 feet; S 00°52'46" E, a distance of 13.61 feet; S 15°10'00" W, a distance of 23.86 feet; S 59°11'49" W, a distance of 60.93 feet; Thence N 88°32'28" E, a distance of 65.11 feet to the Westerly back of curb line of said Razorback Road; Thence along the Westerly back of curb line of said Razorback Road the following bearings and distances: Northeasterly along a 39.50 feet radius curve to the left, thru a central angle of 43°02'25", for a distance of 29.67 feet, said curve having a chord bearing of N 24°09'42" E, and distance of 28.98 feet; N 02°38'34" E, a distance of 256.33 feet; N 04°37'56" E, a distance of 172.82 feet; N 02°38'34" E, a distance of 607.73 feet; N 00°30'29" E, a distance of 161.08 feet; N 02°38'34" E, a distance of 126.25 feet; Northwesterly along a 33.50 feet radius curve to the left, thru a central angle of 49°41'15", for a distance of 29.05 feet, said curve having a chord bearing of N 22°12'04" W, and distance of 28.15 feet; Thence N 87°28'31" W, a distance of 7.18 feet to the Point of Beginning, containing 0.76 Acres more or less.

#13

Part of the NW1/4 SE1/4 of Section 17, Township 16 North, Range 30 West, City of Fayetteville, Washington County, Arkansas, being more particularly described as follows:

Commencing at the NE corner of the said NW1/4 NE1/4; Thence S 02°43'27" W along the East line of the said NW1/4 NE1/4, a distance of 43.47 feet; Thence N 87°16'33" W, a distance of 30.92 feet to a point lying on the Westerly right of way line of Razorback Road and the Point of Beginning; Thence along the Westerly right of way line of said Razorback Road the following bearings and distances: S 02°05'15" W, a distance of 192.55 feet; S 02°56'28" W, a distance of 171.14 feet; S 02°56'28" W, a distance of 52.91 feet; N 87°22'08" W, a distance of 17.55 feet; S 02°37'57" W, a distance of 70.15 feet; Thence S 16°40'05" W, a distance of 28.86 feet; S 02°37'57" W, a distance of 82.00 feet; S 30°42'28" W, a distance of 17.53 feet; S 03°25'24" W, a distance of 50.00 feet; S 45°00'08" E, a distance of 21.57 feet; S 03°06'51" W, a distance of 163.01 feet; S 09°06'16" W, a distance of 24.47 feet; Thence S 87°28'31" E, a distance of 8.84 feet to the Westerly back of curb line of said Razorback Road and the beginning of a circular curve to the left; Thence along the Westerly back of curb line of said Razorback Road the following bearings and distances: Northeasterly along a 29.50 feet radius curve to the left, thru a central angle of 46°40'08", for a distance of 24.03 feet, said curve having a chord bearing of N 25°58'38" E, and distance of 23.37 feet; N 02°38'34" E, a distance of 83.71 feet; N 02°30'46" E, a distance of 51.61 feet; N 04°40'57" E, a distance of 158.48 feet; N 02°30'46" E, a distance of 132.20 feet; N 02°54'25" E, a distance of 380.29 feet; N 00°22'40" W, a distance of 25.69 feet to a circular curve to the left; Northwesterly along a 27.50 feet radius curve to the left, thru a central angle of

23°19'03", for a distance of 11.19 feet, said curve having a chord bearing of N 12°02'11" W, and distance of 11.11 feet to the Point of Beginning, containing 0.23 Acres more or less.

#14

Part of the SW/4 NE1/4 of Section 17, Township 16 North, Range 30 West, City of Fayetteville, Washington County, Arkansas, being more particularly described as follows:

Commencing at the NE corner of the said SW1/4 NE1/4; Thence S 02°35'17" W along the East line of the said SW1/4 NE1/4, a distance of 545.93 feet; Thence N 86°40'08" W, a distance of 42.18 feet to the Westerly right of way line of Razorback Road and the Point of Beginning; Thence along the Westerly right of way line of said Razorback Road the following bearings and distances: S 02°52'01" W, a distance of 302.22 feet; S 86°38'50" E, a distance of 3.21 feet; S 02°32'00" W, a distance of 179.59 feet to a point on the Westerly back of curb line of said Razorback Road and the beginning of a circular curve to the left; Thence along the Westerly back of curb line of said Razorback Road the following bearings and distances: Northeasterly along a 30.00 feet radius curve to the left, thru a central angle of 27°36'29", for a distance of 14.46 feet, said curve having a chord bearing of N 16°31'19" E, and distance of 14.32 feet; N 02°43'04" E, a distance of 9.68 feet; Thence leaving said Westerly back of curb line of said Razorback Road and along the proposed Westerly back of curb line of said Razorback Road the following bearings and distances: N 02°43'04" E, a distance of 85.06 feet; N 04°37'24" E, a distance of 214.63 feet; N 03°01'17" E, a distance of 140.19 feet to the beginning of a circular curve to the left on the Westerly back of curb line of said Razorback Road; Thence Northwesterly along the Westerly back of curb line of said Razorback Road along a 29.50 feet radius curve to the left, thru a central angle of 38°31'42", for a distance of 19.84 feet, said curve having a chord bearing of N 16°14'34" W, and distance of 19.47 feet; Thence N 86°40'08" W, a distance of 7.97 feet to the Point of Beginning, containing 0.11 Acres more or less.

#15

Part of the SW/4 NE1/4 of Section 17, Township 16 North, Range 30 West, City of Fayetteville, Washington County, Arkansas, being more particularly described as follows:

Commencing at the NE corner of the said SW1/4 NE1/4; Thence S 02°35'17" W along the West line of the said SW1/4 NE1/4, a distance of 31.42 feet; Thence N 87°24'43" W, a distance of 35.00 feet to a point lying on the Westerly right of way line of Razorback Road and the Point of Beginning; Thence S 03°03'28" W along the Westerly right of way line of said Razorback Road, a distance of 469.02 feet; Thence S 86°40'08" E, a distance of 18.37 feet to the Westerly back of curb line of said Razorback Road and the beginning of a circular curve to the left; Thence along the Westerly back of curb line of said Razorback Road the following bearings and distances: Northeasterly along a 23.50 feet radius curve to the left, thru a central angle of 34°00'59", for a distance of 13.95

feet, said curve having a chord bearing of N 19°54'33" E, and distance of 13.75 feet; N 02°54'03" E, a distance of 417.63 feet; Thence N 02°40'22" E, a distance of 6.09 feet to the beginning of a circular curve to the left; Northwesternly along a 35.50 feet radius curve to the left, thru a central angle of 65°48'22", for a distance of 40.77 feet, said curve having a chord bearing of N 30°13'49" W, and distance of 38.57 feet to the Point of Beginning, containing 0.23 Acres more or less.

#16

Part of the NW/4 NE1/4 of Section 17, Township 16 North, Range 30 West, City of Fayetteville, Washington County, Arkansas, being more particularly described as follows:

Commencing at the NE corner of the said NW1/4 NE1/4; Thence S 02°43'18" W along the West line of the said NW1/4 NE1/4, a distance of 35.57 feet; Thence N 87°15'25" W, a distance of 98.42 feet to a point lying on the Westerly right of way line of Razorback Road and the Point of Beginning; Thence along the Westerly right of way line of Razorback Road the following bearings and distances: S 02°43'04" W, a distance of 16.99 feet; S 87°16'56" E, a distance of 23.00 feet; S 48°06'31" E, a distance of 34.83 feet; S 02°59'34" E, a distance of 40.20 feet; S 02°43'04" W, a distance of 83.09 feet; S 32°43'04" W, a distance of 22.48 feet; S 55°46'02" E, a distance of 8.49 feet; S 02°43'04" W, a distance of 58.00 feet; N 87°16'56" W, a distance of 15.00 feet; S 02°43'04" W, a distance of 20.00 feet; S 22°17'57" E, a distance of 33.11 feet; S 08°25'42" W, a distance of 60.30 feet; S 02°43'04" W, a distance of 164.00 feet; S 62°53'17" W, a distance of 23.05 feet; S 02°43'04" W, a distance of 26.97 feet; N 87°16'56" W, a distance of 49.00 feet; S 02°43'04" W, a distance of 20.56 feet; S 87°16'56" E, a distance of 64.00 feet; S 02°43'04" W, a distance of 52.51 feet; S 87°08'22" E, a distance of 26.12 feet; S 02°46'31" W, a distance of 668.51 feet; Thence S 87°12'53" E, a distance of 3.08 feet to the Westerly back of curb line of Razorback Road and the beginning of a circular curve to the left; Thence along the Westerly back of curb line of said Razorback Road the following bearings and distances: Northeasterly along a 32.50 feet radius curve to the left, thru a central angle of 63°06'05", for a distance of 35.79 feet, said curve having a chord bearing of N 34°13'24" E, and distance of 34.01 feet; N 02°40'22" E, a distance of 507.98 feet; N 02°58'57" E, a distance of 647.83 feet; N 02°58'57" E, a distance of 88.90 feet to the beginning of a circular curve to the left; Northwesternly along a 30.00 feet radius curve to the left, thru a central angle of 90°09'00", for a distance of 47.20 feet, said curve having a chord bearing of N 42°05'33" W, and distance of 42.48 feet; N 87°10'03" W, a distance of 57.37 feet; Thence S 02°43'04" W, a distance of 5.88 feet to the Point of Beginning, containing 0.97 Acres more or less.

#17

Part of the NW/4 NE1/4 of Section 17 and part of the SW1/4 SE1/4 of Section 8, all in Township 16 North, Range 30 West, City of Fayetteville, Washington County, Arkansas, being more particularly described as follows:

Beginning at a point that lies N 80°19'52" W, a distance of 83.78 feet from the SE corner of the SW1/4 SE1/4 of said Section, said point lying on the Northerly right of way line of West Maple Street and the Point of Beginning; Thence N 63°02'21" E along the Northerly right of way line of said West Maple Street, a distance of 57.24 feet; Thence S 87°16'56" E along the Northerly right of way line of said West Maple Street, a distance of 17.73 feet to the Westerly back of curb line of Razorback Road; Thence S 02°48'54" W along the Westerly back of curb line of said Razorback Road, a distance of 13.28 feet to the beginning of a circular curve to the right; Thence Southwesterly along the Northerly back of curb line of said West Maple Street along a 30.00 feet radius curve to the right, thru a central angle of 90°01'03", for a distance of 47.13 feet, said curve having a chord bearing of S 47°49'25" W, and distance of 42.43 feet; Thence N 87°10'03" W along the Northerly right of way line of said West Maple Street, a distance of 37.41 feet; Thence N 02°49'57" E, a distance of 14.81 feet to the Point of Beginning, containing 0.05 Acres more or less.

#18

Part of the SE1/4 SE1/4 of Section 8, Township 16 North, Range 30 West, City of Fayetteville, Washington County, Arkansas, being more particularly described as follows:

Commencing at the SW corner of said SE1/4 SE1/4; Thence N 29°38'05" E, a distance of 51.01 feet to a point lying on the Easterly right of way line of Razorback Road and the Point of Beginning; Thence N 02°19'02" E along the Easterly right of way of said Razorback Road, a distance of 1214.34 feet to the intersection of the Easterly right of way of said Razorback Road and the Southerly right of way line of Cleveland Street; Thence N 87°09'15" W along the Southerly right of way line of said Cleveland Street, a distance of 5.66 feet to the Easterly proposed back of curb line of Razorback Road; Thence along the Easterly proposed back of curb line of said Razorback Road the following bearings and distances: Southwesterly along a 29.53 feet radius curve to the left, thru a central angle of 31°36'29", for a distance of 16.29 feet, said curve having a chord bearing of S 19°23'53" W, and distance of 16.08 feet; S 02°52'26" W, a distance of 171.46 feet; S 05°36'04" E, a distance of 51.06 feet to the Easterly back of curb line of said Razorback Road; Thence along the Easterly back of curb line of said Razorback Road the following bearings and distances: S 02°23'22" W, a distance of 497.62 feet; S 02°37'37" W, a distance of 479.33 feet; Thence S 87°16'56" E, a distance of 8.23 feet to the Point of Beginning, containing 0.19 Acres more or less.

ROW Dedication Description

Part of the NE1/4 NE1/4 and part of the SE1/4 NE1/4, and part of the SW1/4 NE1/4 and part of the NE1/4 SE1/4 of Section 17, Township 16 North, Range 30 West, City of Fayetteville, Washington County, Arkansas, being more particularly described as follows:

Commencing at the NW of the said NE1/4 NE1/4; Thence S 02°43'18" W along the West line of said NE1/4 NE1/4, a distance of 309.18 feet; Thence S 87°16'42" E, a distance of 23.76 feet to a point lying on the Easterly right of way line of Razorback Road and the Easterly back of curb line of said Razorback Road and the Point of Beginning; Thence along the Easterly back of curb line of said Razorback Road the following bearings and distances: S 02°58'57" W, a distance of 487.50 feet; S 02°40'22" W, a distance of 608.01 feet; S 02°54'03" W, a distance of 436.29 feet; S 03°01'17" W, a distance of 198.13 feet; S 01°25'06" W, a distance of 214.48 feet; S 02°43'04" W, a distance of 95.61; Thence Southeasterly along the Northerly back of curb line of Meadow Street along a 30.00 feet radius curve to the left, thru a central angle of 89°30'25", for a distance of 46.87 feet, said curve having a chord bearing of S 42°02'08" E, and distance of 42.24 feet; Thence S 01°46'07" W, a distance of 31.18 feet to the Southerly back of curb line of said Meadow Street and the beginning of a circular curb to the left; Thence along the Easterly back of curb line of said Razorback Road the following bearings and distances: Southwesterly along a 30.00 feet radius curve to the left, thru a central angle of 90°29'35", for a distance of 47.38 feet, said curve having a chord bearing of S 47°57'52" W, and distance of 42.61 feet; S 02°43'04" W, a distance of 88.40 feet; S 03°03'35" W, a distance of 200.01 feet; S 02°54'25" W, a distance of 322.05 feet; Thence N 88°04'02" W, a distance of 17.94 feet; Thence N 02°32'00" E, a distance of 401.68 feet to the SW corner of the aforesaid SE1/4 NE1/4; Thence N 02°35'17" E along the West line of the said SE1/4 NE1/4, a distance of 124.57 feet; Thence N 86°38'48" W, a distance of 37.23 feet to the Westerly back of curb line of said Razorback Road; Thence N 02°43'04" E along the Westerly back of curb line of said Razorback Road, a distance of 85.06 feet; Thence Northwesterly along the Westerly back of curb line of said Razorback Road along a 30.00 feet radius curve to the left, thru a central angle of 26°45'00", for a distance of 14.01 feet, said curve having a chord bearing of N 10°39'26" W, and distance of 13.88 feet; Thence N 02°32'00" E, a distance of 34.66 feet; Thence S 86°40'45" E, a distance of 40.25 feet to the West line of the said SE1/4 NE1/4; Thence N 02°35'17" E along the West line of the said SE1/4 NE1/4, a distance of 1056.85 feet to the SW corner of the NE1/4 NE1/4; Thence N 02°43'18" E along the West line of the said NE1/4 NE1/4, a distance of 769.53 feet; Thence S 87°08'22" E, a distance of 5.84 feet; Thence N 02°46'31" E, a distance of 243.50 feet to a point lying on the Easterly right of way line of said Razorback Road; Thence N 57°28'29" E along the Easterly right of way line of said Razorback Road, a distance of 21.67 feet to the Point of Beginning, containing 1.43 Acres more or less.

**Written request and narrative to accompany Right-of-Way Vacation
University of Arkansas, City of Fayetteville, Arkansas.**

To: The Fayetteville City Planning Commission and
The Fayetteville City Council

On behalf of the landowners, I am petitioning the Fayetteville City Planning Commission and the Fayetteville City Council to vacate/reduce portions of ROW in the areas described below:

Razorback Rd: Vacating ROW west of the west back of curb and east of the east back of curb from MLKJr Blvd to Maple St (and including the bus pull off area on the east side just north of Mitchell St); and east of the east back of curb from Maple St to Cleveland St. Excluding any vacation of the existing ROW along the west side of Razorback Rd, north of Center Street adjacent to the Islamic Center of Northwest Arkansas property.

Maple St: Vacating ROW north of the north back of curb and south of the south back of curb, from Razorback Rd to Garland Ave

Garland Ave: Vacating ROW west of the west back of curb and east of the east back of curb, from Maple St to Cleveland St (and including the bus pull off area on the east side between Douglas St and Cleveland St)

Cleveland St: Vacating ROW south of the south back of curb, from Razorback Rd to Lindell Ave

Hill Ave: Vacating ROW east of the east back of curb, south of MLKJr Blvd to the alley along the north side of the National Cemetery property

Lt Col Leroy Pond: Vacating ROW west of the proposed back of curb, south of MLKJr Blvd to the Railroad ROW containing the City trail

MLKJr Blvd: Vacating the 10' strip of ROW along the south side of MLKJr Blvd in the center of the block between Hill Ave and Lt Col Leroy Pond

The University of Arkansas is the only abutting land owner to the rights of way sought to be vacated/reduced. By granting this vacation request, the current owners would benefit, and no other landowner would be adversely affected.

Pedestrian Access Easements will be dedicated to the City to the back of sidewalks along the streets.

Where storm drainage systems, water mains, and sewer mains exist within the proposed vacated areas: drainage, water, and sewer easements will be dedicated to the City. Other utilities located within the proposed vacated areas will receive written easements for their continued use, maintenance, & repair/replacement.

The public interest and welfare would not be adversely affected by granting this vacation request.

The vacation/reduction of the rights of way described above would benefit the City of Fayetteville by removing the senior sidewalks, sidewalks, side paths, lights, trees, signs, drive aprons, etc from required city maintenance and repair/replacement, thus saving the taxpayers and allowing money allocated for this purpose to be used where needed elsewhere. Those obligations would be conveyed unto the University of Arkansas.

Included in the Petition Packet is:

- 1 Application and Payment of applicable fees for processing the application \$205.00.
- 2 Legal description of areas to be vacated
- 3 Exhibit Maps
- 4 This Letter
- 5 Owner's consent
- 6 Authorization Letter
- 7 County Parcel Map Copies
- 8 Petition to Vacate ROW
- 9 Utility Company Comments


Allen Jay Young, Development Consultants, Inc.

PETITION TO VACATE/REDUCE STREET RIGHTS OF WAY LOCATED IN SECTIONS 8, 9, 16, 17 & 21, T16N, R30W, IN THE CITY OF FAYETTEVILLE, ARKANSAS

TO: The Fayetteville City Planning Commission and
The Fayetteville City Council

We, the undersigned, being all the owners of the real estate abutting the street rights of way hereinafter sought to be abandoned/vacated/reduced, lying in sections 8, 9, 16, 17 & 21, T16N, R30W, in the City of Fayetteville, Arkansas, a municipal corporation, petition to vacate the street rights-of-way which are described as follows:

Razorback Rd: Vacating ROW west of the west back of curb and east of the east back of curb from MLKJr Blvd to Maple St (and including the bus pull off area on the east side just north of Mitchell St); and east of the east back of curb from Maple St to Cleveland St. Excluding any vacation of the existing ROW along the west side of Razorback Rd, north of Center Street adjacent to the Islamic Center of Northwest Arkansas property.

Maple St: Vacating ROW north of the north back of curb and south of the south back of curb, from Razorback Rd to Garland Ave

Garland Ave: Vacating ROW west of the west back of curb and east of the east back of curb, from Maple St to Cleveland St (and including the bus pull off area on the east side between Douglas St and Cleveland St)

Cleveland St: Vacating ROW south of the south back of curb, from Razorback Rd to Lindell Ave

Hill Ave: Vacating ROW east of the east back of curb, south of MLKJr Blvd to the alley along the north side of the National Cemetery property

Lt Col Leroy Pond: Vacating ROW west of the proposed back of curb, south of MLKJr Blvd to the Railroad ROW containing the City trail

MLKJr Blvd: Vacating the 10' strip of ROW along the south side of MLKJr Blvd in the center of the block between Hill Ave and Lt Col Leroy Pond

That the abutting real estate affected by said abandonment/vacation/reduction of the street rights of way are various tracts of land owned by the University of Arkansas in the City of Fayetteville, the rights of way are only being abandoned to the extents noted in the description above thus reducing the street rights of way and not eliminating them, that the affected streets will continue to have unaffected vehicular traffic, and that the public interest and welfare would not be adversely affected by the abandonment/vacation/reduction of portions of the above described street rights of way.

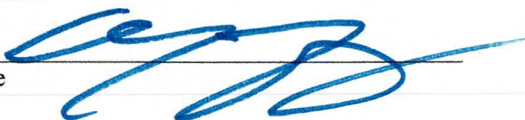
The petitioners pray that the City of Fayetteville, Arkansas, abandon and vacate the above described real estate, subject, however, to the existing storm drainage easements, water easements and sewer easements as required, and that the above described real estate be used for their respective benefit and purpose as now approved by law.

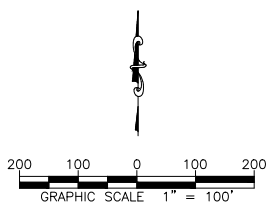
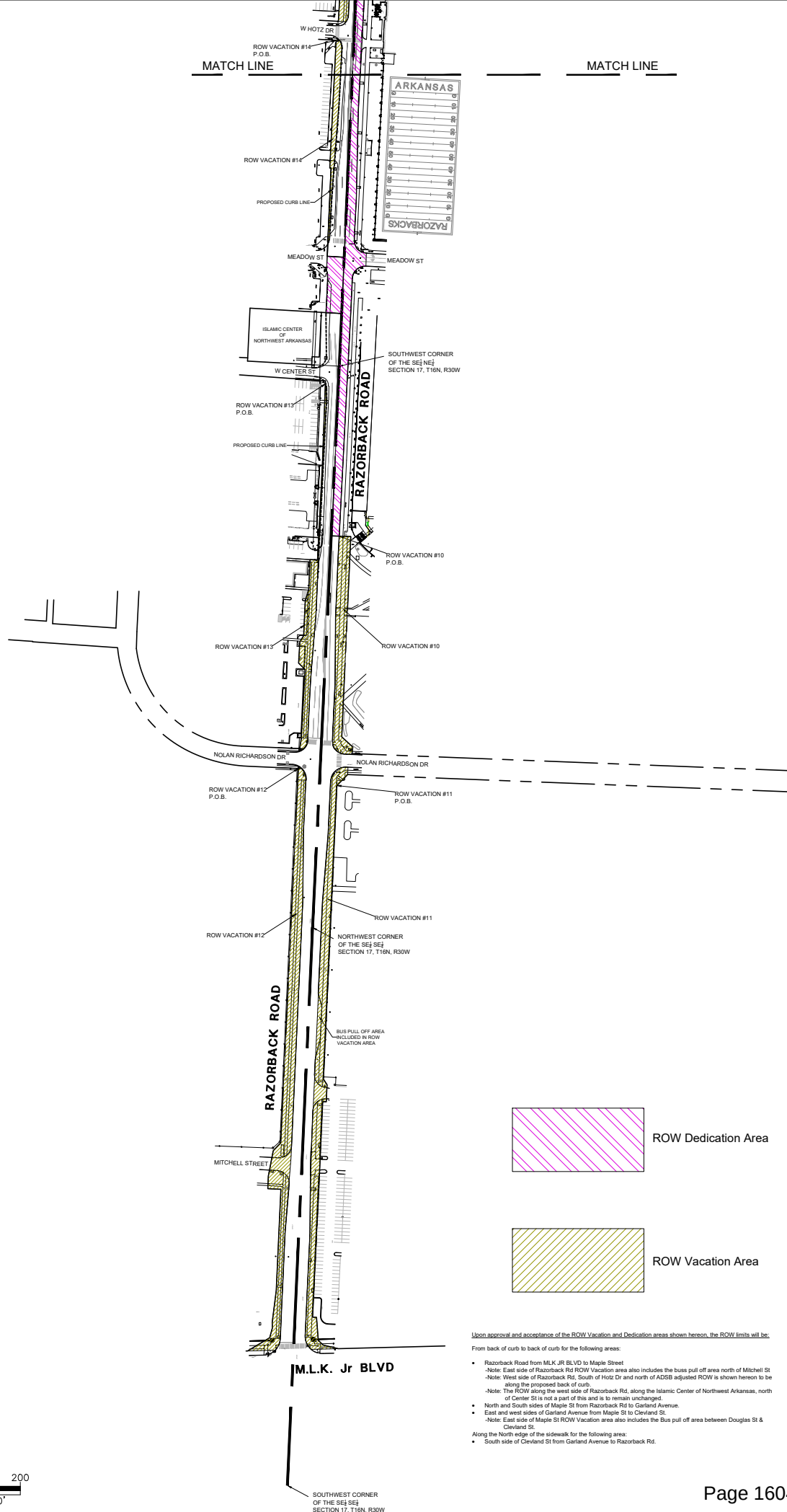
The petitioners further pray that the above described real estate be vested in the abutting property owners as provided by law.

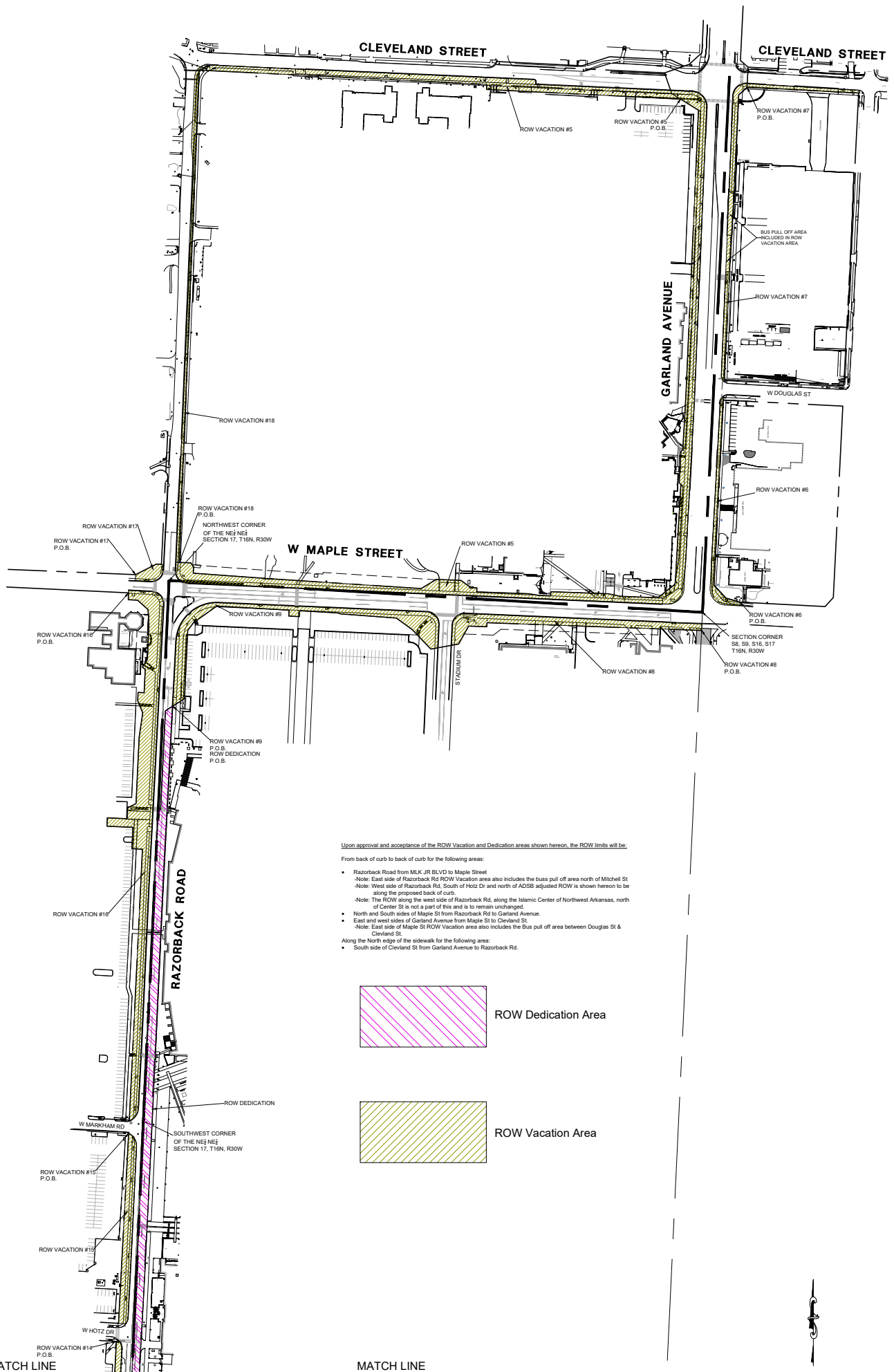
WHEREFORE, the undersigned petitioners respectfully pray that the governing body of the City of Fayetteville, Arkansas, abandon and vacate the above described real estate, subject to said storm drainage easements, water easements and sewer easements, and that title to said real estate sought to be abandoned be vested in the abutting property owners as provided by law, and as to that particular land the owners be free from the easements of the public for the use of said right of way.

Dated this 1 day of November, 2022.

Allen Jay Young
Printed Name


Signature





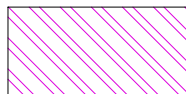
Upon approval and acceptance of the ROW Vacation and Dedication areas shown herein, the ROW limits will be:

From back of curb to back of curb for the following areas:

- Razorback Road from MLK JR BLVD to Maple Street
 -Note: East side of Razorback Rd ROW Vacation area also includes the bus pull off area north of Mitchell St
 -Note: West side of Razorback Rd, South of Hotz Dr and north of ADDB adjusted ROW is shown herein to be along the proposed back of curb.
 -Note: The ROW along the west side of Razorback Rd, along the Islamic Center of Northwest Arkansas, north of Center St is not a part of this and is to remain unchanged.
- North and South sides of Maple St from Razorback Rd to Garland Avenue.
- East and west sides of Garland Avenue from Maple St to Cleveland St.
 -Note: East side of Maple St ROW Vacation area also includes the Bus pull off area between Douglas St & Cleveland St.

Along the North edge of the sidewalk for the following area:

- South side of Cleveland St from Garland Avenue to Razorback Rd.



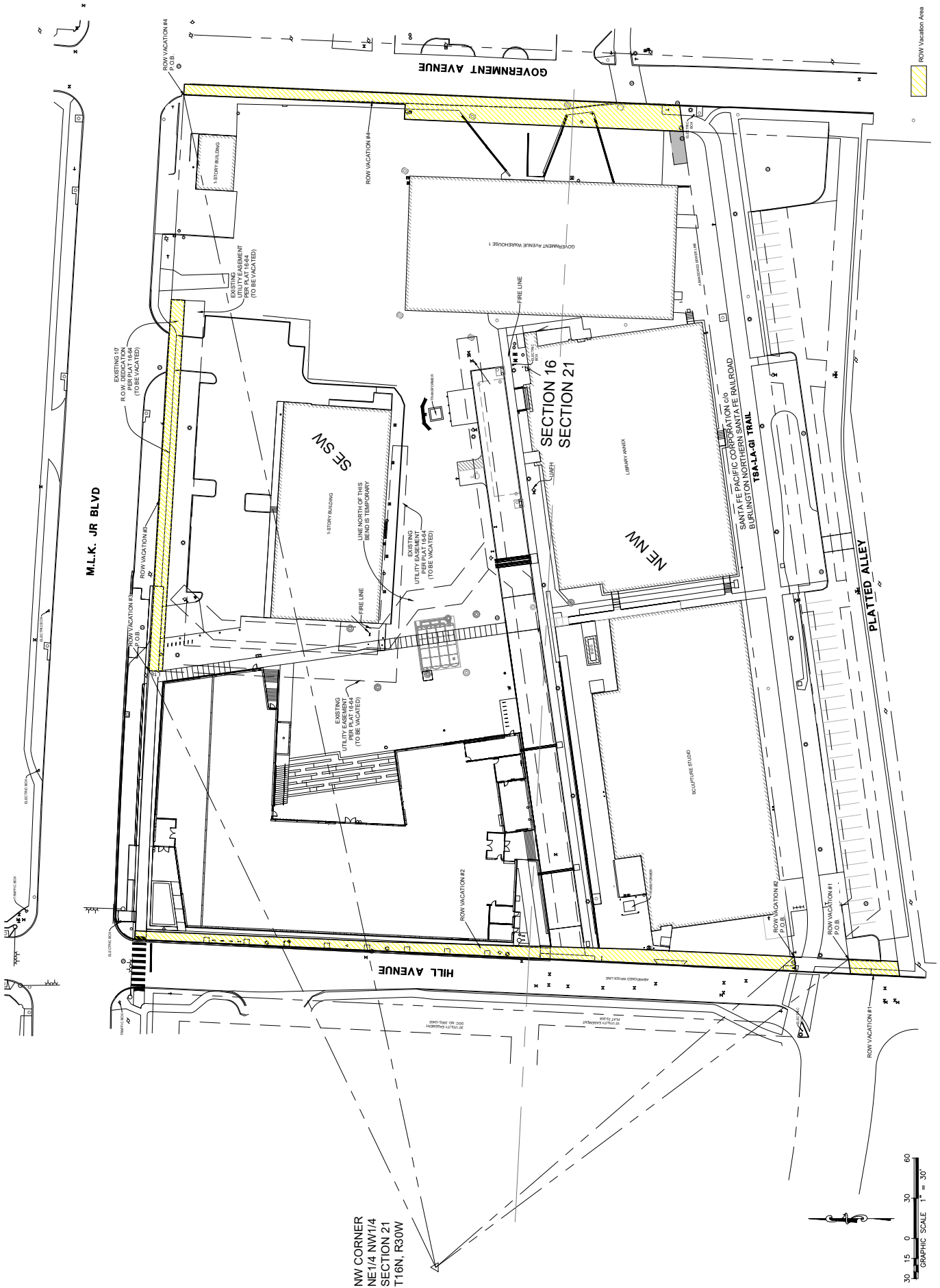
ROW Dedication Area



ROW Vacation Area

MATCH LINE

MATCH LINE



NW CORNER
NE 1/4 NW 1/4
SECTION 21
T16N, R30W



TO: Fayetteville Planning Commission

FROM: Jessie Masters, Development Review Manager

MEETING DATE: December 12, 2022

SUBJECT: **VAC-2022-0024: Vacation (RAZORBACK RD., MLK BLVD., MAPLE ST., GARLAND AVE., CLEVELAND ST., HILL AVE., & LT. COL. LEROY POND AVE./UA-ARTS ROW VACATION, 482/521/522):** Submitted by DCI for portions of right-of-way located along Razorback Rd./Maple St./Garland Ave/Cleveland St./Hill Ave./MLK Blvd./Lt. Col. Leroy Pond Ave. The rights-of-way are within or adjacent to property belonging to the University of Arkansas. The request is to vacate portions of existing street rights of way totaling approximately 6.54 acres.

RECOMMENDATION:

Staff recommends forwarding **VAC-2022-0024** to City Council with a recommendation of approval, with conditions.

RECOMMENDED MOTION:

"I move to forward **VAC-2022-0024** with a recommendation of approval, with conditions as recommended by staff."

BACKGROUND:

The subject property includes 6.54 acres of right-of-way spread along portions of seven public streets adjacent to University of Arkansas Property (see attached survey). Most prominently, the right-of-way includes:

- **Arts District:** Three separate areas of right-of-way behind street curbs on the north, west, and east borders of the new Arts District, along W. Martin Luther King Jr. Boulevard, S. Hill Avenue, and S. LT. Col. Leroy Pond Avenue.
- **Former Highway 112:** Multiple areas of right-of-way behind the curb along both the east and west sides of Razorback Road, north and south sides of W. Maple Street, and east and west sides of Garland Avenue.
- **Cleveland Street:** Two areas of right-of-way along the south side of W. Cleveland Street, between N. Lindell Avenue to the east and N. Razorback Road to the west.

Given the large number of properties associated with the right-of-way, adjacent zoning district information is not provided. All properties adjacent to the request are owned by the University of Arkansas with uses varying from parking and athletic facilities to housing and classrooms. A similar proposal was heard by the Planning Commission in late 2021, but was tabled indefinitely at the applicant's request to allow time to coordinate with the City Attorney's office. The applicant is bringing back a new request, with an additional portion of right-of-way for consideration.

Proposal: The applicant proposes to vacate 18 separate pieces of public right of way totaling 6.54 acres along seven streets. In turn, a dedication of right-of-way totaling 1.43 acres is proposed along Razorback Road and between W. Nolan Richardson Drive to the south and W. Maple Street to the north. With this request, the applicant noted in their letter that existing utilities will be protected through easement dedication. Additionally, the applicant asserts that vacating the right-of-way will remove current and future sections of Senior Walk, landscaping, lights, and trees from the City's responsibility.

DISCUSSION:

For several years, the University of Arkansas expressed interest to City staff in achieving greater flexibility to program their property frontages along public streets. This is with the intent of using the land outside of the street and behind the curb for additional landscaping, alternative paving options, extended areas of Senior Walk, or other opportunities. While this was originally proposed as an agreement, the University ultimately submitted a request to vacate the subject right-of-way. Staff finds that if existing utilities and access are adequately protected, the proposal can promote the University's interests and remove areas from City maintenance. None of the 18 portions of right-of-way proposed for vacation encroach on driving lanes and all adjoin University property.

Vacation Approval: The applicant has submitted the required vacation forms to the relevant City departments and franchise utility companies with the following responses in 2021; the applicant re-affirmed and made some modifications to the utility providers' conditions with this request in 2022. As the petitioner and sole landowner adjacent to the subject right-of-way, adjacent property owner consent is not an applicable standard.

<u>Utility</u>	<u>Response</u>
Cox Communications	No objections, provided any damage or relocation of existing Cox facilities will be at the expense of the applicant.
AEP/SWEPCO	No objections, provided easement be dedicated for existing facilities associated with this right-of-way vacation request.
Black Hills Energy AR	No objections, provided that easements along existing lines shall be drafted for Black Hills Energy review, then recorded (retaining same recording position as currently exists, if any).
AT&T	No objections, provided dedicated easements are recorded by client properly identifying ATT utilities in the field by means of surveying, pot holing, and coordinating with ATT representatives. A 10-foot utility easement at ATT existing utility locations a dedicated corridor for backbone placements. Further, ATT requests that any relocation/movement of ATT facilities will be at the cost of the petitioner, and that a permanent TELCO utility easement will be provided to cover all existing ATT facilities along the described route.
Ozarks Electric	No objections and no comment.
<u>City of Fayetteville</u>	<u>Response</u>
Water/Sewer	No objections, provided easements are dedicated as needed for existing water and sewer lines.

Solid Waste & Recycling

No objections and no comment.

Transportation

No objections, provided adequate accommodation is provided for pedestrian access, whether through easement or agreement. Transportation will also require the dedication of Right of Way to the back of curb in any areas where right of way does not currently exist and the dedication of a pedestrian access easement to the existing back of sidewalk or master street plan right of way in areas where sidewalk does not currently exist. Signal poles and appurtenances need to remain in the right of way, or an easement be dedicated over the areas where poles and appurtenances are located. Drainage easements are needed in areas of existing drainage facilities. An agreement will need to be developed establishing responsibility (or lack thereof) for repairs to non-typical features behind the curb due to maintenance, installation, and repair of any city facilities located within vacated rights of way, including drainage facilities and water/sewer lines.

Public Comment: Staff has received inquiries about the request, but no statements of support or opposition. Given the scope of the request, staff required posting of ten public notification signs.

RECOMMENDATION: Staff recommends forwarding **VAC-2022-0024** to City Council with a recommendation of approval, with the following conditions:

Conditions of Approval:

1. Easements shall be dedicated for any existing facilities associated with this right-of-way vacation request, with review and coordination by the applicant with the utility provider, including the client properly identifying utilities in the field by means of surveying, pot holing, and coordinating with representatives.
2. Adequate accommodation for pedestrian access must be maintained whether through easement or agreement.
3. The applicant must dedicate right-of-way to the back of curb in any areas where right of way does not currently exist
4. The applicant must dedicate a pedestrian access easement to the existing back of sidewalk or master street plan right of way in areas where sidewalk does not currently exist.
5. Signal poles and appurtenances must remain in the right-of-way, or an easement be dedicated over the areas where poles and appurtenances are located.
6. Drainage easements must be dedicated in areas of existing drainage facilities.
7. An agreement will need to be developed establishing responsibility (or lack thereof) for repairs to non-typical features behind the curb due to maintenance, installation, and repair of any city facilities located within vacated rights of way, including drainage facilities and water/sewer lines. The City will not be responsible for maintenance or repair of anything except a standard sidewalk.
8. Any damage or relocation of existing facilities will be at the property owner/developer's expense.
9. All easements and agreements required as a condition of this vacation shall be reviewed by the City and signed by the Mayor.

PLANNING COMMISSION ACTION: Required YES

Date: December 12, 2022

☐ Tabled

☐ Forwarded

☐ Denied

Motion:

Second:

Vote:

BUDGET/STAFF IMPACT:

None

Attachments:

- Applicant Request Letter
- Applicant Petition to Vacate
- Site Exhibit – ROW to be vacated
- Overall Map

**Written request and narrative to accompany Right-of-Way Vacation
University of Arkansas, City of Fayetteville, Arkansas.**

To: The Fayetteville City Planning Commission and
The Fayetteville City Council

On behalf of the landowners, I am petitioning the Fayetteville City Planning Commission and the Fayetteville City Council to vacate/reduce portions of ROW in the areas described below:

Razorback Rd: Vacating ROW west of the west back of curb and east of the east back of curb from MLKJr Blvd to Maple St (and including the bus pull off area on the east side just north of Mitchell St); and east of the east back of curb from Maple St to Cleveland St. Excluding any vacation of the existing ROW along the west side of Razorback Rd, north of Center Street adjacent to the Islamic Center of Northwest Arkansas property.

Maple St: Vacating ROW north of the north back of curb and south of the south back of curb, from Razorback Rd to Garland Ave

Garland Ave: Vacating ROW west of the west back of curb and east of the east back of curb, from Maple St to Cleveland St (and including the bus pull off area on the east side between Douglas St and Cleveland St)

Cleveland St: Vacating ROW south of the south back of curb, from Razorback Rd to Lindell Ave

Hill Ave: Vacating ROW east of the east back of curb, south of MLKJr Blvd to the alley along the north side of the National Cemetery property

Lt Col Leroy Pond: Vacating ROW west of the proposed back of curb, south of MLKJr Blvd to the Railroad ROW containing the City trail

MLKJr Blvd: Vacating the 10' strip of ROW along the south side of MLKJr Blvd in the center of the block between Hill Ave and Lt Col Leroy Pond

The University of Arkansas is the only abutting land owner to the rights of way sought to be vacated/reduced. By granting this vacation request, the current owners would benefit, and no other landowner would be adversely affected.

Pedestrian Access Easements will be dedicated to the City to the back of sidewalks along the streets.

Where storm drainage systems, water mains, and sewer mains exist within the proposed vacated areas: drainage, water, and sewer easements will be dedicated to the City. Other utilities located within the proposed vacated areas will receive written easements for their continued use, maintenance, & repair/replacement.

The public interest and welfare would not be adversely affected by granting this vacation request.

The vacation/reduction of the rights of way described above would benefit the City of Fayetteville by removing the senior sidewalks, sidewalks, side paths, lights, trees, signs, drive aprons, etc from required city maintenance and repair/replacement, thus saving the taxpayers and allowing money allocated for this purpose to be used where needed elsewhere. Those obligations would be conveyed unto the University of Arkansas.

Included in the Petition Packet is:

- 1 Application and Payment of applicable fees for processing the application \$205.00.
- 2 Legal description of areas to be vacated
- 3 Exhibit Maps
- 4 This Letter
- 5 Owner's consent
- 6 Authorization Letter
- 7 County Parcel Map Copies
- 8 Petition to Vacate ROW
- 9 Utility Company Comments


Allen Jay Young, Development Consultants, Inc.

PETITION TO VACATE/REDUCE STREET RIGHTS OF WAY LOCATED IN SECTIONS 8, 9, 16, 17 & 21, T16N, R30W, IN THE CITY OF FAYETTEVILLE, ARKANSAS

TO: The Fayetteville City Planning Commission and
The Fayetteville City Council

We, the undersigned, being all the owners of the real estate abutting the street rights of way hereinafter sought to be abandoned/vacated/reduced, lying in sections 8, 9, 16, 17 & 21, T16N, R30W, in the City of Fayetteville, Arkansas, a municipal corporation, petition to vacate the street rights-of-way which are described as follows:

Razorback Rd: Vacating ROW west of the west back of curb and east of the east back of curb from MLKJr Blvd to Maple St (and including the bus pull off area on the east side just north of Mitchell St); and east of the east back of curb from Maple St to Cleveland St. Excluding any vacation of the existing ROW along the west side of Razorback Rd, north of Center Street adjacent to the Islamic Center of Northwest Arkansas property.

Maple St: Vacating ROW north of the north back of curb and south of the south back of curb, from Razorback Rd to Garland Ave

Garland Ave: Vacating ROW west of the west back of curb and east of the east back of curb, from Maple St to Cleveland St (and including the bus pull off area on the east side between Douglas St and Cleveland St)

Cleveland St: Vacating ROW south of the south back of curb, from Razorback Rd to Lindell Ave

Hill Ave: Vacating ROW east of the east back of curb, south of MLKJr Blvd to the alley along the north side of the National Cemetery property

Lt Col Leroy Pond: Vacating ROW west of the proposed back of curb, south of MLKJr Blvd to the Railroad ROW containing the City trail

MLKJr Blvd: Vacating the 10' strip of ROW along the south side of MLKJr Blvd in the center of the block between Hill Ave and Lt Col Leroy Pond

That the abutting real estate affected by said abandonment/vacation/reduction of the street rights of way are various tracts of land owned by the University of Arkansas in the City of Fayetteville, the rights of way are only being abandoned to the extents noted in the description above thus reducing the street rights of way and not eliminating them, that the affected streets will continue to have unaffected vehicular traffic, and that the public interest and welfare would not be adversely affected by the abandonment/vacation/reduction of portions of the above described street rights of way.

The petitioners pray that the City of Fayetteville, Arkansas, abandon and vacate the above described real estate, subject, however, to the existing storm drainage easements, water easements and sewer easements as required, and that the above described real estate be used for their respective benefit and purpose as now approved by law.

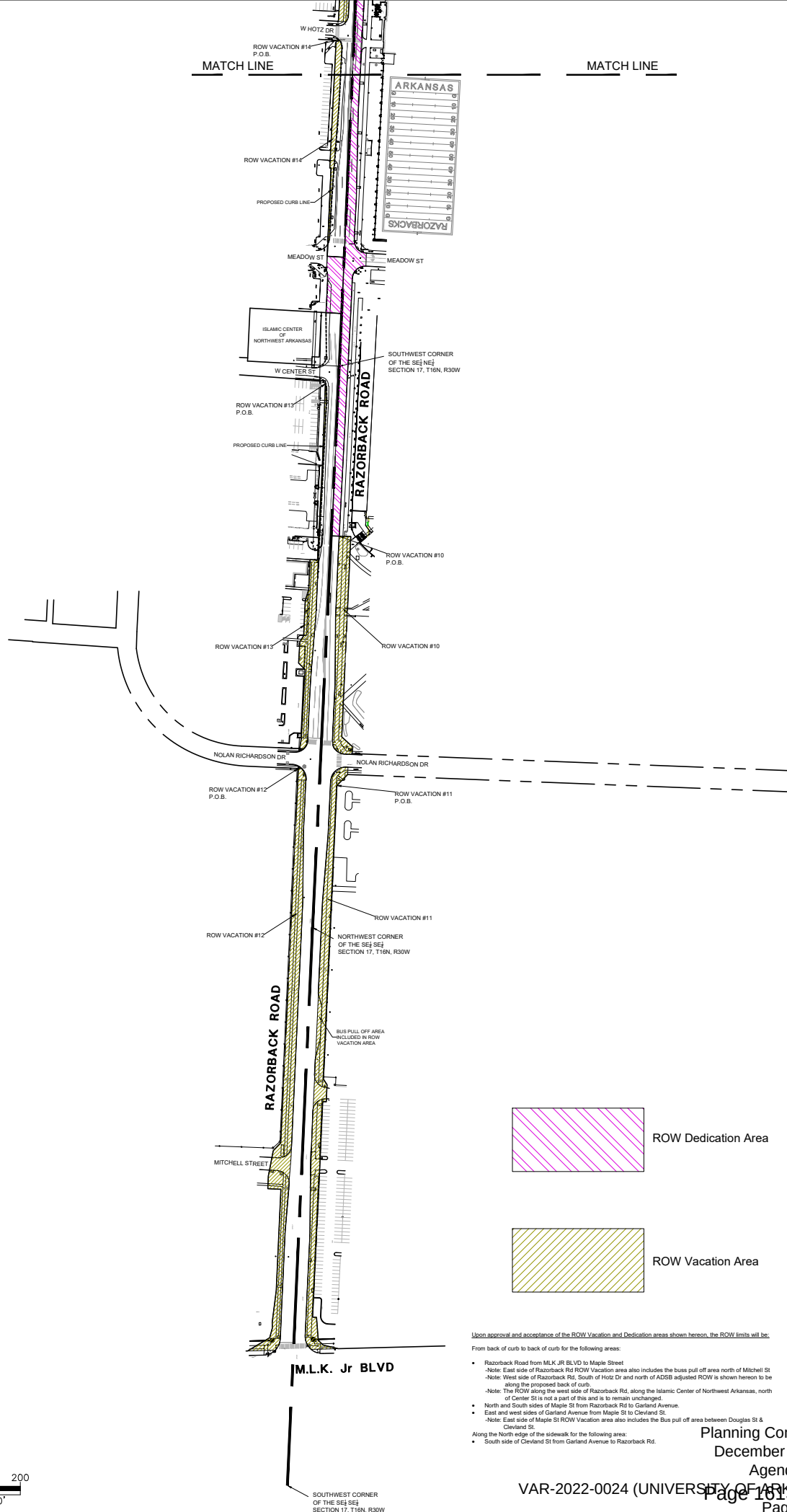
The petitioners further pray that the above described real estate be vested in the abutting property owners as provided by law.

WHEREFORE, the undersigned petitioners respectfully pray that the governing body of the City of Fayetteville, Arkansas, abandon and vacate the above described real estate, subject to said storm drainage easements, water easements and sewer easements, and that title to said real estate sought to be abandoned be vested in the abutting property owners as provided by law, and as to that particular land the owners be free from the easements of the public for the use of said right of way.

Dated this 1 day of November, 2022.

Allen Jay Young
Printed Name

[Signature]
Signature

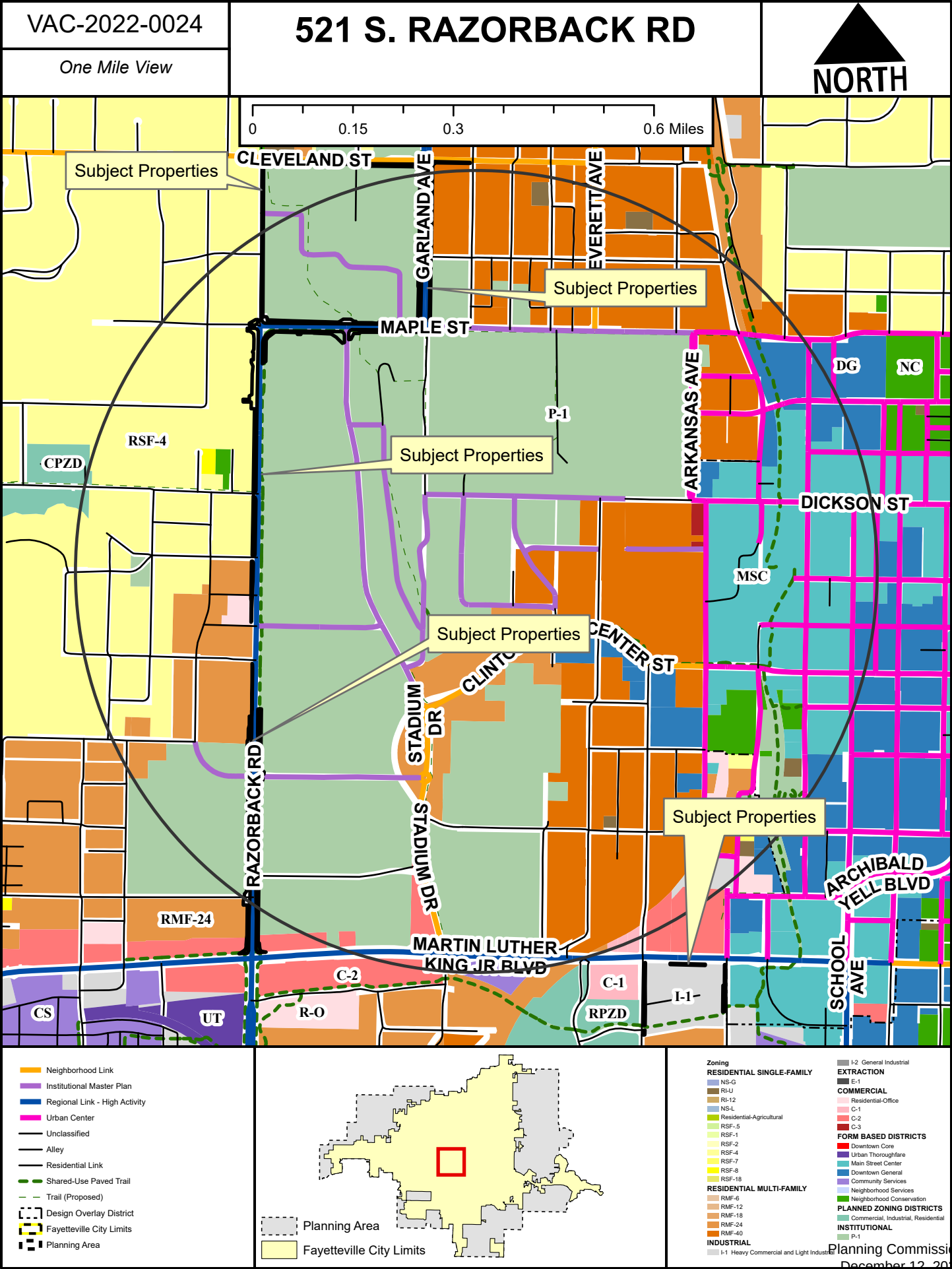


Upon approval and acceptance of the ROW Vacation and Dedication areas shown hereon, the ROW limits will be:

From back of curb to back of curb for the following areas:

- Razorback Road from M.L.K. Jr Blvd to Maple Street
- Note: East side of Razorback Rd ROW Vacation area also includes the bus pull off area north of Mitchell St
- Note: West side of Razorback Rd, South of Hotz Dr and north of ADSB adjusted ROW is shown hereon to be along the proposed back of curb.
- Note: The ROW along the west side of Razorback Rd, along the Islamic Center of Northwest Arkansas, north of Center St is not a part of this and is to remain unchanged.
- North and South sides of Maple St from Razorback Rd to Garland Avenue.
- East and west sides of Garland Avenue from Maple St to Cleveland St.
- Note: East side of Maple St ROW Vacation area also includes the Bus pull off area between Douglas St & Cleveland St.
- Along the North edge of the sidewalk for the following area:
- South side of Cleveland St from Garland Avenue to Razorback Rd.

Planning Commission
December 12, 2022
Agenda Item 6



ORDINANCE NO. _____

AN ORDINANCE TO APPROVE VAC 22-024 FOR PROPERTY LOCATED ALONG RAZORBACK ROAD, MAPLE STREET, GARLAND AVENUE, CLEVELAND STREET, HILL AVENUE, MARTIN LUTHER KING JUNIOR BOULEVARD AND LT. COLONEL LEROY POND AVENUE IN WARDS 1 AND 2 TO VACATE PORTIONS OF STREET RIGHTS-OF-WAY

WHEREAS, the City Council has the authority under A.C.A. § 14-54-104 to vacate public grounds or portions thereof which are not required for corporate purposes; and

WHEREAS, the City Council has determined that the following described portions of street rights-of-way is not required for corporate purposes.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:

Section 1: That the City Council of the City of Fayetteville, Arkansas hereby vacates the portions of street rights-of-way as described in Exhibit B attached to the Planning Department's memo.

Section 2: A copy of this Ordinance duly certified by the City Clerk along with the map attached as Exhibit A to the Planning Department's memo shall be filed in the office of the Washington County Circuit Clerk.

Section 3: This vacation approval is subject to the following conditions:

1. Easements shall be dedicated for any existing facilities associated with this right-of-way vacation request, with review and coordination by the applicant with the utility provider, including properly identifying utilities in the field by means of surveying, pot holing, and coordinating with representatives.
2. Adequate accommodation for pedestrian access must be maintained whether through easement or agreement.
3. The applicant must dedicate right-of-way to the back of curb in any areas where right of way does not currently exist.
4. The applicant must dedicate a pedestrian access easement to the existing back of sidewalk or master street plan right of way in areas where sidewalk does not currently exist.
5. Signal poles and appurtenances must remain in the right-of-way, or an easement be dedicated over the areas where poles and appurtenances are located.
6. Drainage easements must be dedicated in areas of existing drainage facilities.
7. An agreement will need to be developed establishing responsibility for repairs to non-typical features behind the curb due to maintenance, installation, and repair of any city facilities located within vacated rights of way, including drainage facilities and water/sewer lines. The City will not be responsible for maintenance or repair of anything except a standard sidewalk.

8. Any damage to or relocation of existing facilities will be at the property owner/developer's expense.
9. All easements and agreements required as a condition of this vacation shall be reviewed by the City and signed by the Mayor.



MEETING OF DECEMBER 27, 2022

TO: Mayor Jordan and City Council

THRU:

FROM: Kit Williams, City Attorney

DATE: December 27, 2022

SUBJECT: A RESOLUTION TO ALLOCATE THREE MILLION DOLLARS IN AMERICAN RESCUE PLAN ACT FUNDS FOR ARTS AND CULTURE NONPROFIT ORGANIZATIONS OPERATING IN FAYETTEVILLE AND TO APPROVE A BUDGET ADJUSTMENT IN THE AMOUNT OF \$3,000,000.00

RECOMMENDATION:

Council Member Harvey is sponsoring a resolution to allocate \$3,000,000 in American Rescue Plan Act funds for arts and culture nonprofit organizations operating in Fayetteville.

BACKGROUND:

DISCUSSION:

BUDGET/STAFF IMPACT:

Budget Adjustment attached

ATTACHMENTS: Agenda Request- ARPA Arts and Cultural Nonprofit - Council Member Harvey

AGENDA REQUEST FORM

FOR: Council Meeting of January 3, 2023

FROM: Council Member Sonia Harvey

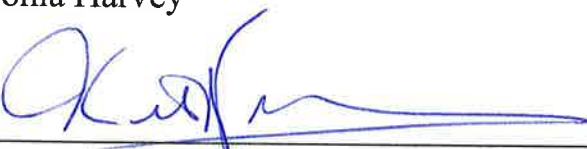
ORDINANCE OR RESOLUTION TITLE AND SUBJECT:

A RESOLUTION TO ALLOCATE THREE MILLION DOLLARS IN AMERICAN
RESCUE PLAN ACT FUNDS FOR ARTS AND CULTURE NONPROFIT
ORGANIZATIONS OPERATING IN FAYETTEVILLE AND TO APPROVE A BUDGET
ADJUSTMENT IN THE AMOUNT OF \$3,000,000.00

APPROVED FOR AGENDA:

Approved by email (Attached)
City Council Member
Sonia Harvey

12-27-22
Date


City Attorney Kit Williams
Approved as to form

December 27, 2022
Date

Williams, Kit

From: Harvey, Sonia
Sent: Tuesday, December 27, 2022 11:49 AM
To: Williams, Kit
Cc: Springer, Kevin; Black, Holly; Dotson, Steven
Subject: Re: ARPA funding for arts and culture nonprofits

Approved! Thank you!

Sonia Harvey
Fayetteville City Council Member
Ward 1, Position 1
(479) 409-5064

Report a concern with SeeClickFix:
<https://www.fayetteville-ar.gov/4233/Report-a-Concern-with-SeeClickFix>
Speak up on City projects:
<https://speakup.fayetteville-ar.gov/>
Voice your feedback to the entire Council and Mayor by emailing:
agendaitemcomment@fayetteville-ar.gov

From: Williams, Kit <kwilliams@fayetteville-ar.gov>
Sent: Tuesday, December 27, 2022 11:43:40 AM
To: Harvey, Sonia <sonia.harvey@fayetteville-ar.gov>
Cc: Springer, Kevin <kspringer@fayetteville-ar.gov>; Black, Holly <hblack@fayetteville-ar.gov>; Dotson, Steven <sdotson@fayetteville-ar.gov>
Subject: ARPA funding for arts and culture nonprofits

Sonia,

Attached is the Resolution you requested as well as the agenda request form for you signature. Budget is working up on a Budget Adjustment which will be attached when it is ready.

If the Resolution is what you wanted, please sign the agenda request form or otherwise indicate your approval by email. If any changes need to be made, please let me know and I will make them.

Kit

RESOLUTION NO. _____

A RESOLUTION TO ALLOCATE THREE MILLION DOLLARS IN AMERICAN RESCUE PLAN ACT FUNDS FOR ARTS AND CULTURE NONPROFIT ORGANIZATIONS OPERATING IN FAYETTEVILLE AND TO APPROVE A BUDGET ADJUSTMENT IN THE AMOUNT OF \$3,000,000.00

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF FAYETTEVILLE, ARKANSAS:

Section 1: That the City Council of the City of Fayetteville, Arkansas hereby allocates Three Million Dollars in American Rescue Plan Act funds for arts and culture nonprofit organizations operating in Fayetteville and approves the attached Budget Adjustment in the amount of \$3,000,000.00.

Section 2: That the City Council of the City of Fayetteville, Arkansas hereby recommends a three tiered application process that would assist small, medium and large arts and culture nonprofit organizations operating in Fayetteville. Such organizations may seek either “Subrecipient” or “Beneficiary” (Reimbursement) status if allowed by the American Rescue Plan Act (ARPA) and other Federal regulations.

Section 3: That the City Council of the City of Fayetteville, Arkansas hereby determines that once an applicant has been approved as qualifying pursuant to all Federal regulations, the application shall be reviewed by the Fayetteville Arts Council which shall make funding recommendations to the Fayetteville City Council which shall make the final decision.

Section 4: That the City Council of the City of Fayetteville, Arkansas hereby recommends an approximate schedule for the application and review of these proposed ARPA funding of arts and culture nonprofit organizations operating in Fayetteville as follows:

- A. January, 2023: Advertise the grant opportunity.
- B. February, 2023: Applications can be submitted.
- C. March, 2023: Eligible applications to be reviewed, evaluated, and funding recommendations made by Fayetteville Arts Council.
- D. April, 2023: City Council reviews and acts upon recommendations of Fayetteville Arts Council.

PASSED and APPROVED this 3rd day of January, 2023.

APPROVED:

ATTEST:

By: _____
LIONELD JORDAN, Mayor

By: _____
KARA PAXTON, City Clerk/Treasurer

Budget Year	Division	Adjustment Number
2023 (BY)	Non-Departmental (800)	
	Requestor: Alderman Sonia Harvey	

A RESOLUTION TO ALLOCATE \$3,000,000 IN AMERICAN RESCUE PLAN ACT FUNDS FOR ARTS AND CULTURE NONPROFIT ORGANIZATIONS OPERATING IN FAYETTEVILLE AND APPROVAL OF A BUDGET ADJUSTMENT.

RESOLUTION/ORDINANCE	COUNCIL DATE:	1/3/2022
	ITEM ID#:	
	Kevin Springer	
	12/27/2022 12:24 PM	
	Budget Division	Date
	TYPE:	D - (City Council)
JOURNAL #:		
GLDATE:		
CHKD/POSTED:	/	

[illegible]

Williams, Kit

From: Harvey, Sonia
Sent: Tuesday, December 20, 2022 12:45 PM
To: Dotson, Steven; Williams, Kit; Becker, Paul; Bell, Joanna
Cc: Jumper, Alison
Subject: Re: Looping Back after Today's Arts Council Meeting

Correction! I will plan to walk it on for the next agenda session.

Sonia Harvey
Fayetteville City Council Member
Ward 1, Position 1
(479) 409-5064

Report a concern with SeeClickFix:
<https://www.fayetteville-ar.gov/4233/Report-a-Concern-with-SeeClickFix>

Speak up on City projects:

<https://speakup.fayetteville-ar.gov/>

Voice your feedback to the entire Council and Mayor by emailing:
agendaitemcomment@fayetteville-ar.gov

From: Harvey, Sonia <sonia.harvey@fayetteville-ar.gov>
Sent: Monday, December 19, 2022 2:02:15 PM
To: Dotson, Steven <sdotson@fayetteville-ar.gov>; Williams, Kit <kwilliams@fayetteville-ar.gov>; Becker, Paul <pbecker@fayetteville-ar.gov>; Bell, Joanna <jbell@fayetteville-ar.gov>
Cc: Jumper, Alison <ajumper@fayetteville-ar.gov>
Subject: Re: Looping Back after Today's Arts Council Meeting

Good morning, Kit!

I'm checking in to see if you have any questions for me regarding the resolution. Do you know if it will be ready for tomorrow's meeting? Let me know if I can do anything at all to assist.

Sincerely,

Sonia Harvey
Fayetteville City Council Member
Ward 1, Position 1
(479) 409-5064

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<https://www.fayetteville-ar.gov/4233/Report-a-Concern-with-SeeClickFix>

Speak up on City projects:

<https://speakup.fayetteville-ar.gov/>

Voice your feedback to the entire Council and Mayor by emailing:
agendaitemcomment@fayetteville-ar.gov

From: Dotson, Steven <sdotson@fayetteville-ar.gov>
Sent: Friday, December 16, 2022 9:05:46 AM

To: Harvey, Sonia <sonia.harvey@fayetteville-ar.gov>; Williams, Kit <kwilliams@fayetteville-ar.gov>; Becker, Paul <pbecker@fayetteville-ar.gov>; Bell, Joanna <jbell@fayetteville-ar.gov>
Cc: Jumper, Alison <ajumper@fayetteville-ar.gov>
Subject: RE: Looping Back after Today's Arts Council Meeting

Hi Sonia,

There were two other main issues that we discussed when we all met last Friday. Not sure if these need to be in here for clarification, but due to their importance, I wanted to bring this back up:

- City staff will need to review applications to determine eligibility with ARPA regulations (we cannot put the responsibility for making this determination onto the Arts Council)
- As with all of the ARPA funded projects, City Council will ultimately determine which organizations are awarded funding and the total funded amount

Thanks,

Steve Dotson
Internal Auditor
City of Fayetteville, Arkansas
479.575.8261
www.fayetteville-ar.gov

From: Harvey, Sonia <sonia.harvey@fayetteville-ar.gov>
Sent: Thursday, December 15, 2022 11:46 PM
To: Williams, Kit <kwilliams@fayetteville-ar.gov>; Becker, Paul <pbecker@fayetteville-ar.gov>; Bell, Joanna <jbell@fayetteville-ar.gov>
Cc: Dotson, Steven <sdotson@fayetteville-ar.gov>; Jumper, Alison <ajumper@fayetteville-ar.gov>
Subject: Re: Looping Back after Today's Arts Council Meeting

Thank you, Kit.

I'm ok with that and want to respect what works best for you. Here's a draft of the resolution which I'm flexible to your edits:

A resolution to allocate \$3 million in ARPA funds for arts and culture nonprofits.

Whereas the creative economy in Fayetteville was severely affected by the COVID pandemic
Whereas we offer a tiered application process that would assist a small, medium and large arts and culture nonprofit.
Whereas nonprofits could choose from either of the two existing grant categories: Project, "Subrecipient" or Reimbursement, "Beneficiary."

Whereas the Fayetteville Arts Council will review applications and make the funding recommendations.

Whereas this resolution is endorsed by the Fayetteville Arts Council.

Approximate timeline 2023:

January - Advertise the grant opportunity

February - Open the application portal

March - Art Council reviews applications

April - Grant recipient recommendations forwarded to City Council