

PROJECT MANUAL

FIRST ASSEMBLY DRAINAGE REHABILITATION

FEBRUARY 2019

**NLR CITY ENGINEERING
PROJECT NO. 18-08**

Prepared By:
NLR City Engineering
500 W. 13th Street
North Little Rock, Arkansas 72114

**FIRST ASSEMBLY
DRAINAGE REHABILITATION
City Engineering Project No. 18-08**

PROJECT MANUAL

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CITY OF NORTH LITTLE ROCK, ARKANSAS
COMMERCE DEPARTMENT
Mary Beth Bowman, Director
Amy Smith, Assistant Director for Procurement
Crystal Willis, Admin. Sect./Assistant Purchasing Agent



120 MAIN STREET, North Little Rock, AR 72114
P.O. BOX 5757, North Little Rock, AR 72119
501-975-8881 Phone
501-975-8885 Fax

INVITATION TO BID/PROPOSAL COVER SHEET

Bid Number: 19-3576 Date Issued: Sunday, February 17, 2019

Date & Time Bid Opening: Tuesday, March 5, 2019 @ 10:30am.

FIRST ASSEMBLY DRAINAGE REHABILITATION

Total Project Bid Price: \$ _____

Plans and specifications may be obtained from:

- Commerce Department at 120 Main Street, North Little Rock, AR 72114
- www.nlr.ar.gov click on the tab "Business," select "Bids and Vendors" and then choose "Current Bids."
- Please direct all technical questions in writing to Chris Wilbourn at cwilbourn@nlr.ar.gov.
- General bid questions should be directed to the Commerce Department at 501-975-8881.

The City of North Little Rock encourages participation of small, minority, and woman own business enterprises in the procurement of goods, services, professional services, and construction, either as a general contractor or sub-contractor. It is further requested that whenever possible, majority contractors who require sub-contractors, seek qualified small, minority, and woman businesses to partner with them.

If you are obtaining this bid from our website, please be reminded that addendums may occur. It is therefore advisable that you review our listings for attachments including any changes to the bid.

Note: FAILURE TO FILL OUT AND SIGN THE INVITATION TO BID SHEET WILL RESULT IN REJECTION OF THE BID.

EXECUTION OF BID

Upon signing this page, the organization certifies that they have read and agree to the requirements set forth in this bid including conditions set forth and pertinent information requests.

Name of Firm: _____ Phone No.: _____

Arkansas Tax Permit No.: _____

Business Address: _____

Signature of Authorized Person: _____

Title: _____ Date: _____

PLEASE PUBLISH THE FOLLOWING LEGAL NOTICE ON:

Sunday, February 17, 2019

and

Sunday, February 24, 2019

Notice to bidders

Bid #19-3576

Notice is hereby given that the City of North Little Rock's Commerce Department will receive sealed proposals until, Tuesday, March 5, 2019 at 10:30am on the following:

FIRST ASSEMBLY DRAINAGE REHABILITATION

1. NOTICE TO THE GENERAL CONTRACTORS

Sealed bids for the **FIRST ASSEMBLY DRAINAGE REHABILITATION** will be received by the City of North Little Rock, at 10:30 am on Tuesday, March 5, 2019, at 120 Main Street, North Little Rock, Arkansas and then be publicly opened and read aloud. Any bids not submitted on time will be returned unopened.

2. SCOPE OF WORK

- a. The Contractor shall complete all work as specified or indicated in the Contract Documents. The work is generally described as follows: Excavation and removal and replacement of 30 LF of 48" CMP at east side of existing junction box connection, including C-Ballast bedding, reshaping box face connection and grouting, gasket connection to existing pipe on easternmost end of new pipe, flowable fill around new pipe and at box connection, and construction of base course and asphalt above pipe installation for existing disturbed parking lot. Additionally, all 48" CMP east of the existing junction box (including newly installed CMP) will be centrifugally lined for the entire inside diameter, and all existing 48" CMP west of the existing junction box will be manually lined by hand along the bottom inside diameter, and as more fully set forth in the Contract Documents attached hereto and incorporated herein as Exhibit "A" (the "Project").

3. SINGLE PROPOSAL

Bidders shall submit one proposal for the entire project.

4. BID SUBMISSION

Bids shall be submitted on the form within the project manual and shall be delivered in a clearly identified, sealed, opaque envelope prior to the date and time described above.

5. AVAILABILITY OF CONSTRUCTION DOCUMENTS

Bona fide bidders may obtain documents at the address listed below, on the following basis:

- a. Drawings and Specifications may be examined at the following places:

COMMERCE DEPARTMENT
120 Main Street
North Little Rock, AR 72114
(501) 975-8881
Fax 975-8885

- b. www.nlr.ar.gov click on the tab "Business," select "Bids and Vendors" and then choose "Current Bids."

6. BID SECURITY

Bid security in the amount of five (5%) percent of the Base Proposal must accompany each proposal as described in the "Instruction to Bidders".

7. WITHDRAWAL OF BIDS

No bid may be withdrawn for a period of sixty (60) days subsequent to date of the opening of Proposals and in accordance with the "Supplemental Instructions to Bidders" without consent of the Owner.

8. COMPLIANCE WITH ARKANSAS STATUTES

All bidders shall comply with the requirements of the Contractor's Licensing Law of the State of Arkansas, and all applicable Arkansas regulations. All bonds on this project shall comply with Arkansas Statutory Performance and Payment Bond Law, Act 351 of 1953,

as amended by Act 209 of 1957.

9. REJECTION OF BIDS

The Owner reserves the right to reject any or all bids and to waive any irregularities. Proposals which fail to comply fully with the provisions of the specifications and other Contract Documents will be considered invalid and may not receive consideration.

The right is reserved by the City of North Little Rock to reject any or all bids, in whole or part, or award items separately, or to waive informalities in bids received.

The City of North Little Rock encourages participation from MBE/DBE/WBE and SBA vendors.

CITY OF NORTH LITTLE ROCK

Amy Smith
Assistant Director for Procurement

Send invoice and proof of publication to:

Amy Smith
Commerce Department
P.O. Box 5757
North Little Rock, AR 72119

GENERAL TERMS AND CONDITIONS FOR THE CITY OF NORTH LITTLE ROCK, AR

1. When submitting an "Invitation to Bid," the bidder warrants that the commodities covered by the bid shall be free from defects in material and workmanship under normal use and service. In addition, bidder must deliver new commodities of the latest design and model, unless otherwise specified in the "Invitation to Bid."
2. Prices quoted are to be net process, and when an error is made in extending total prices, the City may accept the bid for the lesser amount whether reflected by extension or by the correct multiple of the unit price.
3. Discounts offered will be taken when the City qualifies for such. The beginning date for computing discounts will be the date of invoice or the date of delivery and acceptance, whichever is later.
4. When bidding other than the brand and/or model specified in the "Invitation to Bid," the brand and/or model number must be stated by that item in the "Invitation to Bid," and descriptive literature be submitted with the bid.
5. The City reserves the right to reject any and all bids.
6. The Purchasing office reserves the right to award items, all or none, or by line item(s).
7. Quality, time and probability of performance may be factors in making an award.
8. Bid quotes submitted will remain firm for 30 calendar days from bid opening date; however, the prices may remain firm for a longer period of time if mutually agreeable between bidder and the Department of Commerce.
9. Bidder must submit a completed signed copy of the front page of the "Invitation to Bid" and must submit any other information required in the "Invitation to Bid."
10. In the event a contract is entered into pursuant to the "Invitation to Bid," the bidder shall not discriminate against any qualified employee or qualified applicant for employment because of race, sex, color, creed, national origin or ancestry. The bidder must include in any and all subcontracts a provision similar to the above.
11. Sales or use tax is not to be included in the bid price, but is to be added by the vendor to the invoice billing to the City. Although use tax is not to be included in this bid, vendors are to register and pay tax direct to the Arkansas State Revenue Department.
12. Prices quoted shall be "Free on Board" (F.O.B.) to destination at designated facility in North Little Rock. Charges may not be added after the bid is opened.
13. In the event of two or more identical low bids, the contract may be awarded arbitrarily or for any reason to any of such bidders or split in any proportion between them at the discretion of the Department of Commerce..
14. Specifications furnished with this Invitation are intended to establish a desired quality or performance level, or other minimum dimensions and capacities, which will provide the best product available at the lowest possible price. Other than designated brands and/or models approved as equal to designated products shall receive an equal consideration.
15. Samples of items when required, must be furnished free, and, if not called for within 30 days from date of bid opening, will become property of the City.
16. Bids will not be considered if they are:
 1. Submitted after the bid's opening time.
 2. Submitted electronically or faxed (unless authorized by Purchasing Agent).

17. Guarantees and warranties should be submitted with the bid, as they may be a consideration in making an award.
18. **CONSTRUCTION**
 - A. Contractor is to supply the City with evidence of having and maintaining proper and complete insurance, specifically Workman's Compensation Insurance in accordance with the laws of the State of Arkansas, Public Liability and Property Damage. All premiums and cost shall be paid by the Contractor. In no way will the City be responsible in case of accident.
 - B. When noted, a Certified check or bid bond in the amount of 5% of total bid shall accompany bid.
 - C. A Performance Bond equaling the total amount of any bid exceeding \$20,000.00 must be provided for any contract for the repair, alteration or erection of any public building, public structure or public improvement (pursuant to Arkansas Code Annotated Section 22-9-203).
19. **LIQUIDATED DAMAGES** - Liquidated damages shall be assessed beginning on the first day following the maximum delivery or completion time entered on this bid form and/or provided for by the plans and specifications.
20. **AMBIGUITY IN BID** - Any ambiguity in any bid as the result of omission, error, lack of clarity or non-compliance by the bidder with specifications, instructions, and all conditions of bidding shall be construed in the light most favorable to the City.
21. The bid number should be stated on the face of the sealed bid envelope. If it is not, the envelope will have to be opened to identify.
22. Whenever a bid is sought seeking a source of supply for a specified period of time for materials and services, the quantities of usage shown are estimated ONLY. No guarantee or warranty is given or implied by the participants as to the total amount that may or may not be purchased from any resulting contracts. These quantities are for the bidders information ONLY and will be used for tabulation and presentation of bid and the participant reserves the right to increase or decrease quantities as required.
23. The City of North Little Rock reserves the right to reject any and all bids, to accept in whole or in part, to waive any informalities in bids received, to accept bids on materials or equipment with variations from specifications in those cases where efficiency of operation will not be impaired, and unless otherwise specified by the bidder, to accept any item in the bid. If unit prices and extensions thereof do not coincide, the City of North Little Rock may accept the bid for the lesser amount whether reflected by the extension or by the correct multiple of the unit price.
24. Additional information or bid forms may be obtained from:
COMMERCE DEPARTMENT, 120 Main Street, P.O. Box 5757, North Little Rock, Arkansas 72119 (501)975-8881 www.nlr.ar.gov

Bidding documents must be submitted on or before the bid's opening date and time. Unless noted, bids must be sealed and mailed or delivered to:

Mary Beth Bowman
Director of Commerce
120 Main Street (P.O. Box 5757)
North Little Rock, AR 72119

BID FORM

NOTE TO BIDDER: Please use BLACK ink for completing this Bid form.

To. _____
Address: _____

Project Title: **FIRST ASSEMBLY
DRAINAGE REHABILITATION**

Engineer's
Project No.: **CNLR ENGINEERING PROJECT NO. 18-08**

Date: _____ Arkansas Contractor's
License No.: _____

Bidder: _____

Address: _____

Bidder's person to contact for additional information on this Bid:

Name: _____

Telephone: _____

ADDENDA

The Bidder hereby acknowledges that he/she has received Addenda Numbers:

_____ to these Specifications.
(Bidder insert number of each addendum received.)

CONSTRUCTION DAYS

The Work will be completed and ready for final payment in accordance with the General Conditions within **60 Working Days** after the date when the Contract Time commences to run as provided in Notice to Proceed.

LIQUIDATED DAMAGES

Liquidated Damages: Owner and Contractor recognize that time is of the essence of this Agreement and the Owner will suffer financial loss if the Work is not completed within the time specified in above, plus any extensions thereof allowed in accordance with the General Conditions. They also recognize the delays, expense, and difficulties involved in proving the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay Owner **Two Hundred and Fifty Dollars (\$250.00)** for each day that expires after the time specified in Paragraph 3 for completion and readiness for final payment.

INSURANCE AND BONDING REQUIREMENTS

The Bidder hereby acknowledges that he/she has read and understands the performance bond, payment bond, and insurance requirements for this project as specified in the General Conditions. If awarded a construction contract, the Bidder agrees to furnish the required bonds and insurance certificates within fifteen (15) days of the date the award is made.

Signature _____ Title _____

BIDDER'S DECLARATION AND UNDERSTANDING

The undersigned, hereinafter called the Bidder, declares that the only persons or parties interested in this Bid are those named herein, that this Bid is, in all respects, fair and without fraud, that it is made without collusion with any official of the Owner, and that the Bid is made without any connection or collusion with any person submitting another Bid on this Contract.

The Bidder further declares that he has carefully examined the Contract Documents for the construction of the project, that he has personally inspected the site, that he has satisfied himself as to the quantities involved, including materials and equipment, and conditions of work involved, including the fact that the description of the quantities of work and materials, as included herein, is brief and is intended only to indicate the general nature of the work and to identify the said quantities with the detailed requirements of the Contract Documents, and that this Bid is made according to the provisions and under the terms of the Contract Documents, which Documents are hereby made a part of this Bid.

The Bidder further agrees that he has exercised his own judgment and has utilized all data which he believes pertinent from the Engineer, Owner, and other sources in arriving at his own conclusions.

The Bidder states that he has experience in and is qualified to perform the work herein specified and, if he does not have craftsmen experienced and qualified in any phase of the work for which this Bid is offered, that he will subcontract the work under said phase to a contractor who does have the necessary experience and qualifications.

CONTRACT EXECUTION AND BONDS

The Bidder agrees that if this Bid is accepted, he will, within 15 days after notice of award, sign the Contract in the form annexed hereto, and will at that time, deliver to the Owner the Performance Bond and Payment Bond required herein, and will, to the extent of his Bid, furnish all machinery, tools, apparatus, and other means of construction and do the work and furnish all the materials necessary to complete all work as specified or indicated in the Contract Documents.

CERTIFICATES OF INSURANCE, PAYMENT BOND, AND PERFORMANCE BOND

The Bidder further agrees to furnish the Owner, before executing the Contract, the certificates of insurance, Payment Bond, and Performance Bond as specified in these Documents.

START OF CONSTRUCTION, CONTRACT COMPLETION TIME, AND LIQUIDATED DAMAGES

Start of Construction, Contract Completion Time, and Liquidated Damages are stated in Document 00500 - Contract.

SALES AND USE TAXES

The Bidder agrees that all federal, state, and local sales and use taxes are included in the stated bid prices for the work.

UNIT PRICE BASE BID

Any Bid may be rejected which contains material omissions, or irregularities, or in which any of the unit prices are obviously unbalanced in the opinion of the Owner. Also, a bid may be rejected if, in any manner it shall fail to conform to the conditions of the published Bidding Requirements and Contract Documents.

The bidder agrees to accept as full payment for the work proposed herein the amount computed under the provisions of the Contract Documents and based on the following unit price amounts, it being expressly understood that the unit prices are independent of the exact quantities involved. The bidder agrees that the unit prices represent a true measure of the labor and materials required to perform the work, including all allowances for overhead and profit for each type and unit of work called for in the Contract Documents.

Item No.	Item Description	Units	Quantity	Unit Cost	Total Cost
1	Site Preparation	LS	1	\$	\$
2	Trench and Excavation Safety Systems	LS	1	\$	\$
3	Remove Existing 48" CMP and Replace With 48" CMP (14 Gage, 2.67"X0.5" Corrugation, Aluminized, Type II)	LF	30	\$	\$
4	6" Pipe Embedment	CY	1	\$	\$
5	1" Full Diameter Spincast Geopolymer Pipe Lining (For Existing 48" CMP On East Side of Site)	LF	118	\$	\$
6	1" Manual Geopolymer Pipe Lining By Hand (For Bottom 26" Wide Section of Existing 48" CMP on West Side of Site)	LF	114	\$	\$
7	2" ACHM Surface Course	TON	8	\$	\$
8	8" Aggregate Base Course (Class 7)	SY	72	\$	\$

TOTAL BASE BID AMOUNT \$_____

Words

BASIS OF AWARD

The Bidder understands that the Contract will be awarded to the most qualified bidder with the lowest Total Base Bid that the Owner may choose that makes the Project cost acceptable to the Owner. The Owner reserves the right to waive irregularities, reject bids, choose the most qualified bidder for the Project, and to postpone award of the Contract for a period of time which shall not exceed beyond 90 days

from the bid opening date.

PAYMENT SCHEDULE

A detailed payment schedule for each structure or unit shall be submitted by the successful low Bidder. The successful low Bidder shall meet with the Engineer and Owner in Little Rock, Arkansas, to review the format and details of the payment schedule. This meeting shall be held within 5 days of notification that the Contractor is the low Bidder. The purpose of the meeting shall be to establish an acceptable format for the payment schedule. The construction detailed payment schedule shall be completed by the Contractor 14 days after the meeting and submitted to the Engineer and Owner for review and approval. Failure of the Contractor to submit the payment schedule as required may result in the Owner's rejection of the Bid or delay in processing the Contractor's request for a progress payment.

SUBCONTRACTORS

The Bidder further certifies that proposals from the following subcontractors were used in the preparation of this Bid; and if awarded a contract, Bidder agrees to not enter into Contracts with others for these divisions of the Work without written approval from the Owner and Engineer.

Subcontractor	Subcontractor
Arkansas Contractor License #	Arkansas Contractor License #
Street Address, City, State, Zip Code	Street Address, City, State, Zip Code
Subcontractor	Subcontractor
Arkansas Contractor License #	Arkansas Contractor License #
Street Address, City, State, Zip Code	Street Address, City, State, Zip Code

SUPPLIERS/VENDORS

The Bidder shall list the suppliers/vendors where material for this Project will be purchased from and successful Bidder shall updated suppliers/vendors during construction of the Project.

Supplier/Vendor Name	Supplier/Vendor Name
Street Address, City, State, Zip Code	Street Address, City, State, Zip Code
Phone Number	Phone Number

Supplier/Vendor Name

Street Address, City, State, Zip Code

Phone Number

Supplier/Vendor Name

Street Address, City, State, Zip Code

Phone Number

PERFORMANCE OF WORK BY CONTRACTOR

The Bidder shall perform at least 40 percent of the work with his own forces (refer to Paragraph 24, INSTRUCTIONS TO BIDDERS. Bids from so called "Brokerage Contractors" will not be considered.) List below the items that the Bidder will perform with his own forces, if awarded this Contract, and fill in the blank showing the estimated total cost of these items.

Estimated total cost of the above items the Bidder states that will be performed with his own forces, if awarded Contract:

_____ Dollars (\$ _____)
(Words)

EXPERIENCE OF BIDDER

The Bidder states that he is an experienced Contractor and has completed similar projects within the last 5 years. (List similar projects, with types, names of clients, construction costs, and references with telephone numbers. Use additional sheets if necessary.)

SURETY

If the Bidder is awarded a construction Contract on this Bid, the Surety who provides the Performance and Payment Bond will be:

_____ whose address is:

Street, City, State Zip Code

BIDDER

The name of the Bidder submitting this Bid is:

_____ doing business at:

Street, City, State, Zip Code

which is the address to which all communications concerned with this Bid and with the Contract shall be sent.

The names of the principal officers of the corporation submitting this Bid, or of the partnership, or of all persons interested in this Bid as principals are as follows:

If Sole Proprietor or Partnership

IN WITNESS hereto the undersigned has set his (its) hand this ____ day of _____, 20__.

Signature of Bidder

Title

If Corporation

IN WITNESS WHEREOF the undersigned corporation has caused this instrument to be executed and its seal affixed by its duly authorized officers this ____ day of _____, 20__.

Name of Corporation

(SEAL)

By _____

Title _____

Attest _____

Secretary

BID BOND

STATE OF ARKANSAS

KNOW ALL MEN BY THESE PRESENTS, that we:

Principal and Contractor, and _____

hereinafter called Surety, are held and firmly bound unto the **City of North Little Rock, 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:

**FIRST ASSEMBLY DRAINAGE REHABILITATION
City Engineering Project No. 18-08
North Little Rock, Arkansas**

WHEREAS, it was a condition precedent to the submission of said bid that a cashier's check, certified 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 15 consecutive calendar days after written notice having been given of the award of the Contract.

NOW, THEREFORE, the conditions of this obligation are such that if the Principal within 15 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 _____ 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., 20__.

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 _____
Agent

NOTICE OF AWARD

TO:

**PROJECT: FIRST ASSEMBLY DRAINAGE REHABILITATION
City Project No. 18-08**

The OWNER has considered the BID submitted by you on _____ for the above described WORK in response to its Advertisement for Bids and Instructions to Bidders.

You are hereby notified that your BID has been accepted in the amount of:

_____ Dollars (\$ _____)

You are required by the Instructions to Bidders to execute the Contract and furnish the required CONTRACTOR’S Performance BOND, Payment BOND, and certificates of insurance within fifteen (15) calendar days from the date of this Notice to you.

If you fail to execute said Contract and to furnish said BONDS within fifteen (15) days from the date of this Notice, said OWNER will be entitled to consider your bid in default, to annul this Notice of Award and to declare your Bid Security forfeited. The OWNER will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER.

Dated this _____ day of _____, 20__.

Owner

By _____

Title _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged

by _____,

this the _____ day of _____, 20__

By _____

Title _____

PERFORMANCE BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

CONTRACTOR (*Name and Address*): SURETY (*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):

CONTRACT

Effective Date of Agreement:
Amount:
Description (*Name and Location*):

BOND

Bond Number:
Date (*Not earlier than Effective Date of Agreement*):
Amount:
Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal (Seal)

Surety's Name and Corporate Seal (Seal)

By: _____
Signature

By: _____
Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Note: Provide execution by additional parties, such as joint ventures, if necessary.

Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner for the performance of the Contract, which is incorporated herein by reference.

1. If Contractor performs the Contract, Surety and Contractor have no obligation under this Bond, except to participate in conferences as provided in Paragraph 2.1.
2. If there is no Owner Default, Surety's obligation under this Bond shall arise after:
 - 2.1 Owner has notified Contractor and Surety, at the addresses described in Paragraph 9 below, that Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with Contractor and Surety to be held not later than 15 days after receipt of such notice to discuss methods of performing the Contract. If Owner, Contractor, and Surety agree, Contractor shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive Owner's right, if any, subsequently to declare a Contractor Default; and
 - 2.2 Owner has declared a Contractor Default and formally terminated Contractor's right to complete the Contract. Such Contractor Default shall not be declared earlier than 20 days after Contractor and Surety have received notice as provided in Paragraph 2.1; and
 - 2.3 Owner has agreed to pay the Balance of the Contract Price to:
 1. Surety in accordance with the terms of the Contract; or
 2. Another contractor selected pursuant to Paragraph 3.3 to perform the Contract.
3. When Owner has satisfied the conditions of Paragraph 2, Surety shall promptly, and at Surety's expense, take one of the following actions:
 - 3.1 Arrange for Contractor, with consent of Owner, to perform and complete the Contract; or
 - 3.2 Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or
 - 3.3 Obtain bids or negotiated proposals from qualified contractors acceptable to Owner for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by Owner and contractor selected with Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Contract, and pay to Owner the amount of damages as described in Paragraph 5 in excess of the Balance of the Contract Price incurred by Owner resulting from Contractor Default; or
 - 3.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
 1. After investigation, determine the amount for which it may be liable to Owner and, as soon as practicable after the amount is determined, tender payment therefor to Owner; or
 2. Deny liability in whole or in part and notify Owner citing reasons therefor.
4. If Surety does not proceed as provided in Paragraph 3 with reasonable promptness, Surety shall be deemed to be in default on this Bond 15 days after receipt of an additional written notice from Owner to Surety demanding that Surety perform its obligations under this Bond, and Owner shall be entitled to enforce any remedy available to Owner. If Surety proceeds as provided in Paragraph 3.4, and Owner refuses the payment tendered or Surety has denied liability, in whole or in part, without further notice Owner shall be entitled to enforce any remedy available to Owner.
5. After Owner has terminated Contractor's right to complete the Contract, and if Surety elects to act under Paragraph 3.1, 3.2, or 3.3 above, then the responsibilities of Surety to Owner shall not be greater than those of Contractor under the Contract, and the responsibilities of Owner to Surety shall not be greater than those of Owner under the Contract. To the limit of the amount of this Bond, but subject to commitment by Owner of the Balance of the Contract Price to mitigation of costs and damages on the Contract, Surety is obligated without duplication for:

- 5.1 The responsibilities of Contractor for correction of defective Work and completion of the Contract;
- 5.2 Additional legal, design professional, and delay costs resulting from Contractor's Default, and resulting from the actions of or failure to act of Surety under Paragraph 3; and
- 5.3 Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of Contractor.

6. Surety shall not be liable to Owner or others for obligations of Contractor that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than Owner or its heirs, executors, administrators, or successors.

7. Surety hereby waives notice of any change, including changes of time, to Contract or to related subcontracts, purchase orders, and other obligations.

8. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located, and shall be instituted within two years after Contractor Default or within two years after Contractor ceased working or within two years after Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

9. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the address shown on the signature page.

10. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

11. Definitions.

- 11.1 Balance of the Contract Price: The total amount payable by Owner to Contractor under the Contract after all proper adjustments have been made, including allowance to Contractor of any amounts received or to be received by Owner in settlement of insurance or other Claims for damages to which Contractor is entitled, reduced by all valid and proper payments made to or on behalf of Contractor under the Contract.
- 11.2 Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.
- 11.3 Contractor Default: Failure of Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.
- 11.4 Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract or to perform and complete or otherwise comply with the other terms thereof.

FOR INFORMATION ONLY – *(Name, Address and Telephone)*

Surety Agency or Broker:

Owner's Representative *(Engineer or other party)*:

PAYMENT BOND

CONTRACTOR *(name and address)*:

SURETY *(name and address of principal place of business)*:

OWNER *(name and address)*:

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location)*:

BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract)*:

Amount:

Modifications to this Bond Form: None See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

_____ *(seal)*

Contractor's Name and Corporate Seal

_____ *(seal)*

Surety's Name and Corporate Seal

By: _____
Signature

By: _____
Signature *(attach power of attorney)*

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond shall arise after the following:
 - 5.1 Claimants who do not have a direct contract with the Contractor,
 - 5.1.1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2 have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2 Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2 Pay or arrange for payment of any undisputed amounts.
 - 7.3 The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.
8. The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or

(2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, 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.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. Definitions

16.1 **Claim:** A written statement by the Claimant including at a minimum:

1. The name of the Claimant;
2. The name of the person for whom the labor was done, or materials or equipment furnished;
3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
4. A brief description of the labor, materials, or equipment furnished;
5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
7. The total amount of previous payments received by the Claimant; and
8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

16.2 **Claimant:** An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond

shall be to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

16.3 **Construction Contract:** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4 **Owner Default:** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5 **Contract Documents:** All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

18. Modifications to this Bond are as follows:

CONTRACT
FOR
FIRST ASSEMBLY
DRAINAGE REHABILITATION

THIS **CONTRACT** is made this ____ day of _____, 2019, by and between THE CITY OF NORTH LITTLE ROCK, herein called the “City,” acting herein through its Mayor, Joe A. Smith, and _____, herein called “Contractor.”

In consideration of the mutual covenants herein, the parties agree as follows:

ARTICLE 1. SCOPE OF WORK

1.01 The Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: Excavation and removal and replacement of 30 LF of 48” CMP at east side of existing junction box connection, including C-Ballast bedding, reshaping box face connection and grouting, gasket connection to existing pipe on easternmost end of new pipe, flowable fill around new pipe and at box connection, and construction of base course and asphalt above pipe installation for existing disturbed parking lot. Additionally, all 48” CMP east of the existing junction box (including newly installed CMP) will be centrifugally lined for the entire inside diameter, and all existing 48” CMP west of the existing junction box will be manually lined by hand along the bottom inside diameter, and as more fully set forth in the Contract Documents attached hereto and incorporated herein as Exhibit “A” (the “Project”).

ARTICLE 2. CONTRACT DOCUMENTS

2.01 The Contract Documents shall consist of:

- .1 The fully executed Contract, which incorporates by reference documents (.2) thru (.10);
- .2 The entire Bid Documents dated: _____;
- .3 The Contractor’s Bid dated _____, all of which documents are incorporated herein;
- .4 Supplementary Conditions, if applicable;
- .5 Performance Bond;
- .6 Proof of Insurance Coverage;
- .7 Proof of Workers’ Compensation Insurance;

The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:

- .8 Written Amendments;
- .9 Work Change Directives;
- .10 Change Order(s).

2.02 The Contract Documents may only be amended, modified, or supplemented as provided in Article 11 of the Standard General Conditions of the Construction Contract, as modified and identified in the Supplementary General Conditions, if applicable.

ARTICLE 3. CONTRACT PRICE

3.01 Contractor hereby agrees with the City to commence and complete the Work for the sum of

and any additional services in connection therewith, under the terms stated in the Standard General Conditions, as modified and identified in the Supplementary General Conditions, if applicable.

3.02 Further, in accordance with the Contract Documents, Contractor agrees, at its own proper cost and expense, to furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete the Project in accordance with the Bid Documents and General Conditions, as modified, and prices stated in these specifications, which include any maps, plats, blue prints, and other drawings and printed or written explanatory matter thereof, all of which are made a part hereof and collectively constitute the Contract.

3.03 The City agrees to pay the Contractor in current funds for the Project performed under the Contract, subject to additions and deductions, as provided in the Standard General Conditions, as modified.

ARTICLE 4 ENGINEER

4.01 The Project will be coordinated by:

City of North Little Rock Engineering Department

Chris Wilbourn, Engineer

Who is hereinafter called ENGINEER and who is to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to ENGINEER in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 5 CONTRACT TIMES, DATES FOR SUBSTANTIAL COMPLETION, AND LIQUIDATED DAMAGES

5.01 Contractor hereby agrees to commence the work on the Project on or before a date to be specified in a written Notice to Proceed (NTP) of the City, incorporated by reference as set forth herein, and to fully complete the project within **60** calendar days or as determined by City Engineer. Contractor further agrees to pay, as liquidated damages, the sum of **\$250.00** for each consecutive calendar day thereafter as hereinafter provided.

ARTICLE 6 PAYMENT PROCEDURES

6.01 Contractor shall submit Applications for Payment in accordance with Article 15 of the Standard General Conditions of the Construction Contract, as modified. Applications for Payment will be processed by ENGINEER as provided in the Standard General Conditions of the Construction Contract, as modified.

ARTICLE 7 CONTRACTOR'S REPRESENTATIONS AND WARRANTIES

7.01 In order to induce Owner to enter into this Agreement CONTRACTOR makes the following representations:

- .1 Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.
- .2 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, and performance of the Work.
- .3 Contractor is familiar with and is satisfied as to all federal, state and local laws, regulations, and ordinances that may affect cost, progress, and performance of the Work. All Work shall be completed in accordance with all applicable federal, state, and local laws, regulations, and ordinances.
- .4 Contractor has carefully studied all: (1) drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities), if applicable, which have been provided as described in paragraph 5.03 of the Standard General Conditions of the Construction Contract, as modified and (2) reports and drawings of a Hazardous Environmental Condition, if any, at the Site which has been identified in the Supplementary Conditions, if applicable, as provided in paragraph 5.06 of the Standard General Conditions of the Construction Contract, as modified.
- .5 Contractor has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means methods, techniques, sequences, and procedures of construction, if any, expressly required by the Contract Documents to be employed by Contractor, and safety precautions and programs incident thereto.
- .6 Contractor does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.
- .7 Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

.8 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.

.9 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.

.10 The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

.11 The Contractor further represents and warrants that:

a. Contractor has full power and authority to enter into this Contract and to carry out the Project contemplated by this Contract.

b. The Contractor represents and warrants that Contractor will comply with all laws applicable to the performance of the Project under this Contract.

c. The Contractor represents and warrants that Contractor's execution, delivery, and performance of this Contract will not constitute: (i) a violation of any judgment, order, or decree binding on Contractor; (ii) a breach under any contract by which Contractor is bound; or (iii) an event that would, with notice or lapse of time, or both, constitute such a breach.

d. The Contractor represents and warrants that the Project will be performed with the degree of skill and care that is required by current, good, and sound professional procedures and practices, and in conformance with generally accepted professional procedures and industry standards prevailing at the time the Project is performed, and that all work on the Project meet the specifications set forth herein. Contractor further represents and warrants that Contractor and all personnel used to perform the Project, including permitted subcontractors, possess the knowledge, skill, and experience necessary to perform the Project.

e. The Contractor represents and warrants that Contractor has, and shall maintain in effect for the duration of this Contract, all licenses, permits qualifications, and approvals of whatsoever nature which are legally required for Contractor to complete the Project. Contractor shall also ensure that all permitted subcontractors are similarly licensed and qualified.

ARTICLE 8 CHANGE ORDERS

8.01 The Contractor and the Owner agree and acknowledge as a part of this Contract that no change order, as defined in Section 1.01.A.8 of the General Conditions of the Construction Contract, as modified, or other form or order or directive is authorized without written assurance by the Owner that lawful appropriations to cover the costs of the additional work have been made, and without the change order being signed by the Owner and the Contractor.

It is the Contractor's sole responsibility to know, determine, and ascertain the authority of the City representative signing any change order under this Contract.

ARTICLE 9 SUSPENSION OF WORK AND TERMINATION

9.01 Suspension of Work and Termination of this Contract will be in accordance with Article 16 of the Standard General Conditions of the Construction Contract, as modified.

9.02 Notwithstanding any other provision of this Contract, with respect to any financial obligation of the City which may arise under this Agreement in any fiscal year after the year of execution, in the event the budget or other means of appropriation for any such year fails to provide funds in sufficient amounts to discharge such obligation, such failure (i) shall act to terminate this Contract at such time as the then-existing and available appropriations are depleted, and (ii) neither such failure nor termination shall constitute a default or breach of this Contract, including any sub-agreement, attachment, schedule, or exhibit thereto, by the City. As used herein, the term "appropriation" shall mean and include the due adoption of an appropriation ordinance and budget and the approval of availability of sufficient funds for the performance of fiscal obligations arising under this Contract.

ARTICLE 10 INSURANCE AND BOND

10.01 Contractor shall, at Contractor's sole cost and expense, procure and maintain for the duration of this Contract proper and complete liability insurance in the amount of \$1,000,000, and Workers Compensation Insurance in accordance with the laws of the State of Arkansas. The City shall not be responsible in case of accident.

10.02 Contractor shall provide a Performance Bond equaling the total amount of the bid, (pursuant to Ark. Code Ann. §§ 18-44-503 and 22-9-401. Additionally, a Maintenance Bond shall be provided for a period of two (2) years.

ARTICLE 11 INDEMNIFICATION

11.01 The Contractor shall indemnify and hold the City its officers, employees, and agents harmless from any loss, lawsuit, liability, damage, cost and expense (including reasonable attorneys' fees) which may arise out of or result from (i) claims by third persons against the City that the Project has caused damage to property or bodily injury (including death); or (ii) the acts or omissions of the Contractor, its agents or employees in connection with this Contract; or (iii) any defects in any equipment used by the Contractor; or (iv) any breach or default in the performance of the obligations of the Contractor hereunder including any breach of warranties. The Contractor's indemnification obligations hereunder shall not apply to the extent that any claim is determined by a court of competent jurisdiction to have been caused by the gross negligence or misconduct of The City.

11.02 The invalidity, in whole or in part, of any of the foregoing paragraph will not affect the remainder of such paragraph.

11.03 The foregoing indemnification by the Contractor is not a waiver of the City's tort of immunity.

ARTICLE 12 DISPUTE RESOLUTION

12.01 Dispute resolution shall be in accordance with the process set forth in the Standard General Conditions of the Construction Contract, as modified.

ARTICLE 13 MISCELLANEOUS

13.01 Terms. Terms used in this Agreement will have the meanings indicated in the Standard General Conditions of the Construction Contract, as modified.

13.02 Restrictions on Public Improvement Contracts

.1 In accordance with the Bid Documents, all bid documents related to public improvements exceeding \$75,000 in value must include a statement that encourages participation of small, minority, and women's business enterprises.

.2 Contractor, in accordance with Ark. Code Ann. §§ 18-44-503 and 22-9-401, must furnish a surety bond in an amount equal to the contract price.

.3 In accordance with Ark. Code Ann. § 22-9-601, et seq., Contractor is subject to the retainage provisions which allows the City to retain five percent (5%) of payments until final project completion.

.4 Contractor acknowledges that a public right-of-way is an easement used for ingress and egress to property. These easements are held by the City for the benefit of the public at large. As part of any public improvement contract performed in or about public rights-of-way, the City requires and Contractor agrees that such rights-of-way will be repaired, to the extent possible, to the condition prior to the performance of work.

13.03 Choice of Law. The parties hereto agree that this Contract shall be construed under Arkansas law, excluding its conflict of laws rules. The parties further agree that proper jurisdiction and venue for any cause of action arising from this Contract shall be vested in either the U.S. District Court for the Eastern District of Arkansas or the Circuit Court of Pulaski County, Arkansas.

13.04 Non-Waiver. No delay or failure to exercise any right under this Contract shall impair any such right or be construed to be a waiver thereof. No waiver shall be effective unless in writing signed by the party waiving. A waiver of a right on one occasion shall not be deemed to be waiver of such right on any other occasion. A waiver of a right on one occasion shall not be deemed to be a waiver of any other right on that occasion.

13.05 No Assignment. The Project to be performed pursuant to this Contract is personal in nature, and Contractor may not, voluntarily or by operation of law, assign or transfer any of its rights or obligations under this Contract without the prior written consent of the City.

13.06 *Merger*. This Contract constitutes the full understanding of the parties, a complete allocation of risks between them and a complete and exclusive statement of the terms and conditions of their agreement, related to the services provided hereunder. All prior agreements, negotiations, dealings and understandings, whether written or oral, regarding the subject matter hereof, are superseded by and merged into this Contract.

13.07 *Modification*

No conditions, usage of trade, course of dealing or performance, understanding or agreement purporting to modify, vary the terms or conditions of the Contract shall be binding unless hereafter made in writing and signed by the party to be bound, and no modification shall be effected by the acknowledgment or acceptance of any forms containing terms or conditions or variance with or in addition to those set forth in this Contract.

13.08 *Severability*. 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 Owner 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.

13.09 *No Presumption against Drafter*. Each of the parties hereto has jointly participated in the negotiation and drafting of this Agreement. In the event an ambiguity or a question of intent or interpretation arises, this Agreement shall be construed as if drafted jointly by each of the parties hereto and no presumptions or burdens of proof shall arise favoring any party by virtue of the authorship of any provisions of this Agreement.

13.10 *Counterpart Execution*. This Contract may be executed in two or more counterparts, each of which is deemed as original but all constitute one and the same instrument.

13.11 *Filing*. This document shall be filed in the official records of the City Clerk of the City of North Little Rock, Arkansas. Either party may additionally file this document in any other governmental office deemed appropriate; however, the parties waive all claims and defenses in law or equity based upon such additional filing.

[Signatures on the Next Page]

IN WITNESS WHEREOF, the parties have caused this Contract to be duly executed intending to be bound thereby.

City of North Little Rock

Contractor

By: _____
Joe A. Smith, Mayor

By: _____

Name/Title

ATTEST:

Diane Whitbey, City Clerk

Contract reviewed and approved as to form by:

Amy Beckman Fields
North Little Rock City Attorney

BY: _____
Deputy City Attorney Date

NOTICE TO PROCEED

TO:

PROJECT: FIRST ASSEMBLY DRAINAGE REHABILITATION
City Project No. 18-08

You are hereby notified to commence WORK in accordance with the Contract dated _____ on or before _____, and you are to complete the WORK within _____ consecutive calendar days thereafter. The date of completion of all WORK is therefore _____, 20__.

Owner

By _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by

_____ this the _____ day of _____ 20__.

By _____

Title _____

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT AS MODIFIED BY CNLR

Prepared by



Issued and Published Jointly by



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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
 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 or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Bid*—The offer of a Bidder submitted on the prescribed form under a contract that solicits bids and provides a bid form setting forth the prices for the Work to be performed.
 5. *Bidder*—An individual or entity that submits a Bid to Owner.
 6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
 7. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the prescribed bid form, and the Bid with any attachments.
 8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
 10. *Claim*—(a) A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein: seeking an adjustment of Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work

under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract; or (b) a demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal; or seeking resolution of a contractual issue that Engineer has declined to address. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. ("CERCLA"); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5501 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. ("RCRA"); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
12. *Contract*—The entire and integrated written contract between the Owner and Contractor concerning the Work.
13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.
15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
17. *Cost of the Work*—See Paragraph 13.01 for definition.
18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
20. *Engineer*—The individual, designated representative or entity named as such in the Agreement.
21. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
22. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto. The presence at the Site of materials that are necessary for

the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.

23. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction, or purporting to have jurisdiction.
24. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
25. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date or by a time prior to Substantial Completion of all the Work.
26. *Notice of Award*—The written notice by Owner to the successful Bidder of Owner's acceptance of the Bid, if the Owner decides to proceed with the Work. The Notice of Award alone shall not create remedies of any Work performed under the Agreement or Contract Documents. Until the Contractor receives a Notice to Proceed from the Owner, the Contractor shall not proceed with work and has no remedy against the Owner for performing any Work related to the Project before receiving that Notice.
27. *Notice to Proceed*—A 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 the Work.
28. *Owner*—The individual, designated representative or entity named as such in the Agreement.
29. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
30. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.
31. *Project Manual*—The written documents prepared for, or made available for, procuring and constructing the Work, including but not limited to the Bidding Documents or other construction procurement documents, geotechnical and existing conditions information, the Agreement, bond forms, General Conditions, Supplementary Conditions, and Specifications. The contents of the Project Manual may be bound in one or more volumes.
32. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative or "RPR" includes any assistants or field staff of Resident Project Representative.
33. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.

34. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals and the performance of related construction activities.
35. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor’s Applications for Payment.
36. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
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, and such other lands furnished by Owner which are designated for the use of Contractor.
38. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
39. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
40. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
41. *Successful Bidder*—The Bidder whose Bid the Owner accepts, and to which the Owner makes an award of contract, subject to stated conditions.
42. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
43. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
44. *Technical Data*—Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then the data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor are

hereby defined as Technical Data with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06.

45. *Termination for Convenience* – includes, but without limitation, non-appropriation of funds or change of law.
46. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including but not limited to those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, fiber optic transmissions, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
47. *Unit Price Work*—Work to be paid for on the basis of unit prices.
48. *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; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
49. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and Engineer, in which Engineer recommends an addition, deletion, or revision in the Work.

1.02 *Terminology*

- A. The words and terms discussed in the following paragraphs are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:*
 1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:*
 1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective:*

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or 15.04).

E. *Furnish, Install, Perform, Provide:*

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

- A. *Bonds:* When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Contractor’s Insurance:* When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract), the certificates and other evidence of insurance required to be provided by Contractor in accordance with Article 6.
- C. *Evidence of Owner’s Insurance:* After receipt of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each named insured and additional insured (as identified in the

Supplementary Conditions or otherwise), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully executed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

- A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Contract (or as otherwise specifically required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, the Contractor shall arrange for, either at such time as the engineer shall specifically direct, if any, or otherwise, a conference attended by Owner, Contractor, Engineer, and others as appropriate to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records. Contractor shall have no remedies for any Work Performed under the Agreement or Contract Documents until the Owner issues the Notice to Proceed.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment the Contractor shall arrange for, either at such time as the engineer shall specifically direct, if any, or otherwise a conference, attended by Contractor, Engineer, and others as appropriate, to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.03.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
 - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 - 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through access to a secure Project website.
- B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the items, or from those established in applicable transmittal protocols.

ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- 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.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic or digital versions of the Contract Documents (including any printed copies derived

from such electronic or digital versions) and the printed record version, the printed record version shall govern.

- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

3.02 *Reference Standards*

- A. Standards Specifications, Codes, Laws and Regulations
 - 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 - 2. No provision of any such standard specification, manual, reference standard, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

- A. *Reporting Discrepancies:*
 - 1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. The Contractor shall be responsible for verifying the accuracy of all grades, elevations, dimensions, locations and field measurements. In all cases of the interconnection of its Work with existing or other Work, the Contractor shall verify at the site all dimensions relating to such existing or other Work. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01. Any errors due to the Contractor's failure to verify all such grades, elevations, dimensions, locations, or field measurements shall be promptly rectified by the Contractor without any additional costs to the Owner or extensions of Contract Times.

2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.
 3. Contractor shall be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents that, upon careful study and verification, Contractor reasonably should have known.
- B. *Resolving Discrepancies:*
1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
 - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work thereunder.
- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly give written notice to Owner and Contractor that Engineer is unable to provide a decision or interpretation. If

Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
1. 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 or its consultants, including electronic media editions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on or before applicable date to be specified in a written Notice to Proceed, and fully complete the Work within 180 calendar days thereafter. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

- B. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to such date.

4.03 *Reference Points*

- C. Engineer shall 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, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument 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 or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 11.
- B. 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, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Times and Contract Price. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
 - 1. severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 - 2. abnormal weather conditions;
 - 3. acts or failures to act of utility owners (other than those performing other work at or adjacent to the Site by arrangement with the Owner, as contemplated in Article 8); and
 - 4. acts of war or terrorism.
- D. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with

reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5.

- E. Paragraph 8.03 governs delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.
- F. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor.
- G. Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under this paragraph within 30 days of the commencement of the delaying, disrupting, or interfering event.

ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 Availability of Lands

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- 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.

5.02 Use of Site and Other Areas

- A. *Limitation on Use of Site and Other Areas:*
 - 1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
 - 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.12, or otherwise;

(b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or at law; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claim, and against all 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 claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.
- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading of Structures:* 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 structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

A. *Reports and Drawings:*

1. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site;
2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities);

Such reports or drawings shall not excuse the Contractor and each Subcontractor from the duty to independently evaluate and satisfy themselves as to the site conditions and limitations under which the Work is to be performed, including, without limitation, (1) the location, condition, layout, and nature of the project site and surrounding areas; (2) generally prevailing climatic conditions; (3) anticipated labor, supply, and costs; (4) availability and cost of materials, tools, and equipment; and (5) other similar issues. Further, the Owner assumes no responsibility or liability for the physical condition or safety of the project site or any improvement located on the project site. Except as set forth in Article 5, the Contractor shall be solely responsible for providing a safe place for the performance of the Work. The Owner shall not be required to make adjustments in either the Contract Price or Contract Times arising from a failure by the Contractor or

any Subcontractor to independently evaluate and satisfy themselves as to the site conditions and limitations as required in this Paragraph; and

3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

A. *Notice by Contractor:* If Contractor discovers or should have discovered that any subsurface or physical condition that is uncovered or revealed at the Site either:

1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate; or
2. is of such a nature as to require a change in the Drawings or Specifications; or
3. differs materially from that shown or indicated in the Contract Documents; or
4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, immediately, and in any event not more than 24 hours after the time the Contractor discovers and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine the necessity of Owner's obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site

condition categories in Paragraph 5.04.A above; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.

- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Possible Price and Times Adjustments:*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
 - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
 2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise; or
 - b. the existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice as required by Paragraph 5.04.A.
 3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
 4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than

30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or adjacent to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
1. Owner and Engineer do not warrant or guarantee the accuracy or completeness of any such information or data provided by others; and
 2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents as being at the Site;
 - c. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 - d. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, then Contractor shall before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), immediately attempt to identify the owner of such Underground Facility and to as many of them as the Contractor can by the end of next business day after the Contractor learns of the Underground Facility, give written notice to that owner and to Owner and Engineer.
- C. *Engineer's Review:* Engineer will review the Underground Facility and conclude whether such Underground Facility was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the Underground Facility in question; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and advise Owner in writing of Engineer's findings, conclusions, and recommendations. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question,

addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.

E. *Possible Price and Times Adjustments:*

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, or both, to the extent that any existing Underground Facility at the Site that was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the existence or actual location of the Underground Facility in question;
 - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
 - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times; and
 - d. Contractor gave the notice required in Paragraph 5.05.B.
2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

5.06 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
2. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. The Contractor must make all reasonable efforts to discover and locate any Hazardous Environmental Condition(s) at the site that may present a substantial danger to persons or property exposed thereto in connection with the Work at the site. The Contractor is liable for any damages caused by any Hazardous Environmental Condition(s) that Contractor knew or, or by the exercise of reasonable efforts should have known or, and any damages caused by reason of any Hazardous Environmental Condition(s) created, known to, or encountered by Contractor, its Subcontractor, Supplier, or anyone else for who the Contractor is responsible. Within 24 hours of the time when the Contractor discovers any such Hazardous Environmental Condition(s), the Contractor will follow the procedures set forth in Paragraph
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent attributable to any Work stoppage, evaluation, corrective action, or other conditions caused by or arising from any Hazardous Environmental Condition(s) addressed in Paragraph 5.06. C and D. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly 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 condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.
- F. [DELETED]
- G. [DELETED]

- H. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or, evaluation, corrective action, or other conditions caused by or arising from any Hazardous Environmental Conditions(s) addressed in Paragraph 5.06.C and D, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off.
- I. If after receipt of such 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 the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.
- J. [DELETED]
- K. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, 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 the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- L. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6 – BONDS AND INSURANCE

6.01 Performance, Payment, and Other Bonds

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to at least equal to the Contract Price, as security for the faithful performance and payment of all of Contractor's obligations under the Contract. By issuing the payment and performance bonds required by this paragraph, the surety for those bonds consents in advance to non-cardinal changes that are contemplated, or that may commonly issue from time to time, under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the Supplementary Conditions, or other specific provisions of the Contract. Contractor shall also furnish such other bonds as are required by the Supplementary Conditions or other specific provisions of the Contract.
- B. All bonds shall be in the form prescribed by the Contract except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in "Companies

Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” as published in Circular 570 (as amended and supplemented) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual’s authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

- C. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds in the required amounts.
- D. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or its right to do business is terminated in any state or jurisdiction where any part of the Project is located, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the bond and surety requirements above.
- E. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner’s termination rights under Article 16.
- F. Upon request, Owner shall provide a copy of the payment bond to any Subcontractor, Supplier, or other person or entity claiming to have furnished labor or materials used in the performance of the Work.

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this Article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Contractor shall be obtained from insurance companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Contractor shall deliver to Owner, with copies to each named insured and additional insured (as identified in this Article, in the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Contractor has obtained and is maintaining the policies, coverages, and endorsements required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- D. [DELETED]
- E. Failure of Owner to demand such certificates or other evidence of the Contractor’s full compliance with these insurance requirements, or failure of Owner to identify a deficiency

in compliance from the evidence provided, shall not be construed as a waiver of the Contractor's obligation to obtain and maintain such insurance.

- F. If Contractor does not purchase or maintain all of the insurance required by the Contract, Contractor shall notify the Owner 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.
- G. If Contractor has failed to obtain and maintain required insurance, Owner may exclude the Contractor from the Site, impose an appropriate set-off against payment, and exercise Owner's termination rights under Article 16.
- H. Without prejudice to any other right or remedy, if Contractor has failed to obtain required insurance, the Owner may elect to obtain equivalent insurance to protect Owner's interests at the expense of the Contractor who was required to provide such coverage, and the Contract Price shall be adjusted accordingly.
- I. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner and other individuals and entities in the Contract.

6.03 Contractor's Insurance

- A. *Workers' Compensation*: Contractor shall purchase and maintain workers' compensation and employer's liability insurance for:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts.
 - 2. United States Longshoreman and Harbor Workers' Compensation Act and Jones Act coverage (if applicable).
 - 3. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees (by stop-gap endorsement in monopolist worker's compensation states).
 - 4. Foreign voluntary worker compensation (if applicable).
- B. *Commercial General Liability—Claims Covered*: Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against:
 - 1. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees.
 - 2. claims for damages insured by reasonably available personal injury liability coverage.
 - 3. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- C. *Commercial General Liability—Form and Content*: Contractor's commercial liability policy shall be written on a 1996 (or later) ISO commercial general liability form (occurrence form) and include the following coverages and endorsements:
 - 1. Products and completed operations coverage:
 - a. Such insurance shall be maintained for three years after final payment.

- b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
 2. Blanket contractual liability coverage, to the extent permitted by law, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
 3. Broad form property damage coverage.
 4. Severability of interest.
 5. Underground, explosion, and collapse coverage.
 6. Personal injury coverage.
 7. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together); or CG 20 10 07 04 and CG 20 37 07 04 (together); or their equivalent.
 8. For design professional additional insureds, ISO Endorsement CG 20 32 07 04, "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- D. *Automobile liability*: Contractor shall purchase and maintain automobile liability insurance against 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. The automobile liability policy shall be written on an occurrence basis.
- E. *Umbrella or excess liability*: Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the paragraphs above. Subject to industry-standard exclusions, the coverage afforded shall follow form as to each and every one of the underlying policies.
- F. *Contractor's pollution liability insurance*: Contractor shall purchase and maintain a policy covering third-party injury and property damage claims, including clean-up costs, as a result of pollution conditions arising from Contractor's operations and completed operations. This insurance shall be maintained for no less than three years after final completion.
- G. *Additional insureds*: The Contractor's commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner and Engineer, and any individuals or entities identified in the Supplementary Conditions; include coverage for the respective officers, directors, members, partners, employees, agents, 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 (including as applicable those arising from both ongoing and completed operations) on a non-contributory basis. Contractor shall obtain all necessary endorsements to support these requirements.
- H. *Contractor's professional liability insurance*: If Contractor will provide or furnish professional services under this Contract, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable

professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the insured party is legally liable. It shall be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. If such professional design services are performed by a Subcontractor, and not by Contractor itself, then the requirements of this paragraph may be satisfied through the purchasing and maintenance of such insurance by such Subcontractor.

- I. *General provisions:* The policies of insurance required by this Paragraph 6.03 shall:
1. include at least the specific coverages provided in this Article.
 2. be written for not less than the limits of liability provided in this Article and in the Supplementary Conditions, or required by Laws or Regulations, whichever is greater.
 3. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 10 days prior written notice has been given to Contractor. Within three days of receipt of any such written notice, Contractor shall provide a copy of the notice to Owner, Engineer, and each other insured under the policy.
 4. remain in effect at least until final payment (and longer if expressly required in this Article) and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract Documents.
 5. be appropriate for the Work being performed and provide protection from claims that may arise out of or result from Contractor's 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.
- J. The coverage requirements for specific policies of insurance must be met by such policies, and not by reference to excess or umbrella insurance provided in other policies.

6.04 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 6.03, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.
- B. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

6.05 *Property Insurance*

- A. *Builder's Risk:* Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the full insurable replacement cost thereof (subject to such deductible

amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the Owner and Contractor as named insureds, and all Subcontractors, and any individuals or entities required by the Supplementary Conditions to be insured under such builder's risk policy, as insureds or named insureds. For purposes of the remainder of this Paragraph 6.05, Paragraphs 6.06 and 6.07, and any corresponding Supplementary Conditions, the parties required to be insured shall collectively be referred to as "insureds."
2. be written on a builder's risk "all risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire; lightning; windstorm; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; water damage (other than that caused by flood); and such other perils or causes of loss as may be specifically required by the Supplementary Conditions. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance may be provided through other insurance policies acceptable to Owner and Contractor.
3. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.
4. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects).
5. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).
6. extend to cover damage or loss to insured property while in transit.
7. allow for partial occupation or use of the Work by Owner, such that those portions of the Work that are not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
8. allow for the waiver of the insurer's subrogation rights, as set forth below.

9. provide primary coverage for all losses and damages caused by the perils or causes of loss covered.
 10. not include a co-insurance clause.
 11. include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.
 12. include performance/hot testing and start-up.
 13. be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Work by Owner, until the Work is complete.
- B. *Notice of Cancellation or Change:* All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured.
- C. *Deductibles:* The purchaser of any required builder's risk or property insurance shall pay for costs not covered because of the application of a policy deductible.
- D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide notice of such occupancy or use to the builder's risk insurer. The builder's risk insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy; rather, those portions of the Work that are occupied or used by Owner may come off the builder's risk policy, while those portions of the Work not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
- E. *Additional Insurance:* If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.05, it may do so at Contractor's expense.
- F. *Insurance of Other Property:* If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, such as tools, construction equipment, or other personal property owned by Contractor, a Subcontractor, or an employee of Contractor or a Subcontractor, then the entity or individual owning such property item will be responsible for deciding whether to insure it, and if so in what amount.

6.06 *Waiver of Rights*

- A. All policies purchased in accordance with Paragraph 6.05, expressly including the builder's risk policy, 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 insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.
- B. [DELETED]

- C. [DELETED]
- D. Contractor shall be responsible for assuring that the agreement under which a Subcontractor performs a portion of the Work contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by builder's risk insurance and any other property insurance applicable to the Work.

6.07 Receipt and Application of Property Insurance Proceeds

- A. Any insured loss under the builder's risk and other policies of insurance required by Paragraph 6.05 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act in good faith as to the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.05 shall distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the money so received applied on account thereof, and the Work and the cost thereof covered by Change Order, if needed.

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

7.01 Supervision and Superintendence

- A. Contractor shall supervise, inspect, 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 the means, methods, techniques, sequences, and procedures of construction. Contractor shall be responsible to see that the completed Work complies accurately with the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent, who shall be the individual designated by the Contractor under Paragraph 2.04.B who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.02 *Labor; Working Hours*

- 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.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.03 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, 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 performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work shall be of good quality and new, except as otherwise provided in the Contract Documents. All warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. The Contractor agrees to passing to the Owner at the time of final completion of the Work any and all manufacturer's warranties relating to materials and labor used in the Work, and the Contractor further agrees to perform the Work in such a manner as to preserve any and all manufacturer's warranties. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.04 *"Or Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item 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 is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment, or items from other proposed suppliers under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer shall deem it an "or equal"

item. For the purposes of this paragraph, a proposed item of material or equipment will be considered functionally equal to an item so named if:

- a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3) it has a proven record of performance and availability of responsive service; and
 - 4) it is not objectionable to Owner.
 - b. Contractor certifies that, if approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense:* Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal", which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination:* Neither approval nor denial of an "or-equal" request shall result in any change in Contract Price. The Engineer's denial of an "or-equal" request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.
- E. *Treatment as a Substitution Request:* If Engineer determines that an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer considered the proposed item as a substitute pursuant to Paragraph 7.05.

7.05 *Substitutes*

- A. Unless the specification or description of an item of material or equipment required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment under the circumstances described below. To the extent possible such requests shall be made before commencement of related construction at the Site.

1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of material or equipment from anyone other than Contractor.
 2. The requirements for review by Engineer will be as set forth in Paragraph 7.05.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.
 3. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - a. shall certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design,
 - 2) be similar in substance to that specified, and
 - 3) be suited to the same use as that specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times,
 - 2) whether 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 other work on the Project) to adapt the design to the proposed substitute item, and
 - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from that specified, and
 - 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination:* Engineer will be allowed seven (7) days, or such other reasonable period of time as the Owner and Contractor shall agree, to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts,

including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.

- C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.05.D, by timely submittal of a Change Proposal.

7.06 Concerning Subcontractors, Suppliers, and Others

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. No later than 14 days after the execution of the Agreement by the Contractor and Owner, the Contractor shall furnish the Owner and the Engineer, in writing, with (1) the name, trade, and subcontract amount for each Subcontractor and (2) the names of all persons or entities proposed as manufacturers of the products identified in the specifications (including those who are to furnish materials or equipment fabricated to a special design) and, where applicable, the name of the installing Subcontractor.
- B. Contractor shall retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable, during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within five days.
- E. All subcontracts shall be in writing and shall specifically provide that the Owner is an intended third-party beneficiary.

- F. Owner may require the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors, Suppliers, or other individuals or entities for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor, Supplier, or other individual or entity so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity.
- G. If Owner requires the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, or both, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- H. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.
- I. On a monthly basis Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- J. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions.
- K. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.
- L. Contractor shall restrict all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed herein.
- M. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- N. All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer.
- O. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by the particular Subcontractor or Supplier.

P. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier, or other individual or entity; nor
2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

7.07 *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.
- B. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, 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.

7.08 *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 the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Contractor shall pay all charges of utility owners for connections for providing permanent service to the Work, and Owner shall pay all charges of such utility owners for costs related to providing post construction service to the Work.

7.09 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.10 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the 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 performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, 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 such Work or other action. It shall not be Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Owner or Contractor may give notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.11 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings, to which the Owner and the Engineer may interpose reasonable objections. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.12 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. 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 persons on the Site or who may be affected by the Work;
 - 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, other work in progress, 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 relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify Owner; the owners of adjacent property, Underground Facilities, and other utilities; and other contractors and utility owners performing work at or adjacent to the Site, when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 7.12.A.2 or 7.12.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (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 any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- F. Contractor's duties and responsibilities for safety and protection 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 15.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).
- G. Contractor's duties and responsibilities for safety and protection shall resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.13 Safety Representative

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

7.14 Hazard Communication Programs

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer written notice immediately, and in no instance later than the end of the next business day after the day on which the alleged emergency occurred. If Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

7.16 *Shop Drawings, Samples, and Other Submittals*

A. *Shop Drawing and Sample Submittal Requirements:*

1. Before submitting a Shop Drawing or Sample, Contractor shall have:

- a. reviewed and coordinated the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
- b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
- c. determined and verified the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
- d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that submittal, and that Contractor approves the submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review and approval of each such variation.

- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals. Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

- a. Contractor shall submit the number of copies required in the Specifications.
- b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data

to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.D.

2. *Samples:*
 - a. Contractor shall submit the number of Samples required in the Specifications.
 - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 7.16.D.
3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Other Submittals:* Contractor shall submit other submittals to Engineer in accordance with the accepted Schedule of Submittals, and pursuant to the applicable terms of the Specifications.
- D. *Engineer's Review:*
 1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto.
 3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
 4. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order.
 5. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 7.16.A and B.
 6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, shall not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.

7. Neither Engineer's receipt, review, acceptance nor approval of a Shop Drawing, Sample, or other submittal shall result in such item becoming a Contract Document.
 8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.D.4.
- E. *Resubmittal Procedures:*
1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.
 2. Contractor shall furnish required submittals with sufficient information and accuracy to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing a fourth or subsequent submittal of a Shop Drawings, sample, or other item requiring approval, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.
 3. If Contractor requests a change of a previously approved submittal item, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

7.17 *Contractor's General 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.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 1. observations by Engineer;
 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 4. use or occupancy of the Work or any part thereof by Owner;
 5. any review and approval of a Shop Drawing or Sample submittal;
 6. the issuance of a notice of acceptability by Engineer;

7. any inspection, test, or approval by others; or
 8. any correction of defective Work by Owner.
- D. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract shall govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, 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 the performance of the Work, provided that 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 in whole or in part from any negligent act or omission caused by the Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A 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, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 7.18.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

7.19 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable Laws and Regulations.

- B. If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this paragraph, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 7.16.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria specified by Owner or Engineer.

ARTICLE 8 – OTHER WORK AT THE SITE

8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any utility work at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford each other contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

- D. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 8, Contractor shall inspect such other work and immediately report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
 - 1. the identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 - 2. an itemization of the specific matters to be covered by such authority and responsibility; and
 - 3. the extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

- A. If, in the course of performing other work at or adjacent to the Site for Owner, the Owner's employees, any other contractor working for Owner, or any utility owner causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment shall take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract. When applicable, any such equitable adjustment in Contract Price shall be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other

contractor or utility owner, then Owner may impose a set-off against payments due to Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this paragraph.

- C. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due to Contractor.
- D. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all 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 such damage, delay, disruption, or interference.

ARTICLE 9 – OWNER'S RESPONSIBILITIES

9.01 Communications to Contractor

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 Replacement of Engineer

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents shall be that of the former Engineer.

9.03 Furnish Data

- A. Owner shall furnish the data required of Owner under the Contract Documents.

9.04 Pay When Due

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 Lands and Easements; Reports, Tests, and Drawings

- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.

- B. Engineer's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

- A. The 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.

9.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

- A. [DELETED]

9.12 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *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.

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site 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 generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.08. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, 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.

10.03 *Project Representative*

- A. If Owner and Engineer have agreed that Engineer shall designate, in writing, a person to act as its Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and shall include the authority to transmit instructions, receive information, render decisions relative to the Contract Documents, and otherwise act on behalf of the Engineer, subject to the Supplementary Conditions providing otherwise, and the limitations on the responsibilities thereof will be as provided in Paragraph 10.08. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent, or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

10.04 *Rejecting Defective Work*

- A. Engineer has the authority to reject Work in accordance with Article 14.

10.05 *Shop Drawings, Change Orders and Payments*

- A. Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, are set forth in Paragraph 7.16.
- B. Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, are set forth in Paragraph 7.19.
- C. Engineer's authority as to Change Orders is set forth in Article 11.
- D. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.06 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.07 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.08 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. 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 the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review 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 15.06.A 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.
- E. The limitations upon authority and responsibility set forth in this Paragraph 10.08 shall also apply to the Resident Project Representative, if any.

10.09 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs (if any) of which Engineer has been informed.

ARTICLE 11 – AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK

11.01 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended or supplemented by a Change Order executed pursuant to Paragraph 11.06, a Work Change Directive, or a Field Order.

1. *Change Orders:*

- a. If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.
- b. Owner and Contractor may amend those terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, without the recommendation of the Engineer. Such an amendment shall be set forth in a Change Order.

2. *Work Change Directives:* A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.04 regarding change of Contract Price. Contractor must submit any Change Proposal seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 30 days after the completion of the Work set out in the Work Change Directive. Owner must submit any Claim seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 60 days after issuance of the Work Change Directive.

3. *Field Orders:* Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.02 *Owner-Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Such changes shall be supported by Engineer's recommendation, to the extent the change involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters. Such changes may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or

by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.03 *Unauthorized Changes in the Work*

- A. 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, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.
- B. An agreed Change Order that adjusts the Contract Price, or the Contract Time, or both, shall be accomplished only by a written and executed Change Order. Accordingly, no course of conduct or dealings between the parties, no expressed or implied acceptance of alterations or additions to the Work, and no claim that the Owner has been unjustly enriched by any alterations or additions to the Work shall be the basis of any claim for an increase in any amount due under the contract documents or in any time period provided for in the Contract Documents, unless executed as a Change Order, including, but not limited to, all direct and indirect costs associated with such change and any and all adjustments to the Contract Price and the Contract Times. In the event a Change Order increases the Contract Price, the Contractor shall include the Work covered by such Change Order in applications for payments as if such Work were originally part of the Agreement.

11.04 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment of Contract Price shall comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:
 - 1. where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03); or
 - 2. where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.04.C.2); or
 - 3. where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.04.C).
- C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit shall be determined as follows:
 - 1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 13.01.B.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.01.C.2.a and 11.01.C.2.b is that the Contractor's fee shall be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.A.1 and 13.01.A.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of five percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted work the maximum total fee to be paid by Owner shall be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the work;
 - d. no fee shall be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
 - e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such 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 11.04.C.2.a through 11.04.C.2.e, inclusive.

11.05 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment in the Contract Times shall comply with the provisions of Article 12.
- B. An adjustment of the Contract Times shall be subject to the limitations set forth in Paragraph 4.05, concerning delays in Contractor's progress.

11.06 *Change Proposals*

- A. Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; appeal an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; contest a set-off against payment due; or seek other relief under the Contract. The Change Proposal shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.

1. *Procedures*: Contractor shall submit each Change Proposal to Engineer promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision. The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal. The supporting data shall be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event. Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.
 2. *Engineer's Action*: Engineer will review each Change Proposal and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.
 3. *Binding Decision*: Engineer's decision will be final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- B. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice shall be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

11.07 Execution of Change Orders

- A. Owner and Contractor shall execute appropriate Change Orders covering:
1. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 2. changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 3. changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.02, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters; and
 4. changes in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results under Paragraph 11.06, or Article 12.

- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of this Paragraph 11.07, it shall be deemed to be of full force and effect, as if fully executed.

11.08 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety 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), and such notice has not been consented to in advance by the surety, the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12 – CLAIMS

12.01 *Claims*

- A. *Claims Process:* The following disputes between Owner and Contractor shall be submitted to the Claims process set forth in this Article:
 - 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 - 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents; and
 - 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters.
- B. *Submittal of Claim:* The party submitting a Claim shall deliver it directly to the other party to the Contract within 14 days after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim shall rest with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, or both, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.
- C. *Review and Resolution:* The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim shall be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation:*
 - 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate shall stay the Claim submittal and response process.
 - 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the

Claim submittal and decision process shall resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process shall resume as of the date of the conclusion of the mediation, as determined by the mediator.

3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action shall be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim shall be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim shall be incorporated in a Change Order to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or
 2. To determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 13.01.C, and shall include only the following items:
 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. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. 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' compensation, health and retirement benefits, bonuses, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized in writing by Owner.

2. Cost of all materials and equipment 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 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 Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any 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 and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
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, but only to the extent authorized and approved in writing by the Engineer.
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. Cost, 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, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the 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, and other similar taxes related to the Work, and for which Contractor is liable, as 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 (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 6.05), provided such losses and damages 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. Such losses 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.
 - g. The cost of utilities, fuel, and sanitary facilities at the Site.
 - h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
 - i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.
- C. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:
1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety 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 branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here 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. 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.
 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.
- D. *Contractor's Fee:* When the Work as a whole is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in

Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 11.04.C.

- E. *Documentation*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances*: Contractor agrees that:
 - 1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- C. *Contingency Allowance*: Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

13.03 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 unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement (the quantity of an item will be deemed to differ materially and significantly, without limitation, if it exceeds the estimated quantity by more than 25 percent).
- B. 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. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. 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.
- D. 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 (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual

conditions or more accurate data) upon Owner and Contractor, subject to the provisions of the following paragraph.

- E. Within 30 days of Engineer's written decision under the preceding paragraph, Contractor may submit a Change Proposal, or Owner may file a Claim, seeking an adjustment in the Contract Price if:
 - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement;
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. Contractor believes that it is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price, and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 14 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

14.01 Access to Work

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

14.02 Tests, Inspections, and Approvals

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work shall be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
 - 1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;

2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
3. by manufacturers of equipment furnished under the Contract Documents;
4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests shall be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering shall be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted in the time set forth in the Contractor's notice, or by the end of the next business day after the Engineer receives the Contractor's notice, whichever is later.

14.03 *Defective Work*

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties:* When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages:* In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work shall be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

- A. Engineer has the authority to require special inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then 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, and provide all necessary labor, material, and equipment.
 - 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
 - 2. If the uncovered 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, replacement, and reconstruction, unless the Contractor fails to provide written notice as required in Paragraph 14.02F. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *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 perform the Work in such a way that the completed Work will conform to the Contract Documents, then 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, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 Owner May Correct Defective Work

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer, 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, then Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or 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, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15 – PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 Progress Payments

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 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 during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments:*
 - 1. At least 20 days before the date established in the Agreement for each progress payment (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, and additionally the following:

- a. In addition to the current Contractor's lien waiver, a duly executed and acknowledged sworn statement showing all Subcontractors and material suppliers with whom the Contractor has entered into Subcontracts, the amount of each such Subcontract, the amount requested for each Subcontractor and Supplier who is to be paid any sum under the Application for Payment, and the amount to be paid to the Contractor from such progress payment, together with similar sworn statements from all such Subcontractors and Suppliers;
- b. Duly executed waivers of mechanics' and material Suppliers' liens from all Subcontractors and, when appropriate, from material suppliers' liens from all Subcontractors, establishing payment or satisfaction or payment of all amounts requested of the Contractor on behalf of such entities or persons in any previous application for payment; and
- c. All information and materials required to comply with the requirements of the Contract Documents or reasonably requested by the Owner or the Engineer. If required by the Owner's title insurer, if any, the Contractor shall execute a personal gap undertaking in form and substance satisfactory to such title insurer.

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, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. 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.
3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. Review of Applications:

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, 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.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;

- b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
 3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
 4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
 5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
 6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

- d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
- e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due:*

- 1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner:*

- 1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. claims have been made against Owner on account of Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;
 - b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Contractor has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. the Work is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - h. the Contract Price has been reduced by Change Orders;
 - i. an event that would constitute a default by Contractor and therefore justify a termination for cause has occurred;
 - j. liquidated damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
 - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - l. there are other items entitling Owner to a set off against the amount recommended.

2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed shall be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.
3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 15.01.C.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than seven days after the time of payment by Owner.

15.03 *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 and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.
- B. At a time the Engineer determines to be reasonable after Contractor's notification, Owner, 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 the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which shall fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.

- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed 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 usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
 - 1. At any time Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through E for that part of the Work.
 - 2. At any time Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 - 3. 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 15.03 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.
 - 4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.05 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

A. *Application for Payment:*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.11), and other documents, Contractor may make application for final payment.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.
 - d. a list of all disputes that Contractor believes are unsettled; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

B. *Engineer's Review of Application and Acceptance:*

1. 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 as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within ten days after receipt of the final

Application for Payment, indicate in writing Engineer's recommendation of final payment and present the Application for Payment to Owner for payment. Such recommendation shall account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to the provisions of Paragraph 15.07. Otherwise, Engineer will return the Application for Payment 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 for Payment.

- C. *Completion of Work*: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment.
- D. *Payment Becomes Due*: Thirty days after the presentation to Owner of the final Application for Payment and accompanying documentation, the amount recommended by Engineer (less any further sum Owner is entitled to set off against Engineer's recommendation, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.

15.07 *Waiver of Claims*

- A. The making of final payment will not constitute a waiver by Owner of claims or rights against Contractor. Owner expressly reserves claims and rights arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 15.05, from Contractor's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from outstanding Claims by Owner, or from Contractor's continuing obligations under the Contract Documents.
- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted or appealed under the provisions of Article 17.

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed 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, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such other adjacent areas;
 - 2. correct such defective Work;
 - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and

4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay 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 such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).
- C. 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.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16 – SUSPENSION OF WORK AND TERMINATION

16.01 Owner May Suspend Work

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension. Any Change Proposal seeking such adjustments shall be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 Owner May Terminate for Cause

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply the authorized representative required by Paragraph 2.04.B, sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule);
 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or

4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) ten days written notice that Owner is considering a declaration that Contractor is in default and termination of the contract, Owner may proceed to:
 1. declare Contractor to be in default, and give Contractor (and any surety) notice that the Contract is terminated; and
 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within seven days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.
- F. 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, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond shall govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate For Convenience*

- A. The Owner may, at any time, terminate the Contract in whole or in part for the Owner's convenience and without cause. Termination by the Owner under this paragraph shall be by a notice of termination delivered to the Contractor specifying the extent of termination and the effect date.

- B. Upon receipt of a notice of termination for convenience, the Contractor shall immediately, in accordance with instructions from the Owner, proceed with performance of the following duties regardless of delay in determining or adjusting amounts due under this paragraph:
1. Cease operations as specified in the notice;
 2. Place no further orders and enter into no further subcontracts for materials, labor, services, or facilities except as necessary to complete continued portions of the Contract;
 3. Terminate all subcontracts and orders to the extent they relate to the Work terminated;
 4. Proceed to complete the performance of Work not terminated; and
 5. Take actions that may be necessary, or that the Owner may direct, for the protection and preservation of the terminated Work.
- C. Upon such termination, the Contractor shall recover as its sole remedy payment of the percentage of the Contract Price equal to the percentage of the work performed satisfactorily and not previously paid for as determined by the Engineer. The Contractor hereby waives and forfeits all other claims for payment and damages, including, without limitation, anticipated profits or revenue or other economic loss arising out of or resulting from such termination.
- D. The Owner shall be credited for: (1) payments previously made to the Contractor for the terminated portion of the Work; (2) claims that the Owner has against the Contractor under the Contract; and (3) the value of the materials, supplies, equipment, or other items that are to be disposed of by the Contractor that are part of the Contract Price.

16.04 Contractor May Stop Work or Terminate

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17 – FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this Article:
1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full; and
 2. Disputes between Owner and Contractor concerning the Work or obligations under the Contract Documents, and arising after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this Article, Owner or Contractor may:
1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions; or
 2. agree with the other party to submit the dispute to another dispute resolution process; or
 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18 – MISCELLANEOUS

18.01 *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:
1. delivered in person, by a commercial courier service or otherwise, to the individual or to a member of the firm or to an officer of the corporation for which it is intended; or
 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the sender of the notice.

18.02 *Computation of Times*

- A. When any period of time is referred to in the Contract 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.

18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto 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. 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.

18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

- A. A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Contract. No waiver shall be effective unless in writing signed by the party waiving.

18.06 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

18.07 *Controlling Law*

- A. This Contract is to be governed by the laws of the State of Arkansas. The parties further agree that proper jurisdiction and venue for any cause of action arising from this Contract shall be vested in either the U.S. District Court for the Eastern District of Arkansas or the Circuit Court of Pulaski County, Arkansas.

18.08 *Headings*

Article and paragraph headings are inserted for convenience only and do not constitute

SECTION 1
GENERAL REQUIREMENTS

PART 1. GENERAL

1.1 SUMMARY OF WORK

- A. Section Includes:
- 1.2 Description of Project
 - 1.3 Site Investigation
 - 1.4 Existing Utilities
 - 1.5 Payment Schedule
 - 1.6 Application for Payment
 - 1.7 Change Order Procedures
 - 1.8 Cutting and Patching
 - 1.9 Conferences
 - 1.10 Progress Meetings (Not Used)
 - 1.11 Submittal Procedures
 - 1.12 Construction Progress Schedule (Not Used)
 - 1.13 Prosecution of the Work
 - 1.14 Shop Drawings
 - 1.15 Product Data
 - 1.16 Manufacturers' Instructions and Certifications
 - 1.17 Quality Assurance
 - 1.18 References
 - 1.19 Manufacturer's Field Services (Not Used)
 - 1.20 Testing Laboratory Services
 - 1.21 Temporary Electric Power and Lighting (Not Used)
 - 1.22 Temporary Water
 - 1.23 Sanitary Facilities (Not Used)
 - 1.24 Water for Testing (Not Used)
 - 1.25 Temporary Telephone Service (Not Used)
 - 1.26 Temporary Water Control
 - 1.27 Temporary Access Roads and Parking (Not Used)
 - 1.28 Temporary Heating and Ventilating (Not Used)
 - 1.29 Protection of Finished Work
 - 1.30 Progress Cleaning
 - 1.31 Field Offices (Not Used)
 - 1.32 Removal of Utilities, Facilities, and Controls
 - 1.33 Products
 - 1.34 Transportation, Handling, Storage, and Protection
 - 1.35 Substitutions
 - 1.36 System Demonstration (Not Used)
 - 1.37 Contract Closeout Procedures
 - 1.38 Final Cleaning and Inspection
 - 1.39 Final Submittals
 - 1.40 Project Record Documents ("As-Builts") (Not Used)
 - 1.41 Operation and Maintenance Data (Not Used)
 - 1.42 Guarantees, Bonds, Affidavits, and Warranties
 - 1.43 Spare Parts and Maintenance Materials

1.2 DESCRIPTION OF PROJECT

- A. Wherever in these Documents the word "Engineer" appears, it shall be understood to mean NLR City Engineer acting either directly or indirectly as authorized agents of the Owner. In these Documents where the word "Owner" appears, it shall be understood to mean the City of North Little Rock, Arkansas.
- B. The Work is generally described as follows: Removal and replacement of existing concrete road with new concrete road over base material, including maintenance of traffic and miscellaneous items. Work includes all labor, material equipment, supplies, and incidental items necessary to complete the project in conformance with the plans and specifications.

1.3 SITE INVESTIGATION

- A. Information obtained by the Owner regarding site conditions; topography; existing construction of site facilities; and subsurface investigations, including test boring logs are available for examination at the office of the Engineer.

1.4 EXISTING UTILITIES

- A. Contact Arkansas One-Call at 1-800-482-8998 and notify all utilities affected by the construction operation at least 48 hours in advance of beginning work.

1.5 PAYMENT SCHEDULE

- A. Payment shall be made based on the payment schedule submitted by the Contractor in accordance with the Bid Form and the Engineers observation of work completed to date.
- B. Payment will be increased 10 percent of the unit price bid upon completion and acceptance of final clean-up by the Owner and Engineer and in accordance with the General Conditions.

1.6 APPLICATION FOR PAYMENT

- A. Submit three copies of each application on EJCDC Form C-620 or other format approved by Engineer.
- B. Contractor shall submit lien release for all previous progress payments for materials, labor, and equipment that has been billed to the Owner in the present pay request. Lien release shall be submitted to the Engineer with next Application for Payment. Application for Payment submitted without lien release from previous Application for Payment will not be approved for payment until Engineer has received lien release. Submit lien release on the form found at the end of this Section.
- C. Utilize Payment Schedule or Unit Prices for listing items in Application for Payment.
- D. Pay Periods: Calendar Month.

1.7 CHANGE ORDER PROCEDURES

- A. Submit on EJCDC Form 1910-8B.

1.8 CUTTING AND PATCHING

- A. Employ a skilled and experienced installer to perform cutting and patching new Work; restore Work with new products.
- B. Submit written request in advance of cutting or altering existing structures or utilities.
- C. Fit work tight to adjacent elements and maintain integrity of existing work.

1.9 CONFERENCES

- A. Engineer will schedule a preconstruction conference after Notice of Award for all affected parties.
- B. Where required in individual specification Section, convene a pre-installation conference at project site prior to commencing Work of the Section.

1.10 PROGRESS MEETINGS (NOT USED)

1.11 SUBMITTAL PROCEDURES

- A. The Contractor shall submit a sufficient number of copies to allow the Engineer to retain four copies (2 for himself; 2 for the Owner) for review. Submittals shall include shop drawings, electrical diagrams, and catalog cuts for fabricated items and manufactured items (including mechanical and electrical equipment) required for construction.
- B. Submittal form to identify Project, Contractor, subcontractor or supplier, and pertinent Contract Document reference.
- C. Apply Contractor's stamp, signed or initialed, certifying that review, verification of products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.
- D. Identify variations from Contract Documents and product or system limitations which may be detrimental to successful performance of completed Work.
- E. Revise and resubmit as required; identify all changes made since previous submittal.

1.12 CONSTRUCTION PROGRESS SCHEDULE (NOT USED)

1.13 PROSECUTION OF THE WORK

- A. It is expressly understood and agreed that the time of beginning, rate of progress, and time of completion of the Work are the essence of this Contract. The Work shall be prosecuted at such time, and in or on such part or parts of the Project as may be required, to complete the Project as contemplated in the Contract Documents and the approved construction schedule.

- B. Regular Work hours shall be from 8:30 a.m. to 4:00 p.m. Monday through Friday. No Work requiring the presence of the Engineer's representative will be performed outside of regular Work hours. If, however, the Contractor works additional hours (other than specified herein), the Contractor shall pay the Owner for additional engineering services as outlined below.
- C. The cost of additional engineering services shall be borne by the Contractor and will be based upon actual hours worked (labor cost x 3 x 1.5) plus out-of-pocket expenses such as lodging, mileage, materials, etc. Otherwise, the Contractor may perform clean-up work only outside of regular hours (including Saturdays and Sundays). No Work will be accomplished on holidays.

1.14 SHOP DRAWINGS

- A. Submit number of copies which the Contractor requires, plus four copies which will be retained by the Engineer.
- B. Include as a minimum dimensions, size, location of connections to other work, weight of equipment, and supporting calculations.

1.15 PRODUCT DATA

- A. Submit number of copies which the Contractor requires, plus four copies which will be retained by the Engineer.
- B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturer's standard data to provide information unique to this Project.

1.16 MANUFACTURERS' INSTRUCTIONS AND CERTIFICATIONS

- A. Submit as noted in individual specification Sections.

1.17 QUALITY ASSURANCE

- A. Maintain quality control over suppliers, manufacturers, products, services, site conditions, and workmanship to produce work of specified quality.
- B. Comply fully with manufacturer's instructions.
- C. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

1.18 REFERENCES

- A. Conform to reference standard by date of issue current as of date of Contract.
- B. Should specified reference standard conflict with Contract Documents, request clarification from Engineer before proceeding.

1.19 MANUFACTURERS' FIELD SERVICES (NOT USED)

1.20 TESTING LABORATORY SERVICES

- A. Owner will approve the Contractor's selection of a testing laboratory to perform inspections, tests, and other services required by individual Specification Sections.
- B. All costs for laboratory testing of earthwork and concrete shall be paid for by the Contractor.
- C. Services will be performed in accordance with requirements of governing authorities and with specified standards.
- D. Contractor shall cooperate with Testing Laboratory personnel; furnish tools, samples of materials, design mix, equipment, storage and assistance as requested.
 - 1. Notify Engineer/Testing Laboratory 48 hours prior to expected time for operations requiring testing services.
 - 2. Furnish and deliver samples/cylinders to lab for testing.
 - 3. Pay for testing.

1.21 TEMPORARY ELECTRIC POWER AND LIGHTING (NOT USED)

1.22 TEMPORARY WATER

- A. Provide water, as needed, for own use.
- B. Provide an adequate supply of potable drinking water for use by employees and Engineer's employees.

1.23 SANITARY FACILITIES (NOT USED)

1.24 WATER FOR TESTING (NOT USED)

1.25 TEMPORARY TELEPHONE SERVICE (NOT USED)

1.26 TEMPORARY WATER CONTROL

- A. Maintain excavations and trenches free of water. Provide and operate pumping equipment of a capacity to control water flow.
- B. Provide dewatering system and pumping to maintain excavations dry and free of water inflow on a 24 hours basis.
- C. Provide piping to handle pumping outflow to discharge in a manner to avoid erosion or deposit of silt.

1.27 TEMPORARY ACCESS ROADS AND PARKING (NOT USED)

1.28 TEMPORARY HEATING AND VENTILATING (NOT USED)

1.29 PROTECTION OF FINISHED WORK

- A. Protect installed work and provide special protection where specified in individual specification Sections.

1.30 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

1.31 FIELD OFFICES (NOT USED)

1.32 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary erosion control construction, above grade or buried utilities, equipment, facilities, and materials, prior to Substantial Completion inspection.
- B. Remove and repair damage caused by installation or use of temporary work.

1.33 PRODUCTS

- A. Products: New material, machinery, components, equipment, and systems forming Work, but does not include machinery or equipment used for preparation, fabrication, or erection of Work.
- B. Use interchangeable components of the same manufacture for similar components.

1.34 TRANSPORTATION, HANDLING, STORAGE, AND PROTECTION

- A. Transport, handle, store and protect Products in accordance with manufacturer's instructions.

1.35 SUBSTITUTIONS

- A. Possible substitutions (“or approved equal”/ “or equal”) shall be submitted no later than 10 days prior to bid date for Engineer to review and consider requests from Contractor or Bidder for substitutions as equal . The Bidder may include substitutions not specified only if written approval is received from the Engineer prior to bidding. Otherwise, substitutions will be not be allowed.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.

1.36 SYSTEMS DEMONSTRATION (NOT USED)

1.37 CONTRACT CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and Work is complete in accordance with Contract Documents and ready for Engineers inspection.

- B. Submit final Application for Payment identifying total adjusted Contract Price, previous payments, and amount remaining due after Engineer has given written approval of Project Record Documents.

1.38 FINAL CLEANING AND INSPECTION

- A. Execute final cleaning prior to final inspection.
- B. Clean interior and exterior surfaces exposed to view.
- C. Clean debris, waste and surplus supplies, rubbish, and construction facilities from site.
- D. After final cleaning and upon written notice from the Contractor that the Work is completed, the Engineer will make a preliminary inspection with the Owner and Contractor present. Upon completion of this preliminary inspection, the Engineer will notify the Contractor, in writing, of any particulars in which this inspection reveals that the Work is defective or incomplete.
- E. Upon receiving written notice from the Engineer, the Contractor shall immediately undertake the work required to remedy defects and complete the Work to the satisfaction of the Owner.
- F. When the Contractor has corrected or completed the items as listed in the Engineer's written notice, he shall inform the Engineer, in writing, that the required Work has been completed. Upon receipt of this notice, the Engineer, in the presence of the Owner and Contractor, shall make his final inspection of the Project.
- G. Should the Engineer find all Work satisfactory at the time of his inspection, the Contractor will be allowed to make application for final payment in accordance with the provisions of the General Conditions. Should the Engineer still find deficiencies in the Work, the Engineer will inform the Contractor of the deficiencies and will deny the Contractor's request for final payment until the Contractor has satisfactorily completed the required Work.
- H. Water courses, gutters, and ditches shall be opened and left in a condition satisfactory to the Engineer.

1.39 FINAL SUBMITTALS

- A. No contract will be finalized until all of the following have been submitted:
 - 1. Final Shop Drawings.

1.40 PROJECT RECORD DOCUMENTS (“AS-BUILTS”) (NOT USED)

1.41 OPERATION AND MAINTENANCE DATA (NOT USED)

1.42 GUARANTEES, BONDS, AFFIDAVITS, AND WARRANTIES

- A. Provide duplicate notarized copies.
- B. Execute and assemble documents from Subcontractors, suppliers, and manufacturers.

- C. No contract will be finalized until all guarantees, performance tests, bonds, certificates, licenses, affidavits, and warranties required for Work or equipment as specified are satisfactorily filed with the Engineer.
- D. Submit prior to final Application for Payment.

1.43 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification Sections.
- B. Deliver to project site and place in locations as directed; obtain receipt prior to final payment.

END OF SECTION

Contractor's Application for Payment No.

	Application Period:	Application Date:
To (Owner):	From (Contractor):	Via (Engineer):
Project:	Contract:	
Owner's Contract No.:	Contractor's Project No.:	Engineer's Project No.:

Application For Payment Change Order Summary

Approved Change Orders				
Number	Additions	Deductions		
TOTALS				
NET CHANGE BY				
CHANGE ORDERS				

1. ORIGINAL CONTRACT PRICE.....	\$	
2. Net change by Change Orders.....	\$	
3. Current Contract Price (Line 1 ± 2).....	\$	
4. TOTAL COMPLETED AND STORED TO DATE (Column F on Progress Estimate).....	\$	
5. RETAINAGE:		
a. X _____ Work Completed.....	\$	
b. X _____ Stored Material.....	\$	
c. Total Retainage (Line 5a + Line 5b).....	\$	
6. AMOUNT ELIGIBLE TO DATE (Line 4 - Line 5c).....	\$	
7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application).....	\$	
8. AMOUNT DUE THIS APPLICATION.....	\$	
9. BALANCE TO FINISH, PLUS RETAINAGE (Column G on Progress Estimate + Line 5 above).....	\$	

Contractor's Certification	
<p>The undersigned Contractor certifies that to the best of its knowledge: (1) all previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with Work covered by prior Applications for Payment; (2) title of all Work, materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to Owner at time of payment free and clear of all Liens, security interests and encumbrances (except such as are covered by a Bond acceptable to Owner indemnifying Owner against any such Liens, security interest or encumbrances); and (3) all Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.</p>	
By:	Date:

Payment of:	\$	
		(Line 8 or other - attach explanation of the other amount)
is recommended by:		
		(Engineer) (Date)
Payment of:	\$	
		(Line 8 or other - attach explanation of the other amount)
is approved by:		
		(Owner) (Date)
Approved by:		
		Funding Agency (if applicable) (Date)

Progress Estimate

Contractor's Application

For (contract):				Application Number:				
Application Period:				Application Date:				
A		B	Work Completed		E	F		G
Item		Scheduled Value	C	D	Materials Presently Stored (not in C or D)	Total Completed and Stored to Date (C + D + E)	% (E) B	Balance to Finish (B - F)
Specification Section No.	Description		From Previous Application (C+D)	This Period				
Totals								

Progress Estimate

Contractor's Application

For (contract):						Application Number:				
Application Period:						Application Date:				
A				B	C	D	E	F		
Item		Bid Quantity	Unit Price	Bid Value	Estimated Quantity Installed	Value	Materials Presently Stored (not in C)	Total Completed and Stored to Date (D + E)	% (F) B	Balance to Finish (B - F)
Bid Item No.	Description									
Totals										

Stored Material Summary

Contractor's Application

For (contract):						Application Number:			
Application Period:						Application Date:			
A	B	C	D		E		F		G
Invoice No.	Shop Drawing Transmittal No.	Materials Description	Stored Previously		Stored this Month		Incorporated in Work		Materials Remaining in Storage (\$) (D + E - F)
			Date (Month/Year)	Amount (\$)	Amount (\$)	Subtotal	Date (Month/Year)	Amount (\$)	
		Totals							

Change Order

No. _____

Date of Issuance: _____

Effective Date: _____

Project:	Owner: City of North Little Rock Arkansas	Owner's Contract No.:
Contract:		Date of Contract:
Contractor:		Engineer's Project No.: Project No.

The Contract Documents are modified as follows upon execution of this Change Order:

Description:

Attachments (list documents supporting change):

CHANGE IN CONTRACT PRICE:

CHANGE IN CONTRACT TIMES:

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 Order:

\$ _____

Original Contract Times: Working days 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: _____

Approved by Funding Agency (if applicable):

ACCEPTED:

By: _____

Owner (Authorized Signature)

Date: _____

ACCEPTED:

By: _____

Contractor (Authorized Signature)

Date: _____

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.

LIEN RELEASE

NAME OF GENERAL CONTRACTOR:

PROJECT: First Assembly Drainage Rehabilitation

ENGINEER'S PROJECT NUMBER: City Project No. 18-08

PAY REQUEST NUMBER: _____

The undersigned Contractor certifies that: (1) all previous progress payments received from OWNER on account of Work done under the Contract referred to above have been applied to discharge in full all obligations of CONTRACTOR incurred in connection with Work covered by Prior Applications for Payment numbered 1 through _____ inclusive; (2) title to all Work, materials, labor, and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to OWNER at time of payment free and clear of all (i.e., all stored materials, subcontracted work, labor, materials, equipment, and other items incorporated into Work have been paid to date by the Contractor) liens, claims, security interest, and encumbrances; and (3) all Work covered by this Application for Payment is in accordance with the Contract Documents and not *defective* as that term is defined in Contract Documents.

If it is found that material or work has not been paid as sworn on this document, the full amount of the unpaid payment shall be withheld from the next pay estimate, and a check will be prepared by the Owner, made out jointly to the Contractor and the payee for materials or work. The check will be mailed to the payee.

Signed this _____ day of _____, 20____.

Subscribed and Sworn to before me

Contractor

this _____ day of _____, 20____.

By _____

Notary Public

Title _____

My commission expires the _____ day of _____, 20____.

Certificate of Substantial Completion

Project:

Owner: City of North Little Rock

Owner's Contract No.:

Contract:

Engineer's Project No.:

This [tentative] [definitive] Certificate of Substantial Completion applies to:

All Work under the Contract Documents: The following specified portions of the Work:

Date of Substantial Completion

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Project or portion thereof designated above is hereby declared and is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below.

A [tentative] [definitive] list of items to be completed or corrected is attached hereto. This list may not be all-inclusive, and 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.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance and warranties shall be as provided in the Contract Documents except as amended as follows:

Amended Responsibilities Not Amended

Owner's Amended Responsibilities:

Contractor's Amended Responsibilities:

The following documents are attached to and made part of this Certificate:

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

Executed by Engineer

Date

Accepted by Contractor

Date

Accepted by Owner

Date



State of Arkansas
Arkansas Department of Labor
Arkansas Occupational Safety and Health

10421 WEST MARKHAM • LITTLE ROCK, AR 72205-2190
Phone: 501-682-9091 Fax: 501-682-4532 TRS: 800-285-1131

CONTRACT FOR EXCAVATION REPORTING FORM

This form must be completed by any public body (state agency, county, municipality, school district, or other local tax unit or improvement district) awarding a contract for a public construction project which will involve any trench or excavation of five feet (5') or more. *Arkansas Code § 22-9-212.*

Name of Public Agency: _____

Address of Public Agency: _____

Contact Person: _____ Phone number: _____

Person Filing Report: _____

Name of General Contractor: _____

Address: _____ Phone number: _____

Name of any subcontractor doing trenching or excavation: _____

Subcontractor address: _____ Phone number: _____

Estimated start date: _____

Estimated completion date: _____

Site location/address/street/road: _____

Arkansas Code § 22-9-212 also requires that the current federal OSHA standard for excavation and trenching be incorporated into the project's specifications and that the contract bid form include a separate pay item for trench or excavation safety systems.

The Arkansas Department of Labor provides free training on trenching and excavation safety.

SEND NOTICE TO:

**Arkansas Department of Labor
Safety Division
10421 West Markham Street
Little Rock, AR 72205-2190
(501) 682-9091
fax: (501) 682-4532
e-mail: mike.watson@arkansas.gov**



**STATE OF ARKANSAS
DEPARTMENT OF LABOR
ARKANSAS OCCUPATIONAL SAFETY & HEALTH**

10421 WEST MARKHAM • LITTLE ROCK, AR 72205-2190
Phone: 501-682-9091 Fax: 501-682-4532 TRS: 800-285-1131

**REPORTING FORM FOR
WORK NEAR OVERHEAD HIGH VOLTAGE POWER LINES AND
CONDUCTORS**

This form must be completed by any person, firm, or corporation that desires to carry on any work or activity within ten feet (10') of overhead energized electrical lines or conductors. *Arkansas Code § 11-5-307*. The ten feet clearance applies to any part of any machinery, equipment or materials, as well as any employee or person.

Name of company or individual: _____

Address: _____ Phone Number: _____

Name & title of person filing report: _____

Date work to be performed: _____

Expected date of completion: _____

Has the operator of the electrical lines been notified? _____

IMPORTANT

*Arkansas Code § 11-5-307 also requires written notice to the owner or operator of the electrical lines. You must also make appropriate arrangements with the operator of the electrical lines **before** proceeding with any work which would violate the ten feet clearance requirement.*

The Arkansas Department of Labor provides free training on working safely near high voltage lines.

SEND NOTICE TO:

**Arkansas Department of Labor
Safety Division
10421 West Markham Street
Little Rock, AR 72205
(501) 682-9091
fax: (501) 682-4532
e-mail: mike.watson@arkansas.gov**

SECTION SP-1 – ARDOT SPECIFICATIONS

GENERAL

SP1-1.1 The standard specifications of the Arkansas Department of Transportation (ARDOT) are bound in a book titled Standard Specifications for Highway Construction. These specifications are referred to herein as "Standard Specifications." The latest edition (2014) shall apply. A copy of these "Standard Specifications" may be obtained from the Arkansas Department of Transportation, Little Rock, Arkansas, at their customary charge.

INCORPORATION AND MODIFICATION

SP1-2.1 Certain parts of the Standard Specifications are appropriate for inclusion in these Technical Specifications. Such parts are incorporated herein by reference to the proper section or paragraph number. The individual specification numbers noted herein may be different from those in the latest edition of the "Standard Specifications." The most current specification number shall apply. Each such referenced part shall be considered to be a part of these Contract Documents as though copied herein in full.

SP1-2.2 Certain referenced parts of the Standard Specifications are modified in the Specifications that follow. In case of conflict between the Standard Specifications and the Specifications that follow, the Specifications that follow shall govern.

SP1-2.3 Individual material test numbers change from time to time. Use the latest applicable test.

SP1-2.4 Reference in the Standard Specifications to the "Department" are herein changed to the "Owner".

END OF SECTION SP-1

SECTION 1 – SITE PREPARATION

DESCRIPTION

1-1.1 This item covers the preparation of the site for construction of the proposed improvements. The attention of the bidder is directed to the necessity for careful examination of the entire project site to determine, at the time of bid preparation, the full extent of work to be done under the item "SITE PREPARATION."

1-1.2 The item "SITE PREPARATION" shall include:

1. Mobilization/Demobilization
2. Contractor's Staging Areas
3. Contractor's Access
4. Clean Up

CONSTRUCTION METHODS

1-2.1 MOBILIZATION/DEMobilIZATION: The Contractor shall consider and include his cost for providing personnel, equipment, materials, bonds, etc. required for prosecution of the work under this item.

1-2.2 CONTRACTOR'S STAGING AREAS: The Contractor's staging area location shall be coordinated with the City Engineer and used by the Contractor to store materials/equipment, for employee parking, and for other purposes necessary to perform the work on this project. All areas used or otherwise occupied by the Contractor for his operations shall be cleaned and restored to their original condition prior to the final acceptance of the project by the Owner. All work involved in the preparation and restoration of areas used or occupied by the Contractor will not be measured for separate payment, but will be considered subsidiary to the bid item "SITE PREPARATION."

1-2.3 CONTRACTOR'S ACCESS: The Contractor's access to the site shall be coordinated with the City Engineer. Before final acceptance of the project, any damage to the existing roads caused by the Contractor shall be repaired as directed by the Engineer. The repair of the existing roads will not be measured for separate payment but will be considered subsidiary to the item "SITE PREPARATION."

1-2.4 CLEAN UP: From time to time, the Contractor shall clean up the site in order that the site presents a neat appearance and that the progress of work will not be impeded. One such clean up shall immediately precede final inspection.

Immediately following acceptance of the work by the Owner, the Contractor shall remove all temporary equipment, surplus materials, and debris resulting from his operations, and leave the site in a condition fully acceptable to the Owner. Cleanup will not be paid for directly but will be considered subsidiary to "SITE PREPARATION".

MEASUREMENT AND PAYMENT

1-3.1 Site Preparation will be measured as a lump sum complete item. Work completed and accepted under this item will be paid for at the contract lump sum price bid for "SITE PREPARATION," which price shall be full compensation for furnishing all labor, tools, equipment and

incidentals necessary to complete the work.

Periodic payments will be made under this item in proportion to the amount of work accomplished, as determined by the Engineer.

END OF SECTION 1

SECTION I-8 PAVEMENT REMOVAL

DESCRIPTION

I8-1.1 This item shall consist of the full-depth sawcutting, removal, and disposal of existing pavement, in accordance with these specifications and in conformity to the dimensions and details shown on the plans. All pavement material removed shall be disposed of off-site in accordance with Section E-3 – EXCAVATION FOR STRUCTURES of these specifications.

CONSTRUCTION METHODS

I8-2.1 GENERAL: No pavement removal or repair shall be started until the work has been laid out and approved by the Engineer. All removed pavement material shall be disposed of off-site as mentioned above. All hauling will be considered a necessary and incidental part of the work. Its cost shall be considered by the Contractor and included in the contract unit price for the pay of items of work involved. No payment will be made separately or directly for hauling on any part of the work.

I8-2.2 PAVEMENT REMOVAL: The method of removal shall be approved by the Engineer before any removal operations begin. The Contractor shall take care not to damage adjacent pavement which is to remain in place; any adjacent sound pavement damaged by the Contractor shall be removed and replaced at the contractor's expense.

Sawcutting will be required at the edge of the removal areas. The removal shall proceed to the depth necessary to remove the existing pavement. Removal of any additional material beyond the pavement shall be considered work that applies to Section E-3- EXCAVATION FOR STRUCTURES of these specifications.

MEASUREMENT AND PAYMENT

I8-3.1 Pavement Removal will not be measured for separate payment but shall be considered subsidiary to the removal and replacement of 48” CMP pay item.

END OF SECTION I-8

SECTION E-2 – EXCAVATION

DESCRIPTION

E2-1.1 This section addresses the requirements of all earthwork necessary for the construction of streets, driveways, parking areas, sidewalks, trails, curb and gutter, ditches, and site work within the project area in accordance with the Plans. The work shall be in conformity with the lines, grades, thicknesses, and typical sections as shown in the Plans or established by the Engineer.

E2-1.2 This section does not include the excavation and backfill of structures and pipe. Excavation and backfill of structures and pipe is included under SECTION E-3 – EXCAVATION FOR STRUCTURES of these specifications.

STANDARDS

E2-2.1 All materials and work (including testing) shall be in accordance with the lines and grades shown on the plans, or as directed by the Engineer, and with applicable portions of SECTION 210 – EXCAVATION AND EMBANKMENT and SECTION 212 – SUBGRADE of the Standard Specifications, except as modified or augmented herein.

MATERIALS

E2-3.1 Excavation performed under this Section, regardless of the material encountered, shall be classified as unclassified excavation.

Unless otherwise noted in the Plans or directed by the Engineer all excavated material shall become the property of the Contractor and shall be disposed of at an off-site location.

CONSTRUCTION METHODS

E2-4.2 USE OF SUITABLE EXCAVATION: Suitable excavation shall be used for backfilling. The suitability of material to be placed for backfill shall be subject to approval by the Engineer. Suitable excavation not needed for the work shall be disposed of by the Contractor off-site. Excavation unsuitable for use shall be disposed of by the Contractor off-site.

E2-4.4 The Contractor shall keep the subgrade properly drained at all times by the use of pumps as required. Improperly drained subgrade will not be justification for undercut. The Engineer may require the exposed surface to dry before any judgment is rendered to the quality or workmanship of the exposed soils. The Contractor may be required to scarify/disk (to promote drying) and recompact the subgrade prior to determining whether undercut will be permitted. Regraded, recompact, or reworked subgrade will not be considered for additional payment. Alternatively, the Contractor may elect to undercut saturated subgrade material at his own expense.

No contract time extensions will be granted to the Contractor for reworking wet subgrades retaining water due to improper grading or negligence by the Contractor. If proper drainage is not maintained during earthwork operations, the potential for undercut may be increased. Additional undercut required due to Contractor negligence will not be considered for payment.

Preparation of subgrade will not be measured for separate payment, but shall be considered subsidiary work pertaining to removal and replacement of 48" CMP.

Subgrade soils which the Engineer determines cannot be properly compacted shall be undercut to a specified depth. This excavated unsuitable material shall be disposed of off-site.

Backfill for undercut areas shall be subject to the approval of the Engineer. Backfill shall be placed and compacted in 6-inch maximum lifts in accordance with the density requirements described in Section E-3 – EXCAVATION FOR STRUCTURES of these specifications.

E2-4.6 OVER-EXCAVATION: Where excavation is carried below or beyond that required, the space shall be filled to grade with suitable material and thoroughly compacted as directed by the Engineer. The Contractor will not be entitled to additional compensation for such over-excavation or the necessary refilling, unless the Owner or its representative is responsible for the error.

E2-4.8 If it is necessary to interrupt existing surface drainage, sewers or under-drainage, conduits, utilities, or similar underground structures, the Contractor shall be responsible for and shall take all necessary precautions to preserve them or provide temporary services. When such facilities are encountered, the Contractor shall notify the Engineer, who shall arrange for their removal if necessary. The Contractor shall, at his/her own expense, satisfactorily repair or pay the cost of all damage to such facilities or structures which may result from any of the Contractor's operations during the period of the contract.

MEASUREMENT AND PAYMENT

E2-5.1 Unclassified Excavation, Undercut Excavation, and Trench Excavation will not be measured for separate payment, but will be subsidiary to all work necessary for the removal and replacement of 48" CMP pay item.

END OF SECTION E-2

SECTION E-3 – EXCAVATION FOR STRUCTURES

DESCRIPTION

E3-1.1 This section covers the removal of all materials of whatever nature necessary for the construction of retaining walls, wingwalls, headwalls, pipe culverts, storm drainage piping, inlets and other structures. All work shall be in accordance with details shown on the plans, or as directed by the Engineer, and with these specifications.

E3-1.2 The work involved in unclassified excavation for structures shall be in accordance with SECTION E-2 – EXCAVATION of these specifications, except as modified or augmented herein.

MATERIALS

E3-2.1 Backfill materials shall meet the applicable requirements of SECTION E-2 – EXCAVATION of these specifications. Such material shall be free from frozen material, trash, lumber, broken pieces of concrete having any dimension greater than two (2) inches, broken concrete in nests regardless of dimensions, or other debris. Such material shall be susceptible to proper compaction.

CONSTRUCTION METHODS

E3-3.1 EXCAVATION FOR STORM DRAINAGE PIPE AND OTHER STRUCTURES:

Trench width shall not exceed the dimensions shown in the details of the plans.

Areas of excavation for inlets and junction boxes shall be selected by the Contractor, except that areas shall be large enough to permit proper construction of the structures, and except that they shall not extend more than eighteen (18) inches outside the structures, unless authorized by the Engineer.

E3-3.2 BACKFILL: Backfill shall be made from suitable available structural excavation materials as shown on the plans, or as directed by the Engineer.

Backfill shall be compacted to a density not less than ninety-five (95) percent of the maximum density, at optimum moisture, obtained in the laboratory in accordance with AASHTO Designation T99. Samples for laboratory tests and field determinations will be taken by the Contractor.

Backfill shall not be placed against structural backfill (such as flowable fill) for at least one day or as directed by the City Engineer.

Compacting shall be obtained by the use of pneumatic or mechanically actuated tampers. Gravity hand tampers will not be acceptable. Backfill material shall be sprinkled or aerated as necessary to assure the required density.

Backfill of structures, other than pipe, shall be made with reasonable uniformity around and along the structure. It shall be placed in 6 inch layers, loose measurement and each layer compacted.

Backfill of storm drainage pipe shall be in accordance with SECTION I-3 - PIPE CULVERTS of these specifications and SECTION 606 – PIPE CULVERTS of the Standard Specifications.

Backfill will not be measured for separate payment. Placing and compacting of backfill shall be considered subsidiary work pertaining to removal and replacement of 48" CMP.

E3-3.3 DISPOSAL OF EXCAVATED MATERIAL: Excavated material unsuitable for use, or in excess of needs, shall be disposed of by the Contractor off-site.

MEASUREMENT AND PAYMENT

E3-4.1 Excavation for structures, as mentioned in this specification, including but not limited to existing storm drainage pipe, will not be measured for separate payment, but will be considered subsidiary work pertaining to the removal and replacement of 48" CMP pay item.

END OF SECTION E-3

SECTION E-4 – TRENCH AND EXCAVATION SAFETY SYSTEMS

DESCRIPTION

E4-1.1 This item covers the compliance with Act 291 of 1993 which requires the inclusion, in the bid, of a separate pay item for "TRENCH AND EXCAVATION SAFETY SYSTEMS."

STANDARDS

E4-2.1 All work under this item shall conform to the current edition of 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.

"Competent Person" as defined in the Standard Specifications shall be the General Contractor's General Superintendent.

CONSTRUCTION METHODS

E4-3.1 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.

E4-3.2 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 Project Owner.

METHOD OF MEASUREMENT

E4-4.1 Trench or excavation safety systems shall be measured as a complete unit.

BASIS OF PAYMENT

E4-5.1 Trench and excavation safety systems shall be paid for at the lump sum price bid for "TRENCH AND EXCAVATION SAFETY SYSTEMS," which price shall be full compensation for benching, sloping, sheeting, shoring, shielding, or any other protective system that provides the necessary protection to comply with Act 291 of 1993.

END OF SECTION E-4

SECTION I-3 – PIPE CULVERTS

DESCRIPTION

I3-1.1 This section covers construction of 48” CMP at the location shown on the plans.

STANDARDS

I3-2.1 Materials and work shall be in accordance with SECTION 606 – PIPE CULVERTS of the Standard Specifications, except as modified or augmented herein.

MATERIALS

I3-3.3 Pipe and pipe connection accessories shall be in accordance with Section 800 – Corrugated Metal Pipe of these specifications.

CONSTRUCTION METHODS

I3-4.1 TRENCHING AND BACKFILL: Trenching and backfill shall be in accordance with applicable requirements of SECTION 606 – PIPE CULVERTS of the Standard Specifications and SECTION E-3 – EXCAVATION FOR STRUCTURES and SECTION E-4 – TRENCH AND EXCAVATION SAFETY SYSTEMS of these specifications, except as modified or augmented herein.

Where unsuitable material is encountered, excavation shall continue until a firm material is reached and the over-excavation filled to grade with C-Ballast in accordance with the provisions of SECTION M-5 – PIPE EMBEDMENT.

I3-4.2 INSTALLATION OF PIPE: The installation of pipe shall be in accordance with SECTION 606 – PIPE CULVERTS of the Standard Specifications, except as modified or augmented herein, and shall be in accordance with Section 800 – Corrugated Metal Pipe of these specifications.

The pipe ends (where jointing occurs) shall be cleaned and maintained clean. The joint shall be constructed as recommended by the manufacturer of the pipe. Each section of pipe shall be examined carefully before being laid, and the defective or damaged sections shall not be used. Pipelines shall be laid to match flow lines at existing connections.

Proper facilities shall be provided for lowering sections of pipe into trenches. Under no circumstances shall pipe be laid in water, and no pipe shall be laid when trench conditions or weather are unsuitable for such work. Full responsibility for the diversion of drainage and for dewatering of trenches during construction shall be borne by the Contractor.

All pipe in place shall be approved by the Engineer before being backfilled. In all backfilling operations, the Contractor shall be responsible for preventing damage to or misalignment of the pipe.

Pipe embedment shall be furnished, placed, and shaped as described in SECTION M-5 – PIPE EMBEDMENT.

METHOD OF MEASUREMENT

I3-5.1 Pipe culverts will be measured by the linear foot in place, completed and accepted. Length shall not be measured through inlets, junction boxes, or other drainage structures. Measurements will be taken to the nearest linear foot.

I3-5.3 Excavation and backfill, including flowable fill, will not be measured separately, but will be considered subsidiary to removal and replacement of 48" CMP.

I3-5.4 Bedding material will be measured and paid for as specified in SECTION M-5 – PIPE EMBEDMENT.

BASIS OF PAYMENT

I3-6.1 Pipe culvert acceptably completed and measured as provided above will be paid for at the contract unit price per linear foot bid for "Remove Existing 48" CMP and Replace with 48" CMP (14 Gage, 2.67"X0.5" Corrugation, Aluminized Type II)"; which price shall be full compensation for furnishing all materials (including flat band coupler and neoprene gasket, but NOT including bedding material); for all excavating, trenching, removing, hauling, backfilling (including flowable fill), and compacting; and for all equipment, tools, labor, and incidentals necessary to complete the work.

END OF SECTION I-3

SECTION 800 - CORRUGATED METAL PIPE

ALUMINIZED STEEL TYPE 2

1.0 GENERAL

- 1.1 This specification covers the manufacture and installation of the Aluminized Steel Type 2 corrugated metal pipe (CMP) detailed in the project plans.

2.0 DESIGN STANDARDS

- 2.1 The CMP meets the design parameters of the American Association of State Highway and Transportation Officials (AASHTO) Standard Specification for Highway Bridges, AASHTO LRFD Bridge Design, and/or the American Iron and Steel Institute (AISI).

3.0 MATERIAL

- 3.1 The Aluminized Steel Type 2 coils shall conform to the applicable requirements of AASHTO M 274 or ASTM A929.

4.0 PIPE

- 4.1 The CMP shall be manufactured in accordance with the applicable requirements of AASHTO M 36 or ASTM A760. The pipe size diameter, gauge, 2 ⅔" x ½" corrugations shall be as shown on the project plans.
- 4.2 All fabrication of the product shall occur within the United States.

5.0 COUPLING BANDS

- 5.1 Coupling bands for the CMP shall be made of the same base metal and coatings as the CMP to a minimum of 14 gauge.
- 5.2 Ends of the CMP are rerolled with annular corrugations (e.g. Plain cut) for proper indexing.
- 5.3 Connection fasteners will be provided (e.g. Techco angle, bolt bar and strap, etc.).

6.0 HANDLING & ASSEMBLY

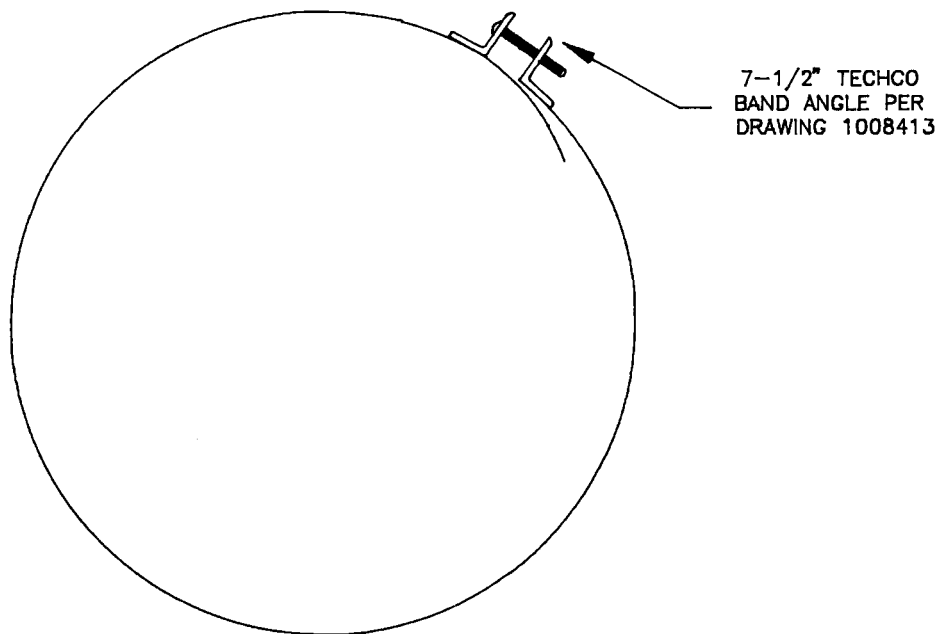
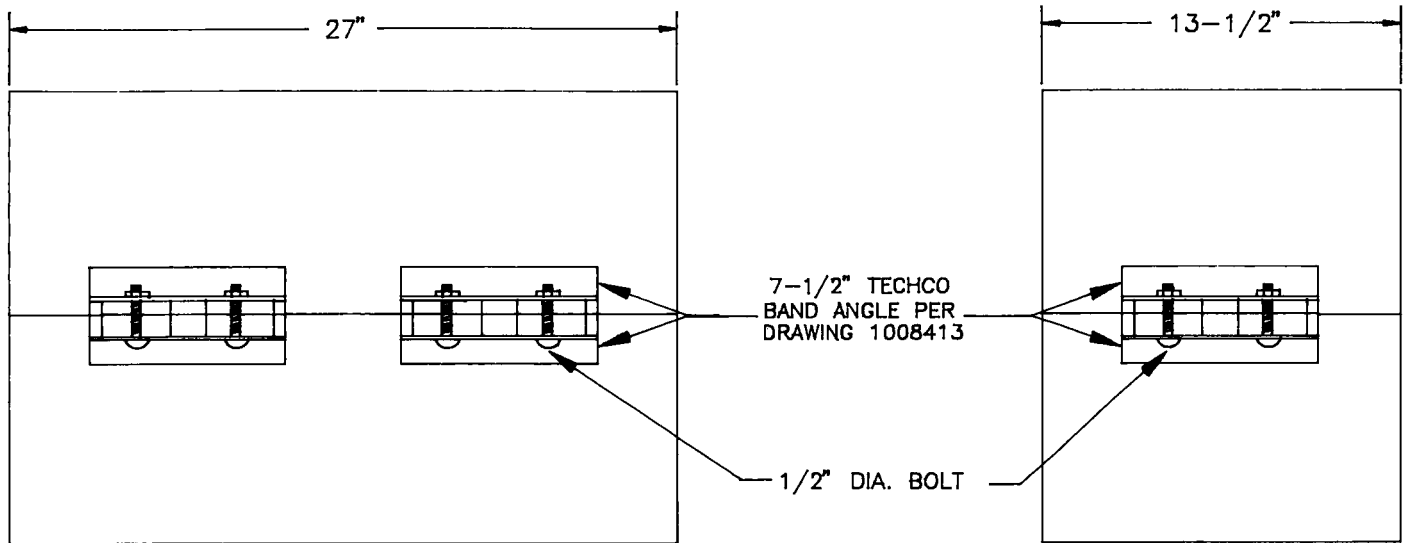
- 6.1 Refer to the recommendations of the National Corrugated Steel Pipe Association's (NCSPA).

7.0 INSTALLATION

- 7.1 The installation shall be in accordance with AASHTO Standard Specifications for Highway Bridges, LRFD Section 26, Division II, NCSPA, or ASTM A798 and in conformance with the project plans and specifications. If there are any inconsistencies or conflicts, the contractor must bring them to the attention of the project engineer.
- 7.2 The contractor shall use approved grouting material when connecting new CMP to stormwater boxes. Geopolymer lining material to be used on the project is acceptable to use as grouting material. Grouting material shall not be measured for separate payment but shall be considered subsidiary to installation of new CMP.
- 7.3 It is always the contractor's responsibility to follow OSHA guidelines for safe practices.

8.0 CONSTRUCTION LOADS

- 8.1 Construction loads may be greater than design loads. The contractor shall follow the recommendations for additional compacted material per manufacturer's or NCSPA guidelines.



GENERAL NOTES

1. Band Fasteners are attached with spot welds, rivets or hand welds.
2. Dimensions are subject to manufacturing tolerances.



FLAT BAND

Drawing Date: F.B. 11-2-90

Revision Date:

Drawing Number: 1008472A

FLAT GASKET INSTALLATION GUIDELINES

1. Clean the pipe end.
2. Apply a liberal amount of lubricant to the first two annular corrugations on the outside of the pipe.
3. Snap the flat gasket into position such that the gasket covers the first annular corrugation or the recorrugated end. Half of the gasket will be hanging over the end of the pipe.
4. Fold the remaining half of the gasket that is extended over the pipe end back over the section of the gasket positioned on the end of the pipe.
5. Apply a liberal amount of lubricant to the entire inner surface of the band.
6. Place the band into position on the installed length of pipe so that the next length of pipe can be indexed correctly and the flat gasket rolled over the second pipe end.
7. Apply a liberal amount of lubricant to the end of the second length of pipe.
8. Place the second length of pipe into position. The two pipe lengths must be positioned properly for the gasket to fit over, and the band to index, onto the second pipe end.
9. Unfold the gasket into position over the second length of pipe. Take care to insure that the gasket fits over the end of the second pipe section. Also, the band must be indexed into the proper annular corrugation on each length of pipe.
10. Check the complete periphery of the pipe to insure that the gasket is centered evenly on the two lengths of pipe.
11. Slide the band into position and tighten the bolts. For maximum compression of the gasket, the band corrugations must be fully seated into the proper corrugation on each pipe end. This will insure that the pipe lengths are positioned properly for the gasket.



FLAT GASKET INSTALLATION GUIDELINES

Drawing
Date:

F.B.
5-6-92

Revision
Date:

Drawing
Number: 1008708A

SECTION M-5 - PIPE EMBEDMENT

DESCRIPTION

M5-1.1 This section covers the furnishing of all labor, equipment, and materials necessary for placing pipe foundations as required on the Plans or as deemed necessary by the Engineer.

MATERIALS

M5-2.1 Materials for pipe bedding or embedment shall be as follows:

M5-2.1.1 Corrugated Metal Pipe shall be bedded in C-Ballast, or an approved equal meeting the following gradation:

<u>Sieve (Square Opening)</u>	<u>Percent Passing</u>
1 1/2"	100
1"	90-100
3/4"	40-75
1/2"	15-35
3/8"	0-15
#4	0-5

M5-2.1.3 All bedding material shall adhere to the following requirements:

(1) Deleterious substances shall not be present in the prepared crushed stone in excess of the following amounts:

Soft and friable pieces - 5%
Material finer than No. 200 - 1%
Clay lumps - 0.5%

(2) The percentage of wear of the crushed stone, tested in the Los Angeles Abrasion Tests, shall not be greater than 45 percent.

(3) Crushed stone shall be stockpiled and placed in such a manner that foreign material will not be included in the complete embedment section.

CONSTRUCTION METHODS

M5-3.1 Pipe embedment will be required for new storm drainage pipe as shown on the plans. The excavated trench shall be inspected by the Engineer and deemed acceptable for pipe placement. Bedding under storm drainage pipe will be 6 inches thick below bottom of existing 48" CMP to be replaced. The width of the pipe embedment shall extend the full width of the trench bottom as shown in the plans, but not beyond the maximum trench width. The Contractor will not be paid for extra bedding placed in trenches that are excessive in width and/or exceed the limits shown in the plans.

M5-3.3 Additional excavation will be required in soft, mucky areas where the specified bedding will not adequately support the pipe. Where such areas as determined by the Engineer are excavated, the additional depth of trench shall be backfilled with additional C-Ballast. The Contractor will not be paid for any additional excavation required, but will be paid for the additional backfill required. No additional compensation will be given to the Contractor unless the Engineer has measured and verified the additional excavation prior to the placement of the bedding.

METHOD OF MEASUREMENT

M5-4.1 Pipe Embedment will be measured by the cubic yard as calculated by the Engineer. Excavation for embedment will not be measured for separate payment, but will be subsidiary to Pipe Embedment.

BASIS OF PAYMENT

M5-5.1 Pipe Embedment acceptably completed and measured as provide above, will be paid for at the contract unit price bid per cubic yard for "6" PIPE EMBEDMENT," which price shall be full compensation for furnishing the material; for hauling, excavating, placing, spreading, and compacting; and for all equipment, tools, labor and incidentals necessary to complete the work.

END OF SECTION M-5

**SECTION GPL - GEOPOLYMER PIPE LINING
(SPIN-CAST OR HAND SPRAYED/APPLIED)**

GPL-1 SUMMARY

- A. Provide all labor, material and equipment to provide for the structural reconstruction of existing sanitary pipes, storm pipes, or culverts using an approved structural Geopolymer Lining System by forming a new pipe within an existing structurally deteriorated pipe, which has generally maintained its original shape. The geopolymer liner may be spin cast, hand sprayed or troweled.

GPL-2 REFERENCE DOCUMENTS

- A. Applicable ASTM and ACI Standards and Specifications

Unless revised herein, the Contractor shall follow the latest revision of the practices and standards of the following American Society for Testing and Materials (ASTM) and American Concrete Institute (ACI) Standards, which are made part of this specification:

1. ASTM C39/39M Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
2. ASTM C78 – Standard Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)
3. ASTM C469 Standard Test Method for Static Modulus of Elasticity and Poisson’s Ratio of Concrete in Compression
4. ASTM C496 Standard Test Method for Splitting Tensile Strength of Cylindrical Concrete Specimens
5. ASTM C882 Standard Test Method for Bond Strength of Epoxy-Resin Systems Used with Concrete by Slant Shear
6. ASTM F2414 Practice for Sealing Sewer Manholes Using Chemical Grouting
7. ACI Certified Concrete Field Testing Technician, Level 1

GPL-3 SUBMITTALS REQUIRED

- A. The design calculations for the wall thickness. Design calculations and drawings substantiating the geopolymer liner system thickness shall be prepared under the direction of a Licensed Engineer registered in the State of the project or a Licensed registered in the State of manufacture (Engineer of Record), with experience in the design of sewer pipe, storm pipe, culverts or sewer pipe linings. Submittals with drawings and computations without the Licensed Engineer seal, signature and date shall be immediately rejected without any review.
- B. Method to verify applied thickness during installation.
 - a. Field measurement of cured liner thickness.

- b. Site specific health and safety plan.
- c. The new liner test results to verify 28-day compressive strength in accordance with ASTM C39. Should values other than compressive strength, such as flexural strength, be used in the engineering calculations, additional testing of that specific parameter, will be required at the same frequency and quantity to clearly show that design strengths were met or exceeded.
- d. The X-Ray Fluorescence (XRF) analysis report, verifying test results meeting the materials performance as listed below.

GPL-4 MATERIALS

- A. The geopolymer lining material shall be a micro-fiber reinforced ultra-dense geopolymer. This material shall provide a high strength fiber reinforced mortar specifically designed for ease of mechanical pumping, spraying and spin casting.
- B. A geopolymer precursor, the original untreated, unground product powder passing through a 200# mesh screen, to remove sand and fibers, when analyzed by X-Ray Fluorescence (XRF), should result in the Calcium Oxide (CaO) being less than 25% of the total oxides.
- C. The geopolymer liner material shall conform to the minimum requirements below:

<u>Physical Properties</u>	<u>ASTM References</u>	<u>Requirements</u>
Compressive Strength	ASTM C39	8,000 psi @ 28 days
Tensile Strength	ASTM C496	800i @ 28 days
Flexural Strength	ASTM C78	800 psi @ 28 days
Modulus of Elasticity	ASTM C469/469M	5,000,000 psi @ 28 days
Bond Strength	ASTM C882/882M	3,000 psi @ 28 days

GPL-5 INSTALLATION OF LINER

- A. Mixing – Combine all of the packaged geopolymer liner dry mix with the specified amount of potable water while mixing until proper consistency is obtained, as described by the manufacturer. The mixer must be capable of regulating the amount of water added to the mix on a consistent basis. Mixing water temperatures must be determined before blending operations begin. The mixing water temperature must be recorded in the daily operation log at multiple times throughout the day during the installation process. If water temperatures exceed 80 degrees F, then the water should be chilled to 80 degrees F or lower. The ability to provide mixing water at a consistent temperature is a critical aspect of the mixing and installation process. Tempering of the material above the manufacturers published limits is not allowed. Continue to agitate the geopolymer liner material to prevent thickening beyond the desired fluidity. The working time shall be as per manufacturer’s recommendations.
- B. Application – The geopolymer liner may be hand sprayed or spin cast to the interior surface of the host pipe after it has been properly prepared and cleaned. The geopolymer lining material shall be applied to a damp surface. However, pools of water should be removed before the start of the application of the geopolymer lining material.

When hand sprayed, the geopolymer lining material delivery hose shall be coupled to a medium velocity spray application nozzle. Pumping of the material shall commence and the material shall be atomized by the introduction of air at the nozzle, creating a medium-

velocity spray pattern for material application. Material shall be applied to a specified uniform minimum thickness no less than 1 inch. Material shall be applied to the bench area in such a manner as to provide for proper drainage without ponding and accounting for anticipated abrasion. Troweling of materials shall begin immediately following the spray application. Initial troweling shall be in a motion, to compress the material into any voids within the structure walls. Precautions should be taken not to over trowel.

When centrifugally cast, the geopolymer lining material delivery hose shall be coupled to a medium-velocity spray application nozzle. Pumping of the material shall commence and the material shall be spin cast onto the pipe surface. A gyroscopic head that has a speed adjustment for making multiple position changes per minute is required. The gyroscopic head allows the spin cast mechanism and the associated selected nozzle to make multiple passes on the pipe wall in a single pass of the sled assembly.

Where the geopolymer liner meets other pipes/liners, the joints shall be flush with no gaps, providing a uniform surface.

The geopolymer liner shall not be applied when ambient and surface temperatures are expected to fall below 36 degrees F within 72 hours of placement, without written permission from the manufacturer. For applying mortar at temperatures below 36 degrees F, the material, water and substrate shall be warmed to above a temperature of 32 degrees F. If heating the substrate is required, the area shall be properly ventilated. The newly installed liner shall be protected from freezing.

- C. Thickness verification – Three (3) small plastic depth gauges (plastic indicator tabs) shall be attached as a ring around the inner surface of the sewer, one (1) at the crown, and one (1) at each spring line. The depth gauges shall show the thickness as designed or specified. The gauge rings shall be placed twenty (20) linear feet apart. The preset depth gauge guides shall be positioned just below the designed or specified finished geopolymer layer. The gauges will be left in place within the geopolymer layer.

The Contractor shall be required to apply the approved designed liner thickness. Additional material thickness applied by the Contractor will be at the Contractor's own expense. No separate additional payment will be made for any extra material thickness applied above the approved designed liner thickness.

- D. Curing – Follow the manufacturer's recommended cure schedule in curing of the geopolymer liner.

GPL-6 QUALIFICATIONS

- A. Product Manufacturer: Company specializing in manufacturing quality Geopolymer liner products with minimum 5-years' experience.
- B. Applicator: At least 3 years' experience specializing in the application of spray on lining systems including the installation of at least 40,000 LF in horizontal infrastructure using the specified material(s) being proposed for the subject project.

GPL-7 TESTING

- A. A minimum of nine samples shall be obtained for each sampling event and formed into cylinders following ASTM C31 and tested in accordance with ASTM C39. Three samples will be tested at 7 and 28 days, with the remaining three samples serving as retains.

- B. The samples may be taken from the pump immediately before discharge into the hose, from a section of hose, or at the spin caster, if feasible.
- C. The samples must be undisturbed for a period of at least 24 hours before they can be transported to the independent testing laboratory.
- D. The test cylinders shall be required at the start of the project. From that point on, a set of samples shall be collected for every 32,000 pounds of material applied. A final sample set shall be collected on the last day of application.

GPL-8 MEASUREMENT AND PAYMENT

All materials, labor, equipment, and incidentals necessary to complete the work described above shall be paid for at the contract unit price per linear foot bid for:

- A. 1” Full Diameter Spincast Geopolymer Pipe Lining (For Existing 48” CMP on East Side of Site)
- B. 1” Manual Geopolymer Pipe Lining By Hand (For Bottom 52” Wide Section of Existing 48” CMP on West Side of Site)

END OF SECTION GPL

SECTION P-3 – ASPHALT SURFACE COURSE

DESCRIPTION

P3-1.1 This section covers construction of the Asphalt Concrete Hot Mix Surface Course in accordance with the lines, grades, thicknesses, and details shown in the Plans, or as directed by the Engineer.

STANDARDS

P3-2.2 SURFACE COURSE: Materials, equipment, and construction methods for ASPHALT CONCRETE HOT MIX SURFACE COURSE shall be in accordance with SECTIONS 407, 409, AND 410 of the Standard Specifications 2014 Edition, except as modified or augmented herein. The asphalt binder shall be PG 70-22.

CONSTRUCTION METHODS

P3-3.1 The Design and Quality Control of Asphalt Mixtures shall be in accordance with SECTION 404 of the Standard Specifications, except as modified herein.

METHOD OF MEASUREMENT

3-4.1 Asphalt Concrete Hot Mix Surface Course will be measured by the ton (2,000 pounds) of each mixture used in the accepted work. Recorded batch weights or truck scale weights will be used to determine the basis for the tonnage. Load tickets shall be provided as directed by the Engineer. Measurements shall include only the actual amounts placed within the lines shown on the Plans, or as directed by the Engineer.

BASIS OF PAYMENT

3-5.1 Asphalt Concrete Hot Mix Surface acceptably completed, and measured as provided above, will be paid for at the contract unit prices per ton bid for “2” ACHM SURFACE COURSE” which prices shall be full compensation for furnishing, placing and compacting all materials; and for all equipment, tools, labor, and incidentals necessary to complete the work.

Addition to Table 410-1 in Standard Specifications

TABLE 410-1: COMPLIANCE, PRICE REDUCTION AND REJECTION LIMITS FOR ACHM COURSES				
Property	Compliance Limits	Price Reduction Limits	Lot Rejection Limits	Sublot Rejection Limits
Thickness (variation from specified)				
Total Binder or Surface	+/- 1/4 inch	more than +/- 1/4 inch, to +/- 3/8 inch	greater than +/- 3/8 inch	greater than +/- 3/8 inch
Total Pavement	+/- 1/4 inch	more than +/- 1/4 inch, to +/- 3/8 inch	greater than +/- 3/8 inch	greater than +/- 3/8 inch

END OF SECTION P-3

SECTION P-1 – AGGREGATE BASE COURSE

DESCRIPTION

P1-1.1 This section covers all work in connection with the construction of aggregate base course in accordance with the lines, grades, thicknesses, and details as shown in the plans or as directed by the Engineer. Material shall be Class 7 as specified in the plans.

STANDARDS

P1-2.1 Material and work (including testing) for aggregate base course shall be in accordance with SECTION 303 – AGGREGATE BASE COURSE of the Standard Specifications for Class 7, except as modified or augmented herein.

CONSTRUCTION METHODS

P1-3.1 **TESTS:** Material will be acceptable from quarries or crushing plants which currently are, or recently have been, supplying material meeting the Standard Specifications for Aggregate Base Course. In-place density shall be determined by AASHTO T 310, Direct Transmission of not less than 98% of maximum density determined in the laboratory by AASHTO T 180, Method D, and not less than 95% modified density shown in the field.

P1-3.2 **MAINTENANCE:** The Contractor shall maintain the base course until and during the construction of the subsequent base or surface course. Defects that develop in the base course shall be repaired by the Contractor at the Contractor's expense.

METHOD OF MEASUREMENT

P1-4.1 Work completed and accepted under this item shall be measured by the square yard (SY) complete in place.

BASIS OF PAYMENT

P1-5.1 Aggregate Base Course acceptably completed and measured as provided above shall be paid for at the contract unit price per square yard for “8” Aggregate Base Course” which price shall be full compensation for furnishing, placing, watering, compacting all materials, and for all labor, tools, equipment and incidentals necessary to complete the work.

END OF SECTION P-1

FIRST ASSEMBLY - DRAINAGE REHABILITATION

NORTH LITTLE ROCK, AR



FEBRUARY 2019

INDEX OF SHEETS	
SHEET	TITLE
1	COVER SHEET
2	SITE PLAN
3	DETAILS



CITY OF NORTH LITTLE ROCK
Engineering Department

500 WEST 13TH STREET
NORTH LITTLE ROCK, AR 72114

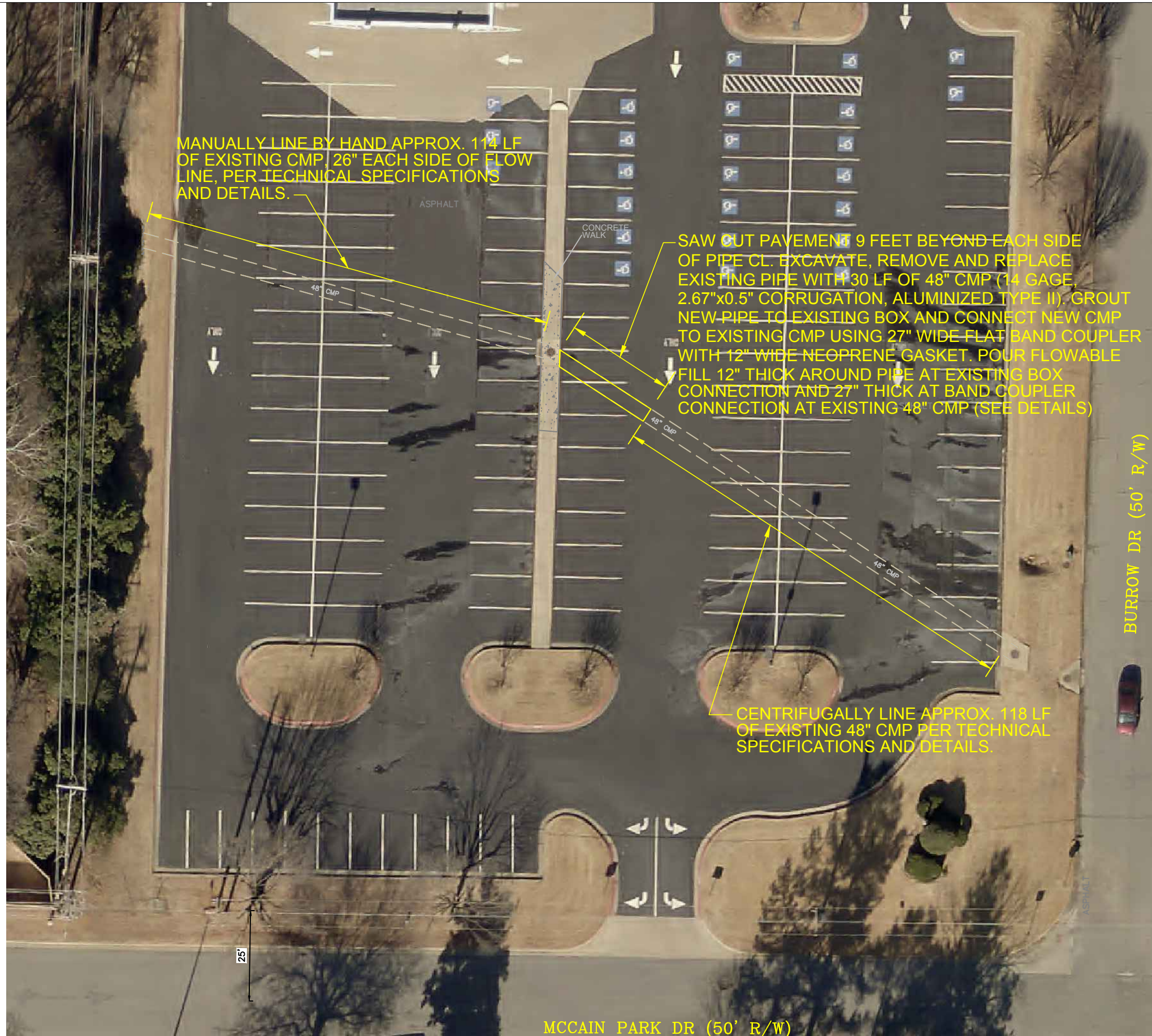
FIRST ASSEMBLY
DRAINAGE REHABILITATION

COVER SHEET

DATE: 2/2019
DESIGNED BY: MCK
DRAWN BY: MCK
SCALE: 1" = 40'

SHEET NUMBER

C



MANUALLY LINE BY HAND APPROX. 114 LF OF EXISTING CMP, 26" EACH SIDE OF FLOW LINE, PER TECHNICAL SPECIFICATIONS AND DETAILS.

SAW OUT PAVEMENT 9 FEET BEYOND EACH SIDE OF PIPE CL. EXCAVATE, REMOVE AND REPLACE EXISTING PIPE WITH 30 LF OF 48" CMP (14 GAGE, 2.67"x0.5" CORRUGATION, ALUMINIZED TYPE II). GROUT NEW PIPE TO EXISTING BOX AND CONNECT NEW CMP TO EXISTING CMP USING 27" WIDE FLAT BAND COUPLER WITH 12" WIDE NEOPRENE GASKET. POUR FLOWABLE FILL 12" THICK AROUND PIPE AT EXISTING BOX CONNECTION AND 27" THICK AT BAND COUPLER CONNECTION AT EXISTING 48" CMP (SEE DETAILS)

CENTRIFUGALLY LINE APPROX. 118 LF OF EXISTING 48" CMP PER TECHNICAL SPECIFICATIONS AND DETAILS.



CITY OF NORTH LITTLE ROCK
Engineering Department

500 WEST 13TH STREET
NORTH LITTLE ROCK, AR 72114

FIRST ASSEMBLY
DRAINAGE REHABILITATION

SITE PLAN

DATE: 2/2019
DESIGNED BY: MCK
DRAWN BY: MCK
SCALE: 1" = 30'

SHEET NUMBER

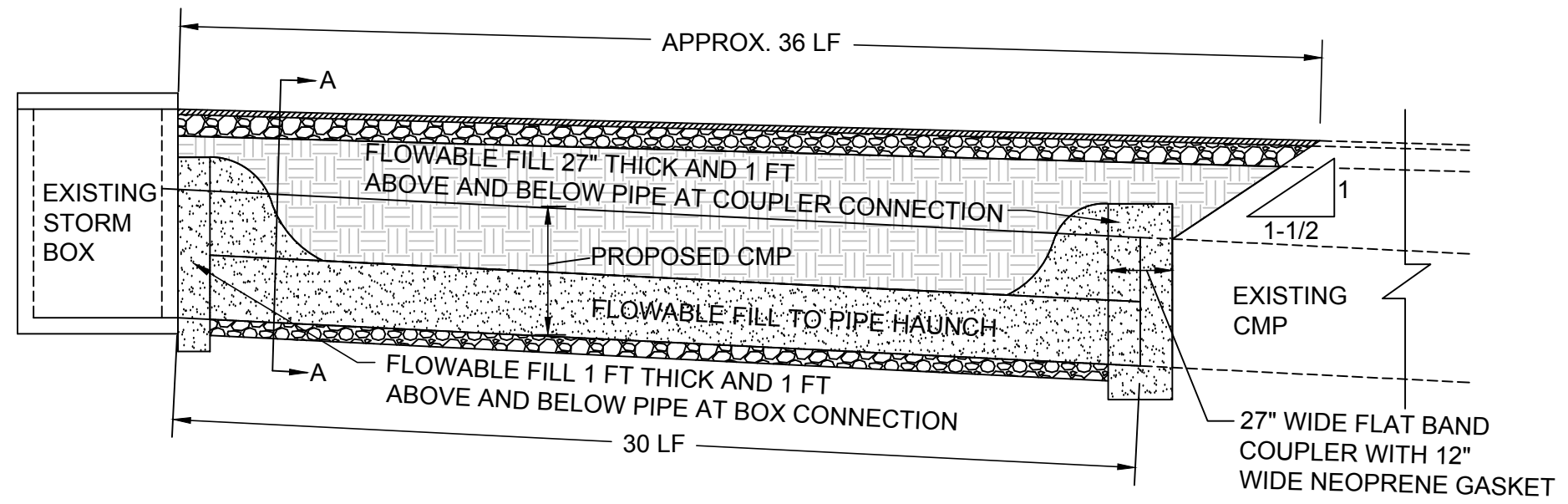
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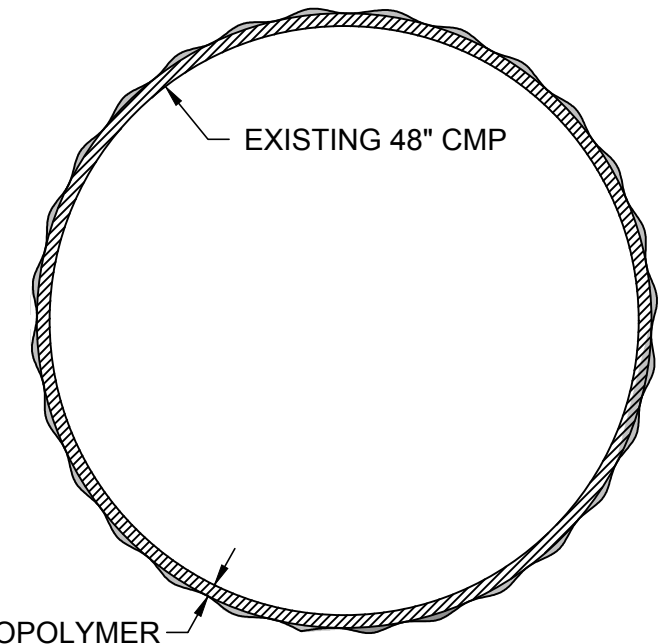
DETAILS

DATE: 2/2019
DESIGNED BY: MCK
DRAWN BY: MCK
SCALE: 1" = 20'

SHEET NUMBER

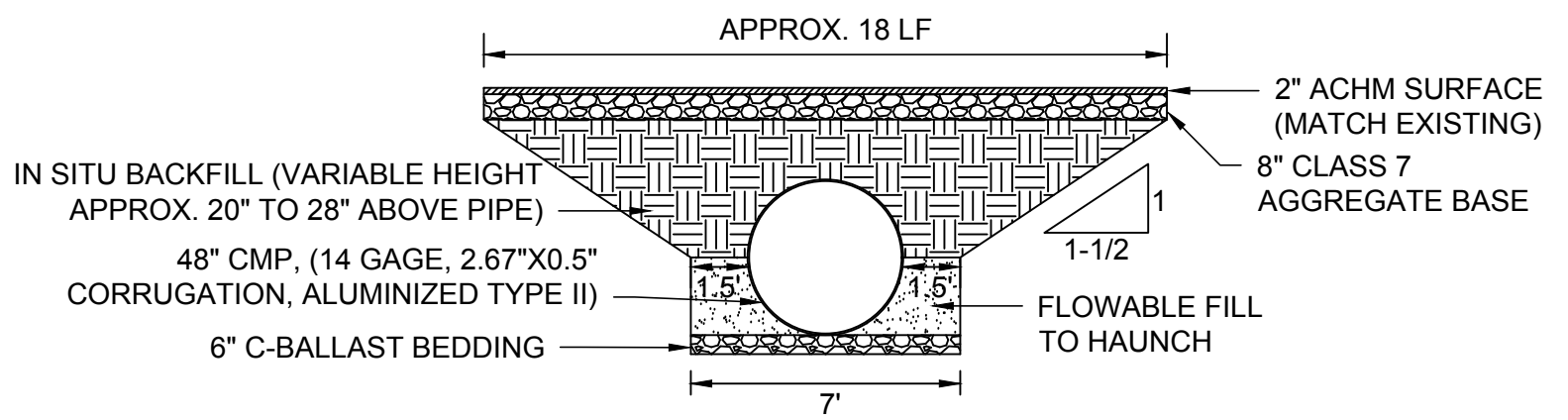


PIPE TRENCH, BACKFILL, AND CONNECTIONS DETAIL

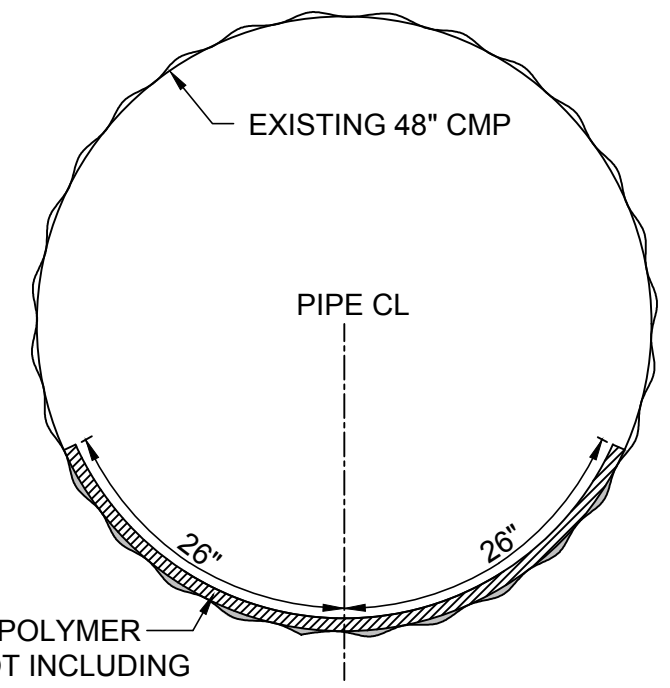


1" SPINCAST GEOPOLYMER PIPE LINING (NOT INCLUDING CORRUGATIONS). SEE SPECIFICATIONS.

CENTRIFUGAL PIPE LINING DETAIL (SPINCAST)



PIPE TRENCH & BACKFILL SECTION DETAIL A-A



1" MANUAL GEOPOLYMER PIPE LINING (NOT INCLUDING CORRUGATIONS). SEE SPECIFICATIONS.

MANUAL PIPE LINING DETAIL (BY HAND)