



BOARD OF COUNTY COMMISSIONERS
WARREN COUNTY, OHIO

406 Justice Drive, Lebanon, Ohio 45036

www.co.warren.oh.us

commissioners@co.warren.oh.us

Telephone (513) 695-1250

Facsimile (513) 695-2054

SHANNON JONES
DAVID G. YOUNG
TOM GROSSMANN

23-1105

August 29, 2023

ENTER INTO CONTRACT WITH J & J ENVIRONMENTAL, INC. (DBA TELE-VAC) FOR THE AS NEEDED SANITARY POINT LINER REPAIRS PROJECT RE-BID

WHEREAS, pursuant to Resolution #23-1005, adopted August 8, 2023, this Board approved a Notice of Intent to Award Contract for the As Needed Sanitary Point Liner Repairs Project Re-Bid to J & J Environmental, Inc.; and

WHEREAS, all documentation, including performance bonds, insurance certificates, etc., has been submitted by the contractor; and

NOW THEREFORE BE IT RESOLVED, to enter into contract with J & J Environmental, Inc., 7611 Easy Street, Mason, Ohio 45040; as attached hereto and made a part hereof.

Mr. Grossmann moved for adoption of the foregoing resolution being seconded by Mrs. Jones. Upon call of the roll, the following vote resulted:

Mr. Young – yea

Mrs. Jones – yea

Mr. Grossmann – yea

Resolution adopted this 29th day of August 2023.

BOARD OF COUNTY COMMISSIONERS

Tina Osborne, Clerk

KP

cc: c/a— J & J Environmental, Inc.

Water/Sewer (file)

OMB Bid file



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TOM GROSSMANN
SHANNON JONES
DAVID G. YOUNG

23-1005

August 08, 2023

APPROVE NOTICE OF INTENT TO AWARD BID TO J & J ENVIRONMENTAL, INC. (DBA TELE-VAC) FOR THE AS NEEDED SANITARY POINT LINER REPAIRS PROJECT RE-BID

WHEREAS, bids were closed at 11:00 a.m., on August 3, 2023, and the bids received were opened and read aloud for the As Needed Sanitary Point Liner Repairs Project Re-Bid, and the results are on file in the Commissioners' Office; and

WHEREAS, upon review of such bids by Chris Wojnicz, Deputy Sanitary Engineer, J & J Environmental, Inc. has been determined to be the lowest and best bidder; and

NOW THEREFORE BE IT RESOLVED, upon recommendation of the Warren County Water and Sewer Department, that it is the intent of this Board to award the contract to , J & J Environmental, Inc., 7611 Easy Street, Mason, Ohio 45040; and

BE IT FURTHER RESOLVED, that the President of the Board is hereby authorized to execute a "Notice of Intent to Award."

Mr. Grossmann moved for adoption of the foregoing resolution being seconded by Mr. Young. Upon call of the roll, the following vote resulted:

Mrs. Jones – yea

Mr. Young – yea

Mr. Grossmann – yea

Resolution adopted this 8th day of August 2023.

BOARD OF COUNTY COMMISSIONERS

Tina Osborne, Clerk

cc: Water/Sewer (file)
OMB Bid file



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Facsimile (513) 695-2054

TOM GROSSMANN
SHANNON JONES
DAVID G. YOUNG

BID OPENING

August 3, 2023

BID OPENING –

Bids were closed at 11:00 a.m. this 3rd day of August and the following bids were received, opened, and read aloud for the As Needed Sanitary Point Liner Repair Project Re-Bid for the Warren County Water and Sewer Department.

| | | |
|--|---------|------------|
| Tele- Vac | 8 inch | \$4,179.00 |
| Mason, OH | 10 inch | \$4,229.40 |
| | 12 inch | \$4,279.80 |
| | 8 x 6 | \$4,179.00 |
| | 10 x 6 | \$4,229.40 |
| | 12 x 6 | \$4,279.80 |
| Champion Cleaning Specialists, Inc. Mason, OH | 8 inch | \$5,200.00 |
| | 10 inch | \$5,250.00 |
| | 12 inch | \$5,377.00 |
| | 8 x 6 | \$7,200.00 |
| | 10 x 6 | \$7,250.00 |
| | 12 x 6 | \$7,377.00 |

Chris Wojnicz, Deputy Sanitary Engineer, will review bids for a recommendation at a later date.

cc: Bid File

OMB

W/S (file)

PLAN HOLDERS LIST

As Needed Sanitary Point Liner Repairs Project Re-Bid

Individuals or companies can be added to the plan holders list by contacting Krystal Powell at krystal.powell@co.warren.oh.us

| Name | Company | Phone Number | E-mail Address |
|------------------|-----------------------------------|---------------------|--|
| Jon Parnell | Champion Cleaning Solutions | 513-871-2333 | jon@championcleaning.net |
| James Kratochvil | Tele- Vac Environmental | 513-701-9623 | james@tele-vac.com . |
| Jeremy Ingle | BLD Services, LLC | 614-706-0588 | jeremy.ingle@bldllc.net |

BID/CONTRACT DOCUMENTS

**AS NEEDED SANITARY POINT LINER
REPAIRS**

WARREN COUNTY WATER & SEWER DEPARTMENT

WARREN COUNTY BOARD OF COMMISSIONERS
406 JUSTICE DRIVE
LEBANON, OHIO 45036
(513) 695-1250

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SECTION 00 10 10
INVITATION TO BIDDERS

Sealed bids will be received by the Clerk of the County Commissioners, Warren County, Ohio, 406 Justice Drive, Lebanon, Ohio 45036, until 11:00 a.m., August 3, 2023, and then at said time bids will be opened and read aloud for the As Needed Sanitary Point Liner Repairs.

Bid documents and specifications are available online on the Warren County website at <http://www.co.warren.oh.us/commissioners/Bids/Default.aspx>. Questions regarding the technical specifications should be directed to Chris Wojnicz, Project Manager, at the Warren County Water and Sewer Department, at (513) 695-1646 or christopher.wojnicz@co.warren.oh.us. Each bid shall contain the full name of each person or company submitting the bid and be accompanied by a bid bond for the full amount of the bid or a certified check in the amount equal to ten (10) percent of the bid. Warren County estimates approximately \$50,000 worth of repairs in the first year of the contract, approximately eight (8) point repairs and eight (8) lateral repairs, varying sizes. The bid bond should be based on \$50,000.

The project generally consists of improvements to existing sanitary mains and laterals that are identified by the Warren County Water & Sewer Department using cured-in-place-pipe trenchless technology. The locations of the work will be at various sites within our service area which includes mainly Warren County. Contact the Warren County Commissioner's Office at (513) 695-1250 should you need assistance in accessing the bidding information on the County's website. All contract addenda will be posted to the website prior to the bid opening. Bidders should check the website regularly to stay updated on any changes to the project.

Please be aware that if you are downloading this document to bid this project, and in order to stay updated on any change, please email Krystal Powell in the Commissioners' Office at krystal.powell@co.warren.oh.us with your contact information.

A Bid guaranty, as required by Ohio Revised Code, Section 153.54, shall accompany each proposal submitted, as follows:

1. A Certified check, cashier's check, or letter of credit equal to ten (10) percent of the bid. A letter of credit may only be revocable by the Owner. Upon entering into a contract with the Owner, the contractor must file a performance bond for the amount of the contract, and the bid guaranty will then be returned to the successful and unsuccessful bidders upon contract execution.

OR

2. A form of bid guaranty bond (attached) for the full amount of the bid. Such bond is retained for the successful bidder but returned to unsuccessful bidders after the contract is executed.

Attention of bidders is called to all of the requirements contained in the bid packet. No bidder may withdraw his/her bid within sixty (60) days after the actual date of the opening thereof. All bids shall be properly signed by an authorized representative of the bidder.

All bids shall be sealed and plainly marked "**Bid Opening – As Needed Sanitary Point Liner Repairs, August 3, 2023 @ 11:00 a.m.**"

Warren County reserves the right to reject any or all bids submitted, to waive any irregularities in bids, and enter into a contract with the Bidder who in Warren County's consideration offered the lowest and best bid.

By order of the Board of County Commissioner, County of Warren, State of Ohio.

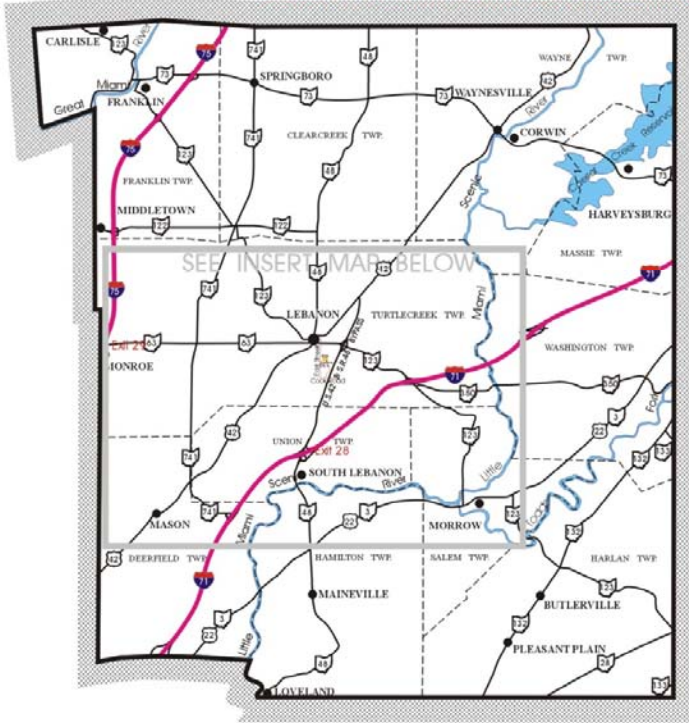
Tina Osborne, Clerk



DIRECTIONS FROM INTERSTATE HIGHWAYS 71 & 75 TO WARREN COUNTY, OHIO COUNTY ADMINISTRATION BUILDING



TRI-STATE REGION COUNTIES



INSERT FROM ABOVE MAP



INSERT FROM MAP AT LEFT



- FROM INTERSTATE 75:**
- Take Monroe / Lebanon Exit 29,
 - Head East on S. R. 63 into Lebanon,
 - Turn right onto East Street,
 - Turn left onto Justice Drive,
 - Turn left into parking lot,
 - At first driveway on left.
- FROM INTERSTATE 71:**
- Take Lebanon / South Lebanon Exit 28,
 - Head North on U. S. 42 / S. R. 48 Bypass
 - Turn left onto Cook Road at traffic light,
 - Turn at first right onto Justice Drive,
 - Turn right at first street on right,
 - Then left into parking lot at first left.

Map Prepared By: Warren County Regional Planning Commission

**SECTION 00 10 20
BID PROPOSAL**

The undersigned declares that the only persons or parties in this Bid are as stated; that the Bid is made without any collusion with other persons, firms, or corporations; that all the Contract Documents as prepared have been carefully examined; that the undersigned is fully informed in regard to all conditions pertaining to the Work and the place where it is to be done, and from them the undersigned makes this bid. The undersigned do hereby propose to furnish all labor, materials, tools, equipment, etc., necessary to complete the work for the As Needed Sanitary Point Liner Repairs and that the bid includes all costs including, permit fees, taxes, insurance, overhead, and profit. All material and equipment must comply with the specifications and contract drawings that comprise the Contract Documents.

The premiums for all Bonds required shall be paid by the Contractor and shall be included in the Contract Price. The undersigned Bidder further agrees that the Bid Security accompanying this Bid shall become the property of the County if the Bidder fails to execute the Agreement.

If any addenda are published on Warren County's website at <https://www.co.warren.oh.us/Commissioners/Bids/Default.aspx>, pursuant to SECTION 00 20 00, Paragraph 7, the undersigned acknowledges receipt of the following Addenda:

No. _____, dated _____, 20__

No. _____, dated _____, 20__

No. _____, dated _____, 20__

**SECTION 00 10 30
BID FORM**

Bids shall include all costs incurred for the Work including materials, equipment, supplies, labor, permit fees, taxes, insurance, miscellaneous costs, overhead, and profit. All Material must comply with the specifications shown on the contract drawings.

The Bid shall include the following:

| CIPP POINT REPAIR SYSTEM | | | | |
|---------------------------------|----------------------------|----------------------------------|--------------------------------|--------------------|
| Item # | Pipe Diameter (in.) | 4-Foot Base Length (Unit) | Unit Price Installed \$ | Cure Method |
| 1 | 8 | EACH | | |
| 2 | 10 | EACH | | |
| 3 | 12 | EACH | | |

| LATERAL CONNECTION SYSTEM REPAIR | | | | |
|---|----------------------------|----------------------------------|--------------------------------|--------------------|
| Item # | Pipe Diameter (in.) | 4-Foot Base Length (Unit) | Unit Price Installed \$ | Cure Method |
| 1 | 8 x 6 | EACH | | |
| 2 | 10 x 6 | EACH | | |
| 3 | 12 x 6 | EACH | | |

The undersigned hereby certifies under the penalty of perjury that this bid is in all respects bona fide, fair and made without collusion or fraud with any other person or entity. The bid proposals shall remain in full force and effect for sixty (60) days after the date of opening bids. The full name and address of all persons and parties interested in the foregoing bids as principals are as follows:

Individual, Partnership, or Corporation

Signature of Corporate Officer, President, or Owner

Date

Notice of acceptance should be mail or delivered to the following:

COMPANY NAME: _____

CHIEF EXECUTIVE OFFICER: _____

ADDRESS: _____

PHONE NUMBER: _____

FAX NUMBER: _____

PROJECT CONTACT PERSON: _____

PHONE NUMBER: _____

E-MAIL ADDRESS: _____

FEDERAL ID #: _____

WEBSITE ADDRESS: _____

NOTE: The firm, corporate or individual name of the bidder must be signed in ink in the space provided for the signatures on the proposed blanks. In the case of a corporation, the title of the officer signing must be stated, and such officer must be thereunto duly authorized and the seal of said corporation duly affixed. In the case of a partnership, the signature of at least one of the partners must follow the firm name, using the term "member of the firm." In the case of an individual, use the terms "doing business as", or "sole owner."

**SECTION 00 10 50
EXCEPTION SHEET**

Exceptions: Exceptions to any bid specification must be clearly stated on this sheet. This sheet must be submitted with each bid. If there are no exceptions, please indicate “none” below.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

SECTION 00 20 00
GENERAL INSTRUCTION TO BIDDERS

1. **Receipt and Opening of Bids:** The Warren County Board of Commissioners (herein referred to as “Owner”), invites bids on the form attached hereto, all blanks of which must be appropriately filled in. Bids will be received by the Owner at the Office of the Warren County Board of Commissioners until 11:00 AM, Thursday, August 3, 2023, and then at said office publicly opened and read aloud. The envelopes containing the bids must be sealed, addressed to Warren County Board of Commissioners at 406 Justice Drive, Lebanon, Ohio 45036, and shall be clearly marked as follows:

Bid Opening
As Needed Sanitary Point Liner Repairs
11:00 AM, Thursday, August 3, 2023

The Owner may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may withdraw a bid within 60 days after the actual date of opening thereof.

2. **Scope of Project:** The project generally consists of improvements to existing sanitary mains and laterals that are identified by the Warren County Water & Sewer Department using cured-in-place-pipe trenchless technology. The locations of the work will be at various sites within our service area which includes mainly Warren County. The primary objective is to improve the structural integrity and hydraulic renewal of the failing mains.

All awarded contracts will be of a standby nature and will only be exercised by the Warren County Water & Sewer Department as the need for contractual services arise.

The contractor shall furnish all labor material and equipment, and perform all work necessary to complete point repairs, renewals, and improvements comprising the Warren County Water & Sewer Department’s wastewater collection system including main sewers and forcemains using cured-in-place-pipe (CIPP) trenchless technology methods and equipment.

In conjunction with repairing, renewing, or improving assets under this contract, the Contractor shall clean and televise sewers, reconnect existing sewer service connections, and provide all submittals required by the specifications. The Contractor will be required to submit a visual PACP condition assessment of all mainline improvements, repairs, replacements, or renewals. Television inspection includes televising immediately before lining, televising and submitting video within 48 hours after lining, televising after making repairs to correct liner defects, and televising after rehabilitating lateral connections.

It shall be understood and agreed that the safe and continuous operation of the wastewater collection system shall have priority over any work performed under this contract.

3. **Project Funding/Financing:** The project shall be financed to the Contractor only through the Owner's reserved funds.
4. **Completion of Work:** The number of days allowed for completion of on-site work shall be determined on a per-project basis by the County Sanitary Engineer.
5. **Bid Documents:** Bid documents, including terms, general conditions, supplemental conditions, drawings, addenda, and other information are available online, free of charge, at the Warren County's Website at <https://www.co.warren.oh.us/Commissioners/Bids/Default.aspx>. No planholder list will be maintained by the Owner. All Addenda will be posted on the website and shall not be mailed to bidders.
6. **Addenda and Interpretations:** No interpretations of the meaning of the plans, specifications, or other pre-bid documents will be made to any bidder orally. Every request for such interpretation must be in writing to Chris Wojnicz at Christopher.Wojnicz@co.warren.oh.us. To be given consideration all questions must be received by 5:00 pm on Thursday, July 27, 2023. All such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, if issued, will be posted on the Warren County Commissioners' website <https://www.co.warren.oh.us/Commissioners/Bids/Default.aspx>, no later than five days prior to the date fixed for opening of bids. Failure of any bidder to monitor the website and download any such addendum or interpretations shall not relieve such bidder from any obligation under his/her bid as submitted. All addenda so issued shall become part of the contract documents. Bidders shall be responsible for checking the website prior to submitting their bid.
7. **Power of Attorney:** Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.
8. **Required Forms:** Each bid must be submitted on the forms contained in the Contract Documents herein. All blank spaces for bid prices must be completed, in ink or typewritten, in both words and figures, and the foregoing certifications must be fully completed and executed when submitted. Each Bidder shall complete and submit the following forms with his/her bid:
- | | |
|------------------|---|
| Section 00 10 20 | BID PROPOSAL |
| Section 00 10 30 | EXCEPTION SHEET |
| Section 00 30 10 | NONCOLLUSION AFFIDAVIT – FORM 1 |
| Section 00 30 20 | NONCOLLUSION AFFIDAVIT – FORM 2 |
| Section 00 30 30 | AFFIDAVIT OF NON-DELINQUENCY OF REAL AND/OR PERSONAL PROPERTY TAX |
| Section 00 30 40 | FINDINGS FOR RECOVERY AFFIDAVIT |
| Section 00 30 50 | EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS, BID CONDITIONS, NON-DISCRIMINATION, AND EQUAL EMPLOYMENT OPPORTUNITY AFFIDAVIT |
| Section 00 40 00 | BONDING REQUIREMENTS |
| Section 00 40 10 | BID GUARANTY AND CONTRACT BOND |
9. **Modification or Withdraw of Bid:** Bids may be modified or withdrawn by any appropriate document duly executed (in the manner that a bid must be executed) and delivered to the place where bids are to be submitted at any time prior to the opening of bids.

After opening, a Bidder may withdraw their bid from consideration if the price bid was substantially lower than the other bids, provided the bid was submitted in good faith and the reason for the price being substantially lower was a clerical mistake as opposed to a judgment mistake and was actually due to an unintentional omission of a substantial quantity of work, labor or material made directly in the compilation of the bid. Request to withdraw such bid must be made in writing and filed with the Owner within two business days after the opening of bids and prior to the acceptance thereof.

10. **Method of Award:** The Owner may reject all bids or may award the contract on the base bid or on the base bid combined with additions or deductible alternates, to the lowest and best bidder, as produces a net amount which is within the available funds.

To determine lowest and best bidder, the price of the bid will be given equal weight against the totality of the following factors: 1.) the bidder's information provided in the Section 00 50 10 Experience Statement which shall be used to judge responsibility, experience, skill, financial standing, feedback from references or prior clients—which may include Owner; 2.) the Section 00 10 30 Exception Sheet; 3.) availability, proximity, and familiarity to job site.

If the total price received from the lowest and best bidder exceeds the amount of funds available to finance the contract, the Owner may:

- a. Reject all bids;
- b. Augment the funds available in the amount sufficient to enable award to the lowest and best bidder or bidders;
- c. Reduce the scope of the work by eliminating certain items of work to produce a total bid which is within the available funds;
- d. Reduce the scope of work by reducing the quantities of certain items of work to produce a total bid which is within the available funds;
- e. Reduce the scope of work by a combination of adjustments as outlined in “c” and “d” above to produce a total bid which is within available funds.
- f. The Owner may reject all bids or may award the contract on the base bid or on the base bid combined with additions or deductible alternative as produces a net amount which is within the available funds.
- g. The Owner may consider informal and may reject any bid not prepared and submitted in accordance with the provisions hereof. The Owner reserves the right to reject all bids, to waive any informalities or irregularities in the bids received, and to accept any bid which is deemed lowest and best.

11. **Qualification of Bidder:** The Owner any make such investigations as he/she deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated herein; conditional bids will not be accepted.

12. **No Damage for Delay:** No payment, compensation or adjustment of any kind shall be made to the contract price for damages incurred by the contractor because of hindrances or delays

in the progress of the work from any cause that is not proximately caused by the Owner's action or failure to act. Whether such hindrances or delays are avoidable or unavoidable, the contractor agrees that he or she will make no claim for compensation, damages, or mitigation of liquidated damages for any such delays. Examples of delays include (but are in no manner limited to) obtaining all necessary permission from any government agency or any private party, any act or failure to act by any other contractor, subcontractor and/or supplier, all foreseen and unforeseen events and any conditions or acts of God. It is understood and agreed that the contractor assumes all risks of delays in prosecuting or completing the work under the contract that are not proximately caused by the Owner's action or failure to act. The contractor will accept in full satisfaction for such delays, an extension of time, if any, agreed to by the Owner.

13. **Conditions of Work:** Each bidder must inform him/herself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of his/her obligation to furnish all material and labor necessary to carry out the provisions of his/her contract. Insofar as possible the contractor, in carrying out the work, must employ such methods or means or will not cause any interruption of or interference with the work of any other contractor. No plea of ignorance of conditions that exist or that may hereafter exist, or of conditions or difficulties that may be encountered in the execution of the work as the result of failure to make such examination and investigation, will be accepted as an excuse for any failure or omission on the part of the Contractor to fulfill in every respect, all the requirements of the Contract, nor will the same be accepted as a basis for any claim whatsoever for extra compensation or for an extension of time.

14. **Obligation of Bidder:** Each bidder shall and is hereby directed to inspect the entire site of the proposed work and judge for him/herself as to all the circumstances affecting the cost and progress of the work and shall assume all patent and latent risks in connection therewith. At the time of the opening of bids each bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the plans and contract documents (including all addenda). The failure or omission of any bidder to examine any form, instrument or document shall in no way relieve any bidder from any obligation in respect of his/her bid.

15. **Non-Collusion Affidavit:** The successful bidder will be required to submit non-collusion affidavit on the form included in these Bid/Contract Documents (SECTION 00 30 10 and 00 30 20). These affidavits shall be dated and executed as part of this bid.

16. **Real and/or Personal Property Tax Affidavit:** All bidders must complete the Real and/or Personal property tax affidavit (Section 00 30 30) and submit with your bid. This section should be fully completed whether or not you as a vendor/contractor own property in Warren County, Ohio.

17. **EEO Compliance:** Equal Employment Opportunity (EEO) compliance requirements and affidavits are contained in SECTION 00 30 50. Owner contracts that receive state or federal funding including, but not limited to, grants, loans, and debt forgiveness shall not be executed unless the Contractor possesses a current Certificate of Compliance issued by the State EEO Coordinator.

Every contract for or on behalf of the County for the construction, alteration, or repair of any public building or public work shall include an affidavit certifying the contractor complies with EEO requirements specified in Ohio Revised Code Section 153.59.

18. **Bid Security:**

A bid guaranty, as required by Ohio Revised Code, Section 153.54, shall accompany each proposal submitted, as follows:

1. A Certified check, cashier's check, or letter of credit equal to ten (10) percent of the bid. A letter of credit may only be revocable by the Owner. Upon entering into a contract with the Owner, the contractor must file a performance bond for the amount of the contract, and the bid guaranty will then be return to the successful and unsuccessful bidders upon request.

OR

2. A form of bid guaranty bond (attached) for the full amount of the bid. Such bond is retained for the successful bidder but returned to unsuccessful bidders after the contract is executed.

Warren County estimates approximately \$50,000 worth of repairs in the first year of the contract, approximately eight (8) point repairs and eight (8) lateral repairs, varying sizes. The bod bond should be based on \$50,000.

Such cash, checks or bid bonds will be returned to bidders after the Owner has awarded the bid and has executed the contract, or, if no award has been made within 60 days after the date of the opening of bids, upon demand of the bidder at any time thereafter, so long as he/she has not been notified of the acceptance of his/her bid.

Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

19. **Liquidated Damages for Failure to Enter into Contract:** Submission of a bid shall be a representation by the Contractor that it has fully reviewed and is familiar with the Contract and all contract documents as defined in the contract and will execute the contract if awarded the bid. The successful bidder, upon his/her failure or refusal to execute and deliver the contract (attached hereto) and bonds required within 10 working days after he/she has received the documents, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his/her bid.

20. **Security for Faithful Performance:** Simultaneously with his/her delivery of the executed contract, the Contractor shall furnish a performance (surety) bond as security for faithful performance of this contract and for the payment of all persons performing labor on project under this contract and furnishing materials in connection with the contract. The surety on such bond or bonds shall be duly authorized surety company satisfactory to the Owner. Please note that upon execution of the Contract if a Bid Guaranty/Contract Bond was submitted with your original bid a Performance Bond will not be required.

21. **Required Insurance:** In accordance with the specifications and the Supplemental Conditions, the Contractor, without restricting the obligations and liabilities assumed under the Contract Documents, shall at his own cost and expense purchase and maintaining in force until final acceptance of his work, the forms of insurance coverage as described in Section 00 80 10 Supplemental Conditions 1.2.C. Article 5 – Bonds and Insurance.

Certificates from the insurance carrier stating the limits of liability and expiration date shall be filed with the Owner before operations are begin. Such certificates shall not merely name the types of policy provided but shall specifically refer to this Contract and shall name the Board of Warren County Commissioners as additionally insured.

However, the original policy for Owner's Protective Bodily Injury (Item D) and Property Damages (Item E) shall at this time be delivered to the Owner for its possession.

All policies as hereinafter required shall be so written that the Owner will be notified of cancellation or restrictive amendment at least ten days prior to the effective date of such cancellation or amendment.

Item A - Workers Compensation and/or Employer's liability Insurance as required or specified by State Law.

Item B – Comprehensive General Liability Insurance: In an amount not less than \$1,000,000.00 per occurrence for Bodily Injury and \$500,000 for explosion underground and collapse, commonly known as “XCU.” The following endorsement documents provided by Warren County:

- a. CG 20 10 10 01 – additional insured endorsement (or equivalent)
- b. CG 20 37 10 01 – additional insured endorsement (or equivalent)
- c. CG 25 03 03 97 – designated location aggregate (or equivalent)

General Liability needs to be written on Primary/Non-contributory basis for the benefit of the additional insured.

Item C – Umbrella: In an amount not less than \$1,000,000 occurrence and \$1,000,000 aggregate. Umbrella needs to attach to General Liability, Employers Liability, Auto Liability. Umbrella needs to be written on follow-form primary.

Item D - Bodily Injury Liability Insurance covering motor vehicles either owned by the Contractor or being used in connection with the prosecution of the work embraced under this contract.

Item E - Property Damage Liability Insurance covering motor vehicles either owned by the Contractor or being used in connection with the prosecution of the work embraced under this contract.

Item F - (If Applicable) - Such Protective (including Railroad Protective) and Contractual Bodily Injury Liability Insurance and such Protective (including Railroad Protective) and Contractual Property Damage Liability Insurance as shall be required by the railroad and other utility companies whose property, facilities or rights-of-way may be affected by the work to be done under this contract, in such amounts and in such form as each such utility company may require.

If any part of the work is sublet, insurance of the same types and limits as required by above items numbered A, B, C, D, E, and F shall be provided by or on behalf of the Subcontractors to cover that part

of the work they have contracted to perform including Property Damage Liability Special Hazards coverage if so required by this contract.

Protective and Contractual Bodily Injury Liability Insurance required by Item F (if applicable) shall be in an amount and form as each railroad or utility company may require.

Builders Risk Insurance: All Risk form, including subsidence and theft of materials from the job site. Such coverage shall be maintained until final acceptance of the Contract by the Owner and payable to the Owner for the benefit of the contractor. The limit for Builders Risk shall be the full value of construction.

All policies as hereinafter required shall be so written that the Owner will be notified of cancellation or restrictive amendment at least sixty days prior to the effective date of such cancellation or amendment.

If any part of the work is sublet, insurance of the same types and limits as required shall be provided by or on behalf of the Subcontractors to cover that part of the work they have contracted to perform including Property Damage Liability Special Hazards coverage if so required by this contract.

22. **Additional Obligations Upon Contract Award:** Upon award of the bid but prior to execution of the final agreement and notice to proceed, the Contractor shall submit all of the following documents, completed as required:

1. Contract
2. Performance Bond
3. Certificates of Insurance

23. **Wage Rates:** This Project is not subject to Prevailing Wage Requirements. Insofar as possible, local labor shall be employed on this work.

24. **Pricing:** Prices shall be firm for the life of the contract.

25. **Contract Period:** The service shall be delivered as ordered during the period beginning October 1, 2023 and ending September 31, 2026.

26. **Termination:** The County may terminate this Agreement at any time for any reason upon thirty (30) days written notice to Contractor.

If, through any cause, the Contractor shall fail to fulfill in a timely and proper manner the Contractor's obligations under this Agreement or if the Contractor violates any of the terms and conditions, covenants or agreements of the Agreement, if no attempt is made to the cure the failure within a period of ten (10) days or a longer period specified in writing, the County shall have the right to terminate this Agreement by giving written notice to the Contractor specifying the effective date of the termination, at least five (5) days before such effective date. Notwithstanding the above, the Contractor shall not be relieved of liability to the County for damages sustained by the County by virtue of any breach of this Agreement by the Contractor, and the County may withhold any payments to the Contractor for the purposes of set-off until such time as the exact amount of

damages due the County from the Contractor is determined. Exceptions may be made with respect to defaults of subcontractors.

27. **Laws and Regulations:** The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances, and the rules and regulations of all authorities have jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full.

28. **Foreign Corporation and Contractors:** "Foreign Corporations" means a corporation incorporated under the laws of another state. No contract shall be entered into with a foreign corporation until the Secretary of State has certified that such corporation is authorized to do business in Ohio: and until, if the bidder so awarded the Contract is a person or partnership, it has filed with the Secretary of State a Power of Attorney designating the Secretary of State as its agent for the purpose of accepting service of summons in any action brought under Ohio Revised Code, Section 153.05 or under Sections 4123.01 to 4123.94, inclusive.

29. **Safety Standards and Accident Prevention:** With respect to all work performed under this Contract, the Contractor shall:

- a. Comply with the safety standards provisions of applicable laws, building and construction codes and the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America, the requirements of the Occupational Safety and Health Act of 1970 (Public Law 91-596), and the requirements of title 29 of the code of Federal Regulations, Section 1518 as published in the "Federal Register", Volume 36, N. 75, Saturday, April 17, 1971.
- b. Exercise every precaution at all times for the prevention of accidents and the protection of persons (including employees) and property.
- c. Maintain at his/her office or other well-known place at the job site, all articles necessary for giving first aid to the injured and shall make standing arrangements for the immediate removal to a hospital or doctor's care of persons (including employees) who may be injured at the job site. In no case shall employees be permitted to work at a job site before the employer has made a standing arrangement for removal of injured persons to a hospital or a doctor's care.

30. **Permits:** Contractor shall keep a copy of all permits at the project site throughout the duration of the work. The permits required for the work, the permit holder, and the entity paying for the permit is outlined below. All obtained permits acquired to date are included in SECTION 00 70 20.

31. **Maintenance of Rights-Of-Way:** All construction as proposed along all City, Township, County, State and Federal roads including storage and stockpiling of materials, is to be conducted within the limits of the public right-of-way. Bracing sheeting and shoring shall be used to keep all construction work within the construction limits unless work agreements are secured from the adjacent property Owners. It is the Contractor's responsibility to secure these work agreements, if deemed necessary. Copies of the work agreements shall be delivered to the Engineer and Owner prior to any work beginning on the affected property.

32. **Lights, Signs and Barricades:** Lights, signs and barricades shall be used to maintain traffic and safety for vehicular and pedestrian traffic during the course of this contract and shall be the sole responsibility of the Contractor.

33. **Subcontracts:** Contractor shall provide upon request of the Owner a list of all subcontractors intended to be used in performance of the work. In the event the Owner does not object, Contractor may have such work performed by a subcontractor. Contractor shall bind every subcontractor to, and every subcontractor must agree to be bound by the terms of the Agreement, as far as applicable to the subcontractor's work particularly pertaining to Prevailing Wages and EEO requirements. Nothing contained in the Agreement shall create any contractual relationship between any subcontractor and Owner, nor create any obligations on the part of the Owner to pay or see to the payment of any sums to any subcontractor.

34. **Subletting of Contract:** The Contractor shall not sublet, sell, transfer, or assign any portion of the contract without written consent of the Owner of his designated agent. When such consent is given, the Contractor will be permitted to sublet a portion thereof, but shall perform with his own organization, work amounting to no less than fifty percent of the total contract cost, except that any time designated in the contract before computing the amount of work required to be performed by the Contractor with his own organization, no subcontract, or transfer of contract, shall in any way release the Contractor of his liability under the contract and bonds.

35. **CONFIDENTIAL DOCUMENTS & INFORMATION:** Do not submit confidential documents or documents of any type that contain trade secrets. All materials submitted become public records once opened and may be copied upon request to anybody including competitive bidders.

END OF SECTION

**SECTION 00 30 10
NONCOLLUSION AFFIDAVIT – FORM 1**

State of _____

BID Identification _____

CONTRACTOR _____ being first duly sworn, deposes and says that he is _____ (sole owner, a partner, president, secretary, etc.) of _____, the party making the foregoing BID; that such BID is not made in the interest of or on behalf of any undisclosed person, partnership, company, association, organization, or corporation; that such BID is genuine and not collusive or sham; that said BIDDER has not directly or indirectly colluded, conspired, connived or agreed with any BIDDER or anyone else to put in a sham BID, or that any one shall refrain from Bidding; that said BIDDER has not in any manner, directly or indirectly, sought by agreement, communication or conference with anyone to fix the BID price of said BIDDER or of any other BIDDER, or to fix any overhead, profit, or cost element of such BID price, or of that of any other BIDDER, or to secure any advantage against the OWNER awarding the contract or anyone interested in the proposed contract; that all statement contained in such BID are true; and, further, that said BIDDER has not, directly or indirectly, submitted his BID price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid and will not pay any fee in connection therewith, to any corporation, partnership, company, association, organization, BID depository, or to any member or agent thereof, or to any other individual except to such person or persons who have a partnership or other financial interest with said BIDDER in his general business.

Signed:

Subscribed and sworn to before

me this ___ day of _____, 2023.

Seal of Notary

SECTION 00 30 20
NONCOLLUSION AFFIDAVIT – FORM 2

STATE OF _____

COUNTY OF _____

I, _____, holding the title and position of _____ at the firm _____, affirm that I am authorized to speak on behalf of the company, board directors and owners in setting the price on the contract, bid or proposal. I understand that any misstatements in the following information will be treated as fraudulent concealment of true facts on the submission of the contract, bid or proposal.

I hereby swear and depose that the following statements are true and factual to the best of my knowledge:

The contract, bid or proposal is genuine and not made on the behalf of any other person, company or client, INCLUDING ANY MEMBER OF THE WARREN COUNTY BOARD OF COMMISSIONERS.

The price of the contract, bid or proposal was determined independent of outside consultation and was not influenced by other companies, clients, or contractors, INCLUDING ANY MEMBER OF THE WARREN COUNTY BOARD OF COMMISSIONERS.

No companies, clients, or contractors, INCLUDING ANY MEMBER OF THE WARREN COUNTY BOARD OF COMMISSIONERS have been solicited to propose a fake contract, bid or proposal for comparative purposes.

No companies, clients, or contractors, INCLUDING ANY MEMBER OF THE WARREN COUNTY BOARD OF COMMISSIONERS have been solicited to refrain from bidding or to submit any form of noncompetitive bidding.

Relative to sealed bids, the price of the bid or proposal has not been disclosed to any client, company or contractor, INCLUDING ANY MEMBER OF THE WARREN COUNTY BOARD OF COMMISSIONERS, and will not be disclosed until the formal bid/proposal opening date.

AFFIANT

Subscribed and sworn to before me this _____ day of _____ 2023.

(Notary Public),

_____ County.

My commission expires _____ 20__

SECTION 00 30 30
AFFIDAVIT OF NON-DELINQUENCY OF REAL AND/OR
PERSONAL PROPERTY TAX

THIS SECTION SHOULD BE FULLY COMPLETED WHETHER OR NOT YOU AS A VENDOR/CONTRACTOR OWN PROPERTY IN WARREN COUNTY, OHIO. MAKING A FALSE STATEMENT ON THIS AFFIDAVIT MAY BE PUNISHABLE BY A FINE AND/OR IMPRISONMENT.

STATE OF _____)

SS:

COUNTY OF _____)

_____ being duly cautioned and sworn, states as follows:

1. That he/she is _____ of
(Title)

(Name of Contracting Party)

2. That _____ is not presently charged with any
(Name of Contracting Party)

delinquent Real and/or Personal property taxes on the general tax list of Real and/or Personal property of Warren County.

-OR-

1. That _____ is charged with delinquent Real and/or
(Name of Contracting Party)

Personal property tax on the general tax list of Real and/or Personal property of Warren County. The amount of delinquent Real and/or Personal property tax due and unpaid including any due and unpaid penalty and interest is:

\$ _____

Further, affiant states not.

Affiant

Sworn to and subscribed in my presence this ____ day of _____ 2023.

Notary Public

This instrument was prepared by _____.

Note to Fiscal Office: If any Real and/or Personal property taxes are delinquent, you must send a copy of this statement to the County Treasurer within 30 days of the date it is submitted.

**SECTION 00 30 40
FINDINGS FOR RECOVERY AFFIDAVIT**

STATE OF _____

COUNTY OF _____, SS:

_____, upon being duly cautioned and sworn, hereby states the following based on personal knowledge:

- 1) That he/she is _____ (title), of _____ (name of bidder) and authorized to execute this affidavit; and,
- 2) That _____ (name of bidder) is not a person or entity against whom a finding for recovery has been issued by the Auditor of State, which finding for recovery is unresolved as defined in Ohio Revised Code [General Provisions] Section 9.24 (B); and,
- 3) That _____ (name of bidder) does not appear in the database of unresolved findings of recovery maintained by the Auditor of State pursuant to Ohio Revised Code [General Provisions] Section 9.24 (D).

Affiant

Sworn to and subscribed in my presence this _____ day of _____, 2023.

Notary Public

My Commission expires: _____

SECTION 00 30 50

EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS, BID CONDITIONS, NON-DISCRIMINATION, AND EQUAL EMPLOYMENT OPPORTUNITY AFFIDAVIT

Bidders shall submit a copy of a valid Certificate of Compliance issued by the State EEO Coordinator for Owner projects that receive state or federal funding. The source of financing and funding for this project is specified in SECTION 00 20 00 – INSTRUCTIONS TO BIDDERS. Bidders may contact the State of Ohio, Department of Administrative Services, Equal Opportunity Division for information on how to apply online for a certification using the Ohio Business Gateway.

Every contract for or on behalf of the County for the construction, alteration, or repair of any public building or public work shall include an affidavit certifying the contractor complies with EEO requirements specified in Ohio Revised Code Section 153.59. In addition to the affidavit, all bidders agree to the following State of Ohio standard conditions of contract for construction:

1. The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, age, disability, Vietnam era Veteran status, ancestry or sex. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, national origin, age, disability, Vietnam era Veteran status, ancestry or sex. Such action shall include, but is not limited to, the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2. The contractor will in all solicitations or advertisements for employees placed by or on behalf of the prime contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, age, disability, Vietnam era Veteran status, ancestry or sex..
3. The contractor agrees to fully cooperate with the County, the State Equal Employment Opportunity Coordinator and with any other official or agency, or the State or Federal government which seeks to eliminate unlawful employment discrimination, and with all other State and Federal efforts to assure equal employment practices under its contract and the contractor shall comply promptly with all requests and directions from the County, the State Equal Opportunity Coordinator and any of the State of Ohio officials and agencies in this regard, both before and during construction.
4. Full cooperation as expressed in clause (3), above, shall include, but not be limited to, being a witness and permitting employees to be witnesses and complainants in any proceedings involving questions of unlawful employment practices, furnishing all information requested by the County and the State Equal Employment Opportunity Coordinator, and permitting access to its books, records, and accounts by the County and the State Equal Employment Opportunity Coordinator for purposes of investigation to ascertain compliance with

applicable rules, regulations and orders.

5. In the event of the contractor's noncompliance with the nondiscrimination clauses of its contract or with any of the said rules, regulations, or orders, its contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further County construction contracts.

In the event that is contract is terminated for a material breach of EEO requirements, the contractor shall become liable for any and all damages which shall accrue to the County as a result of said breach.

6. The contractor will require the inclusion of language reflecting these same six covenants within every subcontract or purchase order it executes in the performance of its contract unless exempted by rules, regulations or orders of the State Equal Employment Opportunity Coordinator so that these provisions will be binding upon each subcontractor or vendor. The contractor will take such as the County may direct as a means of enforcing such provisions, including sanctions for noncompliance; provided, however, that in any litigation with a subcontractor, vendor or other party as a result of such direction by the County, the contractor may be requested to protect the interests of the County.

The bidder hereby adopts the foregoing covenants?

_____ Yes _____ No

PLEASE NOTE: The bidder's failure to adopt the Bidder's EEO Covenants, will cause the bidder's proposal to be rejected as being non-responsive.

CERTIFICATE OF COMPLIANCE NON-DISCRIMINATION AND EQUAL EMPLOYMENT
OPPORTUNITY AFFIDAVIT (CONTRACTOR)

STATE OF _____)

SS:

COUNTY OF _____)

_____ being first duly sworn, deposes and
says that he/she is _____ of _____

the party who made the foregoing proposal; that such party as bidder does not and shall not discriminate against any employee or applicant for employment because of race, color, religion, national origin, age, disability, Vietnam era Veteran status, ancestry or sex. If awarded the bid and contract under this proposal, said party shall take affirmative action to insure that applicants are employed and that employees are treated, during employment, without regard to their race, color, religion, national origin, age, disability, Vietnam era Veteran status, ancestry or sex.. If successful as the lowest and best bidder under the foregoing proposal, this party shall post non-discrimination notices in conspicuous places available to employees and applicants for employment setting forth the provisions of this affidavit.

Furthermore, said party agrees to abide by the assurances found in Section 153.54 of the Ohio Revised Code in the Contract Provisions with the Owner if selected as the successful bidder by the Owner.

Signature

Affiant

Company/Corporation

Address

City/State/Zip Code

Sworn to and subscribed before me this _____ day of _____, 2023.

(seal)

Notary

CERTIFICATE OF COMPLIANCE NON-DISCRIMINATION AND EQUAL EMPLOYMENT
OPPORTUNITY AFFIDAVIT (SUB CONTRACTOR)

STATE OF _____)

SS:

COUNTY OF _____)

_____ being first duly sworn, deposes and

says that he _____ of _____

the party who made the foregoing proposal; that such party as bidder does not and shall not discriminate against any employee or applicant for employment because of race, color, religion, national origin, age, disability, Vietnam era Veteran status, ancestry or sex. If awarded the bid and contract under this proposal, said party shall take affirmative action to insure that applicants are employed and that employees are treated, during employment, without regard to their race, color, religion, national origin, age, disability, Vietnam era Veteran status, ancestry or sex. If successful as the lowest and best bidder under the foregoing proposal, this party shall post non-discrimination notices in conspicuous places available to employees and applicants for employment setting forth the provisions of this affidavit.

Furthermore, said party agrees to abide by the assurances found in Section 153.54 of the Ohio Revised Code in the Contract Provisions with the Owner if selected as the successful bidder by the Owner.

Signature

Affiant

Company/Corporation

Address

City/State/Zip Code

Sworn to and subscribed before me this _____ day of _____, 2023.

(seal)

Notary

SECTION 00 40 00
BONDING REQUIREMENTS

Bid guaranty, as required by Ohio Revised Code, Section 153.54, shall accompany each proposal submitted, as follows, either:

1. A Certified check, cashier's check, or letter of credit equal to ten (10) percent of the bid. A letter of credit may only be revocable by the Owner.

OR

2. A form of bid guaranty and contract bond (attached) for the full amount of the bid. Such bond is retained for the successful bidder but returned to unsuccessful bidders after contract is executed.

Warren County estimates approximately \$50,000 worth of repairs in the first year of the contract, approximately eight (8) point repairs and eight (8) lateral repairs, varying sizes. The bond should be based on \$50,000.

Performance bond is required upon entering into a contract with the Owner for 100 percent of the contract price when the bid guaranty is a certified check, cashier's check, or letter of credit equal to ten percent. Otherwise, the bid guaranty and contract bond shall secure the performance of the contract with a penal sum of 100% of the bid. A "performance bond" is one executed in connection with a contract to secure fulfillment of all the contractor's obligations under such contract.

SECTION 00 40 10
BID GUARANTY AND CONTRACT BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned,

(Insert full name or legal title of Contractor and Address)

as Principal and

(Insert full name or legal title of Surety)

as Surety, are hereby held and firmly bound unto the Warren County Board of Commissioners hereinafter called the Obligee, in the penal sum of the dollar amount of the bid submitted by the Principal to the Obligee on _____ to undertake the project known as:

AS NEEDED SANITARY POINT LINER REPAIRS

The penal sum referred to herein shall be the dollar amount of the Principal's bid to the Obligee, incorporating any additive or deductive alternate proposals made by the Principal on the date referred to above to the Obligee, which are accepted by the Obligee, In no case shall the penal sum exceed the amount of _____ DOLLARS, \$ _____. If this item is left blank, the penal sum will be the full amount of the Principal's bid, including alternates. Alternatively, if completed, the amount stated must not be less than the full amount of the bid, including alternates in dollars and cents. A percentage is not acceptable.

For the payment of the penal sum well and truly to be made we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors, and assigns.

THE CONDITION OF THE ABOVE OBLIGATION IS SUCH, that whereas the above-named Principal has submitted a bid on the above referred to project;

NOW, THEREFORE, if the Obligee accepts the bid of the Principal and the Principal fails to enter into a proper contract in accordance with the bid, plans, details, specifications, and bills of material; and in the event the Principal pays to the Obligee the difference not to exceed ten percent of the penalty hereof between the amount specified in the bid and such larger amount for which the Obligee may in good faith contract with the next lowest bidder to perform the work covered by the bid; or in the event the Obligee does not award the contract to the next lowest bidder and resubmits the project for bidding, the Principal will pay the Obligee the difference not to exceed ten percent of the penalty hereof between the amount specified in the bid, or the costs, in connection with the resubmission, of printing new contract documents, required advertising, and printing and mailing notices to prospective bidders, whichever is less, then this obligation shall be null and void, otherwise to remain in full force and effect.

If the Obligee accepts the bid of the Principal and within TEN days after the awarding of the contract, enters into a proper contract in accordance with the bid, plans, details, specifications, and bills of material, which said contract is made a part of this bond the same as though set forth herein; and

IF THE SAID PRINCIPAL SHALL well and faithfully perform each and every condition of such contract; and indemnify the Obligee against all damage suffered by failure to perform such contract according to the provisions thereof and in accordance with the plans, details, specifications, and bills of material therefore; and shall pay all lawful claims of subcontractors, materialmen, and laborers, for labor performed and materials furnished in the carrying forward, performing, or completing of said contract: we agreeing and assenting that this undertaking shall be for benefit of any materialman or laborer having a just claim, as well as for the Obligee herein; THEN THIS OBLIGATION SHALL be void; otherwise the same shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall in no event exceed the penal amount of this obligation as herein stated.

THE SAID surety hereby stipulates and agrees that no modifications, omissions, or additions, in or to the terms of said contract or in or to the plans and specifications therefor shall in any wise affect the obligations of said surety on its bond, and it does hereby waive notice of any such modifications, omissions or additions to the terms of the contract or to the work or to the specifications.

SIGNED AND SEALED this _____ day of _____ 2023.

PRINCIPAL

SURETY

By: _____

By: _____
Attorney-in-fact

Title: _____

Surety Agent's Name and Address:

**SECTION 00 40 20
PERFORMANCE BOND**

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter called
(Corporation, Partnership or Individual)

Principal, and _____
(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

WARREN COUNTY OHIO, BOARD OF COMMISSIONERS
406 Justice Drive
Lebanon, OH 45036

hereinafter called OWNER, in the penal sum of _____ Dollars, \$(_____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____, 2021, a copy of which is hereto attached and made a part hereof for the construction of:

AS NEEDED SANITARY POINT LINER REPAIRS

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the OWNER, with or without notice to the Surety and during the guaranty period(s), and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition of the terms of the contract or the WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any way affect

its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in counterparts, each one of which shall be deemed an original, this the _____ day of _____ 2023.

ATTEST:

(Principal)

(SEAL)

By _____

ATTEST:

(SEAL)

(Surety)

IMPORTANT: Pursuant to Ohio Revised Code §122.87(A) defines surety company as, “. . . a company that is authorized by the department of insurance to issue bonds as a surety”.

SECTION 00 50 10
EXPERIENCE STATEMENT

The Bidder is required to state in detail in the space provided below, what work they have completed of a character similar to that included in the proposed contract, to give references and such other detailed information as will enable the Owner to judge their responsibility, experience, skill, and financial standing. Completion of this statement is required and must be submitted with the Bid in order to qualify for consideration for award of contract.

SUBMITTED FOR:

HUNTER SEWER SYSTEM IMPROVEMENTS PROJECT

SUBMITTED BY:

Name: _____

(Print or Type Name of Bidder)
(A Corporation / A Partnership / An Individual)
[Bidder to strike out inapplicable terms.]

Address: _____

The undersigned certifies under oath the truth and correctness of all statements and of all answers to questions made hereinafter.

(Note: Attach Separate Sheets as Required)

1.0 How many years has your organization been in business as a construction contractor?

2.0 How many years has your organization been in business under its present name?

3.0 Has any construction contracts to which you have been a party been terminated by the owner; have you ever terminated work on a construction project prior to its completion for any reason; has any surety which issued a performance bond on your behalf ever completed the work in its own name or financed such completion on your behalf; has any surety expended any monies in connection with a contract for which they furnished a bond on your behalf? If the answer to any portion of this question is "yes", please furnish details of all such occurrences including name, address, phone number, and contact person of owner, engineer, and surety, and name and date of project.

No _____ Yes _____, If yes, attach details described above.

4.0 Has any officer or partner of your organization ever been an officer or partner of another organization that had construction contracts terminated by the owner; terminated work on a project prior to its completion for any reason; had any surety which issued a performance bond complete the work in its own name or financed such completion; or had any surety expend any monies in connection with a contract for which they furnished a bond? If the answer to any portion of this question is "yes", please furnish details of all such occurrences including name, address, phone number, and contact person of owner, engineer, and surety, and name and date of project.

No _____ Yes _____, If yes, attach details described above.

5.0 Provide a list of water and wastewater construction projects, their owners, contract amounts, percent complete, short description of work, and scheduled completion that your organization has in process on this date.

6.0 Provide a list of water and wastewater construction projects, their owners, contract amounts, short description of work, and dates of completion that your organization has completed in the past five years.

7.0 Have you personally inspected the site of the proposed work? Describe any anticipated problems with the site and your proposed solutions.

8.0 List name, address and telephone number of a reference for each project listed under Items 5.0 and 6.0, above.

9.0 List name and experience of the principal individuals of your organization.

10.0 List the states in which your organization is legally qualified to do business.

11.0 List name, address and telephone number of an individual who represents each of the following and whom OWNER may contact for a financial reference:

11.1 A surety:

Name _____

Contact _____

Address _____

_____ Phone No. _____

Financial Reference _____

11.2 A bank:

Name _____

Contact _____

Address _____

_____ Phone No. _____

Financial Reference _____

11.3 A major material supplier:

Name _____

Contact _____

Address _____

Phone No. _____

Financial Reference _____

12.0 Dated at _____ this ____ day of _____, 2021.

(Print or Type Name of Bidder)

By: _____

(Seal, if corporation)

------(Affidavit for Individual)-----

_____, being duly sworn, deposes and says that all of the foregoing qualification information is true, complete, and accurate.

------(Affidavit for Partnership)-----

_____, being duly sworn, deposes and says that he/she is a member of the partnership of _____ and that all of the foregoing qualification information is true, complete, and accurate.

------(Affidavit for Corporation)-----

_____, being duly sworn, deposes and says that he/she is _____ of _____, and that all of the (Full name of Corporation)

foregoing qualification information is true, complete, and accurate.

------(Affidavit for Joint Venture)-----

_____ and _____, being duly sworn, deposes and says that they are members of _____ (Full Name of Joint Venture)

, and that all of the foregoing qualification information is true, complete, and accurate.

------(Acknowledgment) -----

_____, being duly sworn, deposes and says that he/she is
of _____; that he/she is duly authorized to make the foregoing
(Name of Bidder)

affidavit and that he/she makes it on behalf of () himself/herself; () said partnership; ()
said corporation.

Sworn to before me this _____ day of _____, 2023, in the County
of _____, State of _____.

(Notary Public)

My commission expires _____

(Seal)

**SECTION 00 60 10
CONTRACT**

THIS AGREEMENT, made this _____ day of _____, 2021, with the Warren County Board of Commissioners, 406 Justice Drive, Lebanon, Ohio, hereinafter called "Owner" and **ENTER CONTRACTOR NAME**, doing businesses as (an individual, partner, a corporation) hereinafter called "Contractor."

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the Owner, the Contractor hereby agrees with the Owner to commence and complete the construction described as follows:

AS NEEDED SANITARY POINT LINER REPAIRS

hereinafter called the project, for the sum of \$ **ENTER AMOUNT**, and all work in connection therewith, under the terms as stated in the General Conditions and Supplemental Conditions of the Contract; and as his (its or their) own proper cost and expense furnish all the materials, supplies, machinery, equipment, tools, superintendence, labor insurance, and other accessories and services necessary to complete the said project in accordance with the conditions and prices stated in Contract Documents. "Contract Documents" means and includes the following:

- Addendum
- Division 00 – Contract Requirements
- Division 01 to 48 – Technical Specifications
- General Conditions
- Supplemental Conditions
- Any and All Bid Documents
- Construction Drawings

CONTRACTOR hereby agrees to commence work under this contract on or before a date to be specified in a Written "Notice to Proceed" of the OWNER.

This Agreement may be terminated by either party upon written notice in the event of substantial failure by the other party to perform in accordance with the terms of this Agreement. The nonperforming party shall have fifteen calendar days from the date of the termination notice to cure or to submit a plan for cure acceptable to the other party.

OWNER may terminate or suspend performance of this Agreement for OWNER'S convenience upon written notice to the CONTRACTOR. CONTRACTOR shall terminate or suspend performance of the services/work on a schedule acceptable to the OWNER.

The CONTRACTOR will indemnify and save the OWNER, their officers and employees, harmless from loss, expenses, costs, reasonable attorney's fees, litigation expenses, suits at law or in equity, causes of action, actions, damages, and obligations arising from (a) negligent, reckless or willful and wanton acts, errors or omissions by CONTRACTOR, its agents, employees, licensees, consultants, or subconsultants; (b) the failure of the CONTRACTOR, its agents, employees, licensees, consultants or subconsultants to observe the applicable standard of care in providing services pursuant to this agreement; (c) the intentional misconduct of the

CONTRACTOR, its agents, employees, licensees, consultants, or subconsultants that result in injury to persons or damage to property. for which the OWNER may be held legally liable.

The CONTRACTOR does hereby agree to indemnify and hold the OWNER harmless for any and all sums for which the OWNER may be required to pay or for which the OWNER may be held responsible for failure of the CONTRACTOR or any subcontractors to pay the prevailing wage upon this project.

The OWNER agrees to pay the CONTRACTOR in the manner and at such times as set forth in the General Conditions and as amended in the Supplemental Conditions and in such amounts as required by the Contract Documents.

This Contract shall be construed under the laws of the State of Ohio, and the parties hereby stipulate to the venue for any and all claims, disputes, interpretations, litigation of any kind arising out of this Contract being exclusively in the Warren County, Ohio Court of Common Pleas (unless both parties mutually agree in writing to alternate dispute resolution), as well as waiving any right to bring or remove such matters in or to any other state or federal court.

This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

Contractor shall bind every subcontractor to, and every subcontractor must agree to be bound by the terms of, this Agreement, as far as applicable to the subcontractor's work particularly pertaining to Prevailing Wages and EEO requirements. Nothing contained in this Agreement shall create any contractual relationship between any subcontractor and Owner, nor create any obligations on the part of the Owner to pay or see to the payment of any sums to any subcontractor.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in two counterparts, each of which shall be deemed an original on the date first above written.

ATTEST:

WARREN COUNTY BOARD OF COMMISSIONERS

(Owner)

Name

David G. Young, President

(Seal)

ATTEST:

ENTER NAME
(Contractor)

By: _____
Name

Title

Approved as to Form:

Assistant Prosecutor

SECTION 00 70 20
PERMITS

Contractor shall keep a copy of all permits at the project site throughout the duration of the work.

SECTION 00 70 30
STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

The Warren County Water and Sewer Department has adopted the Standard General Conditions of the Construction Contract prepared by the Engineers Joint Contract Documents Committee and issued and published by the American Consulting Engineers Council, the National Society of Professional Engineers, and the American Society of Civil Engineers. This document, contained herein, shall be made part of the Contract and shall be used during the performance of the work, except as modified by the following SECTION 00 80 10 Supplemental Conditions.

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the Controlling Law.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By



PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
a practice division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

AMERICAN COUNCIL OF ENGINEERING COMPANIES

AMERICAN SOCIETY OF CIVIL ENGINEERS

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The Associated General Contractors of America



Construction Specifications Institute

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1420 King Street, Alexandria, VA 22314

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American Society of Civil Engineers
1801 Alexander Bell Drive, Reston, VA 20191-4400

These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor Nos. C-520 or C-525 (2002 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the EJCDC Construction Documents, General and Instructions (No. C-001) (2002 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. C-800) (2002 Edition).

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GENERAL CONDITIONS

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. 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 which is evidence of the agreement between Owner and Contractor covering the Work.

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. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*--The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder*--The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements*--The Advertisement or Invitation to Bid, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.

9. *Change Order*--A document recommended by Engineer 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, issued on or after the Effective Date of the Agreement.

10. *Claim*--A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*-- Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor's submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price*--The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor*--The individual or entity with whom Owner has entered into the Agreement.

16. *Cost of the Work*--See Paragraph 11.01.A for definition.

17. *Drawings*--That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*--The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *Engineer*--The individual or entity named as such in the Agreement.

20. *Field Order*--A written order issued by Engineer which requires minor changes in the Work but which does

not involve a change in the Contract Price or the Contract Times.

21. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

22. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

23. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone*--A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*--The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

28. *Notice to Proceed*--A written notice given 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 under the Contract Documents.

29. *Owner*--The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

30. *PCBs*--Polychlorinated biphenyls.

31. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *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.

33. *Project*--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual*--The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

35. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

36. *Related Entity* -- An officer, director, partner, employee, agent, consultant, or subcontractor.

37. *Resident Project Representative*--The authorized representative of Engineer who may be assigned to the Site or any part thereof.

38. *Samples*--Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

39. *Schedule of Submittals*--A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

40. *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.

41. *Shop Drawings*--All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

42. *Site*--Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

43. *Specifications*--That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.

44. *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 at the Site.

45. *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.

46. *Successful Bidder*--The Bidder submitting a responsive Bid to whom Owner makes an award.

47. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

48. *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 any Subcontractor.

49. *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 those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

50. *Unit Price Work*--Work to be paid for on the basis of unit prices.

51. *Work*--The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

52. *Work Change Directive*--A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by

Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology

A. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following 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 requirements of and information in the Contract Documents and conformance with the design concept of the completed 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 Paragraph 9.09 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 14.04 or 14.05).

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. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, "provide" is implied.

F. Unless stated otherwise in the Contract Documents, words or phrases which 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. 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 Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which

Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. 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 Agreement, whichever date is earlier.

2.04 *Starting the Work*

A. 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 the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), 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 Documents;

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.

2.06 *Preconstruction Conference*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other

submittals, processing Applications for Payment, and maintaining required records.

2.07 *Initial Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.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 component parts of the Work.

ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, 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. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to Owner.

C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, 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, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement 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 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 Contract Documents. No such provision or instruction shall be effective to assign to Owner, or Engineer, or any of their Related Entities, 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 Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. Reporting Discrepancies

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, 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 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor knew or reasonably should have known thereof.

B. Resolving Discrepancies

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); 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 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;
2. Engineer's approval of a Shop Drawing or Sample; (Subject to the provisions of Paragraph 6.17.D.3); or
3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier or other individual or entity performing or furnishing all of the Work under a direct or indirect contract with Contractor, 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 Engineer's consultants, including electronic media editions; or

2. reuse any of 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 adaption by Engineer.

B. The prohibition 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.

3.06 *Electronic Data*

A. Copies of data furnished by Owner or Engineer to Contractor or Contractor to Owner or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *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. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor

may make a Claim therefor as provided in Paragraph 10.05.

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 the Work is to be performed 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.

4.02 *Subsurface and Physical Conditions*

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

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; and
2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities 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.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed 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 4.02 is materially inaccurate; or
2. is of such a nature as to require a change in the Contract Documents; 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, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer's Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

C. Possible Price and Times Adjustments

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition 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 meet any one or more of the categories described in Paragraph 4.03.A; and
- 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 Paragraphs 9.07 and 11.03.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

a. Contractor knew of the existence of such conditions at the time Contractor made a final 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

b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, Owner and Engineer, and any of their Related Entities shall not be liable to Contractor for any claims, costs, losses, or 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) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data; 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 such information and data,

b. locating all Underground Facilities shown or indicated in the Contract Documents,

c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and

d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

A. Owner 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.

4.06 Hazardous Environmental Condition at Site

A. Reports and Drawings: Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Engineer in the preparation of the Contract Documents.

B. Limited Reliance by Contractor on Technical Data Authorized: Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities 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. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) 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.

E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered to Contractor written notice:

(i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or 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 such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.

F. 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. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 - BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations 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 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent must be accompanied by a certified copy of the agent's authority to act.

C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, 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 requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

A. Contractor shall deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence

of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

B. Owner shall deliver to Contractor, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

5.04 *Contractor's Liability Insurance*

A. Contractor shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which 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:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:
 - a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
 - b. by any other person for any other reason;
5. 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; and
6. 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.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insured (subject to any customary exclu-

sion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, 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;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include completed operations insurance;

4. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

6. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment.

a. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, 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.

5.06 *Property Insurance*

A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full 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 interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;

2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false work, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, (other than caused by flood) and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

B. Owner shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and

any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and,

in addition, waive all such rights against Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insured or additional insured (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.

C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the insureds, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.

B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make

settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.01 *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 not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or received from the superintendent shall be binding on Contractor.

6.02 *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. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *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.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. 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.

6.04 Progress Schedule

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 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 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 Substitutes and "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 specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. "Or-Equal" Items: If in Engineer's sole discretion 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, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, 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

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.

2. Substitute Items

a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

b. Contractor shall submit sufficient information as provided below to allow Engineer to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented in the General Requirements and as Engineer may decide is appropriate under the circumstances.

d. 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:

1) shall certify that the proposed substitute item will:

a) perform adequately the functions and achieve the results called for by the general design,

b) be similar in substance to that specified, and

c) be suited to the same use as that specified;

2) will state:

a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time;

b) whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

c) whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

3) will identify:

a) all variations of the proposed substitute item from that specified, and

b) available engineering, sales, maintenance, repair, and replacement services;

4) and shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change,

B. Substitute Construction Methods or Procedures: If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

C. Engineer's Evaluation: Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

D. Special Guarantee: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

E. Engineer's Cost Reimbursement: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute

item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the 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.

F. Contractor's Expense: Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. 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 any right of Owner or Engineer to reject defective Work.

C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. 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 anything in the Contract Documents create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.

F. 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.

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, 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 such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *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, 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.

6.08 *Permits*

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *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 knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear 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. However, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on

entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 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.

6.11 Use of Site and Other Areas

A. Limitation on Use of Site and Other Areas

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any 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 by or based upon Contractor's performance of the Work.

B. Removal of Debris During Performance of the Work: During the progress of the Work Contractor shall keep the Site and other 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 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 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 property to stresses or pressures that will endanger it.

6.12 Record Documents

A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 Safety and Protection

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all 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, 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 owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

C. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.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 (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or , 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).

D. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *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.

6.15 *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.

6.16 *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 prompt written notice 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.

6.17 *Shop Drawings and Samples*

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the acceptable Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. Shop Drawings

a. Submit number of copies specified in the General Requirements.

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 6.17.D.

2. *Samples*: Contractor shall also submit Samples to Engineer for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals.

a. Submit number of Samples specified in the Specifications.

b. 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 6.17.D.

B. 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. Submittal Procedures

1. Before submitting each Shop Drawing or Sample, Contractor shall have determined and verified:

a. all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

b. the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

c. all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto; and

d. shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the

requirements of the Work and the Contract Documents.

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 and approval of that 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 both a written communication separate from the Shop Drawing's or Sample Submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

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 (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer's review and approval 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 6.17.C.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's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

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.

6.18 Continuing the Work

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 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. Engineer and its Related Entities shall be entitled to rely on representation of Contractor's warranty and guarantee.

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 or the issuance of a notice of acceptability by Engineer;
6. any inspection, test, or approval by others; or
7. any correction of defective Work by Owner.

6.20 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to 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 therefrom but only to the extent caused by any negligent act or omission 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 .

B. In any and all claims against Owner or Engineer or any of their respective consultants, agents, officers, directors, partners, or employees 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 6.20.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 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, 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.

6.21 *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 law.

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, Shop Drawings 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 6.21, 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 6.17.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 - OTHER WORK AT THE SITE

7.01 *Related Work at Site*

A. Owner may perform other work related to the Project at the Site with Owner's employees, or via other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to Contractor prior to starting any such other work; and
2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the Work with theirs. 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 their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly 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.

7.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
2. the specific matters to be covered by such authority and responsibility will be itemized; and
3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and

disruption costs incurred by Contractor as a result of the other contractor's actions or inactions.

C. Contractor shall be liable to Owner and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's action or inactions.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

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

8.02 *Replacement of Engineer*

A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

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

8.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

A. Owner's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by Engineer in preparing the Contract Documents.

8.06 *Insurance*

A. Owner's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility in respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *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.

8.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

A. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents and will not be changed without written consent of Owner and Engineer.

9.02 *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 9.09. 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.

9.03 *Project Representative*

A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. 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.

9.04 *Authorized Variations in Work*

A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the

Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with 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, see Paragraph 6.21.

C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (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 Paragraph 10.05.

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

A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question

B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believe that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents 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 14.07.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 9.09 shall also apply to, the Resident Project Representative, if any, and assistants, if any.

10.01 *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 by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *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 as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.B.

10.03 *Execution of Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;

2. 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; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any bond to be given to a surety, the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

1. deny the Claim in whole or in part,

2. approve the Claim, or

3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 - COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.

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 at the Site. 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, 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 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 11.01.

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.

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, 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 5.06.D), 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 telegrams, long distance telephone calls, telephone service at the Site, expresses, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. 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 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

4. 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 Paragraphs 11.01.A and 11.01.B.

C. Contractor's Fee: When all the Work 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 or when a Claim for an 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 12.01.C.

D. Documentation: Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, 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.

11.02 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

1. Contractor agrees that:

a. 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

b. 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

1. 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.

11.03 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.

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. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

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. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 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; and
2. there is no corresponding adjustment with respect any other item of Work; and
3. Contractor believes that Contractor 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 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 Change of Contract Price

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for 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, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* 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 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 11.01.A.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 Paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier

Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

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 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, 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 Price or the Contract Times, or both. 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.

C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is 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 described in this Paragraph 12.03.C.

D. Owner, Engineer and the Related Entities of each of them shall not be liable to Contractor for any claims, costs, losses, or 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) sustained by Contractor on or in connection with any other project or anticipated project.

E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 *Notice of Defects*

A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

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

13.03 *Tests and Inspections*

A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections,

tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said Paragraph 13.04.C; and
3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) 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 and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

E. 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, it must, if requested by Engineer, be uncovered for observation.

F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.

B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

C. If it is found that the uncovered Work is defective, 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 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 Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

D. 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. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *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, 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.

13.06 *Correction or Removal of Defective Work*

A. Promptly after receipt of notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. 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 removal (including but not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *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 land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or
2. correct such defective Work; or
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 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. 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) will be paid by Contractor.

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 13.07, 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 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. 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) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *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 in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 13.09, 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, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, 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 (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) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to

an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. 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 13.09.

ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. 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. 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 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.

B. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, 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 on the Site 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, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to 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 Documents; or

b. that 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 moneys 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 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
- b. the Contract Price has been reduced by Change Orders;
- c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
- d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. *Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. *Reduction in Payment*

1. Owner may refuse to make payment of the full amount recommended by Engineer because:

- a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
- b. 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;
- c. there are other items entitling Owner to a set-off against the amount recommended; or
- d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action 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, when Contractor corrects to Owner's satisfaction the reasons for such action.

3. If it is subsequently determined that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1.

14.03 *Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

B. Promptly 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 tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to complete or correct items on the tentative list.

14.05 *Partial Utilization*

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. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Engineer that such part of the Work is substantially complete and request Engineer to issue

a certificate of Substantial Completion for that part of the Work.

2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

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 14.04 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 5.10 regarding property insurance.

14.06 *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 is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *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, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

- a. all documentation called for in the Contract Documents, including but not limited to the

evidence of insurance required by Paragraph 5.04.B.7;

b. consent of the surety, if any, to final payment;

c. a list of all Claims against Owner that Contractor believes are unsettled; and

d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible have been paid or otherwise satisfied. 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.

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 Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. 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 14.09. 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. Payment Becomes Due

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and, will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 *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 notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will 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 sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);
2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
3. Contractor's disregard of the authority of Engineer; or
4. Contractor's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion),
2. 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
3. complete the Work as Owner may deem expedient.

C. If Owner proceeds as provided in Paragraph 15.02.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 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) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed 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.

D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.

15.03 *Owner May Terminate For Convenience*

A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;
3. 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) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
4. reasonable expenses directly attributable to termination.

B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment

within 30 days after it is submitted, or (iii) 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 15.03.

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 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 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 16 - DISPUTE RESOLUTION

16.01 *Methods and Procedures*

A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:

1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions, or
2. agrees with the other party to submit the Claim to another dispute resolution process, or

3. gives written notice to the other party of their intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 - MISCELLANEOUS

17.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or
2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *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 Documents. 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.

17.04 *Survival of Obligations*

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

17.05 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SECTION 00 80 10
SUPPLEMENTAL CONDITIONS

PART 1 GENERAL

1.1 GENERAL

- A. These Supplementary Conditions shall modify and supplement the Standard General Conditions of the Construction Contract (Section 00 70 30, EJCDC C-700), and shall govern whenever they conflict. All provisions which are not so amended or supplemented remain in full force and effect.

1.2 MODIFICATIONS TO ARTICLES OF THE GENERAL CONDITIONS

A. ARTICLE 1 – DEFINITIONS

1. Paragraph 1.01.A.19 is supplemented with the following: Where the term “Engineer” is used in the Specification for the approval of materials or work, it shall be understood to mean Warren County Water & Sewer. Contractor acknowledges that Engineer is a full-time employee appointed by Owner, and Engineer is not an independent third party, rather is a department of the governmental entity of Owner (Warren County Board of Commissioners) a political subdivision of Ohio.
2. Paragraph 1.01.A.29 is supplemented with the following: Whenever the term “Owner” is used in the Contract Documents, it shall refer to Warren County Board of Commissioners on behalf of Warren County Water & Sewer, or its authorized representative.

B. ARTICLE 2 – PRELIMINARY MATTERS

1. Paragraph 2.03 – Commencement of Contract Time: Notice to Proceed is amended as follows: Delete the last sentence.

C. ARTICLE 4 – AVAILABILITY OF LANDS; SURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

1. Paragraph 4.06(G) shall be deleted.

D. ARTICLE 5 – BONDS AND INSURANCE

1. Paragraph 5.01.A – Amend the second sentence to read: “ ...These bonds shall remain in effect not less than one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents”
2. Paragraph 5.01.D – Add the following paragraph:

“D. If the Contractor provided a certified or cashier’s check or letter of credit as Bid Security, he shall furnish a Performance Bond in an amount at least equal to 100% of the Contract Price as security for the faithful performance of this agreement.”

3. Paragraph 5.04.C – Add the following new paragraph immediately after 5.04.B:

“C. The Contractor shall, at his own expense, purchase and maintain the following minimum coverage:

1. Workers Compensation, for claims for bodily injury, sickness, disease or death as follows:
 - a. Coverage A Statutory Benefits as described by the applicable law.
 - b. Coverage B Employer’s Liability
 - i. \$500,000 Bodily Injury by Accident – each employee
 - ii. \$500,000 Bodily Injury by disease – each employee
 - iii. \$500,000 Bodily Injury by disease – policy limit

The Contractor shall provide a copy of a certificate of premium payment from the Industrial Commission and Bureau of Workers Compensation, State of Ohio, for the period of time specified during which construction commences and copies of renewal certificates for subsequent periods, so long as the project continues.

2. Comprehensive General Liability Coverage for Bodily Injury and Property Damage – occurrence form.

| | | |
|---|-------------|---|
| General Aggregate | \$2,000,000 | Each occurrence, combined single limit for Bodily Injury and Property Damager |
| Products – Completed Operations | \$1,000,000 | Each occurrence |
| Aggregate | \$2,000,000 | |
| Personal and Advertising Liability per Occurrence | \$1,000,000 | Combined Single Limit for Bodily Injury and Property Damager |

Coverage shall be extended to include the following:

- a. Per project and per location aggregate.
- b. Premises and operations coverage.
- c. Coverage for liability and independent contractors.
- d. Products and completed operations.
- e. Coverage for explosion, collapse and underground hazards.

- f. Stop-Gap Liability: All monopolistic states - \$1,000,000.
- g. Owner as additional insureds.
- h. Waiver of Subrogation against Owner
- i. 60-Day Notice of Cancellation or material change.

3. Comprehensive Automobile Liability Insurance – Occurrence Form

| | | |
|----------------|-------------|--|
| Any Automobile | \$1,000,000 | Bodily Injury and Property Damage, Combined Single Limit |
|----------------|-------------|--|

| | | |
|---------------------|-------------|---|
| Borrowed, Non-Owned | \$1,000,000 | Bodily Injury and Hired Automobile Property Damage, Combined Single Limit |
|---------------------|-------------|---|

Coverage shall be extended to include:

- a. Contractual liability for assumed liability.
- b. Owner as additional insureds.
- c. Waiver of Subrogation against Owner
- d. 60 Day Notice of Cancellation or material change.
- e. Motor Carrier Act Endorsement MCS-90
- f. Extra Wide/Extra Heavy Hauling Permit Endorsement

4. Any Umbrella Liability or Excess Liability Policy over primary comprehensive General and Automobile Liability shall be carried in a minimum amount of:

\$5,000,000 Each Occurrence
 \$5,000,000 Aggregate

The Umbrella or Excess Policy shall be following the form of:

- a. Any Additional Insured under primary policy.
- b. Per project and per location aggregates.
- c. Explosion, Collapse, or Underground Hazards
- d. Stop-Gap Liability
- e. Waiver of Subrogation against Owner.
- f. Watercraft (when employed to perform the work).
- g. Aircraft (when employed to perform the work).
- h. 60-Day Notice of Cancellation or material change.

4. Paragraph 5.06 – *Property Insurance* – shall be DELETED in its entirety.

D. ARTICLE 6 – CONTRACTOR’S RESPONSIBILITIES

1. Paragraph 6.01.A – After the first sentence add: “Contractor’s Work shall be performed according to the standards of care normally exercised by construction organizations within Ohio that are engaged in performing comparable services devoting such attention thereto and applying such skills as may be necessary to perform the work in accordance with the Contract Documents.”
2. Paragraph 6.02.C – Add a new paragraph as follows:
 - “C. If the Contractor does not perform the work in accordance with the Contractor’s construction schedule and the project construction schedule, and it becomes apparent that the work may not be completed within the contract times, the Contractor shall, at no additional cost to the Owner, as necessary to improve the Contractor’s progress: (a) increase the number of employees in such crafts as will regain lost scheduled progress; and (b) increase the number of working hours per shift, shifts per work day, working days per week, the amount of equipment, or any combination of the foregoing measures to regain lost scheduled progress. Contractor shall furnish such employees, materials, facilities, and equipment, and shall work such hours, including extra shifts, overtime operations, and Sundays and holidays, as may be necessary to insure the prosecution and completion of the work in accordance with the Contractor’s construction schedule and the project construction schedule.”
3. Paragraph 6.02.D – Add a new paragraph as follows:
 - “D. Contractor shall at all times maintain good discipline and order at the site. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them. If the Owner deems any employee of the Contractor or a subcontractor unsatisfactory, the Contractor must transfer or require its subcontractor to transfer such employee from the project immediately.”
4. Paragraph 6.05(E) - shall be deleted.
5. Paragraph 6.08 – Replace this Paragraph with the following:
 - “A. Permit requirements are specified in Section 0020 00 – INSTRUCTIONS TO BIDDERS, and 00 70 20 – PERMITS.
6. Paragraph 6.10 – Taxes, is amended as follows:
 - “A. OWNER, being a public body, is exempt from taxes on material incorporated into the work. CONTRACTOR, therefore, is not

required to pay such materials taxes. The OWNER will provide the tax exemption forms. These forms are to contain all necessary information required by the State. CONTRACTOR shall be responsible for payment of any applicable commercial activity tax.

- B. Owner's exemption does not apply to construction tools, machinery, equipment, or other property purchased by or leased by Contractor, or to supplies or materials not incorporated to the Work.
- C. Contractor is specifically required to abide by all local tax requirements, if any, including income tax requirements to withhold at source. Contractor acknowledges that the Contract work may take place in various cities and taxing districts, and further acknowledges different tax burdens may be imposed by each. Contractor shall indemnify, defend, and hold Owner harmless for any federal, state, or local tax liabilities incurred as a result of Contractor performing the Work."

- 6. Paragraphs 6.13 and 6.14 – Safety and Protection, are supplemented with the following: "All construction work under this Agreement is subject to Chapter XVII of Title 29, Code of Federal Regulations (CFR) Part 1926 (formerly Chapter XVII of Title 29, Part 1518) titled, "Safety and Health Regulations for Construction" and subsequent amendments."

E. ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

- 1. Paragraph 9.01 – Add the following sentence: The parties acknowledge and agree that ENGINEER is a full-time employee of OWNER and is not an independent third party, however, ENGINEER shall perform any duties under this agreement in good faith and adhere to a standard of professional care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality.

F. ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

- 1. Paragraph 10.03.A.4 – Add the following paragraph:
 - "4. In no event is the Contractor entitled to reserve any rights or take other similar action with respect to a change order if the effect or intent of such reservation or action would be to accommodate a further adjustment in the contract times, contract price, or both, after the Contractor executes the change order. By executing a change order, the Contractor irrevocably certifies that the elements of the change order described are completely satisfied and waives all rights to seek further adjustment of the contract times, contract price, or both, at a later date with respect to the associated change in the work."

E. ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

1. Paragraph 11.01(A)(3) – Amend the Second Sentence as follows: DELETE the phrase “If required by Owner”. Add Sentence OWNER requires CONTRACTOR to competitively bid work from subcontractors.

2. Paragraph 11.01(D) Add the following Sentence: This agreement shall be subject to open book pricing, CONTRACTOR shall make any all bids, invoices, receipts, any and all documentation for expenses and costs available for inspection by OWNER immediately upon request.

Paragraph 11.01.B.1 – Add project manager and project executive to the list of excluded compensation and payroll costs.

E. ARTICLE 12 – CHANGE OF CONTRACT PRICE, CHANGE OF CONTRACT TIMES

1. Paragraph 12.01.C.2.e – Add the following to the end of paragraph 12.01.C.2.e: “Any change that results in a net decrease in cost shall include the appropriate overhead and profit added thereto calculated as set forth in ARTICLE 12 of the General Conditions.”

2. Paragraph 12.01.D – Insert new paragraph as follows: “D. In no event shall Contractor be entitled to any increase in the Contract Price on account of any adverse weather.”

3. Paragraph 12.02.B – Replace Paragraph 12.02.B with the following:

“B. If the Contractor wishes to make a claim for an increase in contract times, prompt written notice as provided herein shall be given. The Contractor’s claim shall include an estimate of cost and of probable effect of delay on progress of the work, a detailed schedule which identifies the critical portions of the work impacted by the delaying event and the dates of such impact, and a statement from Contractor that the increase requested is the entire increase in the contract time associated with the claim. The failure to provide such information and statement within the time period established in Paragraph 10.05.B shall constitute an irrevocable waiver of the claim. In the case of a continuing delay occurring on consecutive days, only one claim is necessary, provided, however, that within ten (10) days of the cessation of the cause of the continuing delay, the Contractor shall notify the Owner in writing that the cause of the delay has ceased. The failure to give notice of the cessation of the cause of the continuing delay shall constitute an irrevocable waiver of any claim based upon the continuing delay.”

4. Add the following paragraph as Paragraph 12.02.C:

“In addition to the requirements of Paragraph 12.02.B, if adverse weather conditions are the basis for a claim for additional time, the contractor shall

support such claim with data acceptable to the Owner and Engineer that substantiates that weather conditions were significantly abnormal for the period of time and could not have reasonably been anticipated and that weather conditions had an adverse effect on a critical element of the scheduled construction. Notwithstanding any other provisions of the Contract Documents to the contrary, the project times will not be adjusted on account of the impact of a normal adverse weather or any of the work or on account of the impact of any abnormal adverse weather on non-critical elements of the work. The support for the evaluation of all adverse-weather claims resulting in lost workdays shall be based upon criteria as provided for in the State of Ohio Department of Transportation (ODOT) Construction and Material Specifications dated January 1, 2013. ODOT Specification 108.06.C lists the number of days that the Contractor may expect to be lost due to weather as follows:

| Month | Number of Days Lost Due to Weather |
|--------------|---|
| January | 8 |
| February | 8 |
| March | 7 |
| April | 6 |
| May | 5 |
| June | 5 |
| July | 4 |
| August | 4 |
| September | 5 |
| October | 6 |
| November | 6 |
| December | 6 |

5. Paragraph 12.03.F – Add new paragraph as follows:

“F. Any proposed time extensions for delays requested because of abnormal weather conditions shall be subject to Paragraph 12.02.C.”

6. Paragraph 12.03.G. – Add new paragraph as follows:

“G. Delays beyond the substantial completion date attributable to and within the control of the Contractor, their Subcontractor, or Supplier shall be subject to liquidated damages in the amounts specified in SECTION 00 60 10 – CONTRACT.”

F. ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

1. Paragraph 15.01.A. – Delete the sentence that states: “Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

REPLACE the above sentence with the following: Contractor shall be granted an extension of the Contract Times directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

2. Paragraph 15.03.A(3) – shall be DELETED in its entirety.

G. ARTICLE 14 – PAYMENT TO CONTRACTOR AND COMPLETION

1. Add new Paragraph 14.02.A.4 as follows:

“4. In accordance with ORC Section 153.12 partial payments to the Contractor for labor performed under either a unit or lump sum price contract shall be made at the rate of ninety-two per cent of the estimates prepared by the Contractor and approved by the Engineer. All labor performed after the job is fifty percent completed shall be paid for at the rate of one hundred per cent of the estimates submitted by the Contractor and approved by the Engineer. A Contract shall be considered 50 percent complete when the Contractor has been paid an amount equal to 50 percent of the total cost of the labor of the Contract and 50 percent of the total cost of the material of the Contract.

All materials furnished and delivered but not actually included in the construction and approved by the Owner, after the work under this contract is 50 percent complete, shall be paid for at the rate of 92 percent of the invoiced value of the materials. The balance of such estimates shall be paid when the material is incorporated into and becomes a part of the building construction.

When the major portion of the project is substantially completed and occupied, or in use, or otherwise accepted, and there exists no other reason to withhold retainage, the retained percentages held in connection with such portion shall be released and paid to the contractor, withholding only that amount necessary to assure completion.

All retained payments shall be deposited into an escrow account at the 1st National Bank, 1160 E. Main Street, Lebanon Ohio (513) 932-3221, Contact: Gail Haines. The Contractor may waive their right to deposit the payments in an escrow account by written request to the Owner. Retained payments not deposited into an escrow account will be held by the Owner for future payment to the Contractor.”

2. Amend Paragraph 14.02.C to read: “Thirty days after presentation”

G. ARTICLE 16 – DISPUTE RESOLUTION

1. Delete Paragraphs 16.01.A, 16.01.B, and 16.01.C and replace with the following:

“1. This Contract shall be construed under the laws of the State of Ohio, and the parties hereby stipulate to the venue for any and all claims, disputes, interpretations, litigation of any kind arising out of this Contract being exclusively in the Warren County, Ohio Court of Common Pleas (unless both parties mutually agree in writing to alternate dispute resolution), as well as waiving any right to bring or remove such matters in or to any other state or federal court.”

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

TECHNICAL SPECIFICATIONS

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SECTION 01 11 00

SUMMARY OF WORK

PART 1 – GENERAL

1.1 LOCATION OF WORK

- A. The work for this Contract is located in Warren County, Ohio and consists of Cured-in-Place
- B. Specific location of the Project will vary.

1.2 GENERAL

- A. The installing Contractor shall obtain necessary building and related permits and pay necessary application fees at no additional cost to Owner. Obtain any and all permits in a timely fashion to facilitate the construction schedule.
- B. The Contractor shall furnish all labor, materials, equipment, tools, services and incidentals to complete all work required by these Specifications and as shown on the Drawings.
- C. The Contractor shall perform the work complete, in place, and ready for continuous service, and shall include repairs, testing, permits, cleanup, replacements and restoration required as a result of construction of the work.
- D. All materials, equipment skills, tools and labor which is reasonably and properly inferable and necessary for the proper completion of the work in a substantial manner and in compliance with the requirements stated or implied by these Specifications or Drawings shall be furnished and installed by the Contractor without additional compensation, whether specifically indicated in the Contract Documents or not.
- E. The Contractor shall comply with all municipal, county, state, federal, and other codes, which are applicable to the proposed construction work.

1.3 SCOPE OF WORK

- A. The project generally consists of improvements to existing sanitary mains and laterals that are identified by the Warren County Water & Sewer Department using cured-in-place-pipe trenchless technology. The locations of the work will be at various sites within our service area which includes mainly Warren County. The primary objective is to improve the structural integrity and hydraulic renewal of the failing mains.

All awarded contracts will be of a standby nature and will only be exercised by the Warren County Water & Sewer Department as the need for contractual services arise

The contractor shall furnish all labor material and equipment, and perform all work necessary to complete point repairs, renewals, and improvements comprising the Warren County Water & Sewer Department's wastewater collection system including main sewers and forcemains using cured-in-place-pipe (CIPP) trenchless technology methods and equipment.

In conjunction with repairing, renewing, or improving assets under this contract, the Contractor shall clean and televise sewers, reconnect existing sewer service connections, and provide all submittals required by the specifications. The Contractor will be required to submit a visual PACP condition assessment of all mainline improvements, repairs, replacements, or renewals. Television inspection includes televising immediately before lining, televising and submitting video within 48 hours after lining, televising after making repairs to correct liner defects, and televising after rehabilitating lateral connections.

It shall be understood and agreed that the safe and continuous operation of the wastewater collection system shall have priority over any work performed under this contract.

1.4 WORK SEQUENCE

- A. Contractor to perform work with coordination of the Warren County Water & Sewer Department.
- B. WORK HOURS
- C. Work shall be limited to the hours of 8 AM – 5 PM.

1.5 CONTRACTOR'S USE OF PREMISES

- A. Contractor shall limit the use of the premises for his/her Work and for storage to allow for:
 - 1. Work by other contractors.
 - 2. OWNER occupancy.
- B. Coordinate use of premises with Owner.
- C. CONTRACTOR shall assume full responsibility for security of all his/her and his/her subcontractors' materials and equipment stored on the site.
- D. If directed by the ENGINEER, move any stored items, which interfere with operations of Owner or other contractors.
- E. Obtain and pay for use of additional storage or work areas if needed to perform the Work.

1.6 PLANS AND SPECIFICATIONS

- A. The General Condition Section (No. 00 70 00) contains General Requirements which govern the work. The Technical Specifications consist of three parts: General, Products, and Execution. Products and Execution modify and supplement these by detailed requirements of the work and shall always govern whenever there appears to be a conflict.

1.7 WORK BY OWNER

- A. OWNER will perform the following activities in connection with the Work:
- B. Operation of all existing valves, gates, pumps, equipment, and appurtenances that will affect OWNER'S operation, unless specified otherwise.

1.8 EASEMENTS AND RIGHT-OF-WAY

- A. Easements and rights-of-way will be provided by OWNER. Confine construction operations within OWNER'S property, public rights-of-way, and easements obtained by OWNER, and the limits shown. Use care in placing construction tools, equipment, excavated materials, and products to be incorporated into the Work to avoid damage to property and interference with traffic. Do not enter private property outside the construction limits without permission from the OWNER of the property.
- B. On Private Property:
 - 1. General limits of easements are shown on Drawings.
- C. Within Highway and Railroad Right-of-Way: Permits will be obtained by OWNER, other work permits to be obtained by CONTRACTOR. All work performed and all operations of CONTRACTOR and Subcontractors within the limits of railroad and highway rights-of-ways shall conform to requirements of railroad or highway authority owner and applicable work permits, or authority having jurisdiction over right-of-way.

1.9 NOTICES TO OWNERS AND AUTHORITIES OF PROPERTIES ADJACENT TO OR SIGNIFICANTLY IMPACTED BY THE WORK

- A. Notify owners of adjacent property and utilities when prosecution of the Work may affect their property, facilities, or use of property.
- B. When it is necessary to temporarily obstruct access to property, or when utility service connection will be interrupted, provide notices sufficiently in advance to enable affected persons to provide their needs. Conform notices to applicable local ordinance and, whether delivered orally or in writing, include appropriate information concerning the interruption and instructions on how to limit inconvenience caused thereby.

- C. Utilities and other concerned agencies shall be notified at least 48 hours prior to cutting or closing streets or other traffic areas or excavating near underground utilities or pole lines.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

SECTION 01 26 57

CHANGE ORDER PROCEDURES

PART 1 – GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Promptly implement change order procedures.
 - 1. Provide full written data required to evaluate changes.
 - 2. Maintain detailed records of work done on a time-and-material/force account basis.
 - 3. Provide full documentation to ENGINEER on request.
- B. Designate in writing the member of CONTRACTOR'S organization:
 - 1. Who is authorized to accept changes in the Work.
 - 2. Who is responsible for informing others in the CONTRACTOR's employ of the authorization of changes in the Work.

1.2 RELATED REQUIREMENTS

- A. Standard General Conditions of the Construction Contract are included in Section 00 70 00.
- B. Methods of determining cost of credit to OWNER resulting from changes in Work made on a time and material basis.
- C. CONTRACTOR's claims for additional costs.
- D. Applications for Payment are included in Section 01 29 76.
- E. Schedule of Values are included in Section 01 29 73.

1.3 DEFINITIONS

- A. Change Order: See Contract for Construction.
- B. Construction Change Authorization: A written order to the CONTRACTOR, signed by OWNER and ENGINEER, which amends the Contract Documents as described and authorized CONTRACTOR to proceed with a change which affects the Contract Sum or the Contract Time, for inclusion in a subsequent Change Order.
- C. Field Order: A written order to the CONTRACTOR, signed by the ENGINEER and the CONTRACTOR, which is issued to interpret/clarify the Contract Documents, order minor changes in the work and/or memorialize trade off agreements. The work

described by a Field Order is to be accomplished without change to the Contract Sum, Contract Time, and/or claims for other costs.

1.4 PRELIMINARY PROCEDURES

- A. OWNER or ENGINEER may initiate changes by submitting a Request for Proposal (RFP) to CONTRACTOR. Request will include:
 - 1. Detailed description of the Change, Products and location of the change in the project.
 - 2. Supplementary or revised Drawings and Specifications.
 - 3. The projected time span for making the change and a specific statement as to whether overtime work is, or is not, authorized.
 - 4. A specific period of time during which the requested price will be considered valid.
 - 5. Such request is for information only and is not an instruction to execute the changes, nor to stop work in progress.
- B. CONTRACTOR may initiate changes by submitting a written notice to ENGINEER, containing:
 - 1. Description of the proposed changes.
 - 2. Statement of the reason for making the changes.
 - 3. Statement of the effect on the Contract Sum and the Contract Time.
 - 4. Statement of the effect on the work of separate CONTRACTORS.
 - 5. Documentation supporting any change in Contract Sum or Contract Time, as appropriate.

1.5 WORK DIRECTIVE CHANGE AUTHORIZATION

- A. In lieu of a Request for Proposal (RFP), ENGINEER may issue a work directive authorization for CONTRACTOR to proceed with a change for subsequent inclusion in a Change Order.
- B. Authorization will describe changes in the work, both additions and deletions, with attachments of revised Contract Documents to define details of the change and will designate the method of determining any change in the Contract Sum and any change in Contract Time.
- C. OWNER and ENGINEER will sign and date the Work Directive Change Authorization as authorization for the CONTRACTOR to proceed with the changes.
- D. CONTRACTOR may sign and date the Construction Change Authorization to indicate agreement with the terms therein.

1.6 DOCUMENTATION OF PROPOSALS AND CLAIMS

- A. Support each quotation for a lump sum proposal and for each unit price which has not previously been established, with sufficient substantiating data to allow ENGINEER to evaluate the quotation.
- B. On request, provide additional data to support time and cost computations
 - 1. Labor required.
 - 2. Equipment required.
 - 3. Products required.
 - a. Recommended source of purchase and unit cost.
 - b. Quantities required.
 - 4. Taxes, insurance and bonds.
 - 5. Credit for work deleted from Contract, similarly documented.
 - 6. Overhead and profit.
 - 7. Justification for any change in Contract Time.
- C. Support each claim for additional costs and for work done on a time-and-material/force account basis, with documentation as required for a lump sum proposal, plus additional information.
 - 1. Name of the OWNER's authorized agent who ordered the work and date of the order.
 - 2. Dates and times work was performed and by whom.
 - 3. Time record, summary of hours worked and hourly rates paid.
 - 4. Receipts and invoices for:
 - a. Equipment used, listing dates and times of use.
 - b. Products used, listing of quantities.
 - c. Subcontracts.

1.7 PREPARATION OF CHANGE ORDERS AND FIELD ORDERS

- A. ENGINEER will prepare each Change Order and Field Order.
- B. Change Order will describe changes in the work, both additions and deletions, with attachments of revised Contract Documents to define details of the change.
- C. Change Order will provide an accounting of the adjustment in the Contract Sum and in the Contract Time.

- D. Field Order will describe interpretations or clarifications of Contract Documents, order minor changes in the work, and/or memorialize trade off agreements.
- E. Field Order work will be accomplished without change in the Contract Sum, Contract Time, and/or claims for other costs.

1.8 LUMP-SUM/FIXED PRICE CHANGE ORDER

- A. Content of Change Orders will be based on, either:
 - 1. ENGINEER's Proposal Request and CONTRACTOR's responsive Proposal as mutually agreed between OWNER and CONTRACTOR.
 - 2. CONTRACTOR's Proposal for a change, as recommended by ENGINEER.
- B. OWNER and ENGINEER will sign and date the Change Order as authorization for the CONTRACTOR to proceed with the changes.
- C. CONTRACTOR will sign and date the Change Order to indicate agreement with the terms therein.

1.9 UNIT PRICE CHANGE ORDER

- A. Content of Change Orders will be based on, either:
 - 1. ENGINEER's definition of the scope of the required changes.
 - 2. CONTRACTOR's Proposal for a change, as recommended by ENGINEER.
 - 3. Survey of completed work.
- B. The amounts of the unit prices to be:
 - 1. Those stated in the Agreement.
 - 2. Those mutually agreed upon between OWNER and CONTRACTOR
- C. When quantities of each of the items affected by the Change Order can be determined prior to start of the work:
 - 1. OWNER and ENGINEER will sign and date the Change Order as authorization for CONTRACTOR to proceed with the changes.
 - 2. CONTRACTOR will sign and date the Change Order to indicate agreement with the terms therein.
- D. When quantities of the items cannot be determined prior to start of the work:
 - 1. ENGINEER or OWNER will issue a construction change authorization directing CONTRACTOR to proceed with the change on the basis of unit prices, and will cite the applicable unit prices.

2. At completion of the change, ENGINEER will determine the cost of such work based on the unit prices and quantities used.
 - a. CONTRACTOR shall submit documentation to establish the number of units of each item and any claims for a change in Contract Time.
3. ENGINEER will sign and date the Change Order to establish the change in Contract Sum and in Contract Time.
4. OWNER and CONTRACTOR will sign and date the Change Order to indicate their agreement with the terms therein.

1.10 TIME AND MATERIAL/FORCE ACCOUNT CHANGE ORDER/WORK DIRECTIVE CHANGE AUTHORIZATION

- A. ENGINEER and OWNER will issue a Work Directive Change Authorization directing CONTRACTOR to proceed with the changes.
- B. At completion of the change, submit itemized accounting and supporting data as provided in the Article "Documentation of Proposals and Claims" of this Section.
- C. ENGINEER will determine the allowable cost of such work, as provided in General Conditions and Supplementary Conditions.
- D. ENGINEER will sign and date the Change Order to establish the change in Contract Sum and in Contract Time.
- E. OWNER and CONTRACTOR will sign and date the Change Order to indicate their agreement therewith.

1.11 CORRELATION WITH CONTRACTOR'S SUBMITTALS

- A. Periodically revise Schedule of Values and Request for Payment forms to record each change as a separate item of work, and to record the adjusted Contract Sum.
- B. Periodically revise the Construction Schedule to reflect each change in Contract Time.
 1. Revise subschedules to show changes for other items of work affected by the changes.
- C. Upon completion of work under a Change Order, enter pertinent changes in Record Documents.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

As Needed

Sanitary Point Repair Liner

Change Order Procedures

01 26 57 – 5

THIS PAGE WAS LEFT BLANK INTENTIONALLY

Contract Number: _____

Change Order Number: _____

Original Contract Price \$ _____

Net Increase/Decrease in Contract Price (this change order) \$ _____

Total Adjusted Contract Price (including this change order) \$ _____

This change order increases/decreases the time to complete the work by _____ Calendar days.

The extended completion date is _____

This change order checked by _____ (Chief) Resident Engineer Date

This change order is requested by _____

This change order is recommended by: _____ Consultant Engineer P.E. # Date

The undersigned agree to the terms of the change order.

Contractor Date

Owner Date

Approval as to appropriation:

Certification Officer Date

Name of City/District etc. _____

Contract Number _____

Contract Title _____ Change Order Number _____

OWNER's Name: _____

OWNER's Address: _____

CONTRACTOR's Name: _____

CONTRACTOR's Address: _____

Description of Change

Reason for Change

FIELD ORDER

PROJECT:

FIELD ORDER NO:

DATE:

CONTRACT:

OWNER:

OWNER PROJECT NO.

TO:

CONTRACT DATE:

This Field Order is issued to interpret/clarify the Contract Documents, order minor changes in the work and/or memorialize trade off agreements. Both parties hereby agree that the work described by this Field Order is to be accomplished without change in Contract Sum, Contract Time, and/or claims for other costs.

DESCRIPTION: (Here insert a written description of the interpretation, change or agreement.)

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SECTION 01 29 76

PROGRESS PAYMENT PROCEDURES

PART 1 – GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Submit Applications for Payment to the ENGINEER in accordance with the schedule established by Conditions of the Contract and Agreement Between OWNER and CONTRACTOR.
- B. The accepted Schedule of Values shall be used as the basis for the CONTRACTOR's Application for Payment.

1.2 RELATED WORK

- A. Agreement between OWNER and CONTRACTOR is included in Section 00 40 00.
- B. Standard General Conditions of the Construction Contract is included in Section 00 70 00.
- C. Contract Closeout is included in Section 01 77 00.

1.3 SUBMITTALS

- A. Submit to the OWNER with itemized data typed on 8 1/2 in by 11 in or 8 1/2 in by 14 in white paper continuation sheets.
- B. Provide itemized data on continuation sheet.
 - 1. Format, schedules, line items and values: Those of the Schedule of Values accepted by the ENGINEER.

1.4 PEREPARATION OF APPLICATION FOR EACH PROGRESS PAYMENT

A. Application Form

- 1. Fill in required information, including that for Change Orders executed prior to date of submittal of application.
- 2. Fill in summary of dollar values to agree with respective totals indicated on continuation sheets.
- 3. Execute certification with signature of a responsible officer of Contract firm.

B. Continuation Sheets

- 1. Fill in total list of all scheduled component items of Work, with item number and scheduled dollar value for each item.

2. Fill in dollar value in each column for each scheduled line item when work has been performed or products stored.
 - a. Round off values to nearest dollar, or as specified for Schedule of Values.
3. List each Change Order executed prior to date of submission, at the end of the continuation sheets.
 - a. List by Change Order Number and description, as for an original component item of work.
4. To receive approval for payment on component material stored on site, submit copies of the original paid invoices with the application for payment.

1.5 SUBSTANTIATING DATA FOR PROGRESS PAYMENTS

- A. When the OWNER or the ENGINEER requires substantiating data, submit suitable information, with a cover letter identifying.
 1. Project.
 2. Application number and date.
 3. Detailed list of enclosures.
 4. For stored products:
 - a. Item number and identification as shown on application.
 - b. Description of specific material.
- B. Submit one copy of data and cover letter for each copy of application.
- C. As a prerequisite for payment, submit a "Surety Acknowledgement of Payment Request" letter showing amount of progress payment which the CONTRACTOR is requesting.
- D. Maintain an updated set of drawings to be used as record drawings in accordance with Section 01 77 00. As a prerequisite for monthly progress payments, exhibit the updated record drawings for review by the OWNER and ENGINEER.

1.6 PREPARATION OF APPLICATION FOR FINAL PAYMENT

- A. Fill in Application form as specified for progress payments.
- B. Use continuation sheet for presenting the final statement of accounting as specified in Section 01700 Contract Closeout.
- C. Submit all Project Record Documents in accordance with Section 01 77 00.

1.7 SUBMITTAL PROCEDURE

- A. Submit Applications for Payment to the ENGINEER at the times stipulated in the Agreement.
- B. Number: Five copies of each Application.
- C. When the ENGINEER finds Application properly completed and correct, he/she will transmit certificate for payment to OWNER, with copy to CONTRACTOR.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

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SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 – GENERAL

1.1 DESCRIPTION OF REQUIREMENTS

- A. This Section specifies the general methods and requirements of submissions applicable to Shop Drawings, Product Data, Samples, Mock Ups, Construction Photographs, and Construction or Submittal Schedules. Additional general submission requirements are contained in Paragraphs 6.24 and 6.25 of the General Conditions. Detailed submittal requirements are specified in the technical Sections.
- B. All submittals shall be clearly identified by reference to Section Number, Paragraph, Drawing Number or Detail as applicable. Submittals shall be clear and legible and of sufficient size for presentation of data.

1.2 SHOP DRAWINGS, PRODUCT DATA, SAMPLES

A. Shop Drawings

1. CONTRACTOR shall submit one complete submittal by section. A complete submittal shall include all items listed under the Shop Drawing heading for each section.
2. The General Contractor shall be responsible for the coordination of all submittals for all contracts. This shall include a submittal schedule of Shop Drawings as required, as well as receiving and forwarding submittals from other contractors and the ENGINEER. The General Construction Contractor shall not be responsible for stamping submittals “Approved” from other contractors (unless a Combined Bid has been accepted by the Owner).
3. Shop drawings as specified in individual Sections include custom prepared data such as fabrication and erection/installation (working) drawings, scheduled information, setting diagrams, actual shop work manufacturing instructions, custom templates, special wiring diagrams, coordination drawings, individual system or equipment inspection and test reports, including performance curves and certifications, as applicable to the work.
4. All shop drawings submitted by Prime Contractors and respective subcontractors shall be sent directly to the General Contractor for checking. The Prime Contractor shall be responsible for their submission at the proper time so as to prevent delays in delivery of materials.
5. Check all shop drawings regarding measurements, size of members, materials and details to make sure that they conform to the intent of the Drawings and related Sections. Return shop drawings found to be inaccurate or otherwise in error to the subcontractors for correction before submission thereof.

6. All details on shop drawings shall show clearly the relation of the various parts to the main members and lines of the structure and where correct fabrication of the work depends upon field measurements, such measurements shall be made and noted on the drawings before being submitted.
7. Submittals for equipment specified under Division 33 shall include a listing of all installations where identical or similar equipment has been installed and been in operation for a period of at least one year.
8. All Shop Drawings shall be in English.

B. Product Data

1. Product data as specified in individual Sections include, standard prepared data for manufactured products (sometimes referred to as catalog data), such as the manufacturer's product specification and installation instructions, availability of colors and patterns, manufacturer's printed statements of compliances and applicability, roughing in diagrams and templates, catalog cuts, product photographs, standard wiring diagrams, printed performance curves and operational range diagrams, production or quality control inspection and test reports and certifications, mill reports, product operating and maintenance instructions and recommended spare parts listing and printed product warranties, as applicable to the work.

C. Samples

1. Samples specified in individual Sections include, physical examples of the work such as sections of manufactured or fabricated work, small cuts or containers of materials, complete units of repetitively used products, color/texture/pattern swatches and range sets, specimens for coordination of visual effect, graphic symbols and units of work to be used by the ENGINEER or OWNER for independent inspection and testing, as applicable to the work.

1.3 CONTRACTOR'S RESPONSIBILITIES

- A. Review shop drawings, product data and samples, including those by subcontractors, prior to submission to determine and verify the following:
 1. Field measurements
 2. Field construction criteria
 3. Catalog numbers and similar data
 4. Conformance with related Sections
- B. Each shop drawing, sample and product data submitted by the CONTRACTOR shall have affixed to it the following Certification Statement including the Contractor's Company name and signed by the CONTRACTOR: "Certification Statement: by this submittal, I hereby represent that I have determined and verified all field

measurements, field construction criteria, materials, dimensions, catalog numbers and similar data and I have checked and coordinated each item with other applicable approved shop drawings and all Contract requirements." Shop drawings and product data sheets 11 in x 17 in and smaller shall be bound together in an orderly fashion and bear the above Certification Statement on the cover sheet. The cover sheet shall fully describe the packaged data and include a listing of all items within the package. Provide to the Resident Project Representative a copy of each transmittal sheet for shop drawings, product data and samples at the time of submittal to the ENGINEER. Shop Drawings that are not stamped will not be reviewed.

C. The CONTRACTOR shall utilize a 10 character submittal identification numbering system in the following manner:

1. The first character shall be a D, S, P, M, or R, which represents Shop/Working Drawing and other Product Data (D), Sample (S), Preliminary Submittal (P), Operating/ Maintenance Manual (M), or Request for Information (R).
2. The next five digits shall be the applicable Section Number.
3. The next three digits shall be the numbers 001 to 999 to sequentially number each initial separate item or drawing submitted under each specific Section Number.
4. The last character shall be a letter, A to Z, indicating the submission, or resubmission of the same Drawing, i.e., "A=1st submission, B=2nd submission, C=3rd submission, etc. A typical submittal number would be as follows:

| | | |
|-------|---|--|
| | | D 03300 008 B |
| D | = | Shop Drawing |
| 03300 | = | Section for Concrete |
| 008 | = | The eighth initial submittal under this section |
| B | = | The second submission (first resubmission) of that |

D. Notify the ENGINEER in writing, at the time of submittal, of any deviations in the submittals from the requirements of the Contract Documents.

E. The review and approval of shop drawings, samples or product data by the ENGINEER shall not relieve the CONTRACTOR from the responsibility for the fulfillment of the terms of the Contract. All risks of error and omission are assumed by the CONTRACTOR and the ENGINEER will have no responsibility therefore.

F. No portion of the work requiring a shop drawing, sample, or product data shall be started nor shall any materials be fabricated or installed prior to the approval or qualified approval of such item. Fabrication performed, materials purchased or on site construction accomplished which does not conform to approved shop drawings and data shall be at the CONTRACTOR's risk. The OWNER will not be liable for any expense or delay due to corrections or remedies required to accomplish conformity.

G. Project work, materials, fabrication, and installation shall conform with approved shop drawings, applicable samples, and product data.

H. Contractor to use green ink for all submittals.

1.4 SUBMISSION REQUIREMENTS

A. Make submittals promptly in accordance with approved schedule and in such sequence as to cause no delay in the Work or in the work of any other CONTRACTOR.

B. Each submittal, appropriately coded, will be returned within 30 working days following receipt of submittal by the ENGINEER.

C. Number of submittals required:

1. Shop Drawings: The number of copies for distribution is the minimum required for coordination of specific items of the Work. Additional shop drawings are required for coordination between prime contractors for certain items of the Work. A minimum of six copies for distribution as follows:

- a. ENGINEER – one
- b. Resident Project Representative – one
- c. OWNER – one
- d. Prime Contractor – three
- e. Other Prime Contractors - as required.

2. Product Data: Six copies for same distribution as shop drawings.

3. Samples: Submit the number stated in the respective Sections.

D. Submittals shall contain:

1. The date of submission and the dates of any previous submissions.

2. The Project title and number.

3. Contractor identification.

4. The names of:

- a. Contractor
- b. Supplier
- c. Manufacturer

5. Identification of the product, with the section number, page and paragraph(s).

6. Field dimensions, clearly identified as such.

7. Relation to adjacent or critical features of the work or materials.

8. Applicable standards, such as ASTM or Federal Standards numbers.

9. Identification of deviations from Contract Documents.

10. Identification of revisions on resubmittals.

11. An 8 in by 4 in blank space suitably sized to fit both the Contractor and ENGINEER stamps.

1.5 REVIEW OF SHOP DRAWINGS, PRODUCT DATA, WORKING DRAWINGS AND SAMPLES

- A. The review of shop drawings, data and samples will be for general conformance with the design concept and Contract Documents. They shall not be construed:
1. as permitting any departure from the Contract requirements;
 2. as relieving the CONTRACTOR of responsibility for any errors, including details, dimensions, and materials;
 3. as approving departures from details furnished by the ENGINEER, except as otherwise provided herein.
- B. The CONTRACTOR remains responsible for details and accuracy, for coordinating the work with all other associated work and trades, for selecting fabrication processes, for techniques of assembly, and for performing work in a safe manner. CONTRACTOR shall provide additional copies of shop drawings for distribution to related prime contractors.
- C. If the shop drawings, data or samples as submitted describe variations and show a departure from the Contract requirements which ENGINEER finds to be in the interest of the OWNER and to be so minor as not to involve a change in Contract Price or Contract Time, the ENGINEER may return the reviewed drawings without noting an exception.
- D. Submittals will be returned to the Contractor under one of the following codes.
1. Code 1 "APPROVED" is assigned when there are no notations or comments on the submittal. When returned under this code the CONTRACTOR may release the equipment and/or material for manufacture.
 2. Code 2 "APPROVED WITH CHANGES NOTED". This code is assigned when a confirmation of the notations and comments IS NOT required by the CONTRACTOR. The CONTRACTOR may release the equipment or material for manufacture; however, all notations and comments must be incorporated into the final product.
 3. Code 3 "REVISE AND RESUBMIT". This combination of codes is assigned when notations and comments are extensive enough to require a resubmittal of the package. This resubmittal is to address all comments, omissions and non conforming items that were noted. Resubmittal is to be received by the ENGINEER within 15 calendar days of the date of the ENGINEER's transmittal requiring the resubmittal.

4. Code 4 "REJECTED" is assigned when the submittal does not meet the intent of the Contract Documents. The CONTRACTOR must resubmit the entire package revised to bring the submittal into conformance. It may be necessary to resubmit using a different manufacturer/vendor to meet the Contract Documents.
- E. Resubmittals will be handled in the same manner as first submittals. On resubmittals the CONTRACTOR shall direct specific attention, in writing on the letter of transmittal and on resubmitted shop drawings by use of revision triangles or other similar methods, to revisions other than the corrections requested by the ENGINEER, on previous submissions. Any such revisions which are not clearly identified shall be made at the risk of the CONTRACTOR. The CONTRACTOR shall make corrections to any work done because of this type revision that is not in accordance to the Contract Documents as may be required by the ENGINEER.
- F. Partial submittals may not be reviewed. The ENGINEER will be the only judge as to the completeness of a submittal. Submittals not complete will be returned to the CONTRACTOR and will be considered "Not Approved" until resubmitted. The ENGINEER may at his option provide a list or mark the submittal directing the CONTRACTOR to the areas that are incomplete.
- G. Repetitive Review
 1. Shop drawings and other submittals will be reviewed no more than twice at the Owner's expense. All subsequent reviews will be performed at times convenient to the ENGINEER and at the CONTRACTOR's expense, based on the ENGINEER's then prevailing rates. The CONTRACTOR shall reimburse the Owner for all such fees invoiced to the Owner by the ENGINEER. Submittals are required until approved.
 2. Any need for more than one resubmission, or any other delay in obtaining ENGINEER's review of submittals, will not entitle CONTRACTOR to extension of the Contract Time.
- H. If the CONTRACTOR considers any correction indicated on the shop drawings to constitute a change to the Contract Documents, the CONTRACTOR shall give written notice thereof to the ENGINEER at least 7 working days prior to release for manufacture.
- I. When the shop drawings have been completed to the satisfaction of the ENGINEER, the CONTRACTOR shall carry out the construction in accordance therewith and shall make no further changes therein except upon written instructions from the ENGINEER.

1.6 DISTRIBUTION

- A. Distribute reproductions of approved shop drawings and copies of approved product data and samples, where required, to the job site file and elsewhere as directed by the ENGINEER. Number of copies shall be as directed by the ENGINEER but shall not exceed seven unless otherwise approved for specific items of work.

1.7 MOCK UPS

- A. Mock Up units as specified in individual Sections include, but are not necessarily limited to, complete units of the standard of acceptance for that type of work to be used on the project. Remove at the completion of the work or when directed.

1.8 CONSTRUCTION SCHEDULE

- A. In lieu of the progress schedules specified in Article 2.06, 2.09 and 14.01 of the General Conditions, the General CONTRACTOR shall, within 10 days after the Effective Date of the Agreement, provide and submit to the Engineer for approval, the Schedule he plans to maintain in order to successfully construct the work within the time allotted. This Schedule shall include a Critical Path Network and a Computer generated print out. The Schedule shall account for all Contracts in addition to the work of the General CONTRACTOR. In addition to all reasonably important construction activities, the Schedule shall provide for the proper sequence of construction considering the various crafts, purchasing time, submittal approval, material delivery, equipment fabrication, and similar time consuming factors.
- B. The Schedule shall include as a minimum, the earliest starting and finish dates, latest starting and finish dates, and the total float for each task or item. The General CONTRACTOR shall update (monitor) and rerun the Schedule at least monthly and shall submit to the Engineer both the Network and Computer print out at the same time the pay estimate is prepared. The Schedule shall contain all of the items of the Periodic Estimate and Pay Schedule.
- C. Following receipt and preliminary approval by the ENGINEER of the General CONTRACTOR's CPM Schedule, copies will be sent to the other CONTRACTORs for their comments. A preconstruction conference will then be held between the OWNER, ENGINEER and all involved CONTRACTORs to review and, if necessary, revise the Schedule to afford all CONTRACTORs ample time to perform their work in the proper sequence of construction operations. In case of disputes between CONTRACTORs over allotted time for various items of work, the ENGINEER shall decide and his decision shall be final and binding on all. The ENGINEER shall give final approval to the CPM Schedule before any construction is begun.
- D. The monthly Schedule update (monitoring) shall include the following items:
 - 1. Network
 - a. Identify activities that are completed or in process by contrasting heavy lines. Each activity worked on should be proportional to the percentage of progress achieved to date.
 - b. Identify restraints imposed by material deliveries, precedent activity durations or schedule adjustments on the monthly update of the Network.
 - 2. Computer Print out

- a. Show the percentage progress status of each activity. The percentage progress status will be used to support each CONTRACTOR's periodic pay estimate.
 - b. Show actual start and completion dates.
 - c. Flag all activities started and in progress.
- E. Supplemental to the Critical Path Schedule, each CONTRACTOR shall provide a detailed work schedule, projected at least a month in advance. The implementation of the work schedule and the coordination required will constitute the basic agenda of the coordination and planning meetings.

1.9 PROFESSIONAL ENGINEER (P.E.) CERTIFICATION FORM

- A. If specifically required in other related Sections, submit a P.E. Certification for each item required, in the form attached to this Section, completely filled in and stamped.

1.10 GENERAL PROCEDURES FOR SUBMITTALS

- A. Coordination of Submittal Times: Prepare and transmit each submittal sufficiently in advance of performing the related work or other applicable activities, or within the time specified in the individual work of other related Sections, so that the installation will not be delayed by processing times including disapproval and resubmittal (if required), coordination with other submittals, testing, purchasing, fabrication, delivery and similar sequenced activities. No extension of time will be authorized because of the CONTRACTOR's failure to transmit submittals sufficiently in advance of the Work.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

SECTION 01 55 00

VEHICULAR ACCESS AND PARKING

PART 1 – GENERAL

1.1 GENERAL

- A. All streets and bike trails shall be kept open for the passage of traffic during the construction period.
 - 1. CONTRACTOR shall obtain all permits required by State or local authorities.
 - 2. CONTRACTOR shall maintain access for emergency vehicles at all times.
- B. CONTRACTOR shall be responsible to contact all local authorities and utilities at least two (2) weeks prior to commencement of work. Local authorities include but are not limited to police, fire, gas, electric, telephone, TV cable, water, sewer, traffic and street department. CONTRACTOR shall be responsible to keep all above apprised of Work schedule, actual progress, etc.
- C. CONTRACTOR shall give reasonable notice to owners or tenants of private property and commercial or industrial facilities who may be affected by CONTRACTOR'S operations.
- D. CONTRACTOR shall take all means necessary to prevent accidents. CONTRACTOR shall provide signs, signals, barricades, flares, lights, and all other equipment, service, and personnel required to regulate and protect all traffic, and warn of hazards. All such work shall conform to requirements of the Warren County Engineer's Office, Ohio Department of Natural Resources or authority having jurisdiction and be provided in accordance with ODOT Manual of Uniform Traffic Control Devices, Construction and Maintenance Operations. Remove temporary equipment and facilities when no longer required, restore grounds to original, or to specified conditions. Traffic Control plan to be reviewed and approved by Warren County Water & Sewer Department.
- E. CONTRACTOR shall maintain work hours of 8:00AM-5:00PM.
- F. CONTRACTOR shall provide dust control in accordance with Section 01 57 00.

1.2 TRAFFIC SIGNALS AND SIGNS

- A. Provide and operate traffic control and directional signals required to direct and maintain orderly flow of traffic in all areas under CONTRACTOR'S control or affected by CONTRACTOR'S operations.
- B. Provide traffic control and directional signs, mounted on barricades or standard posts:
 - 1. At each change of direction and at each crossroad.

2. At detours and hazardous areas.
3. At parking areas.
4. As required by approved permit or authority having jurisdiction.

1.3 FLAGMEN

- A. Provide qualified and suitably equipped flagmen, including STOP/SLOW paddles, when construction operations encroach on traffic lanes or prevent adequate sight distance, as required for regulation of traffic and in accordance with the requirements of the authority having jurisdiction.

1.4 FLARES AND LIGHTS

- A. Provide flares and lights during periods of low visibility:
 1. To clearly delineate traffic lanes, to guide traffic and to warn of hazardous areas.
 2. For use by flagmen in directing traffic.
- B. Provide illumination of critical traffic and parking areas.

1.5 PARKING CONTROL

- A. Control all construction related vehicular parking within the limits of Work to preclude interference with public traffic or parking, access by emergency vehicles, OWNER'S operations, or construction operations. Provide temporary parking facilities for the public as may be required because of construction or operations.
- B. Monitor parking of all construction and private vehicles:
 1. Maintain free vehicular access to and through parking areas.
 2. Prohibit parking on or adjacent to access roads or in non-designated areas.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

SECTION 01 57 00

TEMPORARY CONTROLS

PART 1 – GENERAL

1.1 DESCRIPTION OF REQUIREMENTS

1. CONTRACTOR shall provide and maintain methods, equipment, and temporary construction, as required to provide controls over environmental conditions at the construction site and adjacent areas. Remove physical evidence of temporary facilities at completion of the Work.
- B. CONTRACTOR shall obtain all City, County and State permits required for the construction of all Work, including Hazardous Material Management, Earth Moving/Dust Control and Stormwater Pollution Prevention Permits.

1.2 NOISE CONTROL

- A. CONTRACTOR'S vehicles and equipment shall be such as to minimize noise to the greatest degree practicable. Noise levels shall conform to the latest OSHA standards and in no case will noise levels be permitted which interfere with the Work of the OWNER or others.

1.3 DUST CONTROL

- A. CONTRACTOR shall be responsible for controlling objectionable dust caused by CONTRACTOR'S operation of vehicles and equipment, clearing or for any reason whatever. CONTRACTOR shall apply water or use other methods subject to the ENGINEER'S approval, which will keep dust in the air to a minimum.

1.4 PEST AND RODENT CONTROL

- A. Provide rodent and pest control as required to prevent infestation of construction or storage areas.
 1. Employ methods and use materials that will not adversely affect conditions at the Site or on adjoining properties.

1.5 WATER CONTROL

- A. Provide methods to control surface water and water from excavations and structures to prevent damage to the Work, the Site, or adjoining properties.
 1. Control fill, grading and ditching to direct water away from excavations, pits, tunnels and other construction areas and to direct drainage to proper runoff courses so as to prevent any erosion, damage or nuisance.

- B. Provide, operate and maintain equipment and facilities of adequate size to control surface water.
- C. Dispose of drainage water in a manner to prevent flooding, erosion, or other damage to any portion of the Site or to adjoining areas and in conformance with all environmental requirements.

1.6 POLLUTION CONTROL

- A. Provide methods, means and facilities required to prevent contamination of soil, water or atmosphere by the discharge of noxious substances from construction operations.
- B. Provide equipment and personnel, perform emergency measures required to contain any spillages, and to remove contaminated soils or liquids.
 - 1. Excavate and dispose of any contaminated earth offsite, and replace with suitable compacted fill and topsoil.
- C. Take special measures to prevent harmful substances from entering public waters.
 - 1. Prevent disposal of wastes, effluents, chemicals, or other such substances adjacent to streams, or in sanitary or storm sewers.
- D. Provide systems for control of atmospheric pollutants.
 - 1. Prevent toxic concentrations of chemicals.
 - 2. Prevent harmful dispersal of pollutants into the atmosphere.
- E. All CONTRACTOR'S equipment used during construction shall conform to all current federal, state and local laws and regulations.

1.7 EROSION CONTROL

- A. Plan and execute construction and earth work by methods to control surface drainage from cuts and fills, and from borrow and waste disposal areas, to prevent erosion and sedimentation.
 - 1. Hold the areas of bare soil exposed at one time to a minimum.
 - 2. Provide temporary control measures such as berms, dikes and drains.
- B. Construct fills and waste areas by selective placement to eliminate surface silts or clays which will erode.
- C. Periodically inspect earthwork to detect any evidence of the start of erosion; apply corrective measures as required to control erosion.
- D. Coordinate erosion control requirements with the requirements of Article 1.05, above.

END OF SECTION

SECTION 01 77 00
CLOSEOUT PROCEDURES

PART 1 – GENERAL

1.1 SCOPE OF WORK

- A. This Section specifies administrative and procedural requirements for project closeout, including but not limited to:
 - 1. Closeout procedures.
 - 2. Final cleaning.
 - 3. Adjusting.
 - 4. Project record documents.
 - 5. Spare parts and maintenance materials.

1.2 RELATED WORK

- A. Warranties and Bonds are included in Section 01 78 00.

1.3 RECORD DOCUMENTS

- A. Maintain on site, one set of the following documents; actual revisions to the work shall be recorded in these documents:
 - 1. Contract Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other Modifications to the Contract.
 - 5. Reviewed shop drawings, product data, and samples.
- B. Store Record Documents separate from documents used for construction.
- C. Record information concurrent with construction progress.
- D. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Product substitutions or alternates utilized.
 - 3. Changes made by Addenda and Modifications.

- E. Contract Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
 - 1. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - 2. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the work.
 - 3. Field changes of dimension and detail.
 - 4. Details not on original Contract Drawings.
- F. Submit documents to Engineer with Application for Final Payment.

1.4 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, work has been inspected and that work is complete in accordance with Contract Documents and ready for Engineer's inspection.
- B. Provide submittals to Engineer that are required by governing or other authorities.
- C. Submit Application for Final Payment identifying total adjusted Contract Sum, previous payments and sum remaining due.

1.5 FINAL CLEANING

- A. Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion.
 - 1. Remove labels that are not permanent labels.
 - 2. The installing Prime Contractor shall clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compound and other substances that are noticeable vision obscuring materials. Replace chipped or broken glass and other damaged transparent materials.
 - 3. Clean exposed exterior and interior hard surfaced finishes to a dust free condition, free of stains, films and similar foreign substances. Leave concrete floors broom clean.
 - 4. The installing Prime Contractor shall wipe surface of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean light fixtures.
 - 5. Clean the site of rubbish, litter and other foreign substances. Sweep paved areas broom clean; remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted, to a smooth even textured surface.

1.6 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

END OF SECTION

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SECTION 01 78 00

WARRANTIES AND BONDS

PART 1 – GENERAL

1.1 SCOPE OF WORK

- A. This Section specifies general administrative and procedural requirements for warranties and bonds required by the Contract Documents, including manufacturer's standard warranties on products and special warranties.

1.2 RELATED WORK

- A. Refer to Conditions of Contract for the general requirements relating to warranties and bonds.
- B. General closeout requirements are included in Section 01 77 00 Closeout Procedures.
- C. Specific requirements for warranties for the work and products and installations that are specified to be warranted, are included in the individual Sections of Division 2 through 33.

1.3 SUBMITTALS

- A. Submit written warranties to the OWNER prior to the date fixed by the ENGINEER for Substantial Completion. If the Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the work, or a designated portion of the work, submit written warranties upon request of the OWNER.
- B. When a designated portion of the work is completed and occupied or used by the OWNER, by separate agreement with the CONTRACTOR during the construction period, submit properly executed warranties to the OWNER within 15 days of completion of that designated portion of the Work.
- C. When a special warranty is required to be executed by the CONTRACTOR, or the CONTRACTOR and a subcontractor, supplier or manufacturer, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the ENGINEER for approval prior to final execution.
- D. Refer to individual Sections of Divisions 2 through 33 for specific content requirements, and particular requirements for submittal of special warranties.
- E. At Final Completion compile two copies of each required warranty and bond properly executed by the CONTRACTOR, or by the CONTRACTOR, subcontractor, supplier,

or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.

- F. Bond warranties and bonds in heavy duty, commercial quality, durable 3 ring vinyl covered loose leaf binders, thickness as necessary to accommodate contents and sized to receive 8 1/2 in by 11 in paper.
- G. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the Section in which specified and the name of the product or work item.
- H. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address and telephone number of the installer, supplier and manufacturer.
- I. Identify each binder on the front and the spine with the typed or printed title "WARRANTIES AND BONDS", the project title or name and the name, address and telephone number of the CONTRACTOR.
- J. When operating and maintenance manuals are required for warranted construction, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

1.4 WARRANTY REQUIREMENT

- A. Related Damages and Losses: When correcting warranted work that has failed, remove and replace other work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted work
- B. Reinstatement of Warranty: When work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- C. Replacement Cost: Upon determination that work covered by a warranty has failed, replace or rebuild the work to an acceptable condition complying with requirements of Contract Documents. The CONTRACTOR is responsible for the cost of replacing or rebuilding defective work regardless of whether the OWNER has benefited from use of the work through a portion of its anticipated useful service life.
- D. OWNER's Recourse: Written warranties made to the OWNER are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the OWNER can enforce such other duties, obligations, rights, or remedies.

- E. Rejection of Warranties: The OWNER reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the contract Documents.
- F. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the CONTRACTOR of the warranty on the work that incorporates the products, nor does it relieve suppliers, manufacturers and subcontractors required to countersign special warranties with the CONTRACTOR.
- G. Separate Prime Contracts: Each Prime CONTRACTOR is responsible for warranties related to its own Contract.

1.5 DEFINITIONS

- A. Standard Product Warranties are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the OWNER.
- B. Special Warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the OWNER.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

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SECTION 33 01 30

CURED-IN-PLACE PIPE

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. The Plans, general provisions of the Contract, and The Ohio Department of Transportation Construction and Material Specifications (CMS) (current edition), apply to this section.

1.2 DESCRIPTION OF WORK

- A. Scope of Work. Furnish and install the cured-in-place resin impregnated flexible tube pipe liner as specified herein. Water tight, fiberglass reinforced cured-in-place pipe (CIPP) Point Repair shall be installed without digging, through existing access points such as cleanouts or manholes. The resin/fiberglass reinforced fabric system can be cured via ambient cure, the flow through the fiberglass reinforced fabric tube of mixed air and steam or by the use of ultraviolet light. The contractor must pre-inspect, clean, by-pass pump (as needed), furnish and install CIPP spot repair and post-inspect completed work.

1.3 QUALITY ASSURANCE

- A. Standards. All work and materials used shall be in compliance with the following standards that are made part of this specification:
 - 1. American Society for Testing and Materials (ASTM) (latest edition):
 - a. ASTM D-543, Practices for Evaluating the Resistance of Plastics to Chemical Reagents.
 - b. ASTM D-638, Test Method for Tensile Properties of Plastics.
 - c. ASTM D-790, Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
 - d. ASTM D-5813, “Standard Specification for Cured-in-Place thermosetting Resin Pipe”
 - e. ASTM F-1216, Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin Impregnated Tube.
 - f. ASTM F-1743, Standard Practice for Rehabilitation of Existing Pipelines and Conduits by Pulled-in-Place Installation of Cured-in-Place thermosetting resin Pipe (CIPP) (if given approval on a case-by-case basis).
 - 2. National Association of Sewer Service Companies (NASSCO).

- B. Contractor's Qualifications. Installation of the sewer pipe lining system shall be performed by an experienced Contractor fully licensed and approved by the lining process manufacturer. The contractor shall have a minimum of five (5) years of experience in such work and shall have satisfactorily completed ten (10) similar regional projects for at least three (3) different utilities of agencies. If the Contractor anticipates utilizing steam curing, three (3) of these ten (10) regional projects must be a steam cured application.

1.4 BASIS OF DESIGN MANUFACTURER/PRODUCT

- A. The point repair system outlined in this Section is based on PipePatch, a Source 1 Environmental, LLC product. The contractor may propose another manufacturer's comparable product subject to approval based on compliance with the specified requirements.
 - 1. Acceptable manufacturers: Source 1 Environmental (PipePatch), Perma-Liner Industries, Trelleborg, Hammerhead trenchless, or approved equal.

1.5 SUBMITTALS

The following submittals (A-F) shall be made with the Bid:

- A. Contractor's Qualifications. Submit copy of manufacturer's licensee certificate. Submit list of ten (10) similar regional jobs within the past three (3) years as well. Provide project information such as length of project, pipe diameter, and date complete. Project cost, owner contact, and installation/curing method. In addition, three (3) of the ten (10) regional jobs must indicate the successful use of steam curing if this method is to be utilized by the Contractor.
- B. Material Certifications. Written certification is required from the manufacturer that all liner and resin used in the work are manufactured and tested in accordance with the ASTM Standards specified herein, and are being used or installed in conformance with the manufacturer's recommendations.
- C. Material Safety Data Sheets. The Contractor shall submit Material Safety Data Sheets (MSDS) for each component of the CIPP system.
- D. Test Results. Prior to the use of any materials, the Contractor shall furnish, at its expense, the results of testing of the proposed materials by an independent laboratory in conformance with these specifications. All submitted test data shall have been performed on field installed samples within the last twelve (12) months. Any material not meeting the requirements of these specifications shall be completely removed from the project. Material acceptable to the Engineer shall be substituted for rejected items at the Contractor's expense.

The Contractor shall submit the following:

As Need Sanitary Point
Liner Repairs

Cured-In-Place-Pipe

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1. Testing by an independent laboratory to verify that the products to be used meet all minimum strength standards as set forth in ASTM F-1216, Table 1.
 2. Testing by an independent laboratory to verify that the products used meet the Creep Factor specified within. The submittal shall include the long-term Flexural and Tensile Modulus of Elasticity measured in accordance with SSTM D2290.
 3. Testing by an independent laboratory to verify that any product to be used on the project meets the minimum chemical resistance requirements as established in ASTM F-1216, Table 2, where the testing is in accordance with Appendix X2 of ASTM F1216.
- E. Installation Procedures. The Contractor shall submit the CIPP liner manufacturer's detailed installation procedures for the installation method(s) to be utilized on this project.
- F. Curing Cycle and Cooling Rate. The Contractor shall submit the resin manufacturer's recommended curing cycle as well as the recommended cooling rate. The Contractor shall submit inversion pressure (desired and maximum), curing pressure (desired and maximum) and times (part of the curing cycle) for air inversion/steam curing.

1.6 JOB CONDITIONS

A. Environmental Requirements

1. Contractor may be required to monitor styrene odors as necessary in business and residences to ensure that concentration levels are under recommended limits.
2. Contractor shall use caution when working in project sewers. During rain events, project sewers may reach capacity.

B. Safety. All work completed in conformance with all applicable safety standards in particular OSHA Standard 29CFR 1910.146. Permit Required Confined Space Entry. See Supplemental Specification Section SS-01, General Requirements.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Delivery

1. CIPP material shall be delivered to the job site in a covered refrigerated truck to minimize exposure to sunlight and to maintain temperature of the product within manufacturer's recommendations to avoid premature curing.
2. Delivery of material shall be coordinated with other trades to avoid delays.
3. Pipe preparations and field inspections shall be completed prior to delivery of liner to site.

B. Storage of Materials

1. Material shall be stored in the delivery truck in order to minimize exposure to sunlight and to maintain the temperature of the product to within manufacturer's recommendation to avoid premature curing.
2. No material shall be stored in the open or in contact with the ground.
3. Temperature logs of liner from time of wet-out to installation shall be given to the County representative on site at the time of installation. These logs shall contain the calculated volume of resin required and the actual volume of resin provided. The County representative shall verify that the volume resin provided is 5 to 10 percent greater than the calculated volume of resin required per ASRM F-1216, 7.2

C. Handling

1. Handle all products with care. Only sound, undamaged products shall be accepted.

1.8 GUARANTEE

- A. When any work is accepted by the County there shall be a guarantee period extending for one year from the date of acceptance of the work. At any time during the guarantee period, the County may notify the Contractor and his Surety that certain repairs are necessary, including, but not limited to, any damage or active infiltration or inflow. Within 10 days after being so notified, the Contractor shall make such repairs as are declared necessary to restore the work to a good serviceable condition. In the event that the contractor fails to comply with the order to repair as provided, said repairs may be made by the County and it is hereby agreed by the Contractor that reimbursement shall be made by the County for 2.5 times said expense so incurred within ten days following the receipt of a statement rendered to the Contractor by the County for said expense. Specifications for the work performed under this Contract shall govern in the making of repairs under this section. The Contractor shall perform and provide CCTV recording of the rehabilitated sewers as part of the 12 month warranty as directed by the County.

PART 2 – PRODUCTS

2.1 General

Not Used

2.2 MATERIALS

Only products and materials approved by Warren County may be used for this project.

- A. Products. The product shall meet requirements within these specifications.
- B. Design Parameters and Mechanical Properties. The following values are to be used to verify that the liner thickness equals or exceeds that shown in the plans and, where

indicated by ASTM standard, shall serve as the minimum acceptable strength requirements for the final cured liner.

| | |
|--|-------------|
| Flexural Strength (ASTM-D-790) | 6,500 psi |
| Short-term Flexural Modulus of Elasticity (ASTM D-790) | 725,000 psi |
| Tensile Strength (Pressure Pipe) (D-638) | 9,000 psi |

The design thickness shall be based on ASTM-1216 methodology and approved by Warren County.

Each tube shall be designed to withstand internal and/or external pressures as dictated by sire and pop conditions as well as the installation process used by the Contractor.

The CIPP liner thickness should be calculated to withstand the soil loading as the deepest point (the maximum difference between the surface evaluation and the pipe evaluation) between manholes. Unless noted otherwise on the Contract Drawings or job-specific data is available, assume the water table to be four (4) feet below the average surface evaluation. For partially deteriorated liner design, the water depth shall be taken from the pipe invert. For fully deteriorated liner design, the water depth shall be taken from the top of the pipe.

- C. Fabric Tube. The flexible fabric tube shall consist of one or more layers of flexible needled felt or an equivalent woven and/or non-woven material capable of carrying resin, withstanding installation pressures and curing temperatures, and compatible with the resin system used. The tube shall be sized to accommodate the forces of installation, host pipe configuration, and any other pertinent factors to assure a tight fitting final product with a smooth finish.
- D. Resin System. The resin system shall be a polyester, epoxy, or vinyl ester resin and catalyst system compatible with the insertion process. The resin system shall not contain filler or additive; expect those required for viscosity control, fire retardant, modulus enhancement, chemical resistance, or life extension. The following additives may not interfere with the visual inspection of the cured-in-place liner pip or its required properties: thixotropic agents added for viscosity control, the opaqueness of the plastic coating, and resins that may contain pigments, dyes, or colors. Resin selected shall be reflected in the CIPP liner thickness calculations.

The tube shall be vacuum impregnated with risen (wet-out) under controlled conditions. The volume of resin used shall be sufficient to fill all voids in the tube material at nominal thickness and diameter and an allowance for migration of resin into the cracks and joints in the host pipe. A roller system shall be used to uniformly distribute the resin throughout the tube.

PET or recycled resins will not be permitted.

- E. Inverting/Curing Medium. The inverting/curing medium shall be heated potable water or steam. In no instance will sewage be used to invert or cure liners or calibration tubes. If a private water source is proposed for use, a written agreement shall be obtained from the owner of the private water source and a copy of said agreement given to the County.
- F. Physical Properties: The finished CIPP Point repair must make a mechanical bond with the host pipe providing a water tight seal.
- G. Structural Requirements:
 - 1. The CIPP point Repair will stop both infiltration and exfiltration where it makes contact with the host pipe and provide a watertight seal at both ends so no water will migrate between the ends of the CIPP Point Repair and the host pipe.
 - 2. The manufacturer must certify that the tube/tissue in the CIPP liner will not wick. Any wicking will be considered CIPP lining failure and the lining or pipe must be replaced at the Contractor's expense.
 - 3. The finished CIPP Point Repair must be free as practical from wrinkles and have tapered ends. The CIPP Point Repair must not impede flow characteristics of the pipe or inhibit inspection or maintenance equipment. The CIPP Point Repair must be installed inside the pipe wall of the sewer main.

2.3 EQUIPMENT.

- A. All equipment required for the installation and curing of the resin impregnated flexible fabric tube, including cables, sleeves, rollers, compressors, generators, pumps, valves, gauges, water heaters and accessories required for complete installation shall be in the accordance with the manufacturer's recommendations.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. General. Examine areas and conditions within the sewer system in which materials and products are to be installed.
- B. Material. All sewer pipe liner materials shall be carefully inspected for defects prior to installation. The liner shall be homogeneous throughout, uniform in color, free of tears, holes, foreign materials, blisters, or other deleterious faults. Any material found during the progress of the work to have flaws or defects shall be rejected. All defective

materials furnished by the Contractor shall be promptly removed by the Contractor from the project site.

- C. Responsibility. The Contractor shall be responsible for all material furnished and shall replace at its own expense all such materials found defective in manufacturer or damaged in handling after delivery by the manufacturer. This shall include the furnishing of all material and labor required for the replacement of installed material discovered defective prior to the final acceptance of the work.

3.2 PREPARATION

- A. Cleaning. All sewers to be lined shall be cleaned as required prior to lining with CIPP. The term “cleaning” shall mean the removal of all sand, dirt, roots, grease, and all other solids or semisolid materials from the interior face of the sewer lines. Utilizing high pressure jet cleaning equipment, several passes must be completed to assure all debris is removed from the pipe. If roots are present, root cutters or mechanical brushes should be used to remove all root intrusions.
- B. Sewer Digital Recording and Inspection. The Contractor shall televise the sewer to provide a detailed record of existing conditions and lateral connections. Two (2) copies of the pre-rehabilitation inspection shall be submitted to the Engineer. The Contractor shall be responsible for having a copy of the pre-rehabilitation inspections in the field as well. Immediately prior to CIPP liner insertion, the camera shall traverse the sewer to inspect for debris which may have entered the sewer line after the existing condition recording. Warren County must sign off on this reconnaissance inspection for the CIPP lining work to proceed.
- C. Laterals. Lateral sewer pipes protruding into the main sewer shall be trimmed flush with the inside of the main sewer wall prior to lining. Trimming must be done in a neat, workmanlike manner, causing no damage to the lateral pipe beyond the inside face of the main sewer. Point repairs shall be made as needed around laterals to ensure a smooth, watertight opening following lining of the main and reestablishment of the lateral. Payment for trimming of the protruding taps and all other necessary work to meet project requirements shall be included in the unit price bid for the CIPP.
- D. Bypassing Sewage. The Contractor shall bypass the sewage around the sections of the sewer that are to be lined as required.
- E. Line Obstruction. It shall be the responsibility of the Contractor to clear the sewer of obstructions, solids, protruding services, or collapsed pipes that will prevent the proper installation of the liner.

If the pre-rehabilitation video recording and inspection reveals an obstruction that cannot be removed by trenchless means from within the sewer, the Contractor shall notify the County.

If the pre-rehabilitation video recording and inspection reveals a sag in the sewer that has a vertical displacement greater than one-half pipe diameter, the Contractor shall notify the County.

In addition, any equipment that is lost, broken, wedged, or struck in the line section shall be removed by the Contractor at the Contractor's expense.

- F. Protective Measures. To prevent burnt grass, the Contractor shall provide protective measure, (E.g. felt, blocks of wood) to create a barrier between to boiler hoses and the grass for each installation.

For steam curing, the Contractor shall take appropriate measures to ensure that non-water residuals/byproducts of steam curing do not enter nearby steams, storm sewers, etc. Contractor shall also provide barriers to prevent steam from burning grass.

3.3 INSTALLATION PROCEDURE

- A. General. Installation shall be by inversion (ASTM F-1216). Pulled-in-place installation (ASTM F-1743) may be allowed on case-by-case basis, if approved by the Engineer. The Contractor shall deliver the liner to the site and provide all equipment required to insert the liner into the sewer and cure it in place. The Contractor shall designate the locations where the tube will be vacuum impregnated prior to installation. The Contractor shall allow the Owner to inspect the materials and the "wet-out" procedure upon request. All procedures to prepare the liner for installation will be in strict compliance with the manufacturer's recommendation. Any material nor properly prepared shall be rejected and replaced with acceptable materials at the Contractor's expense. Contractor shall not proceed with work until satisfactory conditions are present in the sewer.

- B. Installation. A scaffold, elevated platform, or other means of providing required pressure shall be provided at the access point. The resin-impregnated tube shall be pulled and/or inverted into the host pipe by methods approved by the manufacturer and proven through previous successful installations. The Insertion method used shall not cause abrasion or scuffing of the tube. Hydrostatic or air pressure shall be used to inflate the tube, molding it against the walls of the host pipe. Tube installation pressures shall be limited so as not to stretch the tube longitudinally by more than five (5) percent of the original length.

- C. Curing.

1. Using Circulated Heated Water: After the installation is complete, the Contractor shall supply a suitable heat source, water recirculation equipment, and a curing medium as approved by the Engineer. The equipment shall be capable of uniformly raising the water temperature to a level required to effectively cure the resin.
2. Using Steam: After the installation is complete, the Contractor shall supply suitable heat steam-generation equipment as approved by the Engineer. The equipment shall be capable of delivering steam throughout the section to uniformly raising the temperature within the pipe to a level required to effectively cure the resin.

3. General. The equipment shall be muffled to reduce excess noise during the curing process.

The heat source shall be fitted with suitable monitors to gauge the temperature of the incoming and outgoing water supply. Another such gauge shall be placed between the tube and the host pipe in the downstream manhole at or near the bottom to determine the temperatures during cure. Water temperature in the pipe during the cure period shall be as recommended by the resin manufacturer.

Initial cure shall be deemed complete when the exposed portions of the tube appear to be hard and sound and the temperature sensor indicates the recommended temperature of the manufacturer. The cure period shall be of a duration recommended by the resin manufacturer and may require continuous recirculation of the water to maintain temperature.

D. Cool Down.

1. After Heated Water Cure. The Contractor shall cool the hardened pipe to a temperature below 100 degrees Fahrenheit before relieving the hydrostatic head. Cool-down shall be accomplished by introducing cool water into the inversion standpipe to replace water being drained from a small hole made in the downstream end. Rate of cooling shall not exceed resin manufacturers recommendations. Water shall be cooled to 50 degree Celsius (122 Degree F) prior to being released into the sewer.
 2. After Steam Cure. The Contractor shall cool the hardened pipe to a temperature below 113 degrees Fahrenheit before relieving the internal pressure within the section. Cool-Down may be accomplished by introducing cool water into the section to replace the mixture of air and steam being drained from a small hole made in the downstream end. Rate of cooling shall not exceed resin manufacturer's recommendations. Water shall be cooled to 50 degrees Celsius (122 Degree F) prior to being released into the sewer.
- E. Finish. The new pipe shall be cut off in the manhole at a suitable location. Excavation will not be allowed at cleanouts unless approved by the Engineer. The finished product shall be continuous over the length of the pipe reconstructed and be free from dry spots, delamination, lifts, and debris under the liner. If any unsatisfactory condition is present in the lined pipe, the County reserves the right to require a suitable repair.
- F. Sealing Pipe in Manholes. Form a tight seal between the CIPP and the manhole wall at the pipe penetration. Do not leave any annular gaps. Seal any annular space greater than ½-inch with manhole wall repair material. Finish off the seal and seal any annular spaces less than 1-2-inch with chemical grouting per SS-11 placed around the pipe opening from inside the manhole in a band at least 4-inches wide.
- G. Service Connections. It shall be the Contractor's responsibility to accurately field locate all existing active service connections. If any lateral connections are discovered during

the pre-lining CCTV the contractor shall notify Warren County when the pre-lining CCTV videos are submitted as described above.

The Contractor shall reconnect all active service connections to the liner pipe. Reinstatement of the active laterals on the cured liner shall begin immediately after curing operations are complete and continue uninterrupted until all active laterals have been reopened.

The Contractor shall be responsible for restoring/correcting all missed or faulty reconnections within 12 hours of being notified by the County. The Contractor shall be responsible for any damage caused to property owners for not reinstating the services soon enough or for not giving notice to the owners.

All existing active service connections shall be reinstated by a remote controlled cutting device directed internally by a television camera or by internal manual cutting. They shall be made by experienced operators so that no blind attempts or holes are made in the liner pipe. Location shall be verified carefully to match earlier tapes for accurate locations especially where dimples are not well defined or clearly ascertained. The Engineers reserve the right to require service connection by excavation at the Contractor's cost at any location, if the quality of workmanship for the cut is not satisfactory.

The cut shall be smooth and circular in nature as seen by a television inspection camera. Lateral cuts shall be brushed as necessary to ensure smooth openings. It shall be properly aligned, invert to invert, to the existing connection with no obstructions to the flow. Resin slugs shall be removed from the reinstated service connections. Any miscuts shall be repaired at no cost of the Owner, and to the full satisfaction of the Engineer. All coupons cut from the liner for reopening of lateral connections shall be retrieved from the sewer, accounted for by the Contractor, and turned over to Warren County.

- H. Final Television Inspection The Contractor shall televise the rehabilitated sewer to provide a detailed record of finished conditions and lateral connections. Lateral connections shall be observed while the camera is stopped and viewing the connection squarely. The Contractor shall provide video of a full 360 degree sweep of each reinstated lateral to show the lateral connection in its entirety. When complete, the Contractor shall submit two (2) copies of the rehabilitated sewer inspection, along with the accompanying logs, which shall be printed clearly or typed as requested,

3.4 RESTORATION

- A. Where portions of the site, either inside or outside the contract limits, not designated for change or new work become damaged during the course of construction by the Contractor's operations, the Contractor shall repair or replace at no addition cost to the Owner such damage to original or better condition in conformance with the Contract Documents. This shall include, but not be limited to, reseeding, replacing shrubbery in kind, replacing damaged fence, etc.

3.5 FIELD QUALITY CONTROL

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Liner Repairs

Cured-In-Place-Pipe

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- A. General. The rehabilitated pipe shall be continuous (without joints) over the entire length. The liner shall be as free as commercially practicable from visual defects such as foreign inclusions, dry spots, pinholes, and delamination. The liner surface shall be free of leaks, cracks, and crazing with a smooth finish. Some minor waviness that, in the Engineer's opinion, will not appreciably decrease the flow cross section or affect the flow characteristics shall be permissible.

Any defects in the product shall be repaired at the Contractor's expense in a manner mutually agreed upon the Owner and Contractor. The Contractor shall reinspect these repairs before the one (1) year guarantee period expires. During the one (1) year guarantee period, any defects that are discovered that will affect the integrity or strength of the product shall be repaired at the Contractor's expense in a manner mutually agreed upon by the owner and the Contractor. These repairs shall be granted a three (3) year extended guarantee period by the Contractor from the date of repair. The Contractor shall reinspect these repairs prior to the expiration of the three (3) year extended guarantee period.

- B. Testing. The following tests shall be performed for each length of CIPP length installed per ASTM F-1216 and/or F-1743 (when approved):

1. Short-term Flexural (Bending) Properties- The initial tangent flexural modulus of elasticity and flexural yield strength shall be measures in accordance with ASTM D790.

The Contractor is to provide test samples to the Engineer upon request in accordance with ASTM F-1216, Item 8.1. Note that this item requires two CIPP samples, one from each of the following two methods:

2. The sample should be cut from a section of cured CIPP at an intermediate manhole or at the termination point that has been inverted through a like diameter pipe which has been held in place by suitable heat sink, such as sandbags.
3. The sample should be fabricated from material taken from the tube and the resin/catalyst system used and cured in a clamped mold placed in the downtube when circulating heated water is used and in the silencer when steam is used as the curing medium.

The Owner retains the right to test coupons retrieved from the sewer and turned over to the Engineer. If the Contractor performs independent tests for their purposes, additional sample shall be provided by the Contractor for that use.

- C. Final Installed Liner Thickness. The final installed their thickness shall not be less than the thickness specified in the approved shop drawings. The final installed liner thickness shall not be more the 10% greater than the specified or approved thickness. The final installed liner thickness measurement shall be determined from pipe samples, coupons retrieved from the sewer, or as deemed necessary by the Engineer. It shall be the Contractor's responsibility to consider site conditions and their installation process to determine the liner thickness to install.

- D. Non-Compliance. In the event the flat plate samples do not meet the required thickness or Flexural Strength of 6,500 psi and Flexural Modulus of Elasticity of 750,000 psi as outlined in Section 2.2 B; actual installed samples must be taken. The installed samples shall be taken as directed by the Engineer and in accordance with all applicable ASTM requirements. From these samples, the installed Thickness shall be determined by taking an average of at least 10 thickness measurements. Installed samples shall then be prepared for re-testing in accordance with Section 2.2 C of these specifications.

In the event that any liner installation does not meet specified strengths and/or thicknesses, the conformity of the work with the plans and specifications shall be in accordance with ODOT CMS Section 105.3.

3.6 MEASUREMENT AND PAYMENT

- A. Liner. This item of work shall include all necessary television observation, protruding lateral removal and repair, sewer cleaning, pipe preparations, liner resins, grouting, water, equipment, labor, testing, clean up, manhole reconstruction required by construction means and methods of CIPP installation, and all other expenses whether specifically mentioned or not to install the cured-in-place pipe. Payment will be made at the unit price bid lineal foot as measured from center of manhole to center of manhole along the horizontal centerline of the rehabilitated sewer, complete, tested, and ready for service.
- B. Payment. Payment will be made at the unit price as outlined in bid table.

END OF SECTION

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SECTION 33 01 30.10

LATERAL CONNECTION LINING

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

- A. The Plans, general provisions of the Contract, and The Ohio Department of Transportation Construction and Material Specifications (CMS) (current edition), apply to this section.

1.2 DESCRIPTION

- A. Scope of Work. Reconstruction of sewer service main connections without excavation. The lateral pipe shall be remotely accessed from the main pipe. This shall be accomplished by the installation of a single-piece resin impregnated one-piece main/lateral lining tube assembly by means of air inflation. The liner is pressed against the main and lateral host pipes by pressurizing a tee or wye-shaped bladder that is held in place until the thermos-set resins have cured. When cured, the liner tube shall extend approximately 3 feet inches within the service lateral and 16 inches for the full circumference of the main pipe, forming a continuous, one piece, tight fitting, corrosion resistant and verifiable non-leaking lateral connection liner.

1.3 QUALITY ASSURANCE

- A. Standards. All work and materials used shall be in compliance with the following standards that are made part of this specification:
 - 1. American Society for Testing and Materials (ASTM) (latest edition):
 - a. ASTM D-2990, Standard Test Methods for Tensile, Compressive, and Flexural Creep and Creep-Rupture of Plastics.
 - b. ASTM D-5813, Standard Specification for Cured-in-Place thermosetting Resin Pipe.
 - c. ASTM F-1216, Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin Impregnated Tube.
 - d. ASTM F-1743, Standard Practice for Rehabilitation of Existing Pipelines and Conduits by Pulled-in-Place Installation of Cured-in-Place thermosetting resin Pipe (CIPP) (if given approval on a case-by-case basis).
 - 2. National Association of Sewer Service Companies (NASSCO).
- B. Contractor's Qualifications. Installation of the lateral connection lining system shall be performed by an experienced Contractor fully licensed and approved by the lining process manufacturer. The contractor shall have a minimum of five (5) years of experience in such work and shall have satisfactorily completed ten (10) similar regional projects for at least three (3) different utilities of agencies. If the Contractor

anticipates utilizing steam curing, three (3) of these ten (10) regional projects must be a steam cured application.

1.4 MANUFACTURERS/PRODUCTS

- A. Acceptable manufacturers: BLD (SCS+L), Source 1 Environmental (TYGERPatch), Perma-Liner Industries, Trelleborg, Hammerhead Trenchless, or approved equal.

1.5 SUBMITTALS

The following submittal (A-F) shall be made with the Bid:

- A. Contractor's Qualifications. Submit copy of manufacturer's licensee certificate. Submit list of ten (10) similar regional jobs within the past three (3) years as well. Provide project information such as length of project, pipe diameter, and date complete. Project cost, owner contact information, and installation/curing method. In addition, three (3) of the ten (10) regional jobs must indicate the successful use of steam curing if this method is to be utilized by the Contractor.
- B. Material Certifications. Written certifications is required from the manufacturer that all liner and resin used in the work are manufactured and tested in accordance with the ASTM Standards specified herein, and are being used or installed in conformance with the manufacture's recommendations.
- C. Material Safety Data Sheets. The Contractor shall submit Material Safety Data Sheets (MSDS) for each component of the CIPP system.
- D. Test Results. Prior to the use of any materials, the Contractor shall furnish, at its expense, the results of testing of the proposed materials by an independent laboratory in conformance with these specifications. All submitted test data shall have been performed on field installed samples within the last twelve (12) months. Any material not meeting the requirements of these specifications shall be completely removed from the project. Material acceptable to the Engineer shall be substituted for rejected items at the Contactor's expense.

The Contractor shall submit the following:

1. Resin:

- a. Long term creep test data confirming the resin system's 50 year design life in accordance with ASTM D2990.
- b. Chemical Resistance in accordance with ASTM F1216.
- c. Certificate of Compliance in accordance with ASTM F1216.

2. Liner:

- a. Certificate of Compliance in accordance with ASTM F1216.
- b. Certificate of Compliance in accordance with ASTM F1743 for pull in plastic tubes.

- E. Installation Procedures. The Contractor shall submit the CIPP liner manufacture's detailed installation procedures for the installation method(s) to be utilized on this project.
- F. Curing Cycle and Cooling Rate. The Contractor shall submit the resin manufacture's recommended curing cycle as well as the recommended cooling rate. The Contractor shall submit inversion pressure (desired and maximum), curing pressure (desired and maximum) and times (part of the curing cycle) for air inversion/steam curing.

1.6 JOB CONDITIONS

A. Environmental Requirements

1. Contractor may be required to monitor styrene odors as necessary in business and residences to ensure that concentration levels are under recommended limits.
2. Contractor shall use caution when working in project sewers. During rain events, project sewers may reach capacity and/or head up.

- B. Safety. All work completed in conformance with all applicable safety standards in particular OSHA Standard 29CFR 1910.146. Permit Required Confined Space Entry. See Supplemental Specification Section SS-01, General Requirements.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Delivery

1. CIPP material shall be delivered to the job site in a covered refrigerated truck to minimize exposure to sunlight and to maintain temperature of the product within manufacturer's recommendations to avoid premature curing.
2. Delivery of material shall be coordinated with other trades to avoid delays.
3. Pipe preparations and field inspections shall be completed prior to delivery of liner to site.

B. Storage of Materials

1. Material shall be stored in the delivery truck in order to minimize exposure to sunlight and to maintain the temperature of the product to within manufacturer's recommendation to avoid premature curing.
2. No material shall be stored in the open or in contact with the ground.
3. Temperature logs of liner from time of wet-out to installation shall be given to the County representative on site at the time of installation. These logs shall contain the calculated volume of resin required and the actual volume of resin provided. The County representative shall verify that the volume resin provided is 5 to 10 percent greater than the calculated volume of resin required per ASRM F-1216, 7.2

C. Handling

1. Handle all products with care. Only sound, undamaged products shall be accepted.

1.8 GUARANTEE

- A. When any work is accepted by the County there shall be a guarantee period extending for one year from the date of acceptance of the work. At any time during the guarantee period, the County may notify the Contractor and his Surety that certain repairs are necessary, including, but not limited to, any damage or active infiltration or inflow. Within 10 days after being so notified, the Contractor shall make such repairs as are declared necessary to restore the work to a good serviceable condition. In the event that the contractor fails to comply with the order to repair as provided, said repairs may be made by the County and it is hereby agreed by the Contractor that reimbursement shall be made by the County for 2.5 times said expense so incurred within ten days following the receipt of a statement rendered to the Contractor by the County for said expense. Specifications for the work performed under this Contract shall govern in the making of repairs under this section. The Contractor shall perform and provide CCTV recording of the rehabilitated sewers as part of the 12 month warranty as directed by the County.

PART 2 – PRODUCTS

2.1 MATERIALS

Only products and materials approved by Warren County may be used for this project.

- A. Products. The product shall meet requirements within these specifications.

B. CIPP Lateral Materials

1. Lateral lining is intended to create a water tight interface connection seal with the main line sewer.
2. Lateral lining should be a one-piece resin impregnated, flexible non-woven felt liner.
3. The liner shall be a joint-less polyester felt “tube” with a sewn or a semi-rigid collar at the connection at the connection which includes a 16-inch full wrap that will create a watertight seal at the main pipe interface.
4. Liner shall extend a minimum of 3-feet up the lateral.
5. Liner and resin shall meet the requirements of ASTM D5813, F1216, and F1743.

C. Physical Strength

1. The structural performance of the finished cured-in-place-pipe must be adequate to accommodate all anticipated loads throughout its design life. No cured-in-place-pipe reconstruction technology will be allowed that requires bonding to the existing

pipe for any part of its structural strength. Only resin saturation using vacuum impregnation will be allowed.

2. Design methods are to be derived from traditionally accepted pipe formulas for various loading parameters and modes of failure. All equations will be modified to include ovality as a design parameter. The design method shall be submitted to the Engineer for approval.
3. The CIPP lateral pipe shall conform to the minimum structural standards as listed below:

| <u>Property</u> | <u>ASTM Standard</u> | <u>Result</u> |
|------------------|----------------------|---------------|
| Flexural Stress | ASTM D790 | 4,500 psi |
| Flexural Modulus | ASTM D790 | 250,000 psi |

PART 3 – EXECUTION

3.1 EXAMINATION

- A. General. Examine areas and conditions within the sewer system in which materials and products are to be installed.
- B. Material. All sewer pipe liner materials shall be carefully inspected for defects prior to installation. The liner shall be homogeneous throughout, uniform in color, free of tears, holes, foreign materials, blisters, or other deleterious faults. Any material found during the progress of the work to have flaws or defects shall be rejected. All defective materials furnished by the Contractor shall be promptly removed by the Contractor from the project site.
- C. Responsibility. The Contractor shall be responsible for all material furnished and shall replace at its own expense all such materials found defective in manufacture or damaged in handling after delivery by the manufacturer. This shall include the furnishing of all material and labor required for the replacement of installed material discovered defective prior to the final acceptance of the work.

3.2 PREPARATION

- A. Cleansing. All sewers to be lined shall be cleaned as required prior to lining with CIPP. The term “cleansing” shall mean the removal of all sand, dirt, roots, grease, and all other solids or semisolid materials from the interior face of the sewer lines
- B. Sewer Digital Recording and Inspection. The Contractor shall televise the sewer to provide a detailed record of existing conditions and lateral connections. Two (2) copies of the pre-rehabilitation inspection shall be submitted to the Engineer. The Contractor shall be responsible for having a copy of the pre-rehabilitation inspections in the field as well. Immediately prior to CIPP liner insertion, the camera shall traverse the sewer to inspect for debris which may have entered the sewer line after the existing condition

recording. Warren County must sign off on this reconnaissance inspection for the CIPP lining work to proceed.

- C. Bypassing Sewage. The Contractor shall bypass the sewage around the sections of the mainline sewer where the service lateral designated for lining is located.
- D. Line Obstruction. It shall be the responsibility of the Contractor to clear the sewer of obstructions, solids, protruding services, or collapsed pipes that will prevent the proper installation of the liner.

If the pre-rehabilitation video recording and inspection reveals an obstruction that cannot be removed by trenchless means from within the sewer, the Contractor shall notify the County. The Contractor shall complete the repair work at the rates on the contract within a reasonable amount of time not to exceed 15 days. The Contractor shall re-televiser the sewer.

In addition, any equipment that is lost, broken, wedged, or struck in the line section shall be removed by the Contractor at the Contractor's expense.

- E. Protective Measures. To prevent burnt grass, the Contractor shall provide protective measure, (E.g. felt, blocks of wood) to create a barrier between boiler hoses and the grass for each installation.

For steam curing, the Contractor shall take appropriate measures to ensure that non-water residuals/byproducts of steam curing do not enter nearby steams, storm sewers, etc. Contractor shall also provide barriers to prevent steam from burning grass.

3.3 INSTALLATION PROCEDURE

- A. The Installer shall designate a location where the liner will be vacuum impregnated prior to installation. The Installer shall allow the Owner to inspect the materials and resin saturation (wet-out) procedure. A catalyst system compatible with the resin and liner shall be used.
- B. The wet-out liner shall be loaded inside a pressure apparatus above ground, utilizing a hydrophilic sealant (or equivalent) on the backside of the connection applied in a one half to one inch wide bead to enhance a watertight seal. Also, a Silicate Resin or a two-part 100% solid epoxy (reference ASTM C-881) shall be applied at a volume no less than 6oz to the lateral interface to enhance adhesion against the host pipe. The pressure apparatus, with an end attached to a robotic device, shall be winched through the main pipe to the service connection. The robotic device, together with a television camera, will be used to position the pressure apparatus' inversion elbow at the service connection opening. Air pressure, supplied to the pressure apparatus through an inversion hose, shall be used to invert the wet-out liner. The inversion head will be adjusted to be of sufficient pressure to cause the impregnated liner to invert completely in the lateral pipe and hold the liner tight to the pipe wall. Care shall be taken during the curing process so as not to overstress the liner.

- C. Curing – Unless otherwise approved by the engineer, an ambient-temperature curing resin system will be utilized.
 - 1. Initial cure shall be deemed to be completed when inspection of the exposed portions of the CIPP appear to be hard and sound. The cure period shall be of a duration recommended by the resin manufacturer, as modified for the installation process.
- D. Cool-down – The Installer shall cool the hardened CIPP to a temperature to approximately 1000 F before relieving the pressure in the pressure apparatus. Care shall be taken to maintain proper pressure throughout the cure and cool-down period.
- E. Finish – The finished CIPP shall be a watertight connection seal at the main pipe and extend to the termination point as specified. The finished CIPP shall be free of dry spots, lifts, and delamination. This continuous one piece structural pipe-within-a-pipe shall not inhibit the closed circuit television (CCTV) post video inspection of the main or service lateral pipes.
- F. During the warranty period, any defects which will affect the integrity or strength of the CIPP liner shall be repaired at the Installer’s expense in a manner mutually agreed upon by the Owner and the Installer.
- G. After the work is completed, the Installer will provide the Owner with a digital video showing the completed work including the restored conditions.

3.4 RESTORATION

- A. Where portions of the site, either inside or outside the contract limits, not designated for change or new work become damaged during the course of construction by the Contractor’s operations, the Contractor shall repair or replace at no addition cost to the Owner such damage to original or better condition in conformance with the Contract Documents. This shall include, but not be limited to, reseeding, replacing shrubbery in kind, replacing damaged fence, etc.

3.5 FIELD QUALITY CONTROL

- A. General. The rehabilitated pipe shall be continuous (without joints) over the entire length of the run. The liner shall be as free as commercially practicable from visual defects such as foreign inclusions, dry spots, pinholes, and delamination. The liner surface shall be free of leaks, cracks, and crazing with a smooth finish. Some minor waviness that, in the Engineer’s opinion, will not appreciably decrease the flow cross section or affect the flow characteristics shall be permissible.

Any defects in the product shall be repaired at the Contractor’s expense in a manner mutually agreed upon the Owner and Contractor. The Contractor shall reinspect these repairs before the one (1) year guarantee period expires. During the one (1) year guarantee period, any defects that are discovered that will affect the integrity or strength of the product shall be repaired at the Contractor’s expense in a manner

mutually agreed upon by the owner and the Contractor. These repairs shall be granted a three (3) year extended guarantee period by the Contractor from the date of repair. The Contractor shall reinspect these repairs prior to the expiration of the three (3) year extended guarantee period.

B. Testing. The following tests shall be performed for each length of CIPP length installed per ASTM F-1216 and/or F-1743 (when approved):

1. Short-term Flexural (Bending) Properties- The initial tangent flexural modulus of elasticity and flexural yield strength shall be measured in accordance with ASTM D790.

The Contractor is to provide test samples to the Engineer upon request in accordance with ASTM F-1216, Item 8.1. Note that this item requires two CIPP samples, one from each of the following two methods:

2. The sample should be cut from a section of cured CIPP at an intermediate manhole or at the termination point that has been inverted through a like diameter pipe which has been held in place by suitable heat sink, such as sandbags.
3. The sample should be fabricated from material taken from the tube and the resin/catalyst system used and cured in a clamped mold placed in the downtube when circulating heated water is used and in the silencer when steam is used as the curing medium.

The Owner retains the right to test coupons retrieved from the sewer and turned over to the Engineer. If the Contractor performs independent tests for their purposes, additional sample shall be provided by the Contractor for that use.

C. Final Installed Liner Thickness. The final installed liner thickness shall not be less than the thickness specified in the Contract Documents or approved shop drawings. The final installed liner thickness shall not be more than 10% greater than the specified or approved thickness. The final installed liner thickness measurement shall be determined from pipe samples, coupons retrieved from the sewer, or as deemed necessary by the Engineer. It shall be the Contractor's responsibility to consider site conditions and their installation process to determine the liner thickness to install.

D. Non-Compliance. In the event the flat plate samples do not meet the required thickness or Flexural Strength of 4,500 psi and Flexural Modulus of Elasticity of 250,000 psi as outlined in Section 2.2 C; actual installed samples must be taken. The installed samples shall be taken as directed by the Engineer and in accordance with all applicable ASTM requirements. From these samples, the installed Thickness shall be determined by taking an average of at least 10 thickness measurements. Installed samples shall then be prepared for re-testing in accordance with Section 2.2 C of these specifications.

In the event that any liner installation does not meet specified strengths and/or thicknesses, the conformity of the work with the plans and specifications shall be in accordance with ODOT CMS Section 105.3.

3.6 MEASUREMENT AND PAYMENT

- A. Liner. This item of work shall include all necessary television observation, protruding lateral removal and repair, sewer cleaning, pipe preparations, liner resins, grouting, water, equipment, labor, testing, clean up, manhole reconstruction required by construction means and methods of CIPP installation, and all other expenses whether specifically mentioned or not to install the cured-in-place pipe.
- B. Payment. Payment will be made at the unit price bid per actual linear foot of CIPP lining installed for each size of pipe and each thickness of liner.

END OF SECTION



BOARD OF COUNTY COMMISSIONERS
WARREN COUNTY, OHIO
406 Justice Drive, Lebanon, Ohio 45036
www.co.warren.oh.us
commissioners@co.warren.oh.us

Telephone (513) 695-1250
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TOM GROSSMANN
SHANNON JONES
DAVID G. YOUNG

ADVERTISEMENT FOR BIDS

Sealed bids will be received by the Clerk of the County Commissioners, Warren County, Ohio, 406 Justice Drive, Lebanon, Ohio 45036, until 11:00 a.m., August 3, 2023, and then at said time bids will be opened and read aloud for the As Needed Sanitary Point Liner Repairs.

Bid documents and specifications are available online on the Warren County website at <http://www.co.warren.oh.us/commissioners/Bids/Default.aspx>. Questions regarding the technical specifications should be directed to Chris Wojnicz, Project Manager, at the Warren County Water and Sewer Department, at (513) 695-1646 or christopher.wojnicz@co.warren.oh.us. Each bid shall contain the full name of each person or company submitting the bid and be accompanied by a bid bond for the full amount of the bid or a certified check in the amount equal to ten (10) percent of the bid. Warren County estimates approximately \$50,000 worth of repairs in the first year of the contract, approximately eight (8) point repairs and eight (8) lateral repairs, varying sizes. The bid bond should be based on \$50,000.

The project generally consists of improvements to existing sanitary mains and laterals that are identified by the Warren County Water & Sewer Department using cured-in-place-pipe trenchless technology. The locations of the work will be at various sites within our service area which includes mainly Warren County. Contact the Warren County Commissioner's Office at (513) 695-1250 should you need assistance in accessing the bidding information on the County's website. All contract addenda will be posted to the website prior to the bid opening. Bidders should check the website regularly to stay updated on any changes to the project.

Please be aware that if you are downloading this document to bid this project, and in order to stay updated on any change, please email Krystal Powell in the Commissioners' Office at krystal.powell@co.warren.oh.us with your contact information.

Warren County reserves the right to reject any or all bids submitted, to waive any irregularities in bids, and enter into a contract with the Bidder who in Warren County's consideration offered the lowest and best bid.

By order of the Board of County Commissioner, County of Warren, State of Ohio.

Tina Osborne, Clerk