

**CONTRACT DOCUMENTS
AND
SPECIFICATIONS
FOR
PROJECT NO. ES 2025-07
TURLEY SOUTH INTERCEPTOR
REHABILITATION PHASE I
ORF-19-0001-CW**

ATTENDANCE AT PRE-BID CONFERENCE IS MANDATORY

PREPARED BY:
RJN Group, Inc.
10830 E. 45th St.
Tulsa, OK 74146
918-627-9737
Jacob Brumbaugh



WATER AND SEWER
Engineering Design

ERIC LEE, DIRECTOR

Account Numbers: 1933200018Z.SewerLines.SwrTrt.7519N.75193300-541101
2531S00013.SewerLines.Sewer.7520N.75203305-541101
2531S00013.SewerTreat.Sewer.7522N.75223300-541101
2531S00032.SewerLines.Sewer.7524.75243300-541101

Public Works Department
175 East 2nd Street, Suite 261
Tulsa, Oklahoma 74103
(918) 596-9637

CONTRACT DOCUMENTS

TULSA METROPOLITAN UTILITY AUTHORITY
PROJECT NO. ES 2025-07
TURLEY SOUTH REHABILITATION PHASE I
OWRB LOAN NO. ORF-19-0001-CW

WATER AND SEWER DEPARTMENT

<u>INDEX TO BIDDING DOCUMENTS</u>	<u>PAGE</u>
NOTICE TO BIDDERS	NTB-1-5
INSTRUCTION TO BIDDERS	IB-1-6
ORF-04B INFORMATION FOR BIDDERS	ORF-1-5
ORF-501 AMERICAN IRON AND STEEL CERTIFICATION	ORF-1-3
RESOLUTION NO. 18145 PROVIDING FOR THE EMPLOYMENT OF RESIDENTS OF THE METROPOLITAN STATISTICAL AREA	R-1-3
BIDDERS AFFIDAVIT FOR MINORITY AND FEMALE UTILIZATION GOALS	M/FBE-1
BIDDERS STATEMENT-ORF-211,ORF212	1-2
RESOLUTION NO. 7404 AFFIDAVIT OF COMPLIANCE	RAC-1
AFFIDAVIT FOR 50% RESIDENT RESOLUTION	RRA-1
INTEREST AFFIDAVIT	IA-1
ORF 185 – CHAPTER 60 – OFFICE OF FEDERAL CONTRACT COMPLIANCE PROGRAMS, EQUAL EMPLOYMENT OPPORTUNITY, DEPARTMENT OF LABOR, COMPLIANCE RESPONSIBILITY FOR EQUAL EMPLOYMENT OPPORTUNITY	1-29
ORF-402 DAVIS BACON WAGE DECISION	1
ORF CW-074 CERTIFICATE OF LABOR STANDARDS COMPLIANCE	1
ORF 267 EPA STATE REVOLVING FUND	1-12
EPA 5700-49 DEBARMENT	1
EPA 6100-2 DBE SUBCONTRACTOR PARTICIPATION FORM	1-2
EPA 6100-3 DBE SUBONTRACTOR PERFORMANCE FORM	1-2
EPA 6100-4 DBE SUBCONTRACTOR UTILIZATION FORM	1-2
ORF 249 BIDDERS LIST	1
SAMS REQUIREMENTS	1
ORF-211 CONTRACTOR'S STATEMENT	1
ORF-212 CONTRACTOR'S CERTIFICATION OF NON-SEGREGATED FACILITY	1
ORF-212A SUB-CONTRACTOR'S CERTIFICATION OF NON-SEGREGATED FACILITY	1
ORF-412 NONCOLLUSION AFFIDAVIT	1
ORF-413 BUSINESS RELATIONSHIP AFFIDAVIT	1
ORF-417 ATTY CERTIFICATE OF APPROVAL	1
ORF-418 NOTICE OF AWARD	1-4
ORF-03NTP NOTIVE TO PROCEED	1
PROPOSAL	P-1-4
CERTIFICATE OF SECRETARY	CS-1
CONSENT OF MEMBERS	CM-1
SALES TAX EXEMPTION DOCUMENT	STED-1
EXTENSION OF TIME REQUEST	ETR-1
CONTRACT	C-1-4
ESCALATION PROCESS	EP-1
PERFORMANCE BOND	PB-1-2
STATUTORY BOND	SB-1-2
MAINTENANCE BOND	MB-1-2
AFFIDAVIT FOR CONTRACT/CLAIM	AC-1
GENERAL CONDITIONS	TMUAGC-1-20

SPECIAL PROVISIONS

SUPPLEMENTAL CONTRACT REQUIREMENTS	SCR-1
INSURANCE REQUIREMENTS	IR-1
OWNER ALLOWANCE	OA-1
COT PROJECT SIGN	PS-1
UTILITY RELOCATIONS AND DESIGN ISSUES	URDI-1

SPECIFICATIONS

CITY OF TULSA ENGINEERING SERVICES CONSTRUCTION
SPECIFICATIONS – March 2022

TECHINCAL SPECIFICATIONS

1-44

Published in the Tulsa World:
April 17, 21, 22, 23 and 24, 2026.

**NOTICE TO BIDDERS
SEALED BIDS FOR
TULSA METROPOLITAN UTILITY AUTHORITY
PROJECT NO. ES 2025-07**

Notice is hereby given that pursuant to an order by the Metropolitan Utility Authority, A Public Trust, sealed bids will be received in Room 260 of the Office of the City Clerk, City of Tulsa, 175 E. 2nd Street, Tulsa, Oklahoma 74103 until **8:30 a.m. the 22nd day of May, 2026** for furnishing all tools, materials and labor and performing the work necessary to be done in the construction of the following:

**PROJECT NO. ES 2025-07 TURLEY SOUTH
INTERCEPTOR REHABILITATION PHASE I
ORF-19-0001-CW**

The entire cost of the improvement shall be paid from Account No.
1933200018Z.SewerLines.SwrTrt.7519N.75193300-541101
2531S00013.SewerLines.Sewer.7520N.75203305-541101
2531S00013.SewerTreat.Sewer.7522N.75223300-541101
2531S00032.SewerLines.Sewer.7524.75243300-541101

A MANDATORY Pre-Bid Conference is scheduled for **Tuesday, April 28, 2026 at 9:00 a.m.** and will be held through video conferencing with Microsoft Teams, invitation presented on the City of Tulsa's website at this link: <https://www.cityoftulsa.org/government/departments/engineering-services/construction-bids/>

Attendance at the Pre-Bid Conference is MANDATORY. Bids will not be received from contractors who did not attend the Pre-Bid Conference.

Bids will be accepted by the City Clerk from the holders of valid pre-qualification certificates from the City of Tulsa in one or more of the following classifications: **A or D**

Drawings, specifications and contract documents for construction of said public improvements of the said project have been adopted by the Mayor of said City. Copies of same may be obtained at the Office of the Director of Engineering Services for the City of Tulsa, 2317 South Jackson, Room 103, North Building, for a non-refundable fee in the amount of **\$50.00** made payable to the Tulsa Metropolitan Utility Authority by check or money order.

"Each bidder must fully comply with the requirements, terms and conditions of the Environmental Protection Agency's Small, Minority, Women's Businesses Requirements including employing the six (6) affirmative steps and soliciting small, minority and women's businesses during the performance of this contract. The bidder commits itself to following the affirmative steps to solicit small, minority and women's businesses contained herein and all other requirements, terms and conditions of these bid conditions by submitting a properly signed bid. Requirements are contained in: (1) Oklahoma Water Resources Board Guidance and Procedures, ORF-267."

Davis Bacon Act wage rules shall apply. All laborers and mechanics employed by contractors and sub-contractors on projects funded directly by or assisted in whole or in part by and through the Federal Government shall be paid wages at rates not less than those prevailing on projects of a character similar in the locality as determined by the Secretary of Labor in accordance with subchapter IV of Chapter 31 of Title 40, United States Code and 29 CFR parts 1,3, and 5. The Department of Labor provides all pertinent information related to compliance with labor standards, including prevailing wage rates and instructions for reporting. For more information please refer to Oklahoma Water Resources Board Supplemental Conditions, ORF 185 as well as <http://www.wdol.gov/>.

American Iron and Steel provisions (Buy American Requirements) also apply to projects funded directly by or assisted in whole or in part by and through the Federal Government pursuant to P.L. 113-76, Consolidated Appropriations Act, 2014, Sec. 436 requires that "None of the funds made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) or made available by a drinking water treatment revolving loan fund as authorized by section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j-12) shall be used for a project for the construction, alteration, maintenance, or repair of a public water system or treatment works unless all of the iron and steel products used in the project are produced in the United States." For more information please refer to Oklahoma Water Resources Board Supplemental Conditions ORF- 185.

System for Award Management (SAM) registration is required for all SRF programs (CWSRF and DWSRF) applicants and Awardees (Entities, Prime Contractors, Subcontractors, Vendors) in order to be awarded contracts by the SRF Programs. SAM replaces Central Contractor Registration/Federal Agency Registration, Online Representations and Certifications Application, and Excluded Parties List System. Applicants and awardees

are required to complete a one-time free registration to provide basic information relevant to procurement and financial transactions. Registrants must retain an active status to be eligible for SRF projects. New Applicants and Awardees can go to SAM.gov to complete the registration process.

Note: In order to register in SAM, a Data Universal Number System (DUNS) number will be required. DUNS number is a unique, non-indicative 9-digit identifier issued and maintained by Dun & Bradstreet (D&B) that verifies the existence of a business entity globally. D&B assigns DUNS numbers for each physical location of a business. All entities doing business with the U.S Government can receive a DUNS number FREE of charge and, under normal circumstances, within 1-2 business days when using D&B web form process at <http://fedgov.dnb.com/webform>.

Each bidder must fully comply with the requirements, terms and conditions of the Oklahoma Water Resources Board (OWRB), Small, Minority, Women's Businesses Requirements, including affirmative steps to contract with small, minority and women's businesses during the performance of this contract. The bidder commits itself to the affirmative steps to contract with small, minority and women's businesses contained herein and all other requirements, terms and conditions of these bid conditions by submitting a properly signed bid. Requirements are contained in Oklahoma Water Resources Board Guidance and Procedures, ORF-267.

Equal Opportunity in Employment All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, age or physical handicap. Bidders on this work will be required to comply with the President's executive Order No. 11246, as amended. The requirements for bidders and contractors under this order are explained in the specifications.

Attention is called to Resolution No. 18145 of August 23, 1988, requiring bidders to commit to the goal of employing on the project at least fifty percent bona fide residents of the City of Tulsa and/or MSA in each employment classification. The established Female/Minority Business Utilization Goals for this project are:

<u>Category</u>	<u>MBE(%)</u>	<u>WBE(%)</u>
Construction	12.93	7.37
Equipment	7.83	15.53
Services	16.84	30.94
Supplies	6.27	31.01

One cannot be substituted for the other.

The Authority, action on behalf of the City of Tulsa, is exempt from the payment of any sales or use taxes, and pursuant to Title 68 O.S. Section 1356(10), direct vendors to the City are also exempt from those taxes. A bidder may exclude from his bid appropriate sales taxes which he will not have to pay while acting for and on behalf of the Tulsa Metropolitan Utility Authority. See Contract Article IIB.

A Certified or Cashier's Check or Bidders Surety Bond, in the sum of 5% of the amount of the bid will be required from each bidder to be retained as liquidated damages in the event the successful bidder fails, neglects or refuses to enter into said contract for the construction of said public improvements for said project and furnish the necessary bonds within thirty days from and after the date the award is made.

The bidder to whom a contract is awarded will be required to furnish public liability and workmen's compensation insurance; Performance, Statutory, and Maintenance bonds acceptable to the City of Tulsa, in conformity with the requirements of the proposed contract documents. The Performance, Statutory, and Maintenance bonds shall be for one hundred percent (100%) of the contract price.

The bidding for this project is subject to a local preference law as defined in Oklahoma Statutes, Title 61, Section 103. For purposes of Section 103 a "local bid" means a bid submitted by a business entity that is authorized to do business in the State of Oklahoma and maintains its primary office or principal place of business within the State of Oklahoma. If the conditions outlined in Title 61 are met, The City of Tulsa must select the second lowest bid if within 5% of the lowest bid and the second lowest bid is a local bid and the lowest bid is not a local bid (i.e. non-local/out of state). Accordingly, when the local bid is required to be selected under the State law, the local bidder must agree to do the work at the lowest bid price to be awarded the project.

All bids will be opened and considered by the Bid Committee of said City at a meeting of said Committee to be held in the City Council Room of City Hall in said City at 9:00 a.m. on the 22nd day of May, 2026.

Dated at Tulsa, Oklahoma, this 17th day of April, 2026.

(SEAL)

Rick Hudson, Chairperson
Tulsa Metropolitan Utility Authority

INSTRUCTIONS TO BIDDERS

B-1. BIDS

Each bid Proposal shall be completed, signed, and submitted. No alterations, additions, or erasures shall be made on the Proposal. Erroneous entries shall be lined out, initialed by the bidder, and the correct entry inserted. The unit price bid must cover all expense for furnishing the labor, materials, tools, equipment, and apparatus of every description to construct, erect, and furnish all work required by and in conformance with the Drawings and Specifications.

Each bid shall be enclosed in a sealed envelope addressed to the Tulsa Metropolitan Utility Authority, 175 E. 2nd Street, Room 260, City Hall, Tulsa, Oklahoma, identified on the outside with the words:

PROJECT NO. ES 2025-07 TURLEY SOUTH INTERCEPTOR REHABILITATION PHASE I ORF-19-0001-CW

Pre-qualification Certificate Number _____,

And shall be filed with the City Clerk in Room 260, City Hall.

All addenda to the contract documents should be denoted on the last page of the Proposal in the space provided.

B-2. BID SECURITY

Each bid shall be accompanied by a cashier's check, a certified check, or bidder's bond, in the amount of five percent (5%) of the total amount bid.

The bid security shall be made payable, without condition, to the Tulsa Metropolitan Utility Authority, Oklahoma. The bid security may be retained by and shall be forfeited to the Authority as liquidated damages if the bid is accepted, a contract based thereon is awarded, and the bidder fails to enter into a contract in the form prescribed, with legally responsible sureties, within thirty (30) days after such award is made by the Authority.

B-3 RETURN OF BID SECURITY

The bid security of each unsuccessful bidder will be returned when his bid is rejected. The bid security of the bidder to whom the contract is awarded will be returned when he executes a contract and files satisfactory bonds. The bid security of the second lowest responsible bidder may be retained for a period of time not to exceed sixty (60) days pending the execution of the contract and bonds by the successful bidder.

B-4 WITHDRAWAL OF BIDS

No bidder may withdraw his bid for sixty (60) days after the date and hour set for the opening. A bidder may withdraw his bid any time prior to expiration of the period during which bids may be submitted by making a written request signed in the same manner and by the same person who signed the Proposal.

B-5 REJECTION OF BIDS

Bids received more than ninety-six (96) hours before the time set for opening bids, excluding Saturdays, Sundays, and holidays, as well as bids received after the time set for opening bids, will not be considered and will be returned unopened.

The Tulsa Metropolitan Utility Authority reserves the right to reject any and all bids when such rejection is in the best interest of the Tulsa Metropolitan Utility Authority. All bids are received subject to this stipulation and the Authority reserves the right to decide which bidder shall be deemed lowest responsible bidder.

A violation of any of the following provisions by a bidder shall be sufficient reason for rejecting bidder's bid, or shall make any contract between the Tulsa Metropolitan Utility Authority and the Contractor that is based on bidder's bid, null and void: divulging the information in said bid before the bids have been opened; submission of a bid which is incomplete, unbalanced, obscure, incorrect, or which has conditional clauses, additions, or irregularities of any kind not in the original proposal form, or which is not in compliance with the Instruction to Bidders and published Notice to Bidders, or which is made in collusion with another bidder. The Authority shall have the right to waive any immaterial defects or irregularities in any bid received.

B-6 DISQUALIFICATION OF BIDDERS

No contract will be awarded to any person or persons, firm, partnership, company, or corporation which is in arrears to the Authority upon any debt of contract, or in default as surety or otherwise upon any obligation to the Authority.

B-7 SIGNATURE OF BIDDERS

Each bid shall be properly signed with the full name of the company or individual submitting the bid, the bidder's address, and the name and title of all persons signing printed below their signature lines. Bids by partnerships shall be signed with the partnership name followed by the signature and title of one of the partners. Bids by corporations shall be signed with the name of the corporation followed by the signature and title of the president, vice president, chairman, or vice chairman of the Board of Directors with attestation by the corporate secretary or assistant corporate secretary. Bids by joint ventures shall be signed by each participant in the joint venture. Bids by limited liability companies shall be signed with the name of the limited liability company followed by the signature and title of the Manager or Managing Member. Bid by limited partnerships shall

be signed with the name of the limited partnership followed by the signature of the general partner. Note: The signature requirements listed above are for Oklahoma entities; entities organized in other states must follow the law of the state in which they are organized.

A bid by a person who affixes to his signature the word "President", "Manager", "General Partner", "Agent", or other title, without disclosing the name of the company for which he is signing, may be held to be the bid of the individual signing.

B-8 INTERPRETATION OF CONTRACT DOCUMENTS

If any bidder who contemplates submitting a bid is in doubt as to the true meaning of any part of the drawing, specifications, or other proposed contract documents, bidder may submit to Contract Administration and the Engineer a written request for interpretation thereof. The person submitting the request shall be responsible for its prompt delivery. Interpretation of the proposed contract documents will be made only by addendum. The addendum will be posted on the Tulsa Metropolitan Utility Authority website and emailed to all the pre-bid attendees. The Authority will not be responsible for any other explanations or interpretations of the proposed contract documents.

B-9 LOCAL CONDITIONS AFFECTING WORK

Each bidder shall visit the site of the work and shall completely inform himself relative to construction hazards and procedure, labor, and all other conditions and factors, local and otherwise, which would affect prosecution and completion of the work and its cost. Such considerations shall include the arrangement and condition of existing structures and facilities, the procedure necessary for maintenance of uninterrupted operation of existing structures and facilities, the availability and cost for labor, and facilities for transportation, handling, and storage of materials and equipment. All such factors shall be properly investigated and considered in the preparation of the bid. There will be no subsequent financial adjustment for lack of such prior information.

B-10 TIME OF COMPLETION

The time of completion is an essential part of the contract and it will be necessary for each bidder to satisfy the Authority of his ability to complete the work within the allowable time set forth in the Bid Form. For all projects that will impact the public, a public meeting is required before any work is done. In this connection, attention is directed to the provisions of the General Conditions and Special Conditions relative to delays, extension of time, and liquidated damages.

B-11 QUALIFICATION OF BIDDERS

No bid will be received and filed by the City Clerk of the Tulsa Metropolitan Utility Authority unless the person submitting the bid has been pre-qualified as provided

by ordinance, and is the holder of a current certificate of Pre-qualification in force and effect on the date such bid is to be submitted and filed.

B-12 TAXES AND PERMITS

Attention is directed to the requirements of the General Conditions regarding payment of taxes and obtaining permits. Contractor shall comply with all zoning ordinances of the City, as provided in the Tulsa Zoning Code, Title 42 Tulsa Revised Ordinances and conform with all zoning requirements established by the Tulsa Metropolitan Area Planning Commission and the Board of Adjustment. Contractor can call the Indian Nations Council of Governments (INCOG) at (918) 584-7526, to determine if any zoning requirements must be met.

B-13 OKLAHOMA LEGAL REQUIREMENTS

The Contractor must comply with the Oklahoma Scaffolding Law, 40 Oklahoma Statutes, Sections 174 - 177, which cover erection and use of scaffolds, hoists, cranes, stays, ladders, supports, or other mechanical contrivances.

In accordance with Oklahoma Statutes, Title 68, Section 1701-1707, before commencing any work pursuant to this contract, any nonresident contractor shall give written notice by certified mail, return receipt requested, to the Oklahoma Tax Commission, the Oklahoma Employment Security Commission, the Workers Compensation Court, and the county assessor of each county in which work will be performed. The notices shall comply with the requirements set forth in said statute.

B-14 BONDS

The bidder to whom a contract is awarded will be required to furnish bonds as follows:

- a. Performance Bond – A Performance Bond to the Authority in an amount equal to one hundred percent (100%) of the Contract price.
- b. Statutory Bond – A Statutory Bond to the State of Oklahoma in an amount equal to one hundred percent (100%) of the contract price.
- c. Maintenance Bond – A Maintenance Bond to the Authority in an amount equal to one hundred percent (100%) of the contract price. Maintenance Bond 1 year requirement.

The bonds shall be executed on the forms included in the contract documents by a surety company authorized to do business in the State of Oklahoma and acceptable as Surety to the Tulsa Metropolitan Utility Authority.

Accompanying the bonds shall be a “Power-of-Attorney” authorizing the attorney-in-fact to bind the Surety Company and certified to include the dates of the bonds.

B-15 BOUND COPY OF CONTRACT DOCUMENTS

Bound contract documents are no longer required.

B-16 EQUAL EMPLOYMENT OPPORTUNITY REQUIREMENTS

Each bidder agrees to comply with the terms of Title 5, Chapter 1, Section 111, of the Tulsa Revised Ordinances relating to Non-Discrimination.

B-17 BASIS FOR AWARD OF CONTRACT

The basis for award of a contract shall be the total base bid submitted by the lowest responsible bidder unless otherwise directed in the form of proposal. The Tulsa Metropolitan Utility Authority reserves the right to withhold the awarding of a contract for a reasonable period of time from the date of opening of bids. The awarding of a contract upon a successful bid shall give the bidder no right or action or claim against the Tulsa Metropolitan Utility Authority upon such contract until the same shall have been reduced to writing and duly signed by the contracting parties. The award of a contract will not be completed until the contract is duly executed and the necessary bonds and insurance approved.

B-18 TIME FOR AWARDING OF CONTRACT

The awarding of a contract to the lowest responsible bidder will be made within thirty (30) days after the opening of bids unless the Tulsa Metropolitan Utility Authority by formal recorded action and for good cause shown, provides for a reasonable extension to that period, which extension period shall not in any event exceed fifteen (15) days where only state or local funds are involved, or not to exceed ninety (90) days on any award of contract for the construction of public improvements where funds are utilized which are furnished by an agency of the federal government.

B-19 SAFETY AND HEALTH REGULATIONS

Bidders should note that they are subject to "Safety and Health Regulations for Construction", Chapter XVII of Title 29, CFR, Part 1926 and that compliance, review and enforcement are the responsibility of the U.S. Department of Labor.

The Contractor is fully responsible for the safety of the work site and is expected to train their employees in all applicable safety issues. This should include but not be limited to: trench safety, confined space entry, head protection, etc. In accordance with construction contracts with the City, Authority, Board, or Commission, all applicable Labor and OSHA safety regulations must be followed.

Work sites must be monitored by the Contractor and safety provisions enforced. Contractors are asked to ensure that all employees are properly informed and trained in construction, work site safety.

B-20 VENDORS AND SUBCONTRACTOR IDENTIFICATION

Where Vendor and Subcontractor Identification Questionnaires are included in the bid documents, each bidder shall submit the Questionnaire directly to the Engineer no later than 5:00 p.m. on the first working day following the bid opening. Failure to submit the questionnaire may render the bid unresponsive and not eligible for award. The award of the Contract will be subject to the acceptability of the vendors and subcontractors listed. If an award is made, the vendors and subcontractors listed on the questionnaire shall be used on the project. No changes in the vendor and subcontractor list will be permitted unless prior consent is obtained from the Engineer.

B-21 U.S. ENVIRONMENTAL PROTECTION AGENCY NPDES REQUIREMENTS FOR STORMWATER DISCHARGES

The bidder's attention is directed to U.S. Environmental Protection Agency (EPA) NPDES requirements for stormwater discharges. The Contractor shall be responsible for filing a Notice of Intent and development and implementation of a Stormwater Pollution Prevention Plan (PPP).

B-22 AMERICANS WITH DISABILITIES ACT

The Contractor shall take the necessary actions to ensure its facilities are in compliance with the requirements of the Americans with Disabilities Act (ADA). It is understood that the program of the Contractor is not a program or activity of the Tulsa Metropolitan Utility Authority. The Contractor agrees that its program or activity will comply with the requirements of the ADA. Any costs of such compliance will be the responsibility of the Contractor. Under no circumstances will the Contractor conduct any activity, which it deems non-compliant with the ADA.

Information for Bidders

Notice is hereby given that _____ City of Tulsa _____
(hereinafter called the "Owner") will receive sealed bids at _____,
_____ County, Oklahoma, until the ___ day of _____, 20___, for the
ES 2025-07 Turley South Interceptor Rehabilitation Phase I ORF-19-0001-CW

This project is to be financed by a CWSRF loan from the Oklahoma Water Resources Board (OWRB) and shall be referred to as Project No. ORF-19-0001-CW. The following requirements and regulations must be complied with:

- A. "Equal Opportunity in Employment: All qualified applicants will receive considerations for employment without regard to race, color, religion, sex, national origin, age or physical handicap. Bidders on this work will be required to comply with the President's Executive Order No. 11246, as amended."
- B. "Each bidder must fully comply with the requirements, terms and conditions of the Environmental Protection Agency's Disadvantaged Business Enterprise Requirements including employing the six (6) good faith efforts and soliciting disadvantaged business enterprises during the performance of this contract. The bidder commits itself to following the good faith efforts to solicit disadvantaged business enterprises contained herein and all other requirements, terms and conditions of these bid conditions by submitting a properly signed bid. Requirements are contained in OWRB's Guidance and Procedures, ORF-267."
- C. "Davis Bacon Act wage rules shall apply. All laborers and mechanics employed by contractors and sub-contractors on projects funded directly by or assisted in whole or in part by and through the Federal Government shall be paid wages at rates not less than those prevailing on projects of a character similar in the locality as determined by the Secretary of Labor in accordance with Subchapter IV of Chapter 31 of Title 40, United States Code and 29 CFR parts 1, 3, and 5. The Department of Labor provides all pertinent information related to compliance with labor standards, including prevailing wage rates and instructions for reporting. For more information please refer to Oklahoma Water Resources Board Supplemental Conditions, ORF-185 as well as <http://www.beta.sam.gov/>."

- D. “American Iron and Steel provisions also apply to projects funded directly by or assisted in whole or in part by and through the Federal Government pursuant to P.L. 113-76, Consolidated Appropriations Act, 2014, Sec. 436 requires that “None of the funds made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) or made available by a drinking water treatment revolving loan fund as authorized by section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j-12) shall be used for a project for the construction, alteration, maintenance, or repair of a public water system or treatment works unless all of the iron and steel products used in the project are produced in the United States.” For more information please refer to Oklahoma Water Resources Board Supplemental Conditions ORF-185.”
- E. “System for Award Management (SAM) registration is required for all SRF programs (CWSRF and DWSRF) applicants and Awardees (Entities, Prime Contractors, Subcontractors, Vendors) in order to be awarded contracts by the SRF Programs. SAM replaces Central Contractor Registration/Federal Agency Registration, Online Representations and Certifications Application, and Excluded Parties List System. Applicants and awardees are required to complete a one-time free registration to provide basic information relevant to procurement and financial transactions. Registrants must retain an active status to be eligible for SRF projects. New Applicants and Awardees can go to SAM.gov to complete the registration process.”

Note: In order to register in SAM, a Data Universal Number System (DUNS) number will be required. DUNS number is a unique, non-indicative 9-digit identifier issued and maintained by Dun & Bradstreet (D&B) that verifies the existence of a business entity globally. D&B assigns DUNS numbers for each physical location of a business. All entities doing business with the U.S Government can receive a DUNS number FREE of charge and, under normal circumstances, within 1-2 business days when using D&B web form process at <http://fedgov.dnb.com/webform>.

Each sealed envelope containing a bid must be plainly marked on the outside as “Bid for ES 2025-07 Turley South Interceptor Rehab”, and the envelope should bear on the outside the bidder’s name, address, and license number (if applicable). If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed to the Owner at City of Tulsa City Clerk 175 E. 2nd St. Suite 260 Tulsa, OK 74103.

All bids must be made on the required bid form, where all blank spaces for bid prices must be filled in, in ink or typewritten. The bid form must be fully completed and executed when submitted. Only one copy of the bid form is required. The Owner may waive any informalities or minor defects, or reject any and all bids as allowed under Oklahoma Law. Any bid may be withdrawn prior to the above scheduled time for bid opening, or authorized postponement thereof. Bids received more than ninety-six (96) hours before the time specified, or those received after the time set for bid opening will not be considered and will be returned unopened. Should there be reasons why the contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the Owner and the bidders.

Bidders must satisfy themselves of the accuracy of estimated quantities in the bid proposal by review of the Plans and Specifications, including any existing addenda, and by examination of the project site. Once a bid is submitted, the bidder shall not assert that there was a misunderstanding concerning the quantities or the nature of work to be performed. The failure or omission of any bidder to do any of the foregoing shall in no way relieve any bidder from any obligation in respect to its bid.

Prior to bidding, the Owner shall provide to the bidders all pertinent information that delineates and describes the land owned and rights-of-way acquired or to be acquired.

The Contract Documents contain the provisions required for the construction of the product. Information obtained from an officer, agent, or employee of the Owner or any other person shall not affect the risks or obligations assumed by the contractor, or relieve the contractor from fulfilling any of the conditions of the contract.

Each bid exceeding \$50,000 must be accompanied by a Bid Bond for five percent of the total amount of the bid and payable to the Owner. A certified check may be used in lieu of the Bid Bond. As soon as the bid prices have been compared, the Owner will return the bonds of all except the three lowest responsive, responsible bidders. The bid securities of the successful bidder and the two remaining unsuccessful bidders will be returned upon Owner's approval of the successful bidder's executed certificate of insurance and construction bonds.

Construction bonds (Performance, Statutory, and Maintenance) in the amount of 100 percent with a corporate surety approved by the Owner will be required for the faithful performance of the contract. Attorneys-in-fact who sign bid and construction bonds must file with each bond a certified and effective dated copy of their Power-of-Attorney.

The Owner shall award a contract to the lowest, responsive, responsible bidder or bidders within thirty (30) calendar days after bid opening. The Owner may extend the award period not to exceed fifteen (15) calendar days by formal recorded action and for good cause. The time may be extended further by mutual agreement between the Owner and the bidder per O.S. Title 61 Section 111, Public Competitive Bidding Act of 1974 (PCBA).

The Notice of Award shall be accompanied by the necessary contract, bonds, and insurance. In the event of failure of the bidder to execute the contract, the Owner may consider the bidder in default, in which case the Bid Bond accompanying the proposal shall become the property of the Owner.

The party to whom the contract is awarded will be required to execute the contract and obtain the construction bonds (Performance, Statutory and Maintenance) and certificate of insurance within 14 calendar days (not to exceed 60 days) from the date when the Notice of Award is delivered to the bidder. The time may be extended further by mutual agreement between the Owner and the bidder per O.S. Title 61 Section 113 (PCBA).

With an acceptable contract, bonds and certificate of insurance signed by the party to whom the Contract was awarded, the Owner shall sign the contract and return to such party an executed duplicate. Should the Owner not execute the contract within the agreed upon period, the bidder may by written notice withdraw the signed contract. Such notice of withdrawal shall be effective upon its receipt by the Owner.

The Owner shall issue the Notice to Proceed after the execution of the contract, approval of bonds and certificate of insurance. If the Notice to Proceed has not been issued within the agreed upon period, the contractor may terminate the contract without further liability on the part of either party.

The Owner may make such investigations as deemed 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 bidders 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 therein.

A conditional or qualified bid will not be accepted. Tied bids are non-restrictive, and in order for a tied bid to be accepted it must be lower than the sum of low separate bids.

All applicable laws, ordinances, rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout. The successful bidder will be required to meet all requirements of the Underground Facilities Damage Prevention Act when engaged in work within public rights-of-way.

When using alternate bids, they will be listed in numerical order, with the highest priority being number one, the second highest priority being number two, etc. The lowest bidder will be determined by comparing all bids that contain the selected alternates and computing the total value of the base bid plus the alternates.

All bidders and owners shall comply with the Oklahoma PCBA of 1974.

The awarded bidder shall supply the names and addresses of all subcontractors and material suppliers when required to do so by the Owner.

To avoid bypassing of raw sewage during construction, the contractor shall use the methods and/or schedule(s) described in Section _____ of these Specifications, or the method(s) and/or schedule(s) described as follows:

The Contractor will be required to begin work within 10 calendar days of the date shown on the Notice to Proceed. The time for completion is 365 calendar days. Liquidated damages will be \$2500.00 per calendar day.

In the event of a conflict between the Specifications and the SRF Supplemental Conditions (ORF-185), the latter will govern. In the event of a conflict between the Plans and the Specifications, the Specifications will govern.

The following items, included in this Bid Packet, shall be submitted along with the bid: Bid Proposal, Bid Bond, Non-Collusion Affidavit, Business Relationship Affidavit, Contractor's Statement about Equal Opportunity (ORF-211), Contractor's Certificate of Non-Segregated Facilities (ORF-212), Bidder's/Supplier's List (ORF-249), Subcontractor Performance form (ORF-6100-3), Subcontractor Utilization form (ORF-6100-4) and DBE documentation (if applicable).

The consulting engineer is RJN Group, Inc.. The consulting engineer's contact person for this project is Jacob Brumbaugh, with phone number 918-627-9737.

BIDDER’S AMERICAN IRON AND STEEL CERTIFICATION

I, the Bidder, _____, authorized representative of
Contractor’s Authorized Representative
 _____, hereby certify that I am aware of the requirement per Section
Contractor
 436(a)-(f) of the Consolidated Appropriations Act of 2014, as amended, by which all applicable products made primarily out of iron and steel used in this project must be manufactured in the United States, and that the bid prepared for _____ has
Project
 been prepared accordingly, as it is funded through the Clean Water State Revolving Fund (loan number ORF- 19 - 0001 -CW). I, the Bidder, am aware that none of the funds appropriated or otherwise made available by the Consolidated Appropriation Act of 2014 (Appropriations Act) shall be used for the construction, alteration, maintenance, or repair of a treatment works unless all of the iron and steel products used in the project are produced in the United States. I, the Bidder, furthermore certify the following:

1. The bidder understands the term “iron and steel products” applies to the following materials made primarily of iron or steel, and used for the construction, alteration, maintenance, or repair of publicly owned treatment works; lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and other construction materials as defined by the U.S. Environmental Protection Agency (EPA). For additional guidance, visit http://water.epa.gov/grants_funding/aisrequirement.cfm
2. The bidder further states that this requirement applies to all portions of the project that are subcontracted.
3. This “Bidder’s American Iron and Steel Certification” is to be submitted by the bidder as part of its bid.
4. Iron and steel of unknown origin are considered to have been produced or manufactured outside the United States.

5. Consistent with the terms of the Owner's bid solicitation and the provisions of Use of American Iron and Steel Section 436, the bidder certifies that this bid reflects the bidder's best, good faith effort to identify domestic sources of iron and steel goods in the bid solicitation where such American-made goods are available on the schedule and consistent with the deadlines prescribed in or required by the bid solicitation.
6. The bidder certifies that all iron and steel products contained in the bid solicitation that are American-made have been so identified, and if this bid is accepted, the bidder agrees that it will provide reasonable, sufficient, and timely verification to the Owner of the U.S. production of each component so identified.
7. The bidder certifies that for any iron and steel products that are not American-made and are so identified in this bid, the bidder has included in or attached to this bid one or both of the following, as applicable:
 - a. Identification of and citation to a categorical waiver published by EPA in the Federal Register that is applicable to such component or components, and an analysis that supports its applicability to the component or components; If the Administrator of EPA receives a request for a waiver under this section, the Administrator shall make available to the public on an informal basis a copy of the request and information available to the Administrator concerning the request, and shall allow for informal public input on the request for at least 15 days prior to making a finding based on the request. The Administrator shall make the request and accompanying information available by electronic means, including on the official public Internet Website of EPA.
 - b. Verifiable documentation sufficient to the Owner, as required in the bid solicitation or otherwise, that the bidder has sought to secure American-produced goods but has determined that such goods are not available on the schedule and consistent with the deadlines prescribed in the bid solicitation, with assurance adequate for the bidder under the applicable conditions stated in the bid solicitation or otherwise.
8. The bidder certifies that for any such product or products that are not so available, the bidder has also provided in or attached to this bid certification, including but not limited to the verifiable documentation and a full description of the bidder's efforts to secure any such American-produced iron and steel goods, that the bidder believes are sufficient to provide and as far as possible constitute the detailed justification required for a waiver under Use of American Iron and Steel with respect to such product or products.

9. If use of a non-compliant iron and/or steel product is permanently incorporated into a project, one or more of the following can occur:
 - a. Request a waiver where appropriate.
 - b. Require the removal of the non-domestic item.
 - c. Payment withholding of all or part of the project.

10. The bidder further agrees that, if this bid is accepted, it will assist the Owner in amending, supplementing, or further supporting such information as required by the Owner to request and, as applicable, implement the terms of a waiver with respect to any such product or products. The EPA strongly recommends the use of a step certification, similar to the one used by the Federal Highway Administration. The final manufacturer can also certify that the manufacturing process occurred in the United States.

Contractor's Authorized Representative Signature

____/____/_____
Date

RESOLUTION NO. 18145

A RESOLUTION REQUIRING THE INCLUSION IN PLANS AND SPECIFICATIONS FOR PUBLIC IMPROVEMENT CONTRACTS OF PROVISIONS PROVIDING FOR THE EMPLOYMENT OF BONA FIDE RESIDENTS OF THE CITY OF TULSA; AND/OR THE MSA; ALSO PROVIDING THAT AT LEAST OF FIFTY PERCENT (50%) OF EACH CLASS OF EMPLOYEES USED ON A PROJECT BE BONA FIDE RESIDENTS OF THE CITY OF TULSA AND/OR THE MSA; THAT THE DIRECTOR OF THE DEPARTMENT OF HUMAN RIGHTS IS CHARGED WITH ENSURING THAT ALL BIDS FOR PUBLIC CONSTRUCTION CONTRACTS COMPLY WITH THIS RESOLUTION; AND DECLARING AN EMERGENCY.

WHEREAS, City of Tulsa, Oklahoma, desires to achieve a goal of full employment.

WHEREAS, it is necessary for the protection of the health, safety and welfare of all residents of the City of Tulsa, Oklahoma, to accomplish this goal.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF THE CITY OF TULSA, OKLAHOMA:

SECTION 1. The City of Tulsa is committed to the policy of achieving full employment of its citizens by encouraging the employment of bona fide Tulsa and MSA residents in public improvement contracts.

SECTION 2. Definitions. The definitions of certain terms used in this resolution are as follows:

a. "Bidding Documents" or "Bid" means the bid notice, plans and specifications, bidding form, bidding instructions, special provisions and all other written instruments prepared by or on behalf of an awarding public agency for use by prospective bidders on a public construction contract.

b. (i) "Bona Fide Residents" shall include only those persons who are either registered to vote in the City of Tulsa or who have resided within the city limits for at least six months, or who have purchased a permanent residence within the city limits or who have leased a residence for at least a six month term. Residency may be further determined by a valid Oklahoma driver's license, a current Oklahoma license tag, and a valid Oklahoma automobile inspection sticker. (ii) Bona fide residents of MSA shall include only those persons who are registered to vote in outlying MSA areas or who have resided within the outlying MSA area for at least six months, or who have purchased a permanent residence within the outlying MSA areas or who have leased a residence for at least a six month term. Residency may be further determined by a valid Oklahoma driver's license, a current Oklahoma license tag, and a valid Oklahoma automobile inspection sticker.

c. "Public Construction Contract" or "Contract" means any contract exceeding Seven Thousand Five Hundred Dollars (\$7,500.00) in amount, awarded by the City of Tulsa for the purpose of making any public improvements or constructing any public building or making repairs to the same.

d. "Public Improvement" means any beneficial or valuable change or addition, betterment, enhancement or amelioration of or upon any real property, or interest therein, belonging to the City of Tulsa, intended to enhance its value, beauty or utility or to adapt it to new or further purposes. The term does not include the direct purchase of materials, equipment or supplies by the City of Tulsa.

CITY OF TULSA
FILED
AUG 23 1988
A.M. P.M.
Office of City Auditor
By _____

e. "MSA". All of the land areas composed of Creek County, Osage County, Rogers County, Tulsa County and Wagoner County.

SECTION 3. Residency Requirements of Contractor's Employees. Every employee and/or agent of the City of Tulsa, Oklahoma, charged or involved with the preparation of plans and specifications for any public impvement funded in whole or in part with funds of the City of Tulsa, is hereby charged to include in said plans and specifications the following provisions which shall be binding upon the successful bidders:

- a. Each bid shall be accompanied by a sworn statement that the bidder is committed to the goal of employing at least 50% bona fide residents of the City of Tulsa and/or the MSA in each classification as determined by the Oklahoma Commissioner of Labor.
- b. The successful bidder will be responsible for having like requirements placed upon any subcontractor.
- c. The successful bidder will submit to the Director or his designated representative of the Department of Human Rights any compliance reports involving the bidder and its subcontractors required by Title 31, Chapter 1, Section 9, of the Tulsa Revised Ordinances. The reports shall include information about the residence of each employee in each laboring and trade class applicable to any City project.

SECTION 4. Unresponsive Bids. The failure to submit the documents required by Section 3 shall render a bid unresponsive. Said documents must be submitted prior to the opening of the bids. The Director of the Department of Human Rights Section of City Development is charged with ensuring that all bids comply with Section 3 prior to the bid opening date.

SECTION 5. Duty of Employees and/or Agents of the City of Tulsa. Any employee and/or agent of the City of Tulsa who fails to include the goals for residency requirements found in Section 3 in the plans and specifications for any public improvement may be subject to disciplinary action, including dismissal.

SECTION 6. Severability. The invalidity of any section, subsection, provision or clause or portion of this chapter, or the invalidity of the application thereof to any person or circumstance shall not affect the validity of the remainder of this chapter or the validity of its application to other persons or circumstances.

SECTION 7. Effect Date. This resolution shall take effect as of July 1, 1988.

SECTION 8. Emergency Clause. That an emergency exists for the preservation of the public peace, health and safety, by reason whereof this resolution shall take effect immediately upon its passage, approval and publication.

PASSED, with the emergency clause ruled upon separately and approved this 23rd day of August, 1988.

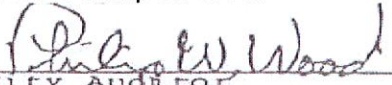
APPROVED, this 23rd day of August, 1988.

Rodger Randle



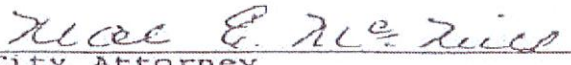
Mayor

ATTEST: Philip W. Wood



City Auditor


APPROVED: Neal E. McNeil



City Attorney

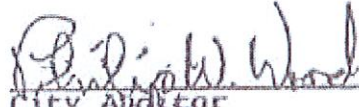
PASSED, with the emergency clause ruled upon separately and approved this 23 day of August, 1988.

- APPROVED, this 23 day of August, 1988.



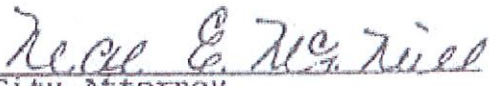
Mayor

ATTEST:



City Auditor

APPROVED:



City Attorney

CITY OF YULEA
FILED

AUG 23 1988

A.M. Office Of City Auditor P.M.
By _____

08/26/16

(Must be Submitted at Time of Bid)

**CITY OF TULSA
BIDDER'S AFFIDAVIT FOR
MINORITY AND FEMALE UTILIZATION GOALS**

STATE OF _____)
) ss:
COUNTY OF _____)

_____, of lawful age, being first duly sworn, says that s(he) is the agent authorized by the bidder to submit the attached bid. Affiant further states that the bidder agrees to fully comply with the City of Tulsa's Resolution requiring that a good faith effort be made to utilize not less than the goals set forth in ORF-267 for the use of minority/female business enterprises as subcontractors. Affiant further agrees to provide goals and timetables for utilization of minorities and females in labor and trade classes.

Affiant further states that s(he) will document on ORF-211, ORF-212, EPA 6100 -2, EPA 6100-3, EPA 6100-4, for public record, his/her good faith efforts in solicitation.

Affiant further states that s(he) is responsible for having like requirements placed upon any subcontractor of said bidder.

BIDDER (Company Name)

SIGNED

TITLE

SUBSCRIBED and SWORN to before me this ____ day of _____

NOTARY PUBLIC

MY COMMISSION EXPIRES:

COMMISSION NO.:

Bidder's Statement about: Equal Opportunity Clause (ORF-211)

Mark **one**:

- I have participated in previous contract(s) or subcontract(s) subject to the equal opportunity clause under Executive Orders 11246 and 11375 or preceding Executive Orders 10925 and 11114. I have filed all reports due under the requirements contained in 40 CFR, Part C, 8.11.
- I have not participated in previous contract(s) subject to the equal opportunity clause under Executive Orders 11246 and 11375 or preceding Executive Orders 10925 and 11114.

- I will obtain a similar statement from any proposed subcontractor(s), when appropriate.

Bidder's Statement about: Non-Segregated Facilities (ORF-212)

- I hereby certify that I do not and will not maintain any facilities provided for my employees in a segregated manner, or permit my employees to perform their services at any location under my control where segregated facilities are maintained; and that I will obtain a similar certification prior to the award of any subcontract exceeding \$10,000 which is not exempted from the equal opportunity clause.

Bidder's Statement about: Bonds

- I hereby certify that I will obtain and provide a Bid Bond along with my Bid.
- I hereby certify that, in the event of being awarded a Contract, I will provide a Performance Bond for 100% of the contract amount.
- I hereby certify that, in the event of being awarded a Contract, I will provide a Statutory/Payment Bond for 100% of the contract amount.
- I hereby certify that, in the event of being awarded a Contract, I will provide a Maintenance Bond for at least 1 year after construction completion, and 100% of the contract amount

Bidder's Statement about: **Sam.gov registration**

Mark **one**:

I have registered in SAM.gov and my status is "active".

I am not currently registered in SAM.gov, but I will be registered and holding an "active" status prior to the beginning of any construction.

I certify that I will actively review the SAM.gov status of all of the subcontractors in this work to verify they are registered and their status is "active".

Bidder's Statement about: **Davis Bacon Act and American Iron and Steel**

I hereby certify that all of my employees will be paid according to the Davis Bacon Act.

I hereby certify that I will comply with the American Iron and Steel requirement.

Name and Title of Prospective Prime Contractor's Representative

Signature of Prospective Prime Contractor's Representative

Name and address of Prospective Prime Contractor

(Must be submitted at time of Bid)
CITY OF TULSA
RESOLUTION NO. 7404
AFFIDAVIT OF COMPLIANCE

_____, of lawful age, being first duly sworn, states that s(he) is the authorized agent of the Company set forth below.

Affiant further states that the Company, in compliance with City of Tulsa Resolution No. 7404, shall not hire or knowingly allow any of its subcontractors or lower tier subcontractors to hire anyone who is not a United States citizen or legal immigrant or anyone who does not have legal status as a temporary worker to perform work on any project which is the subject of a contract between the Company and the City of Tulsa.

Affiant further states that the Company shall not fail to comply with and shall not knowingly allow any of its subcontractors or lower tier subcontractors to fail to comply with all applicable laws including, but not limited to, labor, employment and taxation laws, in the performance of any work on any project which is the subject of a contract between the Company and the City of Tulsa.

Affiant further states that the Company shall make available to the City of Tulsa, at the City's request, sufficient information and/or affirmations to allow the City to confirm Company's compliance with Resolution No. 7404 relating to the performance of any contract between the Company and the City of Tulsa.

Company: _____

Signed: _____

Title

SUBSCRIBED and SWORN to before me, this ____ day of _____, 20__.

NOTARY PUBLIC

MY COMMISSION EXPIRES:

COMMISSION NO.:

Resolution No. 7404
RAC-1

(Must be submitted at time of Bid)
CITY OF TULSA
50% RESIDENT RESOLUTION
AFFIDAVIT FOR BID

STATE OF _____)
) ss:
COUNTY OF _____)

_____, of lawful age, being first duly sworn, states that s(he) is the agent authorized by the bidder to submit the attached bid. Affiant further states that the bidder, in compliance with City of Tulsa Resolution No. 18145, is committed to the goal of employing at least 50% bona fide residents of the City of Tulsa and/or the Metropolitan Statistical Area (composed of Creek, Okmulgee, Osage, Pawnee, Rogers, Tulsa, and Wagoner counties).

Affiant further states that bidder is responsible for having like requirements placed upon any of its subcontractors.

BIDDER (Company Name)

SIGNED

Title

SUBSCRIBED and SWORN to before me this ____ day of _____, 20__.

NOTARY PUBLIC

MY COMISSION EXPIRES:

COMMISSION NO.:

OKLAHOMA WATER RESOURCES BOARD

Supplemental Conditions

for

Projects funded from the

Clean Water State Revolving Loan Fund

RULES AND REGULATIONS

TITLE 41 - PUBLIC CONTRACT AND PROPERTY MANAGEMENT

CHAPTER 60 - OFFICE OF FEDERAL CONTRACT COMPLIANCE PROGRAMS, EQUAL
EMPLOYMENT OPPORTUNITY, DEPARTMENT OF LABOR COMPLIANCE
RESPONSIBILITY FOR EQUAL EMPLOYMENT OPPORTUNITY FINAL RULE

60-1.4 Equal opportunity clause.

(b) Federally assisted construction contracts.

(1) Except as otherwise provided, each administering agency shall require the inclusion of the following language as a condition of any grant, contract, loan, insurance, or guarantee involving federally assisted construction which is not exempt from the requirements of the equal opportunity clause:

The applicant hereby agrees that it will incorporate or cause to be incorporated into any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 CFR Chapter 60, which is paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to a grant, contract, loan insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, the following equal opportunity clause:

During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

- (7) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, That in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering

agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

- (c) Subcontracts. Each nonexempt prime contractor or subcontractor shall include the equal opportunity clause in each of its nonexempt subcontracts.
- (d) Incorporation by reference. The equal opportunity clause may be incorporated by reference in all Government contracts and subcontracts, including Government bills of lading, transportation requests, contracts for deposit of Government funds, and contracts for issuing and paying U.S. savings bonds and notes, and such other contracts and subcontracts as the Deputy Assistant Secretary may designate.
- (e) Incorporation by operation of the order. By operation of the order, the equal opportunity clause shall be considered to be a part of every contract and subcontract required by the order and the regulations in this part to include such a clause whether or not it is physically incorporated in such contracts and whether or not the contract between the agency and the contractor is written.
- (f) Adaptation of language. Such necessary changes in language may be made in the equal opportunity clause as shall be appropriate to identify properly the parties and their undertakings.

[43 FR 49240, Oct. 20, 1978, as amended at 62 FR 66971, Dec. 22, 1997]

60-4.2 Solicitations.

- (a) All Federal contracting officers and all applicants shall include the notice set forth in paragraph (d) of this section and the Standard Federal Equal Employment Opportunity Construction Contract Specifications set forth in § 60-4.3 of this part in all solicitations for offers and bids on all Federal and federally assisted construction contracts or subcontracts to be performed in geographical areas designated by the Director pursuant to § 60-4.6 of the part. Administering agencies shall require the inclusion of the notice set forth in paragraph (d)

of this section and the specifications set forth in § 60-4.3 of this part as a condition of any grant, contract, subcontract, loan, insurance or guarantee involving federally assisted construction covered by this Part 60-4.

- (b) All nonconstruction contractors covered by Executive Order 11246 and the implementing regulations shall include the notice in paragraph (d) of this section in all construction agreements which are necessary in whole or in part to the performance of the covered nonconstruction contract.
- (c) Contracting officers, applicants and nonconstruction contractors shall give written notice to the Director within 10 working days of award of a contract subject to these provisions. The notification shall include the name, address and telephone number of the contractor; employer identification number; dollar amount of the contract, estimated starting and completion dates of the contract; the contract number; and geographical area in which the contract is to be performed.
- (d) The following notice shall be included in, and shall be a part of, all solicitations for offers and bids on all Federal and federally assisted construction contracts or subcontracts in excess of \$10,000 to be performed in geographical areas designated by the Director pursuant to § 60-4.6 of this part (see 41 CFR 60-4.2(a)):

Notice of Requirement for Affirmative Action To Ensure Equal Employment Opportunity (Executive Order 11246)

- 1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
- 2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Goals for MBE
 CONSTRUCTION 13.94%; SUPPLIES - 7.48%;
 SERVICES - 14.29%; EQUIPMENT - 9.13%

Goals for WBE
 CONSTRUCTION - 6.92%; SUPPLIES - 0;
 SERVICES - 26.51%; EQUIPMENT - 19.90%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area.

If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

- 3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.
- 4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is (insert description of the geographical areas where the contract is to be performed giving the state, county and city, if any).
 [43 FR 49254, Oct. 20, 1978; 43 FR 51401, Nov. 3, 1978, as amended at 45 FR 65977, Oct. 3, 1980]

60-4.3 Equal opportunity clauses.

- (a) The equal opportunity clause published at 41 CFR 60-1.4(a) of this chapter is required to be included in, and is part of, all nonexempt Federal contracts and subcontracts, including construction contracts and subcontracts. The

equal opportunity clause published at 41 CFR 60-1.4(b) is required to be included in, and is a part of, all nonexempt federally assisted construction contracts and subcontracts. In addition to the clauses described above, all Federal contracting officers, all applicants and all nonconstruction contractors, as applicable, shall include the specifications set forth in this section in all Federal and federally assisted construction contracts in excess of \$10,000 to be performed in geographical areas designated by the Director pursuant to § 60-4.6 of this part and in construction subcontracts in excess of \$10,000 necessary in whole or in part to the performance of nonconstruction Federal contracts and subcontracts covered under the Executive order.

**Standard Federal Equal Employment
Opportunity Construction Contract Specifications
(Executive Order 11246)**

1. As used in these specifications:
 - a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
 - b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
 - c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
 - d. "Minority" includes:
 - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
 - (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7 a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or

- from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.
5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
 6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.
 7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
 - c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.
 - d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
 - e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.
 - f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is

- performed.
- g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
 - h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
 - i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
 - j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.
 - k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
 - l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
 - m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
 - n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 - p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The

- obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).
 10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
 11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
 12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
 13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
 14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports

relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).
 - (b) The notice set forth in 41 CFR 60-4.2 and the specifications set forth in 41 CFR 60-4.3 replace the New Form for Federal Equal Employment Opportunity Bid Conditions for Federal and Federally Assisted Construction published at 41 FR 32482 and commonly known as the Model Federal EEO Bid Conditions, and the New Form shall not be used after the regulations in 41 CFR Part 60-4 become effective.

[43 FR 49254, Oct. 20, 1978; 43 FR 51401, Nov. 3, 1978, as amended at 45 FR 65978, Oct. 3, 1980]

**DAVIS BACON ACT REQUIREMENTS
(subchapter IV of Chapter 31 of Title 40, United States Code and 29 CFR parts 1, 3, and 5)
(SEE APPENDIX 1 FOR CLARIFYING INFORMATION)**

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this contract pursuant to the provisions applicable to such assistance.

- (a) Any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a public building or public work, or building or work

financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in Sec. 5.1.

(1) Minimum wages. (i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in Sec. 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(ii)(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be

classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(2) Withholding. The *OWRB SRF* or the *Owner* shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the (Agency) may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) Payrolls and basic records. (i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated

in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the *Owner for transmission to the OWRB SRF*. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at beta.SAM.gov or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the *OWRB SRF* if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit them to the *Owner*, as the case may be, for transmission to the *OWRB SRF*, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the Owner.

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance" signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under Sec. 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under Sec. 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the *CWSRF* or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and trainees--(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary

employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination.

Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

(5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the (write in the name of the Federal agency) may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(10) Certification of eligibility. (i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

(b) Contract Work Hours and Safety Standards Act. The following clauses set forth in paragraphs (b)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by Sec. 5.5(a) or 4.6 of part 4 of this title. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed

with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

(3) Withholding for unpaid wages and liquidated damages. The *Owner or the OWRB SRF* shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

(c) In addition to the clauses contained in paragraph (b), in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in Sec. 5.1, the Agency Head shall cause or require the contracting officer to insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Agency Head shall cause or require the contracting officer to insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the *Owner or OWRB SRF* and the Department of Labor,

and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

WAGE RATE REQUIREMENTS

Notwithstanding any other provision of law and in a manner consistent with other provisions, all laborers and mechanics employed by contractors and subcontractors on projects funded directly by or assisted in whole or in part with CWSRF funds shall be paid wages at rates not less than those prevailing on projects of a character similar in the locality as determined by the Secretary of Labor in accordance with subchapter IV of chapter 31 of title 40, United States Code. With respect to the labor standards specified in this section, the Secretary of Labor shall have the authority and functions set forth in Reorganization Plan Numbered 14 of 1950 (64 Stat. 1267; 5 U.S.C. App.) and section 3145 of title 40, United States Code.

See Appendix 1 for clarifying information.

AMERICAN IRON AND STEEL (BUY AMERICAN)

P.L. 113-76, Consolidated Appropriations Act, 2014, "American Iron and Steel" Section 436.

- (a)(1) None of the funds made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) or made available by a drinking water treatment revolving loan fund as authorized by section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j-12) shall be used for a project for the construction, alteration, maintenance, or repair of a public water system or treatment works unless all of the iron and steel products used in the project are produced in the United States.
- (2) In this section, the term "iron and steel products" means the following products made primarily of iron or steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials.
- (b) Subsection (a) shall not apply in any case or category of cases in which the Administrator of the Environmental Protection Agency (in this section referred to as the "Administrator") finds that—

- (1) applying subsection (a) would be inconsistent with the public interest;
 - (2) iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or
 - (3) inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.
- (c) If the Administrator receives a request for a waiver under this section, the Administrator shall make available to the public on an informal basis a copy of the request and information available to the Administrator concerning the request, and shall allow for informal public input on the request for at least 15 days prior to making a finding based on the request. The Administrator shall make the request and accompanying information available by electronic means, including on the official public Internet Web site of the Environmental Protection Agency.
- (d) This section shall be applied in a manner consistent with United States obligations under international agreements.
- (e) The Administrator may retain up to 0.25 percent of the funds appropriated in this Act for the Clean and Drinking Water State Revolving Funds for carrying out the provisions described in subsection (a)(1) for management and oversight of the requirements of this section.
- (f) This section does not apply with respect to a project if a State agency approves the engineering plans and specifications for the project, in that agency's capacity to approve such plans and specifications prior to a project requesting bids, prior to the date of the enactment of this Act.

Please see Appendices 2-4 for Waiver Information.

SYSTEM FOR AWARD MANAGEMENT (SAM)

SAM registration is required for all SRF programs (CWSRF and DWSRF) applicants and Awardees (Entities, Prime Contractors, Subcontractors, Vendors) in order to be awarded contracts by the SRF Programs. SAM replaces Central Contractor Registration/Federal Agency Registration, Online Representations and Certifications Application, and Excluded Parties List System. Applicants and awardees are required to complete a one-time free registration to provide basic information relevant to procurement and financial transactions. Registrants must retain an active status to be eligible for SRF projects.

New Applicants and Awardees can go to SAM.gov to complete the registration process.

Note: In order to register in SAM, a Data Universal Number System (DUNS) number will be required. DUNS number is a unique, non-indicative 9-digit identifier issued and maintained by Dun & Bradstreet (D&B) that verifies the existence of a business entity globally. D&B assigns DUNS numbers for each physical location of a business. All entities doing business with the U.S. Government can receive a DUNS number FREE of charge and, under normal circumstances, within 1-2 business days when using D&B web form process at <http://fedgov.dnb.com/webform>.

OTHER SUPPLEMENTAL CONDITIONS

Disadvantaged Business Enterprises (DBE)

40 CFR 33.301 Contracting with disadvantaged business enterprises and labor surplus area firms.

The SRF loan recipient and subcontractors will take all necessary affirmative steps to assure that minority firms, women's business enterprises, and labor surplus area firms are used when possible.

DBE participation requirements apply to projects constructed with funds directly made available by the federal capitalization grant (equivalency projects).

(1) EPA and the State will negotiate a "Fair Share Objective" (which shall represent a percentage of DBE participation).

(2) When soliciting for a subcontractor (A/E or construction contractor), the loan recipient shall take the following six good faith efforts:

(A) Include qualified Small, DBE businesses on solicitation lists.

(B) Assure that Small, DBE businesses are solicited whenever they are potential sources.

(C) When economically feasible, divide total requirements into smaller tasks or quantities so as to permit maximum Small, DBE business participation.

(D) Where the requirements of the work permits, establish delivery schedules which will encourage participation by Small, DBE businesses.

(E) Use the services and assistance of the Small Business Administration, the Office of Minority Business Enterprise of the United States Department of Commerce, as appropriate.

(F) If any subcontracts are to be let, require the prime contractor or A/E to take the good faith efforts in (A) through (E) of this paragraph (2).

2. Affirmative Steps shall include:

- (i) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
- (ii) Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
- (iii) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority business, and women's business enterprises;
- (iv) Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority business, and women's business enterprises;
- (v) Using the services and assistance of the Small Business Administration, and the Minority Business Development Agency of the Department of Commerce; and
- (vi) Requiring the prime contractor, if subcontracts are to be let, to take the affirmative steps listed in paragraphs (e)(2)(i) through (v) of this section.

Completion Date

If not stated elsewhere in these specifications, the contractor shall complete work under this contract within ³⁶⁵ calendar days. Time for completion shall begin on the 10th day after issuance of the work order, which shall consist of a written request by the engineer for the contractor to proceed with the construction of the project.

Contractor's Liability and Builders All Risk Insurance

The contractor shall furnish the following insurance when the contract is awarded:

(A) Workmen's Compensation: The contractor shall carry on his work in accordance with the requirements of the Workmen's Compensation Law of the State of Oklahoma, and shall not reject the provisions thereof during the life of the contract. A certificate of coverage must be returned with the contract.

(B) Public Liability and Property Damage: He shall also protect himself by liability reinsurance against any and all claims for damages to persons or property which may arise out of operations under this contract, whether such operations be by himself or a subcontractor or by anyone directly employed by either of them. Certificates of such insurance shall be file with the Owner and shall be subject to its approval as to adequacy of protection. The public liability insurance shall have limits of not less than \$100,000/\$300,000 or an amount to be determined by OWRB and Property Damage insurance of not less than \$50,000/\$100,000 or an amount to be determined by OWRB shall be carried by the contractor during the life of the contract. A certificate of such coverage must be returned with the contract.

(C) Builder's Risk: Provide Builders Risk Insurance only if called for in other sections of the specifications.

Bonds

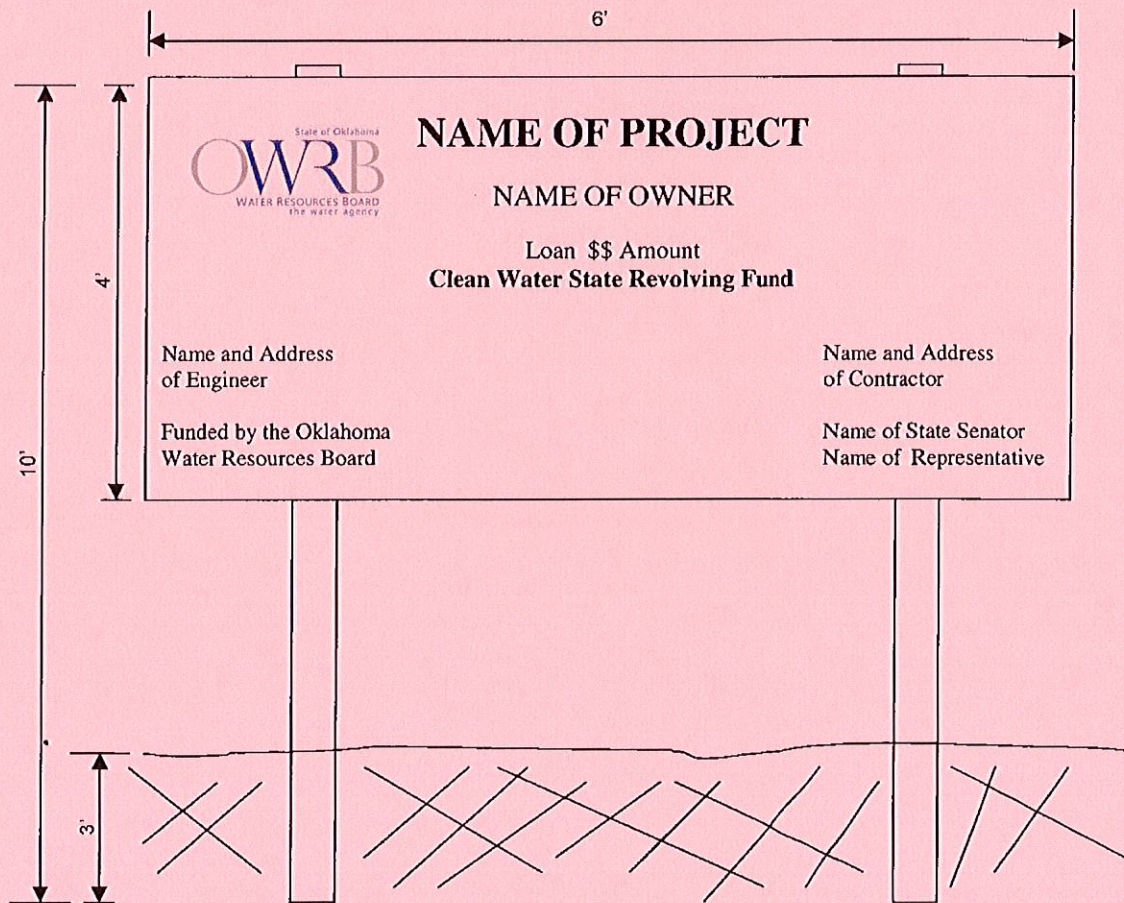
All bonds are for the full value of the contract and must be issued by a surety company authorized by the Oklahoma Insurance Commission to do business in the State of Oklahoma. They will be required after the award of the contact.

Three bonds are required for all contracts with a value exceeding Fifty Thousand Dollars (\$50,000.00) They are: (1.) Performance Bond to insure the completion of the work in accordance with the contract documents in the time stipulated; (2.) Maintenance Bond to provide for defects in construction or materials for a period of one (1) year from the date of acceptance of the completed work; and (3.) Statutory Bond to assure the Owner is protected from the action of subcontractors, suppliers and employees for unpaid debts of the contractor.

Irrevocable Letters of Credit may be used as a substitute for bonds on contracts exceeding Fifty Thousand Dollars (\$50,000.00). The letters of credit must be issued by a financial institution insured by the Federal Deposit Insurance Corporation or the Federal Savings and Loan Insurance Corporation on forms obtained from the Owner.

PROJECT SIGN

- The general contractor shall erect and maintain for the life of the construction contract a suitable sign, 4' x 6' in size, and detailed hereon, lettered black on white background. Sign shall be professionally painted. Lettering to be appropriate size. No separate bid item. Sign shall be the general obligation of the Contractor.
- The OWRB logo is required on the project sign if the project is funded in part with CWSRF funds. The OWRB logo is available at <http://www.owrb.ok.gov/about/index.php> or may be provided directly by OWRB.
- Redwood Posts shall be 4" x 4" x 10' buried securely a minimum of 3 feet below ground.
- Sign face shall be constructed of 3/4" x 4' x 6' - 5 ply Dura-plywood board & mounted to Posts with four (4) 5/8" x 6" Carriage Bolts.



Appendix 1

Wage Rate Requirements

I. Requirements Under The Consolidated and Further Continuing Appropriations Act, 2013 (P.L. 113-6) For Subrecipients That Are Governmental and Not Governmental Entities:

The following terms and conditions specify how recipients will assist EPA in meeting its Davis-Bacon (DB) responsibilities when DB applies to EPA awards of financial assistance under the FY 2013 Continuing Resolution with respect to State recipients and subrecipients that are governmental entities, and for subrecipients that are not governmental entities. If a subrecipient has questions regarding when DB applies, obtaining the correct DB wage determinations, DB provisions, or compliance monitoring, it may contact the State recipient for guidance. If a State recipient needs guidance, the recipient may contact Dannel Brown at brown.dannell@epa.gov or at 214-665-7279 of EPA, Region VI Grants and Audit Management Branch for guidance. The recipient or subrecipient may also obtain additional guidance from DOL's website at <http://www.dol.gov/whd/>.

Under these terms and conditions, the Non-Governmental subrecipient must submit its proposed DB wage determinations to the State recipient for approval prior to including the wage determination in any solicitation, contract task orders, work assignments, or similar instruments to existing contractors.

1. Applicability of the Davis- Bacon (DB) prevailing wage requirements.

Under the FY 2013 Continuing Resolution, DB prevailing wage requirements apply to the construction, alteration, and repair of treatment works carried out in whole or in part with assistance made available by a State water pollution control revolving fund and to any construction project carried out in whole or in part by assistance made available by a drinking water treatment revolving loan fund. If a subrecipient encounters a unique situation at a site that presents uncertainties regarding DB applicability, the subrecipient must discuss the situation with the recipient State before authorizing work on that site.

2. Obtaining Wage Determinations.

(a) Subrecipients must obtain wage determinations for the locality or localities in which a covered activity subject to DB will take place at www.beta.sam.gov prior to issuing requests for bids, proposals, quotes or other methods for soliciting contracts (solicitation) for activities subject to DB. After the Subrecipient obtains its proposed wage determination, it must submit the wage determination to the assigned Financial Assistance Division Engineer, Oklahoma Water Resources Board, 3800 N. Classen Blvd, Oklahoma City, OK 73118. These wage determinations shall be incorporated into solicitations and any subsequent contracts. Prime contracts must contain a provision requiring that subcontractors follow the wage determination incorporated into the prime contract.

- (i) While the solicitation remains open, the subrecipient shall monitor www.beta.sam.gov weekly to ensure that the wage determination contained in the solicitation remains current. The subrecipients shall amend the solicitation if DOL issues a modification more than 10 days prior to the closing date (i.e. bid opening) for the solicitation. If DOL modifies or supersedes the applicable wage determination less than 10 days prior to the closing date, the subrecipients may request a finding from the State recipient that there is not a reasonable time to notify interested contractors of the modification of the wage determination. The State recipient will provide a report of its findings to the subrecipient.

- (ii) If the subrecipient does not award the contract within 90 days of the closure of the solicitation, any modifications or supersedes DOL makes to the wage determination contained in the solicitation shall be effective unless the State recipient, at the request of the subrecipient, obtains an extension of the 90 day period from DOL pursuant to 29 CFR 1.6(c)(3)(iv). The subrecipient shall monitor www.beta.sam.gov on a weekly basis if it does not award the contract within 90 days of closure of the solicitation to ensure that wage determinations contained in the solicitation remain current.

(b) If the subrecipient carries out activity subject to DB by issuing a task order, work assignment or similar instrument to an existing contractor (ordering instrument) rather than by publishing a solicitation, the subrecipient shall insert the appropriate DOL wage determination from www.beta.sam.gov into the ordering instrument.

(c) Subrecipients shall review all subcontracts subject to DB entered into by prime contractors to verify that the prime contractor has required its subcontractors to include the applicable wage determinations.

(d) As provided in 29 CFR 1.6(f), DOL may issue a revised wage determination applicable to a subrecipient's contract after the award of a contract or the issuance of an ordering instrument if DOL determines that the subrecipient has failed to incorporate a wage determination or has used a wage determination that clearly does not apply to the contract or ordering instrument. If this occurs, the subrecipient shall either terminate the contract or ordering instrument and issue a revised solicitation or ordering instrument or incorporate DOL's wage determination retroactive to the beginning of the contract or ordering instrument by change order. The subrecipient's contractor must be compensated for any increases in wages resulting from the use of DOL's revised wage determination.

3. Contract and Subcontract provisions.

(a) The Recipient shall insure that the subrecipient(s) shall insert in full in any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a treatment work under the CWSRF or a construction project under the DWSRF financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in § 5.1 or the FY 2013 Continuing Resolution, the following clauses:

(1) Minimum wages.

(i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans,

funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in § 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

Subrecipients may obtain wage determinations from the U.S. Department of Labor's web site, www.dol.gov.

(ii)(A) The subrecipient(s), on behalf of EPA, shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The State award official shall approve a request for an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (2) The classification is utilized in the area by the construction industry; and
- (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the subrecipient(s) agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), documentation of the action taken and the request, including the local wage determination shall be sent by the subrecipient (s) to the State award official. The State award official will transmit the request, to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210 and to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification request within 30 days of receipt and so advise the State award official or will notify the State award official within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the subrecipient(s) do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the award official shall refer the request and the local wage determination, including the views of all interested parties and the recommendation of the State award official, to the Administrator for determination. The request shall be sent to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt of the request and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii)(B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(2) Withholding. The subrecipient(s), shall upon written request of the EPA Award Official or an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the (Agency) may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) Payrolls and basic records.

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to the subrecipient, that is, the entity that receives the sub-grant or loan from the State capitalization grant recipient. Such documentation shall be available on request of the State recipient or EPA. As to each payroll copy received, the subrecipient shall provide written confirmation in a form

satisfactory to the State indicating whether or not the project is in compliance with the requirements of 29 CFR 5.5(a)(1) based on the most recent payroll copies for the specified week. The payrolls shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on the weekly payrolls. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the subrecipient(s) for transmission to the State or EPA if requested by EPA, the State, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the subrecipient(s).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance" signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under § 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under § 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(i)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the State, EPA or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency or State may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and trainees

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended and 29 CFR part 30.

(5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the EPA determines may be appropriate, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and Subrecipient(s), State, EPA, the U.S. Department of Labor, or the employees or their representatives.

(10) Certification of eligibility.

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

4. Contract Provision for Contracts in Excess of \$100,000.

(a) Contract Work Hours and Safety Standards Act. The subrecipient shall insert the following clauses set forth in paragraphs (a)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by Item 3, above or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less

than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (a)(1) of this section the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (a)(1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (a)(1) of this section.

(3) Withholding for unpaid wages and liquidated damages. The subrecipient, upon written request of the EPA Award Official or an authorized representative of the Department of Labor, shall withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (a)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (a)(1) through (4) of this section.

(b) In addition to the clauses contained in Item 3, above, in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in 29 CFR 5.1, the Subrecipient shall insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Subrecipient shall insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

5. Compliance Verification

(a) The subrecipient shall periodically interview a sufficient number of employees entitled to DB prevailing wages (covered employees) to verify that contractors or subcontractors are paying the appropriate wage rates. As provided in 29 CFR 5.6(a)(6), all interviews must be conducted in confidence. The subrecipient must use Standard Form 1445 (SF 1445) or equivalent documentation to memorialize the interviews. Copies of the SF 1445 are available from EPA on request.

(b) The subrecipient shall establish and follow an interview schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. Subrecipients must conduct more frequent interviews if the initial interviews or other information indicated that there is a risk that the contractor or subcontractor is not complying with DB. Subrecipients shall immediately conduct interviews in response to an alleged violation of the prevailing wage requirements. All interviews shall be conducted in confidence."

(c) The subrecipient shall periodically conduct spot checks of a representative sample of weekly payroll data to verify that contractors or subcontractors are paying the appropriate wage rates. The subrecipient shall establish and follow a spot check schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, if practicable, the subrecipient should spot check payroll data within two weeks of each contractor or subcontractor's submission of its initial payroll data and two weeks prior to the completion date the contract or subcontract . Subrecipients must conduct more frequent spot checks if the initial spot check or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB. In addition, during the examinations the subrecipient shall verify evidence of fringe benefit plans and payments there under by contractors and subcontractors who claim credit for fringe benefit contributions.

(d) The subrecipient shall periodically review contractors and subcontractors use of apprentices and trainees to verify registration and certification with respect to apprenticeship and training programs approved by either the U.S Department of Labor or a state, as appropriate, and that contractors and subcontractors are not using disproportionate numbers of, laborers, trainees and apprentices. These reviews shall be conducted in accordance with the schedules for spot checks and interviews described in Item 5(b) and (c) above.

(e) Subrecipients must immediately report potential violations of the DB prevailing wage requirements to the EPA DB contact listed above and to the appropriate DOL Wage and Hour District Office at 405-231-4158.

Appendix 2

Step-By-Step Waiver Process Related to P.L. 113-76, Consolidated Appropriation Act, 2014, “American Iron and Steel”

Application by Assistance Recipient

Each local entity that receives SRF water infrastructure financial assistance is required by section 436 of the Act to use American made iron and steel products in the construction of its project. However, the recipient may request a waiver. Until a waiver is granted by EPA, the AIS requirement stands, except as noted above with respect to municipalities covered by international agreements.

The waiver process begins with the SRF assistance recipient. In order to fulfill the AIS requirement, the assistance recipient must in good faith design the project (where applicable) and solicit bids for construction with American made iron and steel products. It is essential that the assistance recipient include the AIS terms in any request for proposals or solicitations for bids, and in all contracts. The assistance recipient may receive a waiver at any point before, during, or after the bid process, if one or more of three conditions is met:

1. Applying the American Iron and Steel requirements of the Act would be inconsistent with the public interest;
2. Iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or
3. Inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

Proper and sufficient documentation must be provided by the assistance recipient. A checklist detailing the types of information required for a waiver to be processed is attached as Appendix 3.

Additionally, it is strongly encouraged that assistance recipients hold pre-bid conferences with potential bidders. A pre-bid conference can help to identify iron and steel products needed to complete the project as described in the plans and specifications that may not be available from domestic sources. It may also identify the need to seek a waiver prior to bid, and can help inform the recipient on compliance options.

In order to apply for a project waiver, the assistance recipient should email the request in the form of a Word document (.doc) to the State SRF program. It is strongly recommended that the State designate a single person for all AIS communications. The State SRF designee will review the application for the waiver and determine whether the necessary information has been included. Once the waiver application is complete, the State designee will forward the application to either of two email addresses. For CWSRF waiver requests, please send the application to: cwsrfwaiver@epa.gov. For DWSRF waiver requests, please send the application to: dwsrfwaiver@epa.gov.

Evaluation by EPA

After receiving an application for waiver of the AIS requirements, EPA Headquarters will publish the request on its website for 15 days and receive informal comment. EPA Headquarters will then use the checklist in Appendix 3 to determine whether the application properly and adequately documents and justifies the statutory basis cited for the waiver – that it is quantitatively and qualitatively sufficient – and to determine whether or not to grant the waiver.

In the event that EPA finds that adequate documentation and justification has been submitted, the Administrator may grant a waiver to the assistance recipient. EPA will notify the State designee that a waiver request has been approved or denied as soon as such a decision has been made. Granting such a waiver is a three-step process:

1. Posting – After receiving an application for a waiver, EPA is required to publish the application and all material submitted with the application on EPA’s website for 15 days. During that period, the public will have the opportunity to review the request and provide informal comment to EPA. The website can be found at: http://water.epa.gov/grants_funding/aisrequirement.cfm
2. Evaluation – After receiving an application for waiver of the AIS requirements, EPA Headquarters will use the checklist in Appendix 3 to determine whether the application properly and adequately documents and justifies the statutory basis cited for the waiver – that it is quantitatively and qualitatively sufficient – and to determine whether or not to grant the waiver.
3. Signature of waiver approval by the Administrator or another agency official with delegated authority – As soon as the waiver is signed and dated, EPA will notify the State SRF program, and post the signed waiver on our website. The assistance recipient should keep a copy of the signed waiver in its project files.

Public Interest Waivers

EPA has the authority to issue public interest waivers. Evaluation of a public interest waiver request may be more complicated than that of other waiver requests so they may take more time than other waiver requests for a decision to be made. An example of a public interest waiver that might be issued could be for a community that has standardized on a particular type or manufacturer of a valve because of its performance to meet their specifications. Switching to an alternative valve may require staff to be trained on the new equipment and additional spare parts would need to be purchased and stocked, existing valves may need to be unnecessarily replaced, and portions of the system may need to be redesigned. Therefore, requiring the community to install an alternative valve would be inconsistent with public interest. EPA also has the authority to issue a public interest waiver that covers categories of products that might apply to all projects.

EPA reserves the right to issue national waivers that may apply to particular classes of assistance recipients, particular classes of projects, or particular categories of iron or steel products. EPA may develop national or (US geographic) regional categorical waivers through the identification of similar circumstances in the detailed justifications presented to EPA in a waiver request or requests. EPA may issue a national waiver based on policy decisions regarding the public’s interest or a determination that a particular item is not produced domestically in reasonably available quantities or of a sufficient quality. In such cases, EPA may determine it is necessary to issue a national waiver.

If you have any questions concerning the contents of this memorandum, you may contact us, or have your staff contact 800-887-6063.

**Appendix 3: Information Checklist for Waiver Request
Related to P.L. 113-76, Consolidated Appropriation Act, 2014, "American Iron and Steel"**

The purpose of this checklist is to help ensure that all appropriate and necessary information is submitted to EPA. EPA recommends that States review this checklist carefully and provide all appropriate information to EPA. This checklist is for informational purposes only and does not need to be included as part of a waiver application.

	<i>Items</i>	Notes
<p>General</p> <ul style="list-style-type: none"> • Waiver request includes the following information: <ul style="list-style-type: none"> – Description of the foreign and domestic construction materials – Unit of measure – Quantity – Price – Time of delivery or availability – Location of the construction project – Name and address of the proposed supplier – A detailed justification for the use of foreign construction materials • Waiver request was submitted according to the instructions in the memorandum • Assistance recipient made a good faith effort to solicit bids for domestic iron and steel products, as demonstrated by language in requests for proposals, contracts, and communications with the prime contractor 	✓	
<p>Cost Waiver Requests</p> <ul style="list-style-type: none"> • Waiver request includes the following information: <ul style="list-style-type: none"> – Comparison of overall cost of project with domestic iron and steel products to overall cost of project with foreign iron and steel products – Relevant excerpts from the bid documents used by the contractors to complete the comparison – Supporting documentation indicating that the contractor made a reasonable survey of the market, such as a description of the process for identifying suppliers and a list of contacted suppliers 		
<p>Availability Waiver Requests</p> <ul style="list-style-type: none"> • Waiver request includes the following supporting documentation necessary to demonstrate the availability, quantity, and/or quality of the materials for which the waiver is requested: <ul style="list-style-type: none"> – Supplier information or pricing information from a reasonable number of domestic suppliers indicating availability/delivery date for construction materials – Documentation of the assistance recipient's efforts to find available domestic sources, such as a description of the process for identifying suppliers and a list of contacted suppliers. – Project schedule – Relevant excerpts from project plans, specifications, and permits indicating the required quantity and quality of construction materials • Waiver request includes a statement from the prime contractor and/or supplier confirming the non-availability of the domestic construction materials for which the waiver is sought • Has the State received other waiver requests for the materials described in this waiver request, for comparable projects? 		

**Appendix 4: HQ Review Checklist for Waiver Request
Related to P.L. 113-76, Consolidated Appropriation Act, 2014, "American Iron and Steel"**

Instructions: To be completed by EPA. Review all waiver requests using the questions in the checklist, and mark the appropriate box as Yes, No or N/A. Marks that fall inside the shaded boxes may be grounds for denying the waiver. If none of your review markings fall into a shaded box, the waiver is eligible for approval if it indicates that one or more of the following conditions applies to the domestic product for which the waiver is sought:

1. The iron and/or steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality.
2. The inclusion of iron and/or steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

Review Items		Yes	No	N/A	Comments					
Cost Waiver Requests										
<ul style="list-style-type: none"> • Does the waiver request include the following information? <ul style="list-style-type: none"> — Comparison of overall cost of project with domestic iron and steel products to overall cost of project with foreign iron and steel products — Relevant excerpts from the bid documents used by the contractors to complete the comparison — A sufficient number of bid documents or pricing information from domestic sources to constitute a reasonable survey of the market 										
<ul style="list-style-type: none"> • Does the Total Domestic Project exceed the Total Foreign Project Cost by more than 25%? 										
Availability Waiver Requests										
<ul style="list-style-type: none"> • Does the waiver request include supporting documentation sufficient to show the availability, quantity, and/or quality of the iron and/or steel product for which the waiver is requested? <ul style="list-style-type: none"> — Supplier information or other documentation indicating availability/delivery date for materials — Project schedule — Relevant excerpts from project plans, specifications, and permits indicating the required quantity and quality of materials • Does supporting documentation provide sufficient evidence that the contractors made a reasonable effort to locate domestic suppliers of materials, such as a description of the process for identifying suppliers and a list of contacted suppliers? • Based on the materials delivery/availability date indicated in the supporting documentation, will the materials be unavailable when they are needed according to the project schedule? (By item, list schedule date and domestic delivery quote date or other relevant information) • Is EPA aware of any other evidence indicating the non-availability of the materials for which the waiver is requested? 										
Examples include:										
<ul style="list-style-type: none"> — Multiple waiver requests for the materials described in this waiver request, for comparable projects in the same State — Multiple waiver requests for the materials described in this waiver request, for comparable projects in other States — Correspondence with construction trade associations indicating the non-availability of the materials 										
<ul style="list-style-type: none"> • Are the available domestic materials indicated in the bid documents of inadequate quality compared those required by the project plans, specifications, and/or permits? 										

beta.SAM.gov

INSERT CURRENT WAGE DECISIONS THAT APPLY TO
THE CONSTRUCTION PROJECT HERE
IN CONTRACT SPECIFICATIONS

See Requirements in ORF-185

DAVIS-BACON WAGE DECISION

CLAIM OR INVOICE AFFIDAVIT

State of _____ ss.
County of _____

The undersigned (engineer or supervisory official), of lawful age, being first duly sworn, on oath says that this (invoice, claim, or contract) is true and correct. Affiant further states that the (work, services or materials) as shown by this invoice or claim have been (completed or supplied) in accordance with the plans, specifications, orders, or requests furnished to the affiant. Affiant further states that (s)he has made no payment, given, or donated or agreed to pay, give, or donate, either directly or indirectly, to any elected official, officer, or employee of the State of Oklahoma, of money or any other thing of value to obtain payment or the award of this contract.

Engineer/Supervisory Official signature

Subscribed and sworn to before me this ____ day of _____, 20__.

Notary Public signature

My Commission Expires: _____

Disadvantaged Business Enterprise Program (DBE) Guidance

Important note: All OWRB and EPA forms can be found at www.owrb.ok.gov/forms

The Oklahoma CWSRF receives a portion of their funding from the U.S. Environmental Protection Agency (EPA). The federal funds are used to supplement low interest rate loans to finance wastewater and water quality projects. As a condition of federal grant awards, EPA regulations require that loan recipients and sub-recipients (i.e., prime contractors and subcontractors) make a good-faith effort to award a fair share of work to DBE's who are small business enterprises (SBE's), minority business enterprises (MBE's) and women's business enterprises (WBE's). Additionally, EPA's DBE rule requires loan recipients and sub-recipients adhere to the terms and conditions on Appendix A attached hereto.

To ensure compliance with EPA's DBE requirements, both **Loan Recipients (Project Owners)** and **Prime Contractors must** undertake the good faith efforts to provide opportunities for DBE firms to participate in contracts. EPA regulations require evidence of the demonstration of the six good faith efforts in trying to achieve the DBE participation goals. Oklahoma's negotiated DBE participation goals with EPA can be found on the [OWRB Financial Assistance website](http://www.owrb.ok.gov/financial-assistance). The goals are not a quota. The Oklahoma Department of Transportation has developed a DBE Directory of Certified Firms. This database can be found at this website: <https://okdot.gob2g.com/Default.asp>

Good Faith Efforts: The following good faith efforts apply to the procurement categories involving CWSRF financial assistance funds (See Appendix B: EPA Good Faith Efforts):

1. Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. For state and local government recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.
2. Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.
3. Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. For state and local government recipients, this will include dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.

4. Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.
5. Use the services and assistance of the Small Business Administration (SBA) and the Minority Business Development Agency of the Department of Commerce.
6. If the prime contractor awards subcontracts, require the prime contractor to take the above steps.

Please submit all information to:

Financial Assistance Division, OWRB
3800 North Classen Blvd, Oklahoma City, OK 73118
Phone: 405.530.8800, FAX: 405.530.8900
<http://www.owrb.ok.gov>

Demonstration of the Six Good Faith Efforts. See **Appendices A & B** for additional bidding instructions and contract administrative provisions.

A: Project Owners are required to create and maintain a bidders list in accordance with Subpart E of Part 33 of EPA's Disadvantaged Business Enterprise Program rule, (§ 33.501(b)). The list must include all firms that bid or quote on prime contracts, or bid or quote subcontracts, on competitively bid CWSRF funded projects. The bidders list must only be kept until the project period for the identified loan has ended. The following information must be obtained from all prime and subcontractors and can be provided on **Bidders List (ORF-249)**:

1. Entity's name with point of contact
2. Entity's mailing address, telephone number, and e-mail address
3. The procurement on which the entity bid or quoted, and when; and
4. Entity's status as an MBE/WBE or non-MBE/WBE

B: Project Owners are required to undertake good faith efforts. Steps 1 through 5 can be utilized during the project planning, design and/or pre-bidding phase, to assure that qualified DBE firms have procurement opportunities in construction, equipment, services, and supplies.

To provide procurement opportunities to DBE Firms, the Project Owner should undertake the following:

- Conduct pre-bid meetings to inform potential bidders/contractors about DBE requirements and provide guidance in undertaking the required good faith efforts.

- Use listings of certified DBEs from the U.S. Small Business Administration (SBA), Oklahoma Department of Transportation (ODOT), etc, to solicit DBE firms as prime contractors whenever they are potential candidates. Project Owners should advertise in minority, local and regional newspapers and in the Dodge report.
- Invite DBE firms, where appropriate, to meetings, conferences etc., to inform them of procurement opportunities and develop, where possible, reasonable contract and delivery schedules that encourage and facilitate participation by DBE's. This includes, whenever possible, a minimum of 30 calendar days for bids or request for proposals.
- Determine if a project can be broken down into smaller components/contracts to allow opportunity for DBE firms to bid both as prime-contractors and as sub-contractors.
- For projects broken down into smaller components (e.g., painting, roofing, excavation, pipe laying, etc.,) ensure that the delivery schedules are reasonable.
- Encourage DBE firms, where appropriate, to apply as a consortium of DBE's, when a contract is too large for one of these firms to handle individually.
- **Require prime contractor** to complete **ORF Form 6100-3 & ORF Form 6100-4** and submit with bid proposal to Project Owner.

C: Project Owners must require the prime contractor to undertake steps 1 through 5 of the Good Faith Efforts in providing DBE firms opportunity for sub-contracts.

Project Owner must provide the **DBE Guidance (ORF-267)** and associated forms to Prime Contractors for utilization of DBE's in the bidding documents.

**APPENDIX A: Project Owner, Prime Contractor and
Sub-Contractor Responsibilities**

EPA's Disadvantaged Business Enterprise Program rule applies to contract procurement actions funded in part by EPA assistance agreements awarded after May 27, 2008. The rule is found at Federal regulation Title 40, Part 33. Specific responsibilities are highlighted below.

Project Owner Responsibilities:

- Include OWRB's DBE guidance (ORF-267) in each contract with a primary contractor.
- Employ the six Good Faith Efforts during prime contractor procurement (§33.301).
- Require prime contractor to comply with the following prime contractor requirements of Title 40 Part 33:
 - a) To employ the six Good Faith Efforts steps in paragraphs (a) through (e) of § 33.301 if the prime contractor awards subcontracts (§ 33.301(f)).
 - b) To provide **ORF form 6100-2 – DBE Subcontractor Participation Form to all DBE subcontractors** (Optional submittal by subcontractors) (§ 33.302(e)).
 - c) To submit **ORF form 6100-3 – DBE Program Subcontractor Performance Form and ORF form 6100-4 – DBE Program Subcontractor Utilization Form with bid package or proposal.** (§ 33.302 (f) and (g)).
 - d) To pay its subcontractor for satisfactory performance no more than 30 days from the prime contractor's receipt of payment from the recipient (§ 33.302(a)).
 - e) To notify recipient in writing by its prime contractor prior to any termination of a DBE subcontractor for convenience by the prime contractor (§ 33.302(b)).
 - f) To employ the six good faith efforts described in § 33.301 if soliciting a replacement subcontractor after a DBE subcontractor fails to complete work under the subcontract for any reason. (§ 33.302(c)).
 - g) To employ the six good faith efforts described in § 33.301 even if the prime contractor has achieved its fair share objectives under subpart D of Part 33. (§33.302(d)).

h) Provide Project Owner DBE participation achievements with bid proposal – this includes all information necessary for the Owner to complete the **Bidders List (ORF-249)**. The Owner may allow the prime contractor to complete the **Bidders List (ORF-249)**; however, the **Owner is responsible for review and submittal.**

- Maintain records documenting compliance with the requirements of Title 40 Part 33, including **Bidders List (ORF-249)** and documentation of the good faith efforts (§ 33.301(a)) by the Project Owner and prime contractor.

Prime Contractor Responsibilities:

- Employ the six Good Faith Efforts steps in paragraphs (a) through (e) of § 33.301 if the prime contractor awards subcontracts (§ 33.301(f)).
- Provide **ORF form 6100-2 – DBE Program Subcontractor Participation Form** and **ORF form 6100-3 – DBE Program Subcontractor Performance Form** to each DBE subcontractor as part of the bid conference and prior to opening of the contractor's bid or proposal (§ 33.302(e) and (f)). Complete **ORF form 6100-4 – DBE Program Subcontractor Utilization Form** (§ 33.302(g))
- Submit to recipient with bid package or proposal the completed **ORF form 6100-4**, plus an **ORF form 6100-3** for each DBE subcontractor used in the contractor's bid or proposal (§ 33.302(f) and (g)).
- Pay subcontractors for satisfactory performance no more than 30 days from the prime contractor's receipt of payment from the Project Owner (§ 33.302(a)).
- Notify the recipient in writing prior to prime contractor termination of a DBE subcontractor for convenience (§ 33.302(b)).
- Employ the six good faith efforts described in (§ 33.301) if soliciting a replacement subcontractor after a DBE subcontractor fails to complete work under the subcontract for any reason. (§ 33.302(c)).
- Employ the six good faith efforts described in (§ 33.301) even if the prime contractor has achieved its fair share objectives under subpart D of Part 33. (§33.302(d)).
- Provide Project Owner DBE participation achievements with bid proposal. This includes information necessary for Owner's completion of the **Bidders List (ORF-249)**.

- Maintain records documenting its compliance with the requirements of Title 40 Part 33, including **Bidders List (ORF-249)** and documentation of the good faith efforts (§ 33.301(a)) by the Project Owner and prime contractor.

Subcontractor Responsibilities:

- May submit **ORF form 6100-2 – DBE Subcontractor Participation Form** to Debra Bradford, EPA Region 6 DBE Coordinator (§ 33.302(e)). Submitted if concerns with EPA funded project (e.g. termination, late payment, etc.)
- Must complete **ORF form 6100-3 – DBE Program Subcontractor Performance Form**, and submit it to the prime contractor soliciting services from the subcontractor prior to the opening of bids for the prime contract.

Summary of ORF Forms

ORF Form	Requirement	Provided By	Completed By	Submitted To
6100-2: DBE Subcontractor Participation Form	Project Owners required to have prime contractors provide form to Subcontractors	Prime Contractors to DBE Subcontractors	DBE Subcontractors if concerns with EPA funded project (e.g. termination, late payment, etc)	EPA Region 6 DBE Coordinator, Debora Bradford
6100-3: DBE Subcontractor Performance Form	Project Owners required to have prime contractors provide form to Subcontractors	Prime Contractors to DBE Subcontractors	DBE Subcontractors with Prime Contractor’s Signature. Completed when bidding on a job.	Project Owners as part of a bid or proposal package
6100-4: DBE Subcontractor Utilization Form	Project Owners required to have prime contractors complete the form	Project Owners to Prime Contractors	Prime Contractors to indicate the utilization of a DBE.	Project Owners as part of bid or proposal

APPENDIX B: TITLE 40 PART 33 SUBPART C—GOOD FAITH EFFORTS

§ 33.102 When do the requirements of this part apply?

The requirements of this part apply to procurement under CWSRF financial assistance agreements performed entirely within the United States, whether by a Project Owner or its prime contractor, for construction, equipment, services, and supplies.

§ 33.106 What assurances must CWSRF financial assistance recipients obtain from their contractors?

The recipient must ensure that each procurement contract it awards contains the term and condition specified in Appendix A to this part concerning compliance with the requirements of this part.

§ 33.206 Is there a list of certified MBEs and WBEs?

The Oklahoma Department of Transportation has developed a DBE Directory of Certified Firms. This database can be found at this website: <https://okdot.gob2g.com/Default.asp>. There may be other DBEs outside of this database.

§ 33.301 What does this subpart require?

A recipient, including one exempted from applying the fair share objective requirements by §33.411, is required to make the following good faith efforts whenever procuring construction, equipment, services and supplies under an CWSRF financial assistance agreement, even if it has achieved its fair share objectives under subpart D of this part:

- a) Ensure DBE's are made aware of contracting opportunities fully practicable through outreach and recruitment activities. For State and Local and Government recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.
- b) Make information on forthcoming opportunities available to DBE's, arrange periods for contracts, and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBE's in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.

- c) Consider in the contracting process whether firms competing for large contracts could subcontract with DBE's. For state and local Government recipients, this will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.
- d) Encourage contracting with a consortium of DBE's when a contract is too large for one of these firms to handle individually.
- e) Use the services and assistance of the SBA and the Minority Business Development Agency of the Department of Commerce.
- f) If the prime contractor awards subcontracts, require the prime contractor to take the steps in paragraphs (a) through (e) of this section.

§ 33.302 Are there any additional contract administration requirements?

- a) Project Owners must require its prime contractor to pay its subcontractor for satisfactory performance no more than 30 days from the prime contractor's receipt of payment from the recipient.
- b) Its prime contractor must notify Project Owner in writing prior to any termination of a DBE subcontractor for convenience by the prime contractor.
- c) If a DBE subcontractor fails to complete work under the subcontract for any reason, the recipient must require the prime contractor to employ the six good faith efforts described in § 33.301 if soliciting a replacement subcontractor.
- d) A Project Owner must require its prime contractor to employ the six good faith efforts described in §33.301 even if the prime contractor has achieved its fair share objectives under §33.301 subpart D above.
- e) A recipient must require its prime contractor to provide **ORF Form 6100-2**—DBE Program Subcontractor Participation Form to all of its DBE subcontractors. **ORF Form 6100-2** gives a DBE subcontractor the opportunity to describe the work the DBE subcontractor received from the prime contractor, how much the DBE subcontractor was paid and any other concerns the DBE subcontractor might have, for example reasons why the DBE subcontractor believes it was terminated by the prime contractor. DBE subcontractors may send completed copies of **ORF Form 6100-2** directly to the appropriate EPA DBE Coordinator.
- f) A recipient must require its prime contractor to have its DBE subcontractors complete **ORF Form 6100-3**—DBE Program Subcontractor Performance Form. A recipient must then require its prime contractor to include all completed forms as part of the prime contractor's bid or proposal package.
- g) A recipient must require its prime contractor to complete and submit **ORF Form 6100-4**—DBE Program Subcontractor Utilization Form as part of the prime contractor's bid or proposal package.

- h) Copies of **ORF Form 6100-2**—DBE Program Subcontractor Participation Form, **ORF Form 6100-3**—DBE Program Subcontractor Performance Form and **ORF Form 6100-4**—DBE Program Subcontractor Utilization Form may be obtained from EPA OSDBU's Home Page on the Internet or directly from EPA OSDBU.
- i) A recipient must ensure that each procurement contract it awards contains the term and condition specified in the Appendix A concerning compliance with the requirements of this part. A recipient must also ensure that this term and condition is included in each procurement contract awarded by an entity receiving an identified loan under a financial assistance agreement to capitalize a revolving loan fund.

§ 33.410 Can a recipient be penalized for failing to meet its fair share objectives?

A recipient cannot be penalized, or treated by EPA as being in noncompliance with this subpart, solely because it's MBE or WBE participation does not meet its applicable fair share objective. However, EPA may take remedial action under § 33.105 for a recipient's failure to comply with other provisions of this part, including, but not limited to, the good faith efforts requirements described in subpart C of this part.

Source: Federal Requirements and Contract Provisions for Special Appropriation Act Projects, US Environmental Protection Agency, Region III, June 2008

**APPENDIX C: RESOURCE LISTING CONTACT INFORMATION FOR
UTILIZATION OF MINORITY AND WOMEN'S BUSINESS ENTERPRISES**

Resource Listing	Contact Information	Website
<p>U.S. Small Business Administration (SBA) In addition to the national office, the SBA has local district and regional offices to assist small businesses in contracting with the public and private sector.</p>	<p>US Small Business Administration 409 3rd St, SW Washington DC 20416 Phone: 800-827-5722</p>	<p>https://www.sba.gov/</p>
<p>U. S. Small Business Administration (SBA) - OK. District Office</p>	<p>301 NW 6th St. Oklahoma City, OK 73102 Phone: 405.609.0800</p>	<p>https://www.sba.gov/offices/district/ok/oklahoma-city</p>
<p>Minority Business Development Administration (MBDA): The MBDA is an agency within the U.S. Dept. of Commerce, created to foster the development and growth of minority businesses in the U.S. and coordinates resources in the public and private sectors to help MBEs.</p>	<p>1401 Constitution Ave NW Washington, D.C. 20230 Email: support@mbda.gov Phone: (202) 482-2000</p>	<p>http://www.mbda.gov/</p>
<p>Standard Industrial Classification Codes (SIC) or North American Industry Classification System (NAICS) codes visit the websites.</p>	<p>U.S. Bureau of Labor Statistics Postal Square Building, 2 Massachusetts Ave. NE Washington, DC 20212-0001 Phone: 1-202-691-5200</p>	<p>http://www.bls.gov/iag/tgs/iag_index_naics.htm</p>
<p>Oklahoma Department of Transportation (ODOT) and the Minority/Disadvantaged Business Enterprise (ODOT – MBE/DBE). Project Owners and bidders may locate qualified M/WBE's through the MBE/WBE Directory</p>	<p>200 NE 21st Street Oklahoma City, OK 73105 Phone: 405.521.2082</p>	<p>https://okdot.gob2g.com/Default.asp</p>

<p>US EPA Office of Small and Disadvantaged Business Utilization (OSDBU): advocates and advances the business, regulatory, and environmental compliance concerns of small and socio-economically disadvantaged businesses. The Small Business Vendor Profile System contains information of number of small and disadvantaged companies registered with OSDBU.</p>	<p>USEPA Office of Small Programs 1200 Pennsylvania Ave. NW Mail Code 1230T Washington, D.C. 20460 Phone: 202 566-2075</p>	<p>http://cfpub.epa.gov/sbvps/</p> <p>Select “search the OSBP Registry” and click on the search criteria of interest (ethnicity, size, SIC, etc.)</p>
<p>National Black Chamber of Commerce</p>	<p>4400 Jenifer St NW #331, Washington, DC 20015 Phone: 202 466-6888 Fax: 202 466-4918 Email: info@nationalbcc.org</p>	<p>http://www.nationalbcc.org</p>
<p>U.S. Hispanic Chamber of Commerce</p>	<p>424 K St NW #401, Washington, DC 20005 Phone: (202) 842-1212</p>	<p>http://www.usfcc.com</p>
<p>National Association of Minority Contractors (NAMC)</p>	<p>910 17th Street, NW, Suite 413 Washington, DC 20006 Phone: 202.296.1600 info@namcnational.org</p>	<p>http://namcnational.org/</p>
<p>National Association of Women’s Business Owners (NAWBO)</p>	<p>601 Pennsylvania Ave NW South Building, Ste 900 Washington, DC 20004 Phone: 800-556-2926 Fax: 202-403-3788</p>	<p>www.nawbo.org</p>
<p>National Minority Supplier Development Council, Inc. (NMSDC)</p>	<p>1359 Broadway, 10th Floor, Suite 1000 New York, NY 10018 Phone: (212) 944-2430 Fax: (212) 719-9611</p>	<p>http://www.nmsdc.org/</p>

<p>Native American Development Corporation (NADC) - provides technical assistance, financial lending opportunities, and champions small businesses</p>	<p>17 N. 26th St. Billings, MT 59101 Phone: (406) 259-3804 Fax: (406) 259-4569 Email: nadcptac@nadc-nabn.org</p>	<p>http://www.nadc-nabn.org/</p>
<p>City of Tulsa - Human Rights Department Maintains a list of Minority and Female business Enterprises that are certified through the “building Resources in Developing and Growing Enterprises</p>	<p>175 E. 2nd St. Tulsa, OK. 74103 Phone: (918) 596-7818</p>	<p>https://www.cityoftulsa.org/government/departments/resilience-and-equity/small-business-enterprise-program/ Click on the ‘member list’</p>
<p>Southwest Minority Supplier Development Council: Maintains lists of certified Minority Business Enterprises in Oklahoma</p>	<p>7301 Broadway Ext Ste 224, OKC, OK 73116 Phone: (405) 767-9900</p>	<p>http://www.smsdc.org/</p>
<p>National Association of Women in Construction (NAWIC)</p>	<p>327 S. Adams Street Fort Worth, TX 76104 Phone: 800-552-3506 817.877.5551 Fax: 817.877.0324</p>	<p>http://www.nawic.org/</p>
<p>Oklahoma Department of Central Services Maintains a list of MBE/WBEs</p>	<p>OMES Central Purchasing 5005 N. Lincoln Blvd., Suite 300 OKC, OK 73105 Phone: 405-522-0955</p>	<p>https://omes.ok.gov/services/purchasing</p>
<p>Bureau of Indian Affairs - Maintains a list of Native American Contractors and Suppliers by Trade</p>	<p>P.O. Box 368 (1 Mile North on Hwy 281) Anadarko, OK 73005 Phone: (405) 247-6673 Fax: (405) 247-5611</p>	<p>https://www.bia.gov/as-ia/ieed/division-economic-development/native-american-business-development</p>
<p>Oklahoma Department of Commerce Certification Programs and information</p>	<p>900 N Stiles Ave. Oklahoma City, OK 73104 Phone: (405) 815-6552 Toll-Free: (800) 879-6552</p>	<p>https://okcommerce.gov/business/certifications/</p>
<p>Cherokee Nation Tribal Employment Rights Office - Maintains a directory of Indian-owned businesses</p>	<p>Cherokee Nation TERO Dept. P.O. Box 948 Tahlequah, OK 74465 Phone: (918) 453-5334 or Toll Free: 800-256-0671 ext 5334</p>	<p>http://cherokeetero.com/</p>



SRF Project Number

United States Environmental Protection Agency
Washington, D.C. 20460

**Certification Regarding
Debarment, Suspension, and Other Responsibility Matters**

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- (b) Have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public: (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
- (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to 5 years, or both.

Typed Name and Title of Authorized Representative

Signature of Authorized Representative

Date

I am unable to certify to the above statements. May explanation is attached.

**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Participation Form**

OWRB Financial Assistance Agreement recipients must require prime contractors to provide this form to their DBE¹ subcontractors². This form gives a DBE subcontractor the opportunity to describe work received and/or report any concerns regarding the project.

Subcontractor Name		Project Name	
Bid Proposal #		Point of Contact	
Address			
Phone		e-mail	
Prime Contractor Name		Funding Entity	
		Oklahoma Water Resources Board	

Contract Item Number	Description of Work Received from the Prime Contractor Involving Construction, Services, Equipment or Supplies	Amount Received from Prime Contractor

¹ A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.205 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Performance Form**

This form is intended to capture the DBE¹ subcontractor's² description of work to be performed and the price of the work submitted to the prime contractor. OWRB Financial Assistance Agreement Recipients must require prime contractors to provide this form to their DBE subcontractors.

Subcontractor Name		Project Name	
Bid Proposal #		Point of Contact	
Address			
Phone		e-mail	
Prime Contractor Name		Funding Entity Oklahoma Water Resources Board	

Contract Item Number	Description of Work Received from the Prime Contractor Involving Construction, Services, Equipment or Supplies	Price of Work Submitted to the Prime Contractor
DBE Certified by: <input type="checkbox"/> DOT <input type="checkbox"/> SBA <input type="checkbox"/> Other: _____ Meets or exceeds EPA certification standards? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		

1 A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.205 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

2 Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware of that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor signature	Print Name
Title	Date

Subcontractor signature	Print Name
Title	Date

**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Utilization form**

This form is intended to capture the prime contractor's actual and/or anticipated use of identified certified DBE¹ subcontractors² and the estimated dollar amount of each subcontract. OWRB Financial Assistance Agreement recipients must require their prime contractors to complete this form and include it in the bid or proposal package. Prime contractors should also maintain a copy of this form on file.

Prime Contractor Name _____		Project Name _____	
Bid Proposal # _____		Point of Contact _____	
Address _____			
Phone _____		e-mail _____	
Funding Entity Oklahoma Water Resources Board		I have identified potential DBE certified subcontractors: <input type="checkbox"/> YES <input type="checkbox"/> NO	
If yes, please complete the table below. If no, please explain: _____			
Subcontractor Name/ Company Name	Address/Phone/Email	Estimated \$ Amount	Currently Certified?

1 A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.205 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

2 Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware of that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor signature	Print Name
Title	Date

BIDDERS LIST

To be completed by Project Owner for all bidding Prime Contractors & Subcontractors.
 (List of all firms that bid or quote on Prime Contracts and Subcontracts on the project, including Services and Supplies)

Project Name: _____ CWSRF Loan Number: ORF-19-0001-CW

Company Name:	
Address:	
Contact Name:	
Phone:	
Email:	
Quote/Bid Amount (\$)	
Date:	
Utilized: Y <input type="checkbox"/> N <input type="checkbox"/>	If utilized and >\$10,000, ORF-212a form is required (all subcontractors and suppliers).
DBE: Y <input type="checkbox"/> N <input type="checkbox"/> If <u>yes</u> , MBE or WBE? _____	Check one: Construction <input type="checkbox"/> Equipment <input type="checkbox"/> Services <input type="checkbox"/> Supplies <input type="checkbox"/> ORF 6100-3 form is required for all DBEs that bid/quote, even if not utilized. Submit with Bidders List. If utilized submit the following with Bidders List : <ul style="list-style-type: none"> • A copy of the companies MBE or WBE certificate is required. • ORF 6100-4 form is also required.

Company Name:	
Address:	
Contact Name:	
Phone:	
Email:	
Quote/Bid Amount (\$)	
Date:	
Utilized: Y <input type="checkbox"/> N <input type="checkbox"/>	If utilized and >\$10,000, ORF-212a form is required (all subcontractors and suppliers).
DBE: Y <input type="checkbox"/> N <input type="checkbox"/> If <u>yes</u> , MBE or WBE? _____	Check one: Construction <input type="checkbox"/> Equipment <input type="checkbox"/> Services <input type="checkbox"/> Supplies <input type="checkbox"/> ORF 6100-3 form is required for all DBEs that bid/quote, even if not utilized. Submit with Bidders List. If utilized submit the following with Bidders List : <ul style="list-style-type: none"> • A copy of the companies MBE or WBE certificate is required. • ORF 6100-4 form is also required.

Company Name:	
Address:	
Contact Name:	
Phone:	
Email:	
Quote/Bid Amount (\$)	
Date:	
Utilized: Y <input type="checkbox"/> N <input type="checkbox"/>	If utilized and >\$10,000, ORF-212a form is required (all subcontractors and suppliers).
DBE: Y <input type="checkbox"/> N <input type="checkbox"/> If <u>yes</u> , MBE or WBE? _____	Check one: Construction <input type="checkbox"/> Equipment <input type="checkbox"/> Services <input type="checkbox"/> Supplies <input type="checkbox"/> ORF 6100-3 form is required for all DBEs that bid/quote, even if not utilized. Submit with Bidders List. If utilized submit the following with Bidders List : <ul style="list-style-type: none"> • A copy of the companies MBE or WBE certificate is required. • ORF 6100-4 form is also required.

*Copy this form if additional pages are required.

SAMS REQUIREMENTS FOR CONTRACTORS AND SUBCONTRACTORS

DUNS NUMBER

This is a nine-digit number in a data universal numbering system that identifies business entities on a location-specific basis. A DUNS number is mandatory to receive a federal contract. If you do not have a DUNS number you can register with Dun and Bradstreet at <http://fedgov.dnb.com/webform> (can take up to 30 days to complete) or by calling 866-705-5711 (takes 10-15 minutes to complete).

CONTRACTOR NAME

DUNN'S NUMBER

SYSTEM FOR AWARD MANAGEMENT (SAM)

The System for Award Management (SAM) includes information regarding entities debarred, suspended, proposed for debarment, excluded or disqualified under the non-procurement common rule, or otherwise declared ineligible from receiving Federal contracts, certain subcontracts, and certain Federal assistance and benefits. In order to be eligible to receive a contract, applicants must register on SAM. Registration must be renewed and revalidated at least every 12 months. To register go to www.sam.gov and create an account by clicking the "Create User Account" and follow the directions. You will need your DUNS number and about 30 minutes to complete the process. If you need help call 1-866-606-8220. Registration is FREE.

**PROSPECTIVE PRIME CONTRACTOR'S
(BIDDER) STATEMENT ABOUT
EQUAL OPPORTUNITY CLAUSE**

- I have participated in previous contract(s) or subcontract(s) subject to the equal opportunity clause under Executive Orders 11246 and 11375 or preceding Executive Orders 10925 and 11114. I have filed all reports due under the requirements contained in 40 CFR, Part C, 8.11.
- I have not participated in previous contract(s) subject to the equal opportunity clause under Executive Orders 11246 and 11375 or preceding Executive Orders 10925 and 11114.
- I will obtain a similar statement from any proposed subcontractor(s), when appropriate.

(Signature and Title of Prospective Prime or Subcontractor's Representative)

(Printed or typed Name and Title of Prospective Prime or Subcontractor's Representative)

(Name and address of Prospective Prime or Subcontractor)

**PROSPECTIVE PRIME CONTRACTOR'S
(BIDDER) CERTIFICATION OF
NONSEGREGATED FACILITIES**

I hereby certify that I do not and will not maintain any facilities provided for my employees in a segregated manner, or permit my employees to perform their services at any location under my control where segregated facilities are maintained; and that I will obtain a similar certification prior to the award of any subcontract exceeding \$10,000 which is not exempted from the equal opportunity clause.

(Signature and Title of Prospective Prime Contractor's Representative)

(Printed or typed Name and Title of Prospective Prime Contractor's Representative)

(Name and address of Prospective Prime Contractor)

**SUB-CONTRACTOR'S
CERTIFICATION OF NONSEGREGATED FACILITIES
AND
INCORPORATION OF EQUAL OPPORTUNITY CLAUSES**

I hereby certify that I do not and will not maintain any facilities provided for my employees in a segregated manner, or permit my employees to perform their services at any location under my control where segregated facilities are maintained; and that I will obtain a similar certification prior to the award of any federally assisted subcontract exceeding \$10,000 which is not exempted from the equal opportunity clause;

In addition, I hereby incorporate into my subagreement with the prime contractor the Equal Opportunity Clauses 1-7 as set forth in Executive Order No. 11246 and issued by the Secretary of Labor in Title 41 CFR Chapter 60-1.4 of the federal rules and regulations.

(Business Name)

(Printed or typed Name and Title of Sub-contractor's Representative)

(Signature and Title of Sub-contractor's Representative)

Note: EEO clauses are included in ORF-185 in the contract specifications

AFFIDAVITS

State of _____ ss.
County of _____

_____, of lawful age, being first duly sworn, on oath says that (s)he is the agent authorized by the bidder to submit the attached bid.

Non-Collusion

Affiant further states that the bidder has not been a party to any collusion among bidders in restraint of freedom of competition by agreement to bid at a fixed price or to refrain from bidding; or with any government official or employee as to quantity, quality, or price in the prospective contract, or any other terms of said prospective contract; or in any discussions between bidders and any government official concerning exchange of money or other value for special consideration in the letting of a contract; that the bidder/contractor had not paid, given or donated or agreed to pay, give or donate to any officer or employee of the _____ City of Tulsa _____ (or other entity) any money or other thing of value, either directly or indirectly in the procurement of a contract or pursuant to this bid.

Business Relationships

Affiant further states that the nature of any partnership, joint venture, or other business relationship presently in effect or which existed within one (1) year prior to the date of this statement with the architect, engineer, or other party to the project is as follows:

_____.

Affiant further states that any such business relationship presently in effect or which existed within one (1) year prior to the date of this statement between any officer or director of the bidding company and any officer or director of the architectural or engineering firm or other party to the project is as follows:

_____.

Affiant further states that the names of all persons having any such business relationships and the positions they hold with their respective companies or firms are as follows:

_____.

If none of the business relationship herein above mentioned exists, affiant should so state.

Subscribed and sworn to before me this ___ day of _____, 20__.

Notary Public Signature

My Commission Expires: _____

CERTIFICATE OF APPROVAL OF CONTRACTS AND BONDS BY LOCAL ATTORNEY

I, the undersigned _____,
the duly authorized and acting legal representative of the _____ City of Tulsa _____,
after careful examination of the Contract between this Entity and
_____, and the surety bonds given by the contractor in
connection with the performance of said contract, do hereby certify that:

1. Each of the aforesaid agreements has been duly executed by the proper parties thereto, acting through their duly authorized representatives.
2. Said representatives have full power and authority to execute said agreements on behalf of the respective parties named therein.
3. The foregoing contract and surety bonds, as applicable, constitute valid and legally binding obligations upon the parties executing the same in accordance with the terms, conditions, and provisions thereof.

Dated this ___ day of _____, 20__.

Attorney's signature

AGREEMENT

This Agreement, made this ___ day of _____, 20___ between _____ City of Tulsa
(hereinafter called the Owner) and _____ (hereinafter called the Contractor).

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

1. The Contractor will commence and complete the work for:

ES 2025-07 Turley South Interceptor Rehabilitation Phase I ORF-19-0001-CW

2. The Contractor will furnish all of the materials, supplies, tools, equipment, labor, and other services necessary for the construction and completion of the project described herein.

3. The Contractor will commence the work required by the Contract documents within ~~10~~ calendar days after the date of the Notice to Proceed and will complete the same within 365 calendar days unless the period for completion is extended otherwise.

4. The Contractor agrees to perform all the work described in the Contract documents and comply with the terms therein for the sum of \$_____ or as shown in the Bid Schedule.

5. The term "Contract documents" means and includes the following:

- | | |
|--------------------------------------|------------------------------|
| (A) Advertisement for Bids | (I) Standard Requirements |
| (B) Information for Bidders | (J) Statutory Bond |
| (C) Bid Proposal | (K) Performance Bond |
| (D) Bid Schedule | (L) Maintenance Bond |
| (E) Business Relationships Affidavit | (M) Certificate of Insurance |
| (F) Non-collusion Affidavit | (N) Notice of Award |
| (G) Bid Bond | (O) Notice to Proceed |
| (H) Agreement | (P) Change Order |
- (Q) Drawings prepared by _____.
Numbers _____ through _____, and dated ___/___/___.
- (R) Specifications prepared by _____, dated ___/___/___.
- (S) ADDENDA:
No. _____, dated ___/___/___ No. _____, dated ___/___/___
No. _____, dated ___/___/___ No. _____, dated ___/___/___

6. The Owner will pay to the Contractor in the manner and at such times as set forth in the Standard Requirements such amounts as required by the Contract documents.

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

8. It is understood that the following are also required of the Contractor in performance of this contract:

- a. Liquidated damages for failure to complete the work within the time specified shall be assessed at the rate of \$ 2500.00 per day for each additional calendar day until the work is completed.
- b. Contractor shall comply with the Underground Facilities Damage Prevention Act (63 O.S. 42.1 et seq.).

9. The Contractor hereby represents and warrants to and for the benefit of the Owner that:

- a. The Contractor has reviewed the grant conditions and all the other conditions in the Supplemental Conditions ORF-185.
- b. The Contractor has reviewed and understands the Davis Bacon Act and prevailing wage rate requirements and will provide any further verified information, certification or assurance of compliance as may be required by the Owner.
- c. The Contractor acknowledges to and for the benefit of the Owner and the State of Oklahoma (the "State") that it understands the goods and services under this Agreement are being funded with monies made available by the Clean Water State Revolving Fund and/or Drinking Water State Revolving Fund and such law contains provisions commonly known as "American Iron and Steel;" that requires all of the iron and steel products used in the project to be produced in the United States ("American Iron and Steel Requirement") including iron and steel products provided by the Contractor pursuant to this Agreement.
- d. The Contractor hereby represents and warrants to and for the benefit of the Owner and the State that (a) the Contractor has reviewed and understands the American Iron and Steel Requirement, (b) all of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement, unless a waiver of the requirement is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary

to support a waiver of the American Iron and Steel Requirement, as may be requested by the Owner or the State.

- e. The Contractor has registered for the System for Award Management (SAM) that is required for all SRF program projects. SAM replaces Central Contractor Registration/Federal Agency Registration, Online Representations and Certifications Application, and Excluded Parties List System. Applicants and awardees are required to complete a one-time free registration to provide basic information relevant to procurement and financial transactions. Registrants must retain an active status to be eligible for SRF projects. New applicants and awardees can go to SAM.gov to complete the registration process.

- f. Notwithstanding any other provision of this Agreement, any failure to comply with this paragraph by the Contractor shall permit the Owner or the State to recover as damages against the Contractor any loss, expense, or cost (including without limitation attorney's fees) incurred by the Owner or the State resulting from any such failure (including without limitation any impairment or loss of funding, whether in whole or in part, from the State or any damages owed to the State by the Purchaser). While the Contractor has no direct contractual privity with the State, as a lender to the Owner for the funding of its project, the Owner and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

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

Owner's Authorized Representative	Title	Signature	/ / Date
-----------------------------------	-------	-----------	-------------

Attested by	Title	Signature	/ / Date
-------------	-------	-----------	-------------

Contractor's Authorized Representative	Title	Signature	/ / Date
--	-------	-----------	-------------

Attested by	Title	Signature	/ / Date
-------------	-------	-----------	-------------

NOTICE TO PROCEED

Date: ___/___/___

Project: _____

Loan#: ORF- 19 - 0001 -CW

Notice is hereby given to _____ to commence work on the above
Contractor
referenced project on or before ___/___/_____. In accordance with the Agreement dated
___/___/_____, you are to complete the work within 365 consecutive calendar days. The date
of completion of all work is ___/___/_____.

Owner's Authorized Representative signature

ACCEPTANCE OF NOTICE

Receipt of the above Notice to Proceed is hereby acknowledged by _____,
Contractor's Representative name

Authorized Representative of _____.
Contractor

Contractor's Authorized Representative signature

___/___/___
Date

ELECTRONIC BID PROPOSAL INSTRUCTIONS - EXCEL SPREADSHEET
PROJECT NO. ES 2025-07
TURLEY SOUTH INTERCEPTOR REHABILITATION, PHASE 1

Please read the following instructions carefully.

1. After opening this file re-save it as your company's name.
2. Open the BID FORM Sheet from the tabs below.
3. Input the unit price of the appropriate pay item in the cells highlighted in blue.
4. Review all data input and check calculations to ensure accuracy of Bid.
5. Print 1hardcopy of the "PROPOSAL" tab, BID FORM and the "SIGNATURE PAGE" tab.
6. Complete and sign the "Signature Page" document.
6. Submit hardcopy and electronic disk with Contract Documents and Specifications for Bid opening date.

LEGEND

- \$ 1.00 Cells Requiring Data Input.
- \$ 1.00 Internal Data Transfer.
- \$ 2.00 Calculated Results.

AGREEMENT FOR USING ELECTRONIC BID PROPOSAL

By and Between: RJN Group, Inc., (ENGINEER) and RECIPIENT. The enclosed electronic media is provided pursuant to your request and is for your limited use in connection with your submittal of Bid Proposal for TMUA Project No. ES 2025-07. In no event shall the information be used for any other purpose or be released to third parties without the written consent of the ENGINEER. In the event of a discrepancy between the hard copy and this electronic media at delivery or in the future, the hard copy shall govern. ENGINEER hereby disclaims any and all liability for the consequences from use of the electronic media and makes no warranty or guarantee of accuracy. RECIPIENT shall assume full responsibility for the uses and consequences of the electronic media. It is agreed that ENGINEER has and retains ownership of the electronic media. ENGINEER does not warrant or guarantee that the electronic data is compatible with RECIPIENT'S computer hardware or software, and ENGINEER'S responsibility for the electronic media is limited to replacement of defective media for a period of thirty (30) days after delivery to RECIPIENT. !!! By opening and using this FILE, You AGREE to these TERMS AND CONDITIONS!!!

**PROPOSAL FOR
TURLEY SOUTH INTERCEPTOR REHABILITATION, PHASE 1
TMUA PROJECT NO. ES 2025-07**

TO: TULSA METROPOLITAN UTILITY AUTHORITY
CITY OF TULSA, OKLAHOMA

THE UNDERSIGNED BIDDER, having carefully examined the drawings, specifications, and other Contract Documents of the above project presently on file in the City Clerk, City of Tulsa Oklahoma:

CERTIFIES THAT he has inspected the site of the proposed work and has full knowledge of the extent and character of the work involved, construction difficulties that may be encountered, and materials necessary for construction, class and type of excavation, and all other factors affecting or which may be affected by the specified work; and

CERTIFIES THAT he has not entered into collusion with any other bidder or prospective bidder relative to the project and/or bid: and

HEREBY PROPOSES: to enter into a contract to provide all necessary labor, materials, equipment and tools to completely construct and finish all the work required by the Contract Documents hereto attached and other documents referred to therein: to complete said work within 365 calendar days after the work order is issued; and to accept in full payment therefore the amount set forth below for all work actually performed as computed by the Engineer as set forth in the Contract.

Basis of Award

IT SHOULD BE NOTED THAT THE LOWEST RESPONSIVE BID SHALL BE DETERMINED BY THE TOTAL BASE BID PLUS ADDITIVE ALTERNATES NO. 1. THE ITEMS IN ADDITIVE ALTERNATES NO. 1 MAY OR MAY NOT BE INCLUDED IN THE CONTRACT AWARD AT THE SOLE DISCRETION OF THE CITY OF TULSA. ANY PROPOSAL SUBMITTED WITH THE ADDITIVE ALTERNATE NO. 1 INCOMPLETE SHALL BE CONSIDERED NON-RESPONSIVE

Note: - Item numbers omitted are not a part of the Contract.

PROPOSAL FOR
TURLEY SOUTH INTERCEPTOR REHABILITATION, PHASE 1
TMUA ES 2025-07

BASE BID						
BID ITEM	SPEC NO.	DESCRIPTION	UNIT	QTY	DATA INPUT UNIT PRICE	TOTAL EACH ITEM
1	331	WATER TABLE CRADLE FOR 24-INCH DIAMETER PIPE	LF	300		
2	334	CONSTRUCTION AS-BUILTS	LS	1		
3	335	CONTRACTOR'S QUALITY CONTROL	LS	1		
4	400	MOBILIZATION	EA	1		
5	400	PHOTOGRAPHIC DOCUMENTATION	EA	1		
6	402	SOD REPLACEMENT	SY	4,300		
7	402	FENCE REMOVAL & REPLACEMENT	LF	10		
8	402	GRAVEL PAVEMENT REMOVAL & REPLACEMENT	SY	5		
9	405, SP-2	8-INCH DIAMETER OPEN CUT REPLACEMENT, SDR 26 ASTM D3034 PVC	LF	29		
10	405, SP-1,2,8	24-INCH DIAMETER OPEN CUT REPLACEMENT, PS 75 ASTM D3034 PVC OR SN 72 FRP	LF	1,893		
11	405	SERVICE RECONNECTIONS	EA	1		
12	405	SERVICE LINE REPLACEMENT	LF	20		
13	416, SP-3,4,6,7	COMPLETE MANHOLE REPLACEMENT STD. 6-FOOT DIAMETER FRP OR TEE BASE MANHOLE (0-6 FOOT DEPTH)	EA	5		
14	416, SP-3,4,6,7	EXTRA DEPTH OVER 6-FOOT FOR STD. 6-FOOT DIAMETER FRP OR TEE BASE MANHOLE	VF	22		
15	416, SP-5,6,7	INSTALL 54-INCH DIAMETER FRP MANHOLE LINER (0-6 FOOT DEPTH)	EA	9		
16	416, SP-5,6,7	EXTRA DEPTH OVER 6-FOOT FOR FRP MANHOLE LINER	VF	26		
17	417	COMPLETE LAMPHOLE REPLACEMENT 8-INCH DIAMETER PVC	EA	1		
18	419	MANHOLE REHABILITATION COVER, BENCH AND INVERT REHABILITATION (TYPE Gh REPAIR)	EA	1		
19	421	MANHOLE REHABILITATION EPOXY COATING, (TYPE Gs REPAIR)	SF	1,150		
20	ODOT 220	SWPPP DOCUMENTATION AND MANAGEMENT	LS	1		
21	ODOT 880 (J)	CONSTRUCTION TRAFFIC CONTROL	CD	365		
22	SP-9	OWNERS ALLOWANCE	ALLOW	100,000	\$1.00	\$100,000.00
					BASE BID TOTAL	\$100,000.00
ADDITIVE ALTERNATE NO. 1						
BID ITEM	SPEC NO.	DESCRIPTION	UNIT	QTY	DATA INPUT UNIT PRICE	TOTAL EACH ITEM
23	410, SP-12	27-INCH DIAMETER CURED-IN-PLACE-PIPE COMPLETE IN PLACE	LF	1,480		\$ -
24	415	PRE-CONSTRUCTION TELEVISION INSPECTION OF SANITARY SEWER	LF	1,480		\$ -
					ADDITIVE ALTERNATE NO. 1 TOTAL	\$ -
					BASE BID + ADDITIVE ALTERNATE NO. 1 TOTAL	\$ 100,000.00

BASE BID (ITEMS 1-22)

\$100,000.00

ADDITIVE ALTERNATE NO. 1 (ITEMS 23-24)

\$0.00

BASE BID PLUS ADDITIVE ALTERNATE

\$100,000.00

Enclosed is a () Bidder's Surety Bond, () Certified Check, () Cashier's Check for

_____ %

which the City of Tulsa may retain or recover as liquidated damages in the event that the undersigned fails to enter into contract for the work covered by this proposal., provided the Contract is awarded to the undersigned within thirty (30) days, or within ninety (90) days if Federal funds are utilized, from the date fixed for opening of bids and the undersigned fails to execute said Contract and furnish the required bonds and other requirements as called for in these Contract Documents within thirty (30) days after award of Contract.

Dated at Tulsa, Oklahoma, this _____ day of _____, 20__.

Respectfully submitted,

(Complete legal name of company)

(State of Organization)

By:

ATTEST:

Title:

Title: Corporate Secretary

Printed Name:

Printed Name:

(SEAL)

Address: _____

Telephone Number: _____

Fax Number: _____

By signing above the bidder acknowledges receipt of the following Addenda (give number and date of each):

This form is made available for example purposes only and is not intended to be legal advice nor intended to be relied upon in lieu of consultation with an attorney.

Certificate of Secretary

The undersigned _____ (Assistant) Secretary of _____, a _____ corporation, (the "Corporation") hereby certifies that the following is a true and correct copy of a Resolution duly adopted by the Board of Directors of the Corporation on the _____ day of _____, 20____.

RESOLVED, that _____ is authorized to execute and enter into bids, contracts, bonds, affidavits and any ancillary documents, on behalf of the Corporation.

The undersigned further certifies that this Resolution is in full force and effect as of the date of this Certificate and has not been amended, modified, revoked or rescinded.

IN WITNESS WHEREOF, I have executed this Certificate this ____ day of _____, 20__.

(Signature)

Printed Name

(Assistant) Secretary

This form is made available for example purposes only and is not intended to be legal advice nor intended to be relied upon in lieu of consultation with an attorney.

Consent of Members

The undersigned, being all of the Members of [Name of Company], LLC, an Oklahoma Limited Liability Company, hereby authorize, consent to, approve and ratify the execution by _____ on behalf of [Name of Company], LLC of bid proposals, contracts, affidavits and related documents in connection with [Name of Project] of the City of Tulsa.

DATED, this ____ day of _____, 20__.

Name printed: _____

Name Printed: _____

[ADD ADDITIONAL LINES FOR ADDITIONAL MEMBERS]



**TMUA: Tulsa Metropolitan
Utility Authority**

(DATE)

(Company Name)

(Address)

(City, State, Zip Code)

RE: Tulsa Metropolitan Utility Authority Project No.

TO WHOM IT MAY CONCERN:

The vendor of materials and supplies under the above referenced contract is hereby authorized to invoice the Tulsa Metropolitan Utility Authority (TMUA), 175 E. 2nd Street, Suite 1300, Tulsa, Oklahoma 74107, for all materials and supplies purchased under the above contract, noting any contract discount and omitting all sales taxes. All invoices shall include the contract number and the name of the contractor ordering the materials or supplies.

Upon receipt the Tulsa Metropolitan Utility Authority will pay the invoice, in accordance with its terms and conditions, as money is due the Contractor per referenced contract.

This letter of authorization expires Date.

Sincerely,

Eric Lee,
Director of Water and Sewer

MV:cc

EXTENSION OF TIME REQUEST
(to be submitted with each partial payment application)

DATE: _____

CONTRACTOR: _____

ADDRESS: _____

CONTRACT NO.: _____

PROJECT NO.: _____

DESCRIPTION: _____

ARE THERE ANY CHANGES TO YOUR SBE UTILIZATION? _____ YES _____ NO

IF YES, GIVE REASON AND ATTACH CHANGE REQUEST FORM (SBE-4): _____

EXTENSION OF CONTRACT TIME REQUIRED: _____ YES _____ NO

TOTAL OF EXTENSION TIME REQUESTED: _____

IF YES GIVE REASON: _____

SIGNATURE - CONTRACTOR

CONSULTING ENGINEER OR DEPARTMENT OF PUBLIC WORKS STAFF RECOMMENDATIONS

APPROVED: _____

REJECTED: _____

REASON: _____

SIGNATURE

DATE

ACTION WILL BE TAKEN WITHIN 30 DAYS FROM RECEIPT OF REQUEST

ETR-1

CONTRACT FOR CONSTRUCTION OF PUBLIC IMPROVEMENTS**TULSA, OKLAHOMA**

THIS CONTRACT made and entered into this _____ day of _____, 2026, by and between __, an (list state)_____ (Corporation or Limited Liability Company) of __, Oklahoma hereinafter called the "CONTRACTOR", and the TULSA METROPOLITAN UTILITY AUTHORITY, Tulsa, Oklahoma, a Public Trust, herein called the "Authority".

WITNESSETH:

WHEREAS, the Authority has caused to be prepared the necessary Drawings, Specifications, and other Contract Documents for the public improvements herein described, and has invited bids for the construction thereof in accordance with the terms of the Contract, all of which is hereby designated as:

**PROJECT NO. ES 2025-07 TURLEY SOUTH INTERCEPTOR REHABILITATION
PHASE I ORF-19-0001-CW**

WHEREAS, the Contractor, in response to the Advertisement, has submitted to the Authority, in the manner and at the time specified, a sealed bid in accordance with the terms of this Contract; and,

WHEREAS, the Authority, in the manner prescribed by law, has publicly opened, examined, and canvassed the bids submitted, and has determined the above named Contractor to be the lowest responsible bidder for the work and has duly awarded to the said Contractor therefore, for the sum or sums named in the Contractor's bid, a copy of the Bid Form being attached to and made a part of this Contract;

NOW, THEREFORE, in consideration of the compensation to be paid to the Contractor and of the mutual agreements and covenants herein contained, the parties to this Contract have agreed and hereby agree, as follows:

ARTICLE I. That the contractor shall (a) furnish all tools, equipment, supplies, superintendence, transportation, and other construction accessories, services, and facilities; (b) furnish all materials, supplies, and equipment specified and required to be incorporated in and form a permanent part of the completed work; (c) provide and perform all necessary labor; and (d) in a good, substantial, and workmanlike manner and in accordance with the requirements, stipulations, provisions and conditions of the Contract as defined in the attached General Conditions, said documents forming the Contract and being as fully a part thereof as if repeated verbatim herein, perform, execute, construct, and complete all work included in and covered by the Authority's official award of this Contract to the said Contractor, such award being based on the acceptance by the Authority of the Contractor's bid, or part thereof, as follows:

**PROJECT NO. ES 2025-07 TURLEY SOUTH INTERCEPTOR REHABILITATION
PHASE I ORF-19-0001-CW**

ARTICLE II. That the Authority shall pay to the Contractor for performance of the work embraced in this Contract, and the Contractor will accept as full compensation therefor, the sum (subject to adjustment as provided by the Contract) of AND /100 Dollars (\$ _____) for all work covered by and included in the Contract award and designated in the foregoing Article I; payments therefore to be made in cash or its equivalent, in the manner provided in the General Conditions.

ARTICLE IIA. All materials and supplies to be purchased under the terms of this contract shall be ordered by the Contractor from the vendor or supplier who shall be directed to invoice the Tulsa Metropolitan Utility Authority direct. The invoice shall reflect any contractor discount and no sales tax shall be added. The invoice will be paid direct by the Tulsa Metropolitan Utility Authority in accordance with the terms and conditions of the invoice (Oklahoma Tax Commission Rules Part 27 Trust Authority 710:65-13-140). The monies paid direct by Tulsa Metropolitan Utility Authority to the vendor or supplier shall be deducted from the total contract price. The Contractor shall accept delivery and be responsible for and shall warrant and hold the Authority harmless for the safety and security of all of the materials and supplies furnished for the project under this contract.

ARTICLE III. That the Contractor shall start work within ten (10) days following the date stipulated in a written order from the Authority to proceed with the work to be performed hereunder, and shall complete the work within the number of consecutive calendar days after the authorized starting date, as stipulated below:

All Work Completed: **365** calendar days

ARTICLE IV. The sworn, notarized statement below shall be signed and notarized before this Contract will become effective.

ARTICLE V. Prior to submitting a final payment request, the Contractor shall furnish a lien waiver certifying that all subcontractors and suppliers have been paid.

ARTICLE VI. If the Contractor has 10 or more full-time employees, and this contract exceeds \$100,000 in total value, Contractor acknowledges and agrees that, in accordance with and pursuant to 21 O.S. 1289.31, Contractor verifies to Authority that: (i) it does not have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association, and (ii) will not discriminate against a firearm entity or firearm trade association during the term of this Contract.

IN WITNESS WHEREOF, the Authority and the Contractor hereto have set their hands and seals, respectively, this _____ day of _____, 2026.

APPROVED AS TO SUBSTANCE:

_____ Date: _____
Director

TULSA METROPOLITAN UTILITY AUTHORITY, a Public Trust

By:

_____ Date: _____
Chairman

ATTEST:

_____ Date: _____
Secretary

APPROVED AS TO FORM:

_____ Date: _____
Attorney for the Trust

CONTRACTOR

By: _____

Print Name: _____

_____ Date: _____ Title _____ Date: _____
Title

ATTEST:

Corporate Secretary

(SEAL)

AFFIDAVIT

STATE OF _____)
)ss
COUNTY OF _____)

_____, of lawful age, being first duly sworn, on oath that (s)he is the agent authorized by the Contractor to submit the above Contract to the Tulsa Metropolitan Utility Authority, Tulsa, Oklahoma.

Signature

SUBSCRIBED AND SWORN to before me this _____ day of _____ 2026.

NOTARY PUBLIC

My Commission Expires:

_____, _____.

City of Tulsa Construction Escalation Process

Step	Contractor Representative(s)	City of Tulsa Representative(s)	Process	Communication / Documentation	Resolution (**)	No Resolution	Typical Time Frame (***)
1.0	Superintendent	Construction Inspector	Field Meeting Request for Information (RFI) may apply	Phone, Text, Email, or RFI / Daily Report	Within Construction Documents	If not resolved within Construction Documents, escalate to 2.0	Same day to 3 days
2.0	Superintendent	Construction Inspector Manager / Construction Inspector	Field Meeting Request for Information (RFI) may apply	Phone, Text, Email, or RFI / Daily Report	Within Construction Documents	If not resolved within Construction Documents, escalate to 3.0	1 day to 3 days
3.0	Project Manager / Superintendent	Construction Manager / Construction Inspector Manager / Construction Inspector Lead Engineer / Project Manager Design Consultant	Contractor submit RFI	Phone, Email, RFI / Daily Report, RFI Log, Progress Mtg	Additional information provided. Potential Allowance Authorization, Extension of Quantities, Change Order, or Other	If not resolved by additional information and within terms of contract, escalate to 4.0	Within 10 calendar days (as ODOT 104.06.B)
4.0	Project Manager / Superintendent	Field Engineering Manager / Construction Manager Lead Engineer / Project Manager Design Consultant	Appeal Construction Manager's Decision	Email, RFI / Daily Report, RFI Log, Progress Mtg	Field Engineering Manager makes determination on appeal. Potential Allowance Authorization, Extension of Quantities, Change Order, or Other	If not resolved by additional information and within terms of contract, escalate to 5.0	Within 10 calendar days (as ODOT 104.06.B)
5.0	Owner / Project Manager / Superintendent	PW Deputy Director and/or other Dept Design Manager / Field Engineering Manager / Construction Manager Lead Engineer / Project Manager Design Consultant	Appeal Field Engineering Manager's Decision	Email, RFI / Daily Report, RFI Log, Progress Mtg	PW Deputy Director and/or other Dept. Design Manager makes determination on appeal. Potential Allowance Authorization, Extension of Quantities, Change Order, or Other	If appeal is not resolved, escalate to 6.0	Within 10 calendar days (as ODOT 104.06.B)
6.0	Owner / Project Manager / Superintendent	Director (*) / PW Deputy Director and/or other Dept Design Manager / Field Engineering Manager / Construction Manager Lead Engineer / Project Manager Design Consultant	Appeal PW Deputy Director's and/or other Dept. Design Manager's Decision	Email, RFI / Daily Report, RFI Log, Progress Mtg	Director makes determination on appeal. Potential Allowance Authorization, Extension of Quantities, Change Order, or Other		Within 10 calendar days (as ODOT 104.06.B)

(*) Director of the Department under whose authority construction is managed by Public Works Field Engineering. Public Works Deputy Director will notify Director of Public Works.

(**) Resolution - Complete information will assist in the most timely resolution. Each escalation step should address any information deficiencies and proposed resolutions, if any, that were unsatisfactory.

(***) Time frames - It is understood that special issues will require a more rapid response and escalation.

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: That we, the undersigned, _____, (hereinafter called the "Contractor"), duly authorized by law to do business as a construction contractor in the State of Oklahoma, and _____ (hereinafter called the "Surety"), a corporation organized under the laws of the State of _____, and authorized to transact business in the State of Oklahoma, as Surety, are hereby held and firmly bound unto the Tulsa Metropolitan Utility Authority, Tulsa, Oklahoma (hereinafter called the "Authority"), in the penal sum of Dollars **(full amount of the Contract), (\$00)** lawful money of the United States, for the payment of which, well and truly to be made unto the said Authority, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents, as follows:

THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH THAT, WHEREAS, the Contractor has on the ____ day of _____, 20__, entered into a written contract with the Tulsa Metropolitan Utility Authority, Tulsa, Oklahoma, for furnishing all materials, labor, tools, equipment, and transportation necessary for:

**PROJECT NO. ES 2025-07 TURLEY SOUTH INTERCEPTOR
REHABILITATION PHASE I ORF-19-0001-CW**

NOW, THEREFORE, if said Contractor shall well and truly perform and complete said project in accordance with said Contract, Advertisement for Bids, General Conditions, Instructions to Bidders, Bid Form, Plans and Specifications, and related documents, shall comply with all the requirements of the laws of the State of Oklahoma; shall pay as they become due all just claims for work or labor performed and materials furnished in connection with said contract, and shall defend, indemnify and save harmless said Authority against any and all liens, encumbrances, damages, claims, demands, expenses, costs and charges of every kind, including patent infringement claims except as otherwise provided in said specifications and other contract documents, arising out of or in relation to the performance of said work and the provisions of said Contract, then these presents shall be void; otherwise, they shall remain in full force and effect.

This obligation is made for the use of said Authority and also for the use and benefit of all persons who may perform work or labor, or furnish any material in the execution of said Contract, and may be sued on thereby in the name of the Authority.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract, or to the work to be performed thereunder, or the specifications accompanying 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 of the terms of the Contract, or to the work or to the specifications.

IN WITNESS WHEREOF, the said Principal has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its duly authorized officers, and the said Surety has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its attorney-in-fact, duly authorized so to do, the day and year first above written.

CONTRACTOR (Principal)

BY: _____ ATTEST: (S E A L)
 _____ Date: _____ Date: _____
 Title: _____ Title: _____
 _____ Date: _____ Date: _____
 Attorney-In-Fact _____ Surety (S E A L)

** This date shall match the date of the notarized certificate on the Power of Attorney
(Accompany this Bond with Power-Of-Attorney)

APPROVED AS TO FORM:

Attorney for the Tulsa Metropolitan
Utility Authority Date: _____

APPROVED AS TO FORM:

City Attorney Date: _____
 _____ Date: _____
 City Clerk

STATUTORY BOND

WHEREAS, the undersigned _____
has entered into a certain contract dated the ____ day of _____, 20____,
designated as **Project No. ES 2025-07**, for the construction of certain public
improvements consisting of **Turley South Interceptor Rehabilitation Phase I ORF-
19-0001-CW** to be situated and constructed on and through the property described in
said Contract, including all of the work mentioned and described in said Contract, and
to be performed by the undersigned strictly and punctually in accordance with the
terms, conditions, drawings and specifications thereof, on file in the office of the Tulsa
Metropolitan Utility Authority.

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS: That
_____, as Principal, and
_____, a Corporation
organized under the laws of the State of _____, and authorized to
transact business in the State of Oklahoma, as Surety, are held and firmly bound
unto the State of Oklahoma in the penal sum of

_____ Dollars (Full Amount of Contract) (\$ _____), lawful money of the United
States, for the payment of which sum well and truly to be made, we bind ourselves,
our successors, and assigns, jointly and severally firmly by these presents.

NOW, THEREFORE, if the said Principal shall fail or neglect to pay all indebtedness
incurred by Principal or sub-contractors of said principal who perform work in the
performance of such contract, for labor and materials and repairs to and parts for
equipment used and consumed in the performance of said contract within thirty (30)
days after the same becomes due and payable, the person, firm or corporation
entitled thereto may sue and recover on this bond the amount so due and unpaid.

The Surety, for value received, hereby stipulates and agrees that no change,
extension of time, alteration, or addition to the terms of the contract or to the work to
be performed 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
specifications.

5/30/06

IN WITNESS WHEREOF, the said Principal has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its duly authorized officers, and the said Surety has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its attorney-in-fact, duly authorized so to do, the day and year first above written.

CONTRACTOR(Principal)

BY:	ATTEST: (S E A L)
_____ Date: _____	_____ Date: _____
Title: _____	Title: _____
_____ Date: _____	_____ Date: _____
Attorney-In-Fact	Surety (S E A L)

** This date shall match the date of the notarized certificate on the Power of Attorney

(Accompany this Bond with Power-Of-Attorney) _____

APPROVED AS TO FORM:

_____ Date: _____
 Attorney for the Tulsa Metropolitan
 Utility Authority

APPROVED AS TO FORM:

_____ Date: _____
 City Attorney

_____ Date: _____
 City Clerk

11/18/05

MAINTENANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

That _____, as Principal,
and _____, a corporation organized
under the laws of the State of _____ and authorized to transact business in the
State of Oklahoma, as Surety, are held and firmly bound unto the Tulsa Metropolitan Utility
Authority in the Penal Sum of _____

_____ Dollars (full amount of Contract) (\$ _____) in lawful money of the
United States of America for the payment of which, well and truly to be made, we bind
ourselves and each of us, our heirs executors, administrators, trustees, successors, and
assigns, jointly and severally, firmly by these presents.

The condition of this obligation is such that:

WHEREAS, said Principal entered into a written contract with the Tulsa Metropolitan Utility
Authority dated _____, 20____, for

PROJECT NO. ES 2025-07 TURLEY SOUTH INTERCEPTOR
REHABILITATION PHASE I ORF-19-0001-CW

all in compliance with the drawings and specifications therefore, made a part of said
Contract and on file in the office of the Authority, Tulsa, Oklahoma.

NOW, THEREFORE, if said Principal shall pay or cause to be paid to the Tulsa
Metropolitan Utility Authority, all damage, loss, and expense which may result by reason of
defective materials and/or workmanship in connection with said work, occurring within a
period of one (1) year for all projects, from and after acceptance of said project by the Tulsa
Metropolitan Utility Authority and if Principal shall pay or cause to be paid all labor and
materials, including the prime contractor and all subcontractors; and if principal shall save
and hold the Tulsa Metropolitan Utility Authority harmless from all damages, loss, and
expense occasioned by or resulting from any failure whatsoever of said Principal, then this
obligation shall be null and void, otherwise to be and remain in full force and effect.

It is further expressly agreed and understood by the parties hereto that no changes or
alterations in said Contract and no deviations from the plan or mode of procedure herein
fixed shall have the effect of releasing the sureties, or any of them, from the obligation of
this Bond.

11/18/05

IN WITNESS WHEREOF, the said Principal has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its duly authorized officers, and the said Surety has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its attorney-in-fact, duly authorized so to do, the day and year first above written.

CONTRACTOR(Principal)

BY:	ATTEST: (S E A L)
_____ Date: _____	_____ Date: _____
Title: _____	Title: _____
_____ Date: _____	_____ Date: _____
Attorney-In-Fact **	Surety (S E A L)

** This date shall match the date of the notarized certificate on the Power of Attorney
(Accompany this Bond with Power-Of-Attorney)

APPROVED AS TO FORM:

_____ Date: _____
Attorney for the Tulsa Metropolitan
Utility Authority

APPROVED AS TO FORM:

_____ Date: _____
City Attorney

_____ Date: _____
City Clerk



Amerisure Mutual Insurance Company
Amerisure Insurance Company
PO Box 9098
Farmington Hills, MI 48333-9098

BID BOND

CONTRACTOR:

(Name, legal status and address)

T-G Excavating, Inc.
[Redacted]
Tulsa, OK 74103

SURETY:

Amerisure Mutual Insurance Company
P.O. Box 9098
Farmington Hills, MI 48333-9098

OWNER:

(Name, legal status and address)

Tulsa Metropolitan Utility Authority
175 E. 2nd Street
Tulsa, OK 74103

BOND AMOUNT:

EXAMPLE

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

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

PROJECT:

(Name, location or address, and Project number, if any)

Project No. ES 2013-14 Contract 3 Joe Creek LaFortune Park Specific Remediation Plan

The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

Signed and sealed this 15th day of December, 2023

[Signature]

(Witness)

[Signature]

(Witness) Faith Burlington

[Signature]

(Principal) *President* (Seal)

(Title)

Amerisure Mutual Insurance Company
[Signature]

(Surety) (Seal)
(Title) Kristin Lewis, Attorney-in-Fact

AMERISURE MUTUAL INSURANCE COMPANY
AMERISURE INSURANCE COMPANY
AMERISURE PARTNERS INSURANCE COMPANY

AMERISURE
SURETY

EXAMPLE

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That Amerisure Mutual Insurance Company, Amerisure Insurance Company and Amerisure Partners Insurance Company are corporations duly organized under the laws of the State of Michigan (herein collectively the "Companies"), and that the Companies do hereby make, constitute and appoint:

JOHN K. DEER, VAUGHN P. GRAHAM, VAUGHN P. GRAHAM, JR., STEPHEN M. POLEMAN, TRAVIS E. BROWN, JOSHUA BRYAN,
DEBORAH L. RAPER, JAMIE BURRIS, SHELLI R. SAMSEL, MARK D. NOWELL, VICKI WILSON, AUSTIN K. GREENHAW,
CLAYTON HOWELL, CAREY L. KENNEMER, RANDY D. WEBB, AARON WOOLSEY, GARY LILES, THOMAS PERRAULT and KRISTIN LEWIS

of Rich & Cartmill, Inc. its true and lawful Attorney(s)-in Fact, each in their separate capacity if more than one is named above, to sign, execute, seal and acknowledge, for and on its behalf and as its act and deed, bonds or others writings obligatory in the nature of a bond on behalf of each of said Companies, as surety, on contracts or suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract or suretyship executed under this authority shall exceed the amount of:

ONE HUNDRED MILLION (\$100,000,000.00) DOLLARS

This Power of Attorney is granted and signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of Amerisure Mutual Insurance Company, Amerisure Insurance Company and Amerisure Partners Insurance Company at meetings duly called and held on February 17, 2022.

"RESOLVED, that any two of the President & Chief Executive Officer, the Chief Financial Officer & Treasurer, the Senior Vice President Surety, the Vice President Surety, or the General Counsel & Corporate Secretary be, and each or any of them hereby is authorized to execute, a Power of Attorney qualifying the attorney-in-fact named in the given Power of Attorney to execute on behalf of the Company bonds, undertakings and all contracts of surety, and that President & Chief Executive Officer, Chief Financial Officer & Treasurer or General Counsel & Corporate Secretary each or any of them hereby is authorized to attest to the execution of any such Power of Attorney and to attach therein the seal of the Company;

FURTHER RESOLVED, that the signature of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto electronically/digitally or by facsimile, and any such Power of Attorney or certificate bearing such electronic/digital or facsimile signatures or electronic/digital or facsimile seal shall be binding upon the Company when so affixed and in the future with regard to any bond, undertaking or contract of surety to which it is attached;

FURTHER RESOLVED, that any work carried out by the attorney-in-fact pursuant to this resolution shall be valid and binding upon the Company."



By: [Signature]
Michael A. Ito, Senior Vice President Surety

By: [Signature]
Aaron Green, Vice President Surety



IN WITNESS WHEREOF, Amerisure Mutual Insurance Company, Amerisure Insurance Company and Amerisure Partners Insurance Company have caused their official seals to be hereunto affixed, and these presents to be signed by their authorized officers this 26th day of April, 2023.

Amerisure Mutual Insurance Company
Amerisure Insurance Company
Amerisure Partners Insurance Company

State of Illinois
County of Kane

On this 26th day of April, 2023, before me, a Notary Public personally appeared Michael A. Ito, of Amerisure Mutual Insurance Company, Amerisure Insurance Company and Amerisure Partners Insurance Company and Aaron Green of Amerisure Mutual Insurance Company, Amerisure Insurance Company and Amerisure Partners Insurance Company, personally known to me, who being by me duly sworn, acknowledged that they signed the above Power of Attorney as officers of and acknowledged said instrument to be the voluntary act and deed of their respective companies.



[Signature]
M. Kenny, Notary Public

I, Christopher M. Spaude, the duly elected Chief Financial Officer & Treasurer of Amerisure Mutual Insurance Company, Amerisure Insurance Company and Amerisure Partners Insurance Company, do hereby certify and attest that the above and foregoing is a true and correct copy of a Power of Attorney executed by said Companies, which remains in full force and effect.

IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Companies this 15th day of December 2023.

[Signature]
Christopher M. Spaude, Chief Financial Officer & Treasurer

AFFIDAVIT OF CLAIMANT

STATE OF _____

COUNTY OF _____

The undersigned, of lawful age, being first duly sworn, on oath says that this contract is true and correct. Affiant further states that the work, services or materials will be completed or supplied in accordance with the contract, plans, specifications, orders or requests furnished the affiant. Affiant further states that (s)he has made no payment directly or indirectly of money or any other thing of value to any elected official, officer or employee of the City of Tulsa or any public trust of which the City is a beneficiary to obtain or procure the contract or purchase order.

By: _____
Signature

Name: _____

Company: _____

Title: _____

Subscribed and sworn to before me this ____ day of _____, 20____.

Notary Public

My Commission Expires: _____

Notary Commission Number: _____

GENERAL
CONDITIONS

GENERAL CONDITIONS OF CONTRACT

GC-1. SCOPE:

The Contract stipulations which follow are general in scope and may refer to conditions which will not be encountered in the performance of the work included in this Contract, and which are not applicable thereto. Any requirements, provisions, or other stipulations of these General Conditions which pertain to a nonexistent condition and are not applicable to the work to be performed hereunder, shall have no meaning in the Contract.

The specifications and drawings are intended to supplement, but not necessarily duplicate each other. Together they constitute one (1) complete set of specifications and drawings, so that any work exhibited in the one and not in the other shall be executed just as if it had been set forth in both, in order that the work shall be completed according to the complete design or designs as decided and determined by the Engineer.

Should anything be omitted from the specifications and drawings which is necessary to a clear understanding of the work, or should it appear various instructions are in conflict, then the Contractor shall request written clarification from the Engineer before proceeding with the construction affected by such omissions or discrepancies.

GC-2. CONTRACT DOCUMENTS:

It is understood and agreed that the Notice to Bidders, Instructions to Bidders, Proposal, Contract, Statutory Bond, Performance Bond, Maintenance Bond, Power of Attorney, Certificates of Insurance, General Conditions, Specifications, Drawings, Addenda and duly authorized Change Orders, together with any and all supplementary drawings furnished by the Engineer as and when required to make clear and to define in greater detail the intent of the contract, drawings, and specifications, other drawings, specifications, and engineering data furnished by the Contractor (when accepted by the Engineer), and instructions furnished by manufacturers of equipment for the installation thereof, are each and all included in this Contract, and the work shall be done in full compliance and accord therewith.

GC-3. DEFINITIONS:

Any word, phrase, or other expression defined in this paragraph and used in these Contract Documents shall have the meaning herein given:

1. "Contract" or "Contract Documents" shall include all of the documents and drawings mentioned in Paragraph GC-2.
2. "Authority" shall mean the Tulsa Metropolitan Utility Authority, Tulsa County, Oklahoma, a Public Trust.

3. "Contractor" shall mean the entity named and designated in the Contract who has entered into this Contract to perform the work covered thereby, and its, his, or their duly authorized agents and other legal representatives.

4. "Engineer" shall mean the Superintendent of Water Plant or Sewer Plant, or the Architect or Engineers who have been designated, appointed, or employed by the Authority and Superintendent of Water Plant or Sewer Plant for this project, or their duly authorized agents; such agents acting within the scope of the particular duties entrusted to them in each case.

5. "Inspector" shall mean the engineering or technical inspector or inspectors duly authorized by the Engineer, limited in each case to the particular duties entrusted to him or them.

6. "Surety" shall mean any entity that executes, as surety, the Contractor's performance bond, maintenance bond, and statutory bond securing the performance of this Contract.

7. "Drawings" shall mean and include all drawings prepared by the Authority as a basis for proposals; all drawings submitted by the successful bidder with his proposal and by the Contractor to the Authority, when and as accepted by the Engineer, and all drawings submitted by the Authority to the Contractor during the progress of the work as provided herein.

8. "Subcontractor" shall mean a person, firm or corporation to whom any portion of this work has been sublet by the Contractor.

9. "Work" shall mean the task to be performed, necessary for the fulfillment of this Contract.

10. "Unit Price" shall mean the cost per specified unit of measurement of work and/or material.

11. "Lump Sum" shall mean the price of an item of work including all things necessary to complete the item as shown on the drawings and specifications. Such an item is not measured in units but is defined by description.

GC-4. MODIFICATIONS AND ALTERATIONS:

In executing the Contract, the Contractor agrees that the Authority shall have the right to make such modifications, changes, and alterations as the Authority may see fit, in the extent or plan of the Work agreed to be done or any part thereof, or in the materials to be used therein, either before or after the beginning of construction thereof, without affecting the validity of the Contract or the liability of the Sureties upon the performance of this Contract or the Statutory Bond.

Where any modification, change, or alteration increases the quantity of Work to be performed and is within the scope of a fair interpretation thereof, such increase shall be paid for according to the quantity of work actually done, either at Unit Prices included in

the Contract, or in the absence of such unit, as extra Work. Modifications and alterations which reduce the quantity of Work to be done shall not constitute a claim for damages or for anticipated profits on Work involved in such reduction.

The Engineer shall determine, on an equitable basis, the amount of credit due the Authority for Work not performed as a result of modifications or alterations authorized hereunder; where the value of the omitted Work is not fixed by Unit Prices in the Contract; allowance to the Contractor for any actual loss incurred in connection with the purchase, delivery, and subsequent disposal of materials and equipment required for use on the Work as actually built; and any other adjustment of the Contract amount where the method to be used in making such adjustment is not clearly defined in the Contract Documents. In this respect, such determination shall be final and binding only when approved by the Superintendent of Water Plant or Sewer Plant.

GC-5. CPM SCHEDULE AND DRAWINGS TO BE FURNISHED BY CONTRACTOR:
The successful contractor shall furnish a CPM schedule per ODOT 108.03B. If at any time, in the opinion of the Engineer, proper progress is not being maintained, such changes shall be made in the schedule of operations, which will satisfy the Engineer that the work will be completed within the period stated in the Proposal. Monthly progress meeting will be conducted to maintain coordination between all project entities.

The Contractor shall furnish all shop, fabrication, assembly, foundation, and other drawings required by the specifications; drawings of equipment and devices, offered by the Contractor for review by the Engineer shall be in sufficient detail to show adequately the construction and operation thereof; drawings of essential details of any change in design or construction proposed for consideration of the Engineer, by the Contractor in lieu of the design or arrangement required by the Contract or any item of extra work thereunder. The Contractor shall submit to the Engineer, the required number of each copy of such drawing for the Engineer's review. After review by the Engineer, all such drawings shall become a part of the Contract Documents and the work or equipment shown thereby shall be in conformity therewith unless otherwise required by the Authority.

The Engineer's check and acceptance of drawings submitted by the Contractor will be for, and will cover, only general conformity to the plans and specifications and will not constitute a blanket acceptance of all dimensions, quantities, and details of the material or equipment shown; nor shall such acceptance relieve the Contractor of his responsibility for errors contained in such drawings.

GC-6. CONTRACTOR'S BUSINESS ADDRESS:

The business address of the Contractor given in the bid or proposal upon which this Contract is founded is hereby designated as the place to which all notices, letters, and other communications to the Contractor may be mailed or delivered. The delivery at the above named address or depositing in any mailbox regularly maintained by the Post Office, of any notice, letter, or other communication to the Contractor, shall be deemed sufficient service thereof upon the Contractor and the date of said service shall be the date of such delivery or mailing. Such address may be changed at any time by a written

instrument, executed by the Contractor and delivered to the Engineer. Nothing contained herein shall be deemed to preclude or render inoperative the service of any notice, letter, or communication upon the Contractor personally.

GC-7. CONTRACTOR'S RISK AND RESPONSIBILITY:

The performance of the Contract and the Work is at the risk of the Contractor until the final acceptance thereof and payment therefor. The Contractor shall take all responsibility of the Work, and shall bear all losses resulting because of the amount or character of the Work, or because the nature of the land in or on which the Work is done is different from what is assumed or expected, or on account of the weather, floods, fire, windstorm, or other actions of the elements, or any cause or causes, whatsoever, for which the Authority is not responsible. If the Work or any part or parts thereof is destroyed or damaged from any of the aforesaid causes, the Contractor, at his own cost or expense, shall restore the same or remedy the damage.

The Contractor shall, in a good and workmanlike manner, perform all Work and furnish all supplies and materials, machinery, equipment, facilities, and means, except as otherwise expressly specified, necessary or proper to perform and complete all Work required by the Contract within the time herein specified, in accordance with the provisions of these Contract Documents and Drawings of the Work covered by this Contract, and any and all supplemental Drawings. The Contractor shall observe, comply with, and be subject to all terms, conditions, requirements and limitations of the Contract, and shall complete the entire Work to the satisfaction of the Engineer and of the Authority.

GC-8. ASSIGNMENT AND SUBLETTING OF CONTRACT:

The Contractor shall give his personal attention to the fulfillment of this Contract, and shall not let, assign or transfer it or his right, title, or interest in any part thereof, by attorney or otherwise, or sublet any part of the Work to any other person without the prior consent of the Authority in writing.

Should any Subcontractor fail to perform his Work in a satisfactory manner, his subcontract shall be immediately terminated by the Contractor upon notice from the Authority. The Contractor shall be fully responsible to the Authority for the acts and omissions of his Subcontractor and of persons either directly or indirectly employed by his Subcontractor. Nothing contained in these Contract Documents shall create any contractual relation between any Subcontractor and the Authority.

GC-9. CONTRACTOR'S REPRESENTATIVES:

The Contractor shall designate a person on the Work to represent him when absent from the Work site.

GC-10. CONTRACTOR AND HIS EMPLOYEES:

The Contractor shall employ competent foremen, experienced mechanics, and others skilled in the several parts of the Work in this Contract and shall promptly discharge any and all incompetent or otherwise unsatisfactory employees. Contractor's employees directly employed to perform the Work shall not be paid less than the prevailing

minimum wage scale.

Necessary sanitary conveniences for the use of employees on the job site, properly secluded from public observation, shall be provided and maintained by the Contractor. The construction and location of the facility and disposal of the contents shall comply with all laws of the City and State, relating to health and sanitation regulations.

GC-11. CONTRACTOR'S RIGHT OF PROTEST:

If the Contractor considers any work demanded of him to be outside the requirements of the Contract, or considers any record or ruling of the Engineers to be unfair, he shall, immediately upon such Work being demanded or such record or ruling being made, ask for written instructions or decisions, whereupon he shall proceed without delay to perform the Work or to conform to the record or ruling, and within ten (10) days after the date of receipt of written instructions or decision, he shall file a written protest with the Engineer, stating clearly and in detail the basis of his objections. Except for such protests and objections made of record in the manner herein specified and within the time stated, the records, rulings, or decisions of the Engineer shall be final and conclusive.

GC-12. INSURANCE AND BONDS:

The Contractor (and any subcontractors) shall carry and keep in force during this Contract, policies of insurance issued by an insurer authorized to transact business in Oklahoma in minimum amounts as set forth below or as required by the laws of the State of Oklahoma. The Contractor shall also furnish an Owner's Protective Policy in the same amounts naming the Tulsa Metropolitan Utility Authority as the assured, issued by the same insurance company as the Contractor's liability coverage and indemnifying the Authority against any and all actions, claims, judgments or demands arising from injuries of any kind and character sustained by any person or persons because of work performed by the Contractor.

General Liability Insurance with a bodily injury and property damage combined single limit of not less than \$1,000,000.00 for each occurrence.

Employer's Liability and Workmen's Compensation in the amounts as required by law.

The Contractor shall provide proof of such coverage:

- (a) By providing Certificate(s) of Insurance prior to the execution of this contract; and
- (b) By submitting updated Certificate(s) of Insurance with each and every subsequent request for payment. The Certificate(s) should show that the policies are current and should be dated within 30 days of the payment request.

The Contractor shall not cause any required insurance policy to be cancelled or permit it

to lapse. If the Contractor cancels, allows to lapse, fails to renew or in any way fails to keep any required insurance policy in effect, the Authority will suspend all progress and/or final payments for the project until the required insurance is obtained. Further, a Contractor who fails to keep required insurance policies in effect may be deemed by the Authority to be in breach of contract, ineligible to bid on future projects, and/or ineligible to engage in any new contracts.

The Contractor shall execute and furnish a Statutory Bond for the protection of laborers, mechanics, and material men in a sum equal to one hundred percent (100%) of the contract price.

The Contractor shall execute and furnish a Performance Bond in a sum equal to one hundred percent (100%) of the contract price.

The Contractor shall execute and furnish a Maintenance Bond in a sum equal to one hundred percent (100%) of the contract price.

Prior to doing blasting, the Contractor shall furnish a Certificate of Insurance, which shall certify that any damage caused by blasting is within the coverage of the Contractor's liability insurance to the full limits thereof.

All bonds and insurance must be executed by a company licensed to do business in the State of Oklahoma and must be acceptable to the Authority.

GC-13. TIME FOR COMPLETION:

For all projects that will impact the public, a public meeting is required before any work is started. The City of Tulsa requires a minimum of 25 days' notice to get the public meeting scheduled and invitations mailed out.

The Work shall commence within ten (10) days from and after the date of a written order from the Authority. The Contractor agrees that the Work shall be performed regularly, diligently, and uninterruptedly at a uniform rate of progress so as to insure completion within the number of days after the day on which the work order is issued. If the Contractor fails to complete all Work within the time specified, then the Contractor agrees to pay the Authority, not as a penalty, but as liquidated damages for such breach of contract, the sum of **Two Thousand Five Hundred Dollars (\$2,500.00)** for each and every calendar day beyond the date on which the work was to be completed. The said amount is fixed and agreed upon because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Authority would sustain in such event. It is expressly understood and agreed that the said time for the completion of the Work described herein is a reasonable time for the completion of the same.

The Contractor shall commence work within twenty-four (24) hours of traffic control devices being established at the project location. If the Contractor fails to commence work within twenty-four (24) hours of traffic control devices being established at the

project location, then the Contractor agrees to pay the Authority, not as a penalty, but as liquidated damages the sum of **One Thousand Dollars (\$1,000.00)** per lane for each day of failure to commence work after the specified time set forth. The amount is fixed and agreed upon because of the impracticability and extreme difficulty of fixing and ascertaining the actual damage the Authority would sustain in such event.

The Contractor will be required to provide a full-time, onsite English-speaking superintendent for this Work for direct contact with Authority and coordination of Subcontractors. A working foreman is not acceptable as a work superintendent. The superintendent shall be required to be present at the Work site whenever the Contractor or Subcontractors are performing Work. The superintendent shall be a representative of the Contractor with the authority to make decisions. If the Contractor fails to provide a non-working superintendent on a day when Work is being performed the Contractor agrees to pay the Authority, not as a penalty, but as liquidated damages for such breach of contract, the sum of **One Thousand Dollars (\$1,000.00)** for each and every calendar day it fails to provide a non-working superintendent at the Work site. This amount is fixed and agreed upon because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Authority would sustain in such event.

It is further agreed that time is of the essence as to each and every portion of this Contract and the specifications wherein a definite and certain time is fixed for the performance of any act whatsoever; and where under the Contract an allowance of additional time for completion of any Work is made, the new time fixed by such extension shall be of the essence of this Contract.

Failure to complete the Work within the specified time, as set forth in the Contract, may be grounds for disqualification for future consideration for contracts with the Authority.

Final acceptance of the Work is defined as the completion of the Work and the Contractor moving off the project site. No defined or additional Work is needed.

Contract Evaluation forms will be compiled by Authority staff upon completion of Work to provide a record of the Contractor's performance for use in subsequent projects.

GC-14. EXTENSIONS OF TIME:

Should the Contractor be delayed in the final completion of the Work by any act or neglect of the Authority or Engineer, or any employee of either, or strikes, injunctions, fire, or other causes outside of and beyond the control of the Contractor and which, in the opinion of the Engineer, could have been neither anticipated nor avoided, then an extension of time sufficient to compensate for the delay, as determined by the Engineer, shall be granted by the Authority, provided, however, that the Contractor shall give the Authority and the Engineer notice in writing of the cause of each delay on the "Extension of Time Request" form enclosed in these documents, and agrees that any such claim shall be fully compensated for by an extension of time to complete performance of the Work.

The Contractor shall submit the "Extension of Time Request" form with each partial

payment application. Failure to submit the Extension of Time Request with a partial payment application shall constitute a complete waiver of any claim for time extension for the period covered by the partial payment.

Extensions of time will not be granted for delays caused by unsuitable ground conditions, inadequate construction force, or the failure of the Contractor to place orders for equipment or materials a sufficient time in advance to ensure delivery when needed. Any extension of time granted by the Authority shall not release the Contractor and Surety herein from the payment of liquidated damages as provided in the General Conditions of this Contract, for a period of time not included in the original Contract or the time extension, as herein provided.

In no event shall the Authority be liable or responsible to the Contractor, Surety, or any person for or on account of any stoppage or delay of Work herein provided for by injunction or any other kind of legal, equitable proceedings, or from or by or on account of any delay from any other cause whatsoever.

GC-15. ENGINEER'S POWERS AND DUTIES:

The Engineer will provide general administration of the Contract, including performance of the functions hereinafter described.

The Engineer will be the Authority's representative during construction and until final payment. The Engineer will have authority to act on behalf of the Authority to the extent provided herein unless otherwise modified by written instrument, which will be shown to the Contractor. The Engineer will advise and consult with the Authority, and all of the Authority's instructions to the Contractor shall be issued through the Engineer. Nothing contained in the Contract documents shall create any contractual relationship between the Engineer and the Contractor.

The Engineer shall at all times have access to the Work as provided elsewhere herein. The Engineer will make periodic visits to the Work site to familiarize himself generally with the progress and quality of the Work and to determine in general whether the Work is proceeding in accordance with the Contract. On the basis of his on-site observations as Engineer, he will keep the Authority informed of the progress of the Work and will endeavor to guard the Authority against defects and deficiencies in the Work caused by the Contractor. The Engineer will not be responsible for construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the Work, and will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract. Based on such observations and the Contractor's applications for payment, the Engineer will determine the amounts owing to the Contractor and will issue certificates for payment in amounts as provided elsewhere herein.

The Engineer may provide one or more full-time project representatives to assist the Engineer in carrying out his responsibilities at the Work site. The duties, responsibilities and limitations of authority of the Engineer as the Authority's representative during construction as set forth herein will not be modified or extended without written consent

of the Authority, the Contractor and the Engineer.

The Engineer will not be responsible for the acts or omissions of the Contractor, any Subcontractors, or any of their agents or employees, or any other persons performing any of the Work.

The Engineer shall decide the meaning and intent of any portion of the specifications, and of any plans or Drawings, where the same are found to be obscure or be in dispute; he shall have the right to correct any errors or omissions therein when such corrections are necessary to further the intent of said specifications, plans or Drawings; the action of such correction shall be effective from the date that the Engineer gives due notice thereof.

Any differences or conflicts which may arise between the Contractor and other contractors with the Authority in regard to their work shall be adjusted as determined by the Engineer.

Neither the Engineer's authority to act under this article or elsewhere in the Contract nor any decision made by the Engineer in good faith either to exercise or not to exercise such authority shall give rise to any duty or responsibility of the Engineer to the Contractor, any Subcontractor, any manufacturer, fabricator, supplier or distributor, or any of their agents or employees or any other person performing any of the Work.

Whenever in the Contract the terms "as ordered", "as directed", "as required", "as allowed", or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper", or "satisfactory" or adjectives of like effect or import are used, to describe requirements, direction, review or judgement of the Engineer as to the Work, it is intended that such requirement, direction, review, or judgement will be solely to evaluate the Work for compliance with the Contract (unless there is a specific statement indicating otherwise). The use of any such term or adjective never indicates that the Engineer shall have authority to supervise or direct performance of the Work or authority to undertake responsibility contrary to the provisions of this General Condition.

GC-16. AUTHORITY'S RIGHT OF INSPECTION:

The Authority shall appoint or employ such engineers or inspectors as the Authority may deem proper to inspect the materials furnished and the work performed, and to determine whether said materials are furnished and work is performed in accordance with the Drawings and specifications therefor. The Contractor shall furnish all reasonable aid and assistance required by the Engineer, or by the Inspectors, for the proper inspection and examination of the Work and all parts thereof, even to the extent of uncovering or taking out portions of finished Work. Should the Work thus exposed or examined prove satisfactory, the uncovering or removing and the replacing of the covering or the making good of the parts removed shall be paid for by the Authority; however, should the Work exposed or examined prove unsatisfactory, the uncovering, taking out, replacing, and making good shall be at the expense of the Contractor.

Such inspection shall not relieve the Contractor of any obligation to perform said Work

strictly in accordance with the Drawings and specifications or any modifications thereto as herein provided, and the Work not so constructed shall be removed and made good by the Contractor at his own expense, and free of all expense to the Authority, whenever so ordered by the Engineer, without reference to any previous oversight or error in inspection.

GC-17. SUSPENSION OF WORK ON NOTICE:

The Contractor shall delay or suspend the progress of the Work or any part thereof whenever he shall be so required by written order of the Authority or Engineer, and for such period of time as it or he shall require. Any such order of the Authority or Engineer shall not modify or invalidate in any way the provisions of this Contract.

GC-18. QUALITY OF WORKMANSHIP:

All workmanship shall be the best possible, both as to material and labor, that could be demanded by these Contract Documents, or if no specific description is given, it is understood that the best quality is required.

GC-19. SATURDAY, SUNDAY, HOLIDAY, AND NIGHT WORK:

No work shall be done between the hours of 7:00 p.m. and 7:00 a.m., nor on Saturday, Sunday, or legal holidays without the written approval or permission of the Engineer in each case, except such work as may be necessary for the proper care, maintenance, and protection of work already done, or of equipment, or in the case of an emergency. Allowable working times within secured facilities may be adjusted by Engineer as necessary to facilitate established operational shift schedules.

GC-20. LAWS AND ORDINANCES:

The Contractor shall keep himself fully informed of all existing and current regulations of the City, county, state and national laws which in any way limit or control the actions or operations of those engaged upon the Work, or affecting the materials supplied to or by them. The Contractor shall at all times observe and comply with all applicable ordinances, laws, and regulations, and shall protect and indemnify the Authority and the Authority's employee's officers and agents against any claims or liability arising from or based on any violations of the same.

The contractor certifies that it and all of its Subcontractors to be used in the performance of the Contract are in compliance with 25 O.S. Sec. 1313 and participate in the Status Verification System. The Status Verification System is defined in 25 O. S. Sec. 1312 and includes but is not limited to the free Employee Verification Program (E-Verify) available at www.dhs.gov/E-Verify.

The Contractor shall take the necessary actions to ensure its facilities are in compliance with the requirements of the Americans with Disabilities Act (ADA). It is understood that the program of the Contractor is not a program or activity of the City of Tulsa. The Contractor agrees that its program or activity will comply with the requirements of the ADA. Any costs of such compliance will be the responsibility of the Contractor. Under no circumstances will Contractor conduct any activity, which it deems to not be in compliance with the ADA.

GC-21. TAXES AND PERMITS:

Unless otherwise specified in these Contract Documents, the Contractor shall pay all sales, use, and other taxes that are lawfully assessed against the Authority or Contractor in connection with the Work included in this Contract and shall obtain all licenses, permits, and inspections required for the Work. Contractor shall comply with all zoning ordinances of the City, as provided in the Tulsa Zoning Code, Title 42 Tulsa Revised Ordinances and conform with all zoning requirements established by the Tulsa Metropolitan Area Planning Commission and the Board of Adjustment. Contractor can call the Indian Nations Council of Governments (INCOG) at (918) 584-7526, to determine if any zoning requirements must be met.

GC-22. PROTECTION OF PROPERTY:

The protection of City, state, and government monuments, street signs, and other City property is of prime importance, and if the same be damaged, destroyed, or removed, they shall be repaired, replaced, or paid for by the Contractor.

Work occurring within secured facilities will require the Contractor to obtain City of Tulsa issued ID badges for all employees and subcontractors requiring facility gate access. The Contractor will be responsible for all coordination with City Security as necessary to process background checks and issue badges. The City of Tulsa has the right to deny access to any individual based on evaluation of background check.

GC-23. PATENT RIGHTS:

All fees for any patented invention, article, or arrangement that is based upon, or in any manner connected with the construction, erection, or maintenance of the Work or any part thereof embraced in the Contract and these specifications, shall be included in the price stipulated in the Contract for said Work. The Contractor shall protect and hold harmless the Tulsa Metropolitan Utility Authority, against any and all demands of such fees or claims.

GC-24. DEFENSE OF SUITS:

In case any action at law or suit in equity is brought against the Authority or any employee, officer or agent thereof, for or on account of the failure, omission or neglect of the Contractor to do and perform any of the covenants, acts, matters, or things required by this Contract to be done or performed, or for injury or damage caused by negligence or willful act of the Contractor or his Subcontractors or his or their agents, or in connection with any claim or claims based on the lawful demands of Subcontractors, workmen, materialmen, or suppliers of machinery and parts thereof, equipment, power tools, and supplies incurred in the fulfillment of this Contract, the Contractor shall indemnify and save harmless the Authority and its employees, officers and agents, and the Engineer and any employees, officers and agents thereof, of and from all losses, damages, costs, expenses, judgements, or decrees whatsoever arising out of such action or suit that may be brought, without requiring said parties to give any notice thereof.

The Authority may suspend payments of any sum due or to become due for work done

on this Contract until such claims, suits, actions, or proceedings are final and liability has been determined. The amount of such damages or liability shall be deducted from sums due or to become due on this Contract. The sums mentioned above will be retained by the Authority until the Contractor furnishes evidence that satisfactory settlement has been made. Any action taken by the Authority shall not excuse the Contractor for failure to perform this Contract or bar the Authority from legal action to recover from the Contractor the amount of damages or liability suffered in excess of the amount retained.

The Contractor shall furnish the Authority with satisfactory evidence, upon demand, that all persons who have done work on the Contract or furnished materials for the Contract have been paid in full. If such evidence is not furnished, the amount necessary to pay the lawful claims may be retained until such evidence is furnished, or if such evidence is not furnished, the Authority may apply any sums retained to valid claims and charge the amounts disbursed, including the costs of any action that may be necessary to prove or disprove the claims against the Contractor.

GC-25. REMOVAL OF CONDEMNED MATERIALS AND STRUCTURES:

The Contractor shall remove from the site of the Work, without delay, all rejected and condemned materials or structures of any kind brought to or incorporated in the Work, and upon his failure to do so, or to make satisfactory progress in so doing, within forty-eight (48) hours after the service of a written notice from the Engineer ordering such removal, the condemned material or structures may be removed by the Authority and the cost of such removal be taken out of the money that may be due or may become due the Contractor by virtue of this Contract. No such rejected or condemned material shall again be offered for use by the Contractor under this or any other Contract under this project.

GC-26. EXTRA WORK:

If a modification increases the amount of the Work, and the added Work or any part thereof is of a type and character which can properly and fairly be classified under one or more Unit Price items of the Bid Form, then the added Work or part thereof shall be paid for according to the amount actually done and at the applicable Unit Price. Otherwise, such work shall be paid for as hereafter provided.

Claims for extra work will not be paid unless the Work covered by such claims was authorized in writing by the Authority. The Contractor shall not have the right to take action in court to recover for extra work unless the claim is based upon a written order from the Authority. Payments for extra Work will be based on agreed lump sums or on agreed Unit Prices whenever the Authority and the Contractor agree upon such prices before the extra Work is started.

For the purpose of determining whether proposed extra work will be authorized, or for determining the payment method for extra work, the Contractor shall submit to the Engineer, upon request, a detailed cost estimate for proposed extra work. The estimate shall show itemized quantities and charges for all elements of direct cost.

The cost shall include only those extra costs for labor and materials expended in direct performance of the extra work and may include:

- (a) **Labor.** For all labor and foremen in direct charge of the specific operations, the Contractor shall receive the rate of wage (or scale) agreed upon in writing before beginning work for each and every hour that said labor and foremen are actually engaged in such work. An amount equal to fifteen (15) percent of the sum of the above items will also be paid the Contractor.
- (b) **Bond, Insurance, and Tax.** For property damage, liability, and workmen's compensation insurance premiums, unemployment insurance contributions and social security taxes on the force account work, the Contractor shall receive the actual cost, to which cost no percentage will be added. The Contractor shall furnish satisfactory evidence of the rate or rates paid for such bond, insurance, and tax.
- (c) **Materials.** For materials accepted by the Engineer and used, the Contractor shall receive the actual cost of such materials delivered on the Work site, including transportation charges paid by him (exclusive of machinery rentals as hereinafter set forth), to which cost ten (10) percent will be added.
- (d) **Equipment.** For any machinery or special equipment (other than small tools) including fuel, lubricants and transportation costs, the use of which has been authorized by the Engineer, the Contractor shall receive the rental rates agreed upon in writing before such work is begun for the actual time that such equipment is in operations on the Work, as provided in Subsection 109.04(b3), to which rental sum no percentage will be added.
- (e) **Miscellaneous.** No additional allowance will be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided.

The form on which field cost records are kept, the construction methods and the type and quantity of equipment used shall be submitted to the Engineer for approval.

Construction equipment which the Contractor has on the Work site and which is of a type and size suitable for use in performing the extra Work shall be used. The hourly rental charges for equipment, including all insurance, taxes, fuel, and operating costs, shall not exceed twelve (12) percent of the latest applicable Associated Equipment Distributors published monthly rental rates and shall apply to only the actual time the equipment is used in performing the extra Work.

When extra Work requires the use of equipment, which the Contractor does not have on the work site, the Contractor shall obtain the approval of the Engineer before renting or otherwise acquiring additional equipment. The rental charges for the additional equipment shall not exceed the latest applicable Associated Equipment Distributors published rental rates.

The Contractor shall file with the Engineer, certified lists in duplicate, of any equipment and the schedule of pay rates for common and semi-skilled labor and operators of various classes which are intended to be used in performing the Work covered by this Contract. These rates shall be subject to the review of the Engineer. This information will be used by the Engineer for computation of extra work as mentioned above, however, if the Contractor fails to file these lists with the Engineer prior to starting any Work covered by this Contract, then the Engineer's computation shall be based on average wages and rates paid on Authority work.

GC-27. PAYMENT FOR CONTRACTOR'S PLANT AND MISCELLANEOUS TEMPORARY WORK:

For providing plant, tools, and equipment, and for furnishing, erecting, maintaining, and removing scaffolding and construction plant, construction roads, camps, sanitary conveniences, temporary water supply, trestles, dewatering and other temporary works, the Contractor shall receive no direct payment, but compensation for them shall be considered as having been included in the prices stipulated for the appropriate items.

GC-28. BASIS OF PAYMENT FOR ITEMS OF WORK:

The Contractor shall be paid for all Work performed under the Contract based on the Engineer's computations of as-built quantities and the Contractor's Unit Price or Lump Sum bid per item. This payment shall be full compensation for furnishing all supplies, materials, tools, equipment, transportation, and labor required to do the Work; for all loss or damage, because of the nature of the work, the action of the elements or any unforeseen obstruction or difficulty which may be encountered in the performance of the Work, and for which payment is not specifically provided; for all expense incurred by or because of any suspension or discontinuance of all or any part of the Work; and for faithfully completing the Contract according to the Drawings and specifications and requirements of the Engineer.

GC-29. PAYMENTS:

(1) Partial: If the work is progressing in good and workmanlike manner and if the Contractor is faithfully carrying out the terms of this Contract, approximate estimates of the work done shall be made by the Engineers between the first and fifteenth of each calendar month, including labor actually performed and supplies or materials actually used or incorporated in the Work, and an allowance will be made for acceptable materials satisfactorily delivered, stored and secured on the site of the Work in such amount as can be incorporated in the Work within a reasonable time. The Authority shall have a lien as owner on any materials stored on the site of the Work.

Each partial estimate for payment shall contain or have attached an affidavit in the form found in this book of specifications, as required by law.

The Contractor shall submit with each partial pay estimate a complete list of vendors and suppliers with itemized purchases and invoices from each vendor. Each list shall contain the name of the Contractor or Subcontractor ordering the materials or supplies, and the specific use or placement of each of the materials purchased by the Tulsa

Metropolitan Utility Authority for this project in accordance with Article IIB of the Contract. At the direction of the Contractor, the Tulsa Metropolitan Utility Authority will withhold retainage in the amount of 5% on materials and supplies to be purchased under the terms of this Contract. If fuels are purchased, they shall be limited to dyed diesel fuel and/or kerosene for non-highway use. No unleaded gasoline will be permitted.

Each month that work is performed for which payment is due, the Contractor shall submit to the Engineer an application for such payment, provided said payment is not less than \$1,000.00, and, if required, receipts or other vouchers from Subcontractors showing his payments to them shall be submitted.

Each estimate shall be of the approximate value of all work performed and materials in place or delivered to the Work site, determined as aforesaid from the beginning of this contract to the date fixed for the current estimate, from which shall be deducted five percent (5%), or a lesser amount approved by the Authority, and, in addition thereto, all previous payments and all other sums withheld under the foregoing provisions of this Contract, the remainder to become due and payable; after the estimate has been reviewed and signed by the Engineer and the Authority, shall pay the estimate in the regular manner in the amount determined as due unless it shall be known by the Authority that there is good reason under the terms of this Contract for withholding same.

When the Contractor has completed Work constituting more than fifty percent (50%) of the total Contract amount, the retainage will continue at two and one-half percent (2.5%) for the balance of the remaining work; provided, however, that the City or its duly authorized representative has determined that satisfactory progress is being made and upon approval by the Surety.

The Contractor may withdraw any part or the whole of the amount which has been retained from partial payment to the Contractor pursuant to the terms of Contract, upon depositing with or delivery to the City:

- (1) United States Treasury Bonds, United States Treasury Notes, United States Treasury bills, or
- (2) General Obligation Bonds of the State of Oklahoma, or
- (3) Certificates of Deposit from a state or national bank having its principal office in the State of Oklahoma.

No retained amount shall be withdrawn which would represent an amount in excess of the market value of the securities at the time of deposit or of the par value of such securities, whichever is lower.

All partial estimates are subject to correction in the final estimate.

(2) Final Payment:

When this contract, in the opinion of the Engineer, shall be completely performed on the part of the Contractor, the Engineer shall proceed with all reasonable diligence to measure up the Work and shall make out the final estimate for the same, and shall, except for cause herein specified, give to the Contractor, within thirty (30) days after receiving said certificate, an order on the Authority for the balance found to be due, excepting therefrom such sum or sums as may be lawfully retained under any of the provisions of the Contract; PROVIDED, that nothing herein contained shall be construed to affect the rights of the Authority hereby reserved to reject the whole or any portion of the aforesaid Work should the said estimate and certificate be found or known to be inconsistent with the terms of this Contract or otherwise improperly given; PROVIDED, that if after the work hereunder has been accepted and final payment made, it shall be discovered that any part of the Contract has not been fully performed or has been done in an improper or faulty manner, the Contractor shall immediately remedy such defect, or, in case of neglect to do so within a reasonable time after notice thereof, shall be liable for and shall pay to the Authority the cost of remedying such defect or a sum equal to the damages sustained thereby, as the Authority shall elect and the acceptance of and final payment for the Work shall be no bar to suit on any bond against any principal or principals, or Surety or Sureties, or both, given for the due performance of the Contract, or for the recovery of such cost or the equivalent of such damage.

The Authority will pay to the Contractor interest at the rate of three-fourths percent (3/4%) per month on the final payment due the Contractor. For lump sum contracts, the interest shall commence thirty (30) days after the Work under the Contract has been completed and accepted and all required material certifications and other documentation required by the Contract have been furnished the Authority by the Contractor, and shall run until the date when the final payment or estimate is tendered to the Contractor. For contracts bid by Unit Prices, the interest will commence sixty (60) days after the above conditions are satisfied. When contract quantities or the final payment amount is in dispute, the interest-bearing period will be suspended until the conclusion and settlement of the dispute.

GC-30. CONTRACTOR REIMBURSEMENT FOR SURETY BOND:

For contracts of \$1,000,000.00 or more, the Contractor may receive reimbursement for the cost of the surety bonds after issuance of a work order. To receive reimbursement, the Contractor shall submit a standard partial payment form and affidavit, and a copy of the surety bond invoice. The final partial pay estimate will be reduced by the amount paid for surety bond reimbursement.

GC-31. RELEASE OF LIABILITY AND ACCEPTANCE:

The acceptance by the Contractor of the final payment shall operate as, and shall be a release to the Authority and every employee, officers and agents thereof, from all claims and liability to the Contractor for anything done or furnished for or relating to the Work, or for any act or neglect of the Authority or of any person relating to or affecting the Work, and, following such acceptance, no person, firm, or corporation other than the signer of this Contract as Contractor, will have any interest hereunder, and no claim shall be made or be valid, and neither the Authority nor any employees or agent thereof

shall be liable or be held to pay any money, except as herein provided.

It shall be the duty of the Engineer to determine when the Work is completed and the Contract fulfilled, and to recommend its acceptance by the Authority. The Work herein specified to be performed shall not be considered finally accepted until all the Work has been accepted by the Authority.

GC-32. RIGHT OF AUTHORITY TO TERMINATE CONTRACT:

If the Work to be done under this Contract shall be abandoned by the Contractor, or if this Contract shall be assigned by him otherwise than as herein provided, or if the Contractor should be adjudged bankrupt, or if a general assignment of his assets be made for the benefit of his creditors, or if a receiver should be appointed for the Contractor or any of his property; or if at any time the Engineer shall certify in writing to the Authority that the performance of the Work under this Contract is being unnecessarily delayed, or that the Contractor is executing the same in bad faith or otherwise not in accordance with the terms of the Contract; or if the work be not substantially completed within the time named for its completion, or within the time to which such completion date may be extended; then the Authority may serve written notice upon the Contractor and his Surety of Authority's intention to terminate this Contract, and unless, within five (5) days after service of such notice upon the Contractor, a satisfactory arrangement is made for the continuance of the Contract, this Contract shall cease and terminate. In the event of such termination, the Authority shall immediately serve notice upon the Surety and Contractor, and the Surety shall have the right to take over and complete the Work, provided, however, that if the Surety does not commence performance thereof within fifteen (15) days from the date of said notice of termination, the Authority may take over the Work and perform same to completion, by Contract or otherwise, for the account and at the expense of the Contractor, and the Contractor, and his Surety, shall be liable to the Authority for any and all excess cost sustained by the Authority by reason of such performance and completion. In such event the Authority may take possession of and utilize in completing the Work, all such materials, equipment, tools, and plant as may be on the site of the Work and necessary therefor. The Contractor shall not receive any other payment under the Contract until said Work is wholly finished, at which time, if the unpaid balance of the amount to be paid under the Contract shall exceed the expense incurred by the Authority in finishing the Work as aforesaid, the amount of the excess shall be paid to the Contractor, but if such expense shall exceed the unpaid balance, the Contractor shall pay the difference to the Authority.

GC-33. ADMINISTRATIVE COSTS AND FEES:

Cash Improvements - In the event the improvements are to be paid for in cash: the costs and fees for publication, engineering, filing, recording, abstracting, acquisition of easements, flushings, and pipe testing, shall be paid by the Authority unless otherwise provided for in these Contract Documents.

Assessment Improvements: In the event the improvements are to be paid for by the issuance of special assessment bonds, the costs and fees for publication, engineering, filing, recording, abstracting, acquisition of easements, flushing, pipe testing, and other

authorized costs shall be added to the contract price and paid for in the same manner as the other Work included in this Contract. The Contractor shall pay the Authority the amount of said charges before the execution and delivery of the special assessment bonds or other payments. If the Contractor fails, neglects, or refuses to pay said charges within thirty (30) days after the bonds are ready for delivery, he shall pay the Authority interest at the rate of seven percent (7%) per annum and shall be liable for same in a civil suit. The Contractor shall pay the pipe testing fees directly to the testing laboratory.

GC-34. PAYMENT OR ACCEPTANCE NOT A WAIVER BY AUTHORITY:

Neither acceptance by the Authority or the Engineer or any employee of either nor any order by Authority for the payment of money, or the payment thereof, nor any taking of possession by Authority, nor the granting of any extension of time, shall operate as a waiver of any rights or powers of the Authority hereunder, and in the event that after the Work hereunder has been accepted and final payment made, it should be discovered that any part of this Contract has not been fully performed, or has been done in a faulty or improper manner, the Contractor shall immediately remedy such defect, or in the event of neglect to do so within a reasonable time after notice thereof, shall be liable for and shall pay to Authority the cost of remedying such defect, or a sum equal to the damage caused thereby, as Authority may elect. The acceptance of the Work or final payment therefor shall be no bar to suit against the Contractor or Surety, or both.

GC-35. CONTRACTOR'S OBLIGATION AFTER ACCEPTANCE:

Contractor further agrees, without cost other than is specially provided for in this Contract, at any and all times during one (1) year next following the completion and final acceptance of the Work embraced in this Contract, without notice from Authority, to refill all trenches or ditches that may sink or settle; and to repair all breaks and failures that may occur in the construction work due to defective material or workmanship; and to indemnify, save harmless and defend the Authority from any and all suits and actions of every description brought against Authority for, or on account of injuries or damages alleged to have been received or sustained by any party or parties by reasons of, or arising out of the failure of Contractor to refill all trenches and ditches and to repair all breaks or failures of said construction work, which said injuries or damages are alleged to have been received or incurred within one (1) year from the final acceptance of the Work hereunder, and to pay any and all judgements that might be rendered against Authority in any suits and actions, together with such expenses or attorney's fees expended or incurred by Authority in the defense thereof, and Contractor hereby expressly waives any notice that might by law be required to be given to them by Authority of any defect, break, settling, or failure or of any other condition that might be the cause of injury or damage to any person on account of which a claim or suit might be made or filed against Authority, or a judgement taken for damages against Authority. It is expressly agreed that the acceptance of the Work by Authority shall constitute no bar against any person injured or damaged by the failure of the Contractor to perform all of his covenants and agreements hereunder from maintaining an action against the Contractor, or against Authority from enforcing its rights against the Contractor hereunder.

GC-36. NOTICES:

Any notices or other communications hereunder may be given to Contractor at the address listed in the Proposal, to the Surety at the office of the Attorney-in-Fact signing the bond or at Surety's home office address on file with the Insurance Commissioner of the State of Oklahoma, and to Authority in care of the City of Tulsa's Director of Public Works, or at such other place as may be designated in writing. The delivery at such address, or depositing in any mailbox regularly maintained by the Post Office, of any notice, letter, or other communication to the Contractor, shall be deemed sufficient service thereof, and the date of said service shall be the date of such delivery or mailing.

GC-37. RELATION TO OTHER CONTRACTORS:

Nothing herein contained and nothing marked upon the Drawings shall be interpreted as giving the Contractor exclusive occupancy of the territory or right-of-way provided. The Authority and its employees, officers, and agents for any just purpose, and other contractors of the Authority for any purpose required by their respective contracts, may enter upon or cross this territory or occupy portions of it or take materials therefrom as directed or permitted. When two or more contracts are being executed at one time on the same or adjacent land in such manner that the work on one contract may interfere with the work on another, the Engineers shall decide which contractor shall cease work and which shall continue, or whether the work on both contracts shall progress at the same time and in what manner. When the territory of one contract is the necessary or convenient means of access for the transportation or movement of men, machines, or appliances for the execution of another contract, such privilege of access or any other reasonable privilege may be granted by the Engineers to the contractor desiring it, to the extent, amount, in the manner and at the time permitted. Any decision regarding the method or time of conducting the work or the use of the territory shall not be made the basis of claims for delay or damage except as otherwise stipulated. The Contractor shall not cause any unnecessary hindrance or delay to any other contractors on the premises and shall bear all damages done to the work of such other contractors by him or by his employees.

GC-38. PARTIAL OCCUPANCY AND USE:

The Authority, upon advance written notification to the Contractor, shall have the right to occupy and use any completed or partially completed portions of the Work site when such occupancy and use are in the Authority's best interest, notwithstanding completion of the entire project.

Such partial occupancy and use shall be upon the following terms:

- a. The Engineer shall make an inspection of the portion or portions of the Work concerned, and report to the Authority his findings as to the acceptability and completeness of the Work. The Engineer's report shall include a list of items to be completed or corrected before final payment.
- b. The Authority, upon acceptance of the Engineer's report, shall give

written notice to the Contractor of the Authority's intention to occupy and use said portions of the Work site. The Authority's notice shall include a copy of the Engineer's report, shall clearly identify the portions of the Work site to be occupied and used, and shall establish the date of said occupancy and use.

- c. From the date thus established, the Authority shall assume all responsibilities for operation, maintenance, and the furnishing of water, gas, and electrical power for the portions of the Work site thus occupied and used. The Authority shall have the right to exclude the Contractor from those portions of the Work site but shall provide the Contractor reasonable access to complete or correct necessary items of Work.
- d. The one-year guarantee required by the General Conditions shall not begin until completion and final acceptance of the entire project. If, before final acceptance, the Contractor completes any mechanical or electrical equipment such as pumps, blowers, process equipment, instrumentation, controls, metering equipment, heating, and ventilation equipment and similar items having movable or operable components, the Contractor may then request partial acceptance of each completed equipment system. In response, the Engineer will perform a final inspection of each system and determine if all specifications are satisfied, including but not limited to start-up conditions, performance criteria, control systems, training, and final operation manuals (O & M's). Once found to be complete, ready for operation, and isolated from all remaining work, the Engineer will provide Contractor with written notice of partial acceptance and the start date for the one-year guarantee required by the General Conditions.
- e. Occupancy or use of any space in the Work site shall not constitute acceptance of Work not performed in accordance with the Contract, nor relieve the Contractor of liability to perform any Work required by the Contract but not completed at the time of said occupancy and use.
- f. The Contractor shall not be held responsible for normal wear and tear or damage resulting from said occupancy, except to the extent that such damage is covered by the one-year guarantee.
- g. The partial occupancy and use of any portions of the Work site by the Authority shall not constitute grounds for claims by the Contractor for release of any amounts retained from payments under the provisions of the Contract. The retained amounts will not be due until completion of the entire project for final acceptance and final payment, as set forth in the General Conditions.

SPECIAL PROVISION
SUPPLEMENTAL CONTRACT REQUIREMENTS
PROJECT NO. ES 2025-07 TURLEY SOUTH INTERCEPTOR
REHABILITATION PHASE I

1. Apparent lowest, responsible bidder shall return their signed contract documents (including bonds and insurance) to the City of Tulsa, Contract Administration Section 175 E. 2nd Street, 13th Floor, OK 74103 within fifteen (15) days after notification by the City.
2. If the apparent lowest, responsible bidder provides their signed contract documents (including bonds and insurance) and the contract is executed by the City, the Pre-Construction Conference for this project will be held within sixty (60) days after bid opening.
3. The Notice to Proceed or written work order (NTP) will be issued in the normal time period (approximately within ten (10) days of the Pre-Construction Conference).

The City will grant up to **ZERO (0) days** for a delayed (flexed) NTP after the Pre-Construction Conference. No delayed (flexed) NTP above this amount will be granted unless approved by the City Engineer or designee.

4. There will be no additional compensation due to the use of a delayed (flexed) NTP.
5. This Special Provision does not alter the Public Meeting requirements (and public notice) defined in the General Conditions.

SPECIAL
PROVISIONS

SPECIAL PROVISION
SUPPLEMENTAL CONTRACT REQUIREMENTS
PROJECT NO. ES 2025-07 TURLEY SOUTH INTERCEPTOR
REHABILITATION PHASE I
ORF-19-0001-CW

1. Apparent lowest, responsible bidder shall return their signed contract documents (including bonds and insurance) to the City of Tulsa, Contract Administration Section 175 E. 2nd Street, 13th Floor, OK 74103 within fifteen (15) days after notification by the City.
2. If the apparent lowest, responsible bidder provides their signed contract documents (including bonds and insurance) and the contract is executed by the City, the Pre-Construction Conference for this project will be held within sixty (60) days after bid opening.
3. The Notice to Proceed or written work order (NTP) will be issued in the normal time period (approximately within ten (10) days of the Pre-Construction Conference).

The City will grant up to **ZERO (0) days** for a delayed (flexed) NTP after the Pre-Construction Conference. No delayed (flexed) NTP above this amount will be granted unless approved by the City Engineer or designee.

4. There will be no additional compensation due to the use of a delayed (flexed) NTP.
5. This Special Provision does not alter the Public Meeting requirements (and public notice) defined in the General Conditions.

SPECIAL PROVISIONS
INSURANCE REQUIREMENTS

In reference to Ordinance No. 24616 Adoption of State Specification for Highway Construction, Section 107.12 shall be modified as follows:

The CONTRACTOR (and any subcontractors) shall carry and keep in force during this Contract, policies of insurance issued by an insurer authorized to transact business in Oklahoma in minimum amounts as set forth below or as required by the laws of the State of Oklahoma. The CONTRACTOR shall also furnish an Owner's Protective Policy in the same amounts naming the Tulsa Metropolitan Utility Authority as the assured, issued by the same insurance company as the CONTRACTOR'S liability coverage and indemnifying the Tulsa Metropolitan Utility Authority against any and all actions, claims, judgments or demands arising from injuries of any kind and character sustained by any person or persons because of work performed by the CONTRACTOR.

General Liability Insurance with a bodily injury and property damage combined single limit of not less than \$1,000,000.00 for each occurrence.

Employer's Liability and Workmen's Compensation in the amounts as required by law.

The CONTRACTOR shall provide proof of such coverage:

- (a) By providing Certificate(s) of Insurance prior to the execution of this contract; and
- (b) By submitting updated Certificate(s) of Insurance with each and every subsequent request for payment. The Certificate(s) should show that the policies are current and should be dated within 30 days of payment request.

The CONTRACTOR shall not cause any required insurance policy to be cancelled or permit it to lapse. If the CONTRACTOR cancels, allows to lapse, fails to renew or in any way fails to keep any required insurance policy in effect, the City will suspend all progress and/or final payments for the project until the required insurance is obtained. Further, a CONTRACTOR who fails to keep required insurance policies in effect may be deemed by the City to be in breach of contract, ineligible to bid on future projects, and/or ineligible to engage in any new contracts.

The Contractor shall execute and furnish a Statutory Bond for the protection of laborers, mechanics, and material men in a sum equal to one hundred percent (100%) of the contract price.

The Contractor shall execute and furnish a Performance Bond in a sum equal to one hundred percent (100%) of the contract price.

The Contractor shall execute and furnish a Maintenance Bond in a sum equal to one hundred percent (100%) of the contract price.

Prior to doing blasting, the Contractor shall furnish a Certificate of Insurance, which shall certify that any damage caused by blasting is within the coverage of the Contractor's liability insurance to the full limits thereof.

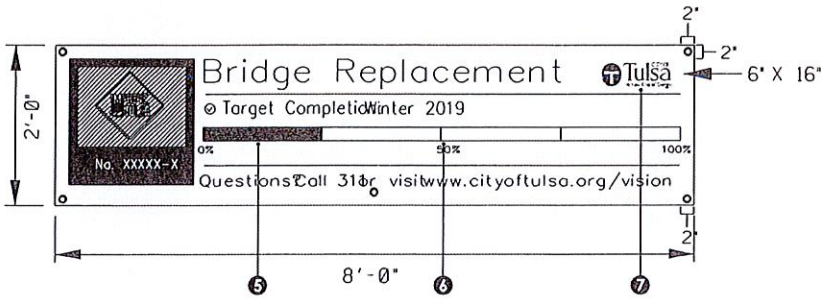
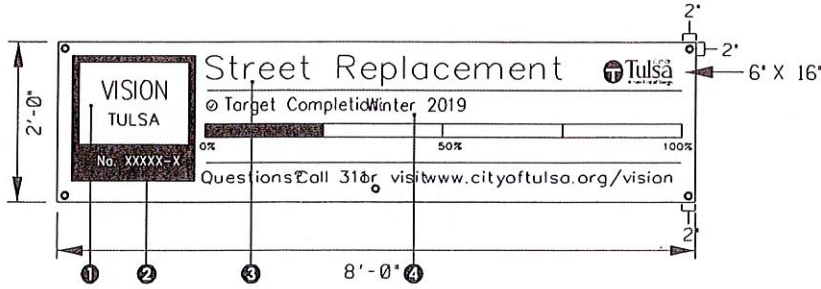
All bonds and insurance must be executed by a company licensed to do business in the State of Oklahoma and must be acceptable to the City.

SPECIAL PROVISIONS
OWNER ALLOWANCE

The "Owner Allowance" may be used for various work and miscellaneous items not specifically identified in the Contract Documents with the following provisions:

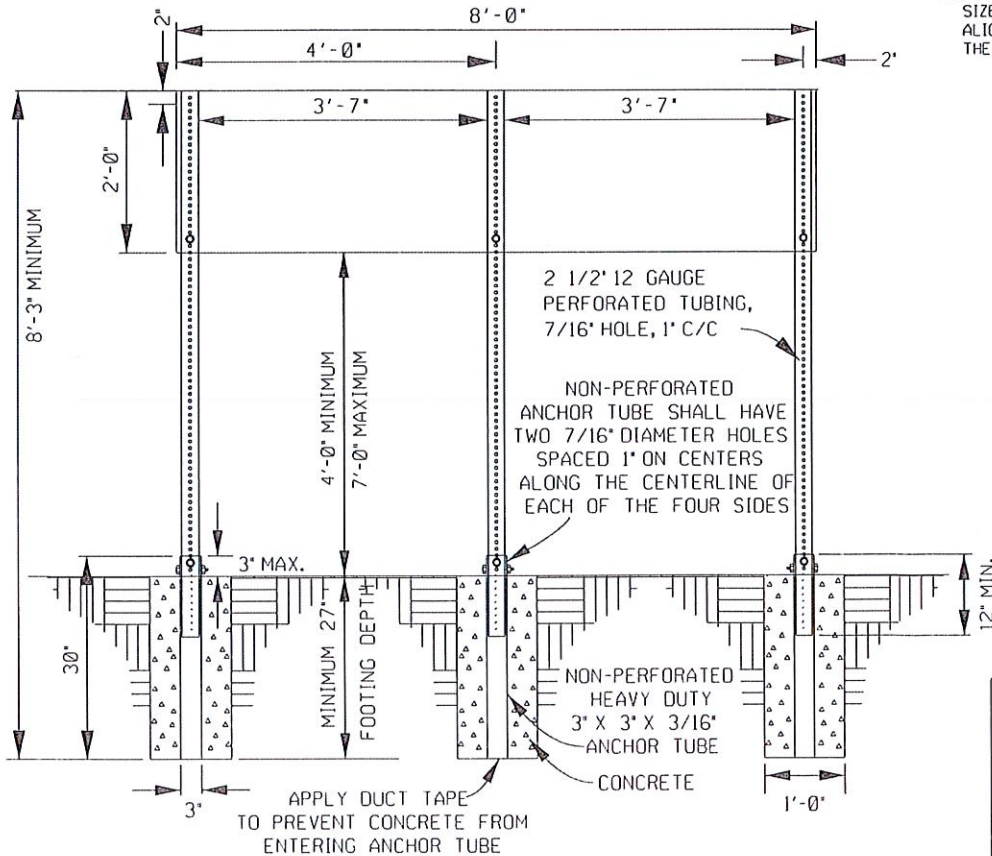
- A. The allowance shall be used for cost of design and construction, including all materials, labor, equipment, profit and overhead, of work items not specifically identified in the Construction Documents, or included in original pay items bid for the contract.
- B. The allowance shall be utilized only at the discretion of the City of Tulsa. Any balance remaining at the completion of the Project will be retained by the City of Tulsa.
- C. The Contractor shall provide, to the City of Tulsa, a written request for the use of any allowance, including a schedule of values and associated backup information, including validity of need, materials, labor, equipment, and time required to perform the associated work.

Contractor shall proceed with the allowance work only after receiving written permission from the City of Tulsa. Proceeding with associated allowance work without written permission from the City of Tulsa will be at the Contractor's sole expense.



NOTE:

1. CAPITAL PROGRAM LOGO
 - VISION TULSA
 - IMPROVE OUT TULSA
2. PROJECT NUMBER
 - FONT: HELVETICA BOLD
 - SIZE: 2.5 INCHES
 - ALIGNMENT: CENTER
 - COLOR: WHITE
3. GENERAL PROJECT TITLE
 - FONT: HELVETICA BOLD
 - SIZE: 4.72 INCHES
 - ALIGNMENT: LEFT
 - COLOR: CITY BLUE
 - GENERALIZED
 - STREET REPLACEMENT
 - STREET REHABILITATION
 - STREET WIDENING
 - STREET RESURFACING
 - BRIDGE REPLACEMENT
 - BRIDGE REHABILITATION
4. TARGET COMPLETION
 - FONT: HELVETICA REGULAR AND BOLD
 - SIZE: 2.5 INCHES
 - ALIGNMENT: LEFT
 - COLOR: CITY BLUE AND BLACK
5. PROJECT PROGRESS BAR
 - SIZE: 2" TALL X 66" WIDE
 - COLOR: GREEN
 - MATERIAL: 2" GREEN, INDUSTRIAL DUCT TAPE CUT AT 1/4 SEGMENTS SHOULD BE USED TO INDICATE PROJECT PROGRESS/ADVANCEMENTS IN THE PROGRESS BAR. PAINT SHOULD ONLY BE USED IN THE EVENT THAT TAPE IS NOT AVAILABLE OR UNABLE TO REMAIN AFFIXED OVER A LONGER CONSTRUCTION PERIOD.
6. CONTACT INFORMATION
 - OPTIONS: 311 AND CORRESPONDING URL
 - FONT: HELVETICA REGULAR AND BOLD
 - SIZE: 2.5 INCHES
 - ALIGNMENT: LEFT
 - COLOR: CITY BLUE AND BLACK
7. CITY OF TULSA LOGO
 - SIZE: 10" WIDE
 - ALIGNMENT: OUTER RIGHT MARGIN EDGE AND TO THE BASELINE OF THE GENERAL PROJECT TITLE.



ASSEMBLY OF PLYWOOD SIGN

PROJECT SIGN	
CITY OF TULSA, OKLAHOMA ENGINEERING SERVICES DEPARTMENT	
DRAWN BY:	APPROVED
CHECKED BY: <i>HAS</i>	<i>[Signature]</i>
DATE: MARCH 2022	
NOT TO SCALE	STANDARD NO. 102

SPECIAL PROVISION
FOR UTILITY RELOCATIONS
AND DESIGN ISSUES

It is the intent of this specification to provide no more than seventy-five **(75)** calendar days due to delays caused by required utility relocations and required design clarifications. Should the Contractor be delayed in the final completion of work by any utility relocation or design issue, additional days as determined by the Engineer shall be granted by the City. However, the Contractor shall give the Engineer notice in writing of the cause of the delay in each case on the Extension of Time Request Form enclosed in these documents, and agrees that any claim shall be fully compensated for by the provisions of this specification to complete performance of the work. An adjustment will not be made to the contract time bid for incentive purposes.

Any time granted for utility relocations or design issues up to **(75)** calendar days will be in addition to the number of days shown in the proposal for computation of disincentive and liquidated damages.

SPECIFICATIONS

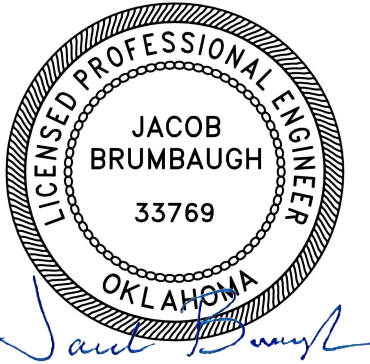
SPECIFICATIONS

- A. Oklahoma Department of Transportation Standard Specifications for Highway Construction, 2019 Edition as modified by Ordinance 24616, shall be used on this project including Section 100-General Provisions.

- B. City of Tulsa, Public Work, Engineering Division, Construction Specifications – March 2022 are incorporated herein as if fully set forth and are on file, including all revisions posted on internet prior to bid opening, with the Public Works Department, Engineering Division, 175 E. 2nd Street, Tulsa, Oklahoma or access on the internet at:
<https://www.cityoftulsa.org/government/departments/public-works/engineering-services/specifications-checklists-and-details/>

TECHNICAL
SPECIFICATIONS

4/10/2026



**SPECIAL PROVISIONS FOR
TURLEY SOUTH INTERCEPTOR
REHABILITATION, PHASE 1**

**TMUA PROJECT NO. ES 2025-07
ENGINEERING SERVICES DEPARTMENT
CITY OF TULSA, OKLAHOMA**

ENGINEER:
RJN GROUP, INC.
4500 S. Garnett Rd., Ste. 110
Tulsa, OK 74146
918.627.9737

TECHNICAL REQUIREMENTS AND SPECIFICATIONS

TABLE OF CONTENTS

SPECIAL PROVISIONS

SP-1 FRP Pipe for Direct Bury Installation – Gravity Service	3
SP-2 Pipe Transitions	6
SP-3 Fiberglass Reinforced Polyester Manholes Water Tight Type	7
SP-4 FRP Tee Base Manholes	11
SP-5 Fiberglass Reinforced Manhole Liners	15
SP-6 Composite Manhole Frame & Cover	21
SP-7 Manhole and Catch Basin Grade Adjusting Ring Specification	22
SP-8 Large Diameter Polyvinyl Chloride (PVC) Gravity Sewer Pipe Fittings	25
SP-9 Owner Allowance	28
SP-10 Sanitary Sewer Construction Form	29
SP-11 Sanitary Sewer Bypass Pumping Notification	30
SP-12 Cured-In-Place-Pipe (CIPP)	32

SP-1 TECHNICAL REQUIREMENTS AND SPECIFICATIONS

FRP PIPE FOR DIRECT BURY INSTALLATION – GRAVITY SERVICE

PART 1 GENERAL

- 1.1 Section Includes
Centrifugally Cast Reinforce Fiberglass Mortar Pipe (CCFRPM) and filament wound glass-reinforced polymer (GRP) pipe.
- 1.2 References
ASTM D3262 - Standard Specification for "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Sewer Pipe.
ASTM D4161 - Standard Specification for "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe Joints Using Flexible Elastomeric Seals.
ASTM D2412 - Standard Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading.
ASTM D3681 - Standard Test Method for Chemical Resistance of "Fiber glass" Pipe in a Deflected Condition.
ASTM D638 - Test Method for Tensile Properties of Plastics.
ASTM F1417 - Standard Practice for Installation Acceptance of Plastic Non-pressure Sewer Lines using Low-Pressure Air

PART 2 PRODUCTS

2.1 MATERIALS

- A. Resin Systems: The manufacturer shall use only polyester resin systems with a proven history of performance in this particular application. The historical data shall have been acquired from a composite material of similar construction and composition as the proposed product.
- B. Glass Reinforcements: The reinforcing glass fibers used to manufacture the components shall be of highest quality commercial grade E-glass filaments with binder and sizing compatible with impregnating resins.
- C. Silica Sand: Sand shall be minimum 98% silica with a maximum moisture content of 0.2%.
- D. Additives: Resin additives, such as curing agents, pigments, dyes, fillers, thixotropic agents, etc., when used, shall not detrimentally effect the performance of the product.
- E. Elastomeric Gaskets: Gaskets shall meet ASTM F477 and be supplied by qualified gasket manufacturers and be suitable for the service intended.

2.2 MANUFACTURE AND CONSTRUCTION

- A. Pipes: Manufacture pipe by the centrifugal casting or filament wound process to result in a dense, nonporous, corrosion-resistant, consistent composite structure. The interior surface of the pipes exposed to sewer flow shall be manufactured using a resin with a 50% elongation (minimum) when tested in accordance with D638. The interior surface shall provide crack resistance and abrasion resistance. The exterior surface of the pipes shall be comprised of a sand and resin layer which provides UV protection to the exterior.

- B. Joints: Unless otherwise specified, the pipe shall be field connected with fiberglass sleeve couplings that utilize elastomeric sealing gaskets as the sole means to maintain joint watertightness. The joints must meet the performance requirements of ASTM D4161. Joints at tie-ins, when needed, may utilize gasket-sealed closure couplings.
- C. Fittings: Flanges, elbows, reducers, tees, wyes, laterals and other fittings shall be capable of withstanding all operating conditions when installed. They may be contact molded or manufactured from mitered sections of pipe joined by glass-fiber-reinforced overlays. Properly protected standard ductile iron, fusion-bonded epoxy-coated steel and stainless steel fittings may also be used.
- D. Acceptable Manufacturer: Centrifugally Cast Reinforce Fiberglass Mortar Pipe (CCFRPM) as manufactured by Hobas Pipe USA, Inc. or a filament wound glass-reinforced polymer (GRP) pipe as manufactured by Hobas Pipe USA, Inc. and FLOWTITE™ as manufactured by Thompson Pipe Group, Inc. are approved for use on this project as a gravity sewer (per ASTM D3262). In all cases, stiffness class SN72 shall be used on this project for the installation of carrier sewer pipe.

2.3 DIMENSIONS

- A. Diameters: The actual outside diameter of standard pipe (nominal 18" to 60") shall be in accordance with ASTM D3262. For other diameters, OD's shall be per manufacturer's literature.
- B. Lengths: Pipe shall be supplied in nominal lengths of 20 to 40 feet. Actual laying length shall be nominal +1, -4 inches. At least 90% of the total footage of each size and class of pipe, excluding special order lengths, shall be furnished in nominal length sections.
- C. Wall Thickness: The minimum wall thickness shall be the stated design thickness.
- D. End Squareness: Pipe ends shall be square to the pipe axis with a maximum tolerance of 1/8".

2.4 TESTING

- A. Pipes: Pipes shall be manufactured and tested in accordance with ASTM D3262.
- B. Joints: Coupling joints shall meet the requirements of ASTM D4161.
- C. Stiffness: Minimum pipe stiffness when tested in accordance with ASTM D2412 shall normally be 72 psi.
- D. Strain Corrosion: The extrapolated 50-year strain corrosion value shall not be less than 0.9% as determined in accordance with ASTM D3681 and ASTM D3262.

2.5 CUSTOMER INSPECTION

- A. The Owner or other designated representative shall be entitled to inspect pipes or witness the pipe manufacturing.
- B. Manufacturer's Notification to Customer: Should the Owner request to see specific pipes during any phase of the manufacturing process, the manufacturer must provide the Owner with adequate advance notice of when and where the production of those pipes will take place.

2.6 PACKAGING, HANDLING, SHIPPING

- A. Packaging, handling, and shipping shall be done in accordance with the manufacturer's instructions.

PART 3 EXECUTION

3.1 INSTALLATION

A. Burial:

2.1 The bedding and burial of FRP pipe and fittings in non-paved areas outside of City right-of-way shall be in accordance with the Drawings.

2.2 The bedding and burial of FRP pipe and fittings and pavement restoration within City right-of-way, or under existing pavement, shall be in accordance with City of Tulsa Standard Detail No. 713.

B. Pipe Handling: Use textile slings, other suitable materials or a forklift. Use of chains or cables is not recommended.

Jointing:

Clean ends of pipe and coupling components.

Apply joint lubricant to pipe ends and elastomeric seals of coupling. Use only lubricants approved by the pipe manufacturer.

Use suitable equipment and end protection to push or pull the pipes together.

Do not exceed forces recommended by the manufacturer for coupling pipe.

Join pipes in straight alignment then deflect to required angle. Do not allow the deflection angle to exceed the deflection permitted by the manufacturer.

Bell holes shall be provided at each joint to permit proper joint assembly and alignment. After joint assembly, fill the bell holes with bedding material and compact as required.

When using movable trench supports, care should be exercised not to disturb the pipe location, jointing or its embedment.

Field Tests:

Low Pressure Air Test: After installation of the pipe, each reach shall be tested with the method as outlined in City of Tulsa Standard Specification Section 408.11. The low pressure air test shall be done in accordance with ASTM F1417. To pass the low pressure air test, the allowable limit is equal to or less than 10 gallons per inch of pipe diameter per mile per day at 2 feet of head as required by OAC 252:656-5-5(b).

Deflection: Perform deflection tests on all pipe after the final backfill has been in place at least 30 days. Maximum allowable long-term deflection shall not exceed 5% of the average initial diameter. Tests shall be performed using a rigid ball or mandrel with a diameter equal to 95% of the average inside diameter of the pipe taking into consideration manufacturing tolerances. Tests shall be performed without mechanical pulling devices. The deflection test shall be done in accordance with ASTM D3262.

CCTV Inspection: After installation of the pipe, Contractor shall contact Field Engineering staff to request scheduling for Sewer Operations & Maintenance to TV inspect the line as specified in City of Tulsa Standard Specifications.

All field tests shall be scheduled and coordinated with the Engineer.

END OF SECTION

SP-2 TECHNICAL REQUIREMENTS AND SPECIFICATIONS

PIPE TRANSITIONS

PART 1 GENERAL

- 1.1 Each reach of sewer shall be constructed using the same type of pipe between the structures at each end of the reach. Transitions between pipe types may only be made at the manholes.

END OF SECTION

SP-3 TECHNICAL REQUIREMENTS AND SPECIFICATIONS

FIBERGLASS REINFORCED POLYESTER MANHOLES WATER TIGHT TYPE

PART 1 GENERAL

1.1 Section Includes:

- A. Fiberglass Reinforced Polyester (FRP) Manholes.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Fiberglass reinforced polyester manhole shall be manufactured from commercial grade polyester resin or other suitable polyester or vinyl ester resins with fiberglass reinforcements. Manhole shall be a one-piece unit manufactured to meet or exceed all specifications of A.S.T.M. D-3753 latest edition as manufactured by L.F. Manufacturing, Inc., Giddings, Texas, 1-800-237-5791, or an approved equal.
- B. Resin: The resins used shall be a commercial grade unsaturated polyester resin or other suitable polyester or vinyl ester resin.
- C. Reinforcing Materials: The reinforcing materials shall be commercial Grade "E" type glass in the form of continuous roving and chop roving, having a coupling agent that will provide a suitable bond between the glass reinforcement and the resin.
- D. Interior Surfacing Material: The inner surface exposed to the chemical environment shall be a resin-rich layer of 0.010 to 0.020 inch thick. The inner surface layer exposed to the corrosive environment shall be followed with a minimum of two (2) passes of chopped roving of minimum length 0.5 inch (13 mm) to maximum length of 2.0 inch (50.8 mm) and shall be applied uniformly to an equivalent weight of 3 oz/ft. Each pass of chopped roving shall be well rolled prior to the application of additional reinforcement. The combined thickness of the inner surface and interior layer shall not be less than 0.10 inch (2.5 mm).
- E. Wall Construction Procedure: After the inner layer has been applied the manhole wall shall be constructed with chop and continuous strand filament wound manufacturing process, which insures continuous reinforcement and uniform strength and composition. The cone section, if produced separately, shall be affixed to the barrel section at the factory with resin-glass reinforced joint resulting in a one-piece unit. Seams shall be fibreglassed on the inside and the outside using the same glass-resin jointing procedure. Field joints shall not be acceptable by anyone other than L.F. Manufacturing, Inc. Giddings, Texas or an approved equal.
- F. Exterior Surface: For a UV inhibitor the resin on the exterior surface of the manhole shall have gray pigment added to a minimum thickness of 0.125 inches.
- G. Stubouts and Connections: Upon request stubouts may be installed. Installation of CCFRPM, GRP, PVC, or other sewer pipe material must be performed by sanding, priming, and using resin fiber-reinforced hand lay-up. The resin and fiberglass shall be the same type and grade as used in the fabrication of the

fiberglass manhole. Inserta-Tee fittings may be requested and installed per manufacturer's instructions. Kor-N-Seal boots may be installed by the manhole manufacturer using fiberglass reinforced pipe stubouts for the Kor-N-Seal boot sealing surface.

- H. Manhole Bottom: Fiberglass manholes will be required to have resin fiber-reinforced bottom. Deeper manholes may require a minimum of two (2) fiberglass channel stiffening supports. All fiberglass manholes manufactured with a fiberglass bottom will have a minimum 3-inch wide anti-flotation ring. The manhole bottom shall be a minimum of ½ inch thick.
- I. Fiberglass enclosed invert and bench area: A fiberglass enclosed invert and bench area shall be installed in the manhole by the manufacturer. The invert will be formed using a non-corrosive material and completely enclosed in a minimum 1/4-inch layer of fiberglass chop.
- J. Height Adjustment: Fiberglass manholes must have the ability to be height adjustable with the use of a height adjustment ring. Height adjustment can be made as a field operation without the use of uncured resins or fiberglass lay-ups. Fiberglass manholes must maintain all load and soundness characteristics required by A.S.T.M. D-3753 after height adjustment has occurred.
- K. Fillers and Additives: Fillers, when used, shall be inert to the environment and manhole construction. Sand shall not be accepted as an approved filler. Additives, such as thixotropic agents, catalysts, promoters, etc., may be added as required by the specific manufacturing process to be used to meet the requirements of the A.S.T.M. D-3753 standard. The resulting reinforced-plastic material must meet the requirements of this specification.

2.2 MANUFACTURE AND CONSTRUCTION

- A. Manhole cylinders, manway reducers, and connectors shall be produced from fiberglass-reinforced polyester resin using a combination of chop and continuous filament wound process.
- B. Interior Access: All manholes shall be designed so that a ladder or step system can be supported by the installed manhole.
- C. Manway Reducer: Manway reducers will be concentric with respect to the larger portion of the manhole diameters through 60 inches. Larger manholes may have concentric or eccentric manway reducer openings.
- D. Cover and Ring Support: The manhole shall provide an area from which a grade ring or brick can be installed to accept a typical metal ring and cover and have the strength to support a traffic load without damage to the manhole.
- E. Exterior Surface: The exterior surface shall be relatively smooth with no sharp projections. Handwork finish is acceptable if enough resin is present to eliminate fiber show. The exterior surface shall be free of blisters larger than 0.5 inch in diameter, de-lamination or fiber show.
- F. Interior Surface: The interior surface shall be resin rich with no exposed fibers. The surface shall be free of crazing, de-lamination, blisters larger than 0.5 inch in diameter, and wrinkles of 0.125 inch or greater in depth. Surface pits shall be permitted if they are less than 0.75 inch in diameter and less than 0.0625 inch deep. Voids that cannot be broken with finger pressure and are entirely below the resin surface shall be permitted if they are less than 0.5 inch in diameter and less than 0.0625 inch thick.
- G. Wall Thickness: Fiberglass manholes 48" in diameter and up to 20 feet in depth will have a minimum wall thickness of 0.3125 inches. Fiberglass manholes 48 inches in diameter and 20 feet to 30 feet in depth will have a minimum wall thickness of 0.5 inches.

- H. Repairs: Any manhole repairs are subject to meet all requirements of this specification.
- I. Manhole Length: Manhole lengths shall be in 6-inch increments +/- 2 inches.
- J. Diameter Tolerance: Tolerance of inside diameter shall be +/- 1% of required manhole diameter.
- K. Load Rating: The complete manhole shall have a minimum dynamic-load rating of 16,000 lbs. when tested in accordance with A.S.T.M. 3753, 8.4 (note 1). To establish this rating the complete manhole shall not leak, crack, or suffer other damage when load tested to 40,000 lbs. and shall not deflect vertically downward more than 0.25 inch at the point of load application when loaded to 24,000 lbs.
- L. Stiffness: The manhole cylinder shall have the minimum pipe-stiffness values shown in the table below when tested in accordance with A.S.T.M. 3753, 8.5 (note 1).

<u>LENGTH - FT.</u>	<u>F/AY - PSI</u>
3 - 6.5	0.75
7 - 12.5	1.26
13 - 20.5	2.01
21 - 25.5	3.02
26 - 35	5.24

- M. Soundness: In order to determine soundness, the manufacturer shall apply an air or water pressure test to the manhole test sample. Test pressure shall not be less than 3 psig or greater than 5 psig. While holding at the established pressure, inspect the entire manhole for leaks. Any leakage through the laminate is cause for failure of the test. Refer to A.S.T.M. D-3753, 8.6.
- N. Chemical Resistance: The fiberglass manhole and all related components shall be fabricated from corrosion proof material suitable for atmospheres containing hydrogen sulfide and dilute sulfuric acid as well as other gases associated with the wastewater collection system.

2.3 PHYSICAL PROPERTIES

	<u>Hoop Direction</u>	<u>Axial Direction</u>
a. Tensile Strength (psi)	18,000	5,000
b. Tensile Modules (psi)	0.6×10^6	0.7×10^6
c. Flexural Strength (psi)	26,000	4,500
d. Flexural Modules (psi)	1.4×10^6	0.7×10^6
e. Compressive (psi)	18,000	10,000

2.4 TESTING

- A. All tests shall be performed as specified in A.S.T.M. D-3753 latest edition, Section 8, test method D-790 (See Note 5) and test method D-695.

2.5 QUALITY CONTROL

- A. Each completed manhole shall be examined by the manufacturer for dimensional requirements, hardness, and workmanship. All required A.S.T.M. D-3753 testing shall be completed and records of all testing shall be kept and copies of test records shall be presented to customer upon formal written request within a reasonable time period.

2.6 CERTIFICATIONS

- A. As a basis of acceptance the manufacturer shall provide an independent certification which consists of a copy of the manufacturer's test report and accompanied by a copy of the test results stating the manhole has been sampled, tested, and inspected in accordance with the provisions of this specification and meets all requirements.

2.7 SHIPPING & HANDLING

- A. Do not drop or impact the fiberglass manhole. Fiberglass manhole may be lifted by inserting a 4"x4"x30" timber into the top of manhole with cable attached or by a sling or "choker" connection around the center of manhole, lift as required. Use of chains or cables in contact with the manhole surface is prohibited.

2.8 MARKING & IDENTIFICATION

- A. Each manhole shall be marked on the inside and outside with the following information:
 1. Manufacturer's name or trademark
 2. Manufacturer's factory location
 3. Manufacturer's serial number
 4. Total manhole depth.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Closed Bottom Manhole Installation: Bottom of excavation should be compacted to 95% Standard Proctor Density. Manholes with diameters less than 60 inches and depths less than 12 feet require a base of 6 inches of crushed stone. Manholes with depths of 10 feet and greater, and diameters of at least 48 inches should have a poured reinforced concrete base at least one (1) foot deep and at least two (2) feet larger than fiberglass manhole outside diameter. The fiberglass manhole shall be lowered into the wet concrete and brought to plumb. Pour reinforced concrete over the anti-flotation flange. The concrete shall be a minimum of one (1) foot deep and two (2) feet from outside wall of the manhole. More concrete may be required in high water table areas. In high water table areas consult the Engineer for backfill requirements.
- B. Backfill Material: Unless shown otherwise on drawings and approved by the Engineer, sand, crushed stone, or pea gravel shall be used for backfill around the manhole for a minimum distance of one (1) foot from the outside surface and extending from the bottom of the excavation to the top of the reducer section. Suitable material chosen from the excavation may be used for the remainder of the backfill. The material chosen shall be free of large lumps or clods, which will not readily break down under compaction. This material will be subject to approval by the Engineer.
- C. Backfill Procedure: Backfill shall be placed in layers of not more than 12 loose measure inches and mechanically tamped to 95% Standard Proctor Density, unless otherwise approved by the Engineer. Flooding will not be permitted. Backfill shall be placed in such a manner as to prevent any wedging action against the fiberglass manhole structure.

END OF SECTION

SP-4 TECHNICAL REQUIREMENTS AND SPECIFICATIONS

FRP TEE BASE MANHOLES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Centrifugally Cast Reinforce Fiberglass Mortar Pipe (CCFRPM) and filament wound glass-reinforced polymer (GRP) pipe Tee Base Manholes

1.2 REFERENCES

- A. ASTM D3262 Standard Specification for "Fiberglass (Glass-Fiber-Reinforced Thermosetting-Resin) Sewer Pipe^{1,2}
- B. ASTM D3753 Standard Specification for Glass-Fiber-Reinforced Polyester Manholes¹
- C. ASTM D2412 Standard Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading
- D. ASTM D3681 Standard Test Method for Chemical Resistance of "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe in a Deflected Condition¹
- E. ASTM D695 Standard Test Method for Compressive Properties of Rigid Plastics
- F. ASTM D638 Standard Test Method for Tensile Properties of Plastics
- G. ISO 9001:2015 Quality managements systems - Requirements

PART 2 PRODUCTS

2.1 MATERIALS

- A. FRP tee base manholes shall be manufactured from commercial grade polyester resin or vinyl ester resins. Tee base manholes shall meet or exceed all specifications of ASTM D-3753 as manufactured by Hobas Pipe USA Inc. or Thompson Pipe Group, Inc. or an approved equal.
- B. Resin: The resin used shall be a commercial grade unsaturated polyester resin or vinyl ester resin. Resins shall be suitable for the service environment intended (i.e. domestic sanitary wastewater).
- C. Reinforcing Materials: The reinforcing material shall be commercial grade "E" type glass in the form of mat, chopped roving, roving fabric, or both, having a coupling agent that will provide a suitable bond between the glass reinforcement and the resin.
- D. Riser and Cones: Riser pipe shall be manufactured per ASTM D3262 with cone manufactured of similar materials.
- E. Interior Surfacing Material: The inner surface of the riser pipe exposed to the environment shall have a resin rich non-reinforced layer (nominal 40 mils in thickness) to resist abrasion and crack resistance.
- F. Fillers and Additives: Fillers, when used, shall be inert to the environment and manhole construction. Additives, such as thixotropic agents, catalyst, promoters, etc., may be added as required by the specific manufacturing process to be used to meet the requirements of the referenced ASTM standards.

- G. Exterior Surface:
- 1) Cones – Exterior surface shall be coated with suitable gel coat as an additional UV and water barrier. Gel coat shall be pigmented to resist ultraviolet. The exterior surface shall be relatively smooth with no sharp projections free of blisters, de-laminations or exposed fiberglass. Indentations or other shape imperfections that will not affect performance are allowed.
 - 2) Riser Sections and Tee-bases – Exterior will be constructed of a sand rich layer without reinforcing glass to provide UV resistance.
- H. Manhole Top Configuration:
- 1) Cone Sections – The manhole reducer must provide a bearing surface on which a standard ring and cover may be supplied and adjusted to grade. The reducer shall be concentric and shall be joined to the barrel section at the factory with resin and glass fiber reinforcement, thus providing required monolithic design to prevent infiltration and/or exfiltration through the manhole.
- I. Class: The manhole shall be manufactured in one class of load rating This class shall have a minimum HS-20-wheel load (16,000 pounds dynamic wheel load).
- J. Connections and Stub outs:
- 1) Inlet and outlets connections will be made of CCFRPM or GRP pipe material that is laminated to CCFRPM or GRP riser pipe and shipped with one spigot end (outlet) and one FWC coupling and (inlet) unless otherwise directed by the purchaser.
 - a. Identified PVC or FRP branch connections will be cored and attached to the manhole riser with fiberglass laminations at the design engineer's flow line elevations, vertical and horizontal angles. All small diameters lateral stub-outs to be furnished as plain end (spigot).
 - b. Field connections of 4"-15" PVC lines can be accomplished with Insert-a-Tee connectors or engineer approved equal.
- K. Manhole Bottom:
- 1) Resin and glass reinforced manhole bottoms will be provided with a glass reinforced bottom section with integral FWC coupling for watertight attachment to FRP tee-base riser neck.
 - 2) Full bench and invert manholes will have a bench manufactured utilizing non-corrosive materials encapsulated in fiberglass minimum ¼" thick.

2.2 MANUFACTURE AND CONSTRUCTION

- A. Manhole cylinders, manway reducers, and joints shall be produced from fiberglass reinforced polyester resin using a combination of centrifugal casting, continuous winding, or spray process. Tee Base-Connection: Fiberglass manhole risers shall be joined to a pipe stub rising vertically from in-line tee fitting. Manhole risers shall be connected to the vertical pipe using an FWC pipe coupling cast into the bottom of the fiberglass riser. Pipe coupling shall seal to the tee-base using a flexible compression gasket compatible with the tee-base

pipe material. Pipe coupling shall be permanently bonded into the base of the riser using fiberglass laminate. Pipe coupling shall be joined to the in-line tee fitting by placing the manhole riser on top of the tee outlet and applying downward pressure until the vertical pipe stub is inserted into the pipe coupling to the proper depth. See homing line mark on tee base branch (neck) for depth of penetration into FWC coupling.

- B. Dimensions: The tee base manhole shall be a circular cylinder, reduced at the top to a circular manway not smaller than 30" inside diameter. Manholes shall be produced in half-foot increments in lengths +/- 2". The nominal inside diameter of the riser section shall be 60".
- C. Diameter Transition: Individual fiberglass components of manhole shall be joined by fiberglass reinforced laminations or be fiberglass bonded.
- D. Anti-Flotation Flange: Exterior of manhole riser shall incorporate a 3" minimum wide flange at its base. Upon joining of manhole riser to pipe tee, sufficient concrete shall be poured around tee and manhole riser to prevent buoyancy. Anti-flotation flange shall be encased with 12" of concrete (minimum), in addition to the 10" of concrete (minimum) above the top of pipe as required for the tee base concrete encasement height.
- E. Concrete Encasement: The minimum width of the concrete encasement shall be the width of the pipe plus 2' on both sides of pipe. Concrete shall have a compressive strength of 5,000 PSI.
- F. Height Adjustment: Fiberglass manholes shall be height adjustable using external grade rings or adjustment with an FWC coupling riser joint. Top riser sections can be cut for height adjustment and shall be rejoined with an FWC coupling.
- G. Ring and Cover Platform: Top of cone/reducer shall have a fiberglass support platform upon which grade rings may be installed to accept a typical cast iron ring and cover. Grade rings, ring and cover shall be placed over fiberglass neck (chimney) in a manner that evenly distribute loading onto grade rings only. No loading shall be placed onto fiberglass neck.
- H. Repairs: Any manhole repair is required to meet all requirements of this specification.
- I. Manhole Riser Lengths: Riser lengths shall be in whole or 1/2-foot increments +/- 2".
- J. Load Rating: The complete manhole riser shall have a minimum dynamic load rating of 16,000 lbf (71 172 N) when tested in accordance with ASTM D3753, 8.4. To establish this rating the complete manhole shall not leak, crack, or suffer other damage when load tested to 40,000 lbf (71 929 N) and shall not deflect vertically downward more than 0.25 in. (6.35 mm) at the point of load application when loaded to 24,000 lb. (106 757 N).
- K. Stiffness: The cylindrical portion of the manhole riser is to be tested in accordance with ASTM Method D2412. The riser cylinder shall have the minimum pipe-stiffness values shown in the table below, when tested in accordance with ASTM D3753, Section 8.5.

3'-6'	46psi
7'-12'	46psi
13'-20'	46psi
21'-25'	46psi
26'-35'	46psi

- L. Soundness: In order to determine soundness, an air or water test is to be applied to the manhole riser test sample. While holding the pressure between 3-5psi, the entire manhole riser must be inspected for leaks. Any leakage through the laminate is cause for failure of the test. Refer to ASTM D3753, Sec. 8.6. Manufacturer to provide documentation of previous test per ASTM D3753 Sec. 8.6.
- M. Chemical Resistance: Riser pipe shall meet the chemical testing outlined in ASTM D3262 when tested in accordance with ASTM D3681. Cones shall be manufactured with similar materials.

2.3 TESTING

- A. All test shall be performed as specified in ASTM D3753, Section 8, Titled "Test Methods". See ASTM D3753, Section 8, Note 5, for test method D790 and test method D-695.

2.4 QUALITY CONTROL

- A. Examinations: Each Manhole riser component part shall be examined for dimensional requirements, hardness, and workmanship.
- B. Composition Control: Controls on glass and resin content shall be maintained for all manufacturing processes and for each portion of the manhole riser fabrication. Records shall be maintained for these control checks. Proper glass content may be shown by glass usage checks or glass and resin application rate checks, in accordance with the material composition test in ASTM D375.

2.5 CERTIFICATIONS

- A. As a basis of acceptance the manufacturer shall provide an independent certification which consists of a copy of the manufacturer's test report and accompanied by a copy of the test results stating the manhole has been sampled, tested, and inspected in accordance with the provisions of this specification and meets all requirements.

2.6 MARKING & IDENTIFICATION

- A. All manholes shall be marked with the following information:
 - 1) Manufacturer's name
 - 2) Riser vertical height
 - 3) ASTM D3753 Designation
 - 4) Station number or manhole ID, per project plans.

SP- 5 TECHNICAL REQUIREMENTS AND SPECIFICATIONS FIBERGLASS-REINFORCED MANHOLE LINERS

PART 1 GENERAL

1.1 Section Includes

- A. Specification for Fiberglass-Reinforced Manhole Liners

1.2 References

ASTM D695 – Test Method for Compressive Properties of Rigid Plastics
ASTM D790 – Test Method for Flexural Properties of Non-Reinforced and Reinforced Plastics and Electrical Insulating Materials
ASTM D2412 - Standard Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading
ASTM D3753 – Standard Specification for Glass-Reinforced Polyester Manholes and Wetwells

PART 2 PRODUCTS

2.1 MATERIALS

- A. Resin Systems: The resins used shall be a commercial grade unsaturated polyester resin or vinyl ester resin. Resins shall be suitable for the service environment intended (i.e. domestic sanitary wastewater).
- B. Additives: Additives, when used, shall produce a laminate that is inert to the service environment intended. All particulate additives used in filament wound components shall be pre-blended with resin using a high shear mixer to assure complete wetting of particulate surfaces. Pre-blending of particulate additives shall result in a homogeneous colloidal mixture (suspension) with additives evenly dispersed and suspended throughout the resin prior and during use. Manhole components manufactured using the filament winding process shall contain no sand. Additives, such as thixotropic agents, catalysts, promoters, etc., may be added to meet the requirements of the ASTM D-3753 standard.
- C. Reinforcing Materials: The reinforcing materials shall be commercial Grade "E" type glass in the form of continuous roving and chop roving, having a coupling agent that will provide a suitable bond between the glass reinforcement and the resin.
- D. Interior Surfacing Material: The inner surface exposed to the chemical environment shall be a resin-rich layer of 0.010 to 0.020-inches thick. The inner surface layer exposed to the corrosive environment shall be followed with a minimum of two passes of chopped roving length of 0.5-inches (min) to 2.0-inches (max) and shall be applied uniformly to an equivalent weight of 3 oz/ft (min). Each pass of chopped roving shall be well rolled prior to the application of additional reinforcement. The combined thickness of the inner surface and interior layer shall be 0.10 inch (min). The interior surface shall be resin rich with no exposed fibers. The surface shall be free of crazing, de-lamination, blisters larger than 0.5-inch in diameter, and wrinkles of 0.125-inch or greater in depth. Surface pits shall be permitted if they are less than 0.75-inch in diameter and less than 0.0625-inch deep. Voids that cannot be broken with finger pressure and are

- entirely below the resin surface shall be permitted if they are less than 0.5-inch in diameter and less than 0.0625-inch thick. Indentations or other shape imperfections that will not affect performance are allowed.
- E. Exterior Surface: Exterior surface shall be coated with 0.125-inches of gel coat as an additional water barrier. Gel coat shall be pigmented gray as an additional UV inhibitor. The exterior surface shall be relatively smooth with no sharp projections. Handwork finish is acceptable if enough resin is present to saturate all fibers and eliminate fiber show. The exterior surface shall be free of blisters larger than 0.5-inch in diameter, de-lamination or fiber show. Indentations or other shape imperfections that will not affect performance are allowed.
 - F. Repairs: All fiberglass laminate repairs are subject to meet the requirements of ASTM D3753.

2.2 MANUFACTURE AND CONSTRUCTION

- A. Manhole cylinders, manway reducers, and connectors shall be produced from fiberglass- reinforced polyester or vinyl ester resin using a combination of chop and continuous filament winding process.
- B. Acceptable Manufacturer: Manufacturer shall have 10-years of experience in the manufacture of fiberglass manholes for use in domestic or industrial sanitary sewer applications. Acceptable manufacturer shall have a quality control program that is currently ISO 9001 certified. Manufacturer shall be L.F. Manufacturing, Inc., Giddings, Texas (1-800- 237-5791).
- C. Wall Construction Procedure: After the inner layer has been applied, the manhole wall shall be constructed using a chop and continuous strand filament wound manufacturing process, to ensure continuous reinforcement and uniform strength and composition. Each layer of glass laminate shall be mechanically roller compacted to remove entrapped air and thoroughly saturate the glass laminate with resin prior to adding another layer of glass reinforcement. The cone section, if produced separately, shall be affixed to the barrel section at the factory with a resin-glass reinforced laminate joint resulting in a one-piece unit. Seams shall be fiberglass laminated on the inside and the outside using the same glass-resin jointing procedure. Field joints shall be performed by the Manufacturer, its agent or qualified third-party.
- D. Ribs: When used, ribs may be manufactured as a solid construction or with fiberglass laminate applied over a structural or non-structural form. The resulting structure shall meet the requirements of ASTM D3753.
- E. Assembly segments: Individual fiberglass components of manhole shall be joined by fiberglass-reinforced laminate overlay. The resulting structure shall meet the all loading and soundness requirements of ASTM D3753.
- F. Height Adjustment: Fiberglass manholes shall be height adjustable using an internal adjustment ring. Riser sections cut for height adjustment shall be rejoined by fiberglass- reinforced laminate, MacWrap or approved equal. Fiberglass manholes shall maintain all loading and soundness characteristics required by ASTM D3753 after height adjustment has occurred. Interior Access: All manholes shall be designed so that a ladder or step system can be supported by the installed manhole wall. Steps shall be installed per project specifications and local standards. Vertical spacing between steps shall be in accordance with OSHA standards (or per local requirements). Ladder or step bolts that penetrate manhole wall shall be sealed externally by a fiberglass-reinforced laminate.
- H. Manway Reducer: Manway reducers shall be concentric or eccentric with respect to the centerline of the manhole riser section, as designated by the Owner.

- I. Ring and Cover Support Platform: Top of cone/reducer shall have a fiberglass support platform upon which concrete grade rings may be installed to accept a typical cast iron ring. For H-20 traffic loading, a 4-inch (minimum) thick concrete grade ring is required. Outside diameter of grade rings, for H-20 loading, shall exceed outside diameter of fiberglass support plate by 1-inch (min) on all sides. Grade rings, ring and cover shall be placed over fiberglass neck (chimney) and onto fiberglass support plate in a manner that evenly distributes loading. No loading shall be placed onto fiberglass neck.
- J. Marking and Identification: Each manhole shall be marked on the inside and outside with the following information:
 - Manufacturer's name or trademark
 - Manufacturer's factory location
 - Manufacturer's serial number
 - Total manhole depth.

2.3 DIMENSIONS

- A. Diameters: Manhole inside diameter shall meet the requirements of the project specifications and shall be measured in accordance with ASTM D3753 Section 8.3. Tolerance of inside diameter shall be +/- 1% of required manhole diameter.
- B. Length: Manhole length shall be measured from lowest bench elevation to rim elevation and be sufficient to allow for 12-inches of concrete grade rings, plus ring height.
- C. Wall Thickness: Design thickness shall be sufficient to withstand all dead and live loads imposed on the manhole for the project conditions. Manholes subject to highway traffic loading (as indicated on Plans) shall meet the requirements of AASHTO H20 as described in ASTM D3753. Wall thickness shall be 1/4" (minimum).

2.4 TESTING

- A. Quality Control: Each completed manhole shall be examined by the manufacturer for dimensional requirements, hardness, and workmanship. All required ASTM D3753 testing shall be completed and records of all testing shall be kept, and copies of test records shall be presented to customer upon formal written request within a reasonable time period.
- B. Manholes: Manholes shall be manufactured and tested in accordance with ASTM D3753.
- C. Load Rating: The complete manhole shall have a minimum dynamic-load rating of 16,000- pounds when tested in accordance with ASTM D3753 8.4 (note 1). To establish this rating, the complete manhole shall not leak, crack, or suffer other damage when load tested to 40,000-pounds and shall not deflect vertically downward more than 0.25-inch at the point of load application when loaded to 24,000-pounds.
- D. Pipe Stiffness: For solid wall manholes, pipe stiffness (ASTM D2412) may be physically tested or calculated using the following formula: $PS = (EI) / (0.149r^3)$. For rib-reinforced manholes, Manufacturer shall provide structural design method. Per ASTM D3753, manhole cylinder shall have the minimum pipe-stiffness values shown in the table below when tested in accordance with ASTM D3753.

<u>Depth (feet)</u>	<u>F/ΔY (psi)</u>
6 or less	0.72
6+ to 12	1.26
12+ to 20	2.01

20+ to 25	3.02
25+ to 35	5.24
35+	Note ¹

Note¹ – For depths greater than 35-feet, pipe stiffness shall be extrapolated from shallower values or Manufacturer shall provide structural design method.

E. Chemical Resistance: Manhole and all related components shall meet the chemical resistance requirements of ASTM D3753 and be fabricated from corrosion resistant material suitable for domestic wastewater collection system environments.

G. Physical Properties:

Manhole riser sections shall have the following physical properties (minimum). All test shall be performed as specified in ASTM D3753 (latest edition), section 8.

	Hoop	Axial
	<u>Direction</u>	<u>Direction</u>
Tensile Strength (psi)	18,000	5,000
Tensile Modulus (psi)	0.6 x 10 ^b	0.7 x 10 ^b
Flexural Strength (psi)	26,000	4,500
Flexural Modulus (psi)	1.4 x 10 ^b	0.7 x 10 ^b
Compressive (psi)	18,000	10,000

2.5 UNLOADING, STORAGE AND HANDLING

- A. Unloading - Contractor shall inspect manholes upon arrival to jobsite, ensuring that manholes have arrived undamaged. Manufacturer shall be notified of any damage immediately upon discovering.
- B. Storage - Contractor shall avoid storing manhole on rocks, uneven ground or other surface that may cause point loading or damage to manhole. Manholes with a height-to-diameter ratio greater than 2:1 shall be stored in horizontal position, prior to use. Manholes shall not be stacked upon one another.
- C. Handling - Manholes shall not be dropped or impacted in a manner that may be detrimental to manhole. Manholes may be lifted using a forklift or nylon/textile sling wrapped around the main body of manhole. Use of chains or cables in contact with the manhole surface is prohibited. Manholes shall be unloaded from trucks one at a time.

Manhole may be lifted by inserting a 4" x 4" timber of sufficient length to span the manhole opening and attaching cable to midpoint of timber or by attaching a nylon/textile sling around the center of manhole.

PART 3 EXECUTION

3.1 INSTALLATION PROCEDURE

- A. Alterations: Contractor shall not alter the design or construction of manhole without notification of Manufacturer and Manufacturer's written consent. Only Manufacturer and its agents may alter design or construction of manhole.
- B. Host Manhole: Contractor shall confirm depth of manhole from rim to top of bench prior to excavation of host manhole cone. Manhole liner length shall be of

- sufficient length to provide the proper rim elevation after being placed on host manhole's bench.
- C. Removal of Host Manhole Cone: Contractor shall remove host manhole cone (to sufficient depth for brick manholes) to expose the full diameter of the manhole. Contractor shall assure proper circumference clearance of manhole liner by lowering into host manhole prior to trimming liner to proper length.
 - D. Mapping of Host Manhole: After Contractor has confirmed sufficient fit and length of manhole liner, Contractor shall measure the centerline location and outside diameters of all pipe penetrations. Contractor shall trim the manhole liner to sufficient length to reach the proper rim elevation. Contractor shall take into consideration any concrete grade rings to be used. Contractor shall trim manhole liner for all pipe penetrations at the proper centerline locations. For steeply sloped bench surfaces, manhole liner may be trimmed to match bench slope. Contractor may wish to consider using masonry or carbide tipped cutters to cut and trim manhole liner. Contractor shall use OSHA approved eye protection and dust mask while cutting and trimming liner.
 - E. Grout Bulkhead: Contractor shall place a ring of uncured grout along the circumference of host manhole bench (and over crown of pipe penetrations at invert) of sufficient strength, width and thickness to provide a bulkhead seal along the bottom of the manhole liner.
 - F. Manhole Liner Installation: Where recessed pipe penetrations exist, a short "bridge" pipe may be used to extend adjoining pipes farther into the manhole. Manhole liner shall be lifted by placing a textile sling around liner or by placing a 4"x4" timber of sufficient length to internally span across manway, attaching a sling to the timber and lifting. Steel cables or chains shall not be wrapped around manhole liner for lifting and handling. Contractor shall carefully lift manhole liner and lower liner into host manhole in a controlled manner. Manhole liner shall be centered within the host manhole to create equal annular space around manhole liner. Bottom edge of manhole liner shall be carefully pressed down into uncured grout ring on bench. Excess grout on interior of manhole liner shall be troweled smooth around circumference of liner to assure no gaps exist between bottom of manhole liner and the bench surface. Small amounts of additional grout may be required to seal gaps around pipe penetrations at the invert. Wooden wedges may be placed at the top of the annular space (three, recommended minimum) and evenly spaced to maintain a center position and prevent teetering of manhole liner during grouting. Wooden wedges, if used, be placed by hand only and shall not be hammered into place. Internal drops shall be reconnected prior to annular grouting.
 - G. Annular Grouting: Contractor shall allow grout bulkhead, at bottom of manhole liner, to cure to sufficient strength to prevent flowing or yield due to annular grout pressure. Annular grout shall be poured in lifts no greater than 12" around the manhole liner and be distributed evenly prior to adding more grout. Contractor shall ensure that equal pressure is maintained on all sides of manhole liner and that manhole liner is not subjected to unbalanced external grouting loads. Annular grout shall have a compressive strength of 300-psi (minimum). Maximum height of uncured grout shall not exceed 20 vertical feet. At 20 vertical feet, Contractor shall allow grout to cure prior to adding another stage of grout. Grout shall be poured to the top of the host manhole riser.
 - H. Manhole Liner Backfill: Any manhole liner extending above and beyond the host manhole shall be backfilled with select native material or $\frac{3}{4}$ " - 1" crushed aggregate. Backfill material shall be placed in 12-inch lifts (max) and compacted to 90% Standard Proctor Density. Backfill shall be distributed evenly around the

manhole for each lift and compacted evenly prior to the following lift. Care should be taken to prevent the placement of large clods, cobbles, frozen soil, and organic matter against the manhole liner.

- I. Casting and Grade Rings: Top of cone/reducer, shall be clean and free of debris prior to placing concrete grade rings onto manhole. Concrete grade rings shall be carefully lowered over fiberglass neck (chimney) and onto top of cone, in a controlled manner, so as not to cause damage to manhole. For AASHTO H20 traffic rated manholes, a 4-inch thick (min) concrete grade rings shall overhang shoulder of fiberglass grade ring platform by 1-inch. Flexible grade rings (i.e. HDPE, rubber) shall not be used on H20 traffic rated manholes. Butyl mastic sealing material shall be placed between manhole, grade rings and cast iron ring to prevent the infiltration of ground water. Cast iron ring and cover may be placed directly on top of cone for non-traffic rated manholes.
- J. Repairs: Any damage to manholes shall be reported to the Manufacturer. All repairs shall be performed by Manufacturer, its agent or qualified third-party (with Manufacturer's written consent).

3.2 FIELD TESTING

Inflow/Infiltration Test: Each manhole liner shall be visually inspected for inflow/infiltration. Any inflow/infiltration in excess of project specifications shall be corrected.

END OF SECTION

SP-6 TECHNICAL REQUIREMENTS AND SPECIFICATIONS

COMPOSITE MANHOLE FRAME & COVER

PART 1 GENERAL

1.1 MATERIAL

- A. Composite manhole frame and cover shall be made of a fiber reinforced polymer using at least 45% fiber reinforcement and thermoset resin matrix.

1.2 USABILITY

- A. Composite unit must facilitate easy removal of the cover by one person, have a 750:1 strength to weight ratio and possess no possibility of corrosion welding between the frame and cover.
- B. Composite unit shall have an integrated gasket system to reduce traffic shock, noise, and odors.
- C. Composite unit shall have Stainless Steel quarter turn paddle lock.

1.3 PEDESTRIAN SAFETY

- A. Composite unit shall be heat insulating, non-conductive, and provide skid slip performance of 0.6 according to ASTM C1028.

1.4 LOAD CARRYING CAPACITY

- A. AASHTO M306-10 H-20 & H-25 traffic requirements of 50,000 lbs., with 100,000lb ultimate load bearing.

1.5 FATIGUE PERFORMANCE

- A. Must pass 2 million cycles at 16,000 lbs. and then proof load requirements U.S. AASHTO M306-10 H-20 & H-25 or EN 124 Class A-D.

1.6 MARKINGS

- A. AASHTO M306-10
- B. Country of origin

1.7 QUALITY & WARRANTY STATEMENT

- A. Manufacturer must provide a warranty for the composite unit for 5 years.
- B. Composite manhole frame and cover must be made in the USA.

1.8 ACCEPTABLE MANUFACTURERS

- A. EJ - Model 3200 or Pre-Approved Equivalent

END OF SECTION

SP-7 TECHNICAL REQUIREMENTS AND SPECIFICATIONS

MANHOLE AND CATCH BASIN GRADE ADJUSTING RING SPECIFICATION

PART 1 GENERAL

1.1 SCOPE

This specification defines the materials required for the adjustment of all manholes, catch basins or other underground utility structures to final elevation as shown on the project drawings.

1.2 WORK REQUIRED

Grade adjustment rings meeting the requirements of this section shall be used to adjust and support the frame and cover or grate to the specified final elevation on all manholes, catch basin or other utility structures.

a. SYSTEM DESCRIPTION

A. Design Requirements – The grade adjustment rings shall be designed to allow final adjustment of the frame and cover or grate to the grade established by the ENGINEER on the project drawings. The rings shall also be designed to accommodate flat or sloping surfaces to within approximately ¼" (one quarter inch) to ½" (one half inch) of the specified final elevation. The grade adjustment system shall have a minimum 50 (fifty) year design life.

B. Performance Requirements – The grade adjustment rings shall be capable of supporting the minimum requirements of AASHTO M-306, H-25 and HS-25, be UV stable and be resistant to chemicals and corrosion commonly associated with the sanitary and storm sewer environments.

b. SUBMITTALS

A. Test Report – A test report from an approved third party testing agency showing the grade adjustment rings meets the minimum requirements of AASHTO M-306, H-25 and HS-25.

B. Certification – The manufacturer of the grade adjustment rings shall provide certification to the ENGINEER stating that the product meets the design life and material requirements of this specification.

PART 2 PRODUCTS

2.1 MANHOLE AND CATCH BASIN GRADE ADJUSTMENT RING

Manhole and catch basin grade adjustment rings shall consist of a variety of heights (thicknesses), diameters and shapes all conforming to the following requirements:

A. Grade Adjustment Rings – The grade adjustment rings shall be manufactured from ARPRO® Expanded Polypropylene (EPP), black, 5000 series meeting ASTM D3575 and ASTM D4819-13; B6D7G4L3M₂4S2T₁7W7. The rings shall be manufactured using a high compression molding process to produce a finished density of 120 g/l ((7.5 pcf).

- B. "Grade" adjustment rings may contain either an upper and lower keyway (tongue and groove) for vertical alignment and/or an adhesive trench on the underside with a flat top.
- C. "Finish" or "Flat" rings may either have a keyway (groove) on the underside for vertical alignment and/or an adhesive trench with a flat upper surface. These rings shall be available in heights (thicknesses) which will allow final adjustment of the frame and cover or grate to within ¼" (one quarter inch) to ½" (one half inch) of the specified final elevation.

"Finish" rings may also have a keyway on the upper surface of the inner diameter to facilitate installation of an "Angle" ring.

- D. "Angle" rings may either have an upper and lower keyway (tongue and groove) for vertical alignment and/or an adhesive trench on the underside. When required, the "Angle" ring or rings shall allow final adjustment of the frame and cover or grate to within ¼" (one quarter inch) to ½" (one half inch) of the specified final elevation.

- E. Acceptable Manufacturer – PRO-RING™ by Cretex Specialty Products

2.2 EQUIPMENT

The contractor shall have the required tools and equipment necessary to facilitate proper installation of the grade adjustment rings.

2.3 ADHESIVE/SEALANT

- A. Any adhesive or sealant used for watertight installation of the manhole grade adjustment rings shall be M-1 Structural Adhesive/Sealant or equal meeting the following specifications:

ASTM C-920, Type S, Grade NS, Class 25, Uses NT, T, M, G, A and O
Federal Specification TT-S-00230-C Type II, Class A
Corps of Engineers CRD-C-541, Type II, Class A
Canadian Standards Board CAN 19, 13-M82
AAMA 802.3-08 Type II, AAMA 803.3-08 Type I and AAMA 805.2-08 Group C

- B. Other adhesives or sealants may only be used with engineer or owner's written authorization.

2.4 REPAIR MORTAR

- A. Repair mortar shall be a one component, quick set, high strength, non-shrink; polymer modified cementitious patching mortar, which has been formulated for vertical or overhead use meeting the requirements of ASTM C-109 for Compressive Strength, C-348 and C-78 for Flexural Strength and C-882 for Slant Shear Bond Strength. Repair mortar shall not contain any chlorides, gypsums, plasters, iron particles, aluminum powder or gas-forming agents nor shall it promote the corrosion of any steel that it may come in contact with.

- B. Acceptable Manufacturers

1. Octocrete by IPA Systems

2. Pre-Approved Equal

2.5 CEMENTITIOUS GROUT

A. Cementitious grout shall be a premixed, non-metallic, high strength, non-shrink grout which meets the requirements of ASTM C-191 and C-827 as well as CRD-C-588 and C-621. When mixed to a mortar or "plastic" consistency, it shall have minimum one day and 28 day compressive strength of 6,000 and 9,000 psi, respectively.

B. Acceptable Manufacturers

1. PennGrout by IPA Systems

2. Pre-Approved Equal

PART 3 EXECUTION

3.1 INSTALLATION

Installation and surface preparation shall be in accordance with the manufacturer's instructions.

The joint between the first grade ring and top of the manhole, catch basin or utility structure shall be sealed using an adhesive/sealant meeting the requirements of Section 2.03.

If the top of the manhole, catch basin or utility structure is not level or is irregular, then a non-shrink repair mortar meeting the requirements of Section 2.04 or non-shrink cementitious grout meeting the requirements of Section 2.05 shall be used. A bed the specified mortar or grout shall be placed on the top surface

of the utility structure and then the first grade ring shall be embedded and leveled into the bed of material.

The remaining joints between all manhole adjustment rings and the frame and cover or grate shall be sealed using an adhesive/sealant meeting the requirements of Section 2.03.

No other materials shall be used in the construction of the grade adjustment area beyond those specified above. Prohibited materials include, but are not limited to wood or wood shims of any kind, concrete, brick, block, stones, etc.

The use of any heat shrinkable chimney seals shall only be permitted with engineer or owner's written authorization.

SP-8 TECHNICAL REQUIREMENTS AND SPECIFICATIONS

LARGE DIAMETER POLYVINYL CHLORIDE (PVC) GRAVITY SEWER PIPE AND FITTINGS

PART 1 GENERAL

1.1 SECTIONS INCLUDES

Polyvinyl chloride (PVC) sewer pipe and fittings for gravity sanitary sewers in nominal diameters 18 inches through 60 inches.

1.2 REFERENCES

ASTM D1784 - Standard Specification for Rigid Polyvinyl Chloride Compound and Chlorinated Polyvinyl Chloride Compounds.

ASTM D2321 - Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe.

ASTM D2444 - Test Method for Impact Resistance of Thermoplastic Pipe and Fittings by Means of a Tup (Falling Weight).

ASTM D3212 - Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals.

ASTM F477 - Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.

ASTM F679 - Specification for Polyvinyl Chloride Large-Diameter Plastic Gravity Sewer Pipe and Fittings.

ASTM F1417 - Standard Practice for Installation Acceptance of Plastic Non-pressure Sewer Lines using Low-Pressure Air

PART 2 PRODUCTS

MATERIALS

- A. Use PVC compounds in the manufacture of pipe that contain no ingredient in an amount that has been demonstrated to migrate into water in quantities considered to be toxic.
- B. Gravity Sanitary Sewer Pipe:
 1. Pipe shall conform to ASTM F 679 with wall thickness as required for a pipe strength of 75 psi.
- C. Joints:
 1. Spigot and integral wall section bell with solid cross section elastomeric or rubber ring gasket conforming to requirements of ASTM D 3212 and ASTM F 477. Gaskets shall be factory-assembled and securely bonded in place to prevent displacement. The manufacturer shall test a sample from each batch conforming to requirements ASTM D 2444.
- D. Gaskets:
 1. Gaskets shall meet the requirements of ASTM F 477. Use elastomeric factory-installed gaskets to make joints flexible and watertight.
 2. Lubricant for rubber-gasketed joints: Water soluble, non-toxic, non-objectionable in taste and odor imparted to fluid, non-supporting of bacteria growth, having no deteriorating effect on PVC or rubber gaskets.

- E. Fittings:
 - 1. Provide PVC gravity sewer sanitary bends, tee, or wye fittings for new sanitary sewer construction. PVC pipe fittings shall be full-bodied, either injection molded or factory fabricated. Saddle-type tee or wye fittings are not acceptable.

CUSTOMER INSPECTION

- F. The Owner or other designated representative shall be entitled to inspect pipes or witness the pipe manufacturing.
- G. Should the Owner request to see specific pipes during any phase of the manufacturing process, the manufacturer must provide the Owner with adequate advance notice of when and where the production of those pipes will take place

PACKAGING, HANDLING, SHIPPING

- A. Packaging, handling, and shipping shall be done in accordance with the manufacturer's instructions.

PART 3 EXECUTION

3.1 PROTECTION

- A. Store pipe under cover out of direct sunlight and protect from excessive heat or harmful chemicals in accordance with the manufacturer's recommendations.

3.2 INSTALLATION

- A. Install PVC pipe in accordance with ASTM D 2321 and manufacturer's recommendations.
- B. Avoid imposing strains that will overstress or buckle the pipe when lowering pipe into trench.
- C. Hand shovel pipe bedding under the pipe haunches and along the sides of the pipe barrel and compact to eliminate voids and ensure side support.
- D. Burial: The bedding and burial of PVC pipe and fittings in non-paved areas outside of City right-of-way shall be in accordance with the Drawings
- E. Pipe Handling: Use textile slings, other suitable materials or a forklift. Use of chains or cables is not recommended.

3.3 FIELD TESTS

- A. Low Pressure Air Test: After installation of the pipe, each reach shall be tested with the method as outlined in City of Tulsa Standard Specification Section 408.11. The low pressure air test shall be done in accordance with ASTM F1417. To pass the low pressure air test, the allowable limit is equal to or less than 10 gallons per inch of pipe diameter per mile per day at 2 feet of head as required by OAC 252:656-5-5(b).
- B. Deflection: Perform deflection tests on all pipe after the final backfill has been in place at least 30 days. Maximum allowable long-term deflection shall not exceed 5% of the average initial diameter. Tests shall be performed using a rigid ball or mandrel with a diameter equal to 95% of the average inside diameter of the pipe taking into consideration manufacturing tolerances. Tests shall be performed without mechanical pulling devices. The deflection test shall be done in accordance with ASTM F679.

- C. CCTV Inspection: After installation of the pipe, Contractor shall contact Field Engineering staff to request scheduling for Sewer Operations & Maintenance to TV inspect the line as specified in City of Tulsa Standard Specifications.
- D. All field tests shall be scheduled and coordinated with the Engineer.

END OF SECTION

SP-9 TECHNICAL REQUIREMENTS AND SPECIFICATIONS

OWNER ALLOWANCE

PART 1 GENERAL

1.1 Work covered by allowance:

- A. Allowances have been provided in the contract for various work not identified in other bid items. Descriptions and dollar amounts are identified in Form of Bid.
- B. The allowance shall be used for cost of materials, labor installation and overhead and profit for additional work that is not identified in the Construction Documents/Plans, and not included in the base bid lump sum.
- C. The allowance shall be used only at the discretion of the City of Tulsa. Any allowance balance remaining at the completion of the project will be credited back to the City of Tulsa on the final Application for Payment submitted by the contractor.
- D. The Contractor shall provide, to the City of Tulsa Representative, a written request for the use of the allowance, with a schedule of values, and all associated backup information, including any time extension required to perform the work.
- E. Contractor shall proceed with work included in the allowance only after receiving a written order, from the City of Tulsa Representative, authorizing such work. Proceeding with work in the allowance without a written order from the City of Tulsa Representative will be at the Contractor's cost.

END OF SECTION

SP-10 TECHNICAL REQUIREMENTS AND SPECIFICATIONS

SANITARY SEWER CONSTRUCTION FORM

PART 1 GENERAL

- 1.1 Contractor shall complete one (1) Sanitary Sewer Construction Form for each sanitary sewer line that has been rehabilitated or constructed on this project. Sample forms may be obtained from City of Tulsa Sewer Operations.
- 1.2 Contractor shall submit forms for all sanitary sewer lines completed with each monthly payment request.
- 1.3 Sanitary Sewer Construction Form shall contain at minimum the follow information.
 - a. Project number
 - b. Project name
 - c. Contractor name
 - d. Pay Application number
 - e. Upstream manhole number
 - f. Downstream manhole number
 - g. Footage of pipe measured from manhole to manhole
 - h. Type of rehabilitation or construction method
 - i. New pipe size and material
 - j. Date completed
 - k. Service connection information as follows for each connection
 - i. Property address served
 - ii. Measurement from downstream manhole
 - iii. Clock position of connection
 - iv. Active service or capped for future service
 - v. Type of service connection at main
 - vi. Footage of service pipe installed by contractor from sewer main
 - vii. Size and material of service pipe
 - viii. Type of coupling utilized to connect to customer's existing service pipe
 - ix. Size and material of customer's existing service pipe
 - x. Depth of contractor's connection to customer's existing service pipe.
- 1.4 No additional payment will be made for completion of Sanitary Sewer Construction Form.

END OF SECTION

SP-11 TECHNICAL REQUIREMENTS AND SPECIFICATIONS

SANITARY SEWER BYPASS PUMPING NOTIFICATION

PART 1 GENERAL

1.1 SCOPE

Contractor is required to submit written bypass pumping notifications form to Sewer Operations and Maintenance at least one week prior to bypass pumping. The notification form is to be submitted via email to SOMDispatch@cityoftulsa.org.



**Sewer Operations and Maintenance
WATER AND SEWER
DEPARTMENT
Sanitary Sewer By-Pass Pumping
Notification**

Contractor: _____ Project: _____

Inspector: _____ Inspector Phone: _____

City Engineer _____ City Eng Phone: _____

By-Pass Pumping Start Date _____ Expected End Date: _____

Address: _____

Pump will be installed in manhole #: _____ Pump will discharge to manhole #: _____

Plan for pump operation to prevent sewage overflows:

How will pump be monitored after hours to ensure no pumping disruption?

After-hour contact information for Contractor:

Primary

Name: _____ Number(s): _____

Secondary

Name: _____ Number(s): _____

1. Form should be emailed to the Sewer Operations personnel at SOMDispatch@cityoftulsa.org, **1-week prior to by-pass pumping event.**
2. Attach to this notification any approved by-pass pumping submittals.
3. If advanced notice cannot be given, form should be emailed immediately after beginning by-pass pumping and Emergency Sewer Response at 918-586-6999 should be contacted.

In the event of sewage overflow or any other emergency while by-pass pumping,
call Emergency Sewer Response at 918-586-6999 for 24-Hour Service.

SP-12 TECHNICAL REQUIREMENTS AND SPECIFICATIONS

CURED-IN-PLACE PIPE (CIPP)

(This Special Provision replaces Part 410 in the City of Tulsa Standard Specifications and Standard Details)

410.1 DESCRIPTION

- 410.1.1 It is the intent of this specification to provide for the reconstruction of existing sewer lines by forming a new pipe within an existing deteriorated pipe, which has generally maintained its original shape. The cured-in-place pipe (CIPP) shall provide flow capacity equal to or greater than 100% of the original pipe's flow capacity when considering age and condition. The process is defined as the reconstruction of sewer lines by installation of a thermosetting resin impregnated flexible felt fiber tube coated on one side with polyethylene or polyurethane, which is installed into the existing sewer line utilizing a water column or cool pressurized air. Curing is accomplished by circulating hot water or steam throughout the length of the inverted tube to cure the thermosetting resin into a hard, impermeable pipe with the polyethylene/polyurethane coating on the interior surface of the new pipe. The pipe shall extend the full length of the original pipe and shall provide a structurally sound, jointless, close fitting and corrosion resistant cured-in-place pipe. A Pulled-In-Place method of installation shall be allowed for pipe diameter sizes 6-inches, 8-inches, 10-inches, and 12-inches only.

410.2 REFERENCE SPECIFICATIONS

- 410.2.1 Installation and material tests of cured-in-place pipe (CIPP) must meet the minimum requirements demonstrated in the following ASTM standards:
- 410.2.2 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)
- 410.2.3 ASTM F-1216 Standard Practice for the Installation of Cured-in-place Pipe by Inversion Lining
- 410.2.4 ASTM D-638 Test Method for Tensile Properties of Plastics (for pressure pipes only)
- | | |
|----------------|-----------|
| Tensile Stress | 3,000 psi |
|----------------|-----------|
- 410.2.5 ASTM D-790 Test Method of Flexural Properties of Plastics
- | | |
|------------------|-------------|
| Flexural Stress | 4,500 psi |
| Flexural Modulus | 400,000 psi |
- 410.2.6 ASTM D5813 (Cured-in-Place Thermosetting Resin Sewer Pipe)

- 410.2.7 ASTM D2990 (Tensile, Compressive, and Flexural Creep and Creep-Rupture of Plastics)

410.3 SUBMITTALS

- 410.3.1 Product Data: Resin, tube material, qualification testing results for laminate sample, resin enhancer, bond enhancer, certification of applicability of resin; sealant/caulking material, resin curing schedule showing time and temperature for each reach, manufacturer's recommended installation pressures, minimum and maximum reach, and manufacturer's wet out report.
- 410.3.2 Design Information: Wall thickness design calculations are required for each pipe section.
- 410.3.3 Inspection Information: Video recordings (DVD/external drive) of pre- and post- inspections.
- 410.3.4 Full-length temperature sensing system to be utilized for all pipe sizes of 24" and larger.
- 410.3.5 Qualifications: Documentation for experience of lining manufacturer and installer.
- 410.3.6 Certificate: Installer Certification by the Manufacturer and a Certificate of Compliance that the tube meets all relevant specifications and ASTM Standards shall be required.
- 410.3.7 Public Relations: Notification Fliers or Door Hangers.

410.4 QUALIFICATIONS

Since sewer products are intended to have a 50-year design life, and in order to minimize the Owner's risk, only proven products with substantial successful long-term track records will be approved.

Products and Installers seeking approval must meet all the following criteria to be deemed Commercially Acceptable:

- 410.4.1 For a Product to be considered Commercially Proven, a minimum of 1,000,000 LF of successful CIPP wastewater collection system installations shall be performed in the U.S. and documented to the satisfaction of the Owner to assure commercial viability.
- 410.4.2 For an Installing Company to be considered as Commercially Proven, the Installer must satisfy all insurance, financial, and bonding requirements of the Owner, and must have had at least 5 (five) years active experience in the commercial installation. In addition, the Installer must have successfully installed at least 100,000 feet of a cured-in-place product in wastewater collection systems in the U.S. for host pipe diameters equal to or larger than

that which is intended for this project. Acceptable documentation of these minimum installations must be submitted to the Owner. Installer's project manager assigned to this project must have a minimum of 5 years of CIPP installation experience with the exact product and Installing Company intended for use with this bid.

- 410.4.3 Sewer rehabilitation products submitted for approval must provide third party test results supporting the structural performance (short-term and long-term) of the product and such data shall be satisfactory to the Owner. No product will be approved without independent third-party testing verification.
- 410.4.4 Both the rehabilitation manufacturing and installation processes shall operate under a quality management system which is third-party certified to ISO 9000 or other recognized organization standards. Proof of certification shall be required for approval.

410.5 MATERIALS

- 410.5.1 Tube - the tube should consist of one or more layers of flexible needled felt or an equivalent nonwoven or woven material capable of carrying resin, withstanding installation pressures and curing temperatures. The tube should be compatible with the resin system used. The material should be able to stretch to fit irregular pipe sections and negotiate bends. The outside layer of the tube should be plastic coated with a material that is compatible with the resin system used. The tube should be fabricated to a size that, when installed, will tightly fit the internal circumference and the length of the original conduit. Allowance should be made for circumferential stretching during inversion.
- 410.5.2 Resin - The resin system shall be a corrosion resistant polyester or vinyl ester system including all required catalysts, initiators that when cured within the tube create a composite that satisfies the requirements of ASTM F1216, ASTM D5813 and ASTM F1743, the physical properties herein, and those which are to be utilized in the submitted and approved design of the CIPP for this project. The resin shall produce a CIPP that will comply with the structural and chemical resistance requirements of this specification.
- 410.5.3 The minimum length shall be that deemed necessary by the Engineer to effectively span the pipelining distance of the necessary manhole section unless otherwise specified. The line lengths shall be verified in the field before impregnation of the tube with resin.
- 410.5.4 The outside of the tube, before installation, shall have an impermeable polyethylene or polyurethane plastic coating. This coating will form the inner layer of the finished pipe and is required for enhancement of corrosion resistance, flow, and abrasion properties. CIPP interior liner colors shall be white or a relatively light reflective color so that a clear detailed examination with closed circuit television inspection equipment may be made.

- 410.5.5 End Seal – A compression gasket sealing product that swells with the presence of water shall be utilized at the junction of the main and manhole. The end seal is a molded rubber gasket that provides a full-circle compression seal to a substantial area at the end of a mainline pipe that is rehabilitated by lining. The end seal shall be Insignia™ Hydrophilic End Seal as manufactured by LMK Technologies or engineer approved equivalent.
- 410.5.6 Caulking/Sealant – Sealant shall be a quick-set epoxy mortar or high viscosity epoxy with good adhesion to the liner and original pipe material.
- 410.5.7 The Owner authorizes the use of proven materials that serve to enhance the pipe performance specified herein. Proven materials have passed independent laboratory testing, not excluding long-term (10,000 hour) structural behavior testing and have been successfully installed to repair failing host pipes in the U. S. for at least 5 years. In addition to the aforementioned requirement, the owner may require that the contractor demonstrate that the enhancements proposed exceed the specifications herein, prior to the installation of the enhanced material systems. This section in no way shall be interpreted as authorization to deviate from the minimum standard practices set forth herein.

410.6 FULL-LENGTH TEMPERATURE MONITORING

- 410.6.1 System shall consist of a wire probe with sensors no more than ten (10) feet apart running the length of the pipe section to be lined and a computer with vendor software for monitoring in real-time and recording curing data. Data output will consist of a report indicating the time and temperature at each sensor location. System shall have the ability to monitor the curing from a remote location, and this ability will be made available to the Owner and Engineer. Owner and Engineer will be provided training in how to access the site for remote viewing and an overview of the system. Temperature monitoring systems will be the ZIA Systems, Vericure by Pipeline Renewal Technologies, or approved equal.

410.7 DESIGN

- 410.7.1 General Requirements of Cured-in-Place Pipe (CIPP) – The finished pipe must be such that when the thermosetting resin cures, the total wall thickness will be a homogeneous and monolithic felt and resin composite matrix that will be chemically resistant to withstand internal exposure to domestic sewage. When cured, the CIPP shall be a tight fit liner to the host pipe.
- 410.7.2 The CIPP shall be designed to a minimum wall thickness based on the individual project parameters and the condition of the existing conduit. The pipe design shall have sufficient strength to support all dead loads, live loads and groundwater loads imposed.
- 410.7.3 The cured lining material shall conform to the minimum structural standards, as listed below.

Linear Material Test Cured Liner	Standard	Results
Tensile Stress	ASTM D 638	3,000 psi
Flexural Stress	ASTM D 790	4,500 psi
Flexural Modulus	ASTM D 790	400,000 psi

Design Parameters: (unless otherwise noted in the Drawings)

Design Condition: Fully deteriorated	Safety Factor = 2.0
Ground Water = 1/2 soil depth	Ovality = 2.0%
Long term flexural modulus = 50% of short term (75% for enhanced materials with testing validation)	Live Load H2O = 16,000 lbs.
Soil modulus = 700 psi for depth < 10' and 1000 psi for depth > or = to 10'	Soil Density = 120 pcf
	Poisson's Ratio = 0.3
	Enhancement factor K = 7

- 410.7.4 Independent material tests for compliance with this specification shall be made according to the applicable ASTM standards. Upon request, a certificate of compliance will be provided for all materials furnished under this specification.
- 410.7.5 The contractor shall submit his price proposal based on the appropriate length, size, and existing pipe parameters designated in the Bid Item or Bid Proposal Section. The deterioration of sewers is an on-going process. Should pre-construction inspections reveal the sewers to be in substantially different conditions than those in the design considerations, the contractor shall request such changes in reconstruction liner thickness, supporting such requests with design data. The deviation, if approved, shall be reflected by Change Order.
- 410.7.6 The Manufacturer must have performed long-term testing for flexural creep of the resin. Such testing results are to be used to determine the long-term, time dependent flexural modulus to be utilized in the product design. A percentage of the instantaneous flexural modulus value (as measured by ASTM D790 testing) will be used in design calculations for external buckling. The percentage, or the long-term creep retention value utilized, will be verified by this testing. Retention values exceeding 50% of the short-term test results shall not be applied unless substantiated by qualified third-party test data to the Owner's satisfaction. The resin and materials utilized for the contracted project shall be of a quality equal to or better than the materials used in the long-term test with respect to the initial flexural modulus used in the CIPP design.
- 410.7.7 The layers of the cured CIPP shall be uniformly bonded. It shall not be possible to separate any two layers with a probe or point of a knife blade so that the layers separate cleanly or the probe or knife blade moves freely between the layers. If the layers separate during field sample testing, the CIPP shall be repaired or replaced by the Contractor at their expense.

410.8 PRE-INSTALLATION PROCEDURES

- 410.8.1 The following installation procedures shall be adhered to unless otherwise approved by Engineer.

410.9 SAFETY

- 410.9.1 Contractor shall carry out his operations in strict accordance with all OSHA and manufacturer's safety requirements. Particular attention is drawn to those safety requirements involving working with scaffolding and confined spaces.

410.10 INSPECTION

- 410.10.1 Additional internal inspection as noted on drawings shall be conducted by Contractor prior to actual construction. Inspection shall be accomplished by means of closed-circuit color television. Supplemental normal cleaning (3 passes of jet nozzle) of the pipes to allow a clear and unobstructed view of the pipe walls will be the responsibility of Contractor and is considered as incidental to the work.

410.11 CLEANING OF SEWER LINES

- 410.11.1 Prior to any lining of a pipe so designated, it shall be the responsibility of the Contractor to remove all internal debris out of the sewer lines in accordance with Section III, "Sewer Line Cleaning" NASSCO Specifications for Sewer Collection System Rehabilitation.
- 410.11.2 Sewers shall be cleaned of all debris, roots and other materials that would block proper inversion of the cured-in-place pipe. Utilizing high-pressure jet cleaning equipment, several passes shall be completed to assure that all debris is removed from the pipe. If roots are present, root cutters or mechanical brushes shall be attached to the jet nozzle and sent through the line to remove all root intrusions. Heavy cleaning (beyond normal) shall either be performed by Owner or shall be paid by separate pay item.
- 410.11.3 Owner or Engineer shall approve cleaning prior to liner insertion.

410.12 TELEVISION INSPECTION

Sewers shall be CCTV inspected providing both a video recording and written log identifying all service connections and openings. Utilizing a color video inspection system with data recording capabilities, the entire pipe sections shall be recorded on standard transfer media to become the property of the City.

Identification and Pre-measurement of Lateral Connections. A 360-degree Pan-and-Tilt view camera shall be used to inspect the pipe traveling upstream. At each connection the operator will stop and turn the camera lens toward the lateral thereby inspecting the first 8- to 12-inches of the lateral connection. If there remains a doubt as to whether or not the connection is live, additional "Dye and Flush" tests shall be performed. It will be the responsibility of the Engineer to review this process live or review the video to verify and approve which lateral

connections are to be reinstated. All lateral locations will be measured from the back wall (opposing wall) of the basis manhole, typically, the downstream manhole.

Inspection of Pipelines - Inspection of pipelines should be performed by experienced personnel trained in locating breaks, obstacles, and service connections by closed-circuit television or man entry. The interior of the pipeline should be carefully inspected to determine the location of any conditions that may prevent proper installation of the impregnated tube, such as protruding service taps, collapsed or crushed pipe, and reductions in the cross-sectional area of more than 10%. These conditions should be noted so that they can be corrected. A pre-insertion video shall be prepared by the Contractor.

410.13 LINE OBSTRUCTIONS

410.13.1 The original pipeline should be clear of obstructions such as solids, dropped joints, protruding service connections, crushed or collapsed pipe, and reductions in the cross-sectional area of more than 10% that will prevent the insertion of the resin-impregnated tube. Protruding service connections shall be removed to prevent dimpling of the finished liner unless approved by the Owner or Engineer. Maximum allowable protrusion shall be 1/2-inch.

410.13.2 The Contractor shall perform all obstruction removals for the sewer section scheduled for relining. The repair shall be an adequate repair for insertion of the resin-impregnated tube. This shall be paid at the bid price for obstruction removal.

410.13.3 If the Contractor identifies obstructions that cannot be removed by conventional sewer cleaning equipment, then, with the Engineer's approval, an excavation shall be made to remove the obstruction.

410.13.4 If pre-insertion inspection reveals a condition such as a protruding service connection, dropped joint, or a collapse that will prevent the insertion process or will result in an unacceptable installation, and it cannot be removed by conventional sewer cleaning equipment, defined as high-pressure jetters, root cutter or grinders, then Contractor shall consult with the Engineer before proceeding with the appropriate remedy. If condition resulting in extra effort by the Contractor was not shown on the drawing or revealed to the Contractor at the time of the bid, the work shall be considered as a separate pay item by Changer Order.

410.14 INFILTRATION

410.14.1 Minor infiltration is a normal condition sometimes encountered during the CIPP process. It is not a "changed condition" and should not be regarded as a reason for change orders. If in the opinion of the Engineer, infiltration is significant enough to adversely affect the curing process, chemical grouting or other remedies may be required. This additional work will be paid for by the Owner as a Changer Order.

410.15 SITE RESTORATION

410.15.1 Areas damaged or modified by the Work for this project shall be repaired or restored to a condition equal to or better than the original condition. Site restoration is incidental to the Work and shall not be regarded as a reason for change orders.

410.16 PUBLIC RELATIONS

410.16.1 A Public Information and Notification Program shall, as a minimum, require the Contractor to be responsible for contacting homeowners or businesses who will be affected by the construction activities and informing them of the work to be done and the estimated timing for the work. Written notice shall be delivered to each home or business two (2) weeks prior to installation. Notice shall include a local telephone number of the Contractor they can call to discuss the project, and how the homeowner or business will be affected. The written notice must be reviewed by the Owner or Engineer prior to the start of any work.

A follow-up notice shall be delivered to each home or business connected to the sanitary sewer two (2) days prior to installation. The notice shall instruct occupants to minimize water usage the day of the insertion and fill all drain traps with water to prevent potential odors.

410.17 BY-PASS OF FLOW AND INTERRUPTION OF SERVICE

410.17.1 Contractor, when required, shall provide for the flow of sewage around the section or sections of pipe that are to be lined. The bypass shall be made by plugging the line at an existing upstream manhole and pumping the flow into a downstream manhole or adjacent system. The pump and bypass lines shall be of adequate capacity and size to handle anticipated wet weather flow or peak flow.

410.17.2 All procedures for maintaining flows must meet the approval of the Owner or Engineer. Contractor shall submit a detailed plan of all methods of flow management, in advance of flow interruption.

410.18 INSTALLATION OF LINES

410.18.1 Prior to installation of the liner, the full-length temperature sensing system shall be placed and tested to ensure proper functioning. If more than two sensors in a row or more than 10% of the total sensors are malfunctioning, the entire sensor array shall be replaced and retested. Time and temperature shall be monitored in accordance with manufacturer's recommendations.

410.18.2 Resin Impregnation of the CIPP Tube - The Contractor shall designate a location where the tube shall be impregnated or "wet out" with resin, using distribution rollers and a "single-source" vacuum system to thoroughly saturate the tube's felt fiber prior to installation in the field. The impregnated tube shall be free of pinholes, resin voids and other defects. If the cured-in-place pipe is impregnated at the manufacturing plant, it shall be delivered to the job site in a refrigerated truck and remain refrigerated prior to installation to prevent premature curing.

- 410.18.3 The tube should be vacuum-impregnated with resin (wet out) under controlled conditions. The volume of resin used should be sufficient to fill all voids in the tube material at nominal thickness and diameter. The volume should be adjusted by adding 5 to 10% excess resin per the manufacturer's recommendation for the change in resin volume due to polymerization and to allow for any migration of resin into the cracks and joints in the original pipe.
- 410.18.4 Inversion of CIPP Tube - The resin impregnated tube shall be water inverted or cool air pressure-inverted through an existing manhole or other approved access point until it has fully traversed the designated line length and the inversion face breaches the destination manhole or termination point. Thermocouples shall be placed at the top and, if possible, at the bottom interface of both ends of the liner for monitoring temperature during the cure cycle. A "Pulled-In-Place" method of installation shall be allowed for pipe diameter sizes 6-inches, 8-inches, 10-inches, and 12-inches.
- 410.18.5 CIPP Processing (Curing and Cool Down) - The cure cycle and cool down will be dictated with consideration given to actual field conditions and shall be according to the manufacturer's recommendations. The curing temperatures shall be monitored at the heater truck's water inlet and outlet lines. The temperature readings from the truck will be compared to the thermocouples to ensure that sufficient heat is being supplied to the system to effect proper cure. Once the pipe has been cured, cool water shall be slowly introduced into the rehabilitated pipe. The water temperature shall be cooled inside of the pipe at a rate of 20 to 30 degrees per hour until the water temperature is within 20 degrees of the ambient temperature. The cool down process will also be affected by actual field conditions and may be modified in cases of severe conditions or below normal ground temperatures. Contractor shall not discharge cooling water to storm sewer system.
- 410.18.6 Termination and Sealing at Manhole Outlets - Termination of the cured-in place pipe at the manhole is completed by trimming the inverted pipe end back within approximately 6-inches of the outlet.
- 410.18.6.1 **An end seal per the materials specification shall be installed at the termination of CIPP at the manhole inlets & outlets.** All roots deposits, and debris should be removed from the pipe with hydraulically powered equipment, high velocity jet cleaners, or mechanically powered equipment as per NASSCO recommended specifications prior to installation of CIPP with end seals. Since the Insignia End Seal product may be used with a variety of rehabilitative pipe liners, the standard installation practices of each individual pipe liner method should be closely followed.
- 410.18.7 Hydraulic Capacity - Overall, the hydraulic profile shall be maintained as large as possible. The CIPP shall have a minimum of the full flow capacity of the original pipe before rehabilitation. Calculated capacities may be derived using a commonly accepted roughness coefficient for the existing pipe material, taking into consideration its age and condition. The

roughness coefficient of the CIPP shall be verified by third party test data and certified by letter from manufacturer or raw material supplier.

410.19 SERVICE CONNECTIONS

410.19.1 After the liner has been cured, Contractor shall reconnect the service connections. All service connections to existing buildings are to be reconnected, except where disconnection is approved by the Engineer. Service connection to a vacated lot shall not be reconnected. If more than one service is found per lot then, the Contractor shall verify that service connections are active by introducing dye into the lines at cleanouts, vent stacks or other access points as approved by the Engineer. Dye testing shall be recorded by CCTV inspection at the location in the main line where the dye appears. All addresses will be noted on log sheets for future reference. Provide the address of all reconnected and disconnected services.

410.19.2 It is the intent of the City that all active service reconnections be made by external service reconnection in accordance with 410.19.4. Where there is no protruding pipe, cracks, or leaks, or where significant surface obstructions exist, service connections shall be internally reinstated as directed by Engineer in accordance with 410.19.3 or 410.19.4. Internal reinstatement of services alone will not be permitted.

410.19.3 Internal Reconnection: **Internal service reconnections without an internal tee-liner or top hat type liner shall not be allowed without prior written approval by the Owner.** Without excavation, the service connection shall be reinstated by means of a television camera and a cutting device that reestablishes the connection to not less than 90 percent capacity. Service connections shall be cut in with neat and smooth circumferential lines to prevent snagging of debris and/or solids. Contractor shall provide a physical demonstration, in the presence of the Engineer, to show the assurance of a watertight seal of all service connections. Service interruptions to any homes tributary to the sewer line being rehabilitated shall not exceed 24 hours. **Internal service reconnections shall require submittal to Engineer and include internal tee-liner and/or top hat type reconnection.**

410.19.4 External Reconnection: Service connections shall be reinstated by excavation and reconnecting the service with an approved saddle or engineer approved equivalent. The Contractor shall remove the appropriate amount of carrier pipe to allow the saddle to be directly connected to the outside wall of the CIPP. An epoxy, meeting the manufacturer's recommendations, shall be applied to the saddle to assure a watertight seal between the saddle and CIPP or host pipe. The saddle shall be secured with stainless steel bands. After the epoxy has set and prior to backfilling, the Contractor shall seal any open annular space between the existing sewer and new liner pipe with a non-shrink grout. The Contractor shall then completely encase the saddle and exposed pipe in concrete. Care shall be used not to damage the CIPP. If damage occurs as a result of the Contractor's operations, the Contractor shall assume all cost associated with the repair of the CIPP.

410.19.5 Connections of the saddle fitting to the existing lateral shall be made using elastomeric boots, full-encirclement clamps, or by other method as approved by the Engineer.

410.20 FINAL INSPECTION AND ACCEPTANCE

410.20.1 Upon completion of the installation, the rehabilitated sewer shall be CCTV inspected providing both a video recording and log identifying all service connections and openings. The entire pipe section rehabilitated shall be recorded on standard transfer media with the video becoming the property of the City.

410.20.2 CIPP samples shall be prepared and physical properties tested in accordance with ASTM F1216, Section 8.1, using either method proposed. The flexural modulus must meet or exceed the value used in design in Section D (structural requirements for the pipe size and thickness furnished in design.)

410.20.3 Leakage testing of the CIPP shall be accomplished during curing while under a positive head. CIPP products in which the pipe wall is cured while not in direct contact with the pressurizing fluid (e.g., a removable bladder) must be tested by an alternative method approved by the Engineer.

410.20.4 Visual inspection of the CIPP shall be in accordance with ASTM F1216, Section 8.6.

410.20.5 Upon acceptance of the installation work and testing, the Contractor shall restore the project area affected by the operations to a condition at least equal to that existing prior to the work.

410.20.6 After installation of the liner, Contractor shall TV inspect the sewer line as specified herein and perform the following test on the sewer line.

410.20.7 Post-insertion video recording TV log in a format acceptable to the Engineer shall be provided to the Engineer within two (2) weeks of taping. With the exception of sag locations in existing host pipe, the pipe must be dry and clean during the televising. Camera speed shall not exceed two feet per second. Video quality shall be high.

410.20.8 No wrinkles, or other defects, will be allowed that, in the opinion of the Owner or Engineer, will impede flow.

410.20.9 Cured Pipe Physical Properties: Samples of the cured pipe should have the minimum physical properties (flexural stress, modulus of elasticity, and thickness) recommended herein.

410.21 MEASUREMENT AND PAYMENT

410.21.1 Cured-in-Place Pipe shall be paid for at the Contract Unit Prices as follows: The unit price shall cover the entire cost of sewer lining, measured to the nearest 0.1 foot, center of manhole to center of

manhole, and include any by-pass pumping, dye and flush testing, and all acceptance testing.

- 410.21.2 Obstruction Removal shall be paid for at the set unit prices of each for obstruction removal. Where point repairs are specified, they shall be installed and paid for in accordance with Part 412 of the City of Tulsa Standard Specifications and Standard Details.
- 410.21.3 Payment for external service connections shall be paid at the unit bid prices for service connections. No additional payment shall be paid for internal service connection reinstatement unless a tee-liner or similar is specified and installed. Tee-liner or top-hat style internal liners shall be paid for by separate pay item different from external service reconnections.
- 410.21.4 Television pre-inspection shall be paid for at the unit price bid per linear foot of pipeline to be inspected. The unit price bid for Television Pre-inspection shall be payment in full for all materials, labor, and equipment necessary for televising the pipe prior to repairing or rehabilitating it. The linear feet paid shall be as measured from the center of the upstream manhole to the center of the downstream manhole. Payment shall only be made once for any manhole-to-manhole pipe segment; no additional payment shall be made for multiple inspections of the same pipe segment. Payment will not be made until the pre-inspection video has been approved.
- 410.21.5 The cost of normal cleaning will not be paid for separately but shall be included in the Contract Unit Price of the rehabilitation or replacement being performed.
- 410.21.6 The cost of heavy cleaning shall be paid for at the unit price bid per linear foot of pipeline to be cleaned. The unit price bid for Heavy Cleaning shall be payment in full for all materials, labor, cost of material disposal, and equipment necessary for heavy cleaning of the pipe prior to repairing or rehabilitating it.
- 410.21.7 The cost of post construction television inspection will not be paid for separately but shall be included in the Contract Unit Price of the rehabilitation or replacement being performed. This shall include all costs associated with the television inspection, such as viewing, record logs, and standard transfer media.
- 410.21.8 The prices shall be payment in full for performing and completing the work and for furnishing all labor and materials necessary including excavation and removal of existing structure, trench safety system, pipe lining materials, pipe sealing materials, labor, backfilling, surface restoration, sodding, pavement replacement, sidewalk and driveway replacement, curb and gutter replacement, all testing, and all incidental costs.

END OF SECTION

