



CONTRACT DOCUMENTS
&
TECHNICAL SPECIFICATIONS
FOR
DEMOLITION OF ELEVATED WATER STORAGE TANK NO.5

BID NO.: B024-25

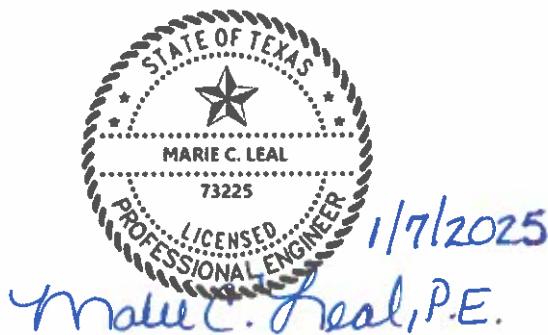


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ONLY)**

END OF SECTION

**LEGAL NOTICE
AND
INVITATION TO BID
B024-25**

Sealed bids will be received by the PUBLIC UTILITIES BOARD of the City of Brownsville, Texas ("BPUB"), at the PUB Purchasing Department office; 1155 FM 511, Olmito, Texas 78575 **until 2:00 PM, February 6, 2025** for the Project described in the Contract Documents and Specifications entitled:

DEMOLITION OF ELEVATED WATER STORAGE TANK NO. 5

Bids received after this time will not be considered.

Bids will be publicly opened and read aloud on February 6, 2025 at 2:15 PM. Bidders can request a copy of the bid tabulation by emailing dsolitaire@brownsville-pub.com. Vendors can call in at 2:15 PM, February 6, 2025 to (956) 214-6020 to listen to the bid opening.

Copies of the Contract Documents and Specifications may be obtained at following website: https://www.brownsville-pub.com/rfp_status/open/. A pre-bid conference will be held by telephone at (956) 214-6020 on January 30, 2025 at 10:00 AM.

Each bid, in duplicate, shall be enclosed in a sealed envelope and shall be plainly marked on the outside of the envelope: **"B024-25 DEMOLITION OF ELEVATED WATER STORAGE TANK NO. 5, February 6, 2025, 2:00 PM"**. This envelope shall be addressed to Diane Solitaire; Brownsville Public Utilities Board; Purchasing Department; 1155 FM 511, Olmito, Texas 78575.

Each bid shall constitute an offer to the Board, as outlined therein, and shall be irrevocable for at least ninety (90) days after the time announced for the opening thereof.

Each bid shall be accompanied by a Certified or Cashier's check payable to the order of the Brownsville Public Utilities Board, City of Brownsville, Texas for a sum not less than five (5%) percent of the total amount bid. In lieu of a check, a Bid Bond may be submitted in an amount not less than five (5%) percent of the total amount bid with a Corporate Surety licensed to do business in the State of Texas, conditioned that the BIDDER will pay the BPUB, as mutually agreed to liquidated damages, and not as a penalty, the amount specified in the Bond unless he enters into a contract in accordance with his bid. BIDDER is required to execute a contract and furnish a Performance Bond, Payment Bond and a Certificate of Insurance. If the BIDDER fails to execute the contract and to furnish satisfactory Performance and Payment Bonds and Insurance Certificates within ten (10) days from the date on which he is notified that his bid has been accepted, the amount of his check or bid bond shall be forfeited to the BPUB as mutually agreed to liquidated damages, and not as a penalty. **No bid will be considered if the Bid Security is not submitted.**

The BPUB will not be responsible in the event that the U.S. Postal Service or any other courier system fails to deliver the sealed bids to the Brownsville Public Utilities Board, Purchasing

Office by the given deadline above. **No bids will be accepted via facsimile or electronic transmission.**

The BPUB specifically reserves the right to reject any or all bids, to waive irregularities or informalities in any or all bids and to accept any bid which is deemed to be in the best interest of the Board.

Diane Solitaire
Purchasing Department
(956) 983-6366

INSTRUCTIONS TO BIDDERS
Please submit this page upon receipt

Acknowledgment Form
DEMOLITION OF ELEVATED WATER STORAGE TANK NO. 5
B024-25

For any clarifications, please contact Diane Solitaire at the Brownsville Public Utilities Board, Purchasing Department at (956) 983-6366 or e-mail: dsolitaire@brownsville-pub.com

Please e-mail this page upon receipt of the bid package or legal notice. If you only received the legal notice and you want the bid package mailed, please provide a method of shipment with account number in the space designated below.

Check one:

☐ **Yes, I will be able to send a bid; obtained bid package from website.**

☐ **Yes, I will be able to send a bid; please email the bid package.**

Email: _____

☐ **Yes, I will be able to send a bid; please mail the bid package using the carrier & account number listed below:**

Carrier: _____

Account: _____

☐ **No, I will not be able to send a bid for the following reason:**

If you are unable to send your bid, kindly indicate your reason for "No bid" above and return this form **via email to:** dsolitaire@brownsville-pub.com. This will ensure you remain active on our vendor list.

Date _____

Company: _____

Name: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Phone: _____ Fax: _____

Email: _____

Special Instructions

Contract Information

- **Interpretation**

Questions concerning terms, conditions, and technical specifications should be directed to:

Diane Solitaire, Purchasing & Materials Manager

Email: dsolitaire@brownsville-pub.com

- **Tentative Time Line**

1. January 13, 2025 through February 6, 2025 – Vendor bid preparation.
2. February 6, 2025 at 2:00 PM - **Vendor must submit bid, in duplicate, sealed in an envelope to:**

Diane Solitaire, Purchasing & Materials Manager

1155 FM 511

Olmito, TX 78575

B024-25 - DEMOLITION OF ELEVATED WATER STORAGE TANK NO. 5

Due February 6, 2025 at 2:00 PM

The above noted information must be included on bid envelope and on any carrier's envelope/package. The Brownsville Public Utilities Board will not be held responsible for missing, lost or late mail. Brownsville Public Utilities Board will not accept electronic transmissions or facsimiles of sealed bids.

1. January 30, 2025 – Pre-Bid Conference at 10:00AM
2. February 6, 2025 - Open bids at 2:15PM
3. February 10-14, 2025 - Evaluate bids
4. February 24, 2025 - Deadline to provide final recommendations for Board approval.
5. March 10, 2025 - Send to Utilities Board for formal and possible Contract award approval

- **“Or Equal”**

Brand name and/or manufacturer's references used in this Request are descriptive – not restrictive – they are intended to generally indicate type and quality desired. Brands of like nature and quality will generally be considered. If bidding on other than referenced Specifications, please provide complete descriptive information of said material/equipment article. BPUB also reserves the legal right to specify a “sole source” component if such component is critical for integration to a larger assembly and alternative manufactured items will not meet the design and/or performance needs of the BPUB, in BPUB's sole discretion.

- **Pricing**

Bid unit prices on BPUB estimated quantities specified, extend and show total. In case of errors in extension, unit prices expressed in written words and not numerals, shall govern. Prices shall remain firm throughout the Contract.

All fields (UNIT PRICE & TOTAL PRICE) in the Bid Schedule must be filled in. The data must be complete to identify any bidding brand called for specifically.

Failure to submit any of the above information with the sealed bid may disqualify bid as non-responsive.

- **Contractor Representative**

The successful contractor agrees to send a personal representative with binding authority for the company to the Brownsville Public Utilities Board, upon request, to make any minor clarifications or adjustments and/or assist with coordination of all transactions as needed to allow Contract entry.

- **Quality of Products**

All material and equipment items specified must be new, in first class condition, including containers suitable for shipment and storage. No substitutions in standard grades or lesser quality will be accepted.

- **Determining Factors for Award**

1. Price
2. Responsibility of contractor to perform the intended work and responsiveness to the bid request.
3. Compliance with requirements of the technical specifications
4. Quality of performance on previous work on similar contracts
5. Recent successful completion of similar projects
6. BPUB financial and legal responsibility evaluations of any identified teaming arrangements involving significant joint ventures, subcontractors, and suppliers.
7. Safety record will be considered when determining the responsibility of the bidder

- **Contract with Vendor/Entity Indebted to BPUB**

It is a policy of the BPUB to refuse to enter into a contract or other transaction with an individual, sole proprietorship, joint venture, Limited Liability Company or other entity indebted to BPUB.

- **Vendor ACH (Direct Deposit) Services**

The BPUB has implemented a payment service for vendors/contractors by depositing the contract payment directly to the contractor's/vendor's bank account. Successful vendor(s)/contractors will be required to receive payments directly through Automated Clearing House (ACH) in lieu of a paper check. **The awarded vendor must agree to receive payments via ACH (Direct Deposit).**

- **Tax Identification Number (TIN)**

In accordance with IRS Publication 1220, a W9 form, or a W8 form in cases of a foreign vendor, will be required of all vendors doing business with the Brownsville PUB. If a W9 or W8 form is not made available to Brownsville PUB, the first payment will be subject to income tax withholding at a rate of 28% or 30% depending on the U.S. status and the source of income as per IRS Publication 1220. **The W9 or W8 form must be included with bid response.** Attached are sample forms.

- **Taxes**

The City of Brownsville and its Brownsville Public Utilities Board are exempt from Federal Excise Tax, State Tax and local sales Taxes. Do not include any taxes in the bid proposal. If it is later determined that tax was included in the bid it will not be included in the tabulation or any awards. Tax exemption certificates will be furnished by BPUB upon request.

- **Signing of Bid**

Failure to sign bid will disqualify it. Person signing bid should show title or authority to bind their firm to a contract.

- **EEOC Guidelines**

During the performance of this contract, the contractor agrees not to discriminate against any employee or applicant for employment because of race, national origin, age, religion, gender, sexual preference, marital or veteran status, or physically challenging condition.

- **Contract and Purchase Order**

The services shall be completed in a timely manner as specified in specifications. A contract for the services will be placed into effect by means of a purchase order issued by the Brownsville Public Utilities Board after tabulation and final Contract approval by the Board.

- **Brownsville Public Utilities Board Rights**

1. If only one or no bid is received by "submission date", the BPUB has the right to reject, re-bid, accept and/or extend the bid by up to an additional two (2) weeks from original submission date.
2. The right to reject any/or all bids and to make award as it may appear to be advantageous to the Brownsville Public Utilities Board.

3. The right to hold bid for 90 days from submission date without action, and to waive all informalities in any bid.
4. The right to extend the total bid beyond the original 90-day period prior to an award, if agreed upon in writing by all parties (BPUB and vendor/contractor) and if bidder/vendor holds original bid prices firm.
5. The right to terminate for cause or convenience all or any part of the unfinished portion of the Project resulting from this solicitation within Fourteen (14) calendar days written notice; for cause: upon default by the vendor/contractor, for delay or non-performance by the vendor/contractor; or if it is deemed in the best interest of the BPUB for BPUB's convenience.

- **Corrections**

Any interpretation, correction, or change of the Invitation to Bid will be made by written ADDENDUM. Changes or corrections will be issued by the Brownsville PUB Purchasing Department. **Addenda will be emailed to all who have returned the Bid Acknowledgment form.** Addenda will be issued as expeditiously as possible. It is the responsibility of the vendors/contractors to determine whether all Addenda have been received. It will be the responsibility of all respondents to contact the Brownsville PUB prior to submitting a response to the Invitation to Bid to ascertain if any/all Addenda have been issued, and to obtain any all Addenda, execute them, and return Addenda with the response to the Invitation to Bid. Addenda may also be posted on BPUB's website.

1. RECEIPT AND OPENING OF BIDS:

The Brownsville Public Utilities Board, City of Brownsville, Texas (hereinafter called OWNER), invites bids on the form attached hereto, all blanks of which must be appropriately filled in, in ink, for Project entitled **"Demolition of Elevated Water Storage Tank No. 5."**

The OWNER may consider informal and non-responsive, any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn by vendor/contractor prior to the above scheduled time for the opening of bids or OWNER authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No BIDDER may withdraw a bid within at least ninety (90) days after the actual date of the opening thereof.

2. INSPECTION OF SITE:

Each BIDDER shall visit the Project site of the proposed work and fully acquaint himself with the existing conditions there relating to construction and labor, and shall fully inform himself as to the facility involved, the difficulties and restrictions attending the performance of the Contract. The BIDDER shall thoroughly examine and familiarize himself with the Drawings, Technical Specifications, and all other Contract Documents. The Contractor, by the execution of the Contract, shall in no way be relieved of any obligation under it due to his failure to receive or examine any form or legal instrument, or to visit the Project site and acquaint himself with the conditions there existing and the OWNER will be justified in rejecting any claim for extra time,

or compensation, or both, based on facts regarding which Contractor should have been on notice as a result of such a diligent Project site visitation. Visits to the Project site shall be arranged by calling Marie C. Leal, P.E. at telephone no. (956) 983-6275.

3. PREPARATION OF BID AND USE OF SEPARATE BID FORMS:

These Contract Documents include a complete set of bidding documents. The BIDDER shall copy all Documents listed in the table of contents under the heading BIDDING DOCUMENTS and shall submit two sets (original signed and one signed photocopy) of his bid on these forms. A bid shall be comprised of the BIDDING DOCUMENTS completed by the BIDDER plus supplemental information required by the Specifications and Contract Documents.

If any of the information submitted as part of the bid is considered to be proprietary by the BIDDER, he shall conspicuously identify such intended confidential information in his bid. BPUB is subject to the provisions of the Texas Public Information Act and cannot legally guarantee confidentiality of submittals and may need to consult with its legal counsel and the Texas Attorney General in rendering decisions on any requested disclosures.

- a) Preparation. Each bid shall be carefully prepared using the bid and bid data forms included as a part of the bidding documents. Entries on the bid and bid data forms shall be typed, using dark black ribbon, or legibly written in black ink. All prices shall be stated in written words and numeric figures, except where the forms provide for figures only. In case of discrepancy, especially in any sum total extensions, the amount shown in written words will generally prevail over numeric unit prices.

The BIDDER shall acknowledge, in the space provided in the bid form, receipt of each Addendum issued for the Specifications and Documents during the bidding period.

The BIDDER shall assemble all drawings, catalog data, and other supplementary information necessary to thoroughly describe work, materials and equipment covered by the bid, and shall attach such supplemental information to the copies of the specifications and documents submitted.

- b) Signatures. Each BIDDER shall sign the bid with his usual signature and shall give his full business address. The BIDDER's name stated on the bid shall be the exact legal name of the firm. The names of all persons signing should also be typed or printed below the signature.

Bids by partnerships shall be signed with the partnership name followed by the signature and designation of one of the partners or other authorized representative. A complete list of the partners shall be included with the bid.

Bids by a corporation shall be signed in the official corporate name of the corporation, followed by the signature and designation of the "president,"

“secretary,” or other appropriate person authorized to bind the corporation.

A bid by a person who affixes to his signature the word "president," "secretary," "agent," or other designation, without disclosing his principal, will be rejected. Satisfactory evidence of the authority of the officer signing on behalf of the corporation shall be furnished. Bidding corporations shall designate the state in which they are incorporated and the address of their principal office.

- c) Submittal. The original signed bid (and its accompanying photocopy) shall be transmitted to arrive at the designated BPUB address not later than the date and time stipulated in the Legal Notice and Invitation to Bid.

Submit the original signed bid (and its accompanying photocopy) to:

Brownsville Public Utilities Board
1155 FM 511
Olmito, Texas 78575
Attention: Ms. Diane Solitaire
Purchasing Department

Each bid must be submitted in duplicate as stated above (original signature and photocopy), in a sealed envelope bearing on the outside the name of the BIDDER, his address, and the name of the Project for which the bid is submitted. If forwarded by mail, the sealed envelope containing the bid itself must be enclosed in another mailing envelope addressed as specified in the bid form.

4. METHOD OF BIDDING:

Prices shall be firm, not subject to qualification, condition or adjustment. Prices shall be in United States dollars. Prices shall be lump sum, except where unit prices are requested by the bid forms. When unit price items are required by the bid, the unit prices for each of the several items in the bid of each BIDDER shall include its pro-rata share of overhead, so that the sum of the products obtained by multiplying the quantity shown for each item, by the unit price bid, represents the total bid. Any bid not conforming to that requirement may be rejected as informal and non-responsive. The special attention of all BIDDERS is called to this provision, for should conditions make it necessary to revise the quantities, no limit will be fixed for such increased or decreased quantities nor extra compensation allowed, provided the net monetary value of all such additive and subtractive changes in quantities of such items of work pursuant to public competitive bidding statutes (i.e., difference in cost) shall not cumulatively increase or decrease the original Contract price by more than twenty-five (25%) percent. A proposed decrease only that exceeds twenty-five (25%) percent of the original Contract price must be agreed to in advance by the Contractor.

5. DISCLOSURE BY BIDDER:

Each BIDDER shall submit with the bid documents, on the form furnished for that purpose, his Pre-Bid Disclosure Statement showing his experience record in performing the type of work embraced in the contract, his organization and equipment available for the work contemplated,

and, when specifically requested by the OWNER, a detailed financial statement. The OWNER shall have the right to take such steps as it deems necessary, including telephonic contact to other owner references, to determine the ability and responsibility of the BIDDER to perform his obligations under the Contract and the BIDDER shall be responsive in furnishing the OWNER all such information and data for this purpose as it may request. OWNER reserves the right to reject any bid where an investigation of the available evidence or information does not satisfy the OWNER that the BIDDER is responsible to properly carry out the terms of the Contract. This shall also apply to any proposed subcontractor(s).

6. SUBCONTRACTS:

The BIDDER is specifically advised that any person, firm, or other party to whom it is proposed to award a subcontract under this contract must be acceptable to the OWNER, and that a Pre-Bid Disclosure Statement for each proposed subcontractor must also be submitted with the bid documents.

7. BID SECURITY:

Each bid must be accompanied by a certified or cashier's check, or a bid bond prepared on the form of the bid bond attached hereto, duly executed by the BIDDER as principal, and having as surety therein a surety company approved by the OWNER, and authorized to do business in the State of Texas, in the amount of not less than five (5%) percent of the total bid amount, but not less than \$2,500.00. Such checks, or bid bonds will be returned to all except the three lowest BIDDERS within fifteen (15) days after the opening of bids, and the remaining checks, or bid bonds will be returned promptly after the OWNER and the accepted successful BIDDER have executed the Contract or if no award has been made, within Ninety (90) calendar days after the date of the opening of bids. The bid security will be returned upon demand of the BIDDER at any time thereafter, so long as he has not been notified of the acceptance of his bid.

8. ADDENDA AND INTERPRETATIONS:

No oral interpretations by OWNER and its representatives shall be binding upon OWNER as to the meaning of the Plans, Specifications, Contract Documents, or other pre-bid documents.

Any interpretation, correction, or change of the bid documents will be made by ADDENDUM only. Changes or corrections will only be issued by the Brownsville PUB Purchasing Department. Addenda will be emailed to all who have returned the Bid Acknowledgment form. Addenda will be issued as expeditiously as possible. It is the responsibility of the vendors/contractors to determine whether all Addenda have been received. It will be the responsibility of all respondents to contact the Brownsville PUB Purchasing Department prior to submitting a response to the bid to ascertain if any Addenda have been issued, and to obtain any all Addenda, execute them, and return Addenda with the response to the bid. All Addenda so issued shall become part of the Contract Documents. Addenda may be posted on BPUB's webpage.

9. FACSIMILE MODIFICATION:

Any BIDDER may modify (not originally submit) his bid by facsimile communication at any time prior to the scheduled bid closing time for receipt of bids, provided such communication is received by the OWNER, in the BPUB Purchasing Department, prior to the bid closing time, and provided further, the OWNER is satisfied that a written confirmation of the facsimile modification, over the original signature of the BIDDER, was also mailed prior to the bid closing time. The facsimile communication should not reveal the total bid price, but only should provide the clarification, addition or subtraction, or other modification, so that the final bid prices or terms intended will not be known by the OWNER, until the original sealed bid is opened and the modification computed by OWNER.

Revised bids submitted before the opening of bids, whether forwarded by mail or facsimile, if representing an increase in excess of two percent (2%) of the original bid submittal, must have the bid security (bid bond or check) adjusted accordingly; otherwise the bid will not be considered responsive.

If the written and originally signed confirmation of a bid revision is not received within three (3) calendar days after the bid closing time, no consideration will be given to any proposed adjustment contained in the facsimile modification.

10. TIME FOR RECEIVING BIDS:

Bids received prior to the advertised hour of opening will be securely kept sealed by BPUB. The officer whose duty it is to open them will decide when the specified time has arrived, and no bid received thereafter will be considered; except that when a bid arrives by mail after the time fixed for opening, but before the public reading of all other bids is completed, and it is shown to the satisfaction of the OWNER that the non-arrival on time was due solely to delay in the mails for which the BIDDER was not responsible, such bid will be received and considered.

BIDDERS are cautioned that, while facsimile modifications of bids may be received as provided above, such modifications, if not explicit and if in any sense subject to misinterpretation, shall make the bid so modified or amended, subject to rejection for non-responsiveness.

11. OPENING OF BIDS:

At the time and place fixed for the public opening of bids, the OWNER will cause to be opened and publicly read aloud every bid received within the time set for receiving bids, irrespective of any irregularities therein. BIDDERS and other persons properly interested may be present, in person or by representative.

12. WITHDRAWAL OF BIDS:

Bids may be withdrawn on written, facsimile or electronic transmission request dispatched by the BIDDER in time for delivery in the normal course of business prior to the time fixed for bid opening; provided, that written confirmation of any facsimile withdrawal over the signature of the BIDDER is placed in the mail and postmarked prior to the time set for bid opening. The bid

security of any BIDDER withdrawing the bid in accordance with the foregoing conditions will be returned promptly.

13. AWARD OF CONTRACT: REJECTION OF BIDS:

The Contract will be awarded to the responsive and responsible BIDDER submitting the lowest bid complying with the conditions of the Legal Notice and Invitation for Bids. The BIDDER to whom the award is made will be notified at the earliest possible date. The OWNER, however, reserves the right to reject any and all bids and to waive any informality in bids received, whenever such rejection or waiver is in BPUB's interest.

The OWNER reserves the right to consider as not responsible, any BIDDER who does not habitually perform with his own forces the major portions of the work involved in construction of the improvements embraced in this proposed Contract. This provision is meant to prevent wholesale assignment and "brokering" of awarded contracts.

14. EXECUTION OF AGREEMENT: PERFORMANCE AND PAYMENT BOND:

Subsequent to the Notice of Award and within ten (10) calendar days after the prescribed forms are presented for signature, the successful BIDDER shall execute and deliver to the OWNER an Agreement in the form included in the Contract Documents in such number of copies as the OWNER may require.

Having satisfied all conditions of award as set forth elsewhere in these Documents, the successful BIDDER shall, within the period specified in the preceding paragraph, furnish a Performance Bond and Payment Bond, in accordance with the following parameters:

- a.) For a Contract in excess of \$100,000.00, a Performance Bond shall be executed in the full amount of the Contract, conditioned upon the faithful and timely performance of the Work in accordance with the Plans, Specifications, and Contract Documents. Said Bond shall be solely for the protection of the OWNER.
- b.) For a Contract in excess of \$50,000.00, a Payment Bond shall be executed in the full amount of the Contract, solely for the protection of all proper claimants supplying labor and material in the prosecution of the Work provided for in the Contract, for the use of each such claimant perfecting a proper claim. Payment Bonds are required under Texas law, since no mechanics' liens are allowed against BPUB's public property assets.

When bonds are required, they shall serve as security for the faithful performance of the Contract, and for the payment of all persons, firms or corporations to whom the Contractor may become legally indebted to for labor, materials, tools, equipment, or services of any nature, including utility and transportation services employed or used by him in performing the work. Such bonds shall be in the same form as that included in the Contract Documents and shall bear the same date as, or a date subsequent to that of the Agreement. The current power of attorney for the person who signs for any surety company shall be attached to such bonds. These bonds shall be signed by a guaranty

or surety company legally authorized to do business in the State of Texas.

The failure of the successful BIDDER to execute such Agreement and to supply the required bonds and insurance certificates within ten (10) calendar days after the prescribed forms are presented for signature, or within such extended period as the OWNER may grant in writing, based upon reasons determined sufficient by the OWNER, shall constitute a default, and the OWNER may either award the contract to the next lowest responsive and responsible BIDDER, or re-advertise for bids, and may charge against the defaulting BIDDER the difference between the amount of the defaulted bid and the amount for which a final contract for the work is subsequently executed, irrespective of whether the amount thus due exceeds the amount of the bid bond. If a more favorable bid is received by re-advertising, the defaulting BIDDER shall have no claim against the OWNER for a bid bond refund.

15. LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT:

The successful BIDDER, upon his failure or refusal to execute and deliver the Contract, Bonds and insurance certificates required within ten (10) calendar days after he has received notice of the acceptance of his bid, shall forfeit to the OWNER, as mutually agreed to liquidated damages (and not as a penalty) for such failure or refusal, the security provided in the bid bond or otherwise deposited with his bid.

16. TIME OF COMPLETION AND LIQUIDATED DAMAGES:

BIDDER agrees by submission of his bid to commence Work on the date to be specified in a written "Notice to Proceed" issued by the OWNER and to Substantially Complete the Project as provided in Article 2 of the Construction Agreement.

BIDDER agrees by submission of his bid to pay as mutually agreed to liquidated damages, and not as a penalty, the sum as provided in said Construction Agreement, Article 2.

17. NOTICE OF SPECIAL CONDITIONS:

Attention is particularly called to those parts of the Contract Documents and Specifications which address the following:

- A. Inspection and testing of materials.
- B. Insurance requirements.
- C. Wage and Hour Provisions.
- D. State Sales and Use Tax Exemption Provisions

18. LAWS AND REGULATIONS:

The BIDDER's attention is directed to the fact that all applicable federal, State and local laws, statutes, ordinances, codes and the rules and regulations of all authorities having jurisdiction over construction of the Project shall apply to the Contract throughout, and they will be mutually deemed to be included in the Contract, the same as though herein written out in full.

19. EQUAL EMPLOYMENT OPPORTUNITY:

Attention of BIDDERS is particularly called to the requirement for ensuring that employees and applicants for employment are not discriminated against because of their race, religion, gender, sexual preference, physically challenging condition or national origin.

20. PRE-BID CONFERENCE:

A pre-bid meeting between the OWNER, prospective bidders, suppliers, etc., will be held to answer any questions concerning the Work. No Addenda will be issued at this meeting. Subsequent thereto, if necessary to clear up any written questions, a written Addendum will be issued by the OWNER to all pre-bid conference attendees. The pre-bid meeting will be held at the place, time and date indicated in the Legal Notice. Interested parties are invited to attend. Attendance at the Pre-Bid Conference is not mandatory, but is recommended for all contractors and suppliers interested in bidding the Work for the Project.

21. SUBMITTAL OF TRENCH SAFETY DESIGN: (RESERVED)

The apparent low BIDDER shall provide the OWNER with a Trench Safety System Plan and a certificate signed and sealed by a Registered Professional Engineer licensed by the State of Texas, within 21 calendar days after the date of the opening of Bids prior to award of the Contract. Failure to timely comply may disqualify BIDDER.

22. INFORMATION TO BE SUBMITTED WITH BID:

Each BIDDER shall submit with his bid pertinent information concerning proposed equipment and materials and proposed construction organization.

a) **Equipment and Materials.** In addition to the information submitted on the bid and bid data forms, each BIDDER shall submit all specifications, preliminary drawings, and similar descriptive information necessary to describe completely the equipment and materials he proposes to furnish.

The bid shall be based on using new equipment and materials which comply with the Specifications and Documents in every respect, unless existing equipment is specifically noted by OWNER for reuse. If alternate or "equal" equipment and materials are indicated in the bid, it shall be understood that the OWNER will have the option of selecting any one of the alternates so indicated and such selection shall not be a cause for extra contractor compensation or extension of time. OWNER specifically reserves the legal right to specify "sole source" equipment or materials in the Specifications when unique circumstances warrant.

b) Contractor's Field Organization and Safety Record.

(i) An organization chart showing the names of field management, supervisory, technical personnel, and number of employees/workforce available and the details of the management, supervisory, and technical organization which he proposes to use for this project. The successful BIDDER's organizational

- concept will be subject to the review and acceptance of the OWNER.
- (ii) The experience record of the Contractor's field superintendent(s) shall be submitted with the bid.
 - (iii) The Contractor's job-safety record summary for the previous five (5) years
 - (iv) The two most recent year's Financial Statements
 - (v) List of three (3) projects completed by CONTRACTOR of both similar size and scope over the past five (5) years

23. PREFERENCE LAW:

Bid evaluations will take into consideration any Preference Laws of the State of Texas, and any reciprocity laws of other states as they may be addressed by current Texas law.

24. SUBSURFACE GEOLOGIC CONDITIONS: (RESERVED)

Each BIDDER shall be responsible for determining prior to bidding, the types of subsurface materials which will be found in the event that any new footings and upright structural supports for the Project are required. If test borings have been made on the Project site by the BPUB or its consultants, the locations and logs of the test borings are bound as an appendix to these Specifications and Documents.

It is to be expressly understood and acknowledged by the BIDDER, that any information on subsurface geology made available by OWNER for BIDDER'S convenience shall not be a part of the Contract Documents and there is no expressed or implied guarantee of the data given, nor of the interpretation thereof.

All excavation for this Project will be unclassified and the BIDDER shall be responsible for investigating and satisfying himself of subsurface geologic conditions (including the presence or likelihood of encountering soils requiring dewatering, rock or rock-like materials) prior to submitting his bid, which shall include any and all costs BIDDER associates with avoiding, managing or removing said subsurface geologic conditions without claim for extra compensation against OWNER.

25. DISPOSAL OF EXCESS MATERIALS:

After completion of this Project there may be in some instances an excess of spoil material or waste material left over. In such cases where there is an excess of material, BIDDER shall load and haul it away from the job site and dispose of it in a legal manner so as not to: trespass; adversely impact any protected wetlands; adversely impact the 100 year flood plain; adversely impact any endangered species; or otherwise create drainage diversions or impoundments. No extra remuneration for this Work will be allowed.

26. EROSION AND SEDIMENT CONTROL MEASURES:

The BIDDER is expected to conduct his Work in such a manner as to minimize any soil erosion

or sediment runoff from the construction site. Earth cuts and fills shall have smooth, flat side slopes, as generally indicated on the PLANS, to preclude erosion of the soil. Such operations should be timed consistent with the actual need for doing the Work and only to leave raw, unprotected surfaces for a minimum of time.

Existing lawns are to remain intact as far as practical. Such areas as are disturbed shall be duly restored by the BIDDER to as good as or better than original condition using the same type of grass, shrubs, or cover as the original. The BIDDER shall be responsible for correcting any erosion that occurs at his sole cost without claim for extra compensation.

As construction progresses, and in accordance with State and federal laws regulating storm water runoff and management from construction sites greater than five acres in size, if applicable, (See: Section 405 of the Water Quality Act of 1987, Section 402(P) as amended), and at locations where erosion with sediment runoff occurs or is likely to occur, the BIDDER shall construct temporary ditches, perimeter siltation screens, retainage levees, drains, inlets, or other works to manage, prevent, or correct the possible conditions. Upon completion of the Work, such facilities shall be removed.

During construction, the BIDDER shall take the necessary precautions to see that erosion is controlled and sediment runoff is prevented so as to protect the quality of any neighboring water bodies.

27. SAFETY PROVISIONS:

BIDDER shall provide barricades, flares, warning signs, and/or flagmen so that danger and inconvenience to the OWNER, public, and any job site working personnel, will be mitigated. In addition to any other requirements of the Contract Documents, the BIDDER shall be responsible for familiarity and compliance with all Federal (OSHA), State, railroad and local safety rules, laws and requirements.

28. PROTECTION OF PROPERTY AND EXISTING UTILITIES:

Within developed areas, all public and private property along and adjacent to the BIDDER'S operations, including roads, driveways, lawns, yards, shrubs, drainage gradients, and trees, shall be adequately protected, and when damages occur, they shall be repaired, replaced, or renewed or otherwise put in a condition equal to, or better than, that which existed before the BIDDER caused the damage or removal.

An attempt has been made by BPUB to show all known existing utilities on the PLANS, but the possibility remains strong that some underground utilities may exist that have not been shown. The BIDDER, through mandatory contact with local utility owners, shall keep himself informed and take such precautions as necessary to avoid utility damage and unsafe working conditions for employees.

29. WAGES AND HOURS:

The most recent wage rate determination from the U.S. Department of Labor for Cameron County, Texas as amended within the previous three (3) years and as locally adopted by the BPUB, is a part of these Specifications and controls minimum wage, hour and any fringe benefits, with the exception that no wage shall be paid below \$8.00 as established locally by the BPUB.

A copy of the appropriate (building and/or heavy/highway) wage rate schedule(s) must be posted at the job site in both English and Spanish and kept posted in a conspicuous place on the site of the Project at all times during construction. The BIDDER shall familiarize himself with the included General Conditions Section entitled "Wage and Labor Standard Provisions - 100% Non-Federally Funded Construction." Copies of the wage rate schedule(s) are included herein, but the responsibility for initial posting and keeping same posted, rests upon the BIDDER.

30. GUARANTEE:

The BIDDER shall warranty and guarantee the Work, equipment and materials for a period of at least one (1) year after date of final acceptance in writing by the OWNER. During this period, the BIDDER shall make any repairs and/or replacements of defective equipment and materials and corrections of Work due to poor workmanship, all as may be required for full compliance with the General Conditions, Plans and Specifications. This combined workmanship quality guarantee, and minimal equipment and materials warranty, shall apply to all matters reported by the OWNER in writing within said one (1) year period and this post-construction guarantee/warranty period shall be included in the coverage period set forth in the Performance Bond.

31. STATE SALES AND USE TAX EXEMPTION:

Pursuant to 34 Texas Administrative Code 3.291, in order for the Brownsville PUB to continue to benefit from its status as a State Sales and Use Tax Exempt Organization, after August 14, 1991, construction contracts must be awarded on a "separated contract" basis. A "separated contract" is one that distinguishes the value of the tangible personal property (materials such as pipe, bricks, lumber, concrete, paint, etc.) to be physically incorporated into the Project realty, from the total Contract price. Under the "separated contract" format, the Contractor in effect becomes a "seller" to the Brownsville PUB of materials that are to be physically incorporated into the Project realty. As a "seller", the Contractor will issue a "Texas Certificate of Resale" to the supplier in lieu of paying the sales tax on materials at the time of purchase. The contractor will also issue a "Certificate of Exemption" to the supplier demonstrating that the personal property is being purchased for resale and that the resale is to the Brownsville PUB, which is a sales tax exempt entity under UTCA Tax Code Section 151.309(5). Contractors should be careful to consult the most recent guidelines of the State Comptroller of Public Accounts regarding the sales tax status of supplies and equipment that are used and/or consumed during project work (gas, oil, rental equipment), but that are not physically incorporated into the project realty. Such items are generally not tax exempt. Contractors that have questions about the implementation of this statute are asked to inquire directly with the State Comptroller of Public Accounts, Tax Administration Division, State of Texas, Austin, Texas 78774. Bidders will not include any federal taxes in bid prices since the City of Brownsville and Brownsville PUB are exempt from payment of such federal taxes. "Texas Certificates of Exemption", "Texas Certificates of Resale" and "Texas Sales Tax Permits" are forms available to the Contractor through the regional offices of the State

Comptroller of Public Accounts.

BID
B024-25
Place: BPUB Purchasing Department
1155 FM 511, Olmito, TX 78575
Due Date: February 6, 2025 at 2:00 PM

Bid of _____ hereinafter called "BIDDER," a
_____ (insert type of legal entity e.g. corporation, partnership, individual
with d/b/a, etc.) organized and existing under the laws of the State of _____.

To: the Public Utilities Board of the City of Brownsville, Texas, hereinafter called
"OWNER."

Gentlemen:

The undersigned BIDDER, in compliance with your Invitation to Bid for the
DEMOLITION OF ELEVATED WATER STORAGE TANK NO. 5, having read and
examined the Plans and Specifications with related Documents and visited the site of the proposed
Work, and being familiar with all of the federal, state and local conditions surrounding the
construction of the proposed project, including the availability of materials and labor, hereby
proposes to furnish all labor, materials, equipment and supplies, and to construct the project in
accordance with the contract documents, within the time set forth herein, and at the Total Base Bid
Amount prior to OWNER options on additive/deductive alternates of: (in words and numeric
figures)

_____. These price(s) are to cover all
expenses incurred in performing the Work required under the Contract Documents, of which this
bid is a part. These price(s) are firm and shall not be subject to adjustment, provided this Bid is
accepted by OWNER within ninety (90) calendar days after the time set for receipt of bids.

BIDDER hereby agrees to commence Work under this Contract on or before a date to be
specified in a written "Notice to Proceed" to be issued by the OWNER.

BIDDER agrees to perform all Work for which he contracts as described in the Plans and
Specifications for the unit prices and/or lump sums shown on the attached Bid Schedule.

BID SCHEDULE
BASE BID – B024-25
BROWNSVILLE PUBLIC UTILITIES BOARD

The Bidder, in compliance with the Invitation for Bids for the DEMOLITION OF ELEVATED WATER STORAGE TANK NO.5, having examined the scope of work and written Specifications, hereby proposes to furnish construction services for the following Unit prices and lump sums.

| Items | DESCRIPTION (Write Unit Price in Words) | Est. Qty. | Unit | Unit Price | Costs |
|--------------|--|----------------------|-------------|-------------------|--------------|
| 1 | Mobilization and Demobilization (Not to Exceed 5% of Total Bid) for _____ Dollars and _____ Cents | 1 | LS | \$ | \$ |
| 2 | Salvage Altitude Valves (2) from the system. This includes the disconnection, careful removal, and transportation of the valves to a designated storage location for potential reuse or refurbishment. Complete In-Place for _____ Dollars and _____ Cents | 1 | LS | \$ | \$ |
| 3 | Salvage Booster Pump and Booster Pump Motor from the system. This includes the disconnection, careful removal, and transportation of the pump and motor to a designated storage location for potential reuse or refurbishment. Complete In-Place for _____ Dollars and _____ Cents | 1 | LS | \$ | \$ |

| | | | | | |
|--|---|---|----|----|----|
| 4 | Demolition of Elevated Water Storage Tank No. 5, including demolition of elevated hydropillar tank, partial removal of multi-leg pier foundations, pump and electrical station foundations and supports, above ground pump, piping, valves, fittings, underground yard piping, valves and fittings, electrical service, equipment and components, communication equipment and components; and site restoration, as per plans and technical specifications. Complete In-Place for _____ Dollars and _____ Cents | 1 | LS | \$ | \$ |
| TOTAL BID AMOUNT (ITEMS 1-4): | | | | | |
| TOTAL BID AMOUNT (ITEMS 1-4) WRITTEN IN WORDS | | | | | |

TOTAL AMOUNT OF BID (ITEMS 1-4): \$ _____

_____ (written in words)

NOTE: Quantities are estimated. The Brownsville PUB reserves the right to increase or decrease quantities as allowed by Texas law (plus or minus 25%) and as deemed necessary by OWNER, without impacting the quoted unit prices. Prospective bidders are encouraged to visit and assess the existing Project site and structures prior to submitting a bid.

BIDDER Acknowledges receipt of the following Addenda:

SUBCONTRACTORS. The undersigned BIDDER proposes that he will be responsible to perform major portions of the Work at the Project site with his own forces and that specific portions of the Work not performed by the undersigned will be subcontracted and performed by the following subcontractors.

| Work Subcontracted | Name of Subcontractor |
|--------------------|-----------------------|
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Bid amounts are to be legibly shown in both words and figures. In case of discrepancy, the unit price shown in words will govern.

The above unit prices shall include all labor, materials, excavation, bailing, shoring, removal, backfill, overhead, profit, insurance, etc., to cover the finished Work of the several kinds called for.

BIDDER understands that the OWNER reserves the right to reject any or all bids and to waive any informalities in the bidding.

BIDDER agrees that this bid shall be good and may not be withdrawn for a period of ninety (90) calendar days after the scheduled bid opening.

The undersigned hereby declares that only the persons or firms interested in the bid as principal or principals are named herein, and that no other persons or firms than are herein mentioned have any interest in this Bid or in the Contract to be entered into; that this Bid is made without connection with any other person, company, or parties likewise submitting a bid or bid; and that it is in all respects for and in good faith, without collusion or fraud.

Upon receipt of written notice of the acceptance of this bid, BIDDER will execute the formal Contract attached within ten (10) days and deliver the Bonds and Insurance Certificates as required under the GENERAL CONDITIONS. The Bid security attached in the sum of _____ (\$ _____) is to become the property of the OWNER in the event the Contract, Bonds, and insurance certificates are not executed or delivered within the time above set forth, as mutually agreed to liquidated damages and not as a penalty for the delay and additional administrative expense to the OWNER caused thereby; otherwise the Bid security will be returned upon the signing of the Contract and delivering the approved Bonds and insurance certificates.

Seal affixed here if BID is by a Corporation:

Respectfully submitted,

By: _____
Signature (failure to sign disqualifies bid)

Title

Address

Attest: _____

BID BOND

STATE OF TEXAS § KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF CAMERON §

THAT WE, the undersigned, _____ as Principal, and _____ as Surety, are hereby held and firmly bound unto the PUBLIC UTILITIES BOARD OF THE CITY OF BROWNSVILLE, TEXAS as OWNER in liquidated damages (not as a penalty) of _____ for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

Signed, this _____ day of _____, 20__.

The Condition of the above obligation is such that whereas the Principal has submitted to the OWNER a certain BID attached hereto and hereby made a part hereof to enter into a contract in writing, for DEMOLITION OF ELEVATED WATER STORAGE TANK NO.5

NOW, THEREFORE,

- (a) If said BID shall be rejected, or
- (b) If said BID shall be accepted and the Principal shall execute and deliver a contract in the form of Agreement attached hereto (properly completed in accordance with said BID) and shall furnish payment and performance bonds for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall furnish insurance certificates, and shall in all other respects perform the agreement created by the acceptance of said BID, then this obligation shall be void. Otherwise the same shall remain in force and effect, it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by an extension of the time within which the OWNER may accept such BID; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

Signed, this _____ day of _____, 20____.

Principal

Surety

By:_____

IMPORTANT - Surety companies executing BONDS must be legally authorized by the State Board of Insurance to transact business in the State of Texas, and be listed as approved federal sureties in the most recently issued (as of the date of legal notice) edition of the U. S. Treasury Circular 570.

CONTRACTOR'S PRE-BID DISCLOSURE STATEMENT

All questions must be answered or your bid will be deemed non-responsive and subject to rejection. The data given must be clear and comprehensive. **This statement must be notarized.** If necessary, questions may be answered on separate attached sheets. The Bidder may submit any additional information he desires, so long as that information does not constitute a condition, qualification or exception to the Bid Submittal.

1. This Pre-Bid Disclosure Statement is submitted to the Brownsville Public Utilities Board by: _____
 ___ a Corporation, ___ a Partnership, ___ a Texas Joint Venture, or ___ an Individual.
 Address: _____ Contractor's #: _____
 City _____ State _____ Zip Code _____

2. Years in business under present business name: _____

3. Years of experience in construction work of the type called for in this contract as: A General Contractor _____, A Subcontractor _____.

4. What projects has your organization completed within the last five (5) years? List most recent FIRST.

| Contract | Type of Work | Date Completed | Owners Name and Address | Amount |
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5. What projects does your organization have under way as of this date?

| Contract | Type of Work | Date Completed | Owners Name and Address | Amount |
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6. Have you ever failed to complete any work awarded to you?

___ Yes ___ No. If "Yes", state where and why. _____

7. Are you at present in any binding arbitrations and/or lawsuits involving construction work of any type?

___ Yes ___ No. If "Yes", explain: _____

8. Explain in detail the manner in which you have inspected the work and jobsite proposed in this contract: _____

9. Explain in detail your plan or layout for performing the work proposed in this contract: _____

10. If this contract is awarded to you, your company's office administrative manager for the work will be Mr. (Ms.) _____, and your resident construction superintendent will be Mr. (Ms.) _____.

11. What experience in this type of work does the individual designated as resident superintendent above have? _____

12. What portions of the work do you intend to subcontract? _____

13. What equipment do you own that is available for the proposed work?

| Quantity | Description, Size Capacity, Etc. | Condition | Years in Service | Present Location |
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14. Have you received firm offers from suppliers or manufacturers for all major items of material and/or equipment within the price totals used in preparing your bid? __ Yes __ No

15. Attach resumes for the principal members of your organization, including the officers as well as the proposed superintendent for the project.

Credit available: \$ _____ Bank Reference: _____

Bonding Capacity available: \$ _____

The undersigned hereby authorizes and requests any person, firm or corporation to furnish any information requested by the Owner in verification of the recitals comprising this Pre-Bid Disclosure Statement.

The signatory of this questionnaire guarantees the truth and accuracy of all statements herein made and all answers herein expressed.

Dated this ____ day of _____, 20__.

By: _____

Title: _____

STATE OF _____

COUNTY OF _____

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

Notary Public

My commission expires: _____

SUBCONTRACTOR'S PRE-BID DISCLOSURE STATEMENT

All questions must be answered or the general contractor's bid will be deemed non-responsive and subject to rejection. The data given must be clear and comprehensive. **This statement must be notarized.** If necessary, questions may be answered on separate attached sheets. The subcontractor may submit any additional information he desires.

1. This Pre-Bid Disclosure Statement is submitted to the Brownsville Public Utilities Board by: _____

___ a Corporation, ___ a Partnership, ___ a Texas Joint Venture, or ___ an Individual.

Address: _____ Contractor's #: _____

City _____ State _____ Zip Code _____

2. Years in business under present business name: _____

3. Years of experience in construction work of the type called for in this contract as: A General Contractor _____, A Subcontractor _____.

4. Have you ever previously worked as a subcontractor for this general contractor?
 ___ Yes ___ No; If yes, list the three most recent projects in which your company has served as a subcontractor to this general contractor.

5. What projects has your organization completed within the last five (5) years? List most recent FIRST.

| Contract | Type of Work | Date Completed | Owners Name and Address | Amount |
|----------|--------------|----------------|-------------------------|--------|
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6. What projects does your organization have under way as of this date?

| Contract | Type of Work | Date Completed | Owners Name and Address | Amount |
|----------|--------------|----------------|-------------------------|--------|
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7. Have you ever failed to complete any work awarded to you?

___ Yes ___ No. If "Yes", state where and why. _____

8. Are you at present in any finding arbitrations and/or lawsuits involving construction work of any type?

___ Yes ___ No. If "Yes", explain: _____

9. Explain in detail the manner in which you have inspected the work and jobsite proposed in this contract: _____

10. Explain in detail your plan or layout for performing the work proposed in this contract:

11. If this subcontract is awarded to you by the general contractor, your company's office administrative manager for the work will be Mr. (Ms.) _____,

and your resident construction superintendent will be Mr. (Ms.) _____.

12. What experience in this type of work does the individual designated as resident superintendent above have? _____

13. What portions of the work do you intend to subtier subcontract?

14. What equipment do you own that is available for the proposed work?

| Quantity | Description, Size Capacity, Etc. | Condition | Years in Service | Present Location |
|----------|----------------------------------|-----------|------------------|------------------|
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15. Have you received firm offers from suppliers or manufacturers for all major items of material and/or equipment within the prices totals used in preparing your subcontractor bid?
 ___ Yes ___ No

16. Attach resumes for the principal members of your organization, including the officers as well as the proposed superintendent for the project.

Credit available: \$ _____ Bank Reference: _____

Bonding Capacity available: \$ _____

The undersigned hereby authorizes and requests any person, firm or corporation to furnish any information requested by the Engineer and Owner in verification of the recitals comprising this Pre-Bid Disclosure Statement.

The signatory of this questionnaire guarantees the truth and accuracy of all statements herein made and all answers herein expressed.

Dated this ____ day of _____, 20__.

By: _____

Title: _____

STATE OF _____

COUNTY OF _____

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

Notary Public

My commission expires: _____

REQUIRED FORMS CHECKLIST

The following documents are to be submitted as a part of the Bid/RFP/RFQ document

| NAME | FORM DESCRIPTION | SUBMITTED WITH BID | |
|---|--|---------------------------------|--------------------------------|
| | | YES <input type="checkbox"/> | NO <input type="checkbox"/> |
| Required Forms (if applicable) | Acknowledgement Form | <input type="checkbox"/> | <input type="checkbox"/> |
| | Debarment Certificate | <input type="checkbox"/> | <input type="checkbox"/> |
| | Ethic Statement | <input type="checkbox"/> | <input type="checkbox"/> |
| | Conflict of Interest Questionnaire | <input type="checkbox"/> | <input type="checkbox"/> |
| | W9 or W8 Form | <input type="checkbox"/> | <input type="checkbox"/> |
| | Direct Deposit Form (will be provided to the awarded vendor) | <input type="checkbox"/> | <input type="checkbox"/> |
| | Residence Certification Form | <input type="checkbox"/> | <input type="checkbox"/> |
| Special Instructions (if applicable) | Bid Schedule/Cost sheet completed and signed | <input type="checkbox"/> | <input type="checkbox"/> |
| | Cashier Check or Bid Bond of 5% of Total Amount of Bid | <input type="checkbox"/> | <input type="checkbox"/> |
| | OSHA 300 Log | <input type="checkbox"/> | <input type="checkbox"/> |
| | Contractor Pre-Bid Disclosure completed, signed and notarized | <input type="checkbox"/> | <input type="checkbox"/> |
| | Sub-Contractor Pre-Bid Disclosure completed, signed, and notarized | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | |
| References | Complete the Previous Customer Reference Worksheet for each reference provided | <input type="checkbox"/> | <input type="checkbox"/> |
| Addenda | | <input type="checkbox"/> | <input type="checkbox"/> |
| | | <input type="checkbox"/> | <input type="checkbox"/> |
| | | <input type="checkbox"/> | <input type="checkbox"/> |

Prospective Bidders are respectfully reminded to completely read and thoroughly respond to the BPUB Instructions for Bidders and Pre-Bid Disclosure Statement. When BPUB evaluates the Bids, it reviews indices regarding the prospective contractors' responsibility to perform the project based upon prior job performances for BPUB and other public owners. Additionally, BPUB carefully reviews the prospective contractors' responsiveness to the BPUB Bid Advertisement. Bidders should thoroughly check their submittal for completeness prior to responding to BPUB. Do not imbalance your Bid line items to overload portions of the work. Remember to answer all written questions in the Pre-Bid Disclosure Statement and then notarize it when signing. Bidders are often required to submit OSHA 300 Logs from prior job performance records as well. BPUB can, has, and will reject Bids that fail the responsibility and/or responsiveness standards so as to protect the integrity of the bidding process for all participants. The Bidding community's compliance with these guideline standards will be appreciated by the BPUB.

ETHICS STATEMENT
(Complete and return with bid)

The undersigned bidder, by signing and executing this bid, certifies and represents to the Brownsville Public Utilities Board that bidder has not offered, conferred or agreed to confer any pecuniary benefit, as defined by (1.07 (a) (6) of the Texas Penal Code, or any other thing of value as consideration for the receipt of information or any special treatment of advantage relating to this bid; the bidder also certifies and represents that the bidder has not offered, conferred or agreed to confer any pecuniary benefit or other thing of value as consideration for the recipient's decision, opinion, recommendation, vote or other exercise of discretion concerning this bid, the bidder certifies and represents that bidder has neither coerced nor attempted to influence the exercise of discretion by any officer, trustee, agent or employee of the Brownsville Public Utilities Board concerning this bid on the basis of any consideration not authorized by law; the bidder also certifies and represents that bidder has not received any information not available to other bidders so as to give the undersigned a preferential advantage with respect to this bid; the bidder further certifies and represents that bidder has not violated any state, federal, or local law, regulation or ordinance relating to bribery, improper influence, collusion or the like and that bidder will not in the future offer, confer, or agree to confer any pecuniary benefit or other thing of value of any officer, trustee, agent or employee of the Brownsville Public Utilities Board in return for the person having exercised their person's official discretion, power or duty with respect to this bid; the bidder certifies and represents that it has not now and will not in the future offer, confer, or agree to confer a pecuniary benefit or other thing of value to any officer, trustee, agent, or employee of the Brownsville Public Utilities Board in connection with information regarding this bid, the submission of this bid, the award of this bid or the performance, delivery or sale pursuant to this bid.

THE VENDOR SHALL DEFEND, INDEMNIFY, AND HOLD HARMLESS THE CITY OF BROWNSVILLE AND THE BROWNSVILLE PUBLIC UTILITIES BOARD, ALL OF THEIR OFFICERS, AGENTS AND EMPLOYEES FROM AND AGAINST ALL CLAIMS, ACTIONS, SUITS, DEMANDS, PROCEEDING, COSTS, DAMAGES, AND LIABILITIES, ARISING OUT OF, CONNECTED WITH, OR RESULTING FROM ANY ACTS OR OMISSIONS OF CONTRACTOR OR ANY AGENT, EMPLOYEE, SUBCONTRACTOR, OR SUPPLIER OF CONTRACTOR IN THE EXECUTION OR PERFORMANCE OF THIS BID.

I have read all of the specifications and general bid requirements and do hereby certify that all items submitted meet specifications.

COMPANY: _____

AGENT NAME: _____

AGENT SIGNATURE: _____

ADDRESS: _____

CITY: _____

STATE: _____ ZIP CODE: _____

TELEPHONE: _____ TELEFAX: _____

FEDERAL ID#: _____ AND/OR SOCIAL SECURITY #: _____

DEVIATIONS FROM SPECIFICATIONS IF ANY:

NOTE: QUESTIONS AND CONCERNS FROM PROSPECTIVE CONTRACTORS SHOULD BE RAISED WITH OWNER AND ITS CONSULTANT (IF APPLICABLE) AND RESOLVED IF POSSIBLE, PRIOR TO THE BID SUBMITTAL DATE. ANY LISTED DEVIATIONS IN A FINALLY SUBMITTED BID MAY ALLOW THE OWNER TO REJECT A BID AS NON-RESPONSIVE.

CERTIFICATION REGARDING DEBARMENT, SUSPENSION,
AND OTHER RESPONSIBILITY MATTERS
(Complete and Return with Bid)

Name of Entity: _____

The prospective participant certifies to the best of their knowledge and belief that they and their 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 bid 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, Local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and
- d) Have not within a three year period preceding this bid had one or more public transactions (Federal, State, Local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this bid or termination of the award. In addition, under 18 USC Section 1001, a false statement may result in a fine up to a \$10,000.00 or imprisonment for up to five (5) years, or both.

Name and Title of Authorized Representative (Typed)

Signature of Authorized Representative

Date

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

THIS FORM MUST BE COMPLETED IN ITS ENTIRETY & SUBMITTED WITH BID RESPONSE

| CONFLICT OF INTEREST QUESTIONNAIRE For vendor doing business with local governmental entity | | FORM CIQ |
|---|--|-----------------|
| <p>This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.</p> <p>This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).</p> <p>By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. See Section 176.006(a-1), Local Government Code.</p> <p>A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.</p> | OFFICE USE ONLY <div style="border: 1px solid black; height: 100px; margin-top: 5px;"></div> | |
| 1 Name of vendor who has a business relationship with local governmental entity. | | |
| 2 <input type="checkbox"/> Check this box if you are filing an update to a previously filed questionnaire. (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.) | | |
| 3 Name of local government officer about whom the information is being disclosed. <div style="text-align: center; margin-top: 10px;"> _____ Name of Officer </div> | | |
| 4 Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary. <div style="margin-top: 20px;"> <p>A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?</p> <div style="display: flex; justify-content: center; gap: 50px; margin-top: 5px;"> <input type="checkbox"/> Yes <input type="checkbox"/> No </div> <p>B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?</p> <div style="display: flex; justify-content: center; gap: 50px; margin-top: 5px;"> <input type="checkbox"/> Yes <input type="checkbox"/> No </div> </div> | | |
| 5 Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more. | | |
| 6 <input type="checkbox"/> Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1). | | |
| 7 <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="width: 60%;"> _____ Signature of vendor doing business with the governmental entity </div> <div style="width: 35%;"> _____ Date </div> </div> | | |

Form provided by Texas Ethics Commission

www.ethics.state.tx.us

Revised 1/1/2021

CONFLICT OF INTEREST QUESTIONNAIRE
For vendor doing business with local governmental entity

A complete copy of Chapter 176 of the Local Government Code may be found at <http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm>. For easy reference, below are some of the sections cited on this form.

Local Government Code § 176.001(1-a): "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

- (A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;
- (B) a transaction conducted at a price and subject to terms available to the public; or
- (C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

Local Government Code § 176.003(a)(2)(A) and (B):

- (a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

- (2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds \$2,500 during the 12-month period preceding the date that the officer becomes aware that

- (i) a contract between the local governmental entity and vendor has been executed; or
- (ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than \$100 in the 12-month period preceding the date the officer becomes aware that:

- (i) a contract between the local governmental entity and vendor has been executed; or
- (ii) the local governmental entity is considering entering into a contract with the vendor.

Local Government Code § 176.006(a) and (a-1)

- (a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

- (1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);
- (2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or
- (3) has a family relationship with a local government officer of that local governmental entity.

- (a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

- (1) the date that the vendor:

- (A) begins discussions or negotiations to enter into a contract with the local governmental entity; or
- (B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

- (2) the date the vendor becomes aware:

- (A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);
- (B) that the vendor has given one or more gifts described by Subsection (a); or
- (C) of a family relationship with a local government officer.

BROWNSVILLE PUBLIC UTILITIES BOARD
RESIDENCE CERTIFICATION

In accordance with Art. 601g, as passed by the 1985 Texas Legislature, the following will apply. The pertinent portion of the Act has been extracted and is as follows:

Section 1. (a)

(1) "Nonresident bidder" means a bidder whose principal place of business is not in this state, but excludes a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

(2) "Texas resident bidder " means a bidder whose principal place of business is in this state, and includes a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

Section 1. (b)

The state or governmental agency of the state may not award a contract for general construction, improvements, services, or public works projects or purchases of supplies, materials or equipment to a nonresident bidder unless the nonresident's bid is lower than the lowest bid submitted by a responsible Texas resident bidder by the same amount that a Texas resident bidder would be required to underbid a nonresident bidder to obtain a comparable contract in the state in which the nonresident's principal place of business is located.

I certify that _____ (Company Name) is a **resident Texas bidder** as defined in Art. 601g.

Signature: _____

Print Name: _____

I certify that _____ (Company Name) is a **nonresident bidder** as defined in Art. 601g. and our principal place of business is:

(City and State)

Signature: _____

Print Name: _____

Previous Customer Reference Worksheet

| | | |
|---|--|------------------------|
| Name of Customer: | | Customer Contact: |
| Customer Address: | | Customer Phone Number: |
| | | |
| | | Customer Email: |
| Name of Company Performing Referenced Work: | | |

| | | |
|-------------------------------------|--|---|
| What was the Period of Performance? | | What was the Final Acceptance Date? |
| From: | | |
| To: | | |
| Dollar Value of Contract? | | What Type of Contract? |
| \$ _____ | | <input type="checkbox"/> Firm Fixed Price <input type="checkbox"/> Time and Material <input type="checkbox"/> Not to Exceed <input type="checkbox"/> Cost Plus Fixed Fee <input type="checkbox"/> Other, Specify: _____ |

[illegible]

**Request for Taxpayer
Identification Number and Certification**

Go to www.irs.gov/FormW9 for instructions and the latest information.

Give form to the
requester. Do not
send to the IRS.

Before you begin. For guidance related to the purpose of Form W-9, see *Purpose of Form*, below.

| | | |
|--|---|--|
| Print or type. See Specific Instructions on page 3. | 1 Name of entity/individual. An entry is required. (For a sole proprietor or disregarded entity, enter the owner's name on line 1, and enter the business/disregarded entity's name on line 2.) | |
| | 2 Business name/disregarded entity name, if different from above. | |
| | 3a Check the appropriate box for federal tax classification of the entity/individual whose name is entered on line 1. Check only one of the following seven boxes. <input type="checkbox"/> Individual/sole proprietor <input type="checkbox"/> C corporation <input type="checkbox"/> S corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate <input type="checkbox"/> LLC. Enter the tax classification (C = C corporation, S = S corporation, P = Partnership) _____ Note: Check the "LLC" box above and, in the entry space, enter the appropriate code (C, S, or P) for the tax classification of the LLC, unless it is a disregarded entity. A disregarded entity should instead check the appropriate box for the tax classification of its owner. <input type="checkbox"/> Other (see instructions) | 4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3): Exempt payee code (if any) _____ Exemption from Foreign Account Tax Compliance Act (FATCA) reporting code (if any) _____ (Applies to accounts maintained outside the United States.) |
| | 3b If on line 3a you checked "Partnership" or "Trust/estate," or checked "LLC" and entered "P" as its tax classification, and you are providing this form to a partnership, trust, or estate in which you have an ownership interest, check this box if you have any foreign partners, owners, or beneficiaries. See instructions <input type="checkbox"/> | |
| | 5 Address (number, street, and apt. or suite no.). See instructions. | Requester's name and address (optional) |
| 6 City, state, and ZIP code | | |
| 7 List account number(s) here (optional) | | |

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. See also *What Name and Number To Give the Requester* for guidelines on whose number to enter.

| | |
|---------------------------------------|------|
| Social security number | |
| | - - |
| or | |
| Employer identification number | |
| | - |

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and, generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

| | | |
|------------------|--------------------------|------|
| Sign Here | Signature of U.S. person | Date |
|------------------|--------------------------|------|

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to www.irs.gov/FormW9.

What's New

Line 3a has been modified to clarify how a disregarded entity completes this line. An LLC that is a disregarded entity should check the appropriate box for the tax classification of its owner. Otherwise, it should check the "LLC" box and enter its appropriate tax classification.

New line 3b has been added to this form. A flow-through entity is required to complete this line to indicate that it has direct or indirect foreign partners, owners, or beneficiaries when it provides the Form W-9 to another flow-through entity in which it has an ownership interest. This change is intended to provide a flow-through entity with information regarding the status of its indirect foreign partners, owners, or beneficiaries, so that it can satisfy any applicable reporting requirements. For example, a partnership that has any indirect foreign partners may be required to complete Schedules K-2 and K-3. See the Partnership Instructions for Schedules K-2 and K-3 (Form 1065).

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS is giving you this form because they

Form **W-8BEN-E**(Rev. October 2021)
Department of the Treasury
Internal Revenue Service**Certificate of Status of Beneficial Owner for
United States Tax Withholding and Reporting (Entities)**▶ For use by entities. Individuals must use Form W-8BEN. ▶ Section references are to the Internal Revenue Code.
▶ Go to www.irs.gov/FormW8BENE for instructions and the latest information.
▶ Give this form to the withholding agent or payer. Do not send to the IRS.

OMB No. 1545-1621

Do NOT use this form for:

- U.S. entity or U.S. citizen or resident W-9
- A foreign individual W-8BEN (Individual) or Form 8233
- A foreign individual or entity claiming that income is effectively connected with the conduct of trade or business within the United States (unless claiming treaty benefits) W-8ECI
- A foreign partnership, a foreign simple trust, or a foreign grantor trust (unless claiming treaty benefits) (see instructions for exceptions) . . . W-8IMY
- A foreign government, international organization, foreign central bank of issue, foreign tax-exempt organization, foreign private foundation, or government of a U.S. possession claiming that income is effectively connected U.S. income or that is claiming the applicability of section(s) 115(2), 501(c), 892, 895, or 1443(b) (unless claiming treaty benefits) (see instructions for other exceptions) W-8ECI or W-8EXP
- Any person acting as an intermediary (including a qualified intermediary acting as a qualified derivatives dealer) W-8IMY

Instead use Form:**Part I Identification of Beneficial Owner****1** Name of organization that is the beneficial owner**2** Country of incorporation or organization**3** Name of disregarded entity receiving the payment (if applicable, see instructions)

- 4** Chapter 3 Status (entity type) (Must check one box only):
- | | | | |
|--|--|---|---|
| <input type="checkbox"/> Simple trust | <input type="checkbox"/> Tax-exempt organization | <input type="checkbox"/> Corporation | <input type="checkbox"/> Partnership |
| <input type="checkbox"/> Central Bank of Issue | <input type="checkbox"/> Private foundation | <input type="checkbox"/> Complex trust | <input type="checkbox"/> Foreign Government - Controlled Entity |
| <input type="checkbox"/> Grantor trust | <input type="checkbox"/> Disregarded entity | <input type="checkbox"/> Estate | <input type="checkbox"/> Foreign Government - Integral Part |
| | | <input type="checkbox"/> International organization | |

If you entered disregarded entity, partnership, simple trust, or grantor trust above, is the entity a hybrid making a treaty claim? If "Yes," complete Part III. ☐ Yes ☐ No

- 5** Chapter 4 Status (FATCA status) (See instructions for details and complete the certification below for the entity's applicable status.)
- | | |
|---|---|
| <input type="checkbox"/> Nonparticipating FFI (including an FFI related to a Reporting IGA FFI other than a deemed-compliant FFI, participating FFI, or exempt beneficial owner). | <input type="checkbox"/> Nonreporting IGA FFI. Complete Part XII. |
| <input type="checkbox"/> Participating FFI. | <input type="checkbox"/> Foreign government, government of a U.S. possession, or foreign central bank of issue. Complete Part XIII. |
| <input type="checkbox"/> Reporting Model 1 FFI. | <input type="checkbox"/> International organization. Complete Part XIV. |
| <input type="checkbox"/> Reporting Model 2 FFI. | <input type="checkbox"/> Exempt retirement plans. Complete Part XV. |
| <input type="checkbox"/> Registered deemed-compliant FFI (other than a reporting Model 1 FFI, sponsored FFI, or nonreporting IGA FFI covered in Part XII). See instructions. | <input type="checkbox"/> Entity wholly owned by exempt beneficial owners. Complete Part XVI. |
| <input type="checkbox"/> Sponsored FFI. Complete Part IV. | <input type="checkbox"/> Territory financial institution. Complete Part XVII. |
| <input type="checkbox"/> Certified deemed-compliant nonregistering local bank. Complete Part V. | <input type="checkbox"/> Excepted nonfinancial group entity. Complete Part XVIII. |
| <input type="checkbox"/> Certified deemed-compliant FFI with only low-value accounts. Complete Part VI. | <input type="checkbox"/> Excepted nonfinancial start-up company. Complete Part XIX. |
| <input type="checkbox"/> Certified deemed-compliant sponsored, closely held investment vehicle. Complete Part VII. | <input type="checkbox"/> Excepted nonfinancial entity in liquidation or bankruptcy. Complete Part XX. |
| <input type="checkbox"/> Certified deemed-compliant limited life debt investment entity. Complete Part VIII. | <input type="checkbox"/> 501(c) organization. Complete Part XXI. |
| <input type="checkbox"/> Certain investment entities that do not maintain financial accounts. Complete Part IX. | <input type="checkbox"/> Nonprofit organization. Complete Part XXII. |
| <input type="checkbox"/> Owner-documented FFI. Complete Part X. | <input type="checkbox"/> Publicly traded NFFE or NFFE affiliate of a publicly traded corporation. Complete Part XXIII. |
| <input type="checkbox"/> Restricted distributor. Complete Part XI. | <input type="checkbox"/> Excepted territory NFFE. Complete Part XXIV. |
| | <input type="checkbox"/> Active NFFE. Complete Part XXV. |
| | <input type="checkbox"/> Passive NFFE. Complete Part XXVI. |
| | <input type="checkbox"/> Excepted inter-affiliate FFI. Complete Part XXVII. |
| | <input type="checkbox"/> Direct reporting NFFE. |
| | <input type="checkbox"/> Sponsored direct reporting NFFE. Complete Part XXVIII. |
| | <input type="checkbox"/> Account that is not a financial account. |

6 Permanent residence address (street, apt. or suite no., or rural route). **Do not use a P.O. box or in-care-of address** (other than a registered address).

City or town, state or province. Include postal code where appropriate.

Country

7 Mailing address (if different from above)

City or town, state or province. Include postal code where appropriate.

Country

For Paperwork Reduction Act Notice, see separate instructions.

Cat. No. 59689N

Form **W-8BEN-E** (Rev. 10-2021)

NOTICE OF AWARD

TO: _____

Project Description: DEMOLITION OF ELEVATED WATER STORAGE TANK NO.5

Dear Sir/Madam:

The Owner has considered the BID submitted by you for the above-described Work in response to its Legal Notice and Invitation to Bid dated <DATE> and Instruction to Bidders.

You are hereby notified that after any Owner adjustments to the Base Bid Amount to account for Owner options regarding additive and deductive alternates, your BID has been accepted in the final Contract Price amount of \$_____.

You are required by the Instructions to Bidders to execute the Construction Agreement and furnish any required Contractor's Performance Bond, Payment Bond and Certificates of Insurance within ten (10) calendar days from the date of this Notice to you.

In addition with the Bonds and Insurance Certificates, you must complete, execute, and submit a Contractor Job Safety Analysis (JSA) form. The JSA form is required prior to entering into a contractual agreement with the OWNER, and will be valid for a period of 30 days after which you must complete, execute and submit an updated JSA form. The completed JSA form is included as a part of the Contract Documents.

If you fail to execute this Agreement and furnish any required Bonds, Insurance Certificates, or other certifications within ten (10) days from the date of this Notice, Owner will be entitled to consider all your rights arising out of the Owner's acceptance of your BID as abandoned, and as a forfeiture of your BID BOND.

The Owner will be entitled to such other rights as may be granted by law and equity.

You are required to promptly sign and return an acknowledged copy of this NOTICE OF AWARD to the Owner.

Dated this ____ day of _____, 20__.

BROWNSVILLE PUBLIC UTILITIES BOARD OF THE
CITY OF BROWNSVILLE, TEXAS

By: _____
Name: Marilyn D. Gilbert
Title: General Manager /CEO

ACCEPTANCE OF AWARD

Receipt of the above NOTICE OF AWARD is hereby acknowledged by:

_____ this ____ day
of _____, 20__.

By: _____

Name: _____

Title: _____

NOTICE TO PROCEED

TO:

ADDRESS:

Contract For: **DEMOLITION OF ELEVATED WATER STORAGE TANK NO.5**

You are notified that the Contract Time under the above Contract will commence to run on _____, 20____. By that date, you are to start performing your obligations under the Contract Documents. In accordance with the Agreement, the date of Substantial Completion prior to final payment is _____, 20____.

Before you may start any Work at the site, material submittals must be submitted and approved by the BPUB before a Purchase Order is issued and prior to the purchase and shipment of materials.

Brownsville Public Utilities Board:
(Owner)

BY: _____
(Authorized Signature)

DATE: _____

NAME: Marilyn D. Gilbert

TITLE: General Manager/CEO

FOR: Brownsville Public Utilities Board

CONSTRUCTION AGREEMENT

THIS AGREEMENT is dated as of the _____ day of _____, 20____, by and between the PUBLIC UTILITIES BOARD of the City of Brownsville, Texas (hereinafter called OWNER) and _____ of _____ an independent contractor, hereinafter called CONTRACTOR).

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

Article 1. WORK.

CONTRACTOR shall furnish all of the material, supplies, tools, equipment, labor and other services necessary for the construction and Final Completion of the Work described herein and complete all the Work as specified or indicated in the Contract Documents for **DEMOLITION OF ELEVATED WATER STORAGE TANK NO.5.**

Article 2. CONTRACT TIME

2.1 The Work shall be Substantially Completed and made ready for later final payment One Hundred (100) consecutive calendar days after the date when the Contract time commences to run as provided in paragraph 2.3 of the General Conditions and in the Notice to Proceed, and in accordance with paragraph 14.13 of the General Conditions.

2.2 **Liquidated Damages.** OWNER AND CONTRACTOR recognize that the **TIME OF PERFORMANCE IS OF THE ESSENCE** in this Agreement and that OWNER will suffer financial loss if the Work is not Substantially Complete within the time specified in paragraph 2.1 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. Both parties hereto also recognize the delays, expense and difficulties involved in proving in a legal proceeding the actual loss suffered by OWNER if the Work is not Substantially Complete on time. Accordingly, instead of requiring such proof, OWNER and CONTRACTOR agree that as liquidated damages, and not as a penalty, for the delay, CONTRACTOR shall pay OWNER Eight Hundred Dollars (\$800.00) for each consecutive calendar day that expires after the time specified in paragraph 2.1 for Substantial Completion.

Article 3. CONTRACT PRICE.

3.1 CONTRACTOR shall perform the Work described in the Contract Documents for the amounts shown in the Bid Schedule, and OWNER shall pay CONTRACTOR in current funds based on the Bid Schedule.

Article 4. PAYMENT PROCEDURES.

Contractor shall submit Applications for Payment in accordance with Article 14 of the

General Conditions. Applications for Payment will be processed by OWNER as provided for in the General Conditions.

4.1 Progress Payments. OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR's Applications for Payment on or about the Twentieth (20th) day after submittal of the Application for Payment each month as provided below. All progress payments shall be on the basis of the progress of the Work measured by the Schedule of Values provided for in paragraph 14.1 of the General Conditions.

4.1.1 Prior to Substantial Completion, progress payments shall be in an amount equal to 95% of the amount requested in the Application for Payment, with 5% remaining as retainage for the Project, to be released in accordance with paragraph 4.2.

4.1.2 Upon Substantial Completion, OWNER shall pay an amount sufficient to increase total payments to CONTRACTOR to 95% of the Contract price, less such amounts OWNER shall determine in accordance with paragraph 14.7 of the General Conditions.

4.2 **Final Payment.** Upon Final Completion and acceptance of the Work in accordance with paragraph 14.13 of the General Conditions, OWNER shall pay the remainder of the Contract price as provided in said paragraph 14.13.

Article 5. CONTRACTOR'S REPRESENTATIONS.

In order to induce OWNER to enter into this Agreement, CONTRACTOR makes the following representations:

5.1 CONTRACTOR has familiarized himself with the nature and extent of the Contract Documents, Work, locality, and with all local conditions and federal, State and local laws, ordinances, rules and regulations that in any manner may affect cost, progress or performance of the Work.

5.2 CONTRACTOR has made or caused to be made examinations and investigations of information and the Project site as he deems necessary for the performance of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents; and no additional examinations, investigations or similar data are or will be required by CONTRACTOR for such purposes.

5.3 CONTRACTOR has given OWNER written notice of all conflicts, errors or discrepancies that he has discovered in the Contract Documents and the written resolution thereof by OWNER is acceptable to CONTRACTOR.

5.4 CONTRACTOR is skilled and experienced in the type of work described in the Contract Documents.

Article 6. CONTRACT DOCUMENTS.

The Contract Documents which comprise the entire Agreement between OWNER and CONTRACTOR are attached to this Agreement, made a part hereof and consist of the following:

- 6.1 Legal Notice and Invitation to Bid
- 6.2 Instructions to Bidders
- 6.3 Bid and Bid Schedule
- 6.4 Bid Bond
- 6.5 Contractor's and Subcontractor's Pre-Bid Disclosure Statements
- 6.6 Notice of Award and Acceptance of Notice
- 6.7 Notice to Proceed
- 6.8 Agreement
- 6.9 Performance Bond
- 6.10 Payment Bond
- 6.11 General Conditions
- 6.12 Supplementary General Conditions
- 6.13 Technical Specifications
- 6.14 Addendum number(s)___ (page __).
- 6.15 CONTRACTOR's Certificate(s) of Insurance
- 6.16 Construction Specifications bearing the following general title: **DEMOLITION OF ELEVATED WATER STORAGE TANK NO.5** (Sheets 1 through 187)
- 6.17 Any written modification, including Change Orders, duly delivered after execution of this Agreement.

There are no Contract Documents other than those listed above in this Article 6. The Contract Documents may only be altered, amended or repealed by a written Modification (as defined in Article 1 of the General Conditions).

Article 7. MISCELLANEOUS.

7.1 Terms used in this Agreement, which are defined in Article 1 of the General Conditions shall have the meanings indicated in the General Conditions.

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

7.3 OWNER and CONTRACTOR each binds himself, his partners, successors, assigns and legal representatives to the other party hereto, his partners, successors, assigns and legal representatives in respect to all covenants, agreements and obligations contained in

the Contract Documents.

7.4 The invalidity or unenforceability of any provision of the Contract Documents shall not affect the validity or enforceability of any other provision of the Contract Documents.

7.5 This Agreement and the Contract Documents are subject to all applicable laws, statutes, codes, ordinances, rules and regulations.

7.6 In the event of default by CONTRACTOR under the Contract Documents, OWNER shall have all rights and remedies afforded to it at law or in equity to enforce the terms of the Contract Documents. The exercise of any one right or remedy shall be without prejudice to the enforcement of any other right or remedy allowed at law or in equity.

7.7 If any action at law or in equity is necessary by OWNER to enforce or interpret the terms of the Contract Documents, OWNER shall be entitled to reasonable attorneys' fees and costs and any necessary disbursements, in addition to any other relief to which the OWNER is entitled.

7.8 The Contract Documents constitute the entire agreement between the parties hereto and supersede all prior agreements, understandings, or oral communications between the parties. The Contract can only be modified or amended by written agreement of the parties.

7.9 These Contract Documents are governed by the laws of the State of Texas and the parties agree that venue for any lawsuits arising from these Contract Documents shall be set in Cameron County, Texas.

(THE REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK)

IN WITNESS WHEREOF, the parties hereto have signed this Agreement in triplicate originals. One counterpart each has been delivered to OWNER and CONTRACTOR. All portions of the Contract Documents have been signed or identified by OWNER and CONTRACTOR. This Agreement will be effective on the date signed by the OWNER below.

BROWNSVILLE
PUBLIC UTILITIES BOARD

CONTRACTOR

By: _____

By: _____

Name: Marilyn D. Gilbert

Name: _____

Title: General Manager/CEO

Title: _____

Attest: _____

Attest: _____

Date: _____

Date: _____

Address for giving notices:

Address for giving notices:

Attn: _____

Attn: _____

1425 Robinhood Drive

P. O. Box 3270

Brownsville, TX 78521

(956) 983-6XXX

Contractor hereby acknowledges and understands that this is a "separated contract" pursuant to 34 T.A.C. 3.291. The following amount of money represents that part of the total Contract price representative of the value of tangible personal property to be physically incorporated into the Project realty: \$_____._____.

[NOTE: SEE GENERAL CONDITIONS ARTICLE 6.15, "STATE SALES AND USE TAX EXEMPTION."]

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

THAT _____
(Name of Contractor)

(Address of Contractor)

a _____
(corporation, partnership, or individual)

hereinafter called Principal, and

(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto the PUBLIC UTILITIES BOARD of the City of Brownsville, Texas, hereinafter called OWNER, in liquidated damages (not as a penalty) of _____ Dollars (\$ _____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain Contract with the OWNER, dated the ____ day of _____, 20____, a copy of which is hereto attached and made a part hereof, for the construction of the: **DEMOLITION OF ELEVATED WATER STORAGE TANK NO.5.**

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said Contract during the original term thereof, and any extensions thereof which may be granted by the OWNER, with or without notice to the Surety and during the one (1) year post-construction workmanship guaranty and materials/equipment warranty period, and if he shall satisfy all claims and demands incurred under such Contract, and **SHALL FULLY INDEMNIFY AND SAVE HARMLESS THE OWNER FROM ALL COSTS AND DAMAGES WHICH IT MAY SUFFER BY REASON OF FAILURE TO DO SO**, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said surety, for value received, hereby stipulates and agrees that no written change, extension of time, alteration or addition to the terms of the Contract or to WORK to be performed thereunder, or the SPECIFICATIONS accompanying the same, shall in any ways affect its obligation on this BOND, and it does hereby waive notice of any such written change, extension of time, alteration or addition to the terms of the Contract, or to the WORK, or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR

shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

This bond is subject to and governed by Section 2253.02 of the Texas Government Code (Vernon's Texas Codes Annotated) and Article 7.19-1 of Vernon's Texas Insurance Code and all amendments thereto.

IN WITNESS WHEREOF, this instrument is executed in triplicate, each counterpart of which shall be deemed an original, this the ____ day of _____, 20__.

ATTEST:

(Principal)

(Principal) Secretary

By: _____ (s)
(Signature)

(SEAL)

(Witness as to Principal)

(Address)

(Address)

ATTEST:

(Surety)

(Surety) Secretary

By: _____
(Attorney-in-Fact)

(SEAL)

(Witness as to Surety)

(Address)

(Address)

NOTE: Date of BOND must not be prior to date of Contract. If Contractor is a Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must be legally authorized by the State Board of Insurance to transact business in the State of Texas.

ATTACH POWER OF ATTORNEY

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS:

THAT _____
(Name of Contractor)

(Address of Contractor)

a _____
(corporation, partnership, or individual)

hereinafter called Principal, and

(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto the PUBLIC UTILITIES BOARD of the City of Brownsville, Texas, hereinafter called OWNER, in liquidated damages (not as a penalty) of _____ Dollars (\$ _____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain Contract with the OWNER, dated the ____ day of _____, 20____, a copy of which is hereto attached and made a part hereof, for the construction of the: **DEMOLITION OF ELEVATED WATER STORAGE TANK NO.5.**

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, SUBCONTRACTORS, and corporations furnishing materials, for or performing labor in, the prosecution of the WORK provided for in such Contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such WORK, and all insurance premiums on said WORK, and for all labor, performed in such WORK whether by SUBCONTRACTOR or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said surety, for value received hereby stipulates and agrees that no written change, extension of time, alteration or addition to the terms of the Contract or to WORK to be performed there under, or the SPECIFICATIONS accompanying the same, shall in any ways affect its obligation on this BOND, and it does hereby waive notice of any such written change, extension of time, alteration or addition to the terms of the Contract, or to the WORK, or to the SPECIFICATIONS.

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

This bond is subject to and governed by Section 2253.02 of the Texas Government Code (Vernon's Texas Codes Annotated) and Article 7.19-1 of Vernon's Texas Insurance Code and all amendments thereto.

IN WITNESS WHEREOF, this instrument is executed in triplicate, each counterpart of which shall be deemed an original, this the ____ day of _____, 20__.

ATTEST:

(Principal)

(Principal) Secretary

By: _____(s)
(Signature)

(SEAL)

(Witness as to Principal)

(Address)

(Address)

ATTEST:

(Surety)

(Surety) Secretary

By: _____
(Attorney-in-Fact)

(SEAL)

(Witness as to Surety)

(Address)

(Address)

NOTE: Date of BOND must not be prior to date of Contract. If Contractor Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must be legally authorized by the State Board of Insurance to transact business in the State of Texas.

ATTACH POWER OF ATTORNEY

INSERT CERTIFICATE OF INSURANCE

**GENERAL CONDITIONS
OF THE
CONSTRUCTION CONTRACT**

Prepared by
The Public Utilities Board of the City of Brownsville, Texas
as an Adaptation From the 1983 Base Document Prepared by

Engineers' Joint Contract Documents Committee

and originally

Issued and Published Jointly By:

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

AMERICAN CONSULTING ENGINEERS COUNCIL

AMERICAN SOCIETY OF CIVIL ENGINEERS

CONSTRUCTION SPECIFICATION INSTITUTE

The base document from which this adaptation was prepared
(1983 edition) was approved and endorsed by:

The Associated General Contractors of America

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GENERAL CONDITIONS

SCOPE. The Standard General Conditions of the Construction Contract prepared by the National Society of Professional Engineers (NSPE-1910-8, 1983 Edition) as amended and adapted by the OWNER to meet local requirements, shall form a part of this Contract, together with the following Supplementary General Conditions. A copy of the locally amended Standard General Conditions (based upon NSPE-1910-8) is bound herewith. The following supplements modify, change, delete, or add to the General Conditions. Where any part of the General Conditions is modified or voided by these Articles, the unaltered provisions of that part shall remain in effect.

ARTICLE 1. DEFINITIONS

Wherever used in these General Conditions or in the other Contract Documents, the following terms have the meanings indicated which are applicable to both the singular and plural thereof:

Addenda - Written or graphic instruments issued prior to the opening of Bids which clarify, correct or change the bidding documents or the Contract Documents. These Addenda are a part of the Contract Documents and modify the Drawings, Specifications or other bid documents as indicated. No verbal changes in the Work not depicted or described in writing shall be binding.

Supplements to, changes in, or corrections to the Drawings and/or Specifications issued in writing by OWNER during the period of bidding. These Addenda are a part of the Contract and modify the drawings and/or specifications as indicated. No verbal changes in the work as shown or described shall become binding.

Agreement - The written and signed short-form Agreement (Contract) between OWNER and CONTRACTOR covering the Work to be performed; other Contract Documents including these General Conditions are attached to the Agreement and made a part thereof as provided therein.

Alternates. Additions; deletions from; or changes to requirements for the Project, each of which shall be bid separately and shall be included in or deleted/deducted from the Contract at the discretion of OWNER.

Application for Payment - The form developed by OWNER which is to be used by CONTRACTOR in requesting interim progress or final Contract payments and which is to include such supporting documentation as is required by the Contract Documents.

Bid - The written offer or bid of the bidder submitted on the OWNER prescribed form setting forth in figures and in script, the prices for the Work to be performed.

Bonds - Bid, Performance and Payment Bonds and any other instruments of security.

Calendar Day - A calendar day of twenty-four hours is measured from midnight, to the next midnight, and shall constitute a single calendar day. Calendar days include Saturdays and Sundays. This is a Calendar Day Contract.

Change Order - A document developed by OWNER, which is signed by CONTRACTOR and OWNER and authorizes an addition, deletion or revision in the Work, or an adjustment in the Contract Price or the Contract Time, issued on or after the Effective Date of the Agreement. Approved Change Orders are part of the Contract Documents.

Contract Documents - The Agreement, Addenda (which pertain to the Contract Documents), CONTRACTOR's Bid (including documentation accompanying the Bid and any post-Bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement, the Bonds, these General Conditions, the Supplementary Conditions, the Specifications and the Drawings as the same are more specifically identified in the Agreement, together with all amendments, modifications, later approved Change Orders and supplements issued pursuant to paragraphs 3.4 and 3.5 on or after the Effective Date of the Agreement.

Contract Price - The moneys payable by OWNER to CONTRACTOR under the Contract Documents as stated in the Agreement (subject to the provisions of paragraph 11.9.1 in the case of Unit Price Work).

Contract Time - The number of days ("calendar" or "working" days computed as provided in paragraph 17.2) or the date specifically stated in the Agreement for the Substantial Completion of the Work.

CONTRACTOR - The person, firm or corporation with whom OWNER has entered into the Agreement to construct the Work.

Defective - An adjective which when modifying the word "Work" refers to "Work" that is unsatisfactory, faulty or deficient, or does not conform to, or comply with the Contract Documents, or does not meet the requirements of any inspection, referenced standard, test or approval referred to in the Contract Documents, or has been damaged prior to the time OWNER makes the final payment (unless responsibility for the protection thereof has been assumed by OWNER at Substantial Completion in accordance with paragraph 14.8 or 14.10).

Drawings - The drawings (plans) which depict the character, design, and scope of the Work to be performed and which have been prepared and/or approved by OWNER and are referred to in the Contract Documents.

Effective Date of the Agreement - The date indicated in the Agreement document upon which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed by OWNER.

Engineer- The OWNER - designated Brownsville P.U.B. in-house staff registered professional person, named as the OWNER's engineering representative for the Project. There is no outside independent engineering consultant anticipated to be retained by OWNER for this Project.

Field Order - A written order issued by OWNER which orders minor changes or interpretations in the Work in accordance with paragraph 9.5, but which does not involve a change

in the Contract Price or the Contract Time.

Furnish. To supply at the jobsite the material, equipment, etc., referred to. Installation is not required of the supplier by the specifications, but shall be arranged for by the General CONTRACTOR.

General Requirements - Sections _____ of the Specifications.

Laws and Regulations; Laws or Regulations - Federal and/or State Laws, rules, administrative agency regulations, local ordinances, local codes and/or court orders.

Notice of Award - The written notice by OWNER to the apparent successful bidder stating that upon compliance by the apparent successful bidder with the conditions precedent enumerated therein, within the time specified, OWNER will sign and deliver the Agreement.

Notice to Proceed - A written notice given by OWNER to CONTRACTOR fixing the date on which the Contract Time will commence to run and on which CONTRACTOR shall start to perform CONTRACTOR's obligations under the Contract Documents.

OWNER - The City of Brownsville, acting through its Public Utilities Board of the City of Brownsville, Texas and its authorized representatives.

Partial Utilization - Placing a portion of the Work in service for the benefit of the OWNER and for the purpose for which it is intended (or a related purpose) before reaching Substantial Completion for all the Work.

Project - The total construction of which the Work to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.

Provide. To furnish and install the material, equipment, etc. referred to, at the location shown or otherwise approved at the Project job-site.

Resident Project Representative - The authorized representative of OWNER who is assigned to periodically observe the site of the Project, or any part thereof, on behalf of OWNER.

Shop Drawings - All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by, or for CONTRACTOR, to illustrate some portion of the Work, and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by CONTRACTOR, to illustrate material or equipment for some portion of the Work.

Specifications - Those portions of the Contract Documents consisting of written technical descriptions for the design configuration and/or performance standard of materials, equipment, any specified construction systems, standards and workmanship, as applied to the Work and certain administrative details applicable thereto.

Standard Abbreviations. Wherever reference is made to standard specifications,

standards of quality or performance, as established by a recognized national authority, the reference may be by initials and acronyms as generally recognized throughout the industry.

Subcontractor - An individual, firm or corporation having a direct contract with CONTRACTOR, or with any other Subcontractor (subtier), for the performance of a part of the Work at the Project site.

Substantial Completion - (See generally paragraph 14.8) The Work (or a specified part thereof) has progressed to the point where, in the opinion of OWNER as evidenced by its definitive written and signed certificate of Substantial Completion, it is apparently sufficiently complete, in accordance with the Contract Documents, so that the Work (or specified part) can be utilized for the OWNER's purposes for which it is intended; or if there is no such certificate issued, when final payment is due in accordance with paragraph 14.13. The terms "Substantially Complete" and "Substantially Completed" as applied to any Work refer to the Substantial Completion thereof.

Supplementary Conditions - The part of the Contract Documents which amends or supplements these General Conditions.

Supplier - A manufacturer, fabricator, supplier, distributor, materialman or third-party vendor.

Underground Facilities - All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any outer encasements containing such facilities (vaults) which have been installed underground to furnish/transport any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other related data communications, cable television, sewage, storm drainage, traffic or other electronic control systems or potable water.

Unit Price Work - Work to be paid for on the basis of unit prices for OWNER estimated quantities.

Work - The entire completed construction or the various separately identifiable parts thereof, required to be furnished by the CONTRACTOR under the Contract Documents. Work is the result of performing services, furnishing labor and furnishing and incorporating materials and equipment into the construction, all as required by the Contract Documents.

Work Directive Change - A written directive to CONTRACTOR, issued on or after the Effective Date of the Agreement and signed by OWNER, ordering an addition, deletion or revision in the Work, or responding to differing or unforeseen physical conditions under which the Work is to be performed as provided in paragraph 4.2 or 4.3 or to emergencies under paragraph 6.22. A Work Directive Change may not change the Contract Price or the Contract Time, but is evidence that the parties expect that the change directed or documented by a Work Directive Change will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Time as provided in paragraph 10.2.

Working Day. A week day (Monday through Friday only, inclusive) in which weather conditions are such that Work can be performed in a normal manner. Weekends (Saturday,

Sunday) and holidays shall not be considered working days. This Contract is not a Working Day Contract.

Written Amendment - A written amendment of the Contract Documents, signed by OWNER and CONTRACTOR on or after the Effective Date of the Agreement and normally dealing with the non-engineering or non-technical (commercial terms, legal provisions, etc.), rather than strictly Work-related, aspects of the Contract Documents. Written Amendments are normally embodied in a Change Order once construction commences.

ARTICLE 2. PRELIMINARY MATTERS

Delivery of Bonds:

2.1 When CONTRACTOR delivers the executed Agreements to OWNER, CONTRACTOR shall also deliver to OWNER such Bonds as CONTRACTOR may be required to furnish in accordance with paragraph 5.1.

Copies of Documents:

2.2 OWNER shall furnish to CONTRACTOR up to five (5) copies (unless otherwise specified in the Supplementary Conditions) of the Contract Documents as are reasonably necessary for the execution of the Work. Additional copies will be furnished to CONTRACTOR, upon request, at the cost of reproduction reimbursable to OWNER.

Commencement of Contract Time; Notice to Proceed:

2.3 The Contract Time will commence to run on the date indicated in the Notice to Proceed. A Notice to Proceed may be given by Owner at any time after the Effective Date of the Agreement. The CONTRACTOR might not yet be actually performing Work after Contract Time commences.

Starting the Project:

2.4 CONTRACTOR is obligated to perform the Work on the date when the Contract Time commences to run, but no Work shall be done at the Project site prior to the date on which the Contract Time commences to run per the Notice to Proceed.

Before Starting Construction:

2.5 Before undertaking each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. CONTRACTOR shall promptly report in writing to OWNER any conflict, error or discrepancy which CONTRACTOR may discover and shall obtain a written interpretation or clarification from OWNER's Engineer before proceeding with any Work affected thereby, however CONTRACTOR shall not be liable to OWNER for failure to report any conflict, error or discrepancy in the Contract Documents, unless CONTRACTOR had actual knowledge thereof or should reasonably have known thereof pursuant to customary construction industry

standards.

2.6 Within ten (10) calendar days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), CONTRACTOR shall submit to OWNER for review:

2.6.1 an estimated Work Progress Schedule indicating the starting and completion dates of the various critical stages of the Work; and

a preliminary schedule of Shop Drawing submissions; and

2.6.2 a preliminary Schedule of Values for all of the Work, which will include quantities and prices of items aggregating the total Contract Price and will subdivide the Work into logical component parts in sufficient detail to serve as the basis for progress payments during construction. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work which will be automatically confirmed in writing by CONTRACTOR at the time of submission to OWNER.

2.7 By the tenth (10th) calendar day after award of the Contract by OWNER, CONTRACTOR shall deliver to OWNER original certificates (and any other evidence of insurance requested by OWNER) which CONTRACTOR is required to purchase and maintain in accordance with Article 5.

Preconstruction Conference:

2.8 After the Effective Date of the Agreement, but before CONTRACTOR starts the Work at the Project site, a mandatory conference attended by CONTRACTOR, OWNER and others as appropriate, will be held to discuss the Schedules referred to in paragraph 2.6, to discuss procedures for handling Shop Drawings and other submittals and for processing Applications for Payment; and to establish a working and pragmatic understanding among the parties as to the general progress and administration of the Work.

Finalizing Schedules:

2.9 At least ten (10) calendar days before submission of the first Application for Payment, a mandatory conference attended by CONTRACTOR, OWNER and others as appropriate, will be held to finalize the Schedules submitted in accordance with paragraph 2.6. The finalized Progress Schedule will be made acceptable to OWNER as providing an orderly progression of the Work to completion within the Contract Time, but such OWNER acceptance will neither impose on OWNER responsibility for the progress or scheduling of the Work, nor relieve CONTRACTOR from full responsibility therefore. The finalized Schedule of Shop Drawing submissions will be acceptable to OWNER's Engineer as providing a workable arrangement for processing the submissions for review. The finalized Schedule of Values will be made acceptable to OWNER's Engineer as to form and substance.

ARTICLE 3. CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

Intent:

3.1 The Contract Documents comprise the entire agreement between OWNER and CONTRACTOR concerning the Work. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the law of Cameron County, Texas.

3.2 It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any Work, materials or equipment that may reasonably be inferred from the Contract Documents as being required of CONTRACTOR to produce the OWNER'S intended result will be supplied by CONTRACTOR, whether or not specifically called for. When words which have a well-known technical or trade meaning are used to describe Work, materials or equipment, such words shall be interpreted in accordance with that meaning. Reference to standard specifications, manuals or codes of any technical society, organization or association, whether such reference be specific or by implication, shall mean the latest amended standard specification, manual, code or Laws or Regulations in effect at the time of opening of Bids (or, on the Effective Date of the Agreement, if there were no Bids), except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of OWNER, CONTRACTOR, or any of their consultants, agents or employees from those set forth in the Contract Documents. Clarifications and interpretations of the Contract Documents shall be issued by OWNER's Engineer in writing as provided in paragraph 9.4.

3.3 If, during the performance of the Work, CONTRACTOR finds a conflict, error or discrepancy in the Contract Documents, CONTRACTOR shall so report to OWNER's Engineer in writing immediately, and before proceeding with the Work affected thereby, and CONTRACTOR shall obtain a written interpretation or clarification from OWNER's Engineer, however, CONTRACTOR shall not be liable to OWNER for failure to report any conflict, error or discrepancy in the Contract Documents unless CONTRACTOR had actual knowledge thereof, or should reasonably have known thereof pursuant to customary construction industry standards.

Amending and Supplementing Contract Documents:

3.4 The Contract Documents may be amended to provide for additions, deletions and revisions in the Work or to modify the terms and conditions thereof in one or more of the following written ways:

3.4.1 a formal Written Amendment,

3.4.2 a Change Order (pursuant to paragraph 10.4), or

3.4.3 a Work Directive Change (pursuant to paragraph 10.1).

As indicated in paragraphs 11.2 and 12.1, Contract Price and Contract Time may only be changed by a Change Order or a Written Amendment.

3.5 In addition, the requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, in one or more of the following ways:

3.5.1 a Field Order (pursuant to paragraph 9.5),

3.5.2 OWNER Engineer's approval of a Shop Drawing or sample (pursuant to paragraphs 6.26 and 6.27), or

3.5.3 OWNER Engineer's written interpretation or clarification (pursuant to paragraph 9.4).

Reuse of Documents:

3.6 Neither CONTRACTOR nor any Subcontractor or Supplier, or other person or organization performing or furnishing any of the Work under a direct contract or Project involvement with OWNER, shall have or acquire any title to, or ownership rights in, any of the Drawings, Specifications or other Contract Documents (or copies of any thereof) prepared by or bearing the seal of OWNER's Engineer, and they shall not reuse any of them on extensions of the Project or any other project without written consent of OWNER and specific written verification or adaptation by OWNER's Engineer. All Drawings, Specifications or other Documents (or copies of any thereof) are upon completion of the Project to become the property of OWNER. Further use thereof without written consent of OWNER and OWNER'S Engineer is prohibited and solely at the risk of the user.

ARTICLE 4. AVAILABILITY OF LANDS: PHYSICAL CONDITIONS: REFERENCE POINTS

Availability of Lands:

4.1 OWNER shall furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way, licenses and easements for access thereto and such other lands which are specifically designated by OWNER for the use of CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by OWNER, unless otherwise provided in the Contract Documents. If CONTRACTOR believes that any delay in OWNER's furnishing of these lands, rights-of-way, licenses or easements entitles CONTRACTOR to an extension of the Contract Time, CONTRACTOR may make a claim therefore as provided in Article 12. CONTRACTOR shall provide at his sole cost and option for any and all additional lands and access thereto not specifically provided by OWNER that CONTRACTOR may perceive are required for staging, temporary construction facilities, or storage of materials and equipment.

4.2 Physical Condition:

4.2.1 Explorations and Reports: Reference is made to the Supplementary

Conditions for any identification of any reports of geotechnical explorations and tests of subsurface conditions at the Project site that may have been utilized by OWNER's Engineer in preparation of the Contract Documents. Any of these geotechnical Explorations and Reports are expressly not part of these Contract Documents. CONTRACTOR may not rely upon the accuracy of the technical data contained in any such reports, nor upon non-technical data, interpretations or opinions contained therein or for the completeness thereof for CONTRACTOR's purposes. Except as indicated in the immediately preceding sentence and in paragraph 4.2.6, CONTRACTOR shall have full responsibility with respect to exploring, testing and encountering any subsurface conditions at the Project site.

4.2.2 Existing Structures: Reference is made to the Supplementary Conditions for any identification of those Drawings of physical conditions in or relating to existing surface or subsurface structures (except Underground Facilities referred to in paragraph 4.3) which are at or contiguous to the Project site that have been utilized by OWNER's Engineer in preparation of the Contract Documents. CONTRACTOR may rely upon the accuracy of the technical data actually contained in such drawings, but not for the current conditions or completeness thereof for CONTRACTOR's purposes. Except as indicated in the immediately preceding sentence and in paragraph 4.2.6, CONTRACTOR shall have full responsibility with respect to current locating, verification, investigation of, and encountering physical conditions in or relating to such structures.

4.2.3. Report of Differing Conditions: If CONTRACTOR believes that:

4.2.3.1 any technical data on which CONTRACTOR is entitled to rely as provided in paragraphs 4.2.1 and 4.2.2 is inaccurate, or

4.2.3.2 any physical condition uncovered or revealed at the Project site differs materially from that indicated, reflected or referred to in the Contract Documents,

CONTRACTOR shall, promptly after becoming aware thereof and before performing any Work in connection therewith (except in an emergency as permitted by paragraph 6.22), notify OWNER's field representative and OWNER's Engineer in writing about the inaccuracy or difference.

4.2.4 OWNER's Review: OWNER's Engineer will promptly review the pertinent conditions, determine the necessity of either CONTRACTOR or OWNER obtaining additional physical or geotechnical explorations or tests with respect thereto, and advise CONTRACTOR in writing of the findings and conclusions.

4.2.5 Possible Document Change: If OWNER's Engineer concludes that there is a material error in the Contract Documents, or that because of newly discovered, latent physical conditions, a change in the Contract Documents is required, a Work Directive Change or a Change Order may be issued as provided in Article 10 to reflect and document the consequences of the inaccuracy or difference.

4.2.6 Possible Price and Time Adjustments: In each such case, an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, or any combination thereof, may be allowable to the extent that they are attributable to any such inaccuracy or difference. If OWNER and CONTRACTOR are unable to agree as to the amount

or length thereof, a CONTRACTOR claim may be made therefore as provided in Articles 11 and 12. All increases or decreases in the Contract Price shall be governed by all State and local statutes, codes, laws, ordinances, rules and regulations governing public competitive bidding and Change Orders.

Physical Conditions

4.3 Underground Facilities:

4.3.1 Shown or Indicated: The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Project site is only based on existing available information and data furnished to OWNER by the owners of such Underground Facilities, (utilities, pipeline companies, railroads, etc.) or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

4.3.1.1 OWNER shall not be responsible for the actual current conditions, accuracy or completeness of any such third-party information or data; and,

4.3.1.2 CONTRACTOR shall have full responsibility for reviewing and checking all such current information and data; for locating all current Underground Facilities shown or indicated in the Contract Documents, for coordination of the Work with the owners of such Underground Facilities during construction; for the safety and protection thereof as provided in paragraph 6.20 and; paying for the repair of any damage thereto resulting from the Work; the cost of all of which will be mutually considered between OWNER and CONTRACTOR as having been included in the CONTRACTOR'S original Contract Price.

4.3.2 Not Shown or Indicated: If an Underground Facility is uncovered or revealed at or contiguous to the Project site which was not shown or indicated in the Contract Documents, and which CONTRACTOR could not reasonably have been expected to be aware of under customary construction industry standards, CONTRACTOR shall, promptly after becoming aware thereof and before performing any Work affected thereby (except in an emergency as permitted by paragraph 6.22), identify the owner of such Underground Facility and give written notice thereof to that owner and to OWNER's Engineer. OWNER's Engineer will promptly review the Underground Facility to determine the extent to which the Contract Documents should be modified to reflect and document the consequences of the existence of the Underground Facility, and the Contract Documents may be amended or supplemented to the extent necessary. During such time, CONTRACTOR shall be responsible for the safety and protection of such Underground Facility as provided in paragraph 6.20. CONTRACTOR may be allowed an increase in the Contract Price or an extension of the Contract Time, or both, to the extent that they are attributable to the existence of any Underground Facility that was not shown or indicated in the Contract Documents, and which CONTRACTOR could not reasonably have been expected to be aware of pursuant to customary construction industry standards. If the parties are unable to agree as to the amount or length thereof, CONTRACTOR may make a claim therefore as provided in Articles 11 and 12. All increases or decreases in the Contract Price shall be governed by all State and local statutes, codes, laws, ordinances, rules and regulations governing public competitive bidding and Change Orders.

Reference Points:

4.4. OWNER shall provide CONTRACTOR with any reasonably current and existing engineering surveys to assist CONTRACTOR to establish reference points for construction, which in OWNER Engineer's judgment are adequate to enable a skilled CONTRACTOR to proceed with the Work pursuant to customary construction industry standards. CONTRACTOR shall be responsible for laying out the Work (unless otherwise specifically specified by OWNER in the General Requirements), and shall protect and preserve the established reference points and shall make no changes or relocations without the prior written approval of OWNER. CONTRACTOR shall report to OWNER's Engineer whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations, and CONTRACTOR shall be responsible for the accurate replacement or relocation of such reference points by professionally qualified personnel.

ARTICLE 5. BONDS AND INSURANCE

Performance and Payment Bonds:

For a Contract in excess of \$100,000.00, a Performance Bond shall be executed in the full amount of the Contract conditioned upon the faithful performance of the Work in accordance with the Plans, Specifications and Contract Documents. Said Bond shall be solely for the protection of the OWNER.

For a Contract in excess of \$50,000.00, a Payment Bond shall be executed in the full amount of the Contract, solely for the primary protection of all proper claimants against the surety for payment in supplying labor and material in the prosecution of the Work provided for in the Contract, for the use of each such claimant timely perfecting a proper claim against surety.

5.1 CONTRACTOR shall furnish Performance and Payment Bonds, each in an amount at least equal to the Contract Price as security for the faithful performance of the Work and payment of all CONTRACTOR's labor, materials and supply obligations under the Contract Documents. **These bonds shall remain in effect at least until one year after the date when final payment becomes due**, except as otherwise provided by Law or Regulation or by the Contract Documents. CONTRACTOR shall also furnish any such other Bonds as may be required by the Supplementary Conditions. All Bonds shall be in the forms prescribed by Law or Regulation or by the Contract Documents and be executed by such sureties as are authorized to do business in the State of Texas. All Bonds signed by an agent must be accompanied by a certified copy of the authority to act on behalf of the surety.

5.2 If the surety on any Bond furnished by CONTRACTOR is declared a bankrupt or becomes insolvent, or its right to do business is terminated in Texas or it ceases to meet the requirements of paragraph 5.1, CONTRACTOR shall within five (5) calendar days thereafter substitute another Bond or surety, both of which must be acceptable to OWNER.

Contractor's Liability Insurance:

5.3 CONTRACTOR shall purchase and maintain such commercial general liability and

other insurance coverages as are appropriate for the Work being performed and furnished, and as will provide protection from claims set forth below which may arise out of, or result from, CONTRACTOR's performance and furnishing of the Work and CONTRACTOR's other obligations under the Contract Documents; whether it is to be performed or furnished by CONTRACTOR, by any Subcontractor, by anyone directly or indirectly employed by any of them to perform or furnish any of the Work; or by anyone for whose acts and/or omissions any of them may be liable:

5.3.1 Claims under workers' compensation, disability benefits and other similar employee benefit acts. This is a Texas public works Contract and rejection of the worker's compensation act, and thereby substituting a CONTRACTOR'S self-insurance reserve, is specifically disallowed.

5.3.2 Claims for damages because of bodily injury, occupational sickness or disease, or death of CONTRACTOR's employees traditionally covered by employer's liability insurance;

5.3.3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than CONTRACTOR's employees;

5.3.4 Claims for damages insured by personal injury liability coverage which are sustained (a) by any person as a result of an offense directly or indirectly related to the employment of such person by CONTRACTOR; or (b) by any other person for any other reason;

5.3.5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting there from;

5.3.6 Claims arising out of operation of Laws or Regulations for damages because of bodily injury or death of any person or for damage to property; and

5.3.7 Claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any owned or hired motor vehicle.

The various insurance coverages required by these paragraphs 5.3 and 5.6 shall include the specific type coverage and be written for not less than the limits of liability and coverage amounts provided herein below or in the Supplementary Conditions, or required by law, whichever is greater. The commercial general liability insurance shall include completed operations insurance. All of the policies of insurance so required to be purchased and maintained (or the certificates or other evidence thereof) shall be of an "occurrence"-type, when applicable, and shall contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least (30) thirty days prior written notice has been given to OWNER by certified mail. All such insurance shall remain in effect until final payment and at all times thereafter when CONTRACTOR may be correcting, removing or replacing defective Work in accordance with paragraph 13.12. In addition, CONTRACTOR shall maintain such completed operations insurance for at least two (2) years after final payment and furnish OWNER with evidence of continuation of such insurance at final payment and one year thereafter. All insurance coverage

furnished under the Contract Documents shall include the City of Brownsville and BPUB as OWNER, and their respective public officials, officers, board members, and employees, as named additional insureds and hereinafter known as "additional insureds."

Contractual Liability Insurance:

5.4 The Commercial general liability insurance required by paragraph 5.3 will include contractual liability insurance applicable to CONTRACTOR's INDEMNITY obligations under paragraphs 6.32 and 6.33.

5.5 Specific Coverages of Insurance Required by Owner:

5.5.1 Workmen's Compensation and Employer's Liability. This insurance shall protect the laborer, and insure the CONTRACTOR, and insulate the additional insureds, against all claims under applicable Texas workmen's compensation laws, pursuant to Section 5.3.1. The additional insureds shall also be protected under an Employer's Liability policy against claims for injury, disease, or death of employees which, for any reason, may not fall within the provisions of a workmen's compensation law. This Employer's Liability policy shall include an "all states" endorsement.

5.5.2. **Mandatory TWCC Rule 28 TAC Sect. 110.110 Language**

(A) **Definitions:**

Certificate of coverage ("certificate") - A copy of a certificate of insurance, a certificate of authority to self-insure issued by the Commission, or a coverage agreement (TWCC-81, TWCC- 82, TWCC-83, or TWCC-84), showing statutory workers' compensation insurance coverage for the person's or entity's (CONTRACTOR's) employees providing services on a Project, for the duration of the Project.

"Duration of the Project" - includes the time from the beginning of the Work on the Project until the CONTRACTOR's/person's Work on the Project has been completed and accepted by the OWNER.

"Persons providing services on the Project" ("subcontractor" in § 406.096) - includes all persons or entities performing all or part of the services the CONTRACTOR has undertaken to perform on the Project, regardless of whether that person contracted directly with the CONTRACTOR and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractors, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the Project.

"Services" - include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a Project.

- (B) The CONTRACTOR shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, § 401.011(44) for all employees of the CONTRACTOR providing services on the Project, for the duration of the Project.
- (C) The CONTRACTOR must provide a certificate of coverage to the OWNER prior to being awarded the Contract.
- (D) If the coverage period shown on the CONTRACTOR'S current certificate of coverage ends during the duration of the Project, the CONTRACTOR must, prior to the end of the coverage period, file a new certificate of coverage with the OWNER showing that coverage has been extended.
- (E) The CONTRACTOR shall obtain from each person providing services on a Project, and provide to the OWNER:
 - (1) a certificate of coverage, prior to that person beginning Work on the Project, so the OWNER will have on file certificates of coverage showing coverage for all persons providing services on the Project; and
 - (2) no later than seven (7) calendar days after receipt by the CONTRACTOR, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the Project.
- (F) The CONTRACTOR shall retain all required certificates of coverage for the duration of the Project and for three (3) years thereafter.
- (G) The CONTRACTOR shall notify the OWNER in writing by certified mail or personal delivery, within ten (10) calendar days after the CONTRACTOR knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the Project.
- (H) The CONTRACTOR shall post on each Project site a notice, in the text, form and manner prescribed by the Texas Workers' Compensation Commission, informing all persons providing services on the Project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.
- (I) The CONTRACTOR shall contractually require each person with whom it contracts to provide services on a Project, to:
 - (1) provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, § 401.011(44) for all of its employees providing services on the Project, for the duration of the Project;

- (2) provide to the CONTRACTOR, prior to that person beginning Work on the Project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the Project, for the duration of the Project;
 - (3) provide the CONTRACTOR, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the Project;
 - (4) obtain from each other person with whom it contracts, and provide to the CONTRACTOR:
 - (a) a certificate of coverage, prior to the other person beginning Work on the Project; and
 - (b) a new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the Project;
 - (5) retain all required certificates of coverage on file for the duration of the Project and for three (3) years thereafter;
 - (6) notify the OWNER in writing by certified mail or personal delivery, within ten (10) calendar days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the Project; and
 - (7) contractually require each person with whom it contracts, to perform as required by clauses (I)-(1-7) of this subparagraph, with the certificates of coverage to be provided to the person for whom they are providing services.
- (J) By signing this Contract or providing or causing to be provided a certificate of coverage, the CONTRACTOR is representing to the OWNER that all employees of the CONTRACTOR who will provide services on the Project will be covered by workers' compensation coverage for the duration of the Project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier, or, in the case of a self-insured, with the Commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the CONTRACTOR to administrative penalties, criminal penalties, civil penalties, or other civil actions.
- (K) The CONTRACTOR's failure to comply with any of these provisions is a breach of Contract by the CONTRACTOR which entitles the OWNER to declare the

Contract void if the CONTRACTOR does not remedy the breach within ten (10) calendar days after receipt of notice of breach from the OWNER.

The liability limits shall not be less than:

| | |
|------------------------|------------------------------|
| Workmen's compensation | Texas Statutory Limits |
| Employer's liability | \$100,000.00 each occurrence |

5.5.3 Comprehensive Business Automobile Liability. This insurance shall be written in comprehensive business form and shall protect the CONTRACTOR and the additional insureds against all claims described under Section 5.3.6. of the General Conditions of the Contract Documents and arising from the use of motor vehicles, and shall cover, on or off the Project site, all motor vehicles licensed for highway use, whether they are owned, non-owned, or hired.

The liability limits shall not be less than:

| | |
|--------------------------------------|---|
| Bodily Injury and Property Damage | \$500,000.00 combined single limit each occurrence |
|--------------------------------------|---|

5.5.4 Commercial General Liability. This insurance shall be an "occurrence" type policy written in commercial form and shall protect the CONTRACTOR and the additional insureds against all claims described in Sections 5.3.2., 5.3.3., 5.3.4., and 5.3.5. of the General Conditions of the Contract Documents arising out of any intentional or negligent act and/or omission of the CONTRACTOR or his agents, employees, or subcontractors. This policy shall also include protection against claims insured by usual personal injury liability coverage.

The liability limits shall not be less than:

| | |
|--|---|
| Personal Injury and property damage | \$1,000,000.00 combined single limit each occurrence and and \$1,000,000.00 aggregate |
|--|---|

If the CONTRACTOR'S Work, or Work under his direction, requires blasting, explosive conditions, or underground operations, the commercial general liability coverage shall contain no exclusion relative to blasting, exploding, collapse of structures, or damage to underground property.

5.5.5 Excess Umbrella Liability Policy. This insurance shall protect the CONTRACTOR and the additional insureds against all claims in excess of the limits provided under the employer's liability, comprehensive business automobile liability, and commercial general liability policies. The liability limits of the umbrella policy shall not be less than \$2,000,000.00. The policy shall be an "occurrence" type policy.

5.5.6 Transportation Insurance. This insurance shall be of the "all risks" type and shall protect the CONTRACTOR and the OWNER from all insurable risks of physical loss or damage to equipment and materials in transit to the Project jobsite and until the OWNER receives

the equipment and materials at the Project jobsite. The coverage amount shall be not less than one-half of the full amount of the total Contract.

Transportation insurance shall provide for losses to be payable to the CONTRACTOR and the OWNER as their interests may appear.

5.5.7 All policies required under Section 5.5 herein shall contain a "cross liability" or "severability of interest" clause or endorsement. Notwithstanding any other provision of these policies, the insurance afforded shall apply separately to each insured, named insured, or additional insured with respect to any claim, suit, or judgment made or brought by or for any other insured, named insured, or additional insured, as though a separate policy had been issued to each, except the insurer's liability shall not be increased beyond the amount or amounts for which the insurer would have been liable had only one insured been named.

5.5.8 CONTRACTOR shall require each of his Subcontractors to procure and maintain during the life of his subcontract, Subcontractor's Commercial General Liability and Property Damage Insurance of the type specified in subparagraph 5.5.1, 5.5.2, 5.5.3, 5.5.4 and paragraph 5.6 hereof, in amounts approved by OWNER.

5.5.9 The insurance required under subparagraphs 5.5.2, 5.5.3, 5.5.4 and paragraph 5.6 hereof shall provide adequate protection for CONTRACTOR and his Subcontractors respectively against damage claims which may arise from operations under this Contract, whether such operation is by the insured or by anyone directly or indirectly employed by him, and also, against any special hazards which may be encountered in the performance of this Contract.

5.5.10 CONTRACTOR shall not commence any Work under this Contract until he has obtained all the insurance coverage required under this Article and such insurance has been approved by OWNER; nor shall CONTRACTOR allow any Subcontractor to commence Work on this Contract until the insurance required by the Subcontractor has been so obtained and approved.

Property Insurance:

5.6 Unless otherwise provided in the Supplementary Conditions, CONTRACTOR shall purchase and maintain property insurance upon the Work at the Project site to the full insurable value thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions, established by current customary construction industry standards given the type of Work and value thereof, or as may be required by Laws and Regulations). This insurance shall include the interests of OWNER, CONTRACTOR, and Subcontractors, in the Work, all of whom shall be listed as insured or additional insured parties, which shall insure against the perils of fire and extended coverage and shall include "all risk" insurance for physical loss and damage including theft, vandalism and malicious mischief, collapse and water damage, and such other perils as may be provided in the Supplementary Conditions; and shall include damages, losses and expenses arising out of or resulting from any insured loss or cost incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers, architects, attorneys and other professionals). If not covered under the "all risk" insurance or otherwise provided in the Supplementary Conditions, CONTRACTOR shall purchase and

maintain similar property insurance on portions of the Work stored on and off the site or in transit when such portions of the Work are to be included in an Application for Payment. The policies of insurance required to be purchased and maintained by CONTRACTOR in accordance with this paragraph shall be of an "occurrence"-type, when applicable, and contain a provision that the coverage afforded will not be canceled or materially changed until at least (30) thirty days prior written notice has been given to OWNER by certified mail.

5.6.1 Property Insurance Coverage. This insurance shall protect CONTRACTOR and the additional insureds against all claims described in Section 5.6 and shall provide the following minimum amounts:

Property Insurance Coverage: Provide Full Contract Amount or
\$100,000.00 Minimum, whichever is greater.

Waiver of Rights:

5.7 Waiver

5.7.1 CONTRACTOR waives all rights against OWNER, unless OWNER was solely negligent, for all losses and damages caused by any of the perils covered by the policies of insurance provided in response to paragraph 5.6 and any other property insurance applicable to the Work, and also waives all such rights against all other parties named as additional insureds in such policies for losses and damages so caused. As required by paragraph 6.12, each subcontract between CONTRACTOR and a Subcontractor will contain similar waiver provisions by the Subcontractor in favor of OWNER, and all other parties named as additional insureds.

5.7.2 CONTRACTOR intends that any policies provided in response to paragraph 5.6 shall protect all of the parties insured and provide primary coverage for all losses and damages caused by the perils covered thereby. Accordingly, all such policies shall contain provisions to the effect that in the event of payment of any loss or damage, the insurer will have no rights of recovery against any of the parties named as insured or additional insured, and if the insurers require separate waiver forms to be signed by any Subcontractor, CONTRACTOR will obtain the same.

Acceptance of Insurance:

5.8 If OWNER has any objection to the coverage afforded by or other provisions of the insurance required to be purchased and maintained by CONTRACTOR in accordance with paragraphs 5.3 and 5.4 on the basis of the coverages not complying with the Contract Documents, OWNER will attempt to notify CONTRACTOR in writing thereof within ten (10) calendar days of the date of delivery of such certificates to OWNER in accordance with paragraph 2.7. CONTRACTOR shall provide to the OWNER such additional information regarding the insurance provided by CONTRACTOR as the OWNER may reasonably request. Failure on the part of the OWNER or its agents to detect an insurance deficiency as compared to the insurance requirements of the Contract shall not constitute a waiver by the OWNER of the insurance requirements which CONTRACTOR and/or Subcontractor must contractually meet to be in compliance herewith.

Partial Utilization - Property Insurance:

5.9 If OWNER finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, such use or occupancy may be accomplished in accordance with paragraph 14.10. CONTRACTOR shall have the obligation to inform the insurers of OWNER's intent to so occupy or use a portion or portions of the Work. The insurers of CONTRACTOR providing the property insurance shall consent to such use or occupancy by endorsement on the policy or policies, but the property insurance shall not be canceled or lapse on account of any such partial use or occupancy by OWNER.

ARTICLE 6. CONTRACTOR'S RESPONSIBILITIES

Supervision and Superintendence:

6.1 CONTRACTOR shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents and customary construction industry standards. CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences, procedures, safety and quality control of construction, but CONTRACTOR shall not be responsible for any negligence of others in any design or selection of a specific means, method, technique, sequence or procedure of construction which is indicated in and required by the Contract Documents. CONTRACTOR shall be solely responsible to guarantee that the finished Work complies accurately with the Contract Documents and CONTRACTOR shall not rely upon the OWNER's construction observation to accomplish same.

6.2 CONTRACTOR shall keep on the Work at all times during its progress a competent resident superintendent, who shall not be replaced without written notice to OWNER and ENGINEER, except under extraordinary circumstances. The superintendent will be CONTRACTOR's representative at the site and shall have authority to act on behalf of CONTRACTOR. All communications given to the superintendent shall be as binding as if given to CONTRACTOR.

Labor, Materials and Equipment:

6.3 CONTRACTOR shall provide competent, suitably qualified personnel to survey and lay out the Work, oversee quality control, and perform construction of the Work as required by the Contract Documents. CONTRACTOR shall at all times maintain good discipline and order at the Project site. Except in connection with the safety or protection of persons or the Work or property at the Project site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the Project site shall be performed during regular daily working hours (generally eight (8) hours between 7:00 A. M. and 6:00 P.M.) as may be specifically set forth by the OWNER, and CONTRACTOR will not permit overtime work or the performance of Work on Saturday, Sunday or any legal holiday without OWNER's advanced written consent. Preference employment shall be given to resident citizens of the Cameron County, Texas area where such persons are available and fully qualified to perform the Work to which the employment relates.

6.3.1 CONTRACTOR shall acquaint himself with all matters and conditions

concerning the Project site and any existing construction. Any practical criticism or exception regarding any feature of the Work must be presented in writing to OWNER at least ten (10) calendar days prior to bidding. After a Contract agreement to perform the Work has been signed by CONTRACTOR, it shall then be his responsibility to provide satisfactory Work that will meet the full intent of the Contract Documents. CONTRACTOR shall then pursue this Work with the other trades so that all phases of the Work may be properly coordinated without delays or damage to any parts of the Work.

6.4 Unless otherwise specified in the General Requirements, CONTRACTOR shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up and completion of the Work.

6.4.1 CONTRACTOR shall provide and maintain suitable weather-tight, washable, sanitary toilet facilities for all workmen for the entire construction period. CONTRACTOR shall comply with all requirements of applicable health authorities. When toilet facilities are no longer required, promptly remove from the Project site, disinfect and clean the area as required. CONTRACTOR shall keep toilet facility swept and supplied with toilet tissue at all times.

6.5 All materials and equipment shall be of good quality and new, except as otherwise specifically provided in the Contract Documents. Sometimes a project specification may require salvage and reinstallation of OWNER's recently acquired machinery and equipment pre-existing at a project site. If required by OWNER's Engineer, CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment procured for the Project. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable Supplier, except as otherwise provided in the Contract Documents; but no provision of any such Supplier instructions will be effective to assign to OWNER any duty or authority to supervise or direct the furnishing or performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of paragraph 9.15 or 9.16.

6.6 CONTRACTOR shall notify OWNER in writing of any conflict between the manufacturer's directions and the Contract Documents and shall not perform any Work on any item until such conflict has been resolved. Upon award of the Contract, CONTRACTOR will secure a certificate of exemption from the Texas State Comptroller to preserve the CITY's exemption from Limited Sales, Excise and Use Tax in an amount representing that part of the total Contract price representative of the value of tangible personal property to be physically incorporated into the Project realty. The certificate of exemption must contain a statement to the effect that such materials or property have been, or will be, utilized in the performance of the Contract to the full extent of the amount for which a certificate of exemption is requested.

6.6.1 Except where otherwise specified, CONTRACTOR shall, at all times, provide protection against weather, so as to maintain all Work, materials and fixtures free from injury or damages. All new Work likely to be damaged shall be covered or otherwise protected as required.

6.6.2 While it is appreciated that CONTRACTOR has to maintain continuous construction operations and sequences, it should be understood that the OWNER's electric distribution system must function during the Contract period with a minimum of inconvenience to the electric users and the OWNER's water distribution system must function during the Contract period with a minimum of inconvenience to the water users, and that the OWNER'S sanitary sewer collection and treatment system must function during the Contract period on a 24 hour daily basis throughout the year to meet the requirements of the Texas Commission on Environmental Quality (TCEQ). It is therefore incumbent on CONTRACTOR to plan ahead on the basis of integrating his construction sequencing program as far as possible into the normal operating sequence of the utility systems. No departure from the normal operating sequence of the systems will be allowed, except with the specific advanced written agreement of OWNER.

6.6.3 CONTRACTOR shall notify OWNER a minimum of 48 hours in advance of any Work which will be tied into the existing utility systems. Method of tie-in shall be submitted to OWNER for OWNER's approval prior to any Work being performed. At no time shall contaminated water that has not been disinfected be allowed to seep into the existing waterlines, and at no time shall sewage be allowed to flow into surrounding areas. Connections will be made during times of daily minimum sewage flows, if required by Project.

6.6.4 CONTRACTOR shall coordinate his Work with that of other contractors whose work may occur at a conflicting time and location. The coordination shall be such that CONTRACTOR's Work will be maintained at a normal rate.

6.6.5 All Work that is performed on, across or along International Boundary and Water Control Commission levees must conform to all I.B. & W.C.C. requirements. All Work performed on, across or along Brownsville Irrigation and Drainage District or the Cameron County Water Control and Improvement District No.16 canals or ditches must conform to all District requirements.

6.6.6 Satisfactory access or detour roads shall be provided where necessary due to construction.

6.6.7 If required by the Bid or Project Specifications, or by law for the type of excavation construction being performed, CONTRACTOR and his Registered Professional Engineer shall develop the Trench Safety System Plan and shall provide any necessary shoring, bracing and/or sheeting pursuant to Section 756.022 of the Texas Health and Safety Code and OSHA 29 C.F.R. 1926, Subpart P, Vol. 54 No. 209 of the Federal Register, October 31, 1989, pp. 45959-45991, and, as provided in Section 11 - "Trench Excavation and Shoring Safety Plan" of the Standard Specifications.

6.6.8 CONTRACTOR shall provide adequate barricades and warning devices in conformance with the guidelines for Traffic Control as established by the Texas Department of Transportation (TDOT) in the Texas Manual on Uniform Traffic Control Devices (TMUTCD). This provision shall be subsidiary to the rest of the Work in this Contract, and shall not constitute a separate pay item.

6.6.9 CONTRACTOR shall provide the services of a technical representative for CONTRACTOR furnished equipment, for a sufficient period of time to assist in start-up and initial adjustment of all equipment, and to train, advise and consult with OWNER's operating personnel, if appropriate for the Project.

6.6.10 All items of equipment required for this Contract shall be bid to provide as part of the initial price, any literature explaining "Operation and Maintenance" of that item of equipment, if required by Project. If a manufacturer does not print such a standard O&M manual, CONTRACTOR shall provide OWNER with a customized manual approved, in writing by the manufacturer.

Adjusting Progress Schedule:

6.7 CONTRACTOR shall submit to OWNER's Engineer for acceptance (to the extent indicated in paragraph 2.9) adjustments in the Progress Schedule to reflect the impact thereon of new developments; these will conform generally to the Progress Schedule then in effect and additionally will comply with any provisions of the General Requirements applicable thereto.

Substitutes or "Or-Equal" Items:

6.8

6.8.1 Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item, or the name of a particular Supplier, the naming of the item is intended to establish the type, function, performance standard and quality required. In some instances, the OWNER is legally allowed to "sole source" a specific material or component of equipment when its design and/or performance is required to integrate with a larger system that will remain in place. Unless the material or equipment name is followed by words indicating that no substitution is permitted, materials or equipment of other Suppliers generally may be accepted by OWNER's Engineer, if sufficient information is submitted by CONTRACTOR to allow OWNER's Engineer to determine that the material or equipment proposed is equivalent, or equal to, that named by OWNER. The procedure for review by OWNER's Engineer will include the following as supplemented in the General Requirements. Requests for review of substitute items of material and equipment will not be accepted by OWNER's Engineer from anyone other than CONTRACTOR. If CONTRACTOR wishes to furnish or use a substitute item of material or equipment, CONTRACTOR shall make written application to OWNER's Engineer for acceptance thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as that specified. The application will state that the evaluation and acceptance of the proposed substitute will not prejudice CONTRACTOR's achievement of Substantial Completion on time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with OWNER for any other work on the Project by other contractors) to adapt the design to the proposed substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified will be

identified in the application and available maintenance, repair and replacement parts and service will be indicated. The application will also contain an itemized estimate of all costs or savings that will result directly or indirectly from acceptance of such substitute, including costs of redesign and potential claims of other contractors affected by the resulting change, all of which shall be considered by OWNER's Engineer in evaluating the proposed substitute. OWNER's Engineer may require CONTRACTOR to furnish at CONTRACTOR's expense additional data about the proposed substitute.

6.8.2 If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, CONTRACTOR may generally furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to OWNER's Engineer, if CONTRACTOR submits sufficient information to allow OWNER's Engineer to determine that the substitute proposed can be legally utilized by CONTRACTOR (e.g. patented or licensed processes) and is equivalent to that indicated or required by the Contract Documents. OWNER may have similar legal rights to "sole source" as indicated above in paragraph 6.8.1. The procedure for review by OWNER's Engineer will be similar to that provided in paragraph 6.8.1 above, as applied by OWNER's Engineer and as may be supplemented in the General Requirements.

6.8.3 OWNER's Engineer will be allowed a reasonable time within which to evaluate each proposed substitute. OWNER's Engineer will be the sole judge of acceptability, and no substitute will be ordered, installed or utilized without OWNER's Engineer prior written acceptance which will be evidenced by either a Change Order or an approved Shop Drawing. OWNER may require CONTRACTOR to furnish at CONTRACTOR's expense a special performance guaranty or other form of surety with respect to any substitute. OWNER's Engineer will record time required by OWNER's Engineer and any OWNER'S Engineer outside technical consultants in evaluating substitutions proposed by CONTRACTOR and in making changes in the Contract Documents occasioned thereby. Whether or not OWNER's Engineer accepts a proposed substitute, CONTRACTOR shall reimburse OWNER for the charges of OWNER's Engineer and any consultants for evaluating each proposed substitute.

Concerning Subcontractors, Suppliers and Others:

6.9

6.9.1 CONTRACTOR shall not employ any Subcontractor, Supplier or other person or organization (including those acceptable to OWNER as indicated in paragraph 6.8.2), whether initially or as a substitute, against whom OWNER may have reasonable objection. CONTRACTOR shall not be required to employ any Subcontractor, Supplier or other person or organization to furnish or perform any of the Work against whom CONTRACTOR has reasonable objection.

6.9.2 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers or other persons or organizations (including those who are to furnish the principal items of material and equipment), to be submitted to OWNER in advance of a specified date prior to the Effective Date of the Agreement for acceptance by OWNER, and if CONTRACTOR has submitted a list thereof in accordance with the Supplementary Conditions, OWNER's acceptance (either in writing or by failing to make written objection thereto by the date

indicated for acceptance or objection in the bidding documents or the Contractor Documents) of any such Subcontractor, Supplier or other person or organization so identified may be revoked by OWNER on the basis of reasonable objection after due investigation, in which case CONTRACTOR shall submit an acceptable substitute. The Contract Price may be increased by the difference in the cost occasioned by such substitution and an appropriate Change Order may be issued or Written Amendment signed. All increases or decreases in the Contract Price shall be governed by all State and local statutes, codes, laws, ordinances, rules and regulations governing public competitive bidding and Change Orders. No acceptance by OWNER of any such Subcontractor, Supplier or other person or organization shall constitute a waiver of any right of OWNER to reject any defective or noncompliant Work.

6.10 CONTRACTOR shall be fully responsible to OWNER for all acts and/or omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct contract or indirect relationship with CONTRACTOR, just as CONTRACTOR is responsible to the OWNER for CONTRACTOR's own acts and/or omissions. Nothing in the Contract Documents shall create any contractual relationship between OWNER and any such Subcontractor, subtier subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of OWNER to pay or to supervise the payment of any moneys due any such Subcontractor, subtier subcontractor, Supplier or other person or organization, except as may otherwise be required by Laws and Regulations.

6.11 The divisions and sections of the Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

6.12 All Work performed for CONTRACTOR by a Subcontractor will be pursuant to an appropriate written agreement between CONTRACTOR and the Subcontractor, which specifically binds the Subcontractor through appropriate "flow down" provisions, to the applicable terms and conditions of the Contract Documents for the benefit of OWNER, and contains waiver provisions as required by paragraph 5.7.

Patent Fees and Royalties:

6.13 CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product or device, which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product or device is specified in the Contract Documents for use in the performance of the Work, and if to the actual knowledge of OWNER its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by OWNER in the Contract Documents. **CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS OWNER AND ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY OWNER AGAINST ANY CLAIMS, DAMAGES, LOSSES AND EXPENSES (INCLUDING ATTORNEYS' FEES AND COURT COSTS) ARISING OUT OF ANY INFRINGEMENT OF PATENT RIGHTS OR COPYRIGHTS INCIDENT TO THE USE IN THE PERFORMANCE OF THE WORK OR RESULTING FROM THE INCORPORATION IN THE WORK OF ANY INVENTION, DESIGN, PROCESS, PRODUCT OR DEVICE NOT SPECIFIED IN THE**

CONTRACT DOCUMENTS, AND SHALL DEFEND ALL SUCH CLAIMS IN CONNECTION WITH ANY ALLEGED INFRINGEMENT OF SUCH RIGHTS. IT IS THE EXPRESSED INTENTION OF THE PARTIES HERETO THAT THE INDEMNITY PROVIDED FOR IN THIS PARAGRAPH IS INDEMNITY BY CONTRACTOR TO INDEMNIFY AND PROTECT OWNER FROM THE CONSEQUENCES OF OWNER'S OWN NEGLIGENCE WHERE THAT NEGLIGENCE ON THE PART OF THE OWNER IS A CONCURRING CAUSE OF THE CLAIMS, DAMAGES, LOSSES, AND EXPENSES REFERENCED ABOVE. FURTHERMORE, THE INDEMNITY PROVIDED FOR IN THIS PARAGRAPH SHALL HAVE NO APPLICATION TO ANY CLAIM, DAMAGE, LOSS AND EXPENSE REFERENCED ABOVE WHERE SUCH RESULTS FROM THE SOLE NEGLIGENCE OF THE OWNER INDEPENDENT OF THE FAULT OF ANY OTHER PERSON OR ENTITY.

Permits:

6.14 Unless otherwise provided in the Supplementary Conditions, CONTRACTOR shall obtain and pay for all construction permits and licenses. OWNER shall assist CONTRACTOR, when necessary, in obtaining such permits and licenses. CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of opening of Bids. CONTRACTOR shall pay all charges of utility owners for connections to the Work, and OWNER shall pay all charges of such utility owners for capital costs related thereto such as impact fees or plant investment fees, if any.

6.14.1 Fires shall not be built on the Project premises except by the express consent of OWNER and Brownsville City Fire Marshall.

Laws and Regulations:

6.15

6.15.1 CONTRACTOR shall give all notices and comply with all Laws and Regulations applicable to furnishing and performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, OWNER shall not be responsible for monitoring CONTRACTOR's compliance with any Laws or Regulations.

6.15.2 If CONTRACTOR has actual knowledge that the Specifications or Drawings are at variance with any Laws or Regulations, CONTRACTOR shall give OWNER's Engineer prompt written notice thereof, and any necessary changes will be authorized by OWNER by one of the methods indicated in paragraph 3.4. If CONTRACTOR performs any Work knowing, or having reason to know, that it is contrary to such Laws or Regulations, and without such notice to OWNER's Engineer, CONTRACTOR shall bear all costs arising there from; however, it shall not be CONTRACTOR's primary responsibility to make certain that the Specifications and Drawings are in accordance with such Laws and Regulations.

Taxes:

6.16 "Pursuant to 34 Texas Administrative Code 3.291, in order for the OWNER to

continue to benefit from its status as a State Sales and Use Tax Exempt Organization, after August 14, 1991 construction contracts must be awarded on a "separated contract" basis. A "separated contract" is one that distinguishes the value of the tangible personal property (materials such as pipe, bricks, lumber, concrete, paint, etc.) to be physically incorporated into the Project from the total Contract price. Under the "separated contract" format, the CONTRACTOR in effect becomes a "seller" to the OWNER of materials that are to be physically incorporated into the Project realty. As a "seller", the CONTRACTOR will issue a "Texas Certificate of Resale" to the supplier in lieu of paying the sales tax on materials at the time of purchase. The CONTRACTOR will also issue a "Certificate of Exemption" to the supplier, demonstrating that the personal property is being purchased for resale and that the resale is to a public owner, the City of Brownsville, Texas, and its BPUB, which are sales tax exempt entities under UTCA Tax Code Section 151.309(5). CONTRACTOR should be careful to consult the most recent guidelines of the State Comptroller of Public Accounts regarding the sales tax status of supplies and equipment that are used and consumed during Project Work, but that are not physically incorporated into the Project realty. If the CONTRACTOR has questions about the implementation of this policy he is asked to inquire with the State Comptroller of Public Accounts, Tax Administration Division, State of Texas, Austin, Texas 78774. The CONTRACTOR will not include any federal taxes in bid prices since the OWNER is exempt from payment of such taxes. "Texas Certificates of Exemption", "Texas Certificates of Resale" and "Texas Sales Tax Permits" are forms available to the CONTRACTOR through the regional offices of the Texas State Comptroller of Public Accounts."

Use of Premises:

6.17 CONTRACTOR shall confine construction equipment, the storage of materials and equipment and the operations of workers to the Project site and land and areas identified in and permitted by the Contract Documents, or otherwise privately acquired by the CONTRACTOR, and other land and areas permitted by Laws and Regulations, rights-of-way, permits and easements. CONTRACTOR shall assume full responsibility for any damage to any Project land or area, or to the owner or occupant thereof, or of any land or areas contiguous thereto, resulting from the performance of the Work. Should any claim be made against OWNER by any such adjacent owner or occupant because of the performance of the Work, CONTRACTOR shall promptly attempt to settle with such other party by agreement, or otherwise resolve the claim by mediation, arbitration or at law. **CONTRACTOR SHALL, TO THE FULLEST EXTENT PERMITTED BY LAWS AND REGULATIONS, INDEMNIFY, AND HOLD HARMLESS OWNER FROM AND AGAINST ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES (INCLUDING, BUT NOT LIMITED TO, FEES OF ENGINEERS, ARCHITECTS, ATTORNEYS AND OTHER PROFESSIONALS AND COURT COSTS) ARISING DIRECTLY, INDIRECTLY OR CONSEQUENTIALLY OUT OF ANY ACTION, LEGAL OR EQUITABLE, BROUGHT BY ANY SUCH OTHER PARTY AGAINST OWNER, TO THE EXTENT BASED ON A CLAIM ARISING OUT OF CONTRACTOR'S PERFORMANCE OF THE WORK. IT IS THE EXPRESSED INTENT OF THE PARTIES HERETO THAT THE INDEMNITY PROVIDED FOR IN THIS PARAGRAPH IS INDEMNITY BY CONTRACTOR TO INDEMNIFY AND PROTECT OWNER FROM THE CONSEQUENCES OF OWNER'S OWN NEGLIGENCE, WHEN THAT NEGLIGENCE ON THE PART OF THE OWNER IS A CONCURRING CAUSE OF THE INJURY, DEATH OR DAMAGE.**

FURTHERMORE, THE INDEMNITY PROVIDED FOR IN THIS PARAGRAPH SHALL HAVE NO APPLICATION TO ANY CLAIM, LOSS, DAMAGE, CAUSE OF ACTION, SUIT, AND LIABILITY WHERE THE INJURY, DEATH OR DAMAGE RESULTS FROM THE SOLE NEGLIGENCE OF THE OWNER, INDEPENDENT OF THE FAULT OF ANY OTHER PERSON OR ENTITY.

6.18 During the progress of the Work, CONTRACTOR shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work, CONTRACTOR shall remove and legally dispose of all waste materials, rubbish and debris from and about the premises, as well as all tools, appliances, construction equipment and machinery, and surplus materials, and shall leave the Project site clean and ready for occupancy by OWNER. CONTRACTOR shall restore to original condition all property not designated for alteration by the Contract Documents.

6.19 CONTRACTOR shall be confined to all working easements provided by OWNER, unless CONTRACTOR separately and privately secures at his own cost, additional private temporary construction easements. Generally, storage of excavation material and all CONTRACTOR equipment and material shall remain within the limits of Project working easements.

6.20 CONTRACTOR shall not weight load or permit any part of any structure or utility to be loaded in any manner that will endanger the structure or utility, nor shall CONTRACTOR subject any part of the Work or adjacent property to surcharge stresses or pressures, or loss of subjacent or lateral support, that will endanger it.

Record Documents:

6.21 CONTRACTOR shall as a precondition to interim progress payments, regularly maintain and update and store in a safe place at the Project site, one record copy of all Drawings, Specifications, Addenda, Written Amendments, Change Orders, Work Directive Changes, Field Orders and any written interpretations and clarifications (issued pursuant to paragraph 9.4) in good order and periodically annotated to show all changes made by CONTRACTOR during construction. These periodically updated record documents, together with all approved samples and a counterpart of all approved Shop Drawings, will be at all times available to OWNER's Engineer for reference. Upon completion of the Work, these record documents, samples and Shop Drawings, will be delivered to OWNER's Engineer for OWNER record retention.

Safety and Protection:

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

6.22.1 all employees on the Work and other persons and organizations who may be required to properly visit the Project site and be affected thereby;

6.22.2 all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Project site; and

6.22.3 other property at the Project site or adjacent thereto, including drainage gradients, trees, shrubs, lawns, walks, pavements, roadways, structures, utilities and underground facilities not designated for removal, relocation or replacement in the course of construction.

6.22.4 Driveways, culverts, storm sewer inlets and laterals, and other public or private property that is destroyed or removed during the construction shall be replaced to its original or better condition by CONTRACTOR. Temporary drainage and any subgrade dewatering is to be provided by CONTRACTOR as necessary to protect and complete the Work.

6.22.5 CONTRACTOR is responsible for locating any underground obstacles. It is not represented that the Plans show all previous or current sewers, waterlines, electric lines, gas lines, telephone lines and other underground obstacles and utilities. CONTRACTOR shall exercise caution to prevent damage to existing utility facilities during the progress of the construction Work, taking care to locate same in advance of the actual Work. OWNER will render all assistance possible to CONTRACTOR in the matter of determining the location of existing utilities by making available such existing maps, records, and other available existing information as may be accessible to OWNER, when requested to do so, but the accuracy of such information will not be guaranteed by OWNER. CONTRACTOR shall make repairs and/or replacements to all damage to existing utilities resulting from his operations. Where a pipe, duct or other structure of a utility is exposed, which, in the opinion of OWNER requires strengthening, altering or moving, CONTRACTOR shall perform such Work on same, as OWNER may order, which Work may be paid for as extra Work. Should CONTRACTOR, in the layout of his Work, encounter any pipe, underground utility or structure, the location of which has been furnished to him by OWNER, he shall bring such conditions to the attention of OWNER for OWNER and CONTRACTOR discussion to determine the CONTRACTOR'S method to be used to pin in place, remove or bypass such obstructions.

6.22.6 It is essential that in the event of any damage being caused to existing utilities that immediate attention be given to their repair. Any repair work carried out shall be at the cost of CONTRACTOR and shall be performed to the complete satisfaction of OWNER, who will acknowledge same in writing. It is therefore, the duty of CONTRACTOR, prior to the commencement of construction, to inspect and accurately record in writing to OWNER, the condition of any utility which he reasonably suspects or knows to be damaged, faulty, or defective. In addition, any such utilities so recorded, which in the opinion of CONTRACTOR may deteriorate further as a result of the proposed mode of construction operations, should be protected, and/or other remedial measures employed as agreed to with OWNER.

CONTRACTOR shall comply with all applicable Laws and Regulations of any public body having jurisdiction for the safety of persons or property, or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR shall notify owners of adjacent property and of Underground Facilities and utility owners, when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, restoration and replacement of their property. All damage, injury or loss to any property referred to in paragraph 6.20.2 or 6.20.3 caused, directly or indirectly, in

whole or in part by CONTRACTOR, any Subcontractor, Supplier or any other person or organization directly or indirectly employed by any of them to perform or furnish any of the Work; or anyone for whose acts any of them may be liable; shall be remedied by CONTRACTOR. CONTRACTOR's duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed and OWNER'S Engineer has issued a notice to OWNER and CONTRACTOR in accordance with paragraph 14.13 that the Work is acceptable to OWNER (except as otherwise expressly provided in connection with Substantial Completion).

6.23 CONTRACTOR shall designate in writing to OWNER a responsible representative at the Project site whose duty shall be the management of risk and safety, and that person shall make a concerted effort to assist workers and visitors at the Project site to prevent accidents. This person shall be CONTRACTOR's superintendent, unless otherwise designated in writing by CONTRACTOR to OWNER.

Emergencies:

6.24 In emergencies affecting the safety or protection of persons, or the Work, or property at the Project site or adjacent thereto, CONTRACTOR, without special written or oral instruction or authorization from OWNER, is obligated to act to prevent threatened damage, injury or loss. CONTRACTOR shall give OWNER's Engineer prompt written notice if CONTRACTOR believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If OWNER's Engineer determines that a change in the Contract Documents is required because of the CONTRACTOR's prompt action taken in response to an emergency, a Work Directive Change or Change Order will be issued to document the consequences of any changes or variations.

Shop Drawings and Samples:

6.25 After checking and verifying all field measurements and after complying with applicable procedures specified in the General Requirements, CONTRACTOR shall submit to OWNER's Engineer for review and approval, in accordance with the accepted Schedule of Shop Drawing submissions (see paragraph 2.9), or for other appropriate action if so indicated in the Supplementary Conditions, five (5) copies (unless otherwise specified in the General Requirements) of all Shop Drawings, which will bear a stamp or specific written indication that CONTRACTOR has satisfied CONTRACTOR's responsibilities under the Contract Documents with respect to the internal review of the submission. All submissions will be identified as the OWNER's Engineer may require. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to enable OWNER'S Engineer to efficiently and comprehensively review the CONTRACTOR's information as required.

6.25.1 Before ordering any material or doing any Work, CONTRACTOR will verify all measurements of any existing and new Work and shall be responsible for their correctness. Any differences which may be found shall be submitted to OWNER for consideration before proceeding with the Work. No extra compensation will be allowed to CONTRACTOR because of differences between actual dimensions and measurements indicated on the final working drawings.

6.26 CONTRACTOR shall also submit to OWNER's Engineer for review and approval with such promptness as to cause no delay in Work, all samples required by the Contract Documents. All samples will have been checked by and accompanied by a specific written indication that CONTRACTOR has internally satisfied CONTRACTOR's responsibilities under the Contract Documents with respect to the review of the submission, and will be identified clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended.

6.27

6.27.1 Before submission of each Shop Drawing or sample, CONTRACTOR shall have internally determined and verified all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar data with respect thereto and reviewed or coordinated each Shop Drawing or sample with other Shop Drawings and samples, and with the requirements of the Work and the Contract Documents.

6.27.2 At the time of each submission, CONTRACTOR shall give OWNER's Engineer specific written notice of each variation that the Shop Drawings or samples may have from the requirements of the Contract Documents, and, in addition, shall cause a specific notation to be made on each Shop Drawing submitted to OWNER's Engineer for review and approval, of each such CONTRACTOR variation.

6.28 OWNER's Engineer will review and approve with reasonable promptness, Shop Drawings and samples, but OWNER Engineer's review and approval will be only for general conformance with the design concept of the Project and for compliance with the information given in the Contract Documents, and shall not extend to CONTRACTOR's means, methods, techniques, sequences or procedures of construction (except where a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents), or to CONTRACTOR's safety precautions or programs incident thereto. The review and approval of a separate or component item will not indicate approval of the assembly into which the item functions integrally. CONTRACTOR shall make corrections required by OWNER's Engineer, and shall return the required number of corrected copies of Shop Drawings and submit as required, new samples for review and approval. CONTRACTOR shall direct Owner Engineer's specific attention in writing to the most current revisions, other than the corrections called for by OWNER's Engineer on previous CONTRACTOR submittals.

6.29 OWNER Engineer's review and approval of Shop Drawings or samples shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents, unless CONTRACTOR has in writing called OWNER Engineer's attention to each such variation at the time of submission as required by paragraph 6.25.2, and OWNER's Engineer has given written approval of each such variation by a specific written notation thereof incorporated in or accompanying the Shop Drawing or sample approval; nor will any approval by OWNER's Engineer relieve CONTRACTOR from responsibility for CONTRACTOR's errors or omissions in the Shop Drawings, or from responsibility for having complied with the provisions of paragraph 6.25.1.

6.30 Where a Shop Drawing or sample is required by the Specifications, any related

Work performed prior to OWNER Engineer's review and approval of the pertinent submission will be at the sole risk, expense and responsibility of CONTRACTOR.

Continuing the Work:

6.31 CONTRACTOR shall carry on the Work and adhere to the Progress Schedule during any and all disputes or disagreements with OWNER. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as OWNER may otherwise agree in writing.

INDEMNIFICATION:

6.32 CONTRACTOR AGREES TO AND SHALL INDEMNIFY AND HOLD HARMLESS OWNER, ITS PUBLIC OFFICIALS, OFFICERS, BOARD MEMBERS, AND EMPLOYEES, FROM AND AGAINST ANY AND ALL CLAIMS, LOSSES, DAMAGES, CAUSES OF ACTION, SUITS, AND LIABILITY OF EVERY KIND, INCLUDING ALL EXPENSES OF LITIGATION, COURT COSTS, AND ATTORNEY'S FEES, FOR INJURY TO OR DEATH OF ANY PERSON, OR FOR DAMAGE TO ANY PROPERTY, ARISING OUT OR IN CONNECTION WITH THE PERFORMANCE OF THE WORK, PROVIDED THAT SUCH CLAIM, DAMAGE, LOSS, LIABILITY OR EXPENSE (A) IS ATTRIBUTABLE TO BODILY INJURY, SICKNESS, DISEASE OR DEATH OR TO INJURY OR DESTRUCTION OF TANGIBLE PROPERTY, INCLUDING THE LOSS OF USE RESULTING THERE FROM AND (B) IS CAUSED IN WHOLE OR IN PART BY ANY CONDITION OF THE WORK OR MATERIALS, OR BY ANY NEGLIGENT ACT OR OMISSION OF CONTRACTOR, ANY SUBTIER SUBCONTRACTOR, ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY CONTRACTOR OR ANY SUBCONTRACTOR OR ANYONE FOR WHOSE ACTS CONTRACTOR OR ANY SUBCONTRACTOR MAY BE LIABLE UNDER THIS CONTRACT.

SUCH INDEMNITY SHALL APPLY WHERE THE CLAIMS, LOSSES, DAMAGES, CAUSES OF ACTION, SUITS, OR LIABILITY ARISE IN PART FROM THE CONCURRENT NEGLIGENCE OF OWNER.

IT IS THE EXPRESSED INTENTION OF THE PARTIES HERETO, BOTH CONTRACTOR AND OWNER, THAT THE INDEMNITY PROVIDED FOR IN THIS PARAGRAPH IS INDEMNITY BY THE CONTRACTOR, TO INDEMNIFY AND PROTECT OWNER FROM THE CONSEQUENCES OF OWNER'S OWN NEGLIGENCE, WHERE THAT NEGLIGENCE IS A CONCURRING CAUSE OF THE INJURY, DEATH OR DAMAGE. FURTHERMORE, HOWEVER, THE INDEMNITY PROVIDED FOR IN THIS PARAGRAPH SHALL HAVE NO APPLICATION TO ANY CLAIM, LOSS, DAMAGE, CAUSE OF ACTION, SUIT, AND LIABILITY WHERE THE INJURY OR DEATH OR DAMAGE RESULTS FROM THE SOLE NEGLIGENCE OF THE OWNER, INDEPENDENT OF THE FAULT OF ANY OTHER PERSON OR ENTITY.

6.33 IN ANY AND ALL CLAIMS AGAINST OWNER OR ANY OF ITS CONSULTANTS, AGENTS OR EMPLOYEES BY ANY EMPLOYEE OF

CONTRACTOR, ANY SUBCONTRACTOR, ANY PERSON OR ORGANIZATION DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM TO PERFORM OR FURNISH ANY OF THE WORK, OR ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE, THE INDEMNIFICATION OBLIGATION UNDER PARAGRAPH 6.32 SHALL NOT BE LIMITED IN ANY WAY BY ANY LIMITATION ON THE AMOUNT OR TYPE OF DAMAGES, COMPENSATION OR BENEFITS PAYABLE BY OR FOR CONTRACTOR, OR ANY SUCH SUBCONTRACTOR, OR OTHER PERSON OR ORGANIZATION UNDER WORKERS' OR WORKMEN'S COMPENSATION ACTS, DISABILITY BENEFIT ACTS OR OTHER EMPLOYEE BENEFIT ACTS.

6.34 THE OBLIGATIONS OF CONTRACTOR UNDER PARAGRAPH 6.32 SHALL NOT EXTEND TO ANY LIABILITY OF OWNER, OWNER'S ENGINEER, CONSULTANTS, AGENTS OR EMPLOYEES ARISING OUT OF THE PREPARATION OR APPROVAL OF PROJECT MAPS, DRAWINGS, PLANS, OPINIONS, REPORTS, SURVEYS, CHANGE ORDERS, DESIGNS, OR SPECIFICATIONS.

6.35 CONTRACTOR shall perform all phases of Work, other than general clean-up, thru the duration of the Contract, as defined in these General and any Supplementary General Conditions. If CONTRACTOR desires to perform Work, other than general clean-up during holidays, prior proper arrangements must be made in writing with OWNER, or any other regulatory agency regarding such Work.

6.35.1 General. This Contract shall be based upon payment by CONTRACTOR and his Subcontractors of wage rates not less than the General Prevailing Wage Rate of per diem wages for work of a similar character in Cameron County, Texas, for each type of laborer, workman or mechanic needed to implement the Contract at the Project Site, and not less than the general prevailing rate of per diem wages for legal holiday and overtime Work. The Schedule of General Prevailing Wage Rates specifically adopted by the OWNER for this Project, and other important Wage and Labor Standard Provisions are included in these Contract Documents in the Supplementary General Conditions. Pursuant to local BPUB labor policy, no Project worker shall be paid less than \$8.00 per hour, regardless of the adopted wage listings in the attached U. S. Department of Labor General Wage Decision.

CONTRACTOR shall at minimum comply with all requirements of the prevailing wage law of the State of Texas, Texas Revised Civil Statutes, Texas Government Code Section 2259.001 et seq., including the latest amendments thereto, and those special local wage provisions adopted by OWNER. When in conflict , the more stringent requirements apply to CONTRACTOR.

6.35.2 Records. CONTRACTOR and each Subcontractor shall keep an accurate record showing the names and occupations of all classifications of laborers, workmen, and mechanics employed, together with the actual wages paid to each worker. At all reasonable working hours, such records shall be open to inspection by the representatives of the OWNER. With each application for payment, CONTRACTOR shall provide a certified copy of such payroll records as necessary to substantiate compliance with this provision during the period of time for which the application for payment pertains. OWNER shall take cognizance of any and all employee complaints regarding any violations of the requirements of TGC Section 2259.001 et

seq.

6.35.3 Penalty. In case CONTRACTOR and any Subcontractor fail to comply with the prevailing wage law, by statutory authority, CONTRACTOR shall forfeit to the OWNER \$60.00 per calendar day, or portion thereof, for each laborer, workman, or mechanic who is paid less than the specified local rate for any Work done under the Contract.

6.35.4 Hours of Labor. CONTRACTOR shall comply with all requirements of the hours of work on public works in accordance with the laws of the State of Texas, Texas Revised Civil Statutes, Articles 5165.1 to 5165.3, including the latest amendments thereto.

No CONTRACTOR or Subcontractor contracting for any part of the Contract Work which may require or involve the employment of laborers, workmen or mechanics at the Project Site, shall require or permit any laborer, workman or mechanic in any work week in which he is employed on such Work, to work in excess of forty (40) hours in such work week, unless such laborer, workman or mechanic receives compensation at a rate not less than one and one-half times his basic rate of pay, for all hours in excess of forty (40) hours in such work week.

6.35.5 Equal Employment Opportunities. The CONTRACTOR shall not discriminate against any employee or applicant for employment because of race, religion, gender, sexual preference, national origin, age, physically challenged condition, or a political belief or affiliation, and will comply with all State and federal statutes applicable to CONTRACTOR which relate to employment discrimination.

ARTICLE 7. OTHER WORK

Related Work at Site:

7.1 OWNER may perform other separate work related to the Project at the site by OWNER's own forces, have other work performed by utility owners, or award other direct construction contracts therefor, which shall contain General Conditions similar to these. If the fact that such other work is to be performed was not originally noted in these Contract Documents, advance written notice thereof will be given to CONTRACTOR prior to OWNER authorizing any such other work; and, if CONTRACTOR believes that such other work performance will involve additional expense to CONTRACTOR, or requires additional time, and the parties are unable to agree as to the extent thereof, CONTRACTOR may make a claim therefore as provided in Articles 11 and 12. All increases or decreases in the Contract price shall be governed by all State and local laws, statutes, codes, ordinances, rules and regulations governing public competitive bidding and Change Orders.

7.2 CONTRACTOR shall afford each utility owner and other contractor who is a party to a direct contract with OWNER (or OWNER, if OWNER is performing the additional work with OWNER's employees) proper and safe access to the Project site and a reasonable opportunity for the introduction and storage of materials and equipment, and the execution of such work, and shall properly connect and coordinate the Work with their separate work. CONTRACTOR shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. CONTRACTOR shall not endanger any

work of others by cutting, excavating or otherwise altering their work, and will only cut or alter their work with the written consent of OWNER's Engineer and the consent of other contractor(s), persons whose work will be affected. The duties and responsibilities of CONTRACTOR under this paragraph are for the benefit of such utility owners and other contractors, to the extent that there are comparable provisions for the benefit of CONTRACTOR in said direct contracts between OWNER and such other utility owners and other contractors.

7.3 If any part of CONTRACTOR's Work depends for proper execution or results upon the work of any such other contractor or utility owner (or OWNER), CONTRACTOR shall inspect and promptly report to OWNER's Engineer in writing any delays, defects or deficiencies in such other work that renders it unavailable or unsuitable for such integration, proper execution and results. CONTRACTOR's failure so to report will constitute an acceptance of the other work as fit and proper for integration with CONTRACTOR's Work, except for latent or non-apparent defects and deficiencies in the other work.

Coordination:

7.4 If OWNER contracts with others for the performance of other work on the Project at the Project site, the person or organization who will have authority and responsibility for coordination of the activities among the various prime contractors will be identified by OWNER in the Supplementary Conditions, and the specific matters to be covered by such authority and responsibility will be itemized, and the extent of such authority and responsibilities will be provided, in the Supplementary Conditions.

ARTICLE 8. OWNER'S RESPONSIBILITIES

8.1 OWNER shall issue all written and oral communications to CONTRACTOR through OWNER's Field Representative and/or OWNER's Engineer.

8.2 In case of termination of the employment of OWNER's Engineer, OWNER shall appoint a replacement Engineer whose status under the Contract Documents shall be that of the former Engineer.

8.3 OWNER shall furnish the data required of OWNER under the Contract Documents promptly, and shall make eligible payments to CONTRACTOR within the time periods allowed by the Contract Documents and State prompt pay statutes, after payments are due as provided in paragraphs 14.4 and 14.13.

8.4 OWNER's duties in respect to providing lands and easements and providing any recent existing available engineering surveys to establish CONTRACTOR construction reference points, are set forth in paragraphs 4.1 and 4.4. Paragraph 4.2 refers to OWNER's identifying and making available to CONTRACTOR copies of any existing and available reports of explorations and tests of subsurface pre-existing conditions at the Project site which are not part of the Contract Documents, but which have been utilized by OWNER's Engineer in generally preparing the Drawings and Specifications.

8.5 (RESERVED)

8.6 OWNER is obligated to execute Change Orders as indicated in paragraph 10.4.

8.7 OWNER's responsibility in respect to certain inspections, tests and approvals is set forth in paragraph 13.4.

8.8 In connection with OWNER's right to stop Work or suspend Work, see paragraphs 13.10 and 15.1. Paragraph 15.2 outlines OWNER's right to terminate services of CONTRACTOR under certain circumstances.

ARTICLE 9. OWNER ENGINEER'S STATUS DURING CONSTRUCTION

Owner's Representative:

9.1 OWNER's Engineer will be OWNER's primary representative during the construction period.

Visits to Site:

9.2 OWNER's Engineer will make periodic visits to the site at intervals appropriate to the various stages of construction to observe the progress and general quality of the executed Work and to determine, in general, for the benefit of OWNER only, if the Work is proceeding in accordance with the Contract Documents. OWNER's Engineer will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work, because CONTRACTOR is solely responsible for same. OWNER Engineer's efforts will be directed toward providing for OWNER only, a greater degree of confidence that the CONTRACTOR's completed Work will conform to the Contract Documents. On the basis of such limited visits and on-site observations as an experienced and qualified design professional working for OWNER, OWNER's Engineer will keep OWNER informed of the progress of the Work and will endeavor to advise OWNER of any obvious defects and deficiencies in the Work.

On-Site Project Representation:

9.3 OWNER may furnish a Project Field Representative to assist OWNER's Engineer in observing the daily performance of the Work. This is an option available to OWNER that need not be exercised, nor may it be relied upon by the CONTRACTOR in any way to satisfy CONTRACTOR's quality control responsibility. The duties, responsibilities and limitations of authority of any such Project Field Representative and assistants will be determined by the OWNER.

Clarifications and Interpretations:

9.4 OWNER's Engineer will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings or otherwise) as OWNER's Engineer may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents. If CONTRACTOR believes that a written clarification or interpretation by OWNER's Engineer

justifies an increase in the Contract Price or an extension of the Contract Time, and the OWNER and CONTRACTOR are unable to agree to the basis, amount or extent thereof, CONTRACTOR may make a claim therefore as provided in Article 11 or Article 12. Any increases or decreases in the Contract Price shall be governed by all State and local laws, statutes, codes, ordinances, rules and regulations governing public competitive bidding and Change Orders.

Authorized Variations in Work:

9.5 OWNER's Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Time, and are consistent with the overall intent of the Contract Documents. These may be accomplished by a Field Order and will be binding on OWNER, and also on CONTRACTOR who shall perform the Work involved promptly. If CONTRACTOR believes that a Field Order justifies an increase in the Contract Price or an extension of the Contract Time, CONTRACTOR may make a claim therefore as provided in Article 11 or 12. Any increases or decreases in the Contract Price shall be governed by all State and local laws, statutes, codes, ordinances, rules and regulations governing public competitive bidding and Change Orders.

Rejecting Defective Work:

9.6 OWNER's Engineer will have the authority to disapprove or reject Work which OWNER's Engineer believes to be defective, and will also have authority to require special inspection or testing of the Work as provided in paragraph 13.9, whether or not the Work is fabricated, installed or completed.

Shop Drawings, Change Orders and Payments:

9.7 In connection with OWNER Engineer's responsibility for Shop Drawings and samples, see paragraphs 6.23 through 6.28 inclusive.

9.8 In connection with OWNER Engineer's responsibilities as to Change Orders, see Articles 10, 11 and 12.

9.9 In connection with OWNER Engineer's responsibilities in respect to Applications for Payment, etc., see Article 14.

Determinations for Unit Prices:

9.10 OWNER's Engineer will determine the final actual quantities and classifications of any Unit Price Work performed by CONTRACTOR. OWNER's Engineer will review with CONTRACTOR, OWNER Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). OWNER Engineer's written decisions thereon will be final and binding upon OWNER and CONTRACTOR.

Decisions on Disputes:

9.11 OWNER's Engineer will be the interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. Claims, disputes and other matters relating to the acceptability of the Work or the interpretation of the requirements of the Contract Documents pertaining to the performance and furnishing of the Work, and claims under Articles 11 and 12 in respect of changes in the Contract Price or Contract Time, will be referred initially to OWNER's Engineer in writing, with a request for a formal decision in accordance with this paragraph, which OWNER's Engineer will render in writing within a reasonable time. Written notice of each such claim, dispute and other matter will be delivered by the CONTRACTOR (but in no event later than thirty (30) calendar days) after the occurrence of the event giving rise thereto, and written supporting data will be submitted to OWNER's Engineer within sixty (60) calendar days after such occurrence, unless OWNER's Engineer allows an additional period of time to ascertain more accurate data in support of the claim.

9.12 When functioning as interpreter and judge under paragraphs 9.10 and 9.11, it is hereby mutually agreed between OWNER and CONTRACTOR that OWNER's Engineer will not be personally liable in connection with any non-negligent interpretation or decision rendered in good faith in such official and professional capacity. The rendering of a decision by OWNER's Engineer pursuant to paragraphs 9.10 and 9.11 with respect to any such claim, dispute or other matter (except any which have been waived by the making or acceptance of final payment as provided in paragraph 14.16) will be a condition precedent to any exercise by CONTRACTOR and/or OWNER of such rights or remedies they may otherwise have under the Contract Documents or by Laws or Regulations in respect of any such claim, dispute or other matter.

Limitations on OWNER Engineer's Responsibilities:

9.13 Neither OWNER Engineer's authority to act under this Article 9, or elsewhere in the Contract Documents, nor any decision made by OWNER Engineer in good faith either to exercise or not exercise such authority, shall give rise to any personal duty or personal responsibility of OWNER Engineer to CONTRACTOR, and Subcontractor, any Supplier, or any other person or organization performing any of the Work, or to any surety for any of them.

9.14 Whenever in the Contract Documents the terms: "as ordered"; "as directed"; "as required"; "as allowed"; "as approved"; or terms of like effect or import are used, or the adjectives: "reasonable"; "suitable"; "acceptable"; "proper"; or "satisfactory"; or adjectives of like effect or import are used to describe a requirement, direction, review or judgment of OWNER's Engineer as to the Work, it is intended that such requirement, direction, review or judgment will be solely to evaluate the Work for compliance with the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign to OWNER's Engineer any duty to supervise or direct the furnishing, performance, or quality control of the CONTRACTOR's Work or any duty or authority to undertake responsibility of the CONTRACTOR contrary to the provisions of paragraph 9.15 or 9.16.

9.15 OWNER's Engineer will not be responsible for CONTRACTOR's means, methods, techniques, quality control, sequences or procedures of construction, or the safety precautions and programs incident thereto, for which CONTRACTOR shall be solely responsible. OWNER's Engineer will not be responsible for CONTRACTOR's failure to perform or furnish the Work in

accordance with the Contract Documents.

9.16 OWNER's Engineer will not be responsible for the acts and/or omissions of CONTRACTOR or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.

ARTICLE 10. CHANGES IN THE WORK

10.1 Without invalidating the Agreement and without notice to any surety, OWNER may, at any time, or from time to time, order additions, deletions or revisions in the Work that are in compliance with State public competitive bidding statutes and laws governing Change Orders; these will be authorized by a Written Amendment, a Change Order, or a Work Directive Change. Upon receipt of any such document, CONTRACTOR shall promptly proceed with the Work involved, which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

10.2 If OWNER and CONTRACTOR are unable to agree as to the extent, if any, of an increase or decrease in the Contract Price, or an extension or shortening of the Contract Time that should be allowed as a result of a Work Directive Change, a claim may be made therefore as provided in Article 11 or Article 12. All increases or decreases in the Contract Price shall be governed by all State and local laws, statutes, codes, ordinances, rules and regulations governing public competitive bidding and Change Orders.

10.3 CONTRACTOR shall not be entitled to an increase in the Contract Price or an extension of the Contract Time with respect to any Work performed that is not required by the Contract Documents as amended, modified and supplemented as provided in paragraphs 3.4 and 3.5, except in the case of an emergency as provided in paragraph 6.22, and except in the case of uncovering Work as provided in paragraph 13.9.

10.4 OWNER and CONTRACTOR may execute appropriate Change Orders (or Written Amendments) covering:

10.4.1 changes in the Work which are ordered by OWNER pursuant to paragraph 10.1; are required because of willing acceptance of defective Work by OWNER under paragraph 13.13; or correcting defective Work under paragraph 13.14; or are otherwise agreed to by the parties;

10.4.2 changes in the Contract Price or Contract Time which are agreed to by the parties; and

10.4.3 changes in the Contract Price or Contract Time which embody the substance of any written decision rendered by OWNER's Engineer pursuant to paragraph 9.11; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, CONTRACTOR shall carry on the Work and adhere to the Progress Schedule as provided in paragraph 6.29.

10.5 If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Time) is required by the provisions of any Bond to be given to a surety by CONTRACTOR, the giving of any such notice will be CONTRACTOR'S sole responsibility, and the amount of each applicable Bond may be adjusted accordingly.

ARTICLE 11. CHANGE OF CONTRACT PRICE

11.1 The Contract price constitutes the total compensation (subject to authorized adjustments) payable to CONTRACTOR for performing the Work. All original duties, responsibilities and obligations assigned to or undertaken by CONTRACTOR shall be at his expense without change in the original Contract price.

11.2 The Contract price may only be changed by a Change Order or by a Written Amendment. Any claim for an increase or decrease in the Contract price shall be based on initial written notice delivered promptly by the CONTRACTOR or OWNER to the other party, and to OWNER'S Engineer promptly (but in no event later than thirty (30) calendar days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the amount of the claim with supporting data shall follow and be delivered within sixty (60) calendar days after such occurrence (unless OWNER's Engineer allows an additional period of time to ascertain more accurate data in support of the claim), and shall be accompanied by claimant's written statement that the amount claimed covers all known amounts (direct, indirect and consequential) to which the claimant believes he is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract price shall be determined by OWNER's Engineer in accordance with paragraph 9.11. No claim for an adjustment in the Contract price will be valid if not submitted in accordance with this paragraph 11.2.

11.3 The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract price shall be determined in one of the following ways:

11.3.1 Where the Work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved (subject to the provisions of paragraphs 11.9.1. through 11.9.3. inclusive).

11.3.2 By mutual acceptance of a lump sum (which may include an allowance for overhead and profit not necessarily in accordance with paragraph 11.6.2.1).

11.3.3 On the basis of the Cost of the Work (determined as provided in paragraphs 11.4 and 11.5), plus a CONTRACTOR's Fee for overhead and profit (determined as provided in paragraphs 11.6 and 11.7).

Cost of the Work:

11.4 The term "Cost of the Work" means the sum of all costs necessarily incurred and paid by CONTRACTOR in the proper performance of the Work. Except as otherwise may be

agreed to in writing by OWNER, such costs shall be in amounts no higher than those prevailing in the Cameron County, Texas area and shall include only the following items, and shall not include any of the costs itemized in paragraph 11.5:

11.4.1 Payroll costs for employees in the direct employ of CONTRACTOR in the performance of the Work under Schedules of Job Classifications as set forth by OWNER in the Supplementary General Conditions of the Contract Documents. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of any fringe benefits, if any, which shall include social security contributions, unemployment, excise and payroll taxes, workers' or workmen's compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday, as may be applicable thereto. Such employees shall include superintendents and foremen at the Project site. The expenses of performing Work after regular daily working hours on Saturday, Sunday or on legal holidays, shall be included in the above, to the extent authorized by OWNER.

11.4.2 Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to CONTRACTOR, unless OWNER deposits funds with CONTRACTOR with which to make advanced payments, in which case the cash discounts shall accrue to OWNER. All trade discounts, rebates and refunds and all returns from sale of surplus materials and equipment, shall accrue to OWNER, and CONTRACTOR shall make provisions so that they may be obtained.

11.4.3 Payments made by CONTRACTOR to the Subcontractors for Work performed by Subcontractors. If required by OWNER, CONTRACTOR shall obtain competitive bids from Subcontractors acceptable to CONTRACTOR, and shall deliver such bids to OWNER who will then determine which bid will be accepted. If a subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work Plus a Fee, the Subcontractor's Cost of the Work shall be determined in the same manner as CONTRACTOR's Cost of the Work. All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.

11.4.4 Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys and accountants) employed for services specifically related to the Work.

11.4.5 Supplemental costs including the following:

11.4.5.1 The proportion of necessary transportation, travel and subsistence expenses of CONTRACTOR's employees incurred in discharge of duties connected with the Work.

11.4.5.2 Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the Project site and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost less market value of such items used, but not consumed, which remain the

property of CONTRACTOR.

11.4.5.3 Rentals of all construction equipment and machinery and the parts thereof, whether rented from CONTRACTOR or others, in accordance with rental agreements approved by OWNER, and the costs of transportation, loading, unloading, installation, dismantling and removal thereof (all in accordance with terms of said rental agreements). The rental of any such equipment, machinery or parts shall cease when the use thereof is no longer necessary for the Work.

11.4.5.4 Any sales, consumer, use or similar taxes related to the Work that OWNER is not exempt from paying, and for which CONTRACTOR is liable, imposed by Laws and Regulations.

11.4.5.5 Deposits lost for causes other than negligence of CONTRACTOR, any Subcontractor or anyone directly or indirectly employed by any of them, or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

11.4.5.6 Losses and damages (and related expenses), not compensated by insurance or otherwise, to the Work, or otherwise sustained by CONTRACTOR in connection with the performance and furnishing of the Work, provided they have resulted from causes other than the intentional and/or negligent acts and/or omissions of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them, or for whose acts and/or omissions any of them may be liable. Such losses shall include settlements made with the written consent and approval of OWNER. No such losses, damages and expenses shall be included in the Cost of the Work for the purpose of determining CONTRACTOR's Fee. If, however, any such loss or damage requires reconstruction and CONTRACTOR is placed in charge thereof, CONTRACTOR shall be paid for reconstruction services, a fee proportionate to that stated in paragraph 11.6.2.

11.4.5.7 The cost of utilities, fuel and sanitary facilities at the Project site.

11.4.5.8 Minor expenses such as telefaxes, long distance telephone calls, telephone service at the Project site, express mailings and similar petty cash items in connection with the Work.

11.4.5.9 Cost of premiums for additional Bonds and insurance required because of changes in the Work.

11.5 The term "Cost of the Work" shall not include any of the following:

11.5.1 Payroll costs and other compensation of CONTRACTOR's officers, executives, principals (of partnership and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by CONTRACTOR whether at the Project site or in CONTRACTOR's principal or a branch office for general administration of the Work and not specifically included in the agreed upon Schedule of Job Classifications referred to

in paragraph 11.4.1, or specifically covered by paragraph 11.4.4, all of which are to be considered administrative costs covered by the CONTRACTOR's Fee.

11.5.2 Expenses of CONTRACTOR's principal and branch offices, other than any CONTRACTOR's office at the Project site.

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

11.5.4 Cost of premiums for all Bonds and for all insurance, whether or not CONTRACTOR is required by the Contract Documents to purchase and maintain the same (except for the cost of premiums covered by subparagraph 11.4.5.9 above).

11.5.5 Costs due to the intentional and/or negligent acts and/or omissions of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them, or for whose acts and/or omissions any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

11.5.6 Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraph 11.4.

CONTRACTOR's Fee:

11.6 The CONTRACTOR's Fee allowed to CONTRACTOR for overhead and profit shall be determined as follows:

11.6.1 a mutually acceptable fixed fee; or if none can be agreed upon,

11.6.2 a fee based on the following percentages of the various portions of the Cost of the Work:

11.6.2.1 for costs incurred under paragraphs 11.4.1 and 11.4.2, the CONTRACTOR's Fee shall be fifteen (15%) percent;

11.6.2.2 for costs incurred under paragraph 11.4.3, the CONTRACTOR's Fee shall be five (5%) percent; and if a subcontract is on the basis of Cost of the Work Plus a Fee, the maximum allowable to CONTRACTOR on account of overhead and profit of all Subcontractors shall be fifteen (15%) percent;

11.6.2.3 no fee shall be payable on the basis of costs itemized under paragraphs 11.4.4, 11.4.5 and 11.5;

11.6.2.4 the amount of credit to be allowed by CONTRACTOR to OWNER for any such change which results in a net decrease in cost will be the amount of the actual net decrease, plus a deduction in CONTRACTOR's Fee by an amount equal to ten (10%)

percent of the net decrease; and

11.6.2.5 when both additions and credits are involved in any one change, the adjustment in CONTRACTOR'S Fee shall be computed on the basis of the net change in accordance with paragraphs 11.6.2.1 through 11.6.2.4, inclusive.

11.7 Whenever the cost of any Work is to be determined pursuant to paragraph 11.4 or 11.5, CONTRACTOR will submit in a form acceptable to OWNER's ENGINEER, an itemized cost breakdown together with supporting data.

Cash Allowances:

11.8 It is understood that CONTRACTOR has included in the Contract price all allowances so named in the Contract Documents and shall cause the Work so covered to be done by such Subcontractors or Suppliers, and for such sums within the limit of the allowances as may be acceptable to OWNER. CONTRACTOR agrees that:

11.8.1 The allowances include the cost to CONTRACTOR (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Project site, and all applicable non-exempt taxes; and

11.8.2 CONTRACTOR's costs for unloading and handling on the Project site, labor, installation costs, overhead, profit and other expenses contemplated for the allowances have been included in the Contract Price and not in the allowances. No demand for additional payment on account of any thereof will be valid.

Prior to final payment, an appropriate Change Order will be issued as recommended by OWNER's Engineer to reflect actual amounts due CONTRACTOR on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

Unit Price Work:

11.9

11.9.1 Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the established unit prices for each separately identified item of Unit Price Work, times the estimated quantity of each item as indicated in the Agreement. The OWNER's estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual final quantities and classifications of Unit Price Work performed by CONTRACTOR will be made by OWNER's Engineer in accordance with Paragraph 9.10.

11.9.2 Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR's overhead and profit for each separately identified item.

11.9.3 Where the quantity of any item of Unit Price Work performed by CONTRACTOR differs materially and significantly from the OWNER's estimated quantity of such item indicated in the Agreement (generally plus or minus 25%), and there is no corresponding and offsetting adjustment(s) with respect to any other item(s) of Work, and if CONTRACTOR believes that CONTRACTOR has incurred additional expense as a result thereof, CONTRACTOR may make a claim for an increase in the Contract Price in accordance with Article 11 and any applicable State law, if the parties are unable to otherwise agree as to the amount of any such increase.

ARTICLE 12 -- CHANGE OF CONTRACT TIME

12.1 The Contract Time may only be changed by a Change Order or a Written Amendment. Any claim for an extension or shortening of the Contract Time shall be based on initial written notice delivered by the CONTRACTOR or OWNER to the other party (but in no event later than thirty (30) calendar days) after the occurrence of the event giving rise to the claim, and stating the general nature of the claim. Notice of the extent of the claim with supporting data shall follow and be delivered within sixty (60) calendar days after such occurrence (unless OWNER's Engineer allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by the claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant has reason to believe it is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Time shall be determined by OWNER's Engineer in accordance with paragraph 9.11. No claim for an adjustment in the Contract Time will be valid if not submitted in accordance with the requirements of this paragraph 12.1.

12.2 The Contract Time will be extended in an amount equal to time lost due to delays beyond the reasonable control of CONTRACTOR, so long as CONTRACTOR has made good faith efforts to mitigate delaying impacts and if a claim is made therefore as provided in paragraph 12.1. Such delays shall include, but not be limited to, acts or neglect by OWNER or others performing additional separate work as contemplated by Article 7, or to fires, floods exceeding the 100 year frequency, labor disputes, epidemics, extremely abnormal weather for Cameron County, Texas, as may be described further in these Contract Documents, or Acts of God.

12.3 **ALL TIME LIMITS STATED IN THE CONTRACT DOCUMENTS ARE MUTUALLY AGREED TO BE OF THE ESSENCE OF THE AGREEMENT.** The provisions of this Article 12 shall not exclude recovery for damages (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court costs) for delay by either party.

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

Warranty and Guarantee:

13.1 CONTRACTOR warrants and guarantees to OWNER that all Work will be in accordance with the Contract Documents and will not be defective. Prompt notice of any obvious

patent defects discovered by OWNER shall be given to CONTRACTOR. All defective Work, whether or not in place, may be rejected, corrected or accepted as provided in this Article 13. In case of dispute as to the cause of improper functioning of all or any part of the Work, the burden of proof that CONTRACTOR has complied with the Contract Documents rests with CONTRACTOR for this Work. He shall submit in writing to OWNER's Engineer his opinion and basis of proof for the adequacy of his Work. OWNER may have those tests made, which OWNER deems advisable, by an independent testing laboratory of OWNER's choice. If any test so made indicates a defect in material or workmanship, or that one or more manufactured components of the Work are performing below the standard set by the manufacturer's public data and specifications, the entire cost of all such tests shall be paid for by CONTRACTOR, and he shall also pay for retesting of the corrected Work, until it functions satisfactorily. The Work shall be guaranteed to be free from defects due to faulty workmanship or material for a period of one (1) year from the date of OWNER issue of the Certificate of Acceptance. Work found to be improper or imperfect shall be replaced or redone without cost to OWNER within the one year guarantee period. Neither the Certificate of Acceptance, final payment, or any other provision of the Contract Documents shall free CONTRACTOR from his workmanship guarantee. Failure to repair or replace faulty Work entitles OWNER to repair or replace the same and recover the costs from CONTRACTOR and/or his Surety. CONTRACTOR shall be the sole guarantor of the Work installed under this Contract and no third party guarantees/warranties by Subcontractors or suppliers of various components or materials will be acceptable; nor shall agreements with Subcontractors or material or component suppliers by CONTRACTOR reduce CONTRACTOR's responsibility to OWNER under this Agreement. All equipment shall be warrantied and/or guaranteed by either CONTRACTOR or its supplier/manufacturer to OWNER for at least one (1) year from the date of OWNER acceptance of the entire Project. It is anticipated by OWNER and acknowledged by CONTRACTOR that many equipment and material warranties from manufacturers shall extend well beyond the initial one (1) year post acceptance period. The CONTRACTOR shall transfer to the OWNER any and all third party supplier and manufacturer warranties and/or guaranties that remain in effect beyond the one (1) year workmanship guarantee/warranty period.

Access to Work:

13.2. OWNER, OWNER's Engineer, OWNER's Field Representative, other representatives of OWNER, testing agencies and governmental agencies with jurisdictional interests, will have access to the Work at reasonable times for their observation, inspecting and testing. CONTRACTOR shall provide proper and safe conditions for such reasonable access.

It is agreed by CONTRACTOR that OWNER shall be and is hereby authorized to appoint from time to time, OWNER Engineer's subordinate supervisors, observers, and/or inspectors, as the said OWNER may deem proper to inspect the material furnished and observe the Work performed under this construction Agreement, and to see that the said material is furnished and said Work is generally done in accordance with the Specifications. This OWNER function, for OWNER's sole benefit, does not excuse the CONTRACTOR from quality control assurance, which is solely his responsibility. CONTRACTOR shall furnish all reasonable aid and assistance required by the OWNER's Engineer, subordinate supervisors, observers and/or inspectors for the proper observation, inspection and examination of the Work and all parts of the Work. CONTRACTOR shall regard and obey the directions and instructions of the OWNER's

Engineer and any subordinate supervisors, or inspector so appointed, when such directions are consistent with the obligations of this Agreement and the accompanying Specifications, provided, however, that should CONTRACTOR object to any order by any subordinate supervisor or inspector, CONTRACTOR may within six (6) calendar days make written notice to OWNER for his decision. Except as herein before provided, the authority of subordinate supervisors or inspectors shall be limited to the rejection of unsatisfactory Work and materials and to the suspension of the Work, until the questions of Work acceptability can be referred to OWNER's Engineer.

13.2.1. CONTRACTOR shall cooperate with any OWNER testing laboratory to the end that the function and services of the laboratory may be properly performed. CONTRACTOR shall give OWNER's representative and testing laboratory a minimum of twenty-four (24) hours notice of readiness for all testing as required by the Specifications or customary construction industry standards. OWNER shall bear the cost of density and concrete testing, for first test only. Testing of equipment, lines and valves shall be the responsibility of CONTRACTOR and he shall notify OWNER's Engineer and/or inspectors of his scheduled time for such tests, so that the test can be witnessed by an OWNER's representative. If initial tests show failure, the CONTRACTOR shall cover the costs of retesting the areas that failed after corrective action has been taken, as well as the personnel and equipment costs incurred by OWNER in said retesting, on a per diem basis. The per diem costs shall be determined based on the hourly wage plus reasonable overhead of OWNER's personnel needed and present at the Project site during retesting, and by the locally prevailing rental rate for the vehicles and equipment utilized in retesting. These retesting time costs shall be paid by CONTRACTOR prior to OWNER's acceptance of the Work improvements.

Tests and Inspections:

13.3. CONTRACTOR shall give OWNER's Engineer and /or OWNER's Field Representative timely notice of readiness of the Work for all required inspections, tests or approvals.

13.4. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) to specifically be inspected, tested or approved, CONTRACTOR shall assume full responsibility therefore, pay all costs in connection therewith, and furnish OWNER's Engineer the required final certificates of inspection, testing or approval. CONTRACTOR shall also be responsible for and shall pay all costs in connection with any special inspection or testing required in connection with OWNER Engineer's approval and acceptance of an alternative Supplier of "or equal" proposed substitutions of materials or equipment proposed by CONTRACTOR to be incorporated in the Work, or of materials or equipment submitted for approval prior to CONTRACTOR's purchase thereof, for incorporation in the Work. The cost of all routine inspections, tests and approvals, other than any of those special inspections which may be required by the Contract Documents to be paid by CONTRACTOR, shall be paid by OWNER (unless otherwise specified).

13.5 All inspections, tests or approvals other than those required by Laws or Regulations of any public body having jurisdiction shall be performed by organizations acceptable to OWNER (or by OWNER's Engineer, if so specified).

13.6 If any Work (including the work of others) that is to be inspected, tested or approved is covered or otherwise concealed by CONTRACTOR without written concurrence of OWNER's Engineer, it must, if requested by OWNER'S Engineer, be uncovered and revealed for OWNER observation. Such uncovering shall be at CONTRACTOR's expense, unless CONTRACTOR has given OWNER's Engineer timely notice of CONTRACTOR's intention to cover the same and OWNER's Engineer has not acted with reasonable promptness in response to such CONTRACTOR notice.

13.7 Neither observations by OWNER's Engineer nor inspections, tests or approvals by others shall relieve CONTRACTOR from CONTRACTOR's obligations to perform the Work and constantly employ quality control in accordance with the Contract Documents.

Uncovering Work:

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

13.9 If OWNER's Engineer considers it necessary or advisable that covered Work be observed by OWNER's Engineer or inspected or tested by others, CONTRACTOR, at OWNER Engineer's request, shall uncover, expose or otherwise make available for observation, inspection or testing as OWNER'S Engineer may require, that portion of the Work in question, furnishing all necessary labor, material and equipment to uncover same. If it is found that such Work is defective, CONTRACTOR shall bear all direct, indirect and consequential costs of such uncovering, exposure, observation, inspection and testing, and of satisfactory repair, replacement and reconstruction, (including but not limited to fees and charges or engineers, architects, attorneys and other professionals), and OWNER shall be entitled to an appropriate decrease in the Contract Price, and if the parties are unable to agree as to the amount thereof, OWNER may make a claim therefore as provided in Article 11. If, however, such Work is not found to be defective, CONTRACTOR may be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, repair, replacement and reconstruction; and, if the parties are unable to agree as to the amount or extent thereof, CONTRACTOR may make a claim therefore as provided in Articles 11 and 12. All increases or decreases in the Contract price shall be governed by all State and local laws, statutes, codes, ordinances, rules and regulations governing public competitive bidding and Change Orders.

Owner May Stop the Work:

13.10 If the Work is defective, or CONTRACTOR fails to supply sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, OWNER may order CONTRACTOR to stop the Work, or any portion thereof, until the cause for such stop Work order has been eliminated; however, this right of OWNER to stop the Work shall not give rise to any duty on the part of OWNER to exercise this right for the benefit of CONTRACTOR, or any other party.

Correction or Removal of Defective Work:

13.11 If required by OWNER's Engineer, CONTRACTOR shall promptly, as directed, either correct all defective Work, whether or not fabricated, installed or completed, if the Work has been rejected by OWNER's Engineer, and remove it from the Project site and replace it with non-defective Work. CONTRACTOR shall bear all direct, indirect and consequential costs of such correction or removal (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) made necessary thereby.

One Year Workmanship Correction Period:

13.12 If within one (1) year after the date of OWNER issuance of the Certificate of Acceptance, or such longer period of time as may be prescribed by Laws or Regulations, or by the terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents, any Work is found to be defective, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER's written instructions, either correct such defective Work, or, if it has been rejected by OWNER, remove it from the Project site and replace it with non-defective Work. If CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the defective Work corrected, or the rejected Work removed and replaced, and all direct, indirect and consequential costs of such removal and replacement (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) will be paid by CONTRACTOR. In special circumstances, where a particular item of equipment is placed in continuous service before acceptance of all the Work, the minimum one (1) year workmanship guarantee and equipment warranty correction period for that item may start to run from an earlier date, if so provided in the Specifications or by Written Amendment.

Acceptance of Defective Work:

13.13 If instead of requiring correction or removal and replacement of defective Work, OWNER (and, prior to OWNER Engineer's recommendation of final payment), prefers to accept it as is, OWNER may do so. CONTRACTOR shall bear all direct, indirect and consequential costs attributable to OWNER's evaluation of, and determination to accept such defective Work (such costs to be approved by OWNER's Engineer as to reasonableness and to include but not be limited to fees and charges of engineers, architects, attorneys and other professionals). If any such OWNER acceptance occurs prior to OWNER Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions to the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, OWNER may make a claim therefore as provided in Article 11. If the acceptance occurs after such final payment, an appropriate amount as determined by OWNER will be paid by CONTRACTOR to OWNER.

OWNER May Correct Defective Work:

13.14 If CONTRACTOR fails within a reasonable time after written notice by OWNER's Engineer to proceed to correct, and to actually correct defective Work; or to remove and replace rejected Work as required by OWNER's Engineer in accordance with paragraph 13.11; or if

CONTRACTOR fails to perform the Work in accordance with the Contract Documents; or if CONTRACTOR fails to comply with any other provision of the Contract Documents; OWNER may, after seven (7) calendar days written notice to CONTRACTOR, correct and remedy any such deficiency. In exercising the rights and remedies under this paragraph, OWNER shall proceed with reasonable expediency. To the extent necessary to complete corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the Project site; take possession of all or part of the Work; and suspend CONTRACTOR's services related thereto; take possession of CONTRACTOR's tools, appliances, construction equipment and machinery at the Project site; and incorporate in the Work all materials, and CONTRACTOR shall allow OWNER, OWNER's representatives, and employees such access to the Project site as may be necessary to enable OWNER to exercise the rights and remedies under this paragraph. All direct, indirect and consequential costs of OWNER in exercising such rights and remedies will be charged against CONTRACTOR, in an amount approved as to reasonableness by ENGINEER, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price, and, if the parties are unable to agree as to the amount thereof, OWNER may make a claim therefore as provided in Article 11. Such direct, indirect and consequential costs will include, but not be limited to: fees and charges of engineers; architects; attorneys; and other professionals; all court costs; and all costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of CONTRACTOR's defective Work. CONTRACTOR shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by OWNER of OWNER's rights and remedies hereunder.

ARTICLE 14 -- PAYMENTS TO CONTRACTOR AND COMPLETION

Schedule of Values:

14.1 The Schedule of Values established as provided in paragraph 2.9 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to OWNER's Engineer. Progress payments on account of Unit Price Work will be based on the number of units actually completed.

Application for Progress Payment:

14.2 At least twenty (20) calendar days before each progress payment is scheduled (but not more often than once a month), CONTRACTOR shall submit to OWNER for review, an Application for Payment filled out and signed by CONTRACTOR, covering the Work completed as of the date of the Application, and accompanied by such supporting documentation as is required by the Contract Documents. The amount of retainage with respect to progress payments (customarily 5%) will be as stipulated in the Agreement.

CONTRACTOR's Warranty of Title:

14.3 CONTRACTOR warrants and guarantees that title to any Work and materials covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER no later than the time of payment, free and clear of any and all prior claims for payment.

Review of Applications for Progress Payment:

14.4 OWNER's Engineer will, within ten (10) calendar days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and process the Application, or return the Application to CONTRACTOR indicating in writing OWNER's reasons for refusing to recommend payment. In the latter case, CONTRACTOR may make the necessary corrections and resubmit the Application. Twenty (20) calendar days after presentation of the Application for Payment with OWNER Engineer's recommendation, the amount recommended will (subject to the provisions of the last sentence of paragraph 14.7) become due, and when due will be paid by OWNER to CONTRACTOR.

14.5 OWNER Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by OWNER's Engineer, based upon ENGINEER's limited on-site observations of the Work in progress as an experienced and qualified design professional; and on OWNER Engineer's review of the Application for Payment and the accompanying data and Schedules; that the Work has progressed to the point indicated, that, to the best of OWNER Engineer's knowledge, information and belief, the status of the Work is in apparent general accordance with the Contract Documents (subject to: a later evaluation of the Work as a functioning whole; prior to or upon Substantial Completion; and subject to the results of any subsequent tests called for in the Contract Documents; and subject to a final determination of quantities and classifications for Unit Price Work under paragraph 9.10; and subject to any other qualifications stated in the OWNER Engineer's recommendation); and that CONTRACTOR is entitled to payment of the amount recommended. However, by recommending any such payment, OWNER's Engineer will not thereby be deemed to have represented that exhaustive or continuous on-site inspections have been made to check the quality or the quantity of the Work beyond the responsibilities specifically assigned to OWNER's Engineer in the Contract Documents, or that there may not be other matters or issues between the parties that might entitle CONTRACTOR to be paid additionally by OWNER, or OWNER to withhold payment to CONTRACTOR.

14.6 OWNER Engineer's recommendation of final payment will constitute an additional representation by OWNER that to the best of OWNER Engineer's knowledge, the conditions precedent to CONTRACTOR's being entitled to final payment, as set forth in paragraph 14.13, have been fulfilled.

14.7 OWNER's Engineer may refuse to recommend the whole or any part of any payment if, in OWNER Engineer's professional opinion, it would be incorrect to make such representations to OWNER. OWNER Engineer may also refuse to recommend any such payment, or, because of subsequently discovered evidence, or the results of subsequent inspections or tests, nullify any such payment previously recommended, to such extent as may be necessary in OWNER Engineer's opinion, to protect OWNER from loss because:

14.7.1 the Work is defective, or completed Work has been damaged requiring correction or replacement.

14.7.2 the Contract Price has been reduced by Written Amendment or Change Order.

14.7.3 OWNER has been required to correct defective Work or complete Work in accordance with paragraph 13.14, or

14.7.4 because of OWNER Engineer's actual knowledge of the occurrence of any of the events enumerated in paragraphs 15.2.1 through 15.2.9 inclusive.

OWNER may for its own benefit and protection and not for the direct benefit of any third parties, refuse to make payment in whole or in part of the amount recommended by OWNER's Engineer, because claims have been made against OWNER on account of CONTRACTOR's improper performance of the Work, or payment bond claims have been filed in connection with the Work and OWNER wishes to consult with CONTRACTOR and/or CONTRACTOR's surety, or there are other items entitling OWNER to a set-off against the amount recommended, but OWNER must give CONTRACTOR written notice stating the reasons for such action.

Substantial Completion:

14.8 When CONTRACTOR considers the entire Work ready for OWNER's intended use, CONTRACTOR shall notify OWNER's Engineer in writing that the entire Work is Substantially Complete (except for items specifically listed by CONTRACTOR as incomplete) and request that OWNER issue a certificate of Substantial Completion. Within a reasonable time thereafter, OWNER and CONTRACTOR shall make an inspection of the Work to determine the status of completion. If OWNER's Engineer does not consider the Work Substantially Complete, OWNER's Engineer will notify CONTRACTOR in writing giving the reasons therefore. If OWNER's Engineer considers the Work Substantially Complete, OWNER's Engineer will prepare and process a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of pending items to be completed or corrected before final payment ("punch-list"). At the time of delivery of the tentative certificate of Substantial Completion, OWNER's Engineer will deliver to CONTRACTOR a written recommendation as to the division of responsibilities pending final payment between OWNER and CONTRACTOR with respect to security, operation, safety, maintenance, heat, utilities, insurance and warranties. OWNER Engineer's aforesaid recommendation will be binding on OWNER and CONTRACTOR, until final payment.

14.9 OWNER shall have the right to exclude CONTRACTOR from the Work after the date of Substantial Completion, but OWNER shall allow CONTRACTOR reasonable access to complete or correct items on the punch list.

Partial Utilization:

14.10 Use by OWNER of any finished part of the Work, which has specifically been identified in the Contract Documents, or which OWNER and CONTRACTOR agree constitutes a separately functioning and useable part of the Work that can be used by OWNER without significant interference with CONTRACTOR's performance of the remainder of the Work, may be accomplished prior to Substantial Completion of all the Work, subject to the following:

14.10.1 OWNER at any time may request CONTRACTOR in writing to permit OWNER to use any such part of the Work which OWNER believes to be ready for

OWNER's intended use and Substantially Complete. If CONTRACTOR agrees, CONTRACTOR will certify to OWNER that said part of the Work is Substantially Complete and request OWNER to issue a certificate of Substantial Completion for that part of the Work. Within a reasonable time after such request, OWNER, and CONTRACTOR shall make an inspection of that part of the Work to determine its status of completion. If OWNER considers that part of the Work to be Substantially Complete, the provisions of paragraphs 14.8 and 14.9 will apply with respect to certification of Substantial Completion of that part of the Work, and the division of responsibility in respect thereof and access thereto.

14.10.2 OWNER may at any time request CONTRACTOR in writing to permit OWNER to take over operation of any such part of the Work, although it is not Substantially Complete. A copy of such request will be sent to OWNER's Engineer and within a reasonable time thereafter OWNER, and CONTRACTOR, shall make an inspection of that part of the Work to determine its status of completion and will prepare a list of the items remaining to be completed or corrected thereon before final payment. If CONTRACTOR does not object in writing to OWNER that such part of the Work is not ready for separate operation by OWNER, OWNER's Engineer will finalize the list of items to be completed or corrected and will deliver such list to CONTRACTOR, together with a written statement as to the division of responsibilities pending final payment between OWNER and CONTRACTOR, with respect to security, operation, safety, maintenance, HVAC, utilities, insurance, warranties and guarantees for that part of the Work, which will become binding upon OWNER and CONTRACTOR at the time when OWNER takes over such operation. During such operation and prior to Substantial Completion of such part of the Work, OWNER shall allow CONTRACTOR reasonable access to complete or correct items on any punch list, and to complete other related Work.

14.10.3 No occupancy or separate operation of part of the Work will be accomplished prior to compliance with the requirements of paragraph 5.15 in respect of CONTRACTOR's property insurance.

Final Inspection:

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

A qualified person representing CONTRACTOR shall be present at this final inspection. Prior to this inspection, all Work shall have been completed, tested, adjusted and in final operating condition, if required by the Project Specifications.

Final Application for Payment:

14.12 After CONTRACTOR has completed all such corrections to the satisfaction of OWNER's Engineer and delivered certificates of inspection, marked-up record documents, if any, depicting as-built conditions (as provided in paragraph 6.19) and other documents--all as required by the Contract Documents; and after OWNER's Engineer has indicated that the Work is

acceptable (subject to the provisions of paragraph 14.16), CONTRACTOR may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents, together with complete and legally effective releases or waivers (satisfactory to OWNER) of all claims arising out of, or filed in connection with the Work. In lieu thereof and as approved by OWNER, CONTRACTOR may furnish receipts or releases in full; an affidavit of CONTRACTOR that the releases and receipts include all labor, services, material and equipment for which a Payment Bond claim could be filed, and that all payrolls, material and equipment bills, and other indebtedness connected with the Work, for which OWNER or OWNER's property might in any way be encumbered, have been paid or otherwise satisfied; and consent of the surety to final payment, if any is required by surety. If any Subcontractor or Supplier fails to furnish a release or receipt in full, CONTRACTOR may furnish a special indemnity Bond, or other collateral satisfactory to OWNER, to indemnify OWNER against any potential third party claim.

Final Payment and Acceptance:

14.13 If, on the basis of OWNER Engineer's observation of the Work during construction and final inspection, and OWNER Engineer's review of the final Application for Payment, and accompanying documentation (all as required by the Contract Documents), OWNER's Engineer is satisfied that the Work has been completed and CONTRACTOR's other obligations under the Contract Documents have been fulfilled, OWNER's Engineer will, within twenty (20) calendar days after receipt of the final Application for Payment, indicate in writing, OWNER Engineer's recommendation of payment and process the Application for Payment. Thereupon OWNER's Engineer will give written notice to CONTRACTOR that the Work is acceptable, subject to the provisions of paragraph 14.16. Otherwise, OWNER's Engineer will return the Application to CONTRACTOR, indicating in writing the reasons for refusing to recommend final payment, in which case CONTRACTOR shall make the necessary corrections and resubmit the Application. Thirty (30) calendar days after presentation to OWNER of the Application for Payment and accompanying documentation, in appropriate final form and substance, and with OWNER Engineer's recommendation and notice of acceptability, the amount recommended by OWNER's Engineer will become due and will be paid by OWNER to CONTRACTOR.

CONTRACTOR shall submit satisfactory evidence to the OWNER that all payrolls, and other indebtedness connected with the Work have been paid, before a Final Certificate of Acceptance is issued.

14.14 If, through no fault of CONTRACTOR, final completion of the Work is significantly delayed, OWNER shall, upon receipt of CONTRACTOR's final Application for Payment and recommendation of OWNER's Engineer, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by OWNER for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in paragraph 5.1, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by CONTRACTOR to OWNER's Engineer with the Application for such Payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a final waiver of claims by OWNER.

Contractor's Continuing Obligation:

14.15 CONTRACTOR'S obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. Neither recommendation of any progress or final payment by OWNER's Engineer; nor the issuance of a Certificate of Substantial Completion or Final Acceptance; nor any payment by OWNER to CONTRACTOR under the Contract Documents; nor any use or occupancy of the Work or any part thereof by OWNER; nor any act of acceptance by OWNER; nor any failure to do so; nor the issuance of a notice of acceptability by OWNER's Engineer pursuant to paragraph 14.13; nor any correction of defective Work by OWNER, will constitute an acceptance of Work not in accordance with the Contract Documents, or a release of CONTRACTOR's obligation to perform the Work in accordance with the Contract Documents (except as provided in paragraph 14.16).

Waiver of Claims:

14.16 The making and acceptance of final payment will constitute:

14.16.1 a waiver of all claims by OWNER against CONTRACTOR, except third party claims arising from unsettled payment bond claims; from latently defective Work appearing after final inspection pursuant to paragraph 14.11; or from failure to comply with the Contract Documents or the terms of any special guarantees specified therein; however, it will not constitute a waiver by OWNER of any rights regarding CONTRACTOR's continuing obligations under the Contract Documents; and

14.16.2 a waiver of all claims by CONTRACTOR against OWNER, other than those previously and properly made in writing and still unsettled.

ARTICLE 15 -- SUSPENSION OF WORK AND TERMINATION

Owner May Suspend Work:

15.1 OWNER may, at any time and without cause, suspend the Work or any portion thereof for a period of not more than thirty (30) calendar days by notice in writing to CONTRACTOR, which will fix the date on which Work will be resumed. CONTRACTOR shall resume the Work on the date so fixed. CONTRACTOR may be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension, if CONTRACTOR demonstrates an approved claim therefore as provided in Articles 11 and 12. Any increase or decrease in the Contract Price shall be governed by all State and local laws, statutes, codes, ordinances, rules and regulations governing public competitive bidding and Change Orders.

Owner May Terminate:

15.2 Upon the occurrence of any one or more of the following events:

15.2.1 if CONTRACTOR commences a voluntary case under any chapter of the Bankruptcy Code (Title 11, United States Code), as now or hereafter in effect, or if

CONTRACTOR takes any equivalent or similar action by filing a petition or otherwise, under any other federal or State law in effect at such time, relating to the bankruptcy or insolvency;

15.2.2 if a petition is filed against CONTRACTOR under any chapter of the Bankruptcy Code as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against CONTRACTOR under any other federal or State law in effect at the time relating to bankruptcy or insolvency;

15.2.3 if CONTRACTOR makes a general assignment for the benefit of creditors;

15.2.4 if a trustee, receiver, custodian or agent of CONTRACTOR is appointed under applicable law or under contract, whose appointment or authority to take charge of the property of CONTRACTOR is for the purpose of enforcing a lien against such CONTRACTOR property, or for the purpose of general administration of such CONTRACTOR property, for the benefit of CONTRACTOR's creditors;

15.2.5 if CONTRACTOR admits in writing an inability to pay its debts generally as they become due;

15.2.6 if CONTRACTOR persistently fails to perform the Work in accordance with the Contract Documents (including but not limited to, failure to supply sufficient skilled workers or equipment, or failure to adhere to the Progress Schedule established under paragraph 2.9, as revised from time to time);

15.2.7 if CONTRACTOR disregards Laws or Regulations of any public body having jurisdiction;

15.2.8 if CONTRACTOR disregards the rights of OWNER; or

15.2.9 if CONTRACTOR otherwise violates in any substantial and material way, any provisions of the Contract Documents;

OWNER may, after giving CONTRACTOR and the surety seven (7) calendar days written notice, and to the extent permitted by Laws and Regulations: terminate the services of CONTRACTOR; exclude CONTRACTOR from the site and take possession of the Work and of all CONTRACTOR's tools, appliances, construction equipment and machinery at the Project site; and use the same to the full extent they could be used by CONTRACTOR (without OWNER liability to CONTRACTOR for trespass or conversion), and finish the Work as OWNER may deem expedient. In such case, CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract price exceeds the OWNER's direct, indirect and consequential costs of completing the Work (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court costs), such excess will be paid to CONTRACTOR or surety. If such OWNER costs exceed such unpaid balance, CONTRACTOR or surety shall pay the difference to OWNER. Such costs incurred by OWNER will be incorporated in a Change Order, but when exercising any rights or remedies under this paragraph, OWNER shall not be required to obtain the lowest price for the Work performed.

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

15.4 Upon seven (7) calendar days written notice to CONTRACTOR, OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the Work and terminate the Agreement. In such case, CONTRACTOR shall mitigate demobilization costs as best as possible and be paid for all Work executed and expenses sustained, plus reasonable termination expenses, which will include, but not be limited to, direct, indirect and consequential costs (including, but not limited to, fees and charges of engineers, architects, attorneys and other professionals and court costs).

15.5 (RESERVED)

ARTICLE 16 -- TIME FOR SUBSTANTIAL COMPLETION AND LIQUIDATED DAMAGES.

16.1. IT IS HEREBY UNDERSTOOD AND MUTUALLY AGREED, BY AND BETWEEN THE PARTIES HERETO, THAT THE DATE OF BEGINNING, RATE OF PROGRESS AND THE TIME FOR SUBSTANTIAL COMPLETION OF THE WORK TO BE DONE HEREUNDER ARE ESSENTIAL CONDITIONS OF THIS CONTRACT; and it is further mutually understood and agreed, by and between the parties hereto, that the time to perform the Work embraced in this Contract shall be commenced on a date to be specified in the Notice to Proceed.

16.2 CONTRACTOR agrees that said Work shall be prosecuted regularly, diligently, and uninterrupted at such rate of progress as will insure Substantial Completion thereof within the time specified. It is expressly understood and mutually agreed, by and between the parties hereto, that the time for the Substantial Completion of the Work described herein is a reasonable time for Substantial Completion of same, taking into consideration the average climatic range and weather conditions that the CONTRACTOR must reasonably anticipate, and usual industrial conditions prevailing in the Cameron County area.

16.3 If CONTRACTOR shall neglect, fail or refuse to Substantially Complete the Work within the time herein specified, then CONTRACTOR does hereby agree, as a part consideration for awarding of this Contract, to pay the OWNER the mutually agreed to amount specified in the Contract, not as a penalty, but as liquidated damages for such breach of Contract as hereinafter set forth, for each and every calendar day that CONTRACTOR shall be in default, after the time stipulated in the Contract for Substantially Completing the Work.

16.4 The damage to OWNER by reason of this Contract not being Substantially Completed as of that date are incapable of definite ascertainment by either party, and therefore the parties hereto have mutually fixed and limited such damages to the sum stipulated in the Agreement for each calendar day the job runs beyond such Substantial Completion date, and the joint fixing of such damages constitutes a part of the consideration for the Contract. It is further agreed that **TIME IS OF THE ESSENCE** of each and every portion of this Contract and of the

Specifications, wherein a definite and certain length of time is fixed for the performance of any act whatsoever; and where under the Contract, additional time is allowed for the Substantial Completion of any Work, the new time fixed by such extension shall be **OF THE ESSENCE** of this Contract. Provided that CONTRACTOR shall not be charged with liquidated damages or any excess cost when the delay in the Substantial Completion of Work is due:

16.4.1 To any preference, priority or allocation order duly issued by the Federal Government.

16.4.2 To unforeseeable causes beyond the control and without the fault or negligence of CONTRACTOR, including, but not restricted to: Acts of God; or of the public enemy; acts of the OWNER; acts of another contractor in the performance of a separate contract with the OWNER; fires; floods exceeding the 100 year frequency; epidemics; quarantine restrictions; strikes; freight embargoes and unusually severe weather not customary for the Cameron County, Texas area.

16.4.3 To any delays of Subcontractors occasioned by any of the causes specified in 16.4.1 or 16.4.2.

16.4.4 Provided further, that CONTRACTOR shall immediately attempt to mitigate the impacts of the delay, and then within seven (7) calendar days from the beginning of such delay, notify OWNER, in writing, of the causes of the delay. OWNER shall then ascertain the facts and extent of the delay and notify CONTRACTOR within a reasonable time of OWNER's decision in the matter regarding any adjustment to the Contract time and a recovery plan.

ARTICLE 17 -- MISCELLANEOUS

Giving Notice:

17.1 Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the CONTRACTOR's Project Superintendent or mailed to an officer of the corporation in the case of the CONTRACTOR; or to the General Manager and CEO of the BPUB in the case of the OWNER; or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

Computation of Calendar Day Time:

17.2 When any period of time is referred to in the Contract Documents by "days", and the OWNER'S format for scheduling the Project is by utilizing calendar days in lieu of working days, it will be computed as calendar days, to exclude the first and include the last calendar day of such period. If the last calendar day of any such period falls on a calendar day listed as a BPUB holiday by the Contract Documents, such calendar day will be omitted from the computation.

17.2.1 A calendar day of twenty-four hours is measured from midnight, to the next midnight, and shall constitute a single calendar day.

General:

17.3 Should OWNER suffer injury or damage to person or property because of any error, omission or negligent act of the CONTRACTOR, or of any of the CONTRACTOR's employees or agents, or others for whose acts and/or omissions CONTRACTOR is legally liable, OWNER's claim will be made in writing to the CONTRACTOR within a reasonable time of the first observance of such injury or damage. The provisions of this paragraph 17.3 shall not be construed as a substitute for, or a waiver of, the legal provisions of any applicable statute of limitations or repose.

17.4 The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the conditions, warranties, guarantees and obligations imposed upon CONTRACTOR by paragraphs 6.30, 13.1, 13.12, 13.14, 14.3 and 15.2, and all of the rights and remedies available to OWNER and OWNER'S Engineer thereunder; are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to OWNER which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this paragraph will be as effective as if repeated specifically in all the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply. All representations, conditions, warranties and guarantees made in the Contract Documents will survive the execution, final payment and termination or completion of the Agreement. All CONTRACTOR recitations contained in any document required by OWNER, whether delivered at the time of the execution of the Contract Documents, or at a later date, shall constitute representations, warranties and guarantees by CONTRACTOR herein.

17.5 CONTRACTOR shall comply with the "anti-kickback" provisions of the Copeland Act now codified at 18 U. S. C. A. §874, and all amendments or modifications of the original act of June 13, 1934.

SUPPLEMENTARY GENERAL CONDITIONS

SECTION 1 - WAGE AND LABOR STANDARD PROVISIONS-100% NON-FEDERALLY FUNDED CONSTRUCTION

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16. "ANTI-KICKBACK" PROVISION
17. "FALSE INFORMATION" PROVISION
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20. EMPLOYMENT OF CERTAIN PERSONS PROHIBITED
21. PROVISIONS TO BE INCLUDED IN SUBCONTRACTS

1. GENERAL STATEMENT

This is a 100% Non-Federally funded and competitively bid Public Works Contract and Texas Government Code Section 2258.001 et seq., as amended, requires that not less than the general prevailing wage rates (minimum hourly base pay and minimum hourly fringe benefit contribution) for Work of similar character be paid to CONTRACTOR and subcontractor employees. These local prevailing and adopted wage rates are derived from the most current applicable pre-Bid federal prevailing wage rates for Cameron County, Texas, as published by the United States Department of Labor, Dallas, Texas pursuant to the original intent and authority of the Resolution passed by the Public Utilities Board of Brownsville on February 24, 1992 (hereinafter referred to as "BPUB"). Copies of the wage rates are contained immediately behind these Supplementary General Conditions, and are included instruments of this Contract and full compliance with same shall be required.

Additionally, on April 16, 2007, the BPUB Board of Directors approved a local "living wage" policy that requires all Contractors and Subcontractors performing 100% Non-Federally funded Work for the BPUB to pay a minimum wage rate of \$8.00/hour, regardless of any lower federal wage rate for Cameron County. The BPUB requires that all Contractors and Subcontractors also comply with this policy. Otherwise, the BPUB adopts the Federal Department of Labor Wage scales for Cameron County on 100% Non-Federally funded projects as specified later herein behind these Supplementary General Conditions.

Any deviation from Wage and Labor Standard Provisions compliance may be cause for OWNER's withholding either interim or final payment to the CONTRACTOR until such deviations are properly corrected.

2. WAGE & HOUR OFFICE, PUBLIC WORKS, RESPONSIBILITIES

The OWNER's Engineer or the BPUB Wage & Hour Monitor is primarily responsible for all Wage and Labor Standard Provisions investigation and enforcement and will monitor Contractor/subcontractor practices to assure the BPUB General Manager and CEO that:

- a. Appropriate weekly compliance statements and payroll records are submitted to the BPUB by the Contractor/subcontractors and that such are reviewed for compliance with Wage and Labor Standard Provisions.
- b. Any Apprentices/trainees designated by CONTRACTOR as working on the Project are properly identified by Contractor/subcontractor on payroll records and documented as being included in programs currently sanctioned by appropriate federal or state regulatory agencies.
- c. Applicable Wage Determination Decisions, including any applicable modifications and related statements are posted at the Work-site by the Contractor and that proper job classifications and commensurate minimum hourly base and any fringe wage rates are paid.

- d. Employees are periodically interviewed (at random) on the Project as required.
- e. That no person employed by Contractor/subcontractor is induced against his will, by any means, to give up any part of the compensation to which he is otherwise entitled.
- f. That any and all periodic administrative directives to the OWNER'S Engineer and/or Wage & Hour Monitor from the Board and General Manager and CEO are being implemented.

3. CLAIMS & DISPUTES PERTAINING TO WAGE RATES

Claims and disputes not promptly and routinely settled by the CONTRACTOR/subcontractor and employees pertaining to wage rates, or to job classifications of labor employed upon the Work covered by this Contract, shall be reported by the employee in writing, within sixty (60) calendar days of employee's receipt of any allegedly incorrect classification, wage or benefit report, to the OWNER's Engineer and/or Wage & Hour Monitor, BPUB for further investigation. Claims and disputes not reported by the employee to the OWNER in writing within the sixty (60) calendar day period shall be deemed waived by the employee for the purposes of the OWNER administering and enforcing the OWNER's Contract rights against the CONTRACTOR on behalf of the employee. Waiver by the employee of this OWNER intervention shall not constitute waiver by the OWNER or employee to independently pursue contractual rights it may have against the CONTRACTOR/subcontractor for breach of contract and other sanctions available to enforce the Wage and Labor Standard Provisions.

4. BREACH OF WAGE AND LABOR STANDARD PROVISIONS

The OWNER reserves the right to terminate this Contract for cause if the Contractor/subcontractors shall knowingly and continuously breach, without timely restitution or cure, any of these governing Wage and Labor Standard Provisions. A knowing and unremedied proven violation of these Wage and Labor Standard Provisions may also be grounds for debarment of the CONTRACTOR/subcontractor from future OWNER contracts for lack of responsibility, as later determined by the OWNER. Recurrent violations, whether remedied or not, will be considered by the General Manager and CEO when assessing the responsibility history of a potential contractor/subcontractor prior to competitive award of future Public Works projects. The general remedies stated in this paragraph 4. above, are not exhaustive and not cumulative, for the OWNER reserves legal and contractual rights to other specific remedies outlined herein below and in other parts of this Contract and as are allowed by applicable OWNER resolutions, State and federal statutes.

5. EMPLOYMENT OF LABORERS/MECHANICS NOT LISTED IN WAGE DETERMINATION DECISION

In the event that a CONTRACTOR/subcontractor discovers that construction of a particular Work element requires a certain employee classification and skill that is not

listed in the Wage Determination Decision contained in the original Contract Documents, CONTRACTOR/subcontractors will make prompt inquiry (before bidding, if possible) to the OWNER identifying that class of laborers/mechanics not listed in the Wage Determination Decision who are intended to be employed, or who are being employed, under the Contract. Using his best judgment and information resources available to him at the time, and any similar prior local or federal decisions, the General Manager and CEO of the OWNER, shall classify said laborers/mechanics by issuing a special local wage determination decision to the CONTRACTOR/subcontractor, which shall be enforced by the OWNER.

6. MINIMUM WAGE

All laborers/mechanics employed to construct the Work governed by this Contract shall be paid not less than weekly the full amount of wages due (minimum hourly base pay and any applicable minimum hourly fringe benefit contribution for all hours worked, including overtime) for the immediately preceding pay period, computed at wage and any fringe rates not less than those contained in the Wage Determination Decision included in this Contract. Only payroll deductions as are mandated by State or federal law, and those legal deductions previously approved in writing by the employee, or as are otherwise permitted by State or federal law, may be withheld by the CONTRACTOR/subcontractor.

Should the CONTRACTOR/subcontractor subscribe to fringe benefit programs for employees, such programs shall be fully approved by the OWNER in adopting a previous U.S. Department of Labor decision on such fringe benefit programs or by applying DOL criteria, in rendering a local decision on the adequacy of the CONTRACTOR's fringe benefit programs. The approved programs shall be in place at the time of OWNER Contract execution and provisions thereof disclosed to the OWNER's Engineer or Wage and Hour Monitor, for legal review prior to Project commencement.

Regular CONTRACTOR/subcontractor contributions made to, or costs incurred for, approved fringe benefit plans, funds or other benefit programs that cover periods of time greater than the one week payroll period (e.g. monthly or quarterly, etc.) shall be prorated by the CONTRACTOR/subcontractor on weekly payroll records to reflect the equivalent value of the hourly and weekly summary of fringe benefits per employee.

7. OVERTIME COMPENSATION ON NON-FEDERALLY FUNDED PROJECTS

No CONTRACTOR/subcontractor contracting for any part of the non-federally funded Contract Work (except for worksite related security guard services), which may require or involve the employment of laborers/mechanics, shall require or permit any laborer/mechanic in any seven (7) calendar day Work period in which he, she is employed on such Work, to Work in excess of 40 hours in such Work period, unless said laborer/mechanic receives compensation at a rate not less than one and one-half times the basic hourly rate of pay for all hours worked in excess of 40 hours in a seven (7) calendar day Work period. Any applicable fringe benefits must be paid for straight time and overtime; however, fringe benefits are not included when computing the overtime rate.

8. PAYMENT OF CASH EQUIVALENT FRINGE BENEFITS

The CONTRACTOR/subcontractor is allowed to pay a minimum hourly cash equivalent of any applicable minimum hourly fringe benefits listed in the Wage Determination Decision, in lieu of the contribution of benefits to a permissible fringe benefit plan, for all hours worked, including overtime. An employee is not allowed to receive less than the local \$8.00 pr. hour minimum living wage or the minimum hourly basic rate of pay specified in the Wage Determination Decision, whichever is greater.

9. WORK CONDUCTED ON HOLIDAYS-NON-FEDERALLY FUNDED PROJECTS

If a laborer/mechanic is employed in the normal course and scope of his or her Work on the jobsite on New Year's Day, Martin Luther King Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day, or the calendar days observed as such in any given year, along with additional OWNER-designated local holidays to be annually determined by OWNER and provided in writing to CONTRACTOR, Work shall be paid for at no less than one and one half (1 1/2) times the regular minimum hourly base pay regardless of the total number of hours the laborer/mechanic has accumulated during the pay period.

10. UNDERPAYMENT OF WAGES OR SALARIES

- a. When a "full investigation" (as called for in and as construed under Texas Government Code Section 2258.001 et seq. and as further generally described in an administrative directive to the OWNER's Engineer and BPUB's Wage & Hour Monitor from the General Manager and CEO entitled "Conducting Wage and Labor Standards Investigations on 100% Non-Federally Funded BPUB Construction Projects", as may be amended) evidences underpayment of wages by CONTRACTOR/subcontractor to laborers/mechanics employed upon the Work covered by this Contract, the OWNER, in addition to such other rights as may be afforded it under State and/or federal law and/or this Contract, shall withhold from the CONTRACTOR, out of any payments (interim progress and /or final) due the CONTRACTOR, so much thereof as the OWNER may consider necessary to secure ultimate payment by the appropriate party to such laborers/mechanics, of full wages required by this Contract, plus possible penalty (See b. below). The amount so withheld, excluding any possible penalty to be retained by the OWNER, may be disbursed at an appropriate time after "full investigation" by the OWNER, for and on behalf of the CONTRACTOR/subcontractor (as may be appropriate), to the respective laborers/mechanics to whom the same is due, or on their behalf to fringe benefit plans, funds, or programs for any type of minimum fringe benefits prescribed in the applicable wage determination decision.
- b. Texas Government Code Section 2258.001 et seq., as amended, states that the CONTRACTOR shall forfeit as a penalty to the OWNER the sum of sixty dollars (\$60.00) for each calendar day, or portion thereof, for each laborer, workman, or mechanic, who is paid less than the said stipulated rate for any Work done under this Contract, whether by the CONTRACTOR himself, or by any subcontractor

working under him. Pursuant to and supplemental to this statutory authority, the OWNER and the CONTRACTOR/subcontractor contractually acknowledge and agree that said sixty dollar (\$60.00) statutory penalty shall be construed by and between the OWNER and the CONTRACTOR/subcontractor as liquidated damages, and not as a penalty, and will apply to any violations of paragraphs 6, 7, or 9 herein, resulting from CONTRACTOR/subcontractor underpayment violations.

- c. If unpaid or underpaid workers cannot be located by the CONTRACTOR or the OWNER after diligent efforts to accomplish same, unpaid or underpaid wages shall be reserved by the OWNER in a special "unfound worker's account" established by the OWNER, for such employees. If after one (1) year from the final acceptance of the Project by the OWNER, workers still cannot be located, in order that the OWNER can make effective interim re-use of the money, such wages and any associated liquidated damages may be used to defray actual costs incurred by the OWNER in attempting to locate said workers, and any remaining monies may then revert back to the OWNER's original funding source for the Project. However, unpaid or underpaid workers for which money was originally reserved are eligible to claim recovery from the OWNER for a period of not-to-exceed three (3) years from the final acceptance of the Project by the OWNER. Recovery after expiration of the three year period is prohibited.

11. DISPLAYING WAGE DETERMINATION DECISIONS/AND NOTICE TO LABORERS/MECHANICS STATEMENT

The applicable Wage Determination Decision as described in the "General Statement" (and as specifically included in the Project Contract), outlining the various worker classifications and mandatory minimum wages and minimum hourly fringe benefit deductions, if any, of laborers/mechanics employed and to be employed upon the Work covered by this Contract, shall be displayed by the CONTRACTOR/subcontractor at the site of Work in a conspicuous and prominent public place, readily and routinely accessible to workmen for the duration of the Project. In addition, the CONTRACTOR/subcontractor agrees with the contents of the following statement, and shall display same, in English and Spanish, near the display of the wage determination decision at the site of Work:

Both the OWNER and the CONTRACTOR/subcontractor agree that you must be compensated with not less than the minimum hourly base pay of \$8.00 pr. hour or other greater minimum hourly base pay based upon job classification, and minimum hourly fringe benefit contribution in accordance with the wage rates publicly posted at this jobsite, and as are applicable to the classification of Work you perform.

Additionally, you must be paid not less than one and one-half times your basic hourly rate of pay for any hours worked over 40 in any seven (7) calendar day Work period, and for any Work conducted on New Year's Day, Martin Luther King Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day or the calendar days observed as such in any given year, along with additional OWNER-designated local holidays to be annually determined by OWNER and provided to CONTRACTOR.

Apprentice and trainee hourly wage rates and ratios apply only to apprentices and trainees recognized under approved Federal, or State, apprenticeship training programs registered with the Bureau of Apprenticeship and Training, U.S. Dept. of Labor.

If you believe that your employer is not paying the appropriate minimum wage for the type of Work you do, you must make direct inquiry to the CONTRACTOR/subcontractor and inquire in writing, within sixty (60) calendar days of your receipt of any allegedly incorrect wage or benefit check or report, to the BPUB(OWNER's) Engineer and/or BPUB Wage & Hour Monitor, 1425 Robinhood Drive, Brownsville, Texas 78520. It is mandatory that you promptly file written inquiry of any allegedly incorrect wage or benefit checks or reports with the BPUB within the sixty (60) calendar day period, so that you do not waive your potential right of recovery under the provisions of the BPUB (OWNER) construction Contract that governs this Project.

Both the OWNER and the Contractor/subcontractor agree that no laborer/mechanic who files a complaint or inquiry concerning alleged underpayment of wages or benefits, shall be discharged by the employer, or in any other manner be discriminated against by the employer, for filing such complaint or inquiry.

12. PAYROLLS & BASIC PAYROLL RECORDS

- a. The CONTRACTOR and each subcontractor shall prepare payroll reports in accordance with the "General Guideline" instructions furnished by the OWNER's Engineer or Wage & Hour Monitor of the BPUB. Such payroll submittals shall contain the name and address of each such employee, his correct labor classification, rate of pay, daily and weekly number of hours worked, any deductions made, and actual basic hourly and fringe benefits paid. The CONTRACTOR shall submit payroll records each week, and no later than seven (7) working days following completion of the workweek being processed, to the OWNER's Engineer or Wage & Hour Monitor, BPUB. These payroll records shall include certified copies of all payrolls of the CONTRACTOR and of his subcontractors, it being understood that the CONTRACTOR shall be responsible for the submission and general mathematical accuracy of payrolls from all of his subcontractors. Each such payroll submittal shall be on forms deemed satisfactory to the OWNER's Engineer or Wage & Hour Monitor, and shall contain a "Weekly Statement of Compliance", as called for by the Contract Documents. Such payrolls will be forwarded to OWNER's Engineer or Wage & Hour Monitor, 1425 Robinhood Drive, Brownsville, Texas 78520.
- b. Copies of payroll submittals and basic supporting payroll records of the CONTRACTOR/subcontractors accounting for all laborers/mechanics employed under the Work covered by this Contract, shall be maintained by CONTRACTOR/subcontractor during the course of the Work, and preserved for a period of three (3) years after completion of the Project. The CONTRACTOR/subcontractors shall maintain records which demonstrate: any CONTRACTOR/subcontractors commitment to provide fringe benefits to

employees as may be mandated by the applicable Wage Determination Decision; that the plan or program is adjudged financially responsible by the appropriate approving authority, (i.e. U.S. Department of Labor, U.S. Department of Treasury, etc.); and that the provisions, policies, certificates, and description of benefits of the plan or program as may be periodically amended, have been clearly communicated in a timely manner and in writing, to the laborers/mechanics affected prior to their performing Work on the Project.

- c. The CONTRACTOR/subcontractor shall make the above records available for inspection, copying, or transcribing by authorized OWNER's Engineer or Wage & Hour Monitor of the BPUB at reasonable times and locations for purposes of monitoring compliance with this Contract.

13. LABOR DISPUTES

The CONTRACTOR/subcontractor shall immediately notify the BPUB General Manager and CEO or his designated representative of any actual or impending CONTRACTOR/subcontractor labor dispute which may affect, or is affecting, the Schedule of the CONTRACTOR's or any other contractor's/subcontractor's Work. In addition, the CONTRACTOR/subcontractor shall consider all appropriate measures to eliminate or minimize the effect of such labor disputes on the Schedule, including but not limited to such measures as: promptly seeking injunctive relief if appropriate; seeking appropriate legal or equitable actions or remedies; taking such measures as establishing a reserved gate, as appropriate; if reasonably feasible, seeking other sources of supply or service; and any other measures that may be appropriately utilized to mitigate or eliminate the jobsite and Scheduling effects of the labor dispute.

14. COMPLAINTS, PROCEEDINGS, OR TESTIMONY BY
CONTRACTOR/SUBCONTRACTOR EMPLOYEES

No laborers/mechanics to whom the wage, salary, or other labor standard provisions of this Contract are applicable shall be discharged, or in any other manner discriminated against by the CONTRACTOR/subcontractors, because such employee has filed any formal inquiry or complaint, or instituted or caused to be instituted, any legal or equitable proceeding, or has testified, or is about to testify, in any such proceeding under or relating to the wage and labor standards applicable under this Contract.

15. EMPLOYEE INTERVIEWS TO ASSURE WAGE AND LABOR STANDARD
COMPLIANCE

CONTRACTOR/subcontractors shall allow expeditious jobsite entry of the OWNER's Engineer and/or Wage & Hour Monitor displaying and presenting proper BPUB identification credentials to the jobsite superintendent or his representative. While on the jobsite, the OWNER's Engineer and/or Wage & Hour Monitor shall observe all jobsite rules and regulations concerning safety, internal security and fire prevention. CONTRACTOR/subcontractors shall allow Project employees to be separately and confidentially interviewed at random for a reasonable duration by the OWNER's Engineer

and/or Wage & Hour Monitor to facilitate compliance determinations regarding adherence by the CONTRACTOR/subcontractor to these Wage and Labor Standard Provisions.

16. "ANTI-KICKBACK" PROVISION

No person employed in the construction or repair of any BPUB public works Project shall be induced, by any means, to give up to the CONTRACTOR/subcontractor or City of Brownsville or BPUB public official or employee, any part of the hourly and/or fringe benefit compensation to which he or she is otherwise entitled.

17. "FALSE OR DECEPTIVE INFORMATION" PROVISION

Any person employed by the CONTRACTOR/subcontractor in the construction or repair of any BPUB public works project, who is proven to have knowingly and willfully falsified, concealed or covered up by any deceptive trick, scheme, or device a material fact, or made any false, fictitious or fraudulent statement or representation, or made or used any false writing or document knowing the same to contain any false, fictitious or fraudulent statement or entry, shall be permanently removed from the jobsite by the CONTRACTOR/subcontractor. The OWNER reserves the right to terminate this Contract for cause as a result of serious and uncured violations of this provision.

18. EMPLOYMENT OF APPRENTICES/TRAINEES

- a. Apprentices will be permitted to work at less than the predetermined rate for the Work they perform when they are employed and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship & Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship & Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen in any craft classification shall not be greater than the ratio under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not a trainee as defined in (b) below, or is not registered or otherwise employed as stated above, shall be paid the wage rate for the classification of work he actually performs. The CONTRACTOR/subcontractor is required to furnish to the OWNER'S Engineer or Wage & Hour Monitor of the BPUB, a copy of the certification, along with the payroll record that the employee is first listed on. The wage rate paid apprentices shall be not less than the specified rate in the registered program for the apprentice's level of progress expressed as the appropriate percentage of the journeyman's rate contained in the applicable Wage Determination Decision.
- b. Trainees will be permitted to work at less than the predetermined rate for the Work performed when they are employed pursuant to an individually registered 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 shall not be greater than that 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 his/her level of progress. Any employee listed on the payroll at a trainee wage 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 wage rate determined by the classification of Work he actually performs. The CONTRACTOR/subcontractor is required to furnish a copy of the trainee program certification, registration of employee-trainees, ratios and wage rates prescribed in the program, along with the payroll record that the employee is first listed on, to the OWNER's Engineer or Wage & Hour Monitor of the BPUB. In the event the Employment and Training Administration withdraws approval of a training program, the CONTRACTOR/subcontractor 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 by the Employment and Training Administration.

- c. Paragraphs 18.a. and b. above shall not operate to exclude training programs approved by the OFCCP, United States Department of Labor and as adopted by the Associated General Contractors (AGC) of Texas, Highway, Heavy, Utilities and Industrial Branch. Guidelines for these training programs shall be the same as those established for federally funded projects. This sub-paragraph 18.c. shall not apply to those portions of a project deemed to be building construction.

d. RATIOS, APPRENTICE TO JOURNEYMAN:

The Ratio of Apprentice to Journeyman for this Project shall be the same as the Ratio permitted under the plan approved by the Employment and Training Administration, Bureau of Apprenticeship and Training, U.S. Department of Labor, by craft. A copy of the allowable Ratios is included with the applicable Wage Determination Decision in the Specifications for this Project.

When a "full investigation" (as called for in, and as construed under Texas Government Code Section 2258.001 et. seq., and as further generally described in an administrative directive to the OWNER's Engineer and BPUB's Wage & Hour Monitor from the General Manager entitled "Conducting Wage and Labor Standards Investigations on 100% Non-Federally Funded BPUB Construction Projects", as may be amended) evidences a violation of the Apprentice or Trainee to Journeyman ratios effective for CONTRACTOR/subcontractor employees working on this Contract, the POWNER, in addition to such other rights as may be afforded it under State and/or federal law and/or other sections of this Contract (especially paragraph 10, of these Supplementary General Conditions "Underpayment of Wages"), shall withhold from the CONTRACTOR, out of any payments (interim progress and/or final) due the CONTRACTOR, the liquidated

damages (not a penalty) sum of seventy-five dollars (\$75.00) for each calendar day, or portion thereof, for each certified Apprentice or Trainee employee assigned to a Journeyman that exceeds the maximum allowable Apprentice/Trainee to Journeyman ratio stipulated for any Work done under this Contract, whether by the CONTRACTOR himself, or by any subcontractor working under him.

19. JOBSITE CONDITIONS

CONTRACTOR/subcontractor will not allow any person employed for the Project to work in surroundings or under construction conditions which are unsanitary, unhealthy, hazardous, or dangerous as governed by industry standards and appropriate City of Brownsville, State and federal statutes, ordinances, and regulatory guidelines.

20. EMPLOYMENT OF CERTAIN PERSONS PROHIBITED

- a. The CONTRACTOR/subcontractor shall knowingly only employ persons of appropriate ages commensurate with the degree of required skill, strength, maturity and judgment associated with the activity to be engaged in, but not less than the age of fourteen (14) years, as governed by Chapter 51 "Employment of Children", Texas Labor Code, (Vernon's Texas Codes Annotated) (as may be amended), and Texas Department of Labor and Standards rulings and interpretations associated with that statute. It is hereby noted that in some circumstances generally governed by this section, a federal statute (see: Fair Labor Standards Act, 29 USCS Section 212; Volume 6A of the Bureau of National Affairs Wage Hour Manual at Paragraph 96:1; "Child Labor Requirements in Nonagricultural Occupations" WH Publication 1330, July 1978 as may be amended), could pre-empt the Texas Statute and therefore be the controlling law on this subject. The CONTRACTOR/subcontractor should seek clarification from State and federal agencies and CONTRACTOR's legal counsel when hiring adolescent employees for particular job classifications.
- b. Prohibited persons not to be employed are also those persons who, at the time of employment for this Contract, are serving sentence in a penal or correctional institution, except that prior approval by the BPUB General Manager is required to employ any person participating in a supervised work release or furlough program that is sanctioned by appropriate State or federal correctional agencies.
- c. The CONTRACTOR/subcontractors shall be responsible for compliance with the provisions of the "Immigration Reform and Control Act of 1986" Public Law 99-603, and any related State enabling or implementing statutes, especially as they in combination apply to the unlawful employment of aliens and unfair immigration-related employment practices affecting this Contract.

21. PROVISIONS TO BE INCLUDED IN SUBCONTRACTS

The CONTRACTOR shall cause these Wage and Labor Standard Provisions, or reasonably similar contextual adaptations hereof, and any other appropriate State and federal labor

provisions, to be inserted in all subcontracts relative to the Work to bind subcontractors to the same Wage and Labor Standards as contained in these terms of the General Conditions and other Contract Documents, insofar as applicable to the Work of subcontractors or sub-tier subcontractors, and to give the CONTRACTOR similar, if not greater, general contractual authority over the subcontractor, or sub-tier subcontractors, as the OWNER may exercise over the CONTRACTOR.

General Decision Number: TX20250003 01/03/2025
Superseded General Decision Number: TX20240003
State: Texas

Construction Types: Heavy and Highway
Counties: Cameron, Hidalgo and Webb Counties in Texas.

HEAVY & HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 20, 2022: Executive Order 14026 generally applies to the contract. The contractor must pay all covered workers at least \$17.75 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025.

If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022: Executive Order 13658 generally applies to the contract. The contractor must pay all covered workers at least \$13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2025.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

| Modification Number | Publication Date |
|---------------------|------------------|
| 0 | 01/03/2025 |

SUTX2011-003 08/02/2011

| | Rates | Fringes |
|--|-------|---------|
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| CEMENT MASON/CONCRETE FINISHER (Paving & Structures)..... | \$ 12.46 | ** |
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| FORM BUILDER/FORM SETTER (Structures)..... | \$ 12.30 | ** |
|---|----------|----|

FORM SETTER (Paving & Curb)...\$ 12.16 **

LABORER

Asphalt Raker.....\$ 10.61 **
Flagger.....\$ 9.10 **
Laborer, Common.....\$ 9.86 **
Laborer, Utility.....\$ 11.53 **
Pipelayer.....\$ 11.87 **
Work Zone Barricade
Servicer.....\$ 12.88 **

POWER EQUIPMENT OPERATOR:

Asphalt Distributor.....\$ 13.48 **
Asphalt Paving Machine.....\$ 12.25 **
Broom or Sweeper.....\$ 10.33 **
Crane, Lattice Boom 80
Tons or Less.....\$ 14.39 **
Crawler Tractor.....\$ 16.63 **
Excavator, 50,000 lbs or less....\$ 12.56 **
Excavator, over 50,000 lbs.....\$ 15.23 **
Foundation Drill, Truck
Mounted.....\$ 16.86 **
Front End Loader Operator,
Over 3 CY.....\$ 13.69 **
Front End Loader, 3 CY or
less.....\$ 13.49 **
Loader/Backhoe.....\$ 12.77 **
Mechanic.....\$ 15.47 **
Milling Machine.....\$ 14.64 **
Motor Grader Operator,
Rough.....\$ 14.62 **
Motor Grader, Fine Grade.....\$ 16.52 **
Scraper.....\$ 11.07 **

Servicer.....\$ 12.34 **

Steel Worker (Reinforcing).....\$ 14.07 **

TRUCK DRIVER

Lowboy-Float.....\$ 13.63 **
Single Axle.....\$ 10.82 **
Single or Tandem Axle Dump..\$ 14.53 **
Tandem Axle Tractor with
Semi Trailer.....\$ 12.12 **

WELDER.....\$ 14.02 **

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.
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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$17.75) or 13658 (\$13.30). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100%

of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R. 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

- a) a survey underlying a wage determination
- b) an existing published wage determination
- c) an initial WHD letter setting forth a position on a wage determination matter
- d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to

davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

END OF GENERAL DECISION

BPUB TECHNICAL SPECIFICATIONS

SECTION 01010
SUMMARY OF WORK

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and Contract documents, including Division 0 and Division 1 Contract requirements and technical Specifications.

1.02 SCOPE OF WORK

- A. This section describes the Project in general and provides an overview of the extent of the Work to be performed by the CONTRACTOR. Detailed requirements and extent of Work is stated in the applicable Specification Sections and shown on the Drawings. CONTRACTOR shall, except as otherwise specifically stated herein or in any applicable part of these Contract Documents, provide and pay for all labor, materials, equipment, tools, construction equipment, and other facilities and services necessary for proper execution, testing, and completion of the Work.
- B. Any part or item of the Work which is reasonably implied or normally required to make the installation satisfactorily operable shall be performed by the CONTRACTOR and the expense thereof shall be included in the applicable unit prices or lump sum prices bid for the Work. It is the intent of these Specifications to provide the OWNER with the complete system. All miscellaneous appurtenances and other items of Work that are incidental to meeting the intent of the Specifications shall be considered as having been included in the applicable unit prices or lump sum prices bid for the Work even though these appurtenances and items may not be specifically called for in the Bid Documents.
- C. The Work shall include furnishing all tools, labor, materials, equipment, spare parts and miscellaneous items necessary for the complete construction of the following:

Demolition of Elevated Water Storage Tank No. 5, including demolition of elevated steel tank, partial removal of multi-leg pier foundations, pump and electrical station foundations and supports, above ground pump, piping, valves, fittings, underground yard piping, valves and fittings, electrical service, equipment and components, communication equipment and components; and site restoration, as noted and detailed in the specifications.

1.03 CONTRACTOR'S RESPONSIBILITIES

- A. Execute all Work, including excavation, installing pipe and backfill, constructing or installing lift station wet wells and associated buildings and odor control, installing electrical equipment, and miscellaneous site work, concrete and testing. The Work of this Contract is specified on the Drawings and in the Technical Specifications listed in the Table of Contents.

- B. Secure all construction-related permits, other than those provided by OWNER, and pay for the same.
- C. Arrange for the necessary temporary water service and pay for this service and all water consumed during the construction Work.
- D. Provide adequate temporary sanitary facilities.

1.04 TRAFFIC CONTROL

- A. Develop and submit a traffic control plan which will show both day and night time operations for the installation of the lift stations, pipelines, and associated improvements in conformance with the current edition of the Texas Manual of Uniform Traffic Control Devices for plan review and approval by the OWNER and TXDOT prior to the start of construction. The TXDOT permit for work in the TXDOT ROW is subject to TXDOT approval of the CONTRACTOR's traffic control plan.
- B. Furnish, install and maintain barricades, warning signs and other traffic handling devices of the size and type specified in the Manual of Uniform Traffic Control Devices or as directed by the ENGINEER or highway department official.
- C. Inspect and properly maintain traffic controls each evening and during the weekend in addition to normal daytime working hours. The CONTRACTOR is responsible for all costs associated with installation and maintenance of traffic controls.
- D. Designate one person who will be accessible to the OWNER on a 24-hour basis and will be responsible for the maintenance of the barricades and the work site.
- E. Coordinate any interruption of traffic with TXDOT, the OWNER, Fire and Police Departments, and the ENGINEER at least 24 hours in advance of such interruptions.
- F. Furnish, install, and maintain street barricades on all dead end streets and as necessary during construction to maintain job safety.

1.05 EASEMENTS OF RIGHT-OF-WAY

- A. CONTRACTOR shall confine his construction operations within the limits indicated on the Drawings, and shall use due care in placing construction tools, equipment, excavated materials, and pipeline materials and supplies so as to cause the least possible damage to property and interference with traffic. If the CONTRACTOR requires additional easement for his operations, the CONTRACTOR is solely responsible for acquisition and maintenance of the easement. No additional compensation will be provided by the OWNER.
- B. Easements
 - 1. Easements across private property are indicated on the Drawings. CONTRACTOR shall set stakes to mark the boundaries of construction easement across private property. The stakes shall be protected and maintained until completion of construction and cleanup.

C. Rights-of-Way

1. Permits for Work in rights-of-way shall be obtained by the CONTRACTOR. All Work performed and all operations of CONTRACTOR, his employees, or subcontractors, within the limits of railroad and highway rights-of-way, shall be in conformity with the requirements and be under the control (through OWNER) of the railroad or highway authority owning, or having jurisdiction over and control of, the right-of-way in each case.

1.06 OPERATION OF EXISTING FACILITIES

- A. Existing water and wastewater facilities shall be kept in continuous operation throughout the construction period. No interruption will be permitted which adversely affects the degree of service provided. Provided permission is obtained from OWNER in advance, portions of the existing facilities may be taken out of service for short periods corresponding with periods of minimum service demands.
- B. CONTRACTOR shall provide temporary facilities and make temporary modifications as necessary to keep the existing facilities in operation during the construction period.

1.07 CONNECTIONS TO EXISTING FACILITIES

- A. Unless otherwise specified or indicated, CONTRACTOR shall make all necessary connections to existing facilities including structures, drain lines, and utilities. In each case, CONTRACTOR shall receive permission from OWNER or the owning utility prior to undertaking connections. CONTRACTOR shall protect facilities against deleterious substances and damage.
- B. Connections to existing facilities which are in service shall be thoroughly planned in advance, and all required equipment, materials and labor shall be on hand at the time of undertaken the connection. Work shall proceed continuously (around the clock) if necessary to complete connections in the minimum time. Operation of valves or other appurtenances on existing utilities, when required, shall be by or under the direct supervision of the owning utility.

1.08 UNFAVORABLE CONSTRUCTION CONDITIONS

- A. No portion of the Work shall be constructed under conditions which adversely affect the quality or efficiency thereof, unless special means or precautions are taken by CONTRACTOR to perform the Work in a proper and satisfactory manner.

END OF SECTION

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SECTION 01019
CONTRACT CONSIDERATIONS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Payment Procedures
- B. Change Procedures
- C. Measurement and Payment for Unit Prices
- D. Correlation of CONTRACTOR Submittals

1.02 PAYMENT PROCEDURES

- A. Submit one (1) copy of the Application for Payment based upon Application for Payment, or other proposed format as agreed upon by OWNER in advance of request.
- B. Payment Period: at intervals stipulated in the Agreement.
- C. Submit an updated Progress Schedule and Photographs with each Application for Payment in accordance with Section 01300 - Submittals.
- D. Submit data justifying dollar amounts in question when ENGINEER requires substantiating information.

1.03 CHANGE PROCEDURES

- A. ENGINEER may advise of minor changes in the Work not involving an adjustment to Contract Price or Contract Time as authorized by Paragraph 9.5 of the General Conditions.
- B. ENGINEER may amend or supplement the Contract Documents as authorized by General Conditions by issuing a detailed description of a proposed change with supplementary or revised Drawings and Specifications, including a change in Contract Time related to the change (with a stipulation for any overtime work required) and the period of time during which the requested price will be considered valid. Prepare and submit an estimate within 15 days.
- C. Propose a change by submitting request for change to ENGINEER and describe the proposed change and its full effect on the Work. Describe the reason for the change and the effect on the Contract Price and Contract Time with full documentation (and a statement describing the effect on Work by separate or other contractors). Document any requested substitutions In accordance with the Procurement General Conditions.
- D. Stipulated Price Change Order: based on CONTRACTOR's maximum price quotation or CONTRACTOR's request for a Change Order as approved by ENGINEER.

- E. Unit Price Change Order: for pre-determined unit prices and quantities and executed on a fixed unit price basis. Changes in Contract Price and Contract Time to be computed as specified for Time and Material Change Order.
- F. Time and Material Change Order: based on itemized account and supporting data after completion of change within time limits indicated in the General Conditions. ENGINEER to determine the change allowable in Contract Price and Contract Time as provided in the General Conditions. Maintain detailed records of work done on this basis, provide full information required for evaluation of proposed changes, and substantiate costs for changes in the Work.
- G. Change Order Form: based on Change Order Form, or other proposed format as agreed upon by OWNER in advance of request.

1.04 CORRELATION OF CONTRACTOR SUBMITTALS

- A. Promptly revise Progress Schedules to reflect any change in Contract Time and revise sub-schedules to adjust time for other items of the Work affected by the change.
- B. Promptly enter changes in Project Record Documents.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

SECTION 01025
MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Measurement and payment criteria applicable to the Work performed under a unit price payment method.
- B. Defect assessment and non-payment for rejected work.

1.02 AUTHORITY

- A. This Section is the authority for measurement methods and definitions of pay items, and supersedes any such direction which may be stated or implied in the Drawings or in individual sections of the technical specifications (Divisions 2 and higher).
- B. Take all measurements and compute quantities. The OWNER will verify measurements and quantities.
- C. Assist by providing necessary equipment, workers, and survey personnel as required.

1.03 UNIT QUANTITIES SPECIFIED

- A. Quantities indicated in the Bid Proposal are for bidding and contract purposes only. Quantities and measurements supplied or placed in the Work and verified by the OWNER determine payment.
- B. If the actual Work requires more or fewer quantities than those quantities indicated, provide the required quantities at the unit sum/prices contracted.

1.04 MEASUREMENT OF QUANTITIES

- A. Measurement by Volume: Measured by cubic dimension using mean length, width and height or thickness.
- B. Measurement by Area: Measured by square dimension using mean length and width or radius.
- C. Linear Measurement: Measured by linear dimension, at the item centerline or mean chord.
- D. Stipulated Sum/Price Measurement: Items measured by weight, volume, area,

1.05 PAYMENT

- A. Payment Includes: Full compensation for all required labor, products, tools, equipment, plant, transportation, services and incidentals; erection, application or installation of an item of the Work, including overhead and profit.
- B. Final payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities accepted by the OWNER multiplied by the unit sum/price for Work which is incorporated in or made necessary by the Work.

1.06 DEFECT ASSESSMENT

- A. Replace the Work, or portions of the Work, not conforming to specified requirements.
- B. The individual specification sections may modify these options or may identify a specific formula or percentage sum/price reduction for defective Work.
- C. The authority of the OWNER to assess the defect and identify payment adjustment, is final.

1.07 NON-PAYMENT FOR REJECTED PRODUCTS

- A. Payment will not be made for any of the following:
 - 1. Products wasted or disposed of in a manner that is not acceptable.
 - 2. Products determined as unacceptable before or after placement.
 - 3. Products not completely unloaded from the transporting vehicle.
 - 4. Products placed beyond the lines and levels of the required Work.
 - 5. Products remaining on hand after completion of the Work.
 - 6. Loading, hauling and disposing of rejected Products.

1.08 STANDARDS FOR COMPUTING PAY ITEMS

- A. See the General Conditions, particularly paragraphs 2.6.3, 2.9, and 14.1, for additional direction regarding use and application of pay items.
- B. The intent of Pay Items is to address all items shown, specified, required, reasonably implied, or otherwise necessary for the completion of the Work indicated in the Contract Documents. No separate payment will be made for costs (including, but not necessarily limited to labor, equipment, materials, or other CONTRACTOR expenses) arising from the completion of the Work which was indicated in the Contract Documents, whether or not a Pay Item expressly includes such costs. Should the Work include costs not expressly included in any Pay Item, CONTRACTOR is presumed to have included such costs in his bid under related pay items.
 - 1. Other Pay Items not specifically listed in the Pay Item Descriptions below, which are for specific work (such as decommissioning or demolition of an existing facility), may be identified in the Bid Form. These items are provided in order to establish a basis for payment upon completion of work including and related to that described for the Pay Item in the Bid Form.
Should the Work include costs not expressly or impliedly included under any Pay Item, CONTRACTOR is presumed to have included such costs in his bid under the Pay Item entitled "ALL OTHER WORK".
- C. Excavation is unclassified, and construction requiring excavation is paid under the appropriate Pay Item value regardless of the character of ground encountered during Construction.
- D. Pay Item Descriptions
 - 1. MOBILIZATION - Lump sum price (which shall not exceed 5% of the Total Base Bid Amount) shall include all work necessary to mobilize, demobilize and remobilize as necessary to perform Work in accordance with the Contract Documents.

2. REMOVE EXISTING PIPE - Price per linear foot of water and/or sewer (gravity or pressure) line removed and disposed of, regardless of size, depth, or material, which follows the same general alignment of proposed pipes. Flow bypass operations to maintain service to connected customers during construction is also included.
3. ABANDON EXISTING PIPE - Price per cubic yard of flowable fill or grout to be placed in existing buried pipes which are to be filled and abandoned in place.
4. (EACH SIZE) PRESSURE PIPE - Price per linear foot of water and/or pressure sewer line regardless of material and depth of installation shall include furnishing, installing, excavating, bedding, backfilling, and testing the pipe and fittings. Also included is the incidental removal and replacement of existing structures (including all occurrences of less than 25 feet of contiguous pipe) which conflict with, but do not follow the same general alignment of proposed pipes. Restoration, including but not limited to replacement of pavement for the width of the trench plus benches on either side of the trench is also included.
5. CONNECT TO EXISTING (EACH SIZE) DRY LINE - Price per each connection shall include all work necessary for locating and making connection to existing inactive pressure line; including fittings and removing abandoned pipe.
6. CONNECT TO EXISTING (EACH SIZE) WET LINE - Price per each connection shall include all work necessary for locating and making connection to existing active pressure line; including fittings and removing abandoned pipe.
7. (EACH SIZE) (EACH TYPE) VALVE - Price per each for buried valves furnished, installed, excavated, bedded, backfilled, and tested, regardless of depth.
8. (EACH SIZE) GRAVITY SEWER AT (EACH DEPTH) - Price per linear foot of gravity sewer line regardless of material shall include furnishing, installing, excavating, bedding, backfilling, and testing the pipe and appurtenances. Depth for payment shall be measured from the finished grade to the invert of the pipe. Connection to existing gravity sewer lines, manholes, and service connections (whether active or inactive), which is necessary for completion and activation of the new sewer, is included. Also included is the incidental removal and replacement of existing structures (including all occurrences of less than 25 feet of contiguous pipe) which conflict with, but do not follow the same general alignment of proposed pipes. Restoration, including but not limited to replacement of pavement for the width of the trench plus benches on either side of the trench is also included.
9. OPEN-CUT SEWER SERVICE LATERALS - Price per each lateral constructed between the sewer main trench excavation and the property line of the customer served, regardless of size, including a new cleanout at the property line, as well as determining location of and making connection to the existing lateral at the property line. Price includes furnishing, installing, excavating, bedding, backfilling, and testing the lateral and appurtenances. Restoration, including but not limited to replacement of pavement for the width of the trench plus benches on either side of the trench is also included.

10. JACKED SEWER SERVICE LATERALS - Price per each lateral constructed between the sewer main trench excavation and the property line of the customer served by jacking methods, regardless of size, including a new cleanout at the property line, as well as determining location of and making connection to the existing lateral at the property line. Price includes furnishing, installing, and testing the lateral and appurtenances, as well as excavating, backfilling, and restoration of entry and exit pit areas.
11. (EACH DIAMETER) MANHOLES AT (EACH DEPTH RANGE) - Price shall be determined per each manhole based on the specified depth range (for example, 0-8 feet, 8-12 feet, etc.). The depth shall be the actual depth from the top to the flow line of the manhole. Price shall include frame and standard or water tight covers. Restoration, including replacement of pavement for the manhole excavation plus benches around the excavation is also included.
12. DROP CONNECTIONS - Price shall be determined per vertical foot for each manhole drop connection constructed regardless of size. Depth for payment shall be measured between the upper and lower inverts of the drop pipe.
13. REMOVE EXISTING MANHOLE - Price per each manhole removed and disposed of, regardless of diameter, depth, or material.
14. ABANDON EXISTING MANHOLE - Price per each manhole abandoned in place, including plugging connected sewer lines, excavating, backfilling, filling manhole, removing upper section(s), and pavement replacement for the extent of the excavation plus benches around the excavation perimeter.
15. JACK & BORE (EACH CASING SIZE) - Price shall be determined per linear foot for furnishing and installing casing pipe by boring or tunneling, furnishing and threading carrier pipe, blocking, sealing ends; excavating, dewatering, and backfilling pits; and all other work that is required to complete the installation.
16. (EACH SIZE) CASING PIPE - OPEN TRENCH - Price shall be determined per linear foot for furnishing and installing casing pipe in an open trench, furnishing and threading carrier pipe, spacers, sealing ends, pits and all other work that is required to complete the installation. Price shall include excavation and backfill.
17. (EACH SIZE) CURE-IN-PLACE PIPING - Price shall be determined per linear foot of pipe, for furnishing, installing, cleaning, and televising cure-in-place piping, and shall include staging and restoration of entry and exit areas. Flow bypass operations to maintain service to connected customers during construction is also included.
18. (EACH EXISTING SIZE X PROPOSED SIZE) PIPE BURSTING - Price shall be determined per linear foot of pipe, for furnishing, installing, and testing pipe burst construction, and shall include staging, excavation, dewatering, backfilling, and restoration of entry and exit areas. Flow bypass operations to maintain service to connected customers during construction is also included.
19. DEWATERING - Price shall be determined per linear foot of pipe installed by open trench methods, where dewatering is deemed necessary by the OWNER's inspector in order to keep the trench dry for pipe installation.
20. TRENCH SAFETY - Price shall be determined per linear foot of trench, where excavation depth exceeds five feet, to include compliance with all applicable OSHA and Texas Health and Safety Code requirements.

21. TRENCH SAFETY PLAN - Lump Sum Price shall include compensation for CONTRACTOR's registered Professional Engineer to design the Trench Safety system, as well as CONTRACTOR's training of employees and other related administration of the Trench Safety Plan.
22. PAVEMENT REPLACEMENT - Price shall be determined per square yard of asphaltic pavement to be replaced outside of utility excavation limits, including removal of existing subgrade, base, and surface, and replacement with new subgrade, base, and surface.
23. PAVEMENT REPAIR - Price shall be determined per square yard of asphaltic pavement to be repaired outside of utility excavation limits, including milling of existing surface, and replacement with new surface.
24. LIFT STATION - Lump Sum Price shall include all work (including, but not limited to civil, mechanical, electrical, structural, start-up, and testing work) within the area of the limits of construction as shown on Drawings as necessary for the complete construction and/or rehabilitation of the lift station, including dewatering, and decommissioning and removal of existing components as called for. Price shall also include associated landscaping and access drive improvements located outside of the proposed fence area or lot, as well as lift station-specific appurtenances (e.g., manhole, flow meter or force main air release valve) and connections located outside of the proposed fence area or lot due to site space limitations.
25. ALL OTHER WORK - Lump Sum Price shall include all work indicated in the Contract Documents (including, but not necessarily limited to labor, equipment, materials, or other CONTRACTOR expenses arising from the completion of the Work) which the CONTRACTOR deems to be expressly and impliedly omitted from, and unrelated to, other Pay Items listed in the Bid Form.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

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SECTION 01039
COORDINATION AND MEETINGS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Coordination.
- B. Preconstruction Conference.
- C. Site Mobilization Meeting.
- D. Progress Meetings.
- E. Preinstallation Conference.
- F. Field Engineering.

1.02 COORDINATION

- A. Inform OWNER and ENGINEER of the address for sending to which official correspondence and the address and telephone number of CONTRACTOR's representative who will be Project Manager for the Contract and responsible and available outside of normal working hours for emergency repairs and maintenance of safety devices.
- B. During periods of construction and testing keep OWNER and ENGINEER informed in writing with name, address, and telephone number of CONTRACTOR's representative who will be responsible and available outside of normal working hours for emergency repairs and the maintenance of safety devices.
- C. Identify correspondence, drawings, data and materials, packing slips or other items associated with this Contract as that identified on the Cover.
- D. Coordinate scheduling, submittals, and Work for the various Sections of Specifications to effectuate an efficient and orderly sequence for installing interdependent construction elements, with provisions for accommodating items installed later.
- E. Coordinate Work of various Sections with interdependent responsibilities for installing, connecting to, and placing in service, operating equipment.
- F. Coordinate space requirements and installation of mechanical and electrical work, which are indicated by diagram on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with line of building. Utilize spaces efficiently to maximize accessibility for other installations, maintenance, and repairs.
- G. In finished areas (except as otherwise indicated), conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.

- H. Coordinate completion and clean up of Work of separate sections in preparation for Substantial Completion and for portions of Work designated for OWNER's partial occupancy.
- I. After OWNER occupancy of premises, coordinate access to site for correction of defective Work and/or incomplete Work to minimize disruption of OWNER's activities.
- J. Provide coordination in accordance with Article 7 of the General Conditions.

1.03 PRECONSTRUCTION CONFERENCE

- A. OWNER to schedule a preconstruction conference in accordance with General Conditions Article 2.
- B. Agenda:
 - 1. Distribute Contract Documents.
 - 2. Finalize preliminary Progress Schedule, submittal schedule and schedule of values.
 - 3. Designate personnel representing each party.
 - 4. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, testing, Change Orders and Contract closeout procedures.
 - 5. Scheduling.

1.04 SITE MOBILIZATION MEETING (NOT USED)

- A. OWNER to schedule a meeting at the Project site before CONTRACTOR occupancy.
- B. Attendance Required: OWNER, *ENGINEER, * *Special Consultants, * CONTRACTOR, *CONTRACTOR's Superintendent, * and major Sub CONTRACTORS.
- C. Agenda:
 - 1. Use of premises by OWNER and CONTRACTOR.
 - 2. OWNER's requirements *and *partial* occupancy*.
 - 3. Construction facilities and controls provided by OWNER.
 - 4. Temporary utilities provided by OWNER.
 - 5. Survey and *building* * * layout.
 - 6. Security and housekeeping procedures.
 - 7. Schedules.
 - 8. Procedures for testing.
 - 9. Procedures for maintaining record documents.
 - 10. Requirements for start-up of equipment.
 - 11. Inspection and acceptance of equipment put into service during construction period.

1.05 PROGRESS MEETINGS

- A. OWNER to schedule a progress meeting no later than 60 days after the Preconstruction Conference and a monthly meeting throughout progress of the Work. Make arrangements for meetings, prepare agenda with copies for participants, and preside at meetings.
- B. Attendance: CONTRACTOR, major Subcontractors, OWNER, and ENGINEER, as appropriate to agenda topics for each meeting.
- C. Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Unresolved issues.
 - 3. Review Work progress.
 - 4. Observations, problems, and decisions.
 - 5. Identification of problems that impede planned progress.
 - 6. Review of submittals schedule and status of submittals.
 - 7. Review of off-site fabrication and delivery schedules.
 - 8. Maintenance of progress schedule.
 - 9. Corrective measures to regain projected schedules.
 - 10. Planned progress during succeeding Work period.
 - 11. Coordination of projected progress.
 - 12. Maintenance of quality and work standards.
 - 13. . Effect of proposed changes on progress schedule and coordination.
 - 14. Other business relating to Work.

1.06 PREINSTALLATION CONFERENCE

- A. When required in individual Specification Section, convene a preinstallation conference at work site before commencing Work of the Section.
- B. Require attendance of parties directly affecting, or affected by, work of the specific Section. Notify ENGINEER 5 days in advance of meeting date.
- C. Make arrangements for meeting and preside at conference.
- D. Review conditions of installation, preparation and installation procedures, and coordination with related work.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 FIELD ENGINEERING

- A. Surveying: All surveying shall be performed by a Land Surveyor registered in the State of Texas.
 - 1. Existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning site work, investigate and verify the existence and location of underground utilities and other utilities and construction. Use "One-Call," 1-800-DIG-TESS or (800) 344-8377.

2. Furnish all surveys necessary to perform the Work. Maintain surveyor's log of control and other survey work. Keep log available for reference.
3. Verify layout information shown on the Drawings in relation to existing benchmarks before laying out of the Work. Locate and protect existing benchmarks and control points. Preserve permanent reference points during construction.
4. Promptly report lost or destroyed reference points, benchmarks, or control points. Promptly report requirements relocate reference and control points due to changes in grades. Promptly replace lost or destroyed control points based on the original survey control points.

END OF SECTION

SECTION 01300

SUBMITTALS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Submittal procedures for:
 - 1. Schedule of Values.
 - 2. Construction Schedules.
 - 3. Shop Drawings, Product Data, and Samples
 - 4. Operations and Maintenance Data.
 - 5. Manufacturer's Certificates.
 - 6. Construction Photographs.
 - 7. Project Record Documents.
 - 8. Video Tapes.
 - 9. Design Mixes.

1.02 SUBMITTAL PROCEDURES

- A. Scheduling and Handling:
 - 1. Schedule submittals well in advance of the need for the material or equipment for construction. Allow time to make delivery of material or equipment after submittal has been approved.
 - 2. Develop a submittal schedule that allows sufficient time for initial review, correction, resubmission and final review of all submittals. The Engineer will review and return submittals to the Contractor as expeditiously as possible but the amount of time required for review will vary depending on the complexity and quantity of data submitted. In no case will a submittal schedule be acceptable which allows less than 30 days for initial review by the Engineer. This time for review shall in no way be justification for delays or additional compensation to the Contractor. Recognizing that time is of the essence, the Contractor is to stamp the top of each submittal with the words ROUTINE or CRITICAL. Routine submittals shall be processed in accordance with the timeframe set forth previously. Critical submittals are those that: were overlooked by the Contractor, involve complex coordination, or are crucial to the successful completion of a specific portion of the project. For critical submittals:
 - a. Contractor shall indicate on the submittal his realistically estimated date of when a review must be returned;
 - b. Upon return of critical submittals, Contractor shall date-stamp the transmittal page with date and time received;
 - c. Contractor is cautioned that the use of critical submittals is not a substitute for proper due diligence on his part. Review of critical submittals found to be routine shall be accompanied by an invoice for excess time and material expenditures that were required in order to complete the critical review as compared to a routine review. The Resident Project Representative shall

make the determination as to whether a critical submittal was in fact routine.

3. The Engineer's review of submittals covers only general conformity to the Drawings, Specifications and dimensions which affect the layout. The Contractor is responsible for quantity determination. Quantities may be verified by the Engineer. The Contractor is responsible for any errors, omissions or deviations from the Contract requirements; review of submittals in no way relieves the Contractor from his obligation to furnish required items according to the Drawings and Specifications.
4. Submit sufficient copies of documents. Unless otherwise specified in the following paragraphs or in the Specifications, provide 3 copies in addition to the number the Contractor requires returned. For portions of the project involving electrical or signal components, provide one additional copy (4 copies in addition to the number the Contractor requires returned).
5. Revise and resubmit submittals as required. Identify all changes made since previous submittal.
6. A maximum of three (3) reviews will be conducted on any one submittal. Submittals requiring more than three (3) reviews will be considered inadequate and result in a recovery of review expenses from the Contractor.
7. The Contractor shall assume the risk for material or equipment which is fabricated or delivered prior to approval. No material or equipment shall be incorporated into the Work or included in periodic progress payments until approval has been obtained in the specified manner.

B. Transmittal Form and Numbering:

1. Transmit each submittal to the Engineer with a Transmittal Cover.
2. Sequentially number each transmittal including the Specification Section number followed by a area designation number and the sequential number beginning with the number 1. Re-submittals shall use the original number with an alphabetic suffix (i.e., 2A for first re-submittal of Submittal 2 or 15C for third re-submittal of Submittal 15). Each submittal shall only contain one type of work, material, or equipment. Mixed submittals will not be accepted.
3. Identify time nature of submittal, either ROUTINE or CRITICAL.
4. Identify variations from requirements of Contract Documents and identify product or system limitations.
5. For submittal numbering of video tapes, see paragraph 1.10 Video.

C. Transmittal Cover:

1. Transmittal Cover, certifying that the items have been reviewed in detail and are correct and in accordance with Contract Documents, except as noted by any requested variance. A stamp may be used to print the information on the Transmittal Cover except for the Contractor's signature. Regardless of whether the transmittal cover is typed or stamped, the transmittal cover text shall be a minimum of fourteen (14) point.
2. As a minimum, Transmittal Cover information shall include:
 - a. Contractor's name.
 - b. Job number.
 - c. Submittal number.

- d. Certification statement that the Contractor has reviewed the submittal and it is in compliance with the Contract Documents.
 - e. Signature line for Contractor.
 - f. Submittal type – routine or critical
3. The bottom half of the Transmittal Cover shall be kept blank.

D. Electronic copy submittals:

- 1. Electronic copies of the approved paper copy Operation and Maintenance Manuals are to be produced in Adobe Acrobat's Portable Document Format (PDF) Version 9.0 or higher.
- 2. Do not password protect and/or lock the PDF document.
- 3. Create one (1) PDF document (PDF file) for each equipment O&M Manual.
- 4. Drawings or other graphics must be converted to PDF format and made part of the one (1) PDF document.
 - a. Scanning to be used only where actual file conversion is not possible.
- 5. Rotate pages that must be viewed in landscape to the appropriate position for easy reading.
- 6. Images only shall be scanned at a resolution of 300 dpi or greater.
 - a. Perform Optical Character Recognition (OCR) capture on all images.
 - b. Achieve OCR with the "original image with hidden text" option.
 - c. Word searches of the PDF document must operate successfully to demonstrate OCR compliance.
- 7. Create bookmarks in the navigation frame, for each entry in the Table of Contents/Index.
 - a. Normally three (3) levels deep (i.e., "Chapter," "Section," "Sub-section").
- 8. Thumbnails must be generated for each PDF file.
- 9. Set the opening view for PDF files as follows:
 - a. Initial view: Bookmarks and Page.
 - b. Magnification: Fit in Window.
 - c. Page layout: Single page.
 - d. Set the file to open to the cover page of the manual with bookmarks to the left, and the first bookmark linked to the cover page.
 - e. All PDF documents shall be set with the option "Fast Web View" 1 to open the first 2 pages of the document for the viewer while the rest of the document continues to load.
 - f. File naming conventions:
 - 1) File names shall use a "ten dot three" convention (XXXXXX-YYYY-Z.PDF) where XXXXX is the Specification Section number, YYYY is the area designation number and Z is the sequential submittal number.

10. Labeling:

- a. As a minimum, include the following labeling on all CD-ROM discs and jewel 19 cases:
 - 1) Project Name.
 - 2) Equipment Name and Project Tag Number.
 - 3) Project Specification Section.
 - 4) Manufacturer Name.
 - 5) Vendor Name.

11. Binding:

- a. Include labeled CD(s) in labeled jewel case(s). Bind jewel cases in standard three-ring binder Jewel Case Page(s), inserted at the front of the Final paper copy submittal.
- b. Jewel Case Page(s) to have means for securing Jewel Case(s) to prevent loss (e.g., flap and strap).

1.03 CONSTRUCTION SCHEDULE

- A. Submit Construction Schedules in accordance with Section 01325 – Construction Schedule.

1.04 OPERATIONS AND MAINTENANCE DATA

- A. Submit Operations and Maintenance data in accordance with Section 01782 - Operations and Maintenance Data.

1.05 MANUFACTURER'S CERTIFICATES

- A. When required in Specification sections, submit manufacturers' certificate of compliance for review by Engineer.
- B. Transmittal Cover, as described in paragraph 1.02C, shall be placed on front page of the certification.
- C. Submit supporting reference data, affidavits, and certifications as appropriate.
- D. Certificates may be recent or previous test results on material or product, but must be acceptable to Engineer.

1.06 CONSTRUCTION PHOTOGRAPHS

- A. Submit Construction Photographs in accordance with Section 01321 – Construction Photographs.

1.07 PROJECT RECORD DOCUMENTS

- A. Submit Project Record Documents in accordance with Section 01785 - Project Record Documents.

1.08 VIDEO

- A. Submit television video tapes as required for Acceptance Testing for Sanitary Sewers.
- B. Transmittal forms for video tapes shall be numbered sequentially beginning with TV01, TV02, etc.

1.09 DESIGN MIXES

- A. When specified in Specifications, submit design mixes for review.
- B. Transmittal Cover, as described in paragraph 1.02C, shall be placed on front page of each design mix.
- C. Mark each design mix to identify proportions, gradations, and additives for each class and type of design mix submitted. Include applicable test results on samples for each mix.

- D. Maintain a copy of approved design mixes at mixing plant.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 GENERAL

- A. Submittals made as part of this project will become a vital portion of the project record and will be referenced by the Owner for the useful life of the project. All submittals shall be of high quality. To this end, the following requirements are made:
1. As much as possible, all catalog cuts and manufacturer's information shall be original.
 2. Copies, when required, shall be clean and entirely legible.
 3. Neither facsimiles nor copies of facsimiles are to be included as part of any submittal.
 4. Binders, if used, shall be rugged, lock-ring type. Spine of binders shall be clearly labeled with the information outlined in items 1.02 C.2.a. through c.
- B. Reviewed submittals shall be returned to Contractor for distribution to subcontractors and other trades as required. As a minimum, submittals returned to the Contractor will be marked with review comments indicating findings of the review and giving instruction as to necessity of a re-submittal. The Engineer may, at his option, use a stamp for this purpose. Detailed correspondence covering the review may also accompany returned submittals.

END OF SECTION

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SECTION 01320

CONSTRUCTION PHOTOGRAPHS

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Photographs taken at specified intervals before, during and after construction.
2. Pre-construction video taken before construction.

1.2 SUBMITTALS

A. Informational Submittals

1. Submit electronic files of each photograph on a CD and videos on a DVD.

PART 2 PRODUCTS

2.1 CONSTRUCTION PHOTOGRAPHS AND VIDEOGRAPHY

- ###### A.
- Electronic files shall be in .jpg image format and MOV or equal video format.

PART 3 EXECUTION

3.1 PRECONSTRUCTION PHOTOGRAPHY AND VIDEOGRAPHY

- ###### A.
- Prior to the commencement of any Work under this Contract, perform a pre-construction video of every major feature on the site and any area accessed off the site, and take photographs daily and from a variety of perspectives and locations to capture the important activities of the project. The video and photographs will serve as a record of the original conditions where construction activities will occur.
- ###### B.
- The area to be photographed shall include, but not be limited to, the area within and adjacent to the proposed construction and/or demolition, including roadways, utilities, driveways, landscaping, trees, structures and buildings.

3.2 PROGRESS PHOTOGRAPHY

- ###### A.
- Take photographs of utility abandonments.
- ###### B.
- Take photographs of relocated or modified utility connections.
- ###### C.
- Take photographs of pipeline backfill, intersections and loamed areas.

END OF SECTION

SECTION 01325
CONSTRUCTION SCHEDULE

PART 1 - PART 1 GENERAL

1.01 GENERAL

- A. Provide Construction Schedules for Work included in this Contract in accordance with requirements in this Section. Create a Construction Schedule using Critical Path Method (CPM) computer software capable of mathematical analysis of Precedence Diagramming Method (PDM) schedules. Provide printed activity listings and bar charts in formats described in this Section.
- B. Combine activity listings and bar charts with a narrative report to form the Contractor's Construction Schedule submittal for the Engineer.

1.02 SCHEDULING STAFF

- A. Employ or retain services of an individual experienced in critical path scheduling for the duration of the Contract. This person shall cooperate with the Engineer and shall update the Contractor's schedule at least monthly as required to indicate current status of the Work.

1.03 SUBMITTALS

- A. Make Construction Schedule submittals for review by the Engineer in accordance with requirements of the Conditions of the Contract.
- B. During the pre-construction meeting provide sample bar charts and activity listings produced from the scheduling software proposed. Scheduling software is subject to approval of the Engineer and must meet requirements provided in this Section. Review of the samples will be provided by the Engineer within 7 days of the submittal.
- C. Within 21 days of receipt of approval of the Contractor's format, or 30 days of the Notice to Proceed, whichever is later, submit a proposed Construction Schedule for review. The Construction Schedule submittal shall be based on the following:
 - 1. The level of detail and number of activities required in the schedule are dependent on the project type.
 - a. For wastewater projects, the work shall be categorized by Work Type and Area Code in the schedule.
 - 2. For projects with multiple types of tasks within the scope, these types of work shall be indicated separately within the schedule.
 - 3. For projects with work at different physical locations or service areas, or different facilities within a site, each location or facility shall be indicated separately within the schedule. Work on each floor of a multi-story building shall be shown as separate tasks.
 - 4. For projects with multiple crafts or significant subcontractor components, these elements shall be indicated separately within the schedule. Unless permitted by the Engineer, tasks shall consist of work covered by only one

division of the Project Manual.

5. Unless permitted by the Engineer, each schedule task shall be the same as a schedule of values line item, and vice versa.
 6. For projects with significant major equipment items or materials representing over 5 percent of the Total Contract Price, the schedule shall indicate dates when these items are to be purchased, when they are to be delivered, and when installed. Activities for testing, adjustment, and delivering O & M manuals shall be included.
 7. No task except the acquisition of major equipment items shall represent more than one percent of the Total Contract Price for facility projects and 3 percent of the Total Contract Price for other projects. The duration of tasks may not exceed 40 calendar days.
 8. For projects where operating facilities are involved, each period of work which will impact any process or operation shall be identified in the schedule and must be agreed to by the Engineer and the facility operator prior to starting work in the area.
 9. Construction Schedule submittals shall include:
 - a. Printed bar charts which meet the criteria outlined in this Section and which are produced by the Contractor's approved scheduling software.
 - b. Activity listings which meet the criteria outlined in this Section and which are produced by the Contractor's approved scheduling software.
 - c. Predecessor/successor listing sorted by Activity ID which meets the criteria outlined in this Section and which is produced by the Contractor's approved scheduling software.
 - d. A logic network diagram shall be required with the first construction schedule submittal for facilities projects.
 - e. A graphic or tabular display of estimated monthly billings for the Work shall be prepared and submitted by the Contractor with the first schedule submittal. This information is not required in monthly updates, unless significant changes in work require re-submittal of the schedule for review. The display shall allocate units indicated in the bid schedule or the schedule of values to Construction Schedule activities. (Weighted allocations are acceptable, where appropriate). The dollar value associated with each allocated unit will be spread across the duration of the activity on a monthly basis. The total for each month and a cumulative total will be indicated. These monthly forecasts are only for planning purposes of the Engineer. Monthly payments for actual work completed will be made by the Engineer in accordance with the Conditions of the Contract.
 - f. A narrative report which shall provide the information outlined in this Section.
- D. No payment will be made until the Construction Schedule and billing forecast are accepted by the Engineer.

- E. If the Contractor desires to make changes in his method of operating and scheduling, after approval of the original schedule has been given by the Engineer, the Contractor shall notify the Engineer in writing, stating the reasons for the change. If the Engineer considers these changes to be of significant nature, the Contractor may be required to revise and resubmit for approval all or the affected portion of the Contractor's Construction Schedule to show the effect on the Work.
- F. Upon written request from the Engineer, the Contractor shall revise and submit for approval all or any part of the Construction Schedule submittal to reflect changed conditions in the Work or deviations made from the original plan and schedule.
- G. The Contractor's Construction Schedule shall thereafter be updated with Actual Start and Actual Finish Dates, Percent Complete, and Remaining Duration of each Activity and submitted monthly. The data date to be used in updating the monthly Construction Schedule shall be the same data date as is used in the monthly Application for Payment. This monthly update of the schedule shall be required before the monthly Application for Payment will be processed for payment.

1.04 SCHEDULING COMPUTER SOFTWARE REQUIREMENTS

- A. The Contractor's Construction Schedule shall be created using CPM computer software which provides mathematical analysis of PDM schedules. The software shall be capable of creating bar charts and activity listings which can be sorted by various fields, i.e., Sort by Activity ID; Sort by Early Start; Sort by Total Float; Sort by Area Code; sort by specification section number; and sort by Subcontractor. The software shall be capable of producing a logic network diagram.
- B. The PDM scheduling software shall be capable of producing activity listings and bar charts with the following information for each activity in the schedule:
 - 1. Activity ID
 - 2. Activity Description
 - 3. Estimated (Original) Duration
 - 4. Remaining Duration
 - 5. Actual Duration
 - 6. Early Start Date
 - 7. Late Start Date
 - 8. Early Finish Date
 - 9. Late Finish Date
 - 10. Free Float
 - 11. Total Float
 - 12. Activity Codes (such as Area Code, Work Type, Specification Section, Subcontractor)
- C. The PDM scheduling software shall be capable of printing calendars using the mathematical analysis of the schedule, indicating the Contractor's standard work days of the week and scheduled holidays.

- D. Scheduling software shall be capable of printing an activity listing which indicates the Predecessors and Successors, Lag Factors and Lag Relationships used in creating the logic of the schedule.
- E. Scheduling software shall be capable of printing a bar chart of the entire schedule for the Work included in this Contract. The bar chart format shall provide a monthly time scale and shall be such that a 12-month time scale shall not exceed one page width. Bar charts may be printed or plotted on 8.5" x 11", 8.5" x 14" or 11" x 17" sheet sizes. Over-size plots are not acceptable.

1.05 NARRATIVE SCHEDULE REPORT

- A. The Narrative Report shall include a listing of the Activities Started This Month; Activities Completed This Month; Activities Continued This Month; Activities Scheduled to Start or Complete Next Month; Problems Encountered This Month; Actions Taken to Solve These Problems.
- B. The narrative Schedule Report shall include a description of changes made to the Construction Schedule Logic (i.e., changes in Predecessors and Lags); Activities Added to the Schedule; Activities Deleted from the Schedule; any other changes made to the Schedule other than the addition of Actual Start Dates and Actual Finish Dates and changes of Data Date and Remaining Durations for recalculation of mathematical analysis.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

SECTION 01350

HEALTH & SAFETY PLAN

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Furnish all labor, equipment and materials and perform all operations in connection with providing health and safety protection for all Contractor personnel, occupants of abutting properties, and the public.
2. Develop a site specific Health and Safety Plan (HASP) specifically addressing the potential hazards that may be encountered. This plan shall meet all OSHA requirements.
3. Review the requirements and data presented and supplement the program with any additional measures deemed necessary to fully comply with regulatory requirements and adequately protect personnel on the site.

1.2 REFERENCES

- ###### A. OSHA Regulation 29 CFR 1910.120

1.3 DEFINITIONS

- ###### A. Site Safety Official (SSO) - The individual located on the site(s) who is responsible to the Contractor and has the authority and knowledge necessary to implement the site safety and health plan and verify compliance with applicable safety and health requirements.

1.4 SUBMITTALS

A. Informational Submittals

1. Submit the following within fifteen (15) days after the Effective Date of the Agreement.
 - a. Site-specific HASP including the Emergency Response Plan for review, including provisions for decontamination and a contingency plan for unforeseen emergencies. The Engineer's review is only to determine if the HASP meets basic regulatory requirements and the minimum requirements of this section. The review will not determine the adequacy of the HASP to address all potential hazards, as that remains the sole responsibility of the Contractor.
 - b. Current certification of employee's health and safety training and certification of employee's baseline medical exam status.
 - c. Certification of additional required health and safety training for supervisors.
 - d. Qualifications and experience of the SSO for approval.

2. Submit minutes of weekly safety meetings at periodic progress meetings.

1.5 CONTRACTOR'S RESPONSIBILITIES

- A. The Contractor is solely responsible for the health and safety of workers employed by the Contractor, any subcontractor and anyone directly or indirectly employed by any of them.
- B. Work under this contract is not being performed on an "Uncontrolled Hazardous Waste Site," as defined in 29 CFR 1910.120 and Article 1.3 B, above; however, the Contractor shall develop the site specific Health & Safety Plan (HASP) in accordance with the requirements of 29 CFR 1910.120 and paragraph 1.6.
- C. Provide a full-time SSO regardless of whether or not the Work is at a defined Uncontrolled Hazardous Waste Site.
- D. Pre-arrange emergency medical care services at a nearby hospital, including establishment of emergency routes of travel.
- E. Conduct weekly safety meetings with all site personnel, documenting attendance and topics covered.
- F. Train all workers assigned to areas where contaminated media are likely to be encountered in accordance with 29 CFR 1910.120.
- G. At all times, prevent oil or other hazardous substances from entering the ground, sewers, drainage areas and piping systems.
- H. Control site access to protect occupants of abutting properties and the public.

1.6 HEALTH & SAFETY PLAN (HASP) REQUIREMENTS

- A. The following items shall be addressed in the HASP:
 1. safety and health hazard assessment;
 2. procedures for emergency medical treatment and first aid;
 3. map indicating route to hospital for emergency medical care;
 4. Lead Exposure Control Plan (29 CFR 1926.62);
 5. assume coatings containing polychlorinated biphenyls are present;
 6. equipment decontamination procedures;
 7. personal protective equipment and decontamination;
 8. physical hazard evaluation and abatement including:
 - a. equipment operation;
 - b. confined space entry;
 - c. slips and falls;
 - d. building collapse;
 - e. falling debris;

- f. encountering unmarked utilities;
 - g. cold and heat stress;
 - h. hot work (cutting and welding);
 - i. excavation entry;
- 9. training requirements;
- 10. recordkeeping requirements;
- 11. emergency response plan that includes:
 - a. names of three (3) Emergency Response Contractors, experienced in the removal and disposal of oils and hazardous chemicals, that the Contractor intends to use in the event of an emergency;
 - b. evacuation routes and procedures;
 - c. emergency alerting and response procedures.

1.7 CONTINGENCY MEASURES & NOTIFICATIONS

- A. The potential for encountering hazardous buried objects or materials that could pose a threat to human health or the environment exists. In the event that potentially hazardous materials are encountered during the work under this contract, the responsibilities of the Contractor and the Engineer are described herein.
- B. The procedures and protocols to be used by the SSO in defining materials that are potentially hazardous include screening with a photo-ionization detector, odor, visual appearance of a material, and obvious oil or chemical contaminated materials.
- C. Upon encountering suspected hazardous buried objects or materials as described above, cover the excavation immediately if no imminent danger, as defined by the SSO, is present. If there is an imminent danger, as defined by the SSO, Evacuate the area immediately. The SSO shall then notify the Engineer and the Owner of the situation.
- D. Establish, properly barricade, and mark the area as an exclusion zone under the direction of the SSO. The SSO shall establish the exclusion zone boundaries based upon air quality monitoring using a photo-ionization detector and other equipment as appropriate. The exclusion zone shall be established at a minimum 50-foot radius around the location where the potentially hazardous material is encountered. Work within the exclusion zone shall be discontinued until the hazardous condition has been remediated and testing indicates that a hazard does not exist. Other activities of the site, outside the limits of the exclusion zone shall continue. Ambient air quality monitoring shall be performed by the SSO to demonstrate that ambient air quality in other portions of the site is not adversely impacted by the exclusion zone condition.
- E. Notify the Engineer and the Owner regarding the presence of potentially hazardous materials. The Owner may direct the Contractor to notify regulators and to obtain necessary regulatory approvals for remediation.

- F. Mobilize the appropriate equipment and personnel to sample and test the hazardous material within the exclusion zone to determine the remedial action required, subject to the Engineer's direction. The Contractor may be directed to remove and legally dispose of the material.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01500
TEMPORARY FACILITIES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

- A. Drawings and General provisions of Contract, including General Conditions and Supplementary General Conditions, and Division 1 requirements.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 OFFICE AT THE WORK SITE

- A. During the performance of this Contract, CONTRACTOR shall maintain a suitable office at or near the site of the Work which shall be the headquarters of his superintendent. Any communication given to the superintendent or delivered to CONTRACTOR's office at the site of the Work in his absence shall be deemed to have been delivered to CONTRACTOR.
- B. In addition, CONTRACTOR shall provide a suitable field office with at least 200 square feet of floor space, either adjacent to, or partitioned off from, his office at the site for use by OWNER's Representative. The office shall be provided with outside entrance door with a substantial lock, glazed windows suitable for light and ventilation, and adequate heating, air conditioning, and lighting facilities. CONTRACTOR shall pay all electricity and heating bills and shall provide telephone services with a telephone as specified hereinafter. The office shall be furnished with a desk, two four-drawer filing cabinets, a table, two chairs, a plan rack, and a locker for storage of surveying instruments. The doors on the locker shall be equipped for padlocking. The general arrangement of the office and facilities provided shall be acceptable to OWNER's Representative.

3.02 WATER FOR CONSTRUCTION

- A. All water required for and in connection with the Work to be performed shall be furnished by and at the expense of the CONTRACTOR through meters installed on hydrants. CONTRACTOR shall supply all necessary tools, hose and pipe, and shall make necessary arrangements for securing and transporting such water and shall take water in such a manner, and at such times, that will not produce a harmful drain or decrease of pressure in the OWNER's water system. It shall be the CONTRACTOR's responsibility to make arrangements with the BPUB for the metering and reporting of the amount of water used. Water shall not be used in a wasteful manner. Standard hydrant wrenches shall be used for opening and closing of fire hydrants. In no case shall pipe wrenches be used for this purpose. Temporary lines shall be removed when no longer required.

3.03 TELEPHONE SERVICE

- A. CONTRACTOR shall make all necessary arrangements and pay all installation charges for telephone lines in his offices at the site and shall provide all telephone instruments.

3.04 SANITARY FACILITIES

- A. CONTRACTOR shall furnish temporary sanitary facilities at the site, as provided herein, for the needs of all construction workers and others performing Work or furnishing services on the Project.
- B. Sanitary facilities shall be of reasonable capacity, properly maintained throughout the construction period, and obscured from public view to the greatest practical extent. If toilets of the chemically treated type are used, at least one toilet shall be furnished for each 20 employees. CONTRACTOR shall enforce the use of such sanitary facilities by all personnel at the site.

3.05 PROTECTION OF PUBLIC AND PRIVATE PROPERTY

- A. CONTRACTOR shall protect, shore, brace, support and maintain all underground pipes, conduits, drains, and other underground construction uncovered or otherwise affected by the CONTRACTOR's operations. All pavement, surfacing, driveways, curbs, walks, buildings, utility poles, guy wires, fences, and other surface structures affected by construction operations, together with all sod and shrubs in yards, parkways, and medians, shall be restored to their original condition, whether within or outside the easement/right-of way. All replacements shall be made with new materials.
- B. CONTRACTOR shall be responsible for all damage to streets, roads, curbs, sidewalks, highways, shoulders, ditches, embankments, culverts, bridges, or other public or private property, which may be caused by transporting equipment, materials, or men to or from the Work, whether by him or his Subcontractors. CONTRACTOR shall make satisfactory and acceptable arrangements with the OWNER of, or the agency having jurisdiction over, the damaged property concerning its repair or replacement or payment of costs incurred in connection with the damage.
- C. All fire hydrants and water control valves shall be kept free from obstruction and available for use at all times.

3.06 TREE AND PLANT PROTECTION

- A. All trees and other vegetation which must be removed to perform the Work shall be removed and disposed of by the CONTRACTOR; however, no trees or cultured plants shall be unnecessarily removed unless their removal is indicated on the Drawings. All trees and plants not removed shall be protected against injury from construction operations.
- B. No tree shall be removed outside of permanent easement(s), except where authorized by the ENGINEER. Whenever practicable, CONTRACTOR shall tunnel beneath trees in yards and parking lots when on or near the line of trenching operations. Hand excavations shall be employed as necessary to prevent injury to trees. Care shall be taken with exposed roots, unearthed during construction, so that roots do not dehydrate causing tree damage.
- C. Trees considered by the ENGINEER to have any significant effect on construction operations are indicated on the Drawings and those which are to be preserved are so indicated.
- D. CONTRACTOR shall take extra measures to protect trees designated to be preserved, using methods shown on the Drawings.

3.07 SECURITY

- A. Security shall be in accordance with Section 01540 - Security.
- B. CONTRACTOR shall be responsible for protection of the site, and all Work, materials, equipment, and existing facilities hereon, against vandals and other unauthorized persons.
- C. No claim shall be made against OWNER by reason of any act of an employee or trespasser, and CONTRACTOR shall make good all damage to the OWNER's property resulting from CONTRACTOR's failure to provide security measures as specified.
- D. Security measures shall be at least equal to those usually provided by OWNER to protect existing facilities during normal operations, and shall also include such additional security fencing, barricades, lighting, and other measures as required to protect the site. When required, the CONTRACTOR shall provide a security plan to the OWNER for review as to appropriateness of the security measures proposed.

3.08 ACCESS ROADS

- A. CONTRACTOR shall establish and maintain temporary access roads to various parts of the site as required to complete the Project. Such roads shall be available for the use of all others performing Work or furnishing services in connection with the Project.

3.09 PARKING

- A. CONTRACTOR shall provide and maintain suitable parking areas for the use of all construction workers and others performing Work or furnishing services in connection with the Project, as required, to avoid any need for parking personal vehicles where they may interfere with public traffic, the OWNER's operations, or construction activities.

3.10 DUST CONTROL

- A. Dust Control during construction of this Project shall be performed daily, as directed by the OWNER's representative. No direct payment will be made for dust control. Dust Control shall be considered subsidiary work relating to various Bid items of the Contract.

3.11 TEMPORARY DRAINAGE PROVISIONS

- A. CONTRACTOR shall be responsible for providing for the drainage of storm water and such water as may be applied or discharged on the site in performance of the Work. CONTRACTOR shall obtain ENGINEER approval for temporary drainage facilities which will handle, carry through, or divert around his Work all drainage flow, including storm flow and flows created by construction activity, to prevent silting of waterways or flooding damage to the property and adjacent property.

3.12 EROSION CONTROL

- A. CONTRACTOR shall prevent erosion of soil on the site and adjacent property resulting from his construction activities. Effective measures shall be initiated prior to the commencement of clearing, grading, excavation, or other operations which will disturb the natural protection.
- B. CONTRACTOR shall use controls developed from successful techniques elsewhere as approved by ENGINEER. Siltation and/or sedimentation controls shall include dams, berms, and dikes.

3.13 POLLUTION CONTROL

- A. CONTRACTOR shall prevent the pollution of drains and watercourses by sanitary wastes, sediment, debris and the substances resulting from construction activities. No sanitary wastes will be permitted to enter any drain or watercourse. No sediment, debris or other substance will be permitted to enter sanitary sewers and reasonable measures shall be taken by CONTRACTOR to prevent such materials from entering any drain or watercourse.
- B. CONTRACTOR shall observe the rules and regulations of the State of Texas and agencies of the U.S. Government prohibiting the pollution of any lake, stream, river, or wetland by the dumping of any refuse, rubbish, dredge material, or debris therein.
- C. CONTRACTOR is specifically cautioned that disposal of materials into any water of the State must conform to the requirements of the Texas Commission on Environmental Quality (TCEQ), and any applicable permit from the U.S. Army Corps of Engineers.

3.14 NOISE CONTROL

- A. CONTRACTOR shall comply with the applicable Noise Ordinances. CONTRACTOR shall take reasonable measures to avoid unnecessary noise. Such measures shall be appropriate for the normal ambient sound level in the area during working hours. All construction machinery and vehicles shall be equipped with practical sound-muffling devices, and operated in a manner to cause the least noise consistent with efficient performance of the Work.

3.15 FENCES

- A. All existing fences affected by the Work shall be maintained by the CONTRACTOR until completion of the Work. Fences which interfere with construction operations shall not be relocated or dismantled until written permission is obtained from the OWNER of the fence, and the period the fence may be left relocated or dismantled has been agreed upon. Where fences must be maintained across any construction easement, adequate gates shall be installed. Gates shall be kept closed and locked at all times when not in use.
- B. Upon completion of the Work across any tract of land, CONTRACTOR shall restore all fences to preconstruction, or to a better, condition and to their preconstruction location.

3.16 MAIL BOXES

- A. CONTRACTOR shall remove, reset temporarily, and relocate permanently all mail boxes that are within construction site limits conforming to requirements of United States Postal Service. Mailboxes shall not be laid on the ground, but shall be temporarily reset the same day as removed. Payment for removing and resetting of mail boxes will not be paid for directly, but will be considered subsidiary to the various Bid items. Any damage to mail boxes or posts shall be the responsibility of the CONTRACTOR.

3.17 EMERGENCY FACILITIES

- A. Free access shall be maintained at all times to fire lanes and emergency and utility control facilities such as fire hydrants, fire alarm boxes, police call boxes, and utility valves, manholes, junction boxes, etc. In the event that it is necessary to make one of these facilities temporarily inaccessible, CONTRACTOR shall obtain approval of such action,

and schedule, of Work from the OWNER. CONTRACTOR shall also provide at least 24 hours prior notice to the Fire Department, Police Department, and City Department governing the affected utility. The same Department(s) shall be promptly notified by the CONTRACTOR when such facilities are placed back in unobstructed service.

END OF SECTION

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SECTION 01510

TEMPORARY UTILITIES

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. Temporary electricity
 - 2. Temporary lighting for construction purposes
 - 3. Temporary water service
 - 4. Temporary fire protection
 - 5. Temporary Fuel Oil

1.2 QUALITY ASSURANCE

- A. Maintain temporary utilities in proper and safe condition throughout the progress of the Work.

1.3 TEMPORARY ELECTRICITY

- A. Provide and pay all charges for temporary electrical service capable of providing sufficient power throughout the site for both temporary power and temporary lighting for the Work. Temporary electrical service shall consist of all wiring, breakers, breaker boxes, poles, supports and all other materials necessary for a totally operable system.
- B. Make all arrangements with the electric service company including all permits, securities and inspections fees to obtain the separately metered temporary services.
- C. Furnish and connect the temporary electric service point to the utility and coordinate metering as required.
- D. All connection points and distribution systems shall be in conformance with applicable electrical codes, OSHA, and enforcement agencies having jurisdiction.
- E. Provide a general power distribution system including all wires, cables, supports, protective devices, transformers, motor starters, etc., as required for a complete electrically protected and safe system to handle construction services.
- F. Provide all outlets with circuit breaker protection and comply with ground fault protection requirements of the NEC.
- G. All connection points and distribution systems shall be in conformance with applicable electrical codes, OSHA, and enforcement agencies having jurisdiction.
- H. Provide all outlets with circuit breaker protection and comply with ground fault protection requirements of the NEC.

1.4 TEMPORARY LIGHTING

- A. Temporary general lighting system shall provide sufficient artificial light so that all Work may be done in a workmanlike manner within enclosed structures and chambers, where there is not sufficient daylight. A minimum of 300 watts of lamp per each 200 square foot or less of work area shall be provided.
- B. Temporary general lighting system shall consist of wiring, switches, necessary insulated supports, poles, fixtures, receptacles, lamps, guards, cut-outs, fuses, and other materials necessary for a totally operable system.

1.5 TEMPORARY WATER SERVICE

- A. Temporary Drinking Water
 - 1. Provide adequate potable drinking water, so piped or transported as to keep it safe and fresh, and served from single service containers or satisfactory types of sanitary drinking stands or fountains.
 - 2. Provide all such facilities and services in strict accordance with existing and governing health regulations.
- B. Water for Construction Purposes
 - 1. Provide adequate water for construction, so piped or transported as to keep it safe and fresh.
 - 2. Water may be purchased from BPUB upon request.

1.6 TEMPORARY FIRE PROTECTION

- A. Comply with all applicable fire protection and prevention requirements that may be established by Federal, State or local governmental agencies.
- B. Prohibit smoking in hazardous areas. Post suitable warning signs in areas that are continuously or intermittently hazardous.
- C. Determine the fire protection adequacy of existing facilities related to the Work being performed and have standby fire protection available if needed.

1.7 TEMPORARY FUEL OIL

- A. No fuel storage is permitted on the site excepting within vehicles and equipment.
- B. Take all necessary precautions to avoid leakage and spillage of all petroleum products, including lubricating oils.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

SECTION 01520

CONSTRUCTION FACILITIES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Temporary sanitary and first-aid facilities

1.2 QUALITY ASSURANCE

- ###### A.
- Maintain temporary construction facilities in proper and safe condition throughout the progress of the Work.

1.3 TEMPORARY SANITARY AND FIRST AID FACILITIES

- ###### A.
- Provide suitably enclosed chemical or self-contained toilets for the use of the labor force employed on the Work. Toilets shall be located near the Work sites and secluded from observation insofar as possible. Toilets shall be serviced weekly, kept clean and supplied throughout the course of the Work.
- ###### B.
- Contractor shall enforce proper use of sanitary facilities.
- ###### C.
- Provide a first aid station at the site.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

SECTION 01555
TRAFFIC CONTROL AND REGULATION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Traffic Control and Regulation

1.02 METHODS OF PAYMENT

- A. Measurement and payment for Traffic Control and Regulation is on a stipulated price basis.
- B. Payment: Traffic Control and Regulation will be paid for at the Contract lump sum price.

1.03 REFERENCES

- A. Texas Manual of Uniform Traffic Control Devices (TMUTCD)
- B. Texas Department of Transportation (TxDOT) permit (if applicable)
- C. City of Brownsville
- D. Cameron County

1.04 PERFORMANCE REQUIREMENTS

- A. Provide all necessary signs, barricades, marking, lighting, and other equipment and supplies required to comply with the TMUTCD (and TxDOT permit, if applicable)
- B. Provide all necessary certified flagmen required to comply with the TMUTCD (and TxDOT, City, and/or County permit, if applicable)

PART 2 - PRODUCTS

- A. Equipment and materials must be furnished, installed and operated by an experienced contractor regularly engaged in traffic control system design, installation and operation.
- B. All equipment must be in good repair and operating order.
- C. Sufficient standby equipment and materials shall be kept available to ensure continuous operation, where required.

PART 3 - EXECUTION

- A. Provide labor, material, equipment, techniques and methods required to provide safe traffic control and regulation. Monitor effectiveness of the installed system and its effect on adjacent property.
- B. Notify, TxDOT, City and /or County as required by the permit(s) (if applicable).
- C. Provide continuous system operation, including nights, weekends and holidays. Arrange for appropriate backup if electrical power is primary energy source for traffic control system.
- D. Remove system(s) upon completion of construction or when traffic control is no longer required.

END OF SECTION

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SECTION 01561
TRENCH EXCAVATION AND SHORING SAFETY PLAN

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This section shall cover CONTRACTOR'S furnishing a Safety System Plan, and all labor and materials for installation and maintenance of the Trench Safety System.
- B. Trench safety system for structural excavations which fall under provisions of State and Federal trench safety laws.
- C. For any trench excavation at a depth of five (5) feet or greater, or where shown on plans, provide trench safety system. Trench safety system shall be in accordance with details shown on CONTRACTOR'S Trench Excavation and Shoring Safety Plan.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices:
 - 1. Measurement for "Trench Safety System" by linear foot of trench excavated. Shoring of trench at manholes and other line structures to be included in the lineal foot cost.
- B. Payment: The Work performed in conformance with this specification shall be paid as follows:
 - 1. Pay for "Trench Safety System" measured as stated above by the linear feet of trench excavated and as shown on PROPOSAL. Payment shall be full compensation for all Work materials and advance trench safety training employed. There shall be no increase in the Contract price because of the incorporation of CONTRACTOR'S Trench Excavation and Shoring Safety Plan or CONTRACTOR'S detailed plans and specifications for the trench safety system into the bid documents and the Construction Contract. There shall be no increase in the Contract price because of modifications to CONTRACTOR's plans and/or the CONTRACTOR's detail plans and specifications for the trench safety system, whether or not the result of unforeseen or differing site or soil conditions.
 - 2. Pay for "Design of Trench Safety System Plan" developed by CONTRACTOR'S Registered Professional Engineer by lump sum as shown on Bid Proposal. Payment by OWNER shall be full compensation for all professional services relating to the CONTRACTOR's submittal to OWNER of the "Trench Safety System Plan".
- C. Stipulated Price (Lump Sum). If the Contract is a Stipulated Price Contract, payment for work in this Section is included in the total Stipulated Price.
- D. When not listed as separate contract pay item, "Trench Safety System" shall be considered as incidental work, and the cost thereof including furnishing all materials, labor equipment, tools and incidentals required for the work, all in accordance with the plans and these specifications, shall be incorporated in such contract pay items as are provided in the proposal contract.

1.03 DEFINITIONS

- A. A trench shall be defined as a narrow excavation (in relation to its depth) made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench (measured at the bottom) is not greater than 15 feet.
- B. The trench safety system requirements will apply to larger open excavations if the erection of structures (or other installations) limits the space between the excavation slope and installed structure to dimensions equivalent of a defined trench above.
- C. Trench Safety Systems include but are not limited to sloping, sheeting, trench boxes or trench shields, sheet piling, cribbing, bracing, shoring, dewatering or diversion of water to provide adequate drainage.

1.04 SUBMITTALS

- A. Submit a Trench Excavation Protection System and Plan specifically for the construction of trench excavation. Design the trench safety program to be in accordance with OSHA standards governing the presence and activities of individuals working in and around trench excavations.
- B. Construction and shop drawings containing deviations from OSHA standards or special designs shall be sealed by a State of Texas Registered Professional Engineer retained and paid by Contractor.
- C. Review of the Contractor's Trench Excavation Protection System and Plan by the Owner's Representative will only be in regard to compliance with this specification and will not constitute approval by the Owner nor relieve Contractor of obligations under State and Federal trench safety regulations.

1.05 REGULATORY REQUIREMENTS

- A. Install and maintain trench safety systems in accordance with the detail specifications set out in the provision of Excavations, Trenching, and Shoring, Federal Occupation Safety and Health Administration (OSHA) Standards.

1.06 INDEMNIFICATION

- A. Contractor shall indemnify and hold harmless the Owner, its employees and agents, from any and all damages, costs (including, without limitation, legal fees, court costs, and the cost of investigation), judgements or claims by anyone for injury or death of persons resulting from the collapse or failure of trenches constructed under this Contract.
- B. Contractor acknowledges and agrees that this indemnity provision provides indemnity for the Owner in case the Owner is negligent either by act or omission in providing for trench safety, including, but not limited to safety program and design reviews, inspections, failures to issue stop work orders, and the hiring of the Contractor.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. The materials used in the Trench Safety System shall be furnished by the CONTRACTOR, as approved by the OWNER, to comply with the requirements of the

work of the CONTRACTOR as specified therein.

- B. Timber. Trench sheeting materials to be full size, a minimum of two inches in thickness, solid and sound, free from weakening defects such as loose knots and splits.
- C. Steel Sheet Piling. Steel sheet piling shall at a minimum conform to one of the following specifications:
 - 1. ASTM A328.
 - 2. ASTM A572, Grade 50.
 - 3. ASTM A690.
- D. Steel for stringers (wales) and cross braces shall conform to ASTM A588.
- E. Steel Trench Boxes. Portable steel trench box shall at a minimum be constructed of steel conforming to ASTM Specification A-36. Connecting bolts used shall conform to Specifications ASTM A-3 07. Welds to conform to requirements of AWS Specification D1.1.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install and maintain trench safety systems in accordance with provisions of OSHA.
- B. Install specially designed trench safety systems plan in accordance with the Contractor's Trench Safety System Plan.
- C. A competent person, as identified in the Contractor's Trench Safety System Plan, shall verify that trench boxes and other pre-manufactured systems are certified for the actual installation conditions.
- D. Timber Sheeting.
 - 1. Timber sheeting and size of uprights, stringers (wales), and cross bracing to be installed in accordance with CONTRACTOR'S plan. Place cross braces in true horizontal position, spaced vertically, and secured to prevent sliding, falling, or kick outs. Cross braces to be placed at each end of stringers (wales), in addition to other locations required. Cross braces and stringers (wales) to be placed at splices of uprights, in addition to other locations required.
- E. Steel Sheet Piling.
 - 1. Steel sheet piling of equal or greater strength may be used in lieu of timber trench shoring shown in the OSHA tables (proposed standards). Drive steel sheet piling to at least minimum depth below trench bottom as recommended by CONTRACTOR'S Registered Professional Engineer providing design. Place cross braces in true horizontal position, spaced vertically and secured to prevent sliding, falling, or kick outs. Cross braces to be placed at each end or stringers (wales), in addition to other locations required.
- F. Trench Boxes.
 - 1. Portable trench box may be used in lieu of timber trench shoring shown in the OSHA tables (proposed standards) and shall be designed to provide equal or greater protection than timber trench shoring shown in the OSHA tables. In cases where top

of portable trench box will be below top of trench, the trench must be sloped to the maximum allowable slope for the soil conditions existing on the Project. In areas where a sloped trench will affect the integrity of existing structures, CONTRACTOR to protect structures prior to sloping trench.

G. Trench Jacks.

1. When trench jacks are used for cross bracing and/or stringers (wales), the trench jacks shall provide protection greater than or equal to the timber cross bracing shown in the OSHA tables (proposed standards). Trench jacks to be placed at each end of stringers (wales) in addition to other locations required.

3.02 SUPERVISION. CONTRACTOR

- A. Supervision Contractor must provide competent supervisory personnel at each trench while Work is in progress to ensure CONTRACTOR's methods, procedures, equipment, and materials pertaining to the safety systems in this Item are sufficient to meet requirements of current Texas Law and OSHA Standards.

3.03 MAINTENANCE OF SAFETY SYSTEM

- A. The safety system shall be maintained in the condition as shown on the Trench Excavation and Shoring Safety Plan as designed by the CONTRACTOR's Registered Professional Engineer. The CONTRACTOR shall take all necessary precaution to ensure the safety systems are not damaged during their use. If at any time during its use a safety system is damaged, personnel shall be immediately removed from the trench excavation area and the safety system repaired. The CONTRACTOR shall take all necessary precautions to ensure no loads, except those provided for in the plan, are imposed upon the trench safety system.

3.04 INSPECTION

- A. Contractor, or Contractor's independently retained consultant, shall make daily inspections of the trench Excavation Protection System to ensure that the installed systems and operations meet OSHA and other personnel protection regulations requirements.
- B. If evidence of possible cave-ins or slides is apparent, Contractor shall immediately stop work in the trench and move personnel to safe locations until the necessary precautions have been taken by Contractor to safeguard personnel entering the trench.
- C. Maintain a permanent record of daily inspections.

3.05 REMOVAL

- A. Bed and backfill pipe to a point at least one (1) foot above top of pipe or other embedded items prior to removal of any portion of trench safety system. Bedding and backfill to be in accordance to other applicable specification items. Backfilling and removal of trench supports shall be in accordance with CONTRACTOR's Trench Excavation and Shoring Safety Plan. Removal of trench safety system to be accomplished in such a manner to cause no damage to pipe or other embedded items. Remove no braces or trench supports until all personnel have evacuated the Trench. Backfill trench to within five (5) feet of natural ground prior to removal of entire trench safety system.

3.06 FIELD QUALITY CONTROL

- A. Contractor shall verify specific applicability of the selected or specially designed trench safety systems to each field condition encountered on the project.

END OF SECTION

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SECTION 01570

TEMPORARY CONTROLS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. Mulch
 - 2. Dust and particle control
 - 3. Ground protection
 - 4. Drainage and erosion control
- B. Related Requirements
 - 1. Section 02920 – Lawns and Grasses

1.2 SUBMITTALS

- A. Ground Protection Plan
- B. Informational Submittals
 - 1. Materials and methods proposed for use in dust and particle control

PART 2 PRODUCTS

2.1 MULCH

- A. Hay mulch shall consist of mowed cured grass, clover, alfalfa, timothy, oats, or wheat. No salt hay shall be used.

PART 3 EXECUTION

3.1 DUST & PARTICLE CONTROL

- A. Control dust and particles during the Work using sweeping and vacuum equipment, and encapsulation as needed.
- B. Prevent dust and particles from becoming a nuisance or hazard. During demolition or land disturbance, raw or coated materials, excavated material, and open or stripped areas are to be policed and controlled to prevent dust or loose particles from spreading or leaving the limits of work.
- C. Control dust and particles during the work on-site using calcium chloride and/or water.
- D. During the earthwork or transportation of demolition debris, all paved road and driveway surfaces shall be scraped and broomed free of excavated or demolition materials on a daily basis. The surfaces shall be hosed down or otherwise treated to eliminate active or potential dust conditions and the natural road or wearing surface shall be exposed.

3.2 GROUND PROTECTION PLAN

- A. Prepare a written Ground Protection Plan (GPP) for review and approval describing the proposed methods for controlling the release and deposition of dust and particles and how the site will be protected from contamination by demolition activities.
- B. Include frequency of inspections, maintenance activities, and emergency response procedures.
- C. Include approach to restore the site to pre-demolition conditions.
- D. Maintain a copy of the GPP on site throughout the project duration.
- E. Comply with the GPP including control of loose or airborne particles that have the potential of being hazardous to workers or from being released to the environment through the use of structural and non-structural means.

3.3 DRAINAGE AND EROSION CONTROL

- A. Control erosion and siltation during the construction through mulching, haybales, siltation fencing, diversion and control of storm water run-off, ponding areas and similar methods.
- B. Provide and maintain sediment trapping systems.
- C. Discharge surface runoff from any disturbances to the site into silt containment basins. Utilize siltation prevention measures including haybale and geotextile fences before discharge to drainage systems.

3.4 RESTORATION

- A. Provide erosion control, seed and mulch and netting for surface restoration of areas disturbed during construction activities.
- B. Provide temporary stabilization of disturbed areas that remain inactive greater than 14 consecutive days to minimize erosion. Methods to minimize erosion may include but are not limited to:
 - 1. Spreading straw and/or providing temporary planting stabilization.
 - 2. Installing jute netting.
 - 3. Preparing surfaces to increase the runoff flow path, reduce the runoff flow velocity, or create small storage pockets to retain surface flows. Methods of accomplishing this include using mechanical devices such as track equipment or sheep's foot rollers.
- C. Restore the ground surface in brush and/or woodland areas by machine spreading of existing stripped surface soils (loam and humus), liming, fertilizing, seeding and mulching, as well as installing jute netting where required by steep slopes.
- D. Salvage existing loam and topsoil and stockpile this material for re-spreading where originally removed. On backfilling, grading shall be returned to preconstruction contours and the stockpile of loam shall be spread over areas disturbed during construction activities.

- E. Place mulch on seeded areas. Use jute netting on areas having a slope greater than 3 horizontal to 1 vertical, to anchor the mulch until a satisfactory growth is obtained. If seeding is not possible because of the time of the year, apply mulch and netting to stabilize the area until such time as seed can be sown.
- F. Provide grading, refertilizing, reseeding, remulching and/or netting to maintain the restored areas until the Work is accepted by the Owner.
- G. Seed shall be as specified under Section 02920.

3.5 CLEANING

- A. Remove any sediment when accumulation has reached 1/3 of the effective height of the sediment control.
- B. Clean sediment trapping devices periodically during the Work. Devices shall be cleaned on a weekly basis, or more frequently if the devices become clogged.

END OF SECTION

SECTION 01576
WASTE MATERIAL DISPOSAL

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Disposal of waste material and salvageable material.

1.02 MEASUREMENT AND PAYMENT

- A. No separate payment will be made for waste material disposal under this Section. Include payment in unit price for related sections.

1.03 SUBMITTALS

- A. Submittals shall conform to requirements of Section 01300 - Submittals.
- B. Obtain and submit disposal permits for proposed disposal sites if required by federal, state and local ordinances.
- C. Submit a copy of written permission from property owner, along with description of property, prior to disposal of excess material.

PART 2 - PRODUCTS - (NOT USED)

PART 3 - EXECUTION

3.01 SALVAGEABLE MATERIAL

- A. Excavated Material: When indicated on Drawings, load, haul, and deposit excavated material at a location or locations shown on Drawings outside the limits of Project.
- B. Other Salvageable Materials: Conform to requirements of individual Specification Sections.

3.02 EXCESS MATERIAL

- A. Vegetation, rubble, broken concrete, debris, asphaltic concrete pavement, excess soil, and other materials not designated for salvage, shall become the property of Contractor and shall be removed from the job site and legally disposed of.
- B. Waste materials shall be removed from the site on a daily basis, such that the site is maintained in a neat and orderly condition.

END OF SECTION

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SECTION 01700
PROJECT CLOSEOUT PROCEDURE

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK AND RELATED DOCUMENTS

- A. Furnish all work and materials, appliances, tools, equipment, facilities, transportation and services required and incidental thereto, as shown on drawings and/or specified herein including but not limited to; the submittal of closeout documents, final cleaning of materials and equipment and furnishing permit clearances, guarantees and warranties.
- B. Related Work Specified Elsewhere:
 - 1. Submittal Requirements: Section 01300
- C. The completion of the closeout procedures indicated in these specifications will be a condition for releasing final payment.

1.02 PROJECT CLEAN-UP

- A. Provide all required personnel, equipment and materials needed to maintain the specified standard of cleanliness. Use only materials and equipment which are compatible with the surface being cleaned, as recommended by the manufacturer of the material, or as approved by the Engineer/Architect.
- B. Final cleaning shall mean a level of cleanliness generally provided by skilled cleaners using commercial quality, site maintenance equipment and materials.
- C. The Contractor shall schedule a final cleaning as approved by the Engineer/Architect.
- D. The contractor shall restore any disturbed areas or structures to pre-construction conditions or improved conditions.

1.03 ONSITE TRAINING

- A. The Contractor shall provide a demonstration of the operation techniques and methods of the mechanical, electrical and plumbing systems. This demonstration must be coordinated with the Engineer/Architect. The operation and maintenance manuals must be available for use during this training period. Training shall be a minimum of eight (8) hours long.
- B. The Contractor shall propose a time in writing to the Engineer/Architect allowing at least seventy-two (72) hours notice.

1.04 AS BUILT DRAWINGS

- A. Final "As-Built" drawings shall be prepared by the Contractor in accordance with Section 01785 Project Record Documents. These drawings shall indicate all changes or deviations from the construction documents. These drawings shall be submitted as a hard copy and electronic PDF format to the Engineer/Architect on a CD. The drawings must clearly state AS BUILT and be neatly organized.

- B. Copies of “As-Built” wiring diagrams shall be laminated and placed inside each Lift Station’s control panel

1.05 GUARANTEES AND WARRANTIES

- A. The Contractor shall provide a construction warranty letter.
- B. The Contractor shall provide final clearances from all permitting agencies.

1.06 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual Specification sections.
- B. Deliver to location within the Owner’s jurisdiction as directed by the Engineer; obtain receipt prior to final Application for Payment.

1.07 FINAL COMPLETION

- A. The Contractor shall supply a written request for a Final Completion inspection. This request shall include the following:
 - 1. Certification that the work and actions specified in the Contract Documents has been completed and that the Owner has full use of the site.
 - 2. All equipment has been tested and balanced and is fully functional.
 - 3. The Onsite Training Program has been completed and there are no outstanding issues resulting from said program.
 - 4. A copy of the list of deficiencies generated by the Substantial Completion Inspection, with each item initialed and showing date completed.
 - 5. A list of all Subcontractors and material suppliers with name, address and phone number. Include source for parts replacement and local representative if different.
 - 6. Submit all test/adjust/balance records and start-up performance reports.
 - 7. Submit all tools, keys and any special devices to assure complete operation by the Owner.
 - 8. Final application for payment.
 - 9. Waivers, Sworn Statements and Affidavits of Payments to Subcontractors and Suppliers.

END OF SECTION

SECTION 01713
MOBILIZATION

PART 1 - G E N E R A L

1.01 SECTION INCLUDES

- A. Organization and mobilization of the Contractor's forces.
- B. Transporting construction plant and equipment to the jobsite and setting up of same.
- C. Transporting various tools, materials, and equipment to the jobsite.
- D. Erection of temporary buildings and facilities as required for field offices, staging, storage, and

1.02 MEASUREMENT AND PAYMENT

- A. Measurement and payment for mobilization is on a stipulated price basis.
- B. Payment: Mobilization will be paid for at the Contract lump sum price, and will include accumulating tools, apparatus, equipment, materials which are not intended to be incorporated in the Work, and personnel, and performing final removal and demobilization. The Contract lump sum price will be paid as follows:
 - 1. 45 percent of the Contract lump sum price will be made upon receipt and approval by the Engineer of the following items (as applicable):
 - a. Schedule of Values
 - b. Trench Protection Plan
 - c. Construction Schedule
 - d. Establishment of Field Office
 - e. Dewatering Plan
 - 2. 45 percent of the Contract lump sum price will be made upon completion of the Work amounting to five percent of Original Contract Price. The amount of Contract Price designated for mobilization may not be applied in the computing of the five percent of the Original Contract Price.
 - 3. 10 percent of the Contract lump sum price after the Engineer has determined that the Contractor has left the work site in a clean condition after the completion of all phases of work.
- C. Mobilization payments will be subject to retainage amounts stipulated in the General Conditions.
- D. All cost difference between the stipulated amount and the actual cost of the initial mobilization and the cost of all subsequent mobilization shall be included in the various other prices bid.

1.03 DESCRIPTION

- A. Mobilization shall include mobilization of all construction equipment, materials, supplies, appurtenances, facilities, and the like which are not intended to be incorporated in the Work, staffed and ready for commencing and prosecuting the Work; and the subsequent demobilization and removal from the jobsite of said equipment,

appurtenances, facilities, and the like upon completion of the Work.

- B. Mobilization shall also include assembly and delivery to the jobsite of plant, equipment, tools, materials, and supplies necessary for the prosecution of work which are not intended to be incorporated in the Work; the clearing of and preparation of the Contractor's work area; the complete assembly, in working order, of equipment necessary to perform the required work; personnel services preparatory to commencing actual work; and all other preparatory work required to permit commencement of the actual work on construction items for which payment is provided under the Contract.

1.04 SUBMITTALS

- A. Refer to Section 01300-Submittals, for the submittal requirements and procedures.
- B. Submit a plan of the proposed layout of the construction site, including fences, roads, parking, buildings, staging, and storage areas, within seven days after the effective date of the Notice to Proceed.

1.05 DELIVERY

- A. Delivery to the jobsite of construction tools, equipment, plant, temporary buildings, materials, and supplies shall be accomplished in conformance with local governing ordinances and regulations.

1.06 TOOLS AND SUPPLIES

- A. Provide construction tools, equipment, materials, and supplies of the types and quantities necessary to facilitate the timely execution of the Work.
- B. Provide personnel, products, construction materials, equipment, tools, and supplies at the jobsite at the time they are scheduled to be installed or utilized.

1.07 DEMOBILIZATION

- A. Upon completion of the Work, remove construction tools, apparatus, equipment mobile units and buildings, unused materials and supplies, plant, and personnel from the jobsite.
- B. Restore all areas utilized for mobilization to their original, natural state or, when called for in the Contract Documents, complete such areas indicated.

PART 2 - P R O D U C T S – NOT USED

PART 3 - E X E C U T I O N – NOT USED

END OF SECTION

SECTION 01725

PRESERVATION AND RESTORATION OF PROJECT FEATURES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Protection and replacement of trees, shrubs, signs, property markers, fences, and related project features.
2. Taking precautions, implementing safeguards, and providing programs, and taking actions necessary to protect persons, public and private property, and facilities that are outside the demolition scope from damage caused by demolition activities.

1.2 DEFINITIONS

A. Underground Structures

1. Underground structures are defined to include, but not be limited to, sewer, water, gas, and other piping, and manholes, chambers, electrical and signal conduits, tunnels and other existing subsurface work located within or adjacent to the limits of the Work.
2. Underground structures known to the Engineer are shown on the Drawings to the extent that locations are available. This information is shown for the assistance of the Contractor in accordance with the best information available, but is not guaranteed to be correct or complete. The Contractor shall be responsible for checking on the actual locations of water, sewer, gas electric and telephone service connection lines to avoid potential interferences.

B. Surface Structures

1. Surface structures are defined as existing buildings, structures and other facilities above the ground surface. Included with such structures are their foundations or any extension below the surface. Surface structures include, but are not limited to, buildings, tanks, walls, bridges, roads, dams, channels, open drainage, piping, poles, wires, posts, signs, markers, curbs, walks, communication equipment, and all other facilities that are visible above the ground surface.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.1 REPAIR/RESTORATION

- ###### A.
- Trees, shrubs, and similar items shall not be removed except where indicated on the drawings or as necessary to access the required demolition work, as approved by the Owner and Engineer prior to commencing the work. Items to be removed shall be clearly marked as directed by the Engineer. If objects not to be removed are damaged or removed, they shall be repaired or replaced to their original condition.

- B. Trees and shrubs on private property, which are removed or damaged by the Contractor shall be replaced with plantings of equal value and similar in size.
- C. Signs, fences, property markers, walls, guard rails and other public or private property that are outside the demolition scope shall be replaced in kind if damaged. Supports and protective devices required shall be provided.
- D. Underground and Surface Structures
 - 1. In the event of damage, injury or loss to existing utilities and structures that were not indicated to be removed or abandoned, whether shown on the Drawings or not, make all reasonable efforts to facilitate repairs and to mitigate the impact of such events upon the utility or structure owner's normal operations. Restore the existing utility or structure to the condition required by the owner of the utility or structure or at least to the condition found immediately prior to the Work. In the event that the utility owner elects to make the repairs, provide all reasonable access and assistance, and reimburse the utility owner for the cost of repairs. If utility service is interrupted due to damage to facilities, alternate facilities shall be provided.
 - 2. All other existing surface facilities, including but not limited to, guard rails, posts, guard cables, signs, poles, markers and curbs which are temporarily removed to facilitate the Work shall be replaced and restored to their original condition at the Contractor's expense unless otherwise indicated in other sections of these specifications.
 - 3. Wherever water, sewer, gas or petroleum mains, electric or telephone lines, 2-way communication receiving and transmitting equipment, cables, conduit, or other utilities, structures, and appurtenances are encountered and may be in any way interfered with, inform the Engineer and the appropriate utility company. Cooperate with the Engineer and utility company in the protection, removal, relocation, and replacement of structures and facilities.
 - 4. At least 14 days prior to the start of demolition activities, the Contractor shall provide notification in writing to direct abutters of the proposed start date of Work and describe the characteristics, magnitude, and schedule of proposed inconveniences.
 - 5. Work affecting water distribution systems, which will take fire hydrants out of service, must be coordinated with the local fire department. The Contractor shall be prepared to restore fire flows in the event of an emergency or to provide for temporary fire flow service in accordance with the requirements of the local fire department.
 - 6. Materials used for relocation or replacement of utilities and structures shall be of an equivalent material, type, class, grade and construction as the existing or as approved by the respective owners thereof, unless otherwise shown or specified.
 - 7. When any survey monument or property marker, whether of stone, concrete, wood or metal, is in the line of any trench or other demolition work and may have to be removed, notify the Engineer in advance of removal. Under no circumstances shall any monument or marker be removed or disturbed by the

Contractor or by any of his Subcontractors, employees or agents, without the permission of the Engineer. Monuments or markers removed or disturbed shall be reset by a land surveyor licensed in the State where the Work is located at the Contractor's expense. Should any monuments or markers be destroyed through accident, neglect or as a result of the Work under this Contract, the Contractor shall, at his own expense, employ a land surveyor licensed in the State where the Work is located to re-establish the monument or marker.

3.2 PROTECTION

- A. The construction of certain portions of the project may require excavation within the root systems of trees. Roots with a diameter of 2 inches or more within the excavation shall not be cut. If necessary, excavation shall be made with small powered equipment or by hand to comply with this requirement. It may be necessary to excavate from more than one direction to avoid damage to the roots.
- B. The trunks of trees that are to remain and are within the swing radius of the excavating machine bucket when fully extended shall be wrapped with burlap and 2 inch by 4 inch protective wood slats (8 inch spacing maximum) wired around the circumference of the trees to protect them from damage.
- C. Tree limbs shall not be cut except upon written approval of the Owner and the Engineer. Tree limbs cut shall be painted with approved forestry paint manufactured specifically for that purpose.
- D. Underground and Surface Structures
 - 1. Sustain in their places and protect from direct or indirect injury underground and surface structures designated to remain within or adjacent to the limits of the Work. Such sustaining and supporting shall be done carefully and as required by the party owning or controlling such structure. Before proceeding with the work of sustaining and supporting such structure, satisfy the Engineer that the methods and procedures to be used have been approved by the party owning same.
 - 2. Pay utility service company charges related to the temporary support of utility poles if required to complete the Work.
 - 3. Assume risks associated with the presence of underground and surface structures within or adjacent to the limits of the Work. The Contractor shall be responsible for damage and expense for direct or indirect injury caused by his Work to any structure. Immediately repair damage caused by the Work to the satisfaction of the owner of the damaged structure.

END OF SECTION

SECTION 01740

WARRANTIES

PART 1 GENERAL

1.01 SCOPE OF WORK

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

1.02 SUBMITTAL REQUIREMENTS

- A. Submit written warranties to the OWNER prior to the date fixed by the Engineer for Substantial Completion. If the Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the work, or a designated portion of the work, submit written warranties upon request of the Owner.
- B. Assemble warranties, service, and maintenance contracts, executed by each of the respective manufacturers, suppliers, and subcontractors.
- C. Number of original signed copies required: Two (2) each.
- D. Table of Contents: Neatly types, in orderly sequence. Provide complete information for each item.
 - 1. Product or work item.
 - 2. Firm, with name of principal, address and telephone number.
 - 3. Scope.
 - 4. Date of beginning of warranty, service, or maintenance contract.
 - 5. Duration of warranty, or service maintenance contract.
 - 6. Provide information for Owner's personnel:
 - a. Proper procedure in case of failure.
 - b. Instances which might affect the validity of warranty.
 - 7. Contractor, name of responsible principal, address and telephone number.

1.03 FORMS OF SUBMITTALS

- A. Prepare in duplicate packets.
- B. Format:
 - 1. Size 8-1/2 inches x 11 inches, punch sheets for standard 3-post binder.
 - a. Fold larger sheets to fit into binders.
 - 2. Cover: Identify each packet with typed or printed title 'WARRANTIES'. List:
 - a. Title of Project.
 - b. Name of Contractor.
 - 3. Binders: Commercial quality, three-post binder, with durable and cleanable plastic covers and maximum post width of 2 inches.

1.04 WARRANTY SUBMITTAL REQUIREMENTS

- A. For all major pieces of equipment, submit a warranty from the equipment manufacturer. The manufacturer's warranty period shall be concurrent with the Contractor's for one (1) years, unless otherwise specified, commencing at the time of final acceptance by the Owner.
- B. The Contractor shall be responsible for obtaining certificates for equipment warranty for all major equipment specified under Divisions 11, 13, 14, 15 and 16 and which has a 1 HP motor or which lists for more than \$1,000. The Engineer reserves the right to request warranties for equipment not classified as major. The Contractor shall still warrant equipment not considered to be "major" in the Contractor's once-year warranty period even though certificates of warranty may not be required.
- C. For certain pieces of equipment, the OWNER may require a warranty greater than one (1) years. The requirement for extended warranty shall be specified in individual sections of the Specifications.

1.05 WARRANTY REQUIREMENTS

- A. Related Damages and Losses: When correcting warranted work that has failed, remove and replace other work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted work.
- B. Reinstatement of Warranty: When work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- C. Replacement Cost: Upon determination that work covered by a warranty has failed, replace, or rebuild the work to an acceptable condition complying with requirements of Contract Documents. The Contractor's is responsible for the cost of replacing or rebuilding defective work regardless of whether the Owner has benefited from use of the work through a portion of its anticipated useful service life.
- D. Owner's Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the OWNER can enforce such other duties, obligations, rights, or remedies.
- E. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.
- F. The Owner reserves the right to refuse to accept work for the project where a special warranty, certification, or similar commitment is required on such work or part of the work, until evidence is presented that entities required to countersign such commitments are willing to do so.
- G. Disclaimers and Limitations: Manufacturer's disclaimers and limitation on product warranties do not relieve the Contractor of the warranty on the work that incorporates the products, nor does it relieve suppliers, manufacturers and subcontractors required to countersign special warranties with the Contractor.

PART 2 PRODUCTS – (NOT USED)

PART 3 EXECUTION -(NOT USED)

END OF SECTION

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SECTION 01785
PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Maintenance and Submittal of Project Record Documents and samples.

1.02 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Maintain one record copy of documents at the site in accordance with the Contract Documents.
- B. Store Record Documents and samples in field office if a field office is required by Contract Documents, or in a secure location. Provide files, racks, and secure storage for Record Documents and samples.
- C. Label each document "PROJECT RECORD" in neat, large, printed letters.
- D. Maintain Record Documents in a clean, dry, and legible condition. Do not use Record Documents for construction purposes.
- E. Keep Record Documents and Samples available for inspection by Resident Project Representative.

1.03 RECORDING

- A. Record information concurrently with construction progress. Do not conceal any work until required information is recorded.
- B. Contract Drawings and Shop Drawings: Legibly mark each item to record all actual construction, or "as built" conditions, including:
 - 1. Measured depths of elements of foundation in relation to finish first floor datum.
 - 2. Measured horizontal locations and elevations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - 3. Elevations of underground utilities referenced to bench mark utilized for project.
 - 4. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of construction.
 - 5. Field changes of dimension and detail.
 - 6. Changes made by modifications.
 - 7. Details not on original contract drawings.
 - 8. References to related shop drawings and modifications.
- C. Record information with a red felt-tip marking pen on a set of blue or black line opaque drawings, provided by Engineer.

1.04 SUBMITTALS

- A. At contract closeout, deliver Project Record Documents to Engineer and prepare the Final “As-Built” data in accordance with Section 01700 Paragraph 1.04 “AS BUILT DRAWINGS”

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

SECTION 02071

DEMOLITION AND SALVAGE OF OLD STRUCTURES AND EQUIPMENT

PART 1 - GENERAL

1.01 SUMMARY

- A. Scope: The work covered by this Section consists of furnishing all labor, materials, equipment, supervision, supplies and tools, and performing all operations in connection with the demolition of old structures, portions of old structures, or old equipment, as shown on PLANS, and in accordance with the Contract Documents. Demolition work includes all excavation and backfill to complete the removal hereinafter described.
- B. Work includes:
 - 1. Demolition of existing structures, facilities, and equipment;
 - 2. Salvage of equipment and/or appurtenances;
 - 3. Disposal of excess material and equipment not designated for reuse or salvage;
 - 4. Restoration.

1.02 RELATED REQUIREMENTS

- A. PLANS show equipment and structures designated to be demolished, salvaged, or reused.
- B. Related work as called for on PLANS, or in this or other TECHNICAL SPECIFICATIONS.

1.03 SUBMITTALS

- A. Submit the following in accordance with Section 01300, "Submittals".
- B. Schedules indicating proposed methods and sequence of operations for selective demolition prior to commencement of Work. Include coordination for shut-off and/or transfer of utility services and details for dust and noise control.

1.04 QUALITY ASSURANCE

- A. Prior to demolition, a joint inspection by the OWNER, ENGINEER and CONTRACTOR will be made to determine condition of existing structures adjacent to items being demolished. Adjacent structures damaged by demolition operations must be restored to at least pre-existing conditions, at no expense to the OWNER.

1.05 MEASUREMENT AND PAYMENT

- A. No separate measurement or payment for work performed under this Section. Include cost of same in Contract price bid for work of which this is a component part.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 GENERAL

- A. Operational procedures are at the CONTRACTOR's option but must not interfere with the execution of other work. Materials or equipment designated for reuse or salvage to be carefully removed, transported and stored in approved storage areas as designated by OWNER.
- B. Ownership of Material and Equipment. Certain materials and equipment may be designated for reuse or salvage and are to remain the OWNER's property. If the designated items are damaged during demolition, handling, or storage, the items must be restored to at least pre-existing conditions, at no expense to the OWNER. Materials and equipment not designated for reuse or salvage become the CONTRACTOR's property.
- C. Reuse. Certain items are designated for reuse. Materials and equipment designated for reuse are to be stored and protected until time of installation.
- D. All material such as pipe, timbers, structural steel, railings, etc., which have been designated as salvable for reuse, to be carefully placed in neat piles in approved storage locations as designated by the OWNER.
- E. Dismantle structural steel and equipment without damage; matchmark all pieces prior to disassembly; store on blocks, off the ground, in an upright position to protect against damage.
- F. Where a temporary structure is necessary for a detour adjacent to an existing structure, CONTRACTOR will be permitted to use the material in the old structure for the detour structure, but he is to dismantle and stack or dispose of material as required above, as soon as new structure is complete.
- G. Disposal. All materials and equipment not designated for reuse or salvage to be legally disposed of off-site by the CONTRACTOR.

3.02 PREPARATION

- A. Perform demolition in such manner as to eliminate hazards to persons and property; to minimize interference with use of adjacent areas, utilities and structures or interruption of use of such utilities; and to provide free passage to and from such adjacent areas of structures. CONTRACTOR is responsible for protection of persons and property, Including safe working conditions throughout work progress.
- B. Provide safeguards, including warning signs, barricades, temporary fences, warning lights, and other similar items that are required for protection of all personnel during demolition and removal operations.
- C. Erect fences, barricades, guardrails, lights, and other similar items around exposed excavations; maintain safeguards until excavations have been completely filled.
- D. Protect from damage, all parts of structures and equipment to remain during all phases of demolition. Execute demolition in a manner to prevent damage from falling debris to OWNER's property or adjacent property.

- E. CONTRACTOR is responsible for safety and maintaining integrity of adjacent structures and, consequently, is liable for any movement or settlement and any resulting injuries or damage. Provide proper bracing and shoring necessary for support. Do not overload floors with equipment and debris.
- F. Do not interfere with use of adjacent facilities; maintain free and safe access at all times. Coordinate work with the OWNER to avoid interference with operation of existing facilities.
- G. Provide enclosed dust chutes with control gates from each floor or elevated area to carry debris to truck beds and govern flow of material into truck. Prevent spread of flying particles and dust. Sprinkle rubbish and debris with water daily to keep dust to a minimum.
- H. Protection of Openings: As equipment and piping is removed from exterior walls and floors, install closures over the openings. Closures in exterior walls to be of solid wood or exterior grade plywood, C-C grade, minimum 3/4-inch thick, cut to fit the opening and installed in a manner to shed rain toward the exterior. Anchor wood to the wall in a manner which will not damage the remaining masonry.
- I. In addition to previously listed fire and safety rules to be observed in performance of work, include following:
 - 1. No debris to be permitted to fall or be thrown from buildings; use chutes or remove through interior of buildings to ground level. Do not throw debris down stairwells or down shafts.
 - 2. Wherever a cutting torch or other equipment that might cause a fire is used, provide and maintain fire extinguishers nearby ready for immediate use. All possible users to be instructed in the use of fire extinguishers.
 - 3. Hydrants to remain accessible at all times. No debris to be permitted to accumulate within a radius of 15 feet of fire hydrants.
 - 4. Fire lines to remain in operation and are to be protected from damage by CONTRACTOR's operations.
 - 5. At least one stairway to be maintained in usable condition to all floors. Keep stairways free of obstructions and debris.
 - 6. Blasting is not permitted.
 - 7. Fires are not permitted unless specifically approved in writing by the OWNER, ENGINEER, and local Fire Marshall.

3.03 ERECTION, INSTALLATION, AND APPLICATION INSTRUCTIONS

- A. Removing and Replacing Concrete. Use these procedures where existing concrete is to be removed to facilitate operations, and is to be subsequently replaced.
 - 1. Make initial cut with a concrete saw exercising care to avoid cutting reinforcement.
 - 2. After removing concrete, cut cross bars at center of breakout and bend back.
 - 3. Before replacing concrete, bend bars to the original position. Cut the bars so that they will extend into the new concrete by a minimum 20 bar diameters.
 - 4. Immediately before placing new concrete, thoroughly clean old concrete and apply a heavy coat of bonding agent.
 - 5. Replace concrete in accordance with Division 3 - Concrete.

- B. Concrete Structures: Remove concrete structures or concrete portions of structures in sizes not larger than 2 cubic feet. Concrete portions of structures below the permanent ground line which will not interfere in any manner with the proposed construction may be left in place, but removal to be carried at least 2 feet below the permanent ground line and neatly squared off. Cut off reinforcement close to the concrete.
- C. Brick or Stone Structures: Remove brick or stone structures, or stone portions of structures, in sizes not larger than 2 cubic feet. Portions of such structures below the permanent ground line which will not in any manner interfere with the proposed construction may be left in place, but removal to be carried at least 2 feet below the permanent ground line and neatly squared off.
- D. Steel Structures: Dismantle steel structures, or steel portions of structures, in sections of such weight and dimensions as to permit convenient handling, hauling, and storing if material is to be reused or salvaged. Remove rivets and bolts connecting steel railing members, steel beams of beam spans, and steel stringers of truss spans by cutting the heads with a "cold cut" and punching or drilling from the hole or by such other method as will not injure members for reuse if material is to be reused or salvaged. Removal of rivets and bolts from connections of truss members, bracing members, and other similar members in the structure is not required unless specifically called for on the PLANS. CONTRACTOR to have the option of dismantling these members by flame-cutting the members immediately adjacent to the connections. Flame-cutting is not permitted, however, when the structural unit is to be salvaged to permit re-erection. In such case, carefully match-mark all members with paint prior to dismantling, and remove all rivets and bolts from the connections in the manner specified in the first portion of this paragraph.
- E. Timber Structures: Remove timber structures, or timber portions of structures, in such a manner to minimize damage to the timber. Remove all bolts and nails from such lumber. Unless otherwise shown on PLANS, CONTRACTOR may remove entirely or cut off timber piles at a point not less than 2 feet below ground line.
- F. Culverts or Sewers: Unless otherwise shown on PLANS, remove pipe and appurtenances by careful excavation of all dirt on top and sides in such a manner that pipe will not be damaged.
- G. Mechanical or Electrical Equipment:
 - 1. General: Demolish, remove, demount, and disconnect mechanical and electrical materials and equipment indicated to be removed and not indicated to be salvaged or reused.
 - 2. Materials and Equipment to be Salvaged: Remove, demount, and disconnect existing materials and equipment indicated to be removed and salvaged, and deliver materials and equipment to the location designated for storage.
 - 3. Demolish, remove, demount, and disconnect the following items:
 - a. Inactive and obsolete piping, fittings and specialties, equipment, ductwork, controls, fixtures, and insulation.
 - 1) Piping and ducts embedded in floors, walls, and ceilings may remain if such materials do not interfere with new installations. Remove materials above accessible ceilings. Drain and cap piping and ducts allowed to remain.

- b. Perform cutting and patching required for demolition in accordance with applicable Section.

3.04 REPAIR/RESTORATION

- A. Patch, repair, and/or fire stop holes through walls, ceilings, and floors as necessary to maintain fire rating of area.
- B. All portions of below grade hydraulic structures that remain after demolition activities are to have minimum 6-inch diameter holes on a 6 foot grid (center-to-center) placed in the floor slab prior to backfilling operations to allow water to drain from structures. Holes may be cored or removed with impact methods.
- C. Backfill all excavations made in connection with this Section and all openings below natural ground line caused by removal of old structures, or portions thereof, to the level of the original ground line, unless otherwise shown on PLANS. Place that portion of the backfill which will support any portion of a structure, roadbed, or embankment as required for placing structural backfill and embankment. In places inaccessible to blading and rolling equipment, use mechanical or hand tamps or rammers to obtain the required density comparable with adjacent undisturbed material.
- D. Backfilling with rubbish or burying rubbish on the site is not permitted.
- E. Anchor bolts exposed after demolition in concrete walls or floors to be cut back at least one inch below the surface and patched with cement grout to provide a smooth surface.
- F. Pipe supports to be removed includes removal of existing anchor bolts, and concrete based anchor bolts to be cut back one inch below the surface and patched smooth with cement grout.

3.05 CLEANING

- A. Cleaning: Keep the work areas free of accumulated debris. Materials and equipment that are not designated for reuse or salvage to be removed from the site weekly, unless otherwise approved.
- B. Disposal and Cleanup: Debris, including concrete, non-reusable brick and stone, metals and similar materials and non-salvaged equipment to become property of CONTRACTOR. Remove from the site and legally dispose of demolished materials and equipment which are not to be salvaged.
- C. Upon completion of work of this Section and after removal of all debris, structure to be broom clean and site to be left in clean condition satisfactory to OWNER.

END OF SECTION

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SECTION 02220

DEMOLITION

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Demolition and disposal of the existing water tanks as shown on the Drawings.
2. Pipe abandonment.

B. Related Sections

1. Section 01320 - Construction Photographs
2. Section 01350 - Health & Safety Plan
3. Section 01570 - Temporary Controls
4. Section 01725 - Preservation and Restoration of Project Features
5. Section 02280 - Pipeline and Underground Structure Abandonment
6. Section 02315 - Excavation, Backfill and Compaction
7. Section 02920 - Lawns and Grasses
8. Section 13010 - Elevated Storage Tank Demolition

1.2 DEFINITIONS

- A. Demolish - To tear down, segregate waste streams and lawfully recycle or dispose of all debris generated in the process including structure contents.
- B. Limit of Work - Area delineated on Drawings that defines the extent of demolition work under the Contract.

1.3 SUBMITTALS

A. Quality Control Submittals prior to commencement of on-site demolition:

1. Demolition Plan describing the methods of demolition and equipment proposed to demolish structures. This submittal should be sufficient to demonstrate a thorough understanding of the Work to be completed and the means that will be implemented to safely complete the demolition within the Contract Time without damage to surrounding structures, property, or resources. The Engineer will review the submittal for completeness, but will not approve the means and methods.
2. Waste Management Plan to indicate the types of wastes to be generated and the proposed disposal or recycling locations. Include back-up disposal facilities.
3. Copies of any authorizations and permits required to perform the work, including disposal/recycling facility permits.

- B. The following records and disposal documentation must be maintained and kept current throughout the project. The documents will be maintained in chronological order in a 3-ring notebook with appropriate tabbed dividers. The notebook will be reviewed for completeness at each progress meeting. Monthly pay requisitions may be rejected, in whole or in part, if documentation is not current.
 - 1. Records of the amounts of waste generated, by waste type
 - 2. Evidence of lawful disposal or recycling of all wastes generated
 - 3. Documentation of underground structures and utilities as identified in Part 3 of this Section
 - 4. Copies of any analytical results generated as a result of waste stream characterization

1.4 REGULATORY REQUIREMENTS

- A. Contractor is solely responsible for obtaining permits or approvals which may be required to perform the work of this section, including all costs, fees and taxes required or levied, except for the following permits that will be obtained by the Owner:
- B. Notify and obtain such permits or approvals from agencies having jurisdiction over demolition prior to starting work.
- C. Comply with all applicable federal, state, and local environmental, safety and health requirements regarding the demolition of structures and other site features and recycling or disposal of demolition debris, as applicable.
- D. Conform to procedures identified in Section 01350 – Health and Safety Plan if hazardous or contaminated materials are discovered.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.1 PROJECT MANAGEMENT

- A. Provide a full-time Project Superintendent, fluent in English, who shall serve as a direct communication among the Contractor, Subcontractors, Engineer, and the Owner.
- B. Require all subcontractors to provide a foreman or superintendent who is fluent in English. That individual must be on site at all times that the subcontractor is working.

3.2 GENERAL REQUIREMENTS

- A. Verify site conditions before proceeding with demolition work. Field check the accuracy of the Drawings and inspect structures and utilities prior to start of work and notify the Engineer in writing, of any hazardous conditions and/or discrepancies. Primary structures and other site features are shown on the Drawings; other smaller structures, including, but not limited to, concrete walks and pads, miscellaneous signs, lamp posts, railings, and fencing may not be shown on the Drawings, but may exist within the Limit of Work and shall be demolished.

- B. Unknown Site Conditions – The information provided on the Drawings and in the Specifications is believed accurate. Field verify all information. Bear full responsibility for obtaining all locations of underground structures, utilities and their connections. Maintain services to buildings outside the limits of work, at no additional cost to the Owner.
- C. Use methods that will not cause damage to surrounding structures, underground and overhead utilities, or other existing items and structures that are to remain in place.
- D. Promptly and properly manage all debris as the demolition progresses. Construct and/or prepare material staging/stockpile areas at locations approved by the Engineer.

3.3 SITE PREPARATION

- A. Remove and/or stabilize all overhead and ground based hazards, prior to commencing work near any structure. Where hazards can not be stabilized, mark and control hazard areas to prohibit access. This shall be performed with caution tape, saw horses, safety fence or other types of barricades as determined by applicable safety codes.

3.4 HAZARDOUS MATERIALS

A. Lead Based Paints

1. A number of state, federal and local agencies regulate work which involves lead based paint. Tests results on paint coating samples associated with the structures to be demolished suggest the presence of heavy metals including lead. This lead could present a hazard to workers and requires regulatory compliance with 29 CFR 1926.62 "Lead in Construction." Paint coatings on the structures to be demolished may also contain other hazardous materials.
2. Of specific concern is the cutting of steel components using torch methods. If the Contractor intends to torch cut painted steel, lead based paint must be removed from the area to be cut with a chemical stripper or other means prior to cutting. Sufficient paint must be removed from the area to prevent volatilization of lead and other materials during the heating of the steel. Other means of controlling worker exposure to hazardous paint will be acceptable provided that they are addressed in the Lead Exposure Control Plan outlined in Section 01350 and that they meet the requirements of 29 CFR 1926.62.
3. Where activities may generate dust/particles or impact a leaded painted surface, regulate work area so that dust and particle migration is contained properly within the regulated work area. Once the work is complete, properly clean up and dispose of leaded paint dust, particles, and materials.

B. Polychlorinated Biphenyls (PCBs)

1. Assume the paint coatings contain PCBs and perform work accordingly to protect workers and prevent the release of dust and particles from the limit of work.

C. Asbestos Cement (AC) Pipe

1. Contractor is responsible for following proper industry best management practices and taking all precautions in accordance with applicable state and federal regulations.

3.5 ELECTRICAL DEMOLITION

A. Examination

1. Verify field measurements and circuiting arrangements are as shown on Drawings.
2. Verify that abandoned wiring and equipment serve only abandoned structures.
3. Demolition Drawings are based on field observation and existing record documents. Report discrepancies to the Engineer before disturbing existing installation.
4. Beginning of demolition means installer accepts existing conditions.
5. Work within live and active panels shall only be conducted by a qualified electrician. If it is not certain as to whether a panel is live or not, it shall be assumed that it is.

B. Demolition of existing electrical work

1. Demolish electrical work under provisions of this Section and in coordination with the Owner and Electric Utility.
2. Remove abandoned wiring to source of supply.
3. Remove exposed and underground conduits.
4. Disconnect, remove, and dispose of electrical devices and equipment serving structure that are to be demolished not including devices and equipment owned by Electric Utility.
5. Repair adjacent construction and finishes damaged during demolition and extension work.
6. Maintain access to existing electrical installations that remain active. Modify installation or provide access panel as appropriate.

3.6 DEMOLITION

A. Demolished all concrete foundations and sub-grade structures and abandon piping in the following manner

1. Demolish all footing and foundation components to **at least eight (8) foot below grade.**
2. Remove underground piping.
3. Remove all concrete slabs.

4. Modify piping so that existing network which is proposed to remain in service can sustain full system pressure, and perform pressure testing and chlorination to the satisfaction of the Water Department.
5. Demolish all fences and gates within the Limit of Work unless otherwise noted on the Drawings.
6. Trees are an important resource and shall be treated as such. Unless specifically noted to be demolished/removed, protect all trees and obtain approval of the Engineer prior to removing or pruning any other trees.

3.7 DISPOSAL

- A. Legally dispose of or recycle all materials from demolition as well as equipment and other materials that are within the structures. The disposal site shall be permitted to accept the waste stream by the applicable State Agency. Perform the loading of demolition materials in a manner that prevents materials and activities from generating excessive dust and ensures minimum interference with roads, sidewalks and streets both onsite and offsite.
- B. Provide evidence that the demolition materials have been received at a legal disposal, recycle, reuse or salvage location. Such proof may include truck weigh slips from an approved disposal facility or documentation of transfer of title. Transport of all materials off site shall be in accordance with applicable Department of Transportation Regulations. All materials identified for demolition and removal from the site shall become the property of the Contractor.

3.8 SITE RESTORATION

- A. Prior to any backfilling, document the location of any structures that remain in place through construction photographs and by obtaining swing ties to and elevations of any structures to be buried. Progress payments may be withheld if current documentation is not maintained.
- B. Backfill foundation areas and areas from which structures were removed to match the surrounding grade or to achieve the final grades indicated on the Drawings. Backfilling shall be conducted in accordance with Section 02315.
- C. Restore damaged areas of the site or neighboring properties in accordance with Section 01725 and stabilize slopes in accordance with the erosion and sedimentation control requirements of the Contract and the stormwater permit.
- D. Loam and seed all disturbed areas in accordance with Section 02920.
- E. Restore disturbed pavement, sidewalk, and curbing to equal or better than original condition meeting the Owner's satisfaction. Existing pavement edges shall be sawcut and finished pavement shall be minimum 2-1/2 inch base course asphalt mix and 1-1/2 wearing (top) course asphalt mix.

END OF SECTION

SECTION 02315

EXCAVATION, BACKFILL, COMPACTION AND DEWATERING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. Excavation, backfill and compaction
 - 2. Earth retention systems
 - 3. Temporary dewatering systems
- B. Related Sections
 - 1. Section 01570 – Temporary Controls
 - 2. Section 02320 – Borrow Materials
 - 3. Section 02920 – Lawns and Grasses

1.2 REFERENCES

- A. ASTM D1557-07 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³))
- B. ASTM D1556-07 - Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
- C. ASTM D2487-06e1 - Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
- D. ASTM D6938-08a - Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)
- E. 29 CFR Part 1926 Subpart P - OSHA Excavation Regulations 1926.650 through 1926.652 including Appendices A through F

1.3 DEFINITIONS

- A. Benching - A method of protecting employees from cave-ins by excavating the sides of an excavation to form one or a series of horizontal levels or steps, usually with vertical or near-vertical surfaces between levels.
- B. Earth Retention Systems - Any structural system, such as sheeting and bracing or cofferdams, designed to retain in-situ soils in place and prevent the collapse of the sides of an excavation in order to protect employees and adjacent structures.
- C. Excavation - Any man-made cut, cavity, trench, or depression in an earth surface, formed by earth removal.
- D. Protective System - A method of protecting employees from cave-ins, from material that could fall or roll from an excavation face or into an excavation, or from the collapse of adjacent structures. Protective systems include earth retention systems,

sloping and benching systems, shield systems, and other systems that provide the necessary protection.

- E. Registered Professional Engineer - A person who is registered as a professional engineer in the state where the work is to be performed. However, a professional engineer, registered in any state is deemed to be a "registered professional engineer" within the meaning of this standard when approving designs for "manufactured protective systems" or "tabulated data" to be used in interstate commerce.
- F. Shield System - A structure that is designed to withstand the forces imposed on it by a cave-in and thereby protects employees within the structure. Shields can be permanent structures or can be designed to be portable and moved along as work progresses. Additionally, shields can be either pre-manufactured or job-built in accordance with 29 CFR 1926.652(c)(3) or (c)(4). Shields used in trenches are usually referred to as "trench boxes" or "trench shields."
- G. Sloping - A method of protecting employees from cave-ins by excavating to form sides of an excavation that are inclined away from the excavation so as to prevent cave-ins. The angle of incline required to prevent a cave-in varies with differences in such factors as the soil type, environmental conditions of exposure, and application of surcharge loads.
- H. Temporary Dewatering System - A system to lower and control water to maintain stable, undisturbed subgrades at the lowest excavation levels. Dewatering shall be provided for all pipelines, structures and for all other miscellaneous excavations.
- I. Trench - A narrow excavation (in relation to its length) made below the surface of the ground, of at least three feet in depth. In general, the depth is greater than the width, but the width of a trench (measured at the bottom) is not greater than 15 feet (4.6 m).

1.4 SUBMITTALS

- A. Drawings and calculations for each Earth Retention System required in the Work. The submittal shall be in sufficient detail to disclose the method of operation for each of the various stages of construction required for the completion of the Earth Retention Systems.
 - 1. Submit calculations and drawings for Earth Retention Systems prepared, signed and stamped by a Professional Engineer registered in the state where the work is performed.
- B. Performance data for the compaction equipment to be utilized
- C. Modified Proctor Test (ASTM D1557) results and soil classification (ASTM D2487) for all proposed backfill materials at the frequency specified below:
 - 1. For suitable soil materials removed during Excavation, perform one test for every 1,000 cubic yards of similar soil type. Similarity of soil types will be as determined by the Engineer.
 - 2. For borrow materials; perform tests at frequency specified in Section 02320, Borrow Materials.

- D. Compaction test results (i.e. ASTM D6938 or ASTM D1556) at a frequency of one test for every 100 cubic yards of material backfilled or at a minimum of one test per lift. The Engineer will determine the locations and lifts to be tested. The Contractor shall plan his operations to allow adequate time for laboratory tests and to permit taking of field density tests during compaction.
1. Methods and equipment proposed for compaction shall be subject to prior review by the Engineer. Compaction generally shall be done with vibrating equipment. Static rolling without vibration may be required by the Engineer on sensitive soils that become unstable under vibration. Displacement of, or damage to existing utilities or structure shall be avoided. Any utility or structure damaged thereby shall be replaced or repaired as directed by the Engineer.
 2. Additional compaction testing may be required when there is evidence of a change in the quality of moisture control or the effectiveness of compaction.
 - a. Any costs associated with correcting and retesting as a result of a failure to meet compaction requirements shall be borne by the Contractor.
 3. If all compaction test results within the initial 25% of the total anticipated number of tests indicate compacted field densities equal to or greater than the project requirements, the Engineer may reduce frequency of compaction testing. In no case will the frequency be reduced to less than one test for every 500 cubic yards of material backfilled.
 4. The Contractor is cautioned that compaction testing by nuclear methods may not be effective where trenches are so narrow that trench walls impact the attenuation of the gamma radiation, when adjacent to concrete that impacts the accuracy of determining moisture content, or where oversize particles (i.e. large cobbles or coarse gravels) are present. In these cases, other field density testing methods may be required.
- E. Dewatering plan for the excavation locations. Design shall include calculations and drawings stamped and signed by a Professional Engineer registered in the state where the work is performed.

1.5 QUALITY ASSURANCE

- A. All Excavation, Trenching, and related Earth Retention Systems shall comply with the requirements of OSHA excavation safety standards (29 CFR Part 1926 Subpart P), 520 CMR 14.00, and other State and local requirements. Where conflict between OSHA and State regulations exists, the more stringent requirements shall apply.
- B. Employ the services of a dewatering specialist or firm when well points, deep wells, recharge systems, or equal systems are required. Specialist shall have completed at least 5 successful dewatering projects of equal size and complexity and with equal systems.

1.6 PROJECT CONDITIONS

- A. Notify Dig Safe and obtain Dig Safe identification numbers.
- B. Notify utility owners in reasonable advance of the work and request the utility owner to stake out on the ground surface the underground facilities and structures. Notify the Engineer in writing of any refusal or failure to stake out such underground utilities after reasonable notice.
- C. Make explorations and Excavations to determine the location of existing underground structures, pipes, house connection services, and other underground facilities in accordance with Paragraph 3.2.D of this Section.
- D. No person shall, except in an emergency, make an excavation in any public way, public property, or privately owned land until a permit is obtained from the appropriate designated permitting authority. For this project, the permit should be obtained from Pease Development Authority.

PART 2 PRODUCTS

2.1 SOIL MATERIALS

- A. Fill material is subject to the approval of the Engineer and may be either material removed from excavations or borrow from off site. Fill material, whether from the excavations or from borrow, shall be of such nature that after it has been placed and properly compacted, it will make a dense, stable fill.
- B. Satisfactory fill materials shall include materials classified by ASTM D 2487 as GW, GP, GM, GP-GM, GW-GM, GC, GP-GC, SW, and SP.
- C. Satisfactory fill materials shall not contain trash, refuse, vegetation, masses of roots, individual roots more than 18 inches long or more than 1/2 inch in diameter, or stones over 6 inches in diameter. Unless otherwise stated in the Contract Documents, organic matter shall not exceed minor quantities and shall be well distributed.
- D. Satisfactory fill materials shall not contain frozen materials nor shall backfill be placed on frozen material.
- E. Excavated surface and/or pavement materials such as gravel or trap rock that are salvaged may be used as a sub-grade material, if processed to the required gradation and compacted to the required degree of compaction. In no case shall salvaged materials be substituted for the required gravel base.

2.2 DEWATERING MATERIALS

- A. Provide haybales and silt fence in accordance with Section 01570.

PART 3 EXECUTION

3.1 PREPARATION

- A. Public Safety and Convenience
 - 1. Take precautions for preventing injuries to persons or damage to property in or about the Work.

2. Provide safe access for the Owner and Engineer at site during construction.
3. Do not obstruct site drainage, natural watercourses or other provisions made for drainage.
4. Site entry gate shall be locked at all times that the Contractor is not on-site. Access to the site shall be limited to only the Contractor.

3.2 CONSTRUCTION

A. Earth Retention Systems

1. Provide Earth Retention Systems necessary for safety of personnel and protection of the Work, adjacent work, utilities and structures.
2. Maintain Earth Retention Systems for the duration of the Work.
3. Systems shall be constructed using interlocking corner pieces at the four corners. Running sheet piles by at the corners, in lieu of fabricated corner pieces, will not be allowed.
4. Drive sheeting ahead of and below the advancing excavation to avoid loss of materials from below and from in front of the sheeting.
5. Sheeting is to be driven to at least the depth specified by the designer of the earth retention system, but no less than 2 feet below the bottom of the Excavation.
6. Remove sheeting, unless designated to be left in place, in a manner that will not endanger the construction or other structures. Backfill and properly compact all voids left or caused by the withdrawal of sheeting.
7. Remove earth retention systems, which have been designated by the Engineer to be left in place, to a depth of 3 feet below the established grade.

B. Excavation

1. Perform excavation to the lines and grades indicated on the Drawings. Backfill unauthorized over-excavation in accordance with the provisions of this Section.
2. Excavate with equipment selected to minimize damage to existing utilities or other facilities. Hand excavate as necessary to locate utilities or avoid damage.
3. During excavation, material satisfactory for backfill shall be stockpiled in an orderly manner at a distance from the sides of the excavation equal to at least one half the depth of the excavation, but in no case closer than 2 feet.
 - a. Excavated material not required or not suitable for backfill shall be removed from the site.
 - b. Perform grading to prevent surface water from flowing into the excavation.

- c. Pile excavated material in a manner that will endanger neither the safety of personnel in the excavation nor the Work itself. Avoid obstructing sidewalks and driveways.
 - d. Hydrants under pressure, valve pit covers, valve boxes, manholes, curb stop boxes, fire and police call boxes, or other utility controls shall be left unobstructed and accessible until the Work is completed.
- 4. Grade or create berms or swales to direct surface water from excavations to appropriate structures designed to accommodate storm water. If no structures exist, direct water to areas that minimize impacts to adjacent structures and properties.
- 5. Perform the excavation in such a manner as to prevent disturbance of the final subgrade. If excessive subgrade disturbance is occurring, as judged by the Owner or Engineer, then the final 6 inches of the excavation must be performed by hand.
 - a. Grade the trench bottom to provide uniform bearing and support for the bottom quadrant of each section of pipe.
 - b. Excavate bell holes at each joint to eliminate point bearing.
 - c. Remove stones greater than 6 inches in any dimension from the bottom of the trench to avoid point bearing.
- 6. If satisfactory materials are not encountered at the design subgrade level, excavate unsatisfactory materials to the depth directed by the Engineer and properly dispose of the material. Backfill the resulting extra depth of excavation with satisfactory fill materials and compact in accordance with the provisions of this Section.

C. Backfill and Compaction

- 1. Unless otherwise specified or indicated on the Drawings, use satisfactory material removed during excavation for backfilling trenches. The Engineer may require stockpiling, drying, blending and reuse of materials from sources on the Project.
- 2. Spread and compact the material promptly after it has been deposited. When, in the Engineer's judgment, equipment is inadequate to spread and compact the material properly, reduce the rate of placing of the fill or employ additional equipment.
- 3. When excavated material is specified for backfill and there is an insufficient amount of this material at a particular location on the Project due to rejection of a portion thereof, consideration will be given to the use of excess material from one portion of the Project to make up the deficiency existing on other portions of the Project.
 - a. Use borrow material if there is no excess of excavated material available at other portions of the Project.

4. Backfilling and compaction methods shall attain 95% of maximum dry density at optimum moisture content as determined in accordance with ASTM D1557.
5. Do not place stone or rock fragment larger than six inches in greatest dimension in the backfill.
6. Maximum loose lift height for backfilling existing or borrow material shall be 18 inches, unless satisfactory compaction is demonstrated otherwise to the Engineer through field-testing. In no case shall loose lift height for backfilling exceed 3 feet.
7. Do not drop large masses of backfill material into the trench endangering any pipe or adjacent utilities.
8. Place and compact backfill around manholes, vaults, pumping stations, gate boxes or other structures in six inch layers, from a point 1 foot over the pipe. Exercise care to protect and prevent damage to the structures.

D. Dewatering

1. Obtain the following construction dewatering permits, as required:
 - a. N/A
2. Provide, operate and maintain adequate pumping, diversion and drainage facilities in accordance with the approved dewatering plan to maintain the excavated area sufficiently dry from groundwater and/or surface runoff so as not to adversely affect construction procedures nor cause excessive disturbance of underlying natural ground. Locate dewatering system components so that they do not interfere with construction under this or other contracts.
3. Conduct operations so as to prevent at all times the accumulation of water, ice and snow in excavations or in the vicinity of excavated areas so as to prevent water from interfering with the progress or quality of the work.
4. Take actions necessary to ensure that dewatering discharges comply with permits applicable to the Project. Dispose of water from the trenches and excavations in such a manner as to avoid public nuisance, injury to public health or the environment, damage to public or private property, or damage to the work completed or in progress.
5. Repair any damage resulting from the failure of the dewatering operations and any damage resulting from the failure to maintain all the areas of work in a suitable dry condition.
6. Take precautions to protect new work from flooding during storms or from other causes. Control the grading in the areas surrounding all excavations so that the surface of the ground will be properly sloped to prevent water from running into the excavated area. Where required, provide temporary ditches for drainage. Upon completion of the work, all areas shall be restored to original condition.

7. Do not excavate until the dewatering system is operational and the excavation may proceed without disturbance to the final subgrade.
8. Where subgrade materials are unable to meet the subgrade density requirements due to improper dewatering techniques, remove and replace the materials in accordance with Section 02320.
9. Notify the Engineer immediately if any settlement or movement is detected of survey points adjacent to excavations being dewatered. If settlement is deemed by the Engineer to be related to the dewatering, submit a modified dewatering plan to the Engineer within 24 hours. Implement the approved modified plan and repair any damage incurred to the adjacent structure.
10. Dewatering discharge:
 - a. Install sand and gravel, or crushed stone, filters in conjunction with sumps, well points, and/or deep wells to prevent the migration of fines from the existing soil during the dewatering operation.
 - b. Transport pumped or drained water without interference to other work, damage to pavement, other surfaces, or property. Pump water to a sedimentation basin prior to discharge to grade of drainage system.
 - c. Do not discharge water into any sanitary sewer system.
 - d. Provide separately controllable pumping lines.
 - e. The Engineer reserves the right to sample discharge water at any time.
11. Install erosion/sedimentation controls for velocity dissipation at point discharges onto non-paved surfaces.
12. Removal
 - a. Do not remove dewatering system without written approval from the Engineer.
 - b. Backfill and compact sumps or ditches with screened gravel or crushed rock in accordance with Section 02320.

3.3 PROTECTION

A. Protection of Existing Structures

1. All existing foundations, conduits, wall, pipes, wires, poles, fences, property line markers and other items which the Engineer decides must be preserved in place without being temporarily or permanently relocated, shall be carefully supported and protected from injury by the Contractor. Should such items be injured, they shall be restored by the Contractor to at least as good condition as that in which they were found immediately before the work began.

B. Accommodation of Traffic

1. Streets and drives shall not be unnecessarily obstructed. The Contractor shall take such measures at his own expense to keep the street or road open and safe for two-way traffic.

2. Construct and maintain such adequate and proper bridges over excavations as may be necessary or as directed for the safe accommodation of pedestrians and vehicles. Provide substantial barricades at crossings of trenches, or along the trench to protect the traveling public.
3. Where deemed necessary, such additional passageways as may be directed shall be maintained free of such obstructions. All material piles, open excavations, equipment, and pipe which may serve as obstructions to traffic shall be protected by proper lights, signage, or guards as necessary.
4. All traffic controls shall be in accordance with the Manual on Uniform Traffic Control Devices for Streets and Highways, latest edition.

C. Erosion and Sedimentation Control

1. Take all necessary steps to prevent soil erosion.
2. Plan the sequence of construction so that only the smallest practical area of land is exposed at any one time during construction.
3. Temporary vegetation and/or mulching shall be used to protect critical areas exposed during construction as judged by the Engineer.

END OF SECTION

SECTION 02320

BORROW MATERIALS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. Standard Gravel Borrow
 - 2. Processed Gravel Borrow for Pavement Base Course
 - 3. Granular Fill
 - 4. Sand Borrow
 - 5. Stone Borrow
 - 6. Ordinary Borrow

1.2 REFERENCES

- A. ASTM C136 - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
- B. ASTM C117 - Standard Test Method for Materials Finer than 75 μm (No. 200) Sieve in Mineral Aggregates by Washing
- C. ASTM D1556 - Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
- D. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lb./ft³)
- E. ASTM D2434 - Standard Test Method for Permeability of Granular Soils (Constant Head)
- F. ASTM D2487 - Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System)
- G. ASTM D6938 - Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)
- H. AASHTO - Standard Specification for Transportation Materials and Methods of Sampling and Testing, 1986 Edition as amended
- I. Texas Department of Transportation "Standard Specifications for Road and Bridge Construction", Latest Edition as amended

1.3 SUBMITTALS

- A. Representative Samples of borrow materials taken from the source. Tag, label, and package the Samples as requested by Engineer. Provide access to the borrow site for field evaluation and inspection.

- B. Provide sieve analysis (ASTM C136) and permeability analysis (ASTM D2434) from certified soils testing laboratory for all borrow materials. Take and test a sample, at no additional cost to the Owner for each 1,500 c.y. of borrow material placed.
- C. Provide modified proctor analysis (ASTM D1557) from certified soils testing laboratory for all borrow materials.
- D. The Engineer reserves the right to require more frequent testing than that which is specified above should the borrow characteristics change.

1.4 QUALITY ASSURANCE

- A. No borrow shall be placed prior to the approval of Samples by the Engineer.

1.5 PROJECT/SITE CONDITIONS

- A. Existing Conditions
 - 1. Comply with any environmental requirements and restrictions.
 - 2. Keep all public and private roadway surfaces clean during hauling operations and promptly and thoroughly remove any borrow or other debris that may be brought upon the surface before it becomes compacted by traffic. Frequently clean and keep clean the wheels of all vehicles used for hauling to avoid bringing any dirt upon the paved surfaces.

PART 2 PRODUCTS

2.1 STANDARD GRAVEL BORROW

- A. Gravel borrow shall consist of inert material that is hard, durable stone and coarse sand, free from loam and clay, surface coatings, and deleterious materials. The coarse aggregate shall have a percentage of wear, by the Los Angeles Abrasion Test, of not more than 50.
- B. Gradation requirements for gravel shall be determined by TXDOT and shall conform to the following:

| Sieve | Percent Passing |
|-----------|-----------------|
| 6 inch | 100 |
| No. 4 | 25 - 75 |
| No. 200 * | 0 - 12 |

* Fraction passing the No. 4 sieve.

- C. Maximum stone size shall not exceed 3 inches.

2.2 PROCESSED GRAVEL BORROW FOR PAVEMENT BASE COURSE

- A. The compacted processed gravel borrow to be used for gravel access roads and pavement base, or other area where a firm, free-draining subgrade is needed shall consist of inert material that is hard, durable stone and coarse sand, free from loam

and clay, surface coatings and deleterious materials. The coarse aggregate shall have a percentage of wear, by the Los Angeles Abrasion Test, of not more than 50.

- B. Gradation requirements for gravel shall be determined by TXDOT and shall conform to the following:

| Sieve | Percent Passing |
|--------------|------------------------|
| 3" | 100 |
| 2" | 95 – 100 |
| 1" | 55 – 85 |
| No. 4 | 27 – 52 |
| No. 200 * | 0 - 12 |

* Fraction passing the No. 4 sieve.

- C. Stockpile the processed materials in such a manner to minimize segregation of particle sizes. All processed gravel shall come from approved stockpiles.

2.3 GRANULAR FILL

- A. Granular Fill to be used as fill material to achieve gravel base grade beneath structures, pavement, or other area requiring structural fill shall consist of inert material that is hard, durable stone and sand, free from loam and clay, surface coatings and deleterious materials. The coarse aggregate shall have a percentage of wear, by the Los Angeles Abrasion Test, of not more than 50.
- B. Gradation requirements for gravel shall be determined by TXDOT and shall conform to the following:

| Sieve | Percent Passing |
|-----------------------------|------------------------|
| 2/3rds loose lift thickness | 95 – 100 |
| No. 4 | 70 - 100 |
| No. 200 * | 0 - 12 |

* Fraction passing the No. 4 sieve.

2.4 SAND BORROW

- A. Sand borrow material shall be supplied from an off-site borrow area approved by the Engineer. Testing of the off-site sand borrow shall be at the Contractor's expense.
- B. Sand borrow shall consist of clean, inert, hard, durable grains of quartz or other hard, durable, rock, free from loam or clay, surface coatings and deleterious materials. The allowable amount of material passing a No. 200 sieve as determined by ASTM-C117 shall not exceed 10% by weight.
- C. Material shall consist of a clean, non-plastic, granular material conforming to the requirements of a SW, SP or SM under the Unified Soil Classification System (USCS) (ASTM D2487).

- D. The material shall have the characteristics that when placed and compacted, the soil particles will bind together so as to form a solid, stable surface capable of supporting rubber-tired vehicular traffic during wet weather periods as well as extended dry weather periods. The borrow material shall not contain fines to the extent that the surface layer becomes “greasy” when wet.
- E. The material shall not contain stones larger than 3/8 inch in diameter.
- F. Material consisting of frozen clogs, ice and snow will be rejected.
- G. All sand borrow material to be used shall be subject to approval by Engineer, and Engineer reserves the right to reject any borrow material from the job that does not meet the above requirements.

2.5 STONE BORROW

A. Crushed Stone Borrow

1. Crushed stone borrow shall consist of one of the following materials:
 - a. Durable crushed rock consisting of the angular fragments obtained by breaking and crushing solid or shattered natural rock, and free from a detrimental quantity of thin, flat, elongated or other objectionable pieces. A detrimental quantity will be considered as any amount in excess of 15% of the total weight. Thin stones shall be considered to be such stones whose average width exceeds 4 times their average thickness. Elongated stones shall be considered to be stones whose average length exceeds 4 times their average width.
 - b. Durable crushed gravel stone obtained by artificial crushing of gravel boulders or fieldstone with a minimum diameter before crushing of 8 inches.
2. The crushed stone shall be free from clay, loam or deleterious material and not more than 1.0% of satisfactory material passing a No. 200 sieve will be allowed to adhere to the crushed stone.
3. The crushed stone shall have a maximum percentage of wear as determined by the Los Angeles Abrasion Test (AASHTO-T-96) as follows:
 - a. Crushed Stone for Subbase 45%
4. Gradation requirements for crushed stone borrow shall conform to the following:

¾” Crushed Stone

| Sieve | Percent Passing |
|--------------|------------------------|
| 1 inch | 100 |
| ¾ inch | 90 - 100 |
| 3/8 inch | 20 - 55 |
| No. 4 | 0 - 10 |

B. Placed Riprap Borrow

1. Stone used for placed riprap shall be hard, durable, subangular in shape, resistant to weathering and shall meet the gradation requirement specified. Neither breadth nor thickness of a single stone should be less than one-third its length. Rounded stone or boulders will not be accepted unless authorized by the Engineer. Stone shall be free from overburden, spoil, shale, or organic material and shall meet the gradation requirement as specified.

| Size of Stone | Maximum Percent of Total Weight Smaller Than Given Size |
|----------------------|--|
| 400 lb. | 100 |
| 300 lb. | 80 |
| 200 lb. | 50 |
| *25 lb. | 10 |

*No more than 5% by weight shall pass a 2" sieve.

2. Each load of riprap shall be reasonably well graded from the smallest to the maximum size specified. Stones smaller than the specified 10% size and spall will not be permitted in an amount exceeding 10% by weight of each load.

2.6 ORDINARY BORROW

- A. Ordinary borrow shall have the physical characteristics of soils designated as type GW, GP, GM, SW, SP or SM, under USCS and shall not be specified as gravel borrow, sand borrow, special borrow material or other particular kind of borrow. It shall have properties such that it may be readily spread and compacted for the formation of embankments. The borrow shall not include rocks with a major dimension greater than 8 inches.

PART 3 EXECUTION**3.1 INSTALLATION**

- A. Prior to the placement of borrow material, site preparation shall be completed as required by the Contract Documents, and approved by the Engineer.
- B. Ensure that all materials are properly stockpiled on site to prevent contamination by other materials.
- C. Place borrow material over the entire area in uniform lifts and compact in accordance with Section 02315.
- D. Utilize on-site soils prior to using off-site borrow provided on-site soils meet the requirements of the specifications.
- E. Utilize gravel borrow in all locations where a surface treatment has not been specified but requires a firm finish surface.

- F. Processed gravel for pavement base course is intended to provide a stable foundation for driveways, sidewalk and roadway repair where a gravel base has been specified.
- G. Borrow shall be used as a replacement for unsuitable materials where poor soil conditions are encountered during the progress of the work, where approved by the Engineer. Borrow type will be determined by the Engineer. Borrow material used as a replacement for unsuitable soil is not intended to be an aid to dewatering.
- H. Shape borrow used for pipe foundation material so that it supports the pipe properly and will not damage the pipe, bells, collars, or the pipe fittings.
- I. Place all borrow to keep it free of other materials and to prevent segregation.

END OF SECTION

SECTION 02920

LAWNS AND GRASSES

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes
 - 1. Restoration of all vegetated areas disturbed during construction including.
 - 2. New loam and seed areas
 - 3. Loam, starter fertilizer, lime, and seed
 - 4. Mulch

1.2 SUBMITTALS

- A. Lawn seed mixture including percent by weight of each seed type, and manufacturer/Supplier name.
- B. Suitable laboratory analysis of the topsoil to determine the quantity of fertilizer and lime to be applied.
- C. Lime and starter fertilizer application rates based on laboratory soil tests.
- D. A sworn certificate indicating each variety of seed, weed content, germination of seed, net weight, date of shipment and manufacturer's name shall accompany each seed shipment.

1.3 QUALITY ASSURANCE

- A. Place seed only between the periods from April 15th to June 1st, and from August 15th to October 1st, unless otherwise approved by the Engineer.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Loam
 - 1. Loam from offsite, as required for Work, shall be taken from a well-drained, arable site, and shall be free of subsoil, large stones, earth clods, sticks, stumps, clay lumps, roots or other objectionable, extraneous matter or debris. Loam shall also be free of quack-grass rhizomes, Agropyron Repens, and the nut-like tubers of nutgrass, Cyperus Esculentus, and all other primary noxious weeds. Loam shall not be delivered or used for planting while in a frozen or muddy condition. Topsoil as delivered to the Site or stockpiled shall have pH between 6.0 and 7.0 and shall contain not less than 5 percent or more than 8 percent organic matter as determined by loss of ignition of moisture-free Samples dried at 100 degrees Celsius.
 - 2. Onsite loam may be available from stripping of onsite topsoil. Onsite topsoil shall be tested as specified below and shall be amended as necessary to meet Specification requirements for loam.

3. Soil Analysis: The Contractor shall submit representative Samples of loam, which he intends to bring onto the Site, and Samples of loam from onsite sources, to a Soil and Plant Testing Laboratory acceptable to the Engineer. All reports shall be sent to the Engineer for approval. Samples of loam to be brought to the Site must be approved prior to delivery of soil. Deficiencies in the loam shall be corrected by the Contractor, as directed by the Engineer after review of the testing agency report by a soils consultant. Testing reports shall include the following tests and recommendations.
 - a. Mechanical gradation (sieve analysis) shall be performed and compared to the USDA Soil Classification System.
 - b. The silt clay content shall be determined by a Hydrometer Test.
 - c. Percent of organics shall be determined by an Ash Burn Test or Walkley/Black Test.
 - d. Chemical analysis shall be undertaken for Nitrate Nitrogen, Ammonium Nitrogen, Phosphorus, Potassium, Calcium, Aluminum, Soluble Salts, and acidity (pH).
 - e. Soil analysis tests shall show recommendations for soil additives to correct soils deficiencies as necessary, and for additives necessary to accomplish particular lawn and planting objectives noted.
 - f. All tests shall be performed in accordance with the current standards of the Association of Official Agriculture Chemists.
4. Loam for General Lawn and Site Restoration Areas: Loam shall conform to the following grain size distribution for material passing the #10 sieve:

| U.S. Sieve Size Number | Percent Passing | |
|------------------------|-----------------|---------|
| | Minimum | Maximum |
| 10 | 100 | ---- |
| 18 | 84 | 100 |
| 35 | 63 | 72 |
| 140 | 26 | 40 |
| 270 | 22 | 34 |
| 0.002 mm | 2 | 5 |

¹The ratio of the particle size for 80% passing (D_{80}) to the particle size for 30% passing (D_{30}) shall be 6 or less ($D_{80}/D_{30} < 6$).

²Maximum size shall be one-inch largest dimension. The maximum retained on the #10 sieve shall be 20% by weight of the total sample.

³Tests shall be by combined hydrometer and wet sieving in compliance with ASTM D422 after destruction of organic matter by ignition.

⁴The organic content shall be between 4.0 and 6.0 percent.

B. Typical Sand Amendment

1. Sand to be mixed with topsoil shall meet the following requirements. The material shall be uniformly graded coarse sand consisting of clean, inert, rounded grains of quartz or other durable rock and free from loam or clay, surface coatings, mica, other deleterious materials with the following gradation.

| U.S. Sieve Size Number | Percent Passing | |
|------------------------|-----------------|---------|
| | Minimum | Maximum |
| 10 | 100 | ---- |
| 18 | 60 | 80 |
| 35 | 35 | 55 |
| 60 | 8 | 20 |
| 140 | 0 | 8 |
| 270 | 0 | 3 |
| 0.002 mm | 0 | 0.3 |

¹Maximum size shall be one-inch largest dimension. The maximum retained on the #10 sieve shall be 10% by weight of the total sample.

²The ratio of the particle size for 70% passing (D_{70}) to the particle size for 20% passing (D_{30}) shall be 3.0 or less ($D_{70}/D_{20} < 3.0$).

³Tests shall be combined hydrometer and wet sieving in compliance with ASTM D422 after destruction of organic matter by ignition.

C. Starter Fertilizer

1. Starter fertilizer shall bear the manufacturer's name and guaranteed statement of analysis, and shall be applied in accordance with the manufacturer's directions.
2. Starter fertilizer shall be Scott's Starter Fertilizer, or equal, with timed nitrogen release to prevent burning.

D. Lime

1. Lime shall be an agricultural type ground limestone.
2. Lime shall be pelletized type for prolonged time release to soil.

E. Seed

1. Seed shall be of the previous year's crop.
2. Required properties:
 - a. Purity > 90%
 - b. Germination > 80%
 - c. Crop < 0.5%
 - d. Weed < 0.3%

- e. Noxious Weed – 0%
- f. Inert < 8%

| Natural Area Seed Mix | % Weight |
|-------------------------------------|----------|
| Kentucky 31 Fescue | 40% |
| Palmer Perennial Ryegrass | 30% |
| Birds Foot Trefoil (Empire Variety) | 15% |
| Red Clover | 5% |
| White Clover | 5% |
| Redtop (Streaker Variety) | 5% |

- 3. All seed shall comply with State and Federal seed Laws and Regulations.

F. Mulch

- 1. Shall be a specially processed 100 percent Virgin wood fiber mulch containing no growth or germination-inhibiting factors. Wood fiber mulch shall be Second Nature Regenerated wood fiber as by Central Fiber Corporation, Wellsville, KS or equal. It shall be manufactured in such a manner that after addition and agitation in slurry tanks with water, the fibers in the material become uniformly suspended to form a homogenous slurry. When sprayed on the ground, the material shall allow absorption and percolation of moisture. Each package of the wood fiber shall be marked by the manufacturer to show the air dry weight content and not contain in excess of 10 percent moisture.

PART 3 EXECUTION

3.1 PREPARATION

- A. After rough grading of the subgrade has been completed and approved, the subgrade surface shall be scarified to a depth of six (6) inches. Then furnish and install a layer of loam providing a rolled six (6) inch thickness. Any depressions which may occur during rolling shall be filled with additional loam, regraded and rerolled until the surface is true to the finished lines and grades. All loam necessary to complete the Work under this section shall be supplied by the Contractor.
- B. The ground surface shall be fine graded and raked to prepare the surface of the loam for lime, fertilizer and seed.
- C. The loam shall be prepared to receive seed by removing stones and grading to eliminate water pockets and irregularities prior to placing seed. Finish grading shall result in straight uniform grades and smooth, even surfaces without irregularities to low points.
- D. All stones over one-half (1/2) inch in diameter remaining on the surface after raking shall be removed.

- E. Shape the areas to the lines and grades required. The Contractor's attention is directed to the scheduling of Loaming and Seeding of graded areas to permit sufficient time for the stabilization of these areas.
- F. All areas disturbed by construction within the property lines and not covered by structures, pavement, or bark mulch shall be loamed and seeded.
- G. Limestone shall be thoroughly incorporated into the loam layer at a minimum rate of 3 ton per acre or more as recommended by the loam analysis in order to provide a pH value of 5.5 to 6.5.
- H. Fertilizer shall be spread on the top layer of loam at the minimum rate of 500 pounds per acre or more as recommended by the loam analysis and worked into the surface

3.2 LOAM AND SEED AREAS

- A. The seed mixtures shall be applied at a minimum rate of 200 pounds per acre, or 4.5 pounds per 1,000 square feet.
- B. Seed shall be sown at the rates indicated above by rotary or drop spreader. Sowing shall be done on a calm, dry day. Immediately before seeding, the soil shall be lightly raked. One half the seed shall be sown in one direction and the other half at right angles to the original direction. It shall be lightly raked into the soil to a depth not over 1/4 inch and rolled with a hand roller weighing not over 100 pounds per linear foot of width.
 - 1. Straw mulch shall be applied immediately after seeding at a rate of 1.5 to 2 tons per acre. Mulch that blows or washes away shall be replaced immediately and anchored using appropriate techniques.
 - 2. The surface shall be watered and kept moist with a fine spray as required, without eroding the soil, until the grass is well established. Any areas, which are not satisfactorily covered with grass, shall be reseeded, and all noxious weeds shall be removed.
- C. Unless otherwise approved, seeding shall be done during the approximate periods of early Spring to May 20, and August 10 to September 15, when soil conditions and weather are suitable for such Work.

3.3 MAINTENANCE

- A. Maintenance shall include watering, weeding, removal of stones and other foreign objects over one half (1/2) inch in diameter, cutting the grass until final acceptance. Mow at least weekly, removing no more than 30-40 percent of the leaf tissue using well sharpened blades. Mow grass between one (1) and two (2) inches high in the spring and fall. Mowing heights shall be an additional one-half to an inch in the summer to reduce temperature stress. Leave the clippings in place to help recycle essential plant nutrients needed for growth. All bare or dead spots which become apparent shall be properly prepared, re-loamed, limed, aerated, fertilized, and reseeded as many times as necessary to secure a good growth. The entire area shall be maintained, watered and cut until final acceptance of the lawn installation.

- B. The dressed and seeded areas shall be sprinkled with water as necessary from time to time. Signs and barricades should be placed to protect the seeded areas.
- C. To be acceptable, seeded areas shall consist of a uniform stand without bare or dead spots of at least 90 percent established permanent grass species, with uniform count of at least 200 plants per square foot.
- D. The Engineer shall determine whether maintenance shall continue in any part.
- E. After all necessary corrective Work and clean-up has been completed, and maintenance instructions have been received by the Owner, the Engineer will certify in writing the acceptance of the lawns.

END OF SECTION

WATER TANK DEMOLITION

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes requirements for demolition, removal and disposal of the existing 1,000,000 gallon Elevated Water Storage Tank No. 5. The hydro-pillar style tank was constructed in 1969 and is located on UTB/TSC in Brownsville, Texas. The tank height is approximately 146-ft to top of the tank.
- B. The work includes all labor, materials, equipment and incidentals required for the demolition, removal and disposal of the water storage tank, foundations (all legs and center riser to 8-ft below ground, pump station and pipe supports), pump station pump, piping, valves and fittings, underground water line piping, valves and fittings (where indicated), electrical (control panels, controls, wiring, mounting racks, etc.), communication antennas, cabling, site work, seeding and miscellaneous appurtenances as shown on the Construction Drawings and as specified herein.
- C. The interior/exterior of the tank has been inspected and the tank has been drained. A copy of the inspection report is included in the Appendix of the specifications but is not a warranty of the interior tank conditions. *The report is offered as an aid in bidding only.* The Owner and Engineer assume no responsibility for any variation between the materials encountered during construction and those indicated in the report. The Contractor shall examine the site and carefully and thoroughly inspect all existing facilities and take into account all conditions affecting the work. The Contractor shall make his own determination of the various methods and procedures required for demolition of the tank and the associated appurtenances. The Owner and Engineer assume no responsibility for actual condition of the tank and appurtenances to be demolished.
- D. Included for the Contractor's information only is a schematic of the original tank construction. The Owner and Engineer assume no responsibility as to the accuracy of the drawing.
- E. The tank is not active; it has been isolated and drained by the Owner. The tank was not washed out during the draining or inspection. The Contractor will be responsible for removing any and all standing water, remaining silt and debris from the tank prior to starting work. All silt and other debris shall be contained, collected and disposed by the Contractor and not washed through the tank drain.
- F. The Owner shall operate ALL existing valves, gates and equipment.
- G. The Owner will not furnish material or labor on this Contract, but the Owner may have other contractor(s) or vendor(s) onsite to perform work, as required. The Contractor shall coordinate his activities around that of the Owner and shall not be allowed any additional compensation due to the Owner's construction and/or operational activities.
- H. Construction is regulated by the Owner of this project. The Owner is the Brownsville Public Utilities Board.
- I. Section includes but is not limited to selective demolition including but not limited to the following:

1. Demolishing of the existing Elevated Water Storage Tank No. 5, including foundations, and appurtenances.
2. Demolishing designated utilities.
3. Demolishing designated electrical, communications, equipment and fixtures.
4. Demolishing designated construction.
5. Cutting and alterations for completion of the Work.
6. Removing and disposing of demolished materials.

J. Related Sections:

1. Section 03 10 00 – Structure Demolition
2. Section 03 20 00 - Selective Electrical Demolition
3. Section 31 00 00 - Earthwork

1.2 REFERENCES

Without limiting the general aspects of other requirements of these specifications the latest edition of the following standards and regulations form a part of this specification as applicable to the scope of the work.

A. Occupational Safety & Health Association (OSHA)

1. CRF 29 Part 1910, Occupational Safety and Health Standards
2. CRF 29 Part 1910.146, Confined Space Entry Procedures
3. CFR 29 Part 1926, Safety and Health Regulations for Construction
4. CFR 29 Part 1926.62, Lead Exposure in Construction
5. CFR 29 Part 1926.354, Welding, Cutting and Heating in Way of Preservative Coatings

B. Title 40, Code of Federal Regulations (40 CFR), Protection of the Environment

C. ANSI Z49.1: Safety in Welding and Cutting

D. Environmental Protection Agency (EPA) and Texas Commission on Environmental Quality (TCEQ) – Hazardous Waste Management Regulations

E. All Federal State and local ordinances, regulations or rules pertaining to lead and other heavy metals, including its storage, transportation and disposal.

1.3 SUBMITTALS

A. Demolition Schedule: Indicate on the schedule any interruptions to water, electrical or other utility service required for the demolition work.

B. Shop Drawings:

1. Demolition plan indicating in detail procedures, sequence of operations, manpower, equipment, means and methods for steel cutting, proposed noise and dust control plans and other protective measures.
2. Indicate demolition and removal sequence.
3. Indicate location and construction of temporary work.
4. Indicate engineering controls and work practices required to control emissions during demolition and shielding of adjacent facilities, including houses, schools and roadways.

5. Indicate the recycler/scrap yard and foundry for scrap steel and disposal site for other debris.
6. Provide a written plan that addresses all facets of the handling and disposal of hazardous debris generated during the work including but not limited to sampling, testing, handling, site storage, transportation and disposal. Provide the name of the environmental waste management company that will be utilized to transport and dispose of wastes generated during the project.
7. Indicate location onsite for performing temporary work and measures used to protect the work area from damage or contamination during construction.

1.4 CLOSEOUT SUBMITTALS

- A. Project Record Documents: Accurately record actual locations of relocated utilities, capped utilities, concealed utilities discovered during demolition. This information shall be turned over to the Engineer and will be recorded on the permanent as-built drawings.

1.5 QUALITY ASSURANCE

- A. Conform to applicable codes for demolition work, dust control, products requiring electrical disconnection and re-connection.
- B. Obtain required permits from authorities having jurisdiction, including permit fees. A commercial demolition permit from the City of Brownsville will be required for this work. The permit requirements may be viewed at: <https://www.cob.us/174/Applications>. The Contractor will be responsible for completing an asbestos survey of the tank if requested by the city and for securing the demolition permit from the City.
- C. Perform Work in accordance with the Owners standards.
- D. Maintain one copy of each document on site.

1.6 PRE-DEMOLITION MEETINGS

- A. A Pre-demolition meeting is required.
- B. Convene minimum two weeks prior to commencing work of this section.

1.7 SCHEDULING

- A. The demolition of the existing tank will be performed prior to construction of the new tank. Delay in completing the demolition of the existing tank will affect the schedule for the construction of the new tank.
- B. Cooperate with Owner in scheduling work to avoid interference with operations and adjoining spaces. Refer to Section 01 10 00 – Summary for additional restrictions.

- C. Cooperate with Owner in scheduling work for the removal of the existing cellular equipment off of the existing tank.
- D. Coordinate utility and service interruptions with Owner.
 - 1. Schedule tie-ins and shut downs to existing systems to minimize disruption to operations.
 - 2. Arrange timing of shut-down periods of existing equipment with Owner. Do not shut down any utility without prior written approval.
 - 3. Keep shut-down period to minimum as directed by the Owner.

1.8 DISPOSAL OF MATERIAL

- A. Except as specifically indicated, no materials or items of equipment will remain the property of the Owner.
- B. The following materials and items of equipment shall remain the property of the Owner.
 - 1. Altitude valve, booster pump and valves, aluminum hatch, in whole or part, to be removed by contractor and be stored where directed by the Owner.
 - 2. Communication equipment, cabling, in whole or part, to be removed by contractor.
 - 3. Electrical control panels, SCADA flowmeters and pressure gauges, in whole or part, to be removed by Contractor.
- C. All other materials and items of equipment shall become the Contractor's property and must be removed from the site.
- D. Removed materials and equipment shall not be reused in part or whole in another tank installation.

1.9 PROJECT CONDITIONS

- A. The exterior of the existing tank includes attachments, antenna, cable and other facilities for cellular and radio communication equipment. The equipment is the property of the Owner. The cellular antenna and other facilities will be removed and turned over to the Owner, prior to the start of demolition. Existing antenna, attachments, cable and other facilities that are abandoned in place shall be removed and disposed by the Contractor.
- B. The existing tank site includes ground facilities for the communication equipment located on the tank. These facilities will be removed and turned over to the Owner prior to the start of demolition. Existing facilities that are abandoned in place shall be removed and disposed by the Contractor.
- C. The two properties adjoining the tank site belong to the school district. The contractor will protect their property at all times.
- D. BPUB's radio equipment will be removed and turned over to the electrical department.

Any damage which occurs shall be repaired by the Contractor at no additional cost to the Owner. Damage shall be repaired to the full satisfaction of the Owner.

- E. The tank may include an automatic cathodic protection system with parallel wired anodes, which shall be removed and disposed of by the Contractor.
- F. Conduct demolition to prevent damage or injury to structures, occupants and adjacent features and so as not to interfere or impact the use and free and safe passage to and from adjacent structures.
- G. Closing or obstruction of roadways, sidewalks, public areas adjacent to the work by the placement or storage of materials will not be permitted and all operations shall be conducted with minimum interference to traffic.
- H. Erect and maintain barriers, lights and other required protective devices.

1.10 SAMPLING AND ANALYSIS OF EXISTING MATERIALS

- A. Sampling analysis, where available, is included in the Appendix of these specifications. However, the Owner and Engineer assume no responsibility for the actual toxic metal content or the toxicity of the existing paint systems or the possibility that other toxic metals may exist or the possibility that other paints may exist on the tank that were not sampled.
- B. Sampling analysis indicates the existing paint system contains less than 10,000 ppm lead or less than 1% lead by weight. Lead abatement of scrap steel is exempted by EPA regulations and no abatement is required. The tank has been recoated several times and presently retains most or all of the original and subsequently added coatings. The most recent coatings were applied in 1998 to the exterior only when the tank was over-coated. No exterior blast cleaning to remove the paint prior to cutting up permitted. A copy of the sampling analysis will be included in the Appendix of the specifications. All material is considered to be hazardous and shall be handled as such by the Contractor, until such time as it is tested and determined to be non-hazardous or rendered as such by the Contractor.
- C. The Contractor is responsible for conducting all appropriate testing of existing materials on their own and shall comply with the applicable regulations for worker safety and health, protection of the environment and management of wastes.
- D. Testing must be performed by a State of Texas approved laboratory.
- E. Certified copies of the test results of sampling and analysis of existing materials are to be provided to the Engineer and Owner.

1.11 SAFETY

- A. Work shall be performed in a safe manner in accordance with all applicable federal, state and local codes.
- B. The Contractor shall provide personnel with safety clothing, climbing devices, scaffolding, work stages, respiratory equipment, and eye and face protection as required for the work.
- C. All work shall be performed in compliance with OSHA rules and regulations for confined space entry and comply with any State and/or local requirements, which are more restrictive than the Federal requirements.
- D. All work shall be performed in compliance with OSHA's latest rules and regulations for working at heights where fall protection is required.
- E. All work shall be performed in accordance with OSHA Safety and Health Standards for occupational exposure to lead, chromium and other heavy metals.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 RULES AND REGULATIONS

- A. No building or structure, or any part thereof, shall be demolished until an application has been filed with the City of Brownsville and a demolition permit issued. The fee for this permit shall be the Contractor's responsibility.

3.2 EXAMINATION

- A. Examine existing structures indicated to be demolished before demolition.
- B. Determine where removals may result in structural deficiency or unplanned structure collapse during demolition. Coordinate demolition sequence and procedures to prevent structures from becoming unstable.
- ~~C. Determine where demolition may affect structural integrity or weather resistance of adjacent structures indicated to remain.~~
 - ~~1. Identify measures required to protect structures from damage.~~
 - ~~2. Identify remedial work including patching, repairing, bracing, and other work required to leave buildings indicated to remain in structurally sound and weathertight and watertight condition.~~

3.3 PREPARATION

- A. See drawings for additional demolition notes and details.
- B. Conduct survey and document conditions of any buildings near locations of demolition and photograph existing conditions identifying existing irregularities.
- C. Mark location and termination of utilities.
- D. Erect, and maintain temporary barriers and security devices, including warning signs and lights, and similar measures, for protection of the public, Owner and Contractor's personnel and existing infrastructure to remain.
- E. Prevent movement/damage to structure/equipment; provide temporary bracing/shoring/measures required to ensure safety of existing infrastructure required to remain in operation.

3.4 POLLUTION CONTROLS

- A. The tank is located in close proximity to private residences, a school and roads. The demolition operations may produce paint chips and flakes, as well as metal chips, dust, dirt and other debris, which may be a hazardous waste. All dust, debris and other materials shall be contained to the tank property and collected.
- B. Use suitable engineering controls to limit the amount of dust, smoke, emissions and dirt arising and scattering in the air to the lowest practical levels and to prevent adverse offsite consequences. Comply with governing regulations pertaining to environmental protection. The quantity of emissions during the work shall be monitored visually by the Engineer throughout the project duration and shall be limited to random emission, which don't present a nuisance (as determined by the Engineer).
- C. Use suitable engineering controls to limit the amount of noise resulting from the demolition activities.
- D. Do not use water when it may create hazardous or objectionable conditions such as ice, flooding and pollution.
- E. The ground surface to a minimum of 10-feet around the outside of the tank shall be protected with suitable ground covers and plywood sheeting. Furnish similar ground cover and other protective measures in work areas where large pieces of the tank may be temporarily placed (no longer than a single workday) before they are cut into smaller pieces prior to truck loading and disposal.
- F. Protect surrounding areas from contamination from storm water runoff during rain events.
- G. Clean adjacent structures, facilities and improvements of dust, dirt and debris caused by demolition operations. Return adjacent areas to conditions existing prior to the start of the work at no additional cost to the Owner.

3.5 DEMOLITION

- A. The methods and procedures used to demolish the tank and appurtenances are the responsibility of the Contractor. The property and the trees noted not to be disturbed around the project site must be protected from damage and contamination while the tank is being demolished.
- B. The demolition methods and procedures must be passive. Wrecking balls and hammers will not be permitted.
- C. Blasting and the use of explosives will not be permitted for any demolition work.
- D. Pieces removed from the tank shall be cut out, lowered, loaded and trucked away from the site in such a manner as to cause no hazards for passerby or damage to any existing facility. Repair adjacent construction and finishes damaged during demolition work. Such repairs shall be made to the Owner's satisfaction.
- E. All debris and residue collected on the drop cloths and the tank bottom plates shall be properly collected (vacuumed) at the end of each workday and properly stored in suitable sealed containers.
- F. Demolished materials shall not be stockpiled or stored on site. Transfer demolished materials to haul trucks as work progresses. When full, the load shall be covered and immediately delivered to the recycling company.
- G. Conduct demolition to minimize interference with adjacent areas and structures.
- H. Do not close or obstruct roadways.
- I. Cease operations immediately when structure appears to be in danger and notify Engineer.
- J. Disconnect and remove utilities within demolition areas prior to demolition activities.
- K. Cap and identify abandoned utilities at termination points when utility is not completely removed. Annotate Record Drawings indicating location and type of service for capped utilities remaining after demolition.
- L. Demolish in orderly and careful manner. Protect existing structures.
- M. Do not burn or bury materials on site.
- N. All excavations associated with the tank footings and removed pipes and structures are to be filled with clean, compacted earth backfill. Refer to Construction Drawings for compaction requirements.
- O. Remove temporary Work.

3.6 DISPOSAL OF SCRAP STEEL

- A. The scrap steel plate, structural members, ladders, hatches and other pieces of steel resulting from demolition of the tank shall become the property of the Contractor.
- B. The method of disposing of scrap steel shall be by recycling to a scrap yard and to a foundry that re-melts the steel. The steel recycler/scrap yard shall be subject to review and approval of the Engineer and Owner.
- C. The Contractor is required to notify the recycler/scrap yard in writing of the presence of lead-based paint and other heavy metals. The Contractor shall obtain a letter from the recycler/scrap yard, acknowledging that there is lead-based paint/other heavy metals in the waste stream being accepted for recycling and that the presence of lead-based paint/other heavy metals does not preclude acceptance of the material at the facility or the foundry where the material will be re-melted. Copies of all letters shall be provided to the Engineer and Owner.
- D. The Contractor shall provide written documentation to the Owner concerning the disposition of the scrap steel at the recycling facility/scrap yard. The documentation shall include a description of the material, date of removal and date of delivery to the recycling facility/scrap yard.
 - 1. Each load of scrap steel shall be numbered and shall be weighed by the recycler at the time of delivery. A copy of the receipt showing the load number and the weight signed by the recycler shall be provided to the Owner.
 - 2. The recycling facility/scrap yard shall indicate the load (i.e., materials from this project and others) to the foundry that contain the materials from this project and provide a copy of the receipt, weigh ticket or other suitable documentation showing the load was received at the foundry.

3.7 DISPOSAL OF WASTE RESIDUE

- A. The Contractor is responsible for assuring the proper handling, transportation and disposal of all hazardous and nonhazardous demolished materials and/or waste generated during the project and shall comply with the requirements of this specification and all applicable federal, state and local codes and regulations pertaining to the handling and legal disposal of all demolished materials and/or waste. The Contractor shall comply with all applicable regulations even if the regulation is not specifically referenced herein. If a federal, state or local regulation is more restrictive than the requirements of this specification, the more restrictive requirements shall apply.
- B. The Contractor shall be responsible for disposal of all lead paint chips and dust, all wastewater from cleaning operations, chemical strippers used, miscellaneous debris used for cleaning (sponges, cloths) and other associated debris. These materials shall be removed in sealed, labeled containers to an approved disposal site in accordance with all applicable hazardous waste regulations.
- C. The Contractor shall utilize the services of an environmental waste management company for the transportation and disposal of waste residue generated during demolition (not steel recycled to the scrap yard). Signed manifests and all other legal documentation shall be supplied to the Engineer, to verify that all steps of the handling, transportation and disposal process have been completed properly in accordance with the applicable regulations. Documentation (manifests and

other transfer documents) shall be provided for each load from the site to the disposal facility. All documentation for each load shall be tracked by the original manifest document number.

1. Waste Management Company shall have a minimum of five (5) years documented successful experience with waste management and disposal of hazardous waste in Texas.
2. Only TCEQ licensed and permitted transporters and disposal facilities shall be used.
3. The Contractor is responsible for the payment of any fines and undertaking any cleanup activities mandated by local, State or federal environmental agencies for improper waste handling, storage, transportation, or disposal.
4. The Contractor shall indemnify and hold harmless the City and Brownsville PUB from any liability arising from handling, transportation and/or disposal of wastes from the Project.

D. The Contractor shall be responsible for all costs involved in the testing, transportation and disposal of waste from the project.

E. The Contractor shall be responsible for preparing all waste stream documents and disposal facility forms. The Owner will sign all waste manifests as the waste generator.

3.8 CLEANING

A. Keep workplace neat and orderly to the satisfaction of the Owner.

B. Collect waste material which may constitute fire hazard, place in closed metal containers, and remove daily from site.

C. Final clean up and restoring the site to its original condition is the responsibility of the Contractor.

D. Before the work will be considered complete, all rubbish and unused material due to, or connected with, the progress of the work shall be removed from the premises and disposed of in a manner satisfactory to the Owner.

E. Property disturbed and damaged as a result of the work shall be restored to their former condition by the Contractor; final payment will be withheld until that work is finished.

F. Repair, seed and fertilize all rutted and disturbed areas.

3.9 PERSONAL OR PROPERTY DAMAGE

A. Claims of damage or disturbance to private and/or public property as a result of the performance of the work shall be reported to the Owner immediately upon their occurrence or immediately upon receipt of notification of said damage by the Contractor.

B. All claims of damage or disturbance to private and/or public property as a result of the performance of the work shall be repaired to equal or better than the original condition. This shall be accomplished solely at the expense of the Contractor. Under no circumstances will the Owner be held responsible for such damages or the repair or payment thereof.

- C. All claims of damage or disturbance as a result of the performance of the work shall be corrected immediately and expeditiously so as not to place undue burden upon the claimant nor upon the Owner.

END OF SECTION

SECTION 15062

DUCTILE IRON PIPE AND CAST IRON AND DUCTILE IRON FITTINGS

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes furnishing ductile iron piping three inches and larger for buried and exposed systems. Soil pipe and fittings are specified in other Specification Sections.

1.02 RELATED REQUIREMENTS

- A. Soil pipe and fittings not under this Specification Section.
- B. PLANS show pipe class, thickness class, type joints, and service pressure.
- C. Other related work as called for on PLANS or specified elsewhere in this or other TECHNICAL SPECIFICATION Sections.

1.03 REFERENCES

- A. The publications listed below form a part of this Specification to the extent referenced. The publications are referred to in the text by basic designation only.
 - 1. American National Standards Institute (ANSI)
 - a. ANSI B18.2.1 Square and Hex Bolts and Screws (Inch Series)
 - b. ANSI B18.2.2 Square and Hex Nuts (Inch Series)
 - 2. American Society For Testing And Materials (ASTM)
 - a. ASTM A307, Standard Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength
 - 3. American Water Works Association (AWWA)
 - a. AWWAC104, Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water
 - b. AWWAC105, Polyethylene Encasement for Ductile Iron Pipe Systems
 - c. AWWAC110, Ductile-Iron and Gray-Iron Fittings, 3-inch Through 48-inch (75 mm
 - d. Through 1200 mm), for Water and Other Liquids
 - e. AWWAC111, Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings
 - f. AWWAC115, Flanged Ductile-Iron Pipe with Threaded Flanges
 - g. AWWAC150, Thickness Design of Ductile-Iron Pipe
 - h. AWWAC151, Ductile-Iron Pipe, Centrifugally Cast, for Water

1.04 SUBMITTALS

- A. Furnish in accordance with Specification Section 01300, "Submittals". In addition to the items specified in Section 01300 "Submittals", furnish the following:
 - 1. Detailed installation drawings for piping.
 - 2. Manufacturer's descriptive literature for mechanical couplings, mechanical flange adapters, and restrained flange adapters.
 - 3. Certified test reports for threaded-on flanged pipe in for shop testing required.

4. Certification per Paragraph 1.05.

1.05 QUALITY ASSURANCE

A. Certification:

1. Pipe used in domestic water distribution systems to have Underwriters' label and be acceptable to local and state authorities without penalty.
2. Furnish sworn statement that inspection and all tests have been made and meet the requirements of AWWA C151.

1.06 DELIVERY, STORAGE AND HANDLING

A. Shipping:

1. Piping with flanged ends to be protected with blank wooden or fiberboard flange protectors. Backing flanges are to be secured to the pipe ends.
2. Pipe spools to be loaded and blocked and lagged as necessary to ensure protection against damage during shipping.
3. Loose parts (couplings, nuts and bolts, gaskets, etc.) are to be shipped in crates that are clearly marked as to contents.

B. Handling and Unloading:

1. Unload and handle piping in accordance with pipe manufacturer's instructions.
2. Transfer of pipe to be accomplished utilizing nylon straps or steel cables.
3. Exercise extra care when handling flanged pieces due to the additional loads imparted by the flanges. (Insert blocking or other means to support the flanges independently of the pipe to prevent the weight of the flange from distorting the pipe.)
4. Maintain plugs and flange protectors in openings to protect the pipe.
5. Do not dump piping off of transport vehicle. Any damaged, chipped, or cracked fittings or pipe to be replaced at CONTRACTOR's expense.

C. Storage:

1. Store in an area that will avoid damage due to traffic.
2. Exposure to normal weather conditions is acceptable; however, avoid contact with other materials.
3. Store at job site on 4" x 4" blocking at 6' spacing. Piping may be stacked a maximum of three rows high as long as 4" high spacers are used on 6' centers.
4. Keep interior of piping free of all foreign matter.

1.07 MEASUREMENT AND PAYMENT

- A. Unless otherwise indicated, no separate measurement or payment for work performed under this Section. Include cost of same in Contract price bid for work of which this is a component part

PART 2 - PRODUCTS

2.01 MANUFACTURER(S)

A. Pipe:

1. American Cast Iron Pipe Co.
2. McWane Incorporated

DUCTILE IRON PIPE AND CAST IRON AND DUCTILE IRON FITTINGS

3. U.S. Pipe & Foundry
- B. Fittings:
1. American Cast Iron Pipe Co.
 2. McWane Incorporated
 3. U.S. Pipe & Foundry Co.
 4. Tyler Pipe
 5. Griffin Pipe

2.02 MATERIALS AND/OR EQUIPMENT

- A. General: Fabrication dimensions and accuracy of fabrication are responsibility of CONTRACTOR.
- B. Pipe:
1. Ductile Iron: Per AWWA C151.
 2. Thickness Class:
 - a. Aboveground Lines: As shown on PLANS and minimum for flanged pipe per AWWA C115, Table 15.2.
 - b. Underground Lines: As shown on PLANS, but not less than that indicated within AWWA C150 for internal pressure and depth shown on PLANS.
- C. Fittings, Flanges, and Joint Material:
1. Fittings: Per AWWAC110 and C111.
 2. Threaded-On Flanges: Per AWWA C115. Use ductile flanges on ductile fittings and cast iron flanges on cast iron fittings.
 3. Nonflanged Joint Material
 - a. Rubber Gaskets for Water and Sewage Service: Per AWWA C111.
 - b. Rubber Gaskets for Diffused Air Systems (10 psi and 210°F Service): EPDM.
- D. Restrained Joints:
1. Restrained Joint Pipe:
 - a. Pipes 16" and less: Joints to be restrained by Mega-Lug, by EBAA Iron, Inc. or equal by Ford Meter Box Co. Provide Mega-Lug Series 1100 and mechanical joint pipe and fittings, or equal by Ford Meter Box Co. Provide Mega-Lug Series 1700, or equal by Ford Meter Box Co. for push on joints.
 - b. Pipes greater than 16": Provide one of the following joint restraint systems:
 - 1) Flex-ring or Lock ring by American Cast Iron Pipe Co.
 - 2) TR Flex by U.S. Pipe Co.
 - 3) Super-Lock by Clow Corp
 - 4) Approved equal; locking gaskets not allowed.
- E. Gaskets:
1. For water and sewage, use rubber gasket conforming to the Appendix in AWWAC115.
 2. For air service, use 1/8-inch full-face EPDM gaskets, factory cut and conforming to AWWA C111.

- F. Bolts and Nuts:
1. Aboveground:
 - a. Hex head bolts and nuts:
 - 1) Bolts per ANSI B18.2.1.
 - 2) Nuts per ANSI B18.2.2.
 - b. Number, size, and length per Table 15.2 of AWWA C115.
 - c. Material: Low carbon steel per ASTM A307.
 - d. Use studs with nuts on each end for pipe sizes 54" and larger.
 2. Underground:
 - a. Tee-head bolts and hexagonal nuts per AWWA C111.
 - b. Number, size, and length per Table 11.1 of AWWA C111.
 - c. Material: Low alloy steel or high strength cast iron in accordance with AWWAC111.
- G. Exterior Coating:
1. Buried Pipe and Fittings: Bituminous coated, not less than 1 mil thick.
 2. Exposed Pipe and Fittings: Reference Section 09902 "Painting and Projective Coatings" for coating requirements. Bituminous coated pipe and fittings will not be allowed.
- H. Interior Lining (pipe and fittings):
1. Air Service: Unlined.
 2. Water Service: Cement mortar lined per AWWA C104/A21.4.
 3. Sewage Service:
 - a. Interior lining for ductile iron sewer pipe to conform to manufacturer's recommendations.
 - b. Minimum lining thickness to be 40 mils regardless of material recommended.
 - c. Acceptable lining materials are:
 - 1) "Corropipe II Wasteliner" by Madison Chemical Industries.
 - 2) "Polythane" by Madison Chemical Industries.
 - 3) "Protecto 401" ceramic epoxy by Vulcan Group.
 - 4) "SP-2000W" by Superior Environmental Products.
 - 5) "SewPerCoat" by La Farge Calcium Aluminates.
- I. Encasement: Polyethylene encasement in accordance with AWWA C105.
- J. Mechanical Couplings: Dresser Style 38, long sleeve unless shown otherwise; equivalent by Smith-Blair or Baker. Harness when required for thrust restraint.
- K. Flanged Coupling Adapters: Dresser Style 127 (2"-12"), Dresser Style 128 (14"-96"), equivalent by Smith Blair or equal.
- L. Restrained Flanged Coupling Adapters: EBAA Iron Series 2100 or equal by Ford Meter Box Co.
- M. Wall Pipes: Unless otherwise shown on PLANS, wall pipes to be cast or ductile iron with an intermediate wall collar. End connections to be as shown on PLANS.

- N. Piping Wall Penetration: GPT-Link Seal or approved equal
- a. Pressure Resistant to 20 psig (40ft of head)
 - b. Standard – EPDM – Rubber (Black)
 - c. Oil Resistant – Nitrile rubber (green)
 - d. Temperature resistant – Silicone rubber (gray)
 - e. Low Durometer for fragile pipe – EPDM rubber (blue) Shore 40 ± 5
 - f. Hardware Options – S316 Stainless Steel and Zinc Dichromate Coated Steel (1470 hr salt spray tested) hardware

2.03 FABRICATION

- A. Flanged Pipe
1. Threaded-On Flanged Pipe:
 2. Shop thread, machine tight, and face in machine shop equipped for this type work and conforming to the requirements of AWWA C115.

2.04 SOURCE QUALITY CONTROL

- A. Threaded-On Flanged Pipe: Shop test, hydrostatically, each flanged pipe piece at 150 psig.

PART 3 - EXECUTION

3.01 ERECTION/INSTALLATION/APPLICATION AND/OR CONSTRUCTION

- A. Installation: Per applicable Specification Section.

END OF SECTION

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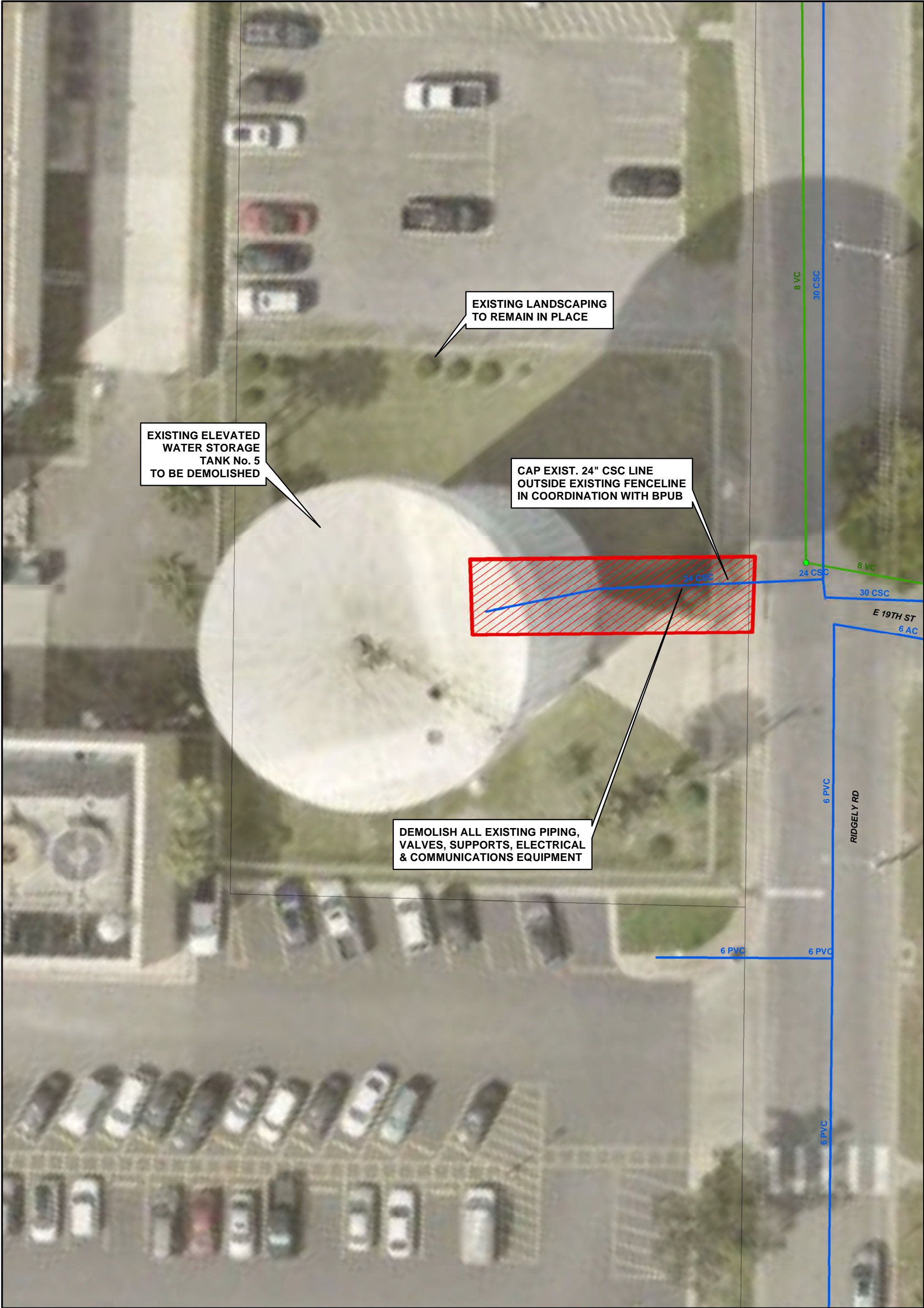
APPENDIX – A

DEMOLITION OF ELEVATED WATER

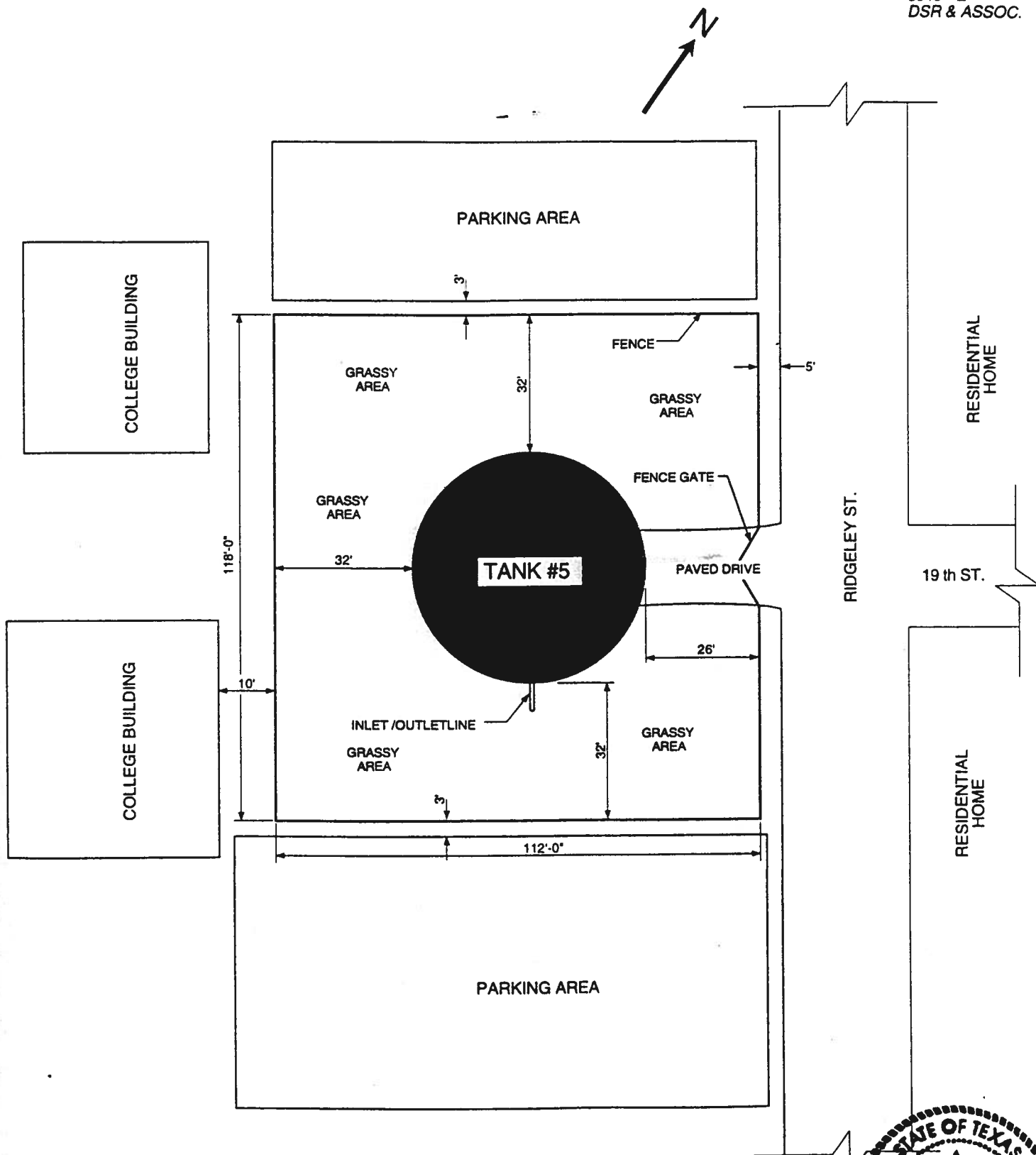
STORAGE TANK NO. 5

DEMOLITION LAYOUT

Demolition of Elevated Water Tank No. 5

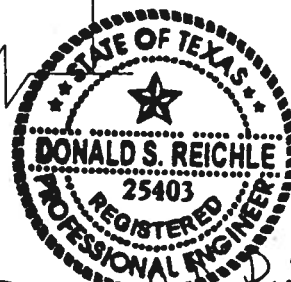


APPENDIX – B
DEMOLITION OF ELEVATED WATER
STORAGE TANK NO.5
EXISTING RECORD DRAWINGS
(10/28/1997)

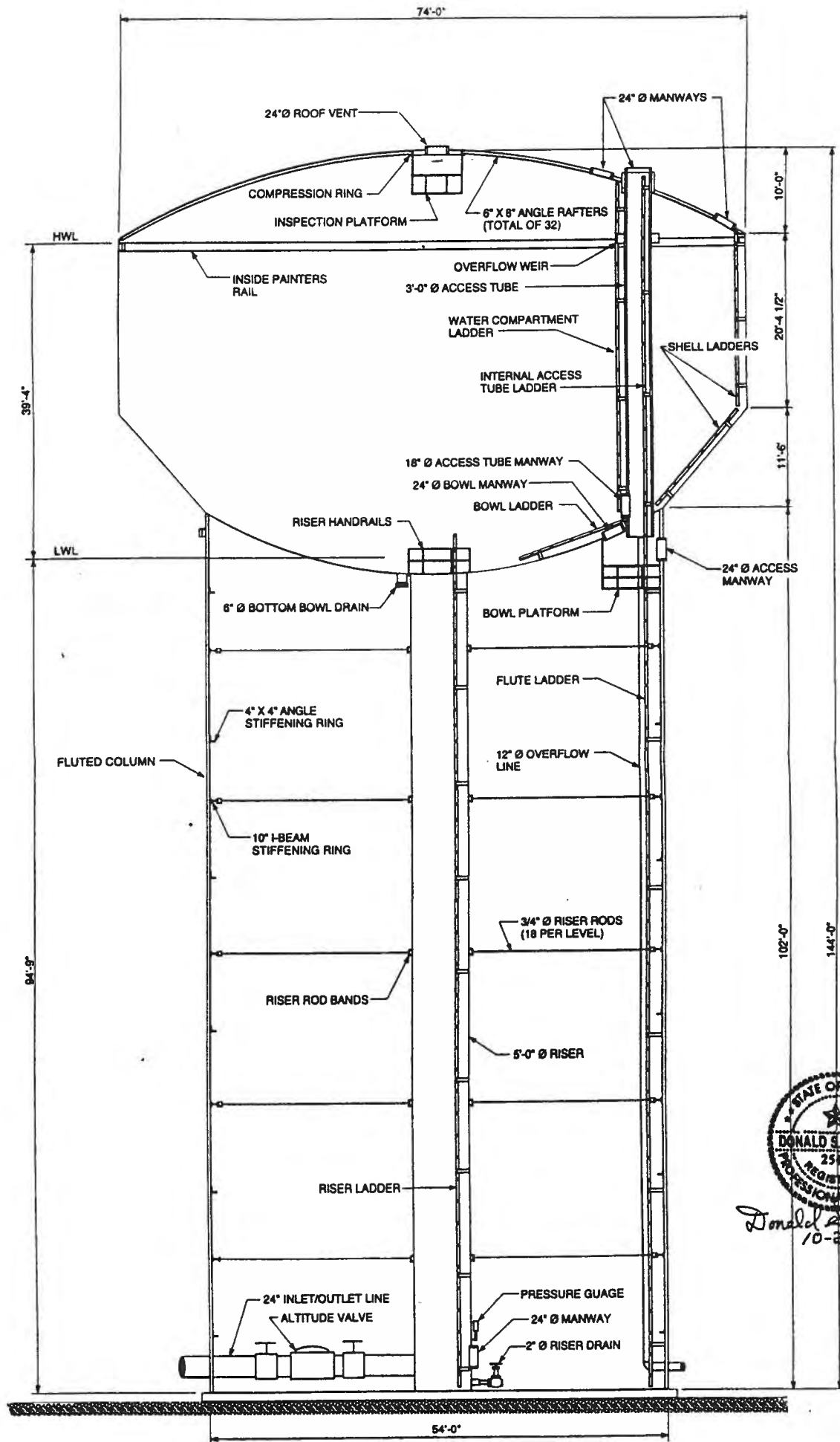


BROWNSVILLE PUB ELEVATED WATER TANK NO. 5

Site Layout



Donald S. Reichle
10-28-97

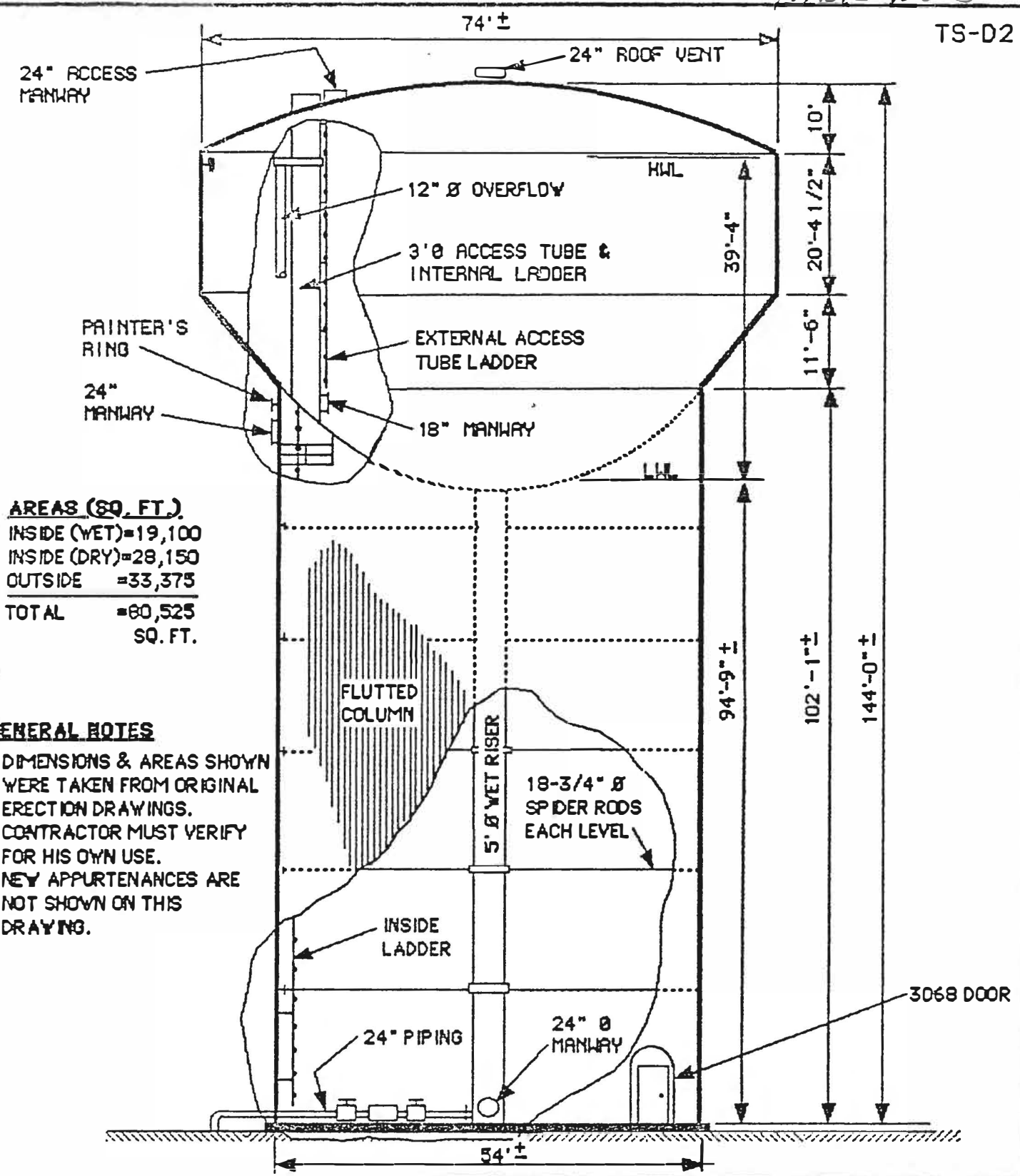


Donald S. Reichle
10-28-97

BROWNSVILLE PUB ELEVATED WATER TANK NO. 5

171012 NO 3

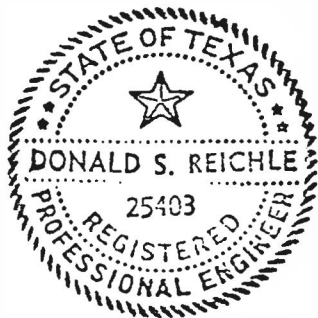
TS-D2



AREAS (SQ. FT.)
INSIDE (WET)=19,100
INSIDE (DRY)=28,150
OUTSIDE =33,375
TOTAL =60,525
SQ. FT.

GENERAL NOTES

1. DIMENSIONS & AREAS SHOWN WERE TAKEN FROM ORIGINAL ERECTION DRAWINGS.
2. CONTRACTOR MUST VERIFY FOR HIS OWN USE.
3. NEW APPURTENANCES ARE NOT SHOWN ON THIS DRAWING.

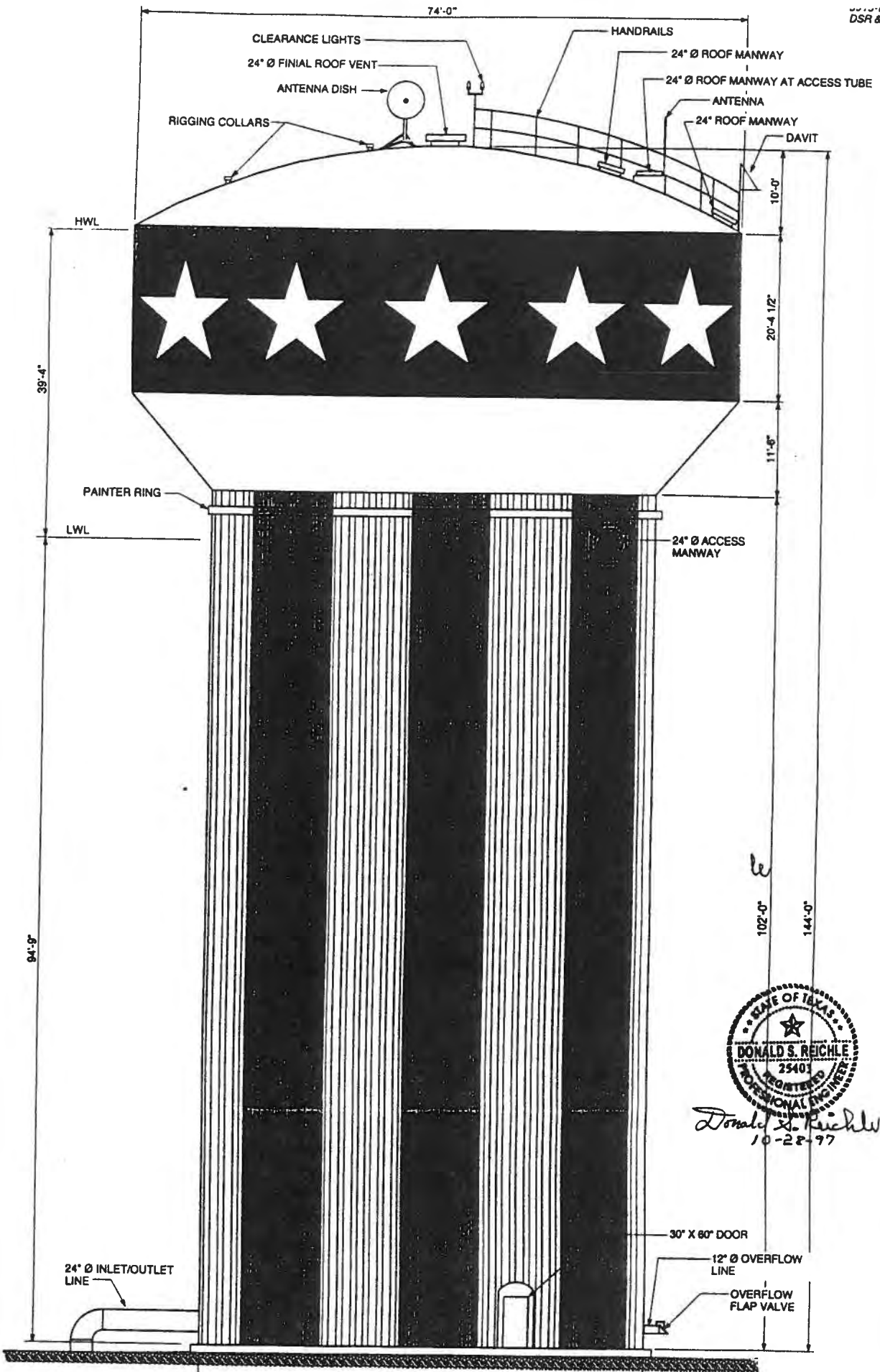


BROWNSVILLE PUBLIC UTILITIES BOARD
BROWNSVILLE, TEXAS

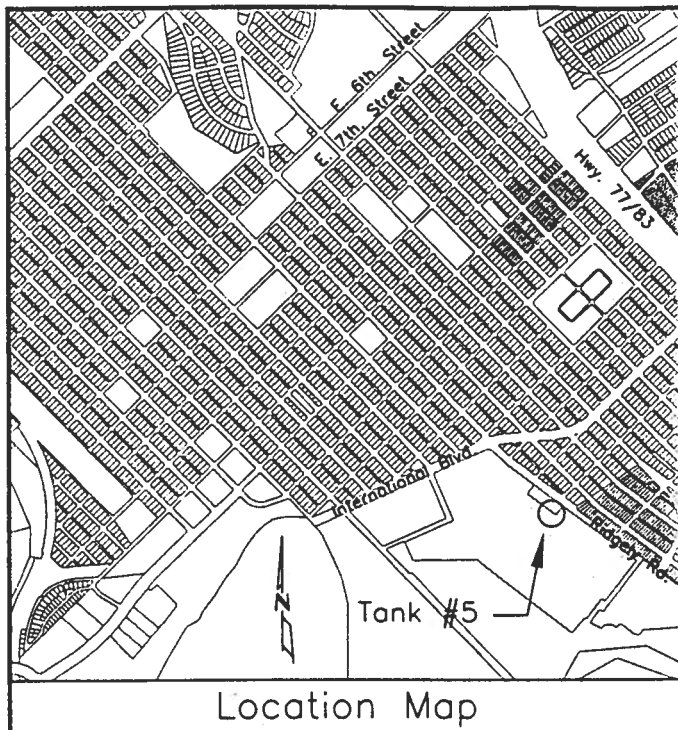
GENERAL DIMENSIONS
1.0 MG ELEVATED TANK NO. 5

DON S. REICHLE
& ASSOCIATES
NEDERLAND, TEXAS

DATE: 1-4-86
BY:RSR CK:DSR
DWG. 3091-E-2

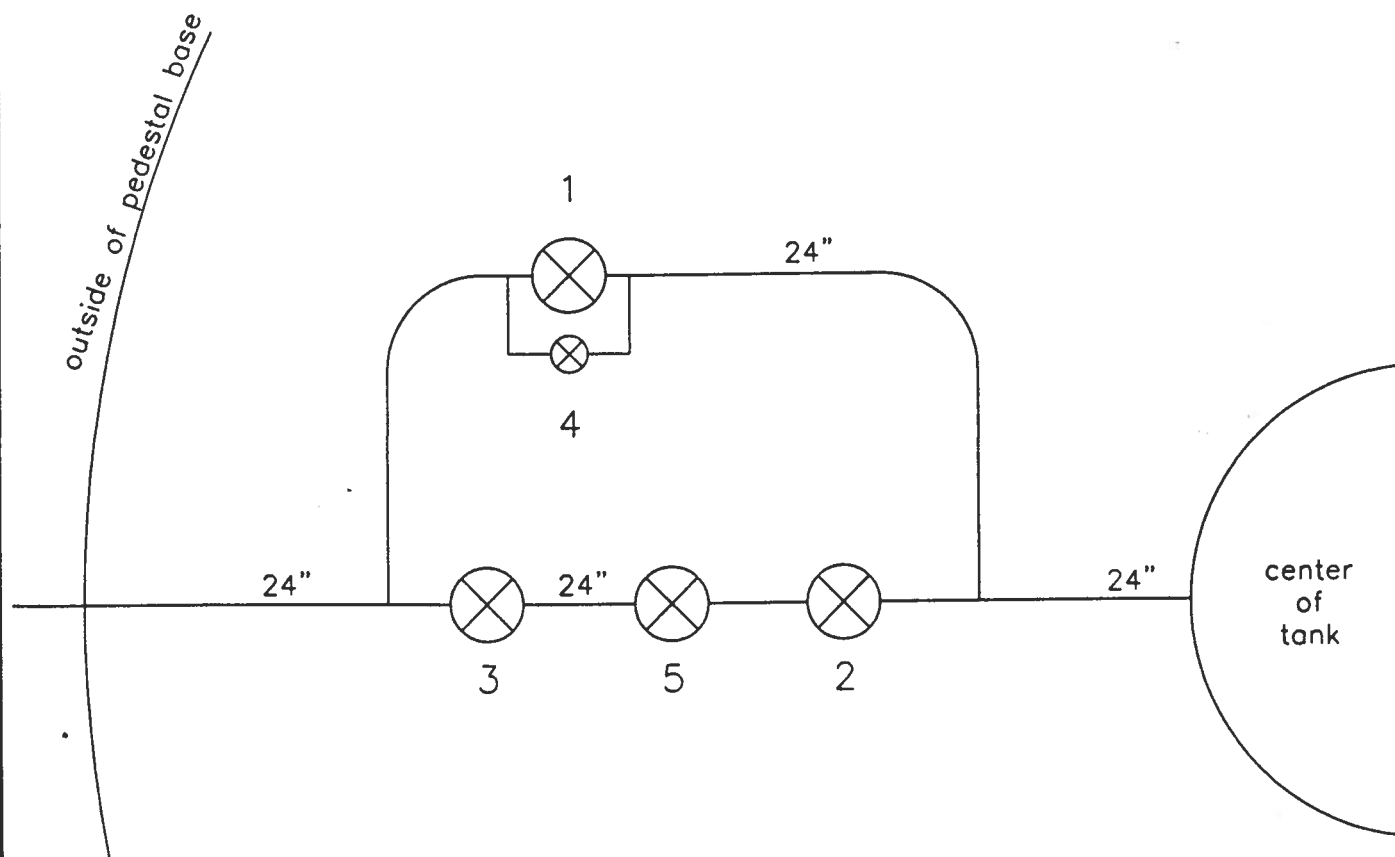


Donald S. Reichle
10-28-97



Legend

| | |
|-----|---|
| 1 | Gear opr. 24" Gate, Mueller, 1968 |
| 2,3 | 24" Gear 125 Butterfly Valve, Mueller, 1997 |
| 4 | 4" Mueller, 200/400, 1967 |
| 5 | Altitude, 24" Ross |



Scale: N.T.S.

Date: 18 August 2000

Drawn by: Luis G. Martinez

Appr. by:

Project No.:

WATER TANK #5
UNIVERSITY OF TEXAS BROWNSVILLE



APPENDIX – C

DEMOLITION OF ELEVATED WATER

STORAGE TANK NO. 5

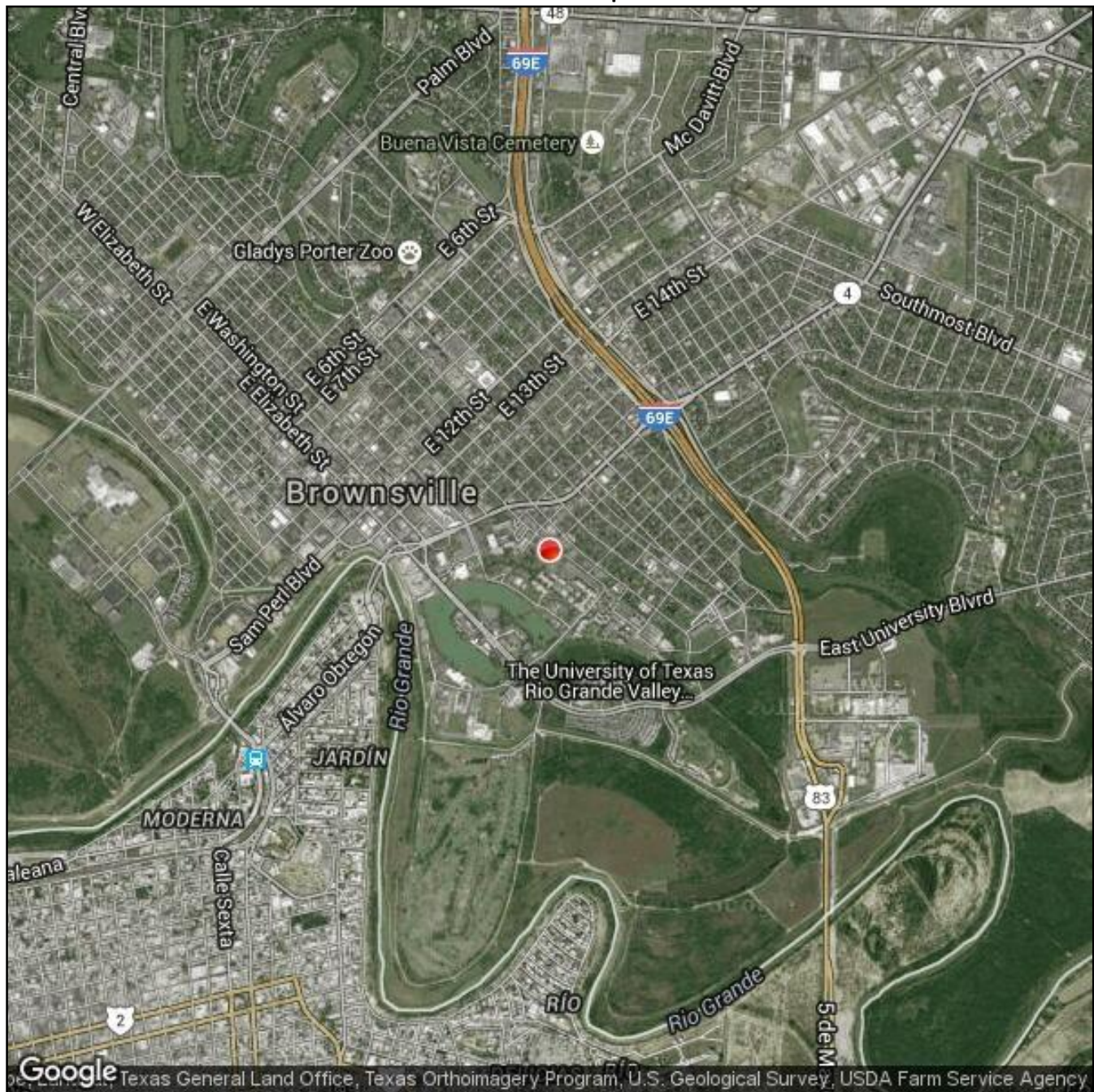
EXISTING RECORD-FIELD INSPECTION

REPORT (3/22/2016)

(FOR INFORMATIONAL PURPOSES ONLY)

Tank ID: UTB EST
Owner: Brownsville PUB
Inspector: DEI - Brad McCrea
Date of Inspection: 3/22/2016
Tank Description: 1,000,000 Gallon Hydropillar
Constructed 1969. LWL 95'. HWL 135'.

Overview Map





| Attributes | |
|--------------------------------------|--|
| Title | UTB BPUB EST |
| Inspection Item | Overview |
| Condition | Poor |
| Notes/Dimensions and Recommendations | <p>The 1.0MG hydro-pillar style elevated storage tank was constructed in 1969 and is in poor condition. The protective coatings are no longer providing adequate corrosion protection and are not tightly adhered. The tank should be rehabilitated or demolished within 12 months. The structure is deteriorated to such a state that spot repair is NOT recommended. A detailed rehabilitation cost estimate is provided at the end of this report.</p> <p>The interior access ladder is in poor condition and NOT safe to climb. All roof access hatches are in poor condition and present a falling hazard if opened.</p> <p>The following water quality defects were observed:</p> <ul style="list-style-type: none"> • Holes in roof • Overflow flap valve does not function properly. • Access hatches and ladders are not safe to properly inspect the tank on an annual basis. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|--------------------------------|
| Title | UTB BPUB EST |
| Inspection Item | Accessibility, Site & Security |
| Condition | Fair |
| Notes/Dimensions and Recommendations | East side of site. |
| Inspector | Brad McCrea |



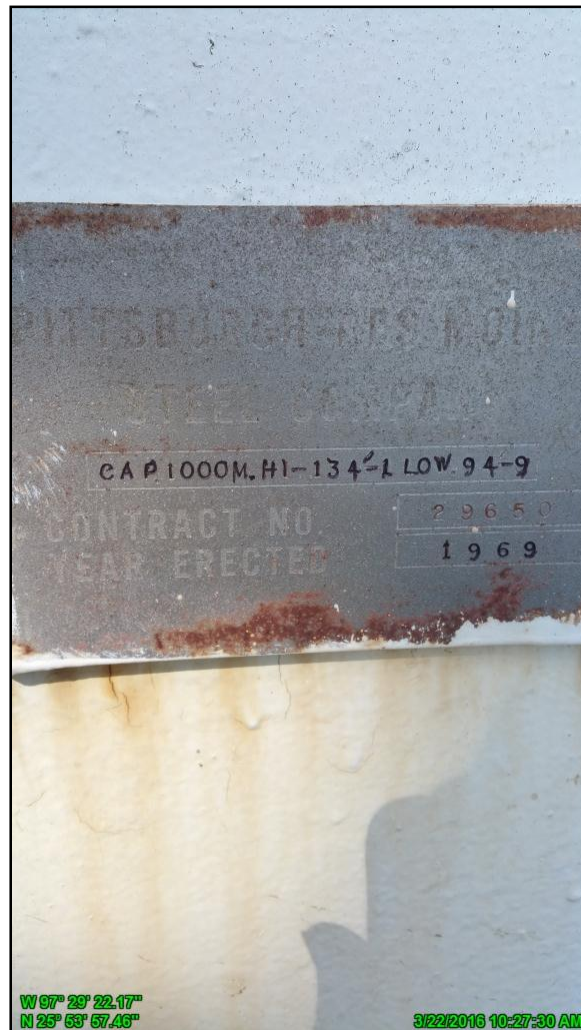
| Attributes | |
|--------------------------------------|--|
| Title | UTB BPUB EST |
| Inspection Item | Accessibility, Site & Security |
| Condition | Fair |
| Notes/Dimensions and Recommendations | North side of site. Drive in gate. The fence is in close proximity to the drip ring of the tank. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|--------------------------------|
| Title | UTB BPUB EST |
| Inspection Item | Accessibility, Site & Security |
| Condition | Fair |
| Notes/Dimensions and Recommendations | South side of site. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|--------------------------------|
| Title | UTB BPUB EST |
| Inspection Item | Accessibility, Site & Security |
| Condition | Fair |
| Notes/Dimensions and Recommendations | West side of site. |
| Inspector | Brad McCrea |



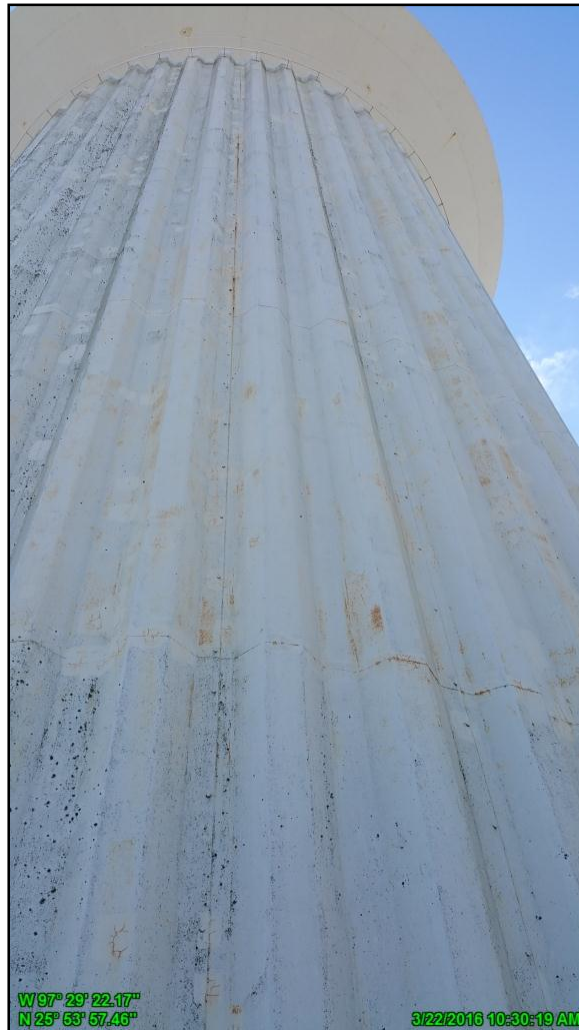
| Attributes | |
|--------------------------------------|---|
| Title | UTB BPUB EST |
| Inspection Item | Data Plate |
| Condition | Fair |
| Notes/Dimensions and Recommendations | 1,000,000 gallons. High Waterline is 134'-1". Low Waterline is 94'-9". Built in 1969. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|---------------------|
| Title | UTB BPUB EST |
| Inspection Item | Door Access to Base |
| Condition | Poor |
| Notes/Dimensions and Recommendations | Replace. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|--|
| Title | UTB BPUB EST |
| Inspection Item | Exterior Coating |
| Condition | Poor |
| Notes/Dimensions and Recommendations | Pedastal base. Typical all around. Severe cracking and spalling present. |
| Inspector | Brad McCrea |



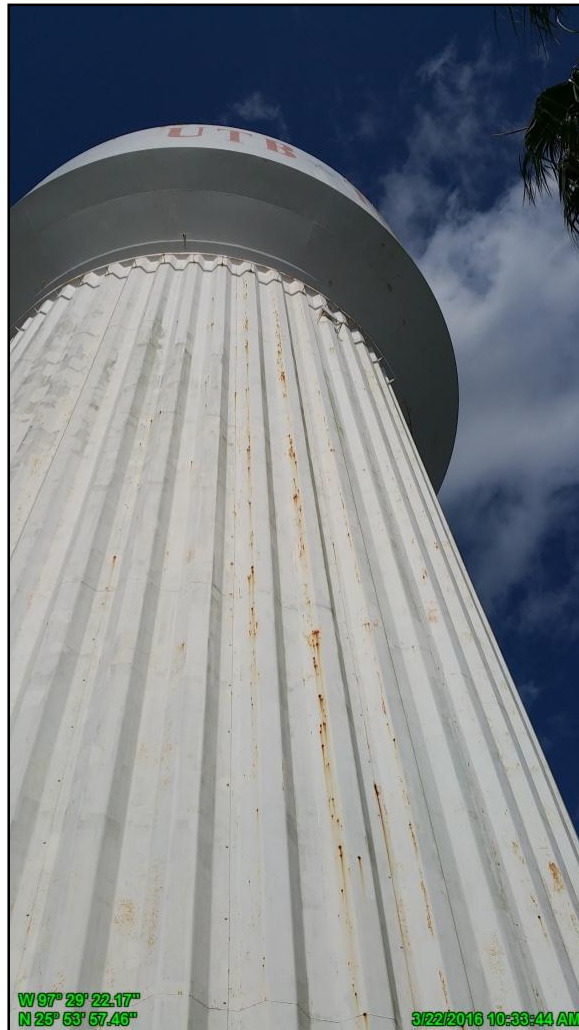
| Attributes | |
|--------------------------------------|--|
| Title | UTB BPUB EST |
| Inspection Item | Exterior Coating |
| Condition | Replace |
| Notes/Dimensions and Recommendations | West side of pedestal. General corrosion present throughout. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|--|
| Title | UTB BPUB EST |
| Inspection Item | Electrical |
| Condition | Repair |
| Notes/Dimensions and Recommendations | Wiring is exposed. Connection is broken. |
| Inspector | Brad McCrea |



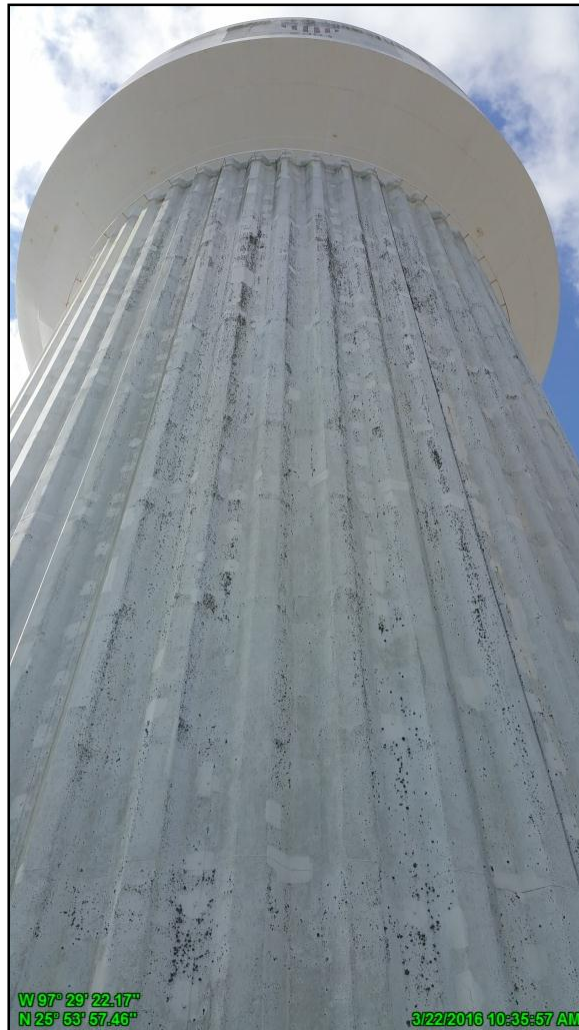
| Attributes | |
|--------------------------------------|---|
| Title | UTB BPUB EST |
| Inspection Item | Exterior Coating |
| Condition | Replace |
| Notes/Dimensions and Recommendations | South side of pedestal. General corrosion present throughout. Severe localized corrosion is also present. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|--|
| Title | UTB BPUB EST |
| Inspection Item | Exterior Coating |
| Condition | Replace |
| Notes/Dimensions and Recommendations | East side of pedestal. General corrosion present throughout. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|---|
| Title | UTB BPUB EST |
| Inspection Item | Overflow Pipe & Splash Basin |
| Condition | Replace |
| Notes/Dimensions and Recommendations | The 12" overflow pipe terminates with a plate steel flap that does not seat properly. Replace |
| Inspector | Brad McCrea |



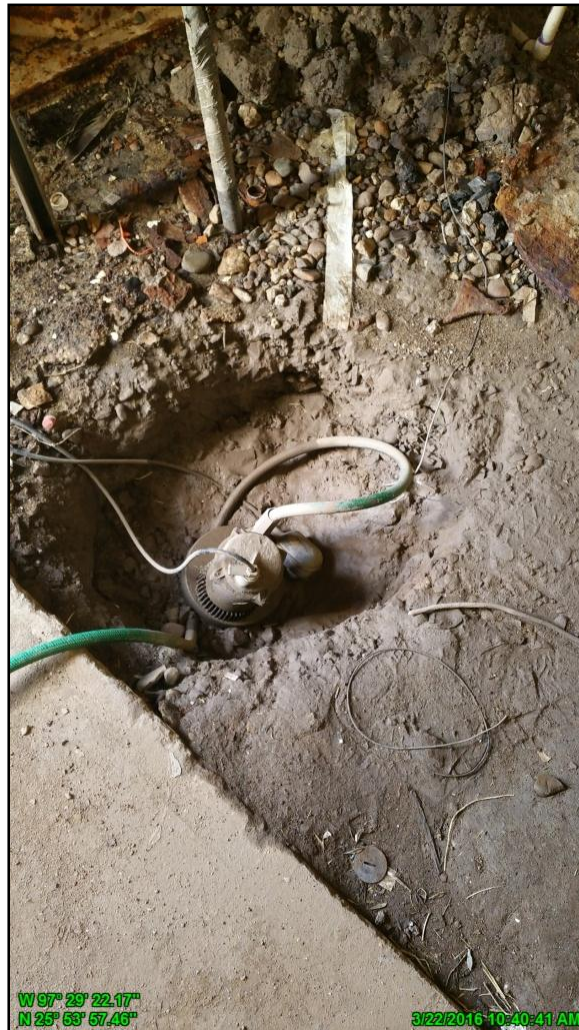
| Attributes | |
|--------------------------------------|--|
| Title | UTB BPUB EST |
| Inspection Item | Exterior Coating |
| Condition | Replace |
| Notes/Dimensions and Recommendations | North side of pedestal. General corrosion present throughout. Moss and algae are also present. |
| Inspector | Brad McCrea |



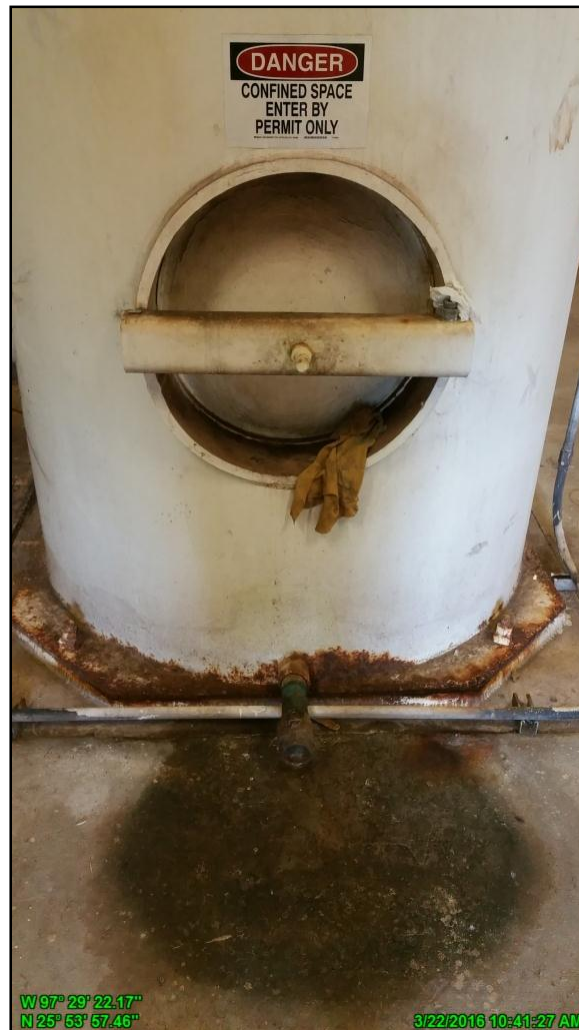
| Attributes | |
|--------------------------------------|-----------------------|
| Title | UTB BPUB EST |
| Inspection Item | Electrical Cabinets |
| Condition | Fair |
| Notes/Dimensions and Recommendations | Inside pedestal base. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|--|
| Title | UTB BPUB EST |
| Inspection Item | Ladder – Interior Dry |
| Condition | Fair |
| Notes/Dimensions and Recommendations | Has safety climb. Not OSHA or AWWA standard. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|---|
| Title | UTB BPUB EST |
| Inspection Item | Sump |
| Condition | Fair |
| Notes/Dimensions and Recommendations | This works but is very crude. There is a hole in the access tube that can let water in the pedestal. A concrete sump should be installed with a safety grate and piped to the overflow drain. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|--|
| Title | UTB BPUB EST |
| Inspection Item | Riser Pipe Base |
| Condition | Poor Replace Drain |
| Notes/Dimensions and Recommendations | The 4' diameter riser is equipped with a 24" pressure manway that shows no signs of leaking. There is moderate corrosion present on the 2" drain and the riser base plate. There is a seep at the 2" drain connection. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|----------------------------------|
| Title | UTB BPUB EST |
| Inspection Item | Anchor Bolt/Nuts |
| Condition | Poor Replace |
| Notes/Dimensions and Recommendations | Replace all 56 nuts and washers. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|---|
| Title | UTB BPUB EST |
| Inspection Item | Inlet/Outlet Piping |
| Condition | Fair |
| Notes/Dimensions and Recommendations | 24" and 14" pipes and fittings are present. All valve bleeds are piped to the overflow pit. No leaks were noted. Minor corrosion was noted on hardware. |
| Inspector | Brad McCrea |



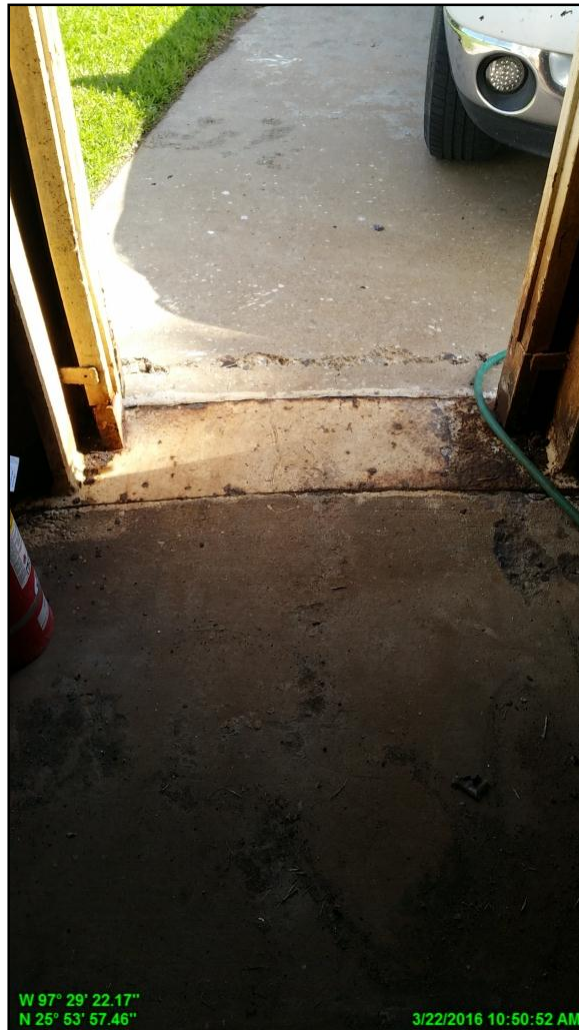
| Attributes | |
|--------------------------------------|---|
| Title | UTB BPUB EST |
| Inspection Item | Piping |
| Condition | Fair |
| Notes/Dimensions and Recommendations | 24" and 14" pipes and fittings are present. All valve bleeds are piped to the overflow pit. No leaks were noted. Minor corrosion was noted on hardware. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|---|
| Title | UTB BPUB EST |
| Inspection Item | Level Gauge & Sample Port |
| Condition | Fair |
| Notes/Dimensions and Recommendations | Operational and is scaled in feet and PSI. Electronic reader is in place and operational as well. |
| Inspector | Brad McCrea |



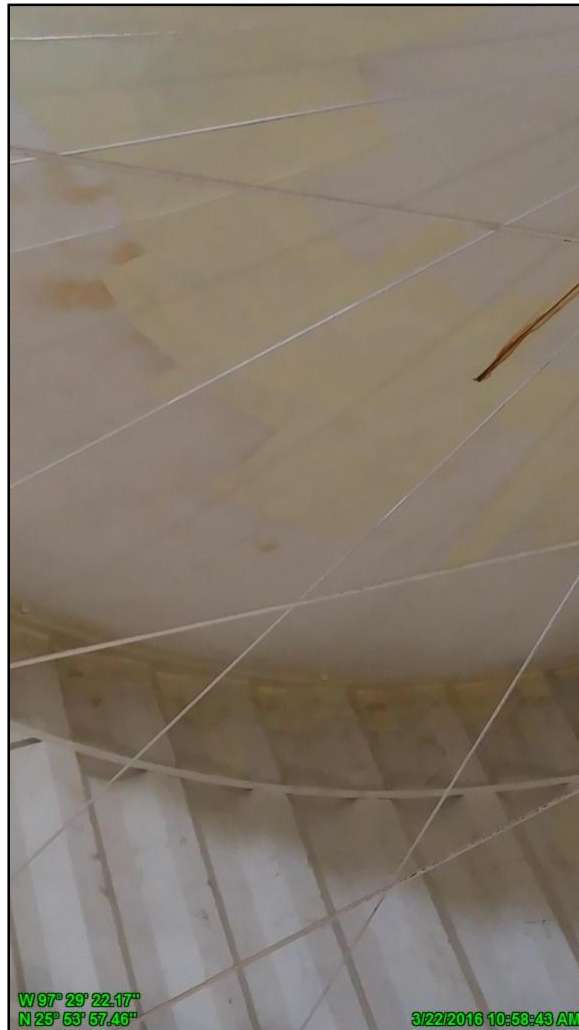
| Attributes | |
|--------------------------------------|-------------------|
| Title | UTB BPUB EST |
| Inspection Item | Interior Dry Stem |
| Condition | Fair to Poor |
| Notes/Dimensions and Recommendations | Replace |
| Inspector | Brad McCrea |



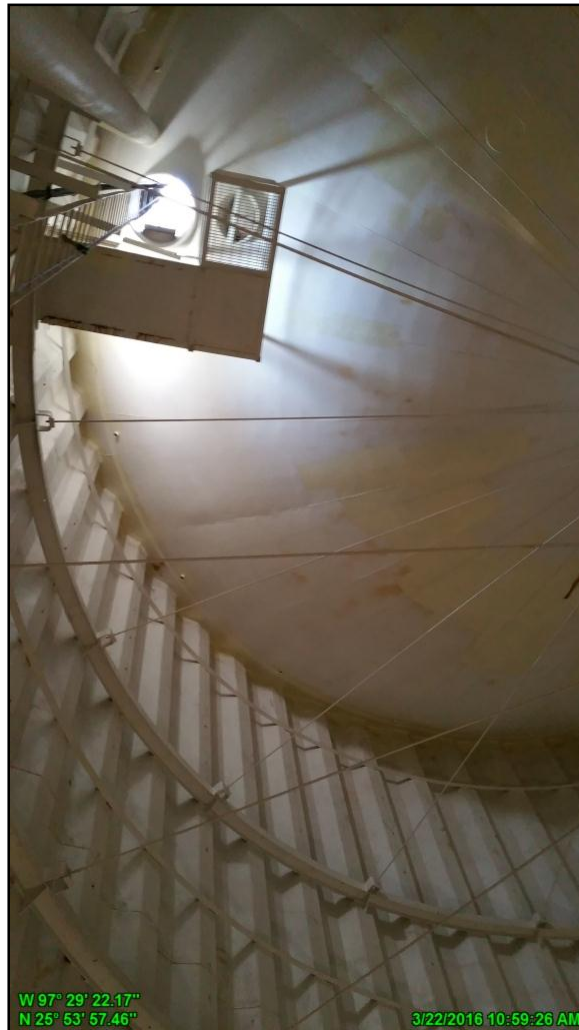
| Attributes | |
|--------------------------------------|--|
| Title | UTB BPUB EST |
| Inspection Item | Access Door |
| Condition | Replace |
| Notes/Dimensions and Recommendations | The door frame is severely deteriorated at the base. The door and frame have been repaired previously. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|---|
| Title | UTB BPUB EST |
| Inspection Item | Dry Stem Coating |
| Condition | Fair |
| Notes/Dimensions and Recommendations | Corrosion is forming on edges and unsealed seams. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|---|
| Title | UTB BPUB EST |
| Inspection Item | Bowl |
| Condition | Repair |
| Notes/Dimensions and Recommendations | There is an area that is a potential leak that will need to be repaired. The coating on the bowl has been previously touched up. It is recommended to remove and replace th coating. There are areas with rust coming through the coatings. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|------------------------------|
| Title | UTB BPUB EST |
| Inspection Item | Bowl |
| Condition | Poor |
| Notes/Dimensions and Recommendations | Paint thinning. Rust present |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|--|
| Title | UTB BPUB EST |
| Inspection Item | Painters Access |
| Condition | Fair |
| Notes/Dimensions and Recommendations | 24" diameter was secured with a chain and pin. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|--------------------------|
| Title | UTB BPUB EST |
| Inspection Item | Bowl Manway |
| Condition | Good |
| Notes/Dimensions and Recommendations | 24" no leaks were noted. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|---|
| Title | UTB BPUB EST |
| Inspection Item | Overflow Pipe |
| Condition | Repair |
| Notes/Dimensions and Recommendations | The 12" overflow pipe joint at the access platform is an unwelded slip joint. This section should be cut out and replaced. Weld completely. |
| Inspector | Brad McCrea |



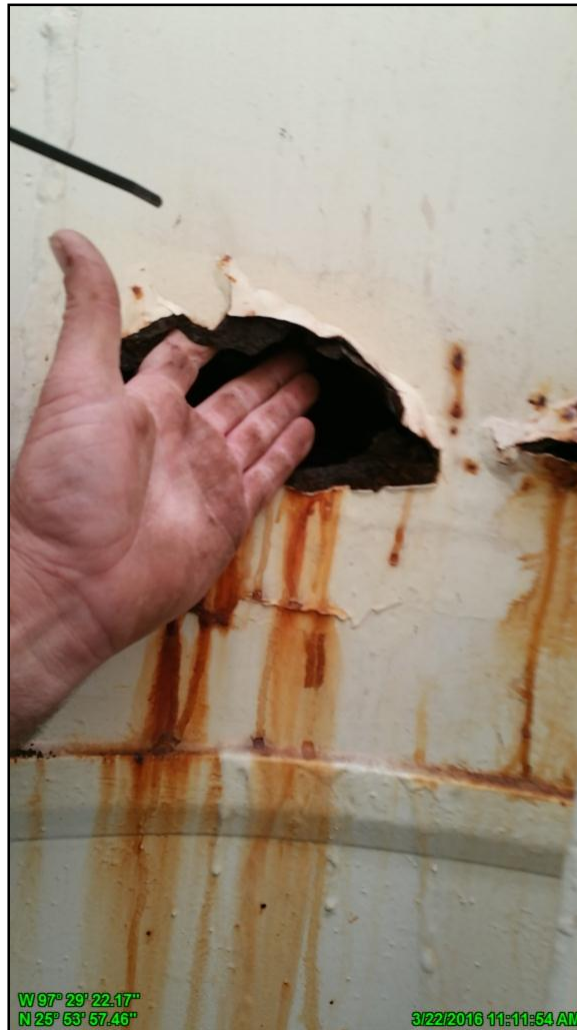
| Attributes | |
|--------------------------------------|---|
| Title | UTB BPUB EST |
| Inspection Item | Access Tube |
| Condition | Fair |
| Notes/Dimensions and Recommendations | The 38" O.D. access tube is equipped with a non OSHA or AWWA standard ladder. There is a safety climb present. The coax and wires are properly routed on their own standoffs. However, their mounting hardware protrudes toward the ladder and causes a climbing hazard. Cutting or scrapping may occur to the climber. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|---|
| Title | UTB BPUB EST |
| Inspection Item | Access Tube Pressure Manway |
| Condition | Fair |
| Notes/Dimensions and Recommendations | 18" diameter presure manway. No leaks were noted. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|--|
| Title | UTB BPUB EST |
| Inspection Item | Access Tube Coating |
| Condition | Poor |
| Notes/Dimensions and Recommendations | General corrosion is present, replace coating. |
| Inspector | Brad McCrea |



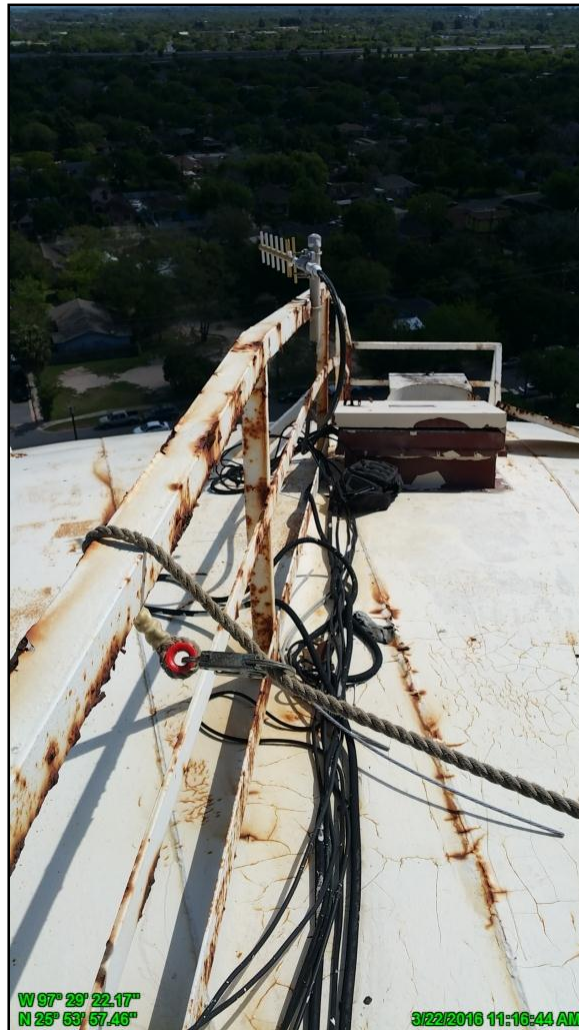
| Attributes | |
|--------------------------------------|--|
| Title | UTB BPUB EST |
| Inspection Item | Access Tube |
| Condition | Poor |
| Notes/Dimensions and Recommendations | The access tube is rusted through at the overflow wier. This will have to be cut out and repaired. |
| Inspector | Brad McCrea |



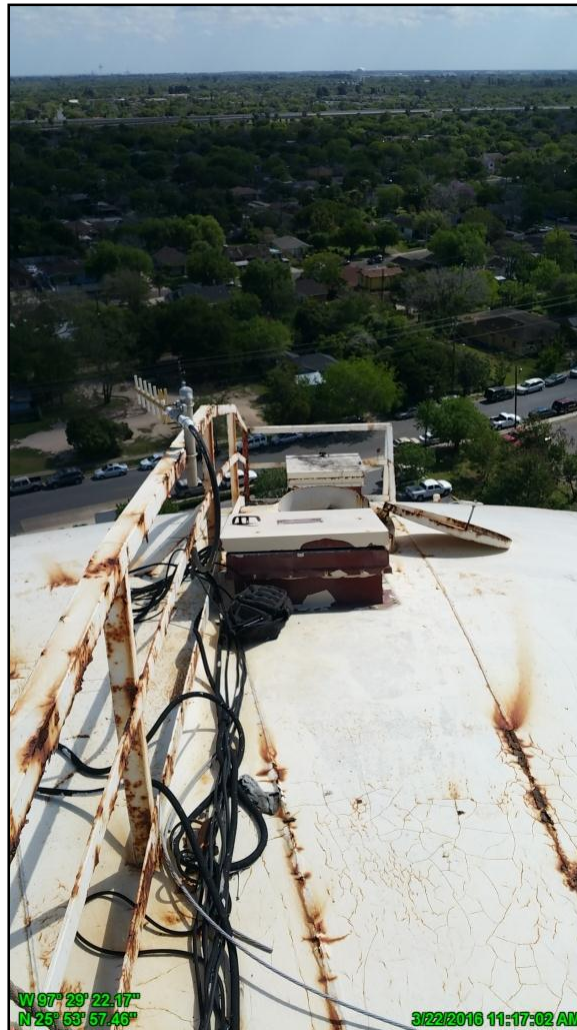
| Attributes | |
|--------------------------------------|---|
| Title | UTB BPUB EST |
| Inspection Item | Access Tube Hatch |
| Condition | Replace |
| Notes/Dimensions and Recommendations | Replace with new 30" Hatch. Use Extreme caution when opening this hatch a lanyard should be attached to it to secure it to the access tube ladder. The hatch only has one hinge attaching it to the roof. |
| Inspector | Brad McCrea |



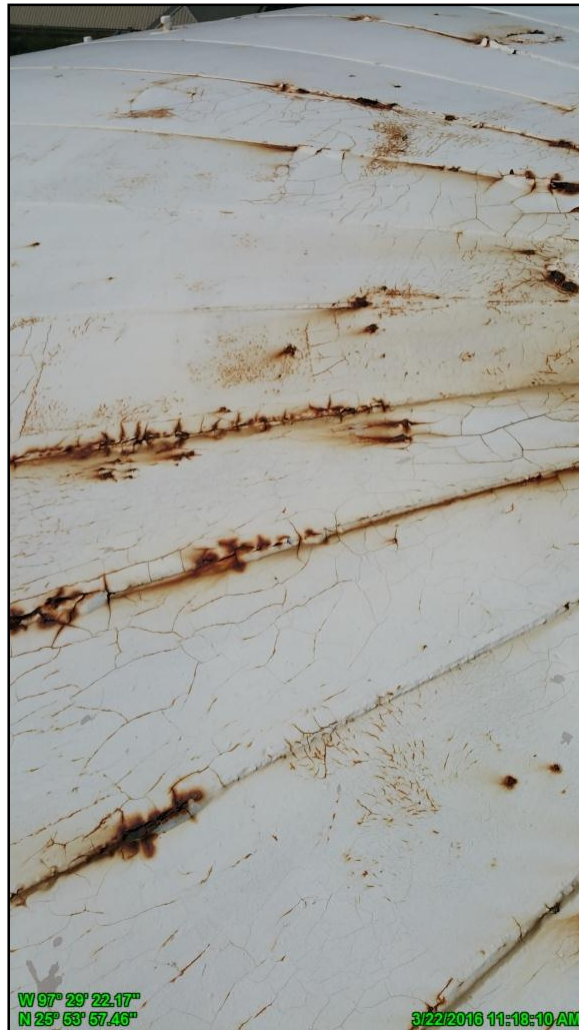
| Attributes | |
|--------------------------------------|---|
| Title | UTB BPUB EST |
| Inspection Item | Exterior Coating Roof |
| Condition | Replace |
| Notes/Dimensions and Recommendations | Moderate to severe corrosion are present. Welding repairs will be needed. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|------------------------------------|
| Title | UTB BPUB EST |
| Inspection Item | Exterior Coating Roof Apurtenances |
| Condition | Poor |
| Notes/Dimensions and Recommendations | Should be replaced. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|---|
| Title | UTB BPUB EST |
| Inspection Item | Roof Manways and Handrails |
| Condition | Replace |
| Notes/Dimensions and Recommendations | The Roof top handrails and the two 30" square access manways to the water compartment must be replaced. Use Extreme caution when opening this hatch a lanyard should be attached to it to secure it to the access tube ladder. The hatch only has one hinge attaching it to the roof. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|---|
| Title | UTB BPUB EST |
| Inspection Item | Exterior Coating Roof |
| Condition | Replace |
| Notes/Dimensions and Recommendations | Severe localized corrosion was noted on the plate and weld seams. Welding repairs will be needed after abrasive blasting. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|-------------------------------------|
| Title | UTB BPUB EST |
| Inspection Item | Roof Seams |
| Condition | Repair |
| Notes/Dimensions and Recommendations | Severe localized corrosion present. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|----------------------|
| Title | UTB BPUB EST |
| Inspection Item | Hole in Roof |
| Condition | Repair |
| Notes/Dimensions and Recommendations | Old 2" rigging port. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|--|
| Title | UTB BPUB EST |
| Inspection Item | Antenna Mount |
| Condition | Replace |
| Notes/Dimensions and Recommendations | Severely corroded. Replace 3 mount connections on roof tripod mount. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|--|
| Title | UTB BPUB EST |
| Inspection Item | Air Vent |
| Condition | Vent Fair, Mount Neck Poor |
| Notes/Dimensions and Recommendations | Replace 24 neck or entire vent and neck. Has been repaired before. Recommend replacincing along with a 4' to 5' center saucer plate. |
| Inspector | Brad McCrea |



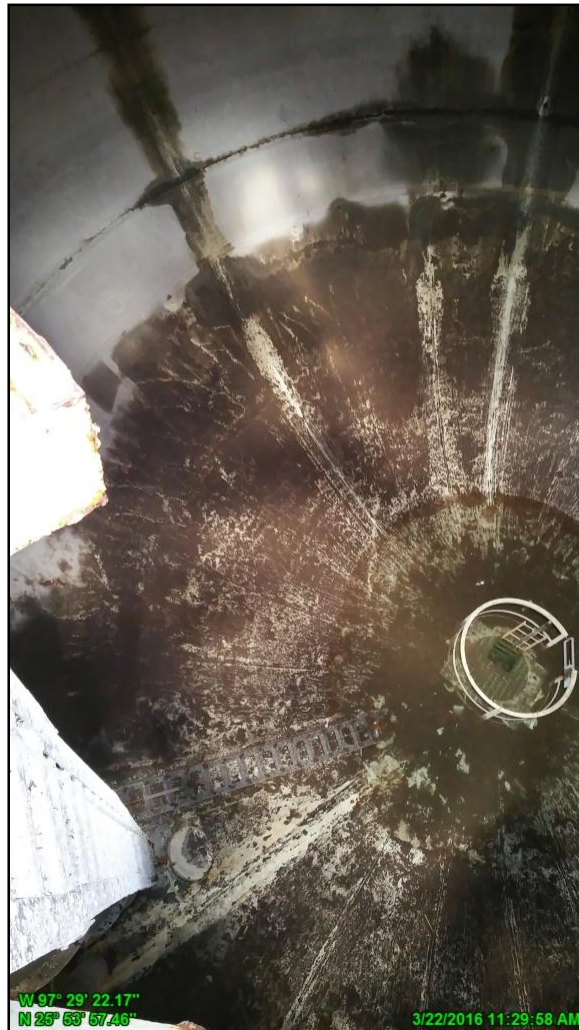
| Attributes | |
|--------------------------------------|--|
| Title | UTB BPUB EST |
| Inspection Item | Rigging Port |
| Condition | Poor |
| Notes/Dimensions and Recommendations | There are approximately 28, two inch rigging ports that need to be removed and replaced or plated closed. There are 3 that are open. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|--|
| Title | UTB BPUB EST |
| Inspection Item | Interior Coating Ceiling |
| Condition | Poor |
| Notes/Dimensions and Recommendations | Severe corrosion is present on the ceiling supports. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|---|
| Title | UTB BPUB EST |
| Inspection Item | Interior Coating Ceiling to Wall |
| Condition | Poor |
| Notes/Dimensions and Recommendations | Corrosion is present at all unwelded seams. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|---|
| Title | UTB BPUB EST |
| Inspection Item | Interior Coating Bowl |
| Condition | Poor |
| Notes/Dimensions and Recommendations | Small amount of sediment was present. I did not climb down into the bowl because I felt the aluminum access ladder to be unsafe. The safety climb was not usable. |
| Inspector | Brad McCrea |



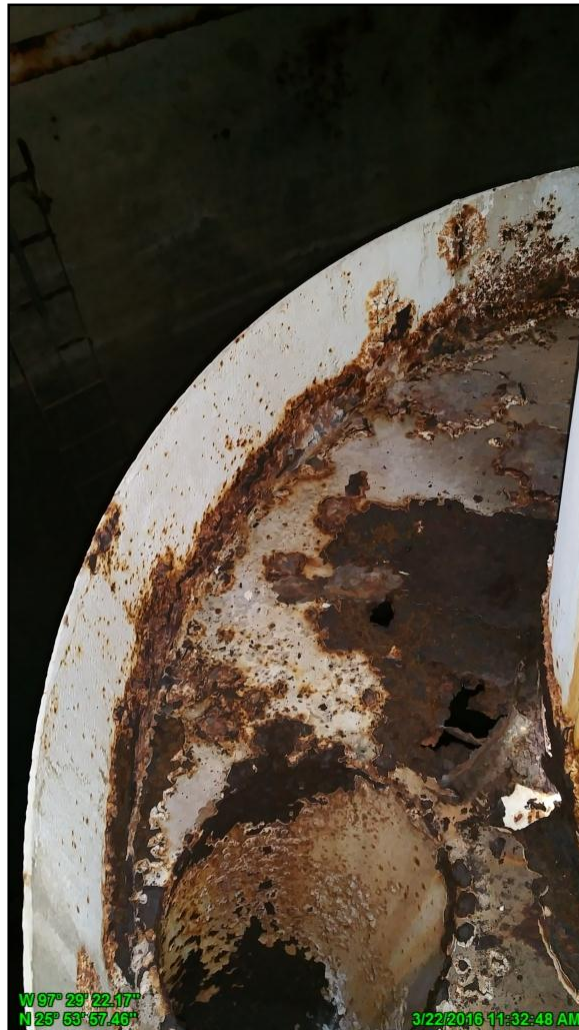
| Attributes | |
|--------------------------------------|---|
| Title | UTB BPUB EST |
| Inspection Item | Interior Coating Bowl |
| Condition | Poor |
| Notes/Dimensions and Recommendations | Small amount of sediment was present. I did not climb down into the bowl because I felt the aluminum access ladder to be unsafe. The safety climb was not usable. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|---------------------------|
| Title | UTB BPUB EST |
| Inspection Item | Overflow Weir |
| Condition | Replace |
| Notes/Dimensions and Recommendations | Severe corrosion present. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|--|
| Title | UTB BPUB EST |
| Inspection Item | Overflow Weir |
| Condition | Replace |
| Notes/Dimensions and Recommendations | The access tube has rusted through and will need to be cut out and repaired. |
| Inspector | Brad McCrea |



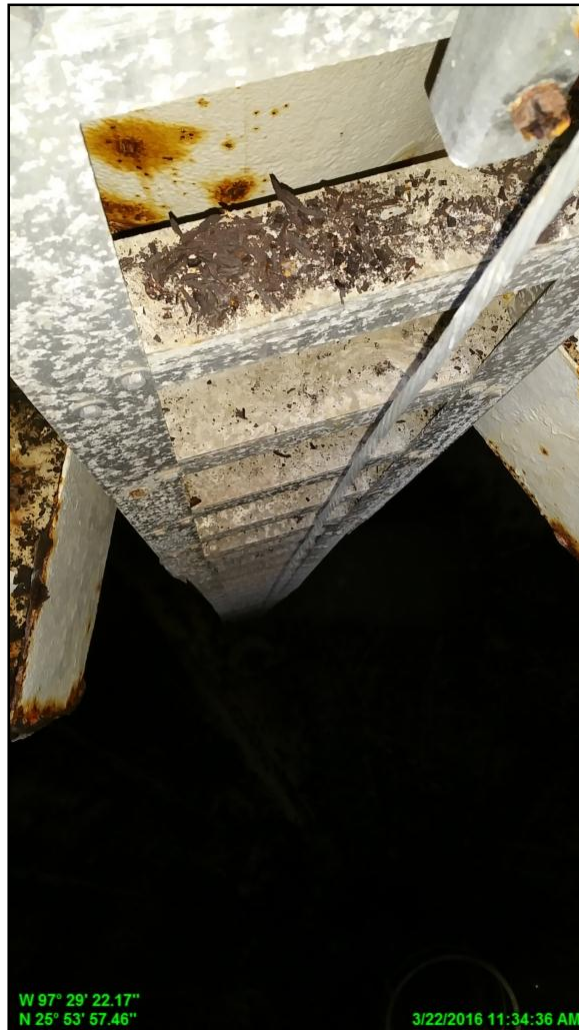
| Attributes | |
|--------------------------------------|--|
| Title | UTB BPUB EST |
| Inspection Item | Overflow Weir |
| Condition | Replace |
| Notes/Dimensions and Recommendations | The overflow weir will need to be replaced it measures 24" wide by 12" tall. The bttom section of the access tube has an O.D of 38". The diameter may be different at the overflow because the wall thickness is less. The weir fits around the access tube with an area cut out for the acces ladder. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|--|
| Title | UTB BPUB EST |
| Inspection Item | Eaves Access |
| Condition | Poor |
| Notes/Dimensions and Recommendations | The divers could not access the interior and left the hatch open 1'. The hardware is in poor condition and is not serviceable. Replace 30" square. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|-------------------------------------|
| Title | UTB BPUB EST |
| Inspection Item | Interior Coating Wall to Transition |
| Condition | Poor |
| Notes/Dimensions and Recommendations | Replace |
| Inspector | Brad McCrea |



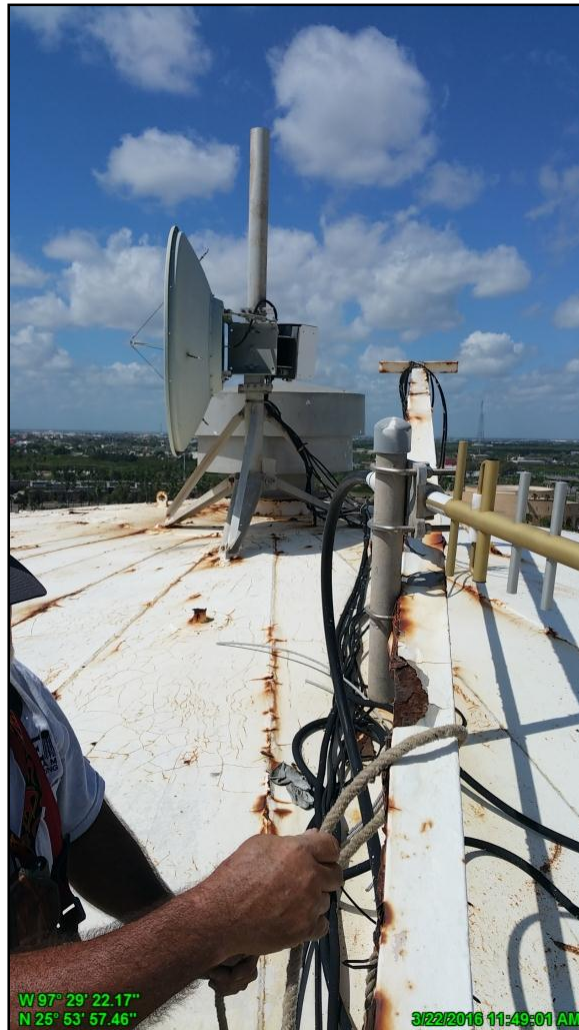
| Attributes | |
|--------------------------------------|--|
| Title | UTB BPUB EST |
| Inspection Item | Ladder Interior |
| Condition | Replace |
| Notes/Dimensions and Recommendations | I do not trust the hardware holding the ladder together or to the access tube. Safety climb is inoperable. Ladder is not safe. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|--|
| Title | UTB BPUB EST |
| Inspection Item | Eaves Access Manway |
| Condition | Poor |
| Notes/Dimensions and Recommendations | I was able to close the manway and secure it with nylon strapping. Use Extreme caution when opening this hatch a lanyard should be attached to it to secure it to the access tube ladder. The hatch only has one hinge attaching it to the roof. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|--|
| Title | UTB BPUB EST |
| Inspection Item | Water Compartment Access Manway |
| Condition | Poor |
| Notes/Dimensions and Recommendations | <p>Use Extreme caution when opening this hatch, a lanyard should be attached to it to secure it to the access tube ladder. The hatch only has one hinge attaching it to the roof.</p> <p>Hatch was secured closed with nylon strapping. Nylon rope was tied to the hatch handle and to the handrail.</p> |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|---|
| Title | UTB BPUB EST |
| Inspection Item | Roof Appurtenances |
| Condition | Fair |
| Notes/Dimensions and Recommendations | Air vent, antenna dish and SCADA antenna. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|---|
| Title | UTB BPUB EST |
| Inspection Item | Access Tube Hatch |
| Condition | Poor |
| Notes/Dimensions and Recommendations | Only one hinge attaches it to the roof. Use Extreme caution when opening this hatch a lanyard should be attached to it to secure it to the access tube ladder. The hatch only has one hinge attaching it to the roof. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|--|
| Title | UTB BPUB EST |
| Inspection Item | Access Tube to Roof Hatch |
| Condition | Poor |
| Notes/Dimensions and Recommendations | Secured closed with nylon mule tape. Use Extreme caution when opening this hatch a lanyard should be attached to it to secure it to the access tube ladder. The hatch only has one hinge attaching it to the roof. |
| Inspector | Brad McCrea |



| Attributes | |
|--------------------------------------|-------------------------------|
| Title | UTB BPUB EST |
| Inspection Item | Painters Access Manway |
| Condition | Fair |
| Notes/Dimensions and Recommendations | Secured with a chain and pin. |
| Inspector | Brad McCrea |

2016 EST Rehab. Cost Estimate

Brownsville PUB UTB-TSC EST (Hydro-Pillar)

| | |
|---|--------------------|
| Capacity (Gallons) | 1,000,000 |
| Int. wet \$/S.F. | 10 |
| Ext. \$/S.F. | 12 |
| Int. Dry \$/SF | 3 |
| | |
| Int. Wet S.F. | 19850 |
| Ext. S.F. | 33250 |
| Int. Dry SF | 31850 |
| | |
| Cost for Int. wet | \$198,500 |
| Cost for int. dry (over-coat) | \$95,550 |
| Cost for Ext. | \$399,000 |
| DH | \$25,000 |
| Disposal | \$20,000 |
| Structural Repairs | \$150,000 |
| Lead Testing | \$0 |
| Containment | \$100,000 |
| | |
| Subtotal | \$988,050 |
| Eng. & Insp. | \$200,000 |
| Contingency | \$100,000 |
| Total | \$1,288,050 |
| Budget Estimate +/- 10% Accuracy | \$1,300,000 |

POTABLE WATER STORAGE TANK

Inspection Form

30 TAC 290.46(m)(1) of the Texas Commission on Environmental Quality's Rules and Regulations for Public Water Systems requires documentation of annual ground, elevated, and pressure storage tank maintenance inspections.

| | |
|---|--|
| Location: Brownsville PUB – Brownsville, Texas | |
| Description: 1.0MG EST at UTB – TSC (EST #5) | |
| Date: 1998 | Material of Exterior Coating System: Epoxy/Urethane |
| Date: 1998 | Material of Interior Coating System: Epoxy |

Exterior of Tank

| O.K. | Problem | N/A | Description |
|------|---------|-----|---|
| X | | | Foundation: settling, cracks, deterioration |
| | X | | Protective Coating: rust, pitting, corrosion, leaks |
| X | | | Liquid Level Indicator: operable, cable access opening protected |
| | X | | Overflow Pipe: flap valve cover accessible, operable, sealed |
| | X | | Access Ladder: loose bolts or rungs |
| | X | | Roof: low spots for ponding water, holes along seams, rust |
| X | | | Air Vents: proper design, screened, sealed edges and seams |
| | | X | Cathodic Protection Anode Plates: secured and sealed |
| | X | | Roof Hatch: proper design, locked, hinged bolts secured, gasket |
| | | X | Pressure Tank Operational Status: pressure release device, pressure gauge, air water volume device |

Interior of Tank

| O.K. | Problem | N/A | Description |
|------|---------|-----|--|
| X | | | Water Quality: insects, floating debris, sediment on the bottom |
| | X | | Protective Coating: rust, corrosion, scaling |

| | |
|--|--------------|
| Last inspection of pressure tank interior | Date: |
|--|--------------|

Comments

Widespread corrosion damage. Water compartment ladder is unsafe. Roof hatches are not safe to operate. Holes in roof. Overflow flap valve does not function properly. Rehab or Demo within 12 months.

Name of Inspector or Water System Staff: Brad McCrea – Dunham Engineering

Date of Inspection: March 22, 2016