

CITY OF PORT LAVACA, TEXAS



CONTRACT DOCUMENTS
and
SPECIFICATIONS
for the

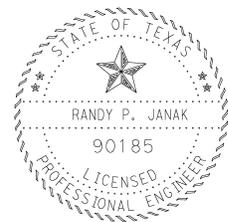
2026 Capital Improvement Projects Western Heights Improvement Project

March 17th, 2026

Prepared by:

THE CITY OF PORT LAVACA,
Department of Public Works,
&
CivilCorp, LLC
4611 E. Airline, Ste. 300
Victoria, Texas 77904
(361) 570-7500

2/25/2026



Approved By:

Randy P. Janak

Randy P. Janak, P.E.
Texas Serial No. 90185
CivilCorp, LLC
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ADVERTISEMENT FOR BIDS

PROJECT: 2026 Capital Improvement Projects - Western Heights Improvement Project

BID DATE AND TIME: March 17th, 2026 2:00 PM

Sealed bids for the above referenced project shall be received by the City Secretary's office, 202 North Virginia, Port Lavaca, Texas 77979 until 2:00 p.m., March 17th, 2026. All bids will be publicly opened and read aloud immediately thereafter.

Said Bids shall be submitted on the Bid Form provided in the bid documents shall be sealed in an envelope and clearly marked "**SEALED BID – 2026 Capital Improvement Projects – Western Heights Improvement Project** – DUE BY 2:00 p.m., March 17th, 2026. Bids received after this time shall be returned unopened.

The Instructions for Bidders, Bid Form, Plans, Specifications and other Contract Documents may be secured from the Public Works Service Center, 628 W George St in Port Lavaca or the Engineer (CivilCorp, LLC) located at 4611 E Airline in Victoria, on deposit of fifty dollars (\$50.00). Any required shipping and/or postage expense of the delivery of the Bid Documents shall be at the Bidder's expense. Plans and specifications will be available for inspection at the above Public Works office and at the office of the Engineer. [Prospective bidders are encouraged to obtain all required bid documents by downloading them for no charge at www.civcastusa.com \(account setup required\).](http://www.civcastusa.com) A PDF of the plans and bid documents may also be attained by calling the Engineer at 361-570-7500 or emailing rjanak@civilcorp.us

A bid bond in the amount of 5% of the bid issued by an acceptable surety shall be submitted with each bid. A certified check or bank draft payable to the City of Port Lavaca or negotiable U.S. Government Bonds (as par value) may be submitted in lieu of the Bid Bond.

Project Specifications will adhere to the TxDOT Standard Specifications for Construction of Highways, Streets, and Bridges (2014) other than specifications deleted or modified by Special Provisions or added by Special Specifications.

Each bidder must deposit with its bid, security in the amount, form and subject to the conditions in the Instructions to Bidders.

An optional pre-bid conference will be held at the Public Works Service Center, 628 W George St in Port Lavaca, on Thursday, March 5th, 2026 at 10:00 a.m.

All Bidders pay particular attention to Section 3.09- Contractor's Insurance of the General Conditions.

The CITY OF PORT LAVACA reserves the right to hold all bids for 30 days without action, to reject any and all bids, to waive informalities in the bidding, and to require statements of evidence of bidder's qualifications and experience including financial statements.

The CITY OF PORT LAVACA is an equal opportunity employer without regard to race, color, sex, age, religion, national origin, persons with disabilities, or limited English proficiency.

Mandy Grant, City Secretary

Advertise on February 25th, & March 4th, 2026

INSTRUCTIONS TO BIDDERS

1.0 INVITATION

- a. The Project: Bids are invited on a construction contract for furnishing all plant, labor, material and equipment and performing all work required for the construction of the 2026 Capital Improvement Projects – Western Heights Improvement Project

The project site is located in the City of Port Lavaca and as shown on the vicinity map on the accompanying set of drawings.

Bid basis will be unit prices.

- b. The Owner: City of Port Lavaca, Texas
202 North Virginia
Port Lavaca, Texas 77979

- c. The Engineer: CivilCorp, LLC
4611 E. Airline, Ste. 300
Victoria, Texas 77904

Attention: Randy Janak, PE

- b. Statement of Bidders Qualifications: Each bidder shall submit on the form furnished for that purpose a statement of the bidder's qualifications. The locality shall have the right to take such steps as it deems necessary to determine the ability of the bidder to perform his obligations under the contract, and the bidder shall furnish the locality all such information and data for this purpose as it may request. The right is reserved to reject any bid where an investigation of the available data does not satisfy the locality that the bidder is qualified to carry out properly the terms of the contract.

- c. Unit Price: The unit price for each of the several items in the bid 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 this requirement may be rejected as informal. Special attention is drawn to this condition, as the unit prices will be used to determine the amount of any change orders resulting from an increase or decrease in quantities.

- d. Withdrawal of Bids: Bidder may withdraw the bid before the time fixed for the opening of bids, by communicating his purpose in writing to the locality. Upon receipt of such notice, the unopened bid will be returned to the bidder. The bid guaranty of any bidder withdrawing his bid will be returned promptly.

- e. Award of Contract/Rejection of Bids

a. The contract will be awarded to the responsive, responsible Bidder submitting the most advantageous bid. The contract award may include full consideration of unit prices, alternatives, and completion time. The bidder selected will be notified at the earliest possible date. The locality reserves the right to reject any or all bids and to waive any informality in bids received where such rejection or waiver is in its interest.

b. The locality reserves the right to consider as unqualified to do the work 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 contract.

- f. Equal Employment Opportunity: Attention is called to the requirements for ensuring that employees and applicants for employment are not discriminated against because of their race, color, creed, sex, or national origin.

2.0 GENERAL INFORMATION

a. Bidding Documents:

(1) Bidding Documents consist of all documents available during the bidding period, including the Instruction to Bidders, Contract Forms, Plans, TxDOT Standard Specifications for Construction of Highways, Streets, and Bridges (2014), Special Provisions, Special Specifications, Drawings and Addenda.

(2) A deposit of fifty dollars (\$50.00) is required to obtain Bidding Documents. Bidders and non-bidders should return all sets promptly and in good condition for their refund. A PDF of the plans and bid documents may also be attained by calling the Engineer at 361-570-7500 or emailing at_rjanak@civilcorp.us

(3) Bidding Documents may be examined at the City of Port Lavaca Public Works Service Center, 628 W. George or by appointment at the office of the Engineer.

(4) Bidding Documents will be placed at the following locations:

**Port Lavaca Public Works Service Center
628 W. George
Port Lavaca, Texas 77979**

**CivilCorp, LLC
4611 E. Airline, Ste. 300
Victoria, Texas 77904**

(5) Complete sets of the Bidding Documents in the number and for the deposit sum, if any, stated in the Advertisement or Invitation to Bid may be obtained from ENGINEER only.

(6) Complete sets of Bidding Documents must be used in preparing Bids. Neither OWNER nor its consultant assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

b. Site Examination:

Bidders should carefully examine the Bidding Documents and the site to determine the actual conditions under which work will be done. Data in the Bidding Documents pertaining to existing conditions is for convenience only and does not supplant obtaining firsthand information at the site. Submission of a bid constitutes acceptance by the bidder of existing site conditions as part of the requirements of this work.

c. Questions:

Submit questions about Bidding Documents to the Engineer. Inquiries are permitted until one week prior to bid opening. Necessary replies will be issued to bidders of record as written addenda, which become a part of the Bidding Documents. Oral instructions do not form a part of the Bidding Documents. Bidders should contact the Engineer not less than seventy-two (72) hours before bid opening to secure any addenda that may affect bidding.

d. Qualifications of Bidders:

(1) The City and the Engineer may make any investigations deemed necessary to determine the bidder's ability to perform the work. When requested, a bidder shall furnish such information and data necessary for this purpose to the Owner. A bidder may be required to submit information on its ability and experience at

performing comparable work, its business and technical organization, financial resources, plant available and method of performing the work, and its prior contract experience.

(2) The City reserves the right to reject the bid of any bidder if evidence or investigation indicates that the bidder is not properly qualified, in the opinion of the City, to complete the work satisfactorily.

3.0 SUBMITTAL

a. Receipt of Bids:

Sealed bids will be received at the City Secretary's Office, 202 North Virginia in Port Lavaca until the hour of 2:00 p.m. on March 17th, 2026. Bids received after 2:00 p.m. will not be accepted. All bids will be opened publicly and read aloud immediately after the time for receipt of bids has expired. All interested parties are invited to attend.

b. Bid Form:

(1) Submit bid in duplicate and other required data in an opaque, sealed envelope. If submitted by mail, enclose bid envelope in another envelope addressed for mailing. Plainly identify the sealed envelope with the following information:

- (a) Do not open before 2:00 PM March 17th, 2026.
- (b) Project: 2026 Capital Improvement Projects – Western Heights Improvement Project
- (c) Owner: City of Port Lavaca, Texas
- (d) Bidder: _____

(2) Submit bid on the Bid Form provided. Fill in all blanks; failure to comply may be cause for rejection. If no amount is to be included on a bid item, insert a zero (-0-) in the applicable space. No segregated bids or assignments will be considered.

(3) Do not alter the Bid Form with written memoranda or qualifications. Any explanation, alteration, or other statement proposed by the Bidder must be written separately, signed independently, and included in the bid envelope. Bids may not be modified after submittal.

(4) A person authorized to bind the Bidder to a contract must sign the Bid Form in the appropriate space. When the Bidder is a corporation, the bid must be signed with the legal name of the corporation, followed by the name of the state of incorporation and the legal signature of a person authorized to bind the corporation to a contract.

c. Alternatives:

Any alternatives listed in the Bid Form are described in detail in the Specifications.

(1) Include amounts for any alternatives shown on the Bid Form.

(2) Alternatives are listed in sequence in which they will be considered. Contract award could be on basis of low base bid, or a low combination of base bid plus the alternate, which produces a total within available funds.

d. Completion Time:

(1) The Project shall be completed within the number of calendar days specified for the BASE BID plus any ADD ALTERNATE BID and option(s) if selected, unless a time extension is granted by the Engineer in writing.

(2) Submission of a bid constitutes acceptance by the Bidder of the completion time for the Project, and acknowledges the use of liquidated damages as a reasonable estimate of the expense of additional construction management and loss of anticipated use of the completed project.

(3) The Contractor must agree to pay the Owner, or allow the City to deduct from the contract sum, as liquidated damages, the sum of eight hundred dollars (\$800) for each calendar day that the work remains incomplete after expiration of the contract time in accordance with the contract.

e. Bid Security:

(1) Include with the bid a Cashier's Check, Certified Check or a Bid Bond for five percent (5%) of the base bid amount. Make checks payable to the City of Port Lavaca. Bid Bonds must be payable to the City of Port Lavaca. Bid Bonds must be executed by the Bidder and a surety company that meets requirements of the conditions of the contract.

(2) The successful bidder's security will be retained until they have signed the agreement, furnished the required performance and payment bonds, and submitted any other required contract forms. The bid security will be forfeited to the City by the successful bidder as liquidated damages for default if the bidder fails to execute and deliver the contract and bonds as required.

(3) The City reserves the right to retain the security of the next two (2) lowest bidders until the successful bidder enters into the contract or until thirty (30) days after bid opening has passed. All other bid securities will be returned within fifteen (15) days of bid opening.

f. Subcontractors:

Bidder shall submit a list of subcontractors with their bid for major portions of work. Give names and addresses of selected subcontractors listed in Bid Form. Failure to list subcontractors constitutes reason for rejecting bid. Attention is directed to the provisions of the Contract Documents requiring the Contractor to submit evidence to the City of full payment of all subcontractors before final payment is made to the Contractor.

g. Modification or Withdrawal:

Bids may be withdrawn any time before bid opening, but may not be resubmitted. Bids may not be withdrawn or modified after bid opening time unless the award of the contract has been delayed more than thirty (30) days.

4.0 CONTRACT REQUIREMENTS

a. Award of Contract:

The City is not obligated to accept the lowest bid or any bid. The City reserves the right to reject any or all bids, and to waive any irregularities in bids or in bidding. The City may accept any bid deemed advantageous. The contract award may include full consideration of unit prices, alternatives, and completion time.

b. Performance and Payment Bonds:

Bidder must be capable of executing satisfactory Performance Bond and Payment Bond for one-hundred (100%) percent of the awarded contract sum in accordance with the conditions of the contract. Bonds must be submitted within thirty (30) calendar days of Award of Contract, and on the forms included in the Contract Documents. Bonds must be issued by a solvent surety company that possesses a valid certificate of authority from the United States Secretary of the Treasury, as evidenced by the list published in the Federal Register by the United States Department of the Treasury, covering the date on which the bond was executed. Bonds are to be furnished as a guarantee of the faithful performance of the work and for protection of the claimants for labor and material. The Performance Bond shall extend for a period of one year (12 months) from the date of the Owner's Certificate of Acceptance.

If the total amount awarded is less than \$25,000.00, a Performance and Payment Bond will not be required provided that no monies will be paid to the Contractor until completion and acceptance of work by the Owner.

If the bid amount exceeds \$25,000.00, the Owner will require 100% Performance and Payment Bonds for the Project; however, if the total amount awarded is between \$25,000.01 and \$100,000.00, the Bidder may elect to provide 100% Performance Bond and accept payment for the Project upon completion and acceptance of the work on the Project by the Owner.

c. Successful Bidder:

The successful bidder shall perform with its own organization and with the assistance of workers under its immediate superintendence, work of a value not less than 60% of the value of all work embraced in the Project. All subcontractors will require the approval of the Engineer in writing.

The contract and its counterparts will be executed as one original document. Once the contract has been fully executed, the original document will remain in the City Manager's office. Copies of the original contract and its counterparts will be distributed to all appropriate parties.

BID FORM FOR UNIT PRICE CONTRACTS

Port Lavaca, Texas

Date: March 17th, 2026

_____ (hereinafter called "Bidder"), doing business as (circle one) (a corporation, a partnership, an individual) to the City of Port Lavaca, Texas, (hereinafter called "Owner").

Gentlemen:

The Bidder, in compliance with your invitation for bids for the construction of the 2026 Capital Improvement Projects – Western Heights Improvement Project having examined the plans and specifications with related documents and the site of the proposed work, and being familiar with all the conditions surrounding the construction of the proposed project, including the availability of materials and labor, hereby proposes to furnish all labor, materials and supplies, and to construct the Project in accordance with the Contract Documents, within the time set forth therein, and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents and drawings, of which this proposal is a part.

Bidder hereby agrees to commence work under this contract on or before a date to be specified in writing in the "Notice to Proceed" issued by the Owner's Engineer and fully complete the Project within the number of calendar days shown for the BASE BID plus any ADD ALTERNATE BID and OPTIONS(s) if selected, as specified in the Contract Documents.

Bidder acknowledges receipt of the following addenda:

**BID SHEET FOR THE
2026 Capital Improvement Projects- Western Heights Improvement Project**

The construction limits of the BASE BID and the ADD ALTERNATE bid are shown on the in the plans. The estimated construction cost for this contract for the BASE BID is \$2,144,000.

BASE BID

ITEM NO.	SPEC NO.	DESCRIPTION	QUANTITY PER UNIT	UNIT	UNIT PRICE	AMOUNT BID (QTY. X UNIT PRICE)
1	104	Remove Concrete (Curb & Gutter), Complete	5099	LF		
2	104	Remove Concrete (Driveway), Complete	916	SY		
3	104	Remove Concrete (Sidewalk), Complete	85	SY		
4	110	Excavation (Roadway), Complete	3592	CY		
5	132	Embankment (Final)(Dens Cont)(Ty A), Complete in Place	55	CY		
6	162	Block Sodding	2642	SY		
7	168	Vegetative Watering	15	MG		
8	247	Flex Base (Ty A Gr 1-2) 10", Complete in Place	2361	CY		
9		Geogrid (Tensar TX-130S or Tenax 3D-LT) Complete in Place	9208	SY		
10	260	Lime Treat Subgrade (6"), Complete in Place	9208	SY		
11	316	Asphalt RC-250, Complete in Place	1503	GAL		
12	316	Asphalt (AC-15P or CRS-2P), Complete in Place	3005	GAL		
13	316	Aggregate Material (Ty B Gr 5)(Underseal) Complete in Place	62	CY		
14	316	Aggregate Material (Ty PE Gr 3 SAC-B)(Seal Coat) Complete in Place	75	CY		
15	340	D-Gr HMA (SQ) Ty D (SAC-B)(PG64-22)(Surf)(2"), Complete in Place	827	TON		
16	420	Conc Valley Gutter (Incl Curb), Complete in Place	39	SY		
17	420	Conc Ditch Flume (Incl Curb), Complete in Place	5	SY		
18	464	RC Pipe (CI III) or ADS HP Storm Dual Pipe (12")(Traffic), Including Cement Stabilized Backfill, Complete in Place	4	LF		
19	464	RC Pipe (CI III) or ADS HP Storm Dual Pipe (15")(Traffic), Including Cement Stabilized Backfill, Complete in Place	16	LF		
20	464	RC Pipe (CI III) or ADS HP Storm Dual Pipe (18")(Traffic), Including Cement Stabilized Backfill, Complete in Place	525	LF		

21	464	RC Pipe (CI III) or ADS HP Storm Dual Pipe (24")(Traffic), Including Cement Stabilized Backfill, Complete in Place	76	LF		
22	465	Curb Inlet (3'x5') PCO w/ 3'x5' PB (Including Cement Stabilized Backfill), Complete in Place	11	EA		
23	465	Remove and Replace Exist Curb Inlet Top	4	EA		
24	465	Junction Box (3'x3')(PB) w/ 3'x3' Riser (RH)	3	EA		
25	465	Junction Box (4'x4')(PB) w/ 3'x3' Riser (RH)	1	EA		
26	465	Adjust Storm Sewer Manhole to Grade	4	EA		
27	465	Grouted Storm Drain Connection	10	EA		
28	496	Remove Exist 12" RC Pipe	27	LF		
29	496	Remove Exist 15" RC Pipe	15	LF		
30	496	Remove Exist 18" RC Pipe	23	LF		
31	496	Remove Exist Curb Inlet	2	EA		
32	500	Mobilization	1	LS		
33	502	Barricades, Signs and Traffic Handling	1	LS		
34	506	Temporary Sediment Control Fence, Complete in Place	470	LF		
35	506	Temporary Sediment Control Fence, (Remove)	470	LF		
36	529	Conc Curb & Gutter (Ty II)(Reinforced), Complete in Place	5110	LF		
37	530	Conc Driveways (4"), Complete in Place	891	SY		
38	530	Conc Driveways (6"), Complete in Place	97	SY		
39	531	Conc Sidewalk (4"), Complete in Place	852	SY		
40	531	Curb Ramp Ty 1, Complete in Pace	3	EA		
41	531	Curb Ramp Ty 7, Complete in Place	1	EA		
42	644	Install Small Rd Sign Sup & Assm Ty 10 BWG (1)SA(P)	6	EA		
43	644	Remove and Relocate Sign Sup & Assm Ty 10 BWG (1)SA(P)	16	EA		
44	668	Prefab Pav Mrk (Ty C)(W)(24 IN)(SLD)	42	LF		
45	668	Prefab Pav Mrk (Ty C)(W)(18 IN)(YLD TRI)	10	EA		
46	2660	Remove Existing Service and Furnish and Install 1" Single, Short Side Water Service, Including 1"x3/4" Reducer, with New Meter Box and Shut-Off Valve with Box on Property Line Side of Meter	19	EA		
47	2660	Remove Existing Service and Furnish and Install 1" Single, Long Side Water Service, Including 1"x3/4" Reducer, with New Meter Box and Shut-off Valve with Box on Property Line Side of Meter	21	EA		

48	2660	Remove Existing Service and Furnish and Install 1" Double, Long Side Water Service, Including 1"x3/4" Reducer, with New Meter Box and Shut-Off Valve with Box on Property Line Side of Meter	1	EA		
49	2660	Remove Existing Service and Furnish and Install 2" Single, Short Side Water Service, with New Meter Box and Shut-Off Valve with Box on Property Line Side of Meter	1	EA		
50	2660	Ex 2" Water Line, Abandon in Place	833	LF		
51	2660	Ex 6" Water Line, Abandon in Place	1238	LF		
52	2660	6" Dia. PVC C900 (Non-Traffic)	2289	LF		
53	2660	6" Dia. PVC C900 (Traffic)	250	LF		
54	2660	Locate and Connect to Ex 2" Waterline	2	EA		
55	2660	Cut and Plug Ex 2" Waterline	2	EA		
56	2660	6" 11.25 Deg Bend	17	EA		
57	2660	6" 22.50 Deg Bend	1	EA		
58	2660	6" 45 Deg Bend	8	EA		
59	2660	6" 90 Deg Bend	3	EA		
60	2660	6"x6"x6" Tee	3	EA		
61	2660	6"x2" Reducer	2	EA		
62	2660	14"x6" Tapping Sleeve and Valve	2	EA		
63	2660	Install 6" Gate Valve and Box	6	EA		
64	2660	Remove Ex Valve	2	EA		
65	2660	Install Fire Hydrant Assm	5	EA		
66	2660	Remove Fire Hydrant Assm	2	EA		
67	2660	Lower Ex 14" Water Below Prop Storm Sewer Line as Directed by Engineer	1	EA		
68	2730	Install Mainlane Sewer Cleanout	2	EA		
69	2730	Install New 48" Diameter Fiberglass Manhole (0'-5' Depth)	1	EA		
70	2730	Adjust Sanitary Sewer Manhole to Grade	4	EA		
TOTAL						

GRAND TOTAL BASE BID IN WORDS:

_____ Dollars and
 _____ Cents

ADD ALTERNATE BID NO. 1

At the owner's option, the following "Add Alternate Bid" and the respective bid items listed under it will be added to the contract. If the owner chooses to exercise this "Add Alternate Bid" option notice will be given to the Contractor prior to the issuance of the "Notice to Proceed".

ADD ALTERNATE BID NO. 1

ITEM NO.	SPEC NO.	DESCRIPTION	QUANTITY PER UNIT	UNIT	UNIT PRICE	AMOUNT BID (QTY. X UNIT PRICE)
1	531	Conc Sidewalk (4"), Complete in Place	339	SY		
TOTAL						

GRAND TOTAL ADD ALTERNATE BID NO. 1 IN WORDS:

_____ Dollars and
 _____ Cents

GRAND TOTAL BASE BID AND ADD ALTERNATE BID NO. 1 IN WORDS:

_____ Dollars and
 _____ Cents

It is agreed that all work on the **Western Heights Improvement Project BASE BID and ADD ALTERNATE BID NO. 1** (if selected) shall be completed within 300 calendar days of the date specified in the written Notice to Proceed.

SCHEDULE OF SUBCONTRACTORS

Bidder proposes the following subcontractors to be used for major portions of the project. All major subcontractors must be listed and submitted with the Bid. Bidder may change subcontractors after Bid submittal only as approved by the Engineer.

SUBCONTRACTORS	ADDRESS & PHONE #	SPECIALTY	% OF WORK
1.			
2.			
3.			
4.			
5.			
6.			
7.			

The Bid Sheet shall be attached to and shall be a part of the complete Contract Documents.

It is agreed that all work on the 2026 Capital Improvement Projects – Western Heights Improvement Project shall be completed within the calendar days specified above for the BASE BID plus any ADD ALTERNATE BID and OWNER’S OPTION(s) if selected, unless a time extension is granted by the Engineer in writing.

The Owner reserves the right to choose the lowest bid based upon the total base bid plus any or all additives within the constraints of available funding. Contractor shall bid on all additives, if applicable, for it to be an acceptable bid.

The above Unit Prices shall include all labor, materials, bailing, shoring, removal, overhead, profit, insurance, etc., to cover the finished work of the several kinds called for.

The Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informality in the bidding.

The Bidder agrees that this bid shall be good and may not be withdrawn for a period of thirty (30) calendar days after the scheduled closing time for receiving bids.

Upon receipt of written Notice of Award of the Contract, the Bidder will execute one original copy of the Contract Documents, each to have enclosed a Performance Bond, a Payment Bond and a Certificate of Insurance. Additional copies of the original contract will be distributed to all appropriate parties. Within ten (10) calendar days of the Notice of Award of Contract, the signed documents shall be delivered to the Port Lavaca City Hall, 202 North Virginia, to be executed by the Owner.

The Bid Security attached in the sum of _____ Dollars & _____ Cents. (\$_____) is to become the property of the Owner in the event the Contract and Bond are not executed within the time above set forth as liquidated damages for the delay and additional expense to the Owner caused thereby.

It is the intent of the Owner to award a contract for all work items and quantities listed in the Bid Form. In the event that the low bid submitted by a qualified bidder exceeds the funds budgeted for this Project, the Owner reserves the right to reduce the scope of the work so that the Project can be completed within the budgeted amount; this may be done by eliminating any or all parts of the Project. The Bidder hereby agrees to maintain the unit prices shown on the Bid Form should this reduction in the scope of the work be necessary.

The Bidder understands that the Owner requires the Bidder to perform with its own organization and with the assistance of workers under its immediate superintendence work of a value not less than 60% of the value of all work embraced in the Project, and that all subcontractors will require the approval of the Engineer in writing.

Respectfully submitted:

(Signature)

By: _____

(Title)

(Business Address)

SEAL
(If bid by a Corporation)

**FORM OF AGREEMENT
BETWEEN
OWNER AND CONTRACTOR**

PREAMBLE

This agreement, made this _____ day of _____, in the year 2026 by and between the City of Port Lavaca, Texas, herein known as the "Owner" or the "City", and _____ herein known as the "Contractor", a _____ of the State of Texas.

ARTICLES

The Owner and the Contractor agree as set forth in the following articles:

1.0 THE WORK

a. Description:

The Contractor will perform the work as described and shown in the Contract Documents and Drawings for completion of the 2026 Capital Improvement Projects – Western Heights Improvement Project, including furnishing all plant, labor, material, and equipment, and performing all work required for the Project. Unless otherwise specified in a Contract Document, each instruction and requirement in that Contract Document shall be considered to be directed at the Contractor.

b. The Engineer:

The Project was designed by CivilCorp, LLC, for the City of Port Lavaca Department of Public Works, and both CivilCorp and the city engineer will serve as Engineer during construction of the work.

2.0 CONTRACT DOCUMENTS

The contract consists of all of the Contract Documents that are as fully a part of the Contract as if attached here to or repeated verbatim herein. The Contract Documents include the following:

- a. the Instructions to Bidders;
- b. the Bid Form and Bid Sheet;
- c. the General Conditions;
- d. the Special Conditions;
- e. the Plans, including drawings and the Technical Specifications which includes the TxDOT Standard Specifications for Construction of Highways, Streets, and Bridges (2014), Special Specifications, and Special Provisions.
- f. the Performance and Payment Bonds;
- g. any addenda that are issued
 - (1) prior to the bid opening **or**
 - (2) after the bid opening which are signed and dated by the Owner, the Engineer and the Contractor.
- h. any written modifications or change orders agreed to by the Owner and Contractor.

3.0 CONTRACT TIME

a. Commencement:

Contract Time will begin ten (10) calendar days after the date of issue for the Notice to Proceed. Notice to Proceed will be issued by the Engineer.

b. Completion:

Project must be fully completed within the number of calendar days as specified for the BASE BID plus any ADD ALTERNATE BID and option(s) if selected after the beginning of the Contract Time, subject to extensions of time as provided by applicable provisions of the Contract.

c. Delayed Completion:

Failure of the Contractor to fully complete the Project within the Contract Time, including any extensions granted, shall entitle the Owner to deduct from the money due to the Contractor, the amount of eight-hundred dollars (\$800.00) for each calendar day of delay in completion of the Work, not as a penalty but as liquidated damages, based on a reasonable estimate of the added expense for supervision, and the loss of anticipated use of the completed project.

4.0 CONTRACT SUM

a. The Owner agrees to pay the Contractor for the performance of the Contract, amounts determined by Contractor's Bid for the project which was as follows:

The total amount _____ (\$) which amount shall be known as the Contract Sum. Actual payment will be based on the Unit Price Schedule, subject to the final measurement of quantities in place.

5.0 PAYMENTS

- a. Partial Payments shall be made on a monthly basis in accordance with the General Conditions.
- b. Final Payment shall be made upon completion of the Project in accordance with the General Conditions.
- c. A 5% retainage will be held until the final inspection and approval of all construction is completed.

6.0 RETENTION OF RECORDS

For purposes of the following paragraph, Contractor shall be the Sub-recipient:

Sub-recipient shall retain all records pertinent to expenditures incurred under this contract for a period of five (5) years after the termination of all activities funded under this Agreement. Records for non-expendable property acquired with funds under this contract shall be retained for five (5) years after final disposition of such property. Records for any displaced person must be kept for five (5) years after he/she has received final payment. Notwithstanding the above, if there is litigation, claims, audits, negotiations, or other actions that involve any of the records cited and that started before the expiration of the five-year period, then such records must be retained until completion of the actions and resolution of all issues, or the expiration of the five-year period, whichever occurs later.

AFFIRMATION

This Contract shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors and assigns. The Contract Documents constitute the entire Contract between the Owner and the Contractor, and may only be altered, amended or repealed by a duly executed written instrument. The Contractor may not assign its obligations under this Contract without the prior written consent of the Owner.

IN WITNESS WHEREOF, the parties have caused this contract to be executed by their duly authorized officials in one original copy on the date first above written. Additional copies of the original contract will be distributed to all appropriate parties.

OWNER:

CONTRACTOR:

City of Port Lavaca, Texas

By: _____
Jack Whitlow
City Mayor

By: _____
Name: _____
Title: _____
(Please type)

Address: P. O. Box 105
202 North Virginia
Port Lavaca, Texas 77979

Address:

(SEAL)

(SEAL)

ATTEST:

ATTEST:

City Secretary

Name: _____
(Please Type)

FORM APPROVED:

Title: _____

City Attorney

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

FORM CIQ

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

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).

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.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 Name of vendor who has a business relationship with local governmental entity.

2 **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.

Name of Officer

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.

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?

Yes No

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?

Yes No

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 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

Signature of vendor doing business with the governmental entity

Date

House Bill 1295 – Certificate of Interested Parties

Explanation and Instructions

As of January 1, 2016, a new state policy was implemented that affects contracts with a governmental entity that either (1) requires an action or vote by the governing body of the entity or agency before the contract may be signed or (2) has a value of at least \$1 million. HB1295 basically states the following...

House Bill 1295 amended the Texas Government Code by adding Section 2252.908, the Disclosure of Interested Parties. Under this Section 2252.908, the City of Rosenberg is prohibited from entering into a contract resulting from action by the governing body with a business entity unless the business entity submits a Disclosure of Interested Parties (Form 1295) to the City at the time the business entity submits the signed contract. The Texas Ethics Commission has adopted rules requiring the business entity to file Form 1295 electronically with the Texas Ethics Commission.

VENDOR’S Responsibility for Compliance:

- 1.) Go to the Ethics Commission Website using the following link to register and complete FORM 1295 - Certificate of Interest Parties Electronic Filing Application: https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm
- 2.) Complete the filing application Form 1295 *electronically* with the Texas Ethics Commission using their online filing application. Click here to hyperlink to the form: Texas Ethics Commission Form 1295
- 3.) Print a copy of the completed form, which will include a certification of filing containing a unique certification number.
- 4.) Sign the form by an authorized agent of the business entity, and then get it notarized.
- 5.) Send a copy of the form with the executed contract to City personnel that is assisting with the contract.

As a “business entity,” all vendors must *electronically* complete, print, sign, notarize, and submit Form 1295 with their contracts even if there are no conflicting interested parties within the City.

Definitions Utilized for Completing Form 1295 include:

“Interested Party” means a person:

- Who has a controlling interest in a business entity with whom the City contracts; or
- Who actively participates in facilitating the contract or negotiating the terms of the contract with the City, including a broker, intermediary, adviser, or attorney for the business entity

“Business Entity” means an entity:

- Who is recognized by law through which business is conducted, including a sole proprietorship, partnership or corporation.
- This includes Non-Profit and For-Profit Organizations as a Business Entity

“Intermediary” for purposes of this rule, means a person:

- Who actively participates in the facilitation of the contract or negotiating the contract, including a broker, adviser, attorney, or representative of or agent for the business entity who:
- Receives compensation from the business entity for the person’s participation
- Communicates directly with the City on behalf of the business entity regarding the contract
- AND is not an employee of the business entity

“Controlling Interest” means a person:

- Whereby has ownership interest or participating interest in the business entity by virtue of units, percentage, shares, stock, or otherwise that exceeds 10 percent
- Is a member on the board of directors or other governing body of a business entity of which the board or other governing body is composed of not more than 10 members
- Who serves as an officer of a business entity that has four or fewer officers or service as one of the four officers most highly compensated by a business entity that has more than four officers

Additional Information to Help Clarify HB1295:

- Should you have questions, or require additional information, please contact the Texas Ethics Commission at 512-463-5800.

CERTIFICATE OF INTERESTED PARTIES

FORM 1295

Complete Nos. 1 - 4 and 6 if there are interested parties.
 Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.

4 Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)	
		Controlling	Intermediary

5 Check only if there is NO interested Party.

6 AFFIDAVIT I swear, or affirm, under penalty of perjury, that the above disclosure is true and correct.

 Signature of authorized agent of contracting business entity

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said _____, this the _____ day of _____, 20_____, to certify which, witness my hand and seal of office.

 Signature of officer administering oath Printed name of officer administering oath Title of officer administering oath

Must file online
 www.ethics.state.tx.us/Fil

House Bill 89 Verification Form

Prohibition on Contracts with Companies Boycotting Israel

The 85th Texas Legislature approved new legislation, effective Sept. 1, 2017, which amends Texas Local Government Code Section 1. Subtitle F, Title 10, Government Code by adding Chapter 2270 which states that a governmental entity may not enter into a contract with a company for goods or services unless the contract contains a written verification from the company that it:

- 1) does not boycott Israel; and
- 2) will not boycott Israel during the term of the contract

Pursuant to Section 2270.001, Texas Government Code:

1. "Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes; and
2. "Company" means a for-profit sole proprietorship, organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or any limited liability company, including a wholly owned subsidiary, majority-owned subsidiary, parent company or affiliate of those entities or business associations that exist to make a profit.

I, (authorized official) _____, do hereby depose and verify the truthfulness and accuracy of the contents of the statements submitted on this certification under the provisions of Subtitle F, Title 10, Government Code Chapter 2270 and that the company named below:

- 1) does not boycott Israel currently; and
- 2) will not boycott Israel during the term of the contract; and
- 3) is not currently listed on the State of Texas Comptroller's Companies that Boycott Israel List
- 4) located at <https://comptroller.texas.gov/purchasing/publications/divestment.php>

Company Name

Signature of Authorized Official

Title of Authorized Official

Date

RESOLUTION

RESOLVED, that _____, President of _____, Inc., is hereby authorized and directed to negotiate, agree, contract and bind the corporation in every respect regarding an agreement with the City of Port Lavaca for 2026 Capital Improvement Projects – Western Heights Improvement Project.

(Signature)

Name: _____
(Typed)

Title: _____

(seal)

Secretary's Signature

(Typed Name)

CERTIFICATE OF CORPORATE RESOLUTION

I, _____, hereby certify as follows:
(Name of Corporate Secretary)

1. I am the duly elected, qualified and acting Secretary of _____, Inc., a Texas corporation (the "Corporation").

2. The Corporation is duly incorporated, legally existing and in good standing under the laws of the State of Texas and is duly qualified to transact business and to own, operate and develop its properties in the State of Texas.

3. Attached hereto and made a part hereof is a true and complete copy of the resolution duly and legally adopted on the ____ day of _____, ____ (year) by the Board of Directors of the Corporation in accordance with the By-laws of the Corporation and applicable law. Such resolutions have been duly entered in the minutes of such meeting in the minute book of the corporation and have not been rescinded or modified in any respect and are presently in full force and effect.

4. The following persons are duly elected, qualified and acting officers of the Corporation and hold the respective offices set opposite their names:

_____ President
_____ Vice President
_____ Secretary

TO CERTIFY WHICH I have executed this Certificate this ____ day of _____, 20____.

Secretary

THE STATE OF TEXAS
COUNTY OF CALHOUN

This instrument was acknowledged before me on the ____ day of _____, 20____, by _____, Secretary, of _____, Inc., a Texas corporation, on behalf of said corporation.

Notary Public, State of Texas

INDEMNITY AGREEMENT - TRENCH SAFETY SYSTEMS

OWNER: The City of Port Lavaca, Texas

CONTRACTOR: _____
(Company name)

ENGINEER: City of Port Lavaca, Department of Public Works

PROJECT: 2026 Capital Improvement Projects- Western Heights Improvements Project

The Contractor has entered into a contract with the Owner for the construction of the Project. The Engineer has designed the Project on behalf of the Owner, but has not designed any trench safety systems for the project that may be required by applicable federal, state and local laws. The Contractor, in its contract with the Owner, has agreed to prepare, and to conform all trenching work to plans for trench safety systems meeting the standards of applicable laws.

The Contractor, as part of its consideration to the Owner for the contract for the construction of the Project, agrees that it will be solely responsible for compliance with its trench safety plans and with all applicable standards of federal, state and local laws relating to trench safety.

The Contractor further agrees to hold harmless, indemnify, and defend the Owner and the Engineer, and all officers, agents and employees of either the Owner or the Engineer, from and against any and all claims, demands or causes of action of any nature, character or description in connection with the presence, or in any way arising out of, the use or construction of trenches or trench safety systems as part of the Project.

EXECUTED, this _____ day of _____, 20 _____.

CONTRACTOR

By: _____

(Contractor's Seal)

OWNER

By: _____
Jack Whitlow, City Mayor

ENGINEER

By: _____

PERFORMANCE BOND

THE STATE OF TEXAS
COUNTY OF CALHOUN

KNOW that _____, whose address is _____ hereinafter called Principal, and _____, as Surety, a corporation organized and existing under the laws of the State of _____, and fully authorized and admitted to do business in the State of Texas, and licensed by the State of Texas to issue surety bonds, are held and firmly bound unto the City of Port Lavaca, a municipal corporation organized and existing under the laws of the State of Texas, hereinafter called Owner, in the penal sum of _____ DOLLARS (\$_____) in lawful money of the United States, to be paid in Calhoun County, Texas, for the payment of which sum well and truly to be made, we hereby bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents. This Bond shall automatically be increased by the amount of any Change Order or Supplemental Agreement, which increases the Contract price, but in no event shall a Change Order or Supplemental Agreement which reduces the Contract price decrease the penal sum of this Bond.

THE OBLIGATION TO PAY SAME is conditioned as follows: Whereas, the Principal entered into a certain Contract with the City of Port Lavaca, the Owner, dated the _____ day of _____, A.D. 20____, a copy of which is hereto attached and made a part hereof for the 2026 Capital Improvement Projects – Western Heights Improvement Project. (The Project)

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform and fulfill all of the undertakings, covenants, terms, conditions and agreements of said Contract in accordance with the plans, specifications and Contract Documents during the original term thereof and any extension thereof which may be granted by the Owner, with or without notice to the Surety, and during the life of any guaranty or warranty required under this Contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of said Contract that may hereafter be made, notice of which modifications to the Surety being hereby waived; and, if the Principal shall repair and/or replace all defects due to faulty materials and workmanship that appear within a period of one (1) year from the date of final completion and final acceptance of the Project by Owner; and, if the Principal shall fully indemnify and save harmless the Owner from all costs and damages which Owner may suffer by reason of failure to so perform herein and shall fully reimburse and repay Owner all outlay and expense which the Owner may incur in making good any default or deficiency, then this obligation shall be void; otherwise, it shall remain in full force and effect.

PROVIDED FURTHER, that if any legal action be filed upon this Bond, exclusive venue shall lie in Calhoun County, State of Texas.

PROVIDED FURTHER, that the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the Project to be performed thereunder or the Specifications accompanying the same shall in anywise affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the Project or to the Specifications.

This Bond is given pursuant to the provisions of Texas Government Code 2253.001, et seq., as amended, and any other applicable statutes of the State of Texas.

The undersigned and designated agent is hereby designated by the Surety herein as the Resident Agent to whom any requisite notices may be delivered and on whom service of process may be had in matters arising out of such surety ship, as provided by Article 7.19-1 of the Texas Insurance Code, as amended.

IN WITNESS WHEREOF, this instrument is executed in one original copy, this, the ____ day of _____, 20_____. Additional copies of the original document will be distributed to all appropriate parties.

ATTEST:

SECRETARY

(Seal of Principal)

PRINCIPAL

BY: _____
Signature

(Typed name)

ATTEST:

(Surety) Secretary

(Seal of Surety)

SURETY

BY: _____
Attorney-in-Fact (signature)

Typed Name

The Resident Agent of the Surety for delivery of notice and service of process is:

Name: _____

Street Address: _____

PAYMENT BOND

THE STATE OF TEXAS
COUNTY OF CALHOUN

KNOW that we, _____ a corporation or other entity of the State of _____, hereinafter called Principal, and _____, of _____, State of _____, and fully authorized and admitted to do business in the State of Texas and licensed by the State of Texas to issue surety bonds, hereinafter called the Surety, are held and firmly bound into City of Port Lavaca, Texas, hereinafter called Owner, and unto all persons, firms, and corporations who may furnish materials or equipment for, or perform labor upon the improvements hereinafter referred to, in the penal sum of _____ Dollars (\$_____) in lawful money of the United States, to be paid in Port Lavaca, Texas, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, 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 City of Port Lavaca, Texas, the Owner, dated the _____ day of _____, 20____, a copy of which is hereto attached and made a part hereof for the construction of the 2026 Capital Improvement Projects - Western Heights Improvements Project. (The Project)

NOW THEREFORE, if the Principal shall promptly make payment to all claimants, as defined in Texas Government Code 2253.001, et seq., as amended, supplying labor and materials in the prosecution of the Project provided for in said Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

This Bond is made and entered into solely for the protection of all claimants supplying labor and material in the prosecution of the Work provided for the said Contract, and all such beneficiaries shall have a direct right of action under the Bond as provided in Texas Government Code 2253.001, et seq., as amended.

PROVIDED FURTHER, that if any legal action be filed upon this Bond, venue shall lie in Calhoun County, State of Texas, and the Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the Project to be performed thereunder or the Specifications accompanying the same, shall in anywise affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the Project or to the Specifications.

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

IN WITNESS WHEREOF, this instrument is executed in one original counterpart, this, the _____ day of _____, 20____. Additional copies of the original document will be distributed to all appropriate parties.

ATTEST:

(Principal) Secretary

(SEAL)

PRINCIPAL

BY: _____
TITLE: _____
ADDRESS: _____

ATTEST:

(Surety) Secretary

(SEAL)

SURETY

BY: _____
TITLE: _____
ADDRESS: _____

NOTE: If Contractor is Partnership, all partners must execute Bond.

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, _____, certify that I am the Secretary of the Corporation named as Principal in the within Bond; that _____, who signed the said Bond on behalf of the Principal, was then _____ of said Corporation; that I know his/her signature, and his/her signature thereto is genuine; and that said Bond was duly signed, sealed, and attested for and in behalf of said Corporation by authority of its governing body.

(SIGNATURE)

(TITLE)

(DATE)

AFFIX CORPORATE SEAL

The rate of premium on this Bond is _____ per thousand or as follows:

\$ _____ for the first \$ _____, and
\$ _____ for \$ _____ to \$ _____, and
\$ _____ for \$ _____ to \$ _____, and
\$ _____ for \$ _____ to \$ _____, and
\$ _____ for \$ _____ to \$ _____.

Total amount of premium charged \$ _____.

(The above must be filled in by a corporate surety.)

(Power of Attorney of person signing for Surety Company must be attached.)

AFFIDAVIT OF ALL BILLS PAID
As per the General Conditions of the
Contract between the City of Port Lavaca and

(Contractor)

THE STATE OF TEXAS
COUNTY OF CALHOUN

_____ personally appeared before the undersigned authority on this day and duly sworn on oath, states that he/she is a duly authorized representative of the Contractor, _____ and that the Contract for the construction of the 2026 Capital Improvement Projects – Western Heights Improvement Project has been fully completed and that all bills of the subcontractors for labor, materials and equipment and supplies furnished in connection with this Project have been fully paid.

Signature

Title

Sworn to and subscribed before me this _____ day of _____, 20_____.

Notary Signature

Print Name

In and for the State of Texas

Commission Expires

GENERAL CONDITIONS

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GENERAL CONDITIONS

1. DEFINITIONS OF TERMS

1.01 OWNER, CITY, CONTRACTOR AND ENGINEER

The Owner, City, Contractor and the Engineer are identified in the Form of Agreement. The Engineer shall be understood to include the duly authorized representative of the Engineer.

1.02 CONTRACT DOCUMENTS

The Contract Documents are as defined by the Form of Agreement, all of which are attached or considered as if attached. The Contract Documents are complementary, and what is called for by any one shall be as binding as if called for by all. In the event of any conflict among the Contract Documents, then the order of precedence among the documents shall be as follows:

- (1) Form of Agreement
- (2) Plans and Drawings
- (3) Special Conditions
- (4) General Conditions
- (5) Technical Specifications which will come from the TxDOT Standard Specifications for Construction of Highways, Streets, and Bridges (2014), Special specifications, special provisions, and Division 2 specifications
- (6) Bid Form & Bid Sheet
- (7) Instructions to Bidders
- (8) Performance and Payment Bonds

1.03 SUBCONTRACTOR

The term Subcontractor, as employed herein, includes all persons, firms and corporations furnishing labor, materials, equipment or supplies for the Project who have a direct contract with the Contractor. Subcontractor includes one who furnishes material worked to a special design according to the Plans or Specifications of this Project, but does not include one who merely furnishes material not so worked.

1.04 WRITTEN NOTICE

Written notice shall be deemed to have been duly served if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by certified mail to the address shown on the form of agreement.

1.05 WORK

Unless otherwise stipulated, the Contractor shall provide and pay for all materials, supplies, machinery, equipment, tools, superintendence, labor, insurance, and all water, light, power, fuel, transportation and other facilities necessary for the execution and completion of the work covered by the Contract Documents. Unless otherwise specified, all materials shall be new and both workmanship and materials shall be of a good quality. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials. Materials or work described in words that have a well-known technical or trade meaning shall be held to refer to such recognized meaning.

1.06 EXTRA WORK

The term "Extra Work" as used in this Contract shall be understood to mean and include all work that may be required by the Engineer or by the Owner to be done by the Contractor to accomplish any change, alteration or addition to the Project shown upon the Plans, or reasonably implied by the Specifications, and not covered by the Bid Form or within the scope of the original Project, except as provided under "Changes and Alterations" herein.

1.07 CALENDAR DAY

A "Calendar Day" is defined as any day of 24 hours measured from midnight to the following midnight, including Saturdays, Sundays and any legal holidays. The Contractor will not be allowed to work Saturdays or Sundays without written permission from the Engineer. The Contractor shall make his request for weekend work at least 24-hours in advance.

2. CONTROL OF WORK

2.01 LINES AND GRADES

Unless otherwise specified, all lines and grades shall be furnished as specified in the General Notes on the Plans.

2.02 ENGINEER'S AUTHORITY AND DUTY

The Engineer will provide administration of the Contract and will be the City's representative. The Engineer may stop the work whenever necessary to ensure the proper execution of the Contract. The Engineer shall determine all questions in relation to construction of the Project, and shall decide questions, which may arise relative to the execution of this Contract on the part of the Contractor. However, the Engineer shall not have control over or charge of and will not be responsible for acts or omissions of the Contractor or any of Contractor's subcontractors, agents, or employees. The Engineer shall in all cases determine the amounts and quantities of the several kinds of work, which are to be paid for under this Contract. The Engineer's estimates and findings shall be the conditions precedent to any rights of the Contractor to receive any money under this Contract. It is the intent of this Contract that there shall be no delay in the execution of the work; therefore, the decision or directions of the Engineer shall be promptly carried out by the Contractor.

Whenever the words "directed," "required," "permitted," "designated," "considered necessary," "prescribed," or words of like import are used, it shall be understood that the direction, requirement, permission, order, designation or prescription of the Engineer is intended; and, similarly, the words "approval," "acceptable," "satisfactory" or words of like import shall mean approved by or acceptable or satisfactory to the Engineer.

2.03 SUPERINTENDENCE AND INSPECTION

The Engineer may appoint such subordinate engineers, supervisors or inspectors as the Engineer may deem proper to inspect the material furnished and the work done under this Contract, and to see that the material is furnished and said work is done in accordance with the Specifications. The Contractor shall furnish all reasonable aid and assistance required by the subordinate engineers, supervisors or inspectors for the proper inspection and examination of the work. The Contractor shall regard and obey the directions and instructions of any subordinate engineers, supervisors or inspectors so appointed, when such directions and instructions are consistent with the obligations of this Contract and the accompanying Plans and Specifications. However, should the Contractor object to any order by any subordinate, written appeal to the Engineer for its decision may be made.

2.04 CONTRACTOR'S DUTY AND SUPERINTENDENCE

The Contractor shall give personal attention to the faithful prosecution and completion of this Contract, and shall keep on the work during its progress a competent superintendent and any necessary assistants, all satisfactory to the Engineer. The superintendent shall represent the Contractor and all directions given to the superintendent shall be as binding as if given to the Contractor. Important directions shall be confirmed in writing to the Contractor. Other directions shall be so confirmed on request in each case.

2.05 CONTRACTOR'S UNDERSTANDING

The information contained on the Drawings in regard to original topography, contours, and sub-surface soils, and any quantities based thereon, is furnished solely for the convenience of the Contractor as the best information available at this time. The accuracy of this information is not guaranteed and its use in no way relieves the Contractor or others of any responsibility for loss due to inaccuracies or deviations therefrom which may be encountered.

It is understood and agreed that the Contractor has, by careful examination, satisfied itself as to the nature and location of the Project, the conformation of the ground, the character of equipment and facilities needed preliminary to and during the prosecution of the Project, the general and local conditions, all other matters which can in any way affect the work under this Contract. No verbal agreement or conversation with any officer, agent or employee of the Owner, either before or after the execution of this Contract, shall affect or modify any of the terms or obligations herein contained.

2.06 CHARACTER OF WORKERS

The Contractor agrees to employ only orderly and competent persons, skillful in the performance of the type of work required under this contract, to do the work, and agrees that whenever the Engineer shall inform it in writing that any person or persons on the work are, in the Engineer's opinion, incompetent, unfaithful or disorderly, such person or persons shall be discharged from the work and shall not again be employed on the work without the Engineer's written consent.

2.07 CONTRACTOR'S BUILDINGS

The building of structures for housing people, or the erection of tents or other forms of protection, will be permitted only at such places as the Engineer shall direct, and the sanitary condition of the grounds in or about such structures shall at all times be maintained in a manner satisfactory to the Engineer.

2.08 SANITATION

Necessary sanitary conveniences for the use of laborers on the work, properly secluded from public observation, shall be constructed and maintained by the Contractor in such a manner and at such points as shall be approved by the Engineer and their use shall be strictly enforced.

2.09 SHOP DRAWINGS

The Contractor shall submit to the Engineer, with such promptness as to cause no delay in the Contractor's work or in that of any subcontractor, four copies, unless otherwise specified, of all Shop and/or Setting Drawings and Schedules required for the work of the various trades, and the Engineer shall pass upon them with reasonable promptness. The Contractor shall make corrections required by the Engineer; and shall file with the Engineer two corrected copies and furnish such other copies as may be needed. The Engineer's approval of such drawings or schedules shall not relieve the Contractor from responsibility for deviations from Drawings or Specifications, unless the Contractor has in writing

called the Engineer's attention to such deviations at the time of submission, nor shall Engineer's approval relieve the Contractor from responsibility for errors of any sort in Shop Drawings or Schedules.

2.10 USE AND SPECIFICATION OF MATERIALS

No material which has been used by the Contractor for any temporary purpose whatever is to be incorporated in any permanent structure without the written consent of the Engineer.

Where materials or equipment are specified by a trade or brand name, it is not the intention of the Owner to discriminate against an equal product of another Manufacturer, but rather to set a definite standard of quality or performance, and to establish an equal basis for the evaluation of bids. Where the words "equivalent," "proper," or "equal to" are used, they shall be understood to mean that the thing referred to shall be proper, the equivalent of, or equal to some other thing, in the opinion or judgment of the Engineer. Notwithstanding that the words "or equal to" or other such expressions may be used in the Specifications in connection with a material, manufactured article or process, the material, article or process specifically designated shall be used, unless a substitute shall be approved in writing by the Engineer, and the Engineer shall have the right to require the use of such specifically designated material, article or process.

2.11 TESTING, INSPECTION AND CONTROL OF MATERIALS

Testing, inspection and control of materials required by the Specifications shall be performed by a commercial laboratory selected by the Owner. Except as otherwise indicated herein, the cost of laboratory testing shall be paid by the Owner.

- a. The Contractor shall furnish, at its own expense, all materials or specimens for testing.
- b. If any material submitted to the laboratory fails a test, the Contractor shall submit samples of new materials until all tests are passed. All cost of submitting new samples and retesting shall be borne by the Contractor.
- c. The Contractor shall furnish, at its own expense, suitable evidence that the materials it proposes to incorporate into the work are in accordance with the Specifications. Mill tests for steel and cement will be acceptable if it is definite that the test sheets apply to the material being furnished. Manufacturer's or supplier's test results will be acceptable for such items as pipe, valves, hydrants, electrical equipment and similar items when it is definite that the tests are applicable to the material being furnished. Grading and inspection of timber and preservative treatment will likewise be acceptable, provided it is grade-marked and trade-marked by the association under whose rules it was graded.
- d. Should the Contractor fail to provide any of the information required by this Section, the Engineer shall have the right to require tests be made to develop this information and the cost therefor shall be paid by the Contractor.
- e. The Engineer may have further inspection and tests made by the commercial laboratory or may make tests itself to ensure that the Contractor is complying with the Specifications.

2.12 STORAGE OF MATERIALS

Watertight storage facilities, of suitable size, with floors raised above the ground, shall be provided for all types of materials liable to damage from exposure to the weather. Other materials shall be stored on blocks off the ground. Materials shall be so placed as to permit easy access for proper inspection and identification. Any material, which has deteriorated, become damaged or otherwise unfit for use, shall not be used in the work. Upon completion of all work or when directed, the Contractor shall remove storage facility construction from the site. Unless prior approval is obtained from the Engineer, no materials shall be stored in the street, and when such permission is granted, a 12' traffic lane will

be maintained free and clear. Materials shall not be stored on private property without the express approval of the property owners so concerned.

2.13 DEFECTS AND THEIR REMEDIES

If the Project or any part thereof, or any material to be used in the Project shall be deemed by the Engineer as unsuitable or not in conformity with the Specifications, the Contractor shall, after receipt of written notice from the Engineer, forthwith remove material and rebuild or otherwise remedy the Project so that it shall be in full accordance with this Contract. The Engineer shall not have the power to waive the Contractor's obligation to furnish good material and perform good work as herein described in full accordance with the Plans and Specifications and other Contract Documents. No failure or omission of the Engineer to condemn any defective work or material shall release the Contractor from the obligation to immediately tear out, remove, and properly replace the same at any time prior to final acceptance upon the discovery of the defective work or material. The Engineer shall, upon request of the Contractor, inspect and accept or reject any material furnished and, in the event the material has been once accepted by the Engineer, such acceptance shall be binding on the Owner unless it can be clearly shown that such material furnished does not meet the Specifications for this Project.

2.14 CHANGES AND ALTERATIONS

The Contractor agrees that the Owner may make such changes and alterations as the Owner may see fit in the line, grade, form, dimensions, plans or materials for the Project, or any part thereof, either before or after the beginning of the construction, without affecting the validity of this Contract and the accompanying Performance and Payment Bonds.

If the changes or alterations diminish the quantity of the work to be done, they shall not constitute the basis for a claim for damages or anticipated profits on the portion of the project that was eliminated, except as provided for unit price items under Section 5, "Measurement and Payment." If the amount of work is increased, and the work can fairly be classified under the Bid Form and Specifications, the increase shall be paid for according to the quantity actually done and at the unit price, established for the work under this Contract; otherwise, additional work shall be paid for as provided for under "Extra Work." In case the Owner makes changes or alterations that make useless any work already done or material already furnished or used, that conformed to specifications, then the Owner shall compensate the Contractor for any material or labor so used on the basis of actual expenses incurred.

2.15 RIGHT OF ENGINEER TO MODIFY METHODS AND EQUIPMENT

If at any time the methods or equipment used by the contractor are found to be inadequate to secure the quality of work or the rate of progress required under this Contract, the Engineer may order the Contractor, in writing, to improve the character and efficiency of the methods and equipment, and the Contractor shall comply with this order.

If at any time the working force of the Contractor is inadequate for securing the progress herein specified, the Engineer may order the Contractor to increase the working force or equipment, or both, to such an extent as to give reasonable assurance of compliance with the schedule of progress.

The Engineer shall in no event, have any duty to modify the Contractor's methods and procedures. Contractor's duties shall in no way be lessened by the Owner's exercise of control or failure to exercise control over Contractor's methods and procedures.

3. GENERAL OBLIGATIONS AND RESPONSIBILITIES

3.01 KEEPING OF PLANS AND SPECIFICATIONS ACCESSIBLE

The Engineer shall furnish the Contractor with an adequate and reasonable number of copies of all Plans and Specifications without expense and the Contractor shall keep one copy of the same constantly accessible on the Project site, with the latest revisions noted thereon.

3.02 OWNERSHIP OF DRAWINGS

All Drawings, Specifications and copies thereof furnished by the Engineer shall not be reused on other work and are the property of the City of Port Lavaca and the Owner.

3.03 PERMITS

Permits and licenses of a temporary nature necessary for the prosecution of the work shall be secured and paid for by the Contractor. Permits, licenses and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the Owner, unless otherwise specified.

3.04 ADEQUACY OF DESIGN

It is understood that the Owner believes it has employed competent engineers and designers. However, Owner does not guarantee the sufficiency or adequacy of the design or the practicability of the operations of the completed Project. The Contractor, having satisfied itself as to the nature and location of the Project, and having fully reviewed plans and specifications, agrees to construct and deliver completed Project to the Owner in workable condition for purposes intended, and agrees that the Project shall remain workable during the period of Contractor's warranty obligation.

3.05 RIGHT OF ENTRY

The Owner and Engineer reserve the right to enter the Project site through such agents as they may elect for any lawful purpose, including inspecting work or constructing or installing collateral work.

3.06 DISCREPANCIES AND OMISSIONS

It is further agreed that it is the intent of this Contract that all work must be done and all material must be furnished in accordance with the generally accepted practice, and in the event of any discrepancies between the separate Contract Documents, the priority of the interpretation defined under Section 1.02 shall govern. In the event that there is still any doubt as to the meaning and intent of any portion of the Contract Documents, the Engineer shall define which is intended to apply to the Project.

3.07 EQUIPMENT, MATERIALS AND CONSTRUCTION PLANT

The Contractor shall be responsible for the care, preservation, conservation, and protection of all materials, supplies, machinery, equipment, tools, apparatus, accessories, facilities, all means of construction, and any and all parts of the Project, whether the Contractor has been paid, partially paid, or not paid for such work, until the entire Project is completed and accepted.

3.08 PROTECTION AGAINST ACCIDENTS TO EMPLOYEES AND THE PUBLIC

The Contractor shall at all times exercise reasonable precautions for the safety of employees and others on or near the work, and shall comply with all applicable provisions of Federal, State and Municipal safety laws and building and construction codes. All machinery, equipment and other physical hazards shall be guarded in accordance with the "Manual of Accident Prevention in Construction" of the Associated General Contractors of America, except where incompatible with Federal, State or Municipal laws or regulations. The Contractor shall provide such machinery, guards, safe walkways, ladders, bridges, gangplanks and other safety devices as may be appropriate or required to prevent accidents. The Contractor shall equip and maintain all work sites in accordance with applicable provisions of the Texas Manual on Uniform Traffic Control Devices.

3.09 CONTRACTOR'S INSURANCE

The Contractor, before starting work on the Project, must furnish to the Owner certificates of insurance or other acceptable evidence from a reputable insurance company or companies (such companies to be acceptable to the Owner) licensed to write insurance in the State of Texas showing that the Contractor is covered by the insurance as follows and maintaining such insurance in force during the entire term of the contract:

1 Worker's Compensation Insurance Coverage:

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 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. "Services" does not include activities unrelated to the project, such as food/beverage contractors, office supply deliveries, and delivery of portable toilets.

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, Section 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 Governmental Entity 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 Governmental Entity showing that coverage has been extended.
- E. The contractor shall obtain from each person providing services on a project, and provide to the Governmental Entity:
- (1) a certificate of coverage, prior to that person beginning work on the project, so the Governmental Entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and
 - (2) no later than seven 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 one year thereafter.
- G. The contractor shall notify the Governmental Entity in writing by certified mail or personal delivery, within 10 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. *The following paragraph shall satisfy this requirement when posted in accordance with the rules of the Texas Workers' Compensation Commission:*

Required Workers' Compensation Coverage

The law requires that each person working on this site or providing services related to this construction project must be covered by workers' compensation insurance. This includes persons providing, hauling or delivering equipment or materials, or providing labor, transportation or other services related to the project, regardless of the identity of their employer or status as an employee.

Call the Texas Workers' Compensation Commission at (512) 440-3789 to receive information on the legal requirement for coverage or to report an employer's failure to provide 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, Section 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 one year thereafter;

(6) notify the Governmental Entity in writing by certified mail or personal delivery, within 10 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 paragraphs (1) - (7), 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 City 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 Governmental Entity to declare the contract void if the contractor does not remedy the breach within ten days after receipt of notice of breach from the Governmental Entity.

L. A Waiver of Subrogation against the City of Port Lavaca and its officers, agents, and employees shall be included.

M. If any of the Contractor's employees engaged in hazardous work on the project under this contract are not protected under the Worker's Compensation Statute, then the Contractor shall provide adequate employer's general liability insurance for the protection of this class of employees.

2. Commercial General Liability

CONTRACTOR shall have, (or purchase) and shall maintain in force during the duration of the Work, coverage for the hazard of explosion, collapse and underground shall be included. Coverage for independent contractor's liability, contractual liability, products/completed operations liability, personal injury and broad form property

damage shall also be included. Completed operations liability shall be kept in force for at least one (1) year after the date of final completion. Coverages shall have at least the following limits.

A.	General Aggregate	\$2,000,000
B.	Products/Completed Operations Aggregate	\$1,000,000
C.	Personal and Advertising Injury	\$1,000,000
D.	Each Occurrence	\$1,000,000
E.	Fire Damage	\$ 50,000

3. OWNER's Protective Liability

CONTRACTOR shall have (or purchase) and maintain in force, for the duration of the Work, naming OWNER, OWNER's Employees and OWNER's Engineer as insured, an OWNER's Protective Liability coverage with at least the following limits.

A.	General Aggregate	\$1,000,000
B.	Each Occurrence	\$1,000,000

4. Automobile Liability

CONTRACTOR shall have (or purchase) and shall maintain in force, for the duration of the Work, coverage cars and trucks owned, rented, hired, or leased, and others of non-ownership nature used by employees in and around or in connection with the particular Contract. Coverage shall have at least the following limit.

Combined Single Limit	\$1,000,000
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5. Builder's Risk Insurance – N/A

CONTRACTOR shall have (or purchase) and shall maintain in force during the duration of the Work, coverage for, but not limited to, fire, lightning, windstorm, tornado, hurricane, and hail. Coverage shall be in the amount of 100 percent complete value basis on the insurable portions of the project for the benefit of OWNER, CONTRACTOR, and all subcontractors, as their interests may appear.

6. Deductible

No deductible on any coverage in excess of \$500.00 per occurrence is acceptable. In the event OWNER is notified of cancellation of all or any part, OWNER may stop all Work on the Contract or secure insurance at its will and charge CONTRACTOR the cost thereof deducting the cost from CONTRACTOR's funds.

3.10 INDEMNIFICATION

The Contractor and its sureties shall defend, indemnify and hold harmless the City of Port Lavaca and its officers, agents, and employees from all suits, actions, or claims of any character, name and description including attorneys' fees and expenses brought for any injuries to persons or damages to property in connection with the performance or attempted performance of this contract. So much of the money due the Contractor under this Contract as shall be considered necessary by the City may be retained for the use of the City, or in case no money is due, the sureties shall be held, until all suits, actions, and claims shall have been settled and satisfactory evidence to that effect furnished the

City. The Contractor and its sureties expressly agree to defend, indemnify and hold harmless the City, its officers, agents, and employees in accordance with this clause regardless of whether the injury or damage is caused in whole or in part by the acts, or omissions, including negligence, of the City or its officers, agents or employees or any condition of the City's property.

3.11 ROUTING OF TRAFFIC

The Contractor shall obtain approval from the City of plans to barricade a street to traffic at least 48 hours in advance. All Barricading shall be done in compliance with the Texas Manual on Uniform Traffic Control Devices.

3.12 NOTICE TO UTILITY COMPANIES

Prior to starting construction in the vicinity of any existing utility, the Contractor shall notify the Utility Companies involved at least 48 hours in advance of beginning construction. All existing underground utility lines shall be located by the Contractor a sufficient distance ahead of construction to prevent damage to them and to allow minor adjustments of proposed grades if a conflict is found. Whenever existing utilities present an obstruction to grade and/or alignment of the proposed facility, the Contractor shall immediately notify the Engineer who will determine whether existing improvements are to be relocated or grade and alignment of the proposed facility changed. The Contractor shall notify the Engineer in sufficient time so that the Owner may make necessary arrangement for utility relocation. The Owner will not be liable for delays due to changes made by the Owner or by the privately owned utilities, which delay or hinder progress or work. The names of some of the utility companies to be notified are Central Power and Light Company, Southwestern Bell Telephone Company, TCA Cable, and Entex.

3.13 HAULING ON CITY STREETS

All trucks shall operate in accordance with local, state, and federal laws and ordinances.

3.14 PROPERTY LINE AND MONUMENTS

Contractor shall protect all property corner markers, and when any such markers or monuments are in danger of being disturbed they shall be properly referenced and if disturbed shall be re-set at the expense of the Contractor.

3.15 DRAINAGE

Contractor shall be responsible for providing adequate drainage of the Project areas until this Project is finally accepted by the Owner. The Contractor will not be permitted to place any materials on a saturated sub grade.

3.16 DAMAGE TO CITY PROPERTY

Contractor shall protect all City property, including all street surfaces, curbs and gutters and shall repair or replace any damaged facilities at no cost to the City.

3.17 CLEANUP

Contractor shall at all times keep the site and structures, facilities or improvements thereon free from accumulations of waste material, debris or rubbish caused by its employees or the employees of subcontractors. At the completion of the Project and before final acceptance and final payment, the Contractor shall remove from the site all tools, scaffolding,

surplus materials, temporary structures and debris and shall leave the site and the work "broom-clean" or its equivalent unless otherwise noted on the Drawings or specified herein.

3.18 PERFORMANCE AND PAYMENT BONDS

If the contract price exceeds \$25,000, Contractor shall execute payment and performance bonds. However, the performance bond requirement is waived if the contract is for less than \$100,000 and Contractor elects to waive payment for the contract until completion and acceptance of the work by Owner. Performance and Payment Bonds will each be in accordance with Chapter 2253 of the Texas Government Code, in a sum of 100 percent of the total Contract Price, and on forms provided by the Owner for this purpose, guaranteeing faithful performance of the Project and the fulfillment of any guarantees required, and further guaranteeing payment to all persons supplying labor and materials or furnishing it any equipment in the execution of the Contract. This Contract shall not be in effect until all required Performance and Payment Bonds are furnished and approved by Owner. Cost of the premium for Performance and Payment Bonds shall be included in Contractor's proposal.

3.19 LOSSES FROM NATURAL CAUSES

Unless otherwise specified, all loss or damage to the Contractor arising out of the nature of the work to be done, or from the action of the elements, or from any unforeseen circumstances in the prosecution of the same, or from unusual obstructions or difficulties which may be encountered in the prosecution of the work, shall be sustained and borne by the Contractor at its own cost and expense.

3.20 PROTECTION OF ADJOINING PROPERTY

Contractor shall take proper means to protect adjacent properties in any way encountered which might be injured or seriously affected by any process of construction to be undertaken under this Contract. The Contractor shall indemnify, hold harmless and defend the Owner and the City from and against any and all claims for such damage on account of his failure to fully protect all adjoining property.

3.21 PROTECTION AGAINST CLAIMS OF SUBCONTRACTORS

Contractor agrees that it will not include any terms in its contracts with subcontractors that are in derogation of its obligations in this Contract. The Contractor will include in its contracts with subcontractors a stipulation that no lien may be filed in connection with the Project, but rather that the Contractor and the Surety on the Payment Bond must be jointly notified of any past due claims against the Contractor.

The Contractor agrees that it will make prompt payments to all subcontractors in connection with this Contract. Prior to making request for Final Payment, the Contractor shall furnish an affidavit that all obligations of this nature have been fully paid. If the Contractor fails to do so, then the Owner may at its option pay directly any unpaid bills, of which the Owner has written notice, or may refuse to make any further payments to the Contractor. In no event, however, shall the provisions of this section be construed to impose any obligation upon the Owner by either the Contractor or the Surety on the Payment Bond.

3.22 PROTECTION AGAINST ROYALTIES OR PATENTED INVENTION

The Contractor shall pay all royalties and license fees, and shall provide for the use of any design, device, material or process covered by letters patent or copyright by suitable legal agreement with the patentee or owner. The Contractor

shall defend all suits or claims for infringement of any patent or copyright rights and shall indemnify and save the Owner harmless from any loss on account thereof, except that the Owner shall defend all such suits and claims, and shall be responsible for all such loss when a particular design, device, material or process or the product of a particular manufacturer or manufacturers is specified or required by the Owner; provided, however, if choice of alternate design, device, material or process is allowed to the Contractor, then the Contractor shall indemnify and save the Owner harmless from any loss on account thereof. If the material or process specified or required by the Owner is claimed to be an infringement, the Contractor shall be responsible for any such claims unless it promptly notifies the Owner of any such claims.

3.23 LAWS AND ORDINANCES

The Contractor shall at all times observe and comply with all federal, state, and local laws, ordinances, and regulations which in any manner affect the Contract or the Project, and shall hold harmless, defend and indemnify the Owner and the City against any claims arising from the violation of any such laws, ordinances and regulations, whether by the Contractor or its employees, except where the violations are called for by the provisions of the Contract Documents. If the Contractor observes that the Contract Documents are at variance with any such laws or regulations, it shall promptly notify the Engineer in writing, and any necessary changes shall be adjusted as provided in the Contract for changes in the work. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules, and regulations, and without notice to the Engineer, the Contractor shall bear all costs arising therefrom. The laws from which the Owner derives its powers, insofar as the same regulate the conditions under which the Owner may enter into contract, shall be controlling and shall be considered as part of this Contract.

3.24 ASSIGNMENT AND SUBLETTING

The Contractor will retain control and will give full attention to the fulfillment of this Contract, and it will not assign by Power-of-Attorney or otherwise, or sublet this Contract, without the written consent of the Owner, and no part or feature of the Project will be sublet to anyone objectionable to the Engineer or the Owner. The Contractor agrees that the subletting of any portion or feature of the Project or materials required in the performance of this Contract shall not relieve the Contractor from its full obligations to the Owner as provided by this Contract.

4. PROSECUTION AND PROGRESS

4.01 TIME AND ORDER OF COMPLETION

The Contractor shall be allowed to prosecute its work at such times and seasons, in such order and precedence, and in such manner as shall be most conducive to economy of construction; provided, however, that the order and the time of prosecution shall be such that the Project shall be completed as a whole and in part, in accordance with this Contract, the Plans and Specifications, and within the time of completion designated in the Contract; provided, also, that when the Owner is having other work done, either by contract or by its own force, the Engineer may direct the time and manner of constructing the work done under this Contract so that conflict will be avoided and the construction of the various works being done for the Owner shall be harmonized.

At the request of the Engineer, the Contractor shall within fifteen (15) days after the award of the Contract, prepare and submit to the Engineer for approval, a practicable schedule showing the order in which the Contractor proposes to prosecute the work, the dates on which it will start the various major elements of the Project (including the procurement of materials, plant and equipment), and the dates contemplated for completion of each. The schedule shall be accompanied by a progress chart of suitable scale to indicate approximately the percentage of work scheduled for

completion at any time. The Contractor shall enter on the chart the actual progress at the end of each week or at such other intervals as may be directed by the Engineer and shall deliver three (3) copies thereof to the Engineer.

4.02 EXTENSION OF TIME

Should the Contractor be delayed in the completion of the Project by any act or neglect of the Owner or Engineer, or by other contractors employed by the Owner, or by changes ordered in the work, or by strikes, lockouts, fires, unusual delays by common carriers, or unavoidable cause or causes beyond the Contractor's control, then the Contractor may present a written request to the Engineer for an extension of time for completing the Project. If the basis for and the amount of the extension are determined by the Engineer to be justified, the Engineer shall issue a written extension to the Contractor.

4.03 HINDRANCES AND DELAYS

The contractor shall make no claims for damages resulting from hindrances or delays from any cause. The sole remedy for any hindrance or delay shall be an extension of time for completion of the Project.

5. MEASUREMENT AND PAYMENT

5.01 QUANTITIES AND MEASUREMENTS

In determining the amounts of payments, no extra or customary measurements of any kind will be allowed; rather, the actual measured and/or computed units according to the units set forth in the Bid Form shall be considered, unless otherwise specifically provided.

5.02 ESTIMATED QUANTITIES

These Contract Documents are intended to show all work to be done and material to be furnished hereunder. Where the estimated quantities are shown for the various classes of work to be done and material to be furnished under this Contract, they are approximate and are to be used as a basis for estimating the probable cost of the work and for comparing the proposals offered for the work. It is understood and agreed that the actual amount of work to be done and material to be furnished under this Contract may differ somewhat from these estimates, and that where the basis for payment under This Contract is the unit price method, payment shall be for the actual amount of work done and the material furnished.

Where payment is based on the unit price method, the Contractor agrees that it will make no claim for damages, anticipated profits or otherwise on account of any differences which may be found between the quantities of work actually done, the material actually furnished under this Contract, and the estimated quantities contemplated and contained in the Bid Form; however, in case the actual quantity of any "major item" should become as much as 20% more than, or 20% less than, the estimated or contemplated quantity for the items, then either party to this Contract may request revised consideration for the portion of the work above or below 20% of the estimated quantity. A "major item" shall be construed to be any individual bid item described in the Bid Proposal that has a total cost equal to or greater than five (5) percent of the Contract sum. Any revised consideration may be determined by agreement between the parties, or by the terms of this Contract as provided under "Extra Work."

5.03 PARTIAL PAYMENTS

On or before the 5th day of each month, the Engineer shall prepare a statement showing as completely as practicable the total value of the work done by the Contractor up to and including the last day of the preceding month. The Owner shall then pay the Contractor on or before the last day of the current month the total amount of the Engineer's statement, less five (5) percent of the amount thereof, which percent shall be retained until final payment and, further, less the sum of all previous payments, and all further sums that may be retained by the Owner under the terms of this Contract. Owner's failure to make said statement shall not waive the right Owner may have under the terms of the Contract Documents or state law to withhold any sums otherwise payable hereunder.

5.04 USE OF COMPLETED PORTIONS

The Owner may take possession of and use any completed or partially completed portions of the Project, even though the time for completing the portions has not expired. This possession and use shall not be deemed an acceptance of any work not constructed in accordance with the Contractor Documents.

5.05 CERTIFICATE OF COMPLETION

Within ten (10) days after the Contractor has given the Engineer written notice that the Project has been fully completed, the Engineer shall inspect the Project and if it is found to be fully completed in accordance with the Contract Documents, the Engineer shall issue to the Owner and the Contractor a Certificate of Completion.

5.06 ACCEPTANCE AND FINAL PAYMENT

Upon the issuance of the Certificate of Completion, the Engineer shall make final measurements and provide to the Owner a final statement of the value of all work performed and materials furnished under the terms of the Contract, and the Contractor shall submit an affidavit that all subcontractors, material suppliers, laborers, accountants and claimants have been fully paid. Within ten (10) days of the Owner's receipt of the Engineer's Certificate of Completion and the Contractor's affidavit, the Owner shall issue a Certificate of Acceptance to the Contractor. The Owner shall make final payment to the Contractor of the balance due on or after the 30th day, and before the 35th day, after the date of the Certificate of Acceptance, provided the Contractor has fully performed its obligations under the terms of this Contract. Neither the Certificate of Acceptance nor the final payment, nor any provision in the Contract Documents, shall relieve the Contractor of the requirement to fulfill all of its maintenance and warranty obligations. Contractor's acceptance of payment pursuant to this contract that is designated as "final payment" shall release Owner from any and all claims of Contractor against Owner with respect to any work performed pursuant to this contract.

5.07 PAYMENTS WITHHELD

The Owner may withhold or nullify the whole or part of any payment request on the basis of:

- a. Defective work not remedied.
- b. Claims filed or reasonable evidence indicating probable filing of claims.
- c. Failure of the Contractor to make payments properly to subcontractors.
- d. Damage to another contractor.

When the grounds for withholding payment are removed to the satisfaction of the Owner, payment less 5% retainage shall be made for amounts withheld because of them.

5.08 DELAYED PAYMENTS

Should the Owner fail to make payment to the Contractor of the sum named in any partial or final statement, when payment is due, then the Owner shall pay to the Contractor, in addition to the sum shown as due by the statement, interest at the rate of six (6) percent per annum, from the date due until fully paid, which shall fully liquidate any injury to the Contractor resulting from the delay in payment.

5.09 GUARANTEE

The Contractor warrants that all the work under the Contract will be free from faulty materials in every particular, and free from improper workmanship, except from proper and usual wear, and agrees to replace or to re-execute without cost to the Owner or City all work found to be improper or imperfect, and to make good all damage caused to the other work or materials due to such required replacement or re-execution. This warranty shall cover a period of One (1) Year from the date of issuance of the Owners Certificate of Acceptance.

Neither the Certificate of Acceptance, nor final payment, nor any provision in the Contract Documents shall relieve the Contractor of responsibility for neglect or faulty materials or workmanship during the period covered by the warranty.

6. EXTRA WORK AND CLAIMS

6.01 EXTRA WORK

The Contractor shall perform Extra Work when presented with a written Extra Work Order signed by the Engineer. The Contractor may require a written confirmation of any Extra Work Order by the Owner. The compensation to be paid the Contractor for performing Extra Work shall be determined by one or more of the following methods:

Method (A) By agreed unit prices; or

Method (B) By agreed lump sum; or

Method (C) If neither Method (A) nor Method (B) is agreed upon before the Extra Work is commenced, then the Contractor shall be paid the "actual field cost" of the work, plus fifteen (15) percent.

In the event Extra Work is paid for under method (C), then the provisions of this paragraph shall apply and the "actual field cost" is hereby defined to include the cost of all laborers and materials, machinery and equipment for the time actually used on the Extra Work. The Engineer may direct the form in which accounts of the "actual field cost" shall be kept, and the records of these accounts shall be made available to the Engineer. The Engineer may also specify in writing, before the work commences, the method of doing the work and type and kind of machinery and equipment to be used; otherwise these matters shall be determined by the Contractor. Unless otherwise agreed upon, the prices for the use of machinery and equipment shall be determined by using 100 percent, unless otherwise specified, of the latest schedule of Equipment Ownership Expense adopted by the Associated General Contractors of America. Where practicable, the terms and prices for the use of machinery and equipment shall be incorporated in the written Extra Work Order. Fifteen (15) percent of the "actual field cost" to be paid to the Contractor shall cover and compensate it for profit, overhead, superintendence and all other elements of cost and expenses not embraced within "actual field cost" as herein defined.

No claim for Extra Work of any kind will be allowed unless ordered in writing by the Engineer. In case any orders or instructions, oral or written, appear to the Contractor to involve Extra Work for which it should receive compensation or an adjustment in the construction time, it shall make written request to the Engineer for an Extra Work Order.

6.02 TIME OF FILING CLAIMS

All questions of dispute or adjustment presented by the Contractor shall be in writing and filed with the Engineer within thirty (30) days after the Engineer has given any directions, orders or instructions to which the Contractor takes exception. The Engineer shall reply to such written exceptions by the Contractor and render a final decision in writing. Failure to present a question of dispute or adjustment to Engineer within 30 days after aforementioned action to which Contractor takes exception shall constitute a waiver of Contractors' request for adjustment or claim against Owner.

7. ABANDONMENT OF CONTRACT

7.01 ABANDONMENT BY CONTRACTOR

In case the Contractor abandons work on the Project and fails to resume work within ten (10) days after written notification from the Engineer, or if the Contractor fails to comply with orders of the Engineer then the Sureties on the Performance Bond shall be notified in writing by the Owner and directed to complete the work, and a copy of this notice shall be delivered to the Contractor.

7.02 USE OF EQUIPMENT AND MATERIALS

After receiving notice of abandonment, the Contractor shall not remove from the work any machinery, equipment, tools, materials, or supplies then on the job. These items together with any materials and equipment under contract for the Project, may be held for use on the Project by the Owner or the Surety on the Performance Bond, or another contractor, for completion of the Project. The Contractor shall not receive any rental or credit therefor it being understood that the use of such equipment and materials may ultimately reduce the cost to complete the work and be reflected in the final payment, if any is due, to the Contractor.

7.03 COMPLETION AFTER ABANDONMENT

In case no Performance Bond is required or in case the Surety on the Performance Bond fails to commence completion of the work in accordance with the Notice of Abandonment within ten (10) days after receipt of the notice, then the Owner may provide for completion of the Project in either of the following manners:

The Owner may employ such laborers and use such machinery, equipment, tools, materials and supplies, including those of the Contractor in accordance with Section 7.02 as is necessary to complete the Project. The Owner shall charge all extra expense of this labor, machinery, equipment, tools, materials and supplies together with a reasonable sum for management and supervision to the Contractor, and expense so charged shall be deducted and paid by the Owner out of monies otherwise due the Contractor under this Contract. In case this expense is greater than the sum which would have been payable under this Contract if the Project had been completed by the Contractor, the Contractor and/or its Surety shall pay the amount of such excess to the Owner; or the Owner may let a contract for the completion of the Project, using a sealed bid procedure, under substantially the same terms and conditions as in this Contract. In case of any increase in cost to the Owner under the new contract including additional expenses for supervision and re-letting of the contract, compared to what would have been the cost under this Contract, the increase shall be charged to the Contractor and the Surety.

When the Project has been completed, the Contractor and the Surety shall be notified and the Certificates of Completion and Acceptance, as provided in Paragraphs 5.06 and 5.07 above, shall be issued. A complete itemized statement of the contract accounts, certified by the Engineer as being correct, shall then be prepared and delivered to

the Contractor and the Surety. The Contractor and the Surety shall pay any balance due as reflected by this statement within thirty-five (35) days after the date of the Certificate of Acceptance.

7.04 DISPOSITION OF EQUIPMENT AND MATERIALS

In the event the Engineer's statement of accounts shows that the cost to complete the work is less than the cost would have been had the work been completed by the Contractor under the terms of this Contract, or upon full payment by the Contractor and the Surety of any balance due to the Owner, then all machinery, equipment, tools, materials or supplies left on the site of the Project shall be turned over to the Contractor and the Surety. Should the Contractor and the Surety fail to pay any balance due the Owner within the time designated above, and there remains any machinery, equipment, tools, materials or supplies of the Contractor on the site of the work, the Owner shall mail a notice together with an itemized list of the equipment and materials, to the Contractor and the Surety at their addresses shown in this Contract. After mailing the notice, the Owner shall hold the property at the risk of the Contractor and the Surety subject only to the duty to exercise ordinary care to protect the property. After fifteen (15) days from the date of the notice, the Owner may sell the machinery, equipment, tools, materials or supplies and apply the proceeds towards the balance due the Owner from the Contractor. This sale may be made at either public or private sale, with or without notice, as the Owner may elect. The Owner shall release any machinery, equipment, tools, materials or supplies that remain on the work and belong to persons other than the Contractor to their proper owners. The records on all activities conducted under this section shall be open to the Contractor and the Surety.

SPECIAL CONDITIONS

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FOR
SPECIAL CONDITIONS**

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**SPECIAL CONDITIONS
CITY OF PORT LAVACA, TEXAS**

1.0 GENERAL

The provisions of the Special Conditions shall govern in the event of any conflict between them and the General Conditions.

2.0 SITE OF WORK

The site of the work is within the City of Port Lavaca and is more clearly defined on the Location Map shown on the front cover of the plan set.

3.0 SUMMARY OF WORK

Project including street, water, and storm sewer improvements.

4.0 ACCESS TO SITE

Easements and rights-of-way for the Project will be obtained by the Owner. Access to the Project is possible over existing rights-of-way, paved or gravel streets and roads. It shall be the Contractor's responsibility to examine each site, and the access thereto, to obtain full knowledge of the conditions under which the work will be executed.

5.0 ALTERATION OF EXISTING UTILITIES

The Contractor shall locate, mark and protect all existing utility lines and services, manholes, valve boxes, meter boxes, fire hydrants, etc., that may be affected by its work. The Contractor shall be responsible for examining the Drawings for other contiguous work that may be under construction or proposed along the site of the work, which drawings are on file in the office of the Engineer. The Contractor shall schedule its work and make such alterations to existing utilities so that the least possible delays and inconvenience to its construction and to adjacent property owners shall occur. The Contractor shall conduct its operations in such a manner as to prevent damage to existing facilities to be relocated and shall repair or replace any damage resulting from its operations at its own expense.

6.0 WORK BY OTHERS

Alterations to existing gas pipeline, underground electrical and telephone lines and conduit, power poles and all alterations of utilities not belonging to the Owner which may be required for the proper completion of the work will be performed by others. The Contractor shall afford other contractors performing such work reasonable access and opportunity for the introduction and storage of materials and the execution of their work and shall coordinate its work with the work of such other contractors. In the event of conflict, the Engineer shall determine the rights of the various interests.

Whenever possible, all existing underground lines, power poles and other facilities will remain in place. The Contractor shall maintain such lines in good working order and free from damage.

7.0 CONSTRUCTION IN INTERSECTIONS

Insofar as possible, the Contractor shall schedule and conduct its operations in the intersections as rapidly as possible to minimize the length of time the intersections will be closed to traffic.

8.0 TESTING OF COMPLETED WORK

When a portion of the work has been completed in accordance with these Specifications and requires testing, the Contractor shall notify the Engineer so that tests of the completed work may be made. It shall be the Contractor's responsibility to give such notification sufficiently in advance of other work so as to prevent delays in the work. No claims for additional payment will be allowed because of delays caused by testing. All tests, made by a commercial laboratory designated by the Owner, shall be paid for by the Owner provided such tests show compliance with the requirements of the Drawings and these Specifications. Any materials failing to meet the requirements of the Drawings and Specifications shall be reworked as necessary until the minimum requirements are met.

9.0 UTILITIES FOR CONSTRUCTION

All utilities for construction shall be secured and paid for by the Contractor.

10.0 HOLIDAYS

Work shall not be performed without written permission of the Engineer on the following days:

July 4, 2026	4 th July
September 7, 2026	Labor Day
November 26-27, 2026	Thanksgiving
December 25, 2026	Christmas
January 1, 2027	New Years
July 4, 2027	4 th July
September 6, 2027	Labor Day
November 25-26, 2027	Thanksgiving

TECHNICAL SPECIFICATIONS

CITY OF PORT LAVACA
GOVERNING SPECIFICATIONS AND SPECIAL PROVISIONS
ITEMS FROM
TEXAS DEPARTMENT OF TRANSPORTATION
&
CITY OF PORT LAVACA

ALL SPECIFICATIONS AND SPECIAL PROVISIONS APPLICABLE TO THIS PROJECT ARE IDENTIFIED AS FOLLOWS:

STANDARD SPECIFICATIONS : ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION NOVEMBER 1, 2014. STANDARD SPECIFICATIONS ARE INCORPORATED IN THE CONTRACT BY REFERENCE WHICH MAY BE VIEWED AT:

<ftp://ftp.dot.state.tx.us/pub/txdot-info/des/spec-book-1114.pdf>

ITEM 104 REMOVING CONCRETE
ITEM 110 EXCAVATION
ITEM 132 EMBANKMENT
ITEM 162 SODDING
ITEM 168 VEGETATIVE WATERING
ITEM 247 FLEXIBLE BASE
ITEM 260 LIME TREATMENT (ROAD MIXED)
ITEM 316 UNDERSEAL/SEAL COAT
ITEM 340 DENSE-GRADED HOT-MIX ASPHALT (SMALL QUANTITY)
ITEM 400 EXCAVATION AND BACKFILL FOR STRUCTURES
ITEM 420 CONCRETE SUBSTRUCTURES
ITEM 464 REINFORCED CONCRETE PIPE
ITEM 465 JUNCTION BOXES, MANHOLES AND INLETS
ITEM 479 ADJUST EXISTING MANHOLE RING & COVER TO GRADE
ITEM 496 REMOVING STRUCTURES
ITEM 500 MOBILIZATION
ITEM 502 BARRICADES, SIGNS, AND TRAFFIC HANDLING
ITEM 506 TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL CONTROLS
ITEM 529 CONCRETE CURB, GUTTER AND COMBINED CURB AND GUTTER
ITEM 530 INTERSECTIONS, DRIVEWAYS AND TURNOUTS
ITEM 531 SIDEWALKS
ITEM 644 SMALL ROADSIDE SIGN ASSEMBLIES
ITEM 668 PREFABRICATED PAVEMENT MARKINGS

SPECIAL PROVISIONS: SPECIAL PROVISIONS WILL GOVERN AND TAKE PRECEDENCE OVER THE SPECIFICATIONS ENUMERATED HEREON WHEREVER IN CONFLICT THEREWITH.

SPECIAL SPECIFICATIONS:

ITEM 2660 POTABLE WATER SYSTEM
ITEM 2730 WASTE WATER COLLECTION SYSTEM
ITEM 4122 THERMOPLASTIC PIPE

GENERAL: THE ABOVE-LISTED SPECIFICATION ITEMS ARE THOSE UNDER WHICH PAYMENT IS TO BE MADE. THESE, TOGETHER WITH SUCH OTHER PERTINENT ITEMS, IF ANY, AS MAY BE REFERRED TO IN THE ABOVE-LISTED SPECIFICATION ITEMS, AND INCLUDING THE SPECIAL PROVISIONS LISTED ABOVE, CONSTITUTE THE COMPLETE SPECIFICATIONS FOR THIS PROJECT.

DIVISION 2 - SITE WORK
SECTION 02660 - POTABLE WATER SYSTEM

.01 GENERAL:

This Work includes furnishing all plant, labor, equipment and materials, and performing all operations for installation and fabrication of all pipe, fittings and accessories required to complete all Potable Water System work, as shown on Contract Drawings and specified herein. All materials (pipe, valves, fittings, etc.) shall be acceptable without penalty to the Texas Fire Insurance Commission for use in Waterworks and Distribution Systems, shall be new and manufactured in the United States, shall be approved for use in Potable Water Systems by the National Sanitation Foundation, shall have Underwriter's Laboratory approval, and shall meet all requirements set forth by the Texas Commission on Environmental Quality (TCEQ) in the most current "Rules and Regulations for Public Water Systems".

.02 PIPE:

a. Polyvinyl Chloride (PVC)

Pipe shall be manufactured from PVC compound with a cell classification of 12454-B in compliance with ASTM Standard D-1784, shall have an ASTM design pressure rating of at least 150 psi or a minimum standard dimension ratio of 26, and shall be assembled in strict accordance with manufacturer's written recommendations.

1. 1/2" or less Diameter Pipe

Pipe shall be Schedule 40 (Solvent Cement Style) conforming to ASTM Standard D-2466 with tapered sockets.

2. 2" to 3" Diameter Pipe

Pipe shall meet ASTM Standard D-2241 (pressure rating 160 psi, SDR26) criteria for PVC Pressure-Rated Pipe.

3. 4" to 12" Diameter Pipe

Pipe shall meet AWWA C900 (pressure rating 150 psi, DR18) criteria for PVC Pressure Pipe (4" thru 12"), shall have cast iron pipe equivalent outside diameter, and shall have integral bell and spigot type joints.

b. Flanged Joint Ductile Iron (DI)

Pipe shall meet the requirements of ANSI/AWWA A21.51/C151 with a minimum thickness class of 150, shall be cement mortar lined in accordance with ANSI/AWWA A21.4/C104, shall have mechanical joint and slip-on gaskets conforming to AWWA C111, and shall be assembled in strict accordance with manufacturer's written recommendations.

1. Flanges

Flanges shall conform to ANSI/AWWA A21.10/C110 requirements.

2. Coating and Wrapping

A. Underground Piping Installation

All piping installed underground shall be coated with not less than 10 mils. adhesive thickness of Standard XtruCoat, or approved equal, and shall be wrapped with high-density polyethylene wrapper having not less than 25 mils. thickness. Coating and wrapping shall be extended to at least a minimum of 6" above finish grade.

B. Above Ground Installation

All piping installed above ground with surfaces exposed to the atmosphere (including flanges and bolts) shall be painted with a lead-free enamel base paint (color to be approved by ENGINEER).

C. Bolts and Flanges

All Bolts and Flanges installed underground shall be coated to at least 10 mil. thickness with "Koppers Bitumastic".

3. Installation Types

A. Above Ground

Flanged joints and fittings for pipe shall be used in above ground installations.

B. Underground

Mechanical joints or boltless gasketed joints for pipe shall be used in underground installations, unless otherwise indicated.

c. Steel Pipe

1. 1/2" to 2" Diameter Pipe shall be Schedule 80, threaded and coupled, ASTM A53, Grade B, Seamless Carbon Steel Galvanized.
2. 4" Diameter Pipe shall be Schedule 40, Beveled Ends, ASTM A53, Grade B, Seamless Carbon Steel Galvanized.
3. Flanges shall be Weld-Neck, Class 125#, Raised-face, Schedule 40 Bore, A105 Forged Carbon Steel, ANSI B 16.5, Galvanized.

.03 FITTINGS:

a. For PVC Pipe

Fittings shall be ductile iron conforming to ANSI/AWWA A21.10/C110, Pressure Class 350, and shall be coated outside to at least 3 to 5 mil thickness with "Koppers' Bitumastic", or approved equal, when installed underground, and shall be coated inside with cement mortar in conformance with ANSI/AWWA A21.4/C104.

b. For Steel Pipe

1. 1/2" to 2" Diameter Fittings shall be screwed, 300#, A105 Forged Carbon Steel, ANSI B16.5 Galvanized.
2. 4" Diameter Fittings shall be Butt-Weld, Seamless, Schedule 40 Bore, A234, Grade WPB, Wrought Carbon Steel, ANSI B16.9 Galvanized.
3. Welding fittings shall conform to physical and chemical requirements of ASTM specifications. Standard weight, forged steel, long radius pattern, butt welding fittings with full thickness of metal sustained at all points shall be provided. Welding tees shall be used when pipes are of same size, and weld-o-lets shall be used to tee a smaller pipe into a larger. All welds shall be made in accordance with standards of the American Welding Society.

.04 VALVES:

a. Gate Valves

1. For PVC Pipe

Valves shall close in a clockwise direction, shall have square stem nuts, and have all bolts and top half of valve coated with Koppers' Bitumastic" when installed underground.

Valves 3" and larger shall be Mueller 2360 Series Resilient Wedge Gate Valve NRS, or approved equal, shall conform to AWWA Specification C-509, shall have Mechanical Joint ends complying with AWWA Specification C-111, and shall have a 10-year warrant.

2. For Steel Pipe

A. Valves 2" and smaller shall be 125# Bronze, Screwed.

B. 3" Diameter valves and larger shall be 125# FF IBBM.

- b. Check Valves shall be center guide, flanged, 125#, semi-steel body, bronze trimmed, spring controlled, non-slam closing silent check valves with stainless steel springs, bronze discs, bronze renewable seat rings, and bronze bushings for center guides.

- c. Adjustable screw-type cast iron valve box with a minimum opening of five (5) inches shall be provided on underground valve installations. Boxes shall be provided with covers marked with the word "WATER".

.05 FIRE HYDRANTS:

Fire Hydrants shall be as per OWNER specifications as noted on Drawings, or shall be Mueller Super Centurion 250 3-Way Fire Hydrant, or approved equal. Hydrants shall have a 5 1/4" main valve opening, American Standard operating nut, and shall be manufactured in accordance with AWWA C502 (latest version). Hydrants shall also carry a ten (10) year warranty.

.06 HANDLING:

Handle pipe, fittings, and accessories to insure their installation in a sound, undamaged condition. Use equipment, tools and methods to prevent damage in unloading, reloading, hauling, and laying pipe and fittings. When using hooks in pipe ends, be sure that the contact surfaces are broad and well padded.

.07 INSPECTION:

During installation, while the pipe is suspended and hanging free, inspect each pipe and fitting for defects. Tap the pipe with a light hammer to detect cracks. Reject defective, damaged, or unsound pipe and fittings, and remove them from the site.

.08 CLEANING:

Thoroughly clean the interior of the pipe and fittings of foreign matter before installation. Keep the interior clean until the Work has been accepted. Remove lumps, blisters, and excess coating from the exterior spigot and interior bell surfaces. Wire brush such surfaces and wipe them clean and dry (free from oil and grease) before placing the spigot in the bell. Keep joint contact surfaces clean until jointing is complete. Take every precaution to prevent foreign material from entering the pipe during installation. Do not place debris, tools, clothing, or other materials in the pipe.

.09 INSTALLATION:

All Work shall be performed in a safe and workmanlike manner. Installation shall be as indicated on Contract Drawings, as specified herein, and in strict accordance with ASTM D-2321 and manufacturer's written recommendations. All earthwork in connection with sewer construction including trenching, dewatering, backfilling and other earthwork operations required shall conform to applicable requirements of Section 02200. Under no circumstances should pipe be laid in water. Do not lay pipe under unsuitable weather or trench conditions. Lay pipe with bell ends facing in the direction of the laying except when making closures. Nonmetallic pipe installed in highway rights-of-way shall have metal wire concurrently installed or other means shall be provided for detection purposes. (#12 Copper coated W.P. recommended)

.10 CONCRETE THRUST BLOCKING:

If thrust blocking is to be used, then each valve, hydrant, bend, tee, cross, plug and any other fitting throughout the underground distribution system shall be provided with concrete thrust blocking of the size, shape and quantity detailed on the Contract Drawings. Blocking shall be placed between firm and undisturbed soil, and located so fitting joints are accessible for repair. All concrete shall be 3000 psi.

.11 THRUST RESTRAINTS:

If thrust restraints are to be used, then each valve, hydrant, bend, tee, cross, plug and any other fitting throughout the underground distribution system shall be provided with either of the following Restraint Devices for PVC pipe.

- a. Ford/Uni-Flange Series 1500 "Circle Lock"

Restraint for PVC pipe Joined with standardized mechanical joint fittings shall be incorporated in the design of the follower gland and shall provide full circle contact and support of the pipe wall. Restraint shall be accomplished by a series of ring segments mechanically retained inside the gland housing and designed to grip the pipe wall in an even and uniform manner. Restraining ring segments shall be actuated by bolts featuring "Auto-Tork®" twist off heads to ensure proper installation torque is applied. All components of the restrainer, including the gland, bolts, and restraint segments shall be of high strength ductile iron, ASTM A536, Grade 65-45-12. Restraining devices shall be UL Listed / FM Approved on AWWA C-900 PVC pipe and shall be certified by a third party testing laboratory as meeting or exceeding ASTM F1674-96 Standard Test Method for Joint Restraint Devices for PVC Pipe. Restraining devices shall be manufactured by a facility independently certified to ISO 9001 quality standard and shall be Ford /Uni-Flange Series 1500 or approved equal.

- b. Ford/Uni-Flange Block Buster Pipe Restraints for PVC Pipe

Restraint Devices for PVC Pipe shall incorporate a series of machined serrations (not "as cast") on the inside diameter to provide positive restraint, exact fit, 360° contact and support of the pipe wall. Restraint Devices shall be manufactured of high strength ductile iron, ASTM A536, Grade 65-45-12 in 2" through 24" sizes and ASTM A36 structural steel in sizes 30" through 36". Bolts and connecting hardware shall be of high strength low alloy material in accordance with ANSI/AWWA C111/A21.11. All components of Restraint Devices shall be coated to at least 3-5 mil thickness with "Koppers' Bitumastic" or approved equal.

All Restraint Devices for PVC Pipe shall have a water working pressure rating equivalent to the full rated pressure of the PVC Pipe on which they are installed, with a minimum 2:1 safety factor in any normal pipe size. In addition, they shall meet or exceed the requirements of Uni-B-13-94, "Recommended Performance Specification For Joint Restraint Devices For Use With Polyvinyl Chloride (PVC) Pipe". Notarized certification from the manufacturer of the restraint device shall be provided with submittals. Restraint Devices for Mechanical Joint or Push-On fittings shall be Ford/Uni-Flange Block Buster 1300 or approved equal.

.12 LOCATION OF WATER LINES:

- a. The following rules apply to installations of potable water distribution lines and wastewater collection lines, wastewater force mains and other conveyances/ appurtenances identified as potential sources of contamination. Furthermore, all ratings specified shall be defined by ASTM or AWWA standards unless stated otherwise.
- b. When new potable water distribution lines are constructed, they shall be installed no closer than nine feet in all directions to wastewater collection facilities. All separation distances shall be measured from the outside surface of each of the respective pieces.
- c. Potable water distribution lines and wastewater collection lines or force mains that form parallel utility lines shall be installed in separate trenches.
- d. No physical connection shall be made between a drinking water supply and a sewer line. Any appurtenance shall be designed and constructed so as to prevent any possibility of sewage entering the drinking water system.
- e. Where the 9-foot separation distance cannot be achieved, the following criteria shall apply:
 1. New Waterline Installation - Parallel Lines
 - A. Where a new potable waterline parallels an existing, non-pressure or pressure rated wastewater line/force main and the registered professional engineer is able to determine that the existing line is not leaking, the new potable waterline shall be located at least two feet above the existing line, measured vertically, and at least four feet away, measured horizontally, from the existing line. Every effort shall be exerted not to disturb the bedding and backfill of the existing wastewater line.
 - B. Where a new potable waterline parallels an existing pressure rated wastewater line and it cannot be determined by the registered professional engineer if the existing line is leaking, the existing wastewater line shall be replaced with a 150psi pressure rated pipe. The new potable waterline shall be located at least two feet above the new wastewater line, measured vertically, and at least four feet away, measured horizontally, from the replaced wastewater line.
 - C. Where a new potable waterline parallels a new wastewater line/force main, the wastewater line shall be constructed of 150psi pressure rated pipe. The new potable waterline shall be located at least two feet above the wastewater line, measured vertically, and at least four feet away, measured horizontally, from the wastewater line.
 2. New Waterline Installation - Crossing Lines
 - A. Where new potable waterline crosses existing, non-pressure rated wastewater line, one segment of the waterline pipe shall be centered over the wastewater line such that the joints of the waterline pipe are equidistant and at least nine feet horizontally from centerline of wastewater line. The potable waterline

shall be at least two feet above the wastewater line. Whenever possible, the crossing shall be centered between the joints of the wastewater line. If the existing wastewater line is disturbed or shows signs of leaking, it shall be replaced for at least nine feet in both directions (18 feet total) with 150psi pressure rated pipe.

- B. Where a new potable waterline crosses an existing, pressure rated wastewater line, one segment of the waterline pipe shall be centered over the wastewater line such that the joints of the waterline pipe are equidistant and at least nine feet horizontally from centerline of wastewater line. The potable waterline shall be at least six inches above the wastewater line. Whenever possible, the crossing shall be centered between the joints of the wastewater line. If the existing wastewater line shows signs of leaking, it shall be replaced for at least nine feet in both directions (18 feet total) with 150psi pressure rated pipe.
- C. Where a new potable waterline crosses a new, non-pressure rated wastewater line and the standard pipe segment length of the wastewater line is at least 18 feet, one segment of the waterline pipe shall be centered over the wastewater line such that the joints of the waterline pipe are equidistant and at least 9 feet horizontally from centerline of wastewater line. The potable waterline shall be at least two feet above the wastewater line. Whenever possible, the crossing shall be centered between joints of wastewater line. The wastewater pipe shall have a minimum pipe stiffness of 115psi at five percent deflection. The wastewater line shall be embedded in cement stabilized sand for the total length of one pipe segment plus 12 inches beyond the joint on each end.
- D. Where a new potable waterline crosses a new, non-pressure rated wastewater line and a standard length of wastewater pipe is less than 18 feet in length, the potable water pipe segment shall be centered over the wastewater line. Materials and method of installation shall conform with one of the following options:
 - (1) Within nine feet horizontally of either side of waterline, wastewater pipe and joints shall be constructed with pipe material having a minimum pressure rating of 150 psi. An absolute minimum vertical separation distance of two feet shall be provided. The wastewater line shall be located below the waterline.
 - (2) All sections of wastewater line within nine feet horizontally of the waterline shall be encased in an 18-foot (or longer) section of pipe. Flexible encasing pipe shall have a minimum pipe stiffness of 115psi at 5 percent deflection. The encasing pipe shall be centered on waterline and shall be at least 2 nominal pipe diameters larger than the wastewater line. Space around the carrier pipe shall be supported at 5-foot (or less) intervals with spacers or be filled to springline with washed sand. Each end of casing shall be sealed with watertight non-shrink cement grout or manufactured watertight seal. An absolute minimum separation distance of 6 inches between encasement pipe and waterline shall be provided. Wastewater line shall be located below waterline.

- (3) When a new waterline crosses under a wastewater line, the waterline will be encased as described above or constructed of ductile iron or steel pipe with mechanical or welded joints as appropriate. An absolute minimum separation distance of 1 foot between the water line and the wastewater line shall be provided. Both the waterline and wastewater line, must pass a pressure and leakage test as specified in AWWA C600 standards.
- E. Where a new potable waterline crosses a new, pressure rated wastewater line, one segment of the waterline pipe shall be centered over the wastewater line such that the joints of the waterline pipe are equidistant and at least nine feet horizontally from the centerline of the wastewater line. The potable waterline shall be at least six inches above the wastewater line. Whenever possible, the crossing should be centered between the joints of the wastewater line. The wastewater pipe shall have a minimum pressure rating of 150 psi. The wastewater line shall be embedded in cement stabilized sand for the total length of one pipe segment plus 12 inches beyond the joint on each end.
- F. Where cement stabilized sand bedding is required, cement stabilized sand shall have minimum of 10 percent cement per cubic yard of cement stabilized sand mixture, based on loose dry weight volume (at least 2.5 bags of cement per cubic yard of mixture). The cement stabilized sand bedding shall be a minimum of six inches above and four inches below the sewer pipe. The use of brown coloring in cement stabilized sand for wastewater line bedding is recommended for the identification of wastewater force mains during future construction.
- f. Waterline and Manhole Separation. The separation distance from a potable waterline to a manhole shall be a minimum of nine feet. Where the nine-foot separation distance cannot be achieved, the potable waterline shall be encased in a joint of 150psi pressure class pipe at least 18 feet long and two nominal sizes larger than the new conveyance. The space around the carrier pipe shall be supported at five feet intervals with spacers or be filled to the spring line with washed sand. The encasement pipe shall be centered on the crossing and both ends sealed with cement grout or manufactured seal.
- g. Location of Fire hydrants. Fire hydrants shall not be installed within nine feet vertically or horizontally of any sanitary sewer line regardless of construction.
- h. Location of Supply/Suction Lines. Suction mains to pumping equipment shall not cross-wastewater lines carrying domestic or industrial wastes. Raw water supply lines shall not be installed within five feet of any tile or concrete wastewater line.
- i. Proximity of Septic Tank Drain fields. Waterlines shall not be installed closer than ten feet to septic tank drain fields.

.13 HYDROSTATIC PRESSURE TEST:

All newly installed water supply lines shall be hydrostatic pressure tested. Maximum allowable leakage shall be as calculated by equation below based on a minimum of a one (1) hour test at a maintained minimum pressure of 100psi.

$$L = \frac{(N)(D)(P^{1/2})}{7400}$$

- L = Allowable leakage in gallons per hour
- N = Number of joints in length of pipeline tested
- D = Nominal Diameter of Pipe in inches
- P = Average test pressure during the leakage test in psi gauge

.14 DISINFECTION:

New mains shall be thoroughly disinfected in accordance with AWWA Standard C651 and then flushed and sampled before being placed in service. Samples shall be collected for microbiological analysis to check the effectiveness of the disinfection procedure, which shall be repeated if contamination persists. A minimum of one sample for each 1,000 feet of completed water line will be required or at the next available sampling point beyond 1,000 feet as designated by the design engineer.

END OF SECTION

DIVISION 2 - SITE WORK

SECTION 02730 - WASTEWATER COLLECTION SYSTEM

.01 GENERAL:

This Work includes furnishing all plant, labor, equipment, and materials and performing all operations for the installation and fabrication of all pipe, fittings, cleanouts and accessories required to complete all Wastewater Collection System work as shown on the Drawings and specified herein. All of the Work shall be constructed in accordance with the current requirements stated in the "Design Criteria for Sewerage Systems" as set forth by the Texas Natural Resource Conservation Commission (TNRCC).

.02 PIPE AND FITTINGS:

a. Gravity Collection Mains

1. Polyvinyl Chloride (PVC) Pipe

A. Pipe and Fittings

Pipe and fittings shall be made of unplasticized PVC plastic, shall have a cell classification of 12454-B as prescribed in ASTM D-1784, shall have sizes and dimensions as set forth in ASTM D-3034, in sizes 4" through 15" and as set forth in ASTM 679 in sizes 18" through 27", shall have a standard dimension ratio (SDR) of at least 26, shall have a minimum pipe stiffness of 115 at a maximum deflection of five percent (5%) for all sizes when tested in accordance with ASTM D-2412, and shall be intended for use in a gravity installation scenario. Fittings and accessories shall be furnished by the pipe supplier, shall conform to the material and performance requirements of the pipe, and shall have joint configurations identical to that of the pipe.

B. Joints

Joints shall be integral wall, bell and spigot type conforming to ASTM D-3212, and shall have compression rubber gaskets conforming to ASTM F-477.

C. Adapters

Appropriate adapters shall be provided for transitions to other pipe products.

2. Ductile Iron (DI) Pipe

A. Pipe

Pipe shall be manufactured in accordance with ANSI/AWWA C150/A21.50 and ANSI/AWWA C151/A21.51, and shall have a Standard Thickness Class of 50.

B. Fittings

Fittings shall conform to ANSI/AWWA C110/A21.10 criteria.

C. Adapters

Appropriate adapters shall be provided for transitions to other pipe products.

b. Pressure (Force) Mains

1. PVC Pipe

A. Pipe and Fittings

Pipe and fittings shall be PVC pressure-rated, shall be manufacture in accordance with ASTM D-2241 (SDR 26) criteria, and shall have ring-tite joints.

B. Gaskets and Joints

Gaskets and joints shall meet all requirements as specified in ASTM F-477.

C. Adapters

Appropriate adapters shall be provided for transitions to other pipe products.

2. DI Pipe

A. Pipe

Pipe shall be manufactured in accordance with ANSI/AWWA C150/A21.50 and ANSI/AWWA C151/A21.51, and shall have Standard Thickness Class of 50.

B. Fittings

Fittings shall conform to ANSI/AWWA C111/A21.11 criteria.

C. Adapts

Appropriate adapters shall be provided for transitions to other pipe products.

c. Pipe Bursting – Materials and installation procedures to be per manufacturer’s recommendations as approved by the City of Port Lavaca.

d. Cured In Place Pipe (CIPP) – Materials and installation procedures to be per manufacturer’s recommendations as approved by the City of Port Lavaca.

.03 FIBERGLASS MANHOLES:

a. General

Manholes shall be manufactured from commercial grade polyester resin or other suitable polyester or vinyl ester resins, with fiberglass reinforcements as manufactured by Owens-Corning or L.M. Manufacturing, Inc. or approved equal; shall be one piece wall and cone unit; shall be manufactured to meet or exceed all specifications of ASTM D-3753, latest edition; and shall have a 48-inch (48") inside diameter with a 30-inch (30") top diameter. Manhole manufacturer shall be capable, upon request, of providing independent certification of manhole. Said certification shall consist of a copy of the manufacturer's test report accompanied by a copy of the test results that each manhole has been sampled, tested, and inspected in accordance with the provisions of the ASTM D-3753 specification and meets all requirements.

b. Ring and Lid Support

Manhole shall have a "Collar Dam" that provides an area to make elevation adjustments to finished top of ground elevation by installation of concrete grade rings. Said area shall have the strength to support a traffic load without damage to manhole. Concrete grade rings shall be installed according to manufacturer's written recommendations.

c. Manhole Rings and Lids

Ring and lids shall be Sigma No. 503-5S, or approved equal. Manhole lids shall have the words "Sanitary Sewer" cast into top surface.

d. Stubout and/or Connection

Installation of stubout and/or connection shall meet the requirements below.

1. PVC (SDR26) pipe stubouts shall be installed by manhole manufacturer.
2. Inserta-Tee fittings shall be installed as per manufacturers instructions.
3. Kor-N-Seal boots shall be installed by manhole manufacturer using fiberglass reinforced pipe stubout for Kor-N-Seal boot sealing surface.

e. Manhole Bottom

1. If resin fiber-reinforced manhole bottoms are utilized, the following shall be required.
 - A. A minimum of three (3) 1 1/2 inch (1 1/2") deep by 3 1/2 inch (3 1/2") wide stiffening ribs, completely enclosed with resin fiber-reinforcement.
 - B. A minimum of 3-inch (3") anti-flotation ring.
 - C. A minimum thickness of 5/16 inch shall be maintained.

2. If concrete bottoms are utilized, the following shall be required.
 - A. Manhole shall be set in wet concrete to a minimum depth of 4 inches below flow line.
 - B. Concrete shall extend a minimum of one foot (1') from outside wall of manhole and minimum of 6 inches (6") above incoming lines.
 - C. Concrete shall be placed on inside of manhole to form bench and invert area, and shall rise a minimum of 4 inches (4") above incoming lines.
- f. Backfill Material
 1. Sand, crushed stone, or pea gravel shall be used for backfill around manhole for minimum distance of one foot (1') from the outside surface and extending from bottom of excavation to top of reducer section.
 2. Suitable material chosen from excavation may be used for remainder of backfill. Chosen material shall be free of large lumps or clods, and shall be subject to ENGINEER approval.
 3. In paved areas: cement stabilized sand shall be used for backfill around manhole for minimum distance of one foot (1') from the outside surface and extending from bottom of excavation to the bottom of the pavement section.

.04 CONCRETE MANHOLES:

- a. Poured-In-Place
 1. Concrete shall be Class "A" and shall conform to the provisions of TxDOT Item 421, "Portland Cement Concrete".
 2. Reinforcing steel shall be new billet steel conforming to ASTM Specification A615 Grade 40 and to TxDOT Item 440, "Reinforcing Steel".
- b. Reinforced Concrete Pipe (RCP)

RCP shall be Class III conforming to ASTM Specification C-76, latest edition; shall be wall "B" circular pipe with reinforcement; and shall be tongue and groove type.

Precast sections shall not be used until the manhole foundation has been built up to a level at the top of the highest pipe to prevent crushing or deflecting pipe.
- c. Mortar

Mortar for masonry shall be one (1) part Portland Cement to two (2) parts clean hard and sharp sand and shall be free of all foreign substances or injurious alkalis.

d. Precast Base Sections, Riser Sections, and Cones

Precast concrete base sections, riser sections, and cones shall conform to the requirements of ASTM C478. Precast grade rings shall be Class "A" concrete with an inside diameter of 24 1/2 inches. Rings shall be 6 inches (6") wide with a thickness of 3 to 6 inches (3"- 6").

e. Waterproofing Joint Material

Waterproofing joint material shall be Type I, rope form, and shall meet the requirements of TxDOT Item 464.2 (9) (d), "Cold Applied Preformed Plastic Gaskets".

f. Manhole Rings and Lids

Manhole ring and lids shall be Sigma No. 503-5S, or approved equal. Manhole lids shall have the words "Sanitary Sewer" cast into top surface.

g. Construction Methods

1. For excavation and backfill requirements see Technical Specifications, "Structural Earthwork".
2. All manhole work shall be completed and finished in a careful and workmanlike manner, special care being given to sealing the joints around all pipe that extends through the wall of the manhole. After finishing of walls has been completed, the bottom of the manhole shall be completed by installing sufficient additional concrete to shape or form the bottom of the manhole to conform to the requirements as shown on the drawings.

h. Leak Testing

The completed manhole shall be tested for leaks by plugging all pipe entries and filling the manhole with water a minimum of 2 feet above the top of the highest pipe and measuring the water level for a period of 24 hours; no measurable difference in water elevation is acceptable.

.05 RE-CONNECTIONS TO NEW MANHOLES:

The connection of existing main to new manhole shall include excavation, shoring, bracing, and dewatering involved in finding and uncovering the existing main. It shall also include the tie-in connection, piping, sealing of entrance pipe at new manhole, backfill, compacting, rough and finish grading, and any required pavement repair at all such locations.

.06 REPAIR EXISTING MANHOLES:

Repair existing manholes as shown in drawings with Spectrashield Lining System or approved equal. Install per manufacturer's recommendations.

.07 MAIN LINE CLEANOUTS:

Construct cleanouts at the end of mainline locations as detailed on Drawings. Cleanout casting and boot shall be Western Iron Works No. 60 Cast Iron Cleanout Boot and Lid, or approved equal.

.08 HANDLING:

Handle pipe, fittings, and accessories to insure their installation in a sound, undamaged condition. Use equipment, tools and methods that prevent damage in unloading, reloading, hauling, and laying pipe and fittings. When using hooks in pipe ends, be sure that the contact surfaces are broad and well padded.

.09 INSPECTION:

During installation, while the pipe is suspended and hanging free, inspect each pipe and fitting for defects. Tap the pipe with a light hammer to detect cracks. Reject defective, damaged, or unsound pipe and fittings, and remove them from the site.

.10 CLEANING:

Thoroughly clean the interior of the pipe and fittings of foreign matter before installation. Keep the interior clean until the Work has been accepted. Remove lumps, blisters, and excess coating from the exterior spigot and interior bell surfaces. Wire brush such surfaces and wipe them clean and dry (free from oil and grease) before placing the spigot in the bell. Keep joint contact surfaces clean until jointing is complete. Take every precaution to prevent foreign material from entering the pipe during installation. Do not place debris, tools, clothing, or other materials in the pipe.

.11 INSTALLATION:

All the Work shall be performed in a safe and workmanlike manner. Installation shall be as indicated on the construction plans, as specified herein, and in strict accordance with ASTM D-2321 and the manufacturer's written recommendations. All earthwork in connection with sewer construction including trenching, dewatering, backfilling and other earthwork operations required shall conform to the applicable requirements of the Section 02200. Under no circumstances should pipe be laid in water. Do not lay pipe under unsuitable weather or trench conditions. Lay pipe with bell ends facing in the direction of the laying except when making closures. Non-metallic pipe installed in highway rights-of-way shall have metal wire concurrently installed or other means shall be provided for detection purposes. (#12 Copper coated W.P. recommended)

.12 WATER AND WASTEWATER SEPARATION:

- a. New wastewater collection lines shall be installed no closer than nine (9) feet in all directions to water. All separation distances shall be measured from the outside surface of each of the respective pieces.
- b. Potable water distribution lines and wastewater collection lines or force mains that form parallel utility lines shall be installed in separated trenches.
- c. Where the nine-foot separation distance cannot be achieved, the following criteria shall apply:

1. New Wastewater Line Installation - Parallel Lines

Where a new wastewater line parallels an existing waterline, the new wastewater line shall be constructed of cast iron, ductile iron, or PVC meeting ASTM specifications with a pressure rating for both the pipe and joints of 150psi. The vertical separation shall be a minimum of two feet between outside diameters and the horizontal separation shall be a minimum of four feet between outside diameters. The new wastewater line shall be located below the existing waterline.

2. New Wastewater Line Installation - Crossing Lines

A. Where a new wastewater line crosses an existing waterline and the new wastewater line is constructed of cast iron, ductile iron, or PVC with a minimum pressure rating of 150psi, an absolute minimum distance of six inches between outside diameters shall be maintained. In addition, the new wastewater line shall be located below the existing waterline where possible and one length of the new wastewater line pipe must be centered on the existing waterline.

B. Where a new wastewater line crosses under an existing waterline and the new wastewater line is constructed of ABS truss pipe, similar semi-rigid plastic composite pipe, clay pipe, or concrete pipe with gasketed joints, a minimum two-foot separation distance shall be maintained. The initial backfill shall be cement-stabilized sand (two or more bags of cement per cubic yard of sand) for all sections of new wastewater line within nine feet of the existing waterline. This initial backfill shall be from one-quarter diameter below the centerline of the pipe to one pipe diameter (but not less than 12 inches) above the top of the pipe.

C. Where a new wastewater line crosses over an existing waterline, all portions of the new wastewater line within nine feet of the existing waterline shall be constructed of cast iron, ductile iron, or PVC pipe with a pressure rating of at least 150psi using appropriate adapters. In lieu of this procedure the new conveyance may be encased in a joint of 150psi pressure class pipe at least 18 feet long and two nominal sizes larger than the new conveyance. The space around the carrier pipe shall be supported at five feet intervals with spacers or be filled to the spring line with washed sand. The encasement pipe should be centered on the crossing and both ends sealed with cement grout or manufactured seal.

d. Waterline and Manhole Separation. The separation distance from a potable waterline to a manhole shall be a minimum of nine feet. Where the 9-foot separation distance cannot be achieved, the potable waterline shall be encased in a joint of 150psi pressure class pipe at least 18 feet long and two nominal sizes larger than the new conveyance. The space around the carrier pipe shall be supported at five feet intervals with spacers or be filled to the spring line with washed sand. The encasement pipe shall be centered on the crossing and both ends sealed with cement grout or manufactured seal.

.13 TESTING:

a. Force Mains

According to TNRCC criteria, all pressure sewer installations shall be tested for leakage by utilizing a hydrostatic test. Leakage shall be defined as the quantity of water that must be supplied into the pipe, or any valved section thereof, to maintain pressure within five pounds per square inch (5psi) of the specified test pressure after all air has been expelled from within the test section of pipe. The test pressure shall be either 25 pounds per square inch gauge (25 psig) or 1 1/2 times the maximum forcemain design pressure, whichever is larger. The maximum leakage is calculated by $L = (S)(D)(P^{1/2}) / 133,200$, where L is the leakage in gallon/hour; S is the length of test section pipe in feet; D is the inside diameter of pipe in inches; and P is the pressure in psi.

b. Gravity Collection Mains

1. Deflection Test

- A. After final backfill has been in place at least 30 days, a deflection test shall be performed on all flexible and semi-rigid pipe, and test shall be performed without benefit of mechanical pulling devices.
- B. No pipe shall exceed a deflection of 5%.
- C. A rigid ball or mandrel with diameter equal to 95% of inside diameter of pipe being tested shall be used.

2. Low-Pressure Air Test

- A. Test shall conform to the procedure described in ASTM C-828, ASTM C-924, ASTM F-1417 or other appropriate, approved procedure, except for test times.
- B. The minimum time allowable for the internal pressure to drop from 3.5 psig to 2.5 psig shall be computed by $T = 0.085(D)(K)/(Q)$; where T is the time for the internal pressure to drop 1 psig in seconds; K is $0.000419(D)(L)$, but not less than 1.0; D is the average inside diameter of the pipe in inches; L is the length of size D line being tested in feet; and Q is the rate of loss, or 0.0015 cubic feet per minute per square foot of internal surface.
- C. Since a K value of less than 1.0 shall not be used, the following table reflects the minimum testing time required to drop 1 psig based on the size of line and the length of line.

PIPE SIZE, D (inches)	MINIMUM TIME, T (min:secs)	MINIMUM LONGER LENGTH, L (feet)	TIME for LENGTH (seconds)
6	5:40	398	0.855L
8	7:34	298	1.520L
10	9:27	239	2.374L
12	11:20	199	3.419L
15	14:10	159	5.342L
18	17:00	133	7.693L
21	19:50	114	10.471L
24	22:40	100	13.676L

The test may be stopped if no pressure loss or leakage has occurred during the first 25% of the calculated testing time, but if any pressure loss or leakage has occurred within that time frame, the test shall continue for the entire test duration as outlined above or until failure.

END OF SECTION

Special Specification 4122

Thermoplastic Pipe



1. DESCRIPTION

Furnish and install thermoplastic pipe for constructing thermoplastic pipe culverts. Provide pipes of the sizes, types, design, and dimensions shown on the plans including the connections and joints to new or existing pipes, sewer, manholes, inlets, headwalls, and other appurtenances as required to complete the work.

2. MATERIALS

Furnish materials in accordance with the following:

- Item 400, "Excavation and Backfill for Structures,"
- Item 401, "Flowable Backfill," and
- Item 467, "Safety End Treatment."

Unless otherwise specified on the plans or in this Item, provide thermoplastic pipe and joint fittings that conform to the following:

2.1. High Density Polyethylene (HDPE) Pipe.

2.1.1. **General.** Provide high density polyethylene pipe and fittings meeting the requirements in AASHTO M 294.

2.1.2. **Raw Materials.** Provide HDPE pipes and fittings manufactured from virgin polyethylene (PE) compounds, conforming to the requirements of cell class 335400C as defined and described in ASTM D 3350, except that the maximum allowable carbon black content is 4%. Use PE compound meeting the environmental stress crack resistance according to the NCLS test set forth in AASHTO M 294.

2.1.3. **Designation of Type.** For HDPE pipes used in gravity flow drainage applications, use Type S (outer corrugated wall with smooth inner liner) or Type D (inner and outer smooth walls braced circumferentially or spirally with projections or ribs).

2.1.4. **Section Properties.** The minimum wall thickness of the inner walls of Type S pipe and inner the outer walls of Type D pipe is specified in Section 7.2.2 of AASHTO M 294. The pipe stiffness at 5% deflection, when determined in accordance with ASTM D 2412, is specified in Section 7.4 of AASHTO M 294.

2.2. Polyvinyl Chloride (PVC) Pipe.

2.2.1. **General.** Provide polyvinyl chloride pipes and fittings meeting the requirements of ASTM F 949.

2.2.2. **Raw Materials.** Provide PVC pipes and fittings manufactured from PVC compounds which conform to the requirements of cell class 12454as defined and described in ASTM D 1784.

2.2.3. **Section Properties.** The minimum wall thickness is specified in ASTM F 949, Table 1. The pipe stiffness at 5% deflection, when determined in accordance with ASTM D 2412, is specified in ASTM D 2412, Table 1.

Ensure the manufacturer performs the appropriate test procedures on representative samples of each type of pipe furnished, and verifies that the pipe complies with the specifications. Submit a certificate of compliance to the Engineer for review and approval. Provide a certificate including the following information: manufacturing plant, date of manufacture, pipe unit mass, material distribution, pipe dimensions, water inlet area, pipe stiffness, pipe flattening, brittleness, ASTM resin cell classification, and workmanship.

2.3. **Polypropylene Pipe.**

- 2.3.1. **General.** Provide polypropylene pipe and fittings meeting the requirements of AASHTO M330.
- 2.3.2. **Raw Materials.** Provide polypropylene compounds used to manufacture the pipe and fittings that meet the minimum properties in Section 6.1.1 of AASHTO M330. .
- 2.3.3. **Designation Type:** For polypropylene pipes used in gravity flow drainage applications use Type S (outer corrugated wall with smooth inner liner) or Type D (inner and outer smooth walls braced circumferentially or spirally with protections or ribs).
- 2.3.4. **Section Properties.** Provide the minimum wall thickness of the inner walls for Type S pipe and both the inner and outer walls of Type D pipe that meet the requirements in Section 7.2.2 of AASHTO M330. The pipe stiffness at 5% deflection will meet the requirements in Section 7.4 of AASHTO M330.
- 2.4. **Testing:** Ensure the manufacturer performs the appropriate test procedures on representative samples of each type of pipe furnished, and verifies that the pipe complies with the specifications. Submit a certificate of compliance to the Engineer for review and approval. Provide a certificate including the following information: manufacturing plant, date of manufacture, pipe unit mass, material distribution, pipe dimensions, water inlet area, pipe stiffness, pipe flattening, brittleness, ASTM resin cell classification, and workmanship.
- 2.5. **Inspection.** The quality of materials, the process of manufacture, and the finished pipe will be subject to inspection and approval by the Engineer at the manufacturing plant. In addition, the finished pipe will be subject to further random inspection by the Engineer at the project site before and during installation.
- 2.6. **Marking.** Furnish pipe clearly marked at maximum 12 ft. intervals and clearly mark fittings and couplings as follows:
- manufacturer's name or trade mark,
 - nominal size,
 - specification designation (e.g. AASHTO M 294, ASTM F 949, AASHTO M330),
 - plant designation code, and
 - date of manufacture.
- 2.7. **Joints.** Install the joints so that the connection of the pipe sections forms a continuous line free from irregularities in the flow line.
- Suitable joints are the following:
- Integral Bell and Spigot. Ensure the bell overlaps a minimum of 2 corrugations of the spigot end when fully engaged. Ensure the spigot end has an O-ring gasket that meets ASTM F 477.
 - Exterior Bell and Spigot. Fully weld the bell to the exterior of the pipe and overlap the spigot end so that the flow lines and ends match when fully engaged. Provide the spigot end with an O-ring gasket that meets ASTM F 477.
- Joint type definitions are the following:
- Soiltight Joints. Joints meeting the soiltightness definition in accordance with AASHTO *Standard Specifications for Highway Bridges*, Section 26.4.2.4.
 - Watertight Joints. Joints meeting the requirements of ASTM D 3212.
- If no joint type is specified, provide a watertight joint.

3. END SECTIONS

For pipe installations beneath and adjacent to roadways, provide Type II Precast Safety End Treatments. For cross drainage structures use TxDOT's PSET-SC standard and for parallel drainage structures use TxDOT's PSET-SP standard.

4. CONSTRUCTION

Construct the pipe at locations shown on the plans or as directed. Only trench installation of thermoplastic pipe will be permitted.

4.1. Excavation. Excavate in accordance with Item 400, "Excavation and Backfill for Structures."

Provide enough trench width for the pipe installation and to ensure enough working room to properly and safely place and compact materials placed under haunches of the pipe and other embedment materials. Provide a space between the pipe and trench wall that is greater than that of the compaction equipment used in the pipe zone.

When using Type I backfill, the minimum allowable trench width is the pipe outside diameter plus 12 in.

When using Type II or Type III backfill, the minimum allowable trench width is specified in Table 2.

Table 2
Minimum Trench Width

Nominal Pipe Diameter (in.)	Minimum Trench Width (in.)
18	39
24	48
30	57
36	66
42	75

4.2. Installing Pipe in Embankment. If any portion of the pipe projects above the existing ground level, construct an embankment as shown on the plans or as directed, for a minimum distance outside each side of the pipe location of 5 times the diameter and to a minimum elevation of 2 ft. above the top of the pipe. Next, excavate the trench to a width as specified in Section 4.1. In areas with a high water table, install the thermoplastic pipe in accordance with the manufacturer's recommendations to prevent pipe floatation.

4.3. Shaping and Bedding. Bed the pipe in a foundation of compacted cohesionless material, such as sand, crushed stone, or pea gravel, with a maximum allowable size of 3/8 in. Extend this material a minimum of 6 in. below the outermost corrugations or ribs, and carefully and accurately shape it to fit the lowest part of the pipe exterior for a minimum of 10% of the overall height. When requested by the Engineer, furnish a template for each size and shape of pipe to be placed for use in checking the shaping of the bedding. Provide a template consisting of a thin plate or board cut to match the lower half of the cross section of the pipe.

4.4. Handling and Storing Pipe. Store pipe above ground on adequate blocking. Always keep pipe clean and fully drained during storage. Store the PVC pipe and fittings out of direct sunlight. Handle and store thermoplastic pipe in accordance with the pipe manufacturer's instructions. Provide proper facilities for hoisting and lowering the pipe into the trench without damaging the pipe or disturbing the bedding or the walls of the trench.

4.5. Laying Pipe. Unless otherwise authorized, start laying pipe on the bedding at the outlet end with the separate sections firmly joined together. Hoist and lower sections of pipe into the trench without damaging the pipe or disturbing the bedding or the sides of the trench. Remove and re-lay any pipe that is not in alignment or that shows excessive settlement after laying, at no expense to the Department.

Lay multiple installation of thermoplastic pipe with the centerlines of the individual barrels parallel. Unless otherwise shown on the plans, maintain the clear distances between outer surfaces of adjacent pipes shown in Table 3.

Nominal Pipe Diameter (in.)	Min. Clear Distance Between Pipes (in.)
18	14
24	17
30	20
36	23
42	26

- 4.6. **Reusing Existing Appurtenances.** When existing appurtenances are specified on the plans for reuse, sever the portion to be reused from the existing culvert and move it to the new position previously prepared, by approved methods.

Provide connections conforming to the requirements for joining sections of pipes as indicated in this specification or as shown on the plans. Restore any headwalls and any aprons or pipes attached to the headwall that are damaged during moving operations, to their original condition, at no expense to the Department. The Contractor has the option to remove and dispose of the existing headwalls and aprons and construct new headwalls at no expense to the Department, in accordance with the pertinent specifications and design indicated on the plans or as furnished by the Engineer.

- 4.7. **Sewer Connections and Stub Ends.** Make connections of pipe sewer to existing sewers or sewer appurtenances as shown on the plans or as directed. Mortar or concrete the bottom of the existing structures, if necessary, to eliminate any drainage pockets created by the new connection. Where the sewer is connected into existing structures which are to remain in service, restore any damage to the existing structure resulting from making the connection to the satisfaction of the Engineer. Seal stub ends, for connections to future work not shown on the plans, by installing watertight plugs into the free end of the pipe. Include the cost for the above in cost of the pipe.

- 4.8. **Backfilling.** Backfill from the pipe bedding up to 1 ft. above the top of the pipe to provide necessary structural support to the pipe and control pipe deflection. Take care when placing and compacting the backfill material. Provide uniform backfill material and uniform compacted density throughout the length of the pipe, to avoid unequal pressure. Use care to ensure proper backfill under the pipe, in the haunch zone.

Provide backfill material meeting the following specifications:

- Type I – Provide backfill consisting of flowable fill in accordance with Item 401, "Flowable Backfill." Place the flowable backfill across the entire width of the trench and maintain a minimum depth of 12 in. above the pipe. Wait a minimum of 24 hr. before backfilling the remaining portion of the trench with other backfill material in accordance with Item 400, "Excavation and Backfill for Structures."
- Type II – Provide backfill consisting of cement stabilized backfill in accordance with Section 400.3.3.4, "Cement Stabilized Backfill." Place and compact cement stabilized backfill to completely fill any voids.
- Type III – Provide backfill consisting of hard, durable, clean granular material that is free of organic matter, clay lumps, and other deleterious matter. Provide backfill meeting the gradation requirements shown in Table 4. Place the backfill material along both sides of the completed structure to a depth of 12 in. above the pipe. Place the backfill in uniform layers a minimum 6 in. deep (loose measurement), wet if required, and thoroughly compact it between adjacent structures and between the structure and the sides of the trench. Until a minimum cover of 12 in. is obtained, only hand-operated tamping equipment will be allowed within vertical planes 2 ft. beyond the horizontal projection of the outside surfaces of the structure. If using Type III backfill, place filter fabric between the native soil and the backfill. Use filter fabric conforming to the requirements of DMS-6200, "Filter Fabric," Type 1.

**Table 4
Gradation Requirements for Type III Backfill Material**

Sieve Size	Percent Retained
	(Cumulative)
1 in.	0-5
7/8 in.	0-35
1/2 in.	0-75
3/8 in.	0-95
No. 4	35-100
No. 10	50-100
No. 200	90-100

- 4.9. **Protecting the Pipe.** Unless otherwise shown on the plans or permitted in writing, do not use heavy earth-moving equipment over the structure until a minimum of 4 ft. of permanent or temporary compacted fill is placed over the top of the structure.

Before adding each new layer of loose backfill material, until a minimum of 12 in. of cover is obtained, an inspection will be made of the inside periphery of the structure for local or unequal deformation caused by improper construction methods. Evidence of such will be reason for corrective measures as may be directed.

Remove and replace pipe damaged by the Contractor at no expense to the Department

5. MEASUREMENT

This Item will be measured by the foot. Measurement will be made between the ends of the pipe barrel along the flow line, not including safety end treatments. Safety end treatments will be measured in accordance with Item 467, "Safety End Treatment." Measurement of spurs, branches, or connections to existing pipe will be made from the intersection of the flow line with the outside surface of the pipe into which it connects.

Where inlets, headwalls, catch basins, manholes, junction chambers, or other structures are included in lines of pipe, the length of pipe tying into the structure wall will be included for measurement, but no other portion of the structure length or width will be included.

For multiple pipes, the measured length will be the sum of the lengths of the barrels.

This is a plans quantity measurement Item. The quantity to be paid for is the quantity shown in the proposal unless modified by Article 9.2., "Plans Quantity Measurement." Additional measurements or calculations will be made if adjustments of quantities are required.

6. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Thermoplastic Pipe" of the size and backfill type specified. This price is full compensation for furnishing, hauling, placing, and joining pipes; connecting to new or existing structures; moving and reusing headwalls where required; removing and disposing of portions of existing structures as required; cutting of pipe ends on skew; and labor, tools, equipment, and incidentals.

Excavation, shaping, bedding, and backfill will be paid for in accordance with Item 400, "Excavation and Backfill for Structures."

Type I backfill will be paid in accordance with Item 401, "Flowable Backfill."

Safety end treatment will be paid for in accordance with Item 467, "Safety End Treatment."