ADDENDUM NO. 3

AUGUST 21, 2019

CITY OF LUCAS

SINGLE PRESSURE PLANE FACILITIES
NORTH PUMP STATION
(Bid No. 019-19)

This Addendum forms a part of the Contract Documents and Specifications. Acknowledge receipt of the Addendum in the space provided in the Bid Form and on the outer envelope of the Bid Proposal. Failure to acknowledge receipt of this Addendum may subject Bidder to disqualification.

SPECIFICATIONS

1. In Section PF, Proposal Form, Bid Endorsement, add the attached form:

2. In Section PF, Proposal Form, add the following to the Notes:

   "13. The Bid Item for piping and valves outside the pump building and the Bid Item for the piping and valves inside and under the pump building shall include all piping and valves not included in another Bid Item."

   "14. The Bid Item for Site Work shall include all items not included in another Bid Item."

   "15. If other Manufacturers of Pumps, Motors, Valves, and Flow Meter can provide a product that meets the Specifications and is equal to the product of the Manufacturer(s) indentified for each of these items included in the Plans and Specifications, the other Manufacturer will be considered as an acceptable Manufacturer."

3. In Section T-3, Pumps, Paragraph 1.01, add the following:

   "Pumps shall be in compliance with NSF 61: ANSI/NSF 61 National Sanitation Foundation Standard 61, Drinking Water Treatment Components. All wetted components shall consist of materials and coatings that comply with the Safe Drinking Water Act and are NSF 61 certified. All paintings and coatings on wetted parts of pump (bowl, shaft, column, inside of head, etc.) shall be suitable and NSF 61 certified as approved for potable water service."

4. In Section T-3, Pumps, delete Pages 3 and 4 and replace with the attached Pages 3 and 4.

5. In Section T-17, Engine Generator, add Generac Industrial and LJ Power Generators as acceptable Manufacturers.

6. In Section T-17, Engine Generator, add the following:

   "Contractor shall furnish a standby generator set that will supply power to the following load profile:

   Max starting voltage dip – 21%
   Max starting frequency dip – 5%
   Provide 3 steps of starting load with 5 seconds time delay between steps
   Motor starters shall be "across the line" type

LOADS

Step 1 –	Running Loads			
	General Receptacles	1.8 kW	2.0	kVA
	Lighting Load	1.99 kW	2.09	kVA
	A/C Equipment	4.0 kW	4.76	kVA
	Miscellaneous	6.24 kW	7.8	kVA

Step 2 - Running Load
Pump #1 – 75hp

Step 3 - Running Load
Pump #2 – 75hp

Contractor shall provide proof of compliance with these stipulations before shop drawings or submittals are furnished to the Engineer for review."

7. In Section T-30, Motor Control Centers, add Siemens as an acceptable Manufacturer for the Motor Control Center and Motor Controllers and add ABB and Allen Bradley as acceptable manufacturers for the Motor Controllers.

8. In the Specifications, change any and all references from 90hp Motors to 75hp motors.

9. In the Appendix, add the following path to the City's Website: www.lucastexas.us, under Your Government, Code Enforcement, City Ordinances, Chapter 13 Utilities.

PLANS

10. On Sheet C-2, General Notes, add the following:

"55. Contractor shall furnish a standby generator set that will supply power to the following load profile:

Max starting voltage dip – 21%
Max starting frequency dip – 5%
Provide 3 steps of starting load with 5 seconds time delay between steps
Motor starters shall be "across the line" type

LOADS

Step 1 – Running Loads				
	General Receptacles	1.8 kW	2.0	kVA
	Lighting Load	1.99 kW	2.09	kVA
	A/C Equipment	4.0 kW	4.76	kVA
	Miscellaneous	6.24 kW	7.8	kVA

Step 2 - Running Load
Pump #1 – 75hp

Step 3 - Running Load
Pump #2 – 75hp

Contractor shall provide proof of compliance with these stipulations before shop drawings or submittals are furnished to the Engineer for review."

"56. If other Manufacturers of Pumps, Motors, Valves, and Flow Meter can provide a product that meets the Specifications and is equal to the product of the Manufacturer(s) indentified for each of these items included in the Plans and Specifications, the other Manufacturer will be considered as an acceptable Manufacturer."

11. In the Plans, change any and all references from 90hp Motors to 75hp motors.

12. On Sheet C-2, General Notes, add the following to Note 40:

    "All materials shall be domestically made."

13. Delete Sheet C-9 and replace with attached Sheet C-9.

14. Delete Sheet C-10 and replace with attached Sheet C-10.

15. Delete Sheet C-12 and replace with attached Sheet C-12.

BID ENDORSEMENT FOR ADD ALTERNATE BIDS #019-19, Single Pressure Plane Facilities, North Pump Station Project:

The Contractor shall use this form to indicate the total number of calendar days that he is bidding in case the City selects one or more of the Add Alternate Bids. If the City selects more than one Add Alternate Bid, then the calendar days shall not be sequential but shall be concurrent with each other. The Contractor hereby agrees to commence work within Ten (10) days after the date written notice to do so shall have been given to him, and to finally complete the same within _____ calendar days after the date of the written notice to commence work subject to such extensions of time as are provided by the General and Special Conditions. The work proposed to be done shall be accepted when fully completed and finished in accordance with the plans and specifications.

In the event of the award of a contract to the undersigned, the undersigned will furnish a Performance Bond and Payment Bond for the full amount of the contract. The undersigned certifies that the bid prices contained in this proposal have been carefully checked and are submitted as correct and final.

NOTE: Unit and lump sum prices must be shown in words and figures for each item listed in the Schedule of Values and in the event of discrepancy the words shall control.

The undersigned, in submitting this bid proposal and their endorsement of same, represents that they are authorized to obligate their firm, that they have read this entire bid proposal package, is aware of the covenants contained herein and will abide by and adhere to the expressed requirements. Submittals will be considered as being responsive only if entire Bid Package plus any/all attachments is returned with all blanks completed. **The price portion of the bid is not the only consideration in the award.**

The total days bid for this project cannot exceed 450 calendar days if any Alternate Bids are selected by the City.

A – Add Alternate Bids Amount Bid: $ _____

Total Days Bid: _____

B – Total Days Value: $ _____

_____
Contractor

By: _____
(please print name)

Signature: _____

Title: _____

Seal and Authorization
(If a Corporation)

_____
Address

_____
City, County, State and Zip

_____
Telephone Fax No.

E-Mail Address: _____

2.03 IMPELLER

Impeller shall be 316 stainless steel and dynamically balanced and shall be of the open or closed type and threaded to the shaft. The impellers may also be bronze as long as they are lead-free and zinc-free. (Documentation will be required.) The impellers shall have back pump out vanes for reduced thrust load and seal chamber pressure.

2.04 STUFFING BOX

Stuffing box to have a single spring John Crane type 21 mechanical seal.

2.05 SHAFT SLEEVE

Renewable stainless steel sleeves shall be provided which extend through stuffing box. They shall be securely keyed and held in place with shaft nuts incorporating set screws for locking purposes. Shaft sleeves shall be provided and sealed with "O" rings at impeller end.

2.06 SHAFT

The motor shaft shall be 316 stainless steel, ground to accurate dimensions and polished to a smooth surface. The shaft sleeve shall protect the shaft at the stuffing boxes. Sealing to protect against leakage under the shaft sleeve shall be accomplished by the use of "O" Ring type seals, located between the sleeve and the impeller. Shaft shall be adequately sized and designed to minimize deflection. The maximum run-out of shaft at stuffing box face shall not exceed .002" at shut off.

2.07 BEARINGS

If required, the bearings shall be double row anti-friction bearings. They shall be designed and sized for at least 300,000 hours calculated minimum L10 rated bearing life at shut off per ANSI B 3.15. Each bearing shall be capable of carrying both line and thrust type loads. The thrust bearings shall be securely held to the shaft by a bearing lock nut and washer.

2.08 BEARING BRACKETS

If required, the bearing brackets shall be separate from the pump casing and accurately machined and doweled to the casing. Grease lubrication shall be provided. Alemite fittings shall be provided to grease bearing. Pump design shall allow bearing to be removed without disturbing upper casing for inspection and replacement of bearings, packing and shaft sleeves.

2.09 CASING FEET

Deleted.

2.10 PUMP AND MOTOR COUPLINGS

Deleted.

2.11 PUMP ROTATION

Deleted.

2.12 PAINTING

1. Exterior surfaces of the pump and motor shall receive a base coat and prime coat per manufacturer's recommendations.

2. The inside of pump casing shall not be painted or coated.

2.13 OPERATING AND DESIGN REQUIREMENTS

1. Proposed pumps shall meet the following design requirements:

Rated Capacity at Full Speed (GPM)	900
Related Head at Full Speed (Feet)	200
Minimum Motor Horsepower	75
Motor Service Factor	1.15

PART 3 EXECUTION

3.01 INSTALLATION OF EQUIPMENT

1. The pump manufacturer shall furnish the services of an engineer to aid in the installation, testing and initial operation of the pumping units. The Contractor shall plan the work to effectively utilize the pump manufacturer engineer's services.

2. Each pumping unit shall be installed on its foundations in accordance with pump manufacturer's drawings and in the manner shown or indicated on the Drawings. The Contractor shall furnish all necessary anchor bolts. The anchor bolts with suitable nuts and washers shall conform to ASTM A307. Anchor bolts shall be set by means of a rigid template which shall be accurately positioned to securely hold against displacement during use.

3. Pump foundation shall be accurately located and neatly formed and finished where exposed.

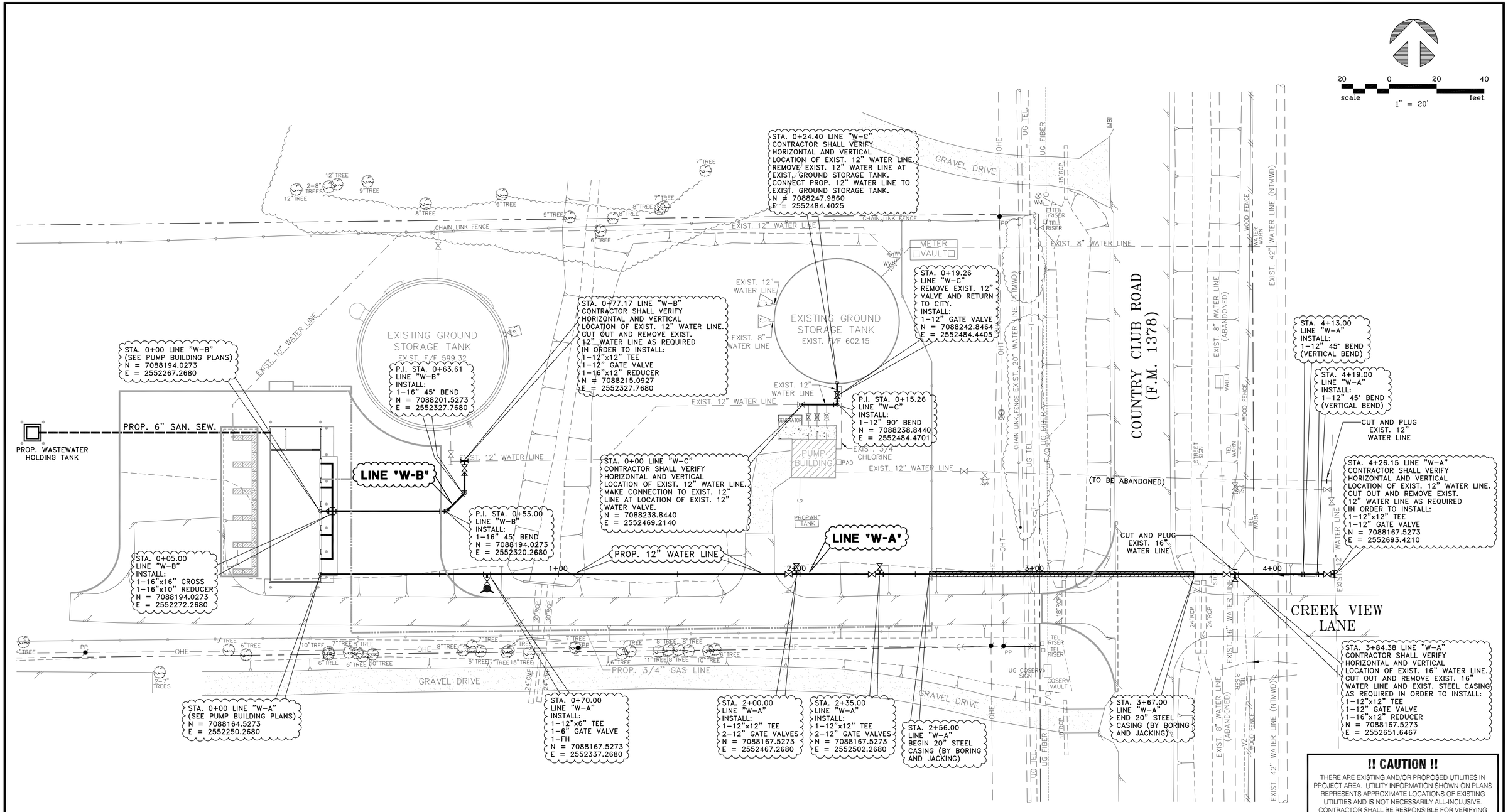
4. Field alignment shall be performed by the pump supplier. Final alignment to be ±0.0015 inches (.0030 inches total) or the coupling manufacturer's recommendation whichever is less in all directions. The pump supplier is to furnish labor, tools, shim stock and dial indicator to place units in final field alignment. Stainless steel shims shall be provided for motor alignment, Shimpack or approved equal.

5. Pump and motor setting and alignment shall be checked and approved by the pump manufacturer's engineer before grouting. The work shall be so conducted that the setting of the pumping unit will not be disturbed by the installation of piping.

6. In making piping connections to the pump, adequate cribbing or blocking shall be used to prevent the unsupported weight of pipe and fittings from being loaded, even temporarily, on the suction or discharge flanges.

3.02 PUMP ACCESSORIES

The Contractor shall furnish and install all pump accessories called for and all necessary piping. Drain



!! CAUTION !!

THERE ARE EXISTING AND/OR PROPOSED UTILITIES IN PROJECT AREA. UTILITY INFORMATION SHOWN ON PLANS REPRESENTS APPROXIMATE LOCATIONS OF EXISTING UTILITIES AND IS NOT NECESSARILY ALL-INCLUSIVE. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING EXACT LOCATIONS OF ALL EXISTING UTILITIES AND SHALL BE REQUIRED TO PROTECT UTILITIES TO AVOID DAMAGE.

PRIOR TO ANY EXCAVATION, CONTRACTOR SHALL CONTACT DIG-TESS, TEXAS ONE CALL, LONE STAR NOTIFICATION AND OTHERS AS REQUIRED TO LOCATE EXISTING UTILITIES.

CONTRACTOR SHALL ALSO CONTACT APPROPRIATE CITY UTILITY DEPARTMENT FOR FIELD LOCATES OF MUNICIPAL INFRASTRUCTURE 48 HOURS PRIOR TO CONSTRUCTION.

NO.	DATE	REVISION	REVIEWED
6			
5			
4			
3			
2			
1	8/16/19	REISSUED SHEET PER ADDENDUM NO. 3	MRB

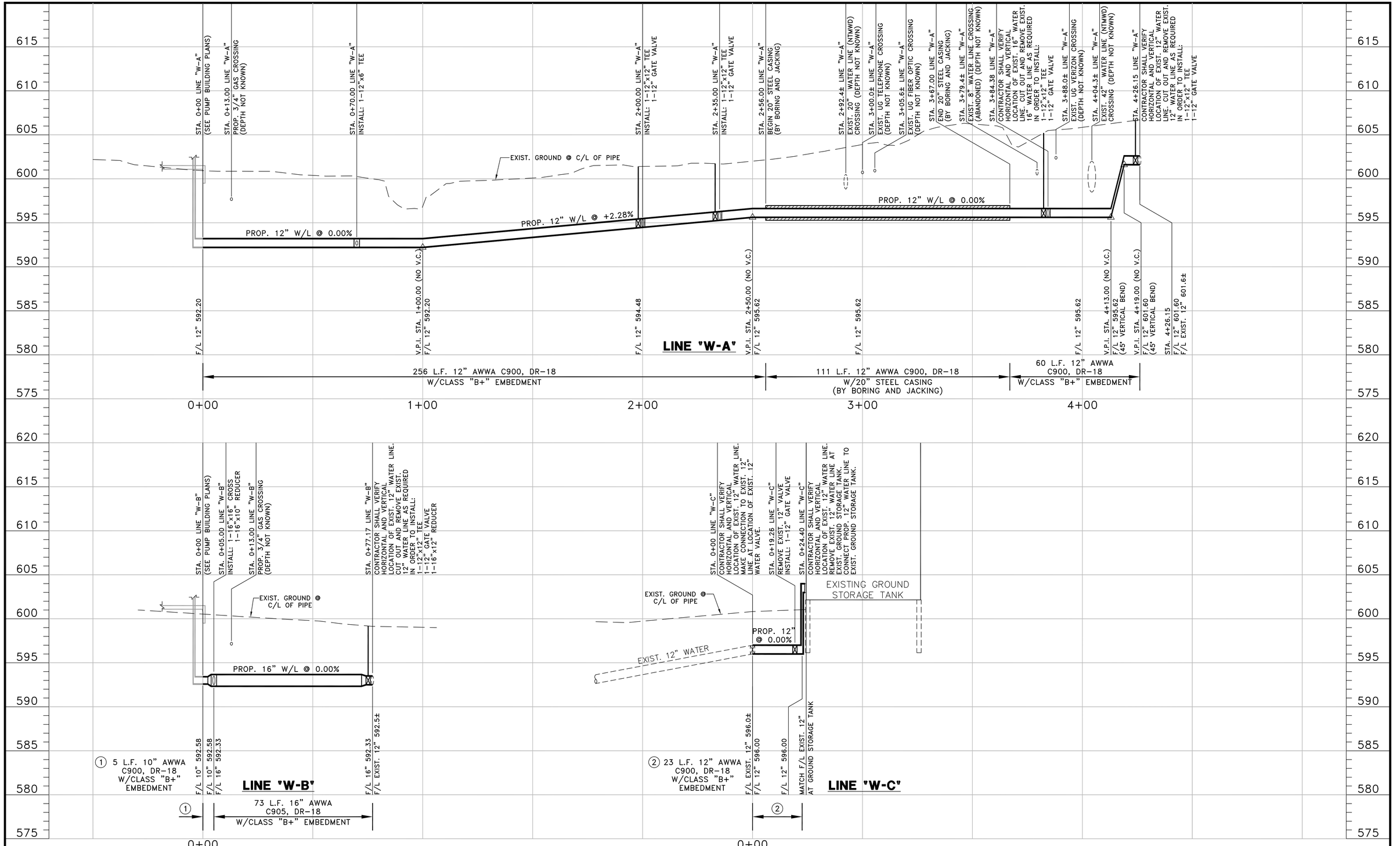
DRAWN: BW2
DESIGN: MRB
REVIEWED: JFW
SCALE: 1" = 20'
DATE: JULY 2019
DWG. NAME: 1811YARDPIPE-PS

BW2 ENGINEERS, INC.
1919 S. Shiloh Road
Suite 500, L.B. 27
Garland, Texas 75042
(972) 864-8200 (T) (972) 864-8220 (F)
Firm Registration No. F-5290

STATE OF TEXAS
MICHAEL R. BURGE
41290
REGISTERED PROFESSIONAL ENGINEER
8-16-19

WATER SYSTEM IMPROVEMENTS
SINGLE PRESSURE PLANE FACILITIES
NORTH PUMP STATION
YARD PIPING PLAN
CITY OF LUCAS

SHEET NO. C9
OF C22 SHEETS
JOB NO. 17-1811



NO.	DATE	REVISION	REVIEWED
6			
5			
4			
3			
2			
⚠	8/16/19	REISSUED SHEET PER ADDENDUM NO. 3	MRB

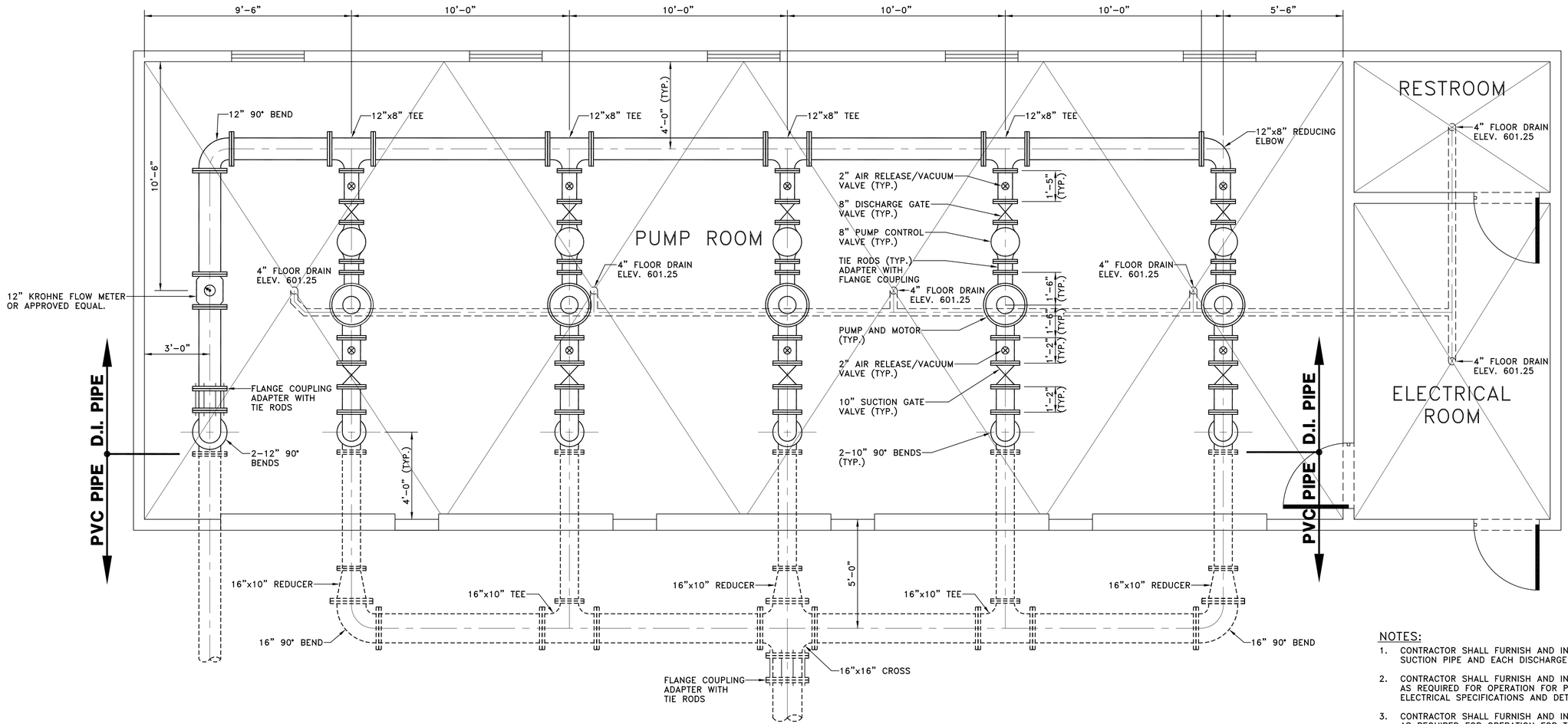
DRAWN: BW2
DESIGN: MRB
REVIEWED: JFW
SCALE: (H)1"=20', (V)1"=5'
DATE: JULY 2019
DWG. NAME: 1811PROFWTR-PS

BW2 ENGINEERS, INC.
1919 S. Shiloh Road
Suite 500, L.B. 27
Garland, Texas 75042
(972) 864-8200 (T) (972) 864-8220 (F)
Firm Registration No. F-5290

STATE OF TEXAS
MICHAEL R. BURGE
41290
REGISTERED
PROFESSIONAL ENGINEER
8-16-19

WATER SYSTEM IMPROVEMENTS
SINGLE PRESSURE PLANE FACILITIES
NORTH PUMP STATION
WATER LINE PROFILES
CITY OF LUCAS

SHEET NO. C10
OF C22 SHEETS
JOB NO. 17-1811



PUMP BUILDING PIPING PLAN

SCALE:3/8"=1'-0"

NOTES:

1. CONTRACTOR SHALL FURNISH AND INSTALL A SAMPLING TAP ON EACH SUCTION PIPE AND EACH DISCHARGE PIPE.
2. CONTRACTOR SHALL FURNISH AND INSTALL ALL ELECTRICAL COMPONENTS AS REQUIRED FOR OPERATION FOR PUMPS, LIGHTING FIXTURES, ETC. PER ELECTRICAL SPECIFICATIONS AND DETAILS.
3. CONTRACTOR SHALL FURNISH AND INSTALL ALL STRUCTURAL COMPONENTS AS REQUIRED FOR OPERATION FOR THE PUMP STATION FOUNDATION PER STRUCTURAL SPECIFICATIONS AND DETAILS.
4. AIR RELEASE/VACUUM VALVES (2" VALVES) SHALL BE FURNISHED AND INSTALLED ON THE SUCTION PIPES AND DISCHARGE PIPES (ONE EACH ON EACH SUCTION PIPE AND DISCHARGE PIPE). AIR RELEASE/VACUUM VALVES SHALL BE APCO ARV CLEAN WATER AIR RELEASE VALVES WITH A DRAIN LINE TO THE FLOOR DRAIN SYSTEM AND SHALL BE AS RECOMMENDED BY THE MANUFACTURER FOR THIS PARTICULAR APPLICATION.
5. ALL PIPING ABOVE THE FLOOR SLAB OF THE PUMP STATION SHALL BE APPROXIMATELY 2-FEET ABOVE THE SLAB, AS MEASURED BETWEEN THE CENTER LINE OF THE PIPE AND THE TOP OF THE SLAB.
6. CONTRACTOR SHALL FURNISH, ASSEMBLE, AND INSTALL EACH OF THE FIVE (5) PUMPING UNITS IN THE LOCATIONS SHOWN ON THIS SHEET.
7. THE FLOW METER SHALL BE AN ELECTROMAGNETIC FLOW METER BY KROHNE, MODEL NO. ENVIROMAG 2000 OR APPROVED EQUAL.
8. THE PUMP CONTROL VALVES SHALL BE 8" PUMP CONTROL VALVES MANUFACTURED BY CLA-VAL (MODEL NO. 60-11) OR APPROVED EQUAL.
9. THE GATE VALVES ON THE SUCTION PIPING AND DISCHARGE PIPING SHALL BE KENNEDY KENSEAL II R/W VALVES OR APPROVED EQUAL.
10. CONTRACTOR SHALL FURNISH AND INSTALL REDUCERS AS REQUIRED TO MATCH PUMP SUCTION PIPE AND DISCHARGE PIPE.

NO.	DATE	REVISION	REVIEWED
6			
5			
4			
3			
2			
1	8/16/19	REISSUED SHEET PER ADDENDUM NO. 3	MRB

DRAWN: BW2
DESIGN: MRB
REVIEWED: JFW
SCALE: 3/8" = 1'-0"
DATE: JULY 2019
DWG. NAME: 1811PUMP-PIPE-PS

BW2 ENGINEERS, INC.
1919 S. Shiloh Road
Suite 500, L.B. 27
Garland, Texas 75042
(972) 864-8200 (T) (972) 864-8220 (F)
Firm Registration No. F-5290

STATE OF TEXAS · MICHAEL R. BURGE · 41290 · REGISTERED PROFESSIONAL ENGINEER

WATER SYSTEM IMPROVEMENTS
SINGLE PRESSURE PLANE FACILITIES
NORTH PUMP STATION
PUMP BUILDING PIPING PLAN
CITY OF LUCAS

SHEET NO. C12
OF C22 SHEETS
JOB NO. 17-1811