



CITY OF PLACERVILLE, CALIFORNIA

DEVELOPMENT SERVICES DEPARTMENT ENGINEERING DIVISION

MADRONE AND GIOVANNI SEWER LIFT STATIONS REHABILITATION PROJECT CITY PROJECT No. 40330

ADDENDUM No. 3
September 28, 2017

This addendum shall become a part of the Contract Documents (Proposal, Measurement and Payment, Plans, and Pothole Data) and modify them as stated below. The Bidder shall acknowledge receipt of the addendum on Page 4 of the Proposal.

The Contract Documents have been modified as follows:

SECTION 00020 – NOTICE TO BIDDERS – REMOVE AND REPLACE “COMPLETION OF WORK SECTION” TO READ

COMPLETION OF WORK: All work shall for the base bid shall be completed in 30 working days. If alternative bid is also selected, all work shall be completed in 50 working days. Work is anticipated to occur during normal working hours from the hours of 8 am to 5 pm, Monday through Friday. No work shall be performed by the Contractor on Saturday or Sunday, or City designated holidays.

SECTION 00310 – PROPOSAL

Remove and replace Pages 3 and 4 of the Proposal (Bid Schedule) with the attached revised pages.

- Description for Bid Item No. 1 has been changed to “Mobilization/Demobilization/BMPs”. See changes to Measurement and Payment section below for bid item descriptions.
- Description of Bid Item Nos. 6 and 8 have been updated
- Bid Item 13 – Access Road Improvements has been added to the Base Bid
- Bid Item 6 – Connection to Existing System – Quantity has been revised from 2 to 3 in bid schedule

SECTION 01200 – MEASUREMENT AND PAYMENT

REVISE BID ITEM 1 TO READ –

ITEM 1 – MOBILIZATION/DEMOBILIZATION/BMPS

Payment for mobilization shall be at the lump sum price bid and shall include mobilization and demobilization, and all costs related to the use, security, maintenance and restoration of the designated contractor construction working and staging area. **This item includes all costs associated with general site best management practices for storm water control including preparation of a Water Pollution Control Program (see Section 01090 for additional requirements).** 40 percent shall be paid with the first pay request. The remaining 60 percent shall be paid with the last pay request upon completion of

the project, including site restoration and cleanup of all staging areas **(including removal of all temporary BMPs)**. No more than 10% of the total bid will be allowed for this item.

REVISE BID ITEM 6 TO READ –

ITEM 6 – CONNECTION TO EXISTING SYSTEM

Measurement and Payment shall be at the lump sum bid price and shall include installation of the necessary connections for interim and ultimate conditions to the existing sewer main including, but not limited to, equipment, materials, labor and all other appurtenances as necessary to complete this work including tees, valves, reducers, miscellaneous piping, fittings, nut, bolt and gasket sets, valve box, valve riser, ductile iron spools, flex couplings, gripper rings, restraint fittings, locating wire, trenching, bedding, pipe laying, thrust blocking, backfilling, compacting, compaction testing, controlled low-strength material backfill (CLSM), concrete or other import, structural section replacement, temporary and permanent asphalt replacement, landscaping restoration or concrete replacement due to construction activities, complete and in place.

As noted on the plans the Contractor is responsible to determine the final number, type and material of fittings necessary to connect to the existing pipeline. All costs associated with determining and making the final connection shall be included in this line item.

REVISE BID ITEM TO READ

ITEM 8 – SEWER WET-WELL AND PUMP IMPROVEMENTS

Measurement and Payment shall be at the lump sum bid price and shall include but not limited to, equipment, labor and materials for furnishing and installation of all necessary piping, connections, coatings, structures (including wet-well), submersible sewer pumps, reinforced concrete pad, tees, reducers, elbows, fittings, restraints, drains, vents, locating wire, nuts, bolts, gaskets, placement, excavation, rock excavation, bedding, backfilling, compacting of backfill, engineered fill or aggregate base, dewatering, thrust blocking, flushing and testing, temporary and permanent pavement, concrete replacement, landscaping, site restoration and all incidental work in the installation of the sewer lift station complete and in place and no additional compensation will be allowed therefore. **Bid item includes all work associated with the Safety Davit Base and Equipment Davit Base.** Attention is directed to Section 9-1.16B Schedule of Values per the State Standard Specifications

ADD THE FOLLOWING

ITEM 13 – ACCESS ROAD IMPROVEMENTS (GIOVANNI SITE ONLY)

Measurement and Payment By the Lump Sum. Includes all labor, equipment and materials for providing a stabilized construction entrance and exit along the existing access easement leading to the Giovanni site. The Contractor shall provide a construction access that sufficiently reduces tracking out of the site. Bid item shall include all costs for maintenance and replacement of materials as necessary for the duration of the project. See limits of existing easement included as an attachment to these specifications.

SECTION 02200 – EARTHWORK – REVISE AS SHOWN:

1.01 B. Related Sections:

1. related Work specified elsewhere:

e. ~~Steel Pipe: Section 15061~~

3.02 M. Excavation:

1. Roadways

- a. Excavate unsuitable material from subgrade.
- b. After shaping, roll subgrade compacted to 95 percent of relative compaction based on the ASTM D1557 test method, to a minimum of 6 inches below subgrade.

2. Hard Rock Excavation

- a. Excavation of unrippable rock requiring a larger excavator and/or hydraulic hammering will be paid for as an additional cost above and beyond the cost for excavation and trenching for ordinary excavation. The City Representative will determine when rock excavation for unrippable rock is required per the definition below. Contractor shall refer to the limited seismic refraction investigation report and geological memorandum included in Appendix A for specifics on geological conditions.
- b. Definition of Rock: Rock encountered during the course of excavation which is sufficiently hard to cause refusal to appropriately sized equipment as determined by the City Representative and Contractor shall be deemed inexcavatable. Rock deemed inexcavatable shall be removed by substantial means such as reciprocating hydraulic hammers and shall conform to this specification.

SECTION 01140 WORK RESTRICTIONS – REMOVE AND REPLACE SECTION 3 WITH

3.0 WORK MILESTONE

Work on Giovanni Lift Station shall be started as first priority. See also Section titled COMPLETION OF WORK for schedule.

ADD SECTION 06600 – FIBERGLASS WET WELL (SEE ATTACHED)

SECTION 15060 H.5 – PIPE AND PIPE FITTINGS – REVISE AS SHOWN:

H. PVC Pressure pipe (C900), item 5 is revised to read:

5. All joints to be restrained
 - a. Internal locking gaskets are not acceptable.
 - b. Provide EBAA Iron Series 1900 Split Serrated Restraint Harness, or equal.

ADD SECTION 15062 DUCTILE IRON PIPING (SEE ATTACHED)

PLANS

The following Plan Sheets have been revised and are attached. A brief description of the major changes made on each sheet is provided below.

1. Sheet 2 – General Notes

- a. Added Project Notes 14, 15 and 16 to read:

14. CONTRACTOR SHALL OBTAIN AN APPROVED ASBESTOS MITIGATION PLAN. IF SERPENTINE ROCK IS ENCOUNTERED CONTACT THE CITY ENGINEER IMMEDIATELY.

15. IF UNUSUAL AMOUNTS OF STONE, BONE OR ARTIFACTS ARE FOUND, STOP WORK AND CONTACT THE CITY IMMEDIATELY.

16. THE CONTRACTOR SHALL RECORD THE POSITION, DEPTH AND DIRECTION OF ANY FACILITIES UNCOVERED DURING CONSTRUCTION AS WELL AS ANY MATERIAL CHANGES OR OTHER INFORMATION WHICH IS REQUIRED TO BE SHOWN ON THE RECORD DRAWINGS.

2. Sheet 3 – Site Plan – Giovanni Lift Station

- a. Added rip-rap and flared end to drainage outlet.
b. Added notes 10, 11, 12, 13, and 14
c. Added notes and callouts

3. Sheet 4 – Site Plan – Madrone Lift Station

- a. Added notes 9, 10, 11 and 12
b. Added notes and callouts

4. Sheet 5 – Typical Lift Station

- a. Added notes regarding the plug valve, engineered fill and pump support

5. Sheet 6 – Details 1

- a. Removed Typical Sewer Trench Detail
b. Added Paving Detail (Detail 4)

6. Sheet 7 – Details 2

- a. Removed Gravel Road Detail and Slab on Grade Detail

7. Sheet 8 – Standard Details

- a. Revised Typical Trench Detail callout

ATTACHMENTS

ATTACHMENT 1 – Specification Modifications

- Section 00310 – Proposal
- Section 06600 – Fiberglass Wet Well
- Section 15062 – Ductile Iron Piping

ATTACHMENT 2 – Plan Modifications

- Sheet 2 – General Notes
- Sheet 3 – Site Plan – Giovanni Lift Station
- Sheet 4 – Site Plan – Madrone Lift Station
- Sheet 5 – Typical Lift Station
- Sheet 5A - Paving Plan for Giovanni Lift Station (New sheet)
- Sheet 6 – Details 1
- Sheet 7 – Details 2
- Sheet 8 – Standard Details

Contractors are required to base their bid on the plans, specifications and any issued addenda. To do otherwise shall be at the contractor's own risk.

END OF ADDENDUM NO. 3

**SECTION 00310
PROPOSAL**

**To: CITY OF PLACERVILLE,
COUNTY OF EL DORADO,
STATE OF CALIFORNIA**

For the construction of

**MADRONE AND GIOVANNI SEWER LIFT STATIONS REHABILITATION PROJECT
PROJECT No. 40330**

Bid Opening: October 5, 2017 at 4:00 p.m.

NAME OF BIDDER

BUSINESS POST OFFICE BOX

CITY, STATE, ZIP

BUSINESS STREET ADDRESS
(PLEASE INCLUDE EVEN IF POST OFFICE BOX USED)

CITY, STATE, ZIP

TELEPHONE NO. AREA CODE (.....)

FAX NO. AREA CODE (.....)

The work for which this Proposal is submitted is for the construction in accordance with these Contract Documents (including the payment of not less than the State general prevailing wage rates or Federal minimum wage rates set forth herein), the Project Plans described below, including any addenda thereto, the Contract annexed hereto, and also in accordance with the California Department of Transportation Standard Plans and Standard Specifications, and the Labor Surcharge and Equipment Rental Rates in effect on the date the work is accomplished, and in accordance with the General Prevailing Wage rates. The Project Plans and Contract Documents for the work to be done are entitled:

**MADRONE AND GIOVANNI SEWER LIFT STATIONS REHABILITATION PROJECT
PROJECT No. 40330**

Bids are to be submitted for the entire work, including additive alternates, if any. The amount of the bid for comparison purposes will be the total of all the base and optional (alternative) bid items. The City reserves the right to award the project to include the base bid only, the alternate bid only or the base and alternate bid together.

The Bidder shall set forth for each unit basis item of work a unit price and a total for the item, and for each lump sum item a total for the item, all in clearly legible figures in the respective spaces provided for

this purpose. In the case of unit basis items, the amount set forth under the "Item Total" column shall be the product of the unit price bid and the estimate quantity for the item.

In case of discrepancy between the item price and the total set forth for a unit basis item, the unit price shall prevail, except as provided in (a) or (b), as follows:

- (a) If the amount set forth as a unit price is unreadable or otherwise unclear, or is omitted, or is the same as the amount as the entry in the item total column, then the amount set forth in the total column for the item shall prevail and shall be divided by the estimate quantity for the item and the price thus obtained shall be the unit price.
- (b) (Decimal Errors) If the product of the entered unit price and the estimated quantity is exactly off by a factor of ten, one hundred, etc., or one-tenth, or one-hundredth, etc., from the entered total, the discrepancy will be resolved by using the entered unit price or item total, whichever most closely approximates percentage wise the unit price or item total in the Department's Final Estimate of Cost.

If this Proposal is accepted and the undersigned Bidder shall fail to enter into the Contract and furnish the two bonds in the sums required by the State Contract Act, with surety satisfaction to the City of Placerville within eight days, not including Sundays and legal holidays, after the bidder has received notice from the City of Placerville that the Contract has been awarded, the City of Placerville may, at its option, determine that the Bidder has abandoned the Contract, and thereupon this Proposal and the acceptance thereof shall be null and void and the forfeiture of such security accompanying this Proposal shall operate and the same shall be the property of the City of Placerville.

The undersigned, as Bidder, declares under penalty of perjury under the laws of the State of California that the only persons or parties interested in this Proposal, as principals, are those named herein; that this Proposal is made without collusion with any other person, firm, or corporation; that he has carefully examined the location of the proposed work, the annexed proposed form of Contract, and the Plans therein referred to; and he proposes, and agrees if this Proposal is accepted, that he will contract with the City of Placerville, in the form of the copy of the Contract annexed hereto, to provide all necessary machinery, tools, apparatus, and other means of construction, and to do all the work and furnish all the materials specified in the Contract, in the manner and time therein prescribed, and according to the requirements of the Engineer as therein set forth, and that he will take in full payment therefore the following item prices, to wit:

CONTRACTOR'S BID AND BID PRICE SCHEDULE

ADDENDUM #1

**MADRONE AND GIOVANNI SEWER LIFT STATIONS REHABILITATION PROJECT
PROJECT No. 40330**

BASE BID- GIOVANNI SEWER LIFT STATION REHABILITATION

ITEM NO.	ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY	ITEM UNIT PRICE	TOTAL
1	Mobilization/ Demobilization/ BMPs	LS	1		
2	Site Safety/ Traffic Control Plan	LS	1		
3	Potholing Existing Facilities	LS	1		
4	Clearing and Grubbing	LS	1		
5	Demolition and Abandonment	LS	1		
6	Connection to Existing System	LS	2		
7	New sewer pipeline	LF	250		
8	Sewer wet-well and pump improvements	LS	1		
9	Site drainage improvements	LS	1		
10	Site Electrical	LS	1		
11	Miscellaneous site improvements	LS	1		
12	Supplemental Work	LS	1	\$50,000	\$50,000
13	Access Road Improvements	LS	1		

ALTERNATIVE BID ITEM – MADRONE SEWER LIFT STATION REHABILITATION

ITEM NO.	ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY	ITEM UNIT PRICE	TOTAL
1	Mobilization/ Demobilization	LS	1		
2	Site Safety/ Traffic Control Plan	LS	1		
3	Potholing Existing Facilities	LS	1		
4	Clearing and Grubbing	LS	1		
5	Demolition and Abandonment	LS	1		
6	Connection to Existing System	LS	3		
7	New sewer pipeline	LF	250		
8	Sewer wet-well and pump improvements	LS	1		
9	Site drainage improvements	LS	1		
10	Site Electrical	LS	1		

ITEM NO.	ITEM DESCRIPTION	UNIT OF MEASURE	ESTIMATED QUANTITY	ITEM UNIT PRICE	TOTAL
11	Miscellaneous site improvements	LS	1		
12	Supplemental Work	LS	1		

BASE BID AMOUNT (GIOVANNI LIFT STATION)

_____ Dollars and _____ Cents.

AMOUNT IN WRITING

ALTERNATIVE BID AMOUNT (MADRONE LIFT STATION)

_____ Dollars and _____ Cents.

AMOUNT IN WRITING

TOTAL BID AMOUNT (BOTH STATIONS)

_____ Dollars and _____ Cents.

AMOUNT IN WRITING

Sign Here⇒ _____ Date: _____
 CONTRACTOR

 PRINT SIGNATURE NAME AND TITLE OF BIDDER

(NOTICE: Bidder's failure to execute the questionnaires and statements contained in this Proposal as required by applicable laws and regulations, or the determinations by City of Placerville based upon those questionnaires and statements, may prohibit award of the subject Contract to the Bidder.)

BIDDER'S PROOF OF DIR REGISTRATION

The Bidder agrees that its Proof of DIR Registration pursuant to Labor Code Section 1725.5 is attached hereto and made a condition of this bid.

SUPPLEMENTAL INFORMATION TO BE SUBMITTED AFTER BID OPENING AND MADE A CONDITION OF THE BID

The Bidder understands that a Bidder will be ineligible for an award of Contract unless the Bidder has furnished the required financial credit rating information required in Item D of Section 00420-CERTIFICATION OF BIDDER'S EXPERIENCE AND QUALIFICATIONS within three (3) business days after the receipt of bids.

PUBLIC CONTRACT CODE SECTION 10285.1 STATEMENT

In conformance with Public Contract Code Section 10285.1 (Chapter 376, Stats. 1985), the bidder hereby declares under penalty of perjury under the laws of the State of California that the bidder has , has not been convicted within the preceding three years of any offenses referred to in that section, including any charge of fraud, bribery, collusion, conspiracy, or any other act in violation of any state or Federal antitrust law in connection with the bidding upon, award of, or performance of, any public works contract, as defined in Public Contract Code Section 1101, with any public entity, as defined in Public Contract Code Section 1100, including the Regents of the University of California or the Trustees of the California State University. The term "bidder" is understood to include any partner, member, officer, director, responsible managing officer, or responsible managing officer, or responsible managing employee thereof, as referred to in Section 10285.1.

NOTE The bidder must place a check mark after "has" or "has not" in one of the spaces provided. The above Statement is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Statement. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

PUBLIC CONTRACT CODE SECTION 10162 QUESTIONNAIRE

In conformance with Public Contract Code Section 10162, the Bidder shall complete, under penalty of perjury, the following questionnaire:

Has the bidder, any officer of the bidder, or any employee of the bidder who has a proprietary interest in the bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal state, or local government project because of a violation of law or a safety regulation?

Yes No

If the answer is yes, explain the circumstances in the following space:

PUBLIC CONTRACT CODE SECTION 10232 STATEMENT

In conformance with Public Contract Code Section 10232, the Contractor hereby states, under penalty of perjury, that no more than one final unappealable finding of contempt of court by a federal court has been issued against the Contractor within the immediately preceding two-year period because of the Contractor's failure to comply with an order of a federal court which orders the Contractor to comply with an order of the National Labor Relations Board.

NOTE: The above Statement and Questionnaire are part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Statement and Questionnaire. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

**NONCOLLUSION AFFIDAVIT
(Title 23 United States Code Section 112 and
Public Contract Code Section 7106)**

In conformance with Title 23 United States Code Section 112 and Public Contract Code Section 7106, the bidder declares that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder, or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

NOTE: The above Noncollusion Affidavit is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Noncollusion Affidavit. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

BUSINESS AND PROFESSIONS CODE SECTION 7028.15 STATEMENT

In accordance with the Business and Professions Code Section 7028.15, the Contractor hereby states, under penalty of perjury, that he/she is licensed in accordance with an act providing for the State of California registration of Contractors,

License No. _____, Classification(s) _____
Expiration Date _____

By my signature on this proposal, I certify, under penalty of perjury under the laws of the State of California, that the foregoing questionnaire and statements of Public Contract Code Section 10162, 10232, and 10285.1 are true and correct and that the bidder has complied with the requirements of Section 8103 of the Fair Employment and Housing Commission Regulation (Chapter 5, Title 2 of the California Administrative Code). By my signature on this proposal, I further certify, under penalty of perjury under the laws of the State of California and the United States of America, that the Noncollusion Affidavit required by title 23 United States Code Section 11 2 and Public Contract Code Section 7106 are true and correct.

Date: _____

SIGNATURE AND TITLE OF BIDDER _____

NAME OF FIRM _____

Accompanying this proposal is _____
(NOTICE: INSERT THE WORDS "CASH (\$_____)", "CASHIER'S CHECK",
"CERTIFIED CHECK", OR "BIDDER'S BOND", AS THE CASE MAY BE)
in amount equal to at least ten percent (10%) of the total of the bid.

The names of all persons interested in the forgoing proposal as principals are as follows:

IMPORTANT NOTICE: If the Bidder or other interested person is a corporation, state legal name of corporation and place of incorporation, also names of the president, secretary, treasurer, and executive officer thereof; if a partnership, state name of partnership, also names of all individual partners; if Bidder or other interested person is an individual, state first and last names in full.

Licensed in accordance with an act providing for the registration of Contractors,

License No. _____ Classification(s).....

!(A copy of the afore-referenced license must be attached hereto)!

ADDENDA:

RECEIPT OF COPIES OF THE FOLLOWING ADDENDA(S) IS HEREBY ACKNOWLEDGED.

<u>ADDENDUM NO.</u>	<u>BIDDER'S SIGNATURE</u>	<u>DATE ACKNOWLEDGED</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

By my signature on this proposal, I certify, under penalty of perjury under the laws of the State of California, that the foregoing questionnaire and statements of Public Contract Code Sections 10162, 10232, and 10285.1 are true and correct and that the Bidder has complied with the requirements of Section 8103 of the Fair Employment and Housing Commission Regulations (Chapter 5, Title 2 of the California Administrative Code). By my signature on this Proposal, I further certify, under penalty of perjury under the laws of the State of California and the United States of America that the Noncollusion Affidavit required by Title 23 United States Code, Section 112 and Public Contract Code Section 7106 are true and correct.

The person or persons executing this Proposal on behalf of a corporation or partnership shall be prepared to demonstrate by resolution, article, or otherwise, that such person is or that such persons are appropriately authorized to act in these regards for such corporation or partnership. Such authority shall be demonstrated to the satisfaction of the City of Placerville.

If the signature is by an agent other than an officer of a corporation or a member of a partnership, a power of attorney authorizing said act by the agent on behalf of his principal shall be submitted with the bid; otherwise, the bid may be disregarded as irregular and unauthorized.

The Bidder's execution on the signature portion of this Proposal shall constitute an endorsement and execution of those affidavits, declarations, and certifications which are part of this Proposal.

Executed this _____ day of _____, 2017
at _____ County, State of _____

SIGN HERE ⇨ _____

Name and Title of Bidder _____

Name of Firm _____

***** END OF PROPOSAL *****

CITY OF PLACERVILLE

BIDDER'S BOND
! (this form MUST be used) !

KNOW ALL PEOPLE BY THESE PRESENTS, THAT WE

_____, as PRINCIPAL, and _____ as Surety are held and firmly bound unto the City of Placerville (Obligee) in the penal sum of TEN (10) PERCENT OF THE AMOUNT OF THE TOTAL BID PRICE of the Principal above named, submitted by said Principal to the Obligee for the work, for the payment of which sum in lawful money of the United States, well and truly to be made to the Obligee, we the Principal and surety bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents. In no case shall the liability of the surety hereunder exceed the sum of

\$ _____

THE CONDITION OF THIS OBLIGATION IS SUCH, THAT:

WHEREAS, the Principal has submitted the above-mentioned bid to the Obligee, as aforesaid, for certain construction specifically described as follows, for which bids are to be opened at Placerville, El Dorado County, California, on October 5, 2017 at 4:00 p.m. for the construction of the

MADRONE AND GIOVANNI SEWER LIFT STATIONS REHABILITATION PROJECT
PROJECT No. 40330

NOW, THEREFORE, if the aforesaid Principal is awarded the Contract and, within the time and manner required under the Contract Documents, after the prescribed forms are presented to him for signature, enters into a written contract, in the prescribed form, in accordance with the Bid, and files two bonds with the City of Placerville, one to guarantee faithful performance and the other to guarantee payment for labor and materials, as required by law, then this obligation shall be null and void; otherwise, it shall remain in full force and virtue.

In the event suit is brought upon this bond by the Obligee and judgment is recovered, the Surety shall pay all costs incurred by the Obligee in such suit, including a reasonable attorney's fee to be fixed by the Court.

IN WITNESS WHEREOF, we have set our hands and seals on this _____ day of _____ 2017.

SIGNATURES

(SEAL) _____ Principal

(SEAL) _____ Surety

Address: _____

(NOTE: Signature of those executing for the Surety shall be properly acknowledged, and accompanied by a Certificate of acknowledgment.)

SECTION 06600
FIBERGLASS WET WELL

PART 1 - GENERAL

1.01 QUALITY ASSURANCE

- A. Acceptable Manufacturer: Flygt TOPS, or equal
- B. Governing Standards, as applicable:
 - 1. American Society for Testing and Materials (ASTM) Standards:
 - 2. ASTM D883: Standard Terminology Related to Plastics
 - 3. ASTM D3753: Standard Specifications for Glass-Fiber-Reinforced Polyester Manholes and Wet Wells
 - 4. ANSI / AWWA D120-09: AWWA Standard for Thermosetting Fiberglass-Reinforced Plastic Tanks

1.02 SCOPE OF WORK

- A. The product listed under this section shall include all labor, materials and equipment necessary to furnish a FRP wet well. Unless otherwise indicated the terminology used in this specification shall be in accordance with the definitions in the American Society for Testing and Materials (ASTM) designation D883 – Standard Terminology Related to Plastics.

1.03 SUBMITTALS

- A. Shop Drawings: The manufacturer shall supply to engineer, contractor, and / or owner, a complete set of scale drawings detailing dimensions of heights, diameter, elevations to invert, pipe sizes and any other necessary details.
- B. Calculations:
 - 1. The manufacturer shall supply the owner buoyancy calculations assuming a flooded condition at finish grade for an empty wet well.
 - 2. Structural design and analysis submittals will include analysis showing a minimum safety factor or 3:1 for longitudinal / axial buckling of the wet well side wall.

PART 2 - PRODUCTS

2.01 FIBERGLASS REINFORCED PLASTIC (FRP) WET WELL

- A. Loading Conditions
 - 1. The wet well shall be designed and constructed to withstand or exceed wall collapse and buckling with a 3:1 safety factor.
 - 2. Wet well bottom shall not have more than 1/8 inches of deflection at its center with the vessel empty and water table located at finished grade.
 - 3. Wet well, when installed according to wet well manufacturers current Wet Well Installation Instructions and Operating Guidelines, shall support accessory equipment – such as submersible pumps, rails, valves, and ladders as shown on drawings.
- B. Materials

1. Wet well shall be manufactured with 100% premium catalyzed isophthalic resin and glass fibers. No fillers or extenders shall be used.
 2. The resin shall be suitable for continuous immersion in sewage in the pH range of 3 to 11 and concentrations of H²S found in municipal sewer systems. Resins shall be suitable for sulfuric acid concentrations to 20% of solution in waste stream.
- C. Wet Well Dimensions
1. Wet well shall have nominal diameter of 72 inches.
 2. See drawings for depths.
- D. All inside surfaces shall be smooth and free of cracks and crazing. The inside surface will be pigmented or gel coated to a bright white finish. All surfaces other than those made in contact with the mold surface shall be coated with air-inhibited resin or gelcoat, this includes any cut edges of laminate.

2.02 ACCESSORIES AND FEATURES

A. Wet Well Top Flange

1. The wet well top flange shall be designed and built to support a 300 lb. vertical foot traffic load. Flange dimensions shall be a minimum of 3.0 inches wide or greater.

B. Anti - Flotation Flange

1. The station shall be provided with a minimum of two (2) anti-flotation rings located near the bottom of the station.
2. The anti-flotation flange shall be an integral part of the station and of sufficient in design to withstand the forces acting upon the station due to the subsoil water pressure.

C. Piping Stub-outs and Connections

1. Piping stub-outs shall be located in the field and meet manufacturer's requirements.

D. Pump Mounting Base and Studs

1. The pump base mounting studs shall be ¾-inch minimum stainless steel threaded studs.
2. The pump mounting base detail shall be provided by the pump manufacturer.

E. Wet well penetrations

1. All penetrations to the wet well shall be designed/approved by the manufacturer.
2. Seal all penetrations
3. The vactor truck extension support beam connections shall be designed by the manufacturer. The epoxy anchor detail shown on the drawings may be modified as required by the manufacturer to ensure a watertight facility.

PART 3 - TESTING, INSTALLATION & WARRANTY

3.01 TESTING & INSTALLATION

- A. Wet well shall be installed and tested according to the manufacturers wet well installation instructions and operating guidelines.

3.02 CERTIFICATION AND DESIGN

- A. The manufacturer shall verify that the wet well has been sampled, tested and inspected in accordance with this specification and meets all requirements.
 - 1. The manufacturer shall provide anti-flotation calculations for the designed wet well based on site specific parameters contained in the project Geotechnical Engineering Study, see Section 02200.
- B. Marking and Identification
 - 1. The wet well shall be marked on the inside and outside with the following information:
 - a. Manufacturer's trade name or trademark
 - b. Manufacturer's location
 - c. Total height and diameter of wet well
 - d. Date of manufacture

3.03 WARRANTY

- A. Warranty
 - 1. Warranty shall be manufacturer's warranty for underground wet wells in effect at time of shipment.

END OF SECTION

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SECTION 15062

DUCTILE IRON PIPING

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes:

1. Provide ductile iron pipe for piping as noted on the Drawings complete with all fittings, jointing materials, pipe hangers and supports, anchors, blocking, encasement, and other necessary appurtenances.

1.02 REFERENCES

A. Reference standards:

1. ANSI/AWWA C104/A21.4: Standard for Cement Mortar Lining for Ductile Iron Pipe and Fitting for Water.
2. ANSI/AWWA C105/A21.5: Standard for Polyethylene Encasement for Ductile Iron Piping for Water and Other Liquids.
3. ANSI/AWWA C110/A21.10: Standard for Ductile Iron and Gray Iron Fittings, 3-In. Through 48-In., for Water and Other Liquids.
4. ANSI/AWWA C111/A21.11: Standard for Rubber Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
5. ANSI/AWWA C115/A21.15: Standard for Flanged Ductile-Iron Pipe with Threaded Flanges.
6. ANSI/AWWA C150/A21.50: Standard for Thickness of Ductile-Iron Pipe.
7. ANSI/AWWA C151/A21.51: Standard for Ductile Iron Pipe, Centrifugally Cast, for Water and Other Liquids.
8. ANSI/AWWA C153/A21.53: Standard for Ductile Iron Compact Fittings 3-In. through 16-In. for Water and Other Liquids.
9. ANSI/AWWA C600: Standard for Installation of Ductile-Iron Water Mains and Their Appurtenances.
10. ASME/ANSI B16.1: Cast Iron Pipe Flanges and Flanged Fittings.
11. ASTM A48: Standard Specification for Gray Iron Castings.
12. ASTM A377: Standard Index of Specification for Ductile-Iron Pressure Pipe.
13. ASTM A536: Standard Specification for Ductile-Iron Castings.
14. ASTM C150: Standard Specification for Portland Cement.
15. ASTM D1248: Standard Specification for Polyethylene Plastics Molding and Extrusion Materials.
16. ASTM D395-89 Method B: Standard Test Method for Rubber Property - Compression Set.
17. ASTM D412-87: Standard Test Method for Rubber Properties in Tension.
18. ASTM D2240-86: Standard Test Method for Rubber Properties -Durometer Hardness.
19. ASTM A307: Standard Specification for Carbon Steel Bolts and Studs.

1.03 SUBMITTALS

A. Product Data and Shop Drawings:

1. Material specification data.

2. Detailed Pipe layout Drawings.
3. Installation instructions.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. During loading, transporting, unloading and storage, prevent damage to material.
 1. To ensure undamaged condition.
 2. Use wide bearing area slings and wide padded skids.
 3. Do not use bare cables, chains, hooks, metal bars, or narrow skids.
 4. Laterally support pipe, fittings, and specials to maintain shape.
 5. Separate materials so they do not bear against each other.
 6. Securely fasten load to prevent movement in transit.
- B. Do not drop pipe or fittings.
- C. Adequately tag or otherwise mark all piping and fittings as to size.
- D. Acceptance at site:
 1. Reject products with dents, kinks, abrupt changes of curvature or other injuries.
 2. Reject any product dropped from truck or crane.
 3. Replace or recondition at Contractor's expense rejected items.
 4. Reconditioning subject to Engineer's acceptance.
 5. Replace coatings as originally specified on reconditioned pipe.

1.05 PROJECT/SITE CONDITIONS

- A. Environmental requirements: See specification Section 02000.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Acceptable manufacturers:
 1. U.S. Pipe and Foundry Co.
 2. Pacific States.
 3. American Pipe
 4. Or equal.
- B. Manufacturers for fittings, joints, and couplings are listed with the specific materials in Section 2.02, Materials.

2.02 MATERIALS

- A. Pipe:
 1. Ductile iron: ANSI/AWWA C151/A21.51 - Classified as listed below:
 - a. 18 inches and below: Pressure Class 350.
 - b. 24 inches and above: Pressure Class 250.
 - c. All pipe burial depth greater than 15 feet below finished grade: Pressure Class 350.
- B. Fittings:
 1. Ductile iron: ANSI/AWWA C110/A21.10 dimensions, ASTM A536 Grade 80-60-03 or 70-50-05. ANSI/AWWA C153 fittings are allowed.
- C. Joints:

1. Mechanical joints: ANSI/AWWA C111/A21.11.
 2. Mechanical joints with tie rods:
 - a. Tie rods: ASTM A307.
 - b. Steel pipe spacers: ASTM A120, standard weight.
 - c. Washers: ANSI A27.2 plain steel.
 - d. Plastic plugs: As recommended by pipe manufacturer.
 3. Flanged joints:
 - a. Flanges:
 - 1) General use: ANSI A21.15 or ASME/ANSI/B16.1, 125 lb.
 - b. Flanged bolts and nuts shall be type 316 stainless steel.
 - c. Gaskets: Full face, 1/8-inch thick, cloth impregnated, Garlock Blue-Guard Style 3300, or equal.
 4. Threaded connections: ANSI B2.1 NPT; provide service saddles at all tapped connections.
 5. Flexible couplings:
 - a. Dresser Style 38 or 138, Smith-Blair 411, Straub Flex, or equal.
 - b. Couplings shall have stainless steel nuts, bolts, and washers.
 6. Grooved couplings: Per AWWA C606, only where shown.
 - a. Coupling: Victaulic Style 77 or equal.
 7. Restrained mechanical joint:
 - a. EBAA Iron Megalug
 - b. Or equal.
 8. Flanged coupling adapters:
 - a. 12 inches and under: Smith-Blair Type 912, Dresser Style 127, or equal, with anchor wedges (no studs) and stainless steel nuts, bolts, and washers.
 - b. 14 inches and over: Smith-Blair Type 913, Dresser Style 128, or equal.
 9. Service saddles: Ductile iron with double galvanized steel straps and rubber sealing gasket, 250 psi pressure rating, stainless steel nuts, bolts, and washers.
 10. Restrained flange adapters:
 - a. EBAA Iron 2100 Megaflange or equal.
- D. Corrosion control:
1. Shop lining and coating:
 - a. Encasement (buried pipe): 8 mil Polyethylene film per ASTM D1248.
 - b. Service lines of different type metal within 3 feet of DIP: Polyethylene or dielectric tape wrap.

2.03 FABRICATION

- A. Joints, shall be restrained:
1. Type:
 - a. Buried: Mechanical or push-on.
 - b. Exposed: Flanged or Grooved where shown.
 - c. Other: As noted on Drawings.
 2. 12 inches and smaller outlets, where minimum line is at least twice the diameter of the branch; tee or a tapping saddle is acceptable.
 3. Where tie rods are required, except where indicated otherwise on Drawings provide:
 - a. 14 inches and below: Two (2) rods.
 - b. 16 inches through 20 inches: Four (4) rods.
 - c. 24 inches through 30 inches: Six (6) rods.

- d. 36 inches through 48 inches: Eight (8) rods.
- 4. Mark the centerline of each flange and mechanical joint piece.
- 5. Screw flanges onto screwed-on flanged pipe so that pipe extends completely through and flush with the flange.
- 6. Finish machine pipe ends and flange faces flat and perpendicular to pipe centerline in a single operation.
- 7. Wall castings:
 - a. Mechanical joint with tapped bolt holes except where indicated otherwise on the Drawings.
 - b. Provide seep ring.
 - c. Provide plastic plugs to prevent bolt holes filling with concrete.
- B. Shop coating and lining:
 - 1. Lining: Ceramic Epoxy, Protecto 401
 - 2. Coating where exposed: Epoxy Paint, Tnemec Series 69.
 - 3. Coating where buried: Bituminous coating per ANSI/AWWA C104/A21.4.
 - 4. Shop-coat flange faces with rust-preventive compound. Houghton "Rust Veto 344," Rust-Oleum "R-9."

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine areas for:
 - 1. Defects such as weak structural components that adversely affect execution and quality Work.
 - 2. Deviations beyond allowable tolerances for piping clearances.
- B. Start installation only when conditions are satisfactory.
- C. Pipe:
 - 1. Carefully examine pipe and fittings for cracks and other defects prior to installation.
 - 2. Remove all defective pipe from site and replace.

3.02 INSTALLATION

- A. Cutting pipe:
 - 1. Cut pipe neatly without damage to pipe or lining.
 - 2. Cut smooth, straight, and at right angles to pipe axis.
 - 3. Dress and bevel end of cut pipe to remove roughness and sharp corners.
 - 4. Cut cast iron with mechanical pipe cutters.
 - 5. Cut ductile iron pipe with saw or abrasive wheel.
- B. Cleaning:
 - 1. Thoroughly clean pipe and fittings of foreign matter before installation.
 - 2. Keep pipe and fittings clean until final acceptance.
 - 3. Joint contact surfaces:
 - a. Wire brush, if necessary.
 - b. Wipe clean.
 - c. Keep clean until jointing is complete.
- C. Piping in buildings or structures:

1. Completed installation should present a neat, orderly appearance.
 2. Do not block openings, passageways, or pipe galleries.
 3. Run piping parallel to walls of building or structure.
 4. Keep piping from contacting walls, structures or installed items.
- D. Piping underground:
1. Install in accordance with AWWA C600, except as specified herein.
 2. Protect from lateral displacement while placing backfill.
 3. Embedment and backfill per Earthwork Section.
 4. Underground piping shall retain the factory bitumastic coating and shall be entirely wrapped in a polyethylene sleeve.
 5. Do not lay pipe:
 - a. In water.
 - b. Under unsuitable weather conditions.
 - c. Under unsuitable trench conditions.
- E. Jointing:
1. Follow manufacturer's instructions.
 2. Mechanical joints:
 - a. If an effective seal is not obtained, disassemble joint, clean thoroughly, and reassemble.
 - b. Do not over-tighten bolts to compensate for poor installation.
 - c. Carefully align holes in mechanical joints with tie rods to permit installation of the harness bolts.
 - d. Install flange and mechanical joint pieces so the mechanical joint holes, as well as the flange holes, straddle the top centerline for horizontal piping or the side centerline for vertical piping.
 - e. Use joint restrainer glands unless indicate otherwise on the Drawings.
 3. Flanged joints:
 - a. Take care when bolting flanges to ensure that there is no restraint on the opposite end of the pipe which would prevent gasket compression or cause unnecessary stress in flanges.
 - b. Leave one (1) flange free to move in any direction while tightening flange bolts.
 - c. Tighten bolts gradually at a uniform rate to compress gaskets uniformly.
 - d. Take special care in connecting to pumping equipment to ensure no stresses are transmitted to pump flanges by connecting piping.
 - 1) Permanently support piping for accurate matching of bolt holes and uniform contact over the entire face of abutting pump and pipe flanges are obtained before bolting those flanges.
 - 2) Allow pump connection piping to move parallel to its longitudinal centerline while bolts are tightened.
 - 3) Level, align, and wedge pipes into position to fit connecting piping; but, do not install grout until after initial pipe fitting and alignment to allow shifting the pump on its foundation.
 - 4) Grout pumps prior to final bolting of connecting piping.
 4. Flanged coupling adaptors:
 - a. Flanged coupling adaptors shall be restrained with Mega-lug type devices, those requiring drilled studs shall not be allowed.
 5. Mechanical couplings:
 - a. Cut pipe ends clean and smooth.
 - b. Leave a space of 1/2-inch between pipe ends.

6. Wall castings: Provide where indicated on the Drawings.
- F. Reducers:
1. Provide eccentric reducers.
 2. Install with straight side on top to avoid trapping air.
- G. Anchorage:
1. In interior locations and where subject to internal pressure block, anchor or harness piping with mechanically coupled or similar joints to prevent separation of joints.
 2. Other location: Provide reaction blocking anchorages or other supports for fittings above grade or exposed in structure as indicated on the Drawings or as required to prevent movement.
 3. Concrete blocking:
 - a. Bearing area as indicated on the Drawings, or as directed by the Engineer.
 - b. Extend from fitting to solid undisturbed earth.
 - c. Install so joints are accessible for repair.
 - d. If adequate support against undisturbed earth cannot be obtained, provide restrained joints or metal harness anchorages across the joint and secure by anchoring to the pipes or fittings or other anchorage facilities as required for adequate support.
 - e. If the lack of a solid vertical excavation face is due to improper excavation, all excess costs shall be borne by Contractor.
 4. Restrained joints: Provide sufficient number of restrained joints on either side of bend or fitting in order to develop full thrust restraint at test pressure.
- H. Encasement:
1. Provide concrete encasement as indicated on the Drawings.
 2. Suitably support and block pipe and anchor against flotation.
- I. Connection to existing pipelines:
1. Make connections between new and existing piping with suitable fittings.
 2. Schedule connection to minimize inconvenience to the Owner.
 3. Provide facilities for adequate dewatering and disposal of water from dewatered line and excavations without damage to adjacent property.
- J. Corrosion control:
1. Metal surfaces:
 - a. Coat all steel clamp rods, bolts, and other metal accessories used in tapping saddles, anchorages or joint harnesses subject to submergence or contact with the earth and not concrete-encased.
 - b. Apply two (2) coats of coal-tar paint to clean, dry, metal surfaces.
 - c. Allow the first coat to dry and harden before applying the second coat.
 2. Polyethylene pipe encasement: Install Method A, ANSI/AWWA C105/A21.5.
- K. Alignment:
1. Unless shown otherwise, piping shall be installed parallel to building lines, plumb, and level.
 2. Piping shall be installed without springing or forcing the pipe in a manner which would set up stresses in the pipe, valves, or connected equipment.

3. All pipe flanges shall be set level, plumb, and aligned. All flanged fittings shall be true and perpendicular to the axis of the pipe. All bolt holes in flanges shall straddle vertical centerline of pipes.

3.03 FIELD QUALITY CONTROL

A. Hydrostatic tests:

1. Perform hydrostatic tests in accordance with Section 15060.

END OF SECTION

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