ADDENDUM NO. 4

TO

CONTRACT DOCUMENTS

FOR

MARINA COAST WATER DISTRICT

REGIONAL URBAN WATER AUGMENTATION PROJECT
RECYCLED WATER PIPELINE AND BLACKHORSE RECYCLED WATER RESERVOIR

CIP # RW-0156

June 27, 2017

06/27/2017

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This Addendum No. 4, pages 1 through 3 modifies the Bidding Documents for the Marina Coast Water District Regional Urban Water Augmentation Project, and shall become part of the Contract Documents for this Project.

This addendum changes the bid opening date.

Bidders shall acknowledge receipt of Addenda by number in the space provided for that purpose on Document 004100 - Bid Forms.

CONTRACT DOCUMENTS, VOLUME 1, SPECIFICATIONS:

DOCUMENT 00 11 00 INVITATION TO BIDDERS

1. Page 00 11 00 - 1, 1st paragraph:
   a) Replace the following text in the first sentence:
   "…until 2:00 p.m. local time on **June 29, 2017**, at which time the Bids received will be publicly opened and read."

SECTION 00 43 00 BID BOND:

1. Replace Section 00 43 00 in Volume 1 with Section 00 43 00 in Addendum 4.

SECTION 15110 VALVES:

1. Page 15110-1, Section 1.03.A.1:
   a) Replace 275 psi with 350 psi.

SECTION 15112 BUTTERFLY VALVES:

1. Replace Section 15112 in Volume 1 with Section 15112 in Addendum 4.

SECTION 15115 GATE VALVES:

1. Page 15115-1, Section 2.01.A.2.b:
   a) Replace 200 psi with 350 psi.
2. Page 15115-2, Section 2.01.B:
   a) Add Item "8. Valves shall be rated for 350 psi working pressure"

SECTION 15120 PIPING SPECIALTIES:

1. Page 15120-2, Replace Section 2.01.A with the following:
   a) A. Service saddles shall be rated for 350 psi working pressure.
      B. Manufacturers, or equal:
         1. Romac Industries, Inc.

SECTION 15211 DUCTILE IRON PIPE: AWWA C151:

1. Page 15211-4, Replace Section 2.01.B.3.a with the following:

a) A. Manufacturers, one of the following, or equal rated at least 350 psi working pressure:
1. EBAA Iron, Inc., Megalug Series 1100TDM
2. Star Pipe Products, Tandem Stargrip Series 3000T

CONTRACT DOCUMENTS, VOLUME 2, DRAWINGS:

DRAWING S-02, DETAIL 1: TANK FOUNDATION DETAIL

1. Replace the callout "6 - #7 CIRCUMFERENTIAL BARS EF @ EQUAL SPACING, STAGGER SPLICE. SEE DETAIL S102/TYP."
with "12 - #7 CIRCUMFERENTIAL BARS EF @ EQUAL SPACING, STAGGER SPLICE. SEE DETAIL S102/TYP."

The time provided for completion of the Contract is not changed.

Bidders shall acknowledge receipt of all Addenda by number in the space provided in the Proposal.

BID BOND

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

BIDDER *(Name and Address)*:

SURETY *(Name, and Address of Principal Place of Business)*:

OWNER *(Name and Address)*:
Marina Coast Water District
11 Reservation Road
Marina, CA 93933

BID
Bid Due Date: June 29, 2017
Description: CIP # RW-0156, REGIONAL URBAN WATER MANAGEMENT PROJECT
RECYCLED WATER PIPELINE AND BLACKHORSE RECYCLED WATER RESERVOIR
MARINA COAST WATER DISTRICT

BOND
Bond Number:
Date:
Penal sum _____ $ _____
(10% (ten percent) of the Total Bid Value, in Words) (Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER	**SURETY**
_____ (Seal)	_____ (Seal)
Bidder's Name and Corporate Seal	Surety's Name and Corporate Seal
By: _____	By: _____
Signature	Signature (Attach Power of Attorney)
_____	_____
Print Name	Print Name
_____	_____
Title	Title
Attest: _____	Attest: _____
Signature	Signature
Title	Title

Note: Addresses are to be used for giving any required notice.
Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.

2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.

3. This obligation shall be null and void if:

3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or

3.2 All Bids are rejected by Owner, or

3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).

4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

SECTION 15112

BUTTERFLY VALVES

PART 1 GENERAL

1.01 SUMMARY

A. Section includes: Butterfly valves:
   1. As specified in Section 15110.

B. Related sections:
   1. Section 01330 - Submittal Procedures.
   2. Section 01756 - Commissioning.
   3. Section 01783 - Warranties and Bonds.
   4. Section 09960 - High-Performance Coatings.
   5. Section 15110 - Common Work Results for Valves.
   6. Section 15211 - Ductile Iron Pipe: AWWA C151.

1.02 REFERENCES

A. American Society of Mechanical Engineers (ASME):
   1. B16.1 - Cast Iron Pipe Flanges and Flanged Fittings, Classes 25, 125 and 250.
   2. B16.5 - Pipe Flanges and Flanged Fittings, NPS 1/2 through NPS 24.

B. American Water Works Association (AWWA):
   1. C110 - Standard for Ductile-Iron and Gray-Iron Fittings.
   2. C504 - Rubber-Seated Butterfly Valves.
   3. C540 - Standard for Power-Actuating Devices for Valves and Sluice Gates.
   4. C550 - Protective Interior Coatings for Valves & Hydrants.
   5. C606 - Standard for Grooved and Shouldered Joints.

C. ASTM International (ASTM):
   1. A126 - Standard Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings.
   2. A216 - Standard Specification for Steel Castings, Carbon, Suitable for Fusion Welding, for Higher-Temperature Service.
   3. A276 - Standard Specification for Stainless Steel Bars and Shapes.
   4. A351 - Standard Specification for Castings, Austenitic, for Pressure-Containing Parts.
   5. A395 - Standard Specification for Ferritic Ductile Iron Pressure-Retaining Castings for Use at Elevated Temperatures.
   6. A479 - Standard Specification for Stainless Steel Bars and Shapes for Use in Boilers and Other Pressure Vessels.
   7. A515 - Standard Specification for Pressure Vessel Plates, Carbon Steel, for Intermediate - and Higher-Temperature Service.
   8. A516 - Standard Specification for Pressure Vessel Plates, Carbon Steel, for Moderate - and Lower-Temperature Service.
   9. A536 - Standard Specification for Ductile Iron Castings.

10. A564 - Standard Specification for Hot-Rolled and Cold-Finished Age-Hardening Stainless Steel Bars and Shapes.
11. A743 - Standard Specification for Castings, Iron-Chromium, Iron-Chromium-Nickel, Corrosion Resistant, for General Application.
12. A890 - Standard Specification for Castings, Iron-Chromium-Nickel-Molybdenum Corrosion-Resistant, Duplex (Austenitic/Ferritic) for General Application.
13. B462 - Standard Specification for Forged or Rolled UNS N06030, UNS N06022, UNS N06035, UNS N06200, UNS N06059, UNS N10362, UNS N06686, UNS N08020, UNS N08024, UNS N08026, UNS N08367, UNS N10276, UNS N10665, UNS N10675, UNS N10629, UNS N08031, UNS N06045, UNS N06025, UNS R20033 Alloy Pipe Flanges, Forged Fittings, and Valves and Parts for Corrosive High-Temperature Service.
14. B584 - Standard Specification for Copper Alloy Sand Castings for General Applications.
15. B691 – Standard Specification for Iron-Nickel-Chromium-Molybdenum Alloys (UNS N08366 and UNS N08367) Rod, Bar, and Wire.
16. D429 - Standard Test Methods for Rubber Property-Adhesion to Rigid Substrate.

D. Compressed Gas Association (CGA):
   1. Standard G-4.1 - Cleaning Equipment for Oxygen Service.

E. NSF International (NSF):
   1. Standard 61 - Drinking Water System Components - Health Effects.

F. United States Code of Federal Regulations (CFR):
   1. 21 - Food and Drugs.

1.03 SYSTEM DESCRIPTION

A. Design requirements:
   1. General purpose AWWA butterfly valves:
      a. Design standard: Provide valves designed and manufactured in accordance with AWWA C504.
      b. Class:
         1) Provide butterfly valves conforming to a minimum design per AWWA Class 250B. The valves shall be designed and constructed for a working pressure of 350 psi.

B. Usage:
   1. Provide and install butterfly valves for buried recycled water service with pressure ratings as indicated in this Specification.

C. Design Requirements:
   1. Design valves and actuators for maximum operating torque, in accordance with and using safety factors required in AWWA C540, using the following values:
      a. Maximum water velocity: 16 feet per second with valve fully open.
      b. Maximum pressure differential across the closed valve: Equal to the pressure class designation.

c. Coefficient for seating and unseating torque, dynamic torque, and bearing friction in accordance with valve manufacturer's published recommendations.

2. Valve Disc: Seat in an angular position of 90 degrees to the pipe axis and rotate an angle of 90 degrees between fully open and fully closed positions:
   a. Do not supply valves with stops or lugs cast with or mechanically secured to the body of the valve for limiting the disc travel.
3. Unacceptable Thrust Bearings: Do not provide valves with thrust bearings exposed to the fluid in the line and consisting of a metal bearing surface in rubbing contact with an opposing metal bearing surface.

D. Performance requirements:
1. Tight shutoff at the pressure rating of the valve with pressure applied in either direction.
2. Suitable for the following service conditions:
   a. Throttling.
   b. Frequent operation.
   c. Operation after long periods of inactivity.
   d. Installation in any position and flow in either direction.

1.04 SUBMITTALS

A. Submit as specified in Section 01330
1. Include certified drawings and material specifications.

B. Submit letter signed by a designated representative from the manufacturer certifying the valve is manufactured to a working pressure of 350 psi. A minimum of 10-years documented installations of 350 psi valves of similar size and pressure ratings will be required with the submittals

C. Certificates:
1. AWWA Butterfly Valves:
   a. Proof-of-Design Tests: Certified statement that proof-of-design tests were performed and all requirements were successfully met.
   b. Affidavit of compliance attesting valves provided comply with all provisions of AWWA C504.

D. Product data: 15110
1. For general purpose AWWA butterfly valves, include description of the method of attachment of the disc edge to the valve disc.
2. Interior epoxy coatings: Affidavit of compliance attesting that epoxy coatings applied to interior surfaces of butterfly valves comply with all provisions in accordance with AWWA C550.
3. Valves shall have traveling nut operator rated for the operating torque at 350 psi. Traveling nut gears shall be rated to 450 ft-lbs input torque and be rated for buried or above ground service and waterproof to a depth of 20 feet.

E. Commissioning submittals:
1. Provide Manufacturer’s Certificate of Installation and Functionality Compliance as specified in Section 01756 WARRANTY
2. Provide warranty as specified in Section 01783.

PART 2 PRODUCTS

2.01 GENERAL PURPOSE AWWA BUTTERFLY VALVES

A. Manufacturers: The following manufacturers have indicated they can supply butterfly valves that meet the requirements of this specification section. Other manufacturers that meet the requirements of this specification section will be considered. Contractor shall verify the requirements of this specification section can be met. Requirements will be also be verified by the Engineer during submittal review and submittals will be rejected if the requirements of this specification section are not met.
   1. Henry Pratt Company, HP350
   2. Dezurik

B. Valves will not be accepted that are rated for a working pressure less than 350 psi, but factory tested to pressures of 350 psi. The valve must be a documented 350 psi product.

C. Valve body:
   1. Material: Cast iron, ASTM A126, Grade B, or ductile iron, ASTM A536, Grade 65-45-12.
   2. Body design:
      a. Flanged body valves:
         1) Usage: Comply with limitations specified in the Butterfly Valve Application Schedule.
         2) Flanges: In accordance with ASME B16.1 Class 250 flanges for Class 250B valves.
      b. Mechanical joint body valves:
         1) Usage: Comply with limitations specified in the Butterfly Valve Application Schedule.
         2) Mechanical joint design: In accordance with AWWA C110.
         3) When mechanical joint body valves are used, incorporate valve into thrust restraint analysis as specified in Section 15211. Restrain pipe joints on both sides of valve.

D. Disc:
   1. Material: Cast iron or ductile iron with Type 316 stainless steel edge that matches seat in valve body.
   2. Secure valve disc to shaft by means of smooth-sided, taper or dowel pins, Type 316 stainless steel, or Monel.
   3. Extend pins through shaft and mechanically secure in place.

E. Shaft and bearings:
   1. Shaft design:
      a. Valves 20-inch and less: 1 piece, through disc design.
      b. Valves greater than 20-inch size: 2 piece, stub shaft design.
   2. Shaft seal: Vee type, chevron design.
   3. Shaft material for Class 150B valves: Type 316 stainless steel, ASTM A276.
   4. Shaft material for Class 250B valves: Type 17-4 pH stainless steel, ASTM A564.
   5. Shaft material for class 350 valves: Type 17-4 pH stainless steel, ASTM A564.
   6. Shaft bearings: Self-lubricating sleeve type:

a. Valves 20-inch and less: Nylatron.
b. Valves greater than 20-inch size: Teflon with stainless steel or fiberglass backing.

F. Seats:
1. Seat materials:
a. Peroxide Cured EPDM.
2. For all 350 psi valves, retain seats mechanically or by adhesive in the body:
a. Mechanical retainage: Retain seat by a clamping ring with segmented clamping ring locks with adjusting locking screws.
1) Clamping ring, ring locks, and adjusting locking screws: Type 316 stainless steel.
2) Provide means to prevent ring locks and screws used to retain seats from loosening due to vibration or cavitation.
b. Adhesive retainage: Inset the seat within a groove in the valve body and retain in place with epoxy injected behind the seat so that the seat expands into the body.
c. Do not provide valves with seats retained by snap rings or spring-loaded retainer rings.
3. Resilient seat: Withstand 75 pound per inch pull when tested in accordance with ASTM D429, Method B.

G. Valve packing:
1. Valves 4 inch to 48 inch nominal size: Self-adjusting V-type packing or chevron-type packing. Match seat material.

2.02 COATING

A. Shop coat interior and exterior metal surfaces of valves, except as follows:
1. Interior machined surfaces.
2. Surfaces of gaskets and elastomeric seats and stem seals.
3. Bearing surfaces.
4. Stainless steel surfaces and components.

B. Interior surfaces:
1. Interior surfaces,: High solids epoxy.

C. Exterior surfaces:
1. Exterior surfaces of valves, actuators, and accessories coating in accordance with Section 09960 with the following coating types:
a. Submerged valves: High solids epoxy.
b. Buried valves: Coal tar epoxy.
c. Other valves: High solids epoxy with polyurethane topcoat.
2. Polished and machined surfaces: Apply rust-preventive compound,
a. Manufacturers: One of the following or equal:
1) Houghton, Rust Veto 344.
2) Rust-Oleum, R-9.

D. Coating materials:
1. High solids epoxy and coal tar epoxy:
a. Products: As specified in Section 09960:
1) Coating product in contact with potable water must be in accordance with AWWA C550 and NSF 61.

2. High temperature coating: As specified in Section 09960 and in accordance with AWWA C550.
3. Rust-preventive compound:
    a. Manufacturers: One of the following or equal:
        1) Houghton, Rust Veto 344.
        2) Rust-Oleum, R-9.

E. Field applied coatings of valve exterior:
1. Match color and be compatible with manufacturer's coating system and as specified in Section 09960.
    a. When shop applied finish coating matches field applied coating on adjacent piping, touch up shop coating in damaged areas in accordance with instructions recommended by the paint manufacturer.
    b. When shop applied coating does not match field coating on adjacent piping, or when damage has occurred to the shop applied coating that requires more than touchup, blast clean valve surfaces or utilize other surface preparation recommended by the manufacturer of the coating material and apply the coating system used for coating adjacent piping.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install valves with valve shafts horizontal, unless a vertical shaft is required to suit a particular installation, and unless a vertical shaft is indicated on the Drawings.

B. Install pipe spools or valve spacers in locations where butterfly valve disc travel may be impaired by adjacent pipe lining, pipe fittings, valves, or other equipment.

C. Wrap buried valves with 2 layers of linear low density polyethylene film having a minimum thickness of 8 mils, in accordance with AWWA C105.

D. Valve shall be anchored in concrete per MCWD Standard plan W-7.

3.02 COMMISSIONING AND PROCESS START-UP REQUIREMENTS

A. As specified in Section 01756 and this Section.

B. Manufacturer services:
1. Provide certificates:
    a. Manufacturer's Certificate of Installation and Functionality Compliance.

C. Functional testing:
1. Valves:
    a. Test witnessing: Witnessed.
    b. Conduct pressure and leak test, as specified in Section 15110

END OF SECTION