

**City of Pinole
Pinole-Hercules Water Pollution Control Plant Upgrades
November 25, 2015**

DESIGNER

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OWNER

City of Pinole
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GENERAL

Scope

- A. This Addendum forms a part of the Bidding and Contract Documents and modifies the Project Specifications and Drawings described below.
- B. This Addendum consists of 13 pages.

Acknowledgment

- A. Acknowledge receipt of this Addendum in the space provided on the Bid Form.

REVISIONS TO SPECIFICATIONS

Part 1 – Contract Requirements

Section 004100 – Bid Forms

Article 6 after the Table

ADD

“Explanation of Bid Items:

Bid Item No. 1 – Mobilization/Demobilization (Lump Sum): Mobilization and demobilization, complete as specified, shall include contractor’s participation in the assessment of pre-construction condition and post construction damage assessment of the job site, move in of equipment, tools, supplies, materials, and manpower to the job site, flow barriers and fencing around storage areas, daily clean up of job site, move out and final cleanup of job site after the project is completed and accepted by the City.

Bid Item No. 2 – Sheeting, Shoring and Bracing (Lump Sum): All sheeting, shoring and bracing for excavations conforming to applicable safety orders.

Bid Item No. 3 – Headworks Facility (Lump Sum): This bid item includes construction of the new headworks, including all influent gravity sewers, flow metering manholes, electrical, instrumentation and associated demolition and site work. This item includes all labor, materials, equipment, and tools necessary for construction. The price shall be full compensation for preparation and installation of these materials, and for all labor, equipment, tools, and incidentals to complete this item.

Bid Item No. 4 – Electrical and Controls (Lump Sum): This bid item includes construction of the new masonry electrical Building, standby generator, interior electrical/control components and associated demolition and site work. This item includes all labor, materials, equipment, and tools necessary for construction. The price shall be full compensation for preparation and installation of these materials, and for all labor, equipment, tools, and incidentals to complete this item.

Bid Item No. 5 – Secondary Treatment (Lump Sum): This bid item includes all construction associated with primary clarifiers, secondary clarifiers/RAS/WAS, aeration basins, flow split structure, Blower Building, yard piping downstream of headworks and associated demolition and site work. It includes electrical and instrumentation requirements for this items. This item includes all labor, materials, equipment, and tools necessary for construction. The price shall be full compensation for preparation and installation of these materials, and for all labor, equipment, tools, and incidentals to complete this item.

Bid Item No. 6 – Chlorine Disinfection (Lump Sum): This bid item includes all construction associated with the modifications to the existing chlorine contact basin, new chlorine contact basin and all chemical feed systems. It includes associated demolition, site work and gravity piping downstream of chlorine contact basin. This item includes all labor,

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materials, equipment, and tools necessary for construction. The price shall be full compensation for preparation and installation of these materials, and for all labor, equipment, tools, and incidentals to complete this item.

Bid Item No. 7 – Effluent Pump Station (Lump Sum): This bid item includes modifications to the existing effluent pump station and construction of the new surge tank, including electrical, instrumentation and associated demolition and site work. This item includes all labor, materials, equipment, and tools necessary for construction. The price shall be full compensation for preparation and installation of these materials, and for all labor, equipment, tools, and incidentals to complete this item.

Bid Item No. 8 – Solids Handling (Lump Sum): This bid item includes construction of the new solids handling facilities including electrical, instrumentation and associated demolition and site work. This item includes all labor, materials, equipment, and tools necessary for construction. The price shall be full compensation for preparation and installation of these materials, and for all labor, equipment, tools, and incidentals to complete this item.

Bid Item No. 9 – Outfall (Lump Sum): This bid item includes off-site modifications to the existing outfall pipeline. This item includes all labor, materials, equipment, and tools necessary for construction. The price shall be full compensation for preparation and installation of these materials, and for all labor, equipment, tools, and incidentals to complete this item.

Bid Item No. 10 – All Other Work (Lump Sum): This bid item is to include any tasks, labor, materials, equipment or tools not included in the previous bid items. The price shall be full compensation for preparation and installation of these materials, and for all labor, equipment, tools, and incidentals to complete these items.”

Section 004360 – List of Equipment Manufacturers

Article 3.07 Table

REPLACE WITH

“Section	Equipment	Manufacturer/Supplier
11061	Non-Clog Centrifugal Pumps	a. Fairbanks – Morse b. Morris c. Worthington
11068	Vortex (Torque-Flow)	a. Wemco b. Morris
11069	Progressing Cavity Pumps	a. Moyno b. Netzsch c. Seepex
11073	Vertical Turbine Pumps	a. Weir Floway b. Flowserve

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11076	Submersible Non-Clog	a. Xylem Water Solutions USA, Inc. (Flygt) b. WEMCO, Inc. c. ABS, Inc.
11080	Submersible Grinder Pumps	a. Vaughn b. Wemco
11081	High Speed Turbo Aeration Blower	a. APG-Neuros, Inc. b. Aerzen c. Piller d. Spencer
11084	Submersible Propeller Pumps	a. Wilo-EMU USA b. Landia c. Flygt
11088	Aeration Equipment: Fine Bubble Type	a. Sanitaire- Silver Series b. EDI- Flex Air SSM c. Aquarius d. Stamford Scientific, Inc. (SSI)
11093	Perforated Plate Screens	a. Huber Technology, Inc., Esca Max b. Enviro – Care (FSM) c. Kusters Water
11094	Screenings Washer/Compactor	a. Huber Technology, Inc. b. Enviro – Care (FSM) c. Kusters Water
11096	Forced Vortex Grit Removal System	a. Smith and Loveless b. Ovivo
11120	Primary Clarifier and Gravity Thickener	a. Ovivo b. Westech c. Clearstream
11125	Sludge Collection: Circular Suction-Type	a. Ovivo b. Westech c. Clearstream
11142	Rotary Drum Thickening System	a. Fokoku Koyogo Company, Ltd. b. Parkson Corporation, Hycor ThickTech c. IPEC
11322	Grit Cyclones and Classifiers	a. Wemco
11364	Dewatering Centrifuge	a. Alfa Laval b. Andritz c. Westfalia
11373	Submersible Mixers	a. Wilo-EMU USA b. Landia c. Flygt

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11376	Rotary-Lobe Blowers	a. Roots b. Sutorbilt c. Aerzen d. Kaeser Compressors
11923	Liquid Polymer Batching System	a. Siemens Water Technologies b. Fluid Dynamics, Dynablend c. Velodyne, Velo Blend
11932	Chemical Metering Pump	a. Watson-Marlow b. Jesco
11947	Induction Mixing Equipment	a. Siemens Water Technologies b. The Mastrrr Company
15885	Odor Control system	a. Evoqua b. Bio-Air c. Purafil d. Biorem“

Part 2 – Technical Specifications

Section 03151 – Anchorage to Concrete

Article 3.5

ADD

“F. Special inspections and laboratory testing shall be paid by Owner.”

Section 11081 – High Speed Turbo Aeration Blower

Article 1.5 D.2.i.

CHANGE TO READ

“i. Provide for back-up purposes four copies of the software ladder logic covering all logic and sequences of operation and provide a soft copy of all documented PLC code on CD. Provide Owner for back-up purposes with four (4) software licenses of any PLC or Touchscreen OIT software that is used. Provide a list of instrument settings.”

Article 2.7 E.

DELETE

Delete in its entirety.

Article 2.8

DELETE

Delete in its entirety.

Article 2.12 B.

CHANGE TO READ

“B. Size and actuator speed shall be as required by blower system and determined by the blower manufacturer. Valve operation shall be controlled by the blower MCP.”

Section 11095 – Automatic Self-Cleaning Strainers

Article 2.2

ADD

“E. Self-Cleaning Strainers shall be designed for the following conditions of service:

1. Number of strainers: 1.
2. Equipment Tag No(s): 92STR003.
3. Strainer filter mesh opening: 100 micron, minimum.
4. Single strainer flow rate: 250 gpm.
5. System source water: Final effluent.
6. System operating pressure range: 50 – 95 psig.
7. Design pressure: 80 psig.
8. Feed water temperature: 44 to 88 DegF.
9. Drive motor HP: 15 Watt.
10. Power supply: 120 VAC, 1 PH, 60 Hz.”

Section 11120 – Primary Clarifier and Gravity Thickener: Circular General Requirements

Article 1.3 A.5.

CHANGE TO READ

“5. Submit statement and supporting calculations signed by a California registered professional Structural Engineer that all members have been designed to support the loadings as specified.”

Article 1.3 B.7.

CHANGE TO READ

“7. Calculations and details must bear the stamp of a California registered professional engineer.”

Article 2.3 A.4.

CHANGE TO READ

“4. Influent column inside diameter:”

Article 2.3

ADD

“D. Gravity Thickener Performance Requirements:

1. Tank dimensions: 40 FT – 0 IN DIA.
2. Side water depth: 10 FT – 0 IN.
3. Minimum freeboard at maximum flow of new clarifier = 3.5 FT.
4. AGMA 20 year continuous rated running torque applied at output of drive unit: 20,000 FT-LBS minimum.
5. Stall or motor cut-out torque: 2 times continuous torque.
6. AGMA yield torque applied at output of drive unit: 2 times continuous torque.
7. Minimum turntable ball race diameter: 30 IN.
8. Minimum internal spur gear pitch diameter: 26 IN.

9. Minimum drive motor horsepower: 3/4 HP.
 10. Maximum drive motor speed: 1,800 rpm.
 11. Drive output speed: Maximum 0.04 rpm (maximum 12 fpm tip speed).
 12. Drive pinion: Single.
 13. Minimum spur gear face width: 2.5 IN.
 14. Stilling well:
 - a. Size: 8 FT DIA.
 - b. Thickness: Minimum 3/16 IN.
 15. Influent head loss at maximum flow: 3 IN.
 16. Thickness of all submerged stainless steel members: 1/4 IN minimum.
- E. The following data to be used to calculate gravity thickener components:

	Maximum Month
Influent flow, gpm	310
Influent total suspended solids, mg/L	3,835

Article 2.5 A.

CHANGE TO READ

“A. Center Pier (for clarifiers):”

Article 2.5 A.1.

CHANGE TO READ

“1. Fabricate center pier of cylindrical stainless steel with diameters called out in Article 2.3 A.4. by minimum 3/8 IN wall thickness.”

Article 2.5 A.7.

DELETE

Delete in its entirety.

Article 2.5 B.5.

CHANGE TO READ

“5. Flocculation baffles for the clarifiers will be supported from the flocculation well (see Section 11150).”

Article 2.5 C.1.

CHANGE TO READ

“1. All-welded stainless steel construction.”

Article 2.5 C.3.

CHANGE TO READ

“3. Design drive cage for clarifiers to encompass center column and transmit and/or carry all torques without overstressing members.”

Article 2.5 C

ADD

“5. Center drive cage of gravity thickener shall be supported from the bridge.”

Article 2.5 F.4.a.

CHANGE TO READ

“a. Fabricate handrail of triple rail, 1-1/2 IN DIA Schedule 40 aluminum, 42 IN height.”

Article 2.5 F.5.

CHANGE TO READ

“5. Support walkway and operating platform from the center column and the tank wall for the clarifiers and from the walls at the gravity thickener.”

Article 2.5 G.

ADD

“15. Trough width: 4 FT.”

Article 2.6 C.

CHANGE TO READ

“C. Provide evidence in the form of field test that the design used by the manufacturer is capable of uniform sludge withdrawal from the entire tank bottom (based on floor area swept).”

Article 3.2 C.

CHANGE TO READ

“C. The drive mechanism shall be shipped with a factory applied finish paint system in accordance with Section 09905.”

Article 3.2

ADD

“F. Stainless steel components shall not be coated.”

Section 11125 – Sludge Collection: Circular Suction-Type

Article 1.4 D.4.

DELETE

Delete in its entirety.

Article 2.2 A.4.a.

CHANGE TO READ

“a. Minimum yield strength of 25,000 psi and minimum tensile strength of 75,000 psi.”

Article 2.2 C.1.

DELETE

Delete in its entirety.

Article 2.2 AA.

CHANGE TO READ

“AA. Scum Box, Skimmer, and Scum Baffle Supports: Type 316 stainless steel.”

Article 2.2

ADD

“CC. Suction Header and Supports: Type 316 stainless steel.”

Article 2.5 C.1.

CHANGE TO READ

“1. Fabricate center pier of cylindrical stainless steel with a minimum 36 IN DIA by minimum 3/8 IN wall thickness.”

Article 2.5 C.7.

DELETE

Delete in its entirety.

Article 2.5 F.1.

CHANGE TO READ

“1. Provide rectangular-shaped, full tapered (two (2) directions) section varying in size from a maximum near the tank center to a minimum at the outer end to maintain a minimum velocity of 0.5 feet per second.”

Article 2.5 F.7.

CHANGE TO READ

“7. Provide inlet orifices at regular intervals along header.

- a. Do not exceed 30 IN spacing along the header.
- b. Vary the orifice sizes from a minimum of 2.75 IN to assure hydraulic balance in the tank and uniform sludge withdrawal from the entire tank bottom at all flows specified.
- c. Maximum headloss through header shall be 1.5 FT.

8. Sludge withdrawal by means of individual riser pipes is not acceptable.

9. Fabricate from 3/16 IN minimum stainless steel plates.”

Article 2.5 G.1.

CHANGE TO READ

“1. Provide connections between the truss and header of 1/4 IN 316 stainless steel plate.”

Article I.2.a.

CHANGE TO READ

“a. Minimum size: 3 FT long by 6 FT wide.”

Article J.2.

CHANGE TO READ

“2. Enclose all gearing in a cast iron ASTM A48, Class 30A or Class 40A housing.”

Section 11142 – Rotary Drum Thickening System

Article 2.2 A.3.

CHANGE TO READ

“3. All other: 316 stainless steel.”

Article 2.2 C.

CHANGE TO READ

“C. Frame: 316 stainless steel.”

Section 11364 – Dewatering Centrifuge

Article 1.1 A.

ADD

“2. The second centrifuge shown on Drawings is existing and relocated to new Solids Handling Building.”

Article 2.2 A.2.

CHANGE TO READ

“2. Minimum performance requirements:

- a. Average hydraulic capacity: 150 gpm.
- b. Average solids loading: 37.5 lbs/min.
- c. Inlet consistency: 2.0 percent – 4.5 percent solids. 3 percent solids average.
- d. Outlet consistency: 18 percent, minimum.
- e. Polymer usage: 24 to 36 lbs/dry ton solids.
- f. Minimum solids capture rate: 95 percent.”

Article 2.4 B.1.a.1)

CHANGE TO READ

“1) For high speed units: Designed to operate at a maximum of 3,200 rpm.”

Article 2.4 B.1.d.

CHANGE TO READ

“d. Minimum bowl diameter of 20 IN.”

Article 3.2 A.

ADD

“7. Perform for new and existing relocated centrifuge.”

Article 3.3 A.

CHANGE TO READ

“A. It is required that start-up and testing of new and existing relocated centrifuges be started as soon as possible after installation.”

Section 13420 – Chemical Storage Tanks

Article 1.2 B.

ADD

“3. The vessels shall be designed and molded with a uniform wall thickness equal to or greater than the minimum wall thickness requirement in this section.”

Article 2.2 A. and B.

CHANGE TO READ

“A. Plastic – The tanks shall be molded from Metallocene High Density Cross-linked Polyethylene (HDXLPE). The resin used shall be Paxon 7004 as manufactured by Exxon/Mobil Chemical, Schulink XL 350, or of resin of equal physical and chemical properties. The interior of the tank shall have an anti-oxidant resistant medium density polyethylene liner.

B. Filler and Pigments – the plastic shall not contain any fillers. All plastic shall contain a minimum of 0.25 percent U.V. stabilizer and a maximum of 0.60 percent. Stabilizer shall be compounded into the polyethylene.”

Article 2.5 B.1.

CHANGE TO READ

“1. Tank manufacturer shall supply one HDXLPE full drain outlet assembly. Connection shall be built without use of rotational mold parting line thus utilizing one piece construction. Full drain outlet shall be molded into High Density Cross-linked polyethylene tank. Assembly shall consist of molded in HDXLPE or metallic insert with welded polyethylene flange end connection. Metallic inserts shall be 316 stainless steel, titanium or Hastelloy C-276 based on chemical compatibility. Molded in HDXLPE assembly shall provide full drain of tank contents. Full drain outlet must be connected to a flexible expansion joint allowing for minimum of 1/2 IN lateral movement and 3/8 IN of elongation.”

Section 15114 – Miscellaneous Valves

Article 1.1 A.2.

ADD

“b. Pressure reducing valves.”

Article 2.2 C.

DELETE

Delete in its entirety.

Article 2.8

ADD

“2.8 AUTOMATIC CONTROL VALVES FOR WATER SERVICE

A. Basic Valve:

1. Type:

a. Diaphragm-actuated hydraulically operated.

1) Materials:

- a) Body: Ductile iron.
 - b) Seat insert: Stainless steel.
 - c) Disc: Buna-N.
 - d) Diaphragm: Nylon fabric bonded with synthetic rubber.
 - 2) Design requirements: Do not use diaphragm as seating surface.
- B. Control:
- 1. Type:
 - a. Pressure relief or pressure-sustaining control:
 - 1) Acceptable manufacturers:
 - a) Clayton, Model 50-01.
 - b) GA Industries, Figure 4800D (relief).
 - c) Watts ACV 116 Series.
 - d) Singer, Model 106-RPS.
 - 2) Design requirements: Modulate basic valve to maintain constant upstream pressure by bypassing or relieving excess pressure.
 - a) Size: 4 IN.
 - b) Relief pressure:
 - (1) Maximum 110 psi.
 - c) Flow:
 - (1) Normal 400 gpm.
 - b. Pressure-reducing control:
 - 1) Acceptable manufacturers:
 - a) Clayton, Model 90-01.
 - b) GA Industries, Figure 4500 D.
 - c) Watts ACV 115 Series.
 - d) Singer 106-PR.
 - 2) Design requirements: Modulate basic valve to maintain a uniform downstream pressure as set on control pilots.
 - a) Size: 6 IN.
 - b) Operating pressure:
 - (1) Maximum inlet: 80 psi.
 - (2) Outlet: 75 psi.
 - c) Flow:
 - (1) Normal maximum 230 gpm.”

REVISIONS TO DRAWINGS

Drawing 76S101

Note 10

CHANGE TO READ

“NOTE 10. FOR PROTECTION OF ADJACENT FOUNDATION PILE, 76P-1, 76P-2, 76P-4 AND 76P-7 SHALL BE DRIVEN THROUGH STEEL CASINGS EXTENDING FROM TOP OF SUBGRADE DOWN TO BOTTOM OF CHLORINE CONTACT STRUCTURE FOUNDATION. AFTER PILE

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INSTALLATION CASING SHALL BE REMOVED AND VOID FILLED
WITH LOW DENSITY CONCRETE FILL.”

Drawing 00E037

General Pad Detail

CHANGE

“1’-6” ENGINEERED FILL (95% COMPACTION)”

TO READ

“1’-0” ENGINEERED FILL (95% COMPACTION)”

End of Addendum