

## DIVISION 10 – SPECIAL PROVISIONS

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## **SECTION 10-01 DESCRIPTION OF THE WORK**

### *10-01.01 Description*

The work covered under this section shall supplement work specified in Division 500, Recoating Specification, and shall include the furnishing of all labor, materials, tools, equipment and performing all work for rehabilitation of the tank, except as provided for in Division 500.

- Spot welding and patching steel tank shell, roof and floor as necessary.
- Install access systems and appurtenances to enhance tank use and meet current regulations.
- Remove and replace existing roof tank vent and adjacent corroded steel.

## **SECTION 10-02 MOBILIZATION**

### *10-02.01 Mobilization*

The Contractor's mobilization efforts shall be in accordance with the requirements of Section 2-01 "Mobilization" of the District's Standard Specifications.

The Contractor shall obtain all necessary approvals, permits and variances to complete the work in accordance with Section 1-04.10 "Contractor Permits and Licenses" and 1-06.10 "Required Permits of the Standard Specifications."

Prior to mobilization the Contractor shall agree upon a "Project Area" at the El Pueblo Water Treatment Plant where Contractor's activities will be limited too. The Project Area shall be of sufficient size to safely store all vehicles, equipment and materials assembled for the performance of the Work. The area may also include parking of personal vehicles of workers employed on the project, or a separate area for parking may be defined.

The Project Area shall be operated and maintained in a manner that minimizes adverse impacts to adjacent properties. The Contractor shall, at all times, maintain control of dust, noise, noxious fumes and similar irritants in accordance with Section 1-06.16, "Water and Air Pollution" and Section 1-06.17, "Construction Noise Mitigation" of the Standard Specifications.

### *10-02.02 Measurement and Payment*

Measurement and Payment for Mobilization shall be in accordance with Section 2-01.06 "Measurement and Payment" of the District's Standard Specifications.

## SECTION 10-03 REQUIREMENTS OF OPERATING FACILITY

### *10-03.01 Description*

El Pueblo Water Treatment Plant is a California Department of Public Health (DPH) permitted facility for treatment and distribution of potable water. Contactor will confer to SVWD Operations Manager concerning permitted activities at the plant.

### *10-03.02 Access to Water Treatment and Distribution Works*

Should operation of El Pueblo WTP become necessary at any time during the Project, the Contractor will act in every way possible to prevent activities related to the Project from affecting start-up and operation of the plant.

- 1) The booster pump manifold for El Pueblo WTP is located adjacent to El Pueblo Clear Well and will be needed should operation of the plant become necessary. Contractor will maintain access to the distribution pump manifold and temporary influent piping to the manifold. Contractor's actions will not limit operation of the pumps, including, but not limited to, electrical power, operation of piping effluent from booster, and access to the pumps.
- 2) A chemical storage and metering building is located adjacent to El Pueblo Clear Well. Contractor's actions will not limit operation of the chemical storage and metering facility, including, but not limited to, electrical power, daily access, and weekly chemical delivery access to the chemical storage and metering building.
- 3) Backwash pump – The dual media filter backwash pump is located adjacent to El Pueblo Clear Well. Contractor's actions will not limit operation of the backwash pump, nor any piping into or out of the backwash pump, whether permanent or temporary, including, but not limited to, electrical power and daily access.

### *10-03.03 Working Corporation Yard*

El Pueblo WTP is a working corporation yard for SVWD Staff. Contractor shall act in every way possible to prevent activities related to the Project from decreasing Staff response to business of the District, including emergency response and routine work. Specifically, access to sheds, equipment, vehicles, and repair materials (asphalt, class 2, rock, fitting, etc) shall be maintained. If any such access directly limits Contractor's ability to complete the Work, Contractor shall notify and receive approval from Engineer two working days prior to blocking access, and if such approval

### *10-03.04 Security*

Contractor shall act to maintain a high level of plant security. The District shall supply a construction combination lock to the rear gate for access via Old El Pueblo Road.

*10-03.05 Measurement and Payment*

Measurement and Payment for items in Section 10-03 shall be considered as incidental to other items of work and shall be considered as included in the contract unit or lump sum prices for other time of work in mobilization and no additional compensation will be allowed.

SECTION 10-04 CLEARING, GRUBBING AND RESTORATION

*10-04.01 General*

The Contractor shall meet with Engineer and prepare a Removal Schedule which clearly identifies any items which must be removed or relocated to accomplish tank rehabilitation. Only those items agreed upon in writing by Engineer may be removed. Contractor shall fully provide for removal except as expressed in writing. Contractor shall be responsible for the repair of existing infrastructure and the restoration of the property to its original condition or better than its original condition prior to installation through completion of the project.

*10-04.02 Disposal*

All material generated by the demolition of existing facilities shall become the property of the Contractor and shall be disposed of offsite in accordance with the provisions of Section 2-03.04, "Disposal" of the District Standard Specifications.

*10-04.03 Clearing and Grubbing*

Contractor shall perform all clearing and grubbing in accordance with Section 2-03 of the District Standard Specifications.

*10-04.04 Restoration*

Contractor shall pay all costs to protect and restore existing infrastructure. Contractor shall be responsible for protection of structures, piping, pumps, power lines, storm drainage facilities and other infrastructure.

*10-04.05 Measurement and Payment*

Measurement and Payment for Clearing, Grubbing and Restoration shall be considered as incidental to other items of work and shall be considered as included in the contract unit or lump sum prices for other time of work in mobilization and no additional compensation will be allowed.

SECTION 10-05 TANK ACCESS IMPROVEMENTS

*10-05.01 General*

Contractor shall install or restore tank appurtenances as outlined herein. Contractor shall prepare submittals for each item consisting of specifications, material data, and shop drawings meeting all local, state, and federal codes.

#### *10-05.02 Exterior Ladder*

Contractor shall comply with all applicable codes when performing work on ladder, including CAL OSHA, AWWA D-100, ANSI A14.3-2002, and CCR 1675. Contractor shall perform a detailed inspection of the exterior ladder and provide for repairs due to corrosion, fatigue, workmanship, material or other deficiencies. The Contractor shall provide following improvements to the exterior ladder:

1. Remove existing safety-climb mechanism.
2. Construct new ladder cage from ladder gate extending 42" above the tank roof and meeting all Cal OSHA requirements. Provide for Through Ladder railing at tank roof. Ladder to be coated per exterior paint specification.
3. Construct railing 42 inches in height and extending 2 feet horizontally on both sides of ladder cage.
4. Contractor shall install a locking ladder gate to restrict access to the tank.
5. Exterior ladder to be protected from corrosion per Exterior Coating Specification.

#### *10-05.03 Interior Ladder*

Contractor shall remove and replace interior ladder in compliance with CAL OSHA, AWWA D100, ANSI A14.3-2002, and CCR 1675 guidelines. Contractor shall install ladder safety device ("safety-climb" type). Interior ladder to be protected from corrosion per Interior Coating Specification.

#### *10-05.04 Ground Entry Manway Hatches*

Provide for two access hatches, each having a minimum 30" inside diameter, meeting AWWA, CDPH, and Cal OSHA requirements. Remove existing 24" diameter manway access hatch and replace with 30" hatch at same location. Install new 30" diameter manway access hatch.

#### *10-05.05 Roof Hatch*

Remove existing roof hatch and replace with an aluminum hatch meeting AWWA, CDPH, and Cal OSHA guidelines. The roof hatch shall be framed 4" to 6" above the surface of the roof at the opening and be fitted with a solid watertight cover which overlaps the framed opening and extends down around the frame a minimum of 2" to prevent contaminated rainwater from entering the tank. The new hatch will also be equipped with the following features:

1. Hatch shall be made of aluminum and equipped with side arm hydraulic mechanism to assist in opening and closing hatch.
2. Hatch shall be fitted with a locking mechanism to prevent unwanted entry.

#### *10-05.06 Measurement and Payment*

The Contract unit price for each listed item, 10-05.02 through 10-05.05, shall include full compensation for all labor, materials, tools, equipment, and for doing all work, in accordance with the District Standard Specifications and Standard

Plans, these Special Provisions, the Recoating Specification, and the direction of the Engineer and no additional compensation will be allowed therefore

## SECTION 10-06 TANK APPURTENANCE IMPROVEMENTS

### *10-06.01 General*

Improvements shall meet AWWA D100 and DPH requirements. Freeze protection must be supplied to all appurtenances. Contractor shall submit shop drawings and material data submittals for listed items.

### *10-06.02 Roof Vent and Surrounding Metal*

Corrosion on existing vent and surrounding roof metal is extensive. Remove and replace existing vent and corroded portion of roof metal, and replace with vent meeting current California DPH and AWWA guidelines. New vent shall be protected from direct contact with the elements, freeze proof, insect proof, and capable of preventing contamination to the tank from animals, wind-blown material, and water, including, but not limited to rain.

### *10-06.03 Fittings for Analytical Instrumentation*

Contract shall provide two additional fittings in tank wall 1 ft above tank bottom for instrumentation. Fittings shall be equipped with a corporation stop type valve, be constructed to prevent galvanic corrosion, and be protected from freezing.

### *10-06.04 Fittings for Pressure Transducer Type Water Level Indicator*

Tank is currently fitted with a pressure transducer type water level indicator to provide 4-20 ma signal for automated control based on tank level. Contractor shall remove and replace existing pressure transducer piping. Contractor shall repair metal and provide for coating as specified. Contractor shall reinstall pressure transducer and calibrate as necessary to provide for accuracy within 0.1 ft of actual tank level. District Electrician to be present during replacement of system and to sign-off system is fully operational. Contractor shall provide freeze protection wrapping for the pressure transducer piping.

### *10-06.05 Mechanical Water Level Indicator*

Contractor shall remove the existing water level sight gauge and replace with a mechanical float-type water level indicator. Indicator should be easily visible from tank exterior at ground level, accurate to 0.1 ft, and require no electrical power to operate.

### *10-06.06 Clean-out*

Contractor shall install a tank clean-out in the tank sidewall at the floor level to facilitate floor cleaning using a squeegee. Approximate dimensions of clean-out shall be two feet wide and six inches high and be equipped with a flanged access cover.

*10-06.07 Measurement and Payment*

The Contract unit price for each listed item, 10-06.02 through 10-06.05, shall include full compensation for all labor, materials, tools, equipment, and for doing all work, in accordance with the District Standard Specifications and Standard Plans, these Special Provisions, the Recoating Specification, and the direction of the Engineer and no additional compensation will be allowed therefore.

SECTION 10-07 TANK COUPLINGS

*10-07.01 Existing Tank Couplings*

Improvements shall meet AWWA D100 and DPH requirements. Contractor shall submit shop drawings and material data submittals for listed items.

*10-07.02 Influent Piping*

Influent pipe has flexible coupling, to remain. Contractor to provide for physical air gap between Tank and influent piping until tank is ready to be filled. Contractor shall bolt a blind flange onto influent piping exposed by air gap.

*10-07.03 Effluent Piping*

Contractor shall inspect tank effluent piping, including sump and encased effluent pipe for corrosion and failure, and provide for repair of corroded, or otherwise failed metal, and coating in accordance with Division 500. Contractor to provide for physical air gap between Tank and effluent piping until tank is ready to be filled. Contractor shall bolt a blind flange onto effluent piping exposed by air gap. Standing water in effluent piping connected to tank shall not be allowed during recoating.

*10-07.04 Intertie Piping*

Install flexible coupling on 4" diameter intertie coupling to tank. Contractor to provide for physical air gap between Tank and intertie piping until tank is ready to be filled. Contractor shall bolt a blind flange onto piping exposed by air gap.

*10-07.05 Measurement and Payment*

The Contract unit price for each listed item, 10-07.03 and 10-07.04, shall include full compensation for all labor, materials, tools, equipment, and for doing all work, in accordance with the District Standard Specifications and Standard Plans, these Special Provisions, the Recoating Specification, and the direction of the Engineer and no additional compensation will be allowed therefore. Work under 10-07.02 shall be considered as incidental to other items of work and shall be considered as included in the contract unit or lump sum prices for other time of work in 10-07 and no additional compensation will be allowed.

## SECTION 10-08 FOUNDATION

### *10-08.01 Foundation Treatment*

Foundation ring exposed around exterior of tank shall be coated with a non-lead based coating appropriate for protection on concrete.

### *10-08.02 Exterior Caulking*

Contractor shall completely remove the existing caulk between the ringwall and steel tank with a chisel or other device that will not damage the steel tank, concrete ringwall, or the tank expansion joint underneath the steel tank floor. Contractor shall completely clean and prepare the cavity area for re-caulking. Contractor shall place a bead of Sika 1A caulk within this cavity area and under the tank.

### *10-08.03 Measurement and Payment*

The Contract unit price for each listed item, 10-08.01 through 10-08.02, shall include full compensation for all labor, materials, tools, equipment, and for doing all work, in accordance with the District Standard Specifications and Standard Plans, these Special Provisions, the Recoating Specification, and the direction of the Engineer and no additional compensation will be allowed therefore.

## SECTION 10-9 EXISTING SYSTEMS TO BE MAINTAINED

### *10-9.01 General*

Contractor to make a detailed inspection of all existing tank systems and provide for continued operation of all existing tank systems at project completion.

### *10-9.02 Cathodic Protection System (CPS)*

Existing cathodic protection equipment shall be removed and reinstalled by independent cathodic protection contractor. Contractor shall remove and replace existing electric conduit run to tank roof. Existing conduit may be reused, with new paint. New wire, matching gauge and type of existing, shall be installed by Contractor and stubbed out for later connection to cathodic system. Contractor shall maintain and improve existing cathodic protection access holes to tank per Division 500.

### *10-9.03 Roof Lighting*

Contractor to remove and replace existing electric lighting located on Tank in operating condition, including conduit.

### *10-09.04 Measurement and Payment*

The Contract unit price for each listed item, 10-09.02 through 10-09.03, shall include full compensation for all labor, materials, tools, equipment, and for doing all work, in accordance with the District Standard Specifications and Standard

Plans, these Special Provisions, the Recoating Specification, and the direction of the Engineer and no additional compensation will be allowed therefore.

## SECTION 10-10 ADDITIONAL IMPROVEMENTS

### *10-10.01 SIGNS*

Post Federal Offense warning signs, or stencils upon approval, on Tank in compliance with DPH requirements.

### *10-10.02 Measurement and Payment*

The Contract unit price for each listed item, 10-10.01 shall include full compensation for all labor, materials, tools, equipment, and for doing all work, in accordance with the District Standard Specifications and Standard Plans, these Special Provisions, the Recoating Specification, and the direction of the Engineer and no additional compensation will be allowed therefore.

## SECTION 10-11 METAL REPAIR

### *10-11.01 General*

Contractor shall provide for metal repair, as specified in Division 500.

### *10-11.02 Pit Weld*

### *10-11.03 Plate repair – 6 inch plate*

### *10-11.04 Plate Repair – 8 inch plate*

### *10-11.05 Lineal Foot Weld*

### *10-11.06 Rafters Replacement*

### *10-11.07 Measurement and Payment*

The Contract unit price for each listed item, 10-08.02 through 10-08.08, shall include full compensation for all labor, materials, tools, equipment, and for doing all work, in accordance with the District Standard Specifications and Standard Plans, these Special Provisions, the Recoating Specification, and the direction of the Engineer and no additional compensation will be allowed therefore.

## SECTION 10-12 CONSTRUCTION REPORT

### *10-12.01 Items to be Included in Report*

Contractor shall prepare a detailed report of the Tank rehabilitation project. The report shall include final material data specifications and as-built shop drawings. A section providing recommendations for an ongoing preventive maintenance

program for the tank shall be included. The Work shall not be deemed complete before the Construction Report is accepted by the Engineer.

**END OF DIVISION 10**