

# **PAJARO COUNTY SANITATION DISTRICT**

## **SPECIFICATIONS**

### **FOR**

### **PROJECT 10691**

### **PAJARO SEWER MANHOLE REHABILITATION AND**

### **SEWER FORCE MAIN LINE REPAIR**



**August 22, 2018**

**The Specifications contained herein have been prepared by or under the direction of the following registered person.**



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REGISTERED CIVIL ENGINEER



## **1. WORK DESCRIPTION**

- 1.1 CONTRACTOR shall provide equipment, services, and staff, and otherwise do all things necessary for or incidental to the performance of work, as set forth below, for the rehabilitation of existing manhole and permanent replacement of the existing damaged force main section.
- 1.2 CONTRACTOR shall coordinate with staff to minimize sewer flows during repair operations. Due to the diurnal nature of sewer flows, CONTRACTOR is limited to performing work on one day between the hours of 9 PM and 6 AM if decreased sewer flows are necessary to perform the work. Repair preparation, such as excavation, shoring, and material and equipment mobilization, may be completed during normal daytime work hours.
- 1.3 CONTRACTOR shall have a vacuum truck on standby on-site during operations with potential for sewer overflows.
- 1.4 CONTRACTOR shall complete all excavation, shoring, and additional preparation for construction prior to the start of the manhole rehabilitation and force main line repair to minimize any time that the sanitation system is offline.
- 1.5 Due to the proximity of the project to the toe of the Pajaro River Levee, scope of work may be subject to additional regulatory approvals.

## **2. SEWER FLOW MANAGEMENT**

- 2.1 Pumps located at the Salinas Road lift station will be stopped to halt flow during manhole rehabilitation and line repair. Septic pumping trucks will operate two (2) at a time to keep up with the flow level in the wet well. It is anticipated that the system will drain out within 15 to 20 minutes to allow for repair work to proceed.
- 2.2 One (1) vacuum truck shall be stationed at the line repair site to capture residual flow if needed.

## **3. SEWER MANHOLE REHABILITATION**

- 3.1 CONTRACTOR shall excavate soil around existing manhole and dismantle manhole wall to bench while manhole is in operation.
- 3.2 CONTRACTOR shall clean and trowel repair bench and invert with epoxy grout to a minimum thickness of .5 inches.
- 3.3 Manhole walls shall be replaced with Jensen precast rings or equal with factory-applied Raven 405 epoxy lining or equal. Precast joints shall be sealed with Ram-Nek gasket material or equal.
- 3.4 CONTRACTOR shall install manhole flat top with frame and cover. All metal exposed to manhole interior, including frame and cover, shall be coated with Scotchkote 323 or equal.
- 3.5 All fill shall be compacted as indicated on contract drawings.

#### **4. FORCE MAIN LINE REPLACEMENT**

- 4.1 CONTRACTOR shall excavate line repair area and prepare materials for repair.
- 4.2 CONTRACTOR shall shore area for excavation support and work protection.
- 4.3 CONTRACTOR shall remove one (1) cubic yard of concrete previously used as temporary patch.
- 4.4 ACP shall be sawcut and removed in accordance with State and Federal requirements for handling and disposal of ACP.
- 4.5 CONTRACTOR shall install approximately ten (10) linear feet of 16" PVC with transition couplings for ACP to PVC. Couplings shall be Romac 501 or equal. Contractor shall have a minimum of forty (40) linear feet of PVC on hand as a contingency for additional repairs should the need arise.
- 4.6 CONTRACTOR shall coordinate pipe outage with County.

#### **5. BACKFILL REQUIREMENTS**

- 5.1 All material used for backfilling excavations shall be suitable for use as levee material and shall meeting the following requirements:
  - 5.1.1 Material shall consist of clay, sandy clay, silty clay, or clayey silt with a maximum total unit weight of 125 pounds per cubic foot when compacted as required. A maximum total unit weight of 125 pounds per cubic foot when compacted as required.
  - 5.1.2 Material shall be free of debris, organic, or deleterious material, and shall not contain rocks or lumps larger than three (3) inches in the greatest dimension with no more than fifteen percent (15%) larger than one (1) inch. A minimum of fifty percent (50%) of the material shall have a particle size passing a No. 4 sieve with no less than thirty percent (30%) passing a No. 200 sieve.
  - 5.1.3 Material shall have a liquid limit less than 45 and a plasticity index between ten (10) and 30. After compaction, the fill shall have a hydraulic conductivity less than  $10^{-4}$  CM/SEC.
  - 5.1.4 Organic content shall be less than three percent (3%) and the fill material shall not be more corrosive than the native material or existing levee fill.
  - 5.1.5 Contractor shall maintain ground water one (1) foot below bottom of excavation using a sump.
  - 5.1.6 No clean gravels or sands shall be used as backfill.
  - 5.1.7 All fill to be compacted to ninety percent (90%) maximum density.
  - 5.1.8 Fill shall be moisture-conditioned, placed in lifts not to exceed six (6) inches, and be mechanically compacted.