



# d.p. Consulting Engineers, Inc.

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## ADDENDUM NO. 1

ADDENDUM ISSUE DATE: OCTOBER 05, 2011

CARDINAL MEADOWS LIFT STATION REHABILITATION AND GENERATOR INSTALLATION ONLY

“Texas Community Development Block Grant Program”

Administered by

d.p. Job No. 110-40B Sanitary Sewer Lift Station Rehab

Engineer Contract No. DRS015010

Grantee Contract No. DRS010219

Work Order No. 10902-1

Activity No. 1b

Project ID P00935

As a result of the questions that have been raised during the mandatory pre-bid meeting held at 10:00 a.m. September 27, 2011 at the Jefferson County Commissioners Court Room, about the project the following information is offered for clarification or modification to the project information you now hold:

### 1. GENERAL NOTE:

- a) BIDDERS ARE ADVISED TO FILL OUT AND USE THE BID BOND THAT IS IN THE BID PACKAGE, ONE ORIGINAL AND THREE COPIES.
- b) ATTACHED IS THE SPECIFICATIONS FOR LIFT STATION NO. 1. PIPING WILL BE DUCTILE IRON FLANGE FITTINGS.
- c) WETWELL TOP AND VALVE VAULT ARE TO HAVE A CONCRETE TOP WITH ALUMINUM MANWAYS PER THE SUMMARY OF WORK.
- d) PLEASE REPLACE BID PROPOSAL PAGE #76 WITH THE ATTACHED PAGE, SHOWING THE AMOUNT FOR CENTERPOINT ENERGY TO EXTEND THEIR GAS LINE TO THE PROPOSED GENERATOR LOCATION.
- e) PAY ITEMS #22 THROUGH #27 WILL ONLY BE USED WHEN AUTHORIZED BY THE ENGINEER.

**Received**

**Date:** \_\_\_\_\_

**Acknowledged:** \_\_\_\_\_

Bidders are advised that each Addendum issued must be recognized by signature and a copy of all addenda must be submitted with Bid.

**SPECIFICATIONS FOR**  
**PIPING, VALVES AND FITTINGS FOR**  
**SEWAGE TREATMENT PLANT**  
**AND LIFT STATIONS**

**SCOPE**

The work covered by this section includes furnishing all labor, materials, equipment and supplies required for the installation of metal pipe, valves, fittings, and all incidental items necessary thereto.

**MATERIALS**

Steel piping two and one-half (2-1/2) inches and smaller shall be standard weight galvanized. Fittings are to be 150 pound banded, galvanized malleable iron, screwed.

Steel piping three (3) inches and larger shall be flanged and underground cast iron pipe shall be a mechanical joint fittings and compression ring pipe run. All cast iron pipes shall be centrifugally cast, ASA A21.8 Class 150. Mechanical joints shall conform at ASA A21.11. Cast iron and cast iron mating flanges shall conform to ASA B16.1 Class 125 dimensions and drilling.

Copper tubing shall be type "K" hard drawn with solder type bronze fittings. Plastic pipe for chlorine solution service shall be PVC Schedule 40, or equal.

**VALVES**

Gate valves two and one-half (2-1/2) inches and smaller shall be 125 pound, brass, with rising stem, double disc brass seats, Crane (No. 440), WKM, Mueller or approved equal.

Above ground gate valves three (3) inches and larger shall be flanged AWWA C-509 O.S. & Y. WKM (Magna Seal), Crane Mueller or approved equal.

Underground gate valves two (2) inches and larger shall be AWWA, C-509 resilient seat, mechanical joint, O-ring, square wrench nut, complete with box. Mueller, American, or approved equal.

Check valves two and one-half (2-1/2) inches and smaller shall be 125-pound brass swing check, with brass disc, screwed ends, Crane (No. 34) WKM, Mueller, or approved equal.

Check valves three (3) inches and larger shall be Class 125 AWWA swing check, flanged ends with weighted lever attached to extended hinge pin, Mueller (No. A-2600-5-01) Crane, WKM or approved equal.

Air control valves shall be Plug Valves, and shall be equipped with position indicators, Dezuric Pratt, Carne or approved equal.

Underground valves shall be installed in case iron valve boxes complete with base screw extensions and lid, Mueller (H-10357), Crane, Darling or approved equal, with base type to be determined by usage.

### **AIR PIPING**

Air piping manifold and header shall be shop fabricated from steel pipe, Schedule 20-12 to 16" and Schedule 40 below 12", ASA Code B31.8, with welded joints and fittings, ASA B16.9 and flanges ASA B16.9 and flanges ASA B16.1. Other connections shall be straight steel couplings, Smith-Blair No. 411 and long steel couplings, Smith-Blair (No. 412). Dresser, Mueller or approved equal.

Piping will be adequately supported, braced and blocked to prevent sag pockets or temperature crawl. The line shall be provided with suitable means to compensate for expansion and contraction over a 200° F. range. The pipe shall be pitched not less than ¼" in 15' from the blowers to the vertical tank connection leg and for any extended runs within the tank area. A suitable blow-off of a capped tee tapped and fitted with a blowdown valve shall be provided at each line low point.

Steel pipe and fittings, after fabrication shall be lined with coal tar enamel, AWWA C-203, or Epoxy Resin lined in accordance with Epoxy Manufacturer's standard for this service. Lining material must be satisfactory for service temperature 0° to 200° F. and produce a Hazlett-Williams "C" coefficient of not less than 140. No field welding of this pipe will be permitted; couplings or flange connections must be used.

### **GASKET AND BLOTS**

Gasket for Class 125 flanges shall be one-sixteenth (1/16) inch full-face rubber. Appropriate service and temperature ring gaskets shall be used with Class 150 flanges. Bolts for flanged joints shall be 304 stainless steel with square heads and hexagon nuts. Bolts and nuts for mechanical joint shall be 304 stainless steel.

### **PIPE HANGERS**

All piping above ground or above the floors of the building shall be supported so as to prevent undue strain or sagging. Vertical members shall be supported by steel clamps similar to Grinnel Figure No. 261.

Horizontal lines with overhead supports shall be supported by adjustable clevis type hangers similar to Grinnel No. 260, attached to structural members, or concrete masonry by means of suitable clamps or bolted clips. Horizontal lines supported from below shall be supported by an adjustable saddle support similar to Grinnel Figure No. 264. Clamps,

supports, racks, etc., specified herein may be Grinnel, Mabry, or job fabricated when approved by the **ENGINEER**.

### **INSTALLATION**

Flanged pipe and fittings shall be assembled to line and grade according to standard practice, beginning in each instance at flange on pump or tank and working away from these fixed points. After assembly, the pipe and fittings shall be supported to insure that no weight or strain is imparted to pumps, blowers or tank nozzles. Bolts connecting at these points shall be loosened so that visual evidence may be had of this specified condition. All flanged joints shall be assembled with necessary gaskets and bolts and shall be watertight and airtight under the specified operation conditions.

Mechanical joint pipe and fittings shall be installed in trenches excavated to line and grade shown on the plans, all joints to be assembled in accordance with the manufacturer's directions to insure watertight and airtight connections. All joints shall be tested before backfill is placed. After the test is approved, backfill shall be placed and tamped and excess earth spread on site as directed.

Screw joint pipe and fittings shall be assembled according to standard pumping practices. Threads shall be cut with sharp dies cleaned with wire brushes and covered with thread compound to insure tight joint.

Welding shall conform to the latest revision of the American Welding Society Code.

### **TESTING**

The piping installed under this section shall be airtight and watertight under the designed operating conditions and the **CONTRACTOR** shall perform necessary tests as may be required to prove this specified condition.

### **THURST BLOCKING**

All underground pipefitting 4" and larger shall be provided with adequate concrete thrust blocking to prevent movement. This applies to all direction changes, side outlets, etc., whether horizontal or vertical. All underground valves will be provided with a concrete support block.

