

**NATURAL RESOURCES CONSERVATION SERVICE
CONSTRUCTION SPECIFICATION**

PIPELINE

1. SCOPE

The work shall consist of furnishing and installing pipeline and the necessary fittings as shown on the drawings.

2. GENERAL

The design, construction, and operation of the pumping plant for water control shall comply with all federal, state, and local law, rules and regulations.

Construction operations shall be carried out in a manner and sequence so that erosion and air and water pollution are minimized and held within legal limits.

The completed job shall present a workmanlike appearance and shall conform to the line, grades, and elevations shown on the drawings or as staked in the field.

All operations shall be carried out in a safe and skillful manner. Safety and health regulations shall be observed and appropriate safety measures used. Contractor shall be assured that all state laws concerning buried utilities have been met.

If water from the pumping plant has the potential to be used for human consumption, applicable federal, state and local laws and regulations shall be met.

3. MATERIALS

Unless otherwise indicated, all pipes shall be PVC (polyvinyl chloride) schedule 40 conforming to ASTM d1785. The ASTM or AWWA designation shall be stamped on the pipe. Storage tanks of concrete shall have a minimum wall and bottom thickness of 6 inches and 16 gauge if made of steel.

4. LAYING AND BEDDING

Pipe shall be laid to the line and grade shown on the drawings. The pipe shall be firmly and uniformly bedded throughout its entire length to the depth and in the manner shown on the drawings or as specified by the NRCS Engineer or designated representative.

5. PLACEMENT

Placement storage tank and appurtenances shall be as shown on the plans or as staked. Other parts of the water system shall be installed and connected to the pipeline as specified.

All pipes shall be protected from hazards presented by traffic, farm operations, freezing temperatures, fire, thermal expansion, and contraction. Reasonable measures should be taken to protect the system from potential vandalism.

All associated pipeline will be buried below the frost line or otherwise protected from freezing.

Pumps shall be located as indicated in the plans minimizing the need for maintenance and low sediment load.

All PVC pipe connections designed to be glued will use PVC solvent cement. Allow glue cure according to manufacturer's guidelines prior to moving pipe and pressure testing. Gluing shall not be done at temperatures below freezing. Watertight joints that have strength equal to that of the pipe shall be used. Couplings must be of material compatible with that of the pipe.

6. PUMP REQUIREMENTS

The pump shall be capable of meeting the planned capacities and range of operating lifts. The size of the pump will be as indicated in the plan at minimum or larger. The pump is designed to take in account for total head for the critical operating conditions. Automatic controls will be used as planned.

7. SUCTION AND DISCHARGE PIPES

Suction and discharge pipe shall be installed as indicated in the plans as a minimum. Gates, valves, pipe connections, and other protective works shall be installed as needed and indicated for satisfactory plant operation.

8. BUILDING AND ACCESSORIES

The design of the plant and associated housing, if required, shall consider the need for protecting equipment from the elements, malicious damage, and fire, and the need for equipment maintenance and repairs. The appearance of the plant shall be in keeping with its surrounding environment and its importance or value.

9. TESTING

All pipelines, junctions, and joints shall be pressure tested at the designed working pressure for 2 hours.

10. VEGETATION

Disturbed areas shall be established with vegetation or otherwise stabilized as soon as practical after construction.

Topsoil shall be added, if needed, to establish vegetation. Disturbed areas shall be seeded to 35 pounds of Tall Fescue or 8 pounds of Orchardgrass and 2 pounds of Redtop unless indicated differently in conservation plan. Temporary seeding or mulching may be necessary. When a temporary seeding is needed, seed 60 pounds of wheat or spring oats. Temporary seeded areas shall be seeded to permanent vegetation as soon as conditions allow.

11. ADDITIONAL ITEMS WHICH APPLY TO THIS JOB