

SECTION 33 11 00

PVC WATER MAIN

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. All material, labor, equipment, tools, and superintendence necessary to furnish and install PVC water main, complete in place.

1.02 REFERENCES

- A. City or Water District Standards.
- B. North Central Texas Council of Governments Public Works Construction Standards 2004.
- C. Where any conflict exists between the City or Water District Standards and NCTCOG, the City or Water District Standards shall govern.

1.03 SUBMITTALS

- A. Pipe certification.
- B. Thrust restraint materials.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Conform to NCTCOG Item 501.14 Polyvinyl Chloride (PVC) Water Pipe.
- B. Conform to City or Water District Standards for backfill and embedment. If no guidelines are given in the City or Water District Standards, then embedment shall conform to NCTCOG Item 504 OPEN CUT-BACKFILL.
- C. Conform to City or Water District Standards for trenchless installation. If no guidelines are given in the City or Water District Standards, then trenchless installation shall conform to NCTCOG Item 503 TRENCHLESS INSTALLATION.
- D. Suitable material for subgrade and backfill shall be in accordance with the recommendations of the geotechnical report. If no guidelines are given in the geotechnical report, the material shall be of the nature required to adequately support proposed improvements and meet density and moisture requirements. If unsuitable material is encountered, the unsuitable material shall be removed and replaced with suitable material. Should the unsuitable material exceed two feet in depth, the Contractor shall contact the Owner for evaluation before construction. Earthwork on this project shall be unclassified. There will be no additional compensation for soil conditioning to meet backfill requirements, or removal and import of replacement material. Rock and rubble shall not be used as backfill material.
- E. Thrust Restraint.
 - 1. Concrete for blocking shall conform to City or Water District Standards. If no guidelines are given in the City or Water District Standards, then concrete for blocking shall be Class A in accordance with NCTCOG Item 303 PORTLAND CEMENT CONCRETE PAVEMENT.
 - 2. Mechanical thrust restraint shall conform to City or Water District Standards. If no guidelines are given in the City or Water District Standards, then mechanical thrust restraint shall be EBAA Iron Series 2000PV or Series 2800 or approved equal.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Conform to NCTCOG Item 506 OPEN CUT –WATER CONDUIT INSTALLATION.
- B. Conform to NCTCOG Item 503 TRENCHLESS INSTALLATION.

- C. Perform excavation to line, grade, and alignment as shown on plans.
- D. Trench backfill shall be of sufficient depth to ensure that the work constructed under this Contract and existing adjacent utilities and structures are stabilized for all conditions that may exist and/or arise. Contractor shall not lay more pipe on any single day than trench backfill can be placed and compacted, and/or such that stabilization of the work performed and surrounding existing utilities and structures cannot be achieved.
- E. Place trench backfill in level, uniform layers in accordance with the recommendations of the geotechnical report. If no guidelines are given in the geotechnical report then compact backfill to within 95% to 100% of maximum dry density in accordance with ASTM D-698, and each layer shall have a uniform loose thickness of not more than ten (10) inches and/or a maximum compacted thickness of not more than six (6) inches, whichever is less. Dispose of surplus or unusable materials offsite.
- F. All backfill to be graded to (\pm) 0.10 feet.

3.02 TESTING

- A. Provide hydrostatic and bacteria testing in accordance with City or Water District Standards. If no guidelines are given in the City or Water District Standards, then testing shall conform to NCTCOG Item 506 OPEN CUT –WATER CONDUIT INSTALLATION.
- B. Provide density/moisture testing in accordance with the recommendations of the geotechnical report. If no guidelines are given in the geotechnical report, then provide one passing density/moisture test for each lift of backfill for every 300 linear feet for linear work.

END OF SECTION