

Special Specification 7230

Replacement of Water and Sewer Lines



1. DESCRIPTION

Furnish, install, or replace water pipe, water valves, water meters and boxes, water service connections, fire hydrant assemblies, pipe fittings, encasement pipes for water lines, adjust wastewater manhole, and supporting materials in conformance with the North Central Texas Council of Governments (NCTCOG) and details shown on the plans. All work must be completed in accordance with the NCTCOG technical specifications unless otherwise noted on the plans authorized in writing.

2. MATERIALS

Furnish all materials in accordance with the requirements set forth by the North Central Texas Council of Governments (NCTCOG) technical specifications unless otherwise noted on the plans. Materials must meet the "Buy America" requirements set forth by the Department and the North Central Texas Council of Governments (NCTCOG).

See Article 8, "Measurement," Table 1.

3. PERMITS, TESTING, AND INSPECTION

3.1. **Permits.** Acquire all necessary permits from the Town of Sunnyvale to perform the work. Please contact the following as needed:

- Town of Sunnyvale (972) 226-7177, or
- North Central Texas Council of Governments (817) 640-3300.

3.2. **Testing.** Provide testing for water and sewer improvements in conformance to the NCTCOG or as directed. In general, perform the following testing as minimum:

- For water mains: hydrostatic test, poly pigging, and sterilization test; and
- For sewer lines: low pressure air test, deflection (Mandrel) test, vacuum test, and Closed-Circuit Television (CCTV) Inspection.

Initial testing and required retesting of all materials, construction items, or products incorporated in the work will be performed at the expense of the CONTRACTOR by a laboratory approved by the OWNER.

3.3. **Inspection.** All water mains, sewer lines, and their appurtenances will be inspected by a representative of the Town of Sunnyvale. These representatives decision of acceptability of the installation will be final. The Town of Sunnyvale will hold three final inspections, one at water completion, second at sewer completion, and the third at roadway completion for final utility grade adjustments.

4. CONSTRUCTION

Perform work in a manner consistent with the construction documents, NCTCOG standard details and specifications, and the Department standard details and specifications.

Priority Contract Documents (First with highest priority.)

- Contract Drawings;
- North Central Texas Council of Governments (NCTCOG) Details, Specifications, and Special Provisions; and
- Texas Department of Transportation Details, Specifications, and Special Provisions.

A Copy of the "Public Works Construction Standards" (Standard Specifications for Public Works Construction-North Central Texas Governments- Fifth Edition-2017) may be obtained from the North Central Texas Council of Governments, 616 Six Flags Drive, Arlington, TX 76006 or ordered online at <http://store2.nctcog.org/NCTCOG/product/ENV101.html>

Standard Specifications for Public Works Construction-Item 107.12, Water for Construction, will be modified to include the following:

Water used for the mixing of concrete, testing, flushing, or any other purpose incidental to the construction of this project may be obtained from the existing Town of Sunnyvale fire hydrants at cost determined by Town's current retail water rate schedule. The Contractor will make the necessary arrangements, with the Town of Sunnyvale Customer Service Department, to secure a temporary water meter which will be requested by the Contractor and approved by the OWNER before installation. A deposit of **One Thousand Dollars (\$1,000.00)** (refundable upon return of meter) is to be left with the Public Works Department 127 N. Collins Road, Sunnyvale, Texas 75182. Water charged to the contractor will be deducted from the fire hydrant meter balance with the remaining balance due in full. Water will only be taken in a manner; and, at such times so as not producing a traffic hazard or a harmful drain or decrease of pressure in the Town water supply. If the Town determines the water is not being used as part of this Project, or in any way feels the Contractor is misusing the water in conjunction with this Project, the Town will notify the Contractor and the Contractor will be responsible for all charges and fines as determined by the Town.

Standard Specifications for Public Works Construction-Item 502.1.4. 5. 'Grade Adjustment Risers' will be modified to include the following:

Where manholes are to be adjusted upward to meet a new grade, the vertical rise in the manhole neck may be adjusted to a maximum of 18 in. This rise will be measured from the top of the manhole lid down to the top of the cone section of the manhole. The vertical measurement will include all vertical rise previously installed on an existing manhole. Where this maximum is exceeded, the existing walls will first be removed down to the bottom of the cone section of the walls, or to such an elevation that the inside diameter of the manhole is not less than 3-1/2 ft. The manhole will then be rebuilt in conformity with the size and shape requirements for new manholes. Salvaged materials in good condition may be used in rebuilding such structures upon approval from the OWNER.

5. WORKMANSHIP, WARRANTIES, AND GUARANTEES

Unless otherwise expressly provided in the Contract drawings or specifications, the work must be performed in accordance with the best modern practice with materials and workmanship of the highest quality and suitable for their purpose. The Owner will judge and determine the CONTRACTOR'S compliance with these requirements.

Promptly correct or replace all work, rejected by the Owner, as defective or as failing to conform to the Contract documents whether observed before or after substantial completion and whether or not fabricated, installed, or completed. The CONTRACTOR will bear all costs of correcting such rejected work, including costs incurred for additional services made necessary thereby.

If within two years after final acceptance of the work by the Owner, as evidenced by the final certificate of acceptance or within such longer or shorter period of time as prescribed by law or by the terms of any other applicable special warranty on designated equipment or portions of work as required by the Contract documents, any of the work is found to be defective or not in accordance with the Contract documents, the CONTRACTOR must correct it promptly after receipt of a written notice from the Owner to do so. This obligation will survive termination of the Contract. The Owner will give such notice promptly after discovery of the condition.

Remove all portions of the work from the site which are defective or nonconforming and which have not been corrected unless removal is waived in writing by the Owner.

All subcontractors', manufactures' and suppliers' warranties and guarantees, express or implied, respecting any part of the work and any materials used therein, will be obtained and enforced by the CONTRACTOR for the benefit of the Owner without the necessity of separate transfer or assignment thereof, provided that if directed, the CONTRACTOR will assign such warranties and guarantees in writing to the Owner.

Any work repaired or replaced, pursuant to this section, will be subject to the provisions of this section to the same extent as work originally performed.

The rights and remedies of the Owner provided in this section are in addition to, and do not limit, any rights or remedies afforded to the Owner by law or any other provision of the Contract documents, or in any way limit the Owner's right to recovery of damage due to default under the Contract.

6. PROTECTION OF PERSONS AND PROPERTY

Should CONTRACTOR cause damage to the work or property of any separate CONTRACTOR at the site, or should any claim arise out of CONTRACTOR'S work, CONTRACTOR must promptly attempt to settle with such other CONTRACTOR by agreement, or to otherwise resolve the dispute by arbitration or at law. Should a separate contractor cause damage to the work or property of CONTRACTOR or should the performance of work be any separate contractor at the site give rise to any other claim, CONTRACTOR must not institute any action, legal or equitable, against Engineer or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from Engineer on account of any such damage or claim.

Work will not be allowed until trench safety plans are submitted and approved. The preparation and approval of these documents are also included in the total contract time and should be completed expeditiously by the CONTRACTOR.

7. EXISTING UTILITIES AND SERVICE LINES

The CONTRACTOR will be responsible for the protection of all existing utilities and service lines, crossed or exposed, by the construction operations. Where existing utilities and service lines are cut, broken, or damaged, the CONTRACTOR must replace the utilities and service lines with the same type of original construction, or better, at his own cost and expense.

If it is necessary to change or move the property of any owner or of a public utility, such property will not be moved or interfered with until authorized. The right is reserved to the owner of any public utility to enter upon the limits of the project for the purpose of making such changes or repairs of their property that may be made necessary by the performance of this contract.

8. MEASUREMENT

These necessary items are required to construct the Water Main and Waste Water Relocations as described in the contract documents will be measured as follows.

**Table 1
Pay Items**

Item Code	Description Code	Bid item DESCRIPTION	UNIT
7230	6001	SAWCUT, DEMO, & RMVE EXT SW & PAV (COG 402)	SY
7230	6002	6" PVC C900 WATERLINE	LF
7230	6003	8" PVC C900 WATERLINE	LF
7230	6004	12" PVC C900 WATERLINE	LF
7230	6005	8" BORE (WL NOT INCLUDED)	LF
7230	6006	12" BORE (WL NOT INCLUDED))	LF
7230	6007	18" STEEL CASING PIPE	LF
7230	6008	CONNECT TO EXT WATER LINE	EA
7230	6009	CONNECT TO EXT WATER LINE	EA
7230	6010	12" GATE VALVE	EA
7230	6011	12" X 8" TAPPING SLEEVE & VALVE	EA
7230	6012	FIRE HYDRANT ASSEMBLY	EA
7230	6013	DUCTILE IRON FITTINGS	TON
7230	6014	RMV & SALV FIRE HYDRANT-RETURN TO TOWN	EA
7230	6015	CUT & PLUG EXISTING WATER LINE	EA
7230	6016	TOPSOIL, DISTURBED AREAS (COG 202.2)-4	SY
7230	6017	SEEDING DISTURBED AREAS (COG 202.6)	SY
7230	6018	CONC PAV REPAIRS (COG 402 & 403)	SY
7230	6019	ASPH PAV REPAIRS (COG 402 & 403)	TON
7230	6020	TRENCH SAFETY	LF
7230	6021	ADJUST WW MANHOLE TO GRADE	EA

9. PAYMENT

The work performed in accordance with this Item must be measured and paid for at the unit price for the various items of work listed under Section 8 – "Measurement." The unit price for the various items of work identified under Section 8 – "Measurement" must include the cost of excavation, embankment, backfill, labor, equipment, inspection, and any other materials necessary for the complete installation in accordance with the construction plans and standard specifications. Water line sterilization and testing of the completed water main system will not be paid for directly, but will be subsidiary to the various bid items.