

# Special Provision to Special Specification 7186

## Natural Gas Pipeline



Special Specification 7186 "Natural Gas Pipeline," is amended with respect to the clauses cited below. No other clauses or requirements of this Item are waived or changed.

Article 4 "Materials", is amended to include the following section:

- 4.1. **Grouting of Existing Gas Mains.** This Section will govern the grouting of existing steel or plastic gas mains with diameter as specified on the plans for the purposes of abandonment underneath roadways, paved areas, and at other designated locations. The location of this Work is as shown on the Contract Document plans or as encountered in the field during construction. The Contractor must, unless otherwise specified, furnish all labor, materials, equipment, tools, and all other appurtenances necessary to abandon gas line segments in place by filling them with flowable cementitious low strength grout including plugs, bulkheads, excavation, and backfill at locations as required to completely fill the line to be abandoned in place to protect against future collapse of the line.

Submittals for Grouting Gas Mains.

- Proposed Mix Design Report for grout.
- Submit manufacturers data for proposed plugs and detail of bulkhead.
- Technical information for equipment and operation procedures including projected injection rate, grout pressure, method of controlling grout pressure, bulkhead and vent design, and number of stages of grout application.
- Submit project specific plan for abandonment at least 15 days before commencing grouting activities, describe proposed sequence, access points, and other appropriate information for completion of Work.

Materials for Grouting Gas Mains.

- Cement-based grout or flowable fill with self-leveling and non-shrink characteristics.
- Unconfined compressive strength: Minimum 100 psi at 56 days as determined based on average of 3 tests for same placement. Present at least 3 acceptable strength tests for proposed mix design in mix design report.

- 4.2. **Remove Existing Gas Mains.** All materials designated to be removed must become the Contractor's property and must be disposed of in an approved and permitted disposal site. The Contractor must obtain City approval before disposing of any material within the City of San Antonio limits.

Article 5 "Construction", is amended to include the following section:

- 5.14. **Grouting of Existing Gas Mains.** Abandoning and grouting of gas lines must not occur until all existing gas mains and services have been transferred to a relocated gas line or another line as designated in the Contract Documents. The Contractor will be responsible for the satisfactory coordination of the pipe abandonments with other construction and activities in the area. Delays in work resulting from lack of coordination will not be cause for additional compensation. Any work involving or impacting asbestos concrete pipe must be in accordance with the specifications.

Remove all gas line appurtenances, such as valves and valve casing and castings. Return these appurtenances to the designated utility representative or dispose of properly. Make cuts, install bulkheads and vents to allow for air release. Remove any gas before starting grout placement.

Place grout or flowable fill using concrete or grout pumps capable of continuous delivery at planned placement rate to fill volume between placement points not to exceed 500 ft. at a time. Pump grout or flowable fill through bulkheads constructed for placement of PVC pipes or other methods to contain grout in line to be abandoned. These pipes will be used for injection points or vents during placement. Place grout or flowable fill under pressure into properly vented open system until grout emerges from vent pipes indicating pipe is completely filled. Pumping must be completed under enough pressure to overcome friction and to fill gas main from downstream to upstream end. Remediate areas where grout or flowable fill did not fill voids in gas main by pressure grouting from inside gas main or from surface if necessary. Plug each end of the gas main being abandoned. Ensure that concrete is placed around plug or bulkhead and around pipe including bedding area, such that it is not penetrable by groundwater and that bedding at this location is not a conduit for groundwater. The method of installation must be able to meet the requirement of completely filling the existing gas main and any voids adjacent to it.

Backfill to grade above pipe left in place. Place and compact backfill in compliance with Section 5.10. "Installation and Backfill."

Remove, transport, and dispose of spoils. Spoils including pipe, unused grout or flowable fill, and other unsuitable materials must be hauled to a facility permitted to accept the material. The abandonment method should provide for the release of air. When intermediate points are required to be constructed for the abandonment of the system, they will be a part of the abandonment project process. The method should provide for the isolation of gas mains to be grouted from other gas mains as shown on the plans.

Gas mains that are not under proposed pavement are generally not required to be grouted unless it is specified in the contract documents. Mains to be abandoned should be grouted only if required by the contract documents or the Engineer and payment, as per these specifications is provided.

#### 5.15. Remove Existing Gas Mains.

Contractor must be responsible for locating all gas lines to be removed. Removal of existing gas lines shall be safely removed without damaging adjacent utilities or structures. Contractor shall take appropriate measures to accurately locate adjacent utilities and crossings. Contractor will be fully responsible for damages caused to other facilities as a result of their pipe removal activities.

When specified or shown otherwise in the Contract documents, Contractor must remove the gas main and all related appurtenances that are to be replaced, or will no longer be in service, and all effort to accomplish this requirement including but not limited to coordination, potholing, excavation and backfill with native or select soil, removal of gas from pipe, groundwater dewatering, trenching, backfill and surface restoration, cutting, capping, removal of pipe, disposal of materials, and all other items will be considered subsidiary to the work required.

Article 7 "Measurement", is amended to include the following section:

- 7.19. Grouting of existing and or abandoned gas main will be measured by the foot of main grouted of the various sizes at the locations as shown on the plans.
- 7.20. Removal of existing and or abandoned gas main will be measured by the foot of main removed of the various sizes at the locations as shown on the plans.

Article 8 "Payment", is amended to include the following section:

- 8.19. Payment for grouting of existing and or abandoned gas main will be at the unit price for "Natural Gas Pipeline (Grout Abandoned Main)" of the various sizes at the locations as shown on the plans.
- 8.20. Payment for removal of existing and or abandoned gas main will be at the unit price for "Natural Gas Pipeline (Remove Abandoned Main)" of the various sizes at the locations as shown on the plans.