PART 1 - GENERAL

1.1 SUMMARY

A. Includes But Not Limited To:
   1. Perform excavation and backfill required for work of this Section.
   2. Furnish and install gas piping and fittings as described in Contract Documents from gas main to meter.
   3. Provide, make necessary arrangements for, and pay necessary fees to local gas utility company for gas service lines and proper size gas meter.

B. Related Sections:
   1. Section 03 3053: Concrete meter base.
   2. Section 05 0523: Welding standards and requirements.
   4. Section 31 2323: Procedure and quality of backfilling and compacting.

1.2 REFERENCES

A. American Society For Testing And Materials:
   1. ASTM A 53-02, 'Standard Specification for Pipe, Steel, Black and Hot-Dipped Zinc-Coated Welded and Seamless.'
   2. ASTM A 234-02, 'Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and Elevated Temperatures.'
   3. ASTM D 2513-03b, 'Standard Specification for Thermoplastic Gas Pressure Pipe, Tubing, and Fittings.'

1.3 QUALITY ASSURANCE

A. Qualifications:
   1. Welders shall be certified and bear evidence of certification 30 days before commencing work on project. If there is doubt as to proficiency of welder, Owner's Representative may require welder to take another test. This shall be done at no cost to Owner. Certification shall be by Pittsburgh Testing Laboratories or other approved authority.
   2. Polyethylene pipe installers shall be properly trained and certified in procedure for joining polyethylene pipe.

B. Requirements of Regulatory Agencies: Lay underground pipe in accordance with federal pipeline safety regulations and local gas utility company regulations and specifications.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Do not store polyethylene pipe so it is exposed to sunlight.
PART 2 - PRODUCTS

2.1 COMPONENTS

A. Above-Ground Pipe And Fittings: Black carbon steel, butt welded, Schedule 40 pipe meeting requirements of ASTM A 53. Welded forged steel fittings meeting requirements of ASTM A 234.

B. Below-Ground Pipe And Fittings: Polyethylene pipe and fittings meeting requirements of ASTM D 2513 with No. 14 coated copper tracer wire.

C. Valves:
   1. Iron body, 125 psi 861 kPa square head cock, with bronze plug.
   2. Class One Quality Standard: Powell No. 2200

PART 3 - EXECUTION

3.1 INSTALLATION

A. Excavate and backfill as specified in Section 31 2316 and 31 2323 with following additional requirements.
   1. Runs shall be as close as possible to those shown on Drawings.
   2. Excavate to required depth.
   3. Bottom of trenches shall be hard. Tamp as required.
   4. Remove debris from trench before laying pipe.
   5. Do not cut trenches near footings without consulting Architect.
   6. Place 4 inches 100 mm of sand around pipe before trench is backfilled.
   7. Bury outside pipe 12 inches 300 mm minimum below frost line or 18 inches 450 mm minimum below finish grade, whichever is deeper.
   8. Backfill only after pipe lines have been tested, inspected, and approved by Architect.

B. General installation shall be as specified in Division 23:
   1. Steel pipe 2-1/2 inches 63 mm and larger shall have welded fittings and joints.
   2. Provide 24 inch 600 mm minimum steel pipe between vertical rise of riser and end of polyethylene line if anode-less riser is not used. Use plastic-to-steel transition or compression fitting between end of service line and steel meter riser. Provide cathodic protection for steel riser or use anode-less riser.
   3. Place tracer wire along side of polyethylene pipe from meter to main.

C. Set meter on concrete base.

D. Provide necessary protection against damage for meter.

END OF SECTION