SECTION 33 52 16 - GAS HYDROCARBON PIPING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Pipe and fittings for natural gas distribution on site outside buildings.

1.02 RELATED REQUIREMENTS

B. Section 22 10 05 - Plumbing Piping.
C. Section 23 11 23 - Facility Natural-Gas Piping.
D. Section 31 23 16.13 - Trenching: Excavating, bedding, and backfilling.

1.03 QUALITY ASSURANCE

E. Welding Materials and Procedures: Comply with ASME BPVC and applicable state regulations.
F. Welders Certification: In accordance with ASME BPVC-IX.
G. Comply with NFPA 58.

PART 2 PRODUCTS

1.04 PIPE

A. Natural Gas Piping: Specified in Section 23 11 23.
B. Steel Pipe: ASTM A53/A53M, Schedule 40 black:
   1. Fittings: ASME B16.11 forged steel, or ASTM A234/A234M wrought steel welding type.
C. Steel Pipe Above Ground: ASTM A53/A53M, Schedule 40 black:
D. Polyethylene Pipe: ASTM D2513, SDR11:

1.05 GAS COCKS AND VALVES
E. Gas Cock and Pressure Regulating Valves: Manufacturer's name and pressure rating marked on valve body.

F. Gas Cocks Up to 2 Inches (50 mm): 150 psig (1,040 kPa) water or gas (WOG), bronze body, bronze tapered plug, non-lubricated, Teflon packing, threaded ends with cast iron curb box, cover, and key.

G. Gas Cocks Over 2 Inches (50 mm): 125 psig (860 kPa) WOG, Steel body and tapered plug, non-lubricated, Teflon packing, threaded ends, with cast iron curb box, cover, and key.

H. Pressure Regulating Valves: Single stage, malleable iron body, corrosion-resistant, pressure regulator with atmospheric vent, elevation compensator; with threaded ends for 2 inch (50 mm) and smaller, flanged ends larger than 2 inch (50 mm).

PART 3 EXECUTION

1.06 TRENCHING

A. See Section 31 23 16.13 for additional requirements.

B. Backfill around sides and to top of pipe with cover fill, tamp in place and compact, then complete backfilling.

1.07 INSTALLATION - PIPING

C. Group piping with other site piping work whenever practical.

D. Route piping in straight line.

E. Install piping to conserve space and not interfere with use of site space.

F. Install piping to allow for expansion and contraction without stressing pipe or joints.

G. Install cocks and other fittings.

H. Establish elevations of buried piping to ensure not less than 24 inches (600 mm) of cover in non-travelled areas and 48 inches (1,200 mm) of cover in driveways and parking areas.

I. Wrap couplings and fittings of steel pipe with polyethylene tape and heat shrink over pipe.

J. Center and plumb valve box over valve. Set box cover flush with finished ground surface. Prevent shock or stress from being transmitted through valve box to valve.

END OF SECTION 33 52 16