

DELAWARE CONSTRUCTION SPECIFICATION

CORRUGATED METAL PIPE CONDUITS CS 43

1. SCOPE

The work shall consist of furnishing and placing circular, arched or elliptical corrugated metal pipe and the necessary fittings.

2. MATERIALS

Pipe and fittings shall conform to the requirements of Material Specification 207 A or 207 B.

3. LAYING AND BACKFILLING THE PIPE

Unless otherwise specified, the pipe shall be installed in accordance with the manufacturer's recommendations. The pipe shall be laid with the outside laps of circumferential joints pointing upstream and with longitudinal laps at the sides at about the vertical midheight of the pipe. Field welding of corrugated galvanized iron or steel pipe will not be permitted. Unless otherwise specified, the pipe sections shall be joined with standard coupling bands.

Perforated pipe shall be laid with the perforations down and oriented symmetrically about a vertical center line. Perforations shall be clear of any obstructions at the time the pipe is laid.

Backfill shall be placed and compacted in accordance with Delaware Construction Specification 15 – STRUCTURAL BACKFILL. The pipe shall be loaded sufficiently during backfilling around the sides to prevent its being lifted from the bedding.

4. STRUTTING

When required, struts or horizontal ties shall be installed in the manner specified on the drawings. Struts and ties shall remain in place until the backfill has been placed to a height of 5 feet above the top of the pipe, or has been completed if the finished height is less than 5 feet above the top of the pipe, at which time they shall be removed by the Contractor.

5. **HANDLING THE PIPE**

The Contractor shall furnish such equipment as is necessary to place the pipe without damaging the pipe or coatings. The pipe shall be transported and handled in such a manner as to prevent bruising, scaling, or breaking of the spelter coating or bituminous coating.

6. **REPAIR OF DAMAGED COATINGS**

Any damage to the zinc coating shall be repaired by thoroughly wire brushing the damaged area, removing all loose and cracked coating, removing all dirt and greasy material with solvent, and painting with two (2) coats of one of the following paint options.

Painting shall be done by use of one of the following options based upon installed exposure of the pipe as determined by the technician.

Normal exterior or interior atmospheric exposure:

- (a) Zinc dust – zinc oxide primer, Federal Specification TT-P-641, Type I or Type II,
- (b) Single package, moisture cured urethane primer in silver metallic color, or
- (c) Zinc-rich cold galvanizing compound, brush, or aerosol application.

Submergence in Water exposure:

- (a) Zinc dust – zinc oxide primer, Federal Specification TT-P-641, Type III,
- (b) Zinc dust paint, Military Specification MIL-P-21035
- (c) Zinc Dust Chlorinated Rubber, Federal Specification TT-P-1046a, or
- (d) Epoxy-Polyamid, Department of Defense Specification DOD-P-15145B.

If the coating is damaged in any individual area larger than 12 square inches, or if more than 0.2 percent of a total surface area of a length of pipe is damaged, the length will be rejected.

Breaks or scuffs in bituminous coatings that are less than 36 square inches in area shall be repaired by the application of two coats of hot asphaltic paint

or a coating of cold-applied bituminous mastic. The repair coating shall be at least 0.05 inches thick after hardening and shall bond securely and permanently to the pipe. The material shall meet the physical requirements for bituminous coatings contained in the references cited in Delaware Material Specification 207. Whenever individual breaks exceed 36 square inches in area or when the total area of breaks exceeds 0.5 percent of the total surface area of the pipe, the pipe will be rejected.

Bituminous coating damaged by welding of coated pipe or pipe fittings shall be repaired as specified in this Section for breaks and scuffs in bituminous coatings.