

## SECTION 1035 -- CORRUGATED METAL PIPE

### 1035.01 -- Description

Corrugated metal pipe, pipe-arches, and underdrains shall be either metallic-coated steel or aluminum.

### 1035.02 -- Material Characteristics

1. The base metal for all coated sheets shall conform to the requirements of AASHTO M 218.
2. Aluminum and steel materials shall not be mixed in any installation.
3.
  - a. Corrugated steel pipe, pipe-arches, and underdrains shall conform to the requirements of AASHTO M 36/M 36M.
  - b. Bolts, nuts, washers, and all other hardware items used with coupling bands shall be galvanized in accordance with AASHTO M 232 (ASTM A 153) or mechanically galvanized in accordance with AASHTO M 298 (ASTM B 695) Class 50.
4. Corrugated aluminum alloy pipe, pipe-arches, and underdrains shall conform to the requirements of AASHTO M 196.
5.
  - a. In the repair of damaged coating on elbows, pipe, and special fittings which are fabricated by methods which damage their coating, both the interior and exterior surfaces of the damaged area shall be thoroughly cleaned and all traces of welding flux and weld spatter shall be removed. The cleaned area shall then be painted with zinc-rich paint at the fabricating plant in accordance with Section 1061.
  - b. The weight of metallic coating may be determined by the use of magnetic thickness gauges in accordance with ASTM E 376. In cases of dispute, additional samples shall be tested in accordance with AASHTO T 65 or AASHTO T 213, as applicable.
6. Unless otherwise specified in the plans, the minimum gauge or sheet thickness for steel or aluminum alloy culverts shall be as shown in Table 1035.01.

**Table 1035.01**

| <b>Steel and Aluminum Culvert Thickness</b> |                        |
|---|------------------------|
| <b>Nominal Diameter</b>                     | <b>Sheet Thickness</b> |
| <b><u>Inches</u></b>                        | <b><u>Inches</u></b>   |
| 8 thru 24                                   | 16 (0.057)             |
| 30 thru 36                                  | 14 (0.072)             |
| 42 thru 54                                  | 12 (0.101)             |
| 60 thru 72                                  | 10 (0.129)             |
| Over 72                                     | 8 (0.168)              |

7. Coupling or connecting bands with projections (often referred to as dimple bands) are not acceptable.

**1035.03 -- Acceptance Requirements**

Corrugated metal pipe will be accepted based on requirements of this Section and sampling and testing requirements as prescribed in the NDR *Materials Sampling Guide*.