

ITEM 02603.5201 M - LINING EXISTING BRIDGES/CULVERTS WITH CORRUGATED ALUMINUM STRUCTURAL PLATE PIPE - ARCH (230 x 65),
4217mm SPAN, 1650 mmRISE, 3.81 mm THICKNESS.

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4411 mm SPAN, 991 mm RISE, 3.81 mm THICKNESS.

DESCRIPTION:

Under these items, the Contractor shall furnish, assemble, and install a corrugated aluminum structural plate pipe - arches as a lining for existing bridges and culverts in accordance with this specification and the contract documents. The proposed pipe - arches shall be placed such that grout may later be placed in the annular space between the new pipe - arch and the existing structure.

MATERIALS:

Materials shall meet the following specifications:

Corrugated Aluminum Structural Plate for Pipe and Pipe Arches, Bolts and Nuts	707-14
Zinc Chromatic Primer	708-04

CONSTRUCTION DETAILS:

Thoroughly coat the exterior of the pipe arch with zinc chromatic primer. Repairs of damaged coatings shall be made in accordance with written procedures of the Materials Bureau.

Corrugated aluminum plates shall have grout holes and fittings located as specified in the contract plans or as recommended by the manufacturer. Plugs shall be inserted into a grout fitting after the grouting operation is complete at that location. Grout fittings shall be compatible with the plugs and grout delivering equipment.

The requirements of Subsection 603-3.04A, Damaged Pipe and Repair - General, of the Standard Specifications shall apply.

All elements of the structure shall be handled and assembled in accordance with subsection 603-3.02B, E (excluding geotextile), G, and the manufacturer's instructions, except as modified herein, on the plans, or by the Engineer in writing. The manufacturer's instructions, including erection drawings shall be submitted to the DCES for review. The DCES will be allowed seven (7) working days to review the Contractor's submittal. All drawings shall be submitted in accordance with Subsection 202.2, 202.3, 202.5, and 202.10, fo the New York State Steel Construction Manual. Should the DCES not approve the Contractor's submission, the Contractor shall be required to resubmit the drawings with appropriate changes or corrections. This resubmission shall not entitle the contractor to an extension of time, as allowed for by Subsection 108-4 of the Standard Specifications.

The Contractor shall maintain the shape of the structure during all stages of assembly and grout

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backfilling. The Contractor will be responsible for any bracing of the aluminum pipe - arch as the manufacture deems necessary for grout backfilling . The requirements of Subsection 603-3.05 Field Strutting of Corrugated and Structural Plate Pipe shall apply. In order to prevent distortion and maintain structure shape within specified limits, the following methods or combination of methods may be used:

1. Field strutting and shoring
2. Sequencing of grouting

The Contractor shall meet with the manufacturer's representative prior to assembly of the corrugated aluminum structural plate culvert shell and prior to grout placement.

Grouting shall be done in accordance with the appropriate item. The difference in grout elevation from one side of the structure to the other shall not exceed 300 mm at any time. A form vibrator shall be used to ensure consolidation of the grout. Care shall be taken during vibrating of the grout material so as to not damage the structure.

METHOD OF MEASUREMENT:

Corrugated aluminum structural plate culvert shell shall be measured in meters along the centerline of the structure as designated on the plans and specifications or where directed by the Engineer in writing.

BASIS OF PAYMENT:

The unit price bid per meter shall include the cost of furnishing all labor, materials, and equipment necessary to manufacture and install the corrugated aluminum plate pipe - arch including: cleaning, inspecting, strutting, bracing, installing grout holes, plugs, fittings, and damaged pipe repairs. The price bid shall also include the cost of the manufacturer's representative during construction. Grout used to fill the annular space, and concrete for the abutments shall be paid for under the appropriate items.