

734 - STRUCTURAL PLATE STRUCTURES

SECTION 734

STRUCTURAL PLATE STRUCTURES

734.1 DESCRIPTION

Assemble and install the size and type of structural plate structure specified in the Contract Documents.

BID ITEMS

- (*) Structural Plate Pipe (**) (***)
- (*) Structural Plate Pipe Arch (**) (***)
- (*) Structural Plate Arch (**) (***)

*Size, diameter or span and height

**Gauge

***Asphalt Coated

UNITS

Linear Foot

Linear Foot

Linear Foot

734.2 MATERIALS

Provide structural plate for pipe, pipe arches and arches that comply with **DIVISION 1900**.

734.3 CONSTRUCTION REQUIREMENTS

Submit the design to the Engineer for approval, before installing any structural plate structure.

Include a Load Rating Table on the working drawings and provide the SBO with a LFR and LRFR rating and support calculations for the structure. The load rating shall take into consideration varying fill depths and KDOT live load criteria. For LFR Load Rating, include HS-20-44, KDOT rating vehicles for Inventory and Operating rating factors. Rate the Heavy Equipment Transport (HET) vehicle for Operating rating factor. For LRFR, use HL-93 for Inventory and Operating. Submit a Load Rating Report along with the working drawings. Include in the Load Rating Report a summary rating table, assumptions used in the load rating, the depth of fill, material strengths and any other significant information required to load rate the precast culvert. The Load Rating will include all elements of the proposed system including, but not limited to stub-walls and connections.

If the Contract Documents require a concrete footing, construct the footing according to **DIVISION 700**.

Excavate for and form the bed for the structural plate structures according to **DIVISION 200**. If placing 2 or more structural plate structures adjacent to each other, separate them by a distance equal to ½ the diameter of the pipe for structural plate pipe, and by a distance of 2 feet for structural plate pipe arch.

Do not damage the plates during assembly and erection. Replace plates that are damaged during shipping or assembly. Repair any damaged coating after erection

Assemble the structural plate structure true to the dimensions shown in the Contract Documents, with all connections tight. When required by the Contract Documents, provide and erect strutting within the structure during construction, leaving it in place until the structure is backfilled.

Backfill the structure according to **DIVISION 200**.

734.4 MEASUREMENT AND PAYMENT

The Engineer will measure structural plate structure by the linear foot, along the centerline of the structure. The Engineer will measure structural plate structures with vertical ends from end to end. The Engineer will measure structural plate structures with sloping ends from the center point of the slope on one end to the center point of the slope on the opposite end.

Payment for the "Structural Plate Pipe", "Structural Plate Pipe Arch" and "Structural Plate Arch" at the contract unit prices is full compensation for the specified work.