

## SECTION 2300 STEEL BEAM GUARDRAIL

2301 SCOPE. This section governs the furnishing of all labor, equipment, tools, and materials and the performance of all work necessary for the installation of steel beam guardrail as shown on the construction plans or standard drawings.

### 2302 MATERIALS.

- A. Steel Posts. All posts, terminal posts connectors, and steel blocks for guardrail shall be formed from a structural steel meeting the requirements of ASTM M-180 Class A, Type I.
- B. Guardrail and Hardware. All guardrail and hardware shall conform to the requirements of AASHTO M-180 Class A, Type I.

### 2303 ERECTION.

- A. Setting Posts. Posts shall be set to the depth and spaced at the intervals shown on the construction plans or standard drawings. They shall be set vertical and true to line and grade. Steel posts may be driven by a power hammer or may be set in dug or bored holes of a size sufficient to permit thorough compacting of the backfill around the post. The backfill material shall be dry sand, placed in layers not exceeding 12 inches in thickness to a height 12 inches below the finished grade. After erecting and adjusting the rail to true line and grade, the sand backfill shall be compacted by flooding. The final 12 inches of backfill consisting of suitable earth material shall then be compacted in six (6) inch lifts. Any mushrooming of the top of the post shall be removed and damaged spelter coating on posts shall be repaired by the Zinc alloy stick method while the surface is heated to approximately 600 deg. F. Other methods of repairing the spelter coating shall receive prior approval of the Engineer.
- B. Placing the Guardrail. Bolt holes shall be shop punched. Field punching, reaming and drilling will not be permitted. Guardrail beams shall be spliced, only at posts by lapping in the direction of traffic, using the required number of splice bolts. Beams for twisted turned down terminal section may be either field or shop twisted. Sufficient twist shall be introduced such that the beam shall retain the required shape in a relaxed condition. Beams to be erected on a radius of 150 feet or less shall be shop-curved as shown on the plans.

Each end of every installation of guardrail shall have an end, bridge anchor, or terminal section of the design and type shown on the construction plans or standard drawings. They shall be of the same material and shall be galvanized in accordance with the requirements for the guardrail beam.

Galvanized rail shall be handled in a manner to avoid damage to the galvanized coating. Any section of rail, end sections or terminal sections on which the spelter coating has been bruised or broken shall be rejected, or may, with the prior approval of the Engineer, be repaired by the method described for repairing damaged spelter coating of steel posts.