

SECTION 6000 - GUARDRAILS

PART 1 - GENERAL

1.01 SCOPE: This Section covers guardrails and guardrail end treatment. Topics include storage requirements for rails, material requirements, general installation requirements, and acceptance criteria.

1.02 RELATED WORK: Refer to the following Section for indicated related work:

Asphalt Shoulder Repair Section 3300-Asphalt Repairs

1.03 SUBMITTALS: The following material shall be submitted for review:

A. Manufacturer's certifications for material requirements listed in Part 2.

1.04 STORAGE OF GALVANIZED MATERIAL: Store all galvanized rail elements, end sections and accessories to prevent galvanic action. Do not store in direct contact with the soil. The material may be stored in the open, provided it is properly separated, stacked and drained.

Protect galvanized surfaces which have been abraded exposing the base metal, threaded portions of all fittings and fasteners and cut ends of bolts from moisture, soil or other damaging elements.

The Contractor is responsible for the condition of the material in storage.

PART 2 - PRODUCTS

2.01 GUARDRAIL PLATES: Guardrail plates and accessories shall be all new materials meeting the requirements of KDOT Standard Specifications Subsection 1618. Plates shall be Class A, Type I. Only materials prequalified by KDOT Bureau of Materials and Research shall be used. Galvanized material with damaged coating will be rejected or, if Engineer determines the damage is minor, shall be repaired. Plates for radiuses less than 150 feet shall be shop bent.

2.02 POSTS: Posts and blocks for repair or extension of existing guardrail shall match existing posts in type and finish; and shall be painted if necessary to meet this requirement. Unless otherwise noted in the plans and specifications, new installations shall be steel posts and blocks that meet the requirements of KDOT Standard Specifications Subsection 1618. Wood posts and blocks for guardrail shall meet the requirements of KDOT Standard Specifications Subsection 2301. Wood posts and blocks shall be preservative treated to the requirements of KDOT Standard Specifications Subsection 2303.

2.03 CORROSION PROTECTION: Rail plates, steel posts and blocks, fasteners, and accessories shall be hot-dipped galvanized after fabrication. Field cuts or other injuries to the zinc coating shall be repaired with two coats of zinc dust paint. Zinc dust paint shall meet the requirements of KDOT Standard Specifications Subsection 1803.

- 2.04 FIELD PRESERVATIVE:** Preservative for field treatment of cut wood posts and blocks shall meet the requirements of KDOT Standard Specifications Subsection 2303.
- 2.05 POST BACKFILL:** Place backfill around the posts in thin layers and thoroughly compact. For the top of the backfill, use the same material of at least the same thickness as that used in construction of the shoulders at that point.

PART 3 - EXECUTION

- 3.01 GENERAL:** Installation of new and resetting of existing guardrail shall conform to KDOT Standard Specifications Section 827 and the following. Posts shall be set plumb and true to line and may be driven or set in excavation. Driven posts shall be protected by a driving cap. Excavation backfill shall be placed in maximum 12-inch lifts and well compacted. Excavation, including rock excavation, and post driving required for the erection of guardrail and guide posts is subsidiary to the installation of the posts and rails.

Galvanized sections shall not be field cut, reamed, or drilled without Engineer's approval. When base metal is exposed, the exposed area shall be painted with galvanized paint. When untreated wood is exposed, the exposed area shall be treated with field preservative.

Rail plates splices shall lap in the direction of traffic (end facing oncoming traffic underneath). Rail plates for terminal sections shall retain the required shape in a relaxed condition.

Damage to asphalt shoulders shall be repaired as specified for rehabilitation work in the referenced section in Part 1, except cold mix asphalt may be substituted if, in Engineer's opinion, the damage is minimal.

END OF SECTION 6000