# SECTION 321717 – GUARDRAIL

1. GENERAL
	1. RELATED DOCUMENTS
		1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification sections, apply to this section.
	2. SUMMARY
		1. This section includes the furnishing and installation of guardrails.
	3. REFERENCES
		1. Except as herein specified or as indicated on the Drawings, the work of this section shall comply with the following:
			1. MDOT:
				1. 2012 Standard Specifications for Construction.
				2. Standard Plans.
			2. AASHTO: Material Specification M-180.
	4. SUBMITTALS
		1. Shop Drawings: For guardrails and components.
			1. Dimensions.
			2. Finishes.
			3. Details of construction and installation.
2. PRODUCTS
	1. MATERIALS
		1. General: Guardrails, posts, offset blocks, backup elements, fittings, end shoes, reflectorized washers, nuts, bolts, and washers shall comply with the material specification of MDOT 908.
		2. Steel: Comply with AASHTO material requirements M-180.
		3. Galvanizing: Guardrails and hardware shall be Type II galvanized in accordance with the above noted references.
		4. Wood Posts: Wood posts shall have a minimum bending stress of 1000 psi.
	2. FABRICATION
		1. Shop Bends: Guardrail with a radius of 150 feet or less shall be shop bent to the radius indicated on the Drawings.
		2. Laps: Beam elements shall be lapped in the direction of traffic.
		3. Anchorages: Guardrail anchorages shall be constructed in accordance with MDOT Standard Plan R-60-F.
3. EXECUTION
	1. INSTALLATION
		1. Install in accordance with MDOT 807.
		2. Post Spacing: Maximum post spacing shall be 6'-3".
		3. Endings:
			1. Endings exposed to approaching traffic shall be protected with a buffered or sloped end section if Contractor is unable to complete the specified ending at the end of the day.
			2. This work shall be incidental to construction of the guardrail.
	2. CLEANING
		1. Prior to acceptance of the work of this section, thoroughly clean all installed materials and related areas in accordance with Division 01 requirements.

END OF SECTION 321717