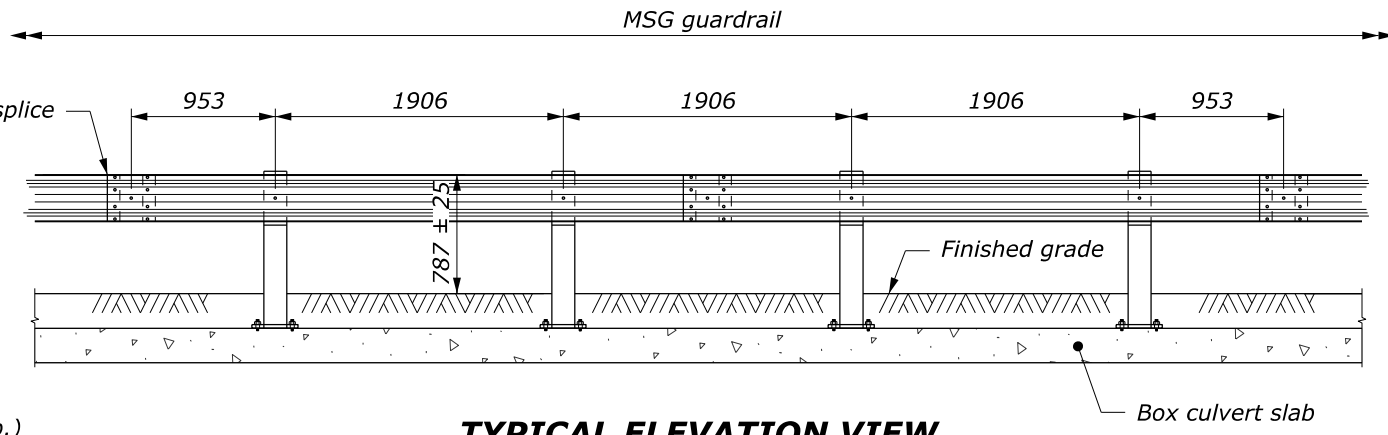


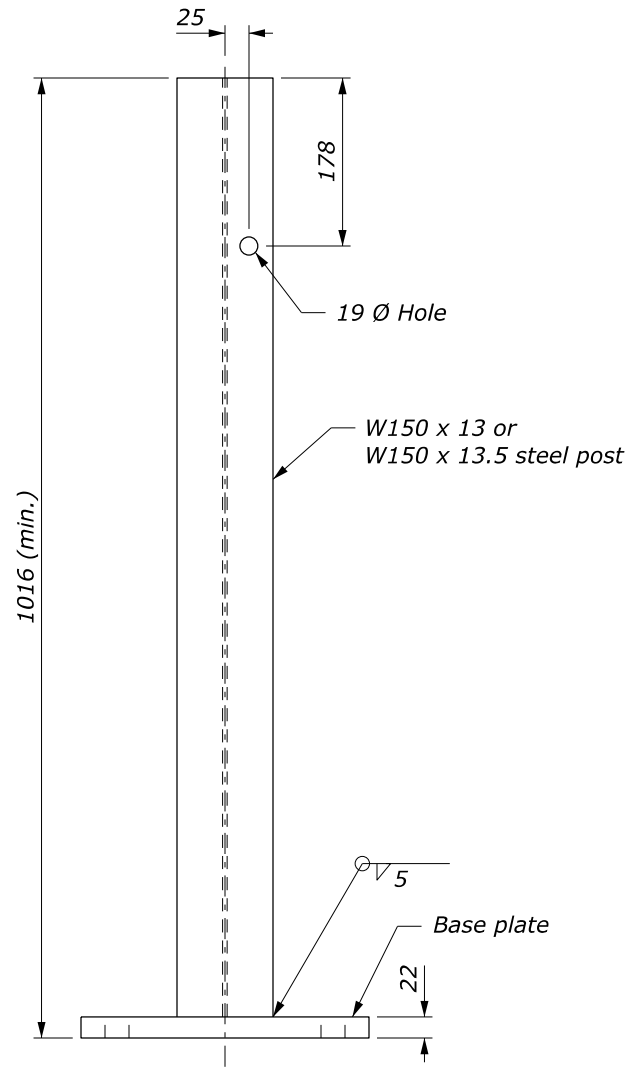
PLAN



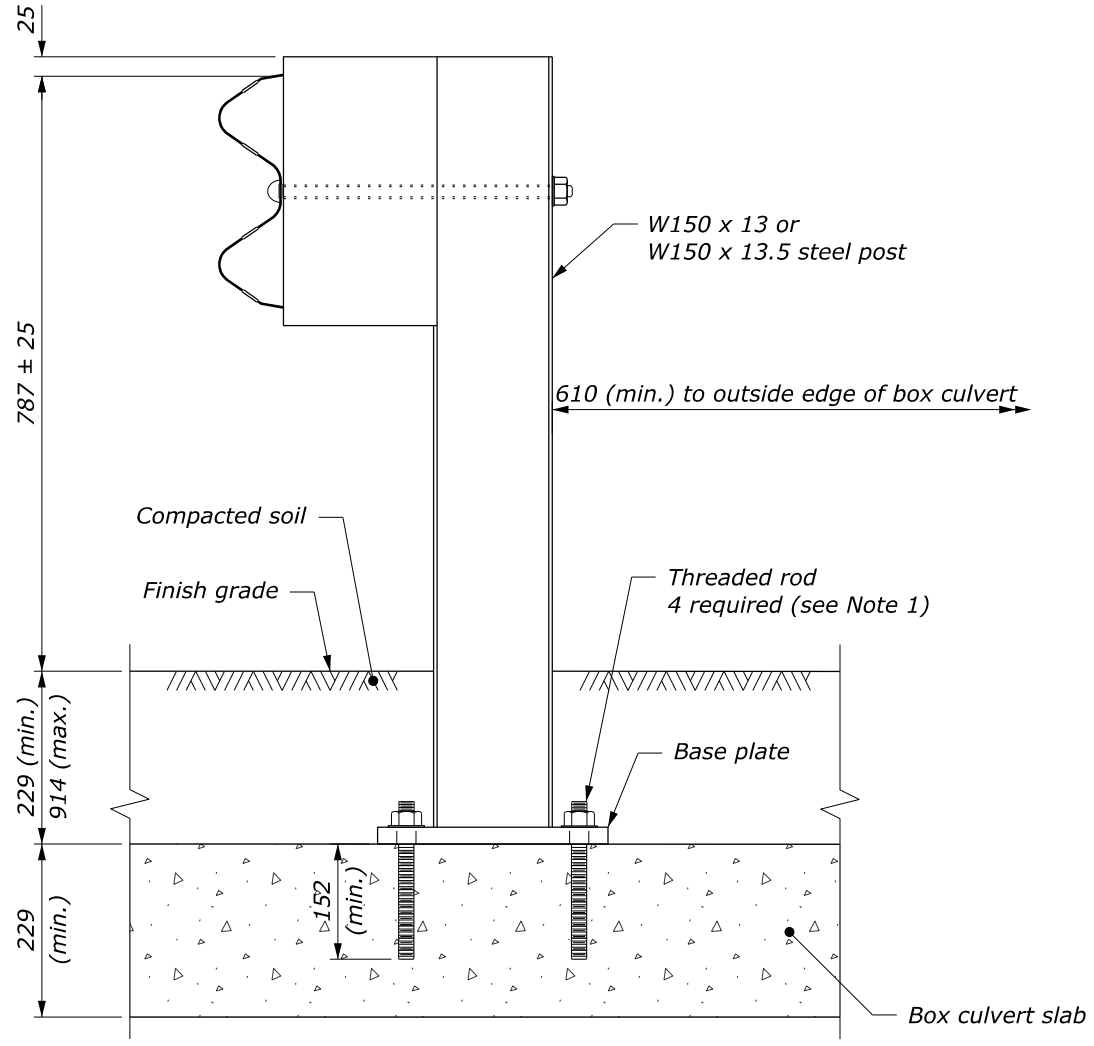
TYPICAL ELEVATION VIEW

**NOTE:**

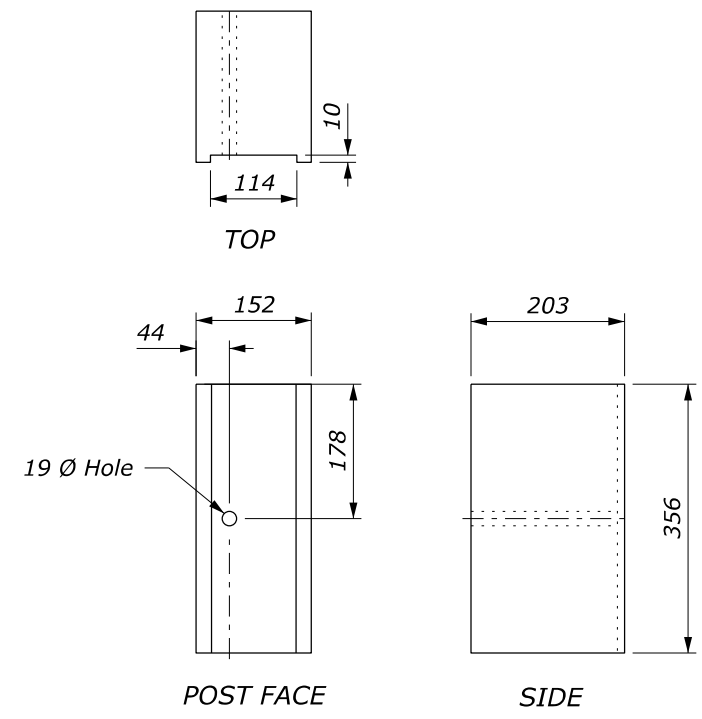
1. Attach guardrail post to box culvert with 22 mm diameter high-strength threaded rods 216 mm in length with resin-bonded anchors. Use carbon steel rods with a minimum strength of 862 MPa and a minimum yield strength of 724 MPa. Rods, nuts, and washers have an electroplated zinc coating.
2. Wood blocks are shown. Blocks of an approved alternative may be used.
3. See Standard M617-32 for other details.
4. Dimensions without units are millimeters.



ELEVATION  
BOX CULVERT POST



BOX CULVERT MGS GUARDRAIL  
STEEL POST



**BLOCK**  
See Note 2

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION OFFICE OF FEDERAL LANDS HIGHWAY	
METRIC FLH STANDARD	
<b>MGS W-BEAM GUARDRAIL STEEL POSTS ATTACHED TO BOX CULVERT</b>	
STANDARD APPROVED FOR USE 7/2022	STANDARD
REVISED:	M617-38

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**Designer Notes: FLH Standard Drawing 617-38**  
**Last Updated: June 2022**

## MGS W-Beam Guardrail Steel Posts Attached to Box Culvert

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### General Information

***Appropriate Applications.***

- This drawing is used with box culverts with shallow fill.

<b><i>Crash Test Criteria</i></b>	MASH
<b><i>Test Level</i></b>	TL-3
<b><i>FHWA Eligibility Letter</i></b>	B-241
<b><i>TF 13 Designator</i></b>	SBW09c
<b><i>Crash Test Report</i></b>	TTI Report No. 405160-23-2

***Limitations.*** Embankment over culvert ranges from 9" (min.) to 3' (max.).

***Layout Guidance.***

- See the FLH *Midwest Guardrail System FAQ* document for more information.

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### Typical Pay Item Used

- 61701-4500 Guardrail system MGS, type 2, class A steel posts [LNFT] for galvanized steel
- 61701-5100 Guardrail system MGS, type 4, class B steel posts [LNFT] for weathering steel

Note: Use the same pay item as roadside rail.

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### Updates

February 2019

- New Detail drawing

June 2022

- Converted from CFL Detail to FLH Standard