NOTES

1. For typical rail element and posts details not shown on this plan, refer to **Standard Plans C-20.10** and **C-1b**.

2. Wood blocks are shown. Blocks of an approved alternative material may be used. See **Standard Specification Section 9-16.3(2)**.

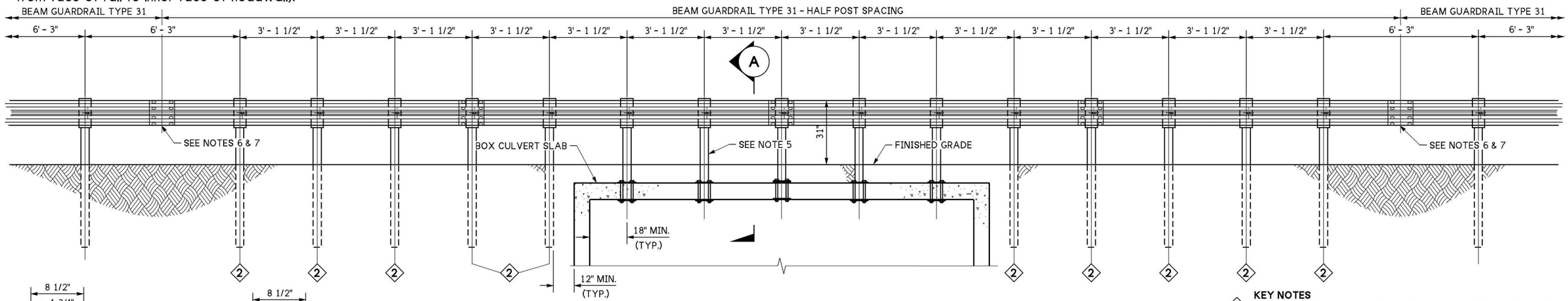
3. Attach blockouts to steel posts using bolt holes on approaching traffic side of post web.

4. Box culvert guardrail steel posts are not needed for fill depths greater than 46 inches. Install standard 6-foot long Type 31 guardrail posts per **Standard Plan C-20.10**. Place Type 31 guardrail a minimum of 5-feet away from the inner edge of headwall (measured from face of rail to inner face of headwall).

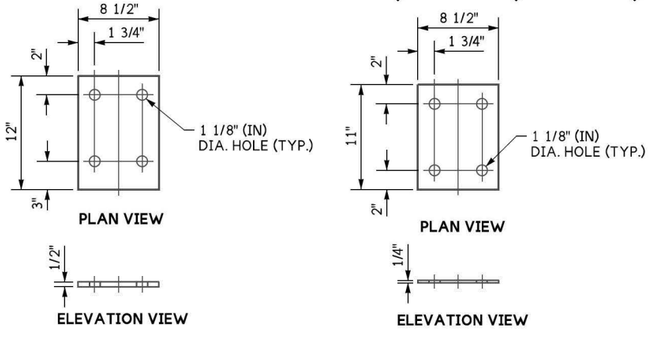
5. Plan shows 5 box culvert guardrail posts installed on culvert lid. it is acceptable to use a greater or lesser number of box culvert guardrail posts to increase or decrease length of system as needed.

6. Install at least 50-feet of Type 31 guardrail upstream and downstream from end of half post spacing guardrail (Terminals and Anchors included in length). Provide at least 12.5-feet of Type 31 guardrail before installing terminals and anchors.

7. Install at least 25-feet of tangent Type 31 guardrail from end of half post spacing guardrail before starting a Taper or Radius Rail Guardrail system.

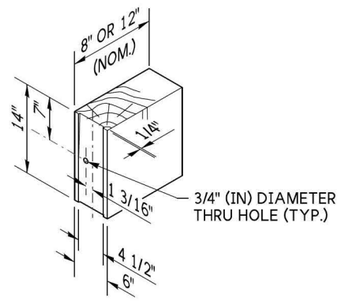


TYPICAL ELEVATION VIEW



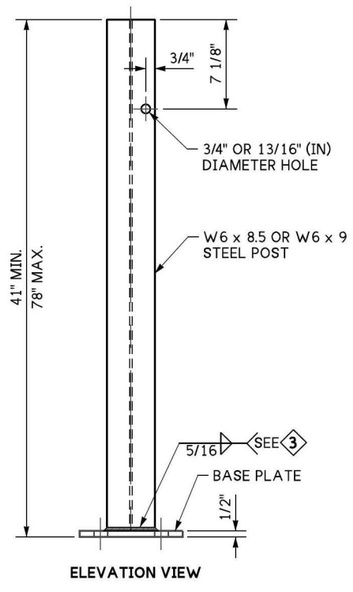
BASE PLATE
ASTM A572, GR. 50

BOTTOM PLATE
ASTM A572, GR. 50

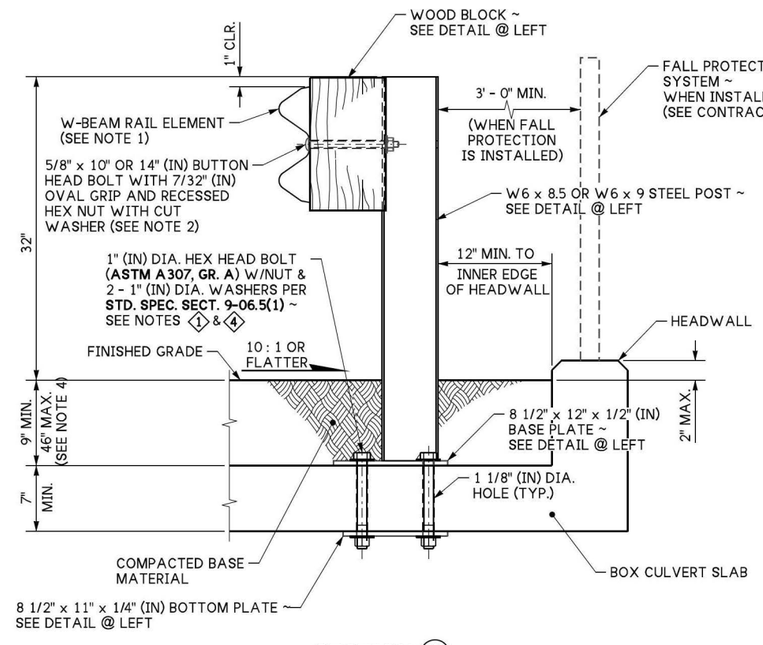


ISOMETRIC

ROUTERED WOOD BLOCKOUT



BOX CULVERT POST & BASE PLATE ASSEMBLY

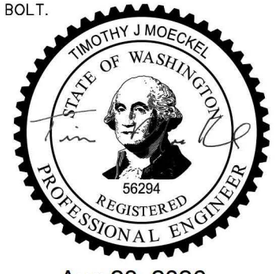


SECTION (A)

BOX CULVERT GUARDRAIL STEEL POST TYPE 31

KEY NOTES

1. LENGTH OF HEX HEAD BOLT SHALL BE 2 1/2" (IN) LONGER THAN BOX CULVERT SLAB DEPTH.
2. INSTALL A MINIMUM OF 5 POSTS AT HALF-POST SPACING (3' - 1 1/2") COMING OFF EDGES OF CULVERT.
3. WELDING SHALL CONFORM TO **STD. SPEC. SECTION 6-03.3(25).**
4. IT IS PERMISSIBLE TO USE A 1" DIAM. ANCHOR ROD WITH TWO NUTS AND TWO - 1" DIAM. WASHERS PER **STD. SPEC. SECTION 9-06.5(4)** IN LIEU OF A HEX HEAD BOLT.



Aug 28, 2026

BOX CULVERT BOLT-THRU ANCHOR GUARDRAIL STEEL POST ~ TYPE 31 STANDARD PLAN C-20.43-02

SHEET 1 OF 1 SHEET

APPROVED FOR PUBLICATION

Mark A Bains — Aug 31, 2026

STATE DESIGN ENGINEER

Washington State Department of Transportation