1. See the following sheets for Sections A-A through D-D, steel rail layouts, and other details.
2. Use weathering steel for all structural steel and fastener hardware.
3. For posts 1, 3, and 4, use an 8" x 9" x 12" block for the blockout, and a 3" x 9" x 12" carriage bolt with hex nut and plate washer.
NOTE:
1. Pre-drill 3/4" holes in blocks outs and posts.
NOTE:

1. CONCRETE: Structural concrete Class A4E, with a specified minimum 28-day compressive strength Fc'=4350 psi. Vibrate all concrete. Chamfer exposed edges ¼" unless otherwise shown. Do not use calcium chloride additives in the concrete.

2. REINFORCING STEEL: Reinforcing steel Grade 420 (AISI A615M-96a, Grade 420) deformed billet steel bars conforming to AASHTO M31M. The minimum concrete covering to the face of any bar is 2" unless otherwise shown. All bars are US Customary size #5.

3. Construct footing against undisturbed material or backfill with well compacted granular material.

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Notes to the Designer
Updated September 2021
Steel-Backed Timber Guardrail TL-2 Connection to Stone Masonry Guardwall

General Information
- All graphics and text will be in the sheet model.
- **Appropriate Applications.**
  Steel-backed timber (SBT) guardrail is an aesthetic roadside barrier. This drawing provides a low-speed (TL-2) connection to stone masonry guardwalls.

<table>
<thead>
<tr>
<th>Crash Test Criteria</th>
<th>NCHRP 350</th>
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<tbody>
<tr>
<td>Test Level</td>
<td>TL-2</td>
</tr>
<tr>
<td>FHWA Eligibility Letter</td>
<td>B-64D2</td>
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<tr>
<td>TF 13 Designator</td>
<td>Not posted</td>
</tr>
<tr>
<td>Crash Test Report</td>
<td>TTI Report No. 405181</td>
</tr>
</tbody>
</table>

- **Limitations.**
  This connection is for low-speed roadways.

Applicable SCRs
- None

Typical Pay Item Used
- 61707-2000 Structure transition railing, SBT system [LNFT]

Updates
- **February 2019**
  - New Detail drawing
- **September 2021**
  - Updated for OpenRoads Designer