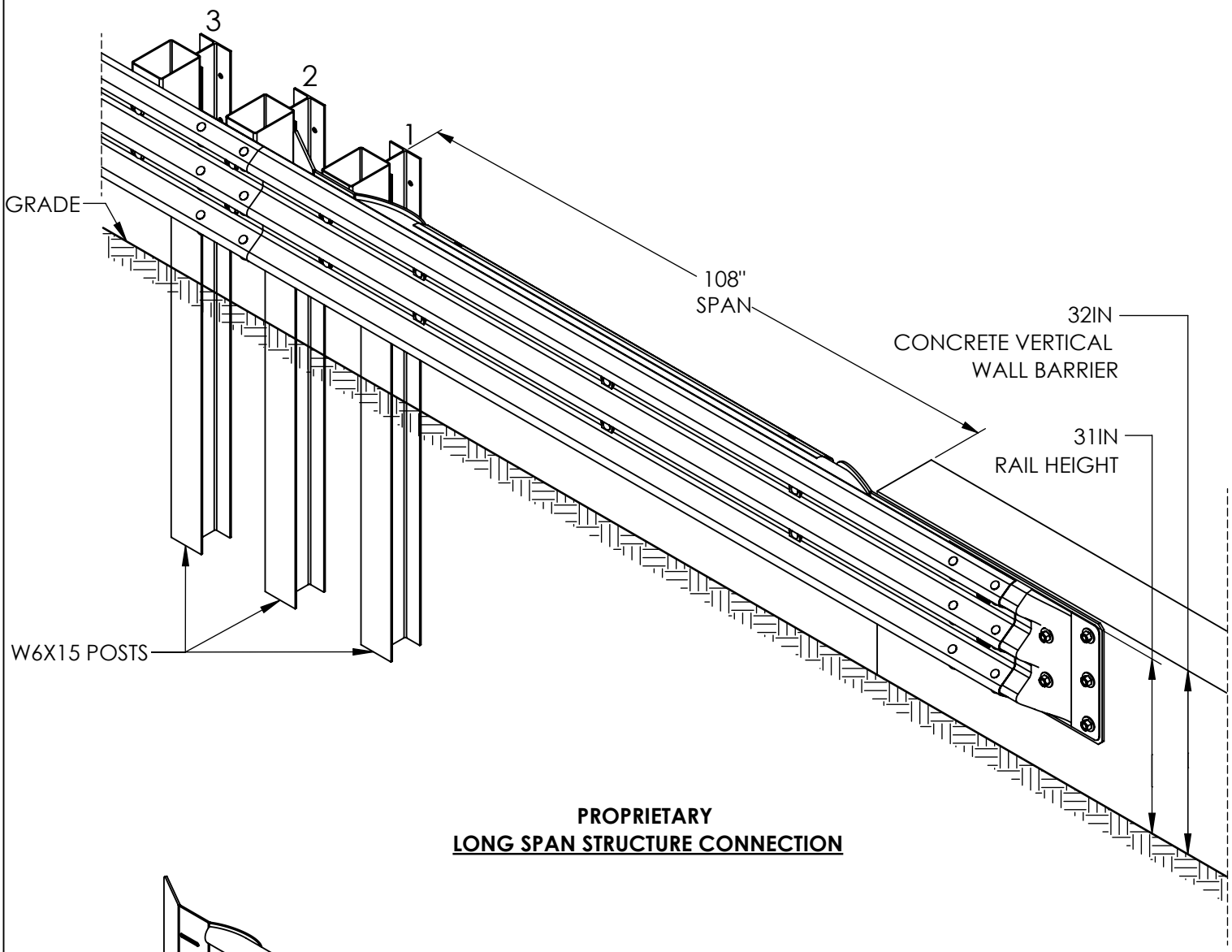
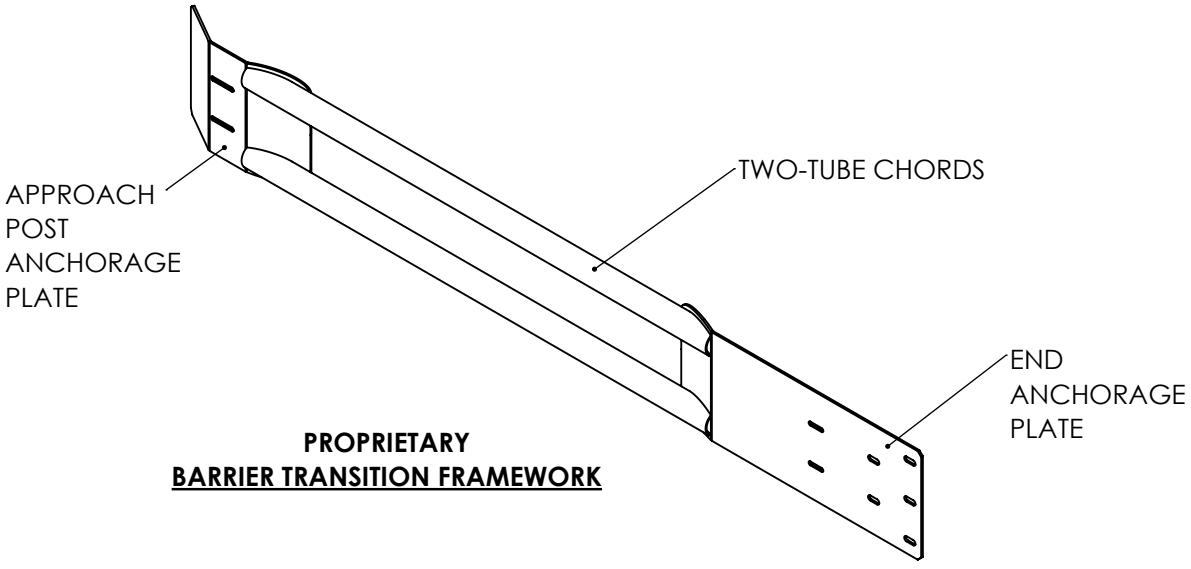


PROPRIETARY
LONG SPAN STRUCTURE CONNECTION



PROPRIETARY
BARRIER TRANSITION FRAMEWORK

LONG SPAN STRUCTURE CONNECTION – MASH TEST LEVEL 3

NORTHERN
INFRASTRUCTURE PRODUCTS

Northern Infrastructure Products

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SHEET NO.	DATE:
1 of 2	09/15/22

INTENDED USE

The Long Span Structure Connection (LSSC) is a MASH TL-3 system intended for installation along roadsides where transition from roadside approach Guardrail to concrete barrier or bridge barrier is required, either permanent or temporary. The LSSC provides an unsupported span of 9 ft. (2.7 m) from approach Guardrail post to concrete barrier, for the purpose of: drainage, drop basin placement, utilities or adequate soil strength for posts. To transition from an approach roadway W-Beam Guardrail system to the bridge or roadside concrete barrier, the W-Beam system first transitions to a Thrie-Beam approach Guardrail, then transitions to the LSSC and is terminated at a bridge or roadside concrete barrier.

Starting downstream and moving up from the rigid structure, the as-tested system consisted of: the proprietary LSSC, 18.8 ft. (5.7 m) of Thrie-Beam, Asymmetric W-Thrie Beam Transition (RWT02), 25.0 ft. (7.6 m) of 12-gauge W-Beam (RTM01a-02b) and Guardrail system End Treatment. The total as-tested system length was 62.8 ft. (19.1 m).

Located downstream of the approach Guardrail Transition, the test article is the proprietary LSSC component, and it consisted of: one (1) double nested 162.5 in. (4128 mm) 12 Ga Thrie-Beam Guardrail, one (1) proprietary Barrier Transition Framework, one (1) 80.5 in. (2045 mm) 12 Ga Thrie-Beam Guardrail, one (1) 30 in. (762 mm) Thrie-Beam Terminal Connector, three (3) W6x15 posts, and three (3) 6 in. (152 mm)x 8 in. (203 mm)x 1/4 in. (6 mm) steel HSS Offset Blocks.

The proprietary Barrier Transition Framework component consists of an approach post anchorage plate, 2-tube chords, and an end anchorage plate. The approach plate bolted to the HSS offset bock of post 1 at the upstream end, while the end anchorage plate was mounted to the 32 in. (813 mm) bridge/roadside parapet on the downstream. The end anchorage plate was installed to concrete barrier wall using epoxied anchors. The Barrier Transition Framework is mounted to the concrete vertical wall at a height from ground of 10.7 in. (273 mm) and from the edge downstream 45.2 in. (1149 mm). The Barrier Transition Framework component is clasped by double nested Thrie-Beam Guardrail on traffic side and Thrie-Beam Guardrail on the field side.

APPROVALS

The Long Span Structure Connection has been fully tested in compliance with MASH 2016, September 2021 Errata, Test Level 3 and is determined eligible for reimbursement by the FHWA.
FHWA Eligibility Letter: TBD

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