

REVISIONS	DATE

DESIGNED BY:	
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DRAWN BY:	
DATE:	

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 GROUND-BREAKING SOLUTIONS
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TYPE SM RAIL DETAILS
 OF
 SHABONA ROAD BRIDGE REPLACEMENT
 FOR
 DEKALB COUNTY HIGHWAY

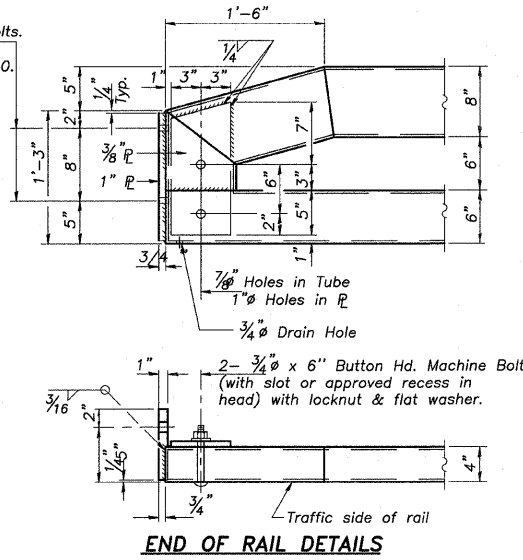
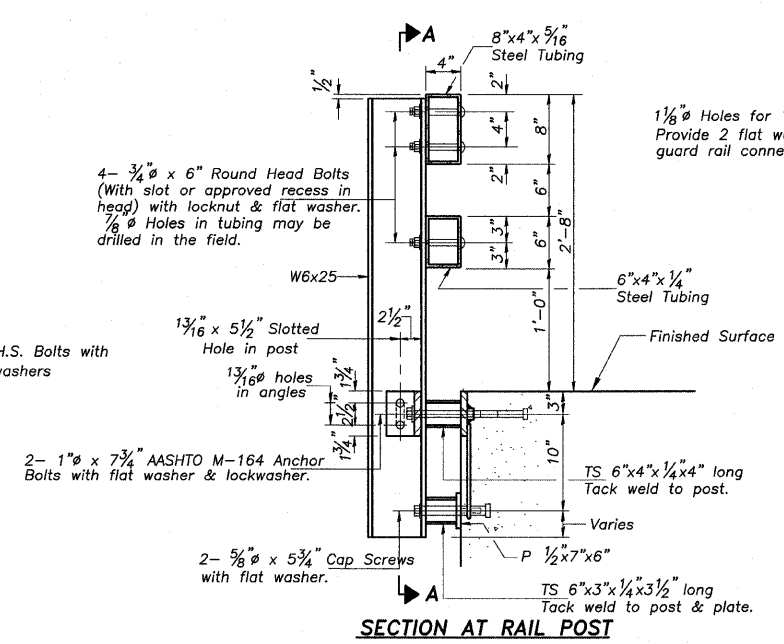
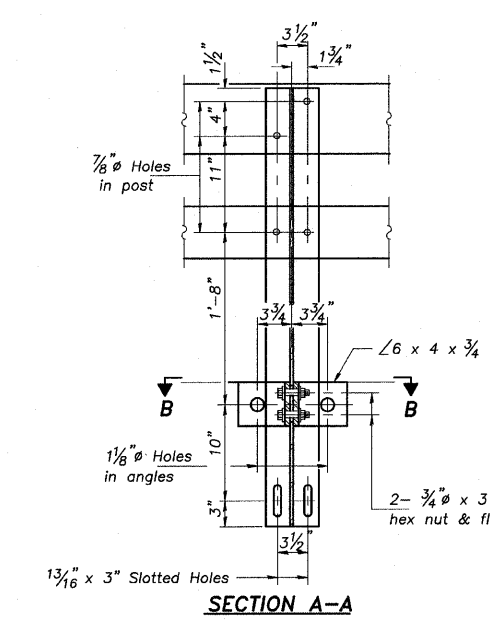
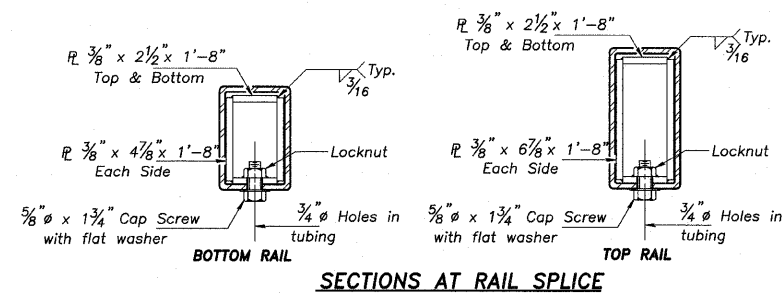
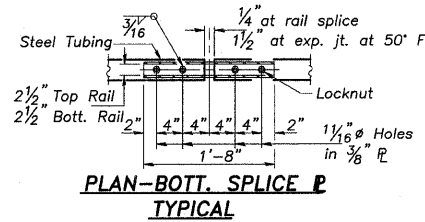
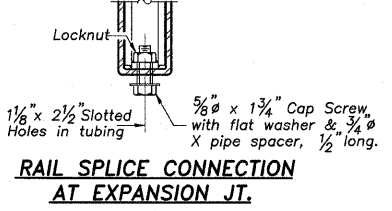
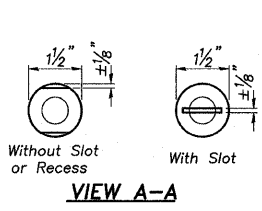
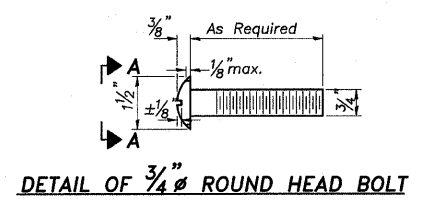
SHEET TITLE

JOB NUMBER
2080381

DATE
2/23/2009

SHEET NO.

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GENERAL NOTES

Hollow structural steel tubing shall conform to the requirements of ASTM designation A-500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0° F.

All other steel shapes and plates shall conform to the requirements of AASHTO M-270 Grade 36 except posts and angles shall conform to AASHTO M-270, Grade 50.

Bolts, cap screws, and nuts shall conform to the requirement of ASTM designation A-307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M-164.

All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with AASHTO M-232.

All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with AASHTO M-111 and ASTM A-385. Galvanized rail shall not be painted.

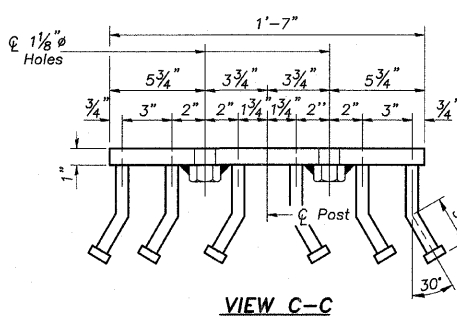
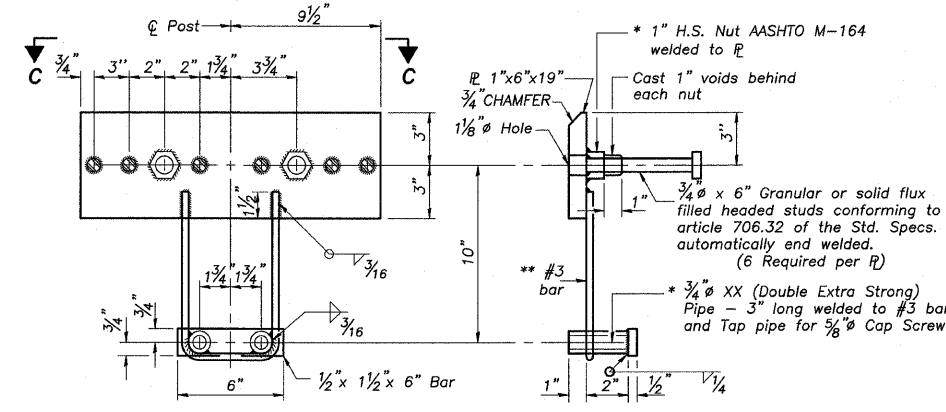
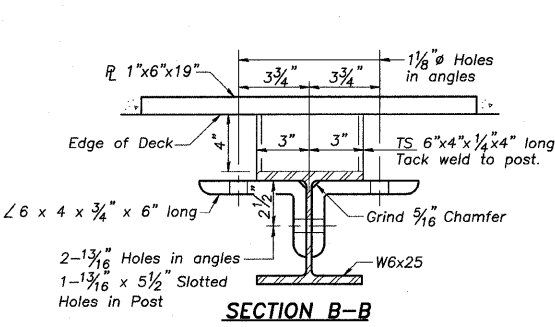
Railing shall be in accordance with Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for STEEL BRIDGE RAIL, TYPE SM.

All field drilled holes shall be coated with an approved zinc rich paint before erection.

For multi-span PPC Deck bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost incidental to STEEL BRIDGE RAIL, TYPE SM.

Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.

The 3/4" high strength bolts used to connect the 6 x 4 x 3/4" angles to the post shall be tightened in accordance with Article 505.04(f)(3) of the Standard Specifications. The 1" high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/8 turn. The 5/8" cap screws in bottom of posts shall be tightened to a snug fit only.



BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail, Type SM	Foot	98

TYPE SM
 STEEL BRIDGE RAIL SIDE MOUNTED
 SECTION 05-00213-00-BR
 SHABONA ROAD
 DEKALB COUNTY
 SN 019-3066

ANCHOR DEVICE

* Threaded areas shall be plugged or blocked off during casting of beam Galvanized after fabrication.

** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".