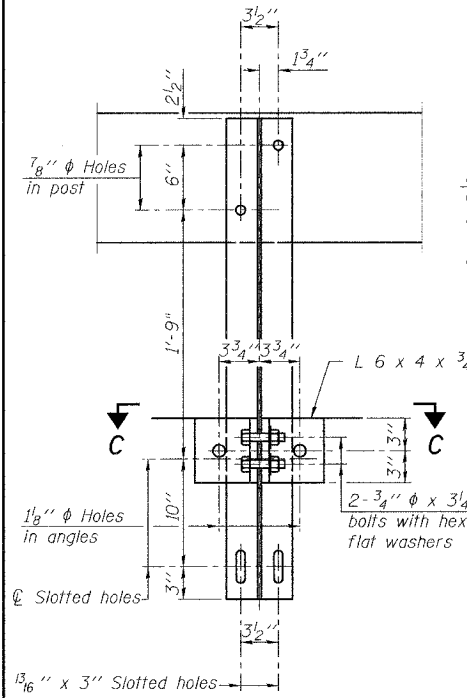
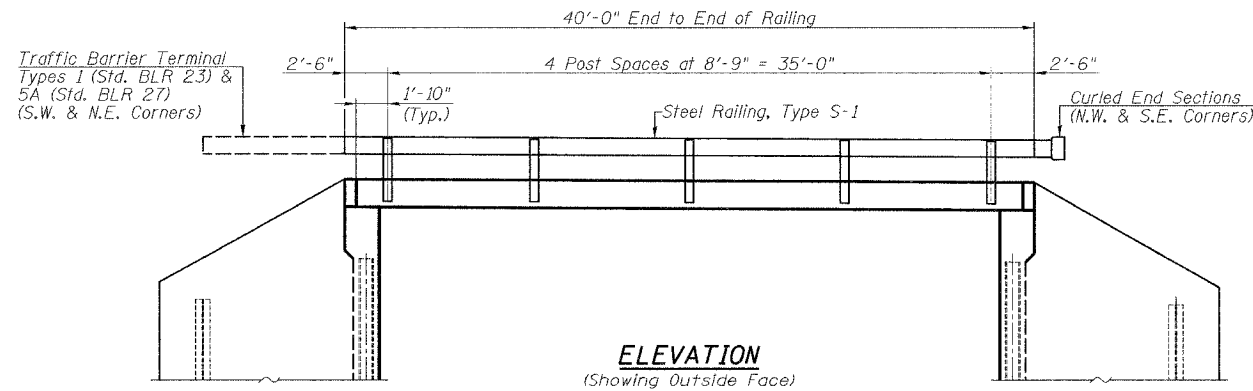


T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	95-05109-00-BR	MENARD	14	7
CONTRACT NO. 93-46				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				



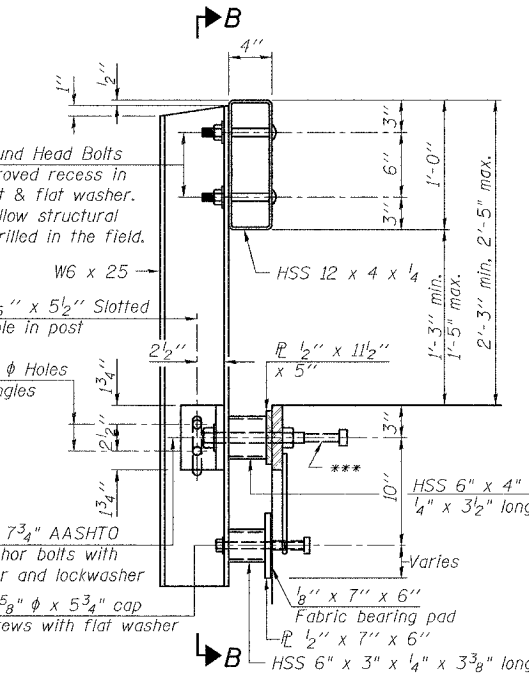
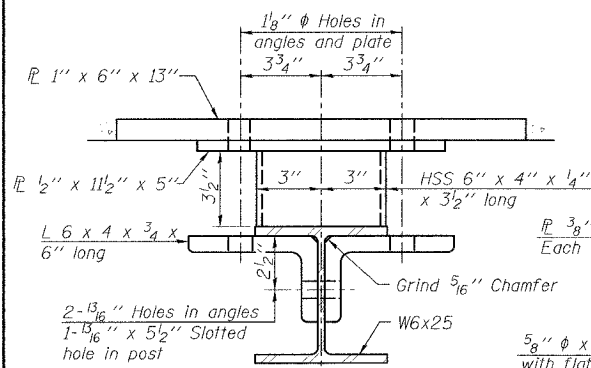
2-3/4" ϕ x 6" Round Head Bolts (With slot or approved recess in head) with locknut & flat washer. 7/8" ϕ holes in hollow structural section may be drilled in the field.

2-3/4" ϕ x 3/4" H.S. bolts with hex nut & flat washers

2-1" ϕ x 7 3/4" AASHTO M-164 anchor bolts with flat washer and lockwasher

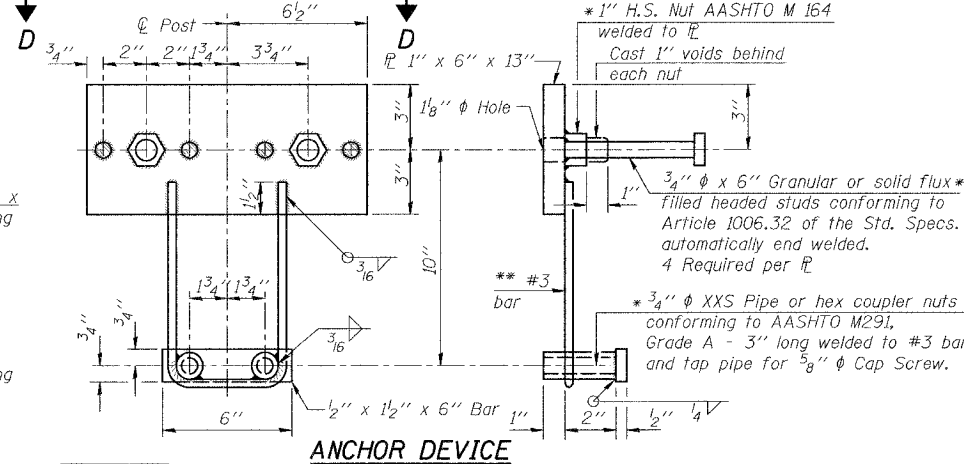
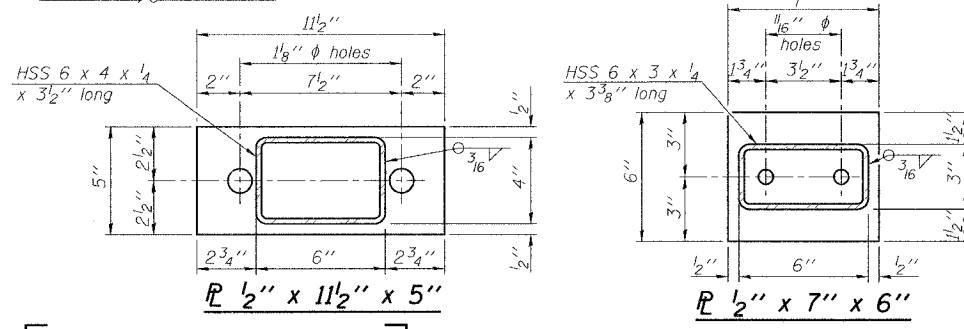
2-5/8" ϕ x 5 3/4" cap screws with flat washer

SECTION B-B

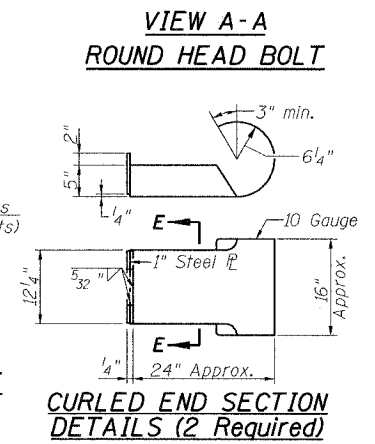
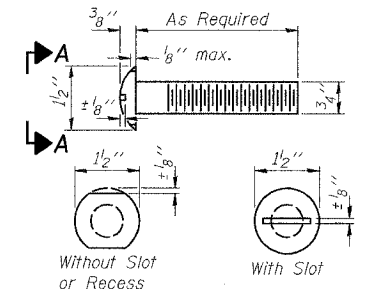
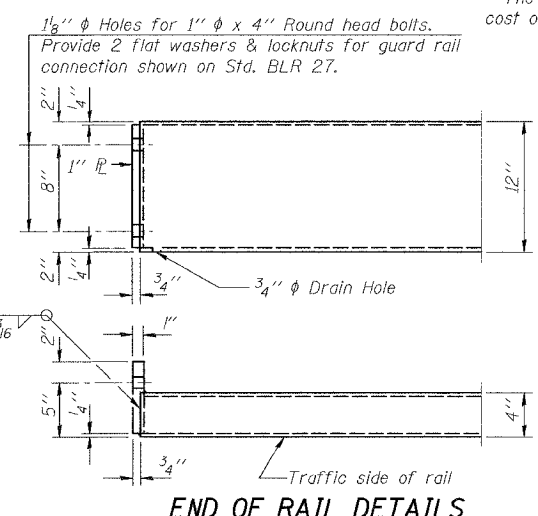
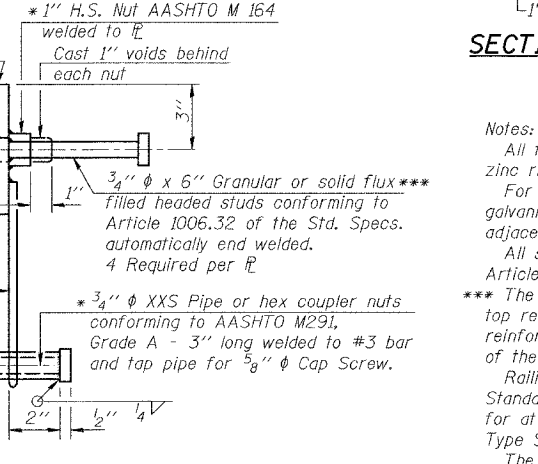
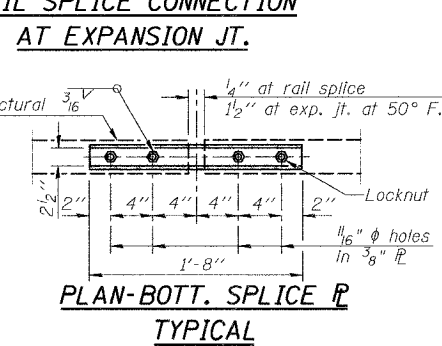
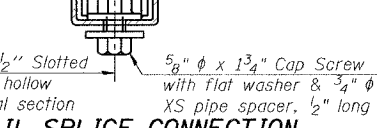


** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".

SECTIONS AT RAIL SPLICE



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



Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
*** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.
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 Railing, Type S-1.
The cost of curled end sections shall be included in the cost of Steel Railing, Type S-1.

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	80

VIEW D-D BILL OF MATERIAL

FILE NAME =	USER NAME = USER#	DESIGNED -	REVISED -
DATE =	DATE =	CHECKED -	REVISED -
DATE =	DATE =	CHECKED -	REVISED -
DATE =	DATE =	CHECKED -	REVISED -

Allen Henderson & Associates, Inc.
Civil and Structural Engineers Springfield, IL
62703 Phone: (217)544-8033 IL Design Firm
No. 184-001907

STEEL RAILING TYPE S-1
SCALE: _____ SHEET NO. 7 OF 14 SHEETS STA. 5+99.00 TO STA. 11+75.00

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34	95-05109-00-BR	MENARD	14	7
CONTRACT NO. _____				
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