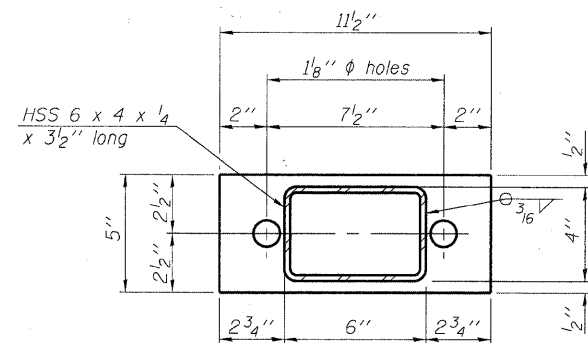
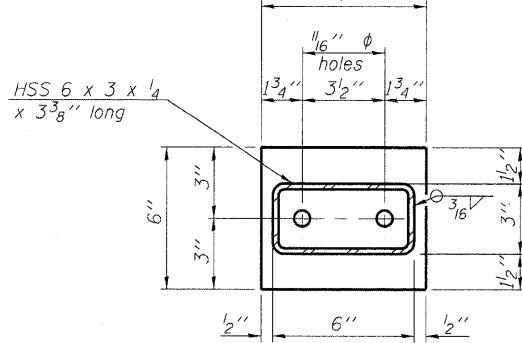


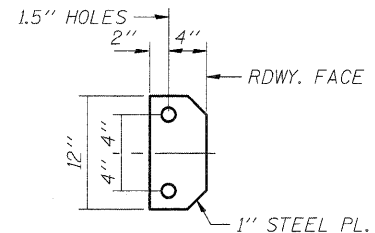
**VIEW A-A
ROUND HEAD BOLT**



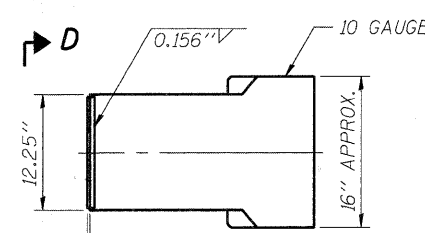
**SECTION B-B
P 1/2" x 11 1/2" x 5"**



**SECTION AT RAILING POST
P 1/2" x 7" x 6"**

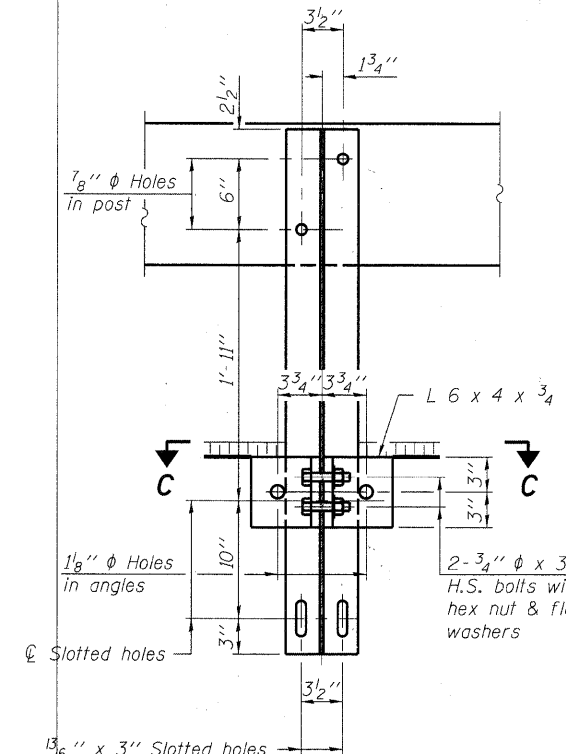
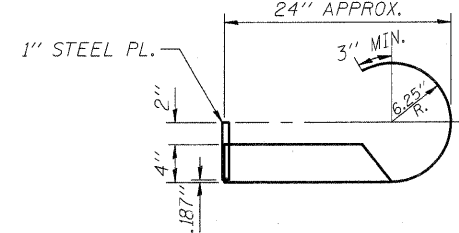


VIEW D-D

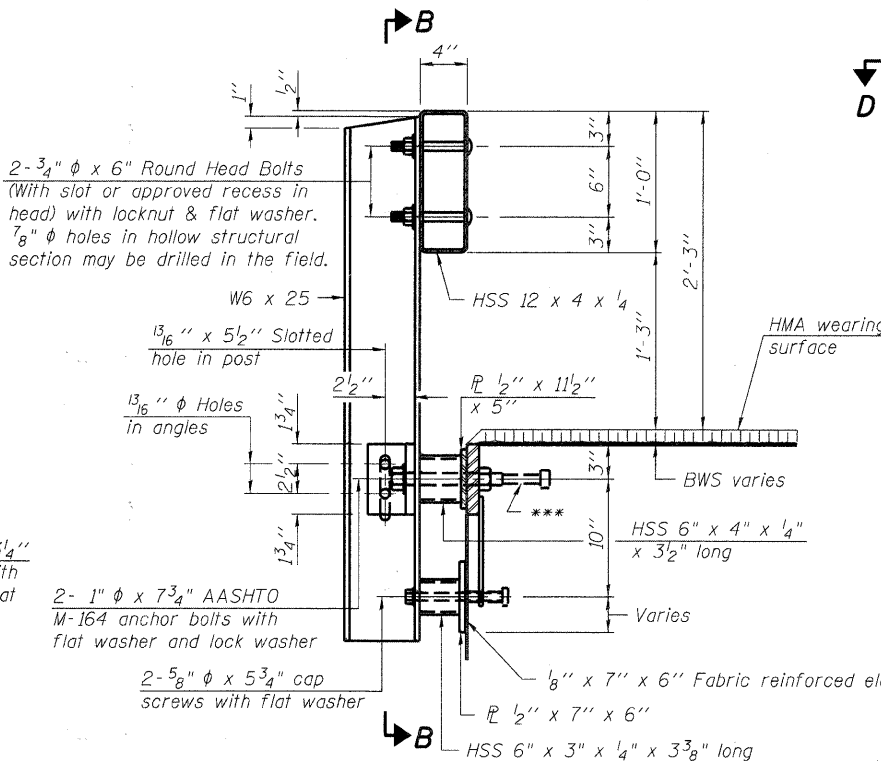


CURLED END SECTION DETAILS

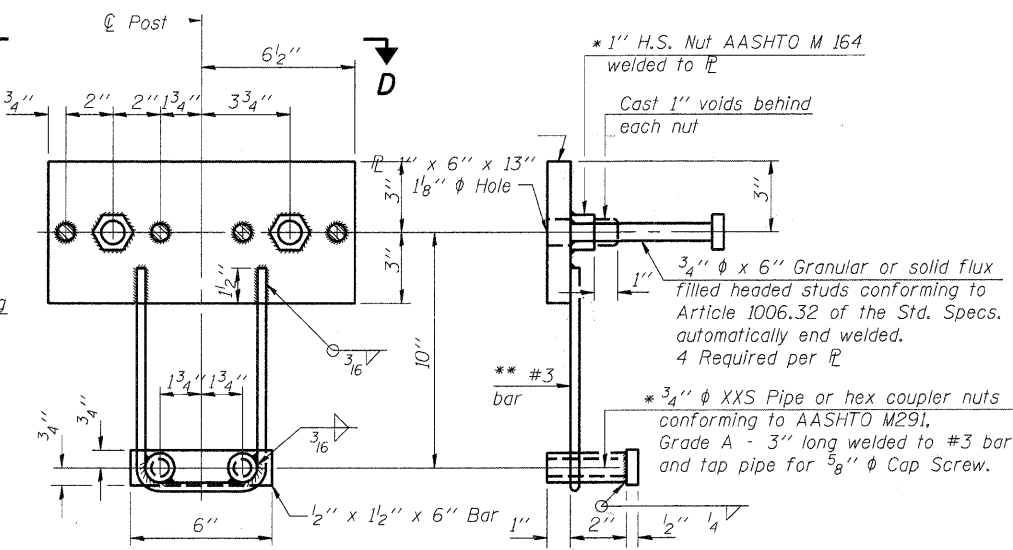
4 REQUIRED - COST INCLUDED IN "STEEL RAILING, TYPE S-1"



SECTION C-C



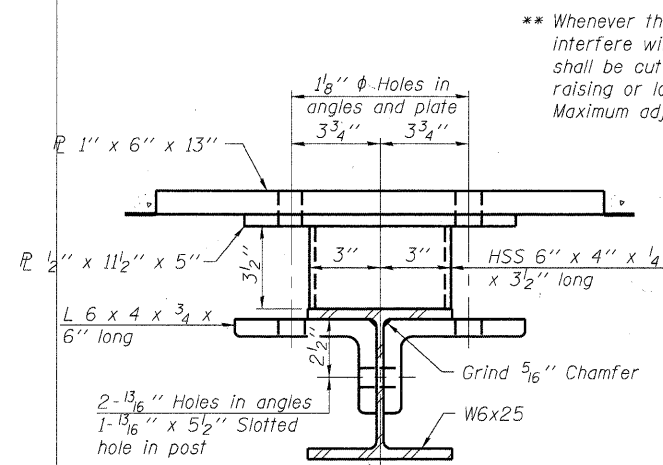
SECTION AT RAILING POST



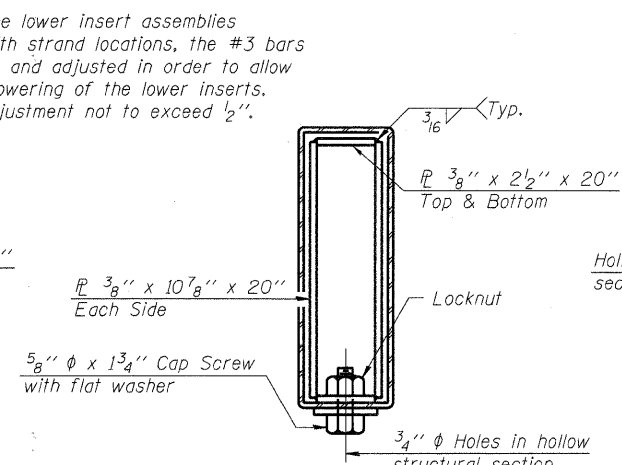
ANCHOR DEVICE

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

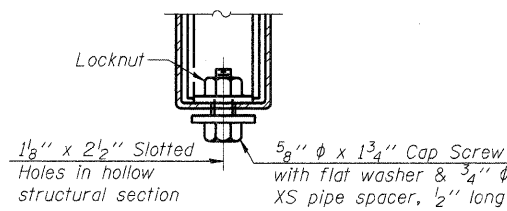
Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection. For multi-span bridges, sufficient 1/4 inch x 6 inch x 1-2 inch galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1. All steel rail elements 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.



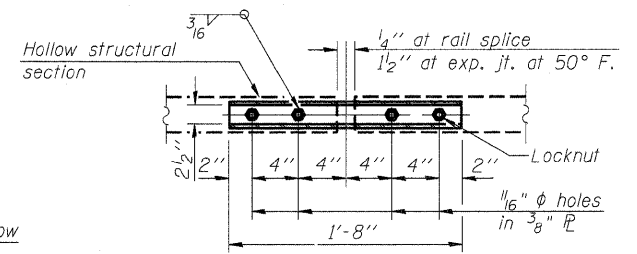
SECTION C-C



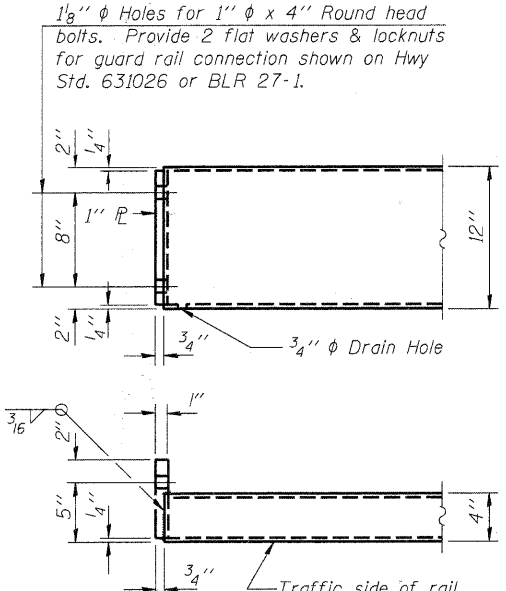
SECTIONS AT RAIL SPLICE



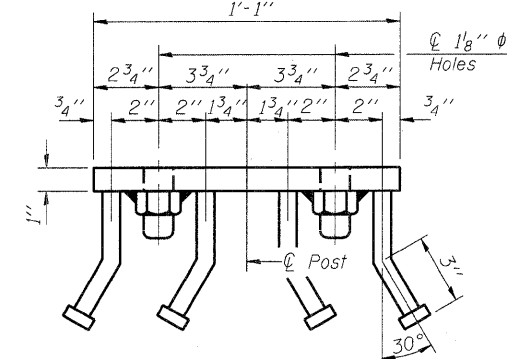
RAIL SPLICE CONNECTION AT EXPANSION JT.



PLAN-BOTT. SPLICE P TYPICAL



END OF RAIL DETAILS



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	92

R-23A 7-1-10 (10'-9" Maximum Post Spacing)

ESI CONSULTANTS, LTD
753 WINDSOR ROAD
CHARLESTON, IL 61920
(217) 348-1800
WWW.ESICONSULTANTS.LTD.COM
ILLINOIS DEPARTMENT OF PROFESSIONAL REGULATION REGISTRATION #184-003685

TR 282
COLES COUNTY

STEEL RAILING, TYPE S-1
STRUCTURE NO. 015-3427

SHEET NO 4 OF 7 SHEETS

TWP	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
RTE 282	07-05136-00-BR	COLES	13	08
CONTRACT NO				
ILLINOIS FEDERAL AID PROJECT				

PRINTED DATE: 2/7/2012 FILE NAME: C:\projects\vailes\co highway_dept\tr 282\road\drawings\Sheets\08_385_Rail.dwg