

NOTES

METAL RAIL SHALL BE GALVANIZED STEEL IN ACCORDANCE WITH THE REQUIREMENTS OF THE GENERAL NOTES AND THE FOLLOWING SPECIFICATIONS. ALUMINUM RAIL WILL NOT BE AN OPTION.

GALVANIZED STEEL RAILS

MATERIAL AND GALVANIZING ARE TO CONFORM TO THE FOLLOWING SPECIFICATIONS:

POST, POST BASES, ANCHOR PLATES, AND RAIL SPLICE TUBES: AASHTO M270 GRADE 36 STRUCTURAL STEEL-GALVANIZED TO AASHTO M111.

THE CUT ENDS OF GALVANIZED STEEL RAILING, AFTER GRINDING SMOOTH SHALL BE GIVEN TWO COATS OF ZINC RICH PAINT MEETING THE REQUIREMENTS OF FEDERAL SPECIFICATION MIL-P-26915 USAF TYPE 1, OR OF FEDERAL SPECIFICATIONS TT-P-641.

RAILS: ASTM A500 GRADE B - GALVANIZED TO AASHTO M111.

WELDED RAIL STUDS: ASTM A108-GALVANIZED TO AASHTO M111.

HIGH STRENGTH ANCHOR BOLTS SHALL CONFORM TO ASTM F1554 GRADE 105. HEAVY HEX NUTS SHALL CONFORM TO ASTM A563 DH, AND WASHERS TO ASTM F436, TYPE 1. NUTS AND WASHERS SHALL BE GALVANIZED TO AASHTO M111.

GENERAL NOTES

RAILING SHALL BE CONTINUOUS FROM END POST TO END POST OF BRIDGE. EACH JOINT IN RAIL LENGTH SHALL BE SPLICED AS DETAILED. PANEL LENGTHS OF RAIL SHALL BE ATTACHED TO A MINIMUM OF THREE POSTS.

FOR END OF RAIL TO CLEAR FACE OF CONCRETE END POST DIMENSION, SEE STANDARD NO. BMR11.

CERTIFIED MILL REPORTS ARE REQUIRED FOR RAILS AND POSTS. SHOP INSPECTION IS NOT REQUIRED.

METAL RAIL POSTS SHALL BE SET NORMAL TO CURB GRADE.

CURVED RAIL USAGE: WHERE RAILS ARE TO BE USED ON BRIDGES ON HORIZONTAL AND/OR VERTICAL CURVATURE THE CONTRACTOR MAY, AT HIS OPTION, HAVE THE REQUIRED CURVATURE IN THE RAIL FORMED IN THE SHOP OR IN THE FIELD. IN EITHER EVENT, THE RAIL SHALL CONFORM WITHOUT BUCKLING OR KINKING TO THE REQUIRED CURVATURE IN A UNIFORM MANNER ACCEPTABLE TO THE ENGINEER.

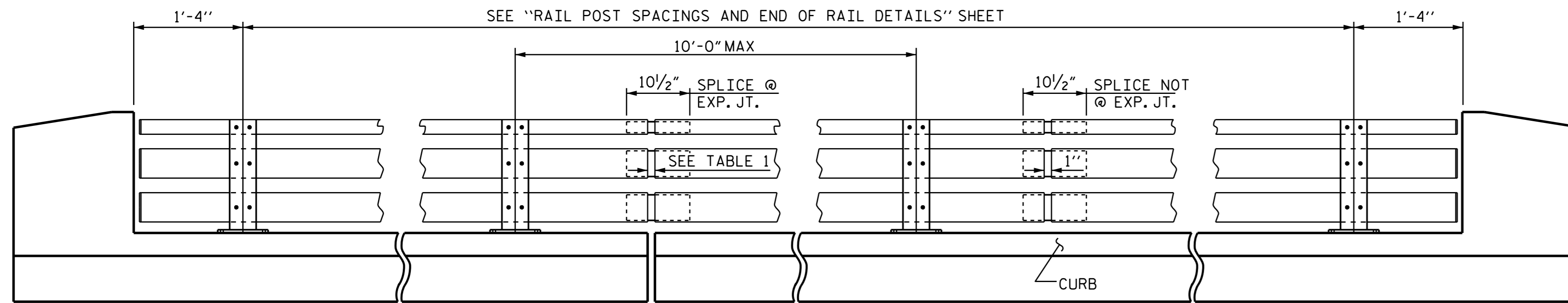
TO INSURE FUTURE IDENTIFICATION OF THE FABRICATOR, A PERMANENT IDENTIFYING MARK SHALL BE PLACED ON EACH POST. THE METHOD OF MARKING AND LOCATION SHALL BE SUCH THAT IT DOES NOT DETRACT FROM THE APPEARANCE OF THE POST, BUT REMAINS VISIBLE AFTER RAIL PLACEMENT.

SHIMS SHALL BE USED AS NECESSARY FOR POST ALIGNMENT.

THE RAIL SECTIONS SHALL BE ATTACHED TO THE POSTS BY TWO THREADED 3/4" Ø WELDED STUDS, PLATE WASHERS, LOCKWASHERS, AND NUTS.

FOR 42" OREGON RAIL, SEE THE SPECIAL PROVISIONS.

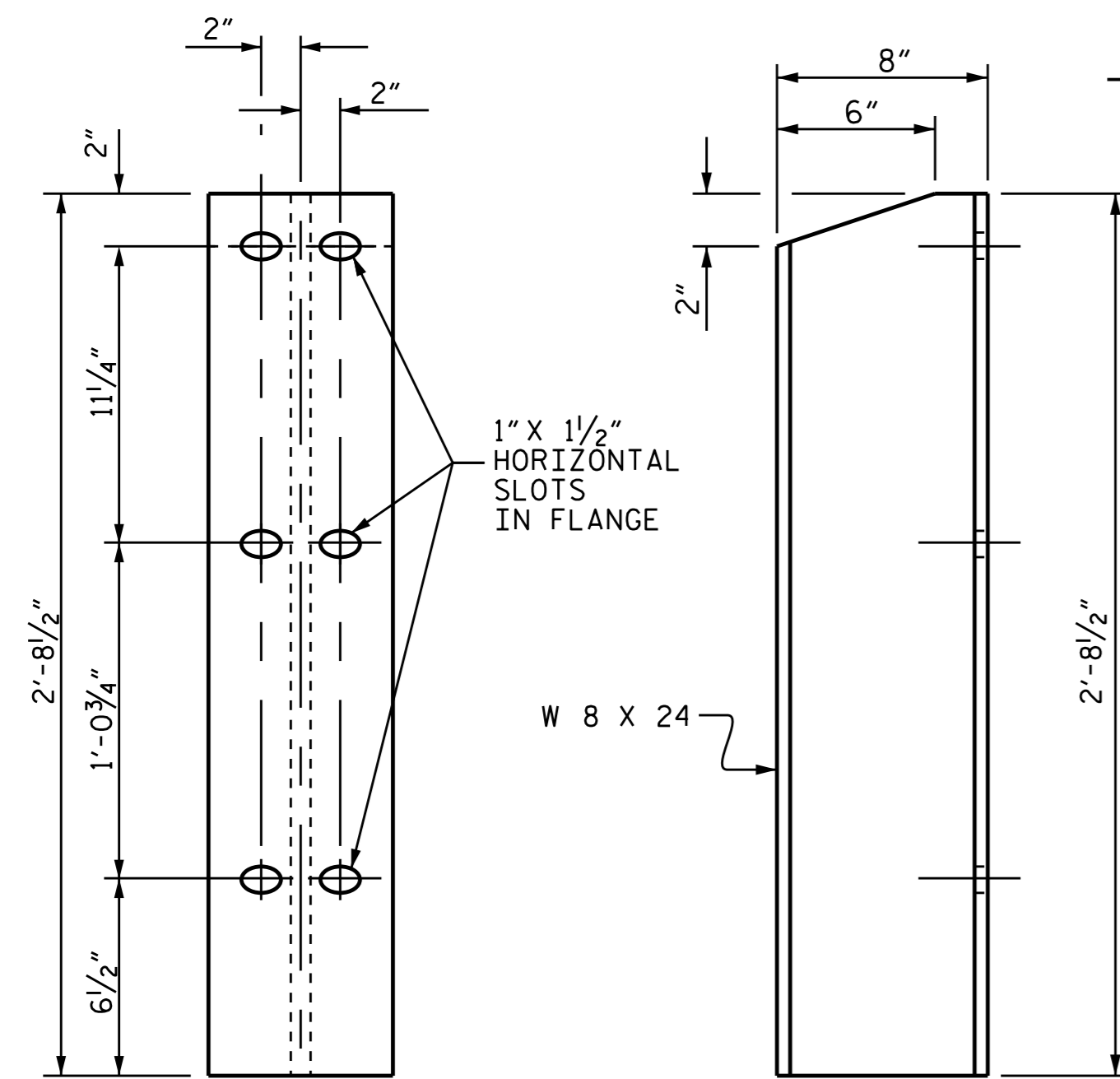
PAY LENGTH 264.6 LIN. FT.



ELEVATION

FOR ATTACHMENT OF METAL RAIL TO END POST, SEE SHEET S-13.

EXP. JT. @	RAIL OPENING
BENT 1	1 1/2"
BENT 2	1 1/2"



FRONT ELEVATION SIDE ELEVATION

DETAILS OF POST

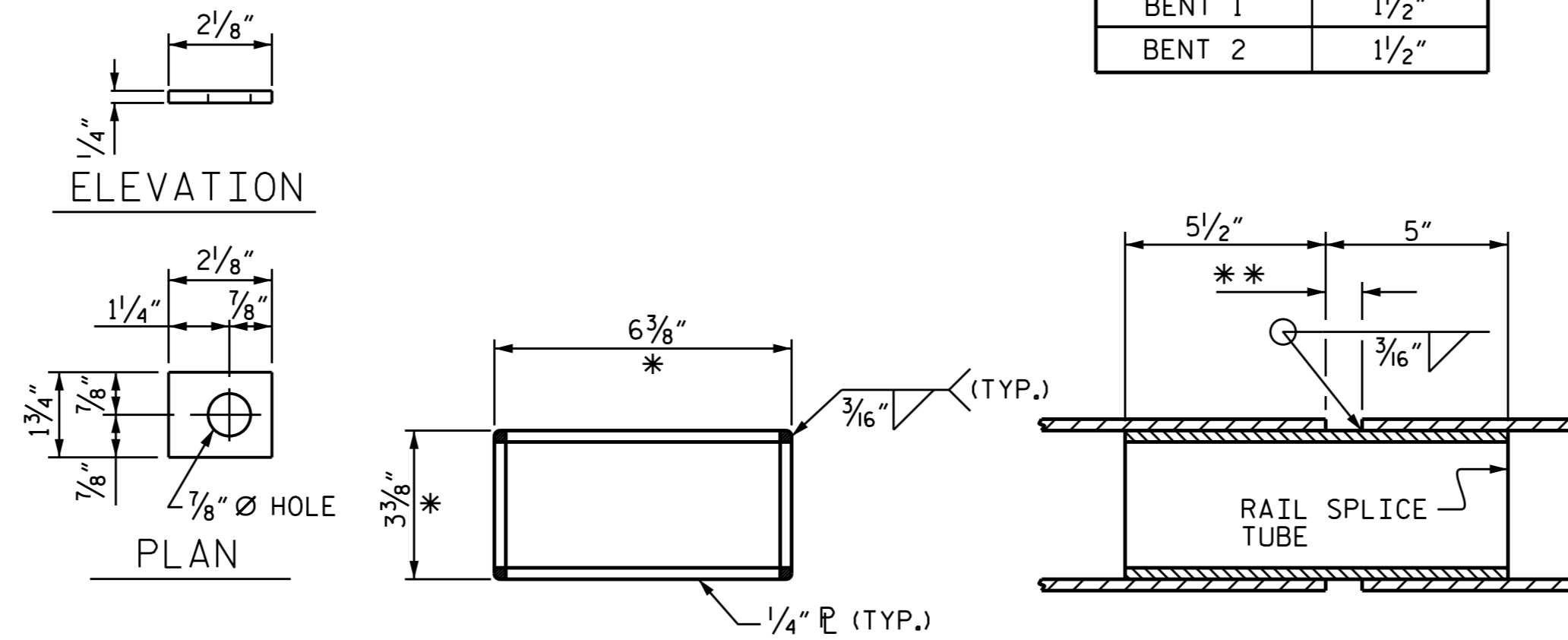
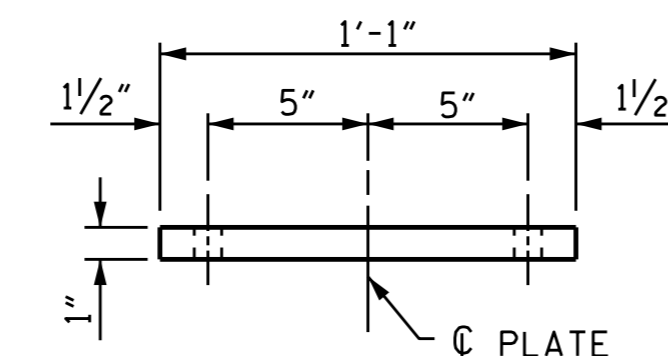


PLATE WASHER

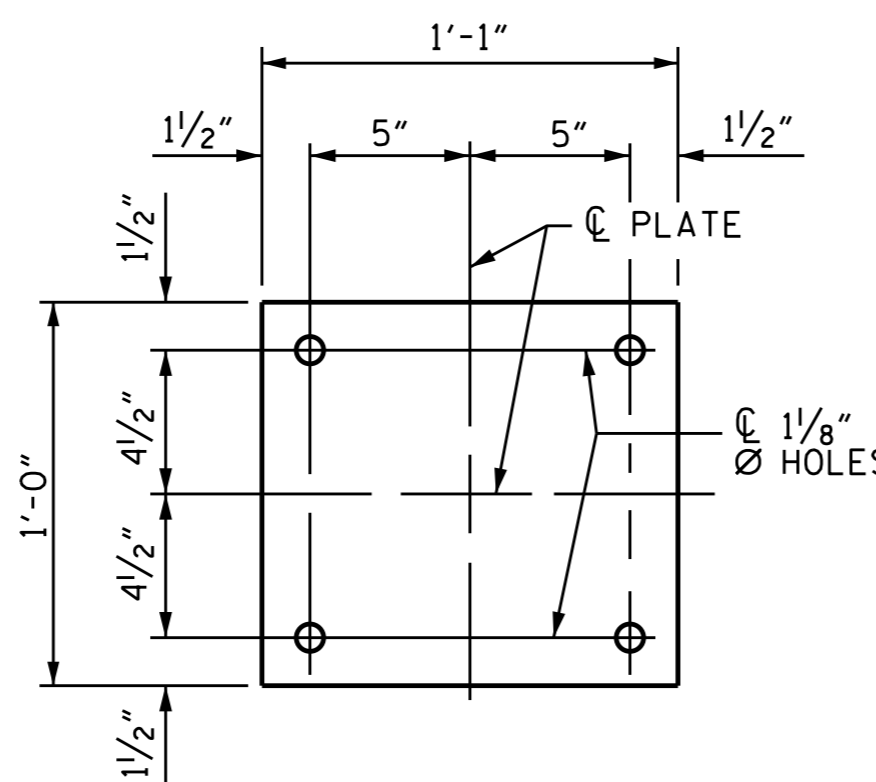
RAIL SPLICE DETAILS

* - DIMENSION AFTER GRINDING RADIUS ON CORNERS TO MATCH INSIDE OF METAL RAIL. GRIND ALL EDGES PRIOR TO GALVANIZING TO ASSURE FIT.

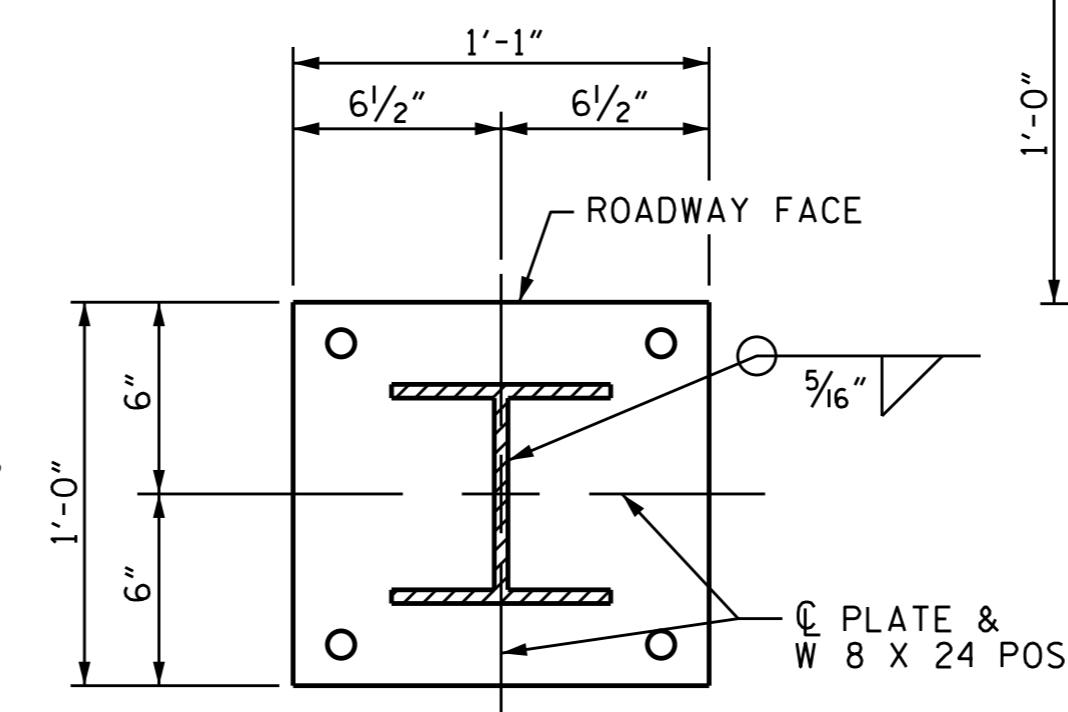
** -1" FOR SPLICE NOT AT EXPANSION JOINT; SEE TABLE 1 FOR OPENING FOR SPLICES AT EXPANSION JOINTS.



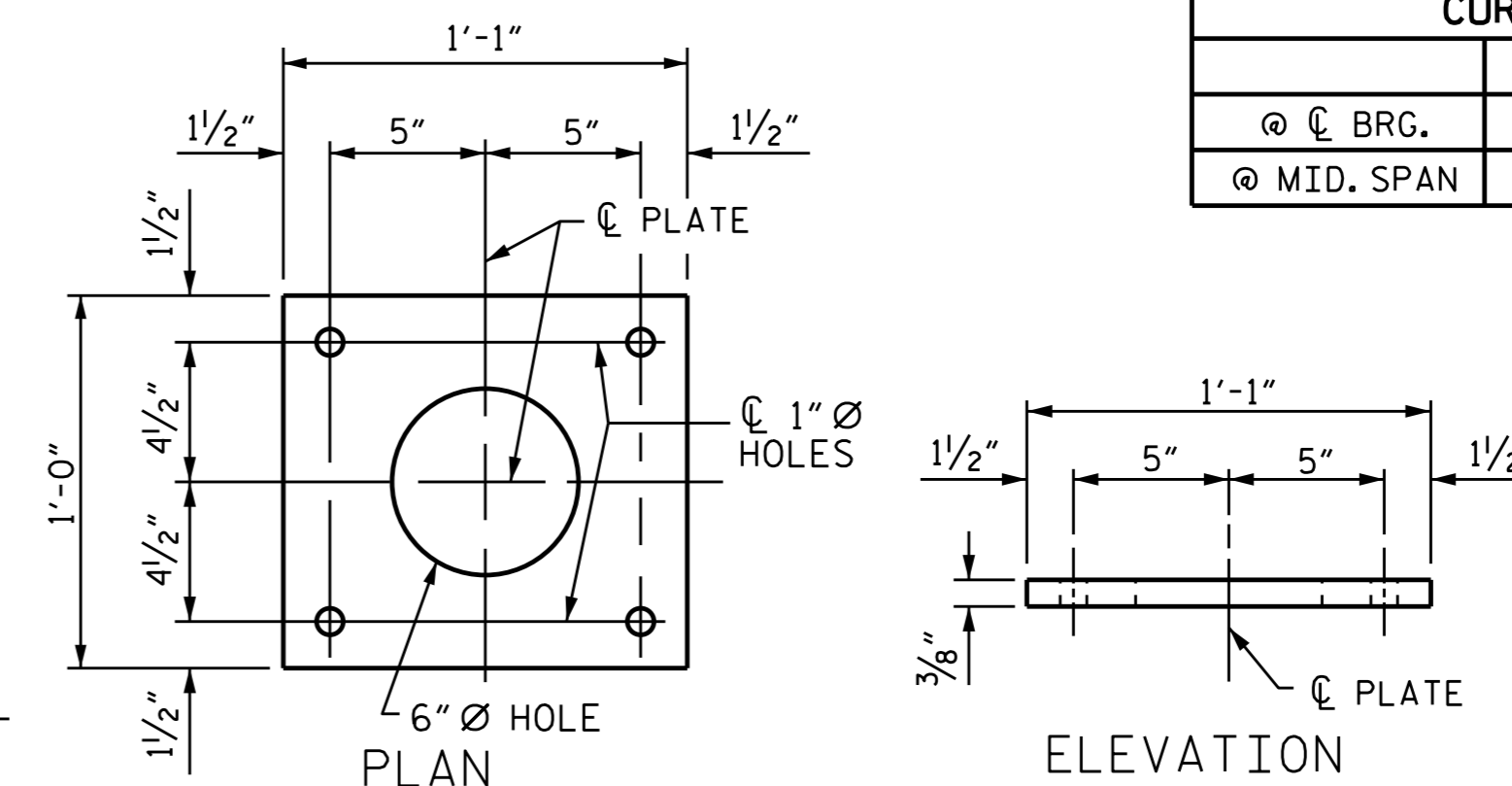
FRONT ELEVATION



PLAN

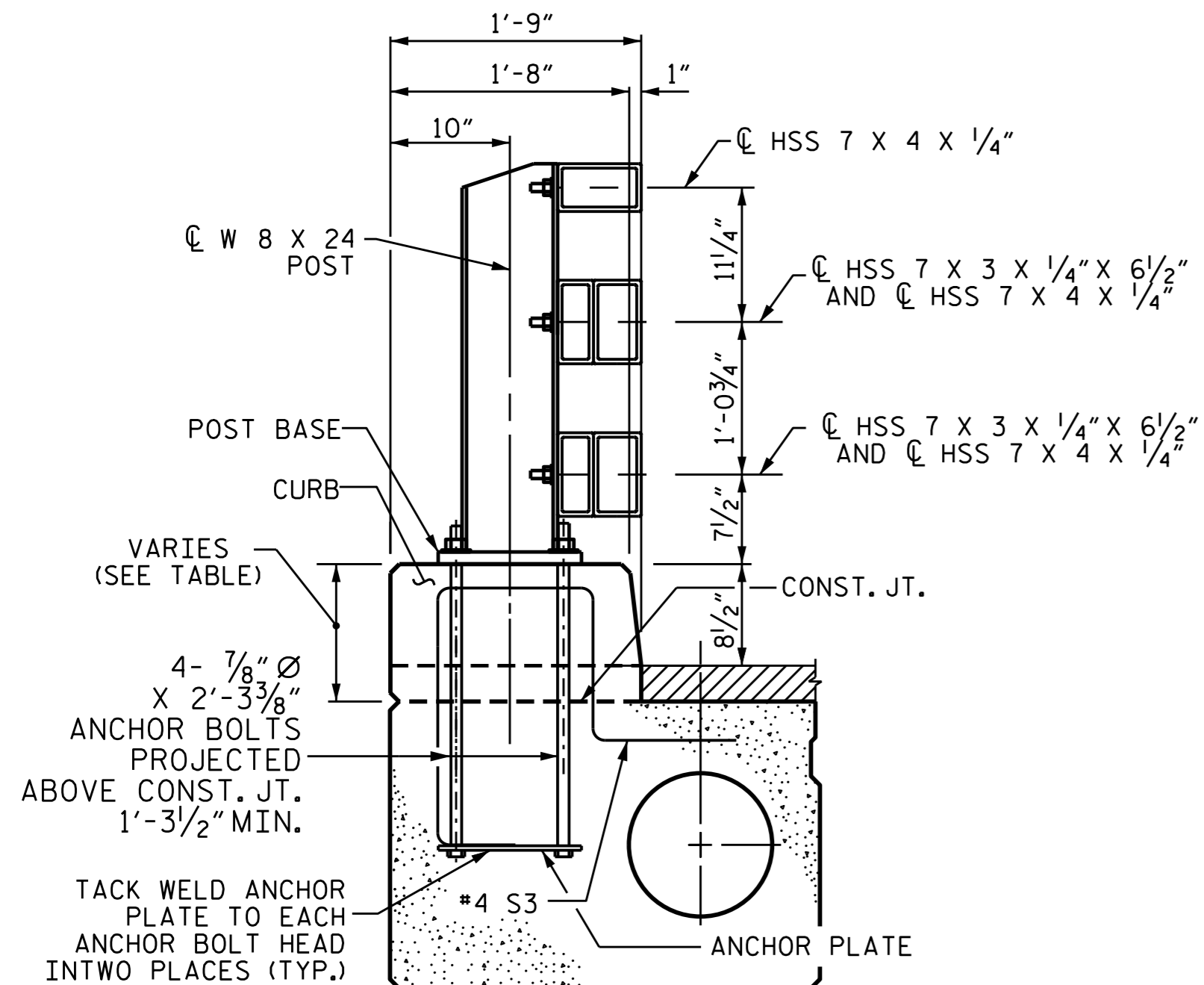


POST ATTACHMENT DETAIL



ANCHOR PLATE DETAILS

CURB HEIGHT TABLE		
	SPANS A & C	SPAN B
@ C. BRG.	10 1/2"	1'-0"
@ MID. SPAN	10 3/8"	10 1/2"



SECTION THRU RAIL

#4 "B" BARS IN CURB NOT SHOWN FOR CLARITY

POST BASE DETAILS

PROJECT NO. B-4959
 GUILFORD COUNTY
 STATION: 14+70.50 -L-

SHEET 1 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

STANDARD

42" OREGON RAIL



DocuSigned by: E. Ome
 03/01/2015

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-12
1			3			TOTAL SHEETS 25
2			4			

ASSEMBLED BY: E.I. OMILE	DATE: 03/01/15
CHECKED BY: T.H. FANG	DATE: 6/8/15
DRAWN BY: RWW 7/14	ADDED 1/15
CHECKED BY: TMC 7/14	