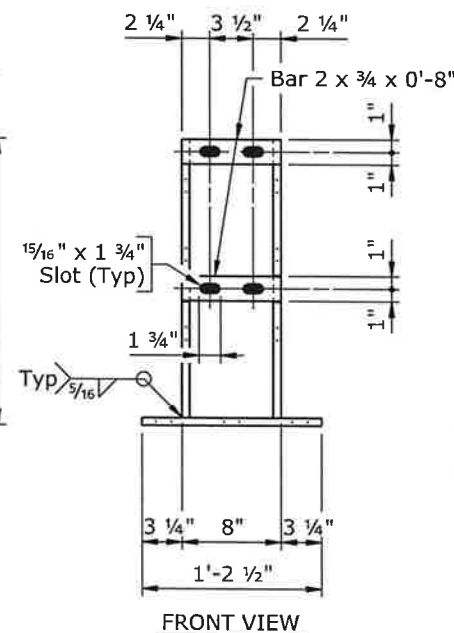
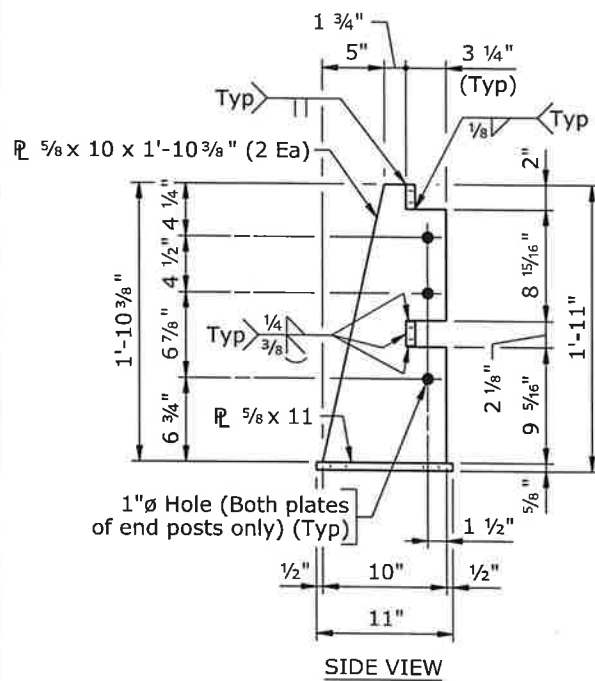
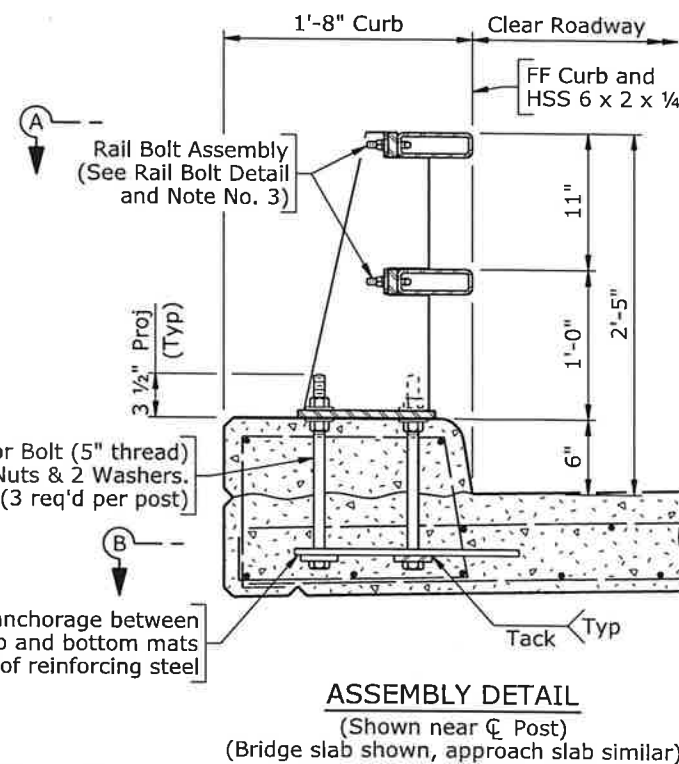


PLAN
 (X posts req'd on bridge)
 (X posts req'd on approach slabs)



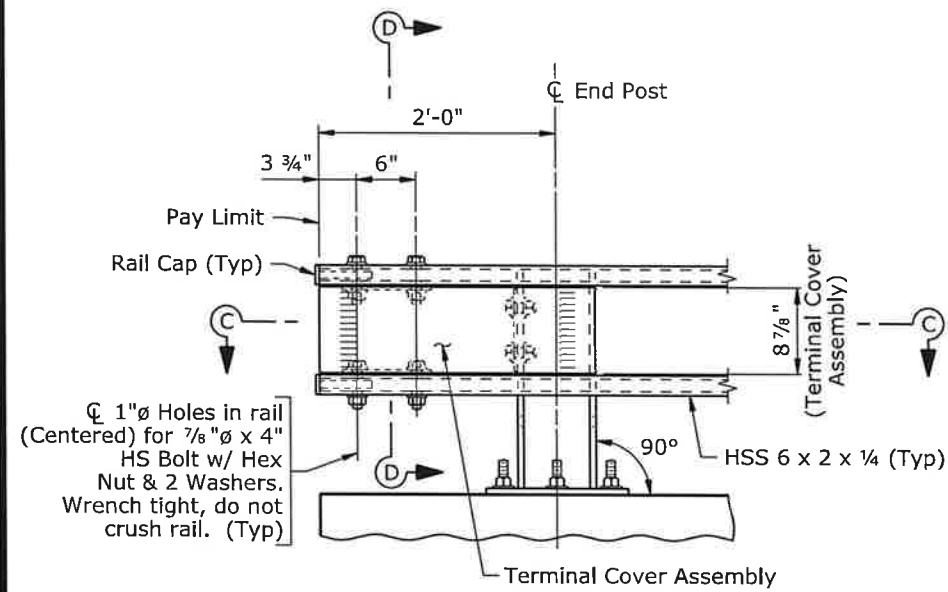
POST DETAILS
 (See View A-A for anchor bolt hole spacing)



ANCHOR BOLT TABLE	
Location	Anchor Bolt
Bridge Slab	7/8" ϕ x 1'-3"
Approach Slab	7/8" ϕ x 1'-5"

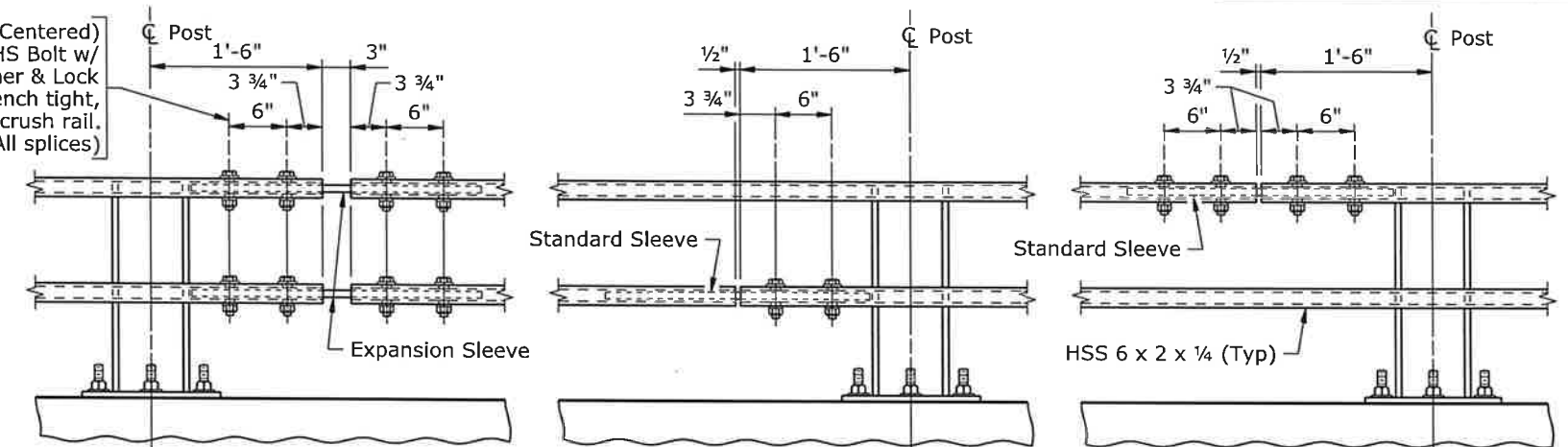
- Note:
- 1) Ensure the expansion splice is located in the railing panel which passes over the bridge expansion joint as indicated on the plan.
 - 2) Anchor bolts may be tack welded to anchorage (Shop or field).
 - 3) At post locations, drill two 1 1/16" ϕ holes in each rail to receive rail bolts (Shop or field). See Post Details for hole spacing.
 - 4) Paint surfaces of the railing components that have been cut, drilled, or otherwise damaged with two coats of zinc-rich paint conforming to ASTM A 780.
 - 5) After installing rails, paint exposed bolt threads with two coats of zinc-rich paint conforming to ASTM A 780.

WYOMING DEPARTMENT OF TRANSPORTATION BRIDGE PROGRAM			
BRIDGE RAILING DETAILS			
TL3BRGRAIL_NCHRP350_br1.dgn			
REVISIONS	DESIGN	Design Section	X
	DETAIL	Drwg No. X	Sheet X of X
APPROVAL	QTY'S		



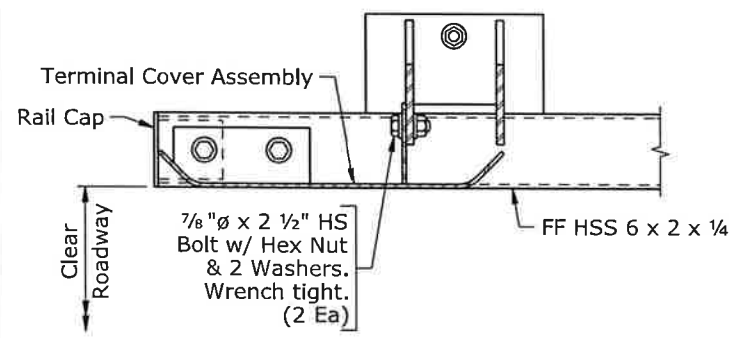
ELEVATION AT TERMINAL

1" \varnothing Holes in rail (Centered) for 3/4" \varnothing x 3 1/2" HS Bolt w/ Hex Nut, Washer & Lock Washer. Wrench tight, do not crush rail. (Typ) (All splices)

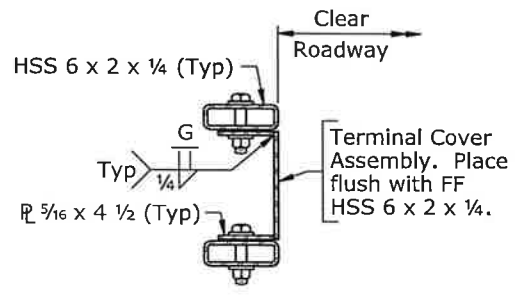


SPLICE DETAILS

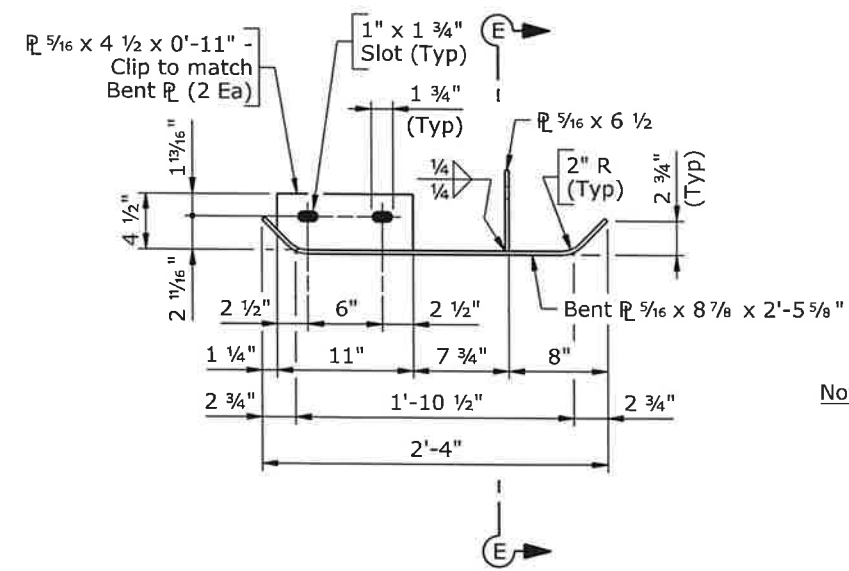
TERMINAL COMPONENT REQUIREMENTS		
Approach Guardrail Connection	Rail Caps Required	Terminal Cover Assembly Required
MGS Approach Guardrail	Yes (Without bolts)	≠ No
Box Beam w/ Rubrail Approach Guardrail	No	No
No Approach Guardrail	Yes (With bolts)	Yes



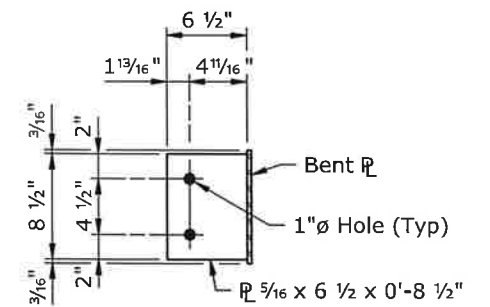
SECTION C-C



SECTION D-D

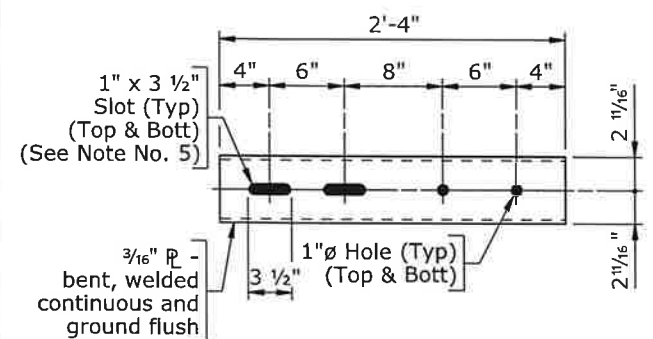


TERMINAL COVER ASSEMBLY DETAIL

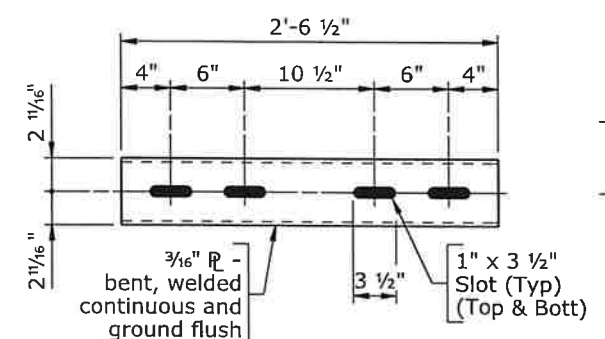


SECTION E-E

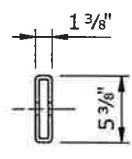
- Note:
- 1) Ensure each rail length is continuous over a minimum of two posts.
 - 2) In rehabilitation work, ensure railing that cannot feasibly be made continuous over a minimum of two posts has a double-bolted splice.
 - 3) Splices may be located on either side of post.
 - 4) Not more than one splice is permitted per side of post, except at expansion splices.
 - 5) Slots may be omitted in standard sleeves where bolts are required on one side of splice only.
 - 6) Do not shop splice rails.
 - 7) Terminal components removed during rehabilitation work will remain the property of the department.
 - 8) Installation of MGS approach guardrail will require other fabricated assemblies to be connected to end post. See road plans for details and pay item.



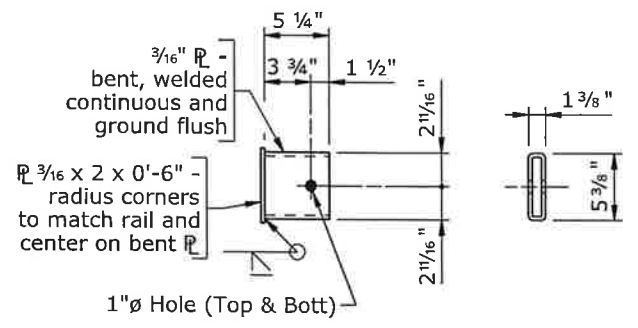
STANDARD SLEEVE



EXPANSION SLEEVE



END VIEW



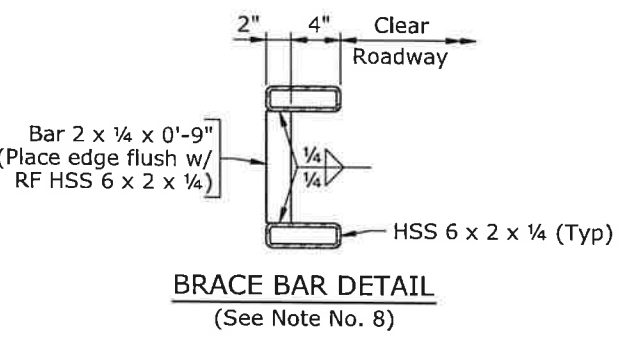
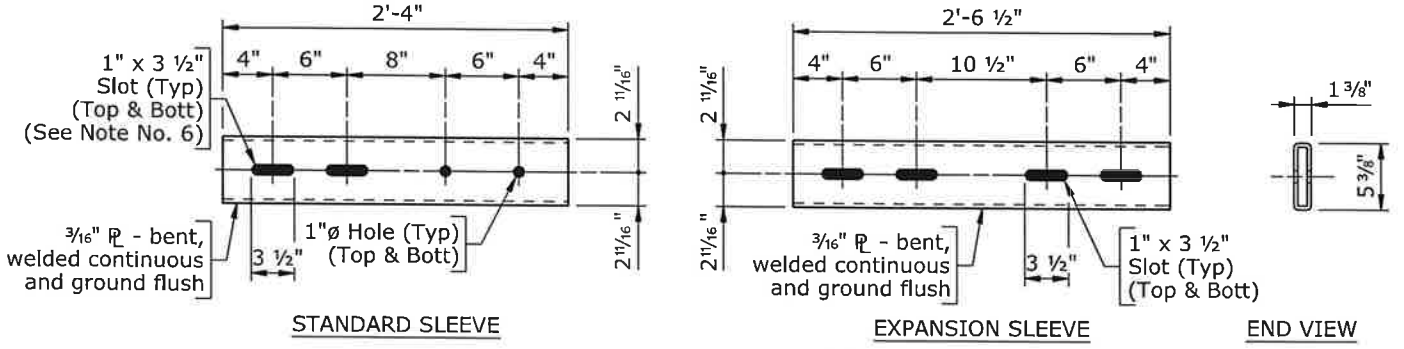
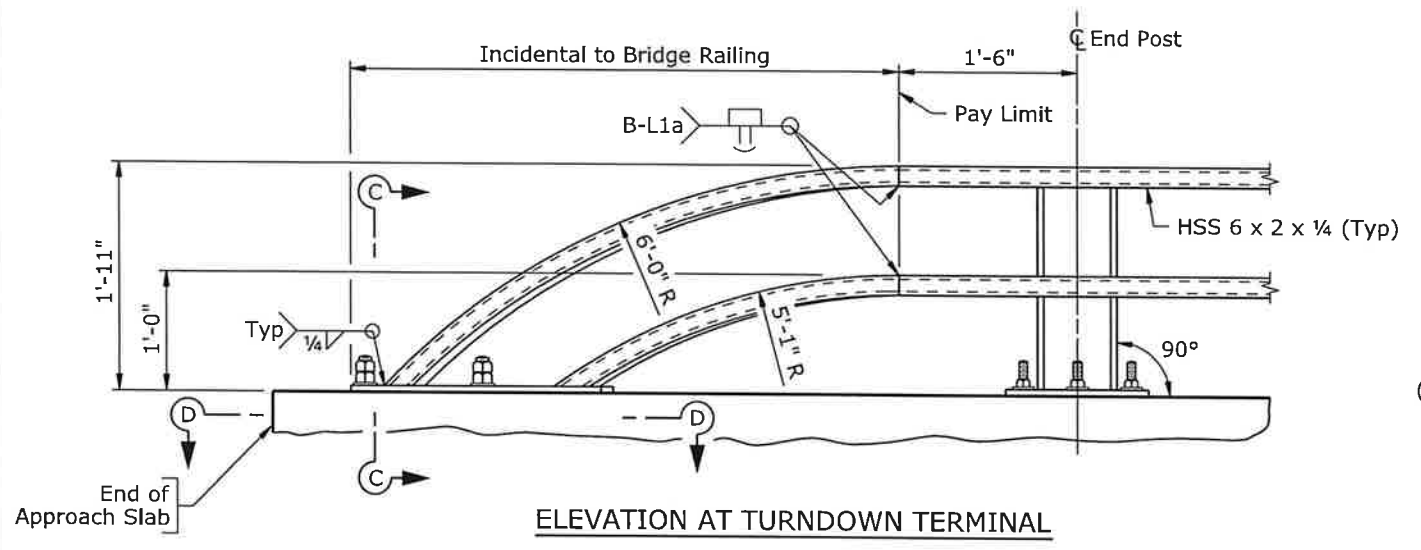
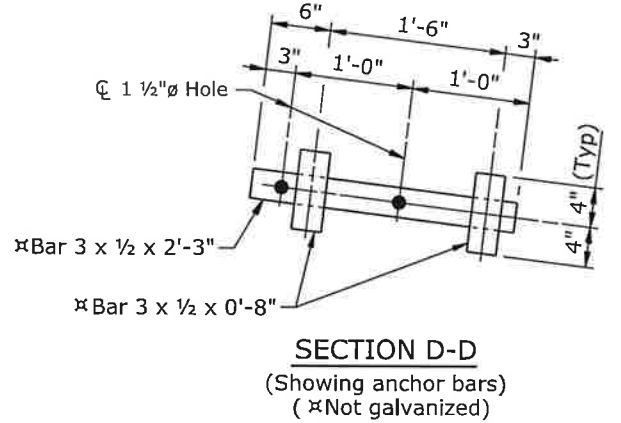
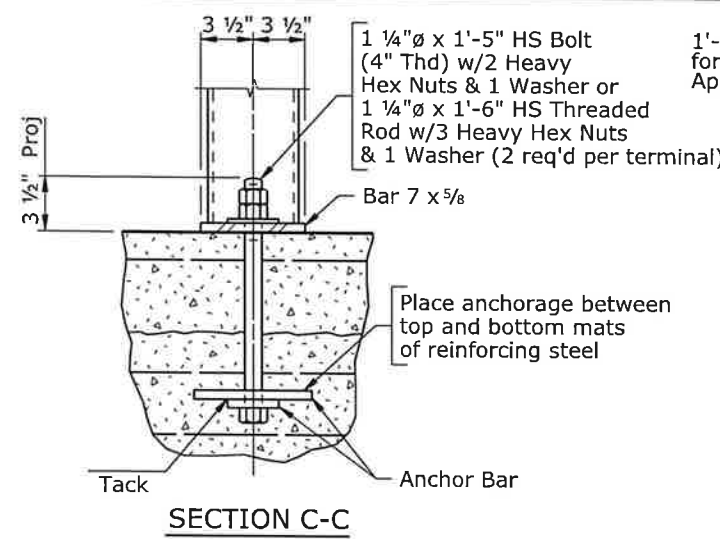
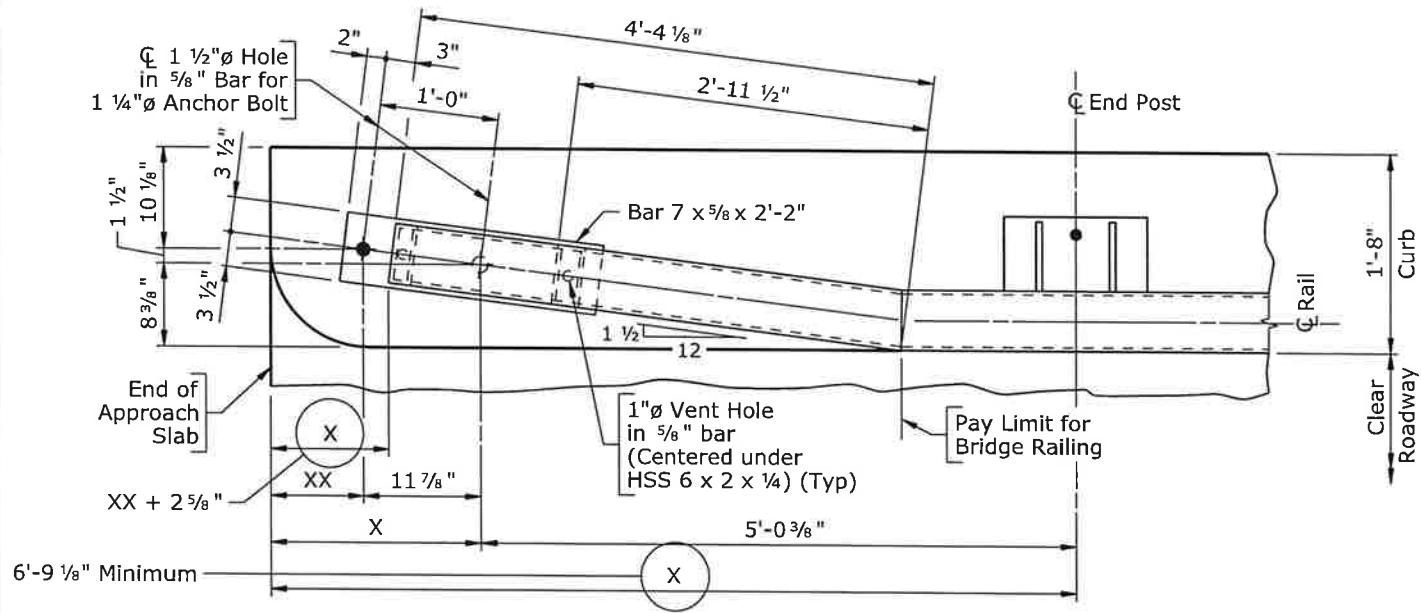
PLAN

END VIEW (R 3/16 x 2 not shown)

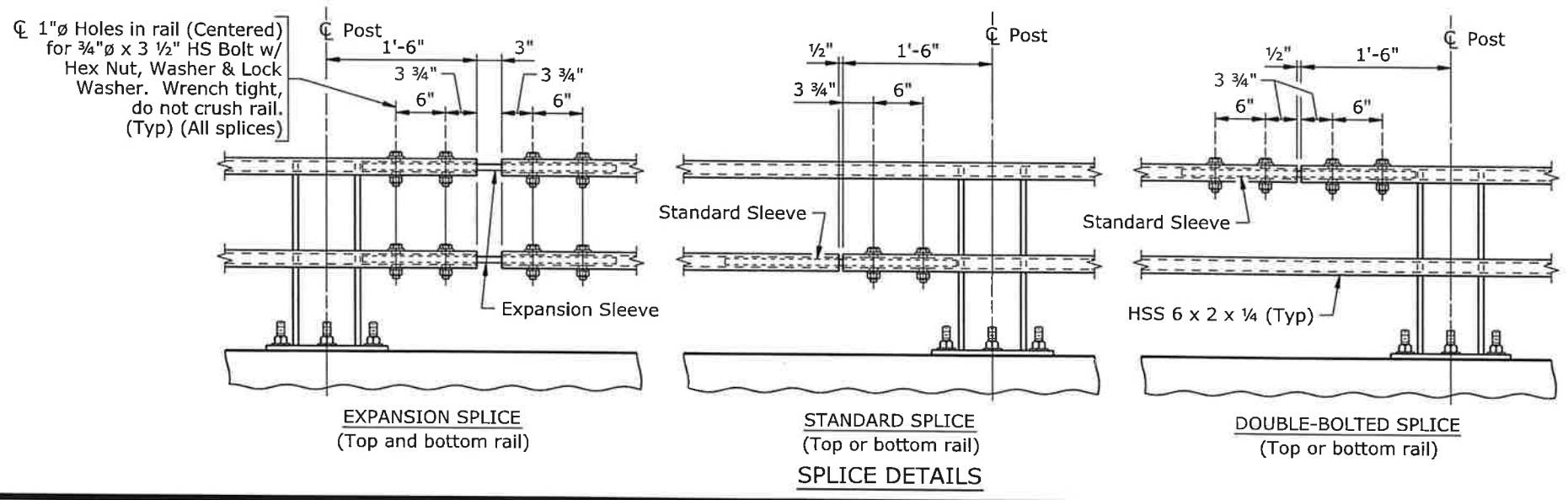
RAIL CAP DETAILS

SLEEVE DETAILS

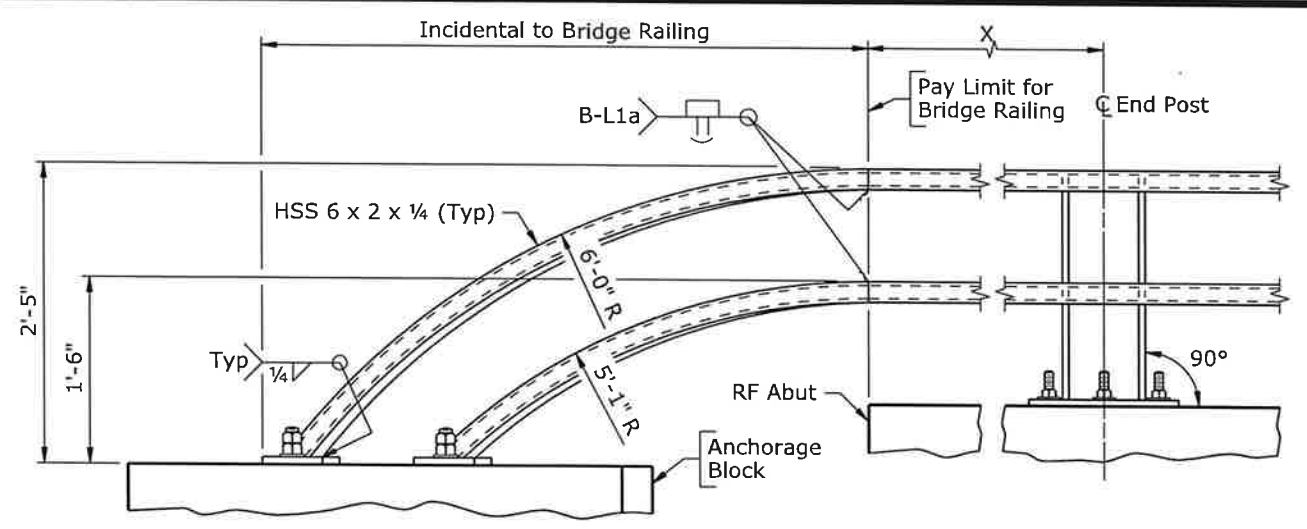
WYOMING DEPARTMENT OF TRANSPORTATION BRIDGE PROGRAM			
REVISIONS		BRIDGE RAILING DETAILS	
		TL3BRGRAIL_NCHRP350_br2.dgn	
REVIEW	DESIGN	Design Section	X
APPROVAL	DETAIL	Drwg No.	X
	QTY'S	Sheet	X of X



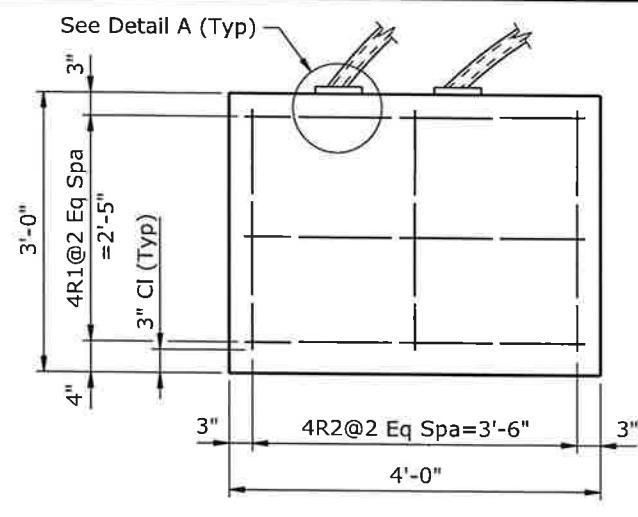
- Note:
- 1) Either top or bottom rail in terminal section may be the longer rail.
 - 2) Ensure each rail length is continuous over a minimum of two posts. Railing that is part of a turndown terminal is continuous if either the top or bottom rail in the terminal is continuous over a minimum of two posts.
 - 3) In rehabilitation work, ensure railing that cannot feasibly be made continuous over a minimum of two posts has a double-bolted splice.
 - 4) Splices may be located on either side of post.
 - 5) Not more than one splice is permitted per side of post, except at expansion splices.
 - 6) Slots may be omitted in standard sleeves where bolts are required on one side of splice only.
 - 7) Do not shop splice rails.
 - 8) Ensure a brace bar is placed 2'-0" from the splice end of the shorter tube at turndown terminals.



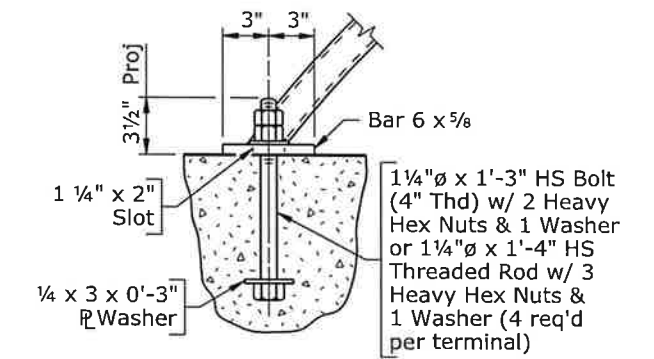
WYOMING DEPARTMENT OF TRANSPORTATION BRIDGE PROGRAM			
BRIDGE RAILING DETAILS			
TL3BRGRAIL_NCHRP350_br3.dgn			
REVISIONS	DESIGN	DETAIL	QTY'S
	X	X	X
REVIEW	DESIGN SECTION	DRWG NO.	SHEET
	X	X	X of X
APPROVAL			



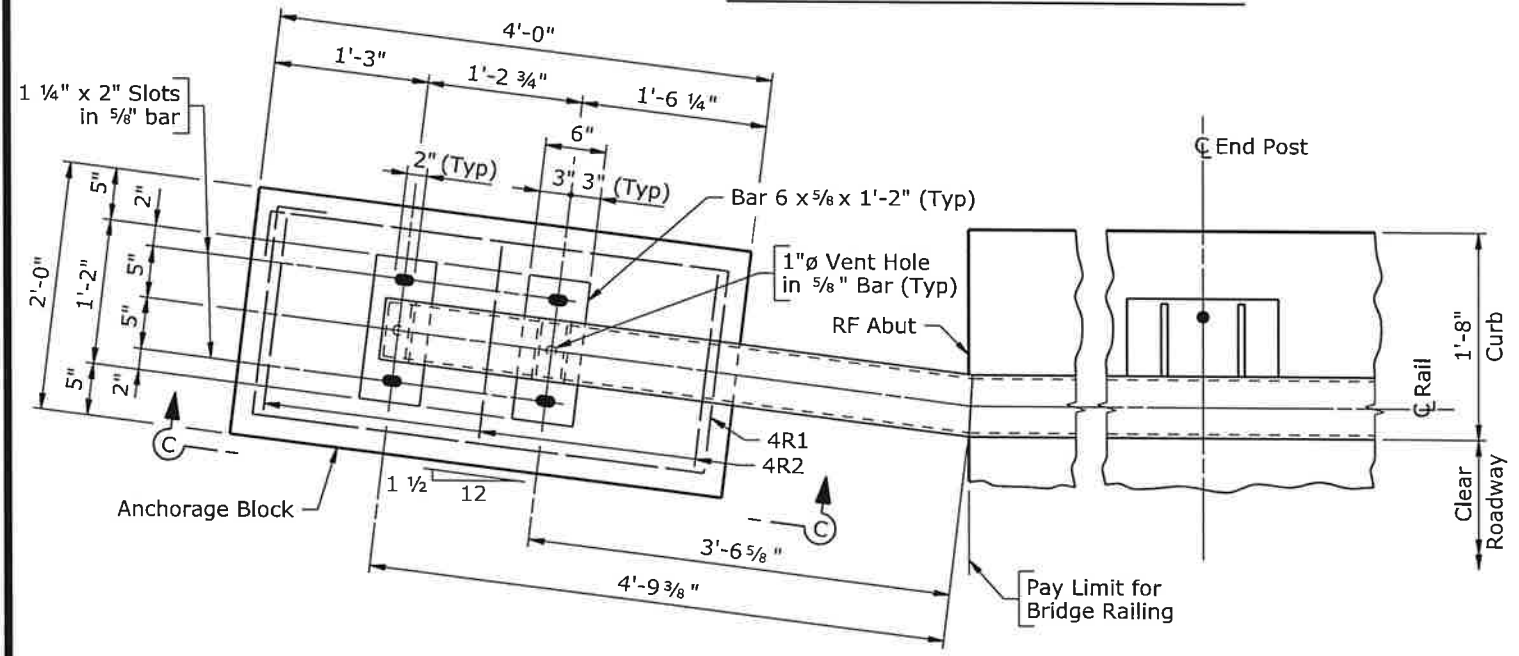
ELEVATION AT TURNDOWN TERMINAL



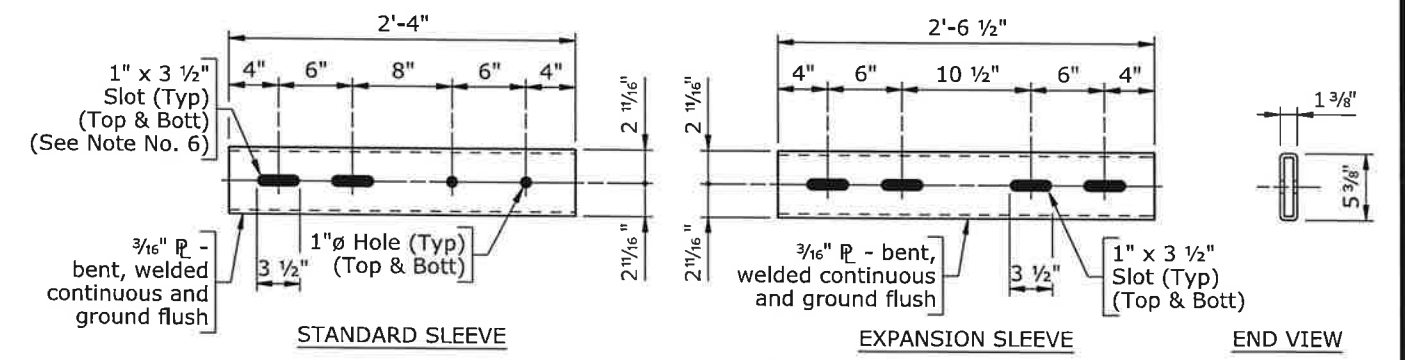
VIEW C-C



DETAIL A



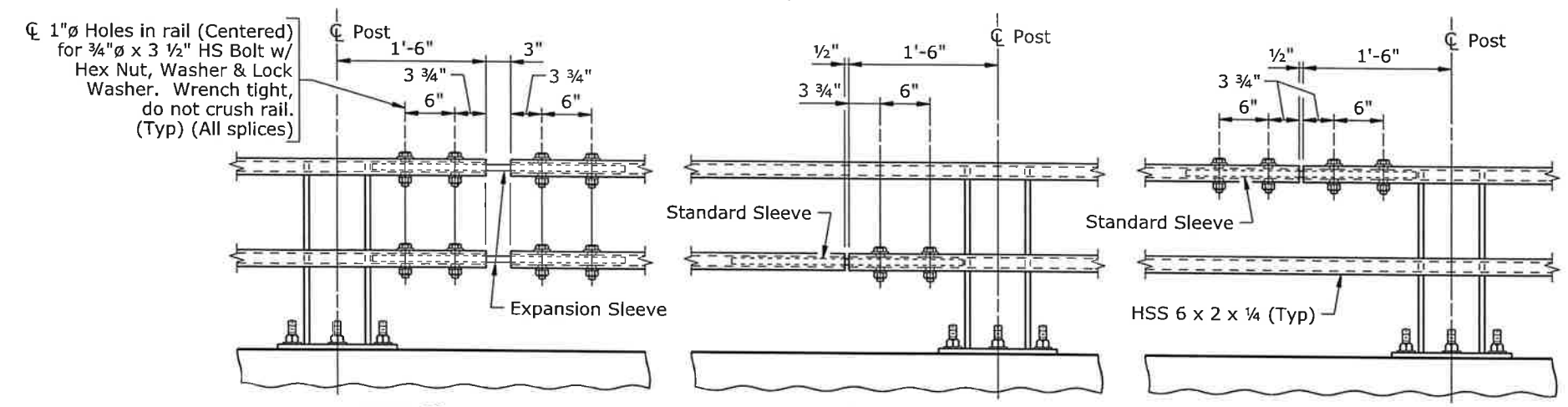
PLAN AT TURNDOWN TERMINAL
(Bolts not shown)



SLEEVE DETAILS

BILL OF REINFORCEMENT			Bending Diagrams	
Location	Mark	Number Req'd Per Anchorage Block		
Anchorage Block	4R1 4R2	3 3		
	Weight	41 LB	4R1 (Tie) (11'-5")	4R2 (Tie) (9'-1")

- Note:
- 1) Either top or bottom rail in terminal section may be the longer rail.
 - 2) Ensure each rail length is continuous over a minimum of two posts.
 - 3) In rehabilitation work, ensure railing that cannot feasibly be made continuous over a minimum of two posts has a double-bolted splice.
 - 4) Splices may be located on either side of post.
 - 5) Not more than one splice is permitted per side of post, except at expansion splices.
 - 6) Slots may be omitted in standard sleeves where bolts are required on one side of splice only.
 - 7) Do not shop splice rails.
 - 8) Ensure rail terminal section is in place and in proper alignment prior to placement of concrete in end anchorage block.



SPlice DETAILS

WYOMING DEPARTMENT OF TRANSPORTATION BRIDGE PROGRAM			
REVISIONS		BRIDGE RAILING DETAILS	
TL3BRGRAIL_NCHRP350_br4.dgn			
DESIGN	DETAIL	Design Section	X
APPROVAL	QTY'S	Drwg No.	X
		Sheet	X of X