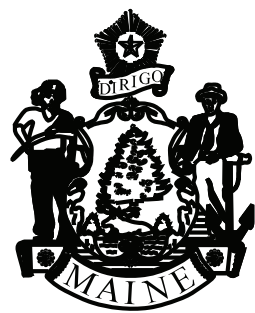


STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



BENTON
KENNEBEC COUNTY
RIVER ROAD
OVER
I 95 - NORTHBOUND
BRIDGE NO. 5993
WIN 26309.00
WR 39826



PROJECT LOCATIONS	Bridge #5993 - I 95 Northbound over the River Road in Benton Lat./Long. 44°36'08.1" N 69°34'58.6" W
PROGRAM AREA	Bridge and Structure Maintenance
OUTLINE OF WORK	Replace existing Bridge Rail with Steel Tube Retrofit (Jeff Rail).

INDEX OF BRIDGE DRAWINGS

Plan View and General Information	1
Fieldwork Details	2
Estimated Quantities and Steel Details	3
Steel Details	4

MATERIALS

Structural Steel: All Material	ASTM A500, Grade B
Galvanized Anchor Bolts	F1554 Grade 105

BASIC DESIGN STRESSES

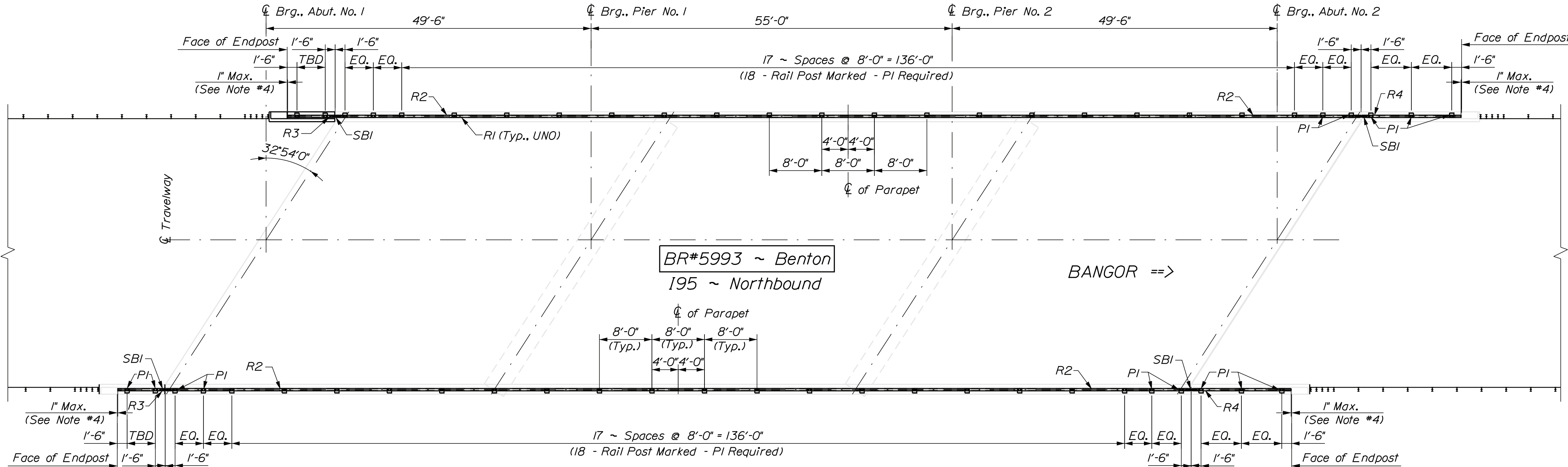
Structural Steel	Fy = 46,000 psi
Galvanized Steel Threaded Studs	Fy = 105,000 psi

MAINTENANCE OF TRAFFIC

The maintenance of traffic shall be coordinated with the Region Traffic Engineer.

GENERAL CONSTRUCTION NOTES

- Existing bridge plans may be obtained from the Maine DOT website. The plans are reproductions of the original drawings as prepared for the construction of the bridge. It is very unlikely that the plans will show any construction field changes or any alterations which may have been made to the bridge during its life span.
- All dimensions based on or relating to the existing bridges shall be verified in the field, i.e., existing joint opening, joint location and existing post locations.



PLAN VIEW for RAIL AND POSTS PLACEMENT
NOTE:

- Establish centerline of parapet between joints and set one post 4'-0" from point in each direction to establish 8'-0" posts spacing.
- Posts dimensions marked as "TBD" will be field located, drilled and attached to parapet and rail posts. This distance will be determined as "Run out" spacing from 8'-0" posts spacing or post location towards end post, and may vary from one location to another.
- A 3" x 3" x 5/16" tube will be used as a splice bar at each existing bridge joint. See details for more information.
- End rails marked R2, R4 & R5 shall be trimmed in the field to fit at the endposts. A maximum gap of 1" shall be allowed.

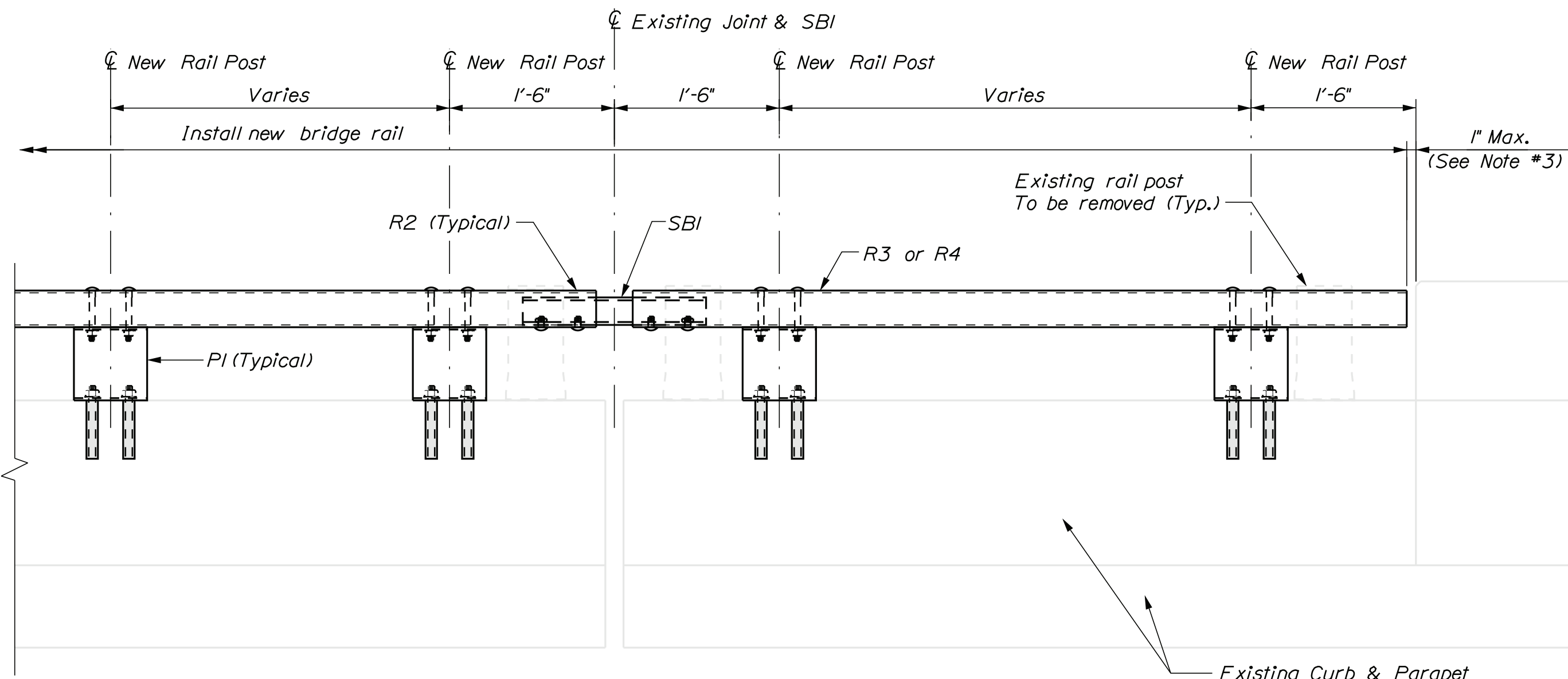
BR#5993 ~ I-95 NORTHBOUND Over RIVER RD. BENTON				KENNEBEC				PROJ. MANAGER C. ADAMS C. LIBBY C. LIBBY J. VILLEUX			
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Date:2/5/2020

Username: common

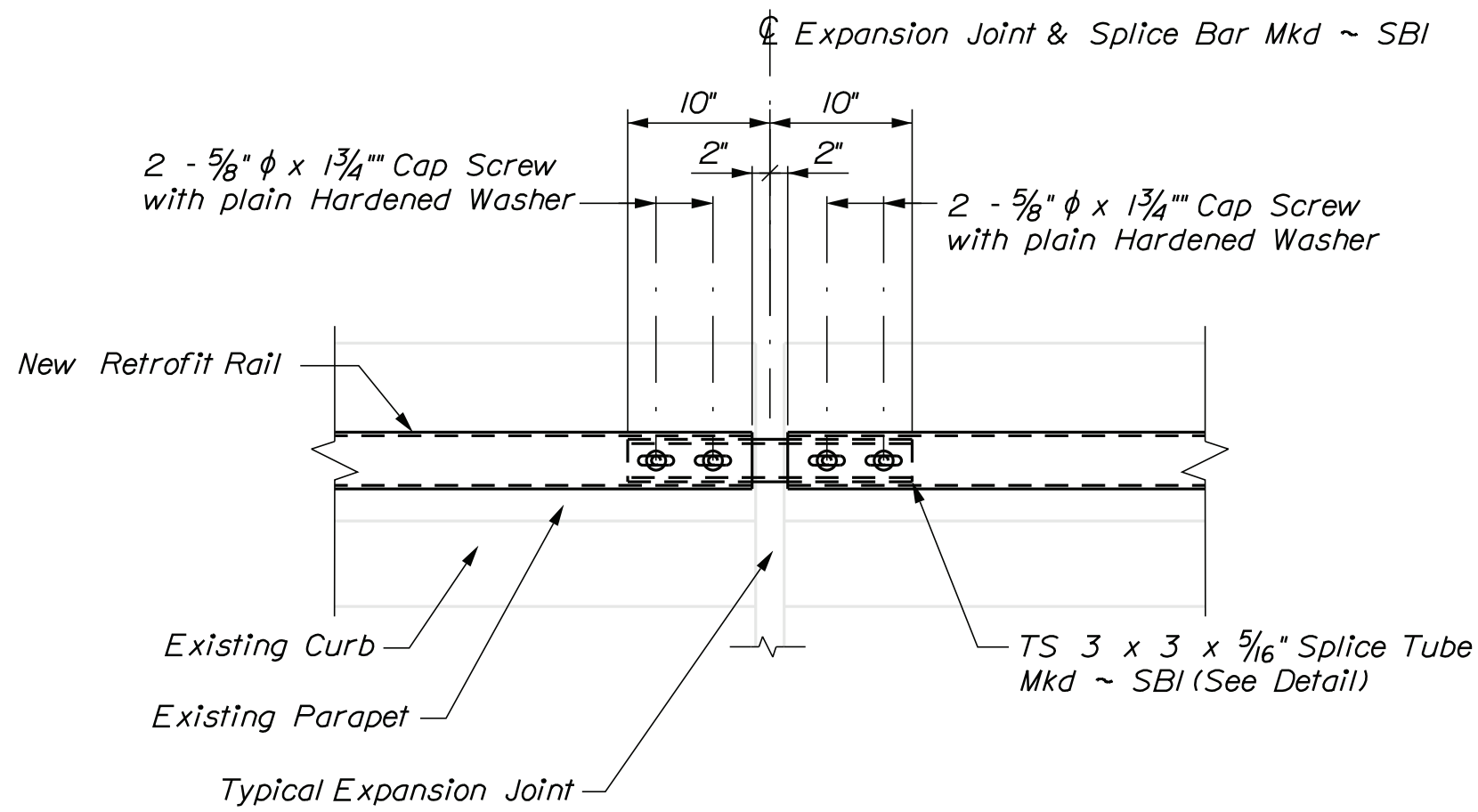
Division: HIGHWAY

Filename: ...\\5993\\002_Plan Views_5993.dgn

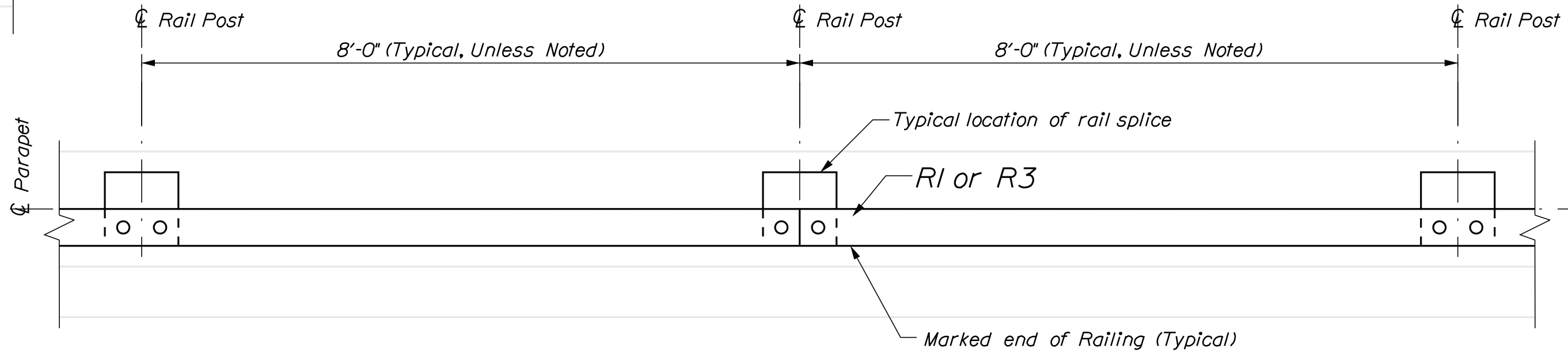


BRIDGE RAIL END LOCATION

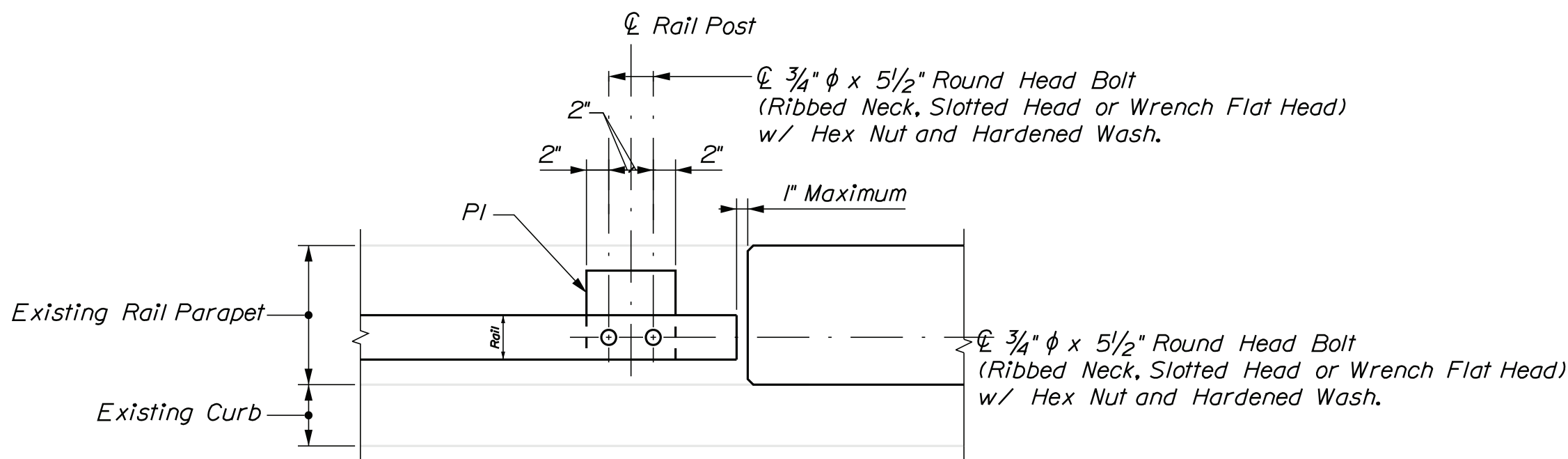
1. Typical at both ends of bridge and both sides of roadway.
2. The location of this post may vary from Posts Location Plan and is set to be the "Runout" for the spacing on all four sides.
3. End rails marked R3 and R4 shall be trimmed in the field to fit at Endpost. The Gap between Bridgerail end and Face of Endpost should be 1" Maximum.



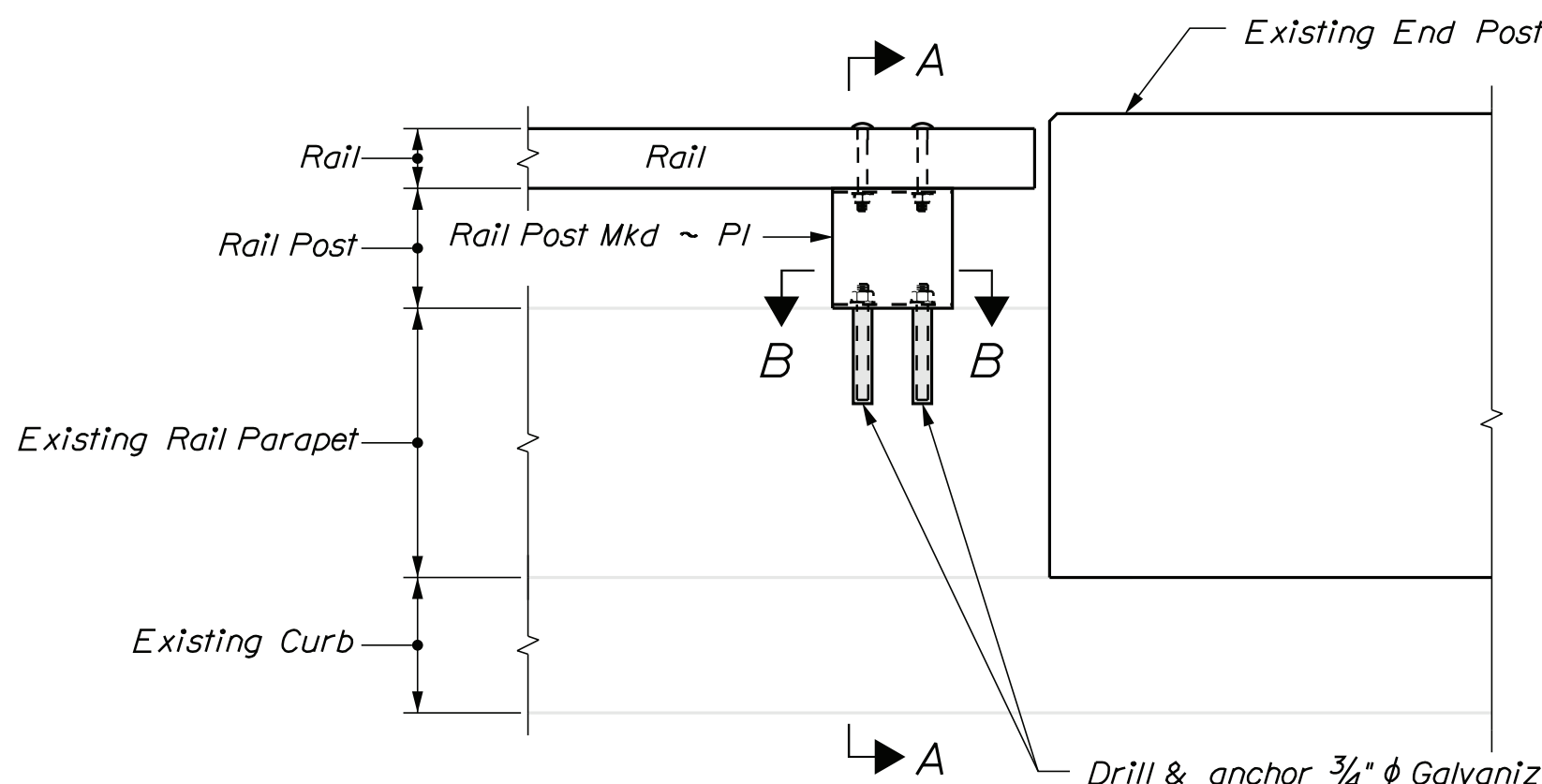
TYPICAL EXPANSION SPLICE DETAIL (PLAN VIEW)



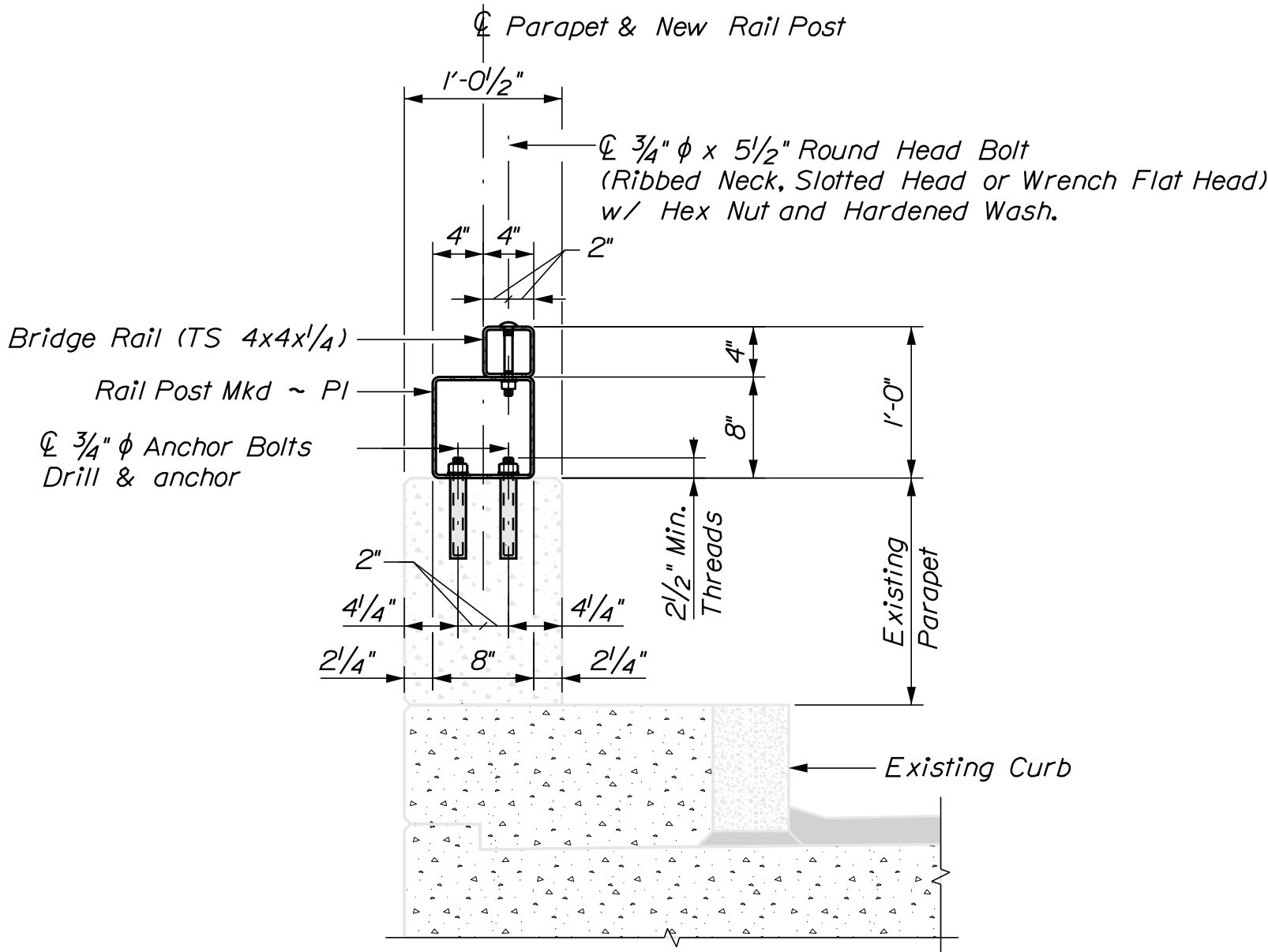
RAIL SPLICE LOCATION



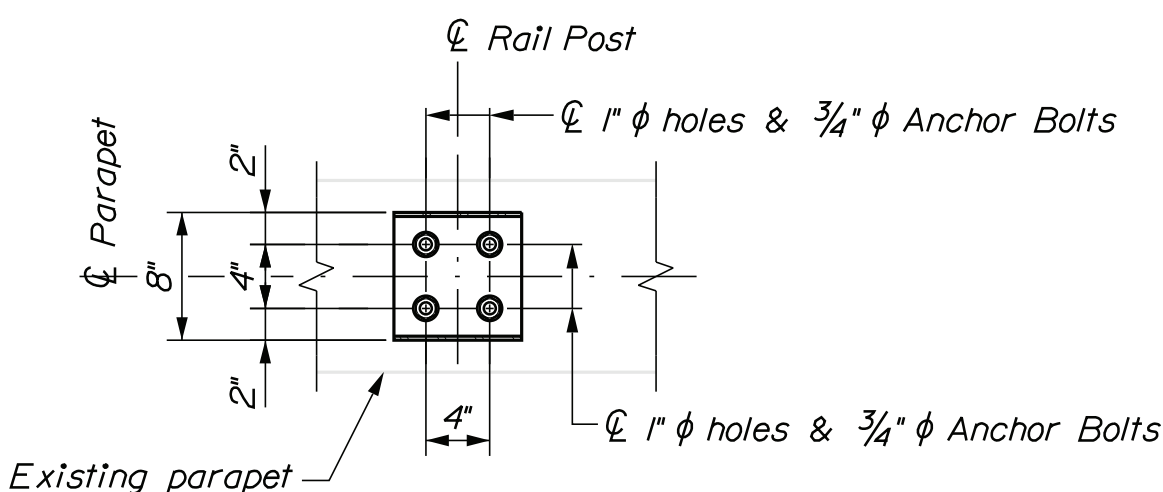
PLAN



ELEVATION



SECTION A-A



SECTION B-B

Showing anchor layout for rail post

BRIDGE RAIL NOTES

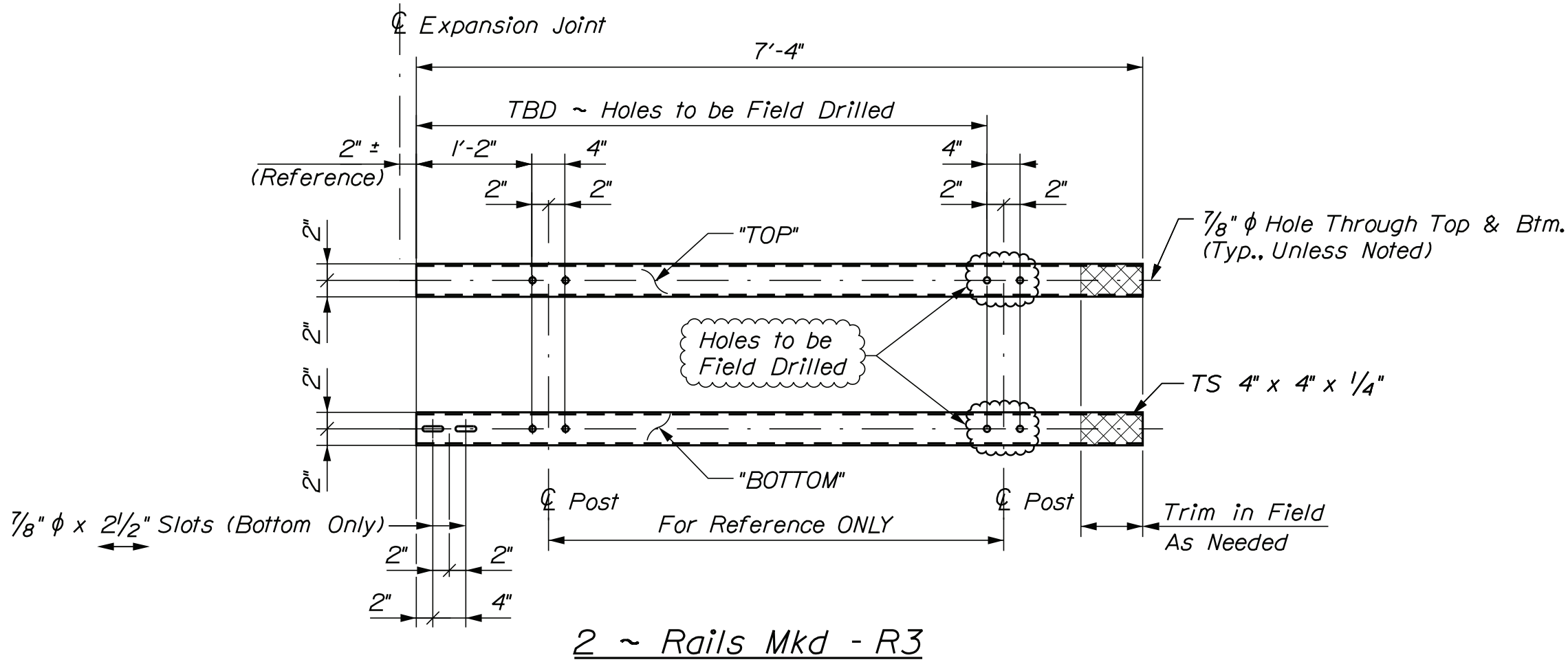
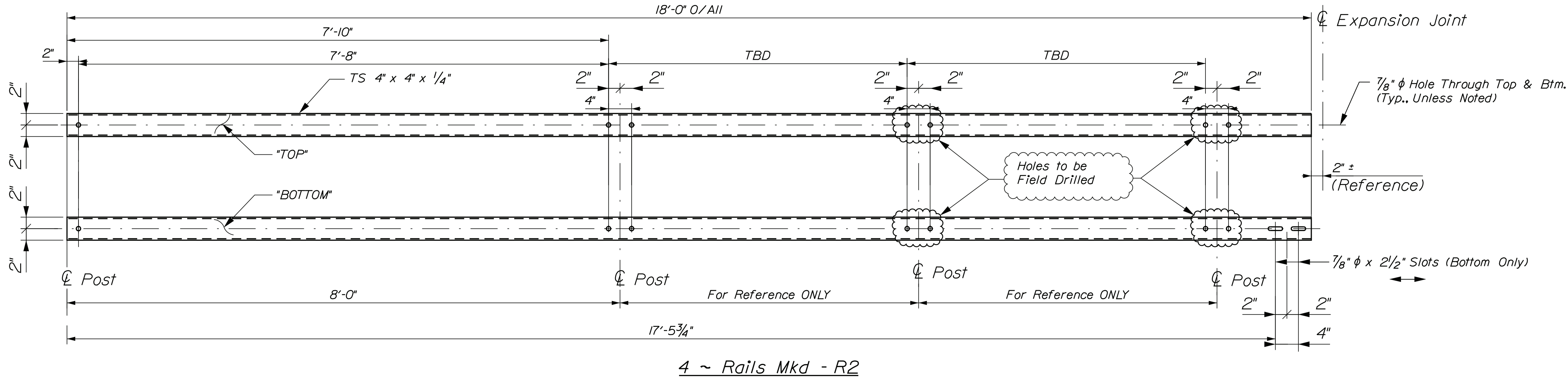
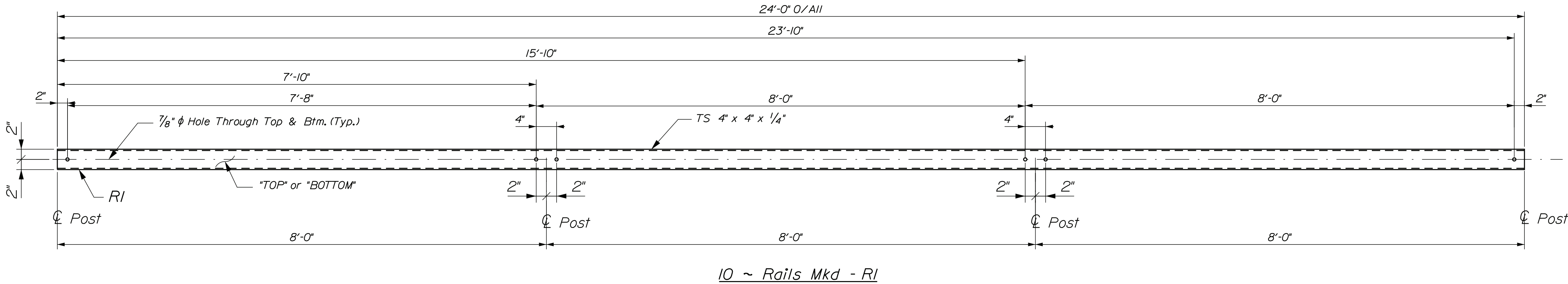
1. All materials shall be hot-dipped galvanized. Bolts shall be galvanized.
2. All existing rail shall be removed and become the property of MDOT Bridge Maintenance. Cut existing anchor bolts flush with existing concrete.
3. The bridge rail post bolt anchorage system shall be Galvanized Anchor bolts anchored with Kellogg from Kellogg Construction Systems or an approved equal from MaineDOT's Qualified Products List. The bolt anchorages shall be installed in strict accordance with the selected manufacturer's recommendations.
4. Locate existing curb reinforcing steel and adjust dowel and bridge rail post anchor stud locations to avoid cutting existing bars. Any adjustments from plan dimensions shall be approved by the Resident.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	WIN 26309.00				BRIDGE NO. 5993		26309.00		BRIDGE PLANS	
	BR#5993 ~ I-95 NORTHBOUND Over RIVER RD.				KENNEBEC		BENTON		FIELD WORK DETAILS	
	SHEET NUMBER				2		OF 4			

BRIDGE 5993 - BENTON ~ RAIL PARTS SCHEDULE				
QUANTITY	MARK	DESCRIPTION	LENGTH	REMARKS
10	RI	TS 4 x 4 x 1/4"	24'-0"	Guard Rail - ASTM A500 GR B, Galvanized
4	R2	TS 4 x 4 x 1/4"	18'-0"	Guard Rail - ASTM A500 GR B, Galvanized / Slots
2	R3	TS 4 x 4 x 1/4"	7'-4"	Guard Rail - ASTM A500 GR B, Galvanized / Slots
2	R4	TS 4 x 4 x 1/4"	15'-2"	Guard Rail - ASTM A500 GR B, Galvanized / Slots
54	PI	TS 8 x 8 x 1/4"	0'-8"	Rail Posts - ASTM A500 GR B, Galvanized
4	SBI	TS 3 x 3 x 5/16"	1'-8"	Guard Rail Splice Bars - ASTM A500 GR B, Galvanized, with 2 - Welded 5/8" Lock Nuts

BRIDGE 5993 - BENTON ~ HARDWARE PARTS SCHEDULE			
QUANTITY	DESCRIPTION	LENGTH	REMARKS
216	3/4" ϕ Anchor Bolts	12"	(F1554) / Full Threads, 1 - Hex Nut (A563) and 1 - Hardened Washer (A436), Galvanized
108	3/4" ϕ Round Head Bolts	5/4"	(A325) / 1 - Hex Nut (A563) and 1 - Hardened Washer (A436), Galvanized
16	5/8" ϕ Cap Screw	1 3/4"	(A325) / 1 - Lock Nut (A563) (8 - Total, See Note #2) and 1 - Hardened Washer (A436), Galvanized

- Notes:
- 1) All hardware and materials shall be Galvanized to ASTM A153.
 - 2) 2 - Hex Nuts per Splice Bar to be tack welded in bar.



STATE OF MAINE
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26309.00

BRIDGE NO. 5993

26309.00

BRIDGE PLANS

BR#5993 ~ I-95 NORTHBOUND
Over RIVER RD.
BENTON

KENNEBEC

ESTIMATED QUANTITIES
and STEEL DETAILS

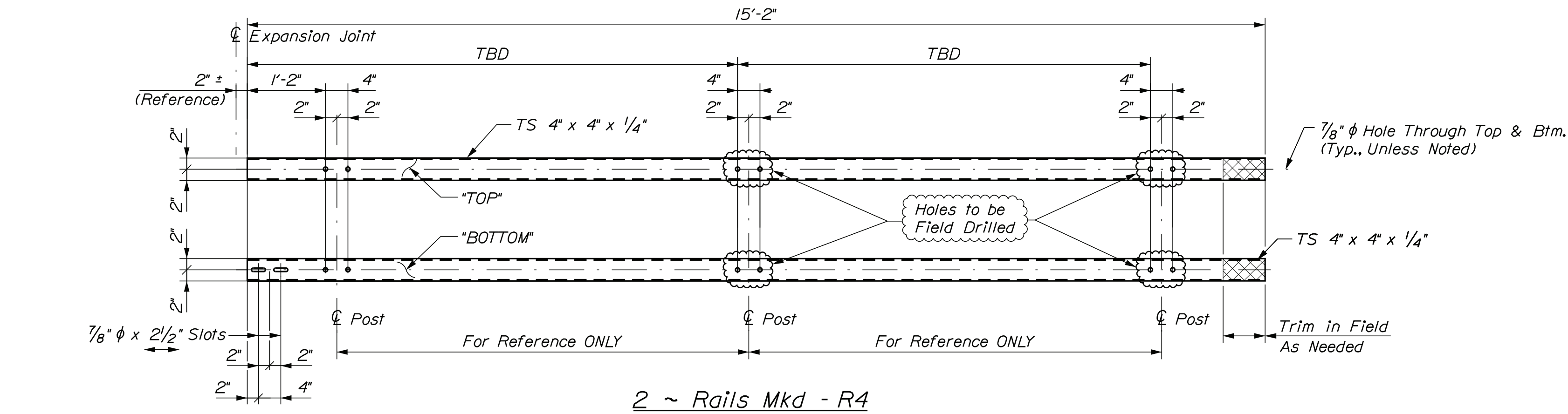
SHEET NUMBER

3

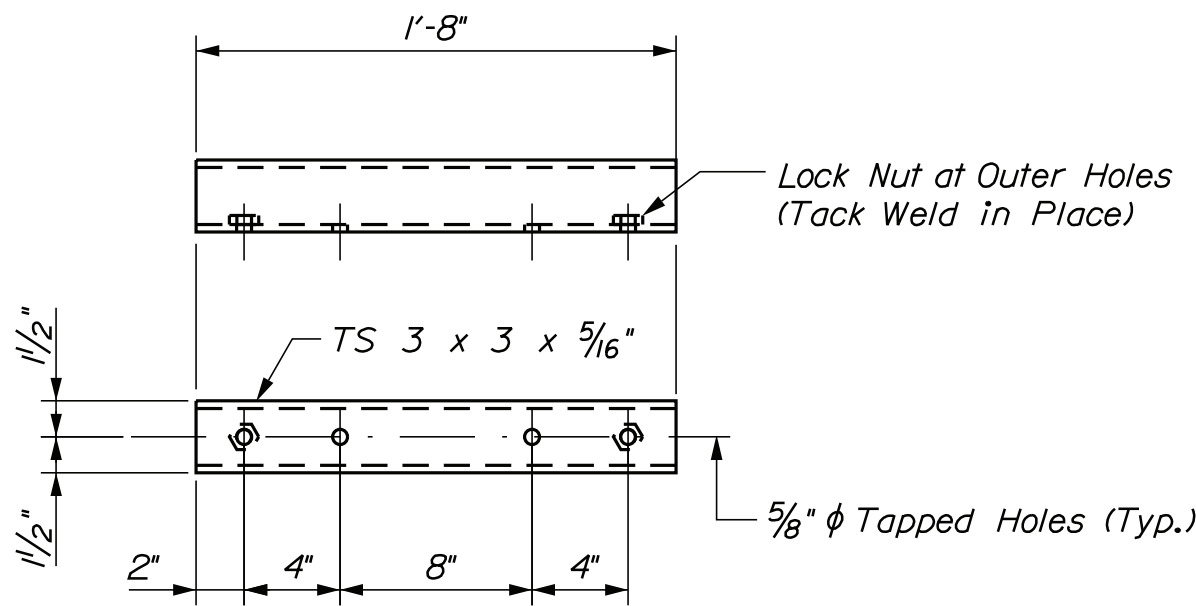
OF 4

PROJ. MANAGER	C. ADAMS	BY	DATE
CHECKED-REVIEWED	G. LIBBY	G. LIBBY	Feb. 2020
DESIGNS-DETAILED	J. VELLEUX	J. VELLEUX	Feb. 2020
DESIGNS-DETAILED			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

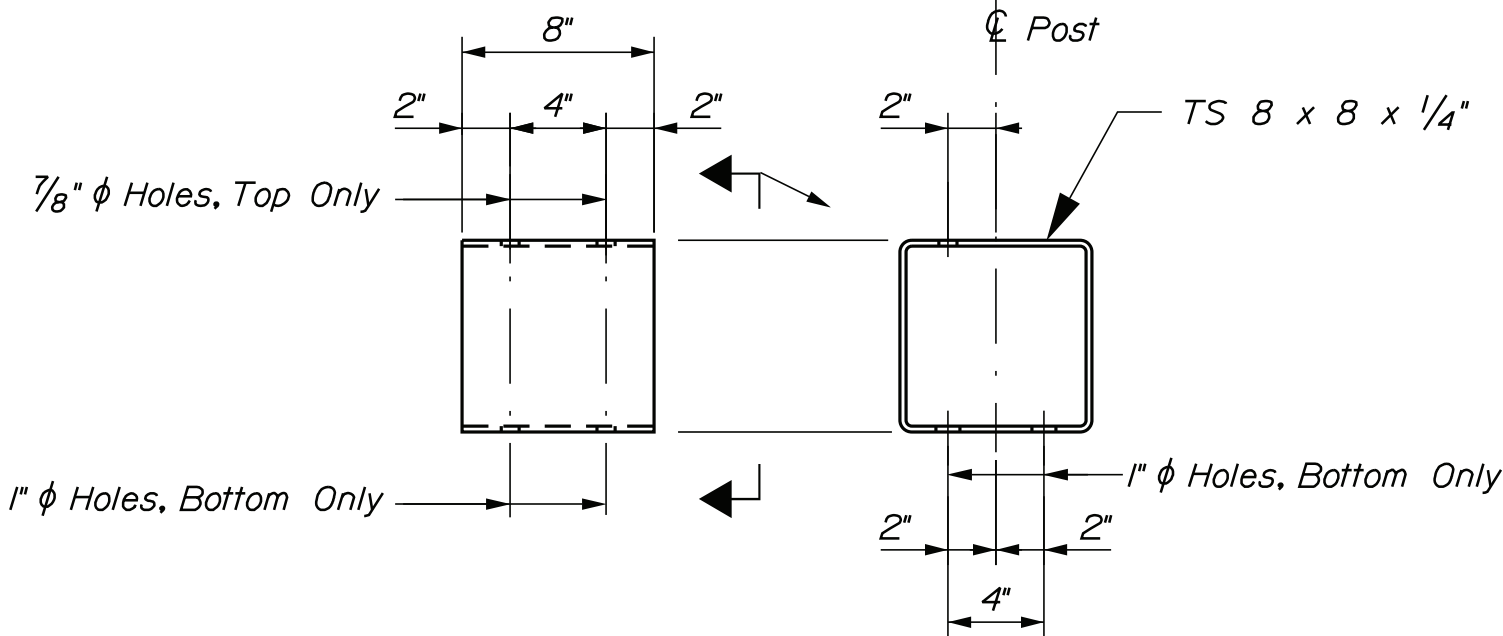
SIGNATURE	P.E. NUMBER	DATE



2 ~ Rails Mkd - R4



4 ~ Rail Splice Bar Mkd - SBI



54 ~ Rail Posts Mkd - PI

BR#5993 ~ I-95 NORTHBOUND Over RIVER RD. BENTON		PROJ. MANAGER		C. ADAMS	BY	DATE
		DESIGN-DETAILED	C. LIBBY	C. LIBBY	Feb. 2020	
KENNEBEC		CHECKED-REVIEWED	J. VELLEUX Feb. 2020			
		DESIGN2-DETAILED2				
		DESIGN3-DETAILED3				
		REVISIONS 1				
STEEL DETAILS		REVISIONS 2				
		REVISIONS 3				
		REVISIONS 4				
		FIELD CHANGES				
SHEET NUMBER		STATE OF MAINE DEPARTMENT OF TRANSPORTATION				
4 OF 4		SIGNATURE				
		P.E. NUMBER				
		BRIDGE NO. 5993				
		26309.00				
		BRIDGE PLANS				