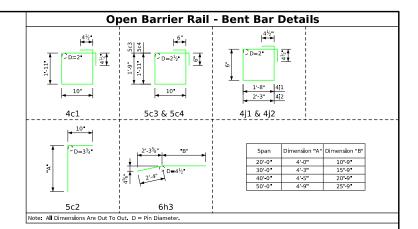
	Epoxy Co	ated	Re	nfor	cing	Ste	el -	Two	Ope	n R	ails			
Bridge Length			20'-0"			30'-0"		40'-0'			50'-0"			
Bar	Location	Shape	No.	Length	Welght	No.	Length	Welght	No.	Length	Welght	No.	Length	Welght
4c1	Rall, Tles		24	6-3	100	46	6'-3	192	64	6'-3	267	92	6'-3	384
5c2	Posts, Vertical		88	4'-10	444	112	5 1	594	136	5'-3	745	160	5 7	932
5c3	End Post, Tle		4	6 2	26	4	6-2	26	4	6'-2	26	4	6 -2	26
5c4	End Post, Tle		20	6'-6	136	20	6-6	136	20	6-6	136	20	6-6	136
5c5	Vertical, End Section		48	5'-1	254	48	5 1	254	48	5-1	254	48	5 1	254
6h1	Rail, Horizontal	I	8	22 4	268	8	32 4	389	16	23 1	555	16	28 1	675
6h2	Rail, Horizontal, Ends	T	24	12'-8	457	24	13'-9	496	24	14-3	514	24	14-7	526
6h3	Rail, Horizontal, Ends	$\overline{}$	16	13'-1	314	16	18'-1	435	16	23'-1	555	16	28'-1	675
4j1	Interior Post, Tie		12	5'-1	41	24	5-1	81	36	5'-1	122	48	5 1	163
4 <b>j</b> 2	End Post, Tie		36	6'-3	150	36	6'-3	150	36	6'-3	150	36	6'-3	150
	(Include with Superstructure Reinforcing )				2190		•	2752			3323			3920

Reinforcing quantities shown are based on 15° skew bid lengths.

Concrete Placement Quantities								
Bridge Length	20'-0"	30'-0"	40'-0"	50-0				
**Standard Section (Cu. Yds.)	5.2	7.4	9.5	11.6				

\*\*Concrete quantities shown are based on 15° skew bid lengths. These values shall be used for all skews.

Concrete Open Rail Quantities									
Bridge Length	Unit	Unit 20'-0"		30 -0 40 -0					
Concrete Open Railing, TL-4	0° Skew	L.F.	46	66	86	106			
Concrete Open Railing, TL-4	15° Skew	L.F.	45.4	65.4	85.4	105.4			



## Open Rail Notes:

Open rail system meets Test Level 4 (TL-4) according to the Manual for Assessing Safety Hardware (MASH) and includes provision for a 3" future wearing surface height.

All reinforcing shall be Grade 60, Epoxy Coated.

Stainless steel reinforcing may be substituted for 5c2 and 5c5 bars at the Designer's discretion. Lap and development lengths shown are based on

epoxy coated reinforcing and need not be modified.

Minimum clear distance from face of concrete to near reinforcing bar is to be 2" unless otherwise noted or shown.

The concrete open rall is to be bid on a lineal foot basis measured from end to end of rall. The number of lineal feet of open rall installed will be paid for at the contract price per lineal foot. Price bid for "Concrete Open Railing, TL-4" shall be full compensation for furnishing all material, excluding reinforcing steel, and all of the equipment and labor required to construct the rall in accordance with these plans and current specifications.

All open rail concrete is to be Class C.

Top of the open rail is to be parallel to theoretical Q grade.





Standard Design - 30'-0" Roadway, Single Span Bridge

Single Span Concrete Slab Bridges

July, 2025

Open Barrier Rail Details for High Abutments

J30S-35-25