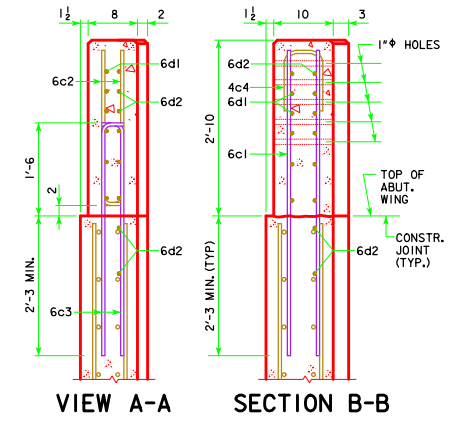


**TABLE OF OPEN RAIL DIMENSIONS AND NUMBERS**

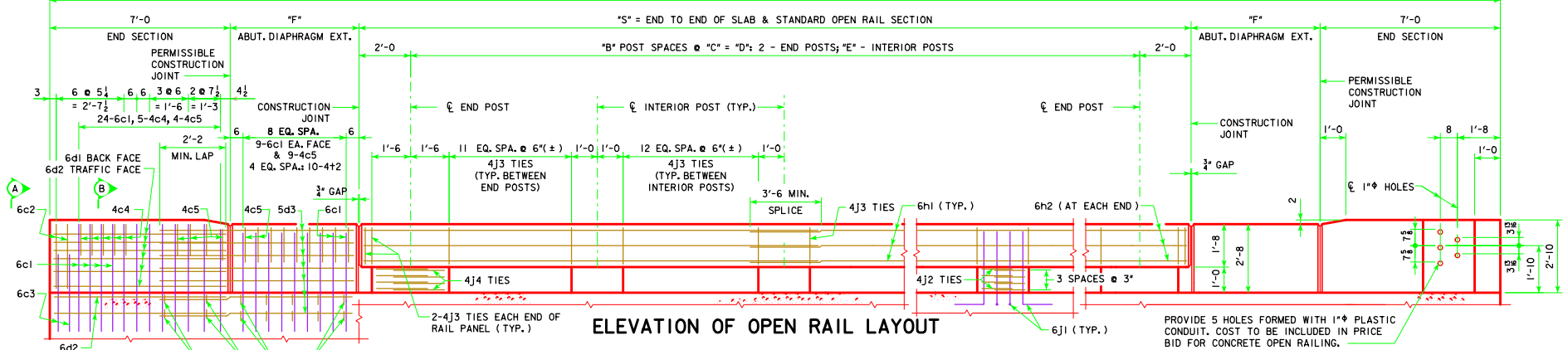
℄-℄ ABUT. BRG	138'-10				151'-4				163'-10				176'-4				188'-10				℄-℄ ABUT. BRG
	SKEW	0°	15°	30°	45°	0°	15°	30°	45°	0°	15°	30°	45°	0°	15°	30°	45°	0°	15°	30°	
L (FT.-IN.)	155'-10	155'-11 1/4	156'-3 3/8	157'-0 1/4	168'-4	168'-5 1/4	168'-9 3/8	169'-6 1/4	180'-10	180'-11 1/4	181'-3 3/8	182'-0 1/4	193'-4	193'-5 1/4	193'-9 3/8	194'-6 1/4	205'-10	205'-11 1/4	206'-3 3/8	207'-0 1/4	L (FT.-IN.)
S (FT.-IN.)	141'-10	141'-11 1/4	142'-3 3/8	143'-0 1/4	154'-4	154'-5 1/4	154'-9 3/8	155'-6 1/4	166'-10	166'-11 1/4	167'-3 3/8	168'-0 1/4	179'-4	179'-5 1/4	179'-9 3/8	180'-6 1/4	191'-10	191'-11 1/4	192'-3 3/8	193'-0 1/4	S (FT.-IN.)
B	18	18	18	18	19	19	19	19	21	21	21	21	23	23	23	23	24	24	24	24	B
C (FT.-IN.)	7'-7 3/8	7'-8	7'-8 1/4	7'-8 3/4	7'-11	7'-11 1/4	7'-11 1/2	7'-11 3/4	7'-9	7'-9 1/4	7'-9 1/2	7'-9 3/4	7'-7 1/2	7'-7 3/4	7'-7 3/8	7'-8	7'-9	7'-10	7'-10 1/4	7'-10 1/2	C (FT.-IN.)
D (FT.-IN.)	137'-10	137'-11 1/4	138'-3 3/8	139'-0 1/4	150'-4	150'-5 1/4	150'-9 3/8	151'-6 1/4	162'-10	162'-11 1/4	163'-3 3/8	164'-0 1/4	175'-4	175'-5 1/4	175'-9 3/8	176'-6 1/4	187'-10	187'-11 1/4	188'-3 3/8	189'-0 1/4	D (FT.-IN.)
E	17	17	17	17	18	18	18	18	20	20	20	20	22	22	22	22	23	23	23	23	E
F (FT.-IN.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	F (FT.-IN.)

**TABLE OF OPEN RAIL DIMENSIONS AND NUMBERS**

℄-℄ ABUT. BRG	201'-4				213'-10				226'-4				243'-0				℄-℄ ABUT. BRG
	SKEW	0°	15°	30°	45°	0°	15°	30°	45°	0°	15°	30°	45°	0°	15°	30°	
L (FT.-IN.)	228'-4	228'-4	228'-4	228'-4	240'-10	240'-10	240'-10	240'-10	253'-4	253'-4	253'-4	253'-4	270'-0	270'-0	270'-0	270'-0	L (FT.-IN.)
S (FT.-IN.)	204'-4	204'-5 1/4	204'-9 3/8	205'-6 1/4	216'-10	216'-11 1/4	217'-3 3/8	218'-0 1/4	229'-4	229'-5 1/4	229'-9 3/8	230'-6 1/4	246'-0	246'-1 1/4	246'-5 3/8	247'-2 1/4	S (FT.-IN.)
B	26	26	26	26	27	27	27	27	29	29	29	29	31	31	31	31	B
C (FT.-IN.)	7'-8 1/2	7'-8 1/2	7'-8 3/4	7'-9	7'-10 3/8	7'-10 3/8	7'-10 3/4	7'-11 1/4	7'-9 1/4	7'-9 1/4	7'-9 1/2	7'-9 3/4	7'-9 3/8	7'-9 3/4	7'-9 3/8	7'-10 1/8	C (FT.-IN.)
D (FT.-IN.)	200'-4	200'-5 1/4	200'-9 3/8	201'-6 1/4	212'-10	212'-11 1/4	213'-3 3/8	214'-0 1/4	225'-4	225'-5 1/4	225'-9 3/8	226'-6 1/4	242'-0	242'-1 1/4	242'-5 3/8	243'-2 1/4	D (FT.-IN.)
E	25	25	25	25	26	26	26	26	28	28	28	28	30	30	30	30	E
F (FT.-IN.)	5'-0	4'-11 3/8	4'-9 1/4	4'-4 1/2	5'-0	4'-11 3/8	4'-9 1/4	4'-4 1/2	5'-0	4'-11 3/8	4'-9 1/4	4'-4 1/2	5'-0	4'-11 3/8	4'-9 1/4	4'-4 1/2	F (FT.-IN.)

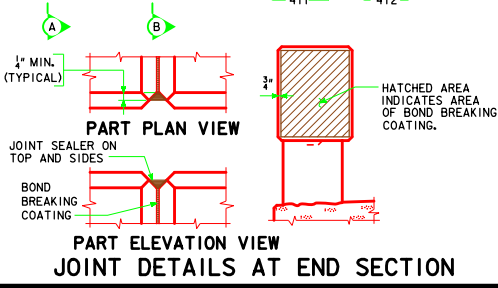


"L" = END TO END OPEN RAIL ( BID LENGTH )



**OPEN RAIL NOTES:**

- CONSTRUCTION JOINT BETWEEN TOP OF WING AND RAIL IS ROUGHENED CONCRETE. MINIMUM CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING BAR IS TO BE 2" UNLESS OTHERWISE NOTED OR SHOWN.
- COST OF THE JOINT SEALER AND BOND BREAKER SHALL BE CONSIDERED INCIDENTAL TO OTHER CONSTRUCTION.
- THE CONCRETE OPEN RAIL IS TO BE BID ON A LINEAL FOOT BASIS MEASURED FROM END TO END OF RAIL. THE NUMBER OF LINEAL FEET OF OPEN RAIL 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 RAIL IN ACCORDANCE WITH THESE PLANS AND CURRENT SPECIFICATIONS.
- ALL OPEN RAIL REINFORCING STEEL IS TO BE INCLUDED ON THE SUMMARY QUANTITIES SHEET IN THE PLAN.
- ALL OPEN RAIL REINFORCING STEEL IS TO BE EITHER EPOXY COATED OR STAINLESS STEEL AS SHOWN OR NOTED. THE STAINLESS STEEL REINFORCING STEEL SHALL BE DEFORMED BAR GRADE 60 MEETING THE REQUIREMENTS OF MATERIALS I.M.452.
- THE CAST-IN-PLACE OPEN RAIL SHALL USE CLASS C MIX. CLASS D CONCRETE IS NOT PERMITTED.
- TOP OF THE OPEN RAIL IS TO BE PARALLEL TO THEORETICAL G GRADE.
- IF CONDUIT IS REQUIRED IN THIS PLAN THE RIGID STEEL CONDUIT, JUNCTION BOXES AND FITTINGS INCLUDING LABOR AND ANY ADDITIONAL WORK TO DO THE INSTALLATION IS CONSIDERED INCIDENTAL TO THE COST OF THE RAILING.



LATEST REVISION DATE  APPROVED BY BRIDGE ENGINEER <i>Thomas E. McQuinn</i>	
	STANDARD DESIGN - 40' ROADWAY, THREE SPAN BRIDGE <b>PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES</b> SEPTEMBER, 2014
	<b>OPEN RAIL, TL-4 DETAILS</b> SHEET 1 OF 2

H40-42-14