

Bill of Reinforcing Steel for Superstructure - 50' Bridge

	Location	Skew Shape	0 Degree				15 Degree				30 Degree				45 Degree			
			Bar	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight			
Slab Longitudinal Bottom			10A1	32	52'-8"	7252	32	52'-8"	7252	32	52'-8"	7252	32	52'-8"	7252			
Slab Longitudinal Bottom			11A2	16	42'-6"	3613	16	42'-6"	3613	16	42'-6"	3613	16	42'-6"	3613			
Slab Longitudinal Bottom			11A3	16	31'-0"	2635	16	31'-0"	2635	16	31'-0"	2635	16	31'-0"	2635			
Slab Longitudinal Bottom, at Rail			11A4	4	52'-8"	1119	4	52'-8"	1119	4	52'-8"	1119	4	52'-8"	1119			
Slab Longitudinal Bottom, at Rail			10A5	4	39'-2"	674	4	39'-2"	674	4	39'-2"	674	4	39'-2"	674			
Slab Longitudinal Top			6B1	32	29'-8"	1424	32	29'-8"	1424	32	29'-8"	1424	32	29'-8"	1424			
Slab Longitudinal Top			6B2	32	10'-1"	485	32	10'-1"	485	32	10'-1"	485	32	10'-1"	485			
Slab Longitudinal Top, at Rail			5B3	8	29'-2"	243	8	29'-2"	243	8	29'-2"	243	8	29'-2"	243			
Slab Longitudinal Top, at Rail			4B4	8	8'-9"	47	8	8'-9"	47	8	8'-9"	47	8	8'-9"	47			
Slab Transverse Bottom			7C2	47	26'-10"	2578	47	27'-9"	2669	36	26'-10"	1975	26	26'-10"	1426			
Slab Transverse Ends, Bottom			7C4	-	-	-	-	-	24	VARIABLES	789	44	VARIABLES	1328				
Slab Transverse, Top			5D2	47	26'-10"	1315	47	27'-9"	1362	36	26'-10"	1008	26	26'-10"	728			
Slab Transverse Ends, Top			5D4	-	-	-	-	-	24	VARIABLES	402	40	VARIABLES	678				
Top of Slab, Transverse, at Rail			4J1	92	7'-5"	456	92	7'-5"	456	92	7'-5"	456	90	7'-5"	446			
Paving Block Lifting Hoops			5Z1	8	2'-10"	24	8	2'-10"	24	8	2'-10"	24	8	2'-10"	24			
Epoxy-Coated Sub Total - LBS.						21,865			22,003			22,146			22,122			

[illegible]

Slab, Transverse at Abutment		8e1	14	26'-10"	1003	-	-	-	-	-	-	-	-	
Slab, Transverse at Abutment		8e2	-	-	-	27'-8"	1034	14	30'-6"	1140	14	36'-9"	1374	
Slab, Hairpins, at Abutment		6e3	60	5'-0"	451	60	5'-1"	458	60	5'-5"	488	60	6'-1"	548
Slab, Diagonal, at Abutment		6e4	60	5'-11"	533	60	5'-11"	533	60	5'-11"	533	60	5'-11"	533
Wing, Vertical		5m1	40	4'-5"	184	40	4'-5"	184	40	4'-5"	184	40	4'-5"	184
Wing, Horizontal		5n1	48	6'-8"	334	48	6'-8"	334	48	6'-8"	334	48	6'-8"	334
Epoxy-Coated Sub Total - Integral Abutment - LBS.					2,505		2,543		2,679				2,973	

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Slab, Diagonal, at Abutment		664	58	5'-11"	515	58	5'-11"	515	-	-	-	-	-
Slab, Transverse at Abutment		865	22	34'-8"	2036	22	35'-11"	2110	-	-	-	-	-
Slab, Transverse at Abutment, Cap Ends		866	4	5'-2"	55	4	5'-4"	57	-	-	-	-	-
Abutment Hairpins		651	156	8'-0"	1874	140	8'-0"	1682	-	-	-	-	-
Abutment Hairpins, Cap Ends		652	-	-	-	16	8'-1"	194	-	-	-	-	-
Abutment Hairpins, Cap Ends		553	24	8'-4"	209	24	8'-5"	211	-	-	-	-	-
Spiral		#2	16	38'-6"	102	16	38'-6"	102	-	-	-	-	-
Spiral Spacers, L 7/8x7/8x1/8x 0,7			48	1'-10"	62	48	1'-10"	62	-	-	-	-	-
Epoxy-Coated Sub Total - High Abutment - LBS,					4,689			4,933					
Non-Coated Sub Total - High Abutment - LBS,					164			164					

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Open Rail - Integral Abutment - See Sheet J24S-27-25			4,462		4,462		4,462		4,462
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Open Rail - High Abutment - See Sheet J24S-29-25			3,920			3,920		.		.
	With									

		Open Ball	28,832		29,008		29,287		29,557
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Totals with Integral Abutment - LBS	Epoxy-Coated Total	With W-2	24,370	24,546	24,925	25,000
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	With Open	30,474	30,856	-	-
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Beam Guardrail	26,554	26,936	-	-
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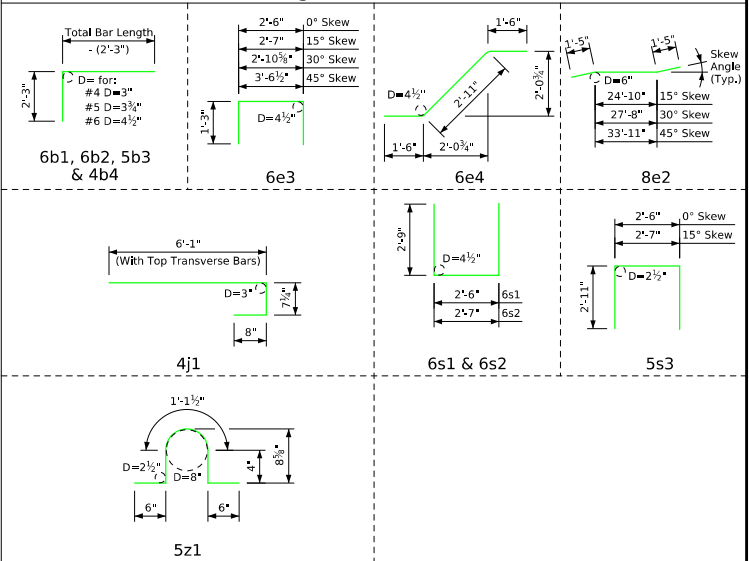
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Estimated Quantities for Superstructure - 50' Bridge	
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Item	Skew	Integral Abutment				High Abutment	
		0°	15°	30°	45°	0°	15°
* Structural Concrete (Bridge)	C.Y.	116.4	116.7	117.7	119.8	127.6	128.1
Reinf. Steel Epoxy Coated With Open Rail	LBS.	28,832	29,008	29,287	29,557	30,474	30,856
Reinf. Steel Epoxy Coated With W-Beam Guardrail	LBS.	24,370	24,546	24,825	25,095	26,554	26,936
Reinf. Steel Non-Coated	LBS.	-	-	-	-	164	164

* Includes 4 wings for integral abutment at 1.18 CY each and temporary paving blocks; excludes rail concrete.

50' Bridge - Bent Bar Details



Note: All Dimensions Are Out To Out. D = Pin Diameter.

Latest Revision Date

Approved by Bridge Engineer



Standard Design - 24'-0" Roadway, Single Span Bridge

Single Span Concrete Slab Bridges

July, 2025

Superstructure Details

50'-0" Bridge

I24S-10-25