

REVISED 07-2009; OPEN RAIL REINF. QTY'S CHANGED WHICH CHANGED TOTAL REINF. QTY'S.  
REVISED 09-2020; UPDATED BRIDGE ENGINEER SIGNATURE. CHANGED PAVING BLOCK LIFTING HOOP BAR MARK WAS 5X11.

### BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 90' BRIDGE

LOCATION	SKEW	SHAPE	0°				15°				30°				45°			
			BAR NO.	LENGTH	WEIGHT		BAR NO.	LENGTH	WEIGHT		BAR NO.	LENGTH	WEIGHT		BAR NO.	LENGTH	WEIGHT	
SLAB LONGITUDINAL BOTTOM			8a1	39	20'-0	2083	39	20'-0	2083	39	20'-0	2083	39	20'-0	2083	39	20'-0	2083
SLAB LONGITUDINAL BOTTOM			8a2	39	30'-3	3150	39	30'-3	3150	39	30'-3	3150	39	30'-3	3150	39	30'-3	3150
SLAB LONGITUDINAL BOTTOM			8a3	39	28'-6	2968	39	28'-6	2968	39	28'-6	2968	39	28'-6	2968	39	28'-6	2968
SLAB LONGITUDINAL BOTTOM			8a4	40	25'-6	2724	40	25'-6	2724	40	25'-6	2724	40	25'-6	2724	40	25'-6	2724
SLAB LONGITUDINAL BOTTOM			8a5	20	28'-0	1496	20	28'-0	1496	20	28'-0	1496	20	28'-0	1496	20	28'-0	1496
SLAB LONGITUDINAL BOTTOM, AT RAIL			8a6	8	32'-3	689	8	32'-3	689	8	32'-3	689	8	32'-3	689	8	32'-3	689
SLAB LONGITUDINAL BOTTOM, AT RAIL			8a7	4	34'-4	367	4	34'-4	367	4	34'-4	367	4	34'-4	367	4	34'-4	367
SLAB LONGITUDINAL BOTTOM, AT RAIL			8a8	8	22'-9	486	8	22'-9	486	8	22'-9	486	8	22'-9	486	8	22'-9	486
SLAB LONGITUDINAL BOTTOM, AT RAIL			8a9	4	21'-0	225	4	21'-0	225	4	21'-0	225	4	21'-0	225	4	21'-0	225
SLAB LONGITUDINAL TOP			6b1	39	8'-0	469	39	8'-0	469	39	8'-0	469	39	8'-0	469	39	8'-0	469
SLAB LONGITUDINAL TOP			9b2	39	22'-9	3017	39	22'-9	3017	39	22'-9	3017	39	22'-9	3017	39	22'-9	3017
SLAB LONGITUDINAL TOP			9b3	39	35'-0	4641	39	35'-0	4641	39	35'-0	4641	39	35'-0	4641	39	35'-0	4641
SLAB LONGITUDINAL TOP			6b4	40	13'-0	782	40	13'-0	782	40	13'-0	782	40	13'-0	782	40	13'-0	782
SLAB LONGITUDINAL TOP			9b5	40	27'-6	3740	40	27'-6	3740	40	27'-6	3740	40	27'-6	3740	40	27'-6	3740
SLAB LONGITUDINAL TOP			6b6	20	16'-10	506	20	16'-10	506	20	16'-10	506	20	16'-10	506	20	16'-10	506
SLAB LONGITUDINAL TOP, AT RAIL			6b8	8	26'-0	313	8	26'-0	313	8	26'-0	313	8	26'-0	313	8	26'-0	313
SLAB LONGITUDINAL TOP, AT RAIL			9b9	8	19'-6	531	8	19'-6	531	8	19'-6	531	8	19'-6	531	8	19'-6	531
SLAB LONGITUDINAL TOP, AT RAIL			6b10	4	18'-0	109	4	18'-0	109	4	18'-0	109	4	18'-0	109	4	18'-0	109
SLAB LONGITUDINAL TOP, AT RAIL			6b11	8	28'-6	343	8	28'-6	343	8	28'-6	343	8	28'-6	343	8	28'-6	343
SLAB LONGITUDINAL TOP, AT RAIL			10b12	8	13'-3	457	8	13'-3	457	8	13'-3	457	8	13'-3	457	8	13'-3	457
SLAB TRANSVERSE, BOTTOM			8c1	87	32'-10	4291	87	34'-0	4443	74	32'-10	3650	60	32'-10	2959			
SLAB TRANSVERSE ENDS, BOTTOM			6c2	-	-	-	-	-	-	30	VARIES	797	56	VARIES	1486			
SLAB TRANSVERSE, TOP			5d1	87	32'-10	2980	87	34'-0	3086	74	32'-10	2535	60	32'-10	2055			
SLAB TRANSVERSE ENDS, TOP			5d2	-	-	-	-	-	-	30	VARIES	553	56	VARIES	1032			
SLAB, TRANSVERSE AT ABUTMENT			8e1	18	32'-10	1578	-	-	-	-	-	-	-	-	-	-	-	-
SLAB, TRANSVERSE AT ABUTMENT			8e2	-	-	-	18	33'-11	1631	18	37'-6	1803	18	45'-4	2179			
SLAB, HAIRPINS, AT ABUTMENT			6e3	72	5'-0	541	72	5'-1	550	72	5'-5	586	72	6'-1	658			
SLAB, DIAGONALS, AT ABUTMENT			6e4	72	5'-11	640	72	5'-11	640	72	5'-11	640	72	5'-11	640			
PIER CAP HOOPS			5h1	56	7'-3	424	56	7'-3	424	56	7'-3	424	70	7'-3	530			
PIER CAP ENDS			8h2	4	14'-5	154	4	14'-5	154	4	14'-5	154	4	14'-5	154			
PIER CAP, BOTTOM LONGITUDINAL			8h3	8	29'-10	638	8	30'-11	661	8	34'-5	736	8	42'-2	901			
PIER CAP, TOP LONGITUDINAL			8h4	4	32'-10	351	4	34'-0	364	4	37'-11	405	4	46'-6	497			
TOP OF SLAB, TRANSVERSE, AT RAIL			5j1	172	8'-6	1525	172	8'-6	1525	172	8'-6	1525	170	8'-6	1508			
WING, VERTICAL			5m1	40	4'-5	185	40	4'-5	185	40	4'-5	185	40	4'-5	185			
WING, HORIZONTAL BACK FACE			5n1	24	6'-8	167	24	6'-8	167	24	6'-8	167	24	6'-8	167			
WING, HORIZONTAL TRAFFIC FACE			5n3	24	6'-9	169	24	6'-9	169	24	6'-9	169	24	6'-9	169			
** PAVING BLOCK LIFTING HOOPS			5z1	10	2'-10	30	10	2'-10	30	10	2'-10	30	10	2'-10	30			
SUB TOTAL - LBS.					42,769			43,125			43,455			44,246				
BARRIER RAIL - SEE LIST ON RAIL SHEET J30-41-06					5950			5950			5950			5950				
OPEN RAIL - SEE LIST ON RAIL SHEET J30-44-06					6330			6330			6330			6330				
TOTAL - LBS.					48,719			49,075			49,405			50,196				
			WITH MONOLITHIC PIER CAP		49,099			49,455			49,785			50,576				
TOTAL - LBS.					47,152			47,472			47,686			48,114				
			WITH NON-MONOLITHIC PIER CAP		47,532			47,852			48,066			48,494				
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED					47,532			47,852			48,066			48,494				

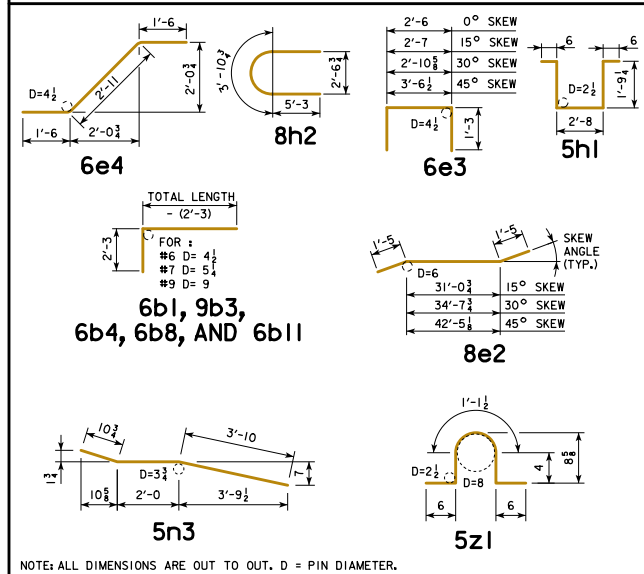
\*\* BARS MAY BE NON-COATED AT CONTRACTOR'S OPTION.

### ESTIMATED QUANTITIES FOR SUPERSTRUCTURE - 90' BRIDGE

ITEM	SKEW	WITH MONOLITHIC PIER CAP				WITH NON-MONOLITHIC PIER CAP			
		0°	15°	30°	45°	0°	15°	30°	45°
WITH STRUCTURAL CONCRETE (BRIDGE) C.Y.		176.5	177.3	180.1	186.1	171.9	172.5	174.9	179.7
BARRIER RAIL REINFORCING STEEL EPOXY COATED LBS.		48,719	49,075	49,405	50,196	47,152	47,472	47,686	48,114
CONCRETE BARRIER OR OPEN RAIL LIN. FT.		202.0	202.2	202.9	204.5	202.0	202.2	202.9	204.5
WITH STRUCTURAL CONCRETE (BRIDGE) C.Y.		176.3	177.1	180.0	185.9	171.7	172.4	174.7	179.5
OPEN RAIL REINFORCING STEEL EPOXY COATED LBS.		49,099	49,455	49,785	50,576	47,532	47,852	48,066	48,494

\* INCLUDES 4 WINGS @ 0.68 C.Y. EACH AND 2 TEMPORARY PAVING BLOCKS; EXCLUDES RAIL CONCRETE.

### BENT BAR DETAILS



08-2020 LATEST REVISION DATE   APPROVED BY BRIDGE ENGINEER	 STANDARD DESIGN - 30' ROADWAY, 3 SPAN BRIDGES <b>CONTINUOUS CONCRETE SLAB BRIDGES</b> NOVEMBER, 2006
	<b>SUPERSTRUCTURE DETAILS 90'-0 BRIDGE</b>
	<b>J30-07E-06</b> EPOXY COATED REINFORCING