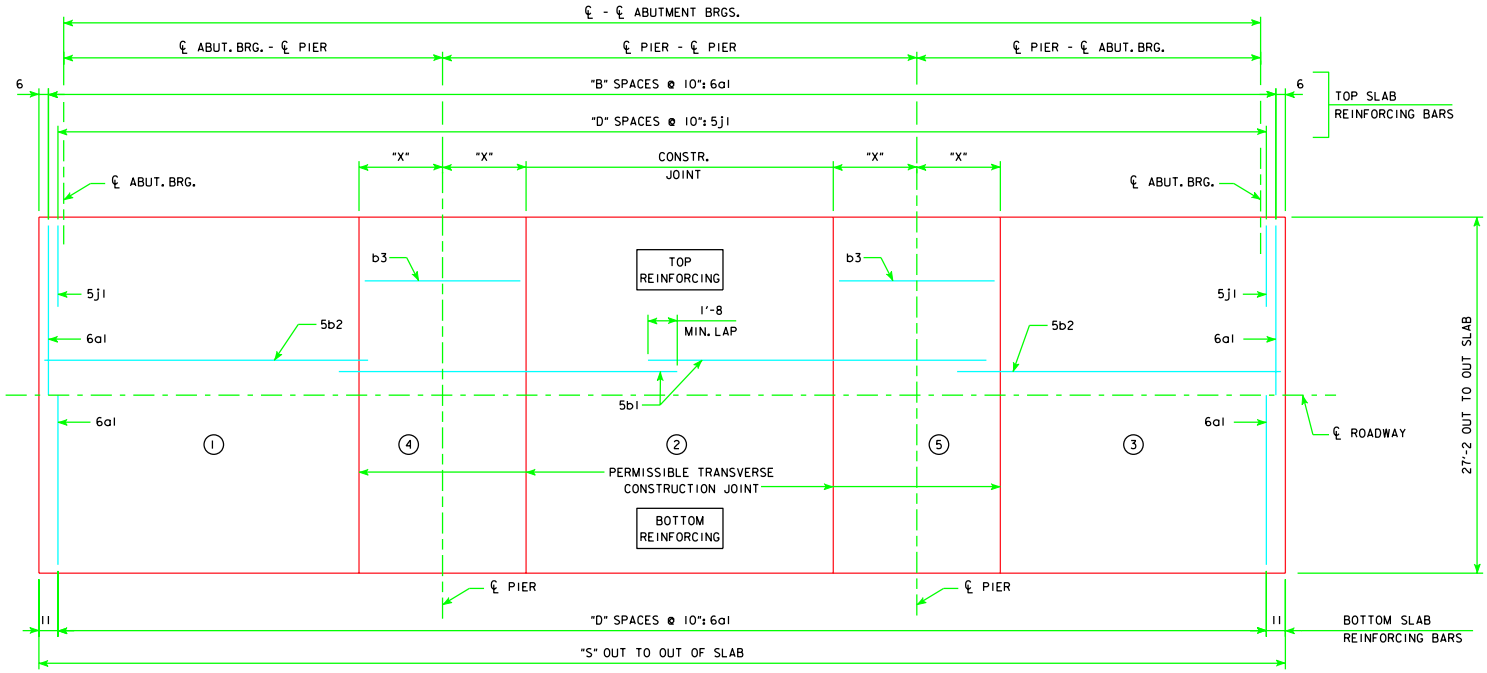

SLAB LAYOUT

NOTE: CONCRETE DECK SLAB SHALL BE PLACED IN SECTIONS AND SEQUENCES INDICATED. ALTERNATE PROCEDURES FOR PLACING SLAB CONCRETE MAY BE SUBMITTED FOR APPROVAL TOGETHER WITH A STATEMENT OF THE PROPOSED METHOD AND EVIDENCE THAT THE CONTRACTOR POSSESSES THE NECESSARY EQUIPMENT AND FACILITIES TO ACCOMPLISH THE REQUIRED RESULTS.

GENERAL DATA		℄-℄ ABUT. BRG.	138'-10	151'-4	163'-10	176'-4	188'-10	201'-4	213'-10	226'-4	243'-0
VERTICAL	TOP OF SLAB TO ABUT. CONSTR. JT. AT C.L. ABUT. BRG.	"U"	3'-8	3'-7 7/8	4'-2 7/8	4'-2 7/8	4'-2 7/8	4'-8 1/2	4'-8 11/16	4'-9 1/8	4'-9 1/2
CURVE	TOP OF SLAB TO PIER TOP AT C.L. PIER*	"U"	3'-6 3/8	3'-6 5/8	4'-1 3/8	4'-1 9/16	4'-1 15/16	4'-7 5/16	4'-7 5/16	4'-7 9/16	4'-7 9/16
STRAIGHT	TOP OF SLAB TO ABUT. CONSTR. JT. AT C.L. ABUT. BRG.	"U"	3'-8 1/16	3'-7 7/8	4'-2 15/16	4'-2 15/16	4'-3 1/16	4'-8 3/4	4'-8 7/8	4'-9 3/8	4'-9 15/16
GRADE	TOP OF SLAB TO PIER TOP AT C.L. PIER*	"U"	3'-6 5/8	3'-6 13/16	4'-1 5/8	4'-1 7/8	4'-2 5/16	4'-7 3/4	4'-7 3/4	4'-8 1/16	4'-8 1/16
D.L. PIER REACTION (D.L. + F.W.S.)		KIPS	290.2	313.8	357.4	382.2	407.2	486.5	514.4	542.4	569.7
L.L. PIER REACTION (HL93) NO IMPACT		KIPS	207.6	215.3	222.7	229.9	237.0	244.0	253.2	268.2	284.4
NO. OF SPACES FOR 6a1 BARS (TOP)		"B"	169	184	199	214	229	244	259	274	294
NO. OF SPACES FOR 6a1 BARS (BOTTOM) AND 5j1 BARS (TOP)		"D"	168	183	198	213	228	243	258	273	293
OUT TO OUT OF SLAB		"S"	141'-10	154'-4	166'-10	179'-4	191'-10	204'-4	216'-10	229'-4	246'-0
SLAB TRANSVERSE CONSTR. JT. DISTANCE FROM C.L. PIER		"X"	6'-7	7'-1	7'-7	8'-1	8'-8	9'-2	9'-8	10'-2	10'-2

ESTIMATED QUANTITIES (SUPERSTRUCTURE PLUS INTEGRAL ABUTMENTS)	℄-℄ ABUT. BRG.	138'-10	151'-4	163'-10	176'-4	188'-10	201'-4	213'-10	226'-4	243'-0
STRUCTURAL CONCRETE SUPERSTRUCTURE (INCLUDES ABUT. WINGS)	C.Y.	142.2	151.0	165.8	175.0	184.2	202.8	212.0	221.6	234.0
STRUCTURAL CONCRETE ABUTMENTS (w/ WOOD PILES)	C.Y.	20.4	20.4	20.3	20.3	20.3	-----	-----	-----	-----
STRUCTURAL CONCRETE ABUTMENTS (w/ STEEL H PILES)	C.Y.	21.6	21.6	21.6	21.6	21.6	29.4	29.4	29.4	29.4
PRETENSIONED PRESTRESSED CONCRETE BEAM, CENTER SPAN	NO.	4-A50	4-A55	4-B59	4-B63	4-B67	4-C71	4-C75	4-C80	4-C80
PRETENSIONED PRESTRESSED CONCRETE BEAM, END SPAN	NO.	8-A42	8-A46	8-B50	8-B55	8-B59	8-C63	8-C67	8-C71	8-C80
CONCRETE RAIL	L.F.	311.7	336.7	361.7	386.7	411.7	456.7	481.7	506.7	540.0
STRUCTURAL STEEL (w/ PILE BENT PIERS)	LB.	2451	2451	2451	2451	2451	2388	2388	2388	2388
STRUCTURAL STEEL (w/ TEE PIERS)	LB.	3168	3168	3168	3168	3168	3234	3234	3234	3234
REINFORCING STEEL (w/ WOOD PILES)	LB.	43,125	45,927	49,334	52,754	55,597	-----	-----	-----	-----
REINFORCING STEEL (w/ STEEL H PILES)	LB.	42,935	45,737	49,036	52,456	55,275	62,073	65,443	68,552	72,402
NO. OF WOOD PILES, TREATED FOR TWO ABUTMENTS	NO.	20	20	22	22	22	-----	-----	-----	-----
NO. OF STEEL H-PILES (HP 10 x 57) FOR TWO ABUTMENTS	NO.	10	10	10	10	12	16	16	16	16
PREBORED HOLES (w/ WOOD PILES)	L.F.	200	200	220	220	220	-----	-----	-----	-----
PREBORED HOLES (w/ STEEL H-PILES)	L.F.	100	100	100	100	120	160	160	160	160

CONCRETE PLACEMENT QUANT. (SUPERSTRUCTURE PLUS INTEGRAL ABUTMENTS)	℄-℄ ABUT. BRG.	138'-10	151'-4	163'-10	176'-4	188'-10	201'-4	213'-10	226'-4	243'-0
SLAB INCL. HAUNCH, ABUT. DIAPHR., & WINGWALLS** , SECT. 1 & 3	C.Y.	76.1	81.2	90.0	95.3	100.5	113.5	119.0	124.6	137.0
SLAB INCLUDING HAUNCH, SECTION 2	C.Y.	28.4	30.7	33.0	35.3	37.5	39.9	42.1	44.5	44.5
SLAB INCLUDING HAUNCH & PIER DIAPHRAGM, SECTIONS 4 & 5	C.Y.	28.5	29.9	33.2	34.8	36.6	39.0	40.5	42.1	42.1
PAVING BLOCKS	C.Y.	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ABUTMENT WINGS	C.Y.	7.2	7.2	7.6	7.6	7.6	8.4	8.4	8.4	8.4
ABUTMENT FOOTINGS (w/ WOOD PILES)	C.Y.	20.4	20.4	20.3	20.3	20.3	-----	-----	-----	-----
ABUTMENT FOOTINGS (w/ STEEL H PILES)	C.Y.	21.6	21.6	21.6	21.6	21.6	29.4	29.4	29.4	29.4

* VALUES SHOWN ARE FOR FIXED PIERS ONLY AND ALLOW FOR 1/16 INCH DEFLECTION OF THE 1 INCH NEOPRENE BEARING PAD. AT EXPANSION PIER LOCATIONS ADD 3 1/16 INCHES TO "U" VALUES SHOWN.

** WINGWALLS APPLY ONLY TO BRIDGES USING "C" BEAMS.

01-10
LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 24' ROADWAY, THREE SPAN BRIDGE

PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES

DECEMBER, 2006

SUPERSTRUCTURE DETAILS
0° SKEW

H24-09-06

REVISED 01-10 - THE ESTIMATED QUANTITIES & CONC. PLACEMENT QUANTITIES WERE CHANGED.