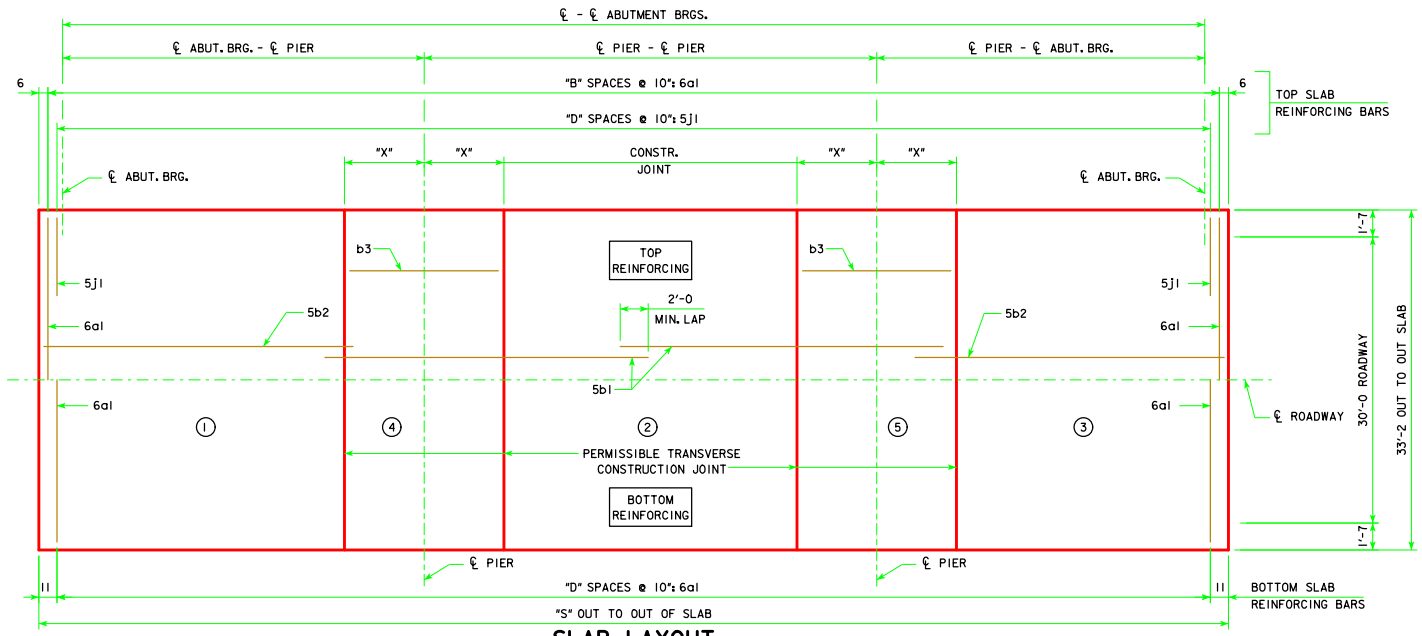

SLAB LAYOUT

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.

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	WITH BARRIER RAIL	C.Y.	168.1	178.8	196.1	206.8	217.5	239.0	249.7	261.0	275.8
(INCLUDES ABUTMENT WINGS, PAV. BLOCKS)	WITH OPEN RAIL	C.Y.	170.6	181.5	199.1	210.0	221.0	242.5	253.4	265.0	280.0
STRUCTURAL CONCRETE ABUTMENTS (w/ WOOD PILES)		C.Y.	25.3	25.2	25.2	25.1	25.1	-----	-----	-----	-----
STRUCTURAL CONCRETE ABUTMENTS (w/ STEEL H PILES)		C.Y.	26.6	26.6	26.6	26.6	26.6	34.4	34.4	34.4	34.4
PRETENSIONED PRESTRESSED CONCRETE BEAM, CENTER SPAN		NO.	5-A50	5-A55	5-B59	5-B63	5-B67	5-C71	5-C75	5-C80	5-C80
PRETENSIONED PRESTRESSED CONCRETE BEAM, END SPAN		NO.	10-A42	10-A46	10-B50	10-B55	10-B59	10-C63	10-C67	10-C71	10-C80
CONCRETE RAIL (BARRIER OR OPEN)		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 & DRAINS)		LB.	3829	3829	3917	3917	3917	3912	3912	3912	3912
STRUCTURAL STEEL (w/ PILE BENT PIERS & NO DRAINS)		LB.	3149	3149	3149	3149	3149	3064	3064	3064	3064
STRUCTURAL STEEL (w/ TEE PIERS & DRAINS)		LB.	4725	4725	4813	4813	4813	4970	4970	4970	4970
STRUCTURAL STEEL (w/ TEE PIERS & NO DRAINS)		LB.	4045	4045	4045	4045	4045	4122	4122	4122	4122
REINFORCING STEEL (w/ WOOD PILES & BARRIER RAIL)		LB.	50,098	53,542	57,274	61,247	64,670	-----	-----	-----	-----
REINFORCING STEEL (w/ WOOD PILES & OPEN RAIL)		LB.	50,763	54,163	58,042	62,191	65,544	-----	-----	-----	-----
REINFORCING STEEL (w/ STEEL H PILES & BARRIER RAIL)		LB.	50,150	53,487	57,064	60,928	64,351	70,789	75,170	78,589	83,064
REINFORCING STEEL (w/ STEEL H PILES & OPEN RAIL)		LB.	50,815	54,108	57,832	61,872	65,225	72,420	76,710	80,326	84,847
NO. OF WOOD PILES, TREATED FOR TWO ABUTMENTS		NO.	22	24	24	26	26	-----	-----	-----	-----
NO. OF STEEL H-PILES FOR TWO ABUTMENTS (HP 10 x 57)		NO.	10	10	12	12	12	16	18	18	18
PREBORED HOLES (w/ WOOD PILES)		L.F.	220	240	240	260	260	-----	-----	-----	-----
PREBORED HOLES (w/ STEEL H-PILES)		L.F.	100	100	120	120	120	160	180	180	180

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 INCLUDING HAUNCH, ABUT. DIAPHRAGM,	WITH BARRIER RAIL	C.Y.	90.8	97.0	107.2	113.4	119.6	134.2	140.6	147.2	162.0
& WINGWALLS** , SECTIONS 1 & 3	WITH OPEN RAIL	C.Y.	92.1	98.4	108.8	115.1	121.5	136.1	142.6	149.4	164.4
SLAB INCLUDING	WITH BARRIER RAIL	C.Y.	33.5	36.2	38.9	41.6	44.1	47.0	49.7	52.4	52.4
HAUNCH, SECTION 2	WITH OPEN RAIL	C.Y.	34.2	37.0	39.7	42.5	45.1	48.0	50.7	53.5	53.5
SLAB INCLUDING HAUNCH &	WITH BARRIER RAIL	C.Y.	34.2	36.0	40.0	41.8	43.8	47.0	48.6	50.6	50.6
PIER DIAPHRAGM, SECTIONS 4 & 5	WITH OPEN RAIL	C.Y.	34.7	36.5	40.6	42.4	44.4	47.6	49.3	51.3	51.3
PAVING BLOCKS		C.Y.	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
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.	25.3	25.2	25.2	25.1	25.1	-----	-----	-----	-----
ABUTMENT FOOTINGS (w/ STEEL H PILES)		C.Y.	26.6	26.6	26.6	26.6	26.6	34.4	34.4	34.4	34.4

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'-7 15/16	3'-7 3/4	4'-2 13/16	4'-2 13/16	4'-3	4'-8 1/2	4'-8 11/16	4'-9	4'-9 7/16
CURVE	TOP OF SLAB TO PIER TOP AT C.L. PIER*	"U"	3'-6 7/16	3'-6 5/8	4'-1 3/8	4'-1 5/8	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 11/16	4'-8 15/16	4'-9 3/8	4'-10
GRADE	TOP OF SLAB TO PIER TOP AT C.L. PIER*	"U"	3'-6 5/8	3'-6 7/8	4'-1 11/16	4'-1 15/16	4'-2 5/16	4'-7 15/16	4'-7 3/4	4'-8 1/16	4'-8 1/16
D.L. PIER REACTION (D.L. + F.W.S.)		KIPS	345.7	373.7	426.8	456.3	485.9	583.8	617.0	650.6	683.4
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

* 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 3/16 INCHES TO "U" VALUES SHOWN.

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

10-11
LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 30' ROADWAY, THREE SPAN BRIDGES

PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES

DECEMBER, 2006

SUPERSTRUCTURE DETAILS
0° SKEW

H30-09-06

REVISED 10-11 - THE ESTIMATED QUANTITIES FOR THE STRUCTURAL STEEL WITH DRAINS WAS CHANGED.