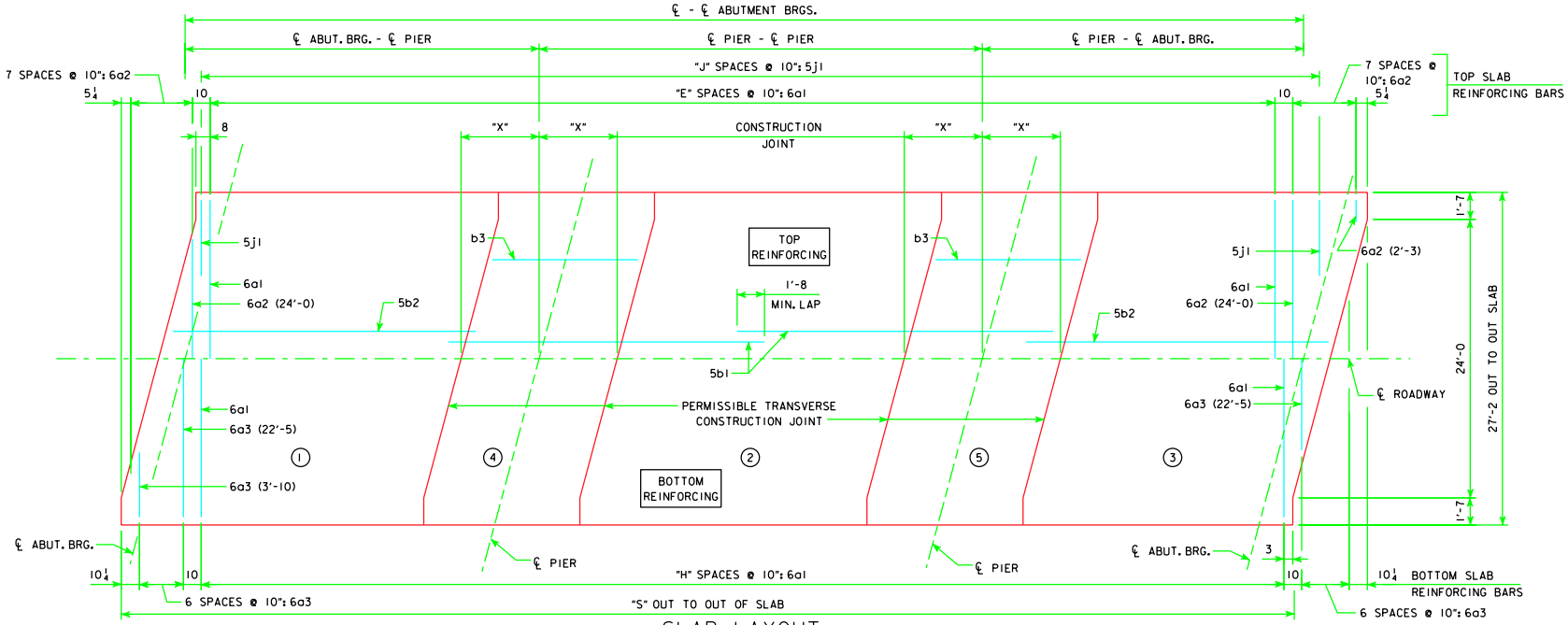

SLAB LAYOUT

(LEFT AHEAD SKEW SHOWN, RIGHT AHEAD SKEW SIMILAR)

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	295.3	318.9	363.5	388.4	413.4	493.2	521.1	549.2	576.4
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)		"E"	161	176	191	206	221	236	251	266	286
NO. OF SPACES FOR 6a1 BARS (BOTTOM)		"H"	162	177	192	207	222	237	252	267	287
NO. OF SPACES FOR 5j1 BARS (TOP)		"J"	167	182	197	212	227	242	257	272	292
OUT TO OUT OF SLAB		"S"	141'-11¼	154'-5¼	166'-11¼	179'-5¼	191'-11¼	204'-5¼	216'-11¼	229'-5¼	246'-1¼
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.	145.4	154.6	169.6	178.8	188.2	207.2	216.4	226.0	238.4
STRUCTURAL CONCRETE ABUTMENTS (w/ WOOD PILES) ***	C.Y.	21.2	21.1	21.1	21.1	21.1	-----	-----	-----	-----
STRUCTURAL CONCRETE ABUTMENTS (w/ STEEL H PILES) ***	C.Y.	22.4	22.4	22.4	22.4	22.4	30.2	30.2	30.2	30.2
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.	311.9	336.9	361.9	386.9	411.9	456.7	481.7	506.7	540.0
STRUCTURAL STEEL (w/ PILE BENT PIERS)	LB.	2555	2555	2555	2555	2555	2498	2498	2498	2498
STRUCTURAL STEEL (w/ TEE PIERS)	LB.	3272	3272	3272	3272	3272	3344	3344	3344	3344
REINFORCING STEEL (w/ WOOD PILES)	LB.	43,251	46,160	49,457	52,878	55,721	-----	-----	-----	-----
REINFORCING STEEL (w/ STEEL H PILES)	LB.	43,235	46,037	49,334	52,755	55,618	62,423	65,792	68,902	72,752
NO. OF WOOD PILES, TREATED FOR TWO ABUTMENTS	NO.	20	22	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	220	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.	76.9	82.2	90.8	96.1	101.5	114.5	120.0	125.6	138.0
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.	30.9	32.5	36.2	37.8	39.6	42.4	43.9	45.5	45.5
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.	21.2	21.1	21.1	21.1	21.1	-----	-----	-----	-----
ABUTMENT FOOTINGS (w/ STEEL H PILES) ***	C.Y.	22.4	22.4	22.4	22.4	22.4	30.2	30.2	30.2	30.2

* 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 1/16 INCHES TO "U" VALUES SHOWN.

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

*** SEE SHEET H24-17-06 FOR ADDITIONAL CONCRETE REQUIRED IN ABUTMENT FOOTINGS.

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
15° SKEW

H24-15-06

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