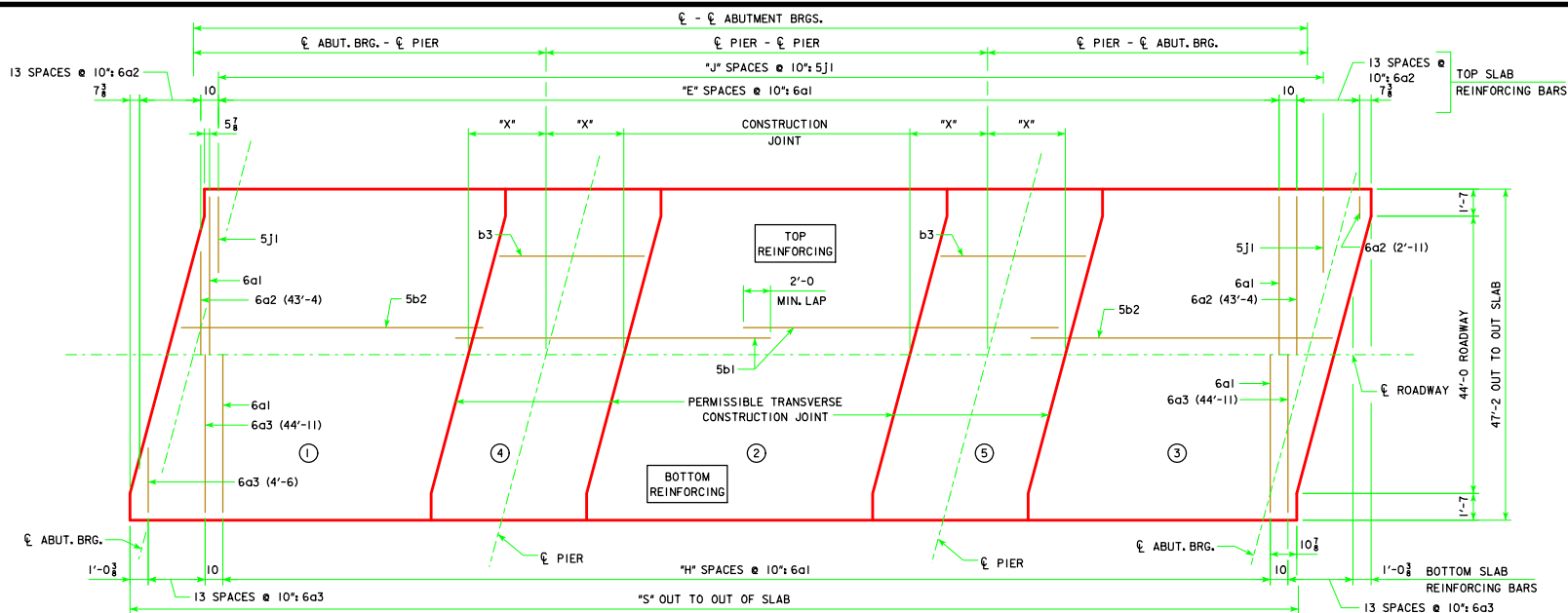


REVISED 07-2015 - CHANGED CONCRETE PLACEMENT NOTE TO ACCOUNT FOR THE POSSIBLE ADDITION OF A RETARDING ADMIXTURE TO THE CONCRETE.



SLAB LAYOUT

(LEFT AHEAD SKEW SHOWN, RIGHT AHEAD SKEW SIMILAR)

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 ABUTMENT WINGS)	WITH BARRIER RAIL	C.Y.	238.3	253.3	278.9	294.1	309.7	338.2	353.4	369.3	390.1
	WITH OPEN RAIL	C.Y.	240.8	256.0	281.9	297.3	313.2	341.7	357.1	373.3	394.3
STRUCTURAL CONCRETE ABUTMENTS (w/ WOOD PILES) ***		C.Y.	38.3	38.1	38.0	38.0	37.9	-----	-----	-----	-----
STRUCTURAL CONCRETE ABUTMENTS (w/ STEEL H PILES) ***		C.Y.	40.0	40.0	40.0	40.0	40.0	47.8	47.8	47.8	47.8
PRETENSIONED PRESTRESSED CONCRETE BEAM, CENTER SPAN		NO.	7-A50	7-A55	7-B59	7-B63	7-B67	7-C71	7-C75	7-C80	7-C80
PRETENSIONED PRESTRESSED CONCRETE BEAM, END SPAN		NO.	14-A42	14-A46	14-B50	14-B55	14-B59	14-C63	14-C67	14-C71	14-C80
CONCRETE RAIL (BARRIER OR OPEN)		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 & DRAINS)		LB.	5689	5689	5777	5777	5777	5742	5742	5742	5742
STRUCTURAL STEEL (w/ PILE BENT PIERS & NO DRAINS)		LB.	5009	5009	5009	5009	5009	4894	4894	4894	4894
STRUCTURAL STEEL (w/ TEE PIERS & DRAINS)		LB.	6943	6943	7031	7031	7013	7223	7223	7223	7223
STRUCTURAL STEEL (w/ TEE PIERS & NO DRAINS)		LB.	6263	6263	6263	6263	6375	6375	6375	6375	6375
EPOXY COATED REINF. STEEL (w/ WOOD PILES & BARRIER RAIL)		LB.	66,715	71,451	76,291	81,500	86,127	-----	-----	-----	-----
EPOXY COATED REINF. STEEL (w/ WOOD PILES & OPEN RAIL)		LB.	67,380	72,072	77,059	82,444	87,001	-----	-----	-----	-----
EPOXY COATED REINF. (w/ STEEL H PILES & BARRIER RAIL)		LB.	66,900	71,529	76,260	81,446	85,966	93,737	99,278	103,804	109,713
EPOXY COATED REINF. (w/ STEEL H PILES & OPEN RAIL)		LB.	67,565	72,150	77,028	82,390	86,840	95,581	101,031	105,754	111,709
NO. OF WOOD PILES, TREATED FOR TWO ABUTMENTS		NO.	30	32	34	34	36	-----	-----	-----	-----
NO. OF STEEL H-PILES FOR TWO ABUTMENTS (HP 10 x 57)		NO.	14	14	14	16	16	20	22	22	22
PREBORED HOLES (w/ WOOD PILES)		L.F.	300	320	340	340	360	-----	-----	-----	-----
PREBORED HOLES (w/ STEEL H-PILES)		L.F.	140	140	140	160	160	200	220	220	220

CONCRETE PLACEMENT QUANT.		℄-℄ 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, & WINGWALLS** , SECTIONS 1 & 3	WITH BARRIER RAIL	C.Y.	130.2	138.8	153.6	162.4	171.2	189.8	198.8	208.2	229.0
	WITH OPEN RAIL	C.Y.	131.5	140.2	155.2	164.1	173.1	191.7	200.8	210.4	231.4
SLAB INCLUDING HAUNCH, SECTION 2	WITH BARRIER RAIL	C.Y.	47.3	51.1	54.9	58.7	62.3	66.4	70.2	74.1	74.1
	WITH OPEN RAIL	C.Y.	48.0	51.9	55.7	59.6	63.3	67.4	71.2	75.2	75.2
SLAB INCLUDING HAUNCH & PIER DIAPHRAGM, SECTIONS 4 & 5	WITH BARRIER RAIL	C.Y.	53.6	56.2	62.8	65.4	68.6	73.6	76.0	78.6	78.6
	WITH OPEN RAIL	C.Y.	54.1	56.7	63.4	66.0	69.2	74.2	76.7	79.3	79.3
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.	36.3	38.1	38.0	38.0	37.9	-----	-----	-----	-----
ABUTMENT FOOTINGS (w/ STEEL H PILES) ***		C.Y.	40.0	40.0	40.0	40.0	40.0	47.8	47.8	47.8	47.8

GENERAL DATA		℄-℄ ABUT. BRG.	138'-10	151'-4	163'-10	176'-4	188'-10	201'-4	213'-10	226'-4	243'-0
VERTICAL CURVE	TOP OF SLAB TO ABUT. CONSTR. JT. AT C.L. ABUT. BRG.	"U"	3'-8 1/8	3'-7 1/8	4'-2 1/8	4'-2 1/8	4'-2 1/8	4'-8 1/8	4'-8 1/8	4'-9 1/8	4'-9 1/8
	TOP OF SLAB TO PIER TOP AT C.L. PIER*	"U"	3'-6 1/8	3'-6 1/8	4'-1 1/8	4'-1 1/8	4'-1 1/8	4'-7 1/8	4'-7 1/8	4'-7 1/8	4'-7 1/8
STRAIGHT GRADE	TOP OF SLAB TO ABUT. CONSTR. JT. AT C.L. ABUT. BRG.	"U"	3'-8 1/8	3'-7 1/8	4'-2 1/8	4'-2 1/8	4'-3 1/8	4'-8 1/8	4'-8 1/8	4'-9 1/8	4'-10
	TOP OF SLAB TO PIER TOP AT C.L. PIER*	"U"	3'-6 1/8	3'-6 1/8	4'-1 1/8	4'-1 1/8	4'-2 1/8	4'-7 1/8	4'-7 1/8	4'-8 1/8	4'-8 1/8
D.L. PIER REACTION (D.L. + F.W.S.) SERVICE LOADS		KIPS	481.4	519.5	594.8	635.1	675.5	812.5	858.0	903.9	948.7
L.L. PIER REACTION (HL93) NO IMPACT SERVICE LOADS		KIPS	264.7	274.5	283.9	293.1	302.2	311.0	322.9	341.9	362.6
NO. OF SPACES FOR 6a1 BARS (TOP)		"E"	155	170	185	200	215	230	245	260	280
NO. OF SPACES FOR 6a1 BARS (BOTTOM)		"H"	154	169	184	199	214	229	244	259	279
NO. OF SPACES FOR 5J1 BARS (TOP)		"J"	167	182	197	212	227	242	257	272	292
OUT TO OUT OF SLAB		"S"	141'-11 1/4	154'-5 1/4	166'-11 1/4	179'-5 1/4	191'-11 1/4	204'-5 1/4	216'-11 1/4	229'-5 1/4	246'-1 1/4
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

NOTE: CONCRETE DECK SHALL BE PLACED IN SECTIONS AND SEQUENCES INDICATED. ALTERNATE PROCEDURES FOR PLACING DECK 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. FOR APPROVED ALTERNATE PROCEDURES THE ENGINEER SHALL DETERMINE IF A RETARDING ADMIXTURE IS REQUIRED TO MAINTAIN PLASTICITY OF THE CONCRETE DECK DURING PLACEMENT.

* VALUES SHOWN ARE FOR FIXED PIERS ONLY AND ALLOW FOR 1/8 INCH DEFLECTION OF THE 1 INCH NEOPRENE BEARING PAD. AT EXPANSION PIER LOCATIONS ADD 3/8 INCHES TO "U" VALUES SHOWN.

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

*** SEE SHEET H44-17-07 FOR ADDITIONAL CONCRETE REQUIRED IN ABUTMENT FOOTINGS.

LATEST REVISION DATE
07-15
APPROVED BY BRIDGE ENGINEER
Thomas E. McQuillan

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 44' ROADWAY, THREE SPAN BRIDGE

PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES

MARCH, 2007

SUPERSTRUCTURE DETAILS
15° SKEW

H44-15-07