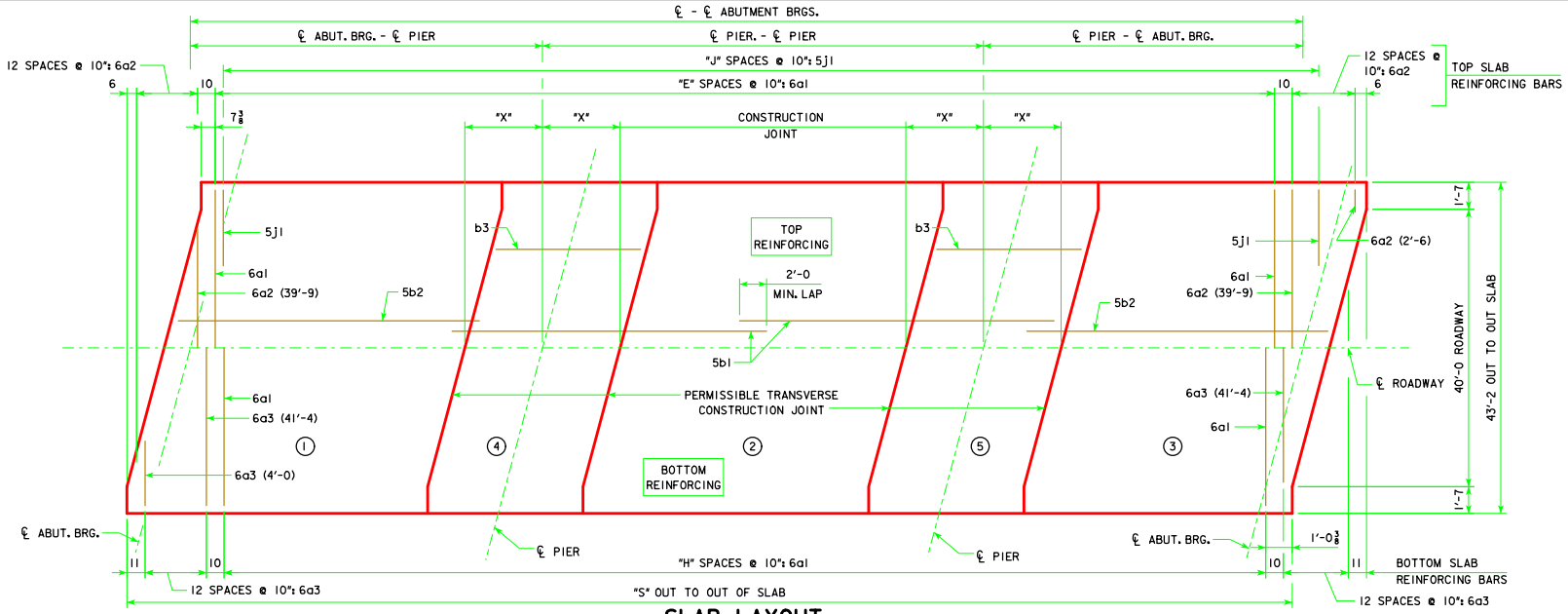

SLAB LAYOUT

(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.

ESTIMATED QUANTITIES
(SUPERSTRUCTURE PLUS INTEGRAL ABUTMENTS)

ESTIMATED QUANTITIES	℄-℄ ABUT. BRG.	138'-10	151'-4	163'-10	176'-4	188'-10	201'-4	213'-10	226'-4	243'-0
PRETENSIONED PRESTRESSED CONCRETE BEAM, CENTER SPAN	NO.	6-A50	6-A55	6-B59	6-B63	6-B67	6-C71	6-C75	6-C80	6-C80
PRETENSIONED PRESTRESSED CONCRETE BEAM, END SPAN	NO.	12-A42	12-A46	12-B50	12-B55	12-B59	12-C63	12-C67	12-C71	12-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
NO. OF WOOD PILES, TREATED FOR TWO ABUTMENTS	NO.	28	30	32	32	34	-----	-----	-----	-----
NO. OF STEEL H-PILES FOR TWO ABUTMENTS (HP 10 x 57)	NO.	14	14	14	14	16	20	20	20	22
PREBORED HOLES (w/ WOOD PILES)	L.F.	280	300	320	320	340	-----	-----	-----	-----
PREBORED HOLES (w/ STEEL H-PILES)	L.F.	140	140	140	140	160	200	200	200	220
WING ARMORING	S.Y.	3.5	3.5	3.5	3.5	3.5	5.7	5.7	5.7	5.7

NOTE:
FOR QUANTITIES OF STRUCTURAL CONCRETE, REINFORCING STEEL AND STRUCTURAL STEEL, REFER TO THE SUMMARY QUANTITIES SHEET IN THE BRIDGE PLANS.

GENERAL DATA

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 13/16	4'-2 7/8	4'-2 15/16	4'-2 7/8	4'-8 9/16	4'-8 11/16	4'-9 1/8	4'-9 7/16
CURVE	TOP OF SLAB TO PIER TOP AT C.L. PIER*	"U"	3'-6 3/8	3'-6 9/16	4'-1 15/16	4'-1 1/2	4'-1 1/8	4'-7 15/16	4'-7 1/4	4'-7 1/2	4'-7 1/2
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	4'-8 3/4	4'-8 7/8	4'-9 5/16	4'-9 7/8
GRADE	TOP OF SLAB TO PIER TOP AT C.L. PIER*	"U"	3'-6 9/16	3'-6 3/4	4'-1 9/16	4'-1 15/16	4'-2 1/4	4'-7 11/16	4'-7 11/16	4'-8	4'-8
D.L. PIER REACTION (D.L. + F.W.S.) SERVICE LOADS		KIPS	438.8	473.4	540.5	577.1	613.9	733.7	774.7	816.2	856.5
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"	156	171	186	201	216	231	246	261	281
NO. OF SPACES FOR 6a1 BARS (BOTTOM)		"H"	155	170	185	200	215	230	245	260	280
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'-11 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

Δ NOTE:
CONCRETE QUANTITIES SHALL BE LISTED ON THE SUMMARY QUANTITIES SHEET.

Δ CONCRETE PLACEMENT QUANT.
(SUPERSTRUCTURE PLUS INTEGRAL ABUTMENTS)

Δ 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.	119.6	127.6	141.2	149.2	157.2	174.8	183.2	191.8	210.8
	WITH OPEN RAIL	C.Y.	120.9	129.0	142.8	150.9	159.1	176.7	185.2	194.0	213.2
SLAB INCLUDING HAUNCH, SECTION 2	WITH BARRIER RAIL	C.Y.	43.5	47.0	50.5	54.0	57.3	61.1	64.6	68.1	68.1
	WITH OPEN RAIL	C.Y.	44.2	47.8	51.3	54.9	58.3	62.1	65.6	69.2	69.2
SLAB INCLUDING HAUNCH & PIER DIAPHRAGM, SECTIONS 4 & 5	WITH BARRIER RAIL	C.Y.	49.2	51.6	57.6	60.0	62.8	67.6	69.8	72.2	72.2
	WITH OPEN RAIL	C.Y.	49.7	52.1	58.2	60.6	63.4	68.2	70.5	72.9	72.9
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.	34.8	34.7	34.5	34.5	34.4	-----	-----	-----	-----
ABUTMENT FOOTINGS (w/ STEEL H PILES) ***		C.Y.	36.4	36.4	36.4	36.4	36.4	44.2	44.2	44.2	44.2

* 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.

LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

IOWADOT Highway Division

STANDARD DESIGN - 40' ROADWAY, THREE SPAN BRIDGE

PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES

SEPTEMBER, 2014

SUPERSTRUCTURE DETAILS
15° SKEW

H40-15-14