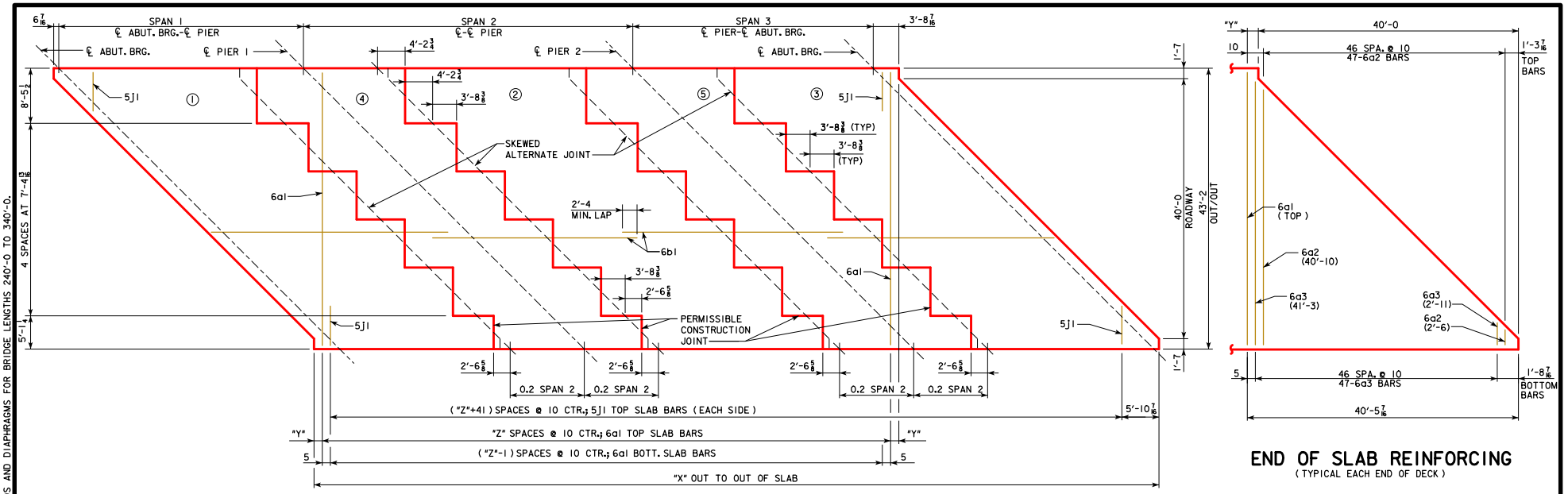
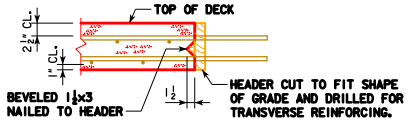


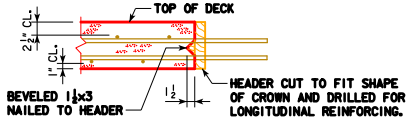
END OF SLAB REINFORCING
(TYPICAL EACH END OF DECK)

REINFORCEMENT DIMENSIONS ℄-℄ ABUTMENT BEARINGS	160'-0	180'-0	200'-0	220'-0	240'-0	260'-0	280'-0	300'-0	320'-0	340'-0
X (FT.-IN.)	164'-2⅞	184'-2⅞	204'-2⅞	224'-2⅞	244'-2⅞	264'-2⅞	284'-2⅞	304'-2⅞	324'-2⅞	344'-2⅞
Y (IN.)	5⅞	5⅞	5⅞	5⅞	5⅞	5⅞	5⅞	5⅞	5⅞	5⅞
Z (SPACES)	148	172	196	220	244	268	292	316	340	364

CONCRETE PLACEMENT DIAGRAM SHOWING SLAB REINFORCING
(RIGHT AHEAD SKEW SHOWN, LEFT AHEAD SKEW SIMILAR)



LONGITUDINAL SLAB CONSTRUCTION JOINT



TRANSVERSE SLAB CONSTRUCTION JOINT

CONCRETE PLACEMENT QTYS. (SUPERSTRUCTURE PLUS INTEGRAL ABUTMENTS)		160'-0	180'-0	200'-0	220'-0	240'-0	260'-0	280'-0	300'-0	320'-0	340'-0
SLAB, AND ABUT DIAPHRAGM, SECTION 1 & 3	CY	129.1	139.4	152.6	165.4	175.4	188.0	198.1	208.2	218.4	232.4
SLAB, SECTION 2	CY	42.1	47.4	52.7	58.0	63.2	68.7	74.0	79.2	84.5	89.8
SLAB, SECTION 4 & 5	CY	56.1	63.2	70.2	77.3	84.3	91.6	98.6	105.7	112.7	119.8
ABUTMENT WINGS	CY	7.2	7.2	7.2	7.6	7.6	7.6	7.6	7.6	7.6	13.9
ABUTMENT FOOTINGS	CY	49.5	49.5	49.5	49.5	49.5	49.5	49.5	49.5	49.5	57.2
TOTAL	CY	284.0	306.7	332.2	357.8	380.0	405.4	427.8	450.2	472.7	513.1

ESTIMATED QTYS. (SUPERSTRUCTURE PLUS INTEGRAL ABUTMENTS)		160'-0	180'-0	200'-0	220'-0	240'-0	260'-0	280'-0	300'-0	320'-0	340'-0
NO. OF STEEL H-PILES FOR TWO ABUTMENTS (HP 10 X 57)	NO.	18	18	18	18	20	20	20	20	22	26
STRUCTURAL CONCRETE, (BRIDGE)	CY	284.0	306.7	332.2	357.8	380.0	405.4	427.8	450.2	472.7	513.1
REINFORCING STEEL EPOXY COATED	LB	77,655	84,892	92,578	99,966	107,824	115,103	122,681	130,291	137,296	147,428
BARRIER RAILS	LF	356.5	396.5	436.5	476.5	516.5	556.5	596.5	636.5	676.5	734.0
STRUCTURAL STEEL	LB	119,156	156,264	190,725	234,340	293,632	337,480	389,833	474,019	524,018	575,274

SPAN LENGTHS			
BRIDGE LENGTH	SPAN 1	SPAN 2	SPAN 3
160'-0	48'-0	64'-0	48'-0
180'-0	54'-0	72'-0	54'-0
200'-0	60'-0	80'-0	60'-0
220'-0	66'-0	88'-0	66'-0
240'-0	72'-0	96'-0	72'-0
260'-0	78'-0	104'-0	78'-0
280'-0	84'-0	112'-0	84'-0
300'-0	90'-0	120'-0	90'-0
320'-0	96'-0	128'-0	96'-0
340'-0	102'-0	136'-0	102'-0

NOTES:

1. 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.
2. WEIGHT OF STRUCTURAL STEEL SHOWN ON THIS SHEET INCLUDES: BEAMS, DIAPHRAGMS, SPLICES, SHEAR STUDS, BEARINGS, WELDS AND BOLT HARDWARE.
3. QUANTITY OF STRUCTURAL STEEL SHOWN ON THIS SHEET IS TABULATED FOR BENT PLATE DIAPHRAGM OPTION. PAYMENT FOR STRUCTURAL STEEL WILL BE BASED ON THE QUANTITIES SHOWN. THE CONTRACTOR MAY CHOOSE TO PROVIDE ROLLED CHANNEL DIAPHRAGMS AT NO ADDITIONAL COST.
4. QUANTITY OF STRUCTURAL STEEL SHOWN ON THIS SHEET IS BASED ON THE USE OF 5" HIGH SHEAR STUDS. CONTRACTOR WILL BE PAID ON AMOUNT SHOWN, BUT IS REQUIRED TO ADJUST HEIGHT OF STUDS AS REQUIRED PER "BEAM PLAN AND ELEVATION" SHEET.

REVISED 07-2015 - CHANGED NOTE 1, CONCRETE PLACEMENT NOTE TO ACCOUNT FOR THE POSSIBLE ADDITION OF A RETARDING ADMIXTURE TO THE CONCRETE.
REVISED 10-2016 - UPDATED ESTIMATED QUANTITY STRUCTURAL STEEL WEIGHT TO INCLUDE SHEAR STUDS AND DIAPHRAGMS FOR BRIDGE LENGTHS 240'-0 TO 340'-0.

10-2016
LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

IOWADOT Highway Division

STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES

ROLLED STEEL BEAM BRIDGES

JUNE, 2010

SUPERSTRUCTURE QUANTITIES 45° SKEW

RS40-035-10