

RESOLUTION OF FINAL PLAN SUBMITTAL FOR
PROJECT NUMBER BRS-SWAP-C050(124)—FF-50

Moved by, Talsma seconded by, Cupples

To sign and approve Final Plans for an April 21, 2020 D.O.T Letting on project BRS-SWAP-C050(124)—FF-50, Pretensioned Prestressed Concrete Beam Bridge on County Road F24 over Indian Creek laying between Sections 34-81N-21W in Clear Creek Township and Section 3-80N-21W in Poweshiek Township, Jasper County, Iowa.

AYES: Carpenter Cupples Talsma

NAYS: _____

Approved this 7th day of January, 2020.

Dennis Carpenter
Dennis Carpenter
Chairman Board of Supervisors

Brandon Talsma
Brandon Talsma
Board of Supervisors

Doug Cupples
Doug Cupples
Board of Supervisors

ATTEST: Dennis Parrott
Dennis Parrott
Jasper County Auditor

JASPER COUNTY

BRIDGE REPLACEMENT

SECTION 404 PERMIT AND CONDITIONS

281.1
10.8.18

Construct this project according to the requirements of U.S. Army Corps of Engineers NATIONWIDE PERMIT 14 CEAWR-CO-2019-0450, Permit No. CEAWR-OD-P-2019-0450. A copy of this permit is available from the Iowa DOT website (<http://www.iowadot.com/ceawr>). The U.S. Army Corps of Engineers reserves the right to visit the site without prior notice.

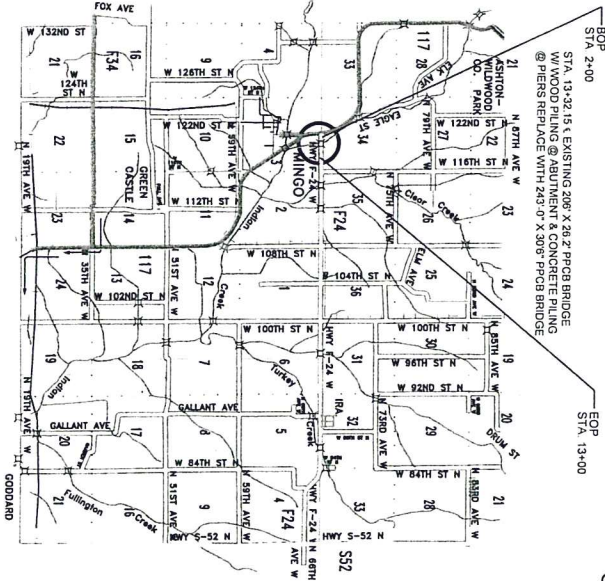
This project is covered by Iowa DNR Floodplain Construction Permit No. (insert Iowa DNR permit number)

REFER TO THE PROPOSAL FORM FOR LIST OF APPLICABLE SPECIFICATIONS

THE CONTRACTOR IS REQUIRED TO CONTACT ONE CALL AT (800) 292-8959 TO OBTAIN LOCATIONS FOR ALL EXISTING UTILITIES

WORKING DRAWINGS, CONSTRUCTION PLANS AND CALCULATIONS SHALL BE CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF IOWA. CONSTRUCTION PLANS SHALL INCLUDE AN ESTIMATE FOR SETTLEMENT OF FORMS, PILING, BRANCHES AND CALCULATIONS ARE TO BE SENT TO JASPER COUNTY ENGINEER

911 NORTH 11TH AVE EAST
NEWTON IOWA 50208



ESTIMATED PROJECT QUANTITIES

NO	ITF	YE	ITEM	UNIT	QUANT
1	21L	.01	CLEARING AND GRUBBING	ACRE	1
2	2102-2710070		EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	4554.81
3	2104-2720020		EXCAVATION, CLASS 10, CHANNEL	CY	257
4	2121-7425020		GRAVULAR SHOULDERS, TYPE B	TON	496
5	2301-0690210		BRIDGE APPROACH, TWO LANE	SY	2145.67
6	2314-9251000		DUST CONTROL SURFACE TREATMENT	STA	7.5
7	2315-92715025		SURFACING, DRIVEWAY, CLASS A CRUSHED STONE	TON	120
8	2401-91745625		REMOVAL OF EXISTING BRIDGE	EACH	1
9	2402-2720000		EXCAVATION, CLASS 20	CY	132
10	2403-0100010		STRUCTURAL CONCRETE (BRIDGE)	LB	433.2
11	2404-7775005		REINFORCING STEEL, EPOXY COATED	LB	100,949
12	2407-0551380		BEAMS PRETENSIONED PRESTRESSED CONCRETE C80	LB	4122
13	2408-7900000		STRUCTURAL STEEL	LB	15
14	2414-6424124		CONCRETE OPEN RAILING, TL-4	LF	540
15	2417-0330024		APPROX. SAFETY SLOPE, 24 IN. DIA.	EACH	130
16	2417-1040024		CULVERT CORRUGATED METAL ENTRANCE PIPE, 24 IN. DIA.	LF	180
17	2501-0201057		PILES, STEEL HP10x57	LF	2250
18	2501-6335010		PREBORED HOLES, 18 @ 10' ABUTMENTS	LF	180
19	2505-4090300		STEEL BEAM GUARDRAIL	LF	150
20	2505-4098410		STEEL BEAM GUARDRAIL, BARRIER TRANS SECTION BA-201	EACH	4
21	2505-4021010		STEEL BEAM GUARDRAIL, END ANCHOR, BOLTED	EACH	4
22	2505-4021710		STEEL BEAM GUARDRAIL, END TERMINAL, LS-625	EACH	4
23	2507-3250005		ENGINEER FABRIC	SY	1100
24	2507-6800081		REVEMENT, CLASS E	TON	892
25	2510-6749590		REMOVAL OF PAVEMENT	SY	2055.2
26	2518-6910000		SAFETY CLOSURE	LS	1
27	2526-8228500		CONSTRUCTION SURVEY	LS	1
28	2528-8445110		TRAFFIC CONTROL	LS	1
29	2533-4980005		MOBILIZATION	LS	1
30	2601-2834100		MULCHING	LS	1
31	2601-2836043		SEED AND FERTILIZE (RURAL)	ACRE	2.2
32	2602-0000020		SILT FENCE	ACRE	2.2
33	2602-0000030		SILT FENCE FOR DITCH CHECKS	LF	1100
34	2602-0000101		MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK	LF	180
35	2602-0000312		PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA. LF STD	LF	1820
36	2602-0010010		MOBILIZATIONS, EMERGENCY EROSION CONTROL	EA	600
37	2602-0010020		MOBILIZATIONS, EMERGENCY EROSION CONTROL	EACH	1

BID ITEM NOTES

- THE CONTRACTING AUTHORITY HAS CUT DOWN TREES GREATER THAN 9" IN DIAMETER DUE TO THE POTENTIAL FOR THESE TREES BEING INHABITED BY THE INDIANA BAT (MYOTIS SODALIS). THE CONTRACTOR WILL BE REQUIRED TO REMOVE THE DOWN TREES, GRUB THE STUMPS AND CLEAR AND GRUB THE REMAINING TREES.
- ANY LIVING, DEAD, CUT OR FALLEN MATERIAL OF THE ASH (FRAXINUS SPP.) INCLUDING TREES, NURSERY STOCK, LOGS, FIREWOOD, STUMPS, BRANCHES, AND COMPOSTED OR UNCOMPOSTED ASH CHIPS CAN BE FREELY MOVED WITHIN THE YELLOW AREAS OF THE MOST RECENT FEDERAL EAB QUARANTINE & AUTHORIZED TRANSIT [HTTPS://WWW.APHIS.USDA.GOV/PLANT_HEALTH/PLANT_PEST_INFO/EMERALD_ASH_BIDOVNIK/ AISIQA/QUARANTINE_MAP.PDF](https://www.aphis.usda.gov/plant_health/plant_pest_info/emerald_ash_birdovnik/aisiqa/quarantine_map.pdf) OBTAIN APPROPRIATE COMPLIANCE AGREEMENTS FROM USDA APHIS PPD PRIOR TO MOVING ANY OF THE ABOVE LISTED ASH ARTICLES TO AREAS OUTSIDE THE YELLOW ZONE ON THE MAP. FOR QUESTIONS, CONCERNS, AND GENERAL ASSISTANCE, CONTACT: USDA APHIS PPD, IOWA OFFICE, 515-414-3295 OR IOWA DEPARTMENT OF AGRICULTURE & LAND STEWARDSHIP 515-725-1470 ENTOMOLOG@IOWAAGRICULTURE.GOV
- TYPE "A" COMPACTION REQUIRED. QUANTITY DOES NOT COMPENSATE FOR SHRINKAGE AFTER ALL AVAILABLE MATERIAL ON SITE HAS BEEN DEPLETED. THE CONTRACTOR SHALL FURNISH ALL REMAINING REQUIRED.
- NO PAYMENT FOR OVERHAUL SHALL BE MADE ON THIS PROJECT.
- INCLUDES COSTS TO EXCAVATE CHANNEL AND SHAPE TO EXTENTS SHOWN ON LONGITUDINAL SECTION ALONG CENTERLINE OF ROADWAY AND THE LIMITS SHOWN ON THE SITUATION PLAN. SUITABLE MATERIAL MAY BE USED TO CONSTRUCT ABUTMENT BERMS. GUARDRAIL BUSTERS OR BE WASTED ON APPROACH ROADWAY FORESLOPES AS DIRECTED BY THE ENGINEER.
- SEE TYPICAL SECTION AND TABULATION SHEET 9.
- SEE TABULATION SHEET 9 AND STANDARD ROAD PLANS BR-102. COARSE AGGREGATE DURABILITY SHALL BE CLASS 3 OR BETTER. CERTIFIED PLANT INSPECTION IS REQUIRED.
- CONTRACTOR TO PROVIDE DUST CONTROL ON WEST 108TH STREET NORTH FROM P24 SOUTH TO HWY 117. CONTRACTOR TO MAINTAIN DUST CONTROL THROUGH THE COMPLETION OF THE PROJECT. METHOD OF MEASUREMENT AND BASIS OF PAYMENT WILL BE ON STATIONS OF APPLICATION.
- SEE SITUATION PLAN SHEET 4 FOR LOCATION OF RELOCATE ENTRANCES. GRANULAR MATERIAL TO BE PLACED AT A THICKNESS OF 4".

JASPER COUNTY

PROJECT NUMBER BRS-SWAP-CO50(124)-FF-50

SHEET 2 OF 14

DESIGN FOR 0° SKEW

**243'-0" x 30'-6" PRETENSIONED
PRESTRESSED CONCRETE BEAM BRIDGE**

INTEGRAL ABUTMENTS TEE PIERS
81'-0" END SPANS 81'-0" INTERIOR SPAN

QUANTITIES

STA. 6+80.98 HWY F24W OVER INDIAN CREEK DECEMBER 2019

JASPER COUNTY
IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION

SPECIFICATIONS
 DESIGN AASH- 'D, 6TH EDITION, WITH INTERIMS THROUGH 2013.
 IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND
 BRIDGE CONSTRUCTION, SERIES 2013, PLUS GENERAL SUPPLEMENTAL SPECIFICATIONS AND APPLICABLE
 SUPPLEMENTAL SPECIFICATIONS, DEVELOPMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS, SHALL APPLY TO
 THE CONSTRUCTION ON THIS PROJECT.

DESIGN STRESSES
 DESIGN STRESSES FOR THE FOLLOWING MATERIALS ARE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN
 SPECIFICATION, 6TH EDITION, WITH INTERIMS THROUGH 2013.
 REINFORCING STEEL IN ACCORDANCE WITH SECTION 5, GRADE 60
 STRUCTURAL STEEL IN ACCORDANCE WITH LRFD AASHTO SECTION 5, ASTM A572 GRADE 50 (AASHTO M270 GRADE
 30) OR ASTM A572
 CONCRETE IN ACCORDANCE WITH LRFD AASHTO SECTION 5, F-C-4.000 PSI EXCEPT PRESTRESSED BEAM CONCRETE
 AS NOTED
 PRESTRESSED STEEL SEE SHEETS H24-32.08 PRESTRESSED CONCRETE SEE SHEETS H24-32.06

GENERAL NOTES
 THIS DESIGN IS FOR A 243'-0" x 30'-6" PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE ON HWY F24 WEST
 OVER INDIAN CREEK IN JASPER COUNTY, IOWA.
 THIS BRIDGE IS DESIGNED FOR HL-93 LOADING PLUS 20 LBS PER SQ FT OF ROADWAY FOR FUTURE WEARING
 SURFACE.

ACCESS SHALL BE MAINTAINED TO INDIVIDUAL PROPERTIES DURING CONSTRUCTION THIS WORK SHALL BE
 CONSIDERED INCIDENTAL TO THE PROJECT.
 THE PRIME CONTRACTOR SHALL EMPLOY CONTROLS TO REDUCE THE EROSIONNESS OF LAND ADJACENT TO
 SURFACE WATERS AND WETLANDS, INCLUDING ESTABLISHMENT AND MAINTENANCE OF EROSION CONTROL DURING
 AND AFTER CONSTRUCTION AND REVEGETATION OF ALL DISTURBED AREAS UPON PROJECT COMPLETION. THE
 PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF ALL EROSION CONTROL MEASURES.

STANDARD ROAD PLANS ARE AVAILABLE FROM THE IOWA DEPARTMENT OF TRANSPORTATION WEBSITE
<http://www.iowadot.gov/index.html>

UTILITY NOTES
 SEE SECTION 1107.15 OF THE STANDARD SPECIFICATION REGARDING UTILITY COORDINATION

WASTE AND DISPOSAL NOTES
 MATERIALS BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE WASTE AREAS OR DISPOSAL SITES FOR EXCESS
 MATERIALS FROM THIS PROJECT. EXCESS MATERIALS WHICH IS NOT DESIRABLE TO BE INCORPORATED INTO
 THE WORK INVOLVED ON THIS PROJECT, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT AREAS
 (INCLUDING HAUL ROADS) SELECTED FOR WASTE OR DISPOSAL NOT IMPAIR STREAM BANKS, STREAM BEDS OR
 GRAVES OR 2) WETLANDS OR WATERS OF THE U.S., INCLUDING STREAMS OR STREAM BANKS, STREAM BEDS OR
 ORDINARY HIGH WATER MARK, WITHOUT AN APPROVED U.S. ARMY CORPS OF ENGINEERS SECTION 404 PERMIT
 NO PAYMENT FOR OVERHAUL WILL BE ALLOWED FOR MATERIAL HAULED TO THESE SITES. NO MATERIAL SHALL BE
 PLACED WITHIN THE RIGHT-OF-WAY, UNLESS SPECIFICALLY STATED IN THE PLANS OR APPROVED BY THE
 ENGINEER.

HAZARDOUS MATERIALS NOTES
 THE CONTRACTOR SHALL CONDUCT THEIR OPERATIONS IN SUCH A MANNER THAT ANY PAINT REMOVED
 DURING REMOVAL OF EXISTING STRUCTURES SHALL BE COLLECTED AND DISPOSED OF IN ACCORDANCE WITH SECTION 2508 OF THE
 STANDARD SPECIFICATIONS.
 BEFORE DELIVERY OF ANY SCRAP STEEL, THE CONTRACTOR SHALL PROVIDE A WRITTEN NOTICE TO THE
 RECEIVING FACILITY. THIS NOTICE SHALL AT A MINIMUM INCLUDE:
 1. A NOTICE THAT THE SCRAP STEEL IS COATED WITH PAINT THAT HAS REGULATED MATERIALS AT LEVELS THAT
 COULD BE HAZARDOUS TO EMPLOYEES OR THE ENVIRONMENT.
 2. A COPY OF THE SCRAP SAMPLE PROVIDED IN THE CONTRACT DOCUMENTS.
 3. A SIGNATURE BLOCK FOR THE RECEIVING FACILITY TO CONFIRM THEIR RECEIPT OF THIS INFORMATION. A
 COPY OF THIS NOTICE, SIGNED BY THE RECEIVING FACILITY, SHALL BE RETURNED TO THE ENGINEER BEFORE ANY
 REMOVAL AND DISPOSAL REQUIREMENTS WILL BE INCIDENTAL TO REMOVAL OF EXISTING BRIDGE.

STREAM CROSSING NOTES
 THE CONTRACTOR IS ENCOURAGED TO CONDUCT CONSTRUCTION ACTIVITIES DURING A PERIOD OF LOW FLOW.
 ANY TEMPORARY CROSSINGS SHALL INCLUDE ENOUGH CULVERTS TO ACCOMMODATE LOW FLOWS AND MUST BE
 REMOVED AFTER COMPLETION OF WORK ON THIS PROJECT. TEMPORARY STREAM CROSSINGS SHALL BE
 CONSTRUCTED IN ACCORDANCE WITH STANDARD ROAD PLAN EW-401. THE COST OF INSTALLATION, MAINTENANCE
 AND REMOVAL OF TEMPORARY CROSSINGS INCLUDING CULVERTS, SHALL BE INCLUDED IN THE PRICE BID FOR
 MOBILIZATION. FOR HANDLING AND CONVEYING MATERIALS DURING CONSTRUCTION SHALL BE OPERATED TO
 PRESENT SHAPING OR SPREADING OF THE STREAM BEDS, STREAMS OR WETLANDS.
 CARE SHALL BE TAKEN TO PREVENT ANY PETROLEUM PRODUCTS, CHEMICALS OR OTHER DELETERIOUS
 MATERIALS FROM ENTERING WATERBODIES, STREAMS OR WETLANDS.
 CONSTRUCTION EQUIPMENT ACTIVITIES AND MATERIALS SHALL BE KEPT OUT OF THE STREAMS, WATERBODIES
 AND WETLANDS TO THE MAXIMUM EXTENT POSSIBLE.

JASPER COUNTY

PILE AND REINFORCING STEEL NOTES
 CRETE FORMS ARE TO REMAIN IN PLACE 5 DAYS OR LONGER IN ACCORDANCE WITH ARTICLE 2403.03, 1.2 OF
 IOWA STANDARD SPECIFICATIONS, EXCEPT THE MINIMUM CONCRETE FLEXURAL STRENGTH REQUIRED BEFORE
 REMOVAL OF FORMS SHALL BE 575 PSI.
 ALL REINFORCING STEEL SHALL BE SECURELY WIRED IN PLACE BEFORE CONCRETE IS PLACED. BAR CHAIRS
 ACCORDANCE WITH TABLE 330.0 CENTERS IN EITHER DIRECTION SHALL BE USED TO SUPPORT ALL REINFORCING IN
 CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING BAR IS TO BE 2" UNLESS OTHERWISE
 NOTED OR SHOWN.
 ALL EXPOSED CORNERS 90 DEGREES OR SHARPER ARE TO BE FILLETED WITH A 3/4" DRESSED AND BEVELED
 STEP.
 ALL REINFORCING BARS AND BARS NOTED AS DOVELS SUPPLIED FOR THIS STRUCTURE SHALL BE DEFORMED
 REINFORCEMENT UNLESS OTHERWISE NOTED OR SHOWN.
 KEYWAY DIMENSIONS SHOWN ON THE PLANS ARE BASED ON NOMINAL DIMENSIONS UNLESS STATED
 OTHERWISE. IN ADDITION BEVEL USED ON THE KEYWAY SHALL BE LIMITED TO A MAXIMUM OF 10 DEGREES FROM
 THE VERTICAL.

CONTRACTOR'S WORK AREA
 THE CONTRACTOR'S WORK AND MATERIAL STORAGE AREA SHALL BE DEFINED BY THE CONTRACTOR AND NOTED
 RETURN IT TO ITS ORIGINAL CONDITION. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE CONTRACTOR'S AREA
 BEING AND FERTILIZING (RURAL) AND MULCHING. BID ITEMS AREAS OUTSIDE THE CONTRACTOR'S AREA OR
 MANAGED BY THE CONTRACTOR SHALL BE REPAIRED TO THEIR ORIGINAL CONDITION AS DETERMINED BY THE
 ENGINEER. NO ADDITIONAL PAYMENT WILL BE AUTHORIZED FOR THIS WORK.
 PILE NOTES
 SOUNDING AND TEST BORING DATA SHOWN ON PLANS WERE ACCUMULATED FOR DESIGNING AND ESTIMATING PURPOSES
 TO BE USED IN CONJUNCTION WITH THE PLANS DOES NOT CONSTITUTE A GUARANTEE THAT CONDITIONS OTHER THAN INDICATED WILL NOT
 BE ENCOUNTERED. THIS PROJECT USES THE LOAD AND RESISTANCE FACTOR DESIGN (LRFD) METHODOLOGY FOR DETERMINING PILE CONTRACT
 LENGTH AND NOMINAL AXIAL BEARING RESISTANCE. NOMINAL AXIAL BEARING RESISTANCES WILL BE LARGER THAN BEARING
 VALUES IN THE PAST, BUT CONSTRUCTION CONTROL, HOWEVER, SHALL BE APPROXIMATELY THE SAME.
 A WEAP ANALYSIS AND BEARING GRAPH WILL BE PREPARED BY THE CONTRACTING AUTHORITY THAT GIVES THE
 RELATIONSHIPS BETWEEN REQUIRED NOMINAL AXIAL BEARING RESISTANCE AND BLOW COUNT.

ABUTMENT PILES
 THE CONTRACT LENGTH OF 65 FEET FOR THE ABUTMENT PILES IS BASED ON A MIXED SOIL CLASSIFICATION, A TOTAL FACTORED
 FACTOR LOAD PER PILE (PL) OF 138 KIPS, AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.65 FOR SOIL AND
 0.70 FOR ROCK END BEARING. RESISTANCE FOR CONSTRUCTION CONTROL WAS DETERMINED FROM A COHESIVE SOIL
 CLASSIFICATION AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.65 FOR SOIL AND 0.70 FOR ROCK END BEARING.
 THE REQUIRED NOMINAL AXIAL BEARING RESISTANCE FOR ABUTMENT PILES IS 103 TONS AT END OF DRIVER RETAPS. THE
 PILE CONTRACT LENGTH SHALL BE DRIVEN AS PER PLAN UNLESS PILES REACH REFUSAL. CONSTRUCTION CONTROL
 REQUIRES A WEAP ANALYSIS WITH BEARING GRAPH.

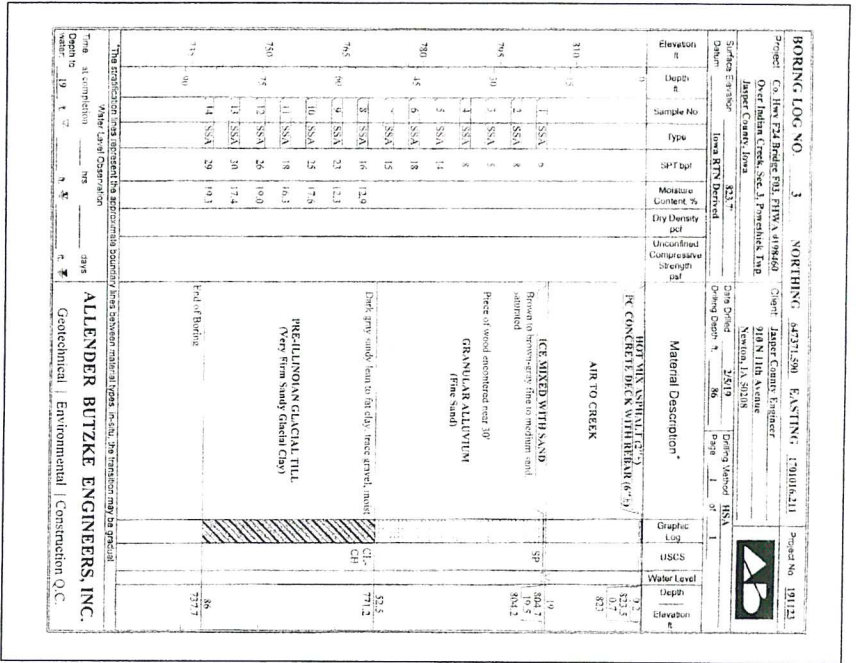
PIER FOOTING PILES
 THE CONTRACT LENGTH OF 45 FEET FOR THE PIER PILES IS BASED ON A MIXED SOIL CLASSIFICATION, A TOTAL FACTORED
 AXIAL FACTOR LOAD PER PILE (PL) OF 143 KIPS, AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.66 FOR SOIL AND 0.70 FOR
 ROCK END BEARING. RESISTANCE FOR CONSTRUCTION CONTROL WAS DETERMINED FROM A COHESIVE SOIL
 CLASSIFICATION AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.65 FOR SOIL AND 0.70 FOR ROCK END BEARING.
 PILES ARE ASSUMED TO BE DRIVEN FROM A START ELEVATION AT THE BOTTOM OF FOOTING.
 THE REQUIRED NOMINAL AXIAL BEARING RESISTANCE FOR ABUTMENT PILES IS 103 TONS AT END OF DRIVE OR RETAP. THE
 PILE CONTRACT LENGTH SHALL BE DRIVEN AS PER PLAN UNLESS PILES REACH REFUSAL. CONSTRUCTION CONTROL
 REQUIRES A WEAP ANALYSIS WITH BEARING GRAPH.

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JASPER COUNTY
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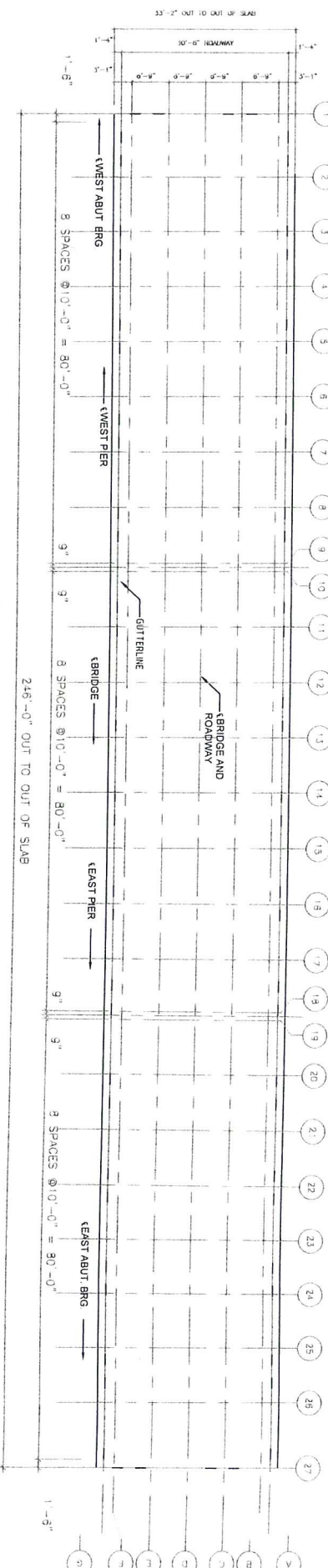
BORING LOG NO. 1										
NORTHING 487295.8 EASTING 170955.40										
Project: C.A. Hwy F24 Bridge Pk1, HWY A 170954.0										
Over Indian Creek, Sec. 1, Potosi, Mo										
Jasper County, Iowa										
Client: Jasper County Engineer										
310 N 11th Avenue										
Newton, IA 50208										
Contract No. 2410										
Contract Admin: HSA										
Date of Report: 2/4/10										
Drawn by: J. J. ...										
Checked by: ...										
Elevation #	Depth #	Sample No.	Type	SPT Blt	Moisture Content %	Dry Density pcf	Unclassified Compressive Strength psi	Material Description	Graphic Log	USCS
810	13	1	SP	14.2	11.3	140		HOT MIX ASPHALT (R-3)		CL
		2	ST	17.5	10.8	200		CRUSHED ROCK WITH SAND (R-3)		CL
		3	ST	18.3	10.9	146		Fill		CL
		4	SSA					Very dark brown silty clay with 2% sand		SP
		5	SSA					Dark brown silty clay with 2% sand		SP
		6	SSA					Dark brown silty clay with 2% sand		SP
		7	SSA					Dark brown silty clay with 2% sand		SP
		8	SSA					Dark brown silty clay with 2% sand		SP
		9	SSA					Dark brown silty clay with 2% sand		SP
		10	SSA					Dark brown silty clay with 2% sand		SP
		11	SSA					Dark brown silty clay with 2% sand		SP
		12	SSA					Dark brown silty clay with 2% sand		SP
		13	SSA					Dark brown silty clay with 2% sand		SP
		14	SSA					Dark brown silty clay with 2% sand		SP
		15	SSA					Dark brown silty clay with 2% sand		SP
		16	SSA					Dark brown silty clay with 2% sand		SP
		17	SSA					Dark brown silty clay with 2% sand		SP
		18	SSA					Dark brown silty clay with 2% sand		SP
		19	SSA					Dark brown silty clay with 2% sand		SP
		20	SSA					Dark brown silty clay with 2% sand		SP
		21	SSA					Dark brown silty clay with 2% sand		SP
		22	SSA					Dark brown silty clay with 2% sand		SP
		23	SSA					Dark brown silty clay with 2% sand		SP
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		31	SSA					Dark brown silty clay with 2% sand		SP
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		38	SSA					Dark brown silty clay with 2% sand		SP
		39	SSA					Dark brown silty clay with 2% sand		SP
		40	SSA					Dark brown silty clay with 2% sand		SP
		41	SSA					Dark brown silty clay with 2% sand		SP
		42	SSA					Dark brown silty clay with 2% sand		SP
		43	SSA					Dark brown silty clay with 2% sand		SP
		44	SSA					Dark brown silty clay with 2% sand		SP
		45	SSA					Dark brown silty clay with 2% sand		SP
		46	SSA					Dark brown silty clay with 2% sand		SP
		47	SSA					Dark brown silty clay with 2% sand		SP
		48	SSA					Dark brown silty clay with 2% sand		SP
		49	SSA					Dark brown silty clay with 2% sand		SP
		50	SSA					Dark brown silty clay with 2% sand		SP
		51	SSA					Dark brown silty clay with 2% sand		SP
		52	SSA					Dark brown silty clay with 2% sand		SP
		53	SSA					Dark brown silty clay with 2% sand		SP
		54	SSA					Dark brown silty clay with 2% sand		SP
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		56	SSA					Dark brown silty clay with 2% sand		SP
		57	SSA					Dark brown silty clay with 2% sand		SP
		58	SSA					Dark brown silty clay with 2% sand		SP
		59	SSA					Dark brown silty clay with 2% sand		SP
		60	SSA					Dark brown silty clay with 2% sand		SP
		61	SSA					Dark brown silty clay with 2% sand		SP
		62	SSA					Dark brown silty clay with 2% sand		SP
		63	SSA					Dark brown silty clay with 2% sand		SP
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		65	SSA					Dark brown silty clay with 2% sand		SP
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		70	SSA					Dark brown silty clay with 2% sand		SP
		71	SSA					Dark brown silty clay with 2% sand		SP
		72	SSA					Dark brown silty clay with 2% sand		SP
		73	SSA					Dark brown silty clay with 2% sand		SP
		74	SSA					Dark brown silty clay with 2% sand		SP
		75	SSA					Dark brown silty clay with 2% sand		SP
		76	SSA					Dark brown silty clay with 2% sand		SP
		77	SSA					Dark brown silty clay with 2% sand		SP
		78	SSA					Dark brown silty clay with 2% sand		SP
		79	SSA					Dark brown silty clay with 2% sand		SP
		80	SSA					Dark brown silty clay with 2% sand		SP
		81	SSA					Dark brown silty clay with 2% sand		SP
		82	SSA					Dark brown silty clay with 2% sand		SP
		83	SSA					Dark brown silty clay with 2% sand		SP
		84	SSA					Dark brown silty clay with 2% sand		SP
		85	SSA					Dark brown silty clay with 2% sand		SP
		86	SSA					Dark brown silty clay with 2% sand		SP
		87	SSA					Dark brown silty clay with 2% sand		SP
		88	SSA					Dark brown silty clay with 2% sand		SP
		89	SSA					Dark brown silty clay with 2% sand		SP
		90	SSA					Dark brown silty clay with 2% sand		SP
		91	SSA					Dark brown silty clay with 2% sand		SP
		92	SSA					Dark brown silty clay with 2% sand		SP
		93	SSA					Dark brown silty clay with 2% sand		SP
		94	SSA					Dark brown silty clay with 2% sand		SP
		95	SSA					Dark brown silty clay with 2% sand		SP
		96	SSA					Dark brown silty clay with 2% sand		SP
		97	SSA					Dark brown silty clay with 2% sand		SP
		98	SSA					Dark brown silty clay with 2% sand		SP
		99	SSA					Dark brown silty clay with 2% sand		SP
		100	SSA					Dark brown silty clay with 2% sand		SP

BORING LOG NO. 2										
NORTHING 487291.170 EASTING 170946.57										
Project: C.A. Hwy F24 Bridge Pk1, HWY A 170946.0										
Over Indian Creek, Sec. 1, Potosi, Mo										
Jasper County, Iowa										
Client: Jasper County Engineer										
310 N 11th Avenue										
Newton, IA 50208										
Contract No. 2410										
Contract Admin: HSA										
Date of Report: 2/4/10										
Drawn by: J. J. ...										
Checked by: ...										
Elevation #	Depth #	Sample No.	Type	SPT Blt	Moisture Content %	Dry Density pcf	Unclassified Compressive Strength psi	Material Description	Graphic Log	USCS
810	15	1	SP	12.2	10.7	140		HOT MIX ASPHALT (R-3)		CL
		2	ST	17.5	10.8	200		CRUSHED ROCK WITH SAND (R-3)		CL
		3	ST	18.3	10.9	146		Fill		CL
		4	SSA					Very dark brown silty clay with 2% sand		SP
		5	SSA					Dark brown silty clay with 2% sand		SP
		6	SSA					Dark brown silty clay with 2% sand		SP
		7	SSA					Dark brown silty clay with 2% sand		SP
		8	SSA					Dark brown silty clay with 2% sand		SP
		9	SSA					Dark brown silty clay with 2% sand		SP
		10	SSA					Dark brown silty clay with 2% sand		SP
		11	SSA					Dark brown silty clay with 2% sand		SP
		12	SSA					Dark brown silty clay with 2% sand		SP
		13	SSA					Dark brown silty clay with 2% sand		SP
		14	SSA					Dark brown silty clay with 2% sand		SP
		15	SSA					Dark brown silty clay with 2% sand		SP
		16	SSA					Dark brown silty clay with 2% sand		SP
		17	SSA					Dark brown silty clay with 2% sand		SP
		18	SSA					Dark brown silty clay with 2% sand		SP
		19	SSA					Dark brown silty clay with 2% sand		SP
		20	SSA					Dark brown silty clay with 2% sand		SP
		21	SSA					Dark brown silty clay with 2% sand		SP
		22	SSA					Dark brown silty clay with 2% sand		SP
		23	SSA					Dark brown silty clay with 2% sand		SP
		24	SSA					Dark brown silty clay with 2% sand		SP
		25	SSA					Dark brown silty clay with 2% sand		SP
		26	SSA					Dark brown silty clay with 2% sand		SP
		27	SSA					Dark brown silty clay with 2% sand		SP
		28	SSA					Dark brown silty clay with 2% sand		SP
		29	SSA					Dark brown silty clay with 2% sand		SP
		30	SSA					Dark brown silty clay with 2% sand		SP
		31	SSA					Dark brown silty clay with 2% sand		SP
		32	SSA					Dark brown silty clay with 2% sand		SP
		33	SSA					Dark brown silty clay with 2% sand		SP
		34	SSA					Dark brown silty clay with 2% sand		SP
		35	SSA					Dark brown silty clay with 2% sand		SP
		36	SSA					Dark brown silty clay with 2% sand		SP
		37	SSA					Dark brown silty clay with 2% sand		SP
		38	SSA					Dark brown silty clay with 2% sand		SP
		39	SSA					Dark brown silty clay with 2% sand		SP
		40	SSA							

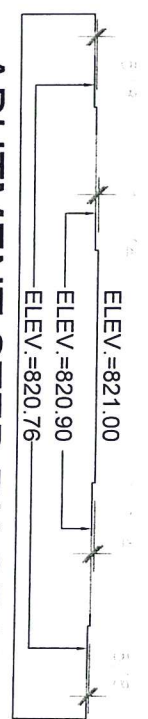


TOP OF DECK ELEVATIONS

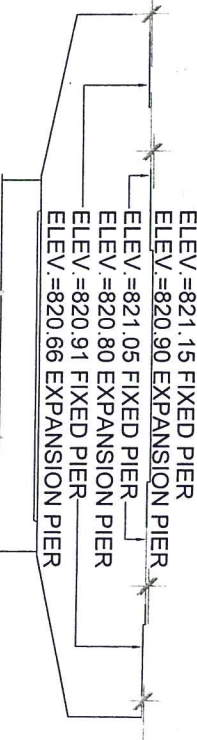
LOCATION	C.L. W/ ABUT BRG	LINE 2	LINE 3	LINE 4	LINE 5	LINE 6	LINE 7	LINE 8	LINE 9	LINE 10	LINE 11	LINE 12	LINE 13	LINE 14	LINE 15	LINE 16	LINE 17	LINE 18	LINE 19	LINE 20	LINE 21	LINE 22	LINE 23	LINE 24	LINE 25	LINE 26	LINE 27	C.L. E ABUT BRG	
NORTH GUTTER LINE	825.56	825.56	825.56	825.56	825.56	825.56	825.56	825.56	825.56	825.56	825.56	825.56	825.56	825.56	825.56	825.56	825.56	825.56	825.56	825.56	825.56	825.56	825.56	825.56	825.56	825.56	825.56	825.56	
BEAM LINE A	825.59	825.59	825.59	825.59	825.59	825.59	825.59	825.59	825.59	825.59	825.59	825.59	825.59	825.59	825.59	825.59	825.59	825.59	825.59	825.59	825.59	825.59	825.59	825.59	825.59	825.59	825.59	825.59	825.59
BEAM LINE B	825.73	825.73	825.73	825.73	825.73	825.73	825.73	825.73	825.73	825.73	825.73	825.73	825.73	825.73	825.73	825.73	825.73	825.73	825.73	825.73	825.73	825.73	825.73	825.73	825.73	825.73	825.73	825.73	825.73
CROWN LINE	825.83	825.83	825.83	825.83	825.83	825.83	825.83	825.83	825.83	825.83	825.83	825.83	825.83	825.83	825.83	825.83	825.83	825.83	825.83	825.83	825.83	825.83	825.83	825.83	825.83	825.83	825.83	825.83	825.83
BEAM LINE C	825.93	825.93	825.93	825.93	825.93	825.93	825.93	825.93	825.93	825.93	825.93	825.93	825.93	825.93	825.93	825.93	825.93	825.93	825.93	825.93	825.93	825.93	825.93	825.93	825.93	825.93	825.93	825.93	825.93
BEAM LINE D	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99
BEAM LINE E	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99	825.99
SOUTH GUTTER LINE	825.96	825.96	825.96	825.96	825.96	825.96	825.96	825.96	825.96	825.96	825.96	825.96	825.96	825.96	825.96	825.96	825.96	825.96	825.96	825.96	825.96	825.96	825.96	825.96	825.96	825.96	825.96	825.96	825.96



ABUTMENT STEP DIAGRAM (LOOKING EAST)



PIER STEP DIAGRAM (LOOKING EAST)



JASPER COUNTY

PROJECT NUMBER BRS-SWAP-CO50(124)-FF-50

DESIGN FOR 0° SKEW
 PRESTRESSED CONCRETE BEAM BRIDGE
 INTEGRAL ABUTMENTS
 81'-0" END SPANS
 SUPERSTRUCTURE DETAILS
 81'-0" INTERIOR SPAN
 STA. 6+80.98 HWY F24W/OVER INDIAN CREEK DECEMBER 2019
 IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION
 JASPER COUNTY

STEEL BEAM GUARDRAIL AT CONCRETE BARRIER OR BRIDGE FULL END SECTION
 Refer to BA-200, BA-201, BA-202, BA-203, BA-204, BA-205, BA-210, BA-211, BA-212, BA-213, BA-214 and ST-211.

No.	Location	Offset	Layout Lengths			Long Span System	Dimensions and Object Markers			Bolted End Markings	Barrier Section	Steel Beam (Guardrail) Standard	End Terminal	Post-Adapter
			V1	V2	V3		ST-211	ST-172	ST-173					
1	BA-200	0	15.79	31.52	25.08	0.00	30.0	STATION	TYPE	TYPE	TYPE	TYPE	TYPE	TYPE
2	BA-201	0	15.79	31.52	25.08	0.00	30.0	TYPE 1	TYPE 2	TYPE 3	TYPE 4	TYPE 5	TYPE 6	
3	BA-202	0	15.79	31.52	25.08	0.00	30.0	TYPE 1	TYPE 2	TYPE 3	TYPE 4	TYPE 5	TYPE 6	
4	BA-203	0	15.79	31.52	25.08	0.00	30.0	TYPE 1	TYPE 2	TYPE 3	TYPE 4	TYPE 5	TYPE 6	

GRADING FOR GUARDRAIL INSTALLATIONS

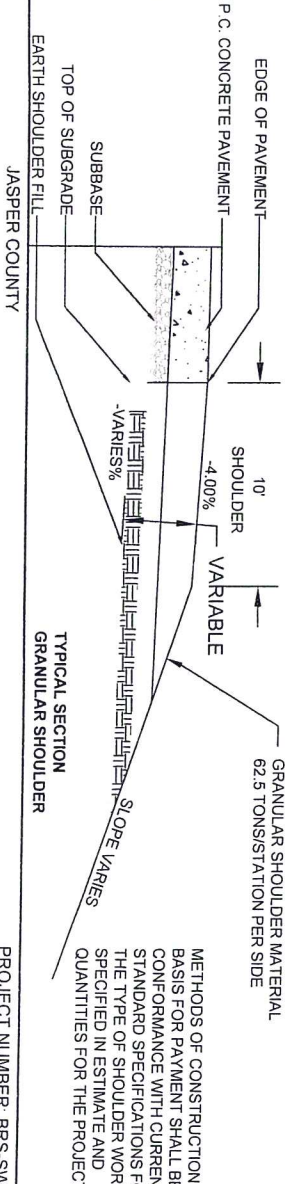
No.	Location	Station	Side	Foregoing at Guardrail			Dimensions (feet)			Excavation in Place	Equipment
				Length	Non-plant Area	Single Pavement Area	Approach	Fixed or Abutting Pavement	Approach		
1	N	8+30.98	L	31.1	52.5	0.3	77.4	2.8	127.4	4.8	18.0
2	S	8+30.98	R	31.1	52.5	0.3	77.4	2.8	127.4	4.8	18.0
3	N	5+50.98	L	31.1	52.5	0.3	77.4	2.8	127.4	4.8	18.0
4	S	5+50.98	R	31.1	52.5	0.3	77.4	2.8	127.4	4.8	18.0

BRIDGE APPROACH SECTION

Bridge Station	Location	Slew Ahead	Degrees	Approach Pavement			Standard Road Plans			Subdrain	Remarks
				Pay Length	Non-plant Area	Single Pavement Area	BR-102	BR-102	BR-102		
6+80.98	E	0	0	10	433.21	104.47	73.52	BR-102	BR-102	BR-102	43
6+80.98	W	0	0	10	359.48	904.16	73.52	BR-102	BR-102	BR-102	43

REMOVAL OF PAVEMENT

Begin Station	End Station	Slide	Pavement Type	Area	Area	Area	Remarks
2+00.00	5+50.00	RT	ASPH/CC	882.52	958.61	24.0	
8+22.48	12+31.70	RT	ASPH/CC	386.28	1096.59	24.0	



PROJECT NUMBER: BRS-SWAP-C050(124)-FF-50

SAFETY CLOSURES

Refer to Section 210 for Standard Specifications
 IOWA STATE HIGHWAY DEPARTMENT
 SECTION: 2+00.00 TO 12+31.70
 ROAD TYPE: 2-LANE DIVIDED HWY
 CLOSURE TYPE: 2-LANE DIVIDED HWY
 CLOSURE DATE: 08/25/10
 EST. TO: 08/25/10

GRANULAR SHOULDER

Station	Begin	End	Slide	Width	Depth	Remarks
2+00.00	5+50.00	RT	RT	8	6	
8+22.48	12+31.70	RT	RT	8	6	

Total Volume Table

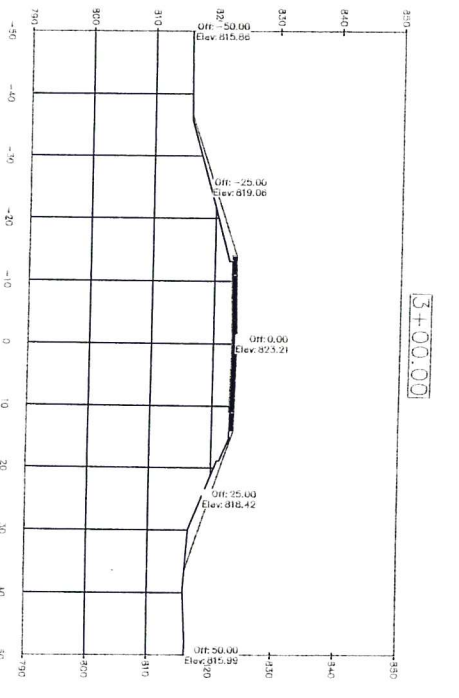
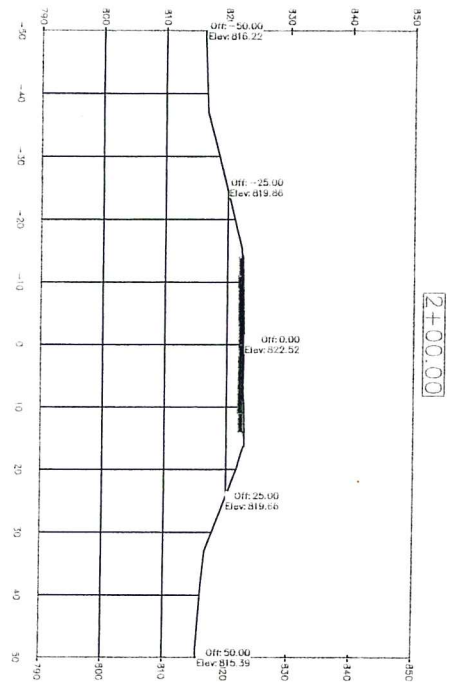
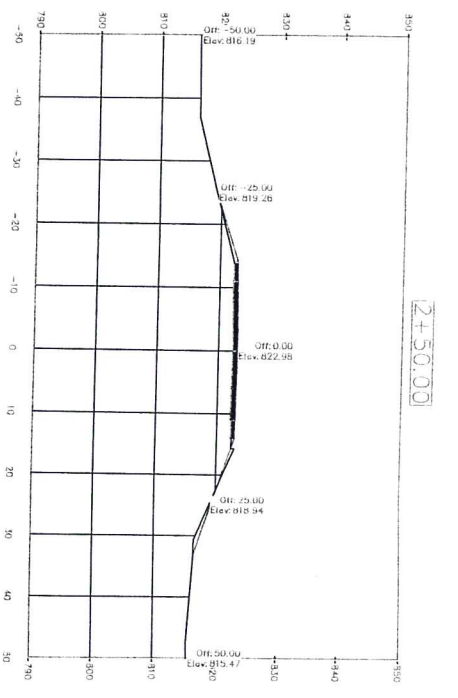
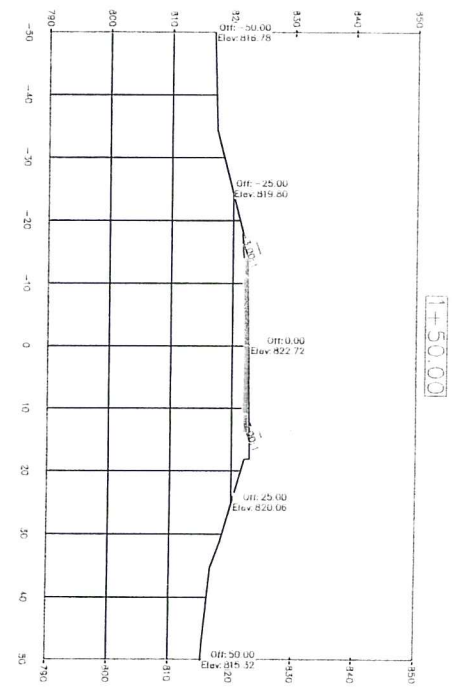
Station	Cur Area	Fill Area	Cut Vol	Fill Vol	Cum Cut Vol	Cum Fill Vol	Net Vol
0+50.00	19.15	0.37	0.00	0.00	0.00	0.00	0.00
1+00.00	1.66	3.62	18.71	3.69	18.71	3.69	15.02
1+50.00	0.20	0.76	19.77	4.06	39.48	7.75	30.74
2+00.00	3.17	3.03	21.72	4.35	60.21	12.09	48.12
2+50.00	0.25	10.78	3.17	13.62	63.38	25.71	37.67
3+00.00	5.40	30.57	5.23	48.62	68.61	72.33	3.72
3+50.00	0.60	102.54	5.00	131.42	73.61	203.75	-130.14
4+00.00	0.00	140.31	0.00	324.87	73.61	428.62	-355.00
4+50.00	0.00	128.59	0.00	249.35	73.61	677.97	-604.36
5+00.00	0.00	138.29	0.00	220.64	73.61	910.61	-836.40
5+50.00	0.00	138.29	0.00	220.65	73.61	1150.66	-1077.05
6+00.00	0.00	0.00	0.00	128.04	73.61	1278.71	-1205.09
7+00.00	0.00	0.00	0.00	0.00	73.61	1278.71	-1205.09
7+50.00	0.00	0.00	0.00	0.00	73.61	1278.71	-1205.09
8+00.00	0.00	449.22	0.00	415.95	73.61	1594.65	-1621.04
8+50.00	0.00	154.48	0.00	558.98	73.61	2253.64	-2180.02
9+00.00	0.00	169.75	0.00	300.21	73.61	2553.85	-2480.24
9+50.00	0.00	246.01	0.00	394.97	73.61	2948.82	-2865.20
10+00.00	0.00	212.67	0.00	424.14	73.61	3363.96	-3289.34
10+50.00	1.49	112.67	1.38	359.24	75.00	3719.19	-3644.20
11+00.00	7.94	101.04	8.73	253.44	83.73	3972.64	-3889.31
11+50.00	13.79	83.21	20.12	170.00	103.85	4142.24	-4039.39
12+00.00	16.52	72.54	28.07	144.21	131.91	4297.46	-4155.54
12+50.00	5.75	74.38	20.51	156.03	152.43	4423.48	-4270.56
13+00.00	25.88	0.30	29.28	05.14	181.81	4459.63	-4310.82
13+50.00	5.11	1.13	28.69	1.32	210.50	4489.94	-4323.34
14+00.00	16.06	17.64	19.60	17.06	230.10	4511.00	-4281.50
14+50.00	16.84	21.47	30.46	20.97	250.57	4544.09	-4287.53
15+00.00	22.31	7.19	36.25	25.54	276.82	4574.63	-4277.81
15+50.00	1.90	3.97	22.43	10.06	319.24	4584.59	-4255.45
16+00.00	12.78	4.04	13.68	7.14	332.82	4591.83	-4251.91
16+50.00	35.71	12.96	44.68	15.74	377.70	4607.57	-4252.99

DESIGN FOR 0° SKEW

**243'-0" X 30'-6" PRETENSIONED
 PRESTRESSED CONCRETE BEAM BRIDGE**

INTEGRAL ABUTMENTS
 81'-0" END SPANS
 TABULATIONS
 TEE PIERS
 81'-0" INTERIOR SPAN

JASPER COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION
 STA. 6+80.98 HWY P24W OVER INDIAN CREEK DECEMBER 2019

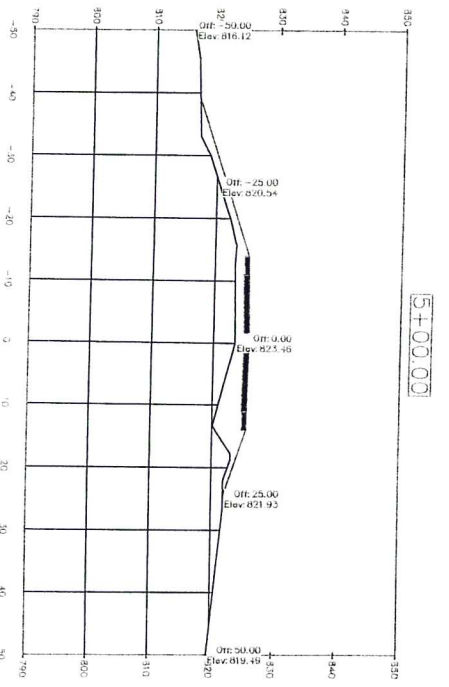
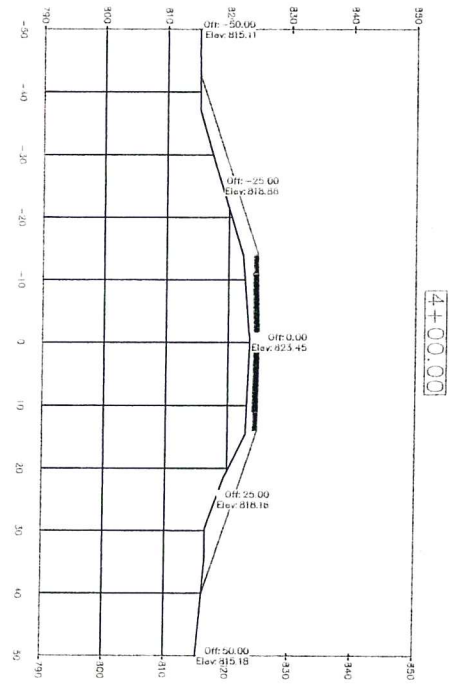
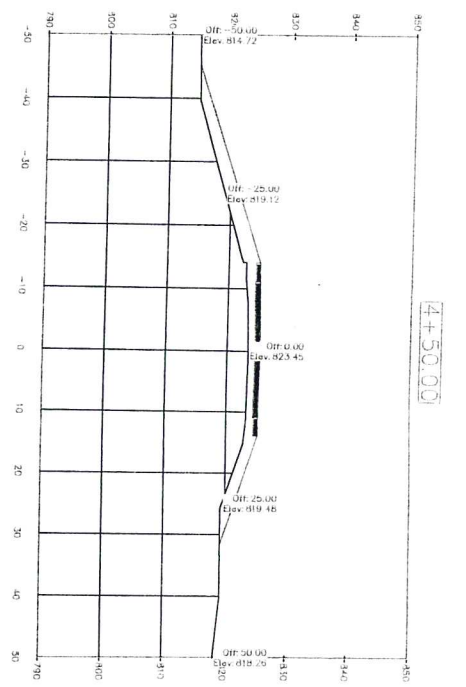
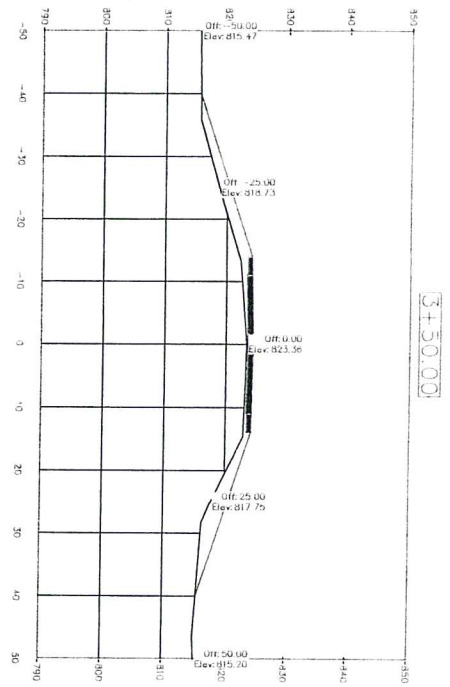


JASPER COUNTY

PROJECT NUMBER: BRS-SWAP-C050(124)-FF-50

SHEET 10 OF 14

DESIGN FOR 0' SKEW
 24.3'-0" X 30'-6" PRETENSIONED
 PRESTRESSED CONCRETE BEAM BRIDGE
 INTEGRAL ABUTMENTS
 81'-0" END SPANS
 CROSS SECTIONS
 81'-0" INTERIOR SPAN
 STA. 6+80.98 HWY F24W OVER INDIAN CREEK DECEMBER 2019
 JASPER COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION

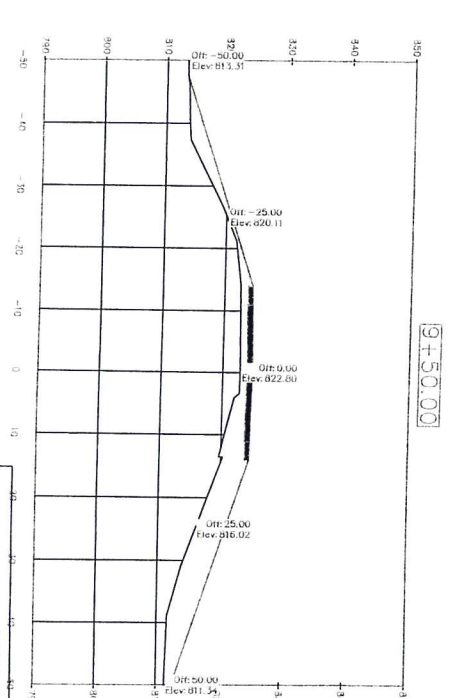
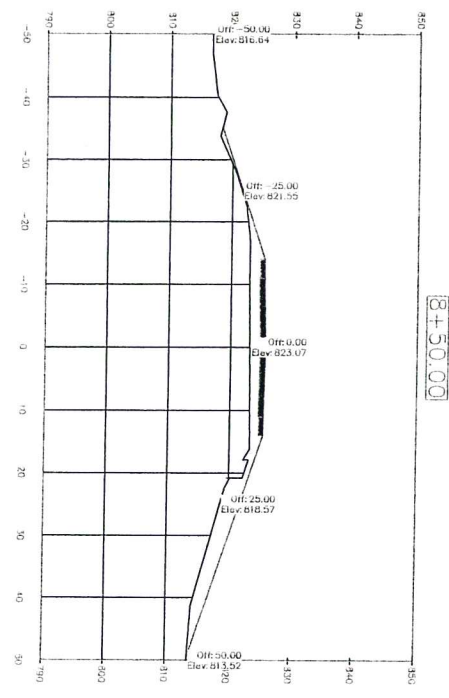
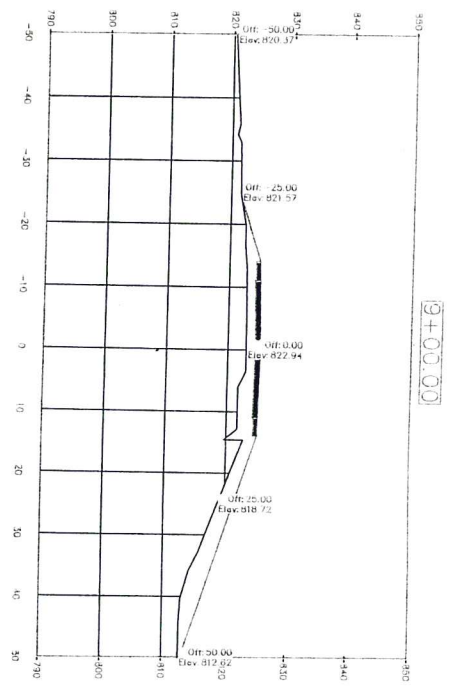
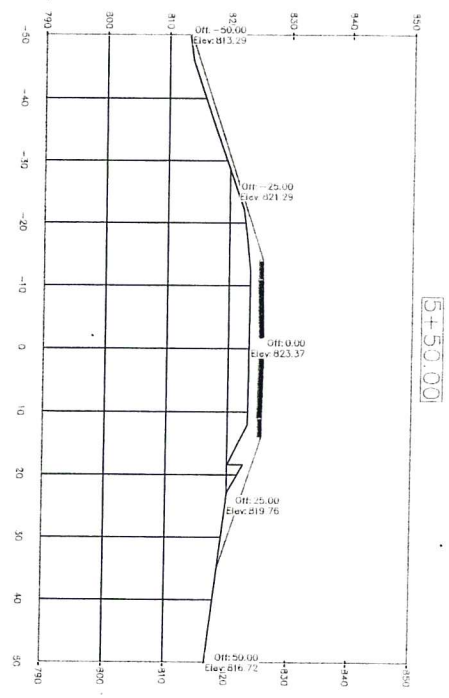


JASPER COUNTY

PROJECT NUMBER: BRS-SWAP-CO50(124)-FF-50

SHEET 11 OF 14

DESIGN FOR 0° SKEW
 24.3'-0" x 30'-6" PRETENSIONED
 PRESTRESSED CONCRETE BEAM BRIDGE
 INTEGRAL ABUTMENTS
 81'-0" END SPANS
 CROSS SECTIONS
 81'-0" INTERIOR SPAN
 TEE PIERS
 JASPER COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION
 STA.6+80.98 HWY F24W OVER INDIAN CREEK DECEMBER 2019

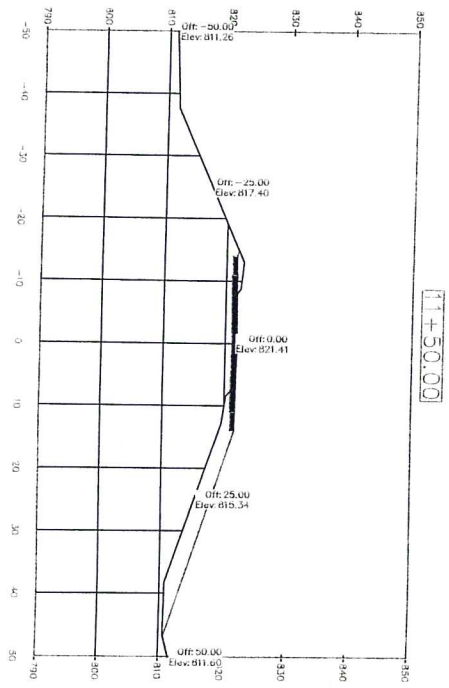
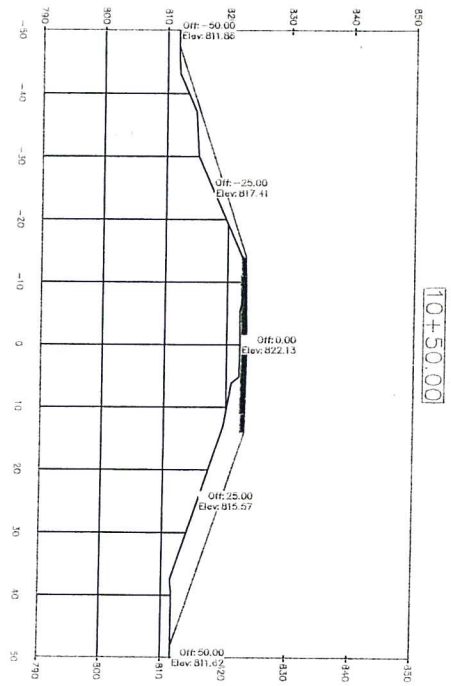
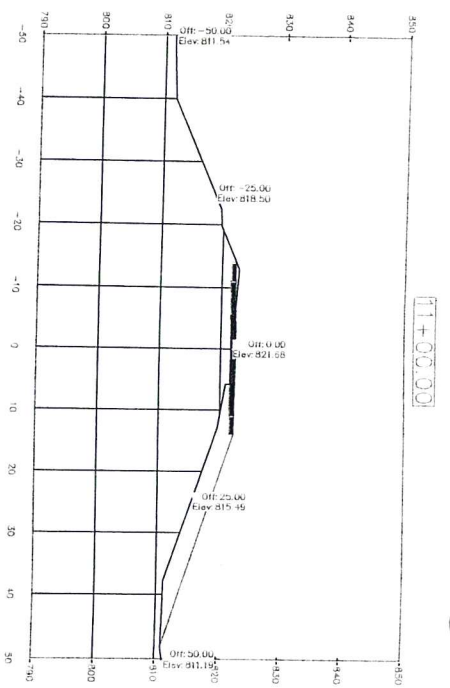
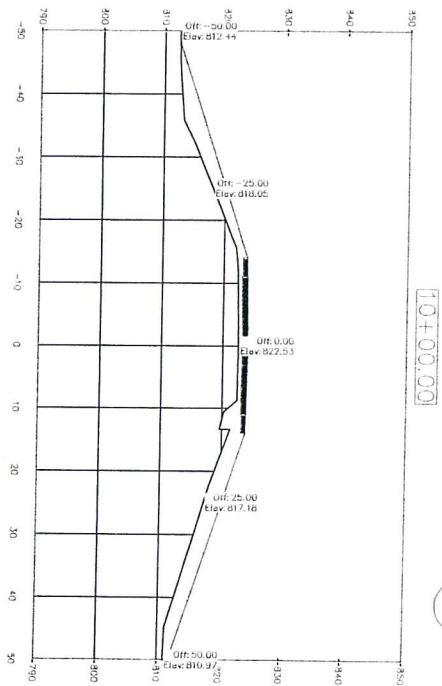


JASPER COUNTY

PROJECT NUMBER: BRS-SWAP-C050(124)-FF-50

SHEET 12 OF 14

DESIGN FOR 0' SKEW
 243'-0" x 30'-6" PRETENSIONED
 PRESTRESSED CONCRETE BEAM BRIDGE
 INTEGRAL ABUTMENTS
 81'-0" END SPANS
 CROSS SECTIONS
 81'-0" INTERIOR SPAN
 JASPER COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION
 STA. 6+80.98 HWY F24W OVER INDIAN CREEK DECEMBER 2019



JASPER COUNTY

PROJECT NUMBER: BRS-SWAP-C050(124)--FF-50

SHEET 13 OF 14

DESIGN FOR 0' SKEW
 24.3'-0" x 30'-6" PRETENSIONED
 PRESTRESSED CONCRETE BEAM BRIDGE
 INTEGRAL ABUTMENTS
 81'-0" END SPANS
 CROSS SECTIONS
 81'-0" INTERIOR SPAN
 STA. 6+80.98 HWY F24W OVER INDIAN CREEK
 JASPER COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION-HIGHWAY DIVISION
 DECEMBER 2019

