

STANDARD ROAD PLANS

STANDARD ROAD PLANS ARE LISTED ON SHEET 12.

SECTION 404 PERMIT AND CONDITIONS

281-1
MODIFIED

CONSTRUCT THIS PROJECT ACCORDING TO THE REQUIREMENTS OF U.S. ARMY CORPS OF ENGINEERS NATIONWIDE PERMIT 14. NATIONWIDE PERMIT 14 CONDITIONS CAN BE FOUND AT <http://www.mvr.usace.army.mil/Missions/Regulatory/Permits/>. 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. FP 2025-0111FP-01, DATED: 03-20-2025



PLANS OF PROPOSED IMPROVEMENT ON THE
FARM TO MARKET SYSTEM
MADISON COUNTY

PROJECT NO. HDP-C061(130)--6B-61
BRIDGE REPLACEMENT - PPCB
ON R 35, OVER MIDDLE RIVER, S25 T76 R26

REFER TO THE PROPOSAL FORM FOR LIST OF APPLICABLE SPECIFICATIONS.

THIS PROJECT IS COVERED BY THE IOWA DEPARTMENT OF NATURAL RESOURCES NPDES GENERAL PERMIT NO. 2. THE CONTRACTOR SHALL CARRY OUT THE TERMS AND CONDITIONS OF GENERAL PERMIT NO. 2 AND THE STORM WATER POLLUTION PREVENTION PLAN WHICH IS A PART OF THESE CONTRACT DOCUMENTS. REFER TO SECTION 2602 OF THE STANDARD SPECIFICATIONS FOR ADDITIONAL INFORMATION.

MILEAGE SUMMARY:

STA. 3+80.00 TO STA. 9+80.00 = 600.00 LIN.FT. = 0.1136 MILES

2022, TRAFFIC COUNT = 450 V.P.D.

UTILITY CONTACTS

COMPANY	UTILITY	CONTACT	PHONE #	EMAIL
CENTURYLINK	COMMUNICATIONS	SADIE HULL	918-547-0147	sadie.hull@lumen.com
MIDAMERICAN	ELECTRIC	JAIME NEER	515-252-6972	MECDSD@midamerican.com
WARREN WATER DISTRICT	WATER	STAN RIPPERGER	515-208-8352	wwd@warrenwaterdistrict.com

INDEX OF SEALS

SHEET NO.	NAME	TYPE
7.	DAVID LOGEMANN	SOILS
15.	MICHAEL J. HACKETT	TRAFFIC CONTROL
BRIDGE STANDARDS	NORMAN L. McDONALD	STRUCTURAL DESIGN

DRAWING APPROVAL

ALL SHOP DRAWINGS AND FALSEWORK DRAWINGS THAT REQUIRE APPROVAL SHALL BE SUBMITTED TO AND APPROVED BY THE CONTRACTOR, WHO SHALL STAMP, CERTIFY OR PROVIDE OTHER SUCH EVIDENCE ON THE DRAWINGS THAT THEY HAVE RECEIVED CONTRACTOR APPROVAL. THE APPROVED DRAWINGS SHALL THEN BE SUBMITTED TO CALHOUN-BURNS AND ASSOCIATES, FOR REVIEW AND APPROVAL.

ADDRESS : 6775 VISTA DRIVE
WEST DES MOINES, IOWA 50266
TELEPHONE : (515) 224-4344
FAX : (515) 224-1385

SHOP DRAWINGS SHALL BE INDEPENDENT DRAWINGS WITH ADEQUATE DIMENSIONING FOR FABRICATION OF INDIVIDUAL PIECES OF EACH COMPONENT. PHOTOCOPIES OF PLAN DRAWINGS AND NON-CONTRACTOR APPROVED PLANS WILL BE REJECTED.

THESE DRAWINGS SHALL NOT BE SENT TO IOWA D.O.T. BRIDGES AND STRUCTURES BUREAU.



PROJECT NO. HDP-C061(130)--6B-61
FHWA NO. 233730
COUNTY BR. NO. 08B-530-485

TOTAL SHEETS
23

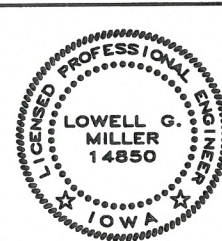
INDEX OF SHEETS

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IOWA DEPARTMENT OF TRANSPORTATION
STANDARDS REQUIRED

STANDARD	LATEST REVISION
H30-01-06	04-13
H30-01A-06	04-13
H30-02-06	04-13
H30-03-06	06-12
H30-04-06	06-12
H30-06-06	04-13
H30-08-06	01-12
H30-09-06	07-15
H30-10-06	05-11
H30-36-06	07-10
H30-37-06	07-10
H30-38-06	07-10
H30-42-06	07-10
H30-43-06	05-11
H30-44-06	09-12
H30-57-06	07-10
H30-63-06	04-13
H30-85-06	07-10
H30-87-06	09-14
H30-90-06	09-14

THESE SHEETS MAY BE OBTAINED AT THE ELECTRONIC REFERENCE LIBRARY WEBSITE. <http://erl.iowadot.gov>



I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

DATE: 8-12-2025

LOWELL G. MILLER, P.E.

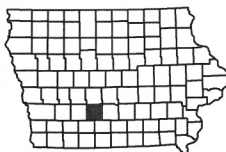
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2026.

PAGES OR SHEETS COVERED BY THIS SEAL:

1-6, 9-14 and 17-23 of 23

APPROVED
MADISON COUNTY ENGINEER
DATE 8/26/2025

BOARD OF SUPERVISORS
DATE 8/26/2025



PROJECT LOCATION

1 MI. 0 1 MI. 2 MI.



TOTAL ESTIMATED QUANTITIES: 243'-0 x 30'-6 P.P.C.B. BRIDGE							
REF. NO.	CODE NO.	ITEM	UNIT	2 ABUTS	2 PIERS	SUPER	TOTAL
1	2101-0850001	CLEARING AND GRUBBING	ACRE	-	-	-	0.7
2	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	-	-	-	327
3	2102-2710090	EXCAVATION, CLASS 10, WASTE	CY	-	-	-	379
4	2104-2710020	EXCAVATION, CLASS 10, CHANNEL	CY	-	-	-	2,400
5	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD	CY	-	-	-	1,100
6	2111-8174100	GRANULAR SUBBASE	SY	-	-	-	1,092
7	2121-7425020	GRANULAR SHOULDERS, TYPE B	TON	-	-	-	185
8	2122-5190501	PAVED SHOULDER, PORTLAND CEMENT CONCRETE (PAVED SHOULDER PANEL FOR BRIDGE END DRAIN)	SY	-	-	-	49.2
9	2123-7450020	SHOULDER FINISHING, EARTH	STA	-	-	-	6.3
10	2301-0690210	BRIDGE APPROACH, TWO LANE	SY	-	-	-	336.0
11	2303-1031750	HOT MIX ASPHALT STANDARD TRAFFIC, BASE COURSE, 3/4 IN. MIX	TON	-	-	-	239
12	2303-1032750	HOT MIX ASPHALT STANDARD TRAFFIC, INTERMEDIATE COURSE, 3/4 I N. MIX	TON	-	-	-	79
13	2303-1033750	HOT MIX ASPHALT STANDARD TRAFFIC, SURFACE COURSE, 3/4 IN. MI X, NO SPECIAL FRICTION REQUIREMENT	TON	-	-	-	79
14	2303-1258283	ASPHALT BINDER, PG 58-28S, STANDARD TRAFFIC	TON	-	-	-	23.8
15	2312-8260051	GRANULAR SURFACING ON ROAD, CLASS A CRUSHED STONE	TON	-	-	-	140
16	2401-6745625	REMOVAL OF EXISTING BRIDGE	LS	-	-	-	1
17	2402-2720000	EXCAVATION, CLASS 20	CY	212	18	-	230
18	2402-2721000	EXCAVATION, CLASS 21	CY	-	508	-	508
19	2402-2722000	EXCAVATION, CLASS 22	CY	-	47	-	47
20	2403-0100010	STRUCTURAL CONCRETE (BRIDGE)	CY	34.4	188.6	280.0	503.0
21	2404-7775000	REINFORCING STEEL	LB	-	23,878	-	23,878
22	2404-7775005	REINFORCING STEEL, EPOXY COATED	LB	8,125	-	76,722	84,847
23	2407-0551380	BEAMS, PRETENSIONED PRESTRESSED CONCRETE, C80	EACH	-	-	15	15
24	2408-7800000	STRUCTURAL STEEL	LB	-	-	4,122	4,122
25	2414-6424124	CONCRETE OPEN RAILING, TL-4	LF	-	-	540.0	540.0
26	2501-0201057	PILES, STEEL, HP 10 X 57 ; 9 @ 50', 9 @ 45'	LF	855	-	-	855
27	2501-6335010	PREBORED HOLES ; 18 @ 10'	LF	180	-	-	180

10.

SEE TABULATION 112-6 ON SHEET 13.
COARSE AGGREGATE DURABILITY SHALL BE CLASS 3 OR BETTER.
CERTIFIED PLANT INSPECTION IS REQUIRED.
REINFORCING STEEL SHALL BE EPOXY COATED.
ARTICLE 2317 REGARDING PAVEMENT SMOOTHNESS SHALL APPLY TO THIS PROJECT.
- 11-13.

SEE TYPICAL SECTIONS CBA-620, CBA-621, AND CBA-622 ON SHEET 10.
NO RECLAIMED ASPHALT PAVEMENT (RAP) WILL BE ALLOWED. MIXTURE SHALL CONTAIN A MINIMUM OF 65% CRUSHED MATERIAL AND TYPE A AGGREGATES PER STANDARD SPECIFICATIONS.
INCLUDES TACK COAT TO BE SPREAD AT A RATE OF 0.05 GAL/SY BETWEEN ALL HMA LIFTS.
14.

ASPHALT BINDER TO BE 6.0% OF MIX QUANTITY FOR ESTIMATING PURPOSES ONLY.
15.

DEPENDING ON THE TIMING OF PAVING OPERATION, TEMPORARY SURFACING MAY BE DIRECTED BY THE ENGINEER. ALL OF A PORTION OF THE BID ITEM MAY BE DELETED. SURFACING TO BE FURNISHED AND PLACED BY THE CONTRACTOR IN TWO PASSES (1400 AND 600 TONS/MILE). PREPARING THE SUBGRADE FOR PLACEMENT AND REMOVAL OF THE TEMPORARY SURFACING SHALL BE INCIDENTAL TO THE BID PRICE.
16.

THE EXISTING BRIDGE AT STATION 6+39 IS A 255' x 20' STEEL I-BEAM BRIDGE WITH STEEL HIGH TRUSS, 2-CONCRETE DIAPHRAGM AND 1-CONCRETE PEDESTAL PIERS AND A CONCRETE DECK WITH A HMA OVERLAY BUILT IN 1932.
AN INSPECTION FOR THE PRESENCE OF ASBESTOS CONTAINING MATERIALS WAS COMPLETED AND NO SUSPECT MATERIALS WERE FOUND. IF ADDITIONAL MATERIALS SUSPECTED OF CONTAINING ASBESTOS ARE DISCOVERED DURING DEMOLITION OF THE BRIDGE, WORK SHALL BE STOPPED IMMEDIATELY AND THE ENGINEER NOTIFIED.
THE LUMP SUM BID FOR "REMOVAL OF EXISTING BRIDGE" SHALL INCLUDE REMOVAL AND DISPOSAL OF THE EXISTING STRUCTURE. THE ITEMS LISTED IN TABULATION 110-13 ON SHEET 13 SHALL REMAIN THE PROPERTY OF THE COUNTY AND THE CONTRACTOR SHALL CAREFULLY REMOVE AND NEATLY STACK THESE ITEMS WITHIN THE RIGHT-OF-WAY, SEE TABULATION 110-13 ON SHEET 13. ALL REMAINING SALVAGEABLE MATERIAL AND UNSALVAGEABLE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR. THE EXISTING STRUCTURE SHALL BE REMOVED TO AN ELEVATION AT LEAST 1 FOOT BELOW FINISHED GROUNDLINE AND TO THE EXTENT THAT IT WILL NOT INTERFERE WITH THE NEW CONSTRUCTION. THE SOUTH CONCRETE ABUTMENT FOOTING AND WINGS SHALL BE FULLY REMOVED.
THE CONTRACTOR SHALL DISPOSE OF THE BROKEN CONCRETE OFF SITE AT A LOCATION PROVIDED BY THE CONTRACTOR AND NOTED TO THE ENGINEER.
SEE HAZARDOUS MATERIALS NOTES ON SHEET 5 FOR PAINT SCRAPE SAMPLE RESULTS.
- 17-19.

QUANTITY IS BASED ON THE ASSUMPTION THAT CHANNEL EXCAVATION AND NECESSARY BERM CONSTRUCTION HAVE BEEN COMPLETED.
INCLUDES COST OF USING SUITABLE MATERIAL FOR CONSTRUCTION ELSEWHERE ON THIS PROJECT. SUITABLE SOILS SHALL BE AS DEFINED BY ARTICLE 2102.02, D, 2 OF THE STANDARD SPECIFICATIONS.
20.

INCLUDES COST OF TAR PAPER, PREFORMED JOINT MATERIAL, PVC PIPE IN WINGS AND CONCRETE SEALER ALONG EDGES OF SLAB.
THE MACADAM STONE SHOWN ON THE WING ARMORING DETAILS IN THE H STANDARDS SHALL EXTEND ACROSS THE BERM AS SHOWN IN DETAIL 'B' ON THE SITUATION PLAN, SHEET 4. THE COST OF MACADAM STONE ON THE BERMS AND FOR WING ARMORING SHALL BE INCIDENTAL TO STRUCTURAL CONCRETE.
INCLUDES COST OF FURNISHING AND PLACING SUBDRAINS (INCLUDING EXCAVATION), FLOODABLE BACKFILL, POROUS BACKFILL AND GEOTEXTILE FABRIC AT ABUTMENTS.
CERTIFIED PLANT INSPECTION IS REQUIRED.
ARTICLE 2428 REGARDING BRIDGE DECK SMOOTHNESS SHALL APPLY TO THIS PROJECT.
COURSE AGGREGATE SHALL BE CLASS 3 OR BETTER.
- 21-22.

ALL REINFORCING SHALL BE GRADE 60.
23.

INCLUDES COST OF BEARING MATERIAL, COIL TIES AND COIL RODS.
ON 'PIER BEARING DETAILS,' SHEET H30-44-06, DIMENSION D=0" FOR ALL SPANS.
THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING STABILITY OF PRESTRESSED CONCRETE BEAMS DURING ERECTION AND CONSTRUCTION UP THROUGH THE CONCRETE BRIDGE DECK REACHING ITS FULL 28-DAY STRENGTH. THE CONTRACTOR SHALL PROVIDE SUFFICIENT TEMPORARY ANCHOR BRACING AT BEAM ENDS AND TEMPORARY INTERMEDIATE BRACING AS NEEDED TO ENSURE PRESTRESSED BEAM STABILITY. PARTIALLY OR FULLY INSTALLED PERMANENT BRACING AS SHOWN IN THESE DESIGN PLANS SHALL NOT BE ASSUMED SUFFICIENT TO BRACE PRESTRESSED BEAMS DURING ERECTION AND CONSTRUCTION. TEMPORARY BRACING SHALL NOT BE WELDED TO PRESTRESSED BEAM STIRRUPS.
SEE MATERIALS IM 570 APPENDIX I FOR ALLOWABLE BEARING SUBSTITUTES AT INTEGRAL ABUTMENTS.
24.

INCLUDES WEIGHT OF STEEL DIAPHRAGMS, SEE STANDARD SHEET H30-38-06.
INCLUDES WEIGHT OF PINTLE PLATE ASSEMBLIES, SEE STANDARD SHEET H30-44-06.
25.

CERTIFIED PLANT INSPECTION IS REQUIRED.
ALL STRUCTURAL CONCRETE FOR THE RAIL IS TO BE CLASS C; SUBSTITUTION OF CLASS D CONCRETE IS NOT ALLOWED.
INCLUDES COST OF CONCRETE SEALER ON RAIL.
26.

SEE PILE NOTES ON SHEET 5.
PILE POINTS SHALL NOT BE USED FOR THIS PROJECT.
27.

THE BRIDGE CONTRACTOR SHALL PREBORE HOLES FOR ABUTMENT PILES. HOLES SHALL BE BORED TO THE ELEVATIONS SHOWN ON THE "LONGITUDINAL SECTION ALONG CENTERLINE ROADWAY" ON THE SITUATION PLAN. PILES SHALL BE DRIVEN THROUGH THE HOLES TO AT LEAST THE SPECIFIED DESIGN BEARING.

REF. NO. ESTIMATE REFERENCE INFORMATION

1.

SEE PLAN AND PROFILE, SHEET 17, FOR LIMITS.
SELECTIVE CLEARING WILL BE REQUIRED ON THIS PROJECT. ALL DESIRABLE TREES OUTSIDE THE CONSTRUCTION AREA WILL BE SAVED. TREES AND SHRUBS WITHIN THE CONSTRUCTION LIMITS THAT DO NOT HINDER CONSTRUCTION SHALL BE SAVED UNLESS DIRECTED BY THE ENGINEER TO BE REMOVED.
2.

SEE TABULATIONS CBA-100 AND CBA-101 ON SHEET 11 FOR BREAKDOWN OF EXCAVATION QUANTITIES.
TYPE "A" COMPACTION WILL BE REQUIRED.
3.

SEE TABULATIONS CBA-100 AND CBA-101 ON SHEET 11 FOR BREAKDOWN OF EXCAVATION QUANTITIES.
INCLUDES ALL COST TO REMOVE UNSUITABLE OR EXCESS MATERIAL FROM SITE. THE UNSUITABLE OR EXCESS MATERIAL SHALL BE WASTED AT A LOCATION PROVIDED BY THE CONTRACTOR AND NOTED TO THE ENGINEER.
4.

SEE TABULATIONS CBA-100 AND CBA-101 ON SHEET 11 FOR BREAKDOWN OF EXCAVATION QUANTITIES.
INCLUDES COSTS TO CLEAR THE CHANNEL TO THE SHAPE, DEPTH, AND EXTENT SHOWN IN THE "LONGITUDINAL SECTION ALONG CENTERLINE OF ROADWAY" AND THE LIMITS SHOWN ON THE SITUATION PLAN, SHEET 4.
INCLUDES COST OF USING SUITABLE MATERIAL FOR CONSTRUCTION ELSEWHERE ON THIS PROJECT. SUITABLE SOILS SHALL BE AS DEFINED BY ARTICLE 2102.02, D, 2 OF THE STANDARD SPECIFICATIONS.
5.

IN ORDER TO MEET NPDES PERMIT REQUIREMENTS TOPSOIL STRIP, SALVAGE AND SPREAD SHALL BE REQUIRED ON THIS PROJECT. QUANTITY PERTAINS TO WORK WITHIN THE PROJECT LIMITS. SIX INCHES OF TOPSOIL SHALL BE STRIPPED FROM WITHIN THE PROJECT LIMITS AND SPREAD UNIFORMLY (6" TARGET WITH 4" MIN. DEPTH) OVER ALL AREAS THAT ARE NOT COVERED BY PAVEMENT OR GRANULAR MATERIAL. AREAS SHALL BE UNDERCUT PRIOR TO PLACING TOPSOIL. CROSS-SECTIONS SHOW FINISHED GRADELINE.
6.

SEE TYPICAL SECTION CBA-622 ON SHEET 10.
AN ELECTRONICALLY CONTROLLED MACHINE SHALL BE USED TO TRIM THE SUBGRADE. THE EXCAVATION FROM THE SUBGRADE PREPARATION SHALL BE USED AS EARTH SHOULDER FILL. THE GRANULAR SUBBASE SHALL BE PERFORMED ACCORDING TO THE STANDARD SPECIFICATION 2111, AND WITH THE FOLLOWING MODIFICATIONS. THE MATERIAL USED FOR GRANULAR SUBBASE SHALL MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 4132. THE MATERIAL SHALL BE PLACED AND COMPACTED AS PER STANDARD SPECIFICATION SECTION 2107, TYPE A COMPACTION IS REQUIRED. HAULING EQUIPMENT WILL BE ALLOWED ON THE SUBGRADE AND SUBBASE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE COMPLETED SUBGRADE AND SUBBASE TO THE REQUIRED COMPACTION, CROSS SECTION, AND SMOOTH CONDITION FREE FROM LOOSE MATERIAL PRIOR TO AND DURING SUBSEQUENT CONSTRUCTION ACTIVITIES. STANDARD SPECIFICATION 211.03 PARAGRAPH B SHALL APPLY.
7.

SEE TYPICAL SECTION CBA-641 ON SHEET 11 AND CBA-643 ON SHEET 10.
8.

SEE TABULATION 104-8A, SHEET 14.
9.

INCLUDES ALL WORK NECESSARY TO CONSTRUCT AND SHAPE SHOULDER AREAS. SEE TYPICAL SECTION CBA-641 ON SHEET 11, AND CBA-643 ON SHEET 10.

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

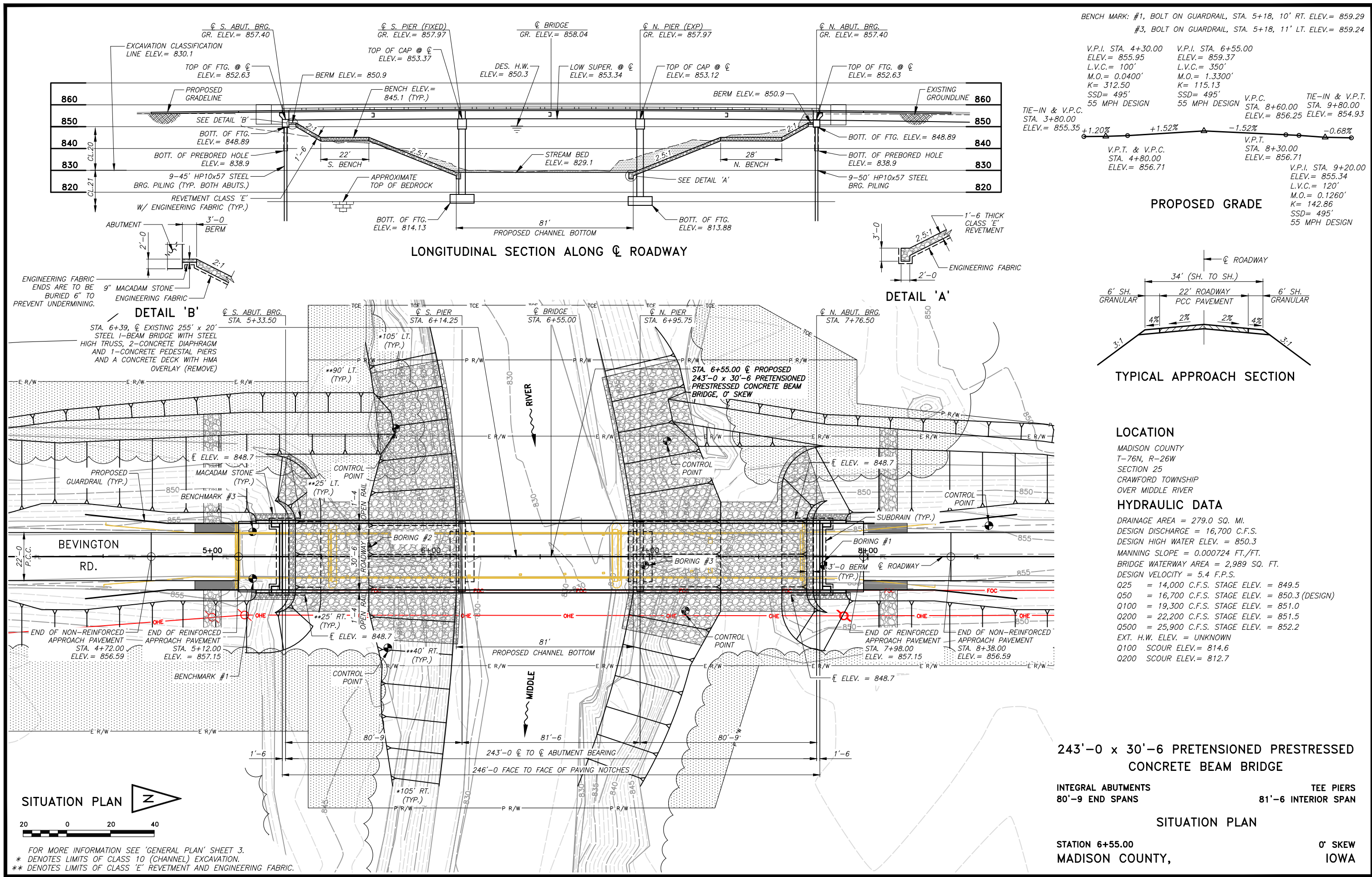
INTEGRAL ABUTMENTS
80'-9 END SPANS

TEE PIERS
81'-6 INTERIOR SPAN

QUANTITY SUMMARY

STATION 6+55.00
MADISON COUNTY,

0' SKEW
IOWA



SPECIFICATIONS

DESIGN: AASHTO LRFD 4TH EDITION, SERIES OF 2007.
CONSTRUCTION: THE IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, SERIES 2023, 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 SPECIFICATIONS, 4TH EDITION, SERIES 2007.
REINFORCING STEEL IN ACCORDANCE WITH LRFD AASHTO SECTION 5, GRADE 60.
STRUCTURAL STEEL IN ACCORDANCE WITH LRFD AASHTO SECTION 6. ASTM A709 GRADE 36 (AASHTO M270 GRADE 36).
CONCRETE IN ACCORDANCE WITH LRFD AASHTO SECTION 5, F'C=3,500 PSI EXCEPT PRESTRESSED BEAM CONCRETE AS NOTED.
PRESTRESSING STEEL SEE SHEETS H30-36-06
PRESTRESSED CONCRETE SEE SHEETS H30-36-06

GENERAL NOTES

THIS DESIGN IS FOR A 243'-0 x 30'-6 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE ON BEVINGTON RD OVER THE MIDDLE RIVER IN MADISON 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 ENGINEER WILL BE RESPONSIBLE FOR THE CONSTRUCTION SURVEY. THE CONTRACTOR IS RESPONSIBLE FOR CONDUCTING AN INDEPENDENT CHECK OF ALL CONSTRUCTION STAKES PLACED FOR THE PROJECT. THIS INDEPENDENT CHECK SHALL BE SUFFICIENT TO UNDERSTAND THE PLACEMENT AND INTENT OF THE STAKES.
THE PRIME CONTRACTOR SHALL EMPLOY CONTROLS TO REDUCE THE EROSIVENESS 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 PLAN EW-401 IS LISTED IN TABULATION 105-4; HOWEVER, IT IS INCLUDED FOR INFORMATION PURPOSES ONLY SINCE IT IS AN OPTION. NO QUANTITIES ASSOCIATED WITH CONSTRUCTING EW-401 ARE INCLUDED IN ANY BID ITEMS.
STANDARD ROAD PLANS ARE AVAILABLE FROM THE IOWA DEPARTMENT OF TRANSPORTATION WEBSITE: <http://www.iowadot.gov/erl/index.html>.

UTILITY NOTES

SEE SECTION 1107.15 OF THE STANDARD SPECIFICATION REGARDING UTILITY COORDINATION.

WASTE AND DISPOSAL NOTES

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE WASTE AREAS OR DISPOSAL SITES FOR EXCESS MATERIAL (EXCAVATED MATERIAL OR BROKEN CONCRETE) 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 IMPACT 1) CULTURALLY SENSITIVE SITES OR GRAVES OR 2) WETLANDS OR "WATERS OF THE U.S.", INCLUDING STREAMS OR STREAM BANKS BELOW THE "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

AN INSPECTION FOR THE PRESENCE OF ASBESTOS CONTAINING MATERIALS WAS COMPLETED BY:
SCOTT BROWN OF IOWA ENVIRONMENTAL SERVICES
IA LICENSE NUMBER: 22-9235I
DATE INSPECTED: 04/13/2023
PHONE: 515-279-8042

A SCRAPE SAMPLE OF THE EXISTING PAINT WAS TAKEN FROM A PONY TRUSS / I-BEAM OF THIS BRIDGE TO GET AN INDICATION OF THE EXISTENCE AND OF THE LEVEL OF TOTAL CHROMIUM AND TOTAL LEAD. ANALYSIS OF TOTAL LEAD ON THIS SAMPLE WAS 241,000 PART PER MILLION (PPM). ANALYSIS OF TOTAL CHROMIUM ON THIS SAMPLE WAS 260 PPM. THESE ANALYSES SHOW THE EXISTENCE OF THESE TWO TOXIC CONSTITUENTS. LEVELS INDICATED BY THESE TESTS COULD CREATE CONDITIONS ABOVE REGULATORY LIMITS FOR HEALTH AND SAFETY REQUIREMENTS. NO OTHER CONSTITUENTS WERE ANALYZED. THE BIDDER SHOULD NOT RELY ON THE COUNTY'S TESTING AND ANALYSIS FOR ANY PURPOSE OTHER THAN AS AN INDICATION OF THE EXISTENCE OF THESE TWO TOXIC CONSTITUENTS.
THE CONTRACTOR SHALL CONDUCT THEIR OPERATIONS IN SUCH A MANNER THAT ANY PAINT REMOVED DURING REMOVAL IS CONTAINED, 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 SCRAPE 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 SCRAP STEEL IS REMOVED FROM THE PROJECT.
ALL COSTS ASSOCIATED WITH COMPLIANCE WITH THE ABOVE REMOVAL AND DISPOSAL REQUIREMENTS WILL BE INCIDENTAL TO "REMOVAL OF EXISTING BRIDGE."

PILE NOTES

SOUNDING AND TEST BORING DATA SHOWN ON PLANS WERE ACCUMULATED FOR DESIGNING AND ESTIMATING PURPOSES. THEIR APPEARANCE ON THE PLAN DOES NOT CONSTITUTE A GUARANTEE THAT CONDITIONS OTHER THAN THOSE 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. A WEAP ANALYSIS AND BEARING GRAPH WILL BE PROVIDED BY THE ENGINEER THAT GIVES THE RELATIONSHIP BETWEEN REQUIRED NOMINAL AXIAL BEARING RESISTANCE AND BLOW COUNT.

SOUTH ABUTMENT PILE

THE CONTRACT LENGTH OF 45 FEET FOR THE SOUTH ABUTMENT PILES IS BASED ON A NON-COHESIVE SOIL CLASSIFICATION, A TOTAL FACTORED AXIAL LOAD PER PILE (PU) OF 138 KIPS, AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.50 FOR SOIL AND 0.70 FOR ROCK END BEARING.
THE NOMINAL AXIAL BEARING RESISTANCE FOR CONSTRUCTION CONTROL WAS DETERMINED FROM A NON-COHESIVE SOIL CLASSIFICATION AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.50 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 THE ABUTMENT PILES IS 102 TONS AT END OF DRIVE (EOD) OR RETAP. AN ATTEMPT SHALL BE MADE TO DRIVE THE PILES THROUGH THE UPPER LIMESTONE LAYER SUCH THAT PILES CAN TIP OUT IN SECOND LIMESTONE LAYER NEAR ELEVATION: 808. CONSTRUCTION CONTROL REQUIRES A MODIFIED IOWA DOT ENR FORMULA.

NORTH ABUTMENT PILE

THE CONTRACT LENGTH OF 50 FEET FOR THE NORTH ABUTMENT PILES IS BASED ON A NON-COHESIVE SOIL CLASSIFICATION, A TOTAL FACTORED AXIAL LOAD PER PILE (PU) OF 138 KIPS, AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.50 FOR SOIL AND 0.70 FOR ROCK END BEARING.
THE NOMINAL AXIAL BEARING RESISTANCE FOR CONSTRUCTION CONTROL WAS DETERMINED FROM A NON-COHESIVE SOIL CLASSIFICATION AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.50 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 THE ABUTMENT PILES IS 102 TONS AT END OF DRIVE (EOD) OR RETAP. AN ATTEMPT SHALL BE MADE TO DRIVE THE PILES THROUGH THE UPPER LIMESTONE LAYER SUCH THAT PILES CAN TIP OUT IN SECOND LIMESTONE LAYER NEAR ELEVATION: 805. CONSTRUCTION CONTROL REQUIRES A MODIFIED IOWA DOT ENR FORMULA.

PIER NOTES

THE FOOTING SHALL BE FOUNDED IN SOLID BEDROCK AS DETAILED IN THE PLANS. THE FOUNDATION ROCK SHALL HAVE A MINIMUM LRFD NOMINAL BEARING RESISTANCE OF 30 KIPS PER SQUARE FOOT (ALLOWABLE SERVICE LOAD BEARING VALUE OF AT LEAST 10 KIPS PER SQUARE FOOT). FOOTING DESIGNED TO MINIMIZE UPLIFT.
EXCAVATION FOR PIER FOOTINGS AND PLACEMENT OF PIER FOOTING CONCRETE ARE TO BE PERFORMED IN AS DRY OF CONDITIONS AS PRACTICABLE, USING COFFERDAMS, PUMPS OR OTHER SUITABLE MEASURES TO ASSURE SUCH CONDITIONS IN ACCORDANCE WITH SECTION 2405 AND SUPPLEMENTAL SPECIFICATIONS. THE COST OF ALL PIER EXCAVATION AND DEWATERING IS TO BE INCLUDED IN THE LUMP SUM BID FOR "EXCAVATION, CLASS 22". THE NEW PIER FOOTINGS SHALL BE KEAY A MINIMUM OF 1'-0 INTO SOUND BEDROCK. THE FINAL 1'-0 OF BEDROCK EXCAVATION IS TO BE NEAT LINES AS SHOWN IN THE PLANS AND IS TO BE PERFORMED WITHIN 24 HOURS OF THE PLACEMENT OF THE FOOTING CONCRETE ON THE EXPOSED BEDROCK BEARING SURFACE.
THE CONTRACTOR AND ENGINEER ARE TO VERIFY THAT THE BEDROCK IS LOCATED AS SHOWN ON THE SOUNDING DATA DETAILED ON THE PLANS. DIFFERENCES WHICH CAUSE CHANGES IN BOTTOM OF FOOTING ELEVATIONS MAY BE CAUSE FOR DESIGN CHANGES. THE ENGINEER WILL RETAIN A QUALIFIED GEOTECHNICAL ENGINEER FOR REVIEW. AFTER EXCAVATING TO WITHIN 6" OF THE DESIGN FOOTING ELEVATION, AT LEAST TWO (2) PROBE HOLES ARE TO BE DRILLED BY THE CONTRACTOR INTO ROCK AT THE BASE OF THE FOOTING EXCAVATION UNDER THE SUPERVISION OF THE GEOTECHNICAL

CONCRETE AND REINFORCING STEEL NOTES

ALL REINFORCING STEEL SHALL BE SECURELY WIRED IN PLACE BEFORE CONCRETE IS PLACED. BAR CHAIRS SPACED AT NOT MORE THAN 3'-0 CENTERS IN EITHER DIRECTION SHALL BE USED TO SUPPORT ALL REINFORCING IN ACCORDANCE WITH THE SECTION 2404 OF THE STANDARD SPECIFICATIONS.
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 STRIP.
ALL REINFORCING BARS AND BARS NOTED AS DOWELS 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, THE BEVEL USED ON THE KEYWAY SHALL BE LIMITED TO A MAXIMUM OF 10 DEGREES FROM THE VERTICAL.
CONCRETE PAVING BLOCKS ARE REQUIRED AND SHALL BE INSTALLED AS PART OF BRIDGE CONSTRUCTION. PAVING BLOCKS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AT THE TIME THE REINFORCED APPROACH PAVEMENT IS INSTALLED.

CONTRACTOR'S WORK AREA

THE CONTRACTOR'S WORK AND MATERIAL STORAGE AREA SHALL BE DEFINED BY THE CONTRACTOR AND NOTED TO THE ENGINEER. THE CONTRACTOR SHALL SHAPE, FERTILIZE, AND SEED THIS CONTRACTOR'S AREA IN ORDER TO RETURN IT TO ITS ORIGINAL CONDITION. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR "SEEDING AND FERTILIZING (RURAL)" AND "MULCHING" BID ITEMS. AREAS OUTSIDE THE CONTRACTOR'S AREA DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED TO THEIR ORIGINAL CONDITION, AS DETERMINED BY THE ENGINEER. NO ADDITIONAL PAYMENT WILL BE AUTHORIZED FOR THIS WORK.

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

INTEGRAL ABUTMENTS TEE PIERS
80'-9 END SPANS 81'-6 INTERIOR SPAN

GENERAL NOTES

STATION 6+55.00 0' SKEW
MADISON COUNTY, IOWA

POLLUTION PREVENTION PLAN

THIS PROJECT IS REGULATED BY THE REQUIREMENTS OF THE IOWA DEPARTMENT OF NATURAL RESOURCES (DNR) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT NO. 2 OR AN IOWA DEPARTMENT OF NATURAL RESOURCES (DNR) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) INDIVIDUAL STORM WATER PERMIT. THE CONTRACTOR SHALL CARRY OUT THE TERMS AND CONDITIONS OF THIS PERMIT AND THE POLLUTION PREVENTION PLAN (PPP).

THIS BASE PPP INCLUDES INFORMATION ON ROLES AND RESPONSIBILITIES, PROJECT SITE DESCRIPTION, CONTROLS, MAINTENANCE PROCEDURES, INSPECTION REQUIREMENTS, NON-STORM WATER CONTROLS, POTENTIAL SOURCES OF OFF RIGHT-OF-WAY POLLUTION, AND DEFINITIONS. THIS PLAN REFERENCES OTHER DOCUMENTS RATHER THAN REPEATING THE INFORMATION CONTAINED IN THE DOCUMENTS. A COPY OF THIS BASE POLLUTION PREVENTION PLAN, AMENDED AS NEEDED DURING CONSTRUCTION, WILL BE READILY AVAILABLE FOR REVIEW.

ALL CONTRACTORS SHALL CONDUCT THEIR OPERATIONS IN A MANNER THAT CONTROLS POLLUTANTS, MINIMIZES EROSION, AND PREVENTS SEDIMENTS FROM ENTERING WATERS OF THE STATE AND LEAVING THE HIGHWAY RIGHT-OF-WAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE AND IMPLEMENTATION OF THE PPP FOR THEIR ENTIRE CONTRACT. THIS RESPONSIBILITY SHALL BE FURTHER SHARED WITH SUBCONTRACTORS WHOSE WORK IS A SOURCE OF POTENTIAL POLLUTION AS DEFINED IN THIS PPP.

I. ROLES AND RESPONSIBILITIES

- A. DESIGNER:
 - 1. PREPARES BASE PPP INCLUDED IN THE PROJECT PLAN.
- B. OWNER
 - 1. PREPARES NOTICE OF INTENT (NOI) SUBMITTED TO IOWA DNR.
 - 2. IS SIGNATURE AUTHORITY ON THE BASE PPP.
- C. CONTRACTOR:
 - 1. SIGNS A CO-PERMITTEE CERTIFICATION STATEMENT ADHERING TO THE REQUIREMENTS OF THE NPDES PERMIT AND THIS PPP. ALL CO-PERMITTEES ARE LEGALLY REQUIRED UNDER THE CLEAN WATER ACT AND THE IOWA ADMINISTRATIVE CODE TO ENSURE COMPLIANCE WITH THE TERMS AND CONDITIONS OF THIS PPP.
 - 2. DESIGNATES A WATER POLLUTION CONTROL MANAGER (WPCM), WHO HAS THE DUTIES AND RESPONSIBILITIES AS DEFINED IN SPECIFICATIONS SECTION 2602 OF THE STANDARD SPECIFICATIONS.
 - 3. SUBMITS AN EROSION CONTROL IMPLEMENTATION PLAN (ECIP) AND ECIP UPDATES ACCORDING TO SPECIFICATIONS SECTION 2602 OF THE STANDARD SPECIFICATIONS.
 - 4. INSTALLS AND MAINTAINS APPROPRIATE CONTROLS. THIS WORK MAY BE SUBCONTRACTED AS DOCUMENTED THROUGH SUBCONTRACTOR REQUEST FORMS (FORM 830231).
 - 5. SUPERVISES AND IMPLEMENTS GOOD HOUSEKEEPING PRACTICES ACCORDING TO PARAGRAPH III, C, 2.
 - 6. CONDUCTS JOINT REQUIRED INSPECTIONS OF THE SITE WITH INSPECTION STAFF. WHEN CONTRACTOR IS NOT MOBILIZED ON SITE, CONTRACTOR MAY DELEGATE THIS RESPONSIBILITY TO A TRAINED OR CERTIFIED SUBCONTRACTOR. CONTRACTING AUTHORITY ALSO MAY WAIVE JOINT INSPECTION REQUIREMENT DURING WINTER SHUTDOWN. IN BOTH CIRCUMSTANCES, WPCM (OR TRAINED OR CERTIFIED DELEGATE FROM THE CONTRACTOR) IS STILL RESPONSIBLE TO REVIEW AND SIGN INSPECTION REPORTS.
 - 7. COMPLIES WITH TRAINING AND CERTIFICATION REQUIREMENTS OF SECTION 2602 OF THE STANDARD SPECIFICATIONS.
 - 8. SUBMITS AMENDED PPP SITE MAP ACCORDING TO SECTION 2602 OF THE STANDARD SPECIFICATIONS.
- D. SUBCONTRACTORS:
 - 1. SIGN A CO-PERMITTEE CERTIFICATION STATEMENT ADHERING TO THE REQUIREMENTS OF THE NPDES PERMIT AND THIS PPP IF RESPONSIBLE FOR SEDIMENT OR EROSION CONTROLS; INVOLVED IN LAND DISTURBING ACTIVITIES; OR PERFORMING WORK THAT IS A SOURCE OF POTENTIAL POLLUTION AS DEFINED IN THIS PPP. SUBCONTRACTED WORK ITEMS ARE IDENTIFIED IN SUBCONTRACTOR REQUEST FORMS (FORM 830231). ALL CO-PERMITTEES ARE LEGALLY REQUIRED UNDER THE CLEAN WATER ACT AND THE IOWA ADMINISTRATIVE CODE TO ENSURE COMPLIANCE WITH THE TERMS AND CONDITIONS OF THIS PPP.
 - 2. IMPLEMENT GOOD HOUSEKEEPING PRACTICES ACCORDING TO PARAGRAPH III, C, 2.
- E. RCE/PROJECT ENGINEER:
 - 1. IS PROJECT STORM WATER MANAGER.
 - 2. TAKES ACTIONS NECESSARY TO ENSURE COMPLIANCE WITH STORM WATER REQUIREMENTS INCLUDING, WHERE APPROPRIATE, ISSUING STOP WORK ORDERS, AND DIRECTING ADDITIONAL INSPECTIONS AT CONSTRUCTION PROJECT SITES THAT ARE EXPERIENCING PROBLEMS WITH ACHIEVING PERMIT COMPLIANCE.
 - 3. ORDERS THE TAKING OF MEASURES TO CEASE, CORRECT, PREVENT, OR MINIMIZE THE CONSEQUENCES OF NON-COMPLIANCE WITH THE STORM WATER REQUIREMENTS OF THE APPLICABLE PERMIT.
 - 4. SUPERVISES ALL WORK NECESSARY TO MEET STORM WATER REQUIREMENTS AT THE PROJECT, INCLUDING WORK PERFORMED BY CONTRACTORS AND SUBCONTRACTORS.
 - 5. REQUIRES EMPLOYEES, CONTRACTORS, AND SUBCONTRACTORS TO TAKE APPROPRIATE RESPONSIVE ACTION TO COMPLY WITH STORM WATER REQUIREMENTS, INCLUDING REQUIRING ANY SUCH PERSON TO CEASE OR CORRECT A VIOLATION OF STORM WATER REQUIREMENTS, AND TO ORDER OR RECOMMEND SUCH OTHER ACTIONS AS NECESSARY TO MEET STORM WATER REQUIREMENTS.
 - 6. IS FAMILIAR WITH THE PROJECT PPP AND STORM WATER SITE MAP.
 - 7. IS THE POINT OF CONTACT FOR THE PROJECT FOR REGULATORY OFFICIALS, INSPECTOR, CONTRACTORS, AND SUBCONTRACTORS REGARDING STORM WATER REQUIREMENTS.
 - 8. IS SIGNATURE AUTHORITY ON NOTICE OF DISCONTINUATION.
 - 9. MAINTAINS AN UP-TO-DATE RECORD OF CONTRACTORS, SUBCONTRACTORS, AND SUBCONTRACTED WORK ITEMS THROUGH SUBCONTRACTOR REQUEST FORMS (FORM 830231).
 - 10. MAKES INFORMATION TO DETERMINE PERMIT COMPLIANCE AVAILABLE TO THE DNR UPON THEIR REQUEST.
- F. INSPECTOR:
 - 1. UPDATES PPP THROUGH FIELDBOOK ENTRIES AND STORM WATER SITE INSPECTION REPORTS IF THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE WHICH HAS A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS FROM THE PROJECT.
 - 2. MAKES INFORMATION TO DETERMINE PERMIT COMPLIANCE AVAILABLE TO THE DNR UPON THEIR REQUEST.
 - 3. CONDUCTS JOINT REQUIRED INSPECTIONS OF THE SITE WITH THE CONTRACTOR/SUBCONTRACTOR.
 - 4. COMPLETES AN INSPECTION REPORT AFTER EACH INSPECTION.
 - 5. IS SIGNATURE AUTHORITY ON STORM WATER INSPECTION REPORTS.

II. PROJECT SITE DESCRIPTION

- A. THIS POLLUTION PREVENTION PLAN (PPP) IS FOR THE CONSTRUCTION OF A 243'-0 X 30'-6 PRETENSIONED PRESTRESSED CONCRETE BRIDGE ON BEVINGTON RD OVER MIDDLE RIVER IN MADISON COUNTY, IOWA.
- B. THIS PPP COVERS APPROXIMATELY 2.4 ACRES WITH AN ESTIMATED 2.0 ACRES BEING DISTURBED. THE PORTION OF THE PPP COVERED BY THIS CONTRACT HAS 2.0 ACRES DISTURBED.
- C. THE PPP IS LOCATED IN AN AREA OF ONE SOIL ASSOCIATION(S) (SHARPSBURG-SHELBY-ADAIR). THE ESTIMATED WEIGHTED AVERAGE RUNOFF COEFFICIENT NUMBER FOR THIS PPP AFTER COMPLETION WILL BE 0.30.
- D. STORM WATER SITE MAP - MULTIPLE SOURCES OF INFORMATION COMPRISE THE BASE STORM WATER SITE MAP INCLUDING:
 - 1. DRAINAGE PATTERNS – SITUATION PLAN AND PLAN AND PROFILE.
 - 2. PROPOSED SLOPES – CROSS SECTIONS.
 - 3. AREAS OF SOIL DISTURBANCE – CONSTRUCTION LIMITS SHOWN ON SITUATION PLAN AND PLAN AND PROFILE.
 - 4. LOCATION OF STRUCTURAL CONTROLS – TABULATIONS.
 - 5. LOCATIONS OF NON-STRUCTURAL CONTROLS – TABULATIONS.
 - 6. LOCATIONS OF STABILIZATION PRACTICES – GENERALLY WITHIN CONSTRUCTION LIMITS SHOWN ON SITUATION PLAN AND PLAN AND PROFILE.

- 7. SURFACE WATERS (INCLUDING WETLANDS) – PROJECT LOCATION MAP AND SITUATION PLAN AND PLAN AND PROFILE.
- 8. LOCATIONS WHERE STORM WATER IS DISCHARGED – SITUATION PLAN AND PLAN AND PROFILE.
- E. THE BASE STORM WATER SITE MAP IS AMENDED BY CONTRACT MODIFICATIONS AND PROGRESS PAYMENTS (FIELDBOOK ENTRIES) OF COMPLETED EROSION CONTROL WORK. ALSO, DUE TO PROJECT PHASING, EROSION AND SEDIMENT CONTROLS SHOWN ON PROJECT PLANS MAY NOT BE INSTALLED UNTIL NEEDED, BASED ON SITE CONDITIONS. FOR EXAMPLE, SILT FENCE DITCH CHECKS WILL TYPICALLY NOT BE INSTALLED UNTIL THE DITCH HAS BEEN INSTALLED. INSTALLED LOCATIONS WILL BE DOCUMENTED BY FIELDBOOK ENTRIES AND AMENDED PPP SITE MAP.
- F. RUNOFF FROM THIS WORK WILL FLOW INTO THE MIDDLE RIVER.

III. CONTROLS

- A. THE CONTRACTOR'S ECIP SPECIFIED IN ARTICLE 2602.03 OF THE STANDARD SPECIFICATIONS FOR ACCOMPLISHMENT OF STORM WATER CONTROLS SHOULD CLEARLY DESCRIBE THE INTENDED SEQUENCE OF MAJOR ACTIVITIES AND FOR EACH ACTIVITY DEFINE THE CONTROL MEASURE AND THE TIMING DURING THE CONSTRUCTION PROCESS THAT THE MEASURE WILL BE IMPLEMENTED.
- B. PRESERVE VEGETATION IN AREAS NOT NEEDED FOR CONSTRUCTION.
- C. SECTIONS 2601 AND 2602 OF THE STANDARD SPECIFICATIONS DEFINE REQUIREMENTS TO IMPLEMENT EROSION AND SEDIMENT CONTROL MEASURES. ACTUAL QUANTITIES USED AND INSTALLED LOCATIONS MAY VARY FROM THE BASE PPP AND AMENDMENT OF THE PLAN WILL BE DOCUMENTED VIA FIELDBOOK ENTRIES, AMENDED PPP SITE MAP, OR BY CONTRACT MODIFICATION. ADDITIONAL EROSION AND SEDIMENT CONTROL ITEMS MAY BE REQUIRED AS DETERMINED BY THE INSPECTOR AND/OR CONTRACTOR DURING STORM WATER SITE INSPECTIONS. IF THE WORK INVOLVED IS NOT APPLICABLE TO ANY CONTRACT ITEMS, THE WORK WILL BE PAID FOR ACCORDING TO ARTICLE 1109.03 PARAGRAPH B OF THE STANDARD SPECIFICATIONS.
 - 1. EROSION AND SEDIMENT CONTROLS
 - a. STABILIZATION PRACTICES
 - 1) SITE PLANS WILL ENSURE THAT EXISTING VEGETATION OR NATURAL BUFFERS ARE PRESERVED WHERE ATTAINABLE AND DISTURBED PORTIONS OF THE SITE WILL BE STABILIZED.
 - 2) INITIALIZE STABILIZATION OF DISTURBED AREAS IMMEDIATELY AFTER CLEARING, GRADING, EXCAVATING, OR OTHER EARTH DISTURBING ACTIVITIES HAVE:
 - a) PERMANENTLY CEASED ON ANY PORTION OF THE SITE, OR
 - b) TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS.
 - 3) STAGED PERMANENT AND/OR TEMPORARY STABILIZING SEEDING AND MULCHING SHALL BE COMPLETED AS THE DISTURBED AREAS ARE COMPLETED. INCOMPLETE AREAS SHALL BE STABILIZED ACCORDING TO PARAGRAPH III, C, 1, a, 2, b ABOVE.
 - 4) PERMANENT AND TEMPORARY STABILIZATION PRACTICES TO BE USED FOR THIS PROJECT ARE LOCATED IN THE ESTIMATED PROJECT QUANTITIES AND ESTIMATE REFERENCE INFORMATION LOCATED IN THE PLANS. TYPICAL DRAWINGS DETAILING CONSTRUCTION OF THE PRACTICES TO BE USED ON THIS PROJECT ARE REFERENCED IN THE STANDARD ROAD PLANS TABULATION.
 - 5) PRESERVATION OF EXISTING VEGETATION WITHIN RIGHT-OF-WAY OR EASEMENTS WILL ACT AS VEGETATIVE BUFFER STRIPS.
 - 6) PRESERVATION OF TOPSOIL: BID ITEMS TO BE USED FOR THIS PROJECT ARE LOCATED IN THE ESTIMATED PROJECT QUANTITIES AND ESTIMATE REFERENCE INFORMATION LOCATED IN THE PLANS. ADDITIONAL INFORMATION MAY BE FOUND IN TABULATIONS OF THE PLANS OR IS REFERENCED IN STANDARD SECTION 2105 OF THE STANDARD SPECIFICATIONS.
 - b. STRUCTURAL PRACTICES
 - 1) STRUCTURAL PRACTICES WILL BE IMPLEMENTED TO DIVERT FLOWS FROM EXPOSED SOILS AND DETAIN OR OTHERWISE LIMIT RUNOFF AND THE DISCHARGE OF POLLUTANTS FROM EXPOSED AREAS OF THE SITE. ADDITIONALLY, STRUCTURAL PRACTICES MAY INCLUDE: SILT BASINS THAT PROVIDE 3600 CUBIC FEET OF STORAGE PER ACRE DRAINED OR EQUIVALENT SEDIMENT CONTROLS, OUTLET STRUCTURES THAT WITHDRAW WATER FROM SURFACE WHEN DISCHARGING BASINS, AND CONTROLS TO DIRECT STORM WATER TO VEGETATED AREAS.
 - 2) STRUCTURAL PRACTICES TO BE USED FOR THIS PROJECT ARE LOCATED IN THE ESTIMATED PROJECT QUANTITIES AND ESTIMATE REFERENCE INFORMATION, AS WELL AS ALL OTHER ITEM SPECIFIC TABULATIONS. TYPICAL DRAWINGS DETAILING CONSTRUCTION OF THE DEVICES TO BE USED ON THIS PROJECT CAN BE FOUND IN THE PLANS OR ARE REFERENCED IN THE STANDARD ROAD PLANS TABULATION.
 - c. STORM WATER MANAGEMENT
 - 1) MEASURES SHALL BE INSTALLED DURING THE CONSTRUCTION PROCESS TO CONTROL POLLUTANTS IN STORM WATER DISCHARGES THAT WILL OCCUR AFTER CONSTRUCTION OPERATIONS HAVE BEEN COMPLETED. THIS MAY INCLUDE VELOCITY DISSIPATION DEVICES AT DISCHARGE LOCATIONS AND ALONG LENGTH OF OUTFALL CHANNEL AS NECESSARY TO PROVIDE A NON-EROSION VELOCITY FLOW FROM STRUCTURE TO WATER COURSE. IF INCLUDED WITH THIS PROJECT, THESE ITEMS ARE LOCATED IN THE ESTIMATED PROJECT QUANTITIES AND ESTIMATE REFERENCE INFORMATION, AS WELL AS ALL OTHER ITEM SPECIFIC TABULATIONS. TYPICAL DRAWINGS DETAILING CONSTRUCTION OF THE PRACTICES TO BE USED ON THIS PROJECT ARE REFERENCED IN THE STANDARD ROAD PLANS TABULATION. THE INSTALLATION OF THESE DEVICES MAY BE SUBJECT TO SECTION 404 OF THE CLEAN WATER ACT.
 - 2. OTHER CONTROLS
 - a. CONTRACTOR DISPOSAL OF UNUSED CONSTRUCTION MATERIALS AND CONSTRUCTION MATERIAL WASTES SHALL COMPLY WITH APPLICABLE STATE AND LOCAL WASTE DISPOSAL, SANITARY SEWER, OR SEPTIC SYSTEM REGULATIONS. IN THE EVENT OF A CONFLICT WITH OTHER GOVERNMENTAL LAWS, RULES AND REGULATIONS, THE MORE RESTRICTIVE APPLICABLE LAWS, RULES OR REGULATIONS SHALL APPLY.
 - 1) VEHICLE ENTRANCES AND EXITS - CONSTRUCT AND MAINTAIN ENTRANCES AND EXITS TO PREVENT TRACKING OF SEDIMENTS ONTO ROADWAYS.
 - 2) MATERIAL DELIVERY, STORAGE AND USE - IMPLEMENT PRACTICES TO PREVENT DISCHARGE OF CONSTRUCTION MATERIALS DURING DELIVERY, STORAGE, AND USE.
 - 3) STOCKPILE MANAGEMENT - INSTALL CONTROLS TO REDUCE OR ELIMINATE POLLUTION OF STORM WATER FROM STOCKPILES OF SOIL AND PAVING.
 - 4) WASTE DISPOSAL - DO NOT DISCHARGE ANY MATERIALS, INCLUDING BUILDING MATERIALS, INTO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.
 - 5) SPILL PREVENTION AND CONTROL - IMPLEMENT CHEMICAL SPILL AND LEAK PREVENTION AND RESPONSE PROCEDURES TO CONTAIN AND CLEAN-UP SPILLS AND PREVENT MATERIAL DISCHARGES TO THE STORM DRAIN SYSTEM AND WATERS OF THE STATE.
 - 6) CONCRETE RESIDUALS AND WASHOUT WASTES - WASTE SHALL NOT BE DISCHARGED TO A SURFACE WATER AND IS NOT ALLOWED TO ADVERSELY AFFECT A WATER OF THE STATE. DESIGNATE TEMPORARY CONCRETE WASHOUT FACILITIES FOR RINSING OUT CONCRETE TRUCKS. PROVIDE DIRECTIONS TO TRUCK DRIVERS WHERE DESIGNATED WASHOUT FACILITIES ARE LOCATED. DESIGNATED WASHOUT AREAS SHOULD BE LOCATED AT LEAST 50 FEET AWAY FROM STORM DRAINS, STREAMS OR OTHER WATER BODIES. CARE SHOULD BE TAKEN TO ENSURE THESE FACILITIES DO NOT OVERFLOW DURING STORM EVENTS.
 - 7) CONCRETE GROOVING/GRINDING SLURRY – DO NOT DISCHARGE SLURRY TO A WATERBODY OR STORM DRAIN. SLURRY MAY BE APPLIED ON FORESLOPES OR REMOVED FROM THE PROJECT.
 - 8) VEHICLE AND EQUIPMENT STORAGE AND MAINTENANCE AREAS - PERFORM ON SITE FUELING AND MAINTENANCE IN ACCORDANCE WITH ALL ENVIRONMENT LAWS SUCH AS PROPER STORAGE OF ONSITE FUELS AND PROPER DISPOSAL OF USED ENGINE OIL OR OTHER FLUIDS ON SITE. EMPLOY WASHING PRACTICES THAT PREVENT CONTAMINATION OF SURFACE AND GROUND WATER FROM WASH WATER. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUIVALENT OR BETTER TREATMENT PRIOR TO DISCHARGE.

- 9) LITTER MANAGEMENT - ENSURE EMPLOYEES PROPERLY DISPOSE OF LITTER. MINIMIZE EXPOSURE OF TRASH IF EXPOSURE TO PRECIPITATION OR STORM WATER WOULD RESULT IN A DISCHARGE OF POLLUTANTS.
- 10) DEWATERING – PROPERLY TREAT WATER TO REMOVE SUSPENDED SEDIMENT BEFORE IT RE-ENTERS A WATERBODY OR DISCHARGES OFF-SITE. MEASURES ARE ALSO TO BE TAKEN TO PREVENT SCOUR EROSION AT DEWATERING DISCHARGE POINT.
- 3. APPROVED STATE OR LOCAL PLANS
 - DURING THE COURSE OF THIS CONSTRUCTION, IT IS POSSIBLE THAT SITUATIONS WILL ARISE WHERE UNKNOWN MATERIALS WILL BE ENCOUNTERED. WHEN SUCH SITUATIONS ARE ENCOUNTERED, THEY WILL BE HANDLED ACCORDING TO ALL FEDERAL, STATE, AND LOCAL REGULATIONS IN EFFECT AT THE TIME.

IV. MAINTENANCE PROCEDURES

THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES IN PROPER WORKING ORDER, INCLUDING CLEANING, REPAIRING, OR REPLACING THEM THROUGHOUT THE CONTRACT PERIOD. THIS SHALL BEGIN WHEN THE FEATURES HAVE LOST 50% OF THEIR CAPACITY.

V. INSPECTION REQUIREMENTS

- A. INSPECTIONS SHALL BE MADE JOINTLY BY THE CONTRACTOR AND THE CONTRACTING AUTHORITY AT LEAST ONCE EVERY SEVEN CALENDAR DAYS. STORM WATER SITE INSPECTIONS WILL INCLUDE:
 - 1. DATE OF THE INSPECTION.
 - 2. SUMMARY OF THE SCOPE OF THE INSPECTION.
 - 3. NAME AND QUALIFICATIONS OF THE PERSONNEL MAKING THE INSPECTION.
 - 4. REVIEW OF EROSION AND SEDIMENT CONTROL MEASURES WITHIN DISTURBED AREAS FOR THE EFFECTIVENESS IN PREVENTING IMPACTS TO RECEIVING WATERS.
 - 5. MAJOR OBSERVATIONS RELATED TO THE IMPLEMENTATION OF THE PPP.
 - 6. IDENTIFICATION OF CORRECTIVE ACTIONS REQUIRED TO MAINTAIN OR MODIFY EROSION AND SEDIMENT CONTROL MEASURES.
- B. INCLUDE STORM WATER SITE INSPECTION REPORTS IN THE AMENDED PPP. INCORPORATE ANY ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES DETERMINED AS A RESULT OF THE INSPECTION. IMMEDIATELY BEGIN CORRECTIVE ACTIONS ON ALL DEFICIENCIES FOUND WITHIN 3 CALENDAR DAYS OF THE INSPECTION AND COMPLETE WITHIN 7 CALENDAR DAYS FOLLOWING THE INSPECTION. IF IT IS DETERMINED THAT MAKING THE CORRECTIONS LESS THAN 72 HOURS AFTER THE INSPECTION IS IMPRACTICABLE, IT SHOULD BE DOCUMENTED WHY IT IS IMPRACTICABLE AND INDICATE AN ESTIMATED DATE BY WHICH THE CORRECTIONS WILL BE MADE.

VI. NON-STORM WATER DISCHARGES

THIS INCLUDES SUBSURFACE DRAINS (I.E. LONGITUDINAL AND STANDARD SUBDRAINS) AND SLOPE DRAINS. THE VELOCITY OF THE DISCHARGE FROM THESE FEATURES MAY BE CONTROLLED BY THE USE OF HEADWALLS OR BLOCKS, CLASS A STONE, EROSION STONE OR OTHER APPROPRIATE MATERIALS. THIS ALSO INCLUDES UNCONTAMINATED GROUNDWATER FROM DEWATERING OPERATIONS, WHICH WILL BE CONTROLLED AS DISCUSSED IN SECTION III OF THE PPP.

VII. POTENTIAL SOURCES OF OFF RIGHT-OF-WAY (ROW) POLLUTION

SILTS, SEDIMENT, AND OTHER FORMS OF POLLUTION MAY BE TRANSPORTED ONTO HIGHWAY RIGHT-OF-WAY (ROW) AS A RESULT OF A STORM EVENT. POTENTIAL SOURCES OF POLLUTION LOCATED OUTSIDE HIGHWAY ROW ARE BEYOND THE CONTROL OF THIS PPP. POLLUTION WITHIN HIGHWAY ROW WILL BE CONVEYED AND CONTROLLED PER THIS PPP.

VIII. DEFINITIONS

- A. BASE PPP - INITIAL POLLUTION PREVENTION PLAN.
- B. AMENDED PPP – BASE PPP AMENDED DURING CONSTRUCTION. MAY INCLUDE PLAN REVISIONS OR CONTRACT MODIFICATIONS FOR NEW ITEMS, STORM WATER SITE INSPECTION REPORTS, FIELDBOOK ENTRIES MADE BY THE INSPECTOR, AMENDED PPP SITE MAP BY THE CONTRACTOR, ECIP, NOI, CO-PERMITTEE CERTIFICATIONS, AND SUBCONTRACTOR REQUEST FORMS. ITEMS AMENDING THE PPP ARE STORED ELECTRONICALLY AND ARE READILY AVAILABLE UPON REQUEST.
- C. FIELDBOOK ENTRIES – THIS CONTAINS THE INSPECTOR'S DAILY DIARY AND BID ITEM POSTINGS.
- D. CONTROLS - METHODS, PRACTICES, OR MEASURES TO MINIMIZE OR PREVENT EROSION, CONTROL SEDIMENTATION, CONTROL STORM WATER, OR MINIMIZE CONTAMINANTS FROM OTHER TYPES OF WASTE OR MATERIALS. ALSO CALLED BEST MANAGEMENT PRACTICES (BMPs).
- E. SIGNATURE AUTHORITY - REPRESENTATIVE AUTHORIZED TO SIGN VARIOUS STORM WATER DOCUMENTS.

CERTIFICATION STATEMENT

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.




SIGNATURE












MICHAEL JAMES HACKETT
PRINTED OR TYPED NAME


POLLUTION PREVENTION PLAN

MADISON COUNTY,


BENCH MARK: #1, BOLT ON GUARDRAIL, STA. 5+18, 10' RT. ELEV. = 859.29
#3, BOLT ON GUARDRAIL, STA. 5+18, 11' LT. ELEV. = 859.24

BORING LOG NO. 2				STATION 5+71, 4.5'LT				CBA Job No.: 2023145				Project No.: 251275							
Project: County Hwy R35 Bridge over Middle Section 25, Crawford Township Madison County, IA								Client: Calhoun-Burns & Associates 6775 Vista Drive West Des Moines, IA 50265											
Surface Elevation: 856.1				Date Drilled: 6/30/2025				Drilling Method: HSA											
Datum: Situation Plan				Drilling Depth, ft.: 54.8				Page: 1 of 2											
Elevation ft.	Depth ft.	Sample No.	Type	SPT bpf	Moisture Content, %	Dry Density pcf	Unconfined Compressive Strength psf	Material Description*				Graphic Log	USCS	Water Level Depth ft.	Elevation ft.				
855	0							2" HMA over 10" PCC							1.0				
								AIR							855.1				
850	5																		
845	10																		
								Brown silty fine sand, damp					SM		12.0				
840	15	1	SSA	3	24.9										844.1				
								GRANULAR ALLUVIUM (Silty Sand)											
835	20	2	SSA	4	12.0			Saturated after 22'											
830	25	3	SSA	5															
								Gray lean clay, very moist					CL		27				
								COHESIVE ALLUVIUM (Soft Silty Clay)							829.1				
825	30	4	SSA	3	29.6														
								Gray clayey fine to medium sand, saturated					SC		33				
															823.1				
	35																		
*The stratification lines represent the approximate boundary lines between material types: in-situ, the transition may be gradual.																			
Water Level Observation																			
Time:at completion hrs. days																			
Depth to water: 22' ft. ft. ft. ft.																			
ALLENDER BUTZKE ENGINEERS, INC.																			
Geotechnical - Environmental - Construction Q.C.																			

BORING LOG NO. 2		STATION 5+71, 4.5'LT		CBA Job No.: 2023145		Project No.: 251275							
Project: County Hwy R35 Bridge over Middle Section 25, Crawford Township Madison County, IA				Client: Calhoun-Burns & Associates 6775 Vista Drive West Des Moines, IA 50265									
Surface Elevation: 856.1				Date Drilled: 6/30/2025		Drilling Method: HSA							
Datum: Situation Plan				Drilling Depth, ft.: 54.8		Page: 2 of 2							
Elevation ft.	Depth ft.	Sample No.	Type	SPT bpf	Moisture Content, %	Dry Density pcf	Unconfined Compressive Strength psf	Material Description *	Graphic Log	USCS	Water Level	Depth	Elevation ft.
820		5	SSA	11				GRANULAR ALLUVIUM (Clayey Sand)					
	40	6	SSA	50/0.8"	16.3			6" Gray shale over 6" hard limestone				39.5	
815		7	SSA	130	17.5			Limestone with shale seams from 40.5' to 41.5'				816.6	
		8	SSA	35	16.9			Hard limestone from 41.5' to 42.5'					
	45	9	SSA	88	19.3			Dark gray clay shale, moist after 42.5'					
810													
		10	SSA	50/2"	18.6			BEDROCK					
		11	SSA	50/1"	10.6			Hard limestone layer from 47.5' to 49'					
	50	12	SSA	58	18.6			Coal seam near 50'					
805		13	SSA	98	12.6								
		14	SSA	50/3"	9.3			Gray shale, damp after 53.5'				54.8	
800								End of Boring				801.3	
	60												
795													
	65												
790													
	70												
*The stratification lines represent the approximate boundary lines between material types: in-situ, the transition may be gradual.													
Water Level Observation													
Time:at completion hrs. days													
Depth to water: 22' ft. ft. ft.													
ALLENDER BUTZKE ENGINEERS, INC.													
Geotechnical - Environmental - Construction Q.C.													

BORING LOG NO. 3		STATION 6+98, 4'RT		CBA Job No.: 2023145		Project No.: 251275						
Project: County Hwy R35 Bridge over Middle Section 25, Crawford Township Madison County, IA				Client: Calhoun-Burns & Associates 6775 Vista Drive West Des Moines, IA 50265								
Surface Elevation: 856.0		Date Drilled: 7/22/2025		Drilling Method: HSA								
Datum: Situation Plan		Drilling Depth, ft.: 53.5		Page: 1 of 2								
Elevation ft.	Depth ft.	Sample No.	Type	SPT bpf	Moisture Content, %	Dry Density pcf	Unconfined Compressive Strength psf	Material Description *	Graphic Log	USCS	Water Level Depth	Elevation ft.
855	0							3" HMA over 6" PCC				1.0
												855
	5											
850												
	10							AIR				
845												
	15											
840												
	20							Brown silty fine sand, damp Saturated after 20'		SM		18.0
835								GRANULAR ALLUVIUM (Silty Sand)				838
	25											
830												
	30							Gray lean clay, very moist		CL		27
825								COHESIVE ALLUVIUM (Soft Silty Clay)				829
	35											
*The stratification lines represent the approximate boundary lines between material types: in-situ, the transition may be gradual.												
Water Level Observation												
Time:at completion hrs. days												
Depth to water: 20' ft. ft. ft.												
ALLENDER BUTZKE ENGINEERS, INC.												
Geotechnical - Environmental - Construction Q.C.												

SOUNDING DATA
(SEE "SITUATION PLAN", SHEETS 4, FOR BORING LOCATIONS)

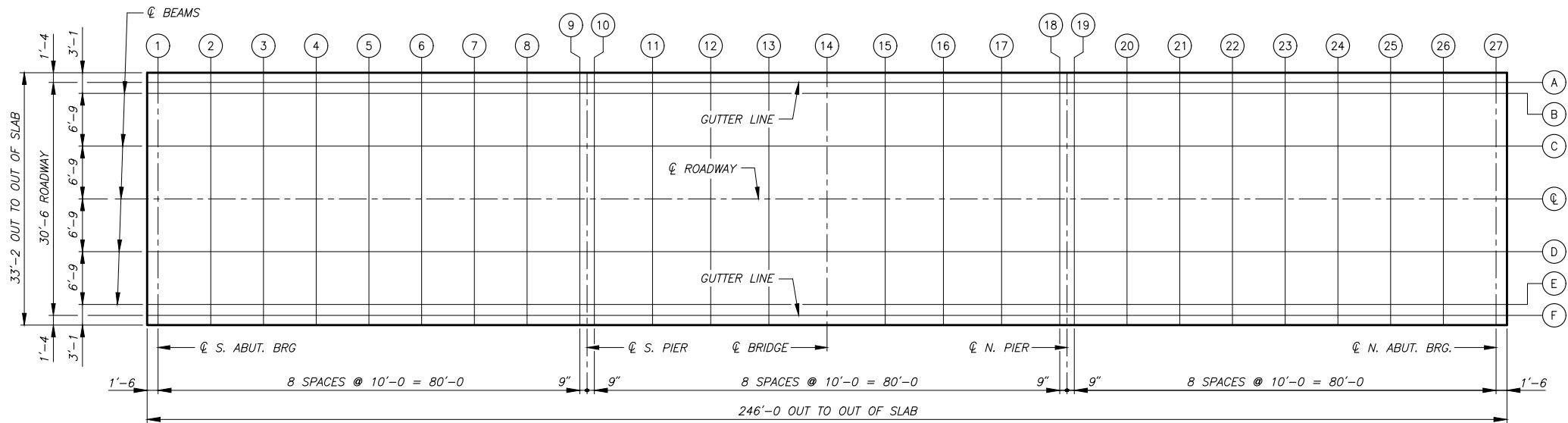
	I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA. DATE: 10/13/25 DAVID LOGEMANN, P.E. MY LICENSE RENEWAL DATE IS DECEMBER 31, 2025. PAGES OR SHEETS COVERED BY THIS SEAL: 7 & 8 OF 23
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243'-0 x 30'-6 PRETENSIONED PRESTRESSED
CONCRETE BEAM BRIDGE

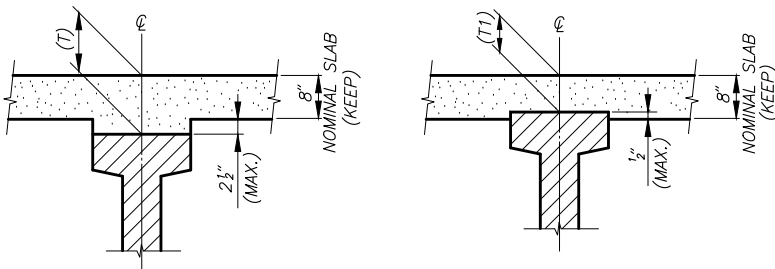
INTEGRAL ABUTMENTS TEE PIERS
80'-9 END SPANS 81'-6 INTERIOR SPAN

SOUNDING DATA

STATION 6+55.00 0' SKEW
MADISON COUNTY, IOWA



BENCH MARK: #1, BOLT ON GUARDRAIL, STA. 5+18, 10' RT. ELEV.= 859.29
 #3, BOLT ON GUARDRAIL, STA. 5+18, 11' LT. ELEV.= 859.24

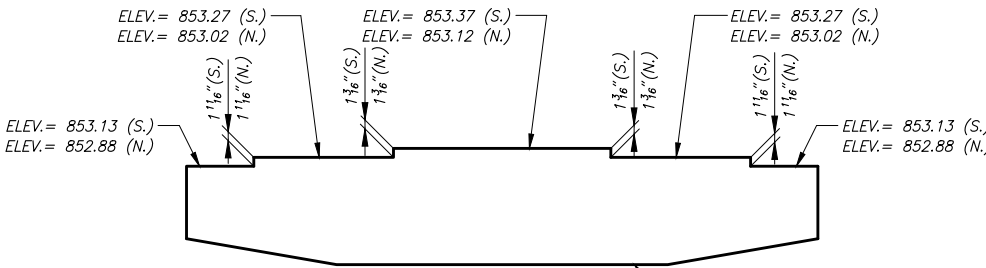
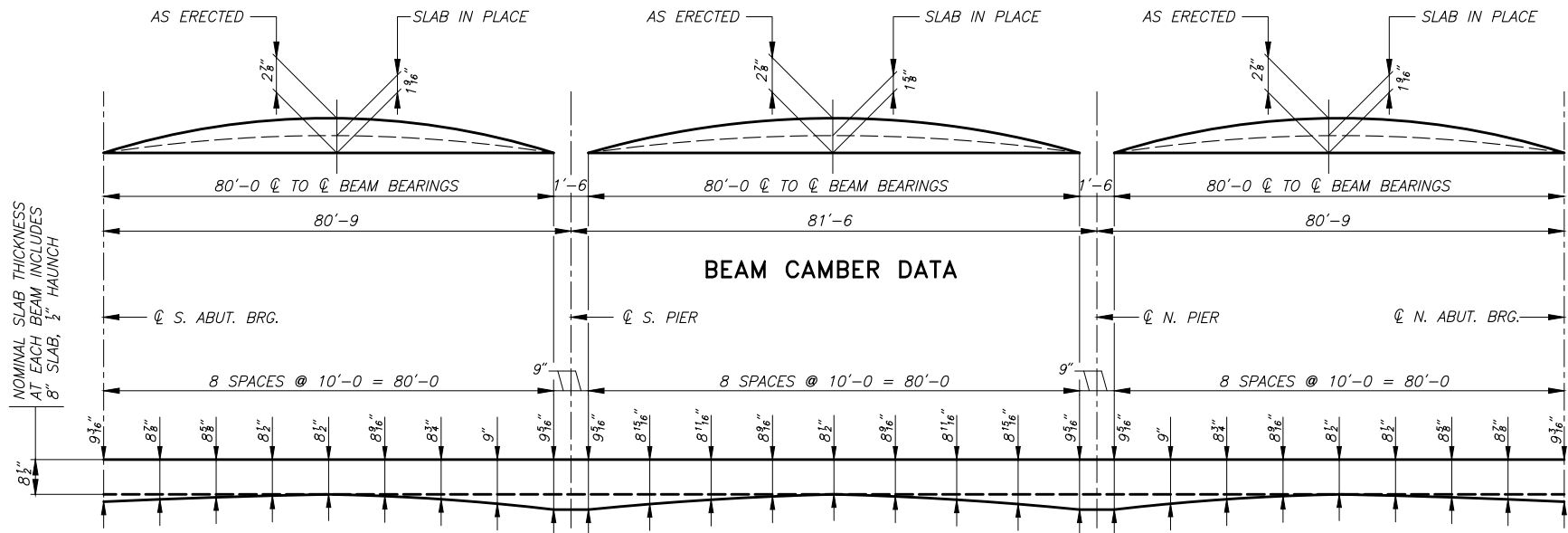


SLAB THICKNESS DETAILS

NOTE: THE SLAB THICKNESS (T) AT BEAMS IS BASED ON THE ANTICIPATED BEAM CAMBER REMAINING AFTER PLACING THE SLAB, BUT IS NOT GUARANTEED FOR CONSTRUCTION. IF BEAM IS UNDER CAMBERED, INCREASE SLAB THICKNESS (T) AT BEAMS TO COMPENSATE. IF BEAM IS OVER CAMBERED, THE SLAB THICKNESS (T) MAY BE DECREASED A MAXIMUM OF 1/2" EMBEDMENT AT THE BEAM (T1). IF MORE THAN 1/2" EMBEDMENT IS REQUIRED, OR IF THE HAUNCH EXCEEDS 2 1/2", THE GRADE LINE IS TO BE REVISED. THE ABOVE DIAGRAMS DO NOT APPLY TO THE CANTILEVERED SLAB SIDE OF THE EXTERIOR BEAM.

TOP OF SLAB ELEVATIONS

LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	LOCATION
A	857.12	857.22	857.31	857.40	857.47	857.54	857.60	857.64	857.69	857.69	857.72	857.74	857.76	857.76	857.76	857.74	857.72	857.69	857.69	857.64	857.60	857.54	857.47	857.40	857.31	857.22	857.12	A
B	857.16	857.26	857.35	857.44	857.51	857.58	857.64	857.68	857.73	857.73	857.76	857.78	857.80	857.80	857.80	857.78	857.76	857.73	857.73	857.68	857.64	857.58	857.51	857.44	857.35	857.26	857.16	B
C	857.30	857.40	857.49	857.58	857.65	857.72	857.78	857.82	857.87	857.87	857.90	857.92	857.94	857.94	857.94	857.92	857.90	857.87	857.87	857.82	857.78	857.72	857.65	857.58	857.49	857.40	857.30	C
CL	857.40	857.50	857.59	857.68	857.75	857.82	857.88	857.92	857.97	857.97	858.00	858.02	858.04	858.04	858.04	858.02	858.00	857.97	857.97	857.92	857.88	857.82	857.75	857.68	857.59	857.50	857.40	CL
D	857.30	857.40	857.49	857.58	857.65	857.72	857.78	857.82	857.87	857.87	857.90	857.92	857.94	857.94	857.94	857.92	857.90	857.87	857.87	857.82	857.78	857.72	857.65	857.58	857.49	857.40	857.30	D
E	857.16	857.26	857.35	857.44	857.51	857.58	857.64	857.68	857.73	857.73	857.76	857.78	857.80	857.80	857.80	857.78	857.76	857.73	857.73	857.68	857.64	857.58	857.51	857.44	857.35	857.26	857.16	E
F	857.12	857.22	857.31	857.40	857.47	857.54	857.60	857.64	857.69	857.69	857.72	857.74	857.76	857.76	857.76	857.74	857.72	857.69	857.69	857.64	857.60	857.54	857.47	857.40	857.31	857.22	857.12	F



PIER NOTES:
 H=39' PER H30-57-06. FOOTING SIZE 4'-0 x 9'-0 x 27'-0 PER H30-63-06.

WING	ELEV. A	ELEV. B	ELEV. C
NW	857.11	857.03	856.95
SW	857.11	857.03	856.95
NE	857.11	857.03	856.95
SE	857.11	857.03	856.95

SEE SHEET H30-08-06 FOR LOCATION OF ELEV. A, B AND C. ELEVATIONS SHOWN ARE AT OUTSIDE FACE.

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

INTEGRAL ABUTMENTS 80'-9 END SPANS
 TEE PIERS 81'-6 INTERIOR SPAN

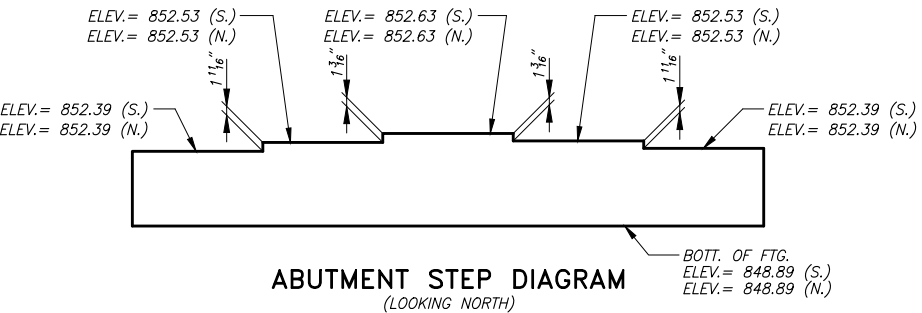
SUPERSTRUCTURE DETAILS

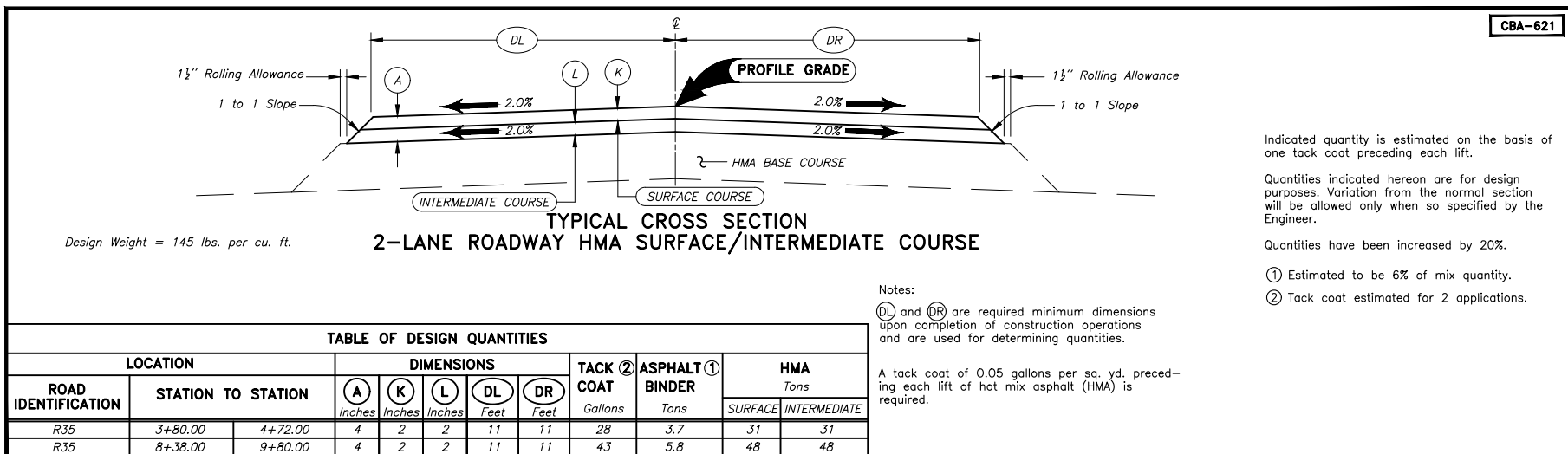
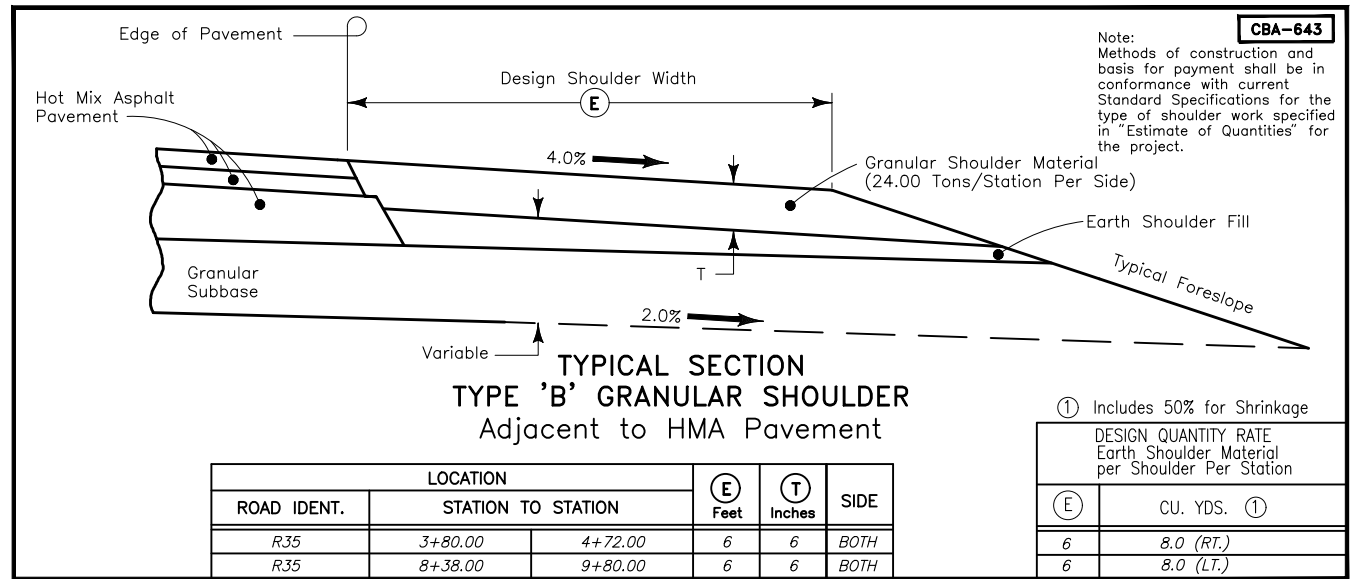
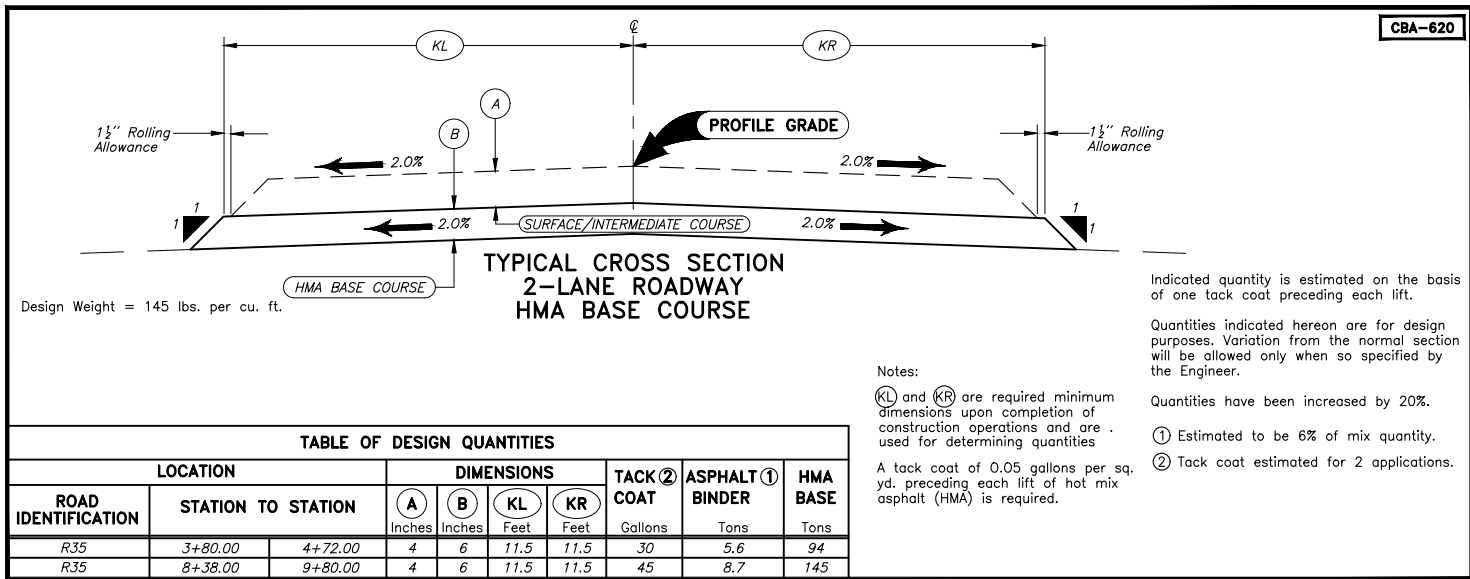
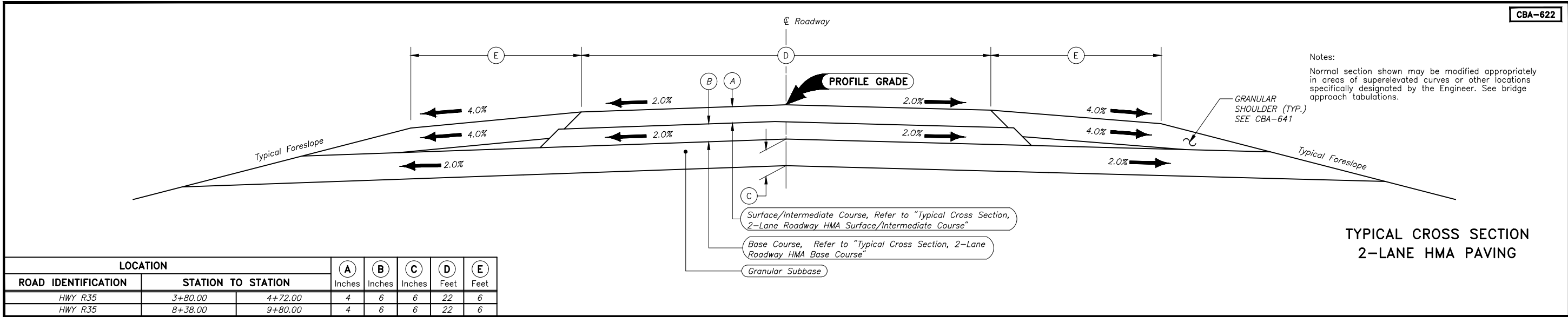
STATION 6+55.00
 MADISON COUNTY, IOWA
 0° SKEW

LOCATION	WEST EDGE OF DECK	C.L. APPROACH ROADWAY	EAST EDGE OF DECK
SOUTH ABUTMENT	N = 492794.52 E = 1557055.14	N = 492794.54 E = 1557071.72	N = 492794.57 E = 1557088.30
SOUTH PIER	N = 492875.27 E = 1557055.01	N = 492875.29 E = 1557071.59	N = 492875.32 E = 1557088.18
NORTH PIER	N = 492956.77 E = 1557054.88	N = 492956.79 E = 1557071.47	N = 492956.82 E = 1557088.05
NORTH ABUTMENT	N = 493037.52 E = 1557054.76	N = 493037.54 E = 1557071.34	N = 493037.57 E = 1557087.92

SLAB THICKNESS AT BEAM (T)

NOTE : HAUNCH THICKNESSES ARE SHOWN FOR ESTIMATING ONLY AND ARE NOT GUARANTEED FOR CONSTRUCTION.





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

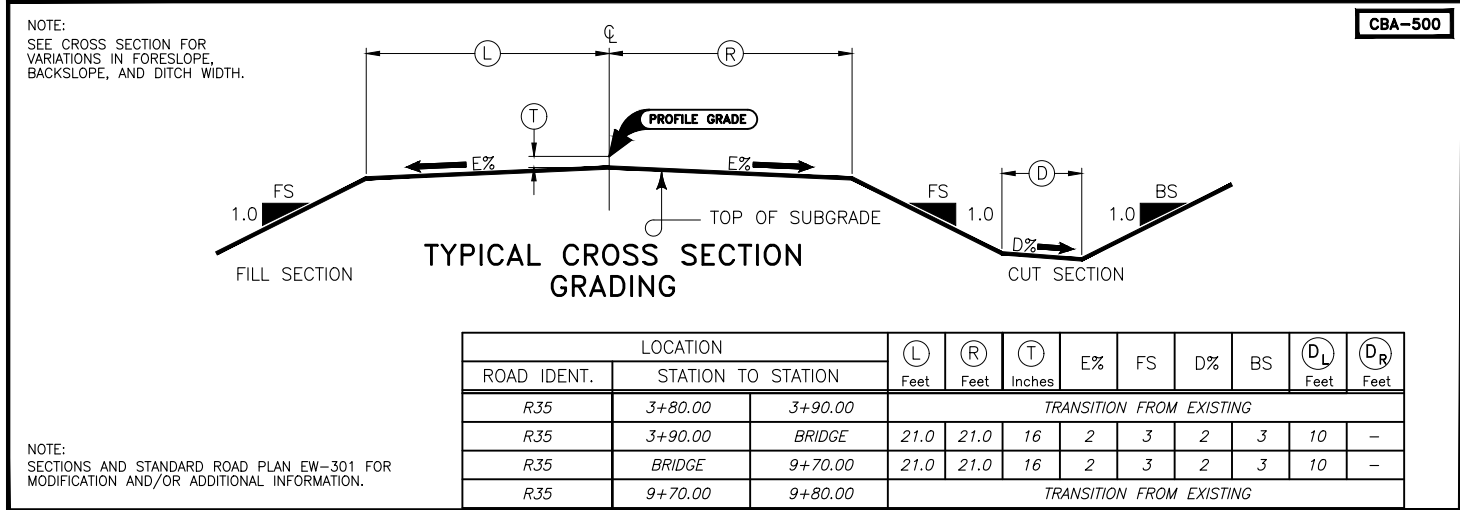
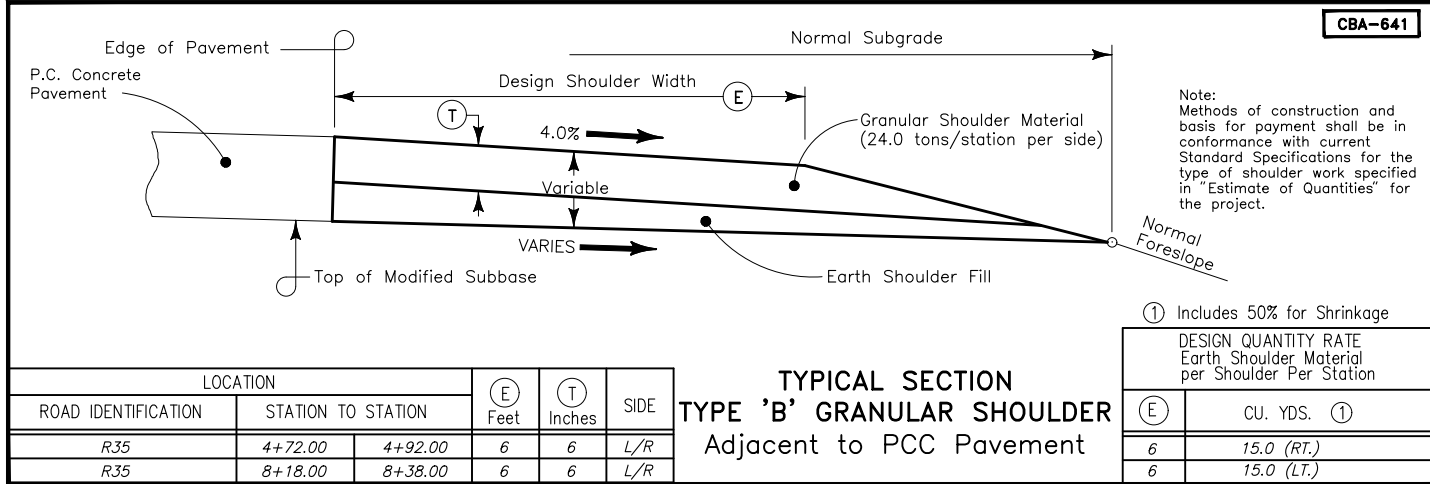
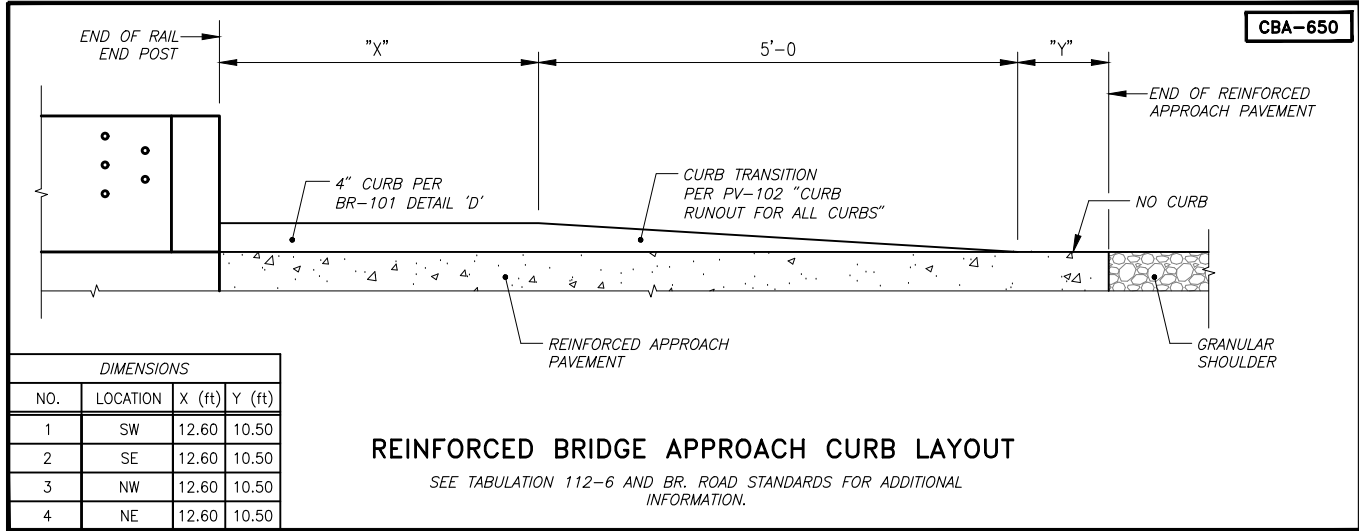
INTEGRAL ABUTMENTS
80'-9 END SPANS

TEE PIERS
81'-6 INTERIOR SPAN

TYPICAL SECTIONS

STATION 6+55.00
MADISON COUNTY,

0° SKEW
IOWA



CBA-100

SUMMARY OF ROADWAY EXCAVATION

STATION	AREAS		RAW VOLUMES			
	CUT	FILL	CUT	ADD'L CUT	FILL	ADD'L FILL
	SF	SF	CY	CY	CY	CY
3+80	0	0	15		138	
4+30	16	149		83		115
5+15	35	168	80		499	
BRIDGE	-	-	-	-	-	-
7+95	11	202				
8+80	33	156	69	31	564	138
9+30	10	47	40		188	
9+80	0	0	9		44	3
SUBTOTALS			213	114	1,433	256
TOTALS			327		1,689	

SEE CROSS SECTIONS FOR ADDITIONAL INFORMATION.

CBA-101

SUMMARY OF EARTHWORK QUANTITIES

EXCAVATION TYPE	RAW CUT	RAW FILL	WASTE **	USABLE CUT	SHRINKAGE FACTOR	FILL +35% SHRINKAGE	PAYMENT QUANTITY
	CY	CY	CY	CY		CY	CY
CLASS 10, ROADWAY AND BORROW	327	1,689	0	327	35%	2,280	327
CLASS 10, CHANNEL	2,400	50	379	2,021	35%	68	2,400
TOTALS			379	2,348		2,348	

** ASSUMES SOME MATERIAL WILL BE UNSUITABLE AND/OR EXCESS AND WILL NEED TO BE WASTED OFF SITE.

- NAVIGABLE WATER CONDITIONS**
- THE IOWA DNR HAS BEEN NOTIFIED THAT PADDLING ACCESS ON THE MIDDLE RIVER WILL BE INTERRUPTED DURING A PORTION OF THE CONSTRUCTION FOR THIS PROJECT. THE CONTRACTOR SHALL MEET THE FOLLOWING REQUIREMENTS:
1. INSTALL THE SIGNAGE SYSTEM AS DETAILED ON THIS SHEET. SIGNS SHOULD BE PLACED PRIOR TO OBSTRUCTING THE RIVER AND BE REMOVED AFTER THE OBSTRUCTION IS REMOVED.
 2. CONTRACTOR TO CONTACT JOHN WENCK AT JOHN.WENCK@DNR.IOWA.GOV A MINIMUM OF ONE WEEK PRIOR TO WHEN TEMPORARY CHANNEL OBSTRUCTION IS PLACED AND WHEN THE CHANNEL OBSTRUCTION IS REMOVED.
 3. CONTRACTOR TO REMOVE ALL CONSTRUCTION DEBRIS FROM RIVER CHANNEL.
 4. CONTRACTOR SHALL MINIMIZE TIME THE RIVER IS OBSTRUCTED.

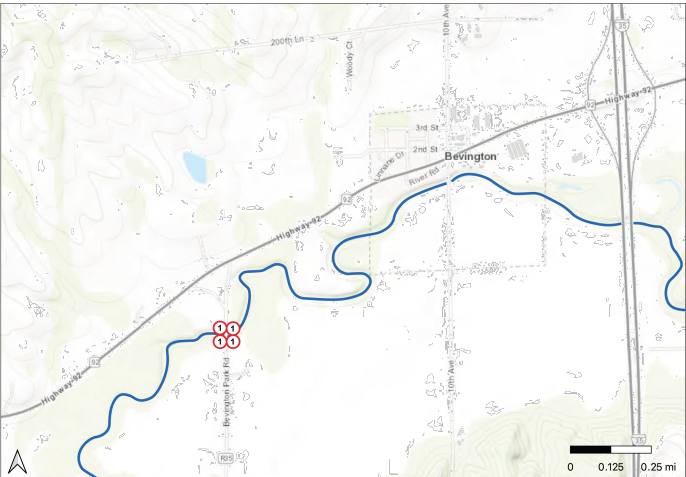
ALL SIGNS SHALL USE COLOR CODING STYLE ACCORDING TO THE WATER TRAIL DEVELOPMENT MANUAL ([HTTPS://WWW.IOWADNR.GOV/THINGS-TO-DO/CANOEING-KAYAKING/WATER-TRAIL-DEVELOPMENT](https://www.iowadnr.gov/things-to-do/canoeing-kayaking/water-trail-development)) SIGNS SHALL BE LOCATED AT THE BRIDGE SITE ON OPPOSITE SIDES OF THE RIVER, ONE PAIR FACING UPSTREAM AND ONE PAIR FACING DOWNSTREAM. ALTERNATELY, TWO SIGNS MAY BE PLACED NEAR THE CENTER OF CHANNEL 12 FEET ABOVE THE REGULAR WATER LEVEL, ONE FACING UPSTREAM AND ONE FACING DOWNSTREAM.

CONTRACTOR SHALL PROVIDE MEANS TO INSTALL THE SIGNS.

COORDINATE SIGN PLACEMENT WITH CONSERVATION OFFICER CRAIG LONNEMAN; PHONE: 515-238-6005. EMAIL: CRAIG.LONNEMAN@DNR.IOWA.GOV

WHEN OBSTRUCTIONS TO THE CHANNEL ARE NOT NEEDED FOR A PERIOD OF 30 DAYS OR GREATER, SIGNAGE SHOULD BE TEMPORARILY REMOVED.

LABOR, MATERIAL AND EQUIPMENT REQUIRED TO PLACE AND MAINTAIN SIGNAGE SHALL BE INCIDENTAL TO THE "TRAFFIC CONTROL" BID ITEM.



①

Danger
No Thru Traffic

7½" LETTER HEIGHT: DANGER
4" LETTER HEIGHT: NO THRU TRAFFIC

PADDLING ROUTE SIGNAGE

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

INTEGRAL ABUTMENTS
80'-9 END SPANS

TEE PIERS
81'-6 INTERIOR SPAN

TYPICAL SECTIONS AND TABULATIONS

STATION 6+55.00
MADISON COUNTY,

0° SKEW
IOWA

105.04
10/21/25

STANDARDS

The following Standards apply to construction work on this project.

Number	Date	Title
BA-200	04-21-26	Steel Beam Guardrail Components
BA-201	10-18-22	Steel Beam Guardrail Barrier Transition Section (MASH TL-3)
BA-202	04-15-25	Steel Beam Guardrail Bolted End Anchor
BR-101	10-21-26	Bridge Approach Section (General Details)
BR-105	10-15-24	Bridge Approach Section (Two-Lane, HMA Pavement)
DR-402	04-16-24	Rock Flume for Bridge End Drain
EC-201	04-20-21	Silt Fence
EC-204	10-19-21	Perimeter, Slope and Ditch Check Sediment Control Devices
EW-301	04-16-24	Guardrail Grading
EW-401	10-20-15	Temporary Stream Crossing, Causeway, or Equipment Pad
LS-626	10-19-21	Steel Beam Guardrail Flared End Terminal (NCHRP 350 TL-3)
LS-630	10-19-21	Steel Beam Guardrail Installation At Concrete Barrier Or Bridge Rail End Section (NCHRP 350 TL-3)
PM-110	10-15-24	Line Types
PV-101	01-01-26	Joints
PV-102	10-21-25	PCC Curb Details
SI-173	04-19-16	Object Markers
SI-211	10-18-22	Object Marker and Delineator Placement with Guardrail
TC-252	10-21-25	Routes Closed to Traffic

108.13A
3/27/25

SAFETY CLOSURES

Refer to Section 2528 of the Standard Specifications

Station	Road Closure Qty.	Hazard Closure Qty.	Remarks
2+30.00	1		SOUTH SIDE
4+50.00		1	SOUTH SIDE
8+60.00		1	NORTH SIDE
10+75.00	1		NORTH SIDE

* PARK ENTRANCE TO REMAIN OPEN

110.07A
8/15/22

REMOVAL OF STEEL BEAM GUARDRAIL

(1) Lane(s) to which the installation is adjacent.
(2) Includes length of End Terminals and End Anchors.

Line No.	No.	Direction of Traffic (1)	Station From	Station To	Side	Removal of Guardrail (2) (LF)
1.0		SB	4+50.00	5+11.50	Left	62.0
2.0		NB	4+50.00	5+11.50	Right	62.0
3.0		SB	7+60.00	8+31.00	Left	62.0
4.0		NB	7+60.00	8+31.00	Right	62.0
Total:						248

110.01
4/5/24

REMOVAL OF PAVEMENT

Refer to Tabulation 102-5.

* Not a bid item.

Line No.	Station From	Station To	Side	Pavement Type	Area (SY)	Saw Cut* (LF)	Remarks
1.0	7+68.00	9+80.00		HMA	518.2	22.0	R35 - N END BOTH LT. AND RT.
1.0	3+80.00	5+10.00		HMA	317.8	22.0	R35 - S END BOTH LT. AND RT.
Total:				836			

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

INTEGRAL ABUTMENTS
80'-9 END SPANS

TEE PIERS
81'-6 INTERIOR SPAN

TABULATIONS

STATION 6+55.00
MADISON COUNTY,

0' SKEW
IOWA

CBA
CALHOUN-BURNS & ASSOCIATES, CONSULTING ENGINEERS
WEST DES MOINES, IOWA 50266
(515) 224-4344

JOB NO. 2023145

DESIGNED BY : LDW
DRAWN BY : LLE
CHECKED BY : LGM

MADISON COUNTY

PROJECT NO. HDP-C061(130)--6B-61

SHEET 12 OF 23

100_19
10/15/24

PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE

Possible Standards: EC-204

Line No.	Station From	Station To	Side	Sediment Control Device Type	Diameter Size	Length (LF)	Remarks
1.0	6+00.00	6+15.00		Perimeter and Slope	12 inch	210.00	TOE S BANK
2.0	6+65.00	6+95.00		Perimeter and Slope	12 inch	210.00	TOE N BANK
3.0	3+80.00	9+80.00		Perimeter and Slope	20 inch	200.00	(1)
Total:						620	

1. USE AS DITCH CHECKS IN LIEU OF SILT FENCE, IF NEEDED BASED ON SITE CONDITIONS

100_18
8/15/22

SILT FENCES FOR DITCH CHECKS

Possible Standard: EC-201

Cross Section View

Longitudinal Profile View

* The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.

* Volume equation: $[0.5 \times \text{Spacing} \times (0.5 \times H^2 \times FS + DW \times H + 0.5 \times H^2 \times BS)]$

Line No.	Basin No.	Type	Station	Side	Installation (LF)	Maintenance (LF)	Removal (LF)	Foreslope (FS:1)	Backslope (BS:1)	Ditch Width (FT)	Avg. % Slope Ditch Grade	Volume (CF)	Remarks
1.0	1	Type 3	4+30.00	Left	22.0	22.0		3.0	3.0	10.0	1.2	942.00	SW DITCH
2.0	1	Type 3	5+00.00	Left	22.0	22.0		3.0	3.0	10.0	1.2	942.00	SW DITCH
3.0	1	Type 3	5+70.00	Left	22.0	22.0		3.0	3.0	10.0	1.2	942.00	SW DITCH
4.0	2	Type 3	7+25.00	Left	22.0	22.0		3.0	3.0	10.0	3.8	376.80	NW DITCH
5.0	2	Type 3	7+65.00	Left	22.0	22.0		3.0	3.0	10.0	3.8	376.80	NW DITCH
6.0	2	Type 3	8+05.00	Left	22.0	22.0		3.0	3.0	10.0	0.8	1460.10	NW DITCH
7.0	2	Type 3	9+15.00	Left	17.0	17.0		3.0	2.5	6.0	0.2	2050.65	NW DITCH
Total:					149	149							

BID QUANTITY = 149 x 1.5 = 224 L.F.

100_17
8/15/22

TABULATION OF SILT FENCES

Refer to EC-201

Line No.	Station From	Station To	Side	Length (FT)	Remarks
1.0	3+80.00	5+50.00	Right	195.00	TOE OF SE FORESLOPE
2.0	5+40.00	5+80.00	Right	90.00	TOP OF SE CHANNEL BANK
3.0	5+70.00	5+75.00	Left	35.00	TOP OF SW CHANNEL BANK
4.0	6+95.00	7+20.00	Right	90.00	TOP OF NE CHANNEL BANK
5.0	7+00.00	7+15.00	Left	40.00	TOP OF NW CHANNEL BANK
6.0	7+60.00	9+80.00	Right	270.00	TOE OF NE FORESLOPE
Total:				720	

BID QUANTITY = 720 x 1.25 = 900 L.F.

112_06
2/22/24

BRIDGE APPROACH SECTION

Refer to the BR Series.

* Not a bid item, includes modified subbase and polymer grid for under reinforced shoulders

Line No.	Bridge Station	End	Skew Ahead Left (Degrees)	Skew Ahead Right (Degrees)	(T) Thickness (IN)	Pay Length (FT)	Non-Reinf. Area (SY)	Single-Reinf. Area (SY)	Double-Reinf. Area (SY)	SRP Approach	SRP Abutment Type	SRP Abutting Pavement	Perforated * 4" Subdrain (LF)	Subdrain * Outlet (STA)	Subdrain * Outlet Side	Porous * Backfill (CY)	Class 'A' * Crushed Stone Backfill (CY)	Modified * Subbase (TON)	Polymer * Grid (SY)	Special * Backfill (TON)	Remarks
1.0	6+55.00	S			10.0	60.0	97.8	70.2			Movable							245.000	220.0		SOUTH END
2.0	6+55.00	N			10.0	60.0	97.8	70.2			Movable							245.000	220.0		NORTH END
Total:							195.6	140.4													

110_13
8/15/22

DELIVERY AND STOCKPILING

Line No.	Item Description	Quantity	Quantity Units	Delivery Location	Contact Name	Contact Number	Remarks
1.0	STEEL THRIE W-BEAM GUARDRAIL	766	LF	STACK NEATLY ON SITE	MIKE HACKETT, PE & PLS	515-462-1136	FROM BRIDGE AND APPROACHES
2.0	STEEL BRIDGE BEAM	1530	LF	STACK NEATLY ON SITE	MIKE HACKETT, PE & PLS	515-462-1136	FROM BRIDGE AND APPROACHES
3.0	STEEL BRIDGE DIAPHRAGMS	30	EACH	STACK NEATLY ON SITE	MIKE HACKETT, PE & PLS	515-462-1136	FROM APPROACH SPANS
4.0	STEEL FLOOR BEAMS	8	EACH	STACK NEATLY ON SITE	MIKE HACKETT, PE & PLS	515-462-1136	FROM TRUSS SPAN
5.0	ORIGINAL BRIDGE RAIL	510	LF	STACK NEATLY ON SITE	MIKE HACKETT, PE & PLS	515-462-1136	FROM BRIDGE AND APPROACHES
6.0	BEVINGTON BRIDGE SIGN	1	EACH	STACK NEATLY ON SITE	MIKE HACKETT, PE & PLS	515-462-1136	HANGING ON LOWER CHORD

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

INTEGRAL ABUTMENTS
80'-9 END SPANS

TEE PIERS
81'-6 INTERIOR SPAN

TABULATIONS

STATION 6+55.00
MADISON COUNTY,

0' SKEW
IOWA

① MEASURED FROM END OF END POST

104_08A
8/15/22

SCOUR PROTECTION OR ROCK FLUME FOR BRIDGE END DRAIN

Refer to Standard Road Plan DR-401 and DR-402

Line No.	Bridge Station	Bridge Corner	① Distance DI-1 or DI-2 (FT)	Bridge End Drain Type	Special Ditch Control, Wood Excelsior Mat EC-101 (SQ)	Turf Reinforced Mat (TRM) Type 2 EC-104 (SQ)	Transition Mat EC-105 (SF)	Macadam Stone Base (TONS)	Engineering Fabric (SY)	Erosion Stone (TON)	Remarks
1.0	6+55.00	SW	19.9	DR-402				1.500	62.0	42.000	12.3 SY PAVED SHOULDER
2.0	6+55.00	SE	19.9	DR-402				1.500	42.0	27.000	12.3 SY PAVED SHOULDER
3.0	6+55.00	NW	19.9	DR-402				1.500	53.0	35.000	12.3 SY PAVED SHOULDER
4.0	6+55.00	NE	19.9	DR-402				1.500	40.0	26.000	12.3 SY PAVED SHOULDER

INCLUDES PAVED SHOULDER FOR 20' PANEL BEYOND REINFORCED SECTION. OUT TO OUT OF PAVED SHOULDERS = 33'-1, SEE CBA-650 ON SHEET 11 FOR CURB LOCATIONS.

108_08A
4/25/25

STEEL BEAM GUARDRAIL AT CONCRETE BARRIER OR BRIDGE RAIL END SECTION

Possible Standards: BA-200, BA-201, BA-202, BA-205, BA-206, BA-209, BA-210, BA-211, BA-221, BA-225, BA-250, BA-260, LS-625, LS-626, LS-630, LS-635, SI-172, SI-173 and SI-211.

(1) Lane(s) to which the obstacle is adjacent.
(2) Not a bid item. Incidental to guardrail installation.

Line No.	Direction of Travel (1)	Side	Station	Offset (FT)	Barrier Transition Section	Barrier Transition Section (EA)	End Terminal	End Terminal Count (EA)	VT1 (LF)	VF (LF)	VT2 (LF)	ET (LF)	BA-211 Station	BA-211 (Type)	SI-211 (Type) (2)	Delineator SI-172 Type 1 (EA) (2)	Object Marker Type 2 (EA) (2)	Object Marker Type 3 Lt (EA) (2)	Object Marker Type 3 Rt (EA) (2)	Bolted End Anchor BA-202 (Type)	Bolted End Anchor BA-202 (EA)	Post Adapter BA-210 (EA)	Steel Beam Guardrail BA-200 (LF)	Remarks
1.0	SB	Left	5+20.00	15.8	BA-201	1	LS-626	1	40.625			37.50			2		3	1		A	1			SW, LS-630 LAYOUT
2.0	NB	Right	5+20.00	15.8	BA-201	1	LS-626	1	40.625			37.50			2		3		1	A	1			SE, LS-630 LAYOUT
3.0	SB	Left	7+90.00	15.8	BA-201	1	LS-626	1	40.625			37.50			2		3		1	A	1			NW, LS-630 LAYOUT
4.0	NB	Right	7+90.00	15.8	BA-201	1	LS-626	1	40.625			37.50			2		3	1		A	1			NE, LS-630 LAYOUT
Total:						4		4										2	2		4			

107_23
8/15/22

GRADING FOR GUARDRAIL INSTALLATIONS

Refer to EW-301.

(1) Lane(s) to which the installation is adjacent.

Line No.	Direction of Traffic (1)	Station	Side	Foreslope at Guardrail	X1 (FT)	Y1 (FT)	X2 (FT)	Y2 (FT)	X3 (FT)	Y3 (FT)	X4 (FT)	Y4 (FT)	Z (FT)	Excavation Class 10 (CY)	Embankment-in- Place (CY)	Remarks
1.0	SB	5+20.00	Left	3:1	40.0	3.3					77.5	7.3	47.2	61.0		SOUTH END, LT.
2.0	NB	5+20.00	Right	3:1	40.0	3.3					77.5	7.3	47.2	56.0		SOUTH END, RT.
3.0	SB	7+90.00	Left	3:1	40.0	3.3					77.5	7.3	47.2	56.0		NORTH END, LT.
4.0	NB	7+90.00	Right	3:1	40.0	3.3					77.5	7.3	47.2	55.0		NORTH END, RT.

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

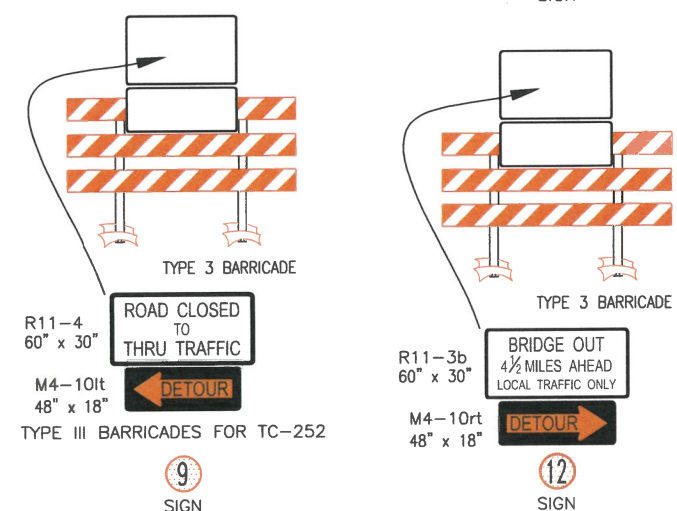
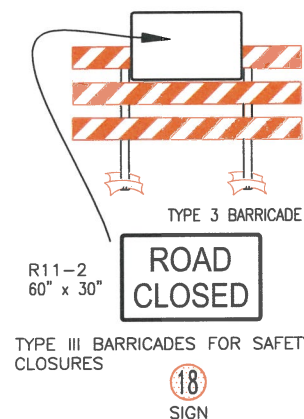
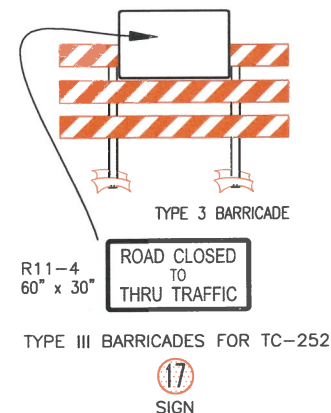
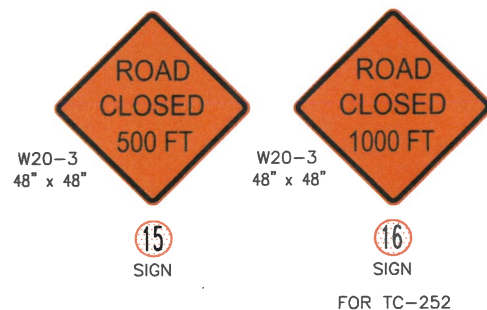
INTEGRAL ABUTMENTS
80'-9 END SPANS

TEE PIERS
81'-6 INTERIOR SPAN

TABULATIONS

STATION 6+55.00
MADISON COUNTY,

0' SKEW
IOWA



SUMMARY OF TRAFFIC CONTROL SIGNS

IA MUTCD	QUANTITY	DESCRIPTION	SIZE	REMARKS
DETOUR ROUTE				
M4-8	26	DETOUR	24" X 12"	
M1-6	26	R35	24" X 24"	
			24" X 24"	
M3-1	13	NORTH	24" X 12"	
M3-3	13	SOUTH	24" X 12"	
M4-8b	2	END	24" X 12"	
M6-3	14	ARROW AHEAD	21" X 15"	ARROW AHEAD
M5-1rt	2	RT TURN ARROW	21" X 15"	RIGHT TURN ARROW
M5-1lt	2	LT TURN ARROW	21" X 15"	LEFT TURN ARROW
M6-1rt	2	RT ARROW	21" X 15"	RIGHT ARROW
M6-1lt	2	LT ARROW	21" X 15"	LEFT ARROW
M6-2rt	2	RT ARROW 45°	21" X 15"	RIGHT ARROW 45°
M4-10rt	1	DETOUR ARROW	48" X 18"	RIGHT ARROW
R11-3b	1	BRIDGE OUT x MILES AHEAD	60" X 30"	BRIDGE OUT 4 1/2 MILES AHEAD
TYPE 3	1	BARRICADE	8' X 5' MIN.	TYPE 3 BARRICADE

STANDARD ROAD PLAN TC-252 SITUATION 1 (RURAL)

W20-3	2	ROAD CLOSED x FT	48" X 48"	1000 FT; SEE TC-252
W20-3	3	ROAD CLOSED x FT	48" X 48"	500 FT; SEE TC-252
R11-4	2	ROAD CLOSED THRU	60" X 30"	ROAD CLOSED TO THRU TRAFFIC
M4-10It	1	DETOUR ARROW	48" X 18"	LEFT ARROW
TYPE 3	2	BARRICADE	8' X 5' MIN.	TYPE 3 BARRICADE; SEE TC-252
TYPE 3	2	BARRICADE	8' X 5' MIN.	TYPE 3 BARRICADE; ADDITIONAL

SAFETY CLOSURES

R11-2	2	ROAD CLOSED	60" X 30"	ROAD CLOSED; ROAD CLOSURES
TYPE 3	2	BARRICADE	8' X 5' MIN.	TYPE 3; ROAD CLOSURES
TYPE 3	2	BARRICADE	8' X 5' MIN.	TYPE 3; HAZARD CLOSURES
TYPE 3	2	BARRICADE	8' X 5' MIN.	TYPE 3; ROAD CLOSURES ADDITIONAL
TYPE 3	2	BARRICADE	8' X 5' MIN.	TYPE 3; HAZARD CLOSURES ADDITIONAL

TRAFFIC CONTROL PLAN

THE ROUTE WILL BE CLOSED TO VEHICULAR AND PEDESTRIAN THROUGH TRAFFIC DURING CONSTRUCTION.

LOCAL TRAFFIC TO ADJACENT PROPERTIES WILL BE MAINTAINED AS PROVIDED FOR IN ARTICLE 1107.08 OF THE CURRENT STANDARD SPECIFICATIONS.

TRAFFIC CONTROL DEVICES, PROCEDURES, LAYOUTS, SIGNING, AND
PAVEMENT MARKINGS INSTALLED WITHIN THE LIMITS OF THIS
PROJECT SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC
CONTROL DEVICES FOR STREETS AND HIGHWAYS" AS ADOPTED BY
THE DEPARTMENT PER 761 OF THE IOWA ADMINISTRATIVE CODE
(IAC) CHAPTER 130.

REFER TO THE "TC" ROAD STANDARD PLANS AND ITEM REFERENCE NOTES.

TRAFFIC CONTROL ON THE PROJECT SHALL BE IN ACCORDANCE WITH STANDARD ROAD PLAN TC-252. SEE STANDARD ROAD PLAN TC-252 FOR SITUATION 1. THIS PROJECT SHALL REQUIRE ALL TYPE III BARRICADES, SIGNS, AND WARNING LIGHTS SHOWN IN STANDARD ROAD PLAN TC-252. ADDITIONAL TYPE III BARRICADES SHALL BE REQUIRED.

THE ENGINEER MAY ADJUST THE LOCATION OF THE TYPE III BARRICADES AND SIGNS TO BETTER FIT THE FIELD CONDITIONS OF THE EXISTING ROADWAY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL TRAFFIC CONTROL REQUIRED BY THE PLANS.

AN OFFSITE DETOUR WILL BE UTILIZED TO MAINTAIN MADISON
COUNTY R35 TRAFFIC.

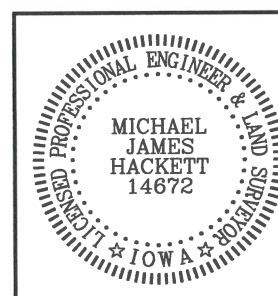
SEE THE TRAFFIC CONTROL PLAN SHEETS FOR DETOUR ROUTE
AND SIGNING.

TRAFFIC CONTROL REQUIRED FOR THE DETOUR SHALL BE
INSTALLED AND MAINTAINED BY THE CONTRACTOR.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ROAD CLOSURE BARRICADES AND DETOUR ROUTE SIGNING.

ADDITIONAL TYPE III BARRICADES SHALL BE REQUIRED AT THE SAFETY CLOSURES.

MADISON COUNTY SHALL SALVAGE THE EXISTING ROAD MARKERS AND SIGNS AFTER THE ROAD IS CLOSED.



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Iowa.

Signed Michael James Hackett Date 8/26/2023
Michael James Hackett Iowa Lic. No. 14672

My license renewal date is 12/31/2026.
Pages covered by this seal: 15 and 16 of 23.

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

**INTEGRAL ABUTMENTS
80'-9 END SPANS**

TEE PIERS
81'-6" INTERIOR SPAN

TRAFFIC CONTROL PLAN

STATION 6+55.00
MADISON COUNTY.






0° SKEW
IOWA

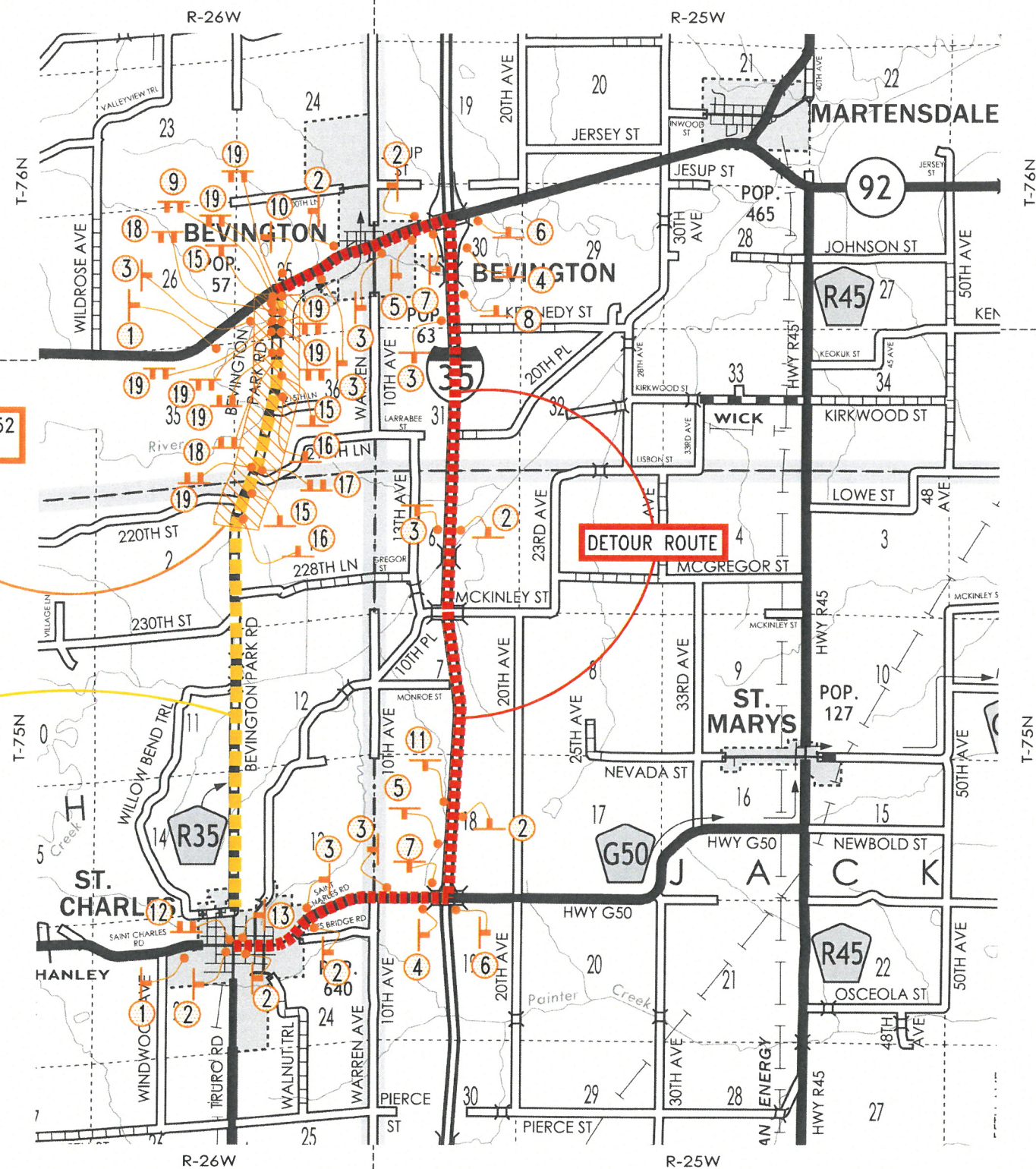


STANDARD ROAD PLAN TC-252
SITUATION 1

LOCAL TRAFFIC ONLY

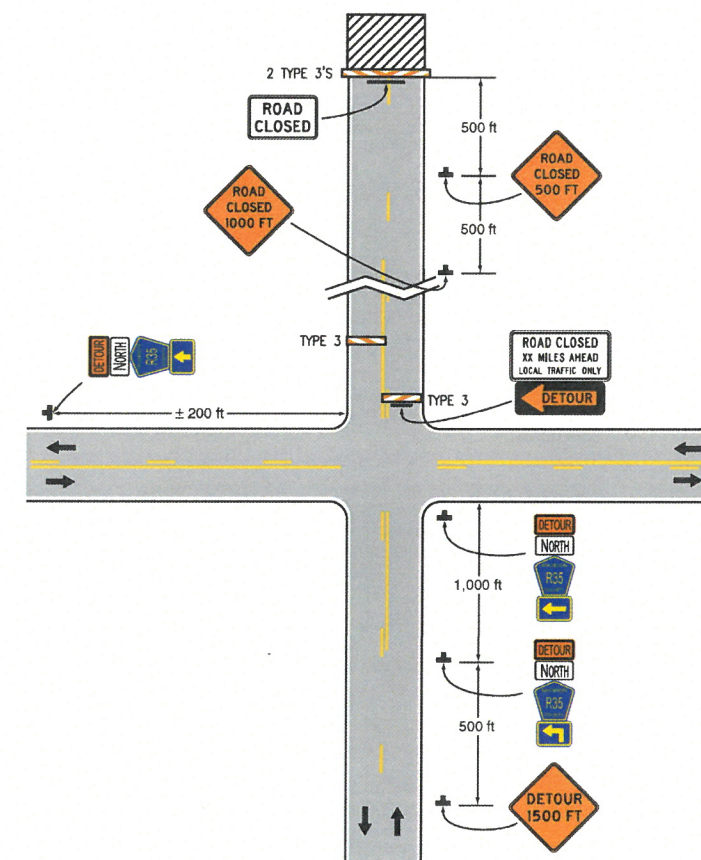
LEGEND

-  Traffic Sign
-  Type III Barricade
-  Standard Road Plan TC-252 Situation 1
-  Detour Route
-  Local Traffic Only



GENERAL LOCATION MAP

NOT TO SCALE



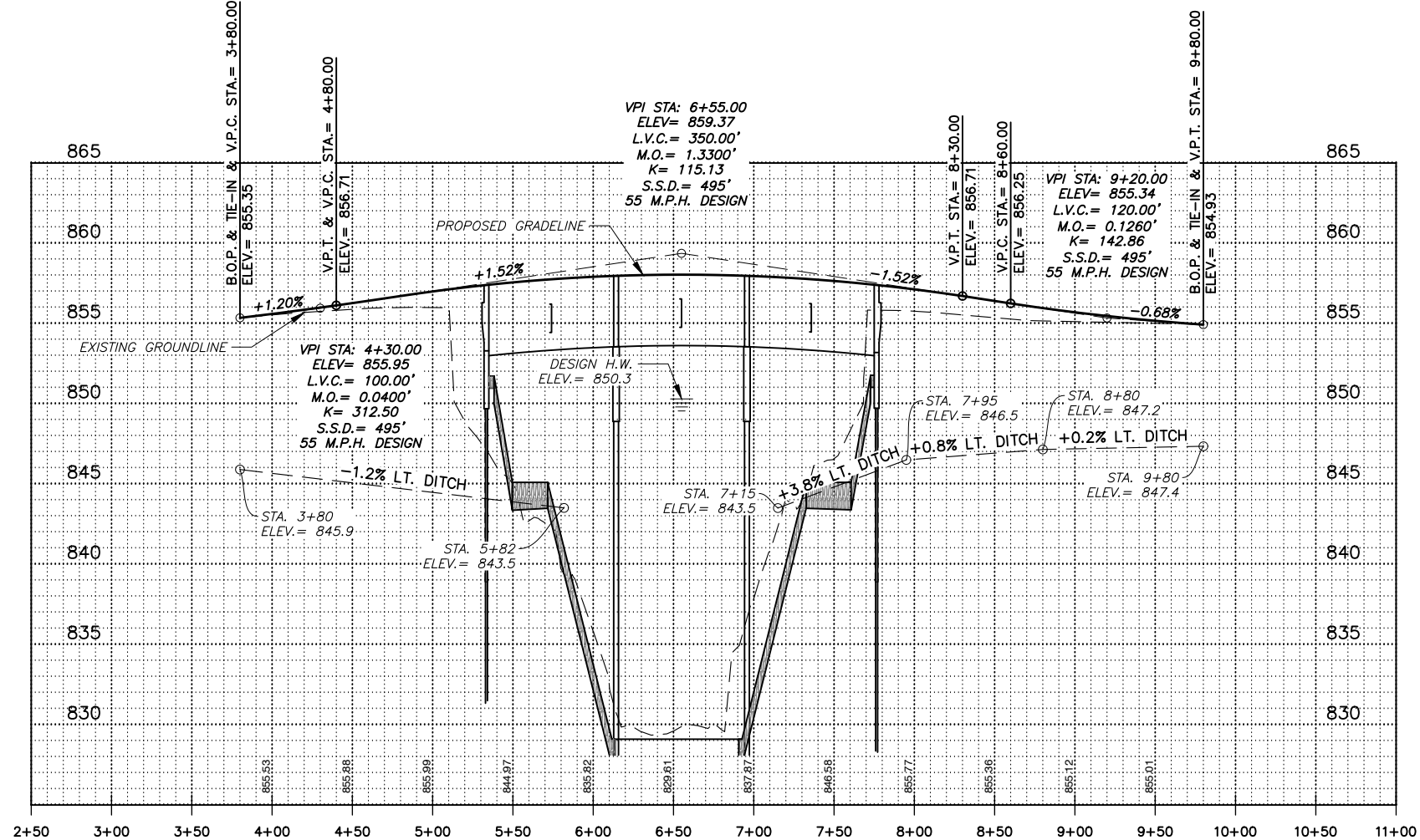
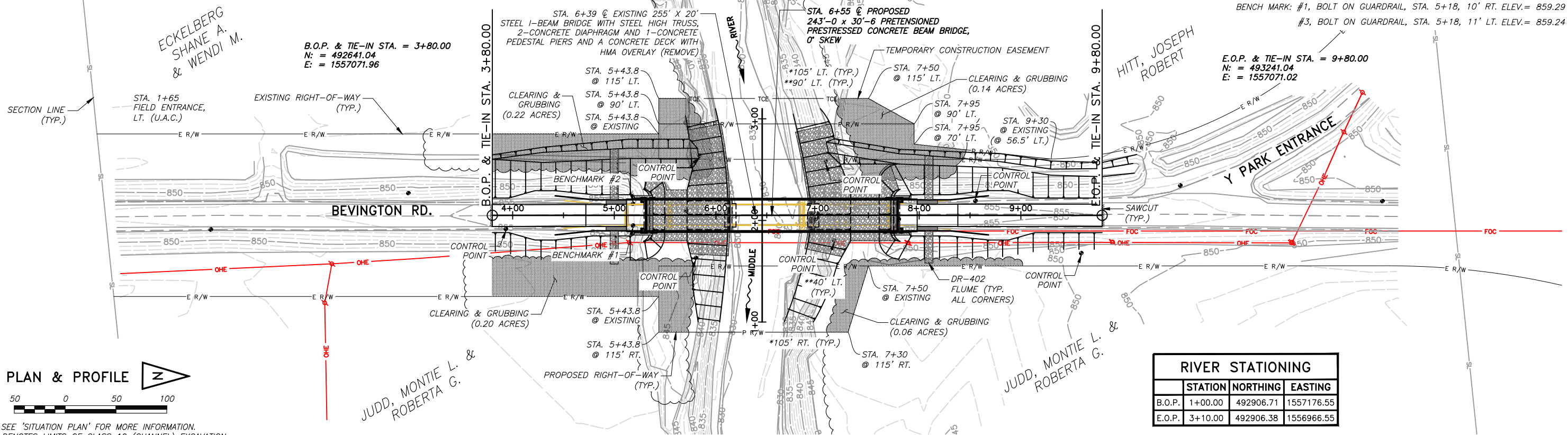
TYPICAL APPLICATION

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

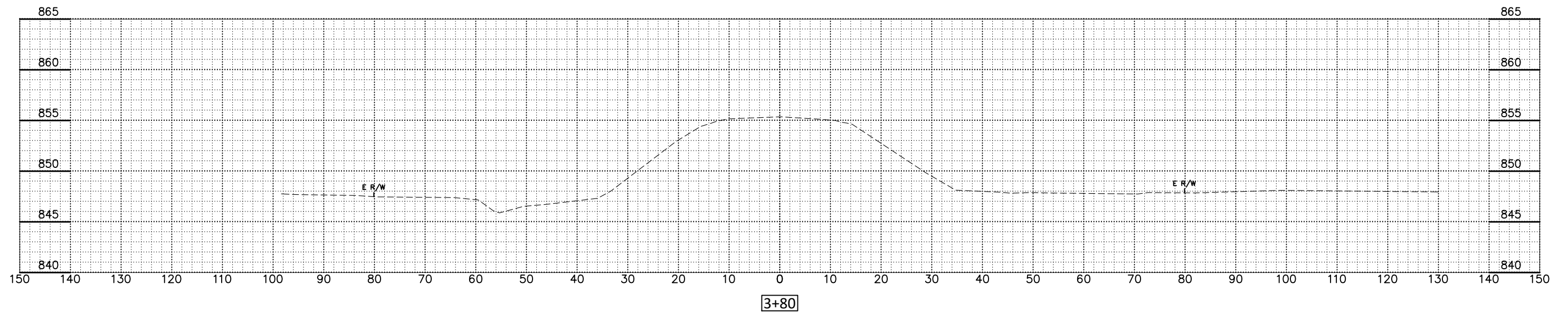
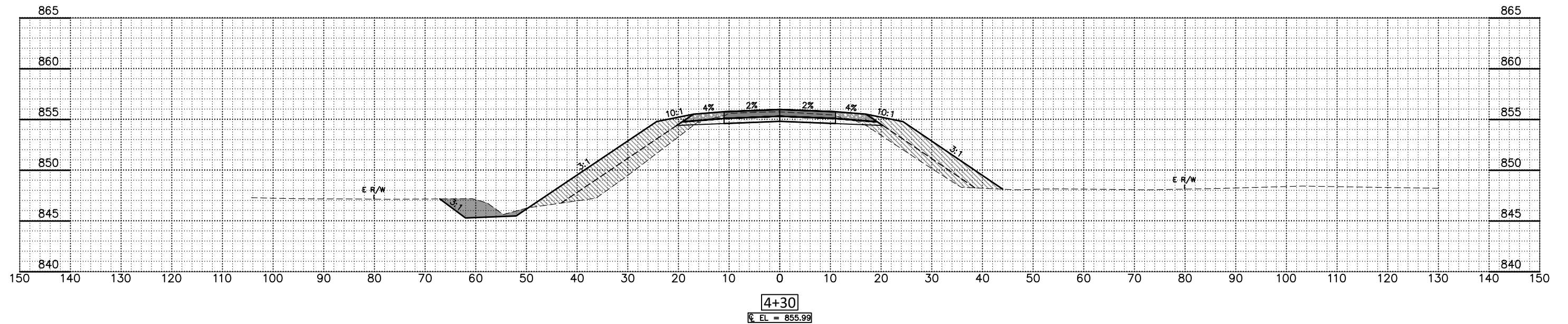
INTEGRAL ABUTMENTS 80'-9 END SPANS
TEE PIERS 81'-6 INTERIOR SPAN

TRAFFIC CONTROL PLAN

STATION 6+55.00
MADISON COUNTY, IOWA
0° SKEW



BENCH MARK: #1, BOLT ON GUARDRAIL, STA. 5+18, 10' RT. ELEV.= 859.29
#3, BOLT ON GUARDRAIL, STA. 5+18, 11' LT. ELEV.= 859.24

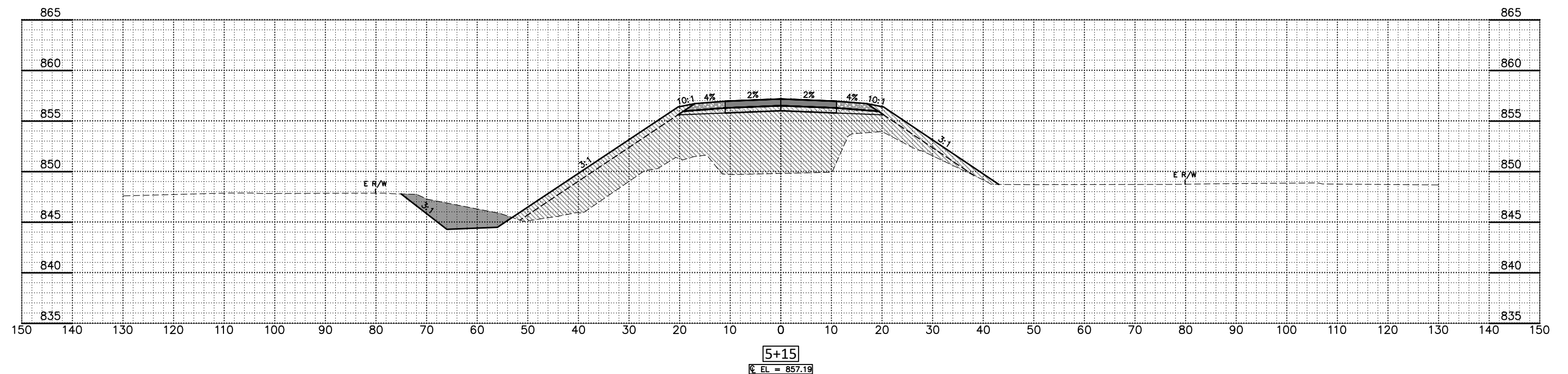
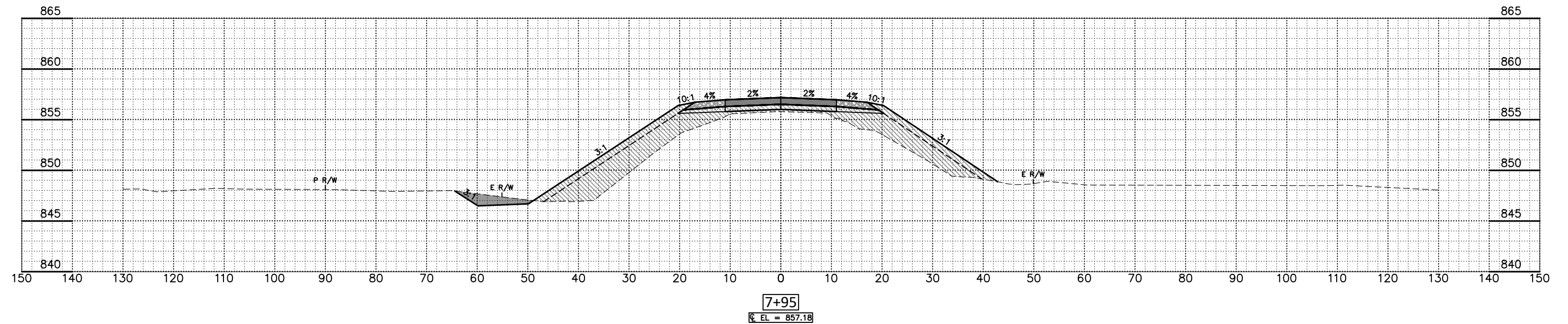


ROAD CROSS SECTIONS

MADISON COUNTY,

IOWA

BENCH MARK: #1, BOLT ON GUARDRAIL, STA. 5+18, 10' RT. ELEV.= 859.29
 #3, BOLT ON GUARDRAIL, STA. 5+18, 11' LT. ELEV.= 859.24

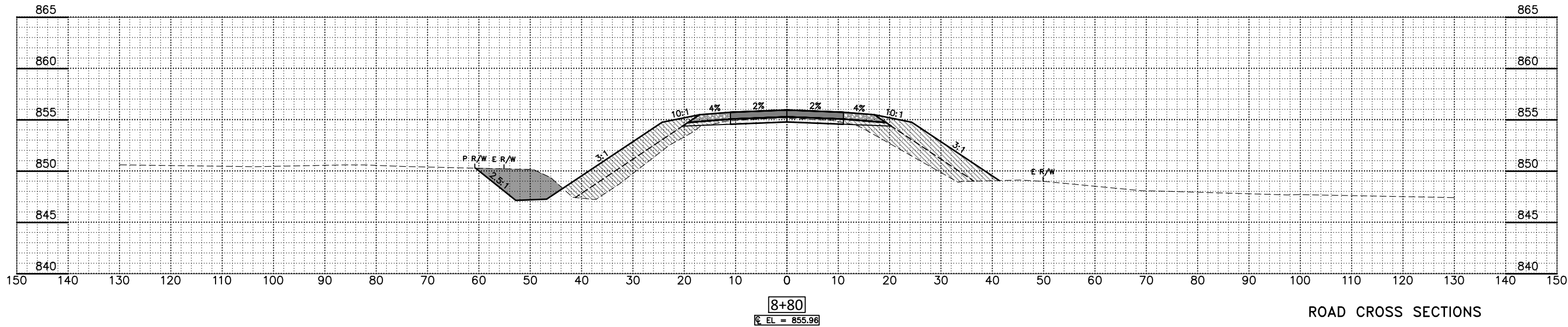
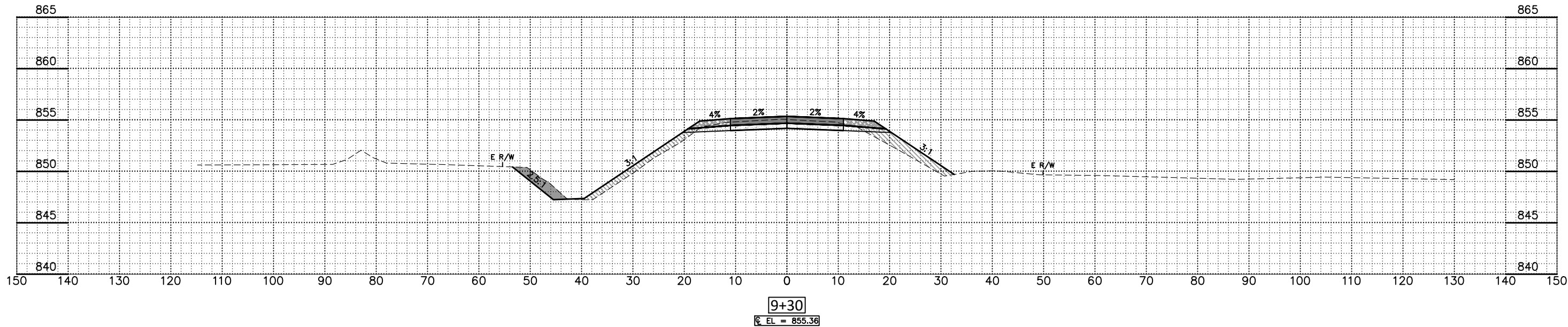
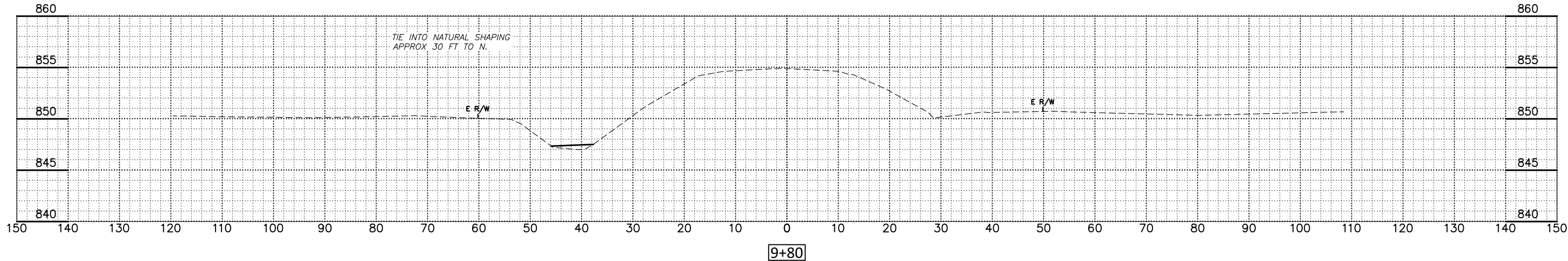


ROAD CROSS SECTIONS

MADISON COUNTY,

IOWA

BENCH MARK: #1, BOLT ON GUARDRAIL, STA. 5+18, 10' RT. ELEV.= 859.29
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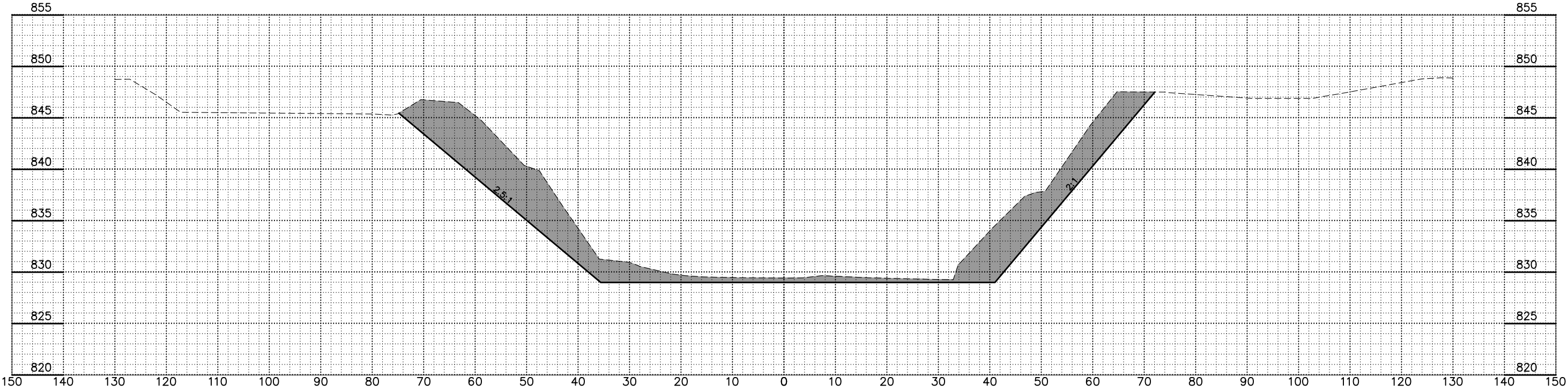


ROAD CROSS SECTIONS

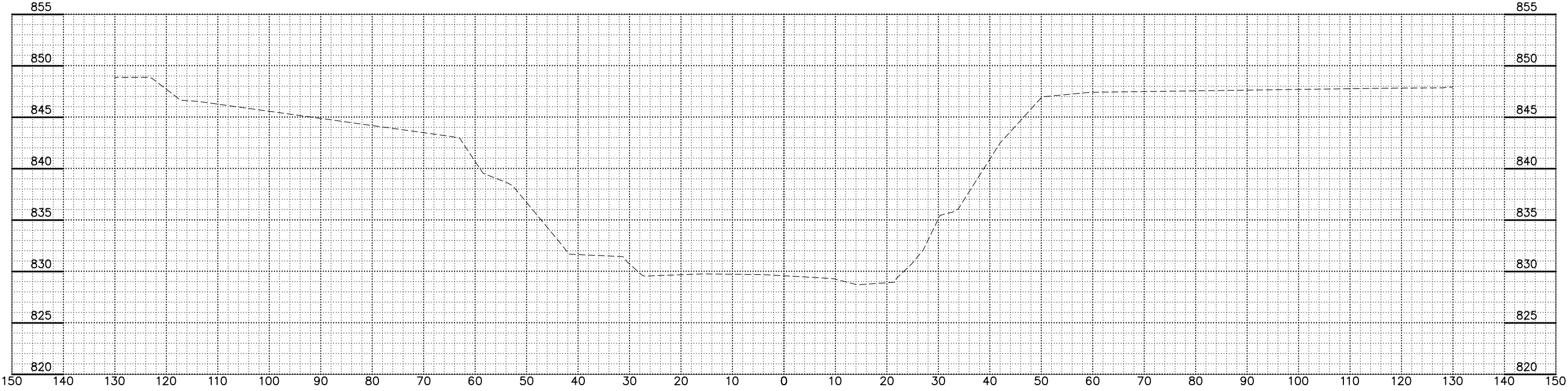
MADISON COUNTY,

IOWA

BENCH MARK: #1, BOLT ON GUARDRAIL, STA. 5+18, 10' RT. ELEV.= 859.29
#3, BOLT ON GUARDRAIL, STA. 5+18, 11' LT. ELEV.= 859.24



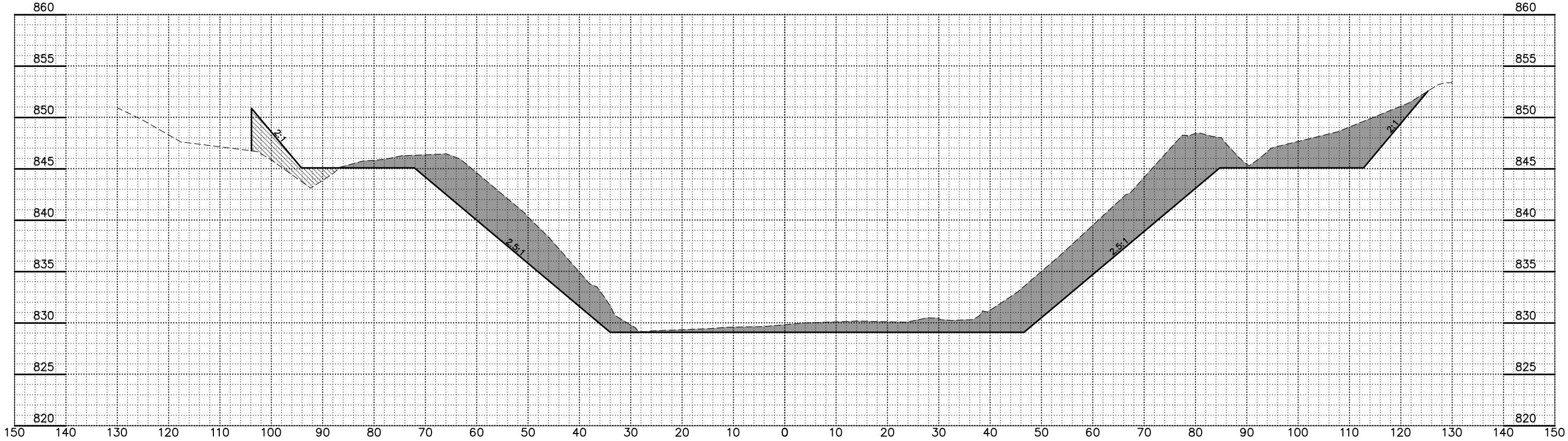
1+60



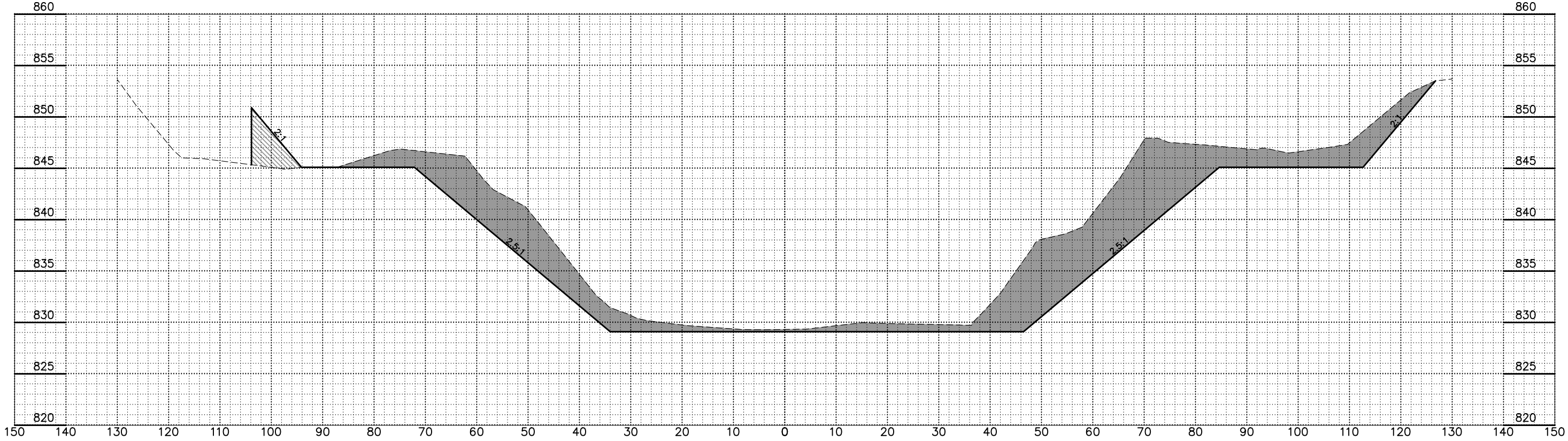
1+00

CHANNEL CROSS SECTIONS
MADISON COUNTY, IOWA

BENCH MARK: #1, BOLT ON GUARDRAIL, STA. 5+18, 10' RT. ELEV.= 859.29
#3, BOLT ON GUARDRAIL, STA. 5+18, 11' LT. ELEV.= 859.24



2+25

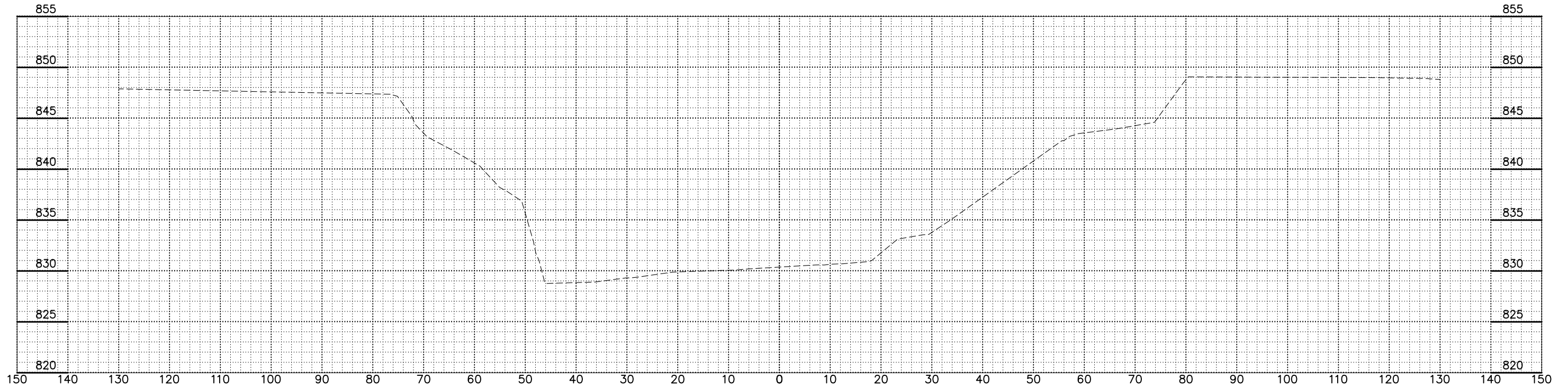


1+85

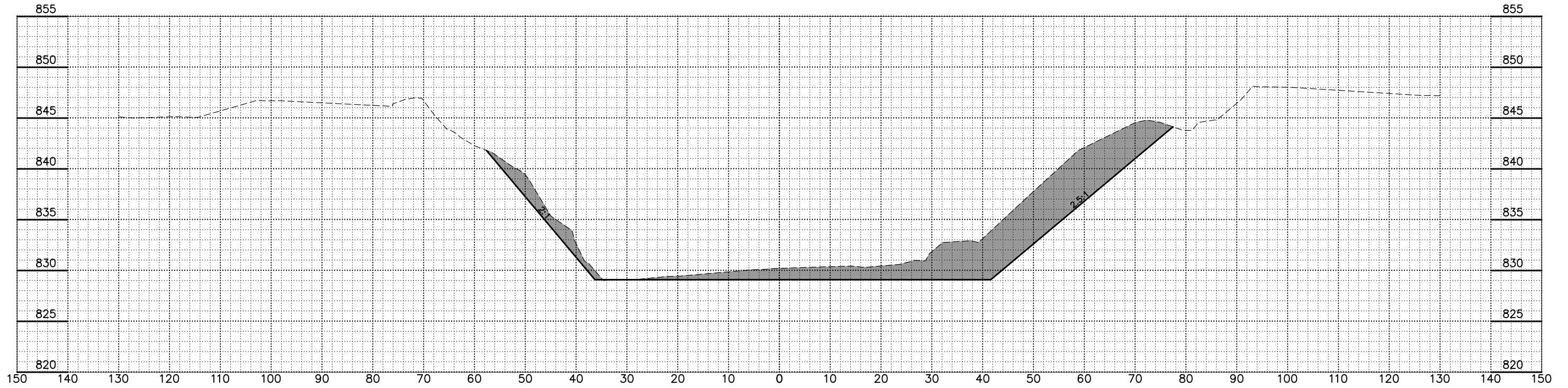
CHANNEL CROSS SECTIONS

MADISON COUNTY, IOWA

BENCH MARK: #1, BOLT ON GUARDRAIL, STA. 5+18, 10' RT. ELEV.= 859.29
#3, BOLT ON GUARDRAIL, STA. 5+18, 11' LT. ELEV.= 859.24



3+10



2+55

CHANNEL CROSS SECTIONS
MADISON COUNTY, IOWA