BRIDGE REPLACEMENT - PPCB
LETTING DATE: NOVEMBER 17, 2026
PROJECT NO. BROS-C064(150)--5F-64
MARSHALL COUNTY

TOTAL SHEETS
13

STANDARD ROAD PLANS
STANDARD ROAD PLANS ARE LISTED ON SHEET 10.

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.	

IOWA | DOT

PLANS OF PROPOSED IMPROVEMENT ON THE
FARM TO MARKET SYSTEM

MARSHALL COUNTY

PROJECT NO. BROS-C064(150)--5F-64

BRIDGE REPLACEMENT - PPCB

ON 2900 MILE OF OAKS AVE, OVER SOUTH TIMBER CREEK, AT SW S9 T82 R18

PROJECT NO. BROS-C064(150)--5F-64
FHWA NO. 241835
COUNTY BR. NO. O-06

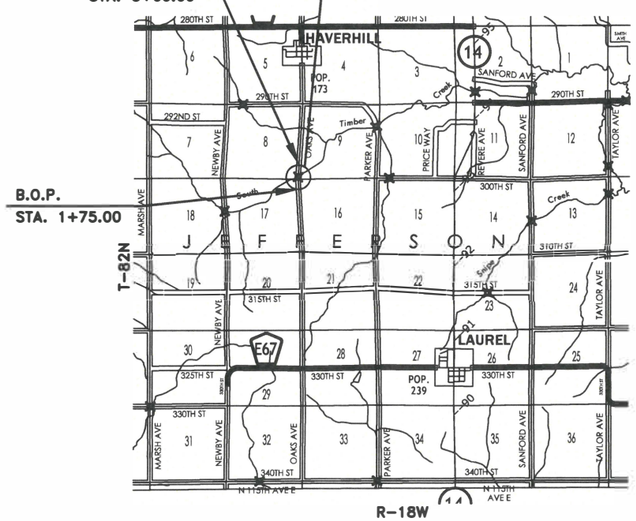
INDEX OF SHEETS

1. TITLE SHEET
2.-3. QUANTITY SUMMARY
4. SITUATION PLAN
5. GENERAL NOTES
6. POLLUTION PREVENTION PLAN
7. SOUNDING DATA
8. SUPERSTRUCTURE DETAILS
9. SE RAIL END SECTION DETAILS
10.-11. TABULATIONS
12.-13. CROSS SECTIONS

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.

B.O.P. STA. 1+75.00
E.O.P. STA. 5+00.00
FHWA NO. 241835
STATION 3+20.00
PROPOSED 80'-0 x 30'-6 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE
15° SKEW, RT. AHEAD



PROJECT LOCATION
1 MI. 0 1 MI. 2 MI.

MILEAGE SUMMARY
STA. 1+75.00 TO STA. 5+00.00 = 325.00 LIN. FT. = 0.0616 MILES

2022, TRAFFIC COUNT = 39 V.P.D.

IOWA DEPARTMENT OF TRANSPORTATION STANDARDS REQUIRED

STANDARD	LATEST REVISION
H30SI-01-12	05-13
H30SI-01A-12	05-13
H30SI-02-12	06-12
H30SI-10-12	05-13
H30SI-12-12	-
H30SI-13-12	05-13
H30SI-14-12	11-15
H30SI-25-12	-
H30SI-26-12	-
H30SI-30-12	-
H30SI-34-12	-
H30SI-35-12	-
H30SI-38-12	-
H30SI-42-12	09-14

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

UTILITY CONTACTS

COMPANY	UTILITY	CONTACT	PHONE #	EMAIL
ALLIANT ENERGY	ELECTRIC	ALLIANT ENERGY FIELD ENGINEER	800-255-4268	LOCATE_IPL@ALLIANTENERGY.COM
IOWA REGIONAL UTILITY ASSOCIATION	WATER	KIMBERLIN ANNIS	641-792-7011	LOCATES@IRUA.NET
HEART OF IOWA COMMUNICATIONS	COMMUNICATIONS	NATHAN BUTLER	641-486-2211	NBUTLER@HEARTOFIOWA.COOP

INDEX OF SEALS

SHEET NO.	NAME	TYPE
H30SI STANDARDS	NORMAN L. MCDONALD	STRUCTURAL DESIGN
7	DAVID LOGEMANN	SOILS

LICENSED PROFESSIONAL ENGINEER
KYLE A. BOSLEY
26411
IOWA

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.

Kyle Bosley DATE: 7-7-2026
KYLE A. BOSLEY, P.E.

MY LICENSE RENEWAL DATE IS DECEMBER 31, 2027.

PAGES OR SHEETS COVERED BY THIS SEAL:
1-6 AND 8-13 OF 13

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.

IOWA ONE CALL
1-800-292-8989
www.iowaonecall.com
811 Know what's below. Call before you dig.

APPROVED
MARSHALL COUNTY ENGINEER — DATE: 7-29-2026

BOARD OF SUPERVISORS — DATE:
7-29-2026
7-29-2026
7-29-2026

TOTAL ESTIMATED QUANTITIES: 80'–0 x 30'–6 P.P.C.B. BRIDGE

REF. NO.	CODE NO.	ITEM	UNIT	2 ABUTS	SUPER	TOTAL
1	2101–0850001	CLEARING AND GRUBBING	ACRE	–	–	0.4
2	2102–2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	–	–	400
3	2102–2710090	EXCAVATION, CLASS 10, WASTE	CY	–	–	646
4	2104–2710020	EXCAVATION, CLASS 10, CHANNEL	CY	–	–	1,225
5	2105–8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD	CY	–	–	725
6	2312–8260051	GRANULAR SURFACING ON ROAD, CLASS A CRUSHED STONE	TON	–	–	100
7	2401–6745625	REMOVAL OF EXISTING BRIDGE	LS	–	–	1
8	2402–2720000	EXCAVATION, CLASS 20	CY	223	–	223
9	2403–0100010	STRUCTURAL CONCRETE (BRIDGE)	CY	43.7	117.4	161.1
10	2404–7775000	REINFORCING STEEL	LB	8,250	30,396	38,646
11	2407–0551380	BEAMS, PRETENSIONED PRESTRESSED CONCRETE, C80	EACH	–	5	5
12	2408–7800000	STRUCTURAL STEEL	LB	–	1,235	1,235
13	2414–6424124	CONCRETE OPEN RAILING, TL–4	LF	–	214.2	214.2
14	2501–0201057	PILES, STEEL, HP 10 X 57 ; 18 @ 65'	LF	1,170	–	1,170
15	2502–8215806	SUBDRAIN, TILE, 6 IN. DIA.	LF			20
16	2502–8221305	SUBDRAIN OUTLET, DR–305	EACH			2
17	2505–4008300	STEEL BEAM GUARDRAIL	LF	–	–	37.5
18	2505–4008420	STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION, BA–221	EACH	–	–	3
19	2505–4021010	STEEL BEAM GUARDRAIL END ANCHOR, BOLTED	EACH	–	–	3
20	2505–4021722	STEEL BEAM GUARDRAIL TANGENT END TERMINAL, BA–225	EACH	–	–	3
21	2507–2638660	BRIDGE WING ARMORING – MACADAM STONE	SY	–	–	52
22	2507–3250005	ENGINEERING FABRIC	SY	–	–	900
23	2507–6800061	REVETMENT, CLASS E	TON	–	–	600
24	2524–9100030	OBJECT MARKER, TYPE 3	EACH	–	–	1
25	2526–8285020	CONSTRUCTION SURVEY, CONTROL POINT SURVEY	LS	–	–	1
26	2526–8285030	CONSTRUCTION SURVEY, RIGHT OF WAY	LS			1
27	2526–8285040	CONSTRUCTION SURVEY, LOCATION SURVEY	LS	–	–	1
28	2528–2518000	SAFETY CLOSURE	EACH	–	–	2
29	2528–8445110	TRAFFIC CONTROL	LS	–	–	1

REF. NO. ESTIMATE REFERENCE INFORMATION

1. SEE SITUATION PLAN, SHEET 4, 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 TABULATION CBA-101 ON SHEET 10 FOR BREAKDOWN OF EXCAVATION QUANTITIES.
TYPE "A" COMPACTION WILL BE REQUIRED.

3. SEE TABULATION CBA-101 ON SHEET 10 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 TABULATION CBA-101 ON SHEET 10 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. SURFACING TO BE FURNISHED AND PLACED BY THE CONTRACTOR IN TWO PASSES (1400 AND 600 TONS /MILE).

7. THE EXISTING BRIDGE AT STATION 3+27 IS A 42' x 24'-6 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE WITH HIGH TIMBER ABUTMENTS AND A CONCRETE DECK BUILT IN 1957.
THE LUMP SUM BID FOR "REMOVAL OF EXISTING BRIDGE" SHALL INCLUDE REMOVAL AND DISPOSAL OF THE EXISTING STRUCTURE. ALL 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.
BROKEN CONCRETE FROM THE EXISTING BRIDGE WITH SIMILAR GRADATION TO CLASS 'E' REVETMENT MAY BE PLACED ON THE BANKS OUTSIDE THE LIMITS SHOWN FOR CLASS 'E' REVETMENT, AS DIRECTED BY THE ENGINEER. ALL REINFORCING SHALL BE CUT OFF FLUSH WITH THE CONCRETE. H.M.A. MATERIAL IS SPECIFICALLY EXCLUDED. ALTERNATELY, THE CONTRACTOR MAY DISPOSE OF THE BROKEN CONCRETE OFF SITE AT A LOCATION PROVIDED BY THE CONTRACTOR AND NOTED TO THE ENGINEER.
SEE HAZARDOUS MATERIAL NOTES ON SHEET 5 FOR PAINT SCRAPE SAMPLE RESULTS.

8. 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.

9. INCLUDES COST OF TAR PAPER.
THE 'CONCRETE SEALER LIMITS FOR OPEN RAIL' DETAIL SHOWN IN THE BRIDGE STANDARD SHALL BE OMITTED.
THE SUBDRAIN SHOWN ON THE WING ARMORING DETAILS IN THE H STANDARDS SHALL BE OMITTED.
NO ADDITIONAL PAYMENT WILL BE ALLOWED FOR HEATING AND PROTECTION OF CONCRETE, IF NECESSARY.
CERTIFIED PLANT INSPECTION IS REQUIRED.
ARTICLE 2428 REGARDING BRIDGE DECK SMOOTHNESS DOES NOT APPLY TO THIS PROJECT.

10. ALL REINFORCING SHALL BE GRADE 60.
THE REINFORCING STEEL QUANTITY HAS BEEN DECREASED BY 205 LBS. FOR THE REVISED RAIL END SECTIONS AS SHOWN ON SHEET 9.

11. INCLUDES COST OF BEARING MATERIAL, COIL TIES AND COIL RODS.
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.

12. INCLUDES WEIGHT OF STEEL DIAPHRAGMS, SEE STANDARD SHEET H30SI-30-12.

13. CERTIFIED PLANT INSPECTION IS REQUIRED.
ALL STRUCTURAL CONCRETE FOR THE RAIL IS TO BE CLASS C; SUBSTITUTION OF CLASS D CONCRETE IS NOT ALLOWED.
NO ADDITIONAL PAYMENT WILL BE ALLOWED FOR HEATING AND PROTECTION OF CONCRETE, IF NECESSARY.
SEE SHEET 9 FOR REVISED RAIL END SECTION DETAILS.

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

15.-16. INCLUDES THE COST TO ADJUST THE 6 INCH AND 4 INCH FIELD TILE LINES ON THE NORTHWEST BANK TO THE PROPOSED BANK OR DITCH SHAPING AND INSTALL A NEW DR-305 TYPE C OUTLET.
SEE SITUATION PLAN, SHEET 4, FOR LOCATIONS.

17.-20. SEE TABULATIONS 108-8A AND 107-23 ON SHEET 11.

21. SEE SHEET H30SI-42-12 FOR DETAILS. QUANTITY INCLUDES MACADAM STONE ON THE BERMS.

22. SEE SITUATION PLAN, SHEET 4, FOR LIMITS.
ENGINEERING FABRIC SHALL BE LAPPED FOR FIELD SPLICING, THE LAPS SHALL BE A MINIMUM OF TWO FEET IN LENGTH, SHINGLE FASHION WITH UP SLOPE LAP PIECE ON TOP. THE CONTRACTOR SHALL PROVIDE A MEANS TO SECURE THE LAP DURING THE PLACEMENT OF THE REVETMENT.

23. REVETMENT IS TO BE PLACED AT A THICKNESS OF 1'-6. SEE SITUATION PLAN, SHEET 4, FOR LIMITS.

24. SEE TABULATION CBA-200 ON SHEET 11.
METHOD OF MEASUREMENT AND BASIS OF PAYMENT SHALL BE PER EACH OBJECT MARKER INSTALLED. PAYMENT IS FULL COMPENSATION FOR FURNISHING ALL MATERIAL, LABOR, AND EQUIPMENT NECESSARY TO CONSTRUCT THE OBJECT MARKERS INCLUDING POSTS AND HARDWARE.

25.-27. 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.
SEE TABULATION CBA-300 ON SHEET 10, FOR FIELD TIES TO THE SITE SURVEY.

28. SEE TABULATION 108-13A ON SHEET 10.

29. SEE TRAFFIC CONTROL PLAN ON SHEET 10.

80'–0 x 30'–6 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

INTEGRAL ABUTMENTS **SINGLE SPAN**

QUANTITY SUMMARY

STATION 3+20.00 **15° SKEW, RT. AHEAD**

MARSHALL COUNTY, IOWA

TOTAL ESTIMATED QUANTITIES:
80'–0 x 30'–6 P.P.C.B. BRIDGE

REF. NO.	CODE NO.	ITEM	UNIT	2 ABUTS	SUPER	TOTAL
30	2533–4980005	MOBILIZATION	LS	–	–	1
31	2536–6745045	REMOVAL OF ASBESTOS	LS	–	–	1
32	2601–2634100	MULCHING	ACRE	–	–	1.8
33	2601–2636043	SEEDING AND FERTILIZING (RURAL)	ACRE	–	–	0.9
34	2601–2642100	STABILIZING CROP – SEEDING AND FERTILIZING	ACRE	–	–	0.9
35	2602–0000020	SILT FENCE	LF	–	–	325
36	2602–0000030	SILT FENCE FOR DITCH CHECKS	LF	–	–	218
37	2602–0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK	LF	–	–	543
38	2602–0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.	LF	–	–	325
39	2602–0010010	MOBILIZATIONS, EROSION CONTROL	EACH	–	–	1
40	2602–0010020	MOBILIZATIONS, EMERGENCY EROSION CONTROL	EACH	–	–	1

REF. NO. ESTIMATE REFERENCE INFORMATION

31. AN INSPECTION FOR THE PRESENCE OF ASBESTOS CONTAINING MATERIALS WAS COMPLETED. THE TOP OF WING PILLING WAS FOUND TO CONTAIN ASBESTOS. ASBESTOS MATERIAL SHALL BE REMOVED PRIOR TO BRIDGE DEMOLITION OPERATIONS. THE LUMP SUM BID FOR "REMOVAL OF ASBESTOS" SHALL INCLUDE REMOVAL AND DISPOSAL OF THE ASBESTOS CONTAINING MATERIAL. IF ADDITIONAL MATERIALS SUSPECTED OF CONTAINING ASBESTOS ARE DISCOVERED DURING DEMOLITION OF THE BRIDGE, WORK SHALL BE STOPPED IMMEDIATELY AND THE ENGINEER NOTIFIED.

32.-34. THE CONTRACTOR IS TO RESHAPE, FERTILIZE, SEED AND MULCH ANY AREAS DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL CONDITION. THIS SHALL BE INCLUDED IN THE PRICES BID FOR “MULCHING” AND “SEEDING AND FERTILIZING (RURAL)”. SEE POLLUTION PREVENTION PLAN, SHEET 6, FOR STABILIZING CROP REQUIREMENT.

35.-40. SEE POLLUTION PREVENTION PLAN, SHEET 6, AND TABULATIONS 100-17, 100-18 AND 100-19 ON SHEET 10.

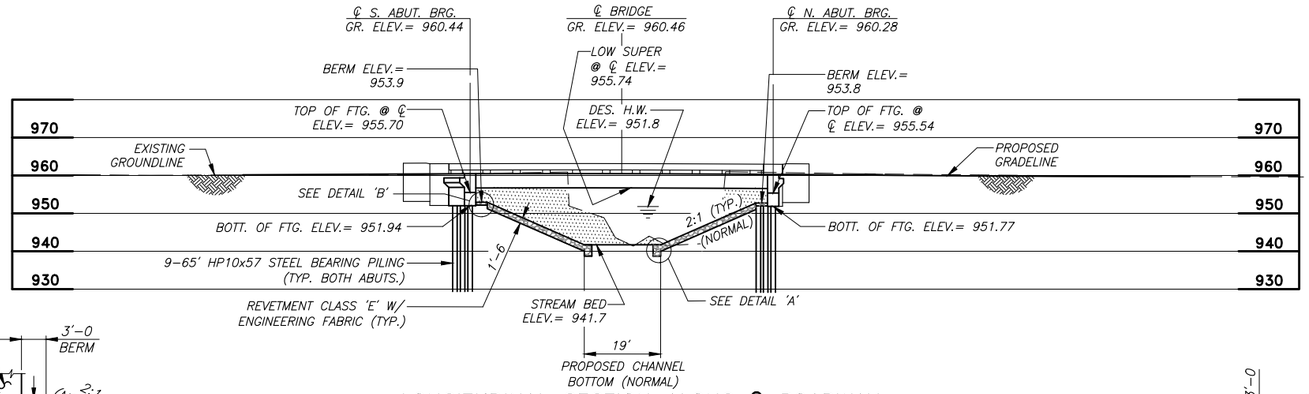
80'–0 x 30'–6 PRETENSIONED PRESTRESSED
CONCRETE BEAM BRIDGE

INTEGRAL ABUTMENTS — SINGLE SPAN

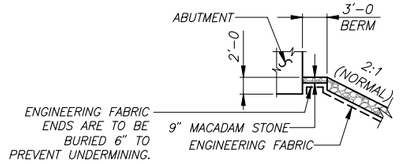
QUANTITY SUMMARY

STATION 3+20.00 — 15° SKEW, RT. AHEAD
MARSHALL COUNTY, — IOWA

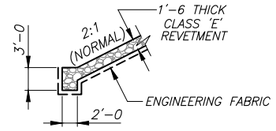
BENCH MARK: T–POST, STA. 3+10, 84' RT. ELEV.= 954.14



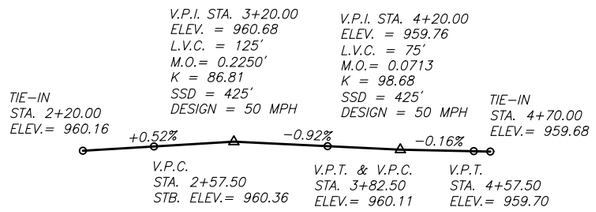
LONGITUDINAL SECTION ALONG ℄ ROADWAY



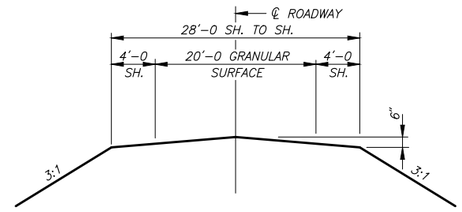
DETAIL 'B'



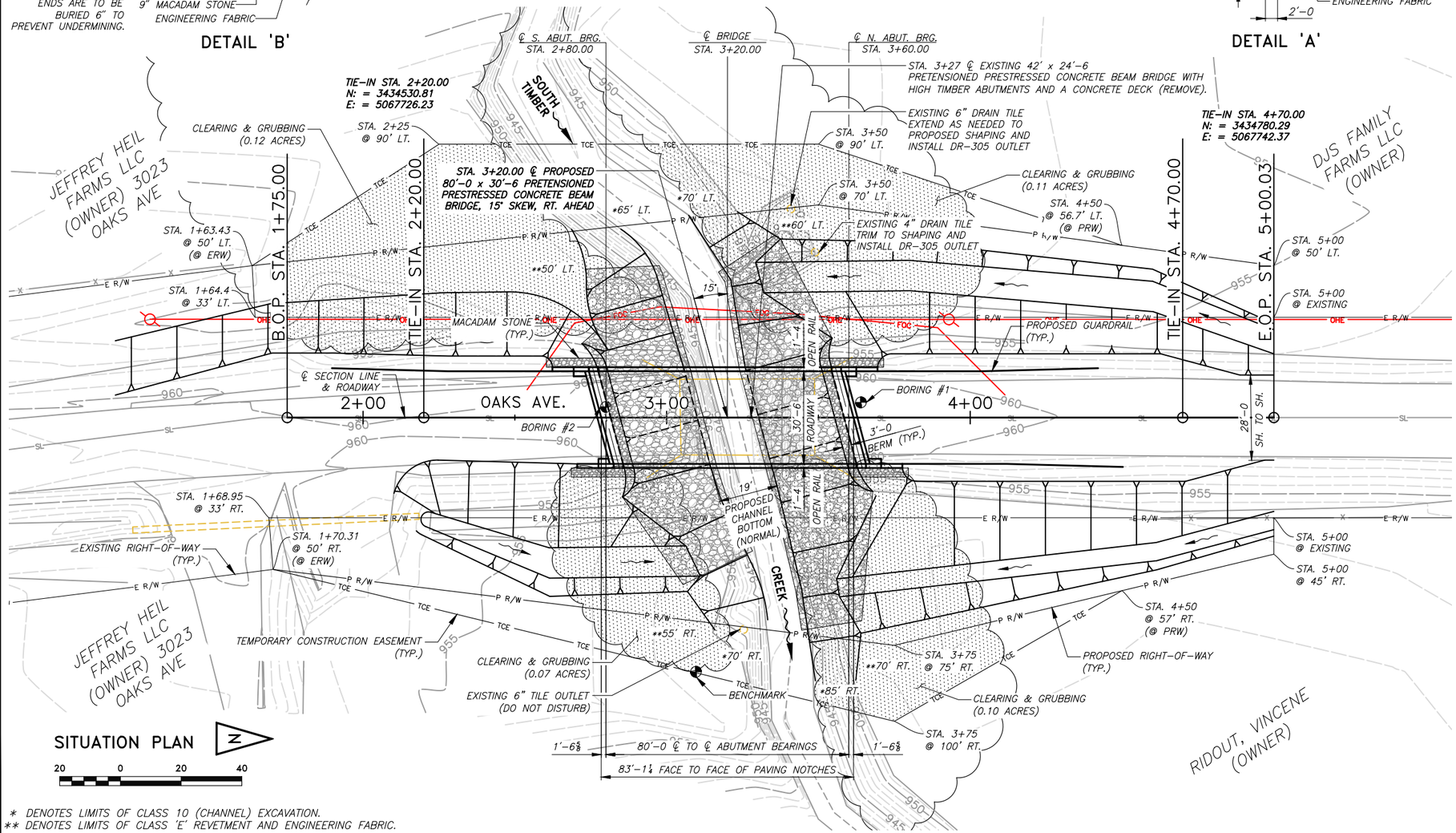
DETAIL 'A'



PROPOSED GRADE



TYPICAL APPROACH SECTION



* DENOTES LIMITS OF CLASS 10 (CHANNEL) EXCAVATION.
** DENOTES LIMITS OF CLASS 'E' REVETMENT AND ENGINEERING FABRIC.

LOCATION

MARSHALL COUNTY
T–82N, R–18W
SECTION 09
JEFFERSON TOWNSHIP
OVER SOUTH TIMBER CREEK

HYDRAULIC DATA

DRAINAGE AREA = 6.0 SQ. MI.
DESIGN DISCHARGE = 1,500 C.F.S.
DESIGN HIGH WATER ELEV. = 951.8
MANNING SLOPE = 0.00275 FT./FT.
BRIDGE WATERWAY AREA = 404 SQ. FT.
DESIGN VELOCITY = 3.7 F.P.S.
Q25 = 1,500 C.F.S. STAGE ELEV. = 951.8 (DESIGN)
Q50 = 1,800 C.F.S. STAGE ELEV. = 952.4
Q100 = 2,200 C.F.S. STAGE ELEV. = 952.9
Q200 = 2,400 C.F.S. STAGE ELEV. = 953.2
Q500 = 3,000 C.F.S. STAGE ELEV. = 953.7
EXT. H.W. ELEV. = UNKNOWN
ANTICIPATED Q50 SCOUR ELEV.= 939.4
ANTICIPATED Q100 SCOUR ELEV.= 937.6

80'–0 x 30'–6 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

INTEGRAL ABUTMENTS **SINGLE SPAN**

SITUATION PLAN

STATION 3+20.00 **15° SKEW, RT. AHEAD**

MARSHALL COUNTY, IOWA

SPECIFICATIONS

DESIGN: AASHTO LRFD 5TH EDITION, SERIES OF 2010.

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, 5TH EDITION, SERIES 2010.

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=4,000 PSI EXCEPT PRESTRESSED BEAM CONCRETE AS NOTED.

PRESTRESSING STEEL SEE SHEETS H30SI-25-12

PRESTRESSED CONCRETE SEE SHEETS H30SI-25-12

GENERAL NOTES

THIS DESIGN IS FOR A 80' x 30'-6 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE ON OAKS AVE OVER SOUTH TIMBER CREEK IN MARSHALL 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 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://erl.iowadot.gov.

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:

MARK R. HENTGES OF MRH ENGINEERING LLC
IA LICENSE NUMBER: 24-11254
DATE INSPECTED: 09/03/2024
PHONE: 319-823-0114

A SCRAPE SAMPLE OF THE EXISTING PAINT WAS TAKEN FROM THE RAILING AND POSTS 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 6110 PART PER MILLION (PPM). ANALYSIS OF TOTAL CHROMIUM ON THIS SAMPLE WAS 684 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.

ABUTMENT PILE

THE CONTRACT LENGTH OF 65 FEET FOR THE ABUTMENT PILES IS BASED ON A COHESIVE SOIL CLASSIFICATION, A TOTAL FACTORED AXIAL LOAD PER PILE (PU) OF 138 KIPS, AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.65.

THE NOMINAL AXIAL BEARING RESISTANCE FOR CONSTRUCTION CONTROL WAS DETERMINED FROM A COHESIVE SOIL CLASSIFICATION AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.77. 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 90 TONS AT END OF DRIVE (EOD) IF RETAPS ARE NECESSARY TO ACHIEVE BEARING, THE NOMINAL AXIAL BEARING RESISTANCE IS 106 TONS AT ONE DAY OR LATER RETAPS. THE PILE CONTRACT LENGTH SHALL BE DRIVEN AS PER PLAN UNLESS PILES REACH REFUSAL. CONSTRUCTION CONTROL REQUIRES A WEAP ANALYSIS WITH BEARING GRAPH.

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 ARE TO REMAIN IN PLACE AFTER CONSTRUCTION.

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.

80'-0 x 30'-6 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

INTEGRAL ABUTMENTS SINGLE SPAN

GENERAL NOTES

STATION 3+20.00 15° SKEW, RT. AHEAD

MARSHALL 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 80'-0 X 30'-6 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE ON OAKS AVE OVER SOUTH TIMBER CREEK IN MARSHALL COUNTY, IOWA.
- B. THIS PPP COVERS APPROXIMATELY 1.2 ACRES WITH AN ESTIMATED 1.2 ACRES BEING DISTURBED. THE PORTION OF THE PPP COVERED BY THIS CONTRACT HAS 1.2 ACRES DISTURBED.
- C. THE PPP IS LOCATED IN AN AREA OF ONE SOIL ASSOCIATION(S) (TAMA-MUSCATINE-DOWNS). THE ESTIMATED WEIGHTED AVERAGE RUNOFF COEFFICIENT NUMBER FOR THIS PPP AFTER COMPLETION WILL BE 0.23.
- D. STORM WATER SITE MAP - MULTIPLE SOURCES OF INFORMATION COMPRISE THE BASE STORM WATER SITE MAP INCLUDING:
  1. DRAINAGE PATTERNS – SITUATION PLAN.
  2. PROPOSED SLOPES – CROSS SECTIONS.
  3. AREAS OF SOIL DISTURBANCE – CONSTRUCTION LIMITS SHOWN ON SITUATION PLAN.
  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.
  7. SURFACE WATERS (INCLUDING WETLANDS) – PROJECT LOCATION MAP AND SITUATION PLAN.
  8. LOCATIONS WHERE STORM WATER IS DISCHARGED – SITUATION PLAN.
- 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 SOUTH TIMBER CREEK.

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

PAUL GEILENFELDT, P.E.

PRINTED OR TYPED NAME

POLLUTION PREVENTION PLAN

MARSHALL COUNTY, IOWA

BORING LOG NO. 2 STATION 2+80, 3.5'LT | CBA Job No.: 964-005 | Project No.: 261260

Project: Oaks Avenue Bridge (O-06) over South Timber Creek, Section 9, Jefferson Twp Marshall County, Iowa

Client: Calhoun-Burns & Associates 6775 Vista Drive West Des Moines, IA 50266

Surface Elevation: 960.4' Datum: Road Elev. at Exist N Abut = 960.99'

Date Drilled: 06/05/2026 Drilling Depth, ft.: 71 Drilling Method: CFA/HSA Page: 1 of 1

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.
								Crushed Rock (6"±)				0.5	
960	0	1	ST		15.1	109	1770	Brown and gray sandy lean clay, trace gravel, moist FILL		CL			959.9
		2	ST		19.0	112	4160					10.5	
948	12	3	ST		21.2	96	1000**	Very dark brown sandy lean clay, trace organics, moist		CL			949.9
		4	ST		35.1	83	1070	Very dark gray lean to fat clay, moist to very moist after 14' COHESIVE ALLUVIUM (Stiff Silty Clay)		CL-CH	▽		
936	24	5	SSA	4	23.9			Dark gray sandy lean to fat clay with saturated sand seams throughout, very moist after 22'					
		6	SSA	7	29.1			With cobbles after 31'				32	
924	36	7	SSA	9	17.7			Dark gray sandy lean to fat clay, trace gravel, moist		CL-CH			928.4
		8	SSA	15	16.7								
		9	SSA	13	18.6								
912	48	10	SSA	21	15.8			GLACIAL TILL (Very Firm Sandy Glacial Clay)					
		11	SSA	22	14.6								
900	60	12	SSA	22									
		13	SSA	30	11.5								
888	72	14	SSA	41	10.7							71	
								End of Boring **Estimated using calibrated hand penetrometer					889.4

*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. 1 STATION 3+64, 5'LT | CBA Job No.: 964-005 | Project No.: 261260

Project: Oaks Avenue Bridge (O-06) over South Timber Creek, Section 9, Jefferson Twp Marshall County, Iowa

Client: Calhoun-Burns & Associates 6775 Vista Drive West Des Moines, IA 50266

Surface Elevation: 960.9' Datum: Road Elev. at Exist N Abut = 960.99'

Date Drilled: 06/05/2026 Drilling Depth, ft.: 71 Drilling Method: CFA/HSA Page: 1 of 1

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.
								Crushed Rock (6"±)				0.5	
960	0	1	ST		16.5	-	4000**	Brown and gray sandy lean clay, trace gravel, moist FILL		CL			960.4
												7	
		2	ST		12.3	107	2360	Very dark brown sandy lean clay, trace organics, moist		CL			953.9
948	12	3	ST		25.2	88	1740	Very dark gray lean to fat clay, moist to very moist after 12.5'		CL-CH			
		4	ST		34.1	87	1490	COHESIVE ALLUVIUM (Stiff Silty Clay) Moisture seepage near 20'			▽		
936	24	5	SSA	1	20.1			Dark gray sandy lean to fat clay with saturated sand seams throughout, very moist after 22'					
		6	SSA	9	15.9							30	
		7	SSA	21	14.8			Dark gray sandy lean to fat clay, trace gravel, moist		CL-CH			930.9
924	36	8	SSA	34	16.0 12.5								
		9	SSA	19	16.9								
912	48	10	SSA	21	14.4			GLACIAL TILL (Very Firm Sandy Glacial Clay)					
		11	SSA	36	15.4								
900	60	12	SSA	25	14.8								
		13	SSA	41	11.3								
888	72	14	SSA	30	11.7							71	
								End of Boring					889.9

*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.

SOUNDING DATA

(SEE "SITUATION PLAN", SHEET 4, FOR BORING LOCATIONS)

DAVID LOGEMANN 12394 LICENSED PROFESSIONAL ENGINEER IOWA

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.

DAVID LOGEMANN, P.E. DATE: 7/15/26

MY LICENSE RENEWAL DATE IS DECEMBER 31, 2027.

PAGES OR SHEETS COVERED BY THIS SEAL: 7 OF 13

80'–0 x 30'–6 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

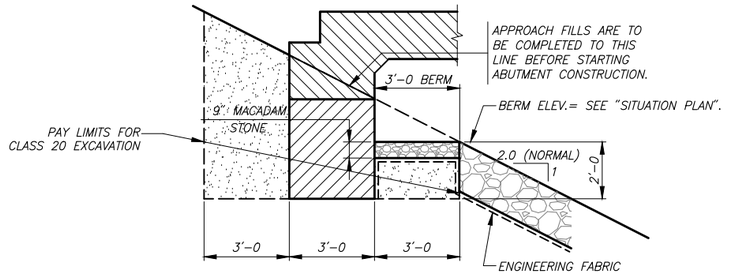
INTEGRAL ABUTMENTS SINGLE SPAN

SOUNDING DATA

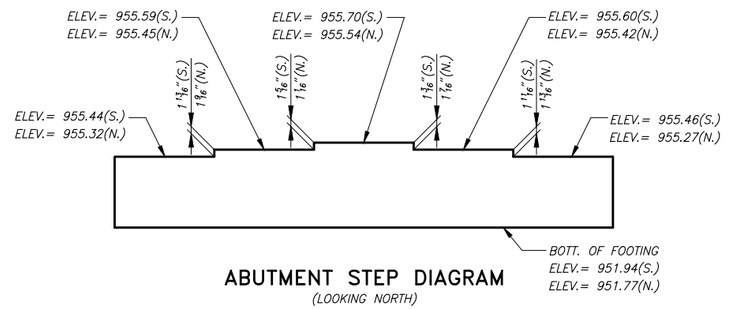
STATION 3+20.00 15° SKEW, RT. AHEAD

MARSHALL COUNTY, IOWA

BENCH MARK: T–POST, STA. 3+10, 84' RT. ELEV.= 954.14

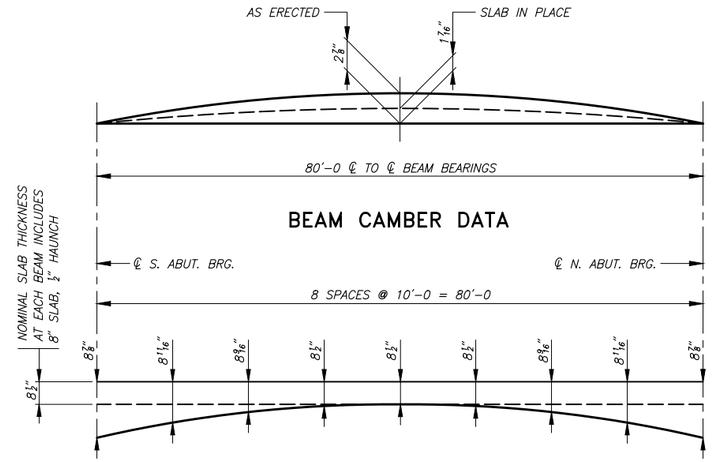


ABUTMENT EXCAVATION DETAIL



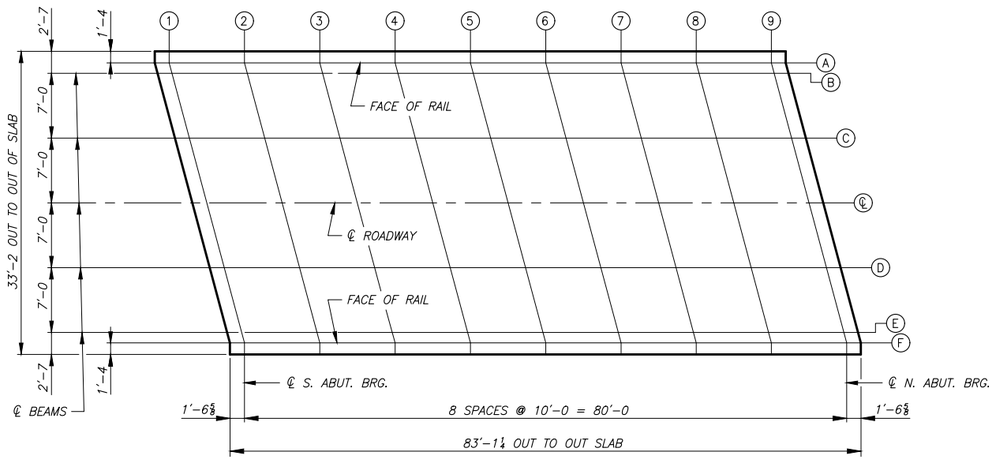
ABUTMENT STEP DIAGRAM

(LOOKING NORTH)



HAUNCH DIAGRAM AND SLAB THICKNESS AT BEAM (T)

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



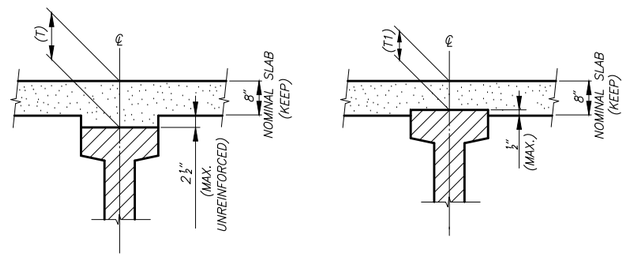
TOP OF SLAB ELEVATIONS

	℄ S. ABUT. BRG.								℄ N. ABUT. BRG.	
LOCATION	1	2	3	4	5	6	7	8	9	LOCATION
A	960.15	960.18	960.19	960.19	960.18	960.16	960.13	960.08	960.03	A
B	960.18	960.21	960.22	960.22	960.21	960.19	960.16	960.11	960.06	B
C	960.33	960.35	960.36	960.36	960.35	960.32	960.29	960.24	960.19	C
℄	960.44	960.46	960.47	960.47	960.46	960.43	960.39	960.34	960.28	℄
D	960.34	960.36	960.36	960.36	960.34	960.31	960.27	960.22	960.16	D
E	960.20	960.22	960.22	960.22	960.20	960.17	960.13	960.07	960.01	E
F	960.17	960.19	960.19	960.18	960.17	960.14	960.09	960.04	959.97	F

WING	ELEV. A	ELEV. B	ELEV. C
SW	960.13	960.11	960.08
SE	960.16	960.14	960.11
NW	960.02	959.97	959.92
NE	959.96	959.90	959.85

SEE SHEET H30SI–12–12 FOR LOCATION OF ELEV. A, B, AND C. ELEVATIONS SHOWN ARE AT OUTSIDE FACE.

BRIDGE COORDINATES			
LOCATION	WEST EDGE OF DECK	C.L. ROADWAY	EAST EDGE OF DECK
SOUTH ABUTMENT	N = 3434587.32 E = 5067713.27	N = 3434590.68 E = 5067730.10	N = 3434594.05 E = 5067746.94
NORTH ABUTMENT	N = 3434667.15 E = 5067718.43	N = 3434670.51 E = 5067735.26	N = 3434673.88 E = 5067752.10



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.

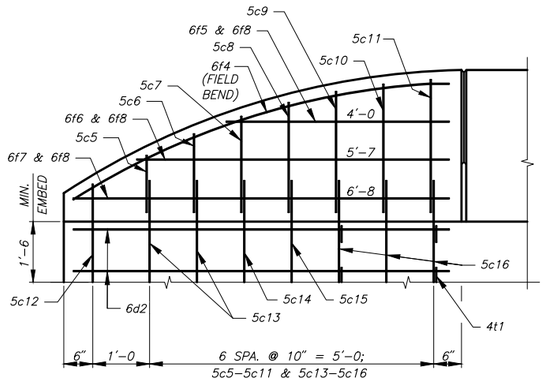
80'–0 x 30'–6 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

INTEGRAL ABUTMENTS **SINGLE SPAN**

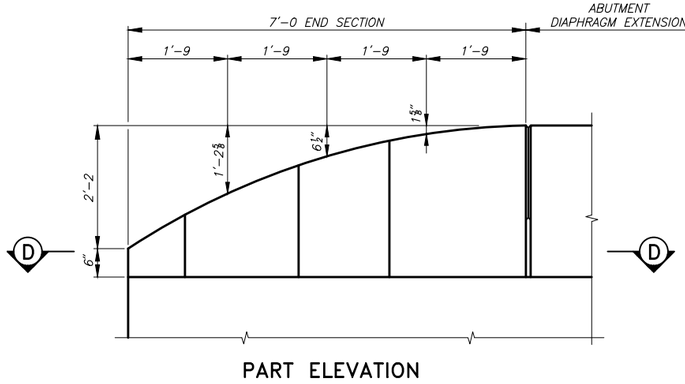
SUPERSTRUCTURE DETAILS

STATION 3+20.00 **15° SKEW, RT. AHEAD**

MARSHALL COUNTY, **IOWA**



PART ELEVATION
(SHOWING REINFORCING)

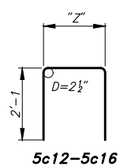


PART ELEVATION

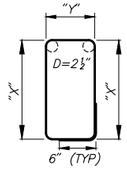
REINFORCING BAR LIST – ONE END SECTION

BAR	LOCATION	SHAPE	NO.	LENGTH	WEIGHT
5c5–11	VERTICAL		7	SHOWN	43
5c12–16	RAIL TO WING		8	SHOWN	40
6f4	LONGITUDINAL		2	7'-0	21
6f5–7	LONGITUDINAL		3	SHOWN	24
6f8	LONGITUDINAL		3	SHOWN	24
				TOTAL (LBS.)	152

BENT BAR DETAILS

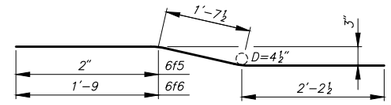


5c12–5c16

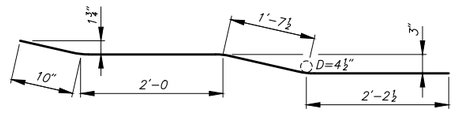


5c5–5c11

BAR	"X"	"Y"	"Z"	NO.	LENGTH
5c5	1'-0	6"	–	1	4'-0
5c6	1'-4	6"	–	1	4'-8
5c7	1'-8	6¼"	–	1	5'-5
5c8	1'-11	7¾"	–	1	6'-2
5c9	2'-1	9"	–	1	6'-8
5c10	2'-3	9"	–	1	7'-0
5c11	2'-3	9"	–	1	7'-0
5c12	–	–	5"	1	4'-7
5c13	–	–	6"	2	4'-8
5c14	–	–	6¼"	1	4'-9
5c15	–	–	7¾"	1	4'-10
5c16	–	–	9"	3	4'-11



6f5 & 6f6

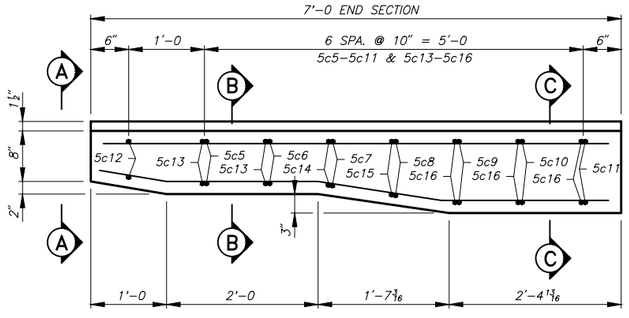


6f7

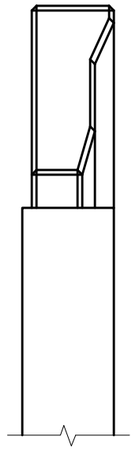
ALL BAR DIMENSIONS ARE OUT TO OUT. *"D"= PIN DIAMETER*

CONCRETE PLACEMENT SUMMARY – END SECTIONS

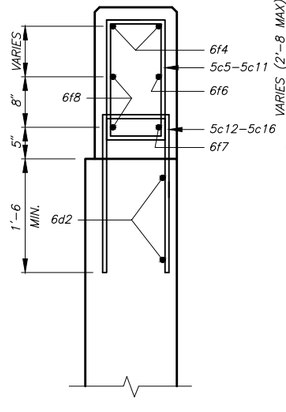
SECTION		TOTAL
END SECTIONS	1 @ 0.48 C.Y.	0.5
	TOTAL (C.Y.)	0.5



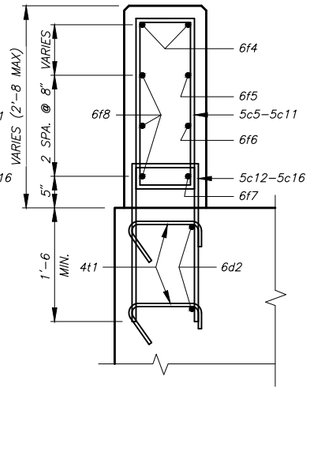
SECTION D–D



END VIEW A–A



PART SECTION B–B



PART SECTION C–C

NOTE:

SPECIAL RAIL END SECTION AS DETAILED ON THIS SHEET SHALL BE USED AT THE SE CORNER INSTEAD OF END SECTION SHOWN ON STANDARD SHEETS H30SI–34–12 AND H30SI–35–12 WHICH WILL REQUIRE THE ELIMINATION OF THE FOLLOWING BARS:

21–6c1	–177 LBS
4–6c2	–17 LBS
4–6c3	–25 LBS
5–4c4	–9 LBS
4–4c5	–8 LBS
6–6d1	–60 LBS
6–6d2	–61 LBS
	–357 LBS

4t1 AND 6d2 IN WING SHALL BE AS SHOWN ON H30SI–34–12 AND H30SI–35–12.

80'–0 x 30'–6 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

INTEGRAL ABUTMENTS **SINGLE SPAN**

SE RAIL END SECTION DETAILS

STATION 3+20.00 **15° SKEW, RT. AHEAD**

MARSHALL COUNTY, IOWA

105_04
10/20/26

STANDARDS

The following Standards apply to construction work on this project.

Number	Date	Title
BA-200	10-20-26	Steel Beam Guardrail Components
BA-202	10-20-26	Steel Beam Guardrail Bolted End Anchor
BA-221	10-18-22	Steel Beam Guardrail Barrier Transition Section (MASH TL-2)
BA-225	10-17-23	Steel Beam Guardrail Tangent End Terminal (MASH TL-2)
EC-201	04-20-21	Silt Fence
EC-204	10-19-21	Perimeter, Slope and Ditch Check Sediment Control Devices
EW-301	10-20-26	Guardrail Grading
EW-401	10-20-15	Temporary Stream Crossing, Causeway, or Equipment Pad
LS-635	10-18-22	Steel Beam Guardrail Installation At Concrete Barrier Or Bridge Rail End Section (MASH TL-2)
SI-173	04-19-16	Object Markers
SI-211	10-18-22	Object Marker and Delineator Placement with Guardrail
TC-252	10-20-26	Routes Closed to Traffic
DR-305	04-19-22	Subdrain Outlets (Standard Subdrain, Pressure Release and Special)

BENCH MARK: T-POST, STA. 3+10, 84' RT. ELEV.= 954.14

SURVEY CONTROL POINTS

CBA-300

Description	Northing	Easting	Approx. Station	Approx. Offset	Elevation
SCF 1/2IR	3437158.92	5067896.32	-20+54	℄	1004.30
SCF 1/2IR	3434477.25	5067722.76	2+34	℄	959.57
SCF 5/8IR	3431926.44	5067880.09	27+89	℄	997.86
Coordinate System				**Vertical Datum**	
(HARN/IA)	IOWA STATE PLANES, NORTH ZONE, US FOOT			NAVD83	

108_13A
3/27/25

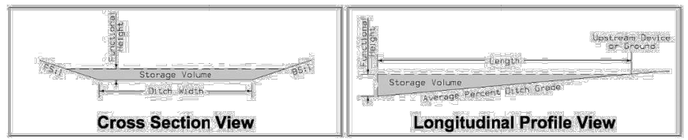
SAFETY CLOSURES

Station	Road Closure Qty.	Hazard Closure Qty.	Remarks
+75.00	1		SOUTH END
6+00.00	1		NORTH END
Total:	**2**		

100_18
8/15/22

SILT FENCES FOR DITCH CHECKS

Possible Standard: EC-201



* 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*Spacing*(0.5*H^2*FS+DW*H+0.5*H^2*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 1	2+45.00	Right	20.0	20.0		3.0	3.0	8.0	5.6	201.87	SE DITCH
2.0	1	Type 1	2+75.00	Right	22.0	22.0		3.0	3.0	10.0	5.6	235.50	SE DITCH
3.0	1	Type 1	3+05.00	Right	22.0	22.0		3.0	3.0	10.0	5.6	235.50	SE DITCH
4.0	2	Type 1	3+35.00	Left	22.0	22.0		3.0	3.0	10.0	3.1	423.90	NW DITCH
5.0	3	Type 1	3+60.00	Right	22.0	22.0		3.0	3.0	10.0	3.5	423.90	NE DITCH
6.0	2	Type 1	3+75.00	Left	22.0	22.0		3.0	3.0	10.0	3.1	423.90	NW DITCH
7.0	3	Type 1	4+10.00	Right	22.0	22.0		3.0	3.0	10.0	3.5	423.90	NE DITCH
8.0	2	Type 1	4+20.00	Left	22.0	22.0		3.0	3.0	10.0	3.1	423.90	NW DITCH
9.0	3	Type 1	4+55.00	Right	22.0	22.0		3.0	3.0	10.0	3.5	423.90	NE DITCH
10.0	2	Type 1	4+65.00	Left	22.0	22.0		3.0	3.0	10.0	3.1	423.90	NW DITCH
Total:					**218**	**218**							

TRAFFIC CONTROL PLAN

1. ROUTE WILL BE CLOSED TO VEHICULAR AND PEDESTRIAN TRAFFIC DURING CONSTRUCTION.
2. TRAFFIC CONTROL ON THE PROJECT SHALL BE IN ACCORDANCE WITH STANDARD ROAD PLAN TC-252.
3. A DETOUR ROUTE WILL NOT BE ESTABLISHED FOR THIS PROJECT.
4. MARSHALL COUNTY MAINTENANCE SHALL SALVAGE EXISTING ROAD MARKERS AFTER THE ROAD IS CLOSED.

CBA-101

SUMMARY OF EARTHWORK QUANTITIES

EXCAVATION TYPE	RAW CUT CY	RAW FILL CY	WASTE ** CY	USABLE CUT CY	SHRINKAGE FACTOR	FILL +35% SHRINKAGE CY	PAYMENT QUANTITY CY
CLASS 10, ROADWAY AND BORROW	400	625	0	400	35%	844	400
CLASS 10, CHANNEL	1,225	100	646	579	35%	135	1,225
TOTALS			646	979		979	

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

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	1+40.00	2+70.00	Left	150.00	TOE SW FORESLOPE
2.0	2+70.00	2+80.00	Left	65.00	TOP SW BANK
3.0	3+05.00	3+15.00	Right	40.00	TOP SE BANK
4.0	3+25.00	3+40.00	Left	35.00	TOP NW BANK
5.0	3+60.00	3+65.00	Right	35.00	TOP NE BANK
Total:				**325**	

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	2+80.00	3+30.00		Perimeter and Slope	12 inch	160.00	TOE SOUTH BANK
2.0	3+10.00	3+45.00		Perimeter and Slope	12 inch	180.00	TOE NORTH BANK
Total:						**340**	

80'-0 x 30'-6 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

INTEGRAL ABUTMENTS **SINGLE SPAN**

TABULATIONS

STATION 3+20.00 **15° SKEW, RT. AHEAD**

MARSHALL COUNTY, **IOWA**

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	2+62.43	15.8	BA-221	1	BA-225	1	37.500			35.17			3			1		A	1		12.5	SOUTH END, LT., LS-635
2.0	SB	Left	3+69.53	15.8	BA-221	1	BA-225	1	37.500			35.17			3				1	A	1		12.5	NORTH END, LT., LS-635
3.0	NB	Right	3+77.57	15.8	BA-221	1	BA-225	1	37.500			35.17			3			1		A	1		12.5	NORTH END, RT., LS-635
Total:						**3**		**3**													**3**		**37.5**	

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	2+62.43	Left	3:1	36.9	6.3					72.0	7.3	47.4	120.0		SOUTH END, LT.
2.0	SB	3+69.53	Left	3:1	36.9	6.3					72.0	7.3	47.4	100.0		NORTH END, LT.
3.0	NB	3+77.57	Right	3:1	36.9	6.3					72.0	7.3	47.4	120.0		NORTH END, RT.

TABULATION OF DELINEATORS AND OBJECT MARKERS

CBA-200

Refer to Standard Plans SI-211*, SI-172 AND SI-173

Location		Delineator	Object Marker			Remarks
Station	Type*	Single White D-1W	Type 2 OM2-3YV	Type 3		
				OM-3L	OM-3R	
		Number	Number	Number	Number	
3+20.00	*3*	–	–	–	*1*	–

80'-0 x 30'-6 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

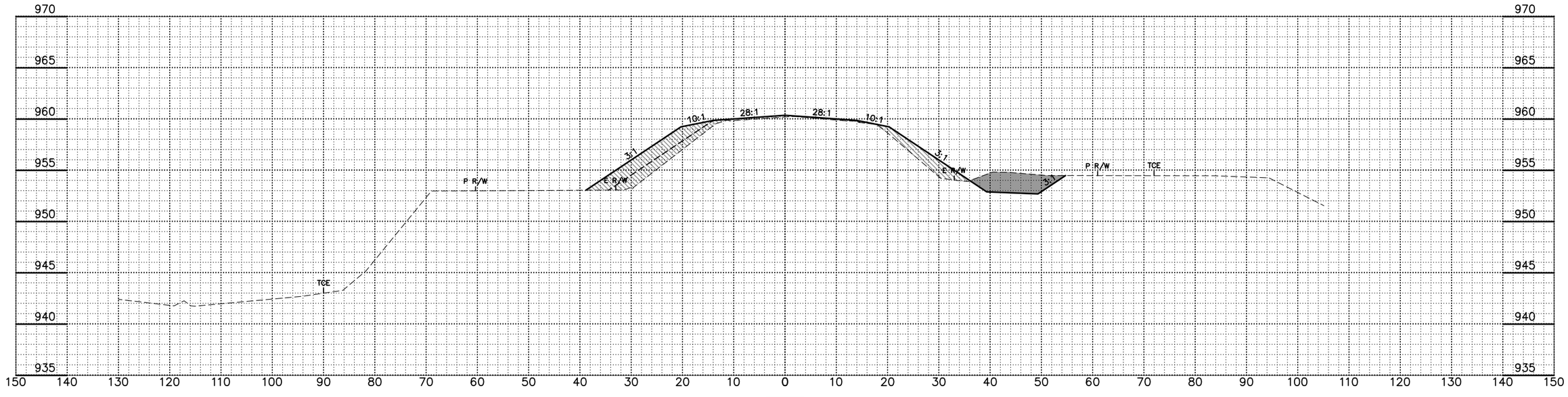
INTEGRAL ABUTMENTS — SINGLE SPAN

TABULATIONS

STATION 3+20.00 — 15° SKEW, RT. AHEAD

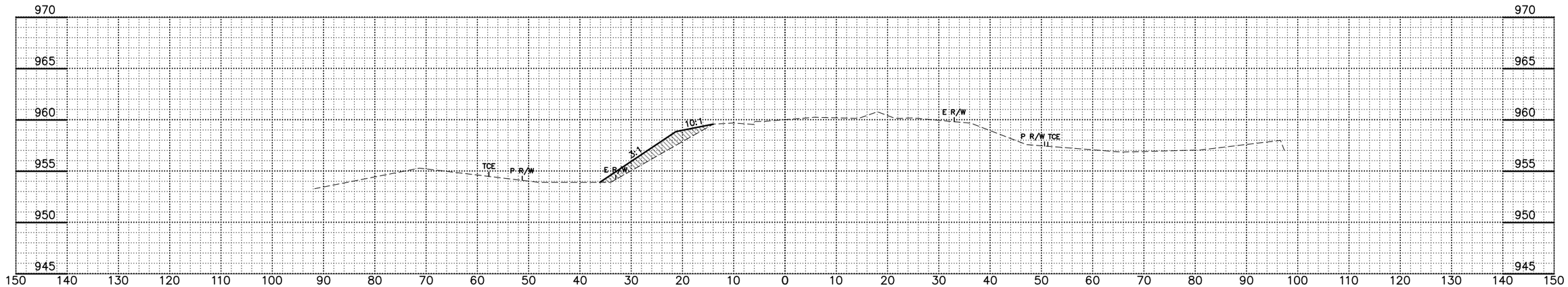
MARSHALL COUNTY, — IOWA

BENCH MARK: T-POST, STA. 3+10, 84' RT. ELEV.= 954.14



2+60

℄ EL = 960.37

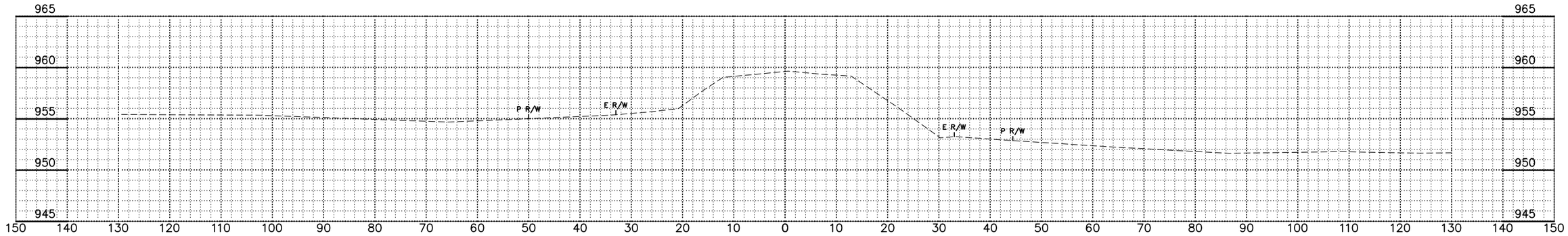


1+75

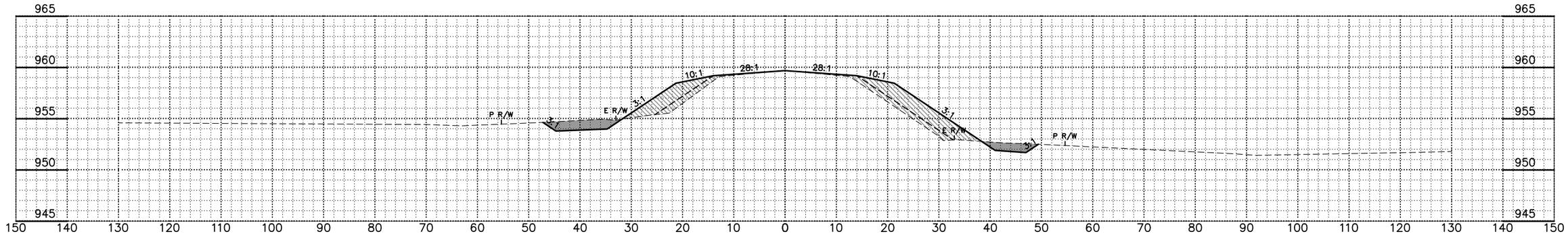
CROSS SECTIONS

MARSHALL COUNTY, IOWA

BENCH MARK: T–POST, STA. 3+10, 84' RT. ELEV.= 954.14

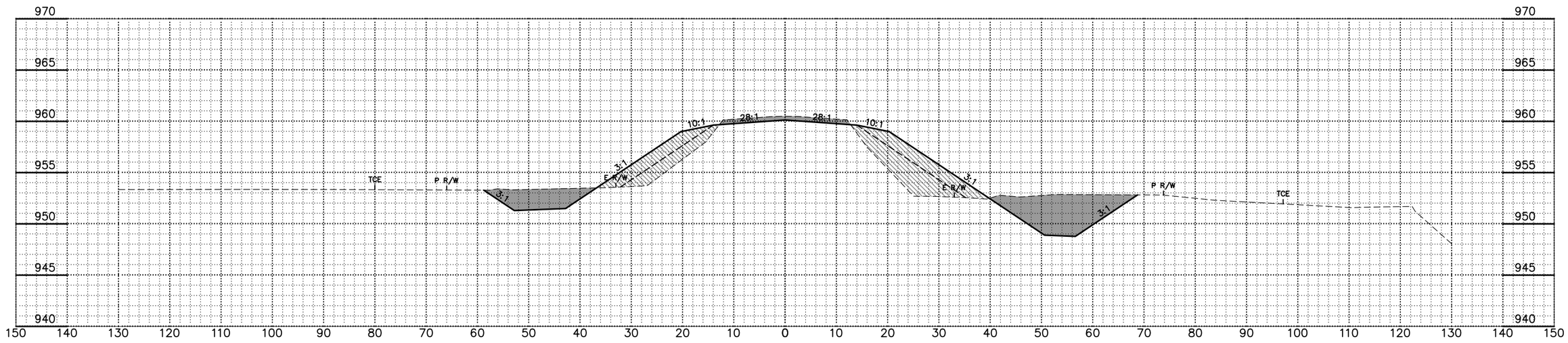


5+00



4+60

℄ EL = 959.70



3+80

℄ EL = 960.13

CROSS SECTIONS

MARSHALL COUNTY, IOWA