

STANDARD ROAD PLANS

STANDARD ROAD PLANS ARE LISTED ON SHEET 9.

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.



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

PROJECT NO. BRS-C038(137)--60-38
BRIDGE REPLACEMENT - CCS
ON T 55, OVER BRANCH BEAVER CREEK, FROM WESTBROOK ST
SOUTH 0.4 MILES TO AN EXISTING CROSSING, AT W1/4 S3 T89N R15W

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. 25+85.00 TO STA. 30+15.00 = 430.00 LIN.FT. = 0.0814 MILES

2022, TRAFFIC COUNT = 619 V.P.D.

UTILITY CONTACTS

COMPANY	UTILITY	CONTACT	PHONE #	EMAIL
CEDAR FALLS UTILITIES	ELECTRIC, WATER, GAS, COMMUNICATIONS	GARRETT RAMTHUN	319-268-5375	garrett.ramthun@cfunet.net
CENTURYLINK	COMMUNICATIONS	SADIE HULL	918-547-0147	sadie.hull@lumen.com
AUREON NETWORK SERVICES	COMMUNICATIONS	JEFF KLOCKO	515-830-0445	jeff.klocko@aureon.com
IOWA REGIONAL UTILITY ASSOC.	WATER	SANDY SPANGENBURG	319-824-5920	grundyservice@irua.net
MEDIACOM	COMMUNICATIONS	SCOTT LAGOW	845-544-9655	clagow@mediacomcc.com

INDEX OF SEALS

SHEET NO.	NAME	TYPE
P10L	JAMES S. NELSON	STRUCTURAL DESIGN
BRIDGE STANDARDS	JAMES S. NELSON	STRUCTURAL DESIGN
7	DAVID LOGEMANN	SOILS

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. OFFICE OF BRIDGES AND STRUCTURES.



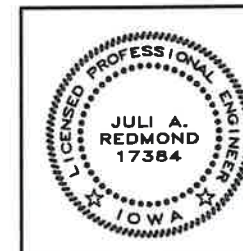
PROJECT NO. BRS-C038(137)--60-38
FHWA NO. 165510
COUNTY BR. NO. A-04
INDEX OF SHEETS

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- 2.-3. QUANTITY SUMMARY
4. SITUATION PLAN
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IOWA DEPARTMENT OF TRANSPORTATION
STANDARDS REQUIRED

STANDARD	LATEST REVISION
J30-01-06	09-20
J30-01A-06	09-20
J30-04E-06	09-20
J30-05E-06	09-20
J30-20-06	09-20
J30-22-06	09-20
J30-23-06	09-20
J30-24-06	09-20
J30-36-06	09-20
J30-39-06	09-20
J30-43-06	09-20
J30-44-06	09-20
J30-45-06	09-20
J30-46-06	09-20
J30-48-06	09-20
P10L	06-25

THESE SHEETS MAY BE OBTAINED AT THE ELECTRONIC
REFERENCE LIBRARY WEBSITE. <http://eri.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.

Juli A. Redmond DATE: 8/4/26
JULI A. REDMOND, P.E.

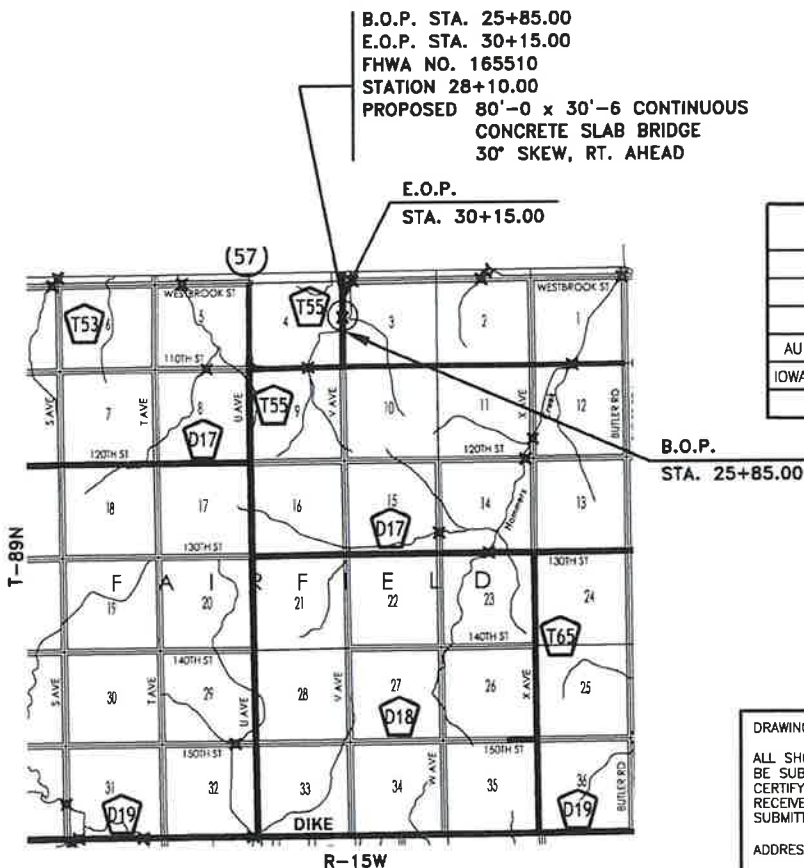
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2026.

PAGES OR SHEETS COVERED BY THIS SEAL:

1-6 AND 8-13 OF 13

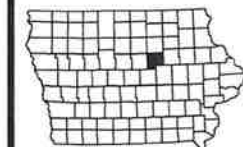
APPROVED: *Jeff Stalleen* 8-10-26
GRUNDY COUNTY ENGINEER DATE

David Nelson 8-10-26
Jeff Stalleen 8-10-26
Mark A. Schmitt 8-10-26
Jeffrey A. Robert 8-10-26
David Nelson 8-10-26
BOARD OF SUPERVISORS DATE



PROJECT LOCATION

1 MI. 0 1 MI. 2 MI.



TOTAL ESTIMATED QUANTITIES: 80'-0 x 30'-6 C.C.S. BRIDGE							
REF. NO.	CODE NO.	ITEM	UNIT	2 ABUTS	2 PIERS	SUPER	TOTAL
1	2101-0850001	CLEARING AND GRUBBING	ACRE	-	-	-	0.1
2	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	-	-	-	700
3	2102-2710090	EXCAVATION, CLASS 10, WASTE	CY	-	-	-	965
4	2104-2710020	EXCAVATION, CLASS 10, CHANNEL	CY	-	-	-	900
5	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD	CY	-	-	-	870
6	2121-7425020	GRANULAR SHOULDERS, TYPE B	TON	-	-	-	25
7	2123-7450020	SHOULDER FINISHING, EARTH	STA	-	-	-	1.6
8	2301-0690210	BRIDGE APPROACH, TWO LANE	SY	-	-	-	427.7
9	2315-8275025	SURFACING, DRIVEWAY, CLASS A CRUSHED STONE	TON	-	-	-	44
10	2401-6745625	REMOVAL OF EXISTING BRIDGE	LS	-	-	-	1
11	2402-2720000	EXCAVATION, CLASS 20	CY	136	-	-	136
12	2403-0100010	STRUCTURAL CONCRETE (BRIDGE)	CY	25.6	-	153.9	179.5
13	2404-7775005	REINFORCING STEEL, EPOXY COATED	LB	3,458	-	44,233	47,691
14	2414-6424124	CONCRETE OPEN RAILING, TL-4	LF	-	-	182.9	182.9
15	2501-0201042	PILES, STEEL, HP 10 X 42 , 26 @ 70'	LF	840	980	-	1,820
16	2501-5478042	CONCRETE ENCASEMENT OF STEEL H PILES, HP 10 X 42 (P10L TYPE 3) 14 @ 13'	LF	-	182	-	182
17	2505-4008120	REMOVAL OF STEEL BEAM GUARDRAIL	LF	-	-	-	321
18	2505-4008410	STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION, BA-201	EACH	-	-	-	3
19	2505-4021010	STEEL BEAM GUARDRAIL END ANCHOR, BOLTED	EACH	-	-	-	3
20	2505-4021710	STEEL BEAM GUARDRAIL TANGENT END TERMINAL, LS-625	EACH	-	-	-	3
21	2507-3250005	ENGINEERING FABRIC	SY	-	-	-	925
22	2507-6800061	REVETMENT, CLASS E	TON	-	-	-	600
23	2507-6875002	REVETMENT, REMOVE AND REPLACE	CY	-	-	-	10
24	2510-6745850	REMOVAL OF PAVEMENT	SY	-	-	-	514
25	2527-9263209	PAINTED PAVEMENT MARKINGS, WATERBORNE OR SOLVENT-BASED	STA	-	-	-	3.19
26	2528-2518000	SAFETY CLOSURE	EACH	-	-	-	2
27	2528-8445110	TRAFFIC CONTROL	LS	-	-	-	1
28	2533-4980005	MOBILIZATION	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.
THE COUNTY WILL CUT DOWN TREES WITHIN THE CLEARING AND GRUBBING AREAS DUE TO THE POTENTIAL OF THESE TREES BEING INHABITED BY STATE AND FEDERAL LISTED THREATENED/ENDANGERED BAT SPECIES. THE CONTRACTOR WILL BE REQUIRED TO REMOVE THE DOWN TREES AND TO GRUB THE STUMPS.
2.

SEE TABULATION CBA-101 ON SHEET 9 FOR BREAKDOWN OF EXCAVATION QUANTITIES.
TYPE "A" COMPACTION WILL BE REQUIRED.
3.

SEE TABULATION CBA-101 ON SHEET 9 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 9 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.
7.

INCLUDES ALL WORK NECESSARY TO CONSTRUCT AND SHAPE SHOULDER AREAS, INCLUDING 14 TONS FOR SHAPING BEYOND END OF NON-REINFORCED APPROACH PAVEMENT.
8.

SEE TABULATION 112-6 ON SHEET 11.
COARSE AGGREGATE DURABILITY SHALL BE CLASS 3 OR BETTER.
NO ADDITIONAL PAYMENT WILL BE ALLOWED FOR HEATING AND PROTECTION OF CONCRETE, IF NECESSARY.
CERTIFIED PLANT INSPECTION IS REQUIRED.
REINFORCING STEEL SHALL BE EPOXY COATED.
9.

SEE TABULATION 102-3 ON SHEET 11. GRANULAR MATERIAL TO BE PLACED AT SIX INCH (6") THICKNESS.

10.

THE EXISTING BRIDGE AT STATION 28+08 IS A 30' x 28' CONCRETE SLAB BRIDGE WITH HIGH TIMBER ABUTMENTS, BUILT IN 1968. INCLUDES REMOVAL OF APPROXIMATELY NINE TIMBER PILE STUBS FROM CHANNEL UNDER EXISTING BRIDGE.
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. ALL SALVAGEABLE AND UNSALVAGEABLE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR. THE EXISTING STRUCTURE AND PILE STUBS 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 MATERIALS NOTES ON SHEET 5 FOR PAINT SCRAPE SAMPLE RESULTS.
11.

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.
12.

THE STRUCTURAL CONCRETE QUANTITY HAS BEEN DECREASED BY 1.6 C.Y. FOR THE ELIMINATION OF THE PAVING BLOCKS.
INCLUDES COST OF PVC PIPE IN WINGS AND CONCRETE SEALER ALONG EDGES OF SLAB.
THE 'CONCRETE SEALER LIMITS FOR OPEN RAIL' DETAIL SHOWN IN THE BRIDGE STANDARD SHALL BE OMITTED.
THE MACADAM STONE SHOWN ON THE WING ARMORING DETAILS IN THE J 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.
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.
13.

ALL REINFORCING SHALL BE GRADE 60.
THE REINFORCING STEEL QUANTITY HAS BEEN DECREASED BY 30 LBS. FOR THE EXCLUSION OF THE 5x1 PAVING BLOCK LIFTING HOOPS.
14.

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.
15.

SEE PILE NOTES ON SHEET 5.
PILE POINTS SHALL NOT BE USED FOR THIS PROJECT.
16.

CERTIFIED PLANT INSPECTION IS REQUIRED.
NO ADDITIONAL PAYMENT WILL BE ALLOWED FOR HEATING AND PROTECTION OF CONCRETE, IF NECESSARY.
CAP STEEL IS REQUIRED.
17.

SEE TABULATION 110-7A ON SHEET 10.
ALL SALVAGEABLE MATERIAL AND UNSALVAGEABLE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR.
- 18-20.

SEE TABULATIONS 108-8A AND 107-23 ON SHEET 10.
21.

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.
22.

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

THE UNIT PRICE BID FOR "REVETMENT, REMOVE AND REPLACE" SHALL INCLUDE THE COST OF LABOR, EQUIPMENT AND MATERIALS REQUIRED TO REMOVE REVETMENT FROM THE EXISTING BANKS, STOCKPILE IF NECESSARY, AND PLACE THE REVETMENT ON THE BANKS OUTSIDE THE LIMITS SHOWN FOR CLASS E REVETMENT. ANY PIECE GREATER THAN 3 FEET IN ANY DIRECTION SHALL BE BROKEN UP SUCH THAT ITS SIZE IS REDUCED TO LESS THAN 3 FEET IN ANY DIRECTION. HMA MATERIAL SHALL NOT BE PLACED WITHIN THE FLOODPLAIN. ANY REINFORCING SHALL BE CUT OFF FLUSH OR REMOVED. MATERIAL IS TO BE PLACED AT A THICKNESS OF 1'-6. SEE SITUATION PLAN, SHEET 4.
THE METHOD OF MEASUREMENT AND BASIS OF PAYMENT SHALL BE BY CUBIC YARD. PLAN QUANTITY WILL BE PAY QUANTITY.
24.

SEE TABULATION 110-1 ON SHEET 9.
EXISTING PAVEMENT CONSISTS OF 13" TO 15" HMA.
IN ORDER TO AVOID ANY UNNECESSARY SURFACE BREAKS OR PREMATURE SPALLING, THE CONTRACTOR IS CAUTIONED TO EXERCISE EXTREME CARE WHEN PERFORMING ANY OF THE NECESSARY SAW CUTTING OPERATIONS FOR THE PROPOSED PAVEMENT REMOVAL. SAW CUTS ARE TO BE MADE AT THE STATION INDICATED OR AT THE NEAREST TRANSVERSE PAVEMENT JOINT, AS DIRECTED BY THE ENGINEER.
25.

SEE TABULATIONS 108-22 ON SHEET 9.
ON ALL NEW OR RECONSTRUCTED PAVEMENTS, THE LOCATION OF "NO PASSING" ZONE LINES SHALL BE LOCATED IN THE FIELD. THE LOCATIONS OF THE PROPOSED "NO PASSING" ZONE LINES SHOWN ON THE PAVEMENT MARKING TABULATION IS FOR ESTIMATING QUANTITIES ONLY.
26.

SEE TABULATION 108-13A ON SHEET 9.
27.

SEE TRAFFIC CONTROL PLAN ON SHEET 9.

80'-0 x 30'-6 CONTINUOUS CONCRETE
SLAB BRIDGE

INTEGRAL ABUTMENTS
24'-6 END SPANS

P10L PIERS
31'-0 INTERIOR SPAN

QUANTITY SUMMARY

STATION 28+10.00
GRUNDY COUNTY,

30' SKEW, RT. AHEAD
IOWA

TOTAL ESTIMATED QUANTITIES: 80'-0 x 30'-6 C.C.S. BRIDGE							
REF. NO.	CODE NO.	ITEM	UNIT	2 ABUTS	2 PIERS	SUPER	TOTAL
29	2551-0000230	PERMANENT CRASH CUSHION, SEVERE USE (SU)	EACH	-	-	-	1
30	2601-2634100	MULCHING	ACRE	-	-	-	2.2
31	2601-2636043	SEEDING AND FERTILIZING (RURAL)	ACRE	-	-	-	1.1
32	2601-2642100	STABILIZING CROP - SEEDING AND FERTILIZING	ACRE	-	-	-	1.1
33	2602-0000020	SILT FENCE	LF	-	-	-	615
34	2602-0000030	SILT FENCE FOR DITCH CHECKS	LF	-	-	-	79
35	2602-0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK	LF	-	-	-	694
36	2602-0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.	LF	-	-	-	940
37	2602-0010010	MOBILIZATIONS, EROSION CONTROL	EACH	-	-	-	1
38	2602-0010020	MOBILIZATIONS, EMERGENCY EROSION CONTROL	EACH	-	-	-	1

REF. NO. ESTIMATE REFERENCE INFORMATION

29.

SEE NORTH APPROACH PAVEMENT DETAIL ON SHEET 5.
SEE TABULATION 108-30 ON SHEET 11.
SHOP DRAWINGS OF THE PROPOSED CRASH CUSHION SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. THE SUBMITTAL SHALL INCLUDE DETAILS OF THE PROPOSED ATTACHMENT TO THE END POST, ALTERNATE RAIL ENDPOST BOLT PATTERN (IF REQUIRED), AND DETAILS OF THE CONCRETE FOOTING (IF PAVEMENT DETAILS NEED TO BE MODIFIED FROM WHAT IS SHOWN IN THESE PLANS). THE CONCRETE FOOTING SHALL MEET THE MANUFACTURE'S REQUIREMENTS AND BE A MINIMUM OF 10 INCHES THICK WITH #5 GRADE 60 EPOXY COATED BARS AT 18 INCH SPACING IN BOTH DIRECTIONS POSITIONED AT MID-DEPTH. CONCRETE SHALL BE CLASS C IF REQUIRED F'c=4,000 PSI OR LESS. PROPOSED MIX DESIGN SHALL BE PROVIDED IF REQUIRED F'c IS GREATER THAN 4,000 PSI. COST OF FOOTING SHALL BE INCLUDED WITH PRICE BID FOR PERMANENT CRASH CUSHION (IF A FOOTING IS REQUIRED BEYOND WHAT IS SHOWN FOR PAVEMENT IN THESE PLANS). THE MAXIMUM LENGTH OF THE CRASH CUSHION SHALL BE 30 FEET MEASURED FROM THE END OF THE ENDPOST. THE PERMANENT CRASH CUSHION MUST MEET EITHER NCHRP REPORT 350, TL-3 CRASH REQUIREMENTS OR MASH TL-3 CRASH REQUIREMENTS. THE ENGINEER SHALL BE ALLOWED A MINIMUM OF 30 DAYS TO REVIEW.
INCLUDES ALL COSTS ASSOCIATED WITH PROVIDING ONE SPARE PARTS KIT, SUPPLIED BY THE CRASH CUSHION MANUFACTURER AND CONTAINING NEW MATERIALS DESIGNATED FOR REPAIRING THE SPECIFIC BRAND AND MODEL OF CRASH CUSHION FURNISHED.
CONTRACTOR SHALL LOAD SPARE PART KIT MATERIAL ONTO A TRUCK PROVIDED BY THE COUNTY. THE CONTRACTOR SHALL FURNISH TO THE ENGINEER THREE COPIES OF THE CURRENT APPLICATION REPAIR MANUAL FOR THE CRASH CUSHION.
- 30.-32.

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.
- 33.-38.

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

80'-0 x 30'-6 CONTINUOUS CONCRETE
SLAB BRIDGE

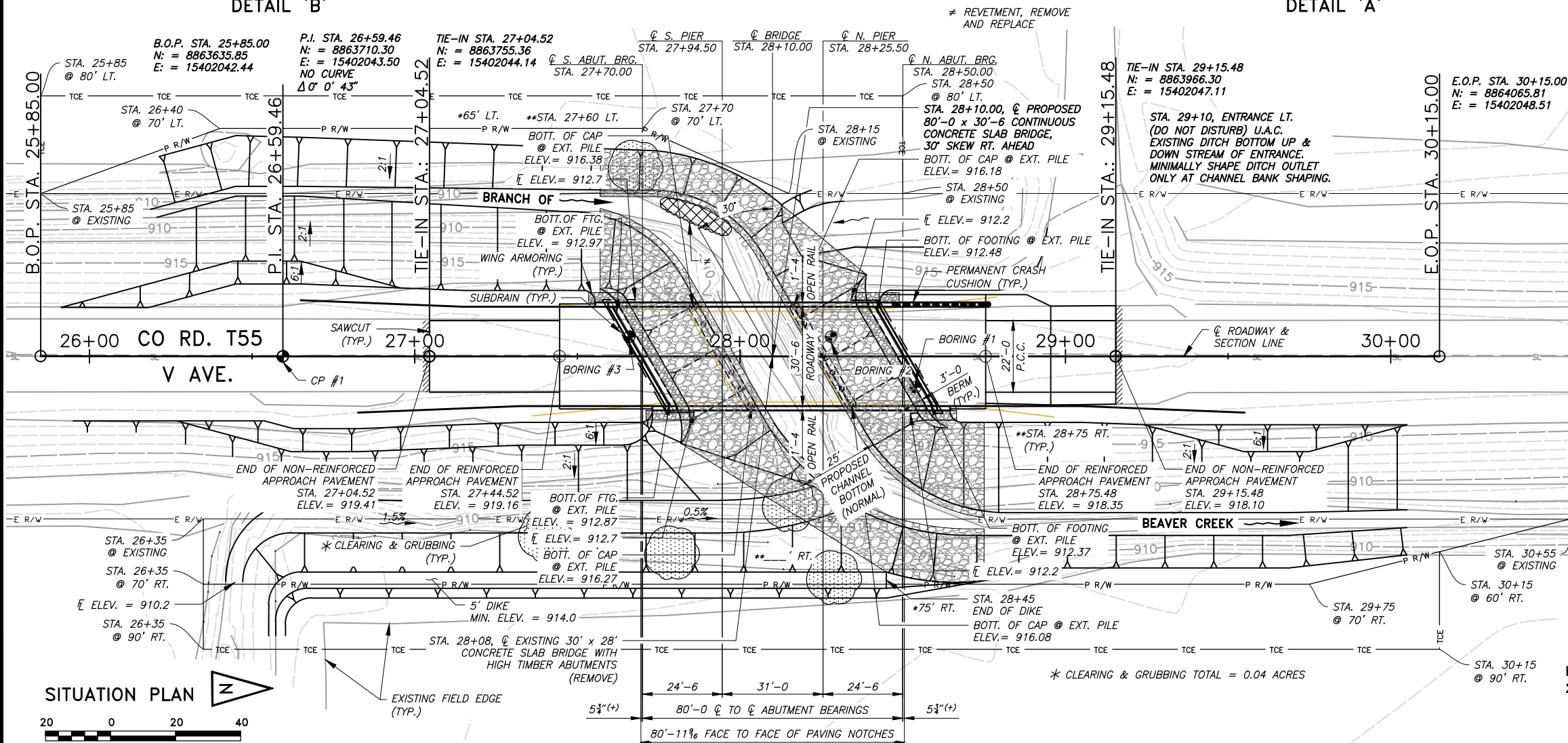
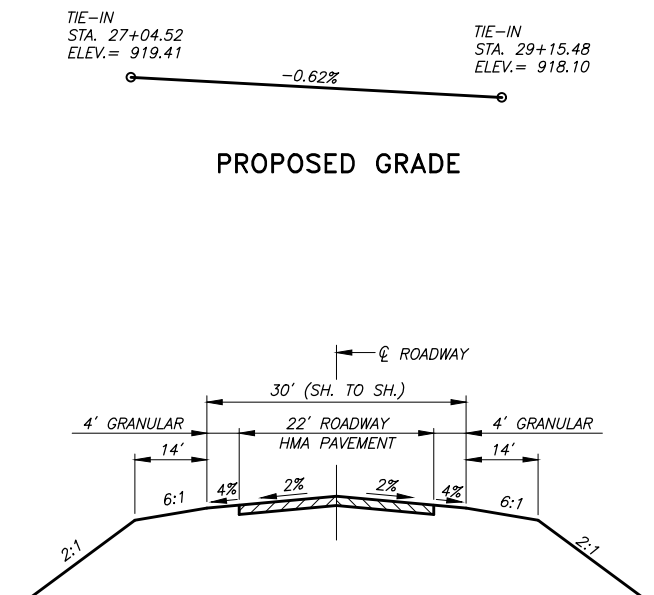
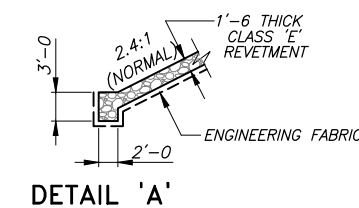
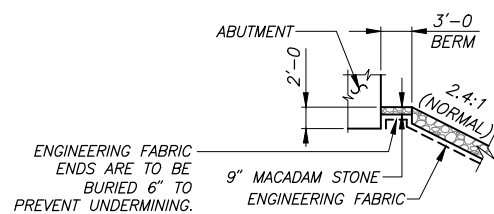
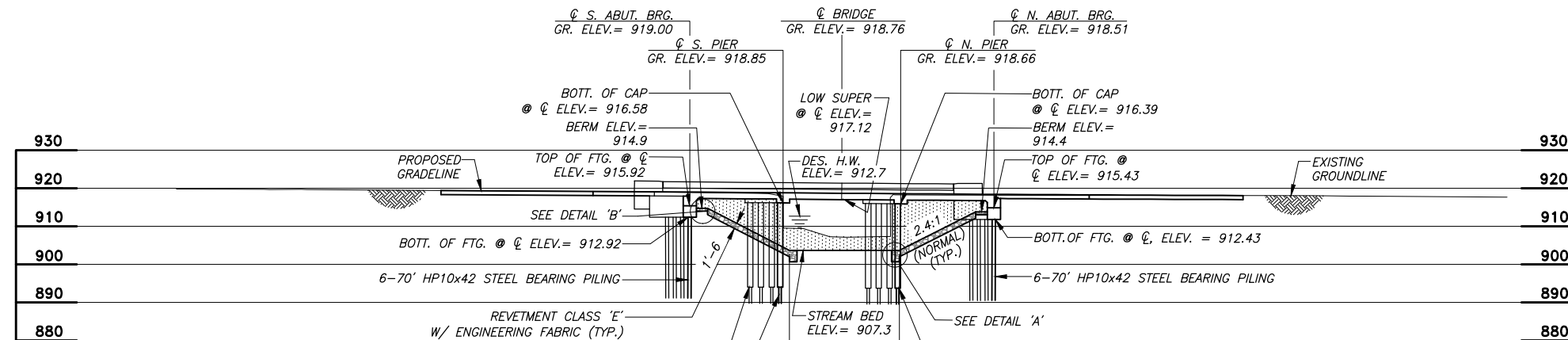
INTEGRAL ABUTMENTS
24'-6 END SPANS

P10L PIERS
31'-0 INTERIOR SPAN

QUANTITY SUMMARY

STATION 28+10.00
GRUNDY COUNTY,

30' SKEW, RT. AHEAD
IOWA

**LOCATION**

GRUNDY COUNTY
T-89N, R-15W
SECTION 3
FAIRFIELD TOWNSHIP
OVER BRANCH OF BEAVER CREEK

HYDRAULIC DATA

DRAINAGE AREA = 1.6 SQ. MI.
DESIGN DISCHARGE = 1,100 C.F.S.
DESIGN HIGH WATER ELEV. = 912.7
MANNING SLOPE = 0.00341 FT./FT.
BRIDGE WATERWAY AREA = 185 SQ. FT.
DESIGN VELOCITY = 5.9 F.P.S.
Q25 = 900 C.F.S. STAGE ELEV. = 912.6
Q50 = 1,100 C.F.S. STAGE ELEV. = 912.7 (DESIGN)
Q100 = 1,350 C.F.S. STAGE ELEV. = 912.8
EXT. H.W. ELEV. = UNKNOWN
ANTICIPATED Q100 SCOUR ELEV. = 900.5

**80'-0 x 30'-6 CONTINUOUS CONCRETE
SLAB BRIDGE**

INTEGRAL ABUTMENTS
24'-6 END SPANS

P10L PIERS
31'-0 INTERIOR SPAN

SITUATION PLAN

STATION 28+10.00
GRUNDY COUNTY,

30' SKEW, RT. AHEAD
IOWA

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

SPECIFICATIONS

DESIGN: AASHTO LRFD 3rd EDITION, SERIES OF 2004, WITH INTERIM 2005.
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, 3rd EDITION, SERIES 2004, WITH INTERIM 2005.
REINFORCING STEEL IN ACCORDANCE WITH LRFD AASHTO SECTION 5, GRADE 60.
CONCRETE IN ACCORDANCE WITH LRFD AASHTO SECTION 5, F'C=3,500 PSI.

GENERAL NOTES

THIS DESIGN IS FOR A 80' x 30'-6 REINFORCED CONCRETE SLAB BRIDGE ON T55 OVER A BRANCH OF BEAVER CREEK IN GRUNDY 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 CONTRCTOR 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://ia.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: 21-7115
DATE INSPECTED: 08/26/2022
PHONE: 515-279-8042

A SCRAPE SAMPLE OF THE EXISTING PAINT WAS TAKEN FROM AN AREA 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 THESE SAMPLES WAS 219,000 AND 163,000 PART PER MILLION (PPM) AT THE STEEL RAIL AND TIE ROD BOLT AND WASHER, RESPECTIVELY. ANALYSIS OF TOTAL CHROMIUM ON THESE SAMPLES WAS 32.9 AND 4,020 PPM AT THE STEEL RAIL AND TIE ROD BOLT AND WASHER, RESPECTIVELY. 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 70 FEET FOR THE ABUTMENT PILES IS BASED ON A MIXED SOIL CLASSIFICATION, A TOTAL FACTORED AXIAL LOAD PER PILE (PU) OF 116 KIPS, AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.65 FOR SOIL AND 0.70 FOR ROCK END BEARING.
THE NOMINAL AXIAL BEARING RESISTANCE FOR CONSTRUCTION CONTROL WAS DETERMINED FROM A MIXED SOIL CLASSIFICATION AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.65 FOR SOIL AND 0.70 FOR ROCK END BEARING. PILES ARE ASSUMED TO BE DRIVEN FROM A START ELEVATION AT THE BOTTOM OF FOOTING.
THE REQUIRED NOMINAL AXIAL BEARING RESISTANCE FOR THE ABUTMENT PILES IS 88 TONS AT END OF DRIVE (EOD) OR RETAP. THE PILE CONTRACT LENGTH SHALL BE DRIVEN AS PER PLAN UNLESS PILES REACH REFUSAL. CONSTRUCTION CONTROL REQUIRES A WEAP ANALYSIS WITH BEARING GRAPH.

PIER PILE

THE CONTRACT LENGTH OF 70 FEET FOR THE PIER PILES IS BASED ON A MIXED SOIL CLASSIFICATION, A TOTAL FACTORED AXIAL LOAD PER PILE (PU) OF 105 KIPS, AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.65 FOR SOIL AND 0.70 FOR ROCK END BEARING.
THE NOMINAL AXIAL BEARING RESISTANCE FOR CONSTRUCTION CONTROL WAS DETERMINED FROM A MIXED SOIL CLASSIFICATION AND A GEOTECHNICAL RESISTANCE FACTOR (PHI) OF 0.65 FOR SOIL AND 0.70 FOR ROCK END BEARING. PILES ARE ASSUMED TO BE DRIVEN FROM A START ELEVATION AT THE BOTTOM OF ENCASEMENT. DESIGN SCOUR (100-YEAR) WAS ASSUMED TO AFFECT THE UPPER 3 FEET OF EMBEDDED PILE LENGTH AND CAUSE 3 KIPS OF DRIVING RESISTANCE.
THE REQUIRED NOMINAL AXIAL BEARING RESISTANCE FOR THE PIER PILES IS 81 TONS AT END OF DRIVE (EOD) OR RETAP. THE PILE CONTRACT LENGTH SHALL BE DRIVEN AS PER PLAN UNLESS PILES REACH REFUSAL. CONSTRUCTION CONTROL REQUIRES A WEAP ANALYSIS WITH BEARING GRAPH.

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.
TOP AND BOTTOM REINFORCING STEEL IS TO BE SUPPORTED AS NOTED ON STANDARD J30-04E-06 AND J30-20-06.
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 NOT REQUIRED, HOWEVER, IF IT BECOMES NECESSARY TO PREVENT DAMAGE TO THE END OF THE BRIDGE DECK OR BACKWALL FROM CONSTRUCTION EQUIPMENT, AN APPROPRIATE METHOD OF PROTECTION APPROVED BY THE ENGINEER SHALL BE PROVIDED BY THE BRIDGE CONTRACTOR. ANY DAMAGE TO THE DECK OR BACKWALL SHALL BE REPAIRED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER. NO ADDITIONAL PAYMENT WILL BE AUTHORIZED FOR THIS WORK.

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.

NOTES:

- SEE BR-101 AND BR-106 FOR ADDITIONAL INFORMATION.
CONTRACTOR SHALL CONFIRM WITH MANUFACTURER OF CRASH CUSHIONS THAT PAVEMENT LAYOUT MEETS THEIR MINIMUM REQUIREMENTS.
- ⑩ MINIMUM DIMENSION, INCREASE IF REQUIRED TO MEET CRASH CUSHION MANUFACTURERS REQUIREMENTS. INCREASE IN WIDTH TO BE APPROVED BY ENGINEER TO MINIMIZE SHAPING OF FORESLOPE.
- ⑪ REINFORCE PANEL WITH EPOXY COATED #5 AT 18" IN BOTH DIRECTION POSITIONED 2 1/2" CLEAR FROM BOTTOM OF SLAB.
- ⑫ MATCH EXISTING PAVED SHOULDER WIDTH.
- ⑬ INCREASE IN WIDTH TO BE APPROVED BY ENGINEER TO MINIMIZE SHAPING OF FORESLOPE.

80'-0 x 30'-6 CONTINUOUS CONCRETE
SLAB BRIDGE

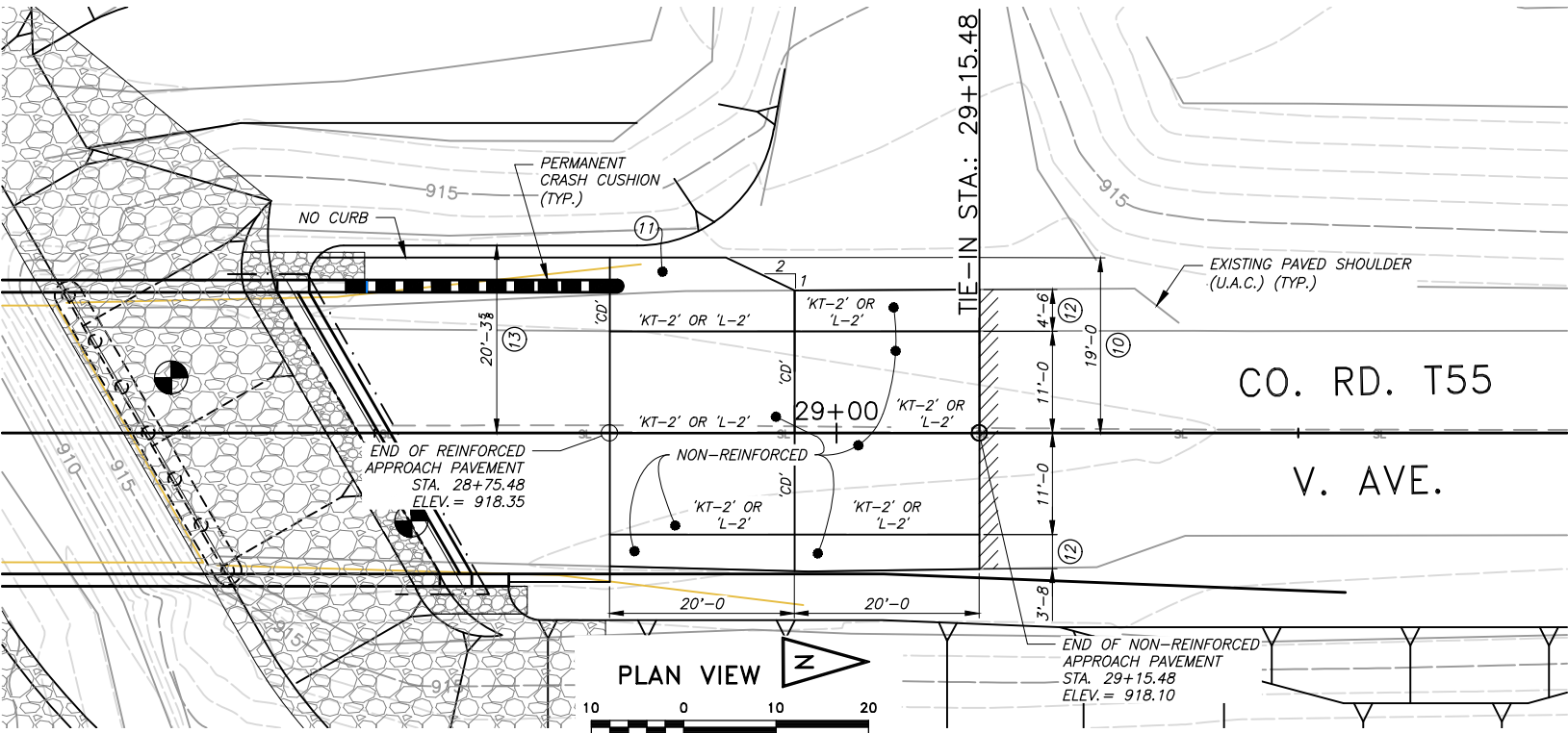
INTEGRAL ABUTMENTS
24'-6 END SPANS

P10L PIERS
31'-0 INTERIOR SPAN

GENERAL NOTES

STATION 28+10.00
GRUNDY COUNTY,

30' SKEW, RT. AHEAD
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. RCPE/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' X 30'-6" REINFORCED CONCRETE SLAB BRIDGE ON T55 OVER A BRANCH OF BEAVER CREEK IN GRUNDY COUNTY, IOWA.
- B. THIS PPP COVERS APPROXIMATELY 1.5 ACRES WITH AN ESTIMATED 1.5 ACRES BEING DISTURBED. THE PORTION OF THE PPP COVERED BY THIS CONTRACT HAS 1.5 ACRES DISTURBED.
- C. THE PPP IS LOCATED IN AN AREA OF ONE SOIL ASSOCIATION (KENYON-CLYDE-FLOYD). THE ESTIMATED WEIGHTED AVERAGE RUNOFF COEFFICIENT NUMBER FOR THIS PPP AFTER COMPLETION WILL BE 0.32.
- 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 A BRANCH OF BEAVER 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) PLANS WILL ENSURE THAT EXISTING VEGETATION OR NATURAL BUFFERS ARE PRESERVED WHERE ATTAINABLE AND DISTURBED PORTIONS OF THE SITE WILL BE STABILIZED.
 - 2) INITIATE 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 ENVIRONMENTAL 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

PRINTED OR TYPED NAME

POLLUTION PREVENTION PLAN

GRUNDY COUNTY,

IOWA

BORING LOG NO. 3		STATION 27+66.6'LT		CBA Job No.: 2022231		Project No.: 251317							
Project: Bridge A-04 on V Ave (T55) over Branch of Beaver Creek, Sec 3, Fairfield Grundy County, IA				Client: Calhoun-Burns & Associates 6775 Vista Drive West Des Moines, IA									
Surface Elevation: 918.6' Datum: Top of Deck at CL N Abut = 918.34'				Date Drilled: 8/28/2025 Drilling Depth, ft.: 75.5		Drilling Method: 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 ft.	Elevation ft.
0								HMA (13"±)				1.1	
		1	SSA	7	25.7			Very dark brown lean clay, trace sand, moist		CL		917.5	
912		2	SSA	4	20.3			FILL				10	
	12	3	SSA	3	16.5			Gray very sandy lean clay, very moist		CL		908.6	
		4	SSA	3	16.1			Brown-gray silty fine to medium sand, saturated after 12.5'		SM			
900		5	SSA	9	15.8			GRANULAR ALLUVIUM (Silty Sand)				30	
	24	6	SSA	20	16.7			Brown-gray silty fine to medium sand, saturated		SM		888.6	
888		7	SSA	29	17.6			GRANULAR ALLUVIUM (Coarse Sand)				40.5	
	36	8	SSA	6	17.2			Dark gray very sandy lean clay with interbedded sand seams, very moist		CL		878.1	
876		9	SSA	10	23.4			COHESIVE ALLUVIUM (Firm Silty Clay)				53	
	48	10	SSA	7	30.3			Dark gray sandy lean clay, trace gravel, moist		CL		865.6	
864		11	SSA	10	17.4			GLACIAL TILL (Firm Sandy Glacial Clay)				57	
	60	12	SSA	33	16.5			Dark gray and brown-gray clay shale, moist				861.6	
852		13	SSA	22	20.9			WEATHERED BEDROCK (Cohesive Material)				75.5	
	72	14	SSA	92	17.0							843.1	
840		15	SSA	125	12.6			Damp after 74.5' End of Boring					
*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: 12.5 ft. ± ft. ± ft. ±													
ALLENDER BUTZKE ENGINEERS, INC.													
Geotechnical - Environmental - Construction Q.C.													

BORING LOG NO. 2		STATION 28+28.6'LT		CBA Job No.: 2022231		Project No.: 251317							
Project: Bridge A-04 on V Ave (T55) over Branch of Beaver Creek, Sec 3, Fairfield Grundy County, IA				Client: Calhoun-Burns & Associates 6775 Vista Drive West Des Moines, IA									
Surface Elevation: 918.3' Datum: Top of Deck at CL N Abut = 918.34'				Date Drilled: 8/27/2025 Drilling Depth, ft.: 75.8		Drilling Method: 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 ft.	Elevation ft.
0								HMA (15"±)				1.3	
912		1	SSA	5	24.6			Very dark brown lean clay, trace organics and gravel, moist		CL		917	
		2	SSA	4	32.0			FILL					
900		3	SSA	5	54.7			Dark gray sandy lean clay, trace organics, very moist		CL		904.8	
		4	SSA	4			COHESIVE ALLUVIUM (Stiff Silty Clay)	SM				900.8	
888		5	SSA	14	14.8			Brown-gray silty fine to medium sand, trace gravel, saturated				30	
		6	SSA	23	15.6			GRANULAR ALLUVIUM (Silty Sand)					888.3
876		7	SSA	21	16.1			Brown-gray silty fine to medium sand, trace gravel, saturated				40	
		8	SSA	13	18.2			GRANULAR ALLUVIUM (Coarse Sand)					878.3
864		9	SSA	7	31.5			Dark gray very sandy lean clay, very moist		CL		53	
		10	SSA	9	17.3			COHESIVE ALLUVIUM (Firm Silty Clay)					865.3
852		11	SSA	14	16.8			Dark gray sandy lean clay, trace gravel, moist		CL		57	
		12	SSA	32	19.1			GLACIAL TILL (Firm Sandy Glacial Clay)					861.3
840		13	SSA	29	22.6			Brown-gray clay shale, moist				75.8	
		14	SSA	61	17.8			WEATHERED BEDROCK (Cohesive Material)					842.5
		15	SSA	115	16.3			Gray after 75' End of Boring					
*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: 18.5 ft. ± ft. ± ft. ±													
ALLENDER BUTZKE ENGINEERS, INC.													
Geotechnical - Environmental - Construction Q.C.													

BORING LOG NO. 1		STATION 28+54.9.5'RT		CBA Job No.: 2022231		Project No.: 251317							
Project: Bridge A-04 on V Ave (T55) over Branch of Beaver Creek, Sec 3, Fairfield Grundy County, IA				Client: Calhoun-Burns & Associates 6775 Vista Drive West Des Moines, IA									
Surface Elevation: 918.2' Datum: Top of Deck at CL N Abut = 918.34'				Date Drilled: 8/27/2025 Drilling Depth, ft.: 75		Drilling Method: 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 ft.	Elevation ft.
0								HMA (13"±)				1.1	
912								Very dark gray sandy lean to fat clay, trace gravel, moist		CL-CH		917.1	
								FILL				9	
12								Very dark gray sandy lean clay, very moist		CL		909.2	
900								COHESIVE ALLUVIUM (Stiff Silty Clay)				19	
								Dark gray clayey fine to medium sand, trace gravel, saturated		SC		899.2	
24								Brown-gray silty fine to medium sand after 23'		SM			
888								GRANULAR ALLUVIUM (Silty Sand)				43	
								Gray after 36'				875.2	
876								Dark gray sandy lean clay, trace gravel, moist		CL		51	
48								GLACIAL TILL (Firm Sandy Glacial Clay)				867.2	
864								Brown-gray and gray clay shale, moist				75	
								WEATHERED BEDROCK (Cohesive Material)				843.2	
60								End of Boring					
840													
*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: 12.8 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

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: 1/5/26
DAVID LOGEMANN, P.E.
MY LICENSE RENEWAL DATE IS DECEMBER 31, 2027.
PAGES OR SHEETS COVERED BY THIS SEAL:
7 OF 13

80'-0 x 30'-6 CONTINUOUS CONCRETE
SLAB BRIDGE

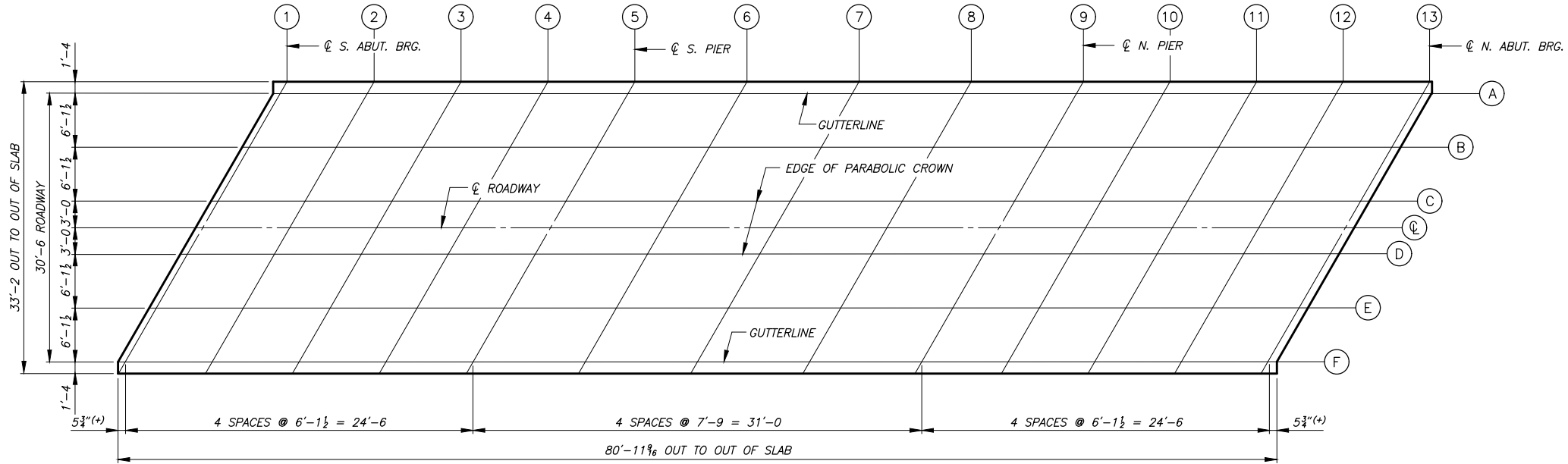
INTEGRAL ABUTMENTS
24'-6 END SPANS

P10L PIERS
31'-0 INTERIOR SPAN

SOUNDING DATA

STATION 28+10.00
GRUNDY COUNTY,

30' SKEW, RT. AHEAD
IOWA



TOP OF SLAB ELEVATIONS | z

	℄ S. ABUT. BRG.					℄ BEARING S. PIER			℄ BRIDGE					℄ BEARING N. PIER				℄ N. ABUT. BRG.	
LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13	LOCATION					
A	918.78	918.74	918.70	918.66	918.62	918.58	918.53	918.48	918.43	918.39	918.36	918.32	918.28	A					
B	918.88	918.85	918.81	918.77	918.73	918.68	918.64	918.59	918.54	918.50	918.46	918.43	918.39	B					
C	918.98	918.94	918.91	918.87	918.83	918.78	918.73	918.69	918.64	918.60	918.56	918.52	918.49	C					
℄	919.00	918.96	918.93	918.89	918.85	918.80	918.75	918.71	918.66	918.62	918.58	918.54	918.51	℄					
D	918.96	918.92	918.89	918.85	918.81	918.76	918.71	918.67	918.62	918.58	918.54	918.50	918.47	D					
E	918.82	918.78	918.74	918.71	918.67	918.62	918.57	918.52	918.48	918.44	918.40	918.36	918.32	E					
F	918.67	918.63	918.59	918.55	918.52	918.47	918.42	918.37	918.32	918.29	918.25	918.21	918.17	F					

BRIDGE COORDINATES			
LOCATION	WEST EDGE OF DECK	C.L. APPROACH ROADWAY	EAST EDGE OF DECK
SOUTH ABUTMENT	N = 8863811.49 E = 15402028.34	N = 8863820.83 E = 15402045.05	N = 8863830.17 E = 15402061.77
SOUTH PIER	N = 8863835.99 E = 15402028.66	N = 8863845.33 E = 15402045.40	N = 8863854.67 E = 15402062.12
NORTH PIER	N = 8863866.98 E = 15402029.12	N = 8863876.32 E = 15402045.83	N = 8863885.66 E = 15402062.56
NORTH ABUTMENT	N = 8863891.48 E = 15402029.47	N = 8863900.82 E = 15402046.18	N = 8863910.16 E = 15402062.90

80'-0" x 30'-6" CONTINUOUS CONCRETE
SLAB BRIDGE

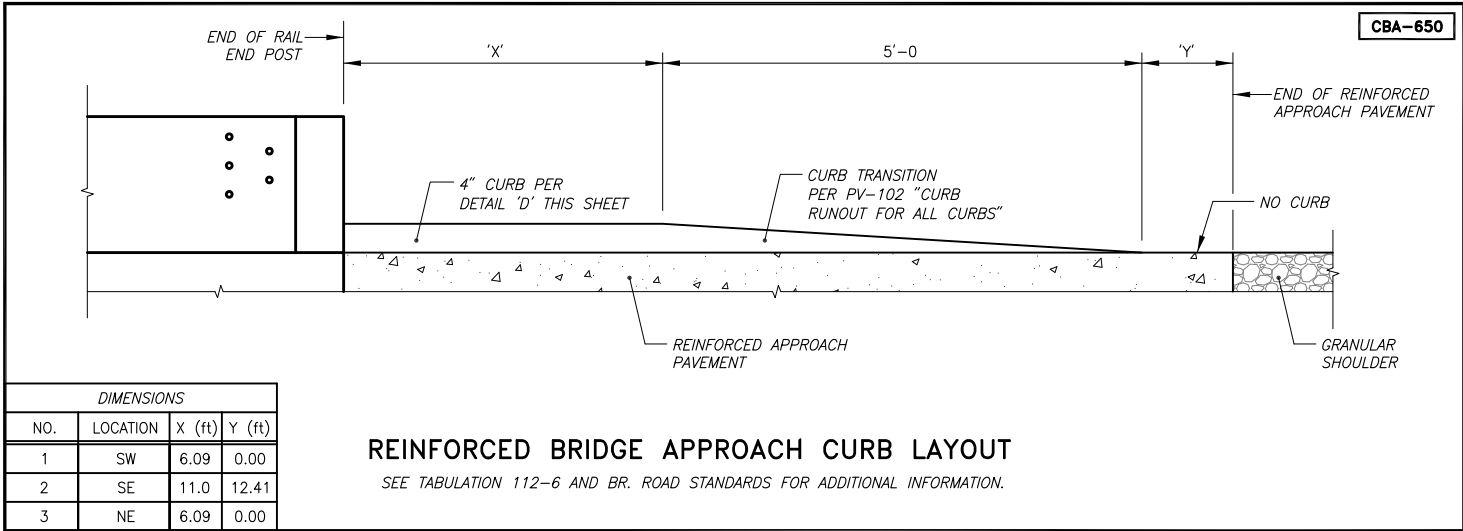
INTEGRAL ABUTMENTS
24'-6" END SPANS

P10L PIERS
31'-0" INTERIOR SPAN

SUPERSTRUCTURE DETAILS

STATION 28+10.00
GRUNDY COUNTY,

30° SKEW, RT. AHEAD
IOWA



REINFORCED BRIDGE APPROACH CURB LAYOUT

SEE TABULATION 112-6 AND BR. ROAD STANDARDS FOR ADDITIONAL INFORMATION.

SAFETY CLOSURES

Refer to Section 2528 of the Standard Specifications

Station	Road Closure Qty.	Hazard Closure Qty.	Remarks
24+85.00	1		SOUTH END
31+15.00	1		NORTH END

TRAFFIC CONTROL PLAN

- ROUTE WILL BE CLOSED TO VEHICULAR AND PEDESTRIAN TRAFFIC DURING CONSTRUCTION.
- TRAFFIC CONTROL ON THE PROJECT SHALL BE IN ACCORDANCE WITH STANDARD ROAD PLAN TC-252.
- TRAFFIC WILL BE MAINTAINED ON A DETOUR ROUTE. GRUNDY COUNTY WILL PROVIDE, MAINTAIN AND REMOVE DETOUR ROUTE.
- GRUNDY COUNTY MAINTENANCE SHALL SALVAGE EXISTING ROAD MARKERS AFTER THE ROAD IS CLOSED.

STANDARDS

The following Standards apply to construction work on this project.

Number	Date	Title
BA-200	10-20-26	Steel Beam Guardrail Components
BA-201	10-18-22	Steel Beam Guardrail Barrier Transition Section (MASH TL-3)
BA-202	10-20-26	Steel Beam Guardrail Bolted End Anchor
BR-101	10-20-26	Bridge Approach Section (General Details)
BR-106	10-20-26	Bridge Approach Section (Two-Lane for Bridge Reconstruction, HMA Pavement)
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
EW-501	10-17-23	Rural Entrance
LS-625	10-19-21	Steel Beam Guardrail Tangent 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	10-20-26	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	10-20-26	Routes Closed to Traffic

PAVEMENT MARKING LINE TYPES

Line factors based on 6-inch wide continuous line.

*BCY4 - Place on the same side of the roadway to match existing markings near the project.

**NPY4 - Estimating purposes only. No Passing Zone Lines will be located in the field.

***MNY6 - Factor of 1.00 includes number of 6-inch passes to cover median nose area.

BCY4: Broken Centerline (Yellow) @ 0.17

BCY6: Broken Centerline (Yellow) @ 0.25

BLC6: Broken Line Contrast (White/Black) @ 0.50

BLW4: Broken Lane Line (White) @ 0.17

BLW6: Broken Lane Line (White) @ 0.25

CBW6: Crosswalk Bar (White) @ 10.00

CHW8: Channelizing Line (White) @ 1.33

CHW10: Channelizing Line (White) @ 1.67

CHY8: Channelizing Line (Yellow) @ 1.33

CHY10: Channelizing Line (Yellow) @ 1.67

CLW6: Crosswalk Line (White) @ 2.00

DCY4: Double Centerline (Yellow) @ 1.34

DCY6: Double Centerline (Yellow) @ 2.00

DDY4: Double Dotted Line (Yellow) @ 0.44

DDY6: Double Dotted Line (Yellow) @ 0.67

DLW4: Dotted Line (White) @ 0.22

DLW6: Dotted Line (White) @ 0.33

DLY4: Dotted Line (Yellow) @ 0.22

DLY6: Dotted Line (Yellow) @ 0.33

ELW4: Edge Line Right (White) @ 0.67

ELW6: Edge Line Right (White) @ 1.00

ELY4: Edge Line Left (Yellow) @ 0.67

ELY6: Edge Line Left (Yellow) @ 1.00

LDW8: Lane Drop (White) @ 0.33

LDW10: Lane Drop (White) @ 0.42

MNY6: Median Nose (Yellow) @ 1.00

NPY4: No Passing Zone Line (Yellow) @ 0.84

NPY6: No Passing Zone Line (Yellow) @ 1.25

RLW4: Ramp Edge Line Right (White) @ 0.67

RLW6: Ramp Edge Line Right (White) @ 1.00

RLY4: Ramp Edge Line Left (Yellow) @ 0.67

RLY6: Ramp Edge Line Left (Yellow) @ 1.00

SLW2: Stop Line (White) @ 4.00

SLW4: Solid Lane Line (White) @ 0.67

SLW6: Solid Lane Line (White) @ 1.00

SPW4: Sloped Curb 4" (White) @ 2.16

SPW6: Sloped Curb 6" (White) @ 2.28

SPY4: Sloped Curb 4" (Yellow) @ 2.16

SPY6: Sloped Curb 6" (Yellow) @ 2.28

STW6: Standard Curb 6" (Yellow) @ 2.03

STY6: Standard Curb 6" (Yellow) @ 2.03

YLW2: Yield Line (White) @ 1.15

Line No.	Road ID	Station From	Station To	Lane	Marking Type	Left	Center	Right	Groove Marking Needed?	Groove Qty. (STA)	BCY4* (STA)	BCY4* Factored (STA)	BLW4 Factored (STA)	DCY4 (STA)	DCY4 Factored (STA)	ELW4 (STA)	ELW4 Factored (STA)	ELY4 Factored (STA)	Remarks
1.0	T55	27+04.52	29+15.48	Both	Waterborne/Solvent Paint		X		No		2.11	0.36							
2.0	T55	27+04.52	29+15.48	Both	Waterborne/Solvent Paint			X	No							4.22	2.83		
																			TOTAL = 3.19 STA

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	27+04.52	27+91.60	Both	HMA	221.0	22.0	SOUTH OF BRIDGE
2.0	28+23.50	29+15.48	Both	HMA	293.0	30.2	NORTH OF BRIDGE, INCLUDES PAVED SHOULDERS TO TIE-IN
Total:					514		

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	700	460	65	635	35%	621	700
CLASS 10, CHANNEL	900	10	900	0	35%	14	900
TOTALS			965	635		635	

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

80'-0 x 30'-6 CONTINUOUS CONCRETE SLAB BRIDGE

INTEGRAL ABUTMENTS
24'-6 END SPANS

P10L PIERS
31'-0 INTERIOR SPAN

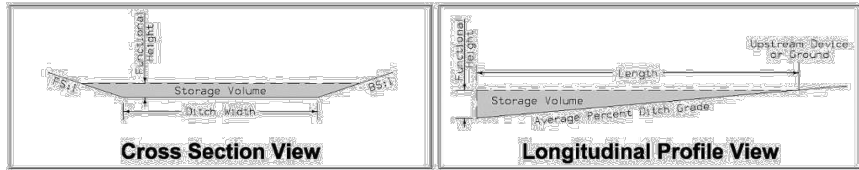
TYPICAL SECTION AND TABULATIONS

STATION 28+10.00
GRUNDY COUNTY,

30' SKEW, RT. AHEAD
IOWA

100_18
8/15/22

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

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	26+70.00	Right	20.0	20.0		2.0	3.0	10.0	1.5	897.00	SE. DITCH
2.0	1	Type 1	27+70.00	Right	18.0	18.0		2.0	2.0	10.0	1.5	852.00	SE. DITCH
3.0	1	Type 1	28+20.00	Right	18.0	18.0		2.0	2.0	10.0	0.5	2683.80	SE. DITCH
4.0	2	Type 1	28+30.00	Left	23.0	23.0		2.0	2.0	15.0	1.5	1187.50	NW. DITCH
Total:					79	79							

100_17
8/15/22

Refer to EC-201

Line No.	Station From	Station To	Side	Length (FT)	Remarks
1.0	26+20.00	28+15.00	Left	220.00	TOP OF W. BANK
2.0	26+60.00	30+05.00	Right	395.00	TOP OF E. BANK/ E. TOE OF DIKE
Total:				615	

110_07A
8/15/22

- (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	1	SB	27+18.91	28+78.84	Left	160.5
2.0	2	NB	27+35.89	28+96.12	Right	160.5
Total:						321

100_19
10/15/24

Possible Standards: EC-204

Line No.	Station From	Station To	Side	Sediment Control Device Type	Diameter Size	Length (LF)	Remarks
1.0	26+00.00	30+05.00		Perimeter and Slope	12 inch	470.00	TOE OF S. BANK
2.0	26+00.00	30+05.00		Perimeter and Slope	12 inch	470.00	TOE OF N. BANK
Total:						940	

108_08A
4/25/25

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	27+55.61	15.8	BA-201	1	LS-625	1	40.625			50.00			2		3	1		A	1			SW CORNER, LS-630
2.0	NB	Right	27+72.93	15.8	BA-201	1	LS-625	1	40.625			50.00			2		3		1	A	1			SE CORNER, LS-630
3.0	NB	Right	28+64.39	15.8	BA-201	1	LS-625	1	40.625			50.00			2		3	1		A	1			NE CORNER, LS-630
Total:						3		3													3			

107_23
8/15/22

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	27+55.61	Left	6:1 / 2:1	40.0	5.3					90.0	7.3	47.4	40.0		SW. CORNER
2.0	NB	27+72.93	Right	6:1 / 2:1	40.0	5.3					90.0	7.3	47.4	30.0		SE. CORNER
3.0	NB	28+64.39	Right	6:1 / 2:1	40.0	5.3					90.0	7.3	47.4	50.0		NE. CORNER

② DOES NOT INCLUDE 35% SHRINK FACTOR

INTEGRAL ABUTMENTS
24'-6" END SPANS

P10L PIERS
31'-0" INTERIOR SPAN

STATION 28+10.00
GRUNDY COUNTY,

30° SKEW, RT. AHEAD
IOWA

BRIDGE APPROACH SECTION Refer to the BR Series.																			112.06 2/22/24
* Not a bid item																			
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)	Class 'A' * Crushed Stone Backfill (CY)	Modified * Subbase (TON)	Polymer * Grid (SY)	Remarks	
1.0	28+10.00	S		30.0	10.0	65.0	97.8	90.8			Movable	HMA				214.000	220.0	BR-106 ABUTTING HMA	
2.0	28+10.00	N		30.0	10.0	65.0	124.1	115.0			Movable	HMA				260.000	270.0	BR-106 ABUTTING HMA, INCLUDES PAVED SHOULDERS, SEE DETAILS SHEET 5	
Total:							221.9	205.8								474	490		

SEE DETAIL 'D' ON SHEET 9 FOR CURB DETAIL. DETAIL 'D' SUPERCEDES CURB DETAIL ON ROAD STANDARD BR-101.

ACCESS POINTS AND SAFETY RAMPS Refer to Cross-Sections																				102.03 10/15/24
Length of Unclassified Pipe calculated is based on using Corrugated Metal Pipe. (1) Refer to MI-210. (2) Refer to EW-501. (3) Refer to EW-501 or EW-502. *Predetermined for access point not constructed with this project.																				
Line No.	Station	Side	Access Type	Descriptor	Case	Curb Type	Curb Length (1) (LF)	Width (FT)	PR (1) (2) (FT)	SR (2) (FT)	Pipe Culvert (H) (3) (FT)	Pipe Culvert Size (3) (IN)	Culvert Length (3) (LF)	Pipe Culvert Lt. (3) (LF)	Pipe Culvert Rt. (3) (LF)	Culvert Aprons (3) (No.)	Driveway Surface Type	Driveway Surface Area (SY)	Driveway Surfacing Material (TON)	Remarks
1.0	29+10.00	Left	D					24.0		15.0							Granular		44.000	NW. DRIVE, U.A.C. WIDTH AND SIDE SLOPES

CRASH CUSHIONS														③ CONSTRUCT GUARDRAIL BERM TO A 20.3' LEFT. INCREASE IF REQUIRED TO MEET CRASH ATTENUATER MANUFACTURERS REQUIREMENT. INCREASE IN WIDTH AND REVISED SLOPES TO BE APPROVED BY ENGINEER TO MINIMUM SHAPING OF FORESLOPE.		108.30 4/16/24	
* Bid Item																	
1. Lane(s) to which the installation is adjacent.																	
2. Complete this section when using the Temporary Crash Cushion bid item and Earthwork is needed for Sand Barrel placement. Refer to BA-500.																	
③																	
Line No.	Lane	Station	Side	Obstacle Width (FT)	Crash Cushion Type	Crash Cushion Quantity	V (FT) (2)	W (FT) (2)	X (FT) (2)	Y (FT) (2)	Z (FT) (2)	Excavation Class 10* (CY)	Embankment in Place* (CY)	Obstacle Description	Remarks		
1.0	SB	28+47.07	Left	0.83	Permanent, Severe Use	1						5.0		NW. ENDPOST	N. END, LT, NCHRP 350 TL-3 OR MASH TL-3		

SURVEY CONTROL POINTS						CBA-300
Description	Northing	Easting	Approx. Station	Approx. Offset	Elevation	
POINT #8 SECTION COR FD 16D	8861051.11	15402005.48	0+00	0	974.68	
POINT #1 SECTION COR FD MAG 1" DEEP	8863710.30	15402043.50	26+59	0	919.68	
POINT #3 SECTION COR FD 7/8 IP 3" DEEP	8865899.45	15402074.35	48+49	0	906.92	
Coordinate System				Vertical Datum		
(NAD83(2011))				IOWA RCS ZONE 5 (WATERLOO)		NAVD88

80'-0 x 30'-6 CONTINUOUS CONCRETE
SLAB BRIDGE

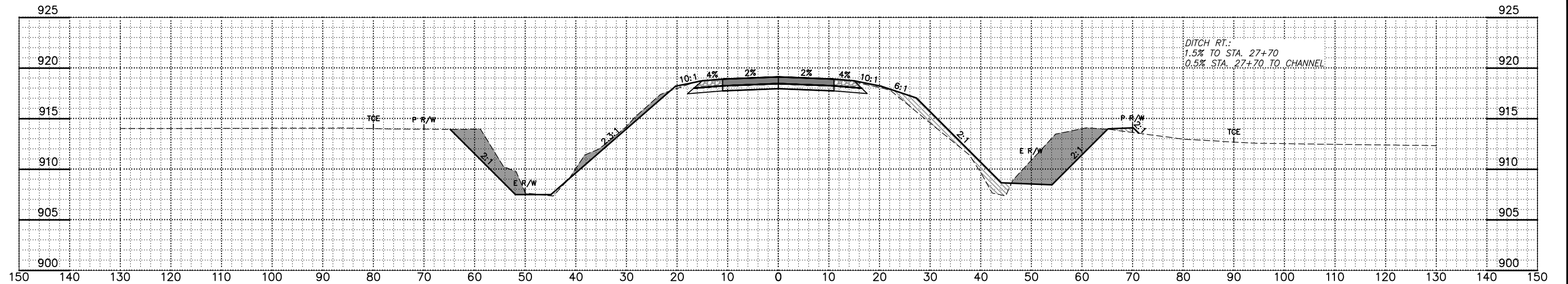
INTEGRAL ABUTMENTS
24'-6 END SPANS

P10L PIERS
31'-0 INTERIOR SPAN

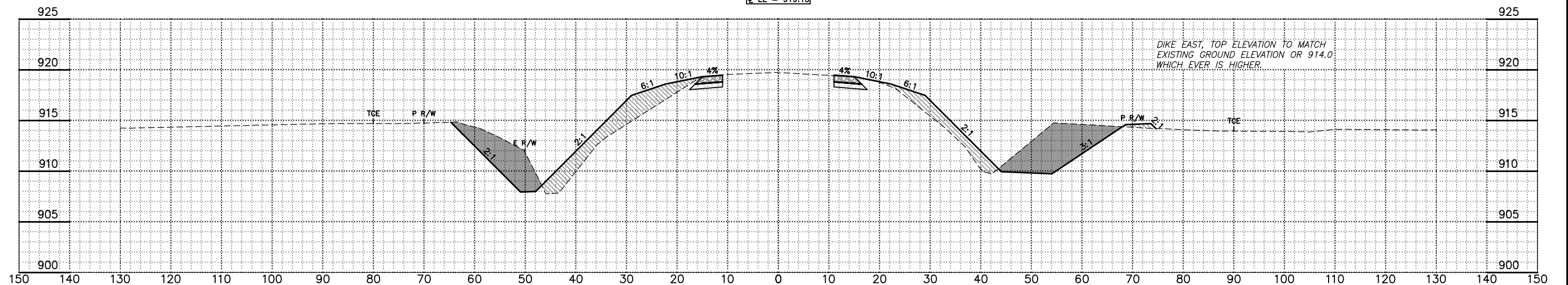
TABULATIONS

STATION 28+10.00
GRUNDY COUNTY,

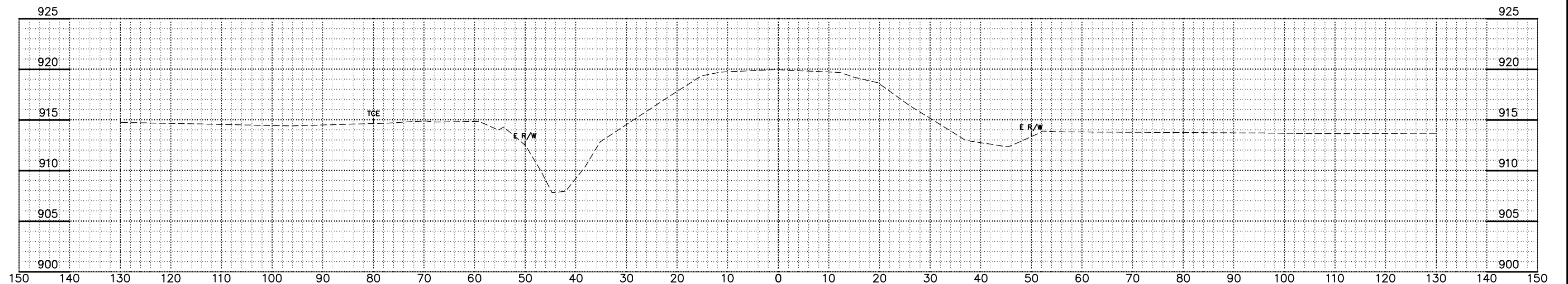
30' SKEW, RT. AHEAD
IOWA



27+50
C EL = 919.13



26+65



25+85

CROSS SECTIONS
GRUNDY COUNTY, IOWA

