LETTING DATE
Nov 18, 2025

Bridge Replacement
BRF-009-3(29)--38-30

DICKINSON COUNTY

INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	**Title Sheets**
A.1	Title Sheet
B Sheets	**Typical Cross Sections and Details**
B.1 - 3	Typical Cross Sections and Details
D Sheets	**Mainline Plan and Profile Sheets**
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2	IA 9
G Sheets	**Survey Sheets**
G.1 - 3	Reference Ties and Bench Marks
J Sheets	**Traffic Control and Staging Sheets**
J.1	Traffic Control Plan
* J.2 - 3	Stage 1 and 2
V Sheets	**Bridge and Culvert Situation Plans**
* V.1 - 3	Bridge and Culvert Situation Plans
W Sheets	**Mainline Cross Sections**
W.1	Cross Sections Legend & Symbol Information Sheet
W.2 - 8	Mainline Cross Sections
	* Color Plan Sheets

IOWA DOT

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

DICKINSON COUNTY

Bridge Replacement

W Fork Little Sioux River 4.9 Mi W of IA 86

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

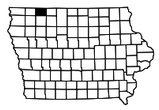
Value Engineering Saves. Refer to Article 1105.14 of the Specifications.

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

REVISIONS

TOTAL
--

PROJECT IDENTIFICATION NUMBER
21-30-009-020
PROJECT NUMBER
BRF-009-3(29)--38-30
R.O.W. PROJECT NUMBER
STPN-009-3(30)--2J-30



DESIGN DATA RURAL			
2026	AADT	4,500	V.P.D.
2046	AADT	4,900	V.P.D.
2046	DHV	510	V.P.H.
TRUCKS		10	%
Total Design ESALs		--	

INDEX OF SEALS			
SHEET NO.	NAME	TYPE	BID QUANTITY SHEETS
A.1	Michael J. Janechek	Primary Signature Block	X
V.1	Phillip M. Harpole	Hydraulic Design	

D4 PLAN - Jul 22, 2025
D5 PLAN - Dec 01, 2023

PRELIMINARY PLANS

Subject to change by final design.

D3 PLAN - Jul 28, 2023

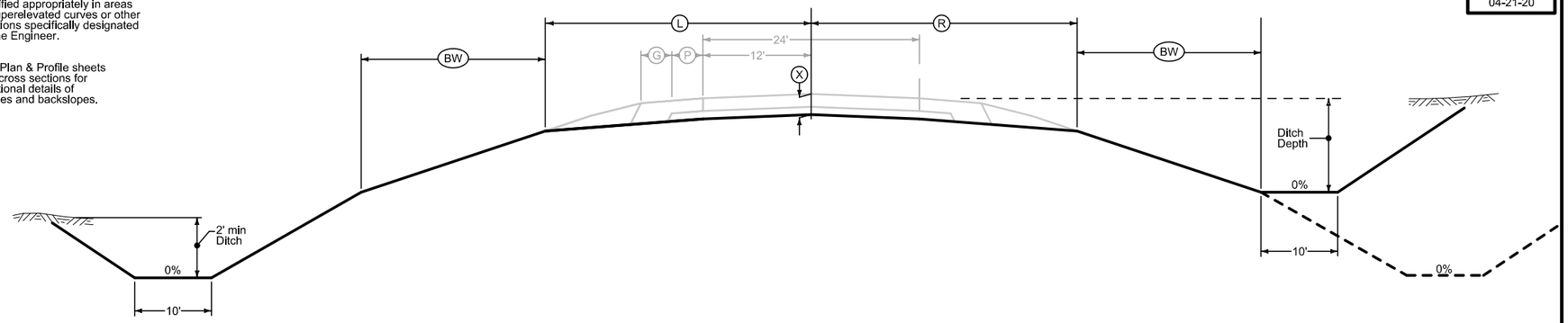
FILE NO.	ENGLISH	DESIGN TEAM	DICKINSON COUNTY	PROJECT NUMBER BRF-009-3(29)--38-30	SHEET NUMBER A1

11:13:14 AM 7/28/2023 mjanechek pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3000902021\Design\CADD_Files\Sheet_Files\SHT_30009029_A1.dgn

LOCATION			DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	(BW) Feet
IA 9	295+04.06	296+29.56			16	
	297+19.97	298+45.87			16	

Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

See Plan & Profile sheets and cross sections for additional details of ditches and backslopes.



G_2_Grade_BR
04-21-20

FILE NO.	ENGLISH	DESIGN TEAM	DICKINSON COUNTY	PROJECT NUMBER BRF-009-3(29)--38-30	SHEET NUMBER B1	

9:37:19 AM 7/28/2023 mjanechek pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3000902021\Design\CADD_Files\Sheet_Files\SHT_30009029_B1.dgn

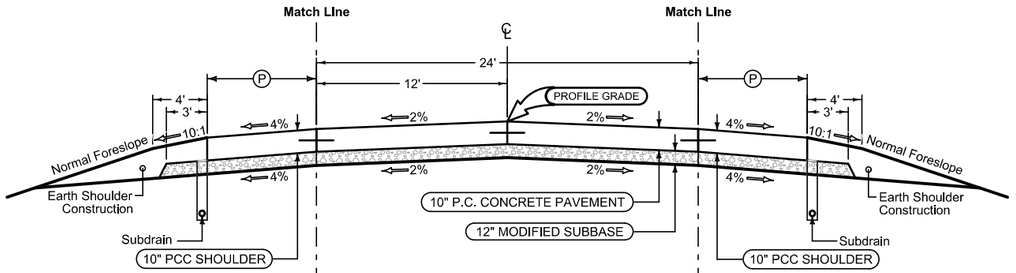
294+98.08 295+55.08 VAR.

297+85.91 298+67.91 VAR.

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: BT-2, L-2 or KT-2
Transverse joints: C at 17' spacing

2_P_FullPCC_ 04-20-21		
STATION TO STATION		(P) Feet
292+74.97	295+04.06	8
295+04.06	295+69.59	VAR
297+90.39	298+69.39	VAR
298+69.39	300+70.39	8



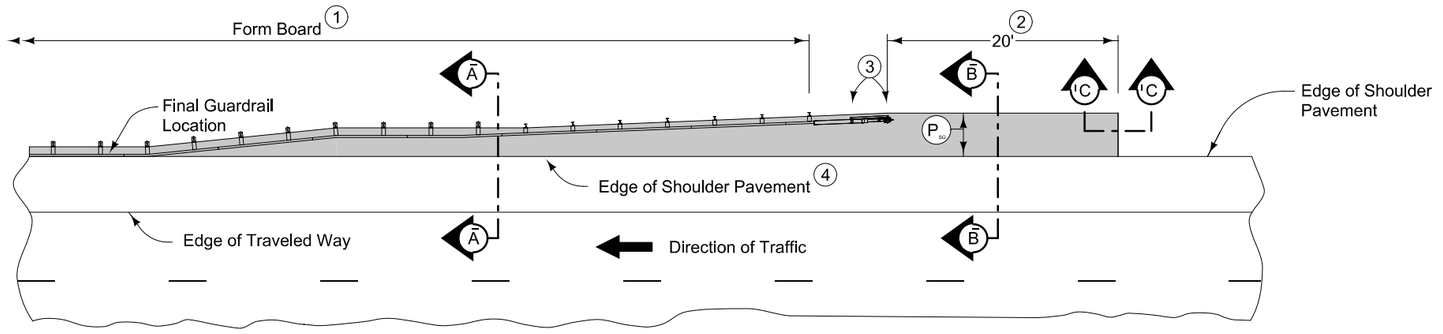
Mainline Jointing:
Transverse joints: CD at 17' spacing
Longitudinal joint: L-2

2P_ 04-21-20	
STATION TO STATION	
295+04.06	295+59.56
297+90.51	298+45.87

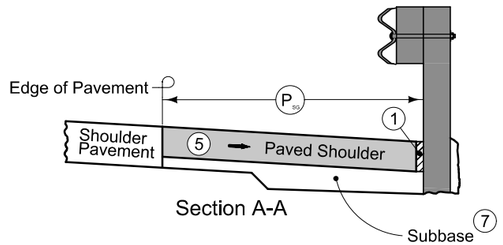
Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: BT-2, L-2 or KT-2
Transverse joints: C at 17' spacing

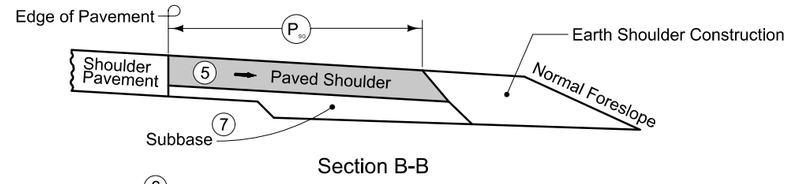
2_P_FullPCC_ 04-20-21		
STATION TO STATION		(P) Feet
293+28.49	294+79.03	8
294+79.03	259+59.56	VAR
297+80.35	298+45.87	VAR
298+45.87	300+21.88	8



PLAN VIEW

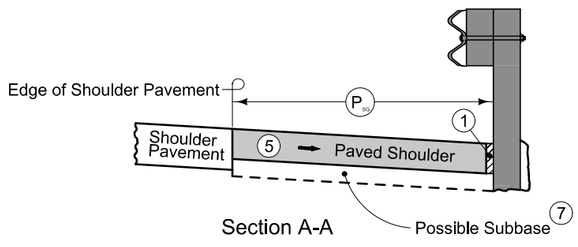


Section A-A

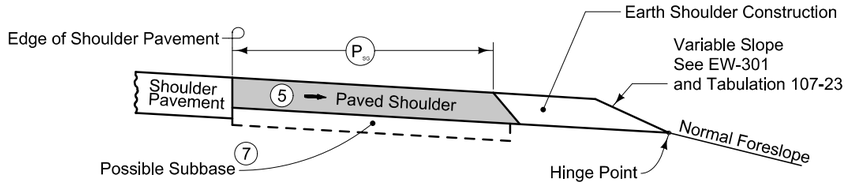


Section B-B

NEW CONSTRUCTION
6



Section A-A



Section B-B

EXISTING SHOULDER

9" HMA Paved Shoulder at guardrail. 8" PCC may be substituted with the following jointing layout:

Match mainline pavement joint spacing. When mainline pavement is 8" or greater in thickness, place additional transverse 'C' joints in shoulder at mid-panel of the mainline pavement. Place longitudinal 'C' joint at P/2 from edge of mainline pavement when P is greater than 10' wide. Terminate longitudinal joint at transverse joint less than 10' in length.

Compaction of HMA is required to face of guardrail post. Hand compaction will be allowed under guardrail. Removal and reinstallation of guardrail will be allowed with no additional payment.

Refer to Tabulation 112-9 for shoulder quantities.

(1) PCC option only: When guardrail posts are installed prior to construction of PCC paved shoulder, fasten form board to the face of guardrail posts for the length shown.

(2) Continue paved shoulder 20 feet beyond the center of the first post.

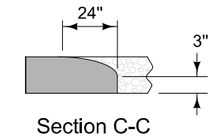
(3) Shoulder may be notched for first 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.

(4) 'KT' (per PV-101) joint for PCC shoulder.
'B' (per PV-101) joint for HMA shoulder.

(5) Match shoulder slope.

(6) The Contractor has the option to pave the paved shoulder at guardrail and the full width paved shoulder as one operation.

(7) Refer to other details in the plan.



Section C-C
Roll down at granular shoulder or earth.

PAVED SHOULDER AT GUARDRAIL
(ADJACENT TO FULL WIDTH PAVED SHOULDER)

SURVEY SYMBOLS

- Interstate Highway Symbol
- U.S. Highway Symbol
- Iowa Highway Symbol
- County Road Highway Symbol
- Evergreen Tree
- Deciduous Tree
- Fruit Tree
- Shrub (Bushes)
- Timber
- Hedge
- Stump
- Swamp
- Rock Outcrop
- Broken Concrete
- Revetment (Rip Rap)
- Cemetery
- Grave
- Cave
- Sink Hole
- Board Fence
- Chain Link or Security Fence
- Wire Fence
- Terrace
- Earth Dam or Dike (Existing)
- Tile Outlet
- Edge of Water
- Existing Drainage
- Right of Way Rail or Lot Corner
- Concrete Monument
- Well
- Windmill
- Beehive Intake
- Existing Intake
- Existing Utility Access (Manhole)
- Fire Hydrant
- WH Water Hydrant (Rural)
- Septic Tank
- Cistern
- L.P. Gas Tank (No Footing)
- Underground Storage Tank
- Latrine
- Satellite TV Dish
- WHU Water Hook Up
- RT Radio Tower
- TA Tower Anchor
- Guardrail (Beam or Cable)
- GP Guard Post (one or two)
- Guard Post (over two)
- FP Filler Pipe
- GV Gas Valve
- WV Water Valve
- SL Speed Limit Sign
- MM Mile Marker Post
- SIGN Sign
- TCB Traffic Signal Control Box
- RRB Rail Road Signal Control Box
- TSB Telephone Switch Box
- EB Electric Box

UTILITY LEGEND

Sub-Surface Utility Mapping Quality Level is in accordance with CI/ASCE 38-02 Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data.

Remark Abbreviations
QLA Quality Level A Highest guideline quality level
QLD Quality Level D Lowest guideline quality level

- E1 — E1 - IOWA LAKES ELECTRIC - Quality D
- FO — FO1D - LONG LINES - Quality D
- FO2 — FO2D - MEDIACOM - Quality D
- FO3 — FO3D - CENTURYLINK - Quality D
- FO4 — FO4D - ICN - Quality D
- FO5 — FO5D - CENTURYLINK - Quality D
- FO6 — FO6D - CENTURYLINK - Quality D
- PPA, Power Pole, IOWA LAKES ELECTRIC

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Topographic Features and Labels
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)	Existing Utilities
SHADING	**Design Color No.**	
Lavender	(9)	Temporary Pavement Shading
Yellow	(4)	Proposed Pavement Shading
Orange	(6)	Proposed Granular Shading
Orange	(70)	Proposed Shoulder Granular Shading
Yellow	(68)	Proposed Shoulder Paved Full Depth Shading
Yellow	(132)	Proposed Shoulder Paved Partial Depth Shading
Gray, Dark	(112)	Proposed Grade and Pave Shading "In conjunction with a paving project"
Brown, Light	(236)	Grading Shading
Orange, Light	(134)	Proposed Granular Entrance Shading
Yellow	(220)	Proposed Paved Entrance Shading
Tan	(8)	Proposed Sidewalk Shading
Blue, Light	(230)	Proposed Sidewalk Landing Shading
Pink	(11)	Proposed Sidewalk Ramp Shading
Green, Light	(225)	Existing Pavement Shading
Red	(3)	Proposed Structure Shading
Red	(3)	Delineates Restricted Areas

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.	
Green	(10)	Existing Ground Line Profile
Blue	(1)	Proposed Profile and Annotation
Magenta	(5)	Existing Utilities
Blue, Light	(230)	Proposed Ditch Grades, Left
Black	(0)	Proposed Ditch Grades, Median
Rust	(14)	Proposed Ditch Grades, Right

- Reference Point / Station — Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- Pavement Removal
- Clearing & Grubbing Area

RIGHT-OF-WAY LEGEND

- Proposed Right-of-Way
- Existing Right of Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Easement (Temporary)
- Easement
- C/A Access Control
- Property Line

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES D, E, F, & K)

FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT\Shive-Hattery	DICKINSON COUNTY	PROJECT NUMBER BRF-009-3(29)--38-30	SHEET NUMBER D.1	

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Silver Lake Twp.
T-100N R-38W
SEC. 36

289+00 290+00 291+00 292+00 293+00 294+00 295+00 296+00 297+00 298+00 299+00 300+00 301+00 302+00 303+00 304+00

N

APPROX. SEC. LINE

ENT +25
U.A.C.

24"x100'
C.P.P.
U.A.C.

Excelsior TWP.
T-99N R-38W
SEC. 1

Sta. 296+65.00
Skew 0°
2-32.0'x20.0'
Type Bridge: I-Beam Span
D.A.=153.0 SQ.MI.
REMOVE

0 FEET 50

Little Sioux River

ENT +00
U.A.C.

18"x40'
C.M.P.
U.A.C.

BUILD
90'x44' CCS Bridge
Sta 296+73.40
Skew 0°

TIE IN
Sta. 295+01.20
Elev. 1414.84

VPI = +54.48
ELV = 1413.83
L = 66.68
K = 50
LP = 297+36.50
ELV = 1413.92

TIE IN
Sta. 298+47.38
Elev. 1414.70

-0.40% +0.94%

RT +99
1411.60

-2.46% RT Ditch Grade

RT +29
1408.40

LT +19
1407.00

+2.20% LT Ditch Grade

+21.30% RT Ditch Grade

RT +20
1401.35

RT +54
1408.70

LT +94
1408.65

UAC UAC 5' Ditch Ditch Grade BRIDGE DG DG 5' Ditch Toe UAC UAC

1414.83 1414.73 1414.64 1414.54 1414.44 1414.34 1414.24 1414.14 1414.04 1413.94 1413.93 1414.05 1414.27 1414.51 1414.70

1425 1420 1415 1410 1405 1400 1395 1390 1385 1380

289+00 290+00 291+00 292+00 293+00 294+00 295+00 296+00 297+00 298+00 299+00 300+00 301+00 302+00 303+00

FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT\Shive-Hattery	DICKINSON COUNTY	PROJECT NUMBER BRF-009-3(29)--38-30	SHEET NUMBER D.2

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SURVEY INDEX

County: Dickinson
PIN: 21-30-009-020
Project Number: BRF-009-3(29)--38-30
Location: Little Sioux River 4.9 mi W of IA 86
Type of Work: Topographic Survey
Project Directory: 3000902021

Survey Personnel

Murray Berting – PLS
Gavin Gear – Land Survey Technician

Date(s) of Survey

Begin Date	11/04/2022
End Date	03/29/2023

General Information

Measurement units for this survey are US survey feet. This survey is for proposed bridge reconstruction and reconstruction of State Highway 9, over the Little Sioux River. Project datum and control information is provided by Shive-Hattery Inc. This project is a Preliminary Survey. This survey request was for the bridge over the Little Sioux River, State Highway 9 corridor and the Little Sioux River.

Project Control

Nearby Iowa Real Time Network reference stations were utilized to obtain horizontal and vertical control on primary project control points. (3) three-minute observations were taken with a minimum two-hour time span between and used in a weighted average to obtain final coordinate values. For additional details of the control survey, contact the Preliminary Survey department.

PROJECT DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 ADJUSTMENT)
COORDINATE SYSTEM: IOWA REGIONAL COORDINATE SYSTEM ZONE 01 (U.S. SURVEY FOOT)
VERTICAL DATUM: NAVD88
GEOID MODEL: 2012bu2

Alignment Information

The horizontal alignment for U.S. Hwy 9 this survey is a retrace of As-built Plans No. FN-9-3-(1)-21-30. Survey stationing was equated to the plan PI at Sta. 261+66.10 and run back without equation and run ahead with equation (POT Sta. 286+32.60 = POT Sta. 286+37.0)

Survey stationing relates to as built plan stationing as follows:

PI Sta. 261+66.10 (NW Corner Sec 1-99-38) As-built plans Project No. FN-9-3-(1)-21-30
Survey PI Sta. 261+66.10

POT Sta. 286+32.60 = POT Sta. 286+37.0 (1959 Survey) Not Found

Survey POT Sta. 288+07.89 (N ¼ Corner Sec 1-99-38)

POT Sta. 296+73.40 (CL Bridge) As-built plans Project No. FN-564 (March 2,1964)

PI Sta. 314+46.40 As-built Plans Project No. FN-9-3-(1)-21-30
Survey POT Sta. 314+45.22

CONTROL POINT VICINITY MAP

This map is a guide to the vicinity of the primary project control points. Primary control is for use with RTK base stations and for RTN validation. Future surveys will use primary project control to establish temporary control as needed for construction or other surveying applications.

HORIZ. DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 Adjustment) - Iowa RCS Zone 01 (U.S. Survey Foot)

VERT. DATUM: NAVD88 - Geoid Model: 2012bu2

Coordinate listing from next sheet will be used with IaRTN for monument recovery. No other reference ties are given.

HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING
HORIZ. DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 Adjustment)
Ia. Regional Coordinate System Zone 01 (U.S. Survey Foot)
VERT. DATUM: NAVD88
Geoid Model: 2012bu2

POINT NAME	NORTHING	EASTING	ELEVATION	FEATURE DEFINITION-DESCRIPTION
202	9683912.082	11494156.78	1425.747333	CP CUT X BALL RAIL
205	9684074.525	11492263.87	1433.325667	CP CUT X BALL RAIL
207	9683904.476	11492208.59	1443.458333	CP 5/8" IR W/ YELLOW IDOT CAP @ REF SIGN
208	9683899.995	11492094.06	1446.989667	CP CUT X BALL RAIL

108-23A
08-01-08

TRAFFIC CONTROL PLAN

1) While bridge and approaches are being removed and replaced, traffic shall be maintained on IA 9 at all times by staged construction with temporary signals allowing one lane of traffic. (TC-217)

2) Signage and devices shall be furnished, installed, maintained, and removed by Contractor.

108-26A
08-01-08

STAGING NOTES

Stage 1:
Construct temporary pavement at EB shoulders.
Remove and replace south (WB) portion of IA 9 roadway, approaches and bridge with traffic shifted to EB lane using temporary signals.

Stage 2:
Remove and replace north half of roadway, approaches and complete bridge structure with traffic shifted to WB lane and temporary pavement using temporary signals.

Stage 3:
Complete approach and roadway to re-establish centerline with IA 9 traffic shifted to EB lane and shoulder using temporary signals.

108-25
10-21-14

511 TRAVEL RESTRICTIONS

Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
IA 9	Both	DICKINSON	Bridge over Little Sioux River	Litle Sioux River	Bridge		Width					

111-01
04-17-12

COORDINATED OPERATIONS

Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.

Project	Type of Work
None Provided	

Silver Lake Twp.
T-100N R-38W
SEC. 36

W FORK LITTLE SIOUX RIVER

Sta. 296+73.40
Skew 0°
2-32.0'x20.0'
Type Bridge: I-Beam Span
D.A.=153.0 SQ.MI.
REMOVE

290+00 291+00 292+00 293+00 294+00 295+00 296+00 297+00 298+00 299+00 300+00 301+00 302+00 303+00 304+00

APPROX. SEC. LINE

PLACE TEMP PAVING (2'x83')

0 FEET 50

24"x100' C.P.P.
ENTRANCE TO REMAIN OPEN
(COORDINATE W/ PROPERTY OWNER)

PLACE TEMP PAVING (2'x83')

18"x40' C.M.P.
FIELD ENTRANCE
CLOSED DURING CONSTRUCTION

STAGE 1
(10'-10" MIN LANE WIDTH)
TC-217

W FORK LITTLE SIOUX RIVER

290+00 291+00 292+00 293+00 294+00 295+00 296+00 297+00 298+00 299+00 300+00 301+00 302+00 303+00 304+00

APPROX. SEC. LINE

PLACE TEMP PAVING IN STAGE 1
(9'x125)

PLACE TEMP PAVING IN STAGE 1 (9'x125')

ENTRANCE TO REMAIN OPEN
(COORDINATE W/ PROPERTY OWNER)

FIELD ENTRANCE
CLOSED DURING CONSTRUCTION

0 FEET 50

STAGE 2
(12' MIN LANE WIDTH)
TC-217

FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT\Shive-Hattery	DICKINSON COUNTY	PROJECT NUMBER BRF-009-3(29)--38-30	SHEET NUMBER J.02

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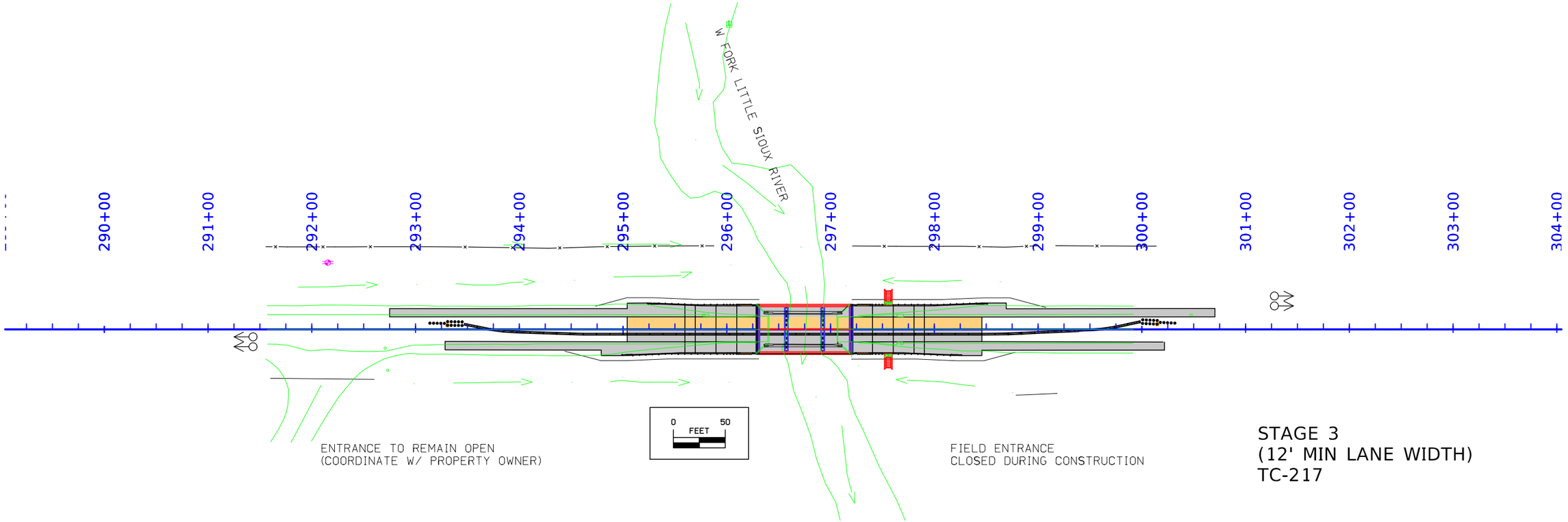
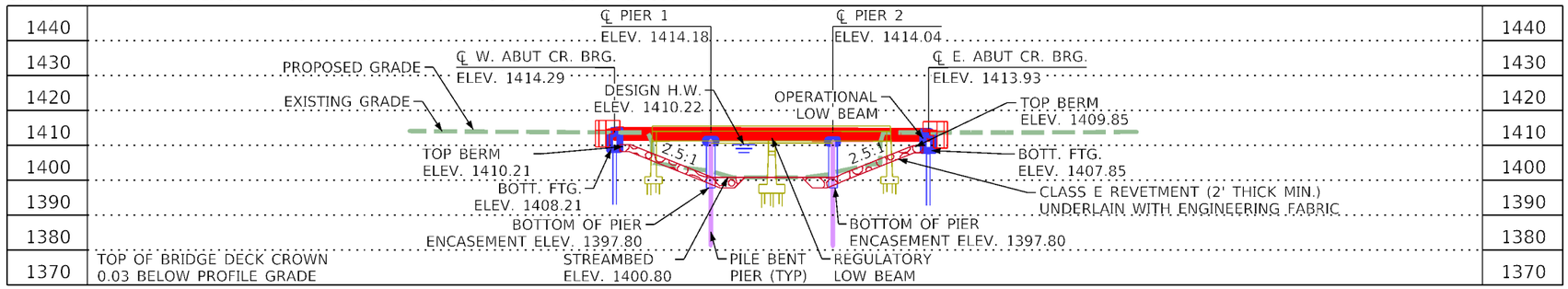


STAGE 3
(12' MIN LANE WIDTH)
TC-217

FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT\Shive-Hattery	DICKINSON COUNTY	PROJECT NUMBER BRF-009-3(29)--38-30	SHEET NUMBER J.03

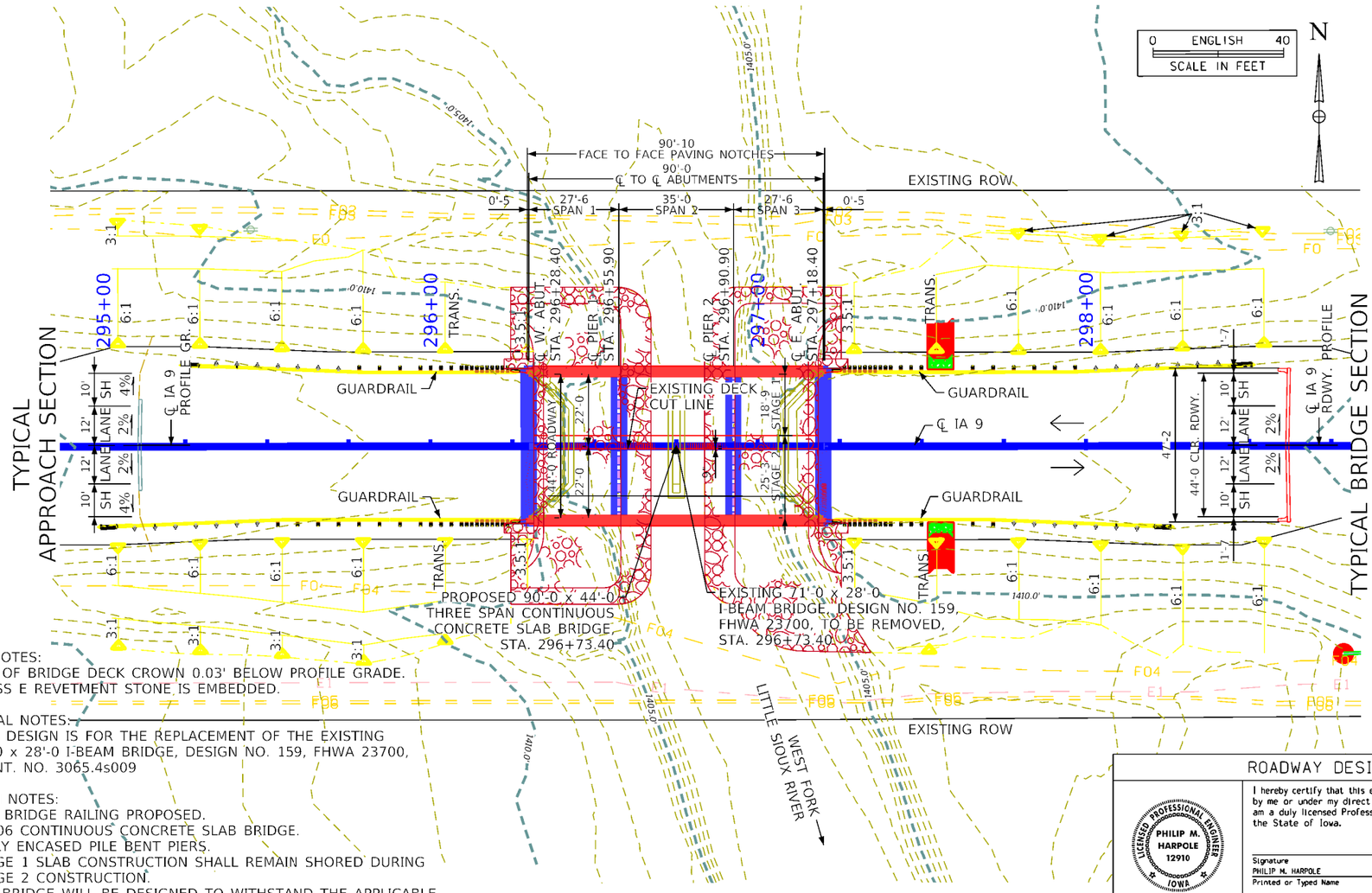
4:13:36 PM 7/27/2023 mjanechek pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\3000902021\Design\CADD_Files\STG_30009029.dgn

Control Point: POINT NAME 205, Y=9684074.525, X=11492263.87, Z=1433.326, CP CUT X BALL RAIL



LONGITUDINAL SECTION ALONG ℄ CULVERT

PRELIMINARY DESIGN SCOUR ELEV. = 1399.6
VERIFY ELEVATIONS WHEN SOIL BORINGS ARE COMPLETE

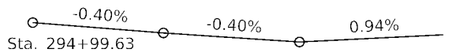


SITUATION PLAN

PLAN NOTES:
1. TOP OF BRIDGE DECK CROWN 0.03' BELOW PROFILE GRADE.
2. CLASS E REVETMENT STONE IS EMBEDDED.

GENERAL NOTES:
1. THIS DESIGN IS FOR THE REPLACEMENT OF THE EXISTING 71'-0 x 28'-0 I-BEAM BRIDGE, DESIGN NO. 159, FHWA 23700, MAINT. NO. 3065.4s009

DESIGN NOTES:
1. TL-4 BRIDGE RAILING PROPOSED.
2. J44-06 CONTINUOUS CONCRETE SLAB BRIDGE.
3. FULLY ENCASED PILE BENT PIERS.
4. STAGE 1 SLAB CONSTRUCTION SHALL REMAIN SHORED DURING STAGE 2 CONSTRUCTION.
5. THE BRIDGE WILL BE DESIGNED TO WITHSTAND THE APPLICABLE EFFECTS OF ICE AND HORIZONTAL STREAM LOADS AND UPLIFT FORCES ASSOCIATED WITH THE Q100.
6. REMOVE EXISTING CONCRETE EROSION CONTROL BLANKET AT ABUTMENTS.



VPI Sta. = 297+52.91
VPI Elev. = 1413.83
LVC = 66.68

Proposed Profile Grade IA 9

Hydraulic Data

Drainage Area = 153 Sq. Mi.
Stream Slope = 5.51 Ft./Mi.
Avg. Low Water Stage = 1401.6

Q_{25} = 3,385 CFS
Stage = 1409.73

Q_{50} = 4,095 CFS
Stage = 1410.22
Regulatory Low Beam = 1412.31
Avg. Bridge Velocity = 8.00 FPS

Q_{100} = 4,870 CFS
Stage = 1410.61
Operational Low Beam = 1412.13
Backwater = 1.39 Ft.
Avg. Bridge Velocity = 9.04 FPS

Q_{200} = 5,720 CFS
Stage = 1410.99
Calculated Design Scour = 1399.6

Q_{500} = 6,690 CFS
Stage = 1411.38
Avg. Bridge Velocity = 11.48 FPS
Calculated Check Scour = 1399.4

Roadway Overtop 1413.92
Sta. 297+36.56

RIBD Site Identification Code: LittleSiouxR_WF_Dick4.52

Utilities Legend

Symbol - Type
- Power Pole
- E1 — Electric Line
- F03 — Fiberoptic Telepone (TYP)

Utilities shown on this sheet are for information only, see road design sheets for final utility information.

Location

IA 9 over West Fork
Little Sioux River
T-100N & T-99N R-38W
Sections 36 & 1
Silver Lake & Excelsior Twp.
Dickinson County
FHWA No.
Bridge Maint. No. 3065.4s009
Latitude 43.430414°
Longitude -95.275864°

Traffic Estimate

2026	AADT	4,500 V.P.D.
2046	AADT	4,900 V.P.D.
2046	DHV	510 V.P.H.
Trucks		10 %
Total		
Design ESALs		??,???

ROADWAY DESIGN

LICENSED PROFESSIONAL ENGINEER
PHILIP M. HARPOLE
12910
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.

Signature Date
PHILIP M. HARPOLE
Printed or Typed Name
My license renewal date is December 31, 2023

Pages or sheets covered by this seal: V.1, V.2

Design For 0° Skew

90'-0 x 44'-0 CONTINUOUS CONCRETE SLAB BRIDGE

27'-6 End Spans 35'-0 Interior Span

SITUATION PLAN

STA. 296+73.40 (IA 9) JULY 2023

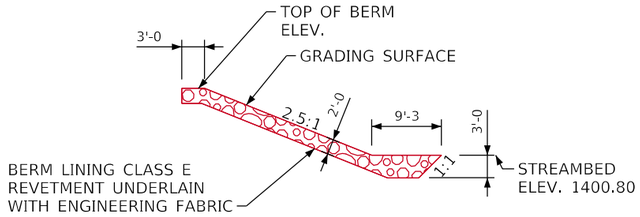
Dickinson County
IOWA DEPARTMENT OF TRANSPORTATION

Design No. #### Design Sheet No. 001 of 003 FHWA/Asset ####

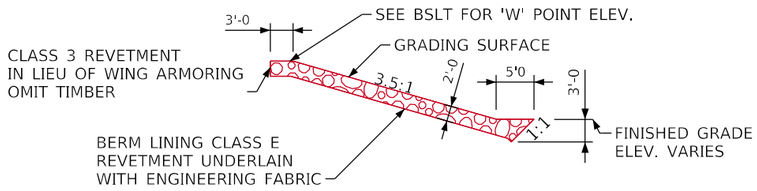
FILE NO. ####	ENGLISH	DESIGN TEAM SHIVE-HATTERY	DICKINSON COUNTY	PROJECT NUMBER BRF-009-3(29)--38-30	SHEET NUMBER V.1	REVISED

SYSTEMTIME SYSTEMDATE USERNAME DGNSPEC

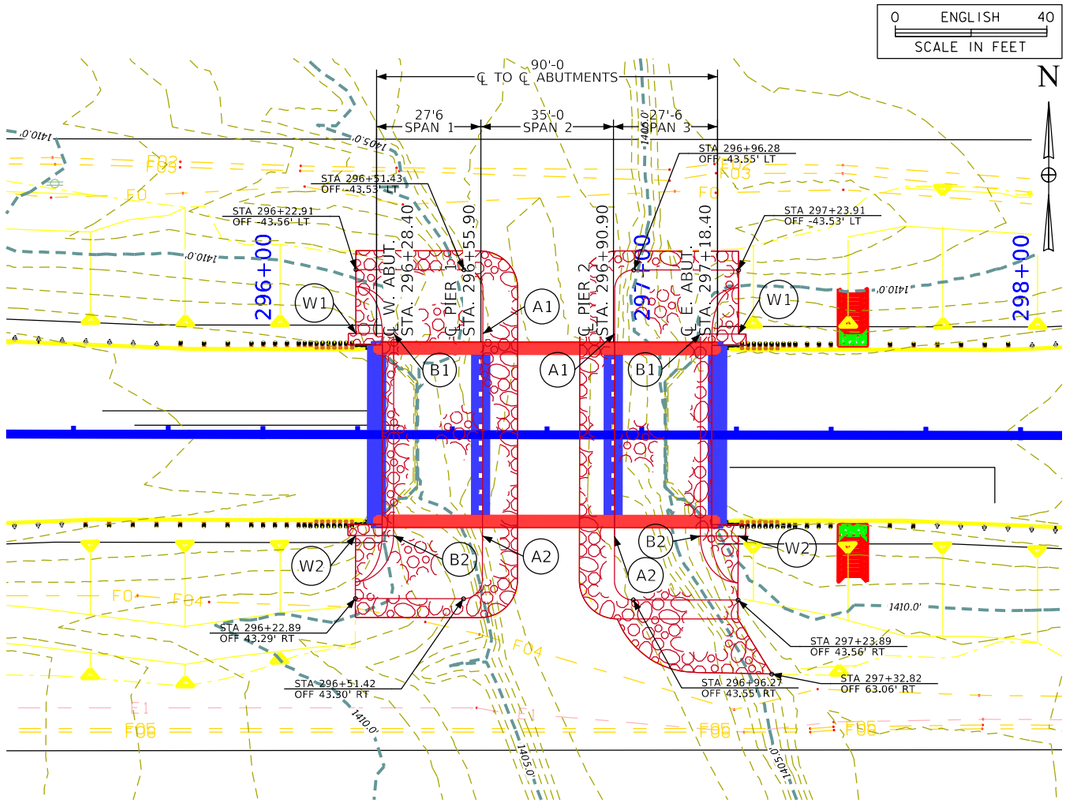
Changed by Addenda



SECTION THRU EMBEDDED REVETMENT BERM



SECTION THRU EMBEDDED REVETMENT BERM
NORMAL TO BRIDGE WING AT 'W' POINT



SITE PLAN

Berm Slope Location Table

Points	West Abutment			East Abutment		
	Station	Offset	Elev.	Station	Offset	Elev.
A1	296+56.43	26.58' LT	1400.80	296+91.28	26.58' LT	1400.80
A2	296+56.43	26.58' RT	1400.80	296+91.28	26.58' RT	1400.80
B1	296+32.90	26.58' LT	1410.21	297+13.90	26.58' LT	1409.85
B2	296+32.90	26.58' RT	1410.21	297+13.90	26.58' RT	1409.85
W1	296+22.90	26.58' LT	1413.55	297+13.90	26.58' LT	1413.15
W2	296+22.90	26.58' RT	1413.55	297+13.90	26.58' RT	1413.15

Berm slope elevations reflect the grading surface.

Estimated Berm Armoring Quantities

Location	Revetment CL. E (Ton)	Enginering Fabric (SY)	Excavation (CY)
Berm Lining - West Abutment			
Berm Lining - East Abutment			
Totals			

Excavation quantity calculated from grading surface.

Design For 0° Skew

90'-0 x 44'-0 CONTINUOUS CONCRETE SLAB BRIDGE

27'-6 End Spans 35'-0 Interior Span

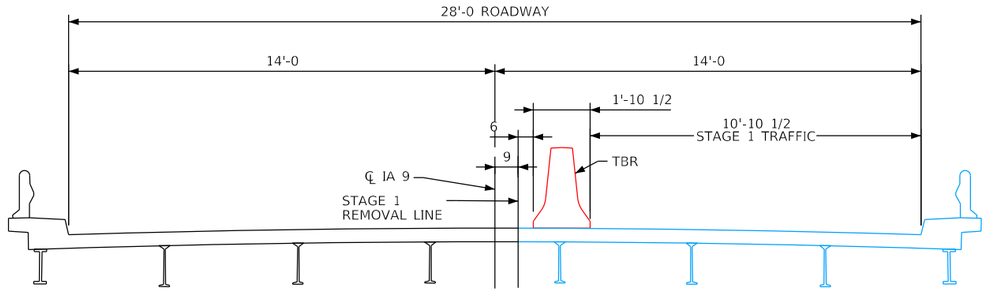
SITUATION PLAN - SITE

STA. 296+73.40 (IA 9) JULY 2023

Dickinson County

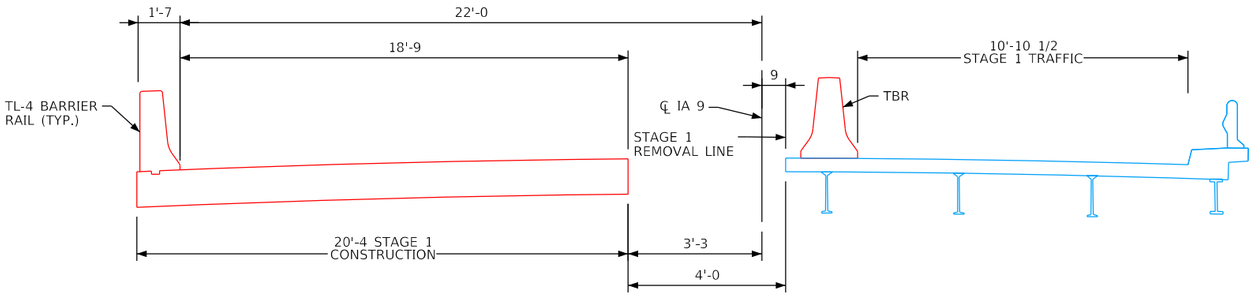
IOWA DEPARTMENT OF TRANSPORTATION

Design No. #### Design Sheet No. 002 of 003 FHWA/Asset ####

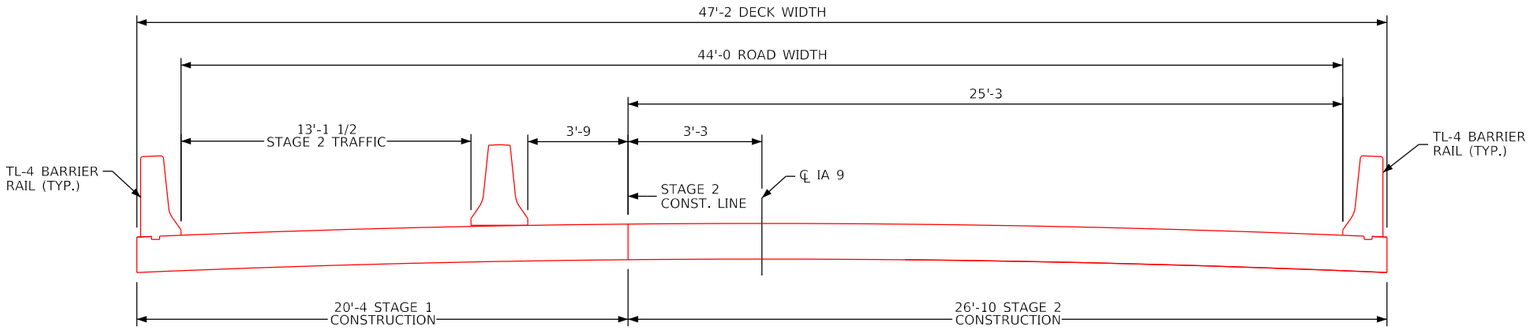


TBR - TEMPORARY BARRIER RAIL

STAGE 1 REMOVAL



STAGE 1 CONSTRUCTION



STAGE 2 CONSTRUCTION

Design For 0° Skew

90'-0 x 44'-0 CONTINUOUS CONCRETE SLAB BRIDGE

27'-6 End Spans 35'-0 Interior Span

STAGE PLAN

STA. 296+73.40 (IA 9) JULY 2023

Dickinson County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. #### Design Sheet No. 003 of 003 FHWA/Asset ####

FILE NO. ####	ENGLISH	DESIGN TEAM SHIVE-HATTERY	DICKINSON COUNTY	PROJECT NUMBER BRF-009-3(29)--38-30	SHEET NUMBER V.3	REVISED

SYSTEMTIME SYSTEMDATE USERNAME DGNSPEC

Changed by Addenda

CROSS SECTION VIEW COLOR LEGEND

Design Color No.	Feature
Aggregate	
(64)	Choke Stone
(42)	Engineering Fabric
(8)	Flooded Backfill
(92)	Macadam Stone
(20)	Modified
(12)	Plowing Shaping
(14)	Porous Backfill
(8)	Revetment Class A
(6)	Revetment Class B
(62)	Revetment Class C
(188)	Revetment Class D
(28)	Revetment Class E
(12)	Shoulder Special Backfill
(12)	Special Backfill
(20)	Subbase
(20)	Subbase Lower
(20)	Subbase Upper
(118)	Subgrade Treatment
Asphalt	
(207)	HMA Base Course
(207)	HMA Interim Course
(207)	HMA Surface Course
Concrete	
(0)	Barrier Concrete
(0)	Barrier Concrete Footing
(0)	Curb Gutter
(48)	Flowable Mortar
(0)	Median Concrete
(0)	PCC Pavement
(0)	Sidewalk
Shoulder	
(209)	Shoulder HMA
(0)	Shoulder PCC
(6)	Shoulder Granular
Existing	
(0)	Existing Pavement
Structural	
(112)	Noise Wall
(112)	Noise Wall Footing
(112)	Retaining Wall Back
(112)	Retaining Wall Back Excavate
(112)	Retaining Wall Face
(112)	Retaining Wall Front Excavate
(112)	Retaining Wall Front Footing
(112)	Retaining Wall MSE Gutter
(112)	Retaining Wall Reinforced Earth
Grading	
(8)	Behind Curb Cut
(6)	Granular
(13)	Granular Back Fill
(48)	Rock Undercut
(8)	Shoulder Earth Fill
(2)	Side Slopes
(226)	Side Slopes Dressing
Substrata	
(128)	Boulder Substrata
(48)	Broken Weathered Substrata
(3)	Core Out Substrata
(203)	Existing Pavement Substrata
(6)	Loam Substrata
(80)	Rock Substrata
(4)	Select Sand Substrata
(3)	Shale Substrata
(10)	Topsoil Substrata
Unsuitable / Waste	
(3)	Unsuitable Type A
(13)	Unsuitable Type B
(11)	Unsuitable Type C
(3)	Waste

NOTES:

Text

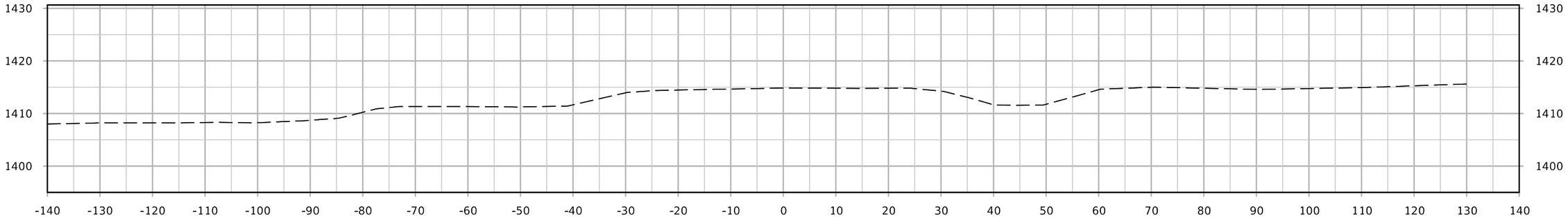
NOTES:

Text

CROSS SECTIONS
LEGEND AND INFORMATION SHEET

(COVERS SHEET SERIES W, X, Y, & Z)

IA 9



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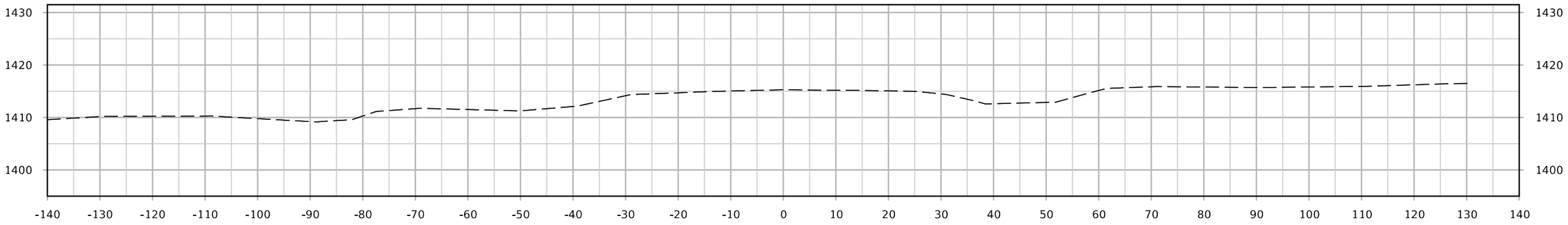

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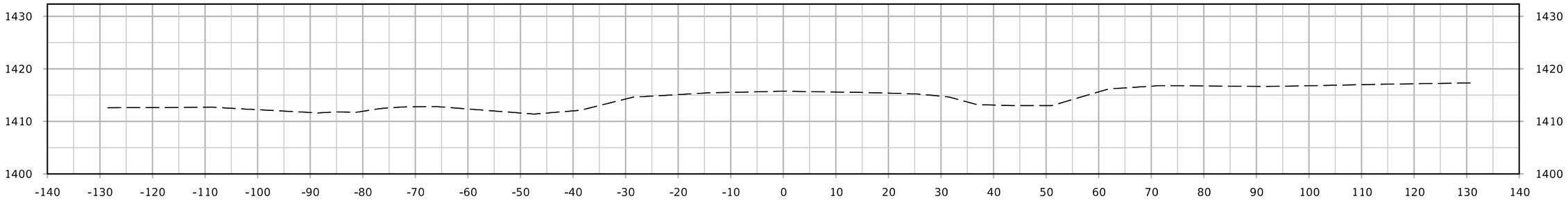

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FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT\Shive-Hattery	DICKINSON COUNTY	PROJECT NUMBER BRF-009-3(29)--38-30	SHEET NUMBER W2	

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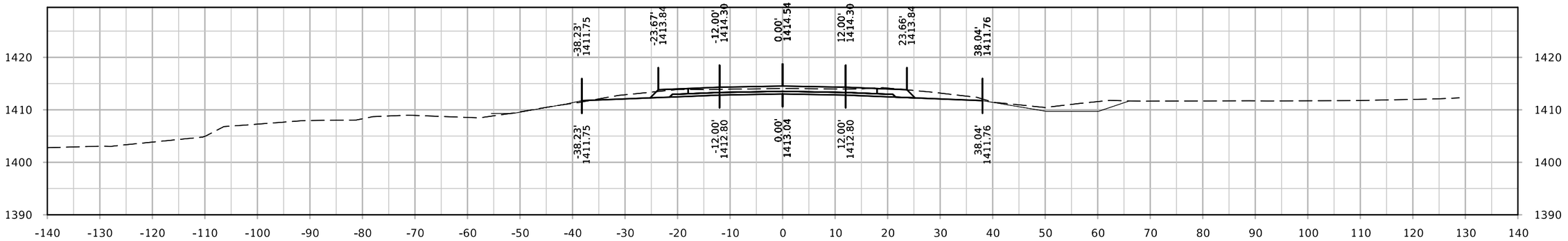
IA 9



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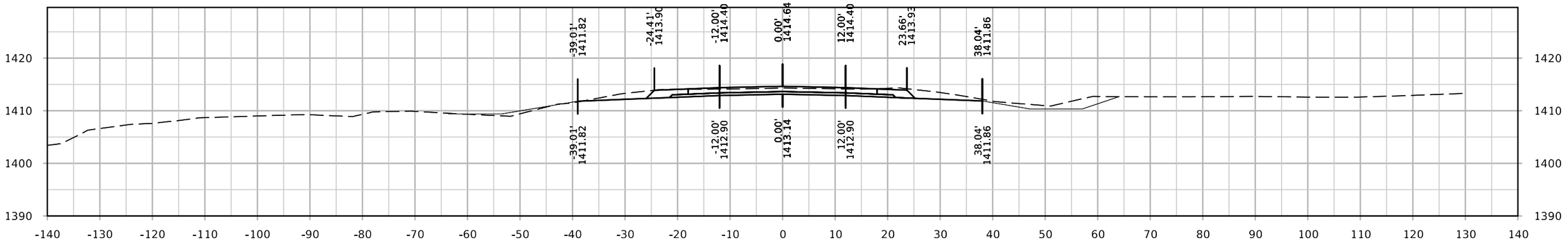

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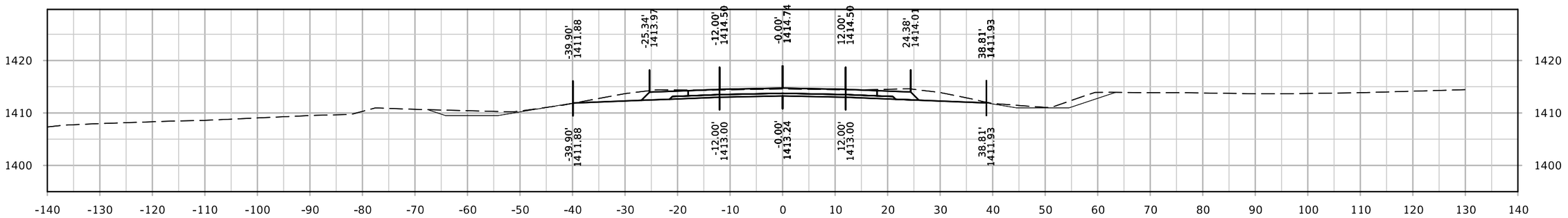

STA. 295+25.00

FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT\Shive-Hattery	DICKINSON COUNTY	PROJECT NUMBER BRF-009-3(29)--38-30	SHEET NUMBER W3

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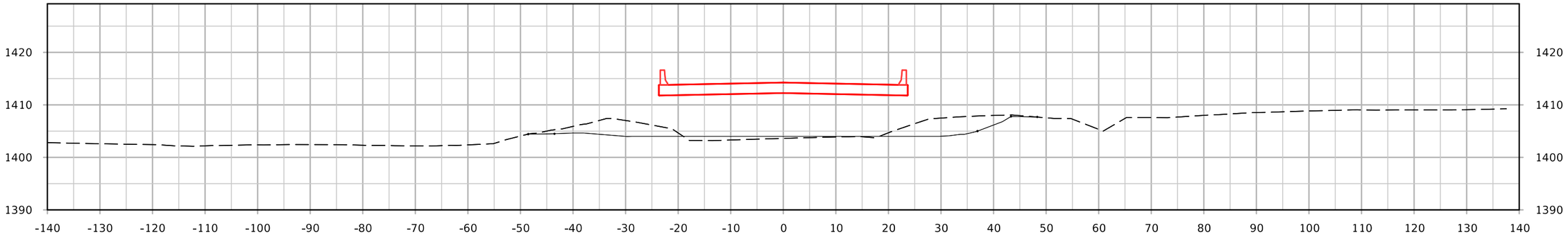
IA 9



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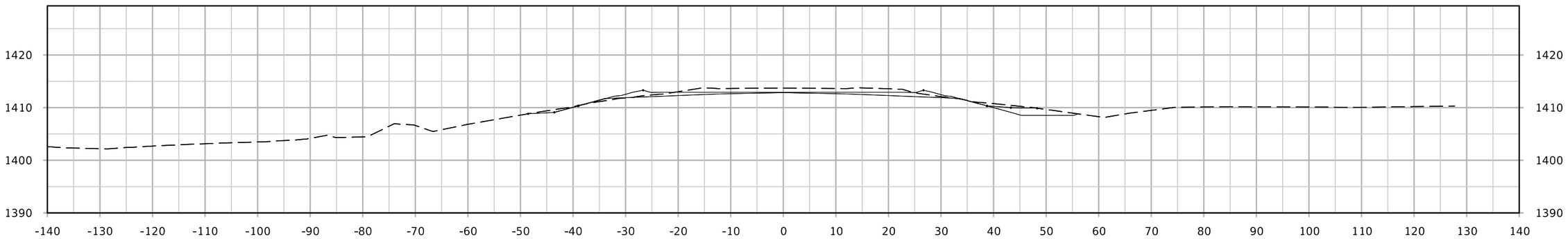

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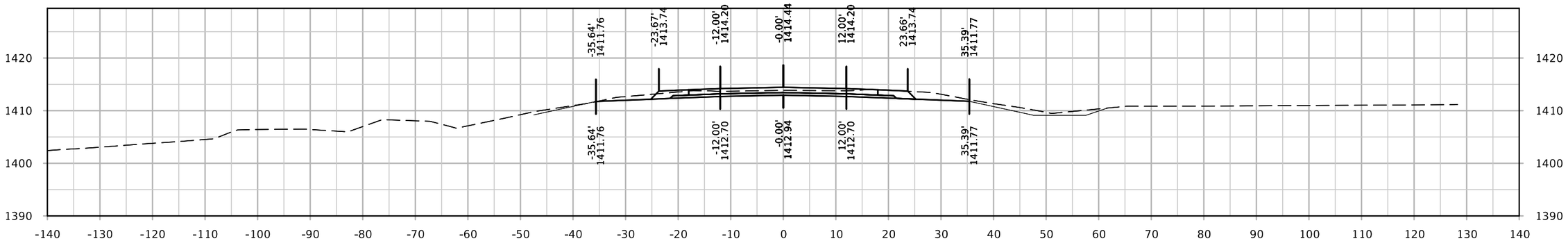

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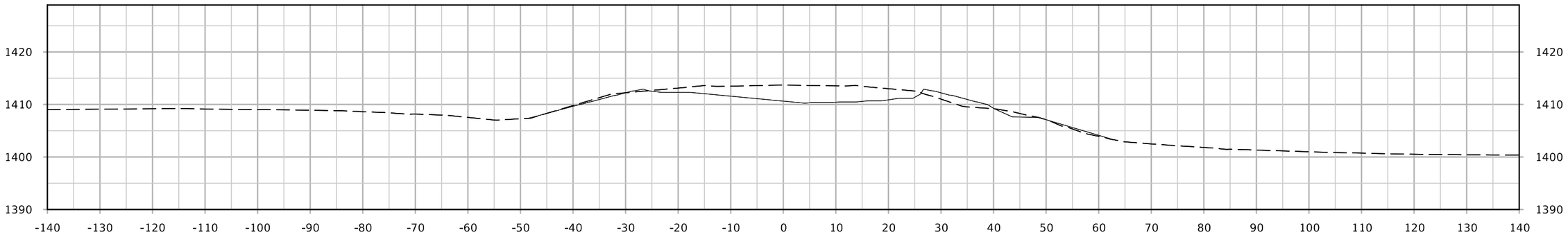
IA 9



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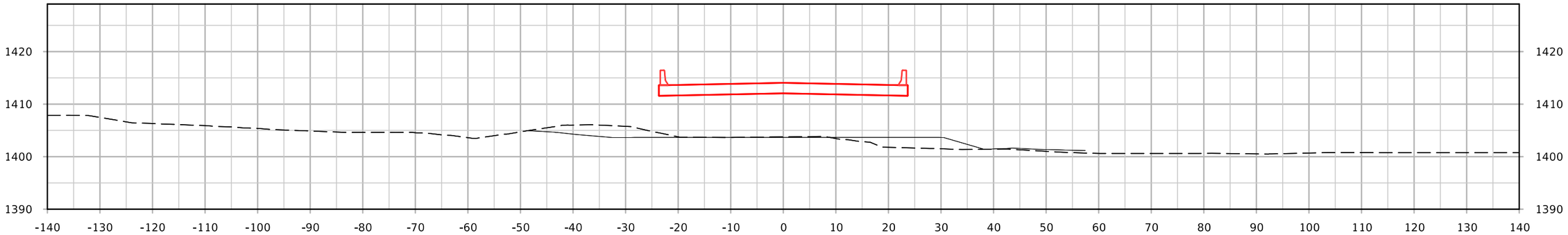

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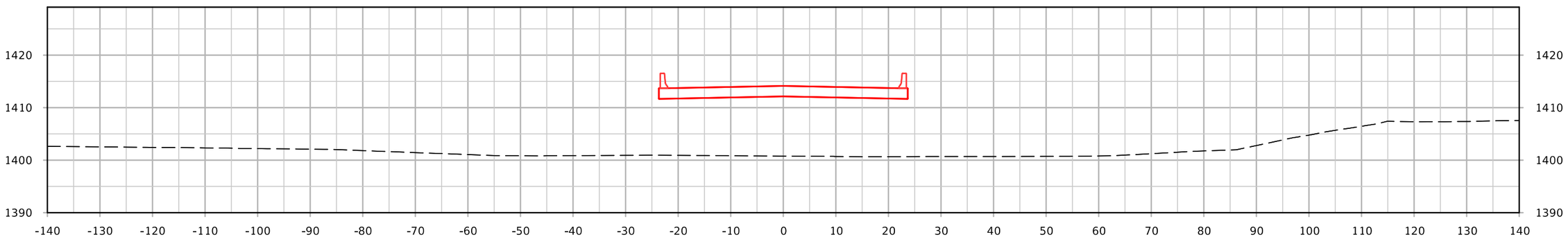

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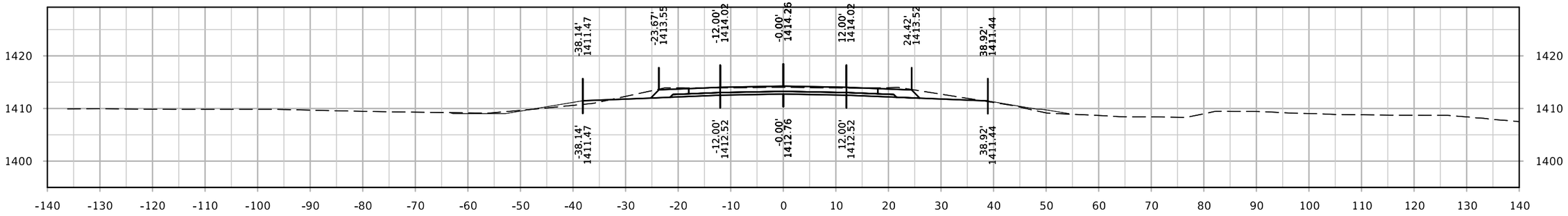
IA 9



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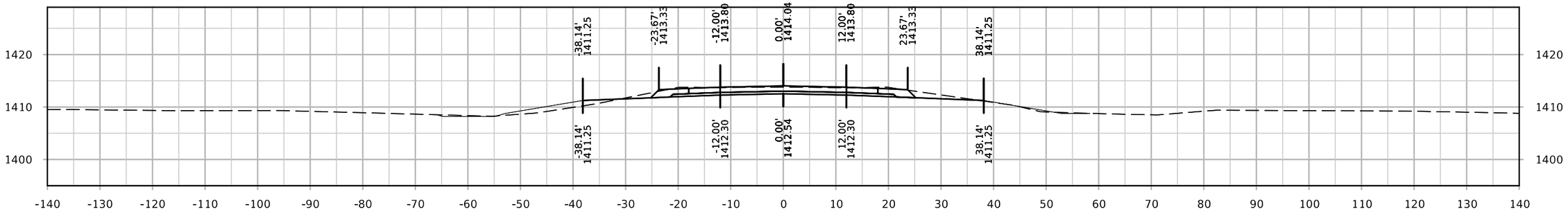

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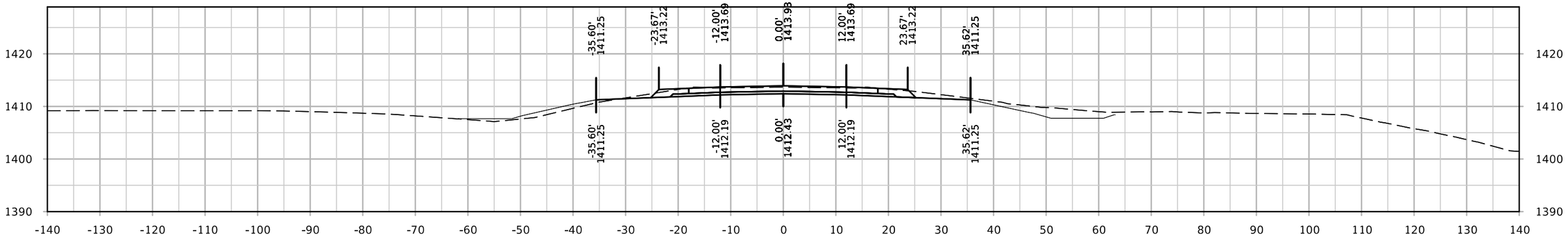

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FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT\Shive-Hattery	DICKINSON COUNTY	PROJECT NUMBER BRF-009-3(29)--38-30	SHEET NUMBER W6	

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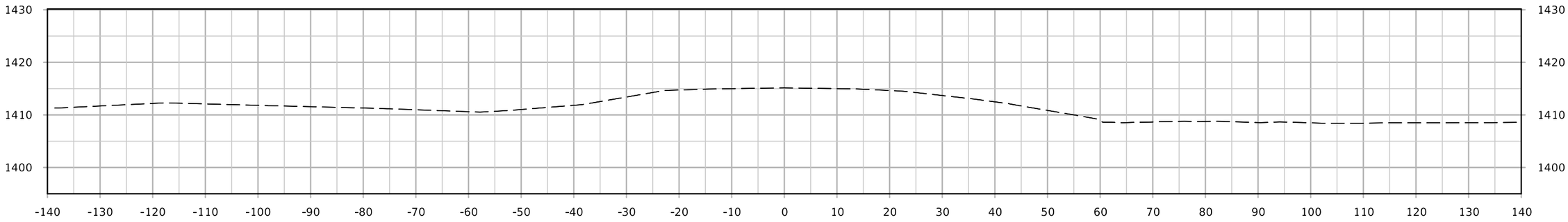

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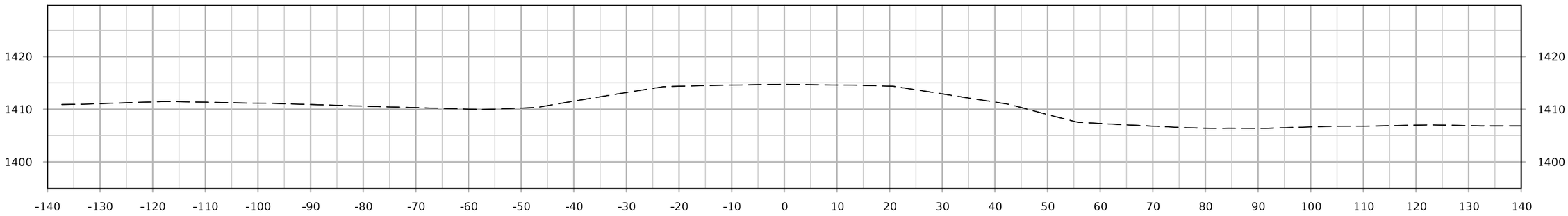

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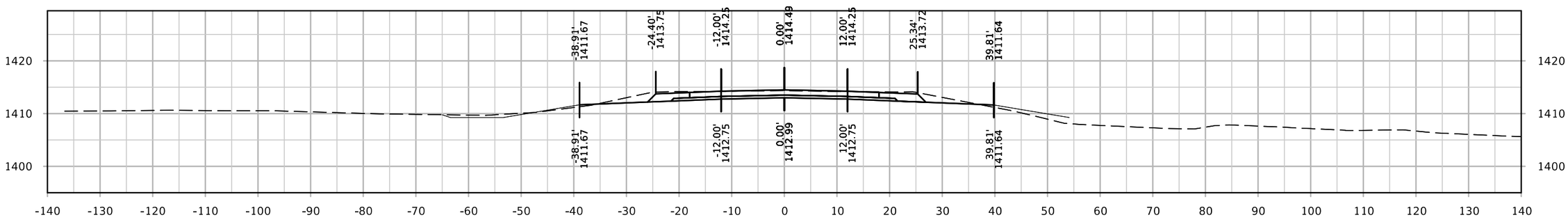

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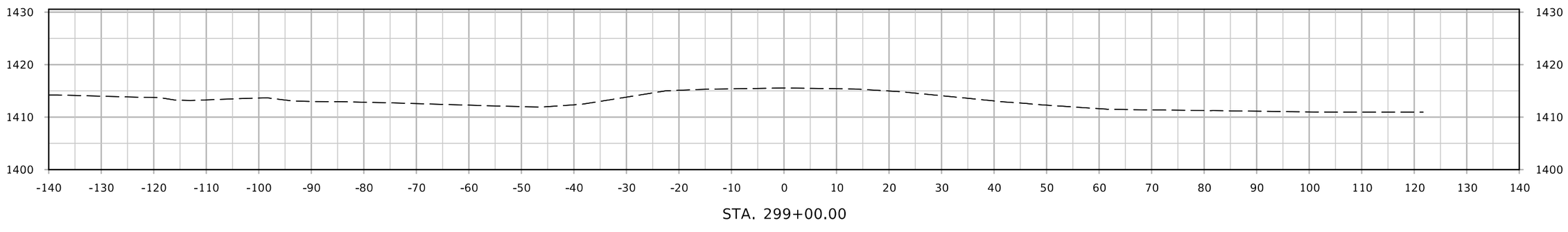
FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT\Shive-Hattery	DICKINSON COUNTY	PROJECT NUMBER BRF-009-3(29)--38-30	SHEET NUMBER W7	



STA. 299+00.00

FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT\Shive-Hattery	DICKINSON COUNTY	PROJECT NUMBER BRF-009-3(29)--38-30	SHEET NUMBER W8	