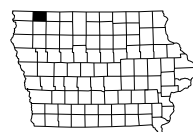


STA 395+42.42
BEGIN PROJECT

STA 398+35.65
END PROJECT

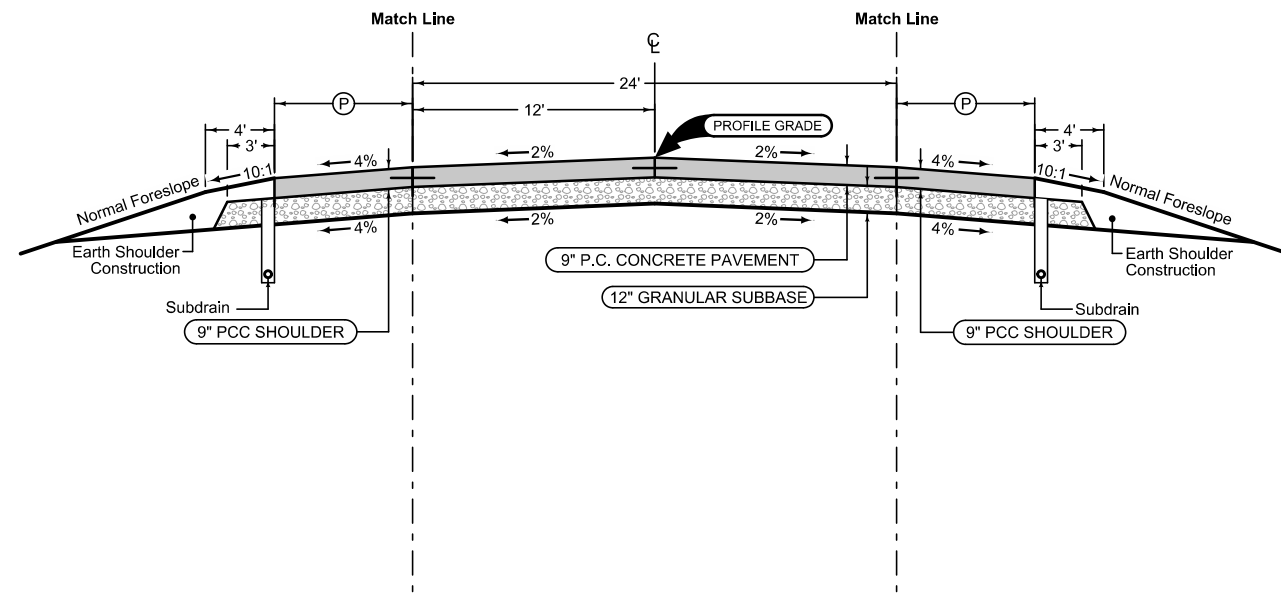
FHWA/ASSET ID No. 038461



PROJECT LOCATION

BRIDGE ESTIMATE:				
Item	Quantity	Unit	Rate	Amount
Excavation, Class 10, Channel	64.37	CY	\$9	\$578
Engineering Fabric	96.55	SY	\$4	\$392
Revetment, Class E	102.99	TON	\$50	\$5,150
Twin Box Culvert - 12' x 10' x 90'	364.4	CY	\$900	\$327,960
Stream Mitigation	1	LS	\$100,000	\$100,000
Remove Existing Bridge	1120	SF	\$10	\$11,200
Mobilization	1	LS	10%	\$44,528
	Base Cost:			\$489,807
	Contingency:		15%	\$73,471
	4 Years Inflation:		4.5%	\$108,442
	BRIDGE TOTAL:			\$671,720
ROADWAY ESTIMATE:				
Item	Quantity	Unit	Rate	Amount
Embankment-in-Place, Contractor Furnished	3060	CY	\$40.00	\$122,400
Excavation, Class 10, Roadway and Borrow	748	CY	\$18.00	\$13,464
Topsoil, Furnish and Spread	417	CY	\$75.00	\$31,275
Compaction with Moisture and Density Control	3636	CY	\$9.00	\$32,724
Modified Subbase	434	CY	\$60.00	\$26,040
Paved Shoulder, PCC, 9"	521	SY	\$100.00	\$52,100
Shoulder Construction, Earth	6	STA	\$615.00	\$3,604
PCC Pavement, 9"	782	SY	\$150.00	\$117,300
Removal of Steel Beam Guardrail	270	LF	\$14.00	\$3,780
Removal of Pavement	798	SY	\$25.00	\$19,950
Silt Fence	1470	LF	\$2.00	\$2,940
Silt Fence for Ditch Checks	264	LF	\$2.00	\$528
Silt Basins	8	EACH	\$450.00	\$3,600
Removal of Silt Fence or Silt Fence for Ditch Checks	867	LF	\$0.50	\$434
Removal of Silt Basins	8	EACH	\$450.00	\$3,600
Maintenance of Silt Fence or Silt Fence for Ditch Check	173	LF	\$0.75	\$130
Stabilized Construction Entrance	300	LF	\$60.00	\$18,000
Rock Check Dam	264	LF	\$80.00	\$21,120
Maintenance of Rock Check Dam	36	EACH	\$250.00	\$9,000
Removal of Rock Check Dam	12	EACH	\$265.00	\$3,180
Additional Roadway Items	1	LS	\$10,000	\$10,000
Detour	1	LS	5%	\$24,258
Mobilization	1	LS	10%	\$48,517
	Base Cost:			\$567,943
	Contingency:		20%	\$113,589
	4 Years Inflation:		4.5%	\$131,208
	ROADWAY TOTAL:			\$812,740
	PROJECT TOTAL:			\$1,484,460

D05 Cost Estimate



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

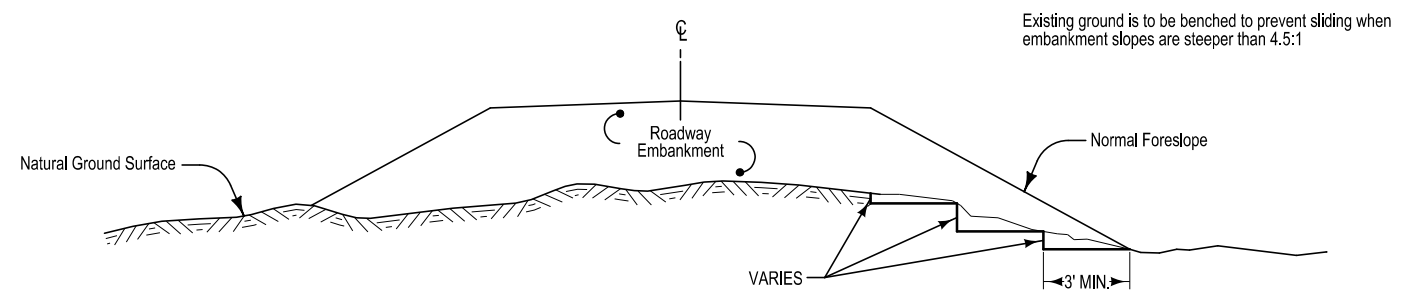
2P_	
04-21-20	
STATION TO STATION	
395+42.42	398+35.65

Full Depth PCC Shoulder

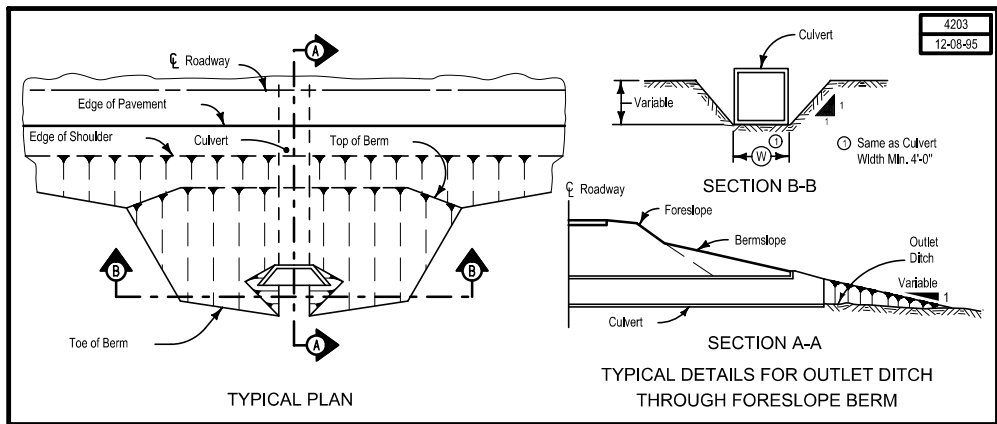
Shoulder Jointing:
 Longitudinal joint: BT-2, or L-2
 Transverse joints: C at 17' spacing

2_P_FullPCC_		
04-15-25		
STATION TO STATION		(P) Feet
395+42.42	398+35.65	8

BENESCH-1
11-18-25



TYPICAL CROSS SECTION
STEPPED FORESLOPE



TYPICAL DETAILS FOR OUTLET DITCH
THROUGH FORESLOPE BERM

100_01D
8/15/22

PROJECT DESCRIPTION

This project involves the bridge replacement at IA 9 over Polly Creek in Osceola County. The work entails replacing the existing 32' x 30' I-beam bridge on IA 9 with a 10' x 10' x 90' twin cast-in-place RCB culvert and reconstructing approximately 294' of IA 9.

105_04
4/21/26

STANDARDS

The following Standards apply to construction work on this project.

Number	Date	Title
DR-303	10-17-17	Subdrains (Longitudinal)
DR-305	04-19-22	Subdrain Outlets (Standard Subdrain, Pressure Release and Special)
EC-201	04-20-21	Silt Fence
EC-204	10-19-21	Perimeter, Slope and Ditch Check Sediment Control Devices
EC-302	10-18-22	Rock Check Dam
EC-303	10-19-21	Stabilized Construction Entrance
EW-402	04-18-17	Temporary Stream Diversion
EW-403	04-18-17	Temporary Erosion Control Measures
PM-110	10-15-24	Line Types
TC-1	10-15-19	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-252	10-21-25	Routes Closed to Traffic

111_25
4/21/26

INDEX OF TABULATIONS

Tabulation	Tabulation Title	Sheet No.
100_01D	PROJECT DESCRIPTION	C.1
100_14	SILT BASINS	C.4
100_17	TABULATION OF SILT FENCES	C.4
100_18	SILT FENCES FOR DITCH CHECKS	C.4
100_32	ROCK CHECK DAM	C.5
103_07	SHRINKAGE DATA	C.5
105_04	STANDARD ROAD PLANS	C.2
111_25	INDEX OF TABULATIONS	C.2
232_03A	EROSION CONTROL (RURAL SEEDING)	C.3
232_03C	EROSION CONTROL (NATIVE GRASS SEEDING)	C.3
262_05	UTILITIES (POINT 25 PROJECT)	C.3
281_01	SECTION 404 PERMIT AND CONDITIONS	C.3
101_16	ALIGNMENT COORDINATES	G.5
108_23A	TRAFFIC CONTROL PLAN	J.1
108_25	511 TRAVEL RESTRICTIONS	J.1
108_26A	STAGING NOTES	J.1
111_01	COORDINATED OPERATIONS	J.1

232_03A
9/28/22

EROSION CONTROL (RURAL SEEDING)

Area to be seeded is estimated to be less than 1 acre. If the contractor determines the area exceeds 2 acres, notify the Engineer. Approved quantity in excess of 2 acres will be paid for as extra work according to Article 1109.03,B of the Standard Specifications.

Following the completion of work in a disturbed area and according to the seeding dates in Section 2601 of the Standard Specifications, place seed, fertilizer, and mulch on the disturbed area lying 8 feet adjacent to shoulder and median as follows:

Place seed and fertilize according to the requirements of Article 2601.03,C,3 and Section 4169 of the Standard Specifications.

Place mulch according to the requirements of Articles 2601.03,E,2,a and 4169.07,A of the Standard Specifications.

Preparing the seedbed, furnishing and applying seed, fertilizer, and mulch are all incidental to mobilization and will not be paid for separately.

262_05
9/28/22

UTILITIES (POINT 25 PROJECT)

This is a POINT 25 project and is subject to the provisions of IAC 761-115.25.

281_01
9/28/22

SECTION 404 PERMIT AND CONDITIONS

Construct this project according to the requirements of U.S. Army Corps of Engineers Nationwide, Permit No. 14. A copy of this permit is available from the Iowa DOT website (<http://www.envpermits.iowadot.gov/>). The U.S. Army Corps of Engineers reserves the right to visit the site without prior notice.

232_03C
8/28/24

EROSION CONTROL (NATIVE GRASS SEEDING)

Area to be seeded is estimated to be less than 1 acre. If the Contractor determines the area exceeds 2 acres, notify the Engineer. Approved quantity in excess of 2 acres will be paid for as extra work according to Article 1109.03,B of the Standard Specifications.

Following the completion of work in a disturbed area and according to the seeding dates in Section 2601 of the Standard Specifications, place seed and mulch on the disturbed area lying 8 feet or more beyond the shoulder as follows:

SEED MIX:
Big bluestem (Andropogon gerardii) 6 lbs. PLS/Acre (7.0 kg/ha)
Indiangrass (Sorghastrum nutans) 6 lbs. PLS/Acre (7.0 kg/ha)
Little bluestem (Schizachyrium scoparium) 6 lbs. PLS/Acre (7.0 kg/ha)
Partridge Pea (Chamaecrista fasciculata) 4 lbs. PLS/Acre (4.5 kg/ha)
Sideoats grama (Bouteloua curtipendula) 4 lbs. PLS/Acre (4.5 kg/ha)
Canada wildrye (Elymus canadensis) 2 lbs. PLS/Acre (2.2 kg/ha)
Switchgrass (Panicum virgatum) 1 lbs. PLS/Acre (1.1 kg/ha)
Oats (Avena sativa) 32 lbs./Acre (36.0 kg/ha)

Furnish Big bluestem, Indiangrass, Canada wildrye and Little bluestem that is debarbed or equal to facilitate the application of seed.

Furnish seed certified as Source Identified Class (Yellow Tag) Source G0-Iowa. Oats are excluded from this requirement. Place seed according to the requirements of Article 4169.02 of the Standard Specifications.

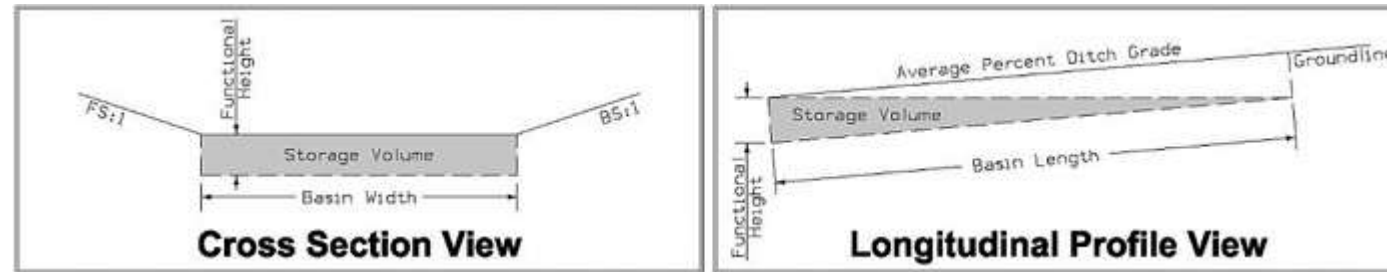
Place mulch according to the requirements of Articles 2601.03,E,2,a and 4169.07,A of the Standard Specifications.

Preparing the seedbed, furnishing and applying seed and mulch are incidental to mobilization and will not be paid for separately.

100_14
8/15/22

SILT BASINS

Possible Standard: EW-403



* The functional height used in the volume equation is 95% of effective height. Effective height is 3 feet as shown in EW-403.
* Volume equation: $(0.5 * \text{Length} * (\text{Width} * \text{Height} + \text{Width} * (\text{Height} - \text{Length} * \text{Avg} \% \text{Slope})))$

Basin No.	Station	Side	Installation (Each)	Removal (Each)	Basin Width (FT)	Basin Length (FT)	Height (FT)	Avg. % Slope	Volume (CF)	Remarks
1	396+78.00	Left	1.0	1.0	10.0	136.0	2.85	4.1	1938.00	
2	396+97.00	Left	1.0	1.0	10.0	138.0	2.85	5.1	1966.50	
3	396+78.00	Right	1.0	1.0	10.0	136.0	2.85	6.7	1938.00	
4	396+97.00	Right	1.0	1.0	10.0	138.0	2.85	8.3	1966.50	
			4.0	4.0						TAB QUANTITY
			8.0	8.0						BID QUANTITY (100% INC.)

100_17
8/15/22

TABULATION OF SILT FENCES

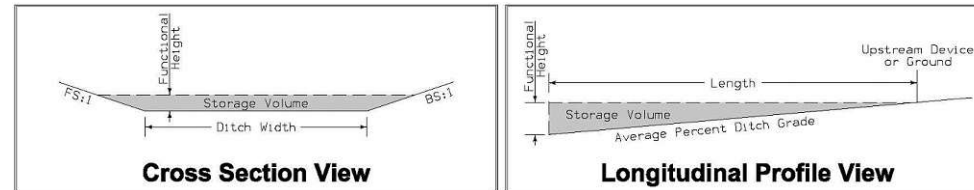
Refer to EC-201

Station From	Station To	Side	Length (FT)	Remarks
395+42.00	398+36.00	Left	294.00	MID-SLOPE
395+42.00	398+36.00	Left	294.00	TOE OF SLOPE
395+42.00	398+36.00	Right	294.00	MID-SLOPE
395+42.00	398+36.00	Right	294.00	TOE OF SLOPE
			1176.00	TAB QUANTITY
			1470.00	BID QUANTITY (25% INC.)

100_18
8/15/22

SILT FENCES FOR DITCH CHECKS

Possible Standard: EC-201

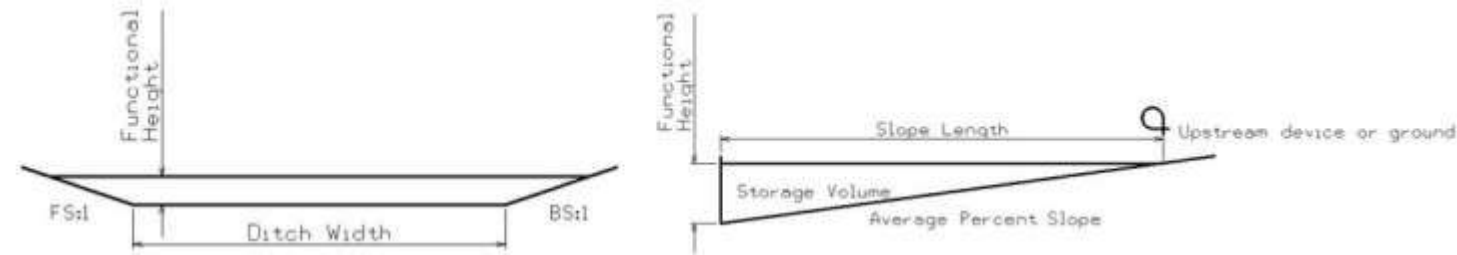


* The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.
* Volume equation: $[0.5 * \text{Spacing} * (0.5 * H^2 * FS + DW * H + 0.5 * H^2 * BS)]$

Basin No.	Type	Station	Side	Installation (LF)	Maintenance (LF)	Removal (LF)	Foreslope (FS:1)	Backslope (BS:1)	Ditch Width (FT)	Avg. % Slope Ditch Grade	Remarks
1	Type 1	395+48.00	Left	22.0	2.2	11.0	3.0	3.0	10.0	4.1	
1	Type 1	395+83.00	Left	22.0	2.2	11.0	3.0	3.0	10.0	4.1	
1	Type 1	396+18.00	Left	22.0	2.2	11.0	3.0	3.0	10.0	4.1	
1	Type 1	396+53.00	Left	22.0	2.2	11.0	3.0	3.0	10.0	4.1	
2	Type 1	397+18.00	Left	22.0	2.2	11.0	3.0	3.0	10.0	5.1	
2	Type 1	397+48.00	Left	22.0	2.2	11.0	3.0	3.0	10.0	5.1	
2	Type 1	397+78.00	Left	22.0	2.2	11.0	3.0	3.0	10.0	5.1	
2	Type 1	398+08.00	Left	22.0	2.2	11.0	3.0	3.0	10.0	5.1	
				176.0	17.6	88.0					TAB QUANTITY
				264.0	26.4	132.0					BID QUANTITY (50% INC.)

ROCK CHECK DAM

Possible Standard: EC-302



* The functional height used in the volume equation is 90% of effective height. Effective height is 2 feet as shown in EC-302.
* Volume equation: $[0.5 * \text{Spacing} * (0.5 * H^2 * FS + DW * H + 0.5 * H^2 * BS)]$

Basin No.	Station	Side	Installation (LF)	Maintenance (Each)	Removal (Each)	Foreslope (FS:1)	Backslope (BS:1)	Ditch Width (FT)	Avg. % Slope	Volume (CF)	Remarks
3	395+63.00	Right	22.0	3	1.0	3.0	3.0	10.0	6.7	346.50	
3	395+88.00	Right	22.0	3	1.0	3.0	3.0	10.0	6.7	346.50	
3	396+13.00	Right	22.0	3	1.0	3.0	3.0	10.0	6.7	346.50	
3	396+38.00	Right	22.0	3	1.0	3.0	3.0	10.0	6.7	346.50	
3	396+63.00	Right	22.0	3	1.0	3.0	3.0	10.0	6.7	346.50	
4	397+13.00	Right	22.0	3	1.0	3.0	3.0	10.0	8.3	277.20	
4	397+33.00	Right	22.0	3	1.0	3.0	3.0	10.0	8.3	277.20	
4	397+53.00	Right	22.0	3	1.0	3.0	3.0	10.0	8.3	277.20	
4	397+73.00	Right	22.0	3	1.0	3.0	3.0	10.0	8.3	277.20	
4	397+93.00	Right	22.0	3	1.0	3.0	3.0	10.0	8.3	277.20	
4	398+13.00	Right	22.0	3	1.0	3.0	3.0	10.0	8.3	277.20	
4	398+33.00	Right	22.0	3	1.0	3.0	3.0	10.0	8.3	277.20	
Total:			264	36	12						

SHRINKAGE DATA

Material	%	Remarks
EXCAVATION, CLASS 10	30.0	

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
- Water Hydrant (Rural)
- Septic Tank
- Cistern
- L.P. Gas Tank (No Footing)
- Underground Storage Tank
- Latrine
- Satellite TV Dish
- Water Hook Up
- Radio Tower
- Tower Anchor
- Guardrail (Beam or Cable)
- Guard Post (one or two)
- Guard Post (over two)
- Filler Pipe
- Gas Valve
- Water Valve
- Speed Limit Sign
- 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

- FO Existing Fiber Optics
- W Existing Water Line

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.	Transparency
Pink, Dark	(13)		Temporary Pavement Shading 50%
Yellow	(4)		Proposed Pavement Shading 50%
Orange	(6)		Proposed Granular Shading 50%
Orange	(70)		Proposed Shoulder Granular Shading 50%
Yellow	(68)		Proposed Shoulder Paved Full Depth Shading 50%
Yellow	(132)		Proposed Shoulder Paved Partial Depth Shading 50%
Brown, Light	(236)		Grading Shading 50%
Orange, Light	(134)		Proposed Granular Entrance Shading 50%
Yellow	(220)		Proposed Paved Entrance Shading 50%
Tan	(8)		Proposed Sidewalk Shading 50%
Blue, Light	(230)		Proposed Sidewalk Landing Shading 50%
Pink	(11)		Proposed Sidewalk Ramp Shading 50%
Red	(3)		Proposed Structure Shading 50%
Red	(3)		Delineates Restricted Areas 0%

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
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- Pavement Removal
- Clearing & Grubbing Area

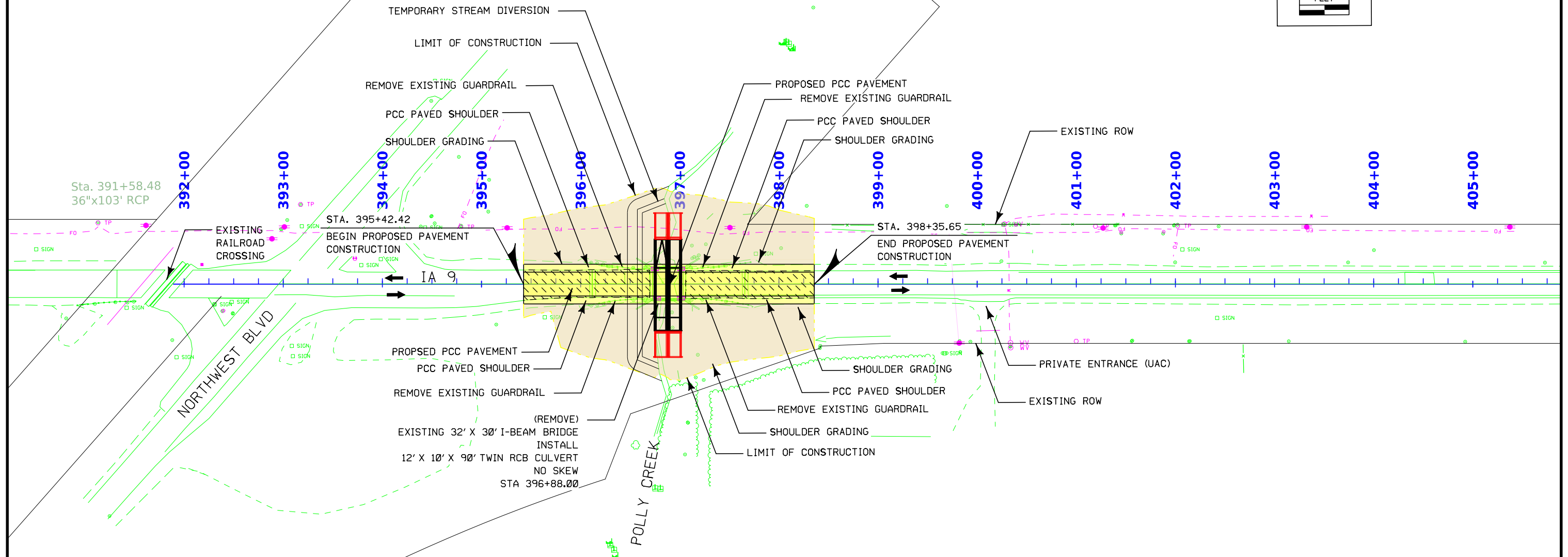
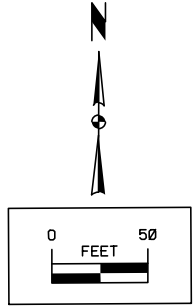
RIGHT-OF-WAY LEGEND

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

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

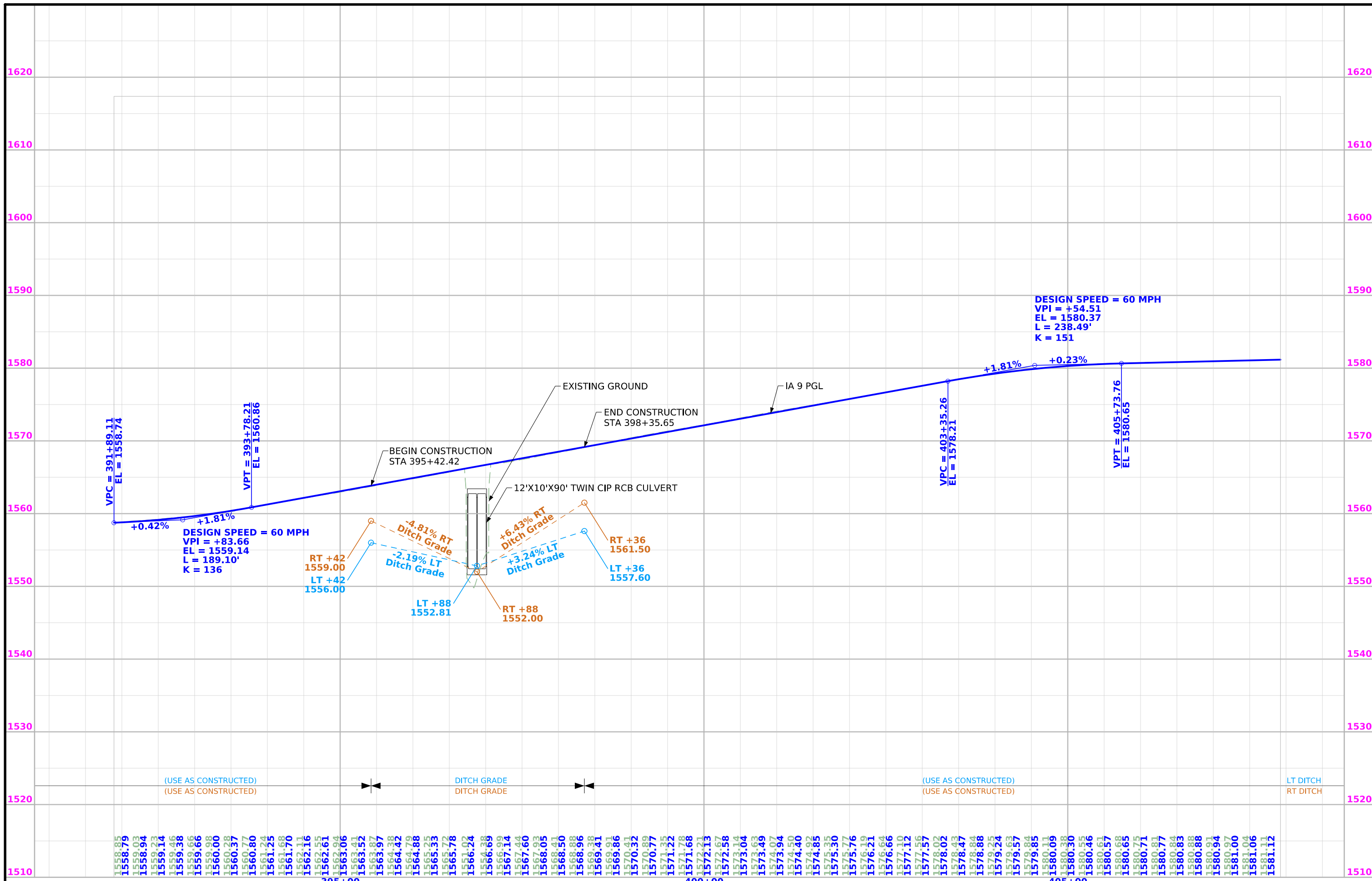
(COVERS SHEET SERIES D, E, F, & K)

WILSON TWP.
T-100N R-41W
SEC. 31



EAST HOLMAN TWP.
T-99N R-41W
SEC. 6

Design No. 0229
File No. 32870



VPC = 391+89.11
EL = 1558.74

VPT = 393+78.21
EL = 1560.86

DESIGN SPEED = 60 MPH
VPI = +83.66
EL = 1559.14
L = 189.10'
K = 136

DESIGN SPEED = 60 MPH
VPI = +54.51
EL = 1580.37
L = 238.49'
K = 151

VPC = 403+35.26
EL = 1578.21

VPT = 405+73.76
EL = 1580.65

RT +42
1559.00
LT +42
1556.00

LT +88
1552.81

RT +88
1552.00

RT +36
1561.50
LT +36
1557.60

(USE AS CONSTRUCTED)

DITCH GRADE

(USE AS CONSTRUCTED)

LT DITCH
RT DITCH

1558.85	1558.79	1559.03	1558.94	1559.23	1559.14	1559.46	1559.38	1559.66	1559.98	1560.00	1560.28	1560.37	1560.77	1560.80	1561.24	1561.25	1561.68	1561.70	1562.11	1562.16	1562.55	1562.61	1563.06	1563.41	1563.52	1563.87	1563.97	1564.38	1564.42	1564.79	1564.88	1565.25	1565.33	1565.72	1565.78	1551.02	1556.24	1566.69	1566.99	1567.14	1567.44	1567.60	1567.92	1568.05	1568.41	1568.50	1568.88	1568.96	1569.38	1569.41	1569.86	1570.41	1570.32	1570.89	1570.77	1571.35	1571.22	1571.78	1571.68	1572.21	1572.13	1572.67	1573.14	1573.04	1573.63	1573.49	1574.07	1573.94	1574.50	1574.40	1574.92	1574.85	1575.35	1575.30	1575.77	1575.76	1576.19	1576.21	1576.64	1576.66	1577.10	1577.12	1577.56	1577.57	1578.02	1578.02	1578.43	1578.47	1578.84	1578.88	1579.25	1579.24	1579.63	1579.57	1579.84	1579.84	1579.85	1580.11	1580.09	1580.38	1580.30	1580.55	1580.46	1580.61	1580.57	1580.68	1580.65	1580.75	1580.71	1580.81	1580.77	1580.84	1580.83	1580.88	1580.88	1580.91	1580.94	1580.97	1580.97	1581.00	1581.04	1581.06	1581.11	1581.12
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SURVEY INDEX

County: Osceola
PIN: 24-72-009-030
Project Number: BRFN-009-2(029)--39-72
Location: Polly Creek 0.9 mi W of IA 60
Type of Work: Bridge Replacement
Project Directory: 7200903024

Survey Personnel

Tom Pajula – Survey Party Chief
Ricky Wesel – Assistant Survey Party Chief

Date(s) of Survey

Begin Date 12/02/2024
End Date 12/08/2024

General Information

This survey is for IA 9 bridge replacement at Polly Creek 0.9 miles west of IA 60. This survey request was for the US Hwy 34 corridor only. This project is a Full Field DTM survey.

Utility Information

For logging data and other utility details see Utility Survey and Ownership Report in the Utility folder of the PrelimSurvey project directory.

Project Control

Nearby Iowa Real Time Network reference stations were utilized to obtain horizontal and vertical control on primary project control points. Three five-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
COORDINATE SYSTEM: IaRCS Zone 1 Spencer (U.S. SURVEY FOOT)
VERTICAL DATUM: NAVD88
GEOID MODEL: 2018

Alignment Information

The horizontal alignment for Iowa 9 this survey is a retrace of Plans for Project No. FA-882(2). Survey stationing was equated to the plan face of west abutment at Sta. 396+73.21, split the pavement to the far east, and carried back and ahead without equation throughout the survey. Stationing increases to the east in both the plan and the survey.

Survey stationing relates to plan stationing as follows:

POT Sta. 396+73.21 As-built Plans Project No. FA-160
Survey POT Sta. 396+73.21

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.



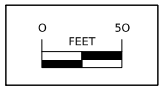
HORIZ. DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 Adjustment) - Iowa RCS Zone 01 (U.S. Survey Foot)

VERT. DATUM: NAVD88 - Geoid Model: 2018

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: 2018

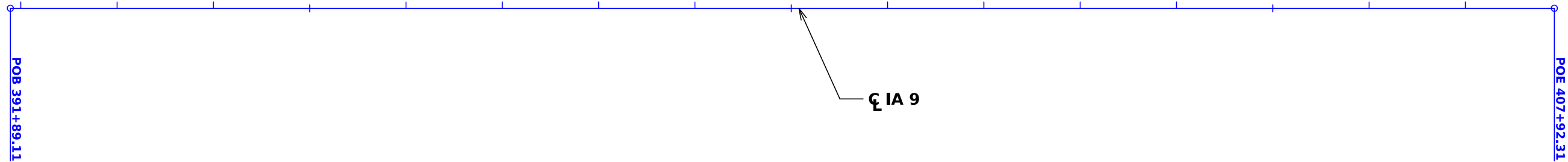
Point Name	Northing	Easting	Elevation	Code Description
11	9685158.05	11371680.26	1558.52	CP MAG NAIL S SIDE OF IA 9 NW OF NORTHWEST BLVD +/-7FT SE OF NEAR RAIL +/-56.5FT W OF STOP SIGN POST +/-65FT NORTHWESTERLY OF LIGHT POLE
12	9685154.06	11372139.38	1564.75	CP ROD W CAP S SIDE OF IA 9 +/-70FT E OF EAST 9 SIGN POST +/-4FT S OF GUARDRAIL POSTS
13	9685157.02	11372589.88	1573.55	CP COG GEAR S SIDE OF IA 9 +/-0.5FT N OF BIT SHOULDER +/-70FT E OF DRIVEWAY
AB1	9685152.7	11371746.5	1558.36	BM SQUARE CUT SOUTHEAST SIDE OF LIGHT POLE FOUNDATION SOUTHWEST QUADRANT OF NORTHWEST BLVD. AND IOWA 9



395+00

400+00

405+00



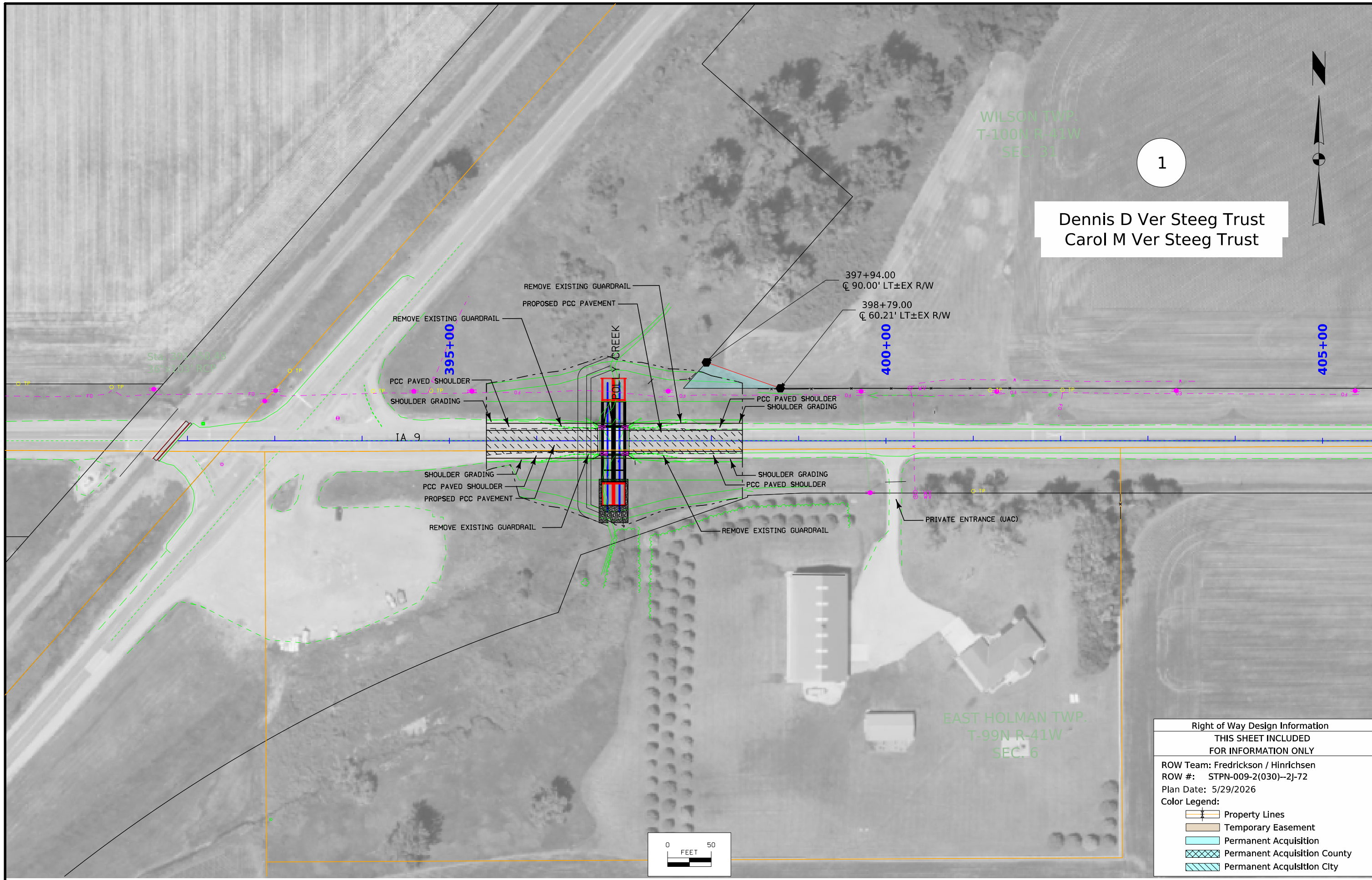
CL IA 9

ALIGNMENT
IA 9

ALIGNMENT COORDINATES

Name	Location	Point on Tangent Station	Point on Tangent Y Northing	Point on Tangent X Easting	Begin Spiral Station	Begin Spiral Y Northing	Begin Spiral X Easting	Begin Curve Station	Begin Curve Y Northing	Begin Curve X Easting	Simple Curve PI or Master PI Station	Simple Curve PI or Master PI Y Northing	Simple Curve PI or Master PI X Easting	End Curve Station	End Curve Y Northing	End Curve X Easting	End Spiral Station	End Spiral Y Northing	End Spiral X Easting
PrCL IA 9	Mainline	391+89.11	9685180.90	11371695.83															
PrCL IA 9	Mainline	407+92.31	9685161.97	11373298.91															

NO ACCESS RIGHTS ARE TO BE ACQUIRED ON THIS PROJECT.



WILSON TWP.
T-100N R-41W
SEC. 31

1

Dennis D Ver Steeg Trust
Carol M Ver Steeg Trust



REMOVE EXISTING GUARDRAIL
PROPOSED PCC PAVEMENT

397+94.00
CL 90.00' LT±EX R/W

398+79.00
CL 60.21' LT±EX R/W

395+00

400+00

405+00

Sta 395+00.00
36'± EX R/W

PCC PAVED SHOULDER
SHOULDER GRADING

PCC PAVED SHOULDER
SHOULDER GRADING

IA 9

SHOULDER GRADING
PCC PAVED SHOULDER
PROPOSED PCC PAVEMENT

SHOULDER GRADING
PCC PAVED SHOULDER

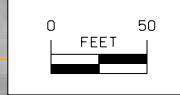
REMOVE EXISTING GUARDRAIL

REMOVE EXISTING GUARDRAIL

PRIVATE ENTRANCE (UAC)

EAST HOLMAN TWP.
T-99N R-41W
SEC. 6

Right of Way Design Information	
THIS SHEET INCLUDED FOR INFORMATION ONLY	
ROW Team: Fredrickson / Hinrichsen	
ROW #: STPN-009-2(030)--2J-72	
Plan Date: 5/29/2026	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition
	Permanent Acquisition County
	Permanent Acquisition City



108_23A
8/15/22

TRAFFIC CONTROL PLAN

IA 9 will be closed to traffic during construction using Standard Road Plan TC-252. Traffic will be detoured via Northwest Boulevard, 2nd Avenue and IA 60 as shown on sheet J.2.

108_25
3/28/24

511 TRAVEL RESTRICTIONS

Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No. or Structure ID or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
			NONE ANTICIPATED				None					

108_26A
8/15/22

STAGING NOTES

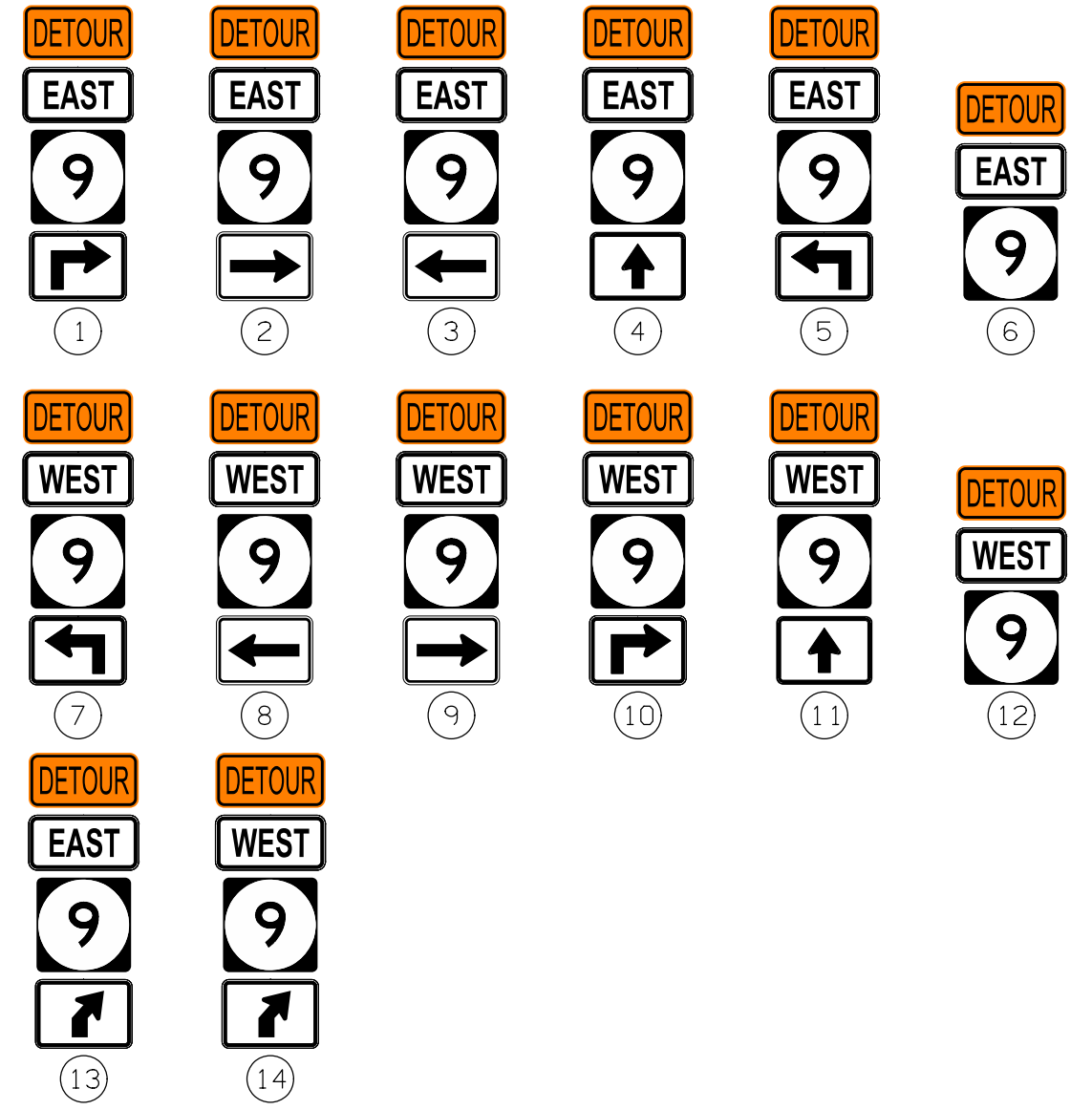
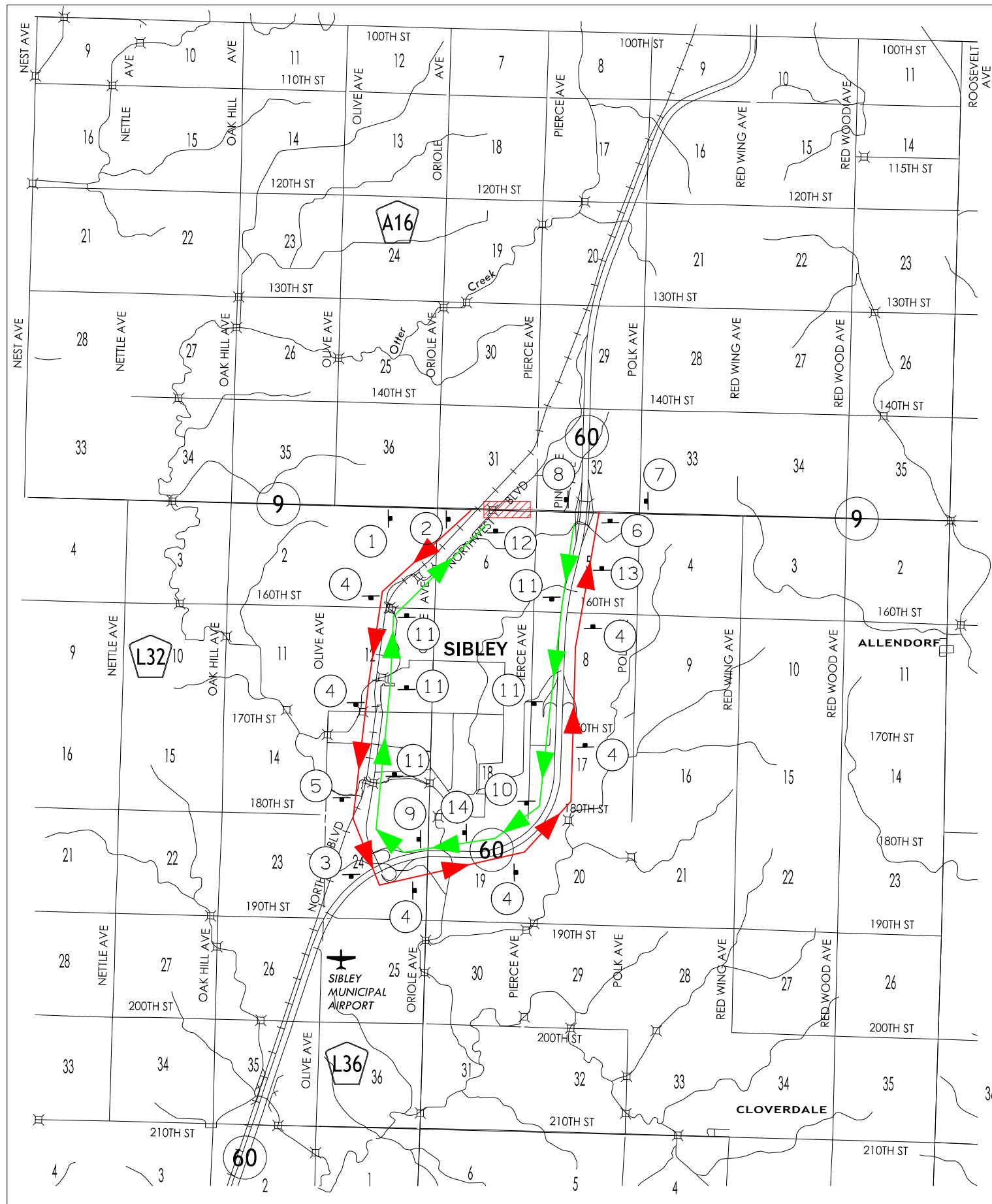
Construction will be performed in a single stage during a full closure of the bridge.

111_01
10/14/22

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 ANTICIPATED	



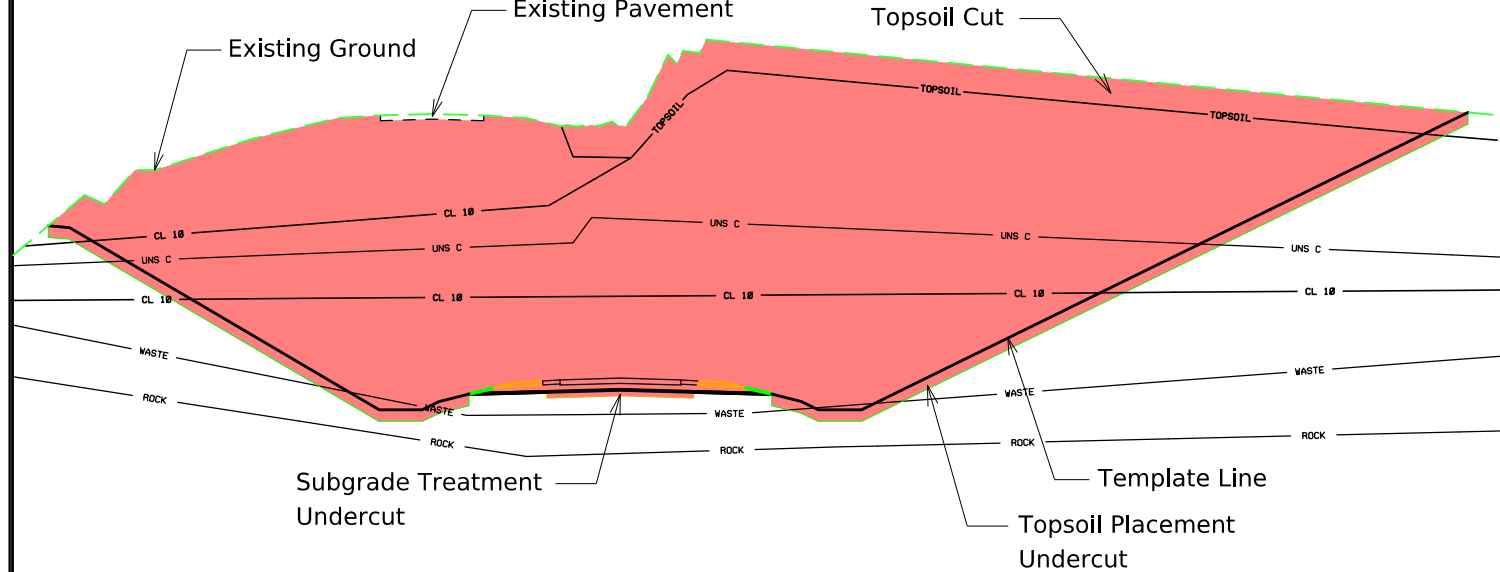
Notes:
All detour signs are to be provided, placed, maintained and removed by the Contractor as part of the Traffic Control bid item.

Access to be maintained to all entrances on IA 9.

- IA-9 WB Detour Route
- IA-9 EB Detour Route
- Road Closed

DETOUR FOR CLOSURE OF IA 9

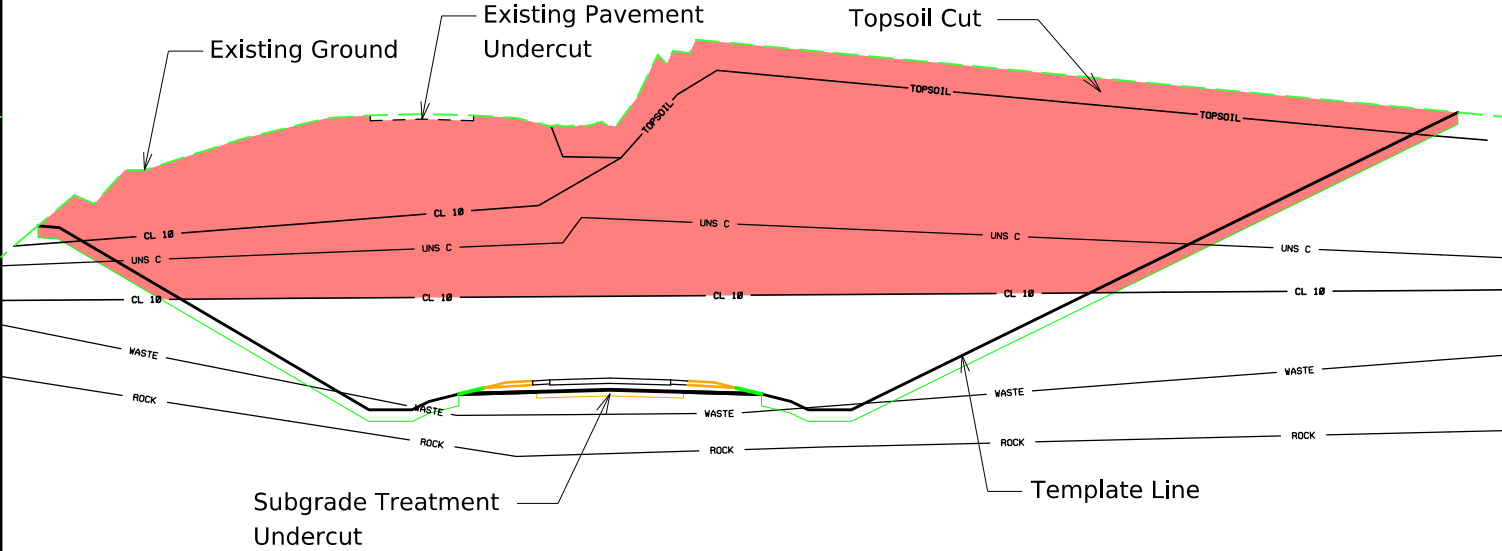
CUT SIDE Total Cut Unadjusted RURAL



Notes:

1. "Total Cut Unadjusted" Column includes all cut values in the Station Range based on Typical, Topsoil and Subgrade Treatment needs.
2. "Total Cut Unadjusted" does not include and Existing Pavement values inside or outside the cut template as shown on cross sections.
3. Tabulated Plowing and Shaping operations are included in the "Total Cut Unadjusted" values.

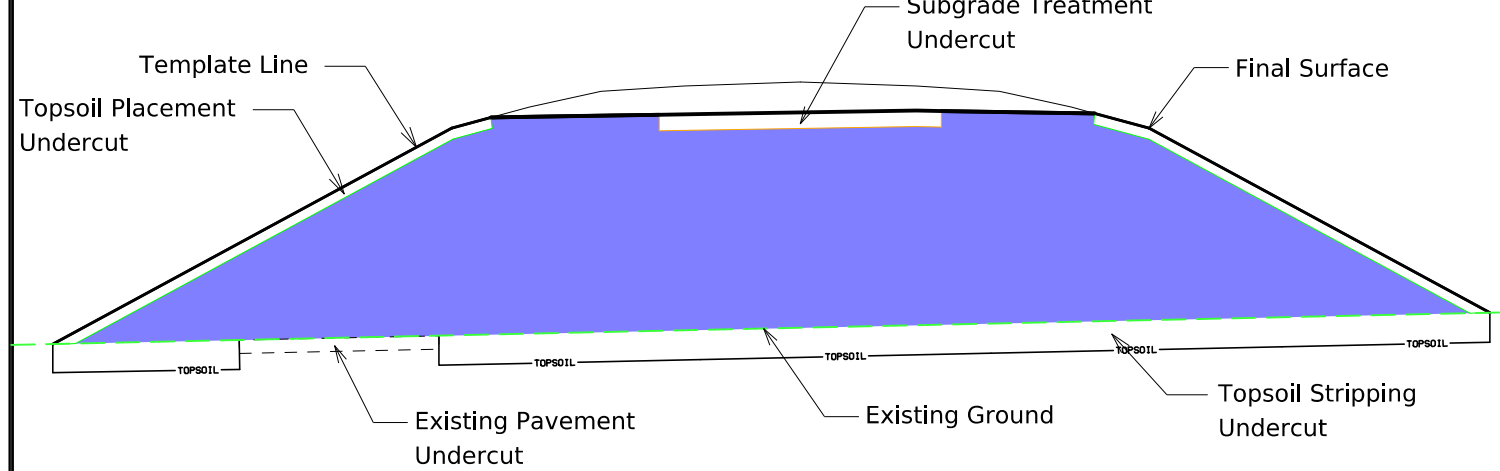
CUT SIDE Total Cut Adjusted



Notes:

1. "Total Cut Adjusted" Column includes all cut values usable as Class 10 material.
2. "Total Cut Adjusted" does not include and Existing Pavement , Existing Topsoil, or material to be wasted.

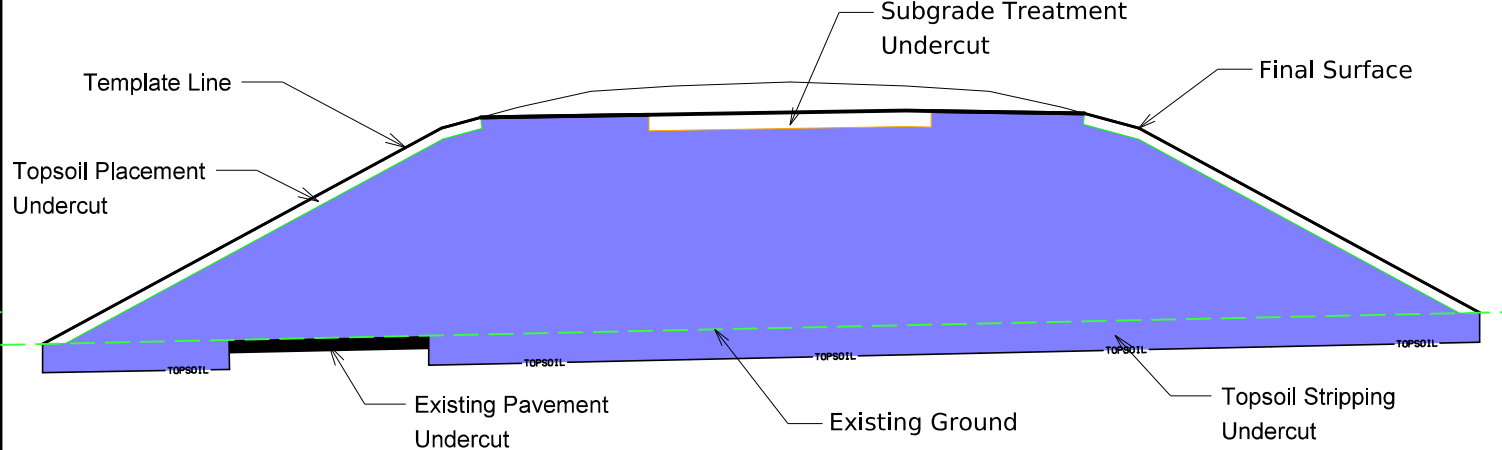
FILL SIDE Total Fill Unadjusted RURAL



Notes:

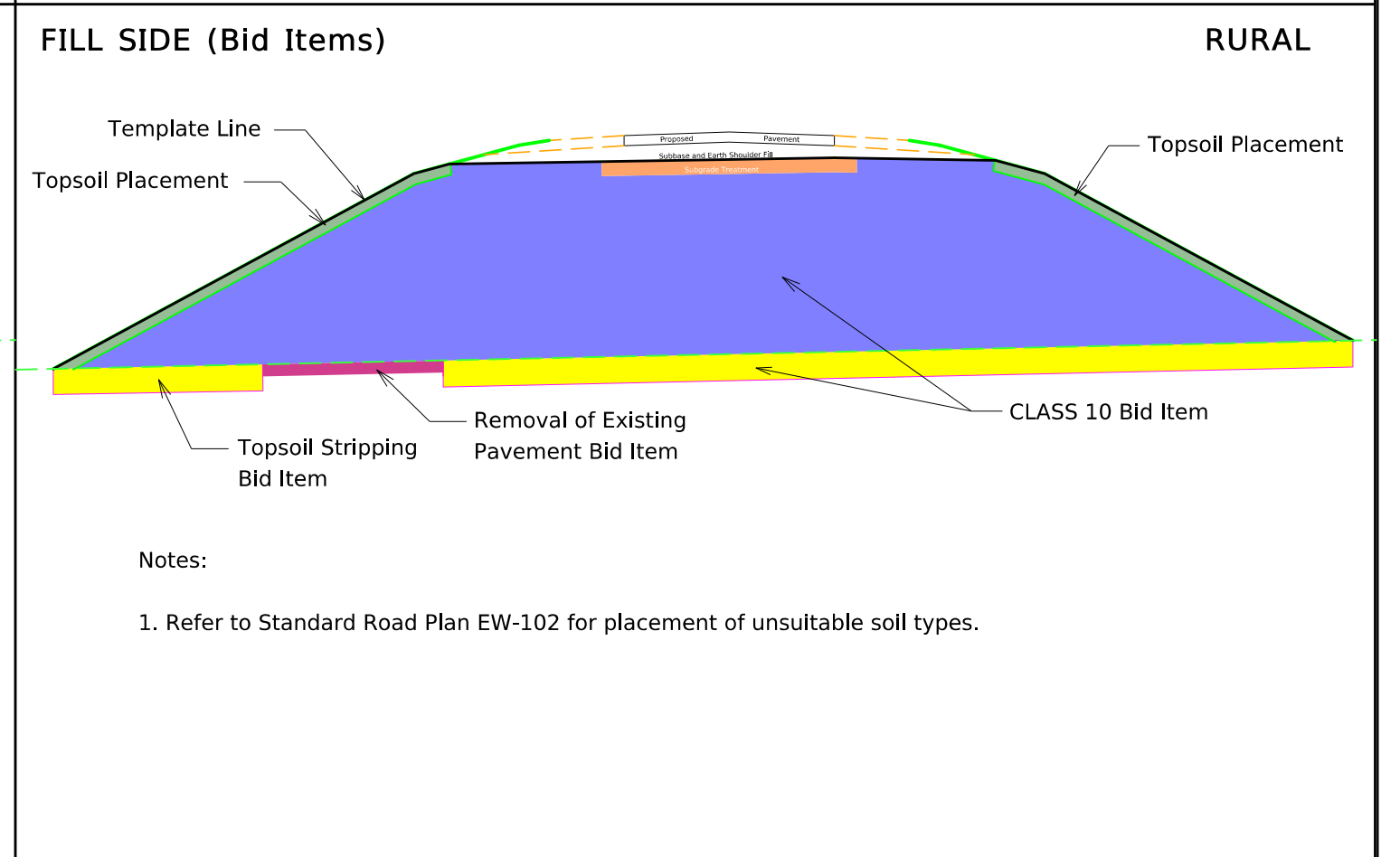
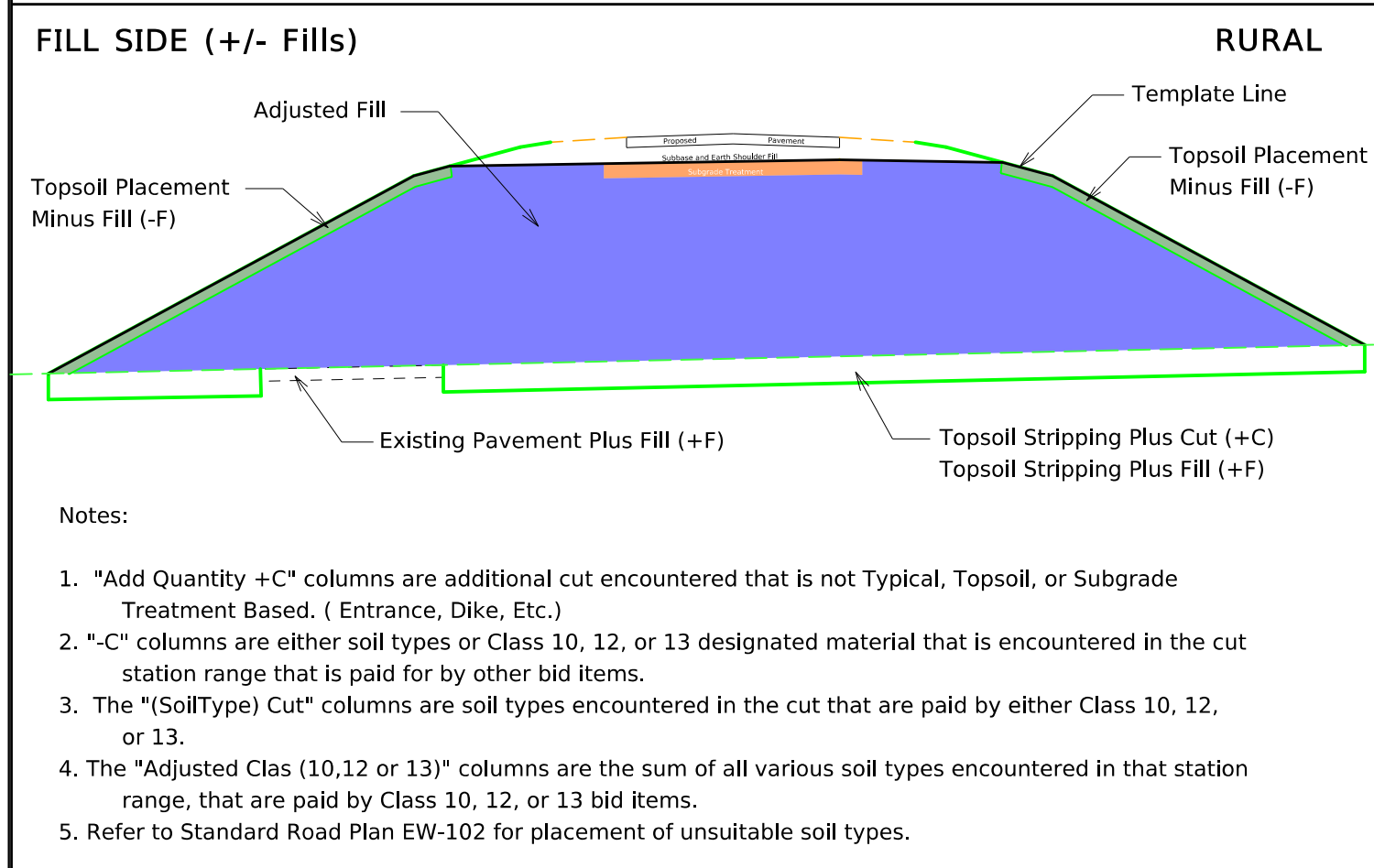
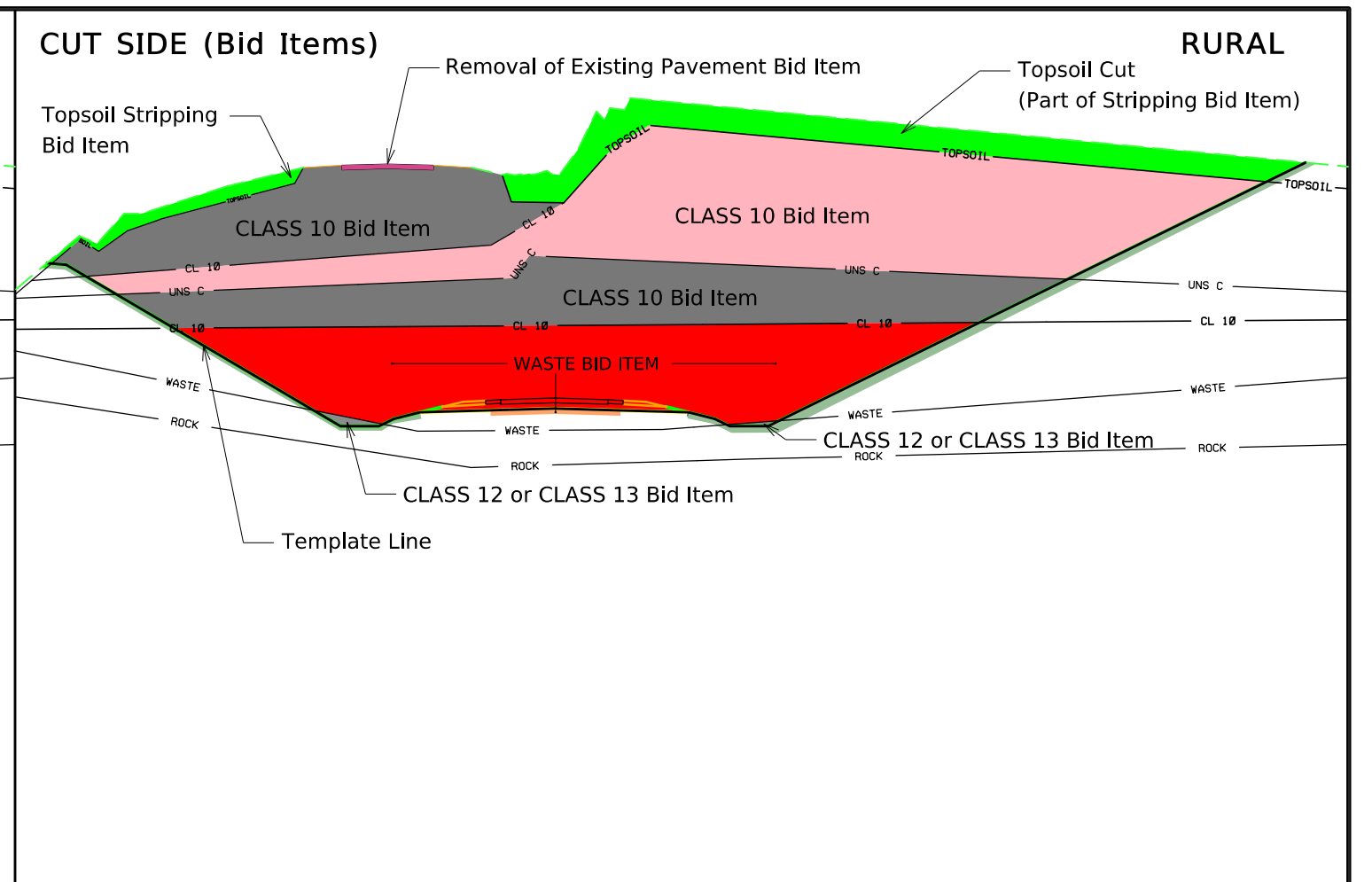
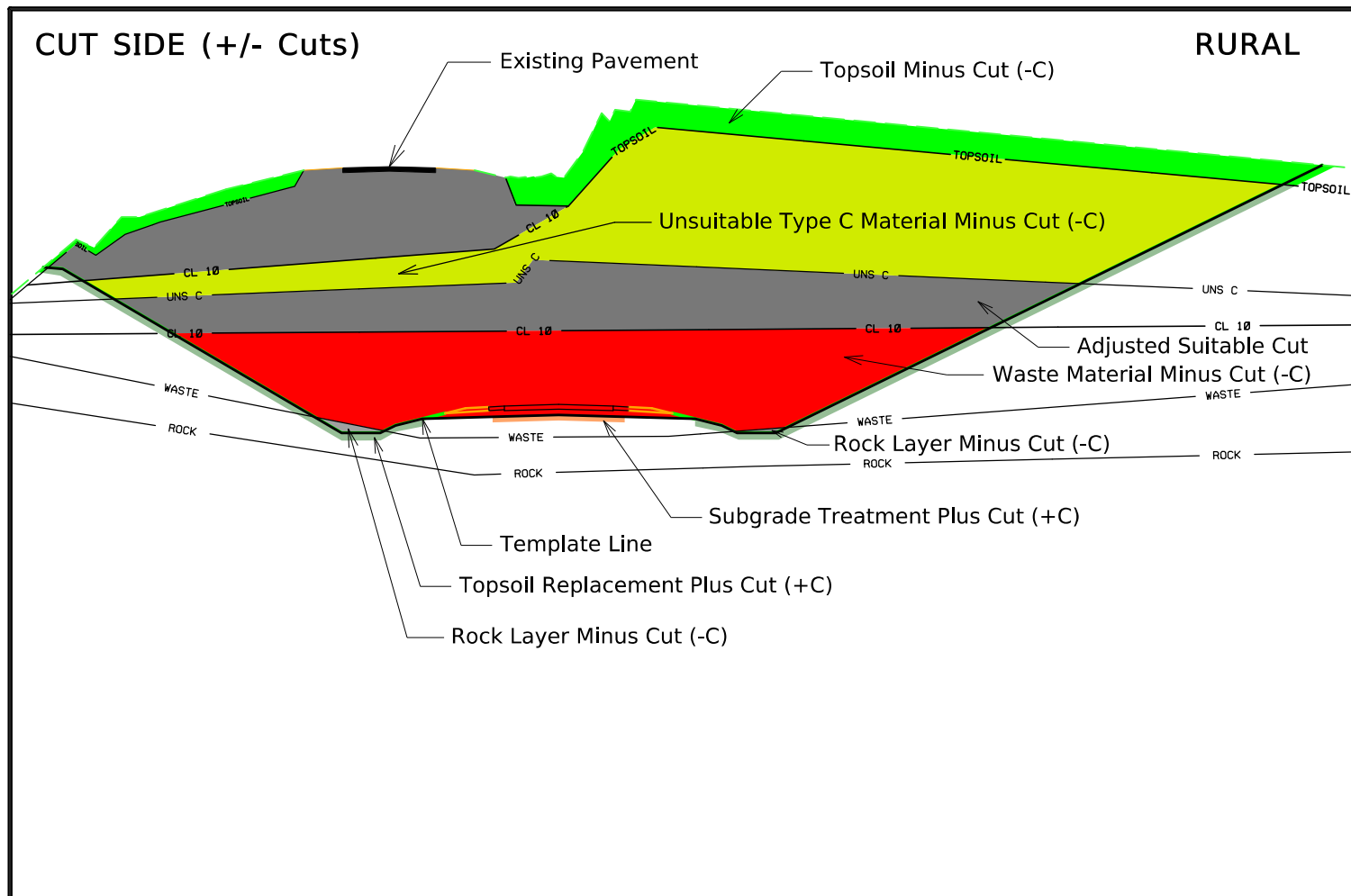
1. "Total Fill Unadjusted" Column includes all Class 10, 12, and 13 fill. This excludes the topsoil, subgrade treatment, subbase, new pavement, and shoulder fill needs in that station range.
2. "Total Fill Unadjusted" Column does not include adjustments for additional fill from cuts such as existing pavement removed, plowing and shaping operations, entrances, dikes, or topsoil stripping.

FILL SIDE Total Fill Adjusted



Notes:

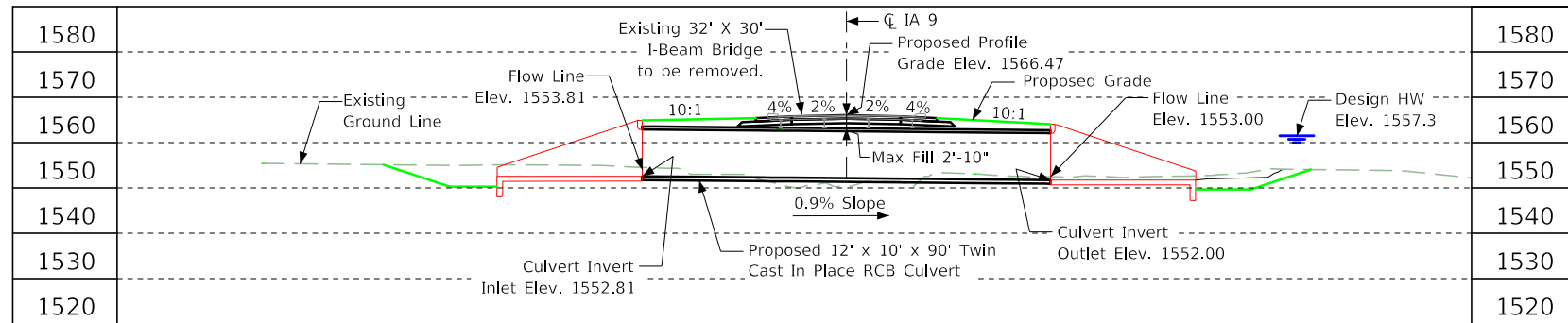
1. "Total Fill Adjusted" Column includes all Class 10, 12, and 13 fill and adjustments for additional fill from cuts such as existing pavement, plowing and shaping operations, entrances, dikes, and topsoil stripping.
2. The available area to place unsuitable materials in the T Sheet tabulation does not include the undercut values from the topsoil stripping, existing pavement, or plowing and shaping



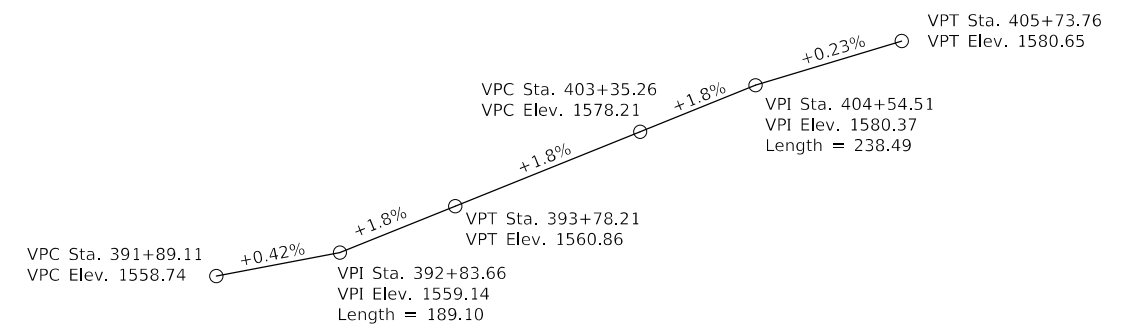
TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut			Fill				Checks (EW-102)		Topsoil				[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]									
		[1] x (1-0.3)	[2]		[4]	[5] x 1.3	[3] - [6]															
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink									
IA9																						
395+42.43	23	16	16	12	12	16	0	0	0	0	0	0	0									
395+50.00	187	131	131	114	114	148	-17	0	0	0	0	0	0									
396+00.00	241	169	169	320	320	416	-247	0	0	0	0	0	0									
396+50.00	168	118	118	1,380	1,380	1,794	-1,676	0	0	0	0	0	0									
397+00.00	138	97	97	1,306	1,306	1,698	-1,601	0	0	0	0	0	0									
397+50.00	191	134	134	308	308	400	-266	0	0	0	0	0	0									
398+00.00	120	84	84	195	195	254	-170	0	0	0	0	0	0									
398+35.66																						
IA9																						
Totals:	1,069	748	748	3,636	3,636	4,726	-3,978	0	0	0	0	0	0									
<p>Excavation, Class 10, Roadway & Borrow 748 [3]</p> <p>Embankment in Place, Contractor Furnished 3,978 / 1.3 = 3,060 [7] / 1.3</p> <p>Compaction with Moisture and Density Control 3,636 [5]</p>																						

Control Point: Rod w/ cap south side of IA 9 ± 70 ft. east of east 9 sign post ± 4 ft. south of guardrail posts, N:9685154.06, E: 11372139.38, El. 1564.75



Longitudinal Section Along Centerline of Culvert



Proposed Profile Grade IA 9

Hydraulic Design



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: *Eric J. Dean* Date: 10-13-2025
 Printed or Typed Name: Eric J. Dean
 My license renewal date is December 31, 2026

Pages or sheets covered by this seal: V.1

Plan Notes:

1. Drainage through existing channel must be maintained throughout construction.
2. Culvert invert has been set 1' below channel flowline elevation.

General Notes:

This design is for the replacement of the existing 32' x 30' I-Beam Bridge, Osceola County, Design No. 1850 FHWA No. 038460 Maint. No. 7242.35009

Design Notes:

1. IA 9 will be closed during construction.
2. Additional ROW will be required.

Hydraulic Data

RIDB: NA
 Drainage Area = 2.7 sq. mi.
 Stream Slope = 26.4 Ft/Mi.
 Q₅₀ = 557 cfs
 HW Elev. = 1557.3 (50 year)
 Exit Velocity = 10.9 fps (50 year)
 Q₁₀₀ = 695 cfs
 HW Elev. = 1557.7 (100 year)
 Exit Velocity = 11.8 fps (100 year)

Utilities Legend

- F0 - Fiber Optic
- Utility Pole

Utilities shown on this sheet are for information only, see Road Design sheets for final utility information.

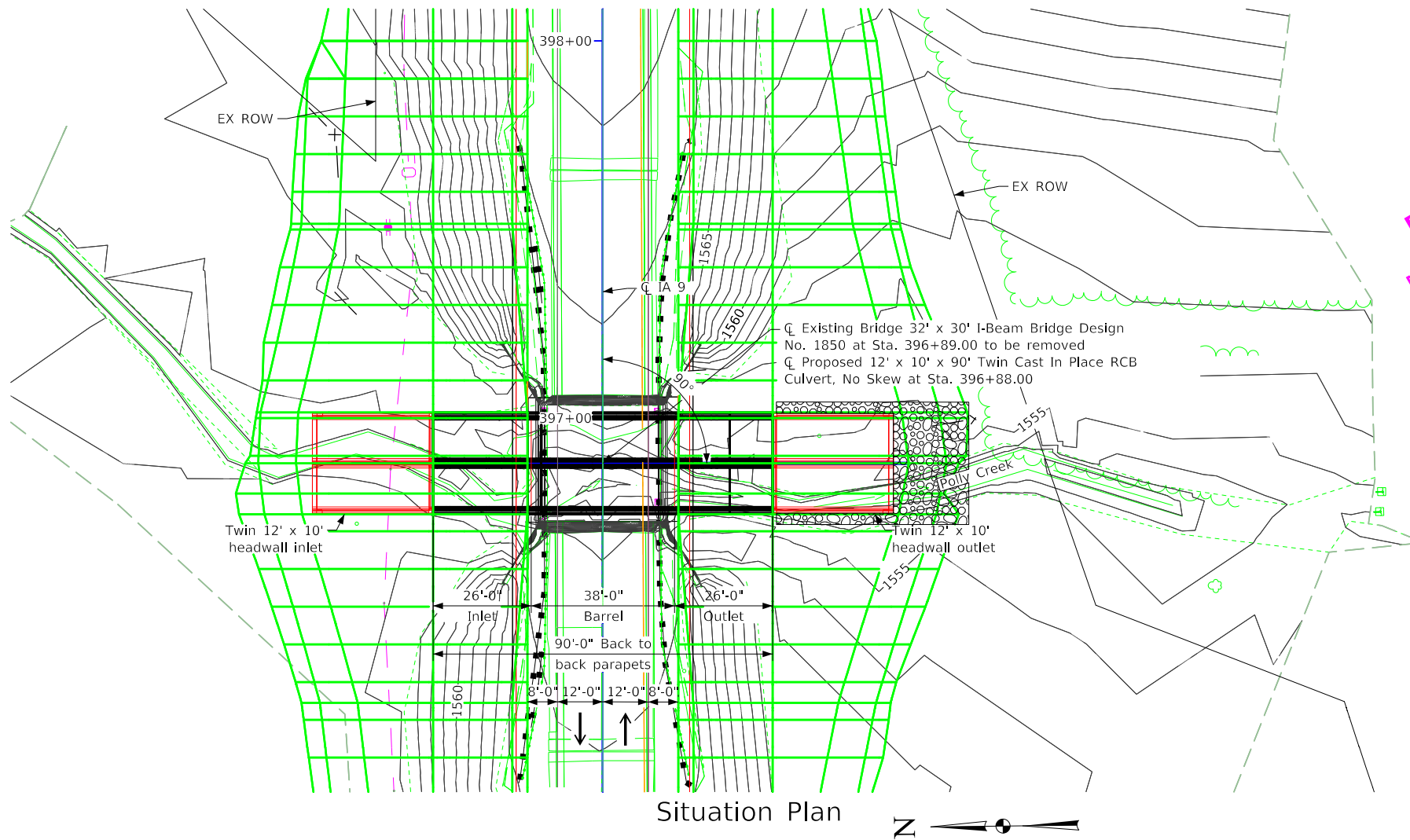
Traffic Estimate

2023 AADT	1910 V.P.D.
2029 AADT	2150 V.P.D.
2029 DHV	-- V.P.H.
TRUCKS	16 %
Total Design ESALs	1,000,000

Location

IA 9 over Polly Creek
 In City of Sibley
 T-99N, 100N R-41W
 Sections 6,31
 Wilson Township
 Osceola County
 FHWA No. 038461
 Bridge Maint. No. 7242.35009
 Latitude 43.432663°
 Longitude -95.731180°

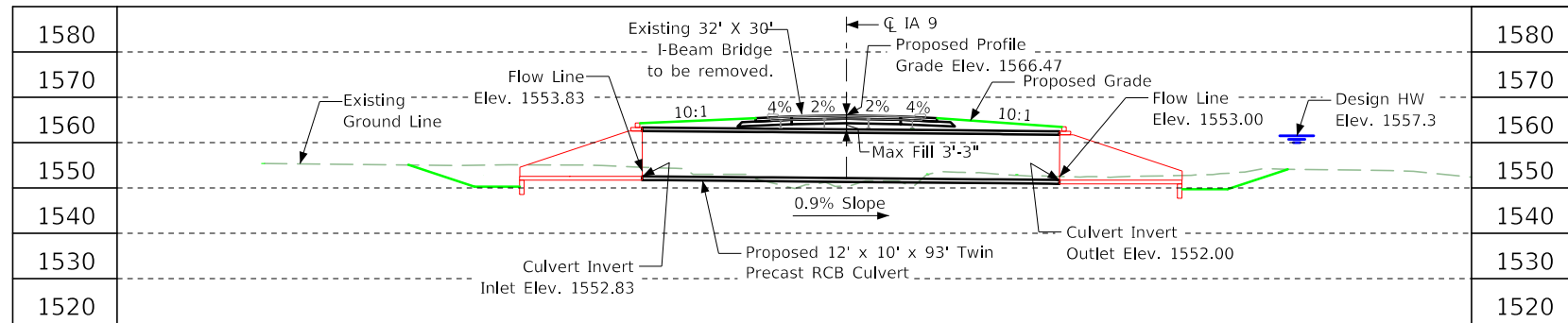
*Preliminary
 Not For Construction*



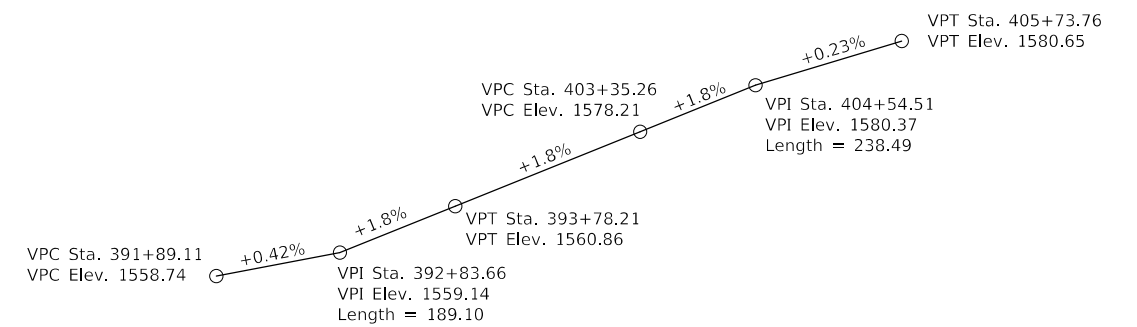
Situation Plan

Design For 0 Degree
Twin 12'x10'x90' Cast In Place Reinforced Concrete Box Culvert
 Situation Plan - CIP
 STA. 396+88.00 (IA 9) Turn-In Date: Oct 2025
Osceola County
 IOWA DEPARTMENT OF TRANSPORTATION
 Design No. 0229 Design Sheet No. 1 of 1 FHWA/Asset 038461

Control Point: Rod w/ cap south side of IA 9 ± 70 ft. east of east 9 sign post ± 4 ft. south of guardrail posts, N:9685154.06, E: 11372139.38, El. 1564.75



Longitudinal Section Along \bar{C} Culvert



Proposed Profile Grade IA 9

Hydraulic Design

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.

Eric J. Dean 10-13-2025
Signature Date

Eric J. Dean
Printed or Typed Name

My license renewal date is December 31, 2026

Pages or sheets covered by this seal: V.2

Plan Notes:

1. Drainage through existing channel must be maintained throughout construction.
2. Culvert invert has been set 1' below channel flowline elevation.

General Notes:

This design is for the replacement of the existing 32' x 30' I-Beam Bridge, Osceola County, Design No. 1850 FHWA No. 038460 Maint. No. 7242.35009

Design Notes:

1. IA 9 will be closed during construction.
2. Additional ROW will be required.

Hydraulic Data

RIDB: NA
 Drainage Area = 2.7 sq. mi.
 Stream Slope = 26.4 Ft/Mi.
 $Q_{50} = 557$ cfs
 HW Elev. = 1557.3 (50 year)
 Exit Velocity = 10.9 fps (50 year)

$Q_{100} = 695$ cfs
 HW Elev. = 1557.7 (100 year)
 Exit Velocity = 11.8 fps (100 year)

Utilities Legend

- F0 - Fiber Optic
- Utility Pole

Utilities shown on this sheet are for information only, see Road Design sheets for final utility information.

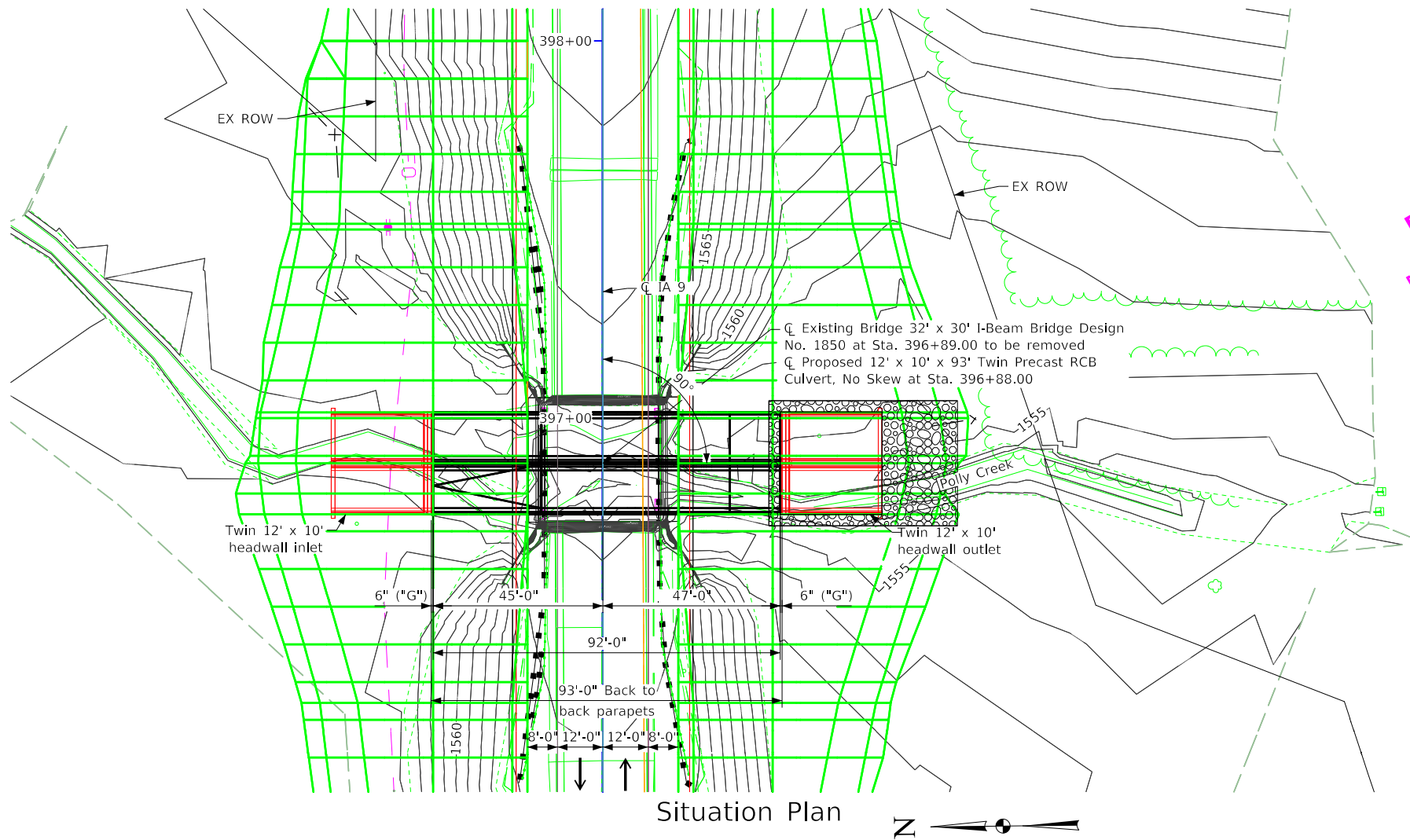
Traffic Estimate

2023 AADT	1910 V.P.D.
2029 AADT	2150 V.P.D.
2029 DHV	-- V.P.H.
TRUCKS	16 %
Total Design ESALs	1,000,000

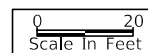
Location

IA 9 over Polly Creek
 In City of Sibley
 T-99N, 100N R-41W
 Sections 6,31
 Wilson Township
 Osceola County
 FHWA No. 038461
 Bridge Maint. No. 7242.35009
 Latitude 43.432663°
 Longitude -95.731180°

Preliminary
Not For Construction



Situation Plan



Design For 0 Degree

Twin 12'x10'x93' Precast Reinforced Concrete Box Culvert

Situation Plan - PC

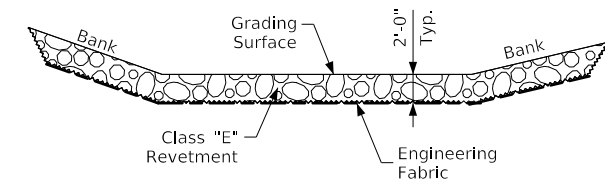
STA. 396+88.00 (IA 9) Turn-In Date: Oct 2025

Osceola County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. 0229 Design Sheet No. 1 of 1 FHWA/Asset 038461

Control Point: Rod w/ cap south side of IA 9 ± 70 ft. east of east 9 sign post ± 4 ft. south of guardrail posts, N:9685154.06, E: 11372139.38, El. 1564.75

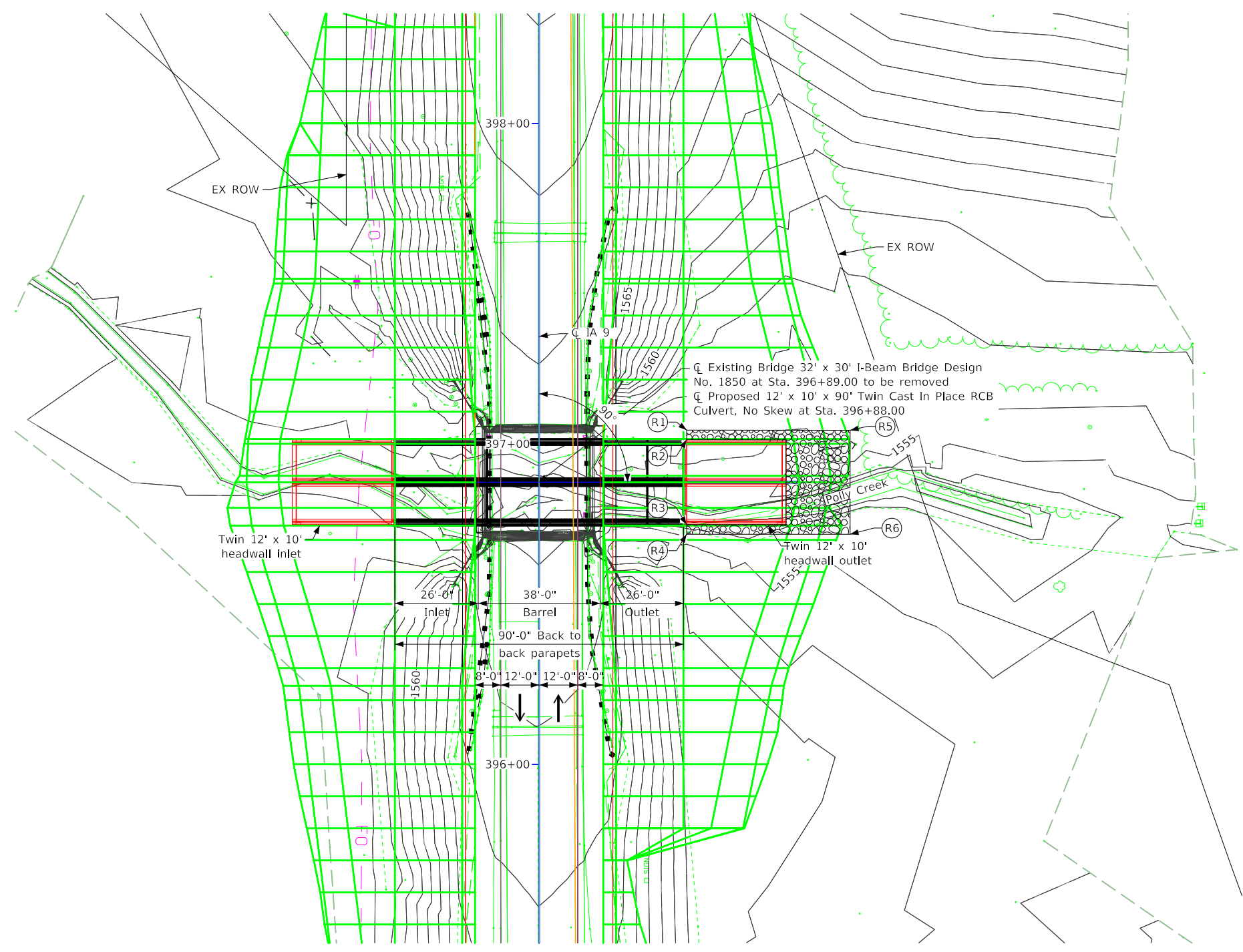


Estimated Revetment Quantities			
Location	Revetment Class "E" (Ton)	Engineering Fabric (SY)	CL. 10 Channel Excavation (CY)
Outlet	102.99	96.55	64.37
Totals	102.99	96.55	64.37

Excavation quantity calculated from grading surface. Quantities shown for information only. Revetment estimated at 1.6 Tons/CY.

Revetment Layout:

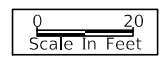
- (R1) Sta. 397+04.25, 46.0' Rt.
- (R2) Sta. 397+01.25, 46.0' Rt.
- (R3) Sta. 396+74.75, 46.0' Rt.
- (R4) Sta. 396+71.75, 46.0' Rt.
- (R5) Sta. 397+04.25, 97.0' Rt.
- (R6) Sta. 396+71.75, 97.0' Rt.



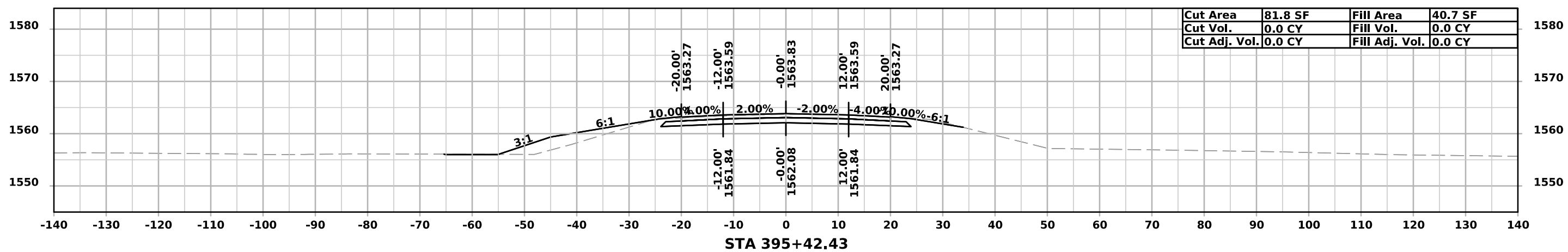
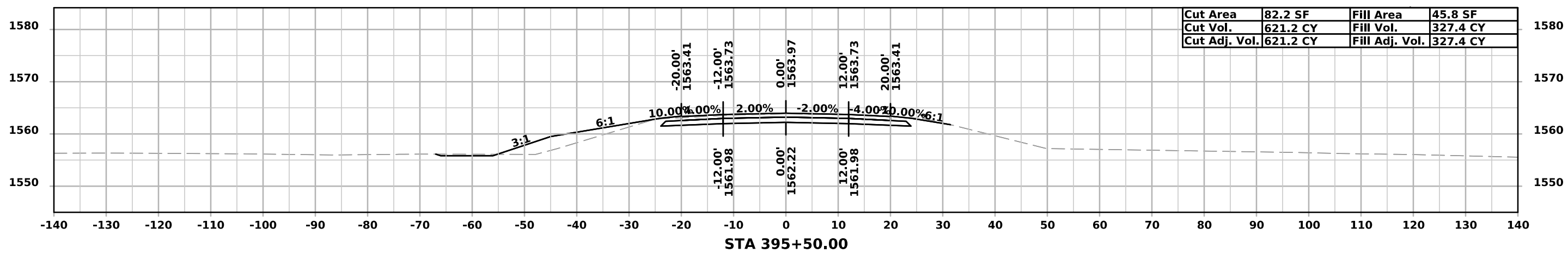
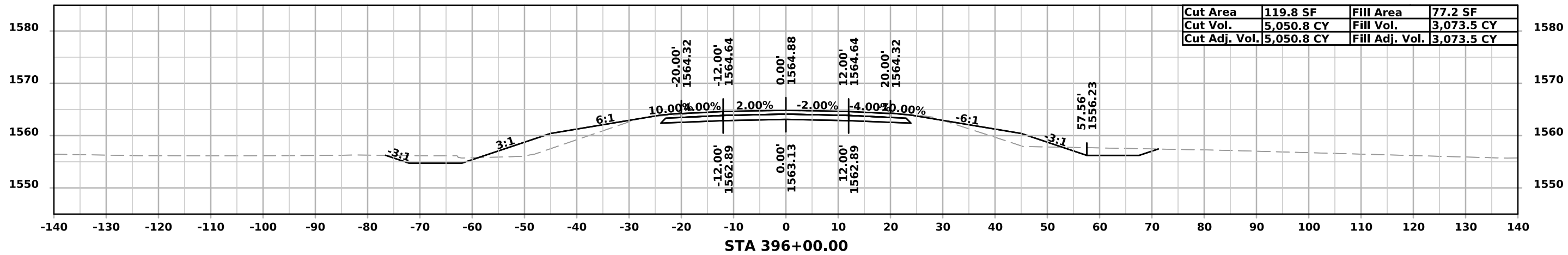
Situation Plan

*Preliminary
Not For Construction*

Design For 0 Degree
**Twin 12'x10' Reinforced
 Concrete Box Culvert**
 Situation Plan - Site
 STA. 396+88.00 (IA 9) Turn-In Date: Oct 2025
Osceola County
 IOWA DEPARTMENT OF TRANSPORTATION
 Design No. 0229 Design Sheet No. 1 of 1 FHWA/Asset 038461



ML - IA 9



ML - IA 9

