

INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	Title Sheets
* A.1	Title Sheet
* A.2	Location Map Sheet
B Sheets	Typical Cross Sections and Details
B.1 - 2	Typical Cross Sections and Details
C Sheets	Quantities and General Information
C.?	Estimated Project Quantities
C.?	Estimate Reference Information
C.?	Standard Road Plans
C.?	Index of Tabulations
C.?	General Notes
C.?	Tabulations
D Sheets	Mainline Plan and Profile Sheets
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2	US 63
G Sheets	Survey Sheets
G.1	Survey General Information
G.2	Control Point Map
G.3	Horizontal Control Tab. & Super for all Alignments
J Sheets	Traffic Control and Staging Sheets
J.1	Traffic Control Plan
J.2	511 Travel Restrictions
J.3	Coordinated Operations
* J.4	Detour Route
R Sheets	Erosion Control Sheets
RC.?	Est. Quantities, PPP, General Notes and Tabulations
* RR.?	Erosion Control Legend and Symbol Information Sheet
* RR.?	Drainage Basin and Erosion Control Device Maps
T Sheets	Earthwork Quantity Sheets
T.?	Earthwork Quantity Sheets
V Sheets	Bridge and Culvert Situation Plans
V.1	Bridge and Culvert Situation Plans
W Sheets	Mainline Cross Sections
* W.1	Cross Sections Legend & Symbol Information Sheet
* W.2 - 10	Mainline Cross Sections
	* Color Plan Sheets



PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
POWESHIEK COUNTY
RCB Culvert-Unspecified
Stream 4.4 mi N of Co Rd G17

<<<H SHEETS

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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



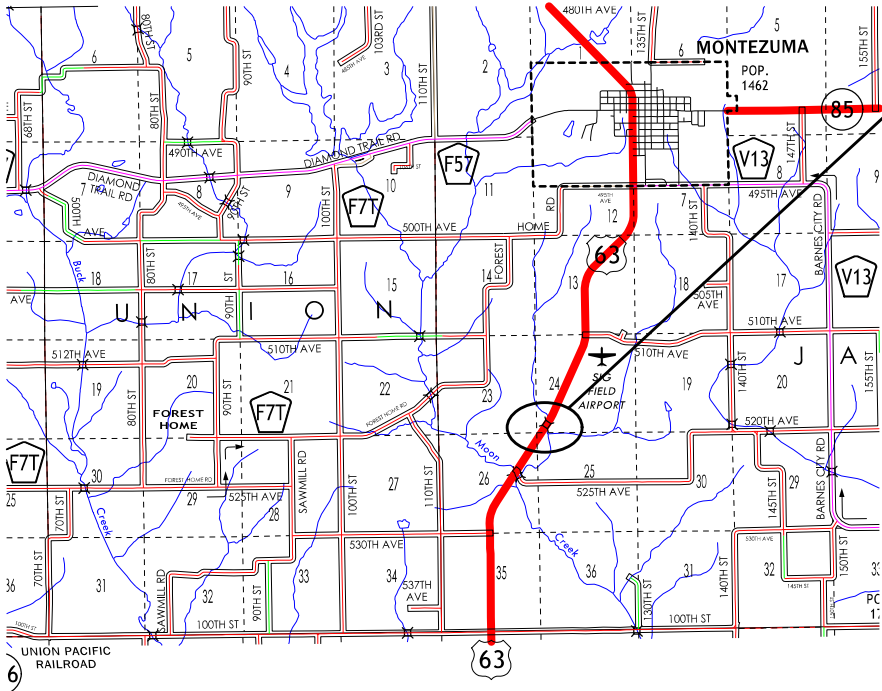
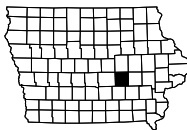
DESIGN DATA RURAL			
2027	AADT	1,700	V.P.D.
2047	AADT	2,000	V.P.D.
20	- DHV	-	V.P.H.
TRUCKS		24	%
Total			
Design ESALs		-	

INDEX OF SEALS			
SHEET NO.	NAME	TYPE	BID QUANTITY SHEETS
A.1	Dung T. Ta	Primary Signature Block	X
X	X	X	X

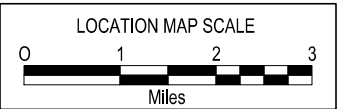
PRELIMINARY PLANS

Subject to change by final design.

D3 PLAN - Date: 4/4/2025



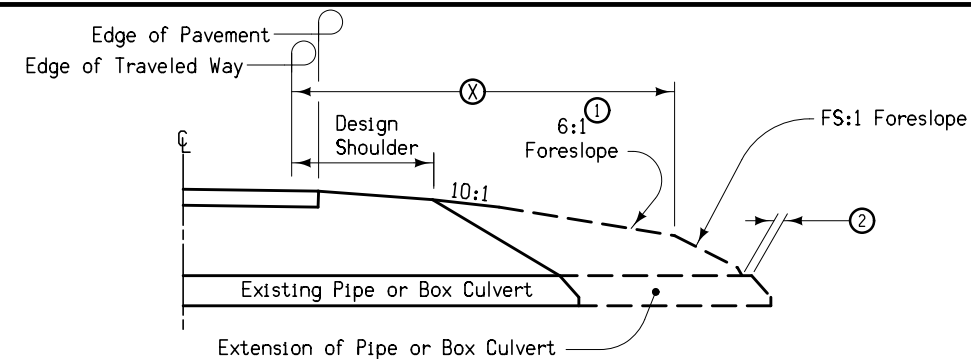
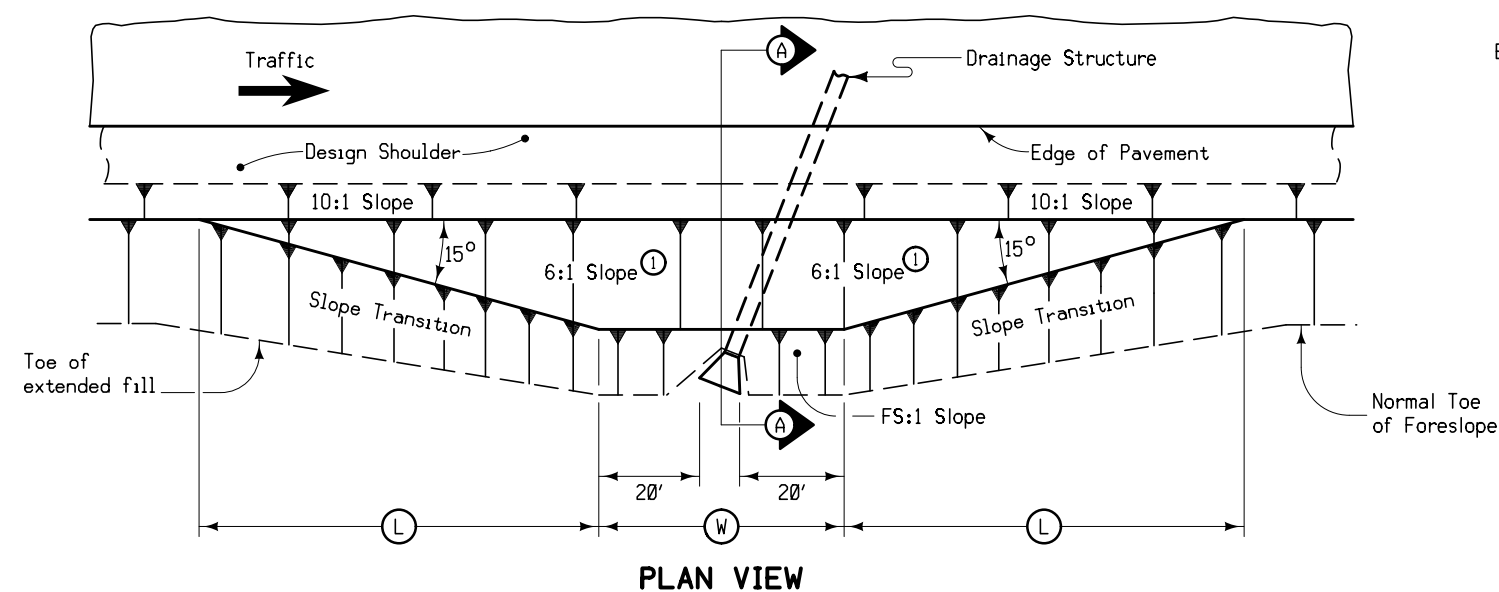
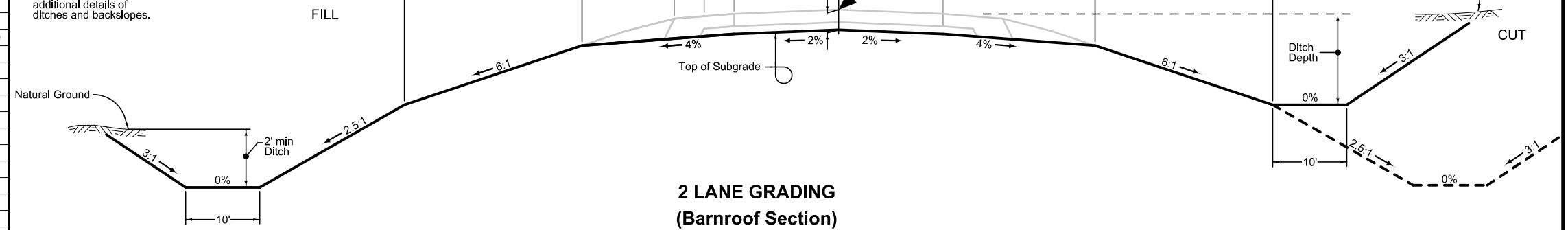
PROJECT LOCATION
Ref. Loc. 85.1
FHWA # 700650



[illegible]

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.



SECTION A-A

STRUCTURE LOCATION		(W)	(L)	(X)	(FS)
STATION (3)	SIDE	Feet	Feet	Feet	
119+62.53	RT	65.7	50	30	2.5
119+62.53	LT	65.7	50	30	2.5

At locations where an extended or newly constructed drainage structure extends beyond the normal foreslope cover, flatten as indicated so as to cover the structure. Minimum earth cover is 6 inches.

- ① Slope may be flatter than 6:1.
- ② 6 inch minimum for pipe installations or to top of headwall on RCB.
- ③ At $\frac{1}{2}$ of roadway.
- ④ = Pipe or RCB opening width plus 20 feet each side.

BARNROOF FORESLOPE AT SKEWED DRAINAGE STRUCTURE

Combination Shoulder

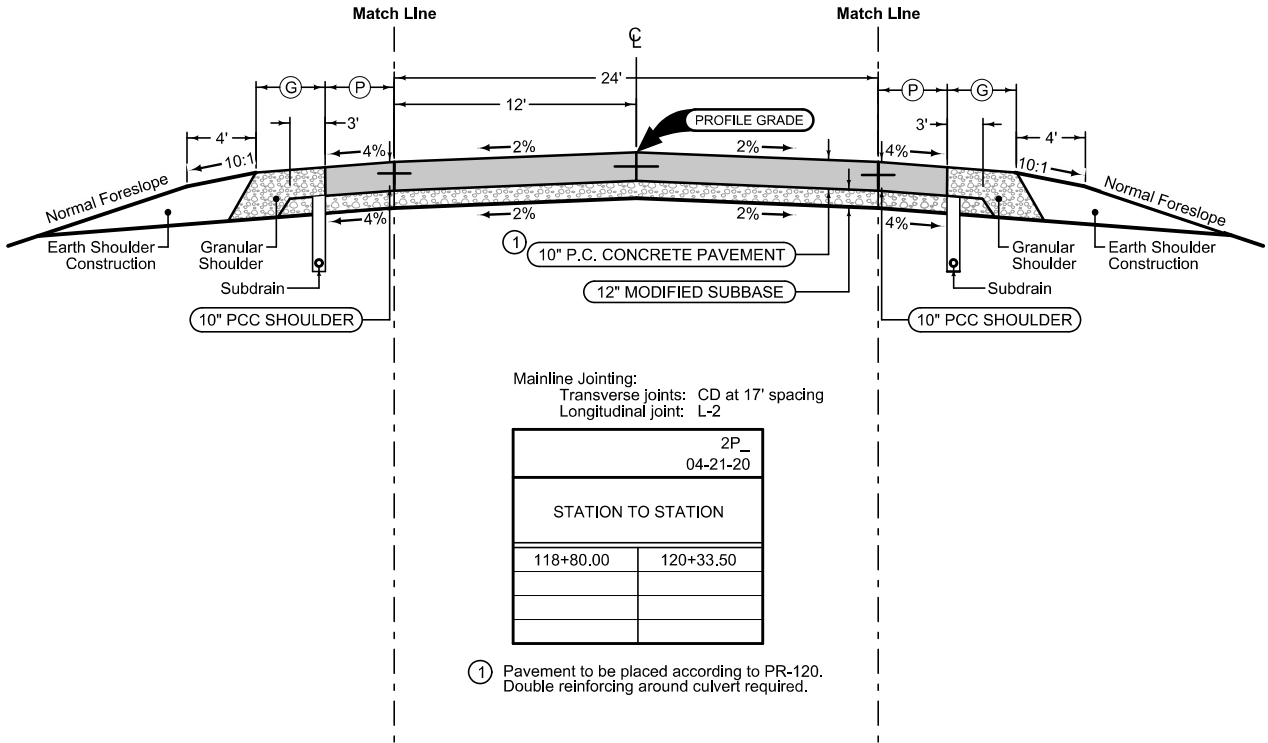
Shoulder Jointing:
Longitudinal joint: B

2_C_ 04-21-20			
STATION TO STATION		(P) Feet	(G) Feet
118+80.00	120+33.50	4	4

Combination Shoulder

Shoulder Jointing:
Longitudinal joint: B

2_C_ 04-21-20			
STATION TO STATION		(P) Feet	(G) Feet
118+80.00	120+33.50	4	4



Combination Shoulder

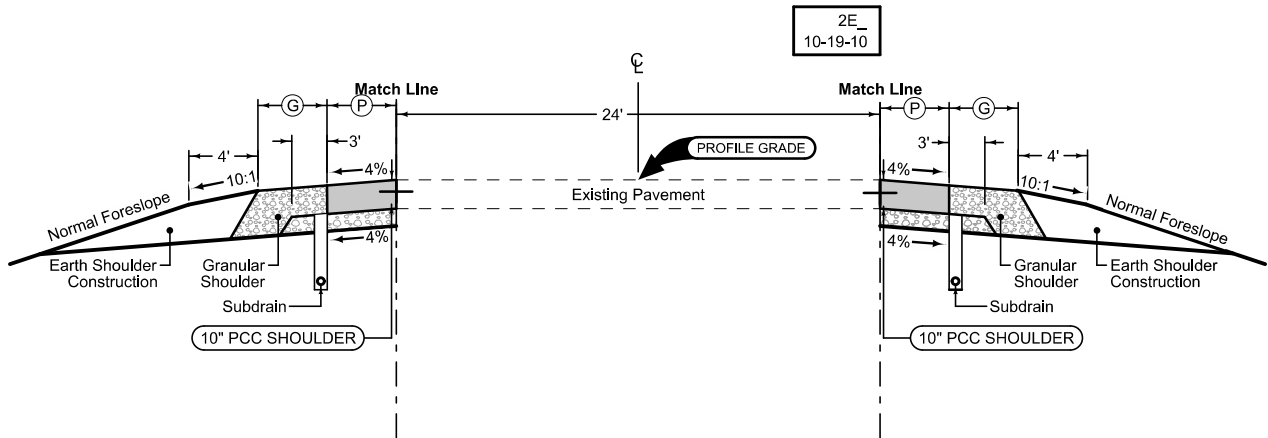
Shoulder Jointing:
Longitudinal joint: B

2_C_ 04-21-20			
STATION TO STATION		(P) Feet	(G) Feet
118+74.50	118+80.00	4	4
120+33.50	120+89.61	4	4
120+89.61	121+68.64	4	4

Combination Shoulder

Shoulder Jointing:
Longitudinal joint: B

2_C_ 04-21-20			
STATION TO STATION		(P) Feet	(G) Feet
117+85.44	118+74.50	4	4
118+74.50	118+80.00	4	4
120+33.50	120+89.61	4	4



SURVEY SYMBOLS

	Interstate Highway Symbol		Septic Tank
	U.S. Highway Symbol		Cistern
	Iowa Highway Symbol		L.P. Gas Tank (No Footing)
	County Road Highway Symbol		Underground Storage Tank
	Evergreen Tree		Latrine
	Deciduous Tree		Satellite TV Dish
	Fruit Tree		Water Hook Up
	Shrub (Bushes)		Radio Tower
	Timber		Tower Anchor
	Hedge		Guardrail (Beam or Cable)
	Stump		Guard Post (one or two)
	Swamp		Guard Post (over two)
	Rock Outcrop		Filler Pipe
	Broken Concrete		Gas Valve
	Revetment (Rip Rap)		Water Valve
	Cemetery		Speed Limit Sign
	Grave		Mile Marker Post
	Cave		Sign
	Sink Hole		Traffic Signal Control Box
	Board Fence		Rail Road Signal Control Box
	Chain Link or Security Fence		Telephone Switch Box
	Wire Fence		Electric Box
	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)		

UTILITY LEGEND

Poweshiek Water Association
Chad Coburn (Water)
chad@poweshiekwater.com

MidAmerican Energy Company
Matt Novy (Electrical)
mdnovy@midamerican.com
515.242.4224

Note: All utilities are outside of disturbed areas.

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

	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)

Survey Information

SURVEY INDEX

County : Poweshiek
Project Code : 22-79-063-010
Phase Number : BRF-063-4(058)--38-79
Location : Stream 4.4 mi N of Co Rd G17
Work Code : 3001-RCB Culvert-Unspecified
Project Directory : 7906301022

Survey Personnel

Samuel Schilb – Assistant Survey Party Chief

Date(s) of Survey

Begin Date 11/13/2024
End Date 12/12/2024

General Information

This survey is for the replacement of the existing 17’ x 10’ RCB with a 16’ x 9’ x 144’ Single Reinforced Concrete Box Culvert (RCB). This survey request was for the US Hwy 63 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

Coordinates were determined for primary project control points by conducting concurrent six-hour static observations. Post processing is constrained to nearby Iowa Real Time Network reference stations. For additional details of the control survey, contact the Preliminary Survey department.

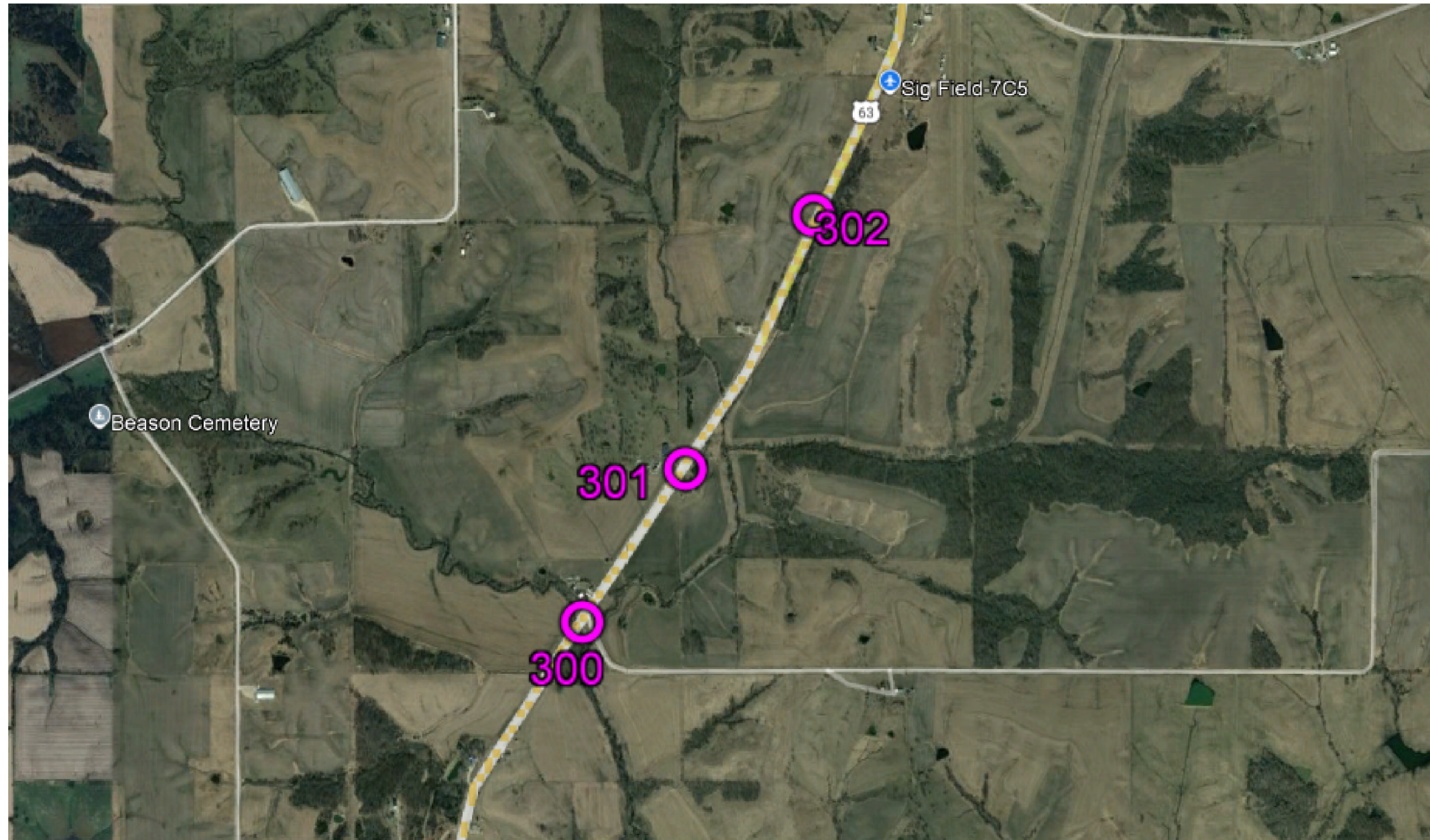
PROJECT DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 ADJUSTMENT)
COORDINATE SYSTEM: IOWA REGIONAL COORDINATE SYSTEM ZONE 09
(U.S. SURVEY FOOT)
VERTICAL DATUM: NAVD88
GEOID MODEL: 2018u3

Alignment Information

Provided by District 1 Right of Way Survey Crew.

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 09 (U.S. Survey Foot)

VERT. DATUM: NAVD88 - Geoid Model: 2018u3

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 09 (U.S. Survey Foot)
VERT. DATUM: NAVD88
Geoid Model: 2018u3

Point Name	Northing	Eastings	Elevation	Code Description
302	7672181.56	19575539.98	843.55	CP Set IDOT FENO Monument 4" Below Surface
300	7667405.11	19572844.87	788.03	CP Set IDOT FENO Monument 4" Below Surface
301	7669181.72	19574005.94	816.96	CP Set IDOT FENO Monument 4" Below Surface

5:47:43 PM

1/21/2025

ctap

pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\7906301022\Design\CADD_Files\Sheet_Files\79063058_G01.dgn

NO ACCESS RIGHTS ARE TO BE ACQUIRED ON THIS PROJECT.

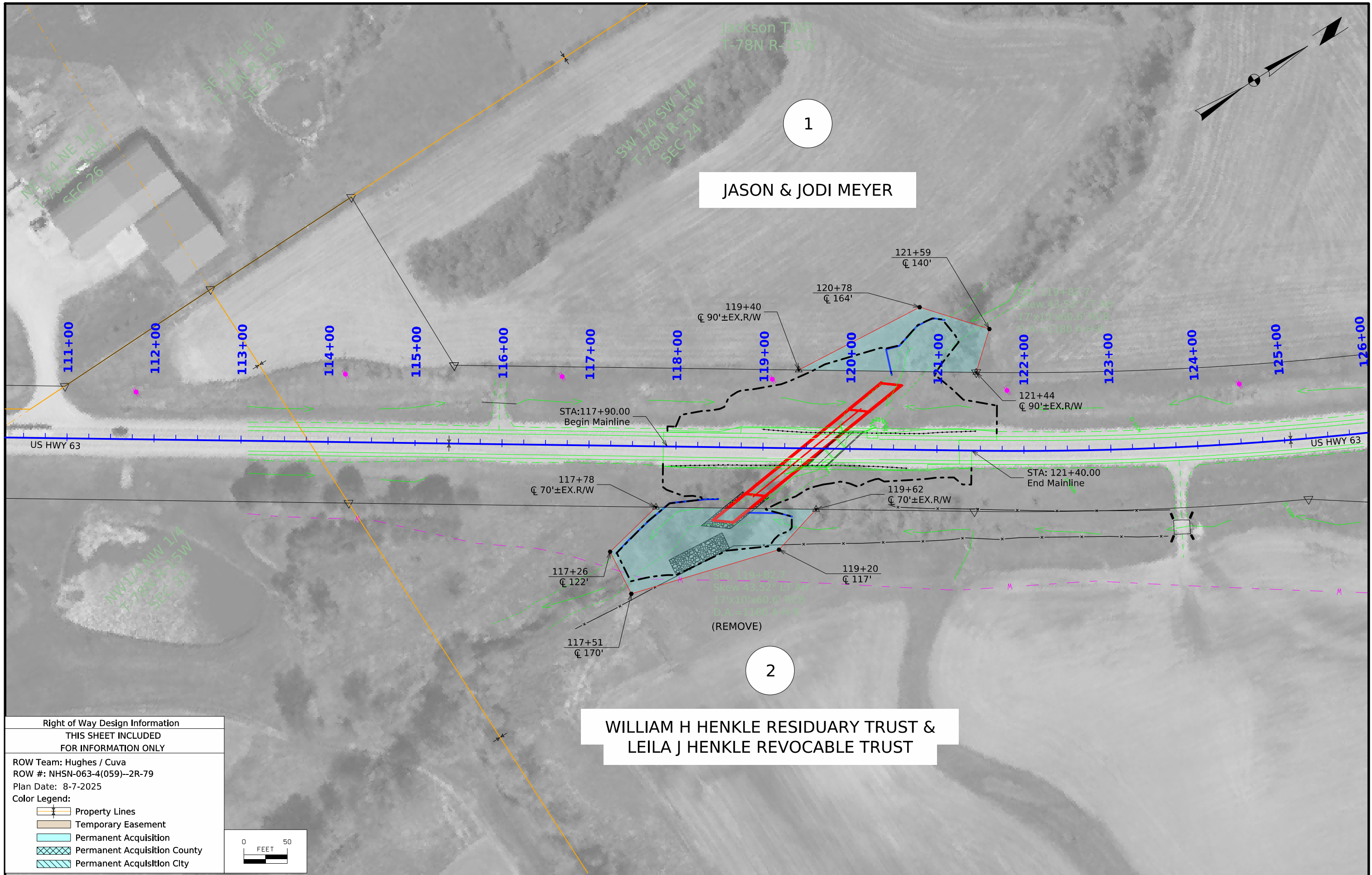
Poweshiek **NHSN-063-4(059)--2R-79**
Stream 4.4 mi N of Co Rd G17
[7906301022](#)

Project Code **22-79-063-010**

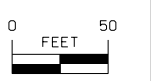
Route **US 63**

		State		County			City				Temp Ease						
Parcel No	Owner Name	Fee	Ease	Fee	Ease		Fee	Ease		Excess			Mitigation	Other	Relocation Needed	A/C Only	Total Acq
1	Jason Meyer		0.22 AC														
2	Leila J Henkle Revocable Trust		0.32 AC														

2 Parcels



Right of Way Design Information			
THIS SHEET INCLUDED			
FOR INFORMATION ONLY			
ROW Team: Hughes / Cuva			
ROW #: NHSN-063-4(059)--2R-79			
Plan Date: 8-7-2025			
Color Legend:			
	Property Lines		
	Temporary Easement		
	Permanent Acquisition		
	Permanent Acquisition County		
	Permanent Acquisition City		



FILE NO. 98765	ENGLISH	DESIGN TEAM FLATTERY / TAP	POWESHIEK COUNTY	PROJECT NUMBER BRF-063-4(058)--38-79	SHEET NUMBER H.1
----------------	---------	----------------------------	------------------	--------------------------------------	------------------

108_23A
8/15/22

TRAFFIC CONTROL PLAN

Traffic on US 63 shall be maintained at all times using an off-site detour throughout construction.
Refer to following J sheet for detour route and detour signing information.

511 TRAVEL RESTRICTIONS

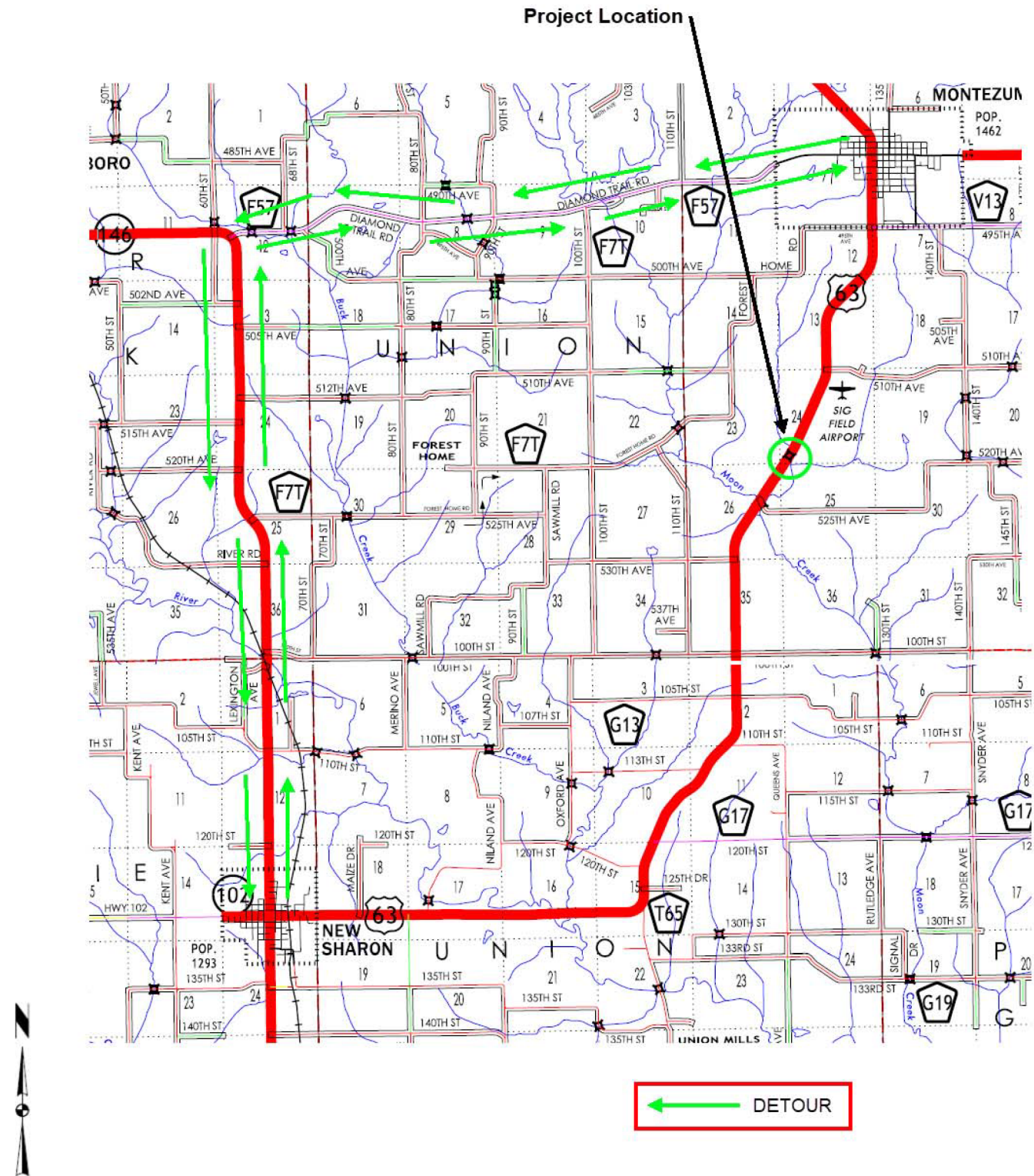
Line No.	Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No. or Structure ID or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
1.0	US 63	Both	Poweshiek	US 63 over Stream 4.4 mi N of Co Rd G17		Traffic Control Device		Horizontal	24				Road Closure

111_01
10/14/22

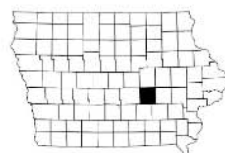
COORDINATED OPERATIONS

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 Provided	



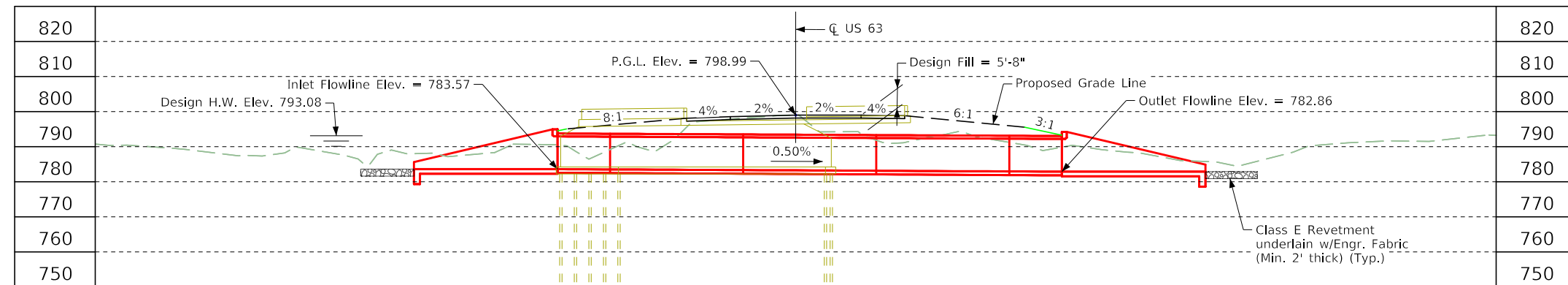
Detour map with signing
to be provided by District
at a later date



Poweshiek County
Stream 4.4 mi North of County Road G17
BRF-063-4(058)--38-79
PIN:: 22-79-063-010



Control Point:



Hydraulic Data

RIDB: Not Applicable
Drainage Area = 1178 Acres
 $Q_{50} = 1075$ cfs
HW Elev. = 793.08
Exit Velocity = 15.9 fps
Stream Slope = 29.6 Ft./Mi.

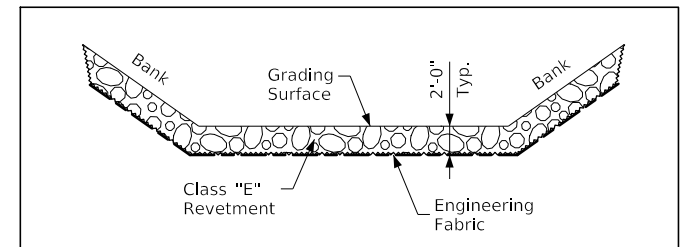
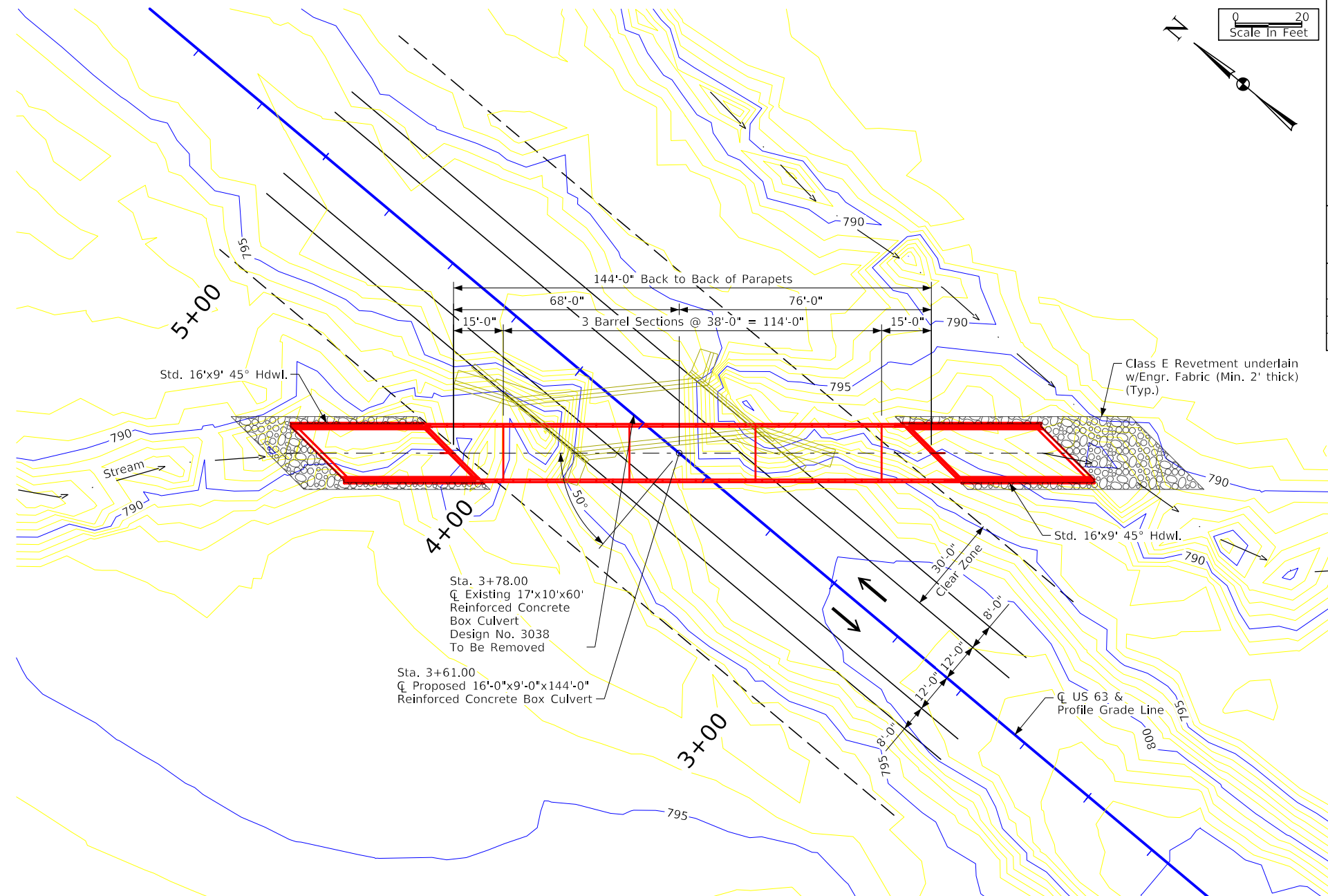
Traffic Estimate

20?? AADT	??? V.P.D.
2047 AADT	1700 V.P.D.
20?? DHV	??? V.P.H.
TRUCKS	?? %
Total	???
Design ESALs	???

Longitudinal Section Along $\mathcal{C}_L$ Culvert

Anticipated Settlement = $x' - x''$; Design Fill = 5'-8"

Note:
Flowline of culvert has been set 1'
below streambed.



Typical Channel Protection

Estimated Revetment Quantities Included With Road Plans

Location	Revetment Class "E" (Ton)	Engineering Fabric (SY)	CL. 10 Channel Excavation (CY)
Inlet	65	60	40
Outlet	100	95	65
Totals	165	155	105

Excavation quantity calculated from grading surface. Excavation quantity is for embedded revetment core out only, and does not include excavation to the grading surface. Excavation quantity to the grading surface is determined by Road Design and included in the Road Plans.

Quantities shown for information only. See Road Sheets.

Location

US 63 over Small Stream
T-78N R-15W
Section 24
Jackson Township
Poweshiek County
FHWA No. 700651
Bridge Maint. No. 7985.15063
Latitude 41.539547°
Longitude -92.544628°

Situation Plan

This design is for the replacement of the existing 17'x10'x60' reinforced concrete box culvert, Poweshiek Design No. 3038, FHWA No. 700650, Maint. No. 7985.15063.

Design For 50 Degree LA
16'-0" x 9'-0" x 144'-0"
Reinforced Concrete Box Culvert

Situation Plan

STA. 3+61.00 (Q US 63) Turn-in Date: Oct 2023
Poweshiek County
 IOWA DEPARTMENT OF TRANSPORTATION
 Design No. ??? Design Sheet No. 1 of 1 FHWA/Asset 700651

CROSS SECTION VIEW COLOR LEGEND			
Design Color No.	Feature	Design Color No.	Feature
Aggregate		Grading	
(64)	Choke Stone	(8)	Behind Curb Cut
(42)	Engineering Fabric	(6)	Granular
(8)	Flooded Backfill	(13)	Granular Back Fill
(92)	Macadam Stone	(48)	Rock Undercut
(20)	Modified	(8)	Shoulder Earth Fill
(12)	Plowing Shaping	(2)	Side Slopes
(14)	Porous Backfill	(226)	Side Slopes Dressing
(8)	Revetment Class A	Substrata	
(6)	Revetment Class B	(128)	Boulder
(62)	Revetment Class C	(209)	Boulder Removed
(188)	Revetment Class D	(48)	Broken Weathered
(28)	Revetment Class E	(210)	Broken Weathered Removed
(12)	Shoulder Special Backfill	(3)	Core Out
(12)	Special Backfill	(115)	Core Out Remove Only
(20)	Subbase	(195)	Core Out Remove and Replace
(20)	Subbase Lower	(203)	Existing Pavement
(20)	Subbase Upper	(184)	Existing Pavement Remove Only
(118)	Subgrade Treatment	(200)	Existing Pavement Remove and Replace
Asphalt		(6)	Loam
(207)	HMA Base Course	(211)	Loam Removed
(207)	HMA Interim Course	(80)	Rock
(207)	HMA Surface Course	(212)	Rock Removed
Bridge		(4)	Select Sand
(0)	Bridge	(214)	Select Sand Removed
Concrete		(3)	Shale
(0)	Barrier Concrete	(215)	Shale Removed
(0)	Barrier Concrete Footing	(10)	Topsoil
(0)	Curb Gutter	(2)	Topsoil Remove Only
(48)	Flowable Mortar	(4)	Topsoil Remove and Replace
(0)	Median Concrete	Unsuitable / Waste	
(0)	PCC Pavement	(3)	Unsuitable Type A
(0)	Sidewalk	(216)	Unsuitable Type A Removed
Existing		(13)	Unsuitable Type B
(0)	Existing Pavement	(217)	Unsuitable Type B Removed
Shoulder		(11)	Unsuitable Type C
(209)	Shoulder HMA	(218)	Unsuitable Type C Removed
(0)	Shoulder PCC	(3)	Waste
(6)	Shoulder Granular	(219)	Waste Removed
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		

NOTES:

Text

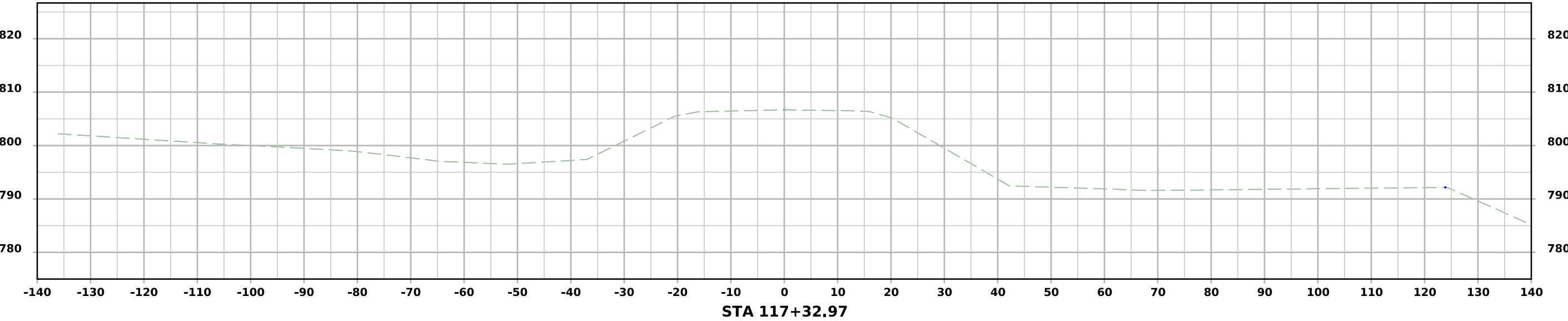
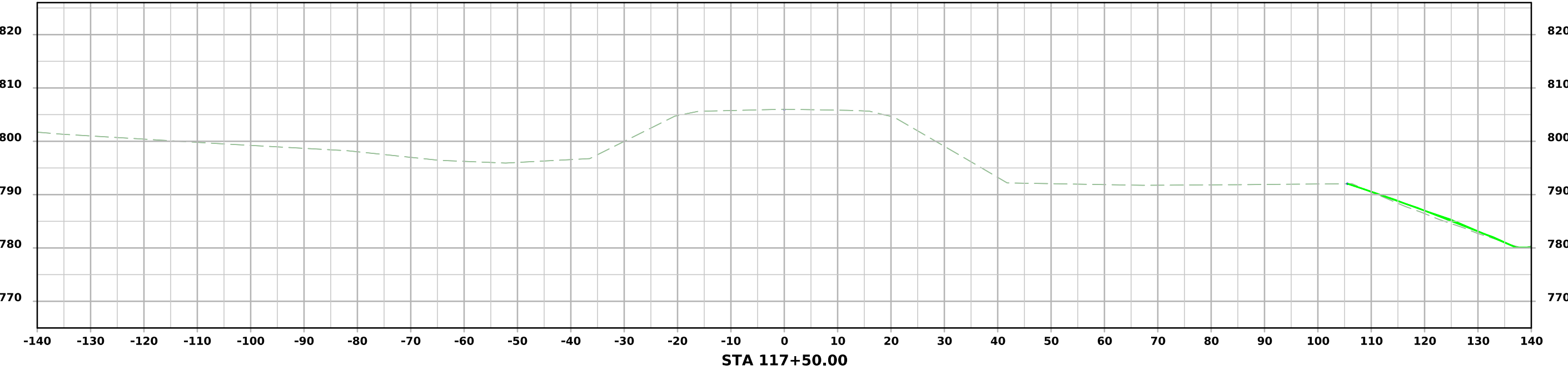
NOTES:

Text

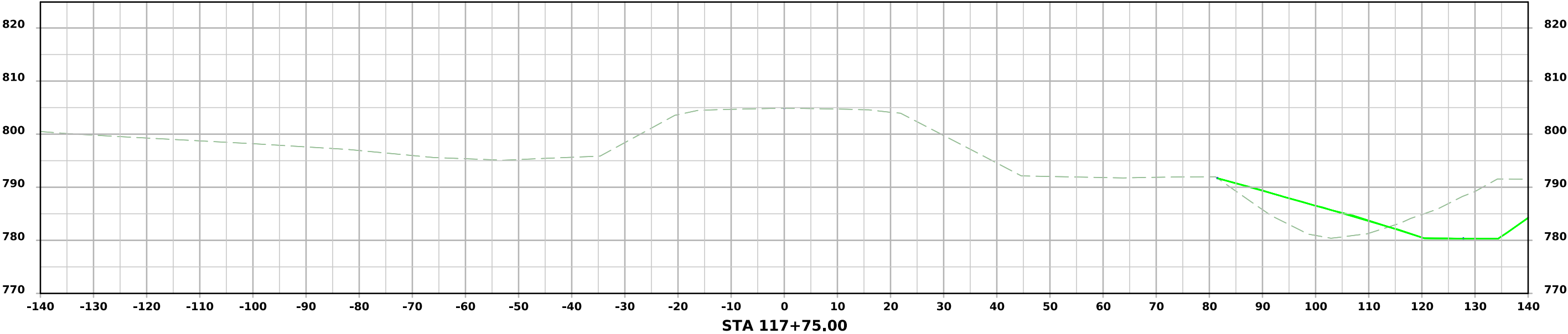
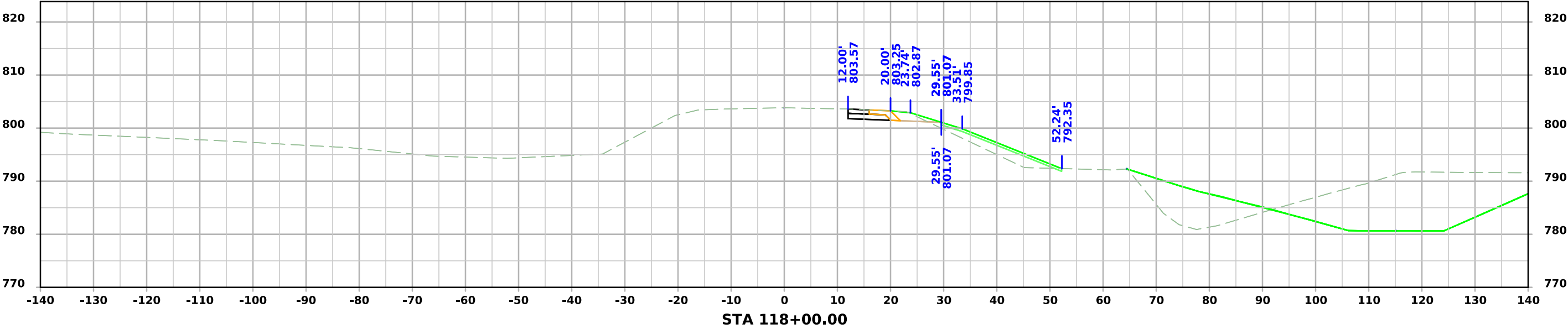
CROSS SECTIONS
LEGEND AND INFORMATION SHEET

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

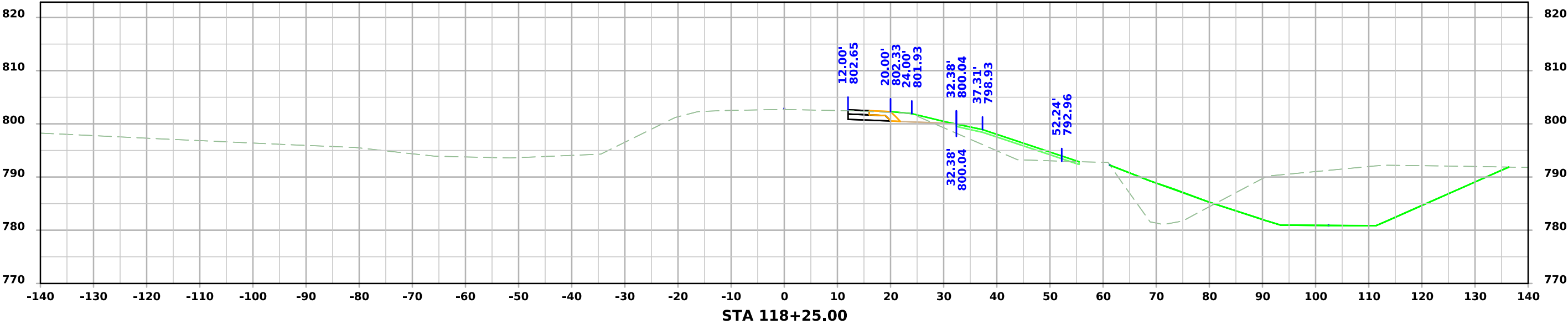
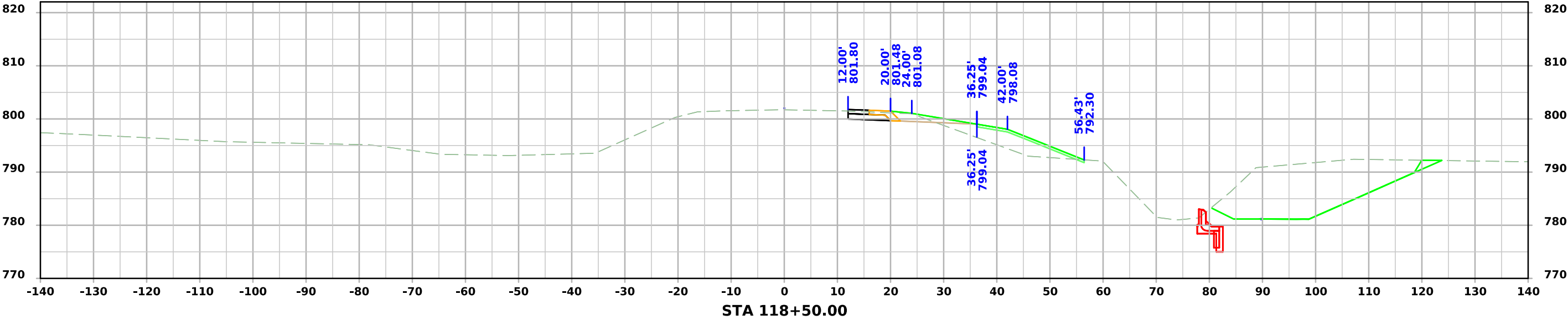
ML - US63



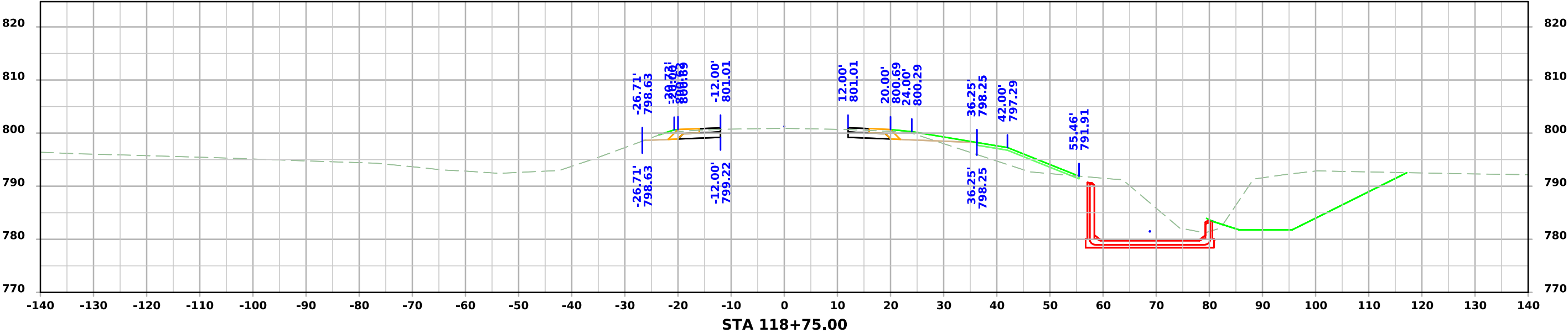
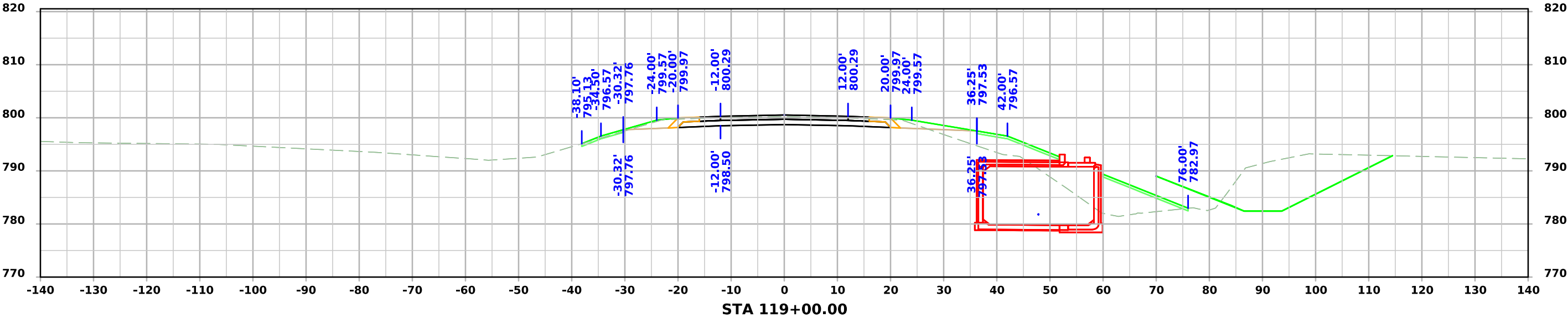
ML - US63

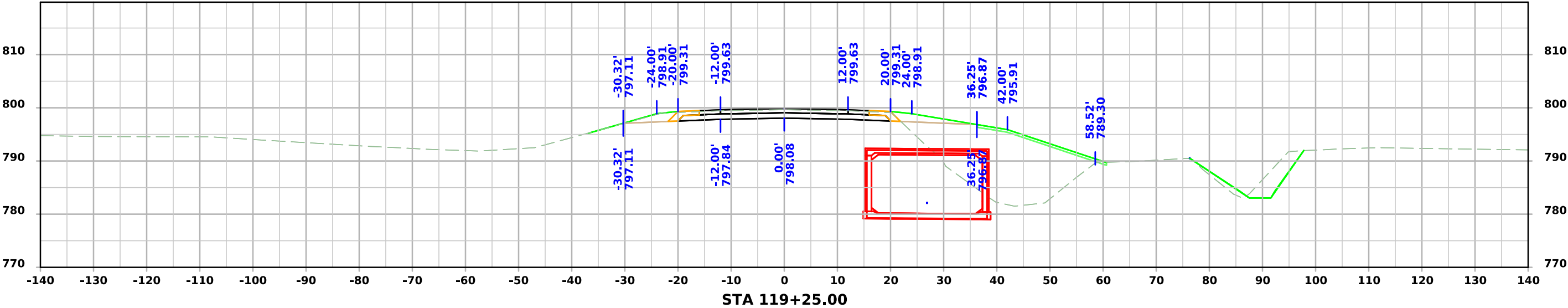
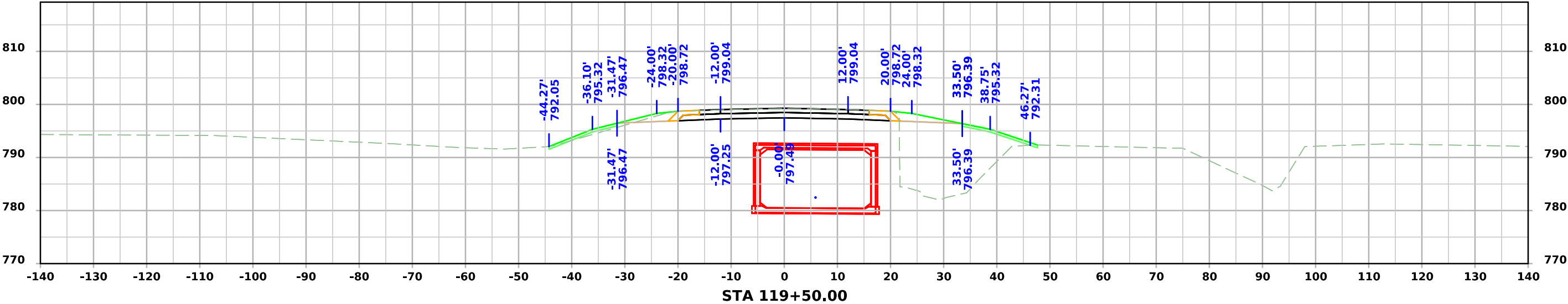


ML - US63

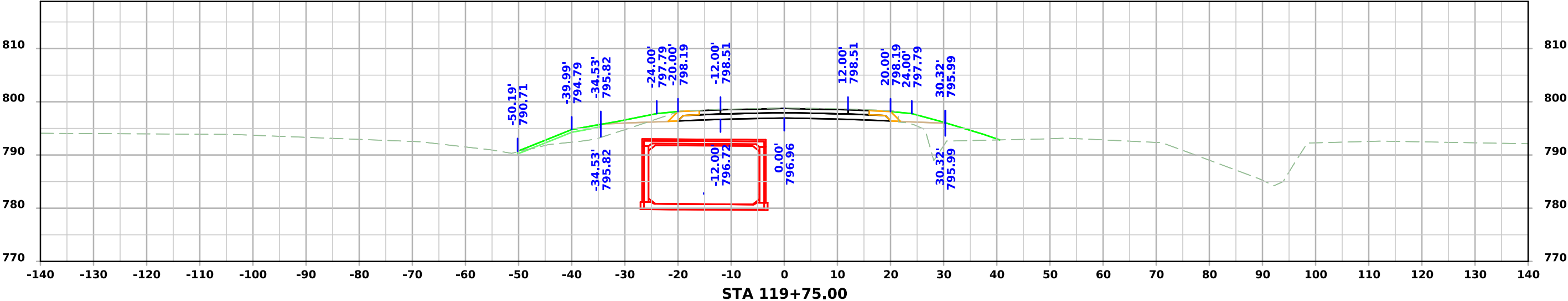
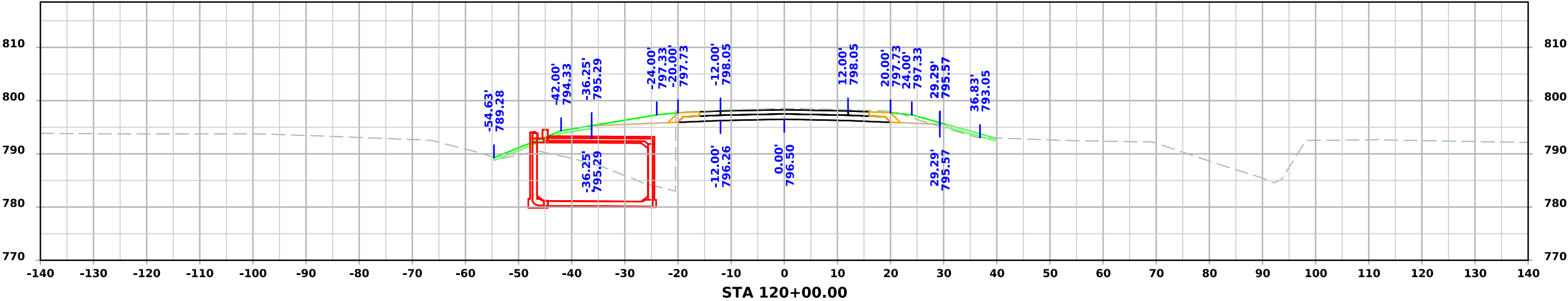


ML - US63

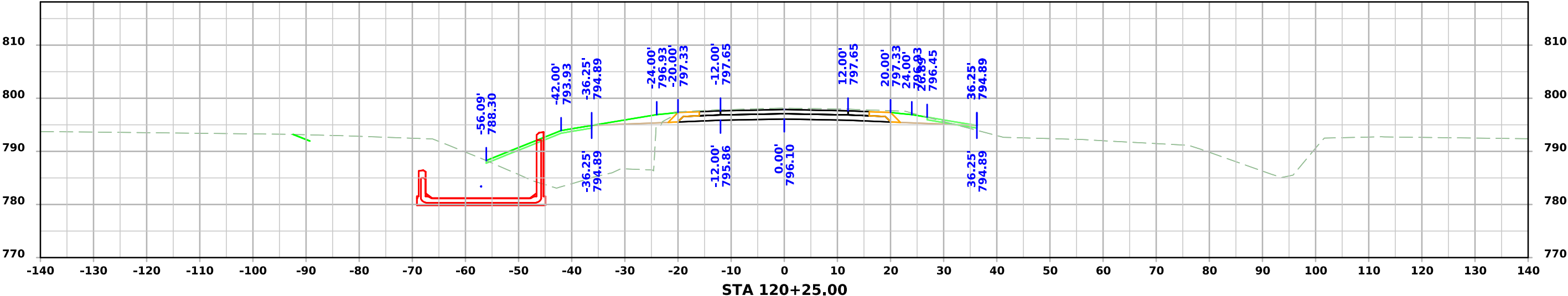
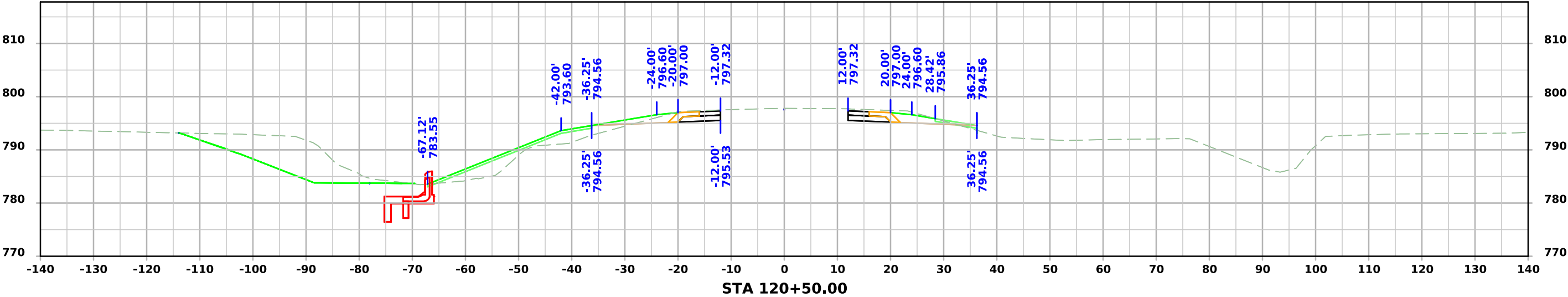




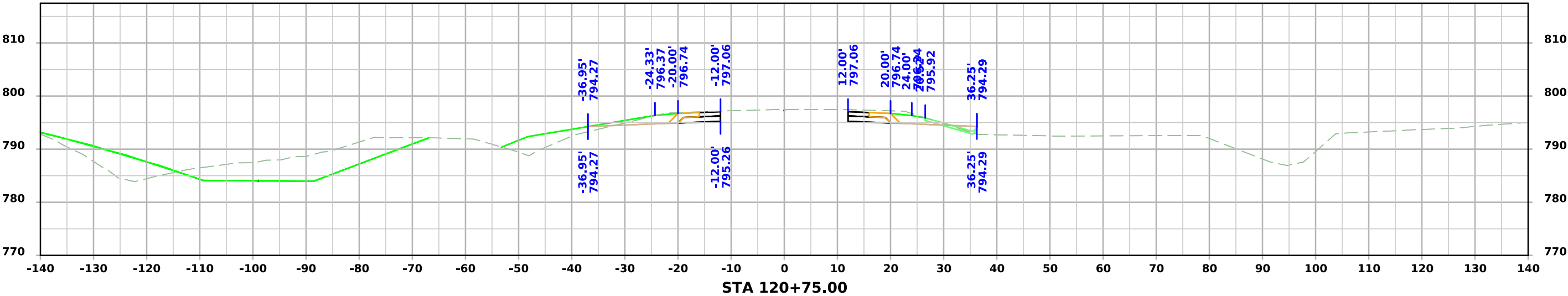
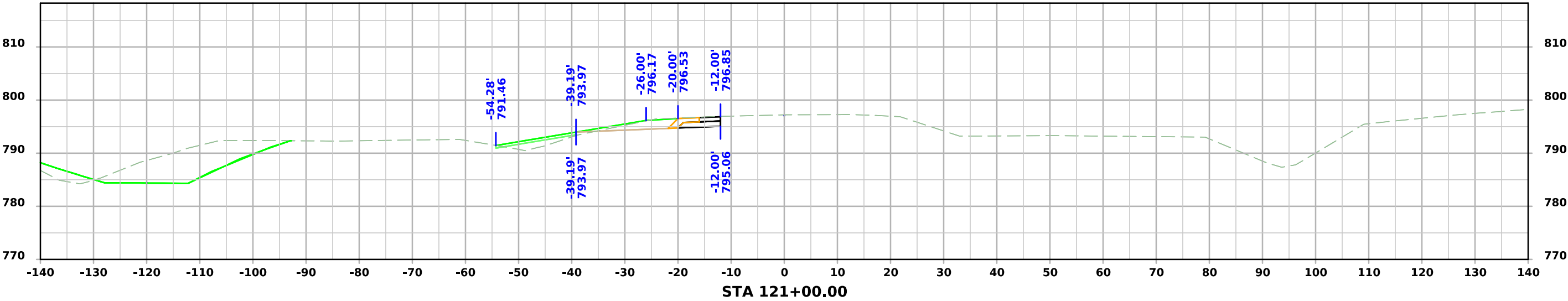
ML - US63



ML - US63



ML - US63



ML - US63

