

PCC Pavement - Grade and New  
 HSIPX-063-5(078)--3L-86

LETTING DATE  
 Apr 15 2025

**TAMA COUNTY**

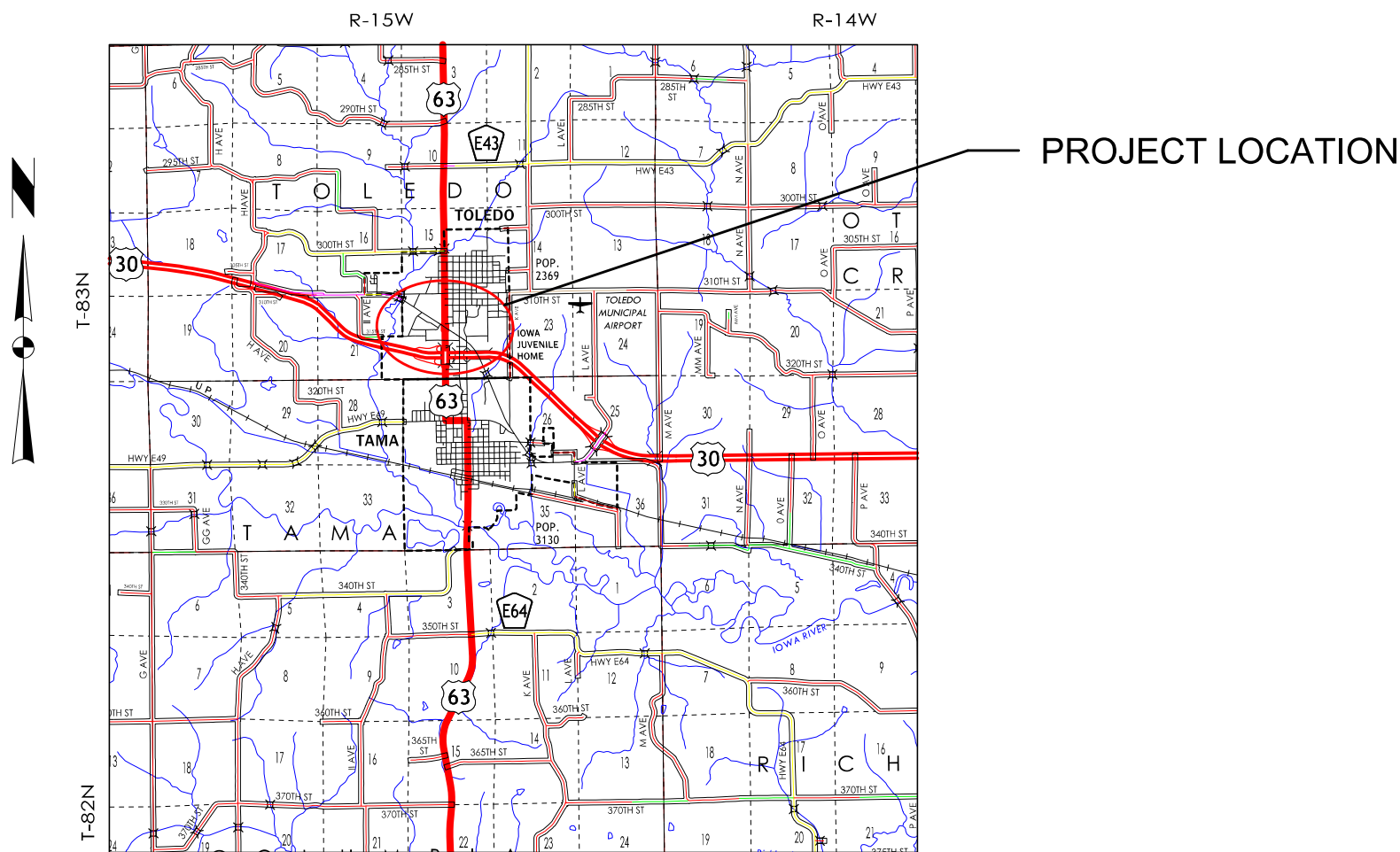


PLANS OF PROPOSED IMPROVEMENT ON THE  
**PRIMARY ROAD SYSTEM**  
**TAMA COUNTY**  
 PCC Pavement - Grade and New  
 US Highway 63  
 Business US 30 Intersection in Toledo

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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



REVISIONS

TOTAL

PROJECT IDENTIFICATION NUMBER

24-86-063-010

PROJECT NUMBER

HSIPX-063-5(078)--3L-86

R.O.W. PROJECT NUMBER

**INDEX OF SHEETS**

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A.2	Project Overview
A.3	Design Criteria
<b>B Sheets</b>	<b>Typical Cross Sections and Details</b>
B.1	Typical Cross Sections and Details
<b>D Sheets</b>	<b>Mainline Plan and Profile Sheets</b>
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - 3	US 63
<b>E Sheets</b>	<b>Side Road Plan and Profile Sheets</b>
* E.1 - 3	BUS 30
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G.1	Survey Information
G.2	Control Point Vicinity Map
G.3	Horizontal and Vertical Control Tab
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* J.2 - 6	Staging and Traffic Control Sheets
<b>M Sheets</b>	<b>Storm Sewer Sheets</b>
M.1	Storm Sewer Legend & Symbol Information Sheet
M.2	Drainage Overview
<b>W Sheets</b>	<b>Mainline Cross Sections</b>
W.1	Mainline Cross Sections - US 63
<b>X Sheets</b>	<b>Side Road Cross Sections</b>
X.1	Side Road Cross Sections - BUS 30
	* Color Plan Sheets

**PRELIMINARY PLANS**

Subject to change by final design.

**D2 PLAN - Date: 7/24/2024**

FILE NO.

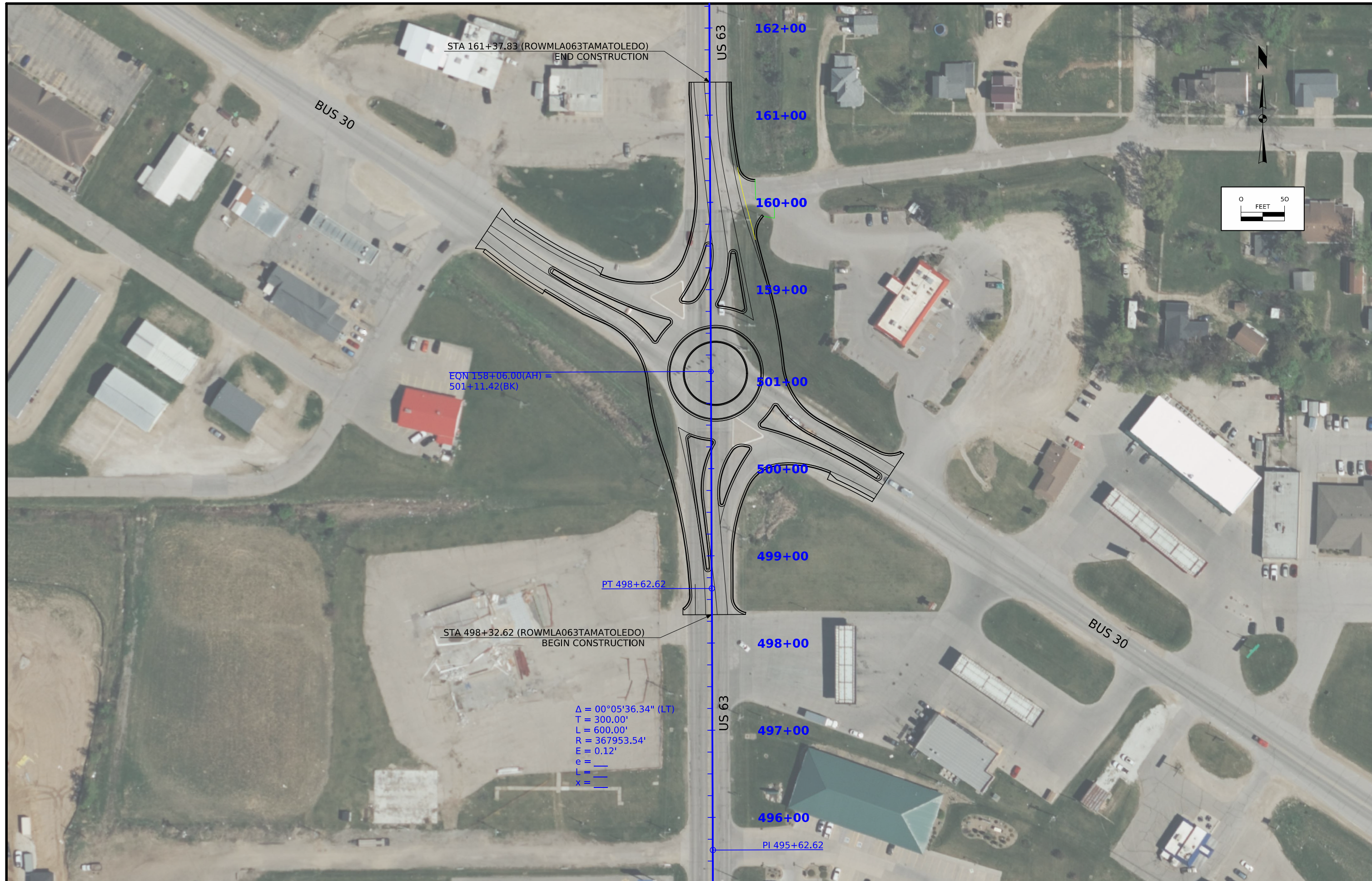
ENGLISH

DESIGN TEAM **MSA PROFESSIONAL SERVICES**

TAMA COUNTY

PROJECT NUMBER **HSIPX-063-5(078)--3L-86**

SHEET NUMBER **A.1**

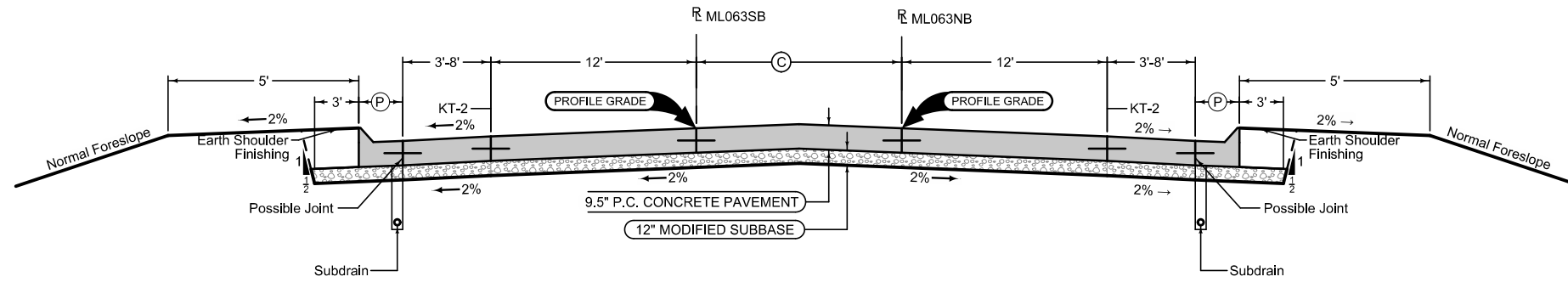


<b>Roadway</b>	USH 63/BUS 30		
<b>PIN Number</b>	24-52-006-040	<b>Submittal Date</b>	07/24/24
<b>Project Number</b>	STP-006-7(098)--2C-52	<b>Approval Date</b>	
<b>District</b>	District 6	<b>Assistant District Engineer</b>	Jeremey Vortherms
<b>County</b>	TAMA	<b>or</b>	
<b>Route</b>	USH 63/BUS 30	<b>Office Director</b>	
<b>Location</b>	BUSINESS US 30 INTERSECTION IN TOLEDO, IA		
<b>Work Type</b>	1013-PCC PAVEMENT - GRADE AND NEW		
<b>Segment Manager</b>			
<b>Designer</b>	MSA PROFESSIONAL SERVICES		

Urban Two-Lane Roadways (Urban Arterials)			
Design Element	Preferred	Acceptable Criteria	Project Values
Design speed (mph)	40	35	40
Maximum superelevation rate (Refer to Section 2A-2)	4%	6%	N/A
Design lane width (ft)	12	11	12
Full depth paved width (ft)	15.5	14.5	15.5
Right turn lane (ft)	12	10	12
Left turn lane (ft)	With raised or painted median	12 ft + median	10 ft + median
	With depressed median	12	10
Two-way left turn lane	14	11	N/A
Parking lane width (ft)	10	7	N/A
Pavement cross-slope (on tangent sections)	Through lanes	2%	1.5% minimum, 2% maximum
	Auxiliary and turn lanes	3%	3% maximum
	Crown break at centerline	4%	4% maximum
Shoulder cross-slope (on tangent sections)	Shoulders	4%	Shoulder cross-slope cannot be less than the adjacent lane, 6% max for paved or granular shoulders, 8% max for earth shoulders
	Curb and gutter units	Match pavement cross-slope	6% maximum
	Parking lanes	1% greater than pavement cross-slope	6% maximum
Curb type (See Section 3C-2)	Design speed ≤ 45 mph	6-inch standard	any shape
Foreslope (For fill areas greater than 40 ft, contact the Soils Design Section for assistance)	Adjacent to shoulder	10:1 for 4' then 6:1	3:1
	Beyond standard ditch depth and design clear zone	3.5:1	3:1
	Curbed roadways	2%	not steeper than 3:1
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)	3:1	2.5:1	3:1
Traverse Slopes	w/ drainage structures	8:1	6:1
	w/o drainage structures	10:1	6:1
Ditches (See Section 3G-1)	Outside ditch (depth x width) (ft)	5 x 10	--
Bridge width—new*	Bridge length ≤ 200 ft	design lane widths + effective shoulder widths (curbed or uncurbed) or design lane width + 3 ft each side (curbed) which ever is greater	design lane widths + effective shoulder widths or curb-to-curb width in curb and gutter section**
	Bridge length > 200 ft	design lane widths + effective shoulder widths (curbed or uncurbed) or design lane width + 3 ft each side (curbed) which ever is greater	design lane widths + 4 ft offset each side for roadways with shoulders or curb-to-curb width in curb and gutter section**
Bridge width—existing*		design lane widths + no less than 2 ft left and right	design lane widths + 2 ft left and right
Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks)	Over primary	16.5	16
	Over non-primary	16.5 at interchange locations, 15 at all other locations	14
	Over railroad	23.3	23.3
	Sign trusses and pedestrian bridges	17.5	17
Structural Capacity	Contact Office of Bridges and Structures	Contact Office of Bridges and Structures	Contact Office of Bridges and Structures
Level of Service	C	D	C

\*FHWA notification via email is required if acceptable criteria is not met on the NHS system (No formal design exception is required)  
\*\* If travel lanes are less than 12 ft wide contact the Methods Section for assistance.

**DESIGN CRITERIA  
US 63  
Business US 30 Intersection in Toledo**



**Curbed Shoulder**

Shoulder Jointing:  
 Longitudinal joint not required when distance from back of curb to nearest joint is less than XX':

Single pour: XXX  
 Staged: XXX  
 Transverse: XXX

STATION TO STATION		(P) Feet	Curb Type See PV-102
4953+32.51	4953+81.00	2.5	6" STD
4957+64.00	4959+56.81	2.5	6" STD

Mainline Jointing:  
 Transverse joints: XXX  
 Longitudinal joint: XXX

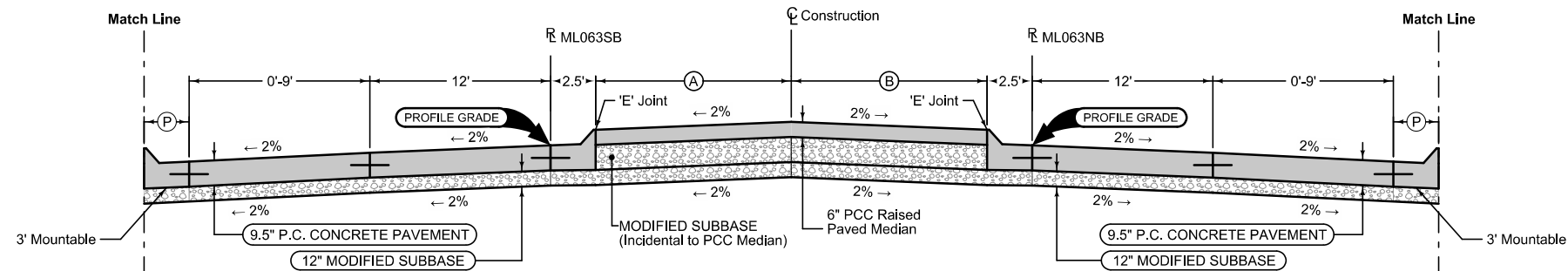
STATION TO STATION		(C) Feet
4953+32.59	4953+81.00	9'-13"
4957+65.00	4959+57.43	9'-13"

**Curbed Shoulder**

Shoulder Jointing:  
 Longitudinal joint not required when distance from back of curb to nearest joint is less than XX':

Single pour: XXX  
 Staged: XXX  
 Transverse: XXX

STATION TO STATION		(P) Feet	Curb Type See PV-102
4953+32.59	4953+81.00	2.5	6" STD
4957+65.00	4959+57.43	2.5	6" STD



**Curbed Shoulder**

Shoulder Jointing:  
 Longitudinal joint not required when distance from back of curb to nearest joint is less than XX':

Single pour: XXX  
 Staged: XXX  
 Transverse: XXX

STATION TO STATION		(P) Feet	Curb Type See PV-102
4953+80.00	4955+50.35	3	6" SLOPED

BEGIN STATION		END STATION	(A) Feet	(B) Feet
4954+53.00	4955+38.60	2.5'-15"	2.5'-15"	
4956+80.37	4957+65.00	2.5'-15"	2.5'-15"	

**Curbed Shoulder**

Shoulder Jointing:  
 Longitudinal joint not required when distance from back of curb to nearest joint is less than XX':

Single pour: XXX  
 Staged: XXX  
 Transverse: XXX

STATION TO STATION		(P) Feet	Curb Type See PV-102
4954+53.00	4955+38.60	3	6" SLOPED

See Tab 100-24 or 100-25 for pavement quantities.  
 See Tab 112-9 for shoulder quantities.

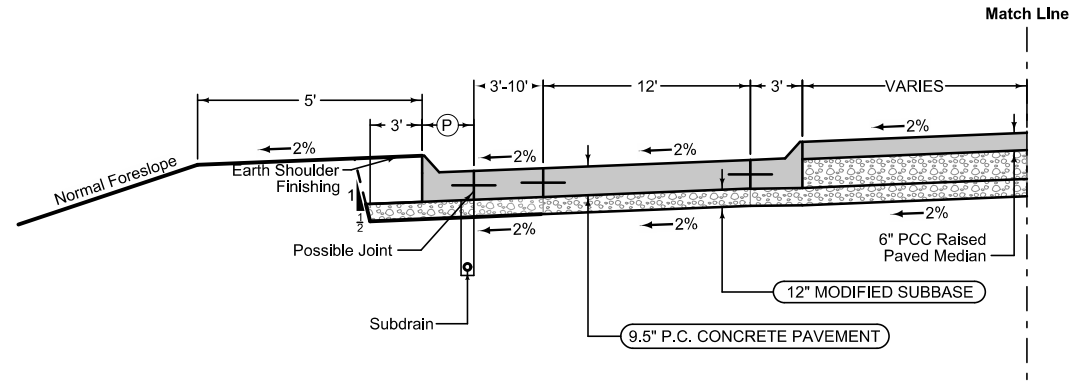
**US 63 NB/SB**

### Curbed Shoulder

Shoulder Jointing:  
 Longitudinal joint not required when distance from back of curb to nearest joint is less than XX':

Single pour: XXX  
 Staged: XXX  
 Transverse: XXX

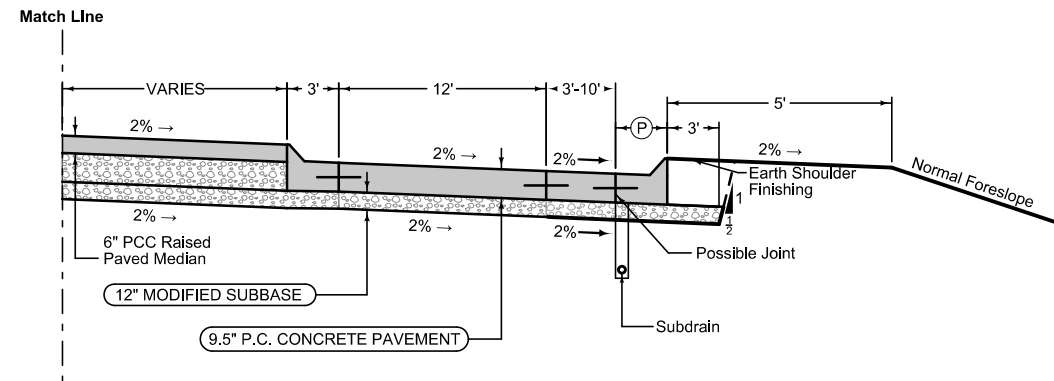
STATION TO STATION		(P) Feet	Curb Type See PV-102
4956+92.59	4957+70.00	2.5	6" STD



Section shown in the direction of traffic.

Ramp Jointing:  
 Transverse joints: XXX  
 Longitudinal joints: XXX

1RP_ 04-20-21	
BEGIN STATION	END STATION
4956+92.59	4957+70.00



Section shown in the direction of traffic.

Ramp Jointing:  
 Transverse joints: XXX  
 Longitudinal joints: XXX

1RP_ 04-20-21	
BEGIN STATION	END STATION
4957+53.00	4955+38.60

### Curbed Shoulder

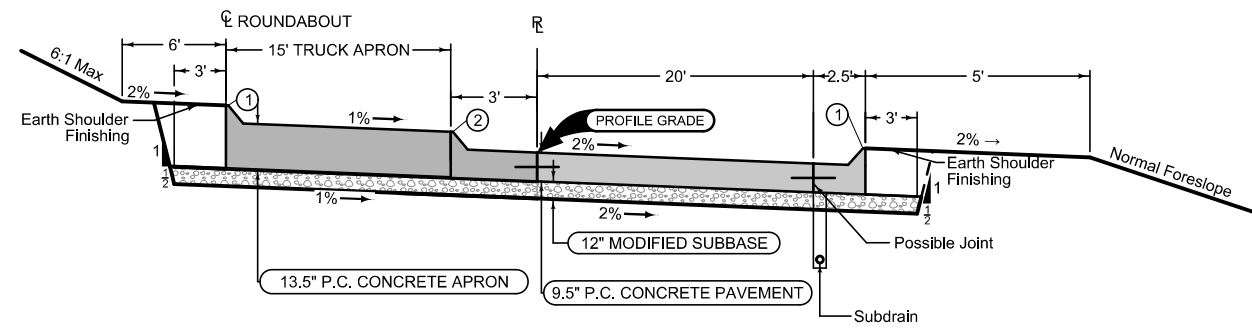
Shoulder Jointing:  
 Longitudinal joint not required when distance from back of curb to nearest joint is less than XX':

Single pour: XXX  
 Staged: XXX  
 Transverse: XXX

STATION TO STATION		(P) Feet	Curb Type See PV-102
4957+53.00	4955+38.60	2.5	6" STD

See Tab 100-24 or 100-25 for pavement quantities.  
 See Tab 112-9 for shoulder quantities.

**US 63 NB/SB**



- ① 6" STANDARD CURB
  - ② 4" SLOPED CURB
- NOTE: SEE 'L' SHEETS FOR JOINTING LAYOUT

LOCATION	
BEGIN STATION	END STATION
10+00.00	13+45.58

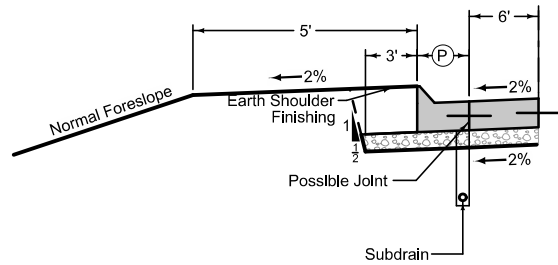
See Tab 100-24 or 100-25 for pavement quantities.  
 See Tab 112-9 for shoulder quantities.

**RAB**

**Full Depth PCC Combination Shoulder**

Shoulder Jointing:  
 Longitudinal joint: XXX  
 Transverse joints: XXX

2_C_FullPCC_04-20-21			
STATION TO STATION		(P) Feet	(G) Feet
501+55.15	502+38.00	6'	4'

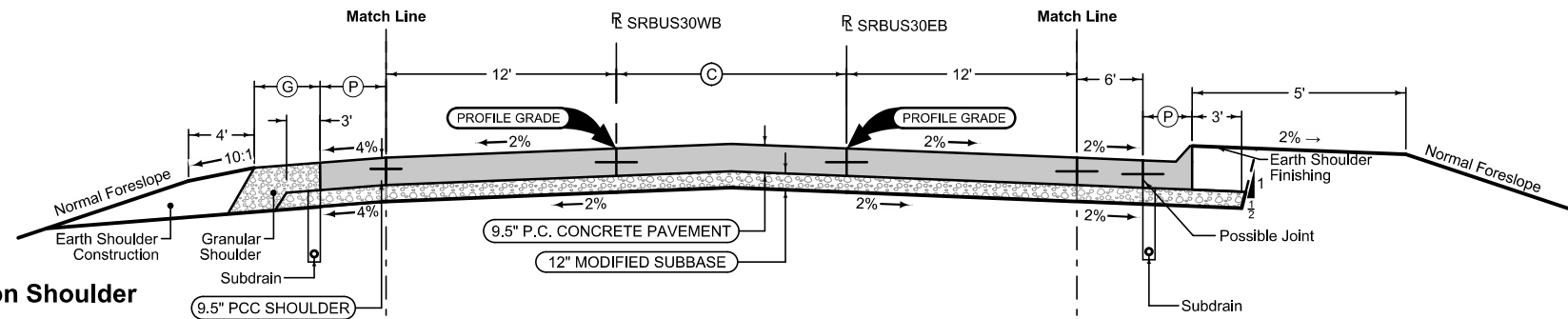


**Curbed Shoulder**

Shoulder Jointing:  
 Longitudinal joint not required when distance from back of curb to nearest joint is less than XX':

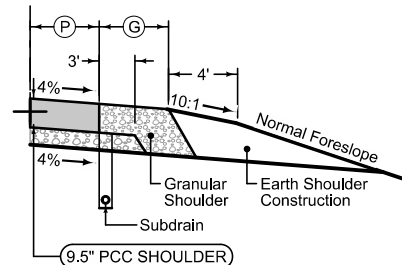
Single pour: XXX  
 Staged : XXX  
 Transverse: XXX

2_Curb_04-21-20			
STATION TO STATION		(P) Feet	Curb Type See PV-102
506+92.00	507+00.81	2.5	6" STD



Mainline Jointing:  
 Transverse joints: XXX  
 Longitudinal joint: XXX

2P_TWLTL_04-21-20		
STATION TO STATION		(C) Feet
501+54.92	502+38.00	6'-10"
506+94.00	507+00.61	12'



**Full Depth PCC Combination Shoulder**

Shoulder Jointing:  
 Longitudinal joint: XXX  
 Transverse joints: XXX

2_C_FullPCC_04-20-21			
STATION TO STATION		(P) Feet	(G) Feet
506+94.00	507+00.61	6'	3'

**Curbed Shoulder**

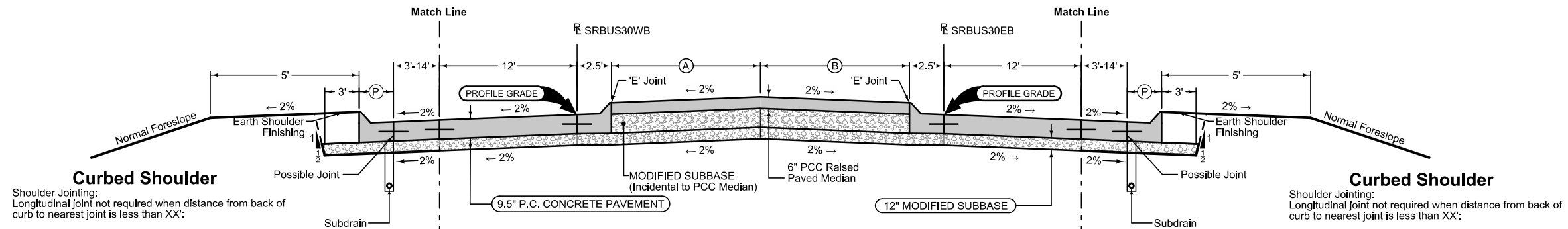
Shoulder Jointing:  
 Longitudinal joint not required when distance from back of curb to nearest joint is less than XX':

Single pour: XXX  
 Staged : XXX  
 Transverse: XXX

2_Curb_04-21-20			
STATION TO STATION		(P) Feet	Curb Type See PV-102
501+54.92	502+35.00	2.5	6" STD

See Tab 100-24 or 100-25 for pavement quantities.  
 See Tab 112-9 for shoulder quantities.

**BUS 30 EB/WB**



**Curbed Shoulder**  
 Shoulder Jointing:  
 Longitudinal joint not required when distance from back of curb to nearest joint is less than XX':

Single pour: XXX  
 Staged: XXX  
 Transverse: XXX

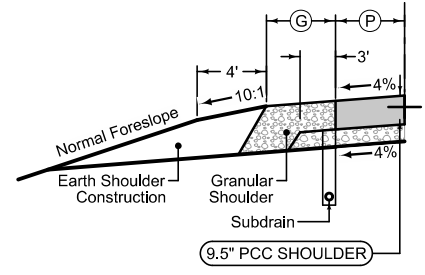
2_Curb_ 04-21-20			
STATION TO STATION		(P) Feet	Curb Type See PV-102
502+91.00	503+97.08	2.5	6" STD
505+41.50	506+92.00	2.5	6" STD

4DP_Raised_Out_ 04-21-20			
BEGIN STATION	END STATION	(A) Feet	(B) Feet
502+38.00	503+91.74	2.5'-14"	2.5'-14"
505+36.16	506+94.00	2.5'-14"	2.5'-14"

**Curbed Shoulder**  
 Shoulder Jointing:  
 Longitudinal joint not required when distance from back of curb to nearest joint is less than XX':

Single pour: XXX  
 Staged: XXX  
 Transverse: XXX

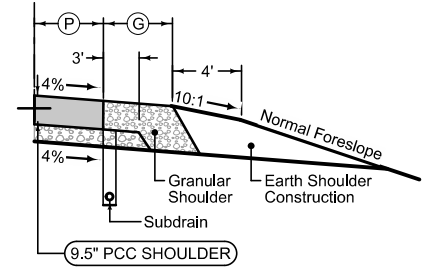
2_Curb_ 04-21-20			
STATION TO STATION		(P) Feet	Curb Type See PV-102
502+38.00	503+91.74	2.5	6" STD
505+36.16	506+41.00	2.5	6" STD



**Full Depth PCC Combination Shoulder**

Shoulder Jointing:  
 Longitudinal joint: XXX  
 Transverse joints: XXX

2_C_FullPCC_ 04-20-21			
STATION TO STATION		(P) Feet	(G) Feet
502+38.00	502+91.00	8'	4'



**Full Depth PCC Combination Shoulder**

Shoulder Jointing:  
 Longitudinal joint: XXX  
 Transverse joints: XXX

2_C_FullPCC_ 04-20-21			
STATION TO STATION		(P) Feet	(G) Feet
506+41.00	506+94.00	8'	4'

See Tab 100-24 or 100-25 for pavement quantities.  
 See Tab 112-9 for shoulder quantities.

**BUS 30 EB/WB**



### 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

### 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

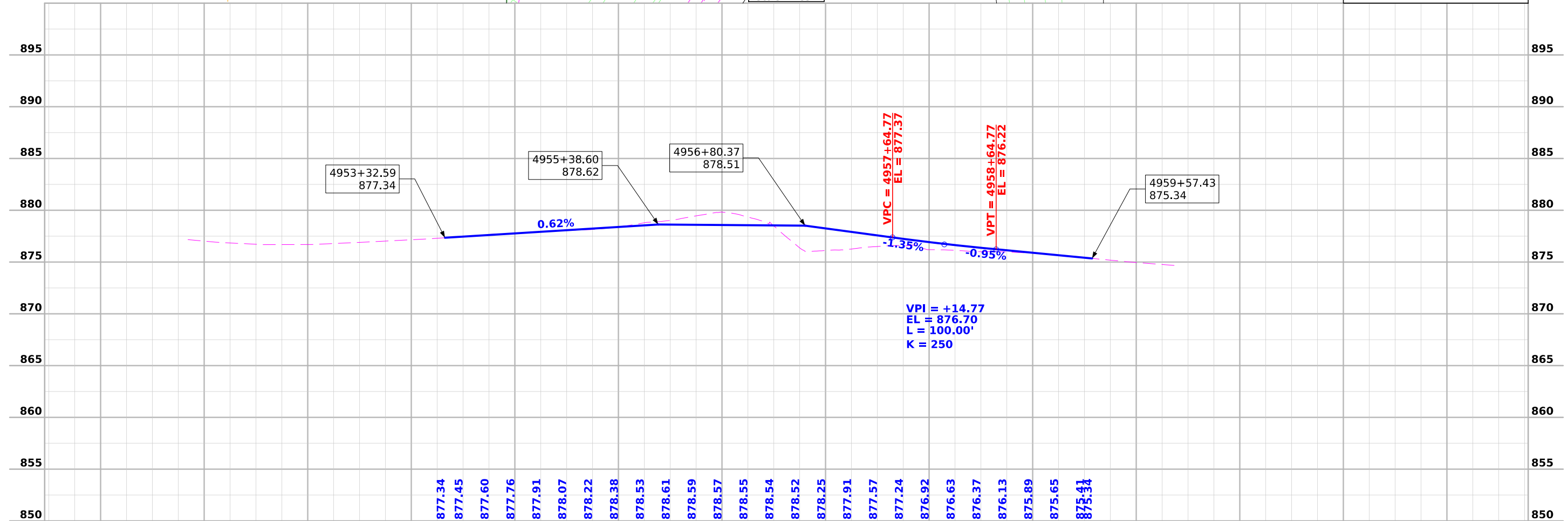
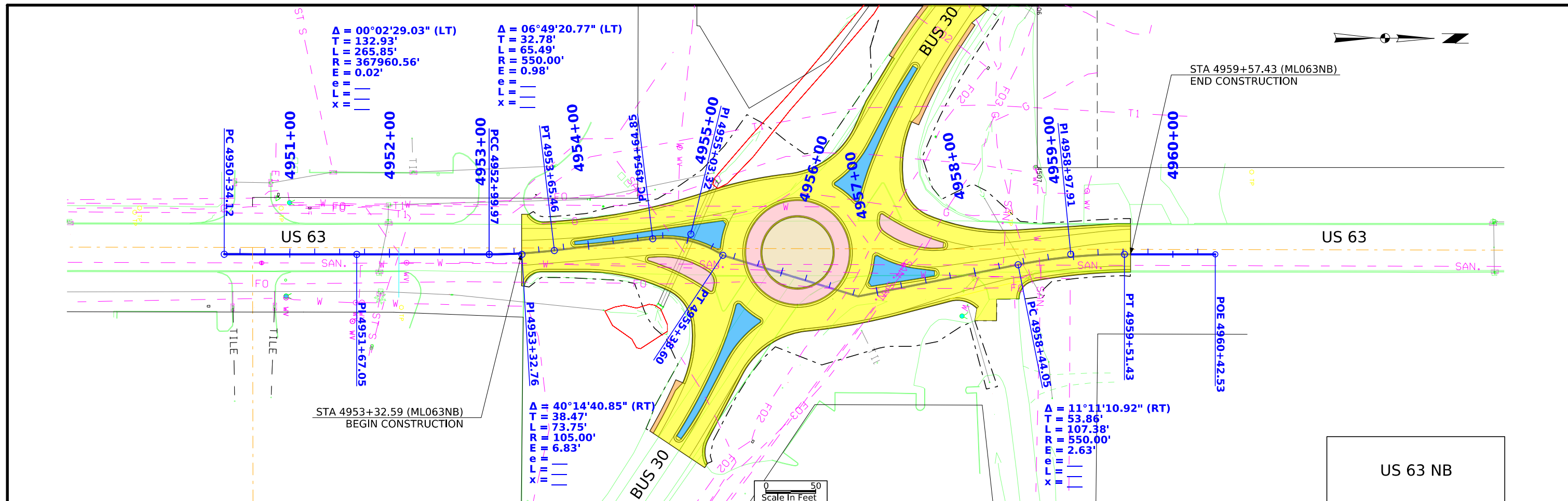
- |  |                             |  |                          |
|--|-----------------------------|--|--------------------------|
|  | Reference Point             |  | Survey Line              |
|  | Station                     |  | Section Corner           |
|  | Ground Line Intercept       |  | Saw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

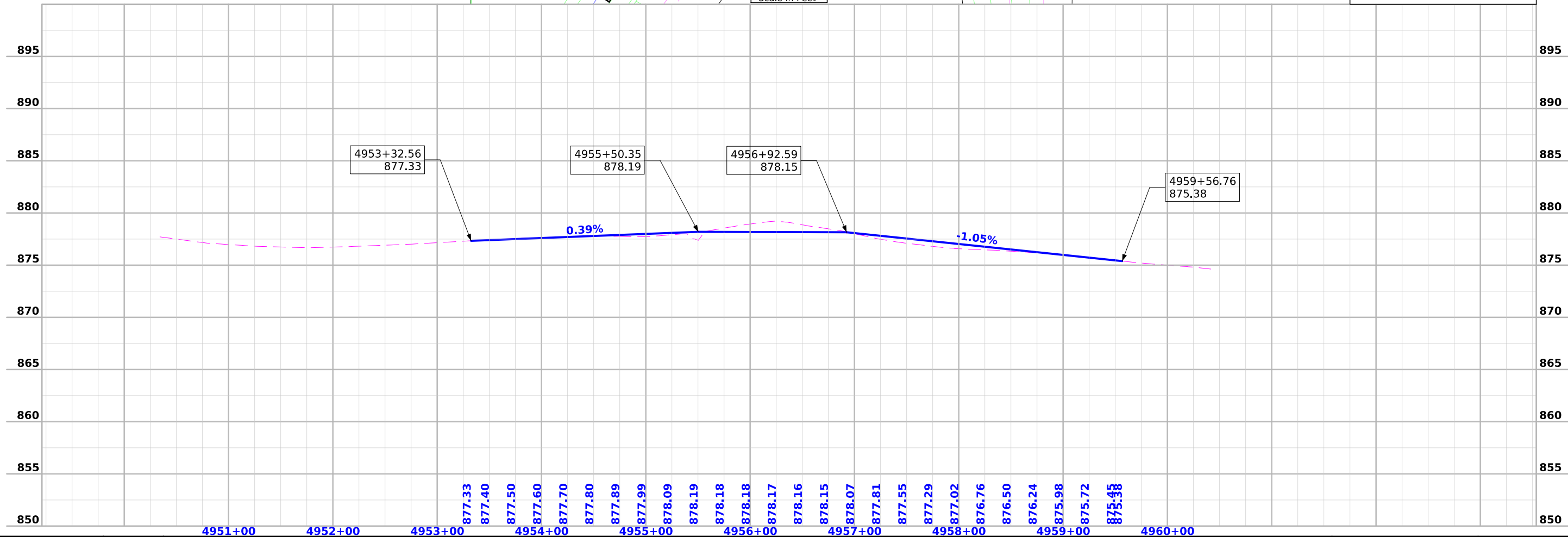
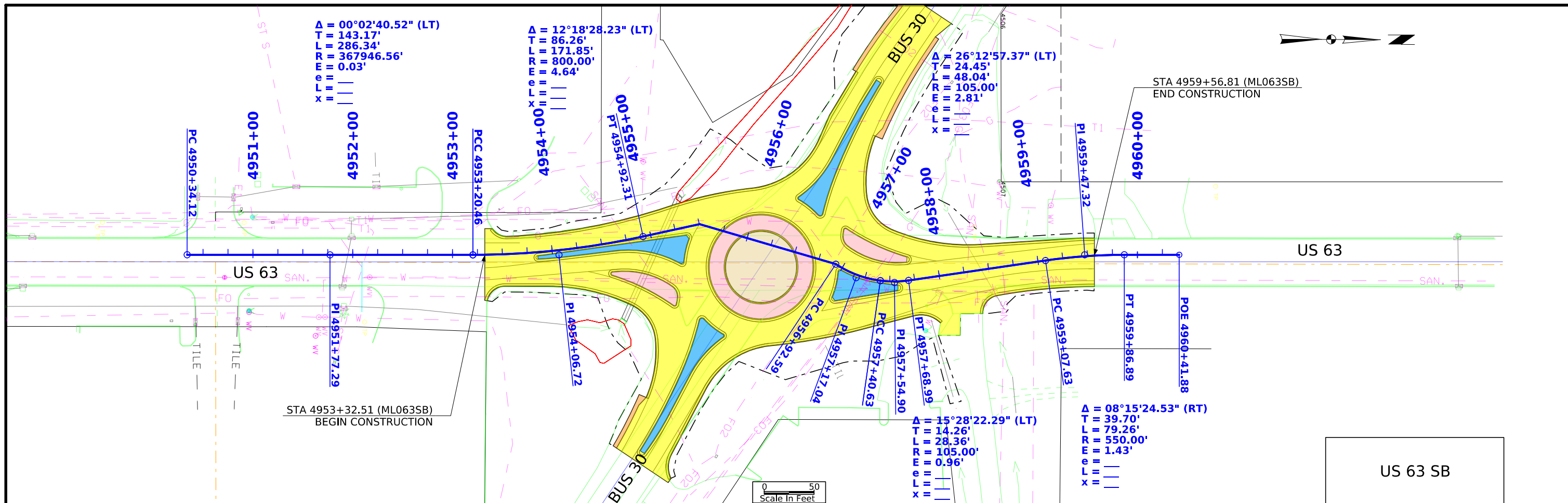
### RIGHT-OF-WAY LEGEND

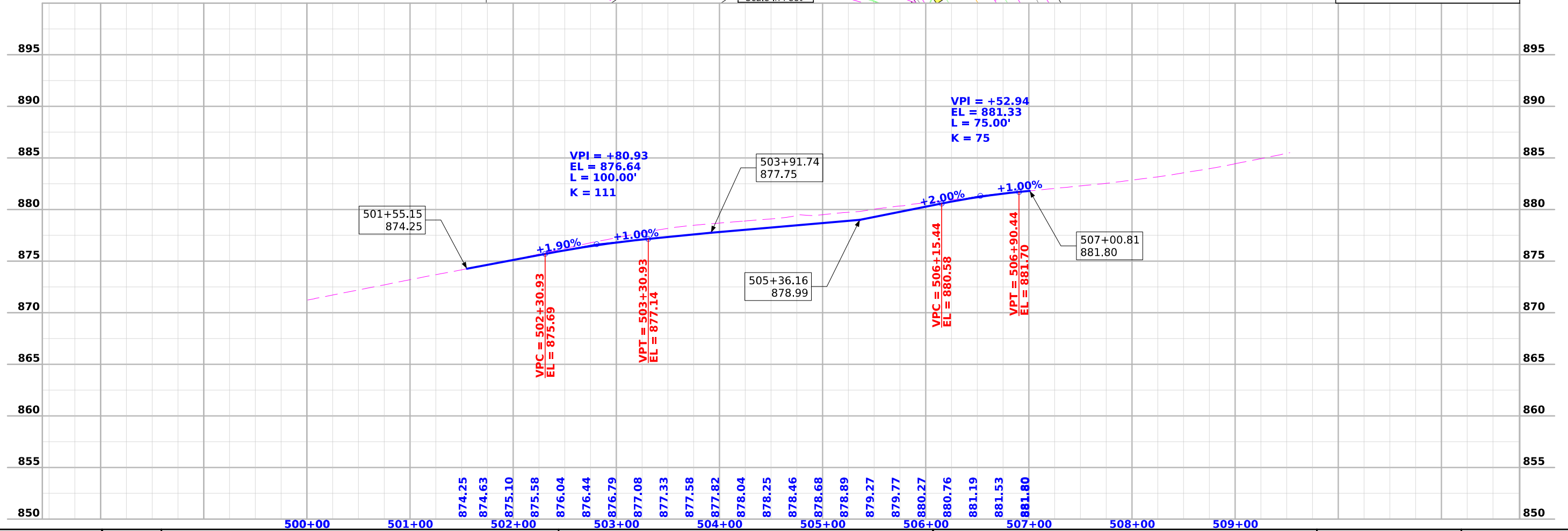
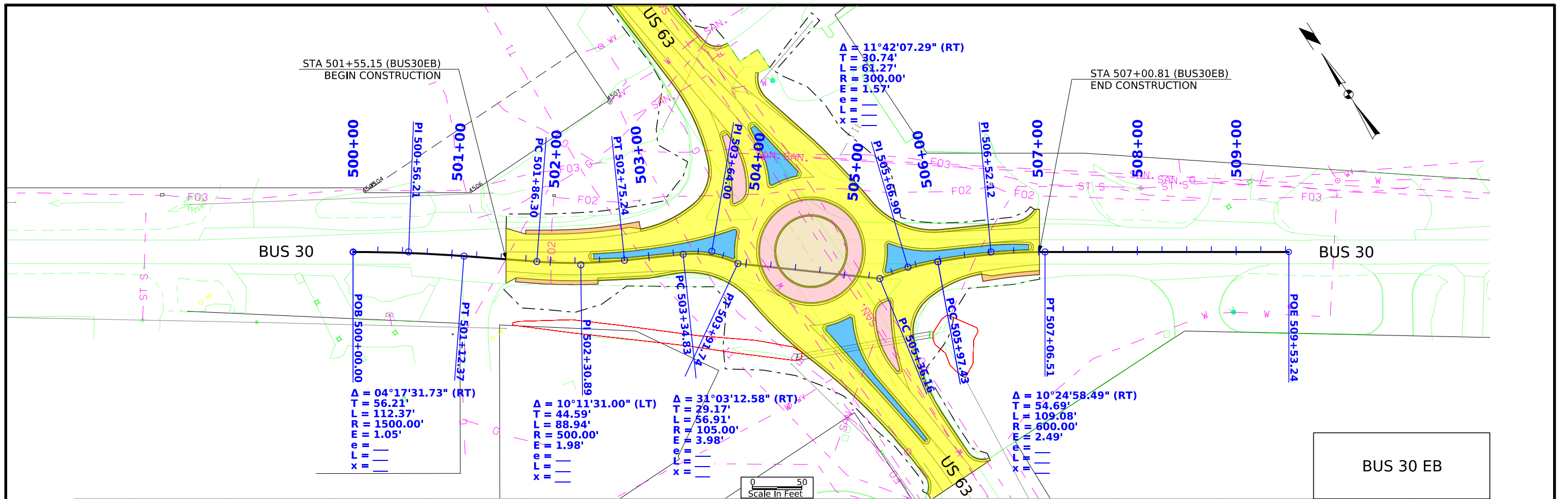
- |  |                                    |
|--|------------------------------------|
|  | Proposed Right-of-Way              |
|  | Existing Right of Way              |
|  | Existing and Proposed Right-of-Way |
|  | Easement and Existing Right-of-Way |
|  | Easement (Temporary)               |
|  | Easement                           |
|  | Access Control                     |
|  | Property Line                      |

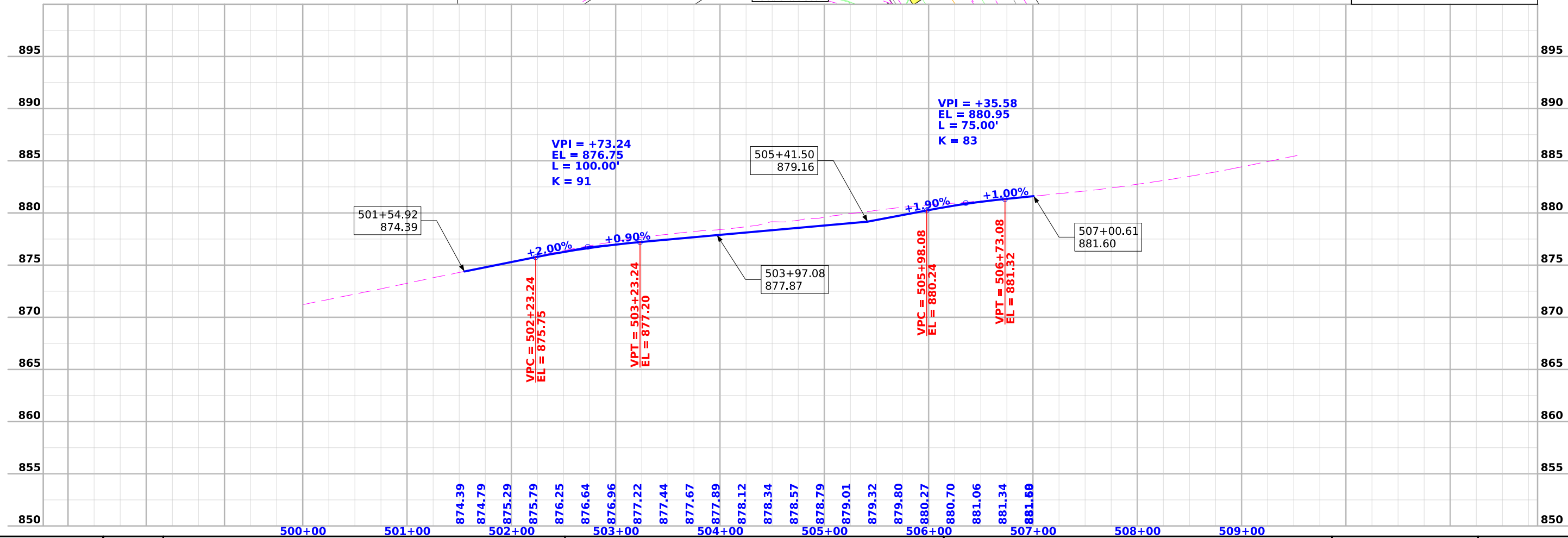
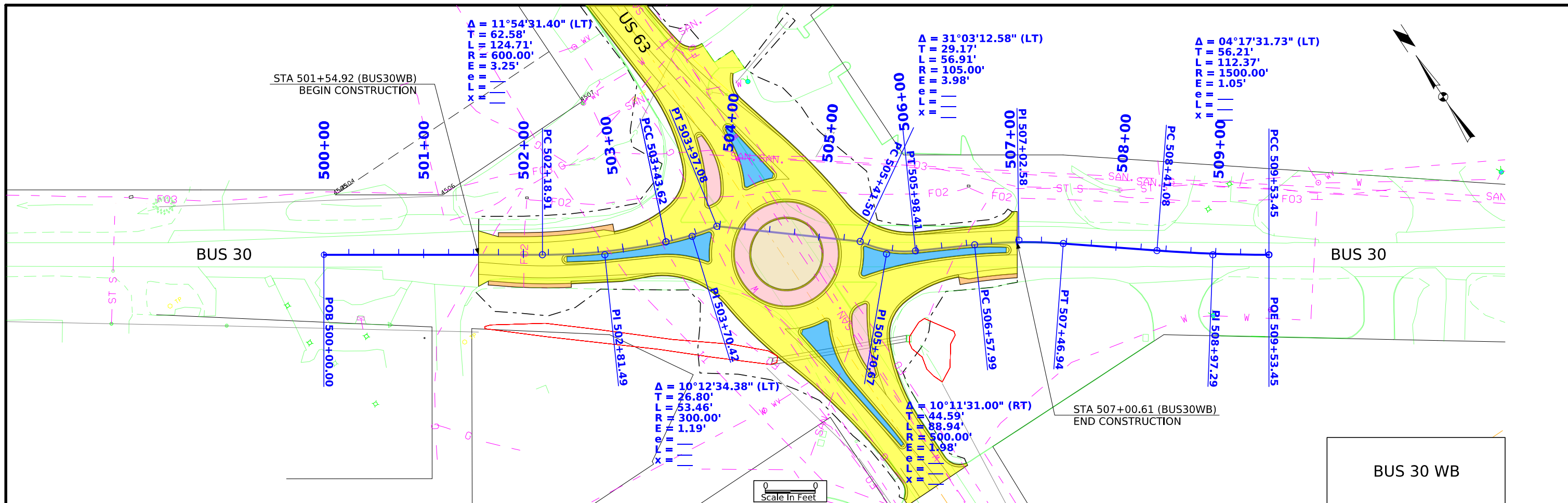
## PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

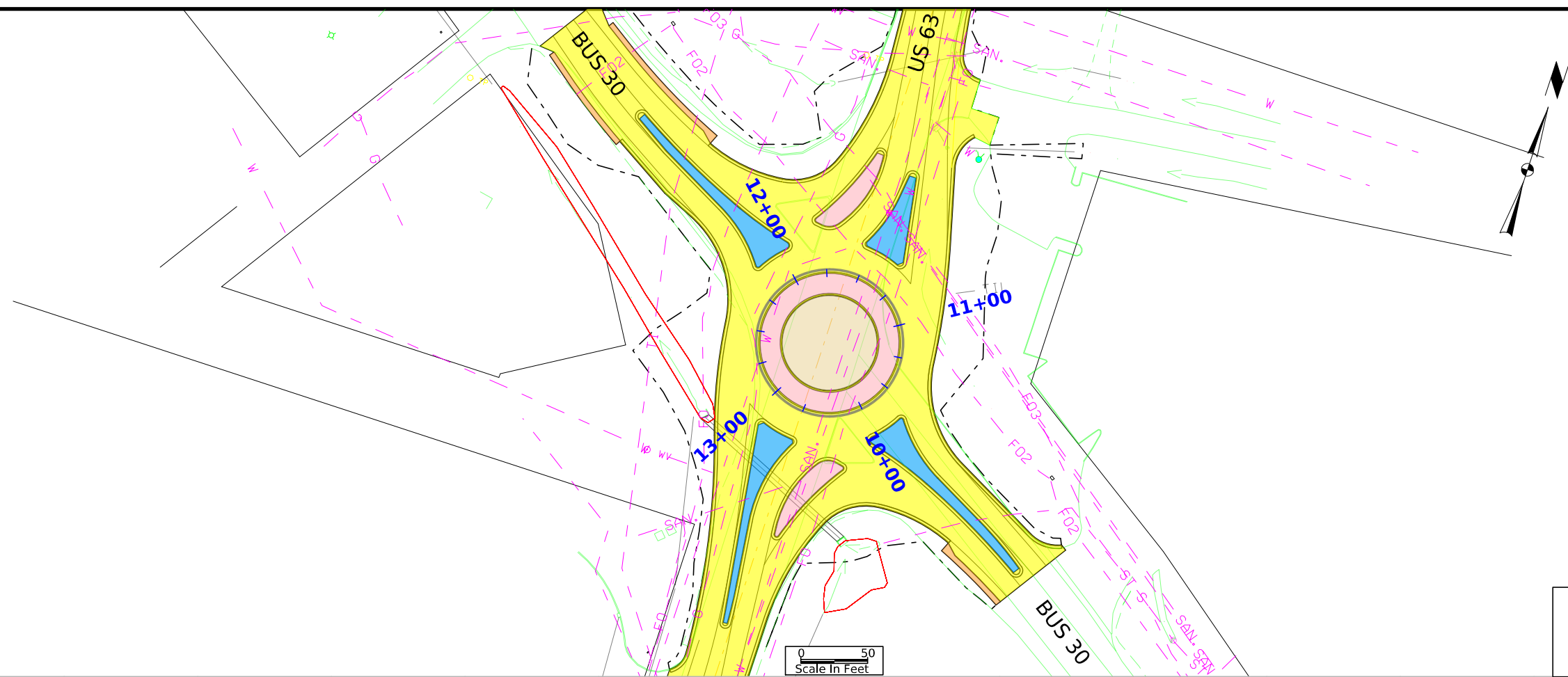
(COVERS SHEET SERIES D, E, F, & K)



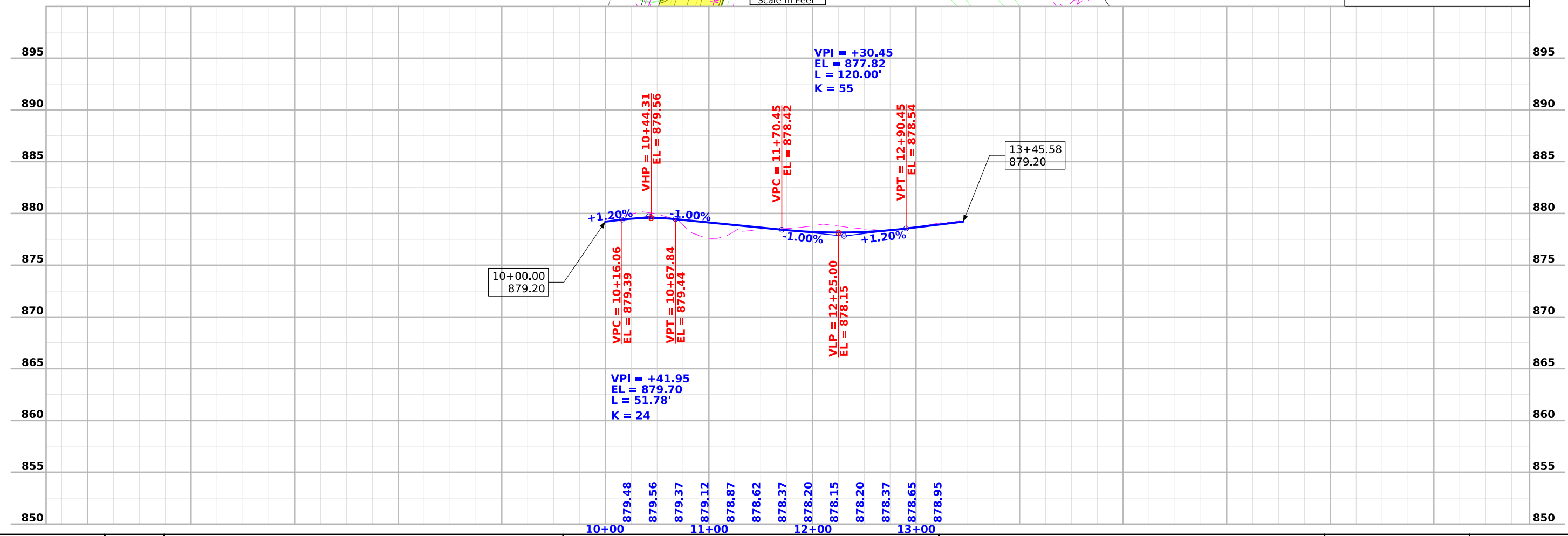








RAB



Survey Information

**SURVEY INDEX**

**County: Tama**

**PIN: 24-86-063-010**

**Project Number: HSIPX-063-5(078)--3L-86**

**Location: Business US30 Intersection in Toledo**

**Type of Work: PCC Pavement - Grade and New**

**Project Directory: 8606301024**

**Survey Personnel**

John Hahn – Survey Party Chief

Kokou Allande – Assistant Survey Party Chief

**Date(s) of Survey**

Begin Date 11/20/23

End Date 05/20/24

**General Information**

This survey is for US Hwy 63 PCC Paving- Grade and New at the intersection of US63 and Business 30 in Toledo. This project is a Partial Field DTM with Photo control.

**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**

Published values for NGS GSVS monuments 152 and 151 were held fixed for final control. A previously post processed position on point 1 was held fixed as well. A base setup on GSVS152 was used to establish final control values on points 24 and CP1.

For a full, detailed description of the establishment of control for this project please consult the Preliminary Survey Project Control and Primary Control Establishment Report documents in the Control folder of the PrelimSurvey project directory.

**PROJECT DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 ADJUSTMENT)**

**COORDINATE SYSTEM: IOWA REGIONAL COORDINATE SYSTEM ZONE 9**

**(U.S. SURVEY FOOT)**

**VERTICAL DATUM: NAVD88**

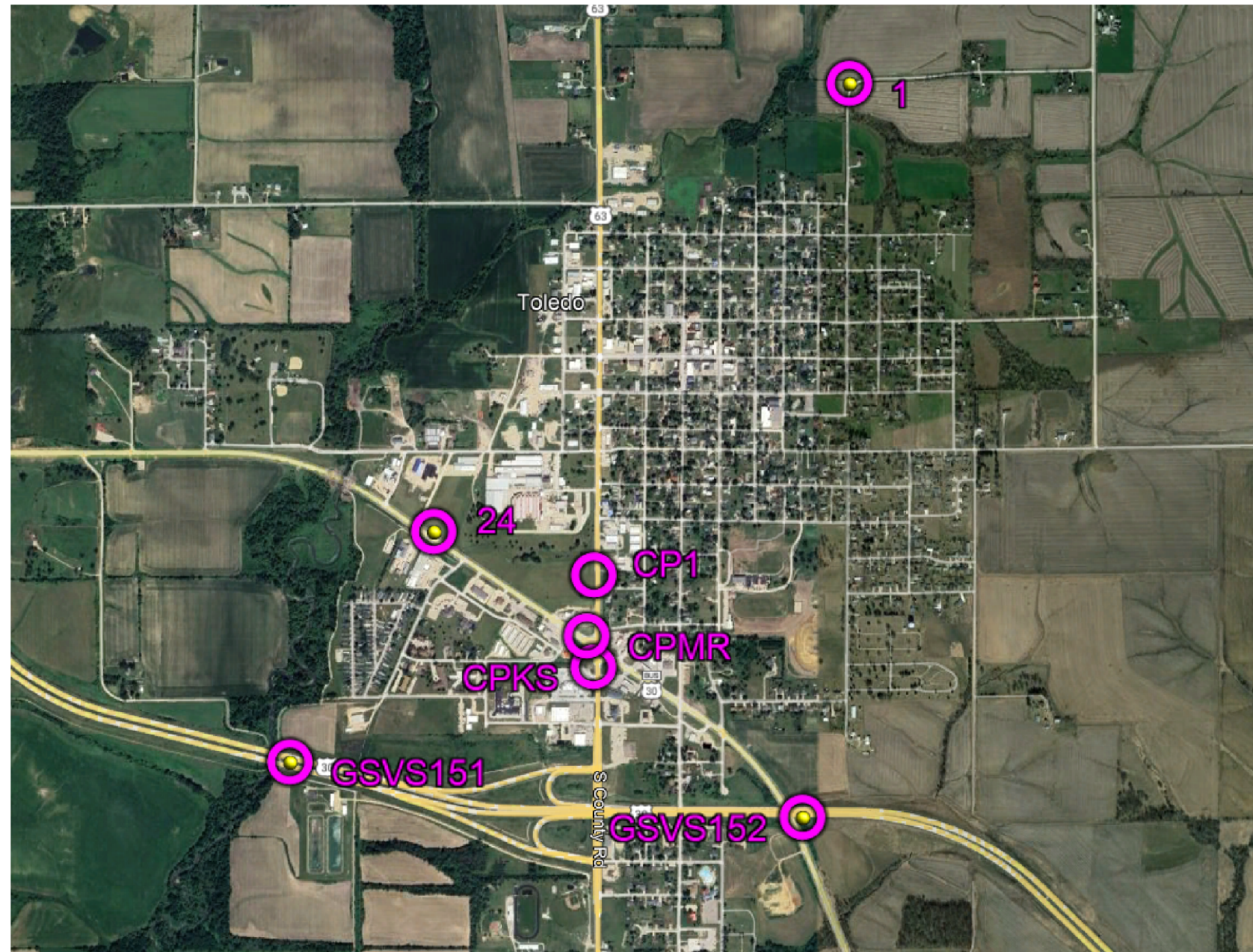
**GEOID MODEL: 2018u3**

**Alignment Information**

The horizontal alignments for U.S. Hwy 63 and Old U.S. Hwy 30 this survey were provided by District 1 Right of Way Survey.

## 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	Easting	Elevation	Code-Description
GSVS151	7831793.69	19560595.71	838.16	CP FND NGS SECOND ORDER CLASS I VERTICAL MARK AS DESCRIBED IN GOOD CONDITION
GSVS152	7831235.71	19566082.66	939.59	CP FND NGS SECOND ORDER CLASS I VERTICAL MARK AS DESCRIBED IN GOOD CONDITION
1	7839047.66	19566565.86	857.46	CP FND FENO MON PROJ NHSX-063-5(55)--3H-86 AS DESCRIBED IN GOOD CONDITION
24	7834260.65	19562134.83	841.99	CP FND TAMA CO GPS CONTROL POINT AS DESCRIBED IN GOOD CONDITION
CP1	7833804.03	19563851.17	871.03	CP SET FENO MON 0.15 MI NORTH OF INTERSECTION US 63 AND US 30 BUSINESS LOOP IN THE WESTERLY ROW
CPKS	7832821.9	19563848.57	877.01	CP SET 5/8X40 REBAR IN THE NW QUADRANT OF US 63 AND US 30 BUSINESS LOOP IN THE TOP OF FORESLOPE
CPMR	7833155.16	19563777.2	874.96	CP SET 5/8X40 REBAR 225FT SOUTH OF INTERSECTION US 63 AND US 30 BUSINESS LOOP IN THE TOP OF WESTERLY FORESLOPE

**CROSS SECTION VIEW COLOR LEGEND  
OF TRAFFIC CONTROL AND STAGING SHEETS**

SHADING	Design Color No.	
Green, Light	(225)	Existing Pavement Shading
Gray, Light	(48)	Previously Constructed Pavement Shading
Gray, Med	(80)	Previously Constructed Granular Surface Shading
Blue, Light	(230)	Proposed Pavement Shading
Lavender	(9)	Temporary Pavement Shading
Brown, Med	(237)	Future Proposed Pavement Shading

**CROSS SECTION VIEW PATTERN AND SYMBOL LEGEND  
OF TRAFFIC CONTROL AND STAGING SHEETS**

	Pavement Removal		Proposed Granular Shoulder
	Proposed Granular Subbase		Temporary Shoulder
	Proposed Special Backfill		Existing Shoulder Strengthening
	Temporary Barrier Rail		Permanent Barrier Rail
			Channelizing Device

**PLAN VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS**

LINEWORK	Design Color No.	
Green	(2)	Existing Topographic Features and Labels
Magenta	(5)	Pavement Marking Call Outs
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Yellow	(4)	Pavement Markings, Yellow
Off White	(254)	Pavement Markings, White
Violet	(15)	Temporary barrier rail, Unpinned
Flush Orange	(228)	Temporary barrier rail, Pinned

SHADING	Design Color No.	
Green, Light	(225)	Existing Pavement Shading
Gray, Light	(48)	Previously Constructed Pavement Shading
Gray, Med	(80)	Proposed Granular Surface Shading
Gray, Med	(80)	Previously Constructed Granular Surface Shading
Blue, Light	(230)	Proposed Pavement Shading
Lavender	(9)	Temporary Pavement Shading
Brown, Light	(236)	Proposed Grading Limits Shading
Pink, Dark	(13)	Proposed MSE or CIP Wall Shading
Red	(3)	Proposed Bridge Shading and Sign Trusses
Black w/Gray, Light Fill	(0,48)	Previously Constructed Structure

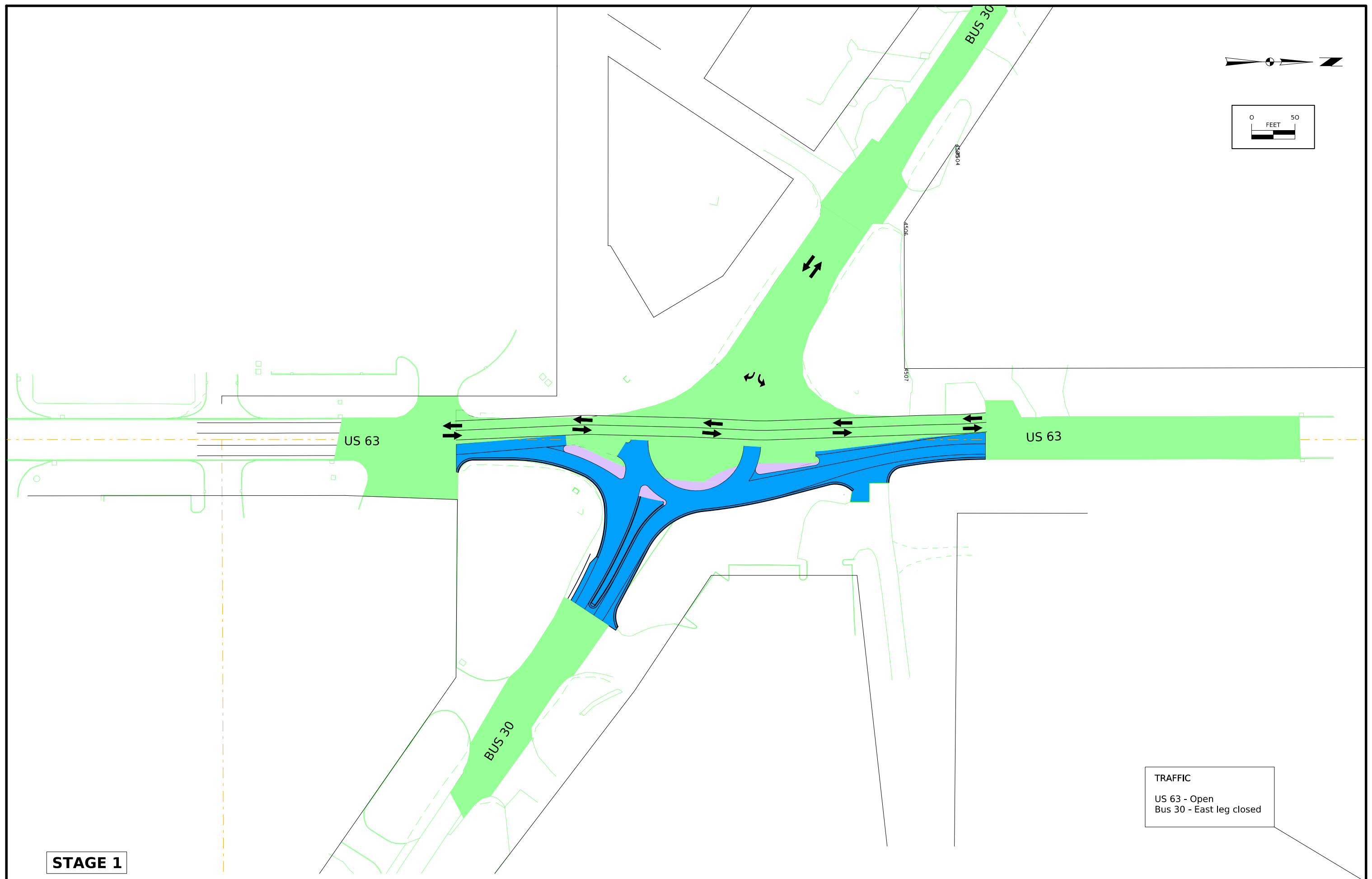
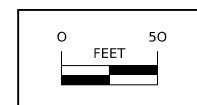
**PLAN VIEW PATTERN AND SYMBOL LEGEND  
OF TRAFFIC CONTROL AND STAGING SHEETS**

	Channelizing Device		Crash Cushion (Temp or Perm)
	Drum		Traffic Signal
	Temporary Lane Separator		Flagger
	Tubular Marker		Temporary Floodlighting
	Channelizer Marker		Traffic Sign
	Concrete Barrier Marker		Type III Barricade
	Delineator		Type A Warning Light
	Temporary Barrier Rail		Direction of Traffic
	Pavement Removal		Safety Closure
	Sand Barrel Layout		Lane Identification

**NOTE: Device spacing according to Standard Road Plans unless specifically dimensioned.**

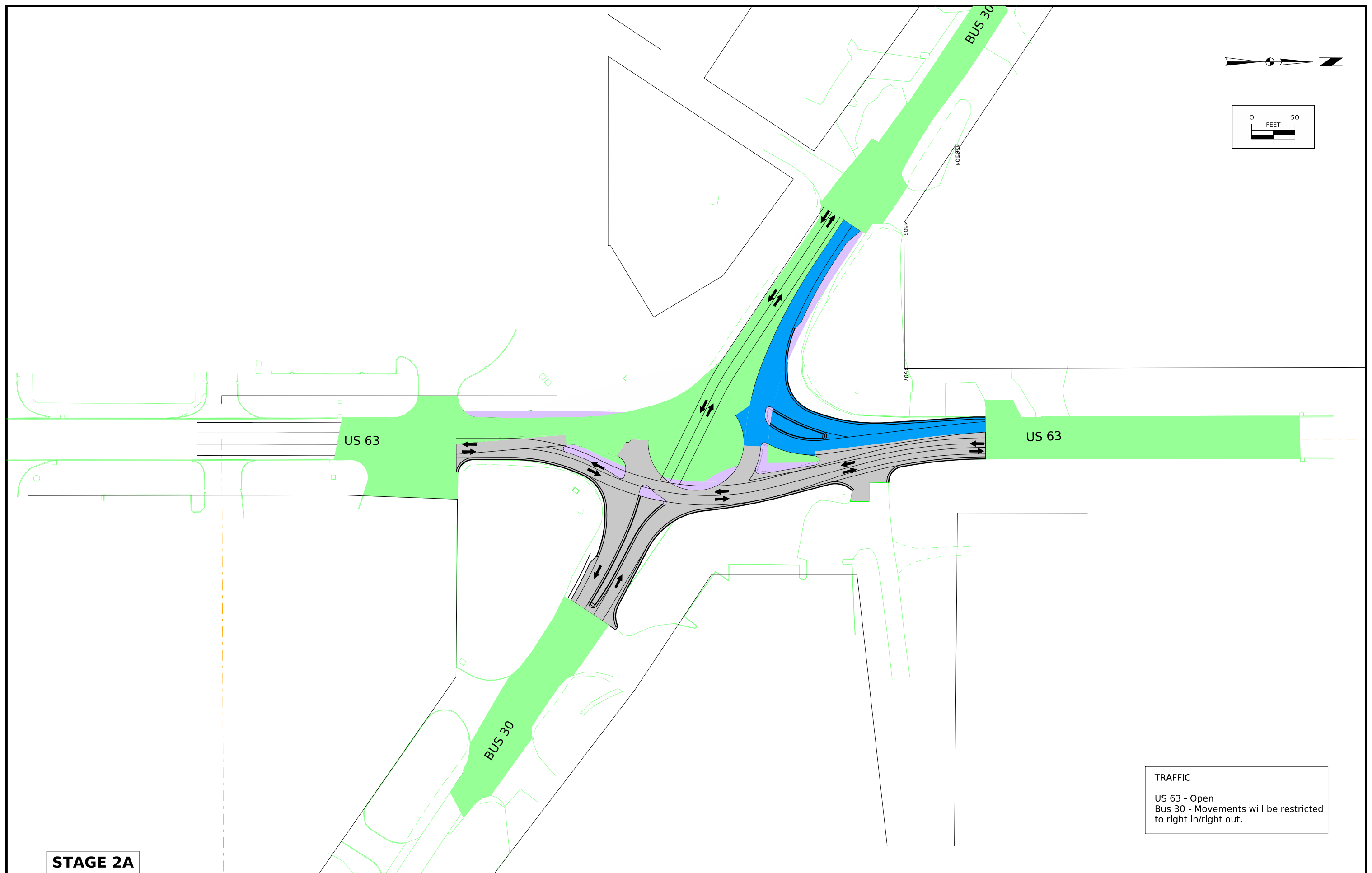
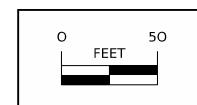
**TRAFFIC CONTROL  
AND  
STAGING  
LEGEND AND SYMBOL  
INFORMATION SHEET**

(COVERS SHEET SERIES J)



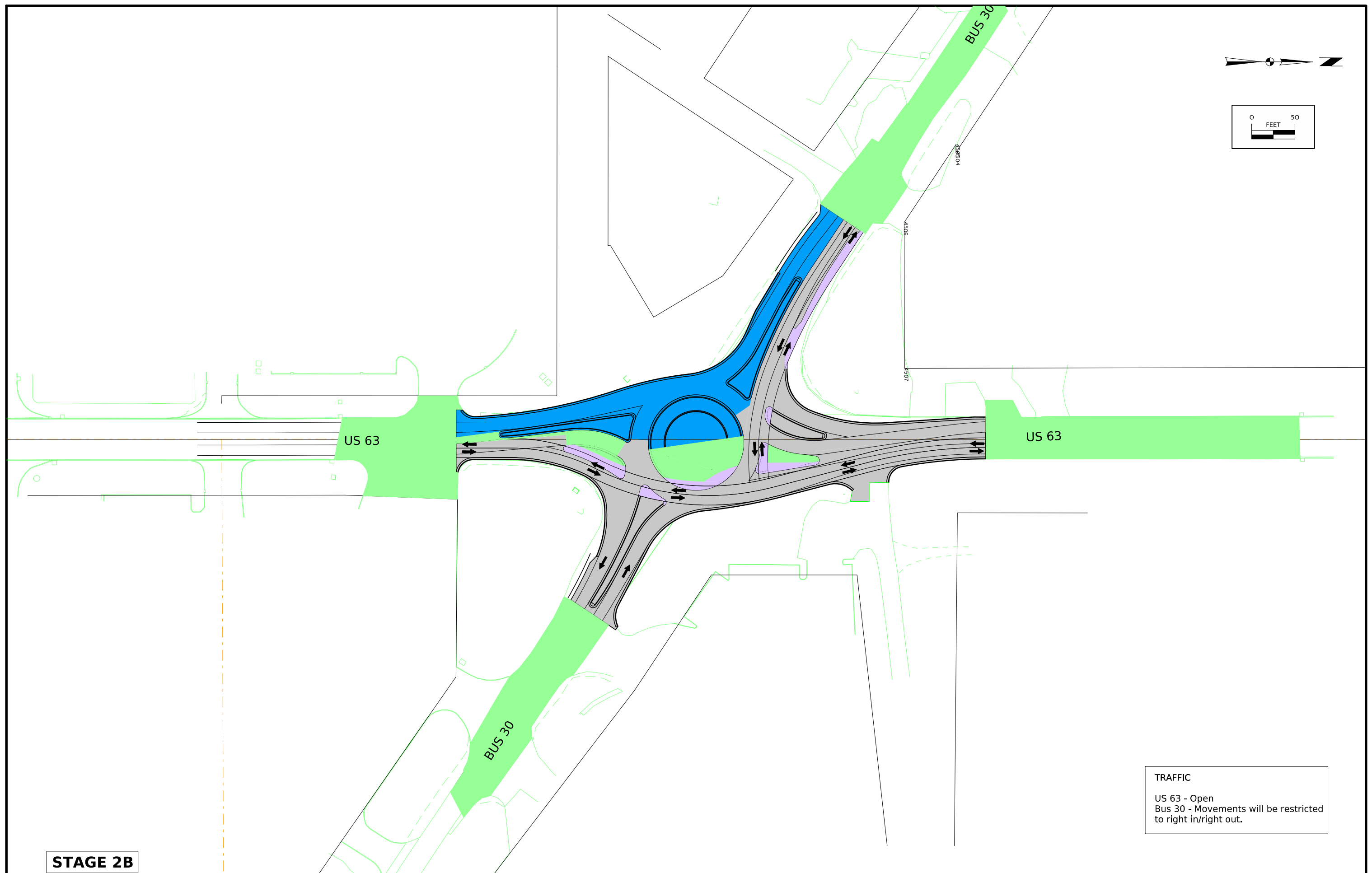
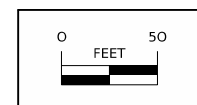
TRAFFIC  
US 63 - Open  
Bus 30 - East leg closed

**STAGE 1**



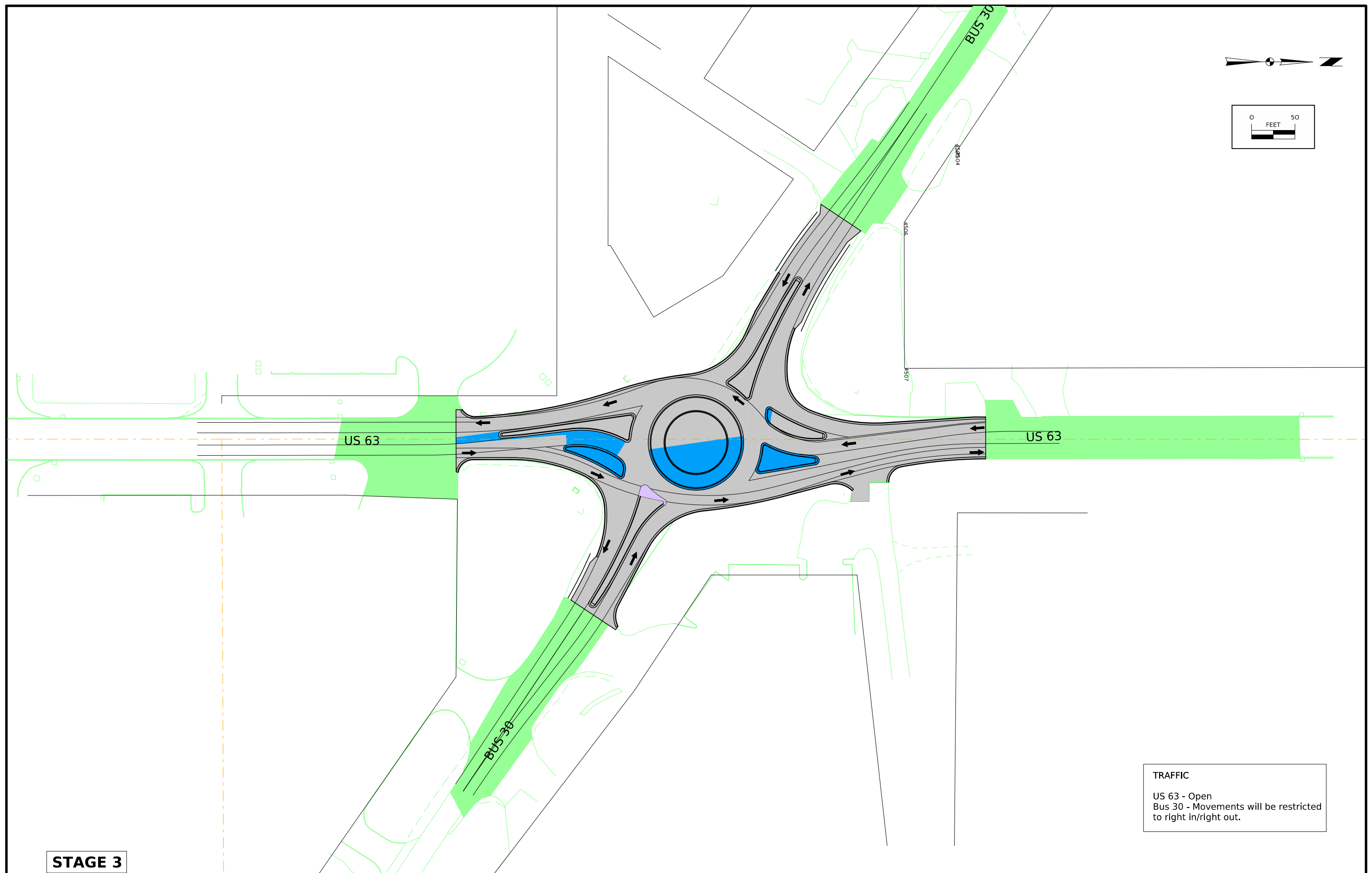
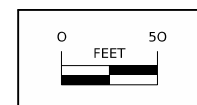
**TRAFFIC**  
US 63 - Open  
Bus 30 - Movements will be restricted to right in/right out.

**STAGE 2A**



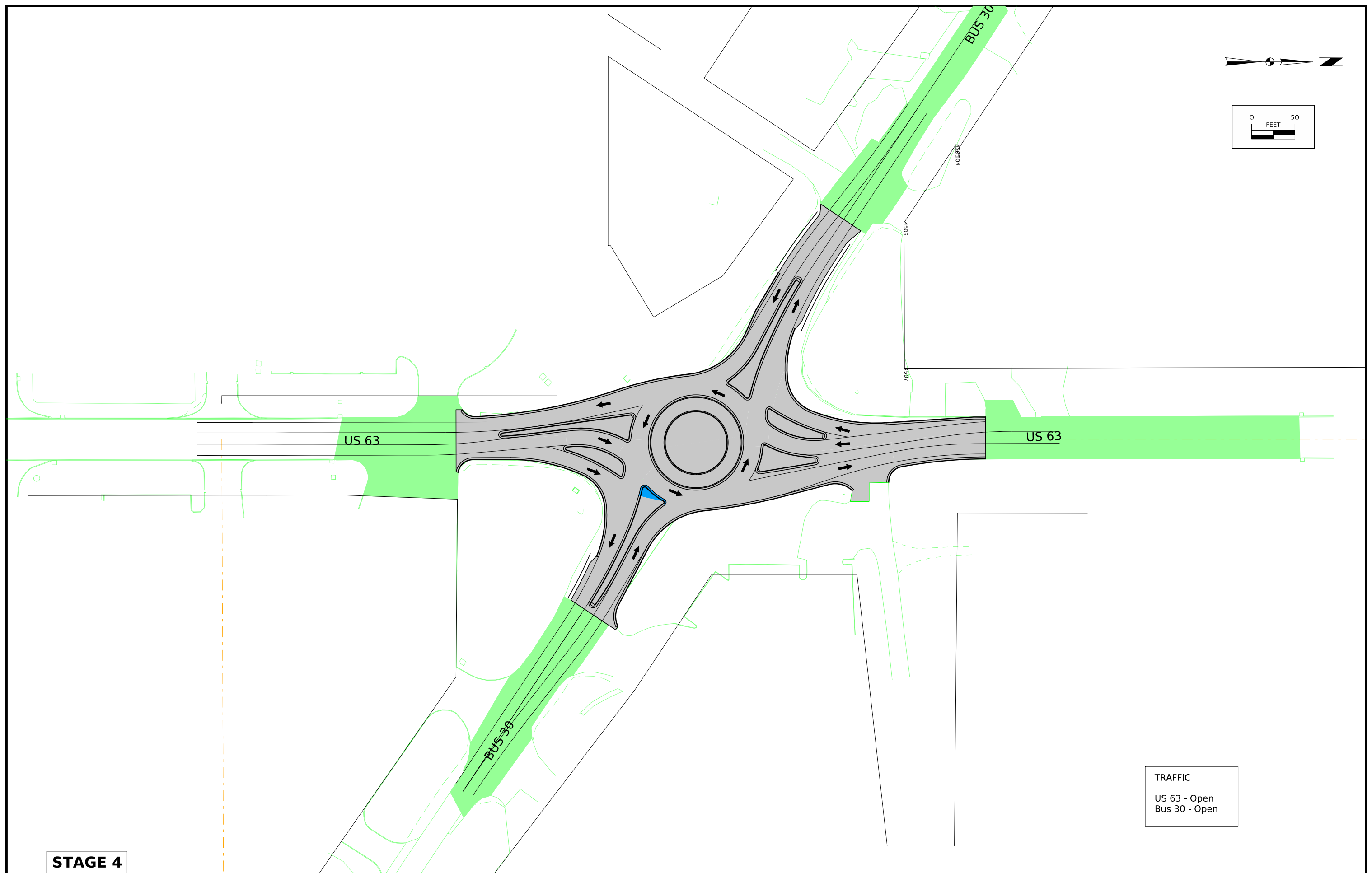
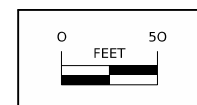
**STAGE 2B**

**TRAFFIC**  
US 63 - Open  
Bus 30 - Movements will be restricted to right in/right out.



**TRAFFIC**  
US 63 - Open  
Bus 30 - Movements will be restricted to right in/right out.

**STAGE 3**



TRAFFIC  
US 63 - Open  
Bus 30 - Open

**STAGE 4**

### 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
- Traffic Signal Control Box
- Rail Road Signal Control Box
- Telephone Switch Box
- Electric Box

### UTILITY LEGEND

### PLAN VIEW COLOR LEGEND OF STORM SEWER SHEETS

LINEWORK		Design Color No.	
Gray, Dark	(112)		Existing Topographic Features, Utilities, and Labels
Black	(17)		Proposed Storm Sewer Details, Alignment, Stationing, Tic Marks, and Alignment Annotation
SHADING		Design Color No.	
Gray, Light	(48)		Proposed Pavement Shading

### PROFILE VIEW COLOR LEGEND OF STORM SEWER SHEETS

LINEWORK		Design Color No.	
Gray, Dark	(112)		Existing Ground Line Profile and Existing Utilities Information
Black	(17)		Proposed Pipes and Intakes

### PLAN VIEW LINE STYLE LEGEND OF STORM SEWER SHEETS

- Plug and Abandon Existing Pipe or Structure
- Removal of Existing Pipe or Structure
- Previously Constructed Pipe or Structure
- Direction of Pipe Flow

### PROFILE VIEW LINE STYLE LEGEND OF STORM SEWER SHEETS

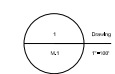
- Existing Ground
- Proposed Ground
- Previously Constructed Pipe or Structure
- Proposed Pipe or Structure

#### Reference Point

- Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Clearing & Grubbing Area
- Pavement Removal

#### RIGHT-OF-WAY LEGEND

- Proposed Right-of-Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Borrow
- Easement (Temporary)
- Easement
- Excess
- Access Control

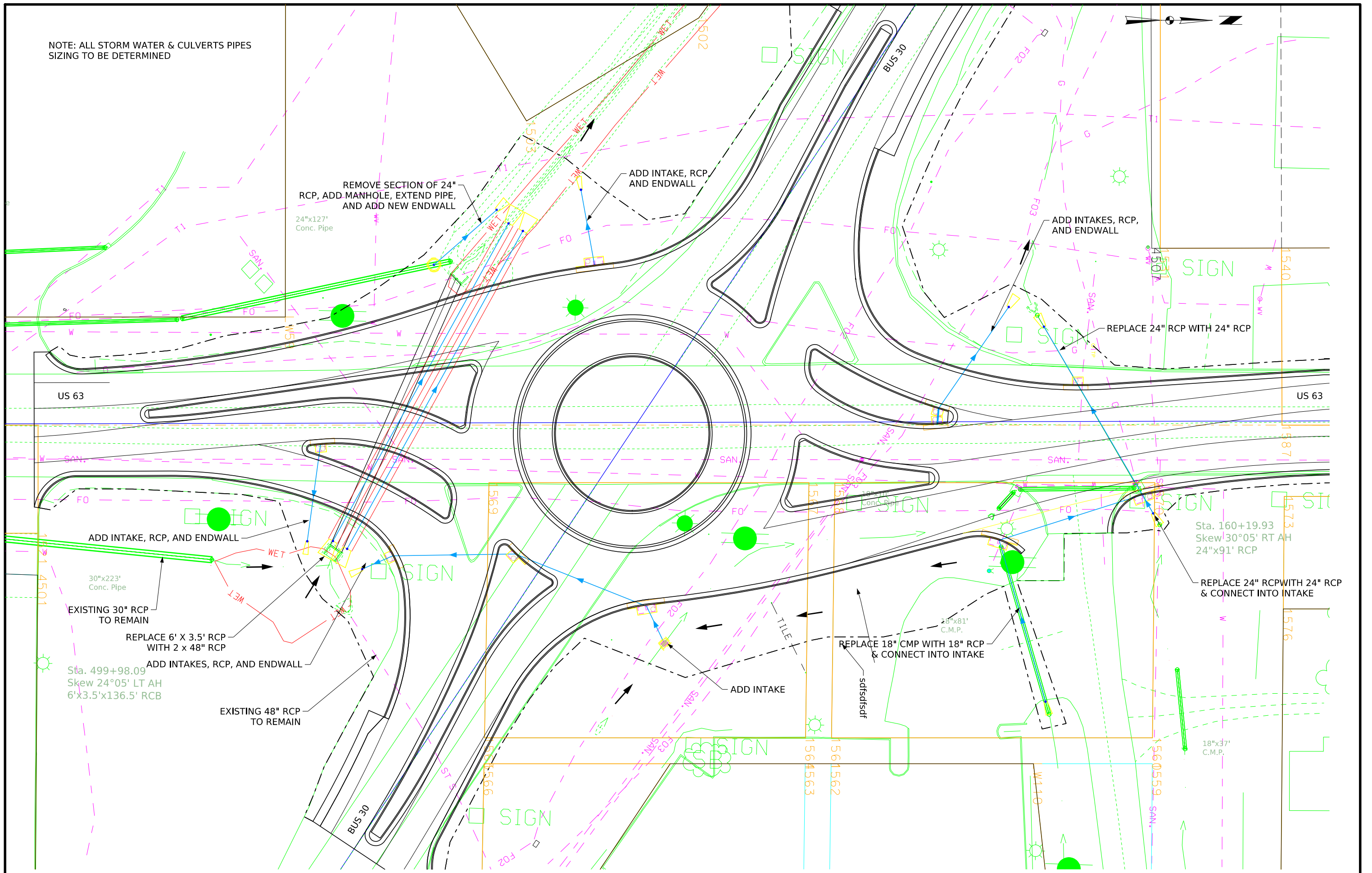


## STORM SEWER LEGEND AND SYMBOL INFORMATION SHEET

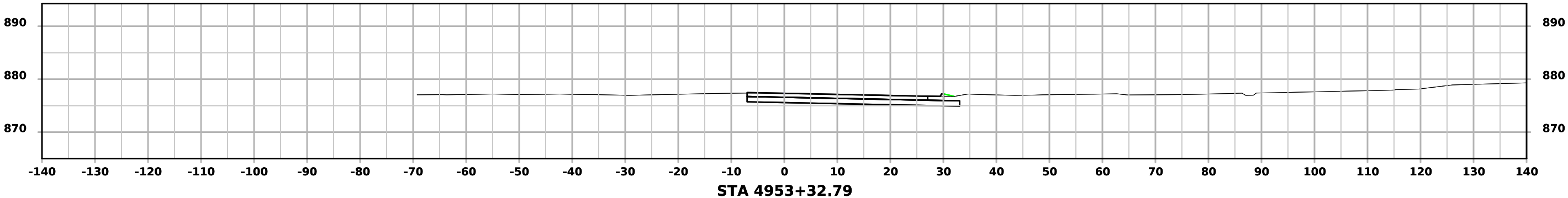
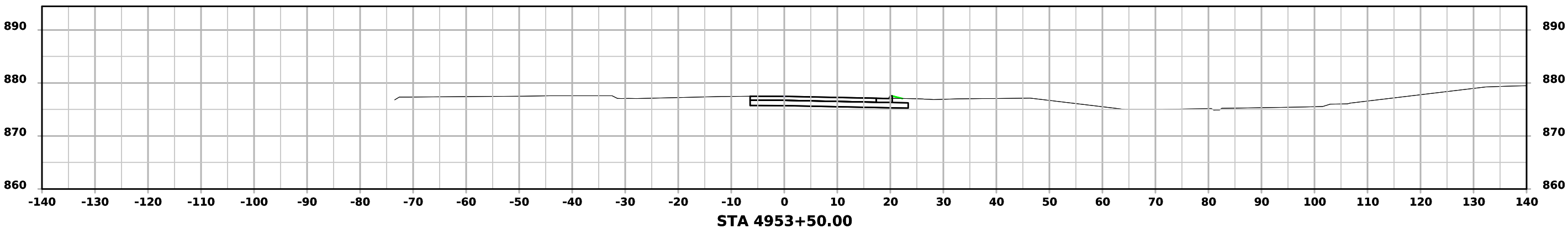
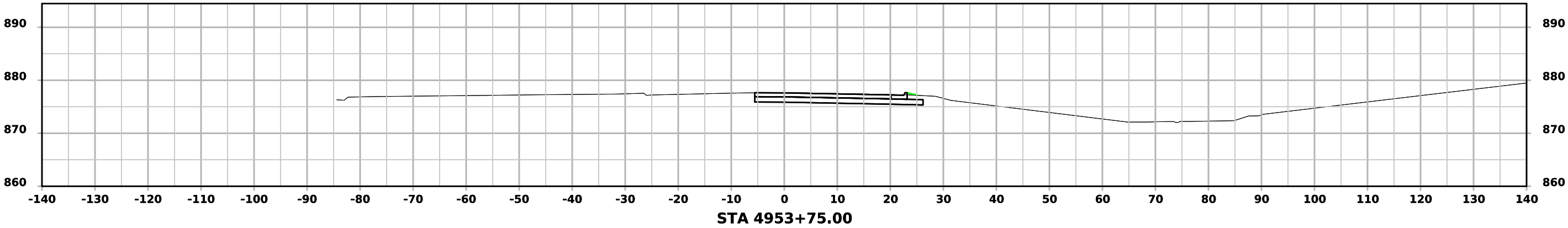
(COVERS SHEET SERIES M)



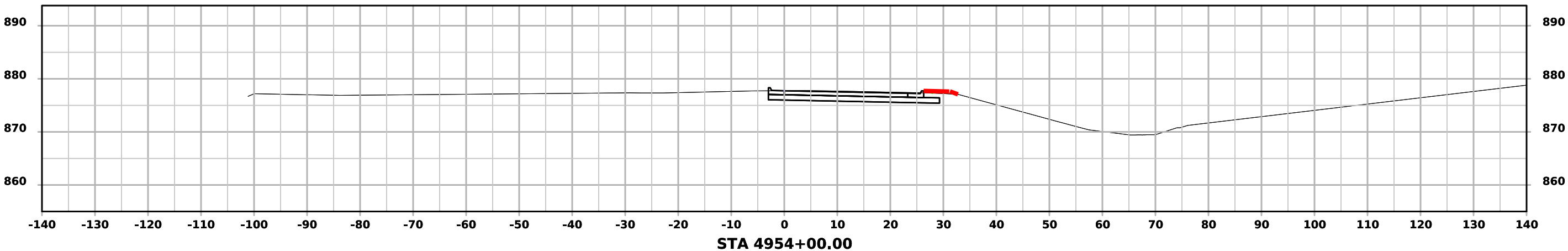
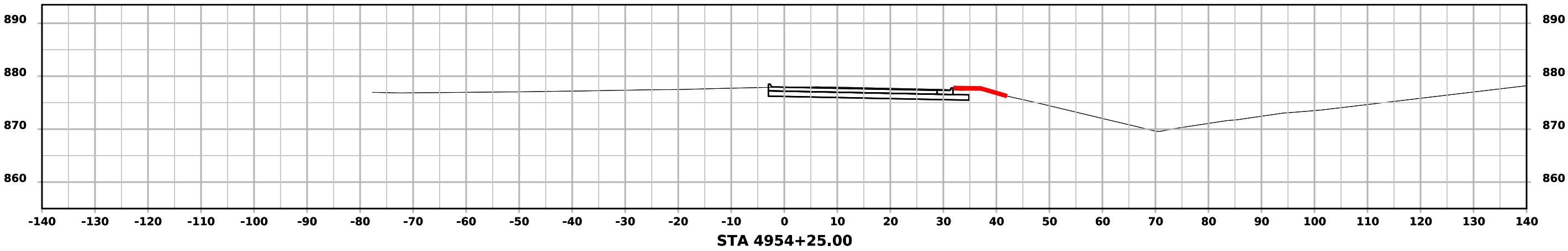
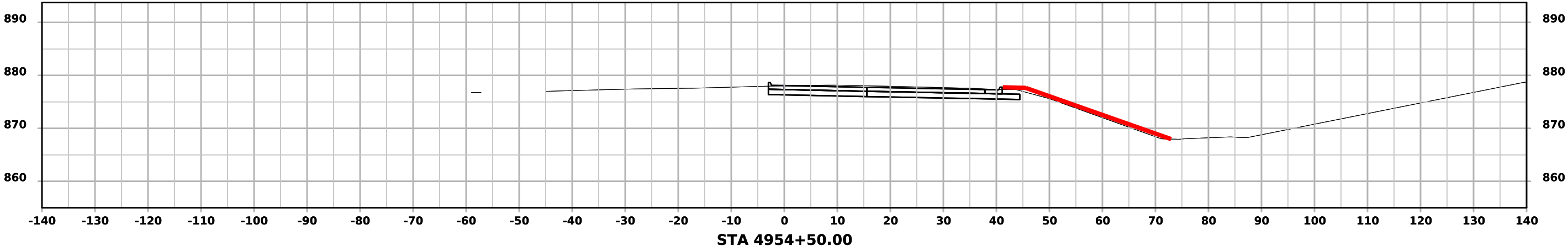
NOTE: ALL STORM WATER & CULVERTS PIPES SIZING TO BE DETERMINED



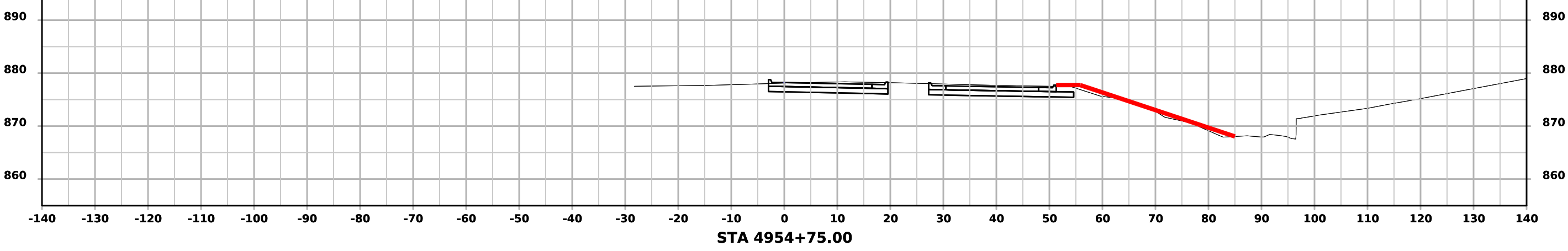
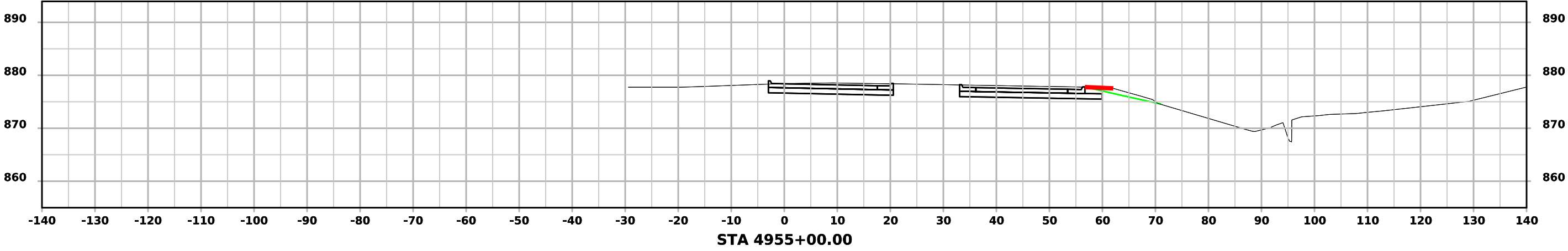
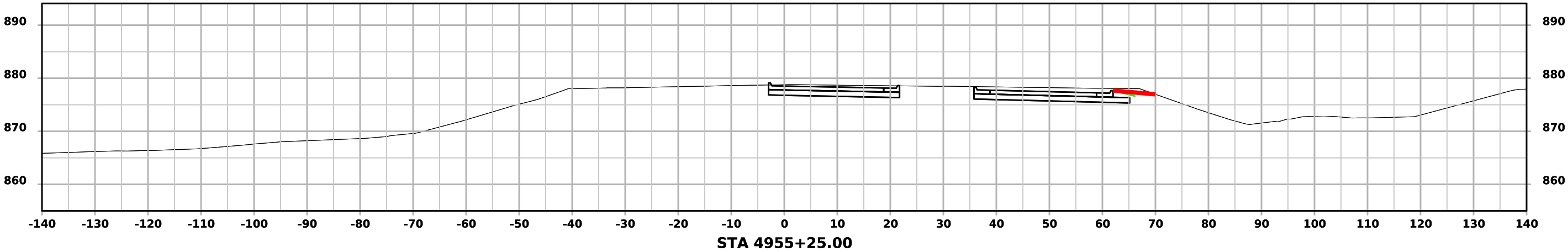
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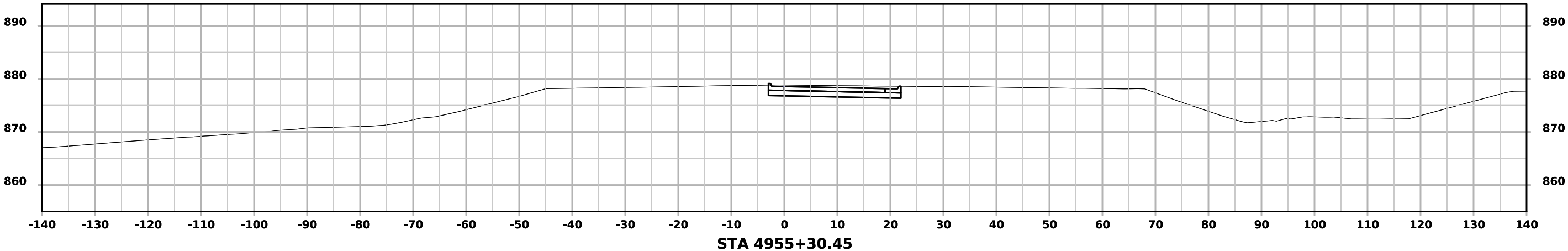
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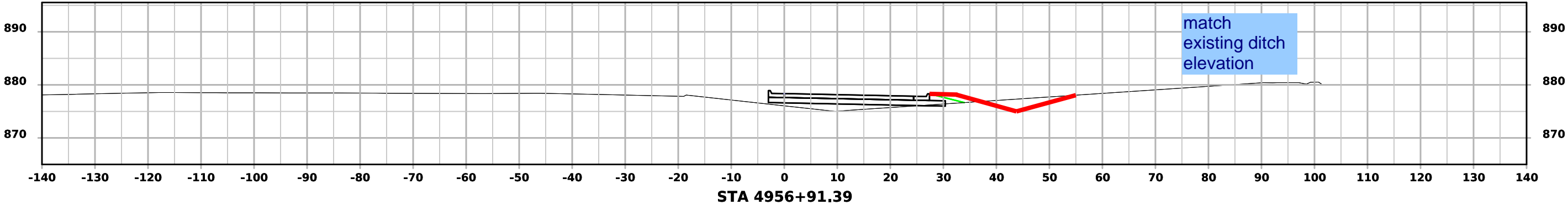
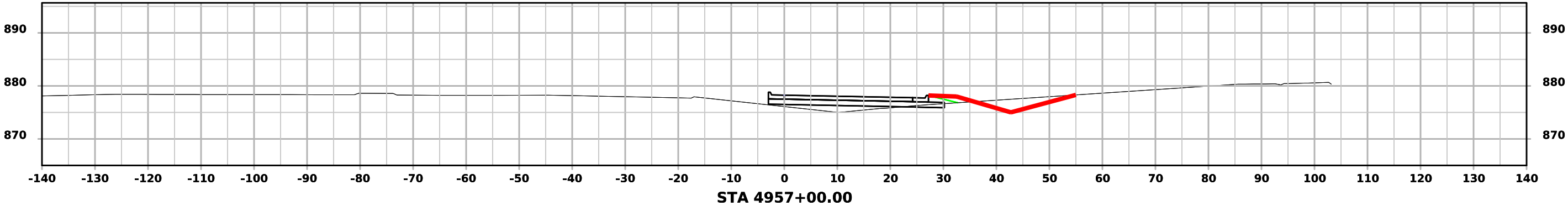
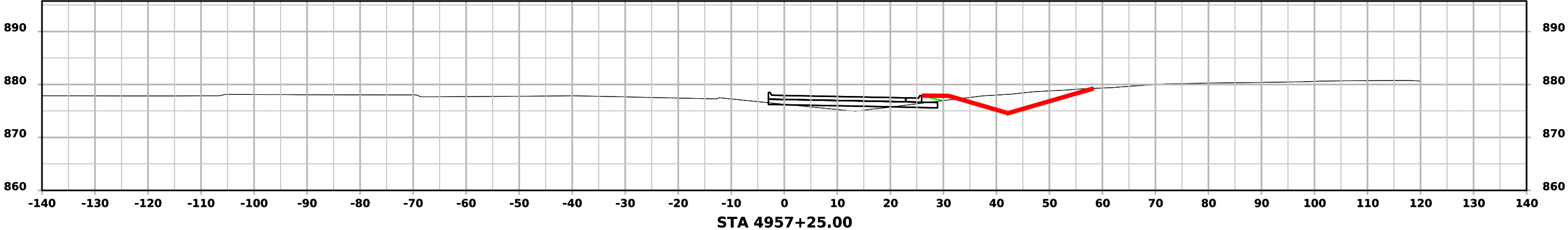


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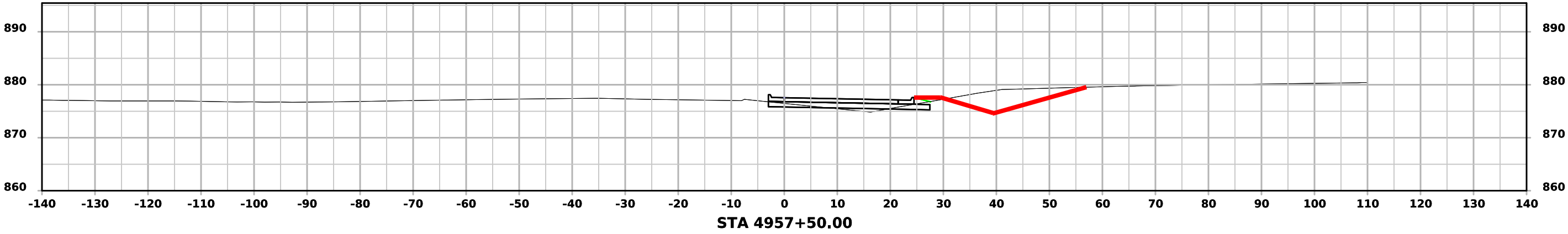
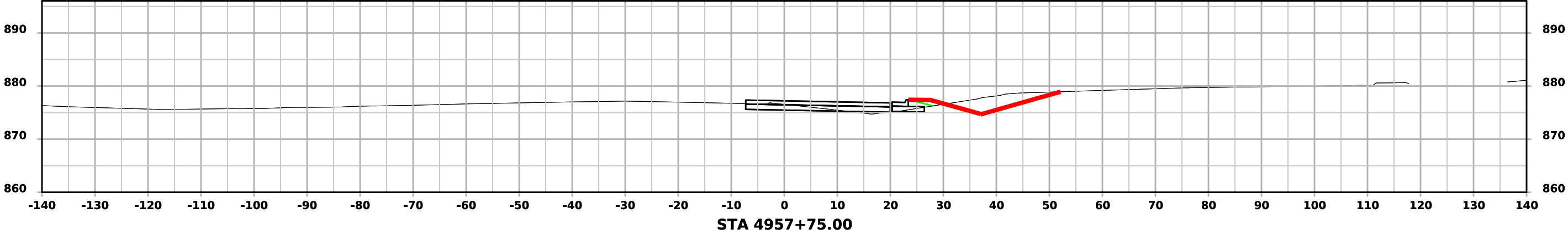
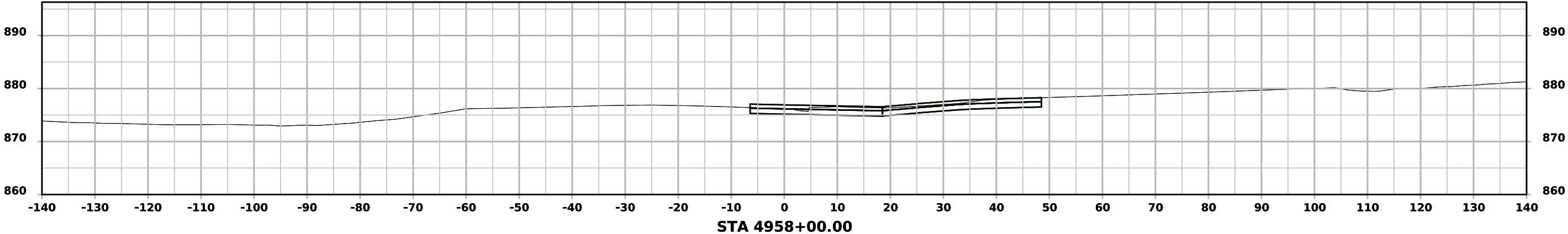


STA 4955+30.45

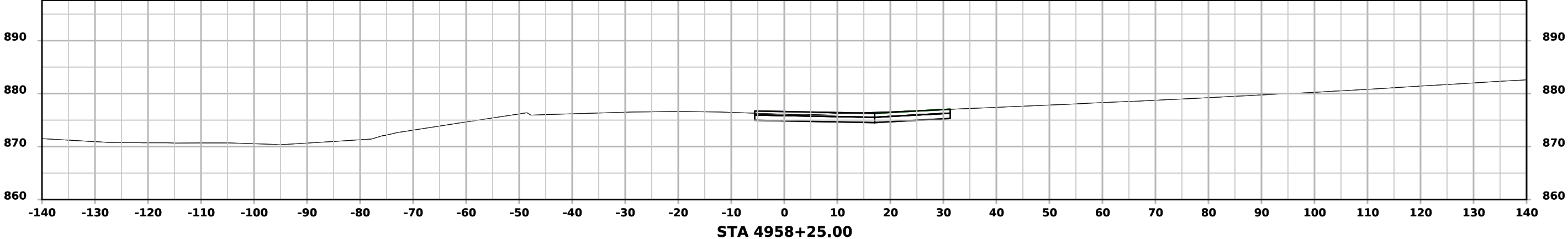
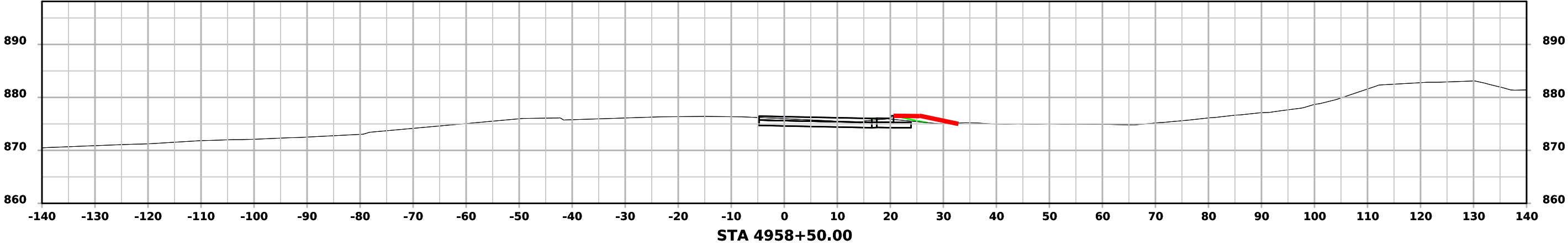
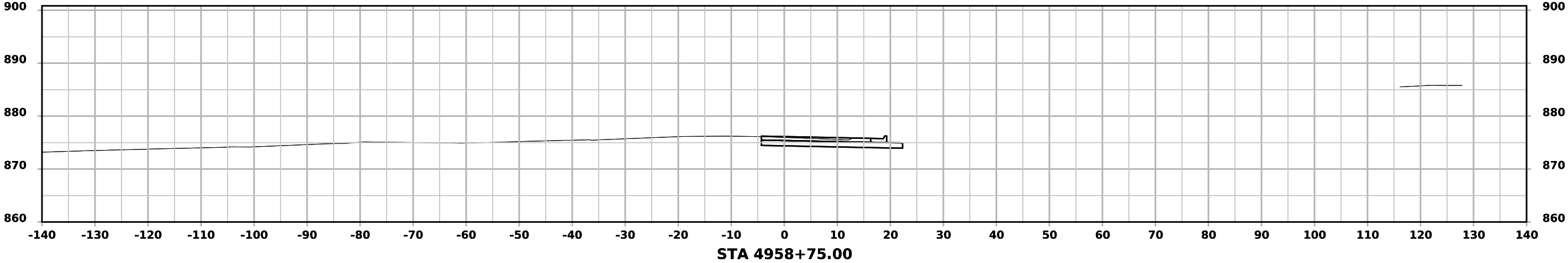
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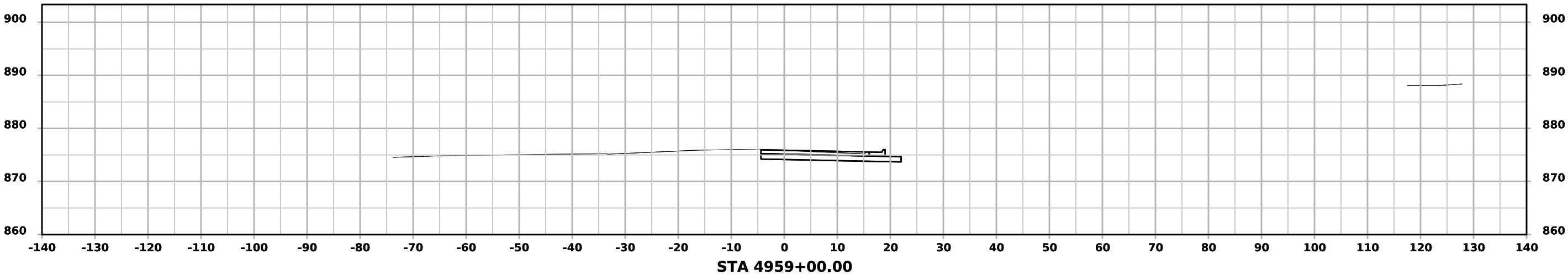
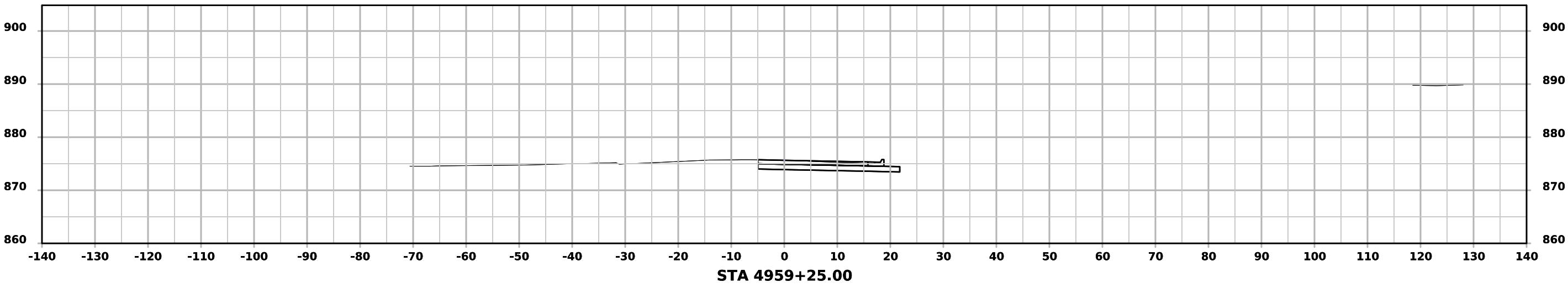
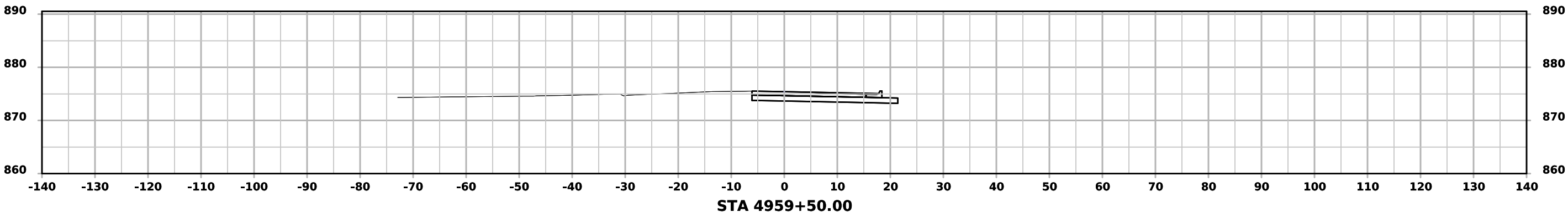


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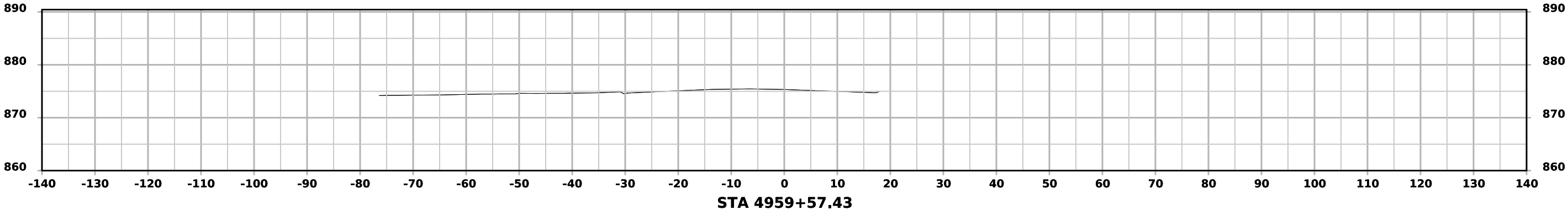




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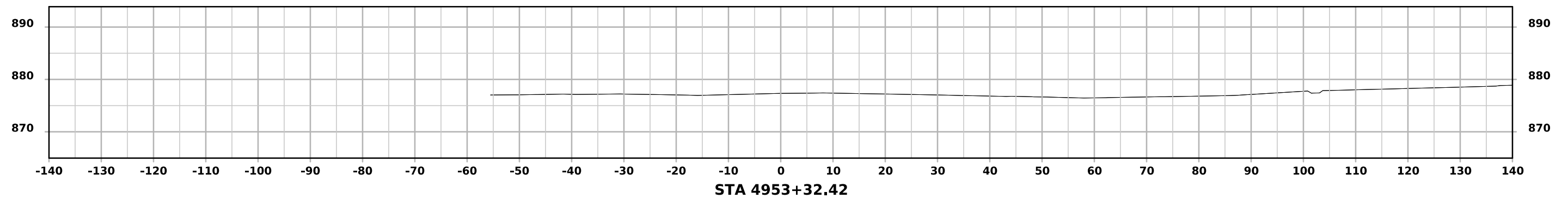
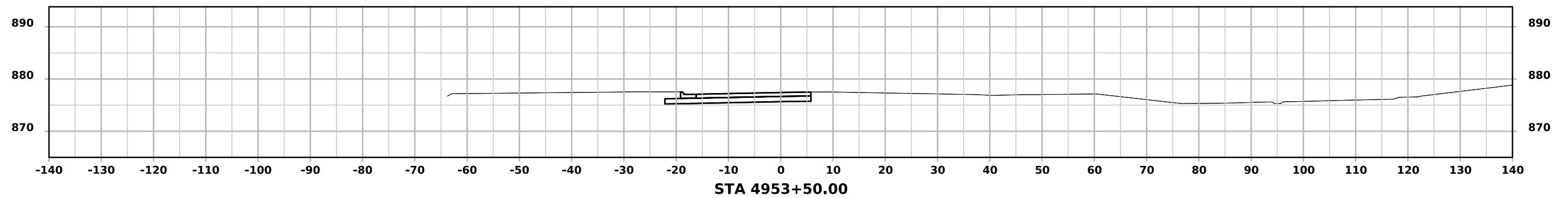
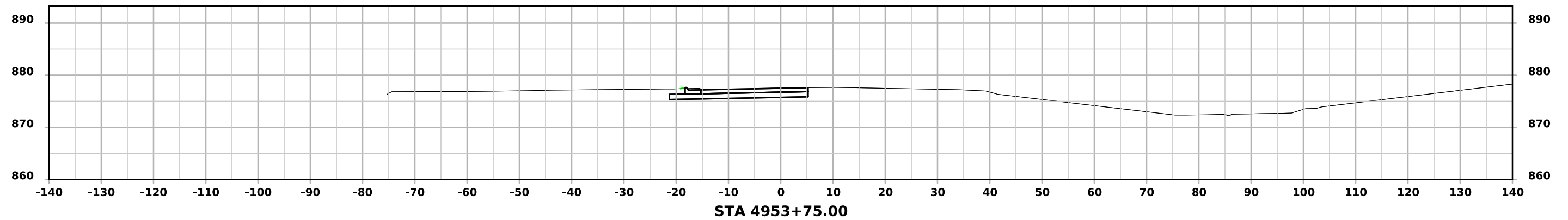


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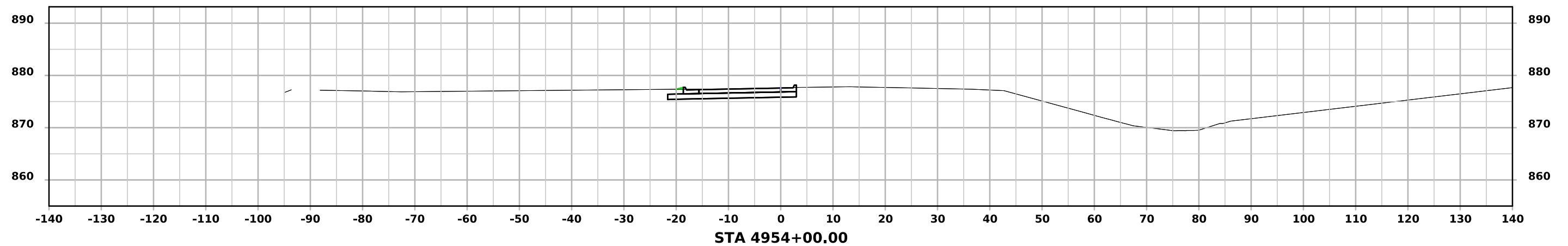
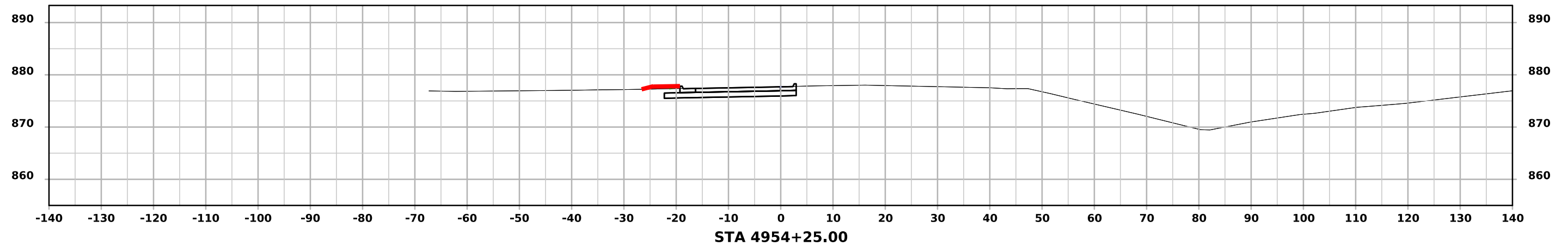
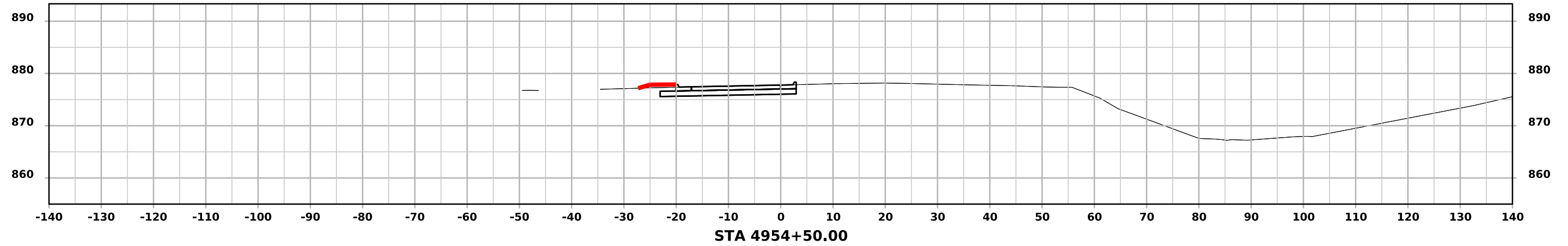


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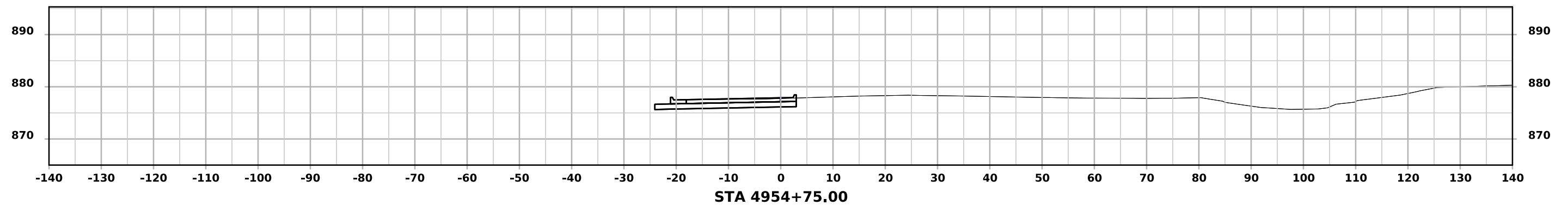
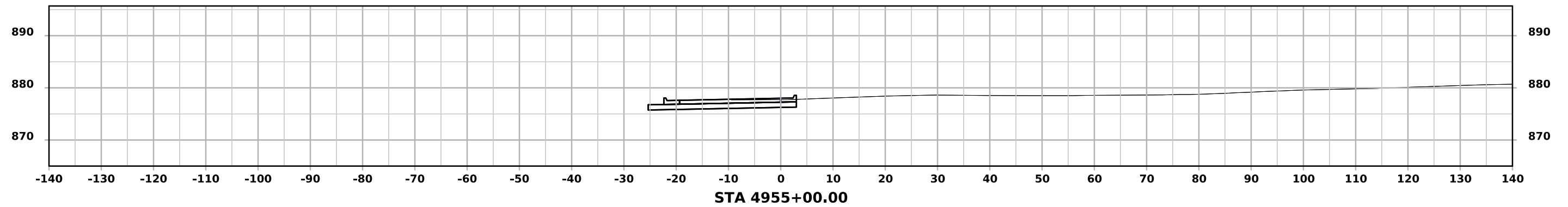
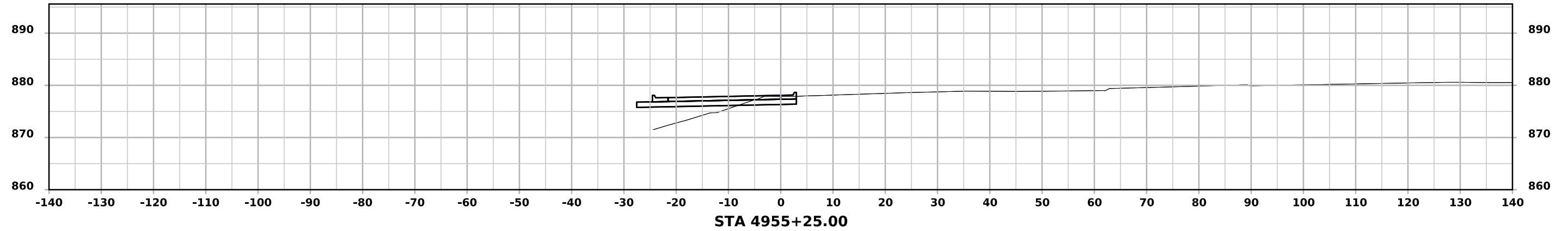
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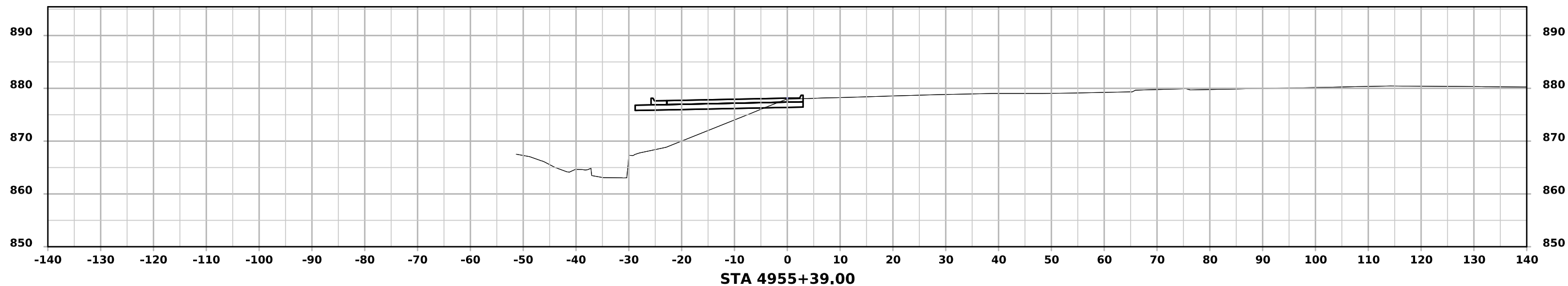
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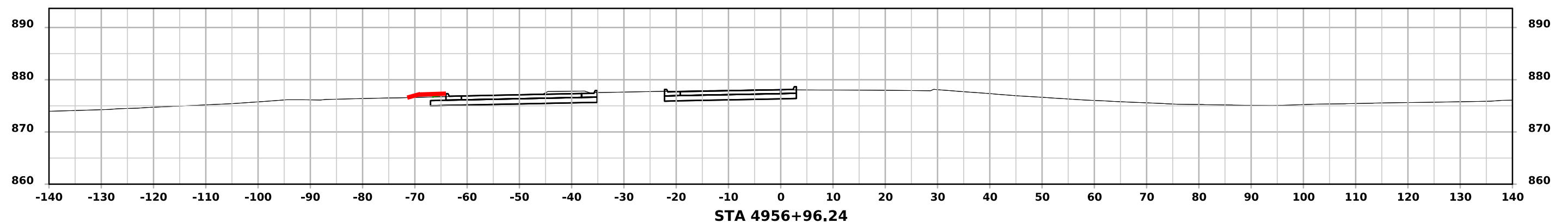
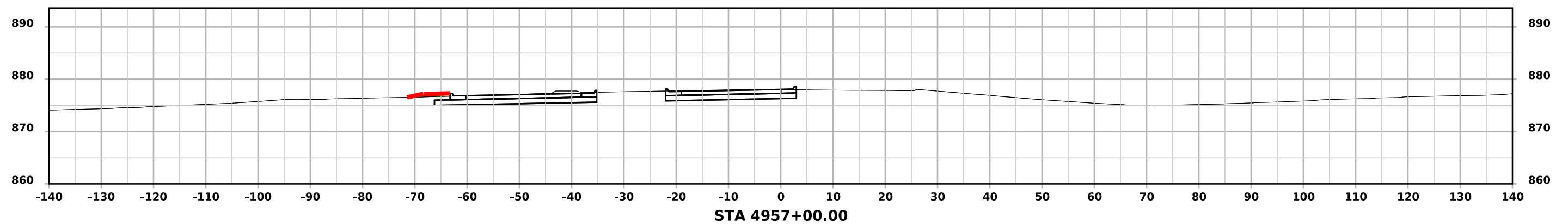
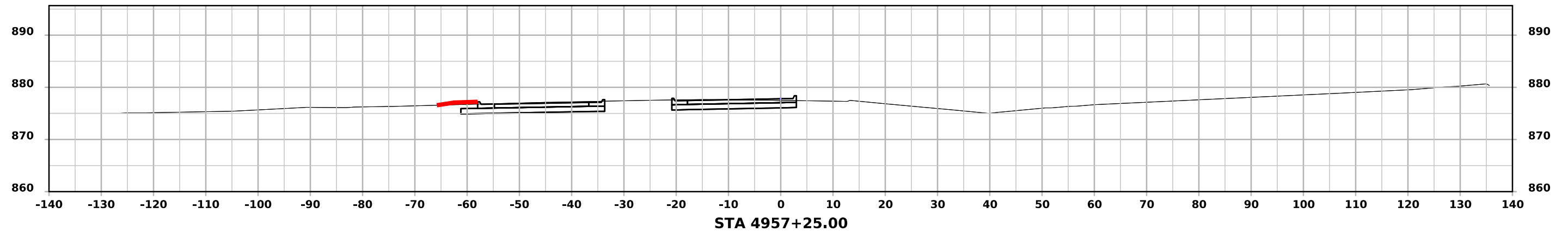
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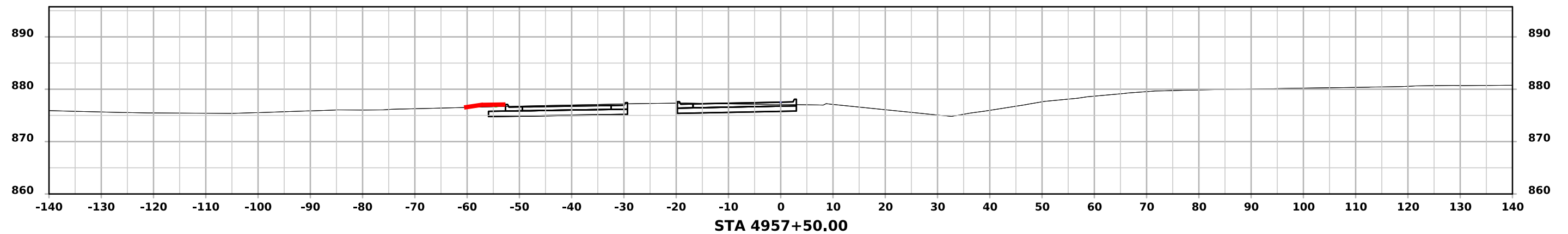
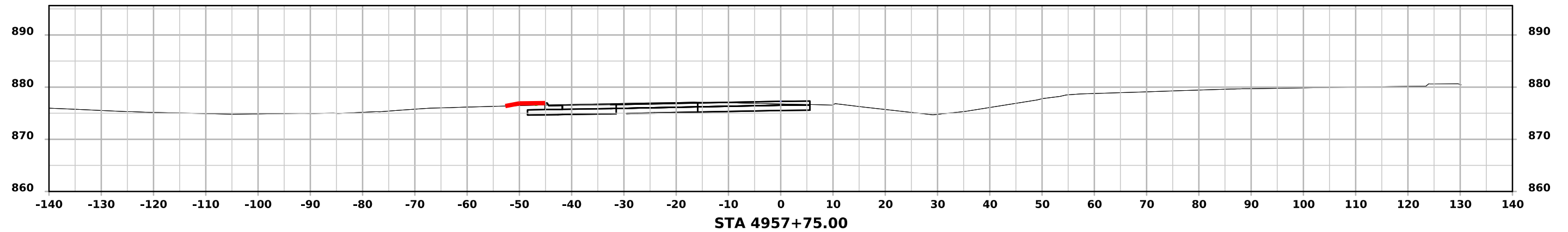
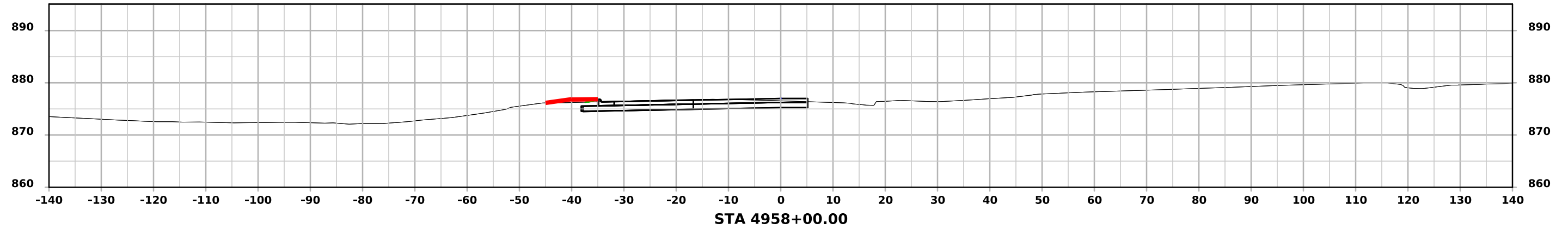
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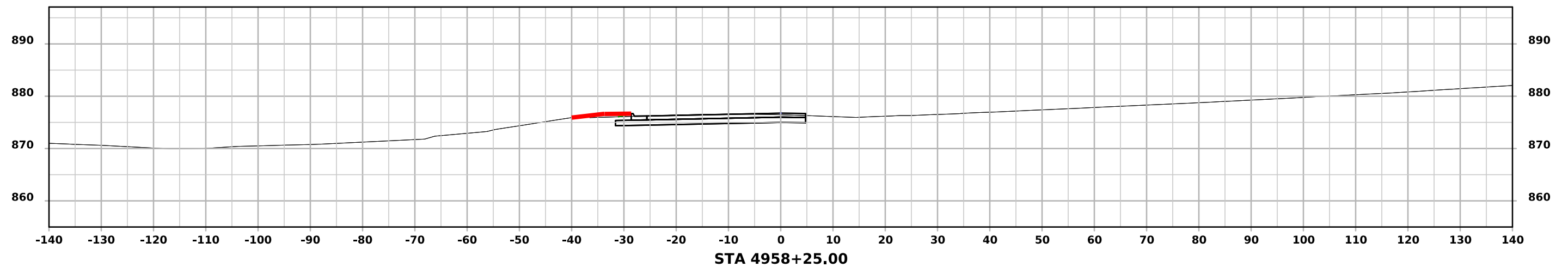
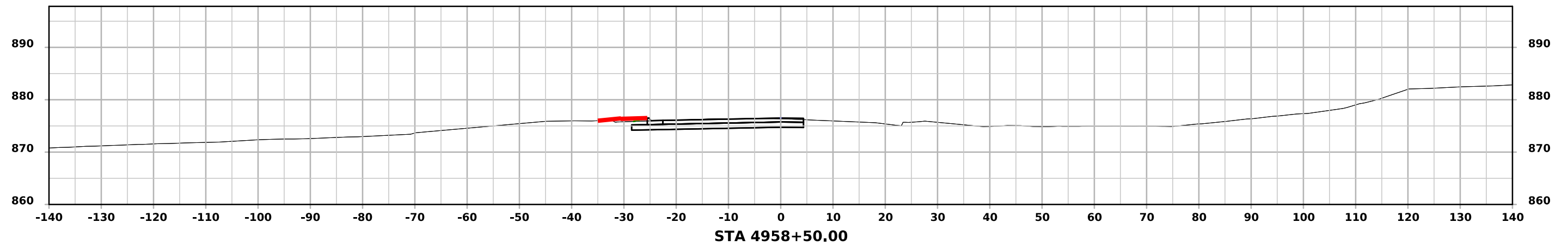
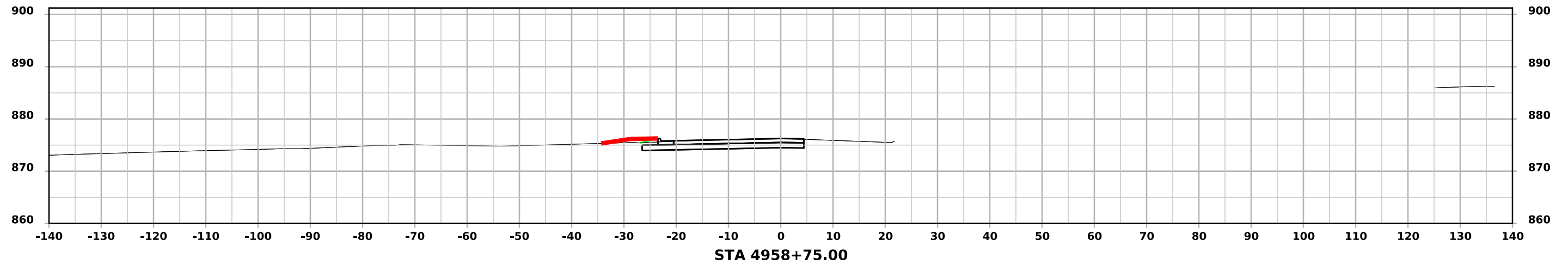


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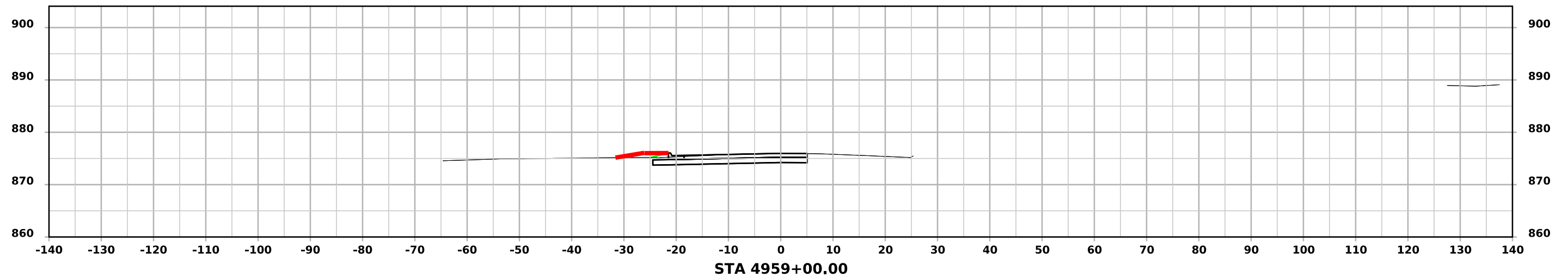
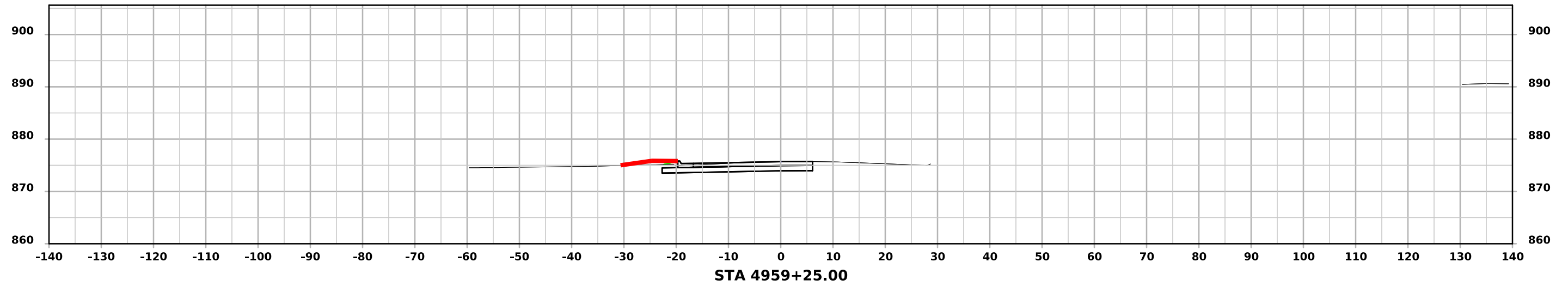
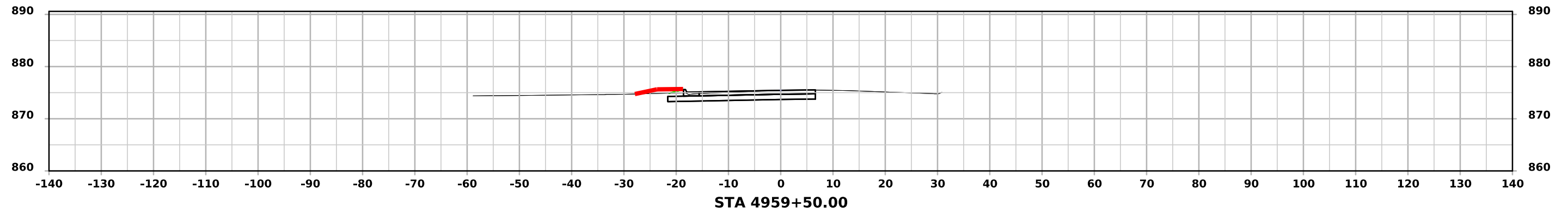




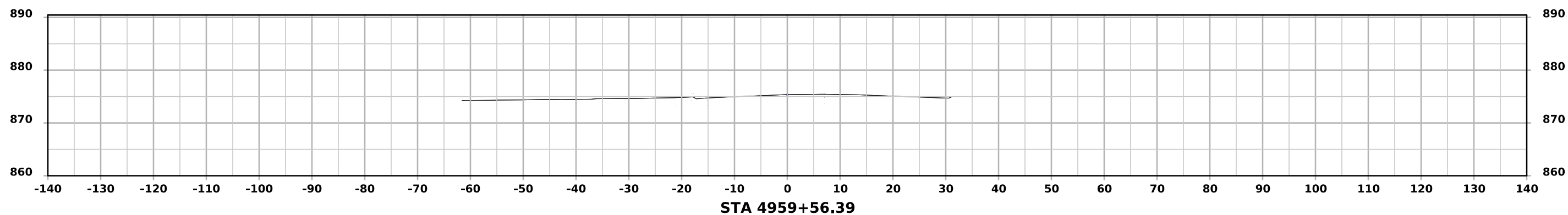
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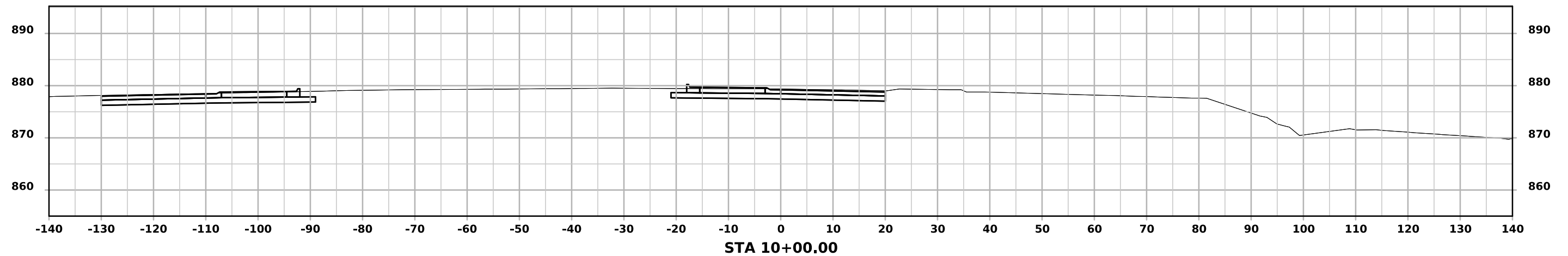
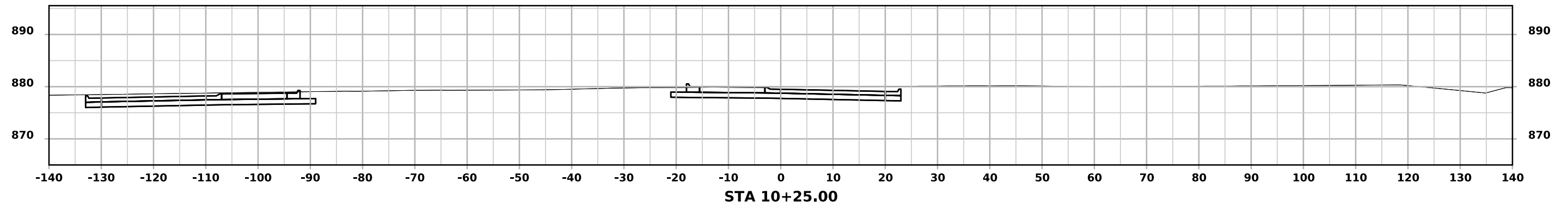
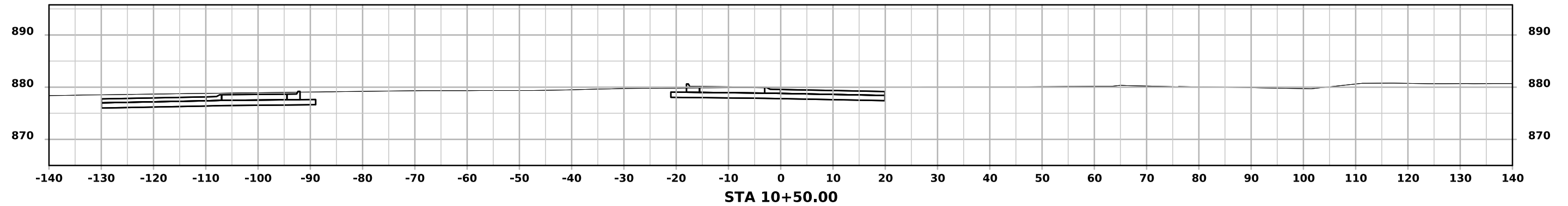
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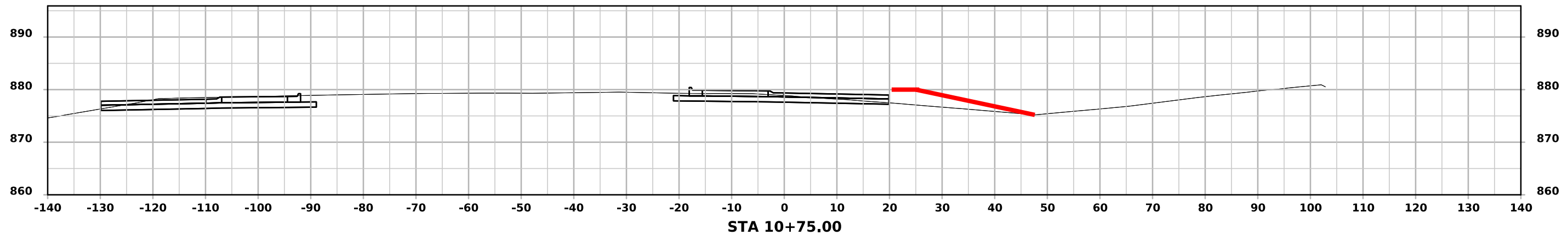
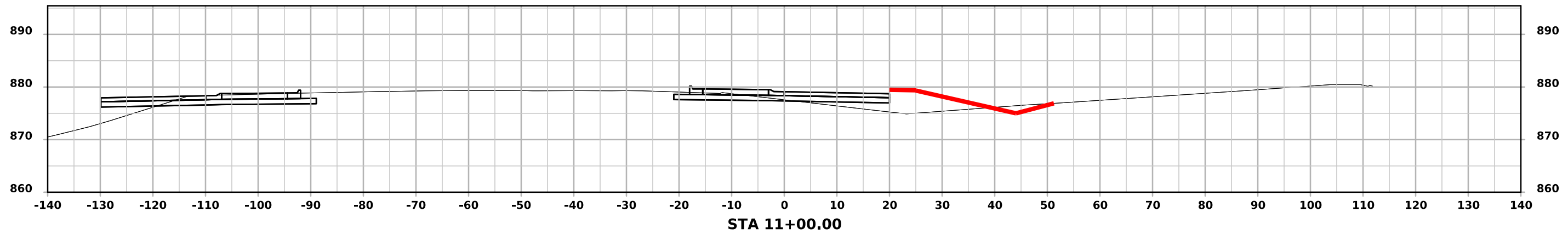
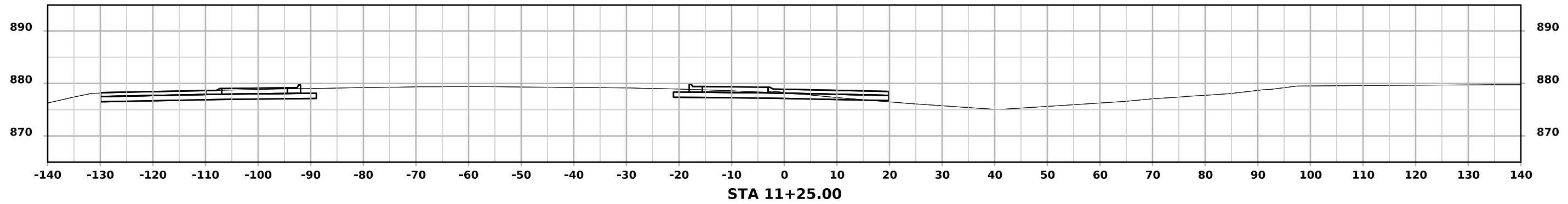
# USH63 SB



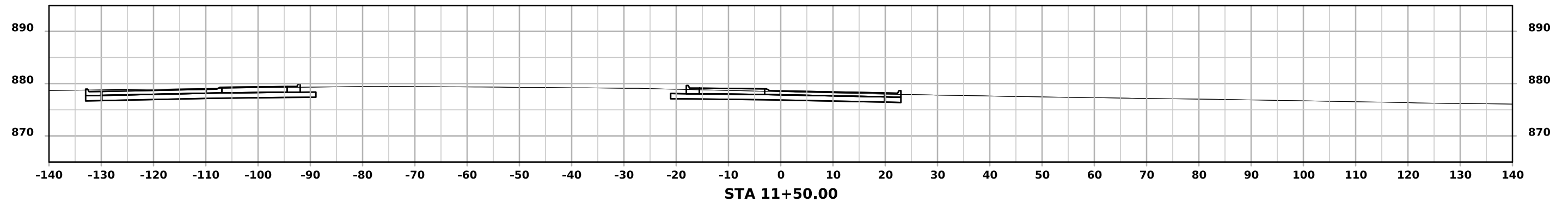
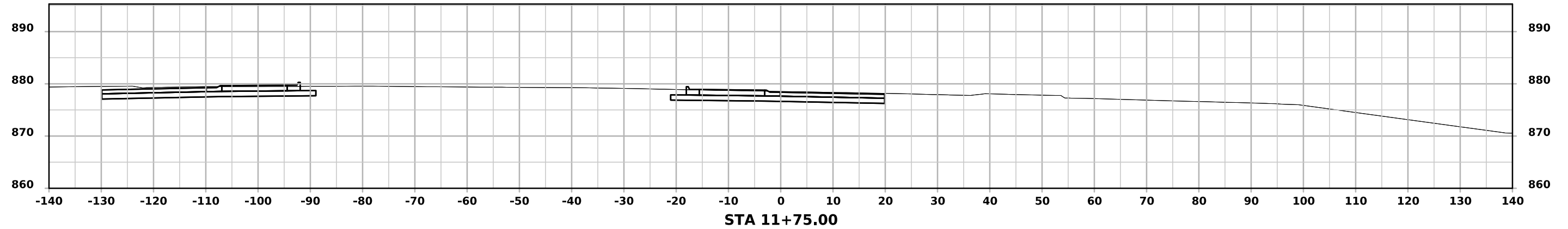
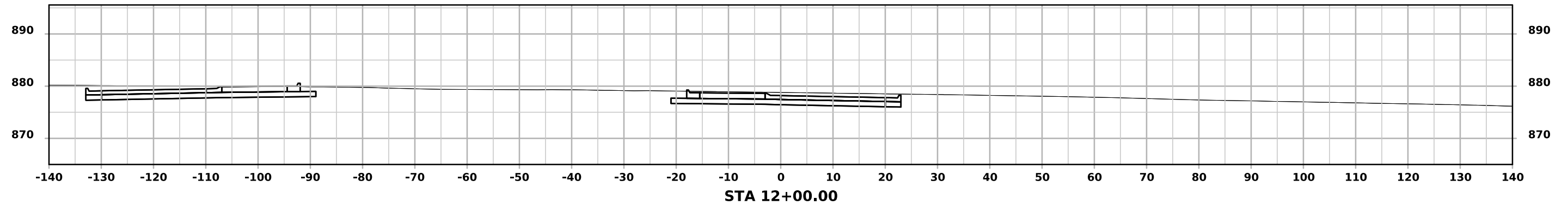
# BUS30 RAB



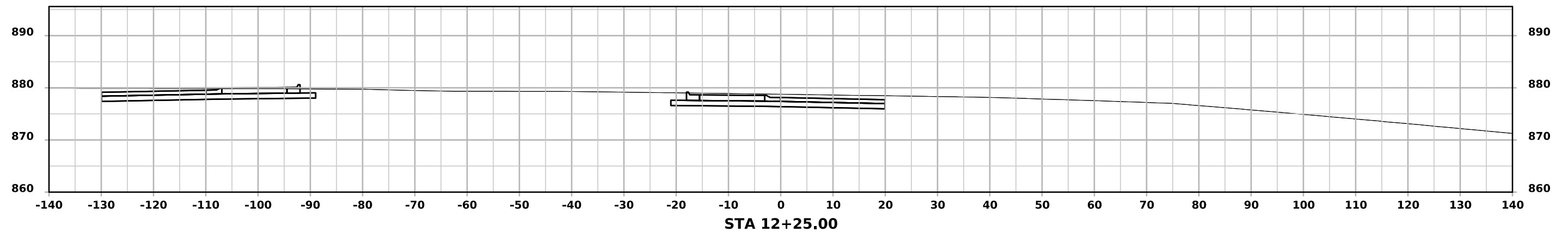
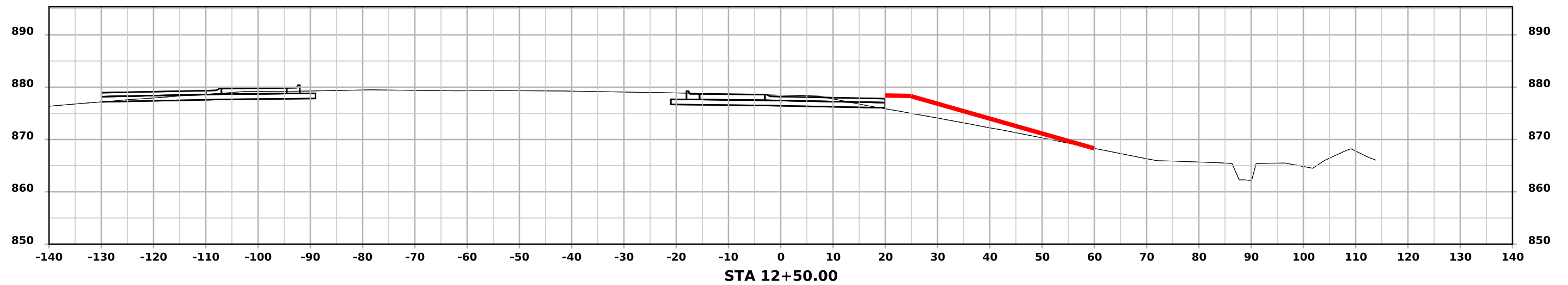
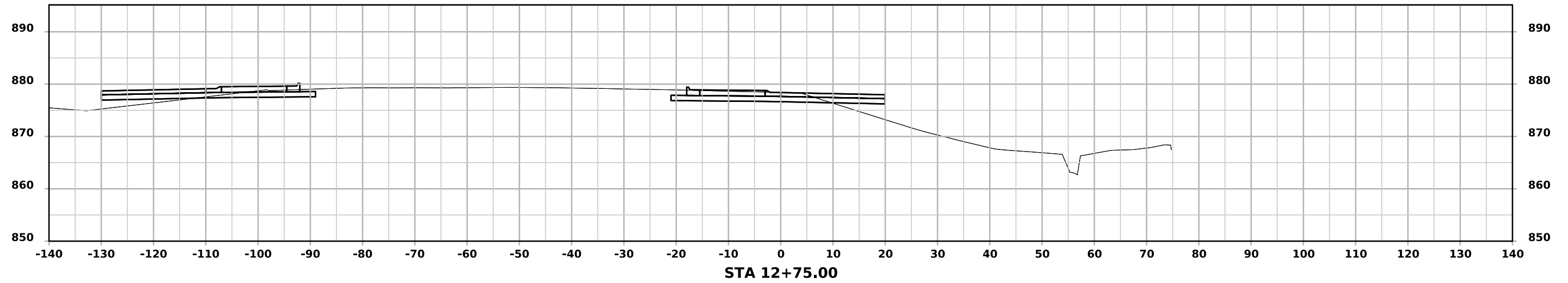
# BUS30 RAB



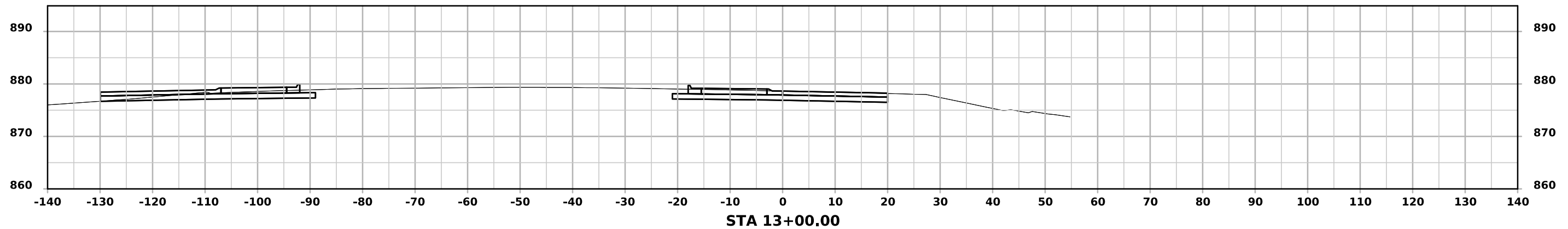
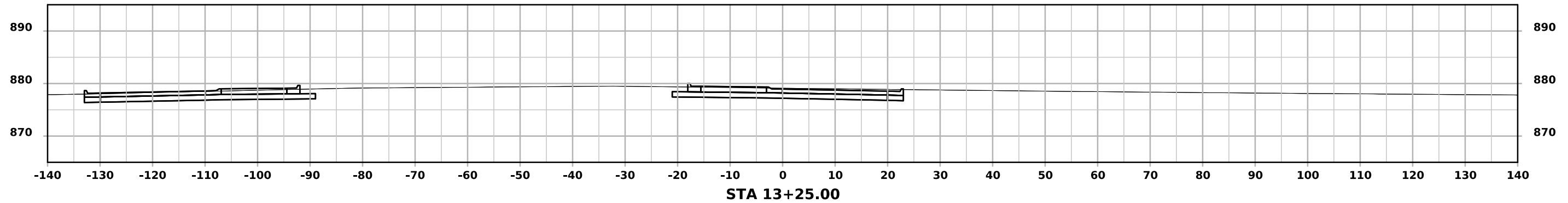
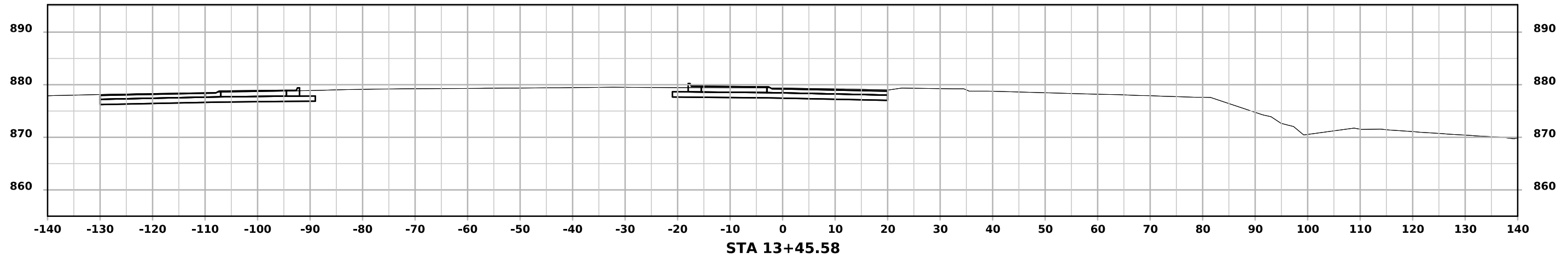
# BUS30 RAB



# BUS30 RAB

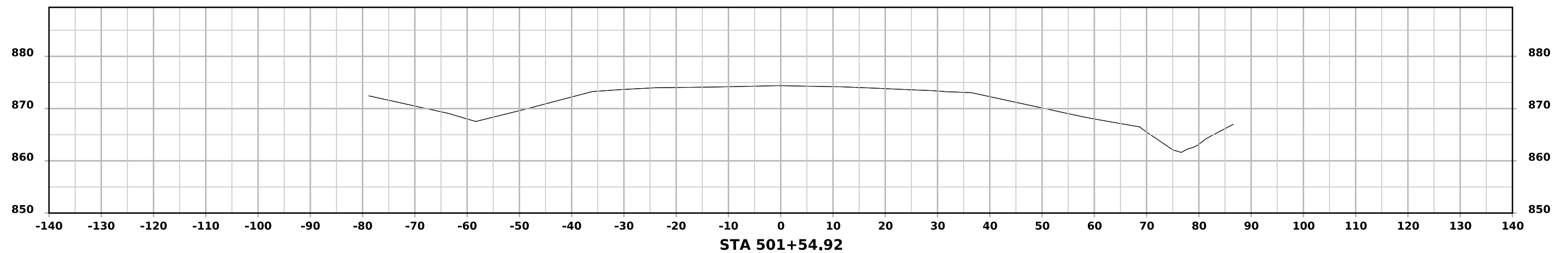
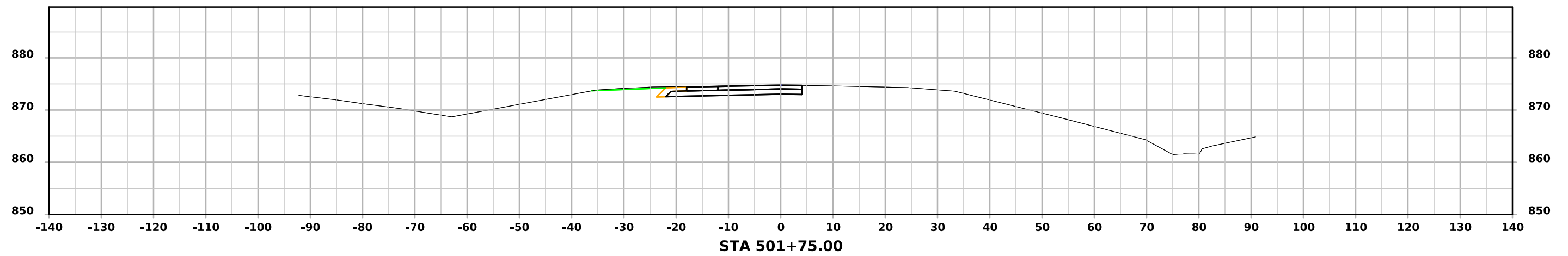
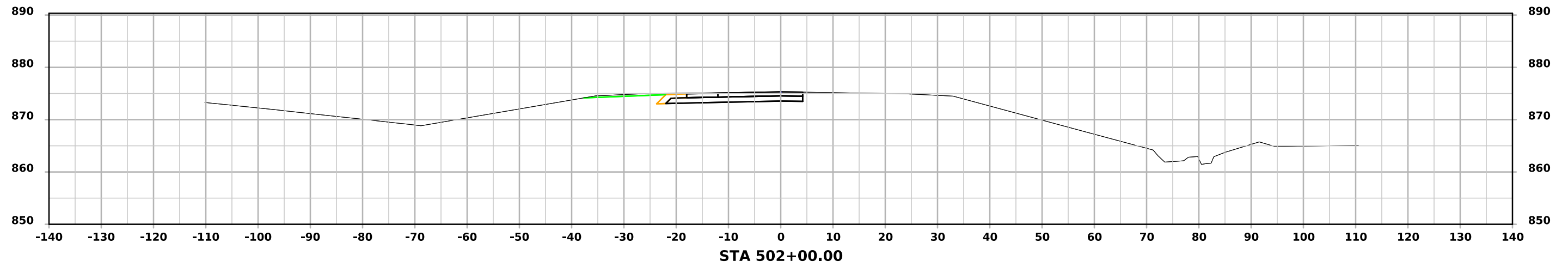


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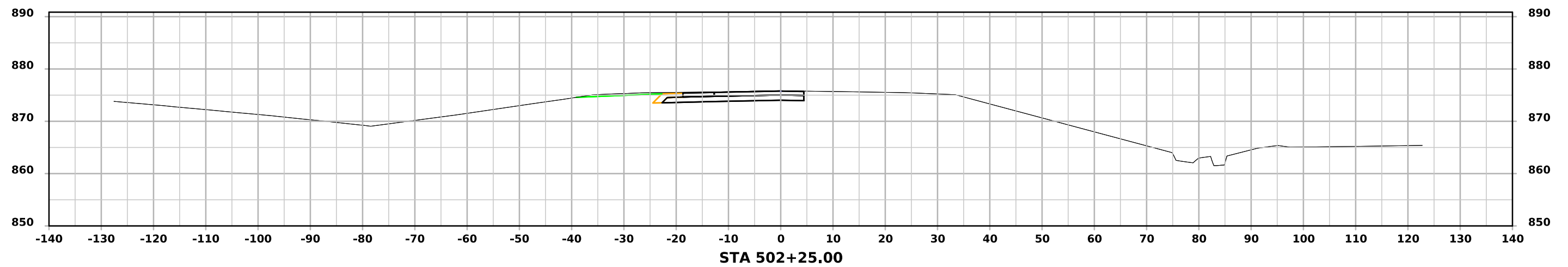
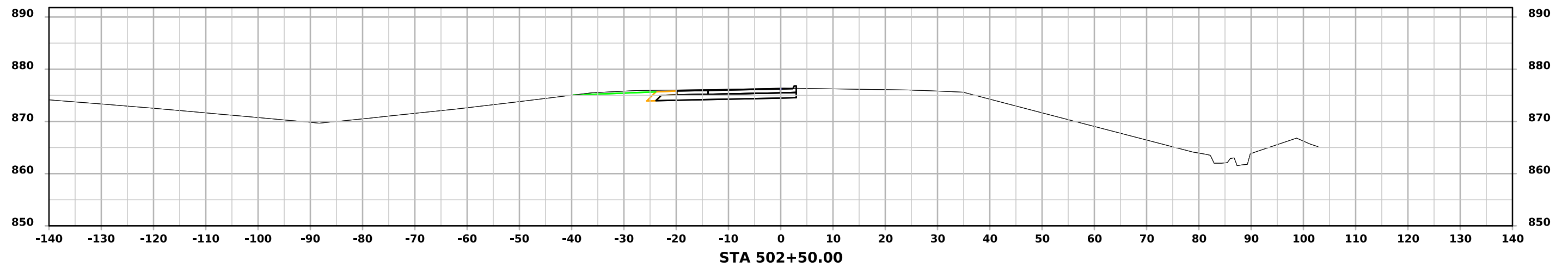
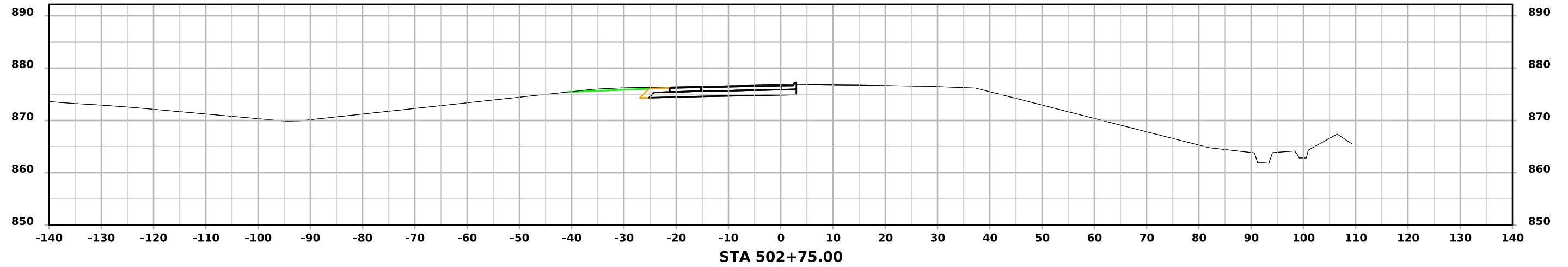




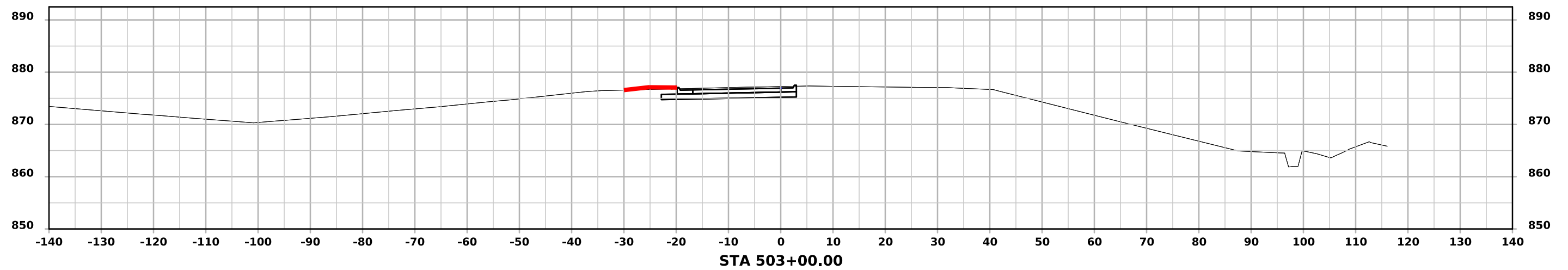
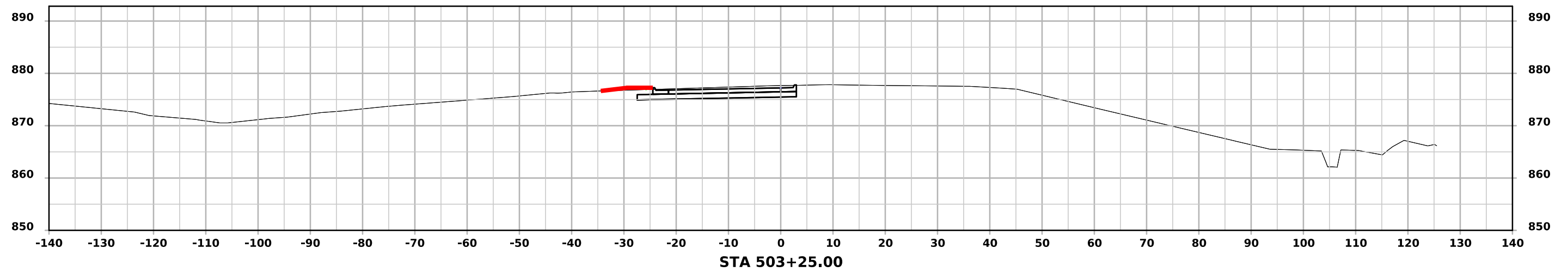
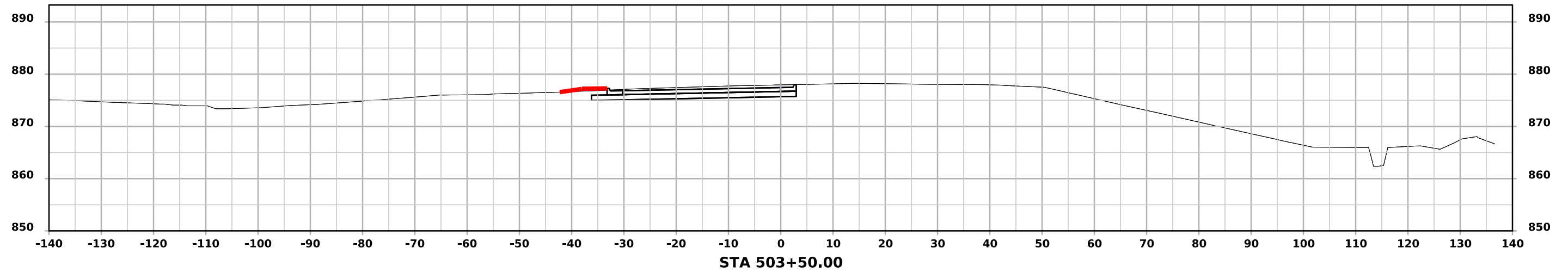
# BUS30 WB



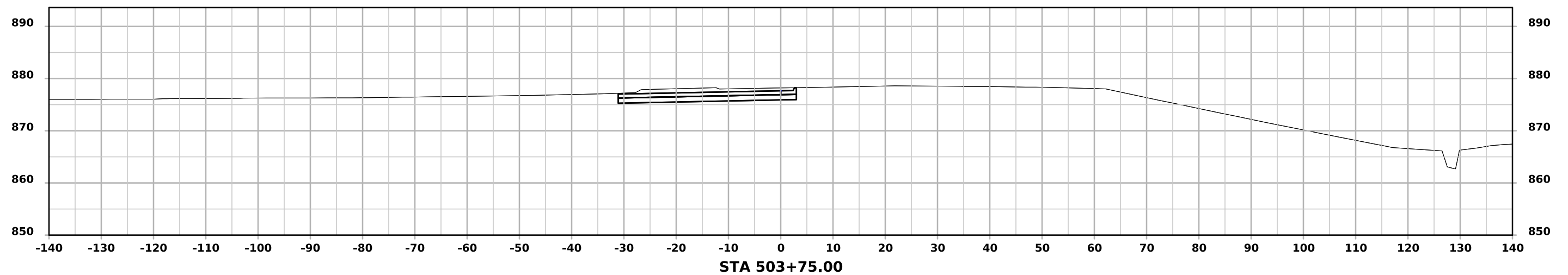
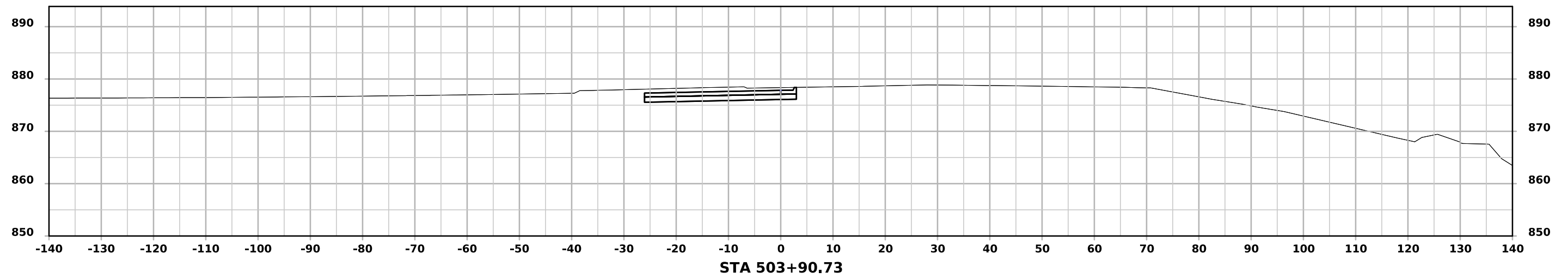
# BUS30 WB



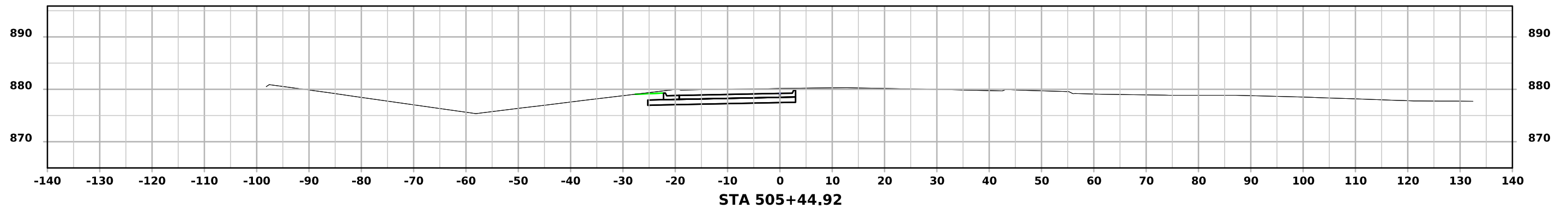
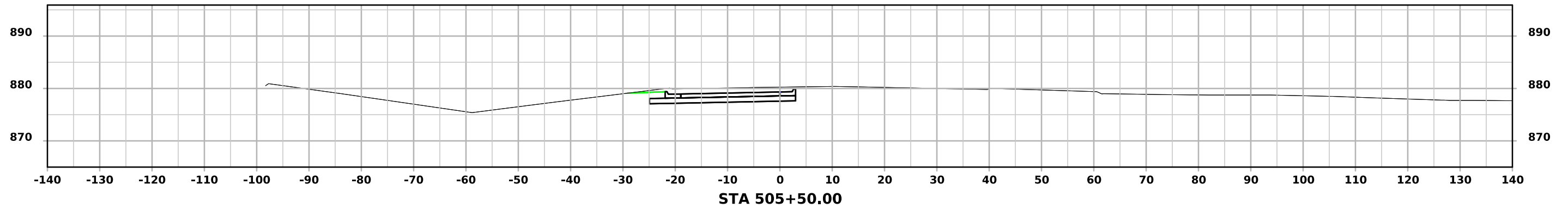
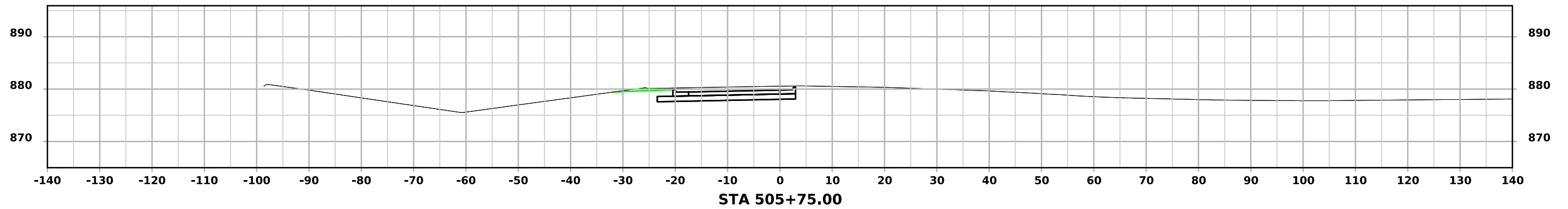
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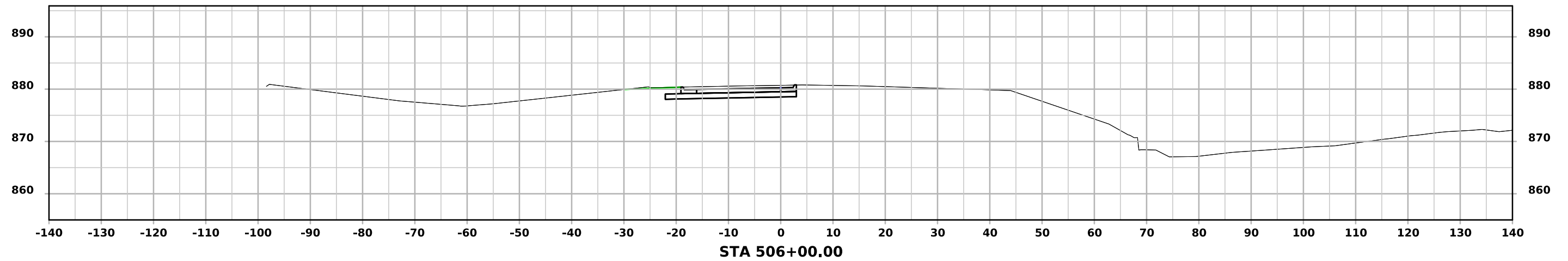
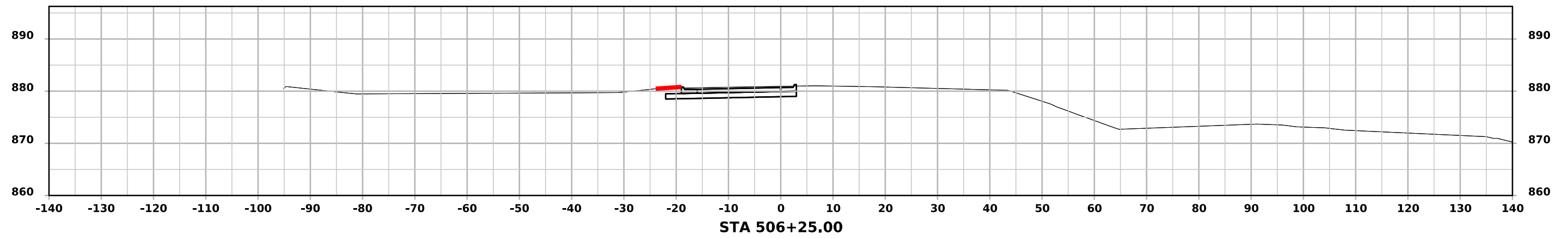
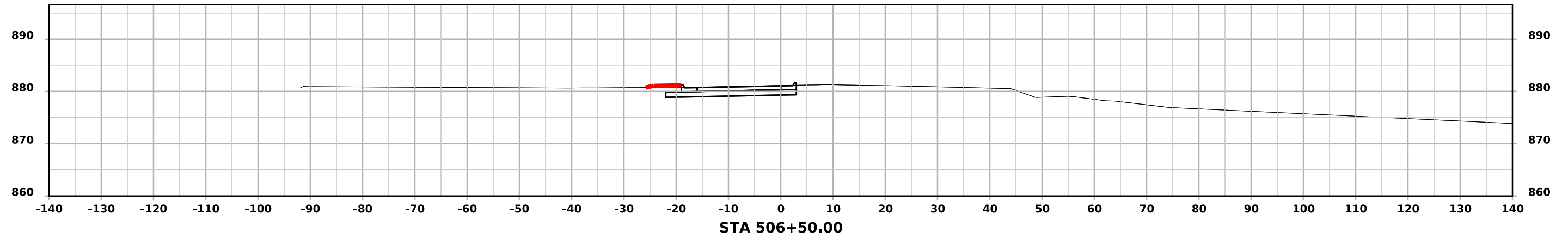
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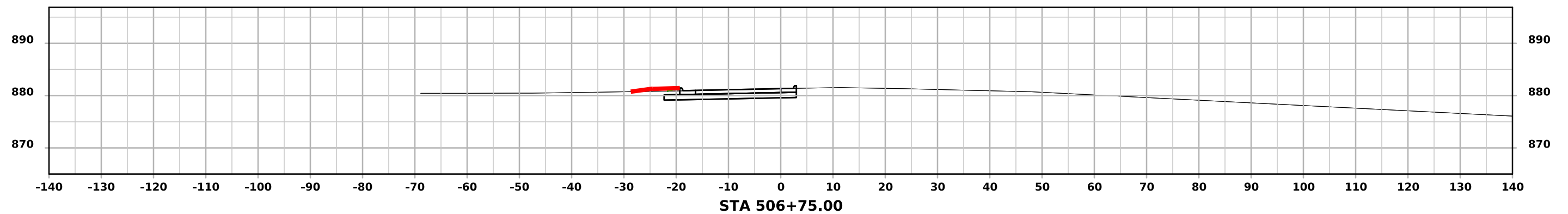
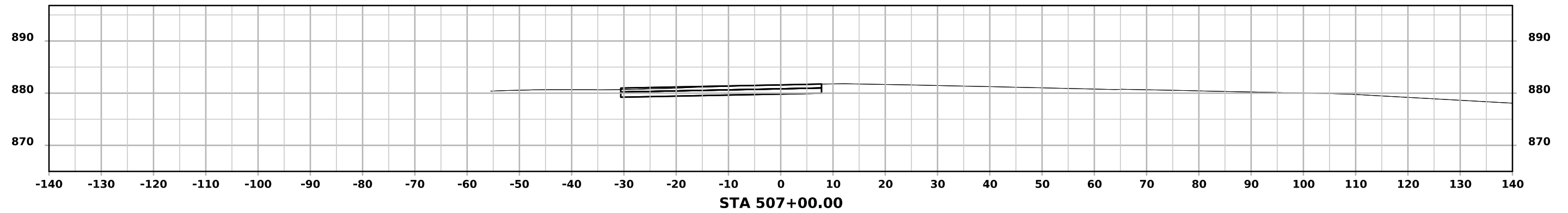
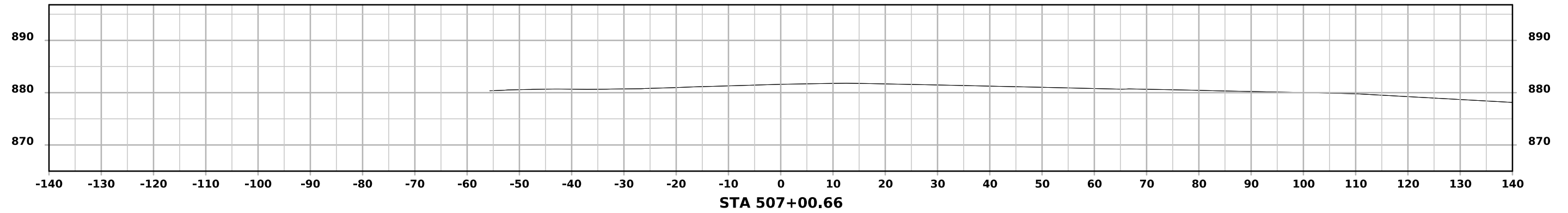
# BUS30 WB



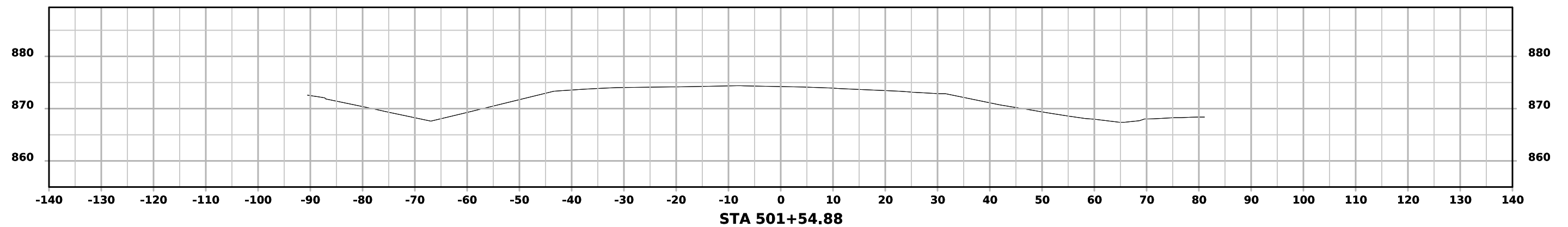
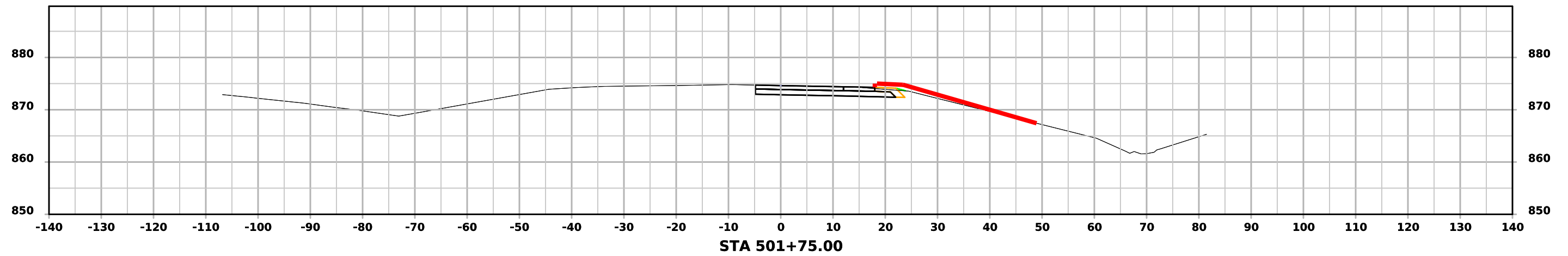
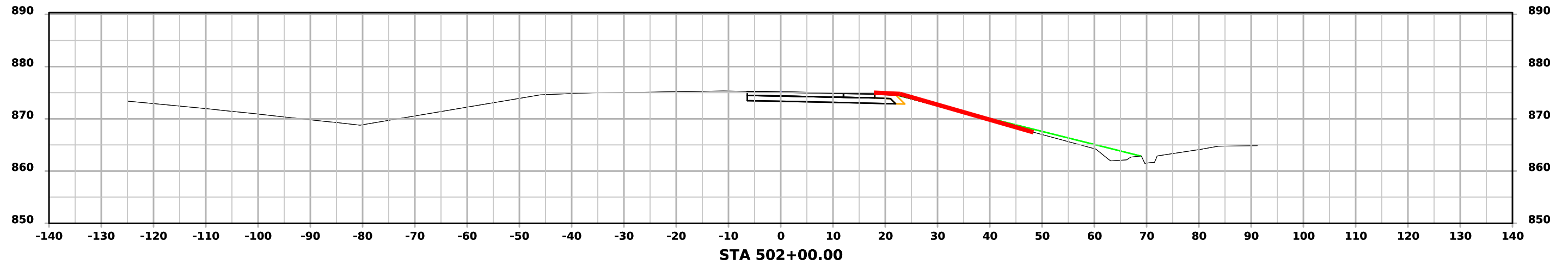
# BUS30 WB



# BUS30 WB

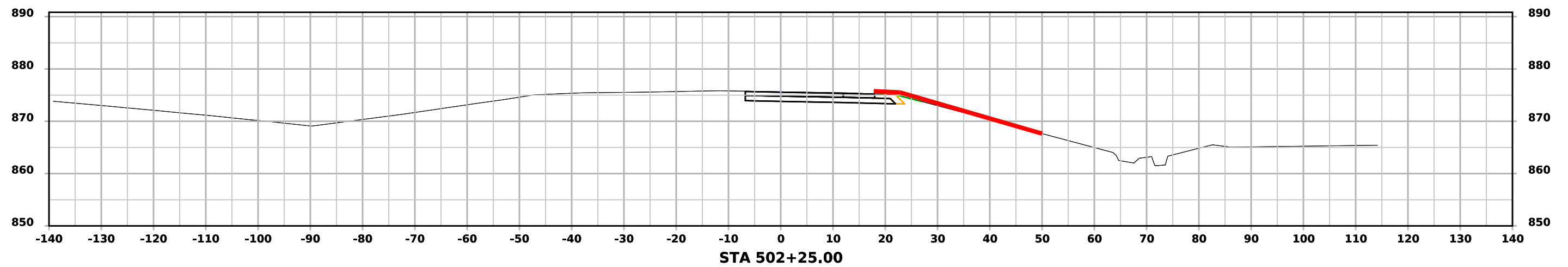
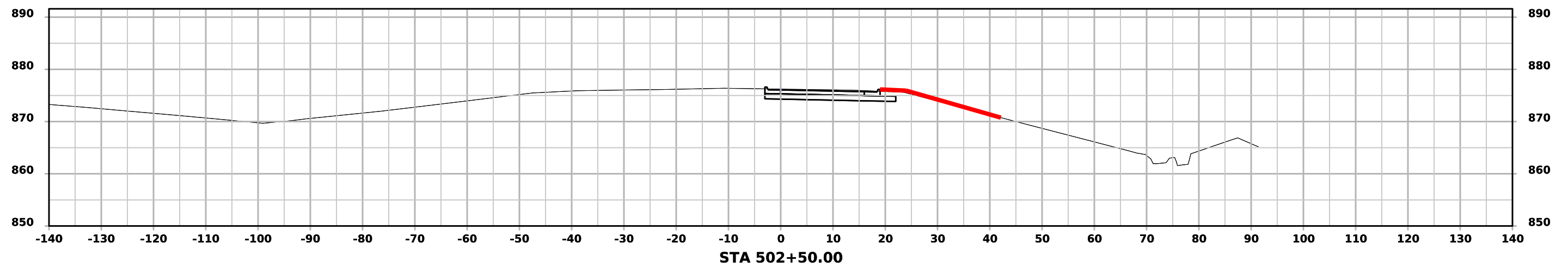
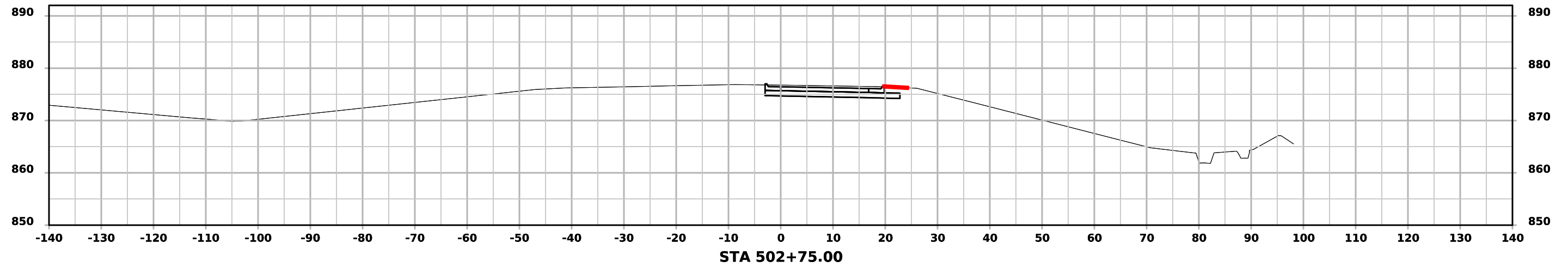


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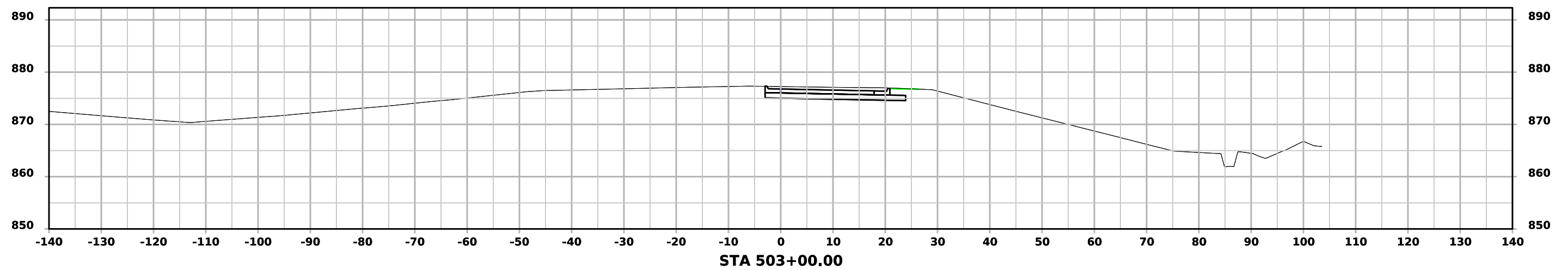
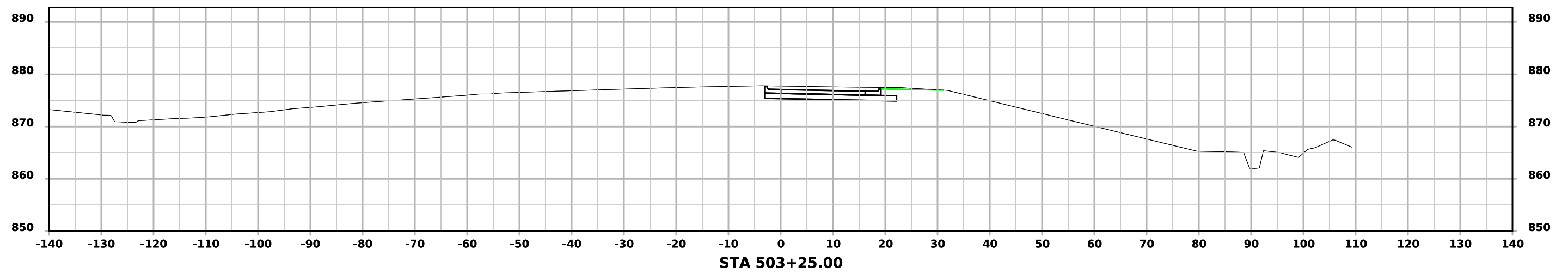
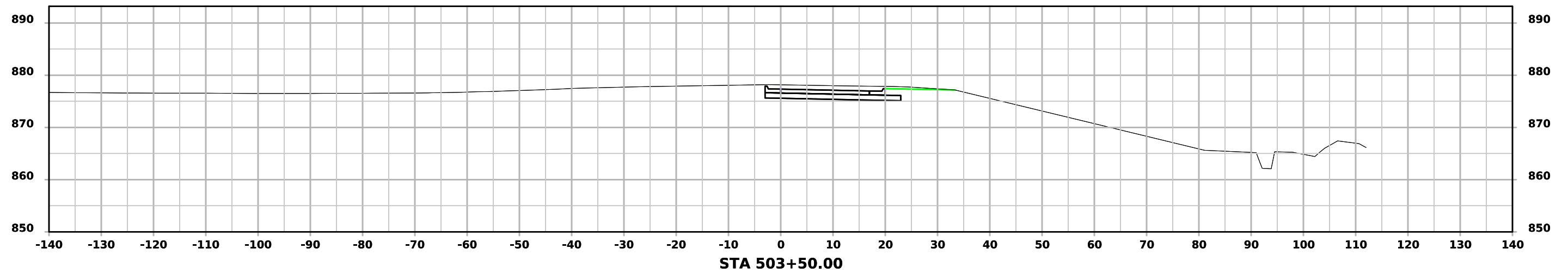




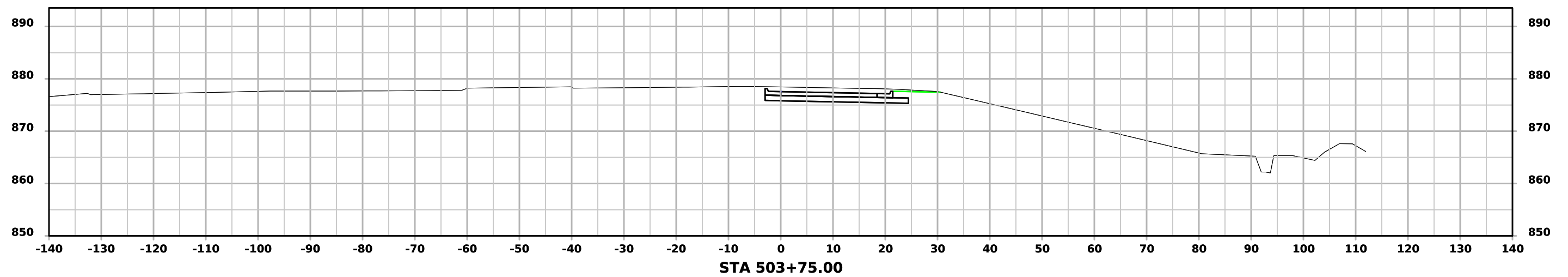
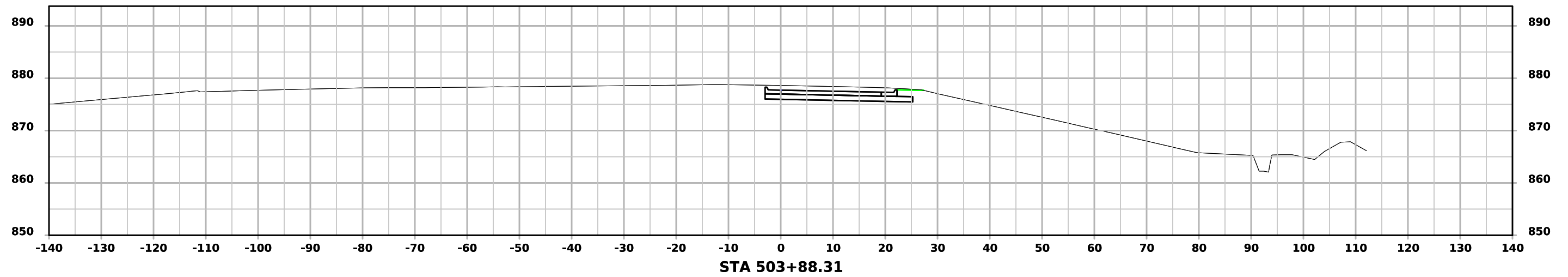
# BUS30 EB



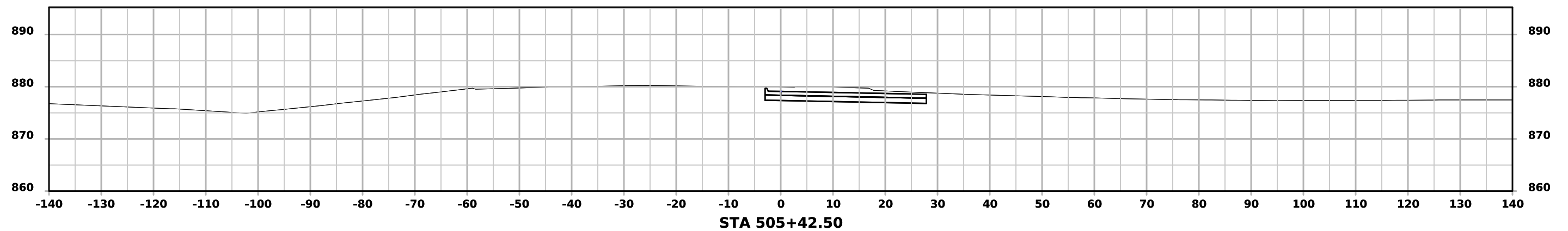
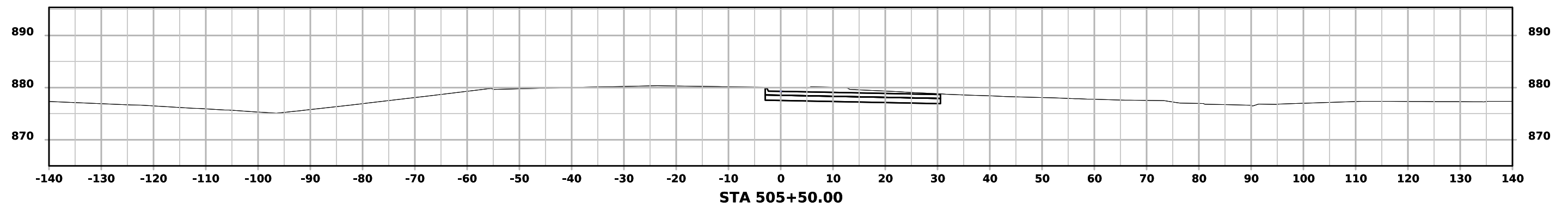
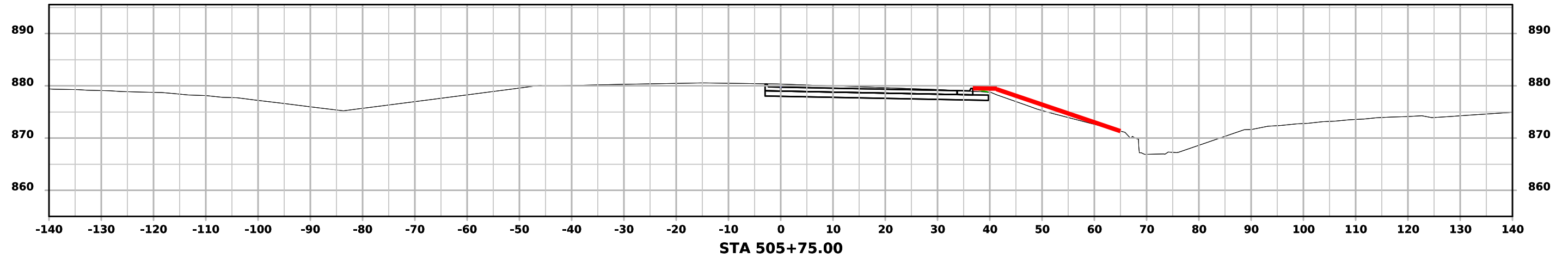
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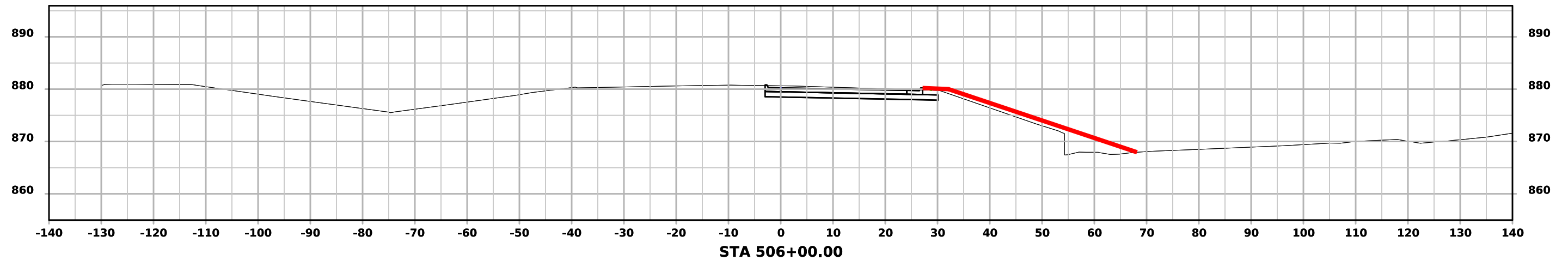
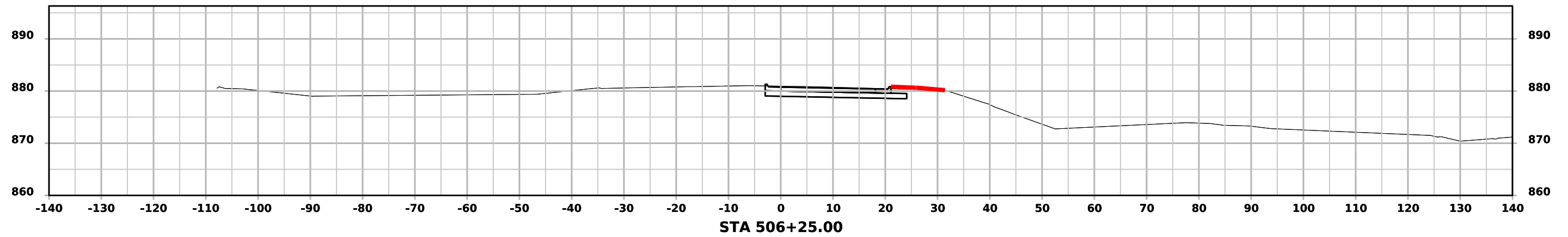
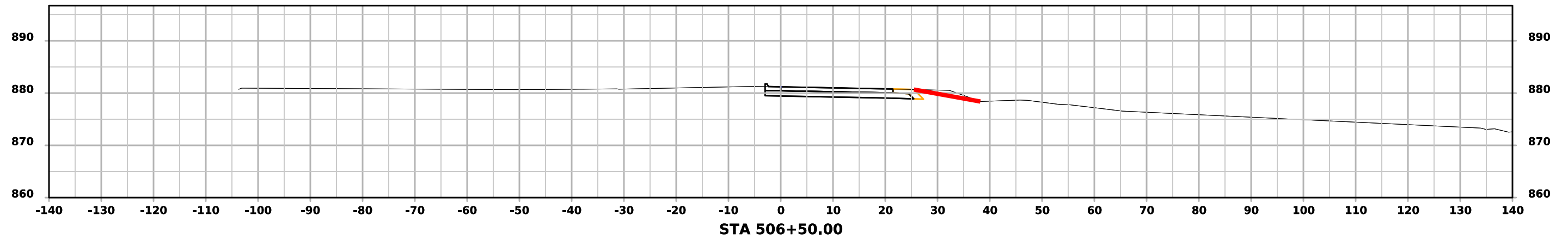
# BUS30 EB



# BUS30 EB



# BUS30 EB



# BUS30 EB

