

LETTING DATE
 Apr 15 2025
 PCC Pavement - Grade and New
 HSIPX-063-5(078)--3L-86

TAMA COUNTY

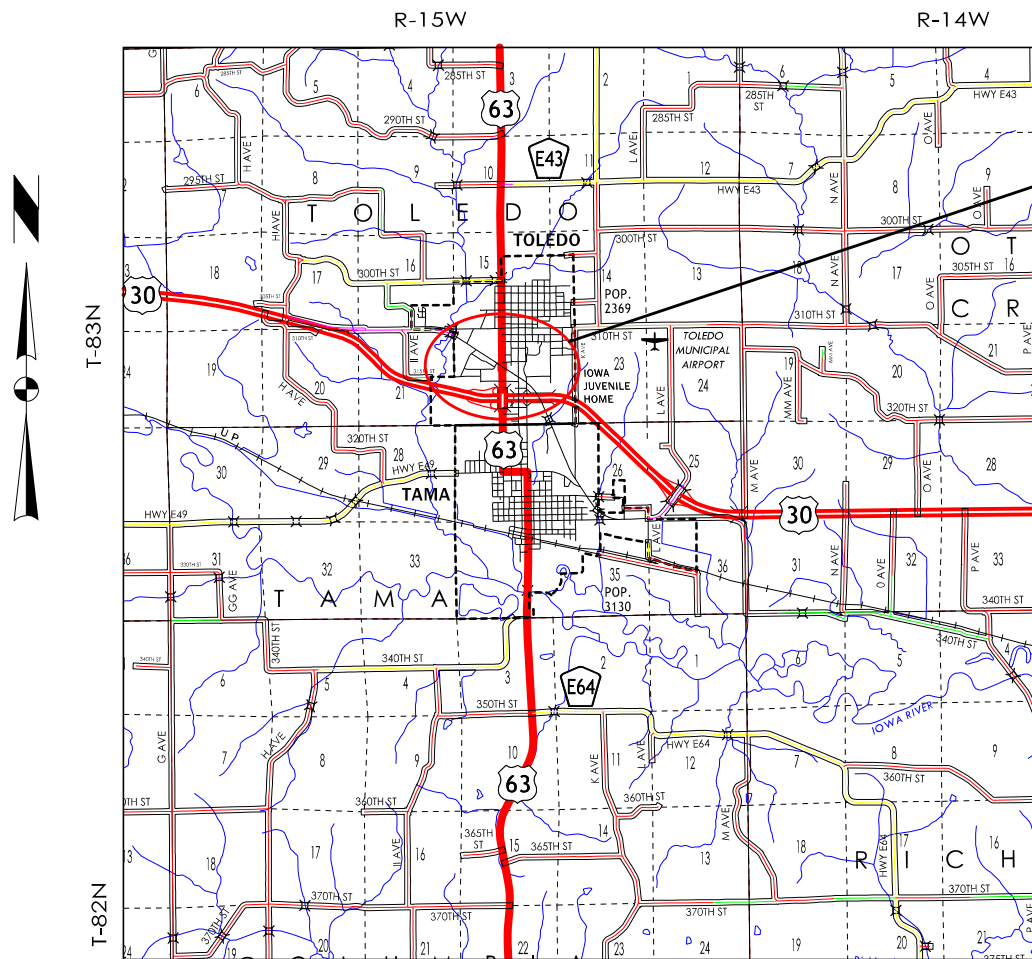


PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
TAMA COUNTY
 PCC Pavement - Grade and New
 US Highway 63
 Business US 30 Intersection in Toledo

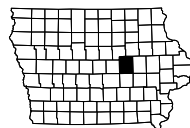
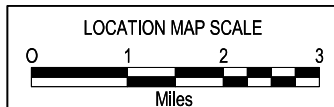
SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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



PROJECT LOCATION



REVISIONS

TOTAL

| | |
|-------------------------------|-------------------------|
| PROJECT IDENTIFICATION NUMBER | 24-86-063-010 |
| PROJECT NUMBER | HSIPX-063-5(078)--3L-86 |
| R.O.W. PROJECT NUMBER | |

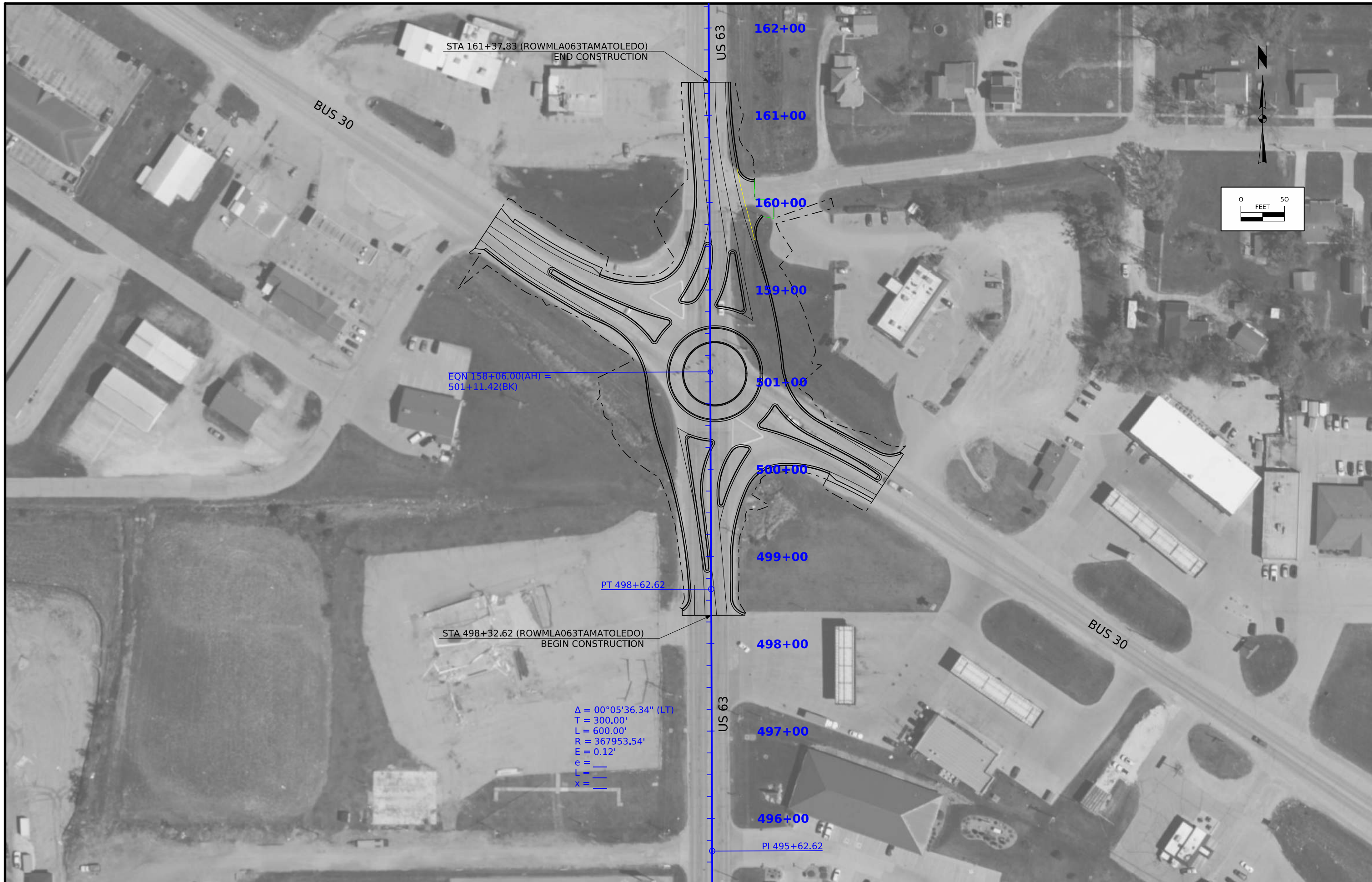
INDEX OF SHEETS

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| A.3 | Design Criteria |
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| * E.1 | BUS 30 |
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PRELIMINARY PLANS

Subject to change by final design.

D5 PLAN - Date: 10/4/2024

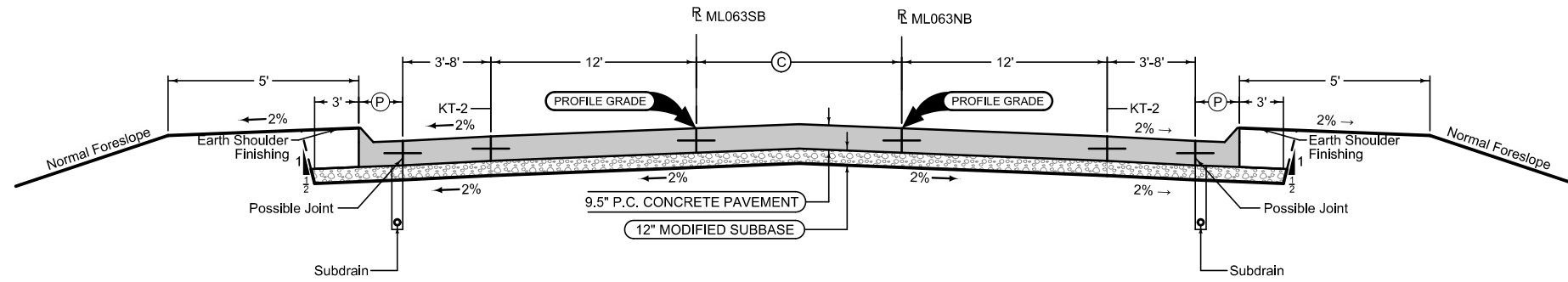


| | | | |
|------------------------|---|------------------------------------|-------------------|
| Roadway | USH 63/BUS 30 | | |
| PIN Number | 24-52-006-040 | Submittal Date | 07/24/24 |
| Project Number | STP-006-7(098)--2C-52 | Approval Date | |
| District | District 6 | Assistant District Engineer | Jeremey Vortherms |
| County | TAMA | or | |
| Route | USH 63/BUS 30 | Office Director | |
| Location | BUSINESS US 30 INTERSECTION IN TOLEDO, IA | | |
| Work Type | 1013-PCC PAVEMENT - GRADE AND NEW | | |
| Segment Manager | | | |
| Designer | 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 | N/A |
| | With depressed median | 12 | 10 | N/A |
| 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 | 2% |
| | Auxiliary and turn lanes | 3% | 3% maximum | 2.5% |
| | Crown break at centerline | 4% | 4% maximum | 3% |
| 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 | 4% |
| | Curb and gutter units | Match pavement cross-slope | 6% maximum | 2% |
| | Parking lanes | 1% greater than pavement cross-slope | 6% maximum | N/A |
| Curb type (See Section 3C-2) | Design speed ≤ 45 mph | 6-inch standard | any shape | 6-inch standard |
| 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 | 10:1 for 4' then 4:1 |
| | Beyond standard ditch depth and design clear zone | 3.5:1 | 3:1 | 3.5:1 |
| | Curbed roadways | 2% | not steeper than 3:1 | 2% |
| 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 | 6:1 |
| | w/o drainage structures | 10:1 | 6:1 | 6:1 |
| Ditches (See Section 3G-1) | Outside ditch (depth x width) (ft) | 5 x 10 | -- | 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** | N/A |
| | 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** | N/A |
| Bridge width—existing* | | design lane widths + no less than 2 ft left and right | design lane widths + 2 ft left and right | N/A |
| Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks) | Over primary | 16.5 | 16 | N/A |
| | Over non-primary | 16.5 at interchange locations, 15 at all other locations | 14 | N/A |
| | Over railroad | 23.3 | 23.3 | N/A |
| | Sign trusses and pedestrian bridges | 17.5 | 17 | N/A |
| 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

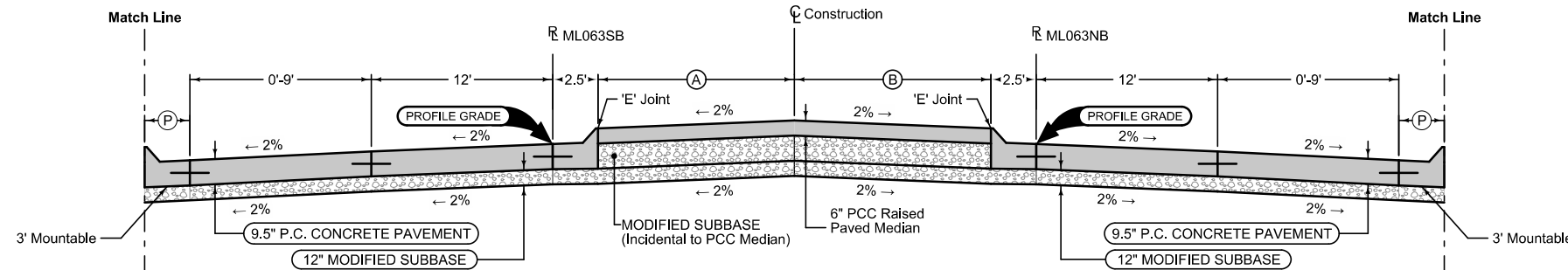
| STATION TO STATION | | (C) Feet |
|--------------------|------------|-------------|
| 4953+32.59 | 4953+81.00 | 9'-13" |
| 4957+65.00 | 4959+57.43 | 9'-13" |

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 |

| STATION TO 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.

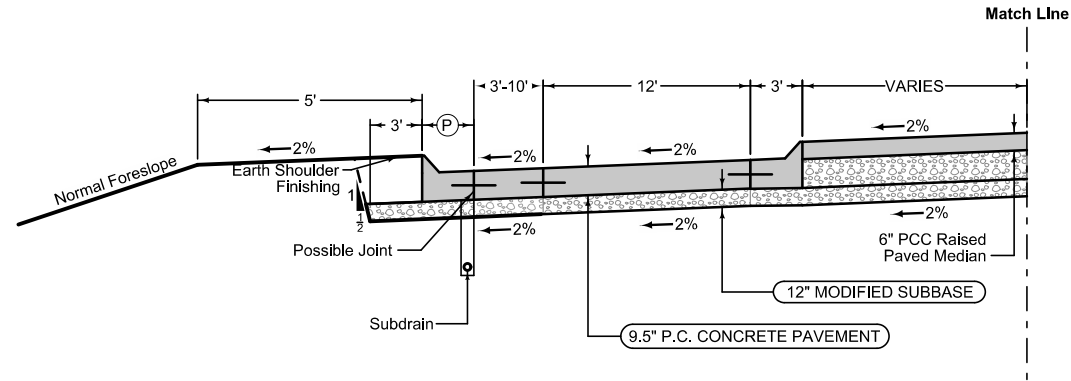
US 63 NB/SB

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

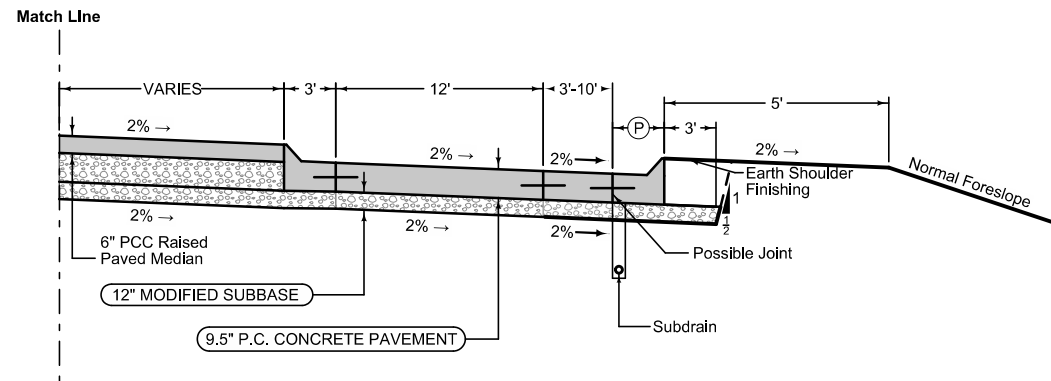
| STATION TO STATION | | (P) Feet | Curb Type See PV-102 |
|--------------------|------------|-------------|-------------------------|
| 4956+92.59 | 4957+70.00 | 2.5 | 6" STD |
| | | | |
| | | | |



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

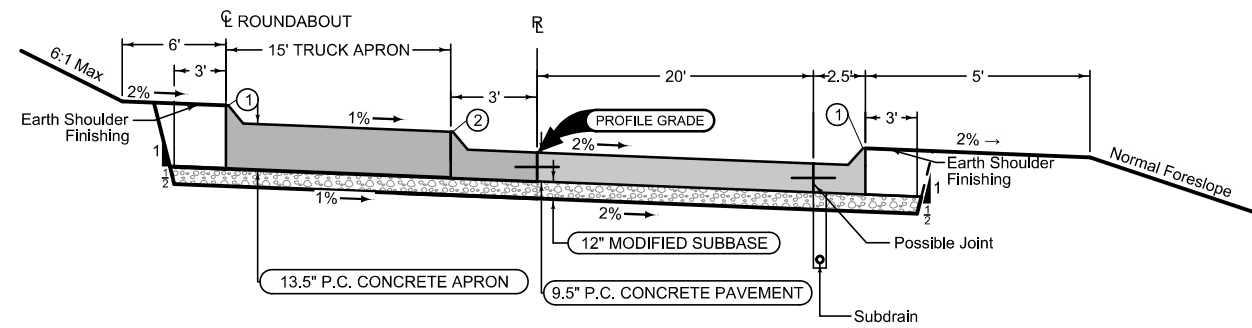
Shoulder Jointing:
 Longitudinal joint not required when distance from back of
 curb to nearest joint is less than XX':

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 |
| | |
| | |

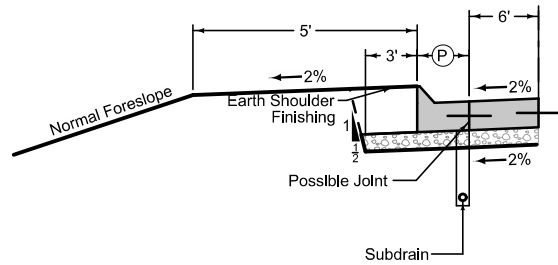
See Tab 100-24 or 100-25 for pavement quantities.
See Tab 112-9 for shoulder quantities.

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' |
| | | | |
| | | | |

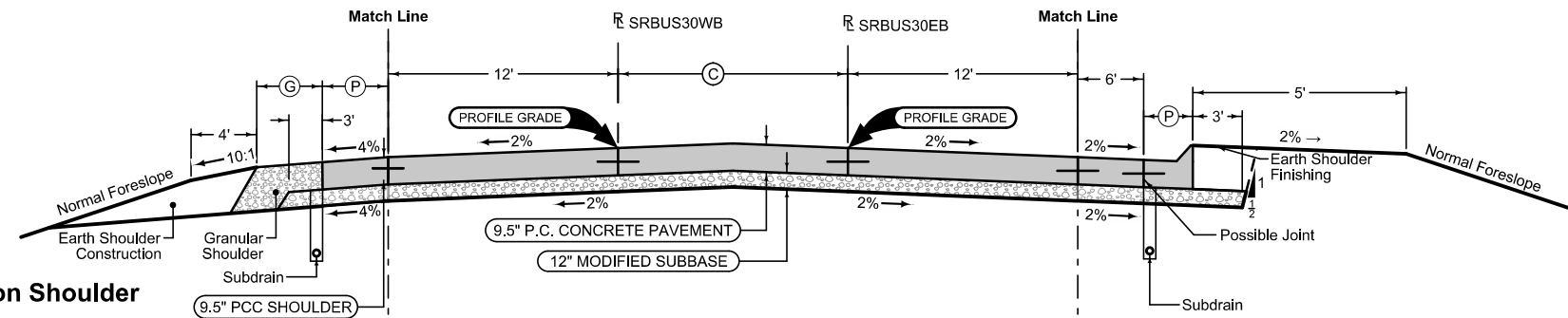


Curbed Shoulder

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

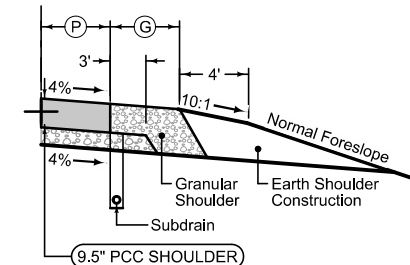
Single pour: XXX
 Staged : XXX
 Transverse: XXX

| 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

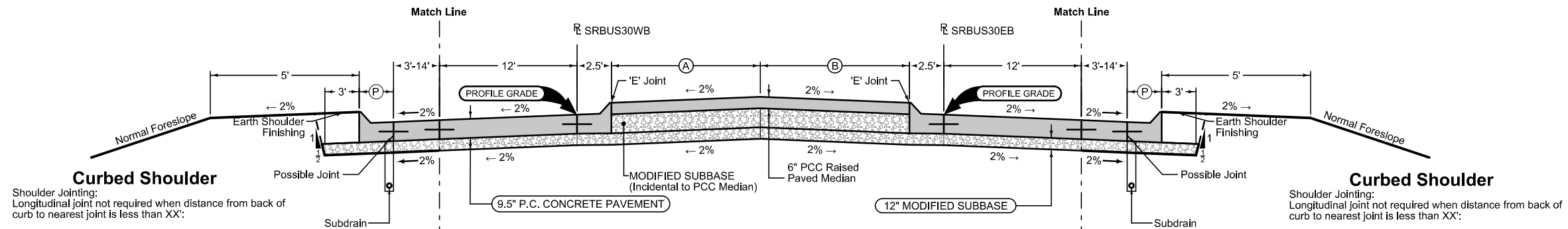
Shoulder Jointing:
 Longitudinal joint not required when distance from back of curb to nearest joint is less than XX':

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

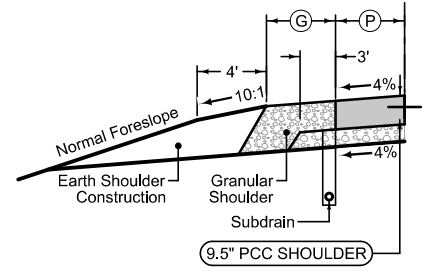
| 2_Curb_04-21-20 | | | |
|--------------------|-----------|-------------|-------------------------|
| STATION TO STATION | | (P) Feet | Curb Type See PV-102 |
| 502+91.00 | 503+97.08 | 2.5 | 6" STD |
| 505+41.50 | 506+92.00 | 2.5 | 6" STD |

| 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

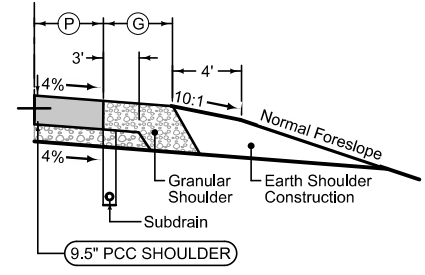
| 2_Curb_04-21-20 | | | |
|--------------------|-----------|-------------|-------------------------|
| STATION TO STATION | | (P) Feet | Curb Type See PV-102 |
| 502+38.00 | 503+91.74 | 2.5 | 6" STD |
| 505+36.16 | 506+41.00 | 2.5 | 6" STD |



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
- 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

- F0 F01D, Windstream Communications - Quality D
- F02 F02D, Aureon Network Services - Quality D
- F03 F03D, CenturyLink - Quality D
- G GL1D, Alliant Energy - Quality D
- SAN SA1D, City of Toledo - Quality D
- ST S ST1D, City of Toledo - Quality D
- T1 TL1D, Windstream Communications - Quality D
- W WL1D, City of Toledo - Quality D

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 |
| Orange | (68) | | Proposed Shoulder Paved Full Depth Shading |
| Yellow | (132) | | Proposed Shoulder Paved Partial Depth Shading |
| Gray, Dark | (112) | | Proposed Grade and Pave Shading "In conjunction with a paving project" |
| Brown, Light | (236) | | Grading Shading |
| Orange, Light | (134) | | Proposed Granular Entrance Shading |
| Yellow | (220) | | Proposed Paved Entrance Shading |
| Tan | (8) | | Proposed Sidewalk Shading |
| Blue, Light | (230) | | Proposed Sidewalk Landing Shading |
| Pink | (11) | | Proposed Sidewalk Ramp Shading |
| Green, Light | (225) | | Existing Pavement Shading |
| Red | (3) | | Proposed Structure Shading |
| Red | (3) | | Delineates Restricted Areas |

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

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

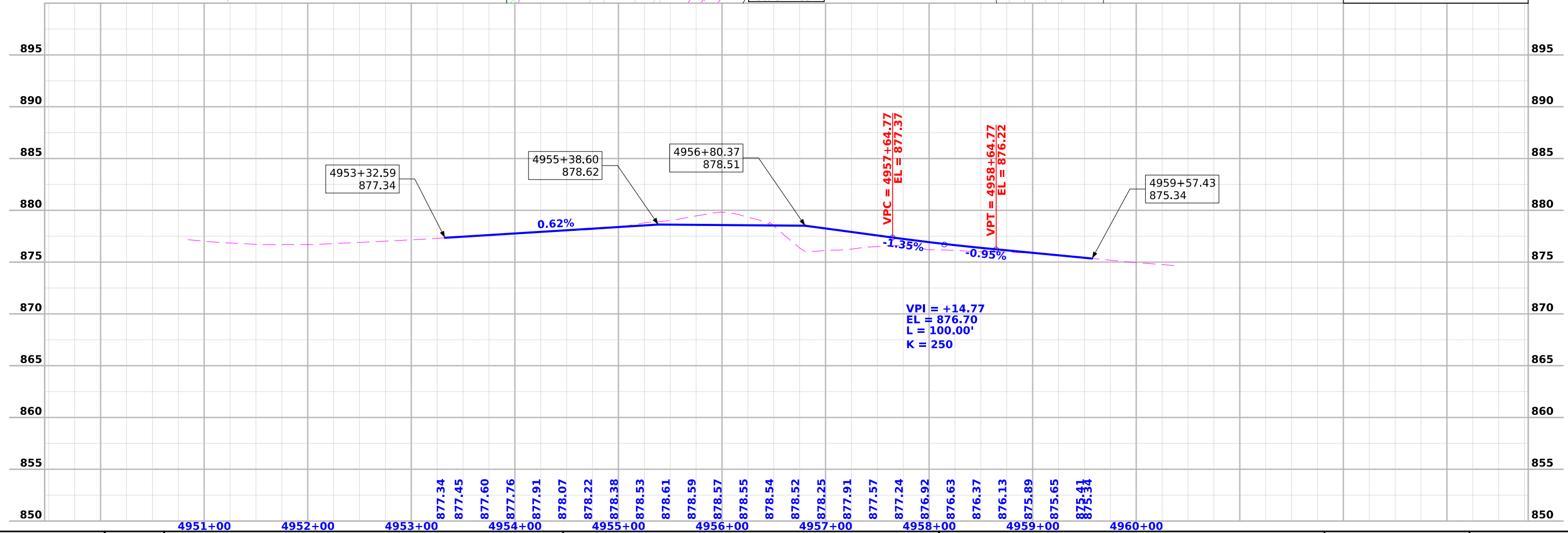
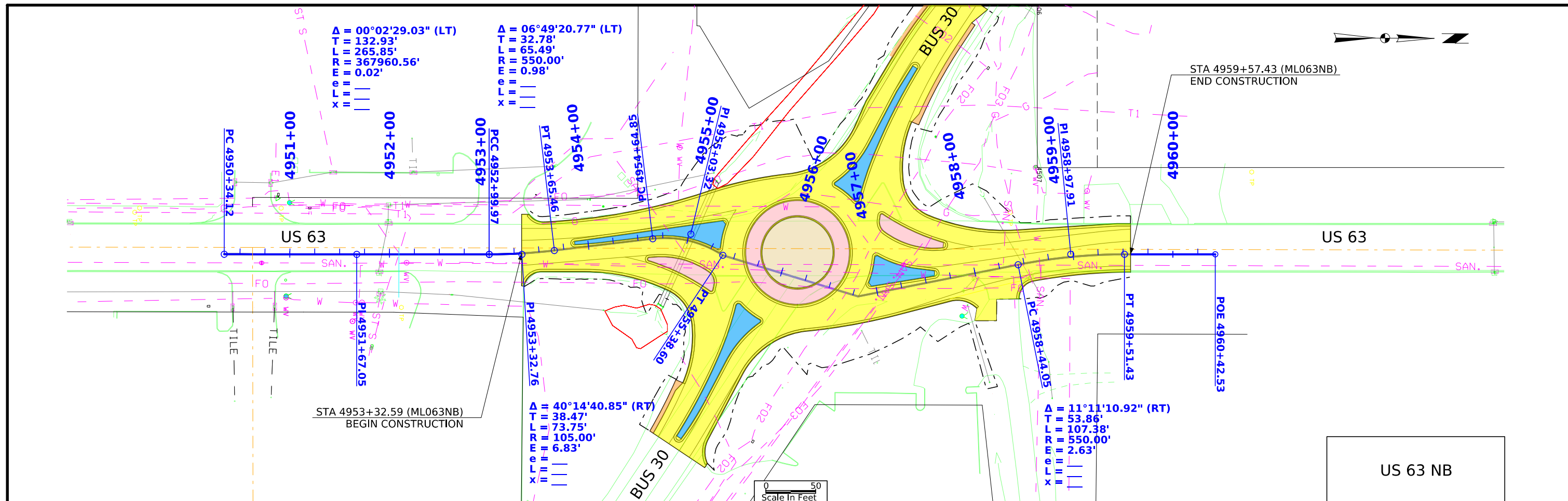
- Reference Point
- Station
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- Pavement Removal
- Clearing & Grubbing Area

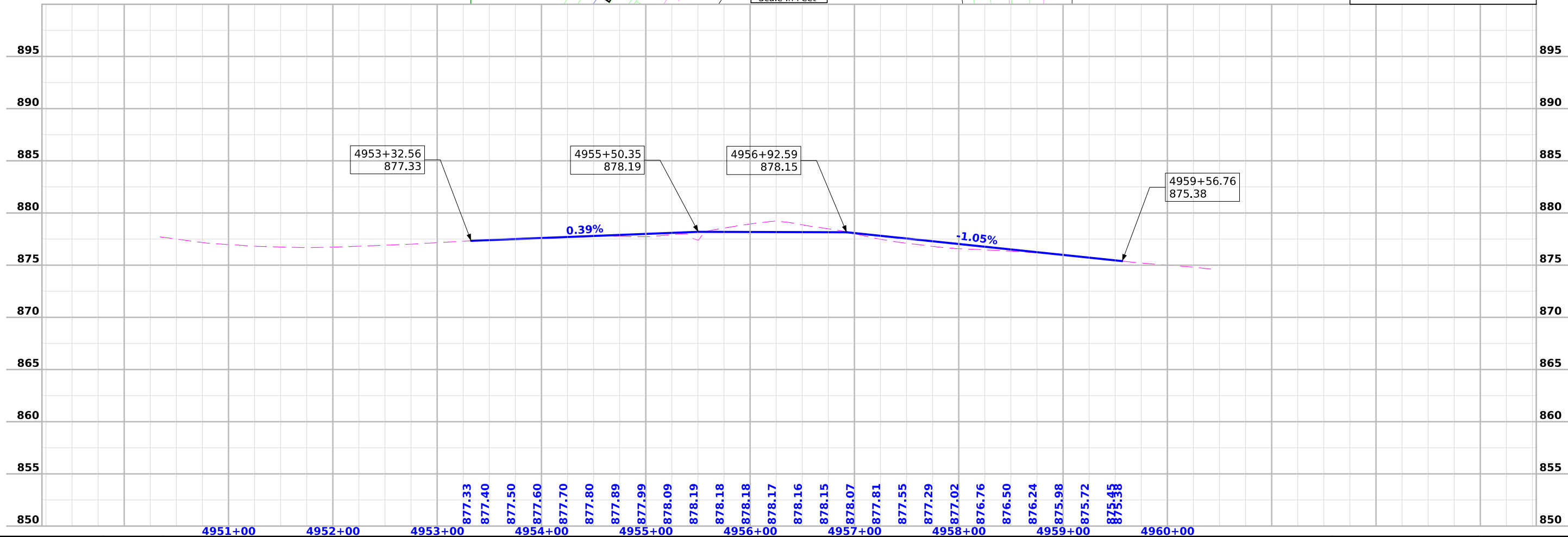
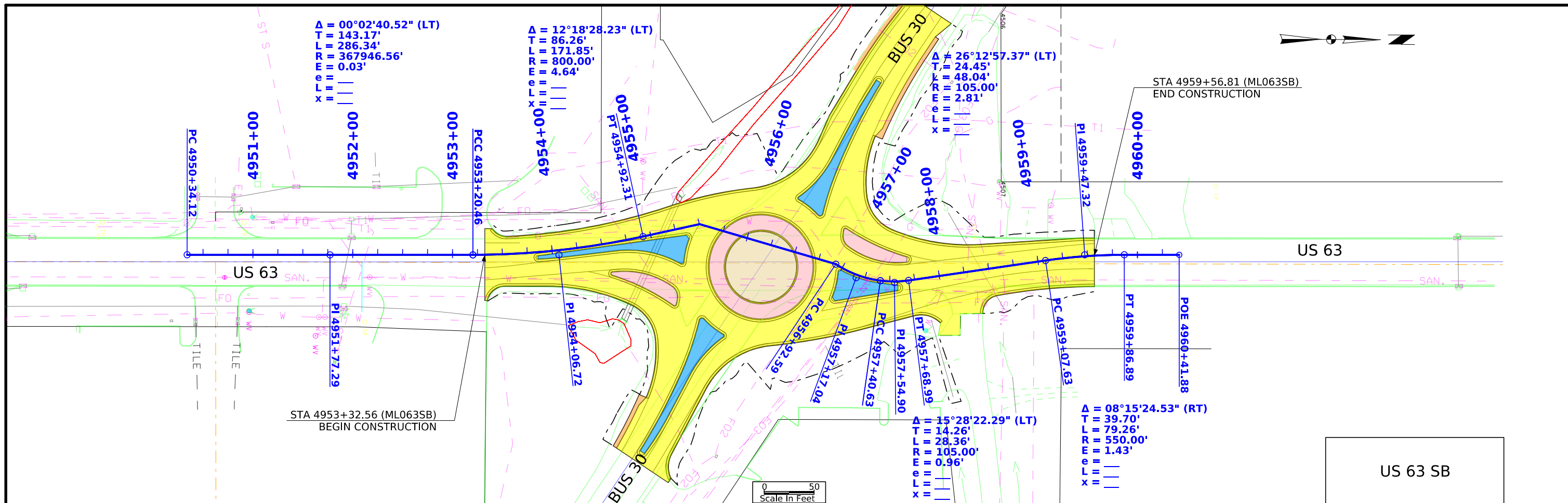
RIGHT-OF-WAY LEGEND

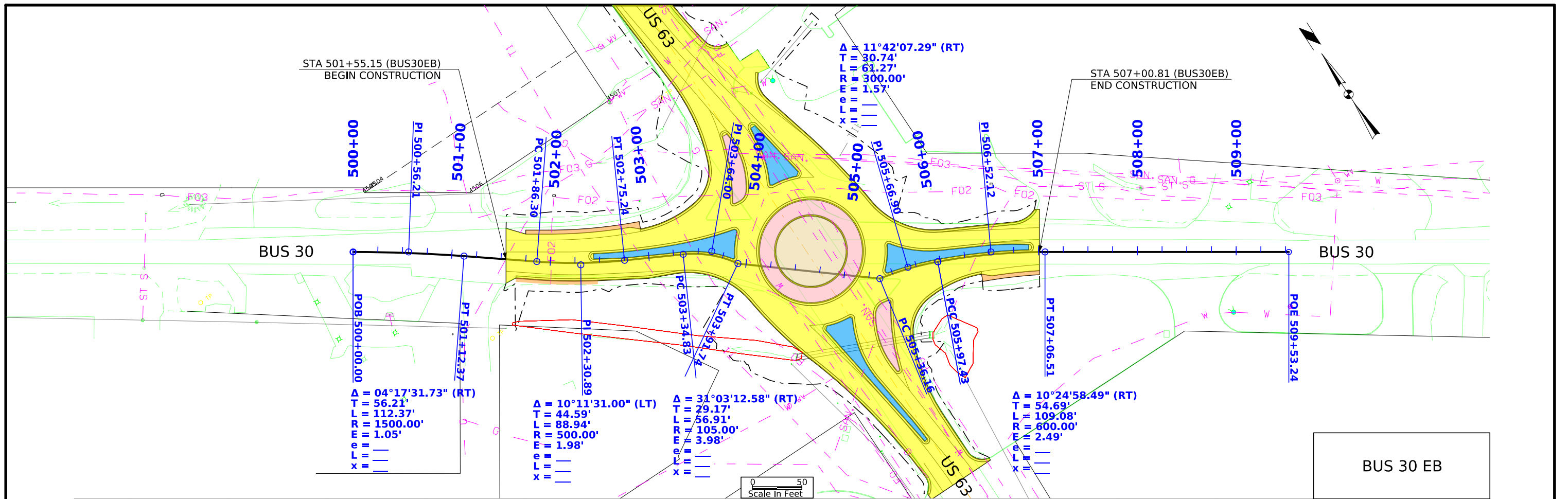
- Proposed Right-of-Way
- Existing Right of Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Easement (Temporary)
- Easement
- Access Control
- Property Line

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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

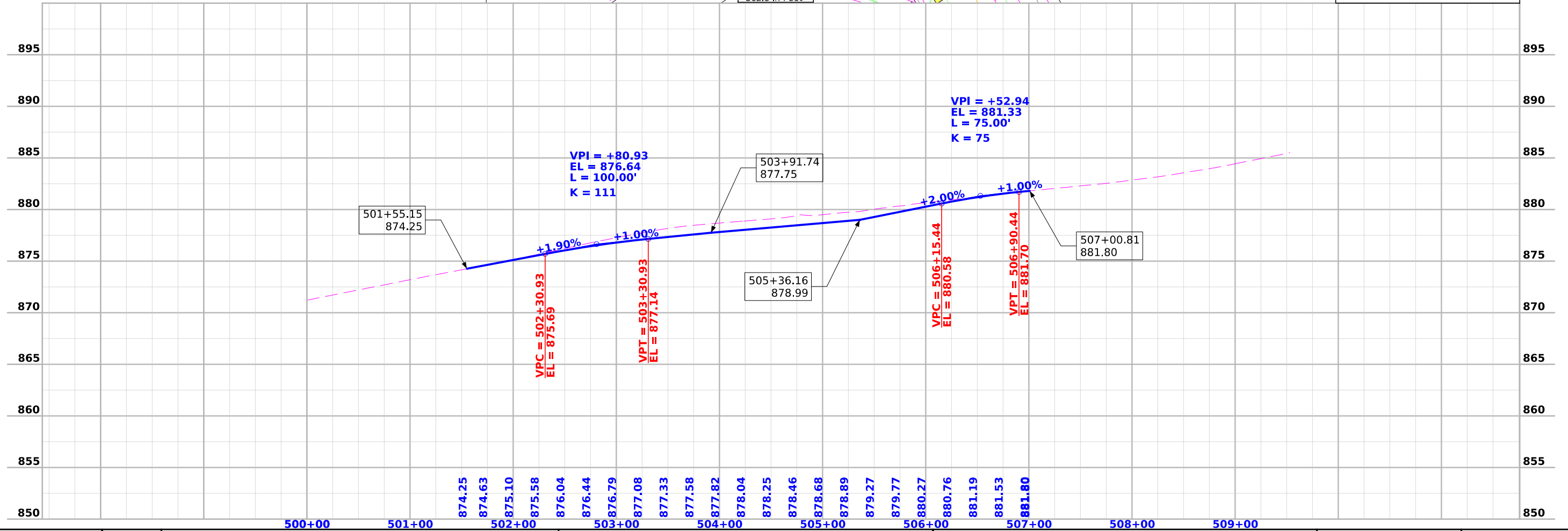


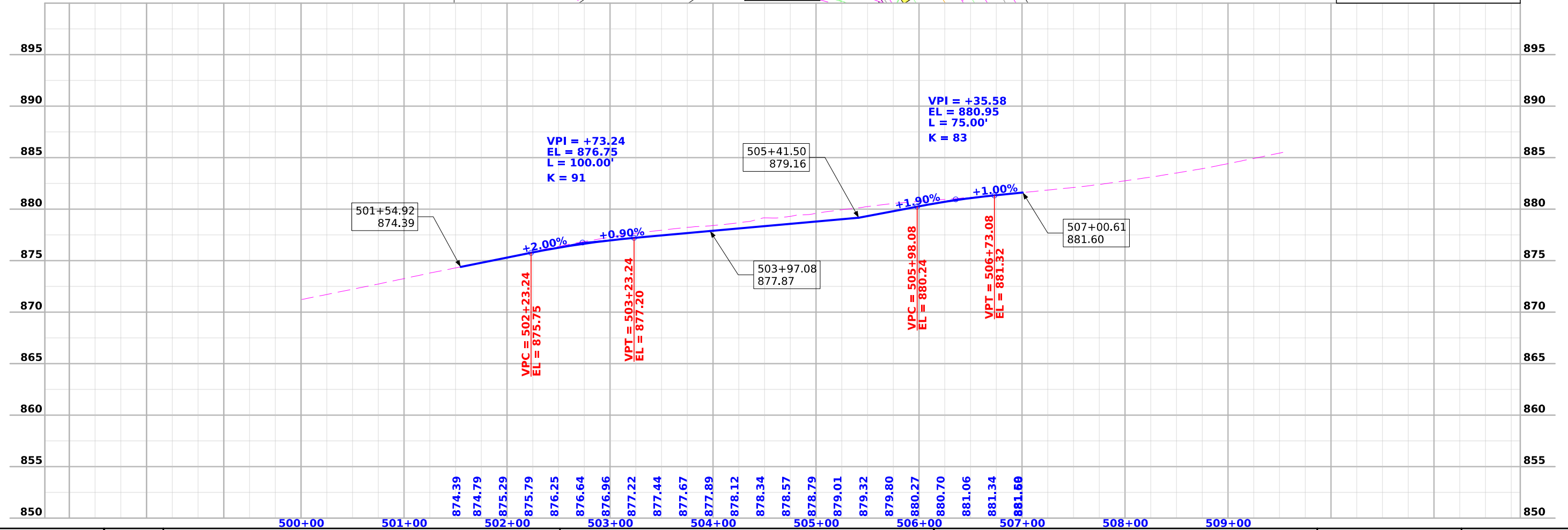
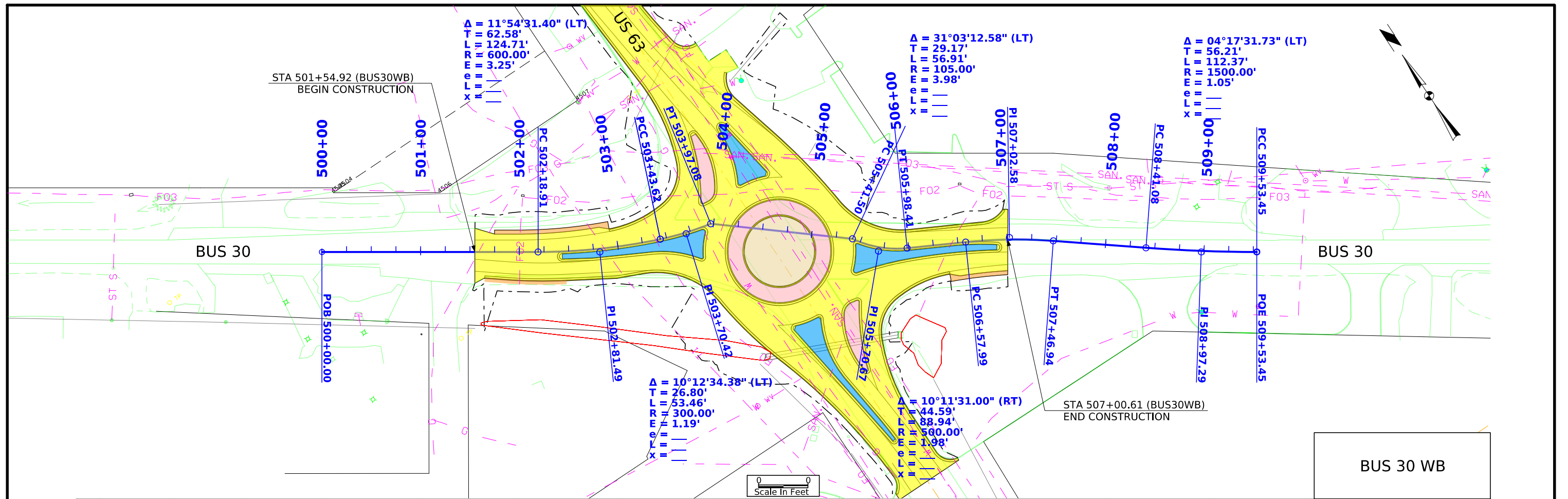


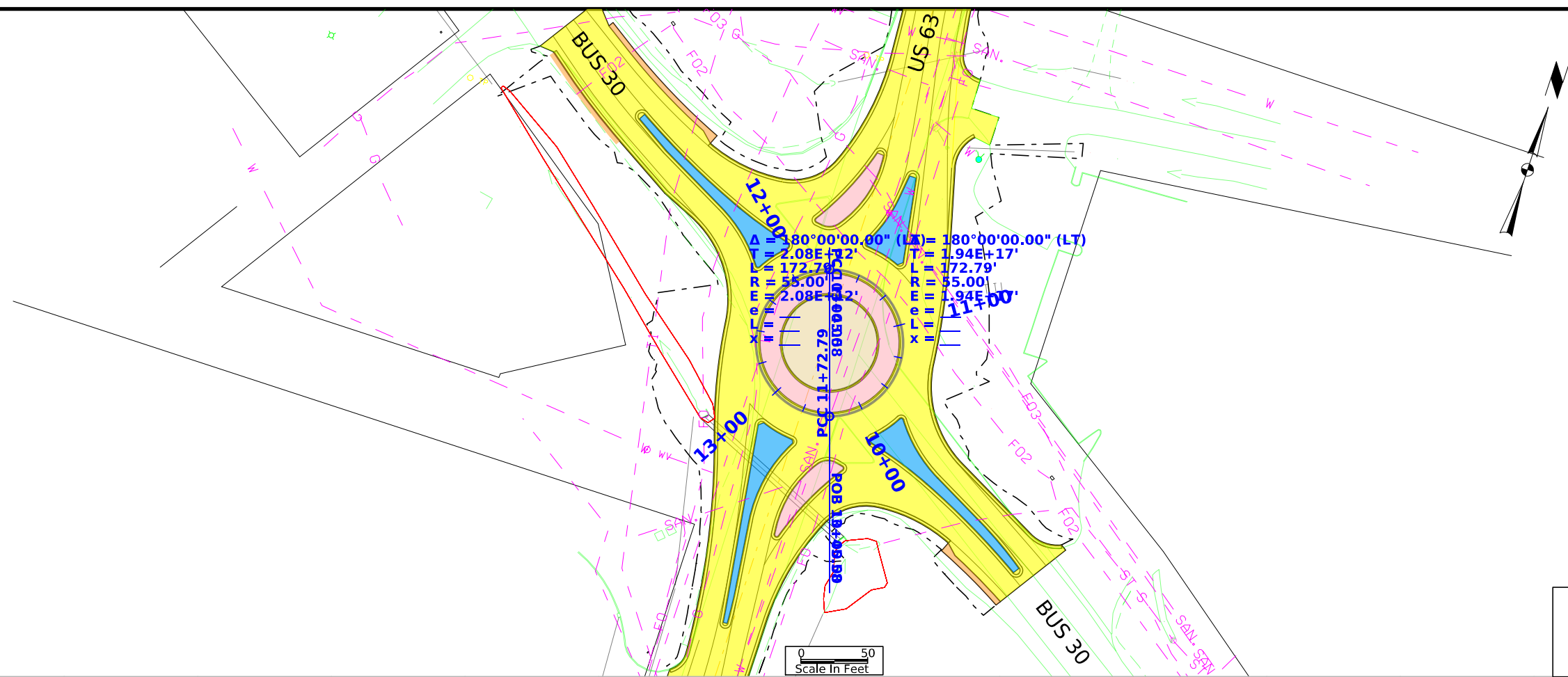


0 50
Scale in Feet

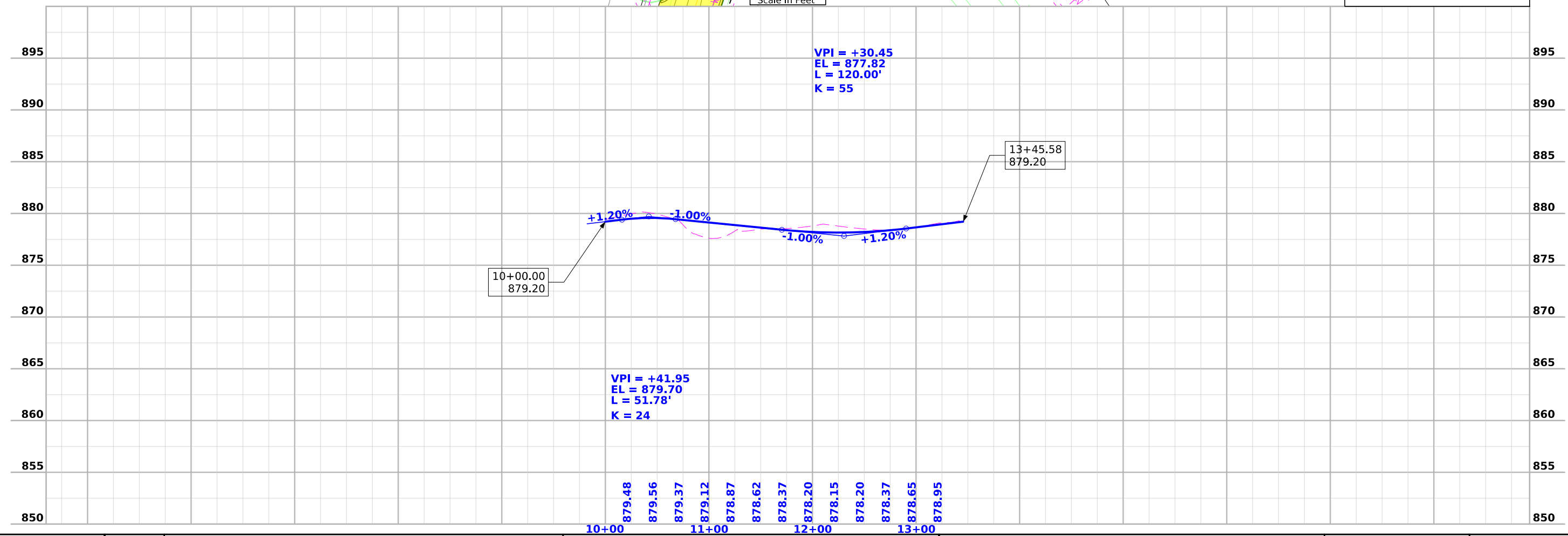
BUS 30 EB







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

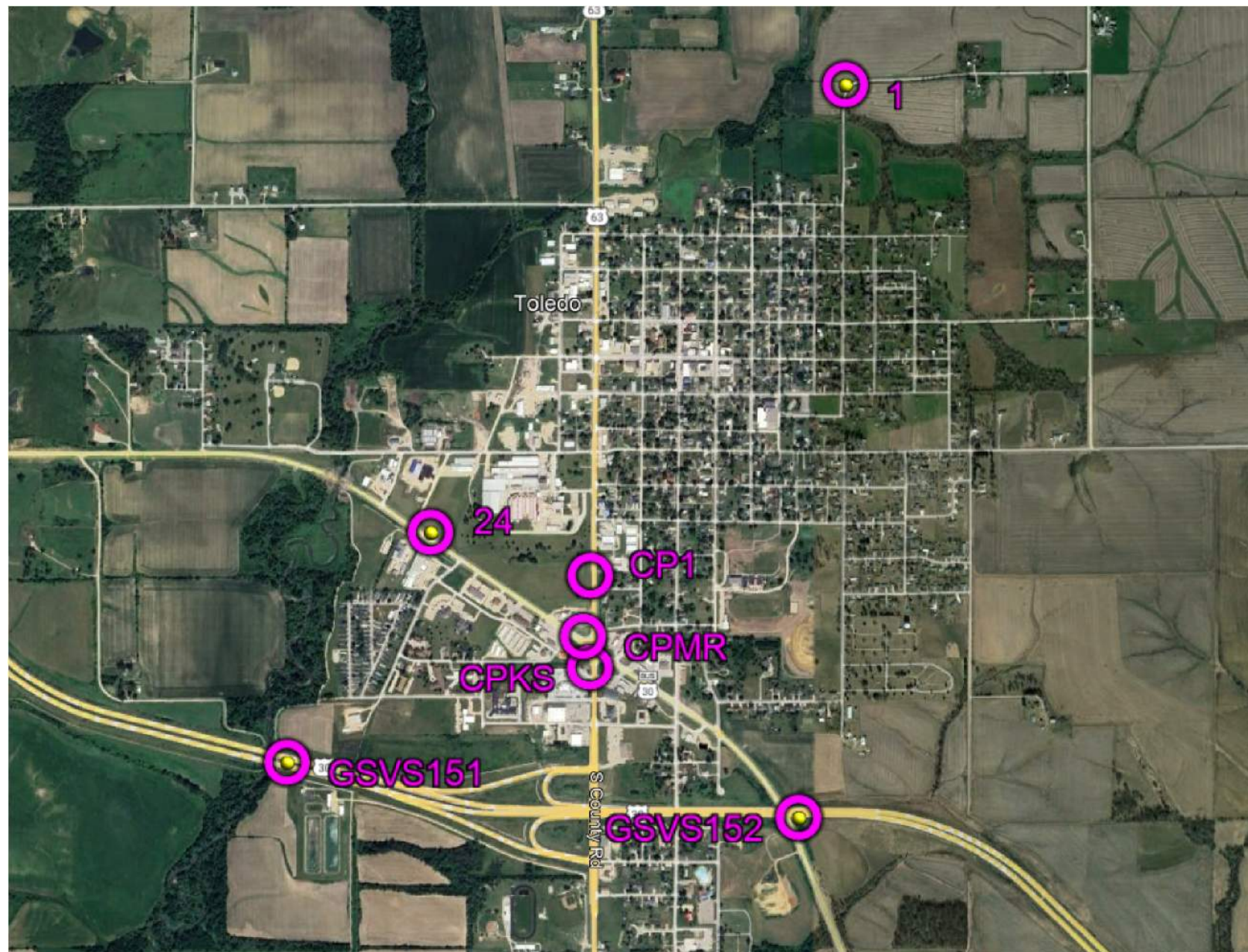
GEOID MODEL: 2018u3

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 |

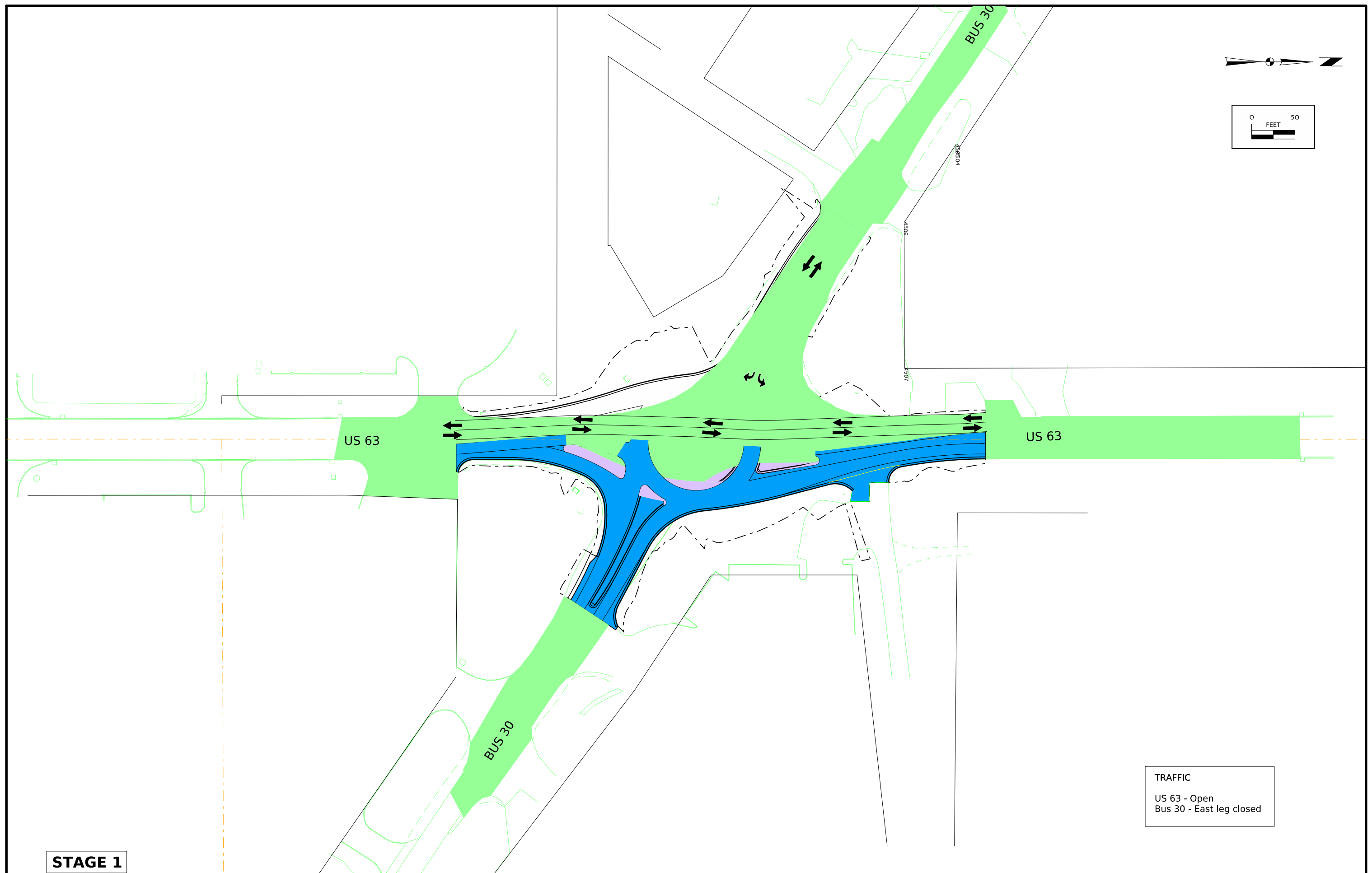
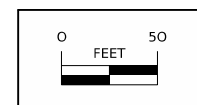
**PLAN VIEW PATTERN AND SYMBOL LEGEND
OF TRAFFIC CONTROL AND STAGING SHEETS**

| | | | |
|--|--------------------------|--|------------------------------|
| | 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.

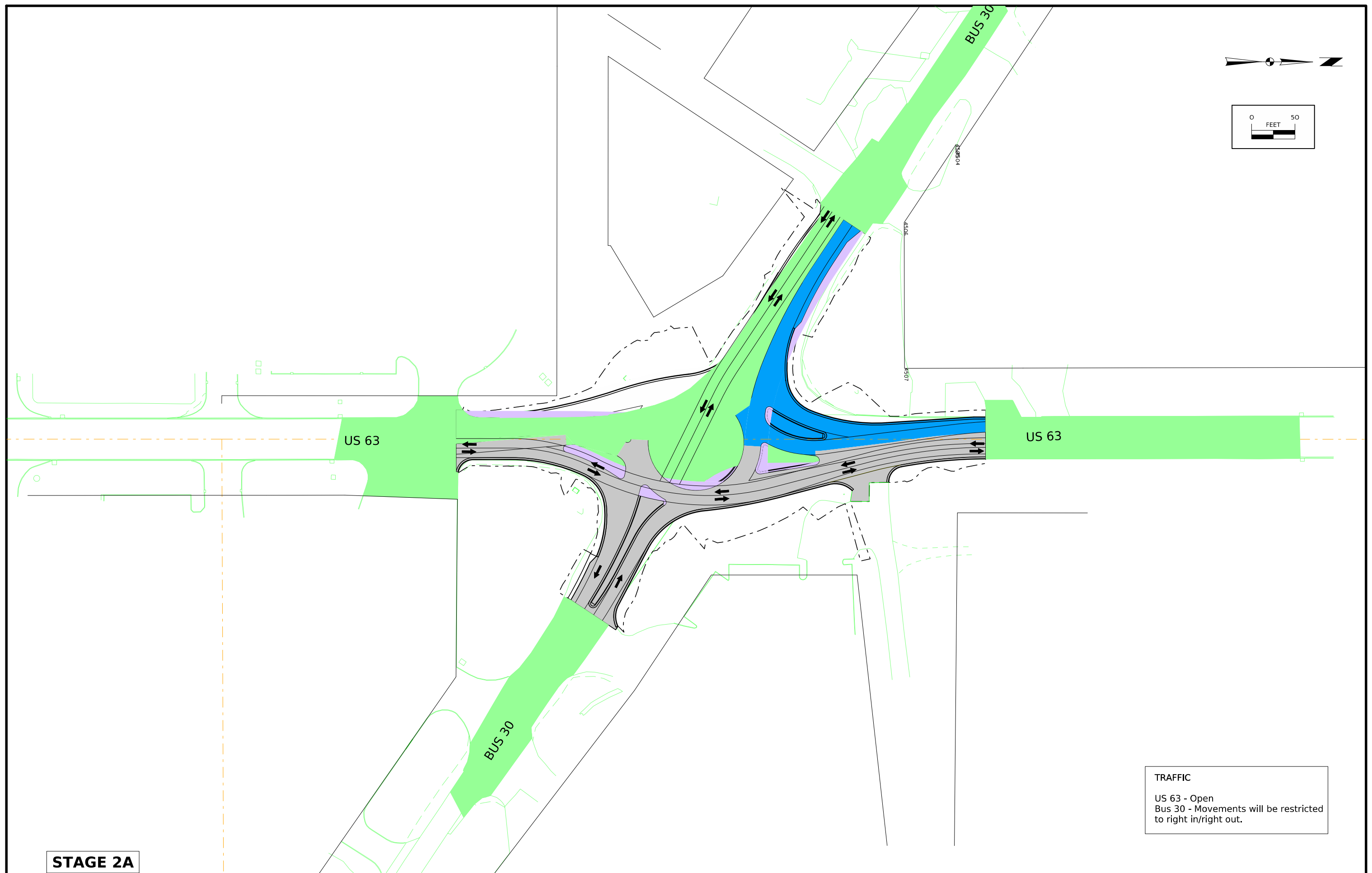
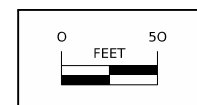
**TRAFFIC CONTROL
AND
STAGING
LEGEND AND SYMBOL
INFORMATION SHEET**

(COVERS SHEET SERIES J)



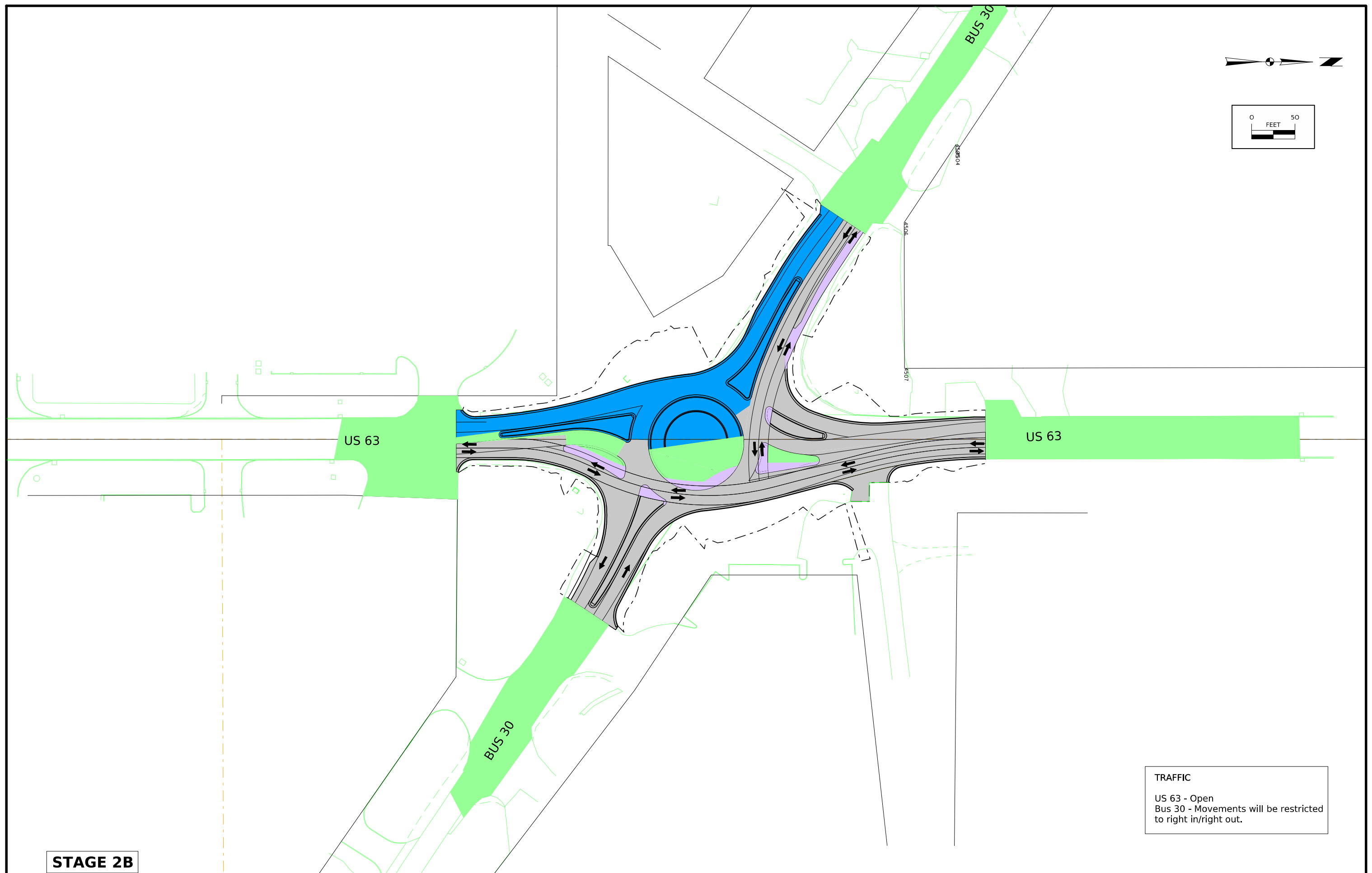
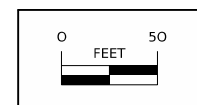
STAGE 1

TRAFFIC
US 63 - Open
Bus 30 - East leg closed



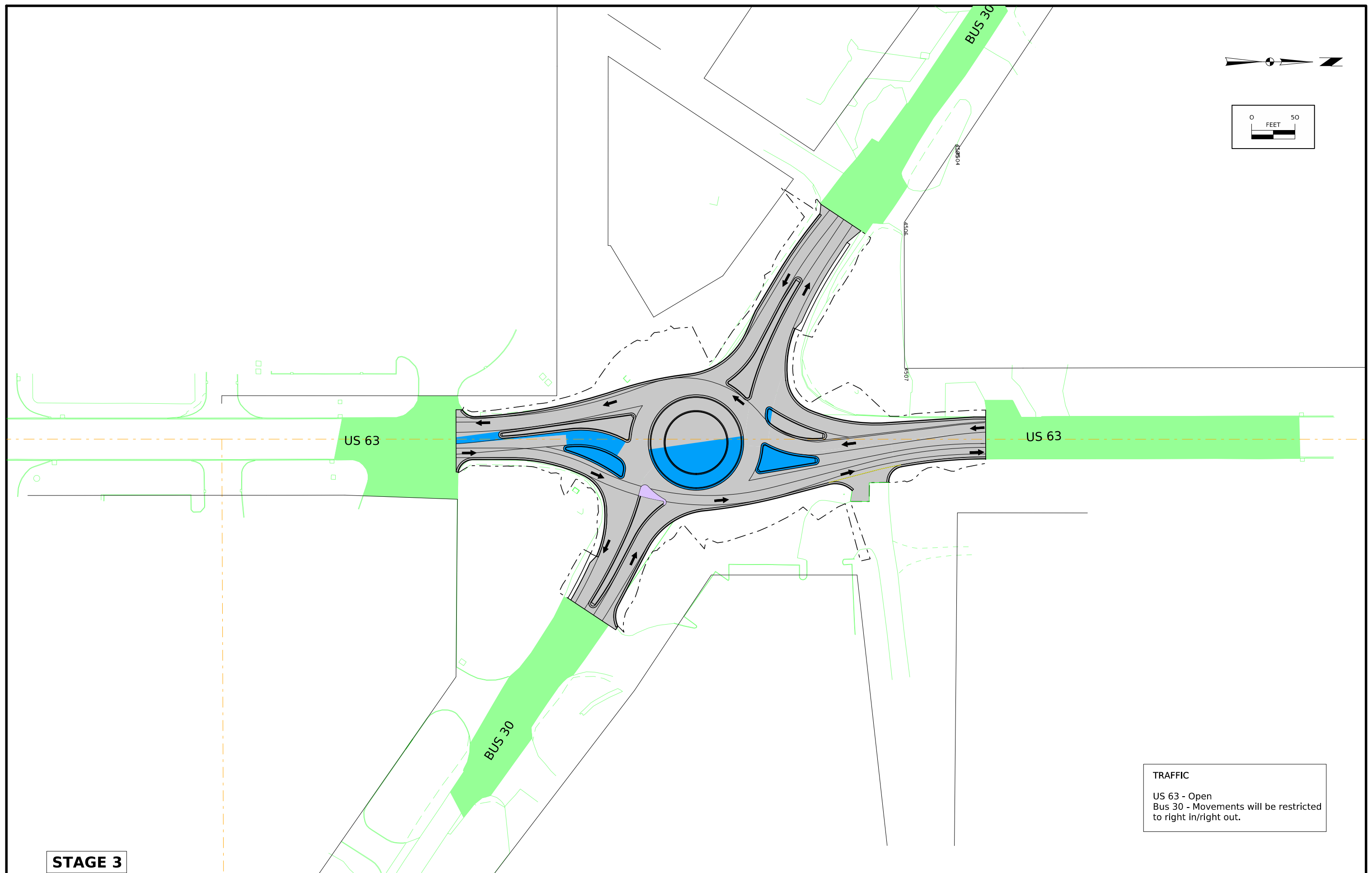
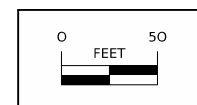
TRAFFIC
US 63 - Open
Bus 30 - Movements will be restricted to right in/right out.

STAGE 2A



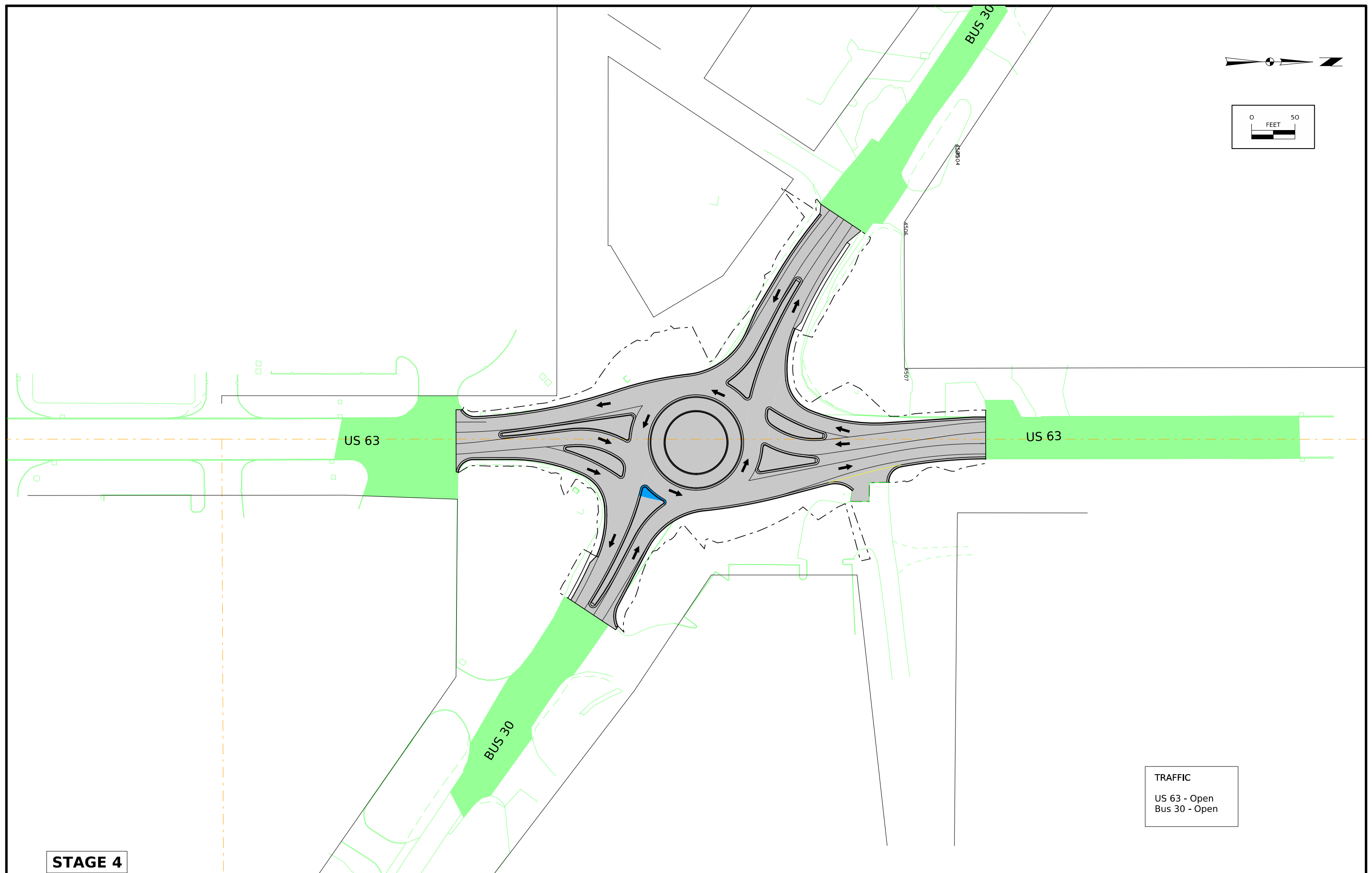
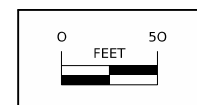
STAGE 2B

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



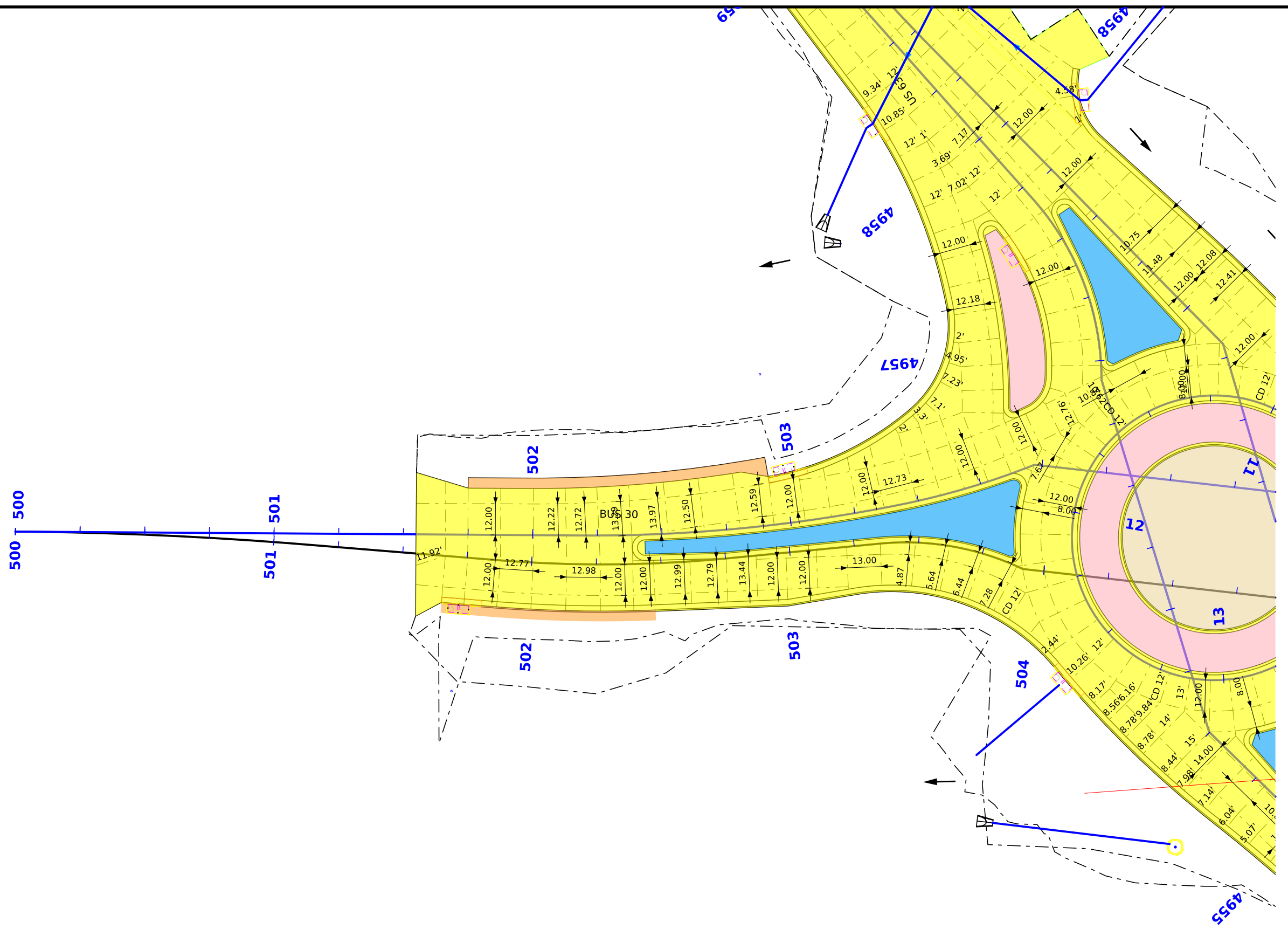
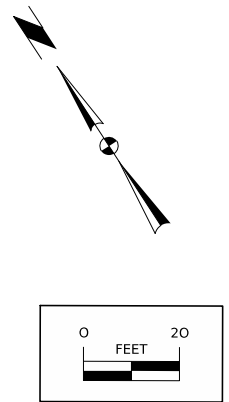
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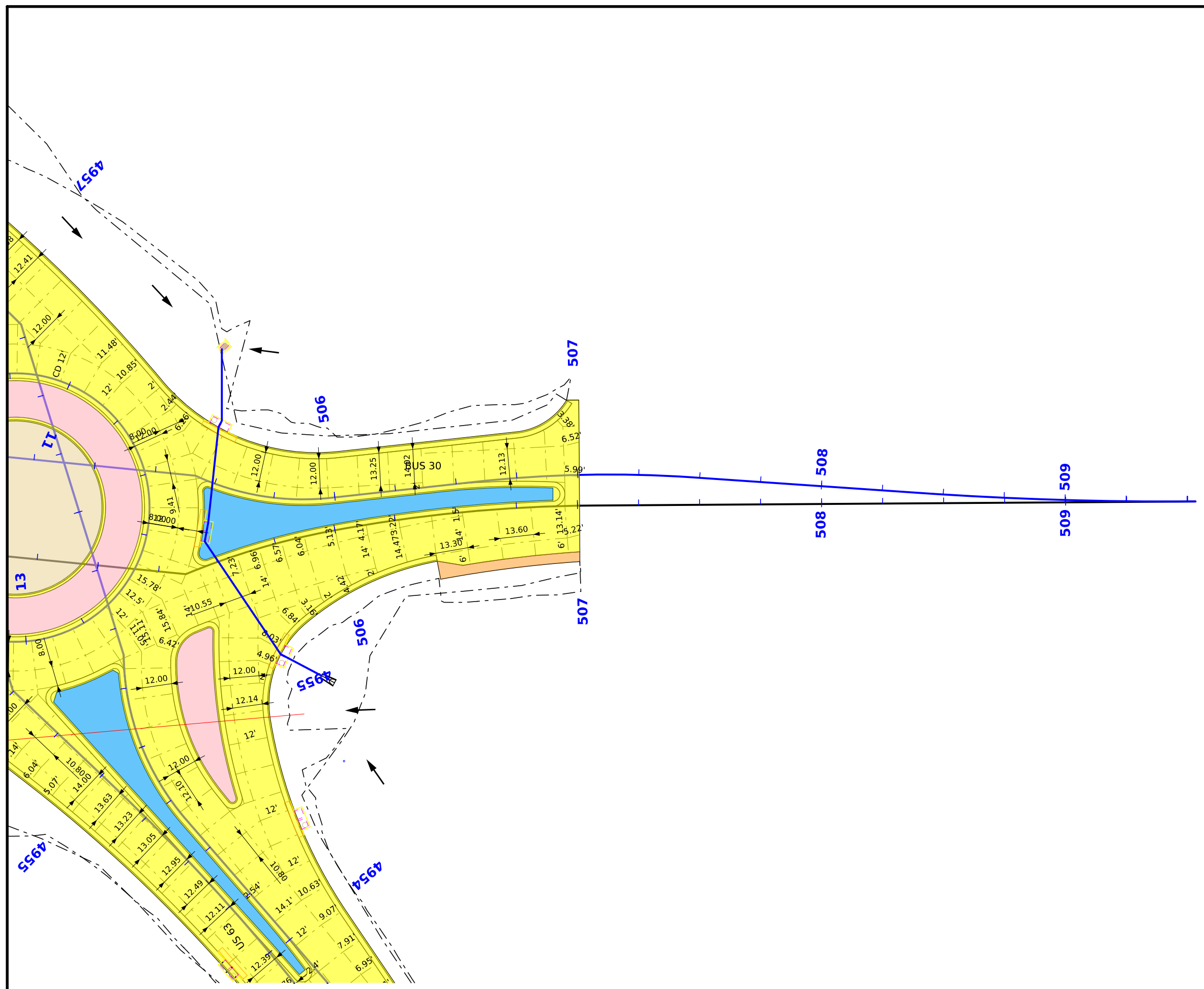
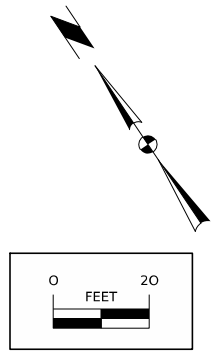
TRAFFIC
US 63 - Open
Bus 30 - Movements will be restricted to right in/right out.



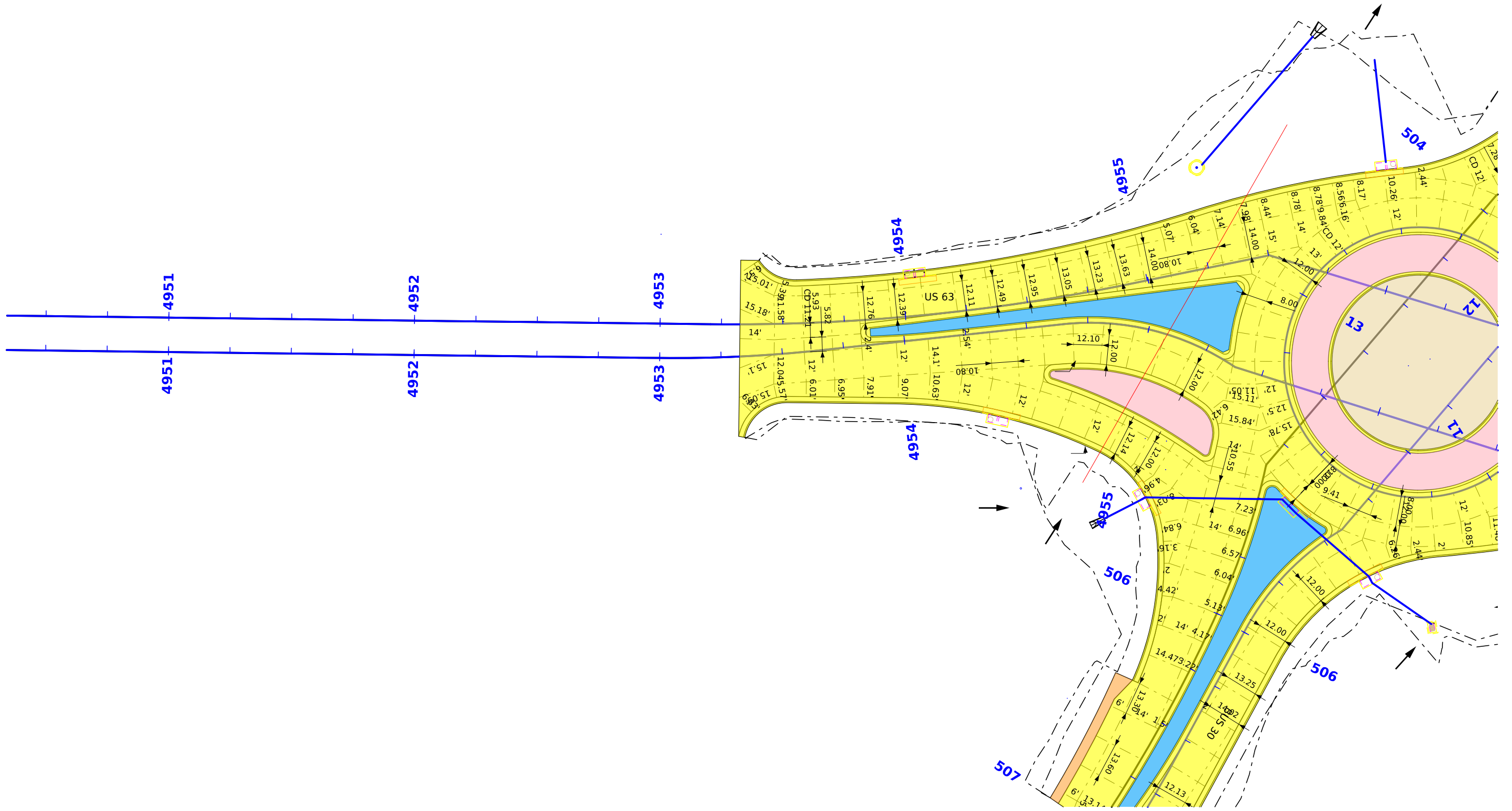
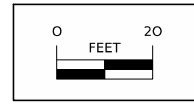
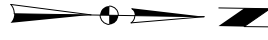
STAGE 4

TRAFFIC
US 63 - Open
Bus 30 - Open

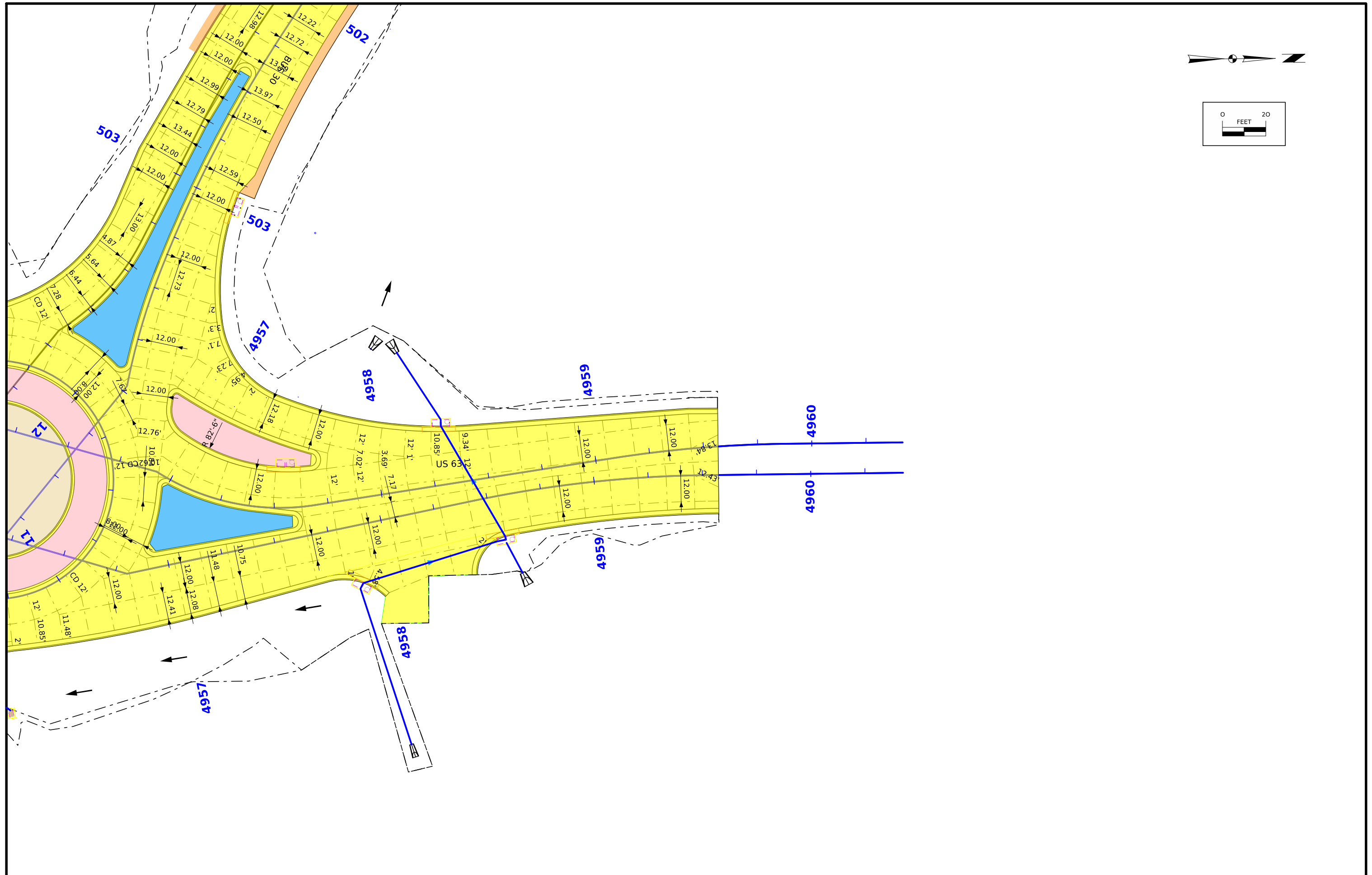




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SURVEY SYMBOLS

- 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

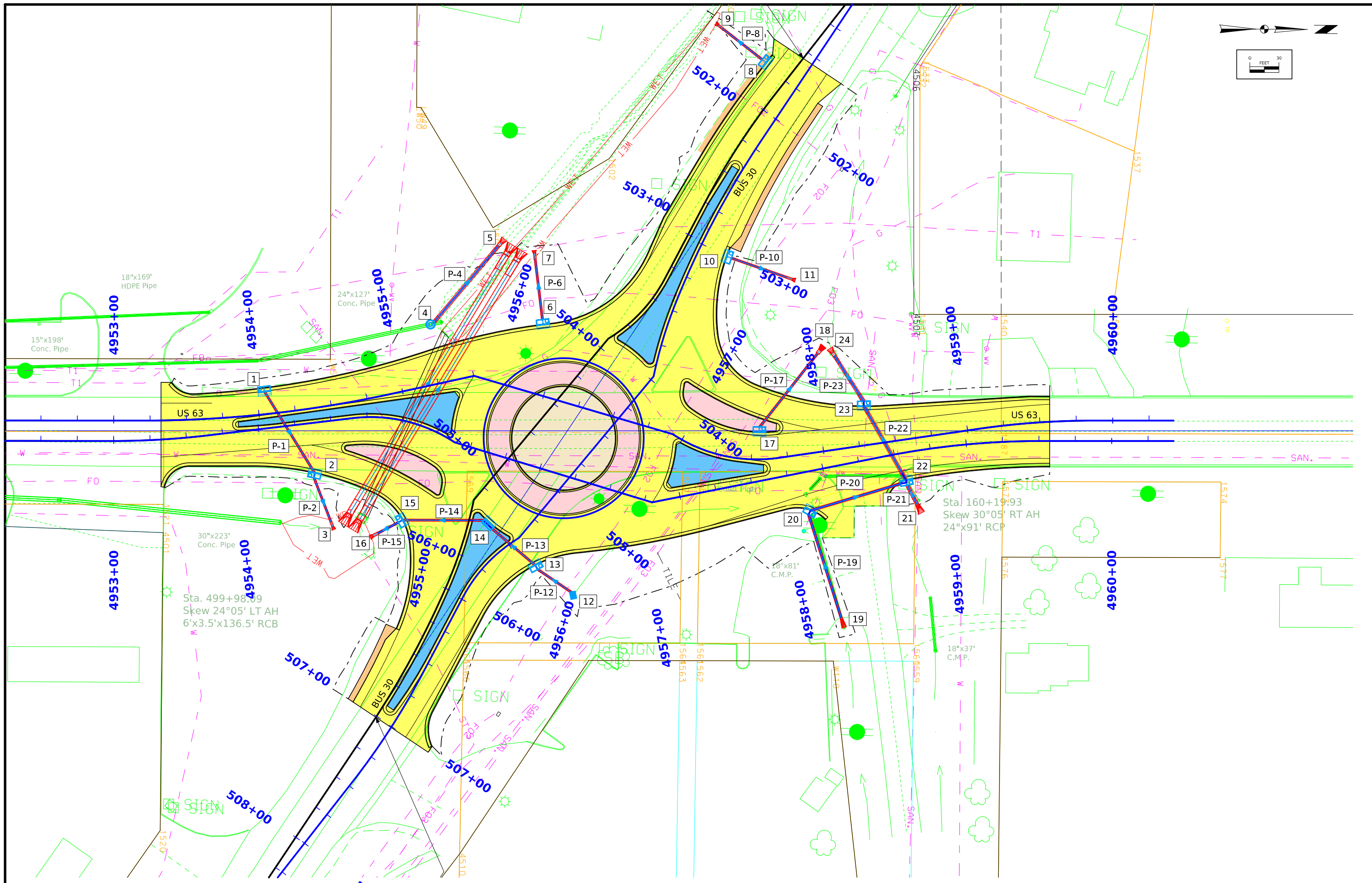
- Existing Ground
- Proposed Ground
- Previously Constructed Pipe or Structure
- Proposed Pipe or Structure

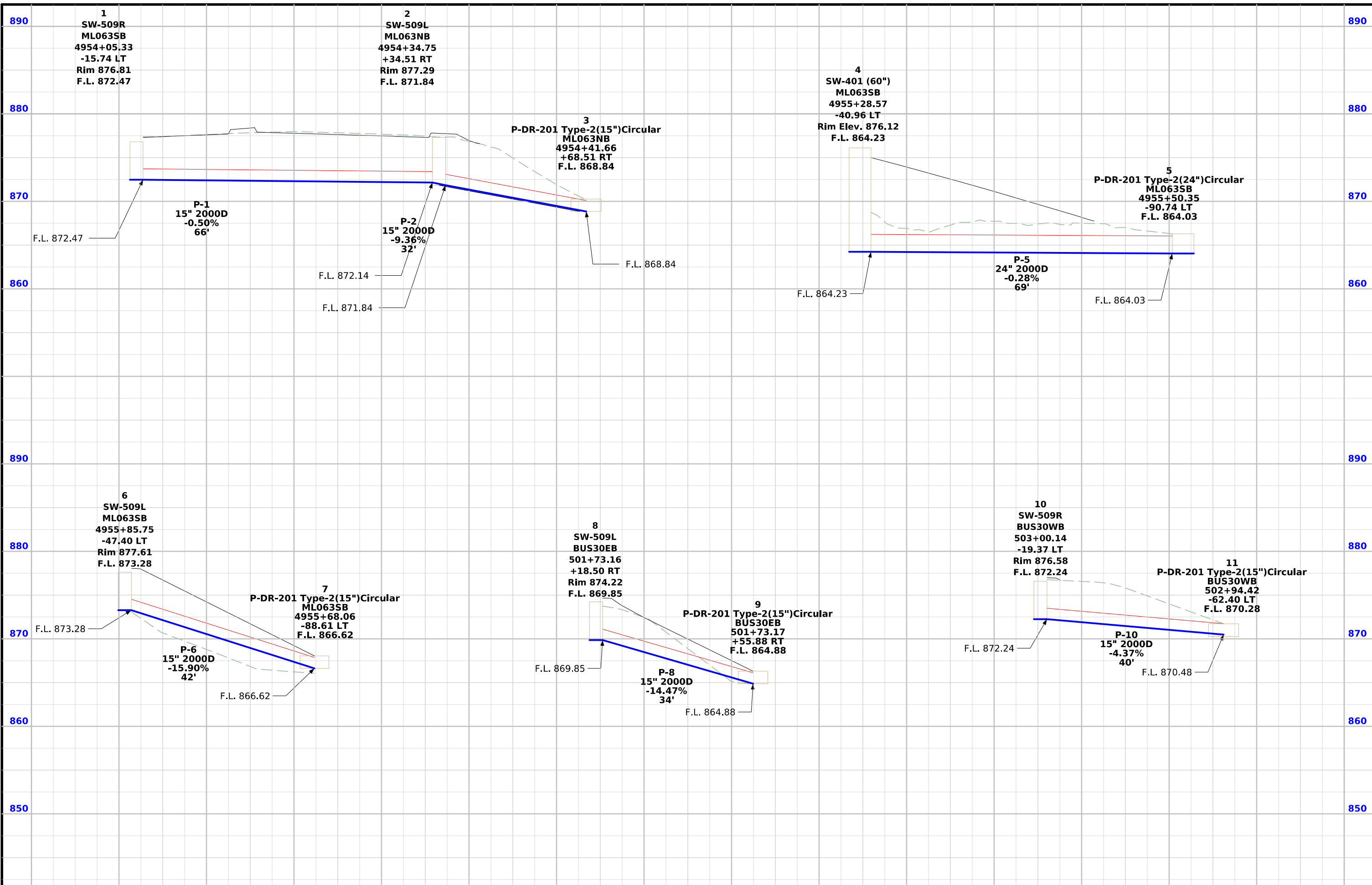
- #### Reference Point
- Survey Line
 - Section Corner
 - Ground Line Intercept
 - Saw Cut
 - Guardrail
 - Clearing & Grubbing Area
 - Pavement Removal

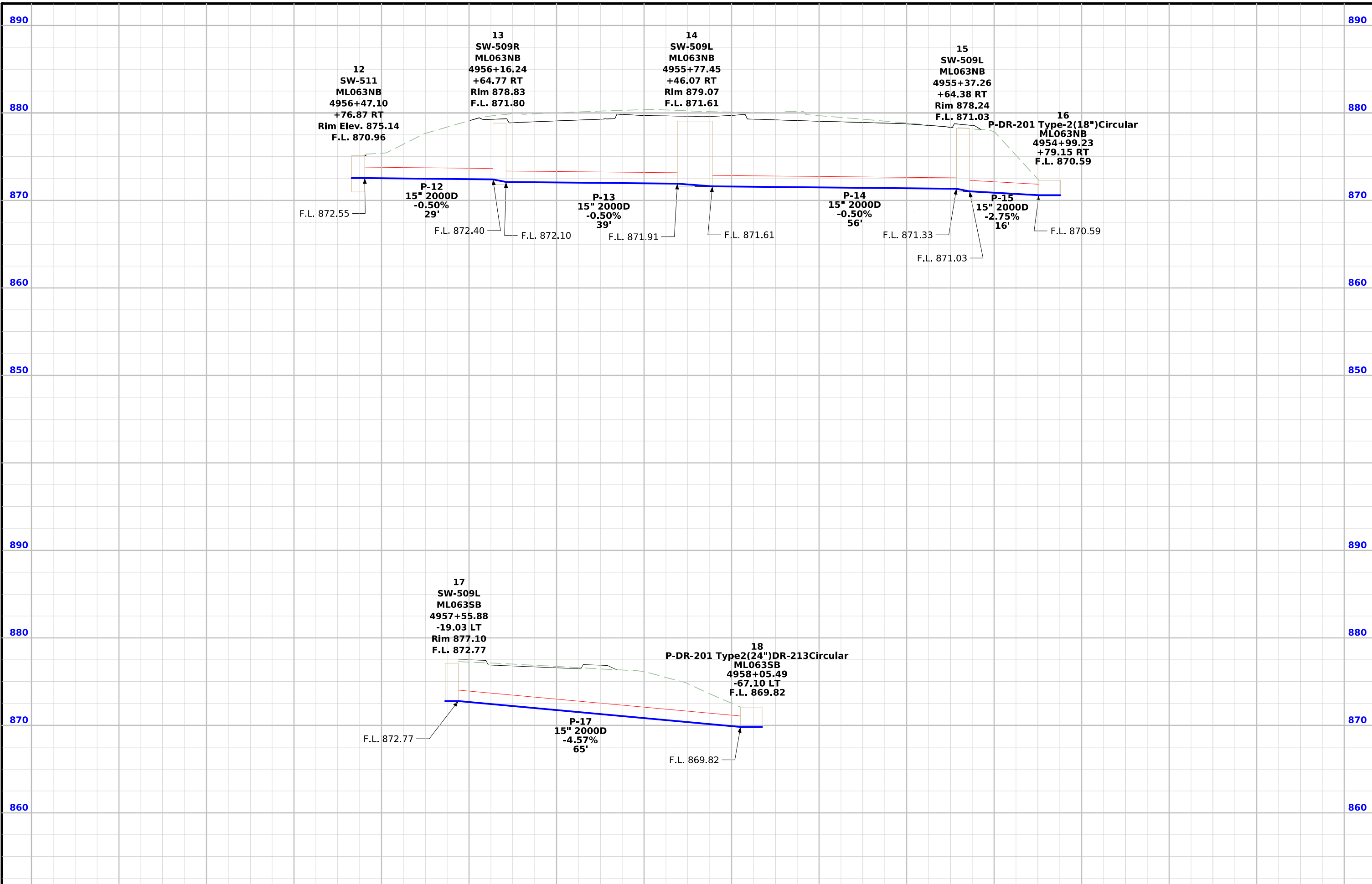
- #### RIGHT-OF-WAY LEGEND
- Proposed Right-of-Way
 - Existing and Proposed Right-of-Way
 - Easement and Existing Right-of-Way
 - Borrow
 - Easement (Temporary)
 - Easement
 - Excess
 - Access Control

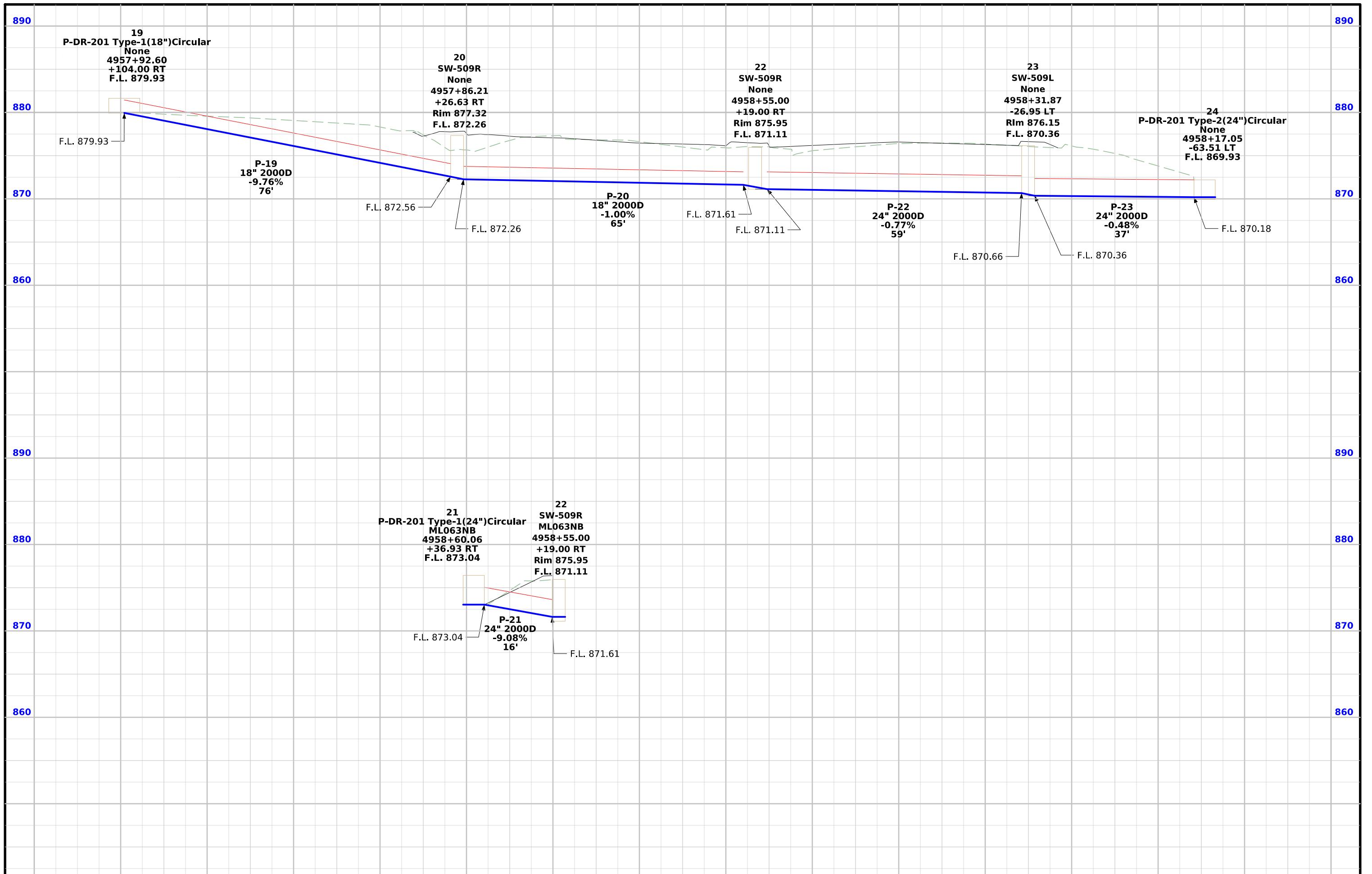
STORM SEWER LEGEND AND SYMBOL INFORMATION SHEET

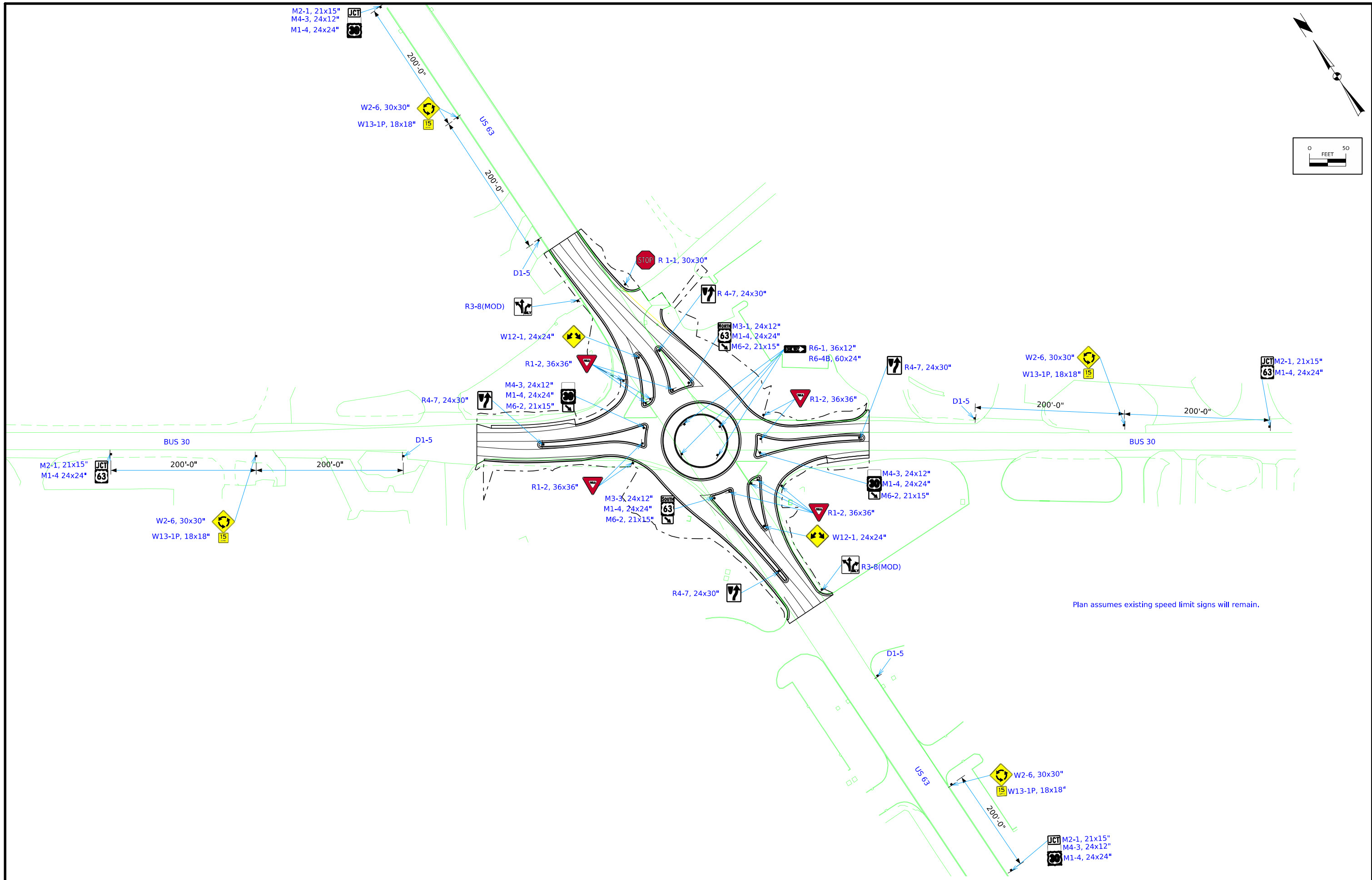
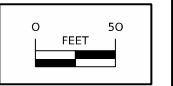
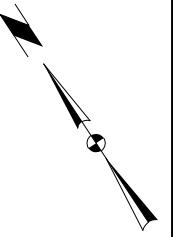
(COVERS SHEET SERIES M)



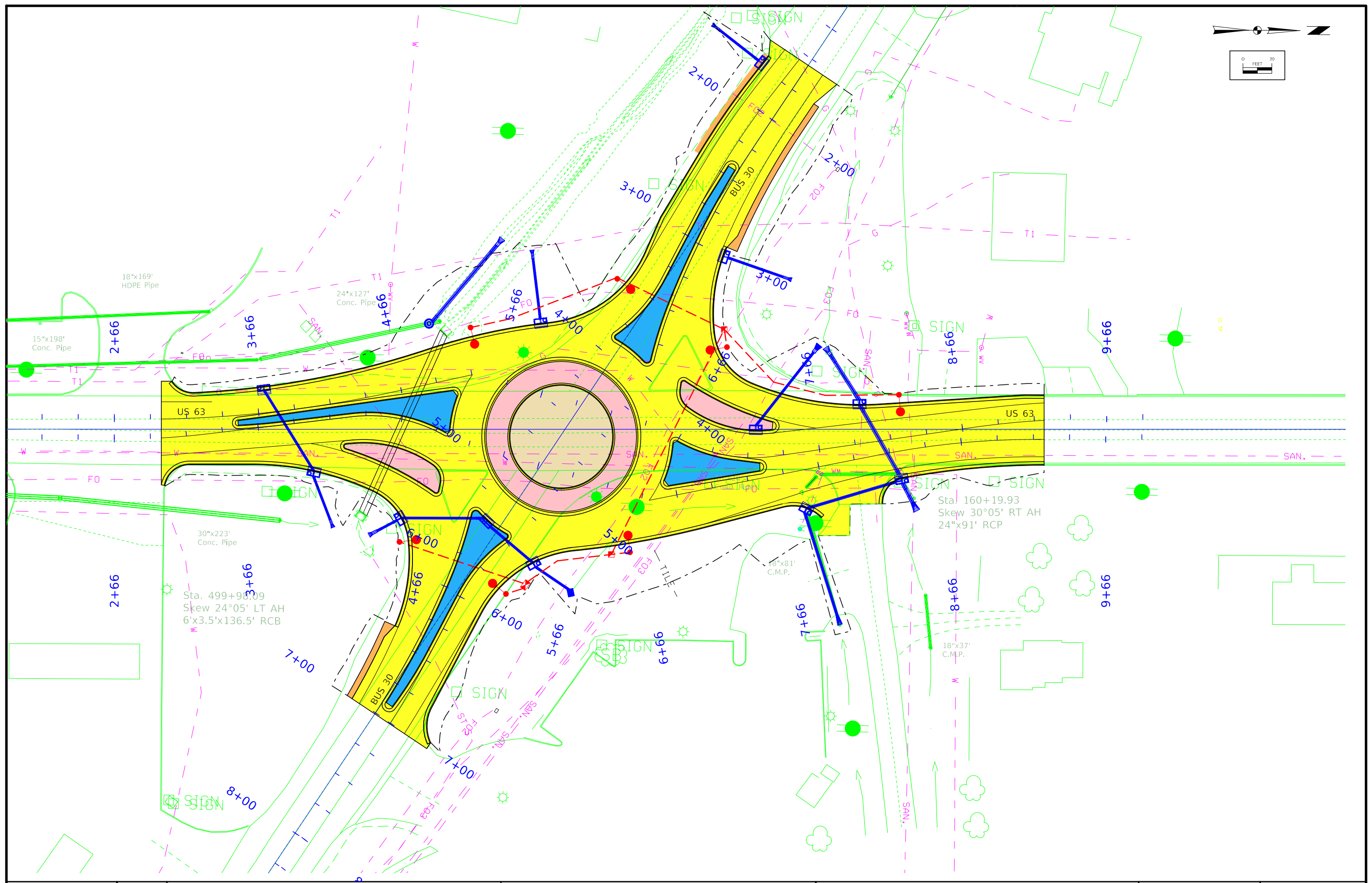
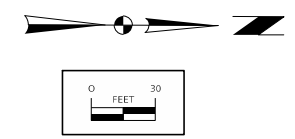




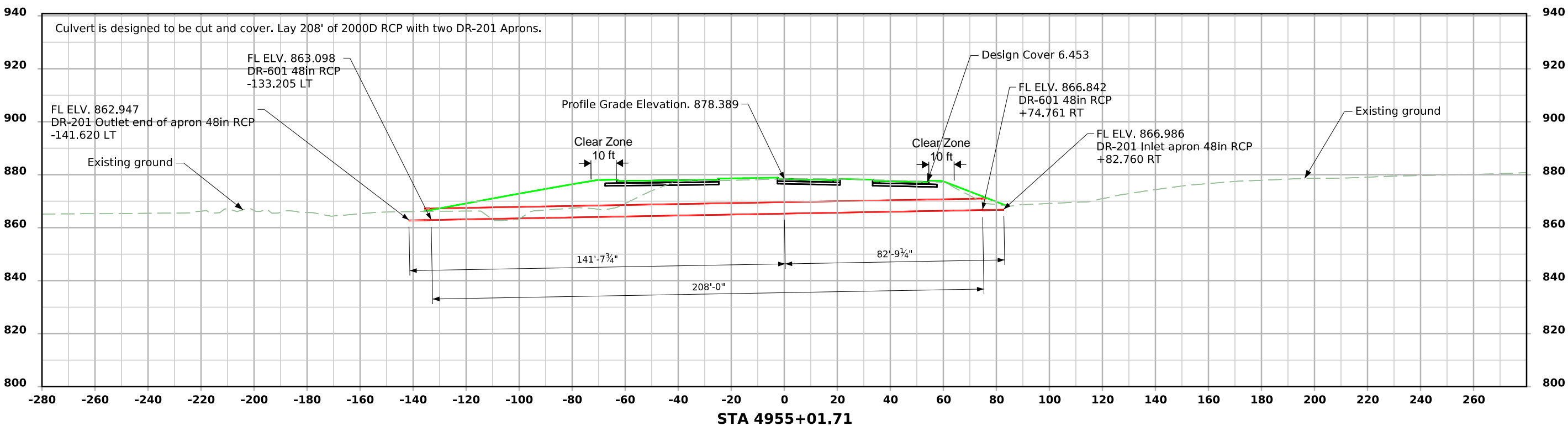
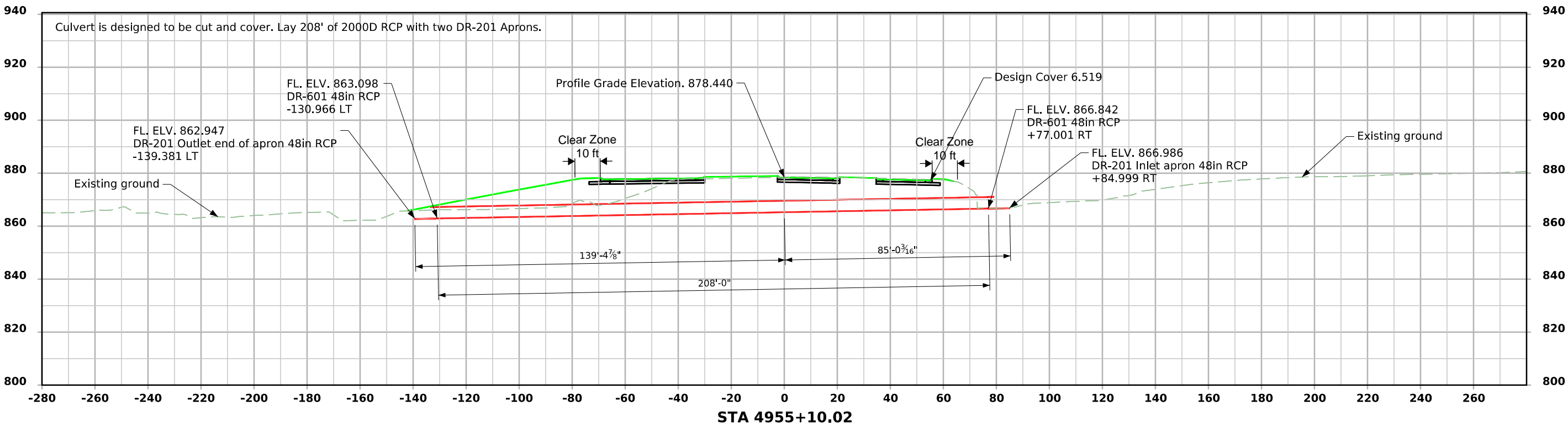




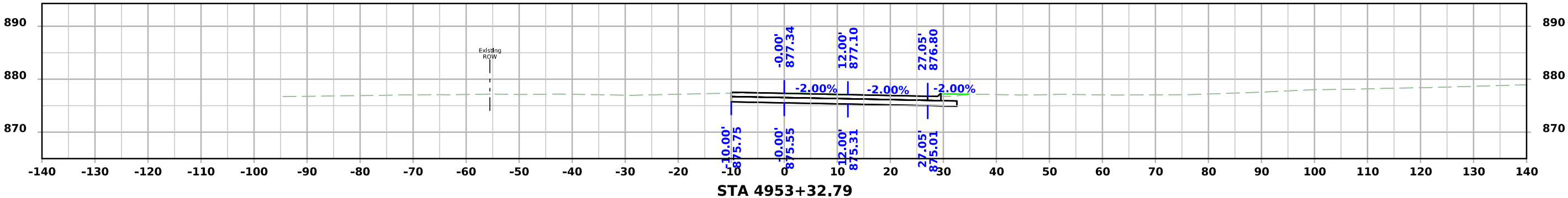
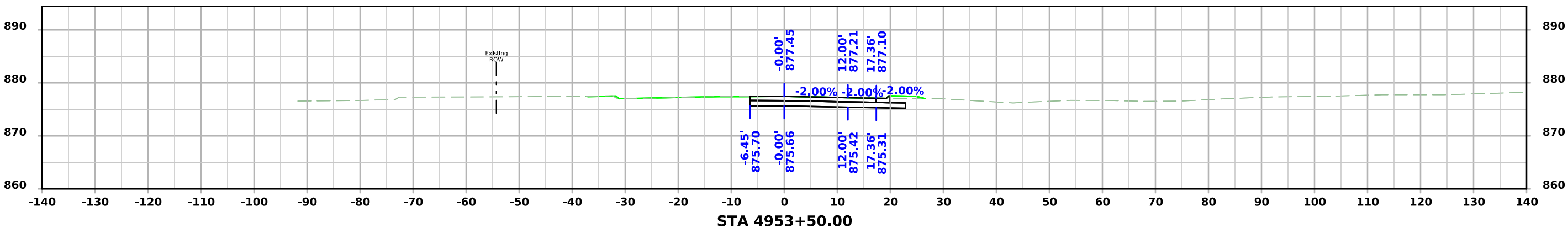
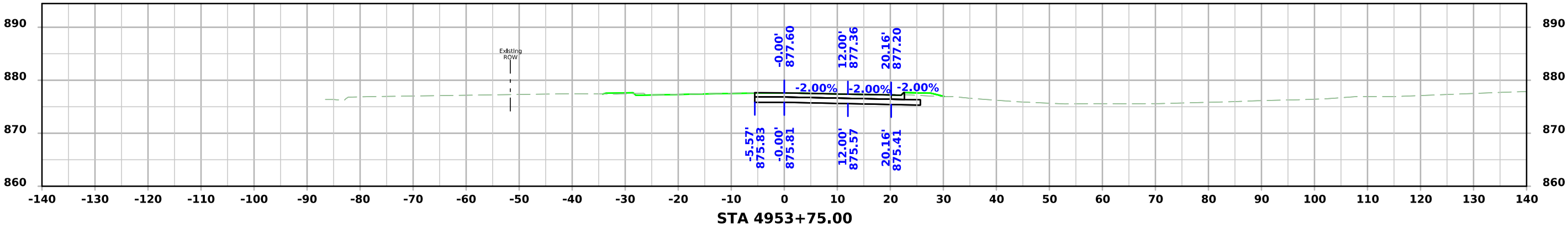
Plan assumes existing speed limit signs will remain.



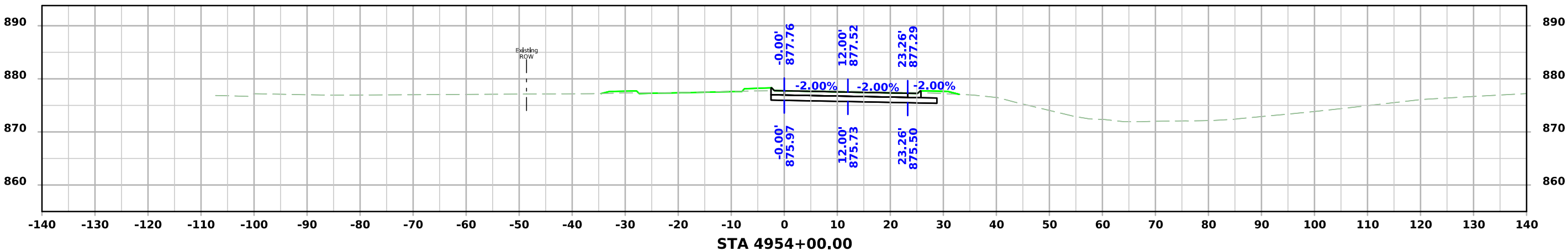
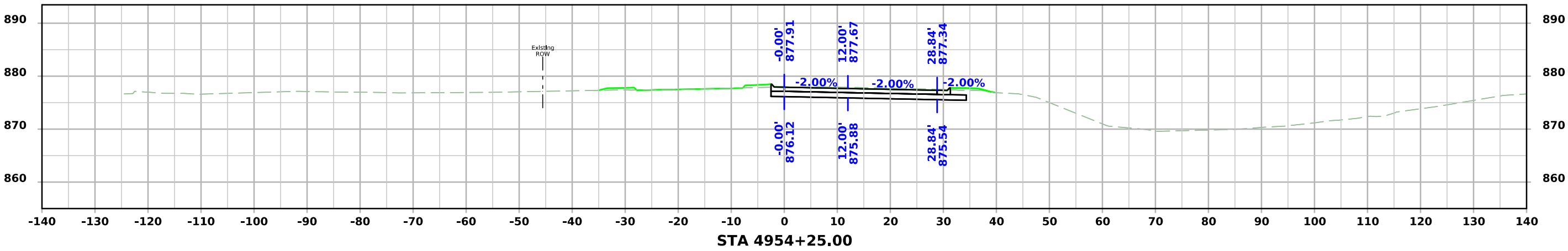
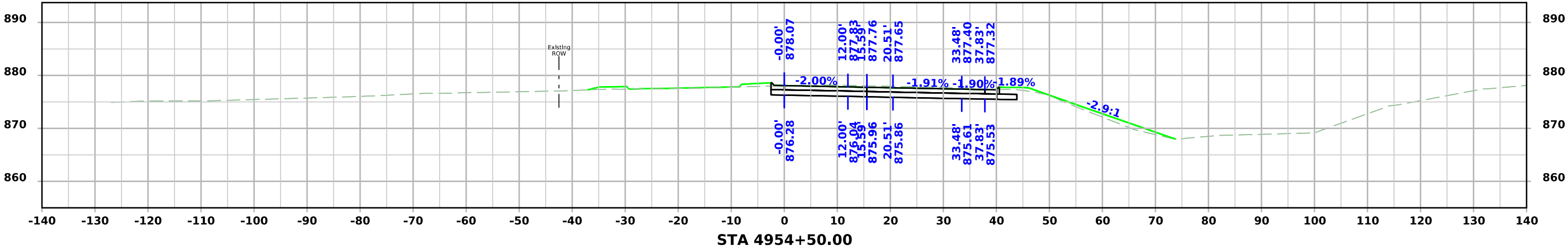
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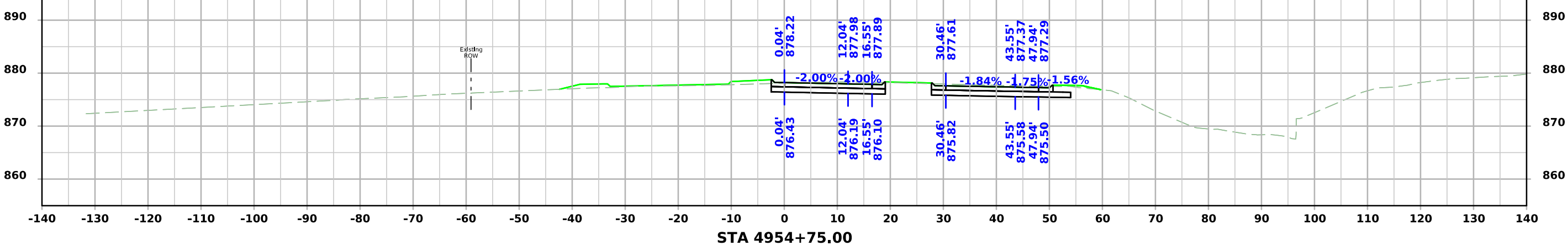
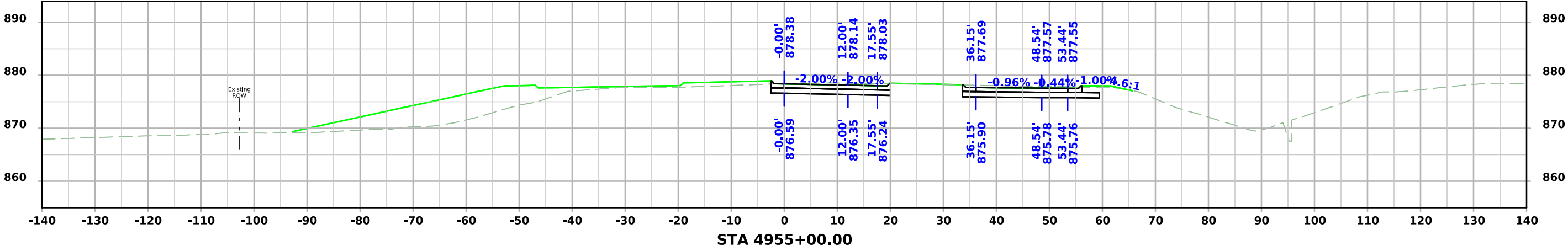
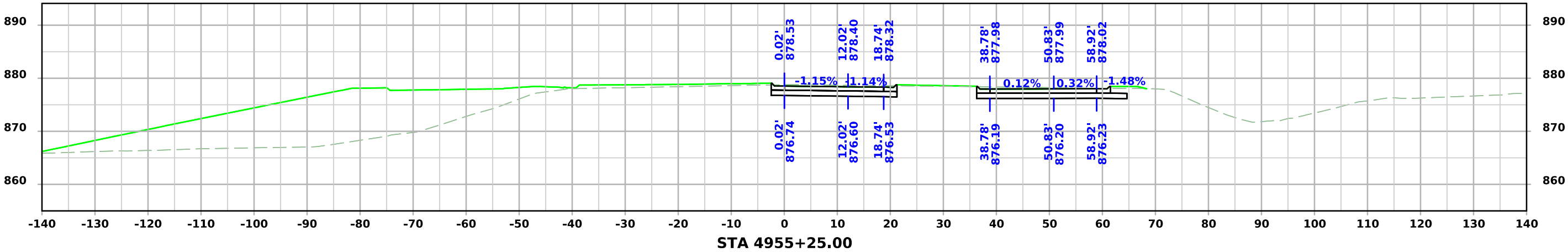
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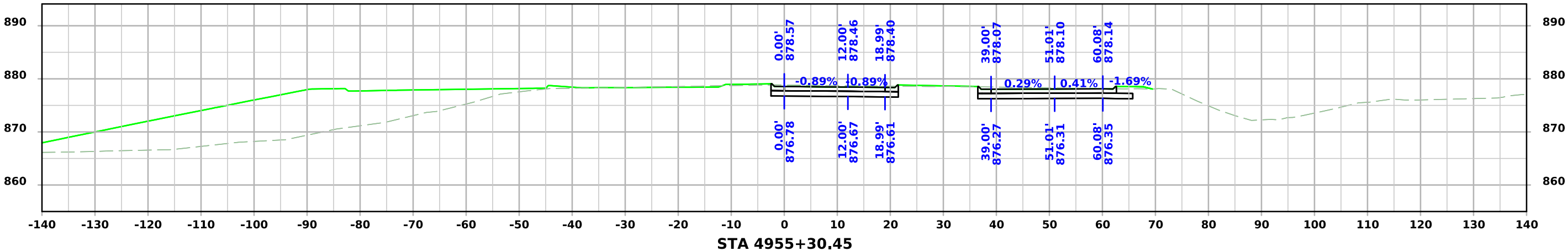
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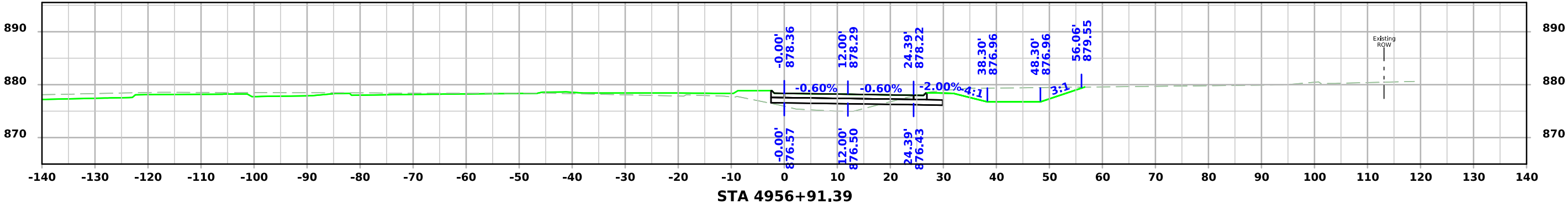
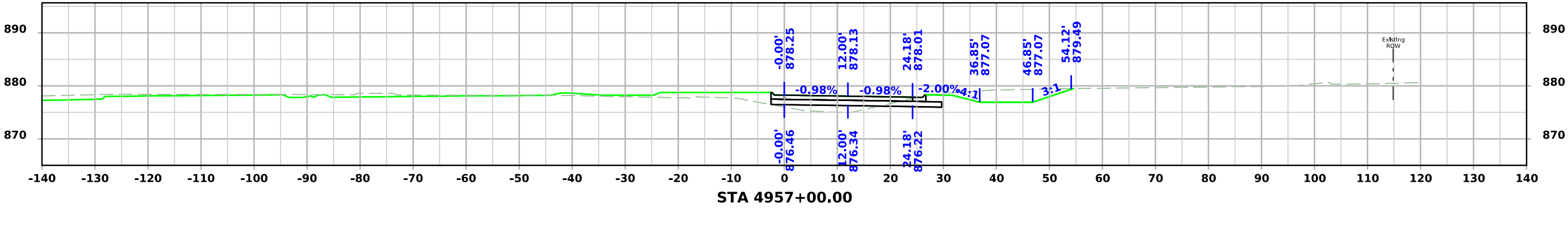
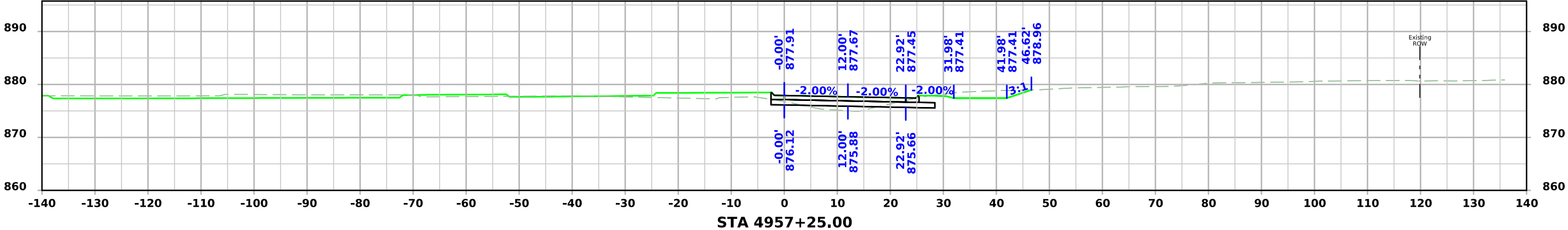
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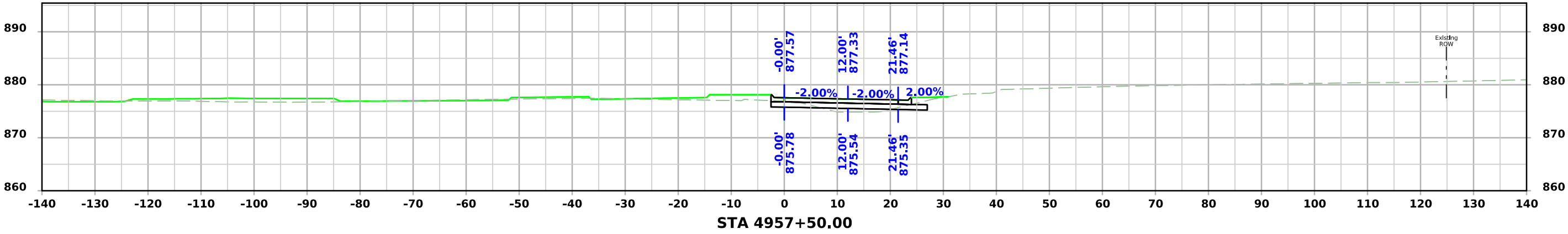
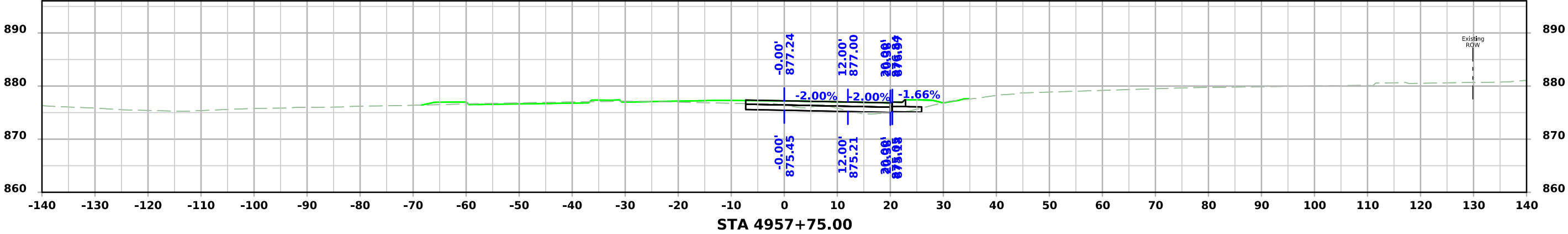
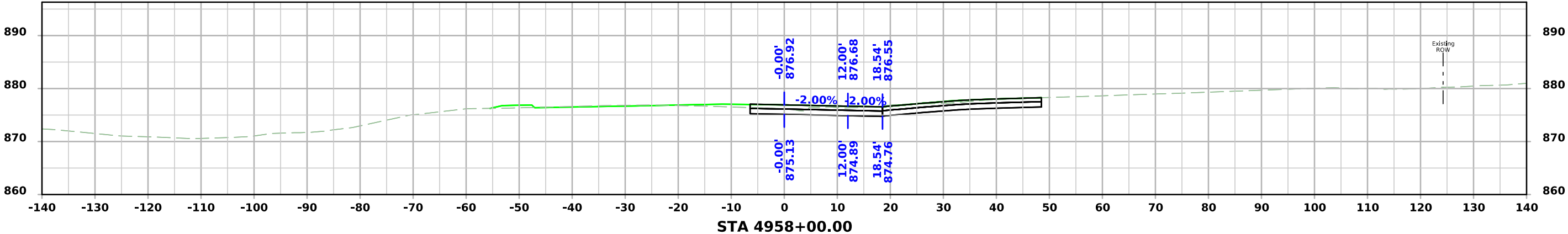
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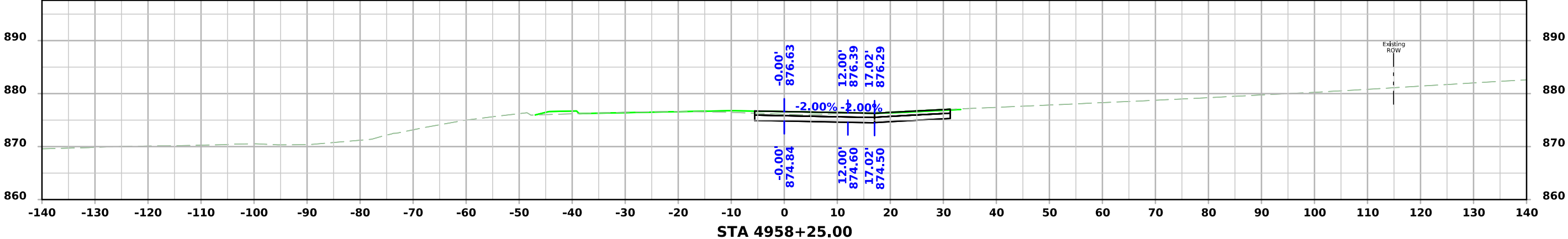
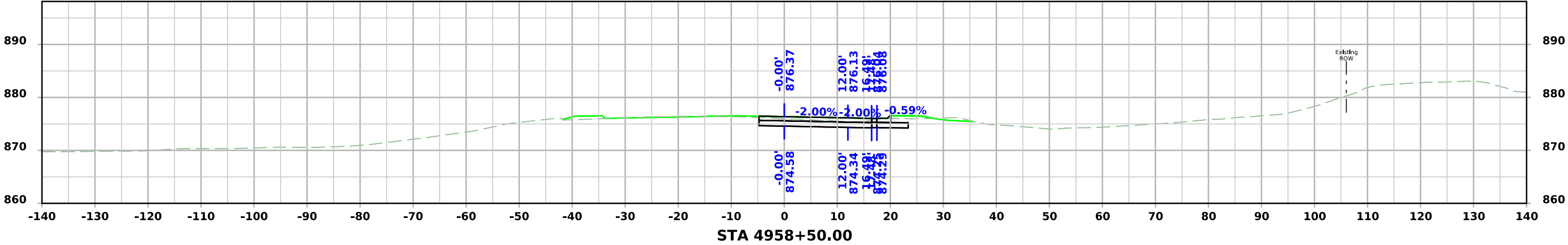
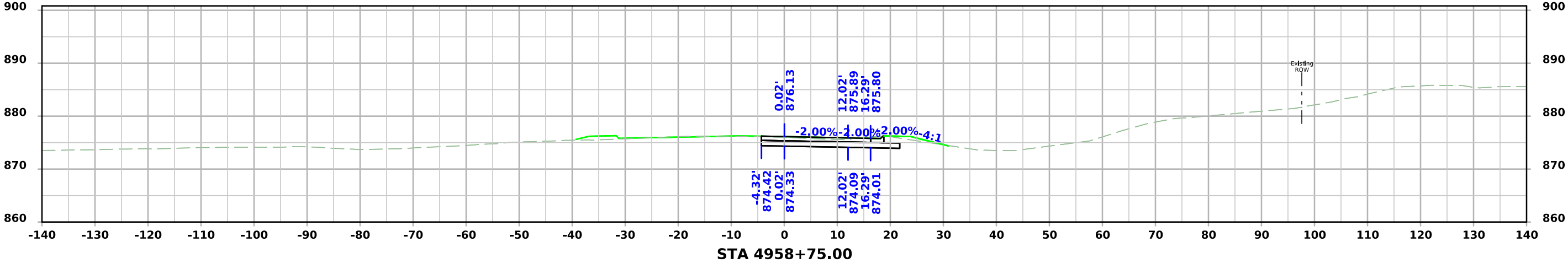
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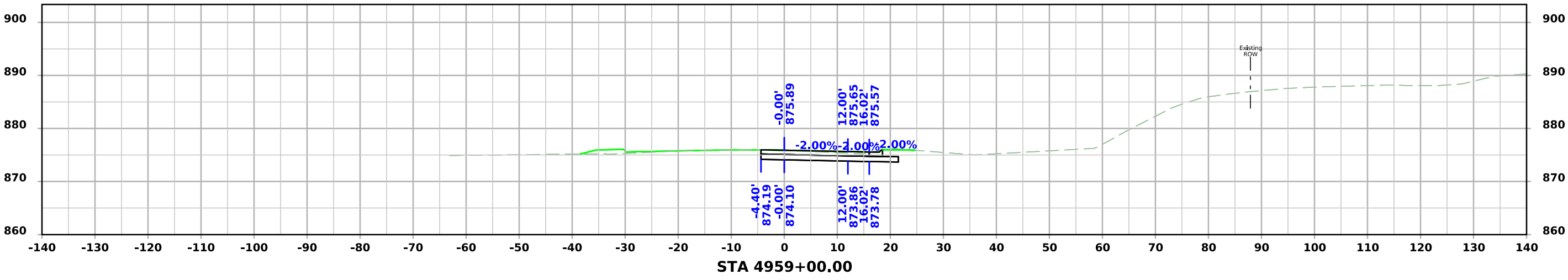
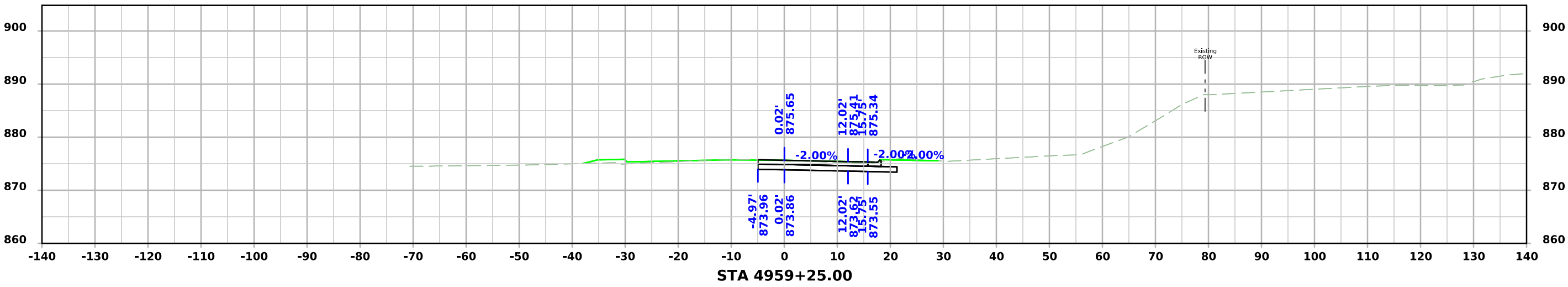
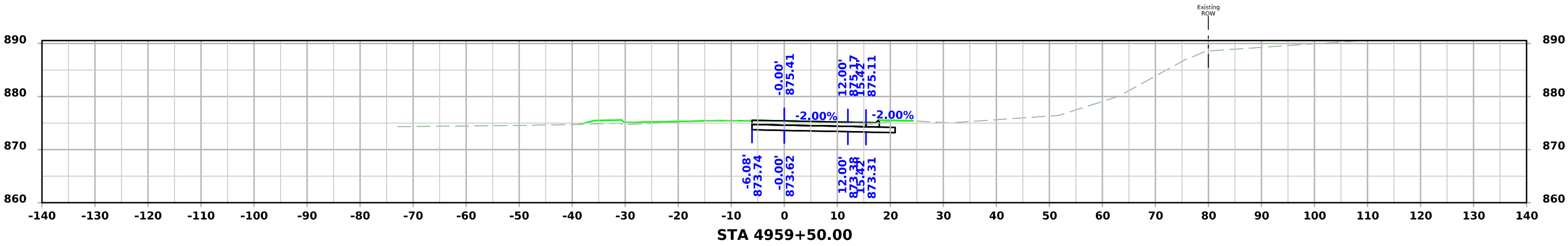
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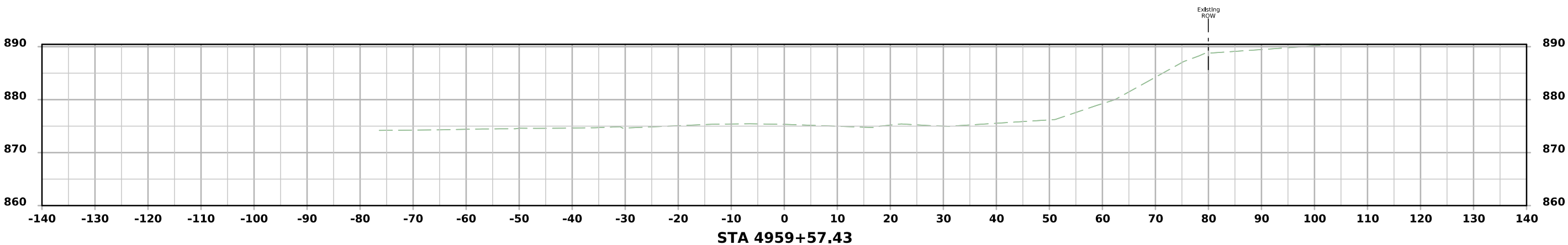
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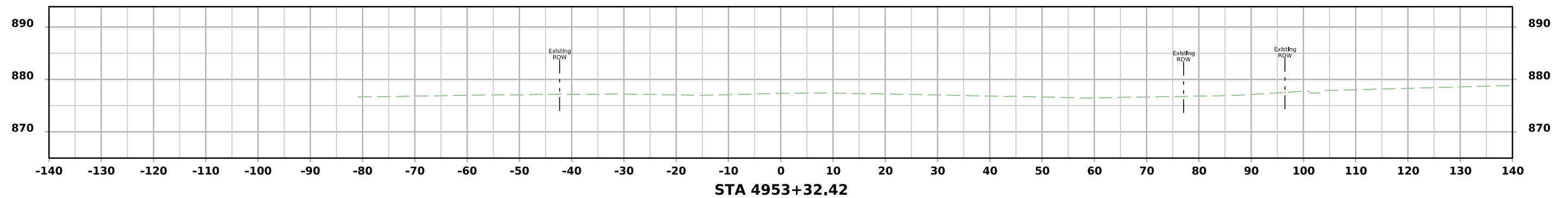
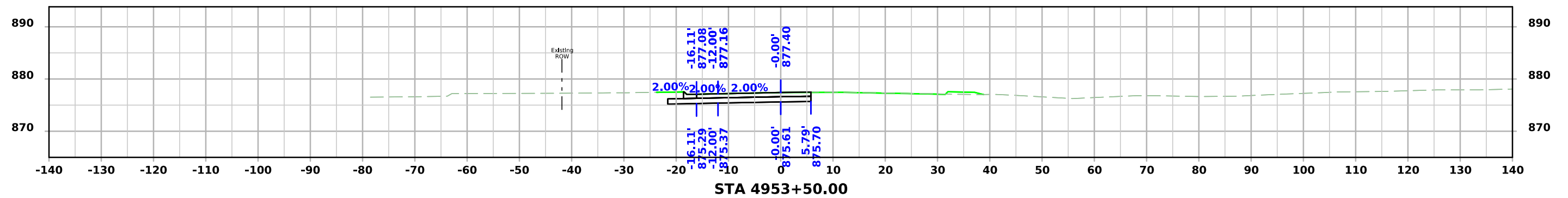
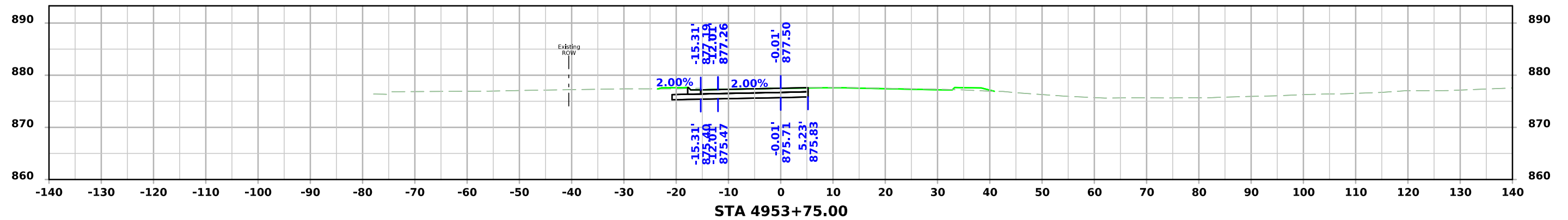
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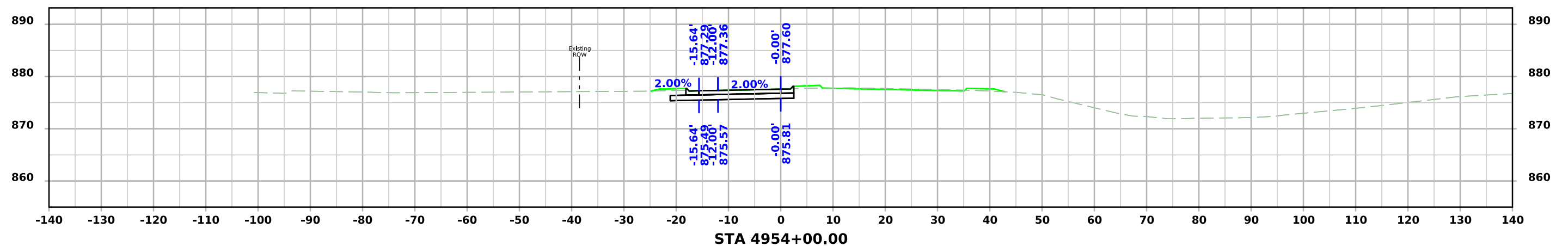
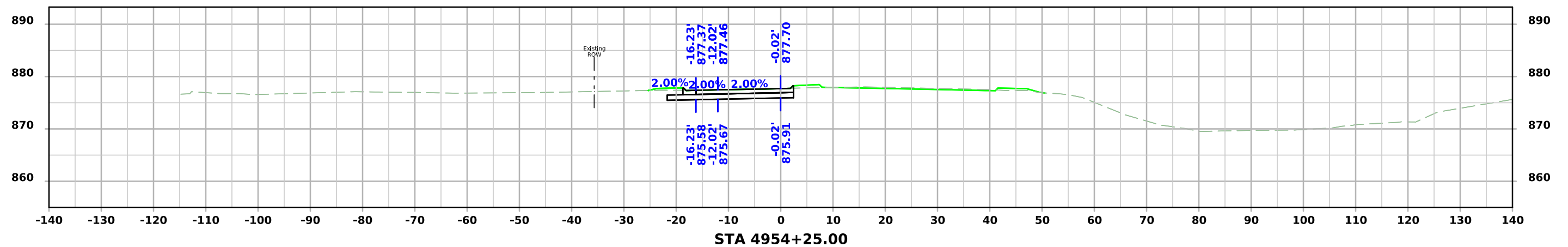
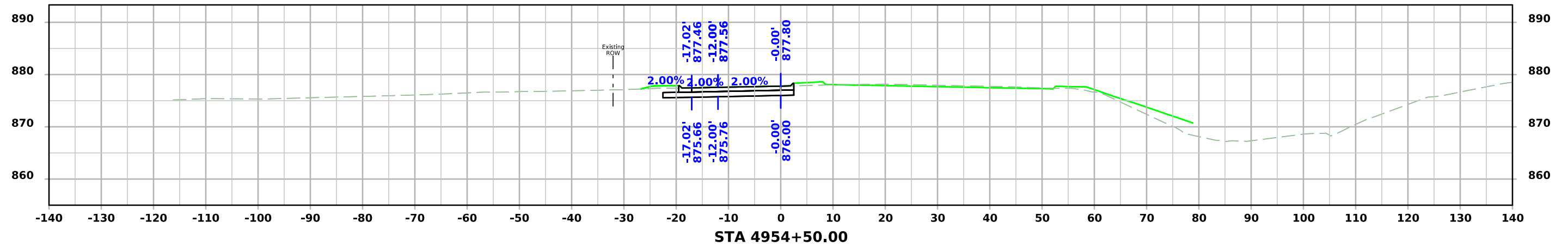
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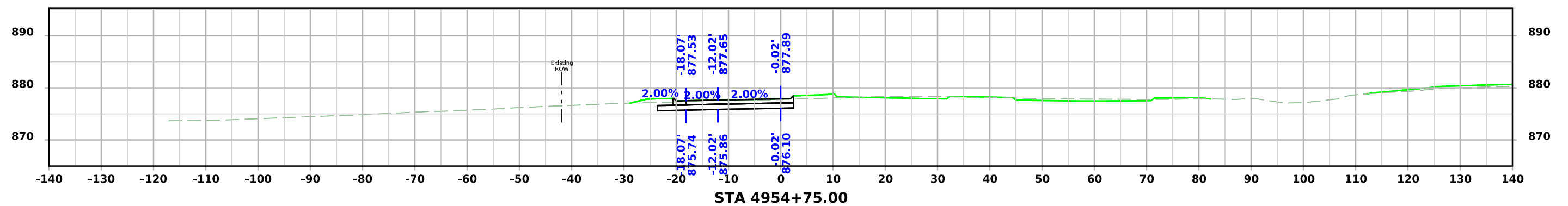
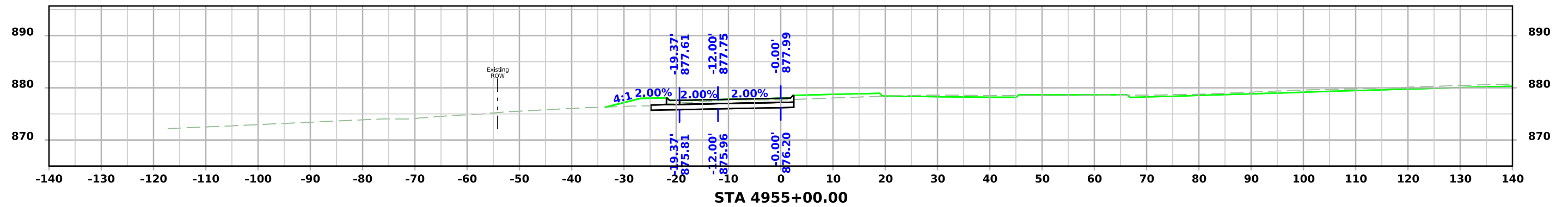
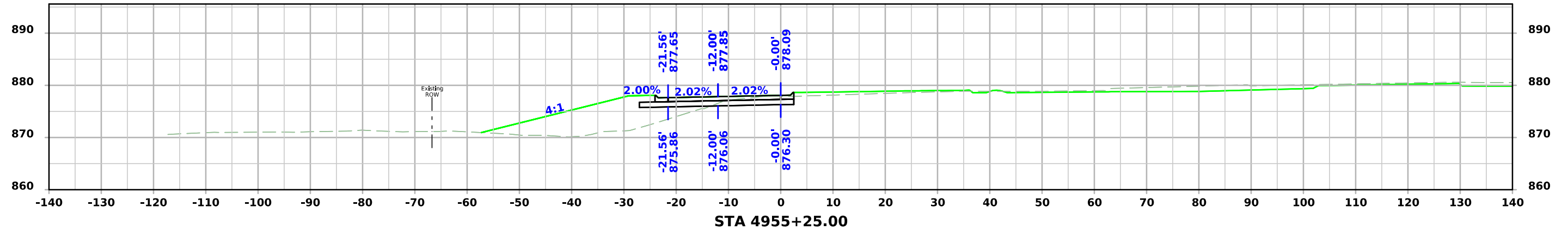
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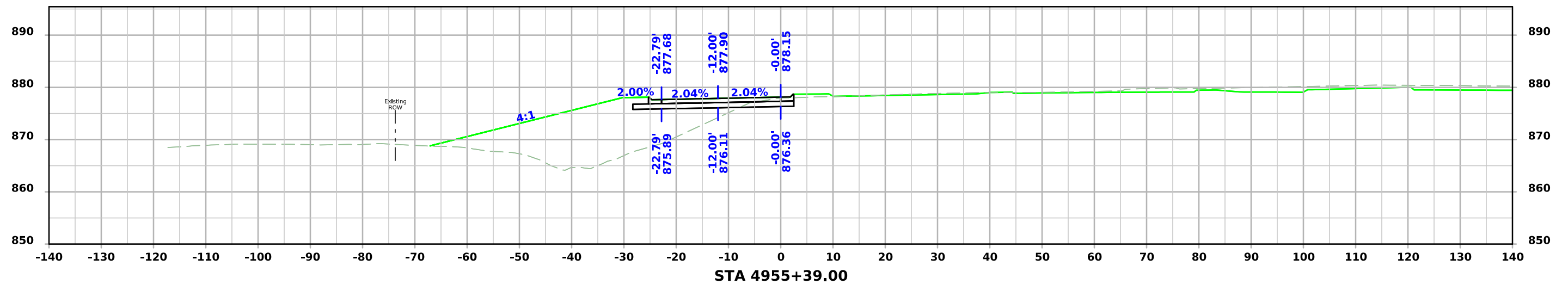
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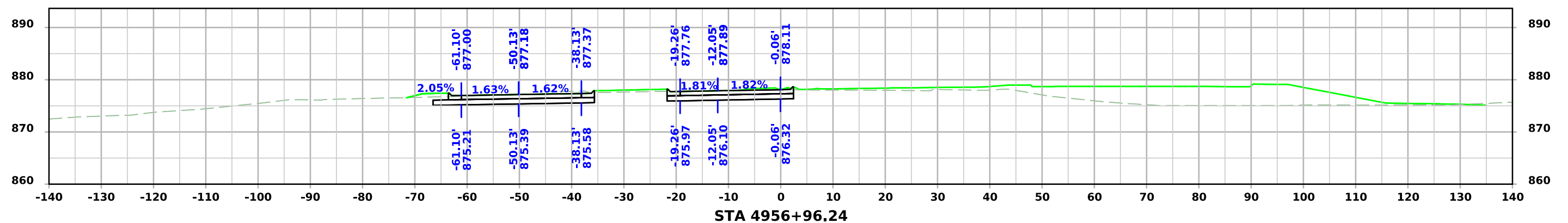
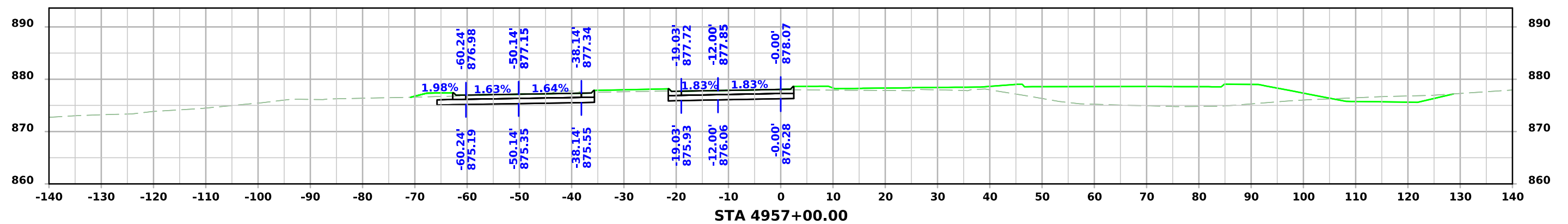
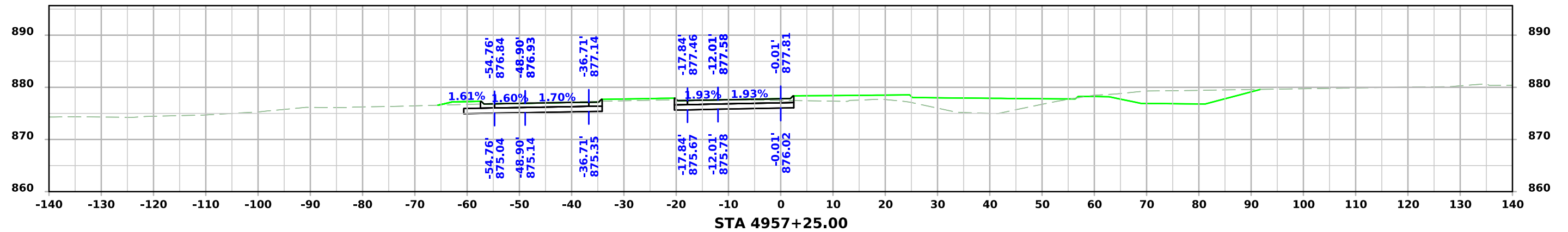
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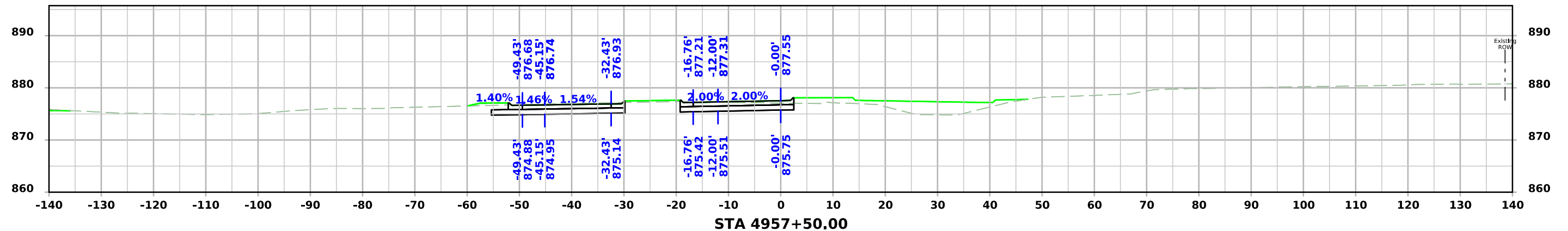
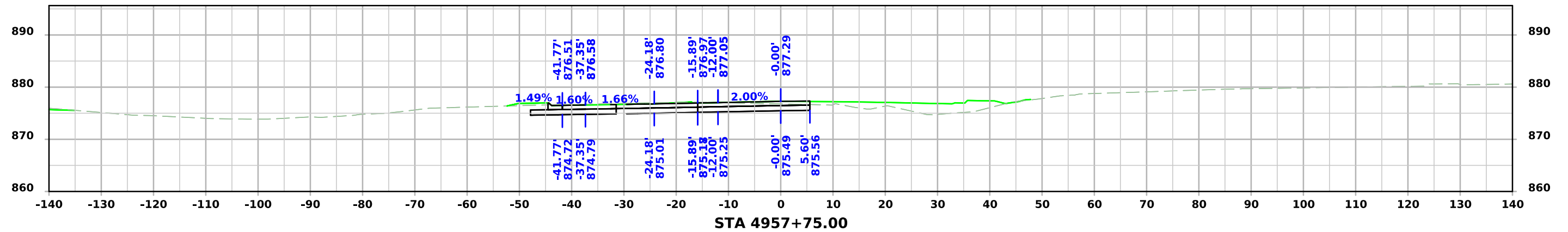
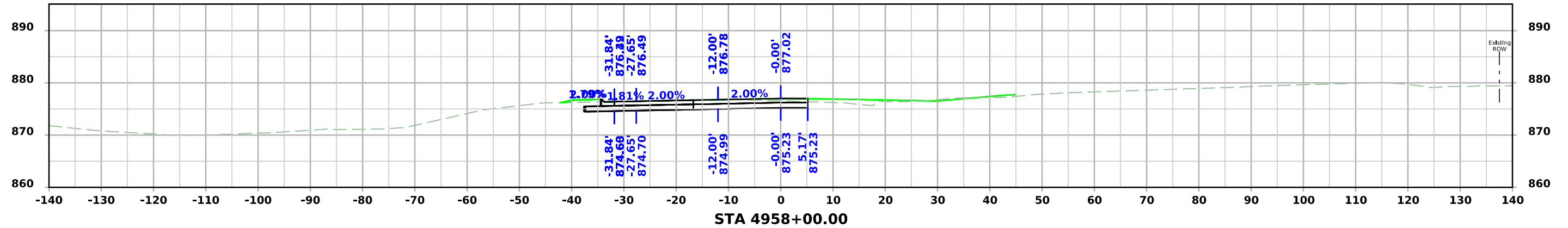
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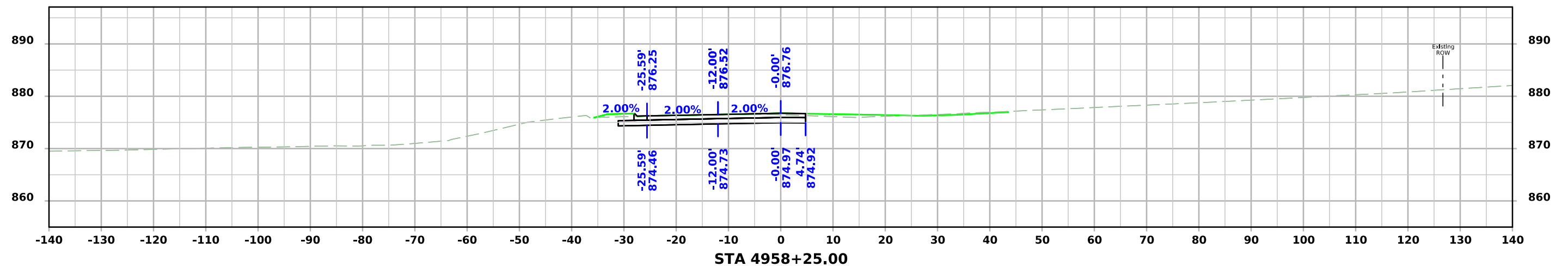
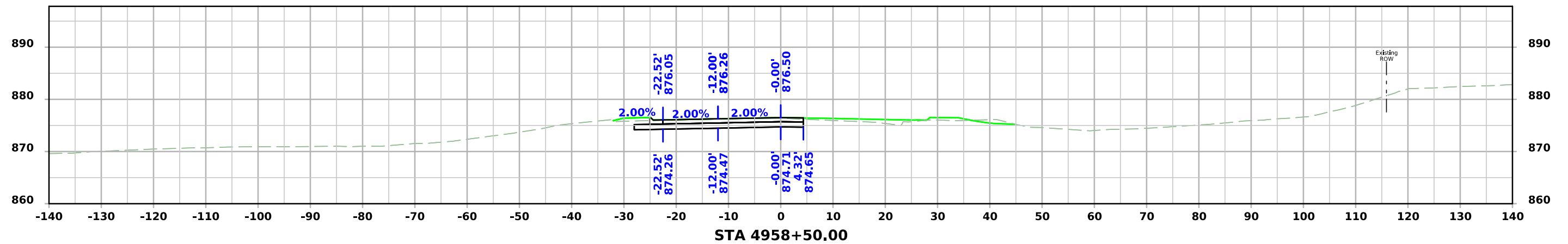
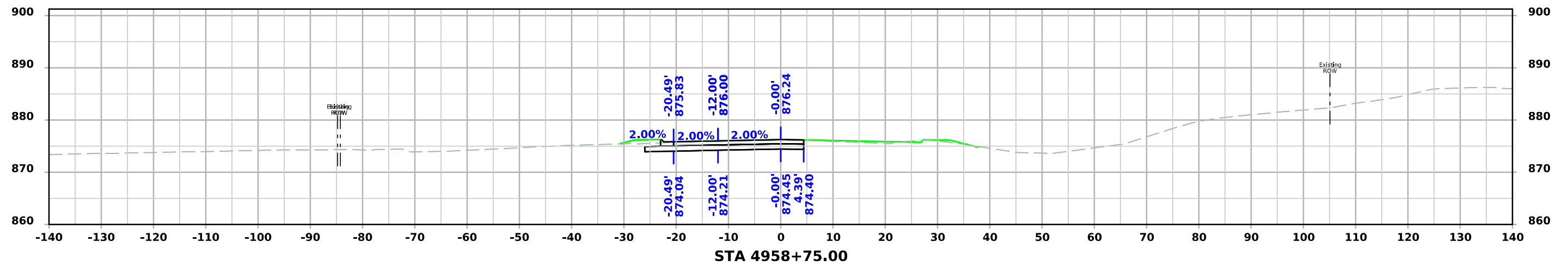
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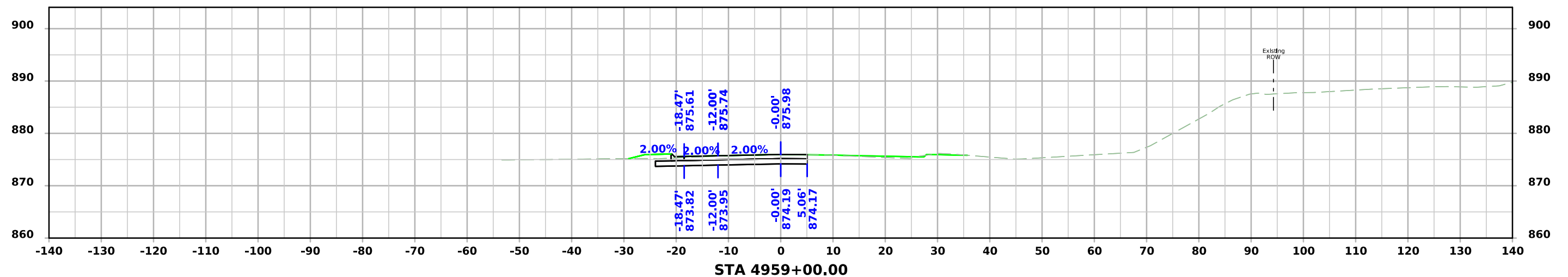
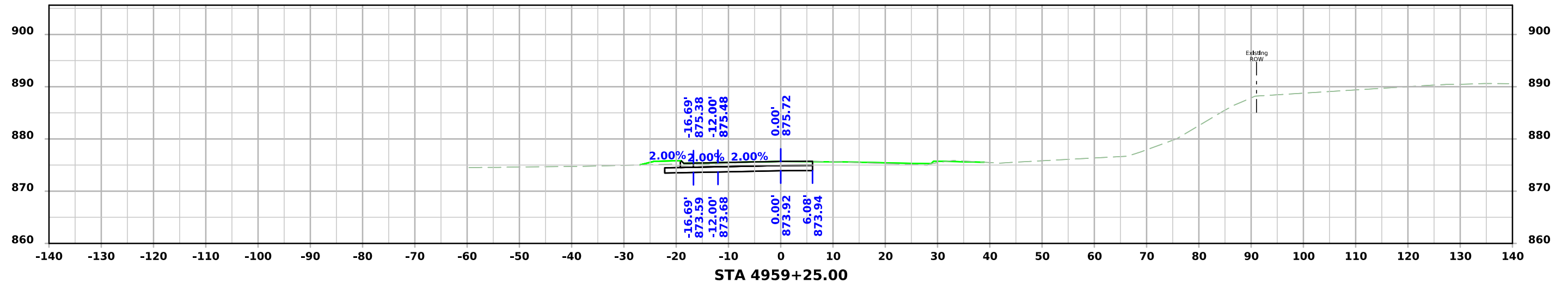
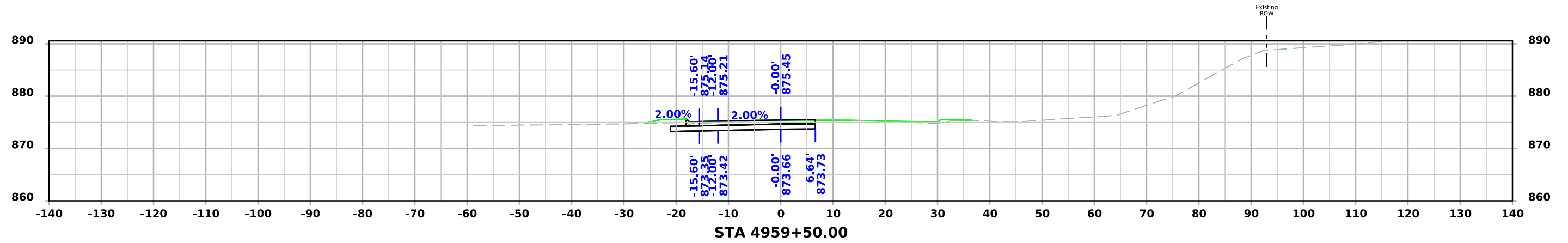
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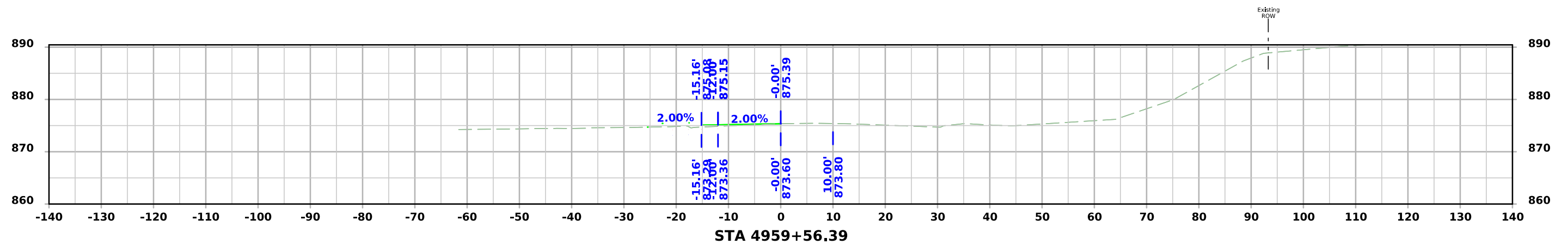
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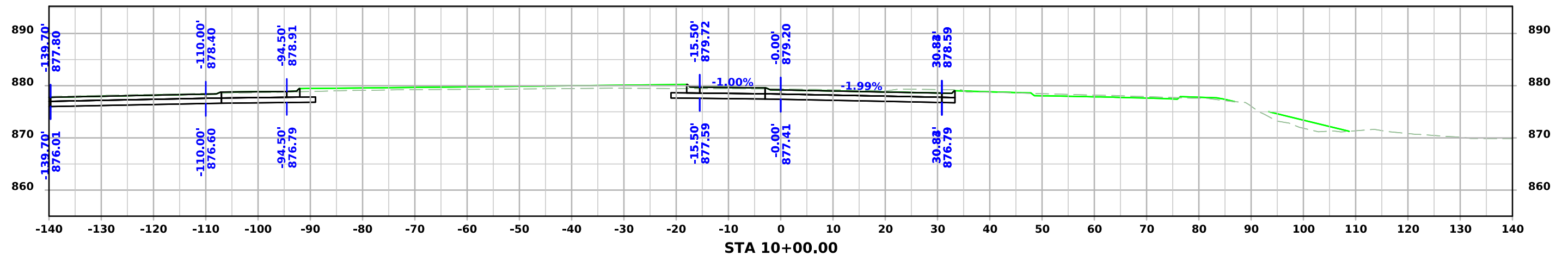
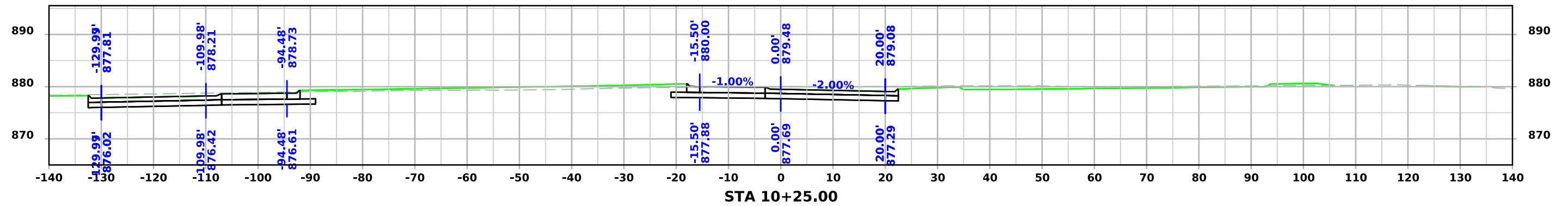
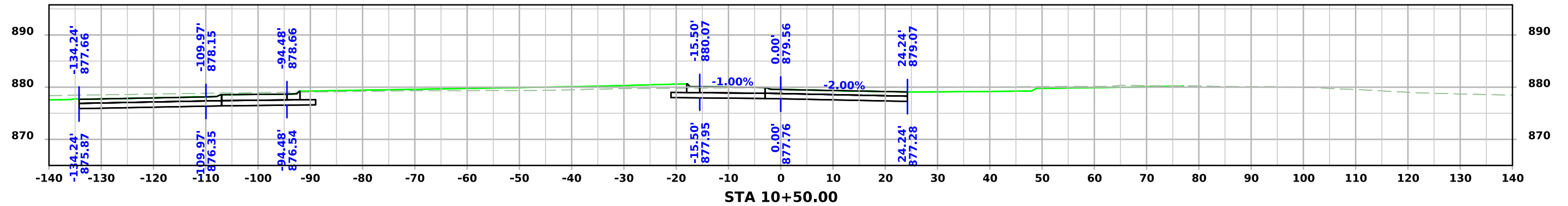
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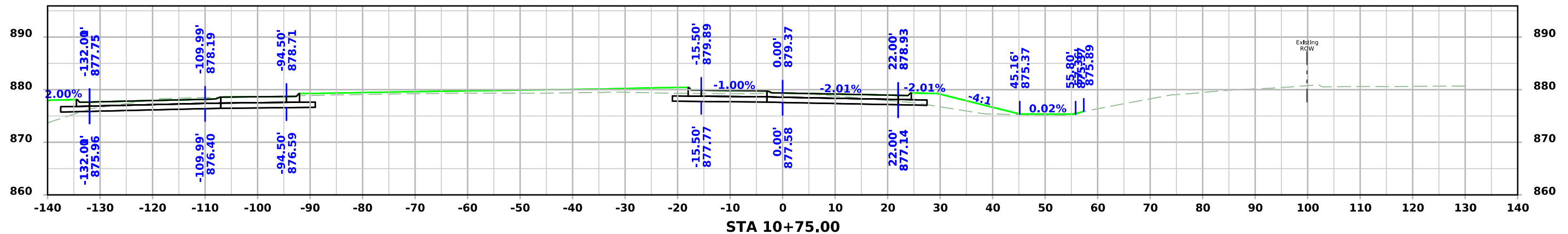
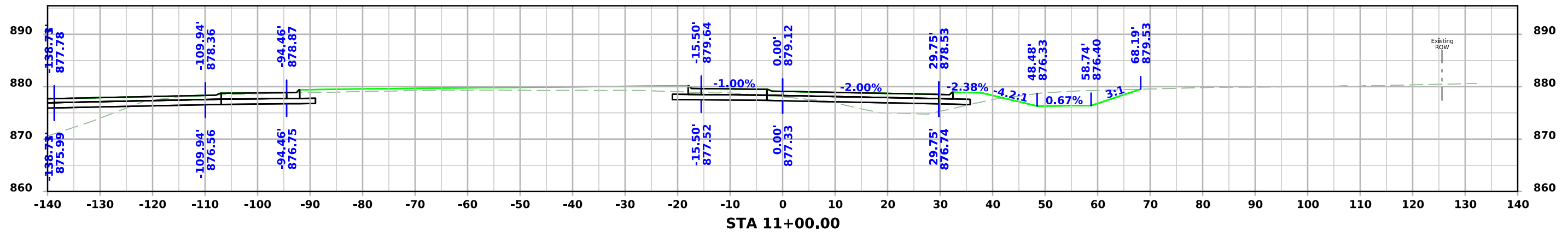
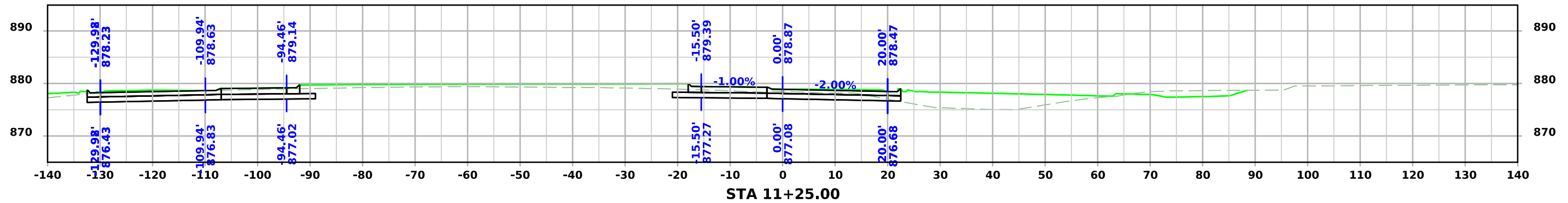
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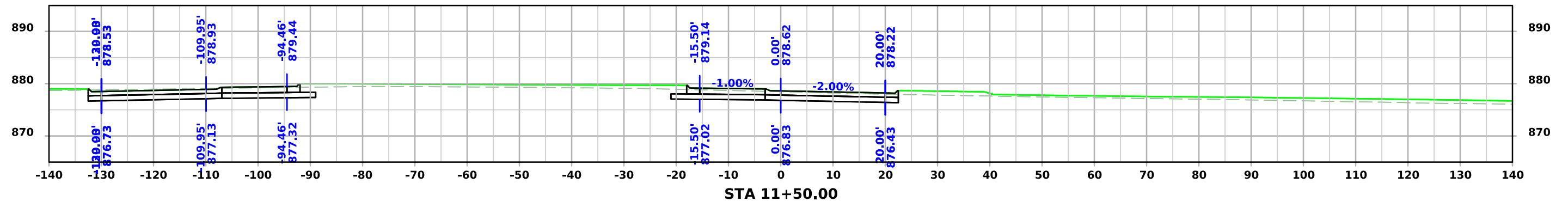
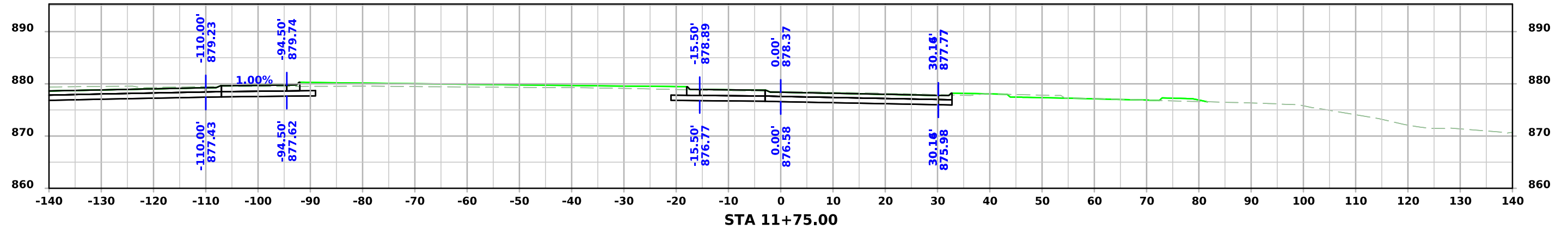
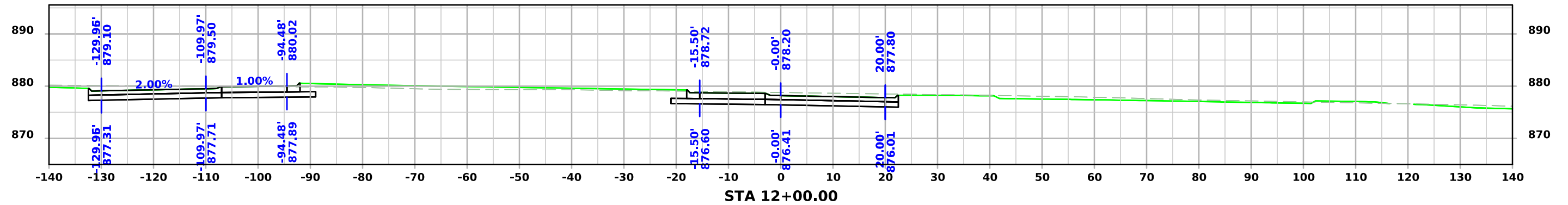
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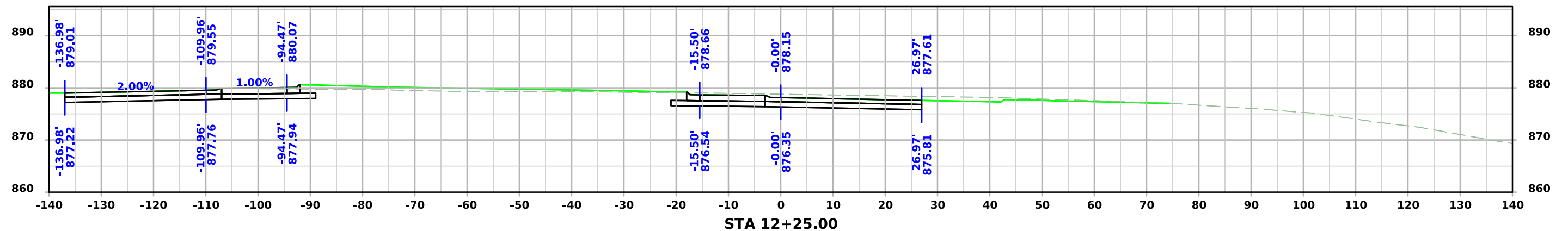
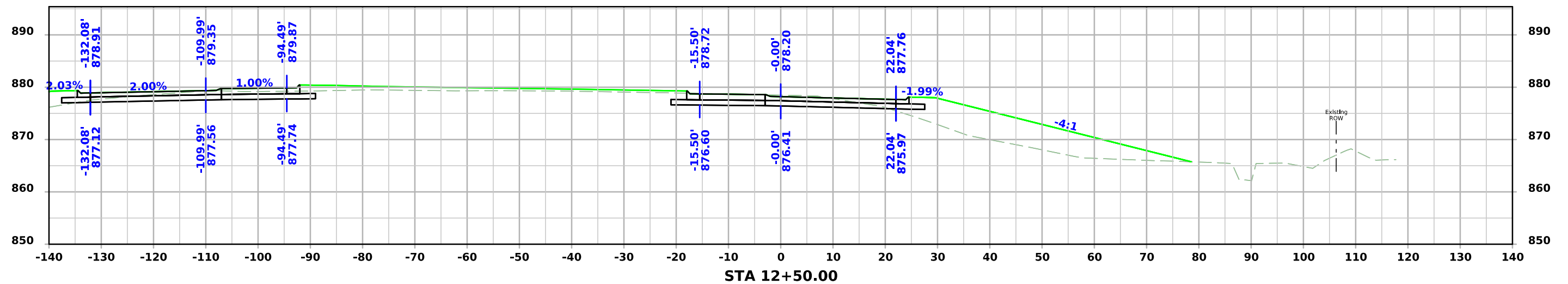
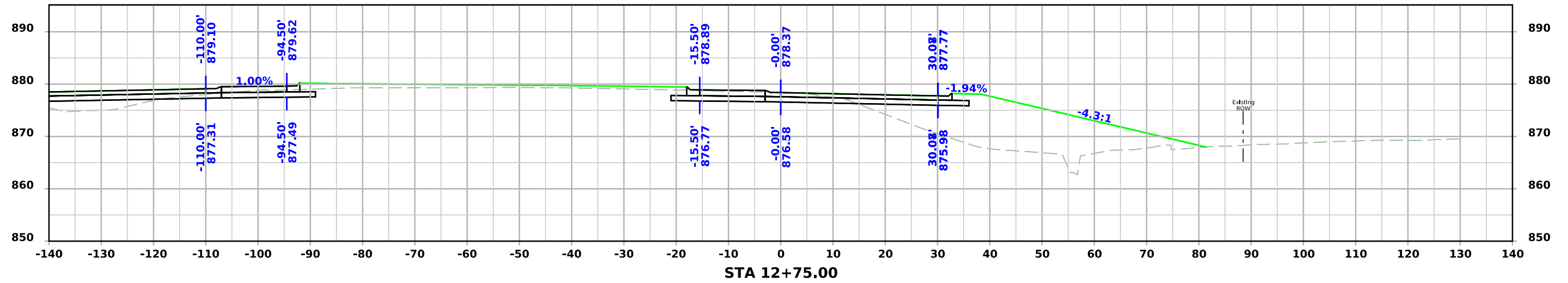
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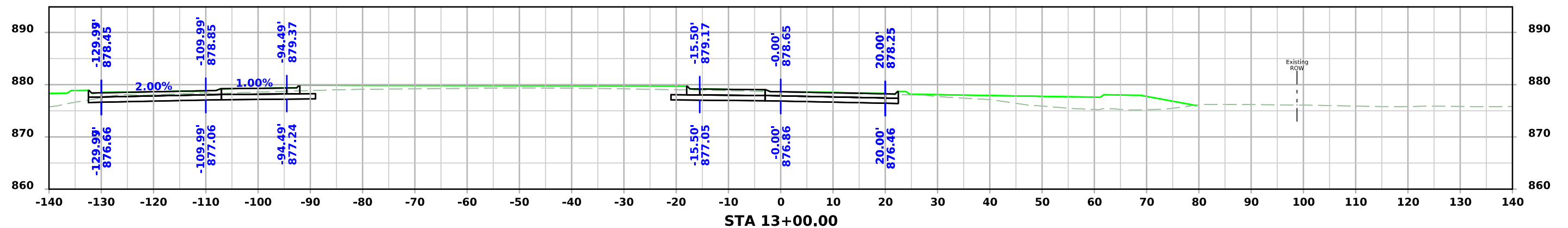
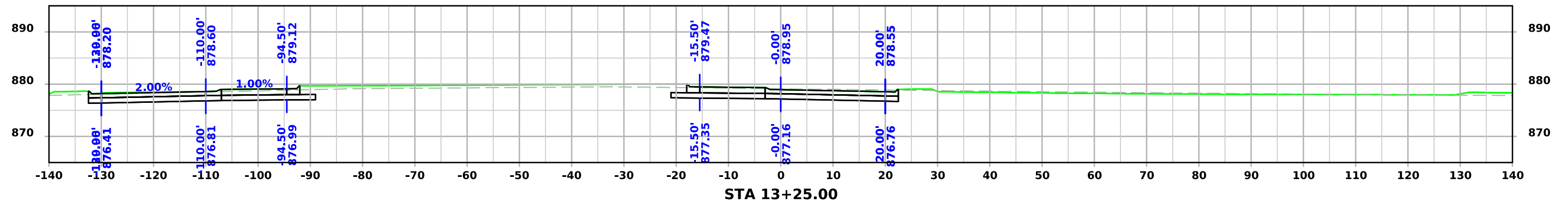
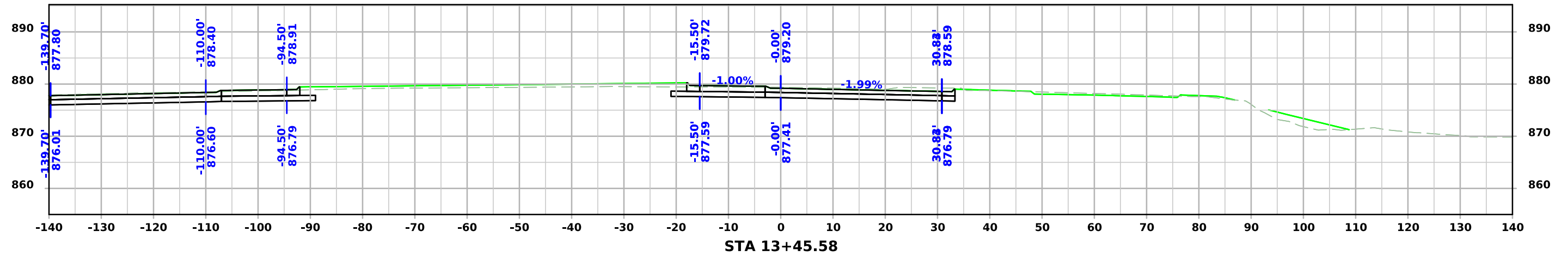
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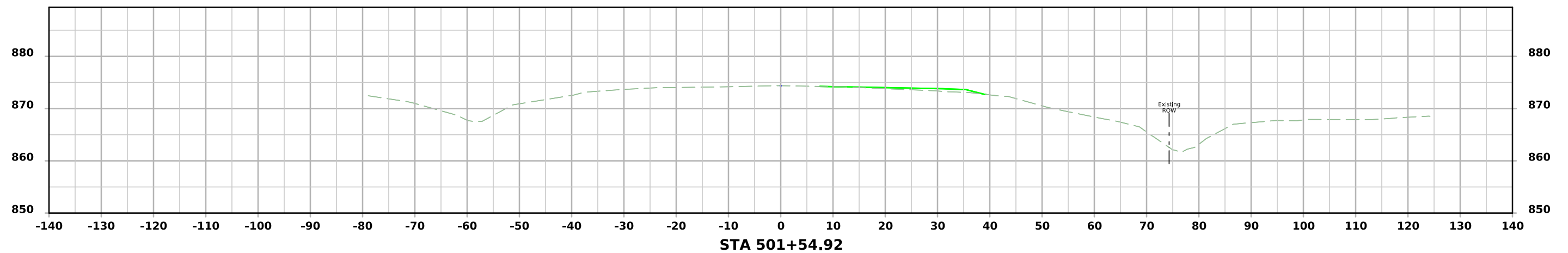
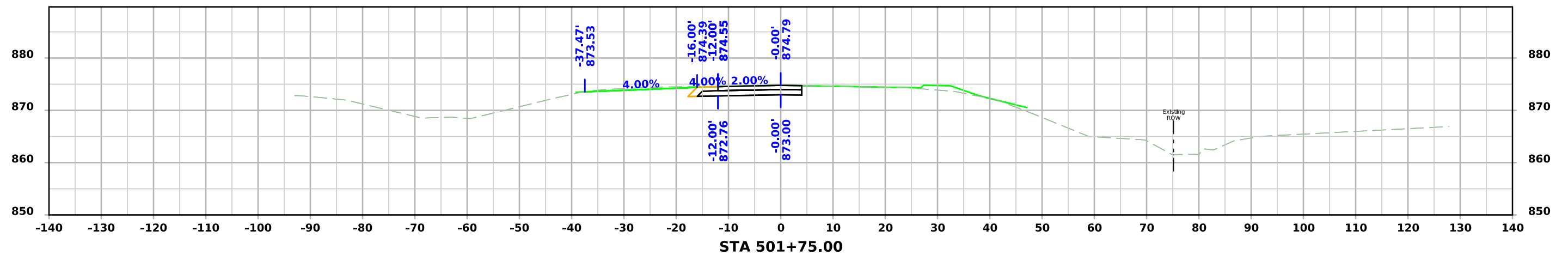
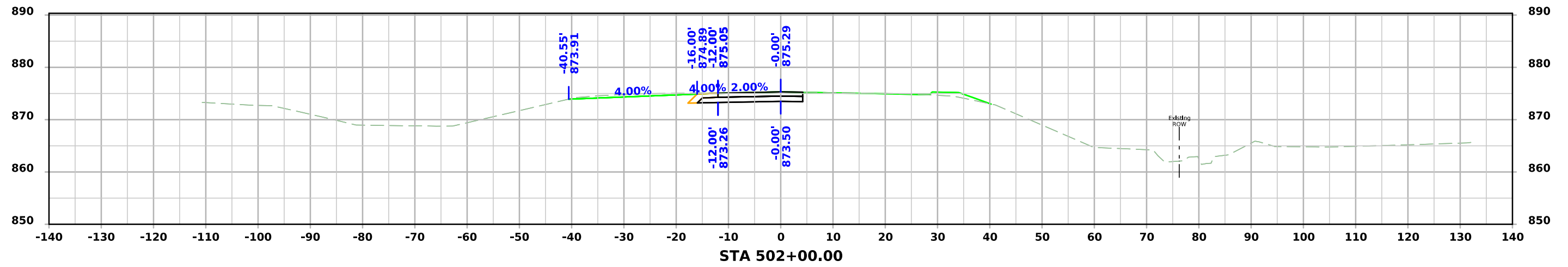
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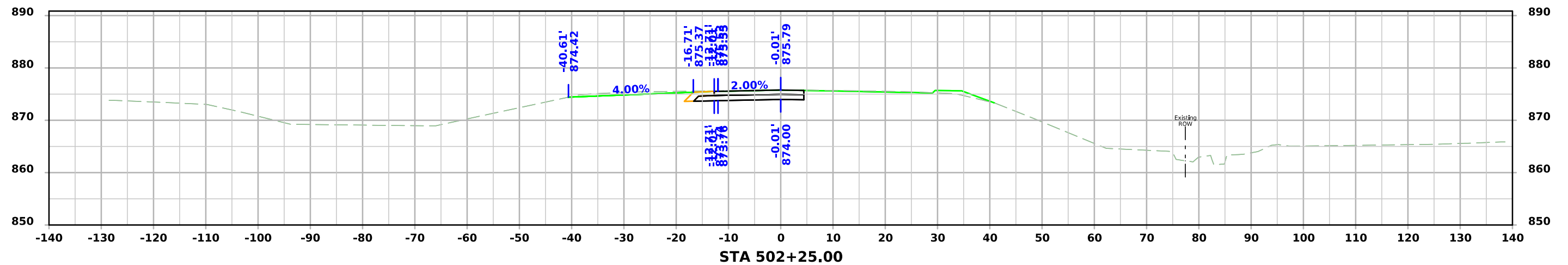
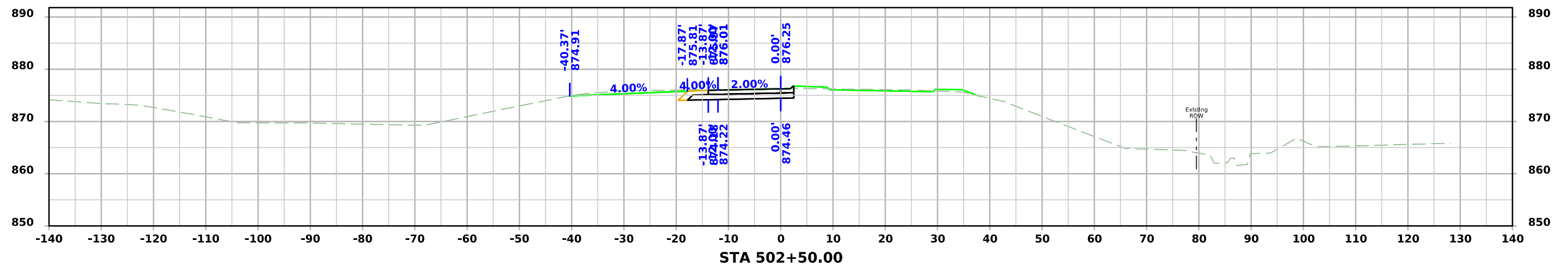
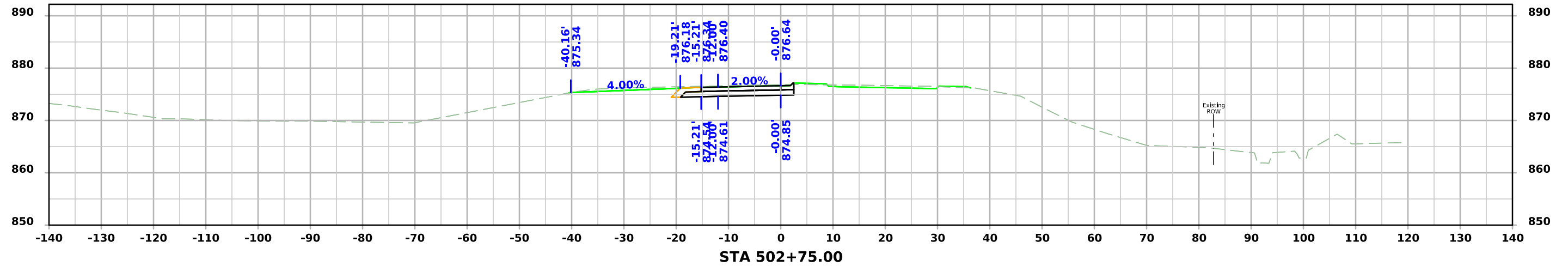
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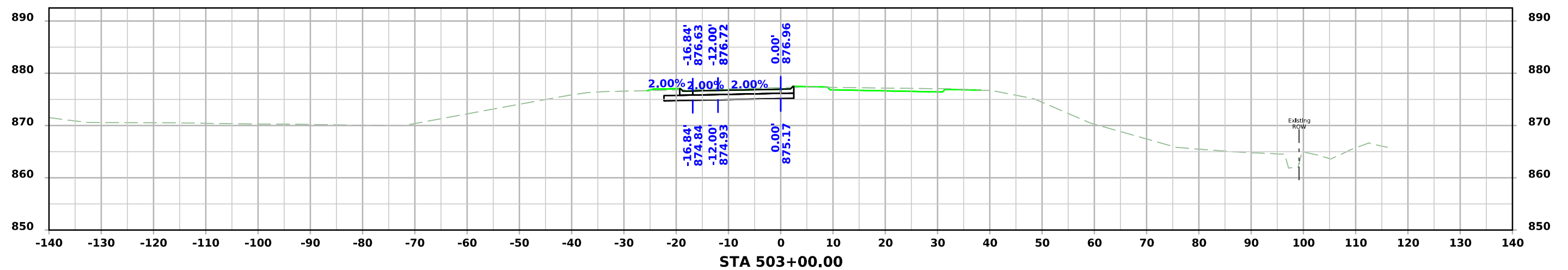
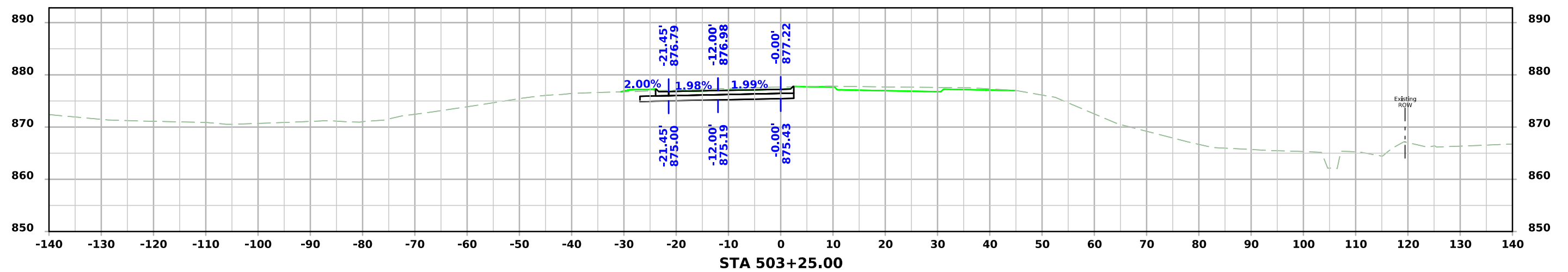
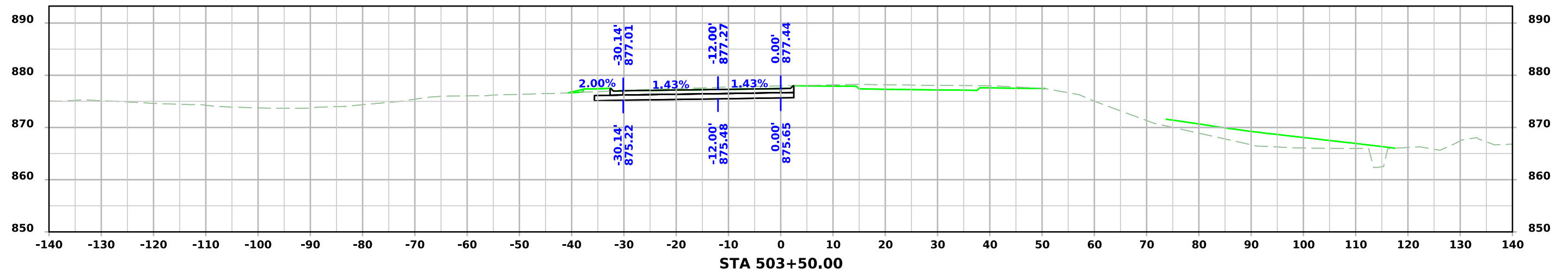
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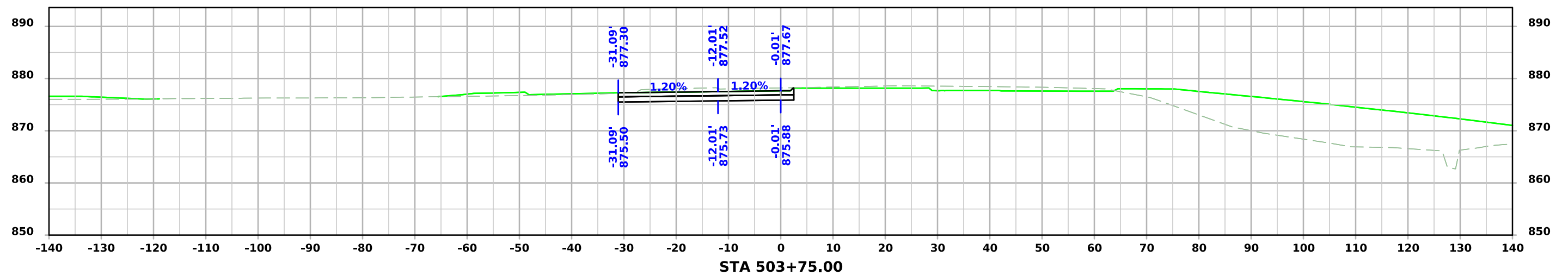
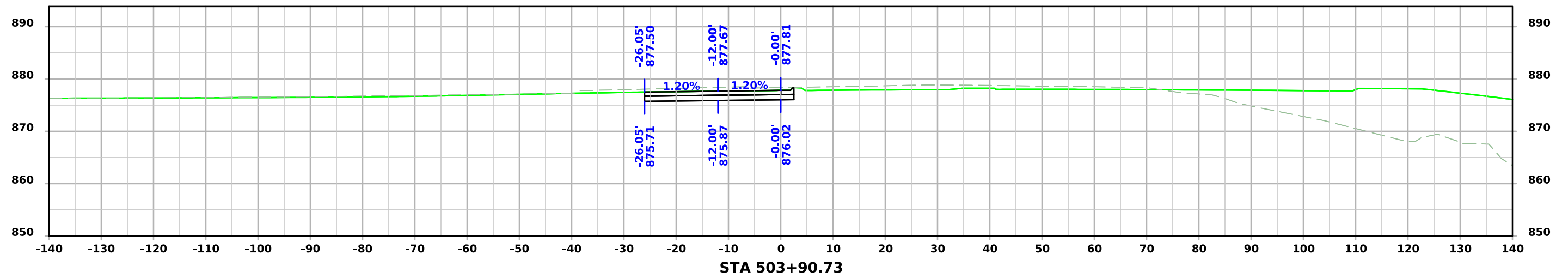
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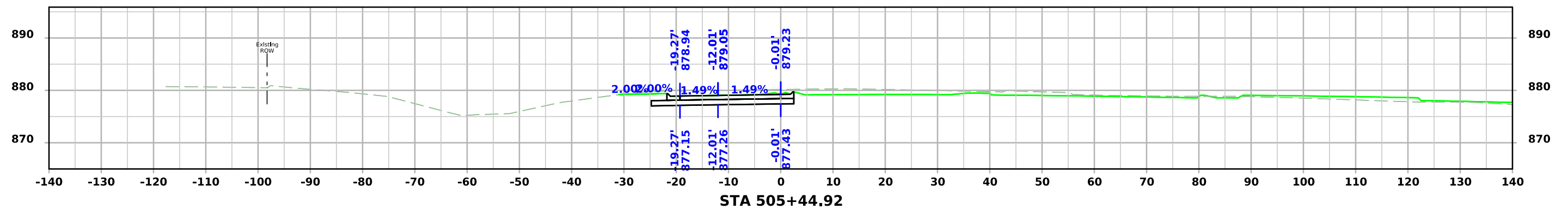
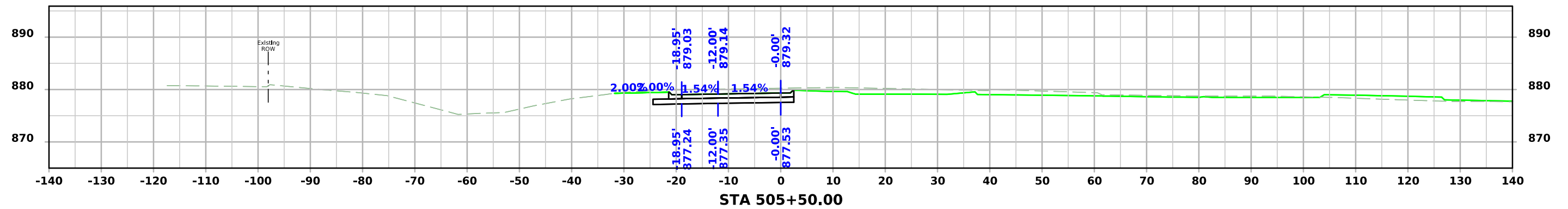
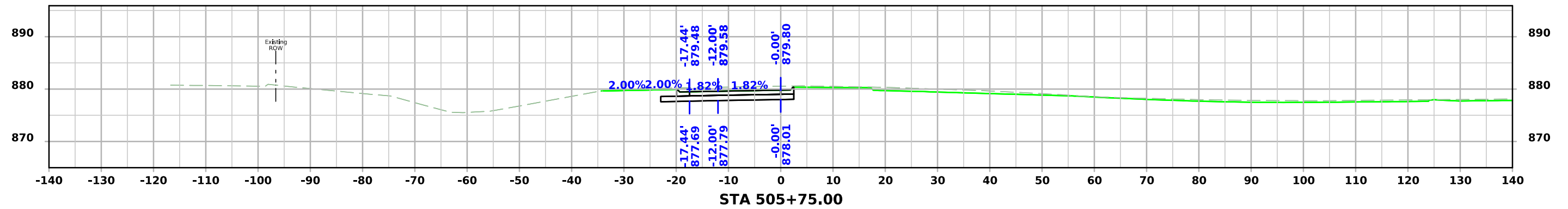
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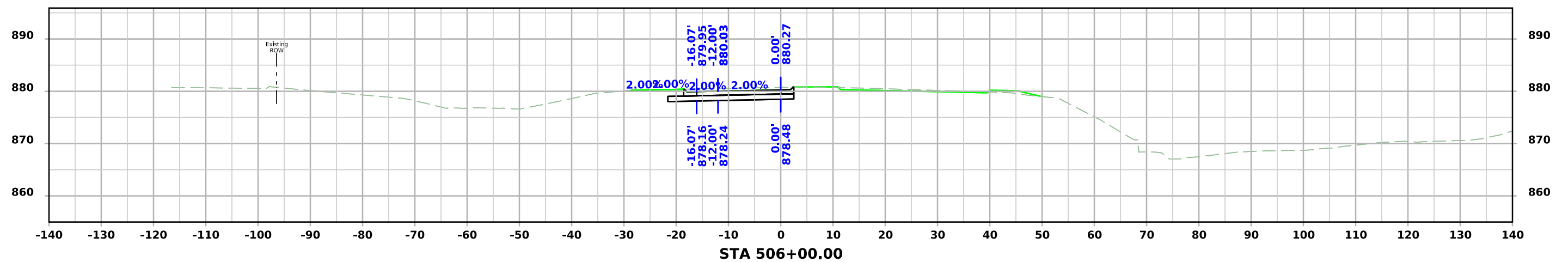
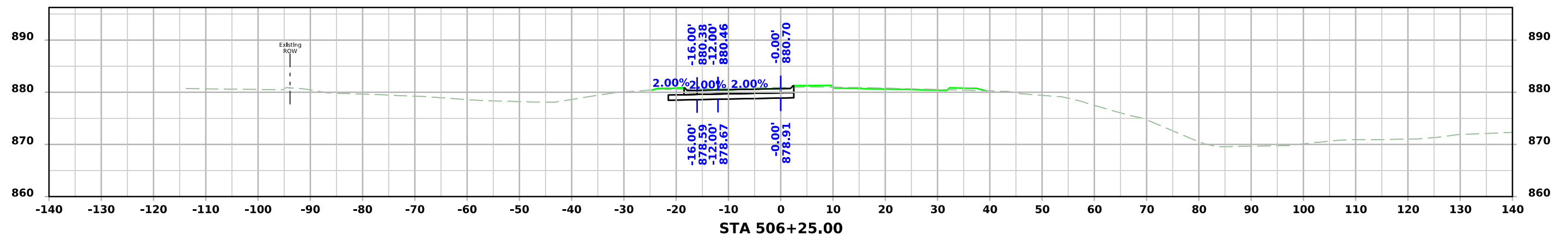
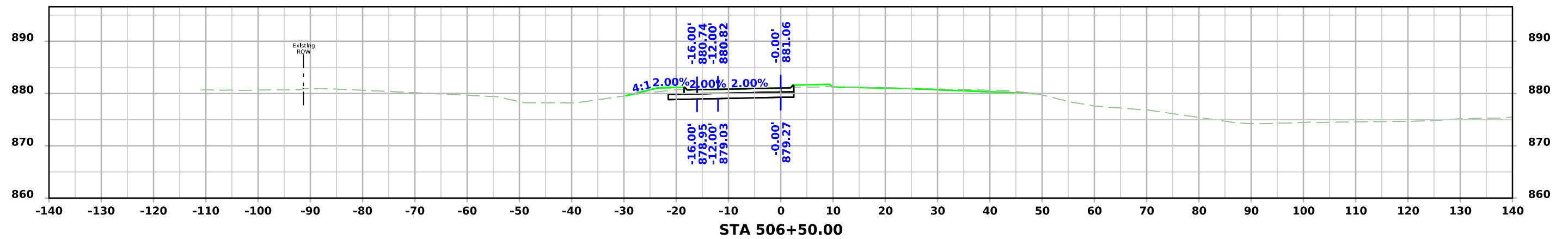
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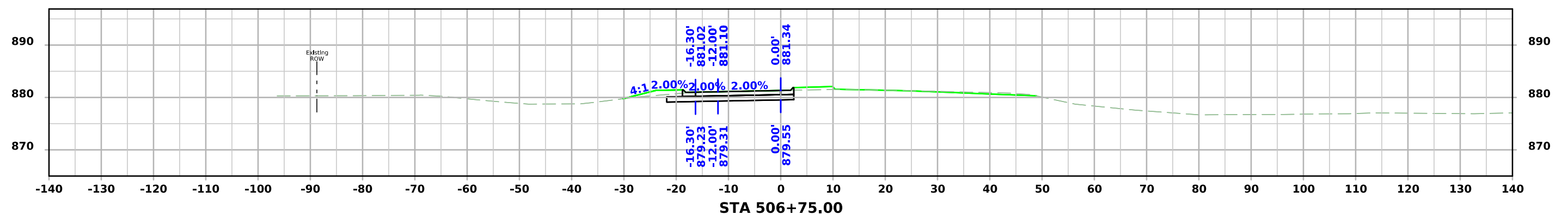
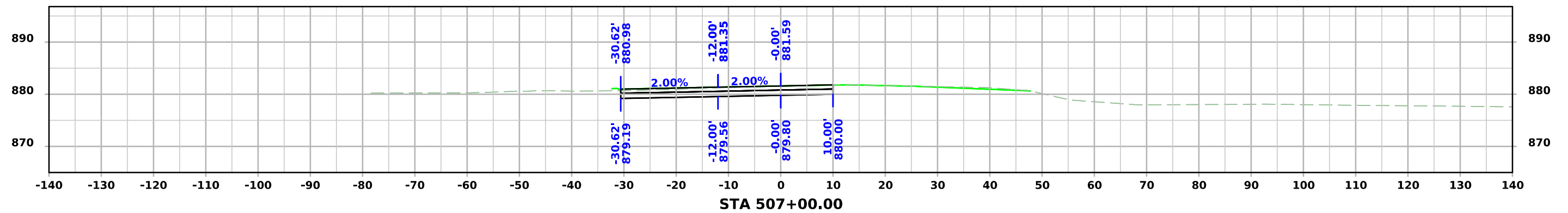
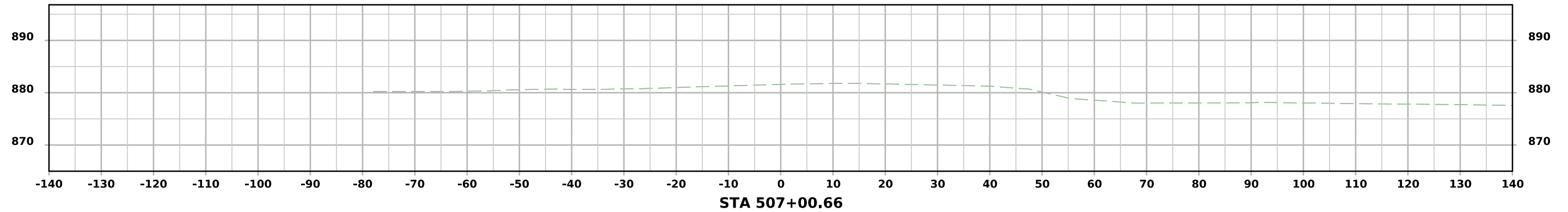
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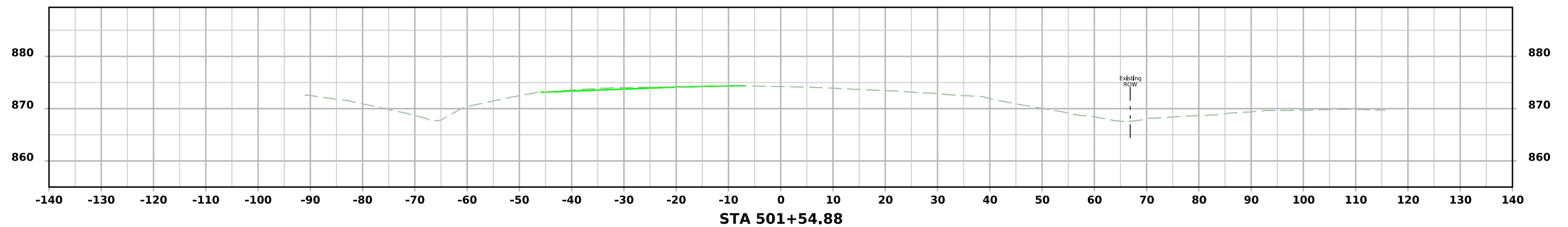
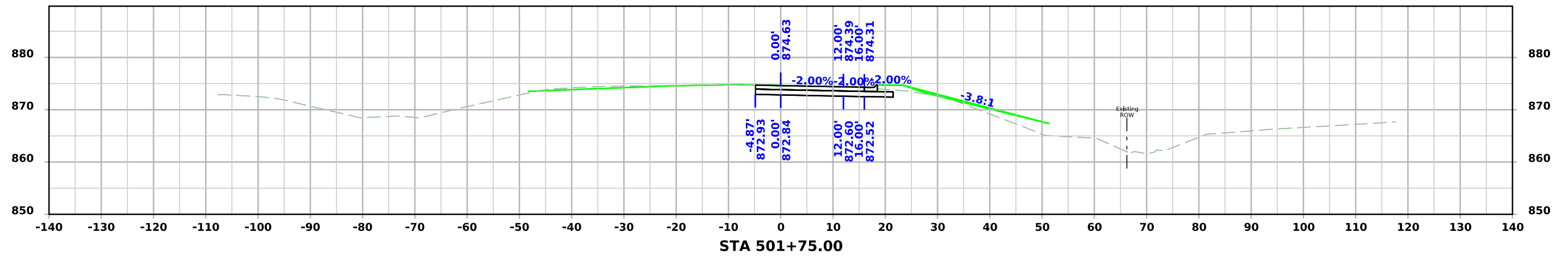
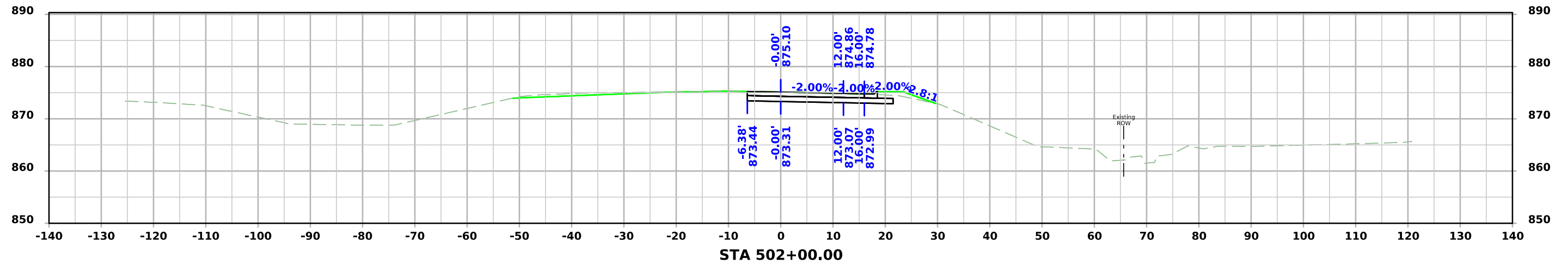
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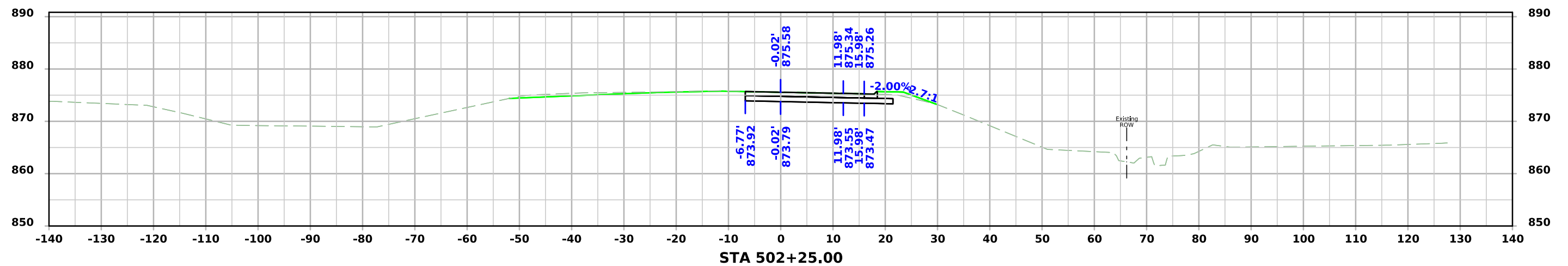
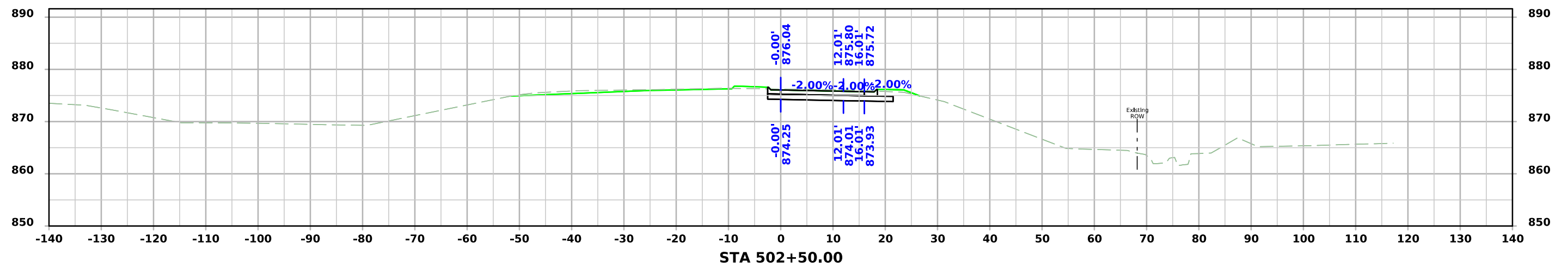
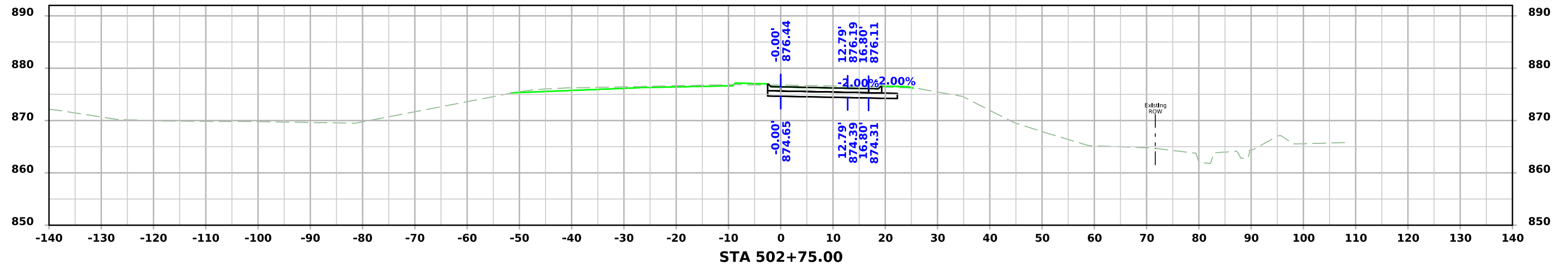
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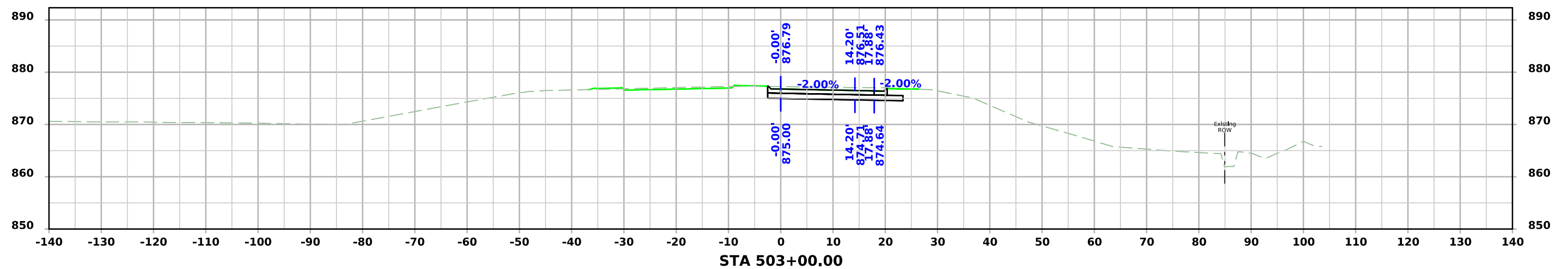
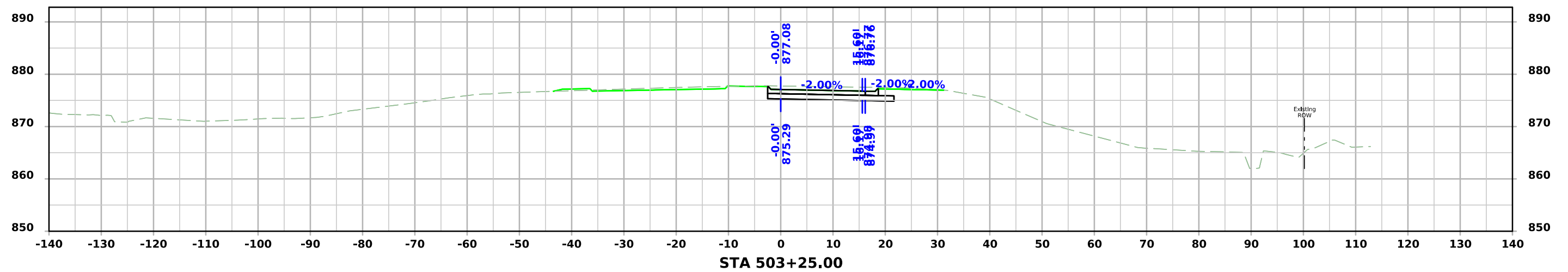
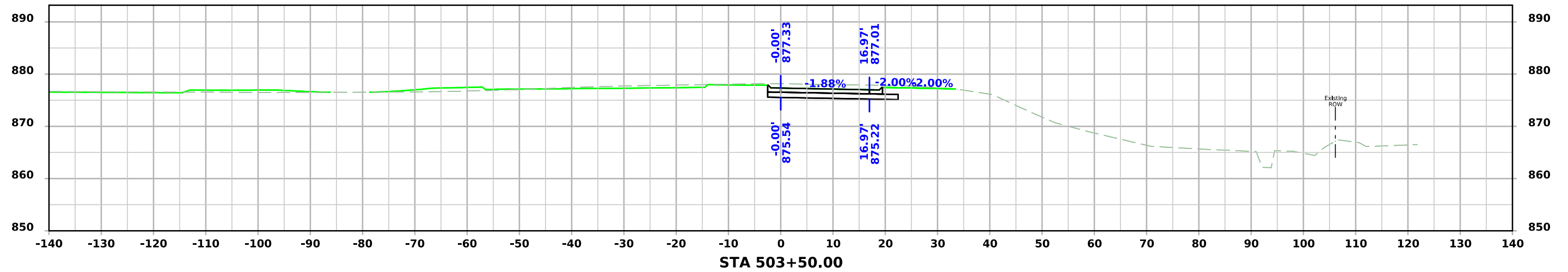
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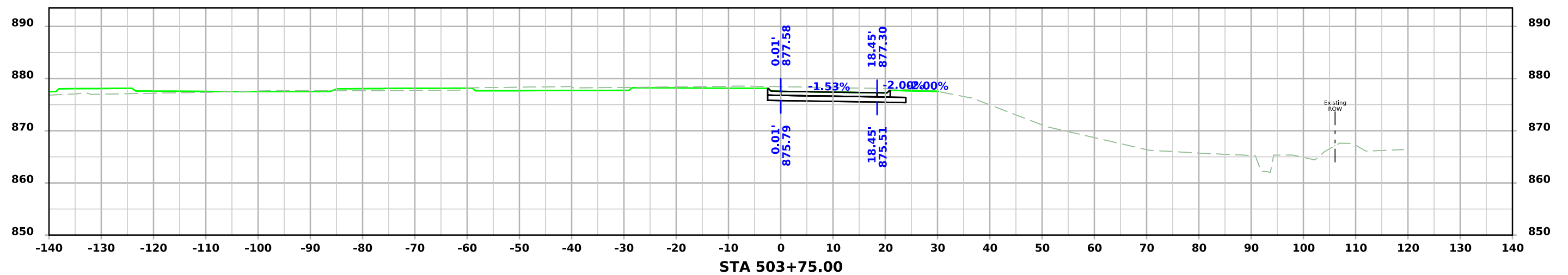
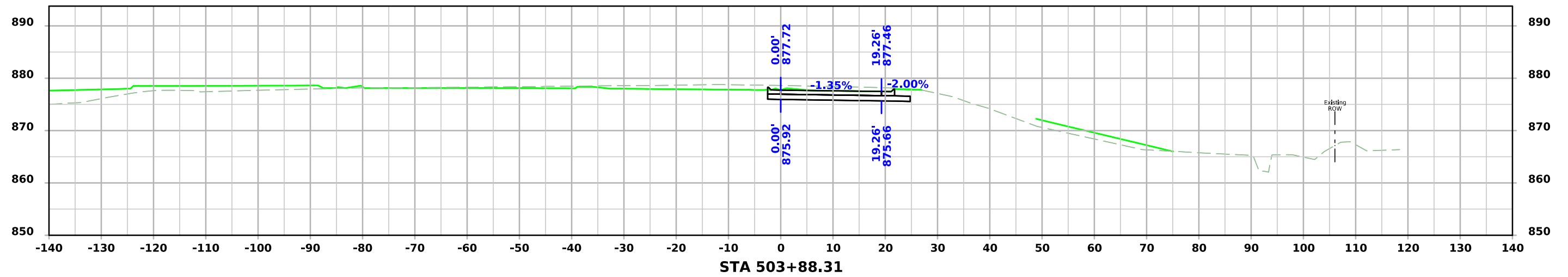
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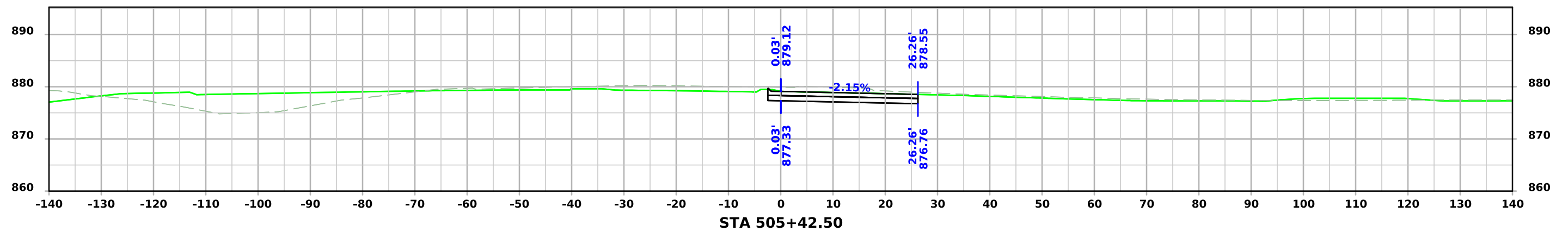
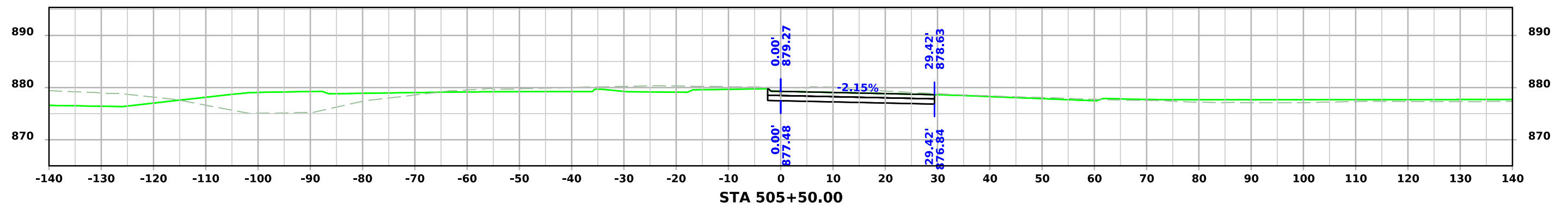
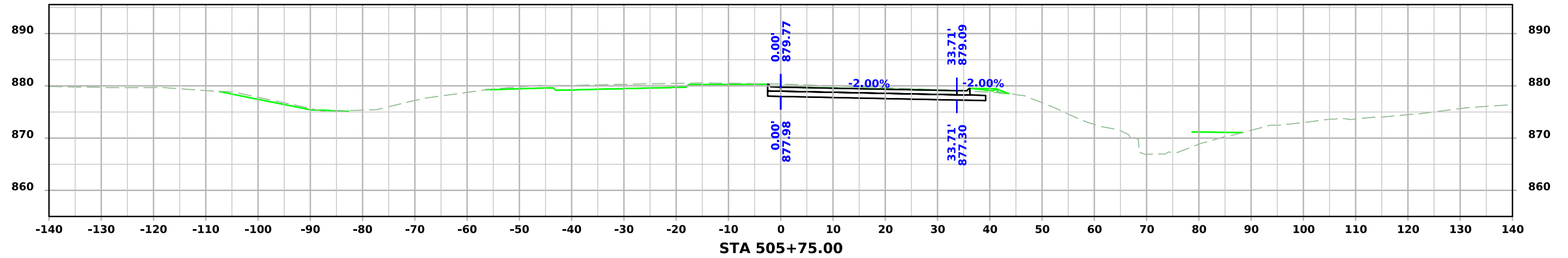
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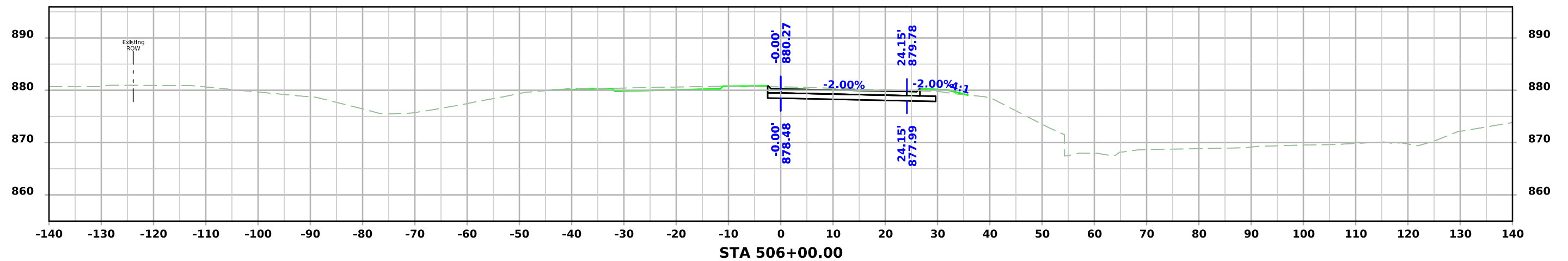
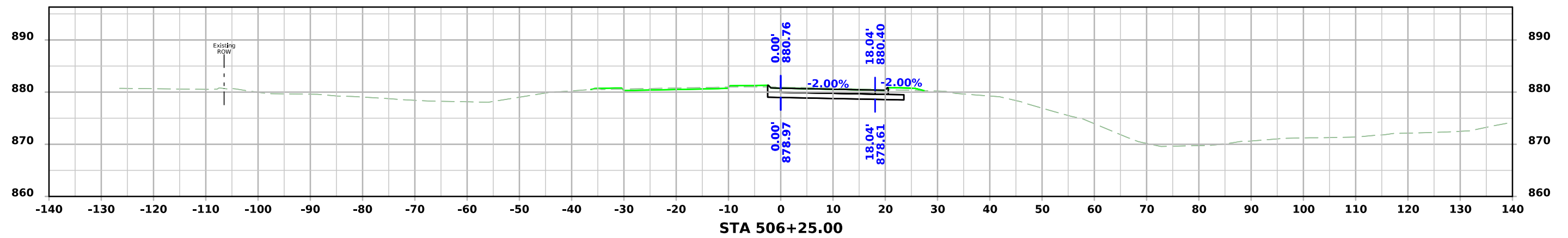
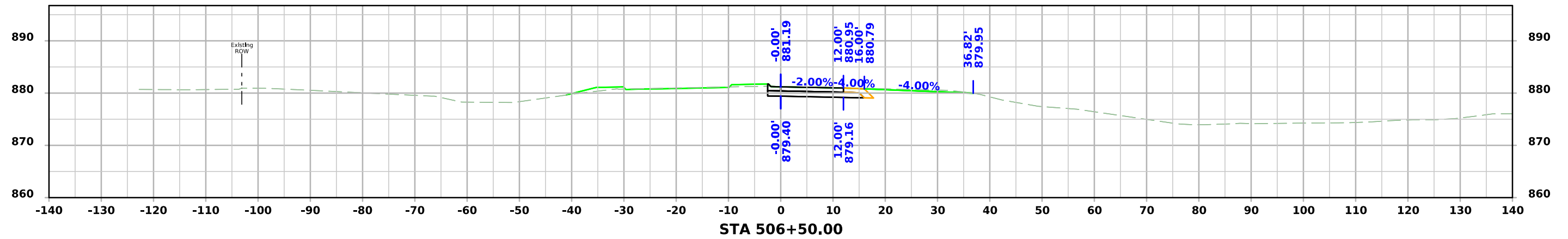
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