

| INDEX OF SHEETS |                                                     |
|-----------------|-----------------------------------------------------|
| No.             | DESCRIPTION                                         |
| <b>A Sheets</b> | <b>Title Sheets</b>                                 |
| A.1             | Title Sheet                                         |
| A.2             | Location Map Sheet                                  |
| <b>B Sheets</b> | <b>Typical Cross Sections and Details</b>           |
| B.1             | Typical Cross Sections and Details                  |
| <b>C Sheets</b> | <b>Quantities and General Information</b>           |
| C.1             | Estimated Project Quantities and Reference Notes    |
| C.2             | Standard Road Plans                                 |
| C.2             | Index of Tabulations                                |
| C.3             | Tabulations                                         |
| <b>D Sheets</b> | <b>Mainline Plan and Profile Sheets</b>             |
| D.1             | Plan & Profile Legend & Symbol Information Sheet    |
| D.2             | I-29 - Section A1                                   |
| D.2             | I-29 - Section A2                                   |
| D.2             | I-29 - Section B                                    |
| D.2             | I-29 - Section C                                    |
| <b>J Sheets</b> | <b>Traffic Control and Staging Sheets</b>           |
| J.1             | Traffic Control Plan and Coordinated Operations     |
| <b>R Sheets</b> | <b>Erosion Control Sheets</b>                       |
| RC.1 - 10       | Est. Quantities, PPP, General Notes and Tabulations |
| RR.1 - 21       | Erosion Control Legend and Symbol Information Sheet |
| <b>T Sheets</b> | <b>Earthwork Quantity Sheets</b>                    |
| T.1 - 8         | Earthwork Quantity Sheets                           |
| <b>U Sheets</b> | <b>500 Series, Mod.Stds. and Detail Sheets</b>      |
| U.1 - 2         | Foreslope Erosion Countermeasure Revetment Details  |
| <b>W Sheets</b> | <b>Mainline Cross Sections</b>                      |
| W.1             | Cross Sections Legend & Symbol Information Sheet    |
| W.100 - 116     | Mainline Section A1 Cross Sections                  |
| W.200 - 204     | Mainline Section A2 Cross Sections                  |
| W.300 - 314     | Mainline Section B Cross Sections                   |
| W.400 - 439     | Mainline Section C Cross Sections                   |



PLANS OF PROPOSED IMPROVEMENT ON THE  
INTERSTATE ROAD SYSTEM  
POTTAWATTAMIE COUNTY  
Grading  
I-680 to I-880 - Various Locations

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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



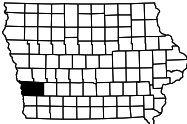
REVISIONS

|                               |  |
|-------------------------------|--|
| TOTAL                         |  |
| 137                           |  |
| PROJECT IDENTIFICATION NUMBER |  |
| 25-78-029-040                 |  |
| PROJECT NUMBER                |  |
| IMX-029-4(148)62--02-78       |  |
| R.O.W. PROJECT NUMBER         |  |
|                               |  |
|                               |  |

Scan the QR code or click the link below to leave plan quality feedback and help us improve future projects.



Design QR Feedback Link



| DESIGN DATA URBAN |        |       |        |
|-------------------|--------|-------|--------|
| 2025              | AADT   | 10450 | V.P.D. |
| 20                | - AADT | -     | V.P.D. |
| 20                | - DHV  | -     | V.P.H. |
| TRUCKS            |        | 7     | %      |
| Total             |        |       |        |
| Design ESALs      |        | -     |        |

| INDEX OF SEALS |                  |                         |                     |
|----------------|------------------|-------------------------|---------------------|
| SHEET NO.      | NAME             | TYPE                    | BID QUANTITY SHEETS |
| A.1            | Kelly C. Bell    | Primary Signature Block | C.1                 |
| RC.1           | Rachel A. Harris | Landscape Design        | RC.2-RC.3           |
|                |                  |                         |                     |
|                |                  |                         |                     |
|                |                  |                         |                     |

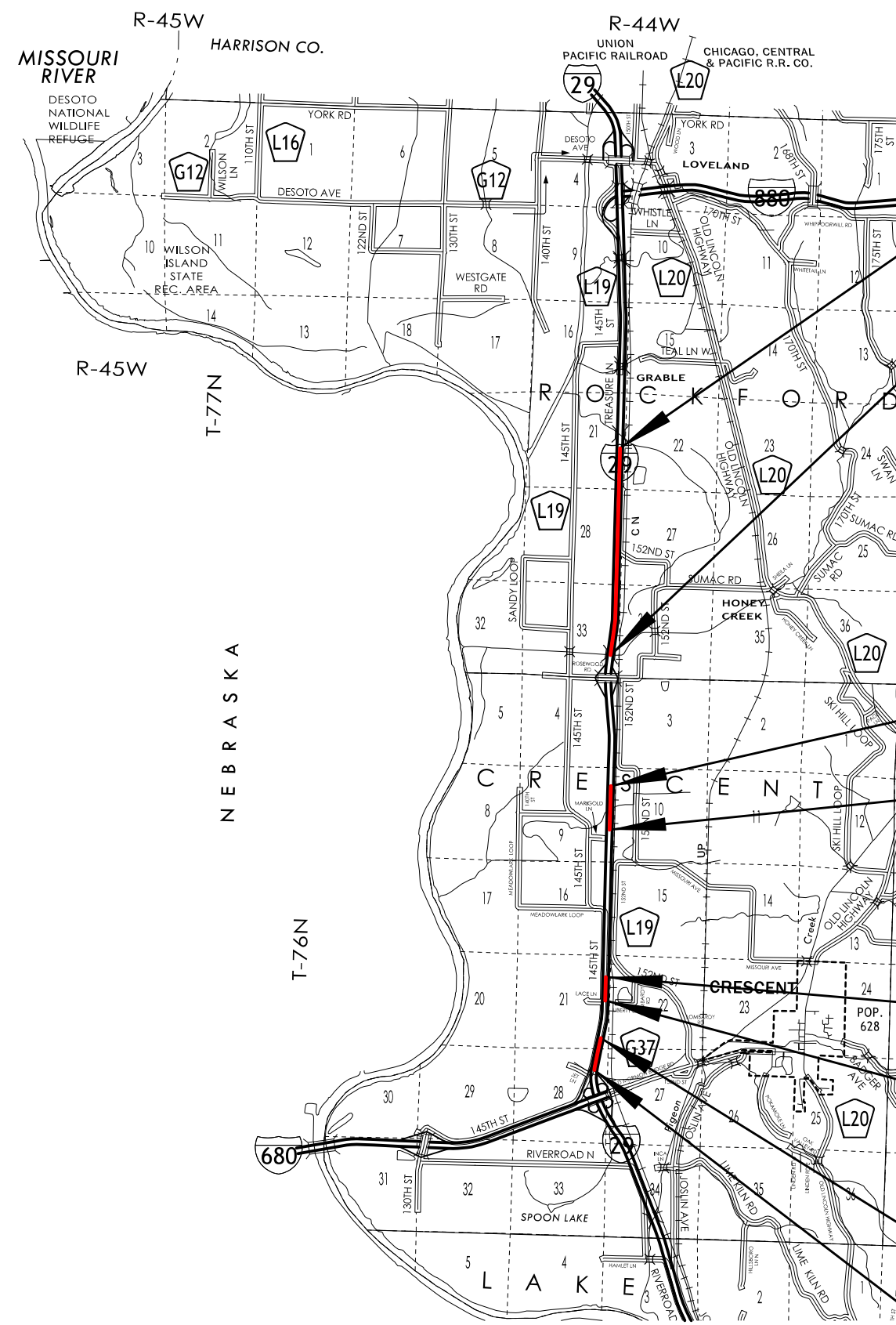
ROADWAY DESIGN



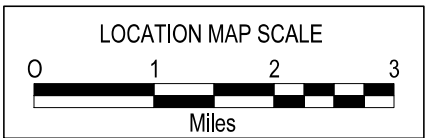
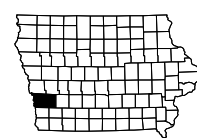
I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Signature Kelly C. Bell Date 08-03-2026  
Kelly C. Bell  
Printed or Typed Name  
My license renewal date is December 31, 20 27

Pages or sheets covered by this seal: A.1-A.2, B.1, C.1-C.3, D.1-D.11, J.1, T.1-T.8, U.1-U.2, W.1, W.100-W.116, W.200-W.204, W.300-W.314, W.400-W.439



- Ref. Loc. MP 71.16  
STA. 678+25.00  
END SECTION C CONSTRUCTION
- STA. 619+75.00  
BEGIN SECTION C CONSTRUCTION
- STA 535+75.00  
END SECTION B CONSTRUCTION
- STA 515+75.00  
BEGIN SECTION B CONSTRUCTION
- STA 432+00.00  
END SECTION A2 CONSTRUCTION
- STA 425+50.00  
BEGIN SECTION A2 CONSTRUCTION
- STA 400+25.00  
END SECTION A1 CONSTRUCTION
- Ref. Loc. MP 62.17  
STA 377+25.00  
BEGIN SECTION A1 CONSTRUCTION





ESTIMATED PROJECT QUANTITIES AND REFERENCE NOTES

Roadway Items : Roadway Items

| Item no. | Item Code    | Item                                                    | Unit | Quantities    | Estimate Reference Notes                                 |
|----------|--------------|---------------------------------------------------------|------|---------------|----------------------------------------------------------|
|          |              |                                                         |      | Estimated     |                                                          |
|          |              |                                                         |      | Roadway Items |                                                          |
| 1        | 2101-0850001 | CLEARING AND GRUBBING                                   | ACRE | 7.3           |                                                          |
| 2        | 2102-2713070 | EXCAVATION, CLASS 13, ROADWAY AND BORROW                | CY   | 642           | Refer to T-Sheets.                                       |
| 3        | 2102-2713090 | EXCAVATION, CLASS 13, WASTE                             | CY   | 4,790         | Refer to T Sheets.                                       |
| 4        | 2105-8425005 | TOPSOIL, FURNISH AND SPREAD                             | CY   | 9,126         | Refer to T Sheets.                                       |
| 5        | 2507-8600020 | FORESLOPE EROSION COUNTERMEASURE, MAJOR (DETAIL 570-22) | SY   | 35,316        | Refer to Tab. 100-40 in the C Sheets. Refer to U Sheets. |
| 6        | 2526-8285040 | CONSTRUCTION SURVEY, LOCATION SURVEY                    | LS   | 1             |                                                          |
| 7        | 2528-8445110 | TRAFFIC CONTROL                                         | LS   | 1             |                                                          |
| 8        | 2533-4980005 | MOBILIZATION                                            | LS   | 1             |                                                          |
|          |              |                                                         |      |               |                                                          |

|                                                                               |          |                                                     |                   |
|-------------------------------------------------------------------------------|----------|-----------------------------------------------------|-------------------|
| STANDARD ROAD PLANS                                                           |          |                                                     | 105-4<br>10-18-11 |
| The following Standard Road Plans apply to construction work on this project. |          |                                                     |                   |
| Number                                                                        | Date     | Title                                               |                   |
|                                                                               |          |                                                     |                   |
| TC-1                                                                          | 10-15-19 | Work Not Affecting Traffic (Two-Lane or Multi-Lane) |                   |
| TC-402                                                                        | 4-18-23  | Work Within 15ft of Traveled Way                    |                   |
| TC-418                                                                        | 4-18-23  | Lane Closure on Divided Highway                     |                   |
| TC-420                                                                        | 10-16-18 | Lane Closure at Ramps                               |                   |
|                                                                               |          |                                                     |                   |
|                                                                               |          |                                                     |                   |
|                                                                               |          |                                                     |                   |
|                                                                               |          |                                                     |                   |
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|                                                                               |          |                                                     |                   |
|                                                                               |          |                                                     |                   |

|                      |                                   |           |                    |
|----------------------|-----------------------------------|-----------|--------------------|
| INDEX OF TABULATIONS |                                   |           | 111-25<br>10-18-11 |
| Tabulation           | Tabulation Title                  | Sheet No. |                    |
| C Sheets             |                                   |           |                    |
| 100-40               | FORESLOPE EROSION COUNTERMEASURES | C.3       |                    |
| 102-5                | EXISTING PAVEMENT                 | C.3       |                    |
| 105-4                | STANDARD ROAD PLANS               | C.2       |                    |
| 111-25               | INDEX OF TABULATIONS              | C.2       |                    |
|                      |                                   |           |                    |
|                      |                                   |           |                    |
|                      |                                   |           |                    |
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|                      |                                   |           |                    |
|                      |                                   |           |                    |
|                      |                                   |           |                    |
|                      |                                   |           |                    |

## FORESLOPE EROSION COUNTERMEASURES

**100-40**  
**Special**

|          |             |                                  |               |        |                |                         |              |     |
|----------|-------------|----------------------------------|---------------|--------|----------------|-------------------------|--------------|-----|
| FILE NO. | DESIGN TEAM | Flattery\Bell\Schinstock\Schmitz | POTTAWATTAMIE | COUNTY | PROJECT NUMBER | IMX-029-4(148)62--02-78 | SHEET NUMBER | C.3 |
|----------|-------------|----------------------------------|---------------|--------|----------------|-------------------------|--------------|-----|

|                                                                                     |                                   |
|-------------------------------------------------------------------------------------|-----------------------------------|
|    | 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                |
|  | WHU Water Hook Up                |
|  | RT Radio Tower                   |
|  | TA Tower Anchor                  |
|  | Guardrail (Beam or Cable)        |
|  | GP Guard Post (one or two)       |
|  | Guard Post (over two)            |
|  | FP Filler Pipe                   |
|  | GV Gas Valve                     |
|  | WV Water Valve                   |
|  | SL Speed Limit Sign              |
|  | MM Mile Marker Post              |
|  | SIGN Sign                        |
|  | TCB Traffic Signal Control Box   |
|  | RRB Rail Road Signal Control Box |
|  | TSB Telephone Switch Box         |
|  | EB Electric Box                  |

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

|        |                                         |
|--------|-----------------------------------------|
| — G —  | GL1D, NUSTAR Gas Line Co. 1 - Quality D |
| — FO — | FO1D, MCI Fiber Optic Co. 1 - Quality D |

| LINEWORK | Design Color No. |                                                                                     |                                                                     |
|----------|------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Green    | (2)              |  | Existing Topographic Features and Labels                            |
| Blue     | (1)              |  | Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation |
| Magenta  | (5)              |  | Existing Utilities                                                  |

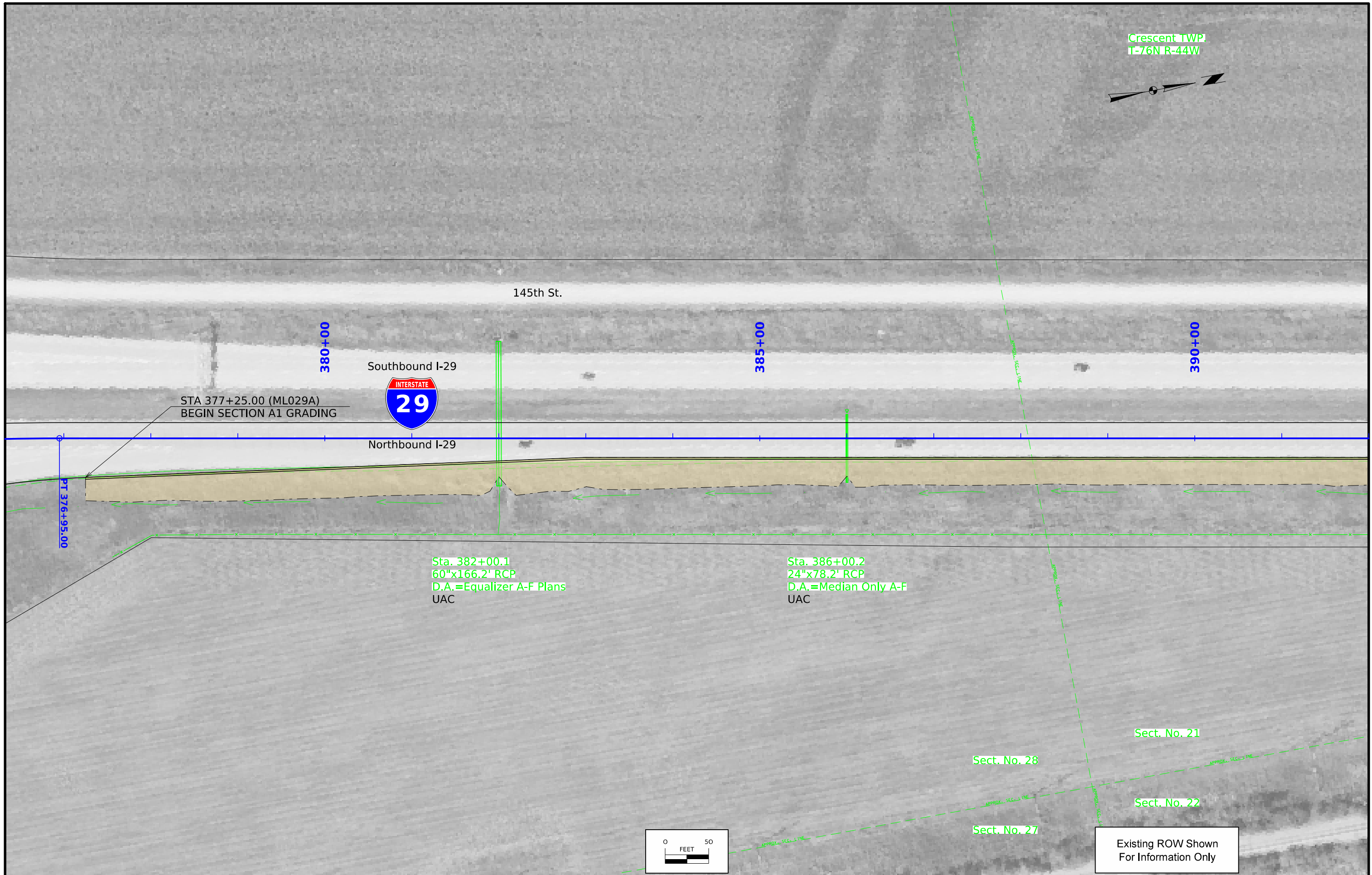
| SHADING       | Design Color No. |                                                                                     | Transparency                                  |     |
|---------------|------------------|-------------------------------------------------------------------------------------|-----------------------------------------------|-----|
| Pink, Dark    | (13)             |  | Temporary Pavement Shading                    | 50% |
| Yellow        | (4)              |  | Proposed Pavement Shading                     | 50% |
| Orange        | (6)              |  | Proposed Granular Shading                     | 50% |
| Orange        | (70)             |  | Proposed Shoulder Granular Shading            | 50% |
| Yellow        | (68)             |  | Proposed Shoulder Paved Full Depth Shading    | 50% |
| Yellow        | (132)            |  | Proposed Shoulder Paved Partial Depth Shading | 50% |
| Brown, Light  | (236)            |  | Proposed Grading Shading                      | 50% |
| Orange, Light | (134)            |  | Proposed Granular Entrance Shading            | 50% |
| Yellow        | (220)            |  | Proposed Paved Entrance Shading               | 50% |
| Tan           | (8)              |  | Proposed Sidewalk Shading                     | 50% |
| Blue, Light   | (230)            |  | Proposed Sidewalk Landing Shading             | 50% |
| Pink          | (11)             |  | Proposed Sidewalk Ramp Shading                | 50% |
| Red           | (3)              |  | Proposed Structure Shading                    | 50% |
| Red           | (3)              |  | Delineates Restricted Areas                   | 0%  |

| 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   |

**RIGHT-OF-WAY LEGEND**

|  |                             |  |                                    |
|--|-----------------------------|--|------------------------------------|
|  | Reference Point             |  | Proposed Right-of-Way Symbol       |
|  | Station                     |  | Proposed Right-of-Way Line         |
|  | Section Corner              |  | Existing Right of Way              |
|  | Ground Line Intercept       |  | Existing and Proposed Right-of-Way |
|  | Saw Cut                     |  | Easement and Existing Right-of-Way |
|  | Guardrail                   |  | Easement (Temporary) Symbol        |
|  | Trench Drain                |  | Easement (Temporary) Line          |
|  | HighTension Cable Guardrail |  | Easement                           |
|  | Sheet Pile                  |  | Access Control                     |
|  | Pavement Removal            |  | Property Line Symbol               |
|  | Clearing & Grubbing Area    |  | Property Line                      |

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



Crescent TWP  
T-76N R-44W



$\Delta = 10^{\circ}32'58.70''$  (LT)  
T = 529.02'  
L = 1055.04'  
R = 5730.00'  
E = 24.37'  
e = \_\_\_\_  
L = \_\_\_\_  
x = \_\_\_\_

145th St.

395+00

Southbound I-29



Northbound I-29

PC 399+43.03

400+00

STA 400+25.00 (ML029A)  
END SECTION A1 GRADING

00+500

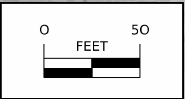
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D.A.=Median Only A-F  
UAC

PI 404+72.05

Sect. No. 21

Sect. No. 22

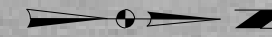
Illinois Central Railroad



Existing ROW Shown  
For Information Only

|             |           |             |                                                                                                                                                     |                      |                |                         |              |     |
|-------------|-----------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------------|-------------------------|--------------|-----|
| FILE NO.    | ENGLISH   | DESIGN TEAM | Flattery/Bell/Schinstock/Schmitz                                                                                                                    | POTTAWATTAMIE COUNTY | PROJECT NUMBER | IMX-029-4(148)62--02-78 | SHEET NUMBER | D.3 |
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Crescent TWP.  
T-76N R-44W



Sect. No. 21

145th St.

425+00

430+00

435+00

Southbound I-29



Northbound I-29

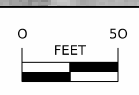
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STA 432+00.00 (ML029A)  
END SECTION A2 GRADING

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60"x180" RCP  
D.A. = 450 AC. Y.F.  
UAC

Illinois Central Railroad

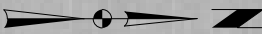
Sect. No. 22



Existing ROW Shown  
For Information Only



Crescent TWP.  
T-76N R-44W



Sect. No. 16

Southbound I-29



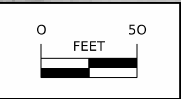
Northbound I-29

STA 515+75.00 (ML029B)  
BEGIN SECTION B GRADING

Sta. 520+06.28  
Skew 30° RT AH  
14'x10'x194.9' RCB  
D.A.=Equalizer A-F Plans  
UAC

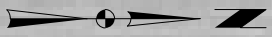
Illinois Central Railroad

Sect. No. 15



Existing ROW Shown  
For Information Only

Crescent TWP.  
T-76N R-44W



530+00

Southbound I-29



Northbound I-29

535+00

Sect. No. 16

540+00

Sect. No. 9

STA 535+75.00 (ML029B)  
END SECTION B GRADING

Sta. 531+94.27  
36"x170.3' RCP  
D.A.=Equalizer A-F Plans  
UAC

Illinois Central Railroad

Sect. No. 15

Sect. No. 10



Existing ROW Shown  
For Information Only

FILE NO.

ENGLISH

DESIGN TEAM Flattery/Bell/Schinstock/Schmitz

POTTAWATTAMIE COUNTY

PROJECT NUMBER IMX-029-4(148)62--02-78

SHEET NUMBER D.6

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|          |         |             |                                  |                      |                |                         |              |     |
|----------|---------|-------------|----------------------------------|----------------------|----------------|-------------------------|--------------|-----|
| FILE NO. | ENGLISH | DESIGN TEAM | Flattery/Bell/Schinstock/Schmitz | POTTAWATTAMIE COUNTY | PROJECT NUMBER | IMX-029-4(148)62--02-78 | SHEET NUMBER | D.8 |
|----------|---------|-------------|----------------------------------|----------------------|----------------|-------------------------|--------------|-----|



Sta. 673+77.76  
30"x162.9' RCP  
D.A.=Equalizer A-F Plans  
UAC

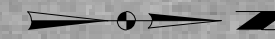


Sta. 671+30.83  
24"x63.3' RCP  
D.A.=Median Only A-F  
UAC

Sta. 673+77.21, 137.3 RT.  
30"x43' RCP  
D.A.=11 A-F  
UAC

Existing ROW Shown  
For Information Only

Rockford TWP.  
T-77N R-44W



Sect. No. 28

675+00

Southbound I-29



Northbound I-29

STA 678+25.00 (ML029C)  
END SECTION C GRADING

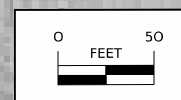
680+00

685+00

690+00

Sect. No. 27

Illinois Central Railroad



Existing ROW Shown  
For Information Only

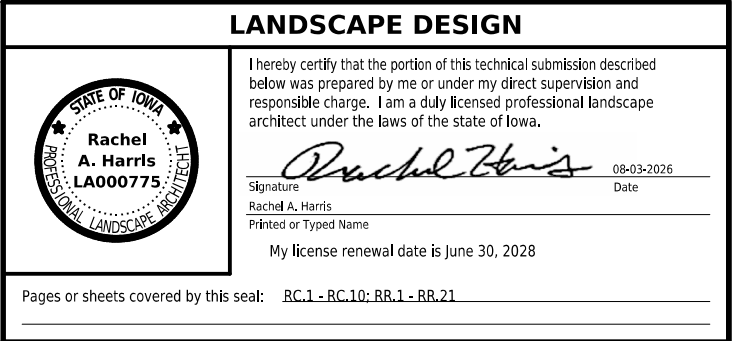
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| FILE NO. | ENGLISH | DESIGN TEAM | Flattery/Bell/Schinstock/Schmitz | POTTAWATTAMIE COUNTY | PROJECT NUMBER | IMX-029-4(148)62--02-78 | SHEET NUMBER | D.11 |
|----------|---------|-------------|----------------------------------|----------------------|----------------|-------------------------|--------------|------|

10:00:26 AM 7/29/2026 rschmi2 pw:\NTPwint1.dot.int.lan:PWMain\Documents\Projects\7802904025\Design\IMX-029-4(148)62--02-78\_Grading\CADD\_Files\Sheet\_Files\SHT\_D02\_78029148Z06.dgn

| <div>COORDINATED OPERATIONS<div>111-0104-17-12</div><div>Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.</div><table><thead><tr><th>Project</th><th>Type of Work</th></tr></thead><tbody><tr><td>None Provided.</td><td></td></tr><tr><td></td><td></td></tr><tr><td></td><td></td></tr></tbody></table></div> |              | Project | Type of Work | None Provided. |  |  |  |  |  | <div>TRAFFIC CONTROL PLAN<div>108-23A08-01-08</div><table><tbody><tr><td>I 29 traffic shall be maintained at all times.</td></tr><tr><td></td></tr><tr><td>I-29 from exit 56 to exit 75: no lane closures Friday 2:00 PM through 6:00 PM</td></tr><tr><td></td></tr><tr><td></td></tr><tr><td></td></tr><tr><td></td></tr><tr><td></td></tr><tr><td></td></tr><tr><td></td></tr></tbody></table></div> |  | I 29 traffic shall be maintained at all times. |  | I-29 from exit 56 to exit 75: no lane closures Friday 2:00 PM through 6:00 PM |  |  |  |  |  |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------|--------------|----------------|--|--|--|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------|--|-------------------------------------------------------------------------------|--|--|--|--|--|--|--|
| Project                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Type of Work |         |              |                |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                        |  |                                                |  |                                                                               |  |  |  |  |  |  |  |
| None Provided.                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |         |              |                |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                        |  |                                                |  |                                                                               |  |  |  |  |  |  |  |
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| I 29 traffic shall be maintained at all times.                                                                                                                                                                                                                                                                                                                                                                                                                 |              |         |              |                |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                        |  |                                                |  |                                                                               |  |  |  |  |  |  |  |
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| I-29 from exit 56 to exit 75: no lane closures Friday 2:00 PM through 6:00 PM                                                                                                                                                                                                                                                                                                                                                                                  |              |         |              |                |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                        |  |                                                |  |                                                                               |  |  |  |  |  |  |  |
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|----------|--|-------------|-----------------------|----------------------|----------------|-------------------------|--------------|-----|
| FILE NO. |  | DESIGN TEAM | Flattery\Bell\Schmitz | POTTAWATTAMIE COUNTY | PROJECT NUMBER | IMX-029-4(148)62--02-78 | SHEET NUMBER | J.1 |
|----------|--|-------------|-----------------------|----------------------|----------------|-------------------------|--------------|-----|

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Signature Rachel Harris Date 08-03-2026

My license renewal date is June 30, 2028

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Pages or sheets covered by this seal: BC.1 - BC.10; BB.1 - BB.21

ESTIMATED PROJECT QUANTITIES AND REFERENCE NOTES

Roadside Items : Roadside Items

| Item no. | Item Code    | Item                                       | Unit | Quantities     | Estimate Reference Notes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------|--------------|--------------------------------------------|------|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |              |                                            |      | Estimated      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|          |              |                                            |      | Roadside Items |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 1        | 2601-2634100 | MULCHING                                   | ACRE | 8.6            | <p>Perform mulching according to Article 2601.03, E, 2, of the Standard Specifications. Anchor mulch into the soil using mulch anchoring equipment with a minimum of two passes.</p> <p>Item is included for areas requiring reshaping and seedbed preparation except where slope protection has been applied. Use mulch that is Certified Noxious Weed Seed Free Mulch as certified by the Iowa Crop Improvement Association or adjacent states Crop Improvement Associations.</p> <p>Mulch Rate: 1 1/2 tons of dry cereal straw or native grass straw per acre.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 2        | 2601-2636015 | NATIVE GRASS SEEDING                       | ACRE | 6.6            | <p>Refer to pages RR.12 - RR.21 for seeding locations.</p> <p>Seeding and seed bed preparation shall be as described in Section 2601.03, C, 5 of the Standard Specifications.</p> <p>Seed all areas outside eight feet adjacent to outside shoulder along mainline, side roads, and infield areas at interchanges with "Native Grass Seeding".</p> <p>Supply all seed for "Native Grass Seeding" in accordance with Table 2601.03-5 of the Standard Specifications.</p> <p>Apply all forb seed through the native grass drill wildflower or small seed box.</p> <p>Do not mix and apply Forb seed with the native grass seed.</p> <p>Apply cover crop through the cool season or through cover crop seed box.</p> <p>Do not mix and apply cover crop seed with the native grass seed.</p> <p>Remove seed remaining in the drill at the end of each day. At the completion of all seeding, remove remaining seed from the drill by vacuum or other means. Hand broadcast remaining seed on the project.</p> <p>The Engineer will review the limits with the Contractor prior to seeding.</p> |
| 3        | 2601-2636060 | SALT TOLERANT SEEDING                      | ACRE | 2              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 4        | 2601-2642100 | STABILIZING CROP - SEEDING AND FERTILIZING | ACRE | 6.6            | <p>Item is included for disturbed areas.</p> <p>Seed and fertilize all disturbed areas according to Article 2601.03, C, 1, of the Standard Specifications. If permanent seeding cannot be placed due to the restrictive planting dates, stabilizing crop will need to be placed on all disturbed areas as temporary erosion control.</p> <p>When stabilizing crop must be used, place immediately following completions of finished grading. Reseeding of these areas will be required at contractors expense if damage occurs due to contractors negligence during the contract period.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 5        | 2602-0000150 | STABILIZED CONSTRUCTION ENTRANCE, EC-303   | LF   | 200            | <p>Refer to Standard Road Plan EC-303.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

| Item no. | Item Code    | Item                                                                  | Unit | Quantities     | Estimate Reference Notes                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------|--------------|-----------------------------------------------------------------------|------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |              |                                                                       |      | Estimated      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|          |              |                                                                       |      | Roadside Items |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 6        | 2602-0000312 | PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.              | LF   | 550            | Refer to Standard Road Plan EC-204.<br><br>Item is included for temporary perimeter sediment control, inlet protection, and water velocity reduction on slopes or ditches at locations to be determined during construction. Verify specific locations with the Engineer prior to beginning placement.<br><br>Item may be used in addition to, or as a direct replacement for "Perimeter and Slope Sediment Control Device, 20 in. dia." upon Engineer approval. |
| 7        | 2602-0000320 | PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 20 IN. DIA.              | LF   | 550            | Refer to Tab. 100-19 for locations.<br><br>Refer to Standard Road Plan EC-204.<br><br>The tabulation includes estimated locations for placement of "Perimeter and Slope Sediment Control Device, 20 in. dia." to address erosion to be encountered during construction.<br><br>Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 25% additional quantity for field adjustments and replacements.                   |
| 8        | 2602-0000351 | REMOVAL OF PERIMETER AND SLOPE OR DITCH CHECK SEDIMENT CONTROL DEVICE | LF   | 1,100          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 9        | 2602-0010010 | MOBILIZATIONS, EROSION CONTROL                                        | EACH | 1              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 10       | 2602-0010020 | MOBILIZATIONS, EMERGENCY EROSION CONTROL                              | EACH | 1              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

281\_01  
9/28/22

SECTION 404 PERMIT AND CONDITIONS

Construct this project according to the requirements of U.S. Army Corps of Engineers Nationwide, Permit No. 3. A copy of this permit is available from the Iowa DOT website (<http://www.envpermits.iowadot.gov/>). The U.S. Army Corps of Engineers reserves the right to visit the site without prior notice.

281\_03  
11/9/23

STORM WATER BEST MANAGEMENT PRACTICES

When the following best management practices are used, they are intended to account for disturbed areas where storage volume cannot be provided: Perimeter and Slope Sediment Control Devices and Seeding.

282\_03  
9/28/22

TEMPORARY STREAM CROSSING, CAUSEWAY, OR EQUIPMENT PAD

Standard Road Plan EW-401 is listed in Tabulation 105-4; however, it is included for information purposes only since it is an option. No quantities associated with constructing EW-401 are included in any bid items.

| INDEX OF TABULATIONS |                                             |              | 111_25<br>10/20/26 |
|----------------------|---------------------------------------------|--------------|--------------------|
| Tabulation           | Tabulation Title                            | Sheet No.    |                    |
| 111_25               | INDEX OF TABULATIONS                        | RC.5         |                    |
| 105_04               | STANDARD ROAD PLANS                         | RC.6         |                    |
| 100_19               | PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE | RC.7         |                    |
| 100_34               | STORMWATER DRAINAGE BASIN                   | RC.8         |                    |
| 110_12               | POLLUTION PREVENTION PLAN                   | RC.9 - RC.10 |                    |

| <div>105_04<br/>10/20/26</div> <div>STANDARDS</div> <div>The following Standards apply to construction work on this project.</div> |          |                                                           |
|------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------------------------------------------------|
| Number                                                                                                                             | Date     | Title                                                     |
| EC-204                                                                                                                             | 10-19-21 | Perimeter, Slope and Ditch Check Sediment Control Devices |
| EC-303                                                                                                                             | 10-19-21 | Stabilized Construction Entrance                          |
| EC-502                                                                                                                             | 04-21-15 | Seeding in Rural Areas                                    |
| EW-401                                                                                                                             | 10-20-15 | Temporary Stream Crossing, Causeway, or Equipment Pad     |

PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE

Possible Standards: EC-204

100\_19  
10/15/24

| Station From | Station To | Side  | Sediment Control Device Type | Diameter Size | Length (LF) | Remarks          |
|--------------|------------|-------|------------------------------|---------------|-------------|------------------|
| 381+80.00    | 382+23.00  | Right | Perimeter and Slope          | 20 inch       | 70.00       |                  |
| 385+90.00    | 386+09.00  | Right | Perimeter and Slope          | 20 inch       | 40.00       |                  |
| 429+40.00    | 429+81.00  | Right | Perimeter and Slope          | 20 inch       | 60.00       |                  |
| 520+10.00    | 520+60.00  | Right | Perimeter and Slope          | 20 inch       | 80.00       | Inlet Protection |
| 531+80.00    | 532+09.00  | Right | Perimeter and Slope          | 20 inch       | 40.00       |                  |
| 639+10.00    | 639+50.00  | Right | Perimeter and Slope          | 20 inch       | 60.00       | Inlet Protection |
| 671+20.00    | 671+40.00  | Right | Perimeter and Slope          | 20 inch       | 30.00       | Inlet Protection |
| 673+60.00    | 674+00.00  | Right | Perimeter and Slope          | 20 inch       | 50.00       | Inlet Protection |

Total:430

100 34  
11/30/25

STORMWATER DRAINAGE BASIN

Refer to EC Standards and 570s Details.

| Basin No. | Station From | Station To | Side  | Discharge Station | Discharge Direction | Total Disturbed Area (ACRES) | Disturbed Area with Storage Provided (ACRES) | Disturbed Area without Storage Provided (ACRES) | Best Management Practice | Total Storage Volume Provided (CF) | Total Storage Volume Required (CF) | Storage Volume Met | Remarks |
|-----------|--------------|------------|-------|-------------------|---------------------|------------------------------|----------------------------------------------|-------------------------------------------------|--------------------------|------------------------------------|------------------------------------|--------------------|---------|
| 1         | 377+30.00    | 381+85.00  | Right | 377+30.00         | S                   | 0.3                          | 0.3                                          |                                                 |                          |                                    | 1080.0                             | No                 |         |
| 2         | 381+85.00    | 400+24.00  | Right | 382+00.00         | E                   | 1.3                          | 1.3                                          |                                                 |                          |                                    | 4680.0                             | No                 |         |
| 3         | 425+50.00    | 432+00.00  | Right | 429+48.00         | E                   | 0.5                          | 0.5                                          |                                                 |                          |                                    | 1800.0                             | No                 |         |
| 4         | 515+75.00    | 520+08.00  | Right | 515+75.00         | S                   | 0.3                          | 0.3                                          |                                                 |                          |                                    | 1080.0                             | No                 |         |
| 5         | 520+08.00    | 535+75.00  | Right | 520+32.00         | W                   | 1.1                          | 1.1                                          |                                                 |                          |                                    | 3960.0                             | No                 |         |
| 6         | 619+77.00    | 678+24.00  | Right | 619+77.00         | S                   | 3.4                          | 3.4                                          |                                                 |                          |                                    | 12240.0                            | No                 |         |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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| <div>110_12<br/>1/13/23</div> <div>POLLUTION PREVENTION PLAN</div> <div><p>This project is regulated by the requirements of the Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) General Permit No. 2 OR an Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) individual storm water permit. The Contractor shall carry out the terms and conditions of this permit and the Pollution Prevention Plan (PPP).</p><p>This Base PPP includes information on Roles and Responsibilities, Project Site Description, Controls, Maintenance Procedures, Inspection Requirements, Non-Storm Water Controls, Potential Sources of Off Right-of-Way Pollution, and Definitions. This plan references other documents rather than repeating the information contained in the documents. A copy of this Base Pollution Prevention Plan, amended as needed during construction, will be readily available for review.</p><p>All contractors shall conduct their operations in a manner that controls pollutants, minimizes erosion, and prevents sediments from entering waters of the state and leaving the highway right-of-way. The Contractor shall be responsible for compliance and implementation of the PPP for their entire contract. This responsibility shall be further shared with subcontractors whose work is a source of potential pollution as defined in this PPP.</p><p>I. ROLES AND RESPONSIBILITES</p><p>A. Designer:</p><ol style="list-style-type: none"><li>Prepares Base PPP included in the project plan.</li><li>Prepares Notice of Intent (NOI) submitted to Iowa DNR.</li><li>Is signature authority on the Base PPP. If consultant designed, signature from Contracting Authority is also required.</li></ol><p>B. Contractor:</p><ol style="list-style-type: none"><li>Signs a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP. All co-permittees are legally required under the Clean Water Act and the Iowa Administrative Code to ensure compliance with the terms and conditions of this PPP.</li><li>Designates a Water Pollution Control Manager (WPCM), who has the duties and responsibilities as defined in Section 2602 of the Standard Specifications.</li><li>Submits an Erosion Control Implementation Plan (ECIP) and ECIP updates according to Section 2602 of the Standard Specifications.</li><li>Installs and maintains appropriate controls. This work may be subcontracted as documented through Subcontractor Request Forms (Form 830231).</li><li>Supervises and implements good housekeeping practices according to Paragraph III, C, 2.</li><li>Conducts joint required inspections of the site with inspection staff. When Contractor is not mobilized on site, Contractor may delegate this responsibility to a trained or certified subcontractor. Contracting Authority also may waive joint inspection requirement during winter shutdown. In both circumstances, WPCM (or trained or certified delegate from the Contractor) is still responsible to review and sign inspection reports.</li><li>Complies with training and certification requirements of Section 2602 of the Standard Specifications.</li><li>Submits amended PPP site map according to Section 2602 of the Standard Specifications.</li></ol><p>C. Subcontractors:</p><ol style="list-style-type: none"><li>Sign a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP if: responsible for sediment or erosion controls; involved in land disturbing activities; or perorming work that is a source of potential pollution as defined in this PPP. Subcontracted work items are identified in Subcontractor Request Forms (Form 830231). All co-permittees are legally required under the Clean Water Act and the Iowa Administrative Code to ensure compliance with the terms and conditions of this PPP.</li><li>Implement good housekeeping practices according to Paragraph III, C, 2.</li></ol><p>D. RCE/Project Engineer:</p><ol style="list-style-type: none"><li>Is Project Storm Water Manager.</li><li>On projects where DOT is the Contracting Authority, is current with erosion control training or certification.</li><li>Takes actions necessary to ensure compliance with storm water requirements including, where appropriate, issuing stop work orders, and directing additional inspections at construction project sites that are experiencing problems with achieving permit compliance.</li><li>Orders the taking of measures to cease, correct, prevent, or minimize the consequences of non-compliance with the storm water requirements of the Applicable Permit.</li><li>Supervises all work necessary to meet storm water requirements at the Project, including work performed by contractors and subcontractors.</li><li>Requires employees, contractors, and subcontractors to take appropriate responsive action to comply with storm water requirements, including requiring any such person to cease or correct a violation of storm water requirements, and to order or recommend such other actions as necessary to meet storm water requirements.</li><li>Is familiar with the Project PPP and storm water site map.</li><li>On projects where DOT is Contracting Authority, is responsible for periodically monitoring inspection reports to determine whether deficiencies identified in inspection reports were adequately and timely addressed, and if not, has the authority and responsibility to direct immediate actions to correct the deficiencies.</li><li>Is the point of contact for the Project for regulatory officials, Inspector, contractors, and subcontractors regarding storm water requirements.</li><li>Is signature authority on Notice of Discontinuation.</li><li>Maintains an up-to-date record of contractors, subcontractors, and subcontracted work items through Subcontractor Request Forms (Form 830231).</li><li>Makes information to determine permit compliance available to the DNR upon their request.</li></ol></div> |         |             |                        | <div>110_12<br/>1/13/23</div> <div>POLLUTION PREVENTION PLAN</div> <div><p>E. Inspector:</p><ol style="list-style-type: none"><li>Updates PPP through fieldbook entries and storm water site inspection reports if there is a change in design, construction, operation, or maintenance which has a significant effect on the discharge of pollutants from the project.</li><li>Makes information to determine permit compliance available to the DNR upon their request.</li><li>Conducts joint required inspections of the site with the contractor/subcontractor.</li><li>Completes an inspection report after each inspection.</li><li>Is signature authority on storm water inspection reports.</li></ol><p>II. PROJECT SITE DESCRIPTION</p><p>A. This Pollution Prevention Plan (PPP) is for Grading in Pottawattamie County.</p><p>B. This PPP covers approximately 123.7 acres with an estimated 6.8 acres being disturbed. The portion of the PPP covered by this contract has 6.8 acres disturbed.</p><p>C. The PPP is located in an area of Albaton - Luton - Onawa and Ida - Hamburg soil associations. The estimated weighted average runoff coefficient number for this PPP after completion will be 0.44.</p><p>D. Storm Water Site Map is located in the R sheets. Proposed slopes are shown in cross sections, details, or standard road plans. Supplemental information is located in the Tabulations in the C or CE sheets.</p><p>E. The base storm water site map is amended by contract modifications and progress payments (fieldbook entries) of completed erosion control work. Also, due to project phasing, erosion and sediment controls shown on project plans may not be installed until needed, based on site conditions. For example, silt fence ditch checks will typically not be installed until the ditch has been installed. Installed locations may also be modified from tabulation locations by field staff. Installed locations will be documented by fieldbook entries and amended PPP site map.</p><p>F. Runoff from this work will flow into Honey Creek to the Missouri River.</p><p>III. CONTROLS</p><p>A. The Contractor’s ECIP specified in Article 2602.03 of the Standard Specifications for accomplishment of storm water controls should clearly describe the intended sequence of major activities, and for each activity define the control measure and the timing during the construction process that the measure will be implemented.</p><p>B. Preserve vegetation in areas not needed for construction.</p><p>C. Sections 2601 and 2602 of the Standard Specifications define requirements to implement erosion and sediment control measures. Actual quantities used and installed locations may vary from the Base PPP and amendment of the plan will be documented via fieldbook entries, amended PPP site map, or by contract modification. Additional erosion and sediment control items may be required as determined by the inspector and/or contractor during storm water site inspections. If the work involved is not applicable to any contract items, the work will be paid for according to Article 1109.03 paragraph B of the Standard Specifications.</p><p>1. EROSION AND SEDIMENT CONTROLS</p><p>a. Stabilization Practices</p><ol style="list-style-type: none"><li>Site plans will ensure that existing vegetation or natural buffers are preserved where attainable and disturbed portions of the site will be stabilized.</li><li>Initialize stabilization of disturbed areas immediately after clearing, grading, excavating, or other earth disturbing activities have:<ol style="list-style-type: none"><li>Permanently ceased on any portion of the site, or</li><li>Temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days.</li></ol></li><li>Staged permanent and/or temporary stabilizing seeding and mulching shall be completed as the disturbed areas are completed. Incomplete areas shall be stabilized according to paragraph III, C, 1, a, 2, b above.</li><li>Permanent and Temporary Stabilization practices to be used for this project are located in the storm water site map, Estimated Project Quantities (100-0A, 100-1A, or 100-1C), and Estimate Reference Information (100-4A) located in the C or R sheets. Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation (105-4) in the C or R sheets.</li><li>Preservation of existing vegetation within right-of-way or easements will act as vegetative buffer strips.</li><li>Preservation of topsoil: Bid items to be used for this project are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C or R sheets. Additional information may be found in the Tabulations in the C or T Tabulation sheets, or is referenced in Section 2105 of the Standard Specifications.</li></ol><p>b. Structural Practices</p><ol style="list-style-type: none"><li>Structural practices will be implemented to divert flows from exposed soils and detain or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Additionally, structural practices may include: silt basins that provide 3600 cubic feet of storage per acre drained or equivalent sediment controls, outlet structures that withdraw water from surface when discharging basins, and controls to direct storm water to vegetated areas.</li><li>Structural practices to be used for this project are located in the storm water site map, Estimated Project Quantities (100-0A, 100-1A, or 100-1C), and Estimate Reference Information (100-4A) located in the C or R sheets, as well as all other item specific Tabulations. Typical drawings detailing construction of the devices to be used on this project can be found on the B or R sheets or are referenced in the Standard Road Plans Tabulation (105-4) located in the C or R sheets.</li></ol></div> |                |                         |              |      |  |
| FILE NO.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ENGLISH | DESIGN TEAM | Harris/Pohlen/McDonald | POTTAWATTAMIE COUNTY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | PROJECT NUMBER | IMX-029-4(148)62--02-78 | SHEET NUMBER | RC.9 |  |

5/18/2026 9:17:50 AM

baebanamecdonald@iowadot.us

Measures shall be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. This may include velocity dissipation devices at discharge locations and along length of outfall channel as necessary to provide a non-erosion velocity flow from structure to water course. If included with this project, these items are located in the storm water site map and Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C or R sheets, as well as all other item specific Tabulations. Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation. The installation of these devices may be subject to Section 404 of the Clean Water Act.

Contractor disposal of unused construction materials and construction material wastes shall comply with applicable state and local waste disposal, sanitary sewer, or septic system regulations. In the event of a conflict with other governmental laws, rules and regulations, the more restrictive laws, rules or regulations shall apply.

- During the course of this construction, it is possible that situations will arise where unknown materials will be encountered. When such situations are encountered, they will be handled according to all federal, state, and local regulations in effect at the time.

The Contractor is required to maintain all temporary erosion and sediment control measures in proper working order, including cleaning, repairing, or replacing them throughout the contract period. This shall begin when the features have lost 50% of their capacity.

A. Inspections shall be made jointly by the Contractor and the Contracting Authority's inspector at least once every seven calendar days. Storm water site inspections will include:

1. Date of the inspection.
2. Summary of the scope of the inspection.
3. Name and qualifications of the personnel making the inspection.
5. Review of erosion and sediment control measures within disturbed areas for the effectiveness in preventing impacts to receiving waters.
6. Major observations related to the implementation of the PPP.
7. Identification of corrective actions required to maintain or modify erosion and sediment control measures.

B. Include storm water site inspection reports in the Amended PPP. Incorporate any additional erosion and sediment control measures determined as a result of the inspection. Immediately begin corrective actions on all deficiencies found within 3 calendar days of the inspection and complete within 7 calendar days following the inspection. If it is determined that making the corrections less than 72 hours after the inspection is impracticable, it should be documented why it is impracticable and indicate an estimated date by which the corrections will be made.

|          |         |             |                               |
|----------|---------|-------------|-------------------------------|
| FILE NO. | ENGLISH | DESIGN TEAM | <b>Harris/Pohlen/McDonald</b> |
|----------|---------|-------------|-------------------------------|

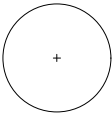
silts, sediment, and other forms of pollution may be transported onto highway right-of-way (ROW) as a result of a storm event. Potential sources of pollution located outside highway ROW are beyond the control of this PPP. Pollution within highway ROW will be conveyed and controlled per this PPP.

- A. Base PPP - Initial Pollution Prevention Plan.
- B. Amended PPP - Base PPP amended during construction. May include Plan Revisions or Contract Modifications for new items, storm water site inspection reports, fieldbook entries made by the inspector, amended PPP site map by the Contractor, ECIP, NOI, co-permittee certifications, and Subcontractor Request Forms. Items amending the PPP are stored electronically and are readily available upon request.
- C. Fieldbook Entries - This contains the inspector's daily diary and bid item postings.
- D. Controls - Methods, practices, or measures to minimize or prevent erosion, control sedimentation, control storm water, or minimize contaminants from other types of waste or materials. Also called Best Management Practices (BMPs).
- E. Signature Authority - Representative authorized to sign various storm water documents.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Nathan J. Pohlen  
Print Name

| LINE STYLE LEGEND OF LANDSCAPE SHEETS |                              |
|---------------------------------------|------------------------------|
| LINESTYLE                             | Design Element               |
| -----                                 | Living Snow Fence Single Row |
| -----                                 | Living Snow Fence Double Row |
| -----                                 | Mechanical Edge              |

| CELL LEGEND OF LANDSCAPE SHEETS                                                   |                          |                |
|-----------------------------------------------------------------------------------|--------------------------|----------------|
| CELL                                                                              | Design Element           | Plant Diameter |
|  | Clearing                 |                |
|  | Proposed Shrub           | 6 FT           |
|  | Proposed Understory Tree | 12 FT          |
|  | Proposed Conifer Tree    | 18 FT          |
|  | Proposed Overstory Tree  | 30 FT          |

| PATTERN LEGEND OF LANDSCAPE SHEETS                                                 |                     |
|------------------------------------------------------------------------------------|---------------------|
|   | Brush Clearing      |
|  | Clearing & Grubbing |
|   | Spray Area          |

| LINE STYLE LEGEND OF EROSION CONTROL SHEETS                                         |                                                   |
|-------------------------------------------------------------------------------------|---------------------------------------------------|
| LINESTYLE                                                                           | Design Element                                    |
|  | Silt Fence                                        |
|  | Perimeter and Slope Sediment Control Device (9")  |
|  | Perimeter and Slope Sediment Control Device (12") |
|  | Perimeter and Slope Sediment Control Device (20") |
|  | Open-Throat Curb Intake Sediment Filter           |
|  | Concentrated Flow                                 |
|  | Rock Check and Rock Check Dam                     |
|  | Sheet Flow                                        |

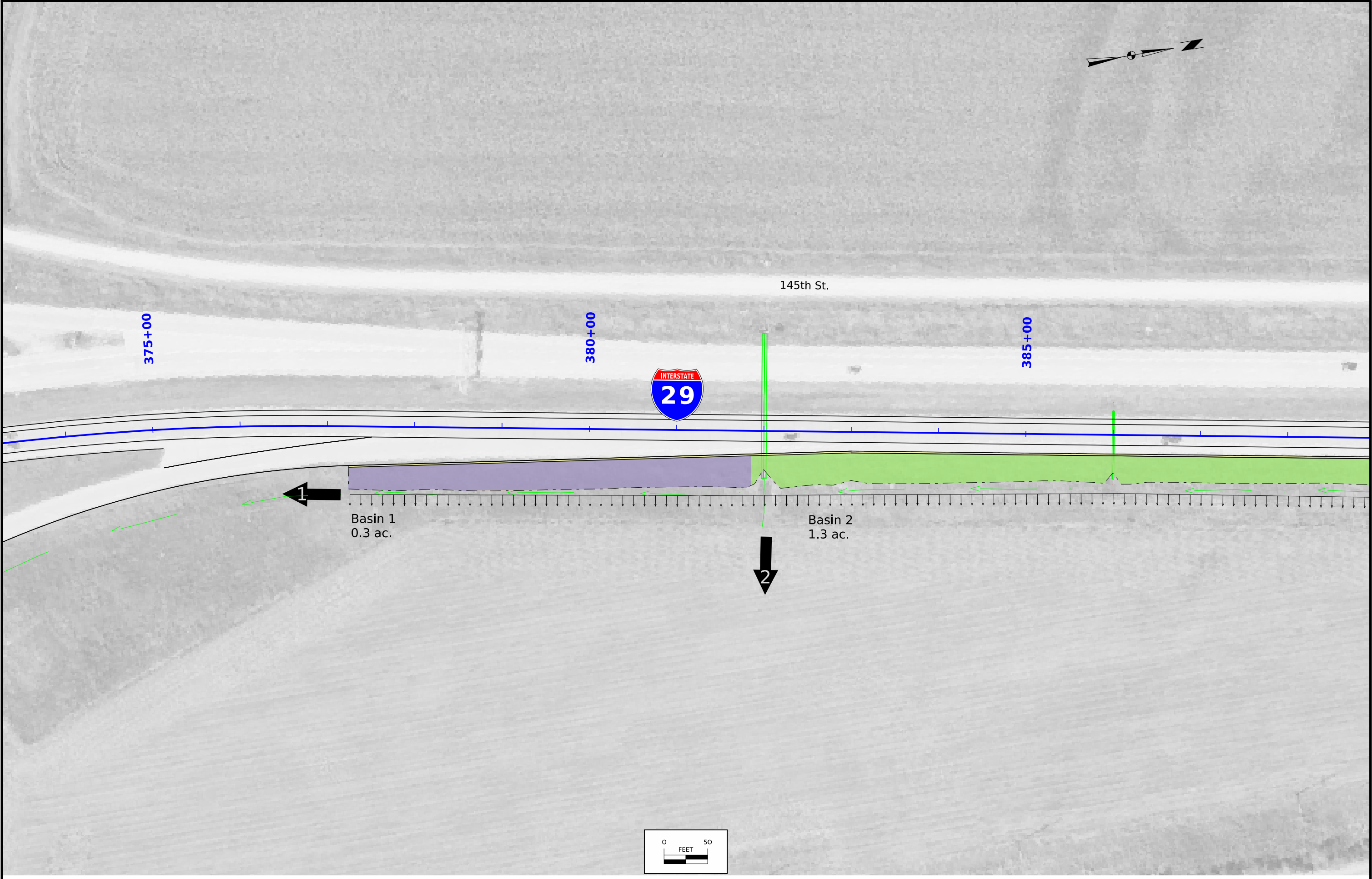
| CELL LEGEND OF EROSION CONTROL SHEETS                                               |                                                        |
|-------------------------------------------------------------------------------------|--------------------------------------------------------|
| CELL                                                                                | Design Element                                         |
|  | Temporary Sediment Control basin                       |
|  | Erosion Control for Circular Intake or Manhole Well    |
|  | Erosion Control for Rectangular Intake or Manhole Well |
|  | Grate Intake Sediment Filter Bag                       |
|  | Silt Basin                                             |
|  | Silt Fence Tail                                        |
|  | Stormwater Drainage Basin Discharge Point              |

| PLAN VIEW COLOR LEGEND OF EROSION CONTROL 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                                                  |
| Black                                            | (0)              |  Permanent Erosion Control Features                                  |
| Blaze Orange                                     | (222)            |  Temporary Erosion Control Features                                  |
| SHADING                                          | Design Color No. | Transparency                                                                                                                                            |
| Citron                                           | (234)            |  Mulching, All Types 50%                                             |
| Light Brown                                      | (238)            |  Special Ditch Control, Wood Excelsior Mat 0%                        |
| Grass Green                                      | (233)            |  8FT Mow Strip 50%                                                   |
| Red                                              | (3)              |  Delineates Restricted Areas 0%                                      |

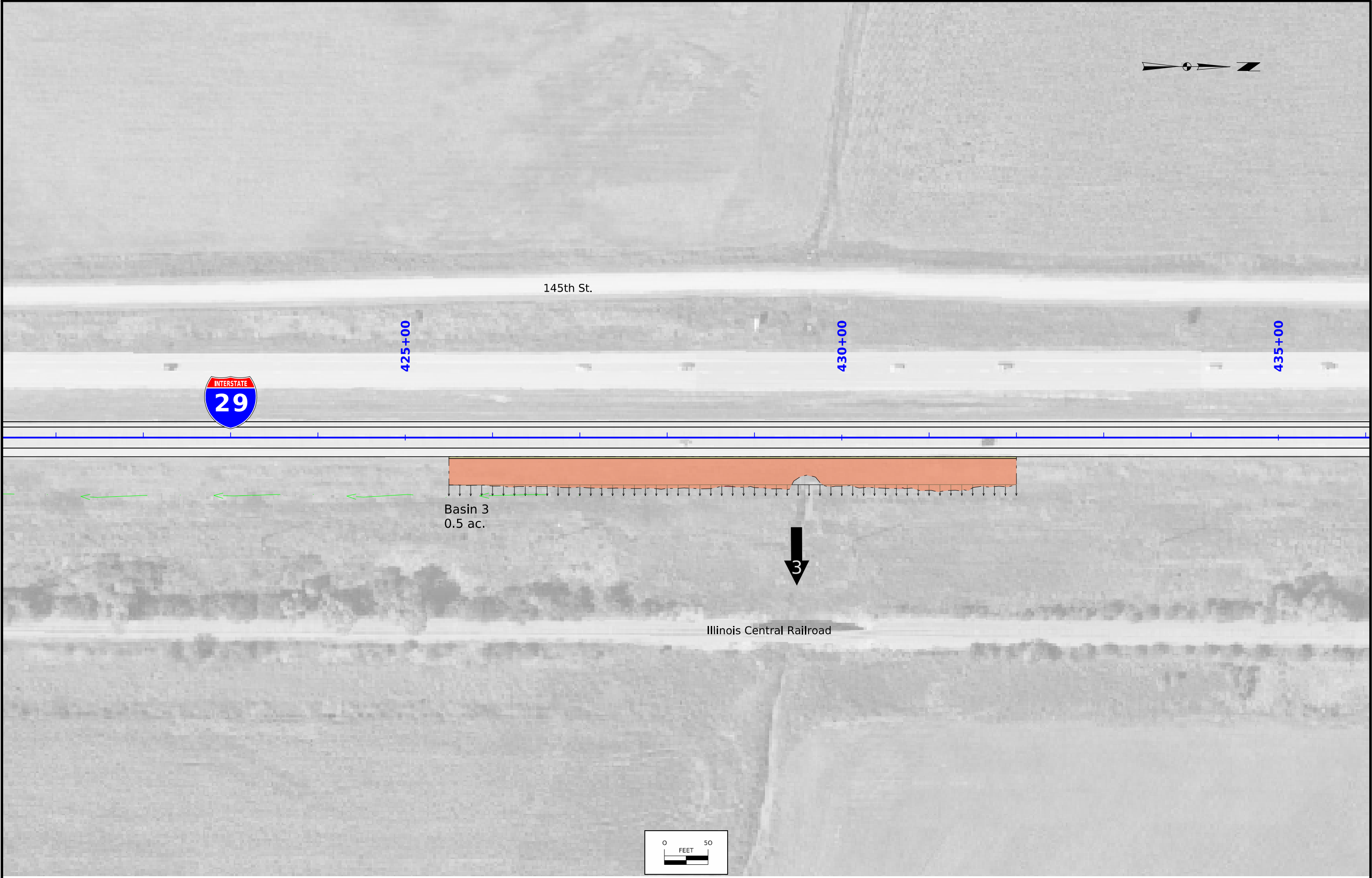
| PATTERN LEGEND OF EROSION CONTROL SHEETS                                              |                                      |
|---------------------------------------------------------------------------------------|--------------------------------------|
|    | Seeding and Fertilizing              |
|    | Seeding and Fertilizing (Rural)      |
|    | Seeding and Fertilizing (Urban)      |
|    | Native Grass Seeding                 |
|    | Salt Tolerant Seeding                |
|   | Wetland Grass Seeding                |
|  | Wildflower Seeding                   |
|  | Sodding                              |
|    | Turf Reinforcement Mat Type 1        |
|    | Turf Reinforcement Mat Type 2        |
|    | Turf Reinforcement Mat Type 3        |
|    | Turf Reinforcement Mat Type 4        |
|    | Slope Protection, Wood Excelsior Mat |
|   | Transition Mat                       |
|  | Rock Features, Permanent             |
|  | Rock Features, Temporary             |

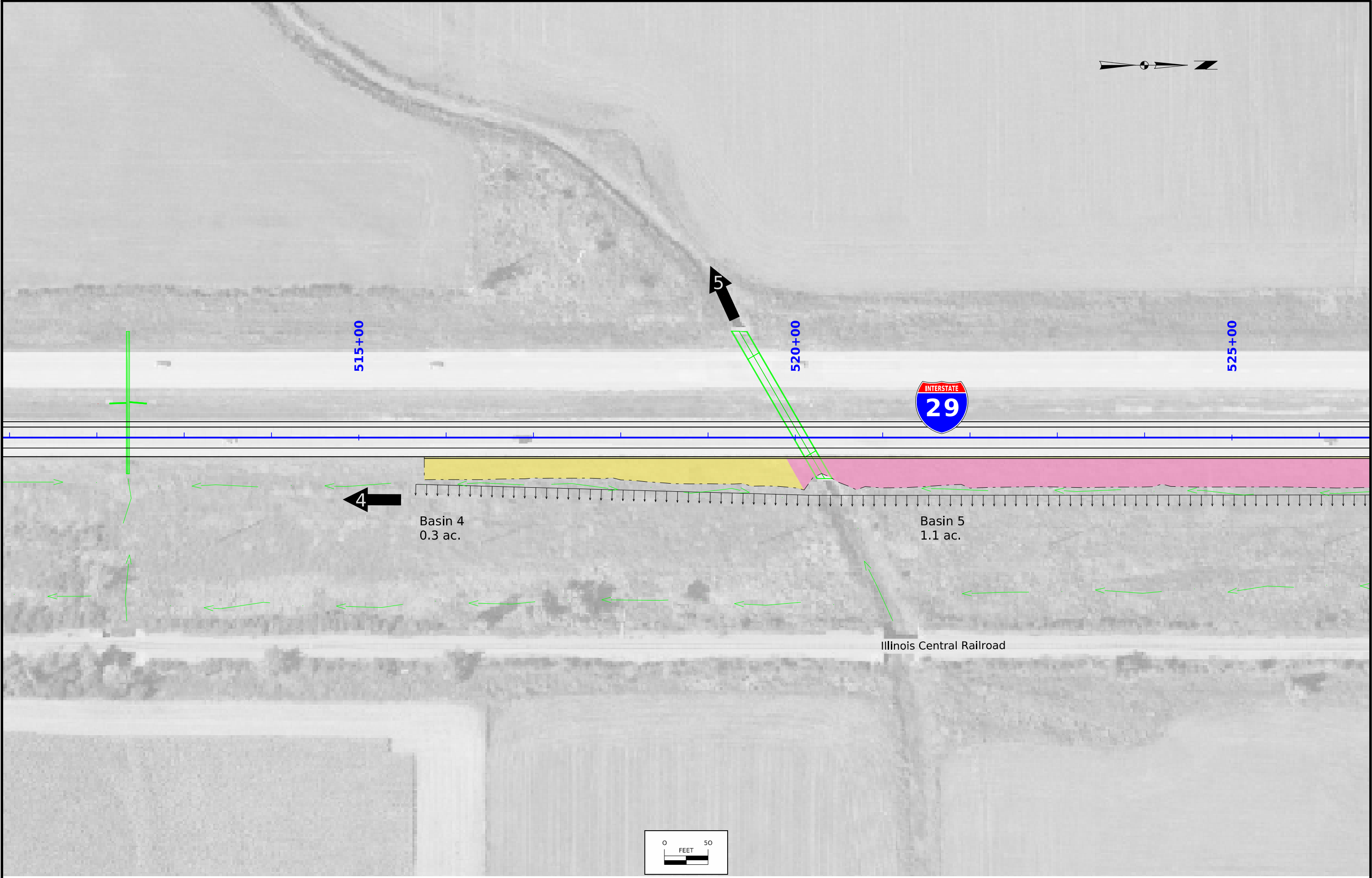
LEGEND AND SYMBOL  
INFORMATION SHEET

(COVERS SHEET SERIES D & R)

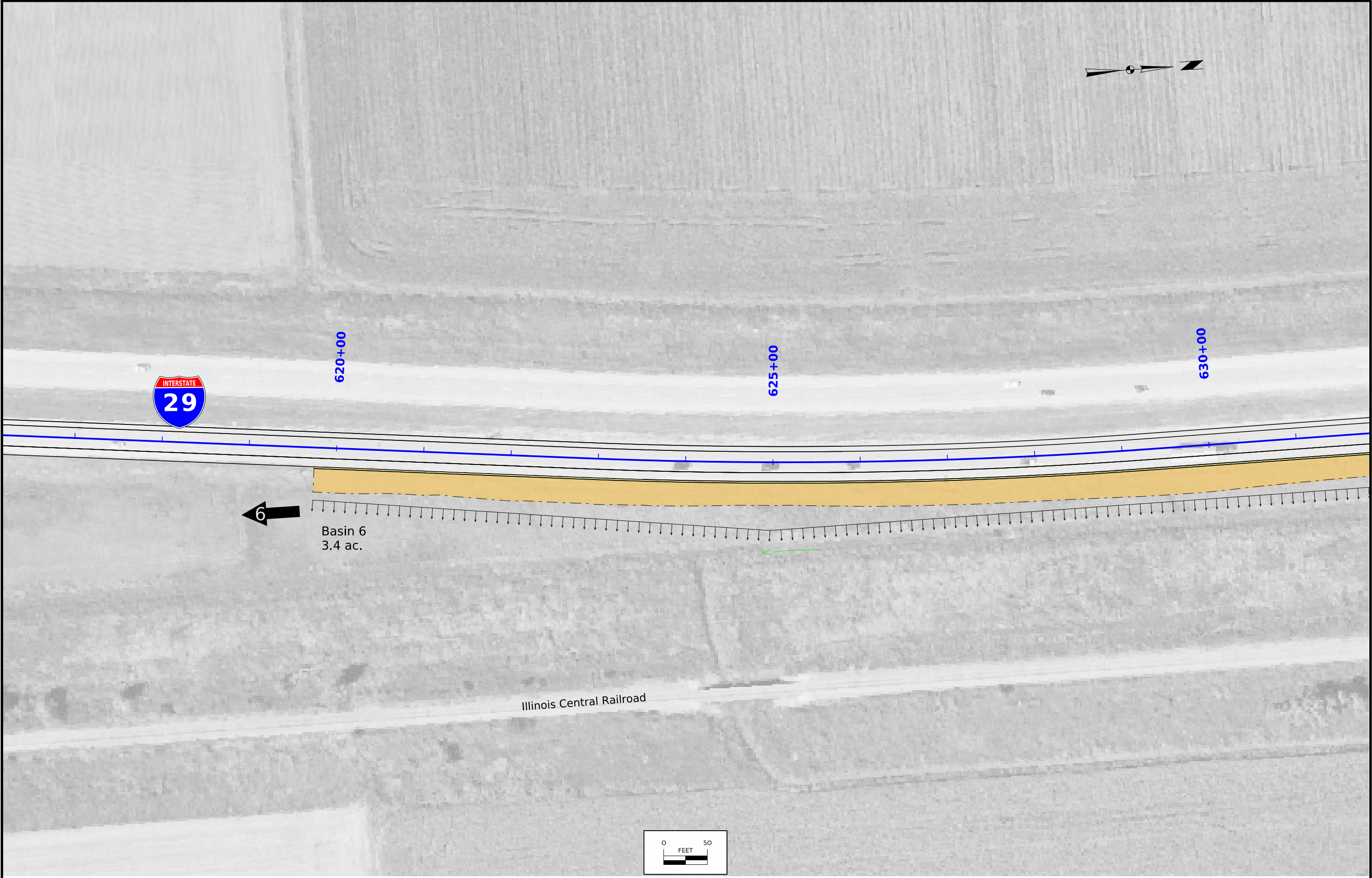




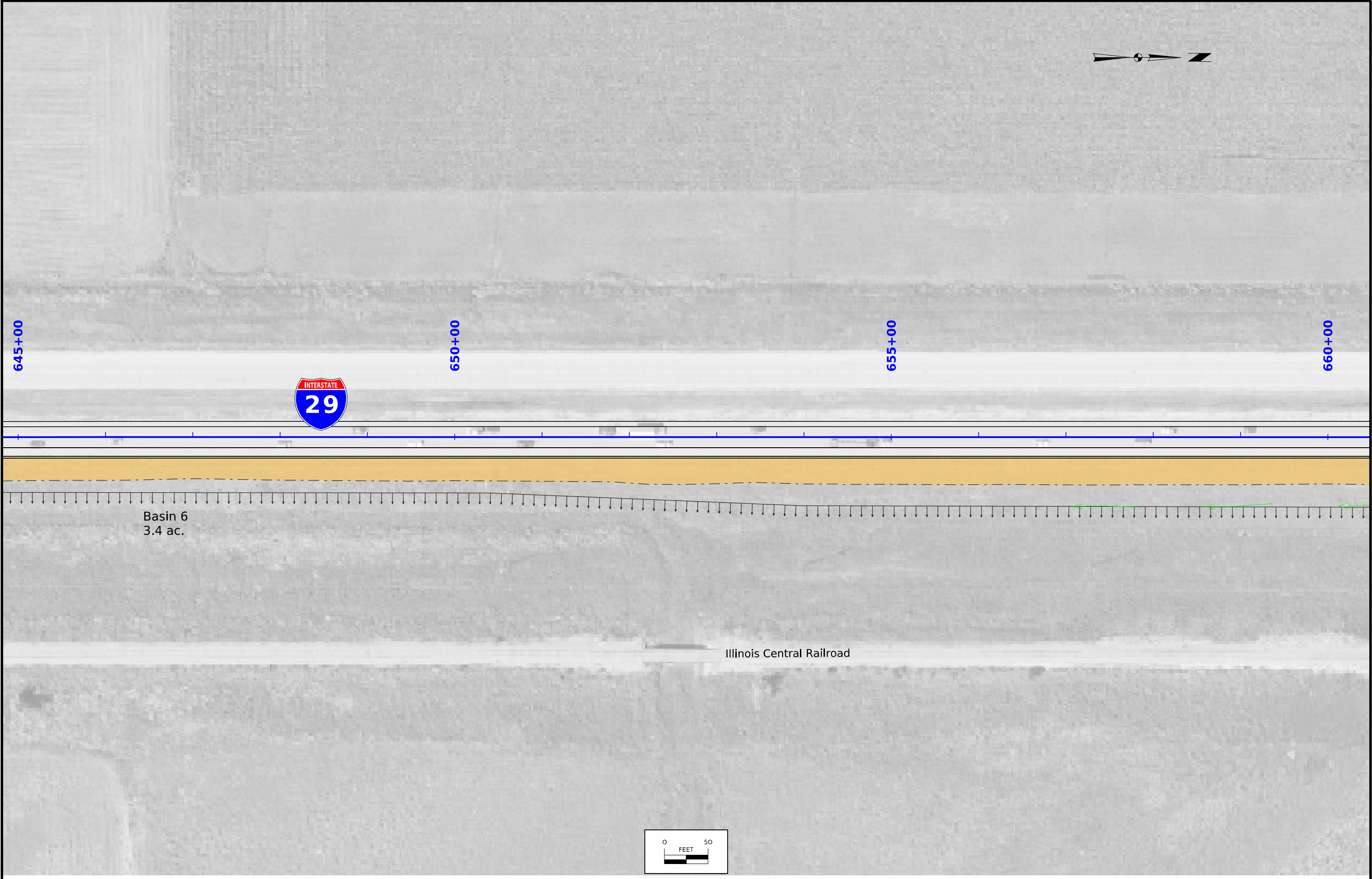




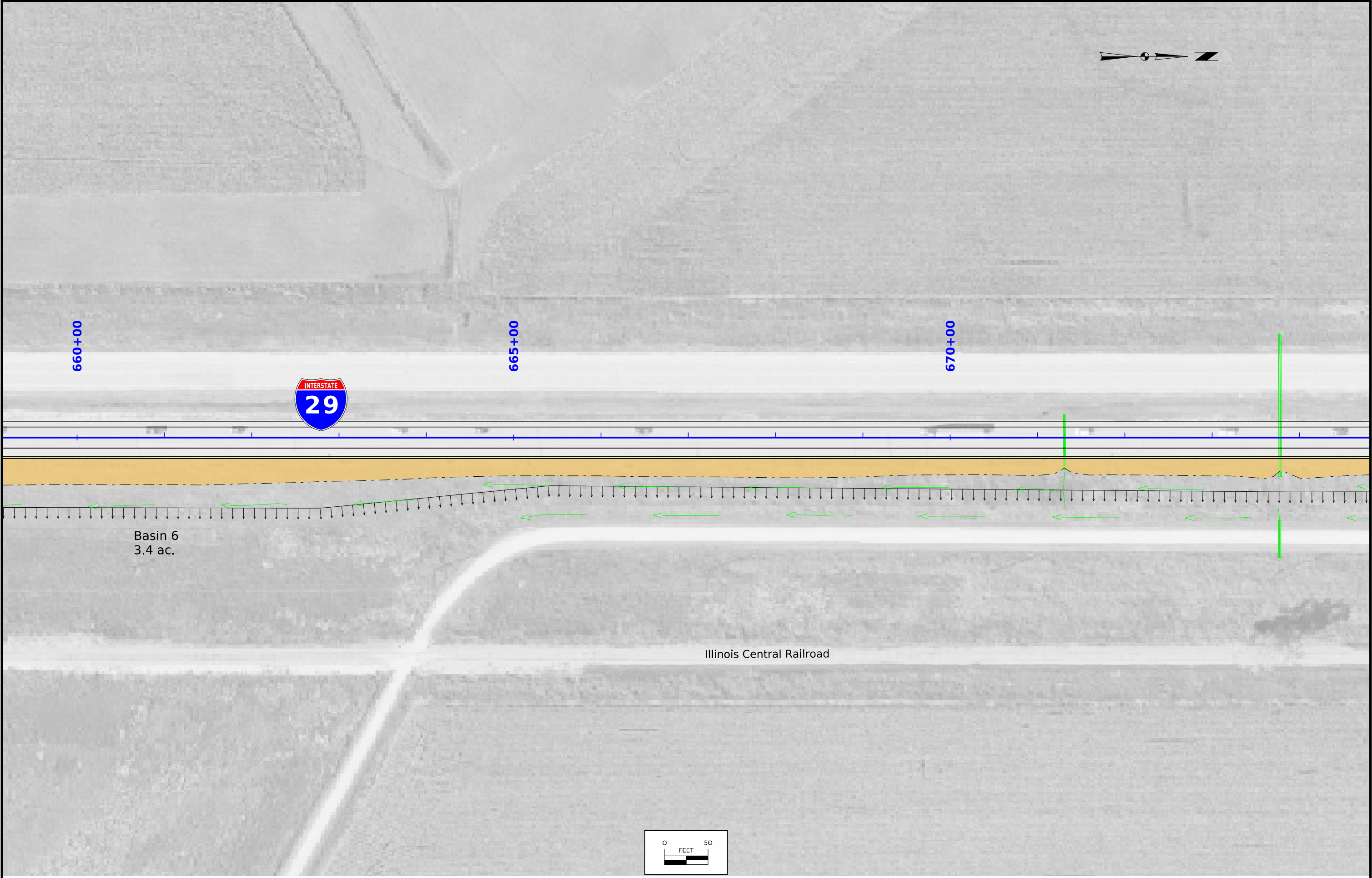








|                |         |                                    |                      |                                        |                   |
|----------------|---------|------------------------------------|----------------------|----------------------------------------|-------------------|
| FILE NO. 98765 | ENGLISH | DESIGN TEAM Harris/Pohlen/McDonald | Pottawattamie COUNTY | PROJECT NUMBER IMX-029-4(148)62--02-78 | SHEET NUMBER RR.9 |
|----------------|---------|------------------------------------|----------------------|----------------------------------------|-------------------|





675+00

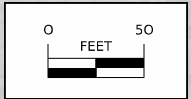


680+00

685+00

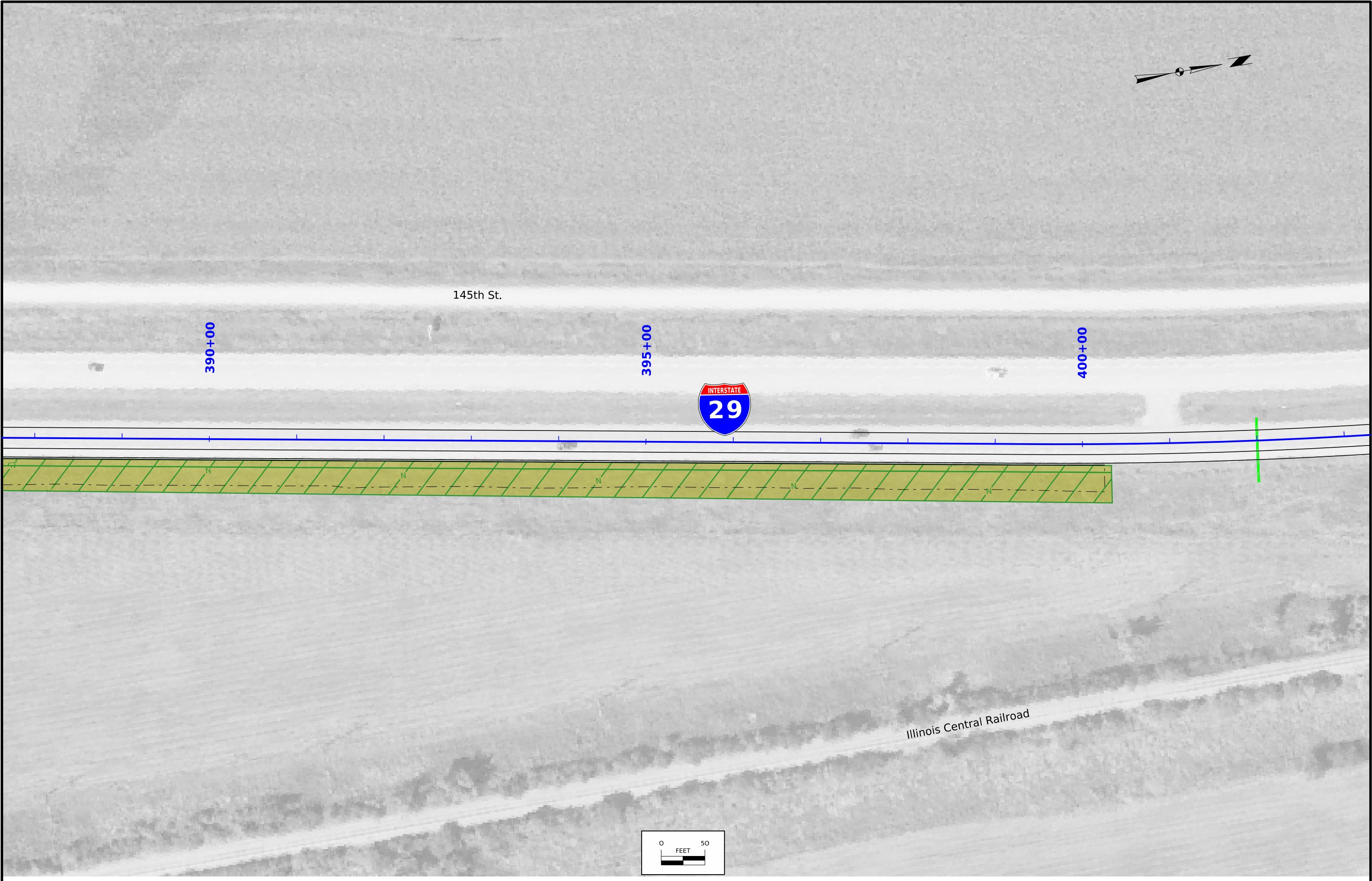
Basin 6  
3.4 ac.

Illinois Central Railroad



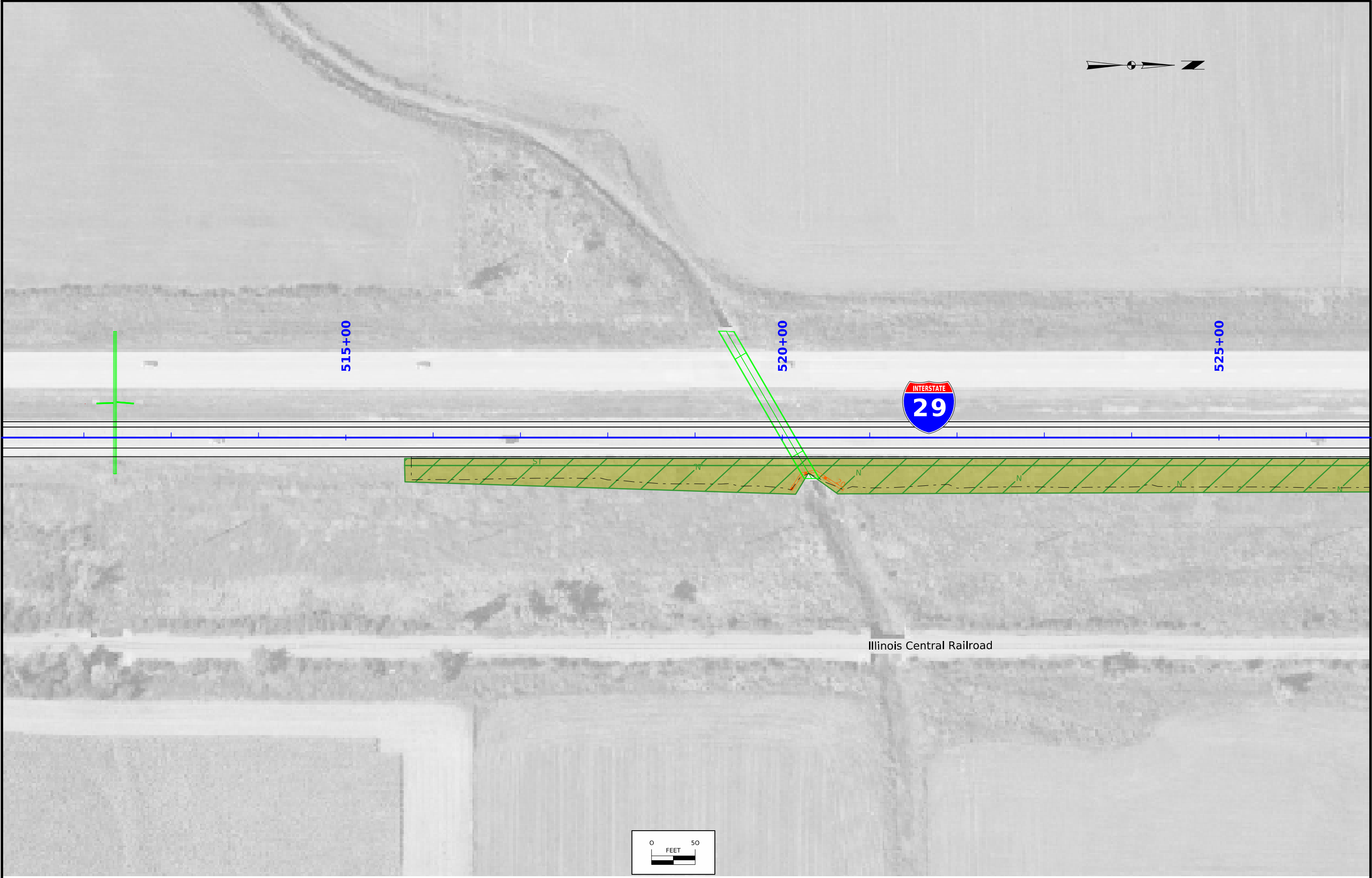


|          |         |                                           |                      |                                               |                           |
|----------|---------|-------------------------------------------|----------------------|-----------------------------------------------|---------------------------|
| FILE NO. | ENGLISH | DESIGN TEAM <b>Harris/Pohlen/McDonald</b> | Pottawattamie COUNTY | PROJECT NUMBER <b>IMX-029-4(148)62--02-78</b> | SHEET NUMBER <b>RR.12</b> |
|----------|---------|-------------------------------------------|----------------------|-----------------------------------------------|---------------------------|

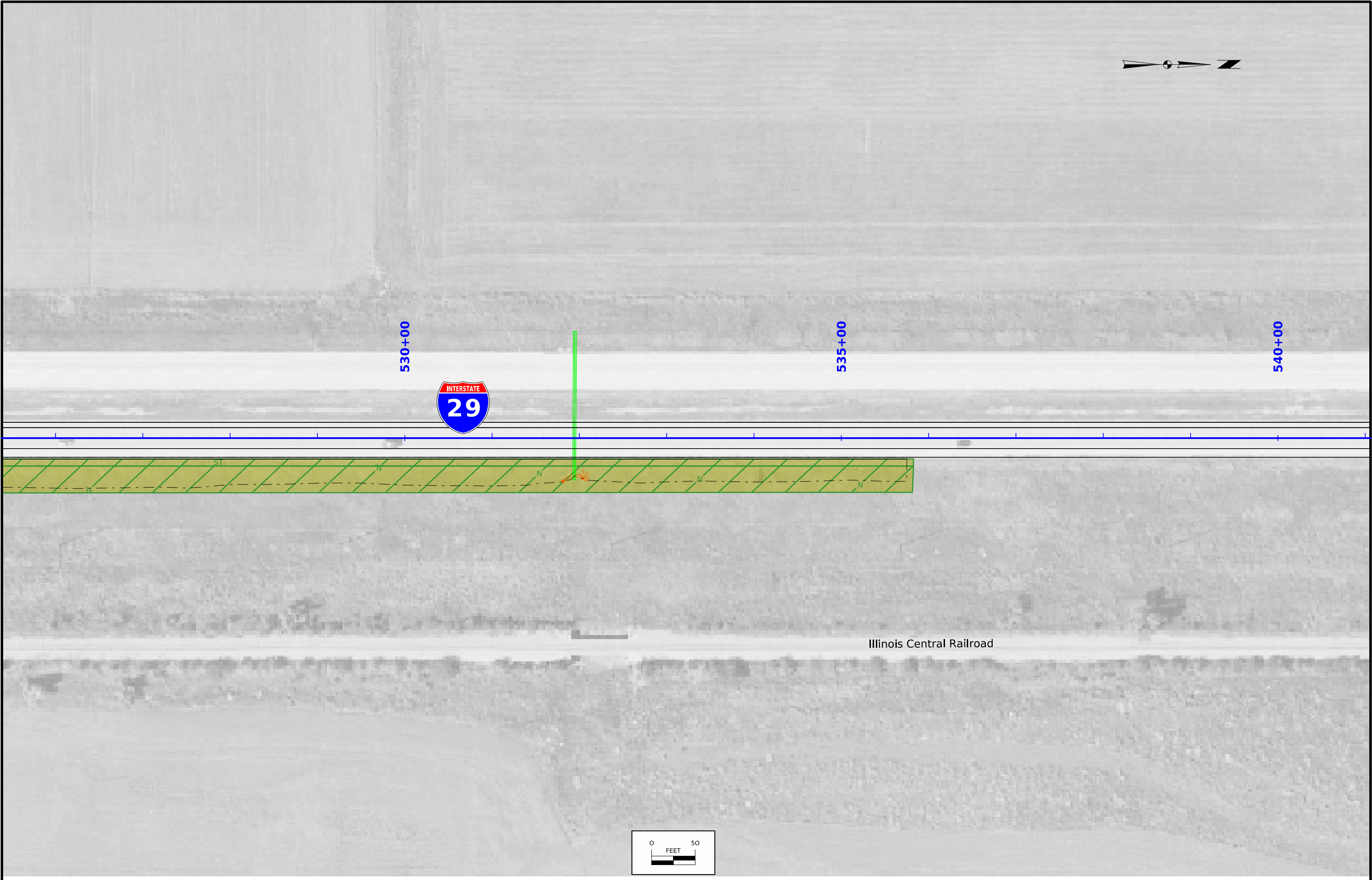


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|----------|---------|------------------------------------|----------------------|----------------------------------------|--------------------|
| FILE NO. | ENGLISH | DESIGN TEAM Harris/Pohlen/McDonald | Pottawattamie COUNTY | PROJECT NUMBER IMX-029-4(148)62--02-78 | SHEET NUMBER RR.13 |
|----------|---------|------------------------------------|----------------------|----------------------------------------|--------------------|





|          |         |                                    |                      |                                        |                    |
|----------|---------|------------------------------------|----------------------|----------------------------------------|--------------------|
| FILE NO. | ENGLISH | DESIGN TEAM Harris/Pohlen/McDonald | Pottawattamie COUNTY | PROJECT NUMBER IMX-029-4(148)62--02-78 | SHEET NUMBER RR.15 |
|----------|---------|------------------------------------|----------------------|----------------------------------------|--------------------|

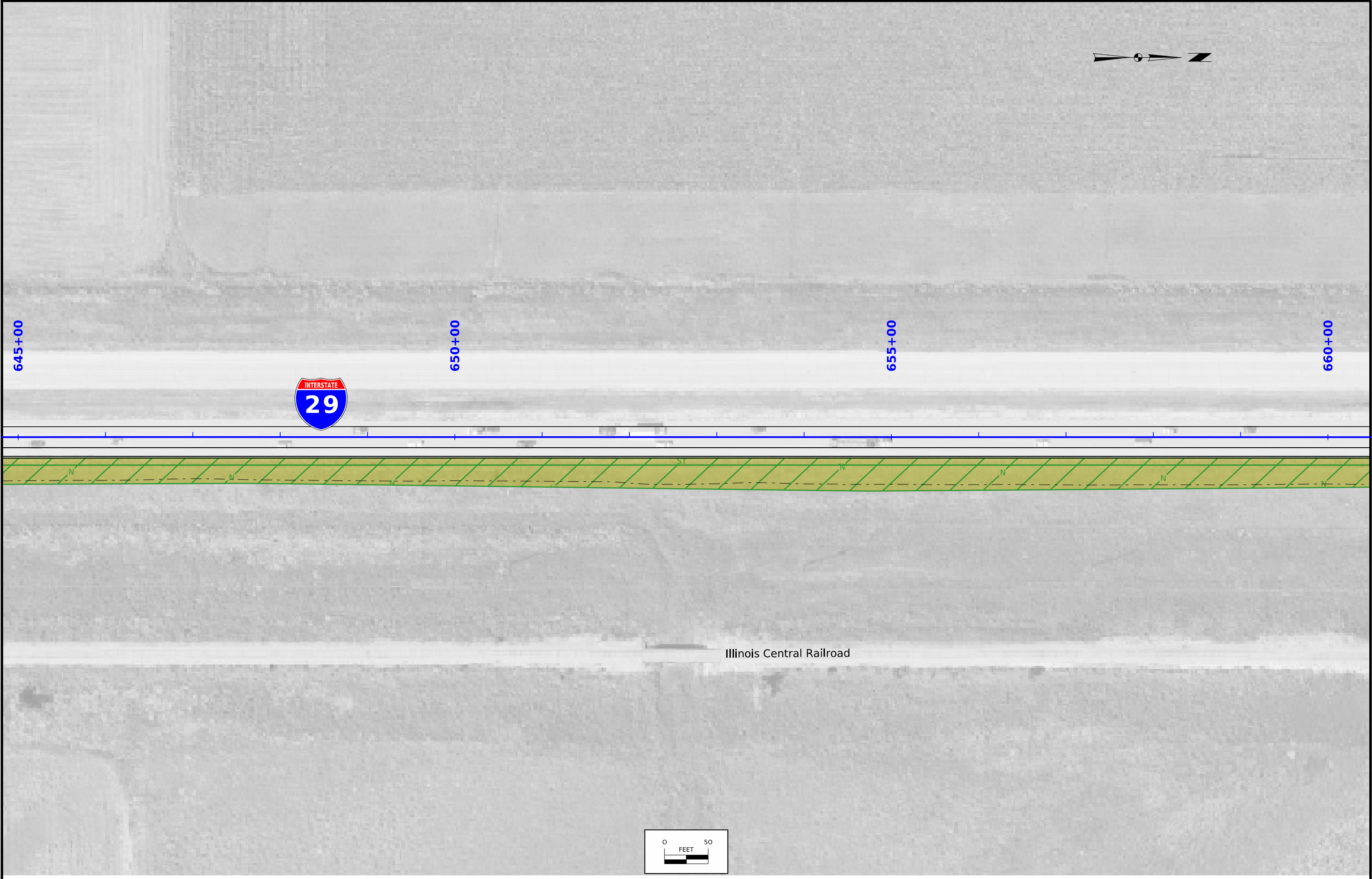




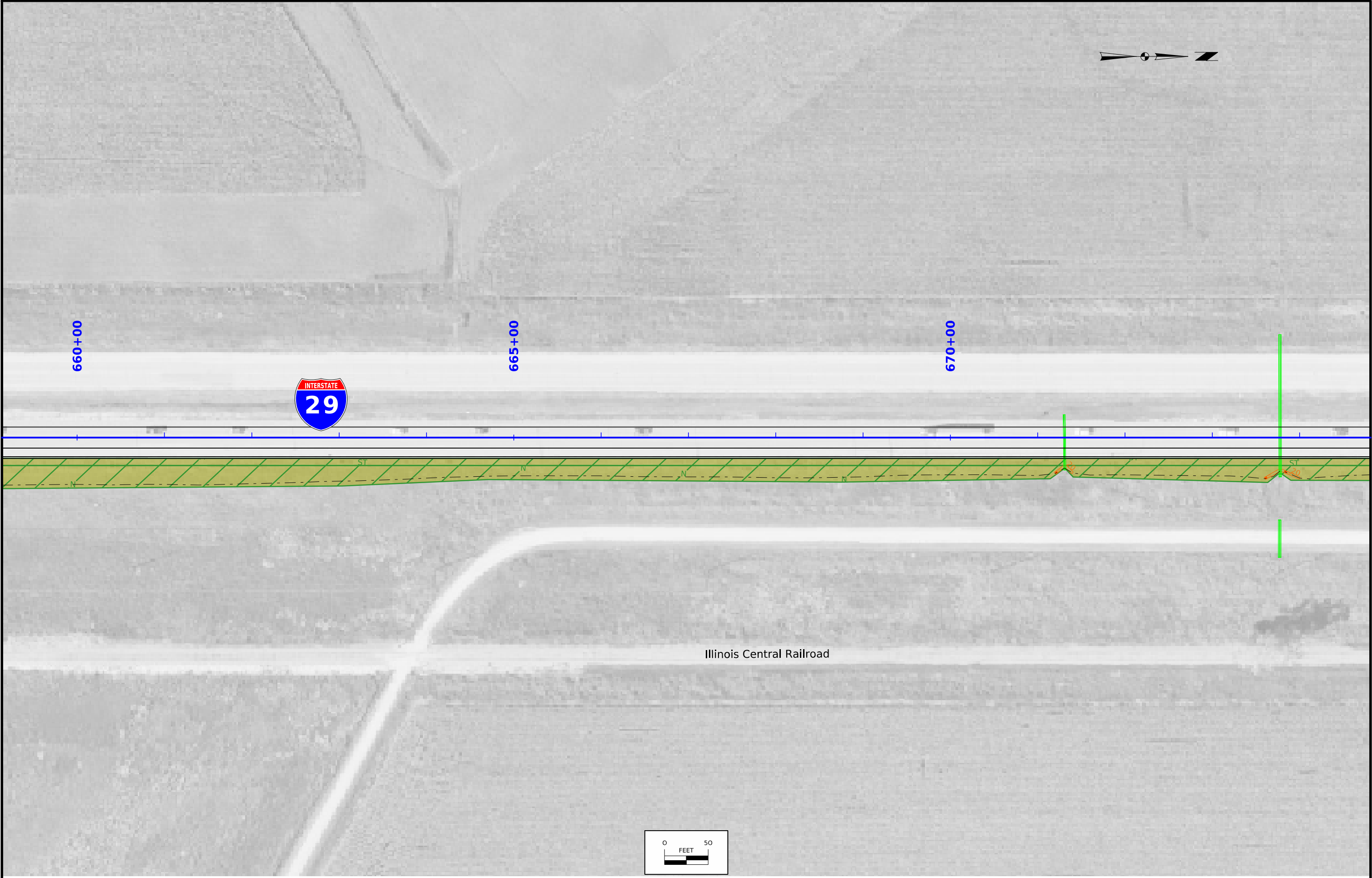
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|----------|---------|------------------------------------|----------------------|----------------------------------------|--------------------|
| FILE NO. | ENGLISH | DESIGN TEAM Harris/Pohlen/McDonald | Pottawattamie COUNTY | PROJECT NUMBER IMX-029-4(148)62--02-78 | SHEET NUMBER RR.17 |
|----------|---------|------------------------------------|----------------------|----------------------------------------|--------------------|



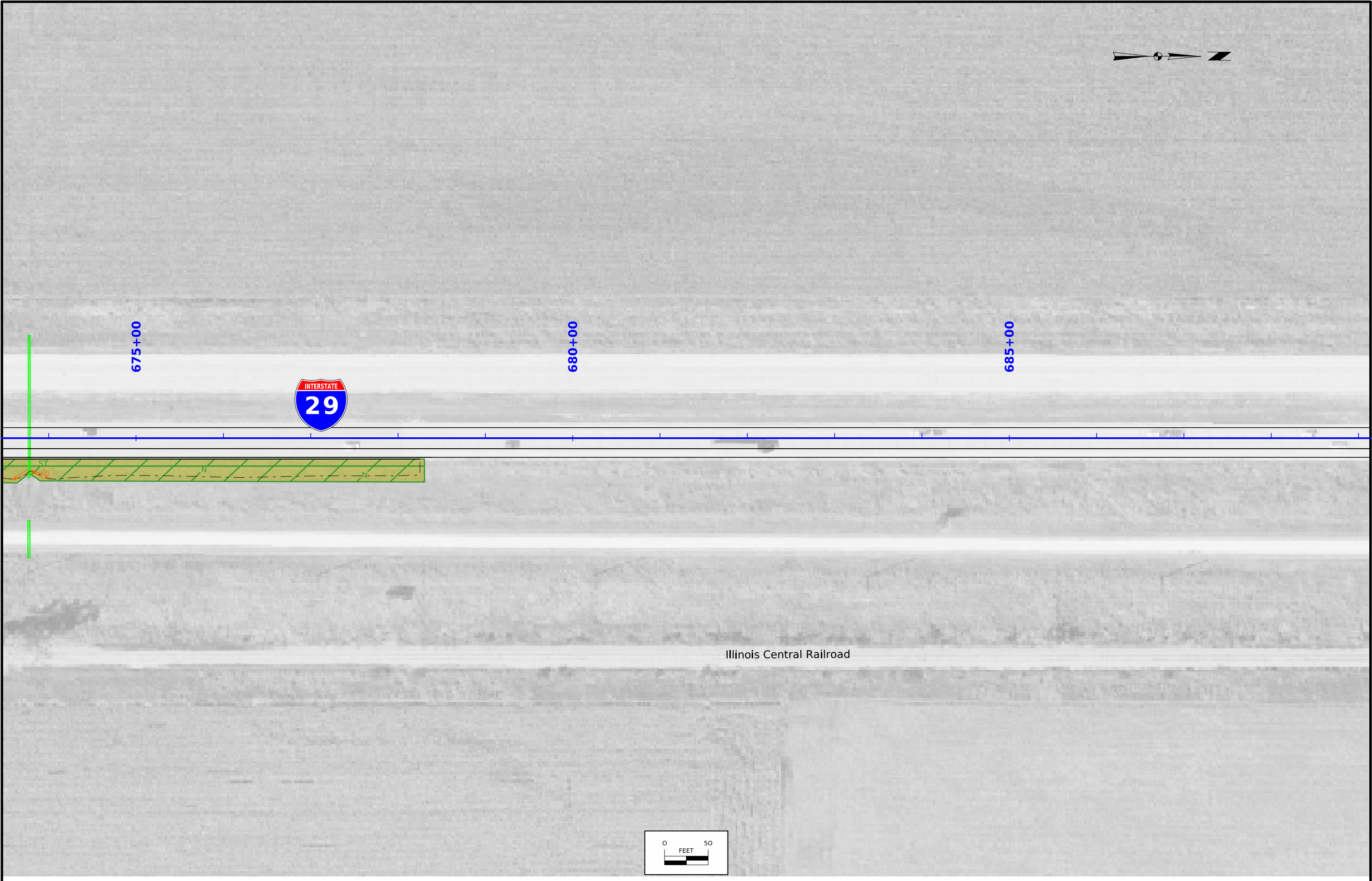
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| FILE NO. | ENGLISH | DESIGN TEAM Harris/Pohlen/McDonald | Pottawattamie COUNTY | PROJECT NUMBER IMX-029-4(148)62--02-78 | SHEET NUMBER RR.18 |
|----------|---------|------------------------------------|----------------------|----------------------------------------|--------------------|



|          |         |                                    |                      |                                        |                    |
|----------|---------|------------------------------------|----------------------|----------------------------------------|--------------------|
| FILE NO. | ENGLISH | DESIGN TEAM Harris/Pohlen/McDonald | Pottawattamie COUNTY | PROJECT NUMBER IMX-029-4(148)62--02-78 | SHEET NUMBER RR.19 |
|----------|---------|------------------------------------|----------------------|----------------------------------------|--------------------|



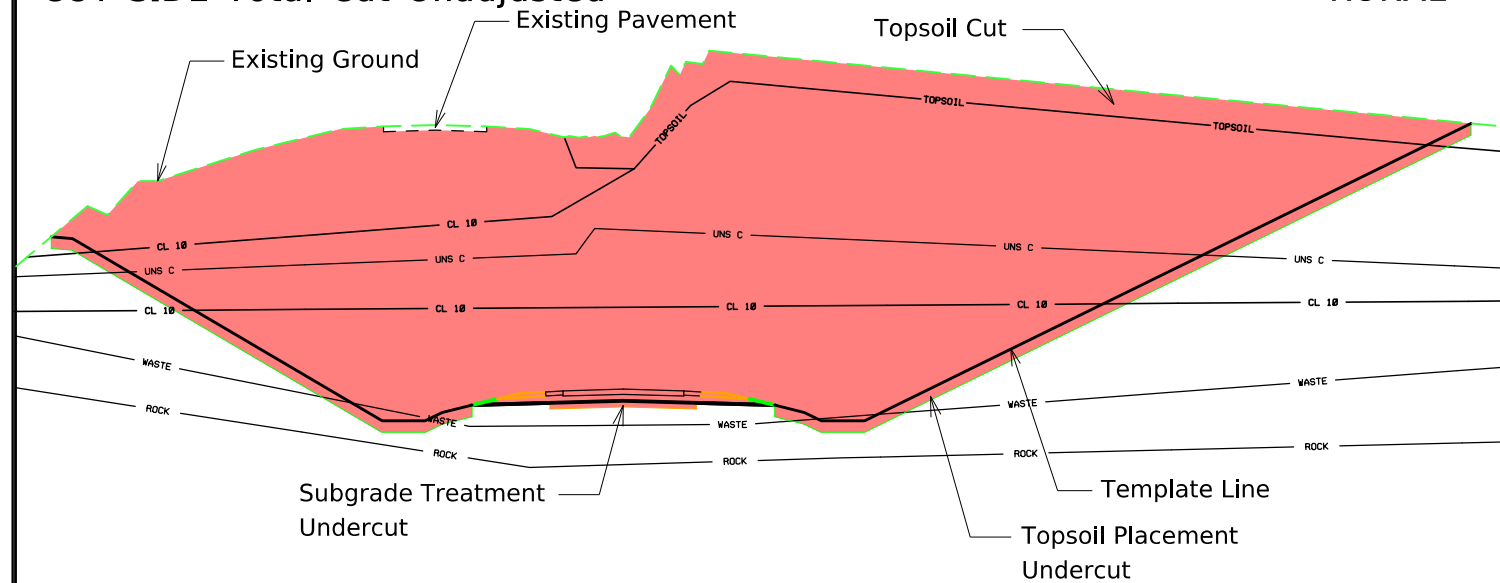
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| FILE NO. | ENGLISH | DESIGN TEAM Harris/Pohlen/McDonald | Pottawattamie COUNTY | PROJECT NUMBER IMX-029-4(148)62--02-78 | SHEET NUMBER RR.20 |
|----------|---------|------------------------------------|----------------------|----------------------------------------|--------------------|



|          |         |                                    |                      |                                        |                    |
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| FILE NO. | ENGLISH | DESIGN TEAM Harris/Pohlen/McDonald | Pottawattamie COUNTY | PROJECT NUMBER IMX-029-4(148)62--02-78 | SHEET NUMBER RR.21 |
|----------|---------|------------------------------------|----------------------|----------------------------------------|--------------------|

CUT SIDE Total Cut Unadjusted

RURAL

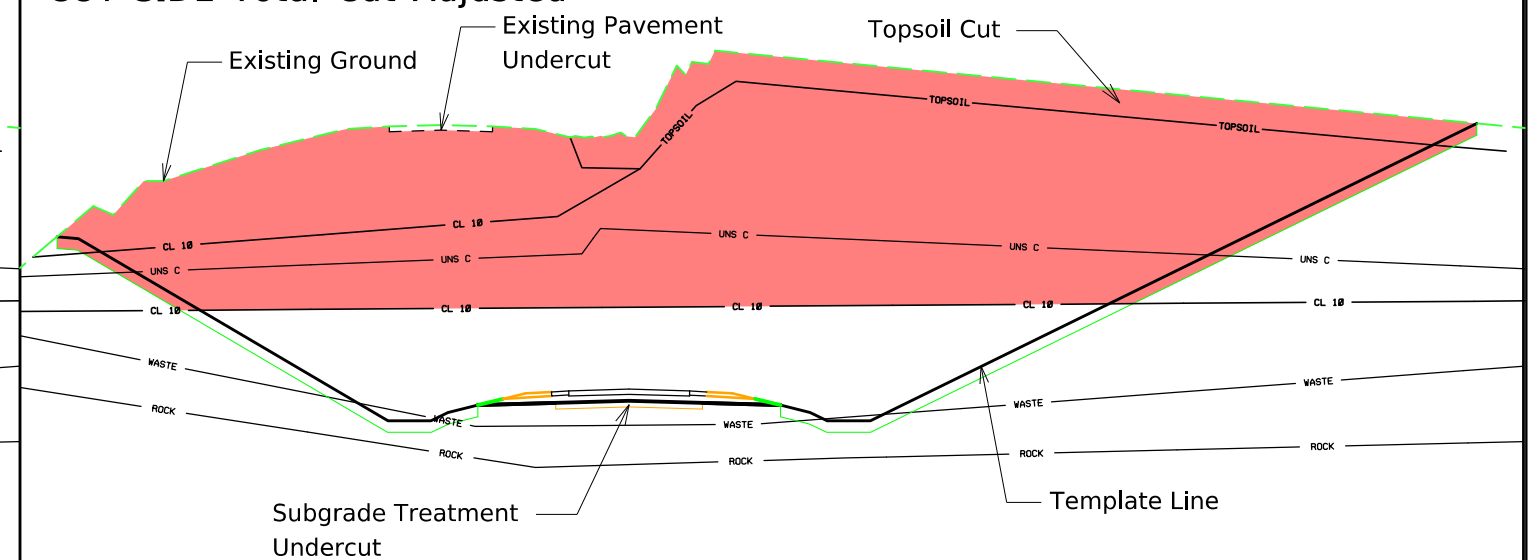


Notes:

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

| CUT | SIDE | Total | Cut Adjusted |
|-----|------|-------|--------------|
| D   | SI   | 10.00 | 10.00        |
|     | SI2  | 10.00 | 10.00        |
|     | SI3  | 10.00 | 10.00        |
|     | SI4  | 10.00 | 10.00        |
| E   | SI   | 10.00 | 10.00        |
|     | SI2  | 10.00 | 10.00        |
|     | SI3  | 10.00 | 10.00        |
|     | SI4  | 10.00 | 10.00        |
| F   | SI   | 10.00 | 10.00        |
|     | SI2  | 10.00 | 10.00        |
|     | SI3  | 10.00 | 10.00        |
|     | SI4  | 10.00 | 10.00        |
| G   | SI   | 10.00 | 10.00        |
|     | SI2  | 10.00 | 10.00        |
|     | SI3  | 10.00 | 10.00        |
|     | SI4  | 10.00 | 10.00        |
| H   | SI   | 10.00 | 10.00        |
|     | SI2  | 10.00 | 10.00        |
|     | SI3  | 10.00 | 10.00        |
|     | SI4  | 10.00 | 10.00        |
| I   | SI   | 10.00 | 10.00        |
|     | SI2  | 10.00 | 10.00        |
|     | SI3  | 10.00 | 10.00        |
|     | SI4  | 10.00 | 10.00        |
| J   | SI   | 10.00 | 10.00        |
|     | SI2  | 10.00 | 10.00        |
|     | SI3  | 10.00 | 10.00        |
|     | SI4  | 10.00 | 10.00        |
| K   | SI   | 10.00 | 10.00        |
|     | SI2  | 10.00 | 10.00        |
|     | SI3  | 10.00 | 10.00        |
|     | SI4  | 10.00 | 10.00        |
| L   | SI   | 10.00 | 10.00        |
|     | SI2  | 10.00 | 10.00        |
|     | SI3  | 10.00 | 10.00        |
|     | SI4  | 10.00 | 10.00        |
| M   | SI   | 10.00 | 10.00        |
|     | SI2  | 10.00 | 10.00        |
|     | SI3  | 10.00 | 10.00        |
|     | SI4  | 10.00 | 10.00        |
| N   | SI   | 10.00 | 10.00        |
|     | SI2  | 10.00 | 10.00        |
|     | SI3  | 10.00 | 10.00        |
|     | SI4  | 10.00 | 10.00        |
| O   | SI   | 10.00 | 10.00        |
|     | SI2  | 10.00 | 10.00        |
|     | SI3  | 10.00 | 10.00        |
|     | SI4  | 10.00 | 10.00        |
| P   | SI   | 10.00 | 10.00        |
|     | SI2  | 10.00 | 10.00        |
|     | SI3  | 10.00 | 10.00        |
|     | SI4  | 10.00 | 10.00        |
| Q   | SI   | 10.00 | 10.00        |
|     | SI2  | 10.00 | 10.00        |
|     | SI3  | 10.00 | 10.00        |
|     | SI4  | 10.00 | 10.00        |
| R   | SI   | 10.00 | 10.00        |
|     | SI2  | 10.00 | 10.00        |
|     | SI3  | 10.00 | 10.00        |
|     | SI4  | 10.00 | 10.00        |
| S   | SI   | 10.00 | 10.00        |
|     | SI2  | 10.00 | 10.00        |
|     | SI3  | 10.00 | 10.00        |
|     | SI4  | 10.00 | 10.00        |
| T   | SI   | 10.00 | 10.00        |
|     | SI2  | 10.00 | 10.00        |
|     | SI3  | 10.00 | 10.00        |
|     | SI4  | 10.00 | 10.00        |
| U   | SI   | 10.00 | 10.00        |
|     | SI2  | 10.00 | 10.00        |
|     | SI3  | 10.00 | 10.00        |
|     | SI4  | 10.00 | 10.00        |
| V   | SI   | 10.00 | 10.00        |
|     | SI2  | 10.00 | 10.00        |
|     | SI3  | 10.00 | 10.00        |
|     | SI4  | 10.00 | 10.00        |
| W   | SI   | 10.00 | 10.00        |
|     | SI2  | 10.00 | 10.00        |
|     | SI3  | 10.00 | 10.00        |
|     | SI4  | 10.00 | 10.00        |
| X   | SI   | 10.00 | 10.00        |
|     | SI2  | 10.00 | 10.00        |
|     | SI3  | 10.00 | 10.00        |
|     | SI4  | 10.00 | 10.00        |
| Y   | SI   | 10.00 | 10.00        |
|     | SI2  | 10.00 | 10.00        |
|     | SI3  | 10.00 | 10.00        |
|     | SI4  | 10.00 | 10.00        |
| Z   | SI   | 10.00 | 10.00        |
|     | SI2  | 10.00 | 10.00        |
|     | SI3  | 10.00 | 10.00        |
|     | SI4  | 10.00 | 10.00        |

Existing Ground Existing Pavement Undercut

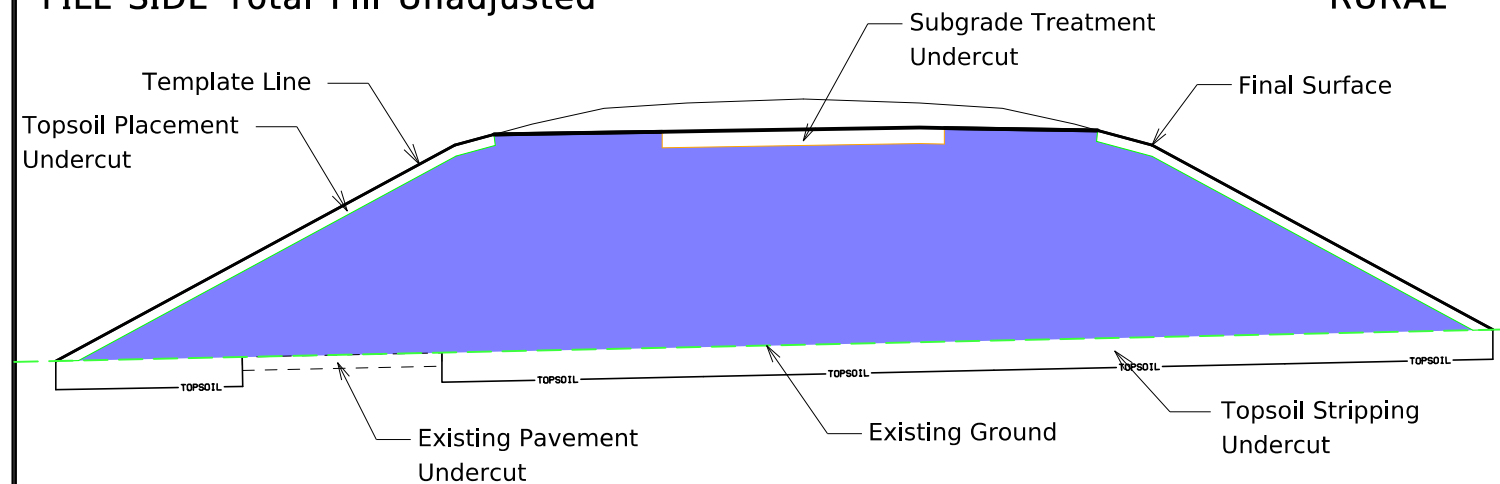


Notes:

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

FILL SIDE Total Fill Unadjusted

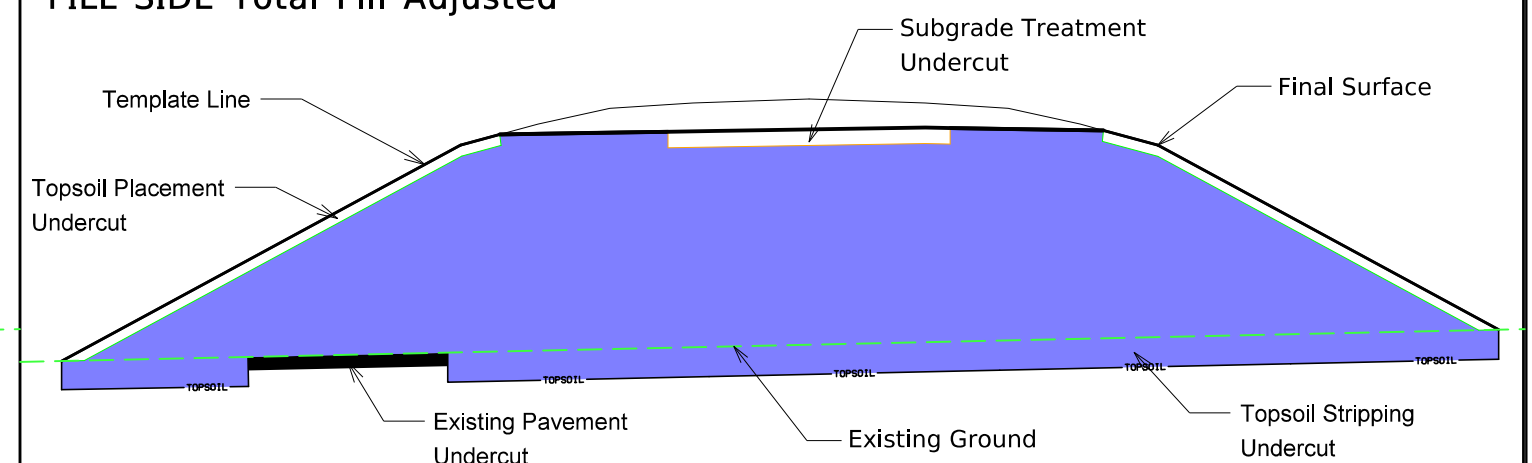
RURAL



Notes:

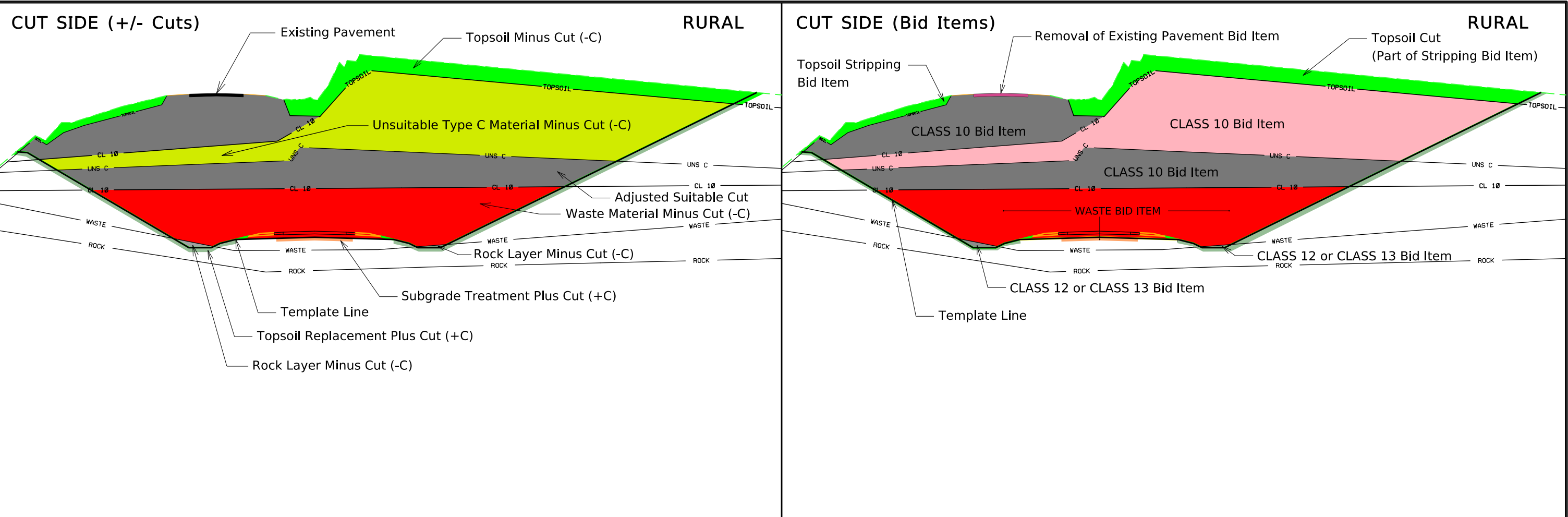
1. "Total Fill Unadjusted" Column includes all Class 10, 12, and 13 fill. This excludes the topsoil, subgrade treatment, subbase, new pavement, and shoulder fill needs in that station range.
2. "Total Fill Unadjusted" Column does not include adjustments for additional fill from cuts such as existing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

|    | FILL | SIDE | Total | Fill | Adjusted |
|----|------|------|-------|------|----------|
| 1  | 1    | 1    | 2     | 1    | 1        |
| 2  | 1    | 1    | 2     | 1    | 1        |
| 3  | 1    | 1    | 2     | 1    | 1        |
| 4  | 1    | 1    | 2     | 1    | 1        |
| 5  | 1    | 1    | 2     | 1    | 1        |
| 6  | 1    | 1    | 2     | 1    | 1        |
| 7  | 1    | 1    | 2     | 1    | 1        |
| 8  | 1    | 1    | 2     | 1    | 1        |
| 9  | 1    | 1    | 2     | 1    | 1        |
| 10 | 1    | 1    | 2     | 1    | 1        |
| 11 | 1    | 1    | 2     | 1    | 1        |
| 12 | 1    | 1    | 2     | 1    | 1        |
| 13 | 1    | 1    | 2     | 1    | 1        |
| 14 | 1    | 1    | 2     | 1    | 1        |
| 15 | 1    | 1    | 2     | 1    | 1        |
| 16 | 1    | 1    | 2     | 1    | 1        |
| 17 | 1    | 1    | 2     | 1    | 1        |
| 18 | 1    | 1    | 2     | 1    | 1        |
| 19 | 1    | 1    | 2     | 1    | 1        |
| 20 | 1    | 1    | 2     | 1    | 1        |
| 21 | 1    | 1    | 2     | 1    | 1        |
| 22 | 1    | 1    | 2     | 1    | 1        |
| 23 | 1    | 1    | 2     | 1    | 1        |
| 24 | 1    | 1    | 2     | 1    | 1        |
| 25 | 1    | 1    | 2     | 1    | 1        |
| 26 | 1    | 1    | 2     | 1    | 1        |
| 27 | 1    | 1    | 2     | 1    | 1        |
| 28 | 1    | 1    | 2     | 1    | 1        |
| 29 | 1    | 1    | 2     | 1    | 1        |
| 30 | 1    | 1    | 2     | 1    | 1        |
| 31 | 1    | 1    | 2     | 1    | 1        |
| 32 | 1    | 1    | 2     | 1    | 1        |
| 33 | 1    | 1    | 2     | 1    | 1        |
| 34 | 1    | 1    | 2     | 1    | 1        |
| 35 | 1    | 1    | 2     | 1    | 1        |
| 36 | 1    | 1    | 2     | 1    | 1        |
| 37 | 1    | 1    | 2     | 1    | 1        |
| 38 | 1    | 1    | 2     | 1    | 1        |
| 39 | 1    | 1    | 2     | 1    | 1        |
| 40 | 1    | 1    | 2     | 1    | 1        |
| 41 | 1    | 1    | 2     | 1    | 1        |
| 42 | 1    | 1    | 2     | 1    | 1        |
| 43 | 1    | 1    | 2     | 1    | 1        |
| 44 | 1    | 1    | 2     | 1    | 1        |
| 45 | 1    | 1    | 2     | 1    | 1        |
| 46 | 1    | 1    | 2     | 1    | 1        |
| 47 | 1    | 1    | 2     | 1    | 1        |
| 48 | 1    | 1    | 2     | 1    | 1        |
| 49 | 1    | 1    | 2     | 1    | 1        |
| 50 | 1    | 1    | 2     | 1    | 1        |
| 51 | 1    | 1    | 2     | 1    | 1        |
| 52 | 1    | 1    | 2     | 1    | 1        |
| 53 | 1    | 1    | 2     | 1    | 1        |
| 54 | 1    | 1    | 2     | 1    | 1        |
| 55 | 1    | 1    | 2     | 1    | 1        |
| 56 | 1    | 1    | 2     | 1    | 1        |
| 57 | 1    | 1    | 2     | 1    | 1        |
| 58 | 1    | 1    | 2     | 1    | 1        |
| 59 | 1    | 1    | 2     | 1    | 1        |
| 60 | 1    | 1    | 2     | 1    | 1        |
| 61 | 1    | 1    | 2     | 1    | 1        |
| 62 | 1    | 1    | 2     | 1    | 1        |
| 63 | 1    | 1    | 2     | 1    | 1        |
| 64 | 1    | 1    | 2     | 1    | 1        |
| 65 | 1    | 1    | 2     | 1    | 1        |
| 66 | 1    | 1    | 2     | 1    | 1        |
| 67 | 1    | 1    | 2     | 1    | 1        |
| 68 | 1    | 1    | 2     | 1    | 1        |
| 69 | 1    | 1    | 2     | 1    | 1        |
| 70 | 1    | 1    | 2     | 1    | 1        |
| 71 | 1    | 1    | 2     | 1    | 1        |
| 72 | 1    | 1    | 2     | 1    | 1        |
| 73 | 1    | 1    | 2     | 1    | 1        |
| 74 | 1    | 1    | 2     | 1    | 1        |
| 75 | 1    | 1    | 2     | 1    | 1        |
| 76 | 1    | 1    | 2     | 1    | 1        |
| 77 | 1    | 1    | 2     | 1    | 1        |
| 78 | 1    | 1    | 2     | 1    | 1        |
| 79 | 1    | 1    | 2     | 1    | 1        |
| 80 | 1    | 1    | 2     | 1    | 1        |
| 81 | 1    | 1    | 2     | 1    | 1</      |



Notes:

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



- Notes:
1. "Add Quantity +C" columns are additional cut encountered that is not Typical, Topsoil, or Subgrade Treatment Based. ( Entrance, Dike, Etc.)
  2. "-C" columns are either soil types or Class 10, 12, or 13 designated material that is encountered in the cut station range that is paid for by other bid items.
  3. The "(SoilType) Cut" columns are soil types encountered in the cut that are paid by either Class 10, 12, or 13.
  4. The "Adjusted Clas (10,12 or 13)" columns are the sum of all various soil types encountered in that station range, that are paid by Class 10, 12, or 13 bid items.
  5. Refer to Standard Road Plan EW-102 for placement of unsuitable soil types.

Refer to Standard Road Plans EW-101 and EW-102.

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## TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

| Station   | Cut                               |                                        |                          | Fill                               |                           |                                                                    |                                               | Checks (EW-102)                                        |                                              | Topsoil                                 |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|-----------|-----------------------------------|----------------------------------------|--------------------------|------------------------------------|---------------------------|--------------------------------------------------------------------|-----------------------------------------------|--------------------------------------------------------|----------------------------------------------|-----------------------------------------|--------------------------------------------|------------------------------------------------|-------------------------------------------------------------|------|------|------|------|------|------|------|------|------|
|           | [1]                               | [2]                                    | [3]                      | [4]                                | [5]                       | [6]                                                                | [7]                                           | [8]                                                    | [9]                                          | [10]                                    | [11]                                       | [12]                                           | [13]                                                        | [14] | [15] | [16] | [17] | [18] | [19] | [20] | [21] | [22] |
|           |                                   |                                        | [2]                      |                                    | [4]                       | [5] x 1.3                                                          | [3] - [6]                                     |                                                        |                                              |                                         |                                            | [11] x 1.4                                     | [10] - [12]                                                 |      |      |      |      |      |      |      |      |      |
|           | Total Cut<br>Unadjusted<br>Volume | Total Class 10<br>Unadjusted<br>Volume | Total<br>Cut<br>Adjusted | Total Fill<br>Unadjusted<br>Volume | Total<br>Fill<br>Adjusted | Total Fill<br>Adjusted w/<br>Weighted Average<br>1.3 Shrink Factor | Total Cut Adjusted<br>Minus Fill w/<br>Shrink | Approx. Fill Vol.<br>Below 5' & Above<br>20' w/ Shrink | Approx. Fill<br>Volume Below 3'<br>w/ Shrink | Topsoil<br>Stripping Undercut<br>Volume | Topsoil<br>Placement<br>Undercut<br>Volume | Topsoil Placement<br>With 1.4 Shrink<br>Factor | Topsoil Stripping<br>Minus Topsoil<br>Placement<br>w/Shrink |      |      |      |      |      |      |      |      |      |
| ML029A_1  |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
| 377+25.00 | 4                                 | 4                                      | 4                        | 0                                  | 0                         | 1                                                                  | 3                                             | 0                                                      | 0                                            | 0                                       | 20                                         | 28                                             | -28                                                         |      |      |      |      |      |      |      |      |      |
| 377+50.00 | 6                                 | 6                                      | 6                        | 2                                  | 2                         | 3                                                                  | 3                                             | 0                                                      | 0                                            | 0                                       | 42                                         | 59                                             | -59                                                         |      |      |      |      |      |      |      |      |      |
| 378+00.00 | 6                                 | 6                                      | 6                        | 3                                  | 3                         | 5                                                                  | 2                                             | 0                                                      | 0                                            | 0                                       | 45                                         | 63                                             | -63                                                         |      |      |      |      |      |      |      |      |      |
| 378+50.00 | 7                                 | 7                                      | 7                        | 2                                  | 2                         | 3                                                                  | 4                                             | 0                                                      | 0                                            | 0                                       | 48                                         | 67                                             | -67                                                         |      |      |      |      |      |      |      |      |      |
| 379+00.00 | 11                                | 11                                     | 11                       | 0                                  | 0                         | 1                                                                  | 11                                            | 0                                                      | 0                                            | 0                                       | 50                                         | 70                                             | -70                                                         |      |      |      |      |      |      |      |      |      |
| 379+50.00 | 20                                | 20                                     | 20                       | 0                                  | 0                         | 0                                                                  | 20                                            | 0                                                      | 0                                            | 0                                       | 50                                         | 71                                             | -71                                                         |      |      |      |      |      |      |      |      |      |
| 380+00.00 | 36                                | 36                                     | 36                       | 0                                  | 0                         | 0                                                                  | 36                                            | 0                                                      | 0                                            | 0                                       | 51                                         | 71                                             | -71                                                         |      |      |      |      |      |      |      |      |      |
| 380+50.00 | 47                                | 47                                     | 47                       | 0                                  | 0                         | 0                                                                  | 47                                            | 0                                                      | 0                                            | 0                                       | 51                                         | 71                                             | -71                                                         |      |      |      |      |      |      |      |      |      |
| 381+00.00 | 51                                | 51                                     | 51                       | 0                                  | 0                         | 0                                                                  | 51                                            | 0                                                      | 0                                            | 0                                       | 53                                         | 74                                             | -74                                                         |      |      |      |      |      |      |      |      |      |
| 381+50.00 | 39                                | 39                                     | 39                       | 0                                  | 0                         | 0                                                                  | 39                                            | 0                                                      | 0                                            | 0                                       | 39                                         | 55                                             | -55                                                         |      |      |      |      |      |      |      |      |      |
| 382+00.00 | 35                                | 35                                     | 35                       | 0                                  | 0                         | 0                                                                  | 35                                            | 0                                                      | 0                                            | 0                                       | 40                                         | 56                                             | -56                                                         |      |      |      |      |      |      |      |      |      |
| 382+50.00 | 48                                | 48                                     | 48                       | 0                                  | 0                         | 0                                                                  | 48                                            | 0                                                      | 0                                            | 0                                       | 52                                         | 73                                             | -73                                                         |      |      |      |      |      |      |      |      |      |
| 383+00.00 | 44                                | 44                                     | 44                       | 0                                  | 0                         | 0                                                                  | 45                                            | 0                                                      | 0                                            | 0                                       | 52                                         | 72                                             | -72                                                         |      |      |      |      |      |      |      |      |      |
| 383+50.00 | 37                                | 37                                     | 37                       | 0                                  | 0                         | 0                                                                  | 37                                            | 0                                                      | 0                                            | 0                                       | 53                                         | 74                                             | -74                                                         |      |      |      |      |      |      |      |      |      |
| 384+00.00 | 37                                | 37                                     | 37                       | 0                                  | 0                         | 0                                                                  | 37                                            | 0                                                      | 0                                            | 0                                       | 51                                         | 71                                             | -71                                                         |      |      |      |      |      |      |      |      |      |
| 384+50.00 | 42                                | 42                                     | 42                       | 0                                  | 0                         | 0                                                                  | 42                                            | 0                                                      | 0                                            | 0                                       | 49                                         | 68                                             | -68                                                         |      |      |      |      |      |      |      |      |      |
| 385+00.00 | 45                                | 45                                     | 45                       | 0                                  | 0                         | 0                                                                  | 45                                            | 0                                                      | 0                                            | 0                                       | 47                                         | 65                                             | -65                                                         |      |      |      |      |      |      |      |      |      |
| 385+50.00 | 39                                | 39                                     | 39                       | 0                                  | 0                         | 0                                                                  | 39                                            | 0                                                      | 0                                            | 0                                       | 38                                         | 54                                             | -54                                                         |      |      |      |      |      |      |      |      |      |
| 386+00.00 | 40                                | 40                                     | 40                       | 0                                  | 0                         | 0                                                                  | 40                                            | 0                                                      | 0                                            | 0                                       | 38                                         | 54                                             | -54                                                         |      |      |      |      |      |      |      |      |      |
| 386+50.00 | 45                                | 45                                     | 45                       | 0                                  | 0                         | 0                                                                  | 45                                            | 0                                                      | 0                                            | 0                                       | 46                                         | 64                                             | -64                                                         |      |      |      |      |      |      |      |      |      |
| 387+00.00 | 40                                | 40                                     | 40                       | 0                                  | 0                         | 0                                                                  | 40                                            | 0                                                      | 0                                            | 0                                       | 46                                         | 65                                             | -65                                                         |      |      |      |      |      |      |      |      |      |
| 387+50.00 | 32                                | 32                                     | 32                       | 0                                  | 0                         | 0                                                                  | 32                                            | 0                                                      | 0                                            | 0                                       | 46                                         | 64                                             | -64                                                         |      |      |      |      |      |      |      |      |      |
| 388+00.00 | 31                                | 31                                     | 31                       | 0                                  | 0                         | 0                                                                  | 32                                            | 0                                                      | 0                                            | 0                                       | 45                                         | 63                                             | -63                                                         |      |      |      |      |      |      |      |      |      |
| 388+50.00 | 34                                | 34                                     | 34                       | 0                                  | 0                         | 0                                                                  | 34                                            | 0                                                      | 0                                            | 0                                       | 45                                         | 63                                             | -63                                                         |      |      |      |      |      |      |      |      |      |
| 389+00.00 | 33                                | 33                                     | 33                       | 0                                  | 0                         | 0                                                                  | 33                                            | 0                                                      | 0                                            | 0                                       | 46                                         | 64                                             | -64                                                         |      |      |      |      |      |      |      |      |      |
| 389+50.00 | 34                                | 34                                     | 34                       | 0                                  | 0                         | 0                                                                  | 34                                            | 0                                                      | 0                                            | 0                                       | 45                                         | 63                                             | -63                                                         |      |      |      |      |      |      |      |      |      |
| 390+00.00 | 36                                | 36                                     | 36                       | 0                                  | 0                         | 0                                                                  | 36                                            | 0                                                      | 0                                            | 0                                       | 45                                         | 63                                             | -63                                                         |      |      |      |      |      |      |      |      |      |
| 390+50.00 | 36                                | 36                                     | 36                       | 0                                  | 0                         | 0                                                                  | 36                                            | 0                                                      | 0                                            | 0                                       | 45                                         | 63                                             | -63                                                         |      |      |      |      |      |      |      |      |      |
| 391+00.00 | 32                                | 32                                     | 32                       | 0                                  | 0                         | 0                                                                  | 32                                            | 0                                                      | 0                                            | 0                                       | 46                                         | 64                                             | -64                                                         |      |      |      |      |      |      |      |      |      |
| 391+50.00 | 32                                | 32                                     | 32                       | 0                                  | 0                         | 0                                                                  | 32                                            | 0                                                      | 0                                            | 0                                       | 46                                         | 65                                             | -65                                                         |      |      |      |      |      |      |      |      |      |
| 392+00.00 | 35                                | 35                                     | 35                       | 0                                  | 0                         | 0                                                                  | 35                                            | 0                                                      | 0                                            | 0                                       | 45                                         | 64                                             | -64                                                         |      |      |      |      |      |      |      |      |      |
| 392+50.00 | 38                                | 38                                     | 38                       | 0                                  | 0                         | 0                                                                  | 38                                            | 0                                                      | 0                                            | 0                                       | 44                                         | 62                                             | -62                                                         |      |      |      |      |      |      |      |      |      |
| 393+00.00 | 37                                | 37                                     | 37                       | 0                                  | 0                         | 0                                                                  | 38                                            | 0                                                      | 0                                            | 0                                       | 45                                         | 63                                             | -63                                                         |      |      |      |      |      |      |      |      |      |
| 393+50.00 | 32                                | 32                                     | 32                       | 0                                  | 0                         | 0                                                                  | 32                                            | 0                                                      | 0                                            | 0                                       | 46                                         | 64                                             | -64                                                         |      |      |      |      |      |      |      |      |      |
| 394+00.00 | 31                                | 31                                     | 31                       | 0                                  | 0                         | 0                                                                  | 31                                            | 0                                                      | 0                                            | 0                                       | 45                                         | 63                                             | -63                                                         |      |      |      |      |      |      |      |      |      |
| 394+50.00 | 31                                | 31                                     | 31                       | 0                                  | 0                         | 0                                                                  | 31                                            | 0                                                      | 0                                            | 0                                       | 44                                         | 61                                             | -61                                                         |      |      |      |      |      |      |      |      |      |
| 395+00.00 | 29                                | 29                                     | 29                       | 0                                  | 0                         | 0                                                                  | 29                                            | 0                                                      | 0                                            | 0                                       | 43                                         | 60                                             | -60                                                         |      |      |      |      |      |      |      |      |      |
| 395+50.00 | 29                                | 29                                     | 29                       | 0                                  | 0                         | 0                                                                  | 29                                            | 0                                                      | 0                                            | 0                                       | 43                                         | 60                                             | -60                                                         |      |      |      |      |      |      |      |      |      |
| 396+00.00 | 29                                | 29                                     | 29                       | 0                                  | 0                         | 0                                                                  | 29                                            | 0                                                      | 0                                            | 0                                       | 43                                         | 60                                             | -60                                                         |      |      |      |      |      |      |      |      |      |
| 396+50.00 | 29                                | 29                                     | 29                       | 0                                  | 0                         | 0                                                                  | 29                                            | 0                                                      | 0                                            | 0                                       | 43                                         | 61                                             | -61                                                         |      |      |      |      |      |      |      |      |      |
| 397+00.00 | 26                                | 26                                     | 26                       | 0                                  | 0                         | 0                                                                  | 26                                            | 0                                                      | 0                                            | 0                                       | 43                                         | 61                                             | -61                                                         |      |      |      |      |      |      |      |      |      |
| 397+50.00 | 26                                | 26                                     | 26                       | 0                                  | 0                         | 0                                                                  | 27                                            | 0                                                      | 0                                            | 0                                       | 44                                         | 61                                             | -61                                                         |      |      |      |      |      |      |      |      |      |
| 398+00.00 | 29                                | 29                                     | 29                       | 0                                  | 0                         | 0                                                                  | 29                                            | 0                                                      | 0                                            | 0                                       | 44                                         | 62                                             | -62                                                         |      |      |      |      |      |      |      |      |      |
| 398+50.00 | 30                                | 30                                     | 30                       | 0                                  | 0                         | 0                                                                  | 30                                            | 0                                                      | 0                                            | 0                                       | 44                                         | 61                                             | -61                                                         |      |      |      |      |      |      |      |      |      |
| 399+00.00 | 32                                | 32                                     | 32                       | 0                                  | 0                         | 0                                                                  | 32                                            | 0                                                      | 0                                            | 0                                       | 44                                         | 62                                             | -62                                                         |      |      |      |      |      |      |      |      |      |
| 399+50.00 | 27                                | 27                                     | 27                       | 0                                  | 0                         | 0                                                                  | 27                                            | 0                                                      | 0                                            | 0                                       | 46                                         | 64                                             | -64                                                         |      |      |      |      |      |      |      |      |      |
| 400+00.00 | 11                                | 11                                     | 11                       | 0                                  | 0                         | 0                                                                  | 11                                            | 0                                                      | 0                                            | 0                                       | 24                                         | 33                                             | -33                                                         |      |      |      |      |      |      |      |      |      |
| 400+25.00 |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
| ML029A_1  |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
| Totals:   | 1,480                             | 1,480                                  | 1,480                    | 9                                  | 9                         | 12                                                                 | 1,471                                         | 0                                                      | 0                                            | 0                                       | 2,098                                      | 2,939                                          | -2,939                                                      |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |

|          |  |                                                     |                             |                                               |                         |  |
|----------|--|-----------------------------------------------------|-----------------------------|-----------------------------------------------|-------------------------|--|
| FILE NO. |  | DESIGN TEAM <b>Flattery\Bell\Schinstock\Schmitz</b> | <b>Pottawattamie</b> COUNTY | PROJECT NUMBER <b>IMX-029-4(148)62--02-78</b> | SHEET NUMBER <b>T.3</b> |  |
|----------|--|-----------------------------------------------------|-----------------------------|-----------------------------------------------|-------------------------|--|

Refer to Standard Road Plans EW-101 and EW-102.

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## TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

| Station   | Cut                               |                                        |                          | Fill                               |                           |                                                                    |                                               | Checks (EW-102)                                        |                                              | Topsoil                                 |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|-----------|-----------------------------------|----------------------------------------|--------------------------|------------------------------------|---------------------------|--------------------------------------------------------------------|-----------------------------------------------|--------------------------------------------------------|----------------------------------------------|-----------------------------------------|--------------------------------------------|------------------------------------------------|-------------------------------------------------------------|------|------|------|------|------|------|------|------|------|
|           | [1]                               | [2]                                    | [3]                      | [4]                                | [5]                       | [6]                                                                | [7]                                           | [8]                                                    | [9]                                          | [10]                                    | [11]                                       | [12]                                           | [13]                                                        | [14] | [15] | [16] | [17] | [18] | [19] | [20] | [21] | [22] |
|           |                                   |                                        | [2]                      |                                    | [4]                       | [5] × 1.3                                                          | [3] - [6]                                     |                                                        |                                              |                                         |                                            | [11] × 1.4                                     | [10] - [12]                                                 |      |      |      |      |      |      |      |      |      |
|           | Total Cut<br>Unadjusted<br>Volume | Total Class 10<br>Unadjusted<br>Volume | Total<br>Cut<br>Adjusted | Total Fill<br>Unadjusted<br>Volume | Total<br>Fill<br>Adjusted | Total Fill<br>Adjusted w/<br>Weighted Average<br>1.3 Shrink Factor | Total Cut Adjusted<br>Minus Fill w/<br>Shrink | Approx. Fill Vol.<br>Below 5' & Above<br>20' w/ Shrink | Approx. Fill<br>Volume Below 3'<br>w/ Shrink | Topsoil<br>Stripping Undercut<br>Volume | Topsoil<br>Placement<br>Undercut<br>Volume | Topsoil Placement<br>With 1.4 Shrink<br>Factor | Topsoil Stripping<br>Minus Topsoil<br>Placement<br>w/Shrink |      |      |      |      |      |      |      |      |      |
| ML029A_2  |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
| 425+50.00 | 35                                | 35                                     | 35                       | 0                                  | 0                         | 0                                                                  | 35                                            | 0                                                      | 0                                            | 0                                       | 48                                         | 67                                             | -67                                                         |      |      |      |      |      |      |      |      |      |
| 426+00.00 | 33                                | 33                                     | 33                       | 0                                  | 0                         | 0                                                                  | 33                                            | 0                                                      | 0                                            | 0                                       | 49                                         | 69                                             | -69                                                         |      |      |      |      |      |      |      |      |      |
| 426+50.00 | 30                                | 30                                     | 30                       | 0                                  | 0                         | 0                                                                  | 30                                            | 0                                                      | 0                                            | 0                                       | 50                                         | 70                                             | -70                                                         |      |      |      |      |      |      |      |      |      |
| 427+00.00 | 29                                | 29                                     | 29                       | 0                                  | 0                         | 0                                                                  | 29                                            | 0                                                      | 0                                            | 0                                       | 52                                         | 72                                             | -72                                                         |      |      |      |      |      |      |      |      |      |
| 427+50.00 | 35                                | 35                                     | 35                       | 0                                  | 0                         | 0                                                                  | 35                                            | 0                                                      | 0                                            | 0                                       | 53                                         | 74                                             | -74                                                         |      |      |      |      |      |      |      |      |      |
| 428+00.00 | 27                                | 27                                     | 27                       | 1                                  | 1                         | 1                                                                  | 27                                            | 0                                                      | 0                                            | 0                                       | 53                                         | 74                                             | -74                                                         |      |      |      |      |      |      |      |      |      |
| 428+50.00 | 20                                | 20                                     | 20                       | 1                                  | 1                         | 1                                                                  | 19                                            | 0                                                      | 0                                            | 0                                       | 52                                         | 73                                             | -73                                                         |      |      |      |      |      |      |      |      |      |
| 429+00.00 | 24                                | 24                                     | 24                       | 0                                  | 0                         | 0                                                                  | 24                                            | 0                                                      | 0                                            | 0                                       | 44                                         | 62                                             | -62                                                         |      |      |      |      |      |      |      |      |      |
| 429+50.00 | 25                                | 25                                     | 25                       | 0                                  | 0                         | 0                                                                  | 25                                            | 0                                                      | 0                                            | 0                                       | 43                                         | 60                                             | -60                                                         |      |      |      |      |      |      |      |      |      |
| 430+00.00 | 26                                | 26                                     | 26                       | 1                                  | 1                         | 1                                                                  | 25                                            | 0                                                      | 0                                            | 0                                       | 51                                         | 71                                             | -71                                                         |      |      |      |      |      |      |      |      |      |
| 430+50.00 | 28                                | 28                                     | 28                       | 1                                  | 1                         | 1                                                                  | 27                                            | 0                                                      | 0                                            | 0                                       | 55                                         | 76                                             | -76                                                         |      |      |      |      |      |      |      |      |      |
| 431+00.00 | 30                                | 30                                     | 30                       | 0                                  | 0                         | 0                                                                  | 30                                            | 0                                                      | 0                                            | 0                                       | 54                                         | 75                                             | -75                                                         |      |      |      |      |      |      |      |      |      |
| 431+50.00 | 33                                | 33                                     | 33                       | 0                                  | 0                         | 0                                                                  | 33                                            | 0                                                      | 0                                            | 0                                       | 49                                         | 68                                             | -68                                                         |      |      |      |      |      |      |      |      |      |
| 432+00.00 |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
| ML029A_2  |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
| Totals:   | 375                               | 375                                    | 375                      | 3                                  | 3                         | 4                                                                  | 372                                           | 0                                                      | 0                                            | 0                                       | 652                                        | 913                                            | -913                                                        |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |

Refer to Standard Road Plans EW-101 and EW-102.

107-28  
04-21-15

## TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

| Station   | Cut                               |                                        |                          | Fill                               |                           |                                                                    |                                               | Checks (EW-102)                                        |                                              | Topsoil                                 |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|-----------|-----------------------------------|----------------------------------------|--------------------------|------------------------------------|---------------------------|--------------------------------------------------------------------|-----------------------------------------------|--------------------------------------------------------|----------------------------------------------|-----------------------------------------|--------------------------------------------|------------------------------------------------|-------------------------------------------------------------|------|------|------|------|------|------|------|------|------|
|           | [1]                               | [2]                                    | [3]                      | [4]                                | [5]                       | [6]                                                                | [7]                                           | [8]                                                    | [9]                                          | [10]                                    | [11]                                       | [12]                                           | [13]                                                        | [14] | [15] | [16] | [17] | [18] | [19] | [20] | [21] | [22] |
|           |                                   |                                        | [2]                      |                                    | [4]                       | [5] x 1.3                                                          | [3] - [6]                                     |                                                        |                                              |                                         |                                            | [11] x 1.4                                     | [10] - [12]                                                 |      |      |      |      |      |      |      |      |      |
|           | Total Cut<br>Unadjusted<br>Volume | Total Class 10<br>Unadjusted<br>Volume | Total<br>Cut<br>Adjusted | Total Fill<br>Unadjusted<br>Volume | Total<br>Fill<br>Adjusted | Total Fill<br>Adjusted w/<br>Weighted Average<br>1.3 Shrink Factor | Total Cut Adjusted<br>Minus Fill w/<br>Shrink | Approx. Fill Vol.<br>Below 5' & Above<br>20' w/ Shrink | Approx. Fill<br>Volume Below 3'<br>w/ Shrink | Topsoil<br>Stripping Undercut<br>Volume | Topsoil<br>Placement<br>Undercut<br>Volume | Topsoil Placement<br>With 1.4 Shrink<br>Factor | Topsoil Stripping<br>Minus Topsoil<br>Placement<br>w/Shrink |      |      |      |      |      |      |      |      |      |
| ML029B    |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
| 515+75.00 | 8                                 | 8                                      | 8                        | 0                                  | 0                         | 0                                                                  | 8                                             | 0                                                      | 0                                            | 0                                       | 19                                         | 26                                             | -26                                                         |      |      |      |      |      |      |      |      |      |
| 516+00.00 | 15                                | 15                                     | 15                       | 0                                  | 0                         | 1                                                                  | 14                                            | 0                                                      | 0                                            | 0                                       | 37                                         | 52                                             | -52                                                         |      |      |      |      |      |      |      |      |      |
| 516+50.00 | 20                                | 20                                     | 20                       | 0                                  | 0                         | 1                                                                  | 20                                            | 0                                                      | 0                                            | 0                                       | 36                                         | 50                                             | -50                                                         |      |      |      |      |      |      |      |      |      |
| 517+00.00 | 20                                | 20                                     | 20                       | 0                                  | 0                         | 0                                                                  | 20                                            | 0                                                      | 0                                            | 0                                       | 35                                         | 49                                             | -49                                                         |      |      |      |      |      |      |      |      |      |
| 517+50.00 | 25                                | 25                                     | 25                       | 0                                  | 0                         | 0                                                                  | 25                                            | 0                                                      | 0                                            | 0                                       | 36                                         | 51                                             | -51                                                         |      |      |      |      |      |      |      |      |      |
| 518+00.00 | 29                                | 29                                     | 29                       | 0                                  | 0                         | 0                                                                  | 29                                            | 0                                                      | 0                                            | 0                                       | 41                                         | 57                                             | -57                                                         |      |      |      |      |      |      |      |      |      |
| 518+50.00 | 27                                | 27                                     | 27                       | 0                                  | 0                         | 0                                                                  | 27                                            | 0                                                      | 0                                            | 0                                       | 44                                         | 62                                             | -62                                                         |      |      |      |      |      |      |      |      |      |
| 519+00.00 | 35                                | 35                                     | 35                       | 0                                  | 0                         | 0                                                                  | 35                                            | 0                                                      | 0                                            | 0                                       | 47                                         | 66                                             | -66                                                         |      |      |      |      |      |      |      |      |      |
| 519+50.00 | 45                                | 45                                     | 45                       | 0                                  | 0                         | 0                                                                  | 45                                            | 0                                                      | 0                                            | 0                                       | 50                                         | 71                                             | -71                                                         |      |      |      |      |      |      |      |      |      |
| 520+00.00 | 50                                | 50                                     | 50                       | 0                                  | 0                         | 0                                                                  | 50                                            | 0                                                      | 0                                            | 0                                       | 47                                         | 66                                             | -66                                                         |      |      |      |      |      |      |      |      |      |
| 520+50.00 | 29                                | 29                                     | 29                       | 10                                 | 10                        | 13                                                                 | 17                                            | 0                                                      | 0                                            | 0                                       | 47                                         | 66                                             | -66                                                         |      |      |      |      |      |      |      |      |      |
| 521+00.00 | 16                                | 16                                     | 16                       | 10                                 | 10                        | 13                                                                 | 3                                             | 0                                                      | 0                                            | 0                                       | 51                                         | 71                                             | -71                                                         |      |      |      |      |      |      |      |      |      |
| 521+50.00 | 18                                | 18                                     | 18                       | 0                                  | 0                         | 0                                                                  | 18                                            | 0                                                      | 0                                            | 0                                       | 51                                         | 71                                             | -71                                                         |      |      |      |      |      |      |      |      |      |
| 522+00.00 | 22                                | 22                                     | 22                       | 0                                  | 0                         | 0                                                                  | 22                                            | 0                                                      | 0                                            | 0                                       | 51                                         | 72                                             | -72                                                         |      |      |      |      |      |      |      |      |      |
| 522+50.00 | 29                                | 29                                     | 29                       | 0                                  | 0                         | 0                                                                  | 29                                            | 0                                                      | 0                                            | 0                                       | 50                                         | 71                                             | -71                                                         |      |      |      |      |      |      |      |      |      |
| 523+00.00 | 28                                | 28                                     | 28                       | 0                                  | 0                         | 0                                                                  | 28                                            | 0                                                      | 0                                            | 0                                       | 51                                         | 71                                             | -71                                                         |      |      |      |      |      |      |      |      |      |
| 523+50.00 | 31                                | 31                                     | 31                       | 0                                  | 0                         | 0                                                                  | 31                                            | 0                                                      | 0                                            | 0                                       | 51                                         | 71                                             | -71                                                         |      |      |      |      |      |      |      |      |      |
| 524+00.00 | 36                                | 36                                     | 36                       | 0                                  | 0                         | 0                                                                  | 36                                            | 0                                                      | 0                                            | 0                                       | 50                                         | 70                                             | -70                                                         |      |      |      |      |      |      |      |      |      |
| 524+50.00 | 43                                | 43                                     | 43                       | 0                                  | 0                         | 0                                                                  | 43                                            | 0                                                      | 0                                            | 0                                       | 50                                         | 70                                             | -70                                                         |      |      |      |      |      |      |      |      |      |
| 525+00.00 | 43                                | 43                                     | 43                       | 0                                  | 0                         | 0                                                                  | 43                                            | 0                                                      | 0                                            | 0                                       | 50                                         | 70                                             | -70                                                         |      |      |      |      |      |      |      |      |      |
| 525+50.00 | 36                                | 36                                     | 36                       | 0                                  | 0                         | 0                                                                  | 36                                            | 0                                                      | 0                                            | 0                                       | 51                                         | 71                                             | -71                                                         |      |      |      |      |      |      |      |      |      |
| 526+00.00 | 35                                | 35                                     | 35                       | 0                                  | 0                         | 0                                                                  | 35                                            | 0                                                      | 0                                            | 0                                       | 51                                         | 72                                             | -72                                                         |      |      |      |      |      |      |      |      |      |
| 526+50.00 | 35                                | 35                                     | 35                       | 0                                  | 0                         | 0                                                                  | 35                                            | 0                                                      | 0                                            | 0                                       | 51                                         | 71                                             | -71                                                         |      |      |      |      |      |      |      |      |      |
| 527+00.00 | 32                                | 32                                     | 32                       | 0                                  | 0                         | 0                                                                  | 32                                            | 0                                                      | 0                                            | 0                                       | 51                                         | 71                                             | -71                                                         |      |      |      |      |      |      |      |      |      |
| 527+50.00 | 33                                | 33                                     | 33                       | 0                                  | 0                         | 0                                                                  | 34                                            | 0                                                      | 0                                            | 0                                       | 48                                         | 68                                             | -68                                                         |      |      |      |      |      |      |      |      |      |
| 528+00.00 | 41                                | 41                                     | 41                       | 0                                  | 0                         | 0                                                                  | 41                                            | 0                                                      | 0                                            | 0                                       | 45                                         | 63                                             | -63                                                         |      |      |      |      |      |      |      |      |      |
| 528+50.00 | 42                                | 42                                     | 42                       | 0                                  | 0                         | 0                                                                  | 42                                            | 0                                                      | 0                                            | 0                                       | 44                                         | 62                                             | -62                                                         |      |      |      |      |      |      |      |      |      |
| 529+00.00 | 36                                | 36                                     | 36                       | 0                                  | 0                         | 0                                                                  | 36                                            | 0                                                      | 0                                            | 0                                       | 43                                         | 60                                             | -60                                                         |      |      |      |      |      |      |      |      |      |
| 529+50.00 | 34                                | 34                                     | 34                       | 0                                  | 0                         | 0                                                                  | 35                                            | 0                                                      | 0                                            | 0                                       | 44                                         | 62                                             | -62                                                         |      |      |      |      |      |      |      |      |      |
| 530+00.00 | 29                                | 29                                     | 29                       | 0                                  | 0                         | 0                                                                  | 29                                            | 0                                                      | 0                                            | 0                                       | 47                                         | 65                                             | -65                                                         |      |      |      |      |      |      |      |      |      |
| 530+50.00 | 18                                | 18                                     | 18                       | 1                                  | 1                         | 1                                                                  | 17                                            | 0                                                      | 0                                            | 0                                       | 47                                         | 67                                             | -67                                                         |      |      |      |      |      |      |      |      |      |
| 531+00.00 | 22                                | 22                                     | 22                       | 1                                  | 1                         | 1                                                                  | 22                                            | 0                                                      | 0                                            | 0                                       | 46                                         | 64                                             | -64                                                         |      |      |      |      |      |      |      |      |      |
| 531+50.00 | 31                                | 31                                     | 31                       | 0                                  | 0                         | 0                                                                  | 31                                            | 0                                                      | 0                                            | 0                                       | 38                                         | 54                                             | -54                                                         |      |      |      |      |      |      |      |      |      |
| 532+00.00 | 29                                | 29                                     | 29                       | 0                                  | 0                         | 0                                                                  | 29                                            | 0                                                      | 0                                            | 0                                       | 37                                         | 52                                             | -52                                                         |      |      |      |      |      |      |      |      |      |
| 532+50.00 | 20                                | 20                                     | 20                       | 2                                  | 2                         | 2                                                                  | 18                                            | 0                                                      | 0                                            | 0                                       | 41                                         | 57                                             | -57                                                         |      |      |      |      |      |      |      |      |      |
| 533+00.00 | 13                                | 13                                     | 13                       | 3                                  | 3                         | 4                                                                  | 9                                             | 0                                                      | 0                                            | 0                                       | 40                                         | 56                                             | -56                                                         |      |      |      |      |      |      |      |      |      |
| 533+50.00 | 13                                | 13                                     | 13                       | 3                                  | 3                         | 3                                                                  | 10                                            | 0                                                      | 0                                            | 0                                       | 40                                         | 56                                             | -56                                                         |      |      |      |      |      |      |      |      |      |
| 534+00.00 | 12                                | 12                                     | 12                       | 4                                  | 4                         | 6                                                                  | 6                                             | 0                                                      | 0                                            | 0                                       | 40                                         | 56                                             | -56                                                         |      |      |      |      |      |      |      |      |      |
| 534+50.00 | 13                                | 13                                     | 13                       | 4                                  | 4                         | 5                                                                  | 9                                             | 0                                                      | 0                                            | 0                                       | 39                                         | 54                                             | -54                                                         |      |      |      |      |      |      |      |      |      |
| 535+00.00 | 13                                | 13                                     | 13                       | 3                                  | 3                         | 4                                                                  | 9                                             | 0                                                      | 0                                            | 0                                       | 38                                         | 54                                             | -54                                                         |      |      |      |      |      |      |      |      |      |
| 535+50.00 | 5                                 | 5                                      | 5                        | 2                                  | 2                         | 3                                                                  | 3                                             | 0                                                      | 0                                            | 0                                       | 20                                         | 28                                             | -28                                                         |      |      |      |      |      |      |      |      |      |
| ML029B    |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
| Totals:   | 1,109                             | 1,109                                  | 1,109                    | 42                                 | 42                        | 55                                                                 | 1,057                                         | 0                                                      | 0                                            | 0                                       | 1,795                                      | 2,514                                          | -2,514                                                      |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|           |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |

|          |  |                                                     |                             |                                               |                         |  |
|----------|--|-----------------------------------------------------|-----------------------------|-----------------------------------------------|-------------------------|--|
| FILE NO. |  | DESIGN TEAM <b>Flattery\Bell\Schinstock\Schmitz</b> | <b>Pottawattamie</b> COUNTY | PROJECT NUMBER <b>IMX-029-4(148)62--02-78</b> | SHEET NUMBER <b>T.5</b> |  |
|----------|--|-----------------------------------------------------|-----------------------------|-----------------------------------------------|-------------------------|--|

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

| Station    | Cut                               |                                        |                          | Fill                               |                           |                                                                    |                                               | Checks (EW-102)                                        |                                              | Topsoil                                 |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|------------|-----------------------------------|----------------------------------------|--------------------------|------------------------------------|---------------------------|--------------------------------------------------------------------|-----------------------------------------------|--------------------------------------------------------|----------------------------------------------|-----------------------------------------|--------------------------------------------|------------------------------------------------|-------------------------------------------------------------|------|------|------|------|------|------|------|------|------|
|            | [1]                               | [2]                                    | [3]                      | [4]                                | [5]                       | [6]                                                                | [7]                                           | [8]                                                    | [9]                                          | [10]                                    | [11]                                       | [12]                                           | [13]                                                        | [14] | [15] | [16] | [17] | [18] | [19] | [20] | [21] | [22] |
|            |                                   |                                        | [2]                      |                                    | [4]                       | [5] x 1.3                                                          | [3] - [6]                                     |                                                        |                                              |                                         |                                            | [11] x 1.4                                     | [10] - [12]                                                 |      |      |      |      |      |      |      |      |      |
|            | Total Cut<br>Unadjusted<br>Volume | Total Class 10<br>Unadjusted<br>Volume | Total<br>Cut<br>Adjusted | Total Fill<br>Unadjusted<br>Volume | Total<br>Fill<br>Adjusted | Total Fill<br>Adjusted w/<br>Weighted Average<br>1.3 Shrink Factor | Total Cut Adjusted<br>Minus Fill w/<br>Shrink | Approx. Fill Vol.<br>Below 5' & Above<br>20' w/ Shrink | Approx. Fill<br>Volume Below 3'<br>w/ Shrink | Topsoil<br>Stripping Undercut<br>Volume | Topsoil<br>Placement<br>Undercut<br>Volume | Topsoil Placement<br>With 1.4 Shrink<br>Factor | Topsoil Stripping<br>Minus Topsoil<br>Placement<br>w/Shrink |      |      |      |      |      |      |      |      |      |
| ML029C     |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
| 619+75.00  | 5                                 | 5                                      | 5                        | 1                                  | 1                         | 1                                                                  | 4                                             | 0                                                      | 0                                            | 0                                       | 21                                         | 29                                             | -29                                                         |      |      |      |      |      |      |      |      |      |
| 620+00.00  | 12                                | 12                                     | 12                       | 0                                  | 0                         | 0                                                                  | 12                                            | 0                                                      | 0                                            | 0                                       | 41                                         | 57                                             | -57                                                         |      |      |      |      |      |      |      |      |      |
| 620+50.00  | 14                                | 14                                     | 14                       | 0                                  | 0                         | 1                                                                  | 13                                            | 0                                                      | 0                                            | 0                                       | 40                                         | 56                                             | -56                                                         |      |      |      |      |      |      |      |      |      |
| 621+00.00  | 12                                | 12                                     | 12                       | 3                                  | 3                         | 5                                                                  | 8                                             | 0                                                      | 0                                            | 0                                       | 40                                         | 56                                             | -56                                                         |      |      |      |      |      |      |      |      |      |
| 621+50.00  | 11                                | 11                                     | 11                       | 10                                 | 10                        | 13                                                                 | -2                                            | 0                                                      | 0                                            | 0                                       | 42                                         | 59                                             | -59                                                         |      |      |      |      |      |      |      |      |      |
| 622+00.00  | 9                                 | 9                                      | 9                        | 16                                 | 16                        | 21                                                                 | -13                                           | 0                                                      | 0                                            | 0                                       | 43                                         | 61                                             | -61                                                         |      |      |      |      |      |      |      |      |      |
| 622+50.00  | 8                                 | 8                                      | 8                        | 22                                 | 22                        | 29                                                                 | -21                                           | 0                                                      | 0                                            | 0                                       | 43                                         | 61                                             | -61                                                         |      |      |      |      |      |      |      |      |      |
| 623+00.00  | 8                                 | 8                                      | 8                        | 26                                 | 26                        | 34                                                                 | -26                                           | 0                                                      | 0                                            | 0                                       | 43                                         | 61                                             | -61                                                         |      |      |      |      |      |      |      |      |      |
| 623+50.00  | 7                                 | 7                                      | 7                        | 28                                 | 28                        | 37                                                                 | -30                                           | 0                                                      | 0                                            | 0                                       | 42                                         | 59                                             | -59                                                         |      |      |      |      |      |      |      |      |      |
| 624+00.00  | 7                                 | 7                                      | 7                        | 27                                 | 27                        | 35                                                                 | -29                                           | 0                                                      | 0                                            | 0                                       | 41                                         | 57                                             | -57                                                         |      |      |      |      |      |      |      |      |      |
| 624+50.00  | 8                                 | 8                                      | 8                        | 22                                 | 22                        | 28                                                                 | -21                                           | 0                                                      | 0                                            | 0                                       | 40                                         | 56                                             | -56                                                         |      |      |      |      |      |      |      |      |      |
| 625+00.00  | 8                                 | 8                                      | 8                        | 21                                 | 21                        | 28                                                                 | -19                                           | 0                                                      | 0                                            | 0                                       | 40                                         | 56                                             | -56                                                         |      |      |      |      |      |      |      |      |      |
| 625+50.00  | 9                                 | 9                                      | 9                        | 20                                 | 20                        | 26                                                                 | -18                                           | 0                                                      | 0                                            | 0                                       | 41                                         | 58                                             | -58                                                         |      |      |      |      |      |      |      |      |      |
| 626+00.00  | 9                                 | 9                                      | 9                        | 18                                 | 18                        | 24                                                                 | -15                                           | 0                                                      | 0                                            | 0                                       | 43                                         | 60                                             | -60                                                         |      |      |      |      |      |      |      |      |      |
| 626+50.00  | 9                                 | 9                                      | 9                        | 18                                 | 18                        | 24                                                                 | -15                                           | 0                                                      | 0                                            | 0                                       | 43                                         | 60                                             | -60                                                         |      |      |      |      |      |      |      |      |      |
| 627+00.00  | 8                                 | 8                                      | 8                        | 19                                 | 19                        | 25                                                                 | -17                                           | 0                                                      | 0                                            | 0                                       | 43                                         | 60                                             | -60                                                         |      |      |      |      |      |      |      |      |      |
| 627+50.00  | 8                                 | 8                                      | 8                        | 19                                 | 19                        | 25                                                                 | -17                                           | 0                                                      | 0                                            | 0                                       | 43                                         | 60                                             | -60                                                         |      |      |      |      |      |      |      |      |      |
| 628+00.00  | 8                                 | 8                                      | 8                        | 19                                 | 19                        | 24                                                                 | -17                                           | 0                                                      | 0                                            | 0                                       | 43                                         | 60                                             | -60                                                         |      |      |      |      |      |      |      |      |      |
| 628+50.00  | 6                                 | 6                                      | 6                        | 23                                 | 23                        | 31                                                                 | -25                                           | 0                                                      | 0                                            | 0                                       | 44                                         | 62                                             | -62                                                         |      |      |      |      |      |      |      |      |      |
| 629+00.00  | 6                                 | 6                                      | 6                        | 27                                 | 27                        | 35                                                                 | -29                                           | 0                                                      | 0                                            | 0                                       | 45                                         | 64                                             | -64                                                         |      |      |      |      |      |      |      |      |      |
| 629+50.00  | 6                                 | 6                                      | 6                        | 29                                 | 29                        | 37                                                                 | -31                                           | 0                                                      | 0                                            | 0                                       | 46                                         | 65                                             | -65                                                         |      |      |      |      |      |      |      |      |      |
| 630+00.00  | 6                                 | 6                                      | 6                        | 19                                 | 19                        | 24                                                                 | -18                                           | 0                                                      | 0                                            | 0                                       | 44                                         | 62                                             | -62                                                         |      |      |      |      |      |      |      |      |      |
| 630+50.00  | 8                                 | 8                                      | 8                        | 4                                  | 4                         | 5                                                                  | 3                                             | 0                                                      | 0                                            | 0                                       | 42                                         | 59                                             | -59                                                         |      |      |      |      |      |      |      |      |      |
| 631+00.00  | 9                                 | 9                                      | 9                        | 0                                  | 0                         | 0                                                                  | 9                                             | 0                                                      | 0                                            | 0                                       | 40                                         | 56                                             | -56                                                         |      |      |      |      |      |      |      |      |      |
| 631+50.00  | 16                                | 16                                     | 16                       | 0                                  | 0                         | 0                                                                  | 16                                            | 0                                                      | 0                                            | 0                                       | 39                                         | 55                                             | -55                                                         |      |      |      |      |      |      |      |      |      |
| 632+00.00  | 17                                | 17                                     | 17                       | 0                                  | 0                         | 0                                                                  | 17                                            | 0                                                      | 0                                            | 0                                       | 39                                         | 55                                             | -55                                                         |      |      |      |      |      |      |      |      |      |
| 632+50.00  | 9                                 | 9                                      | 9                        | 0                                  | 0                         | 1                                                                  | 8                                             | 0                                                      | 0                                            | 0                                       | 40                                         | 56                                             | -56                                                         |      |      |      |      |      |      |      |      |      |
| 633+00.00  | 7                                 | 7                                      | 7                        | 1                                  | 1                         | 1                                                                  | 6                                             | 0                                                      | 0                                            | 0                                       | 40                                         | 56                                             | -56                                                         |      |      |      |      |      |      |      |      |      |
| 633+50.00  | 9                                 | 9                                      | 9                        | 1                                  | 1                         | 1                                                                  | 8                                             | 0                                                      | 0                                            | 0                                       | 40                                         | 56                                             | -56                                                         |      |      |      |      |      |      |      |      |      |
| 634+00.00  | 13                                | 13                                     | 13                       | 0                                  | 0                         | 0                                                                  | 13                                            | 0                                                      | 0                                            | 0                                       | 40                                         | 56                                             | -56                                                         |      |      |      |      |      |      |      |      |      |
| 634+50.00  | 19                                | 19                                     | 19                       | 0                                  | 0                         | 0                                                                  | 19                                            | 0                                                      | 0                                            | 0                                       | 39                                         | 55                                             | -55                                                         |      |      |      |      |      |      |      |      |      |
| 635+00.00  | 20                                | 20                                     | 20                       | 0                                  | 0                         | 0                                                                  | 20                                            | 0                                                      | 0                                            | 0                                       | 38                                         | 54                                             | -54                                                         |      |      |      |      |      |      |      |      |      |
| 635+50.00  | 16                                | 16                                     | 16                       | 0                                  | 0                         | 0                                                                  | 16                                            | 0                                                      | 0                                            | 0                                       | 39                                         | 54                                             | -54                                                         |      |      |      |      |      |      |      |      |      |
| 636+00.00  | 14                                | 14                                     | 14                       | 0                                  | 0                         | 0                                                                  | 14                                            | 0                                                      | 0                                            | 0                                       | 40                                         | 56                                             | -56                                                         |      |      |      |      |      |      |      |      |      |
| 636+50.00  | 14                                | 14                                     | 14                       | 0                                  | 0                         | 0                                                                  | 14                                            | 0                                                      | 0                                            | 0                                       | 40                                         | 56                                             | -56                                                         |      |      |      |      |      |      |      |      |      |
| 637+00.00  | 17                                | 17                                     | 17                       | 0                                  | 0                         | 0                                                                  | 17                                            | 0                                                      | 0                                            | 0                                       | 39                                         | 55                                             | -55                                                         |      |      |      |      |      |      |      |      |      |
| 637+50.00  | 16                                | 16                                     | 16                       | 0                                  | 0                         | 0                                                                  | 16                                            | 0                                                      | 0                                            | 0                                       | 38                                         | 54                                             | -54                                                         |      |      |      |      |      |      |      |      |      |
| 638+00.00  | 14                                | 14                                     | 14                       | 0                                  | 0                         | 0                                                                  | 14                                            | 0                                                      | 0                                            | 0                                       | 37                                         | 52                                             | -52                                                         |      |      |      |      |      |      |      |      |      |
| 638+50.00  | 14                                | 14                                     | 14                       | 1                                  | 1                         | 2                                                                  | 12                                            | 0                                                      | 0                                            | 0                                       | 37                                         | 52                                             | -52                                                         |      |      |      |      |      |      |      |      |      |
| 639+00.00  | 9                                 | 9                                      | 9                        | 6                                  | 6                         | 8                                                                  | 1                                             | 0                                                      | 0                                            | 0                                       | 38                                         | 54                                             | -54                                                         |      |      |      |      |      |      |      |      |      |
| 639+50.00  | 7                                 | 7                                      | 7                        | 7                                  | 7                         | 9                                                                  | -3                                            | 0                                                      | 0                                            | 0                                       | 38                                         | 53                                             | -53                                                         |      |      |      |      |      |      |      |      |      |
| 640+00.00  | 9                                 | 9                                      | 9                        | 2                                  | 2                         | 3                                                                  | 6                                             | 0                                                      | 0                                            | 0                                       | 38                                         | 53                                             | -53                                                         |      |      |      |      |      |      |      |      |      |
| 640+50.00  | 12                                | 12                                     | 12                       | 1                                  | 1                         | 1                                                                  | 11                                            | 0                                                      | 0                                            | 0                                       | 38                                         | 53                                             | -53                                                         |      |      |      |      |      |      |      |      |      |
| 641+00.00  | 14                                | 14                                     | 14                       | 1                                  | 1                         | 2                                                                  | 13                                            | 0                                                      | 0                                            | 0                                       | 39                                         | 54                                             | -54                                                         |      |      |      |      |      |      |      |      |      |
| 641+50.00  | 13                                | 13                                     | 13                       | 1                                  | 1                         | 2                                                                  | 12                                            | 0                                                      | 0                                            | 0                                       | 39                                         | 55                                             | -55                                                         |      |      |      |      |      |      |      |      |      |
| 642+00.00  | 13                                | 13                                     | 13                       | 1                                  | 1                         | 1                                                                  | 12                                            | 0                                                      | 0                                            | 0                                       | 39                                         | 54                                             | -54                                                         |      |      |      |      |      |      |      |      |      |
| 642+50.00  | 12                                | 12                                     | 12                       | 1                                  | 1                         | 2                                                                  | 11                                            | 0                                                      | 0                                            | 0                                       | 38                                         | 53                                             | -53                                                         |      |      |      |      |      |      |      |      |      |
| 643+00.00  | 13                                | 13                                     | 13                       | 1                                  | 1                         | 1                                                                  | 11                                            | 0                                                      | 0                                            | 0                                       | 38                                         | 54                                             | -54                                                         |      |      |      |      |      |      |      |      |      |
| 643+50.00  | 17                                | 17                                     | 17                       | 0                                  | 0                         | 0                                                                  | 17                                            | 0                                                      | 0                                            | 0                                       | 39                                         | 55                                             | -55                                                         |      |      |      |      |      |      |      |      |      |
| 644+00.00  | 18                                | 18                                     | 18                       | 0                                  | 0                         | 0                                                                  | 18                                            | 0                                                      | 0                                            | 0                                       | 40                                         | 56                                             | -56                                                         |      |      |      |      |      |      |      |      |      |
| 644+50.00  | 14                                | 14                                     | 14                       | 0                                  | 0                         | 1                                                                  | 13                                            | 0                                                      | 0                                            | 0                                       | 40                                         | 56                                             | -56                                                         |      |      |      |      |      |      |      |      |      |
| 645+00.00  | 12                                | 12                                     | 12                       | 0                                  | 0                         | 1                                                                  | 12                                            | 0                                                      | 0                                            | 0                                       | 40                                         | 56                                             | -56                                                         |      |      |      |      |      |      |      |      |      |
| 645+50.00  | 15                                | 15                                     | 15                       | 0                                  | 0                         | 0                                                                  | 15                                            | 0                                                      | 0                                            | 0                                       | 40                                         | 56                                             | -56                                                         |      |      |      |      |      |      |      |      |      |
| 646+00.00  | 15                                | 15                                     | 15                       | 2                                  | 2                         | 3                                                                  | 12                                            | 0                                                      | 0                                            | 0                                       | 39                                         | 55                                             | -55                                                         |      |      |      |      |      |      |      |      |      |
| 646+50.00  | 19                                | 19                                     | 19                       | 2                                  | 2                         | 3                                                                  | 17                                            | 0                                                      | 0                                            | 0                                       | 37                                         | 53                                             | -53                                                         |      |      |      |      |      |      |      |      |      |
| 647+00.00  | 22                                | 22                                     | 22                       | 0                                  | 0                         | 0                                                                  | 22                                            | 0                                                      | 0                                            | 0                                       | 37                                         | 52                                             | -52                                                         |      |      |      |      |      |      |      |      |      |
| 647+50.00  | 19                                | 19                                     | 19                       | 0                                  | 0                         | 0                                                                  | 19                                            | 0                                                      | 0                                            | 0                                       | 39                                         | 54                                             | -54                                                         |      |      |      |      |      |      |      |      |      |
| 648+00.00  | 18                                | 18                                     | 18                       | 0                                  | 0                         | 0                                                                  | 18                                            | 0                                                      | 0                                            | 0                                       | 40                                         | 55                                             | -55                                                         |      |      |      |      |      |      |      |      |      |
| 648+50.00  | 17                                | 17                                     | 17                       | 0                                  | 0                         | 0                                                                  | 17                                            | 0                                                      | 0                                            | 0                                       | 40                                         | 56                                             | -56                                                         |      |      |      |      |      |      |      |      |      |
| 649+00.00  | 14                                | 14                                     | 14                       | 4                                  | 4                         | 6                                                                  | 9                                             | 0                                                      | 0                                            | 0                                       | 41                                         | 57                                             | -57                                                         |      |      |      |      |      |      |      |      |      |
| 649+50.00  | 11                                | 11                                     | 11                       | 4                                  | 4                         | 6                                                                  | 6                                             | 0                                                      | 0                                            | 0                                       | 40                                         | 57                                             | -57                                                         |      |      |      |      |      |      |      |      |      |
| 650+00.00  | 11                                | 11                                     | 11                       | 1                                  | 1                         | 2                                                                  | 9                                             | 0                                                      | 0                                            | 0                                       | 40                                         | 57                                             | -57                                                         |      |      |      |      |      |      |      |      |      |
| 650+50.00  | 11                                | 11                                     | 11                       | 2                                  | 2                         | 3                                                                  | 8                                             | 0                                                      | 0                                            | 0                                       | 41                                         | 58                                             | -58                                                         |      |      |      |      |      |      |      |      |      |
| 651+00.00  | 16                                | 16                                     | 16                       | 1                                  | 1                         | 2                                                                  | 14                                            | 0                                                      | 0                                            | 0                                       | 42                                         | 58                                             | -58                                                         |      |      |      |      |      |      |      |      |      |
| 651+50.00  | 19                                | 19                                     | 19                       | 0                                  | 0                         | 0                                                                  | 20                                            | 0                                                      | 0                                            | 0                                       | 43                                         | 60                                             | -60                                                         |      |      |      |      |      |      |      |      |      |
| 652+00.00  | 21                                | 21                                     | 21                       | 0                                  | 0                         | 0                                                                  | 21                                            | 0                                                      | 0                                            | 0                                       | 46                                         | 64                                             | -64                                                         |      |      |      |      |      |      |      |      |      |
| 652+50.00  | 21                                | 21                                     | 21                       | 0                                  | 0                         | 0                                                                  | 21                                            | 0                                                      | 0                                            | 0                                       | 46                                         | 65                                             | -65                                                         |      |      |      |      |      |      |      |      |      |
| 653+00.00  |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
| Subtotals: | 826                               | 826                                    | 826                      | 436                                | 436                       | 570                                                                | 257                                           | 0                                                      | 0                                            | 0                                       | 2,693                                      | 3,774                                          | -3,774                                                      |      |      |      |      |      |      |      |      |      |

Refer to Standard Road Plans EW-101 and EW-102.

107-28  
04-21-15

## TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

| Station           | Cut                               |                                        |                          | Fill                               |                           |                                                                    |                                               | Checks (EW-102)                                        |                                              | Topsoil                                 |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|-------------------|-----------------------------------|----------------------------------------|--------------------------|------------------------------------|---------------------------|--------------------------------------------------------------------|-----------------------------------------------|--------------------------------------------------------|----------------------------------------------|-----------------------------------------|--------------------------------------------|------------------------------------------------|-------------------------------------------------------------|------|------|------|------|------|------|------|------|------|
|                   | [1]                               | [2]                                    | [3]                      | [4]                                | [5]                       | [6]                                                                | [7]                                           | [8]                                                    | [9]                                          | [10]                                    | [11]                                       | [12]                                           | [13]                                                        | [14] | [15] | [16] | [17] | [18] | [19] | [20] | [21] | [22] |
|                   |                                   |                                        | [2]                      |                                    | [4]                       | [5] x 1.3                                                          | [3] - [6]                                     |                                                        |                                              |                                         |                                            | [11] x 1.4                                     | [10] - [12]                                                 |      |      |      |      |      |      |      |      |      |
|                   | Total Cut<br>Unadjusted<br>Volume | Total Class 10<br>Unadjusted<br>Volume | Total<br>Cut<br>Adjusted | Total Fill<br>Unadjusted<br>Volume | Total<br>Fill<br>Adjusted | Total Fill<br>Adjusted w/<br>Weighted Average<br>1.3 Shrink Factor | Total Cut Adjusted<br>Minus Fill w/<br>Shrink | Approx. Fill Vol.<br>Below 5' & Above<br>20' w/ Shrink | Approx. Fill<br>Volume Below 3'<br>w/ Shrink | Topsoil<br>Stripping Undercut<br>Volume | Topsoil<br>Placement<br>Undercut<br>Volume | Topsoil Placement<br>With 1.4 Shrink<br>Factor | Topsoil Stripping<br>Minus Topsoil<br>Placement<br>w/Shrink |      |      |      |      |      |      |      |      |      |
| 653+00.00         | 24                                | 24                                     | 24                       | 0                                  | 0                         | 0                                                                  | 24                                            | 0                                                      | 0                                            | 0                                       | 45                                         | 62                                             | -62                                                         |      |      |      |      |      |      |      |      |      |
| 653+50.00         | 30                                | 30                                     | 30                       | 0                                  | 0                         | 0                                                                  | 31                                            | 0                                                      | 0                                            | 0                                       | 45                                         | 63                                             | -63                                                         |      |      |      |      |      |      |      |      |      |
| 654+00.00         | 39                                | 39                                     | 39                       | 0                                  | 0                         | 0                                                                  | 39                                            | 0                                                      | 0                                            | 0                                       | 46                                         | 65                                             | -65                                                         |      |      |      |      |      |      |      |      |      |
| 654+50.00         | 41                                | 41                                     | 41                       | 0                                  | 0                         | 0                                                                  | 41                                            | 0                                                      | 0                                            | 0                                       | 47                                         | 65                                             | -65                                                         |      |      |      |      |      |      |      |      |      |
| 655+00.00         | 38                                | 38                                     | 38                       | 0                                  | 0                         | 0                                                                  | 38                                            | 0                                                      | 0                                            | 0                                       | 47                                         | 66                                             | -66                                                         |      |      |      |      |      |      |      |      |      |
| 655+50.00         | 35                                | 35                                     | 35                       | 0                                  | 0                         | 0                                                                  | 35                                            | 0                                                      | 0                                            | 0                                       | 47                                         | 66                                             | -66                                                         |      |      |      |      |      |      |      |      |      |
| 656+00.00         | 29                                | 29                                     | 29                       | 0                                  | 0                         | 0                                                                  | 29                                            | 0                                                      | 0                                            | 0                                       | 47                                         | 66                                             | -66                                                         |      |      |      |      |      |      |      |      |      |
| 656+50.00         | 32                                | 32                                     | 32                       | 0                                  | 0                         | 0                                                                  | 33                                            | 0                                                      | 0                                            | 0                                       | 47                                         | 66                                             | -66                                                         |      |      |      |      |      |      |      |      |      |
| 657+00.00         | 36                                | 36                                     | 36                       | 0                                  | 0                         | 0                                                                  | 36                                            | 0                                                      | 0                                            | 0                                       | 48                                         | 67                                             | -67                                                         |      |      |      |      |      |      |      |      |      |
| 657+50.00         | 32                                | 32                                     | 32                       | 0                                  | 0                         | 0                                                                  | 32                                            | 0                                                      | 0                                            | 0                                       | 47                                         | 67                                             | -67                                                         |      |      |      |      |      |      |      |      |      |
| 658+00.00         | 36                                | 36                                     | 36                       | 0                                  | 0                         | 0                                                                  | 36                                            | 0                                                      | 0                                            | 0                                       | 47                                         | 66                                             | -66                                                         |      |      |      |      |      |      |      |      |      |
| 658+50.00         | 37                                | 37                                     | 37                       | 0                                  | 0                         | 0                                                                  | 37                                            | 0                                                      | 0                                            | 0                                       | 47                                         | 66                                             | -66                                                         |      |      |      |      |      |      |      |      |      |
| 659+00.00         | 39                                | 39                                     | 39                       | 0                                  | 0                         | 0                                                                  | 39                                            | 0                                                      | 0                                            | 0                                       | 47                                         | 66                                             | -66                                                         |      |      |      |      |      |      |      |      |      |
| 659+50.00         | 42                                | 42                                     | 42                       | 0                                  | 0                         | 0                                                                  | 42                                            | 0                                                      | 0                                            | 0                                       | 46                                         | 65                                             | -65                                                         |      |      |      |      |      |      |      |      |      |
| 660+00.00         | 44                                | 44                                     | 44                       | 0                                  | 0                         | 0                                                                  | 44                                            | 0                                                      | 0                                            | 0                                       | 46                                         | 65                                             | -65                                                         |      |      |      |      |      |      |      |      |      |
| 660+50.00         | 41                                | 41                                     | 41                       | 0                                  | 0                         | 0                                                                  | 41                                            | 0                                                      | 0                                            | 0                                       | 46                                         | 65                                             | -65                                                         |      |      |      |      |      |      |      |      |      |
| 661+00.00         | 37                                | 37                                     | 37                       | 0                                  | 0                         | 0                                                                  | 37                                            | 0                                                      | 0                                            | 0                                       | 46                                         | 65                                             | -65                                                         |      |      |      |      |      |      |      |      |      |
| 661+50.00         | 40                                | 40                                     | 40                       | 0                                  | 0                         | 0                                                                  | 40                                            | 0                                                      | 0                                            | 0                                       | 45                                         | 64                                             | -64                                                         |      |      |      |      |      |      |      |      |      |
| 662+00.00         | 40                                | 40                                     | 40                       | 0                                  | 0                         | 0                                                                  | 40                                            | 0                                                      | 0                                            | 0                                       | 44                                         | 61                                             | -61                                                         |      |      |      |      |      |      |      |      |      |
| 662+50.00         | 38                                | 38                                     | 38                       | 0                                  | 0                         | 0                                                                  | 38                                            | 0                                                      | 0                                            | 0                                       | 41                                         | 58                                             | -58                                                         |      |      |      |      |      |      |      |      |      |
| 663+00.00         | 31                                | 31                                     | 31                       | 0                                  | 0                         | 0                                                                  | 31                                            | 0                                                      | 0                                            | 0                                       | 39                                         | 55                                             | -55                                                         |      |      |      |      |      |      |      |      |      |
| 663+50.00         | 30                                | 30                                     | 30                       | 0                                  | 0                         | 0                                                                  | 30                                            | 0                                                      | 0                                            | 0                                       | 36                                         | 51                                             | -51                                                         |      |      |      |      |      |      |      |      |      |
| 664+00.00         | 35                                | 35                                     | 35                       | 0                                  | 0                         | 0                                                                  | 35                                            | 0                                                      | 0                                            | 0                                       | 33                                         | 47                                             | -47                                                         |      |      |      |      |      |      |      |      |      |
| 664+50.00         | 32                                | 32                                     | 32                       | 0                                  | 0                         | 0                                                                  | 32                                            | 0                                                      | 0                                            | 0                                       | 31                                         | 44                                             | -44                                                         |      |      |      |      |      |      |      |      |      |
| 665+00.00         | 28                                | 28                                     | 28                       | 0                                  | 0                         | 0                                                                  | 28                                            | 0                                                      | 0                                            | 0                                       | 31                                         | 43                                             | -43                                                         |      |      |      |      |      |      |      |      |      |
| 665+50.00         | 30                                | 30                                     | 30                       | 0                                  | 0                         | 0                                                                  | 31                                            | 0                                                      | 0                                            | 0                                       | 31                                         | 43                                             | -43                                                         |      |      |      |      |      |      |      |      |      |
| 666+00.00         | 33                                | 33                                     | 33                       | 0                                  | 0                         | 0                                                                  | 33                                            | 0                                                      | 0                                            | 0                                       | 31                                         | 44                                             | -44                                                         |      |      |      |      |      |      |      |      |      |
| 666+50.00         | 36                                | 36                                     | 36                       | 0                                  | 0                         | 0                                                                  | 36                                            | 0                                                      | 0                                            | 0                                       | 32                                         | 45                                             | -45                                                         |      |      |      |      |      |      |      |      |      |
| 667+00.00         | 35                                | 35                                     | 35                       | 0                                  | 0                         | 0                                                                  | 35                                            | 0                                                      | 0                                            | 0                                       | 33                                         | 46                                             | -46                                                         |      |      |      |      |      |      |      |      |      |
| 667+50.00         | 35                                | 35                                     | 35                       | 0                                  | 0                         | 0                                                                  | 35                                            | 0                                                      | 0                                            | 0                                       | 33                                         | 47                                             | -47                                                         |      |      |      |      |      |      |      |      |      |
| 668+00.00         | 38                                | 38                                     | 38                       | 0                                  | 0                         | 0                                                                  | 38                                            | 0                                                      | 0                                            | 0                                       | 34                                         | 48                                             | -48                                                         |      |      |      |      |      |      |      |      |      |
| 668+50.00         | 37                                | 37                                     | 37                       | 0                                  | 0                         | 0                                                                  | 37                                            | 0                                                      | 0                                            | 0                                       | 33                                         | 47                                             | -47                                                         |      |      |      |      |      |      |      |      |      |
| 669+00.00         | 31                                | 31                                     | 31                       | 0                                  | 0                         | 0                                                                  | 31                                            | 0                                                      | 0                                            | 0                                       | 31                                         | 44                                             | -44                                                         |      |      |      |      |      |      |      |      |      |
| 670+00.00         | 30                                | 30                                     | 30                       | 0                                  | 0                         | 0                                                                  | 30                                            | 0                                                      | 0                                            | 0                                       | 29                                         | 41                                             | -41                                                         |      |      |      |      |      |      |      |      |      |
| 670+50.00         | 31                                | 31                                     | 31                       | 0                                  | 0                         | 0                                                                  | 32                                            | 0                                                      | 0                                            | 0                                       | 29                                         | 40                                             | -40                                                         |      |      |      |      |      |      |      |      |      |
| 671+00.00         | 29                                | 29                                     | 29                       | 0                                  | 0                         | 0                                                                  | 29                                            | 0                                                      | 0                                            | 0                                       | 30                                         | 41                                             | -41                                                         |      |      |      |      |      |      |      |      |      |
| 671+50.00         | 28                                | 28                                     | 28                       | 0                                  | 0                         | 0                                                                  | 28                                            | 0                                                      | 0                                            | 0                                       | 29                                         | 40                                             | -40                                                         |      |      |      |      |      |      |      |      |      |
| 672+00.00         | 27                                | 27                                     | 27                       | 0                                  | 0                         | 0                                                                  | 28                                            | 0                                                      | 0                                            | 0                                       | 28                                         | 40                                             | -40                                                         |      |      |      |      |      |      |      |      |      |
| 672+50.00         | 26                                | 26                                     | 26                       | 0                                  | 0                         | 0                                                                  | 26                                            | 0                                                      | 0                                            | 0                                       | 29                                         | 41                                             | -41                                                         |      |      |      |      |      |      |      |      |      |
| 673+00.00         | 23                                | 23                                     | 23                       | 0                                  | 0                         | 0                                                                  | 23                                            | 0                                                      | 0                                            | 0                                       | 30                                         | 43                                             | -43                                                         |      |      |      |      |      |      |      |      |      |
| 673+50.00         | 25                                | 25                                     | 25                       | 0                                  | 0                         | 0                                                                  | 25                                            | 0                                                      | 0                                            | 0                                       | 33                                         | 46                                             | -46                                                         |      |      |      |      |      |      |      |      |      |
| 674+00.00         | 30                                | 30                                     | 30                       | 0                                  | 0                         | 0                                                                  | 30                                            | 0                                                      | 0                                            | 0                                       | 34                                         | 48                                             | -48                                                         |      |      |      |      |      |      |      |      |      |
| 674+50.00         | 29                                | 29                                     | 29                       | 0                                  | 0                         | 0                                                                  | 30                                            | 0                                                      | 0                                            | 0                                       | 33                                         | 46                                             | -46                                                         |      |      |      |      |      |      |      |      |      |
| 675+00.00         | 29                                | 29                                     | 29                       | 0                                  | 0                         | 0                                                                  | 29                                            | 0                                                      | 0                                            | 0                                       | 30                                         | 42                                             | -42                                                         |      |      |      |      |      |      |      |      |      |
| 675+50.00         | 30                                | 30                                     | 30                       | 0                                  | 0                         | 0                                                                  | 30                                            | 0                                                      | 0                                            | 0                                       | 29                                         | 41                                             | -41                                                         |      |      |      |      |      |      |      |      |      |
| 676+00.00         | 29                                | 29                                     | 29                       | 0                                  | 0                         | 0                                                                  | 29                                            | 0                                                      | 0                                            | 0                                       | 31                                         | 43                                             | -43                                                         |      |      |      |      |      |      |      |      |      |
| 676+50.00         | 26                                | 26                                     | 26                       | 0                                  | 0                         | 0                                                                  | 26                                            | 0                                                      | 0                                            | 0                                       | 32                                         | 44                                             | -44                                                         |      |      |      |      |      |      |      |      |      |
| 677+00.00         | 24                                | 24                                     | 24                       | 0                                  | 0                         | 0                                                                  | 25                                            | 0                                                      | 0                                            | 0                                       | 31                                         | 43                                             | -43                                                         |      |      |      |      |      |      |      |      |      |
| 677+50.00         | 23                                | 23                                     | 23                       | 0                                  | 0                         | 0                                                                  | 23                                            | 0                                                      | 0                                            | 0                                       | 30                                         | 42                                             | -42                                                         |      |      |      |      |      |      |      |      |      |
| 678+00.00         | 22                                | 22                                     | 22                       | 0                                  | 0                         | 0                                                                  | 22                                            | 0                                                      | 0                                            | 0                                       | 29                                         | 41                                             | -41                                                         |      |      |      |      |      |      |      |      |      |
| 678+25.00         | 11                                | 11                                     | 11                       | 0                                  | 0                         | 0                                                                  | 11                                            | 0                                                      | 0                                            | 0                                       | 14                                         | 20                                             | -20                                                         |      |      |      |      |      |      |      |      |      |
| ML029C<br>Totals: | 2,457                             | 2,457                                  | 2,457                    | 437                                | 437                       | 571                                                                | 1,890                                         | 0                                                      | 0                                            | 0                                       | 4,575                                      | 6,410                                          | -6,410                                                      |      |      |      |      |      |      |      |      |      |
|                   |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|                   |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|                   |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|                   |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|                   |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|                   |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|                   |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|                   |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|                   |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|                   |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|                   |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|                   |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|                   |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|                   |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|                   |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|                   |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|                   |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|                   |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|                   |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|                   |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|                   |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|                   |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|                   |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|                   |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      |      |      |      |      |
|                   |                                   |                                        |                          |                                    |                           |                                                                    |                                               |                                                        |                                              |                                         |                                            |                                                |                                                             |      |      |      |      |      | </   |      |      |      |

Refer to Standard Road Plans EW-101 and EW-102.

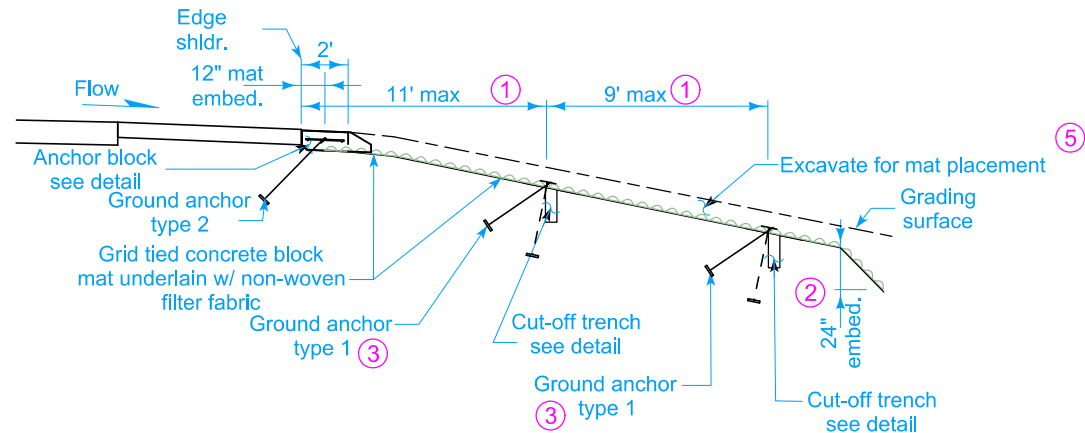
## TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28  
04-21-15

[illegible]

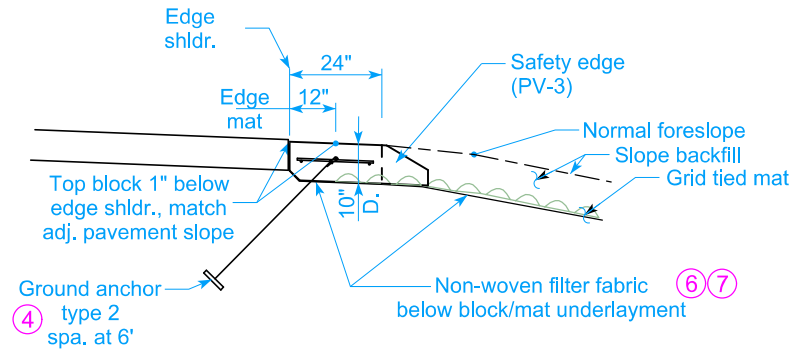
Measurement will be in square yards of slope covered, as measured along the slope.

Payment includes all materials, tools, and labor required to construct "Foreslope Erosion Countermeasure" as detailed.

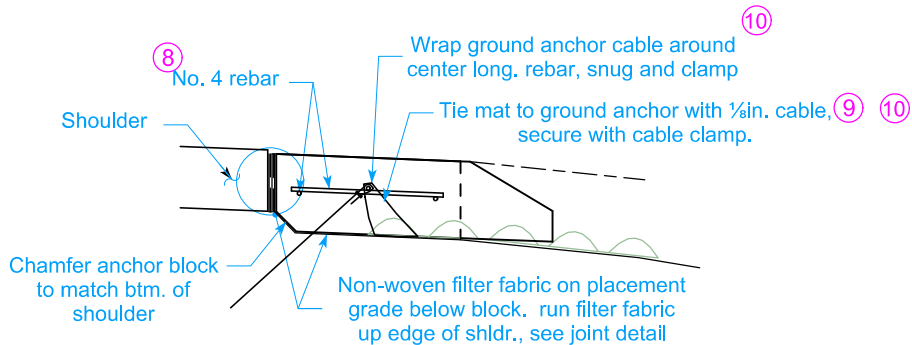


FORESLOPE LINING TYPICAL SECTION

- ① Dimension along grade, adjust to place anchor between blocks
- ② Embed two feet of mat on all exposed edges at 1:1 slope. backfill trench with well compacted excavated material.
- ③ Type 1 ground anchor, spaced at 4 feet. adjacent to cut-off trench install at 45 degrees to horizontal, otherwise install perpendicular to slope or at angle per mat manufacturer recommendation. Mat shall be fastened to anchor with a steel top bearing 'X' plate, 12 inch cross, 0.11 inch thick steel. Plate shall be Zinc Platisol coated or approved equal.
- ④ Type 2 anchor, install at 45 degrees to horizontal as shown.
- ⑤ Excavate 10 inches for mat placement as required. place 10 inches backfill over mat using excavated material or topsoil if required per re-vegetation requirements.
- ⑥ Non-woven filter fabric on placement grade below block and mat underlayment. fabric shall be continuous over placement width. underlayment seams shall be overlapped 2 foot minimum. underlayment shall be continuous across mat seams, with edge of overlap extending 2 feet minimum from edge of mat seam, otherwise a 4 foot wide section of underlayment shall be placed centered on the seam.
- ⑦ If pins are used to secure form for anchor block, pins shall be placed through holes between geogrid fibers. patch hole through underlayment with a portland cement mortar mix or approved equal.

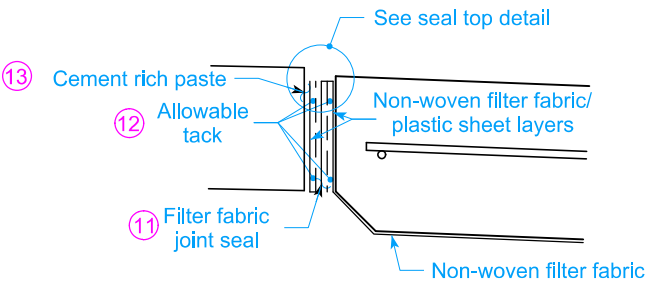


ANCHOR BLOCK TYPICAL SECTION

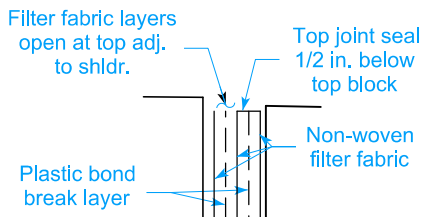


ANCHOR BLOCK DETAIL

- ⑧ Three (3) no. 4 reinforcing bar longitudinal along block. spaced as shown, place at midpoint of depth. place no. 4 bar transverse spaced at 36 inches, 2 inch diameter. all reinforcing bars epoxy coated.
- ⑨ Run cable through and diagonally under geogrid for one block width, loop up and over rebar. wrap cable in spirical manner, under geogrid then over rebar, along length of anchor block, amplitude approx. 1 foot. snug cable to minimize loose cable without displacing rebar. anchor cable ends with cable clamp.
- ⑩ Cable clamp does not need to develop rated cable strength. intent of clamp is to hold cable snug in advance of concrete placement.



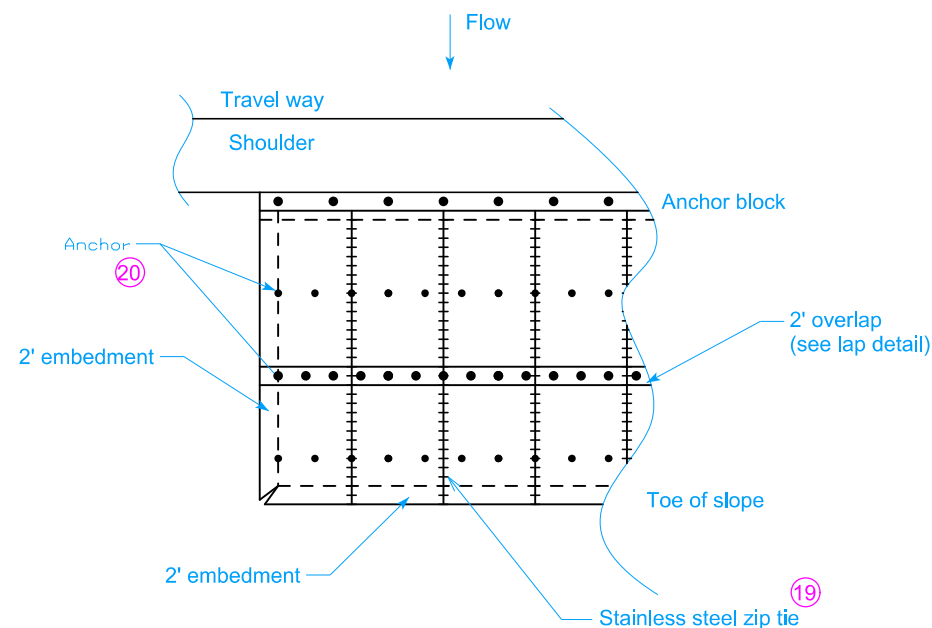
JOINT DETAIL



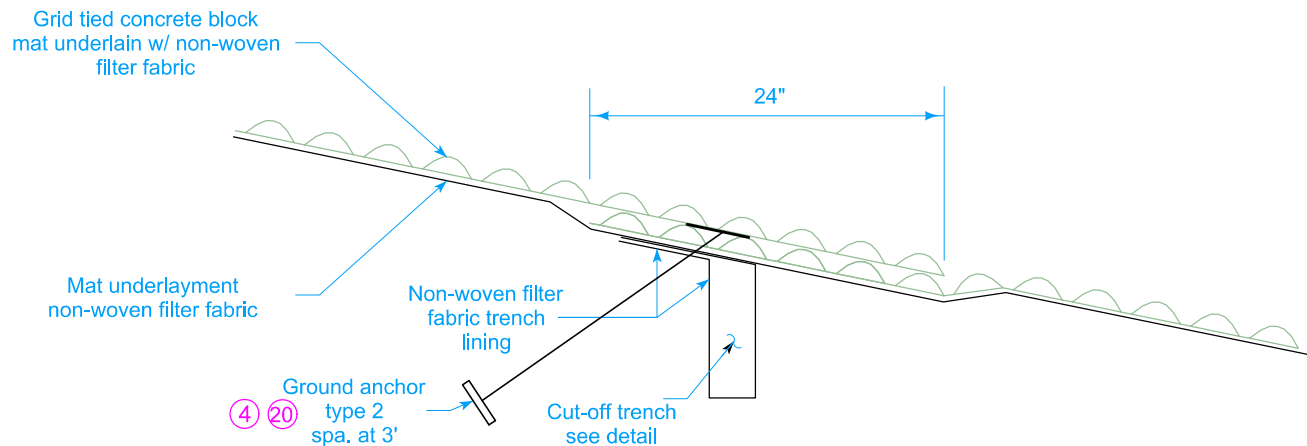
JOINT SEAL TOP DETAIL

- ⑪ Fold filter fabric in serpentine manner as shown, three layers thick. fabric shall be folded to create layers. place plastic bond break layer between fabric layers. layers adjacent to shoulder open at top.
- ⑫ Allowable tack (adhesive) to facilitate placement between outer fabric layers and plastic. allowable duct tape (or equal) strip placed at top to hold outer layer against shldr. after application of paste.
- ⑬ In advance of block concrete placement spread thin layer of cement rich paste, or approved adhesive, full face of shldr. press joint seal sandwich into paste/adhesive.

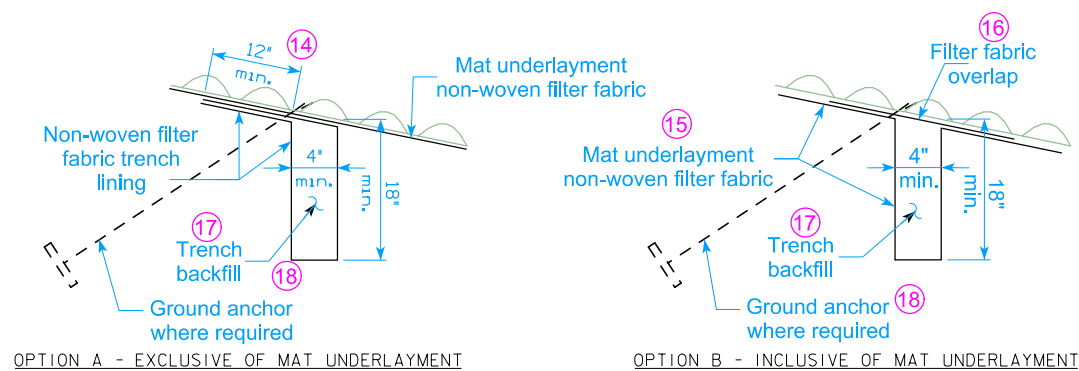
|                                                                                                  |              |          |
|--------------------------------------------------------------------------------------------------|--------------|----------|
|  IOWA   DOT | REVISION     |          |
|                                                                                                  | NEW          | 10-19-21 |
| ROAD DESIGN DETAIL                                                                               | 570-22       |          |
|                                                                                                  | SHEET 1 of 2 |          |
| REVISIONS:                                                                                       |              |          |
|                                                                                                  |              |          |
| FORESLOPE EROSION COUNTERMEASURE<br>REVTMENT DETAILS<br>(MAJOR OVERTOPPING)                      |              |          |



PLAN



LAP DETAIL



CUT-OFF TRENCH DETAIL

- (14) Fold trench lining fabric with termination toward direction of flow, 12 in. lap min. lap section shall not be pinned/staked to underlying ground except within 3 in. of edge trench.
- (15) Embed mat underlayment fabric into trench, 18 in. min. depth as shown. mat underlayment may be continuous around trench sides and btm. or only sides when located at underlayment seam.
- (16) Non-woven filter fabric overlap, 24 in. min. width, place over mat underlayment, center on trench.
- (17) Backfill trench with well compacted excavated material.
- (18) Where trench is installed adjacent to ground anchor, place anchor through mat at edge of first block upstream of edge trench.
- (19) For mat seams parallel to the flow direction (longitudinal seams) abutting sections of mat shall be joined using stainless steel zip ties spaced at 12 inch centers.
- (20) Mat shall be fastened to anchor with a steel top bearing 'X' plate, 12 inch cross, 0.11 inch thick steel. Plate shall be Zinc Plastisol coated or approved equal.

|                                                                                                  |  |              |          |
|--------------------------------------------------------------------------------------------------|--|--------------|----------|
|  IOWA   DOT |  | REVISION     |          |
|                                                                                                  |  | NEW          | 10-19-21 |
|                                                                                                  |  | 570-22       |          |
| ROAD DESIGN DETAIL                                                                               |  | SHEET 2 of 2 |          |
|                                                                                                  |  |              |          |
| REVISIONS:                                                                                       |  |              |          |
|                                                                                                  |  |              |          |
| FORESLOPE EROSION COUNTERMEASURE<br>REVETMENT DETAILS<br>(MAJOR OVERTOPPING)                     |  |              |          |

| CROSS SECTION VIEW COLOR LEGEND |                                 |                    |                                      |
|---------------------------------|---------------------------------|--------------------|--------------------------------------|
| Design Color No.                | Feature                         | Design Color No.   | Feature                              |
| Aggregate                       |                                 | Grading            |                                      |
| (64)                            | Choke Stone                     | (8)                | Behind Curb Cut                      |
| (42)                            | Engineering Fabric              | (6)                | Granular                             |
| (8)                             | Flooded Backfill                | (13)               | Granular Back Fill                   |
| (92)                            | Macadam Stone                   | (48)               | Rock Undercut                        |
| (20)                            | Modified                        | (8)                | Shoulder Earth Fill                  |
| (12)                            | Plowing Shaping                 | (2)                | Side Slopes                          |
| (14)                            | Porous Backfill                 | (226)              | Side Slopes Dressing                 |
| (8)                             | Revetment Class A               | Substrata          |                                      |
| (6)                             | Revetment Class B               | (128)              | Boulder                              |
| (62)                            | Revetment Class C               | (209)              | Boulder Removed                      |
| (188)                           | Revetment Class D               | (48)               | Broken Weathered                     |
| (28)                            | Revetment Class E               | (210)              | Broken Weathered Removed             |
| (12)                            | Shoulder Special Backfill       | (3)                | Core Out                             |
| (12)                            | Special Backfill                | (115)              | Core Out Remove Only                 |
| (20)                            | Subbase                         | (195)              | Core Out Remove and Replace          |
| (20)                            | Subbase Lower                   | (203)              | Existing Pavement                    |
| (20)                            | Subbase Upper                   | (184)              | Existing Pavement Remove Only        |
| (118)                           | Subgrade Treatment              | (200)              | Existing Pavement Remove and Replace |
| Asphalt                         |                                 | (6)                | Loam                                 |
| (207)                           | HMA Base Course                 | (211)              | Loam Removed                         |
| (207)                           | HMA Interim Course              | (80)               | Rock                                 |
| (207)                           | HMA Surface Course              | (212)              | Rock Removed                         |
| Bridge                          |                                 | (4)                | Select Sand                          |
| (0)                             | Bridge                          | (214)              | Select Sand Removed                  |
| Concrete                        |                                 | (3)                | Shale                                |
| (0)                             | Barrier Concrete                | (215)              | Shale Removed                        |
| (0)                             | Barrier Concrete Footing        | (10)               | Topsoil                              |
| (0)                             | Curb Gutter                     | (2)                | Topsoil Remove Only                  |
| (48)                            | Flowable Mortar                 | (4)                | Topsoil Remove and Replace           |
| (0)                             | Median Concrete                 | Unsuitable / Waste |                                      |
| (0)                             | PCC Pavement                    | (3)                | Unsuitable Type A                    |
| (0)                             | Sidewalk                        | (216)              | Unsuitable Type A Removed            |
| Existing                        |                                 | (13)               | Unsuitable Type B                    |
| (0)                             | Existing Pavement               | (217)              | Unsuitable Type B Removed            |
| Shoulder                        |                                 | (11)               | Unsuitable Type C                    |
| (209)                           | Shoulder HMA                    | (218)              | Unsuitable Type C Removed            |
| (0)                             | Shoulder PCC                    | (3)                | Waste                                |
| (6)                             | Shoulder Granular               | (219)              | Waste Removed                        |
| Structural                      |                                 |                    |                                      |
| (112)                           | Noise Wall                      |                    |                                      |
| (112)                           | Noise Wall Footing              |                    |                                      |
| (112)                           | Retaining Wall Back             |                    |                                      |
| (112)                           | Retaining Wall Back Excavate    |                    |                                      |
| (112)                           | Retaining Wall Face             |                    |                                      |
| (112)                           | Retaining Wall Front Excavate   |                    |                                      |
| (112)                           | Retaining Wall Front Footing    |                    |                                      |
| (112)                           | Retaining Wall MSE Gutter       |                    |                                      |
| (112)                           | Retaining Wall Reinforced Earth |                    |                                      |

NOTES:

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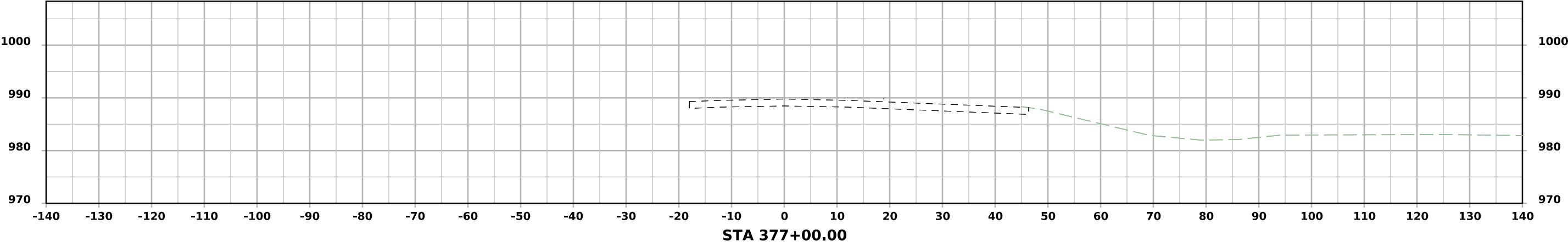
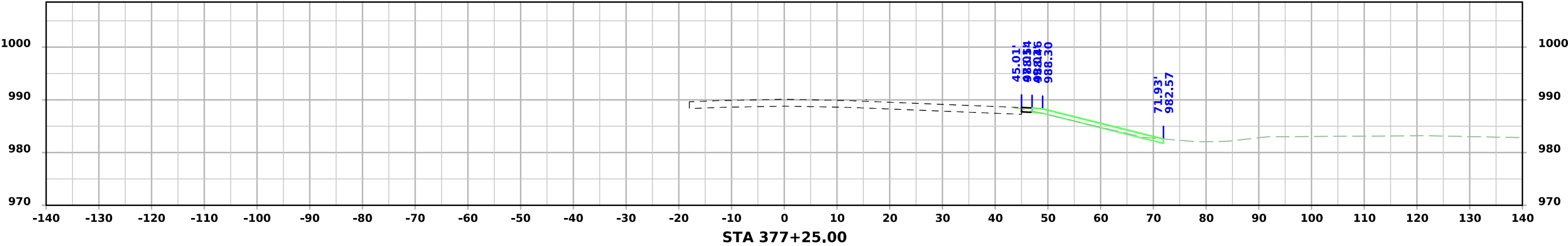
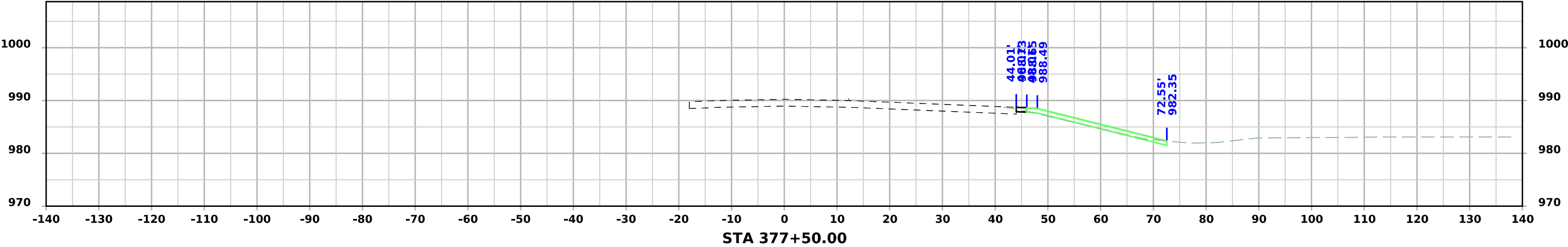
NOTES:

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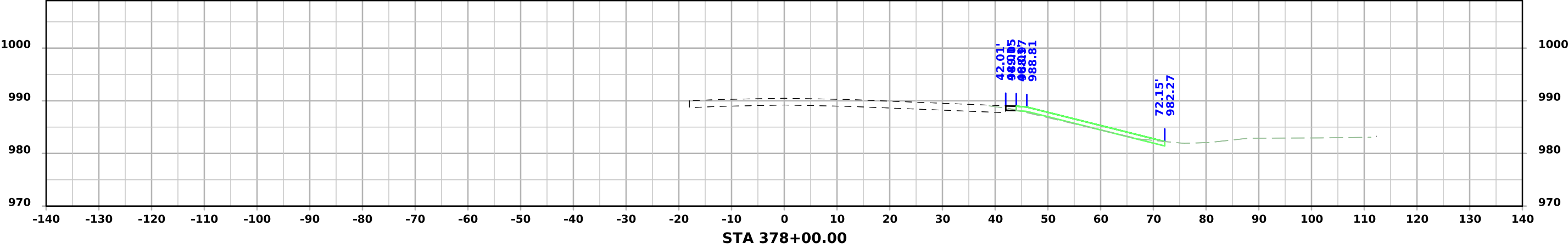
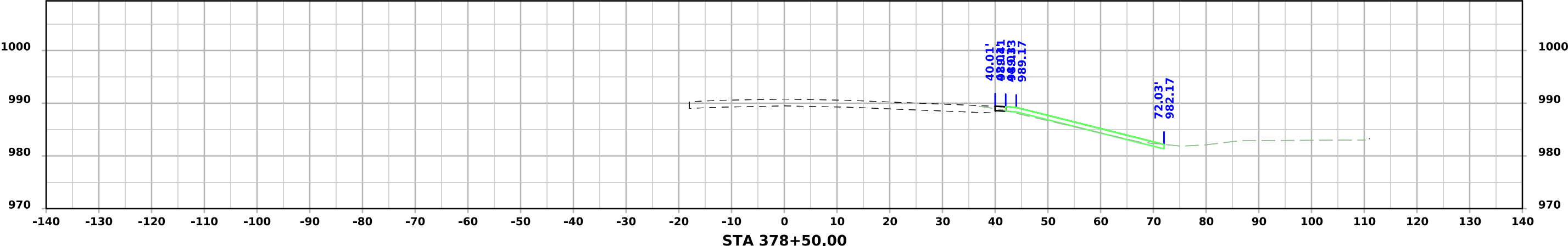
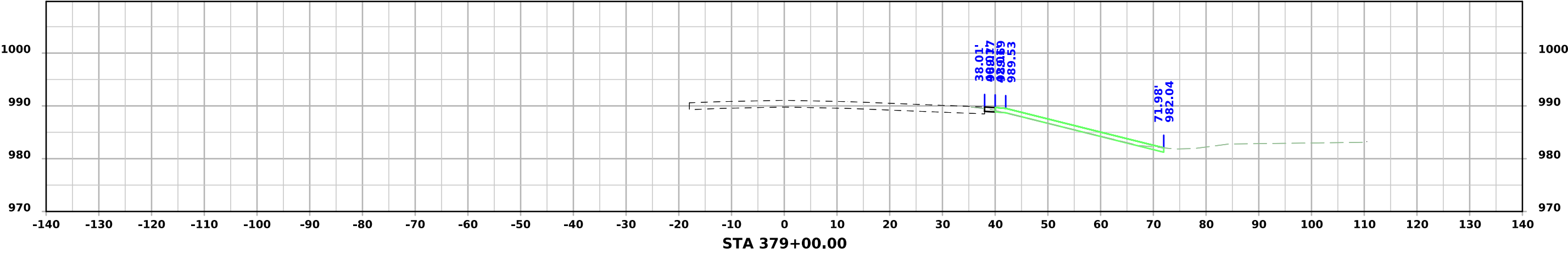
CROSS SECTIONS  
LEGEND AND INFORMATION SHEET

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

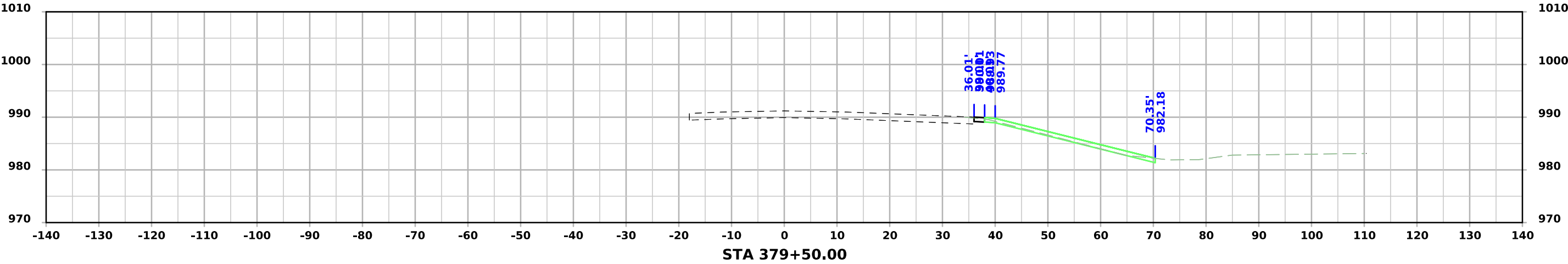
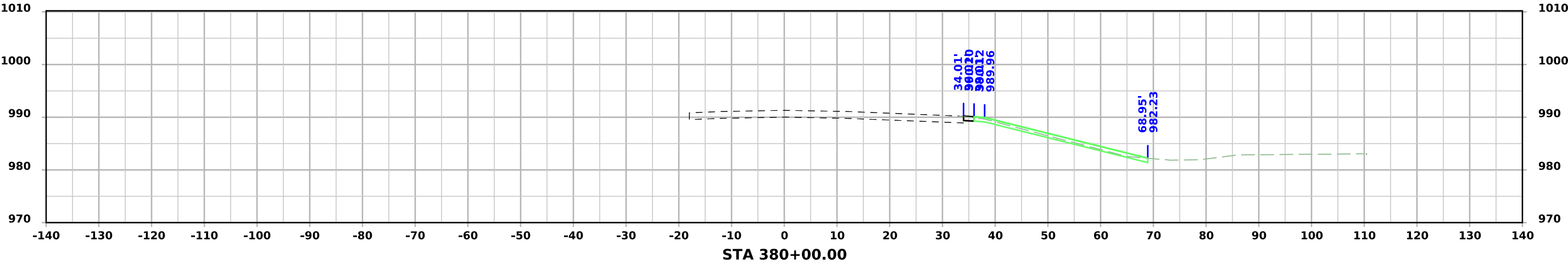
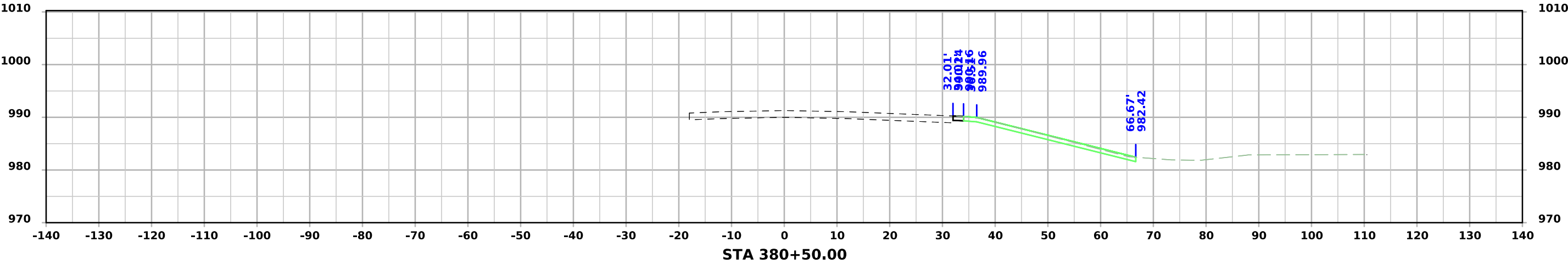
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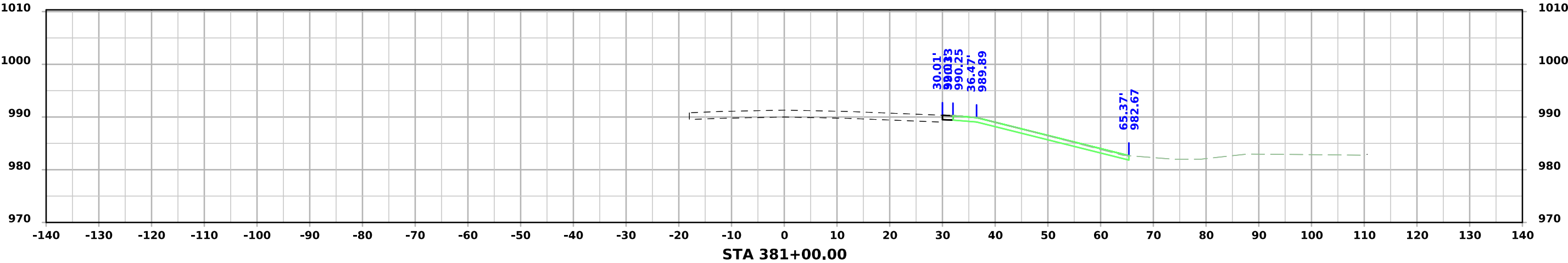
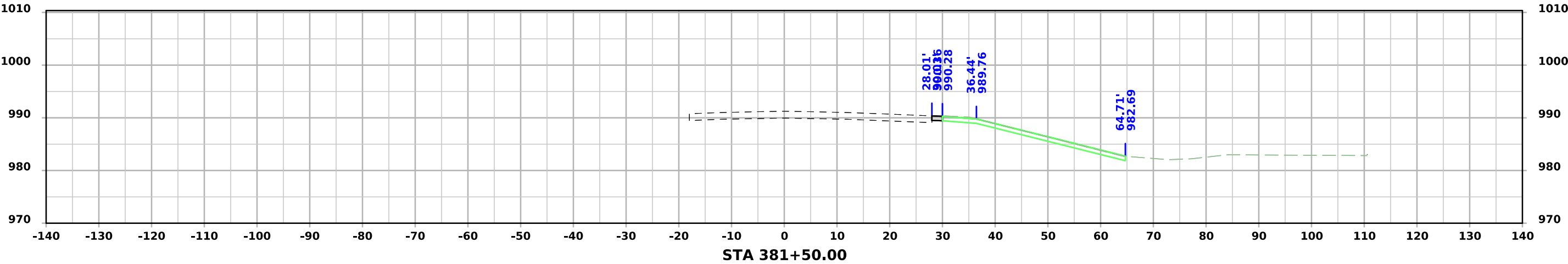
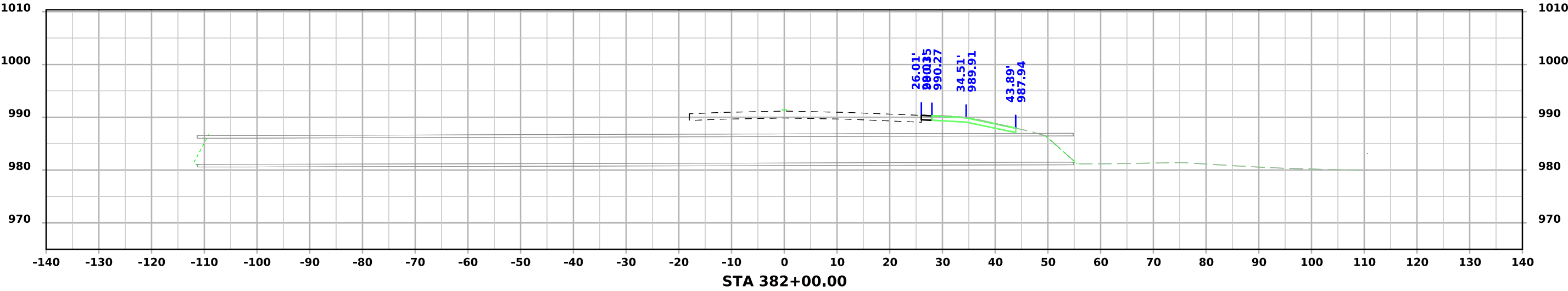
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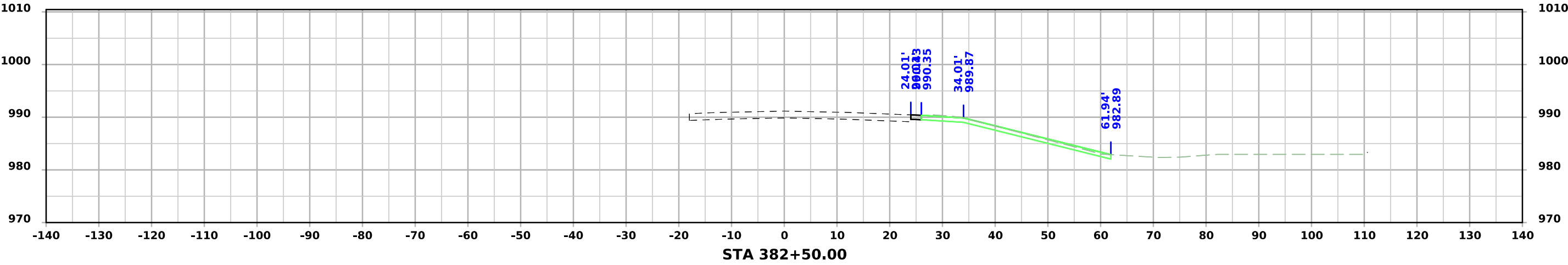
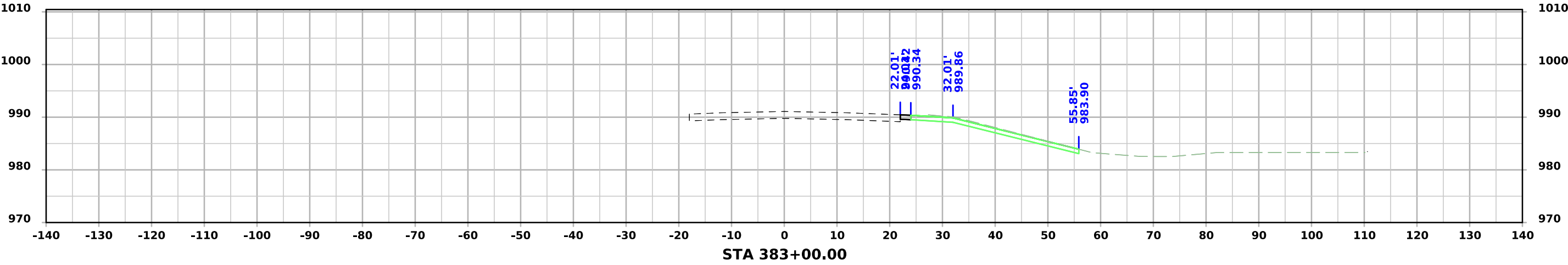
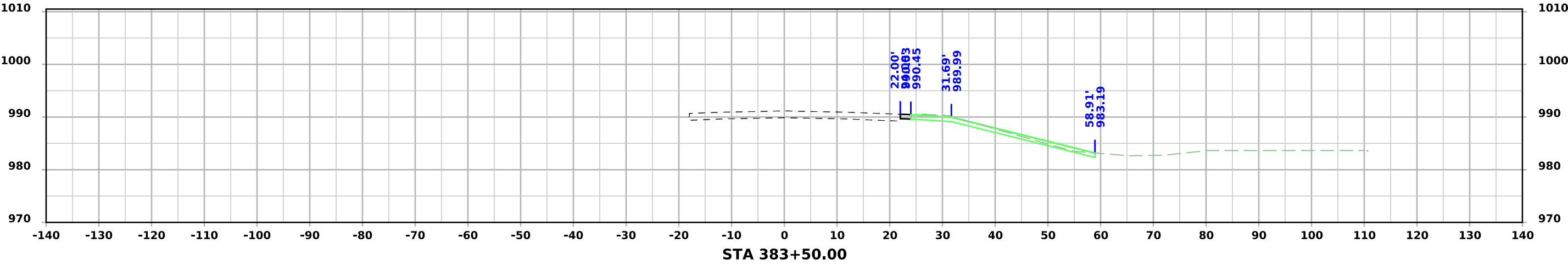
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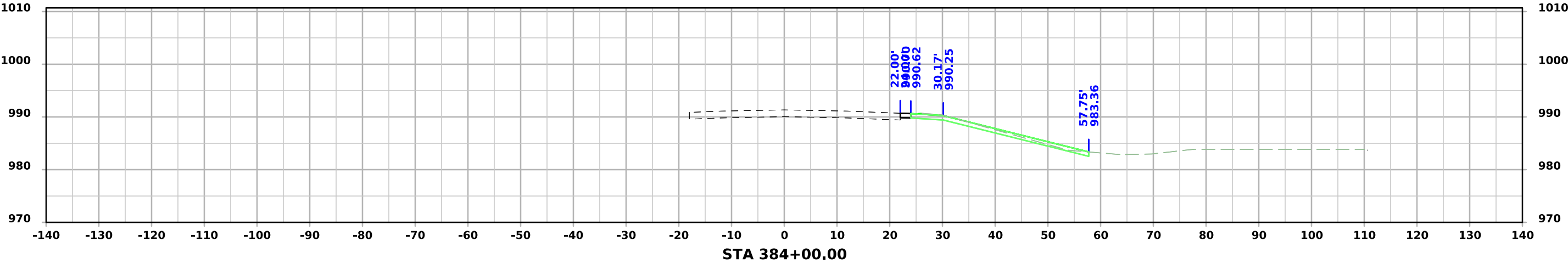
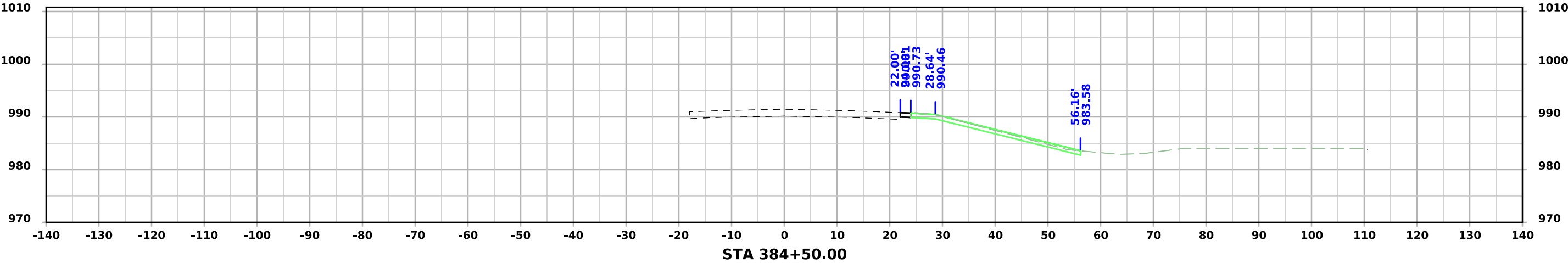
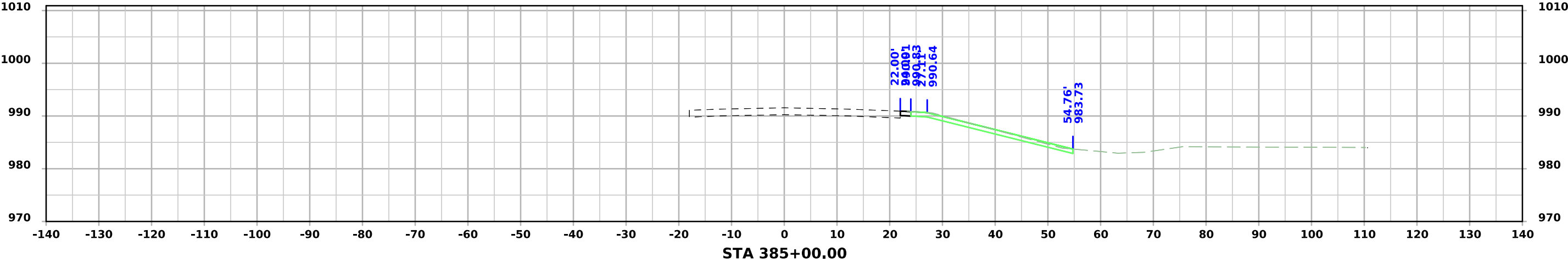
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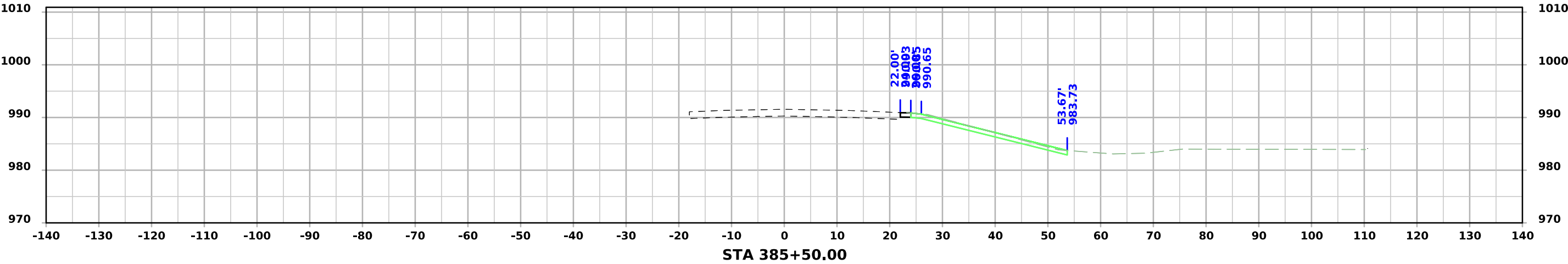
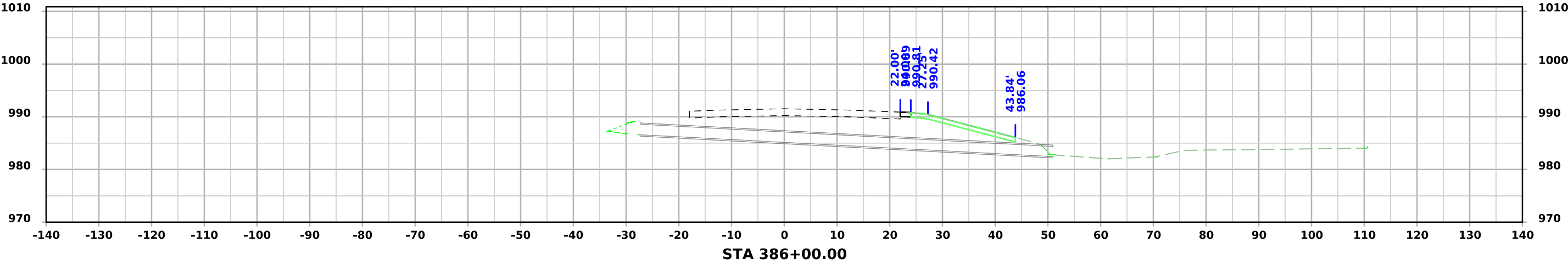
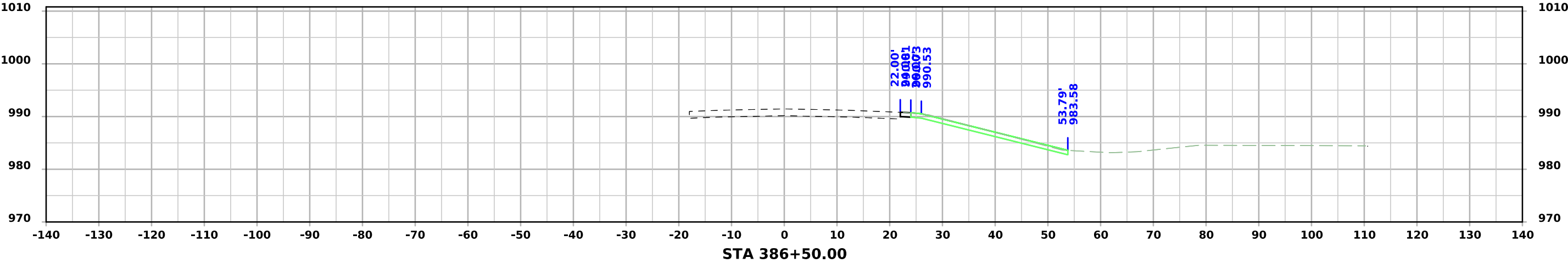
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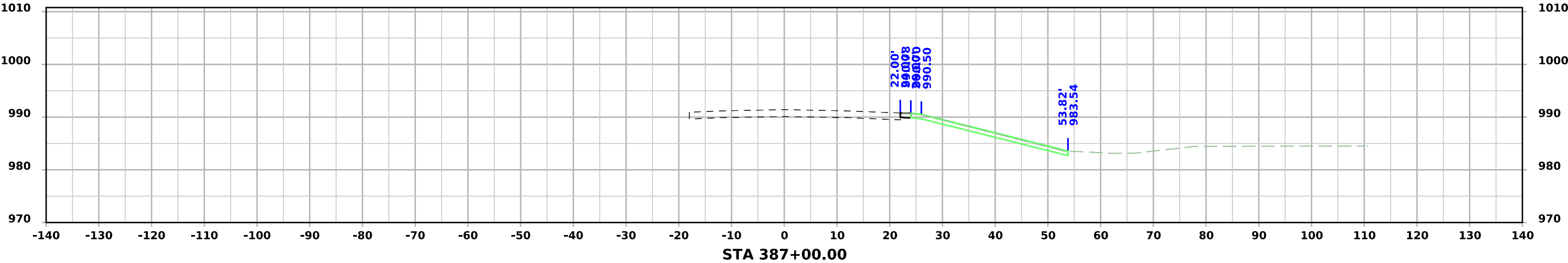
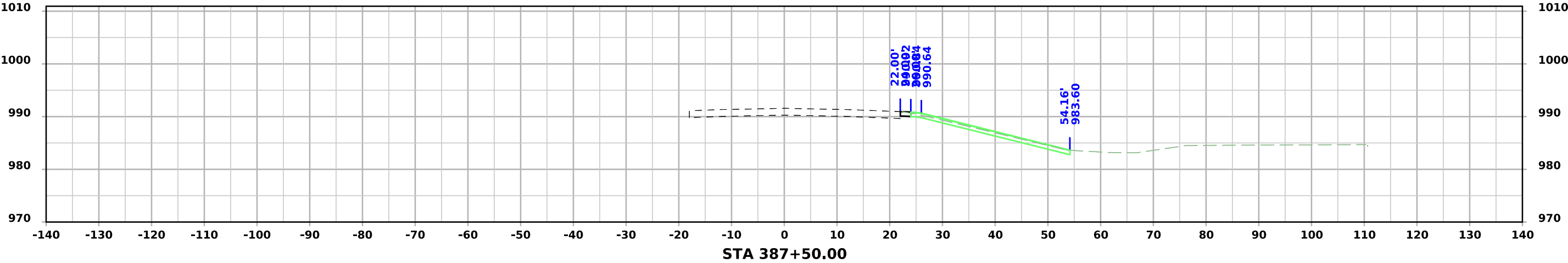
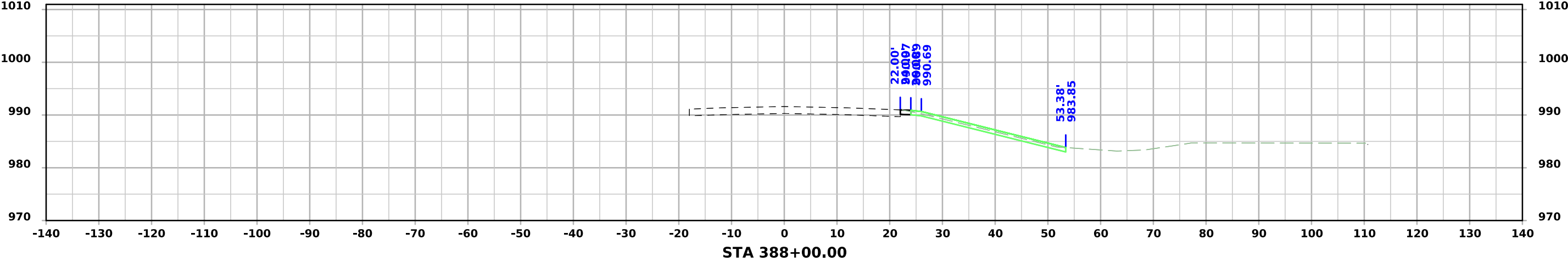
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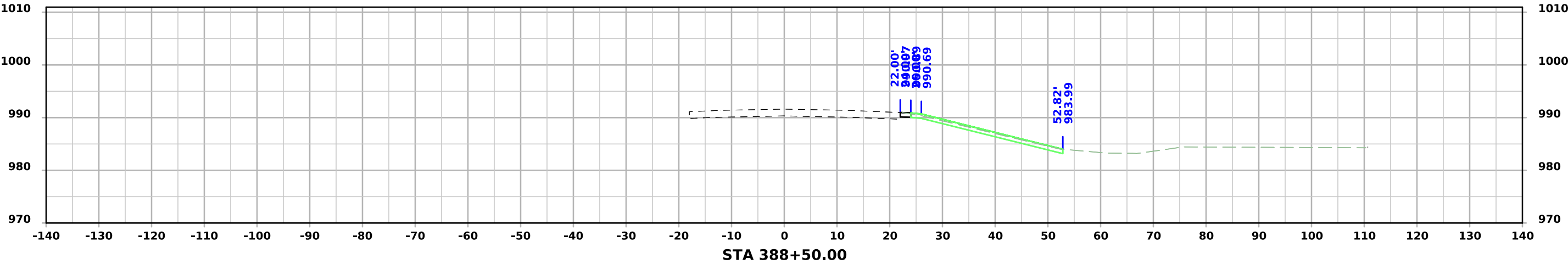
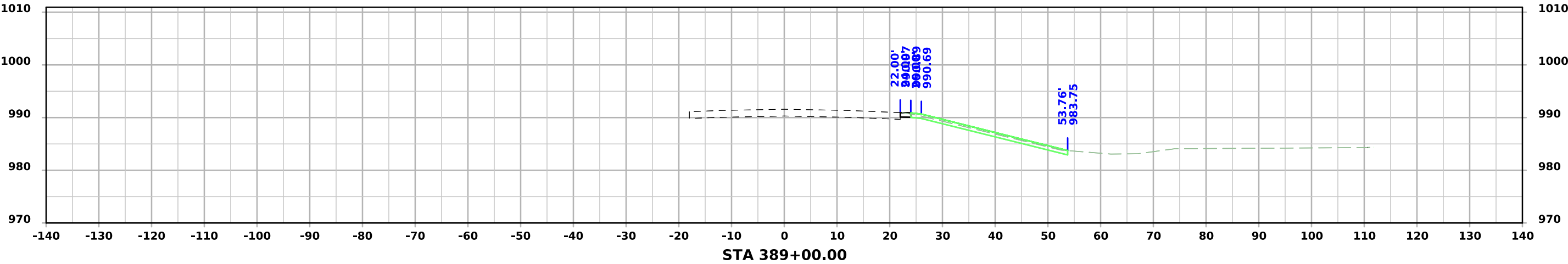
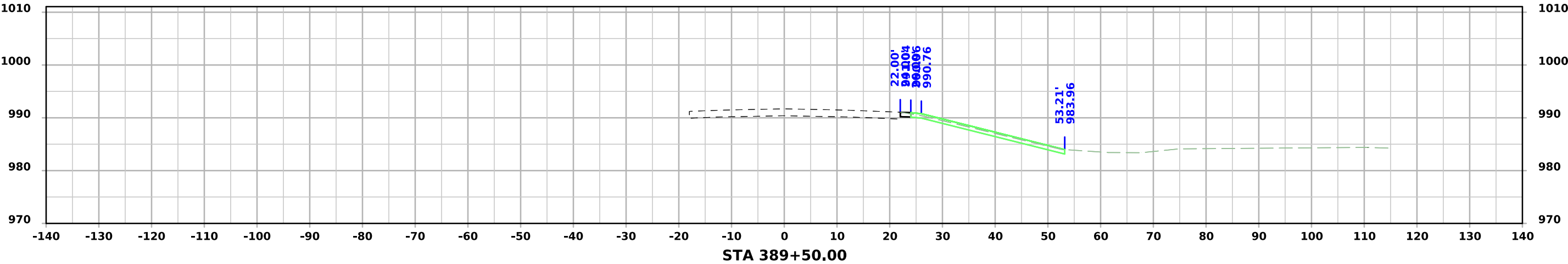
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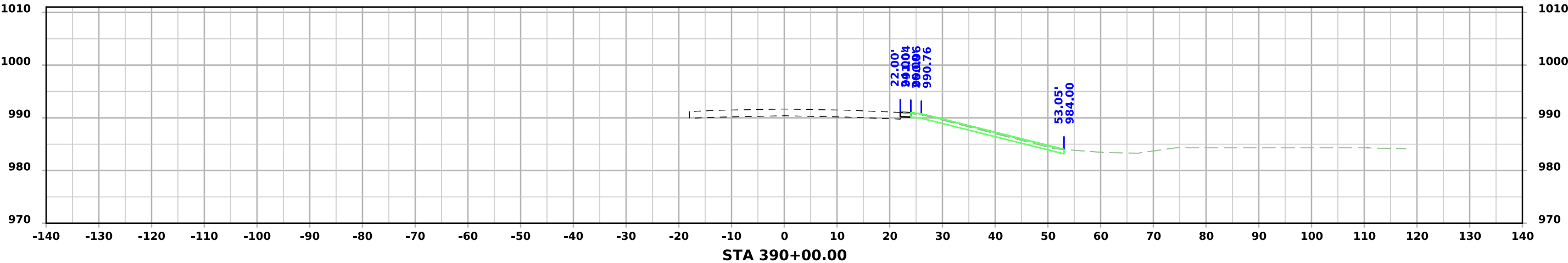
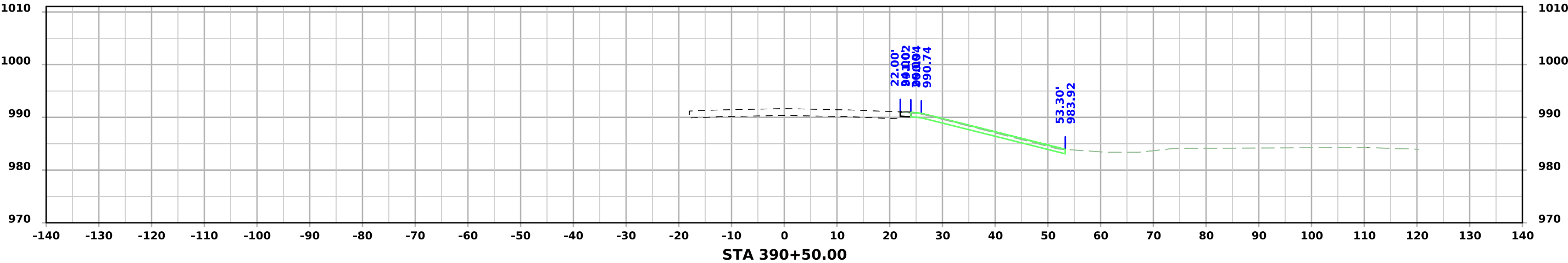
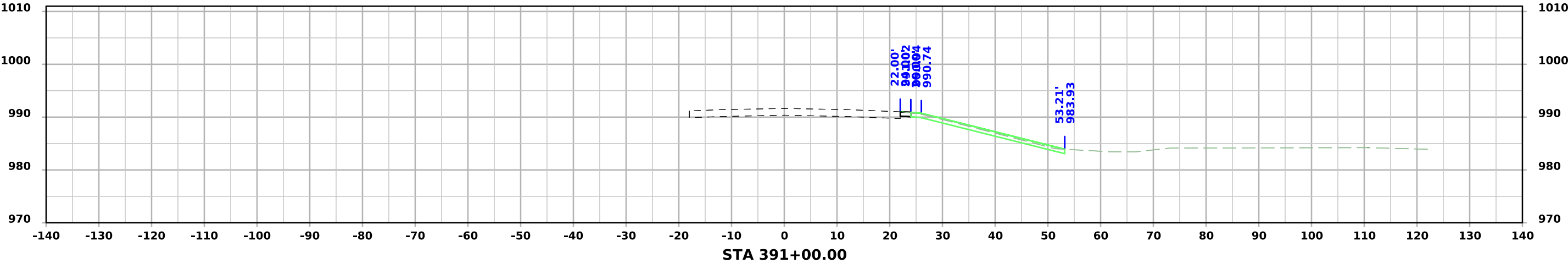
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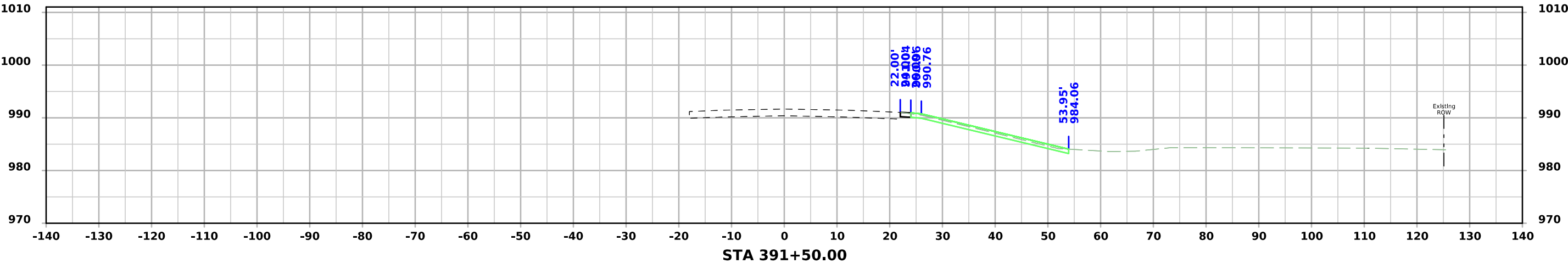
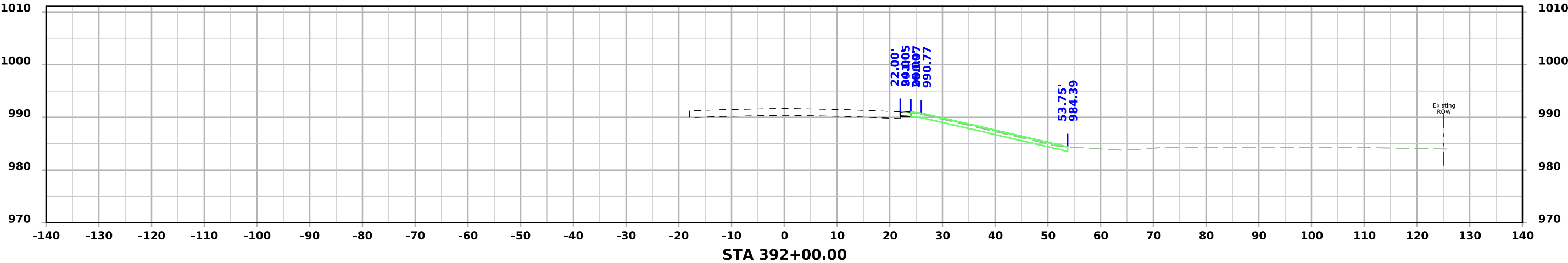
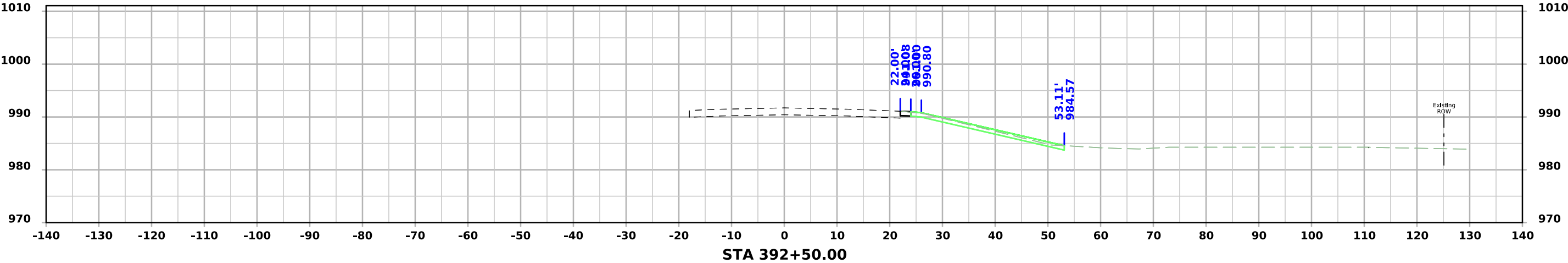
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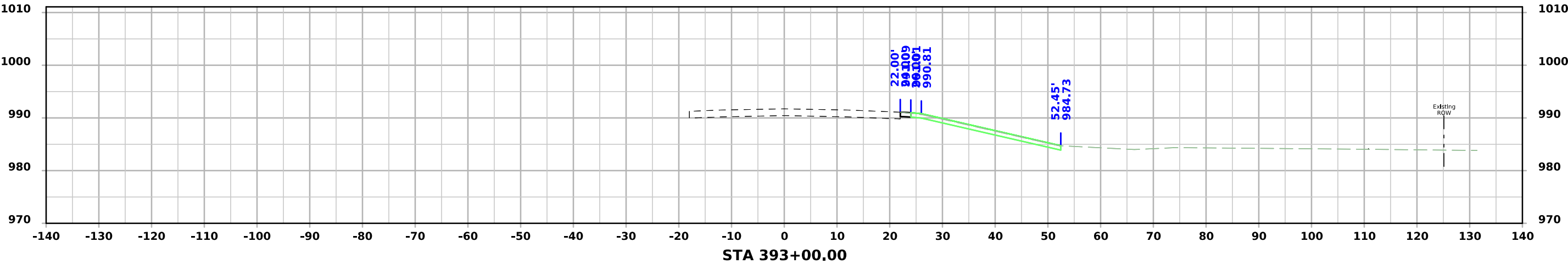
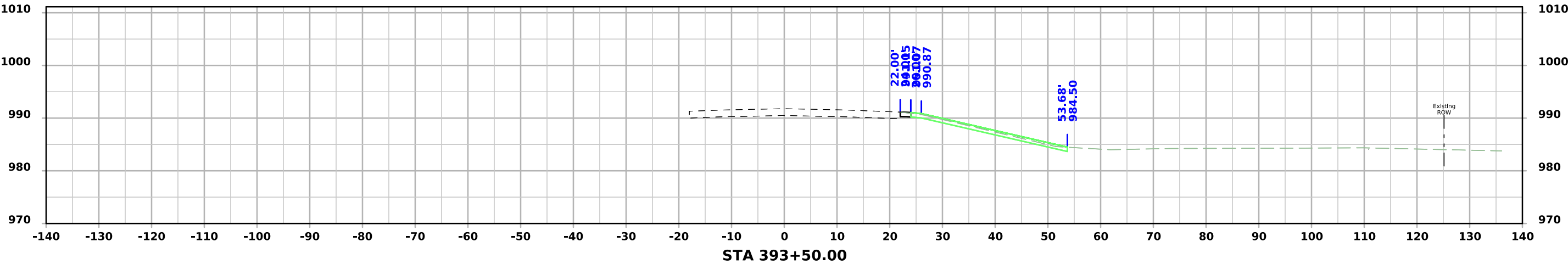
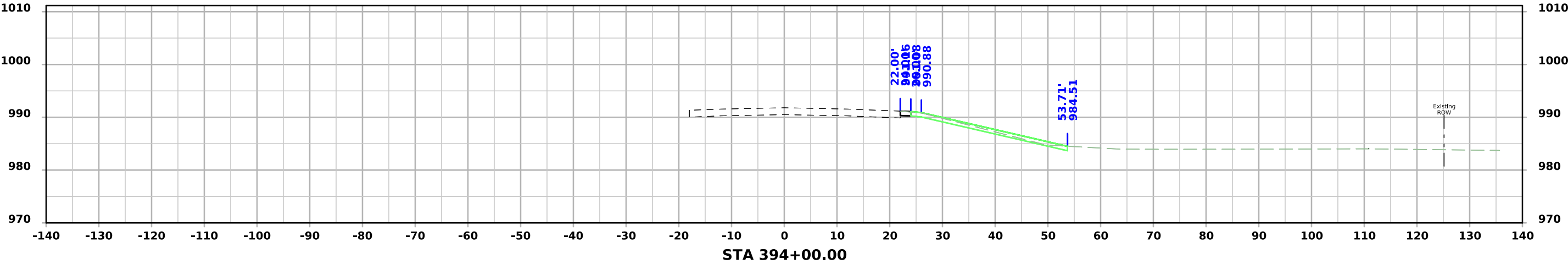
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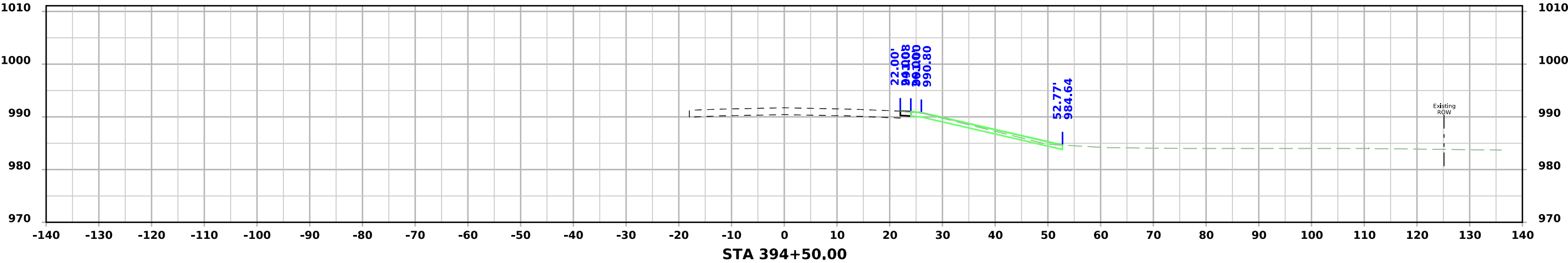
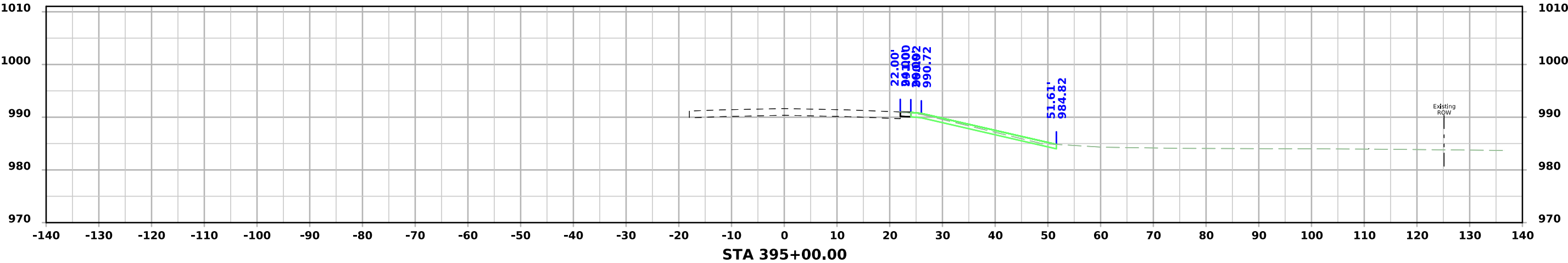
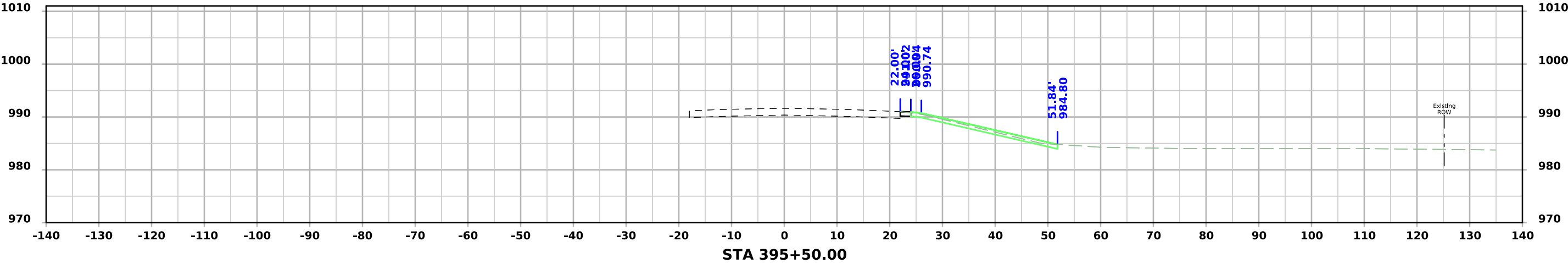
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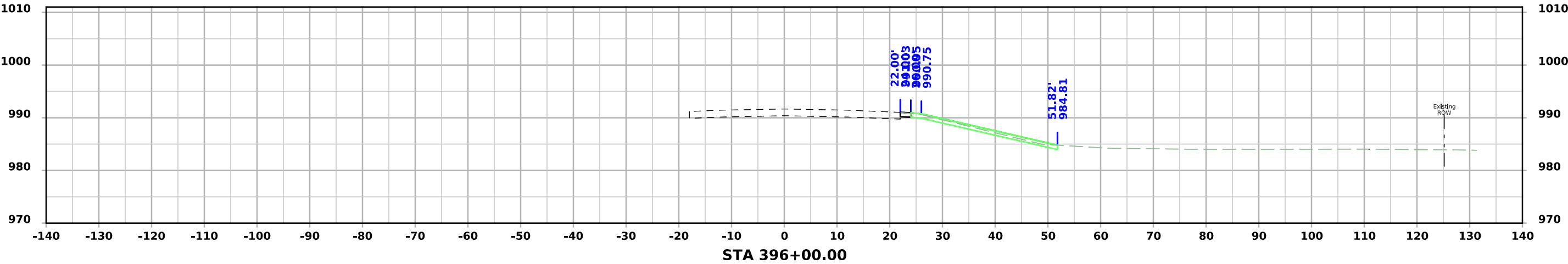
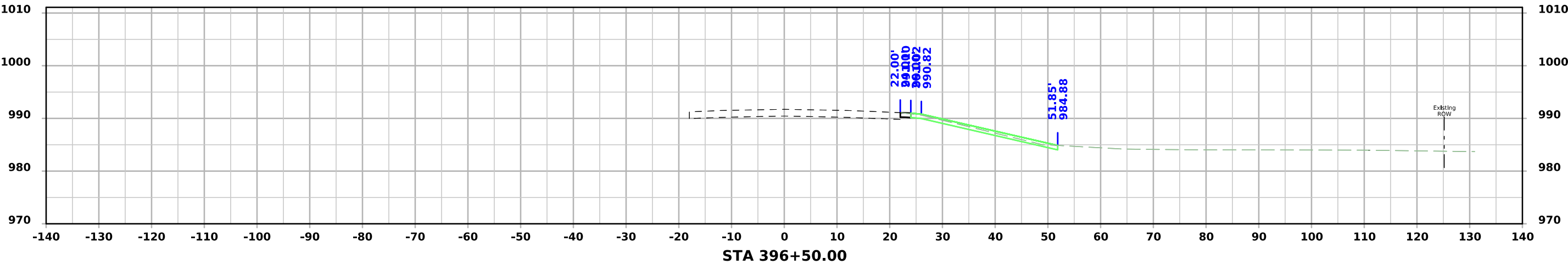
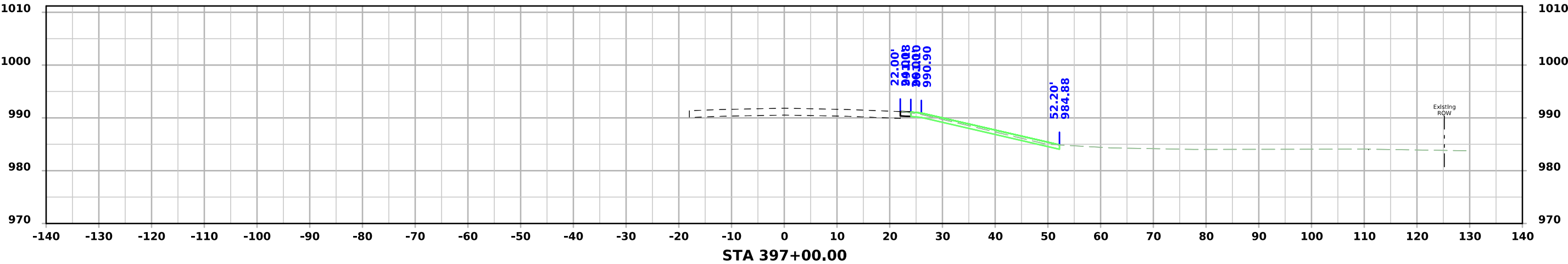
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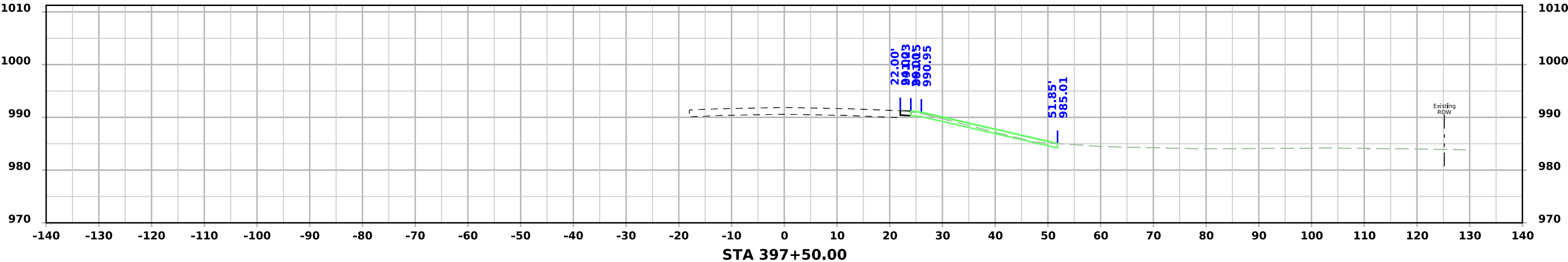
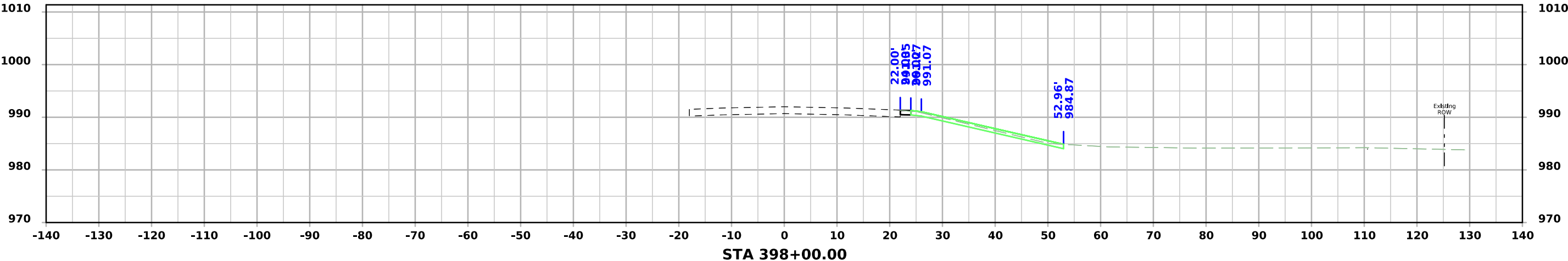
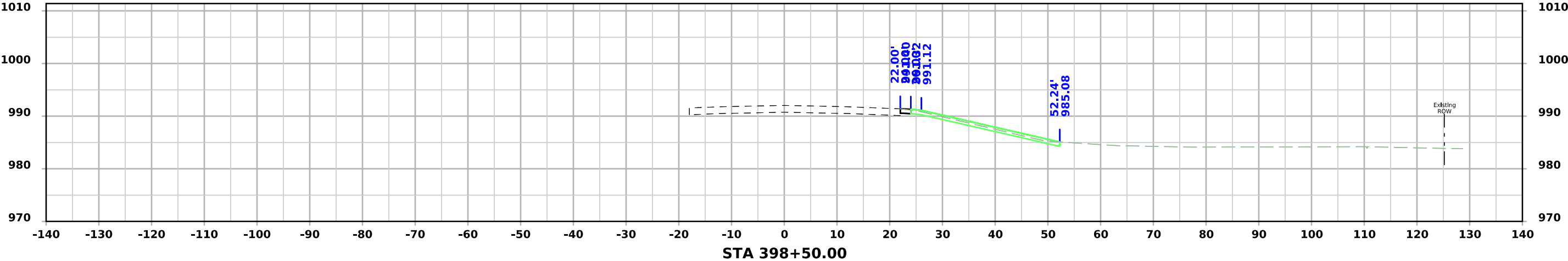
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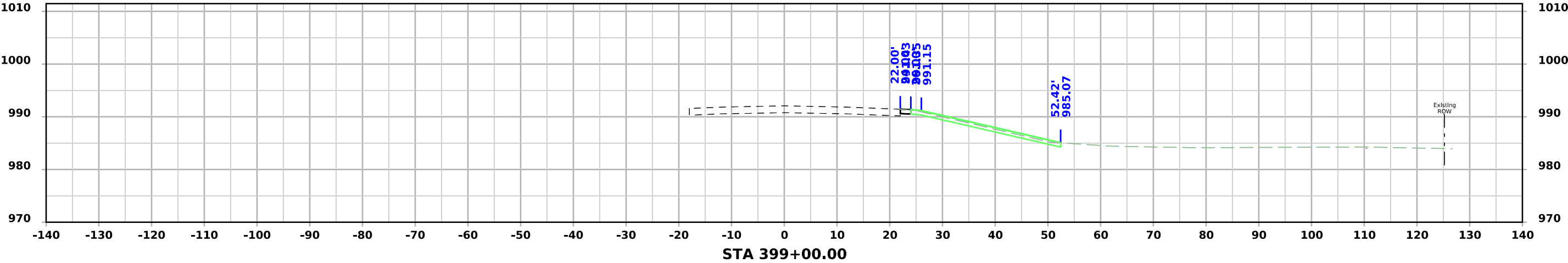
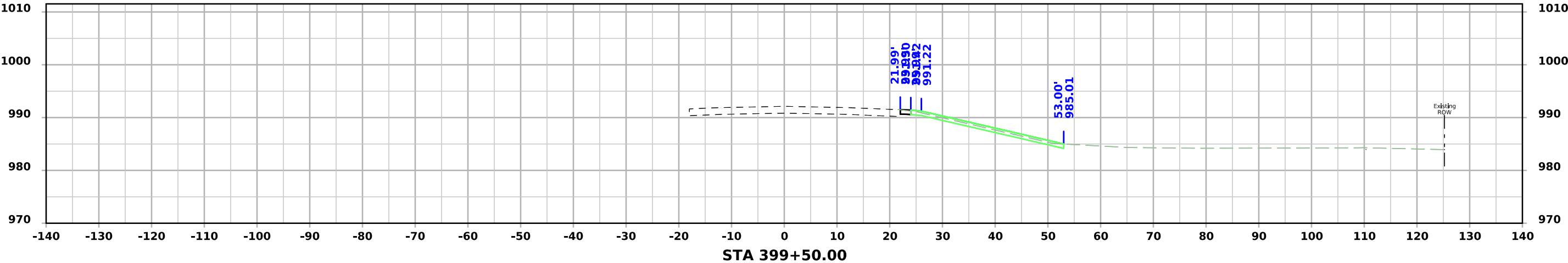
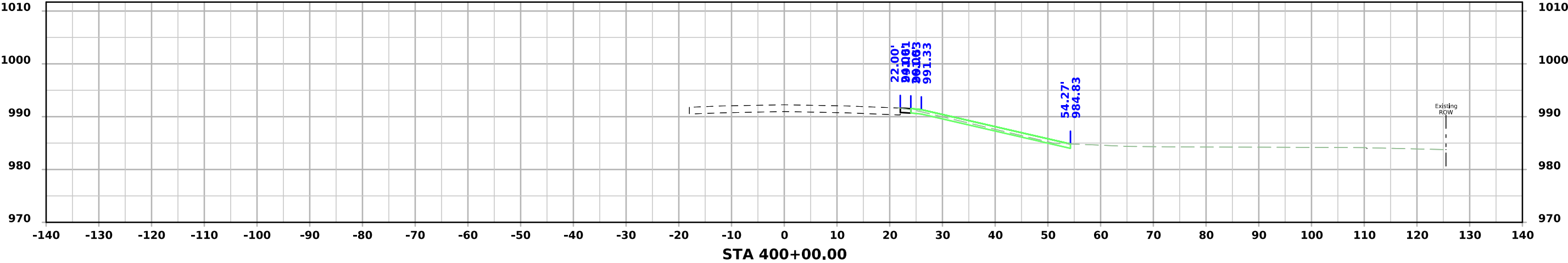
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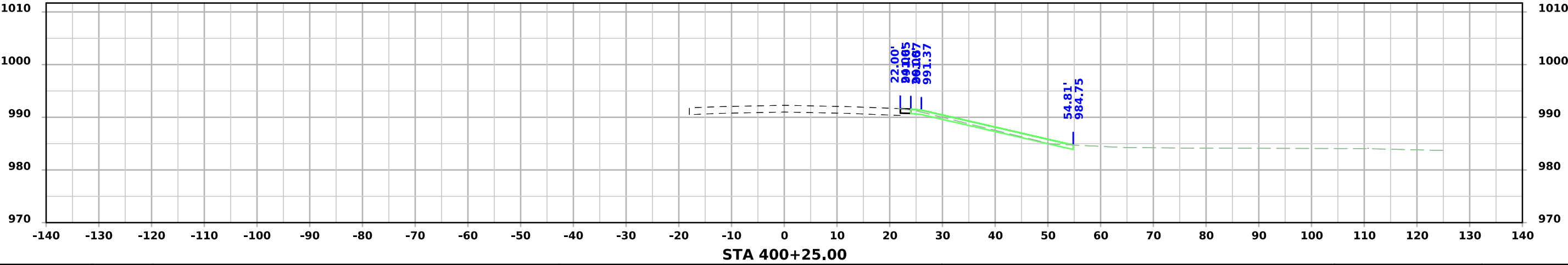
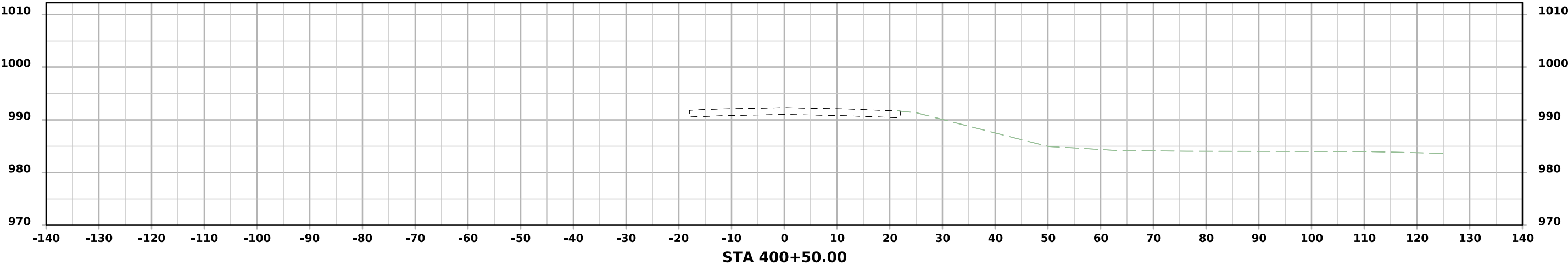
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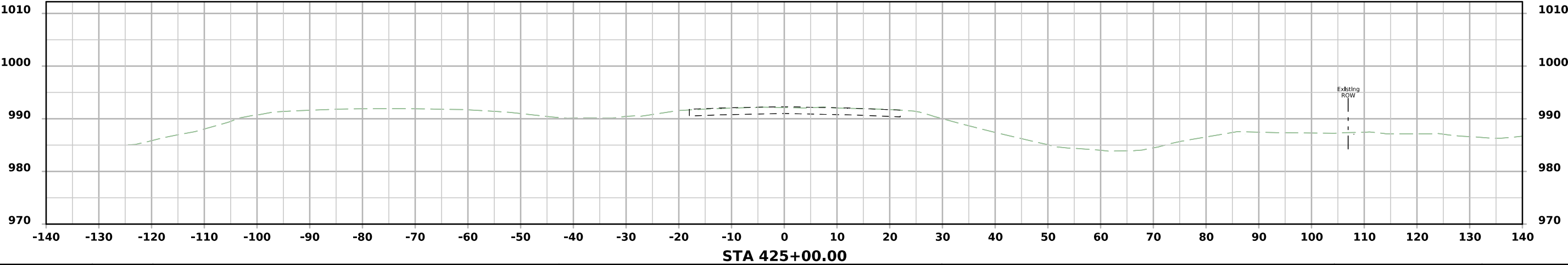
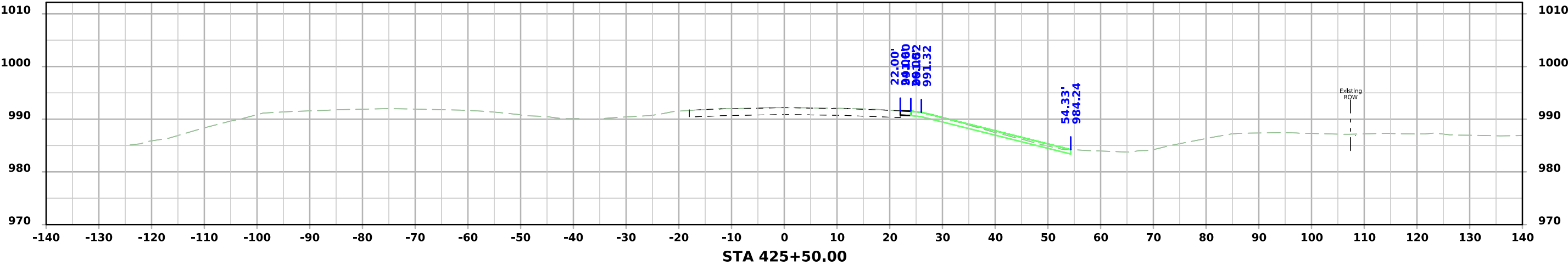
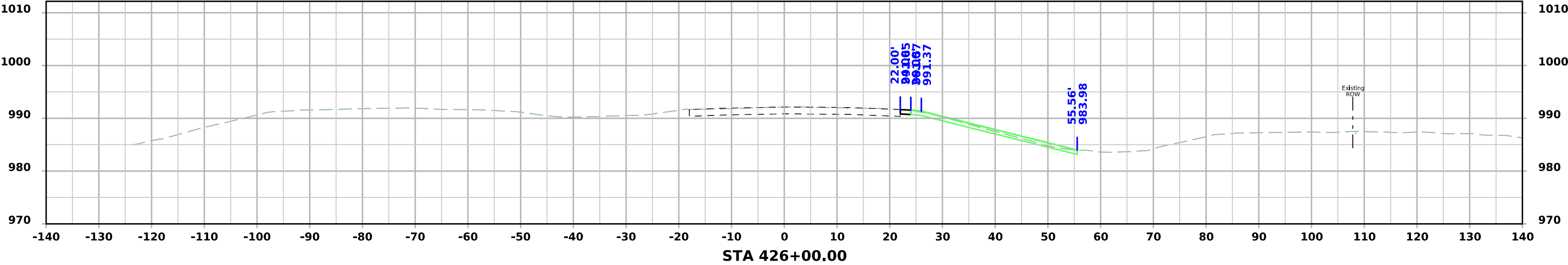
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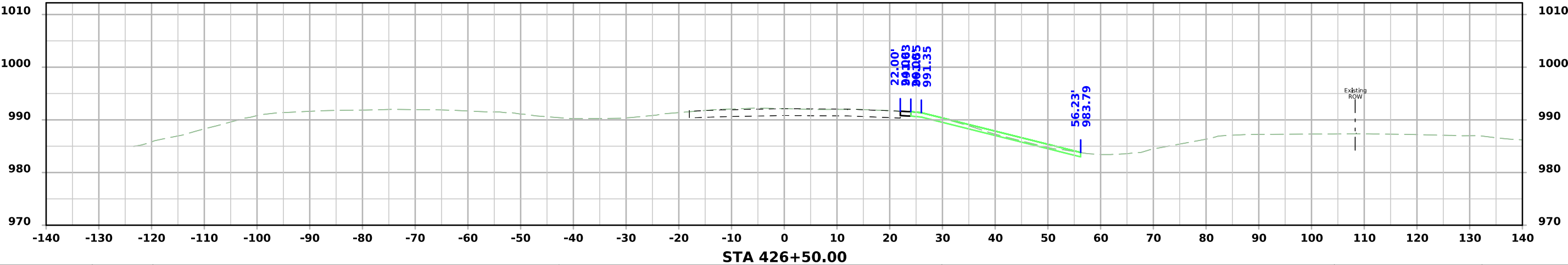
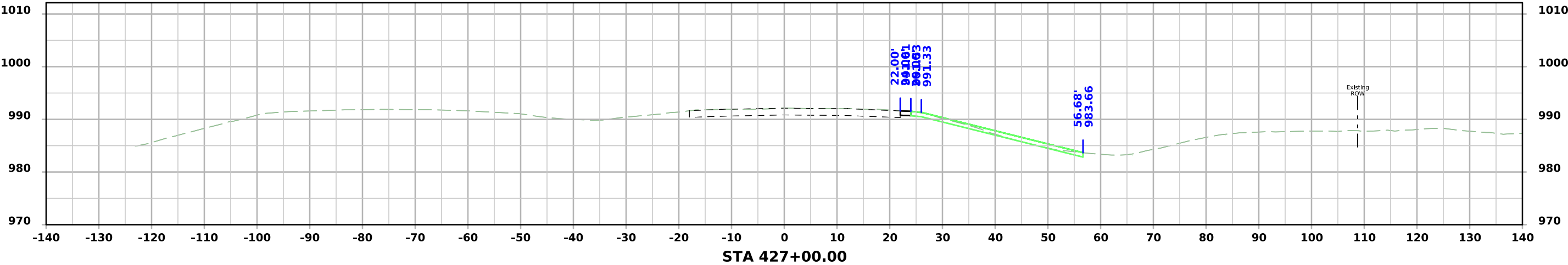
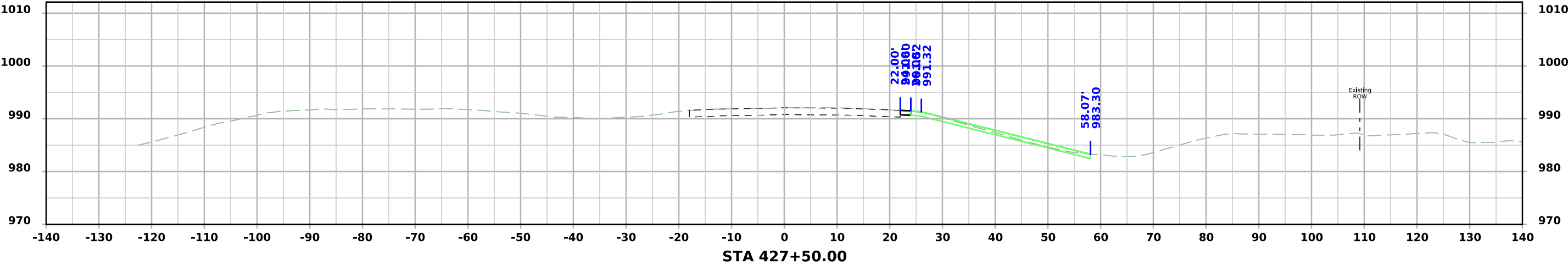
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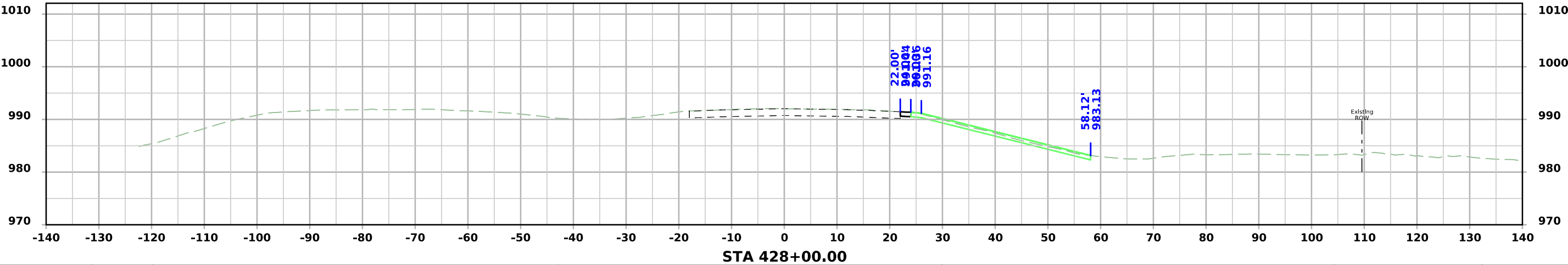
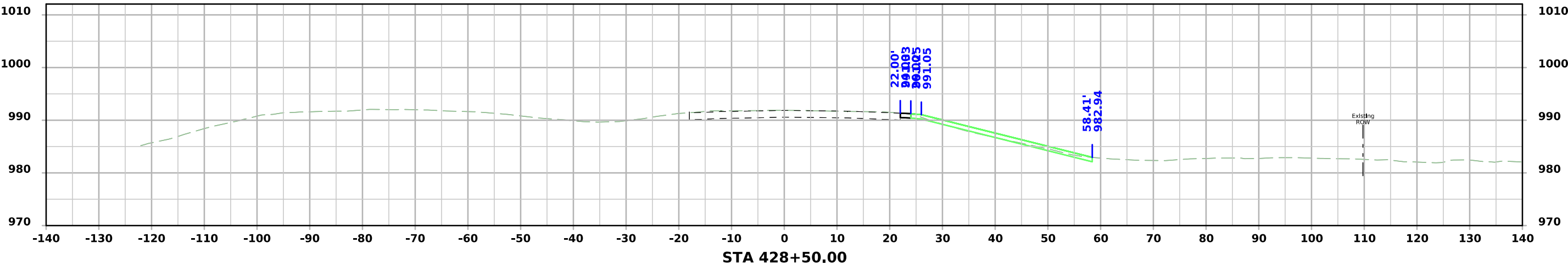
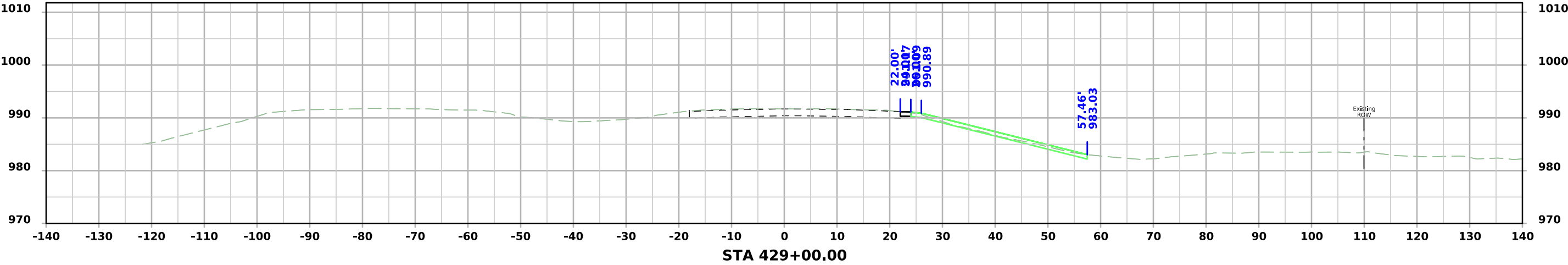
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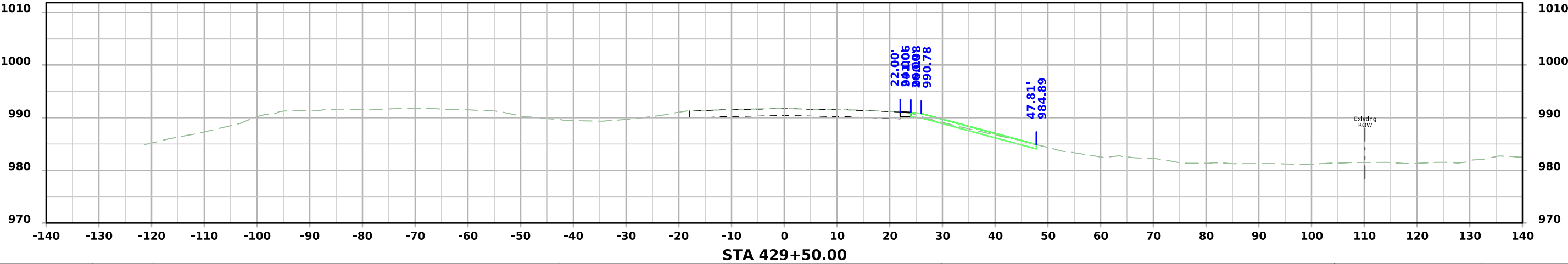
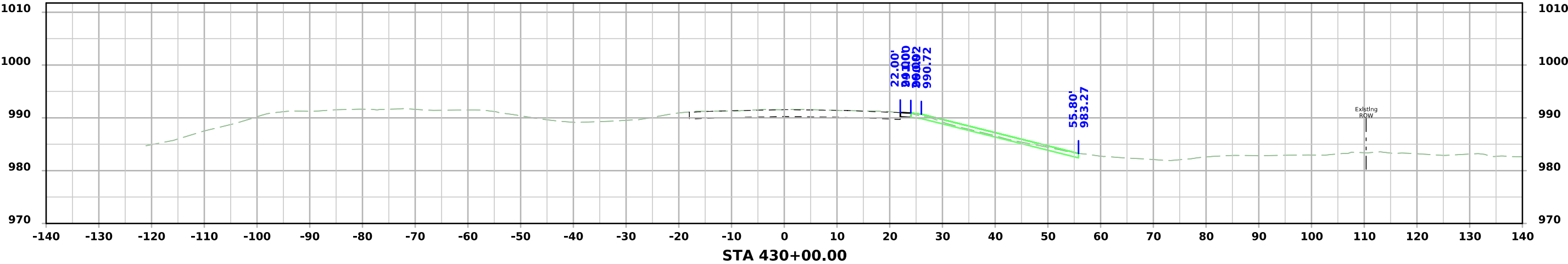
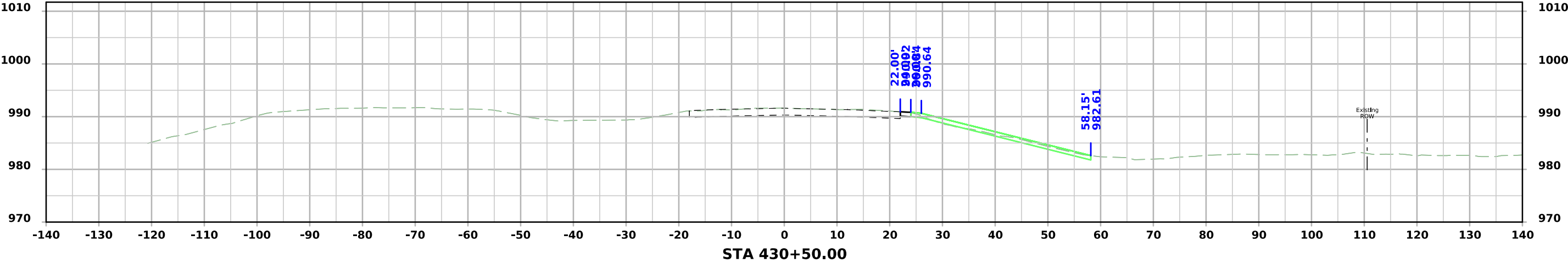
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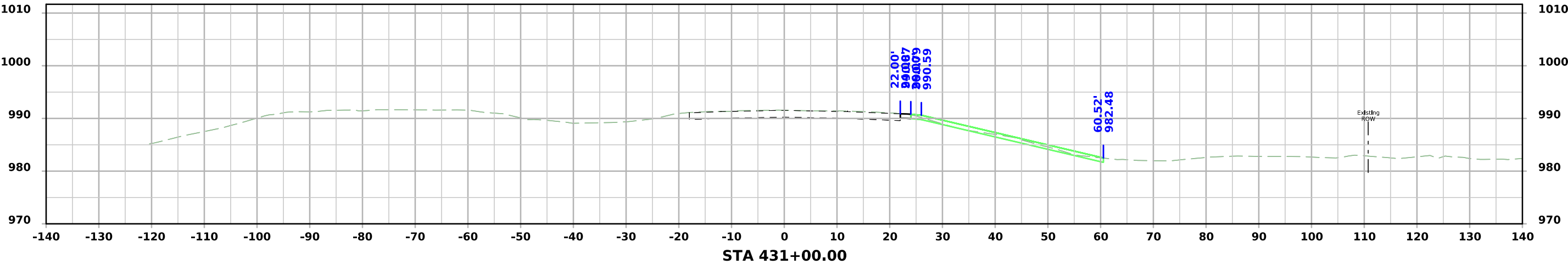
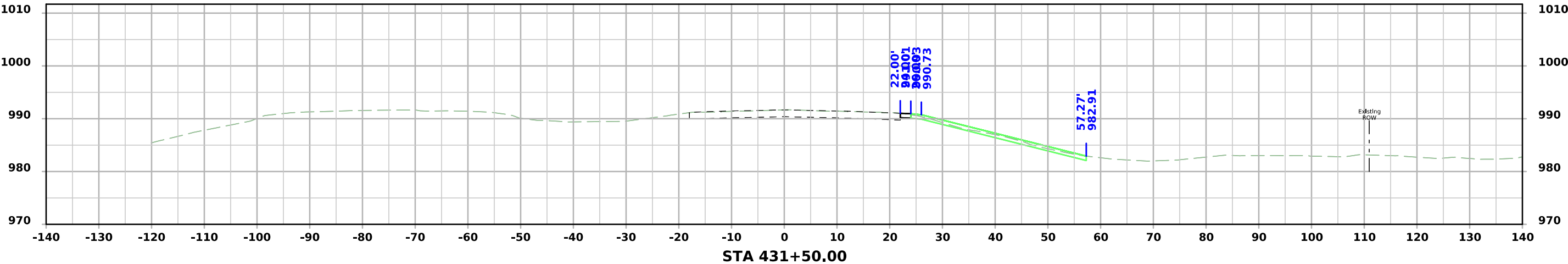
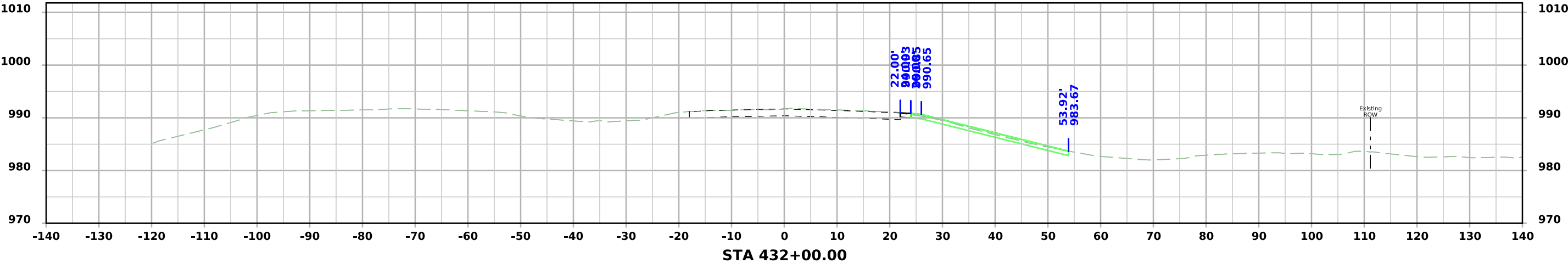
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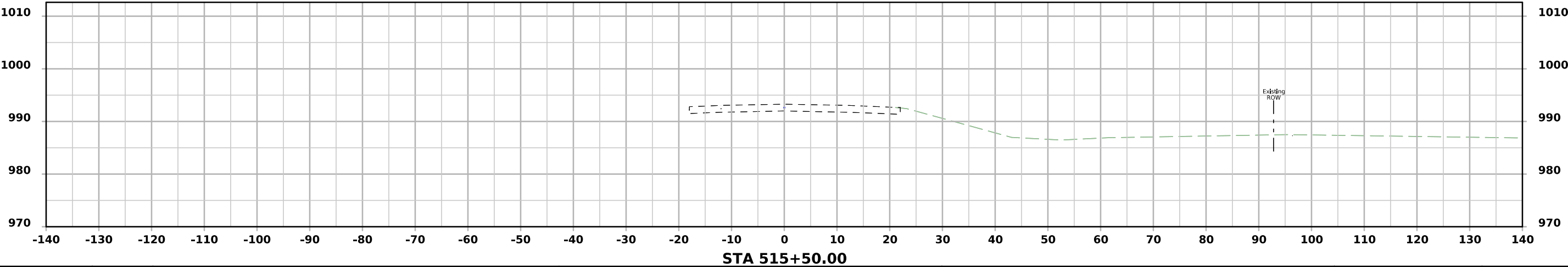
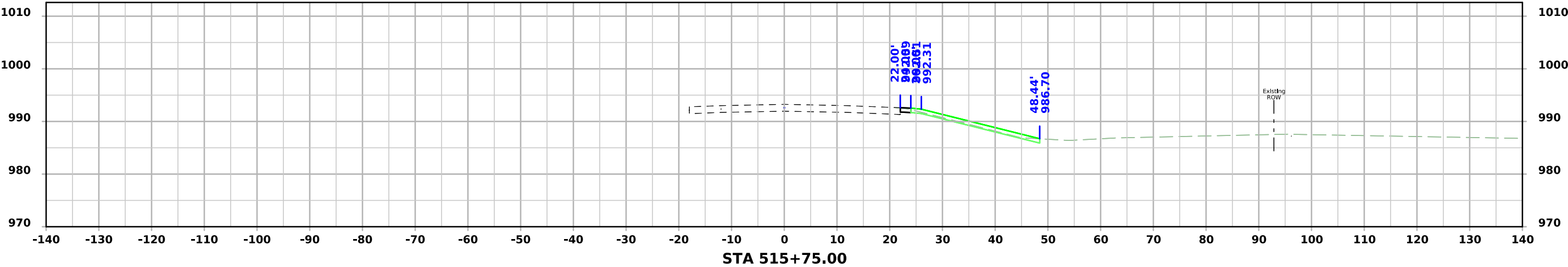
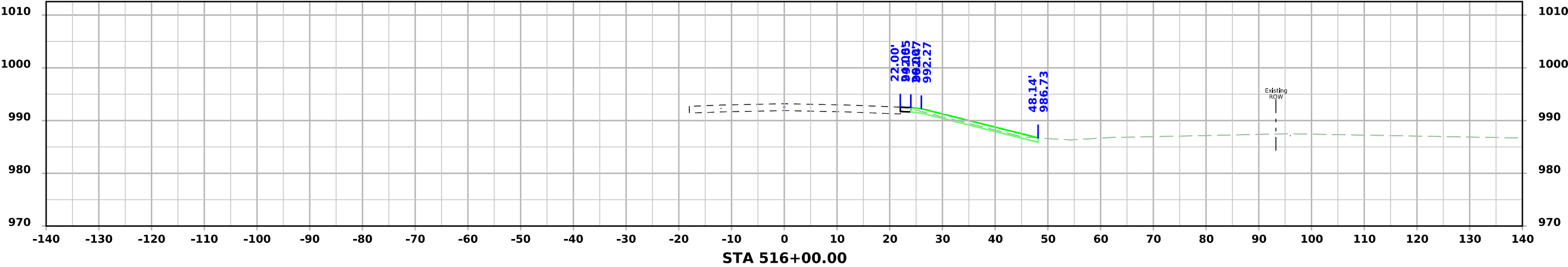
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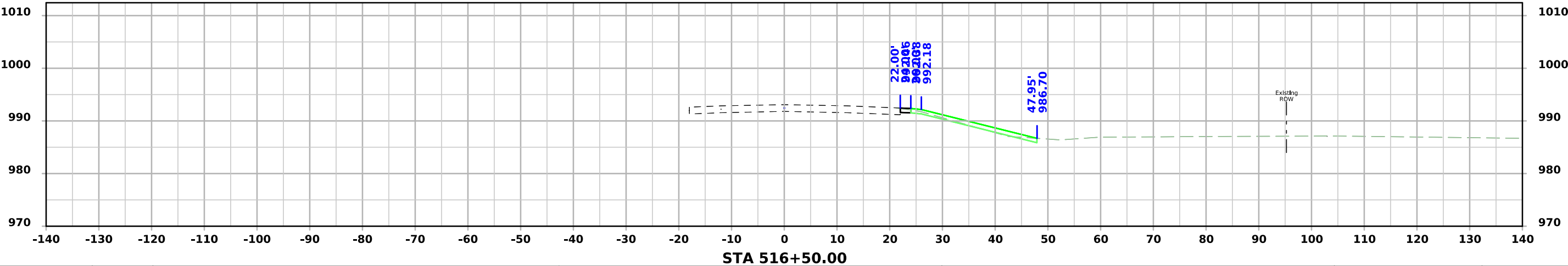
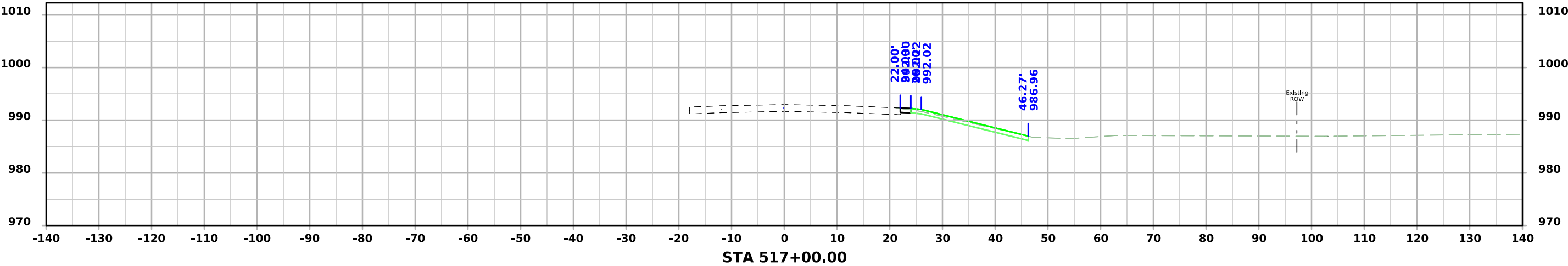
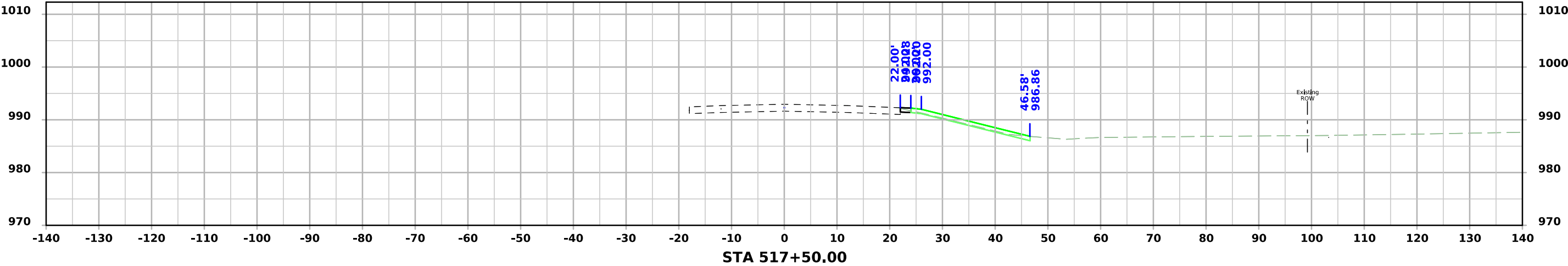
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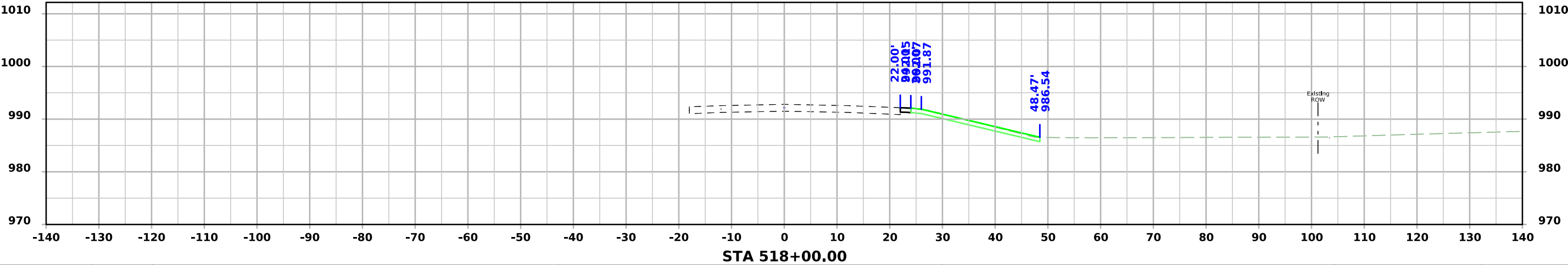
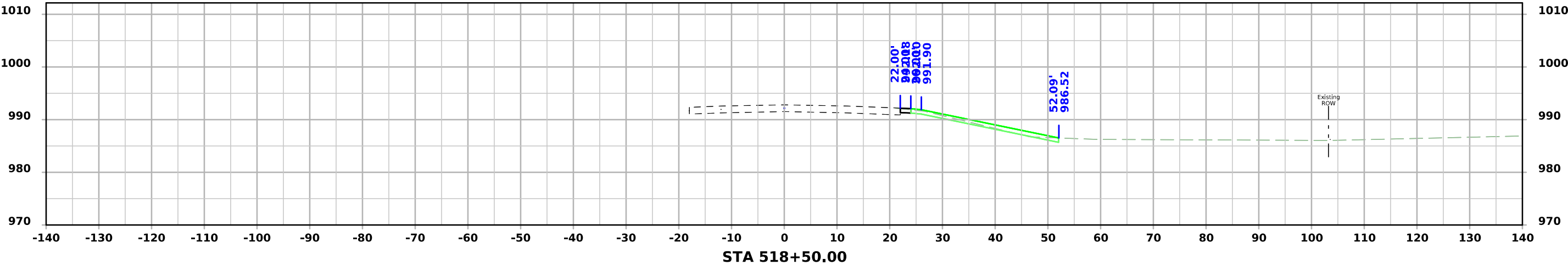
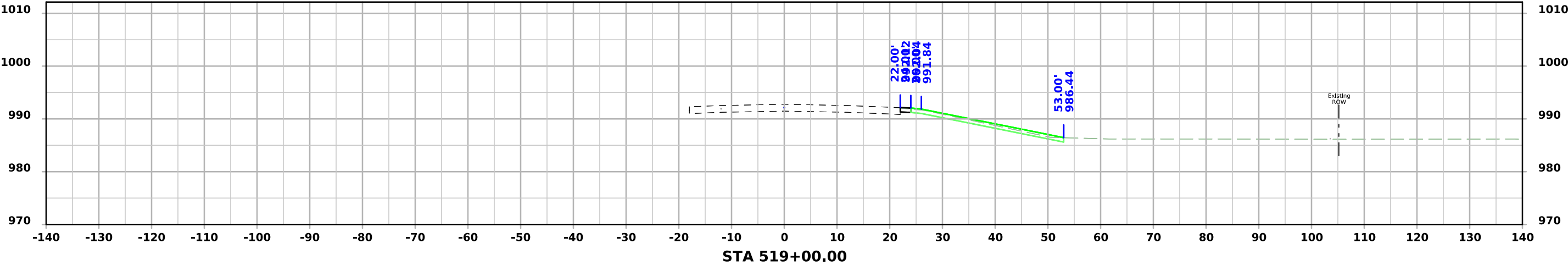
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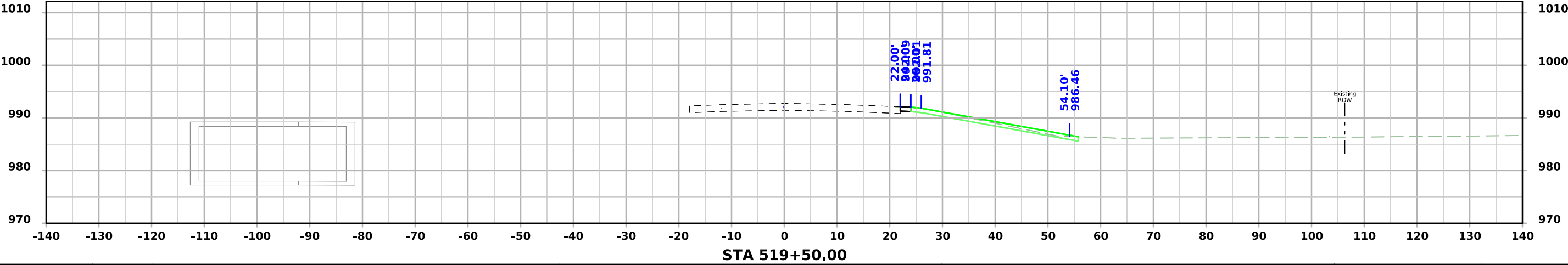
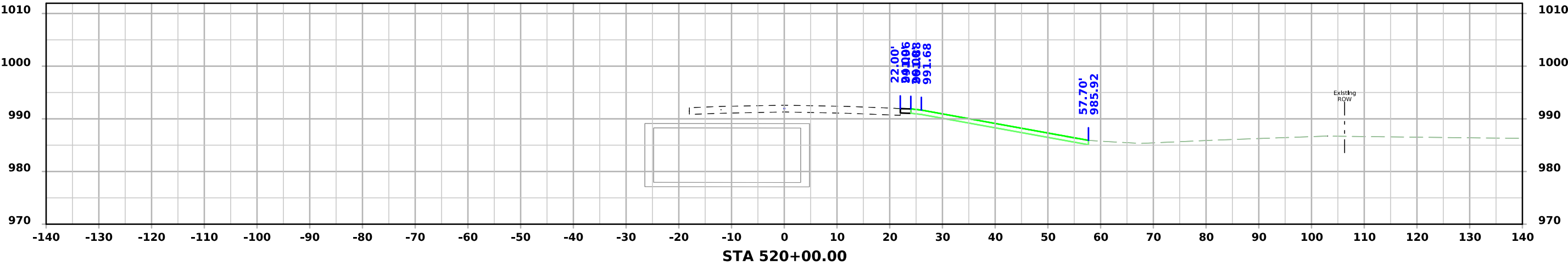
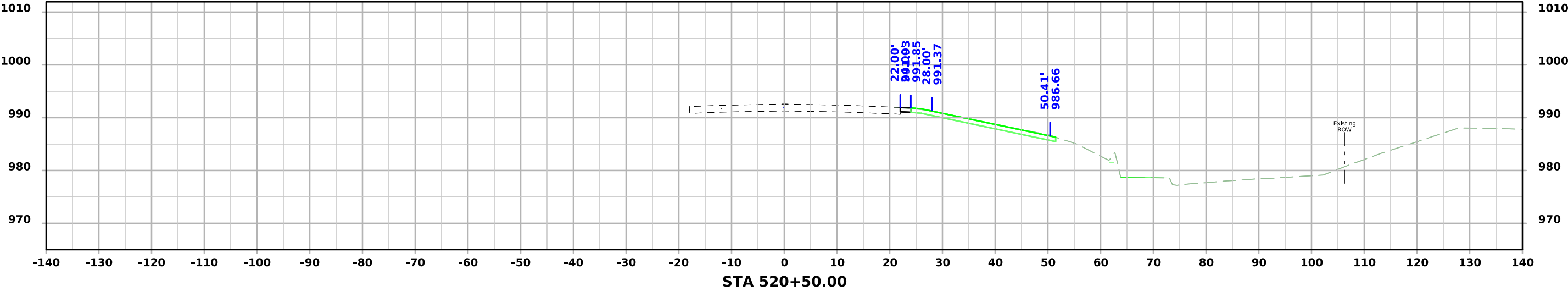
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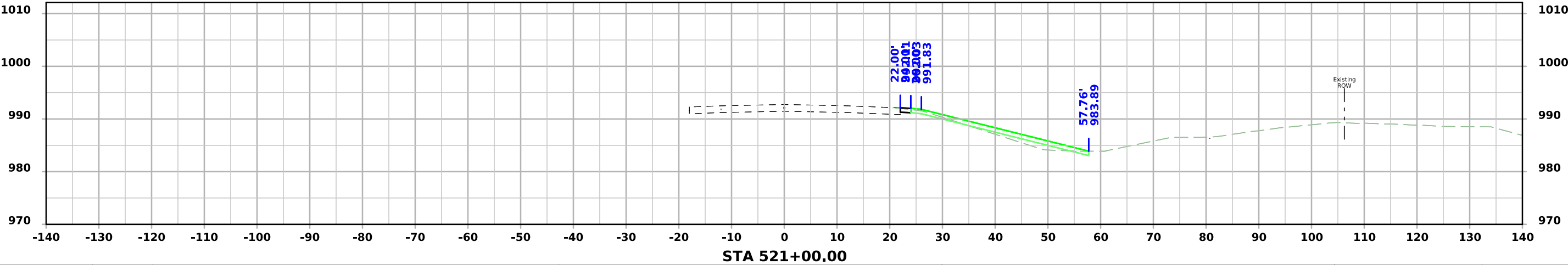
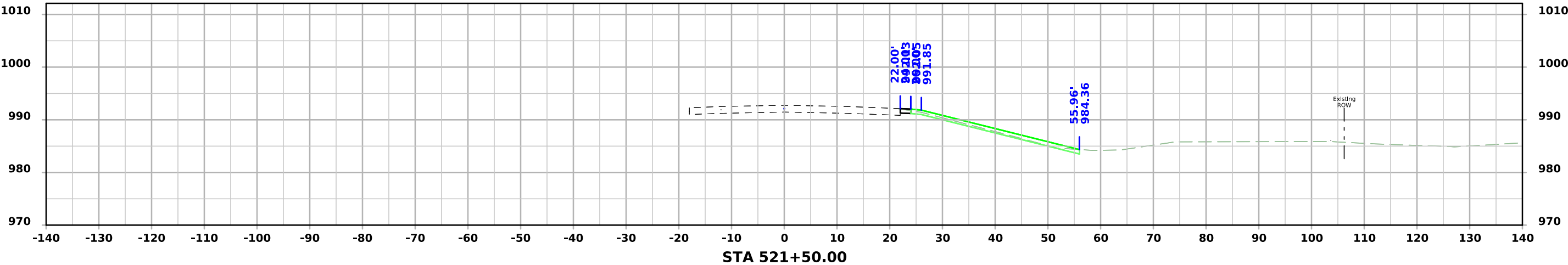
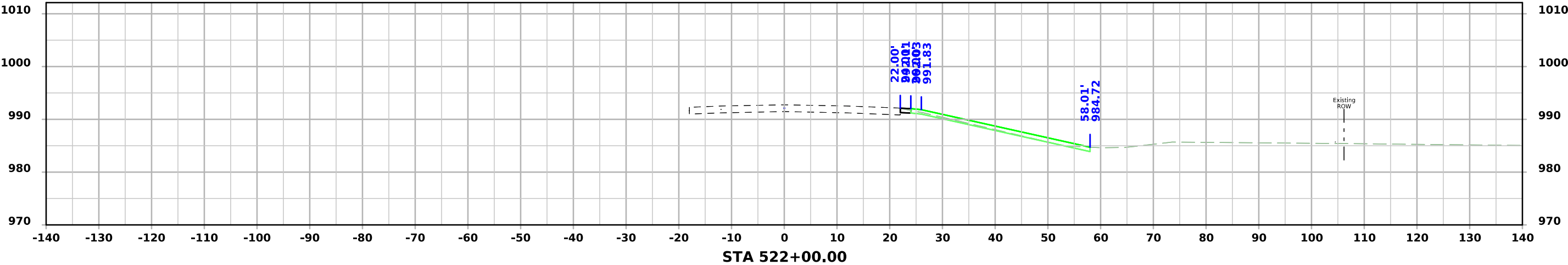
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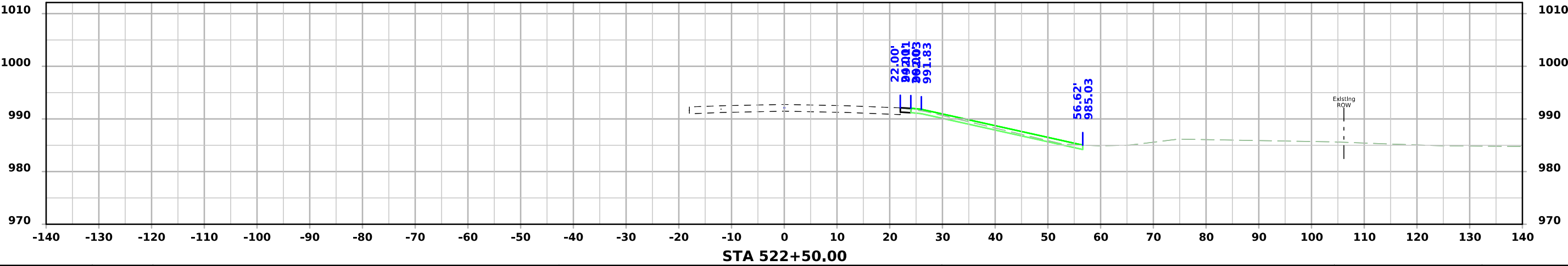
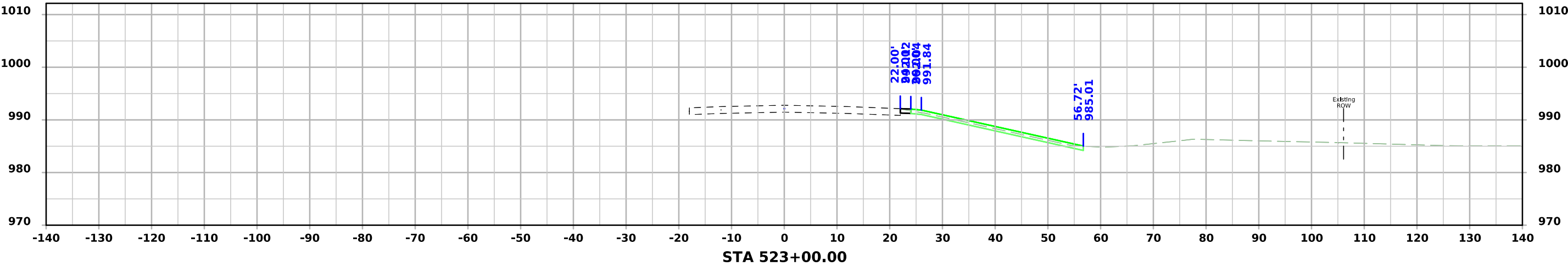
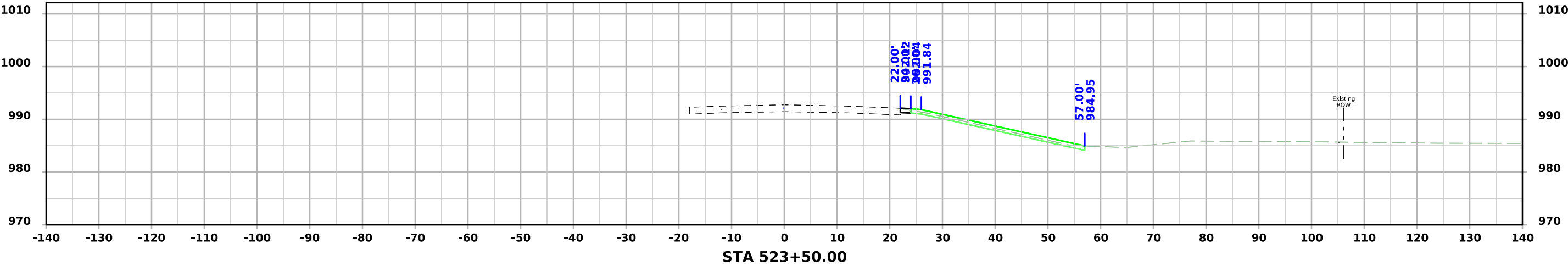
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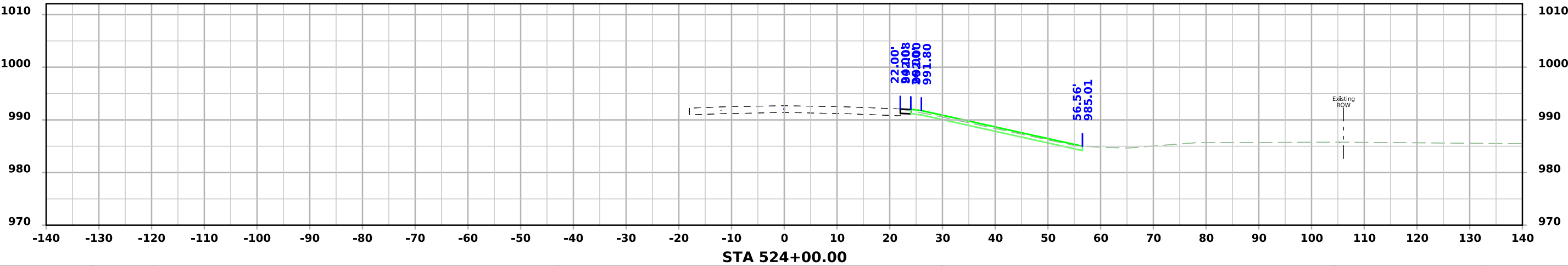
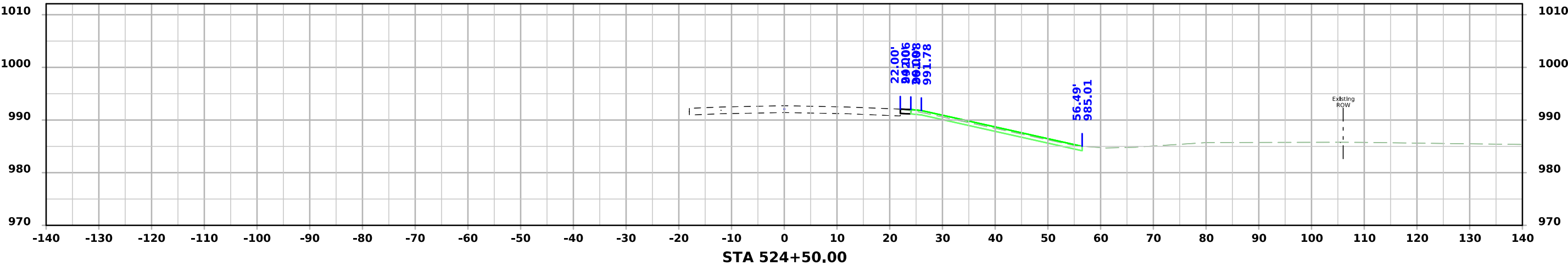
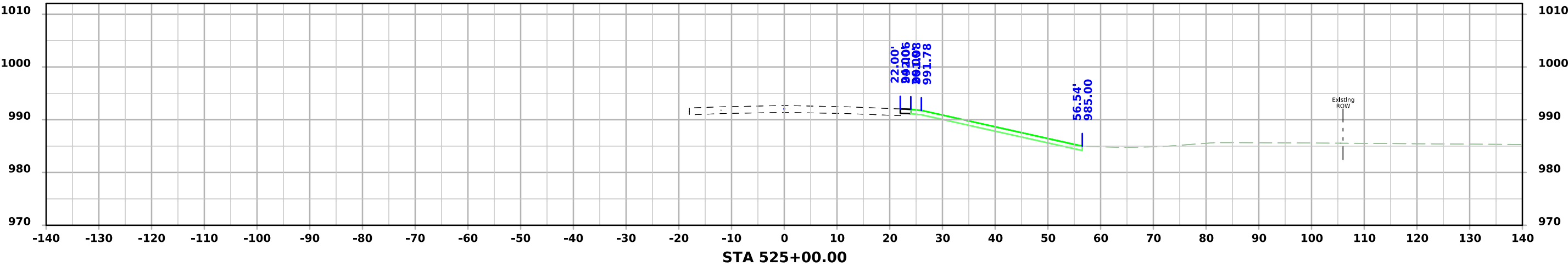
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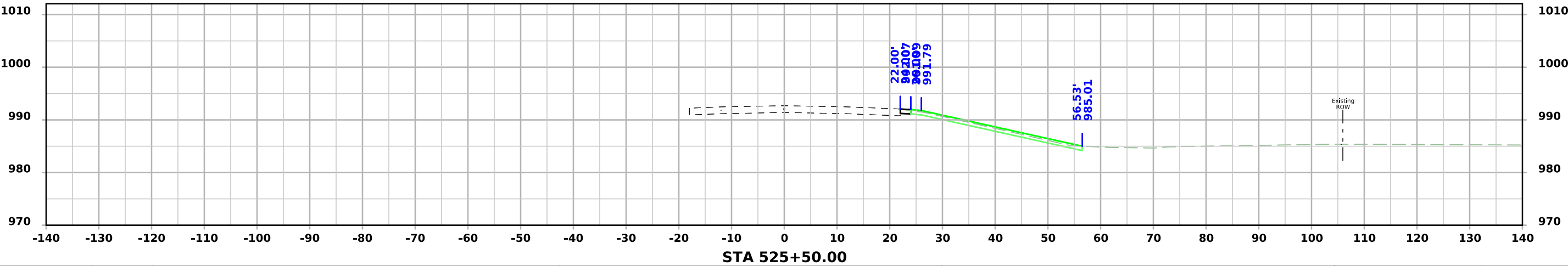
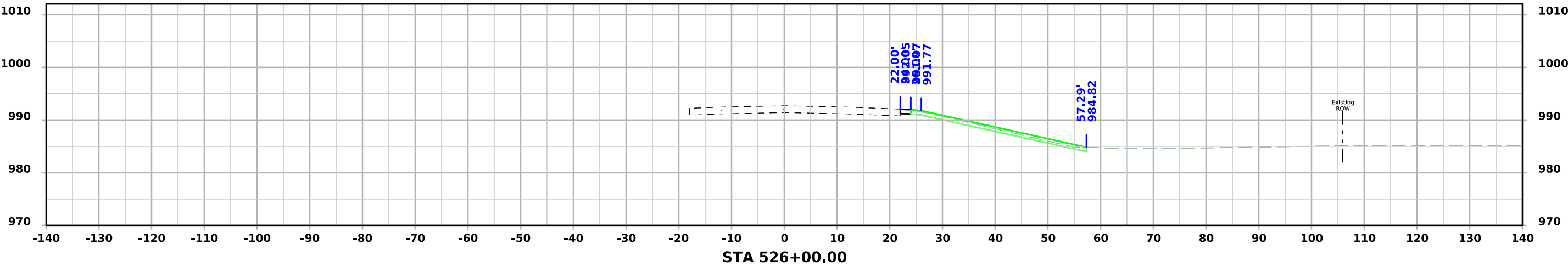
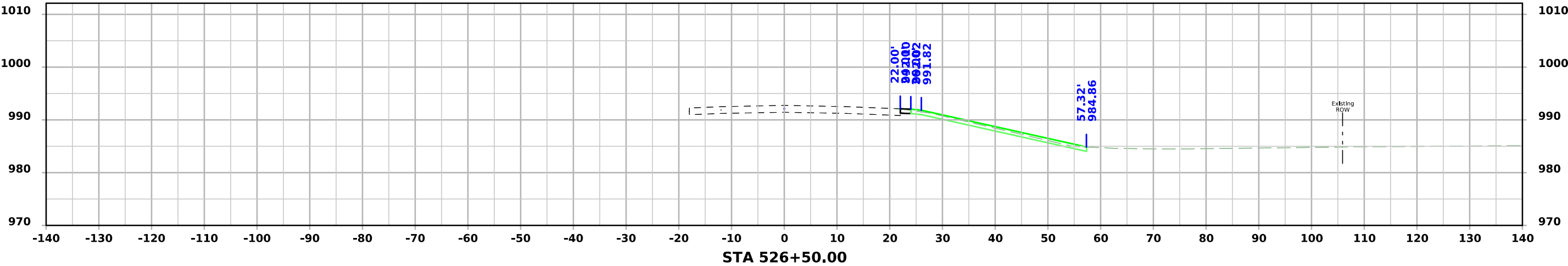
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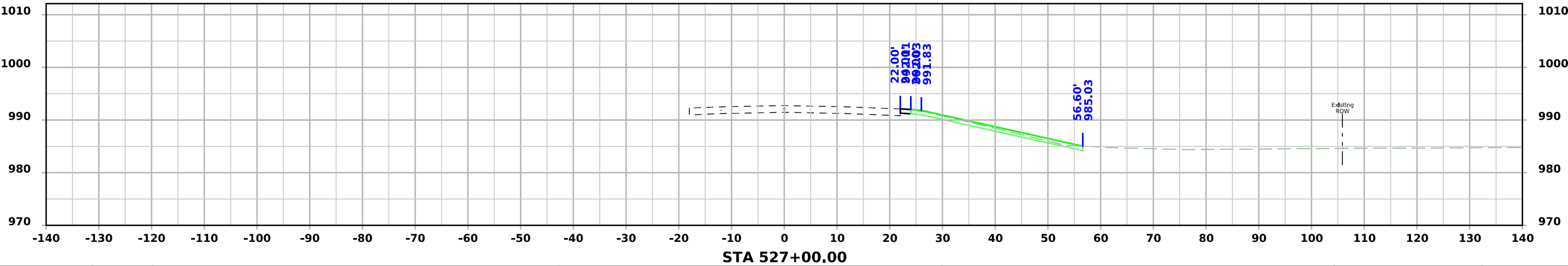
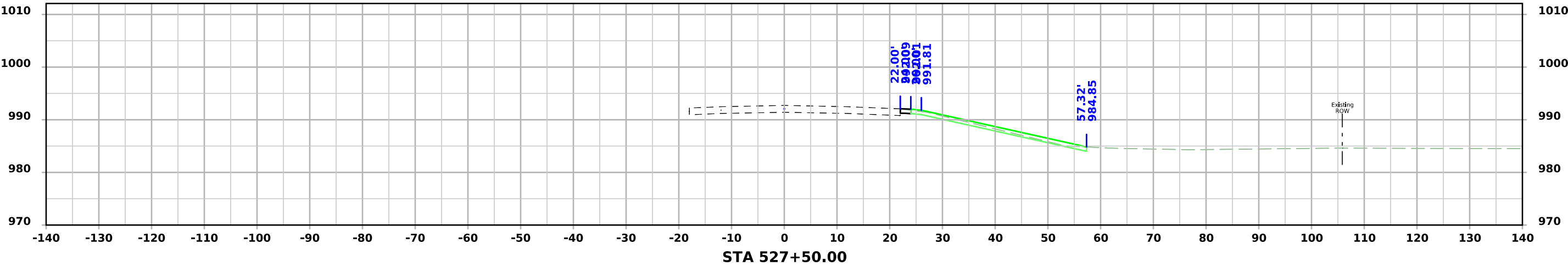
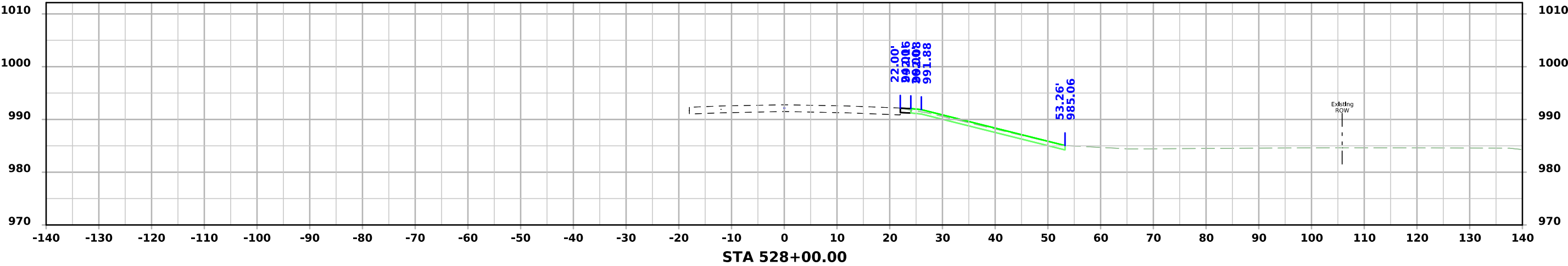
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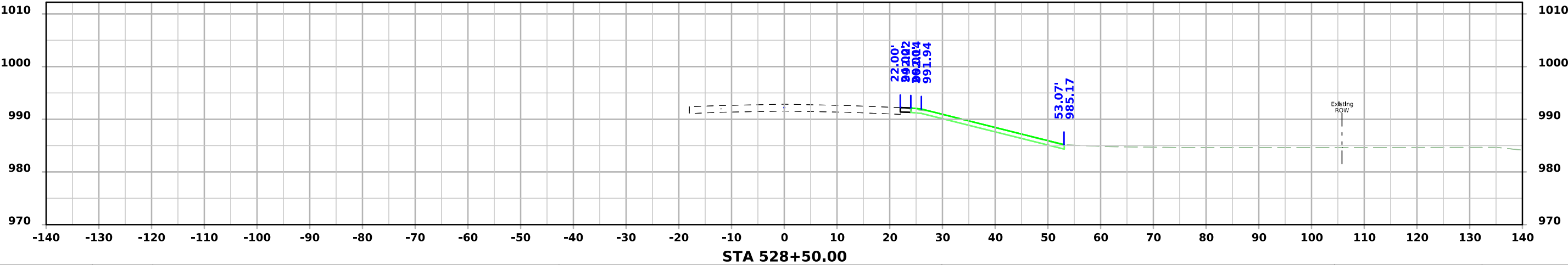
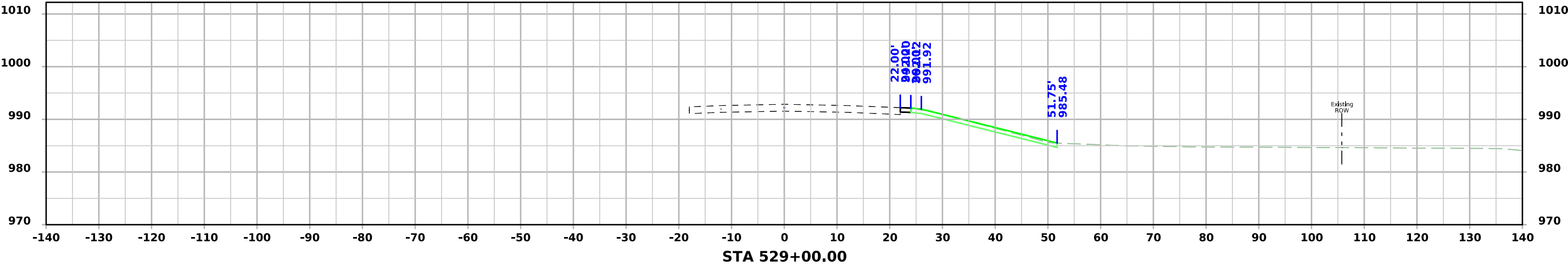
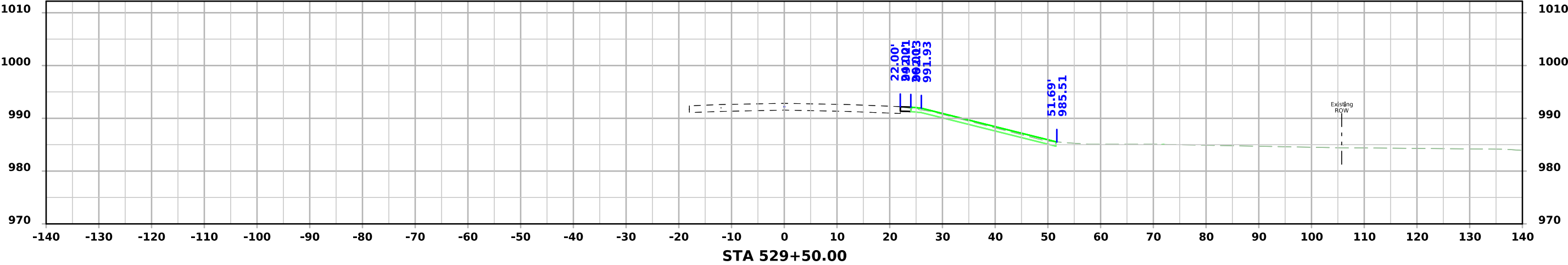
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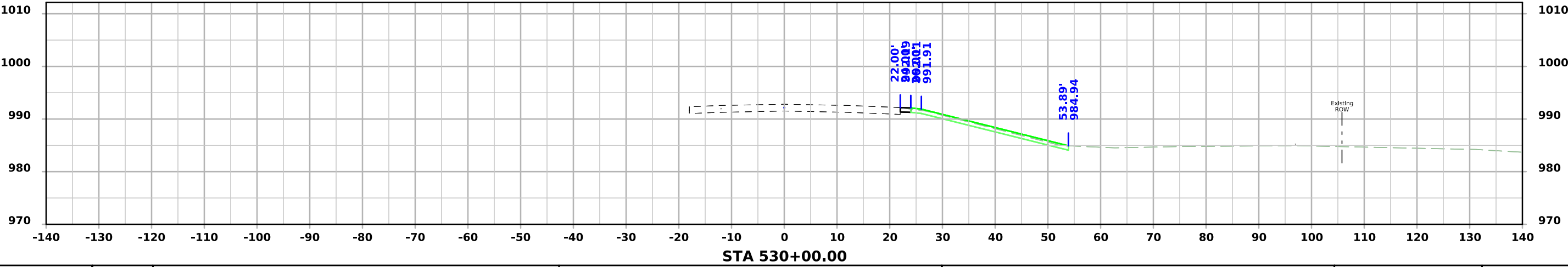
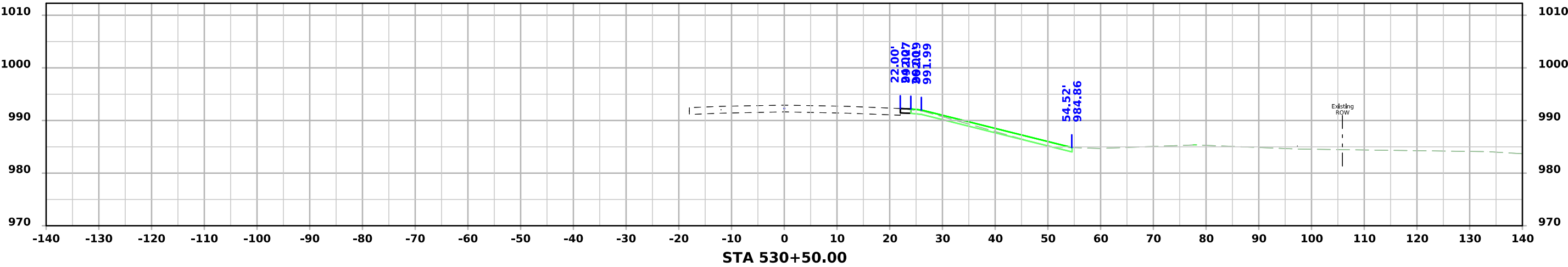
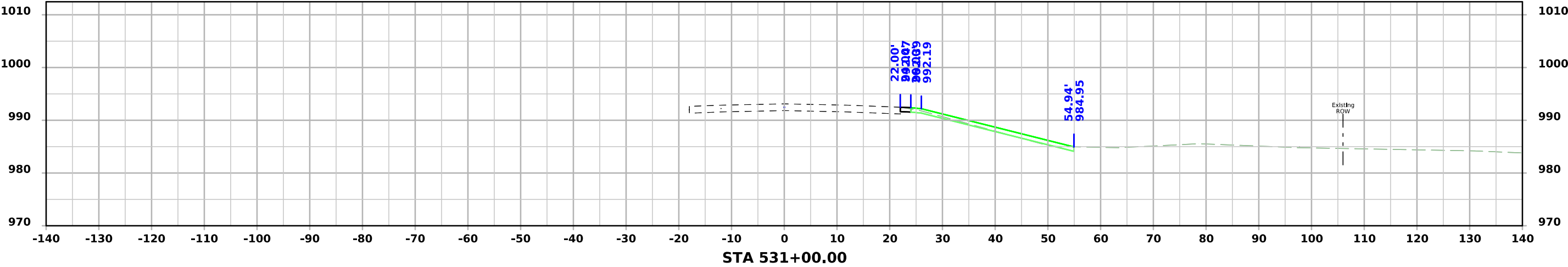
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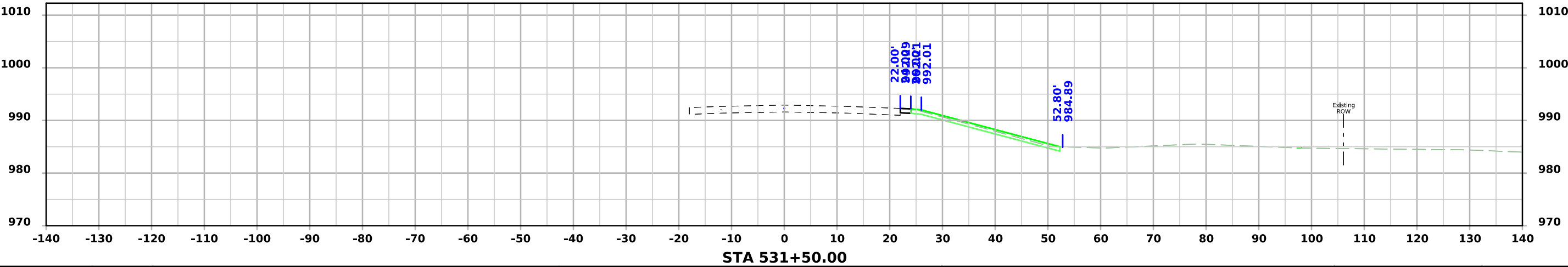
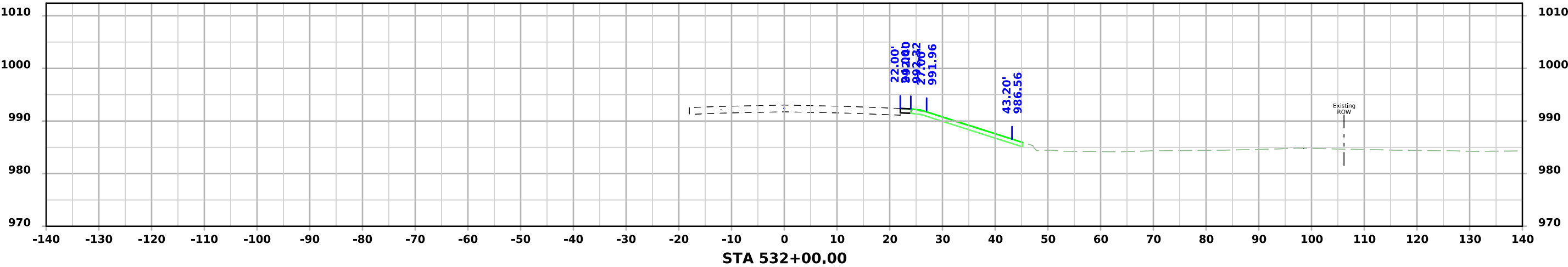
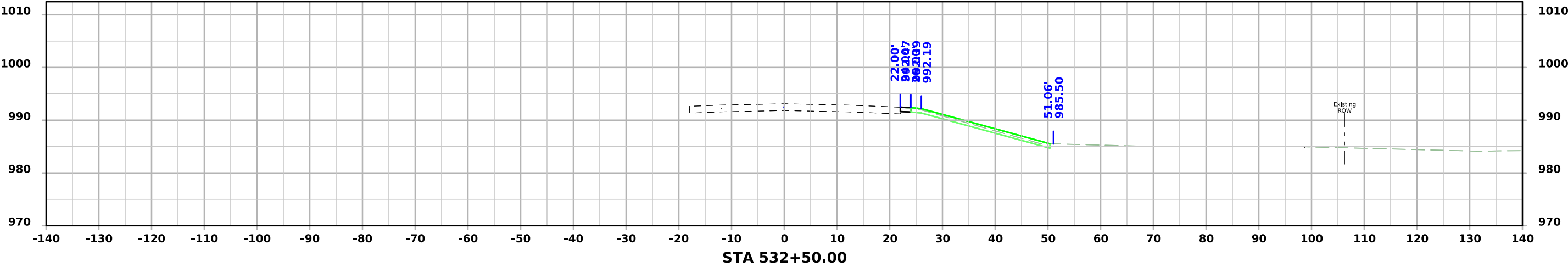
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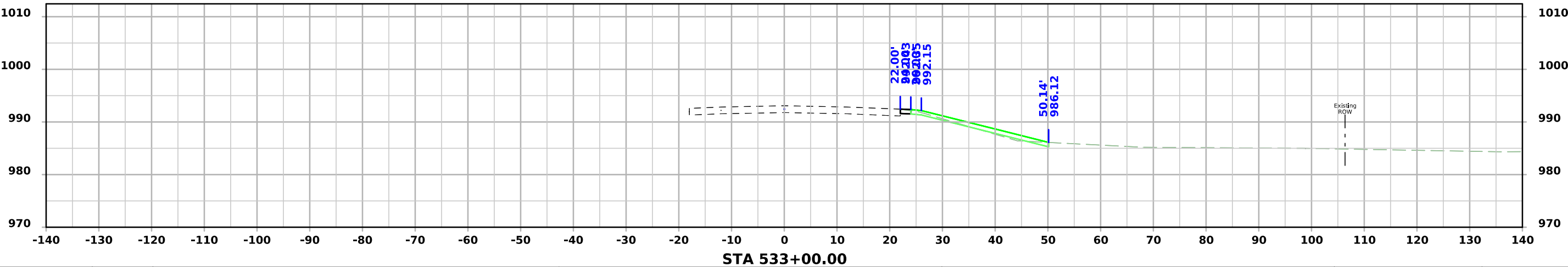
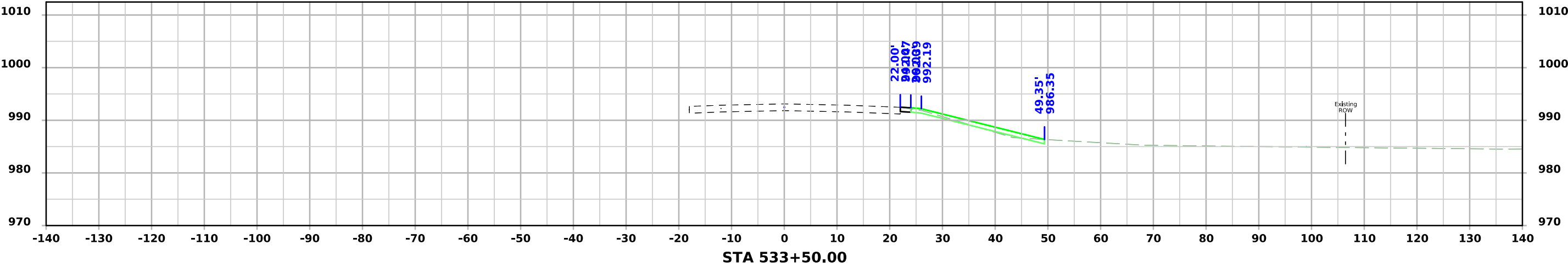
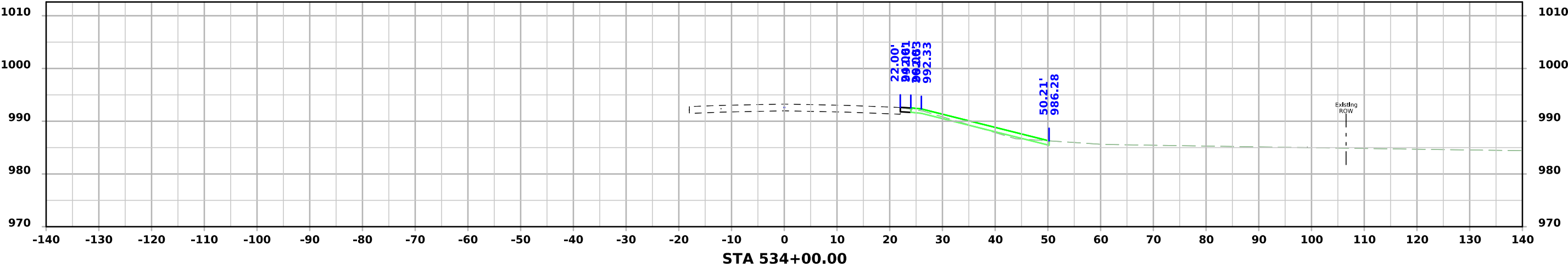
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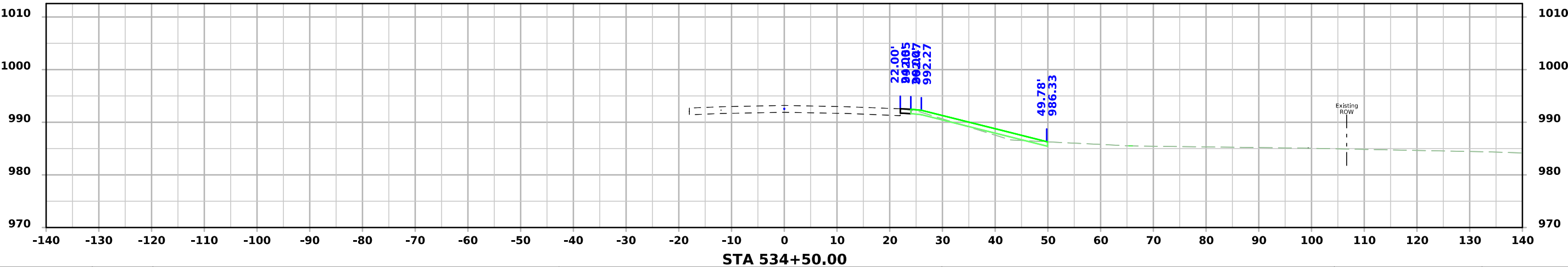
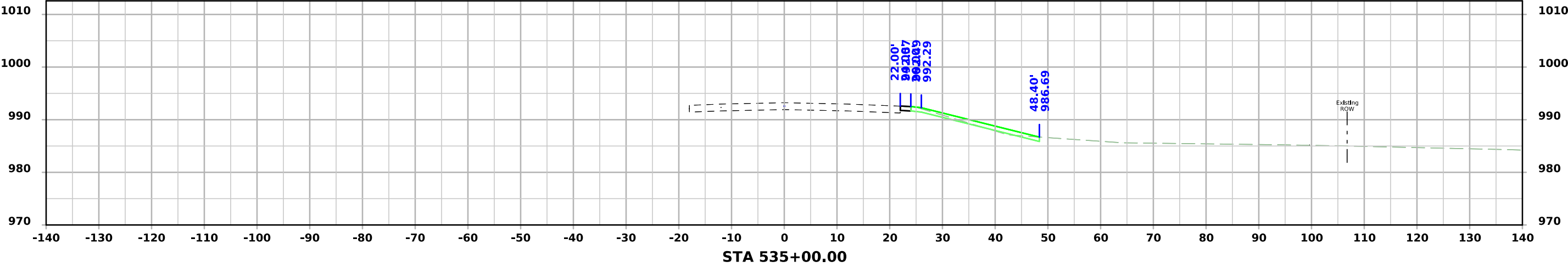
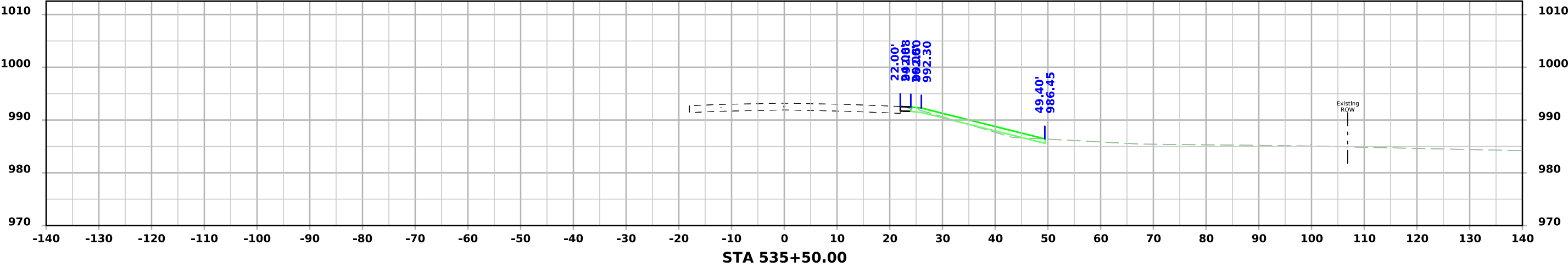
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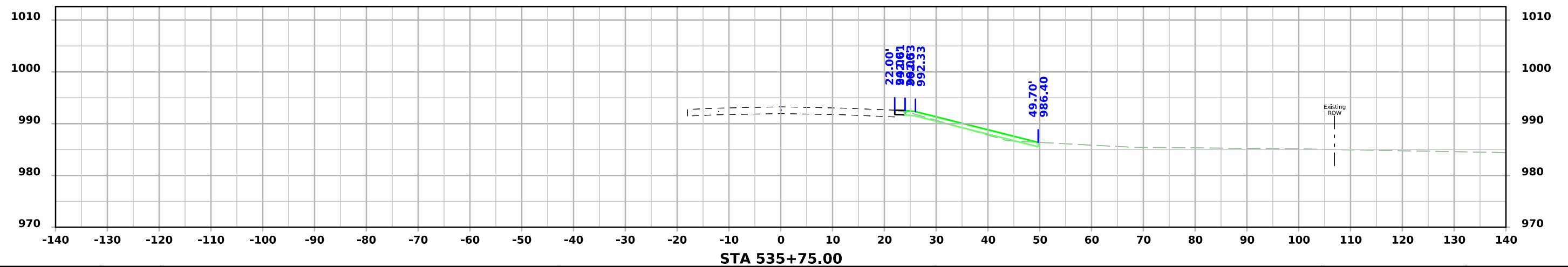
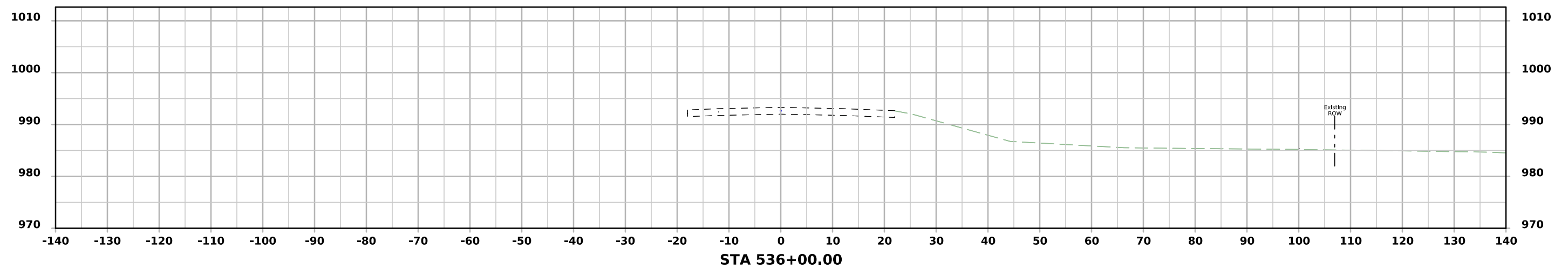
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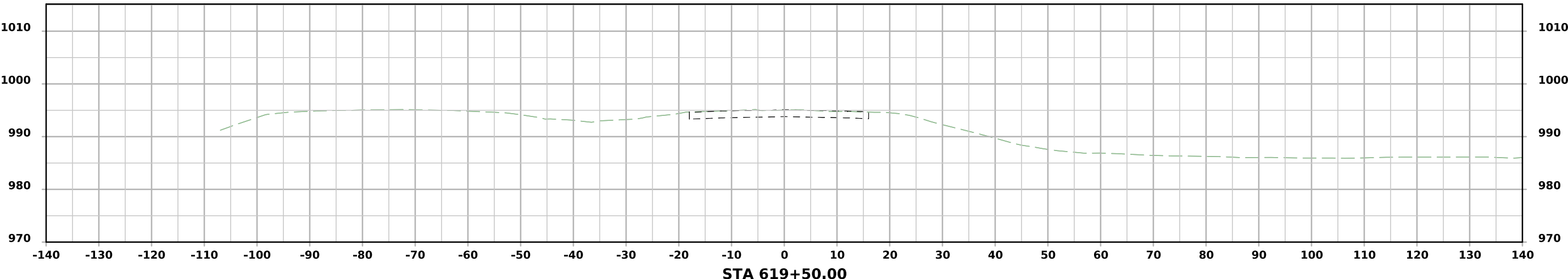
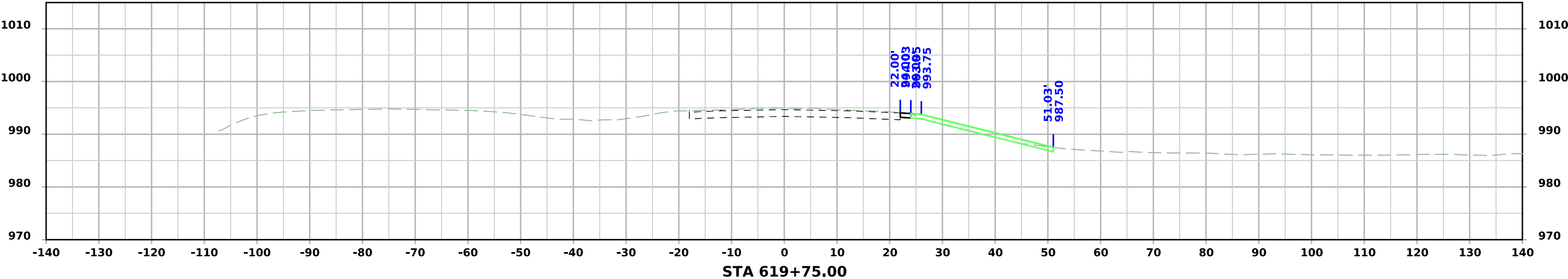
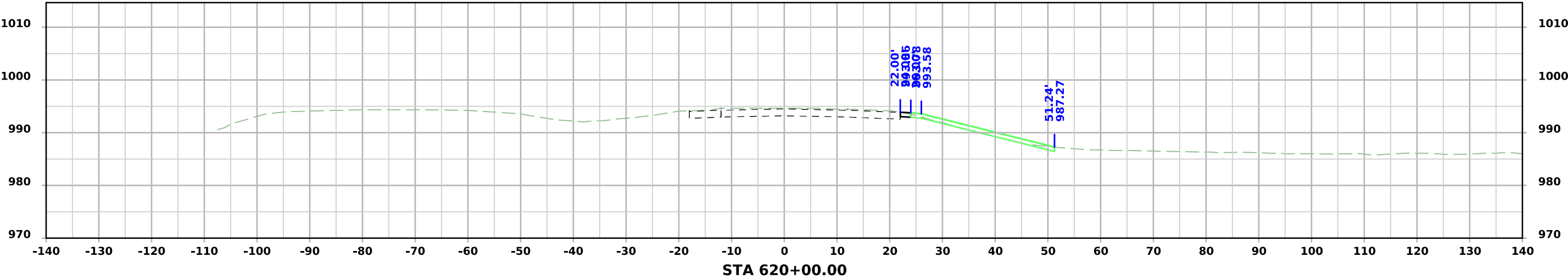
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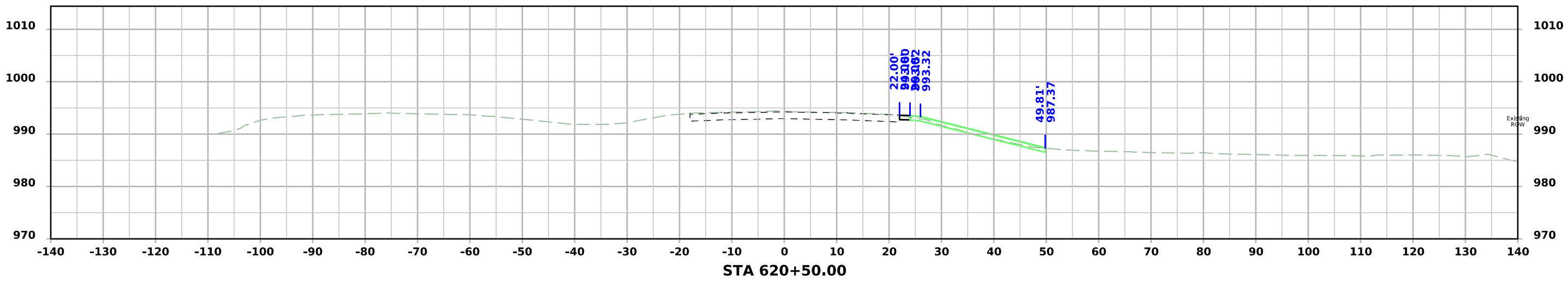
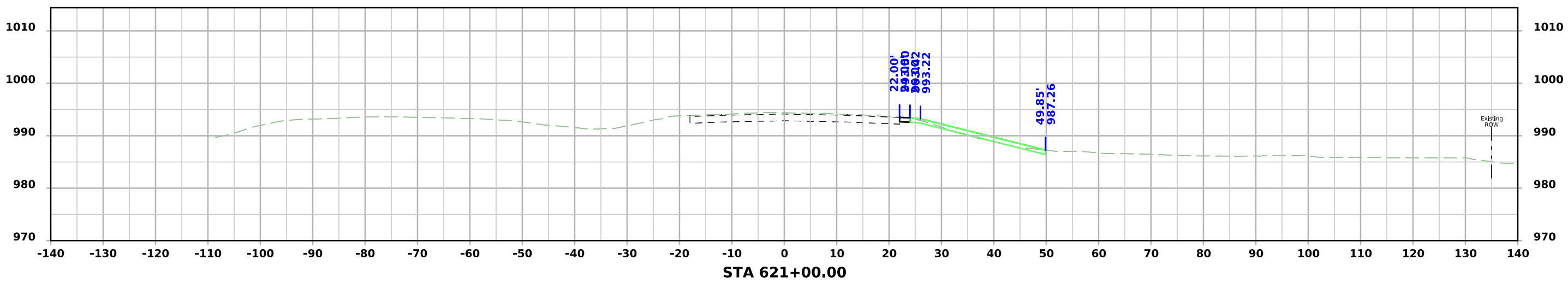
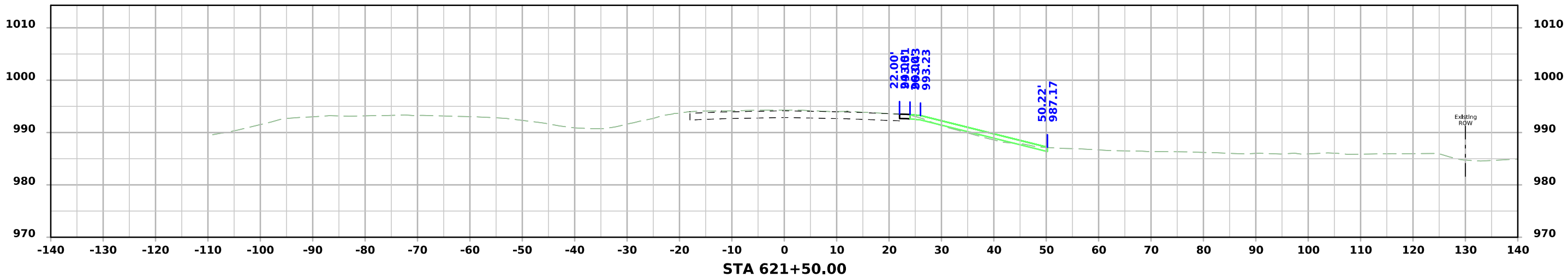
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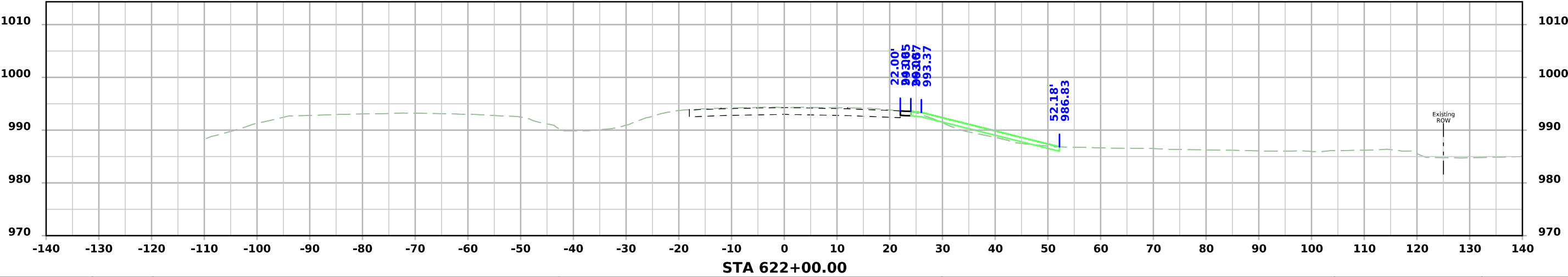
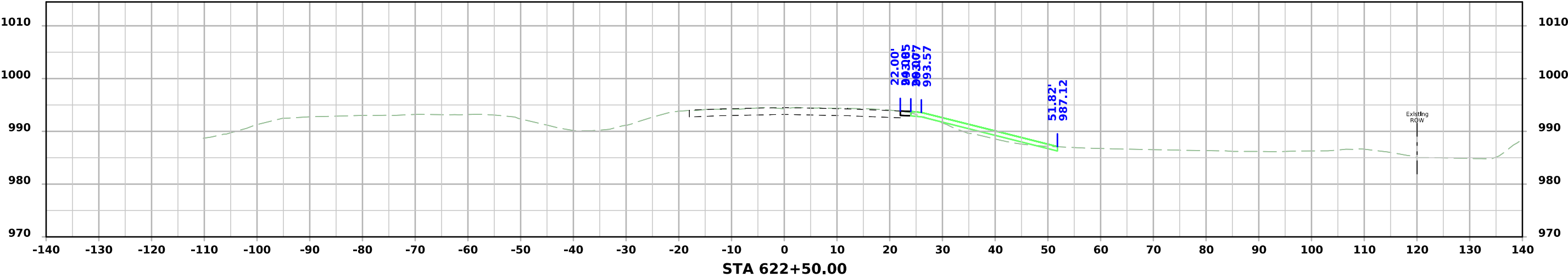
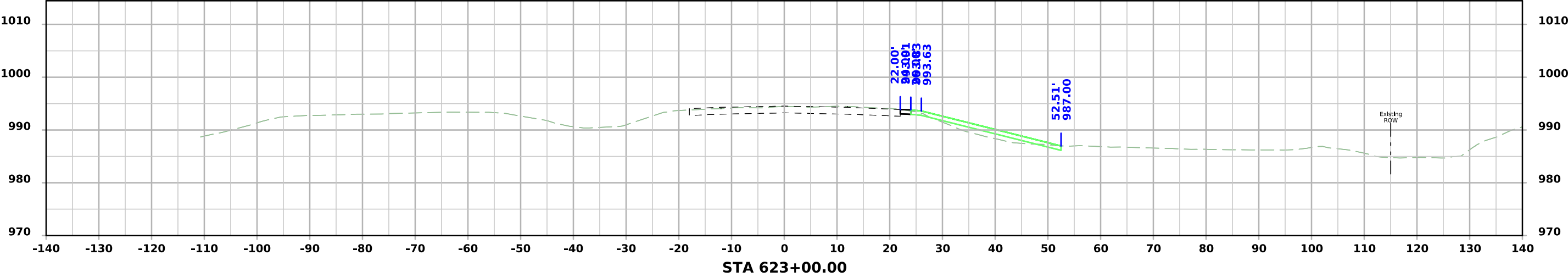
I-29 - Section C



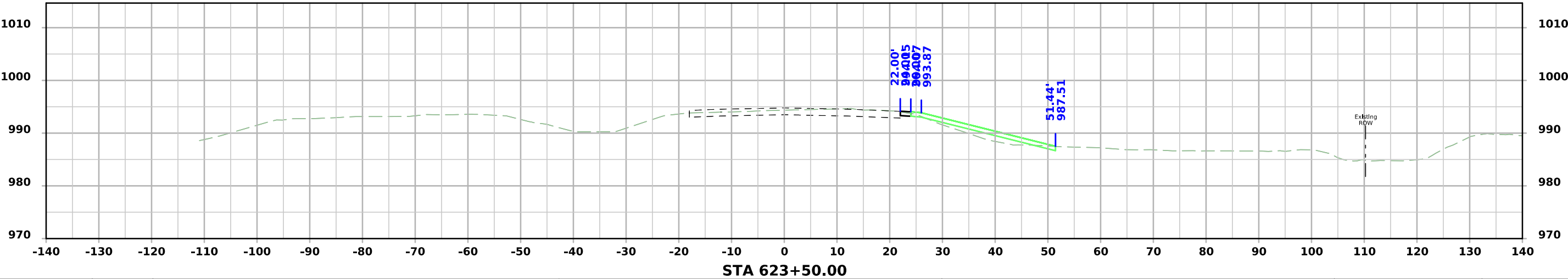
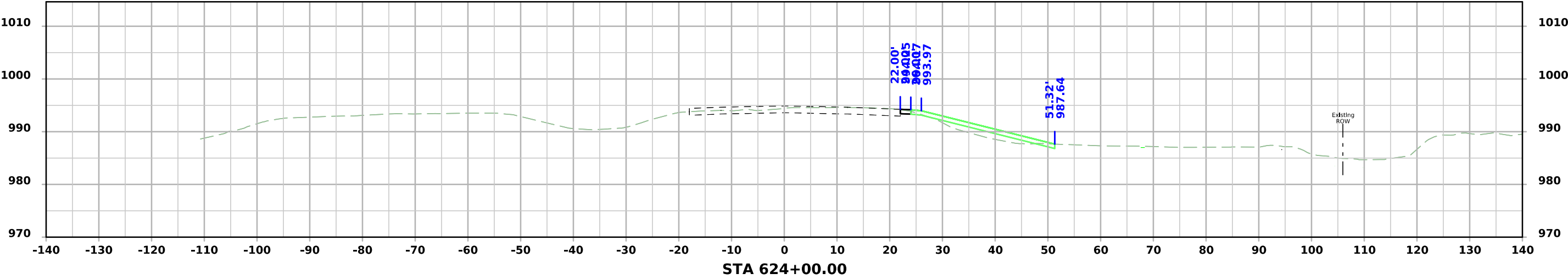
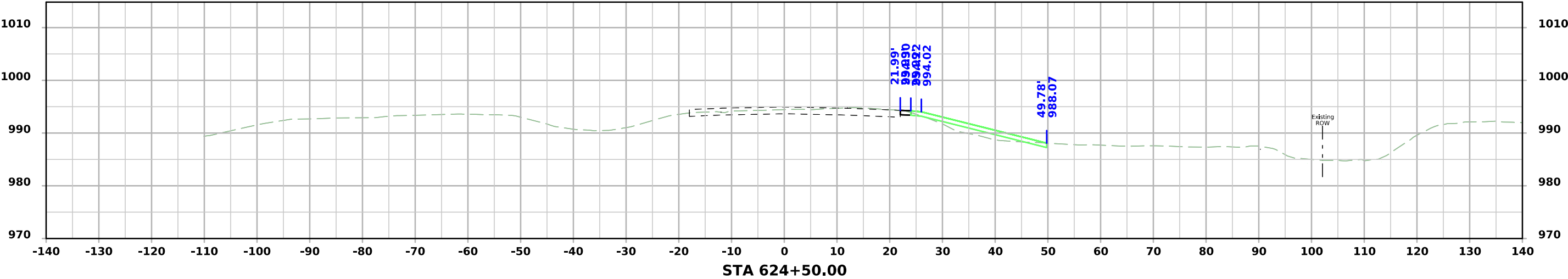
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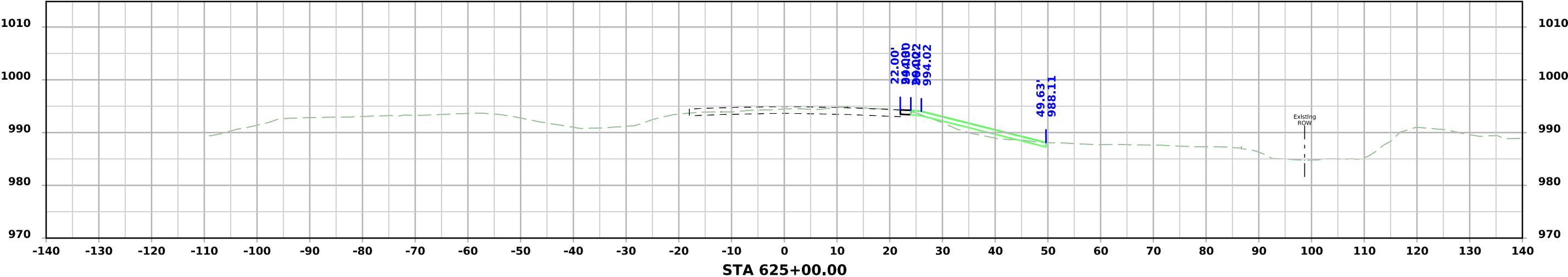
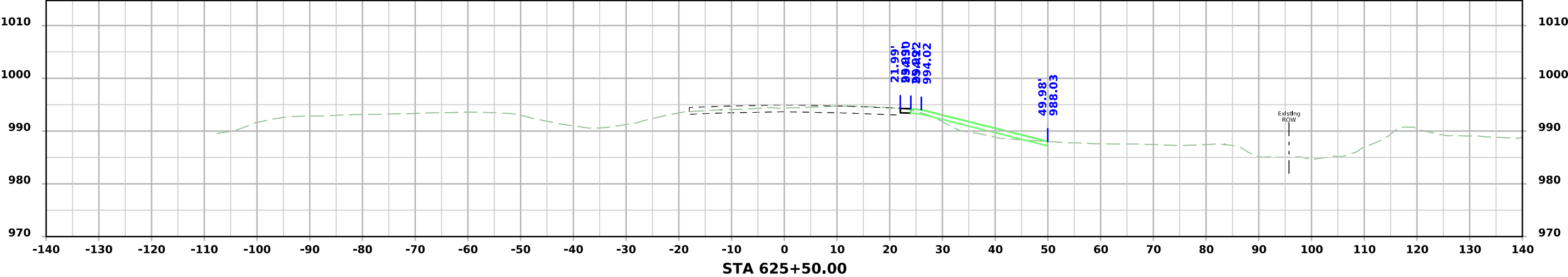
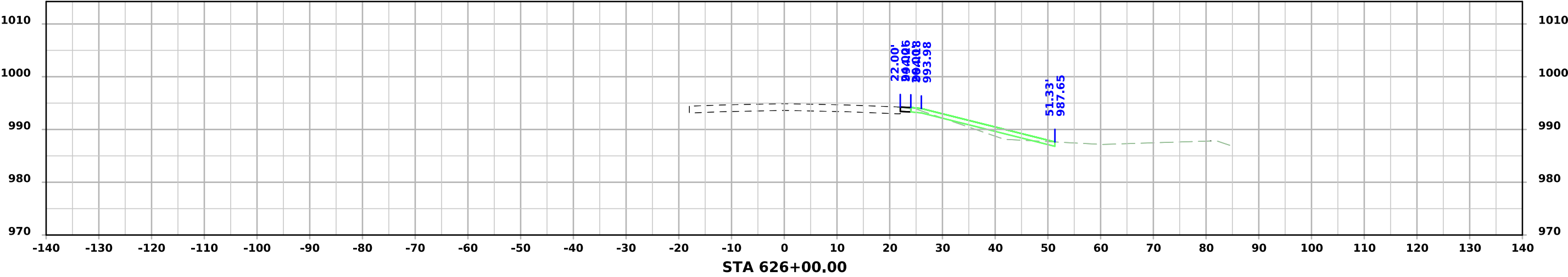
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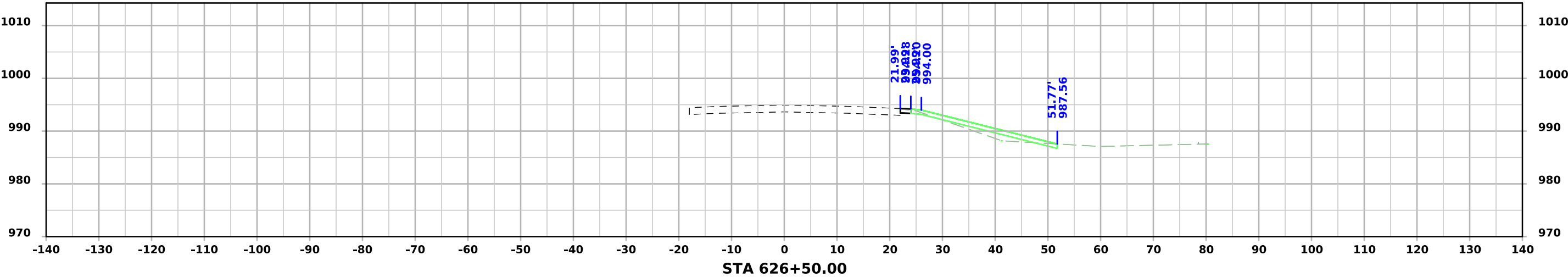
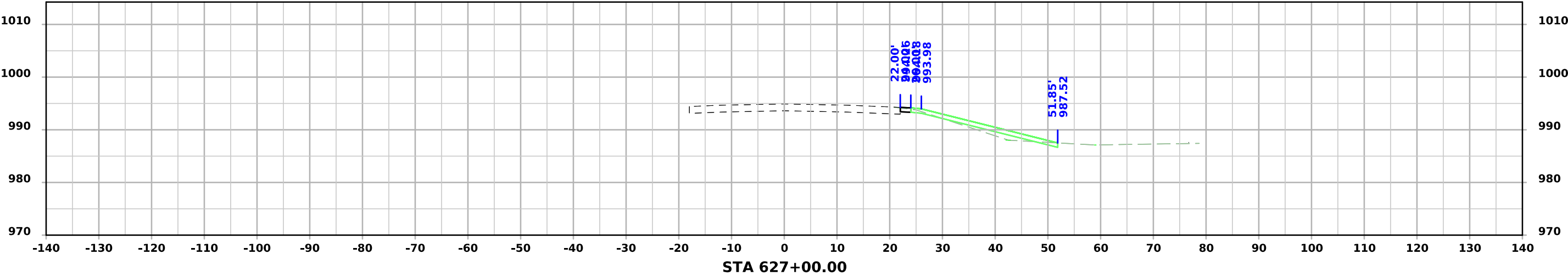
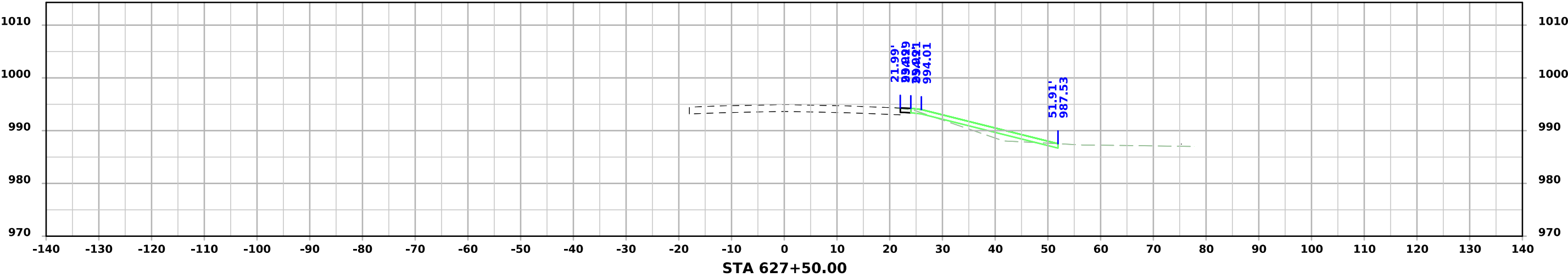
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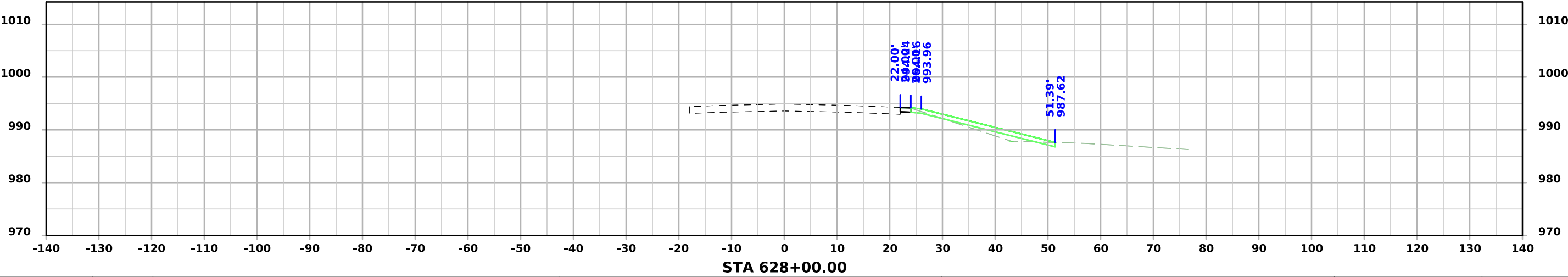
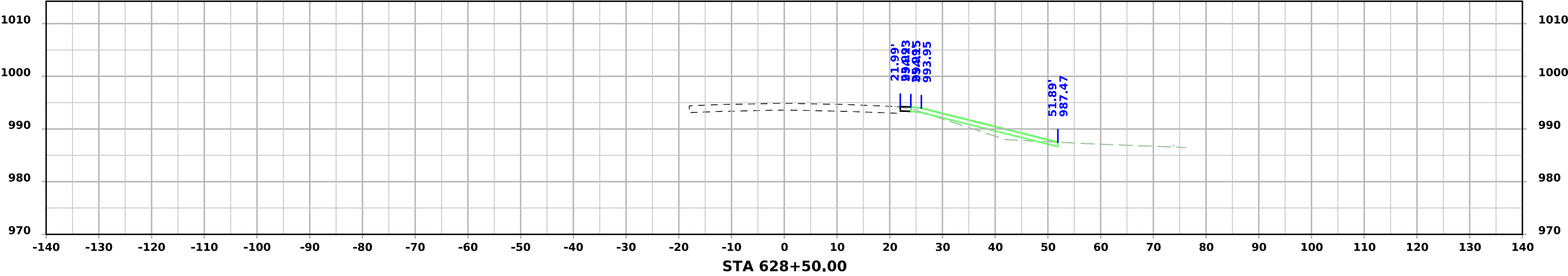
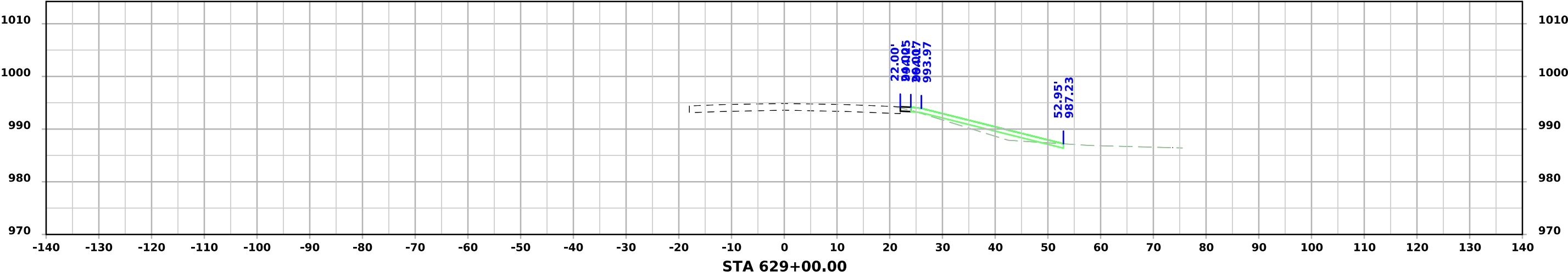
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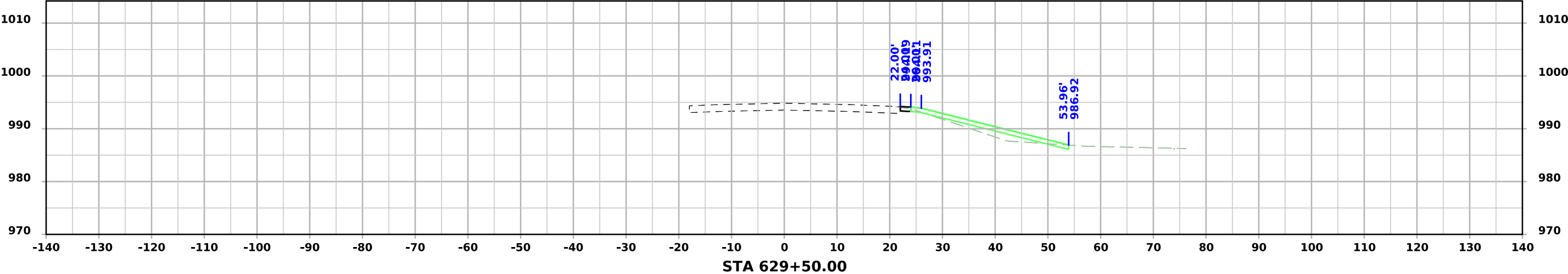
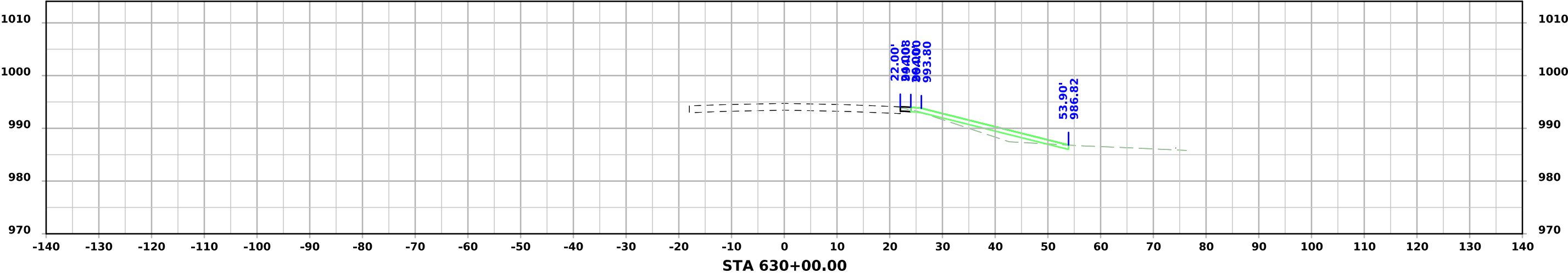
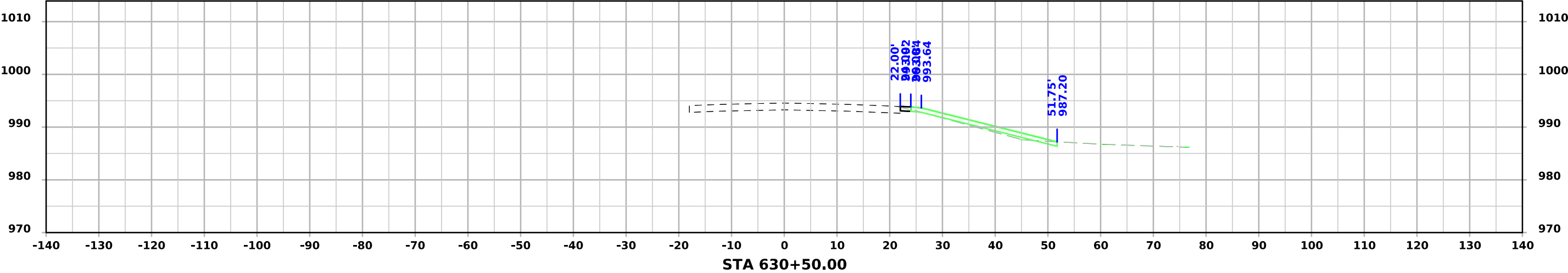
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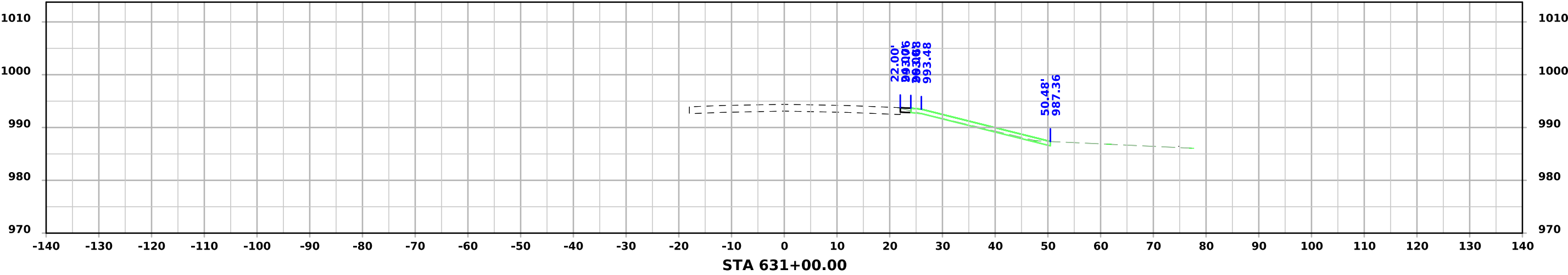
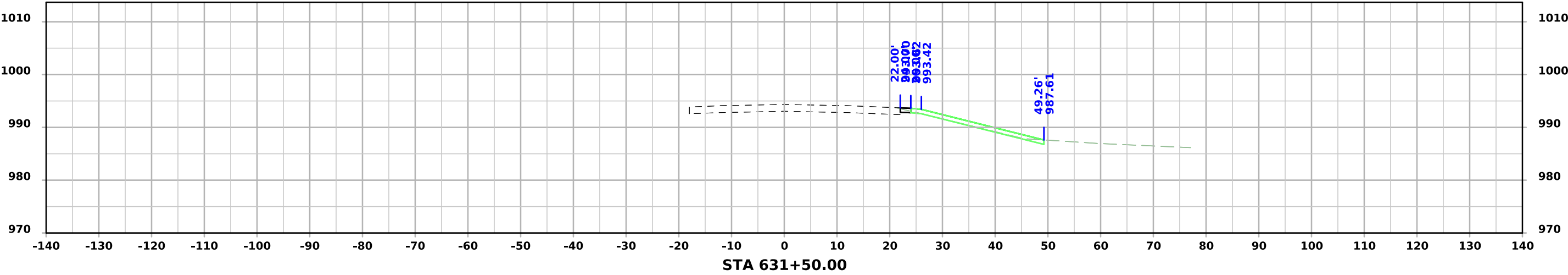
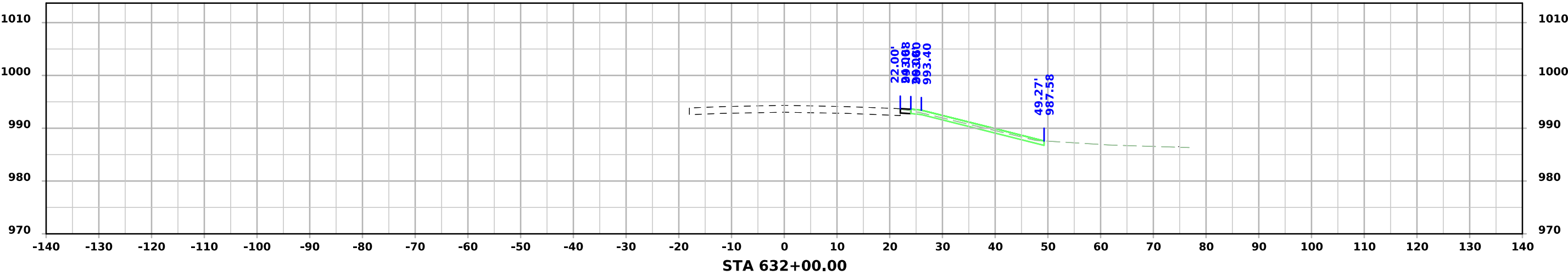
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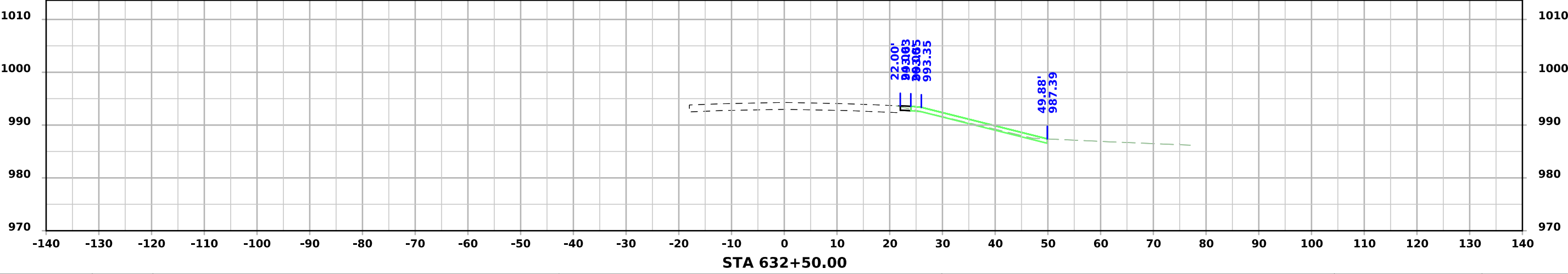
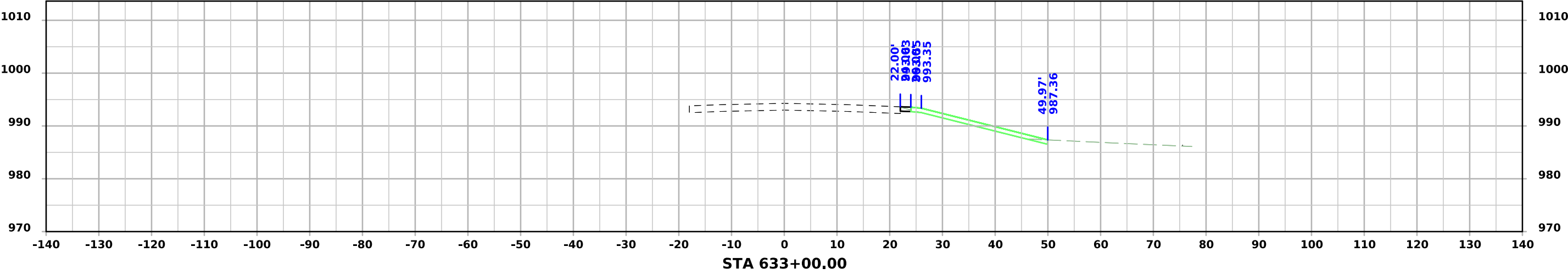
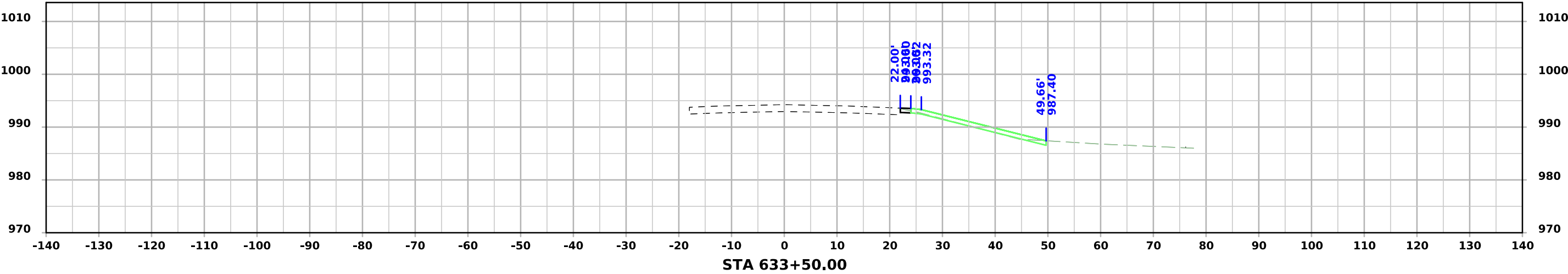
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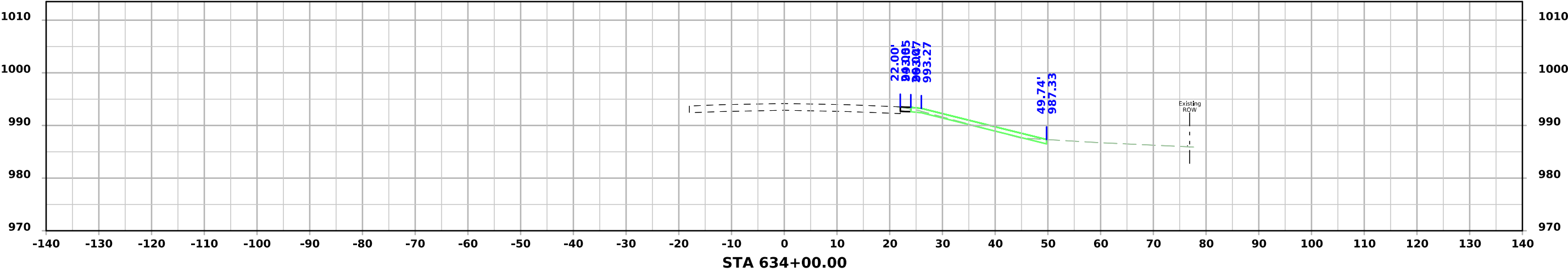
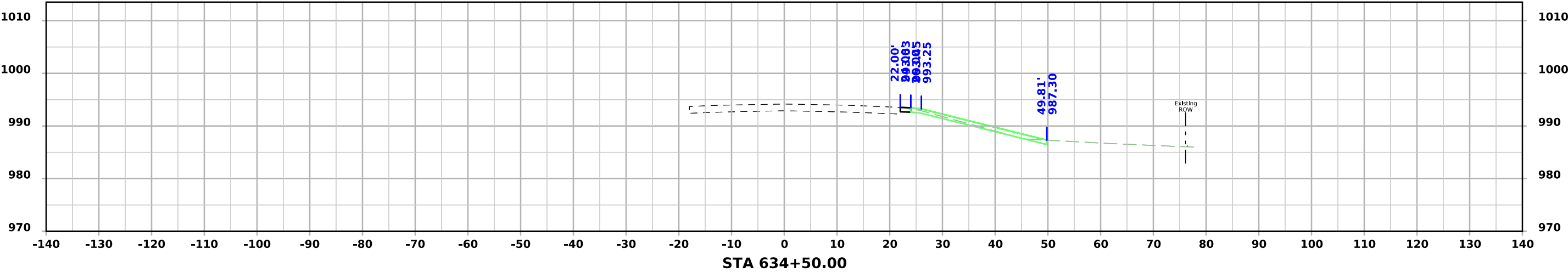
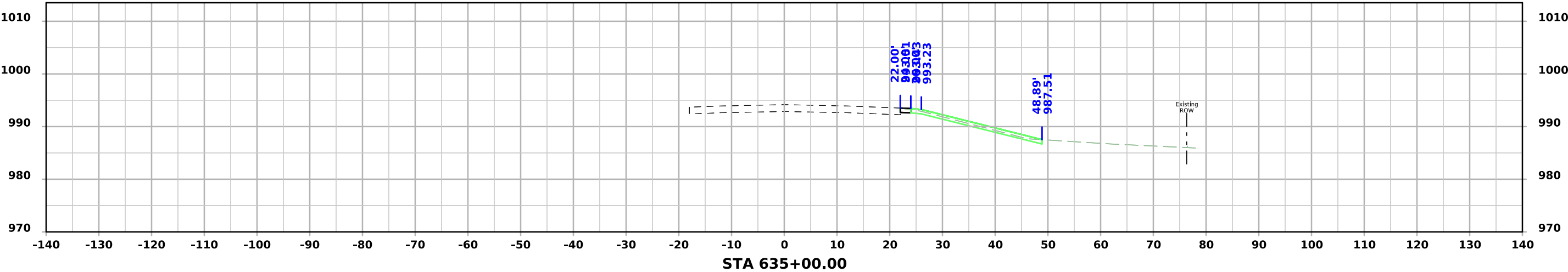
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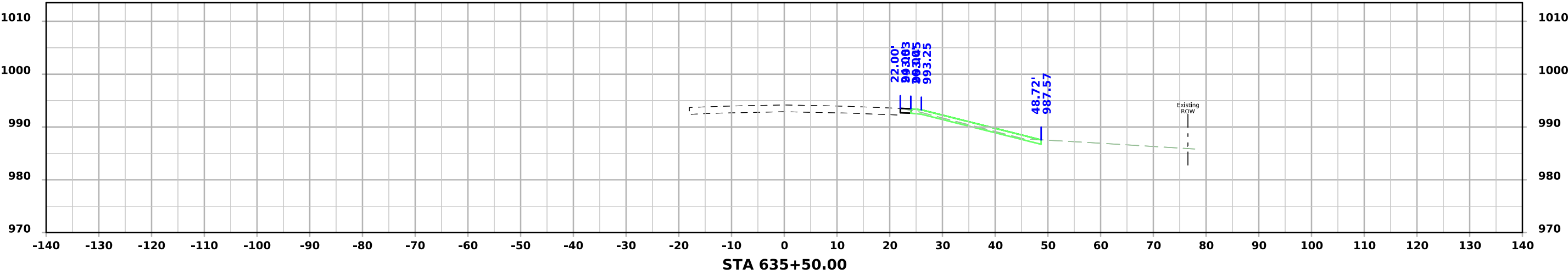
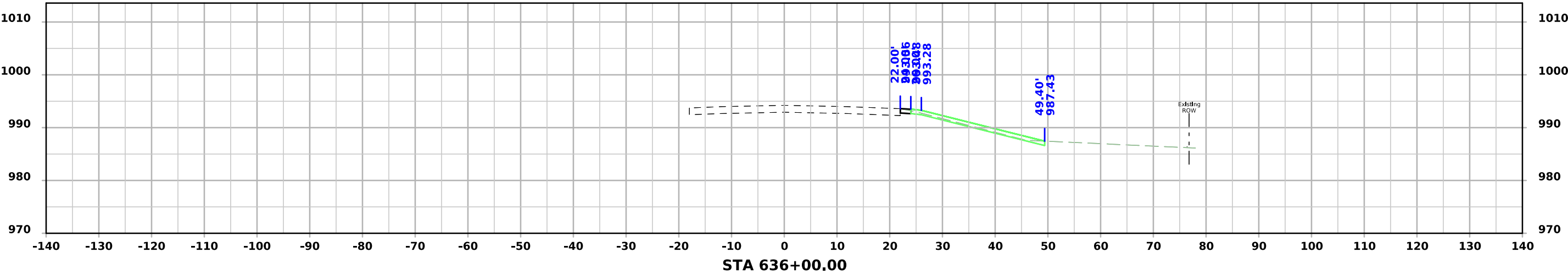
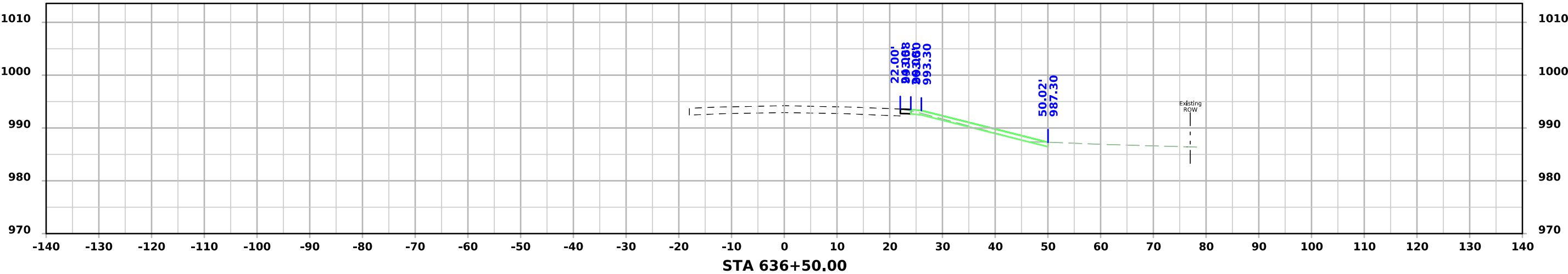
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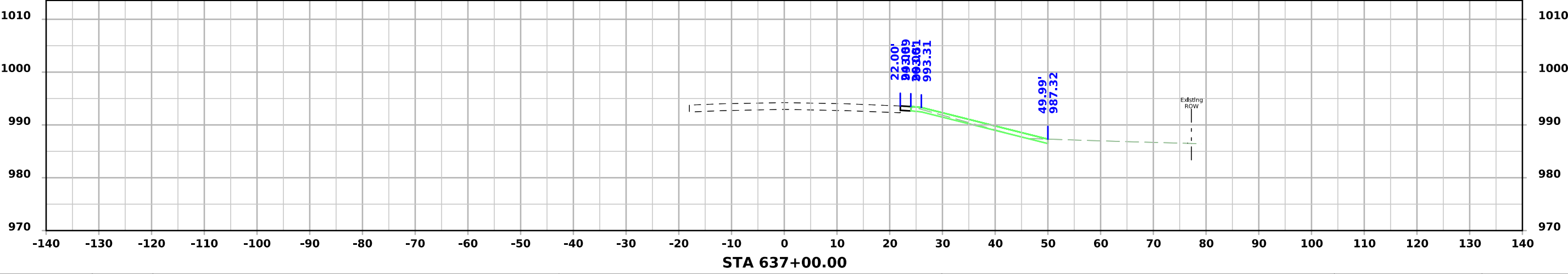
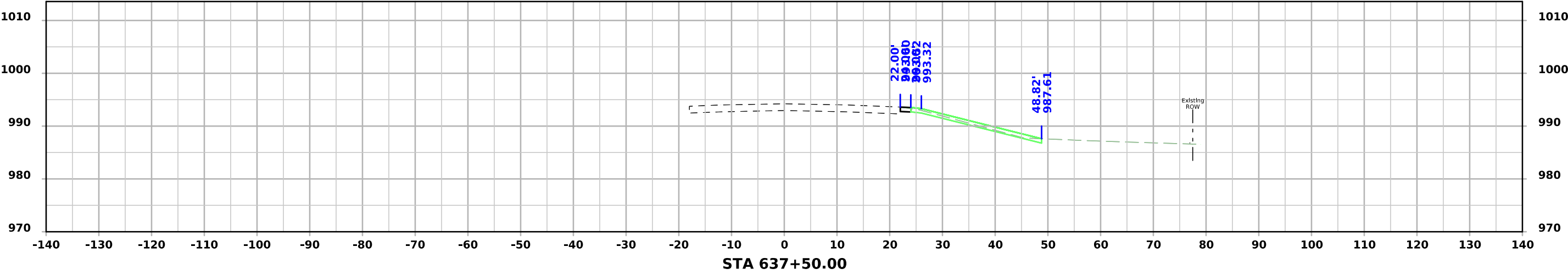
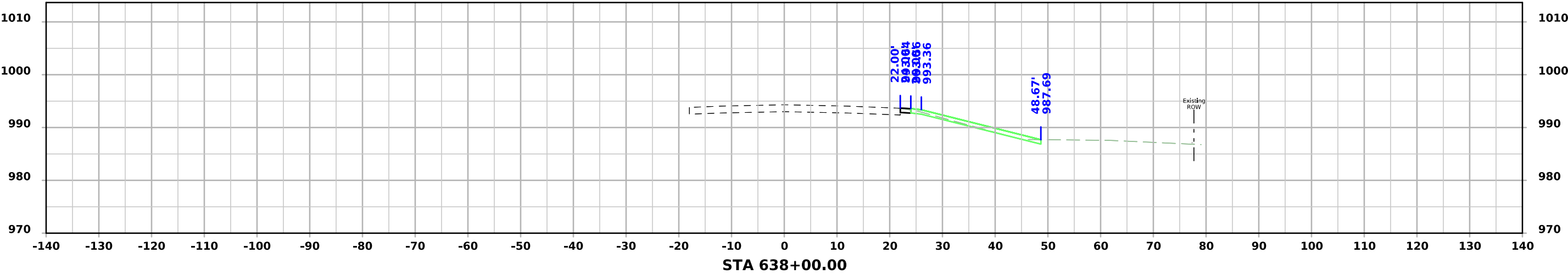
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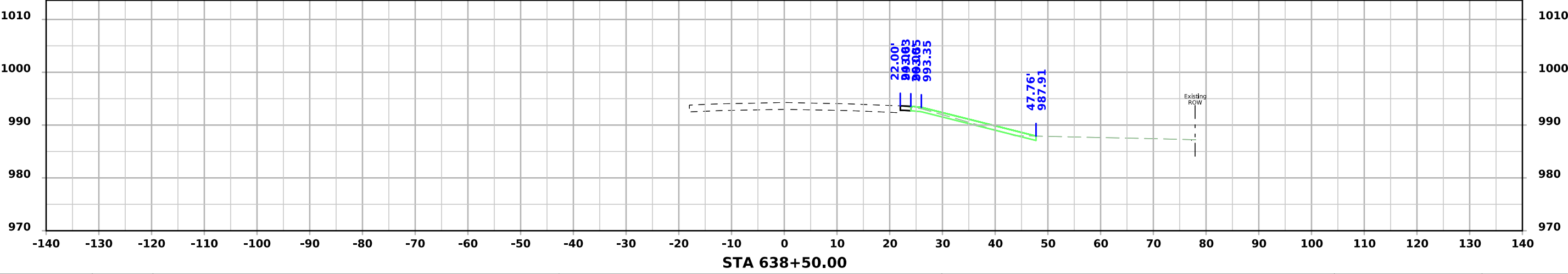
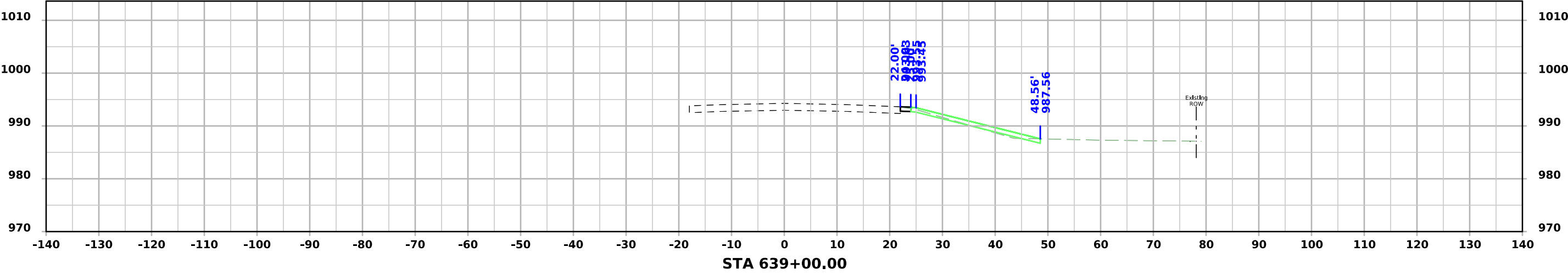
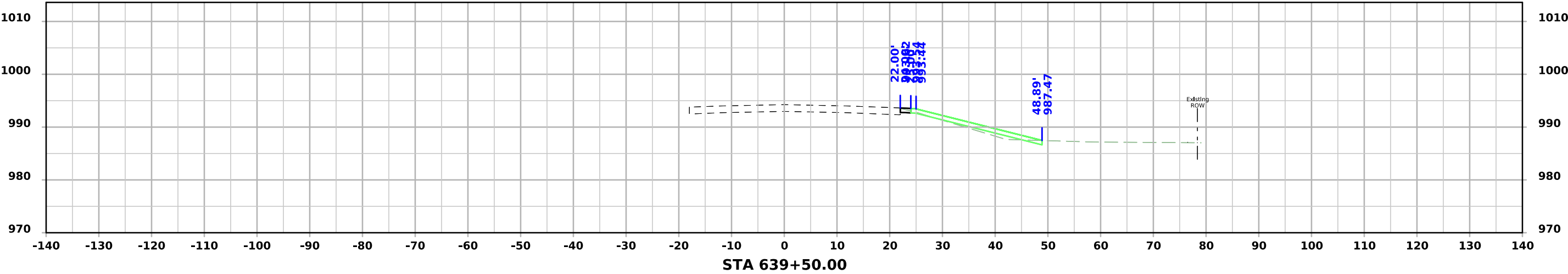
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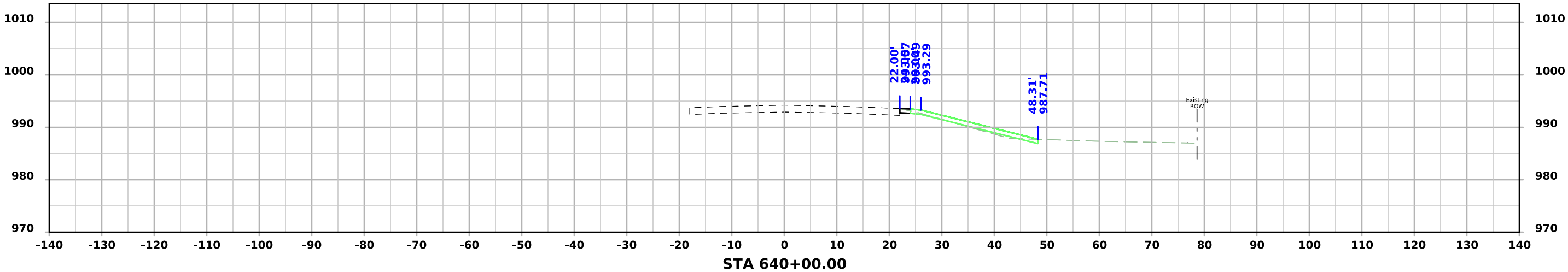
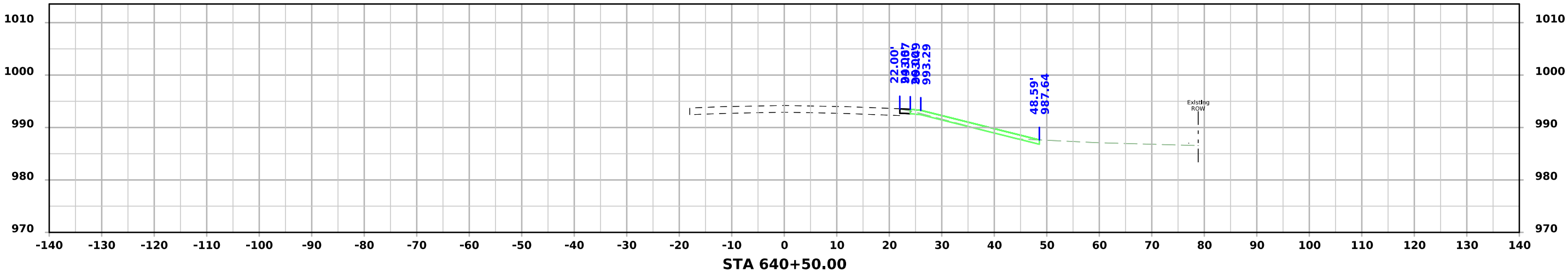
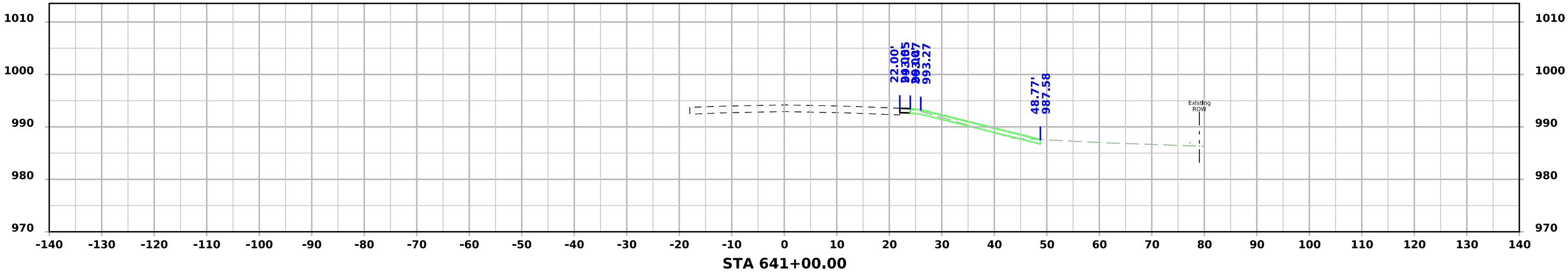
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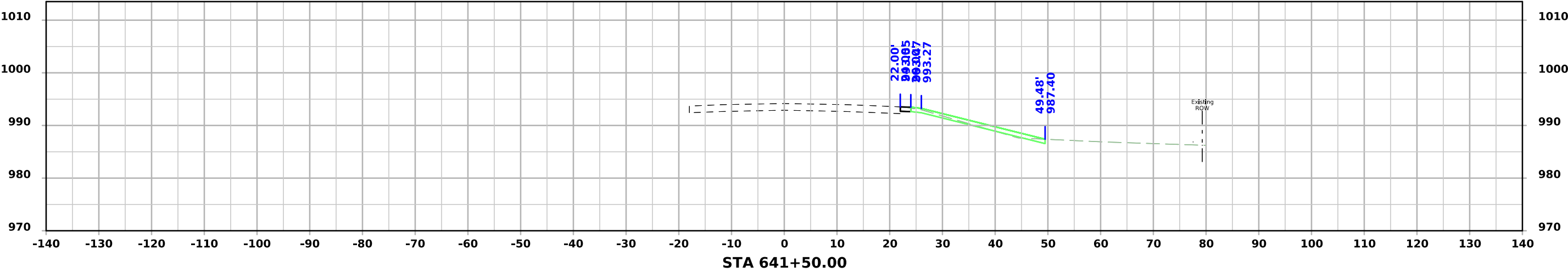
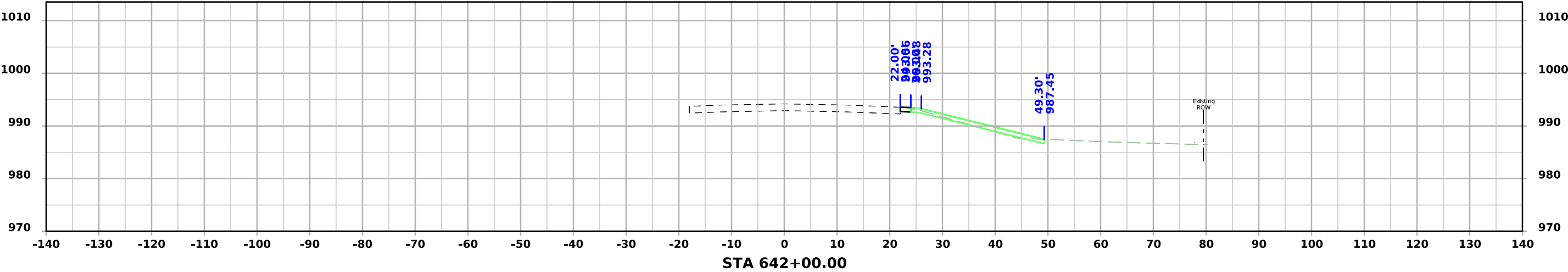
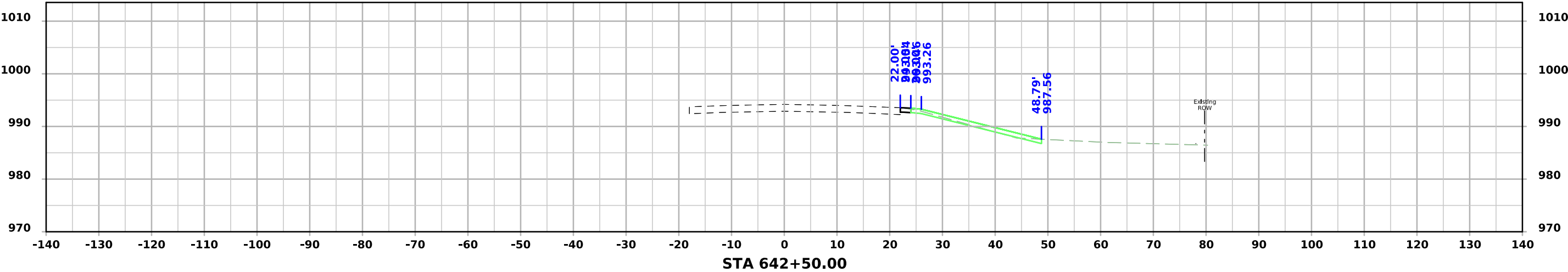
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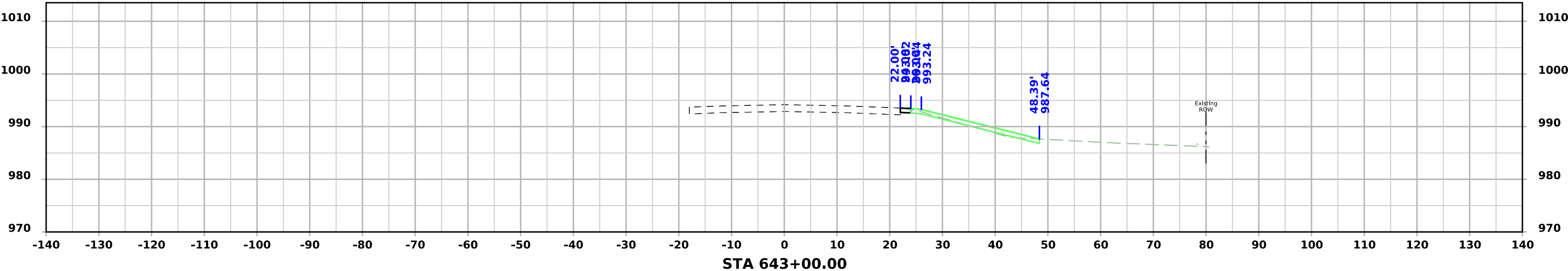
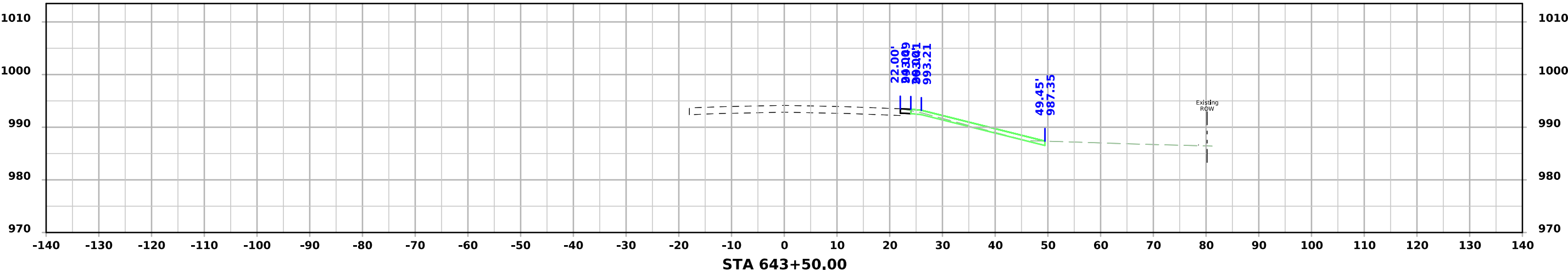
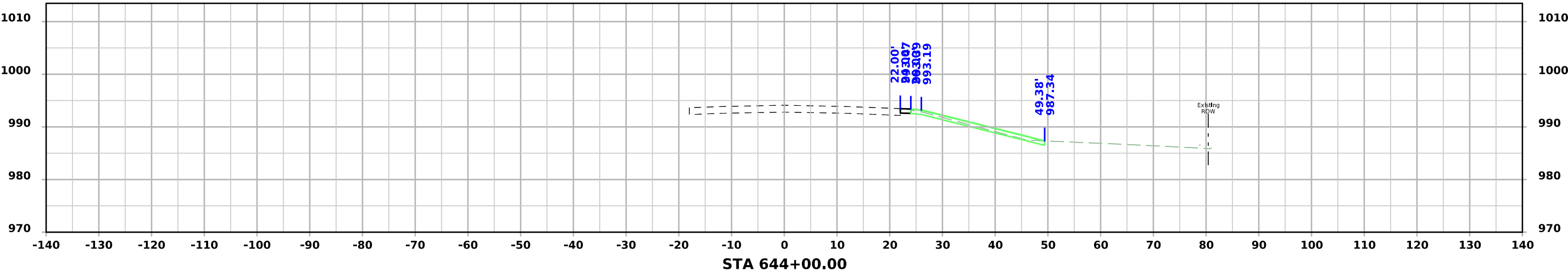
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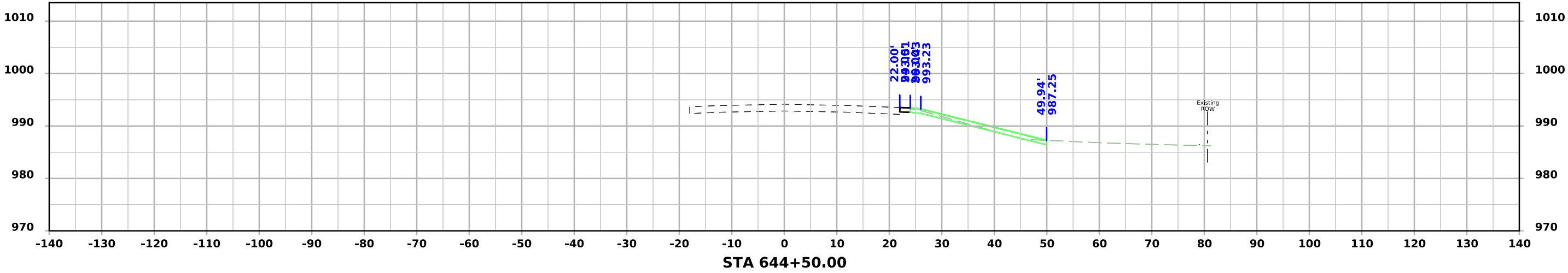
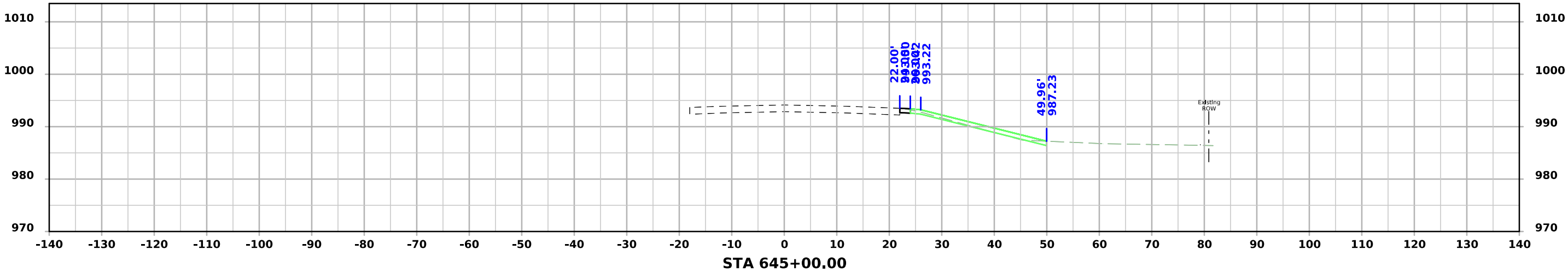
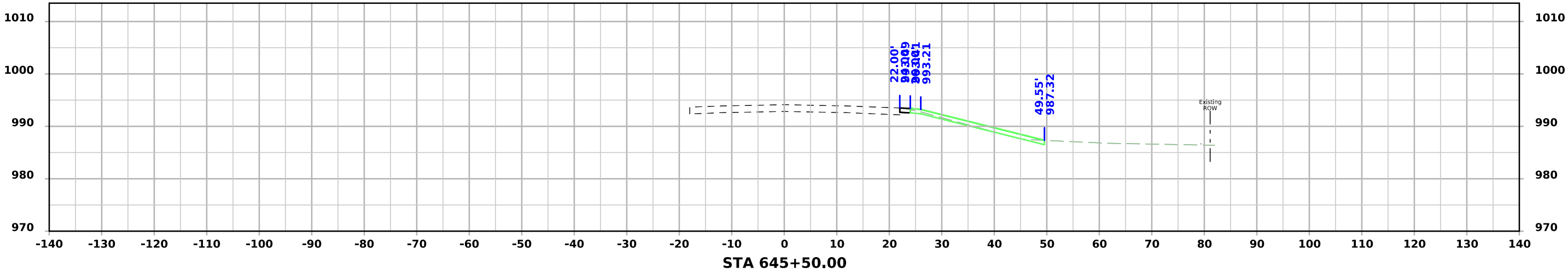
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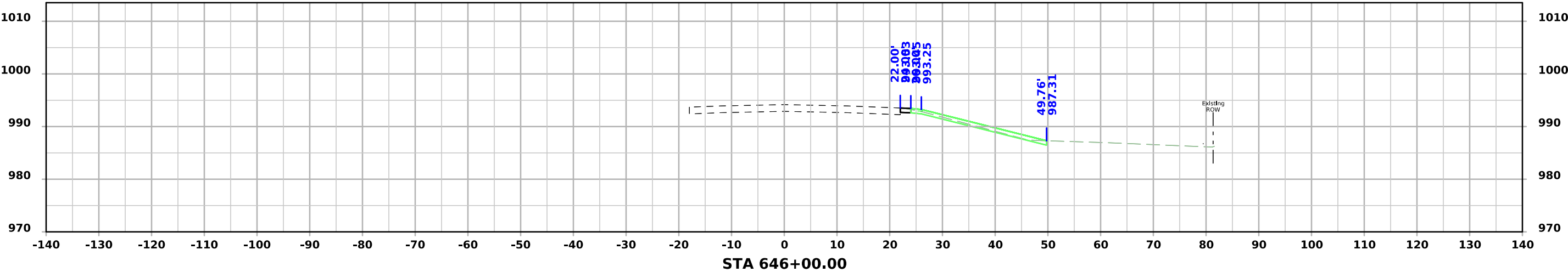
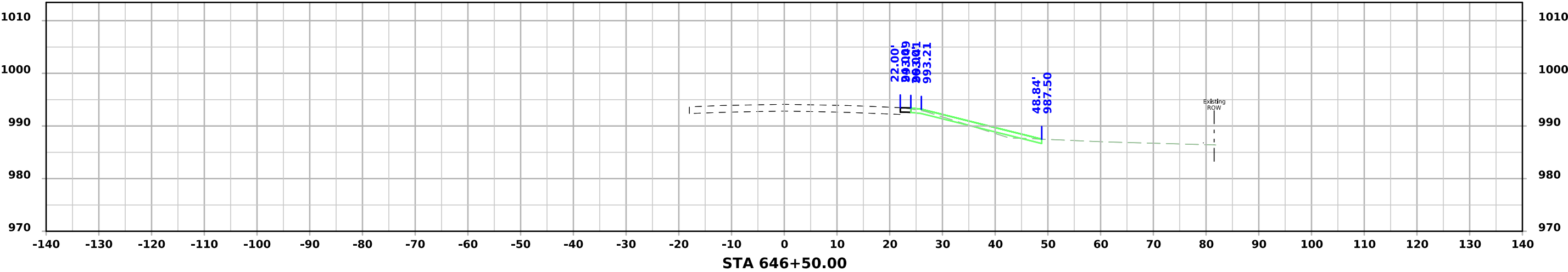
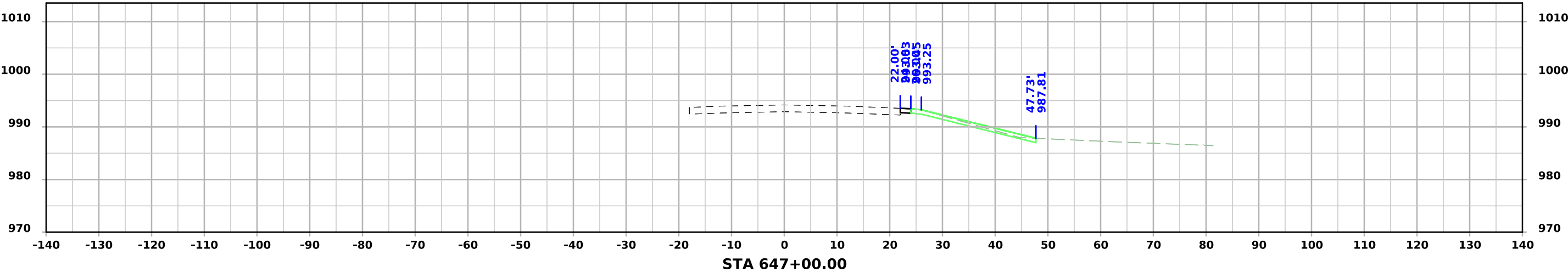
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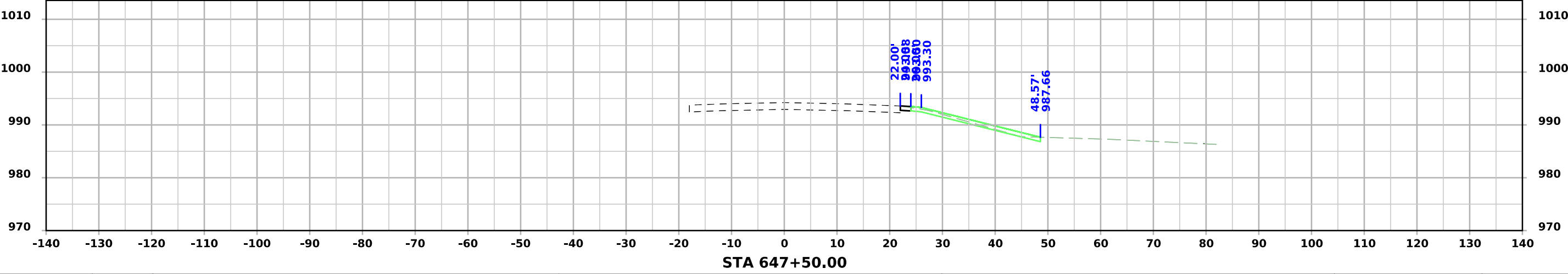
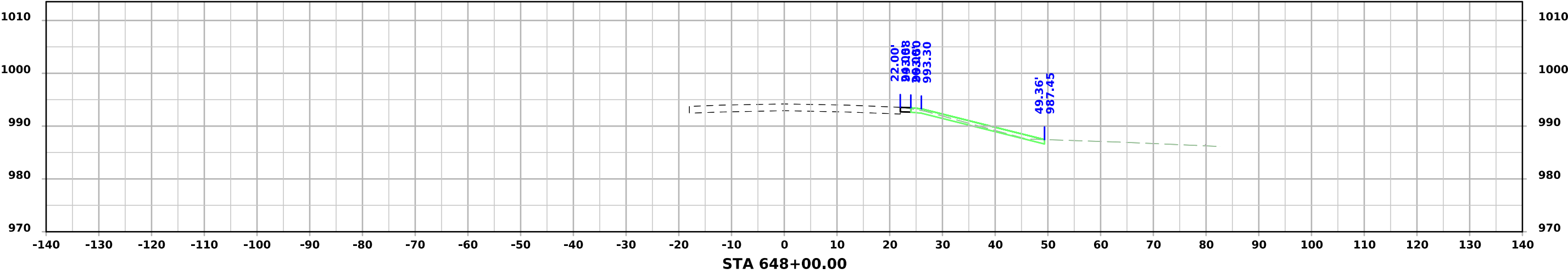
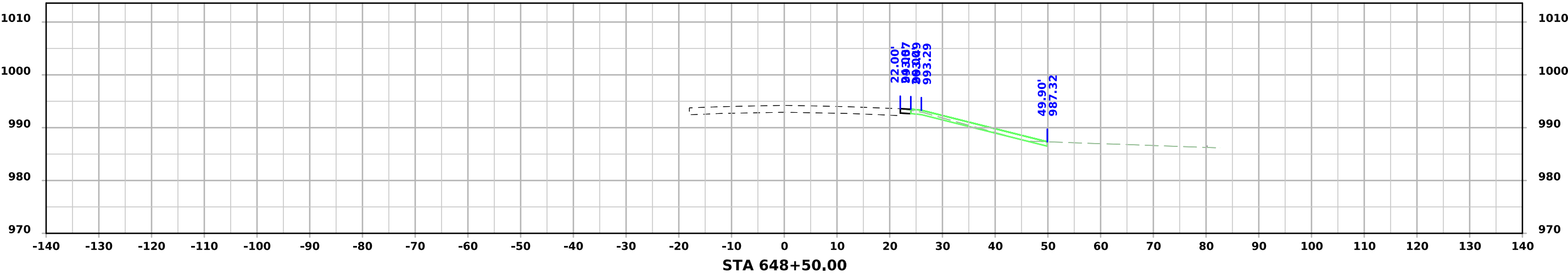
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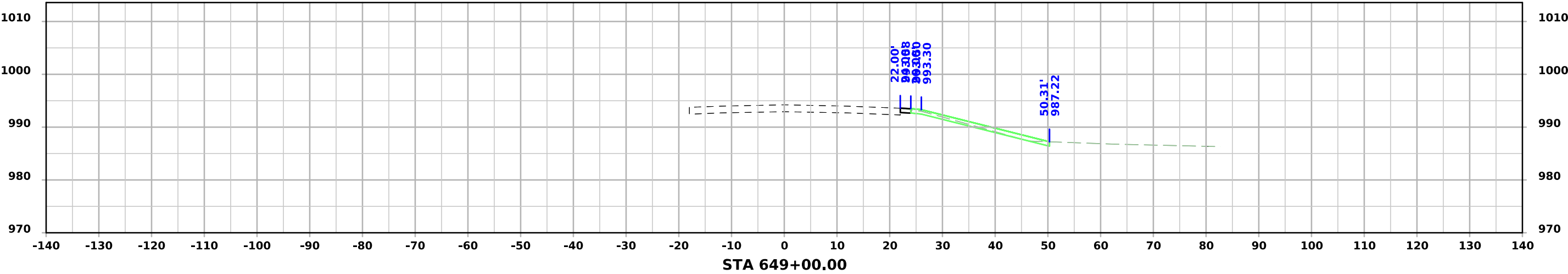
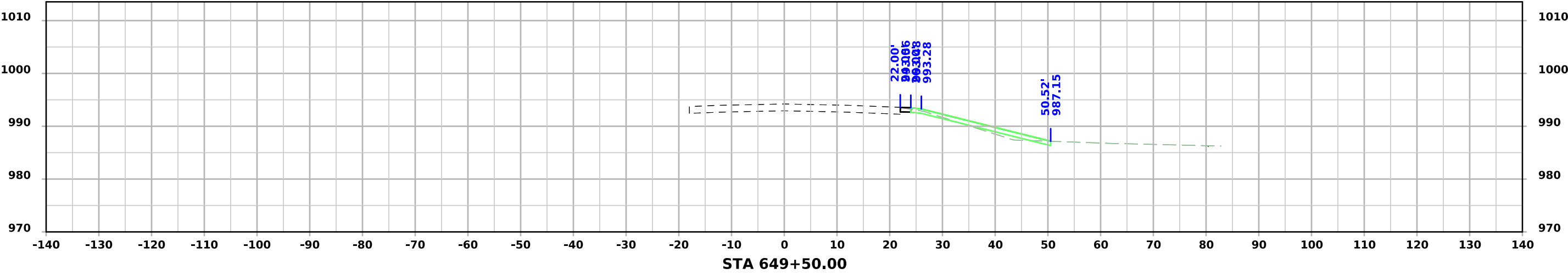
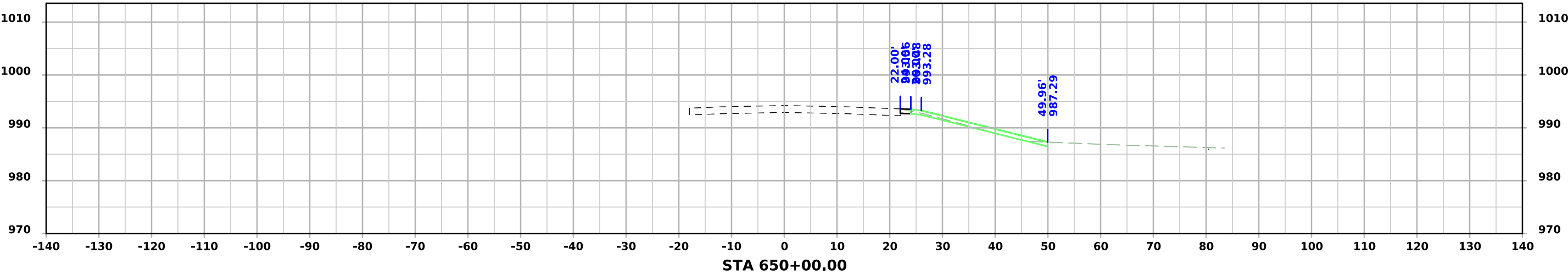
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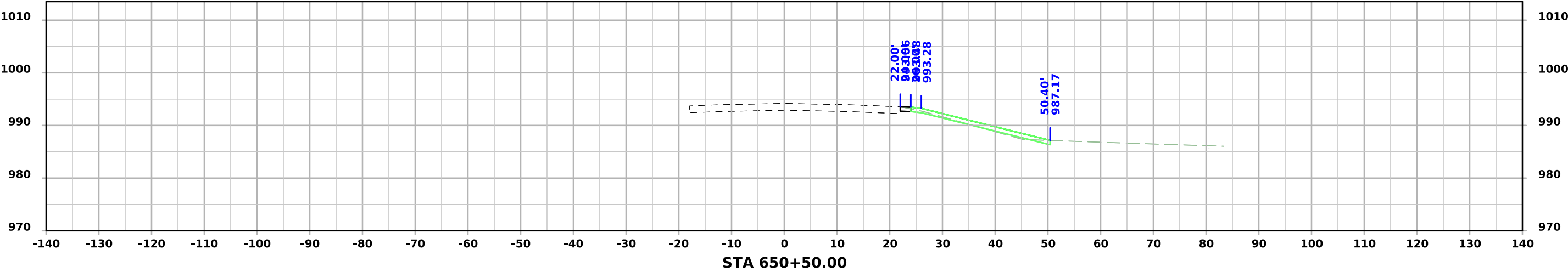
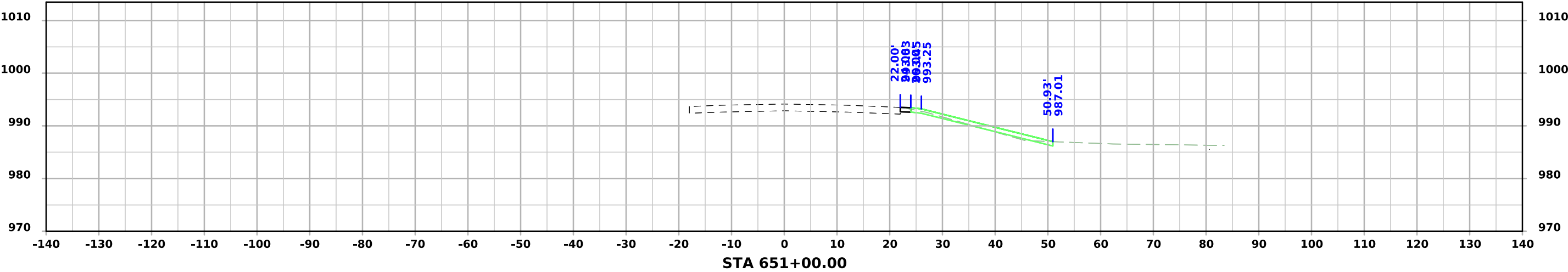
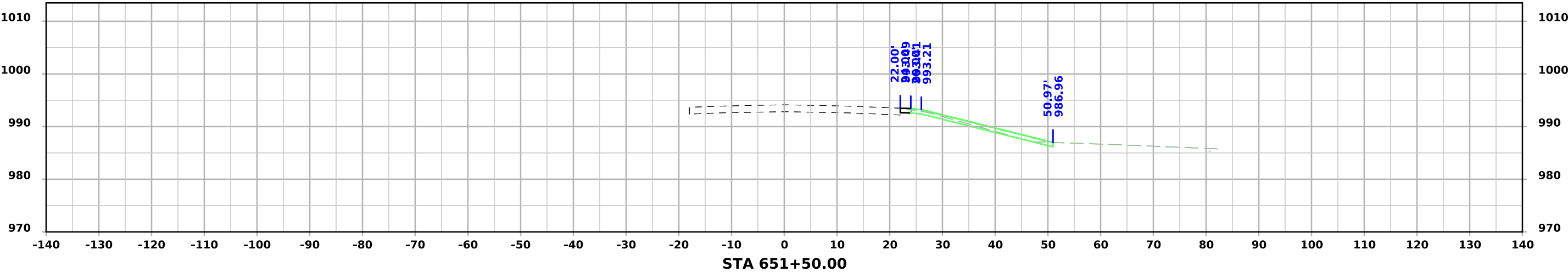
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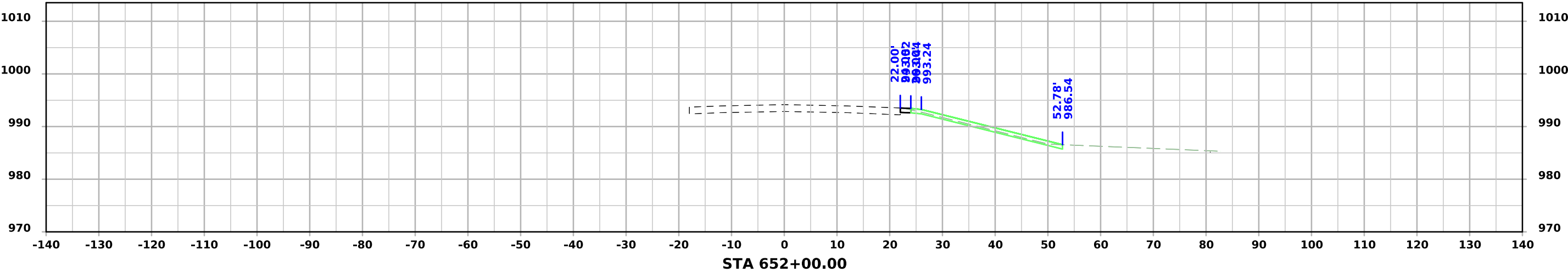
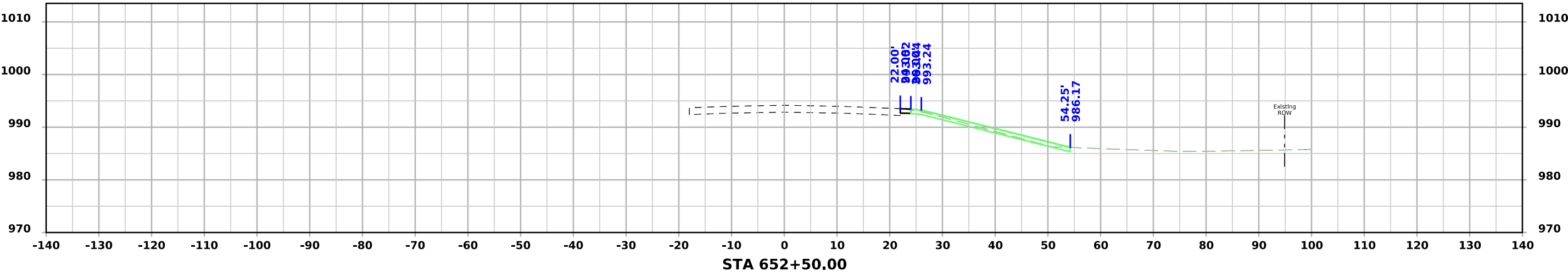
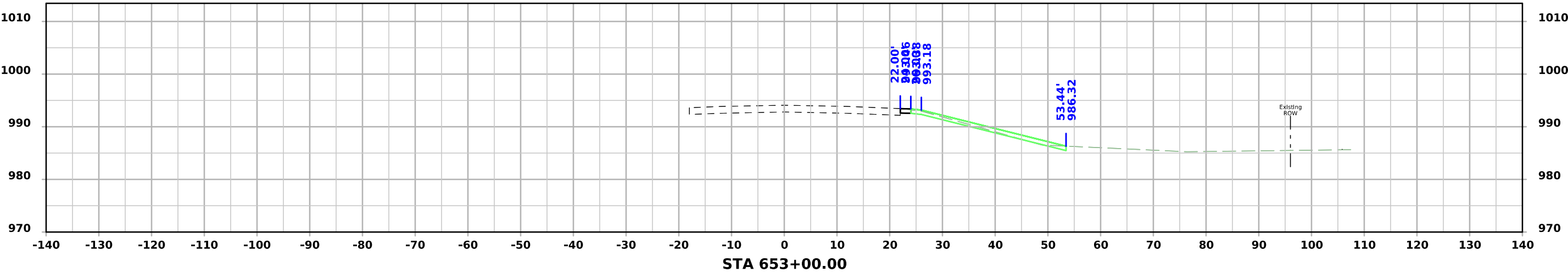
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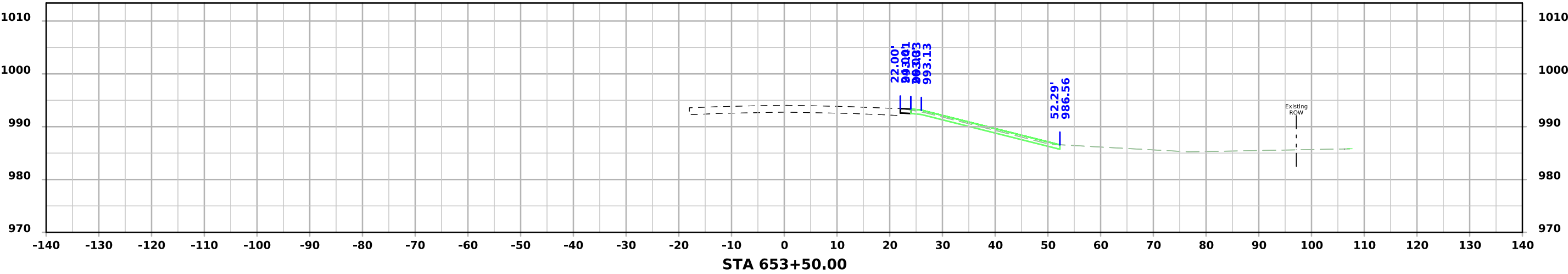
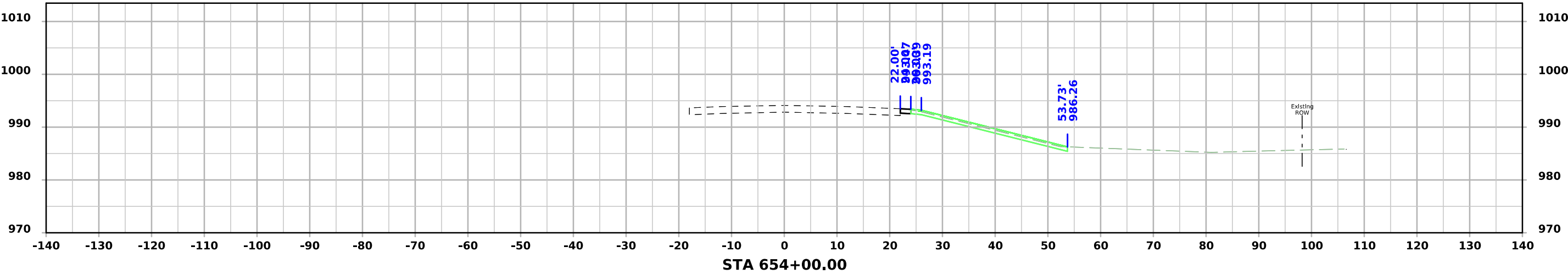
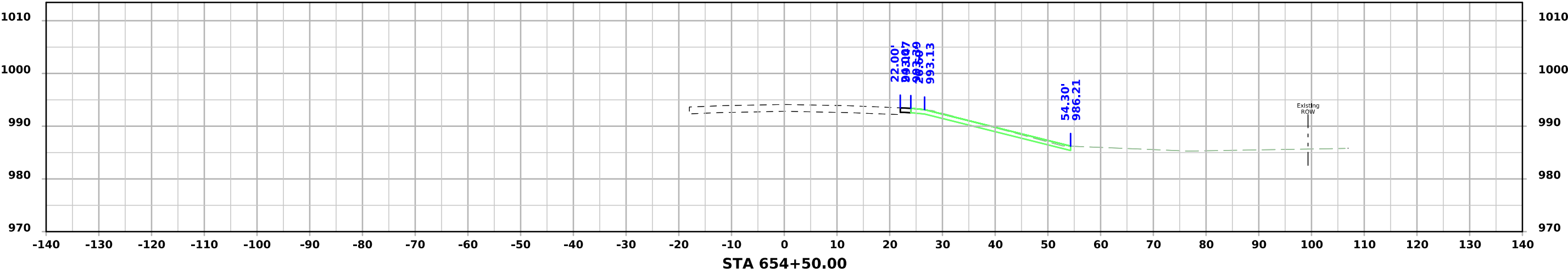
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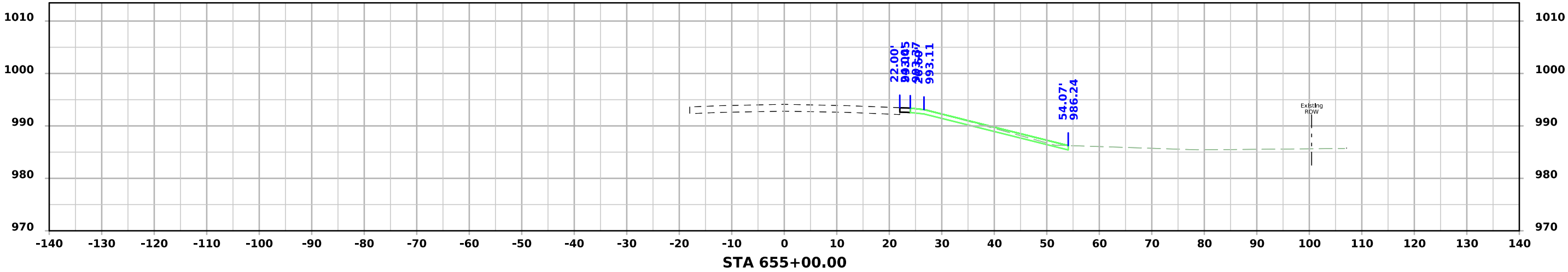
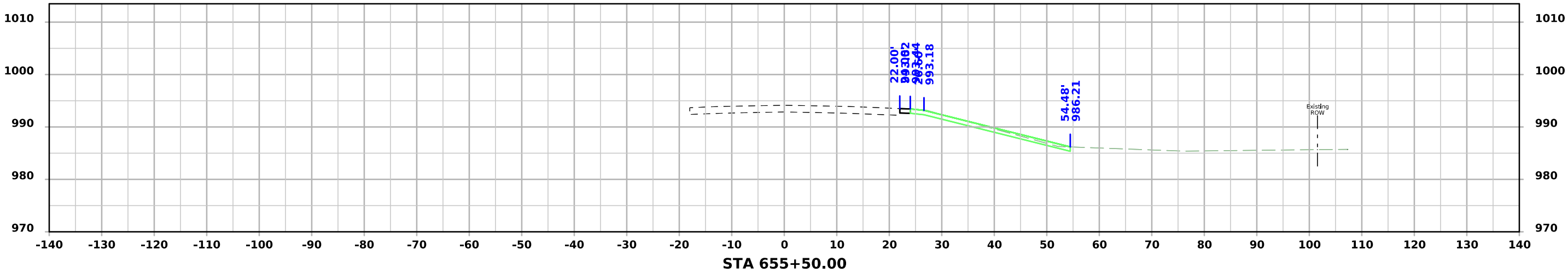
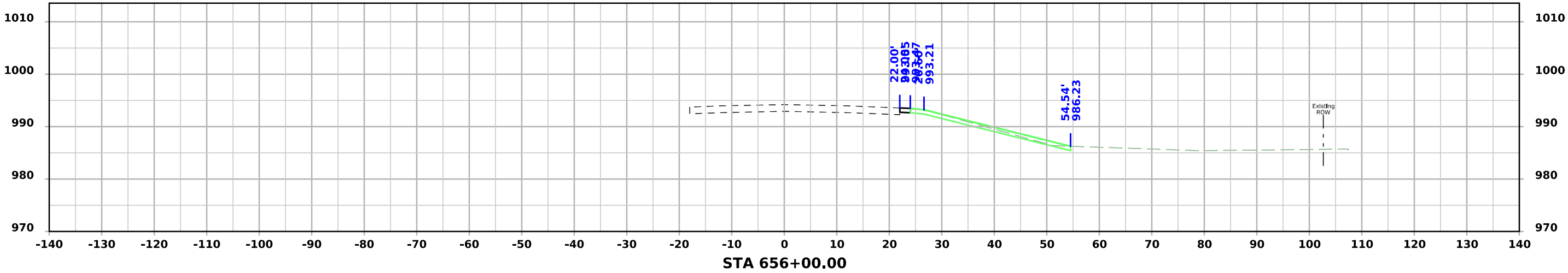
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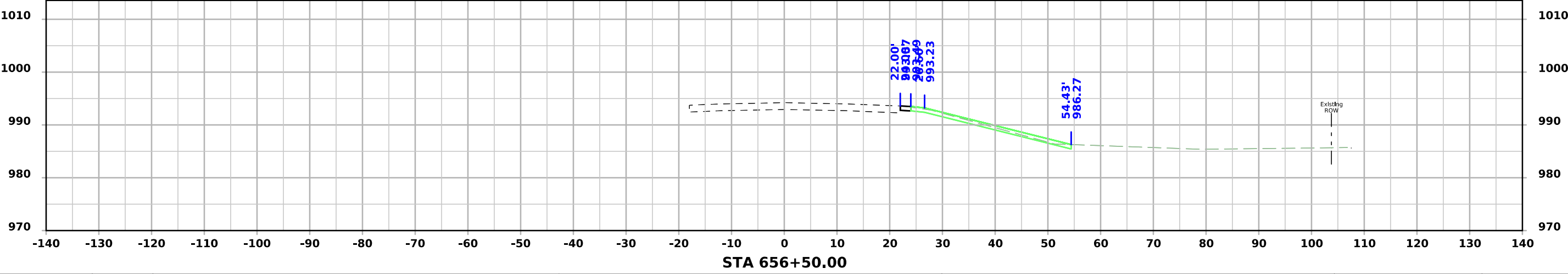
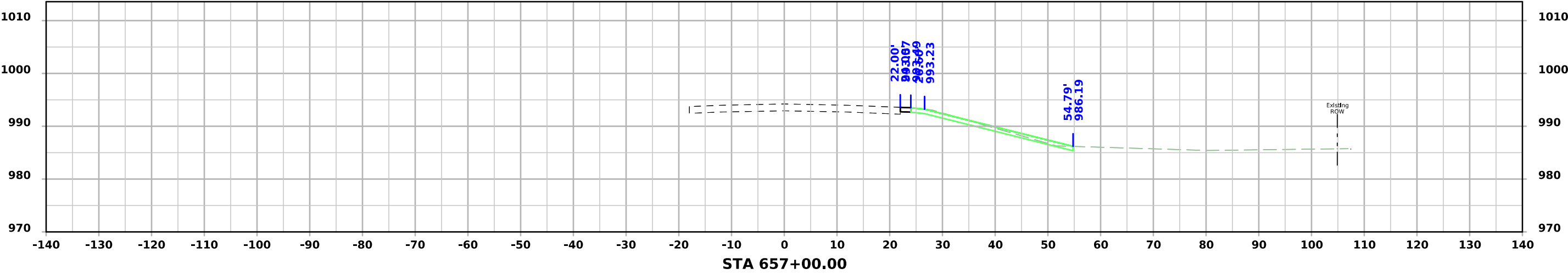
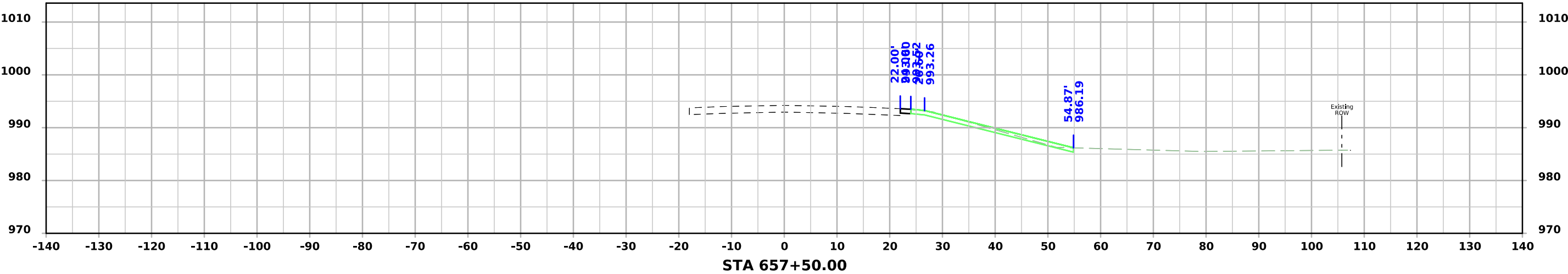
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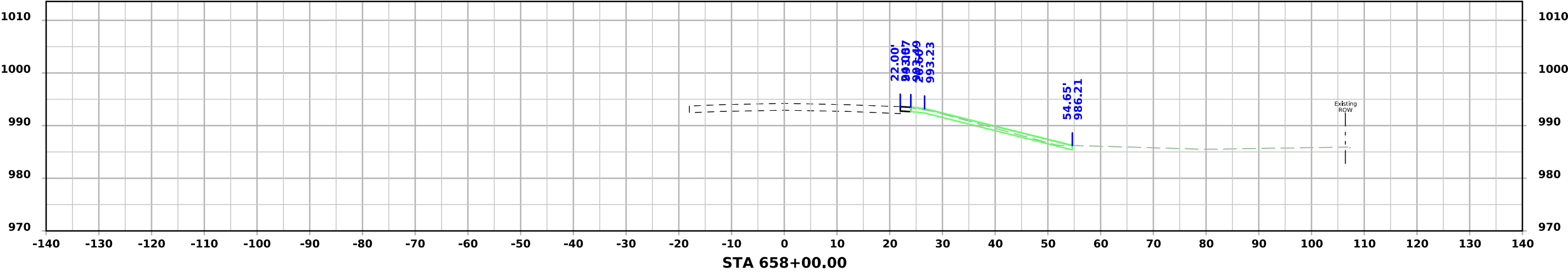
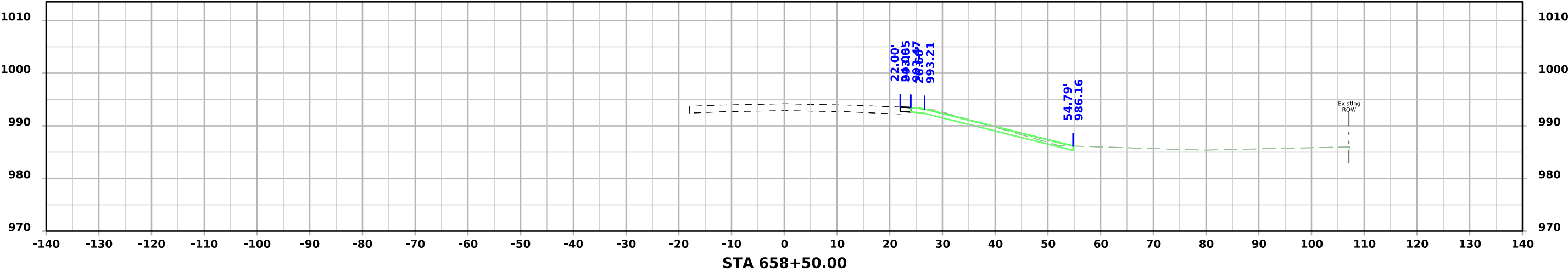
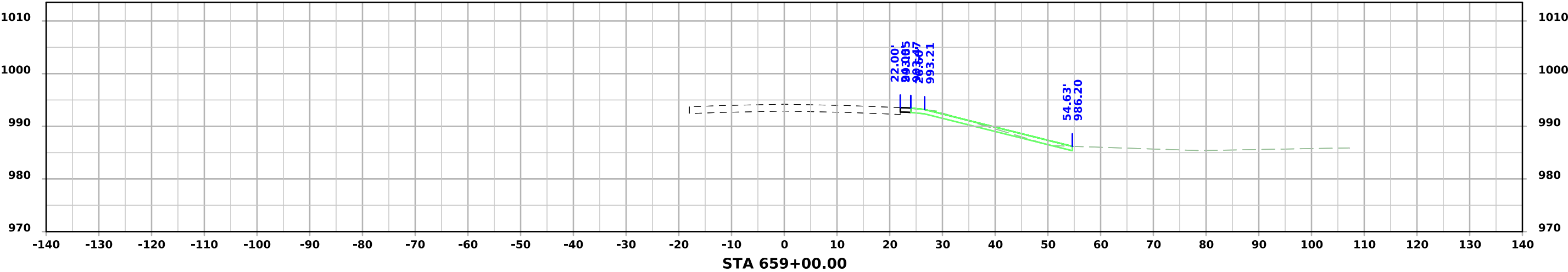
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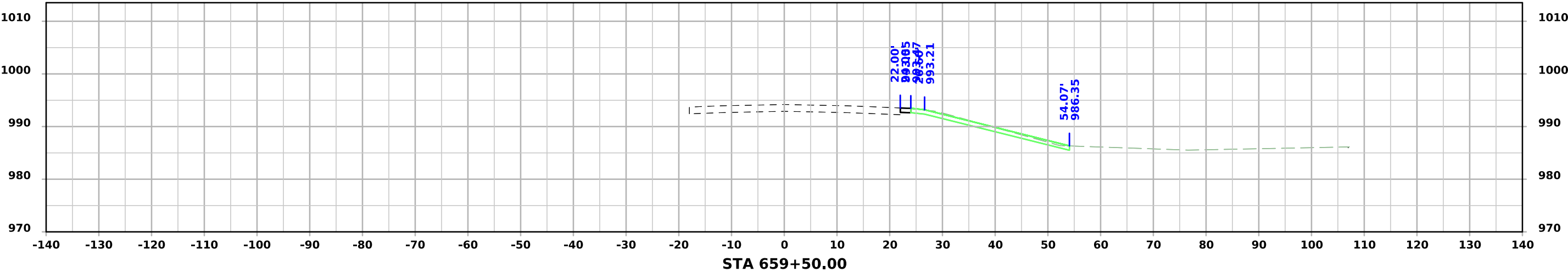
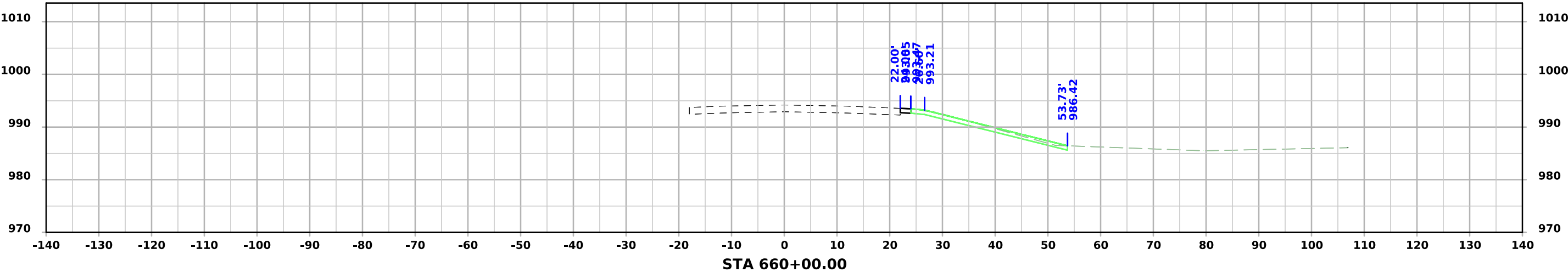
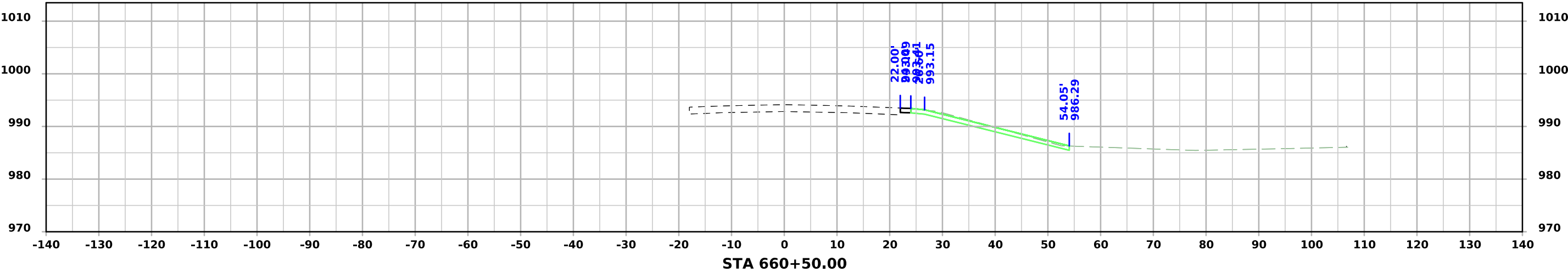
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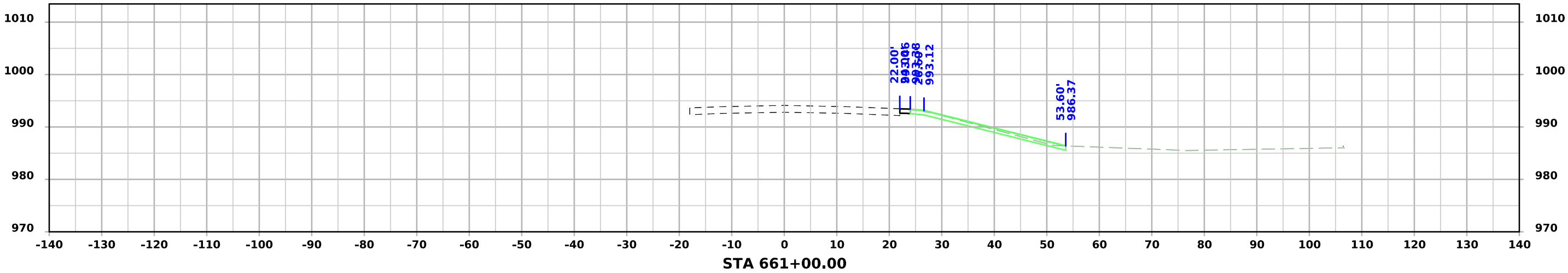
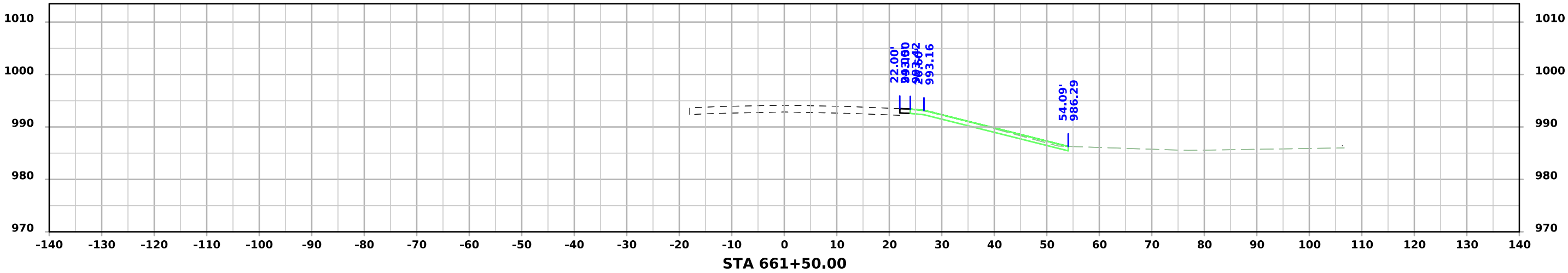
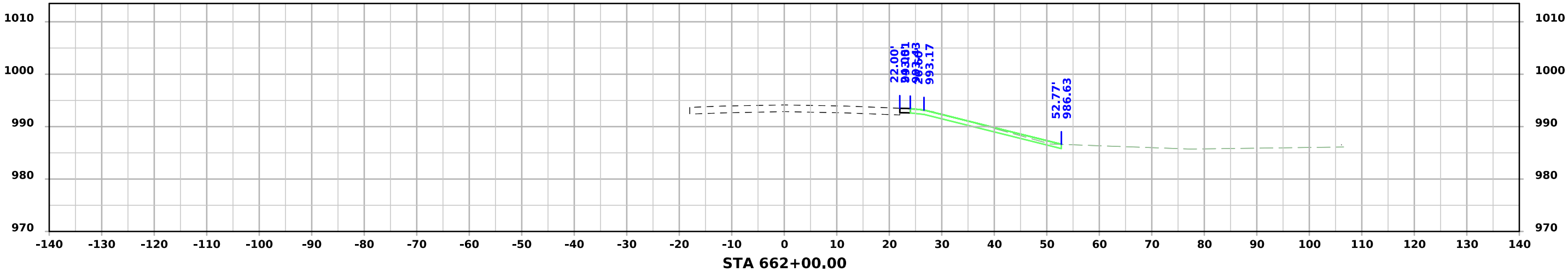
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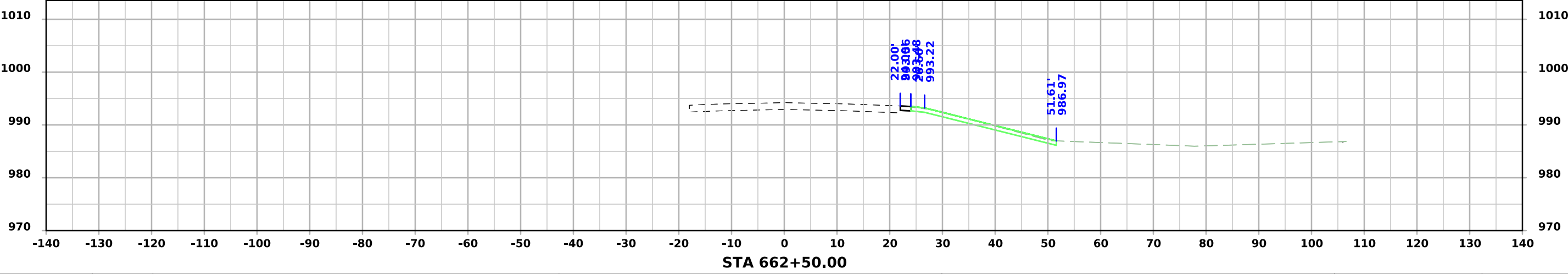
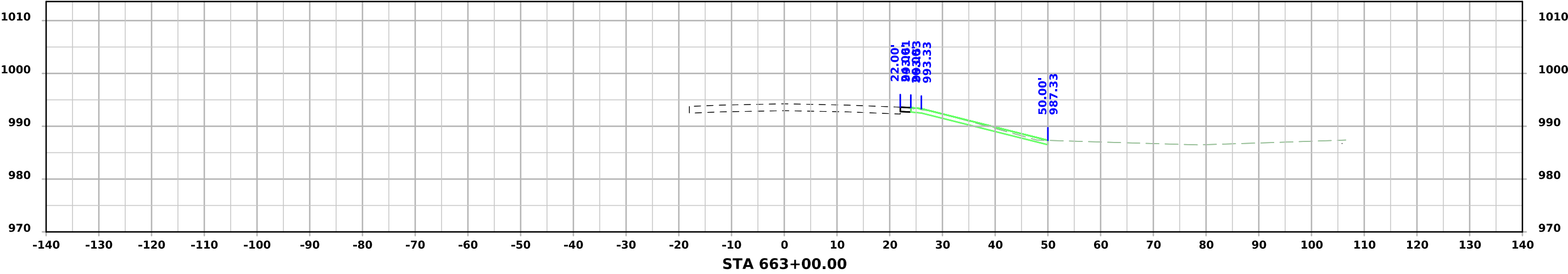
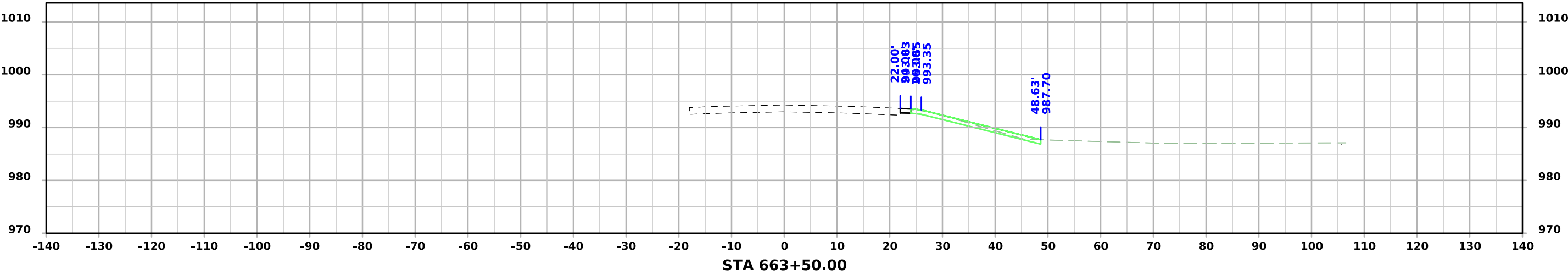
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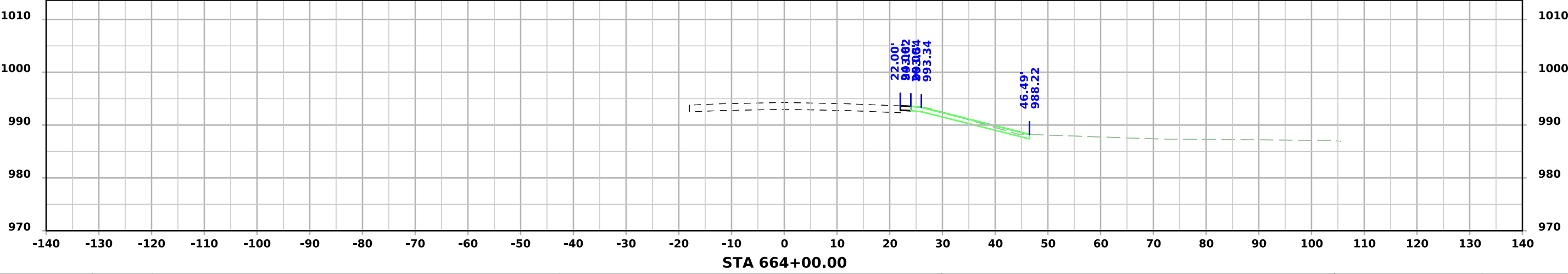
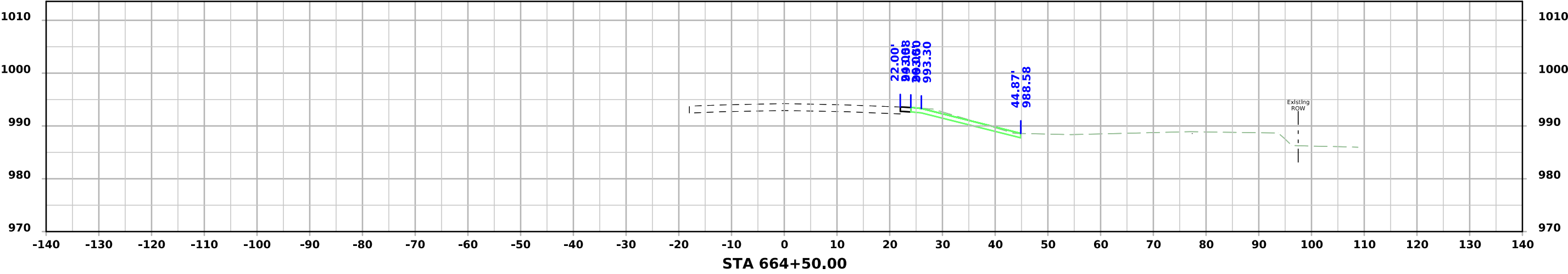
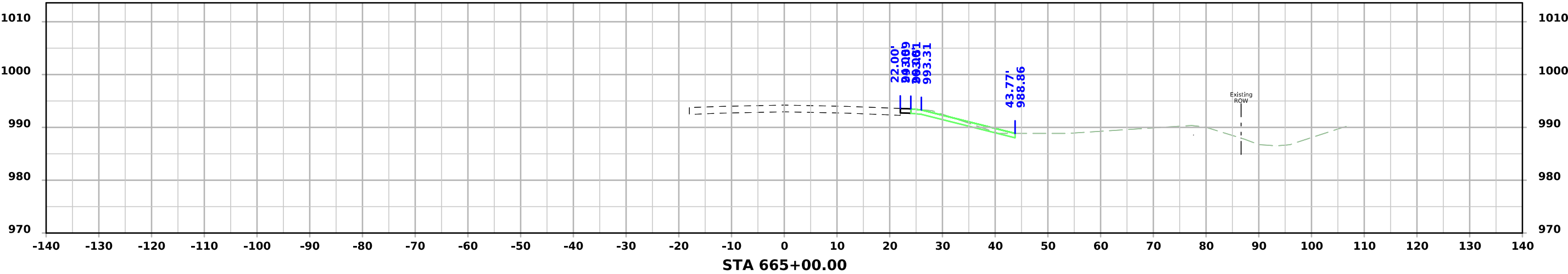
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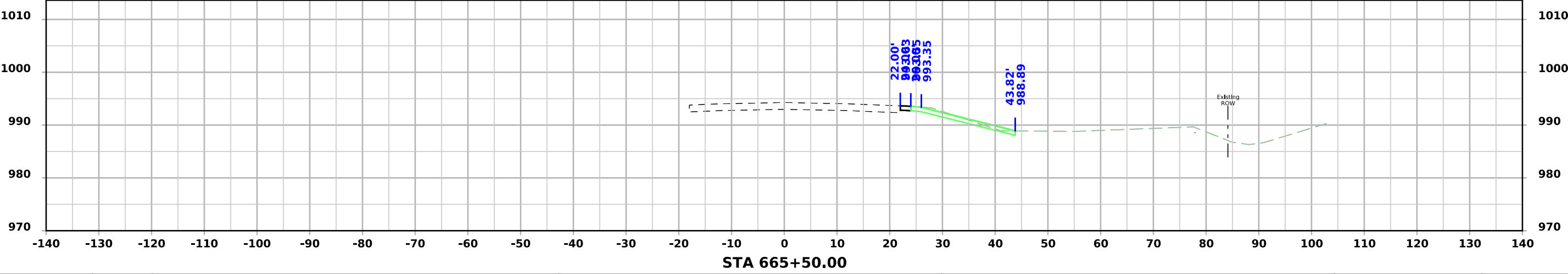
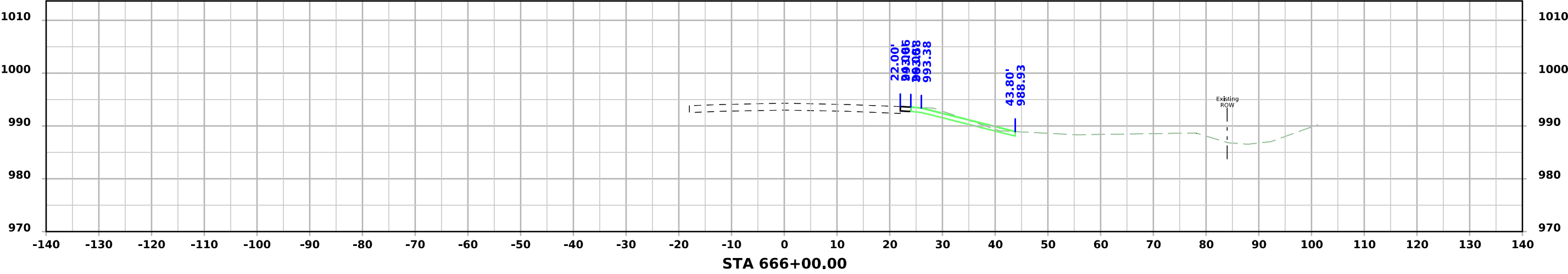
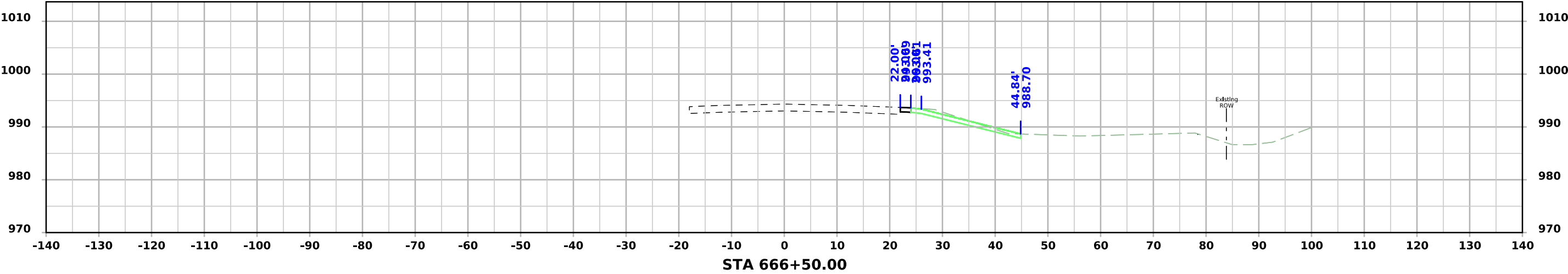
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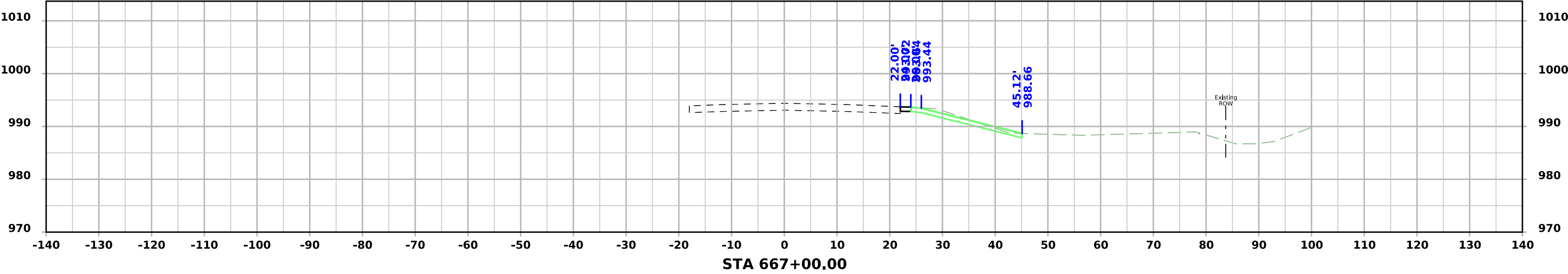
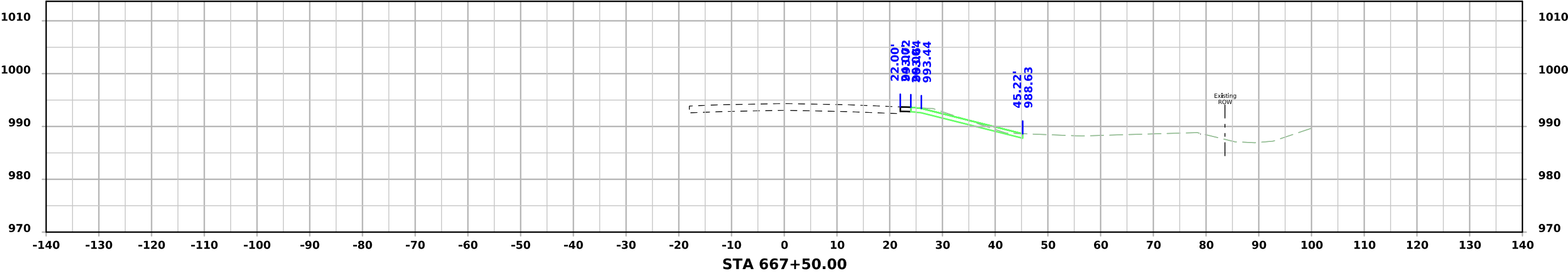
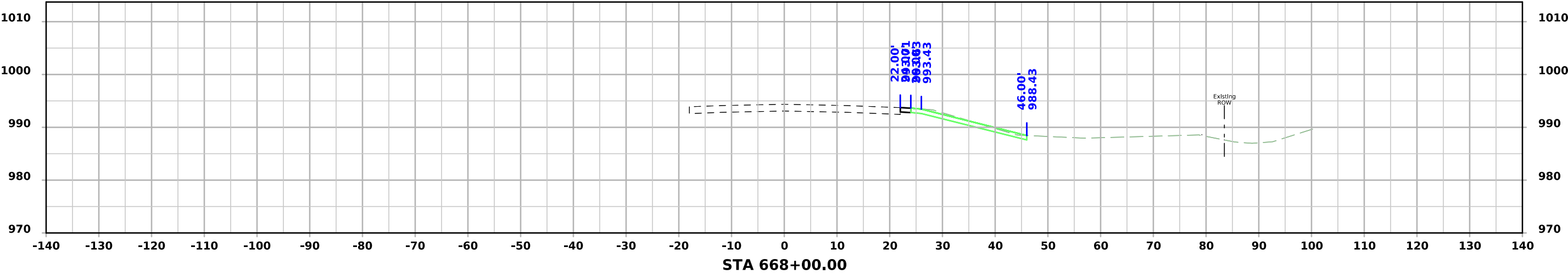
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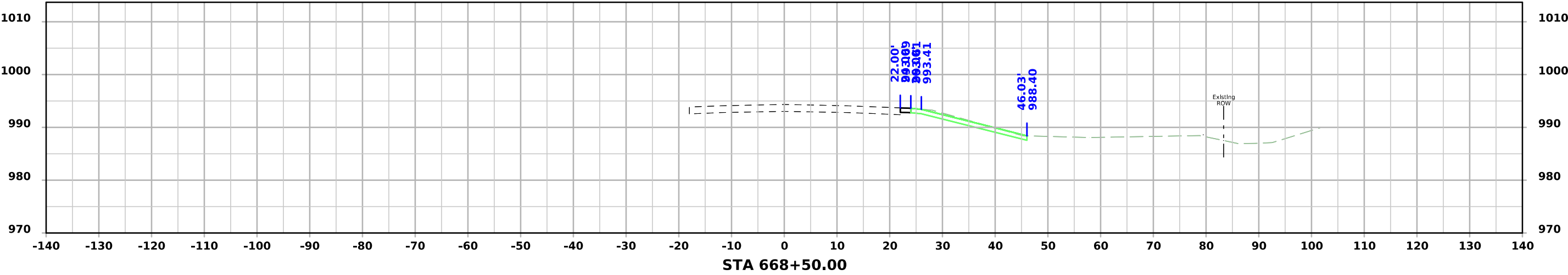
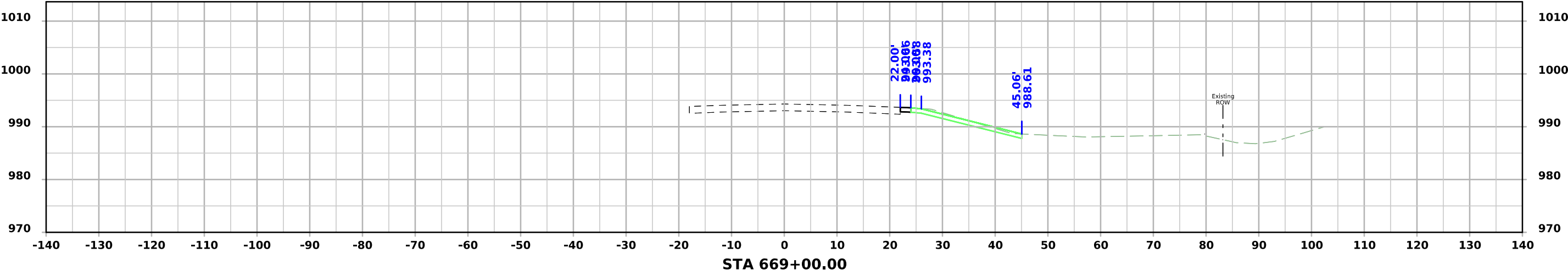
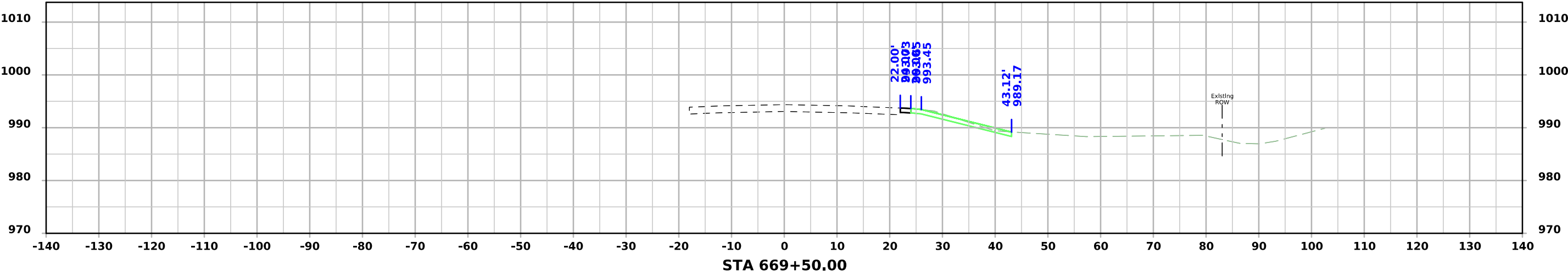
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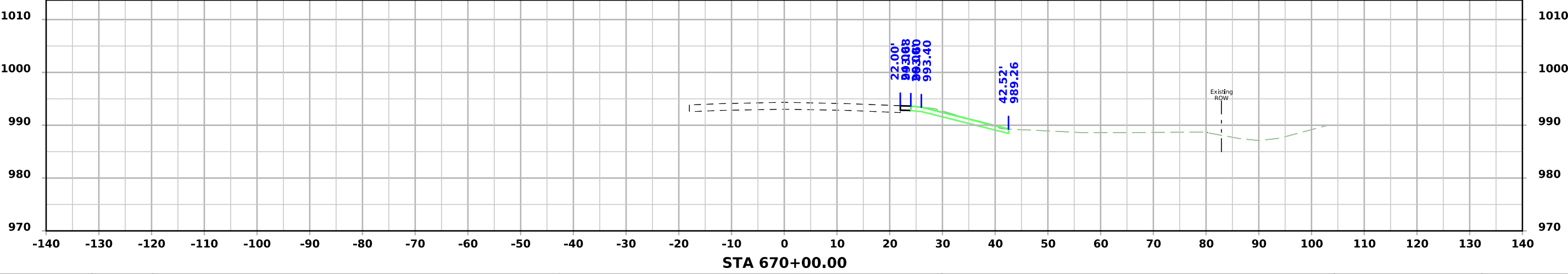
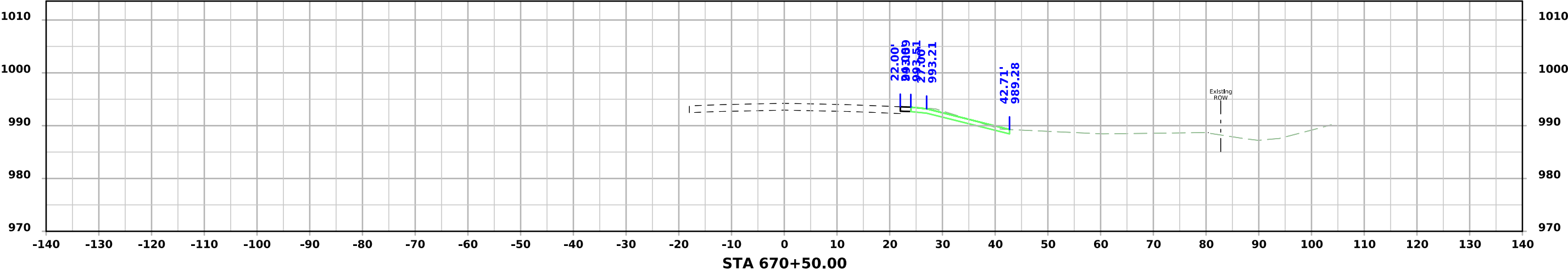
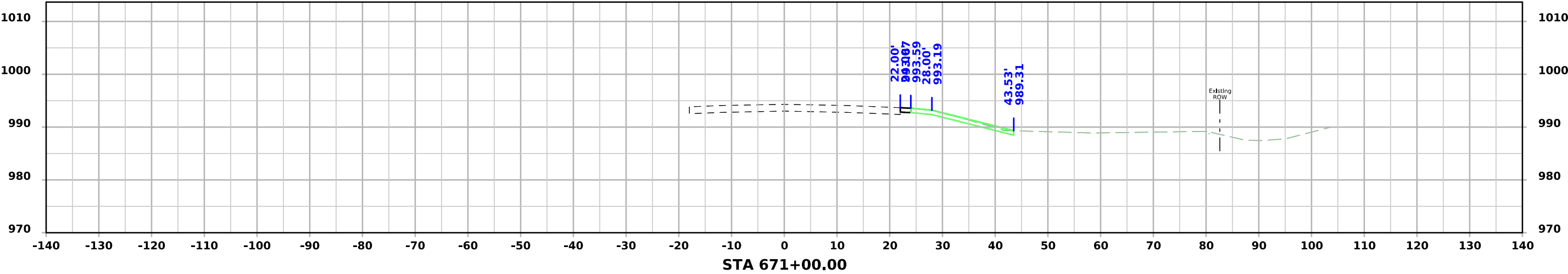
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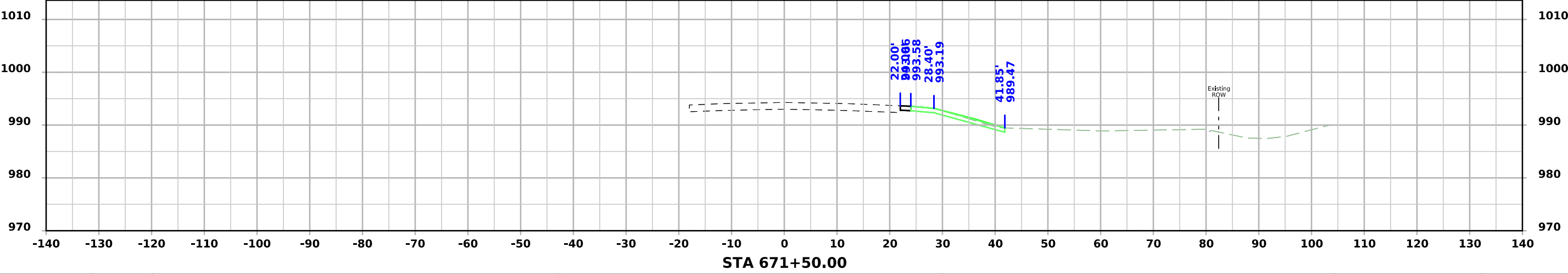
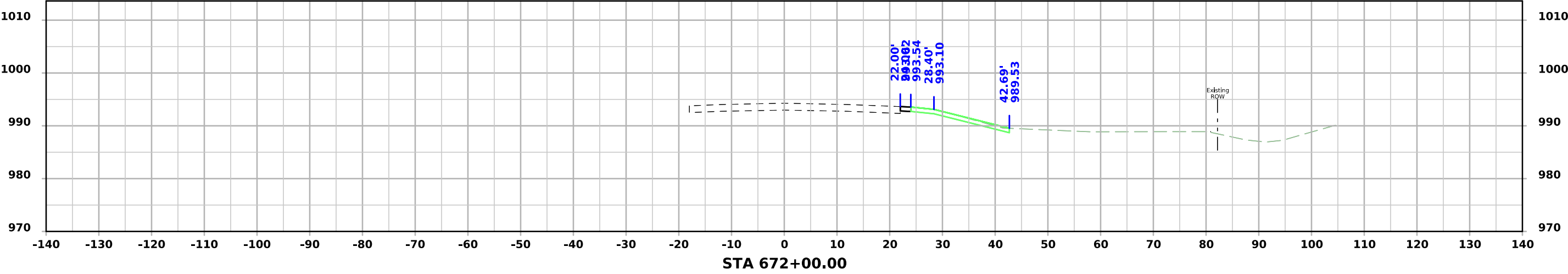
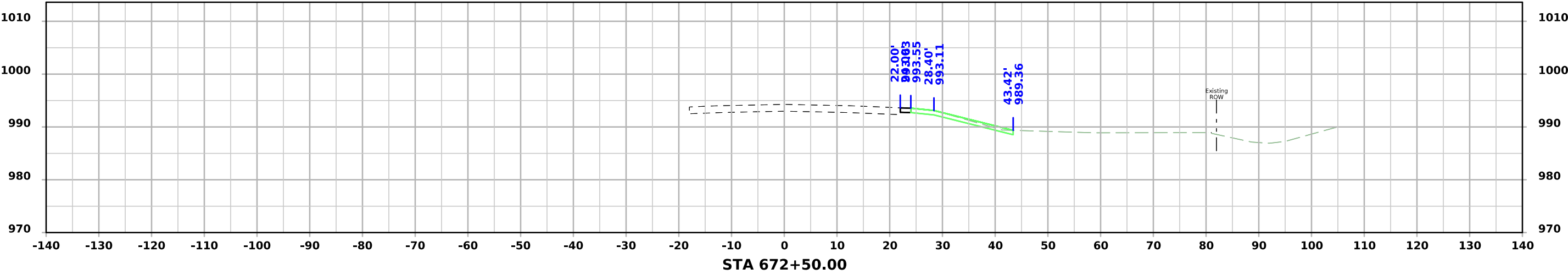
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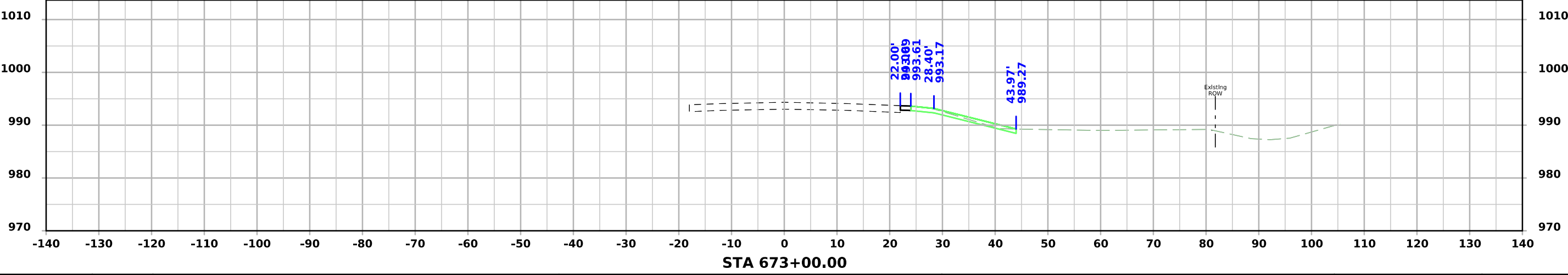
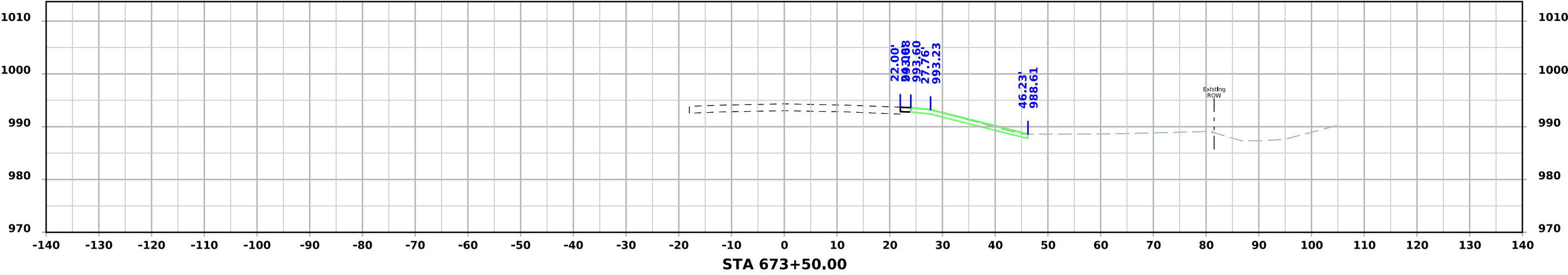
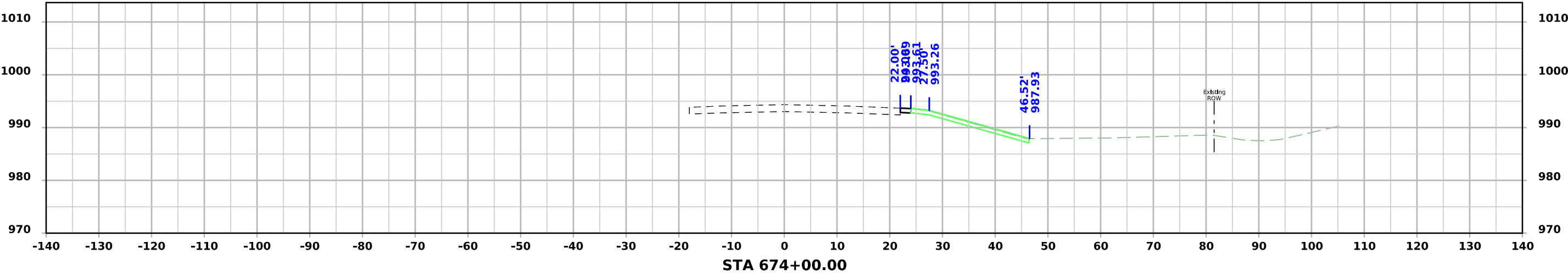
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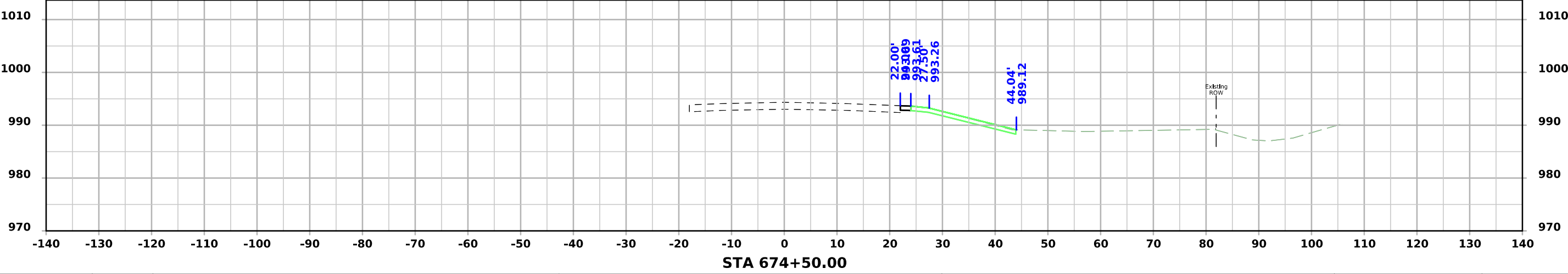
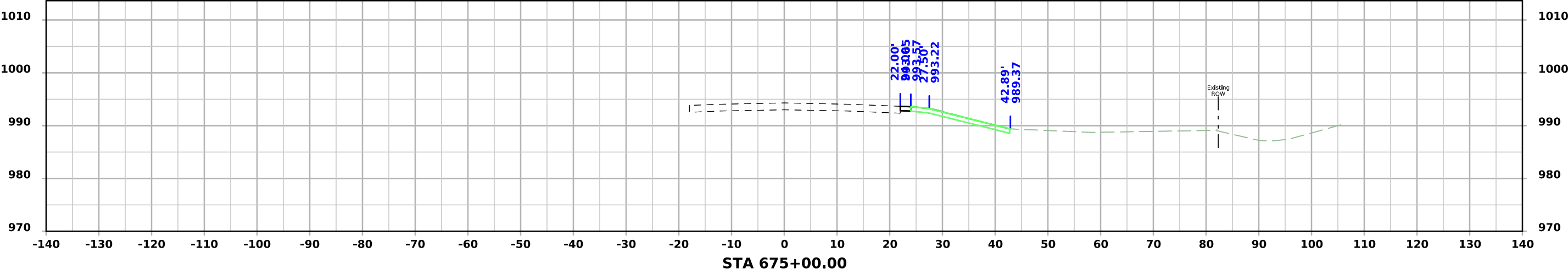
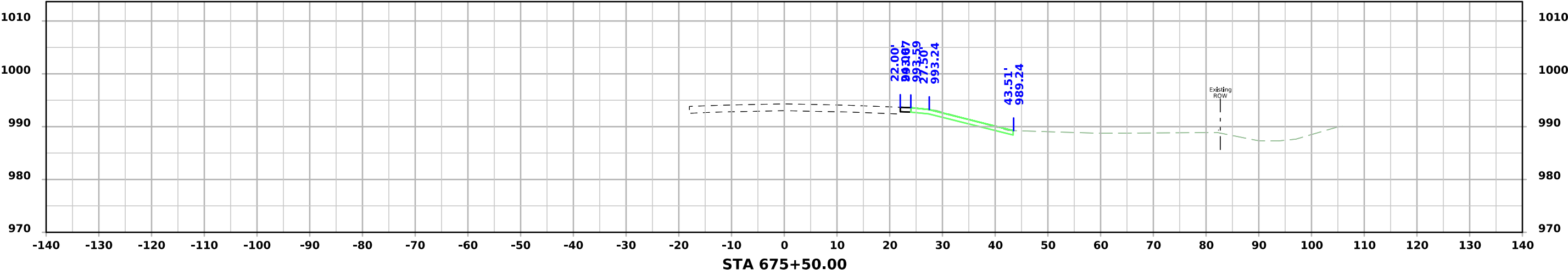
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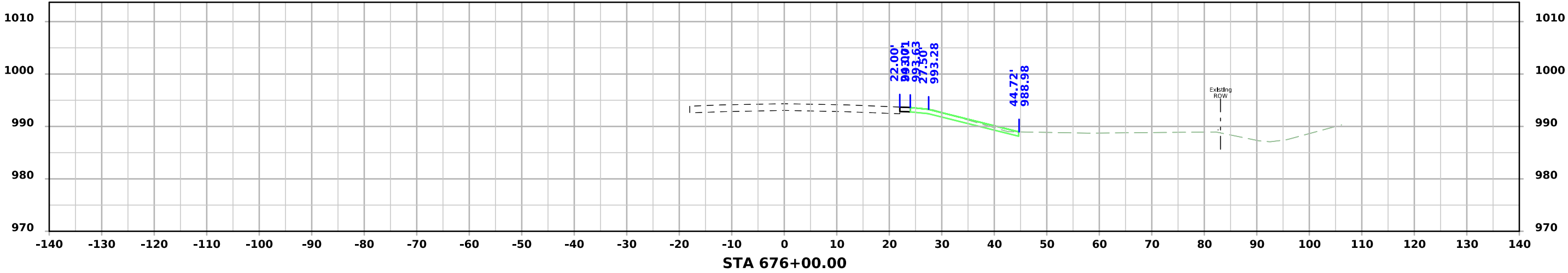
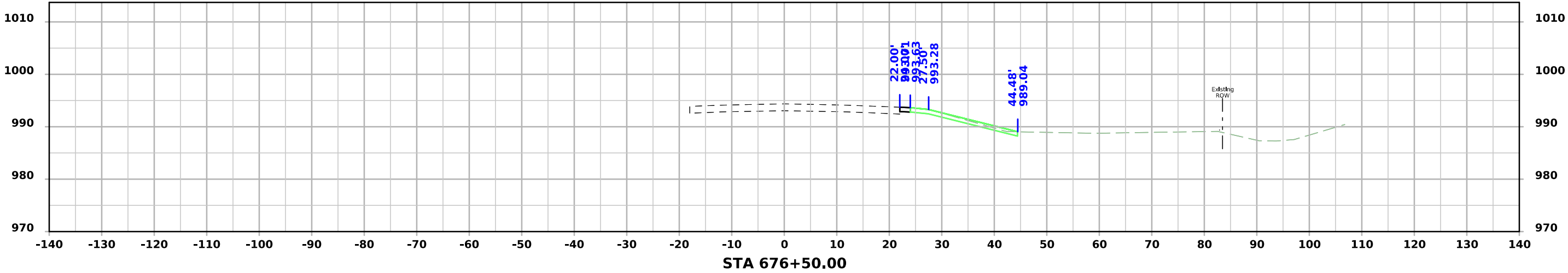
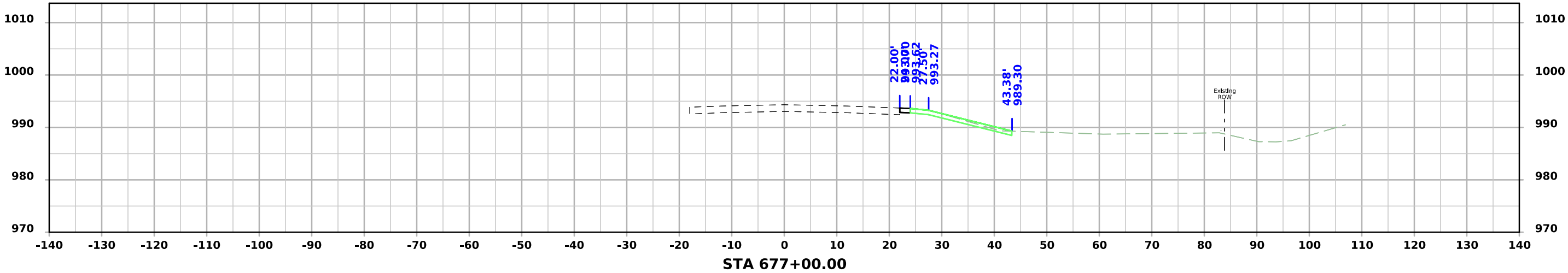
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