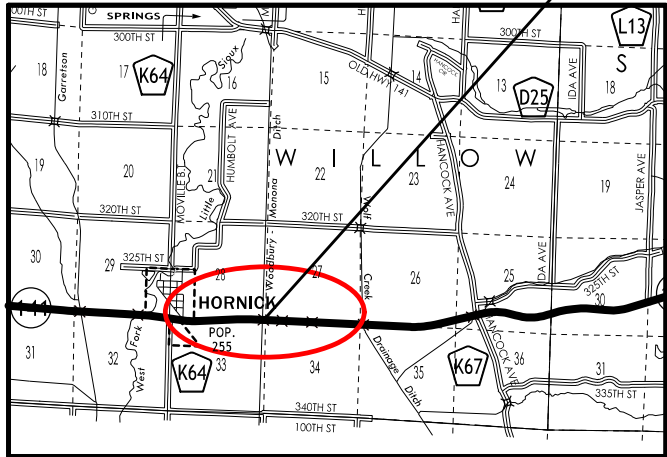
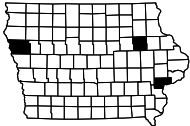




R-45W



PROJECT LOCATION  
STA 599+63  
Ref. Loc. 8

| DESIGN DATA RURAL |       |       |        |  |
|-------------------|-------|-------|--------|--|
| 2028              | AADT  | 1,600 | V.P.D. |  |
| 2048              | AADT  | 1,900 | V.P.D. |  |
| 20                | - DHV | -     | V.P.H. |  |
| TRUCKS            |       | 17    | %      |  |
| Total             |       |       |        |  |
| Design ESALs      |       | -     |        |  |



PLANS OF PROPOSED IMPROVEMENT ON THE  
**PRIMARY ROAD SYSTEM**  
**Woodbury COUNTY**  
**Bridge Replacement - PPCB**  
W Branch Little Sioux River  
0.8 mi E. of Co Rd K-64

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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



REVISIONS

| TOTAL                         |
|-------------------------------|
| ..                            |
| PROJECT IDENTIFICATION NUMBER |
| 23-97-141-030                 |
| PROJECT NUMBER                |
| BRF-141-1(044)--38-97         |
| R.O.W. PROJECT NUMBER         |
| STPN-141-1(048)--2J-97        |
|                               |
|                               |

**PRELIMINARY PLANS**

Subject to change by final design.

**D5 PLAN - Date: 09/26/2025**



Full Depth PCC Shoulder

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

| 2_P_FullPCC_04-15-25 |           | (P)  |
|----------------------|-----------|------|
| STATION TO STATION   |           | Feet |
| 594+75.00            | 597+74.17 | 8    |
| 601+51.83            | 603+75.00 | 8    |
|                      |           |      |
|                      |           |      |

Paved Shoulder at Guardrail

PCC Shoulder Jointing:  
Longitudinal joint: BT-1 or BT-5  
Transverse joints: C at mainline spacing  
HMA Shoulder Jointing:  
Longitudinal joint: B

| 2_P_Guard_04-21-20 |           | (P)   |
|--------------------|-----------|-------|
| STATION TO STATION |           | Feet  |
| 596+91.22          | 597+74.17 | Vari. |
| 601+51.83          | 602+84.58 | Vari. |
|                    |           |       |
|                    |           |       |

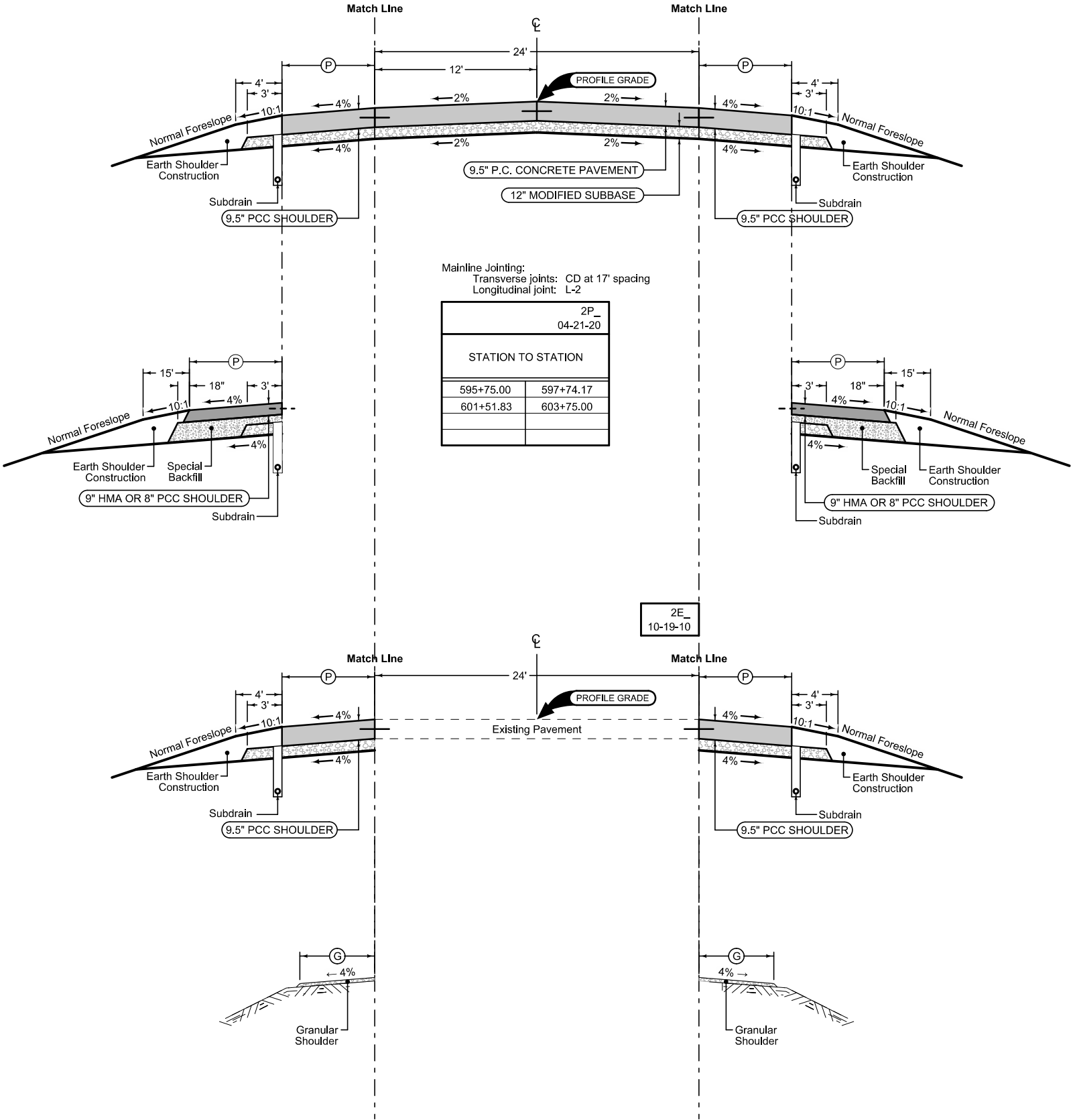
Full Depth PCC Shoulder

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

| 2_P_FullPCC_04-15-25 |           | (P)   |
|----------------------|-----------|-------|
| STATION TO STATION   |           | Feet  |
| 603+75.00            | 604+50.00 | Vari. |
|                      |           |       |
|                      |           |       |

Granular Shoulder

|                    |           | (G)  |
|--------------------|-----------|------|
| STATION TO STATION |           | Feet |
| 594+50.00          | 594+75.00 | 8    |
| 604+50.00          | 604+75.00 | 8    |
|                    |           |      |
|                    |           |      |



Full Depth PCC Shoulder

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

| 2_P_FullPCC_04-15-25 |           | (P)  |
|----------------------|-----------|------|
| STATION TO STATION   |           | Feet |
| 594+75.00            | 597+74.17 | 8    |
| 601+51.83            | 603+75.00 | 8    |
|                      |           |      |
|                      |           |      |

Paved Shoulder at Guardrail

PCC Shoulder Jointing:  
Longitudinal joint: BT-1 or BT-5  
Transverse joints: C at mainline spacing  
HMA Shoulder Jointing:  
Longitudinal joint: B

| 2_P_Guard_04-21-20 |           | (P)   |
|--------------------|-----------|-------|
| STATION TO STATION |           | Feet  |
| 596+41.15          | 597+74.17 | Vari. |
| 601+51.83          | 602+34.90 | Vari. |
|                    |           |       |
|                    |           |       |

Full Depth PCC Shoulder

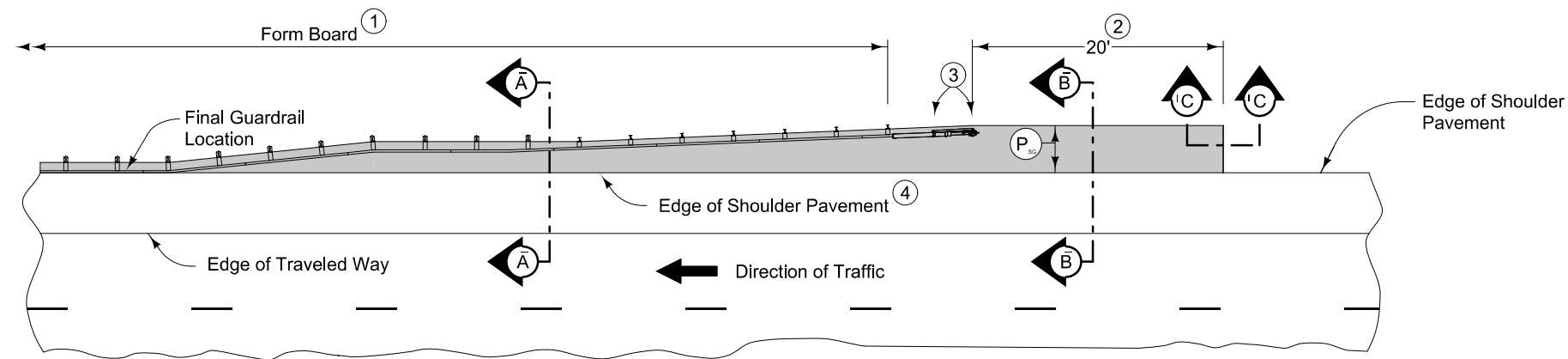
Shoulder Jointing:  
Longitudinal joint: BT-2, or L-2  
Transverse joints: C at 17' spacing

| 2_P_FullPCC_04-15-25 |           | (P)   |
|----------------------|-----------|-------|
| STATION TO STATION   |           | Feet  |
| 603+75.00            | 604+50.00 | Vari. |
|                      |           |       |
|                      |           |       |

Granular Shoulder

|                    |           | (G)  |
|--------------------|-----------|------|
| STATION TO STATION |           | Feet |
| 594+50.00          | 594+75.00 | 8    |
| 604+50.00          | 604+75.00 | 8    |
|                    |           |      |
|                    |           |      |

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



PLAN VIEW

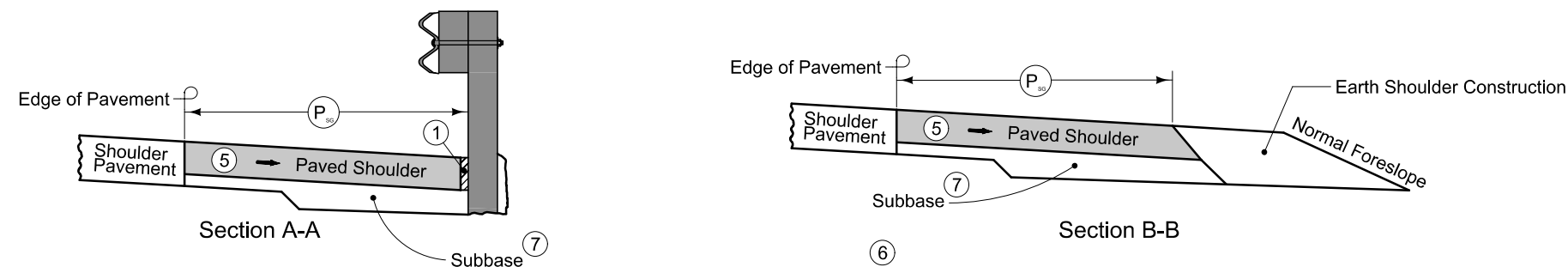
9" HMA Paved Shoulder at guardrail. 8" PCC may be substituted with the following jointing layout:

Match mainline pavement joint spacing. When mainline pavement is 8" or greater in thickness, place additional transverse 'C' joints in shoulder at mid-panel of the mainline pavement. Place longitudinal 'C' joint at P/2 from edge of mainline pavement when P is greater than 10' wide. Terminate longitudinal joint at transverse joint less than 10' in length.

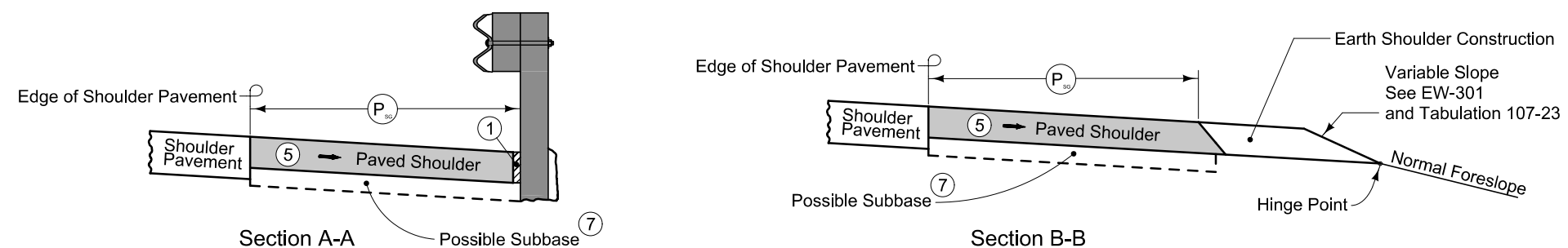
Compaction of HMA is required to face of guardrail post. Hand compaction will be allowed under guardrail. Removal and reinstallation of guardrail will be allowed with no additional payment.

Refer to Tabulation 112-9 for shoulder quantities.

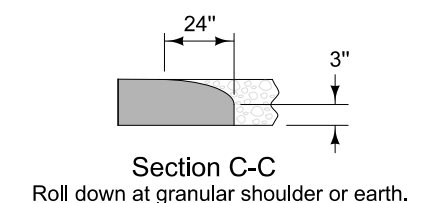
- ① PCC option only: When guardrail posts are installed prior to construction of PCC paved shoulder, fasten form board to the face of guardrail posts for the length shown.
- ② Continue paved shoulder 20 feet beyond the center of the first post.
- ③ Shoulder may be notched for first 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.
- ④ 'KT' (per PV-101) joint for PCC shoulder. 'B' (per PV-101) joint for HMA shoulder.
- ⑤ Match shoulder slope.
- ⑥ The Contractor has the option to pave the paved shoulder at guardrail and the full width paved shoulder as one operation.
- ⑦ Refer to other details in the plan.



NEW CONSTRUCTION



EXISTING SHOULDER



PAVED SHOULDER AT GUARDRAIL  
(ADJACENT TO FULL WIDTH PAVED SHOULDER)



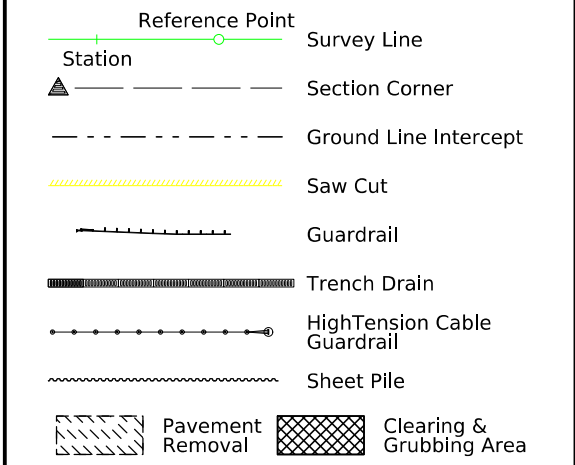
|  |                                   |
|--|-----------------------------------|
|  | Interstate Highway Symbol         |
|  | U.S. Highway Symbol               |
|  | Iowa Highway Symbol               |
|  | County Road Highway Symbol        |
|  | Evergreen Tree                    |
|  | Deciduous Tree                    |
|  | Fruit Tree                        |
|  | Shrub (Bushes)                    |
|  | Timber                            |
|  | Hedge                             |
|  | Stump                             |
|  | Swamp                             |
|  | Rock Outcrop                      |
|  | Broken Concrete                   |
|  | Revetment (Rip Rap)               |
|  | Cemetery                          |
|  | Grave                             |
|  | Cave                              |
|  | Sink Hole                         |
|  | Board Fence                       |
|  | Chain Link or Security Fence      |
|  | Wire Fence                        |
|  | Terrace                           |
|  | Earth Dam or Dike (Existing)      |
|  | Tile Outlet                       |
|  | Edge of Water                     |
|  | Existing Drainage                 |
|  | Right of Way Rail or Lot Corner   |
|  | Concrete Monument                 |
|  | Well                              |
|  | Windmill                          |
|  | Beehive Intake                    |
|  | Existing Intake                   |
|  | Existing Utility Access (Manhole) |
|  | Fire Hydrant                      |
|  | Water Hydrant (Rural)             |

|                                                                                   |                              |
|-----------------------------------------------------------------------------------|------------------------------|
|  | Septic Tank                  |
|  | Cistern                      |
|  | L.P. Gas Tank (No Footing)   |
|  | Underground Storage Tank     |
|  | Latrine                      |
|  | Satellite TV Dish            |
|  | Water Hook Up                |
|  | Radio Tower                  |
|  | Tower Anchor                 |
|  | Guardrail (Beam or Cable)    |
|  | Guard Post (one or two)      |
|  | Guard Post (over two)        |
|  | Filler Pipe                  |
|  | Gas Valve                    |
|  | Water Valve                  |
|  | Speed Limit Sign             |
|  | Mile Marker Post             |
|  | Sign                         |
|  | Traffic Signal Control Box   |
|  | Rail Road Signal Control Box |
|  | Telephone Switch Box         |
|  | Electric Box                 |

FO1D, Western Iowa Telecomm - Quality D

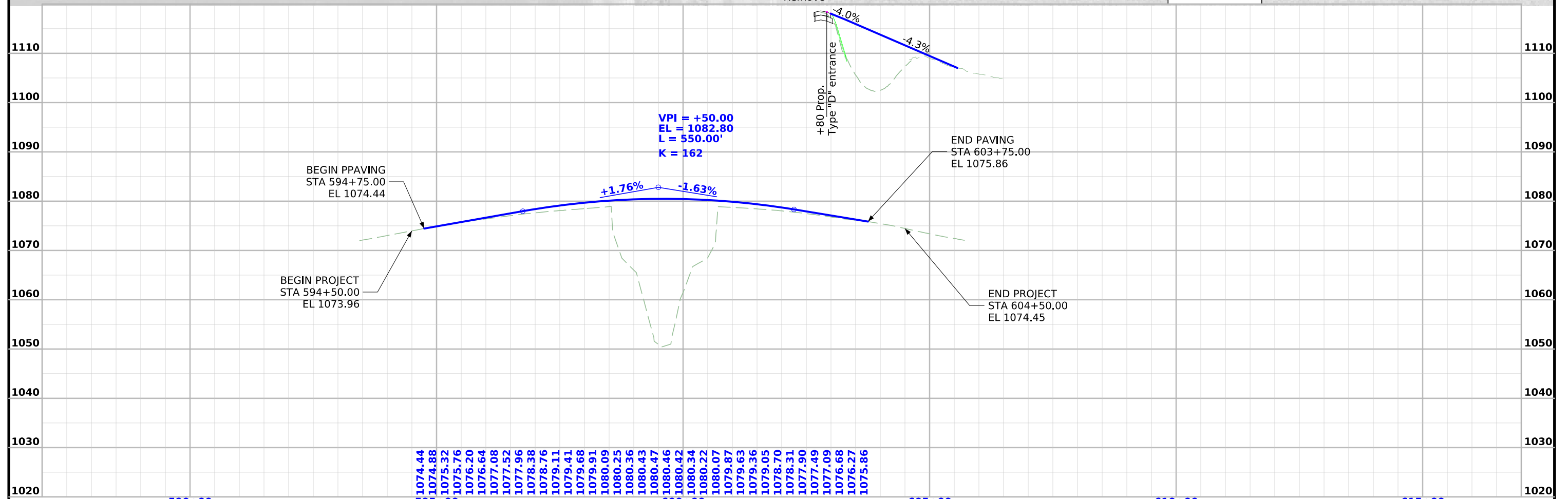
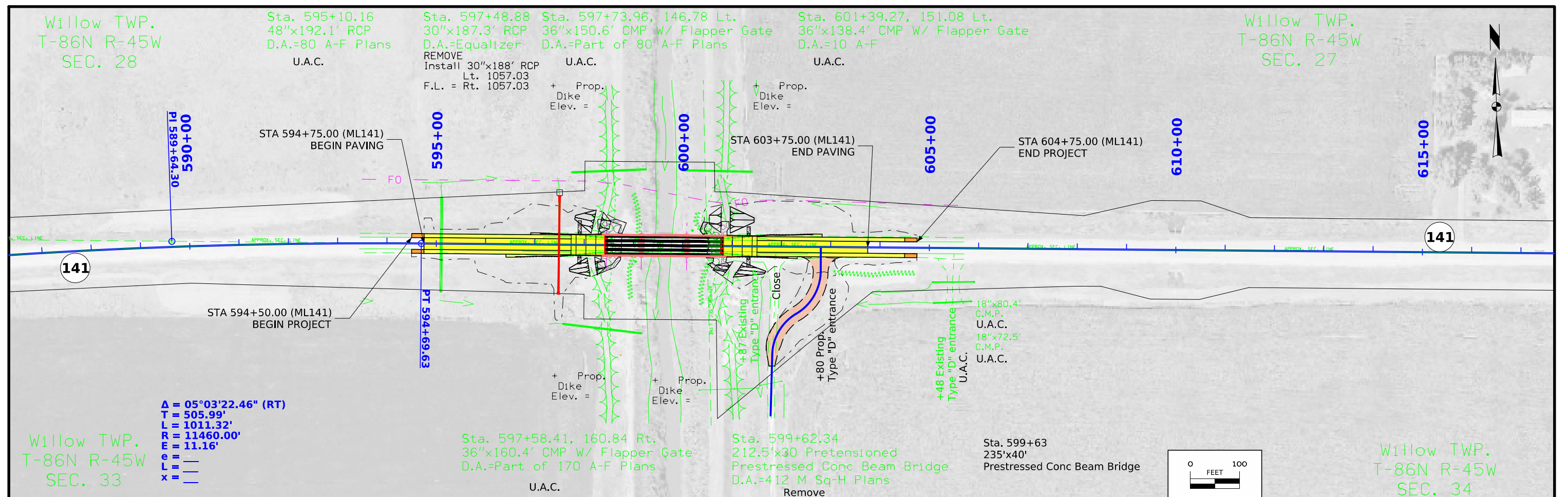
| LINEWORK      |       | Design Color No.                                                                    |                                                                     |     |
|---------------|-------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----|
| 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) |  | 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    |



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

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



Survey Information

SURVEY INDEX

County: Woodbury  
PIN: 23-97-141-030  
Project Number: BRF-141-1(044)--38-97  
Location: W Branch Little Sioux River 0.8 mi E of Co Rd K64  
Type of Work: Bridge-Unspecified  
Project Directory: 9714103023

Survey Personnel

Clayton Henningsen – Survey Party Chief  
Jason Arn – Survey Party Chief

Date(s) of Survey

Begin Date 08/14/2024  
End Date 09/25/2024

General Information

This survey is for IA Hwy 141 bridge over West branch Little Sioux River 0.8 mi east of County road K64. This survey request was for the IA Hwy 141 corridor only. This project is a Full Field DTM survey.

Utility Information

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

Project Control

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

PROJECT DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 ADJUSTMENT)  
COORDINATE SYSTEM: IOWA REGIONAL COORDINATE SYSTEM ZONE 04  
(U.S. SURVEY FOOT)  
VERTICAL DATUM: NAVD88  
GEOID MODEL: 2018u2

Alignment Information

The horizontal alignment for IA Hwy 141 this survey is a retrace of PCC Plans No. F-1083(1). Survey stationing was equated to the plan PI at Sta. 589+64.3 and carried back and ahead without equation throughout the survey.

Survey stationing relates to as built plan stationing as follows:

PI Sta. 589+64.3 PCC Plans No. F-1083(1)  
Survey PI Sta. 589+64.3

POT Sta. 625+78.25 PCC Plans No. F-1083(1)  
Survey POT Sta. 625+77.86



## CONTROL POINT VICINITY MAP

This map is a guide to the vicinity of the primary project control points. Primary control is for use with RTK base stations and for RTN validation. Future surveys will use primary project control to establish temporary control as needed for construction or other surveying applications.



HORIZ. DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 Adjustment) - Iowa RCS Zone 04 (U.S. Survey Foot)

VERT. DATUM: NAVD88 - Geoid Model: 2018u2

Coordinate listing from next sheet will be used with IaRTN for monument recovery. No other reference ties are given.

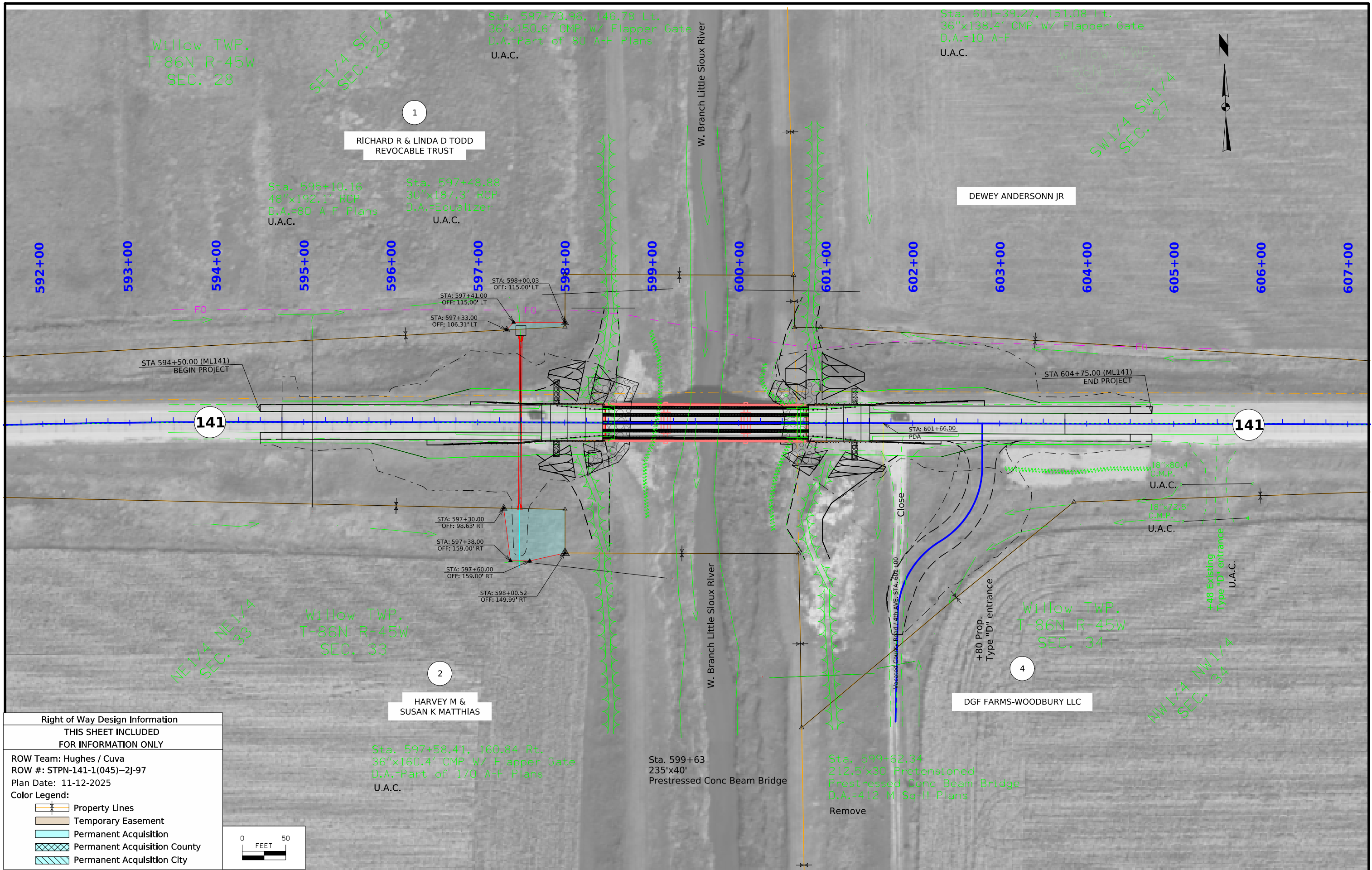
HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING  
HORIZ. DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 Adjustment)  
Ia. Regional Coordinate System Zone 04 (U.S. Survey Foot)  
VERT. DATUM: NAVD88  
Geoid Model: 2018u2

| <u>Point Name</u> | <u>Northing</u> | <u>Easting</u> | <u>Elevation</u> | <u>Feature Definition-Description</u>                                                           |
|-------------------|-----------------|----------------|------------------|-------------------------------------------------------------------------------------------------|
| 8062              | 8485643.30      | 14162838.40    | 1071.33          | CP WOODBURY CO GPS AS DESCRIBED IN GOOD CONDITION                                               |
| 971410074         | 8490814.25      | 14158062.80    | 1066.58          | CP FENO MONUMENT SET ON N SIDE IA 141 50 FT N OF CENTERLINE APPROX 400 FT EAST OF CL<br>MAIN ST |
| 971410084         | 8490866.58      | 14162915.46    | 1076.93          | CP REBAR NE QUAD IA 141 BRG OVER WEST BRANCH LITTLE SIOUX RIVER                                 |
| 971410094         | 8490678.02      | 14168225.33    | 1082.51          | CP FENO MONUMENT NW QUAD IA 141 BRG OVER DRAINAGE DITCH APPROX 30 FT NW CORNER<br>OF BRG        |

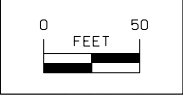
NO ACCESS RIGHTS ARE TO BE ACQUIRED ON THIS PROJECT.

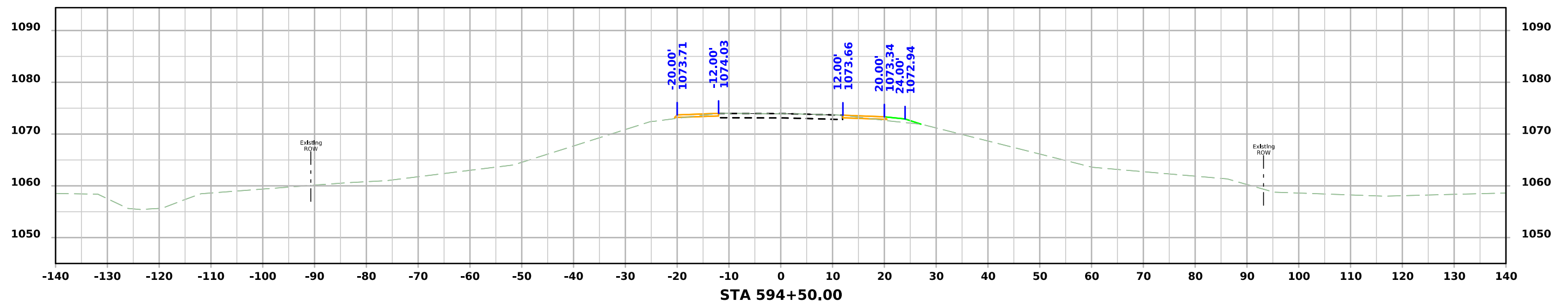
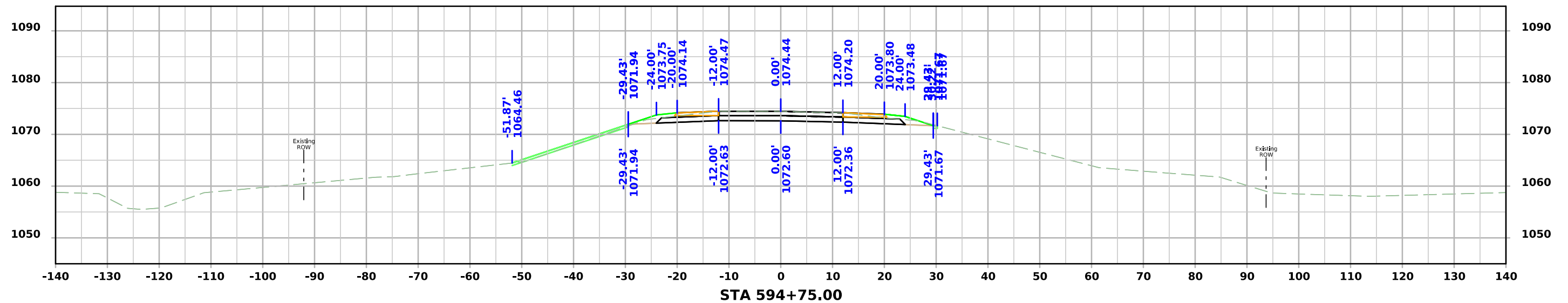
ACCESS CONTROL PREVIOUSLY ACQUIRED.



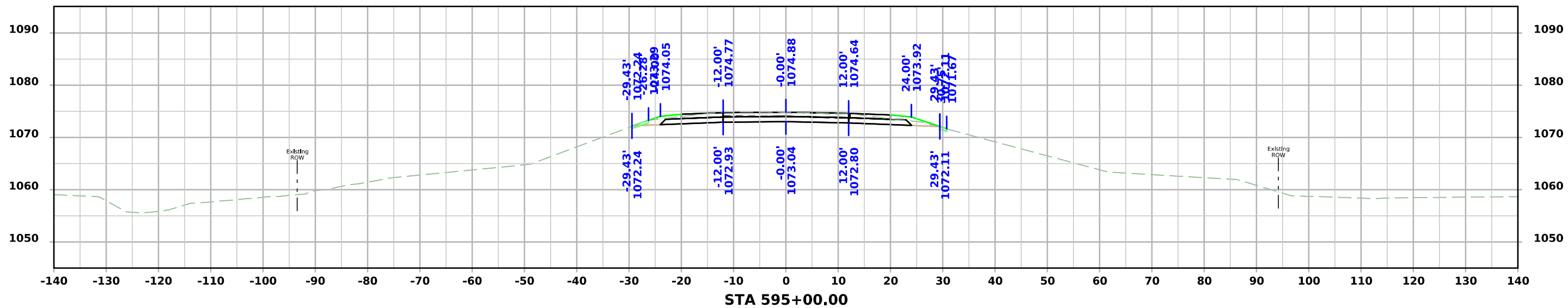
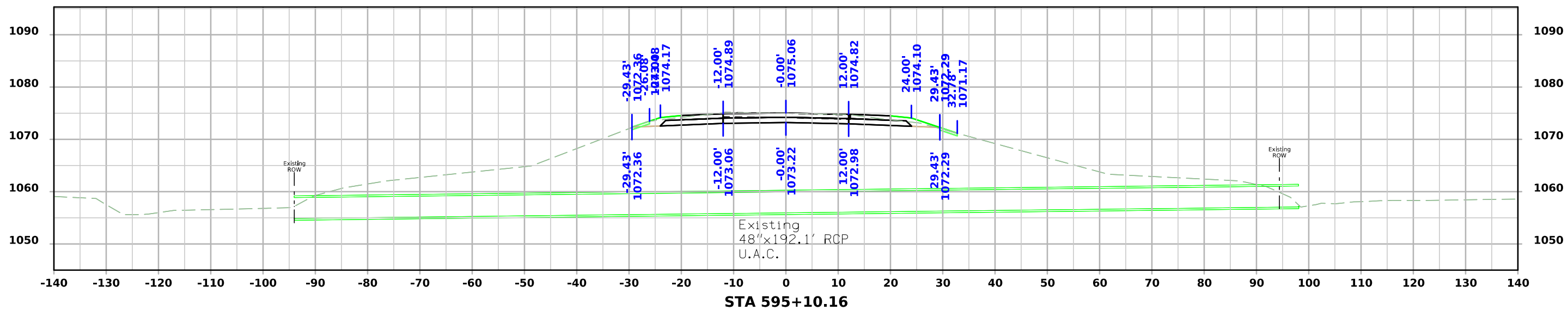


| Right of Way Design Information             |                              |
|---------------------------------------------|------------------------------|
| THIS SHEET INCLUDED<br>FOR INFORMATION ONLY |                              |
| ROW Team: Hughes / Cuva                     |                              |
| ROW #: STPN-141-1(045)-2J-97                |                              |
| Plan Date: 11-12-2025                       |                              |
| Color Legend:                               |                              |
|                                             | Property Lines               |
|                                             | Temporary Easement           |
|                                             | Permanent Acquisition        |
|                                             | Permanent Acquisition County |
|                                             | Permanent Acquisition City   |

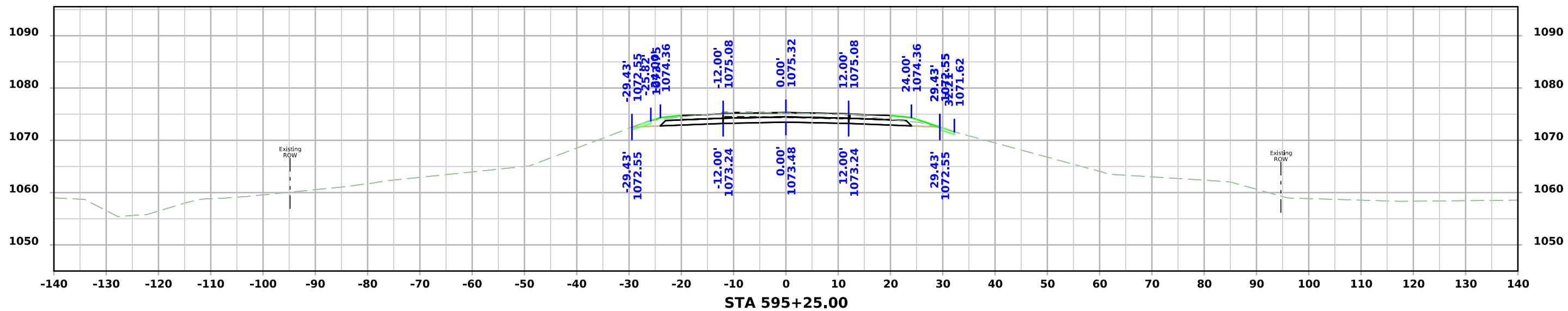
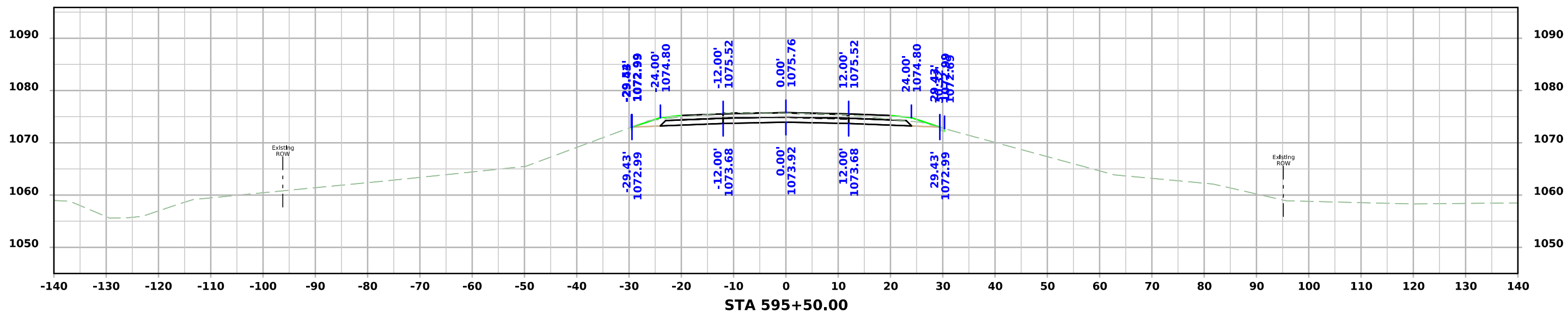


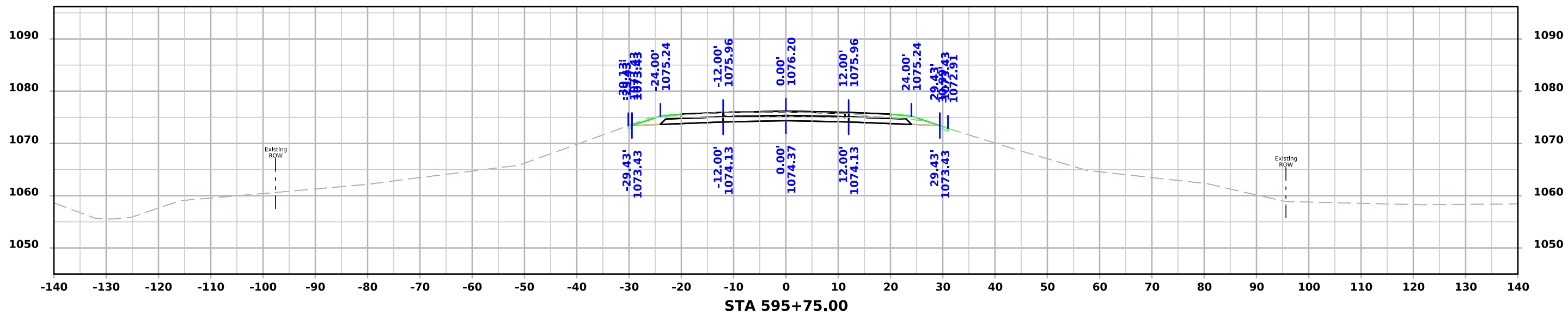
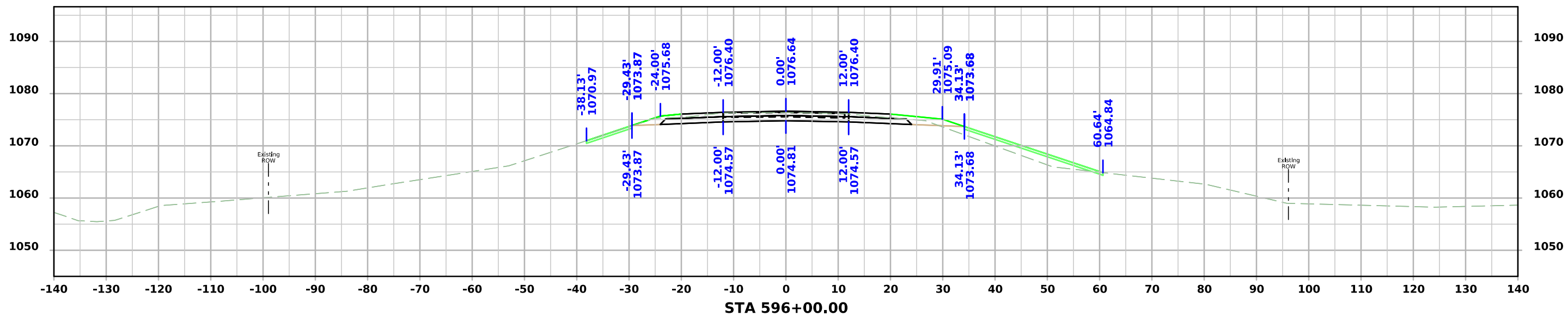


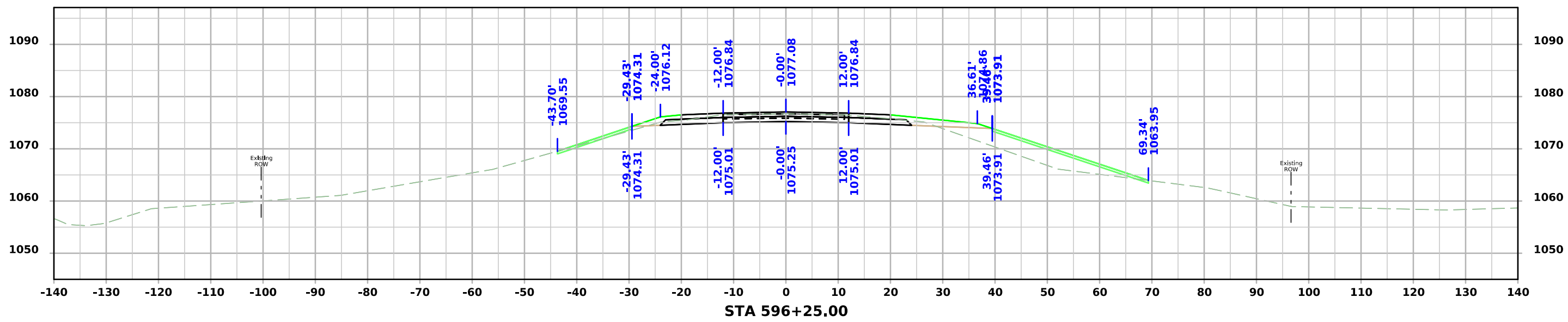
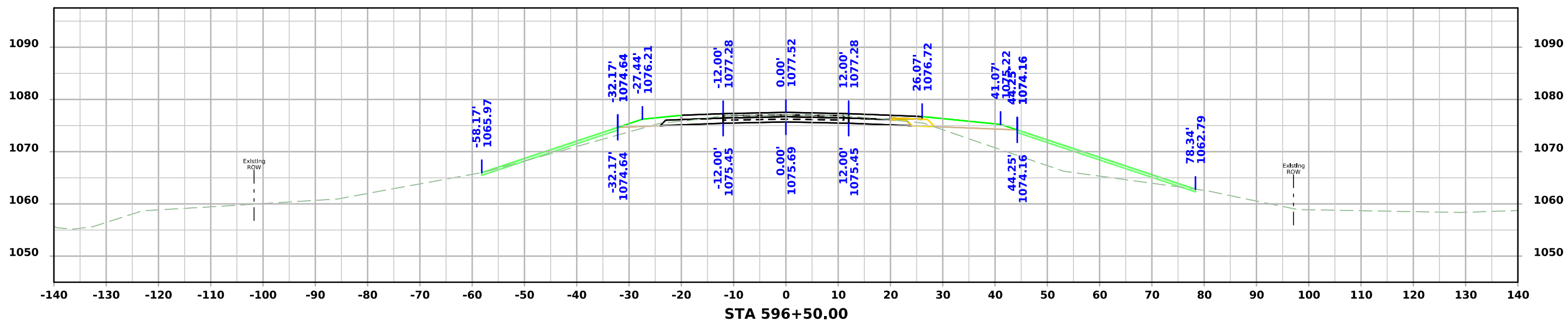


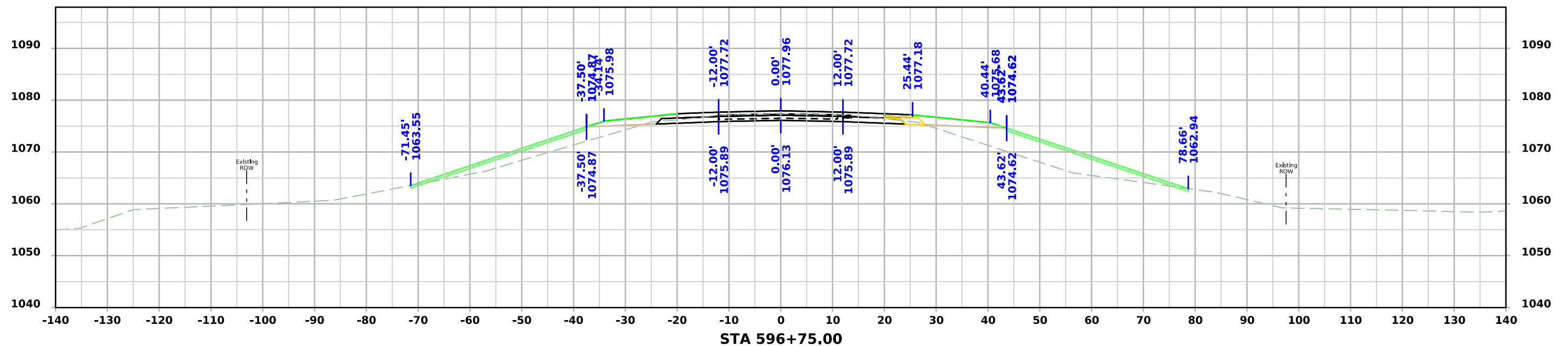
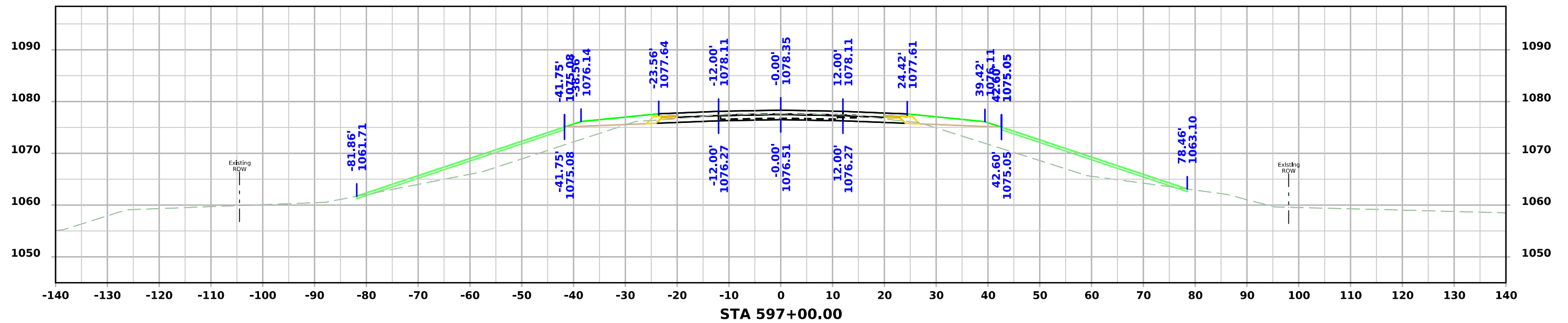


# IA 141

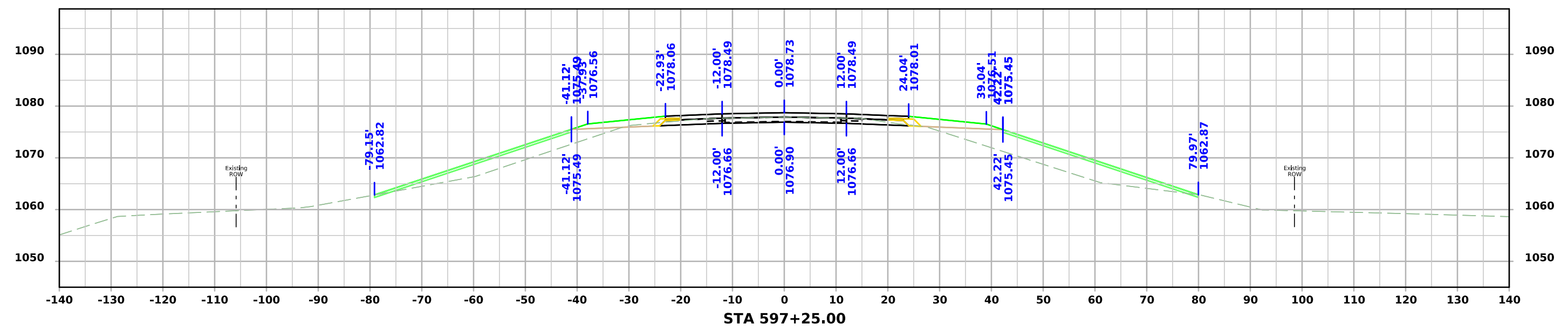
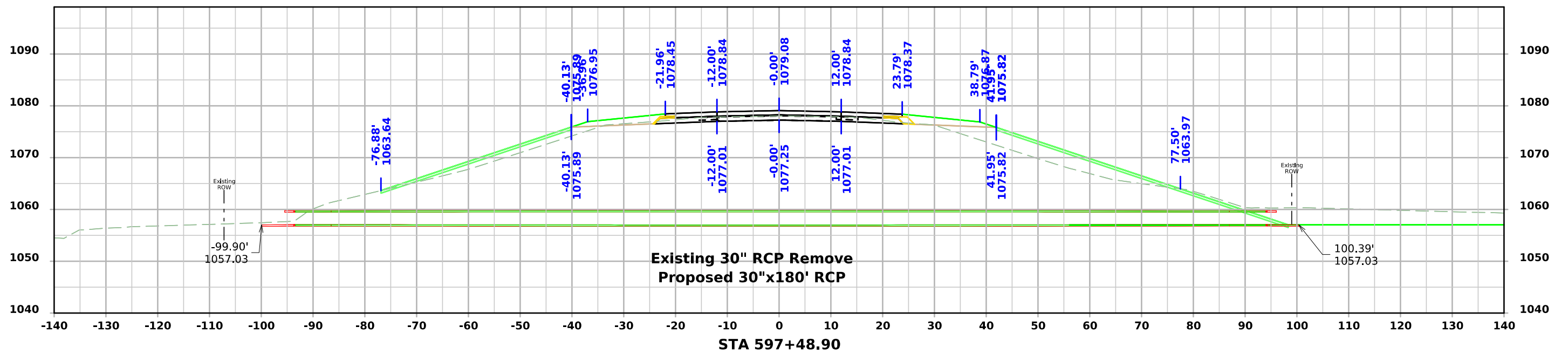


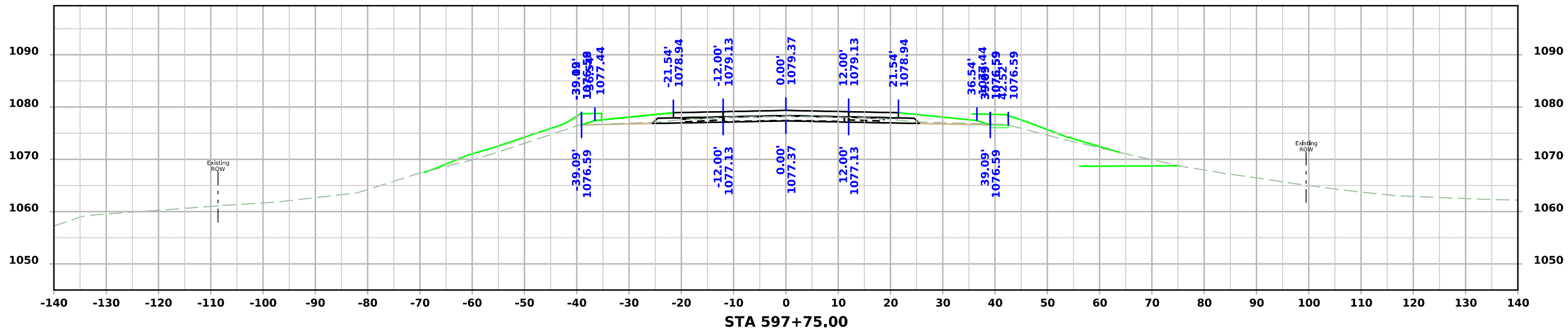
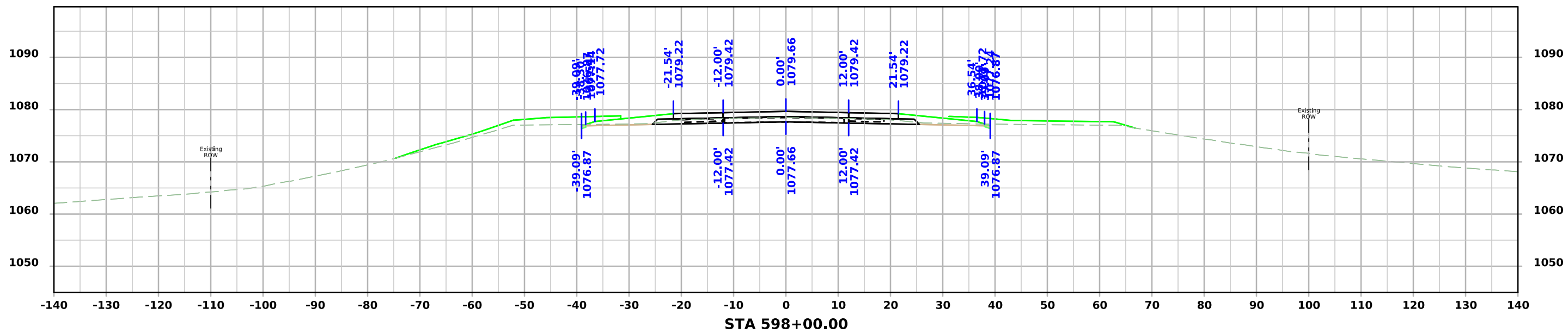


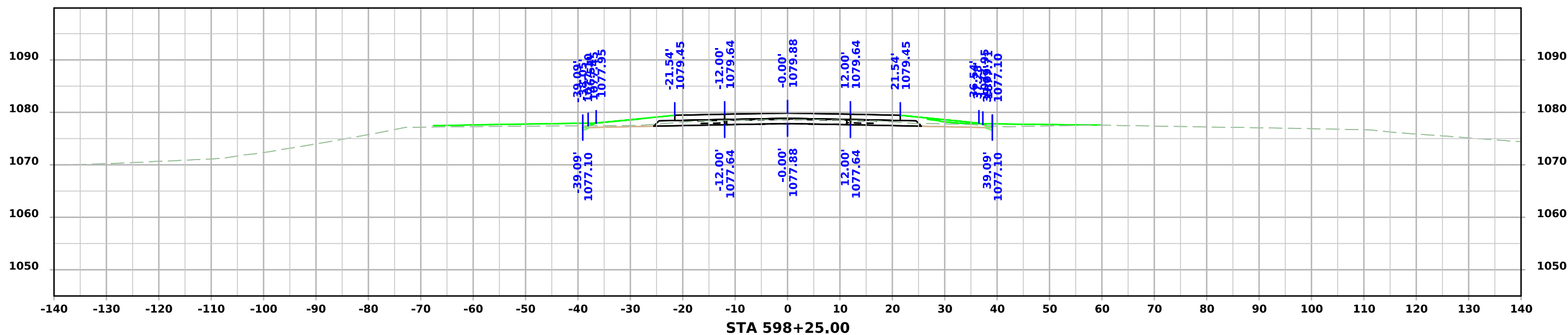
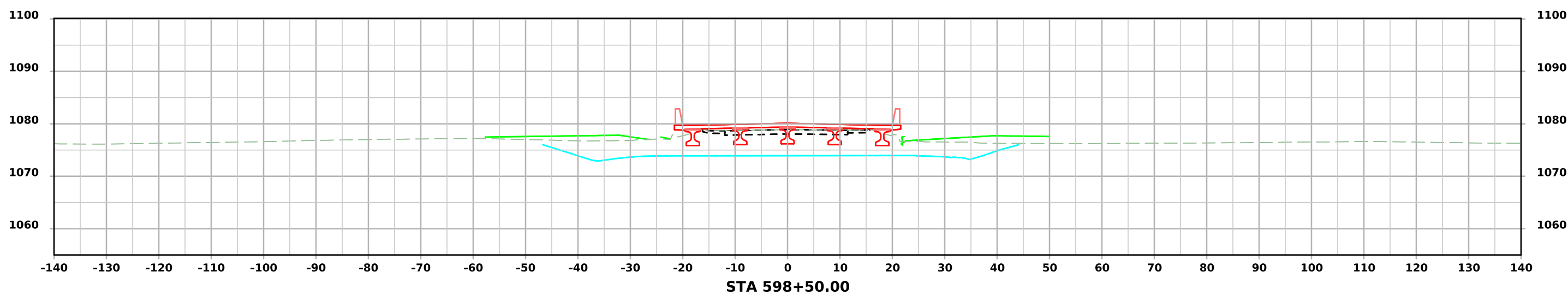


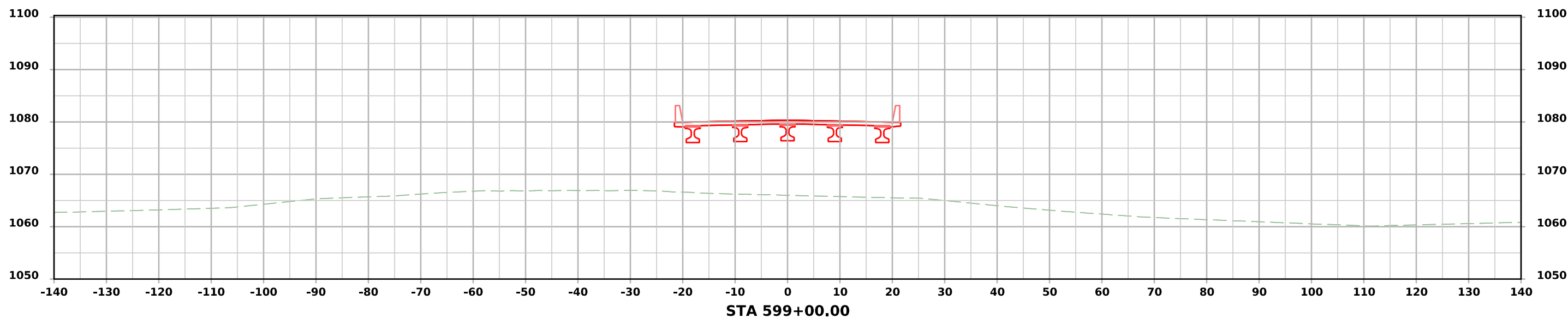
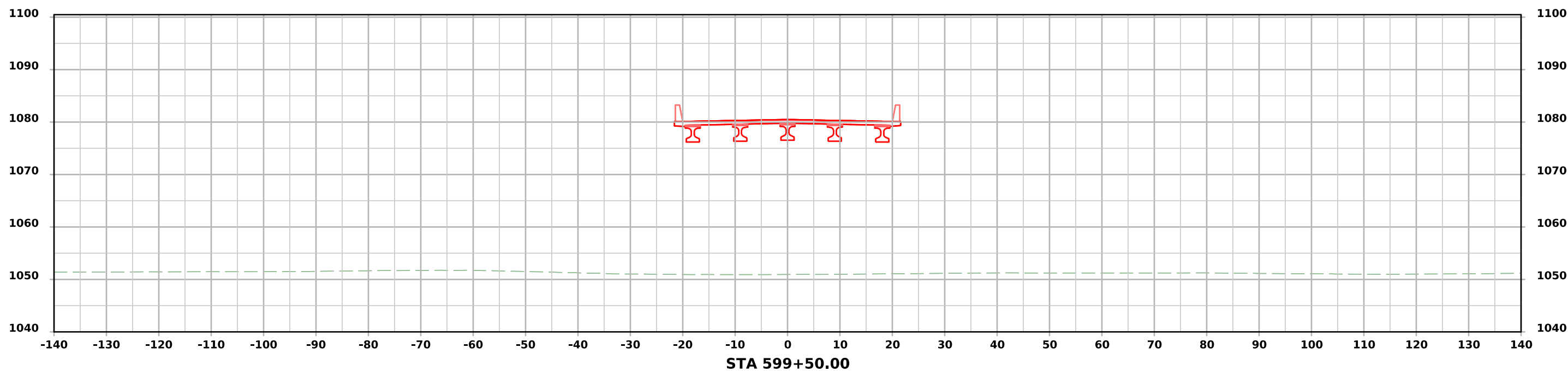




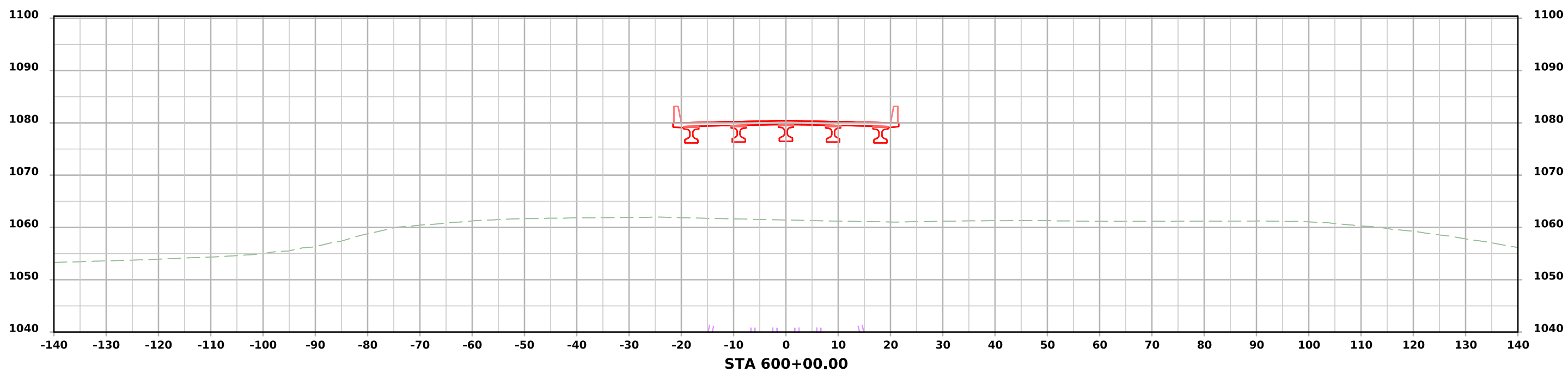
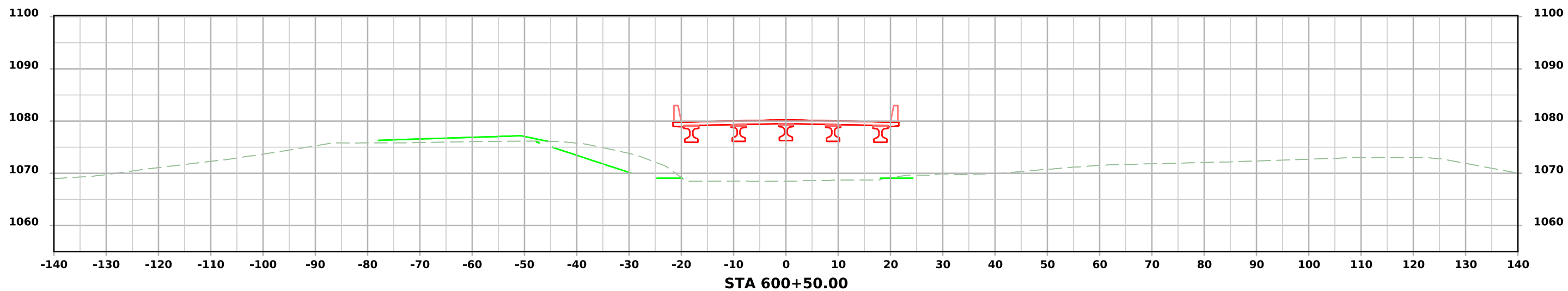


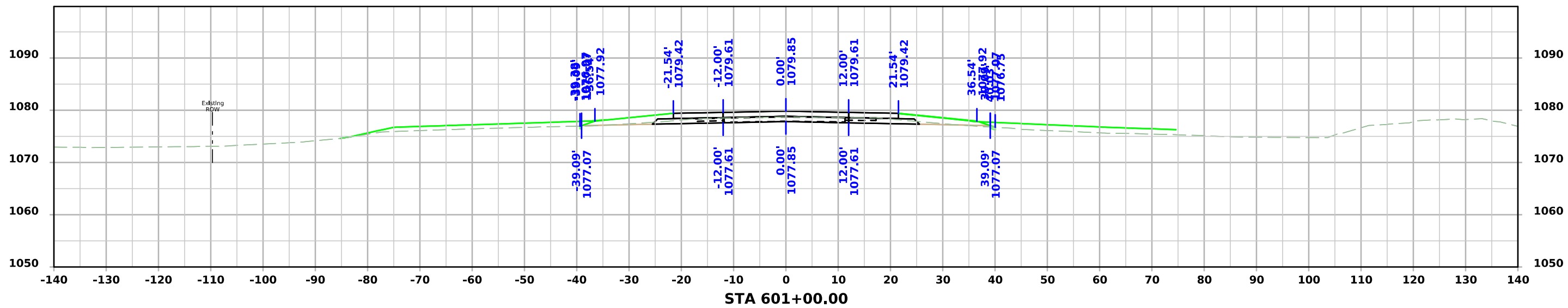
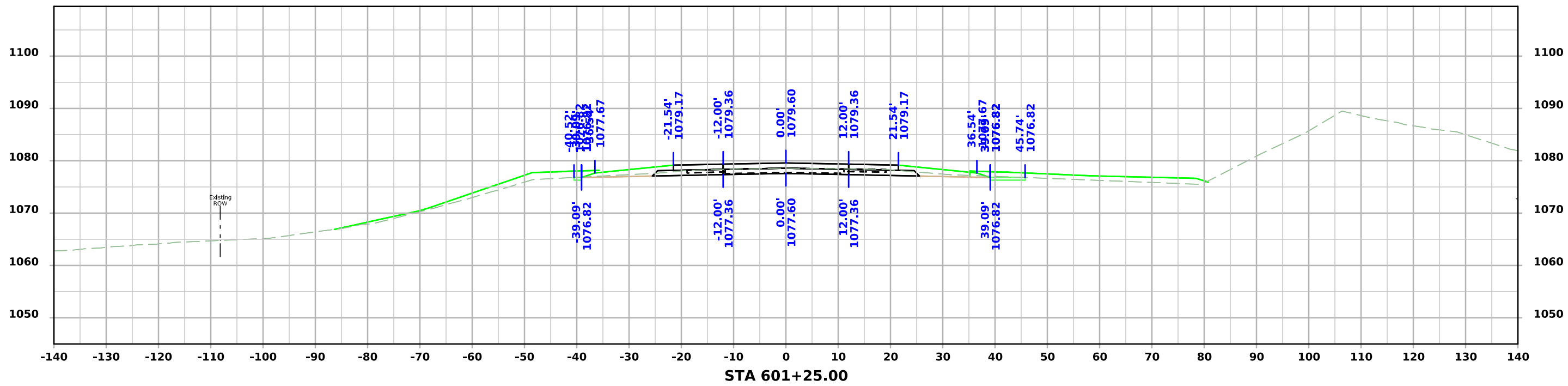




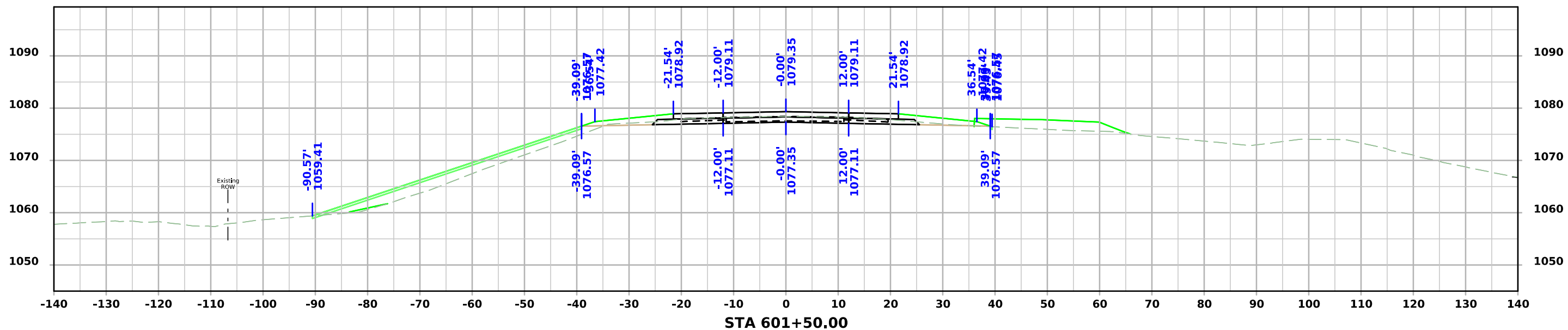
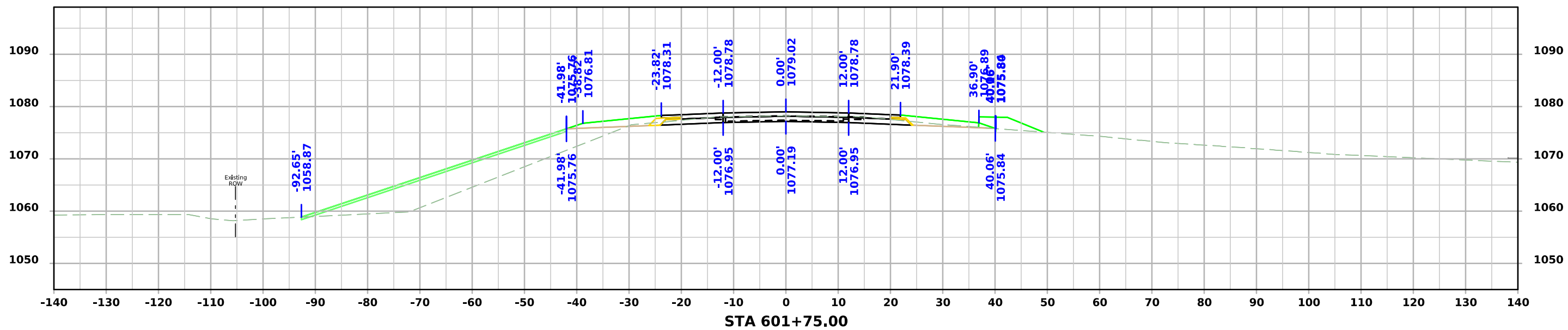


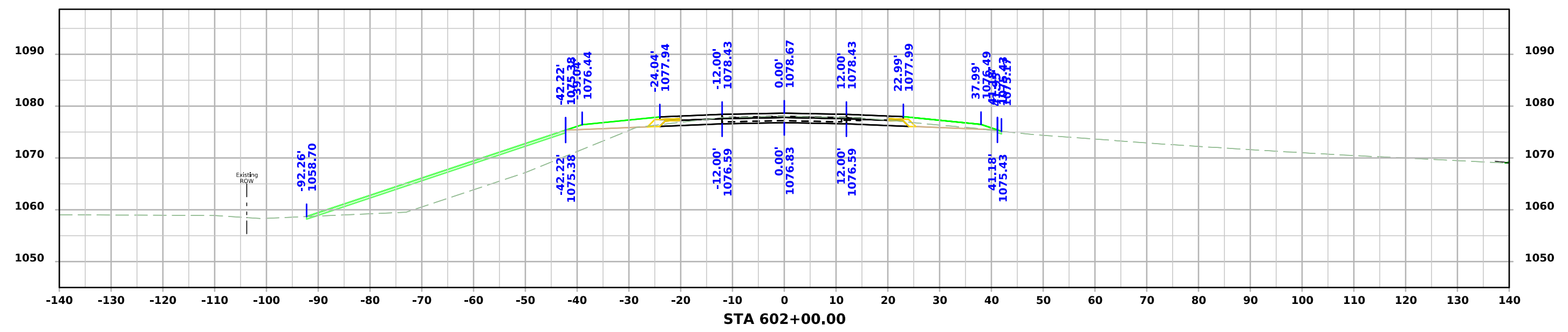
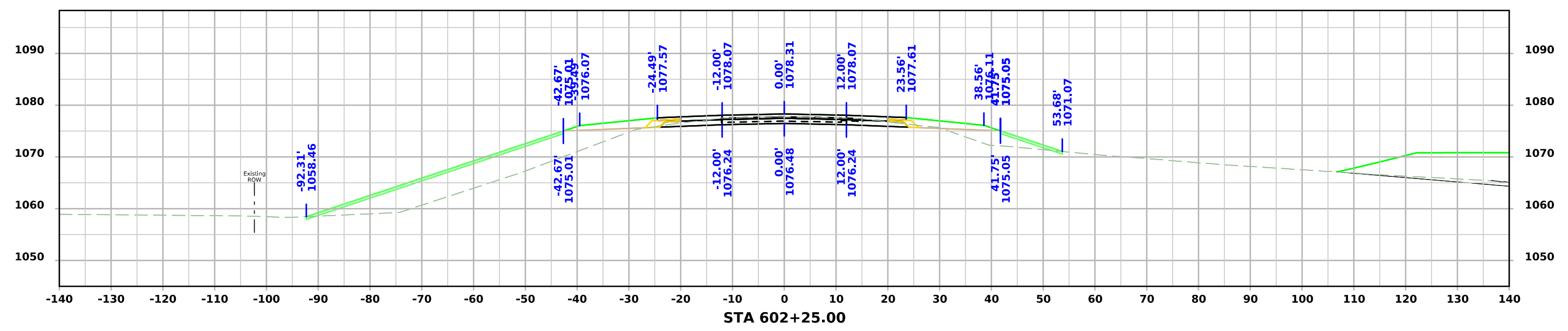
# IA 141

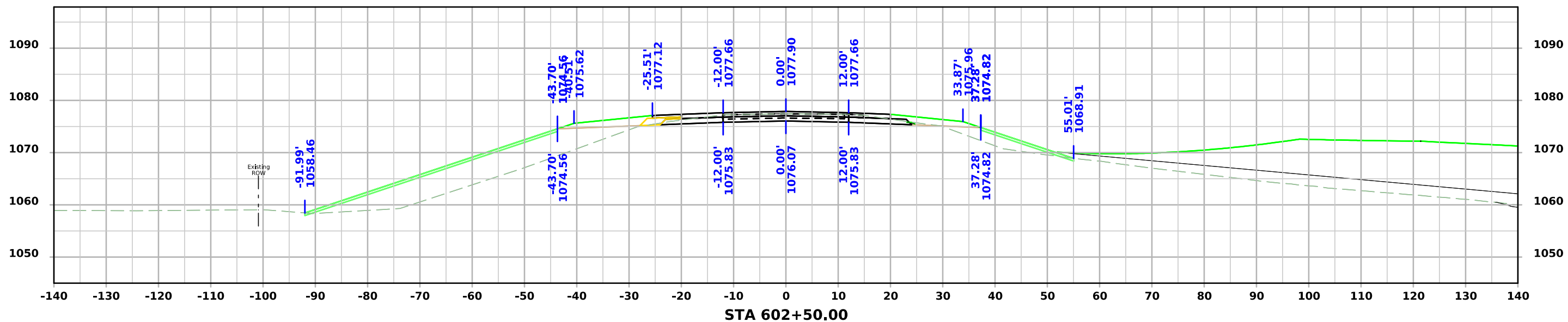
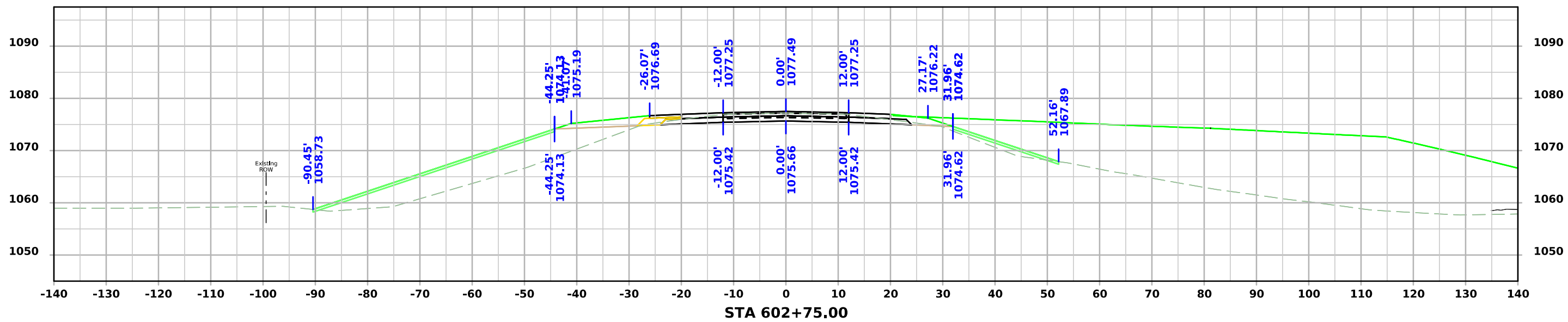


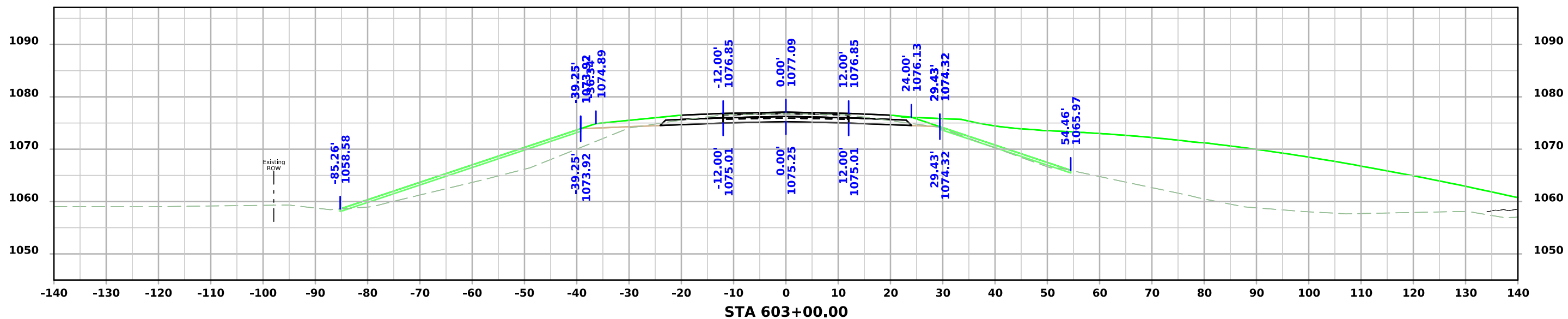
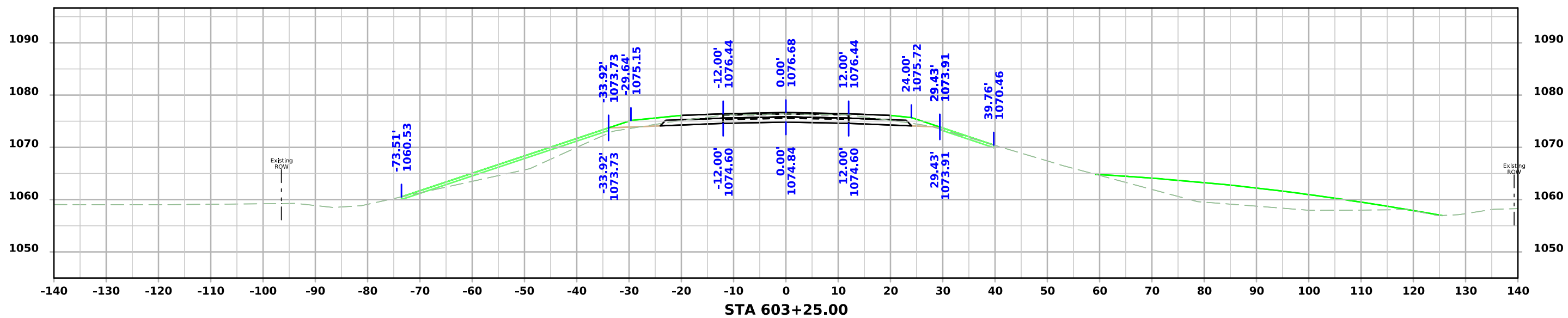


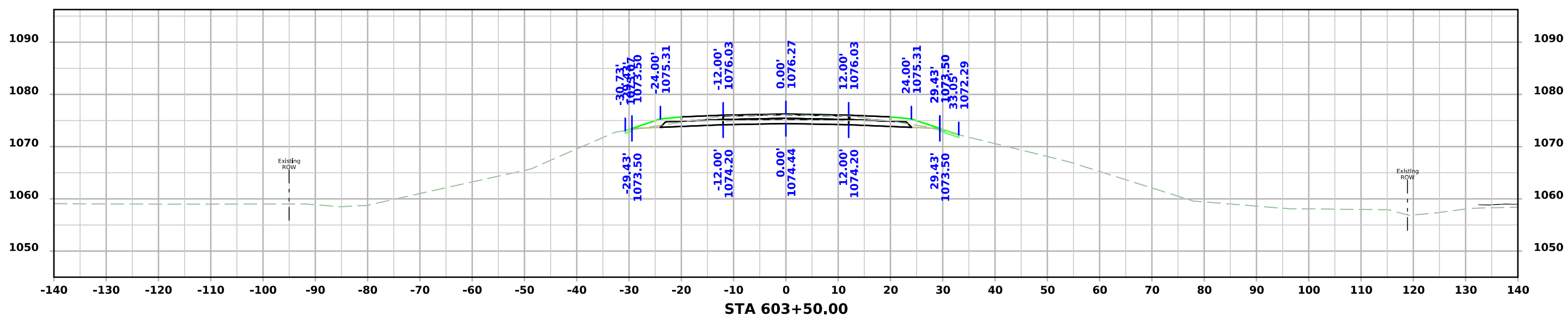
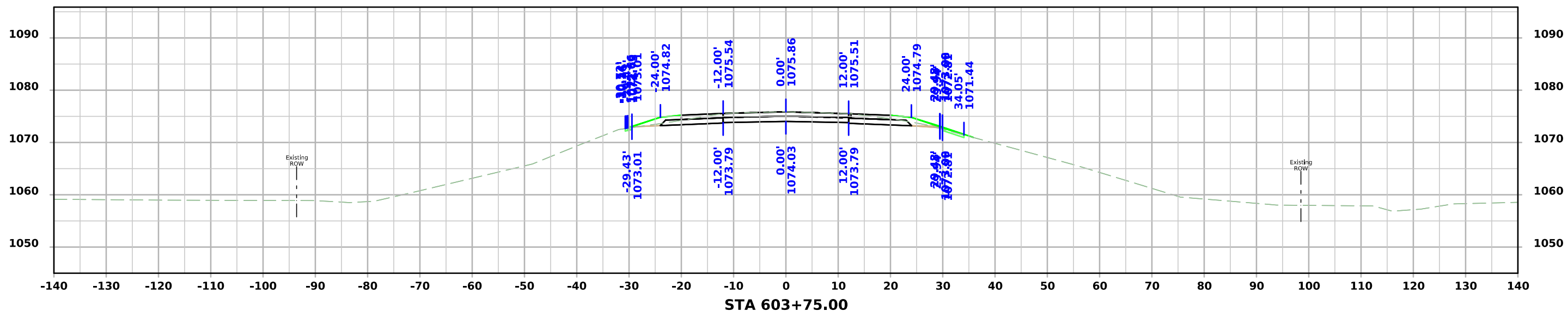


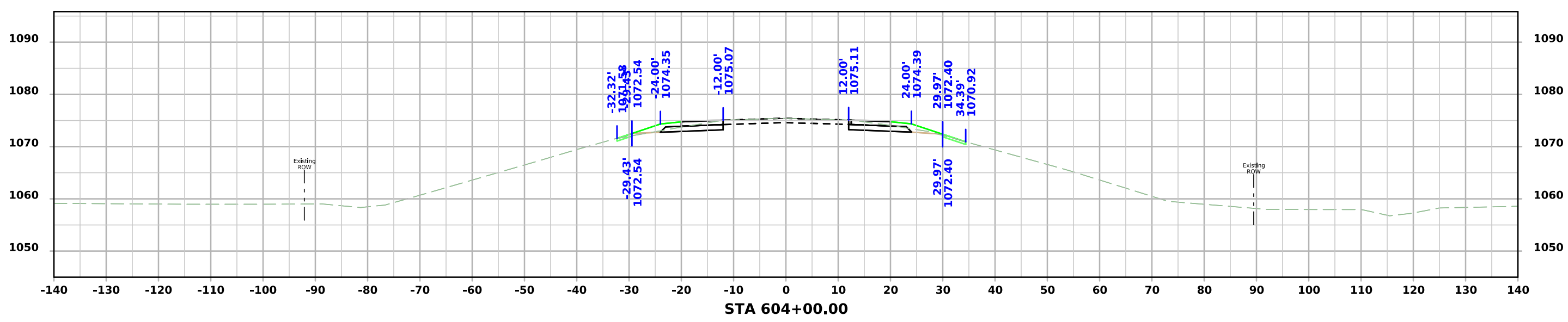
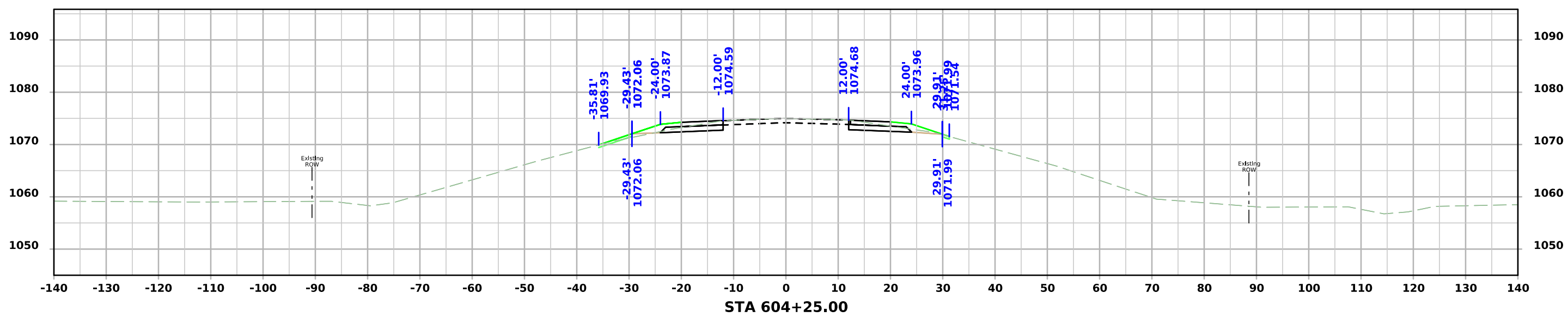














# IA 141

