Bridge - Unspecified
BRF-141-1(044)--38-97
LETTING DATE Oct 19, 2027

Woodbury COUNTY

INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	**Title Sheets**
A.1	Title Sheet
A.2 - 10	Project Concept
B Sheets	**Typical Cross Sections and Details**
B.1 - 2	Typical Cross Sections and Details
D Sheets	**Mainline Plan and Profile Sheets**
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2	IA 141
G Sheets	**Survey Sheets**
G.1 - 3	Reference Ties and Bench Marks
W Sheets	**Mainline Cross Sections**
W.1 - 19	Mainline Cross Sections
	* Color Plan Sheets

IOWA | DOT

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM
Woodbury COUNTY
Bridge - Unspecified

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.

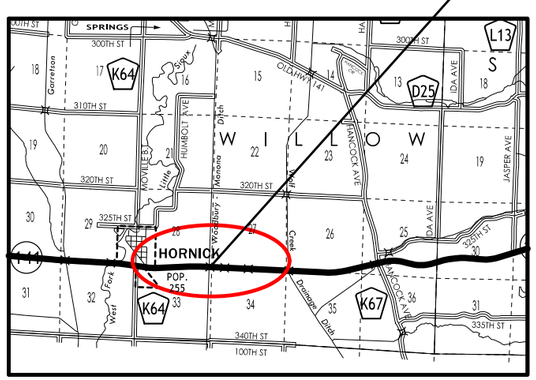
Value Engineering Saves. Refer to Article 1105.14 of the Specifications.

IOWA ONE CALL
1-800-292-8989
www.iowaonecall.com
811 Know what's below. Call before you dig.

REVISIONS

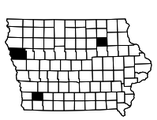
	TOTAL
	..
PROJECT IDENTIFICATION NUMBER	
23-97-141-030	
PROJECT NUMBER	
BRF-141-1(044)--38-97	
R.O.W. PROJECT NUMBER	
STPN-141-1(048)--2J-97	

PROJECT LOCATION
STA 599+63
Ref. Loc. 8



T-86N

R-45W



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		–	

PRELIMINARY PLANS

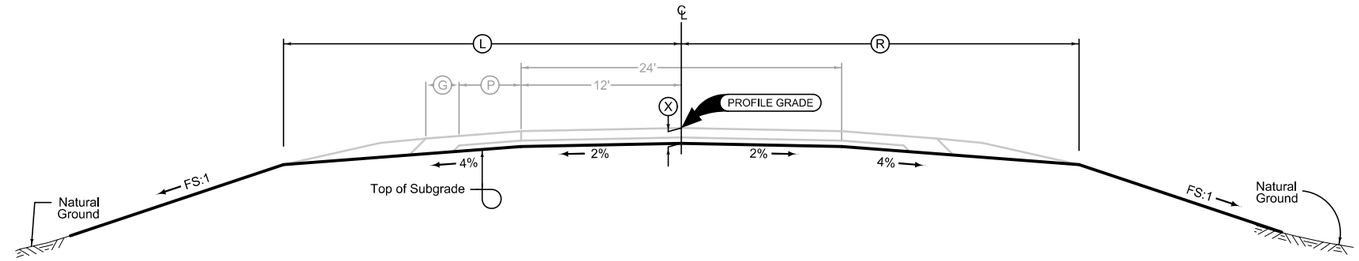
Subject to change by final design.

D3 PLAN - Date: 03/28/2025

FILE NO. 32524	ENGLISH	DESIGN TEAM Strum/Janus	Woodbury COUNTY	PROJECT NUMBER BRF-141-1(044)--38-97	SHEET NUMBER A.1

7:31:10 AM 3/28/2025 ajanus2 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\9714103023\Design\CADD_Files\Sheet_Files\SHT_97141044_A01.dgn

LOCATION			DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	FS
IA 141	595+75.00	597+74.17				3
IA 141	601+51.83	603+75.00				3



CUT

Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

See plan & profile sheets and cross sections for additional details of ditches and backslopes.

2 LANE GRADING

G_2_Grade
04-21-20

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		
STATION TO STATION		(P) 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		
STATION TO STATION		(P) Feet
596+91.22	597+74.17	Vari.
601+51.83	602+84.58	Vari.

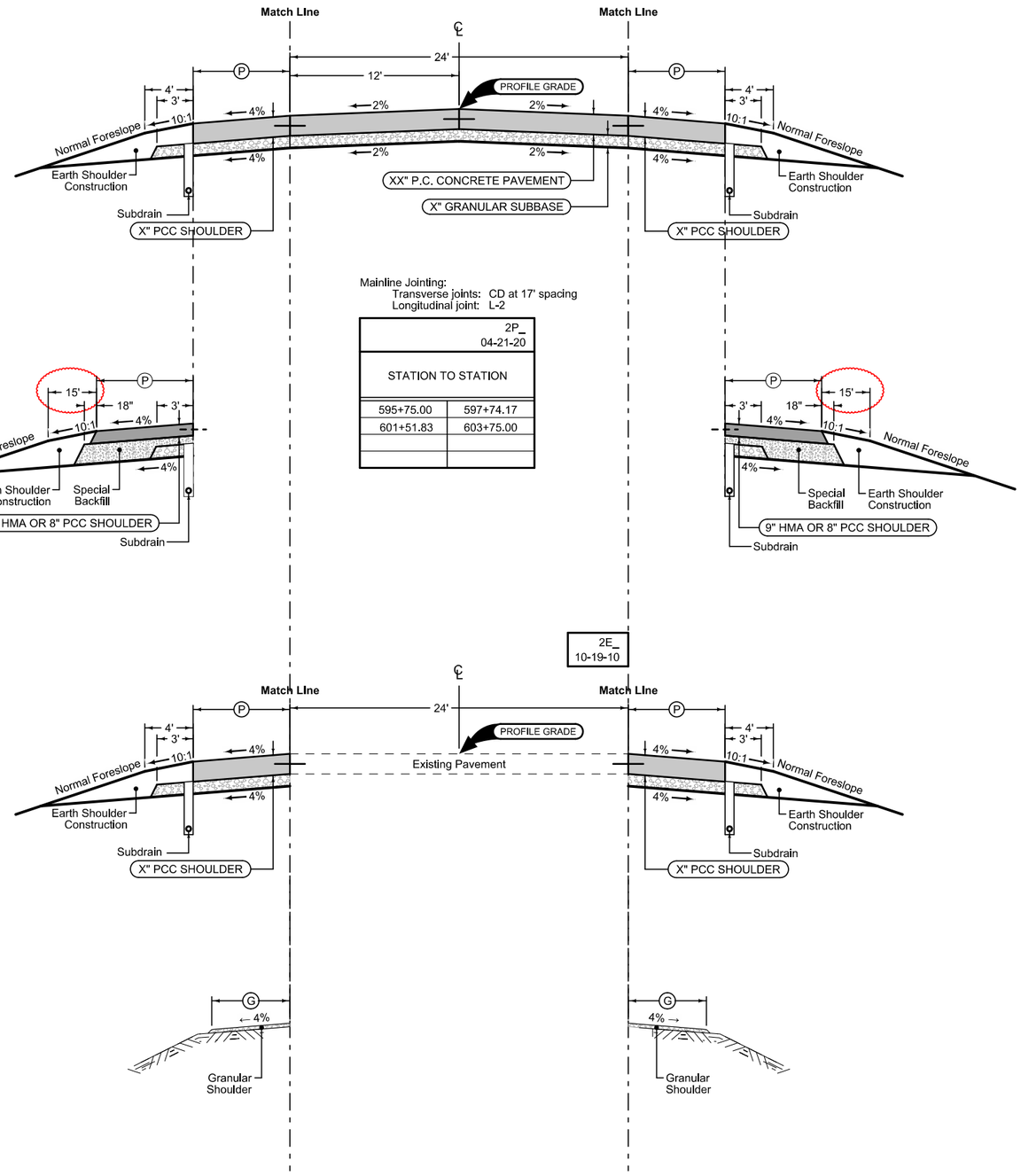
Full Depth PCC Shoulder

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

2_P_FullPCC_ 04-15-25		
STATION TO STATION		(P) Feet
603+75.00	604+50.00	Vari.

Granular Shoulder

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



Mainline Jointing:
Transverse joints: CD at 17' spacing
Longitudinal joint: L-2

2P_ 04-21-20	
STATION TO STATION	
595+75.00	597+74.17
601+51.83	603+75.00

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		
STATION TO STATION		(P) 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		
STATION TO STATION		(P) 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		
STATION TO STATION		(P) Feet
603+75.00	604+50.00	Vari.

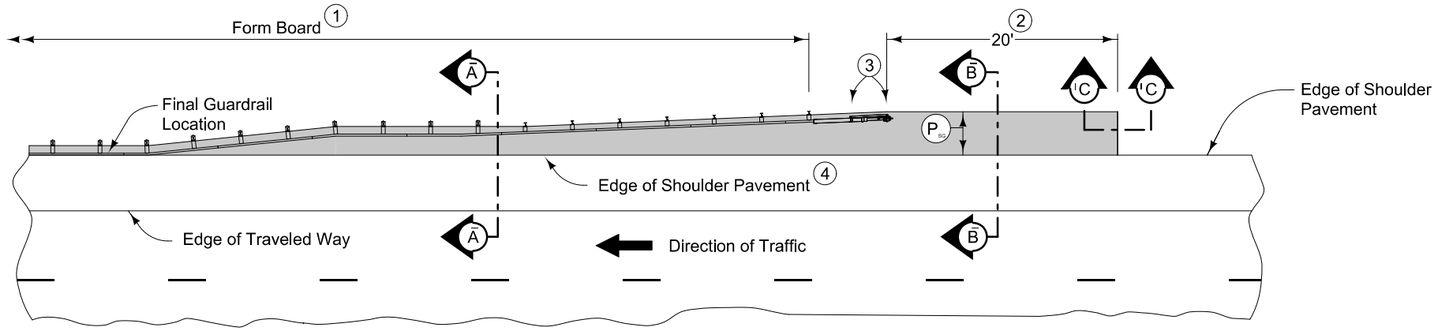
Granular Shoulder

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

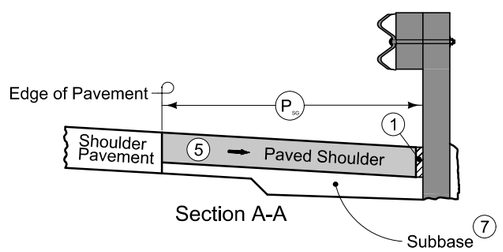
See Tab 100-24 or 100-25 for pavement quantities.

See Tab 112-9 for shoulder quantities.

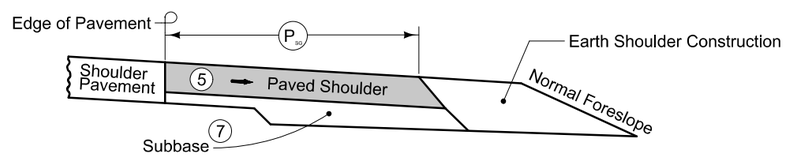
IA 141



PLAN VIEW

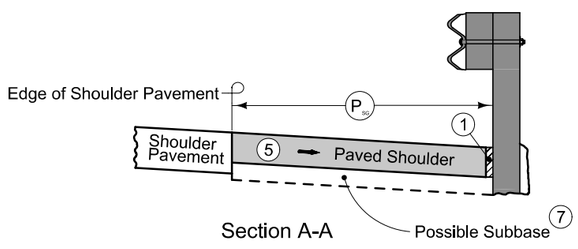


Section A-A

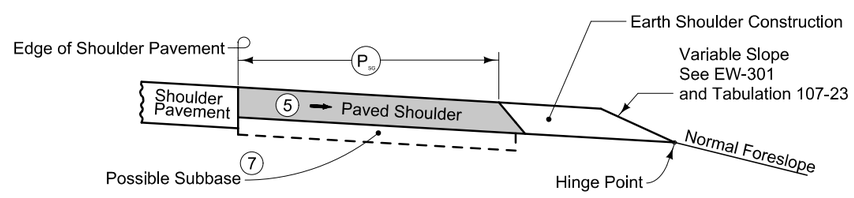


Section B-B

NEW CONSTRUCTION 6



Section A-A



Section B-B

EXISTING SHOULDER

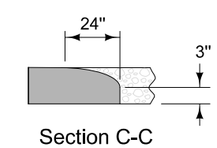
9" HMA Paved Shoulder at guardrail. 8" PCC may be substituted with the following jointing layout:

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.



Section C-C
Roll down at granular shoulder or earth.

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

SURVEY SYMBOLS

- Interstate Highway Symbol
- U.S. Highway Symbol
- Iowa Highway Symbol
- County Road Highway Symbol
- Evergreen Tree
- Deciduous Tree
- Fruit Tree
- SB Shrub (Bushes)
- Timber
- Hedge
- Stump
- Swamp
- Rock Outcrop
- Broken Concrete
- Revetment (Rip Rap)
- Cemetery
- G Grave
- CV Cave
- SH 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
- WH Water Hydrant (Rural)
- ST Septic Tank
- C Cistern
- LP L.P. Gas Tank (No Footing)
- UST 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

UTILITY LEGEND

FO — FO1D, Western Iowa Telecomm - Quality D

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

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

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

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

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

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

RIGHT-OF-WAY LEGEND

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

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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

Willow TWP.
T-86N R-45W
SEC. 28

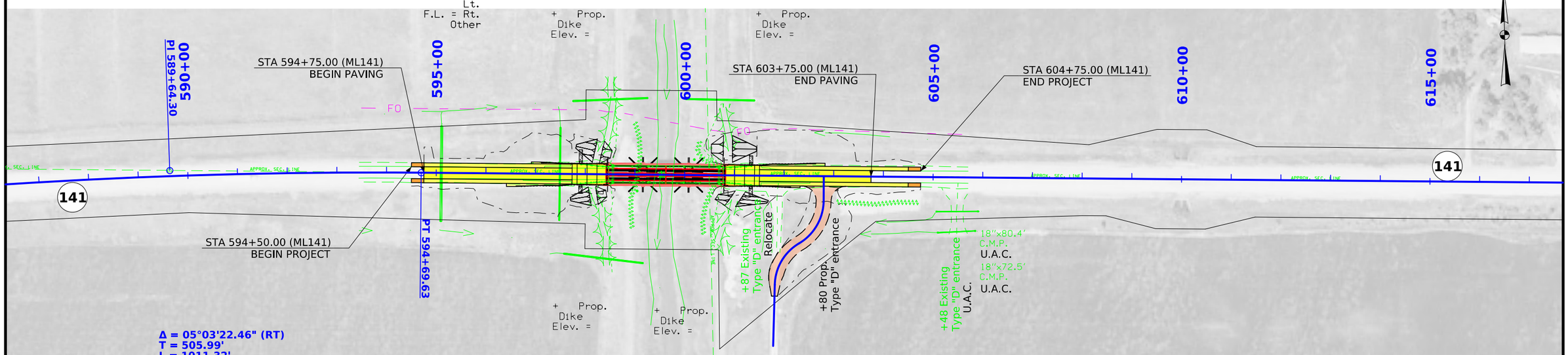
Sta. 595+10.16
48"x192.1' RCP
D.A.=80 A-F Plans
U.A.C.

Sta. 597+48.88
30"x187.3' RCP
D.A.=Equalizer
REMOVE
Install
F.L. = Rt. Lt.
Other

Sta. 597+73.96, 146.78 Lt.
36"x150.6' CMP W/ Flapper Gate
D.A.=Part of 80 A-F Plans
U.A.C.

Sta. 601+39.27, 151.08 Lt.
36"x138.4' CMP W/ Flapper Gate
D.A.=10 A-F
U.A.C.

Willow TWP.
T-86N R-45W
SEC. 27



Δ = 05°03'22.46" (RT)
T = 505.99'
L = 1011.32'
R = 11460.00'
E = 11.16'
e = ___
L = ___
x = ___

Willow TWP.
T-86N R-45W
SEC. 33

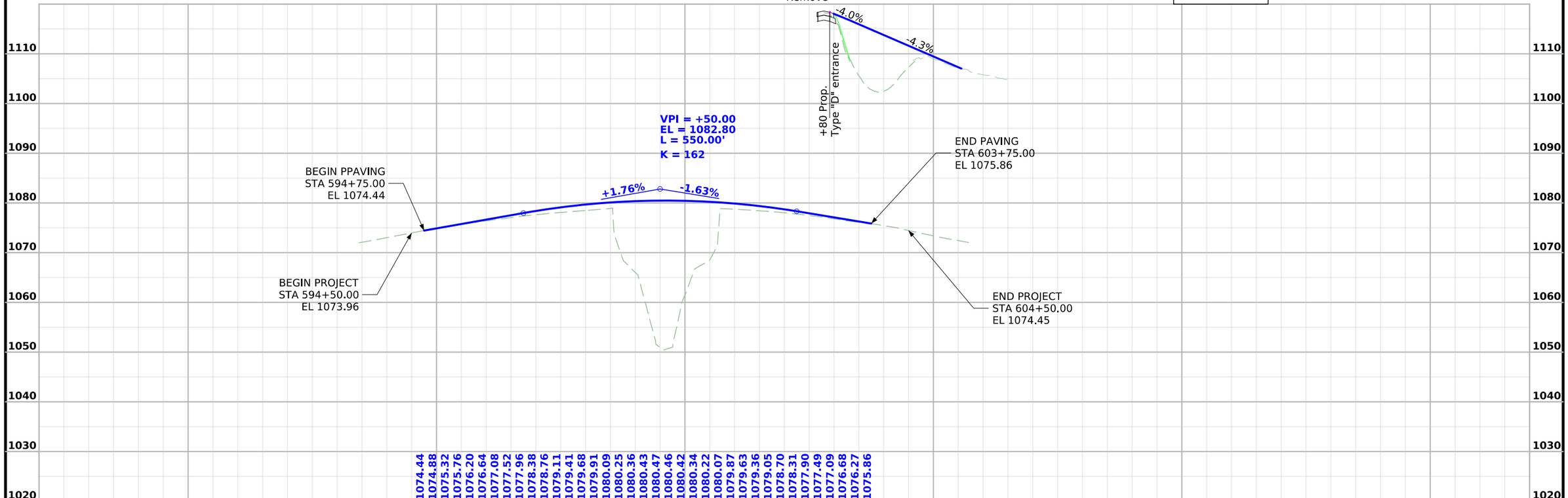
Sta. 597+58.41, 160.84 Rt.
36"x160.4' CMP W/ Flapper Gate
D.A.=Part of 170 A-F Plans
U.A.C.

Sta. 599+62.34
212.5'x30 Pretensioned
Prestressed Conc Beam Bridge
D.A.=412 M Sq-H Plans
Remove

Sta. 599+63
235'x40'
Prestressed Conc Beam Bridge

0 FEET 100

Willow TWP.
T-86N R-45W
SEC. 34



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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)

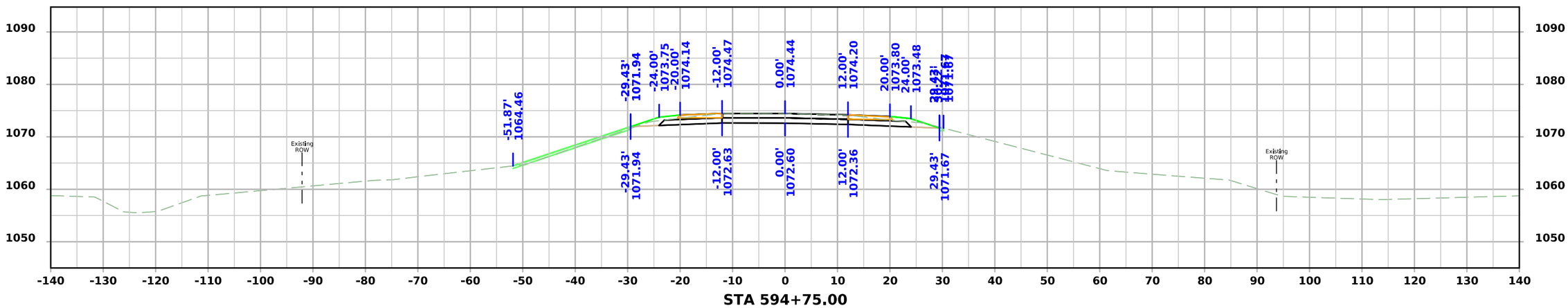
VERT. DATUM: NAVD88 - Geoid Model: 2018u2

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

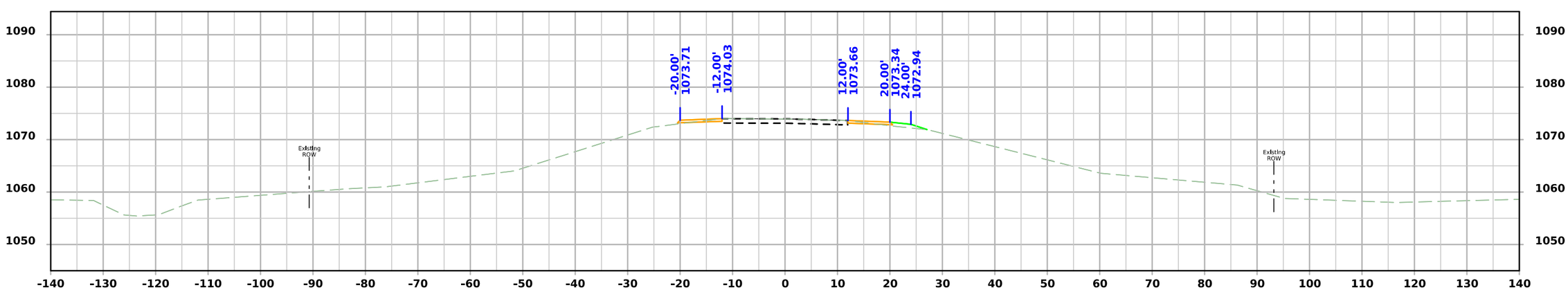
HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING
HORIZ. DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 Adjustment)
Ia. Regional Coordinate System Zone 04 (U.S. Survey Foot)
VERT. DATUM: NAVD88
Geoid Model: 2018u2

Point Name	Northing	Easting	Elevation	Feature Definition-Description
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 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 OF BRG

IA 141



STA 594+75.00



STA 594+50.00

FILE NO. 32524	ENGLISH	DESIGN TEAM Strum/Janus	Woodbury COUNTY	PROJECT NUMBER BRF-141-1(044)--38-97	SHEET NUMBER W.1

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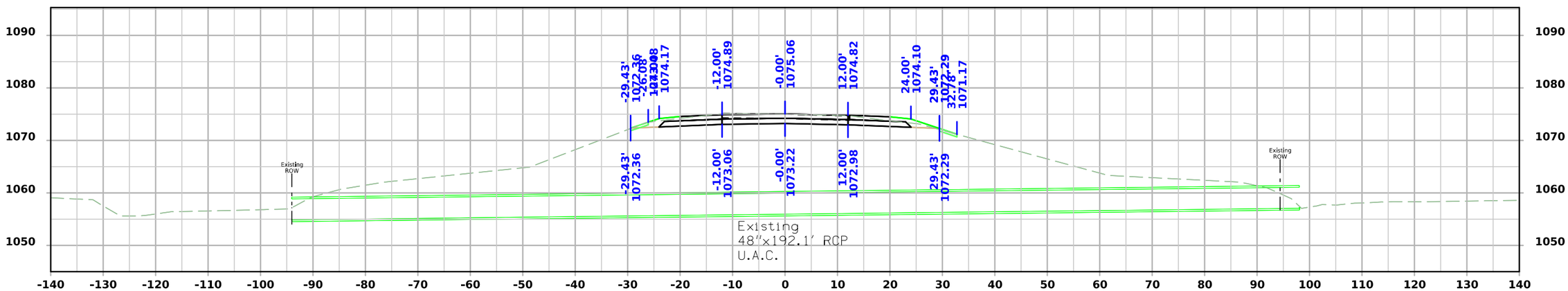
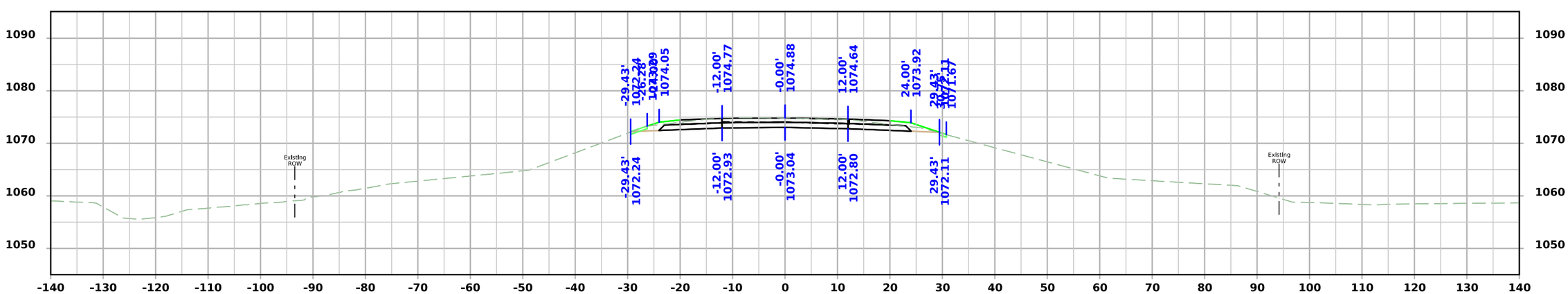


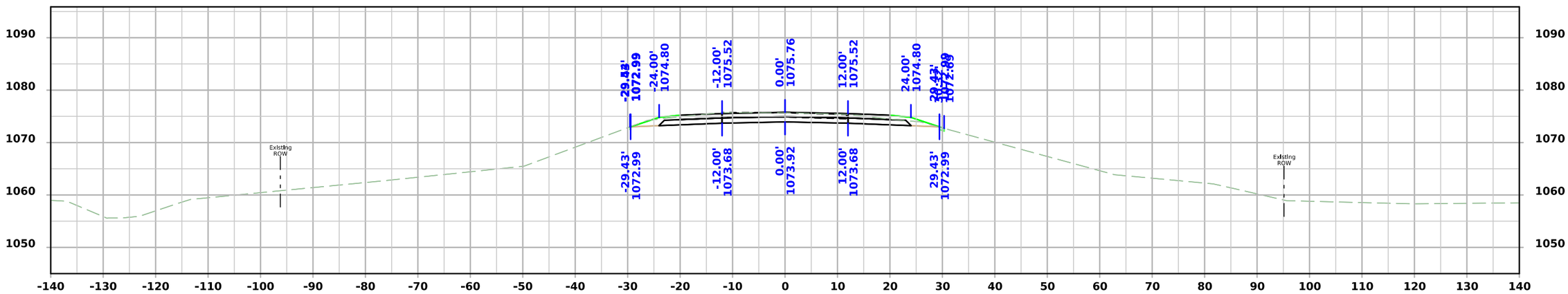
STA 595+10.16



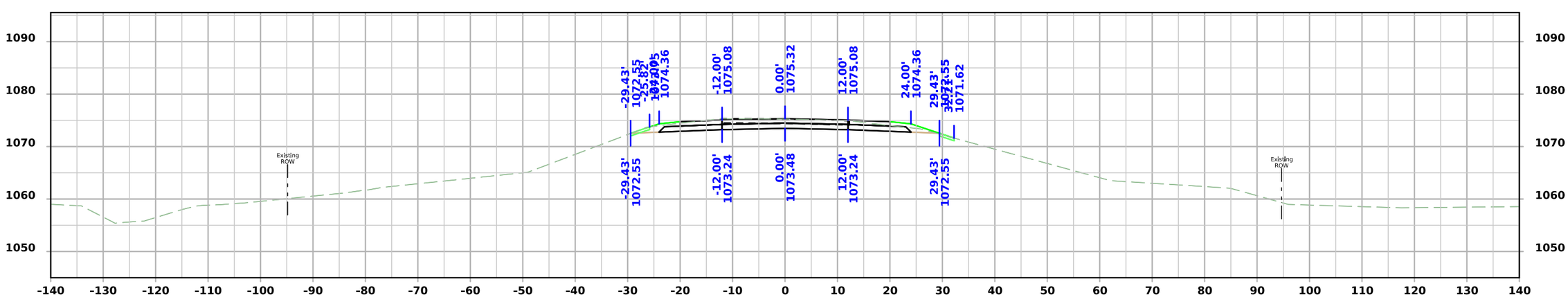
STA 595+00.00

FILE NO. 32524	ENGLISH	DESIGN TEAM Strum/Janus	Woodbury COUNTY	PROJECT NUMBER BRF-141-1(044)--38-97	SHEET NUMBER W.2

IA 141



STA 595+50.00



STA 595+25.00

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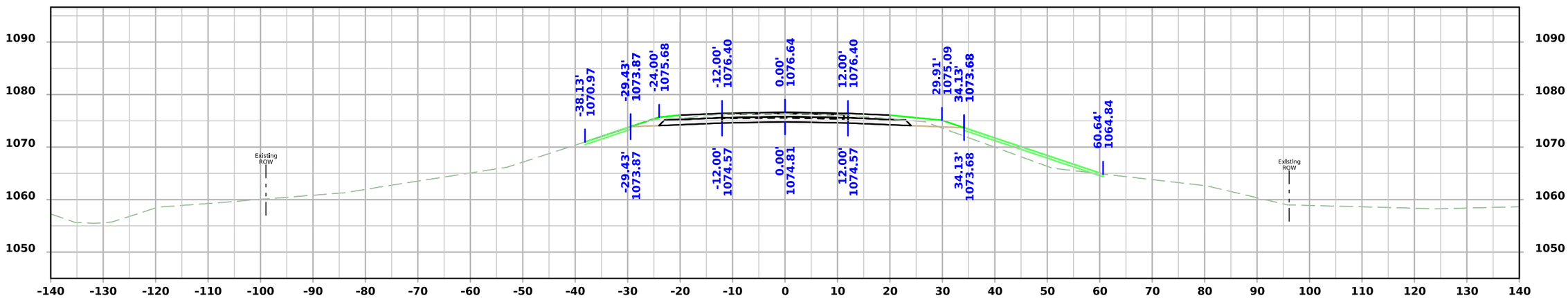
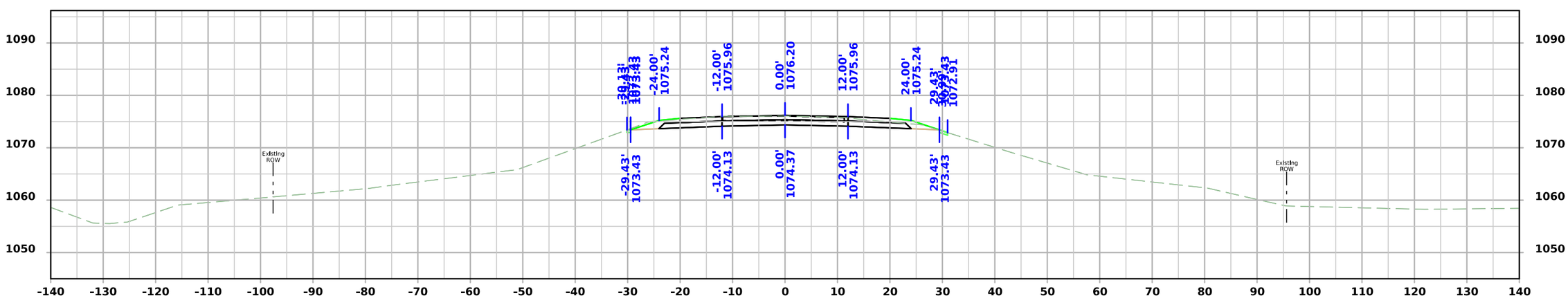
IA 141



STA 596+00.00



STA 595+75.00

FILE NO. 32524	ENGLISH	DESIGN TEAM Strum/Janus	Woodbury COUNTY	PROJECT NUMBER BRF-141-1(044)--38-97	SHEET NUMBER W.4

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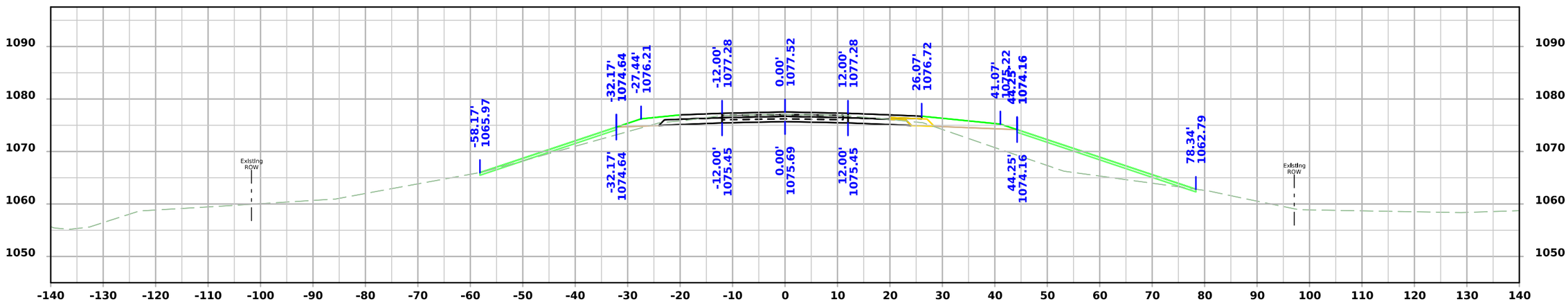
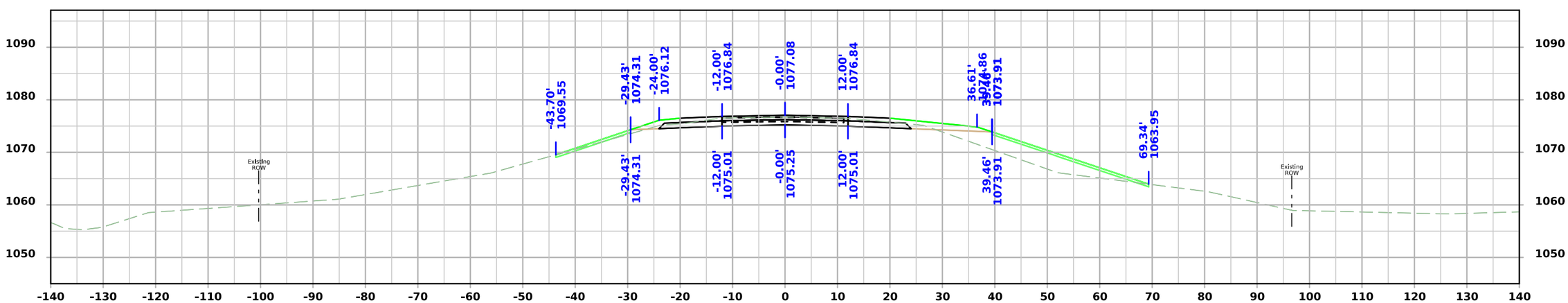
IA 141

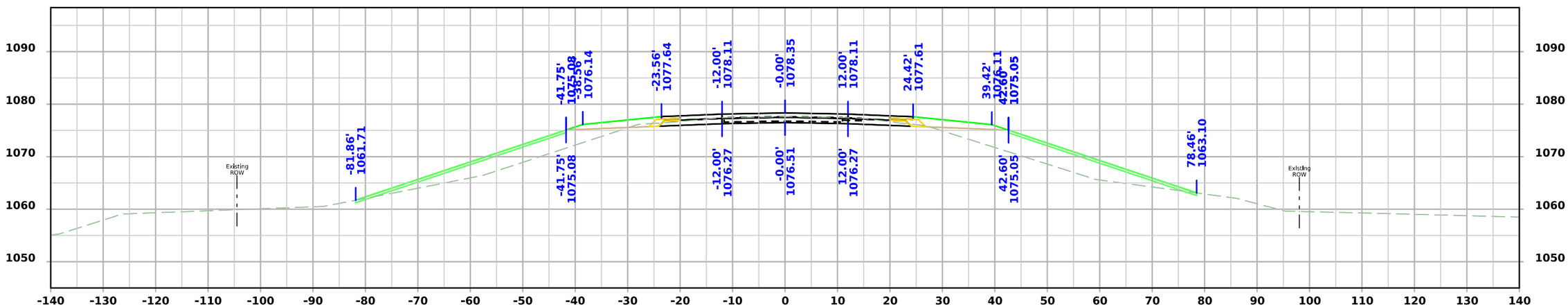


STA 596+50.00



STA 596+25.00

FILE NO. 32524	ENGLISH	DESIGN TEAM Strum/Janus	Woodbury COUNTY	PROJECT NUMBER BRF-141-1(044)--38-97	SHEET NUMBER W.5



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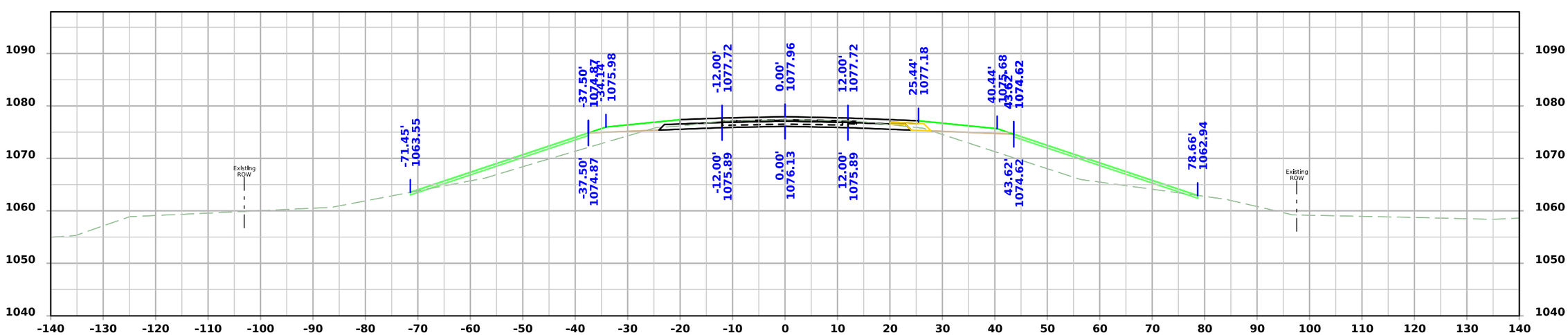
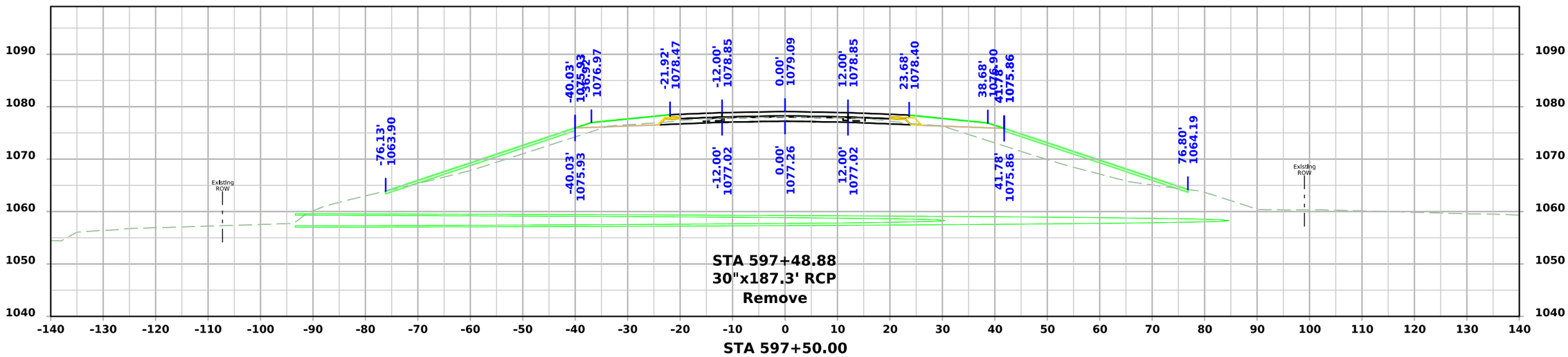
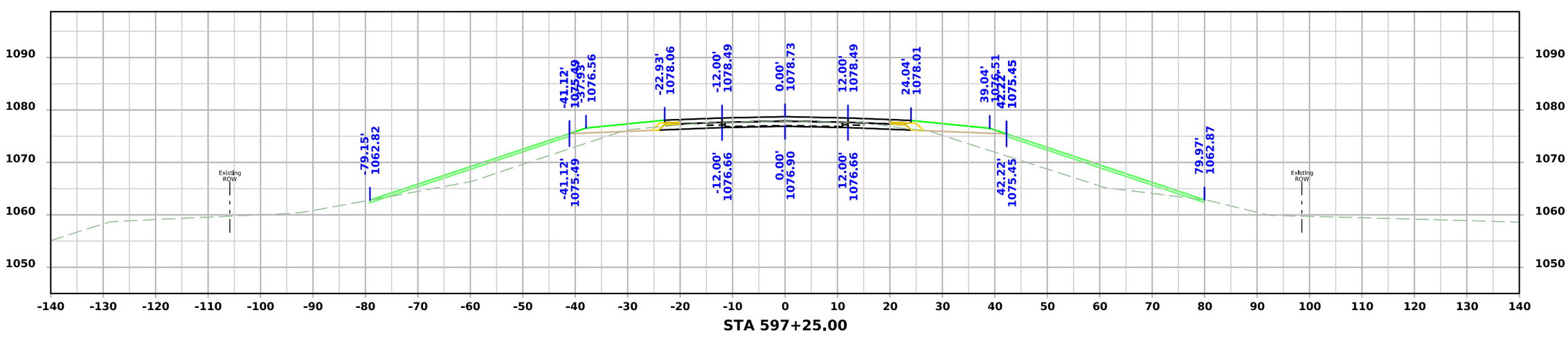


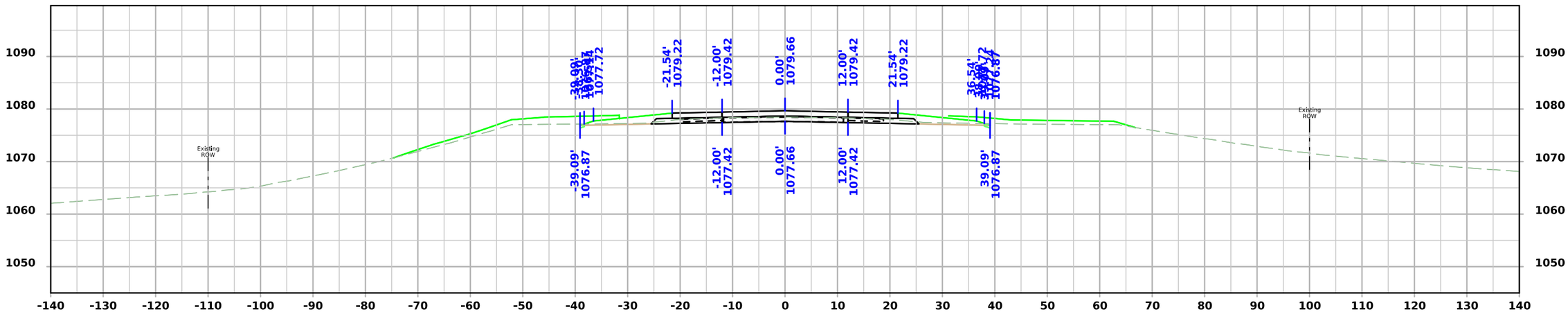
STA 596+75.00

FILE NO. 32524	ENGLISH	DESIGN TEAM Strum/Janus	Woodbury COUNTY	PROJECT NUMBER BRF-141-1(044)--38-97	SHEET NUMBER W.6





FILE NO. 32524	ENGLISH	DESIGN TEAM Strum/Janus	Woodbury COUNTY	PROJECT NUMBER BRF-141-1(044)--38-97	SHEET NUMBER W.7



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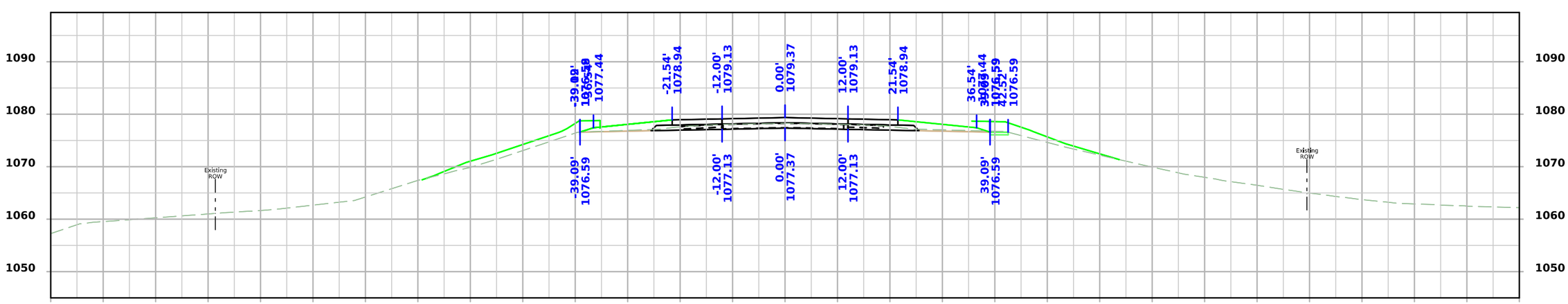
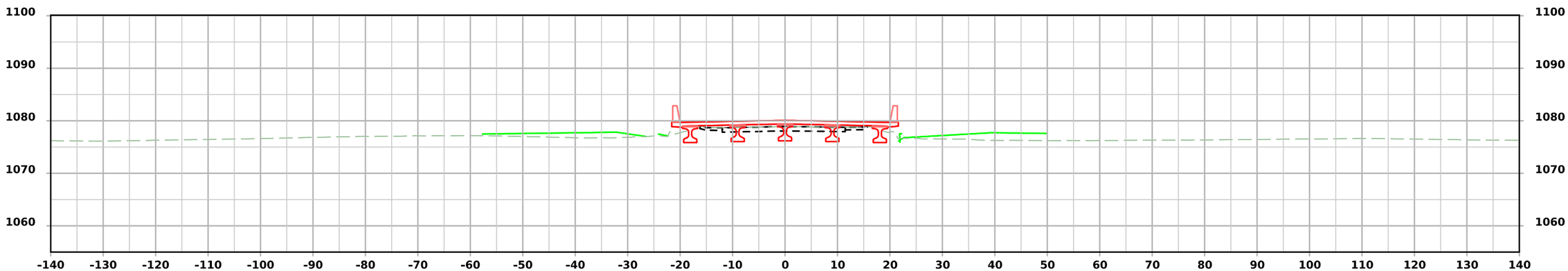


STA 597+75.00

FILE NO. 32524	ENGLISH	DESIGN TEAM Strum/Janus	Woodbury COUNTY	PROJECT NUMBER BRF-141-1(044)--38-97	SHEET NUMBER W.8

IA 141



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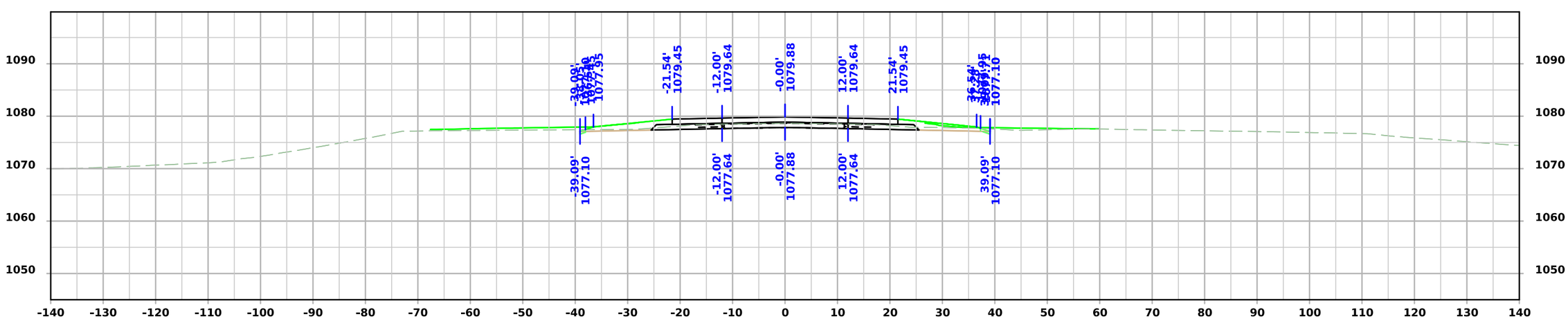

STA 598+25.00

FILE NO. 32524	ENGLISH	DESIGN TEAM Strum/Janus	Woodbury COUNTY	PROJECT NUMBER BRF-141-1(044)--38-97	SHEET NUMBER W.9

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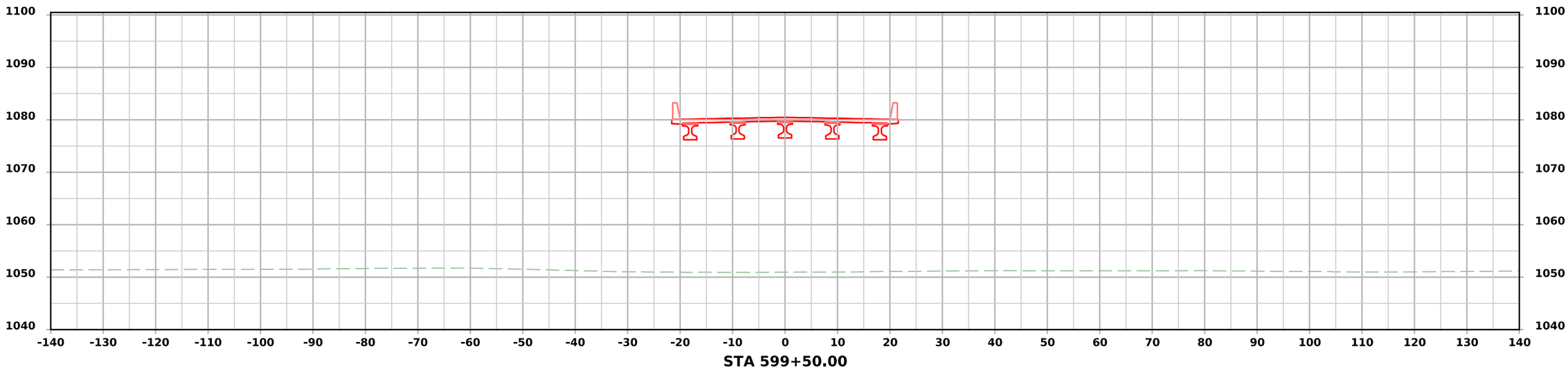
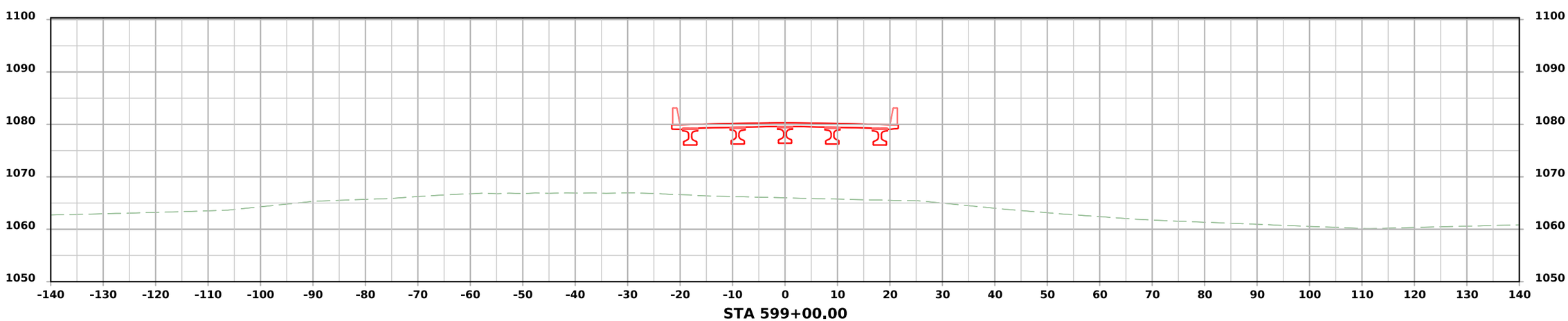
IA 141





FILE NO. 32524	ENGLISH	DESIGN TEAM Strum/Janus	Woodbury COUNTY	PROJECT NUMBER BRF-141-1(044)--38-97	SHEET NUMBER W.10

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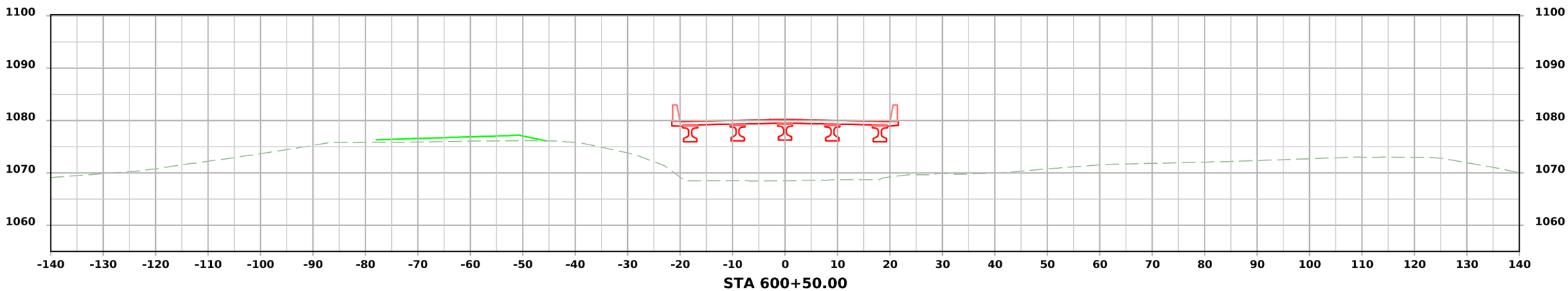
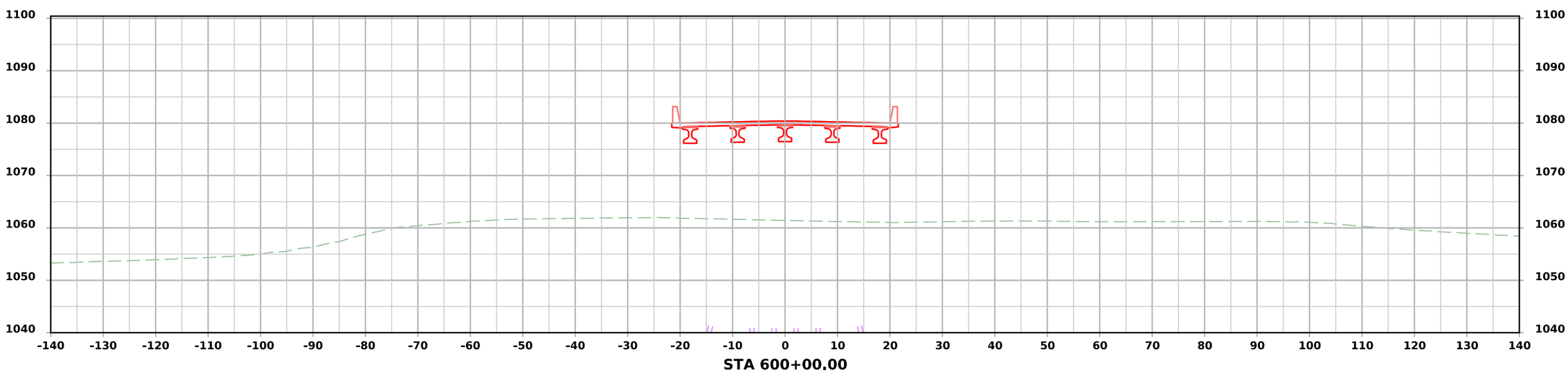
IA 141





FILE NO. 32524	ENGLISH	DESIGN TEAM Strum/Janus	Woodbury COUNTY	PROJECT NUMBER BRF-141-1(044)--38-97	SHEET NUMBER W.11

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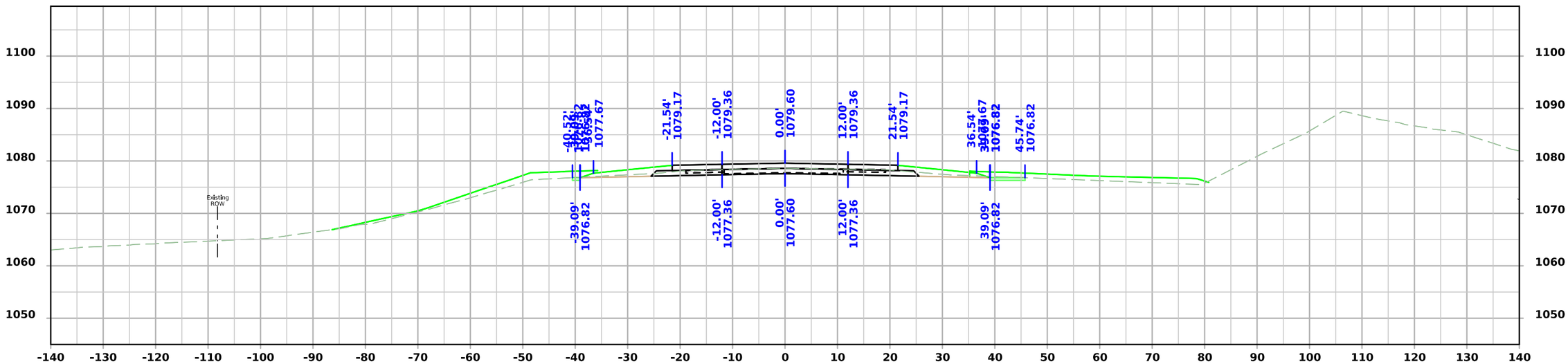
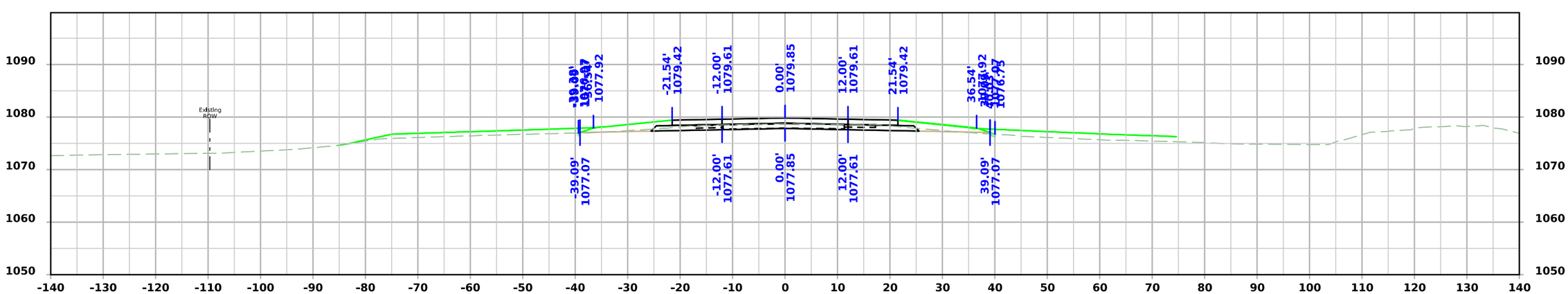
IA 141



STA 601+25.00



STA 601+00.00

FILE NO. 32524	ENGLISH	DESIGN TEAM Strum/Janus	Woodbury COUNTY	PROJECT NUMBER BRF-141-1(044)--38-97	SHEET NUMBER W.12

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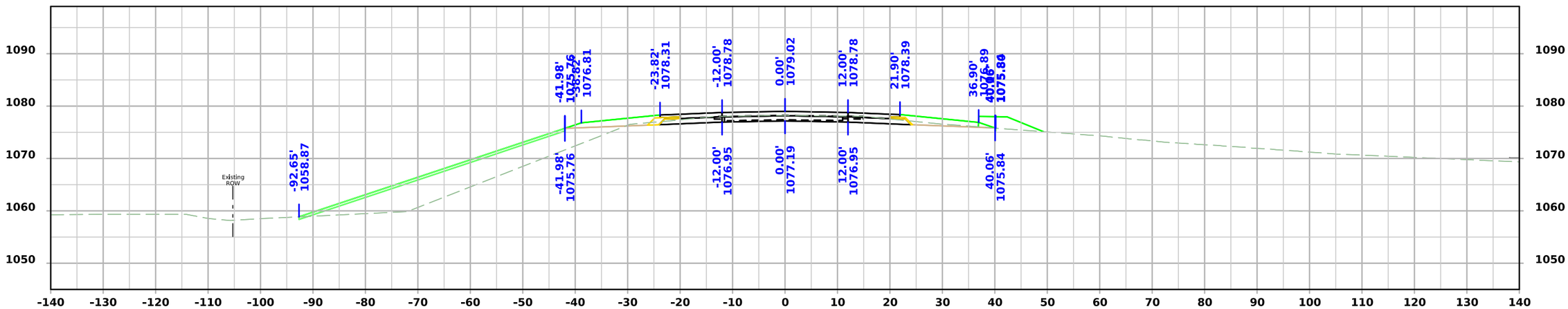
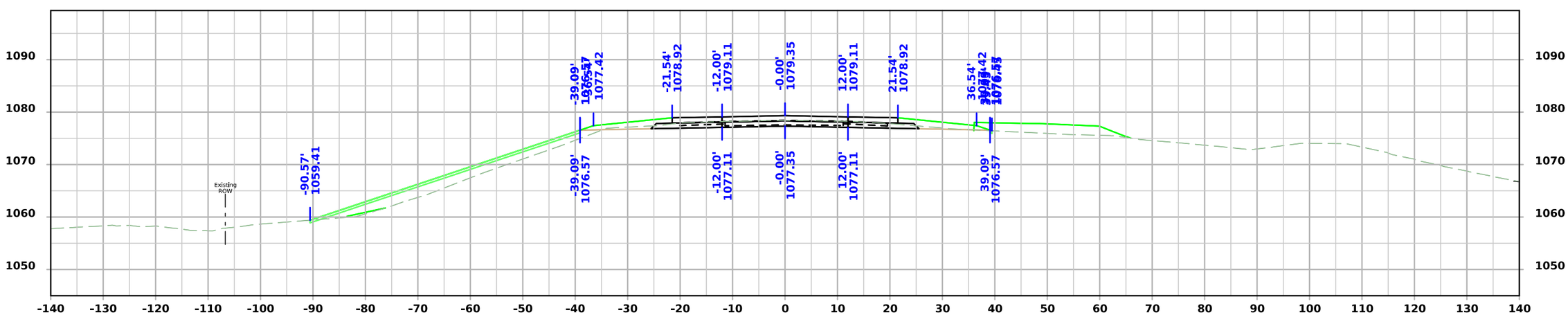


STA 601+75.00



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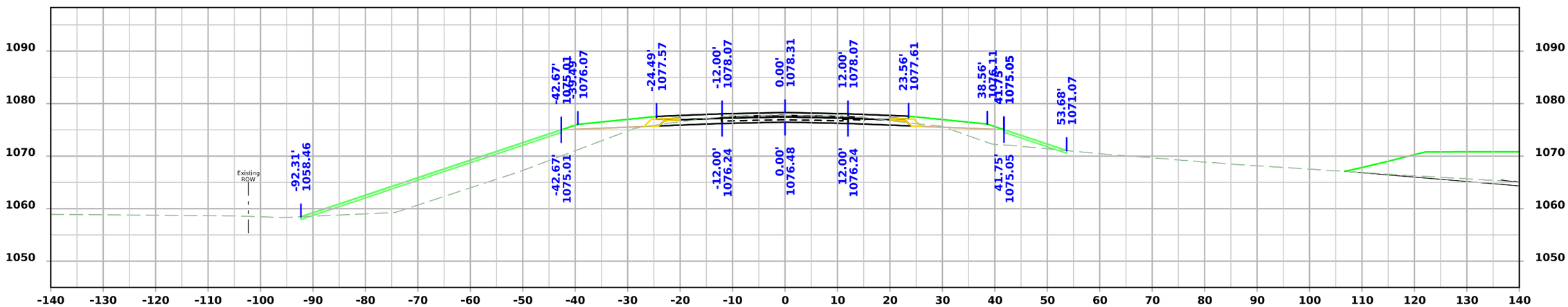
IA 141



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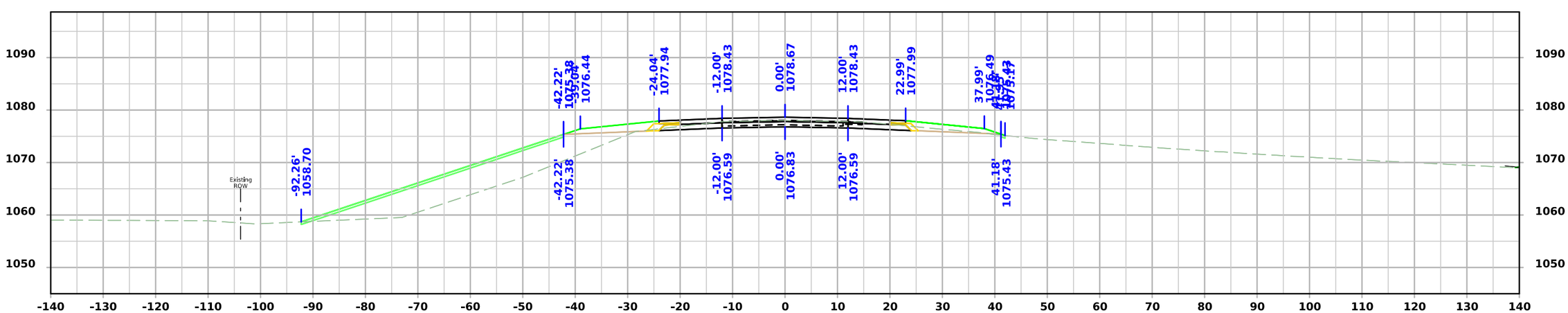

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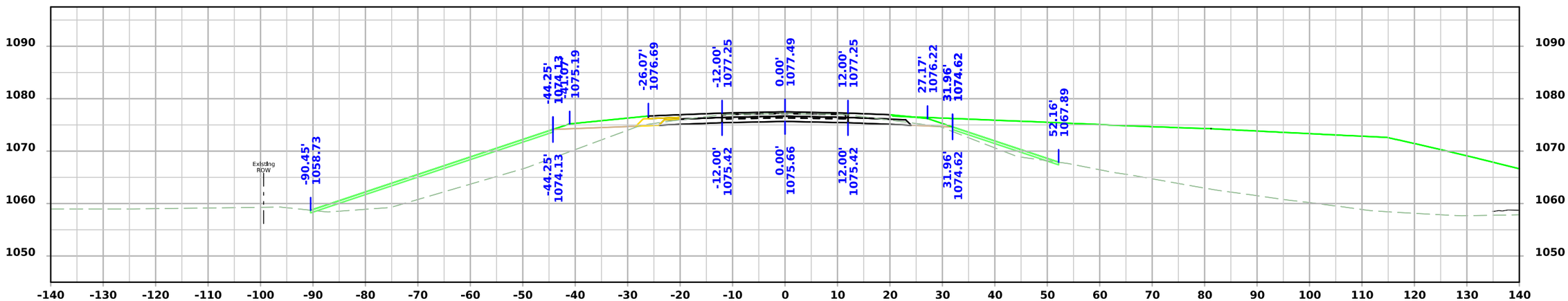

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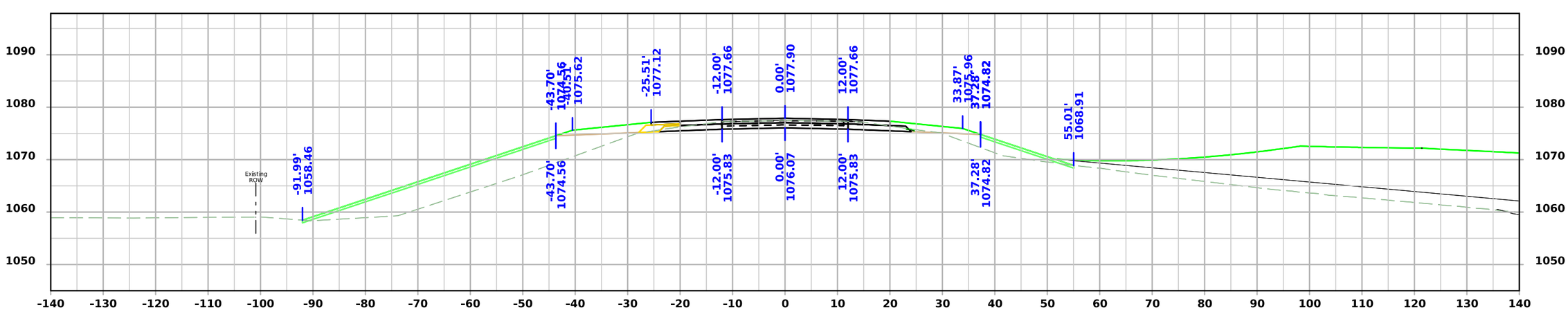

STA 602+50.00

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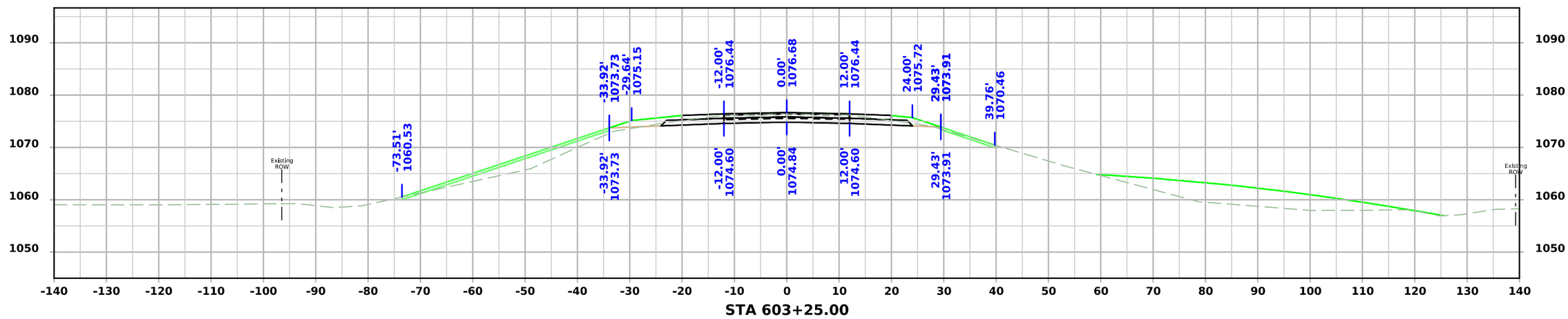
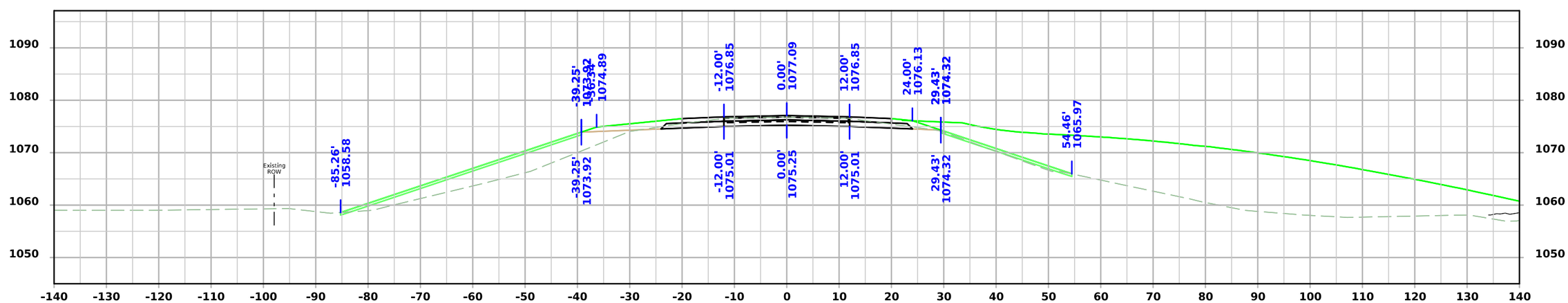
IA 141



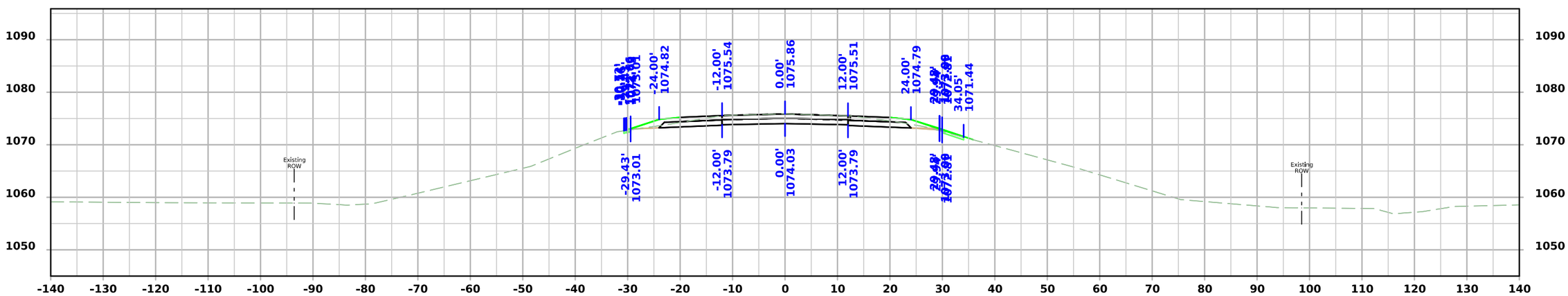
STA 603+25.00



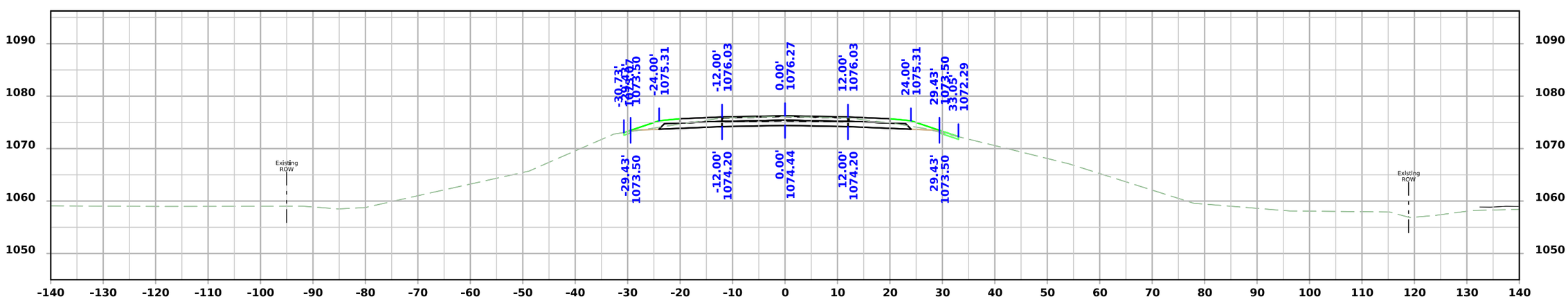
STA 603+00.00

FILE NO. 32524	ENGLISH	DESIGN TEAM Strum/Janus	Woodbury COUNTY	PROJECT NUMBER BRF-141-1(044)--38-97	SHEET NUMBER W.16

IA 141



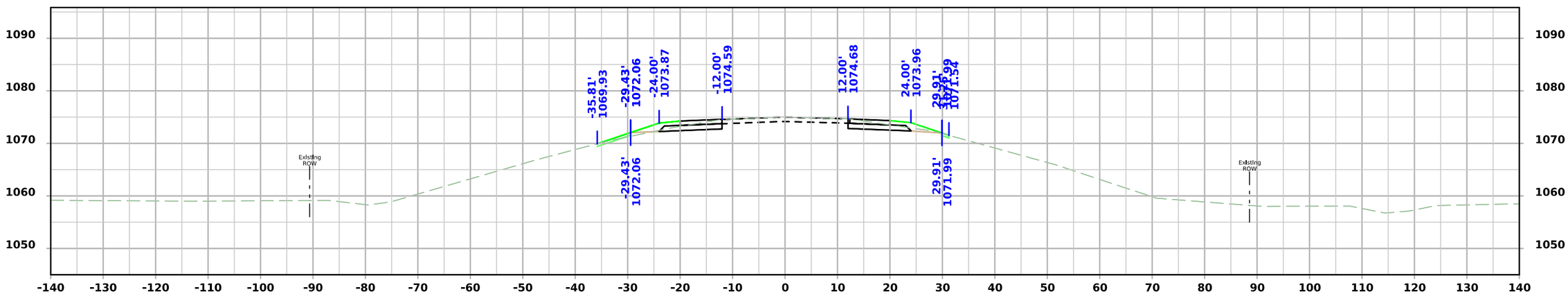
STA 603+75.00



STA 603+50.00

FILE NO. 32524	ENGLISH	DESIGN TEAM Strum/Janus	Woodbury COUNTY	PROJECT NUMBER BRF-141-1(044)--38-97	SHEET NUMBER W.17

IA 141



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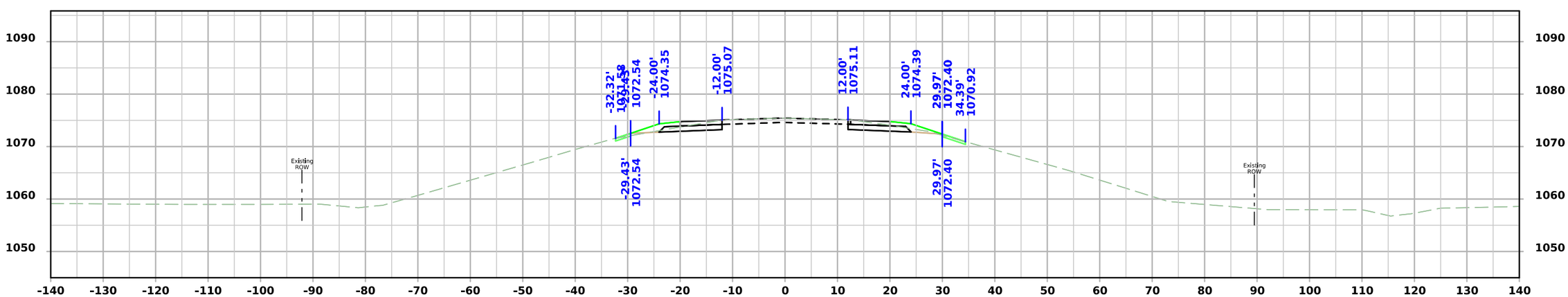
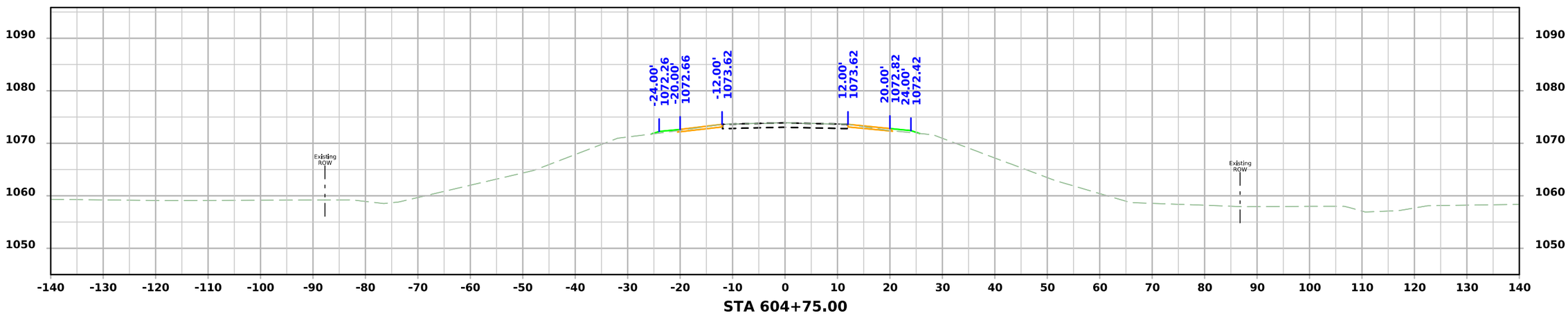


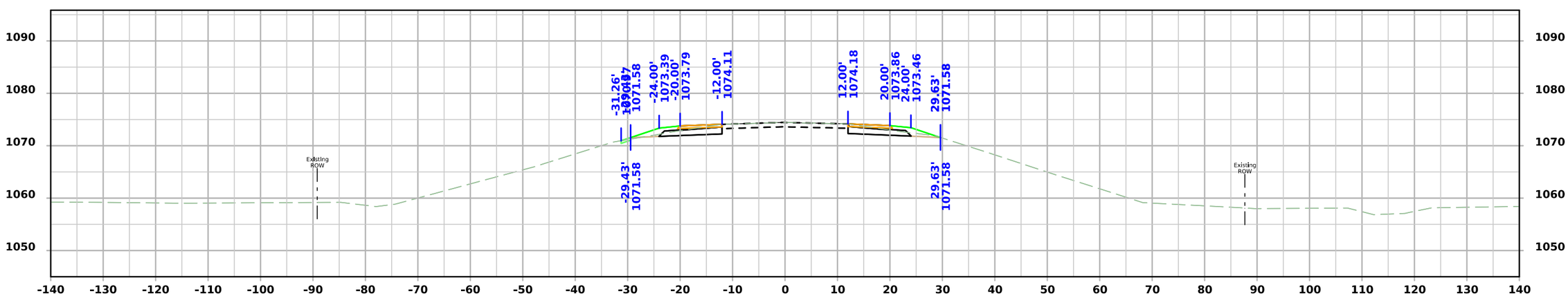
STA 604+00.00

FILE NO. 32524	ENGLISH	DESIGN TEAM Strum/Janus	Woodbury COUNTY	PROJECT NUMBER BRF-141-1(044)--38-97	SHEET NUMBER W.18

IA 141



STA 604+75.00



STA 604+50.00

FILE NO. 32524	ENGLISH	DESIGN TEAM Strum/Janus	Woodbury COUNTY	PROJECT NUMBER BRF-141-1(044)--38-97	SHEET NUMBER W.19