

INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	Title Sheets
A.1	Title Sheet
A.2	Location Map Sheet
B Sheets	Typical Cross Sections and Details
B.1 - 3	Typical Cross Sections and Details
D Sheets	Mainline Plan and Profile Sheets
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - 3	Iowa 37
G Sheets	Survey Sheets
G.1 - 3	Reference Ties and Bench Marks
J Sheets	Traffic Control and Staging Sheets
J.1 - 3	Traffic Control Plan
* J.4	Detour Route
W Sheets	Mainline Cross Sections
* W.1	Cross Sections Legend & Symbol Information Sheet
* W.2 - 24	Mainline Cross Sections
	* Color Plan Sheets



PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
HARRISON COUNTY
 Bridge - Unspecified
 Boyer River 0.1 mi W of US 30

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	
21-43-037-010	
PROJECT NUMBER	
BRF-037-3(10)--38-43	
R.O.W. PROJECT NUMBER	
STPN-037-3(11)-2J-43	

DESIGN DATA RURAL			
2024	AADT	1300	V.P.D.
2044	AADT	1400	V.P.D.
20 -	DHV	--	V.P.H.
	TRUCKS	11	%
	Total		
	Design ESALs	--	

INDEX OF SEALS			
SHEET NO.	NAME	TYPE	BID QUANTITY SHEETS
A.1	Kelly C. Bell	Primary Signature Block	X
X	X	X	X

PRELIMINARY PLANS

Subject to change by final design.

D3 PLAN - Date: May 2, 2024

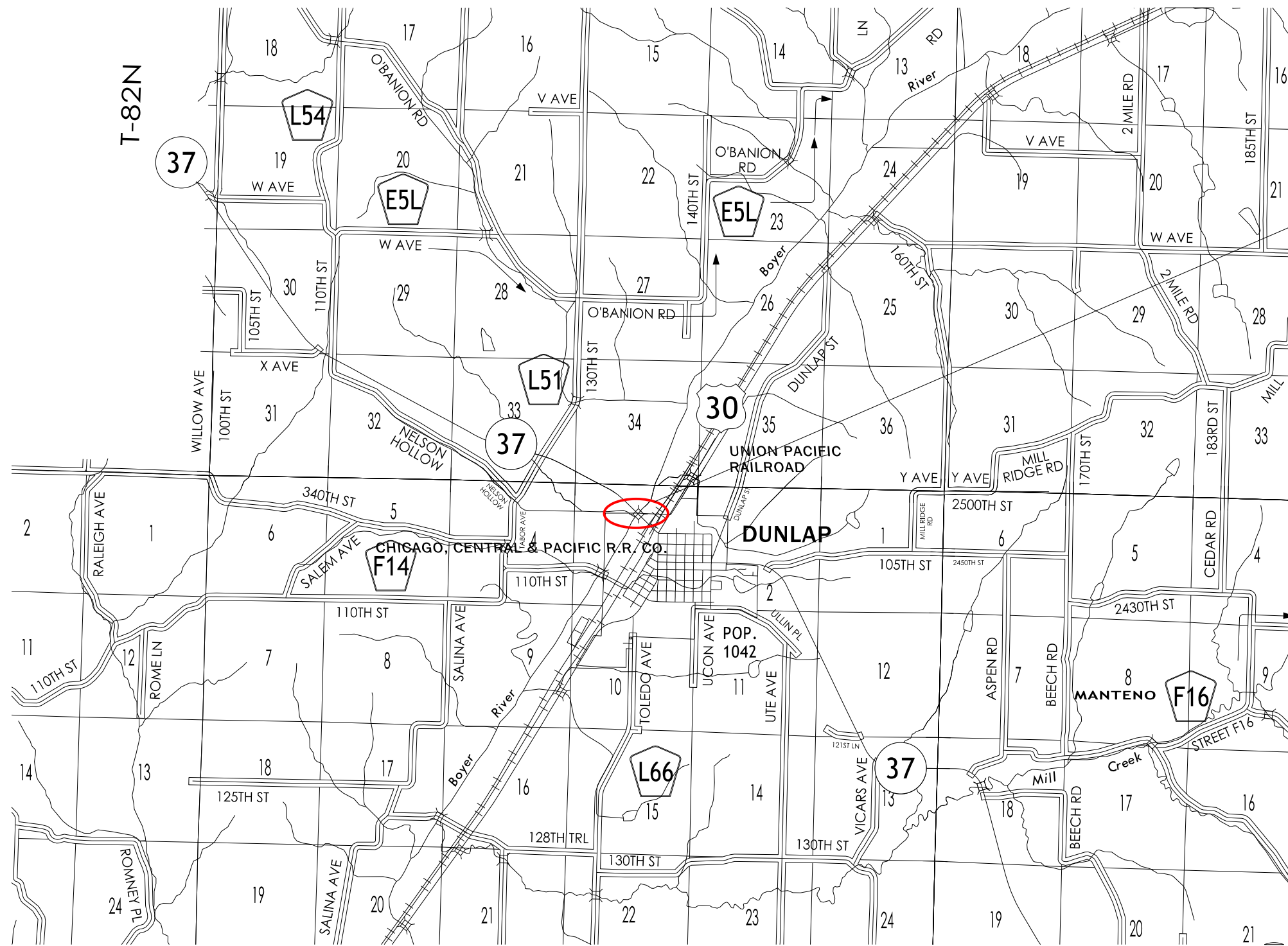
MONONA CO.

CRAWFORD CO.

T-81N

T-82N

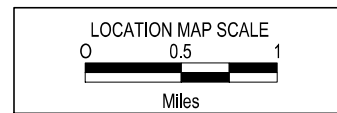
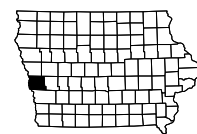
PROJECT LOCATION
Boyer River Bridge
STA 1347+25.50
FHWA# 27600 (EXST)
FHWA# 27601 (NEW)



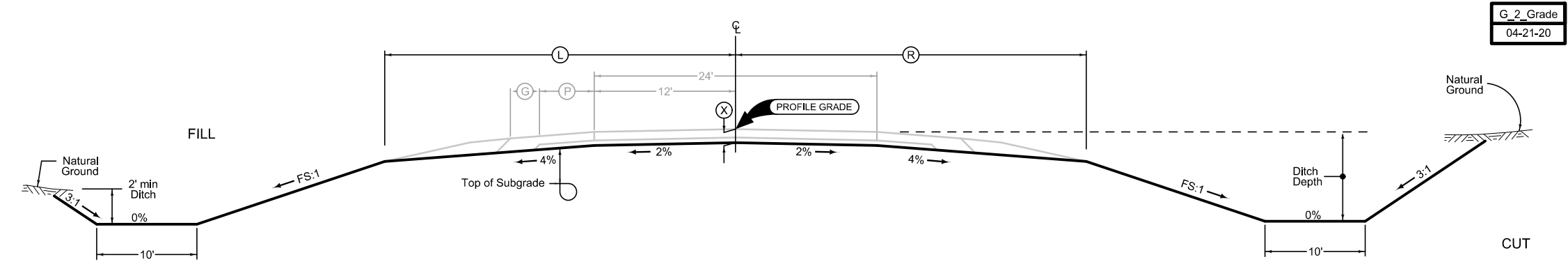
HARRISON CO.

SHELBY CO.

R-41W



LOCATION		DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION	Ⓛ Feet	Ⓜ Feet	ⓧ Inches	FS
IA 37	1342+65.00 1344+90.60				3
Eq: Sta. 1344+30.90 (AH) = Sta. 1344+90.60 (BK)					
	1344+30.90 1345+09.50				3
Bridge and Approaches					
IA 37	1349+41.50 1352+75.00				3



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

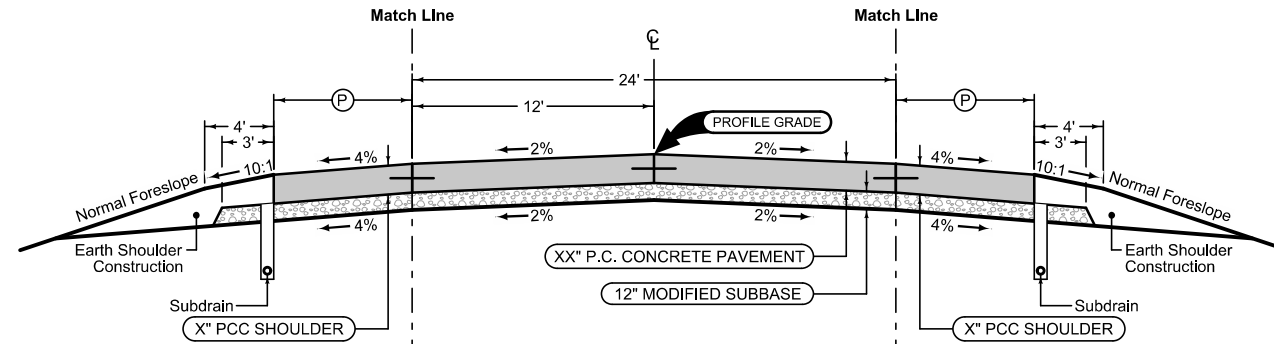
See plan & profile sheets and cross sections for additional details of ditches and backslopes.

2 LANE GRADING

Full Depth PCC Shoulder

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

STATION TO STATION		(P) Feet
1342+65.00	1344+90.60	8
Eq: Sta. 1344+30.90 (AH) = Sta. 1344+90.60 (BK)		
1344+30.90	1345+09.50	8
Bridge and Approaches		
1349+41.50	1352+75.00	8



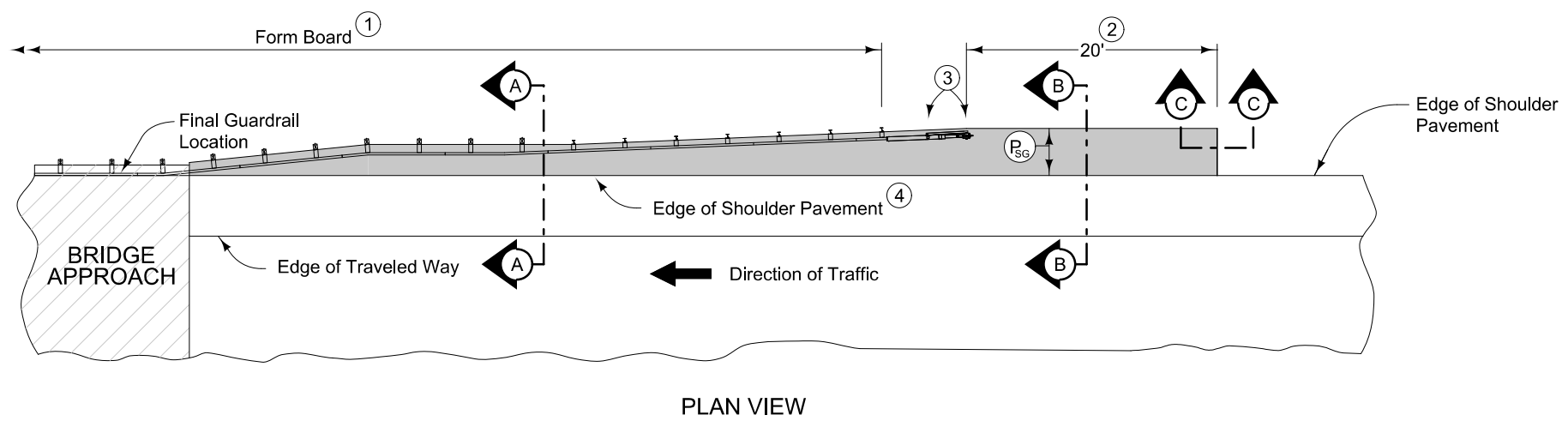
Mainline Jointing:
 Transverse joints: CD at 17' spacing
 Longitudinal joint: L-2

STATION TO STATION	
1342+65.00	1344+90.60
Eq: Sta. 1344+30.90 (AH) = Sta. 1344+90.60 (BK)	
1344+30.90	1345+09.50
Bridge and Approaches	
1349+41.50	1352+75.00

Full Depth PCC Shoulder

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

STATION TO STATION		(P) Feet
1342+65.00	1344+90.60	8
Eq: Sta. 1344+30.90 (AH) = Sta. 1344+90.60 (BK)		
1344+30.90	1345+09.50	8
Bridge and Approaches		
1349+41.50	1352+75.00	8

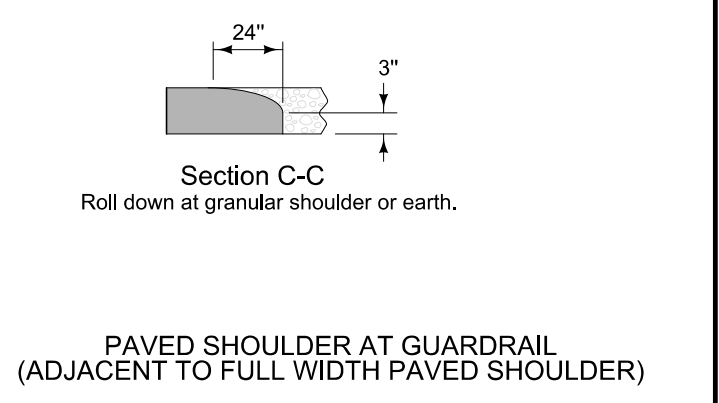
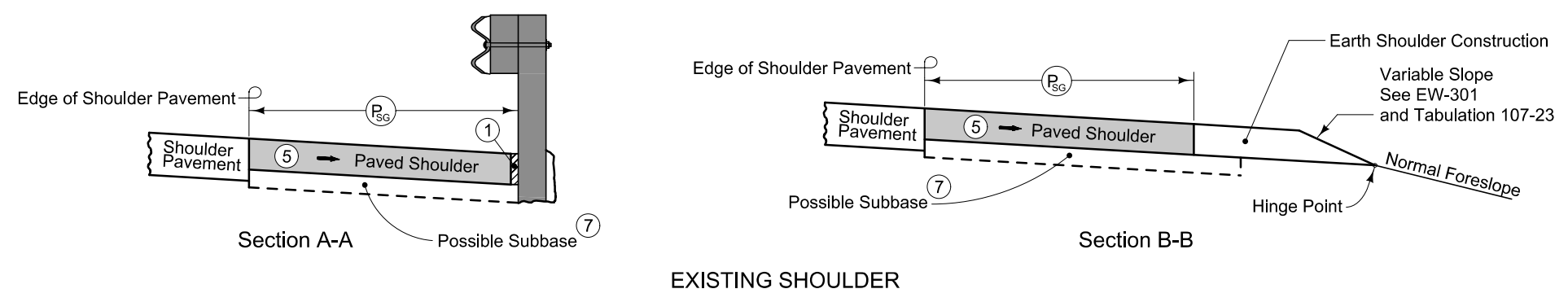
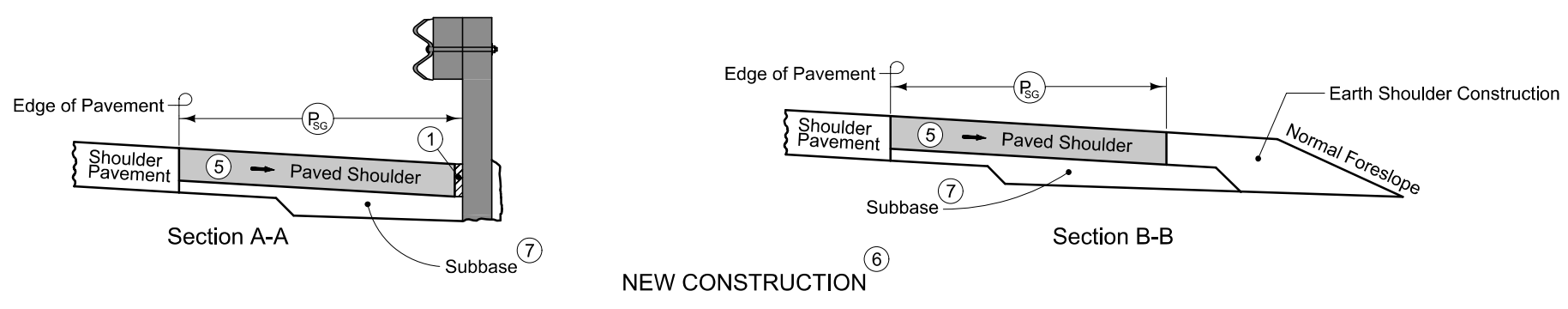


8" PCC Paved Shoulder at guardrail with the following jointing layout:

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.

Refer to Tabulation 112-9 for shoulder quantities.

- ① 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' joint (per PV-101) for PCC shoulder.
- ⑤ Match shoulder slope.
- ⑥ The Contractor has the option to pave the paved shoulder at guardrail and the partial width paved shoulder as one operation.
- ⑦ Refer to other details in the plan.



SURVEY SYMBOLS

- Interstate Highway Symbol
- U.S. Highway Symbol
- Iowa Highway Symbol
- County Road Highway Symbol
- Evergreen Tree
- Deciduous Tree
- Fruit Tree
- Shrub (Bushes)
- Timber
- Hedge
- Stump
- Swamp
- Rock Outcrop
- Broken Concrete
- Revetment (Rip Rap)
- Cemetery
- Grave
- Cave
- Sink Hole
- Board Fence
- Chain Link or Security Fence
- Wire Fence
- Terrace
- Earth Dam or Dike (Existing)
- Tile Outlet
- Edge of Water
- Existing Drainage
- Right of Way Rail or Lot Corner
- Concrete Monument
- Well
- Windmill
- Beehive Intake
- Existing Intake
- Existing Utility Access (Manhole)
- Fire Hydrant
- Water Hydrant (Rural)
- Septic Tank
- Cistern
- L.P. Gas Tank (No Footing)
- Underground Storage Tank
- Latrine
- Satellite TV Dish
- Water Hook Up
- Radio Tower
- Tower Anchor
- Guardrail (Beam or Cable)
- Guard Post (one or two)
- Guard Post (over two)
- Filler Pipe
- Gas Valve
- Water Valve
- Speed Limit Sign
- Mile Marker Post
- SIGN Sign
- Traffic Signal Control Box
- Rail Road Signal Control Box
- Telephone Switch Box
- Electric Box

UTILITY LEGEND

SURVEYED UTILITY OWNER SYMBOLS

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.

Remark Abbreviations

QLA Quality Level A Highest guideline quality level
 QLD Quality Level D Lowest guideline quality level

- PPA, Power Pole Co. 1
- FO1D, Aureon - Quality D
- TL1D, Windstream - 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
Lavender	(9)		Temporary Pavement Shading 0%
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%
Violet	(15)		Proposed Grade and Pave Shading (In conjunction with a paving project) 0%
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%
Green, Light	(225)		Existing Pavement 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

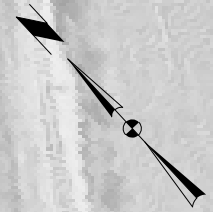
RIGHT-OF-WAY LEGEND

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

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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

Harrison TWP.
T-81N R-41W
SEC. 3



STA 1342+65.00 (ML037)
BEGIN CONSTRUCTION

STA 1352+75.00 (ML037)
END CONSTRUCTION

EON 1344+30.90(AH) =
1344+90.60(BK)

1345+00

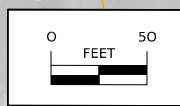
1350+00

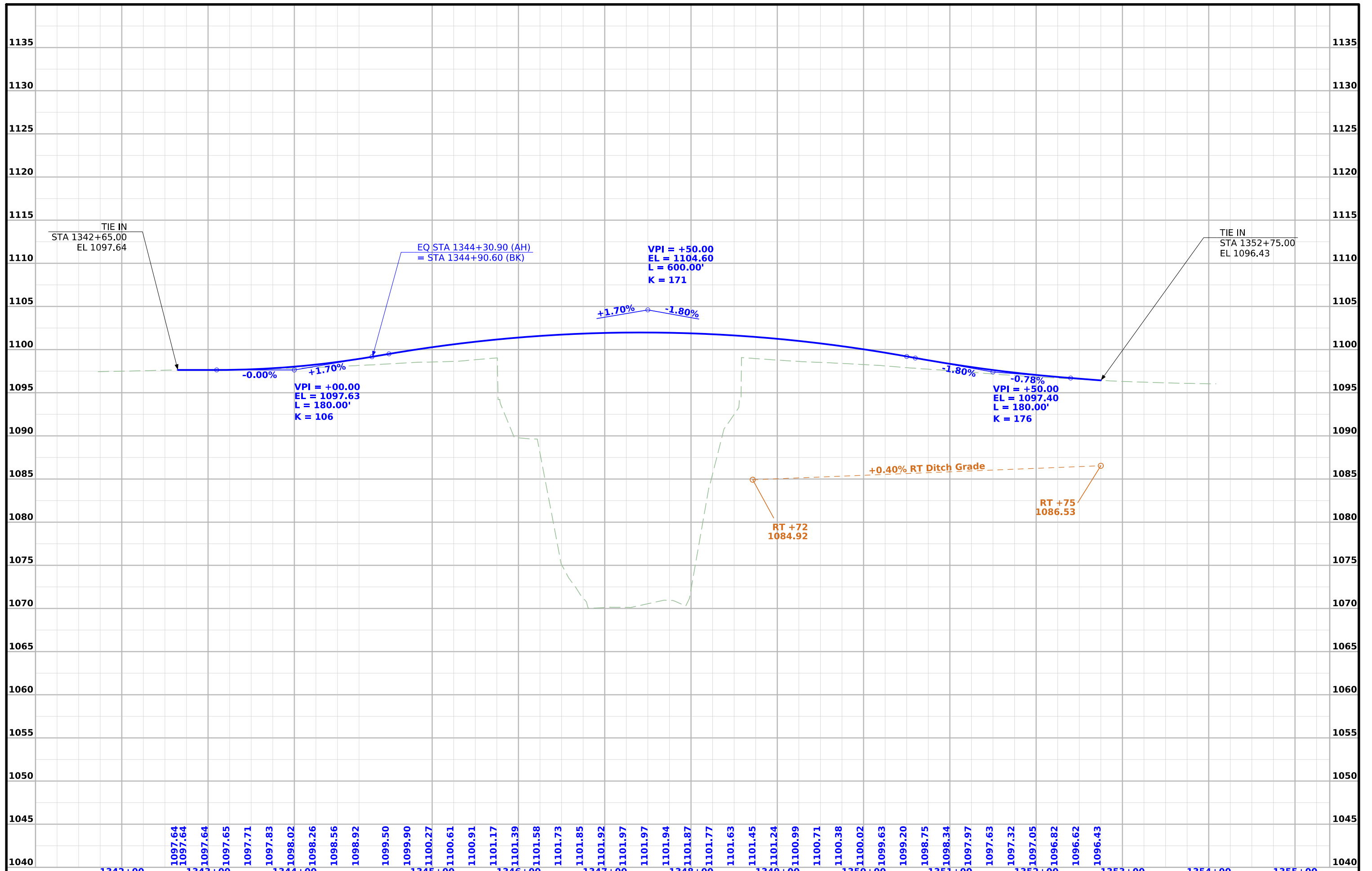
1355+00

UAC?
24"x47.5'
C.M.P.

84"x43.2'
Conc Pipe
UAC

Remove
Sta. 1347+16.76
280'x28' Continuous
I-Beam Bridge
D.A. = 691 SQ M-R
Build 289' x 40' PPCB Bridge





FILE NO.	ENGLISH	DESIGN TEAM	Flattery\Bell\Gast	HARRISON COUNTY	PROJECT NUMBER	BRF-037-3(10)--38-43	SHEET NUMBER	D.3
----------	---------	-------------	--------------------	-----------------	----------------	----------------------	--------------	-----

Survey Information

SURVEY INDEX

Harrison County
BRF-037-3(10)--38-43
Boyer River 0.1 mi W of US 30
PIN: 21-43-037-010
Type of Work: Bridge
Project Directory: 4303701021
SAP: 784.2

Survey Personnel

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

Date(s) of Survey

Begin Date 08/08/2023
End Date 10/30/2023

General Information

This survey is for IA Hwy 37 Boyer River bridge located 0.1 mi west of US Hwy 30. This survey request was for the IA Hwy 37 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 06
(U.S. SURVEY FOOT)
VERTICAL DATUM: NAVD88
GEOID MODEL: 2018u3

Alignment Information

The horizontal alignment for IA Hwy 37 this survey is a retrace of ACC Plans No. F-861(7). Survey stationing was equated to the plan PI at Sta. 1334+81.2 and carried back and ahead throughout the survey with equation at station $1344+90.6=1344+30.9$.

Survey stationing relates to as built plan stationing as follows:

PI Sta. 1334+81.2 ACC Plans No. F-861(7)
Survey PI Sta. 1334+81.2

PI Sta. 1358+91.6 ACC Plans No. F-861(7)
Survey PI Sta. 1358+90.52

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 06 (U.S. Survey Foot)

VERT. DATUM: NAVD88 - Geoid Model: 2018u3

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

HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING
 HORIZ. DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 Adjustment)
 Ia. Regional Coordinate System Zone 06 (U.S. Survey Foot)
 VERT. DATUM: NAVD88
 Geoid Model: 2018u3

<u>Point Name</u>	<u>Northing</u>	<u>Easting</u>	<u>Elevation</u>	<u>Feature Definition-Description</u>
430300383	7187522.23	16536908.62	1096.69	CP FOUND X ON SOUTHERNMOST END OF SIDEWALK AT SULLIVAN FIELDS IN DUNLAP
240370221	7188703.94	16531365.08	1116.70	CP CONC MONUMENT ON SOUTHSIDE IA 37 APPROX 500 FT EAST INTERSECTION IA 37 & 130TH ST
430370228	7187139.75	16534256.06	1092.82	CP CONC MONUMENTON SOUTHSIDE IA 37 APPROX 700 FT WEST OF WEST END BOYER RIVER BRG
430370231	7186163.14	16535490.31	1091.30	CP FENO MONUMENT ON NORTHSIDE IA 37 APPROX 65 FT WEST OF WEST RAIL CN RAILROAD

108_23A
8/15/22

TRAFFIC CONTROL PLAN

IA 37 will be closed to thru traffic during construction.

IA 37 traffic shall be maintained via offsite detour. Iowa DOT will establish and maintain detour route. See Sheet J.4 for detour.

511 TRAVEL RESTRICTIONS

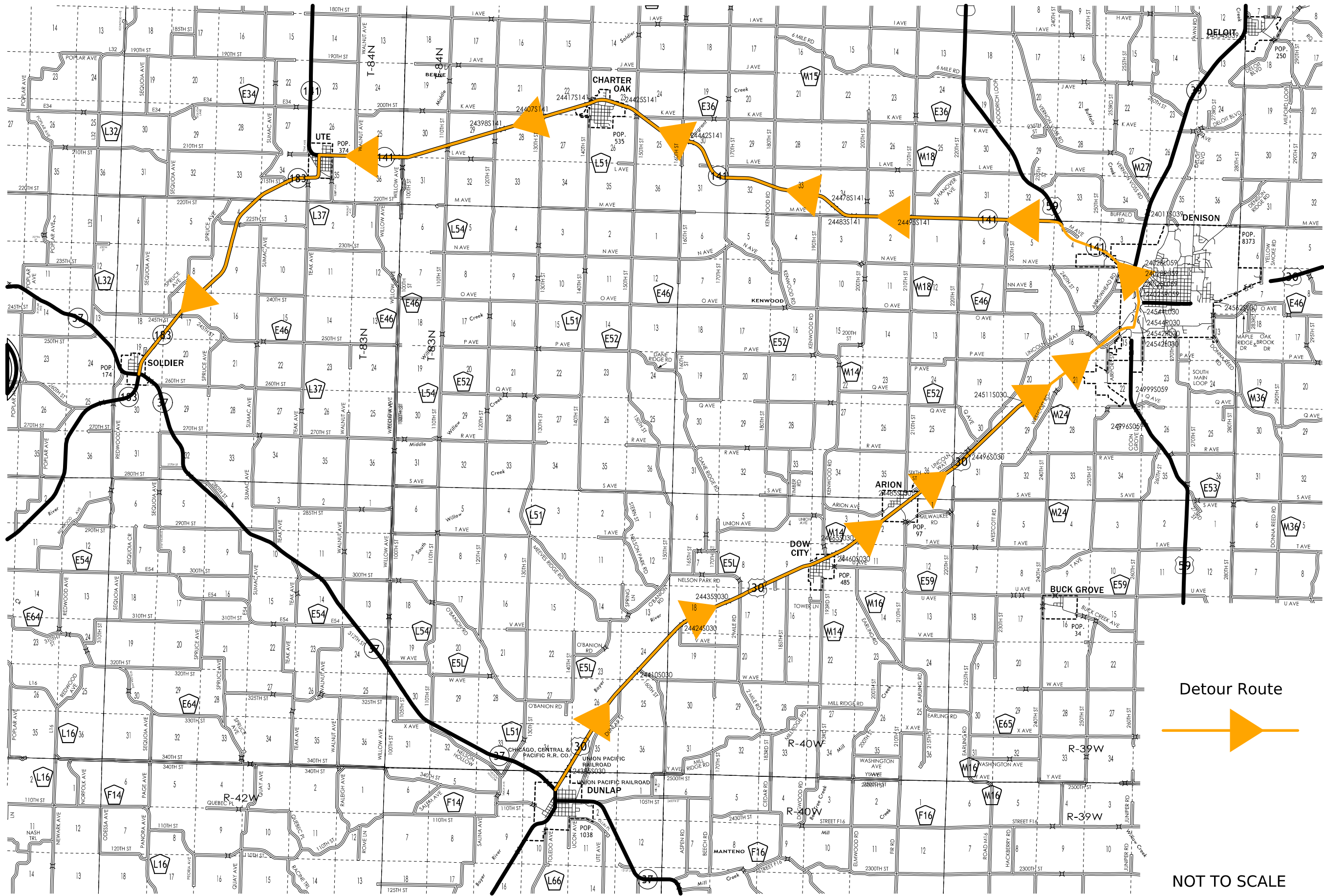
Line No.	Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No. or Structure ID or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
				No travel restrictions expected.				None					

111_01
10/14/22

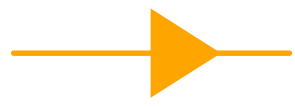
COORDINATED OPERATIONS

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.

Project	Type of Work
None provided.	



Detour Route



NOT TO SCALE



CROSS SECTION VIEW COLOR LEGEND

Design Color No.	Feature	Design Color No.	Feature
Aggregate			
(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
Grading			
(8)	Revetment Class A	(128)	Boulder
(6)	Revetment Class B	(209)	Boulder Removed
(62)	Revetment Class C	(48)	Broken Weathered
(188)	Revetment Class D	(210)	Broken Weathered Removed
(28)	Revetment Class E	(3)	Core Out
(12)	Shoulder Special Backfill	(115)	Core Out Remove Only
(12)	Special Backfill	(195)	Core Out Remove and Replace
(20)	Subbase	(203)	Existing Pavement
(20)	Subbase Lower	(184)	Existing Pavement Remove Only
(20)	Subbase Upper	(200)	Existing Pavement Remove and Replace
(118)	Subgrade Treatment	(6)	Loam
Substrata			
(207)	HMA Base Course	(211)	Loam Removed
(207)	HMA Interim Course	(80)	Rock
(207)	HMA Surface Course	(212)	Rock Removed
(0)	Bridge	(4)	Select Sand
(0)	Barrier Concrete	(214)	Select Sand Removed
(0)	Barrier Concrete Footing	(3)	Shale
(0)	Curb Gutter	(215)	Shale Removed
(48)	Flowable Mortar	(10)	Topsoil
(0)	Median Concrete	(2)	Topsoil Remove Only
(0)	PCC Pavement	(4)	Topsoil Remove and Replace
(0)	Sidewalk	Unsuitable / Waste	
(0)	Existing Pavement	(3)	Unsuitable Type A
(209)	Shoulder HMA	(216)	Unsuitable Type A Removed
(0)	Shoulder PCC	(13)	Unsuitable Type B
(6)	Shoulder Granular	(217)	Unsuitable Type B Removed
(112)	Noise Wall	(11)	Unsuitable Type C
(112)	Noise Wall Footing	(218)	Unsuitable Type C Removed
(112)	Retaining Wall Back	(3)	Waste
(112)	Retaining Wall Back Excavate	(219)	Waste Removed
(112)	Retaining Wall Face		
(112)	Retaining Wall Front Excavate		
(112)	Retaining Wall Front Footing		
(112)	Retaining Wall MSE Gutter		
(112)	Retaining Wall Reinforced Earth		
Concrete			
Asphalt			
Bridge			
Shoulder			
Structural			

NOTES:

Text

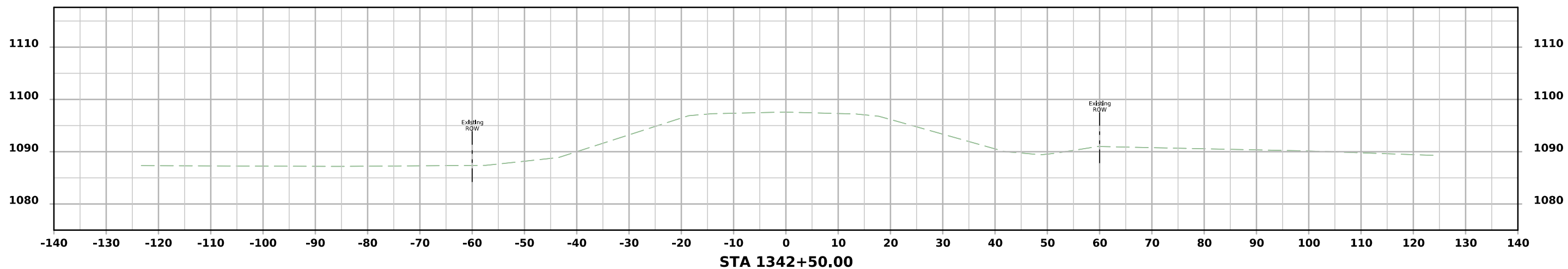
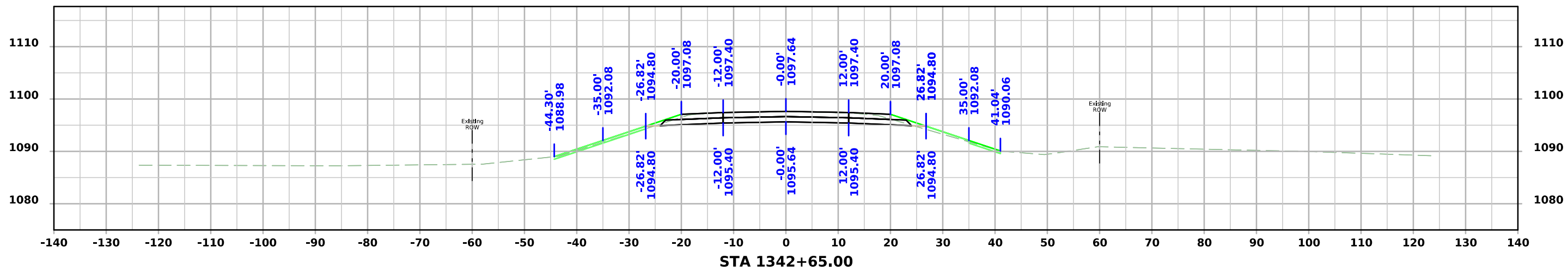
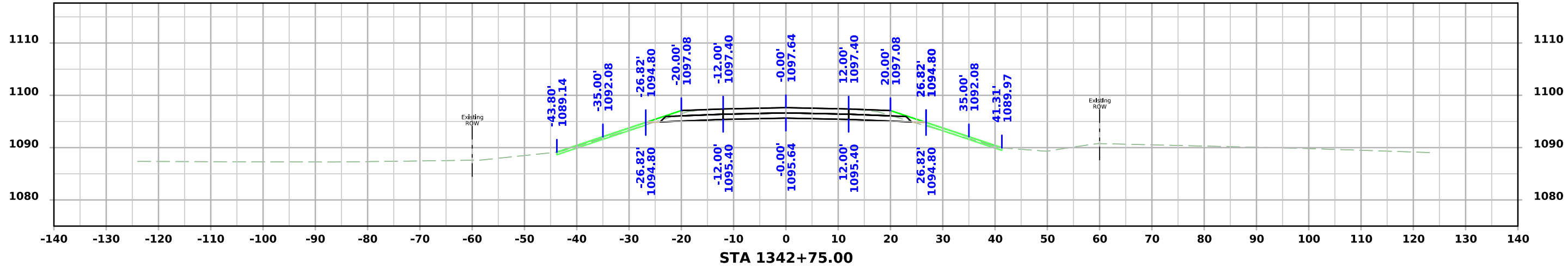
NOTES:

Text

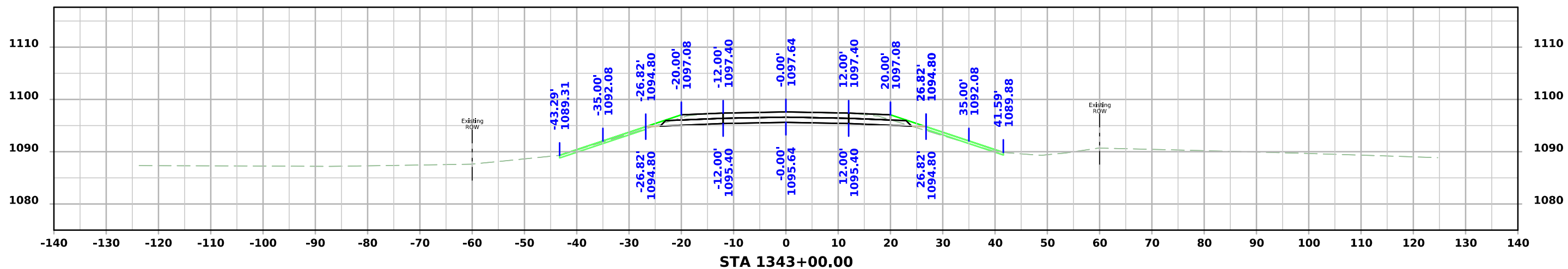
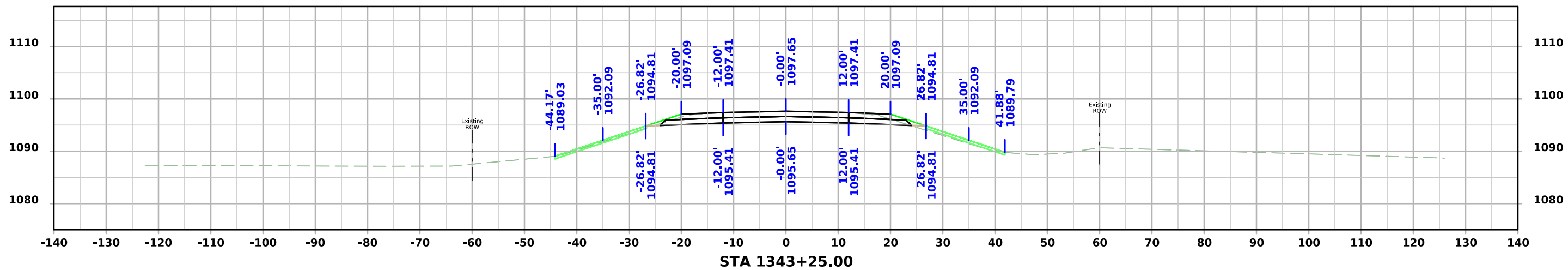
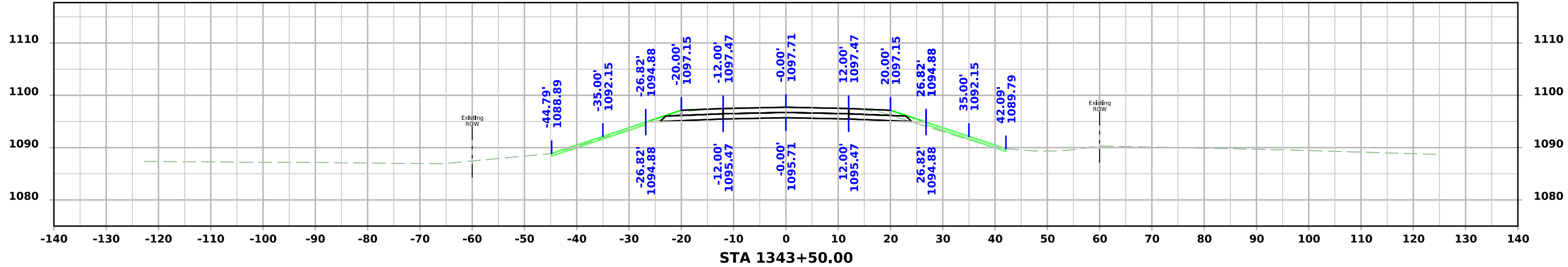
CROSS SECTIONS LEGEND AND INFORMATION SHEET

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

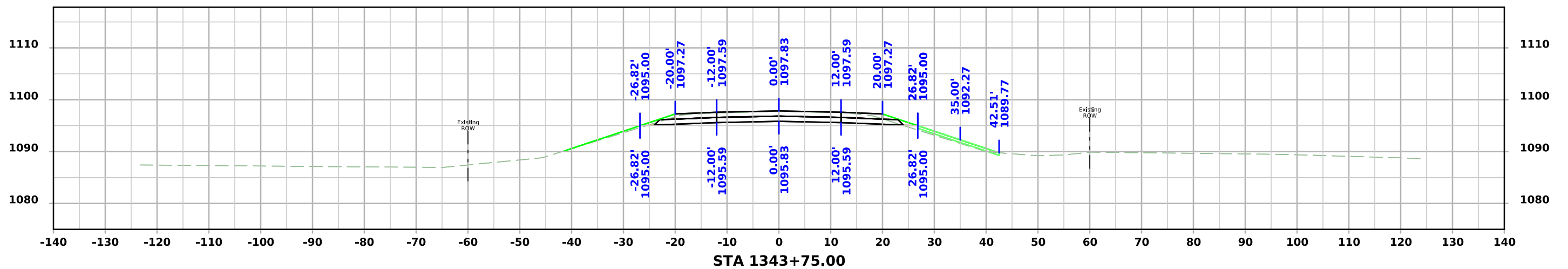
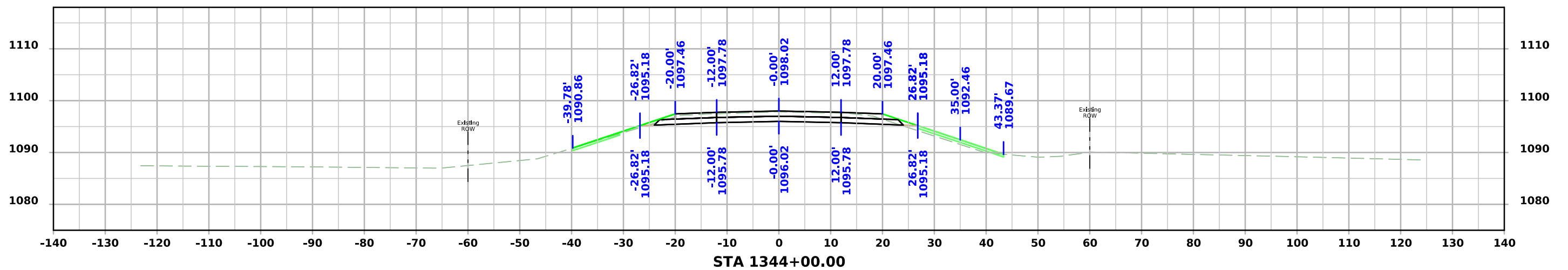
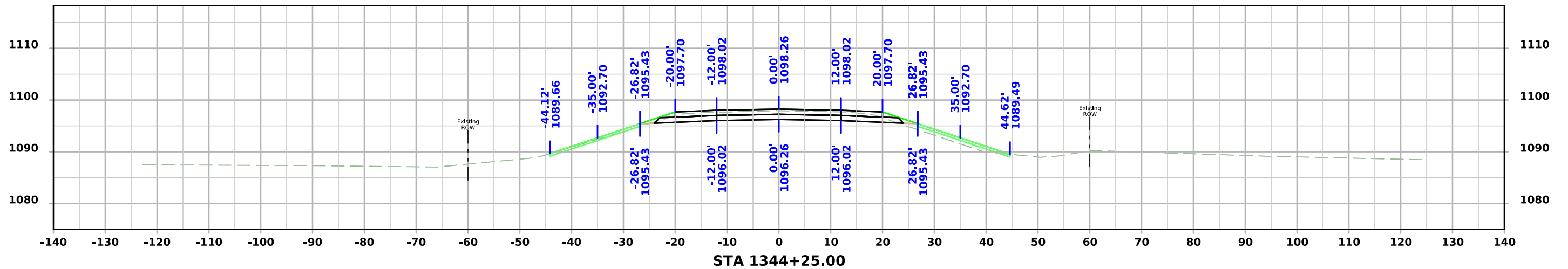
ML - IA37



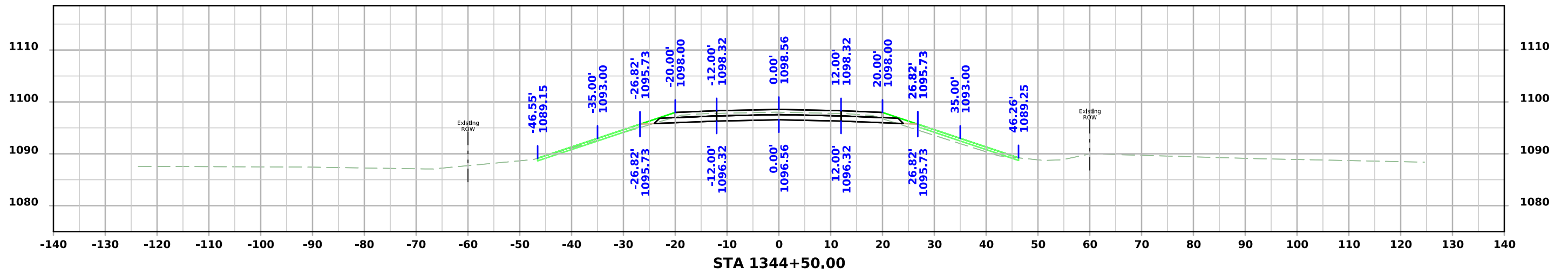
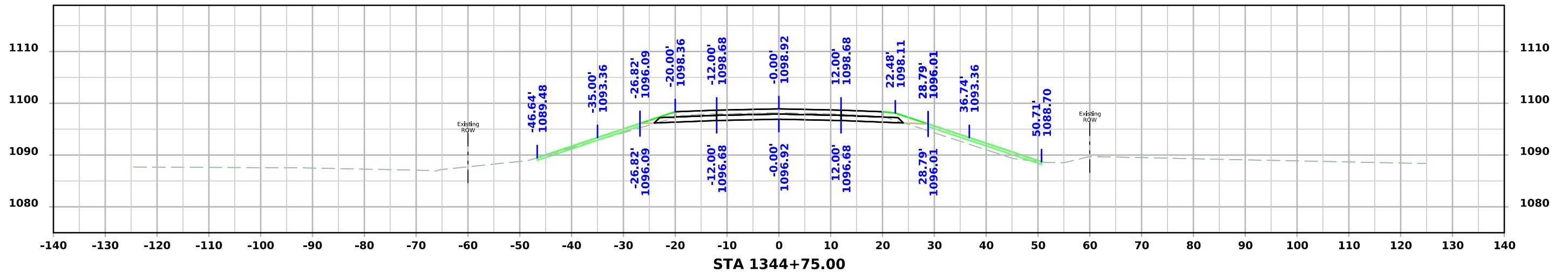
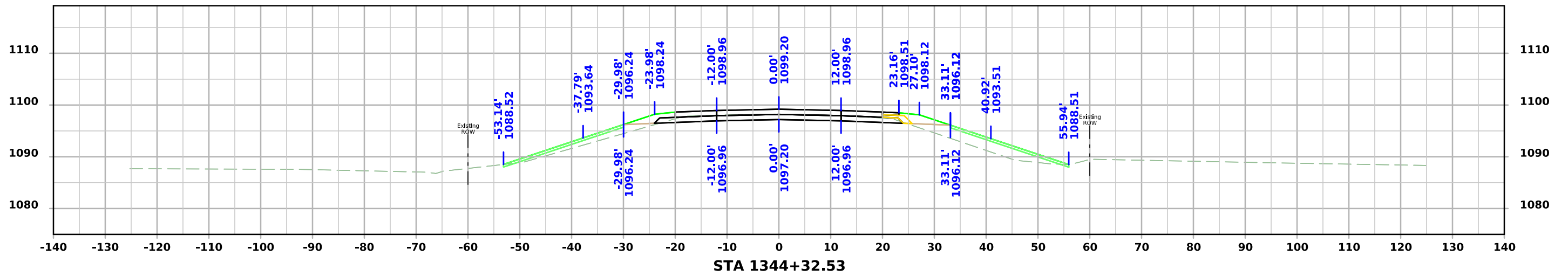
ML - IA37



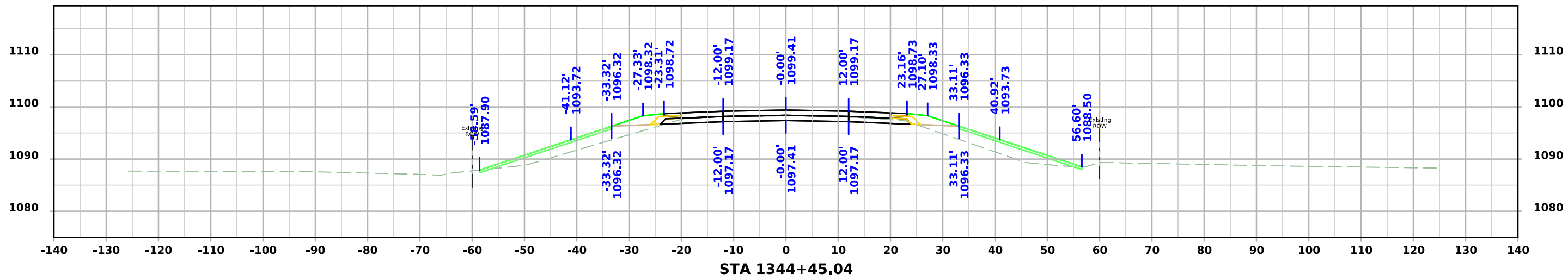
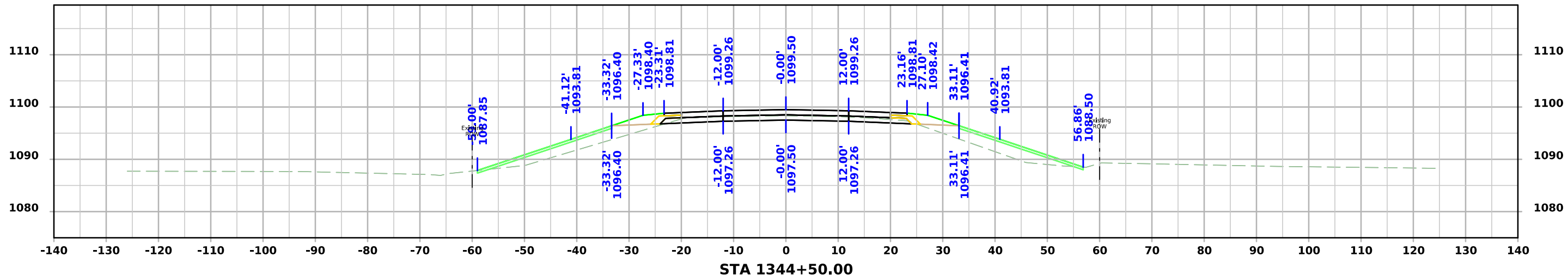
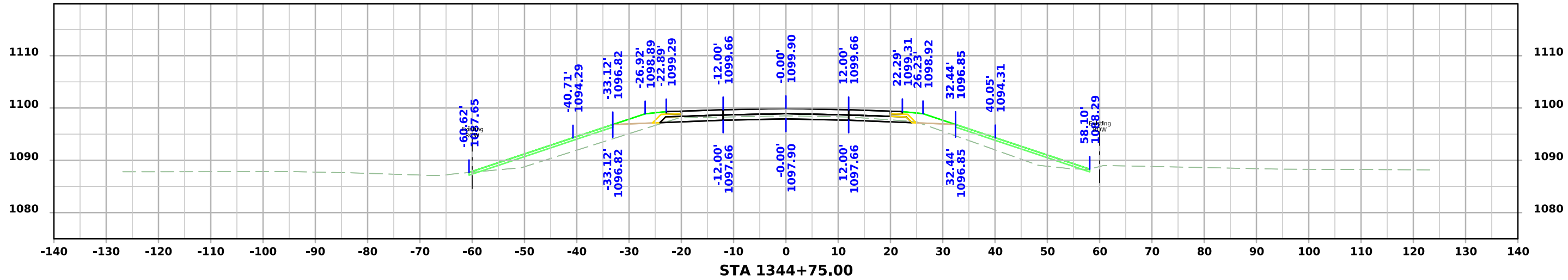
ML - IA37

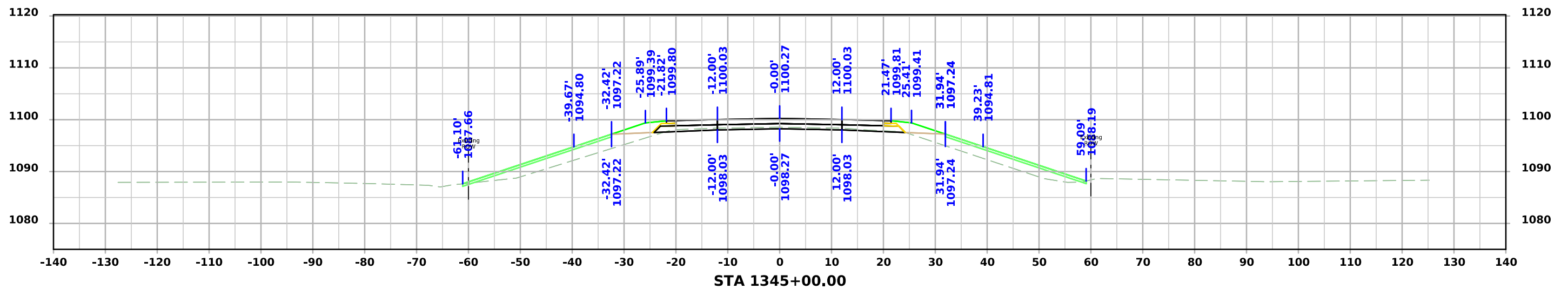
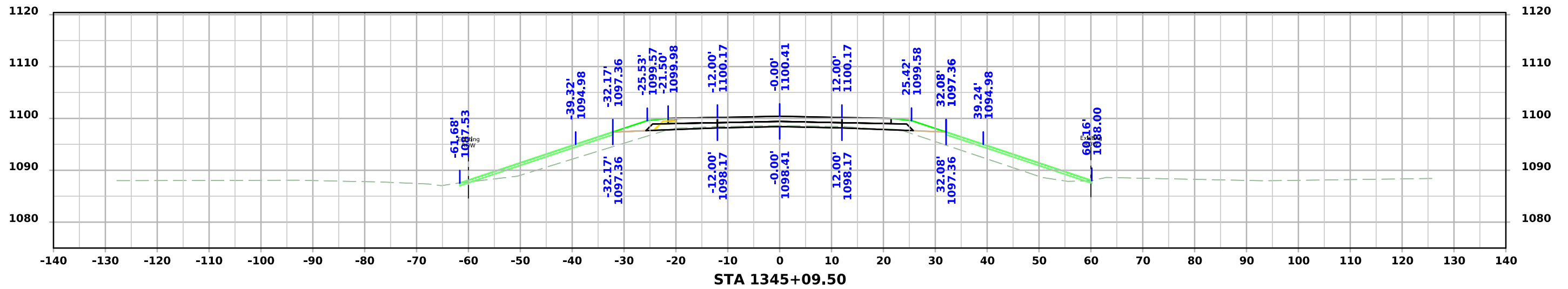
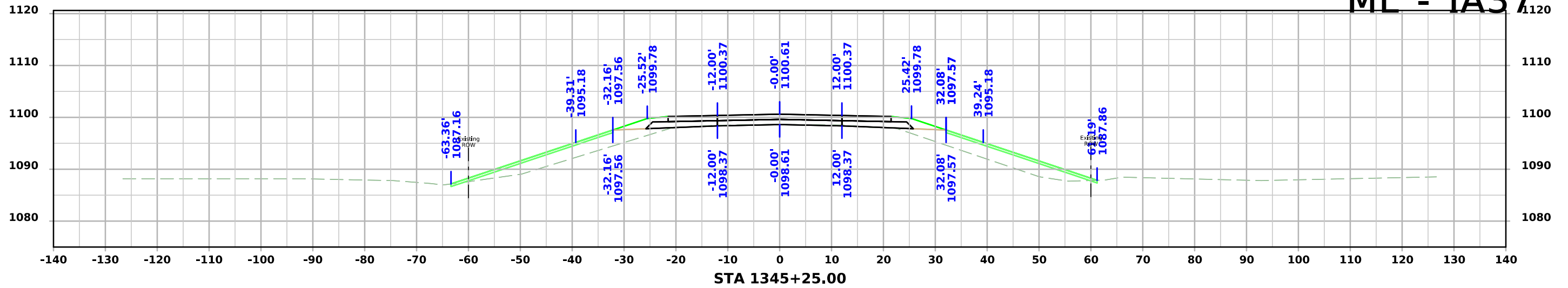


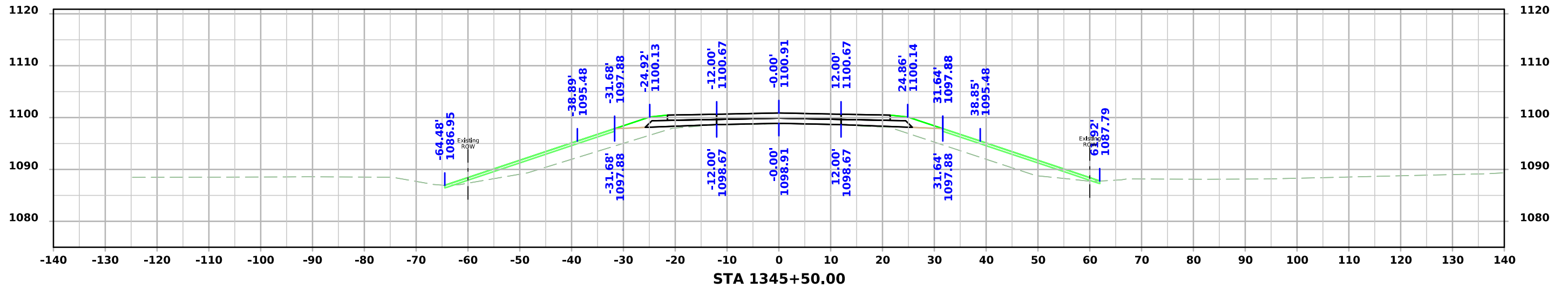
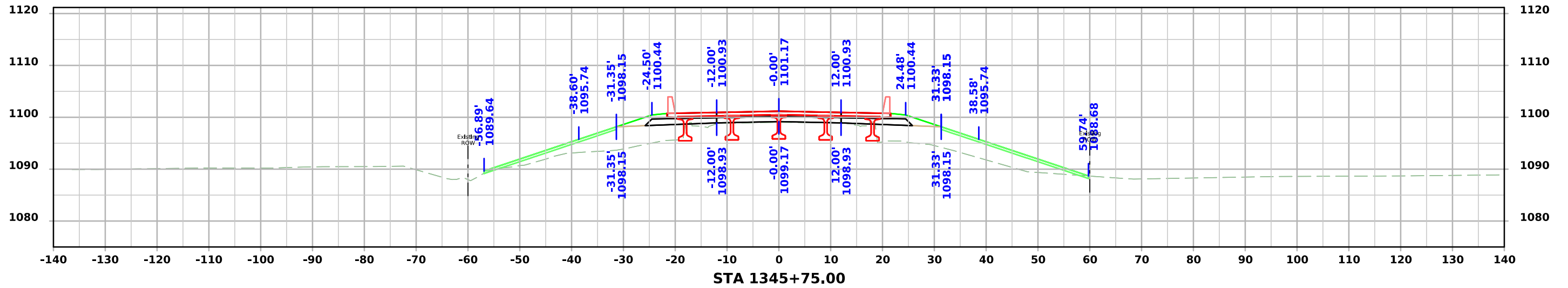
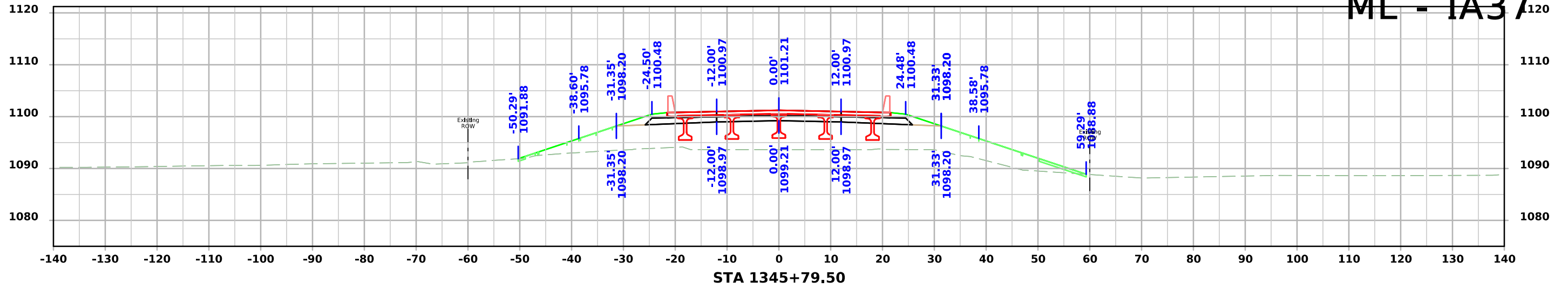
ML - IA37



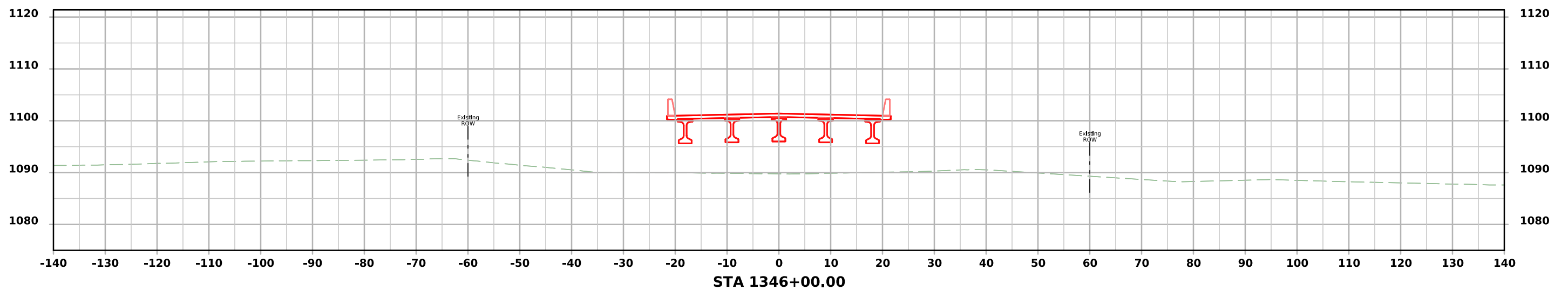
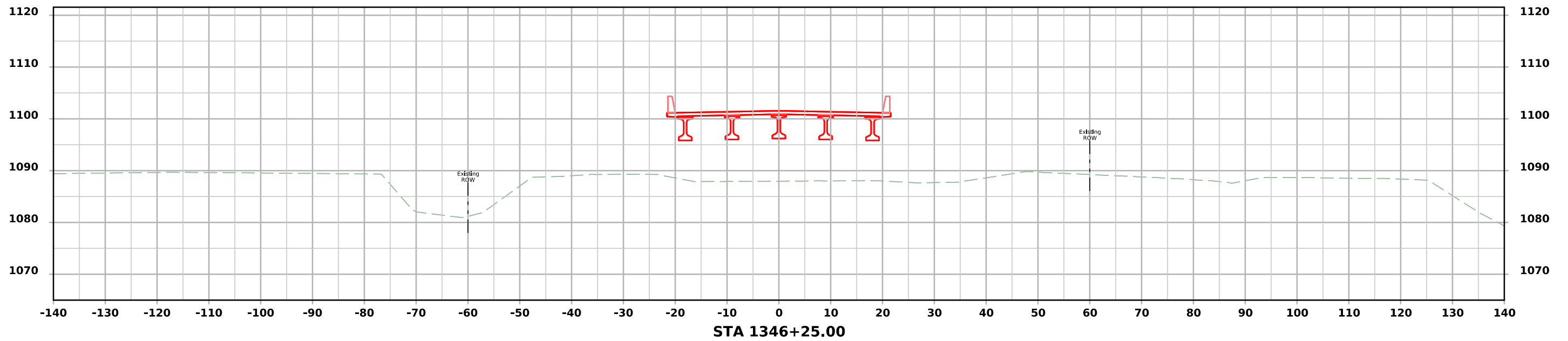
ML - IA37



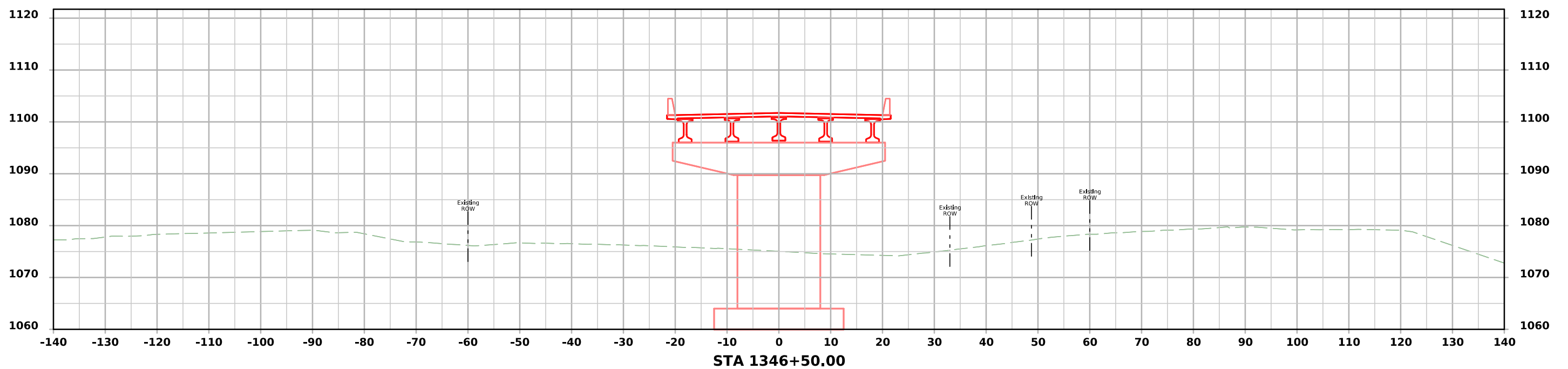
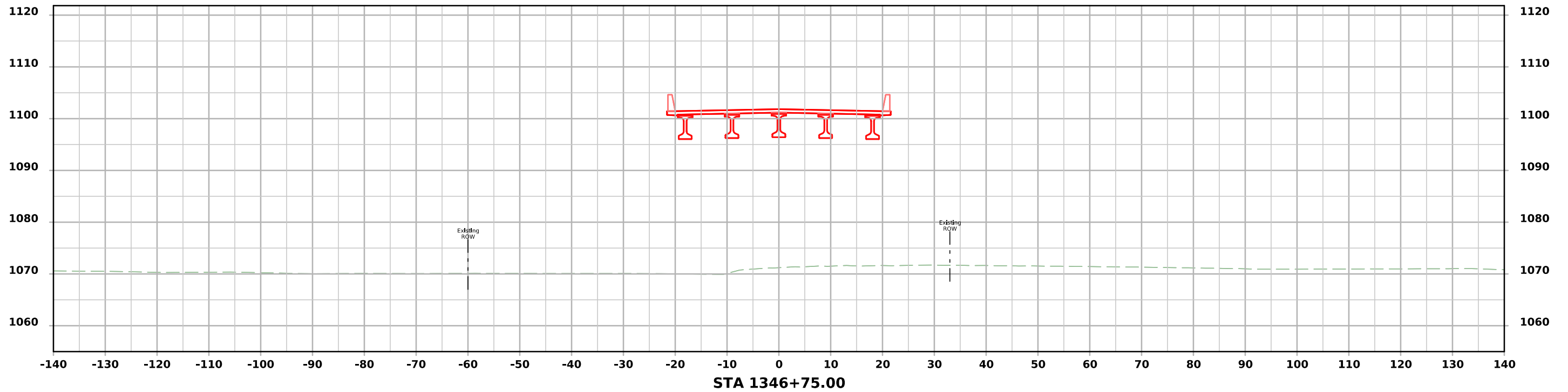




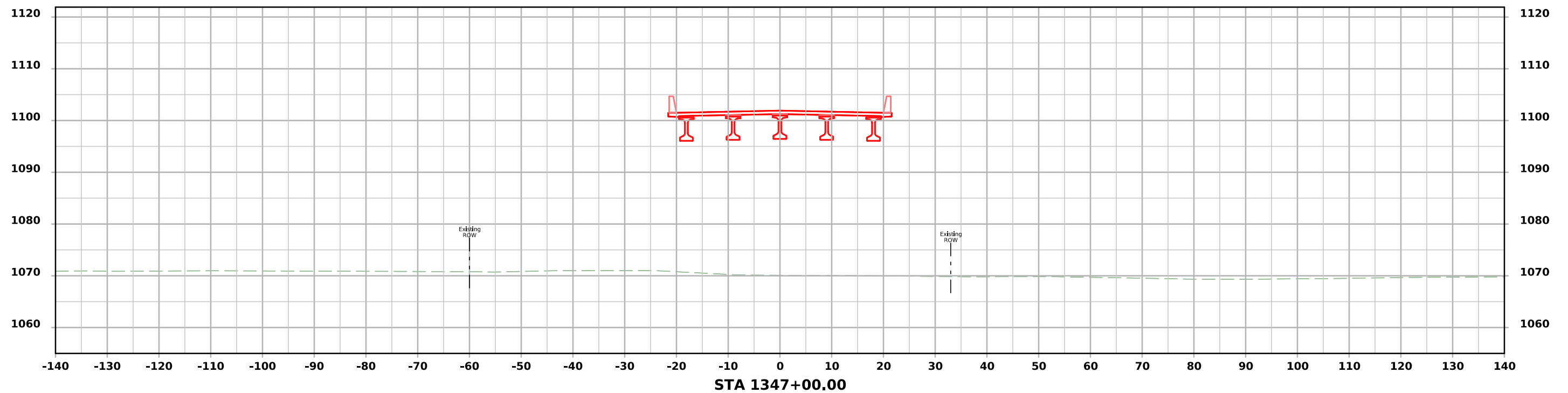
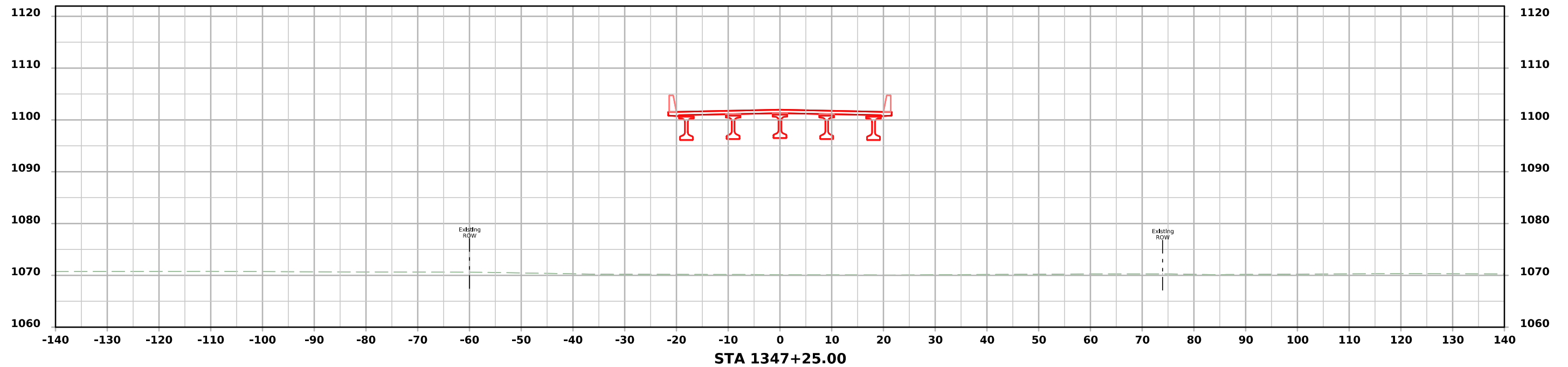
ML - IA37



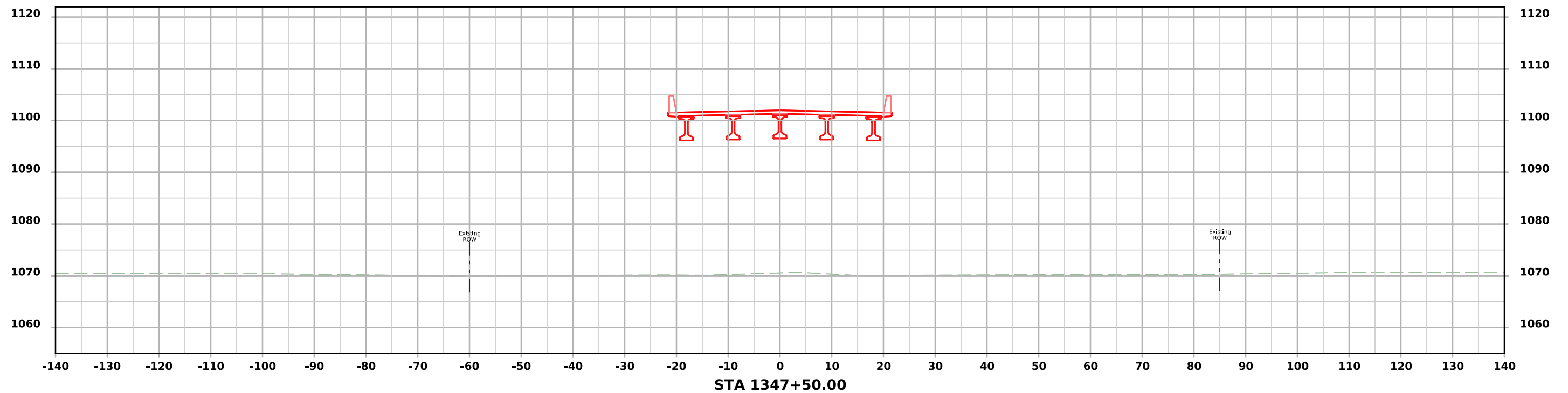
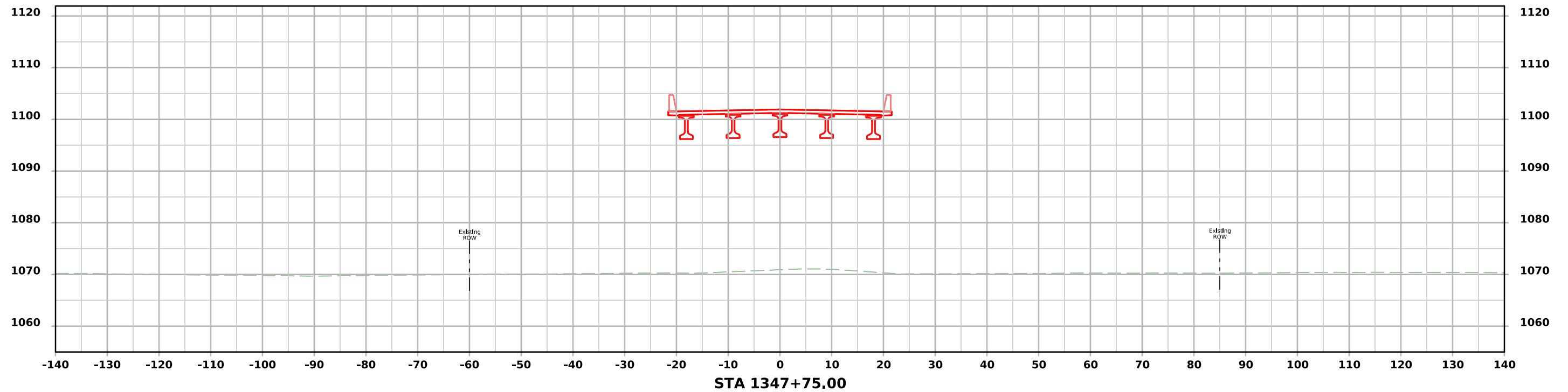
ML - IA37



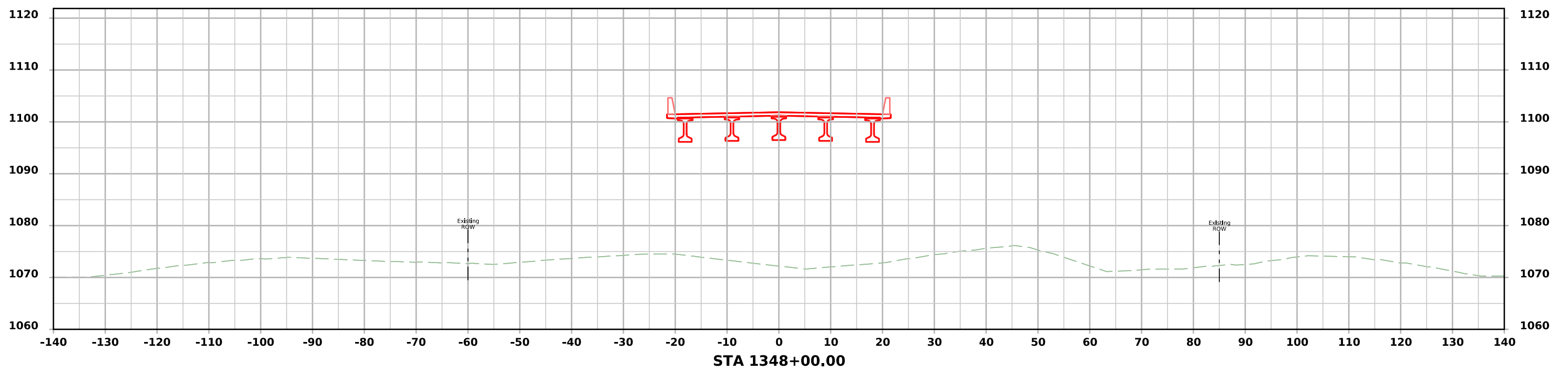
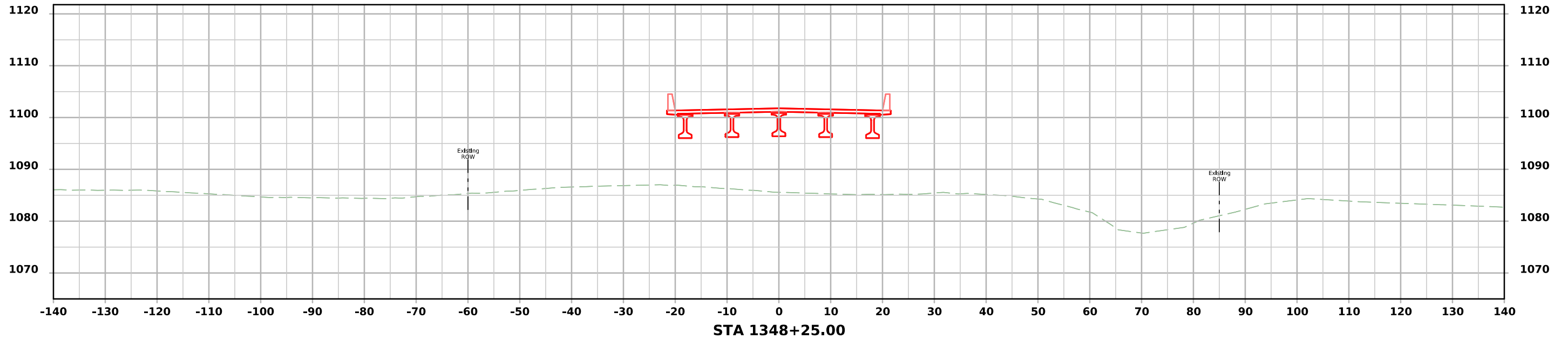
ML - IA37



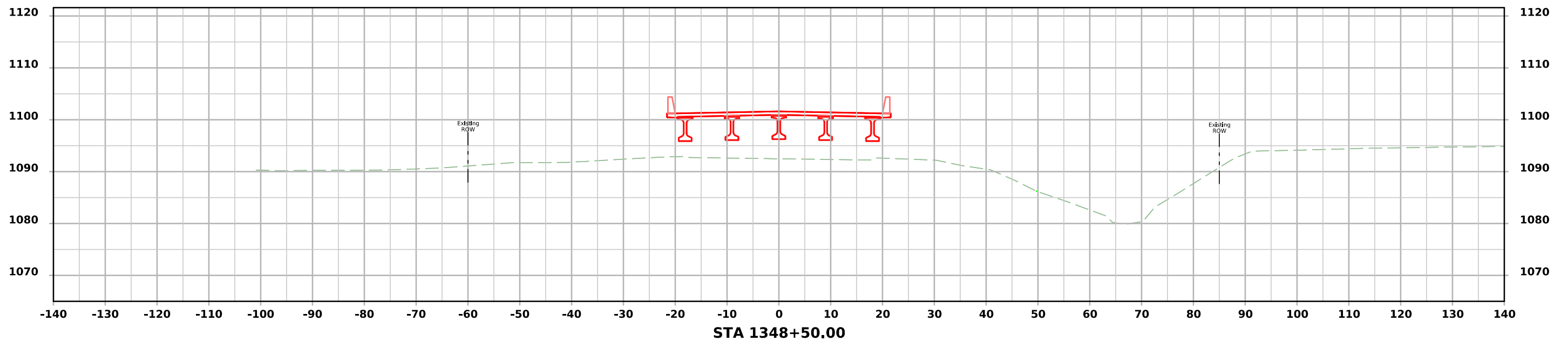
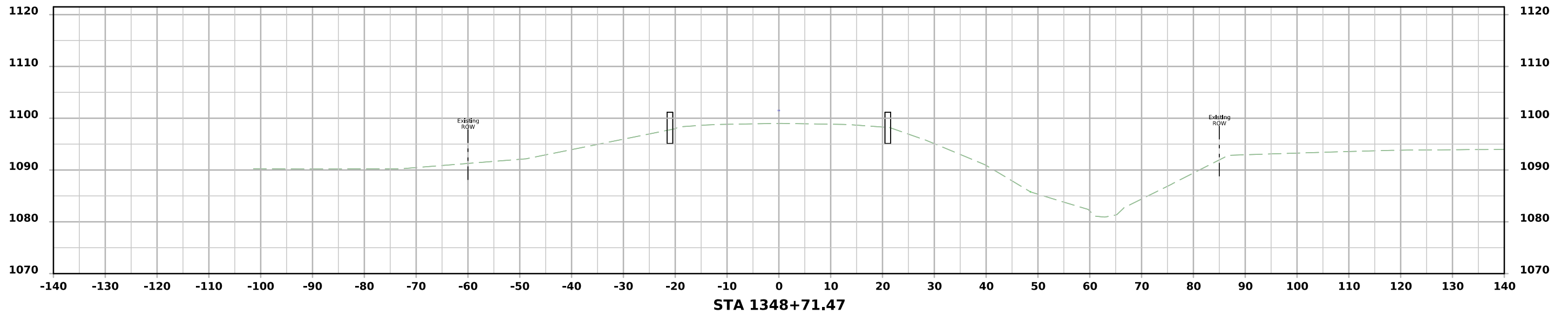
ML - IA37



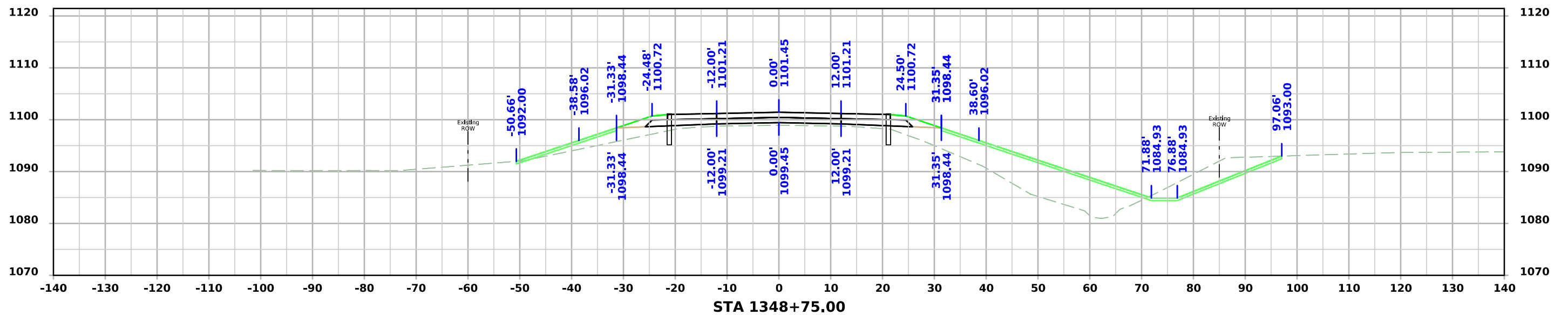
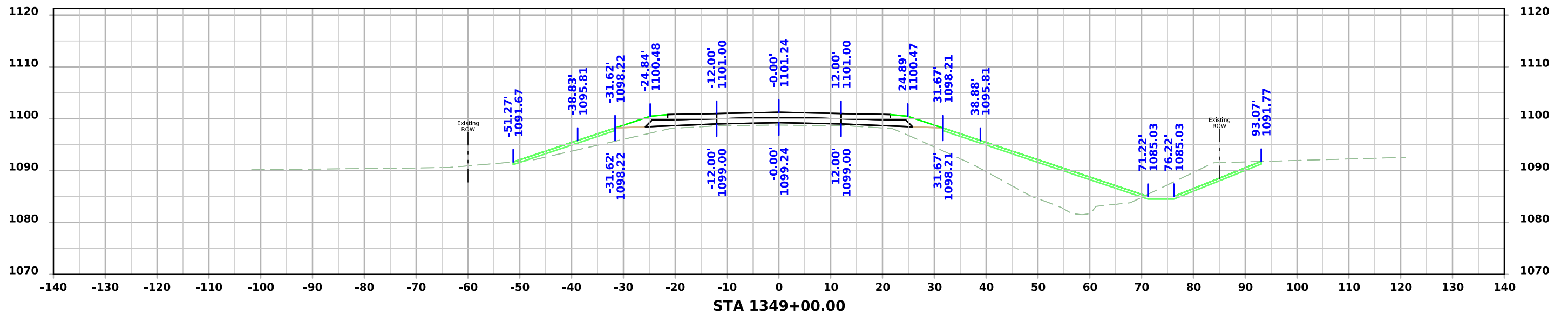
ML - IA37



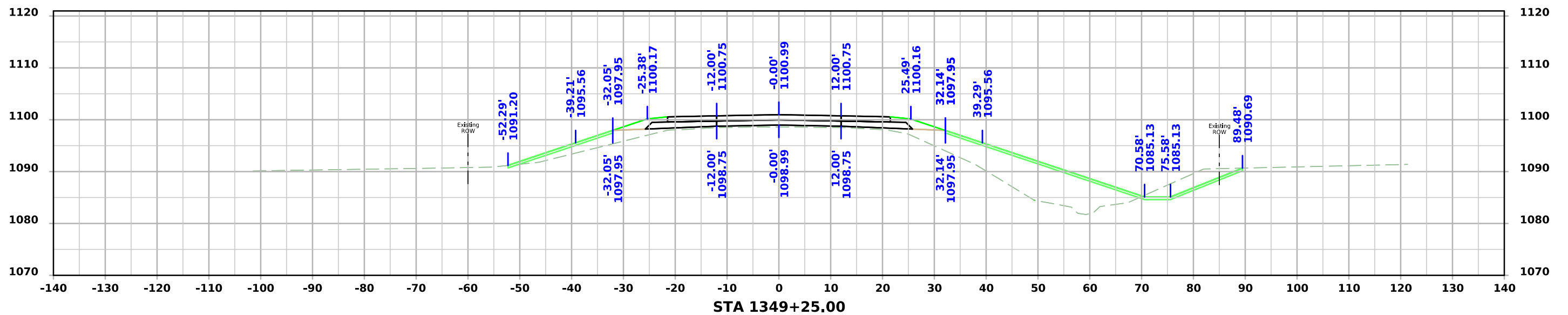
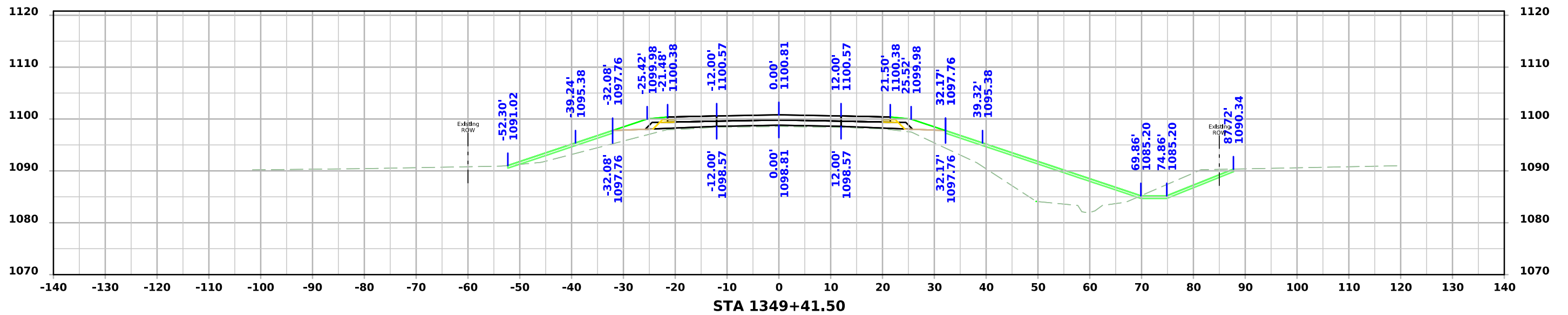
ML - IA37



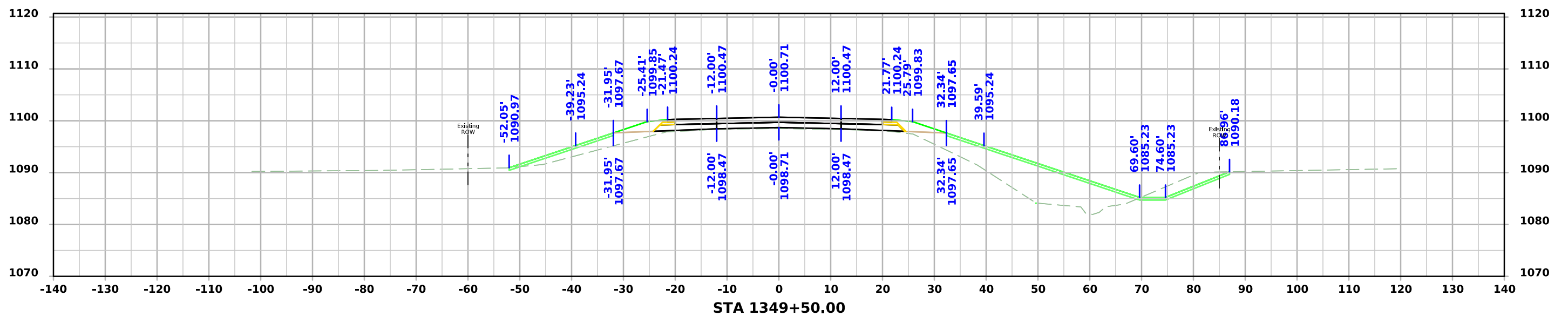
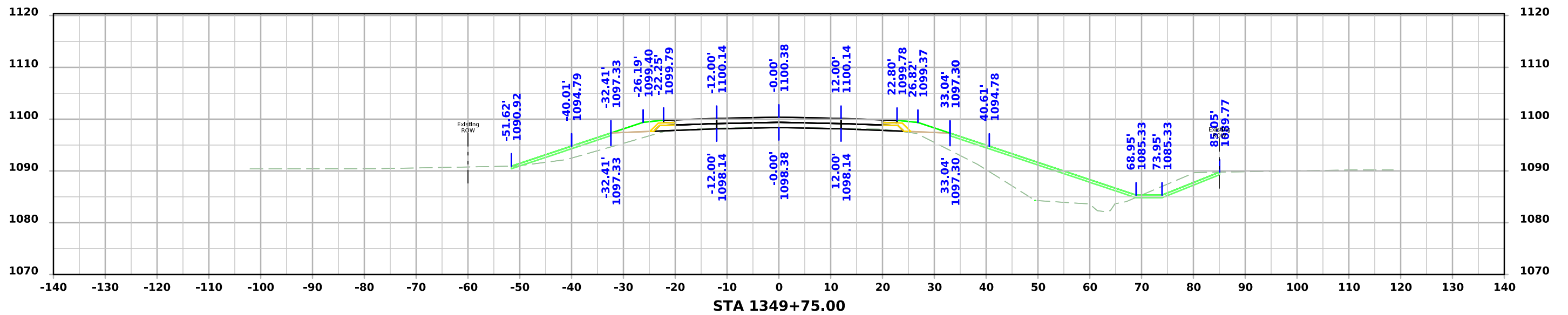
ML - IA37

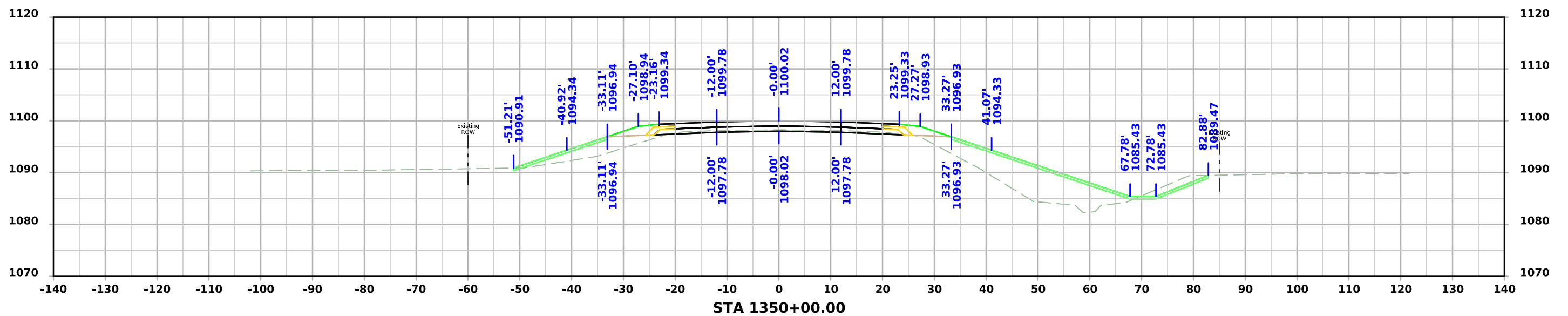
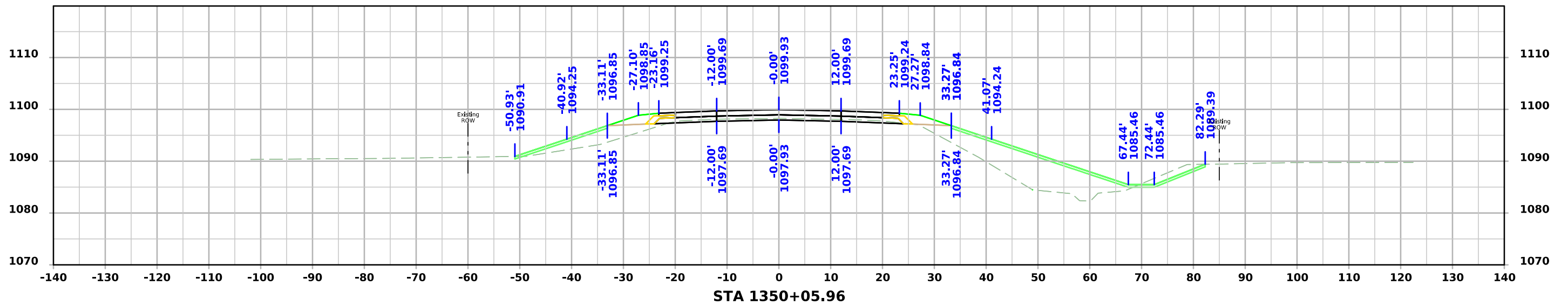


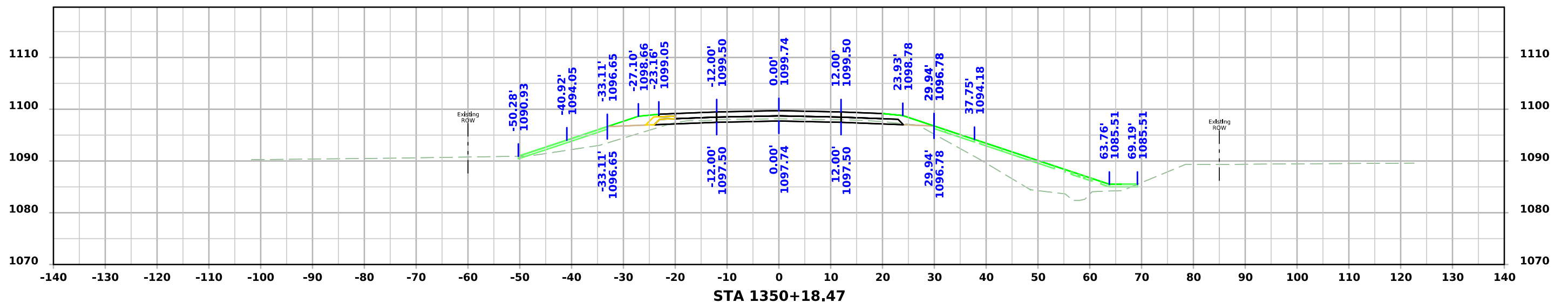
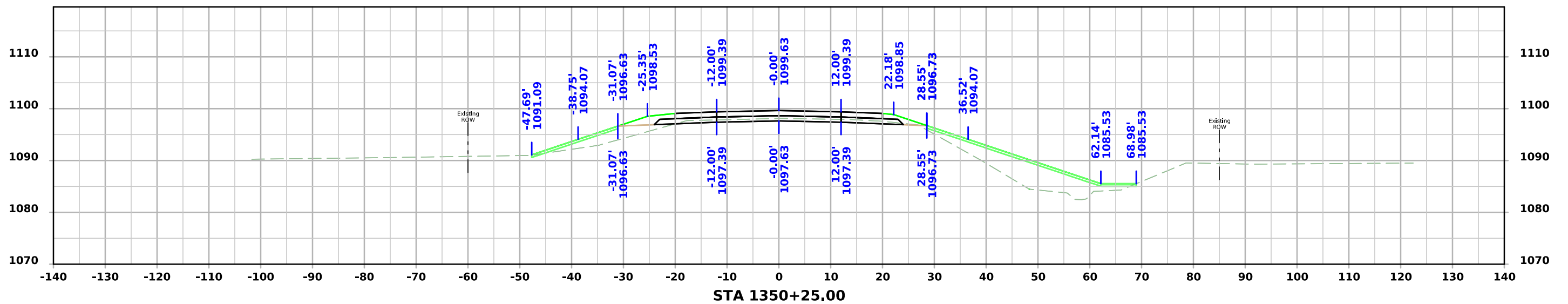
ML - IA37

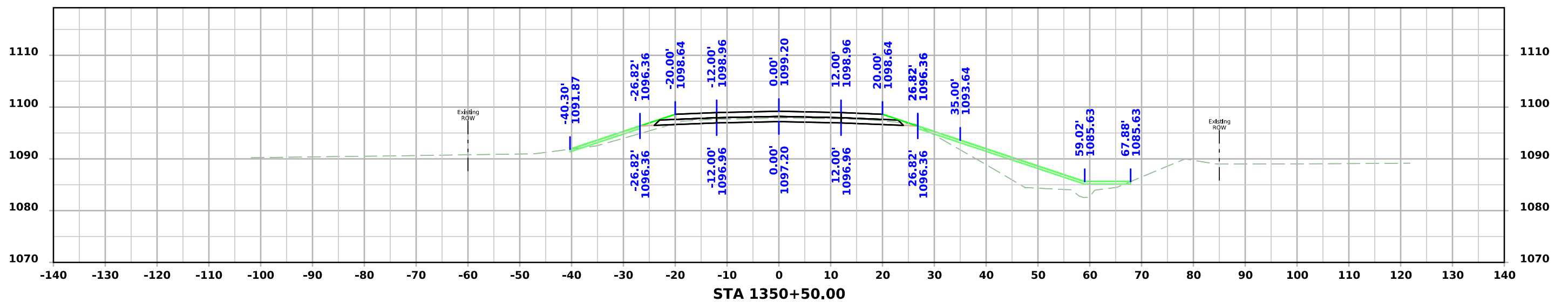
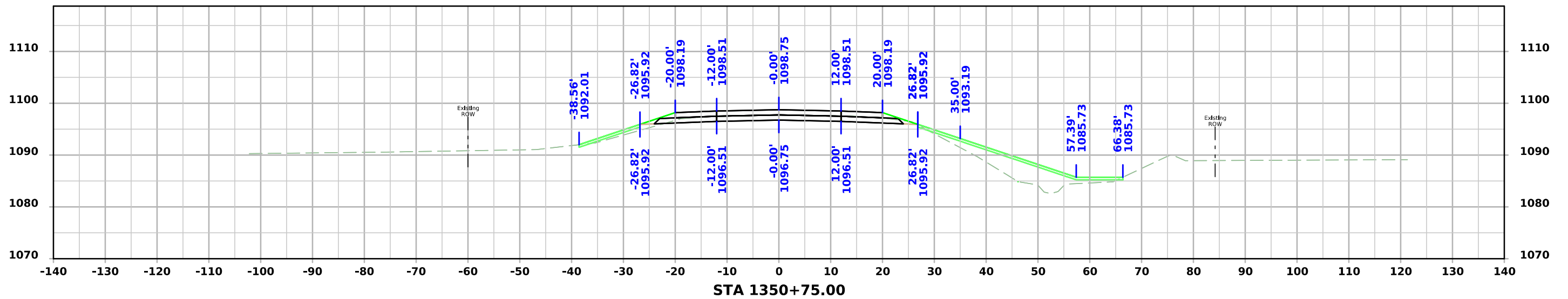


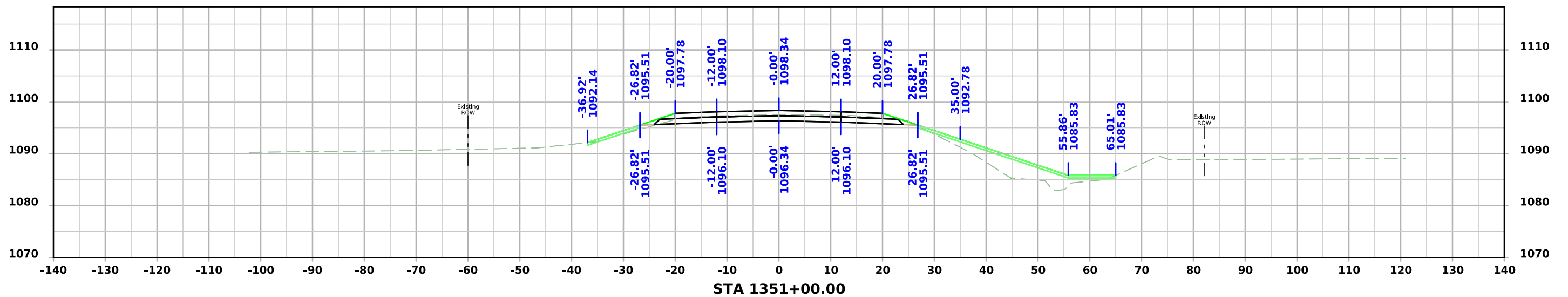
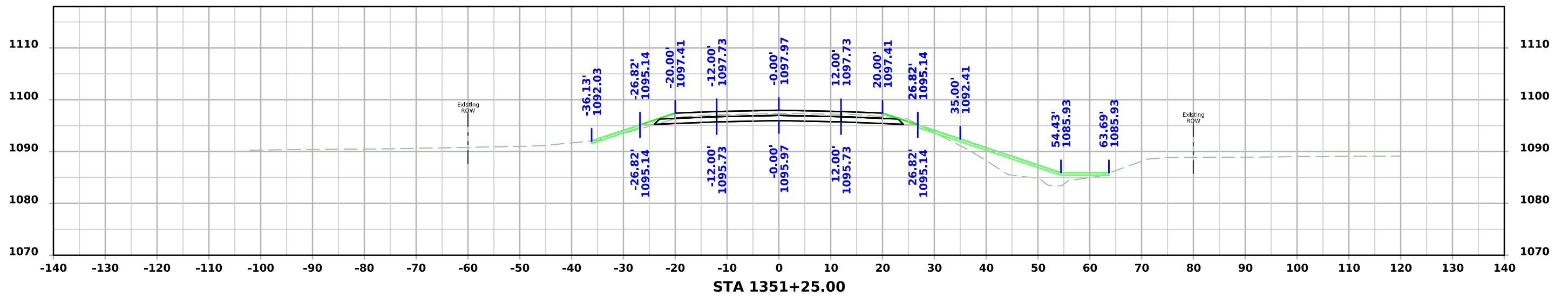
ML - IA37

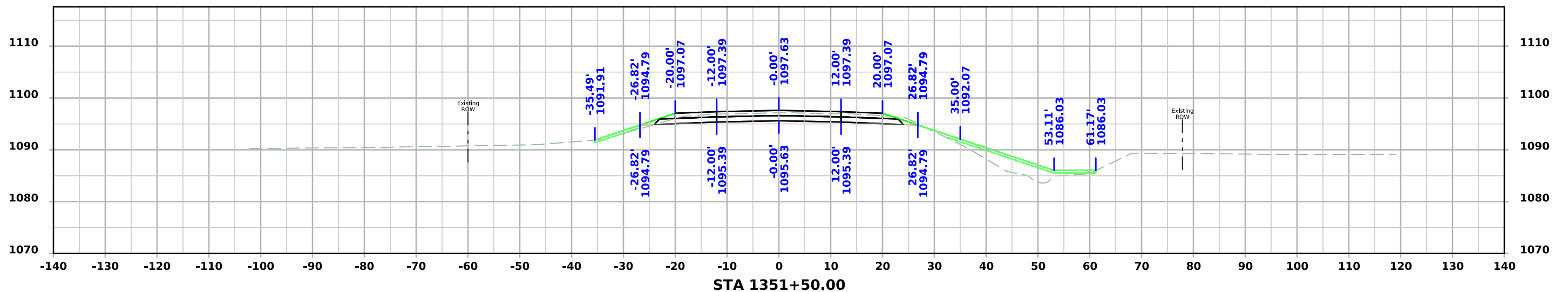
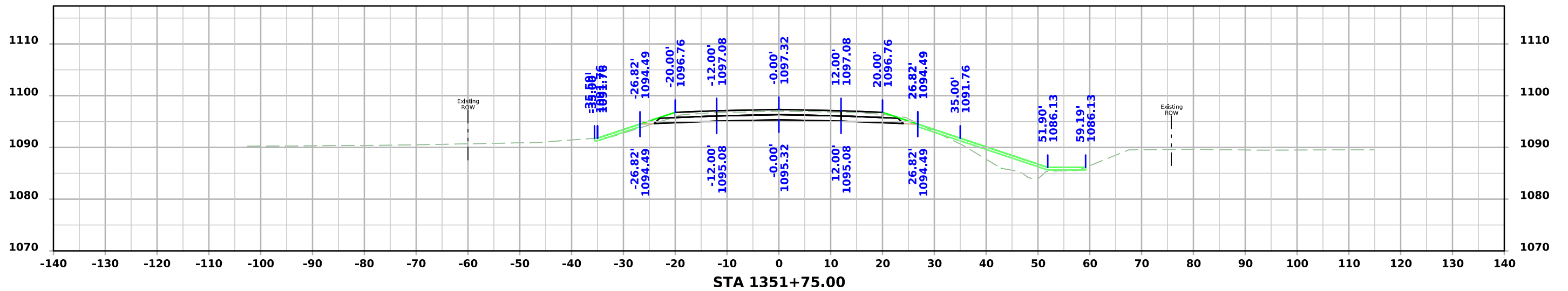












ML - IA37

