

INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	Title Sheets
A.1	Title Sheet
A.2	Location Map Sheet
A.3	Concept Statement
B Sheets	Typical Cross Sections and Details
B.1 - B.4	Typical Cross Sections and Details
D Sheets	Mainline Plan and Profile Sheets
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - D.6	I80 EB
* D.7	I80 WB
E Sheets	Side Road Plan and Profile Sheets
* E.1	US 6/169
G Sheets	Survey Sheets
G.1	Reference Ties and Bench Marks
J Sheets	Traffic Control and Staging Sheets
* J.1	Traffic Control Plan
K Sheets	Interchange Sheets
* K.1	Interchange Layout Sheets
* K.2	RAMP B Plan and Profile Sheets
* K.3	RAMP D Plan and Profile Sheets
V Sheets	Bridge and Culvert Situation Plans
V.1 - V.2	Bridge and Culvert Situation Plans
W Sheets	Mainline Cross Sections
W.1 - W.115	I-80 (Eastbound) Mainline Cross Sections
W.116 - W.129	I-80 (Westbound) Mainline Cross Sections
Y Sheets	Ramp Cross Sections
Y.1 - Y.14	Ramp Cross Sections
	* Color Plan Sheets



PLANS OF PROPOSED IMPROVEMENT ON THE
**PRIMARY ROAD SYSTEM
DALLAS COUNTY**
PCC PAVEMENT - NEW
W OF US 6/169 TO E OF US6/169 INTERCHANGE (EB/WB)

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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

**REFER TO SHEET A.2 FOR
PROJECT LOCATION MAP**

REVISIONS

TOTAL
..
PROJECT IDENTIFICATION NUMBER
22-25-080-030
PROJECT NUMBER
IMN-NHS-080-3(322)110--02-25
R.O.W. PROJECT NUMBER
IMN-080-3(325)110--0E-25



MILEAGE SUMMARY			
DIV.	LOCATION	LIN. FT.	MILES
I-80 EB	Sta. 1591+50.00 to Sta. 1711+74.93	12,024.93	2.277
	Deduct Bridge from Sta. 1643+61.17 to Sta. 1645+69.60	208.43	0.039
I-80 WB	Sta. 2639+00.00 to Sta. 2654+00.00	1,500.00	0.284
	Deduct Bridge from Sta. 2644+16.40 to Sta. 2646+27.49	211.09	0.040
Ramp B	Sta. 2527+38.95 to Sta. 2533+00.00	561.05	0.106
Ramp D	Sta. 4529+25.00 to Sta. 4536+90.16	765.16	0.145
	Total length of Roadway in Project	14,431.62	2.733
	Total length of Bridge in Project	419.52	0.079
	Total length of Project	14,851.14	2.813

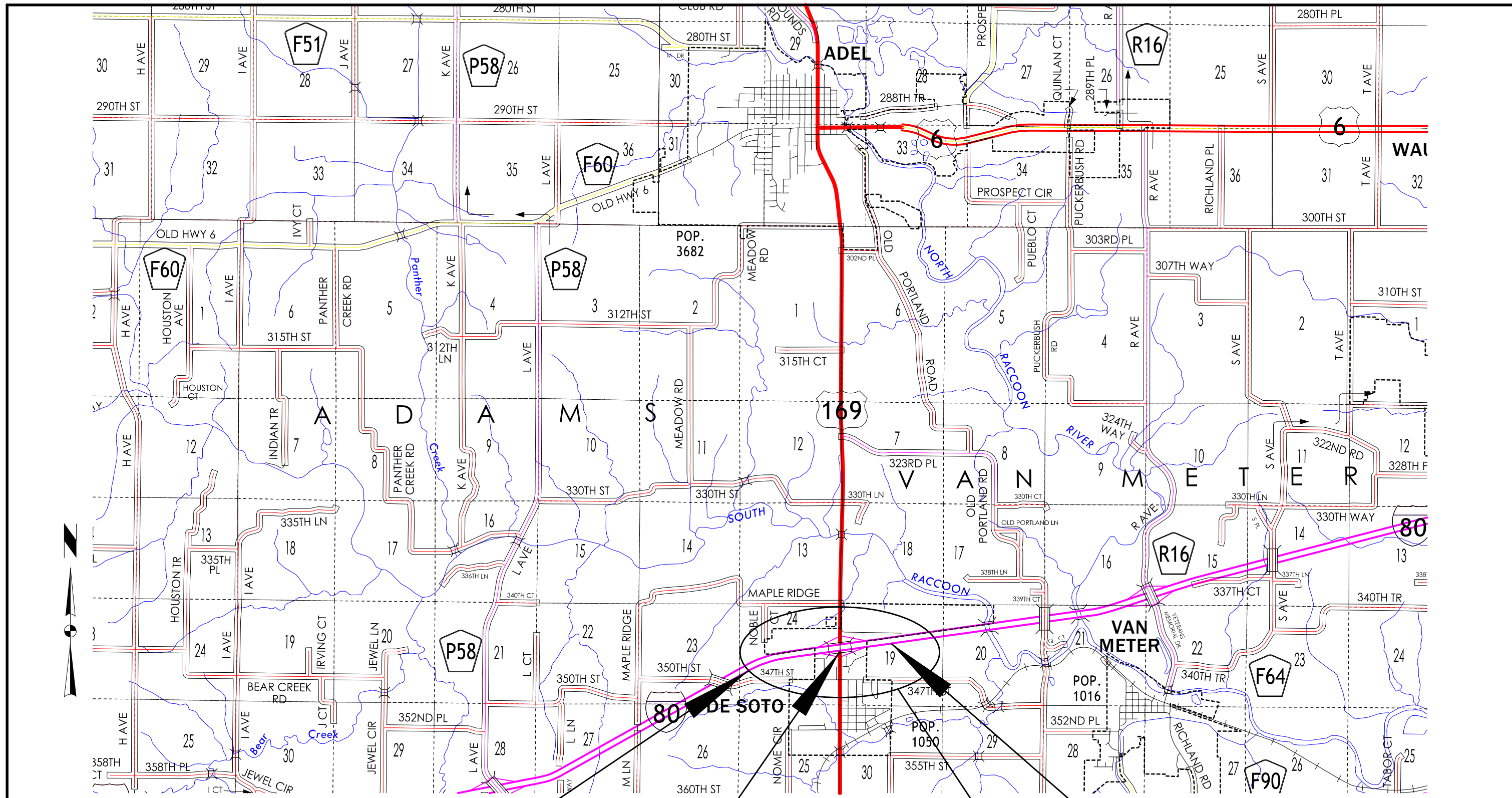
DESIGN DATA RURAL			
2022	AADT	37,500	V.P.D.
2050	AADT	61,300	V.P.D.
20	DHV	-	V.P.H.
	TRUCKS	26.5	%
	Total Design ESALs	-	

INDEX OF SEALS		
SHEET NO.	NAME	TYPE
A.1	X	Primary Signature Block
X	X	X

PRELIMINARY PLANS

Subject to change by final design.

D3 PLAN - Date: APRIL 15, 2024

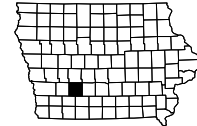


BEGIN CONSTRUCTION
STA 1591+50

END CONSTRUCTION
STA 1711+75

PROJECT LOCATION

I-80 BRIDGE OVER US HIGHWAY 169
 FHWA No.: 22280 and 22290 DESIGN No.: XXXX
 IMX-080-3(322)110--02-25 (EB)
 IMX-080-3(324)110--02-25 (WB)



FINAL PROJECT CONCEPT STATEMENT

I-80 and US-169 Bridge Replacement Concept

Dallas County
Proj.# IMX-080-3(322)110--02-25

IMX-080-3(323)110--02-25 Bridge (EB)
IMX-080-3(324)110--02-25 Bridge (WB)
IMX-080-3(331)110--02-25 Pavement - Grade and New (EB)
IMX-080-3(333)110--02-25 Pavement - Grade and New (WB)

Maint. No. 2510.1R080 and 2510.1L080 FHWA No. 22280 and 22290

Prepared by Foth Infrastructure & Environment
for the Iowa Department of Transportation
District 4

October 9, 2023

I. STUDY AREA

A. Project Description

The project consists of the bridge replacements at the existing Interstate 80 (I-80) interchange with US Highway 6/169 in Dallas County. The purpose of the project is to replace the existing dual bridges at the interchange to increase the vertical clearance to meet the current design standards.

Figure 1



Project Location Map

B. Need for Project

The existing I-80 profile does not provide the required 16.5' vertical bridge clearance over a primary route. The existing bridges have been in service for 57 years and have been identified for replacement after multiple recurrences of being struck by high loads. The study area included mainline I-80 approximately 5200 feet west to 6500 feet east of the structures to allow for a profile grade raise. The proposed bridge replacement will accommodate future anticipated US 6/169 capacity improvements when warranted.

A traffic operational analysis of I-80 and US 6/169 interchange was completed in 2019 and a subsequent interim capacity improvement project was completed in 2021 to address the existing back-ups onto the I-80 westbound off ramp, as well as delays for the I-80 westbound to US 6/169 northbound and US 6/169 southbound to I-80 eastbound movements. The previously completed traffic analysis assessed both the existing traffic volumes and the projected traffic growth along the corridor.

An additional traffic sensitivity analysis was completed in November of 2022 to further evaluate geometric needs of US 6/169 at the interchange with I-80. This analysis had two primary purposes:

- Determine the appropriate US 6/169 roadway cross section to incorporate into the proposed I-80 bridge replacement concept.
- Estimate how long the US 6/169 interim capacity improvements would last based on updated traffic forecast numbers. Future interchange configuration types were included with this planning level analysis. Level of Service (LOS) analysis were completed for the current year (2022) and future years 2037, 2040 and 2050.

C. Present Facility

I-80 is a four-lane interstate with a posted speed of 70 mph. The existing roadway is 26-ft wide concrete with HMA paved 8-ft wide (10' effective outside shoulder width) shoulders. Rumble strips exist on both the inside and outside shoulders. An existing cable guardrail is installed along the westbound shoulder.

The existing structures carrying I-80 traffic over US 6/169 are dual 211-ft x 39-ft prestressed concrete beam bridges constructed in 1966. A deck repair and surface overlay project was completed in 1978 on both structures. Emergency repair projects were completed on three occasions to address beam damage from high load strikes. In 1970, Beams 7, 8 and 9 of Span 3 of the eastbound bridge were replaced along with portions of the rail, curb, deck and pier diaphragms. In 2017, Beam 9 of the westbound bridge and Beams 3, 5, 7 and 8 of the eastbound bridge, all in Span 3, were repaired with FRP laminate. In 2021, Beam 9 of Span 3 of the eastbound bridge was replaced along with portions of the rail, curb, deck, and pier diaphragm.

The original US 6/169 in the project area was a two-lane rural facility and was built in 1966 with 24-ft wide PCC pavement. The I-80 ramps were built in 1966 with 16-ft wide PCC pavement. An HMA overlay was done in 1978 to form a composite pavement.

Today, US 6/169 is a two-lane rural principal arterial roadway with a posted speed limit of 45 mph through the interchange from Ash Street to Ellefson Drive. The existing pavement section is an 8"

PCC with a 2" HMA overlay. The HMA surface was milled and replaced in 2021 along with an interim pavement widening project to construct left turn and right turn lanes serving the westbound and eastbound entrance ramps to I-80. The 2021 interim improvement project also included construction of a westbound right turn lane on the I-80 exit ramp to northbound US 6/169 and the widening of the eastbound I-80 entrance ramp lane to include 585-ft two-lane ramp ahead of a 315-ft merge taper.

Currently, no pedestrian facilities exist within the project area.

D. Traffic Estimates

The table below shows data regarding the current traffic year (2022) and future design year (2050) average daily traffic estimates for the project area.

Location	2022	2050
I-80 west of 169	25,500	42,100
I-80 east of 169	34,900	61,300
169 north of WB ramps	10,200	20,200
169 south of EB ramps	8,400	15,900
WB off ramp	5,700	11,500
WB on ramp	1,350	2,400
EB off ramp	1,350	2,500
EB on ramp	6,350	12,600

**Table 1
 Average Daily Traffic (Existing and Future)**

The current year (2022) and future design year (2050) percent truck traffic north and south of I-80 on US 6/169 is estimated to be 8% and 7% respectively.

Link to the 2019 Traffic Operations Analysis: [16I010.07 - Rpt-Dallas I-80-US 169 Interchange Concept TIS FINAL.pdf](#)

Link to the 2022 Traffic Operations Analysis: [2022-1118 Iowa DOT Memo I-80 and Hwy 169.pdf](#)

E. Bridge Condition Index

The bridge condition index for the I-80 westbound overpass is 76 and the eastbound overpass is 73. US 6/169 is classified as a principal arterial and is a maintenance service level "B" road with a sufficiency rating of 67.5.

F. Access Control

I-80 is classified as Interstate/Freeway (I/F) access controlled and no new access rights or locations are included with this project. In general, along US 6/169 full accesses currently exist at 600-ft spacings from the ramp terminals. The ramp terminals are spaced approximately 850-ft apart and will not change with this project.

G. Crash History

During the five-year study period from 2018 through 2022 there were 14 crashes reported along I-80 within the interchange limits including one fatality and two possible minor injuries. The fatality involved a single westbound vehicle and the cable barrier rail.

During the three and a half years (2018 through June 2021) prior to the interim improvements on US 6/169 there were 22 crashes reported along US 6/169 within the interchange corridor with none being fatal. During the construction phase of the interim improvements from July 2021 to December 2021, there were 4 reported crashes. In 2022, 4 crashes were recorded with one being a possible or unknown injury and the other 3 property damage only.

II. PROJECT CONCEPT

A. Feasible Alternates

7 different alternatives were considered as part of this concept. 3 alternatives were carried forward in this final concept document. Alternatives #2 and #6 were eliminated from consideration due to non-desirable shift in the eastbound I-80 alignment using two sets of reverse curves contained within the limits of the interchange. Similarly, Alternatives #3 and #4 were eliminated from consideration with both alternatives having a symmetrical shift for the eastbound and westbound alignments about the centerline of existing I-80 using a set of reverse curves within the limits of the interchange. Alternate #3 was a 30-ft shift towards the outside and Alternate #4 included a 12-ft shift towards the outside. Considering the limited distance to develop the reverse curves and superelevation transitions, it was not desirable to shift both the eastbound and westbound lanes to complete the I-80 bridge replacements.

Alternatives #1, #5 and #7 were carried forward and are described in greater detail below.

Alternative #1 – Widen towards Median

Alternative #1 includes the replacement of both bridges with new dual structures, new approaches minimal permanent roadway pavement, and associated work. Eastbound and westbound I-80 centerlines will have a slight shift of less than 1-ft towards the outside (north and south). The dual structure will accommodate the future expansion of I-80 to an urban six-lane facility by adding a lane in the median in each direction. Approximately 550-ft and 750-ft of mainline I-80 will be reconstructed west and east of the bridge respectively. The new profile will be approximately 2.5-ft higher than existing profile to meet the current preferred vertical clearance requirements.

I-80 traffic will be maintained via staged construction with no anticipated detours. Two 12-ft lanes with a minimum 3-ft shoulders on I-80 will be maintained in each direction throughout the duration of the project. Temporary concrete barrier rail will be used to protect traffic and the construction zone. Major construction staging will be as follows:

- Stage 1: Complete shoulder reconstruction/strengthening and partial removal of the existing eastbound and westbound bridges to accommodate Stage 1 bridge construction. Shift eastbound and westbound I-80 traffic approximately 7-ft onto the outside shoulders.

Construct interior 22-ft of each dual bridge between the two existing bridges, bridge approaches, roadway pavement and associated work.

- Stage 2: Construct temporary pavement to shift westbound I-80 traffic to the median utilizing the center portion of the new bridges constructed during Stage 1. Remove existing westbound bridge and construct remaining outer 38-ft of the westbound bridge, bridge approaches, roadway pavement and associated work.
- Stage 3: Shift westbound I-80 traffic to the new westbound bridge and utilize temporary pavement to shift eastbound I-80 traffic to the center portion of the new bridges constructed during Stage 1. Remove existing eastbound bridge and construct remaining outer 38-ft of the eastbound bridge, bridge approaches, roadway pavement and associated work.

The proposed bridge replacements will accommodate future US 6/169 capacity improvements anticipated to be a 4-lane divided urban cross section with 20-ft median that will accommodate left turns when warranted.

New steel beam guardrail will be installed at both bridge approaches and a combination of new permanent concrete barrier rail and cable median barrier will be replaced within the project limits.

New lighting is not anticipated with this project.

No Permanent Right-of-Way or Temporary Construction Easements are anticipated with Alternative #1. All work will be contained within the existing interchange limits.

The summary of 2022 estimated construction costs for Alternative #1 is as follows:

<u>Bridge</u>	<u>2022 Estimated Cost</u>
Dual Bridges 199' x 60' PPCB	\$10,224,500
Contingency 20%	\$2,044,900
Bridge Subtotal	\$12,269,400
<u>Road</u>	<u>2022 Estimated Cost</u>
Grading and Paving	\$7,481,100
Contingency @ 30%	\$2,244,400
Road Subtotal	\$9,725,500
Total for Alternative #1	\$18,995,100
<i>Cost/mile (0.6 miles)</i>	<i>\$31,659,000</i>

Link to Alternative # 1 Concept: [Alternative 1 Concept Display.pdf](#)

Link to Alternative #1 detailed construction costs: [Alternative 1 Construction Costs.pdf](#)

Alternative #5 – Shift eastbound I-80 south with new mainline I-80 horizontal curve

This alternative includes the replacement of the existing dual bridges with new dual bridges, bridge approaches, permanent roadway pavement and associated work. Westbound I-80 centerline would remain on its current alignment and the eastbound I-80 centerline would shift

south approximately 60-ft. The transition from existing eastbound I-80 alignment near the west project limits to the new eastbound I-80 alignment would be accomplished with the reconstruction of the existing mainline I-80 horizontal curve. The 60-ft shift south matches the eastbound I-80 reconstruction over the North and South Raccoon Rivers project approximately 1.5 miles east of US 6/169 near the east project limits.

Eastbound I-80 will be reconstructed approximately 5200-ft west and 6500-ft east of the bridge respectively. The east projects limits will connect to the western limits of the current I-80 reconstruction project over the North and South Raccoon Rivers project. Westbound I-80 will be reconstructed approximately 400-ft west and 750-ft east of the bridge respectively. Both the eastbound and westbound lanes will be constructed with a new profile approximately 2.5-ft higher than existing profile to meet the current preferred vertical clearance requirements. Alternative 5 will accommodate a future traffic lane in each direction within the proposed median.

Traffic will be maintained via staging and detour routes. Two 12-ft lanes with a minimum 3-ft shoulders on I-80 will be maintained in each direction throughout the duration of the project. Temporary concrete barrier rail will be used to protect traffic and the work zone. Major construction staging will be as follows:

- Stage 1: Maintain westbound I-80 traffic. Complete eastbound I-80 shoulder reconstruction/strengthening and shift eastbound I-80 traffic 3-ft towards the median between interchange gore areas. Complete partial removal of the existing eastbound I-80 bridge and construct new eastbound I-80 road and bridge leaving gaps at existing eastbound I-80 on and off ramps. Approximately 8000-ft of new eastbound I-80 grading and paving would be part of Stage 1.
 - Stage 2: Construct temporary median pavement to existing eastbound I-80 pavement near west and east project limits. Shift eastbound I-80 to temporary median pavement and complete tie-in to the new eastbound lanes from existing pavement near west and east project limits.
 - Stage 3: Detour eastbound I-80 and US 6/169 off ramp traffic at the I-80 Exit 106 Dallas County F-90 (360th Street), then east on Dallas County F-90 to US 6/169, then back north on US 6/169 to I-80. Detour eastbound I-80 and US 6/169 on ramp traffic south to Dallas County F-90, then west on Dallas County F-90 to the I-80 Exit 106 eastbound on ramp, then east on I-80 back to the US 6/169 interchange. The out of travel distance for eastbound exit ramp traffic is approximately 1.5 miles. The out of travel distance for north and southbound US 6/169 eastbound on ramp traffic via the detour is 8.5 miles.
- Construct remaining I-80 eastbound lanes and the new eastbound US 6/169 exit and entrance ramp tie-ins. Note that the proposed ramp tie-ins and profiles will work with future interchange configuration.
- Stage 4: Shift eastbound I-80 to newly constructed eastbound I-80 lanes. Construct temporary median pavement and utilize the existing crossover east of the interchange to shift westbound I-80 to existing eastbound I-80 and construct new westbound I-80 bridge and roadway. Existing westbound I-80 on and off ramps will be maintained during this stage.

The proposed bridge replacements will accommodate future US 6/169 capacity improvements anticipated to be a 4-lane divided urban cross section with 20-ft median that will accommodate left turns when warranted.

New steel beam guardrail will be installed at both bridge approaches and the cable median barrier will be replaced within the project limits.

New lighting is not anticipated with this project.

Alternative #5 will require permanent right-of-way acquisition and temporary easements along the southside of I-80. An estimated 13 properties on the south side of I-80 will be impacted, including 7 residential properties along the I-80 eastbound exit ramp to US 6/169. See Table 2 for a breakdown of anticipated acquisition types. A retaining wall placed just outside of the I-80 eastbound exit ramp clear zone with a maximum height of approximately 16-ft or less has been incorporated into the project to minimize property impacts.

Type of Acquisition	Number of Parcels
Permanent Right-of-Way	6
Easements	7
Displacements	0

Table 2
Alternative #5 – Anticipated Property Impacts

The summary of 2022 estimated construction costs for Alternative #5 is as follows:

Bridge	2022 Estimated Cost
Dual Bridges 199' x 60' PPCB	\$5,325,000
Contingency 10%	\$532,500
Bridge Subtotal	\$5,857,500
Road	2022 Estimated Cost
Grading and Paving	\$15,191,100
Contingency @ 30%	\$4,557,400
Road Subtotal	\$19,748,500
Total for Alternative #5	\$25,606,000
<i>Cost/mile (2.5 miles)</i>	<i>\$10,242,000</i>

Link to Alternative # 5 Concept: [Alternative 5 Concept Display.pdf](#)

Link to Alternative #5 detailed construction costs: [Alternative 5 Construction Costs.pdf](#)

Alternative #7 - Shift eastbound I-80 south with reverse curves

This alternative includes the replacement of the existing dual bridges with new dual bridges, bridge approaches, permanent roadway pavement and associated work. Like Alternative #5, westbound I-80 centerline will remain on its current alignment and the eastbound I-80 centerline would shift south approximately 60-ft. The difference from Alternative #5 is that the transition

from the existing eastbound I-80 alignment to the new eastbound alignment would be accomplished with set of reverse curves just east of the existing mainline I-80 horizontal curve near the west project limits. The 60-ft shift south matches the eastbound I-80 reconstruction over the North and South Raccoon Rivers project approximately 1.5 miles east of US 6/169 near the east project limits.

Eastbound I-80 would be reconstructed approximately 1900-ft west and 6500-ft east of the bridge respectively. The east projects limits would connect to the western limits of the current I-80 reconstruction project over the North and South Raccoon Rivers project. Westbound I-80 would be reconstructed approximately 400-ft west and 750-ft east of the bridge respectively. Both the eastbound and westbound lanes will be constructed with a new profile approximately 2.5-ft higher than existing profile to meet the current preferred vertical clearance requirements. Alternative #7 will accommodate a future traffic lane in each direction within the median.

Traffic will be maintained via staging and detour routes. Two 12-ft lanes with a minimum 3-ft shoulders on I-80 will be maintained in each direction throughout the duration of the project. Temporary concrete barrier rail will be used to protect traffic and the construction zone. Major construction staging will be as follows:

- Stage 1: Maintain westbound I-80 traffic. Complete eastbound I-80 shoulder reconstruction/strengthening and shift eastbound I-80 traffic 3-ft towards the median between interchange gore areas. Complete partial removal of the existing eastbound I-80 bridge and construct the new eastbound I-80 road and bridge leaving gaps at existing eastbound I-80 on and off ramps. Approximately 6700-ft of new eastbound I-80 grading and paving would be part of Stage 1.
 - Stage 2: Construct temporary median pavement to existing eastbound I-80 pavement near the west and east project limits. Shift eastbound I-80 to temporary median pavement and complete tie-in to the new eastbound lanes from existing pavement near west and east project limits.
 - Stage 3: Detour eastbound I-80 and US 6/169 off ramp traffic at the I-80 Exit 106 Dallas County F-90 (360th Street), then east on Dallas County F-90 to US 6/169, then back north on US 6/169 to I-80. Detour eastbound I-80 and US 6/169 on ramp traffic south to Dallas County F-90, then west on Dallas County F-90 to I-80 Exit 106 eastbound on ramp, then east on I-80 back to the US 6/169 interchange. The out of travel distance for eastbound exit ramp traffic is approximately 1.5 miles. The out of travel distance for north and southbound US 6/169 eastbound on ramp traffic via the detour is 8.5 miles.
- Construct remaining I-80 eastbound lanes and the new US 6/169 exit and entrance ramp tie-ins. Note that the proposed ramp tie-ins and profiles will work with the future interchange configuration.
- Stage 4: Shift I-80 eastbound to newly constructed lanes. Construct temporary median pavement and utilize the existing crossover east of the interchange to shift westbound I-80 to existing eastbound I-80 and construct new I-80 westbound bridge and roadway. Existing I-80 westbound on and off ramps will be maintained during this stage.

Improvements to US 6/169 are not anticipated with this project, however the proposed bridges will accommodate a future Diverging Diamond Interchange configuration. Alternative 7 will also accommodate the widening of US 6/169 from the current 3-lane cross section to a 5-lane cross section urban section with pedestrian accommodations.

New steel beam guardrail will be installed at both bridge approaches and the cable median barrier will be replaced within the project limits.

New lighting is not anticipated with this project.

Alternative #7 will require permanent right-of-way acquisition and temporary easements along the southside of I-80. An estimated 12 properties on the south side of I-80 would be impacted, including 7 residential properties along the I-80 eastbound exit ramp to US 6/169. See Table 3 for a breakdown of anticipated acquisition types. A retaining wall placed just outside of the I-80 eastbound exit ramp clear zone with a maximum height of approximately 13-ft or less has been incorporated into the project to minimize property impacts.

Type of Acquisition	Number of Parcels
Permanent Right-of-Way	5
Easements	7
Displacements	0

Table 3
Alternative #7 – Anticipated Property Impacts

The summary of 2022 estimated construction costs for Alternative #7 is as follows:

Bridge	2022 Estimated Cost
Dual Bridges 199' x 60' PPCB	\$5,325,000
Contingency 10%	\$532,500
Bridge Subtotal	\$5,857,500
Road	2022 Estimated Cost
Grading and Paving	\$11,109,900
Contingency @ 30%	\$3,333,000
Road Subtotal	\$14,442,900
Total for Alternative #7	\$20,300,400
<i>Cost/mile (1.9 miles)</i>	<i>\$10,684,000</i>

Link to Alternative # 7 Concept: [Alternative 7 Concept Display.pdf](#)

Link to Alternative #7 detailed construction costs: [Alternative 7 Construction Costs.pdf](#)

B. Recommendations

It is recommended that Alternative #5 be implemented to reconstruct the mainline I-80 bridges over US 6/169. Alternative #5 provides the following:

- A consistent cross section with the current I-80 reconstruction and bridge replacements over the North and South Raccoon Rivers project 1.5 miles east of this project limit.
- Maintains I-80 mainline as a rural cross section within the project limits.
- Geometrically, eliminates the use of a reverse curve immediately downstream of an existing I-80 horizontal curve to shift eastbound I-80 alignment.
- Provides the most efficient road construction and minimizes added costs for staged bridge construction.
- Minimizes the amount of throw away costs for temporary pavement, shoring and temporary concrete barrier rail.
- Minimizes disruption to mainline I-80 traffic.

Alternative #5 is the overall most expensive alternative in total costs, however it includes the most roadway reconstruction of the three alternatives. In comparison of costs/mile, Alternative #5 is the most cost-effective and provides the preferred roadway section compatible with the long-term plans for reconstruction of the corridor.

C. Construction Sequence

It is anticipated that the bridge replacement work will consist of three project lettings and constructed over 3 construction seasons.

- Eastbound grading and bridge in year 1
- Eastbound paving in year 2
- Westbound grading, paving and bridge in year 3

D. Special Considerations

The following conditions were identified for approval and will be implemented during the design process prior to construction:

Right-of-way requirements will be minimized to the extent possible during final design. No total acquisitions or relocations are anticipated at this time.

Location and Environment Bureau (LEB) has not reviewed the proposed alternatives. Based on cursory review of the National Wetlands Mapper, it is anticipated at a minimum that there may be a stream impact from an outlet of a pond east of the existing interchange south of I-80.



Figure 2

2023 National Wetlands Inventory Map

A Section 401 Water Quality Certificate from the Iowa DNR is anticipated for any unavoidable stream impacts.

A Section 404 permit from USACE is anticipated for stream and wetland impacts. A permit application and wetland mitigation plan will be submitted to the USACE for approval.

A National Pollutant Discharge Elimination System (NPDES) general stormwater discharge permit for construction will be required from the DNR. The Iowa DOT will require the contractor to comply with measures outlined in the Stormwater Pollution Prevention Plan (SWPP)

Trees will be cut after October 1st and before March 31st per Iowa DOT Specifications and impacted woodlands will be mitigated.

Construction activities will be coordinated with public utilities to avoid potential conflicts and to minimize planned interruptions of service.

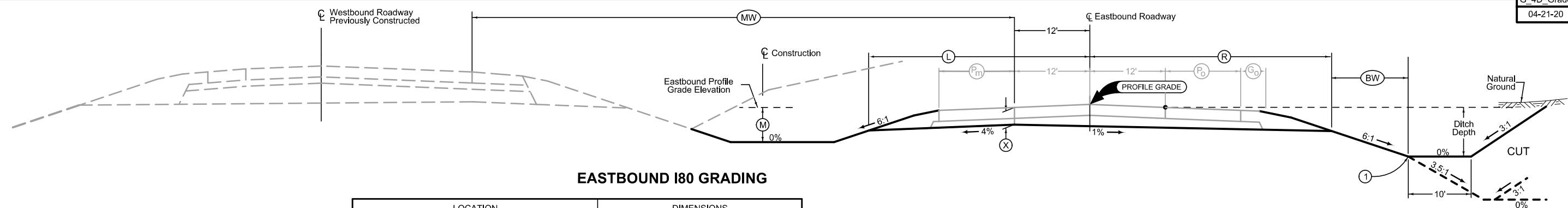
Access will be provided during construction.

E. Program Status

The project is currently program FY 2028 program with the following the following breakdown:

Right-of-Way	\$ 52,000
Bridge (New)	\$ 10,225,000
Grade and Pave	\$ 14,630,000
Traffic Signs	\$ 199,000

The Department should consider reprogramming the allotted dollars that reflects the proposed construction sequence.



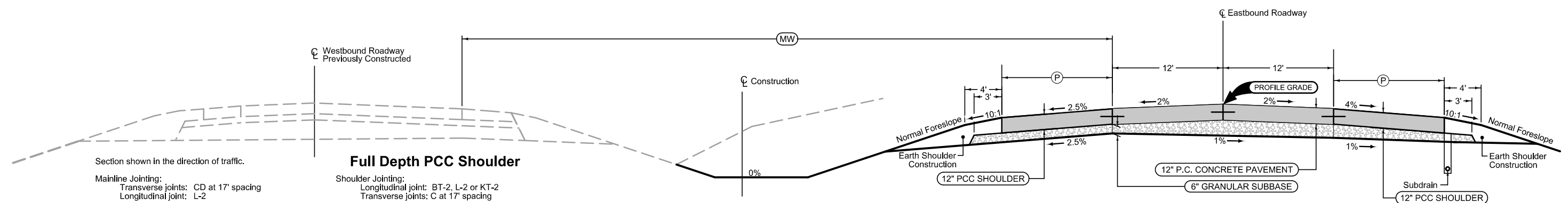
EASTBOUND I80 GRADING

LOCATION		DIMENSIONS						
ROAD IDENTIFICATION	STATION TO STATION	L Feet	R Feet	X Inches	BW Feet	MW Feet	M Feet	
I80 EB	1591+50.00 1616+48.71	38	38	24	VAR.	VAR.	4.0	
I80 EB	1616+48.71 1638+61.19	38	38	24	VAR.	110.0	4.0	
I80 EB	1653+61.19 1711+70.00	38	38	24	VAR.	110.0	4.0	

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

See Plan & Profile sheets and cross sections for additional details of ditches and backslopes.

① Refer to project plan and cross sections for specific location of foreslope change.



EASTBOUND I80 PAVING

4DP_04-21-20

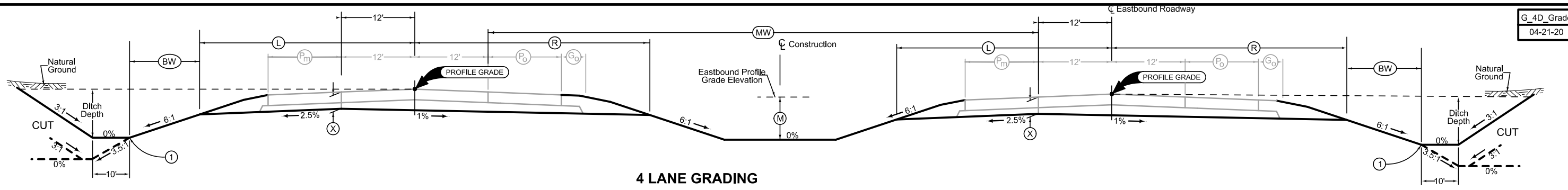
Direction of Travel	BEGIN STATION	END STATION	MW Feet
EB	1591+50.00	1639+00.00	VAR.
EB	1654+00.00	1711+70.00	110

4_P_FullPCC_04-20-21

Direction of Travel	BEGIN STATION	END STATION	P Feet
EB	1591+50.00	1639+00.00	12
EB	1654+00.00	1711+70.00	12

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

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



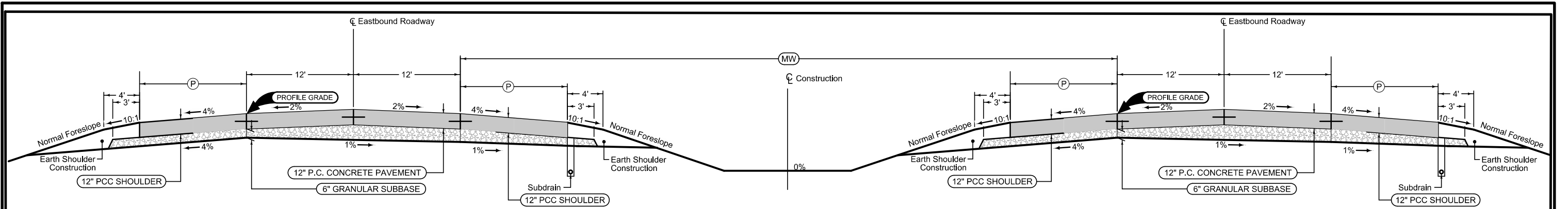
4 LANE GRADING

LOCATION		DIMENSIONS						
ROAD IDENTIFICATION	STATION TO STATION	L Feet	R Feet	X Inches	BW Feet	MW Feet	M Feet	
I80 EB	1638+61.19 1643+60.30	38	38	24	VAR.	110.0	4.0	
I80 EB	1645+69.60 1653+61.19	40	38	24	VAR.	110.0	4.0	
I80 WB	2639+00.00 2644+16.40	37	42	24	VAR.	110.0	4.0	
I80 WB	2646+27.60 2654+00.00	37	42	24	VAR.	110.0	4.0	

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

See Plan & Profile sheets and cross sections for additional details of ditches and backslopes.

① Refer to project plan and cross sections for specific location of foreslope change.



4 LANE PAVING

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.

① Refer to project plan and cross sections for specific location of foreslope change.

Section shown in the direction of traffic.

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

4DP_04-21-20			
Direction of Travel	BEGIN STATION	END STATION	(MW) Feet
EB	1638+61.19	1643+60.30	110
EB	1645+69.60	1653+61.19	110
WB	2639+00.00	2644+16.40	110
WB	2646+27.60	2654+00.00	110

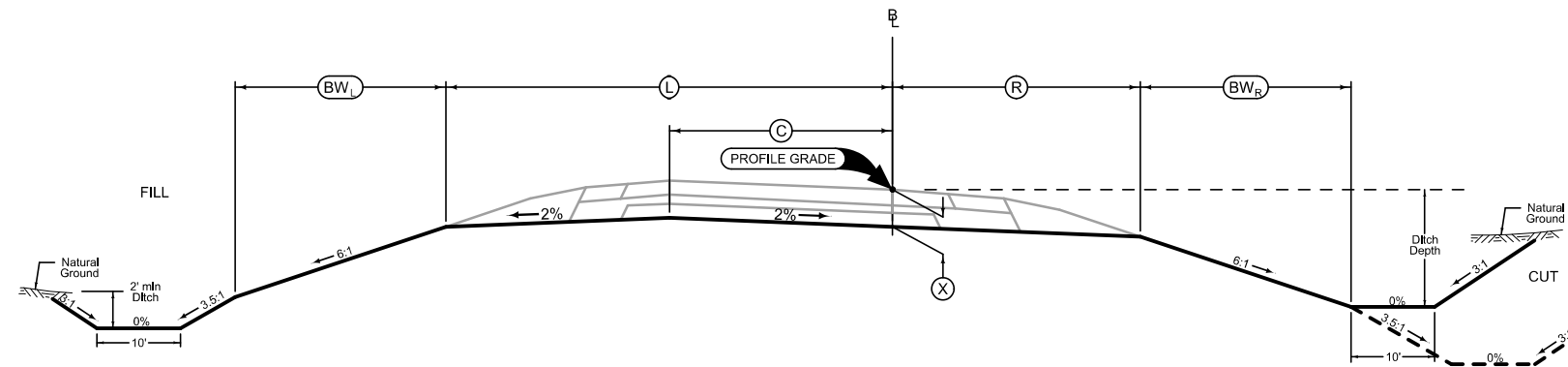
Full Depth PCC Shoulder

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

4_P_FullPCC_04-20-21			
Direction of Travel	BEGIN STATION	END STATION	(P) Feet
EB	1638+61.19	1643+60.30	12
EB	1645+69.60	1653+61.19	12
WB	2639+00.00	2644+16.40	12
WB	2646+27.60	2654+00.00	12

Section view is in direction of traffic.
 Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or superelevated curves.

LOCATION			DIMENSIONS						
INTERCHANGE	RAMP	STATION TO STATION	L Feet	R Feet	C Feet	X Inches	BW _L Feet	BW _R Feet	
US 169 & I80	B	2527+38.95 - 3531+50.00	37.9	23.9	16	24	VAR.	VAR.	
US 169 & I80	B	2531+00.00 - 2533+00.00	VAR.	VAR.	16	24	VAR.	VAR.	
US 169 & I80	D	4529+25.00 - 4531+75.00	44.6	22.6	24	24	14.1	13.6	
US 169 & I80	D	4531+75.00 - 4533+75.00	44.6	22.6	24	24	VAR.	13.6	
US 169 & I80	D	4533+75.00 - 4534+75.00	VAR.	22.6	24	24	VAR.	VAR.	

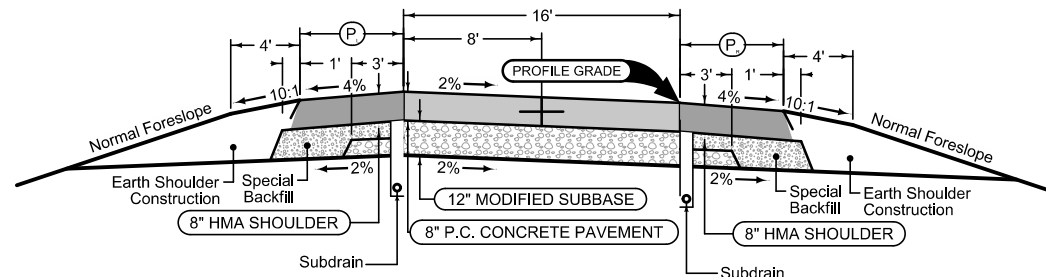


RAMP GRADING

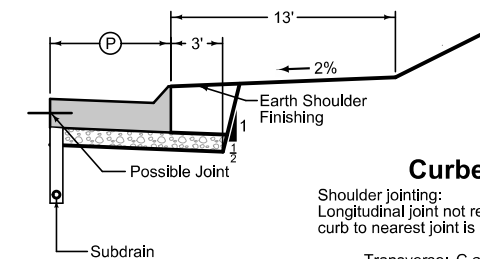
HMA Shoulder

Shoulder Jointing:
 Longitudinal joint: B

1R_P_HMA_10-19-10				
RAMP	BEGIN STATION	END STATION	(P) Feet	(P) Feet
B	2527+38.95	2533+00.00	4	6
D	4534+20.58	4536+90.61	4	6



RAMP PAVING



Curbed Shoulder

Shoulder jointing:
 Longitudinal joint not required when distance from back of curb to nearest joint is less than 16':

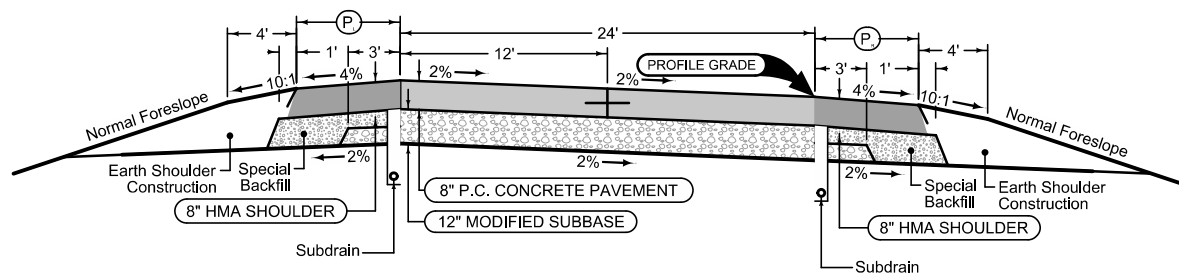
Transverse: C at 15' spacing
 Single pour: L-2
 Staged: KT-2

1R_Curb_10-18-22				
RAMP	BEGIN STATION	END STATION	(P) Feet	Curb Type See PV-102
D	4535+32.00	4536+90.16	6	

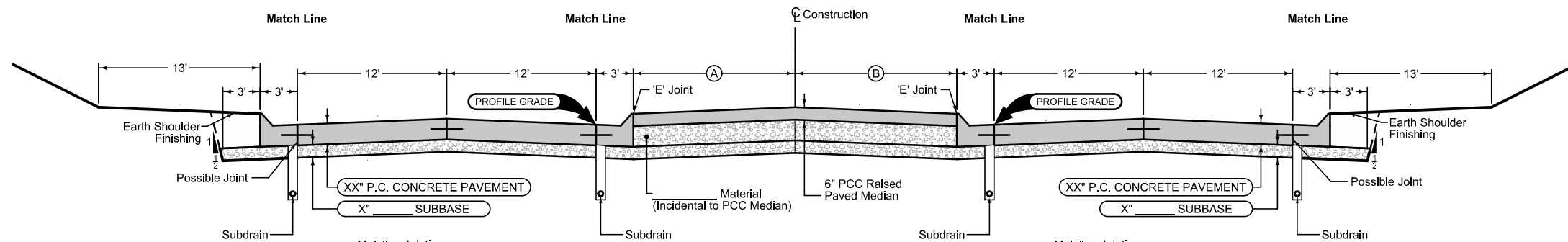
HMA Shoulder

Shoulder Jointing:
 Longitudinal joint: B

1R_P_HMA_10-19-10				
BEGIN STATION	END STATION	(P) Feet	(P) Feet	
4529+25.00	4531+80.51	4	6	



**2 LANE RAMP PAVING
 (RAMP D)**



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

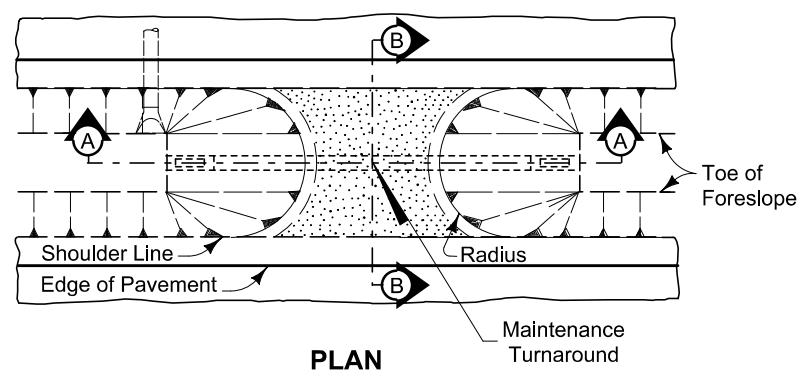
BEGIN STATION	END STATION

4DP_Raised_Crowned_04-21-20			
BEGIN STATION	END STATION	(A) Feet	(B) Feet
		10	10

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

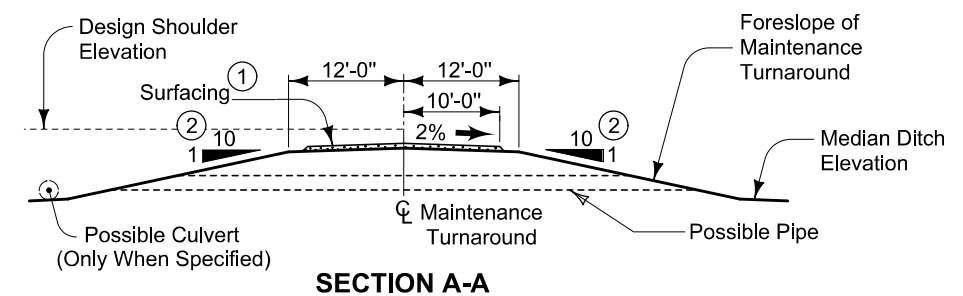
BEGIN STATION	END STATION

**FOR INFORMATION ONLY
 US 169 FUTURE LANE CONFIGURATION**

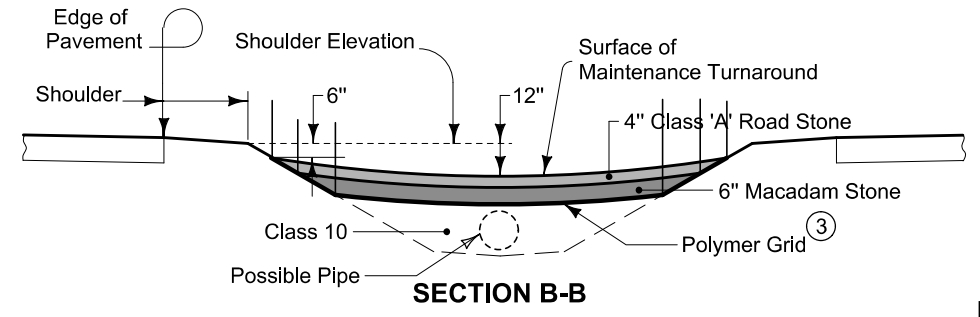


- ① Surfacing quantities based on a 6 inch layer of Macadam Stone base and a 4 inch layer of Class 'A' Road Stone. Apply surfacing as directed by the Engineer.
- ② Construct 8:1 foreslope when drainage pipe is incorporated into the maintenance turnaround.
- ③ Install Polymer Grid between Class 10 and stone material.
- ④ See Standard Road Plan DR-212.

PLAN



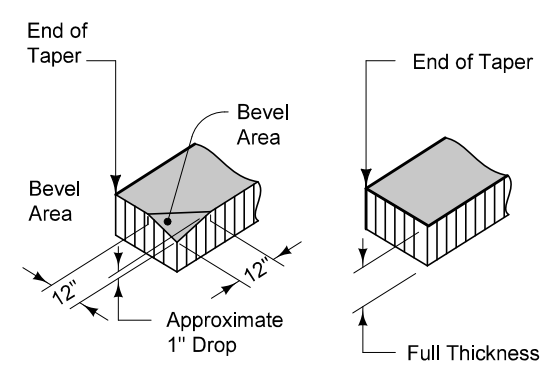
SECTION A-A



SECTION B-B

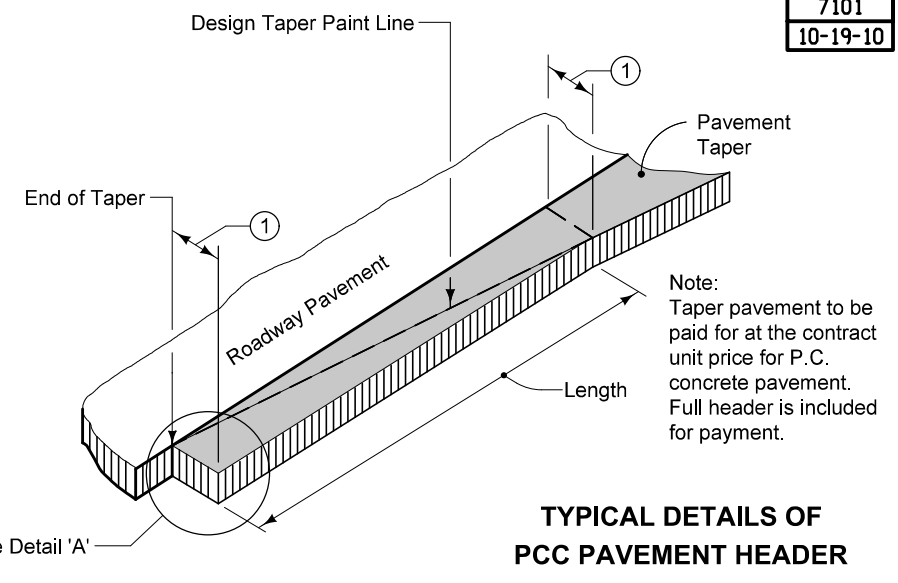
MAINTENANCE TURNAROUND

Location		Class 'A' Road Stone	Macadam Stone	Polymer Grid	Class 10	Pipe Length	Beveled Pipe & Guard ④	Radius	Remarks
Road Identification	Station	TONS	TONS	SY	CY	LF	EACH	FT	
180 EB/WB					See T Sheets			19	



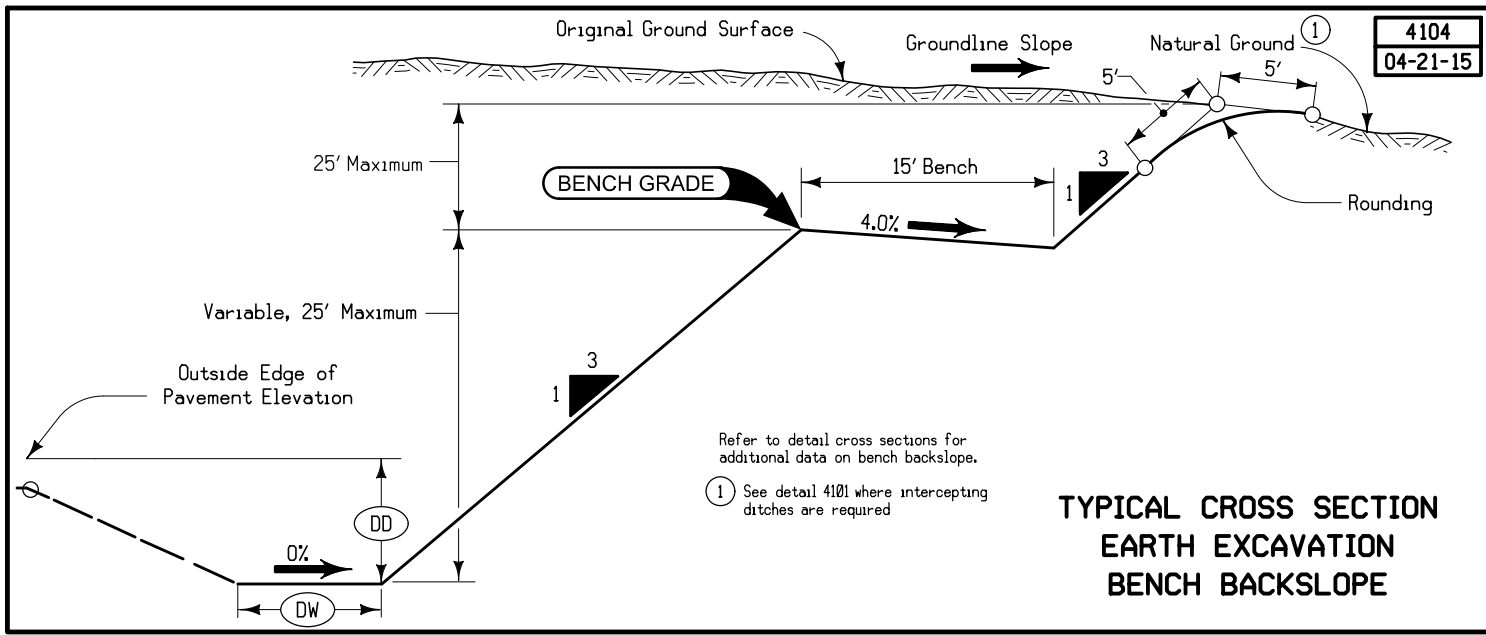
DETAIL 'A' FOR GRANULAR SHOULDERS
DETAIL 'A' FOR PAVED SHOULDERS

- ① Normal width is 2'-0". Construct 4'-0" width when butting into 4' wide HMA shoulders (See Typical 7154A).



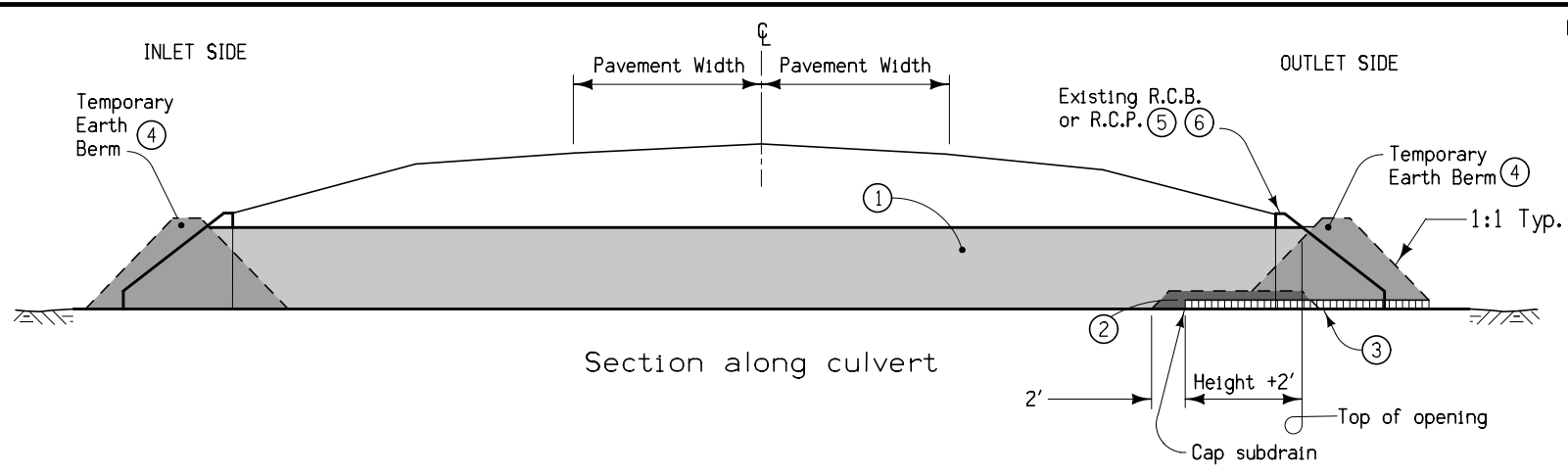
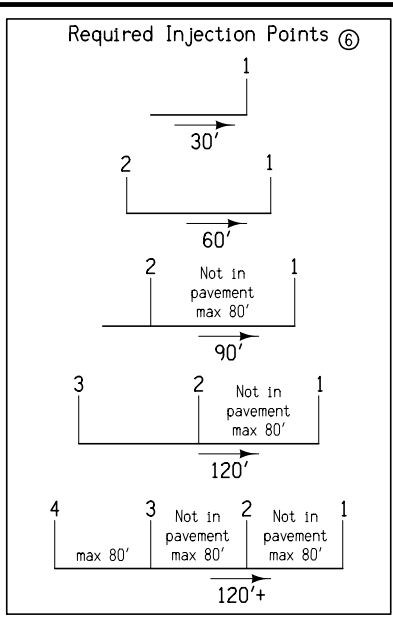
TYPICAL DETAILS OF PCC PAVEMENT HEADER

Note: Taper pavement to be paid for at the contract unit price for P.C. concrete pavement. Full header is included for payment.

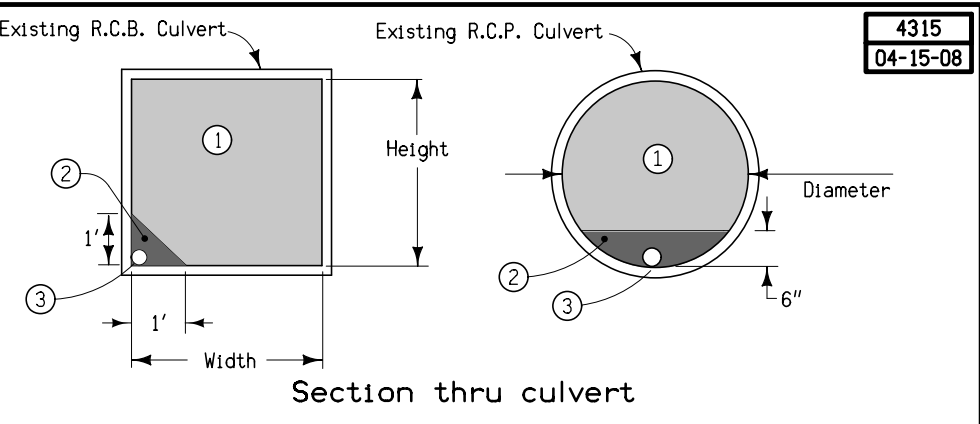


TYPICAL CROSS SECTION EARTH EXCAVATION BENCH BACKSLOPE

Refer to detail cross sections for additional data on bench backslope.
① See detail 4101 where intercepting ditches are required



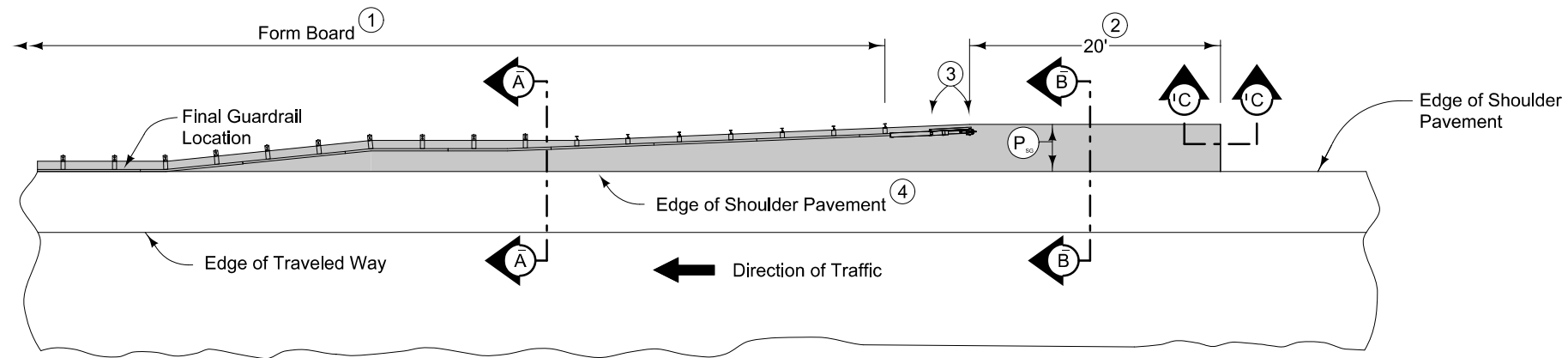
Section along culvert



Section thru culvert

- ① Flowable Mortar.
- ② Granular Backfill.
- ③ 4" subdrain at flowline elevation of culvert shall be extended into the culvert a distance of 2' plus the height of the culvert. Granular Backfill covers subdrain and extends an additional 2'. Subdrain and granular backfill are incidental to flowable mortar.
- ④ Ends of culvert shall be plugged sufficiently to retain flowable mortar. Temporary earth berms are incidental to flowable mortar.
- ⑤ Removal of headwalls may be required.
- ⑥ Outlet shall be filled first. See injection point detail for additional information.

DETAILS OF CULVERT ABANDONMENT WITH FLOWABLE MORTAR
(Rectangular structures less than 8' in either height or width.
Circular structures less than 10' Dia.)

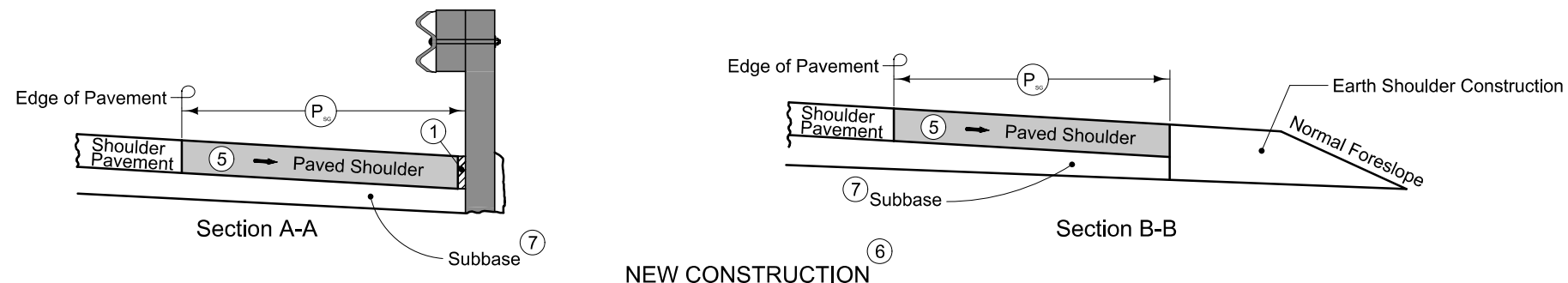


PLAN VIEW

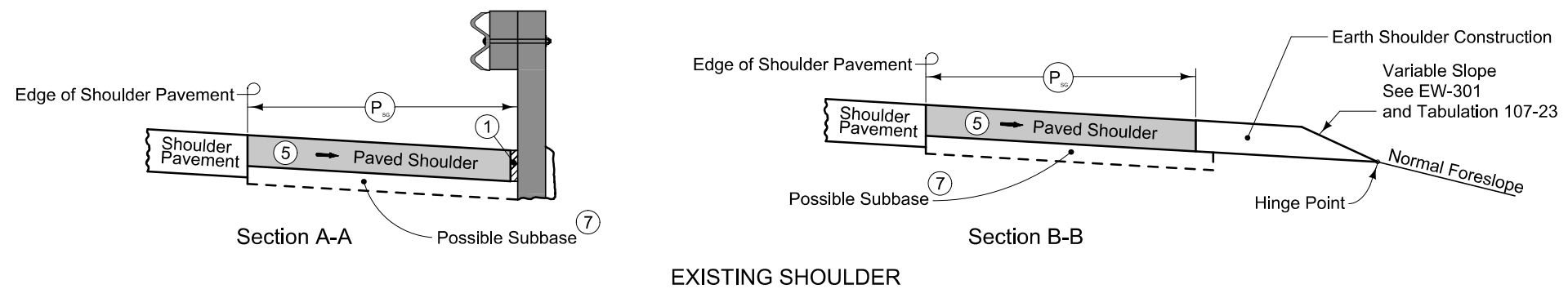
Match mainline pavement joint spacing. When mainline pavement is 8" or greater in thickness, place additional transverse 'C' joints in shoulder at mid-panel of the mainline pavement. Place longitudinal 'C' joint at P/2 from edge of mainline pavement when P is greater than 10' wide. Terminate longitudinal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

Refer to Tabulation 112-9 for shoulder quantities.

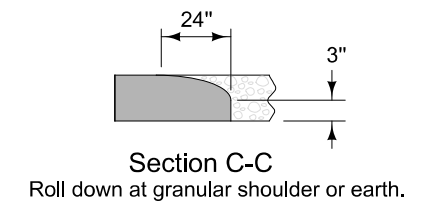
- ① When guardrail posts are installed prior to construction of PCC paved shoulder, fasten form board to the face of guardrail posts for the length shown.
- ② Continue paved shoulder 20 feet beyond the center of the first post.
- ③ Shoulder may be notched for first 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.
- ④ 'KT' (per PV-101) joint for PCC 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)

SURVEY SYMBOLS

	Interstate Highway Symbol		Septic Tank
	U.S. Highway Symbol		Cistern
	Iowa Highway Symbol		L.P. Gas Tank (No Footing)
	County Road Highway Symbol		Underground Storage Tank
	Evergreen Tree		Latrine
	Deciduous Tree		Luminaire
	Fruit Tree		Traffic Signal
	Shrub (Bushes)		Traffic Signal with Luminaire
	Timber		Telephone Pedestal
	Hedge		Television Pedestal
	Stump		Telephone Pole
	Swamp		Telephone Pole (Second Company)
	Rock Outcrop		Telephone Pole (Third Company)
	Broken Concrete		Telephone Pole (Fourth Company)
	Revetment (Rip Rap)		Telephone Pole (Fifth Company)
	Cemetery		Power Pole
	Grave		Power Pole (Second Company)
	Cave		Power Pole (Third Company)
	Sink Hole		Power Pole (Fourth Company)
	Board Fence		Power Pole (Fifth Company)
	Chain Link or Security Fence		Electrical Highline Tower (Metal or Concrete)
	Wire Fence		Telephone Riser Pole
	Terrace		Power Riser Pole
	Earth Dam or Dike (Existing)		Telegraph Pole
	Earth Dam or Dike (Proposed)		Satellite TV Dish
	Tile Outlet		Water Hook Up
	Edge of Water		Radio Tower
	Existing Drainage		Tower Anchor
	Proposed Drainage		PCT Photo Control Target
	Right of Way Rail or Lot Corner		DTM Photogrammetry Elv Control Check
	Concrete Monument		FENO FENO Monument
	Well		CP Control Point
	Windmill		BM Bench Mark
	Beehive Intake		
	Existing Intake		
	Proposed Intake		
	Existing Utility Access (Manhole)		
	Proposed Utility Access (Manhole)		
	Fire Hydrant		
	Water Hydrant (Rural)		

	Guardrail (Beam or Cable)
	Guard Post (one or two)
	Guard Post (over two)
	Filler Pipe
	Gas Valve
	Water Valve
	Speed Limit Sign
	Mile Marker Post
	Sign
	Traffic Signal Control Box
	Rail Road Signal Control Box
	Telephone Switch Box
	Electric Box

UTILITY LEGEND

	DE SOTO
	Contact: Dan Vanlangn
	Phone: 515-208-0066
	MidAmerican
	Contact: Jamie Neer
	Phone: 515-252-6972
	IOWA COMMUNICATIONS NETWORK
	Contact: Doug Ebelshaiser
	Phone: 515-725-4742
	IOWA DOT
	Contact: Pete Wonders
	Phone: 515-834-2368
	Windstream Communications
	Contact: Locate Desk
	Phone: 800-289-1901

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%

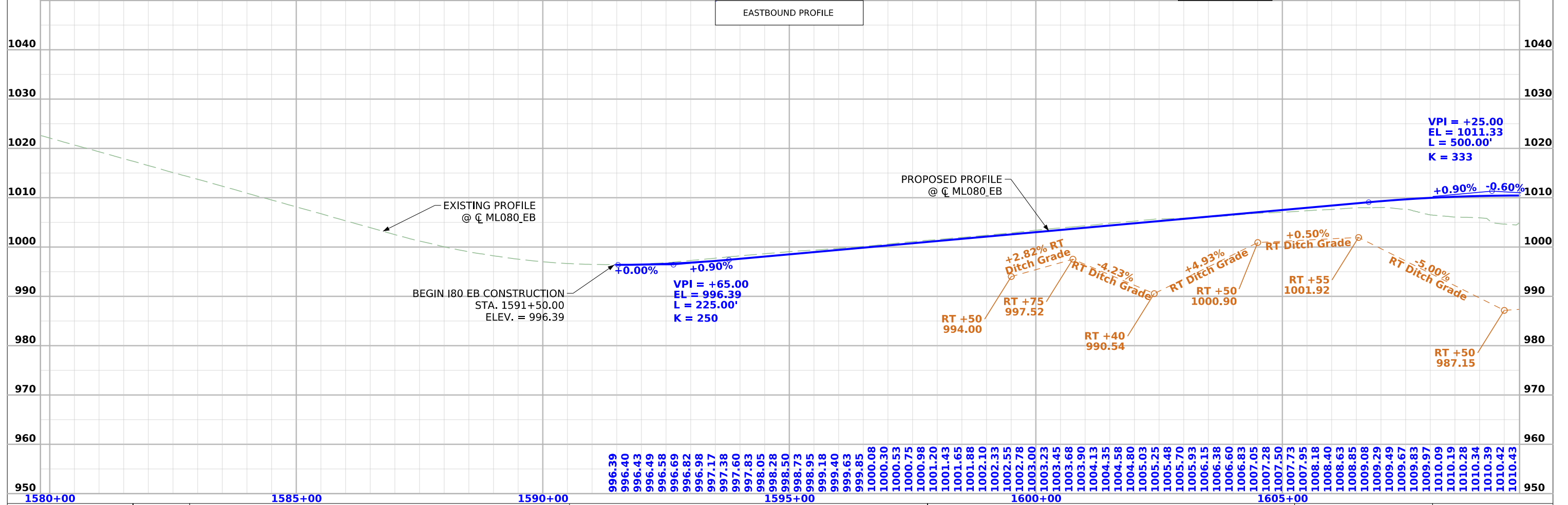
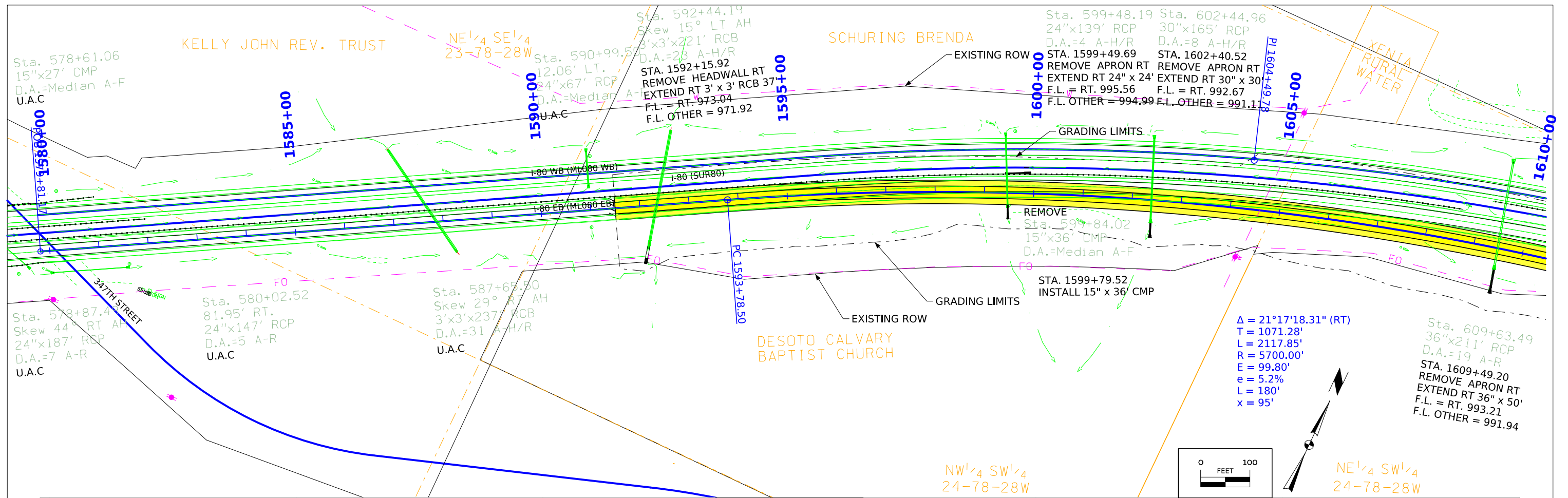
PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

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

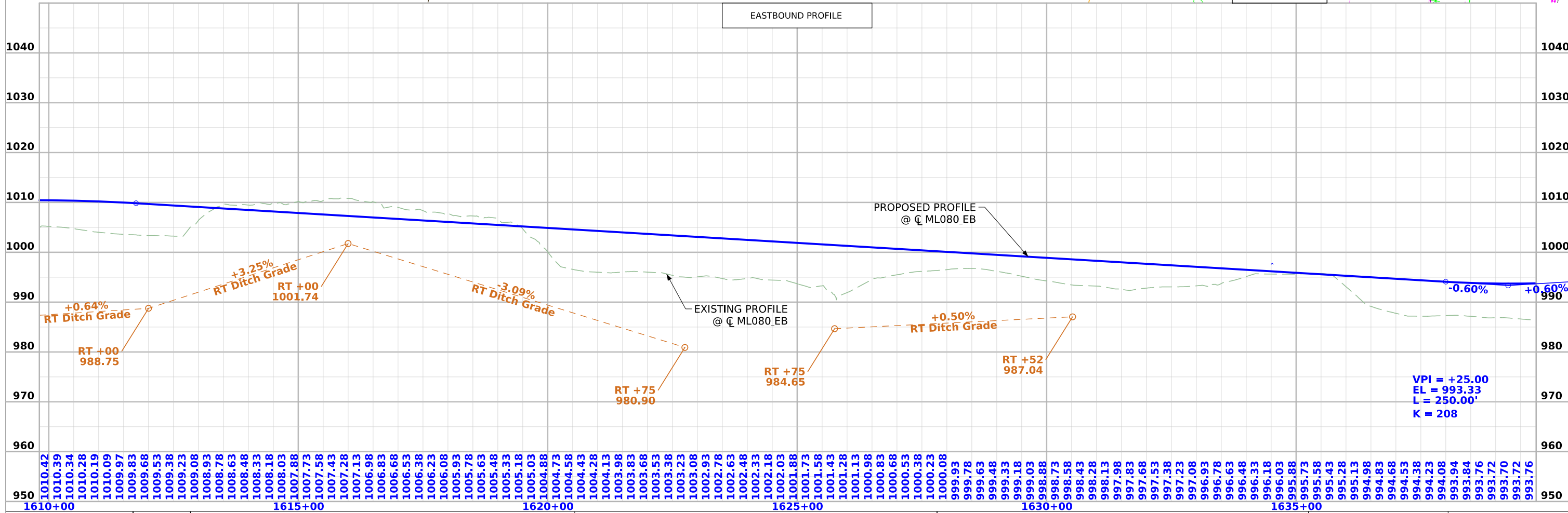
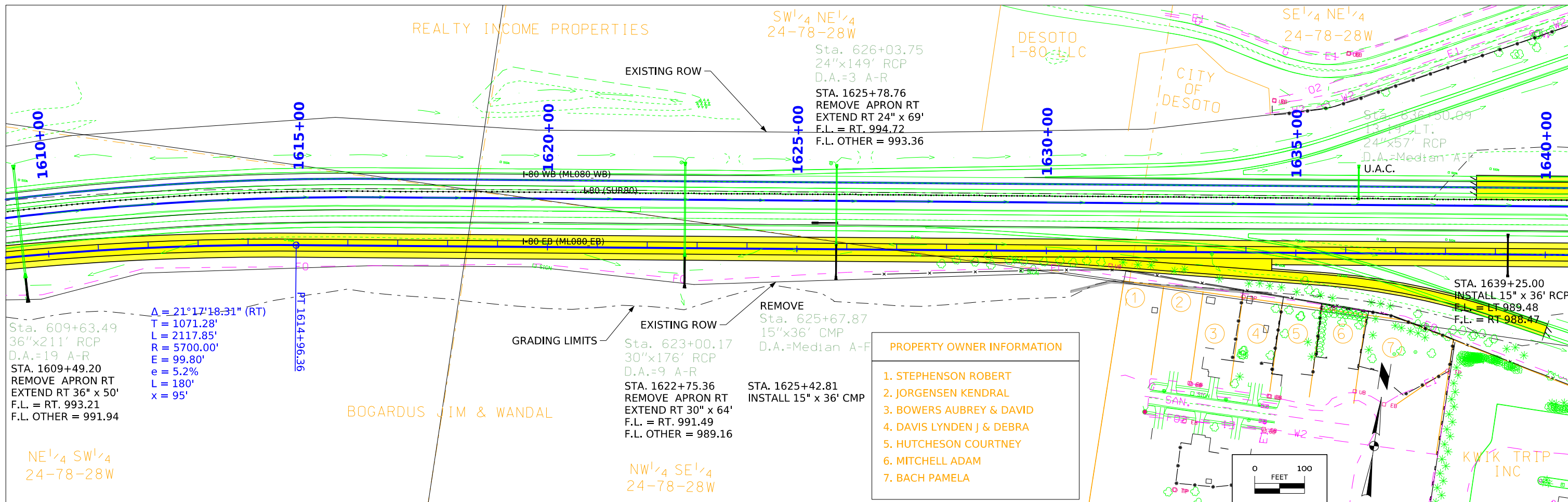
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PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

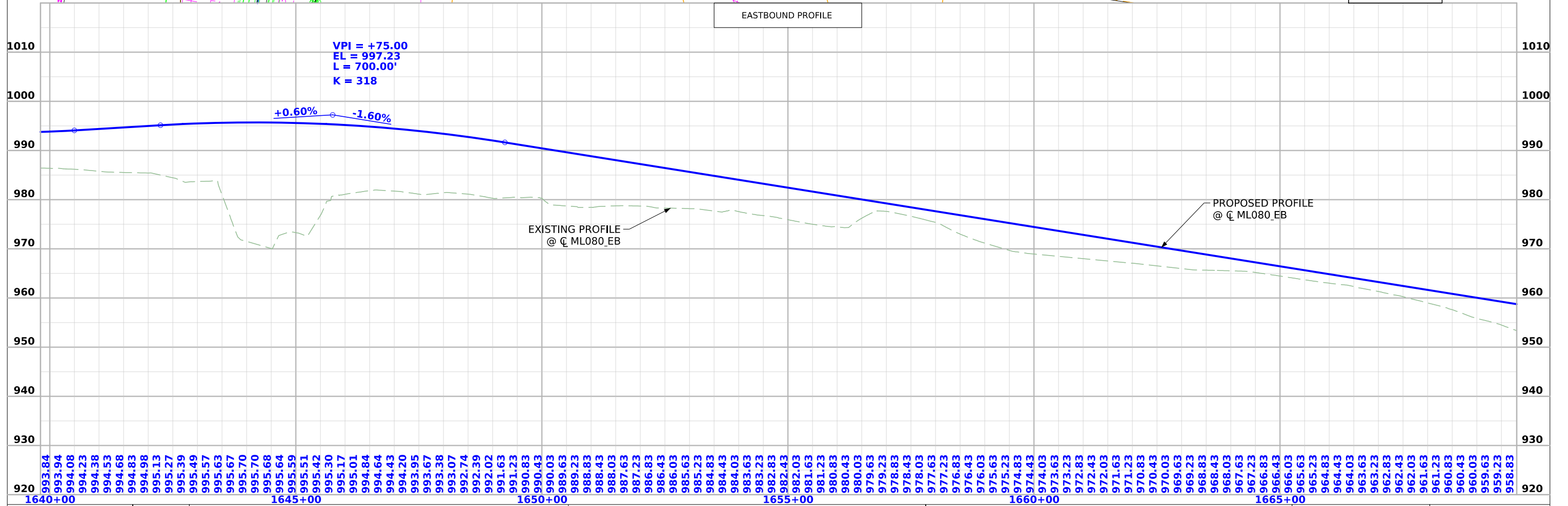
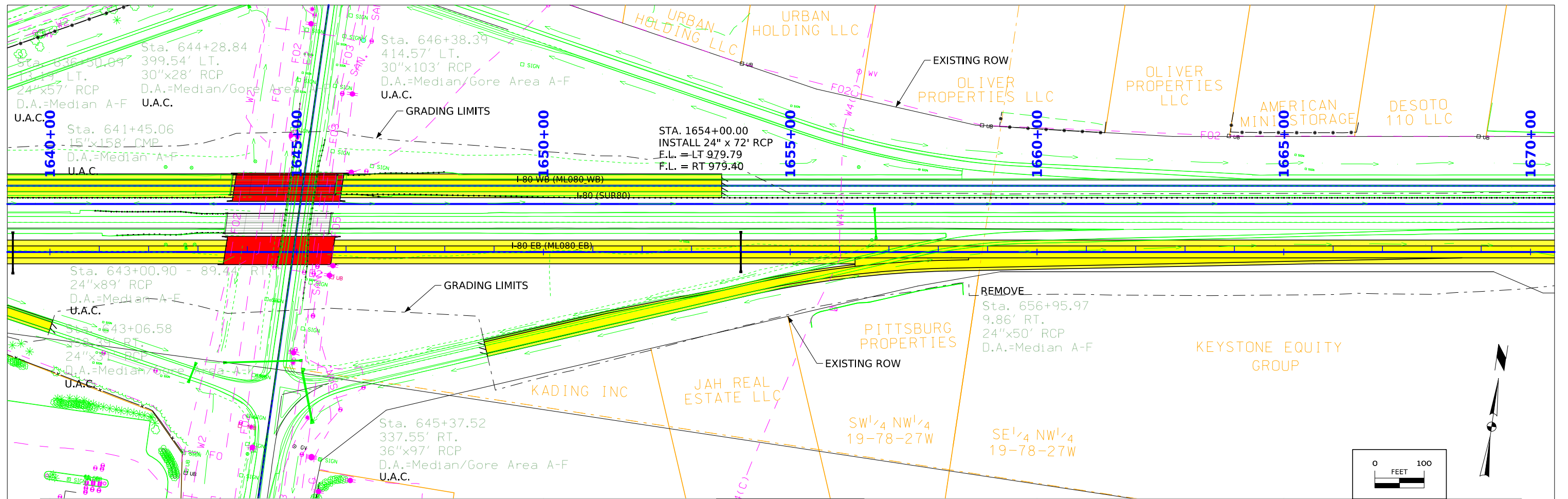
(COVERS SHEET SERIES D, E, F, & K)



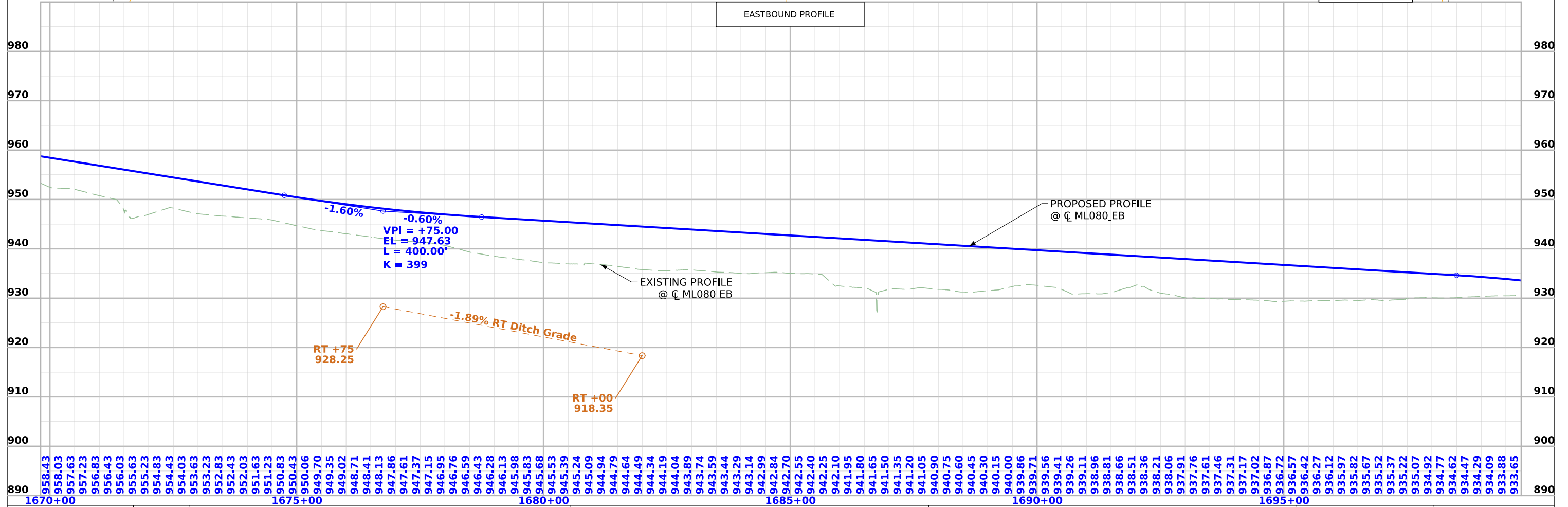
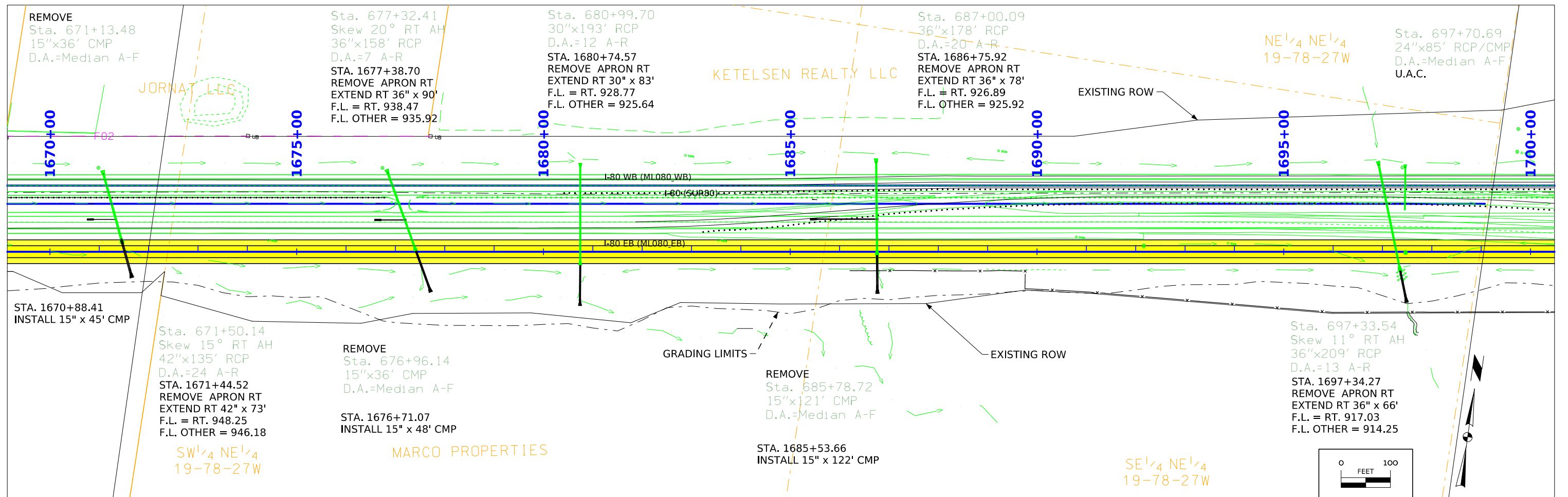
FILE NO.	ENGLISH	DESIGN TEAM	DALLAS COUNTY	PROJECT NUMBER	SHEET NUMBER
4/17/2024	MJL1	IOWA DOT/FOTH		IMN-NHS-080-3(322)110-02-25	D.2



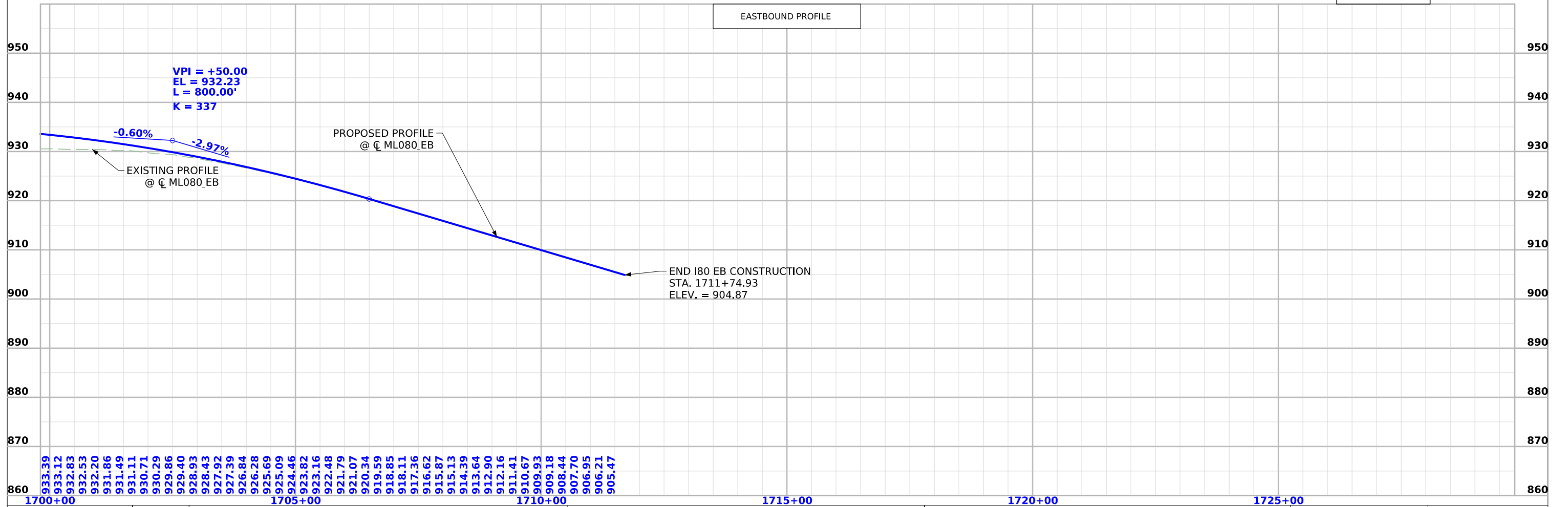
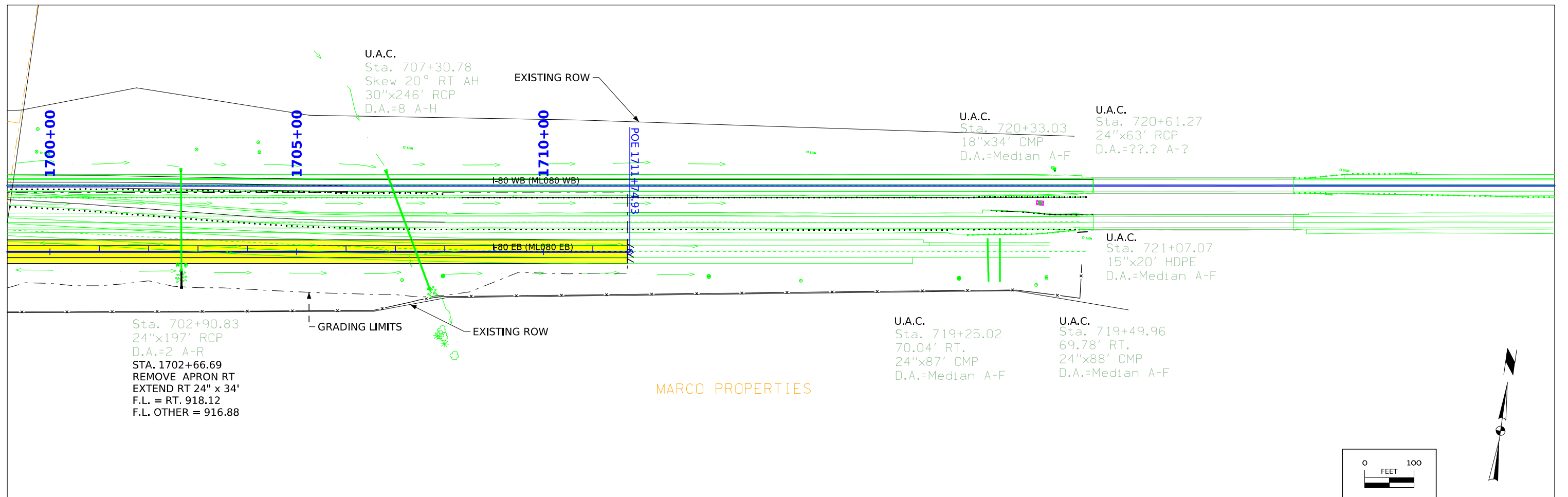
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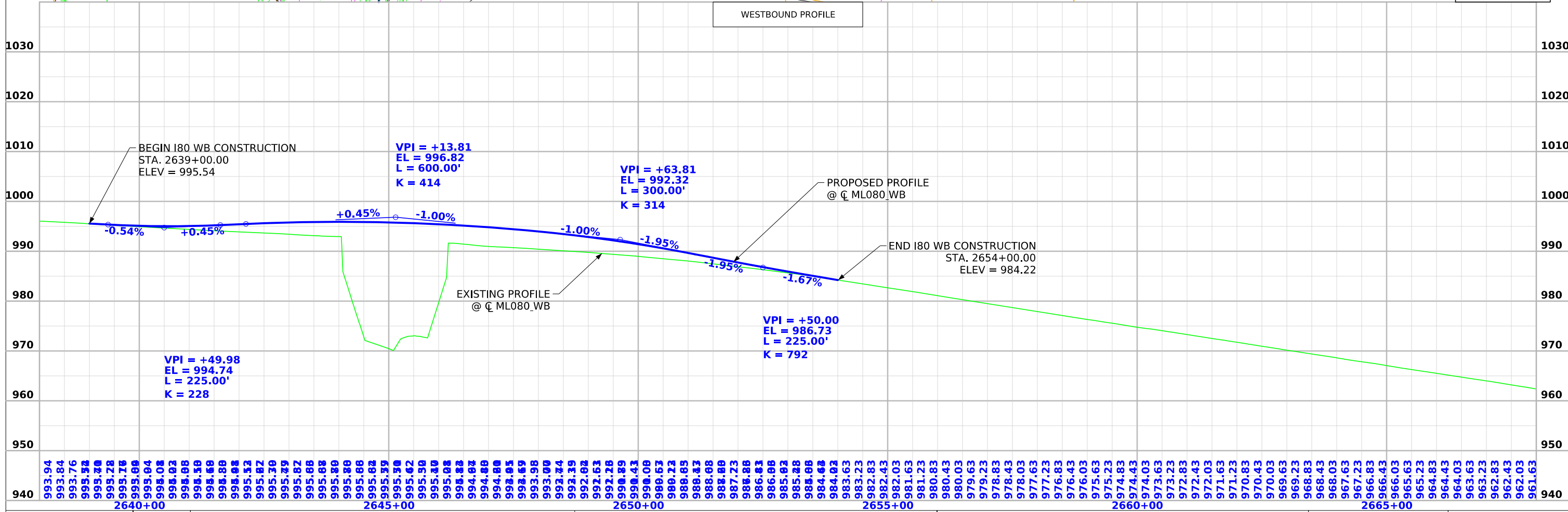
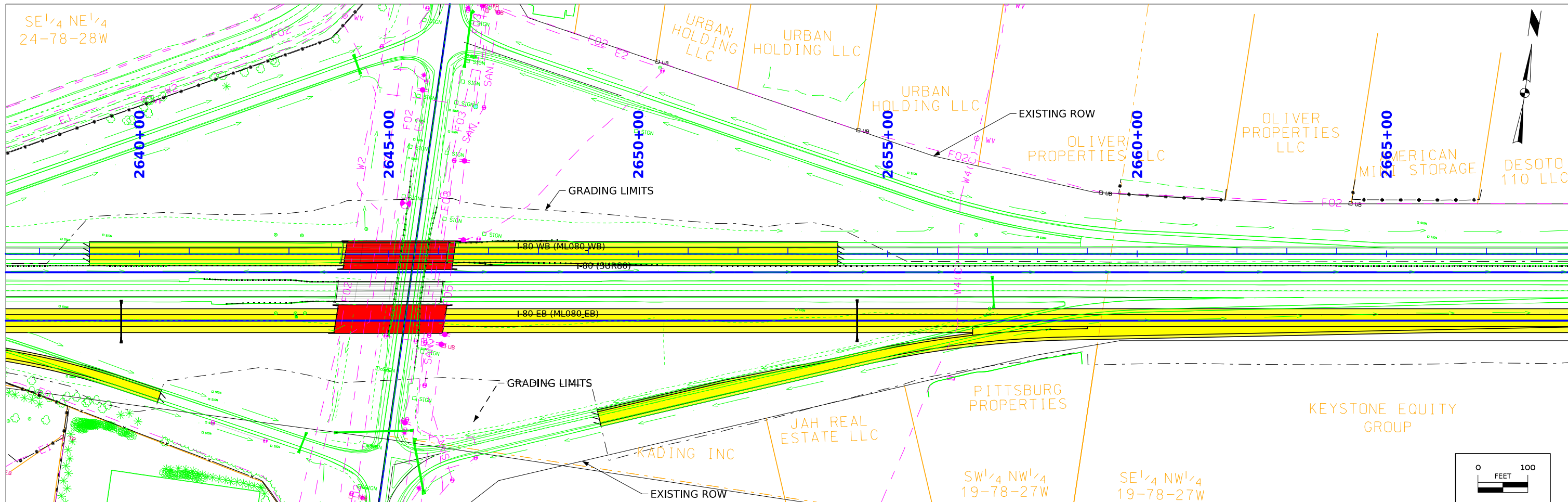


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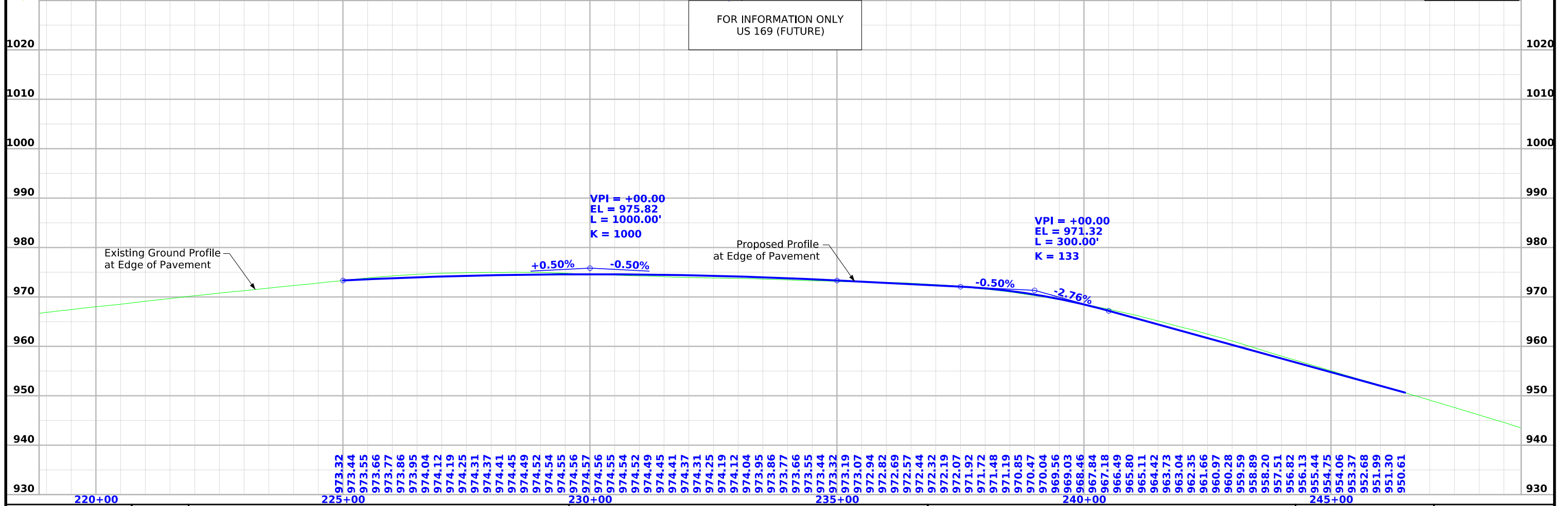
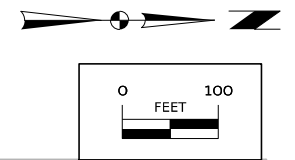
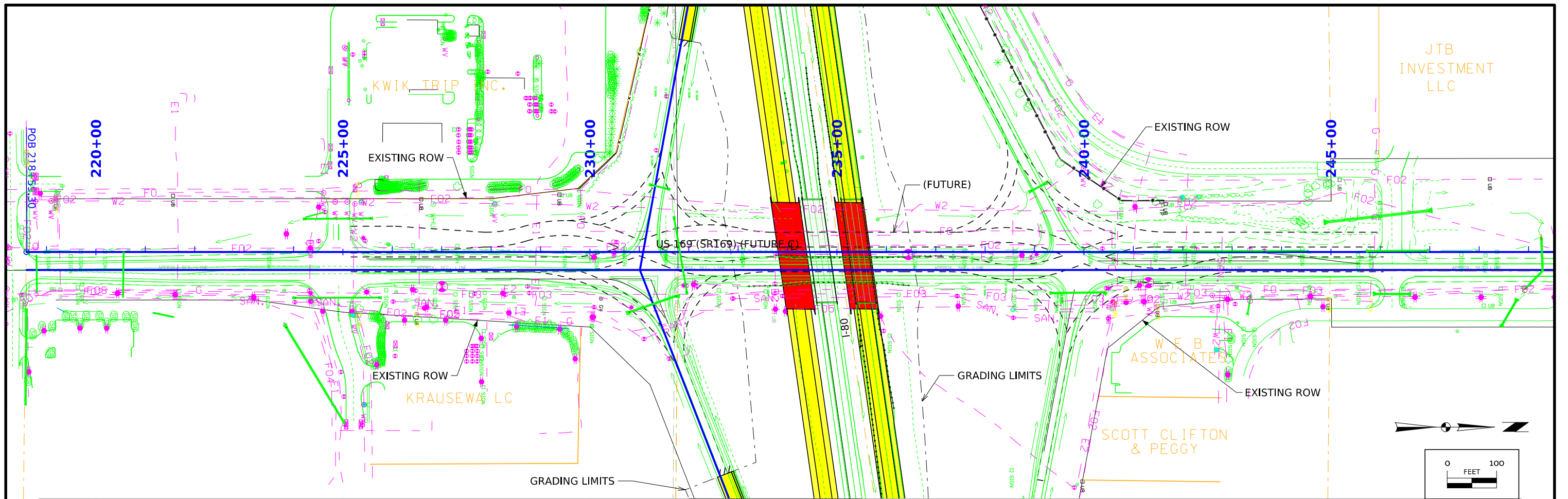


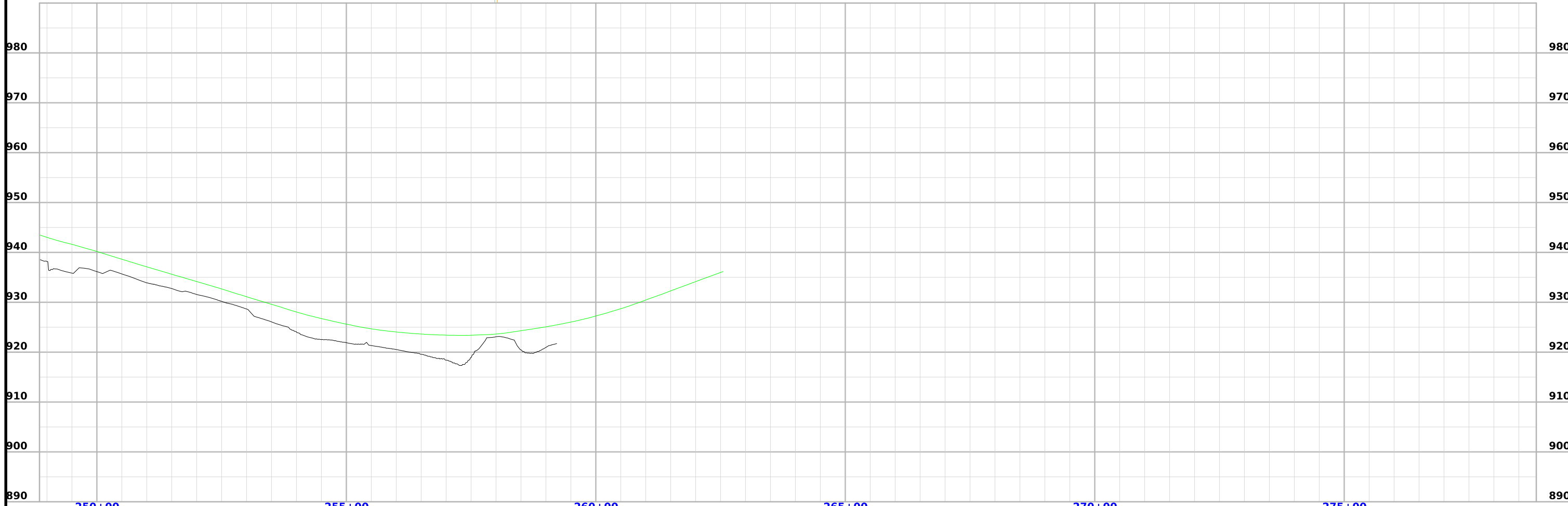
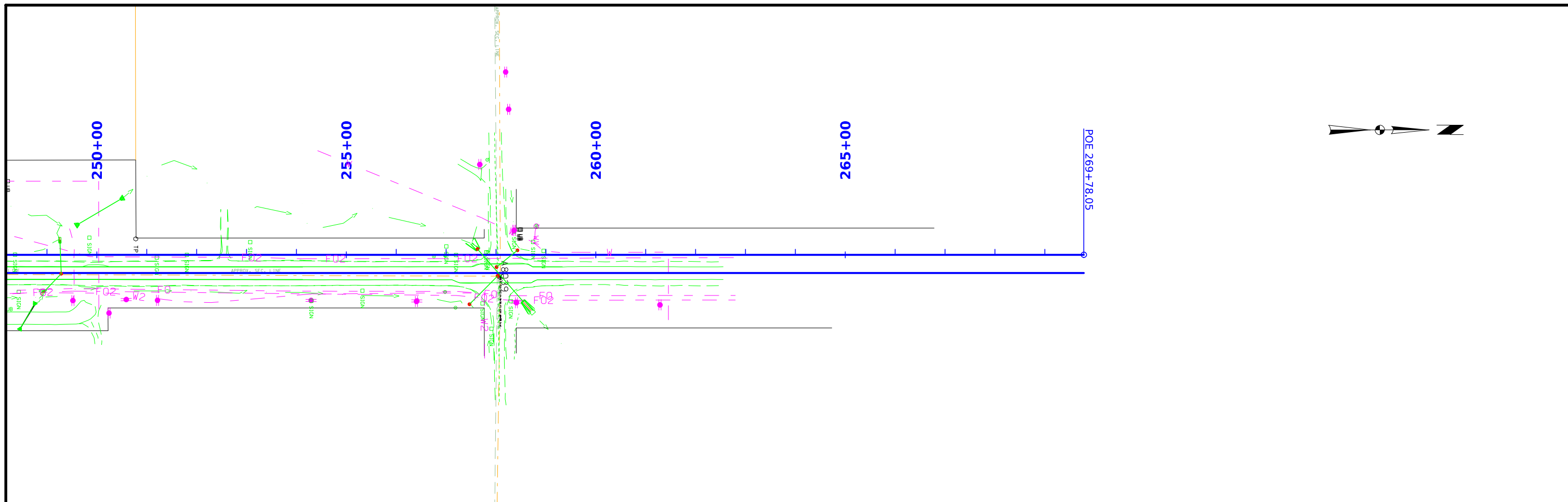
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FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT/FOTH	DALLAS COUNTY	PROJECT NUMBER	IMN-NHS-080-3(322)110-02-25	SHEET NUMBER	D.7
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FILE NO.	ENGLISH	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER	Plan 2	REVISED
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TRAFFIC CONTROL PLAN

1. Traffic control on this project shall be in accordance with the standard road plans shown in Tab 105-4 and the specific layouts shown in the plans. For additional complementary information, refer to Part 6 of the Manual on Uniform Traffic Control Devices (MUTCD) and the current standard specifications and supplemental specifications.
2. Maintain two (2) lanes of traffic in each direction on I-80 except during Engineer approved weekend and night time single-lane closures. Single-lane closures will be allowed as indicated on Tabulation 108-23B and with Engineer approval.
3. Maintain 1 (one) lane of traffic in each direction on US-169 and access to all businesses located US-169 at all times.
4. Contractor shall provide two (2) portable dynamic message signs (PDMS) for periodic use as needed and as directed by the Engineer. Placement and PDMS messages shall be approved by the Engineer prior to use. Additional PDMS units will be required for temporary I-80 closures and detour routes.
5. PDMS shall be used to warn drivers of upcoming closures, changes in travel patterns, and other traffic impacts as follows, or as directed by the Engineer:
 - Three (3) days prior to overnight closures
 - Six days prior to traffic shifts and traffic pattern changes
 - When providing advanced notice of a closure or travel change
6. US-169 EB exit ramp (Ramp B) and entrance ramp (Ramp D) will be closed to traffic to accommodate mainline and ramp construction. Closure of Ramps B and D shall be coordinated with the Engineer a minimum of one (1) week prior to the ramp closures. The Contractor will be responsible for establishing and maintaining the designated ramp detours.

STAGING NOTES

It is not the intent to confine the Contractor's activities to the areas fo suggested stages alone. It is understood that some of the various steps may occur simultaneously. The Contractor may conduct several operations concurrently, provided that traffic is maintained and that these operations do not conflict with the staging indicated herein.

It is recognized that as various activities related to the construction progress, certain situations may arise which will preclude adhering to the original construction sequence or which would readily lend themselves to more efficient staging operations. Should the Contractor desire to deviate from the original plan, a written alternative plan shall be submitted to the Project Engineer, for approval a minimum of one (1) week prior to the proposed changes.

STAGE 1

Construct I-80 EB lanes and EB bridge. Gap paving at ramp terminals.

STAGE 2

Construct temporary pavement on west limits of project within the median.
 Shift I-80 EB traffic onto temporary pavement.
 Construct I-80 EB lane connection to existing roadway alignment on west end of project limits.

STAGE 3

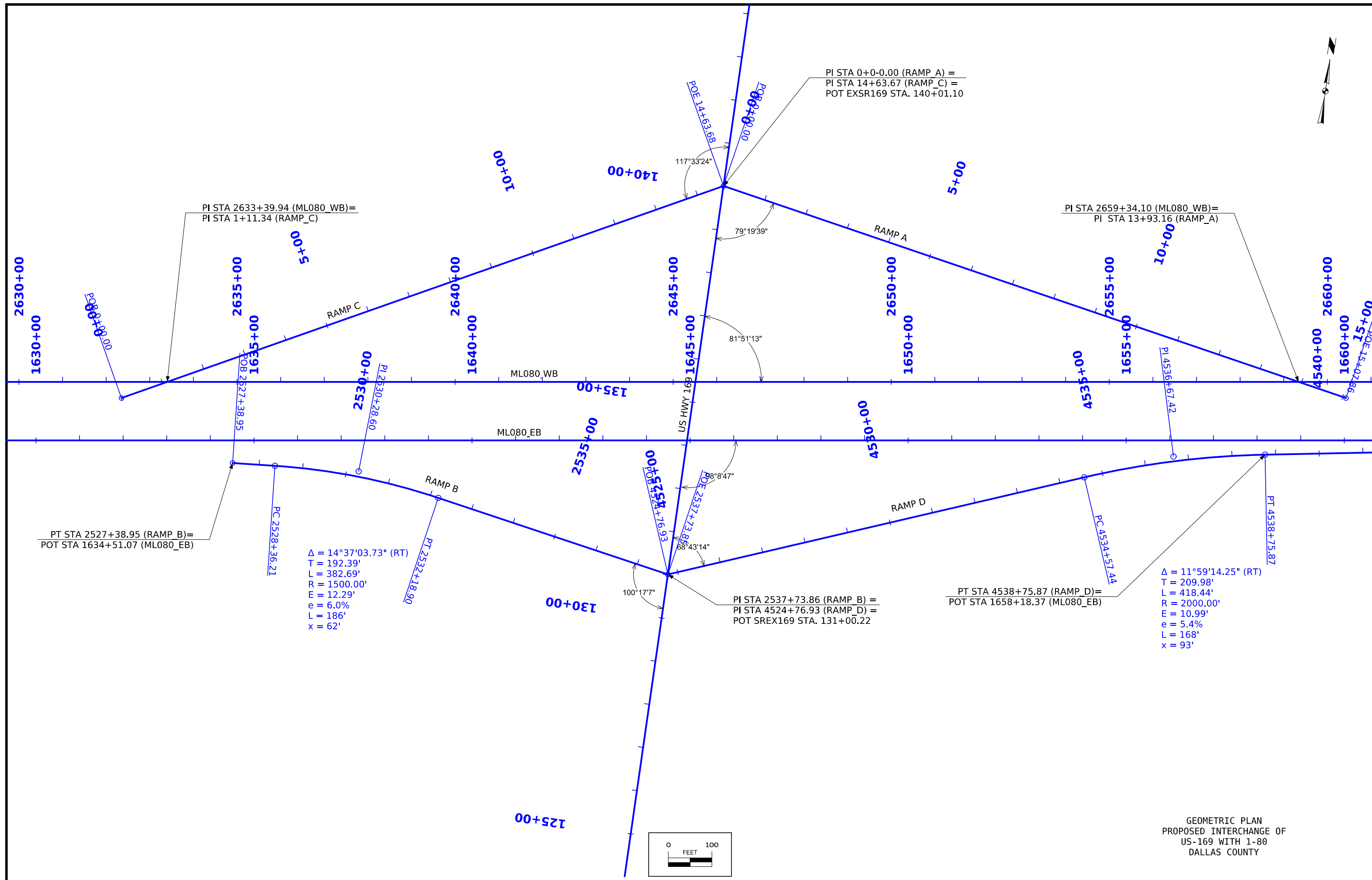
Close Ramp B exit ramp and Ramp D entrance ramp.
 Construct Ramps B and D and remaining I-80 EB roadway.

STAGE 4

Construct temporary median crossovers on both ends of project.
 Shift I-80 WB traffic onto existing I-80 EB lanes and EB bridge. Shift I-80 EB traffic onto new I-80 EB lanes and new Ramps B and D.
 Construct I-80 WB lanes and WB bridge. Remove temporary pavement on west limits of project within the median.

STAGE 5

Shift I-80 WB traffic onto new I-80 WB lanes.
 Remove median crossovers.



PT STA 2527+38.95 (RAMP B)=
POT STA 1634+51.07 (ML080_EB)

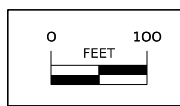
Δ = 14°37'03.73" (RT)
T = 192.39'
L = 382.69'
R = 1500.00'
E = 12.29'
e = 6.0%
L = 186'
x = 62'

PI STA 2537+73.86 (RAMP B) =
PI STA 4524+76.93 (RAMP D) =
POT SREX169 STA. 131+00.22

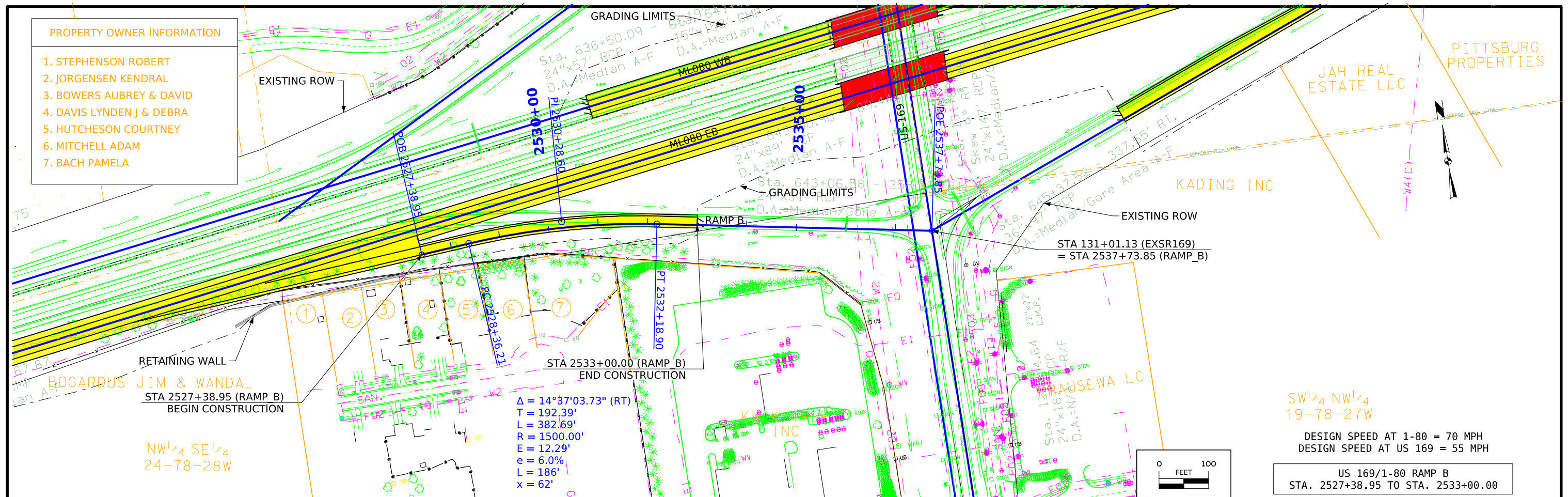
PT STA 4538+75.87 (RAMP D)=
POT STA 1658+18.37 (ML080_EB)

Δ = 11°59'14.25" (RT)
T = 209.98'
L = 418.44'
R = 2000.00'
E = 10.99'
e = 5.4%
L = 168'
x = 93'

GEOMETRIC PLAN
PROPOSED INTERCHANGE OF
US-169 WITH I-80
DALLAS COUNTY

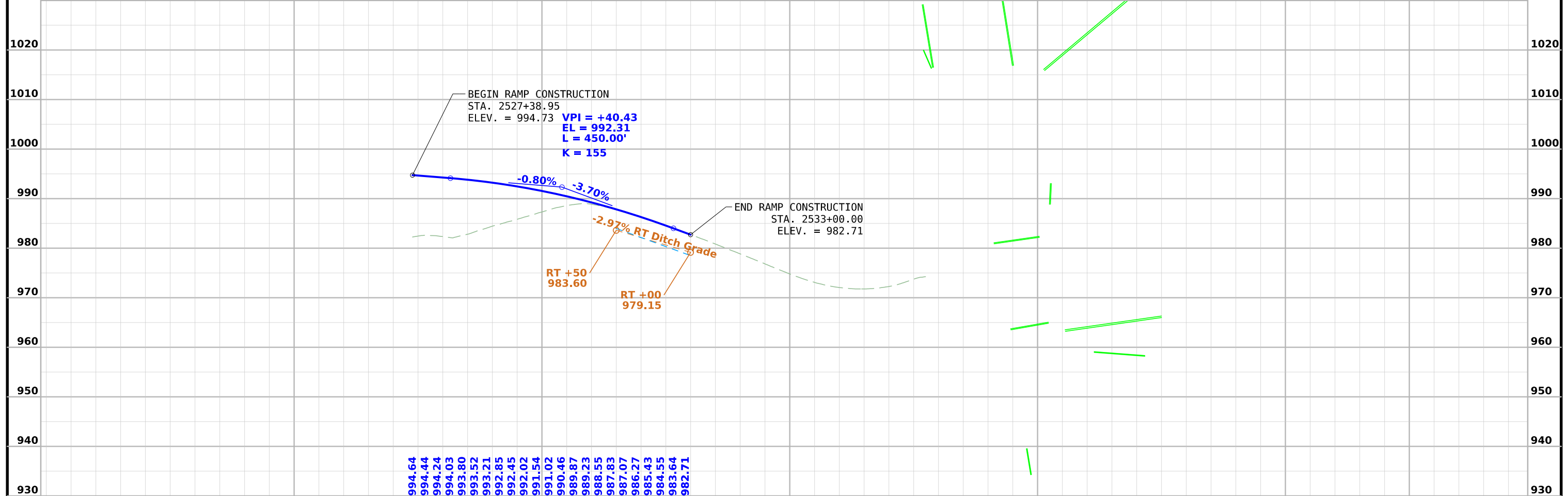
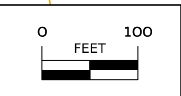


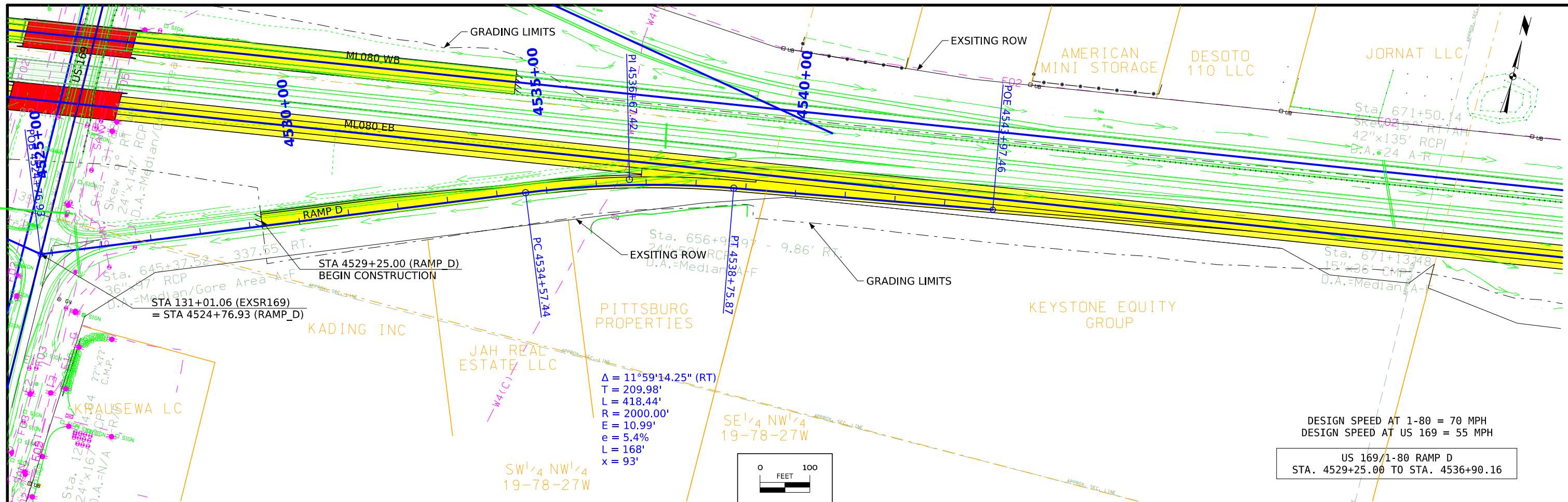
- PROPERTY OWNER INFORMATION**
- STEPHENSON ROBERT
 - JORGENSEN KENDRAL
 - BOWERS AUBREY & DAVID
 - DAVIS LYNDEN J & DEBRA
 - HUTCHESON COURTNEY
 - MITCHELL ADAM
 - BACH PAMELA



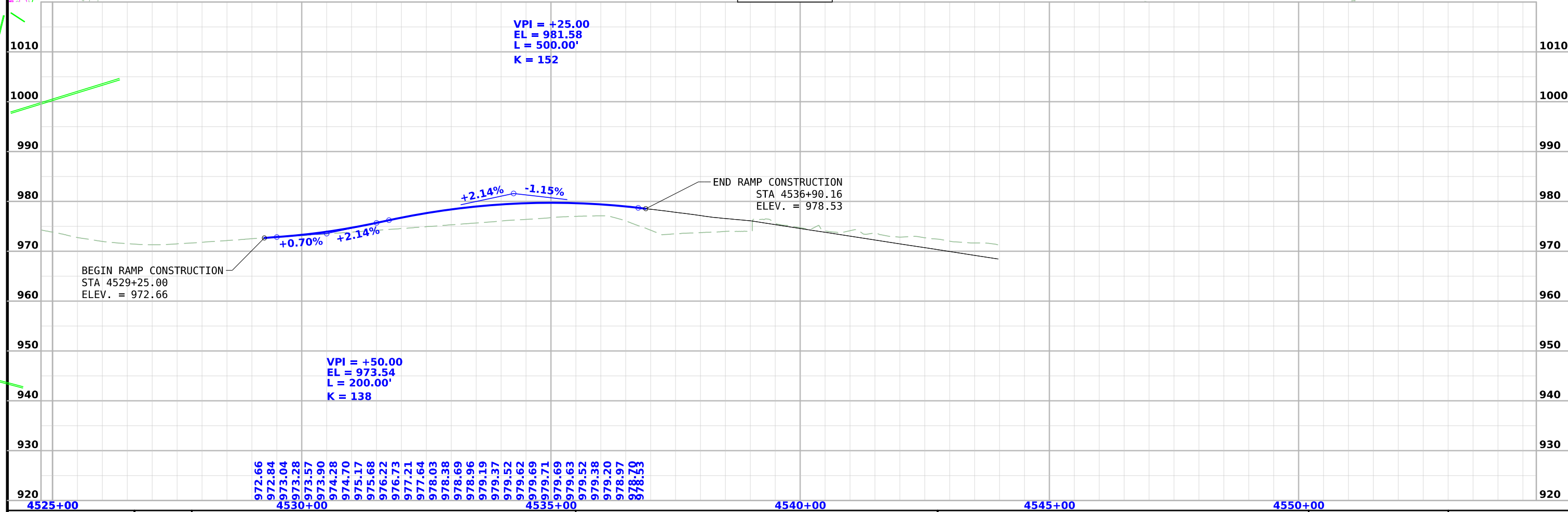
$\Delta = 14^\circ 37' 03.73''$ (RT)
 $T = 192.39'$
 $L = 382.69'$
 $R = 1500.00'$
 $E = 12.29'$
 $e = 6.0\%$
 $L = 186'$
 $x = 62'$

DESIGN SPEED AT 1-80 = 70 MPH
 DESIGN SPEED AT US 169 = 55 MPH
 US 169/1-80 RAMP B
 STA. 2527+38.95 TO STA. 2533+00.00





DESIGN SPEED AT 1-80 = 70 MPH
 DESIGN SPEED AT US 169 = 55 MPH
 US 169/1-80 RAMP D
 STA. 4529+25.00 TO STA. 4536+90.16



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT/FOTH	DALLAS COUNTY	PROJECT NUMBER	IMN-NHS-080-3(322)110--02-25	SHEET NUMBER	K.3
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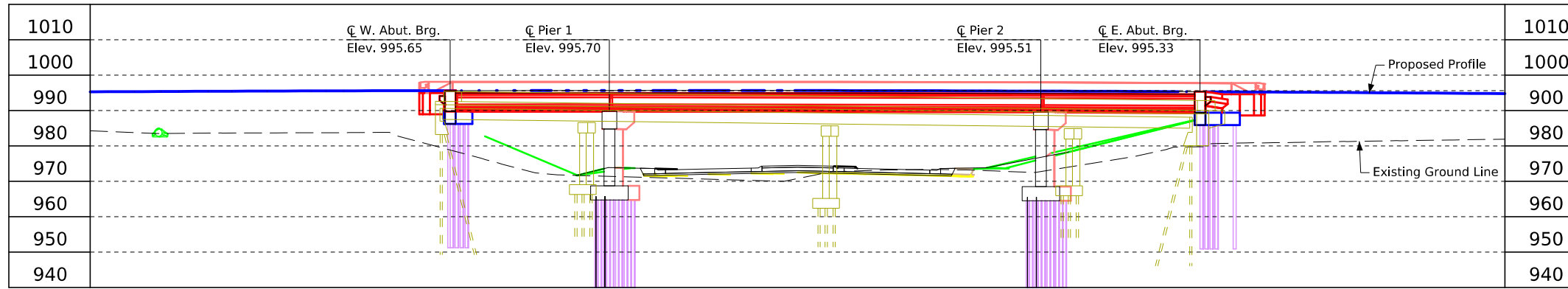
Traffic Estimate
(US 169)

2016 AADT	2290	V.P.D.
2048 AADT	3100	V.P.D.
2077 DHV	???	V.P.H.
TRUCKS	12 %	
Total	???	
Design ESALs	???	

Traffic Estimate
(EB I-80)

2022 AADT	24,800	V.P.D.
20?? AADT	???	V.P.D.
2077 DHV	???	V.P.H.
TRUCKS	?? %	
Total	???	
Design ESALs	???	

Control Point:



g1% g2%

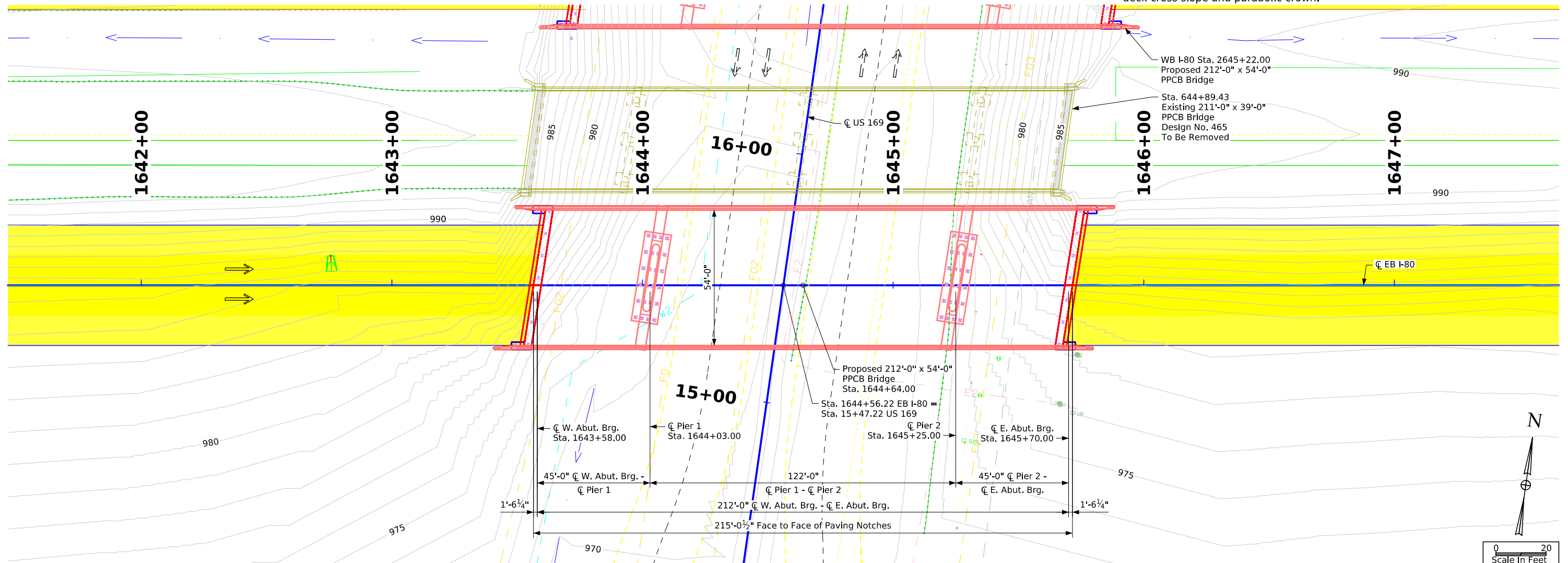
VPI Sta. = 10+33.36
VPI Elev. = 1454.92
VC = 400'

Proposed Profile
Grade EB I-80

Utilities Note:
Utilities shown on this sheet are for information only. See Road Design sheets for utility information.

BRG TSL Longitudinal Section Along Approach Roadway

Note:
Top of bridge deck at centerline roadway is 0.03' below the profile grade to account for deck cross slope and parabolic crown.



Situation Plan

Location

On EB I-80 over US 169
T-78N R-28W
Section 19 & 24
Adams Township
Dallas County
FHWA No. 22280
Bridge Maint. No. 2510.1R080
Latitude ??,123456°
Longitude -??,123456°

Minimum Vertical Clearance

Overhead Station = 9+51.47, Offset 20.08' Rt.
Overhead Elevation = 1449.46
Depth of Superstructure = 4.63'
Underpass Station = ?, Offset 59.00' Rt.
Underpass Elevation = 1427.68
Minimum Vertical Clearance = 17.15'

General Utility Symbols:

- E - Electric Line
- G - Gas Line
- SAN. - Sanitary Sewer
- T - Telephone Line
- W - Water Line
- FO - Fiber Optic Line
- GHP - Gas High Pressure
- ST S - Storm Sewer
- TV - TV
- ⊕ - Power Poles

Design For 9 Degree LA

212'-0" x 54'-0" Prestressed Concrete Beam Bridge

45'-0" End Spans 122'-0" Interior Span

Situation Plan

STA. 1644+64.00 (US 169) Turn-In Date: Mar 01 2024

Dallas County

IOWA DEPARTMENT OF TRANSPORTATION

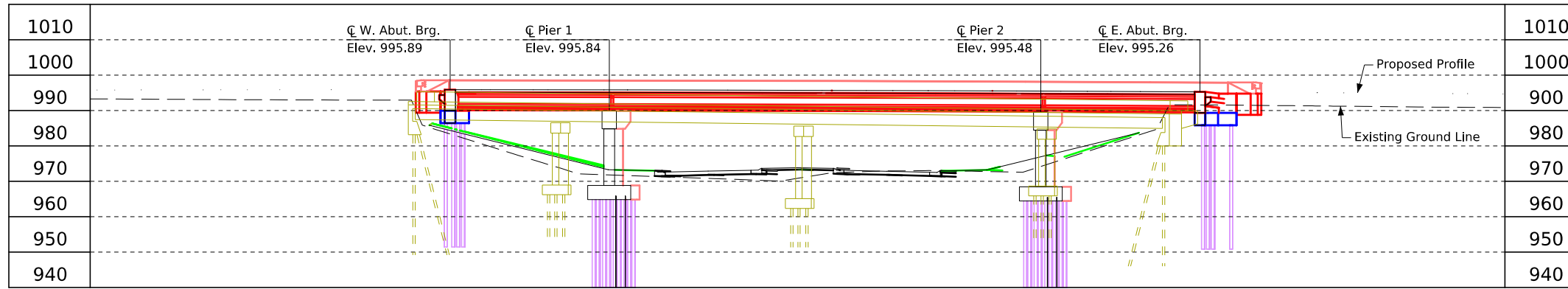
Design No. ??? Design Sheet No. 1 of 1 FHWA No. 22280

Traffic Estimate
(US 169)

2016 AADT	2290	V.P.D.
2048 AADT	3100	V.P.D.
2077 DHV	???	V.P.H.
TRUCKS	12 %	
Total	???	
Design ESALs	???	

Traffic Estimate
(EB I-80)

2022 AADT	24,800	V.P.D.
20?? AADT	???	V.P.D.
20?? DHV	???	V.P.H.
TRUCKS	?? %	
Total	???	
Design ESALs	???	



g1% g2%

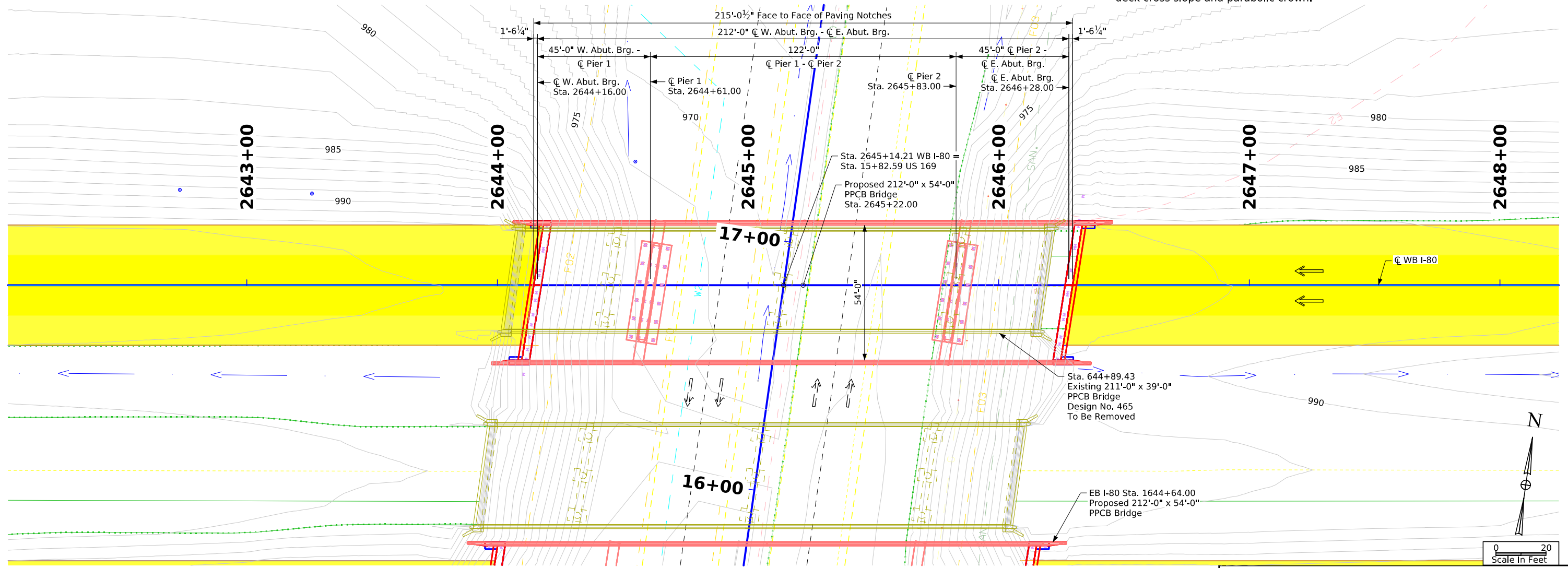
VPI Sta. = 10+33.36
VPI Elev. = 1454.92
VC = 400'

Proposed Profile
Grade EB I-80

Utilities Note:
Utilities shown on this sheet are for information only. See Road Design sheets for utility information.

BRG TSL Longitudinal Section Along C Approach Roadway

Note:
Top of bridge deck at centerline roadway is 0.03' below the profile grade to account for deck cross slope and parabolic crown.



Situation Plan

Location

On EB I-80 over US 169
T-78N R-28W
Section 19 & 24
Adams Township
Dallas County
FHWA No. 22280
Bridge Maint. No. 2510.1R080
Latitude ??,123456°
Longitude -??,123456°

Design For 9 Degree LA
212'-0" x 54'-0" Prestressed Concrete Beam Bridge
45'-0" End Spans 122'-0" Interior Span

Situation Plan
STA. 2645+22.00 (WB I-80) Turn-in Date: Jun 2024

Dallas County
IOWA DEPARTMENT OF TRANSPORTATION
Design No. ?? Design Sheet No. 1 of 1 FHWA No. 22290

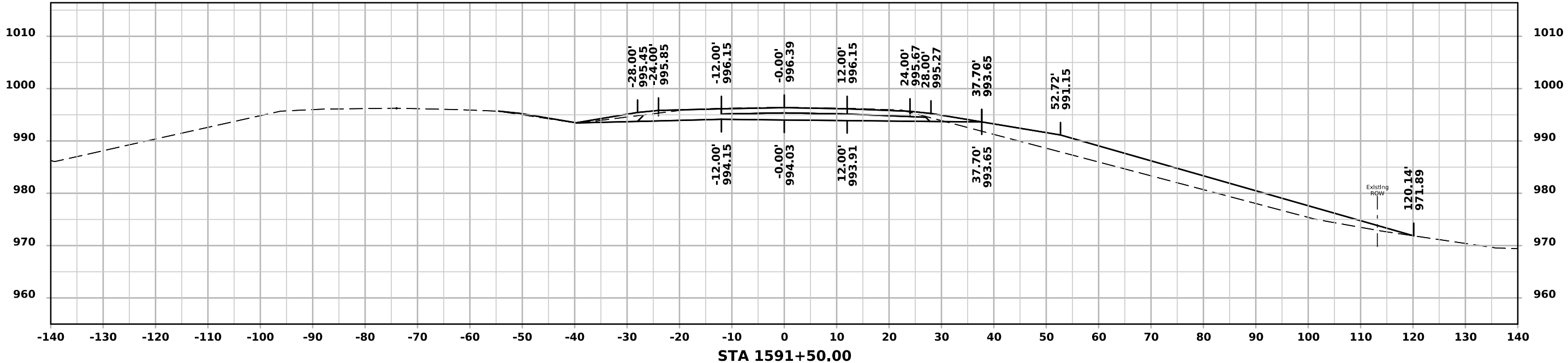
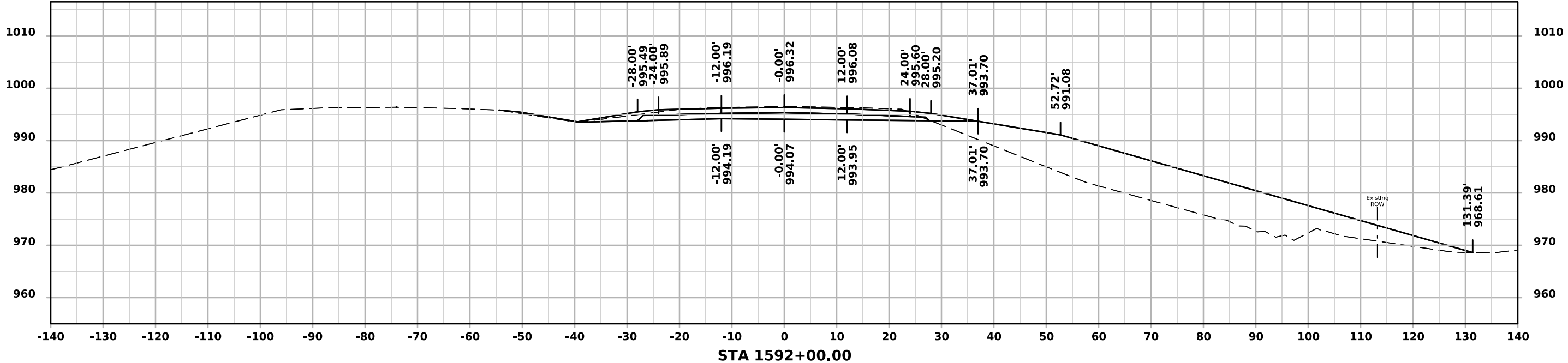
General Utility Symbols:

- E - Electric Line
- G - Gas Line
- SAN. - Sanitary Sewer
- T - Telephone Line
- W - Water Line
- FO - Fiber Optic Line
- GHP - Gas High Pressure
- ST S - Storm Sewer
- TV - TV
- ⊕ - Power Poles

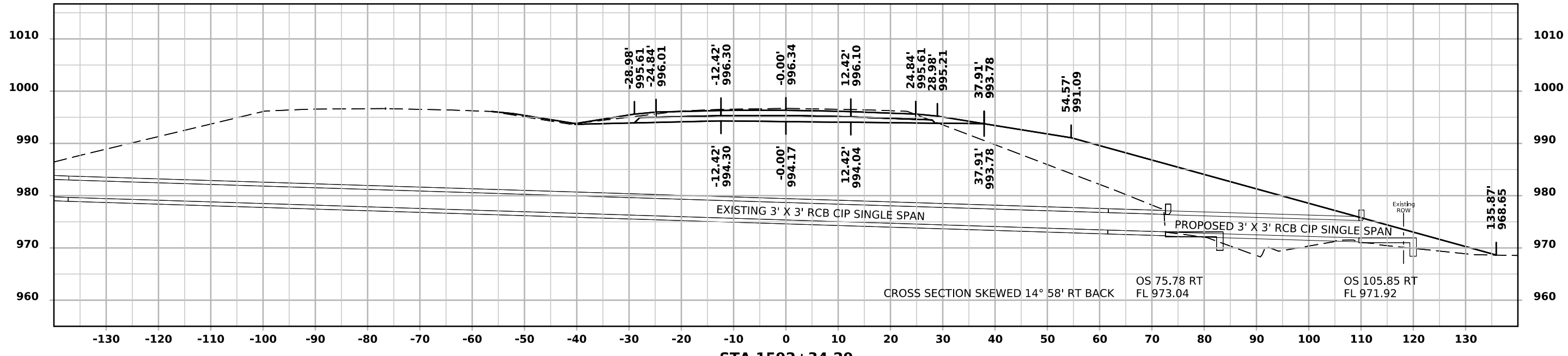
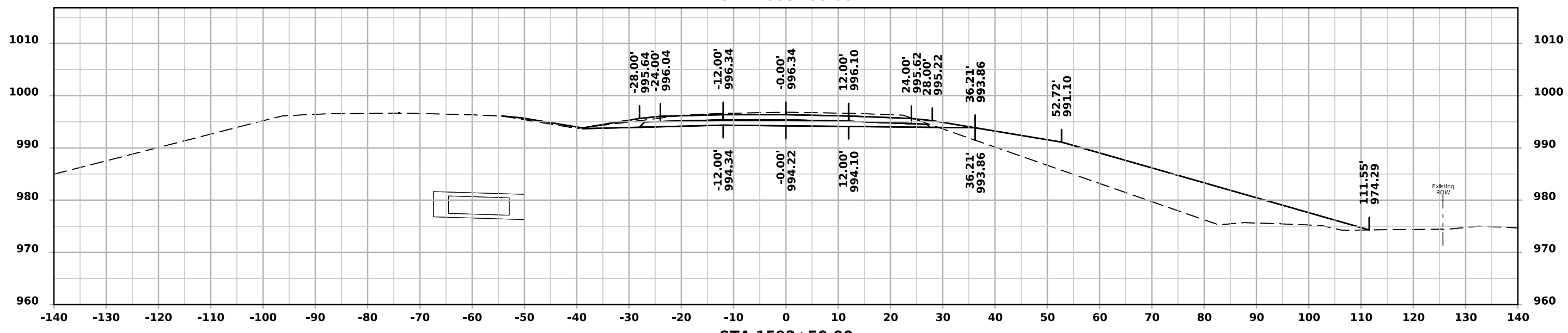
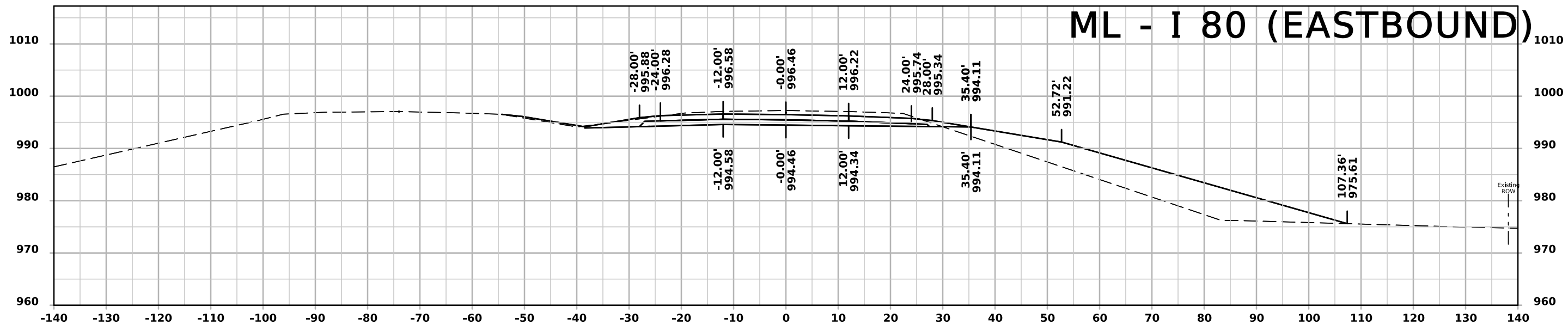
Minimum Vertical Clearance

Overhead Station = 9+51.47, Offset 20.08' Rt.
Overhead Elevation = 1449.46
Depth of Superstructure = 4.63'
Underpass Station = ?, Offset 59.00' Rt.
Underpass Elevation = 1427.68
Minimum Vertical Clearance = 17.15'

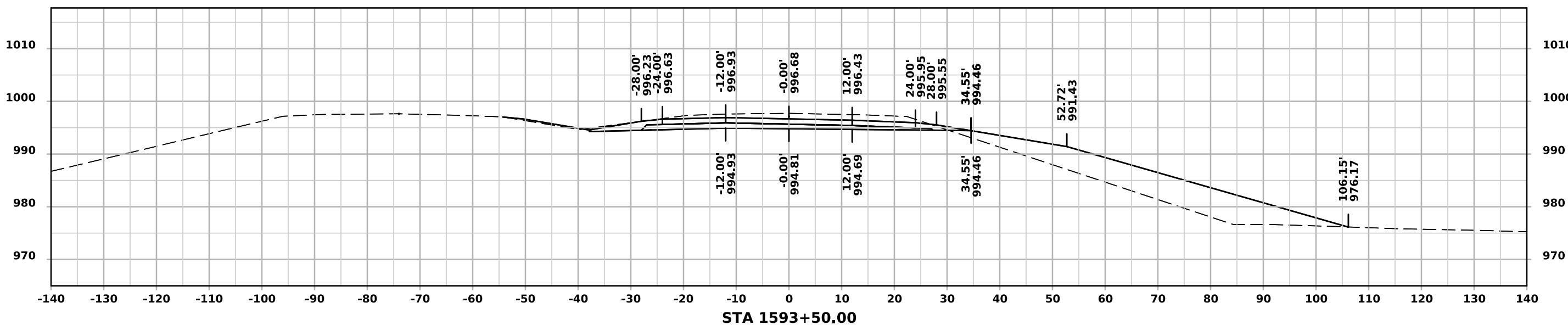
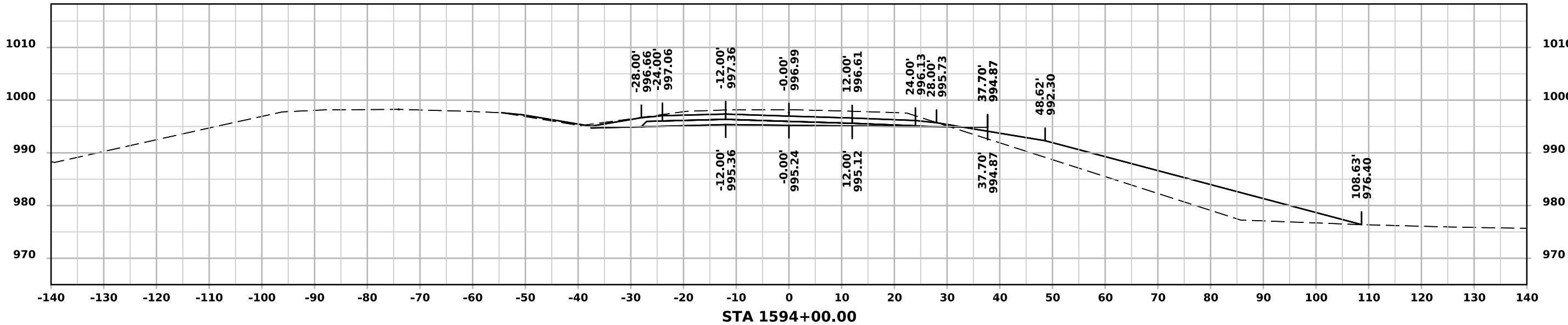
ML - I 80 (EASTBOUND)



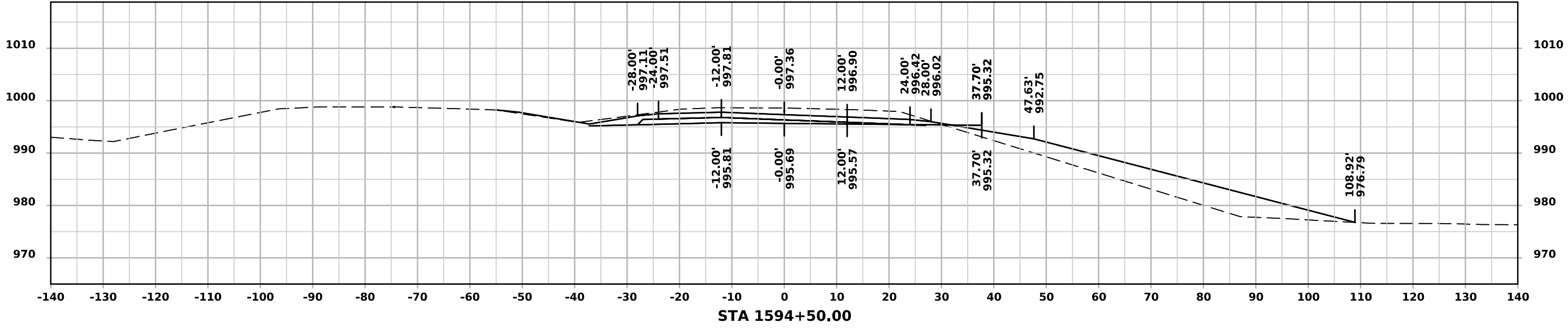
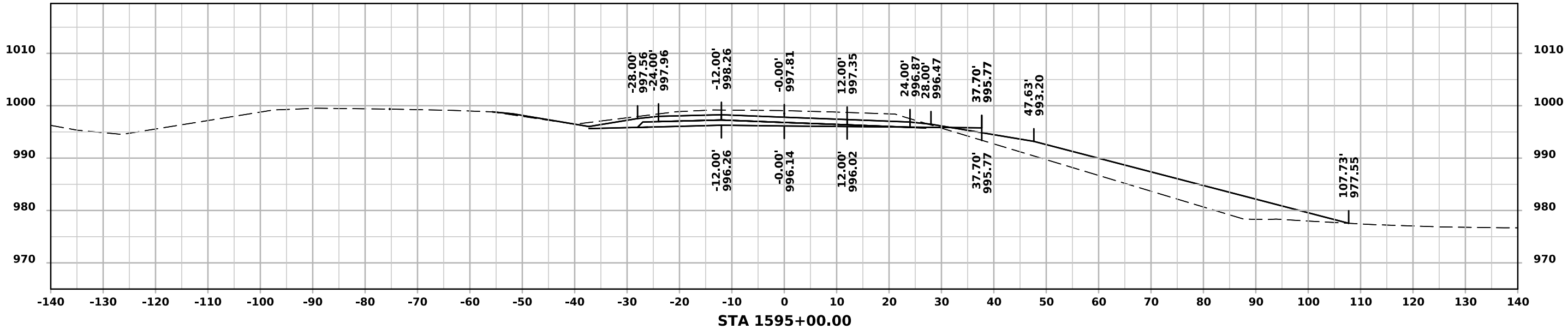
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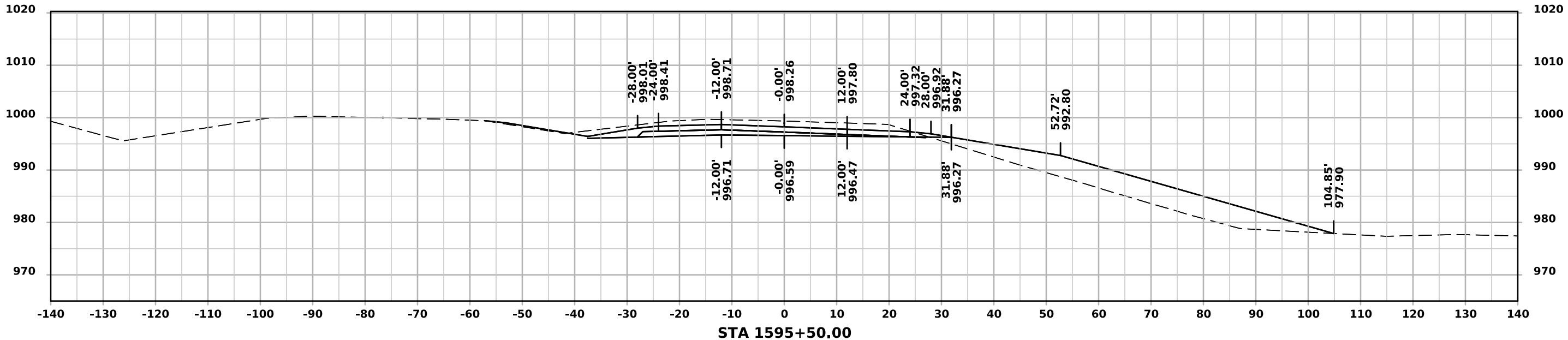
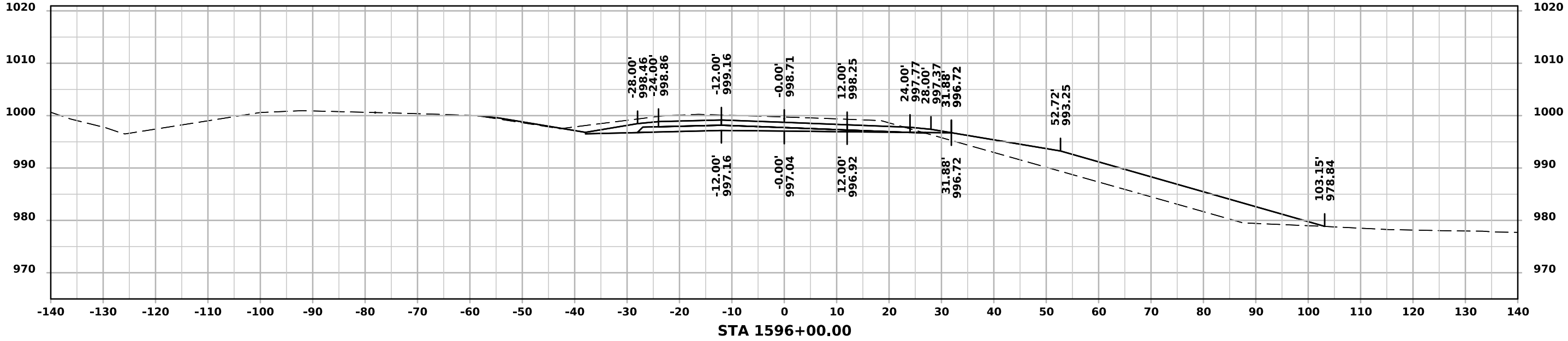
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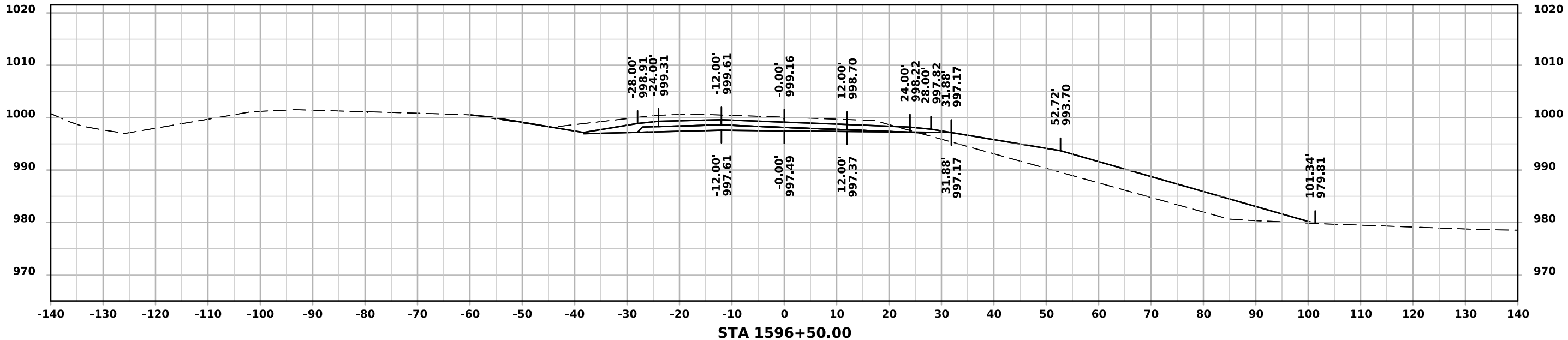
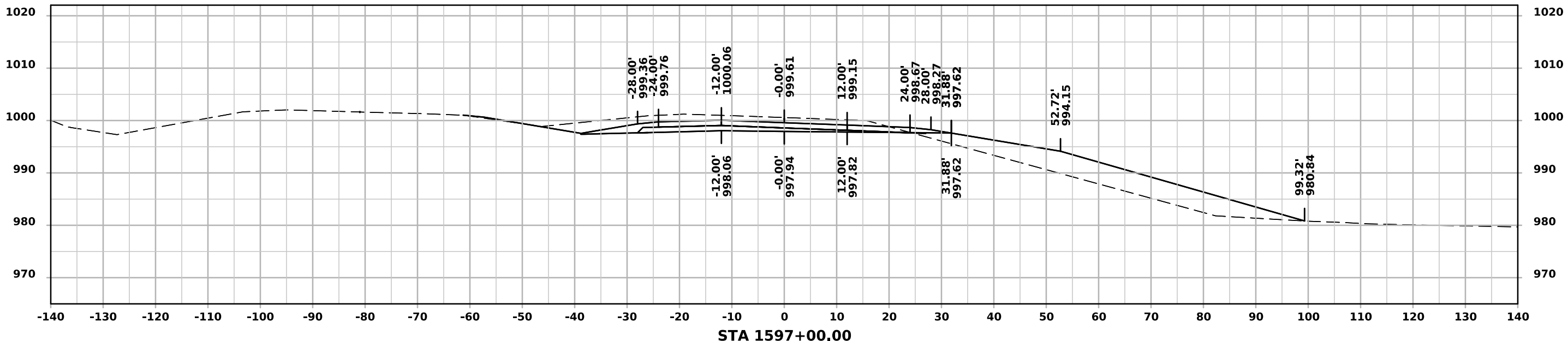
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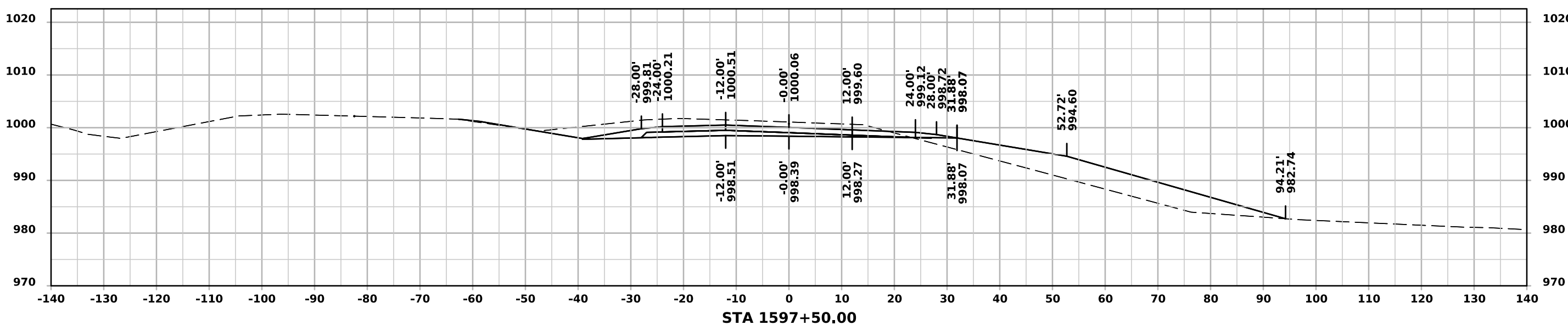
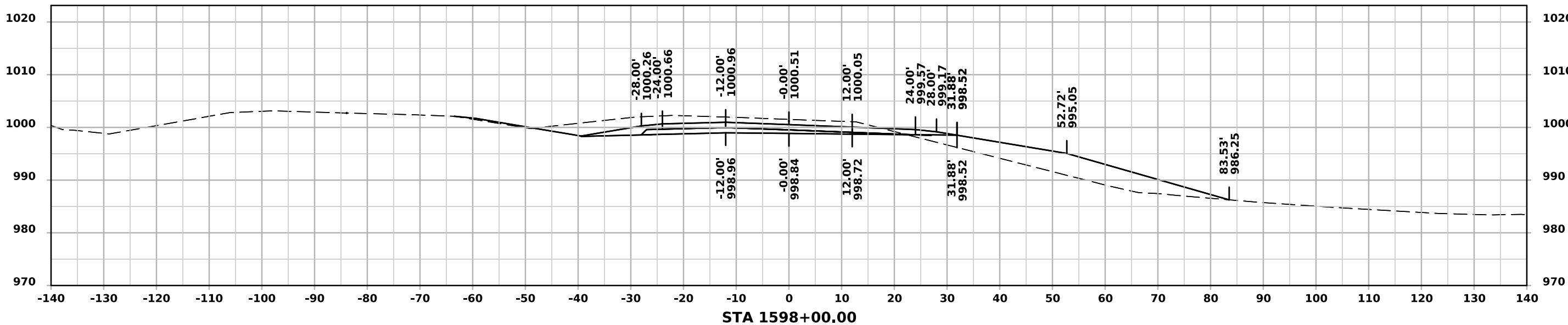
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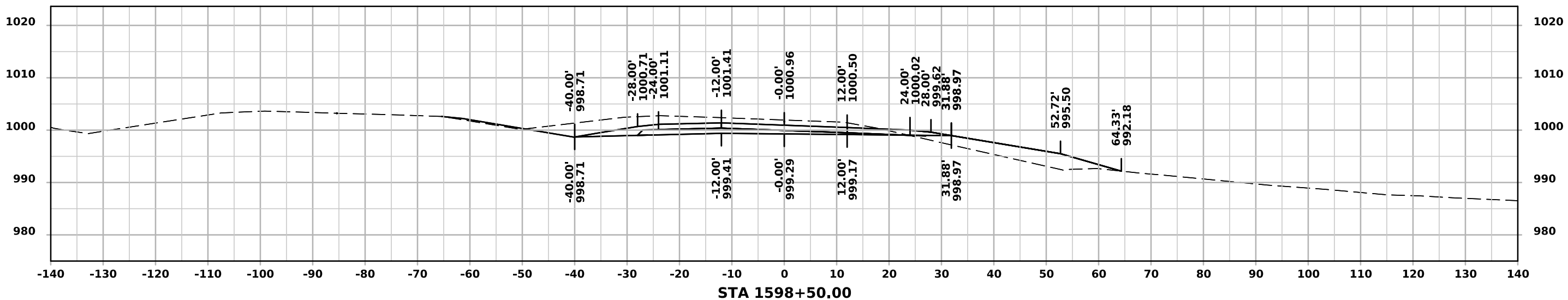
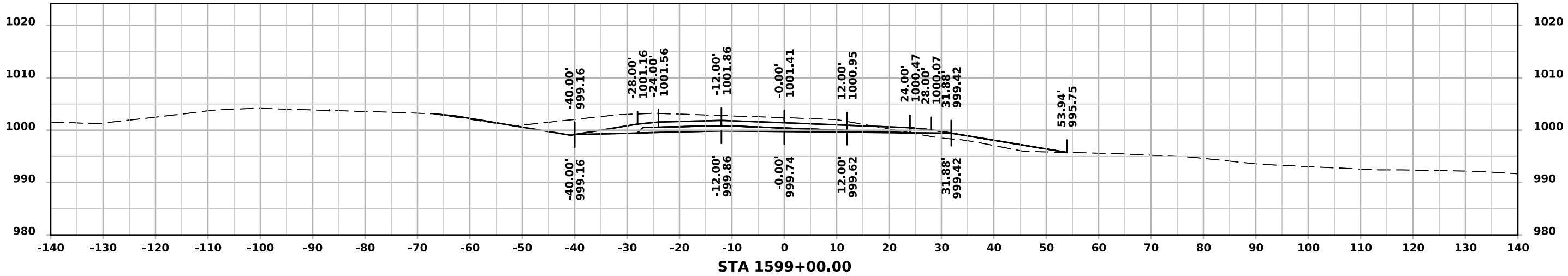
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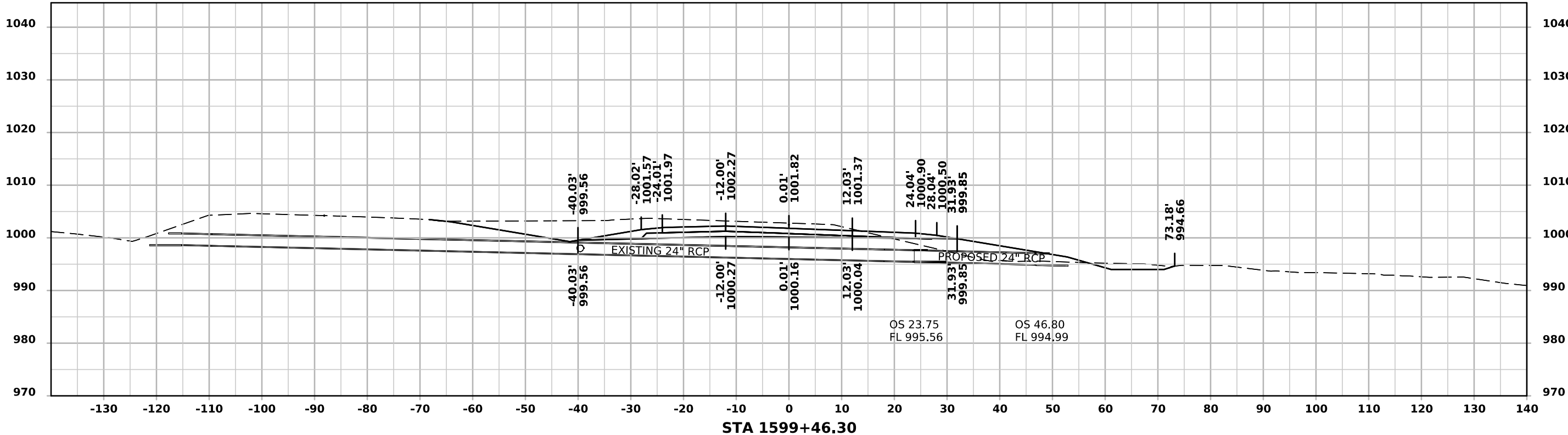
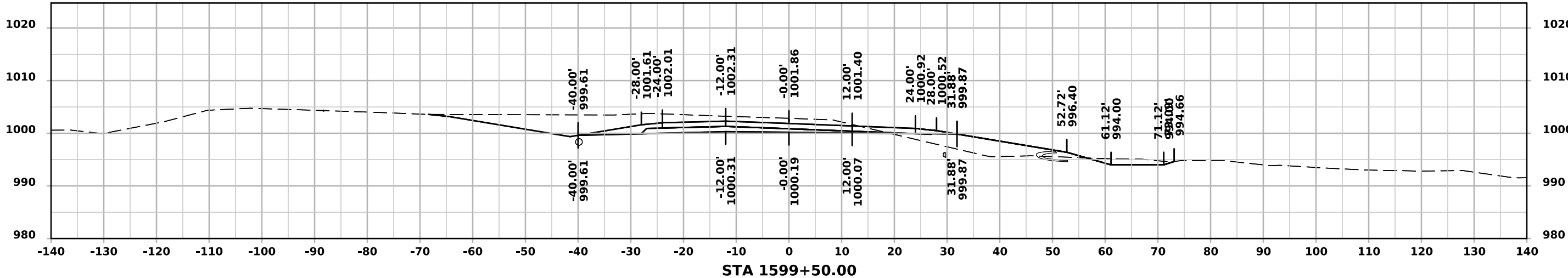
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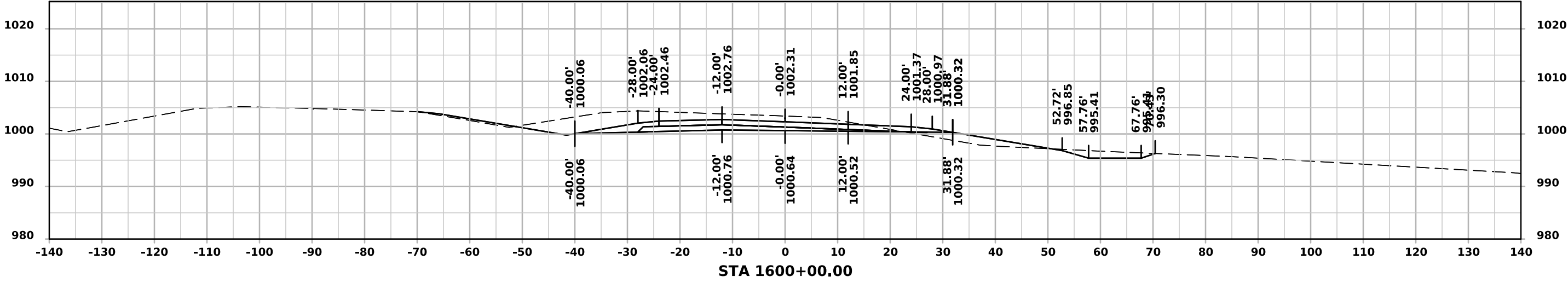
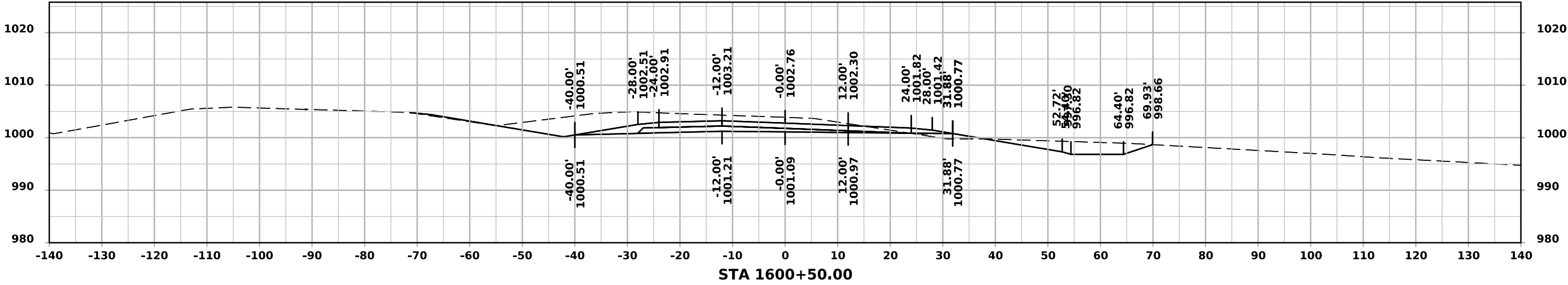
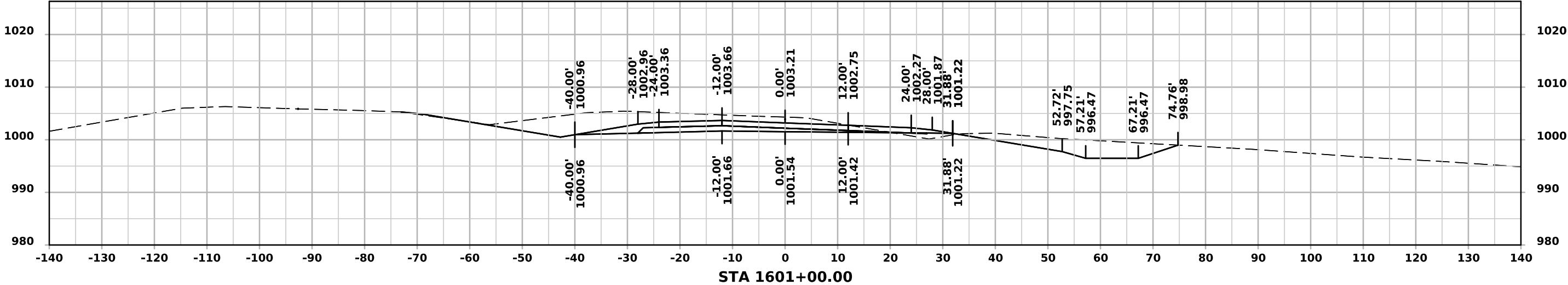
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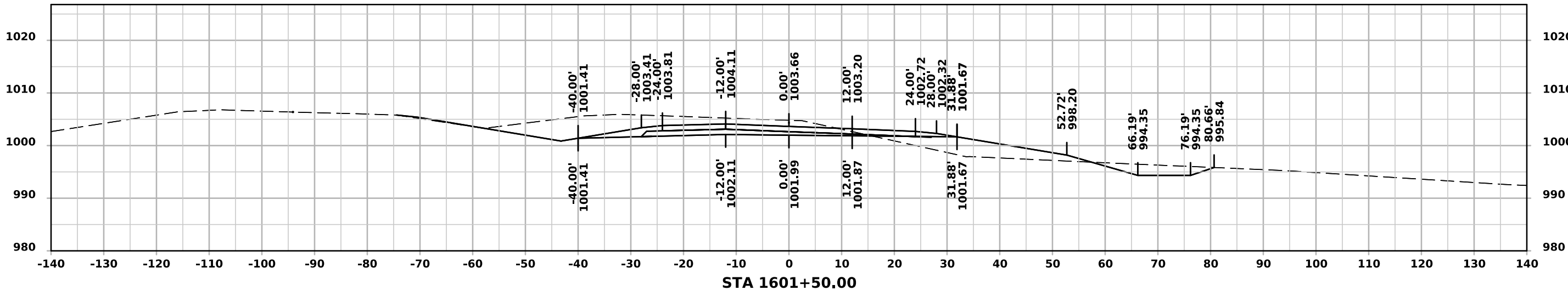
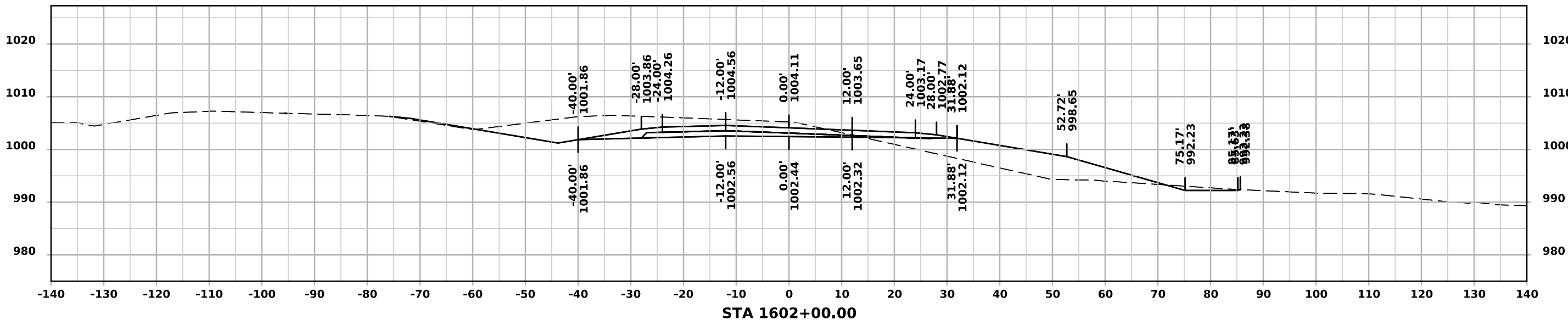
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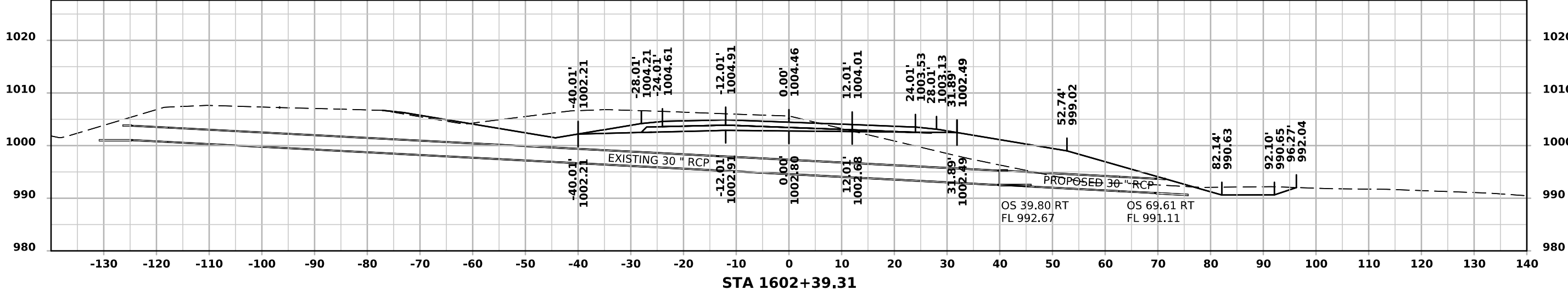
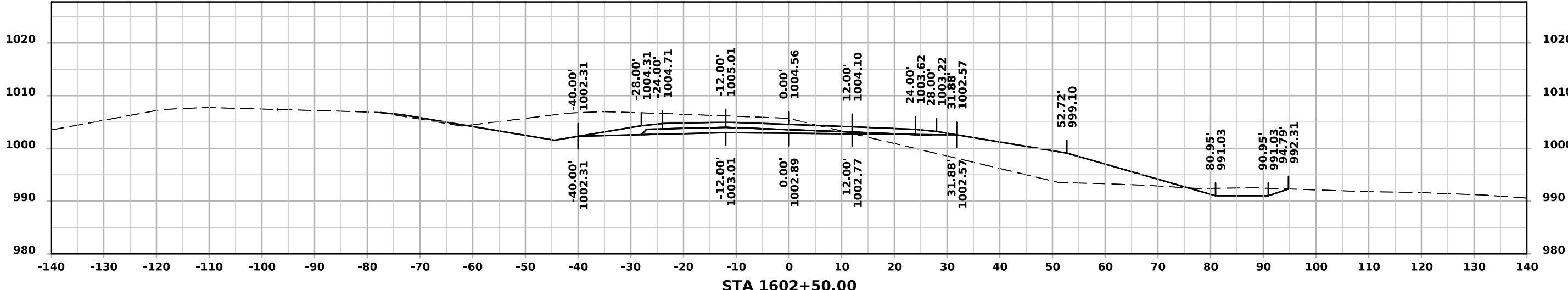
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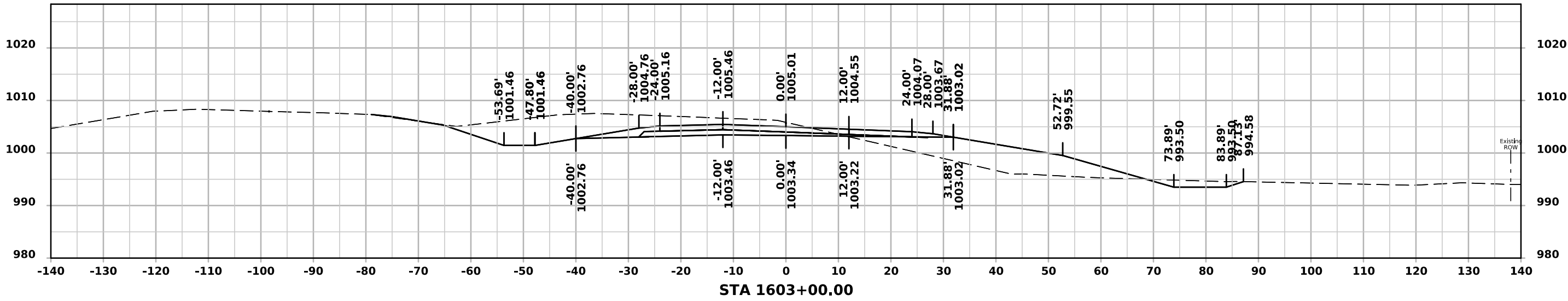
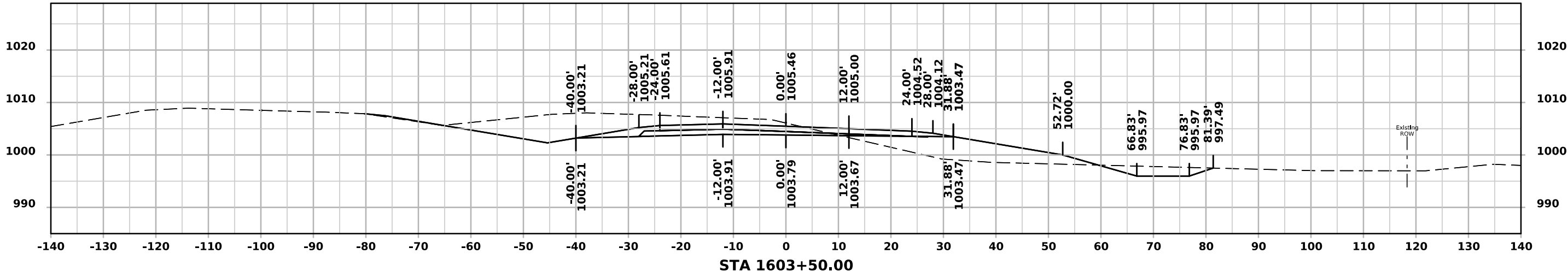
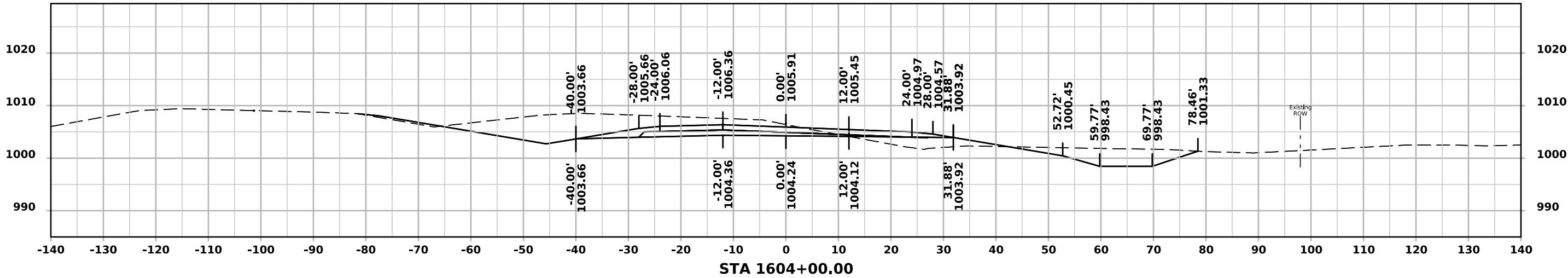
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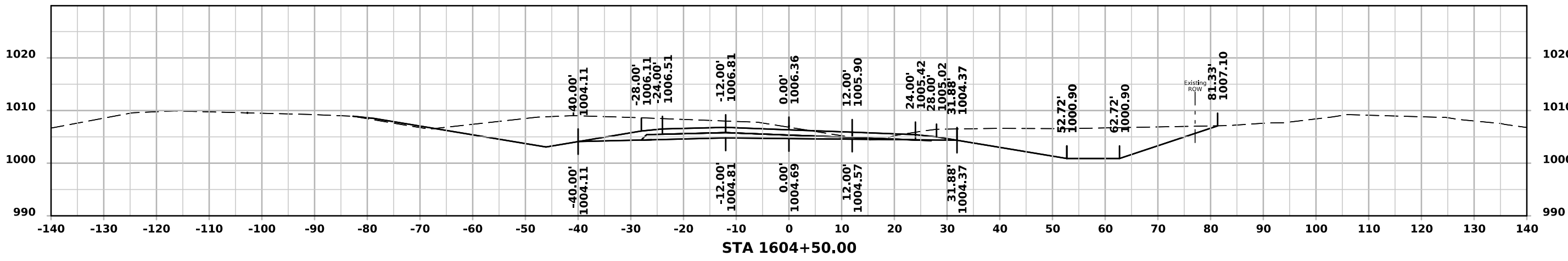
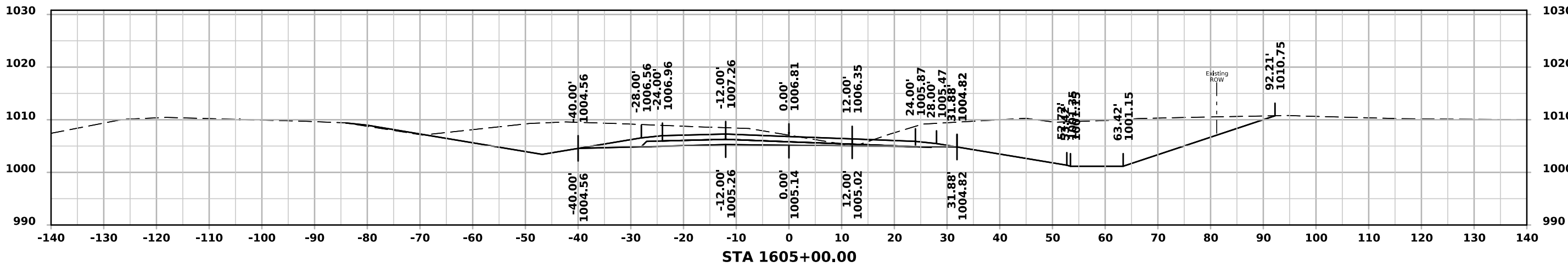
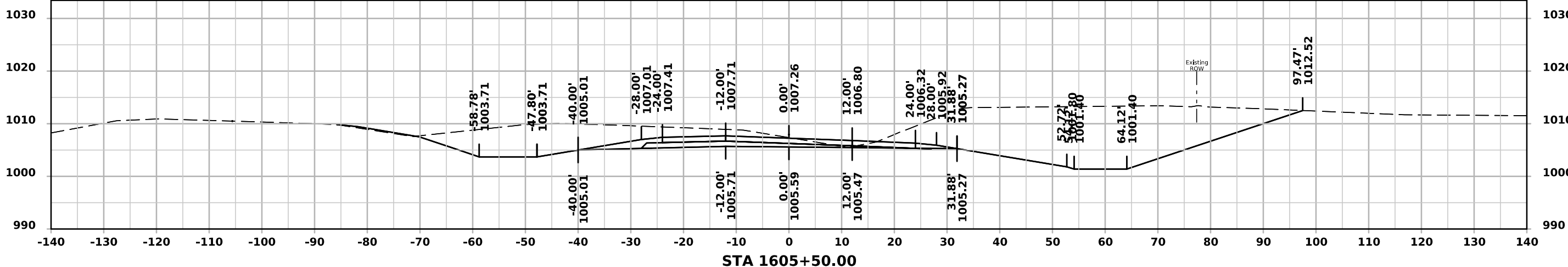
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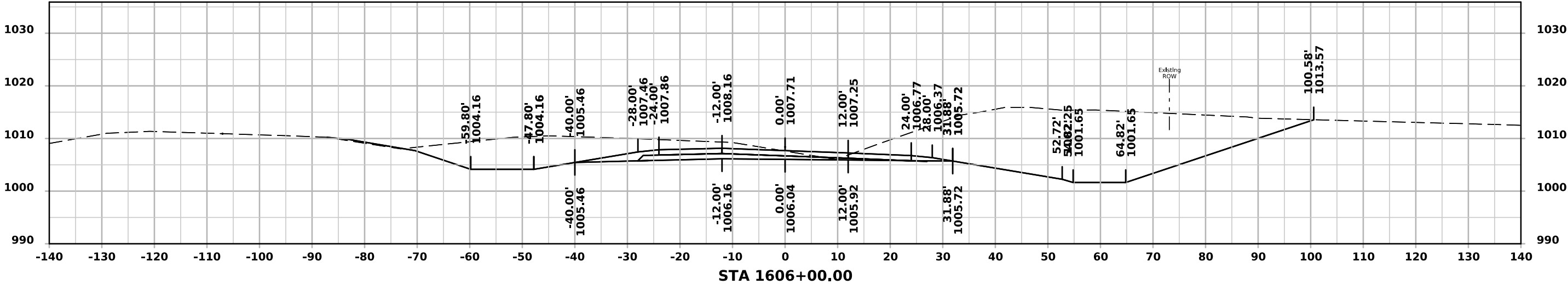
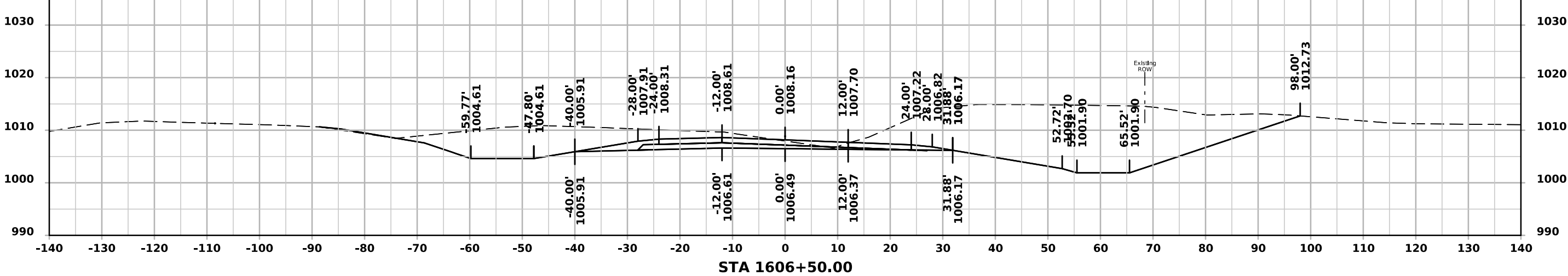
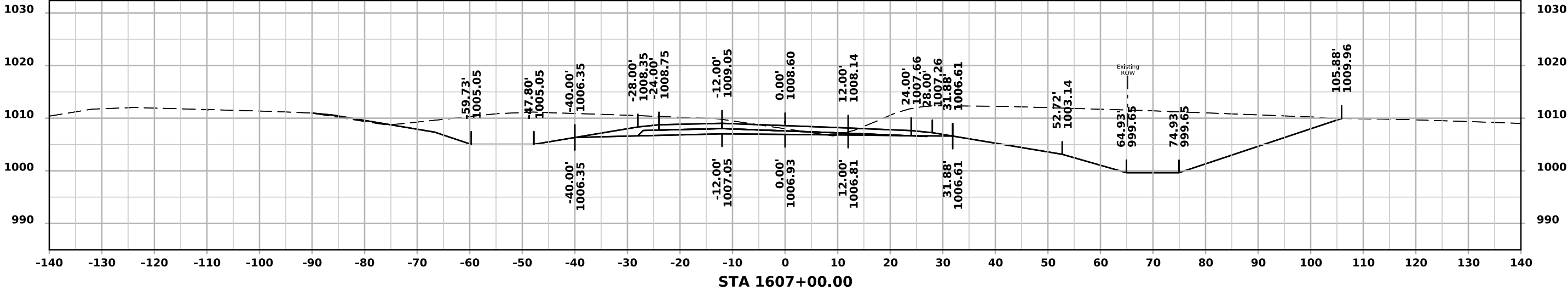
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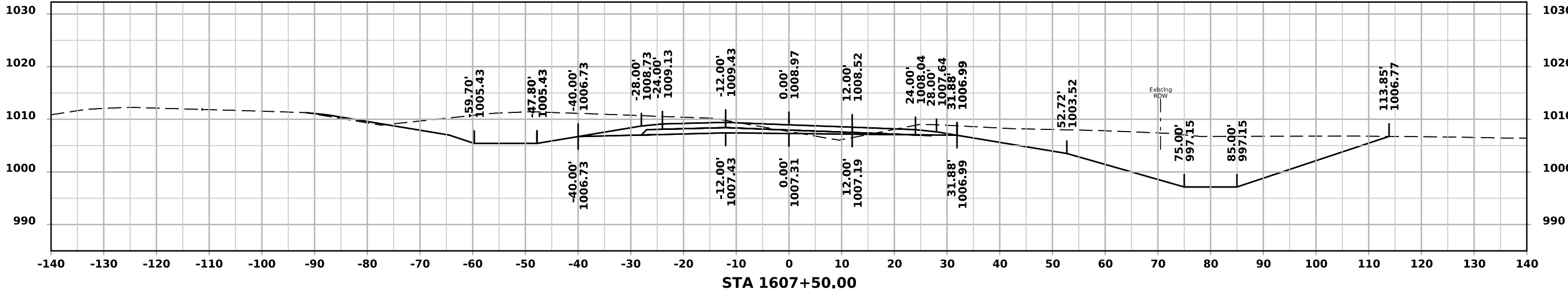
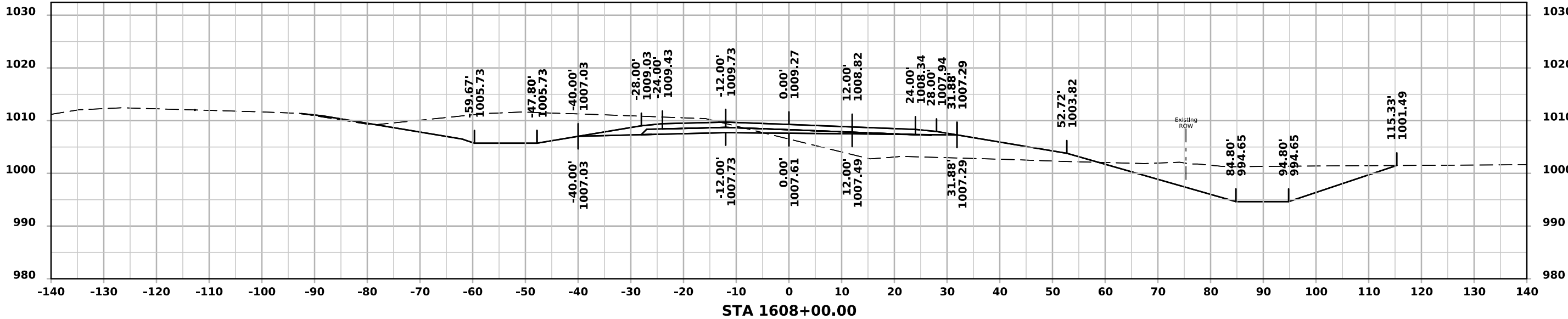
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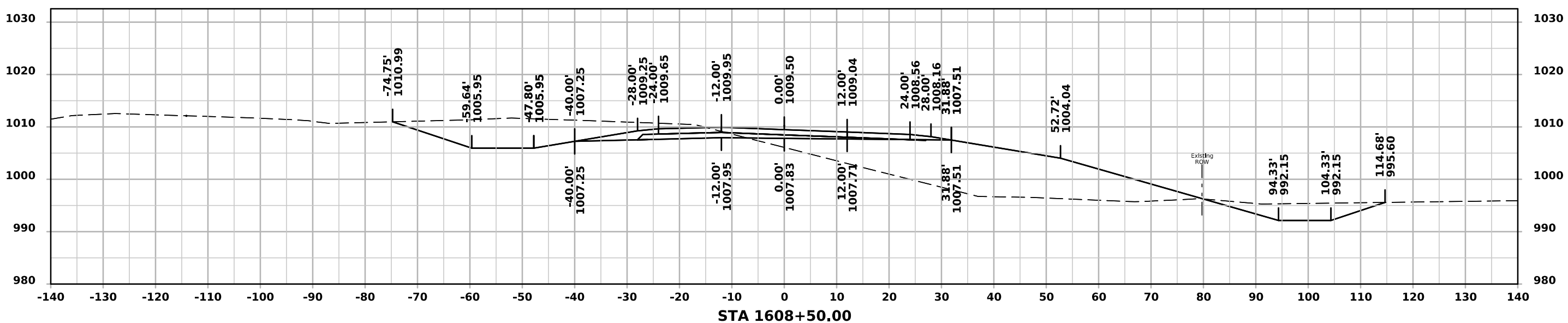
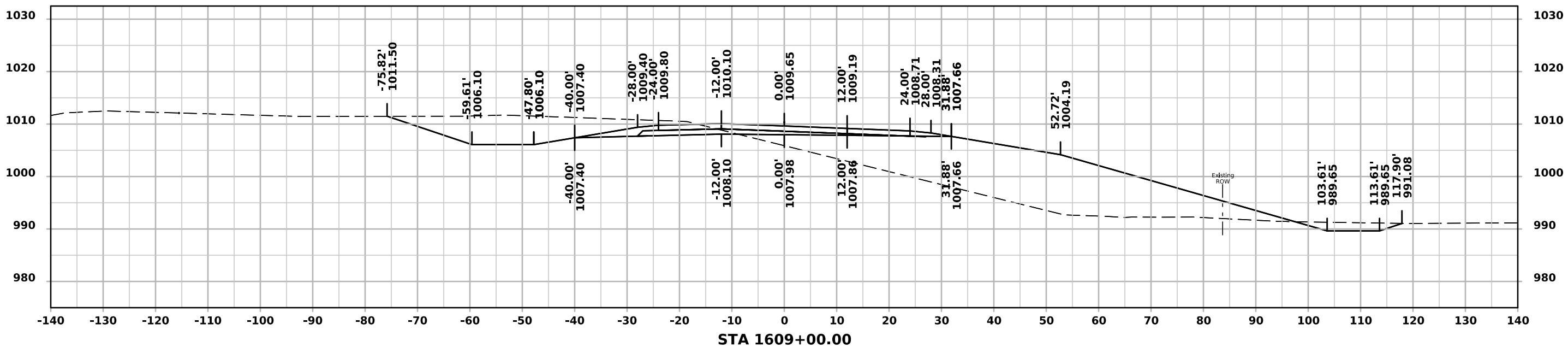
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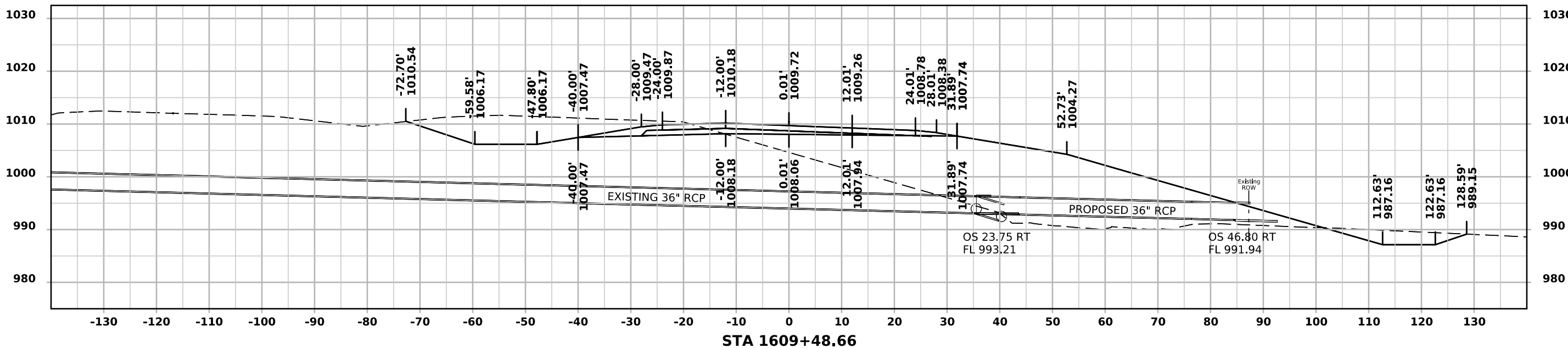
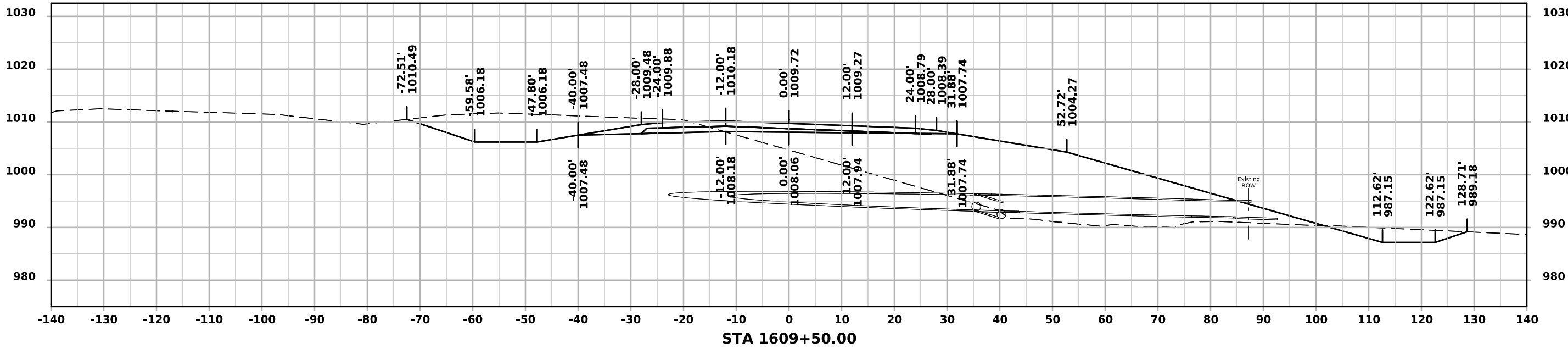
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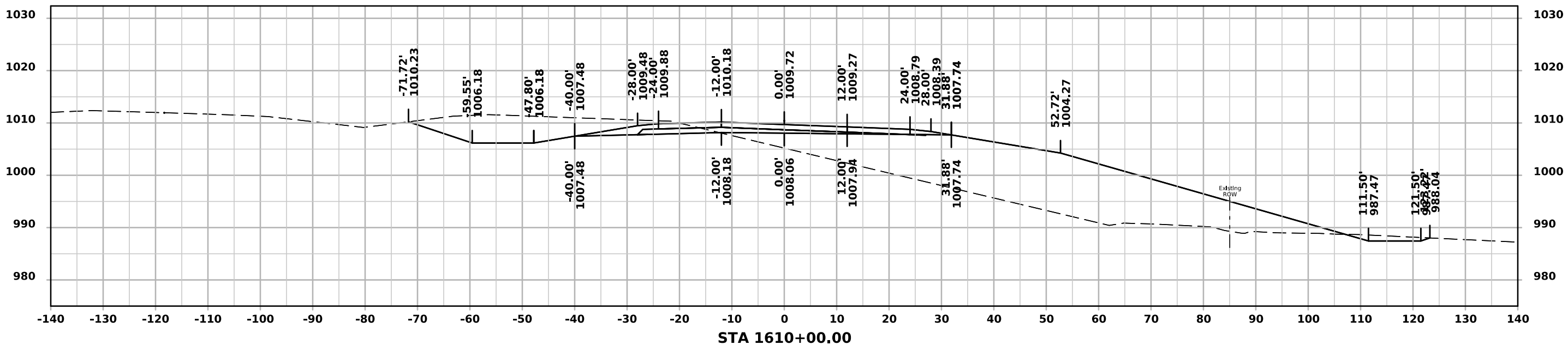
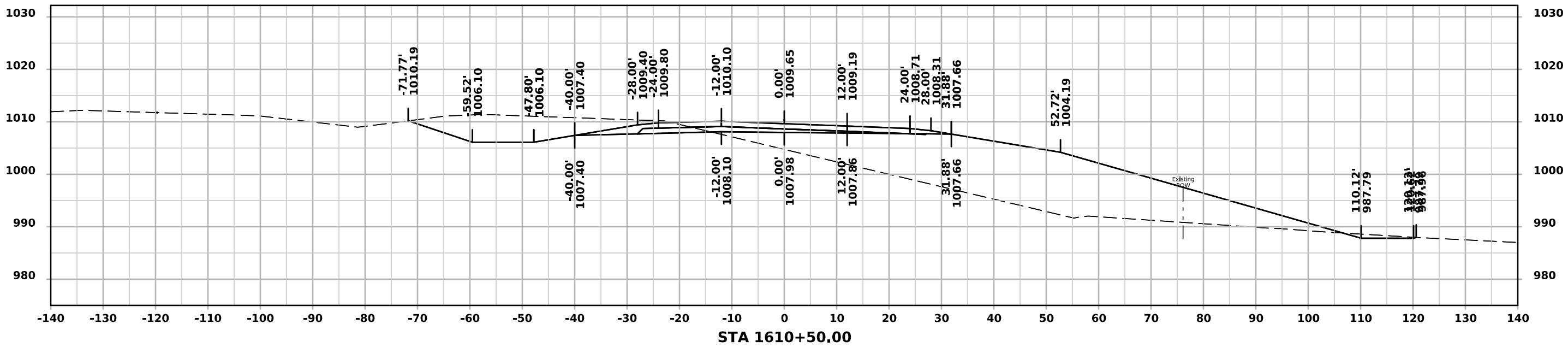
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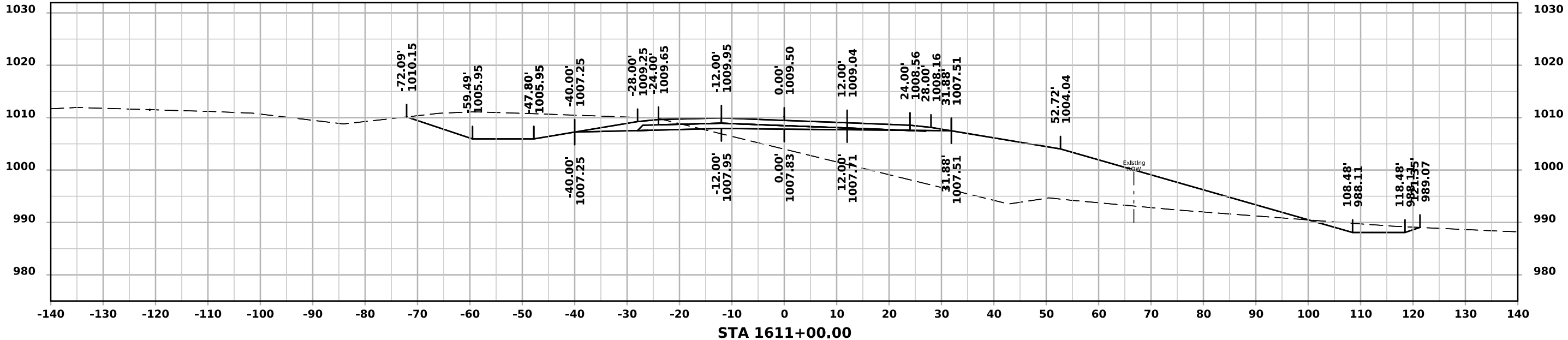
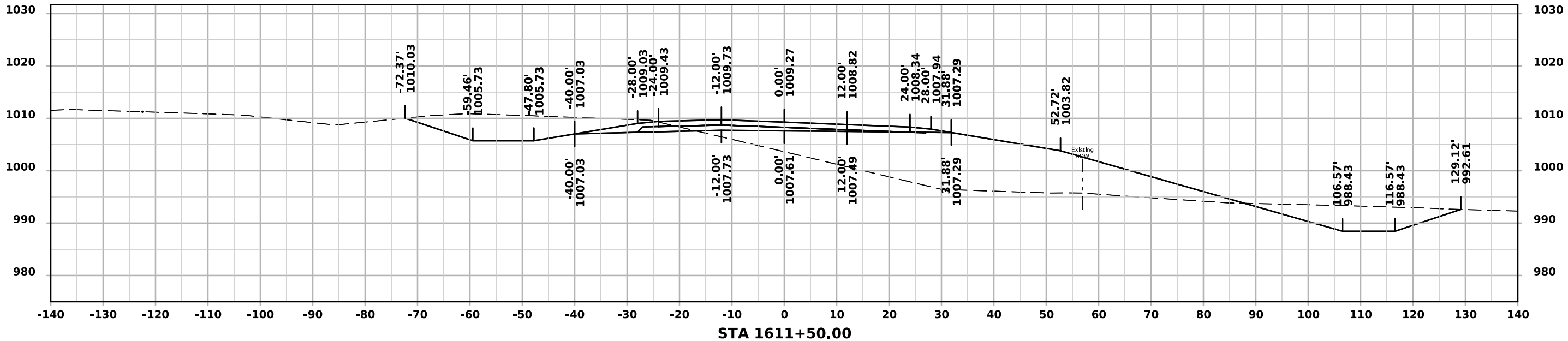
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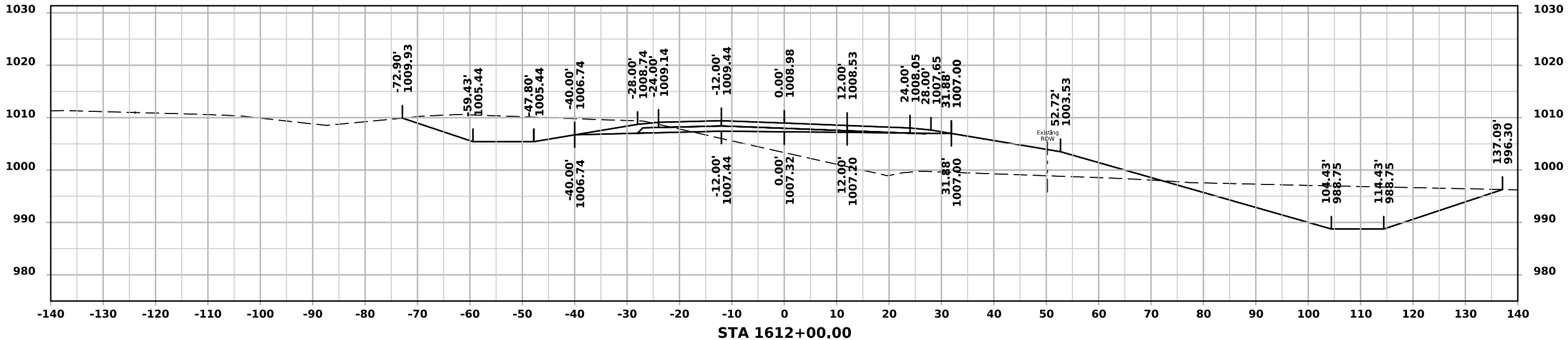
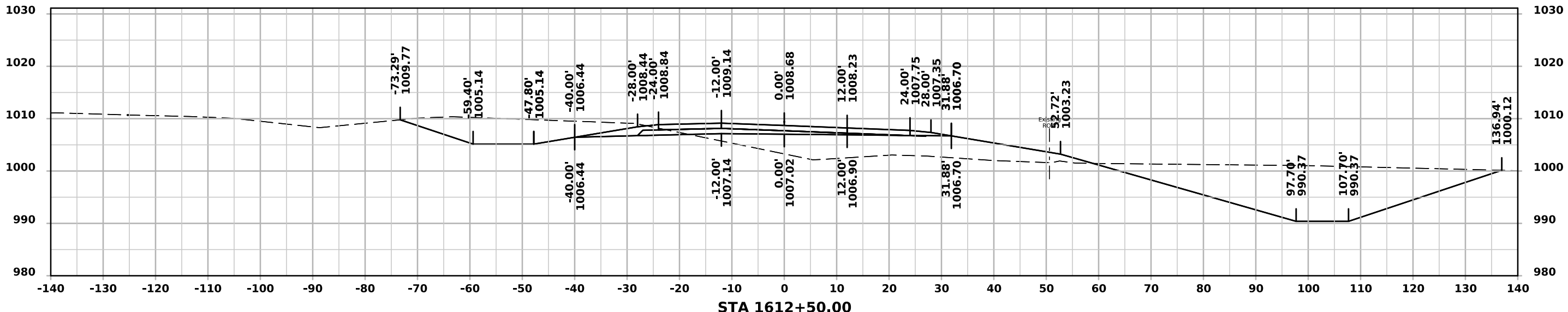
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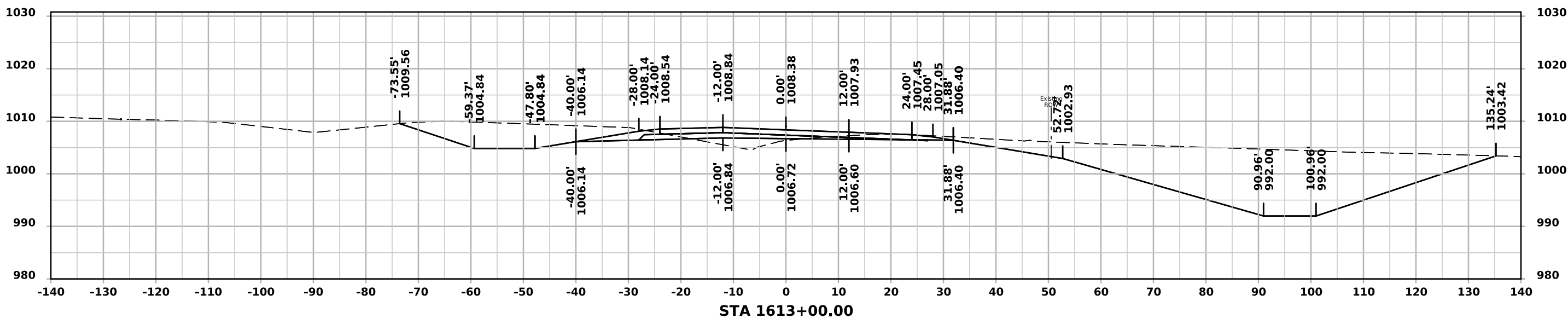
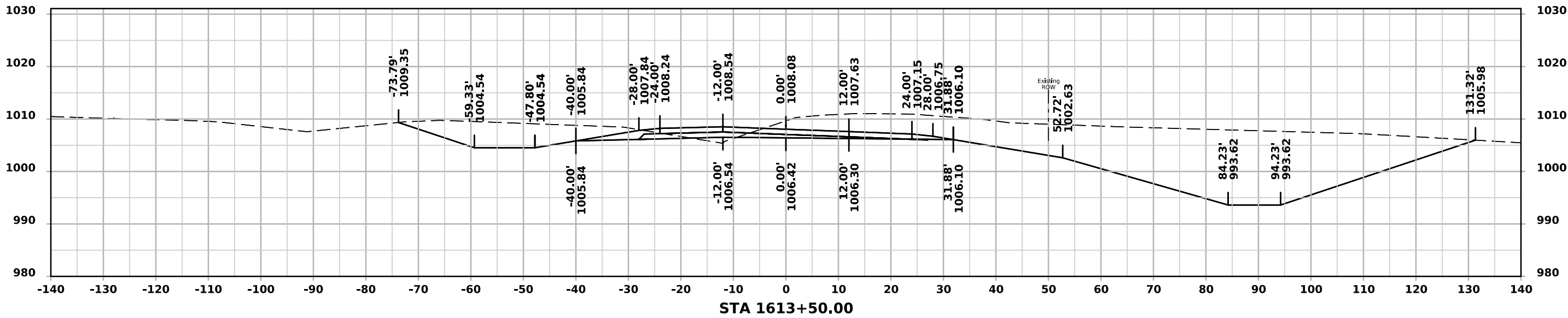
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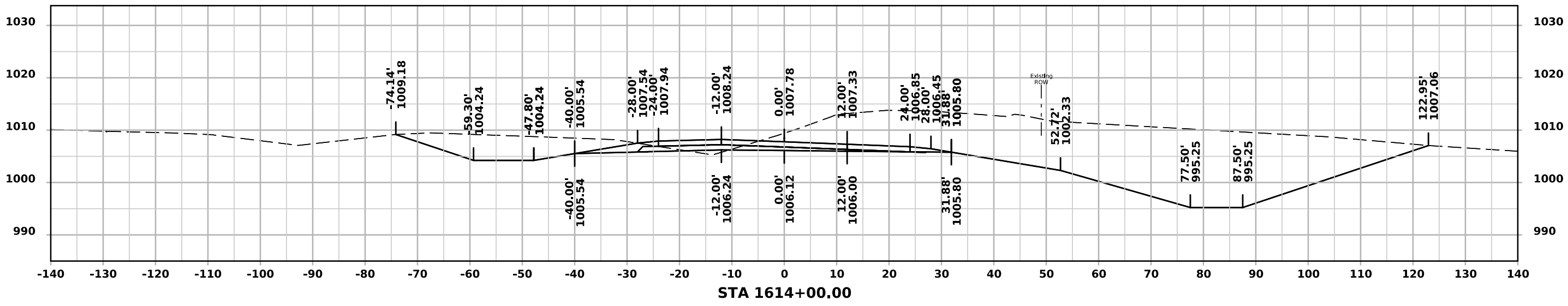
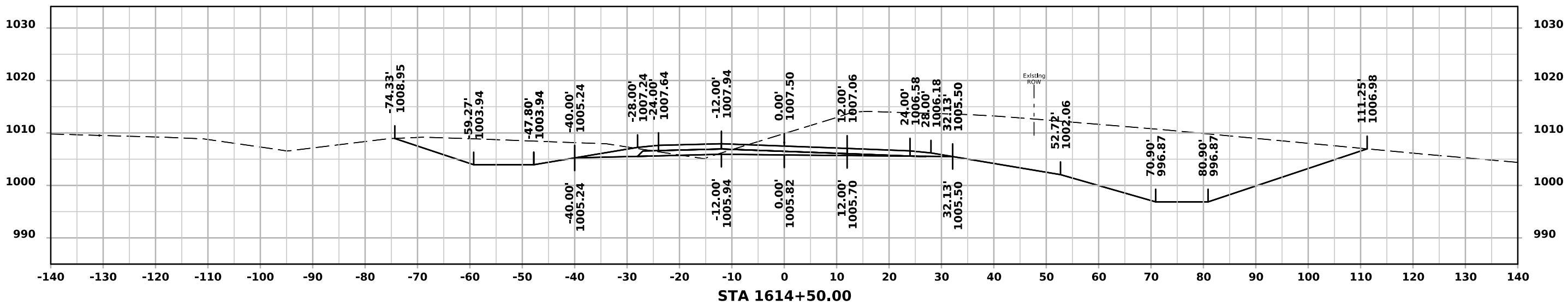
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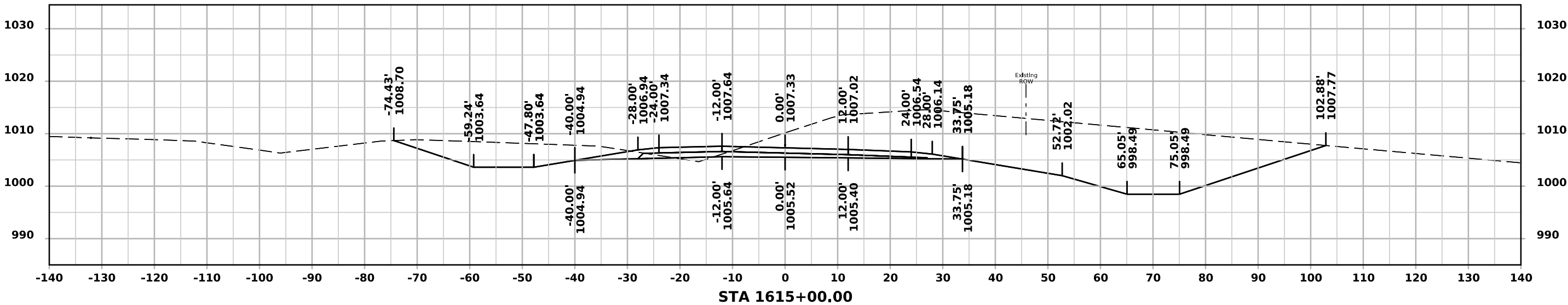
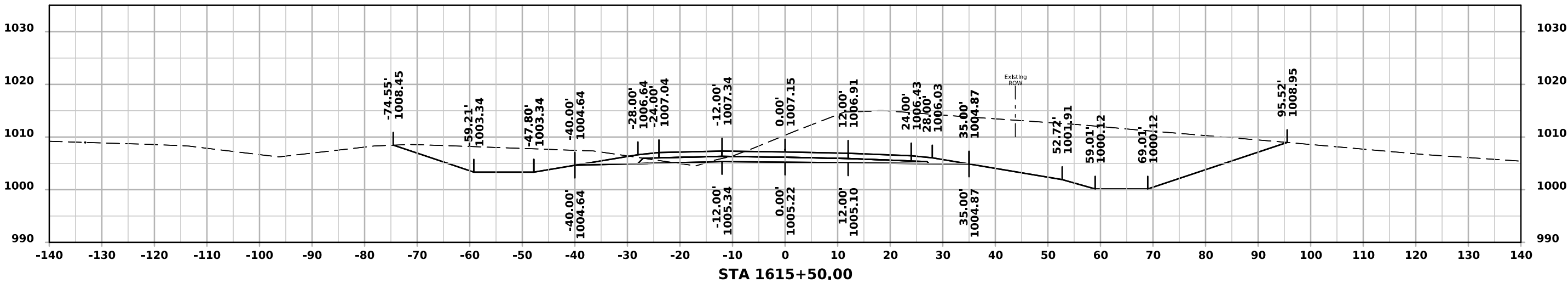
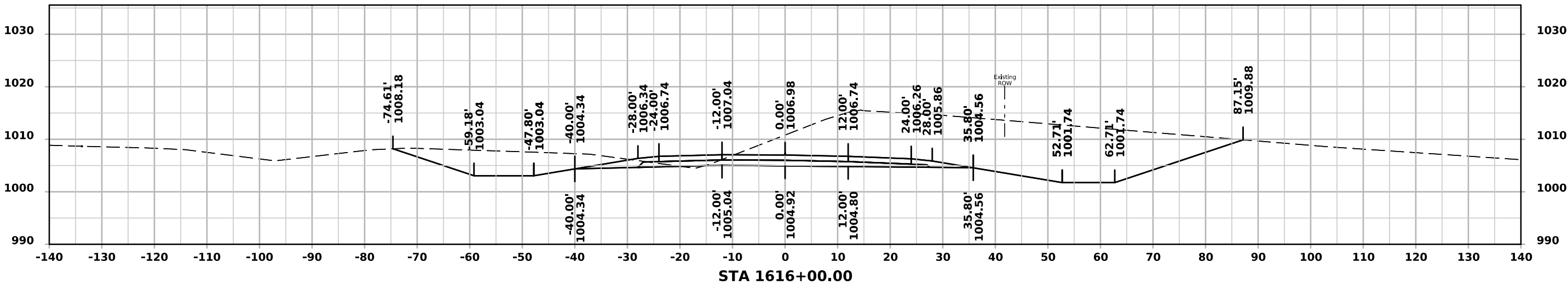
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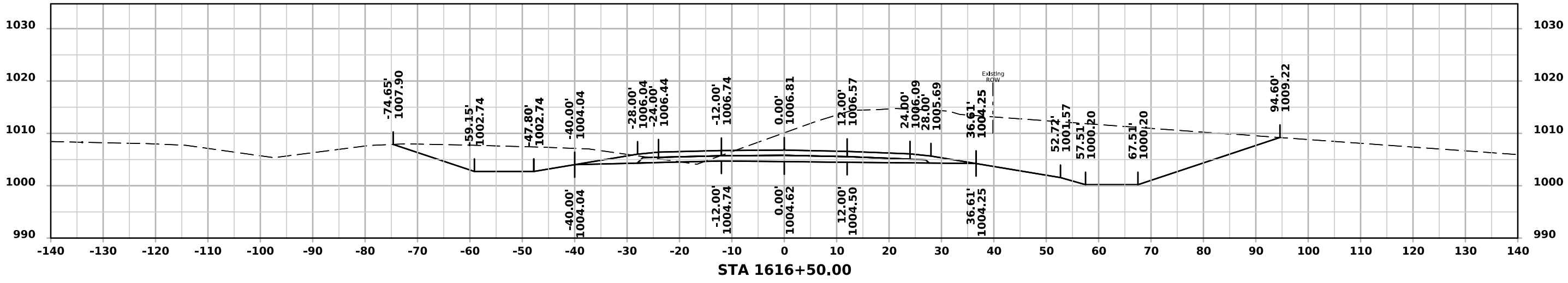
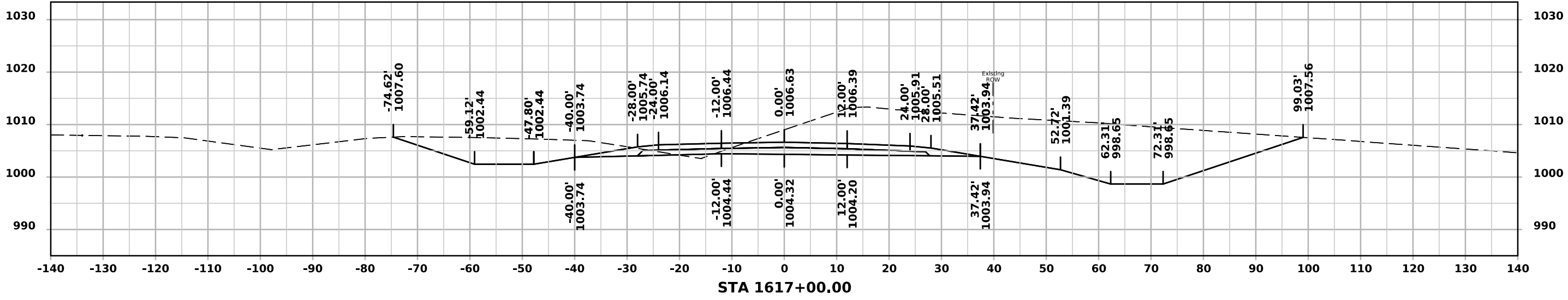
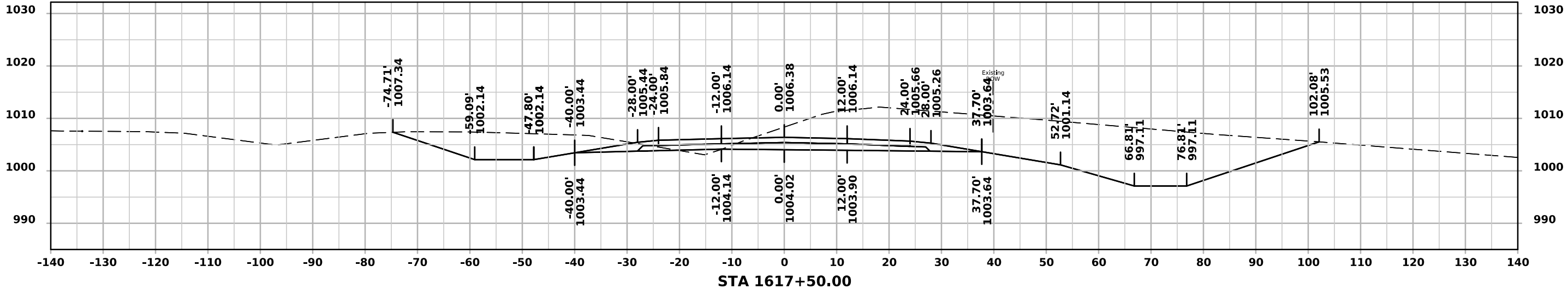
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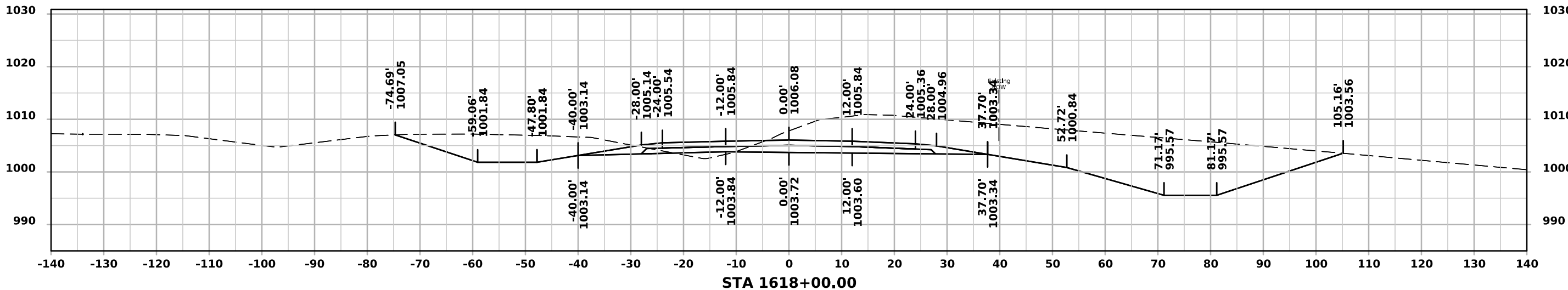
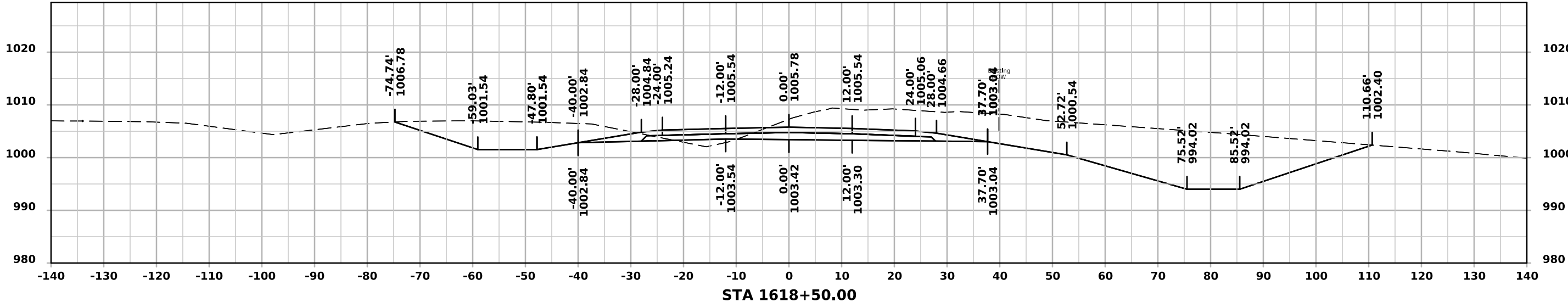
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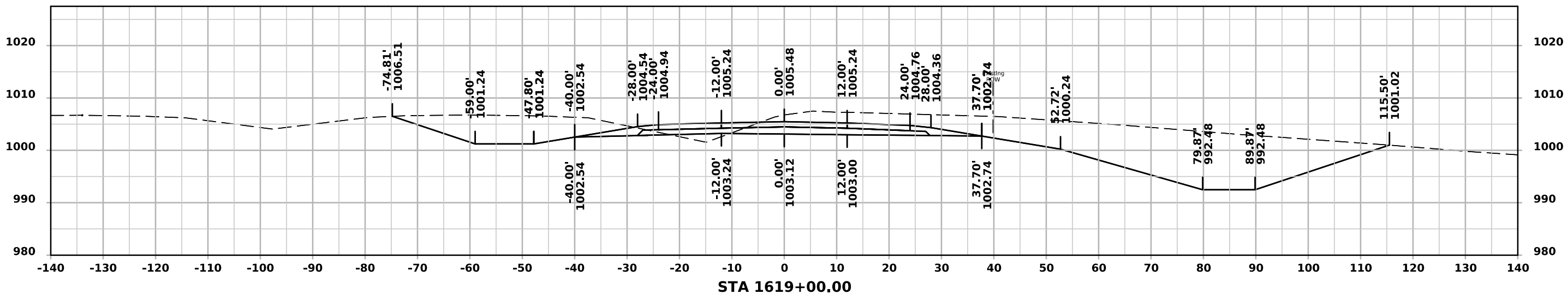
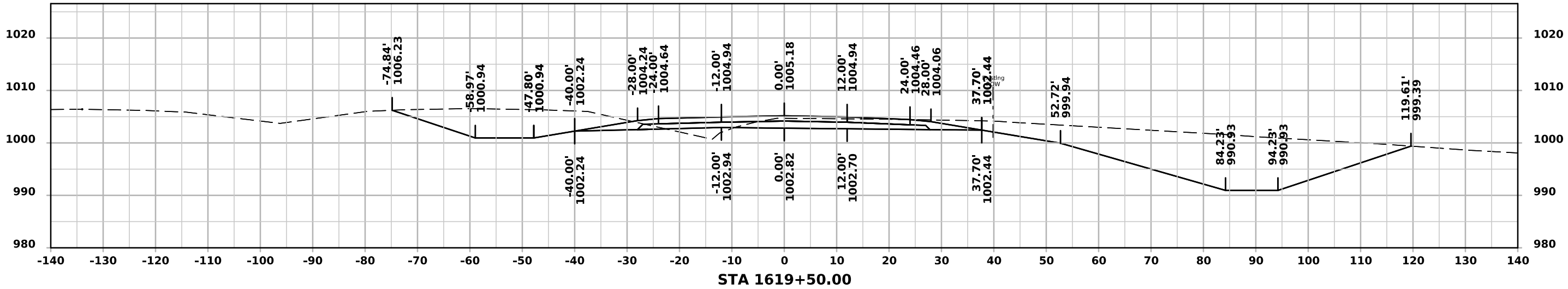
ML - I 80 (EASTBOUND)



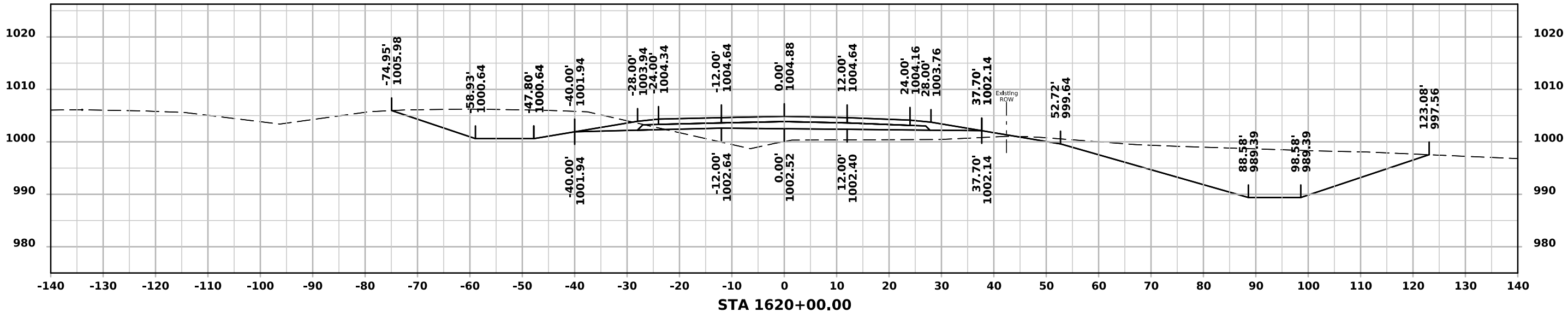
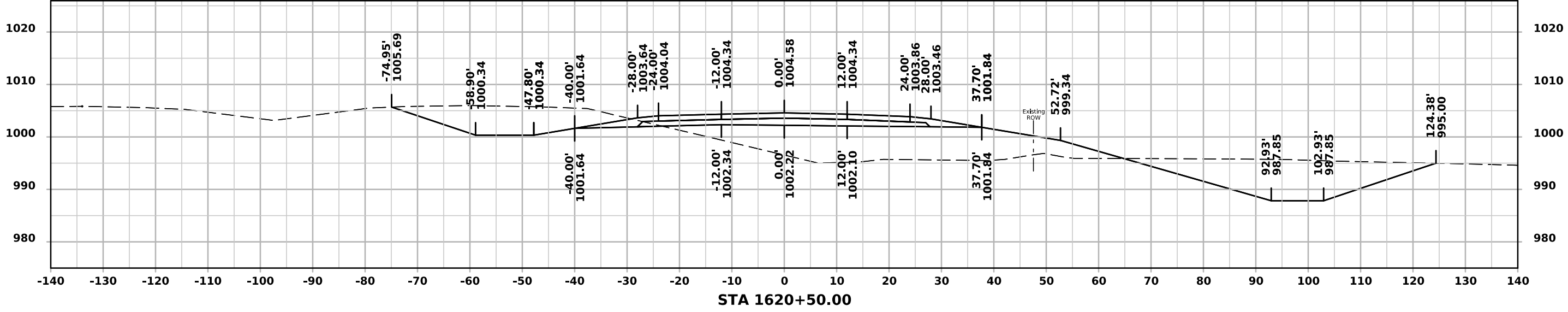
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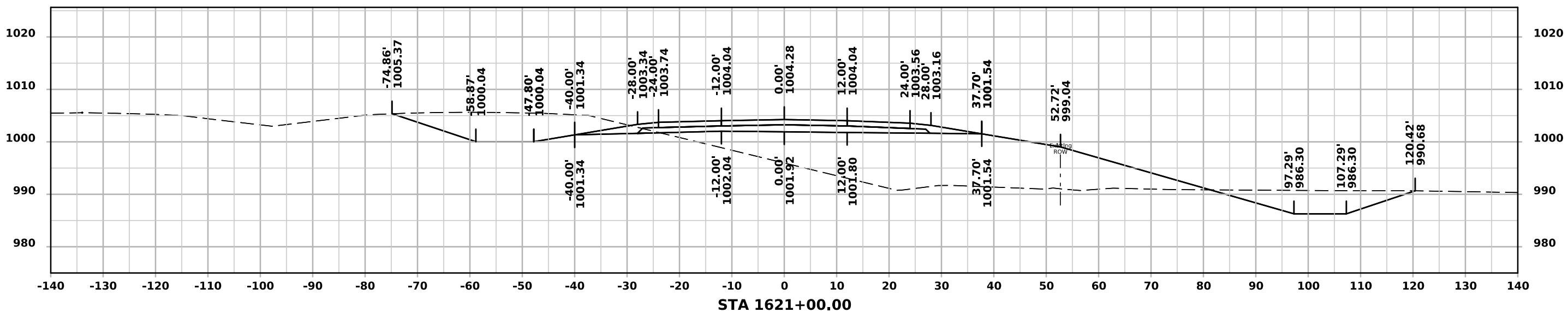
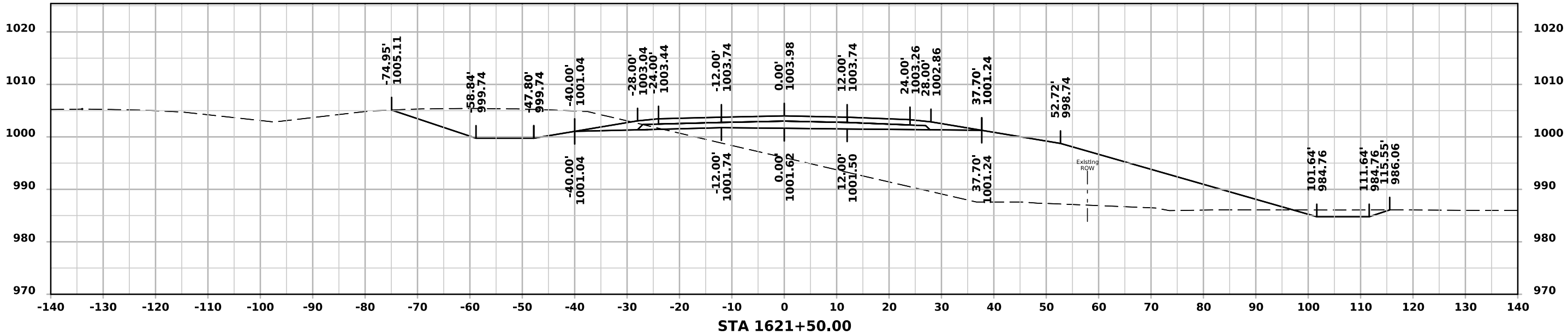
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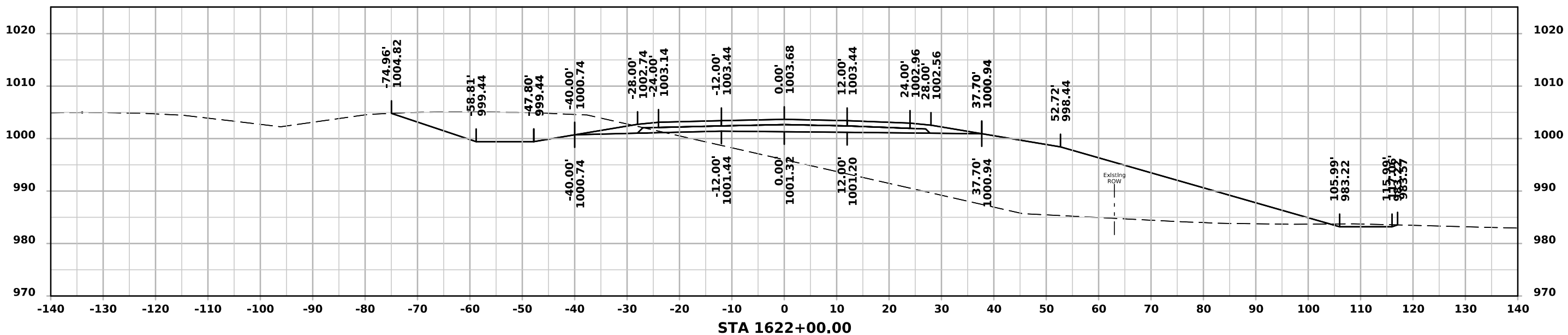
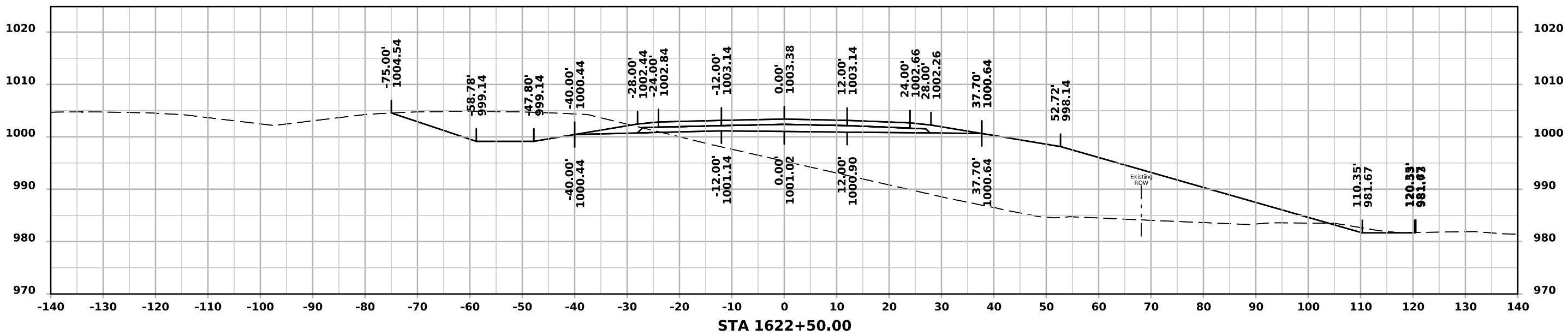
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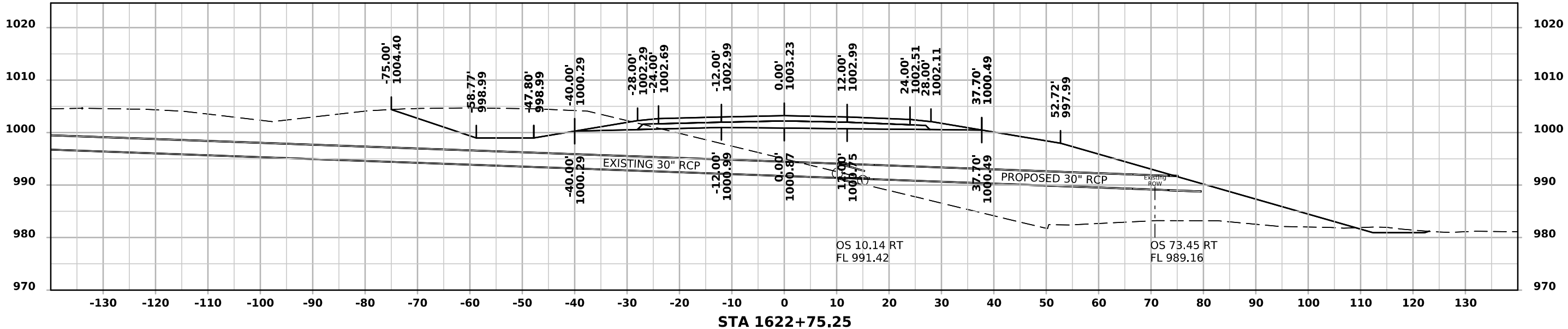
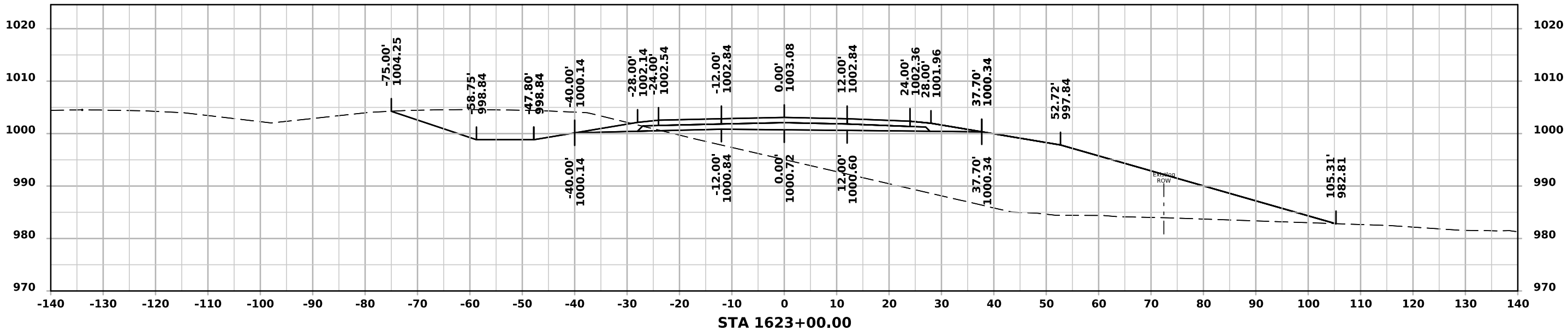
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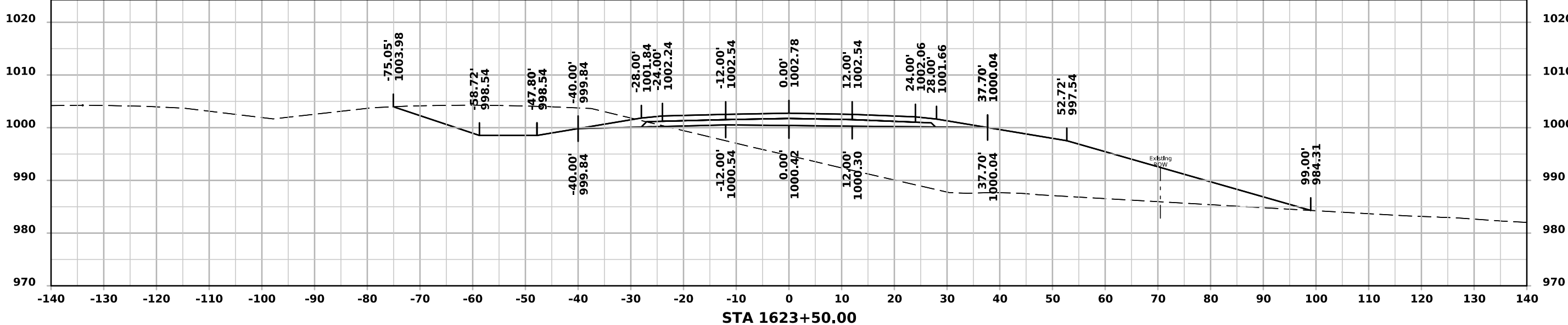
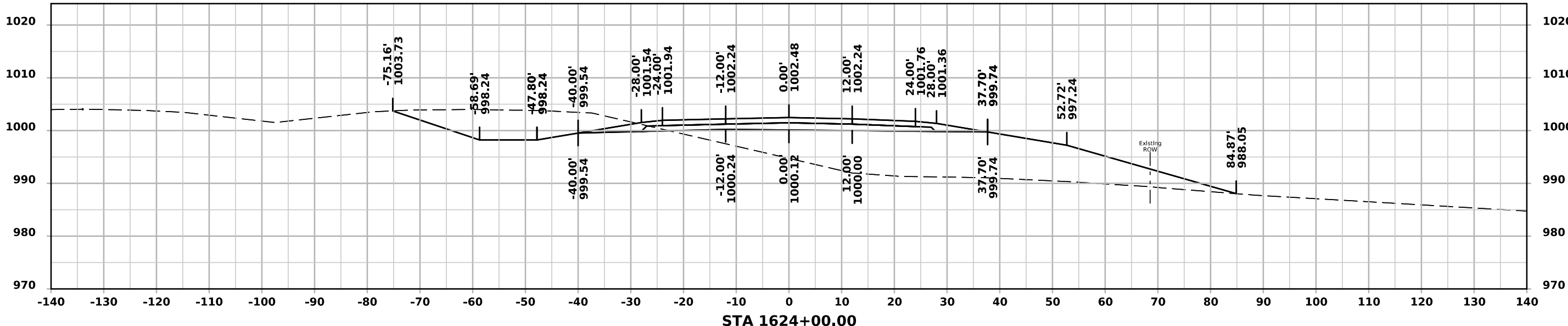
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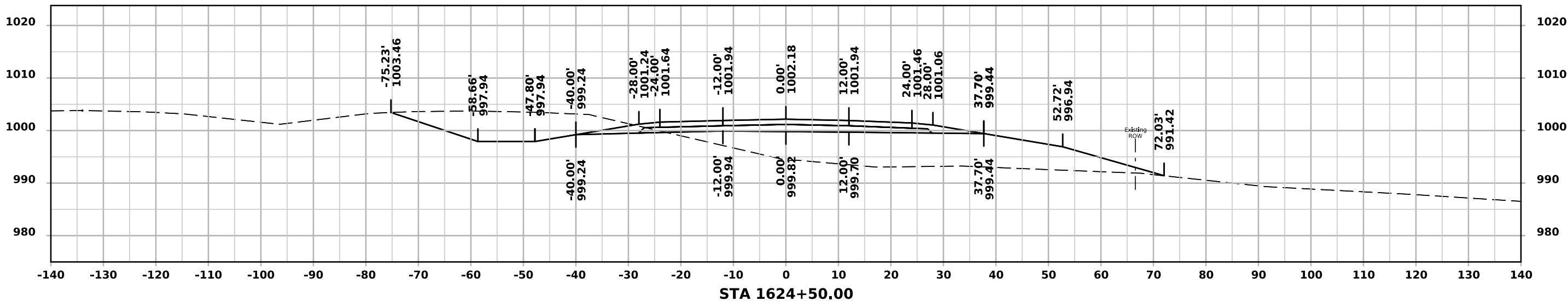
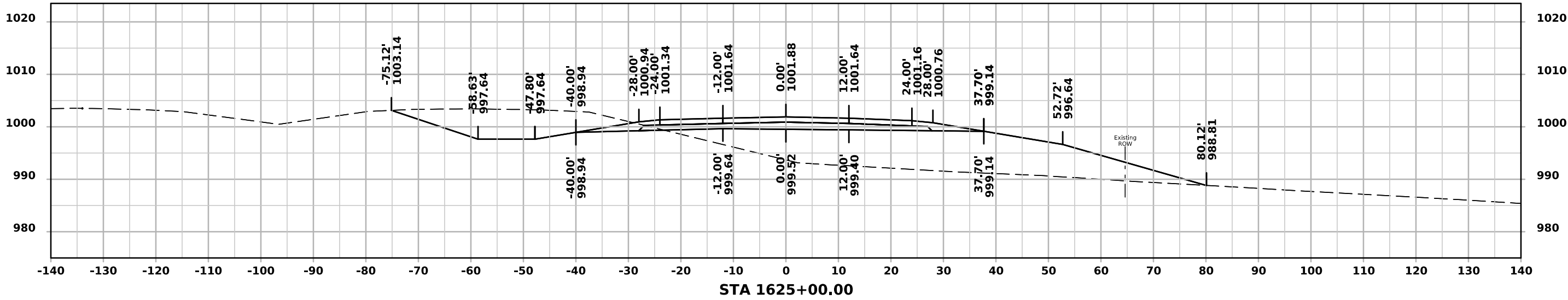
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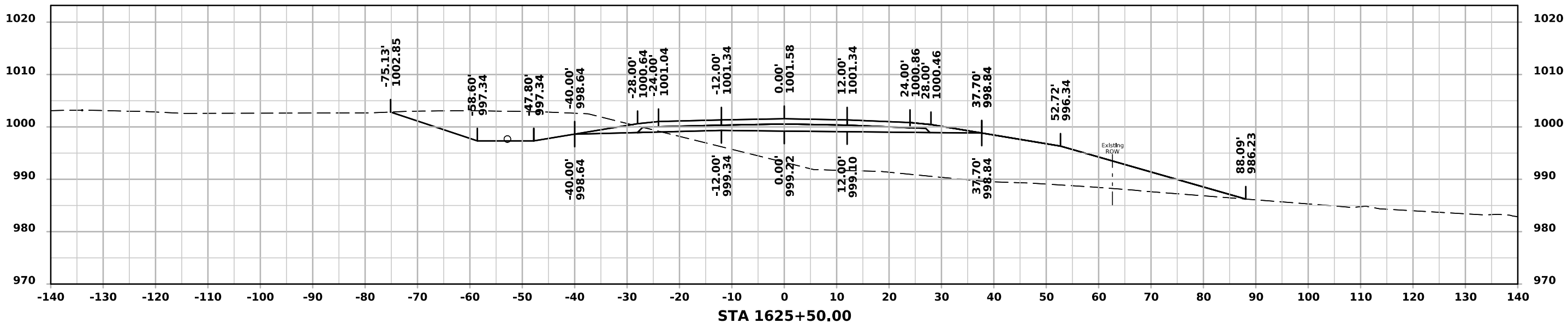
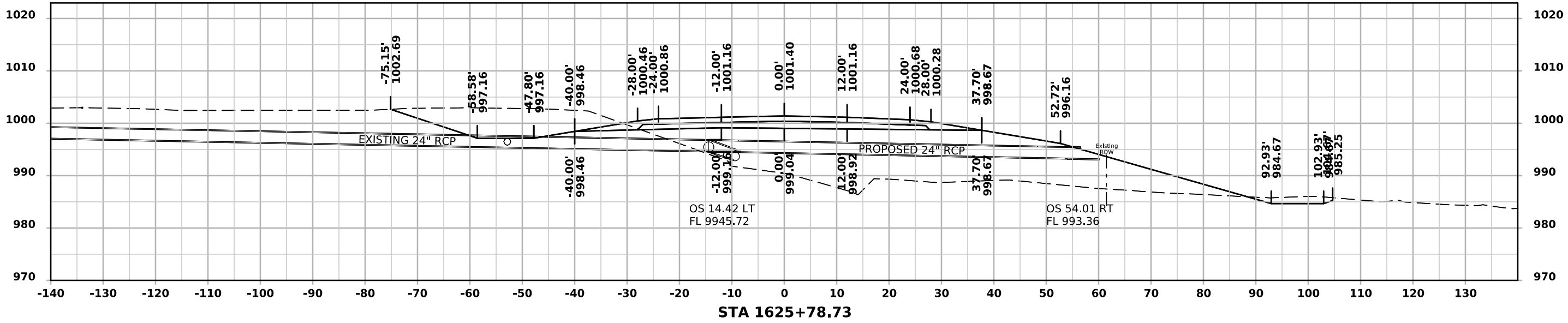
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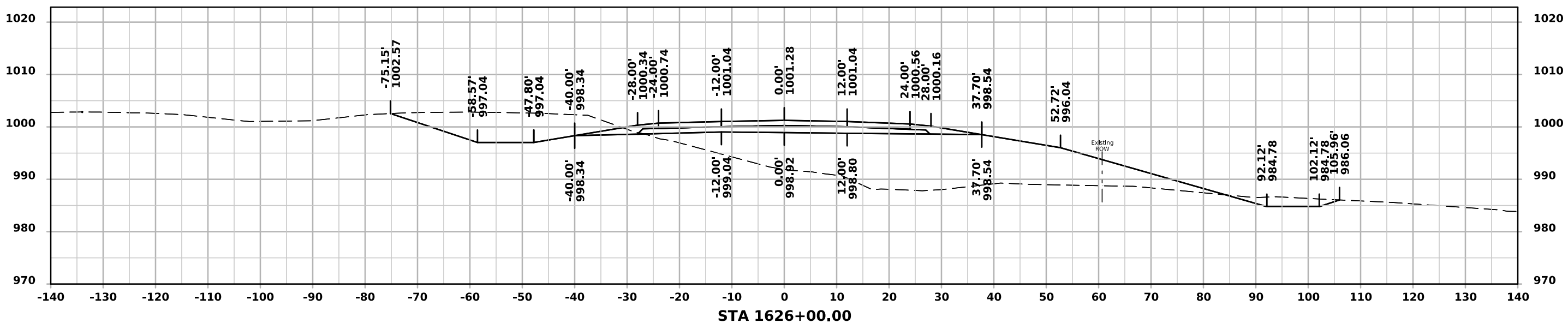
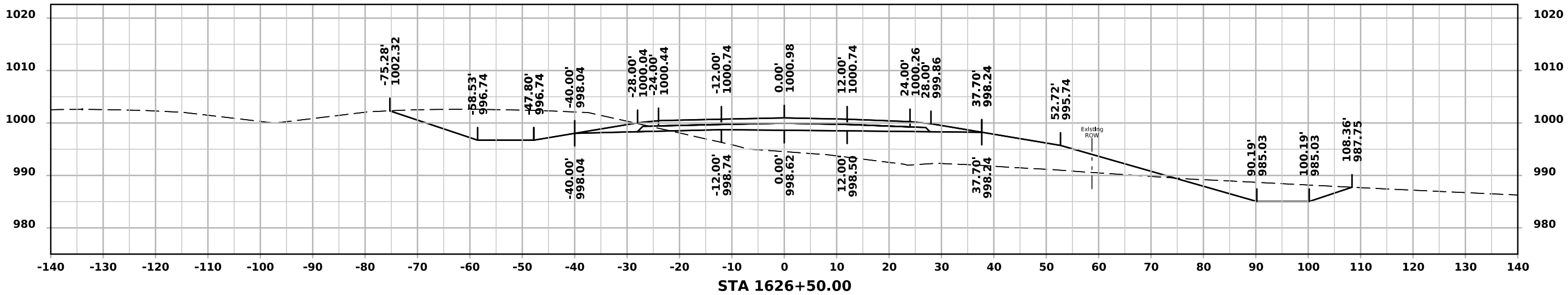
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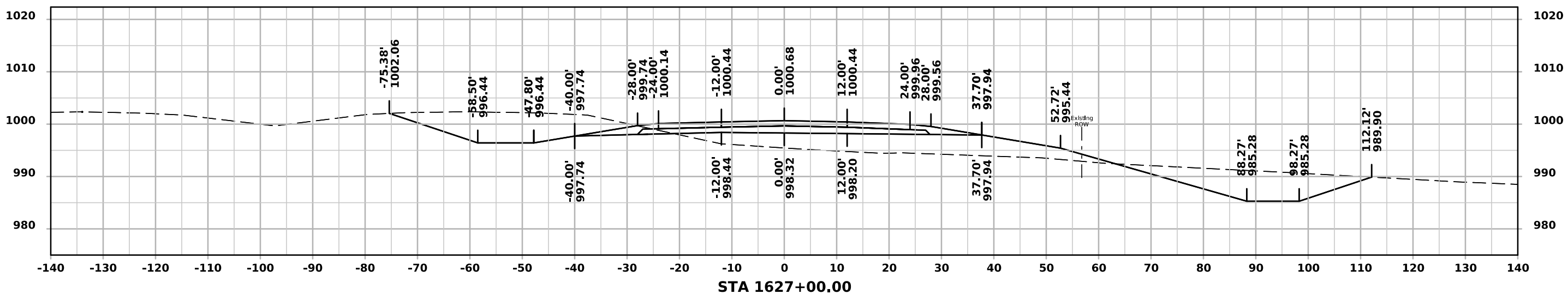
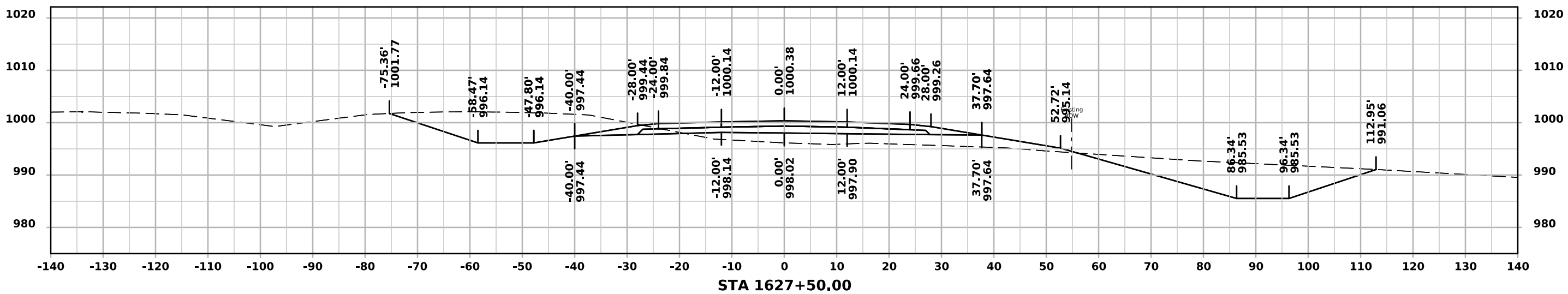
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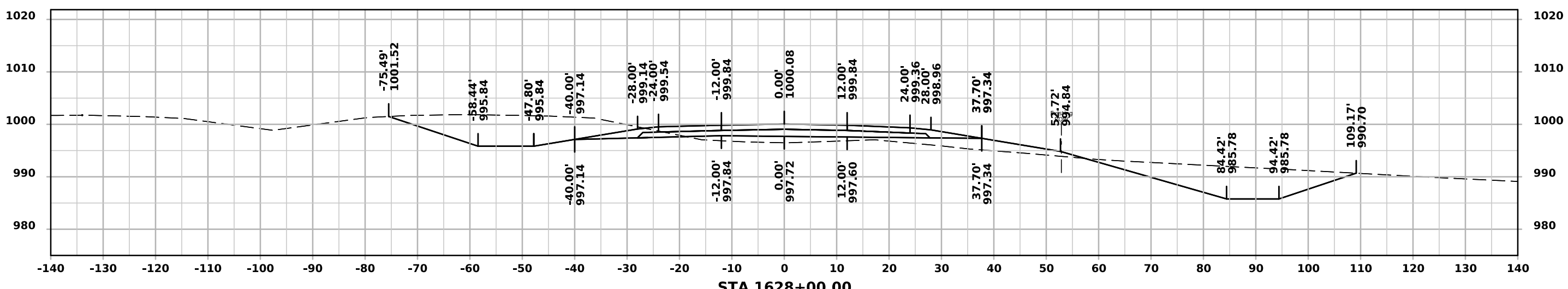
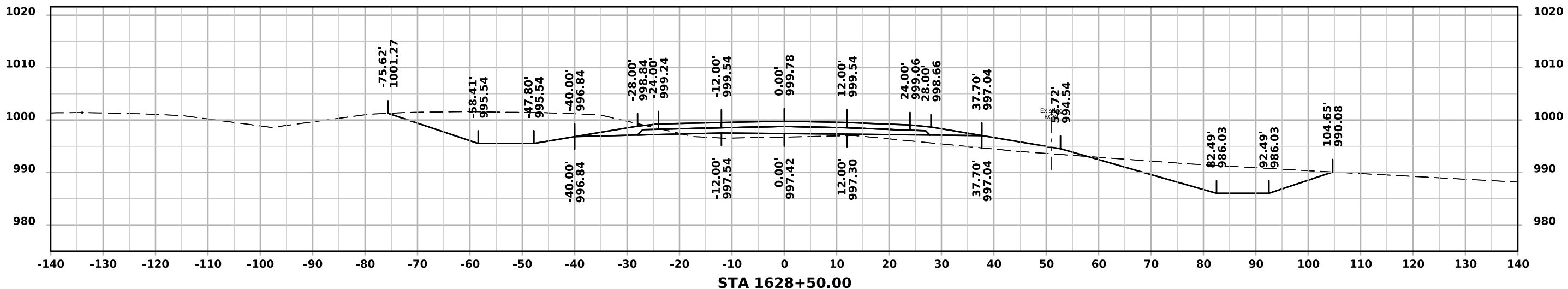
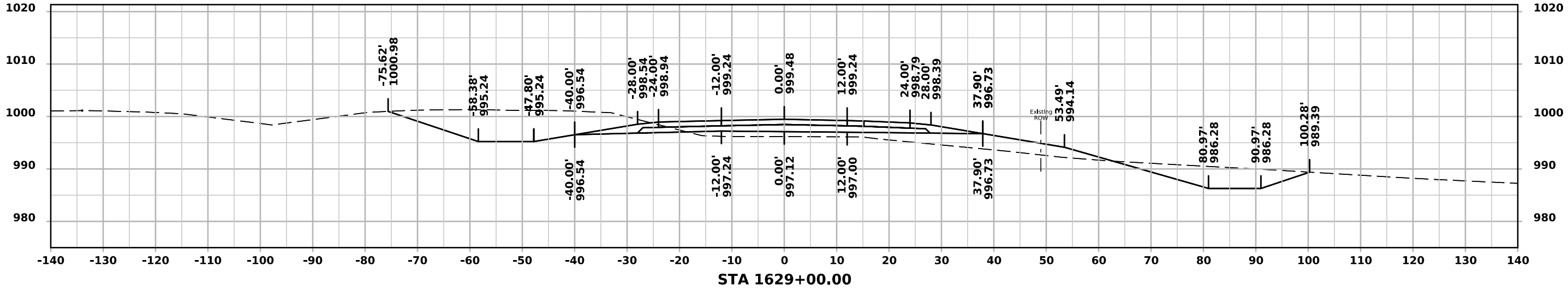
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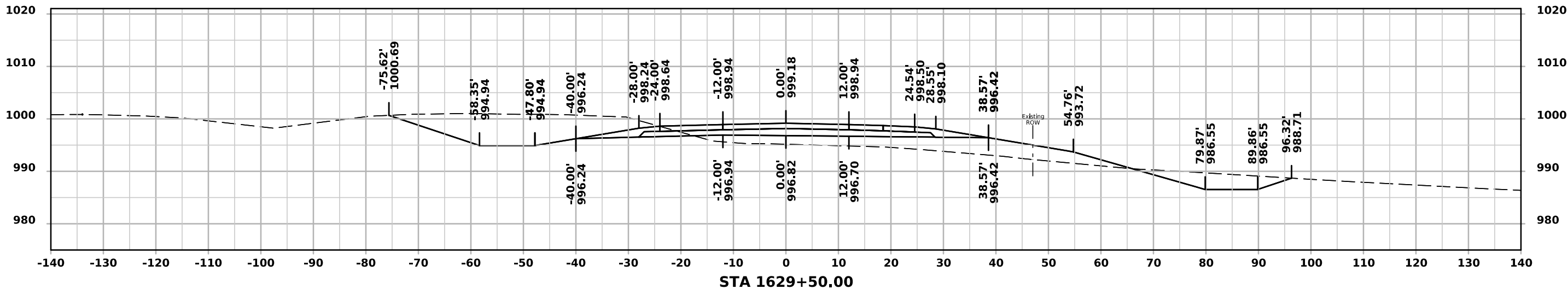
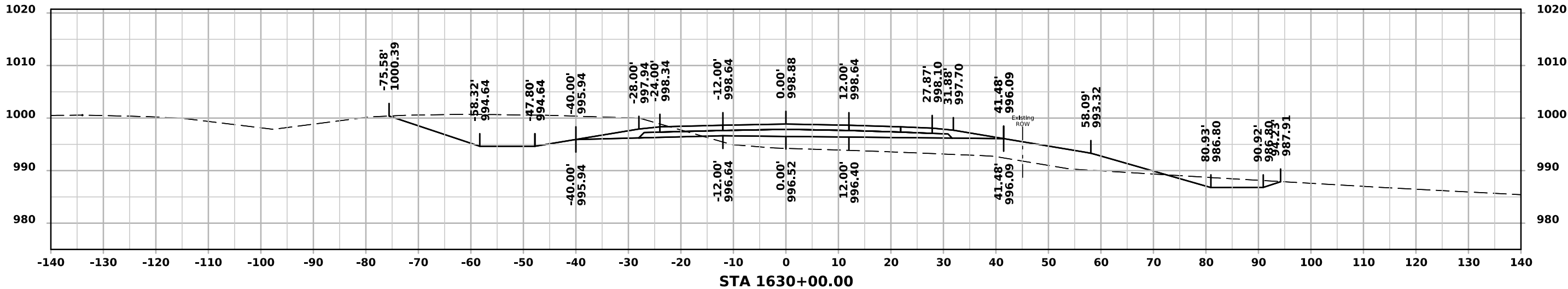
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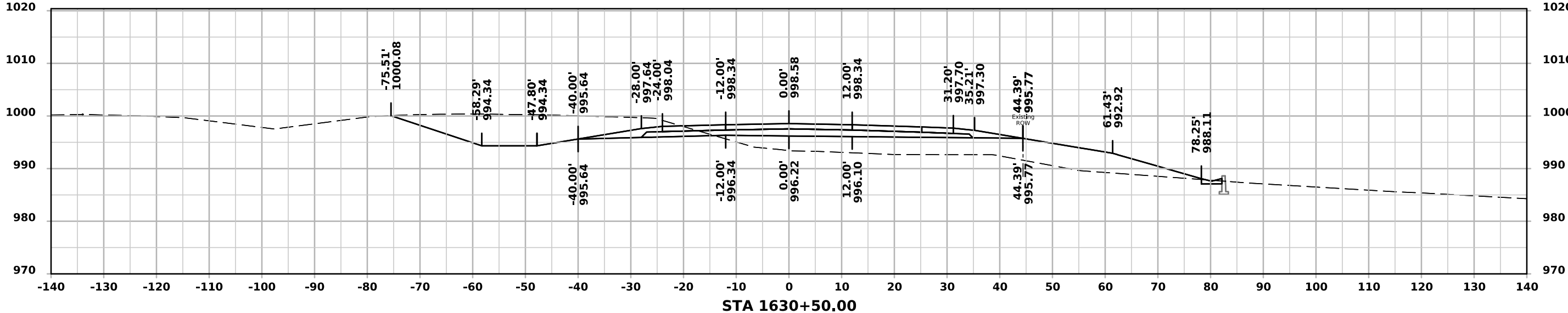
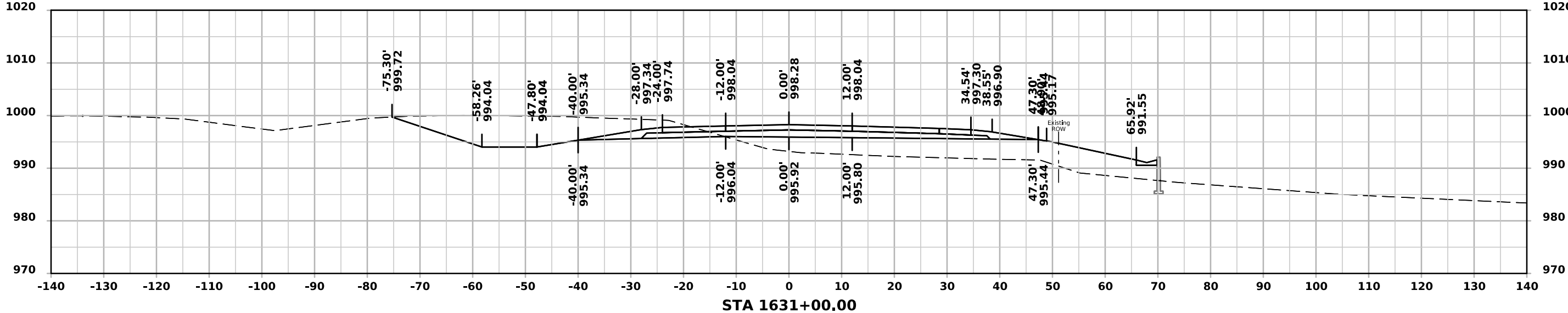
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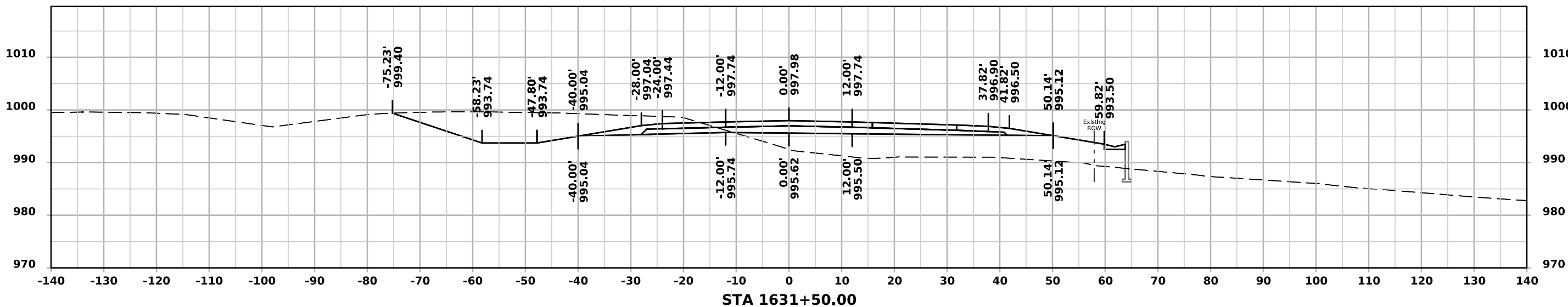
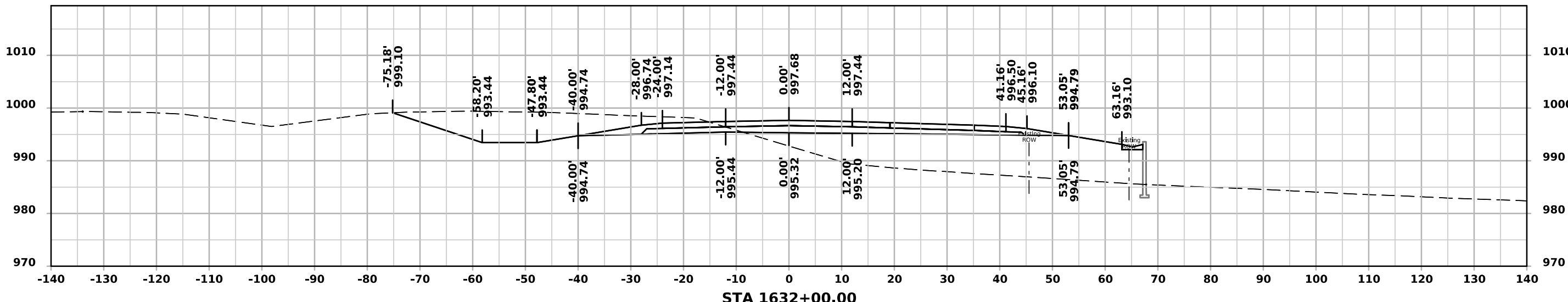
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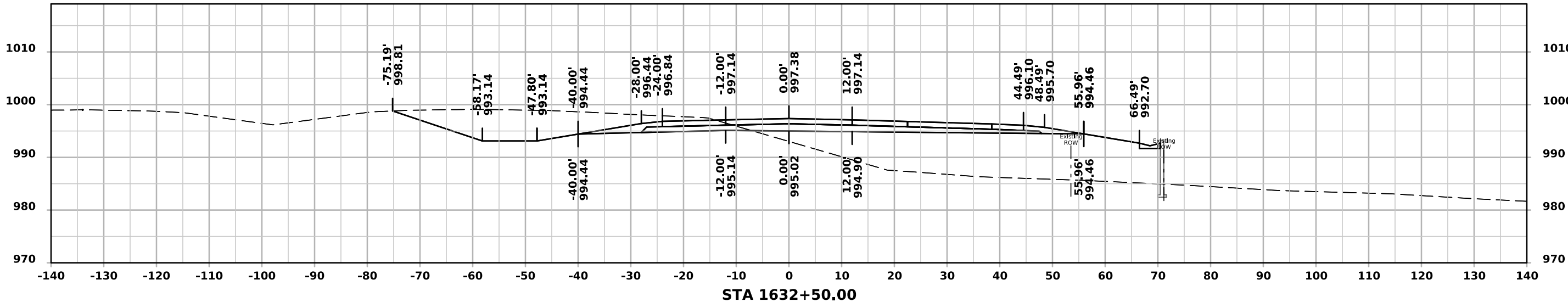
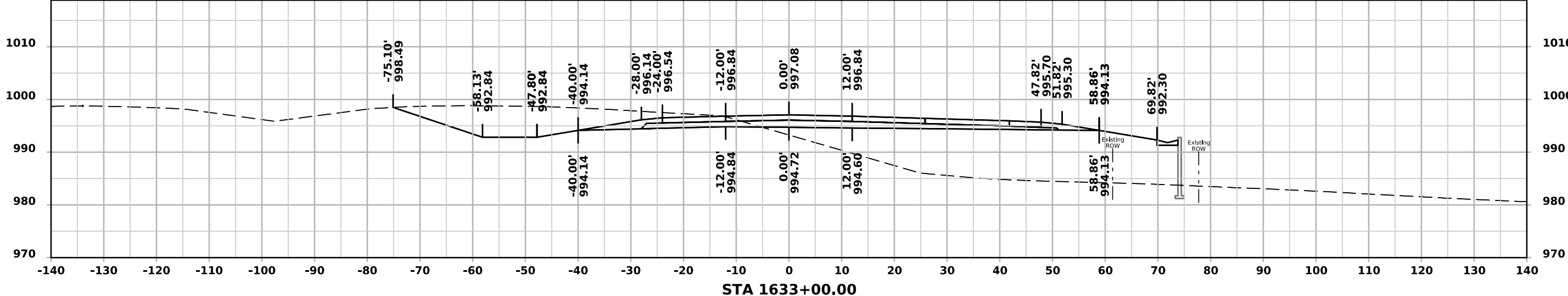
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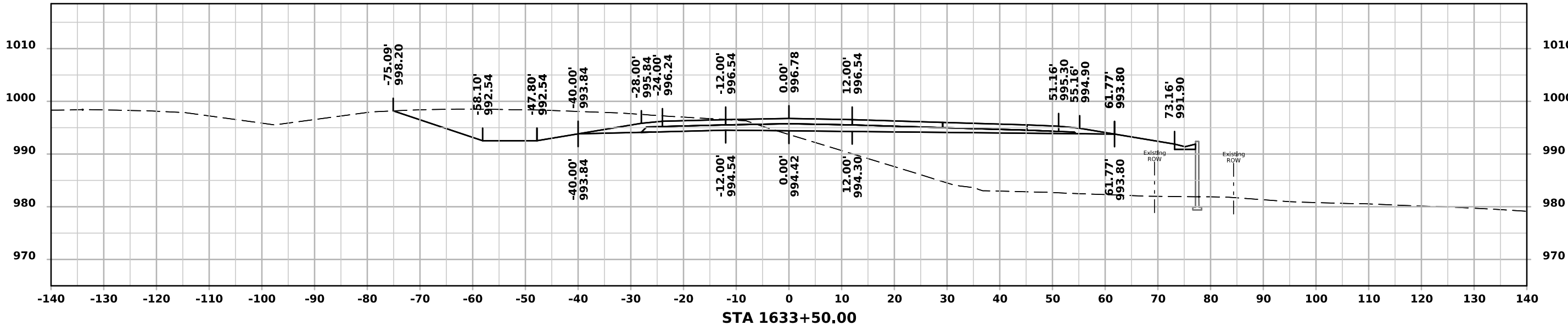
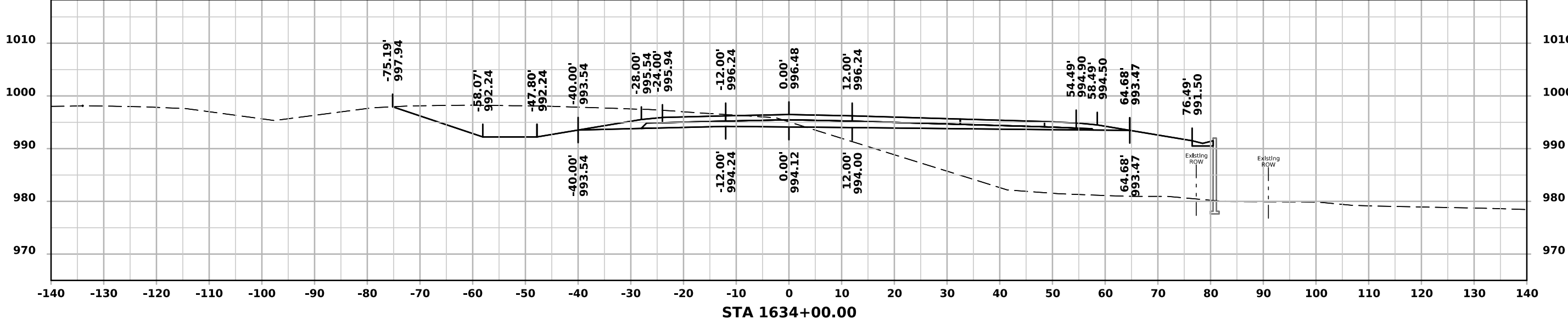
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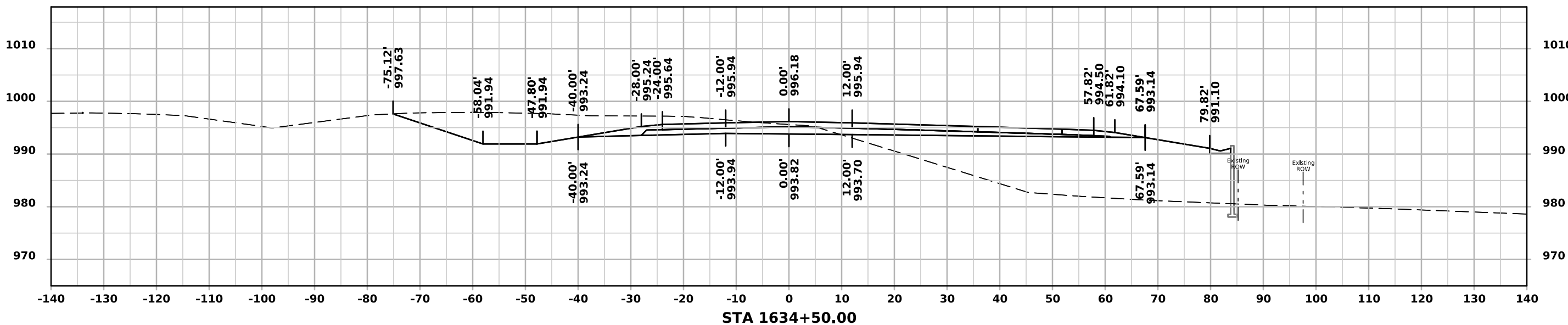
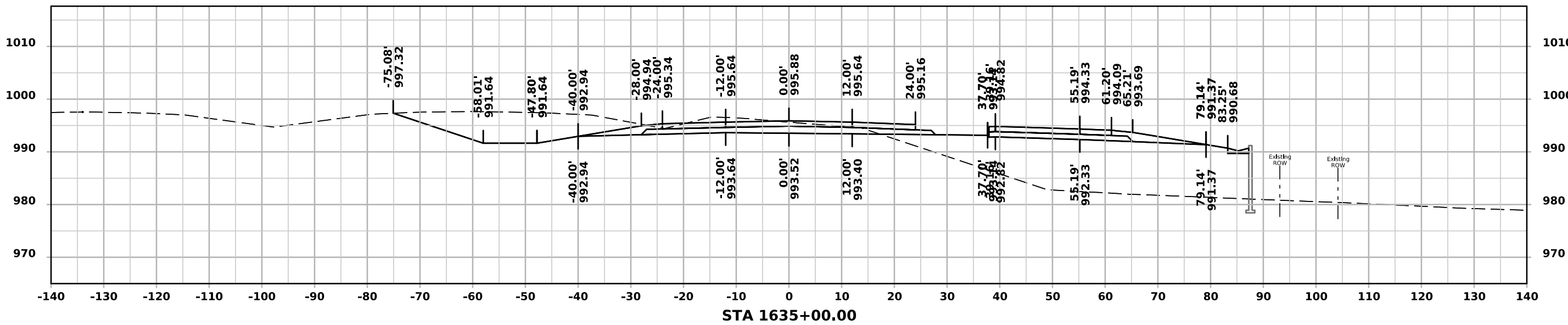
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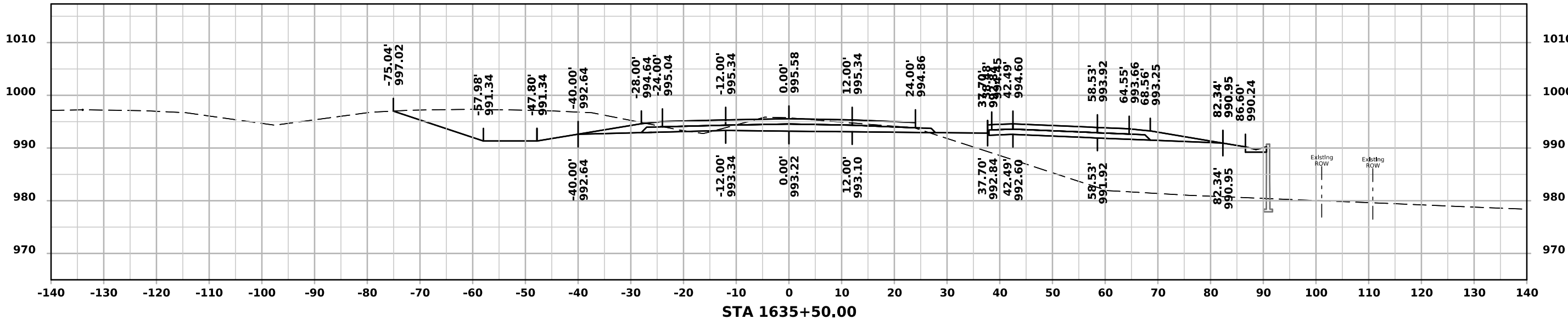
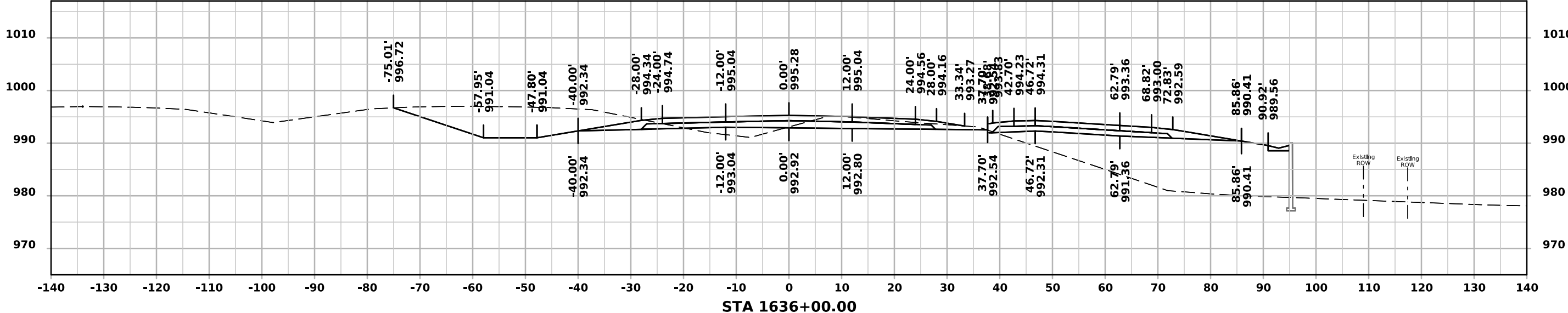
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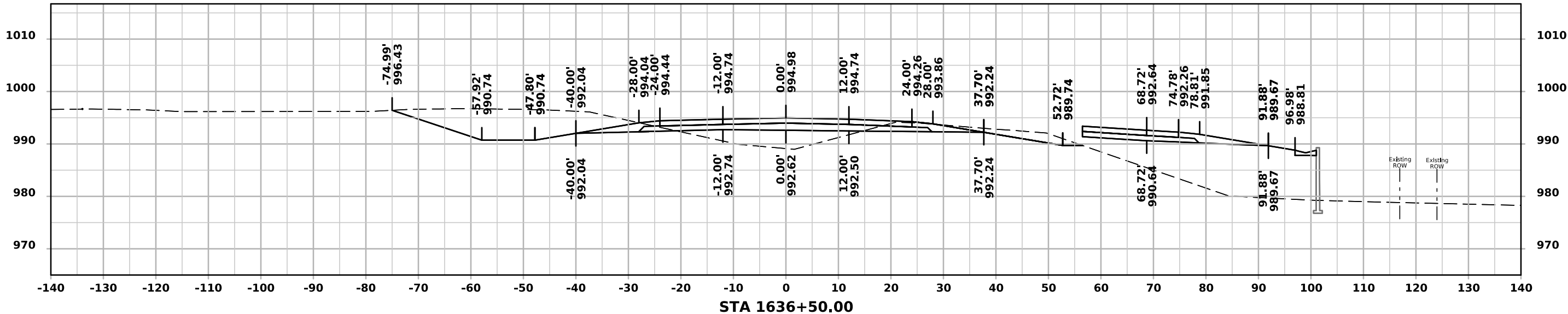
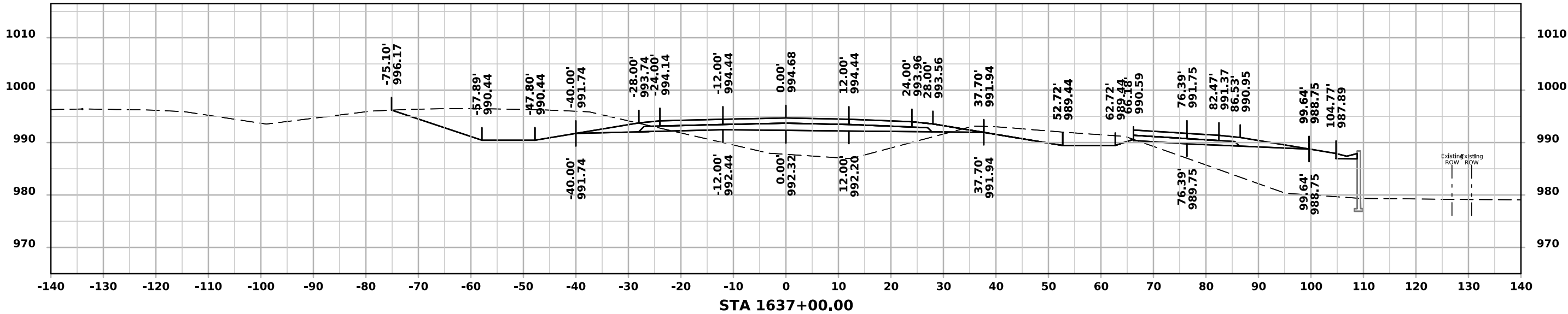
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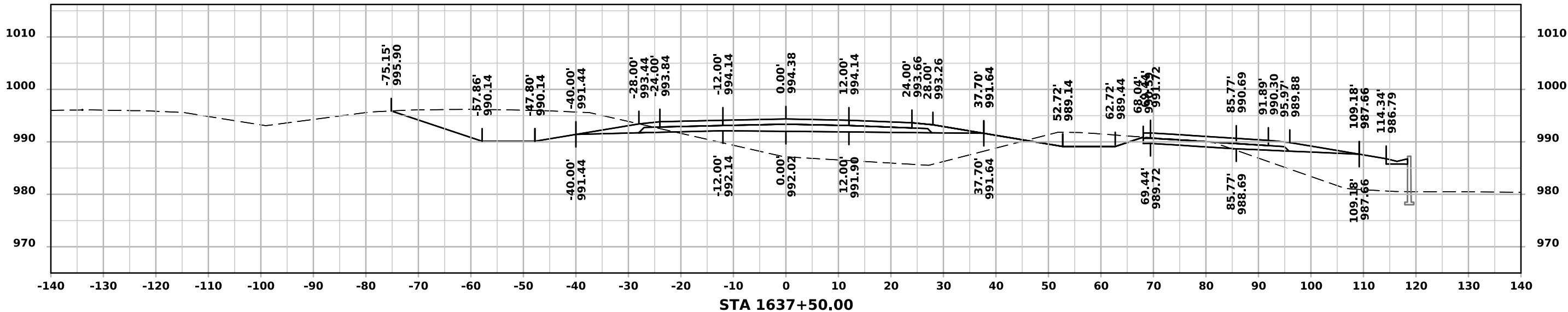
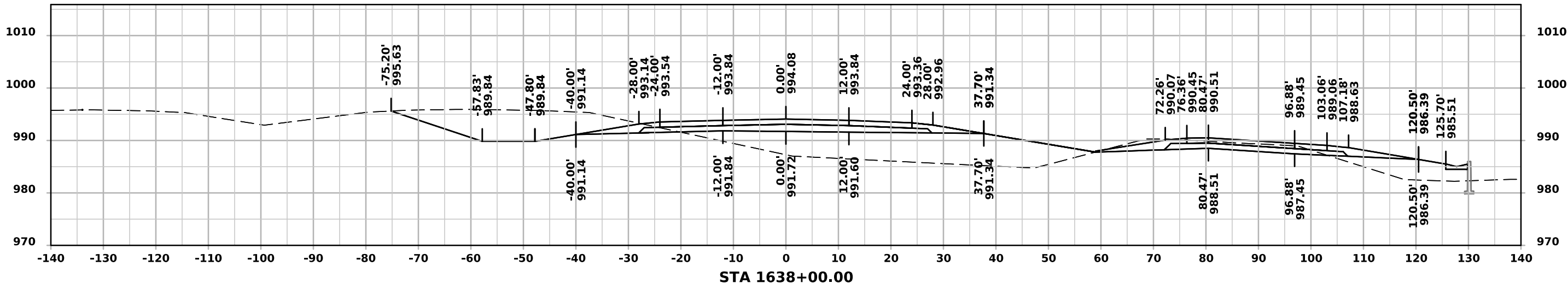
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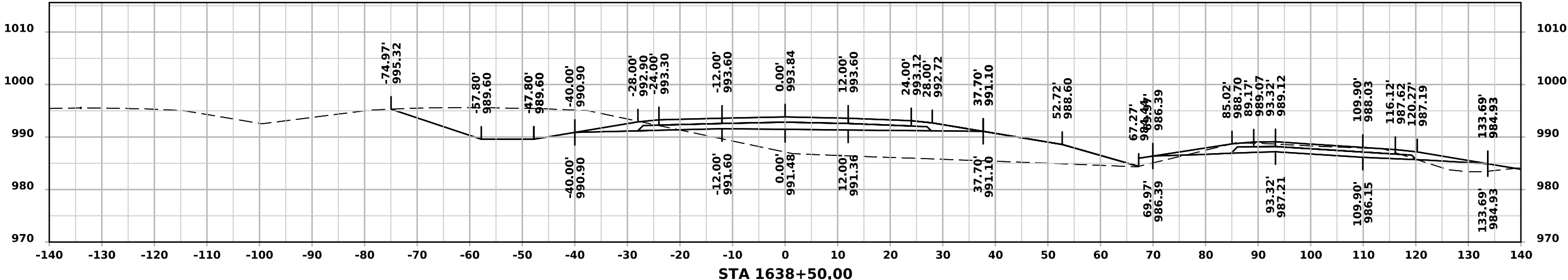
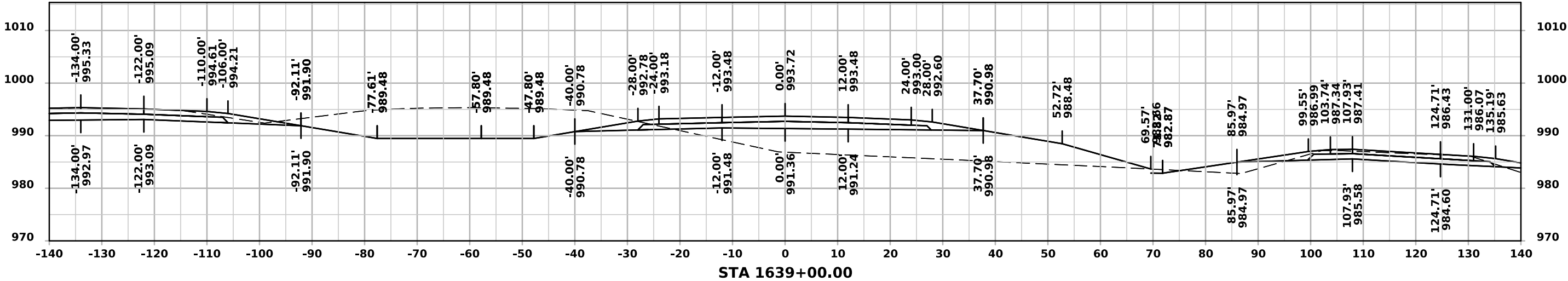
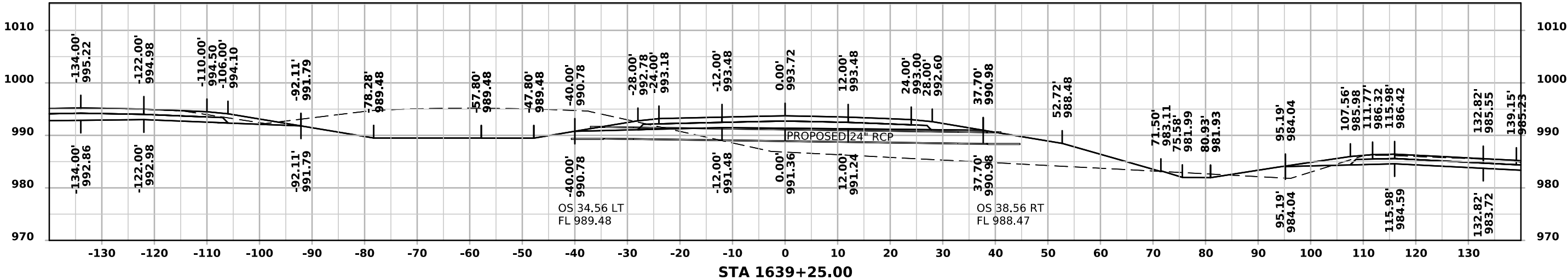
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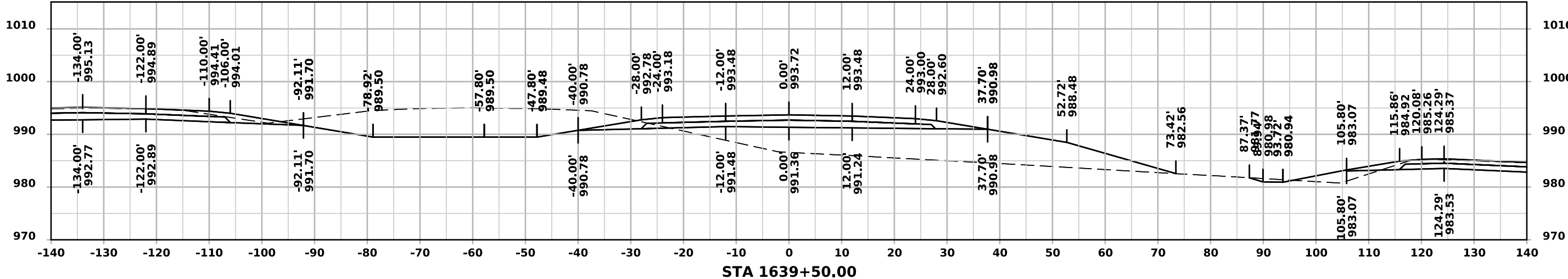
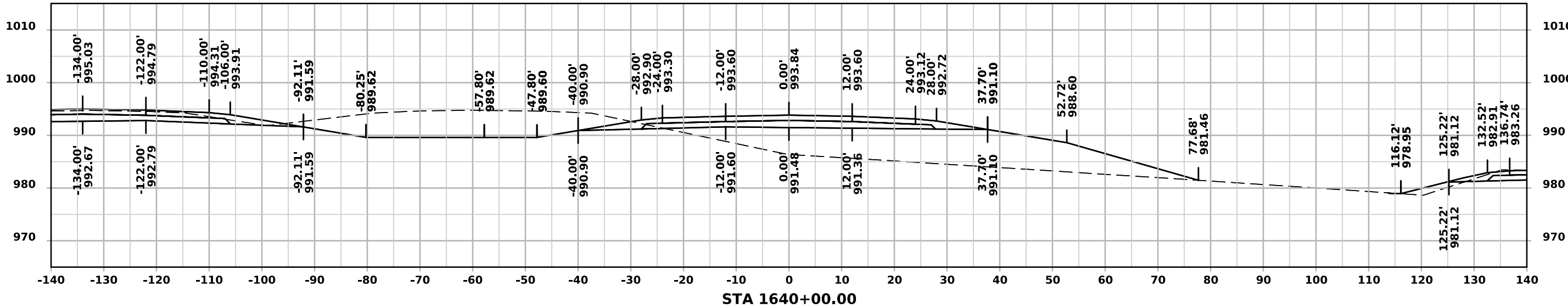
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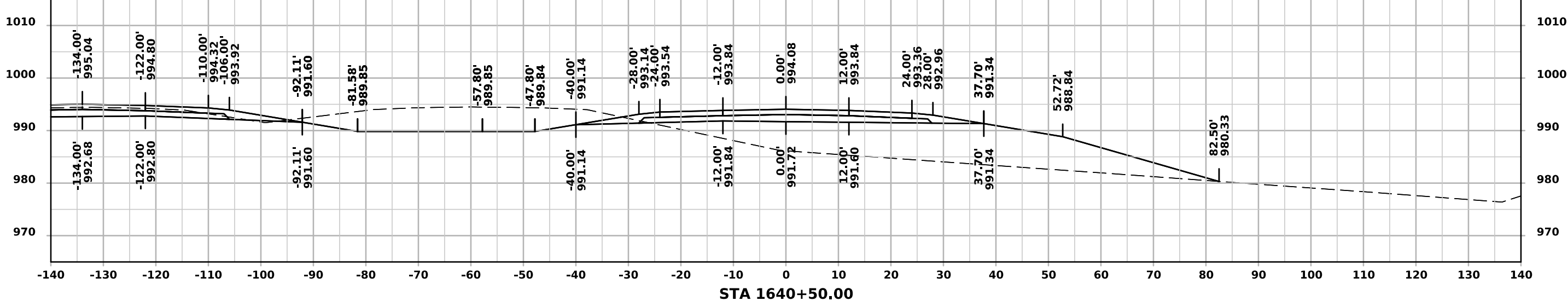
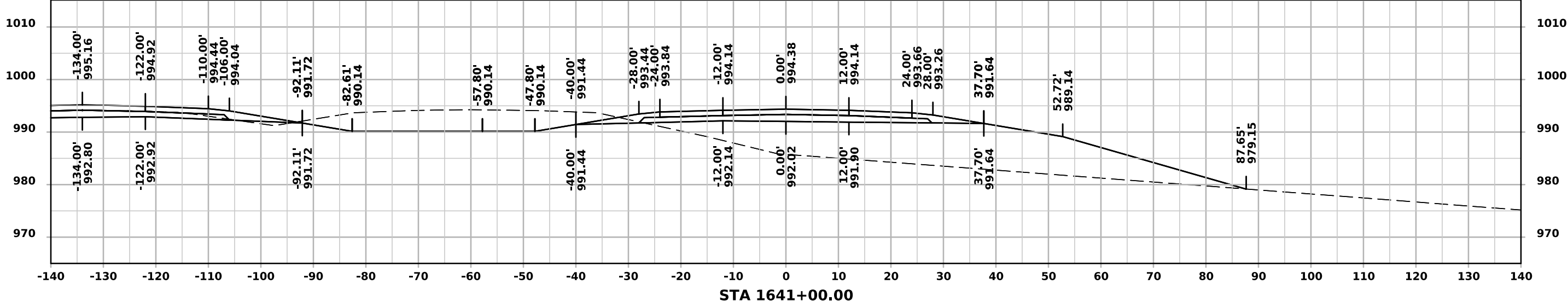
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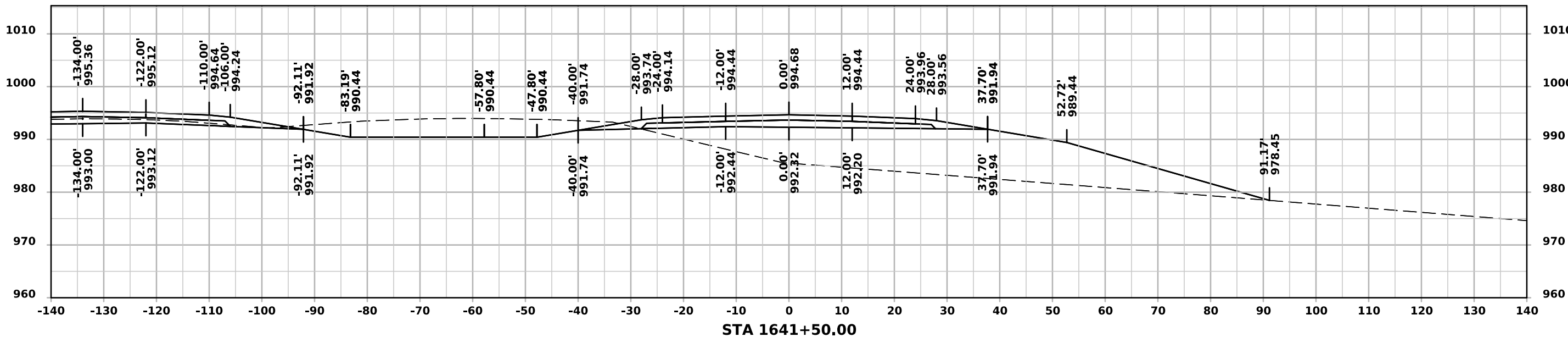
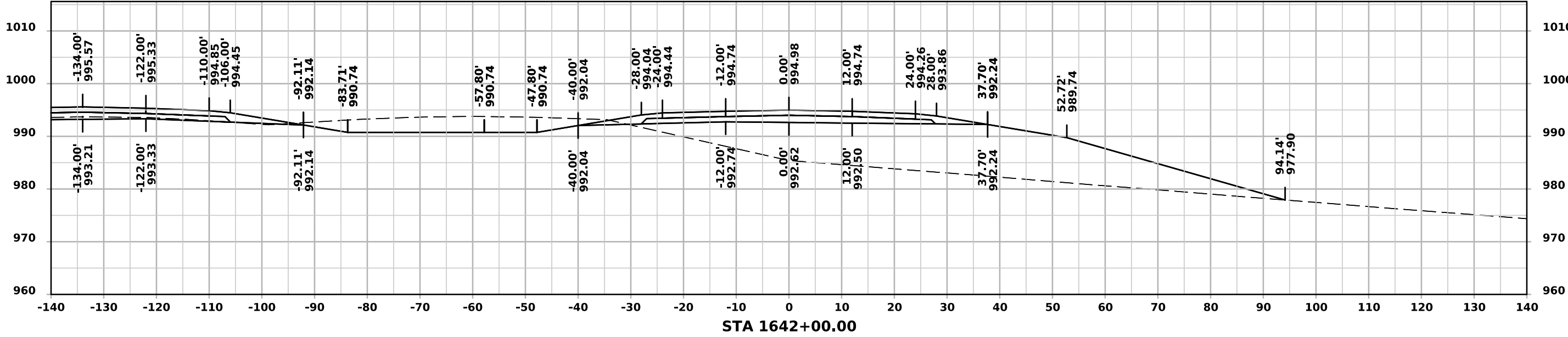
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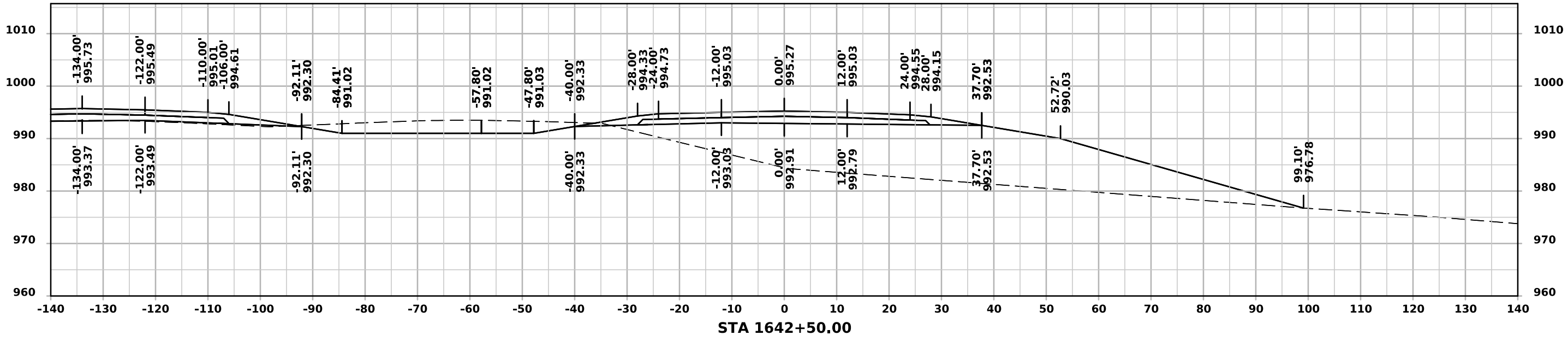
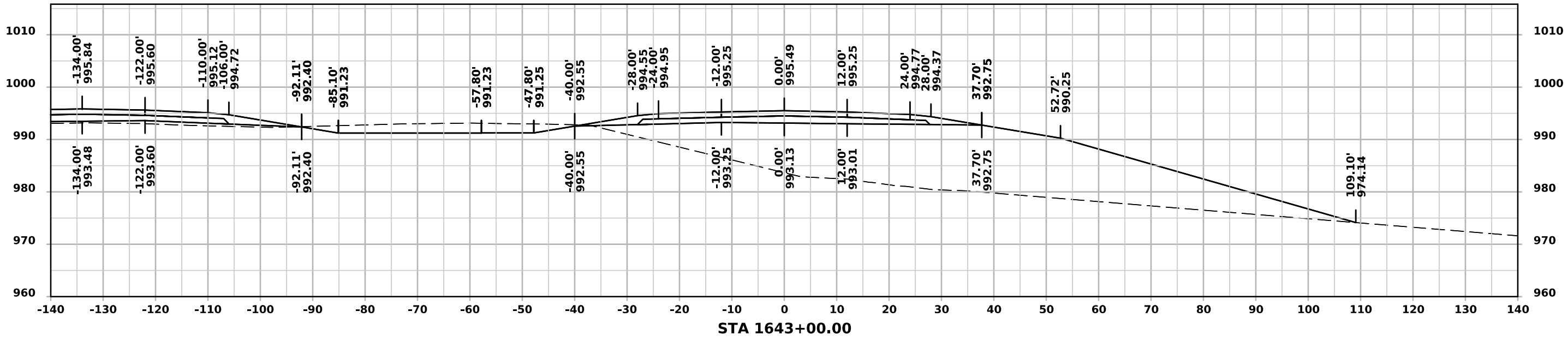
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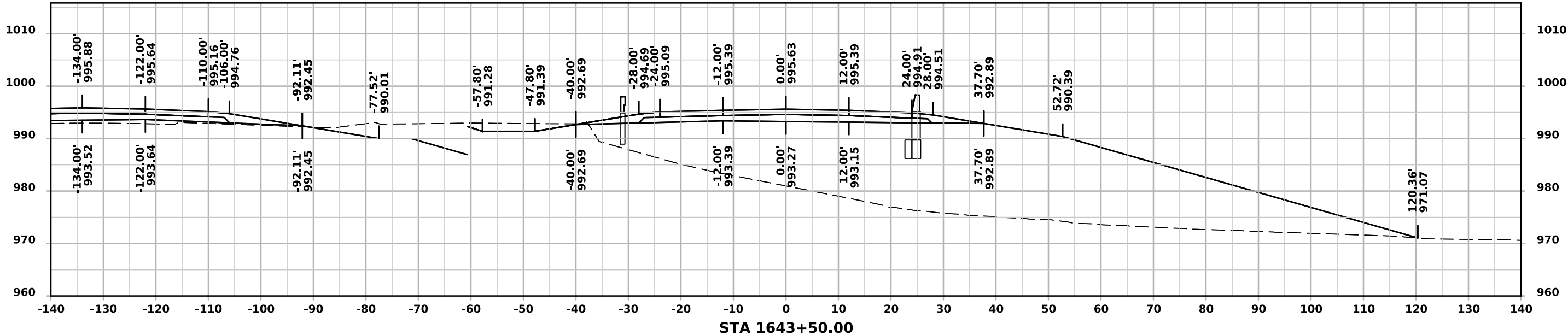
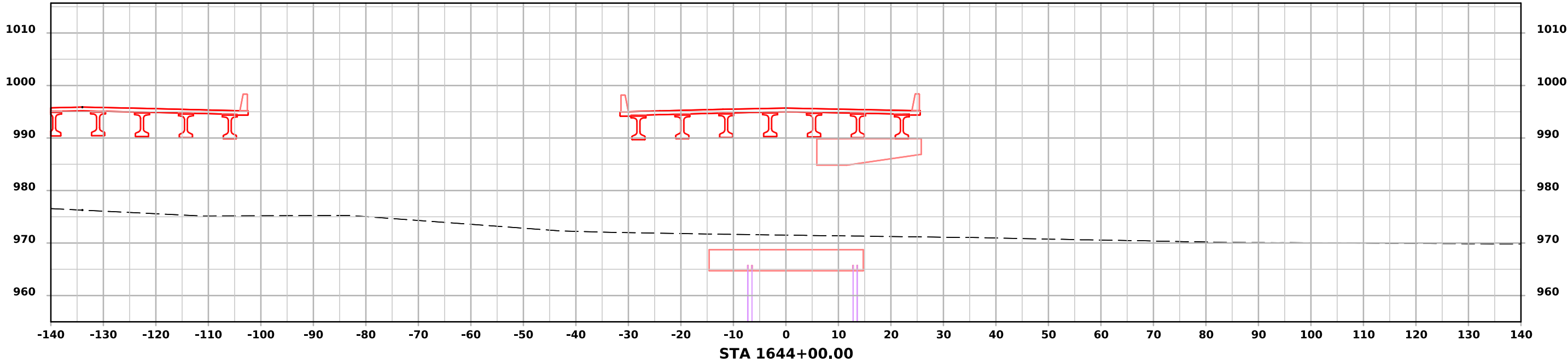
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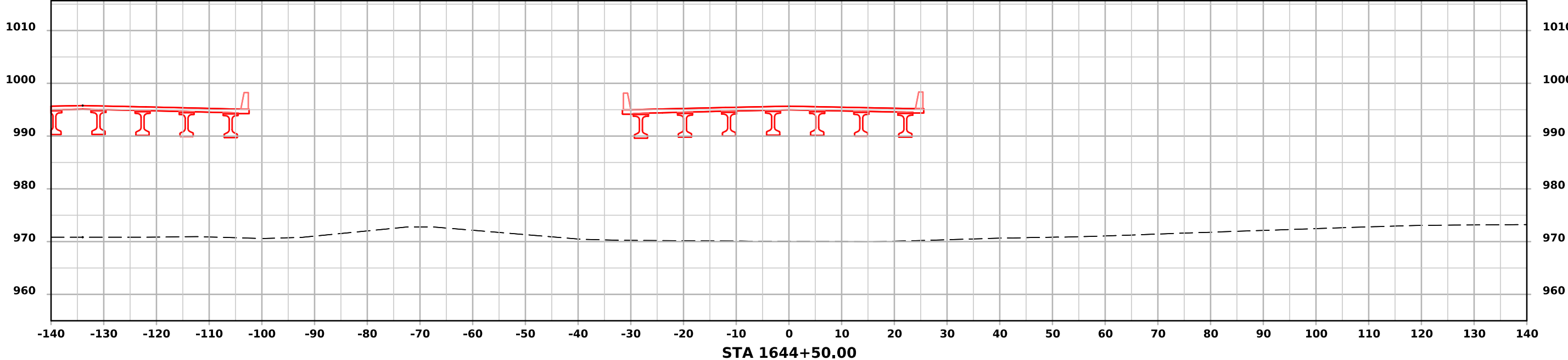
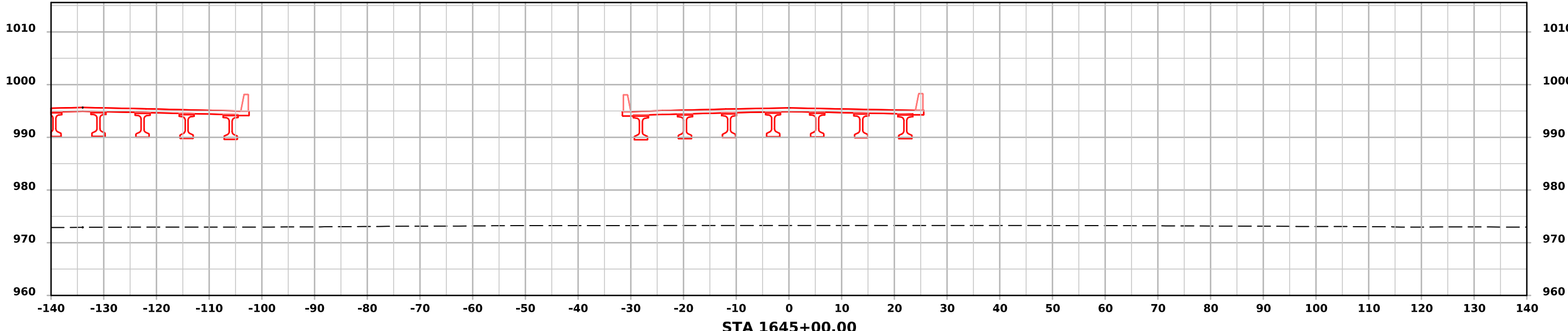
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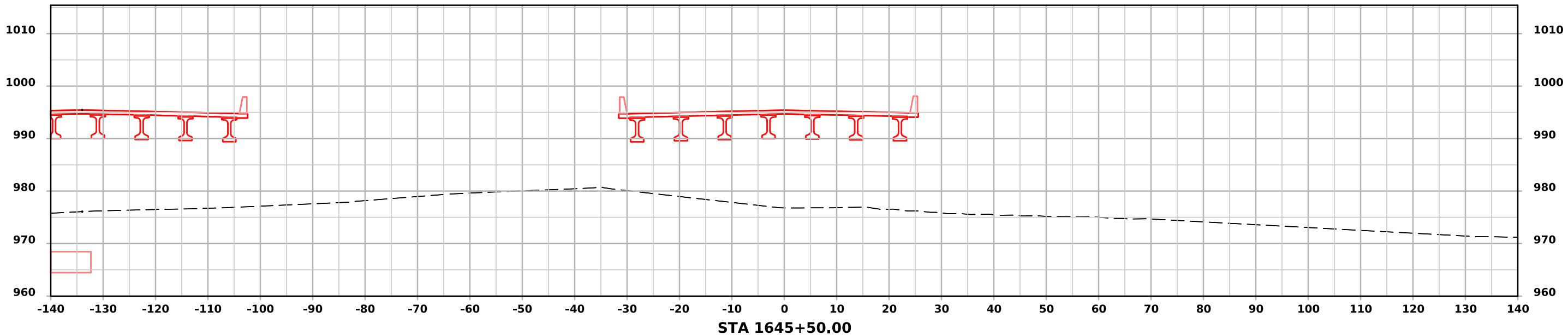
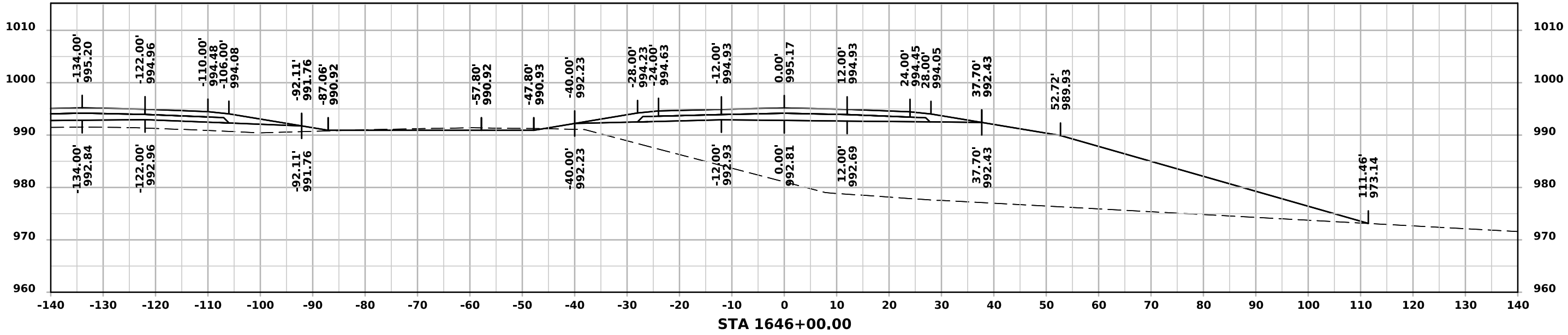
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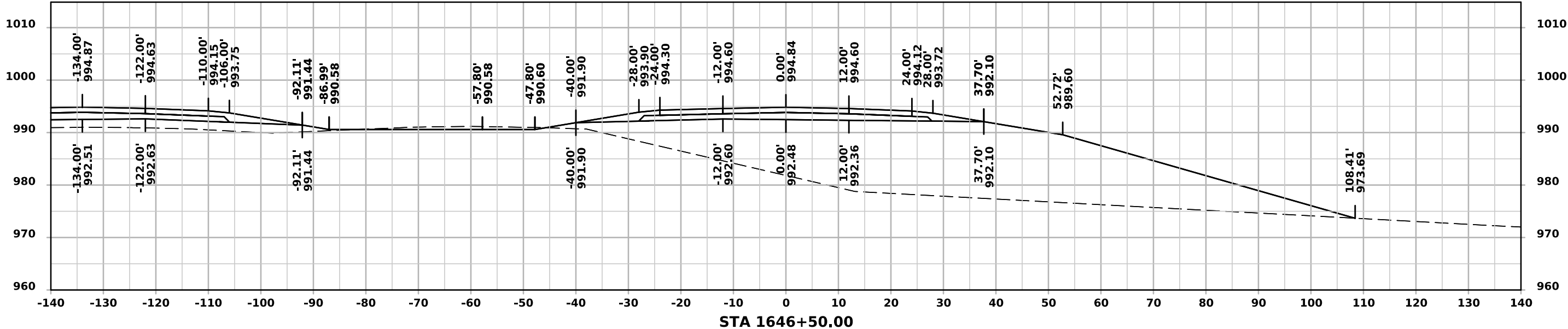
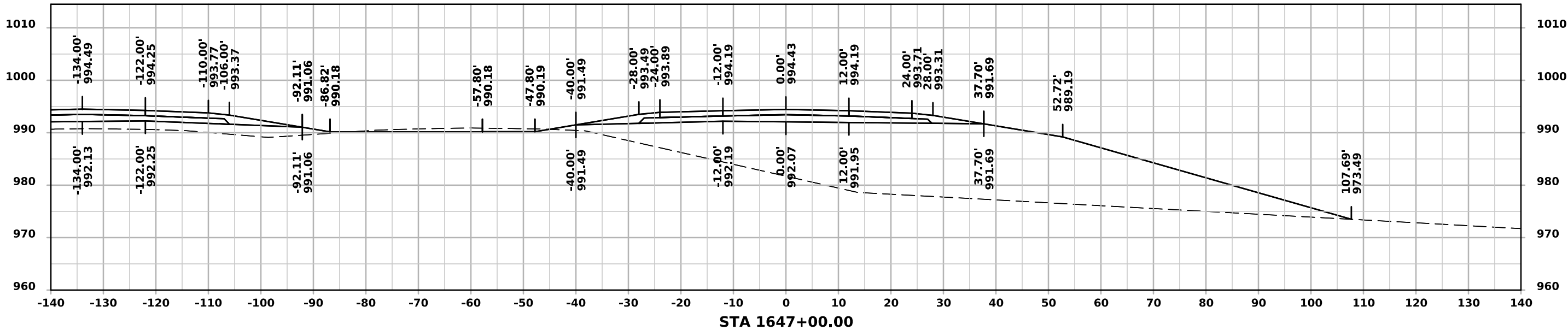
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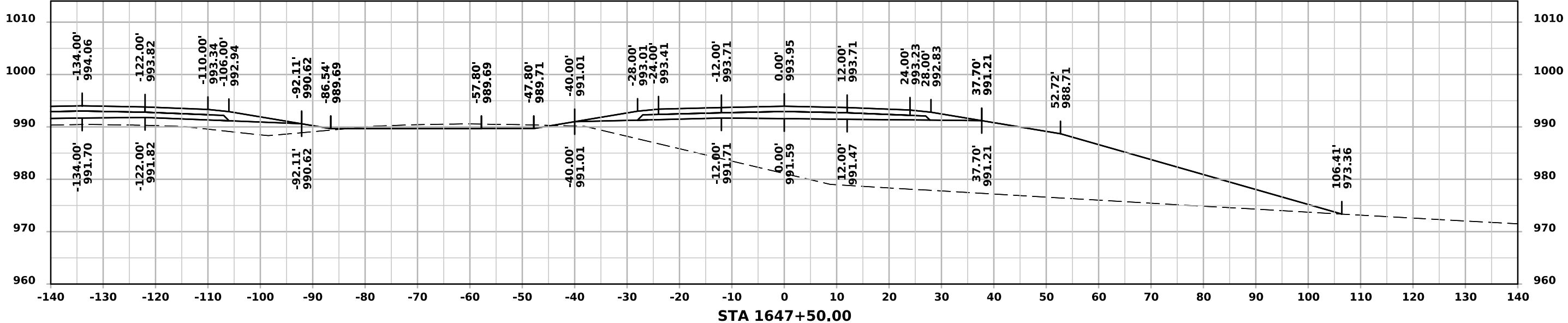
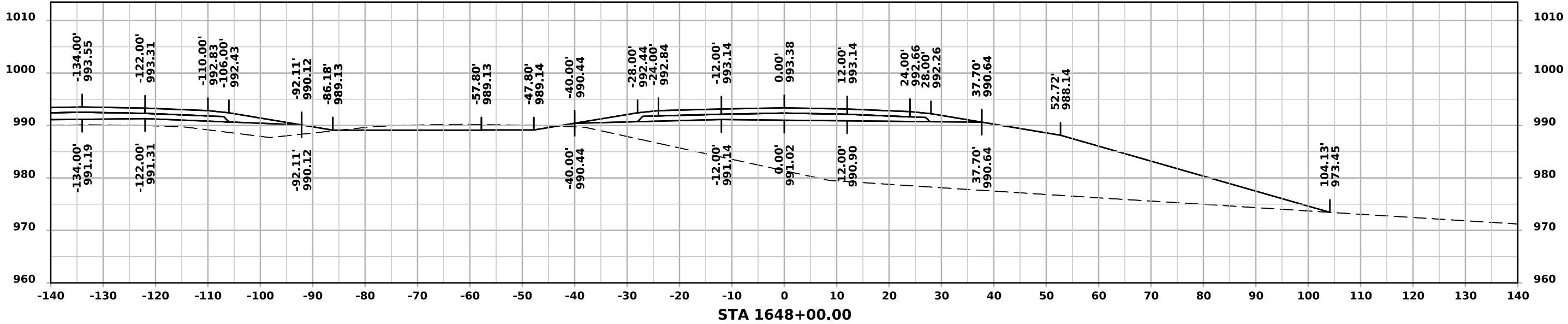
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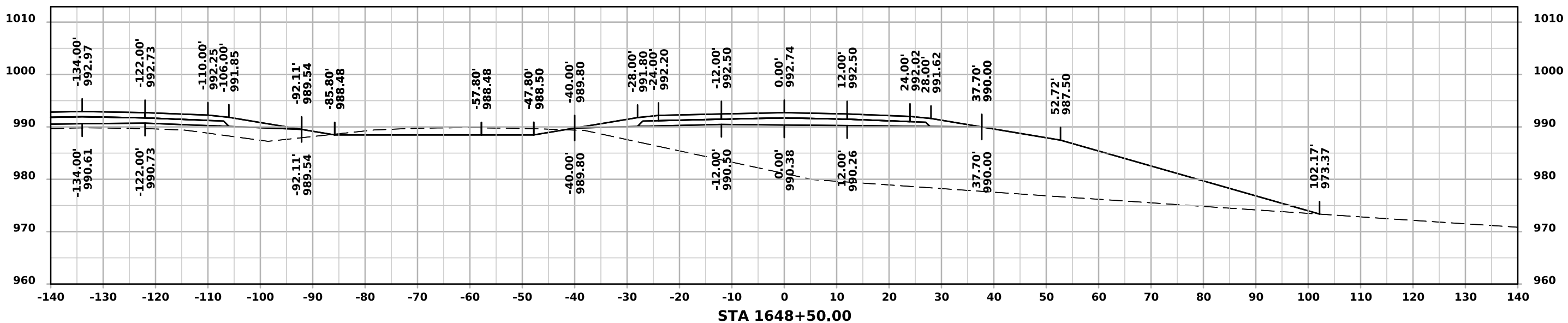
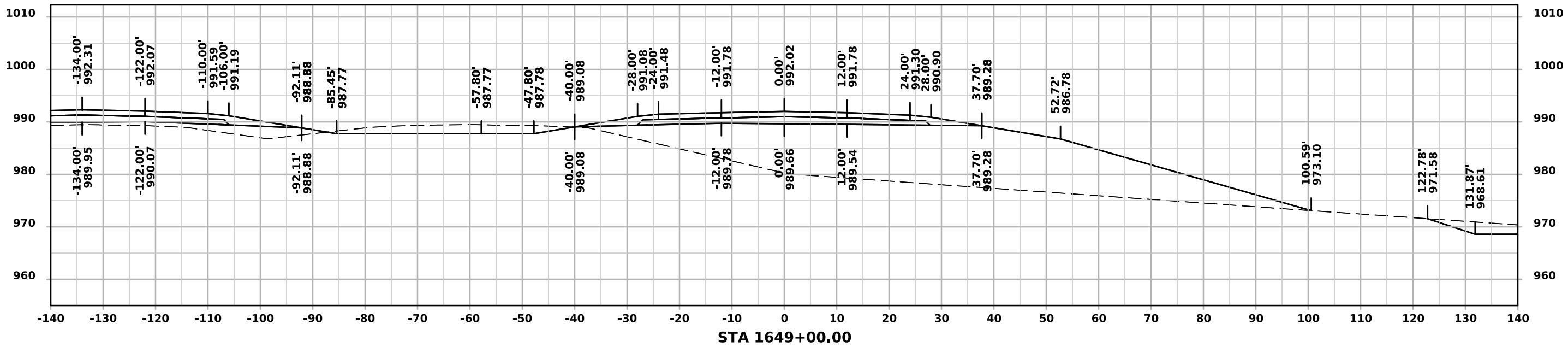
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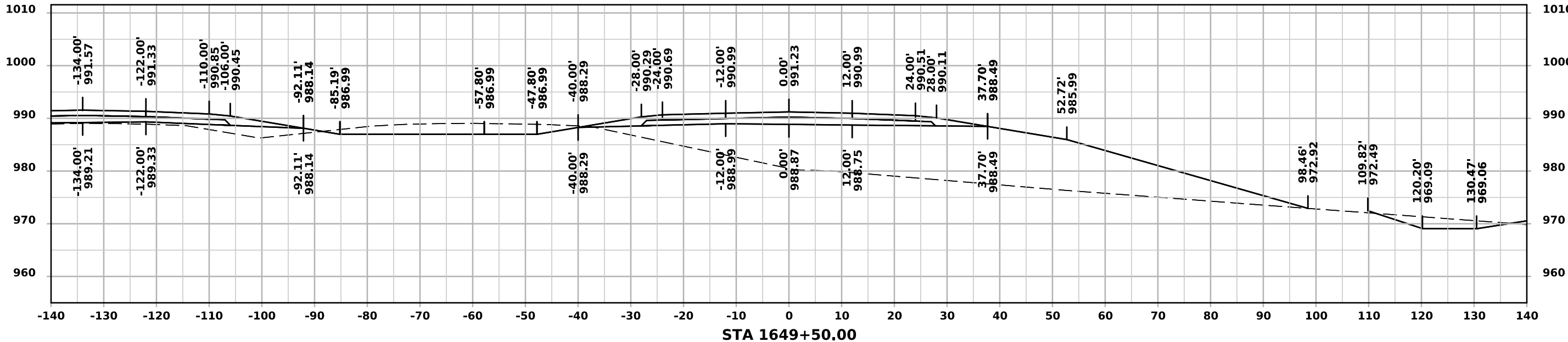
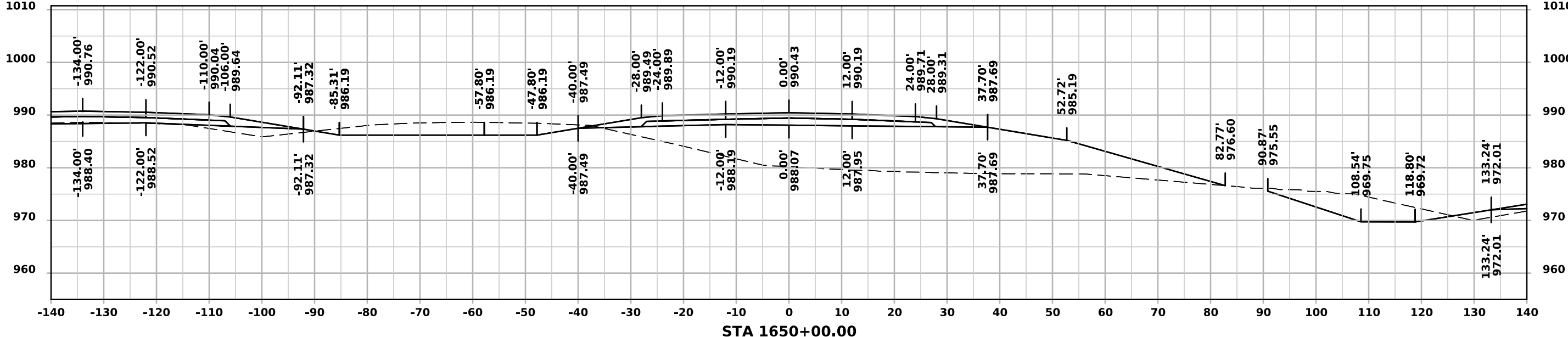
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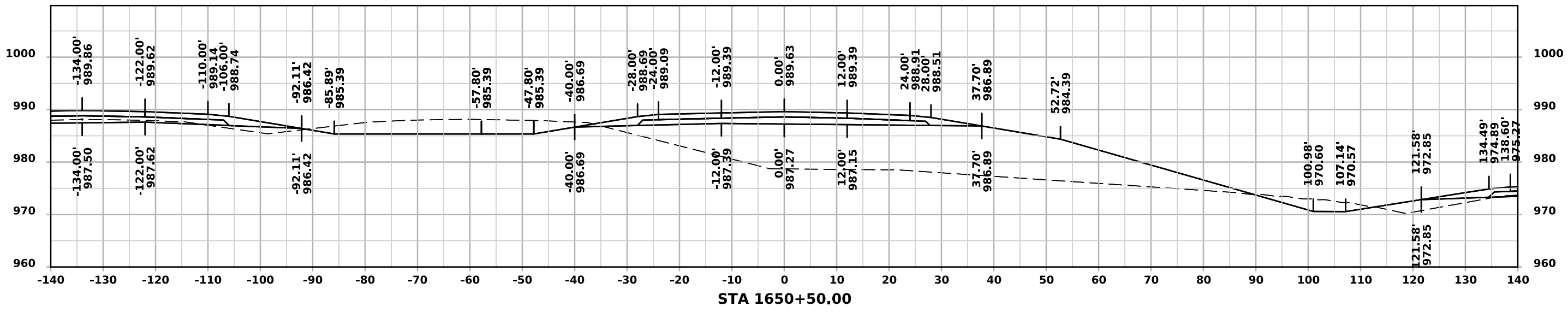
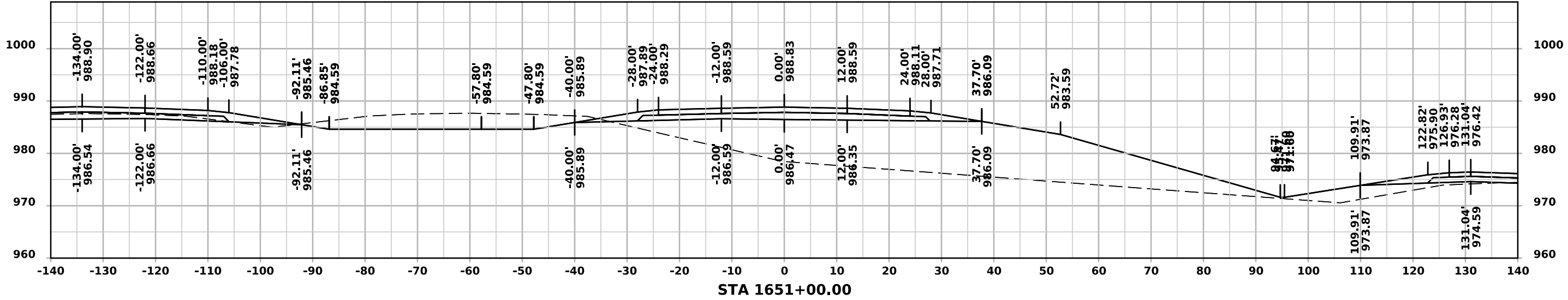
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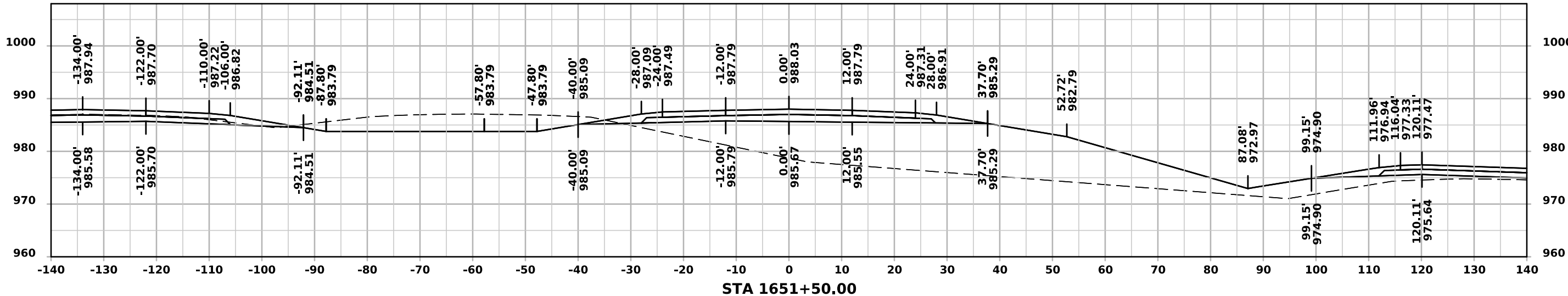
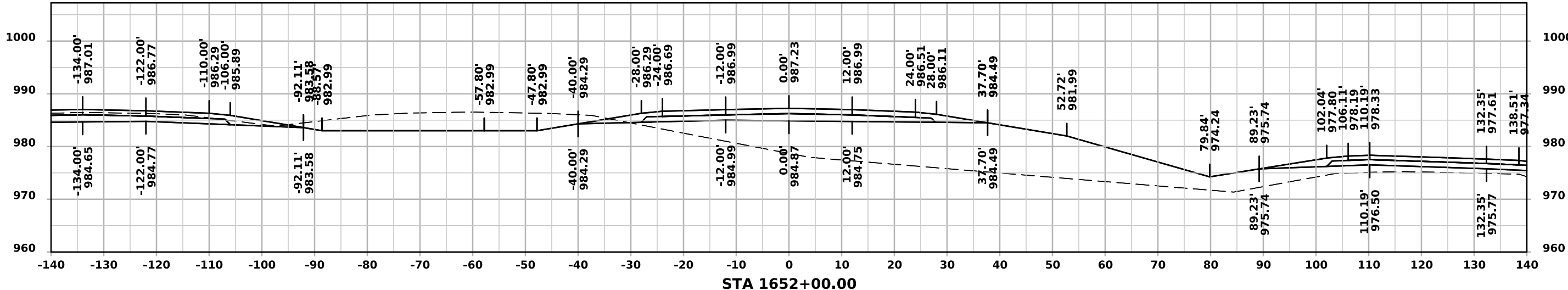
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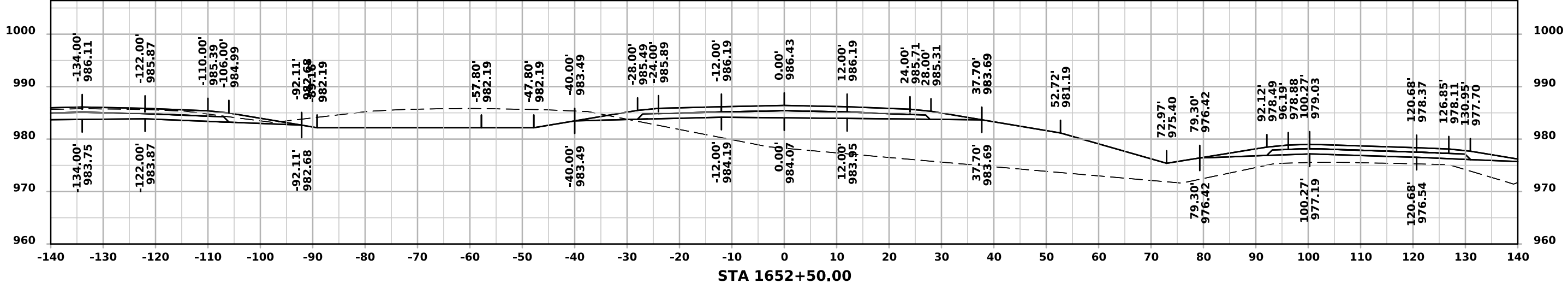
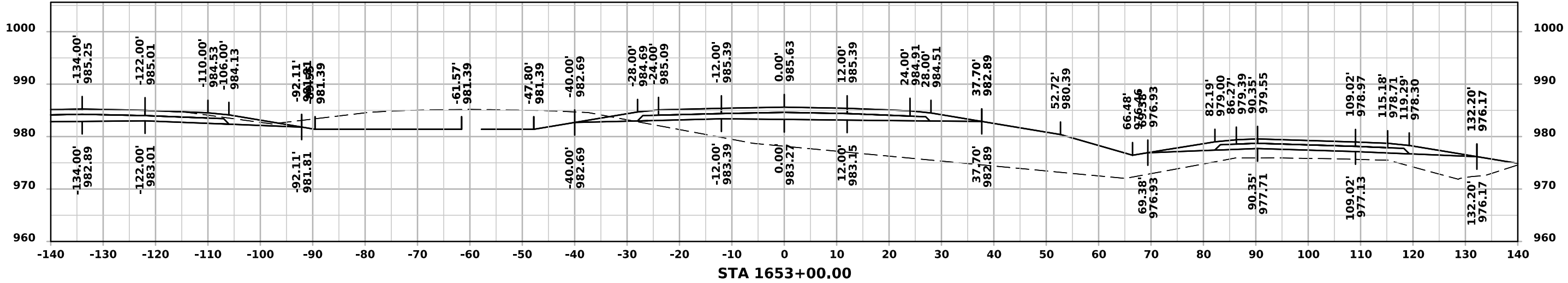
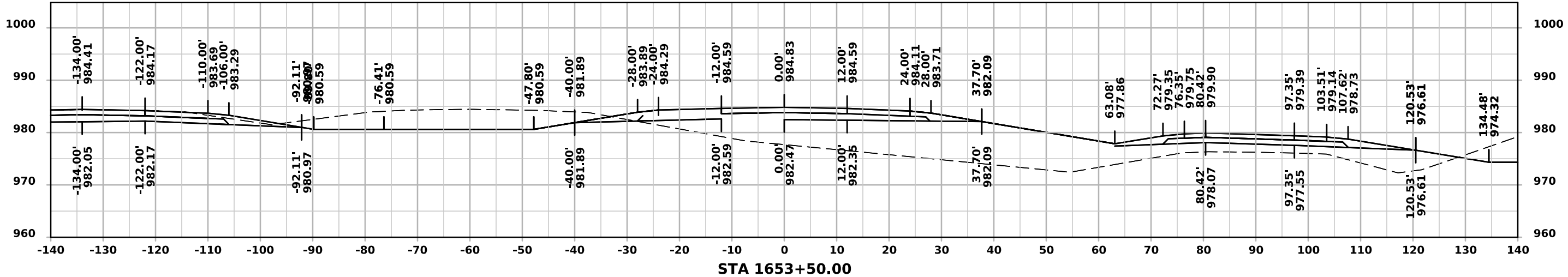
ML - I 80 (EASTBOUND)



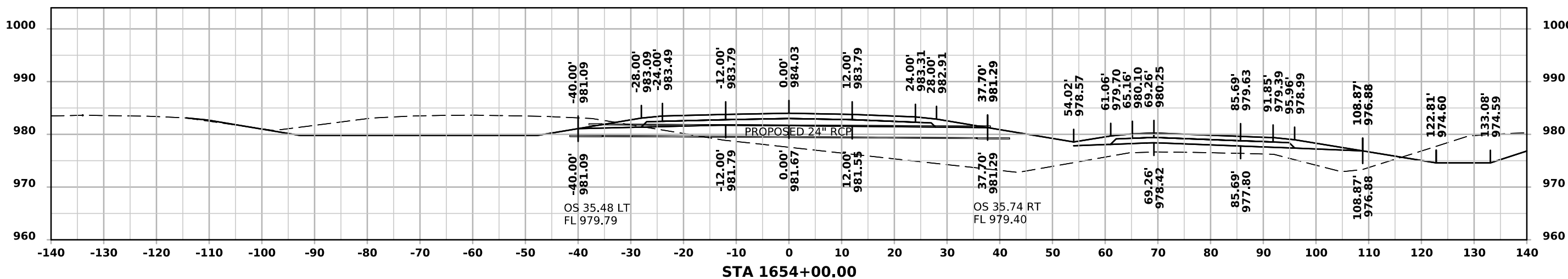
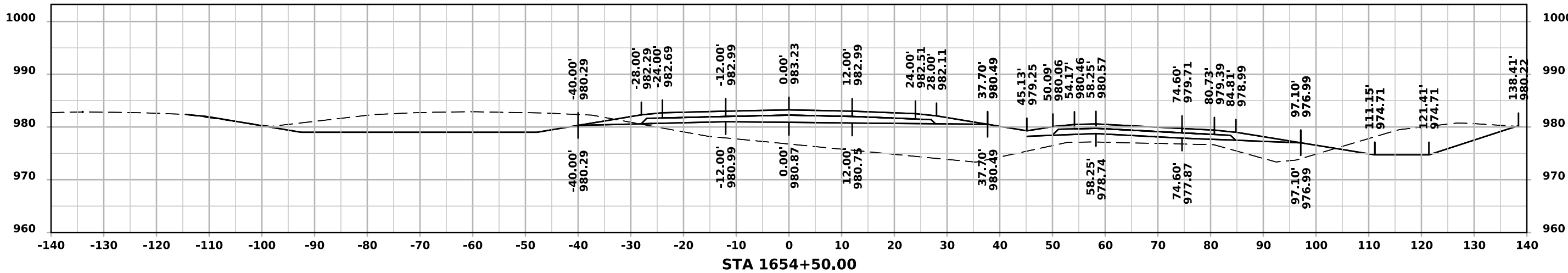
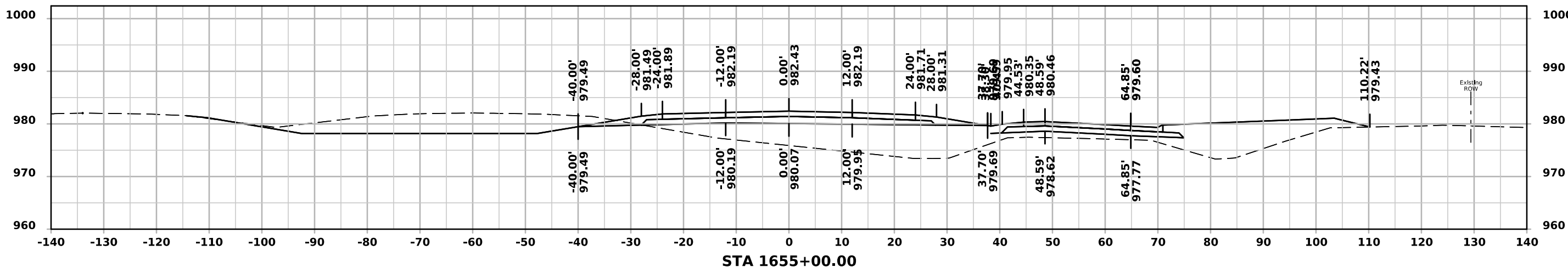
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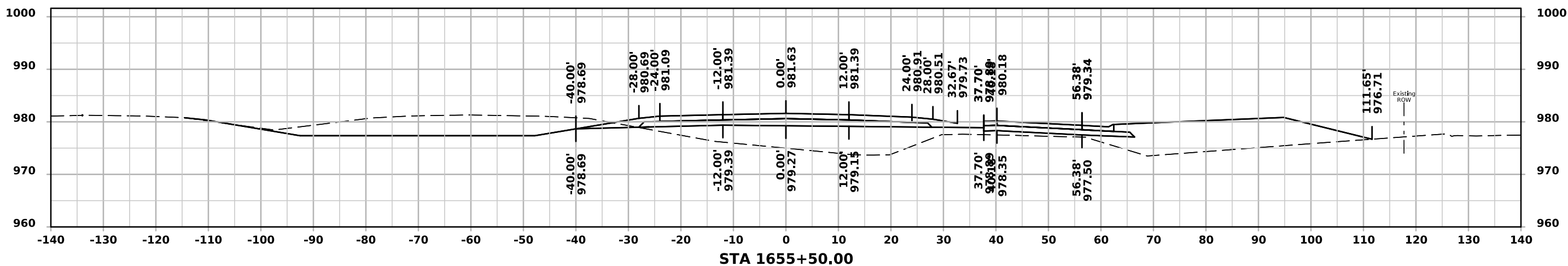
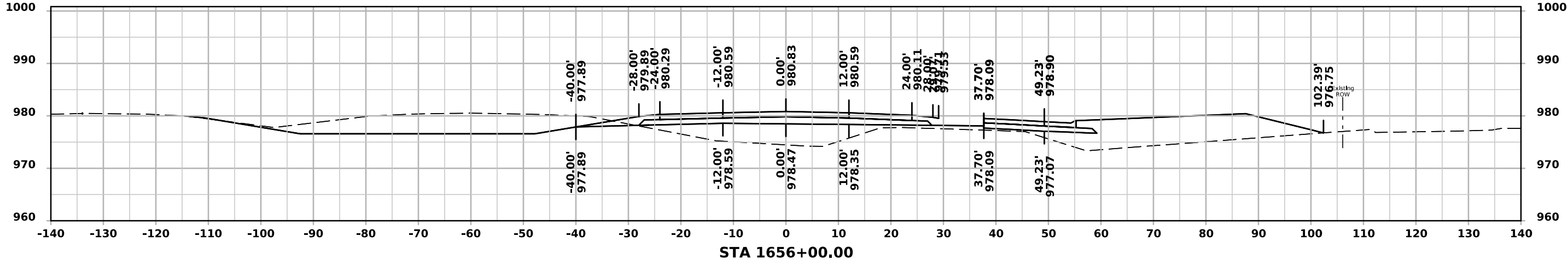
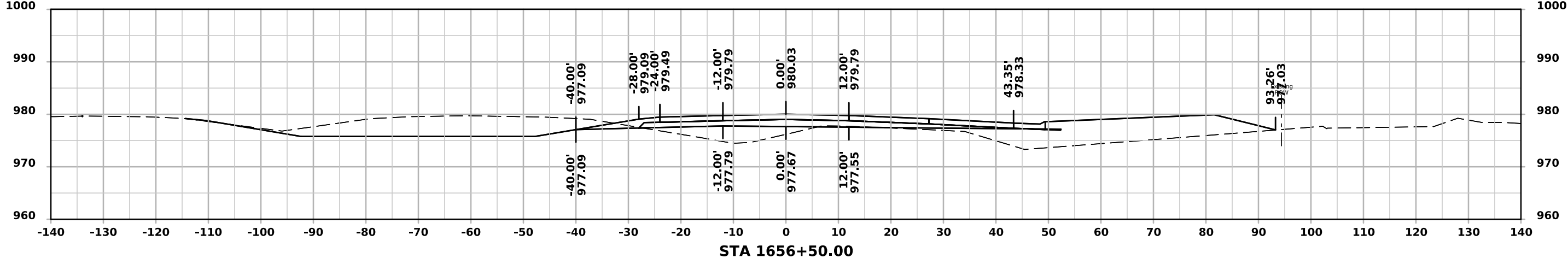
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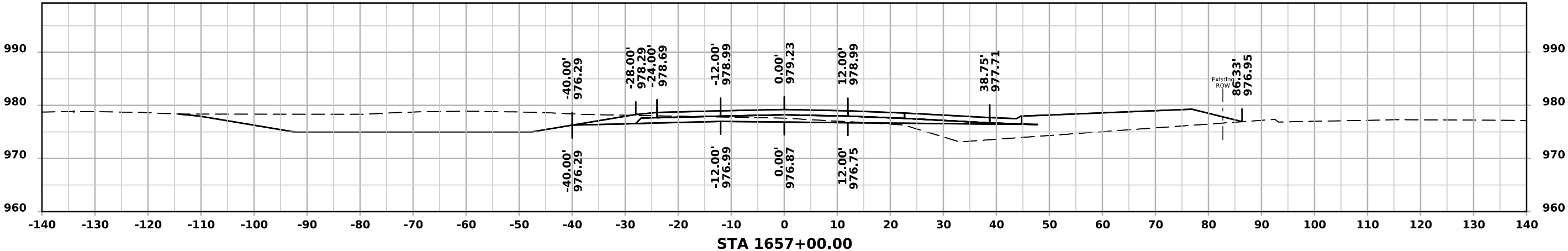
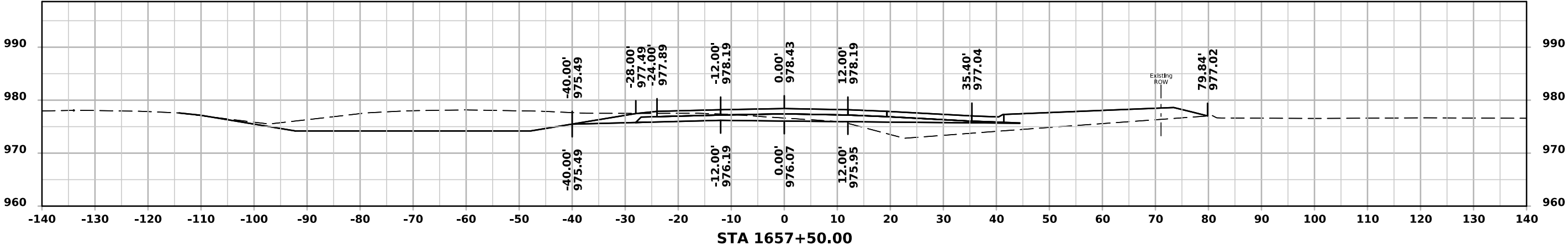
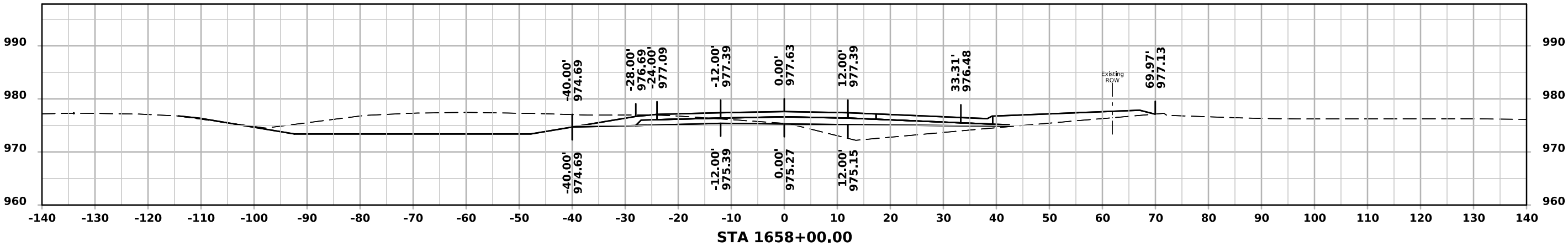
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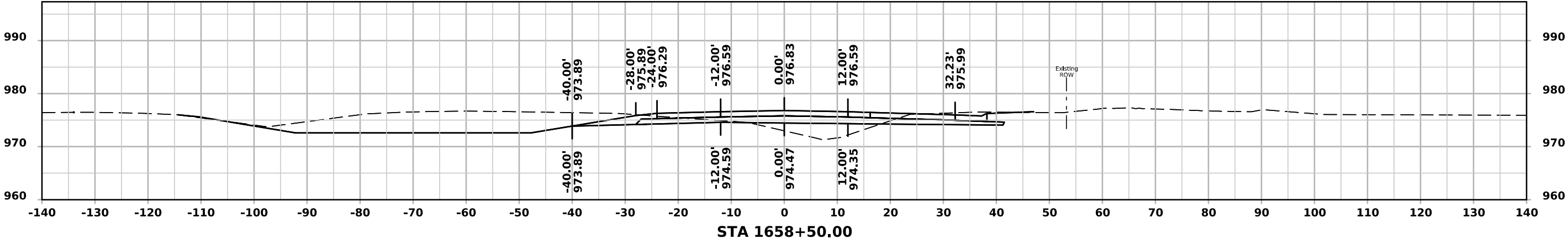
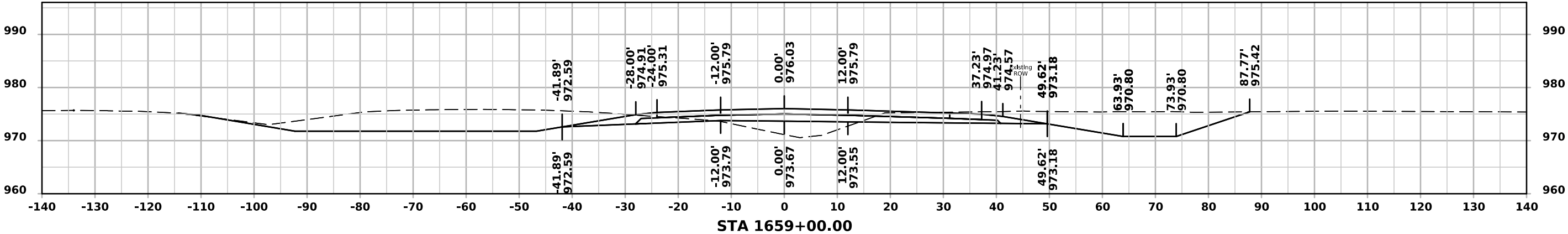
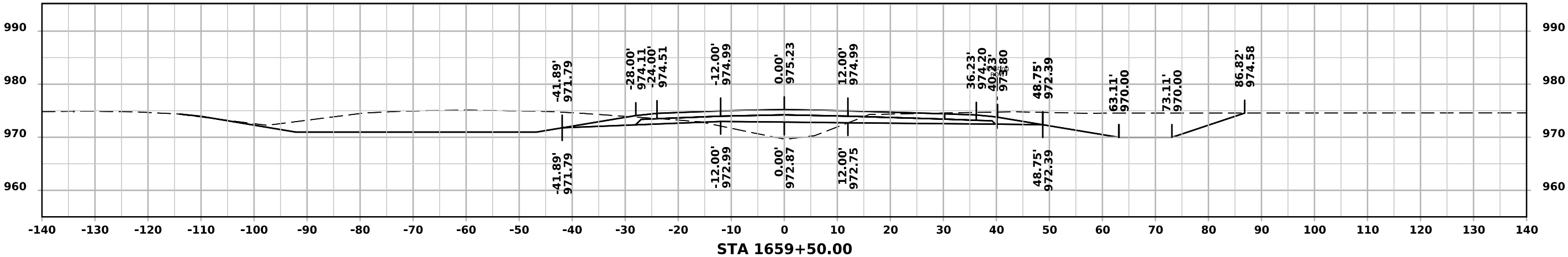
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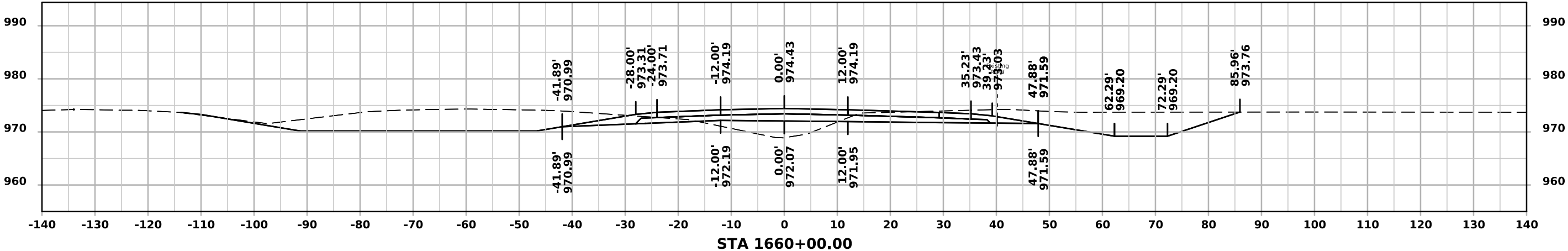
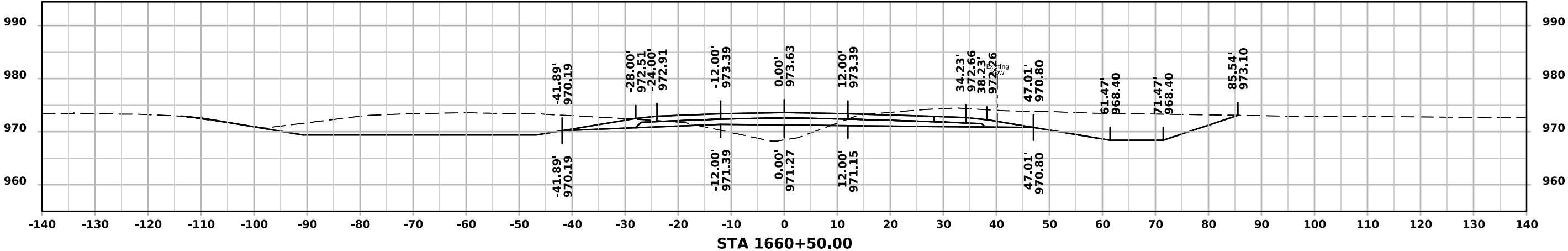
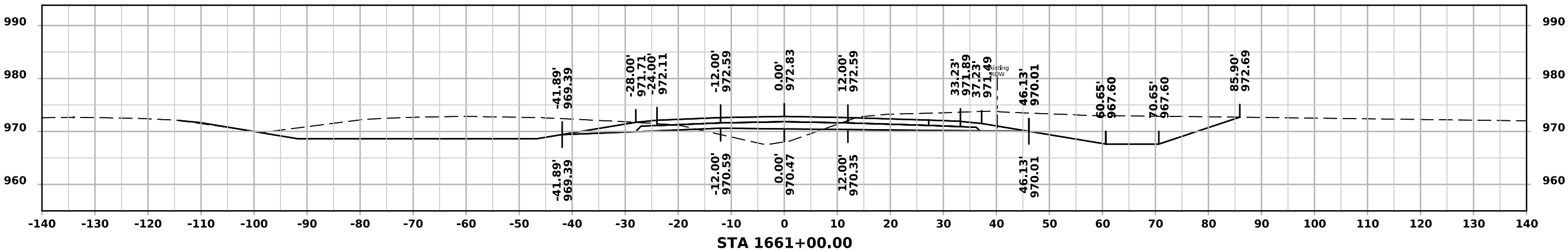
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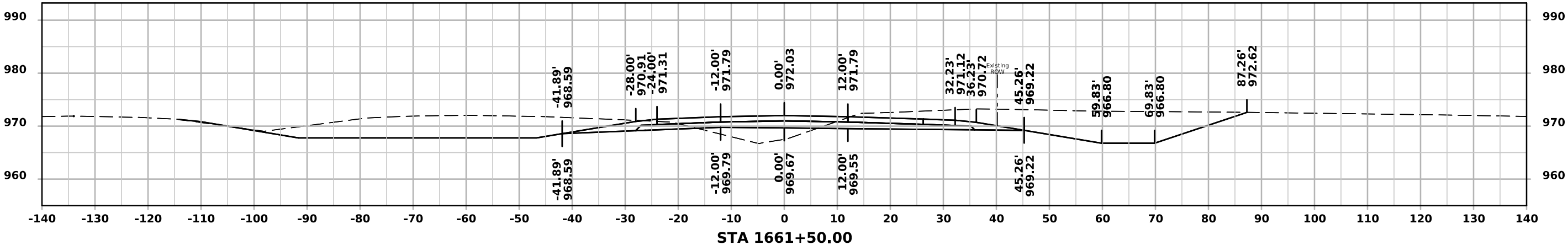
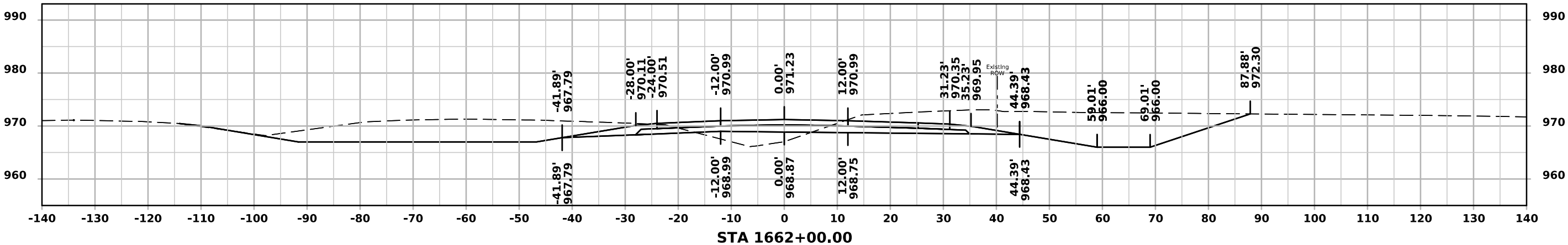
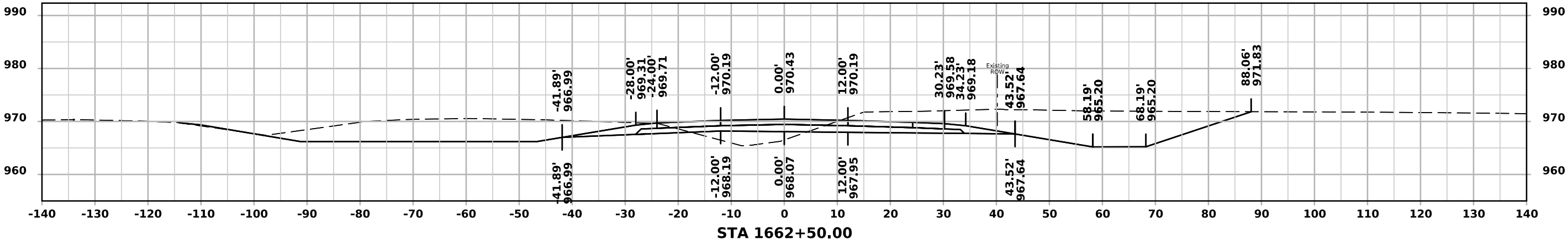
ML - I 80 (EASTBOUND)



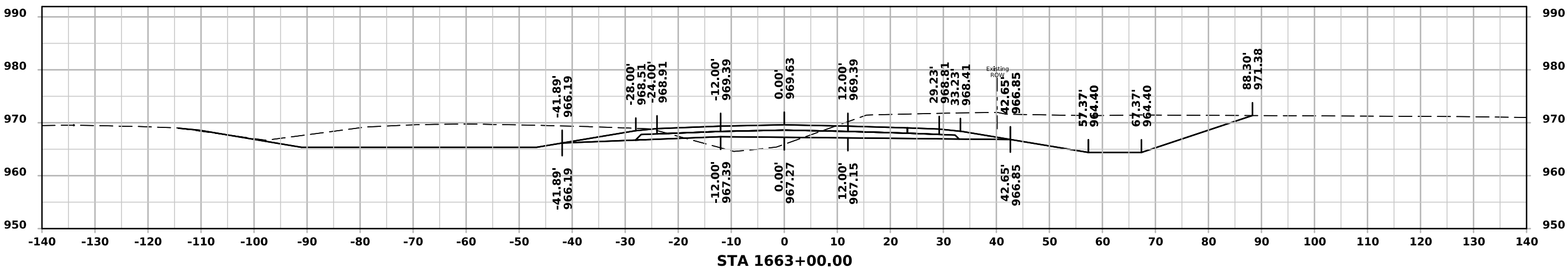
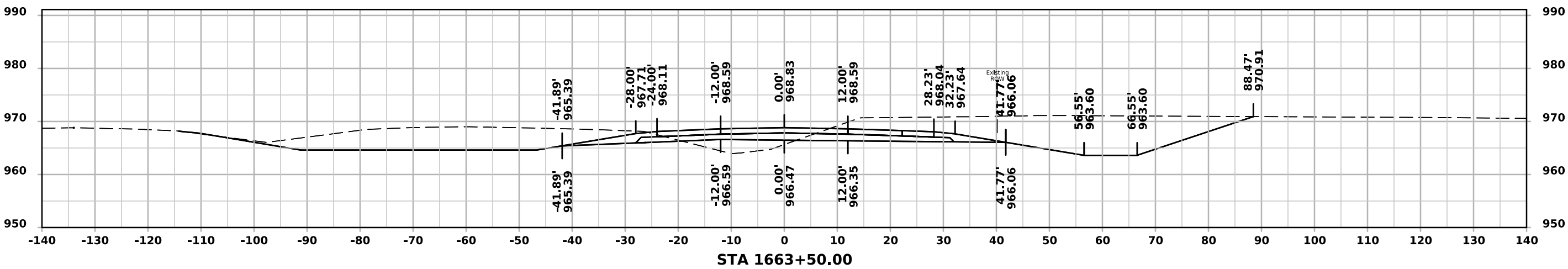
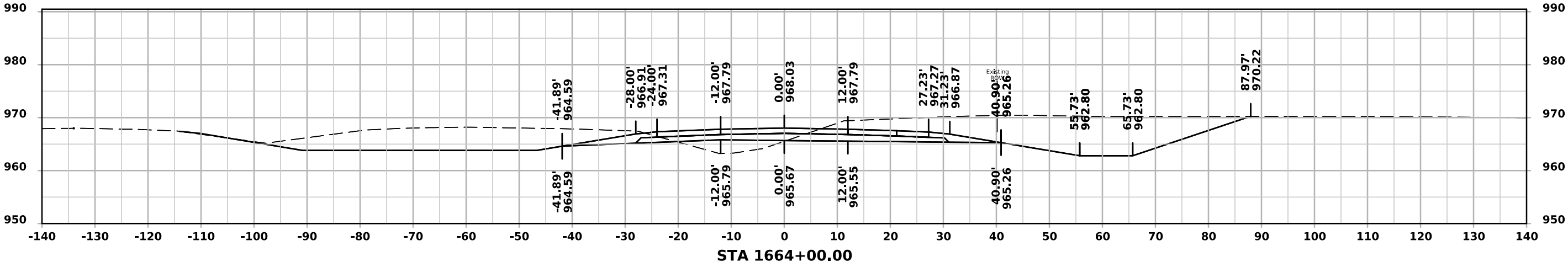
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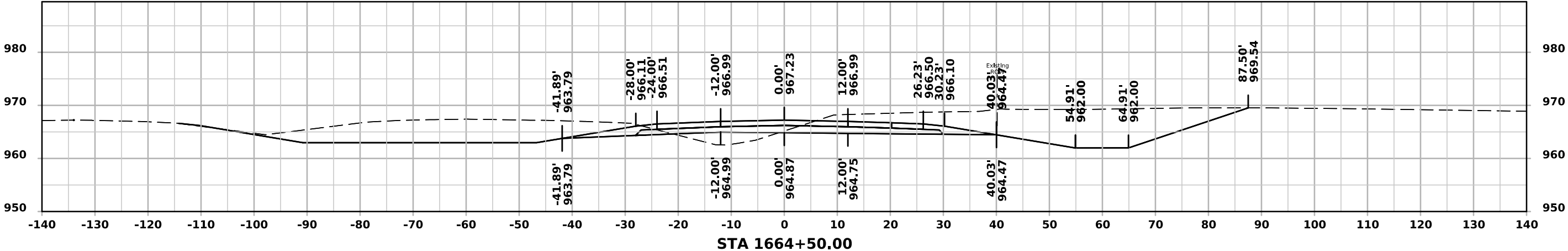
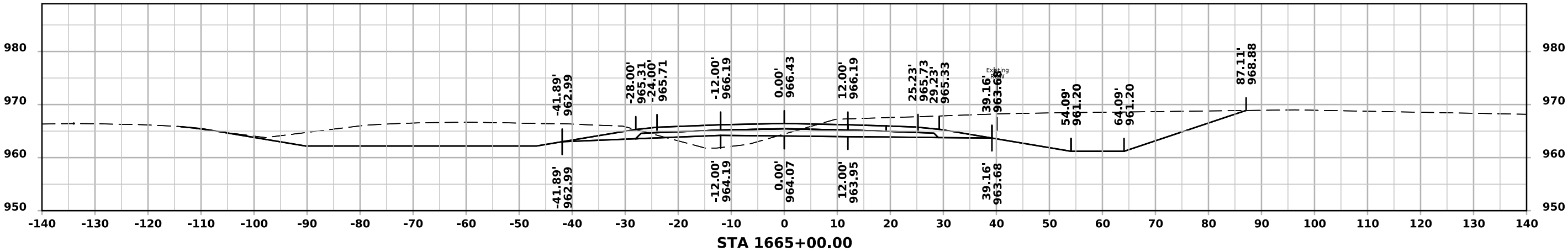
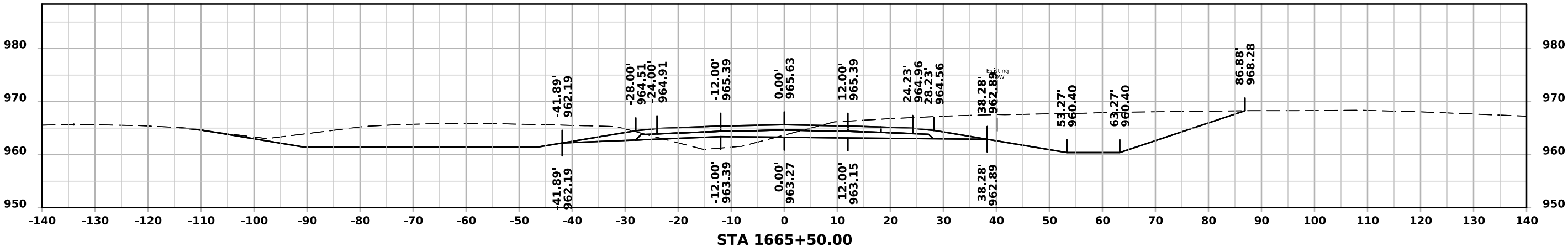
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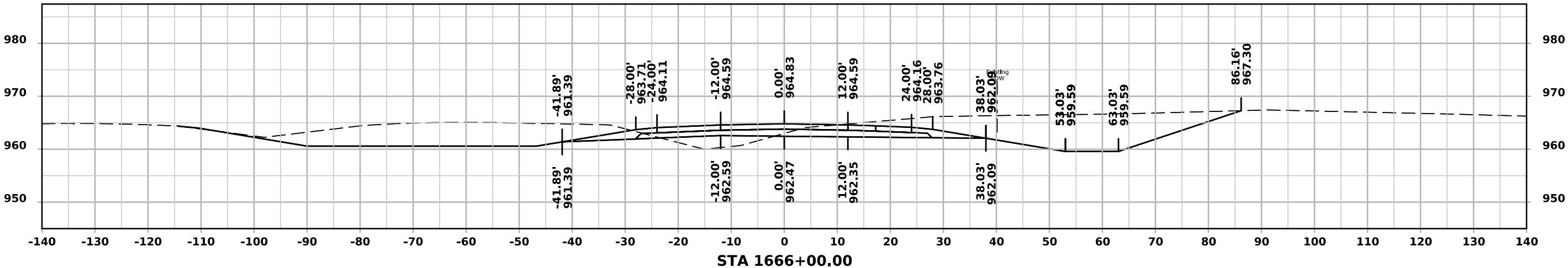
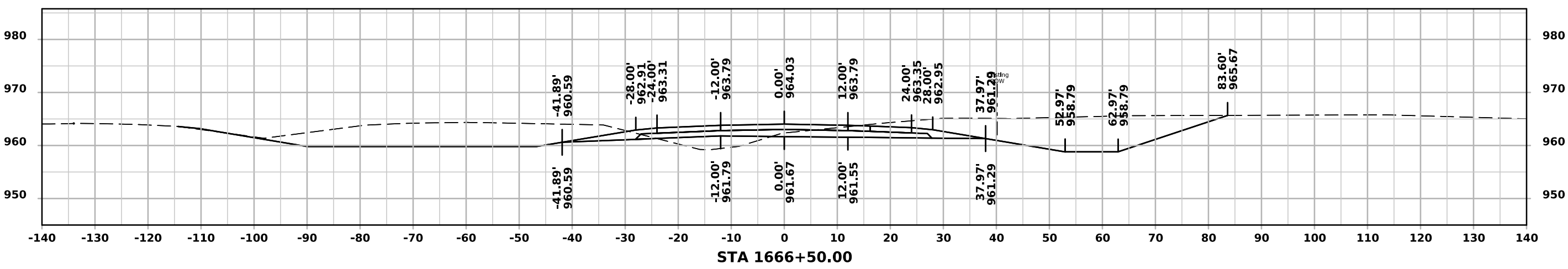
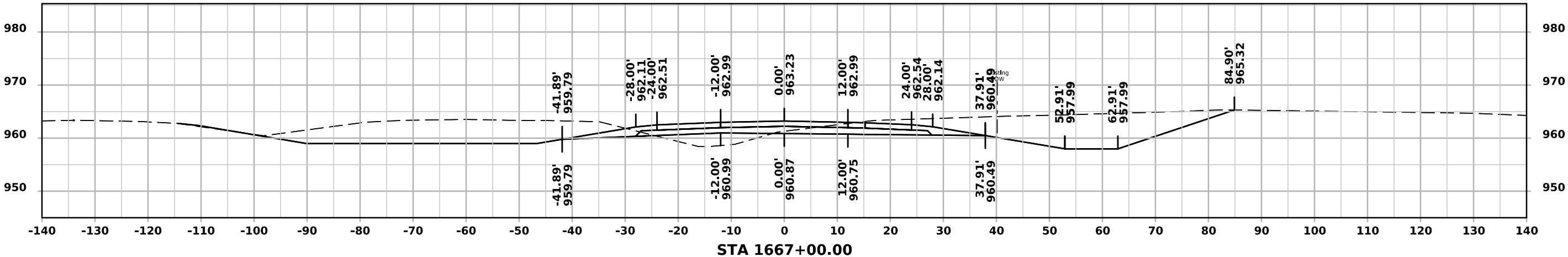
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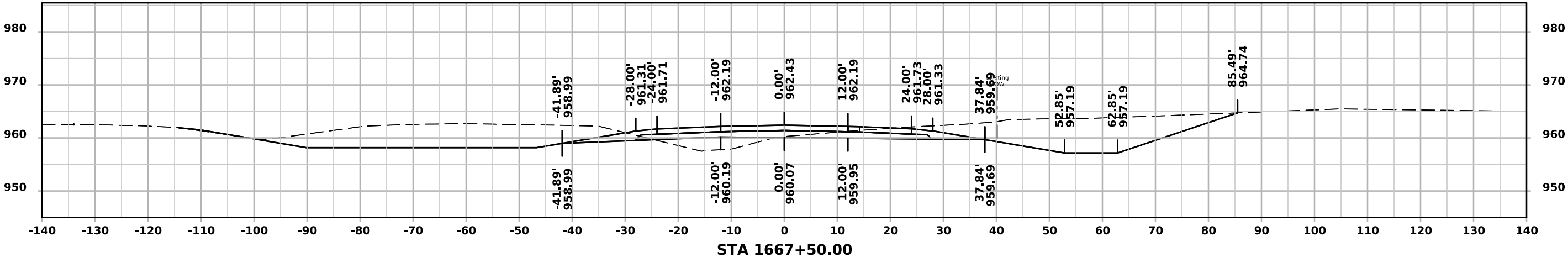
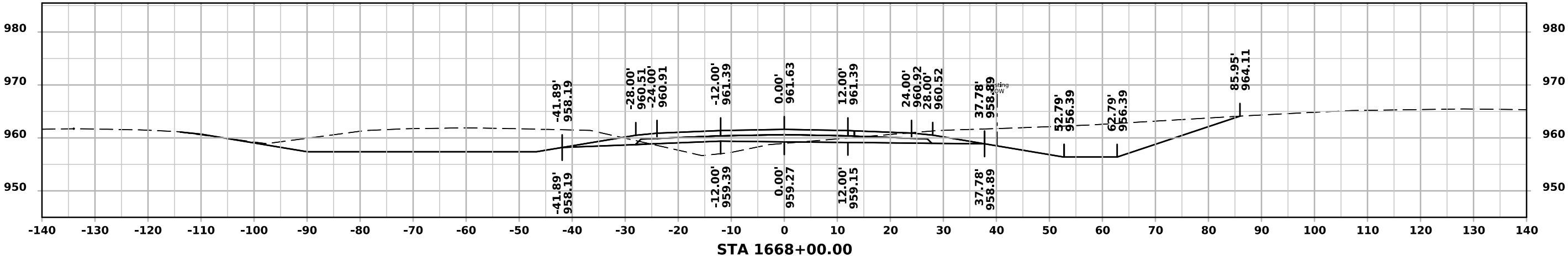
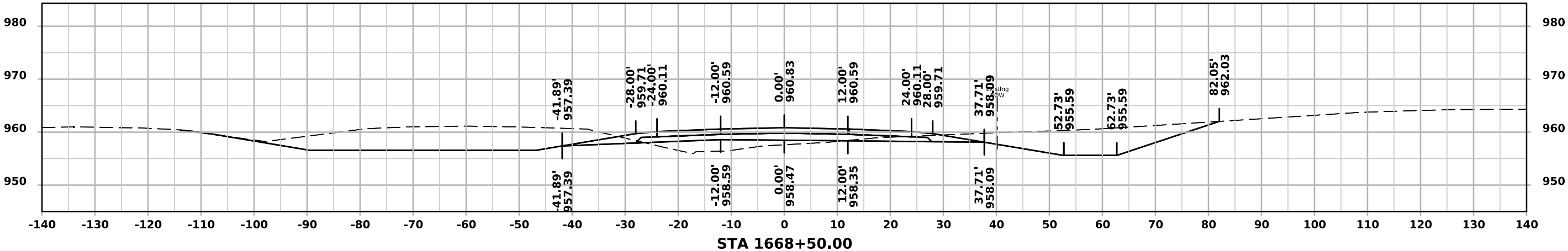
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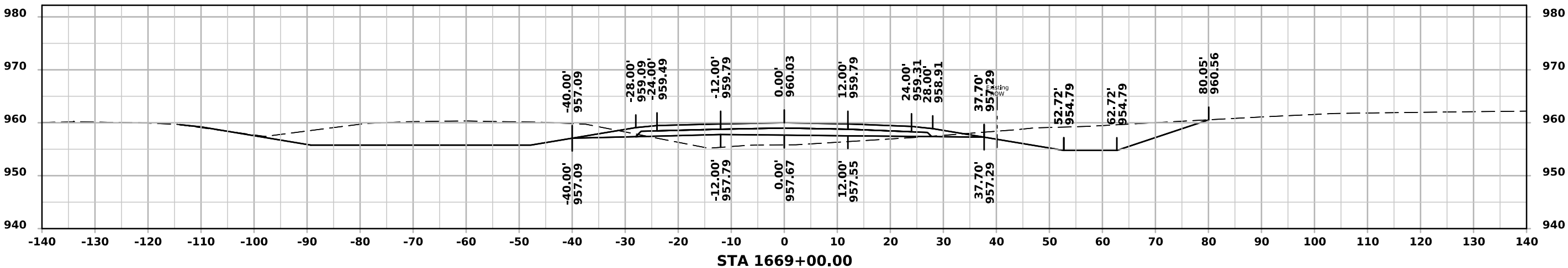
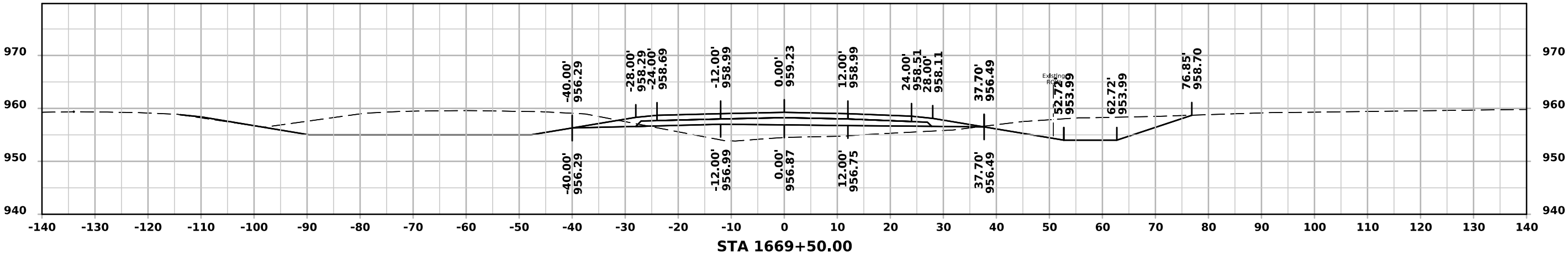
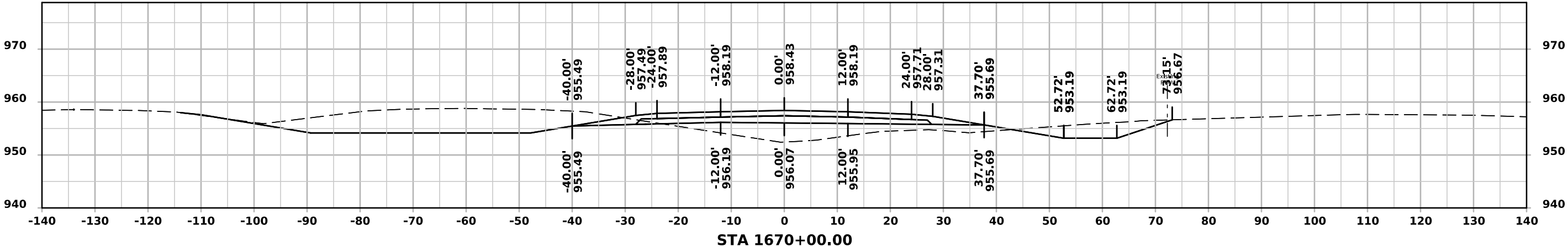
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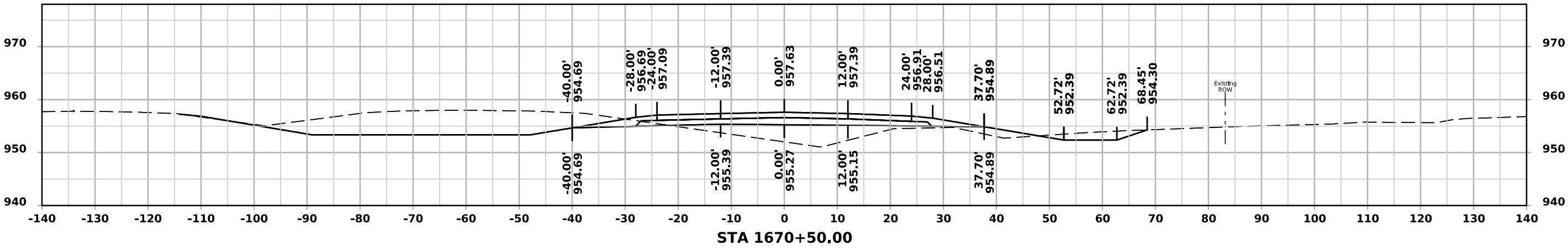
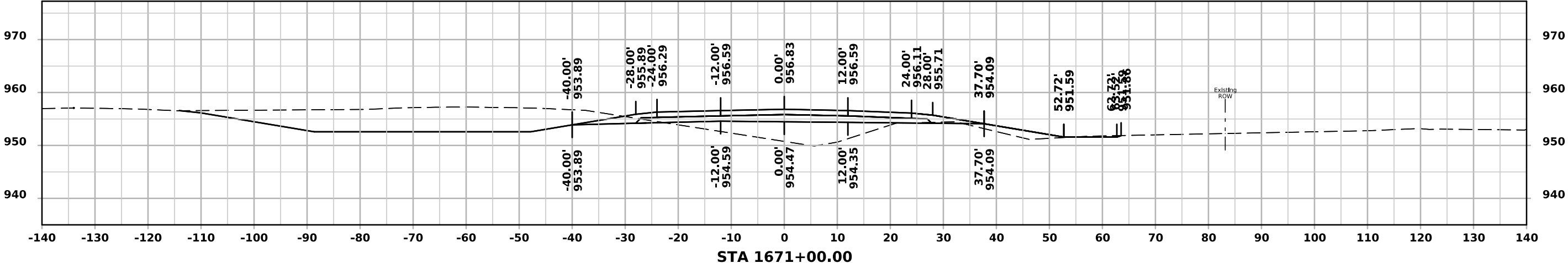
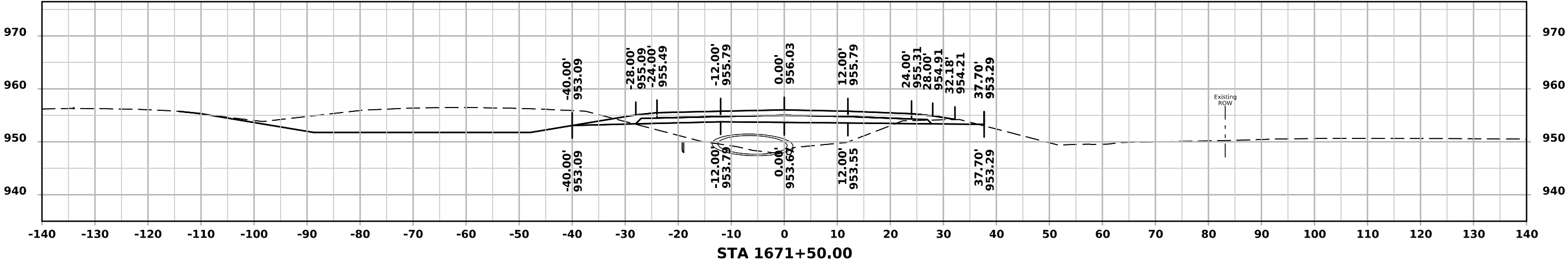
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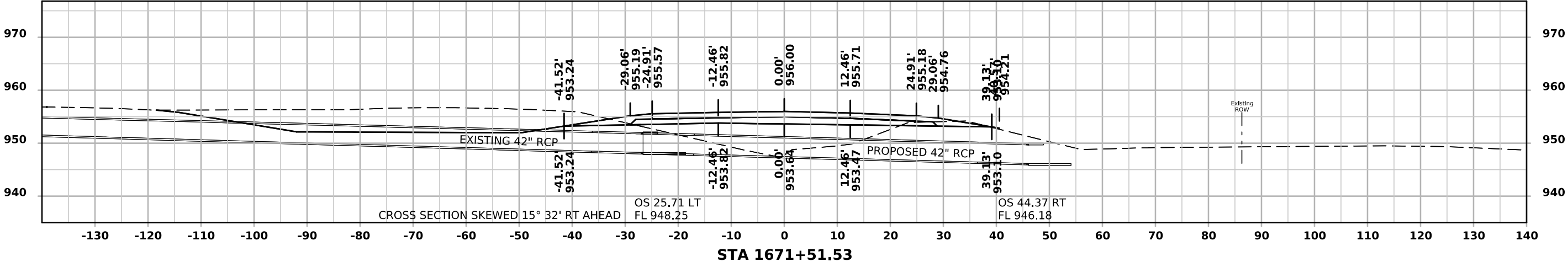
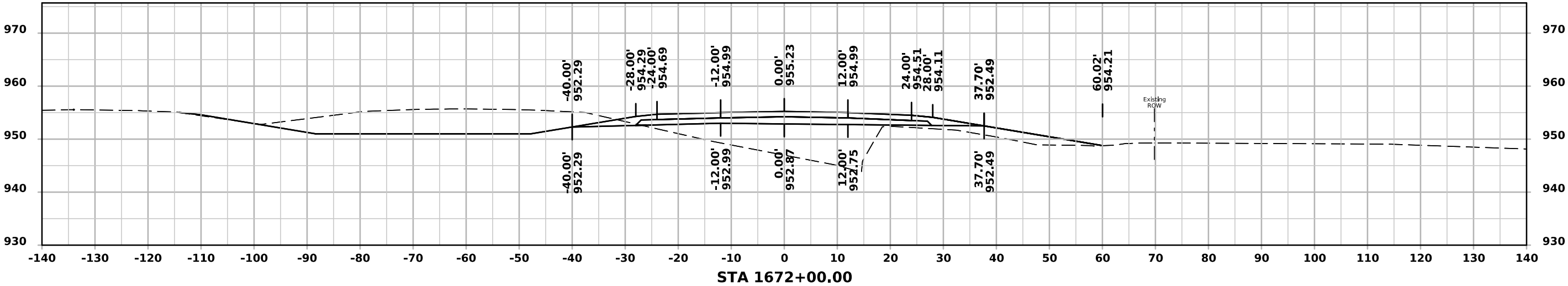
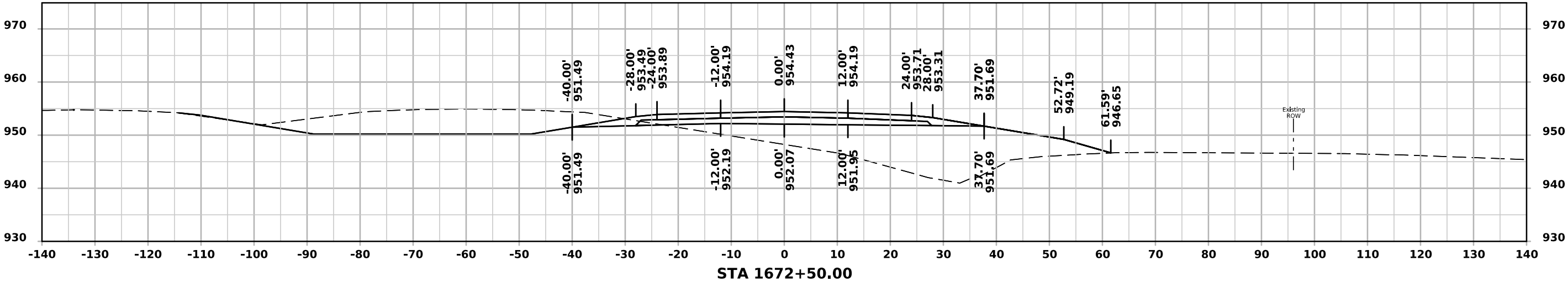
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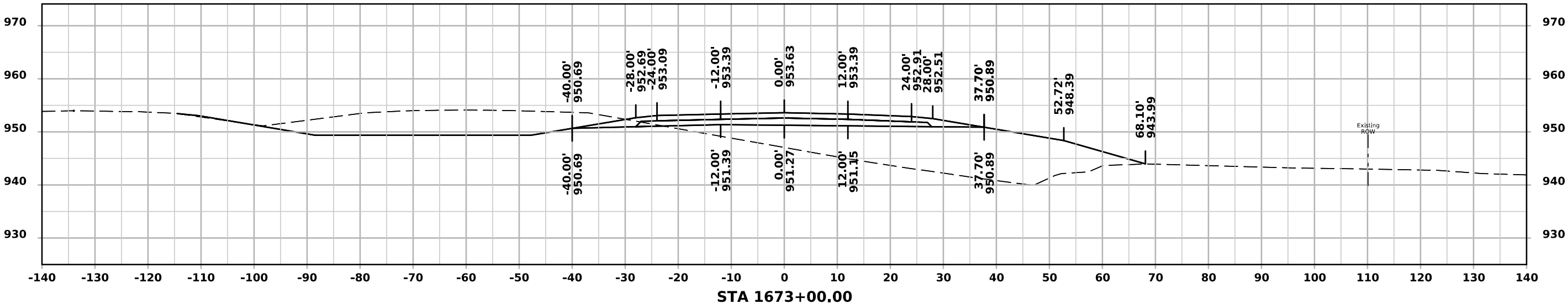
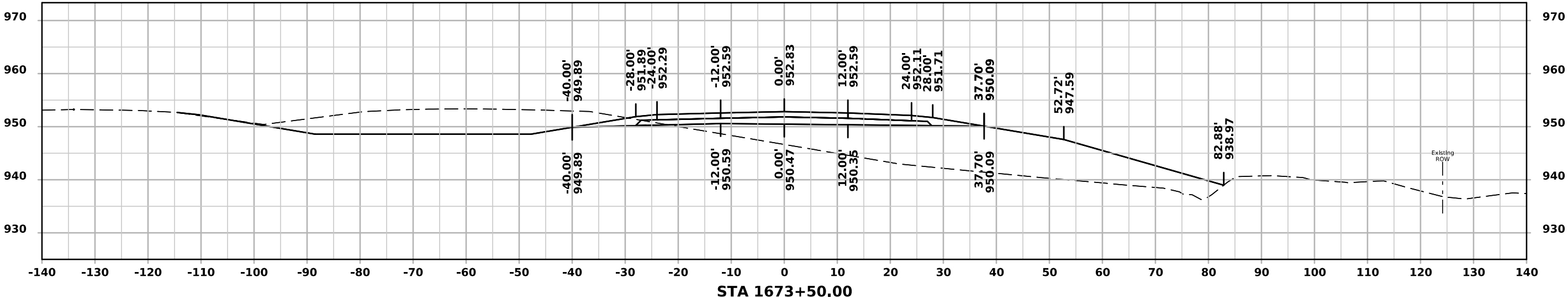
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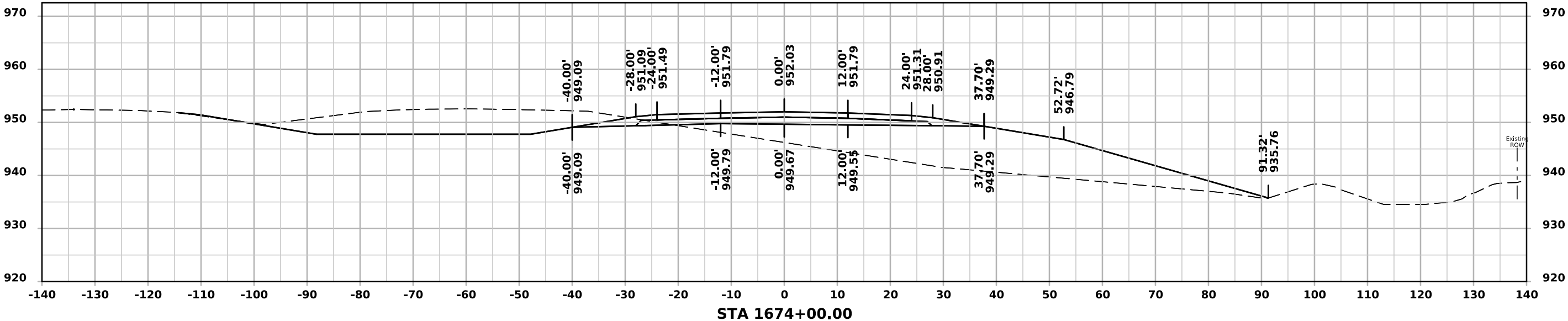
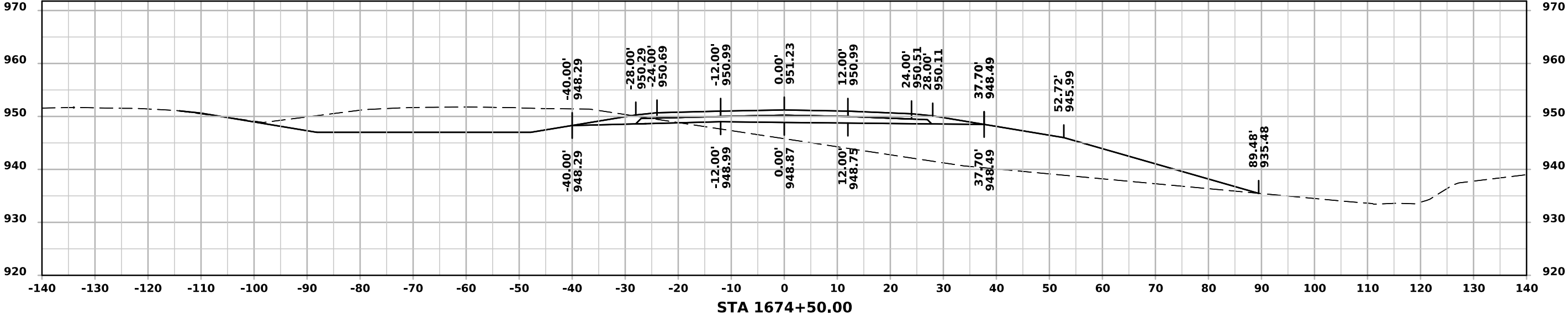
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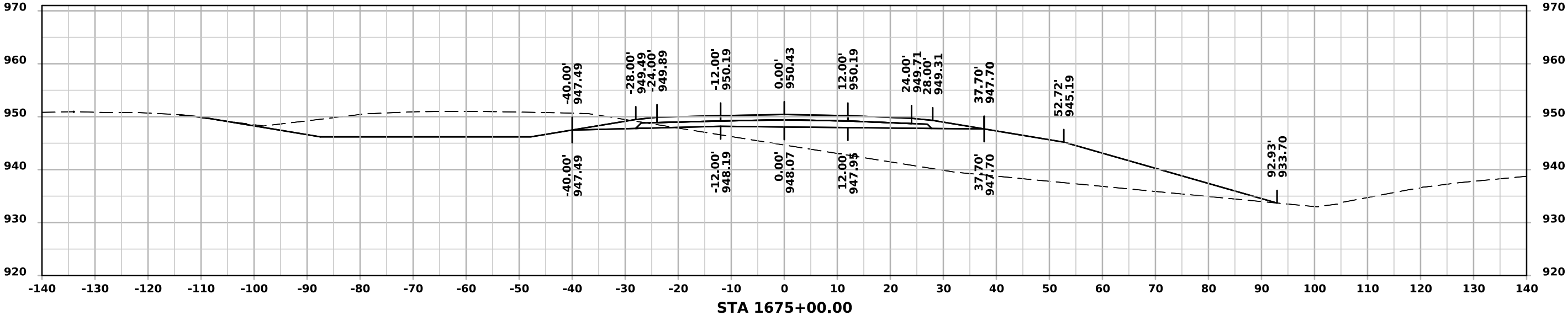
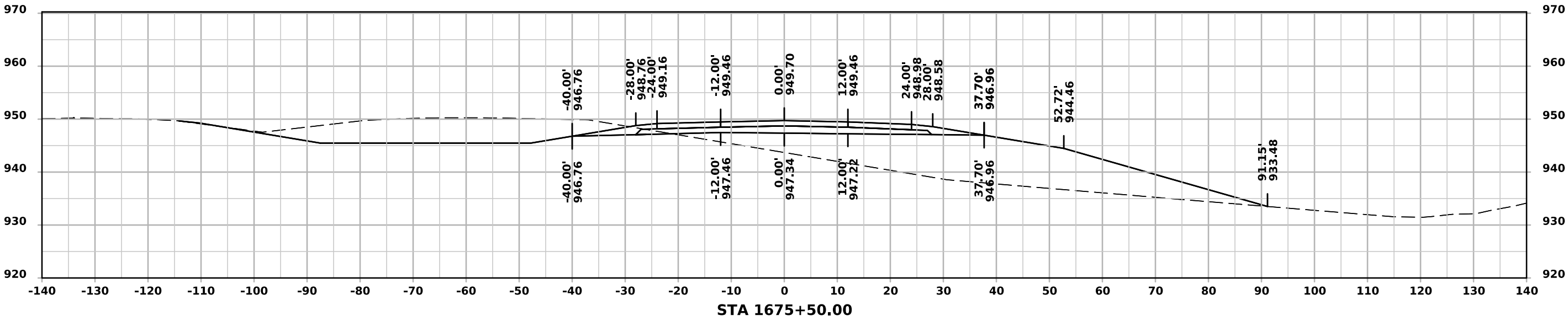
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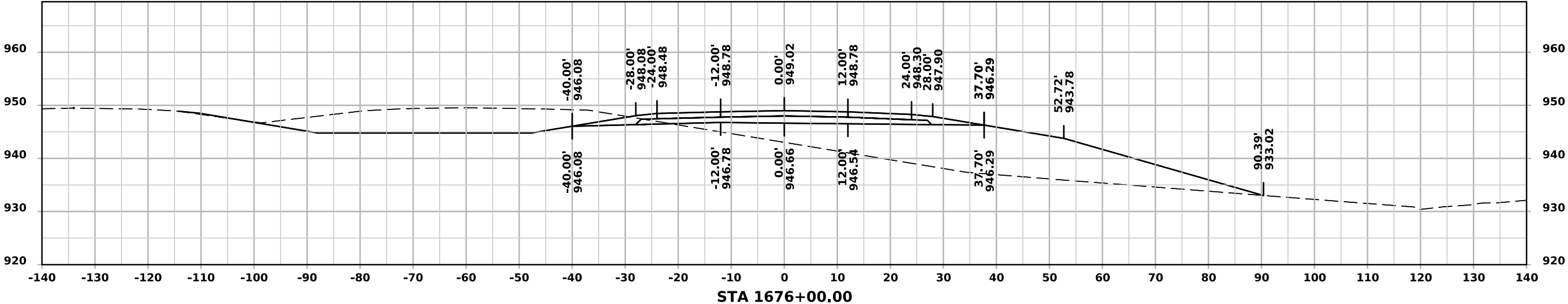
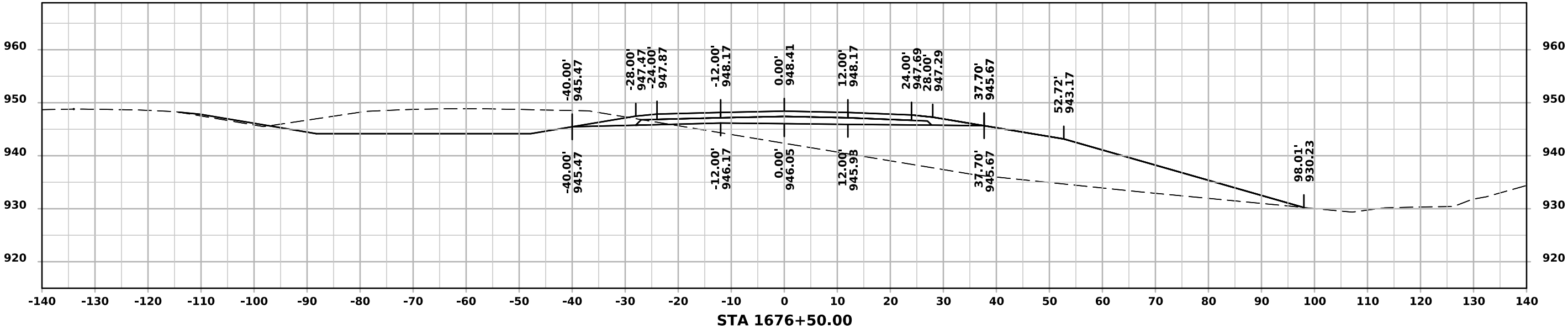
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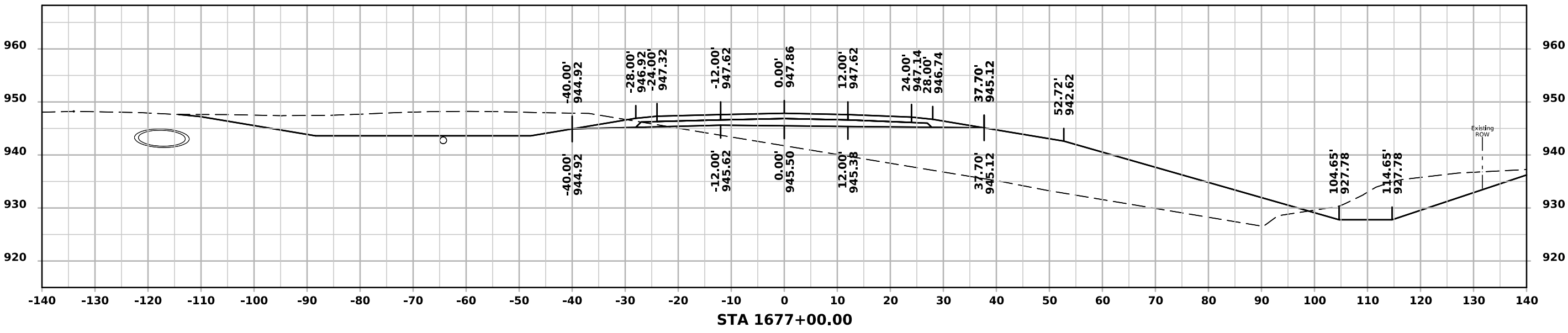
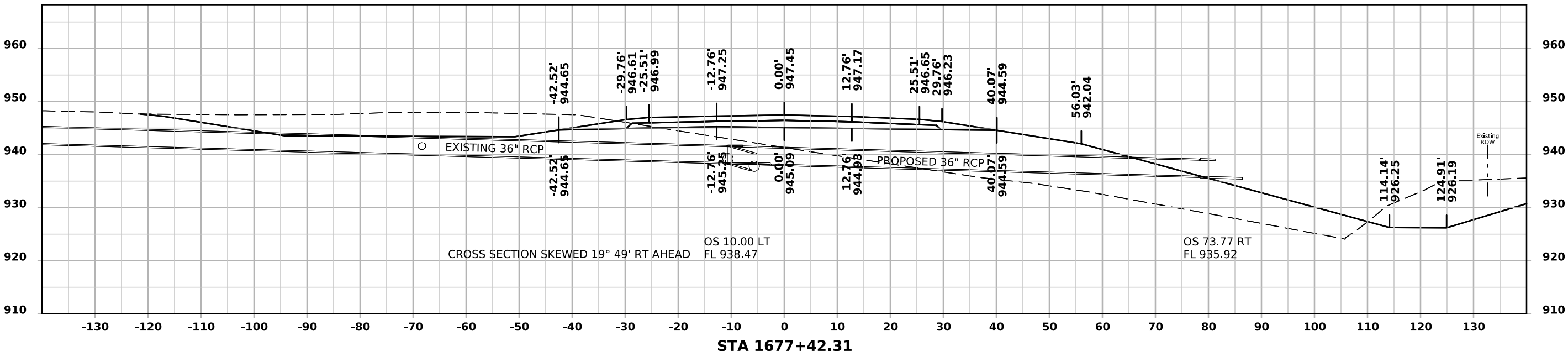
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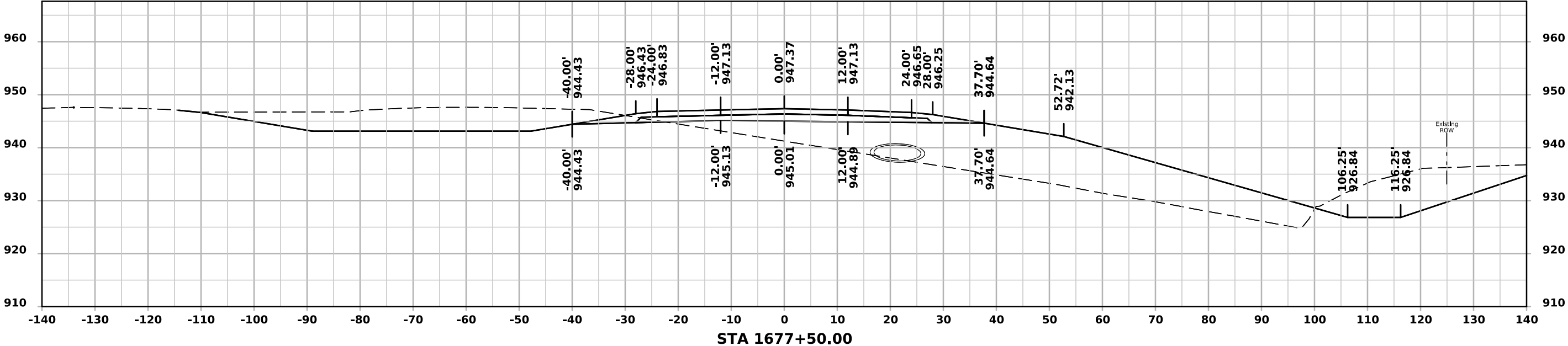
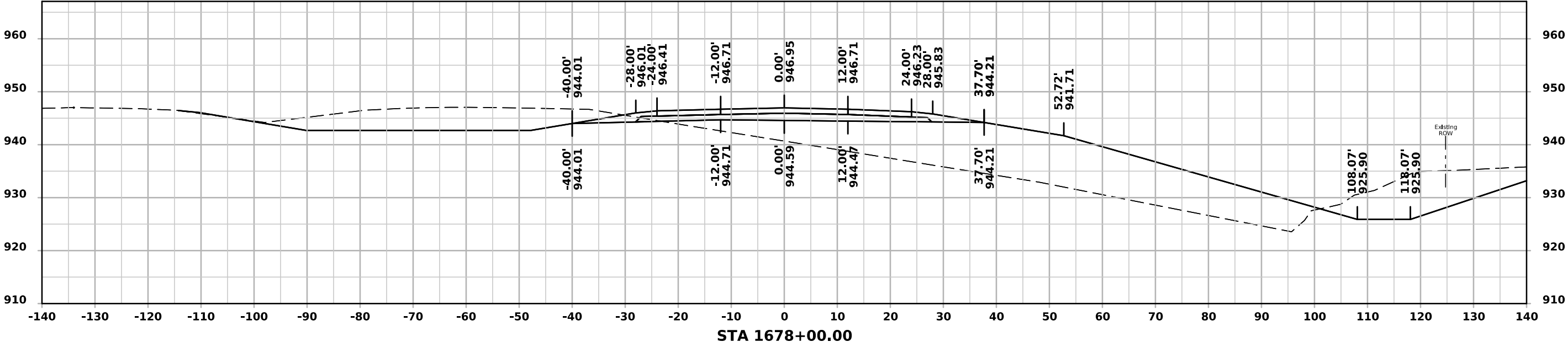
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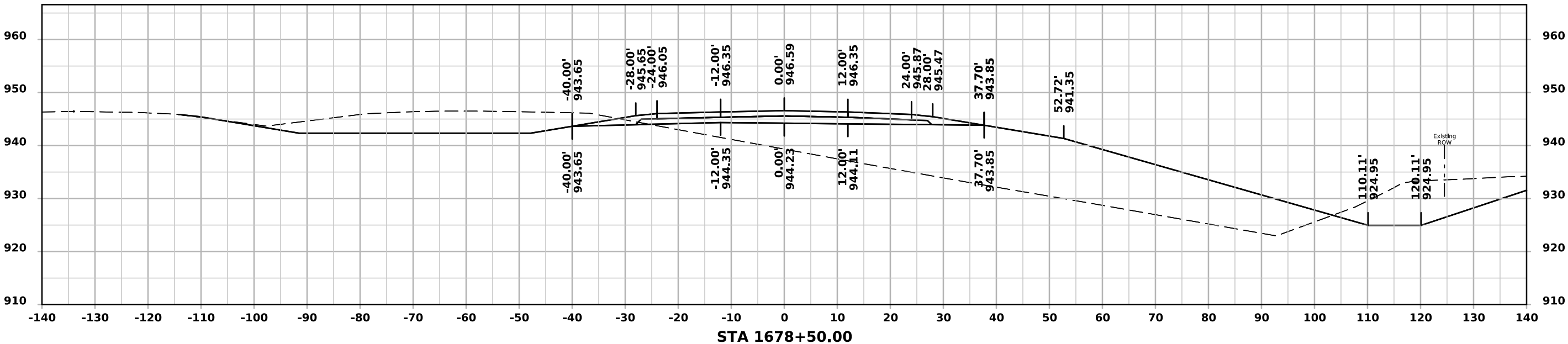
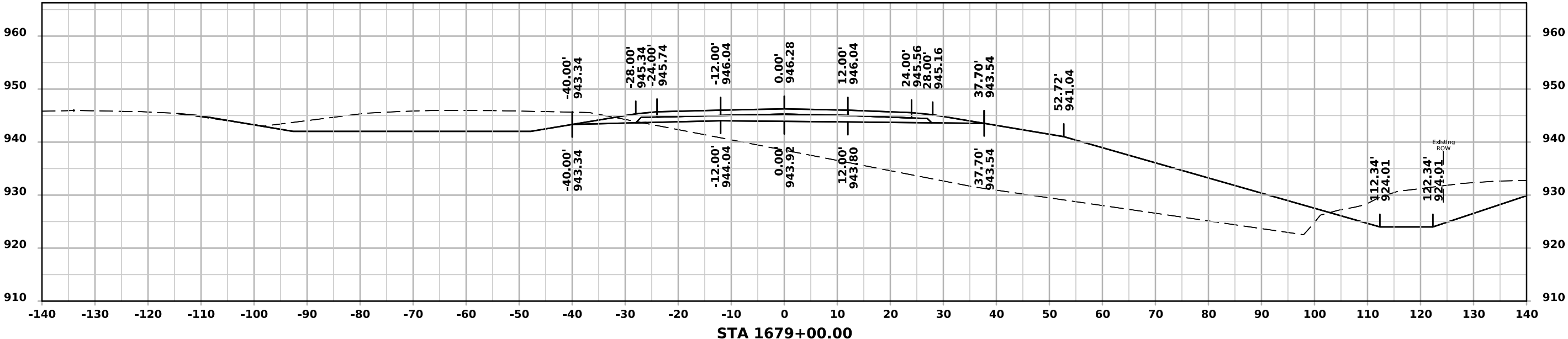
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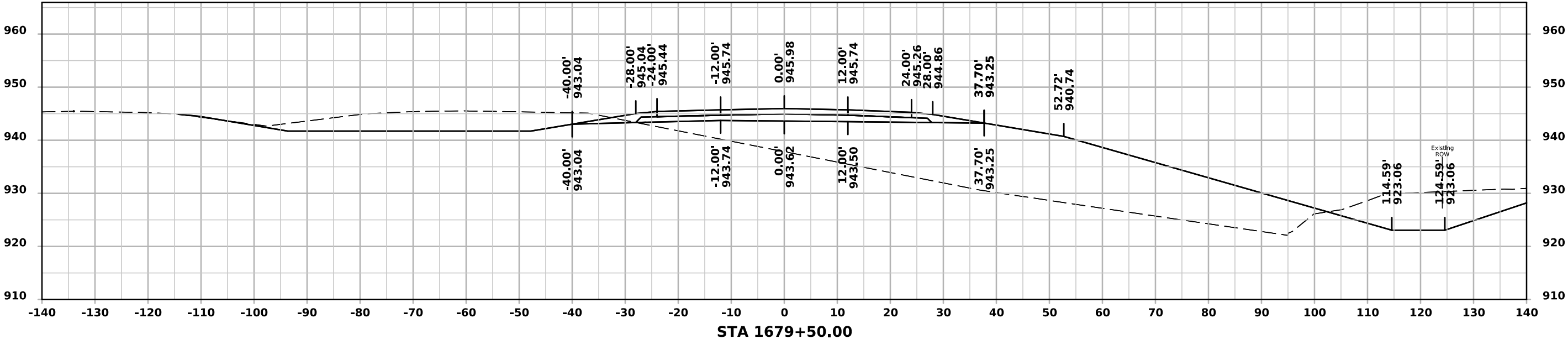
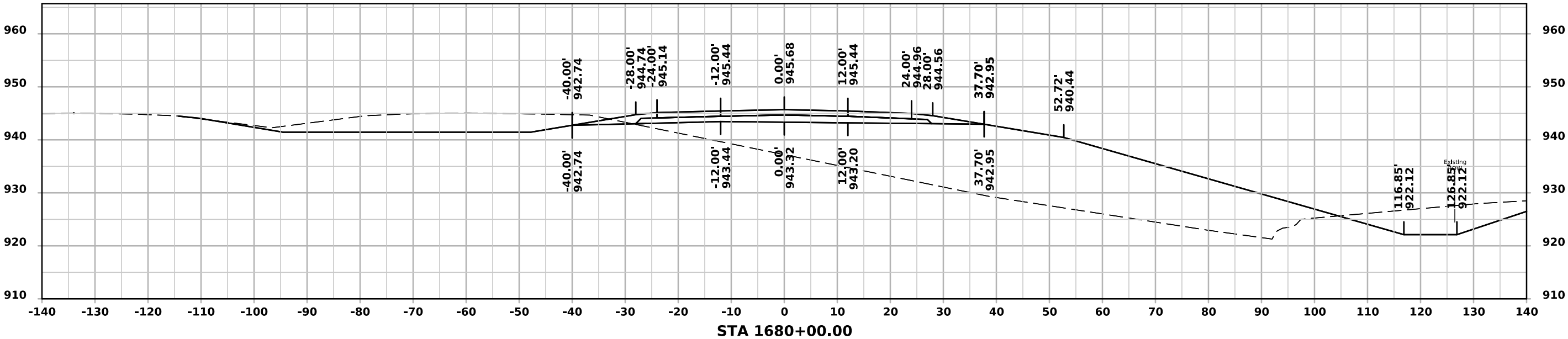
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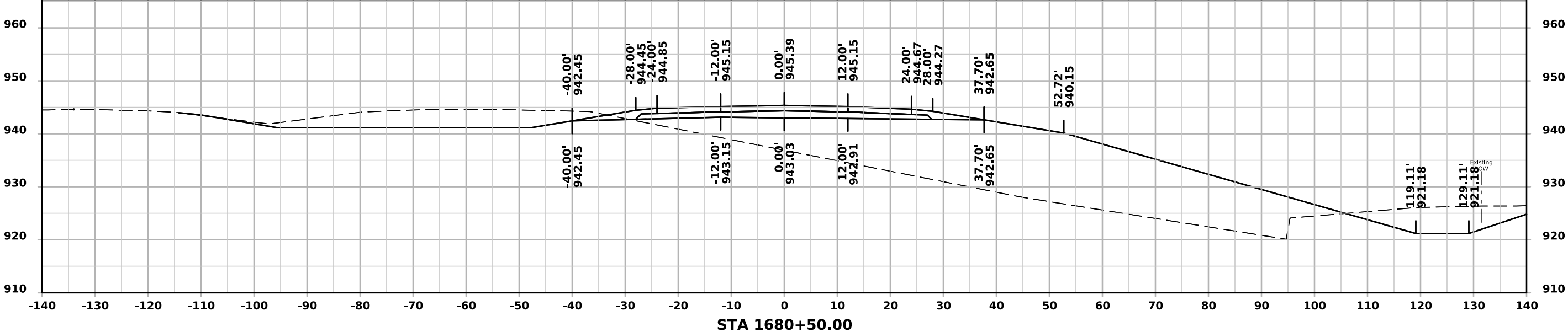
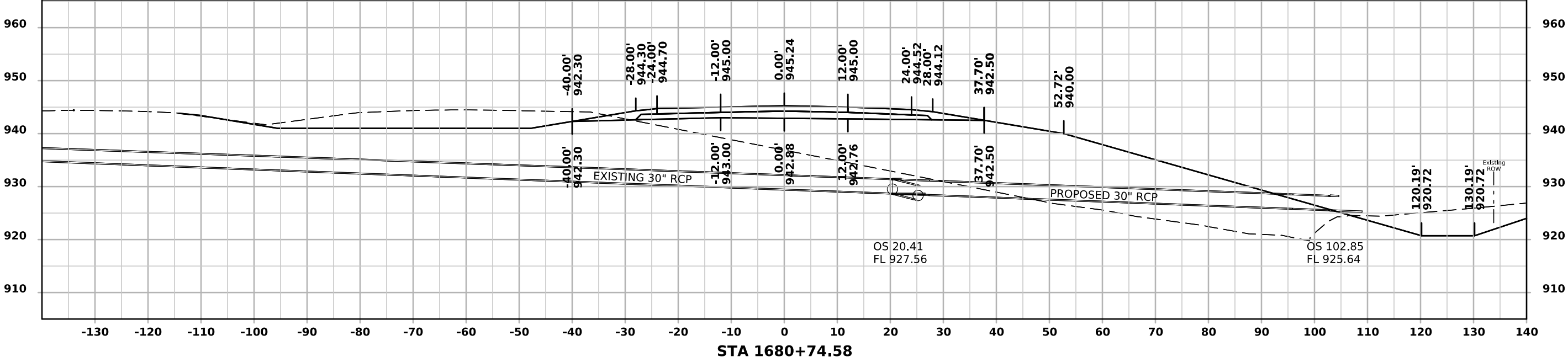
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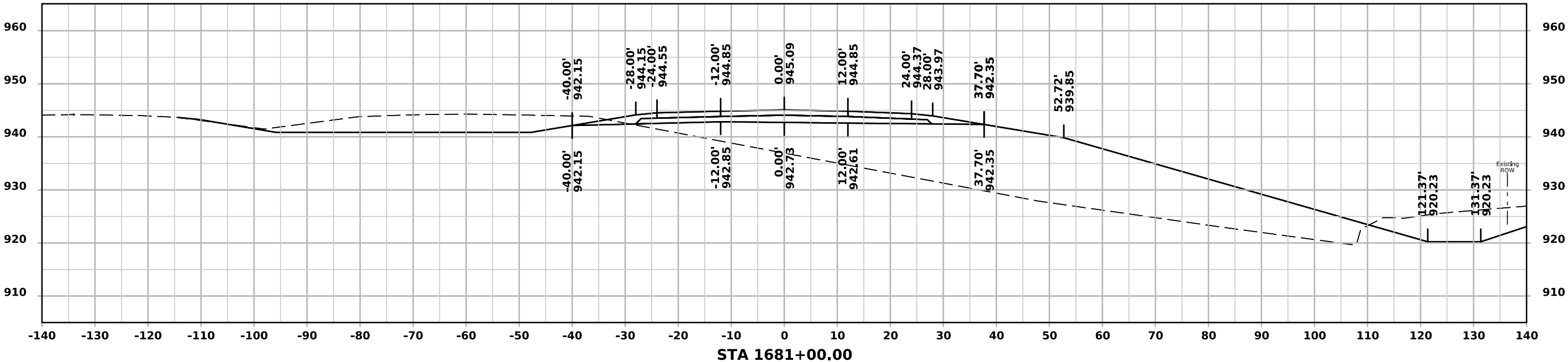
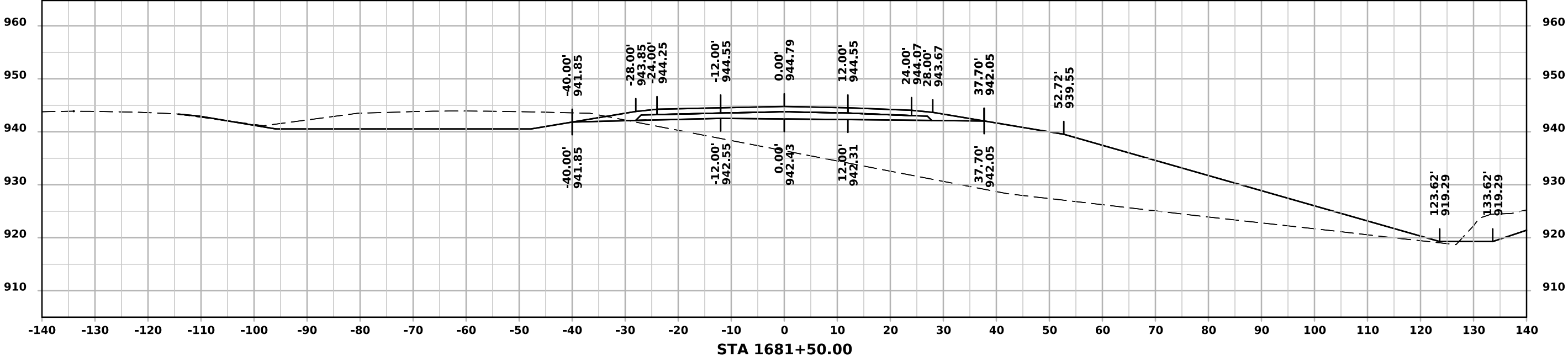
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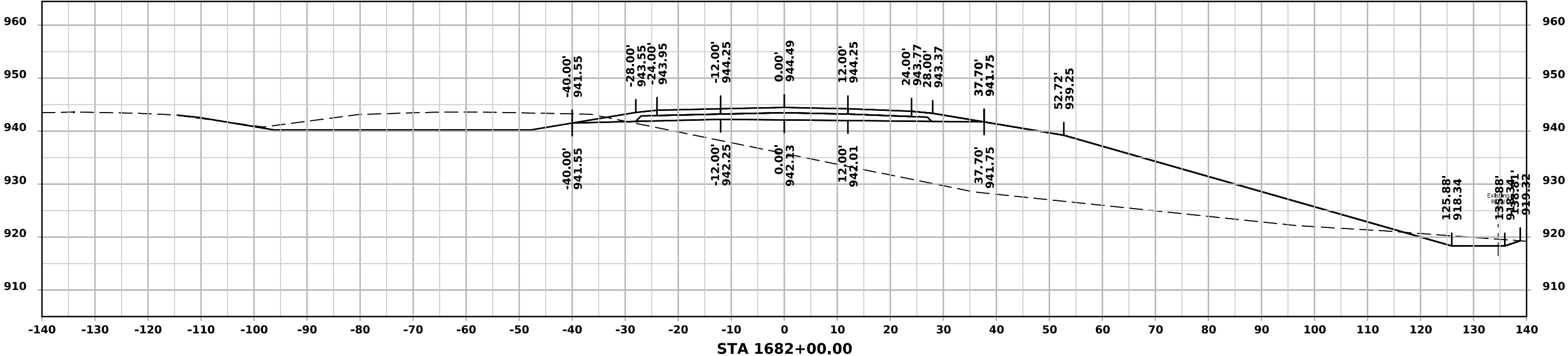
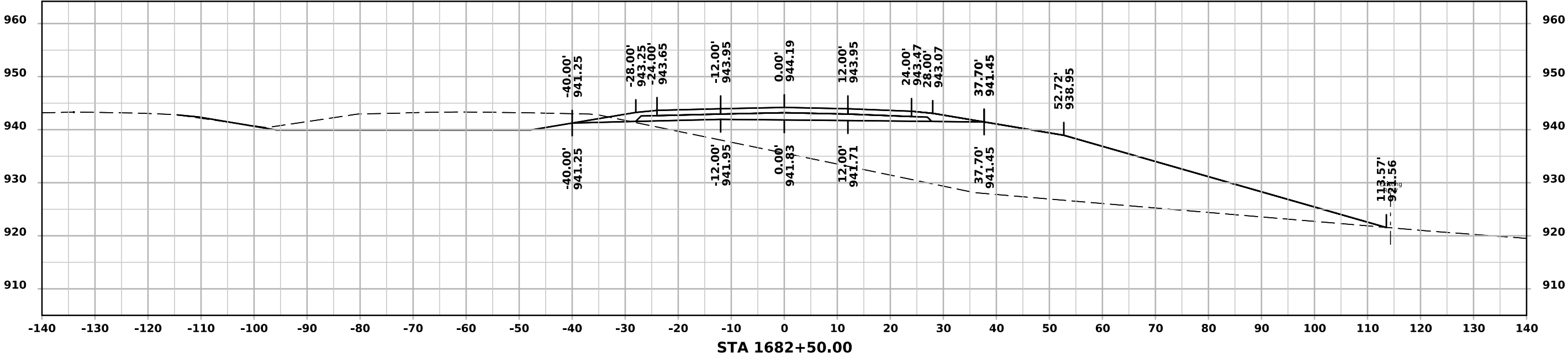
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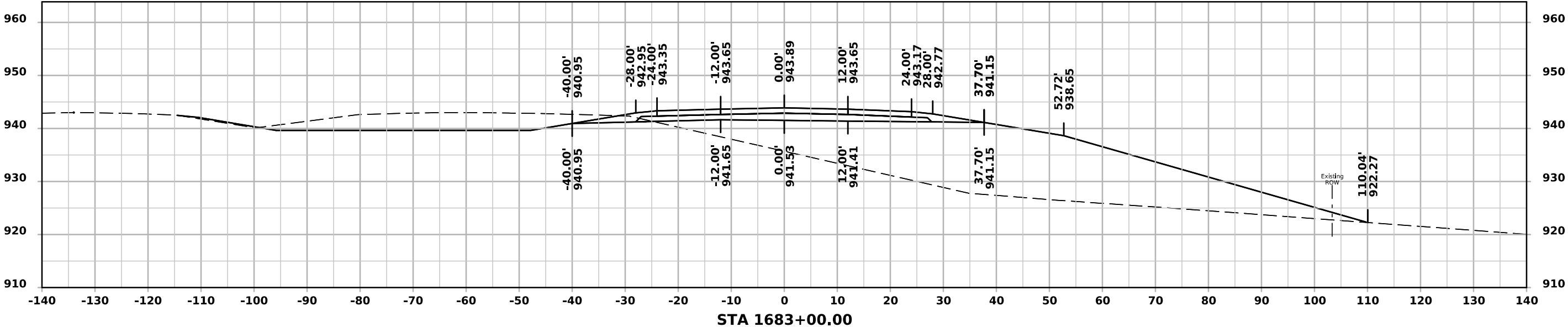
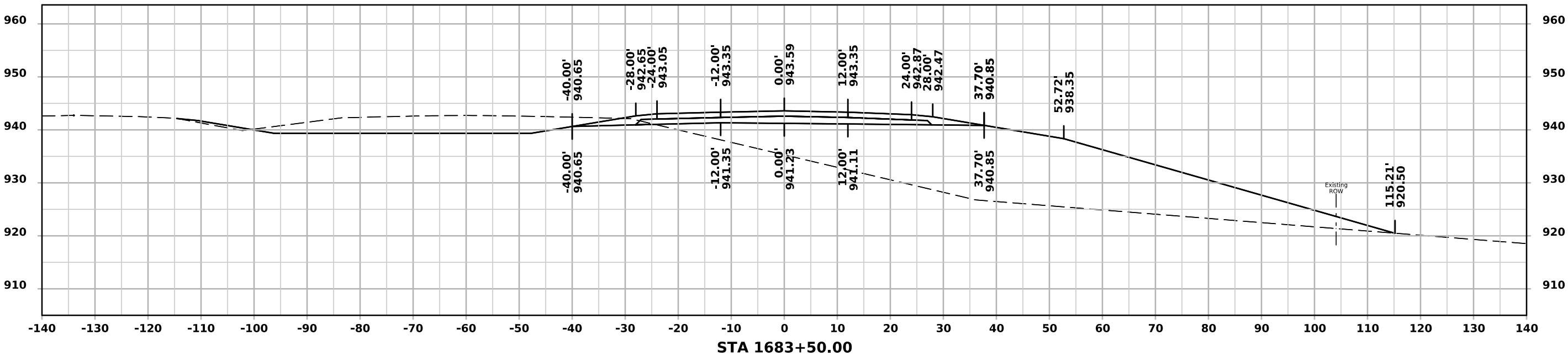
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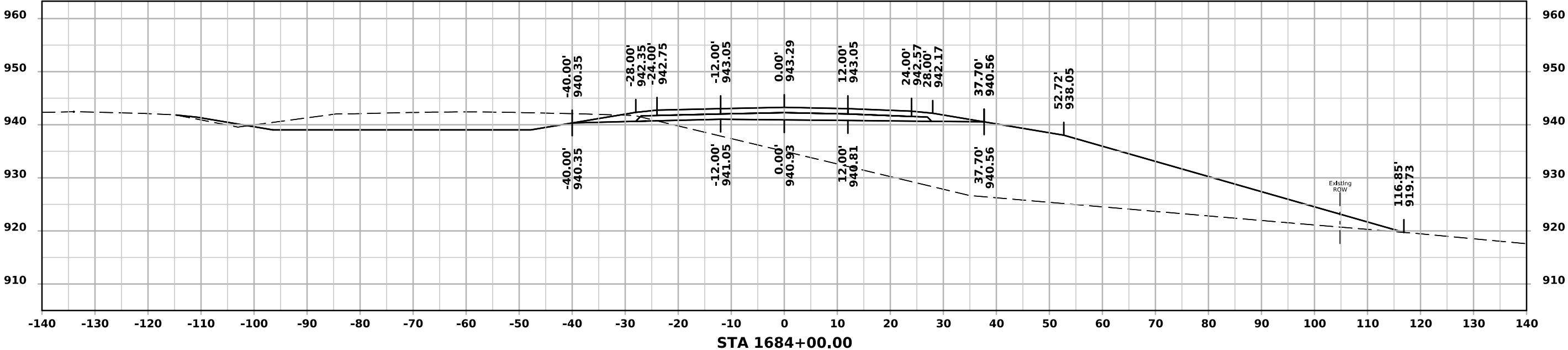
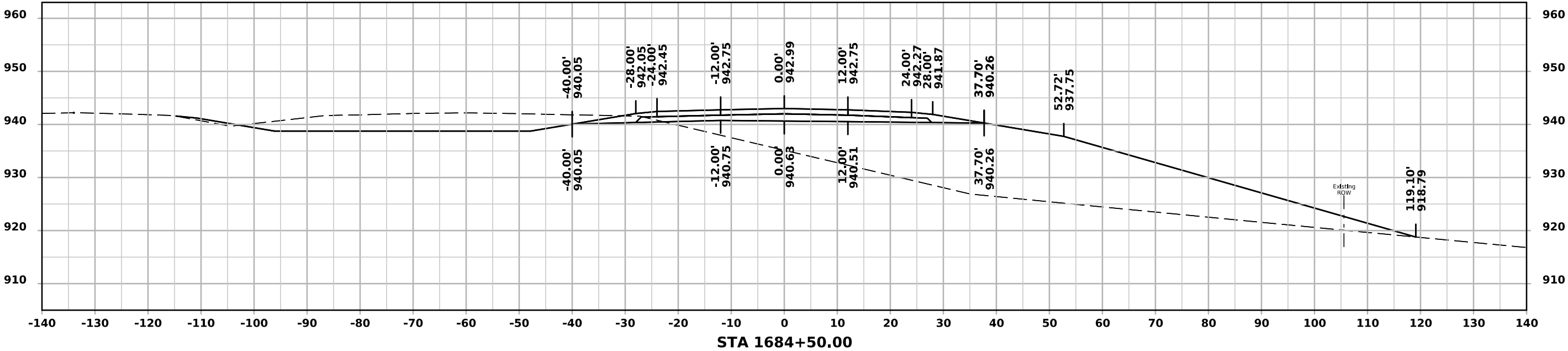
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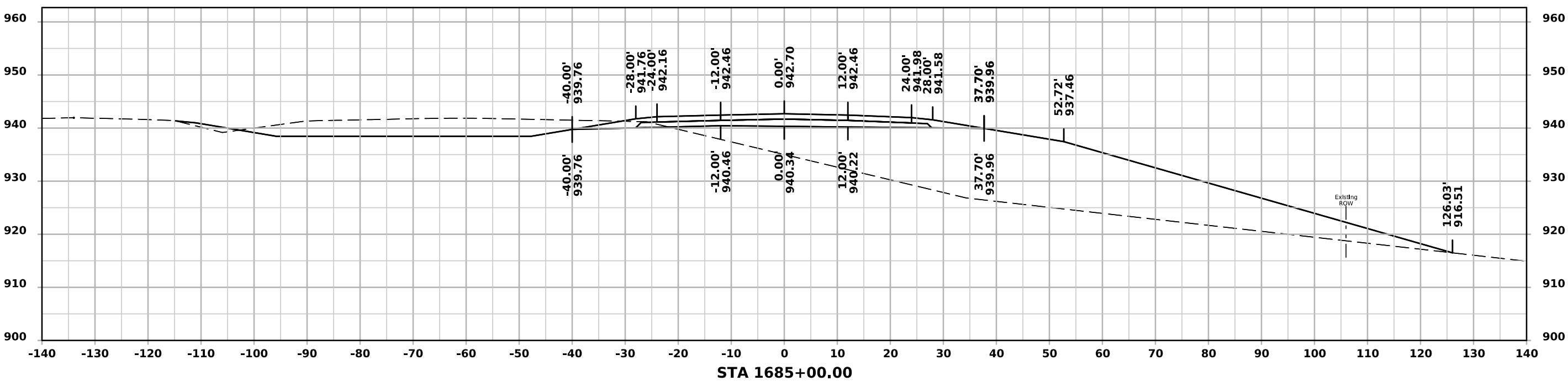
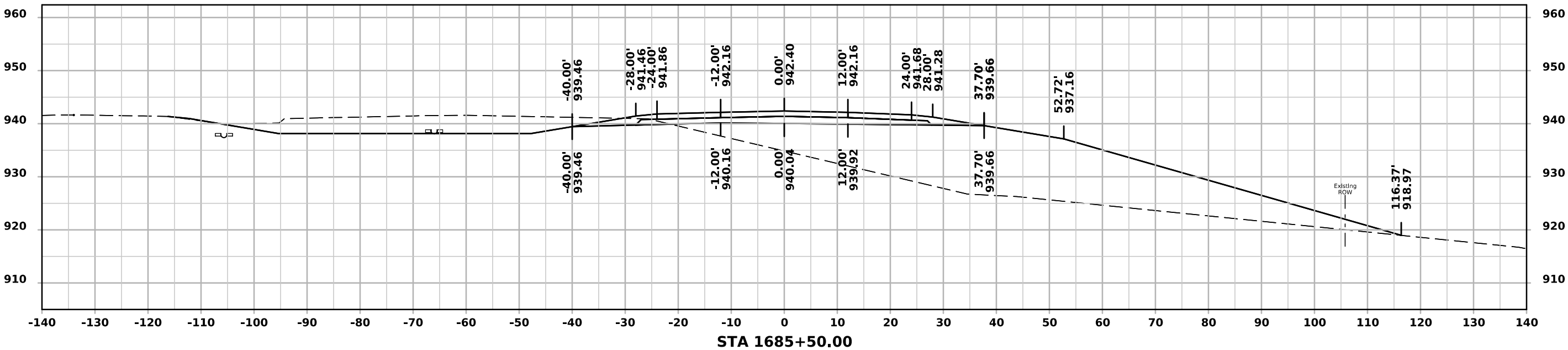
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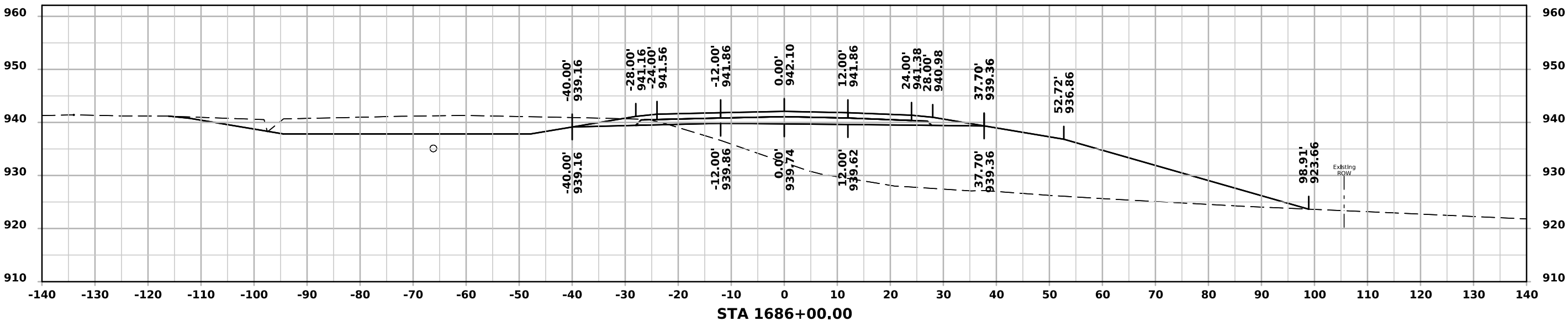
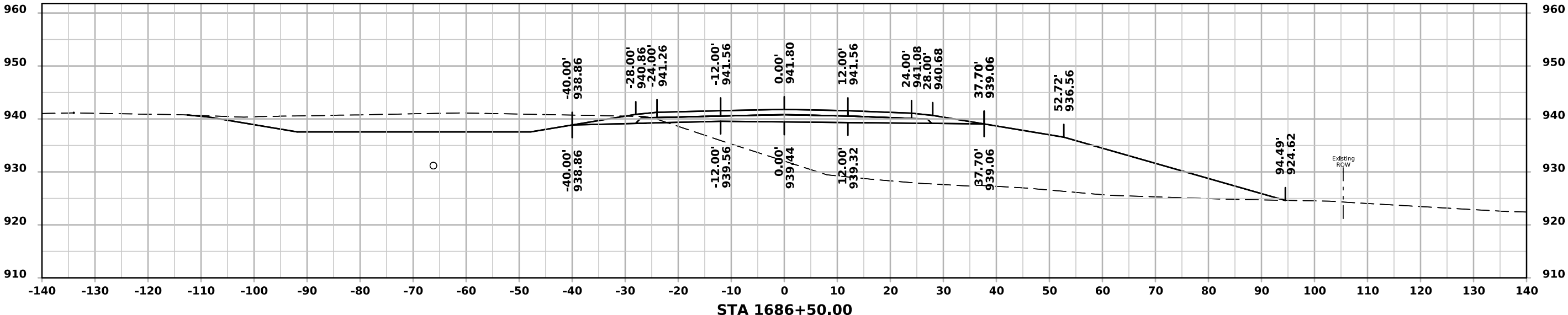
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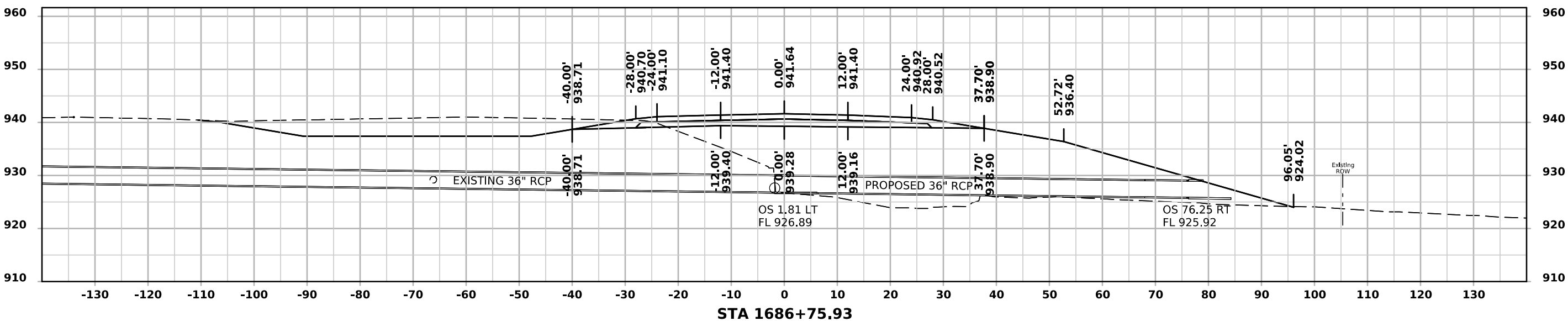
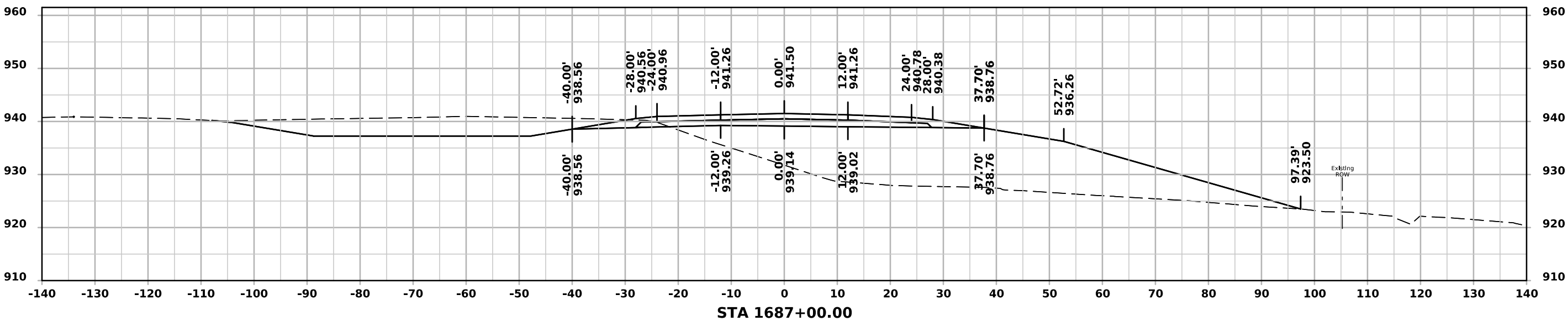
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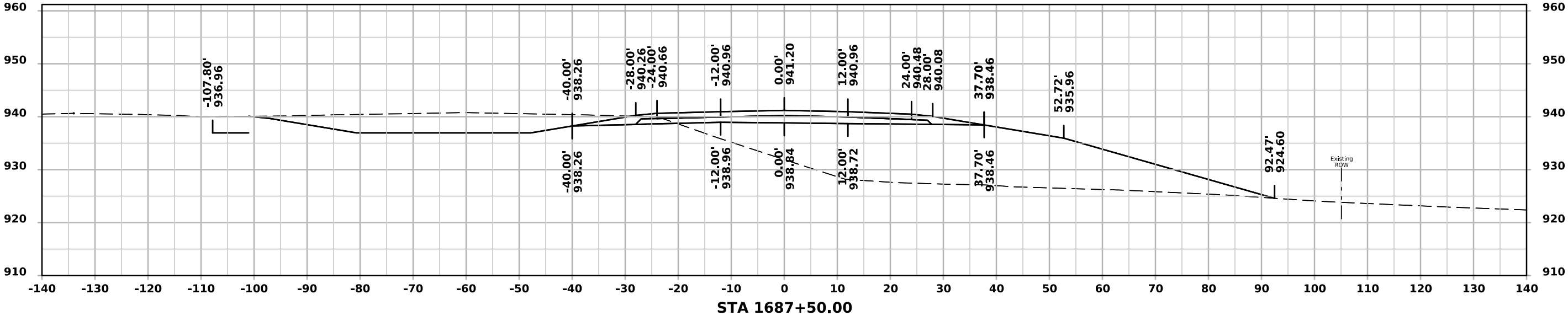
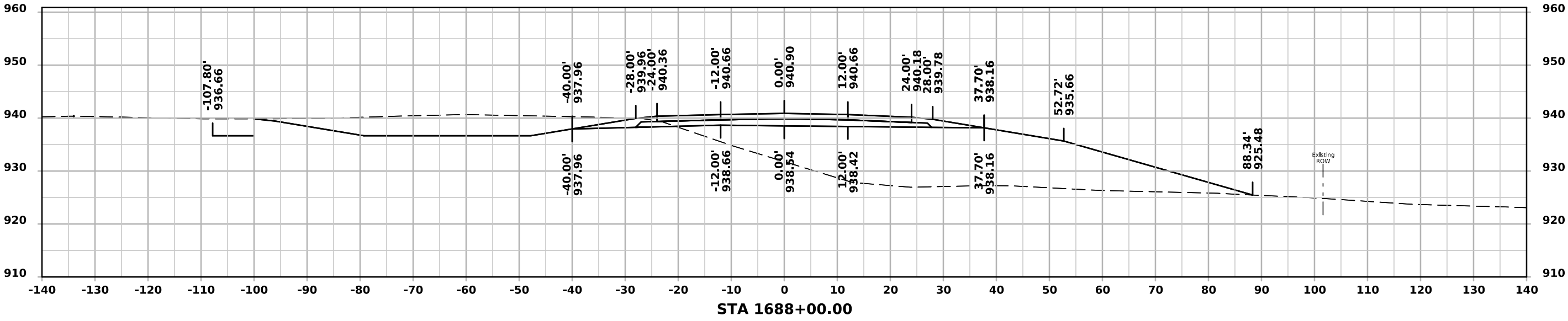
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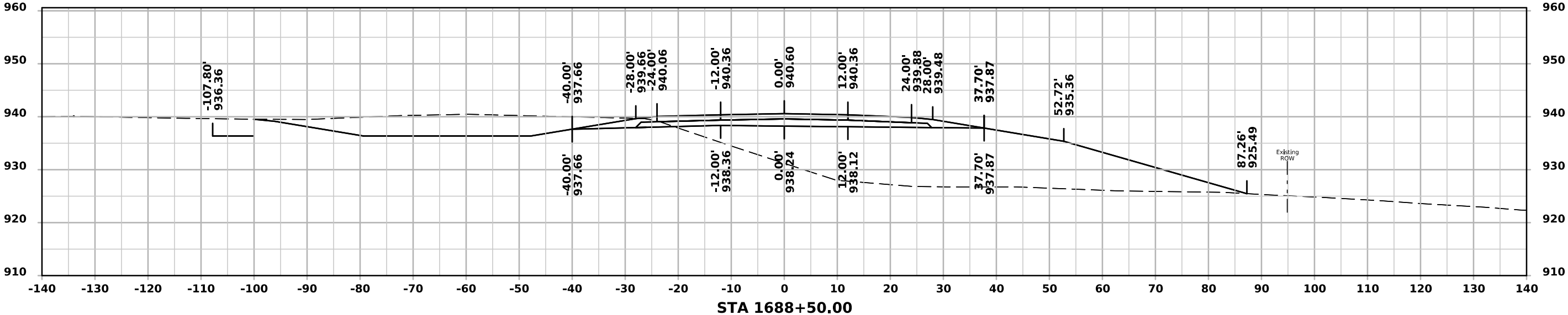
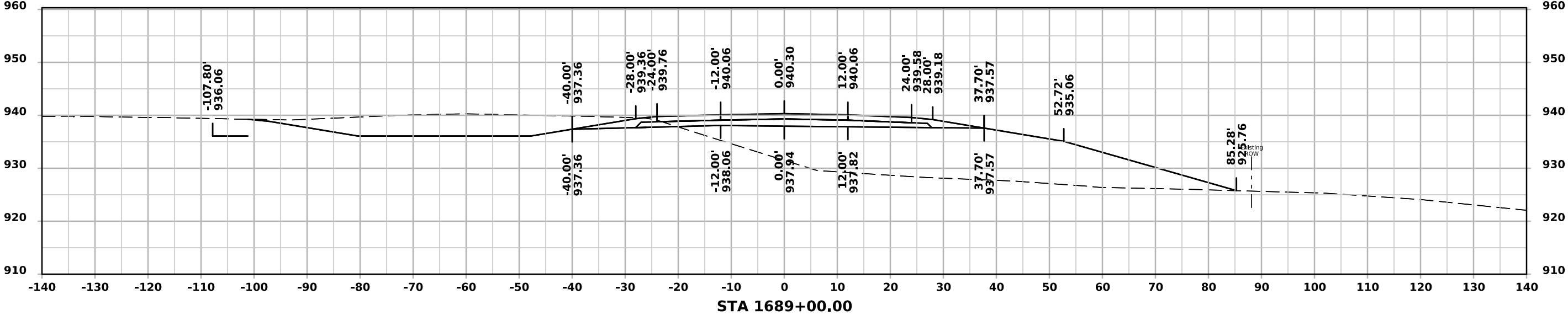
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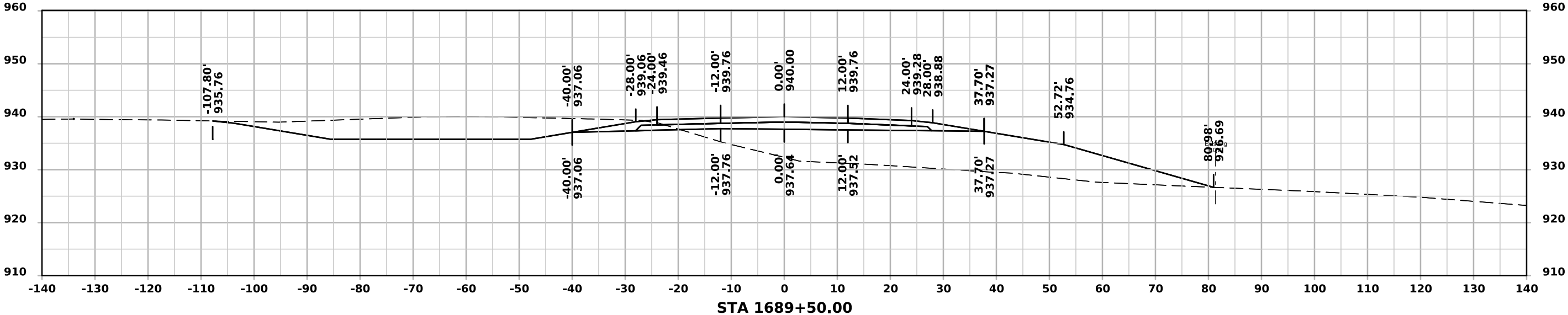
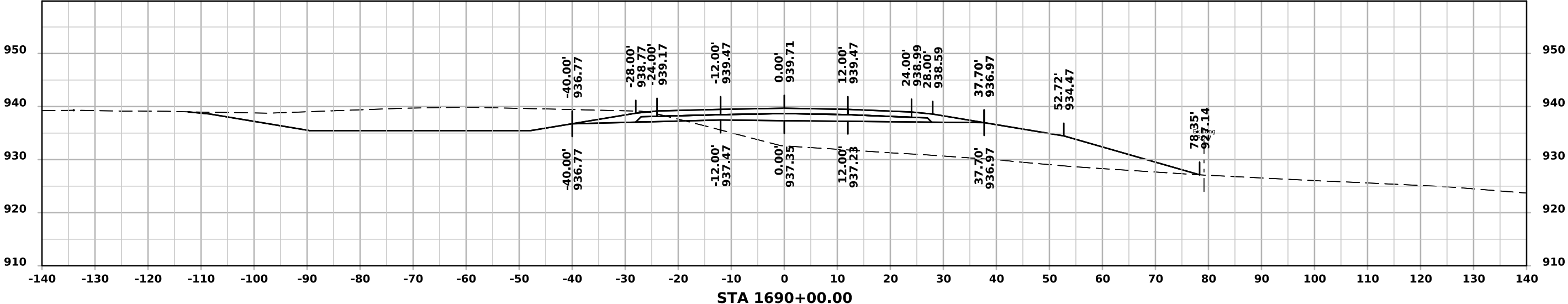
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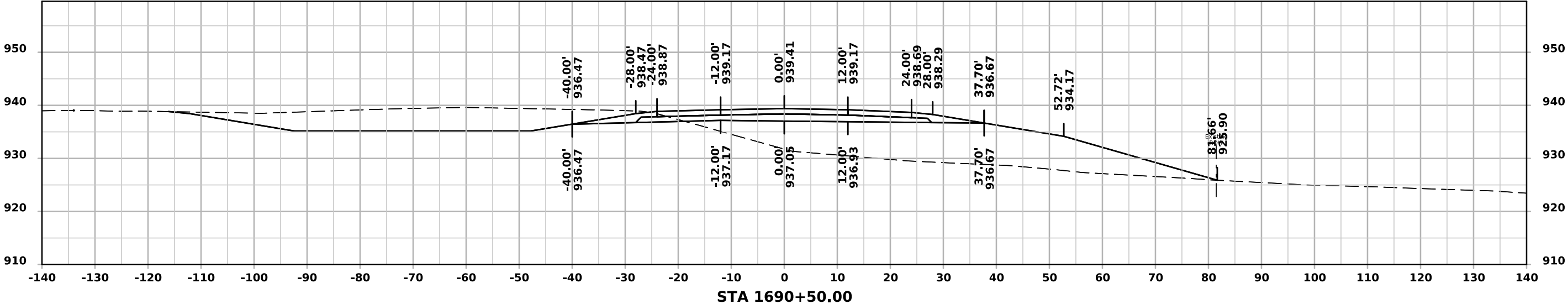
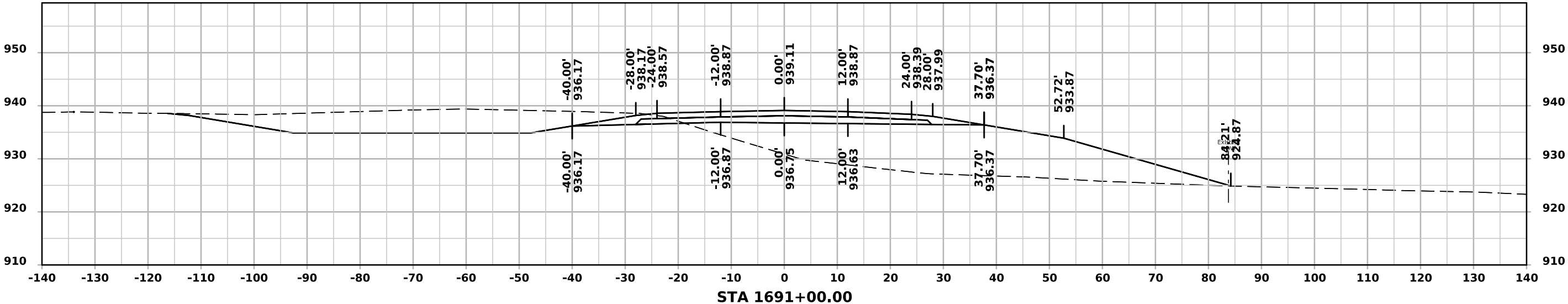
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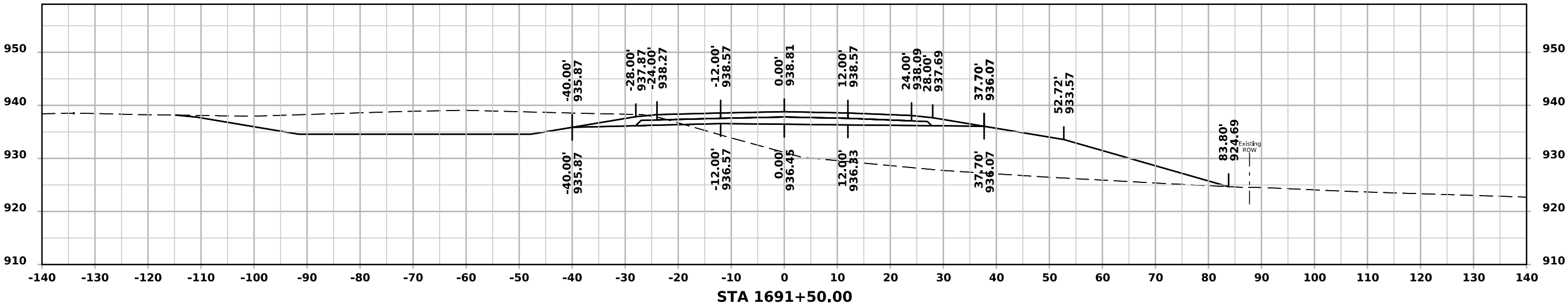
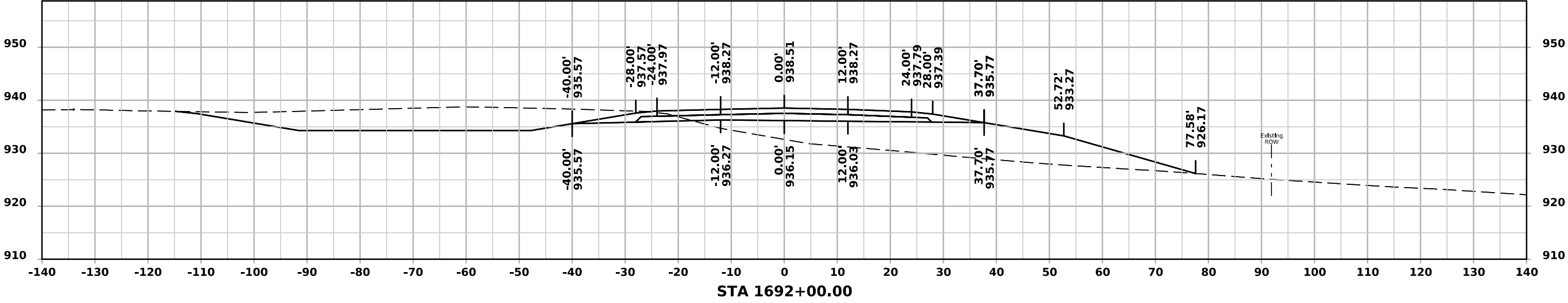
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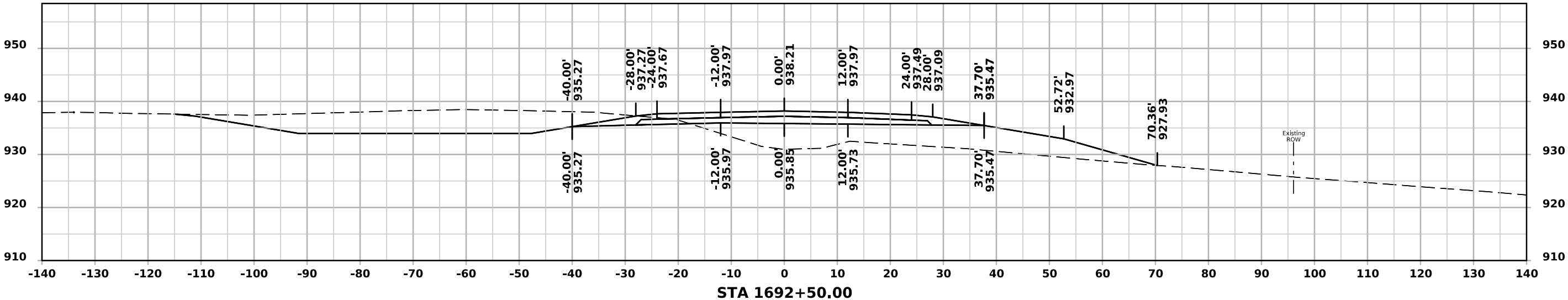
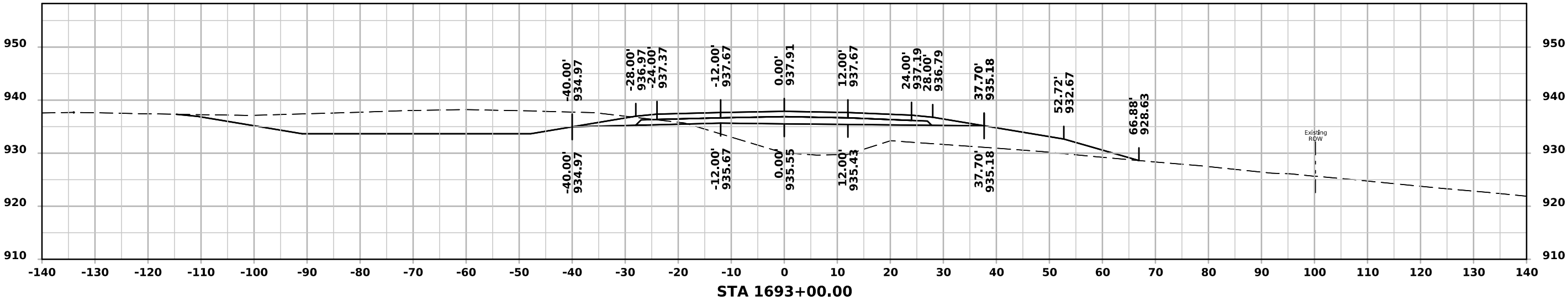
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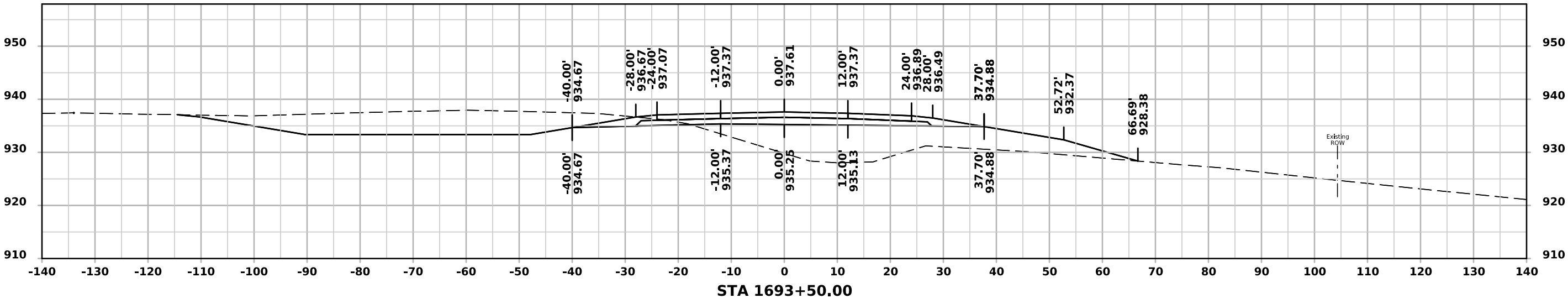
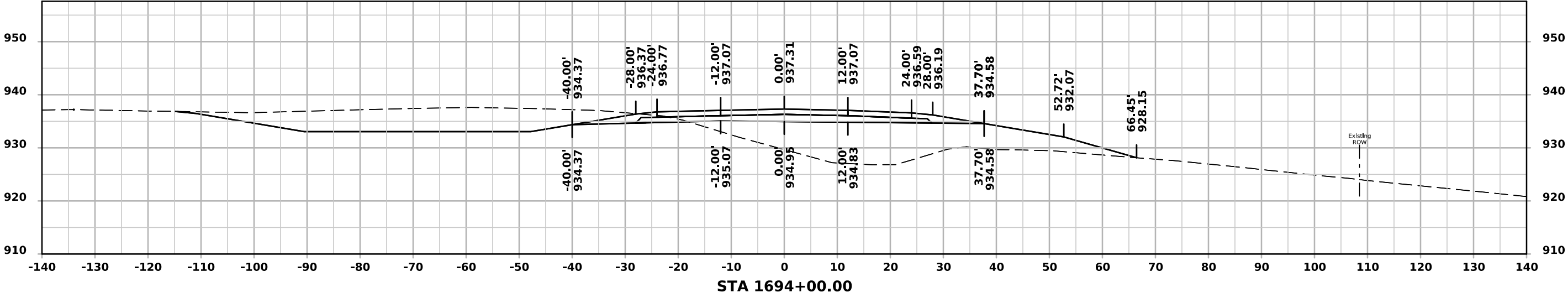
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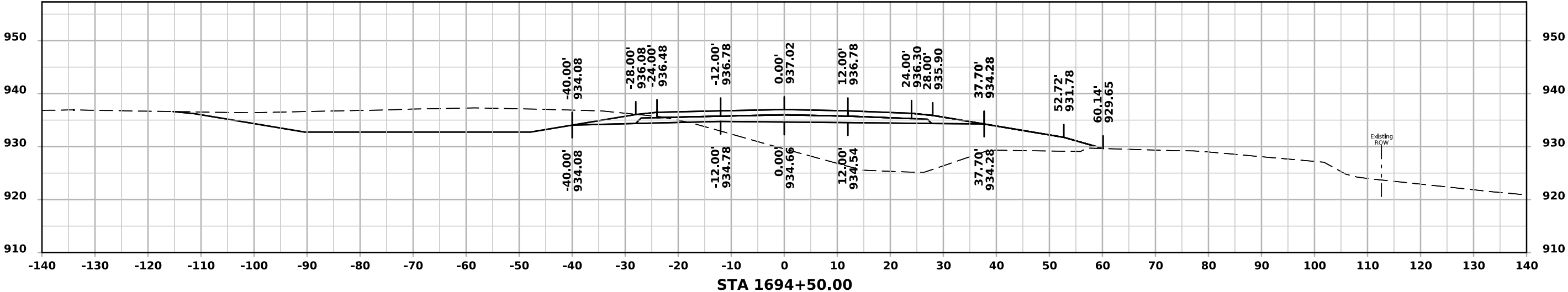
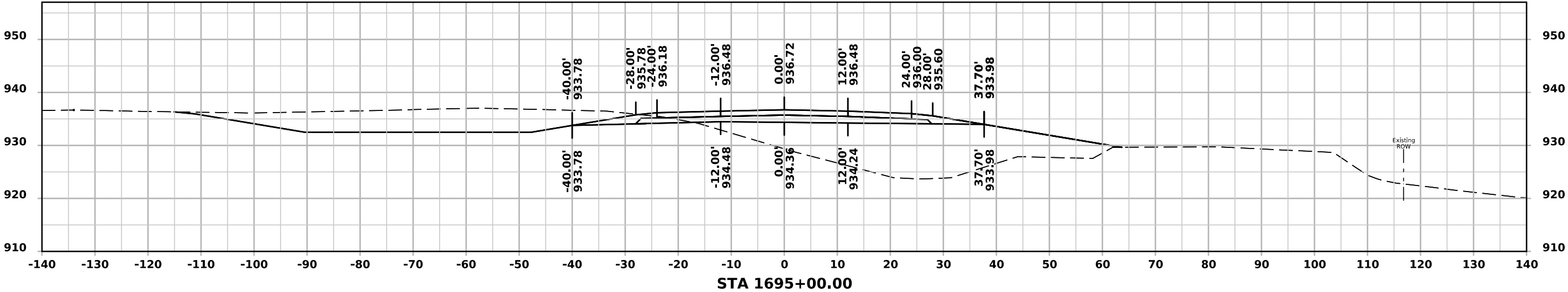
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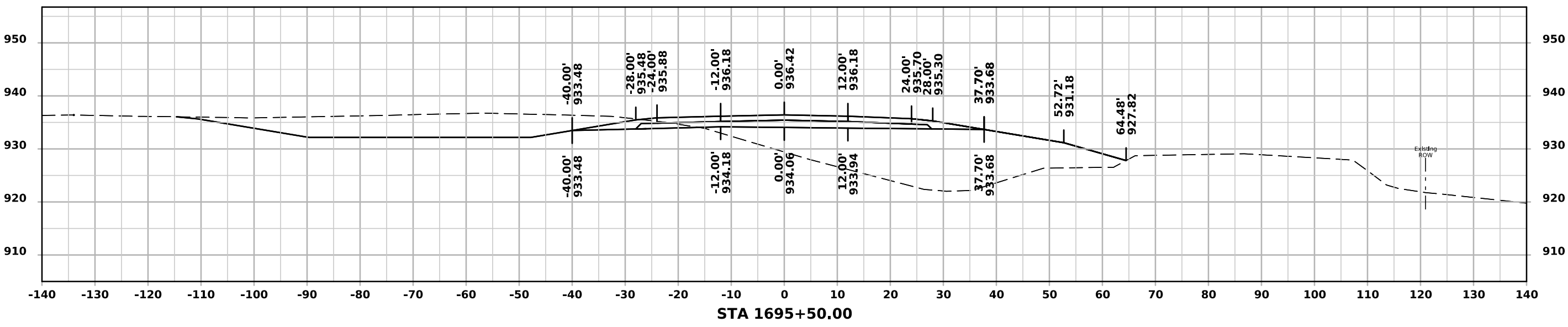
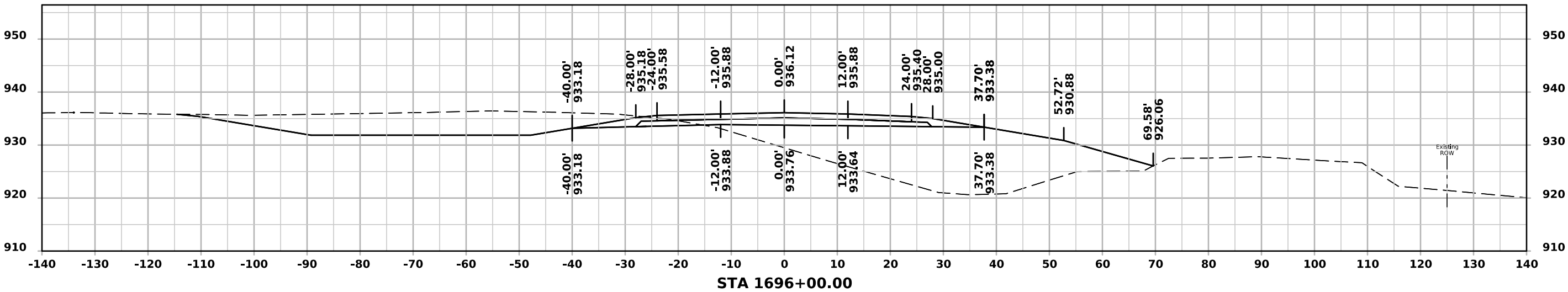
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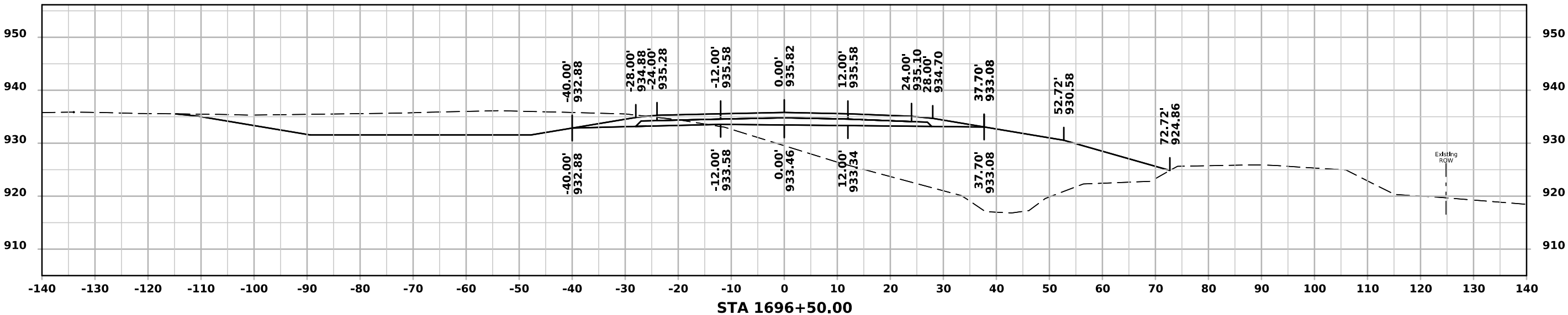
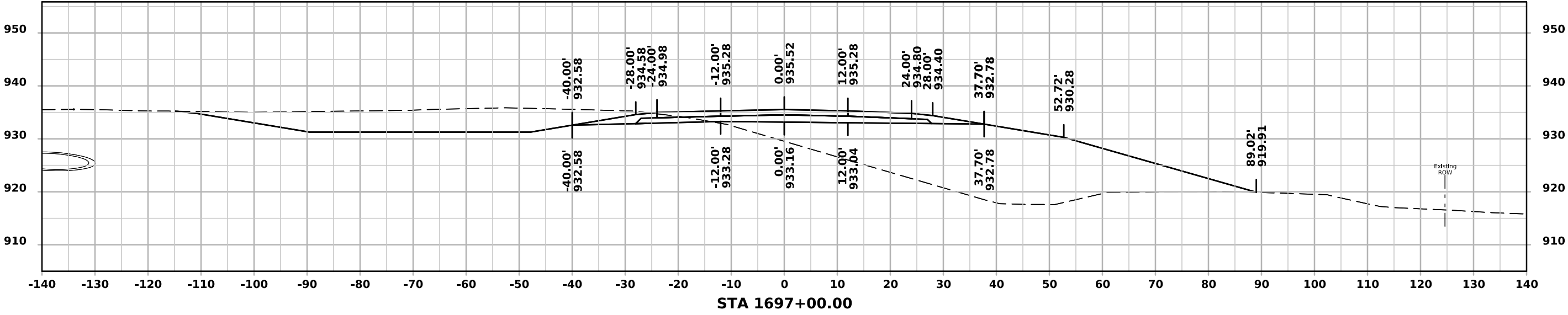
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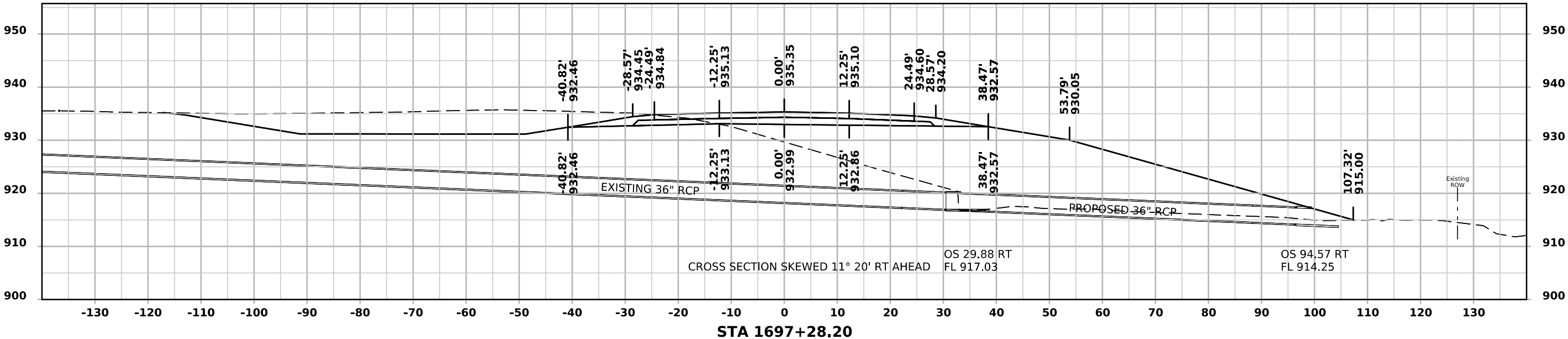
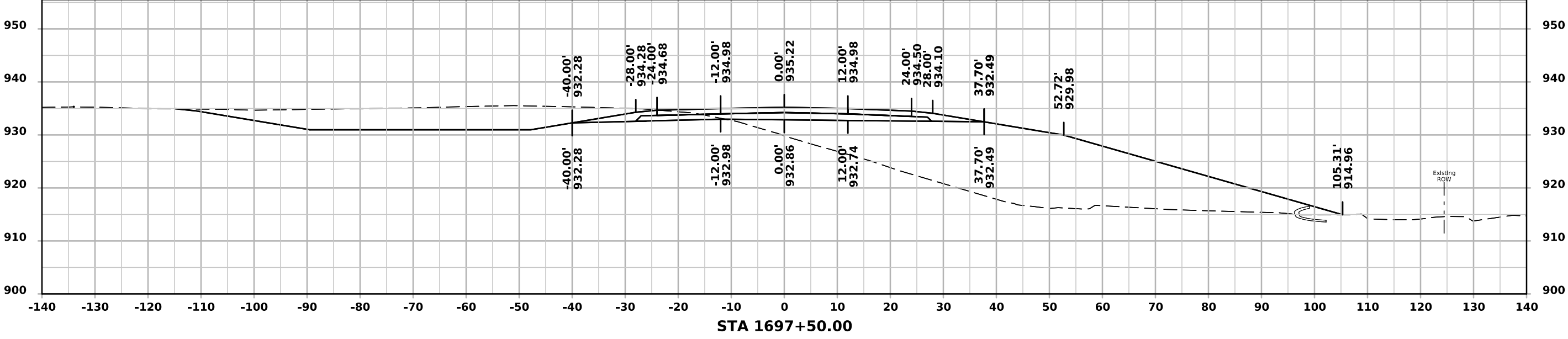
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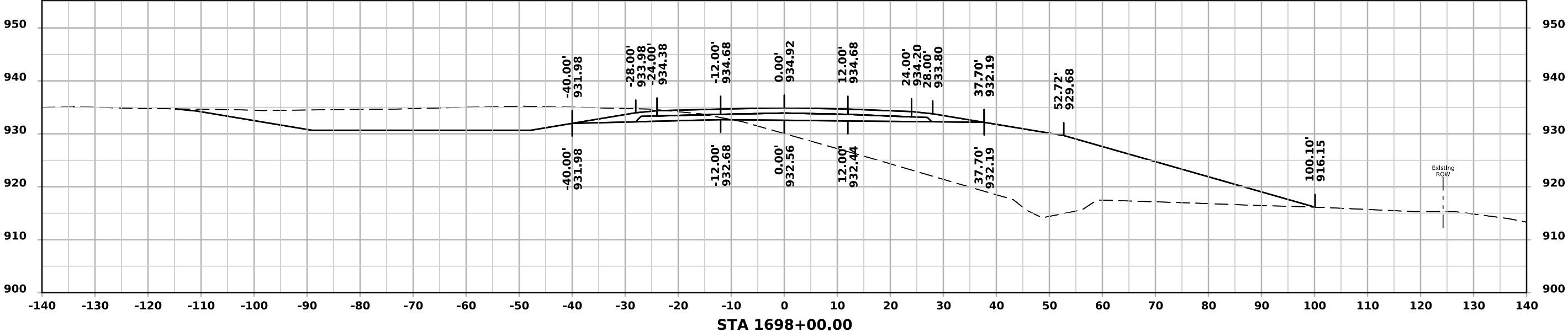
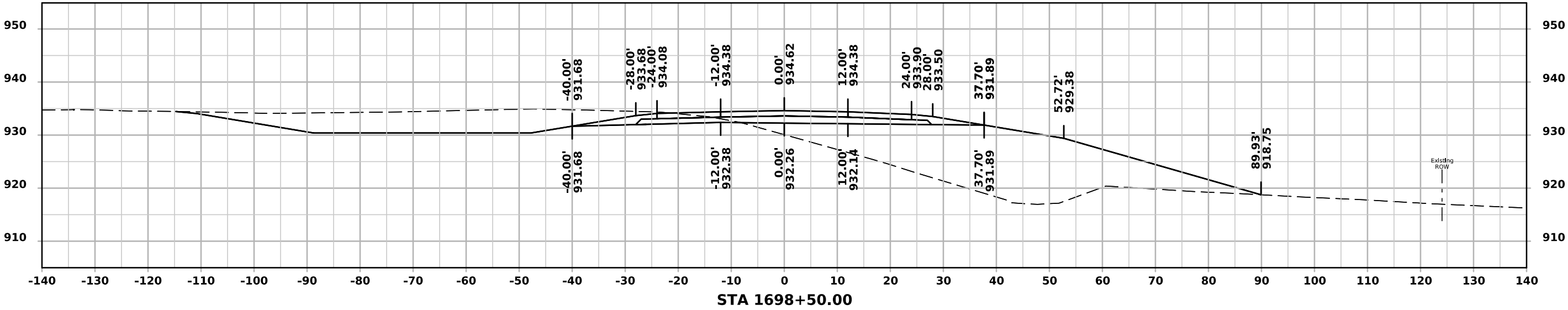
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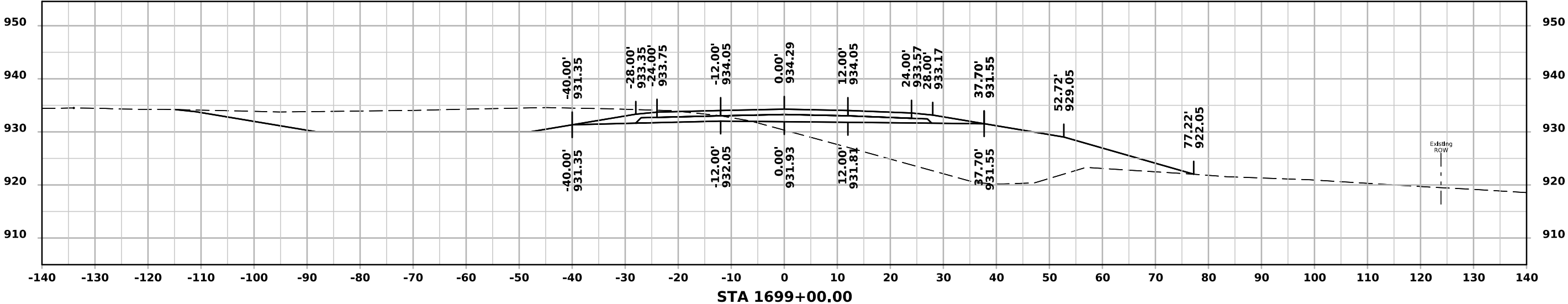
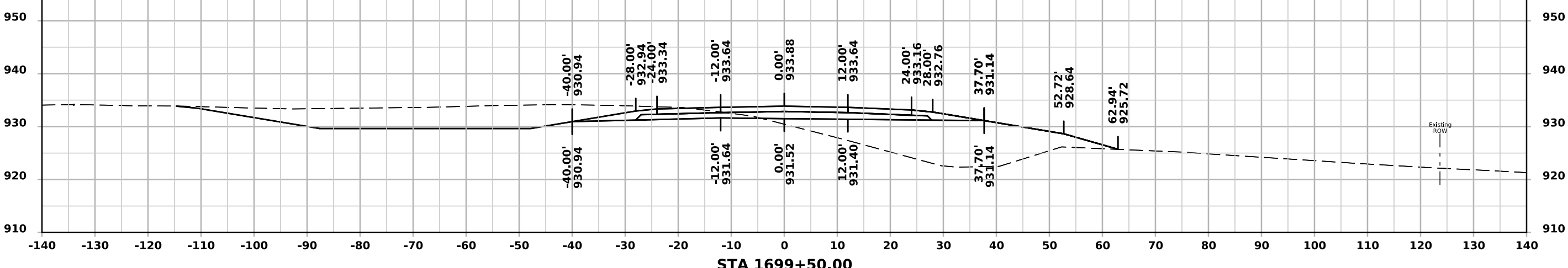
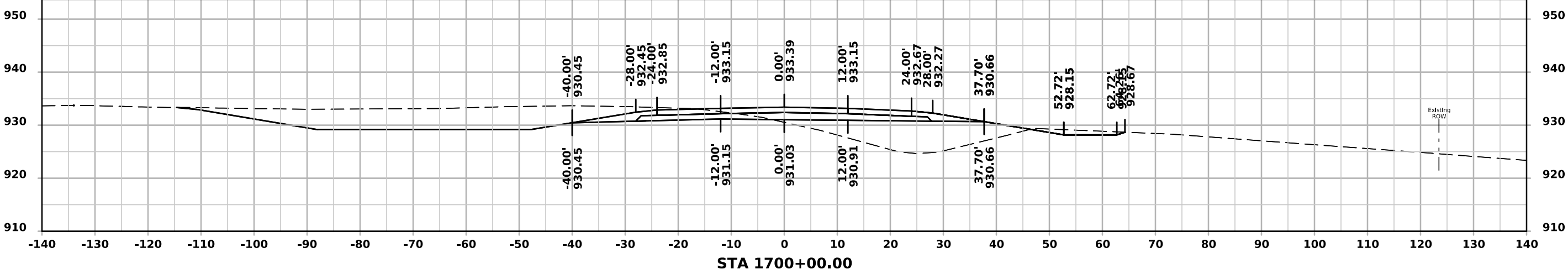
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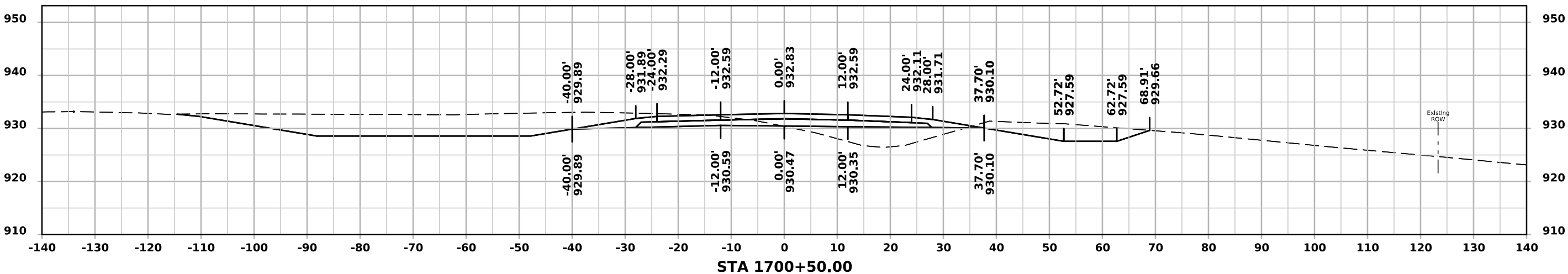
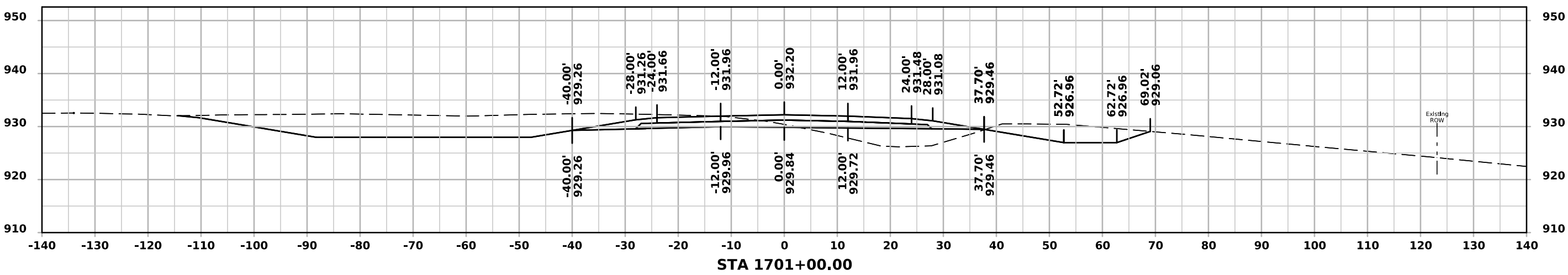
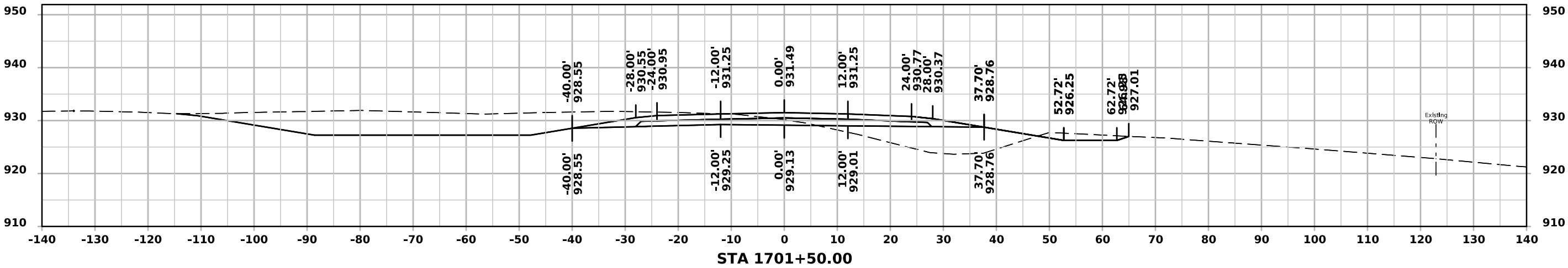
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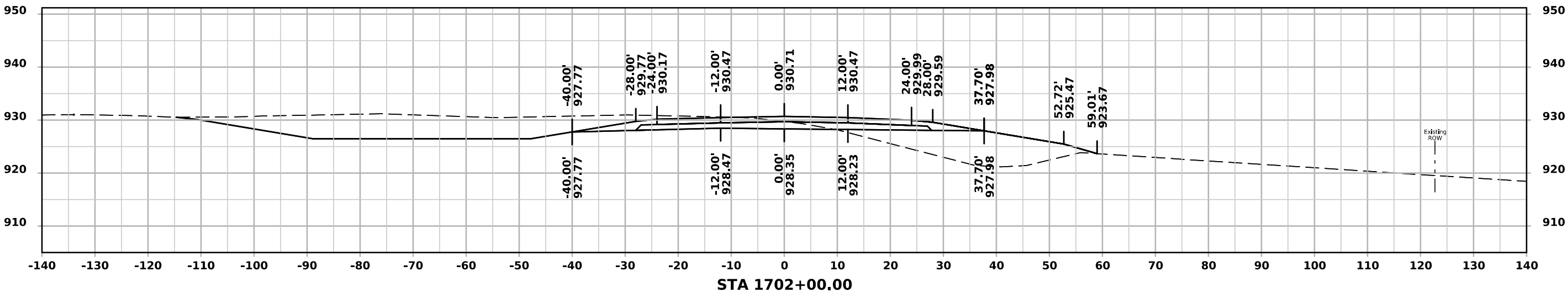
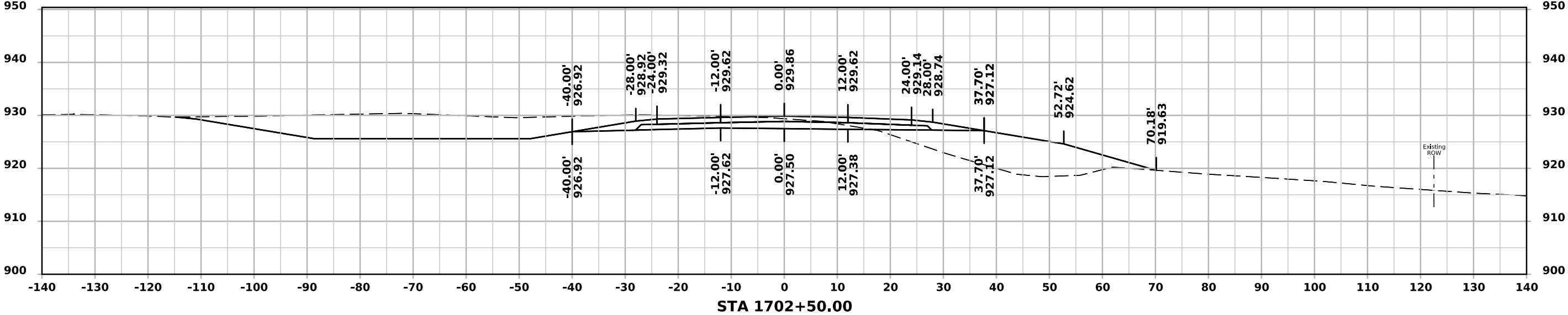
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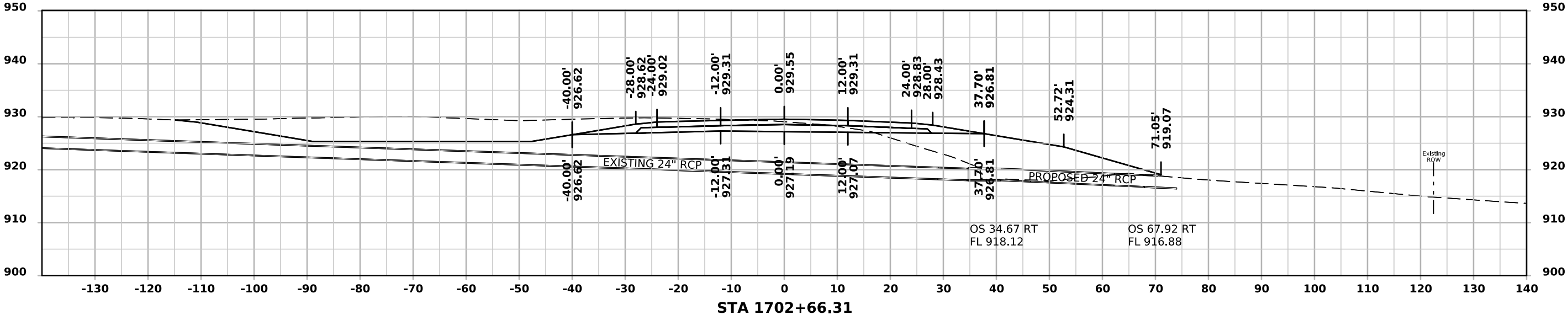
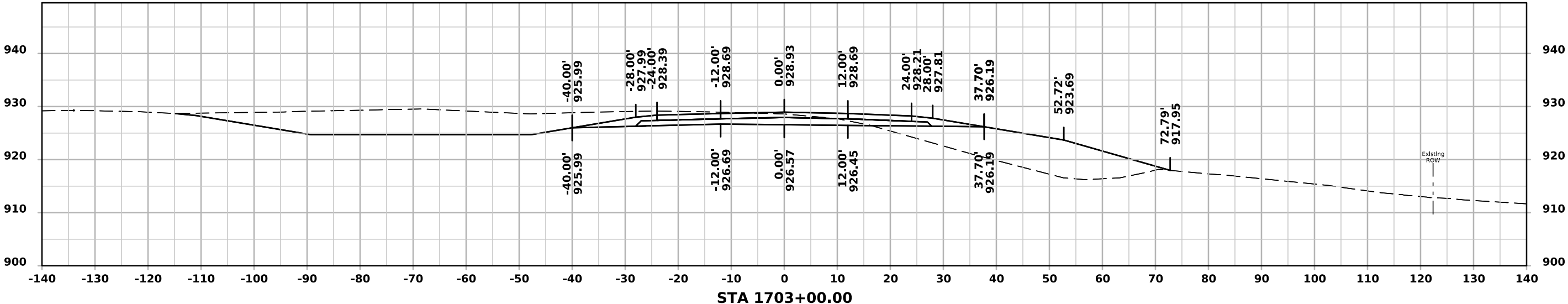
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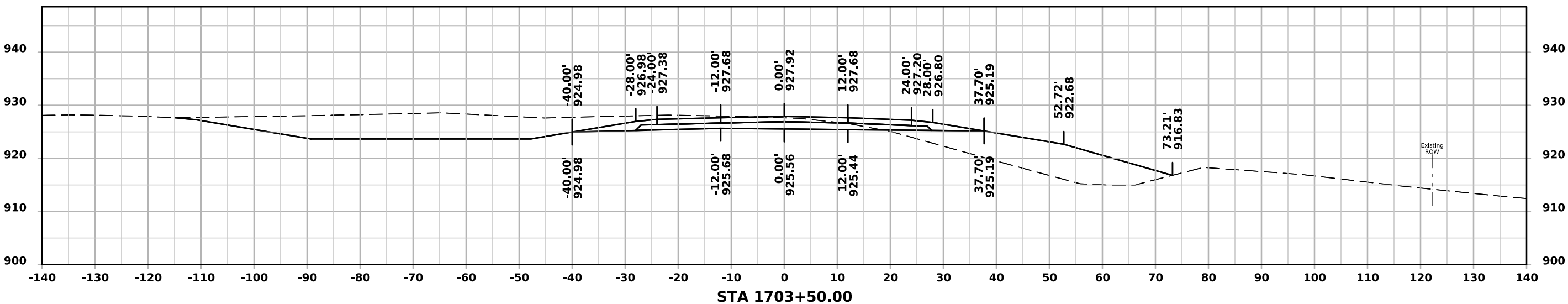
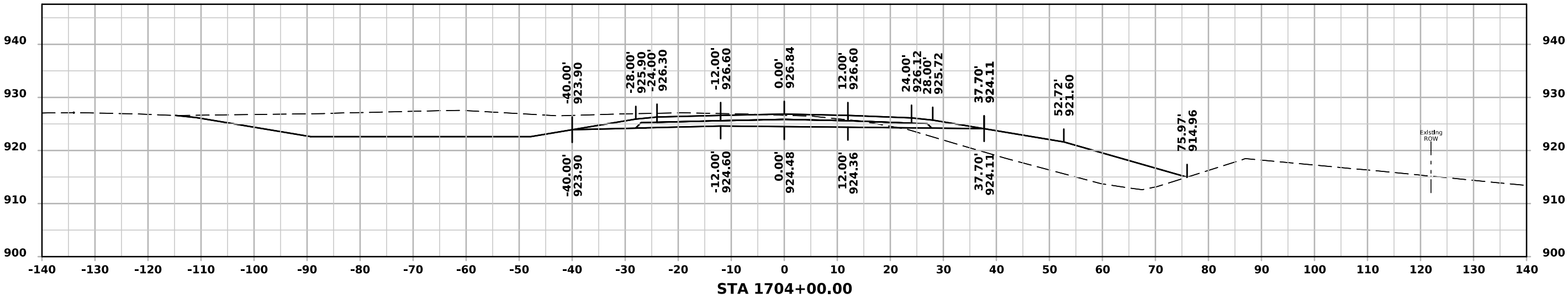
ML - I 80 (EASTBOUND)



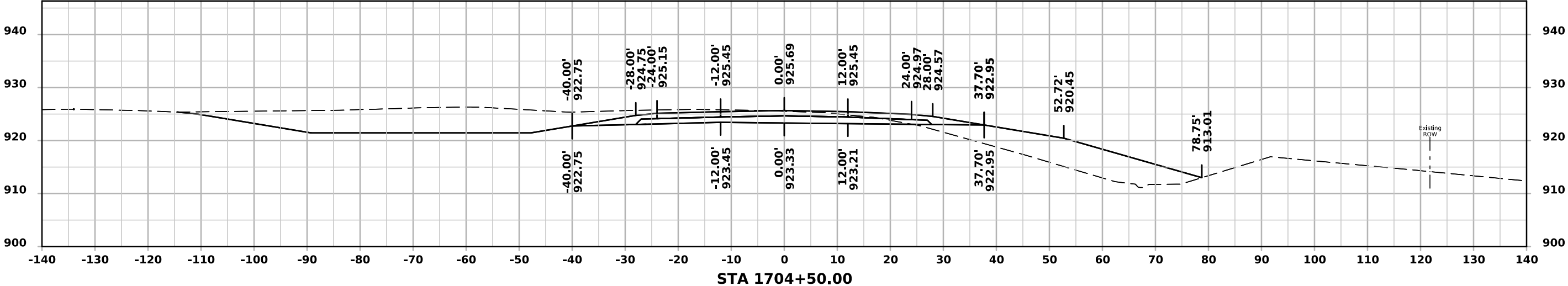
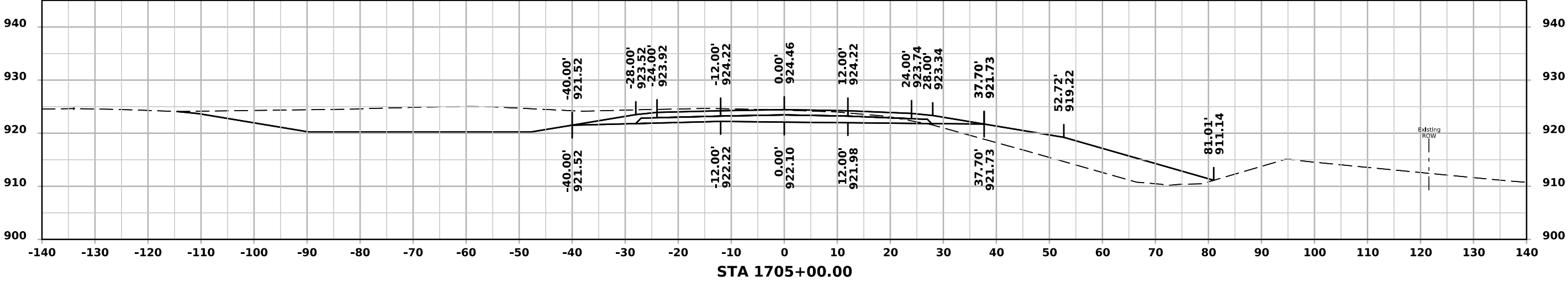
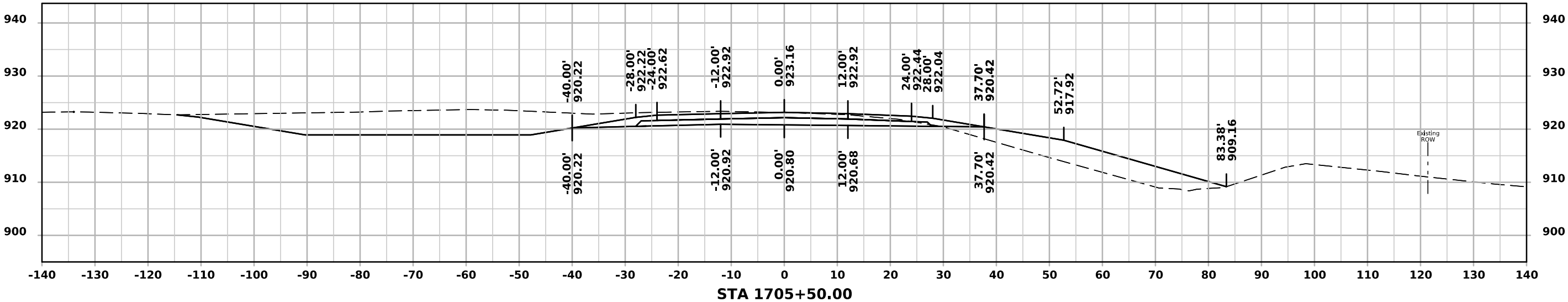
ML - I 80 (EASTBOUND)



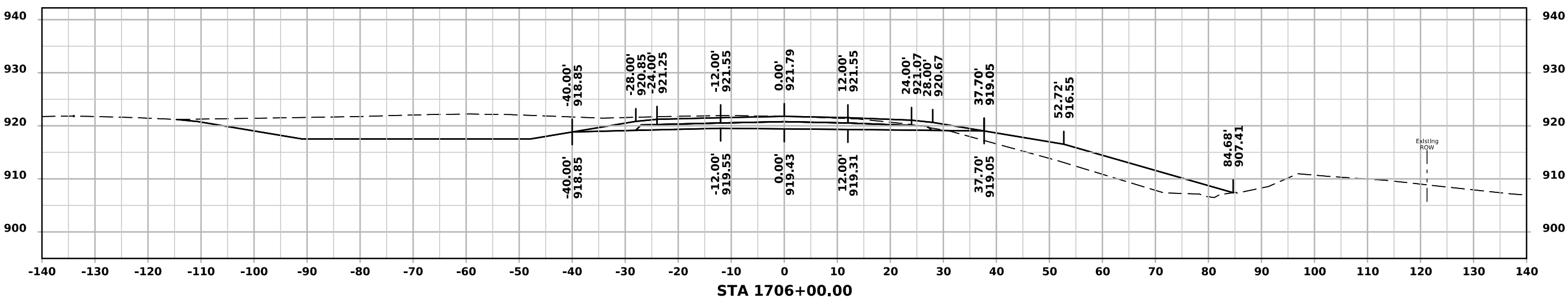
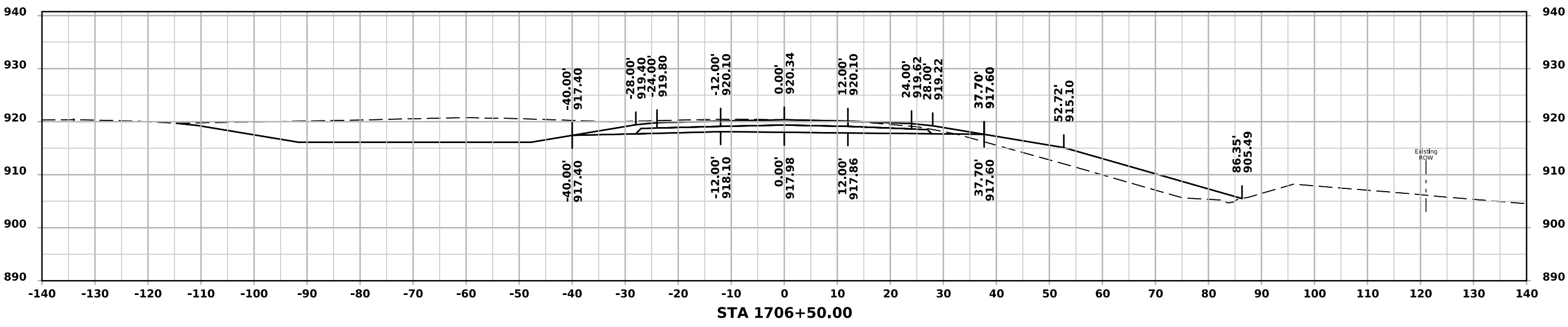
ML - I 80 (EASTBOUND)



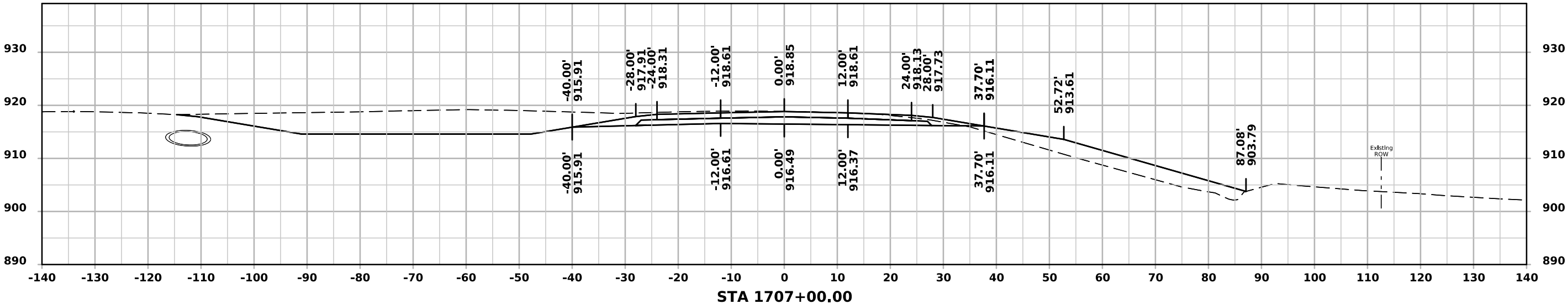
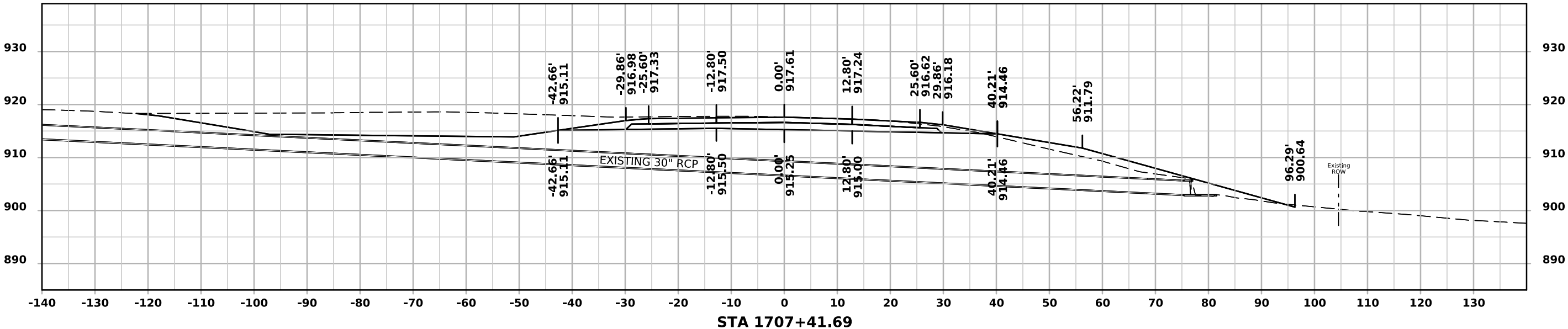
ML - I 80 (EASTBOUND)



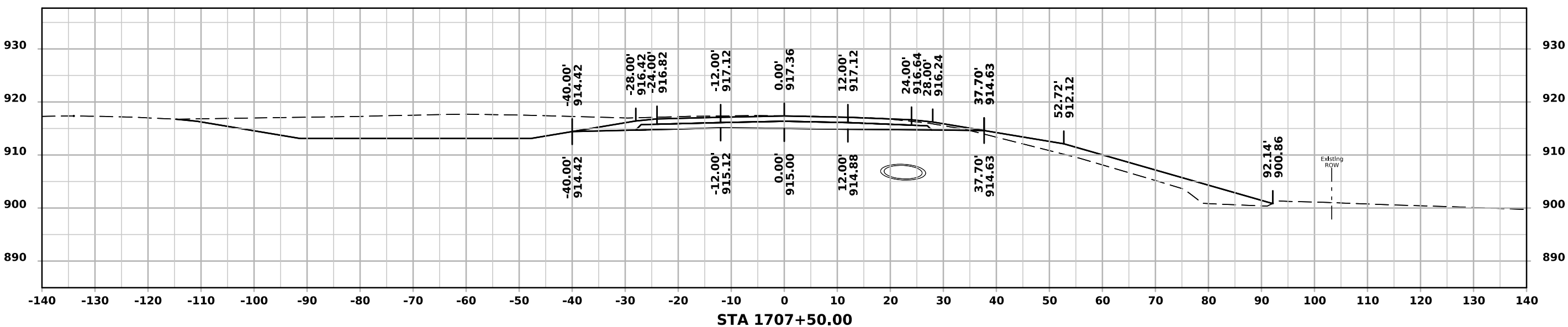
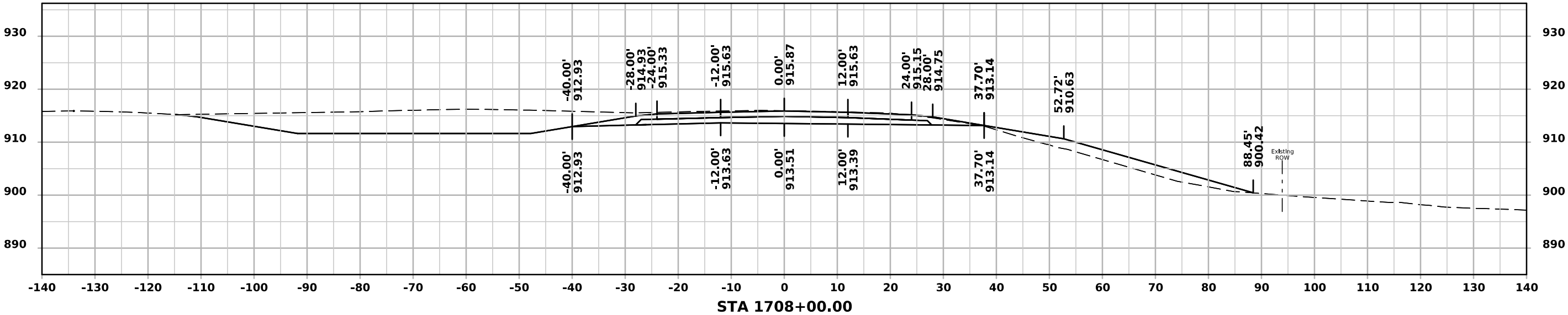
ML - I 80 (EASTBOUND)



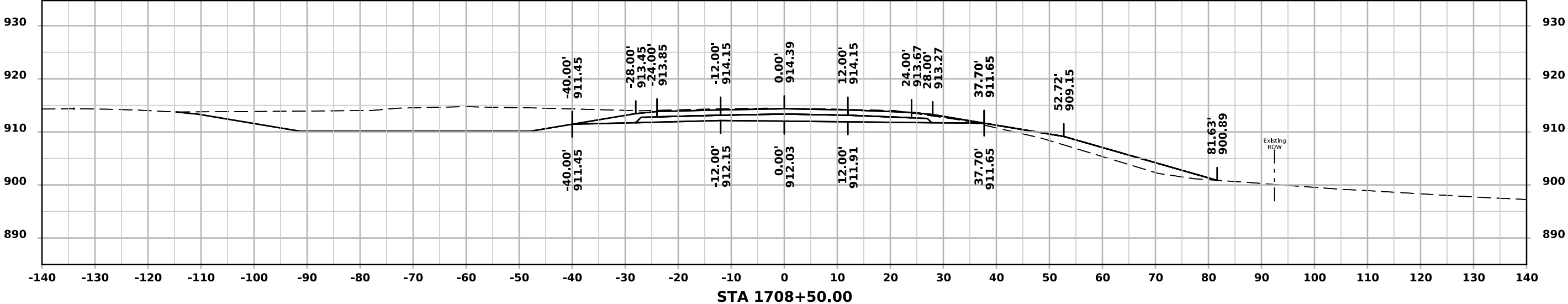
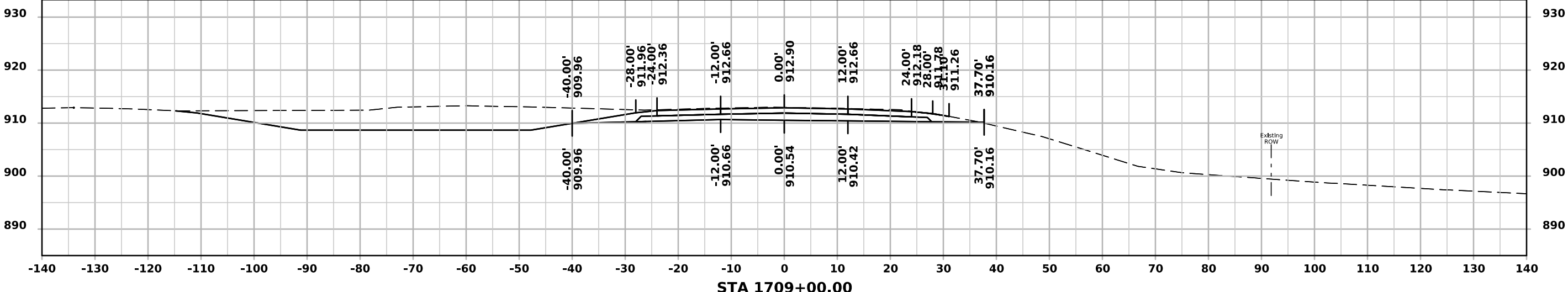
ML - I 80 (EASTBOUND)



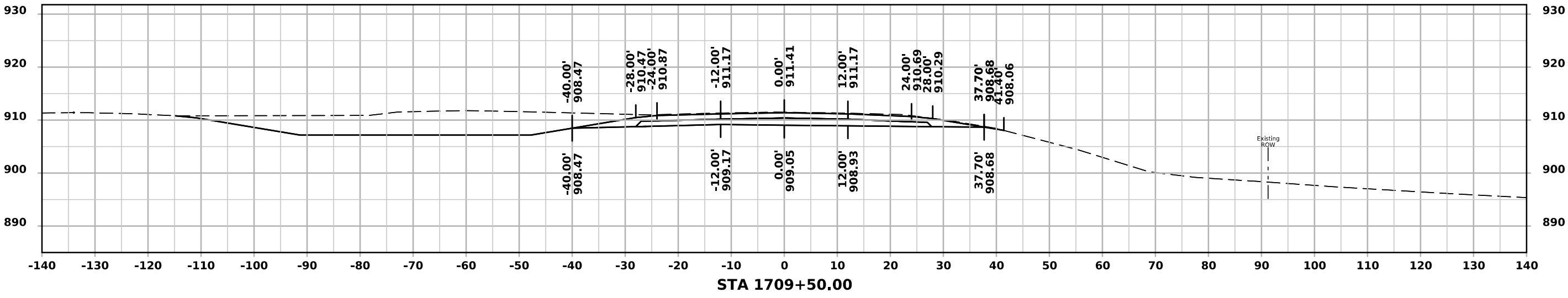
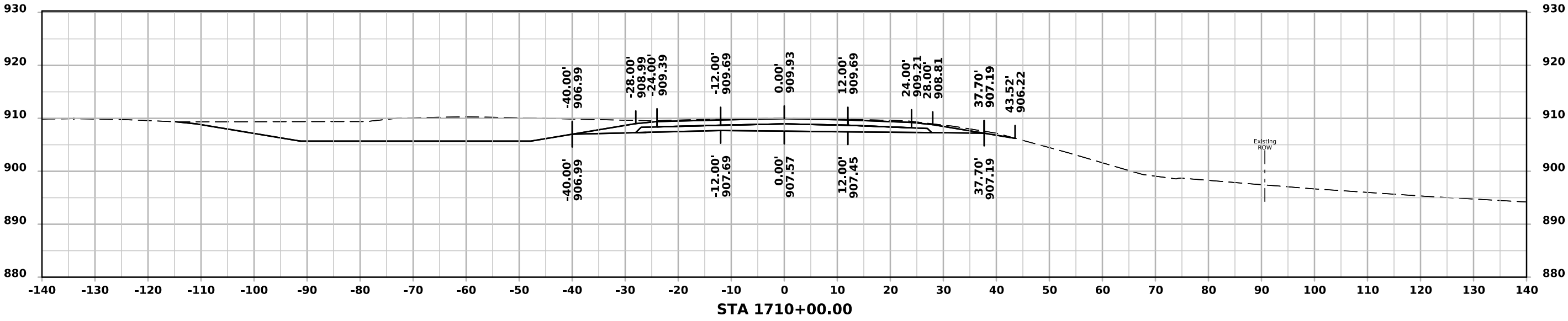
ML - I 80 (EASTBOUND)



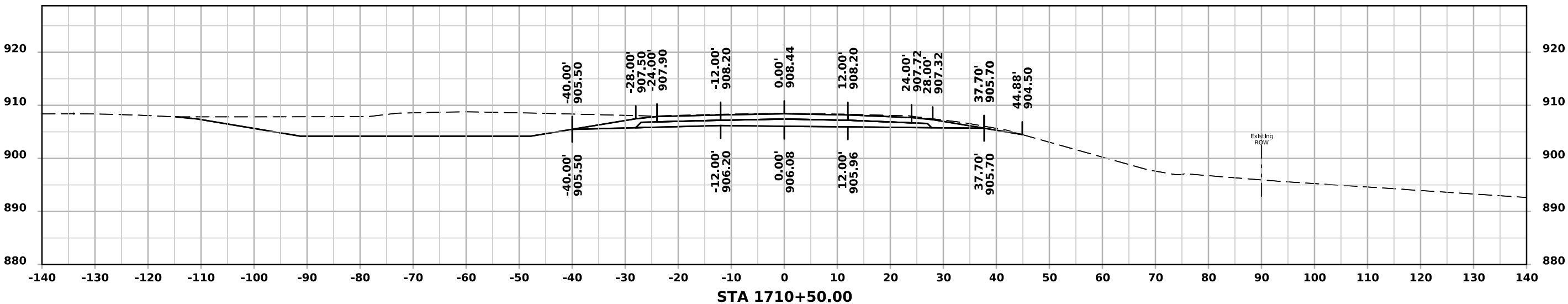
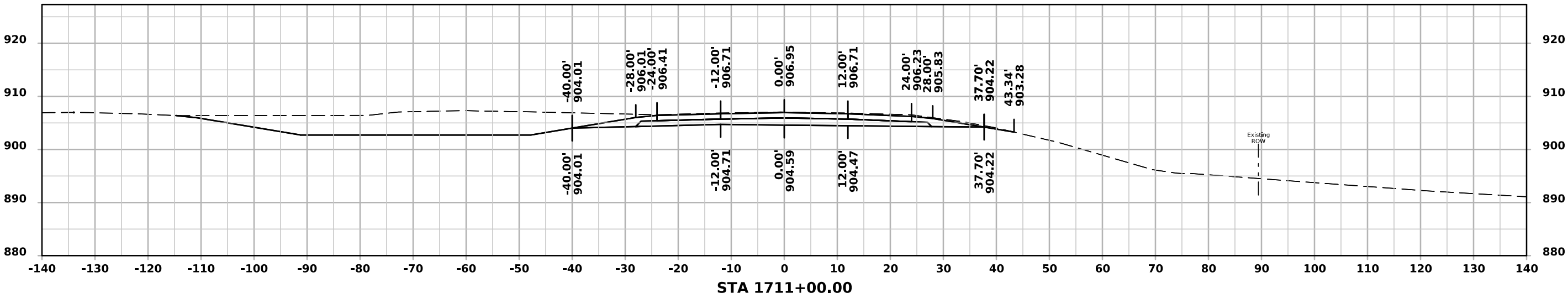
ML - I 80 (EASTBOUND)



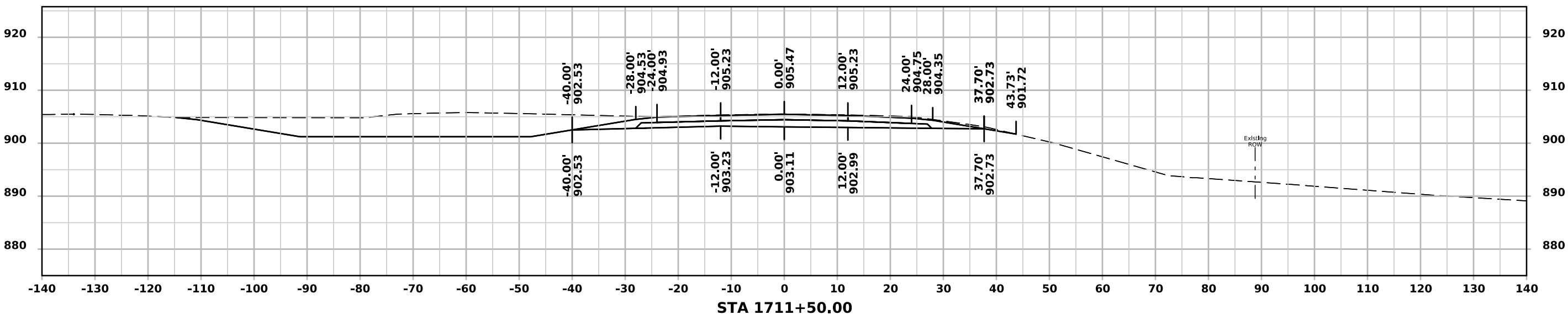
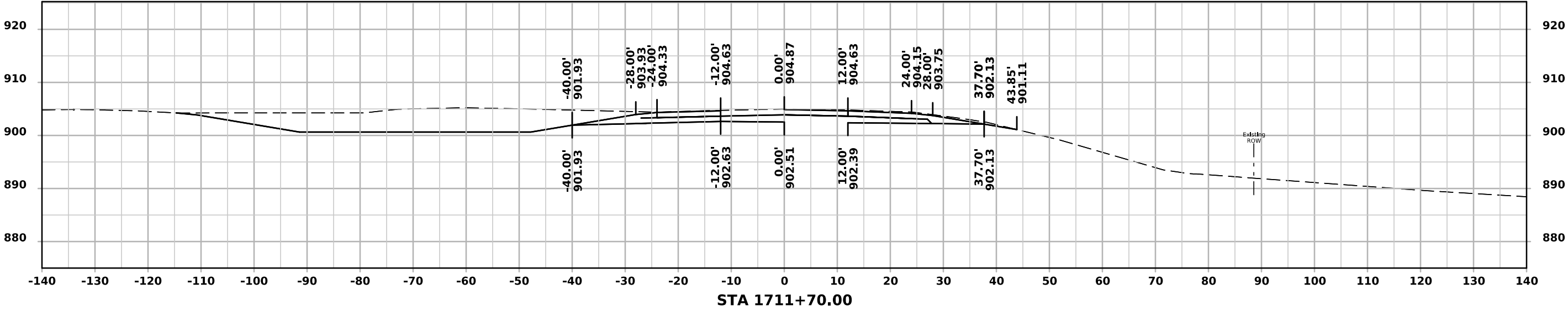
ML - I 80 (EASTBOUND)



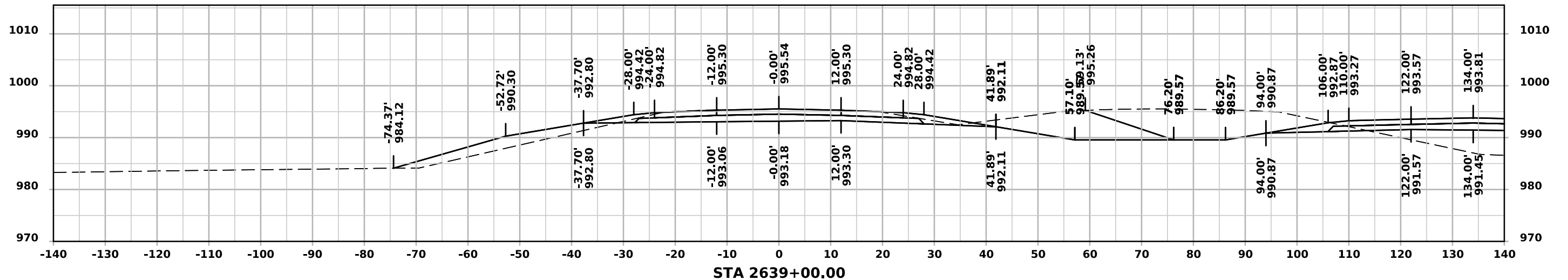
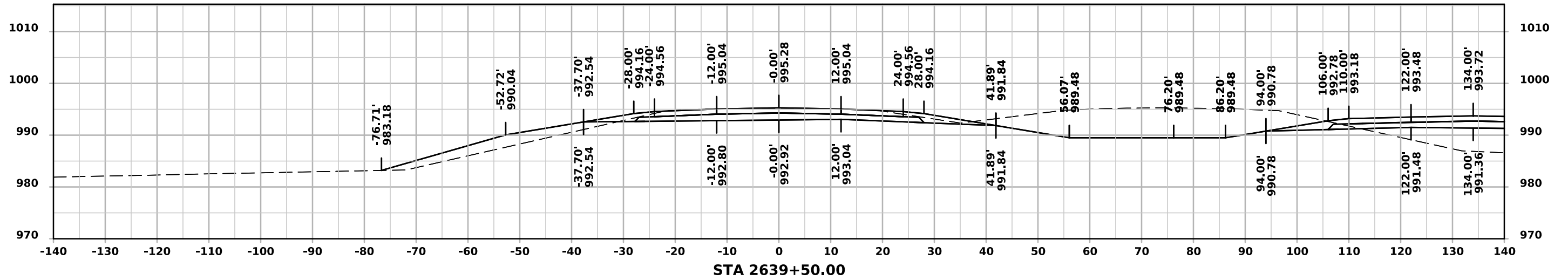
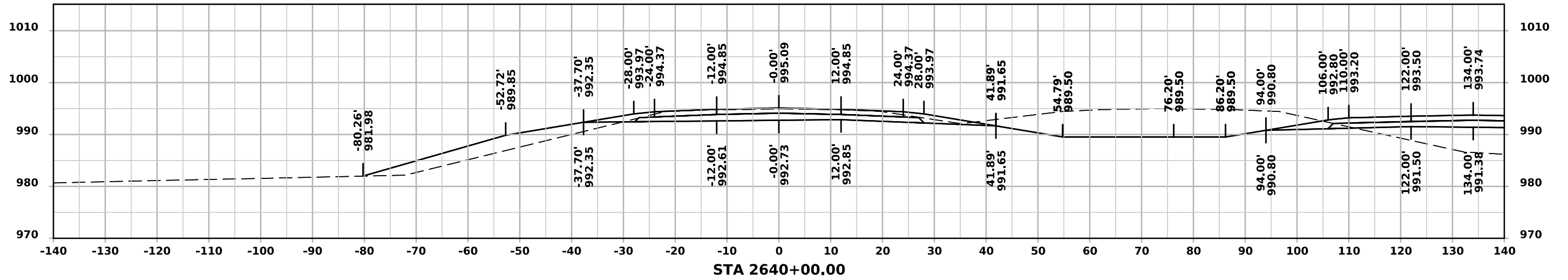
ML - I 80 (EASTBOUND)



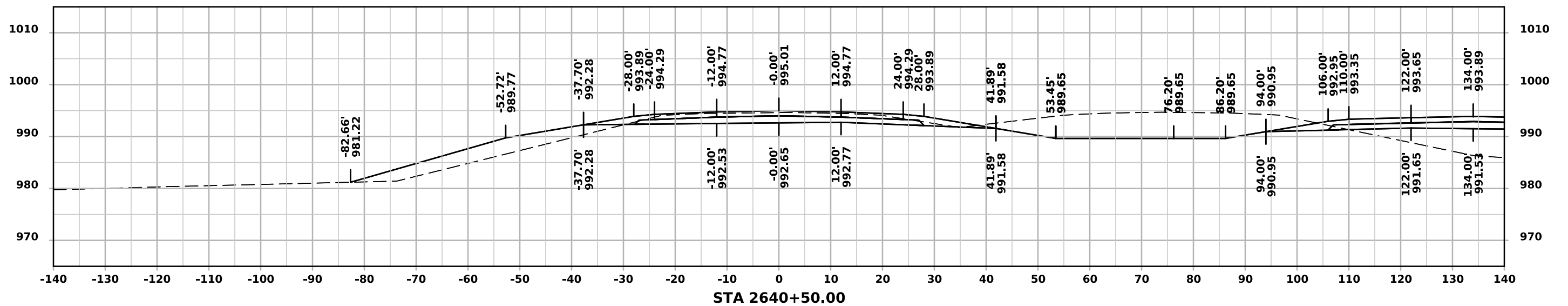
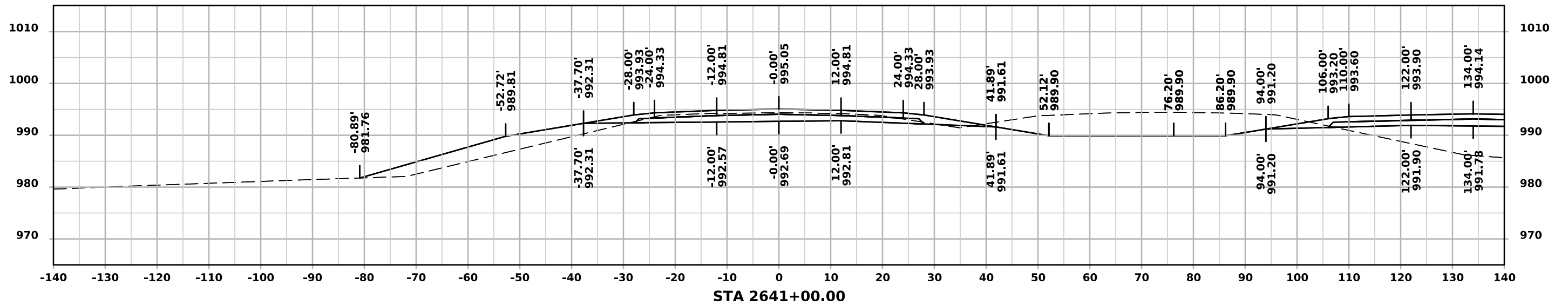
ML - I 80 (EASTBOUND)



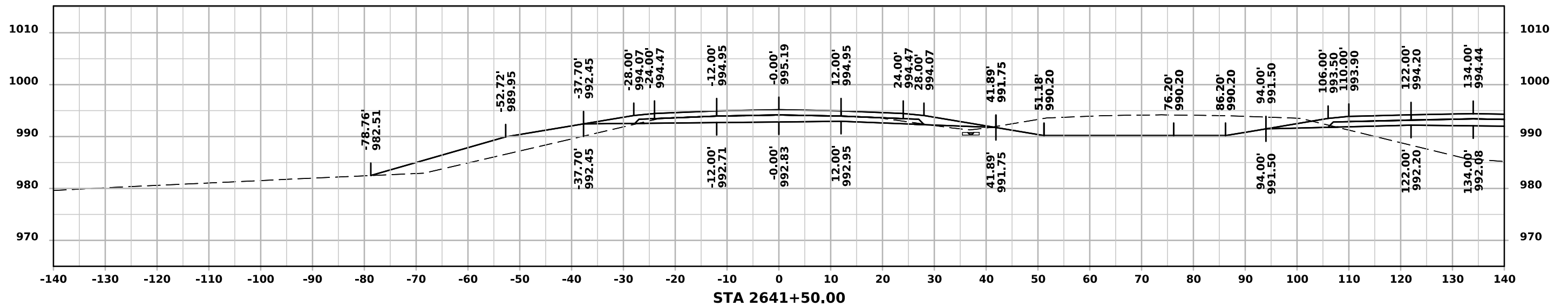
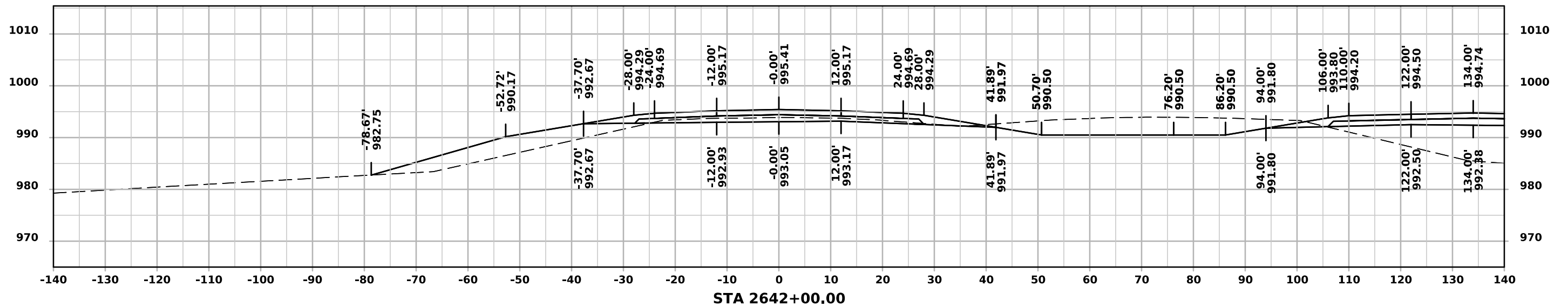
ML - I 80 (WESTBOUND)



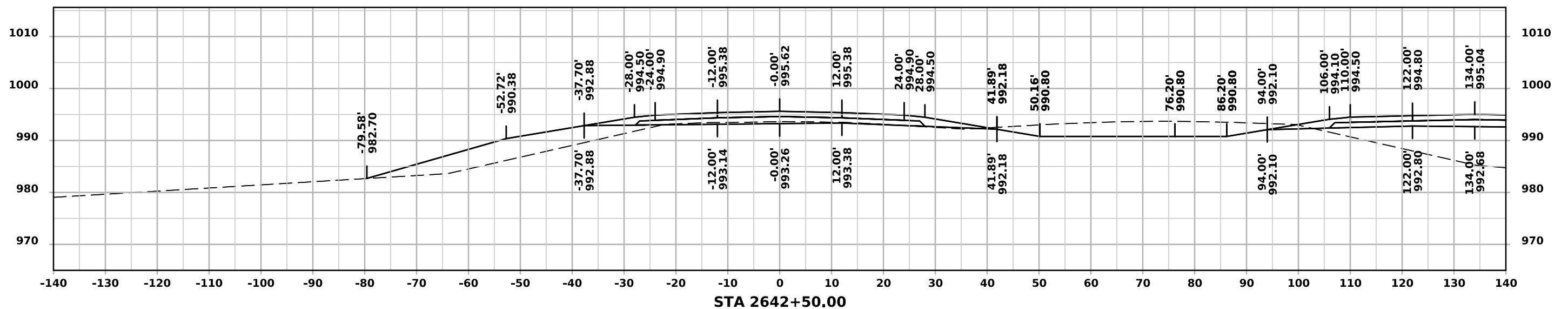
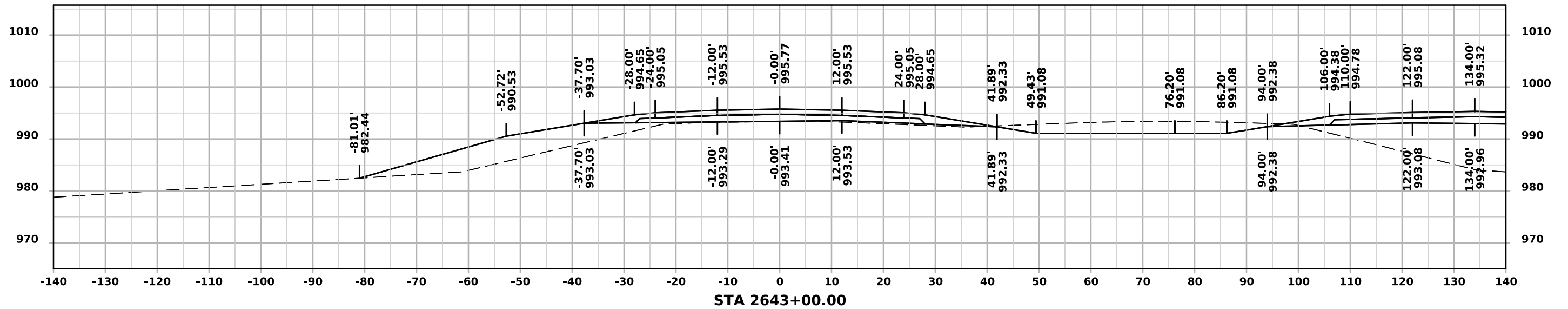
ML - I 80 (WESTBOUND)



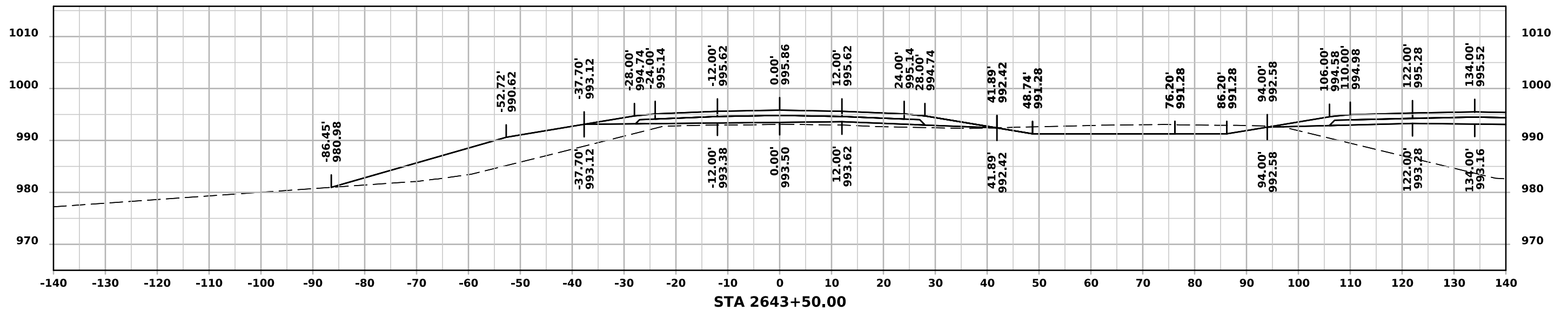
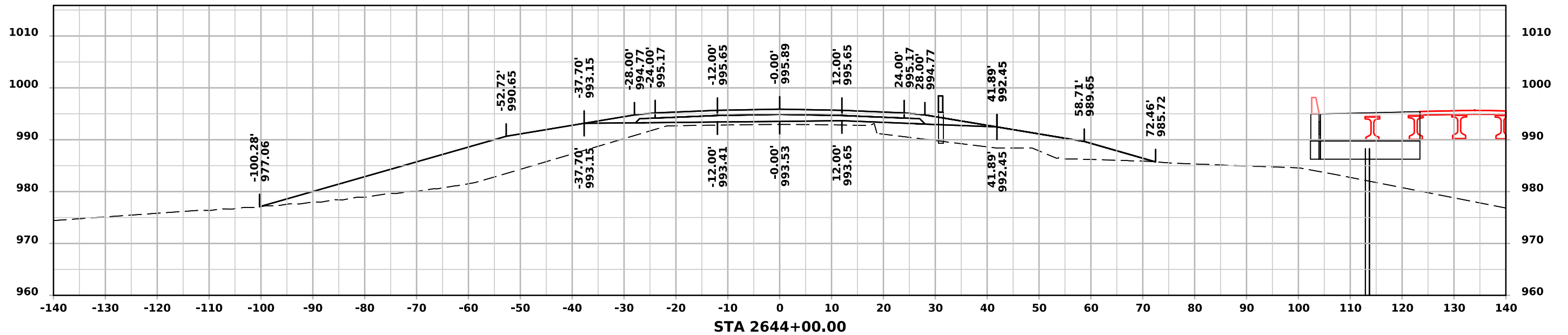
ML - I 80 (WESTBOUND)



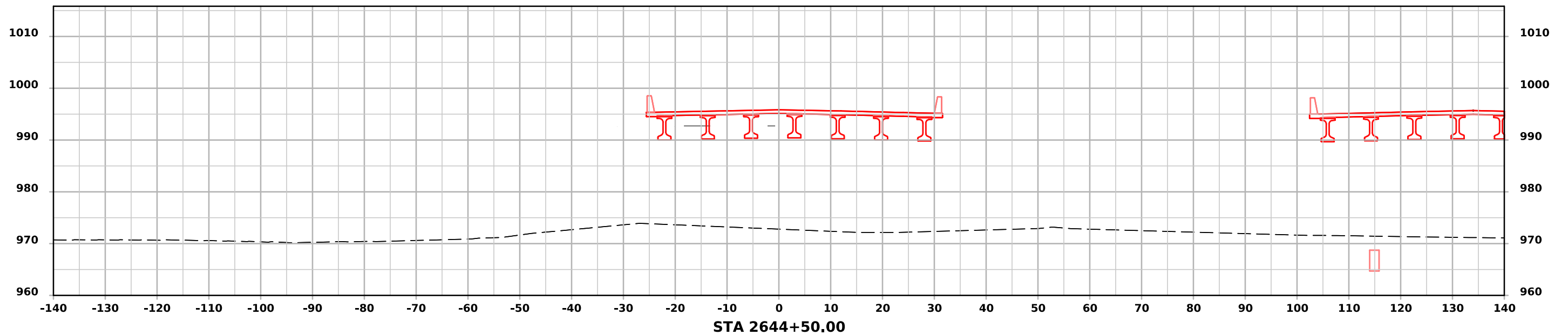
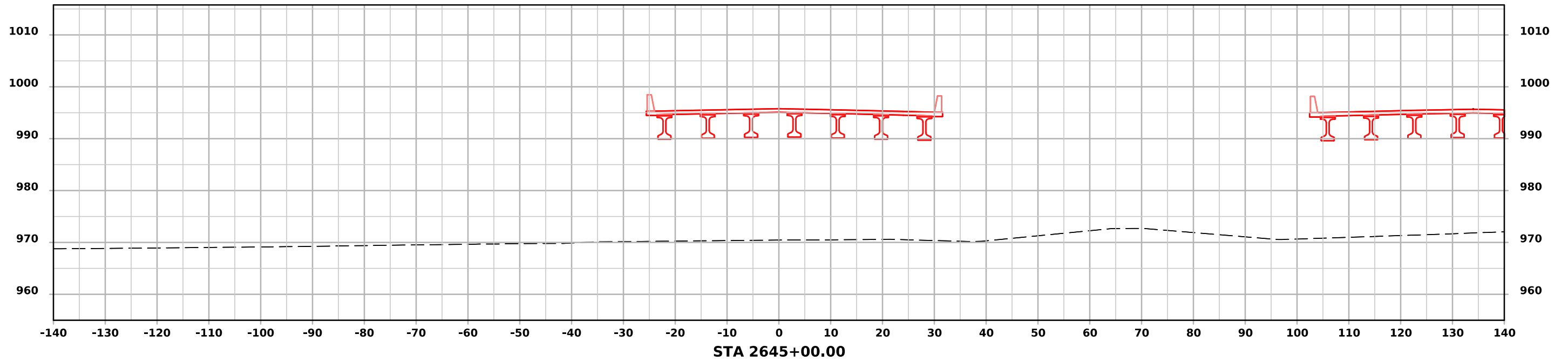
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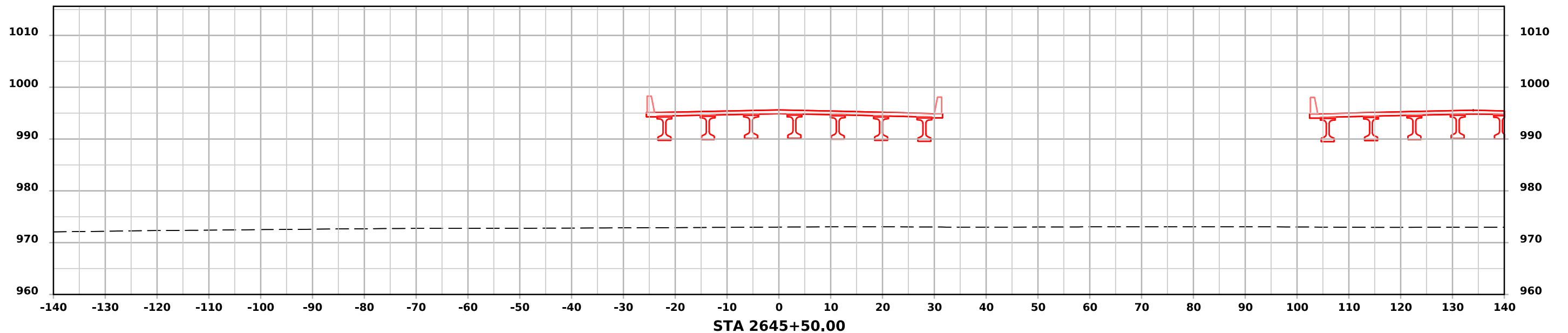
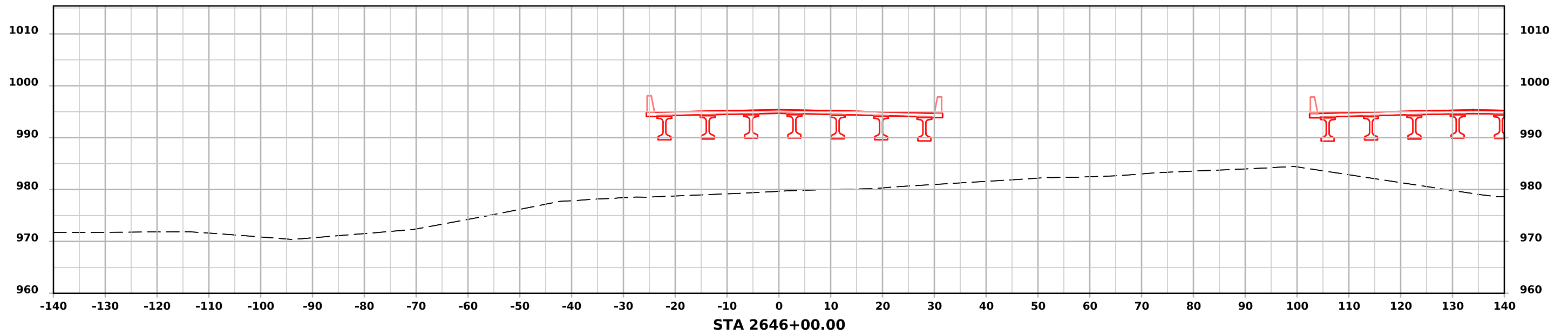
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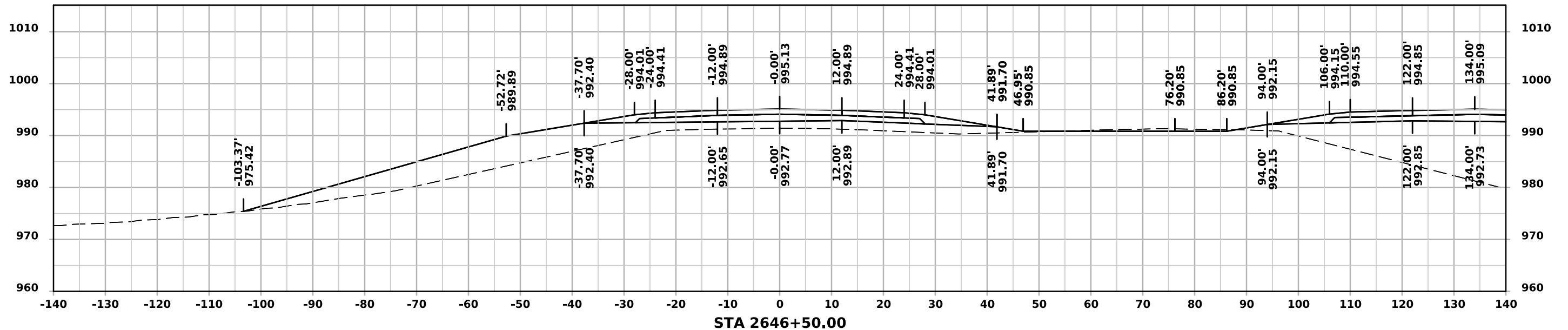
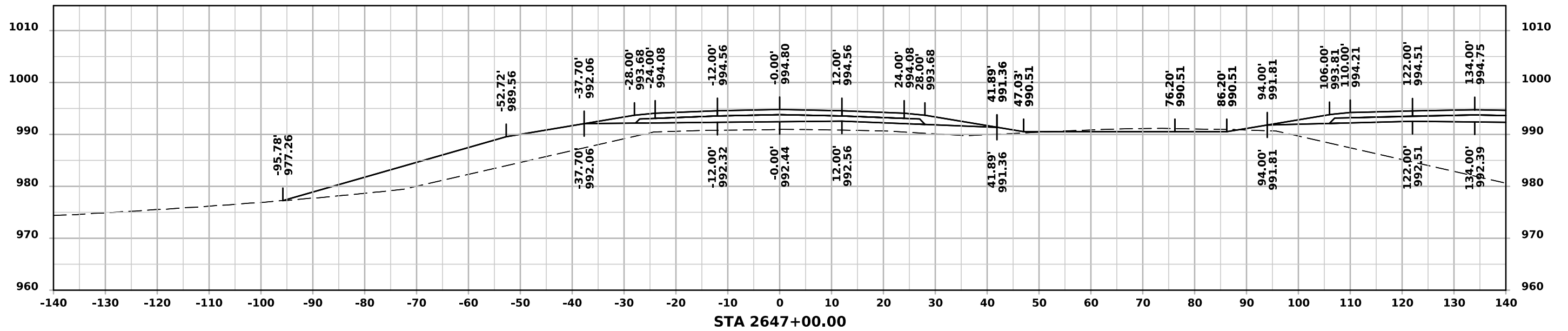
ML - I 80 (WESTBOUND)



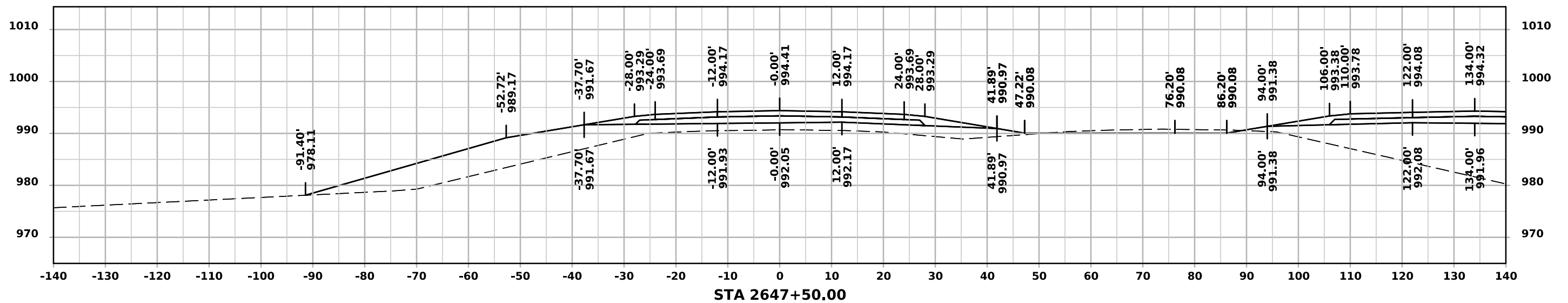
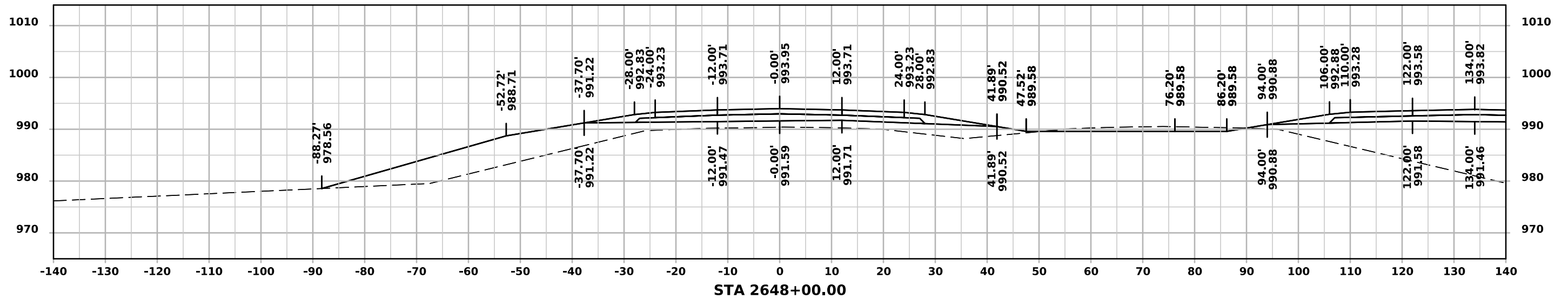
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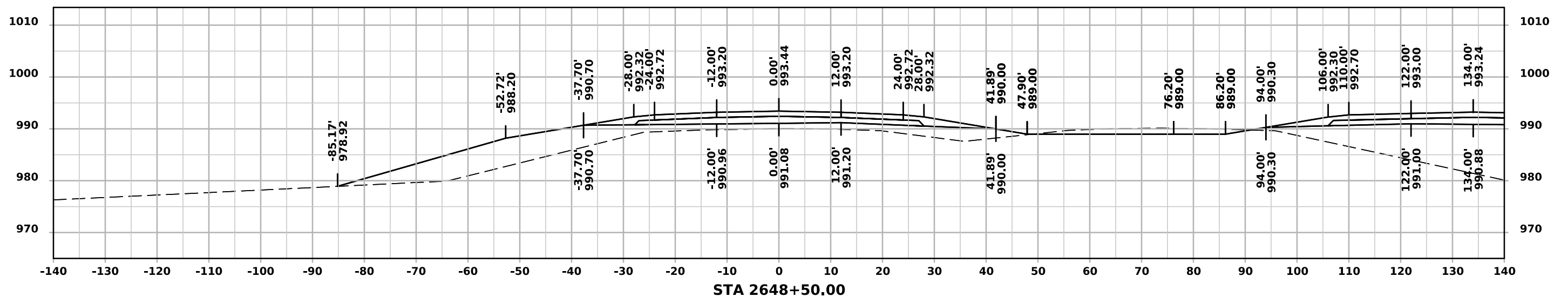
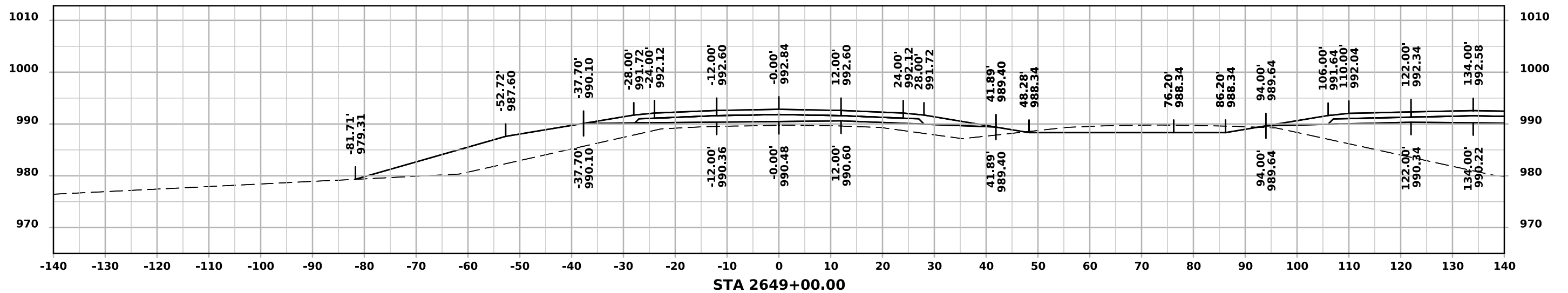
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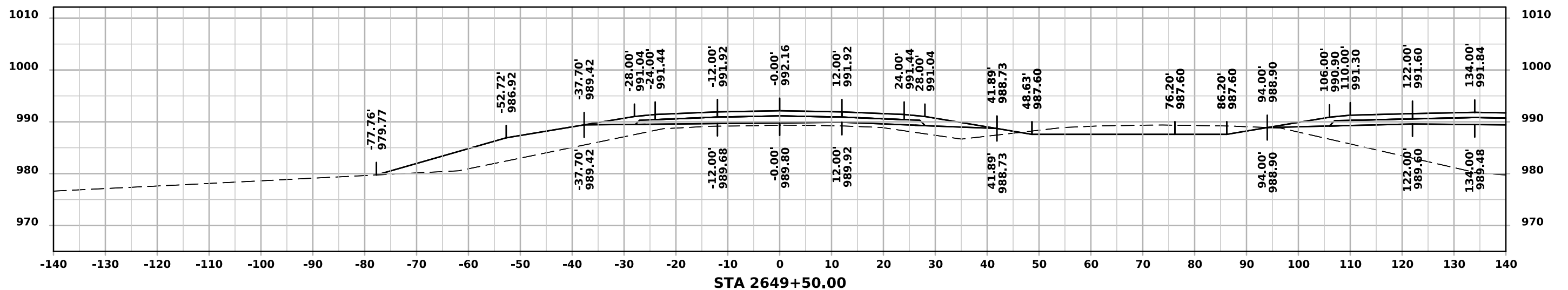
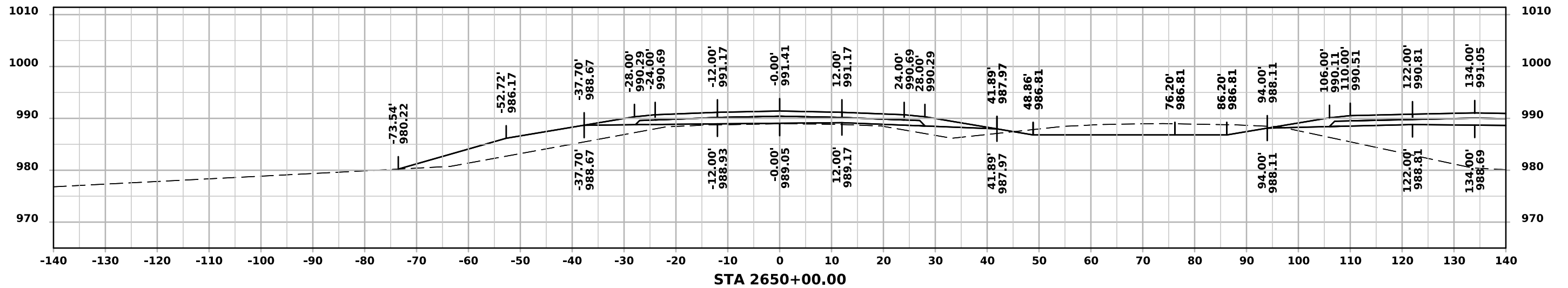
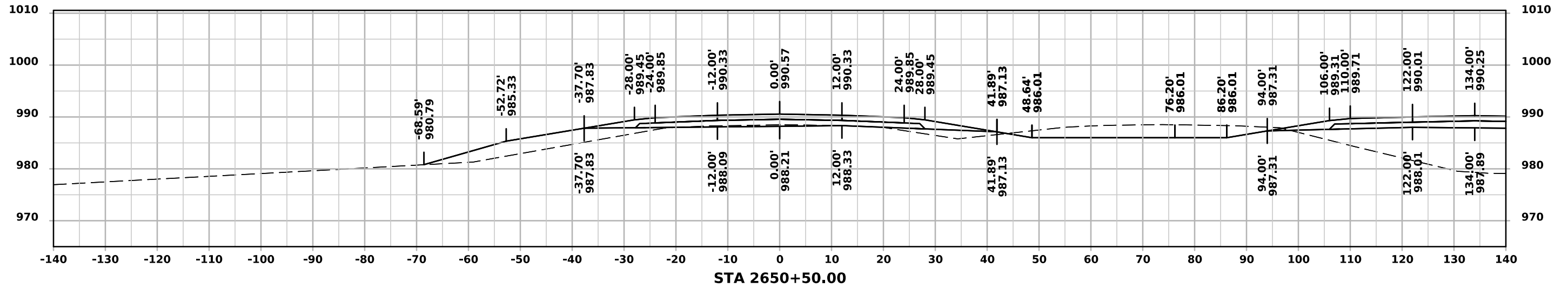
ML - I 80 (WESTBOUND)



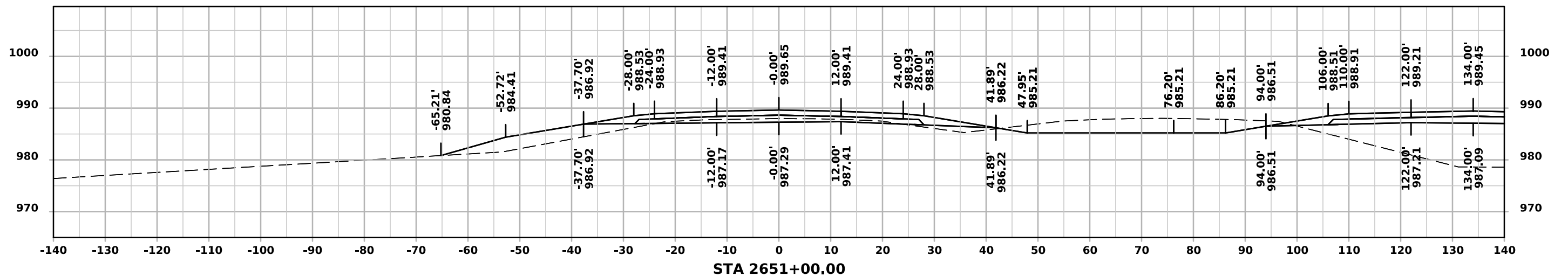
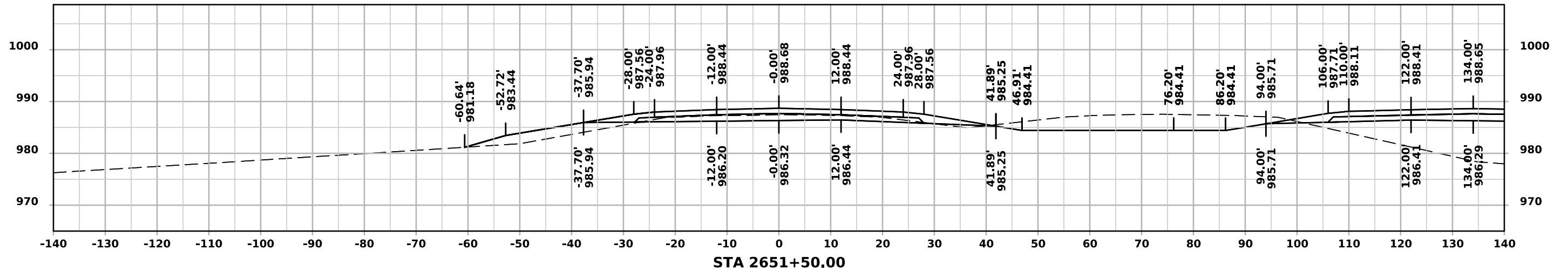
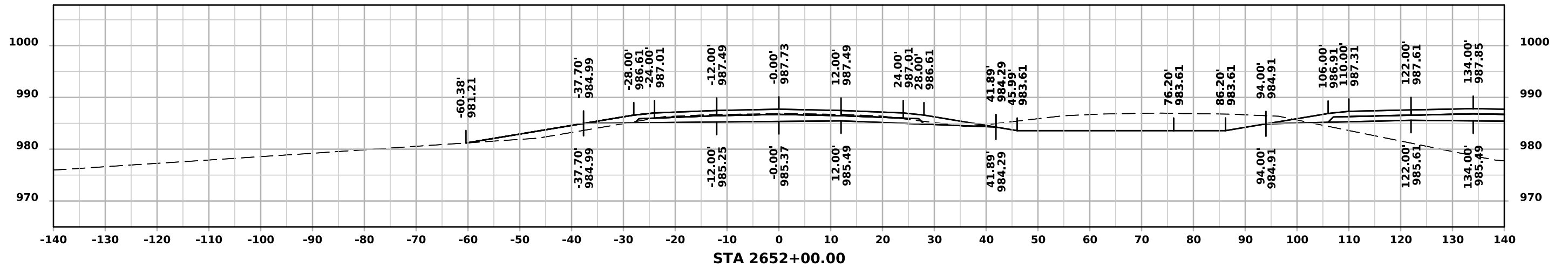
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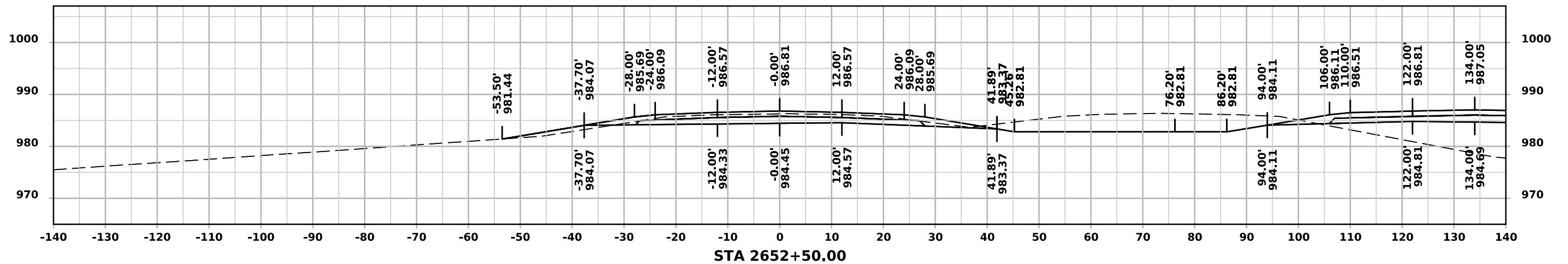
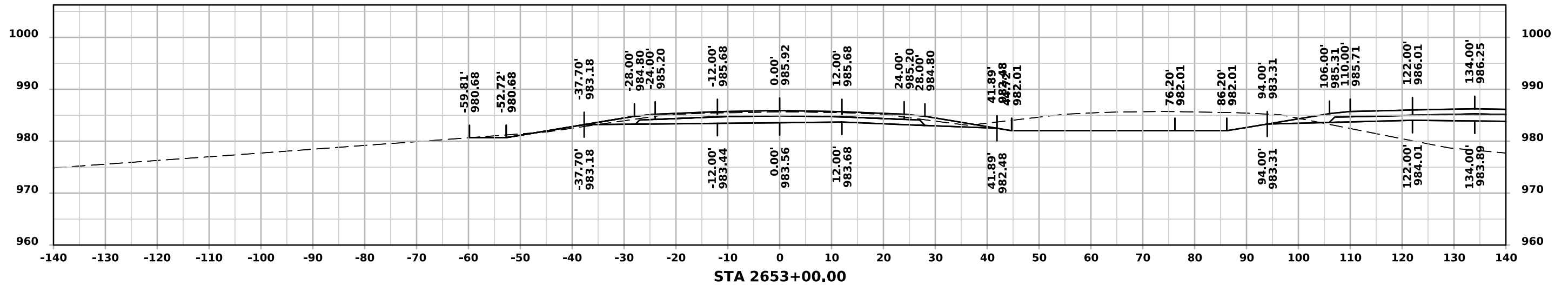
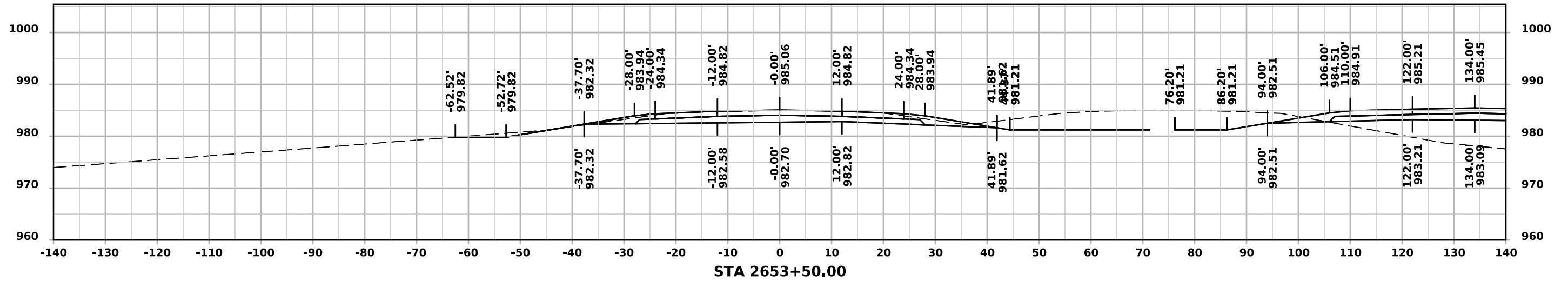
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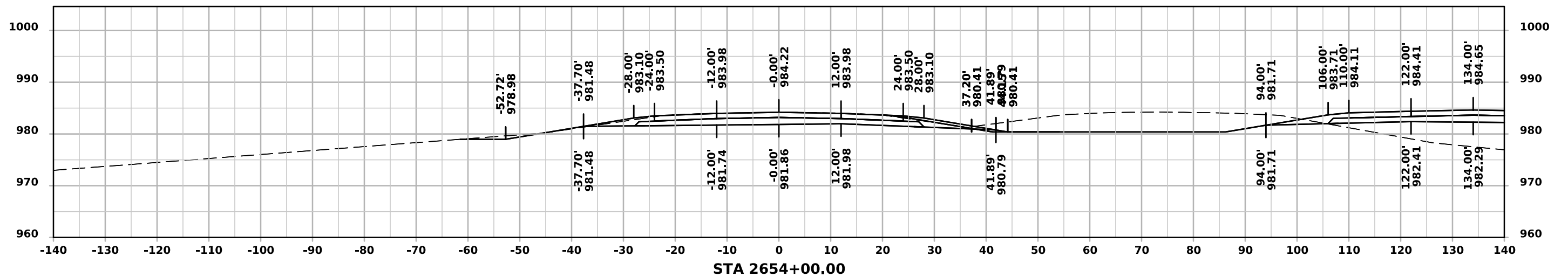
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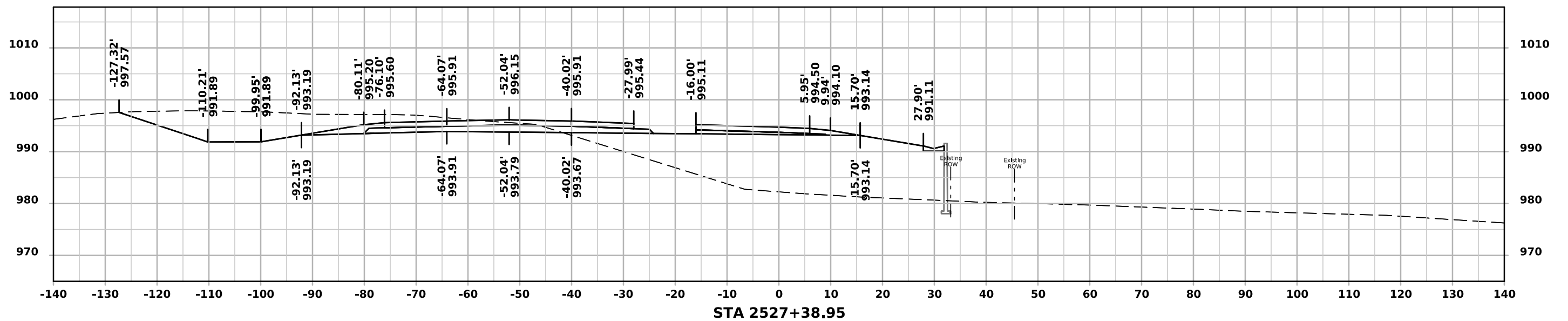
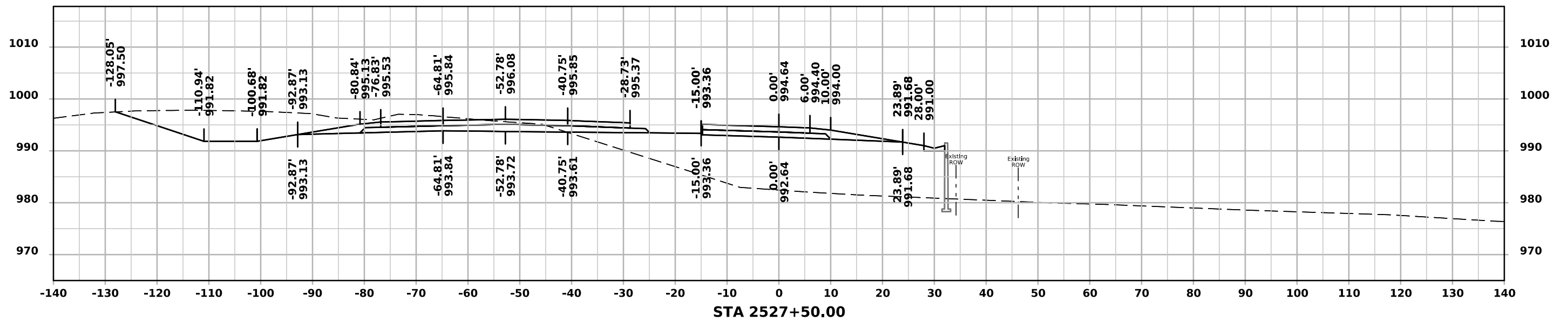
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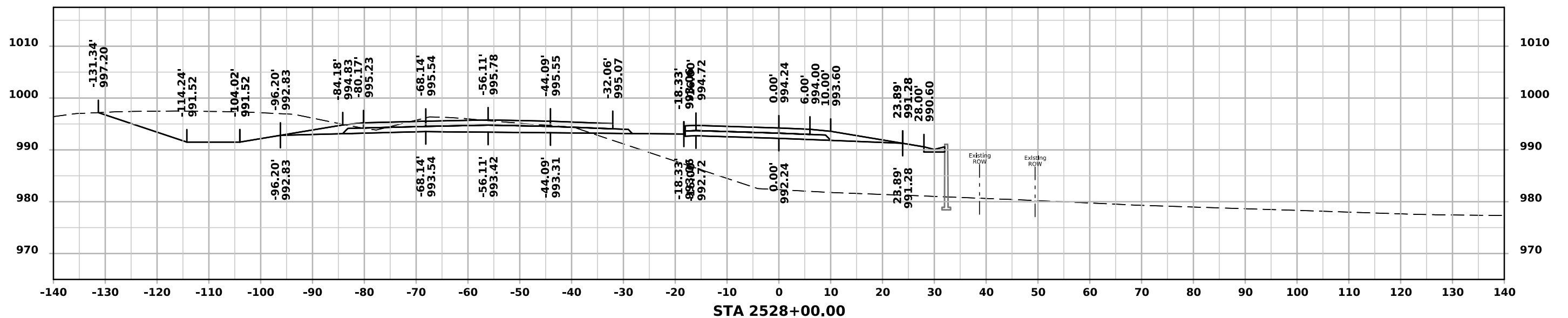
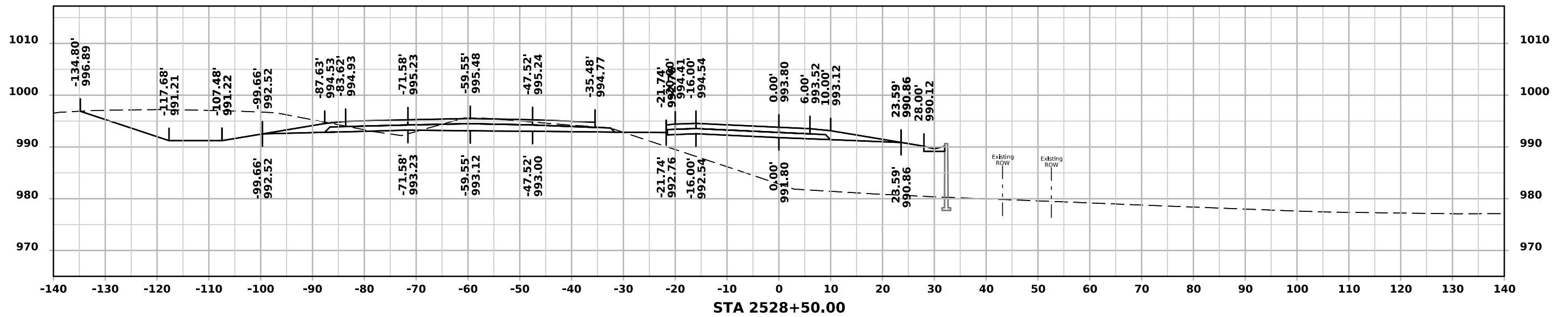
ML - I 80 (WESTBOUND)



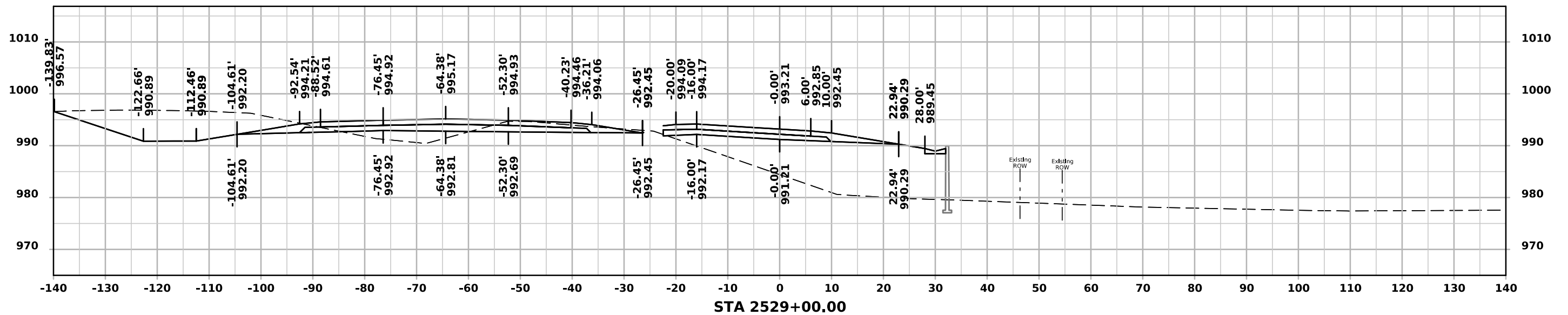
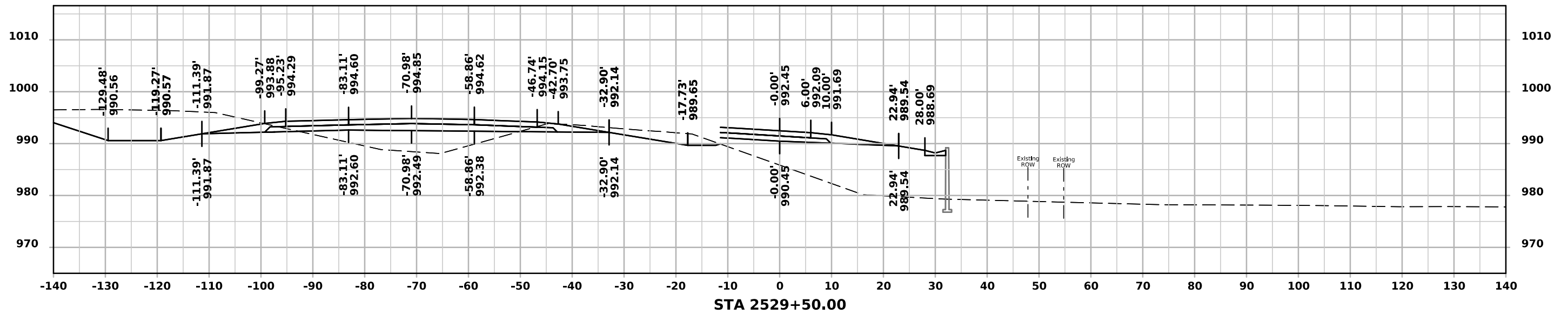
RAMP B



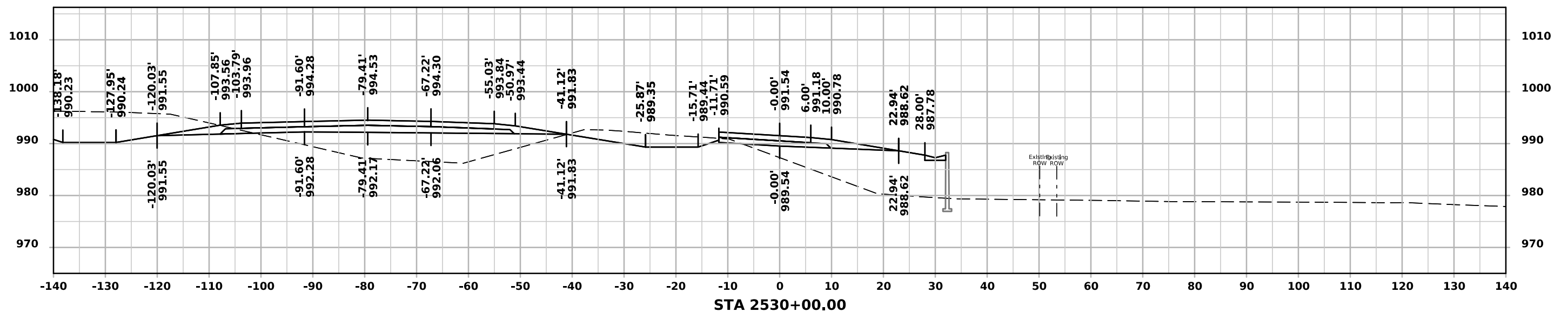
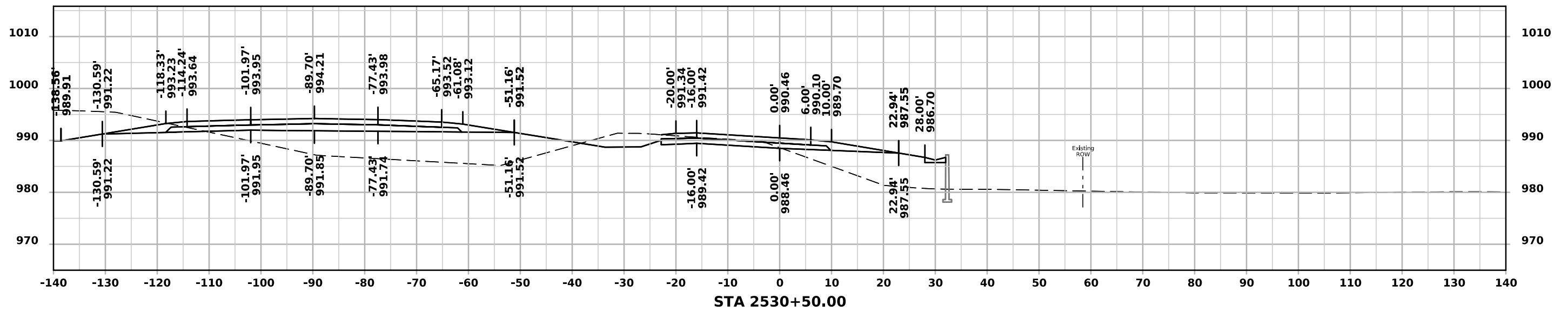
RAMP B



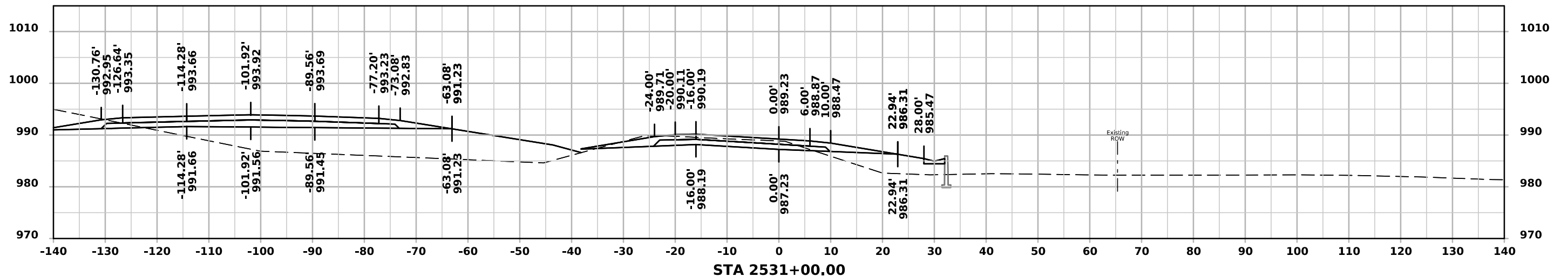
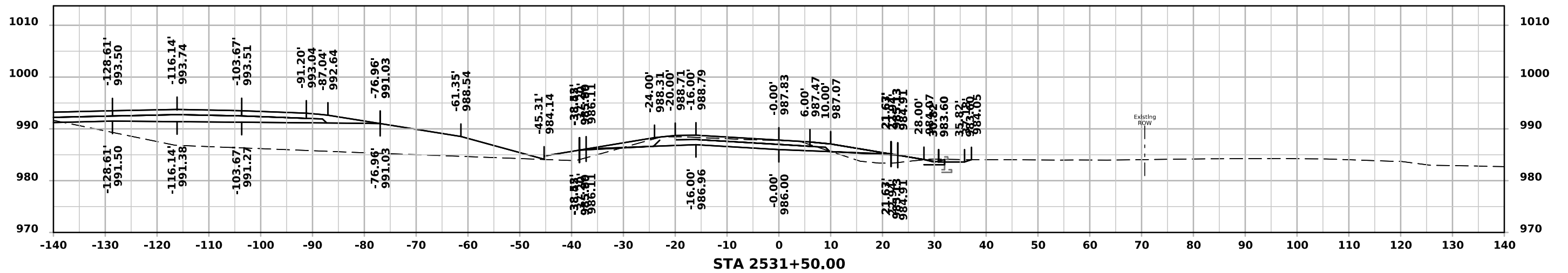
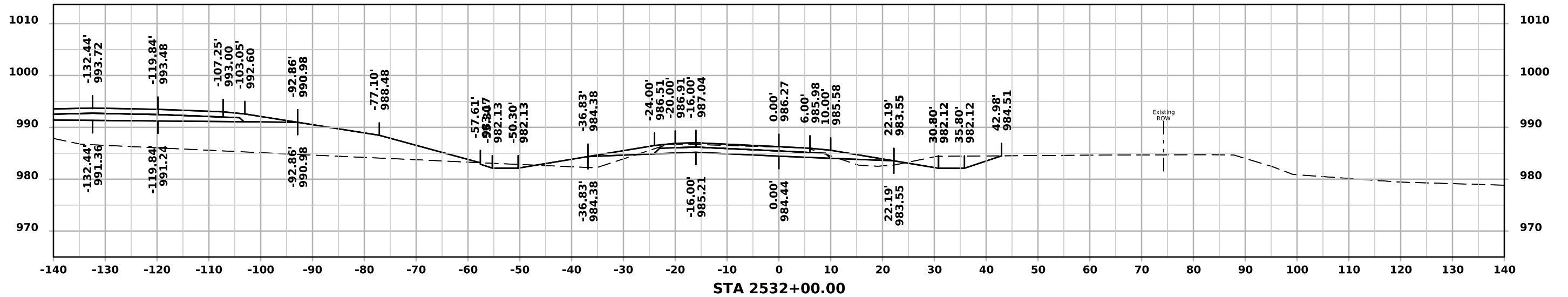
RAMP B



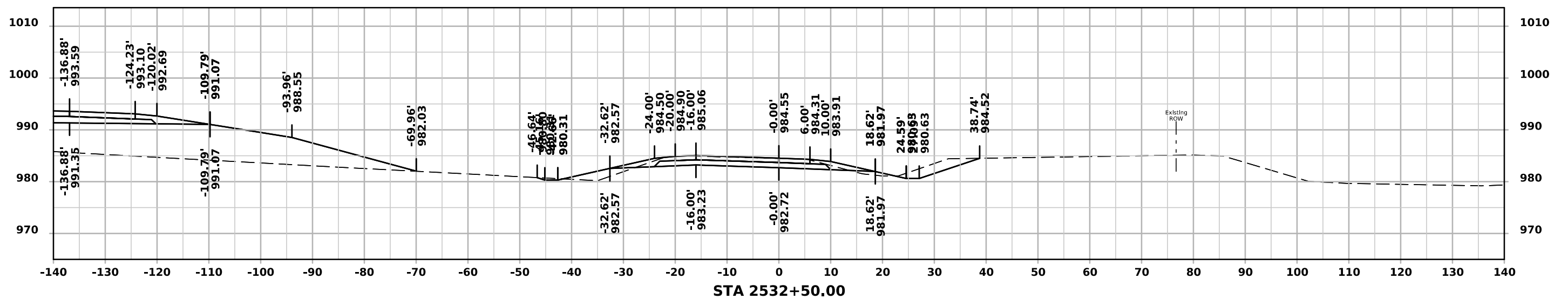
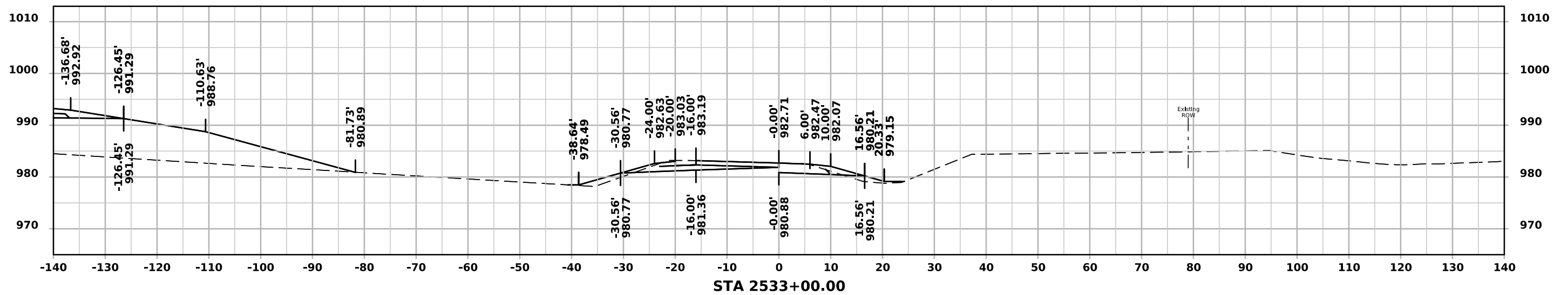
RAMP B



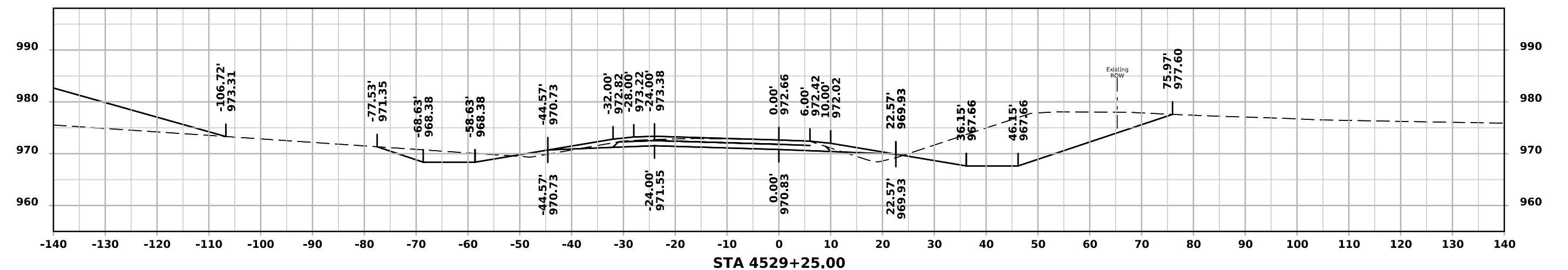
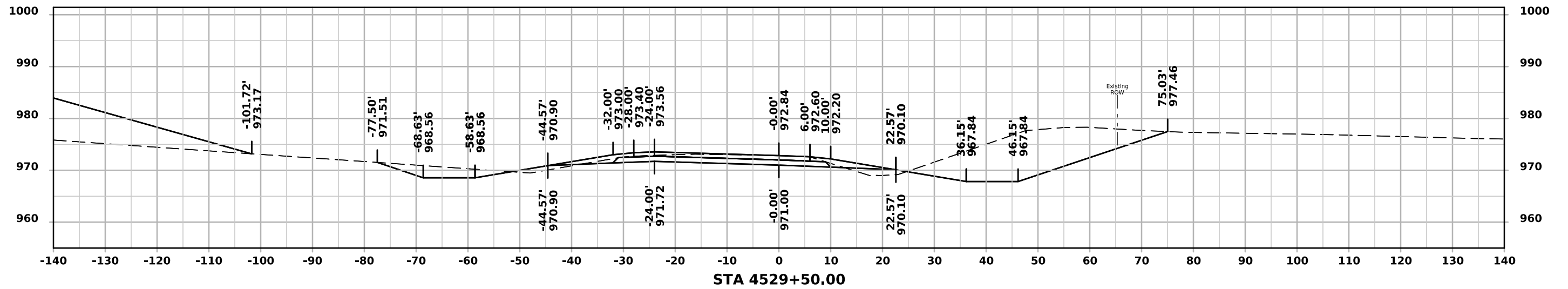
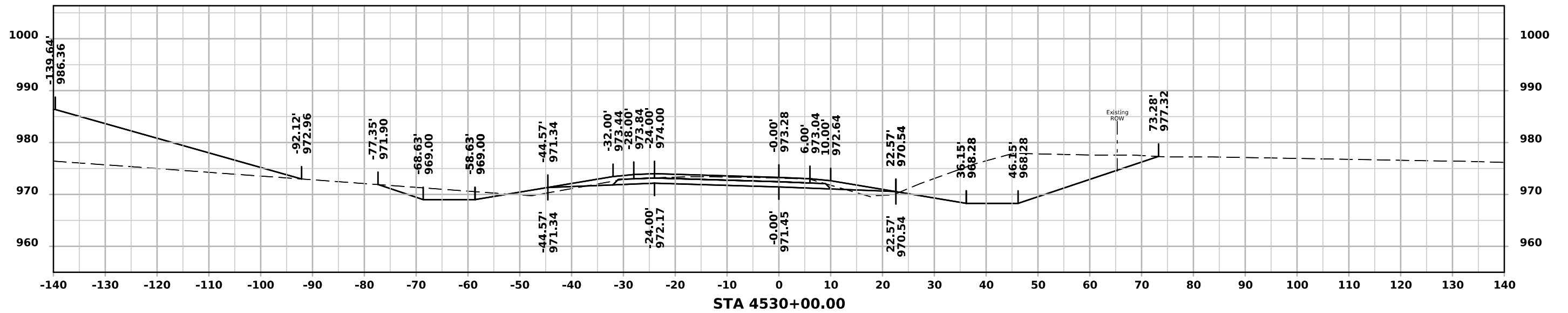
RAMP B



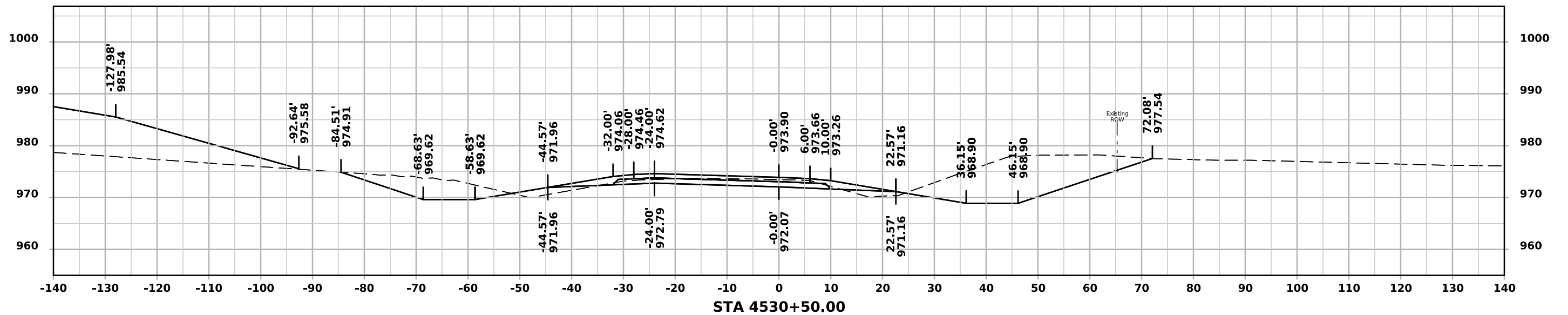
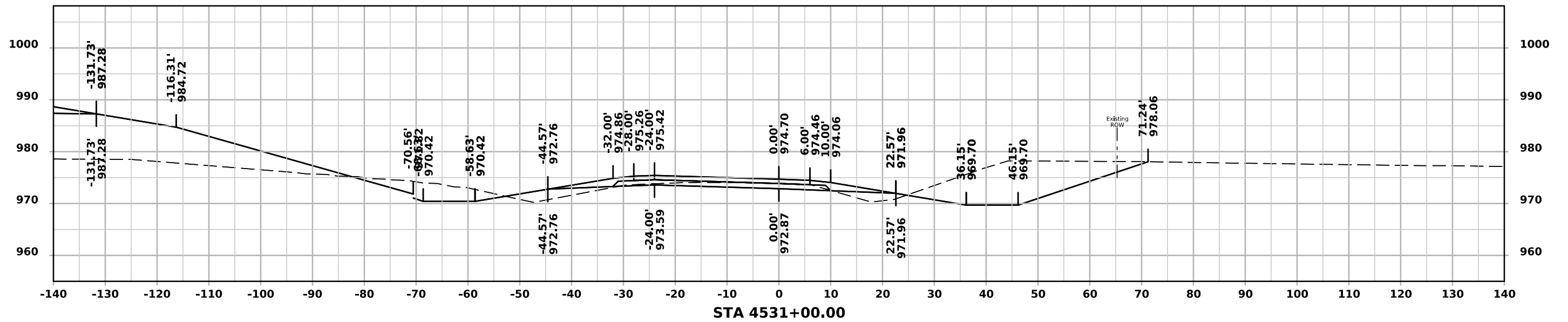
RAMP B



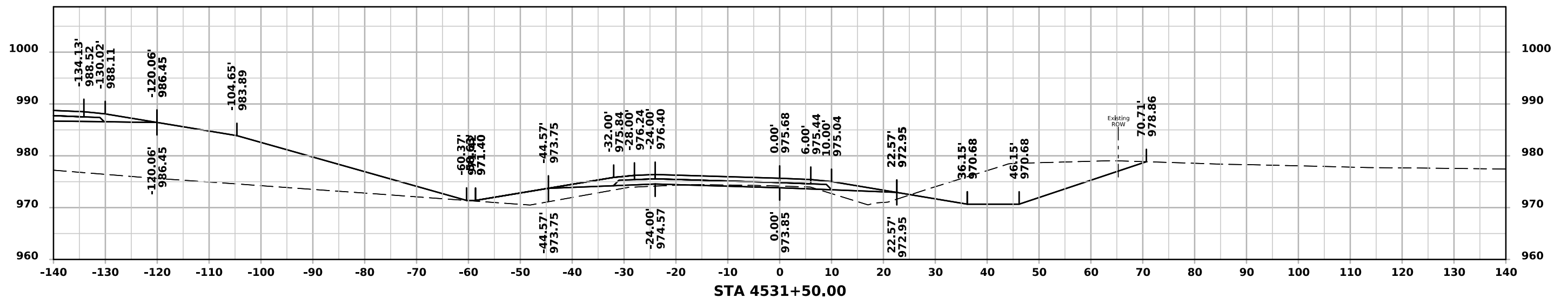
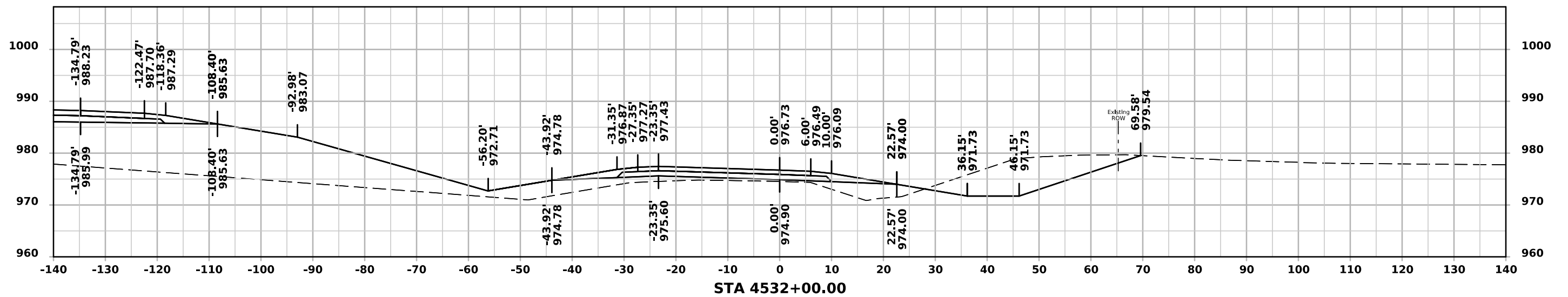
RAMP D



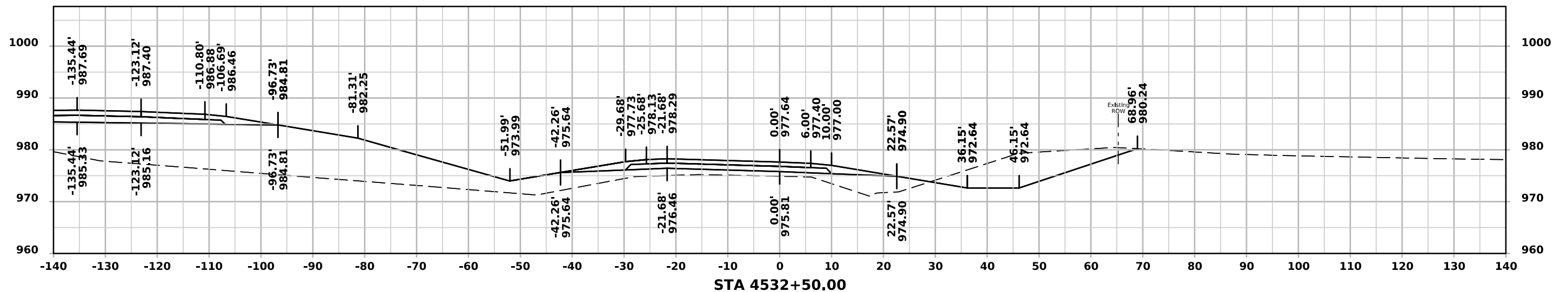
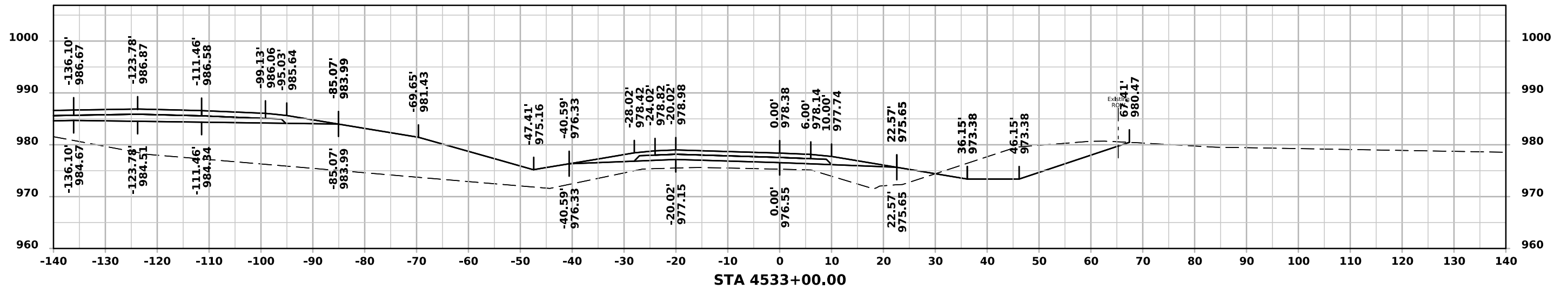
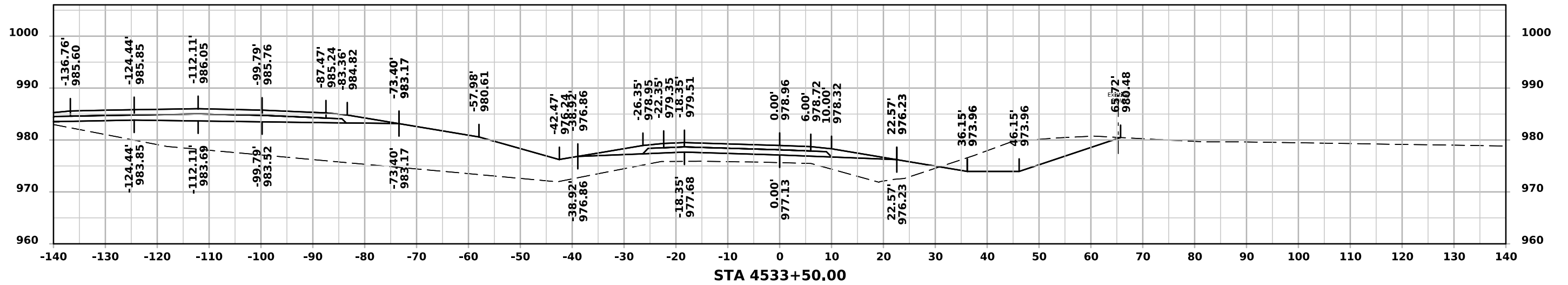
RAMP D



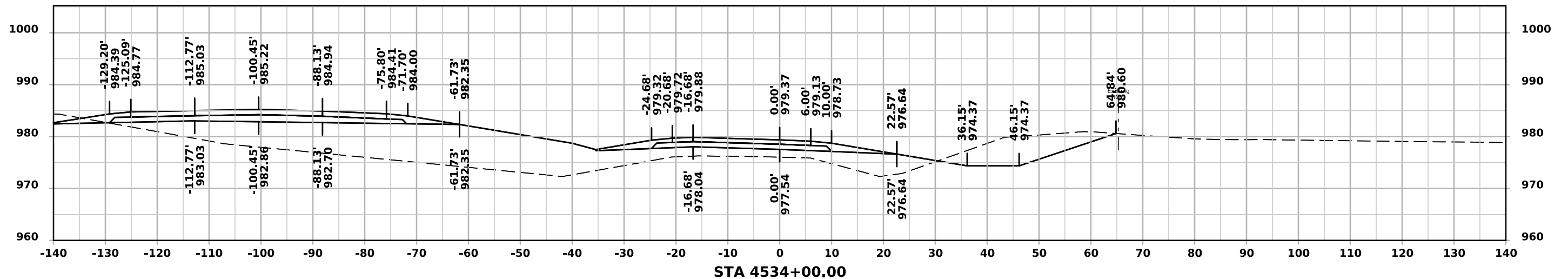
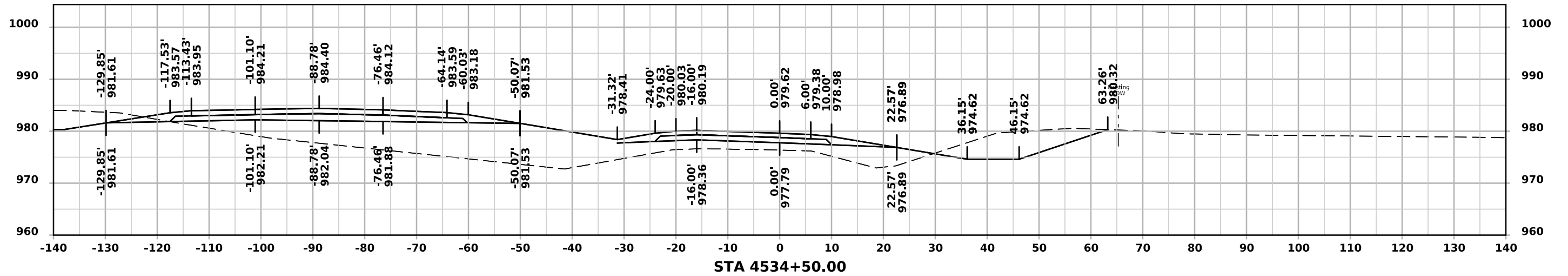
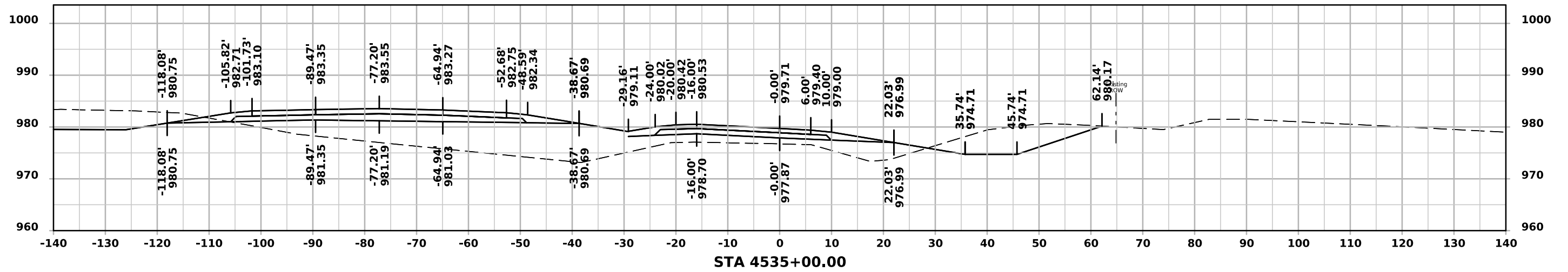
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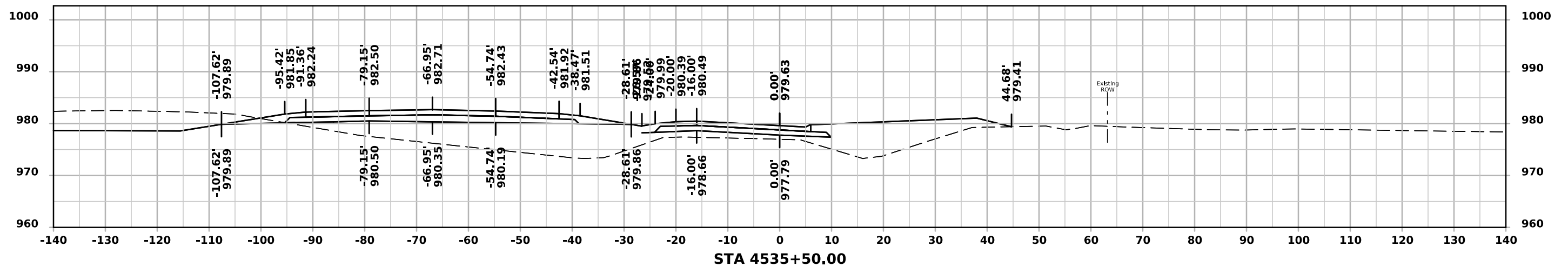
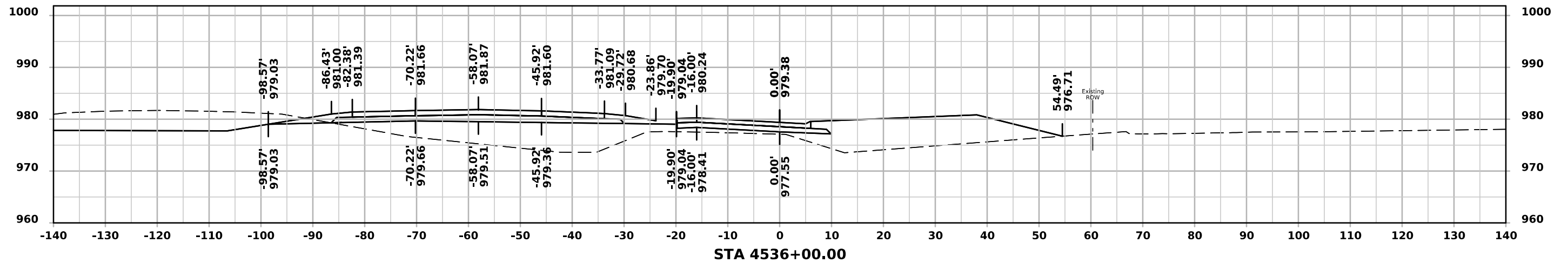
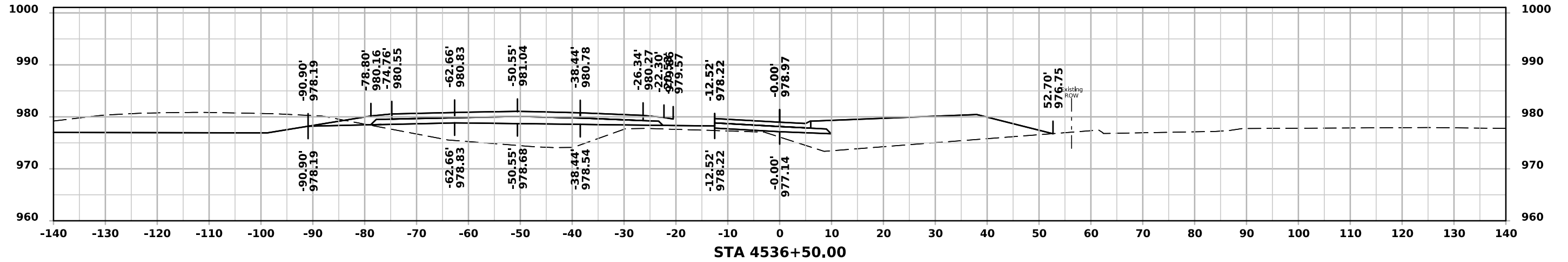
RAMP D



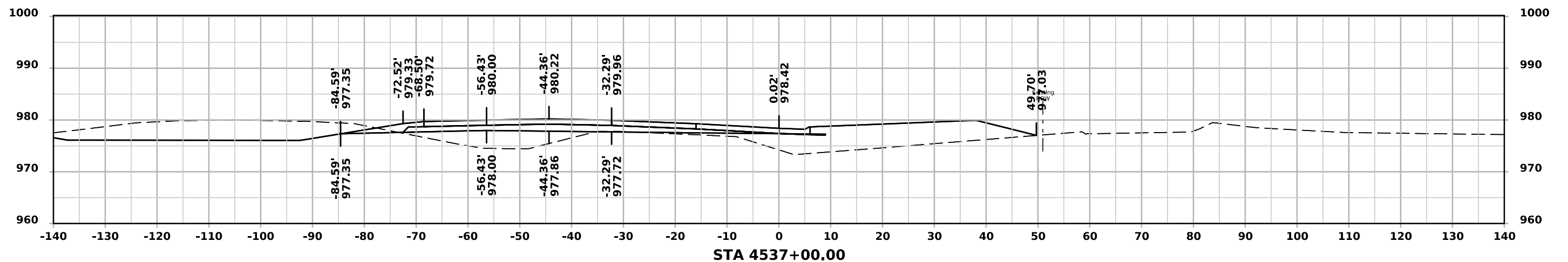
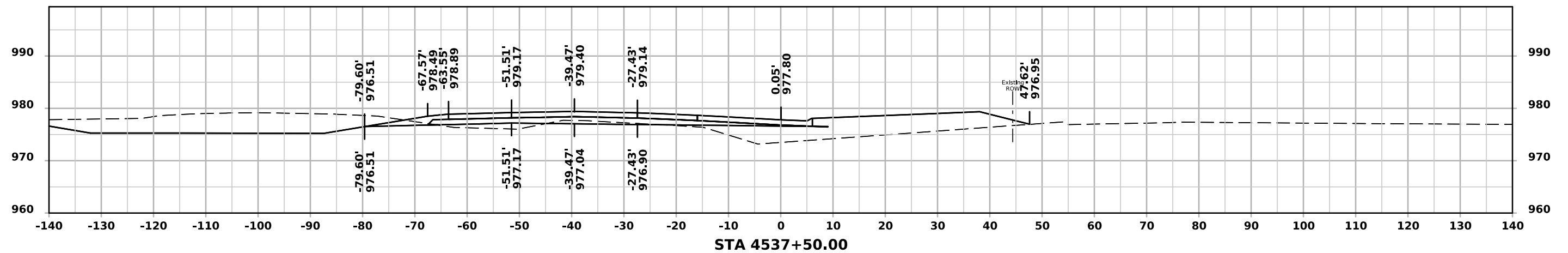
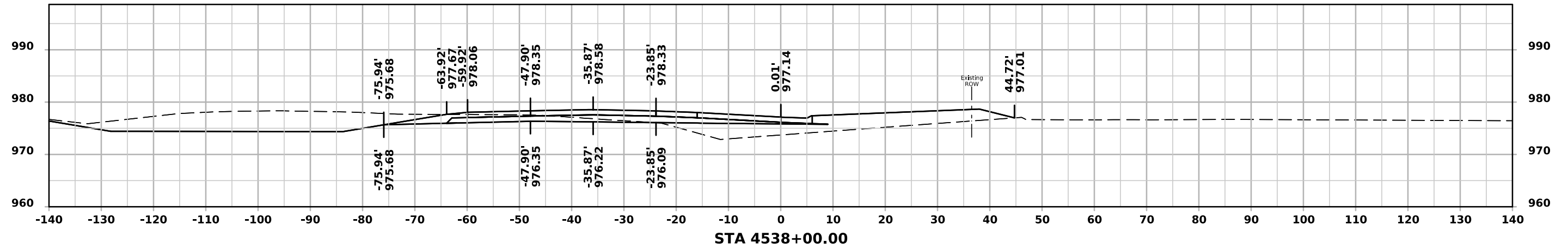
RAMP D



RAMP D



RAMP D



RAMP D

