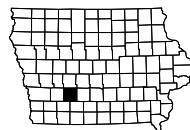


POLK COUNTY

PCC PAVING - NEW
HSIPX-415-1(086)--3L-77

LETTING DATE
XX-XX-XXXX



INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	Title Sheets
* A.1	Title Sheet
* A.2	Location Map Sheet
* A.3	Traffic Data
* A.4 - A.6	Design Criteria
B Sheets	Typical Cross Sections and Details
B.1-B.5	Typical Cross Sections and Details
D Sheets	Mainline Plan and Profile Sheets
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - D.6	IA 415
E Sheets	Side Road Plan and Profile Sheets
* E.1	NW 106th Ave & NW Beaver Dr
G Sheets	Survey Sheets
* G.1	Reference Ties and Benchmarks
H Sheets	Right-of-Way Sheets
* H.1	IA 415
* HE.1	NW 106th Ave & NW Beaver Dr
J Sheets	Traffic Control and Staging Sheets
* J.1	Traffic Control Plan
* J.2	Staging Notes Stage
* J.3	Traffic Control & Staging Legend & Symbol Info. Sheet
* J.4 - J.17	Staging and Traffic Control Sheets
M Sheets	Storm Sewer Sheets
* M.1 - M.4	Storm Sewer Plan and Profile Sheets
W Sheets	Mainline Cross Sections
W.1 - W.27	IA 415
X Sheets	Side Road Cross Sections
X.1 - X.7	NW 106th Ave
X.8 - X.15	NW Beaver Dr
	* Color Plan Sheets



PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
POLK COUNTY
PCC PAVING - NEW

IA 415 AND NW BEAVER DRIVE INTERSECTION

SCALES: As Noted

- Refer to the Proposal Form for list of applicable specifications.
- Value Engineering Saves. Refer to Article 1105.14 of the Specifications.
- For Project Location Map refer to Sheet A.2.



REVISIONS

TOTAL
..
PROJECT IDENTIFICATION NUMBER
22-77-415-020
PROJECT NUMBER
HSIPX-415-1(086)--3L-77
R.O.W. PROJECT NUMBER
###

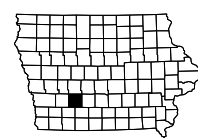
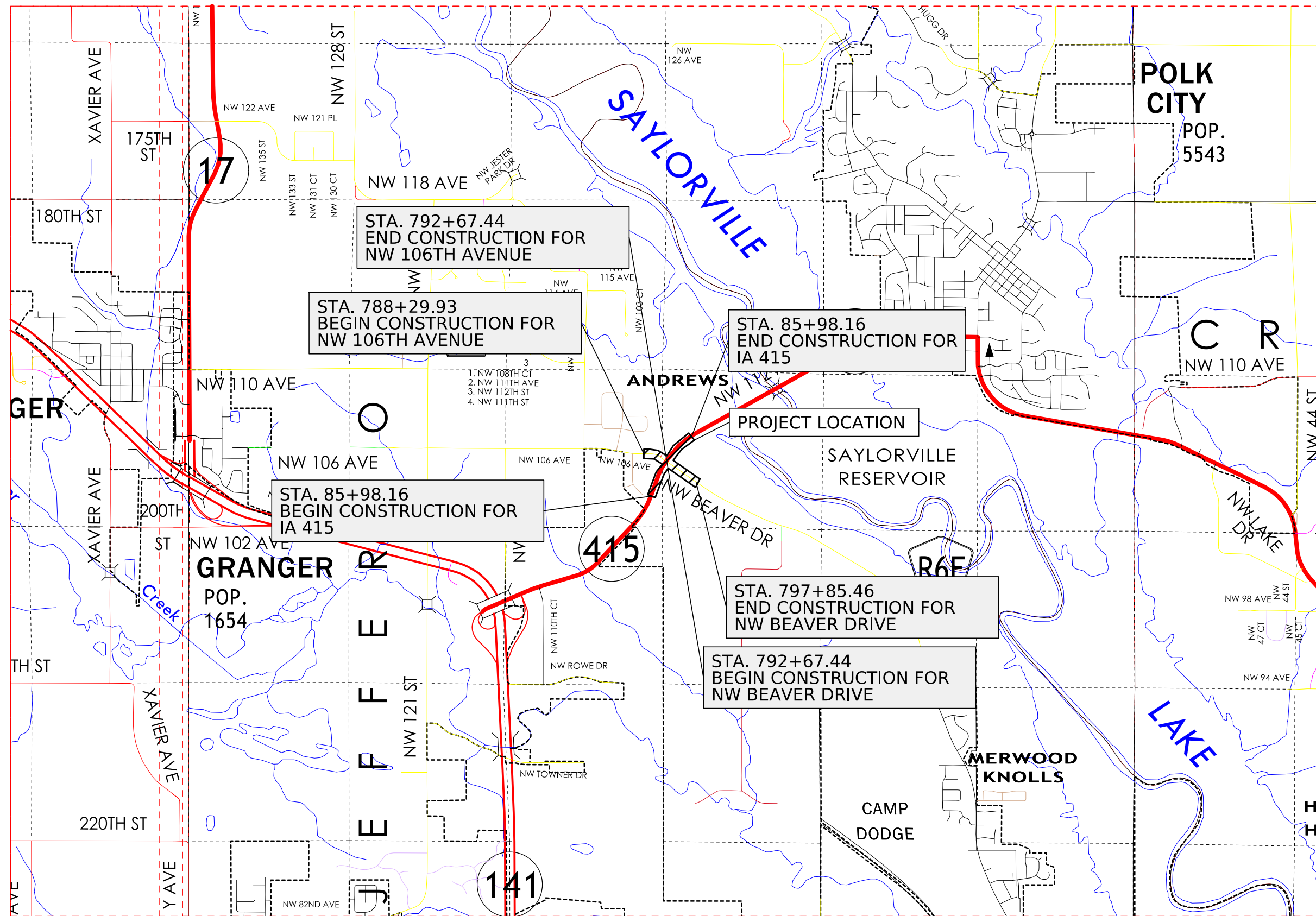
IA 415 DESIGN DATA RURAL			
2025	AADT	11,900	V.P.D.
2045	AADT	16,400	V.P.D.
20	- DHV	--	V.P.H.
	TRUCKS	3	%
	Total		
	Design ESALs	--	

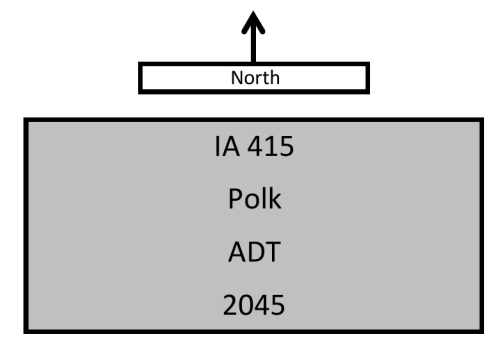
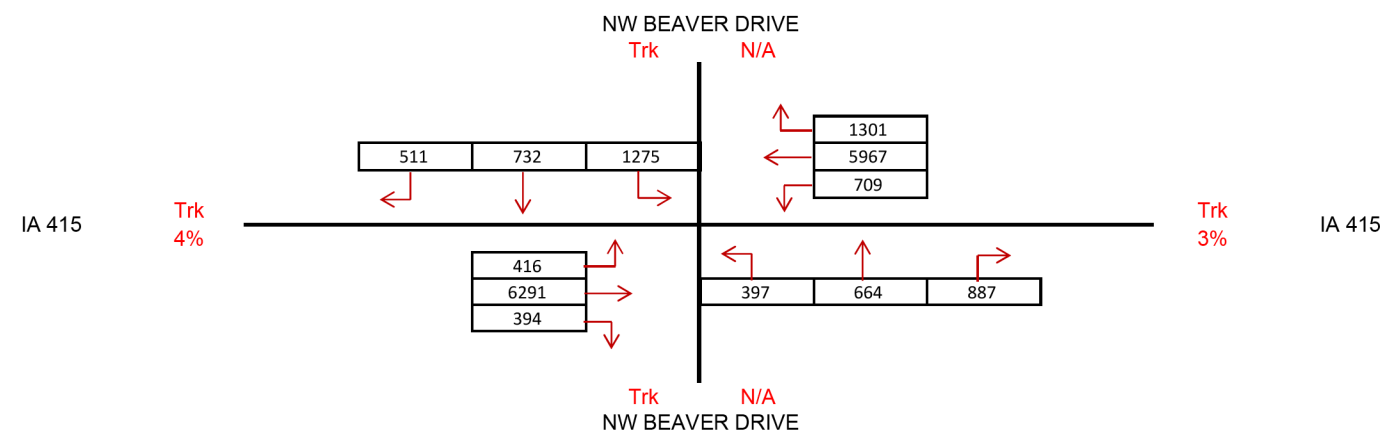
INDEX OF SEALS			
SHEET NO.	NAME	TYPE	BID QUANTITY SHEETS
A.1	X	Primary Signature Block	X
X	X	X	X

FIELD EXAM PLANS

Subject to change by final design.

D2 PLAN - Date: 3/1/2024





Please Note:
TRK Truck Percentages represent both Directions
ADT Average Daily Traffic

Highway IA 415

Roadway	Highway IA 415		Submittal Date	03/01/24
PIN Number	22-77-415-020			
Project Number	HSIPX-415-1(086)--3L-77			
District	District 1	Assistant District Engineer	Jeremy Vortherms	
County	POLK		or	
Route	415	Office Director		
Location	Intersection of IA 415 and NW 106th Avenue/NW Beaver Drive			
Work Type	Intersection Improvements			
Segment Manager	Snyder & Associates, Inc.			

Rural Two-Lane Highways (Rural Arterials)

Design Element	Preferred	Acceptable	Project Values
Design speed (mph)	60	50	50
Maximum superelevation rate (Refer to Section 2A-2)	6%	8%	6%
Design lane width (ft)	12	12	12
Full depth paved width (ft)	12	12	12
Right turn lane (ft)	12	10	N/A
Climbing Lane (ft)	12	12	N/A
Left turn lane (ft)	12	10	N/A
Pavement cross-slope (on tangent sections)	2%	1.5% minimum, 2% maximum	2%
	3%	3% maximum	N/A
	4%	4% maximum	N/A
Shoulder cross-slope (on tangent sections)	4%	Shoulder cross-slope cannot be less than the adjacent lane, 6% max for paved or granular shoulders, 8% max for earth shoulders	4%
Curb type (Refer to Section 3C-2)	6-inch sloped	6-inch standard	6-inch standard
Foreslope	Design speed \geq 60 mph	6-inch sloped	N/A
(For fill areas greater than 40 ft, contact the Soils Design Section for assistance)	Adjacent to shoulder	10:1 for 4' then 6:1	10:1 for 4' then 6:1
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)	3.5:1	3:1	3:1
Transverse Slopes	2%	not steeper than 3:1	N/A
Ditches (Refer to Section 3G-1)	3:1	2.5:1	3:1
Bridge width—new*	8:1	6:1	N/A
Bridge width—existing*	10:1	6:1	N/A
Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks)	5 x 10	--	UAC & 5X10'
Structural Capacity	design lane widths + effective shoulder widths	design lane widths + effective shoulder widths	N/A
Level of Service	design lane widths + no less than 2 ft left and right	design lane widths + 4' right and left of the design lane widths	N/A
	16.5	design lane widths + 2 ft. offset left and right	N/A
	23.3		N/A
	17.5		N/A
	Contact Office of Bridges and Structures	Contact Office of Bridges and Structures	N/A
	B	B	N/A

*FHWA notification via email is required if acceptable criteria is not met on the NHS system (No formal design exception is required)

Design year ADT = 16,400

Effective Shoulder Width and Type for Two-Lane Highways

Design Element	Preferred (values shown in feet)			Acceptable (values shown in feet)			Project Values
	Rural Roadways	Urban Roadways	Urban Roadways	Rural Roadways	Urban Roadways	Urban Roadways	
Turn lanes with shoulders	6	6	6	6	6	0	N/A
Turn lanes with curbs	6	See Section 3C-2	6	6	6	0	N/A
Climbing Lanes	Effective Shoulder Width	Paved Width	4	Effective Shoulder Width	Paved Width		
Two-Lane Highways	6	4	4	4	4	0	N/A
Routes where bicycles are to be accommodated	Effective Shoulder Width	Paved Width	10	Effective Shoulder Width	Paved Width		
On roadways approaching urban areas (due to increased bike traffic)	10	10	10	8	8	0*	
On all curves with a superelevation rate of 7.0% or greater	10	10	10	6	6	0*	
On roadways with design year ADT > 5000	10	6	6	4	4	0*	
On all other NHS	10	6	6	4	4	0*	
On non-NHS routes with design year ADT > 3000	10	6	6	4	4	0*	
On non-NHS routes with design year ADT < 3000	8	0*	0*	4	4	0*	5' Paved with 5' Granular

*Requires safety edge-Refer to Section 3C-6

Curbs should be located beyond the outer edge of the effective shoulder width in rural areas

Refer to Section 3C-2 for curb offsets in urban areas

Notes:

There is a section of IA 415 that will use the existing 3:1 foreslope with cable guardrail to minimize grading impacts to the existing ROW.

Roadway Design Speed (mph) = 50

Design Criteria for High Speed Roadways

Design Element	Preferred Criteria						Acceptable Criteria						Project Values
	50	55	60	65	70	75	50	55	60	65	70	75	
Stopping sight distance (ft) (Refer to Section 6D-1)	425	495	570	645	730	820	425	495	570	645	730	820	425
Minimum horizontal curve radius (ft) (Refer to Sections 2A-2 and 2A-3)	833	1060	1330	1660	2040	2500	833	1060	1330	1660	2040	2500	833
Minimum vertical curve length (ft) (Refer to Section 2B-1)	--	--	--	--	--	--	758	960	1200	1480	1810	2210	N/A
Minimum rate of vertical curvature (K)	150	165	180	195	210	225	150	165	180	195	210	225	150
(Refer to Section 2B-1)	84	114	151	193	247	312	84	114	151	193	247	312	84
Minimum gradient (%)	96	115	136	157	181	206	96	115	136	157	181	206	96
(Refer to Section 2B-1)	96	115	136	157	181	206	54	66	78	91	106	121	54
Maximum gradient (%)	0.5						0.3% with a curb, 0.0% without a curb						0.60
Clear zone	See "Preferred Clear Zone" table in Section 8A-2						See "Acceptable Clear Zone" table in Section 8A-2						20

Roadway		NW 106th Avenue		Submittal Date	03/01/24
PIN Number	22-77-415-020	Assistant District Engineer	Jeremey Vortherms	Approval Date	
Project Number	HSIPX-415-1(086)--3L-77	or			
District	District 1	Office Director			
County	POLK				
Route	415				
Location	Intersection of IA 415 and NW 106th Avenue/NW Beaver Drive				
Work Type	Intersection Improvements				
Segment Manager	Snyder & Associates, Inc.				
Designer					
Rural Two-Lane Highways (Rural Arterials)					
<i>Design Manual Section 1C-1 Last Updated: 04-29-19</i>					
	Design Element	Preferred	Acceptable	Project Values	
	Design speed (mph)	60	50	45	
	Maximum superelevation rate (Refer to Section 2A-2)	6%	8%	8%	
	Design lane width (ft)	12	12	12	
	Full depth paved width (ft)	12	12	12	
	Right turn lane (ft)	12	10	N/A	
	Climbing Lane (ft)	12	12	N/A	
	Left turn lane (ft)	12	10	N/A	
	Pavement cross-slope (on tangent sections)	2%	1.5% minimum, 2% maximum	2%	
	Auxiliary and turn lanes	3%	3% maximum	N/A	
	Crown break at centerline	4%	4% maximum	N/A	
	Shoulder cross-slope (on tangent sections)	4%	Shoulder cross-slope cannot be less than the adjacent lane, 6% max for paved or granular shoulders, 8% max for earth shoulders	N/A	
	Curb type	6-inch sloped	6-inch standard	6-inch standard	
	(Refer to Section 3C-2)	4-inch sloped	6-inch sloped	N/A	
	Design speed = 50 or 55 mph	10:1 for 4' then 6:1	3:1	N/A	
	Design speed ≥ 60 mph	3.5:1	3:1	N/A	
	Adjacent to shoulder	2%	not steeper than 3:1	4%	
	Beyond standard ditch depth and design clear zone	3:1	2.5:1	3:1	
	Contact the Soils Design Section for assistance)	8:1	6:1	N/A	
	Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)	10:1	6:1	N/A	
	Transverse Slopes	5 x 10	--	N/A	
	w/ drainage structures	design lane widths + effective shoulder widths	design lane widths + effective shoulder widths	N/A	
	w/o drainage structures	design lane widths + effective shoulder widths	design lane width + 4' right and left of the design lane widths	N/A	
	Ditches (Refer to Section 3G-1)	design lane widths + no less than 2 ft left and right	design lane widths + 2 ft. offset left and right	N/A	
	Outside ditch (depth x width) (ft)	16.5	16	N/A	
	Bridge length ≤ 200 ft	16.5 at interchange locations, 15 at all other locations	14	N/A	
	Bridge length > 200 ft	23.3	23.3	N/A	
	Over primary	17.5	17	N/A	
	Over non-primary	Contact Office of Bridges and Structures	Contact Office of Bridges and Structures	N/A	
	Over railroad	B	B	N/A	
	Over railroad (tracks)			N/A	
	Sign trusses and pedestrian bridges			N/A	
	Structural Capacity			N/A	
	Level of Service			N/A	
	*FHWA notification via email is required if acceptable criteria is not met on the NHS system (No formal design exception is required)			N/A	

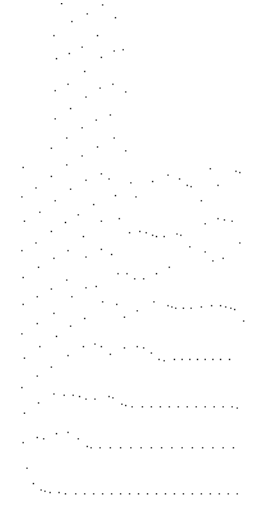
Design year ADT =

<i>Design Manual Section 1C-1 Last Updated: 04-29-19</i>					
	Preferred (values shown in feet)	Urban Roadways	Rural Roadways	Acceptable (values shown in feet)	Project Values
Turn lanes with shoulders	6	6	6	6	0
Turn lanes with curbs	6	See Section 3C-2	6	6	0
	Effective Shoulder Width	Paved Width	Effective Shoulder Width	Paved Width	
Climbing Lanes	6	4	4	0	0
Two-Lane Highways	Effective Shoulder Width	Paved Width	Effective Shoulder Width	Paved Width	
Routes where bicycles are to be accommodated	10	10	8	0*	
On roadways approaching urban areas (due to increased bike traffic)	10	10	Design year ADT > 2000 vpd		
On all curves with a superelevation rate of 7.0% or greater	10	10	Design year ADT between 400 - 2000 vpd	0*	0
On roadways with design year ADT > 5000	10	6	Design year ADT < 400 vpd	0*	
On all other NHS	10	6			
On non-NHS routes with design year ADT > 3000	10	6			
On non-NHS routes with design year ADT < 3000	8	0*			

*Requires safety edge-Refer to Section 3C-6
Curbs should be located beyond the outer edge of the effective shoulder width in rural areas
Refer to Section 3C-2 for curb offsets in urban areas

Notes:

Roadway will have a 6.5' curb and gutter section along side the 12' drive lanes to match the existing (37') pavement section of NW 106th Avenue.
Reconstructed roadway used an urban section to limit ROW grading impacts and help with maintaining positive drainage.



Roadway	NW Beaver Drive	
PIN Number	22-77-415-020	Submittal Date
Project Number	HSIPX-415-1(086)--3L-77	Approval Date
District	Jeremy Vortherms	
County	or	
Route	Assistant District Engineer	
Location	Office Director	
Work Type	Highway 415	
Segment Manager	Intersection of IA 415 & NW Beaver Drive/NW 106th Avenue	
Designer	Intersection Improvements	
	Snyder & Associates, Inc.	

Rural Two-Lane Highways (Rural Arterials)			Project Values
Design Element	Preferred	Acceptable	
Design speed (mph)	60	50	50
Maximum super-elevation rate (Refer to Section 2A-2)	6%	8%	6%
Design lane width (ft)	12	12	12
Full depth paved width (ft)	12	12	12
Right turn lane (ft)	12	10	N/A
Climbing Lane (ft)	12	12	N/A
Left turn lane (ft)	12	10	N/A
Pavement cross-slope (on tangent sections)	2%	1.5% minimum, 2% maximum	2%
	3%	3% maximum	N/A
	4%	4% maximum	N/A
Shoulder cross-slope (on tangent sections)	4%	Shoulder cross-slope cannot be less than the adjacent lane, 6% max for paved or granular shoulders, 8% max for earth shoulders	4%
Curb type (Refer to Section 3C-2)	6-inch sloped 4-inch sloped	6-inch standard 6-inch sloped	6-inch standard N/A
Foreslope (For fill areas greater than 40 ft, contact the Soils Design Section for assistance)	10:1 for 4' then 6:1 3.5:1	3:1	4:1 3:1
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)	2%	not steeper than 3:1	N/A
Transverse Slopes w/ drainage structures	3:1	2.5:1	3:1
w/o drainage structures	8:1	6:1	8:1
Ditches (Refer to Section 3G-1)	10:1	6:1	10:1
Outside ditch (depth x width) (ft)	5 x 10	--	
Bridge width—new*	design lane widths + effective shoulder widths	design lane widths + effective shoulder widths	N/A
Bridge width—existing*	design lane widths + no less than 2 ft left and right	design lane widths + 2 ft. offset left and right	N/A
Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks)	16.5	16	N/A
	16.5 at interchange locations, 15 at all other locations	14	N/A
	23.3	23.3	N/A
Structural Capacity	17.5	17	N/A
Level of Service	Contact Office of Bridges and Structures	Contact Office of Bridges and Structures	N/A
*FHWA notification via email is required if acceptable criteria is not met on the NHS system (No formal design exception is required)	B	B	N/A

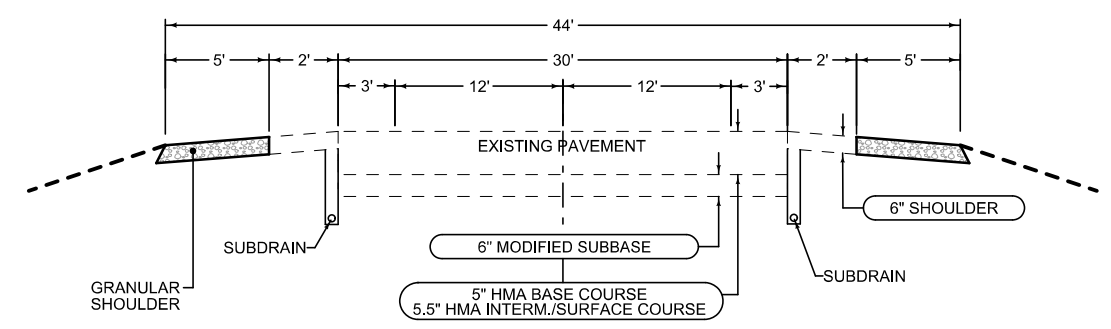
Effective Shoulder Width and Type for Two-Lane Highways				
Design Element	Preferred (values shown in feet)			Project Values
	Rural Roadways	Urban Roadways	Acceptable (values shown in feet)	
Turn lanes with shoulders	6	6	Turn lanes with shoulders	N/A
Turn lanes with curbs	6	See Section 3C-2	Turn lanes with curbs	N/A
Climbing Lanes	Effective Shoulder Width 6	Paved Width 4	Effective Shoulder Width Climbing Lanes	
Two-Lane Highways	Effective Shoulder Width 10	Paved Width 10	Effective Shoulder Width Two-Lane Highways	
Routes where bicycles are to be accommodated	10	10		
On roadways approaching urban areas (due to increased bike traffic)	10	10		
On all curves with a super-elevation rate of 7.0% or greater	10	10		
On roadways with design year ADT > 5000	10	6		
On all other NHS	10	6		
On non-NHS routes with design year ADT > 3000	10	6		
On non-NHS routes with design year ADT < 3000	8	0*		

*Requires safety edge-Refer to Section 3C-6
Curbs should be located beyond the outer edge of the effective shoulder width in rural areas
Refer to Section 3C-2 for curb offsets in urban areas

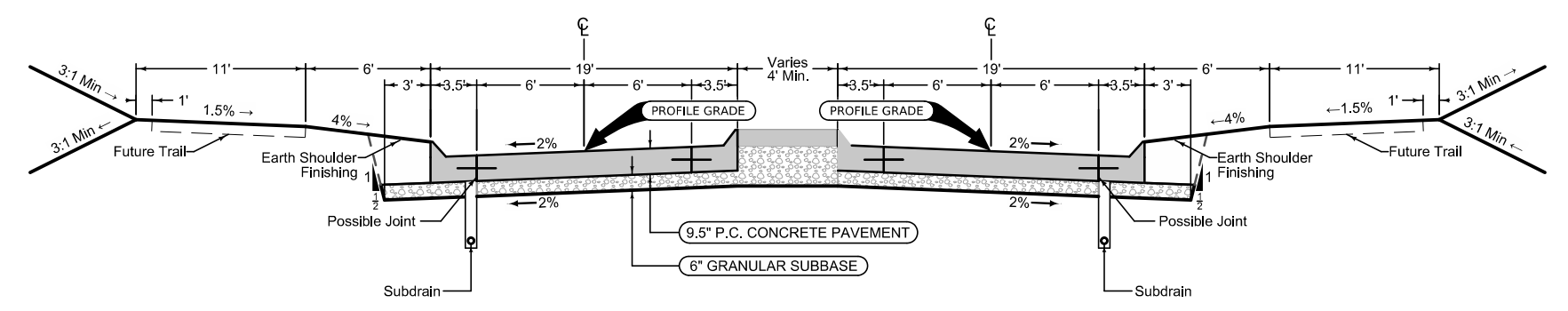
Design Criteria for High Speed Roadways												
Design Element	Preferred Criteria					Acceptable Criteria						
	50	55	60	65	70	75	50	55	60	65		
Stopping sight distance (ft) (Refer to Section 9D-1)	425	495	570	645	730	820	425	495	570	645		
Minimum horizontal curve radius (ft) (Refer to Sections 2A-2 and 2A-3)	833	1060	1330	1660	2040	2500	833	1060	1330	1660		
Minimum vertical curve length (ft) (Refer to Section 2B-1)	--	--	--	--	--	--	758	960	1200	1480		
Minimum rate of vertical curvature (K)	150	84	114	151	193	247	150	165	180	195		
(Refer to Section 2B-1)	96	115	136	157	181	206	84	114	151	193		
Minimum gradient (%)	96	115	136	157	181	206	54	66	78	91		
Maximum gradient (%)	4	4	3	3	3	3	7	6	6	6		
Clear zone	0.5						0.3% with a curb, 0.0% without a curb					

Roadway Design Speed (mph) = 50												
Design Element	Preferred Criteria					Acceptable Criteria						
	50	55	60	65	70	75	50	55	60	65		
Stopping sight distance (ft) (Refer to Section 9D-1)	425	495	570	645	730	820	425	495	570	645		
Minimum horizontal curve radius (ft) (Refer to Sections 2A-2 and 2A-3)	833	1060	1330	1660	2040	2500	833	1060	1330	1660		
Minimum vertical curve length (ft) (Refer to Section 2B-1)	--	--	--	--	--	--	758	960	1200	1480		
Minimum rate of vertical curvature (K)	150	84	114	151	193	247	150	165	180	195		
(Refer to Section 2B-1)	96	115	136	157	181	206	84	114	151	193		
Minimum gradient (%)	96	115	136	157	181	206	54	66	78	91		
Maximum gradient (%)	4	4	3	3	3	3	7	6	6	6		
Clear zone	0.5						0.3% with a curb, 0.0% without a curb					

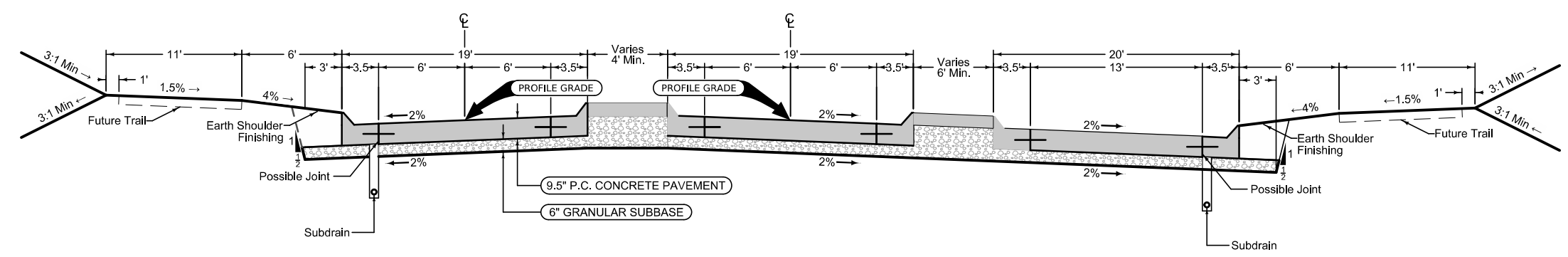
ONCE DOT STAFF HAS COMPLETED PAVEMENT DESIGN, TYPICALS AND DETAILS WILL BE UPDATED.



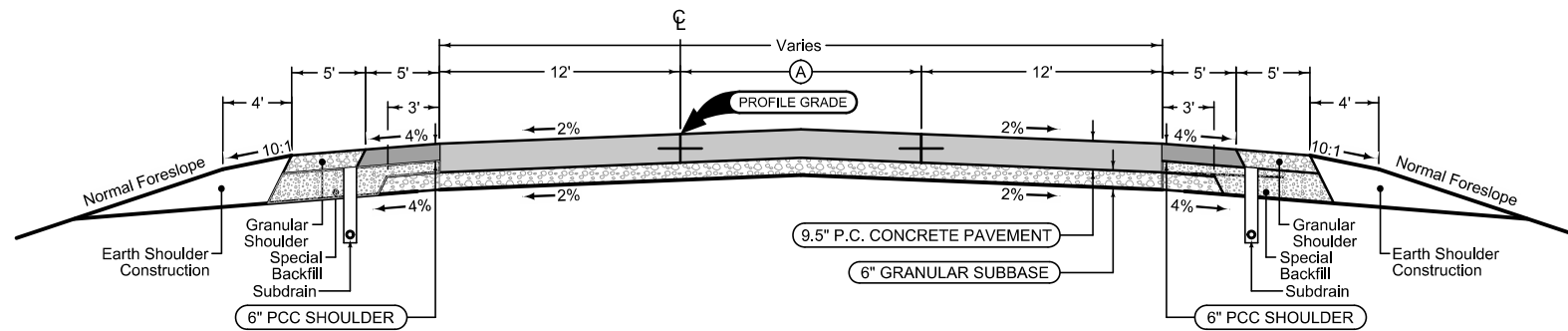
TYPICAL SECTION
IA 415 - EXISTING TYPICAL
FOR INFORMATION ONLY



TYPICAL SECTION
IA 415 - CURB AND GUTTER

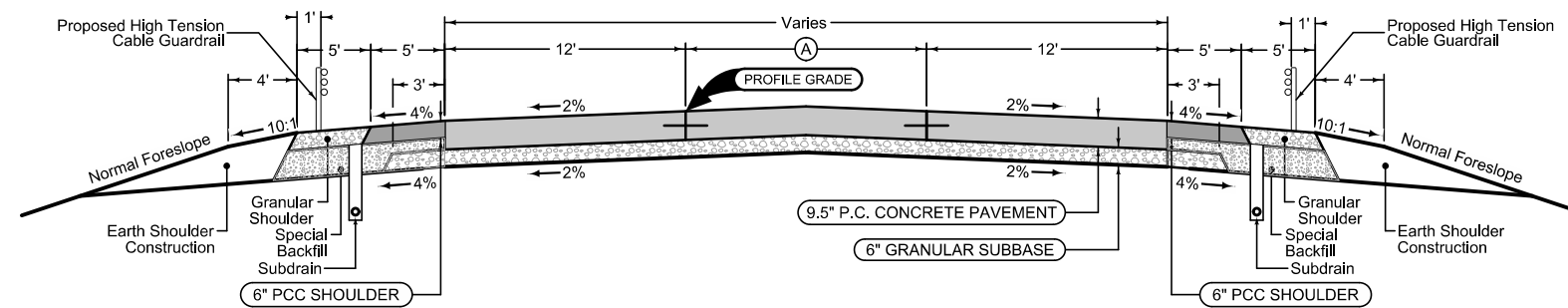


TYPICAL SECTION
IA 415 - CURB AND GUTTER
ROUNDBOAT BY-PASS LANE



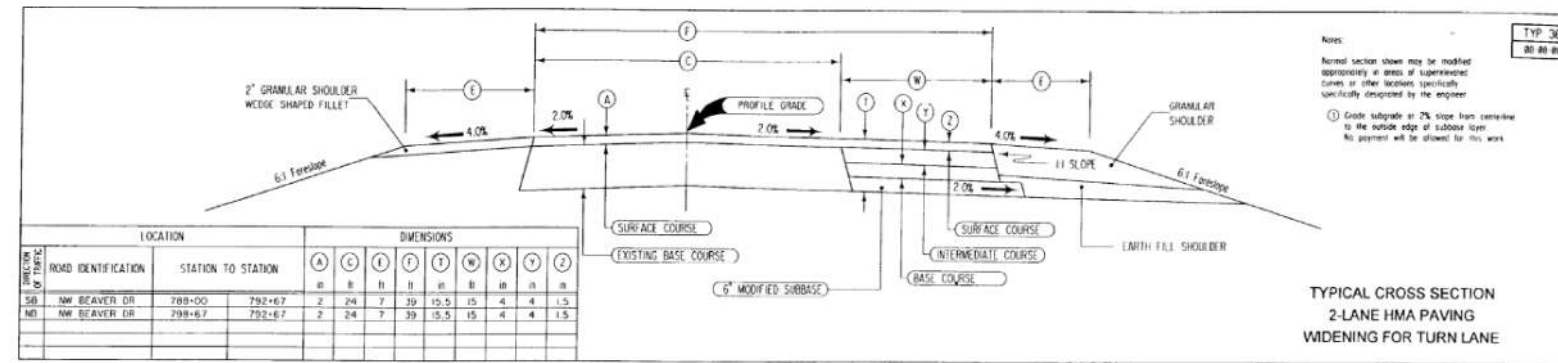
**TYPICAL SECTION
IA 415 - RURAL SECTION
STA. 85+98.16 TO 89+42.06**

STATION TO STATION		(A) Feet
85+98.16	89+42.06	10.8' - 13'

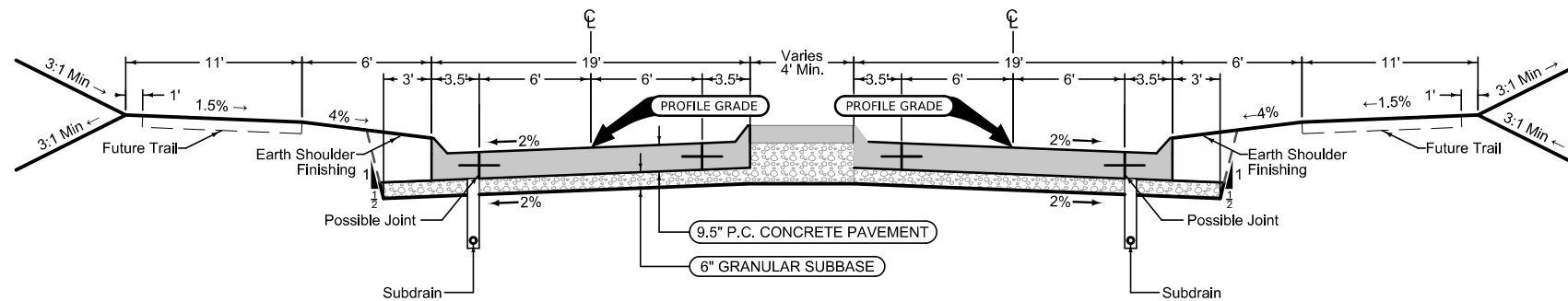


**TYPICAL SECTION
IA 415 - RURAL SECTION
STA. 95+62.32 TO 99+99.57**

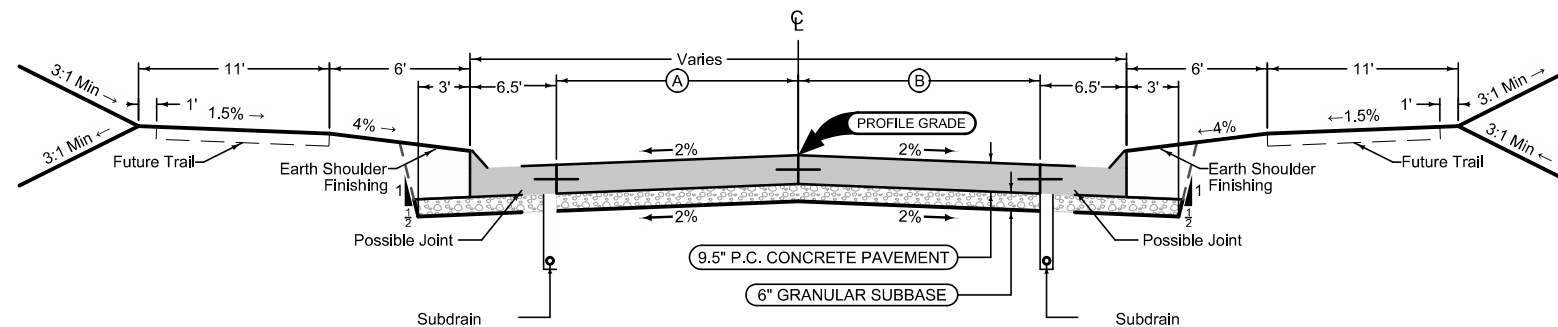
STATION TO STATION		(A) Feet
95+62.32	99+99.57	15' - 9'



TYPICAL SECTION
 NW 106TH AVENUE - EXISTING TYPICAL
 FOR INFORMATION ONLY

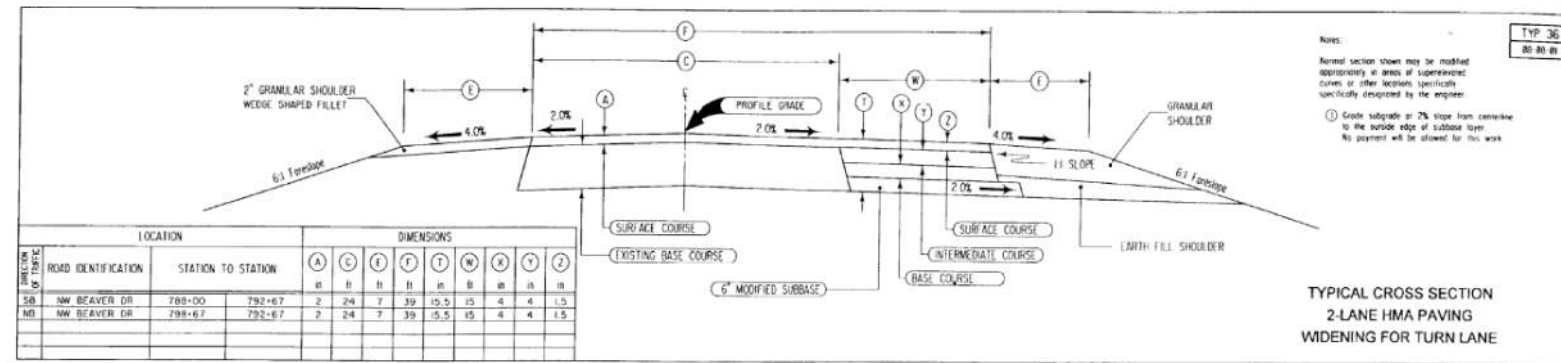


TYPICAL SECTION
 NW 106TH AVENUE - CURB AND GUTTER

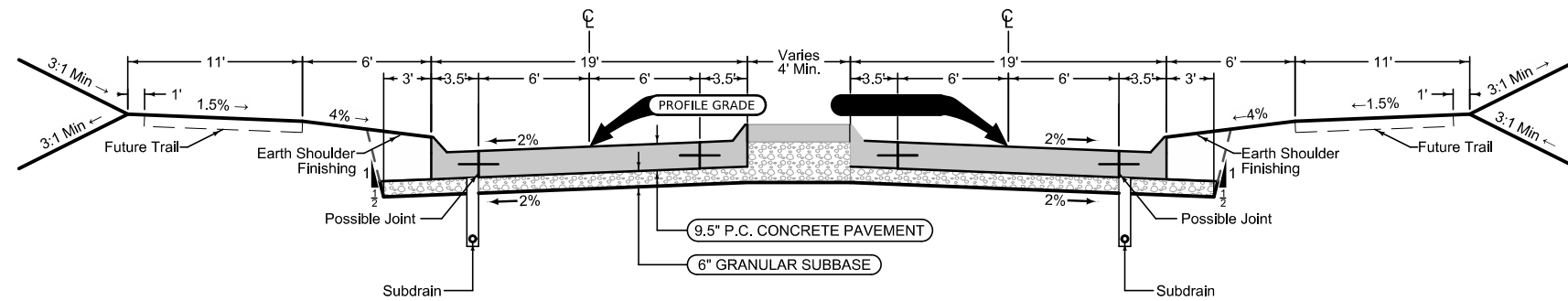


TYPICAL SECTION
 NW 106TH AVENUE - RURAL SECTION
 STA. 788+29.93 TO 790+38.16

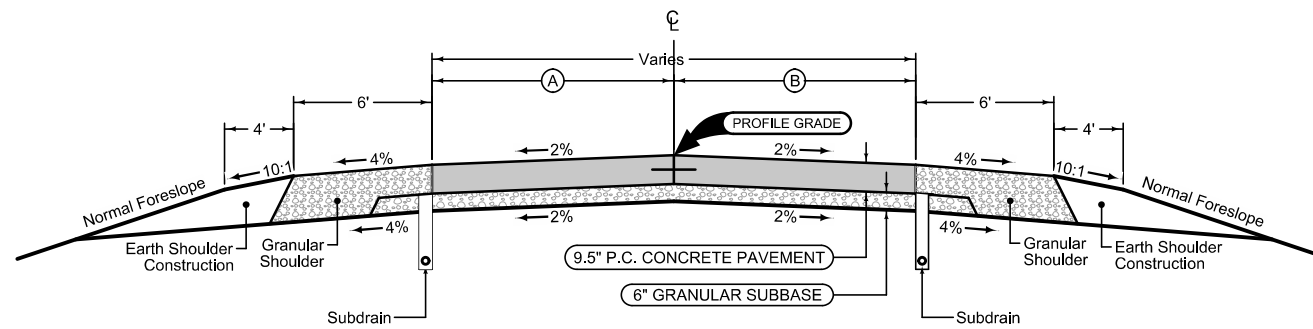
STATION TO STATION	(A) Feet	(B) Feet
788+29.93	790+38.16	20.1'-22'
		17.5'-22'



TYPICAL SECTION
NW BEAVER DRIVE - EXISTING TYPICAL
FOR INFORMATION ONLY

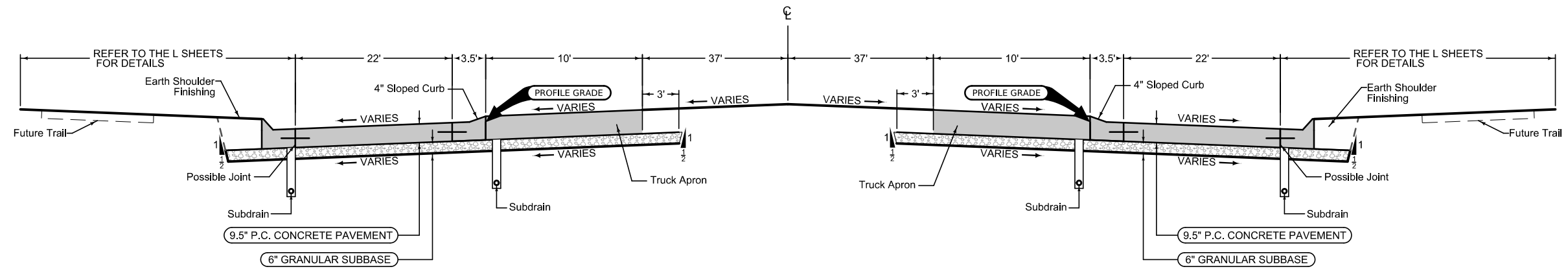


TYPICAL SECTION
NW BEAVER DRIVE - CURB AND GUTTER

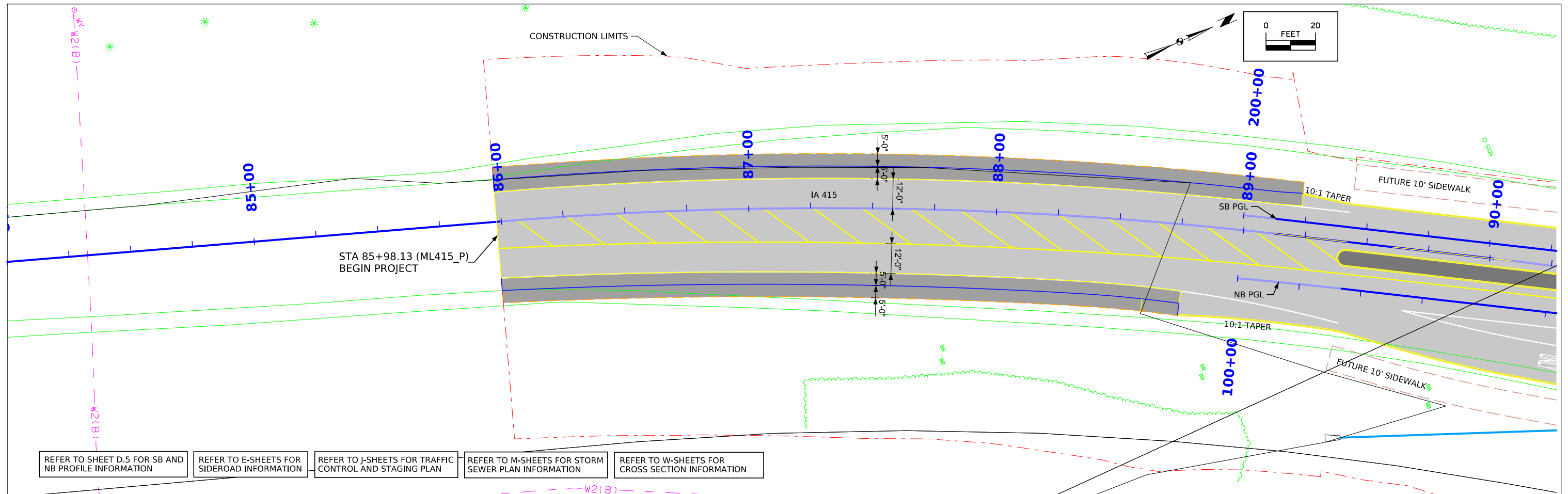


TYPICAL SECTION
NW BEAVER DRIVE - RURAL SECTION
STA. 796+38.90 TO 797+85.46

STATION TO STATION	(A) Feet	(B) Feet
796+38.90 - 797+85.46	20.2' - 13'	20.9' - 13'



TYPICAL SECTION
IA 415 AND NW 106TH AVENUE/NW BEAVER DRIVE
SINGLE LANE ROUNDABOUT



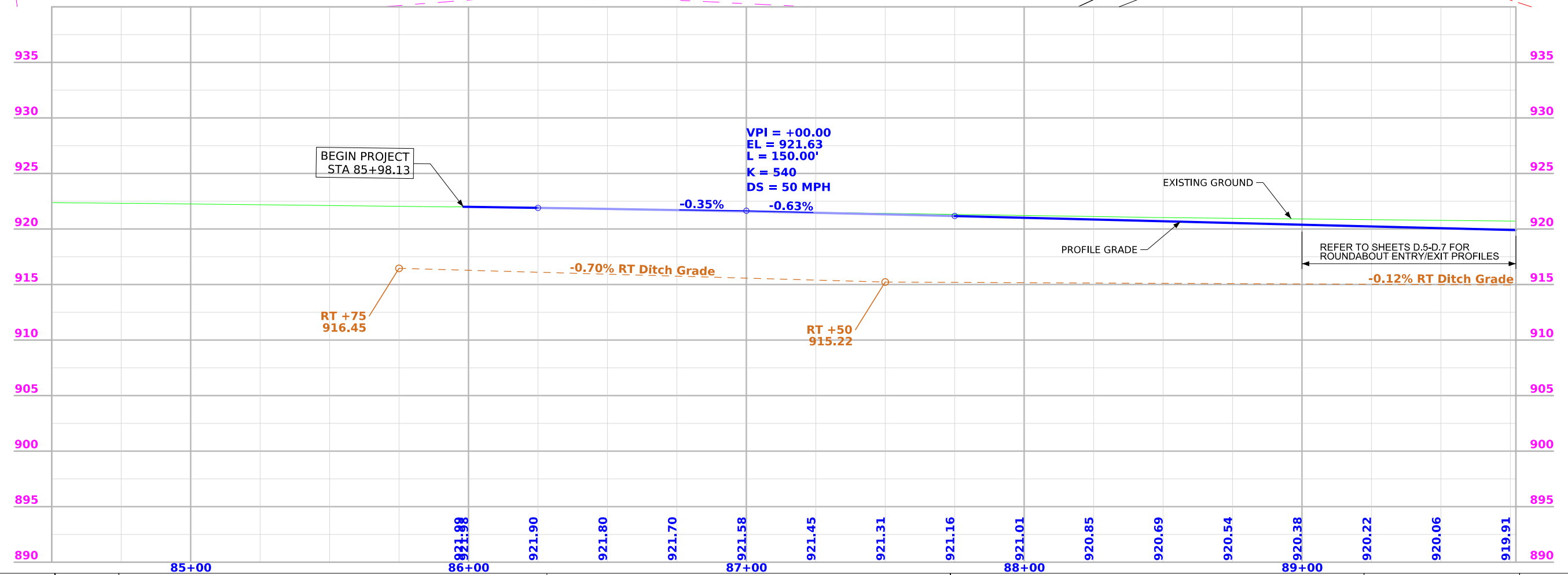
REFER TO SHEET D.5 FOR SB AND NB PROFILE INFORMATION

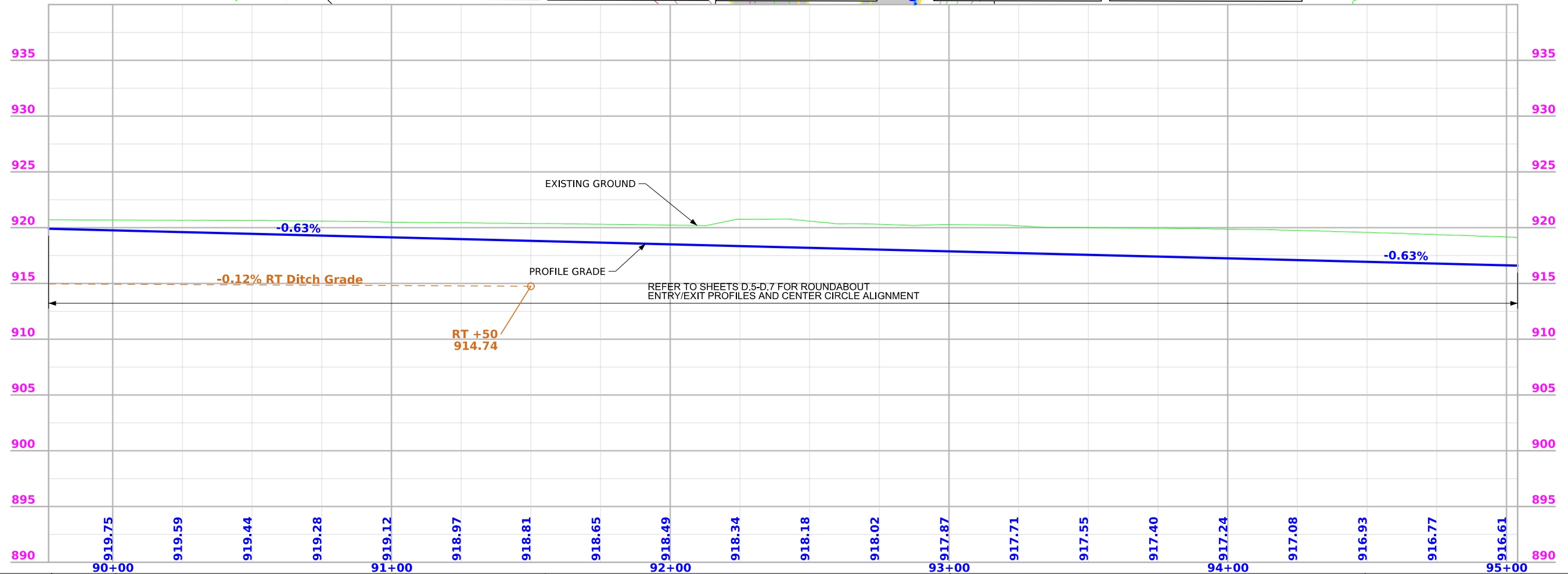
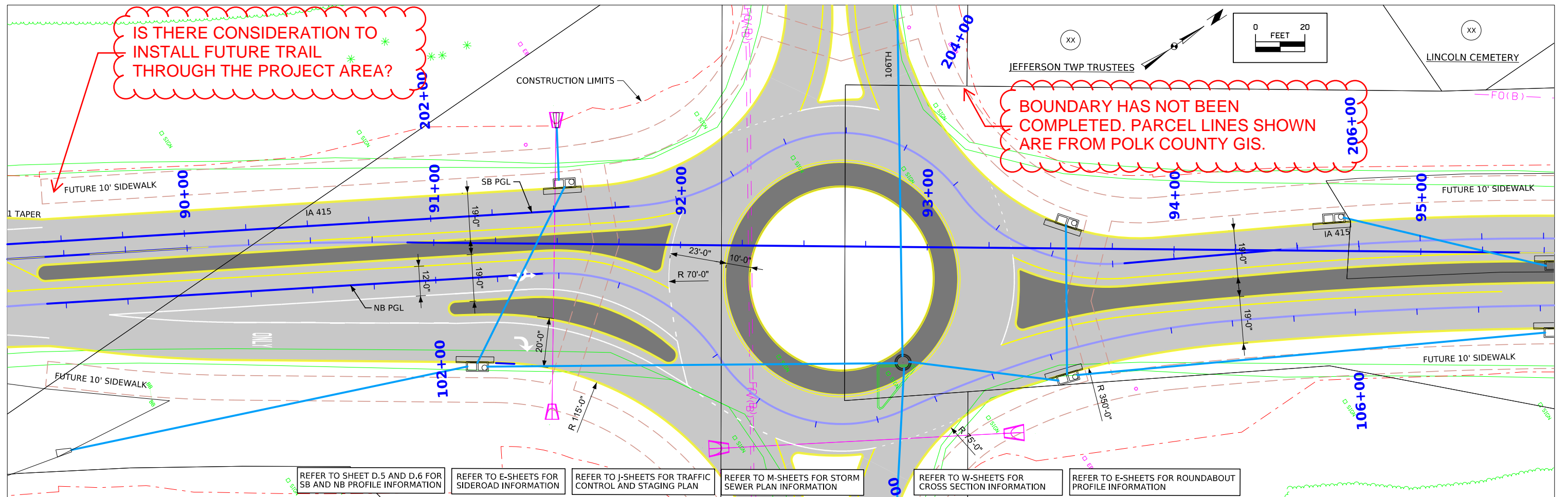
REFER TO E-SHEETS FOR SIDEROAD INFORMATION

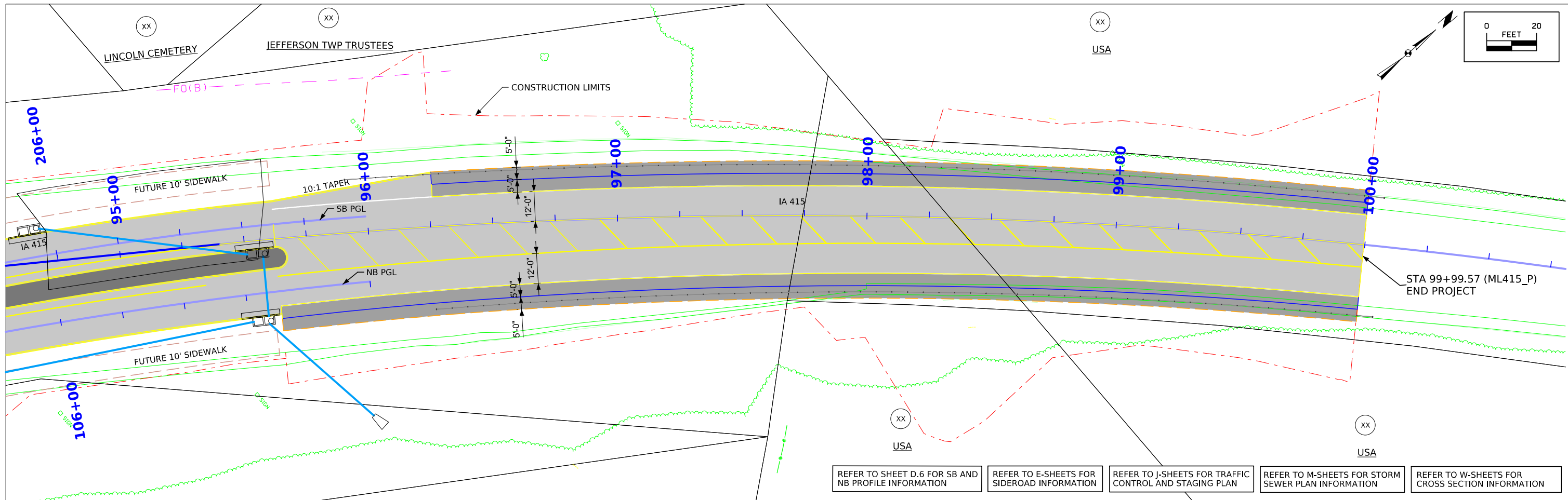
REFER TO J-SHEETS FOR TRAFFIC CONTROL AND STAGING PLAN

REFER TO M-SHEETS FOR STORM SEWER PLAN INFORMATION

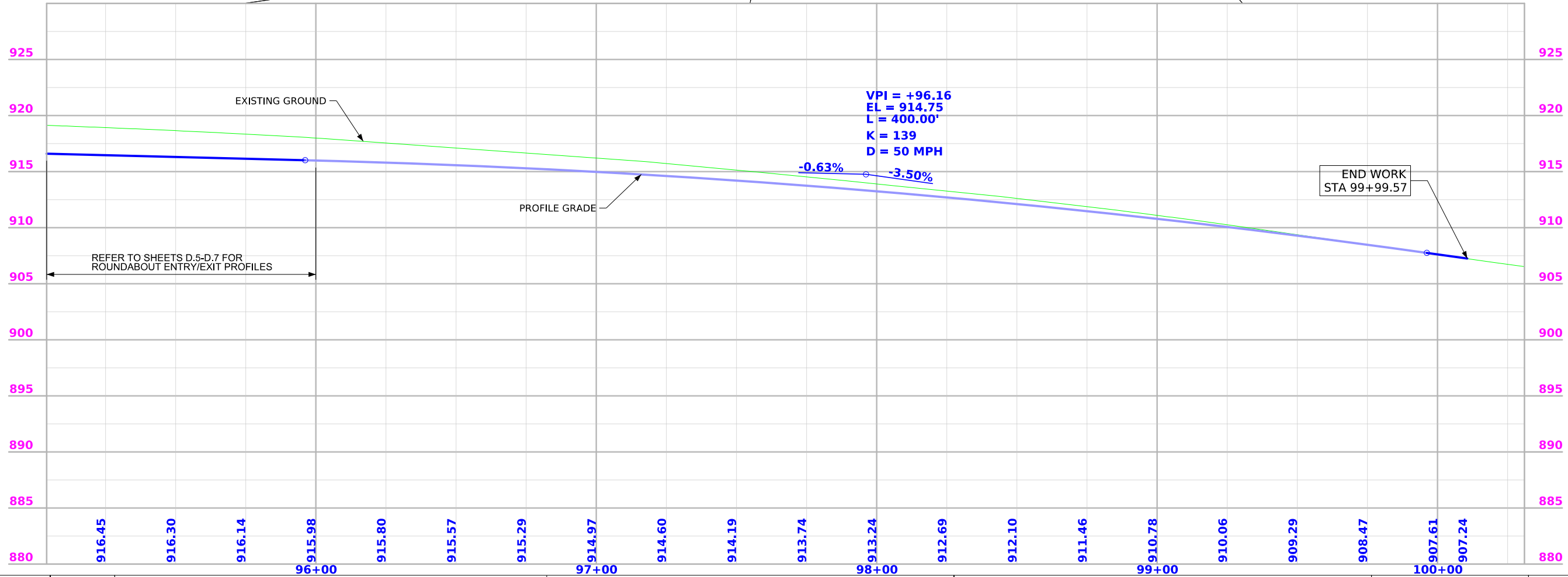
REFER TO W-SHEETS FOR CROSS SECTION INFORMATION

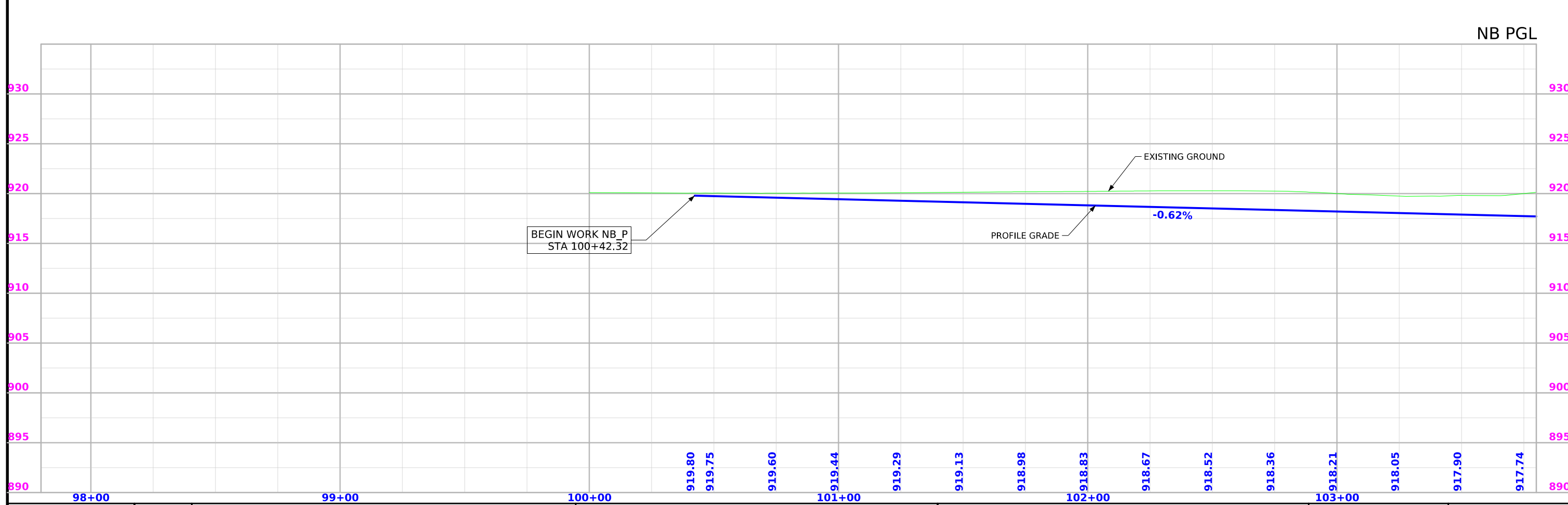
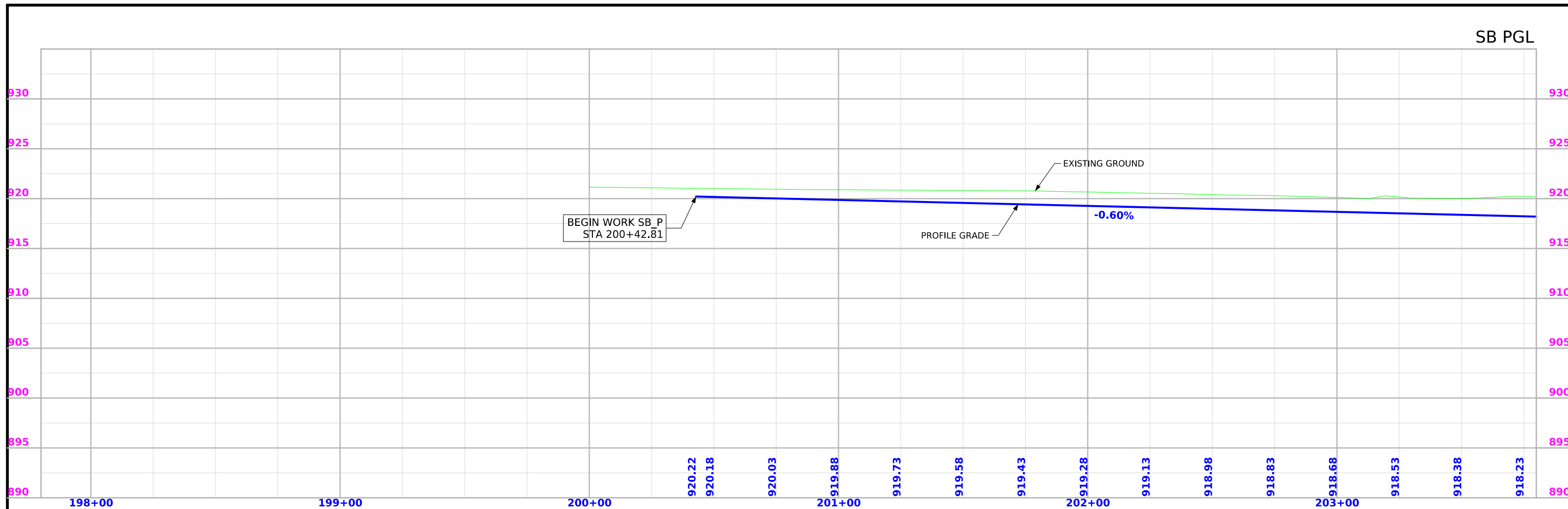




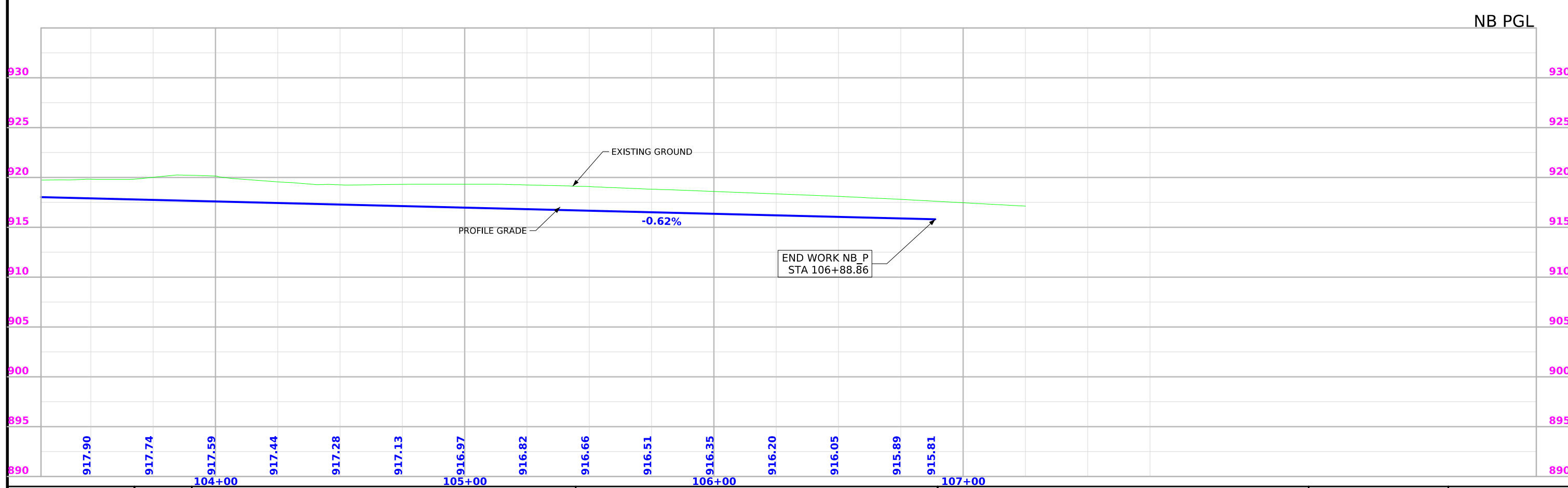
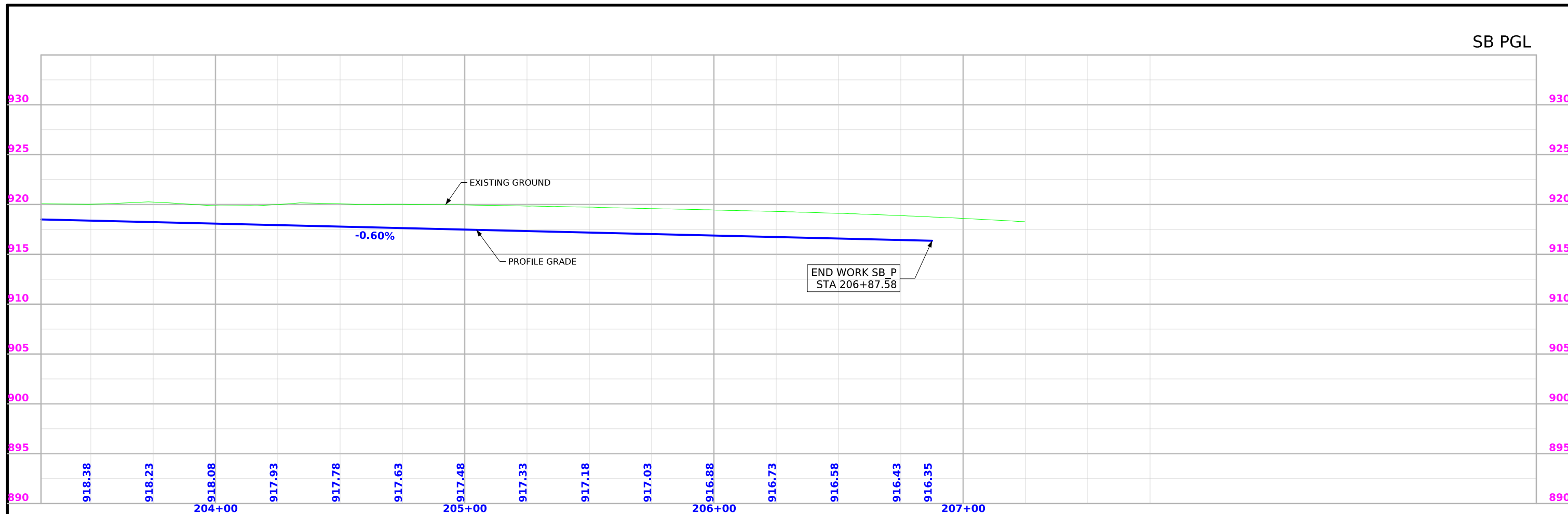


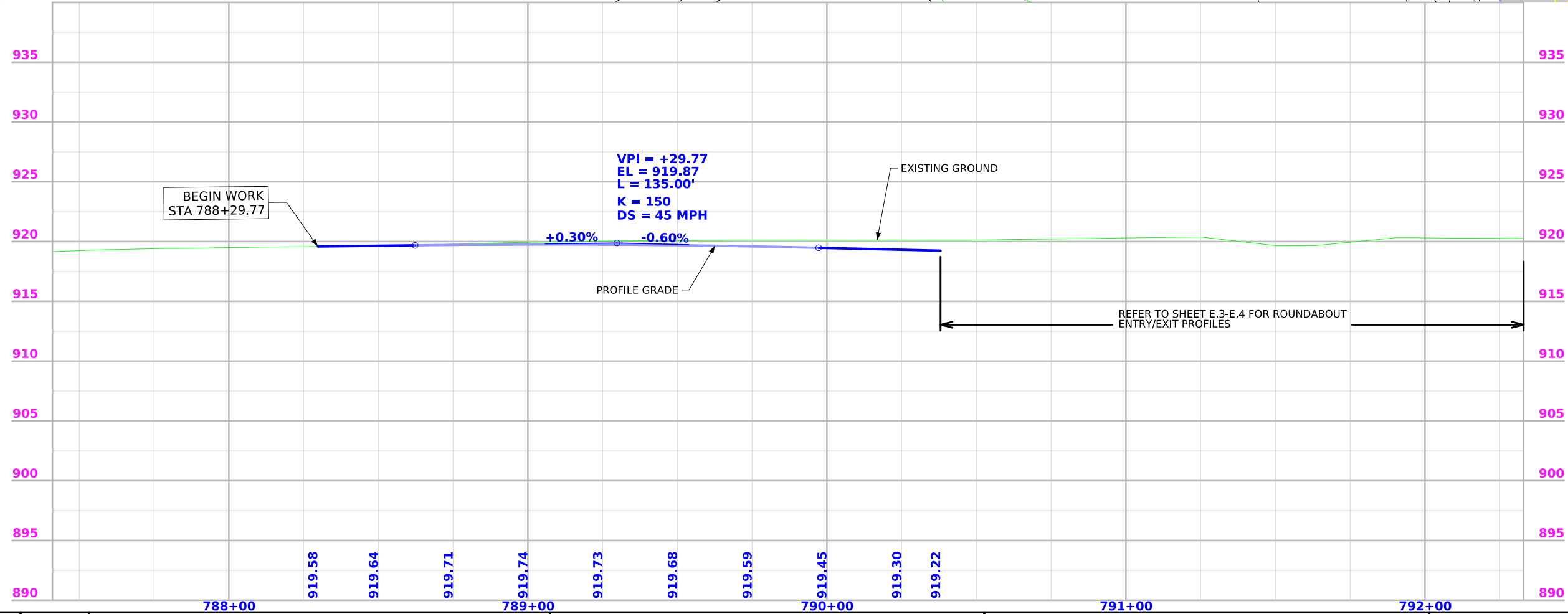
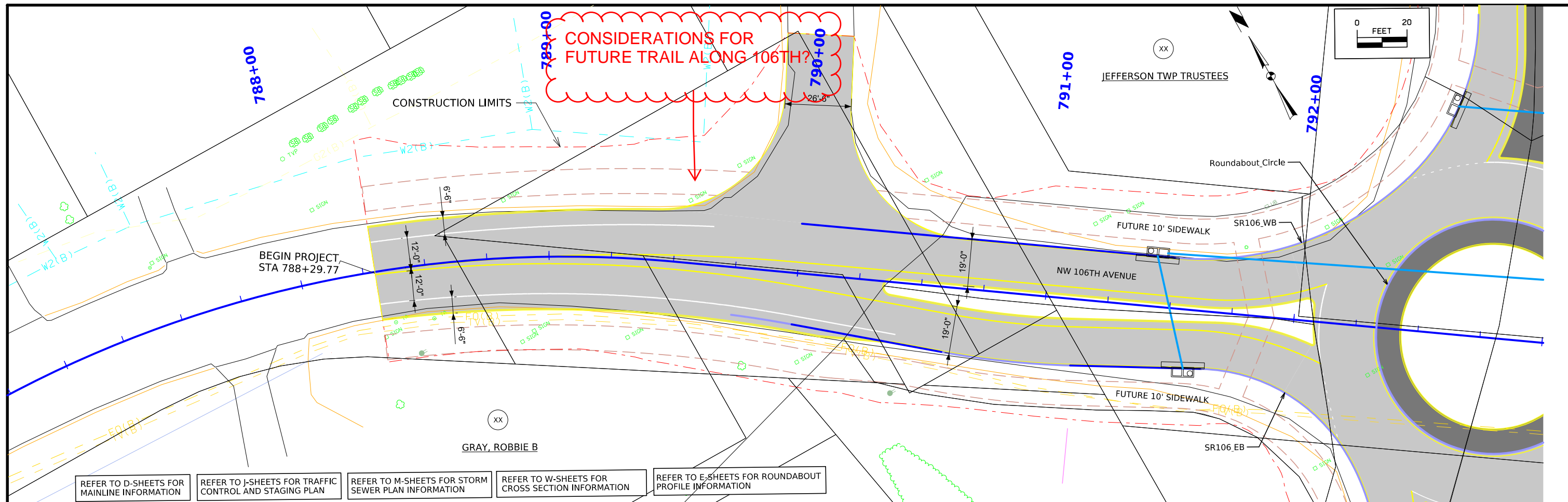
REFER TO SHEET D.6 FOR SB AND NB PROFILE INFORMATION REFER TO E-SHEETS FOR SIDEROAD INFORMATION REFER TO J-SHEETS FOR TRAFFIC CONTROL AND STAGING PLAN REFER TO M-SHEETS FOR STORM SEWER PLAN INFORMATION REFER TO W-SHEETS FOR CROSS SECTION INFORMATION

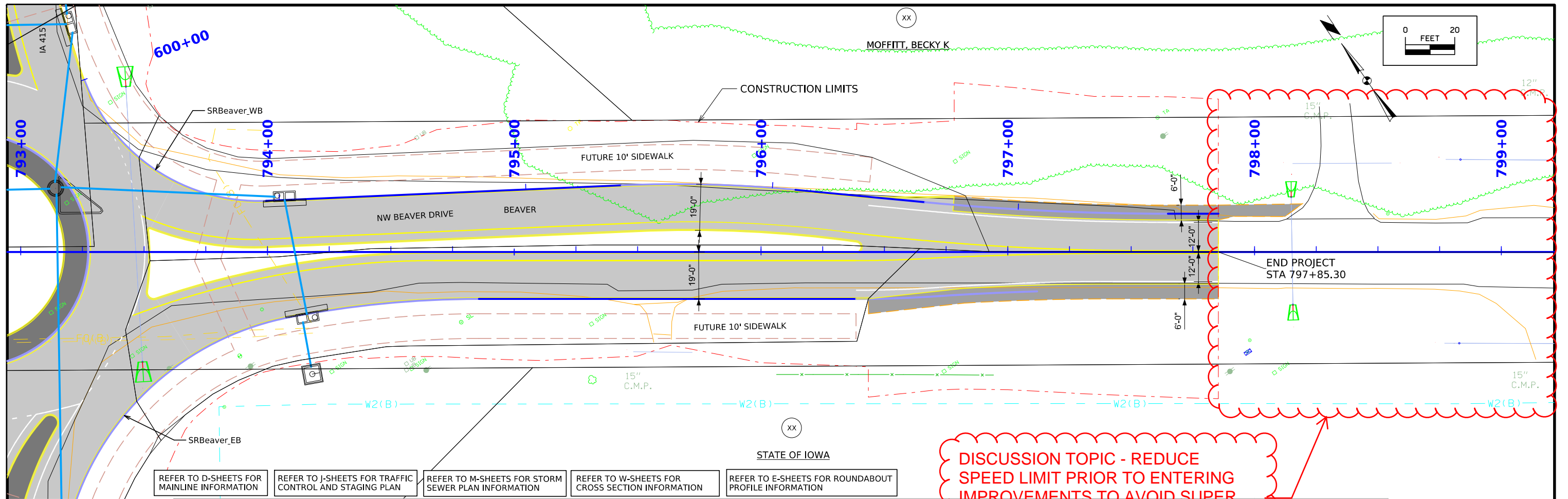




FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER HSIPX-415-1(086)--3L-77	SHEET NUMBER D.5	REVISED
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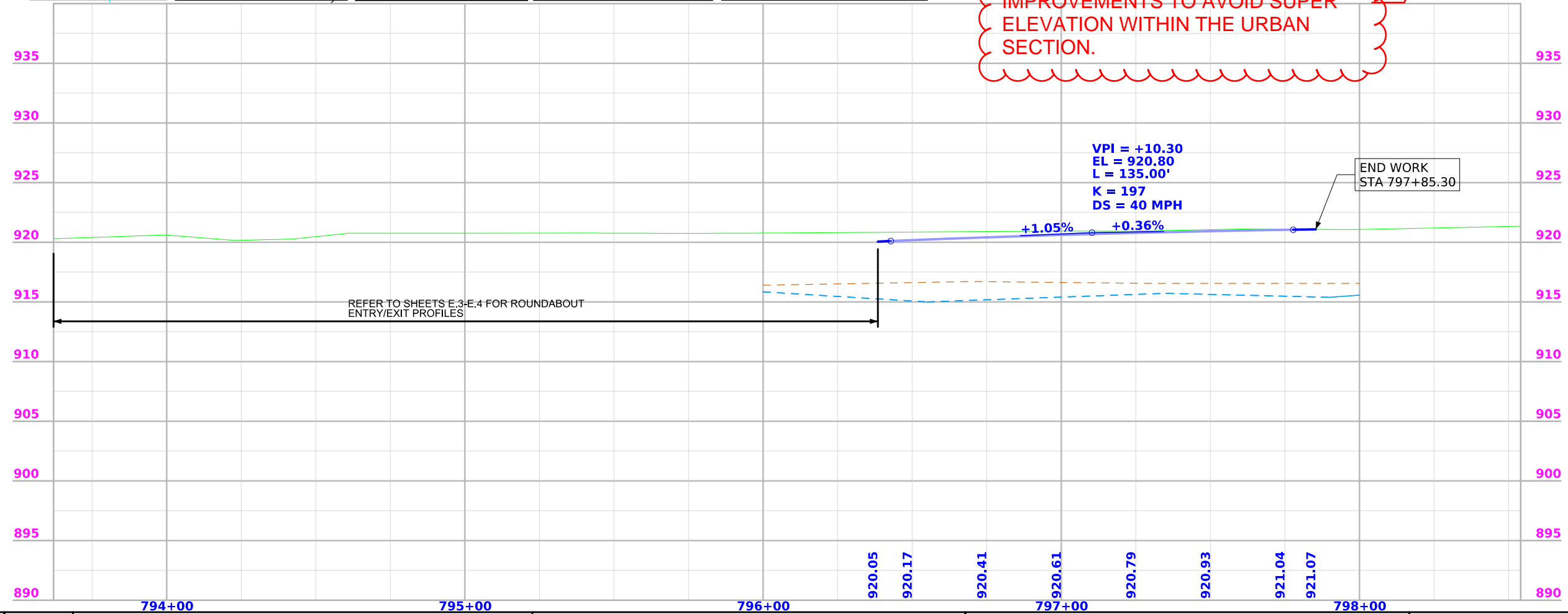


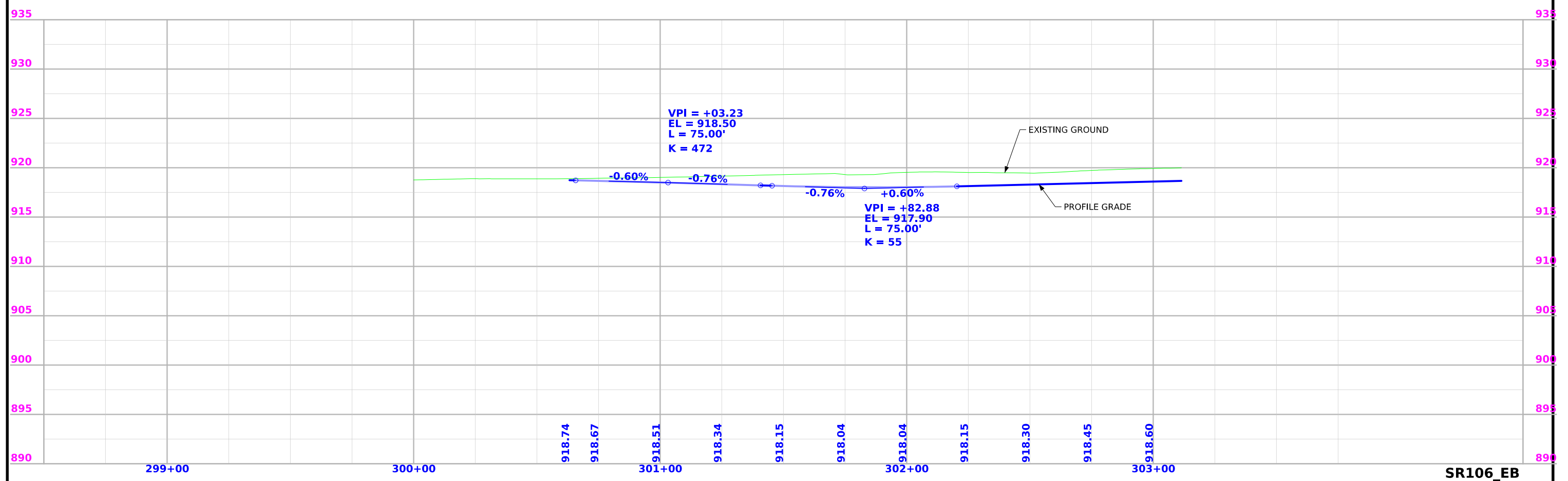
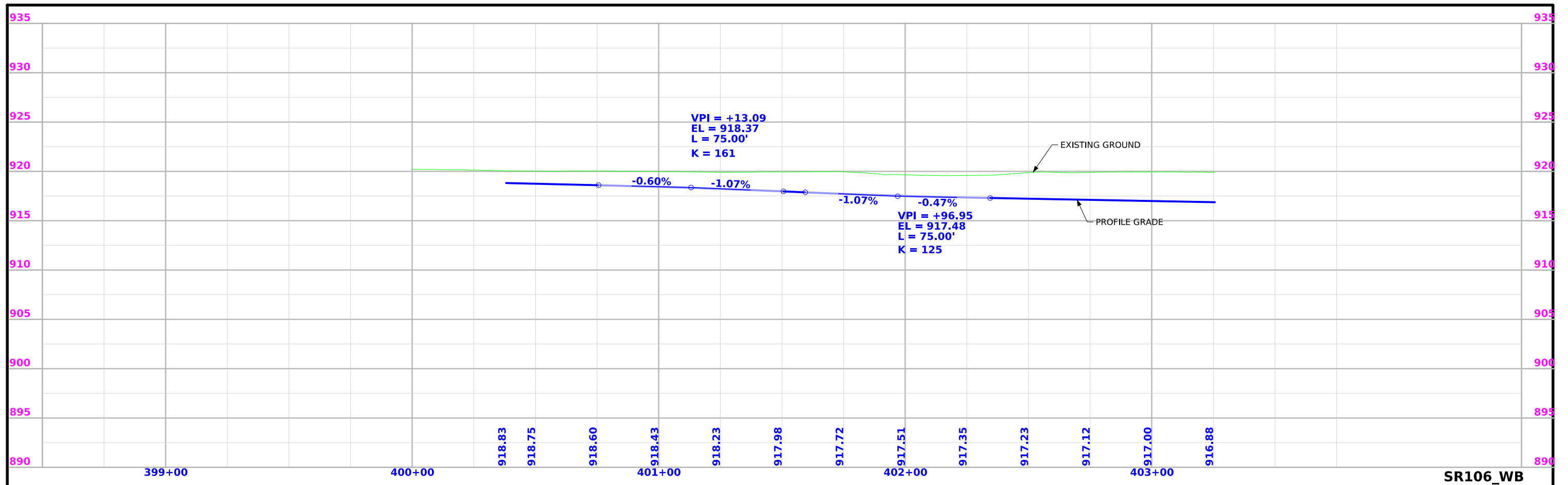




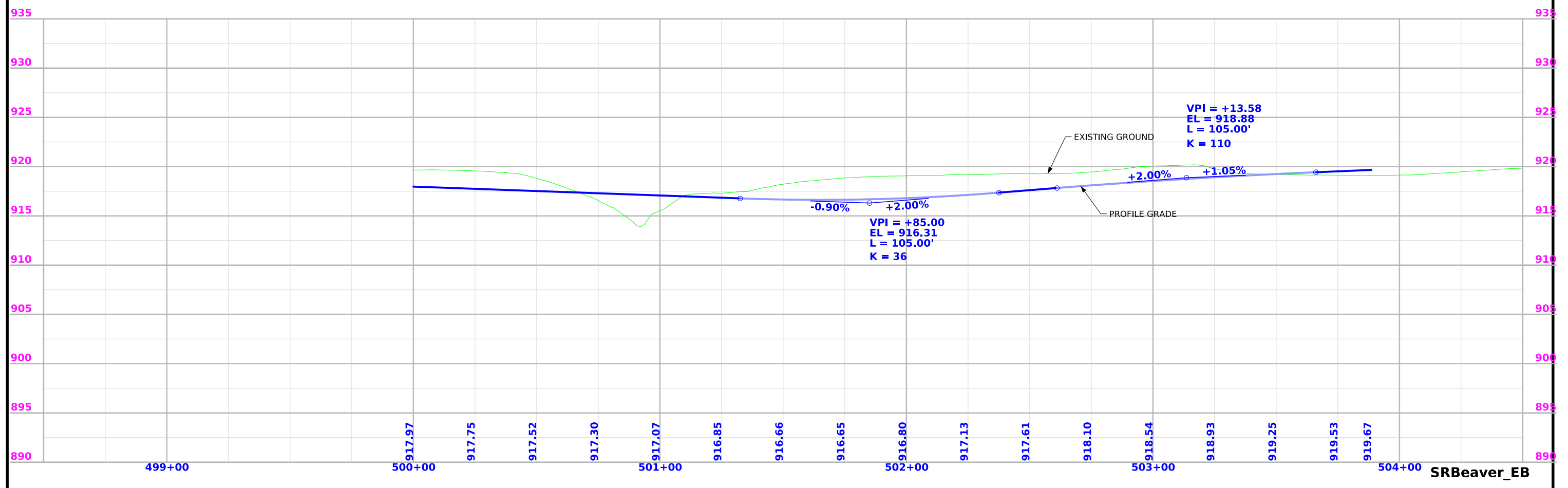
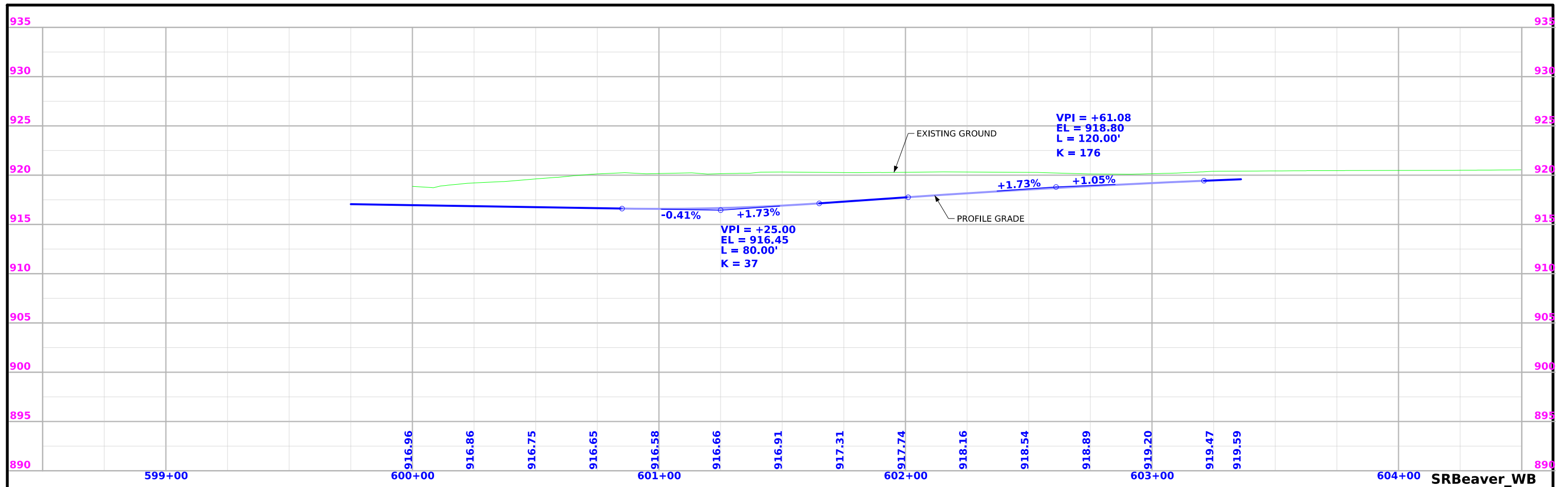
- REFER TO D-SHEETS FOR MAINLINE INFORMATION
- REFER TO J-SHEETS FOR TRAFFIC CONTROL AND STAGING PLAN
- REFER TO M-SHEETS FOR STORM SEWER PLAN INFORMATION
- REFER TO W-SHEETS FOR CROSS SECTION INFORMATION
- REFER TO E-SHEETS FOR ROUNDABOUT PROFILE INFORMATION

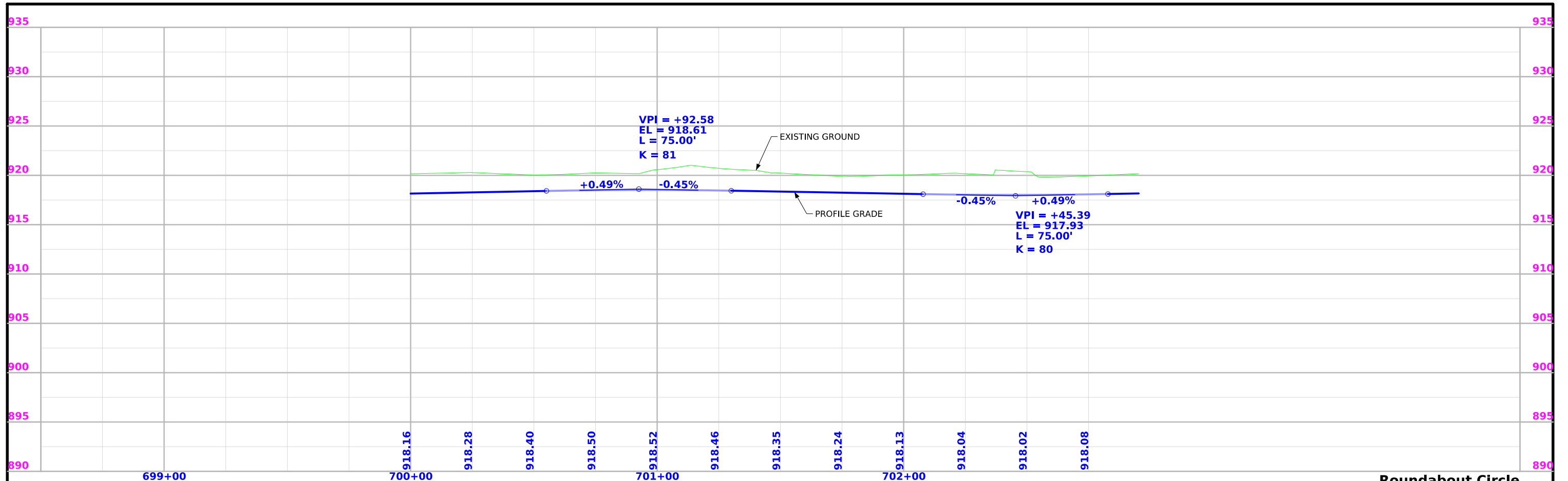
DISCUSSION TOPIC - REDUCE SPEED LIMIT PRIOR TO ENTERING IMPROVEMENTS TO AVOID SUPER ELEVATION WITHIN THE URBAN SECTION.

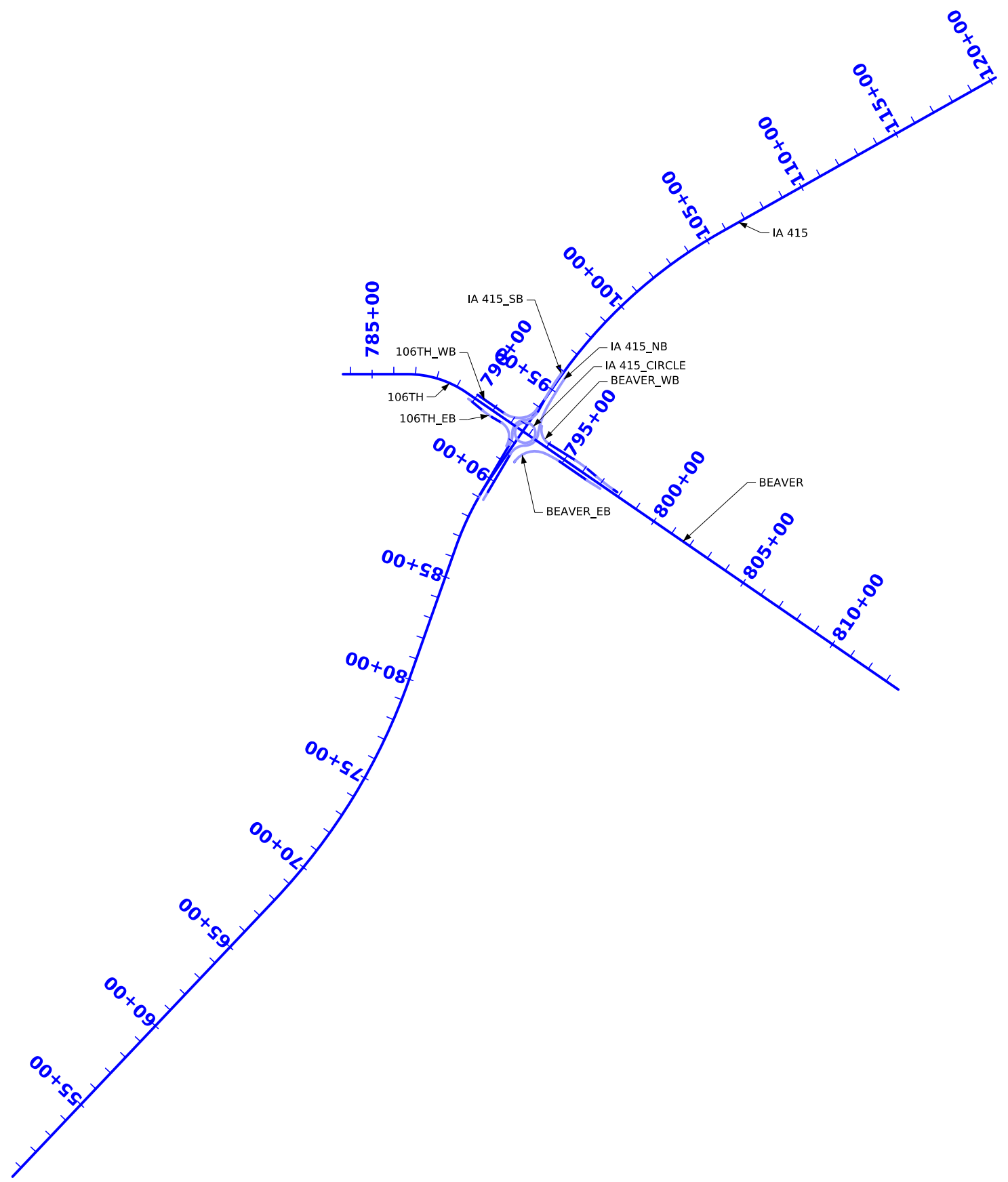
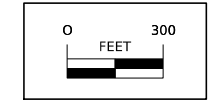


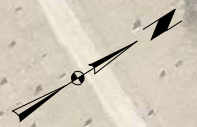
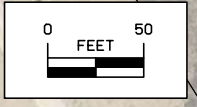


FILE NO.	ENGLISH	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER E.3
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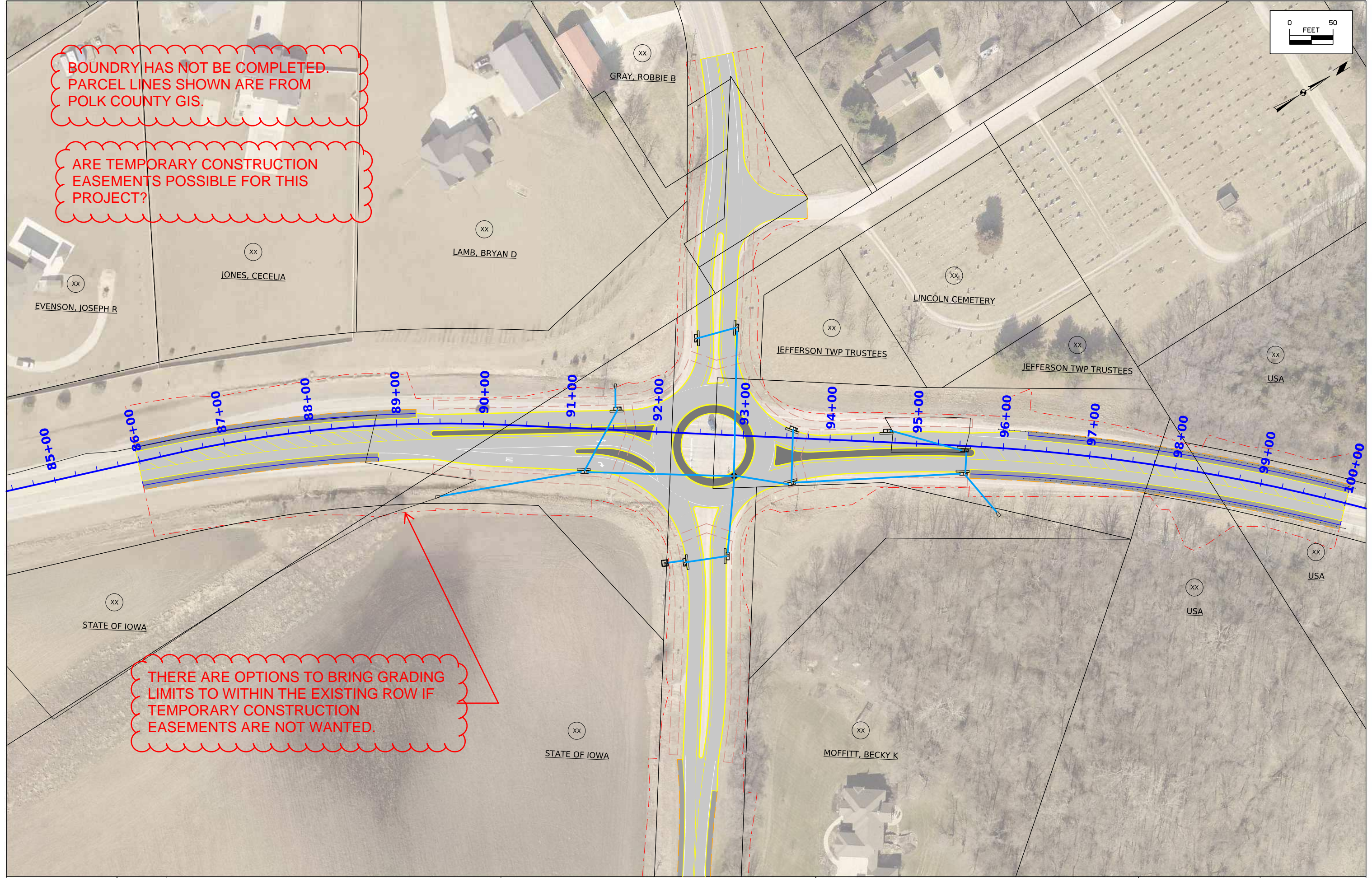


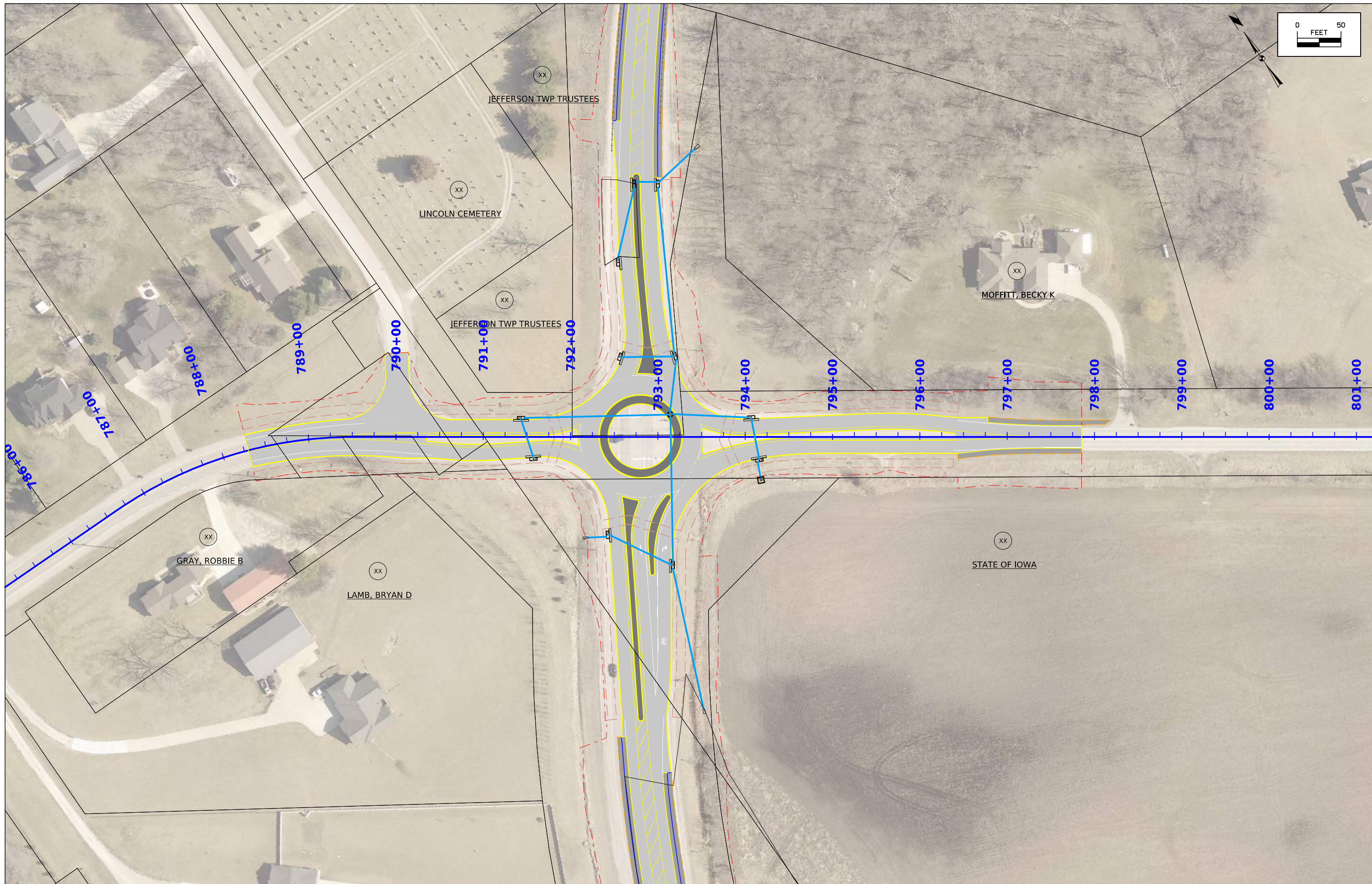


BOUNDARY HAS NOT BE COMPLETED.
PARCEL LINES SHOWN ARE FROM
POLK COUNTY GIS.

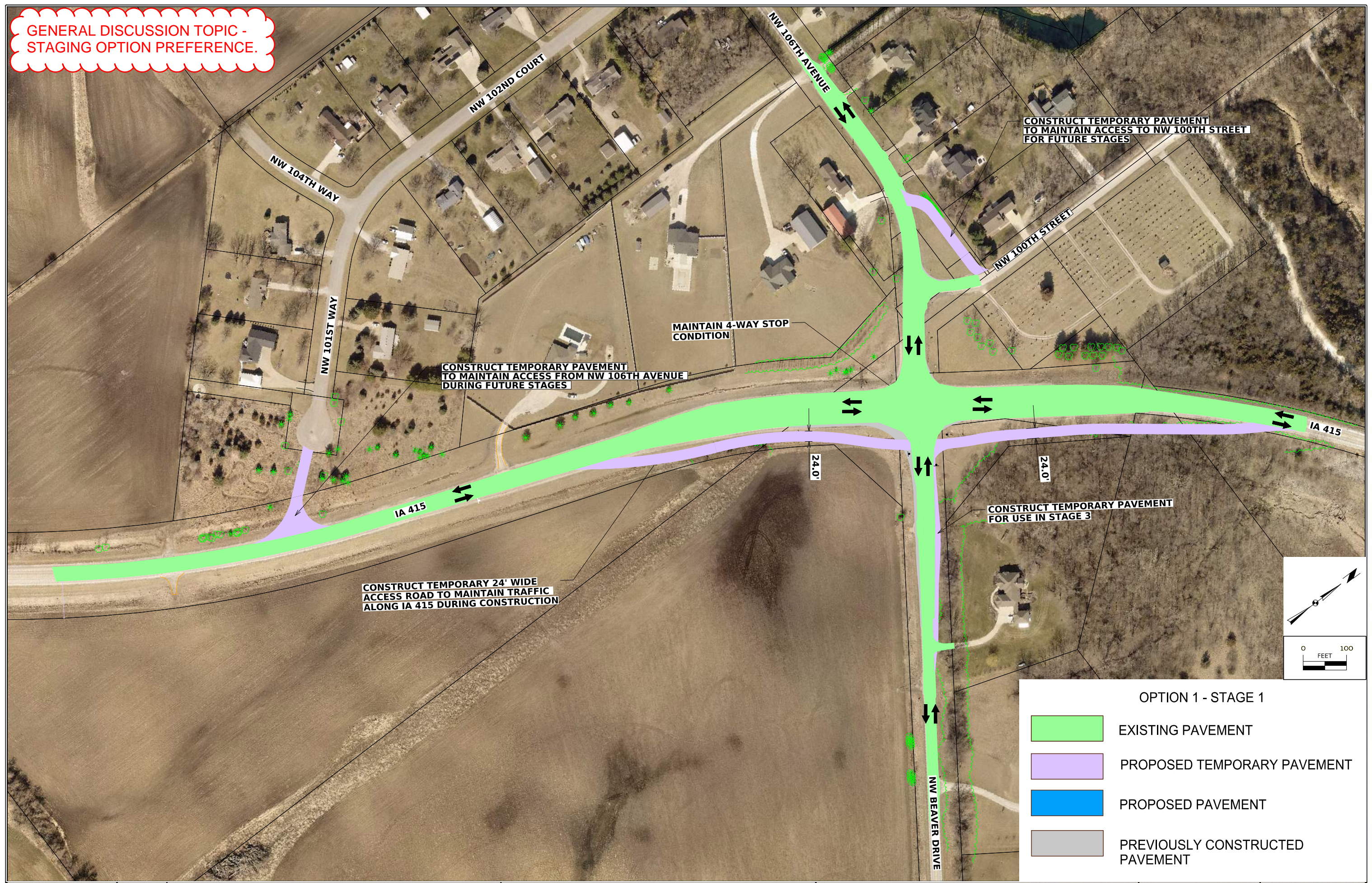
ARE TEMPORARY CONSTRUCTION
EASEMENTS POSSIBLE FOR THIS
PROJECT?

THERE ARE OPTIONS TO BRING GRADING
LIMITS TO WITHIN THE EXISTING ROW IF
TEMPORARY CONSTRUCTION
EASEMENTS ARE NOT WANTED.





GENERAL DISCUSSION TOPIC - STAGING OPTION PREFERENCE.



OPTION 1 - STAGE 1

- EXISTING PAVEMENT
- PROPOSED TEMPORARY PAVEMENT
- PROPOSED PAVEMENT
- PREVIOUSLY CONSTRUCTED PAVEMENT



NW 106TH AVENUE CONNECTION TO IA 415 IS CLOSED. ACCESS TO IA 415 IS MADE THROUGH NW 102ND COURT AND NW 101ST WAY

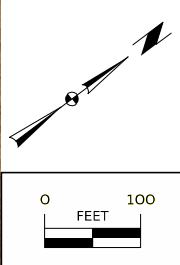
RE-ROUTE TRAFFIC ALONG IA 415 TO USE TEMPORARY ROADWAY

RE-ROUTE TRAFFIC ALONG IA 415 TO USE TEMPORARY ROADWAY

3-WAY STOP CONTROLLED INTERSECTION DURING THIS STAGE

OPTION 1 - STAGE 2

- EXISTING PAVEMENT
- PROPOSED TEMPORARY PAVEMENT
- PROPOSED PAVEMENT
- PREVIOUSLY CONSTRUCTED PAVEMENT





MAINTAIN 4-WAY STOP DURING THIS STAGE

ROUNDBOUT BYPASS LANE WILL BE CLOSED DURING THIS STAGE

PAVED MEDIAN SPLITTER WILL NOT BE CONSTRUCTED IN THIS STAGE TO ALLOW FOR HEAD-TO-HEAD TRAFFIC DURING STAGE 4

TEMPORARY PAVEMENT WILL ALLOW TWO 12' TRAVEL LANES WITH A 6' WORK ZONE.

OPTION 1 - STAGE 3

- EXISTING PAVEMENT
- PROPOSED TEMPORARY PAVEMENT
- PROPOSED PAVEMENT
- PREVIOUSLY CONSTRUCTED PAVEMENT



**INTERSECTION TO MAINTAIN
4-WAY STOP DURING THIS
STAGE**

**BYPASS LANE IS OPEN
TO TRAFFIC**

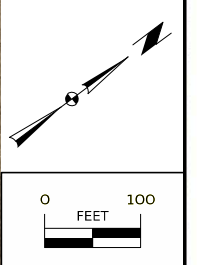
**TEMPORARY PAVEMENT WILL BE USED
IN THE RURAL SECTION OF THE IMPROVEMENTS
TO HEAD-TO-HEAD TRAFFIC ALONG NW BEAVER
DRIVE**

OPTION 1 - STAGE 4

- EXISTING PAVEMENT
- PROPOSED TEMPORARY PAVEMENT
- PROPOSED PAVEMENT
- PREVIOUSLY CONSTRUCTED PAVEMENT



CONSTRUCT PAVED SPLITTER MEDIAN
CURB AND GUTTER OR DOWELED ON
SPLITTER MEDIAN



OPTION 1 - STAGE 5

- EXISTING PAVEMENT
- PROPOSED TEMPORARY PAVEMENT
- PROPOSED PAVEMENT
- PREVIOUSLY CONSTRUCTED PAVEMENT



NW 106TH AVENUE CLOSED DURING THIS STAGE. ACCESS TO IA 415 WILL BE MAINTAINED THROUGH NW 102ND CT. AND NW 101ST WAY.

CONSTRUCT TEMPORARY PAVEMENT TO MAINTAIN ACCESS TO NW 100TH STREET

ROUNDAABOUT CENTER WILL BE PAVED THROUGH TO ALLOW HEAD-TO-HEAD TRAFFIC FOR LATER STAGES

PAVED SPLITTER MEDIAN WILL NOT BE CONSTRUCTED TO MAINTAIN HEAD-TO-HEAD TRAFFIC IN LATER STAGES

USE TEMPORARY PAVEMENT TO MAINTAIN HEAD-TO-HEAD TRAFFIC ALONG IA 415. TEMPORARY PAVEMENT WILL ALLOW TWO 12' TRAVEL LANES WITH A 6' WORK ZONE.

INTERSECTION WILL BE A 3-WAY STOP DURING THIS STAGE

USE TEMPORARY PAVEMENT TO MAINTAIN HEAD-TO-HEAD TRAFFIC ALONG IA 415. TEMPORARY PAVEMENT WILL ALLOW TWO 12' TRAVEL LANES WITH A 6' WORK ZONE.

OPTION 2 - STAGE 1

- EXISTING PAVEMENT
- PROPOSED TEMPORARY PAVEMENT
- PROPOSED PAVEMENT
- PREVIOUSLY CONSTRUCTED PAVEMENT



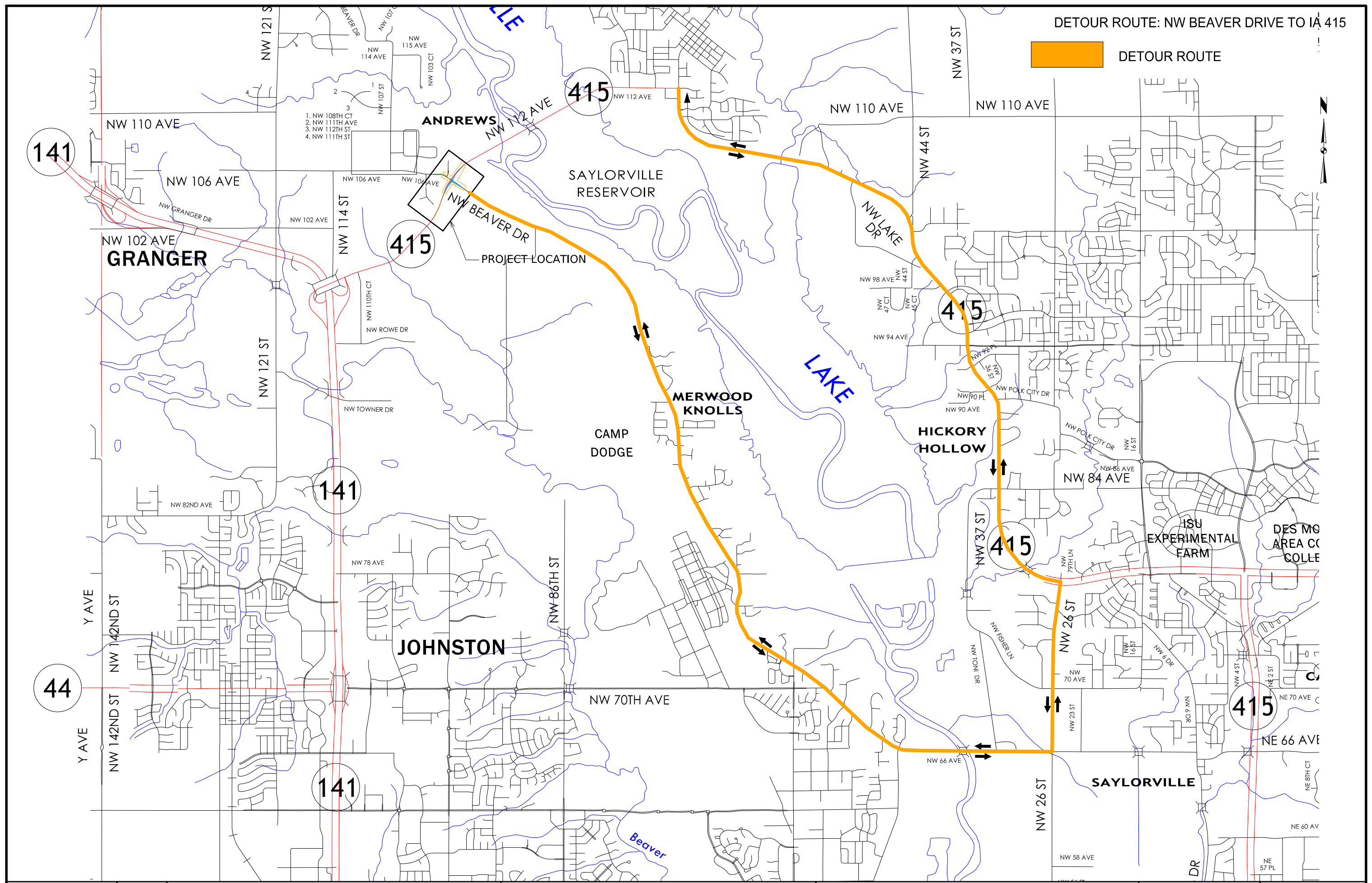
OPTION 2 - STAGE 2

- EXISTING PAVEMENT
- PROPOSED TEMPORARY PAVEMENT
- PROPOSED PAVEMENT
- PREVIOUSLY CONSTRUCTED PAVEMENT

DETOUR ROUTE: NW BEAVER DRIVE TO IA 415

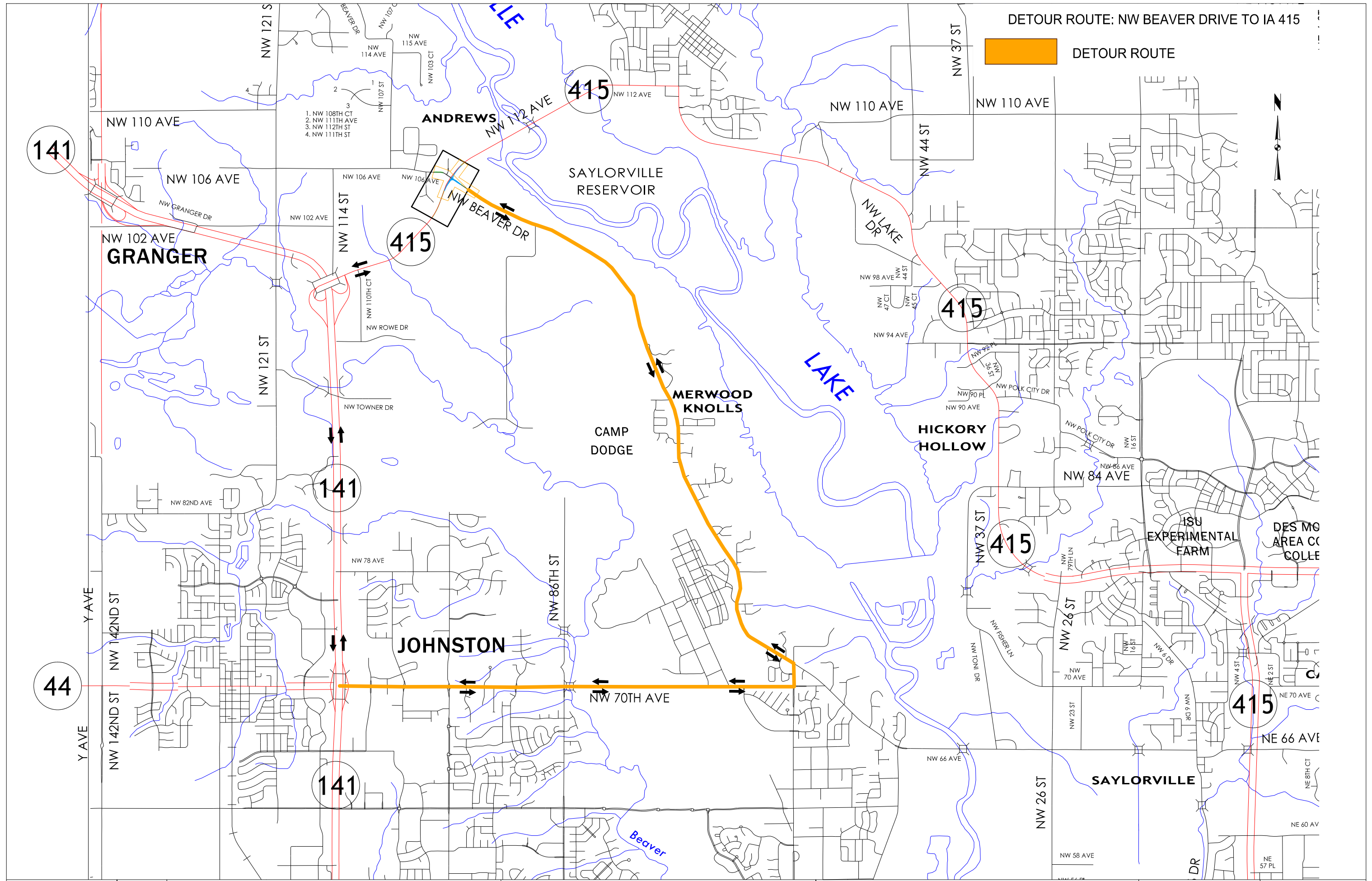


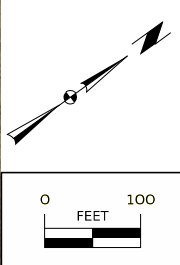
DETOUR ROUTE



DETOUR ROUTE: NW BEAVER DRIVE TO IA 415

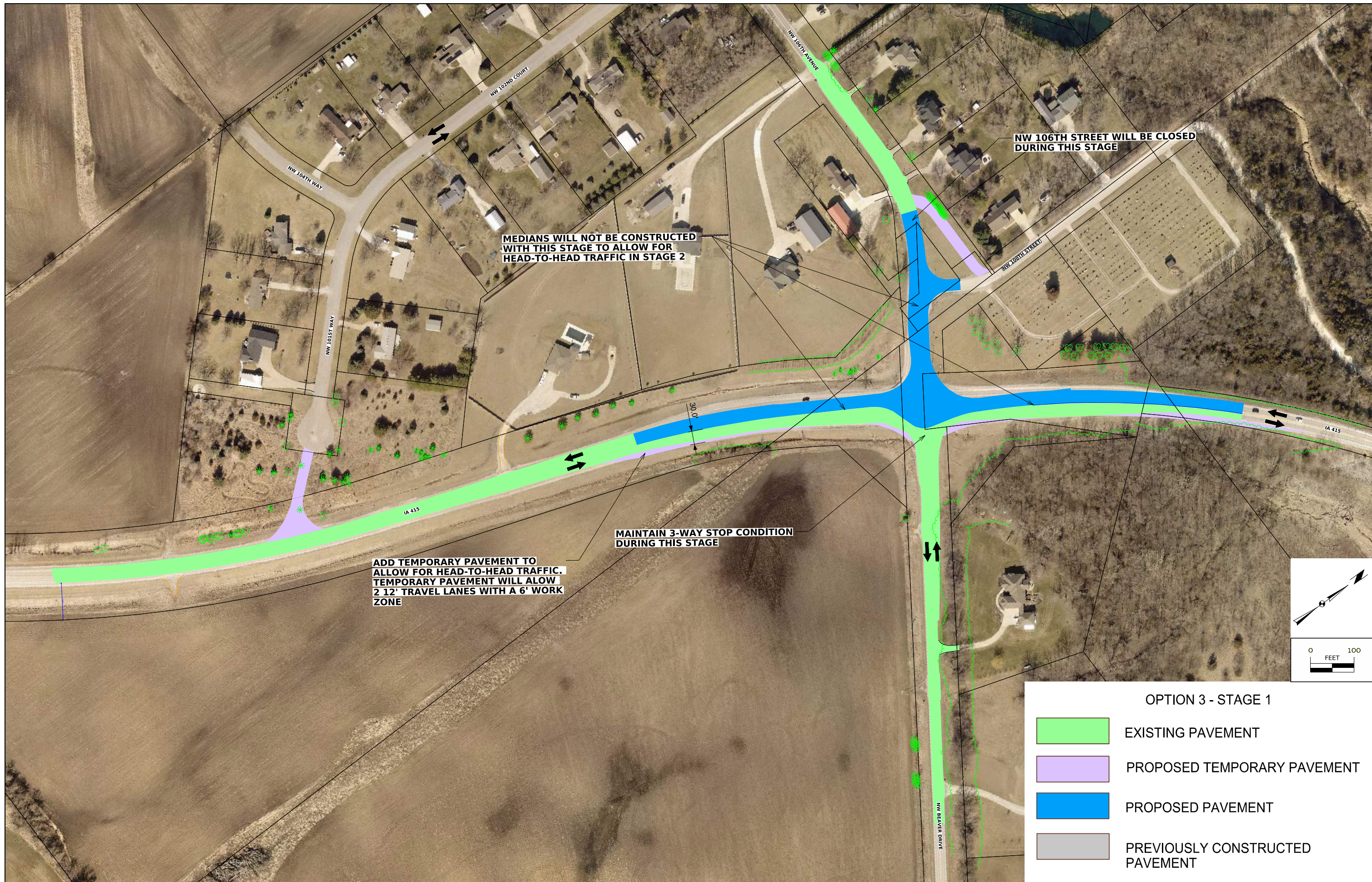
 DETOUR ROUTE





OPTION 2 - STAGE 3

- EXISTING PAVEMENT
- PROPOSED TEMPORARY PAVEMENT
- PROPOSED PAVEMENT
- PREVIOUSLY CONSTRUCTED PAVEMENT



NW 106TH STREET WILL BE CLOSED DURING THIS STAGE

MEDIANS WILL NOT BE CONSTRUCTED WITH THIS STAGE TO ALLOW FOR HEAD-TO-HEAD TRAFFIC IN STAGE 2

ADD TEMPORARY PAVEMENT TO ALLOW FOR HEAD-TO-HEAD TRAFFIC. TEMPORARY PAVEMENT WILL ALLOW 2 12' TRAVEL LANES WITH A 6' WORK ZONE

MAINTAIN 3-WAY STOP CONDITION DURING THIS STAGE

OPTION 3 - STAGE 1

- EXISTING PAVEMENT
- PROPOSED TEMPORARY PAVEMENT
- PROPOSED PAVEMENT
- PREVIOUSLY CONSTRUCTED PAVEMENT



**MAINTAIN CLOSURE OF NW 106TH AVENUE.
LOCAL TRAFFIC WILL ACCESS IA 415 THROUGH
NW 101 WAY.**

**INSTALL TEMPORARY TRAFFIC SIGNALS
FOR THIS STAGE PER TC-216**

ONE-WAY TRAFFIC ALONG NW BEAVER DRIVE

OPTION 3 - STAGE 2

- EXISTING PAVEMENT
- PROPOSED TEMPORARY PAVEMENT
- PROPOSED PAVEMENT
- PREVIOUSLY CONSTRUCTED PAVEMENT



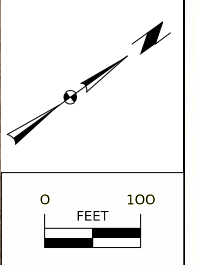
NW 106TH AVENUE CLOSED DURING THIS STAGE. LOCAL TRAFFIC WILL ACCESS IA 415 THROUGH NW 101 WAY

USE TEMPORARY SIGNALS FOR THIS STAGE PER TC-216

MAINTAIN ONE-WAY TRAFFIC ALONG NW BEAVER DRIVE

OPTION 3 - STAGE 3

- EXISTING PAVEMENT
- PROPOSED TEMPORARY PAVEMENT
- PROPOSED PAVEMENT
- PREVIOUSLY CONSTRUCTED PAVEMENT

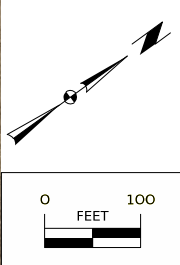


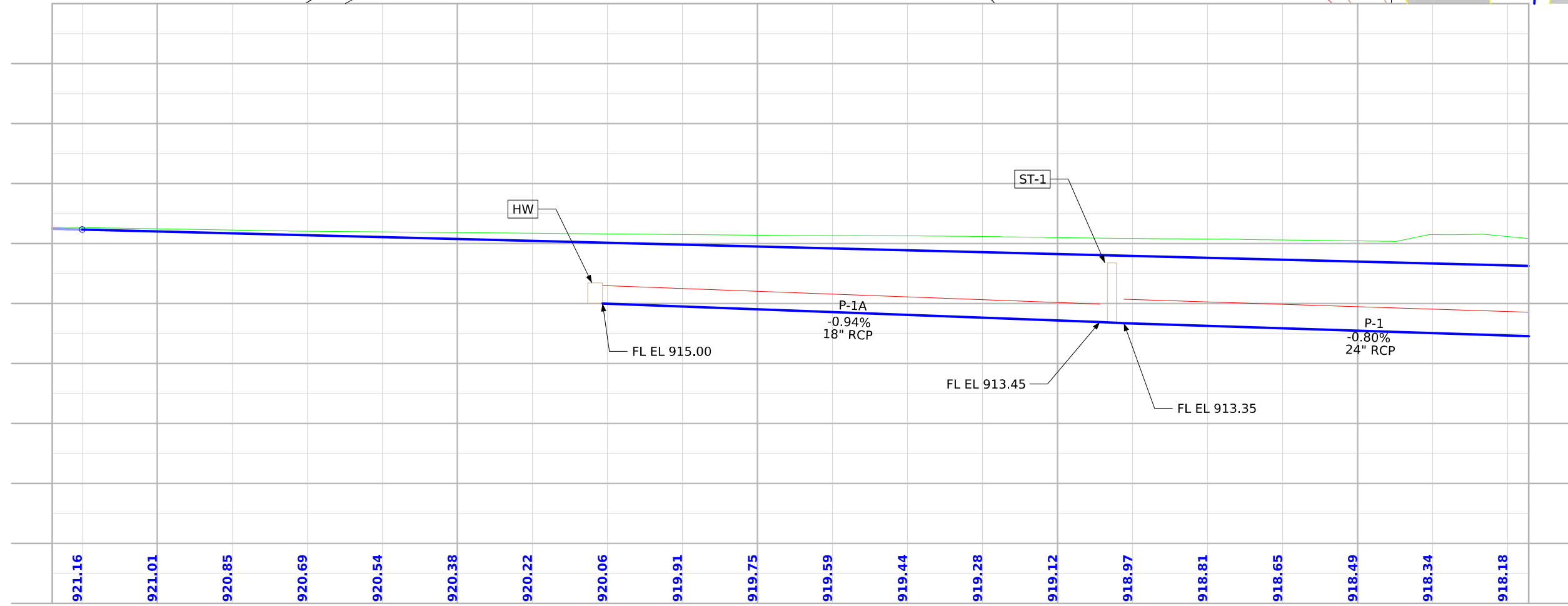
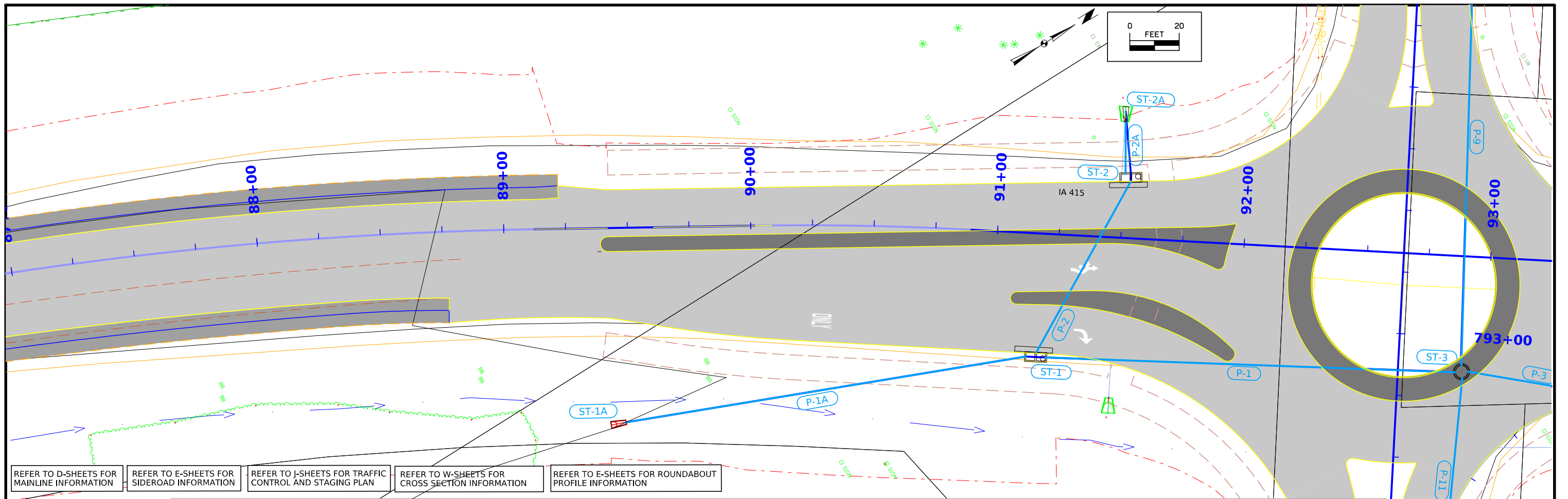


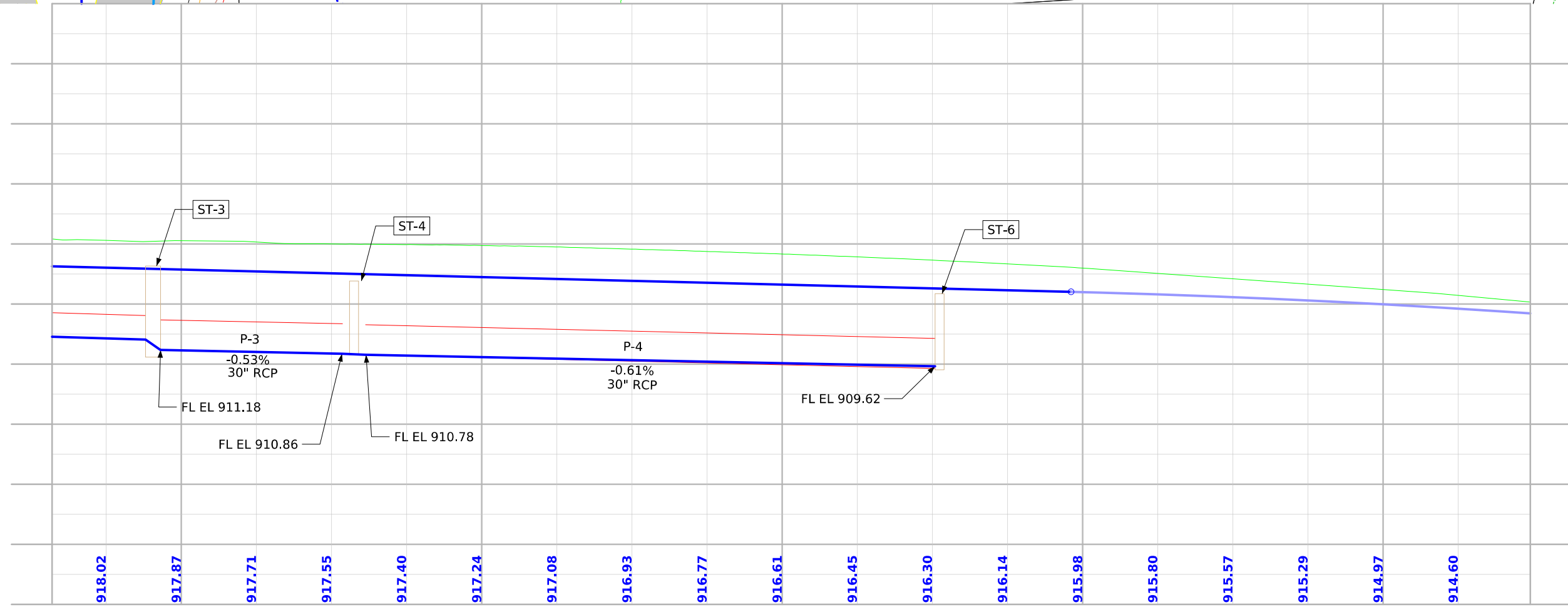
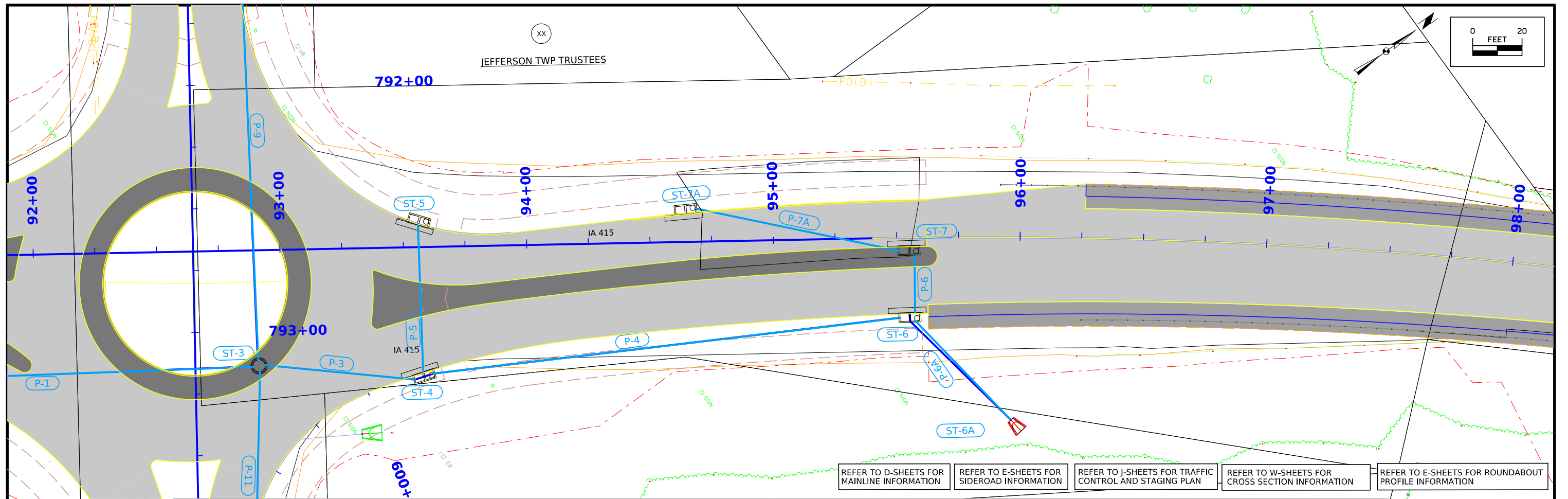
CONSTRUCT PAVED SPLITTER MEDIANS AND TRUCK APRON IN THIS STAGE

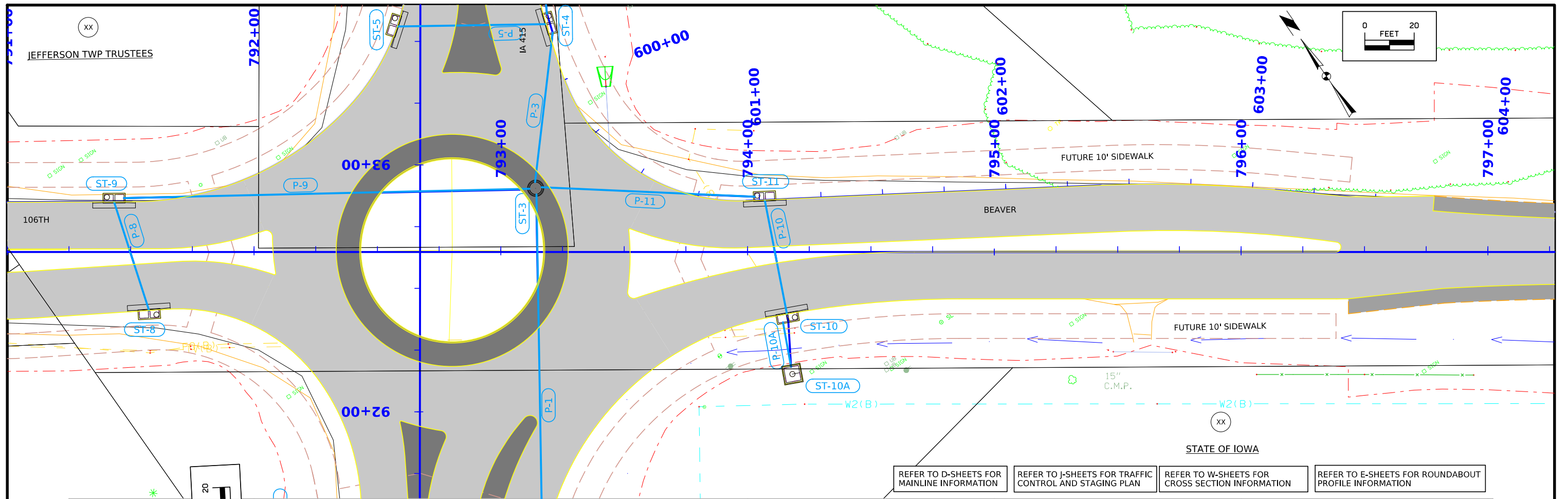
OPTION 3 - STAGE 4

- EXISTING PAVEMENT
- PROPOSED TEMPORARY PAVEMENT
- PROPOSED PAVEMENT
- PREVIOUSLY CONSTRUCTED PAVEMENT

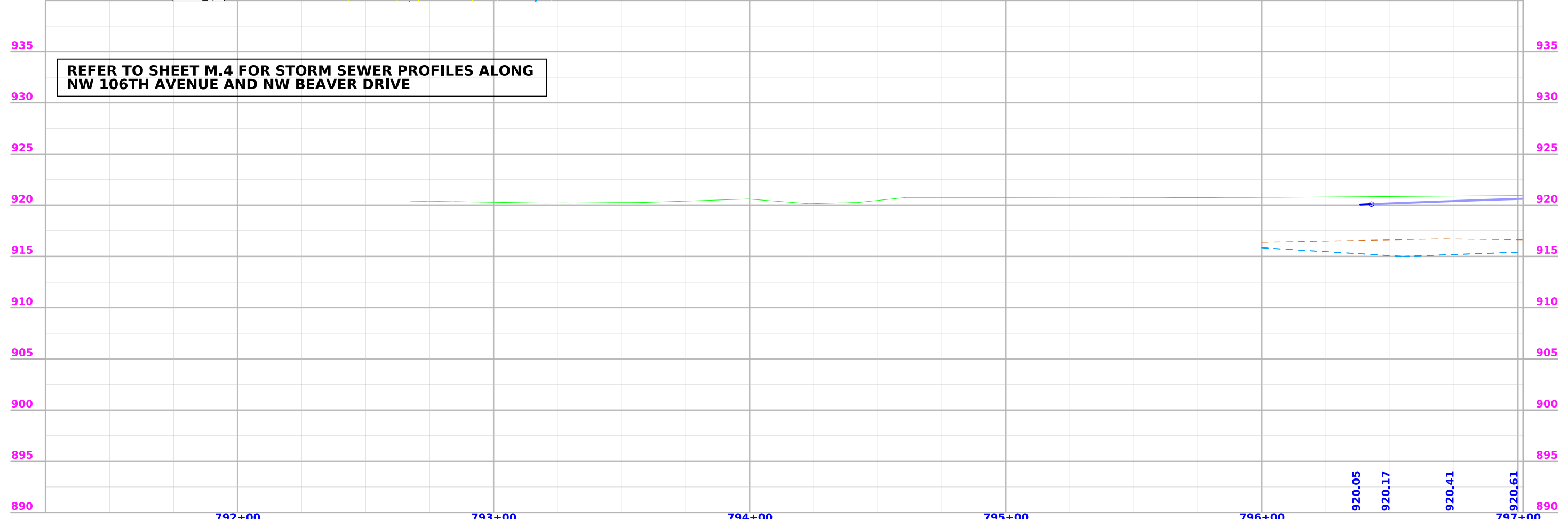


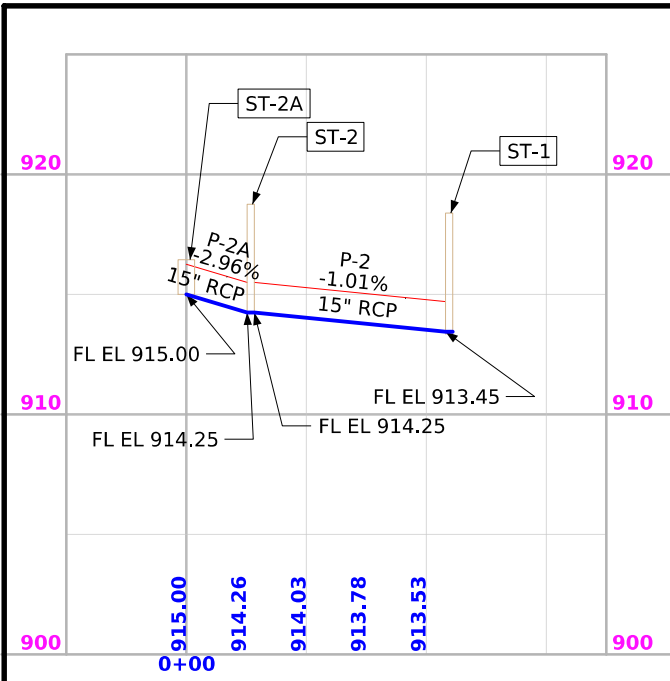




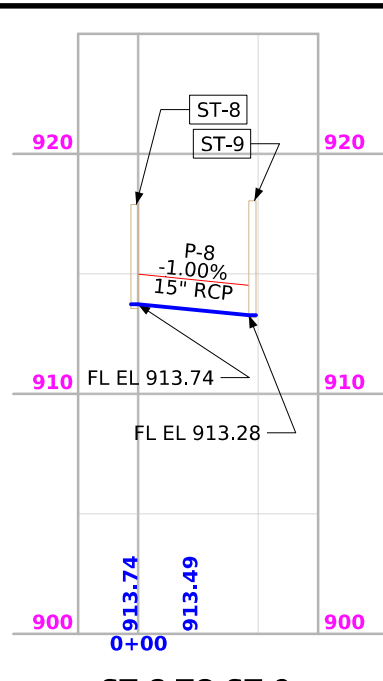


REFER TO SHEET M.4 FOR STORM SEWER PROFILES ALONG NW 106TH AVENUE AND NW BEAVER DRIVE

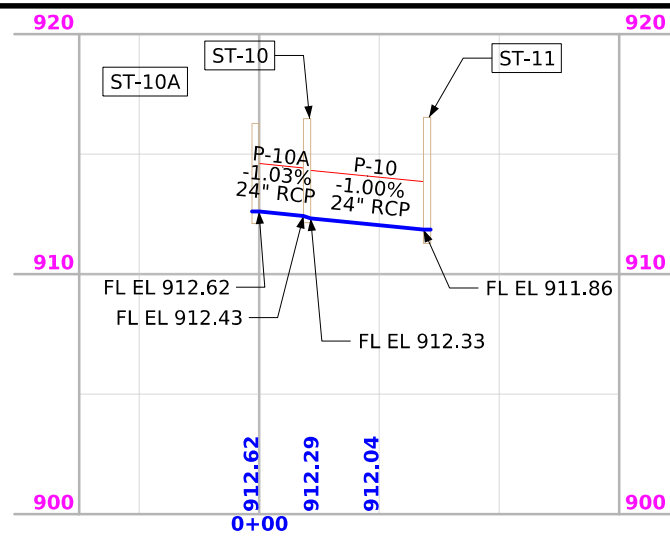




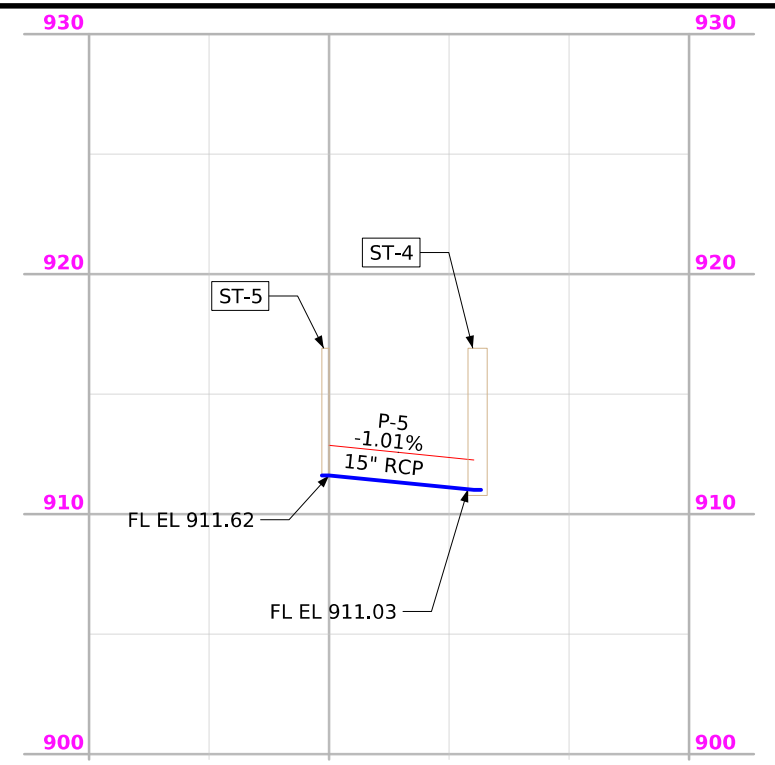
ST-2A TO ST-1



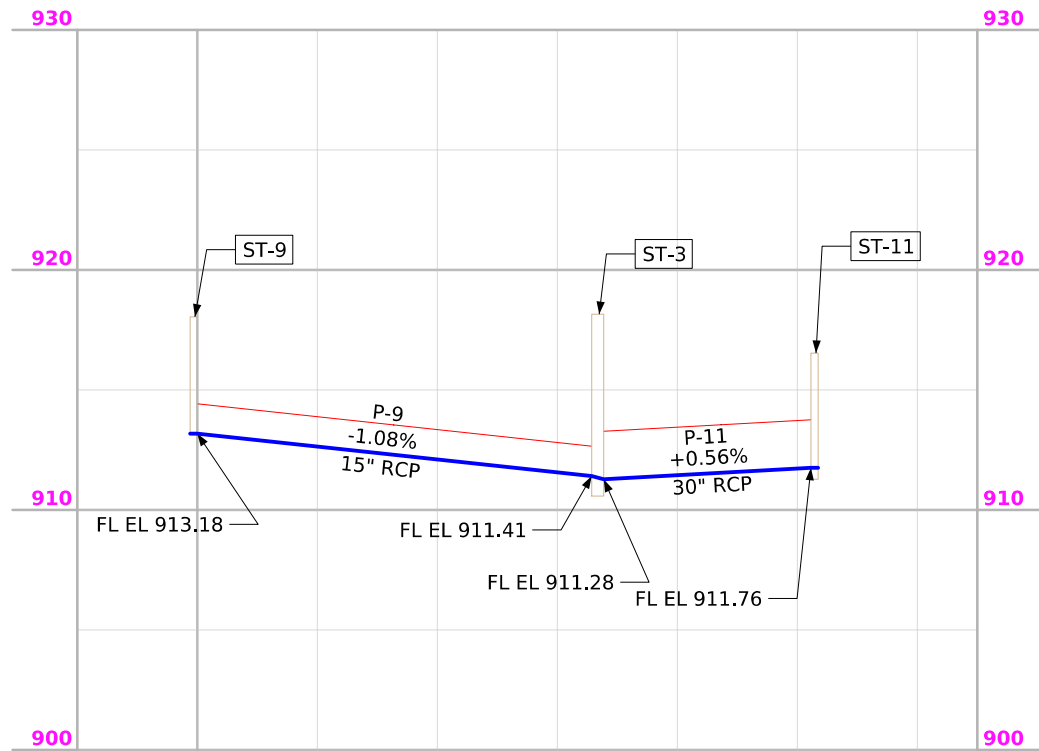
ST-8 TO ST-9



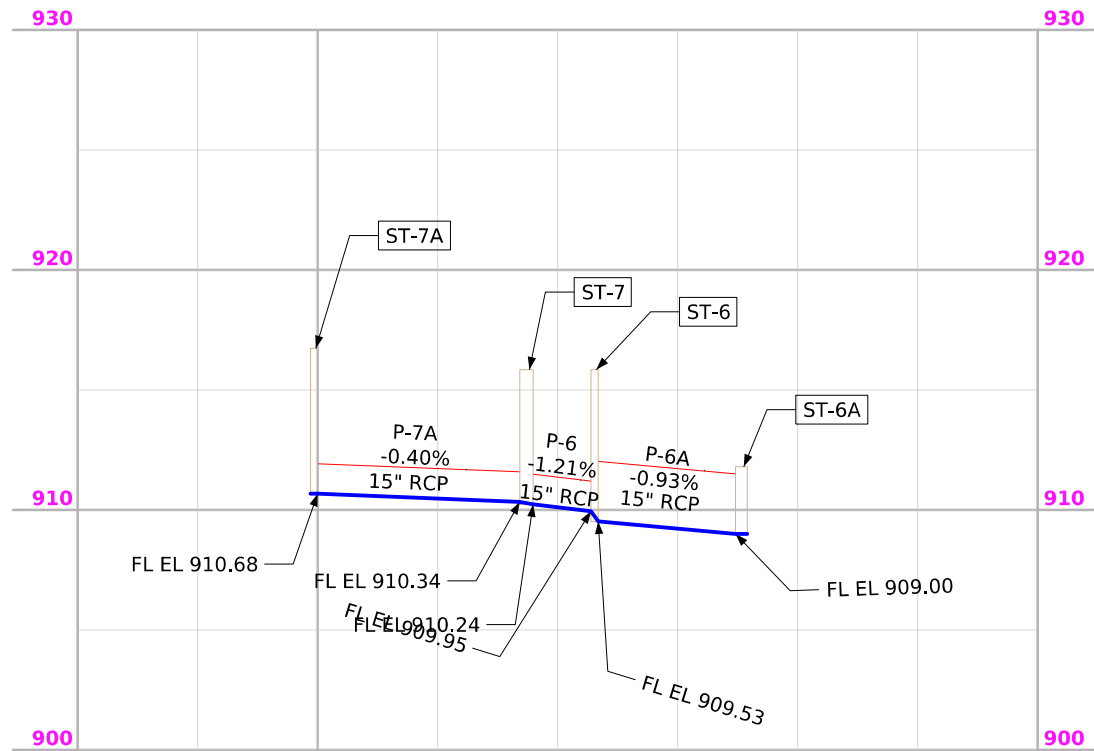
ST-10A TO ST-11



ST-5 TO ST-4

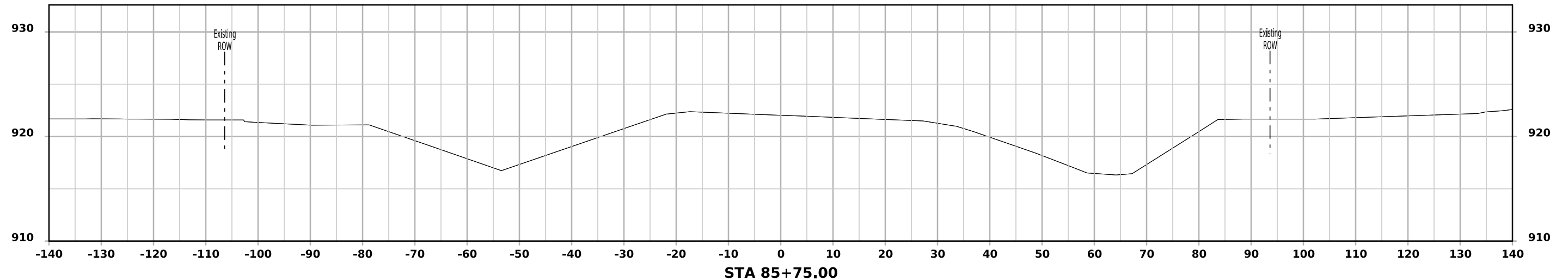
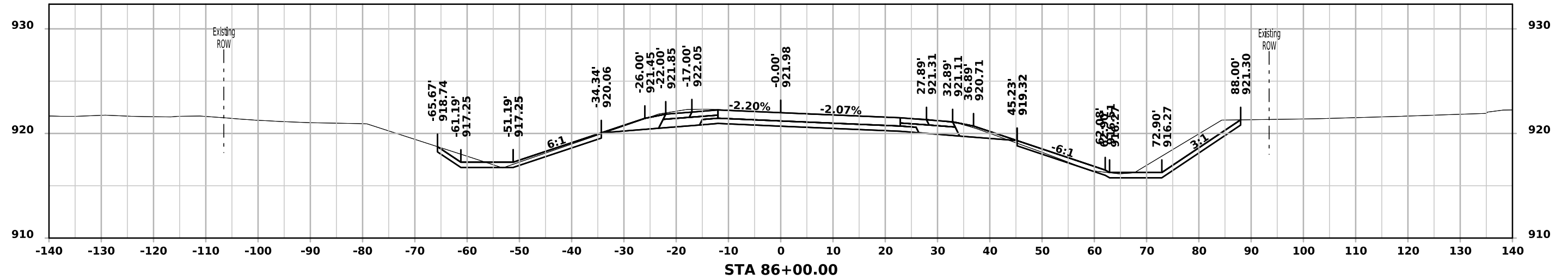
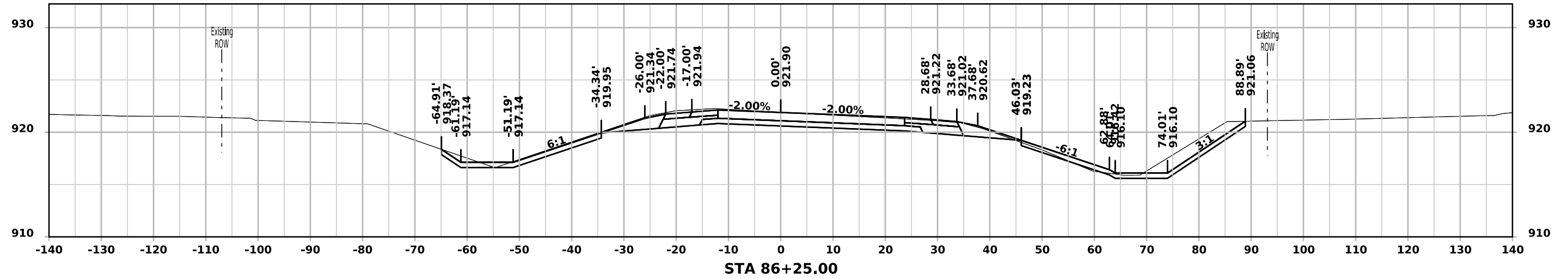


ST-9 TO ST-11

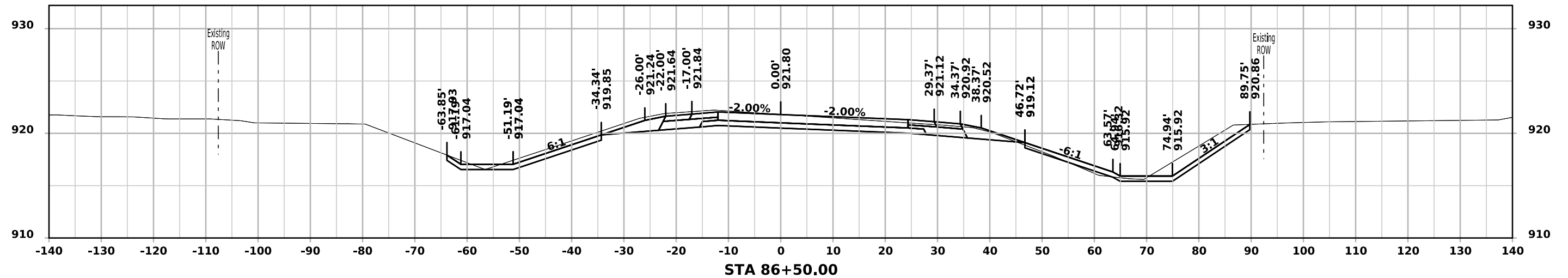
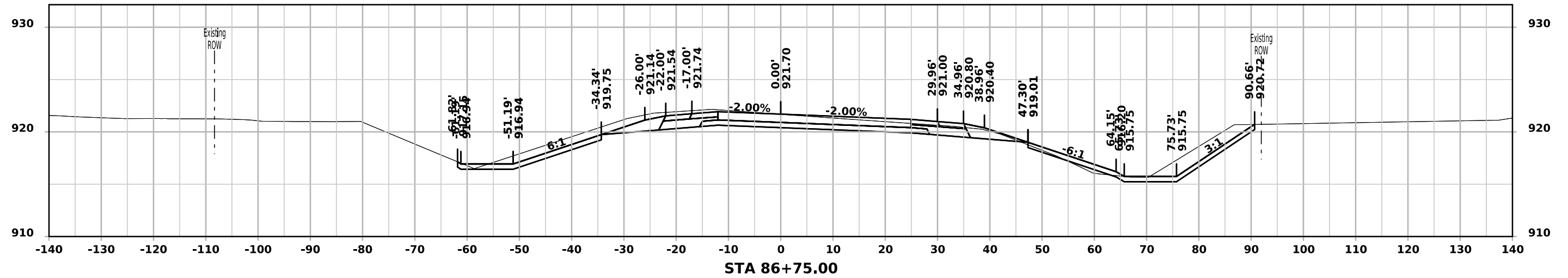
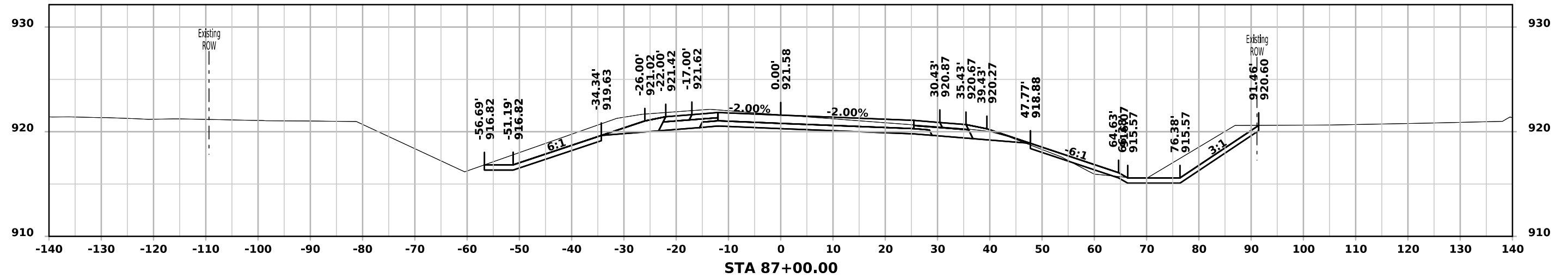


ST-7A TO ST-6A

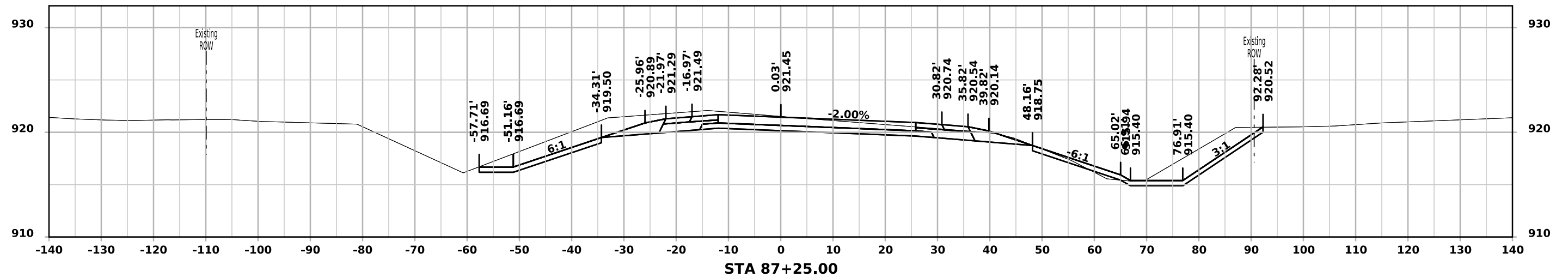
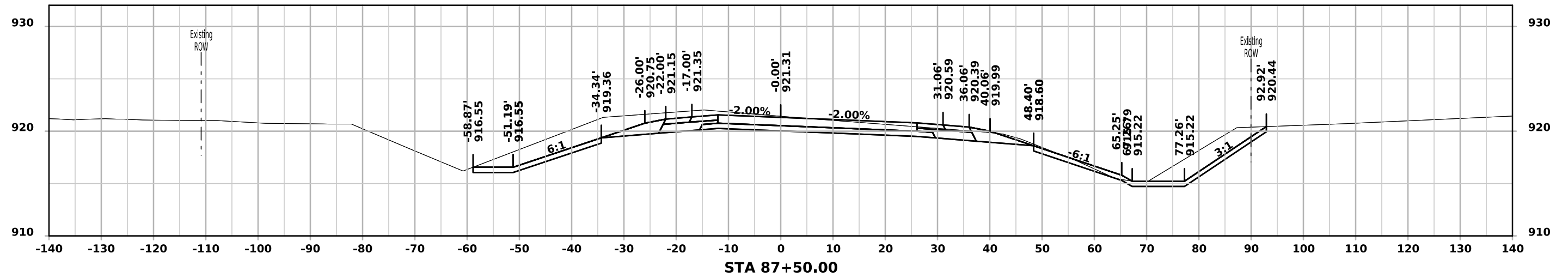
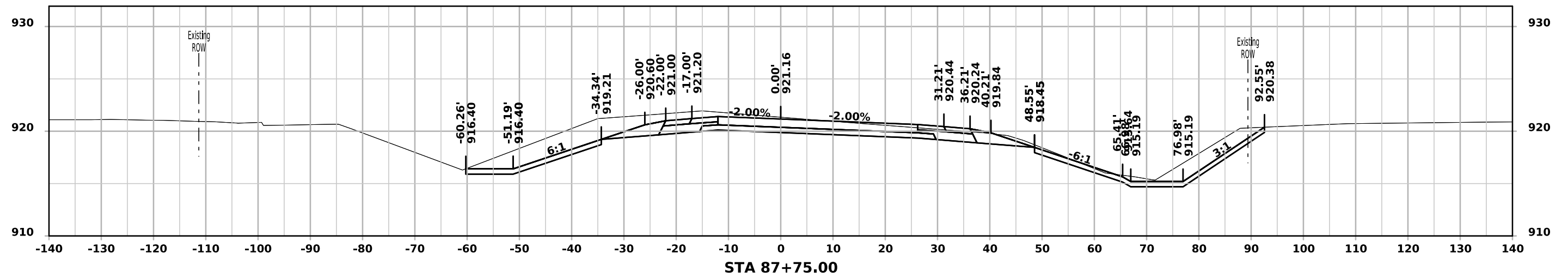
ML - IA 415



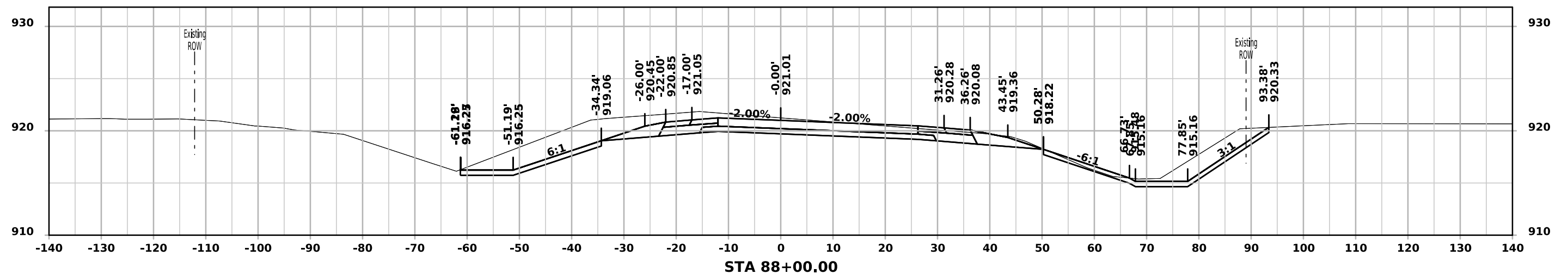
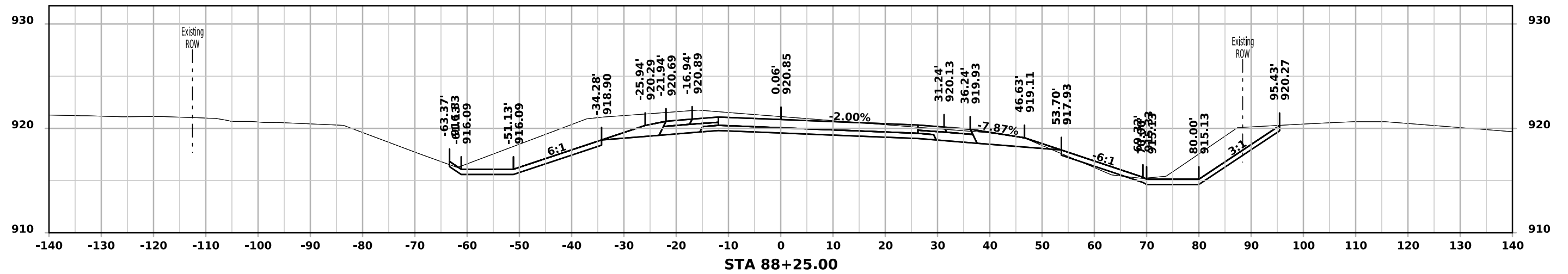
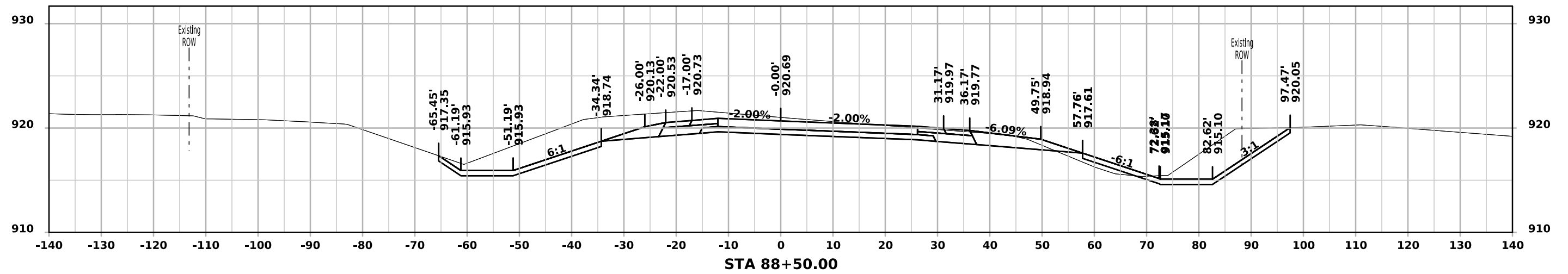
ML - IA 415



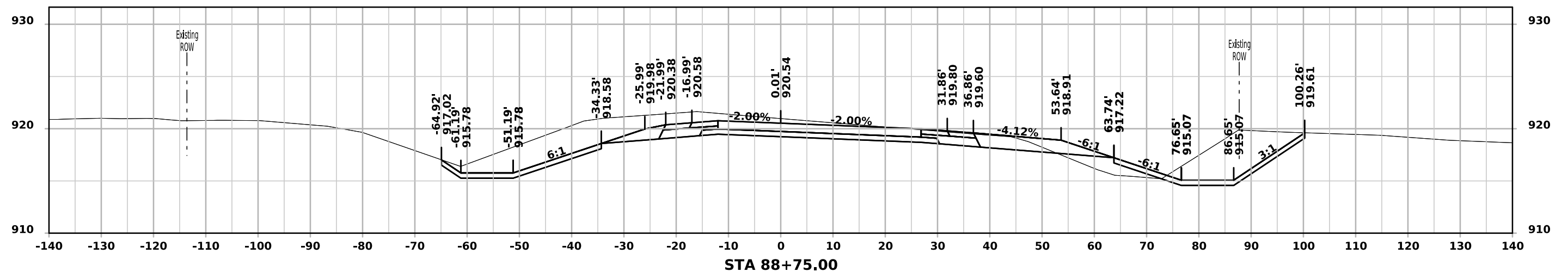
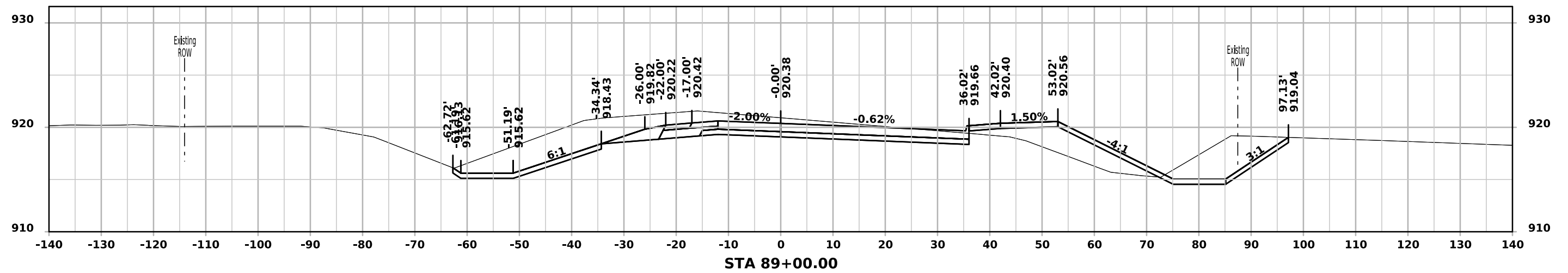
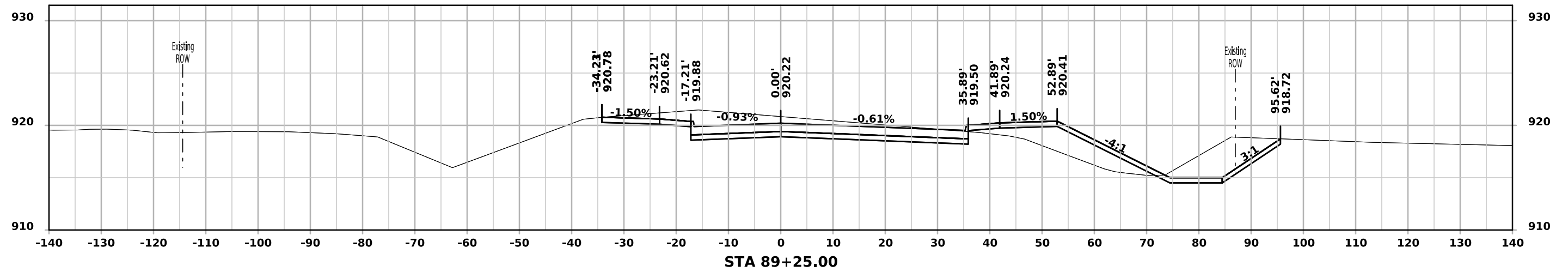
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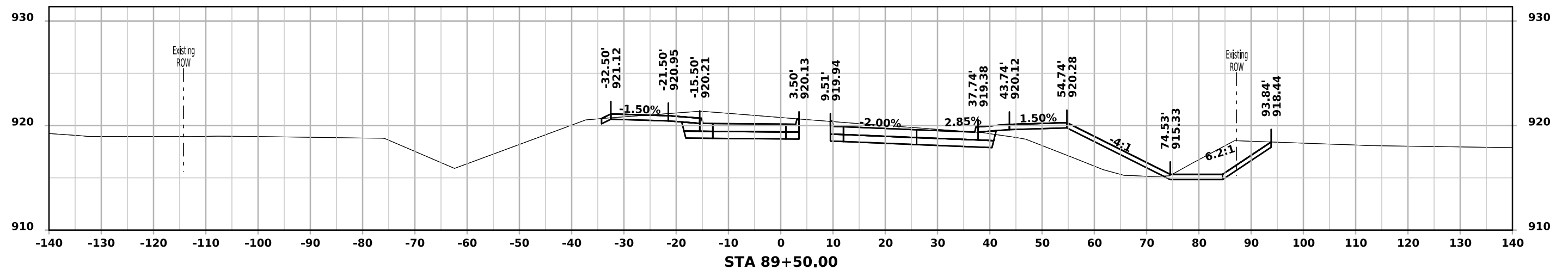
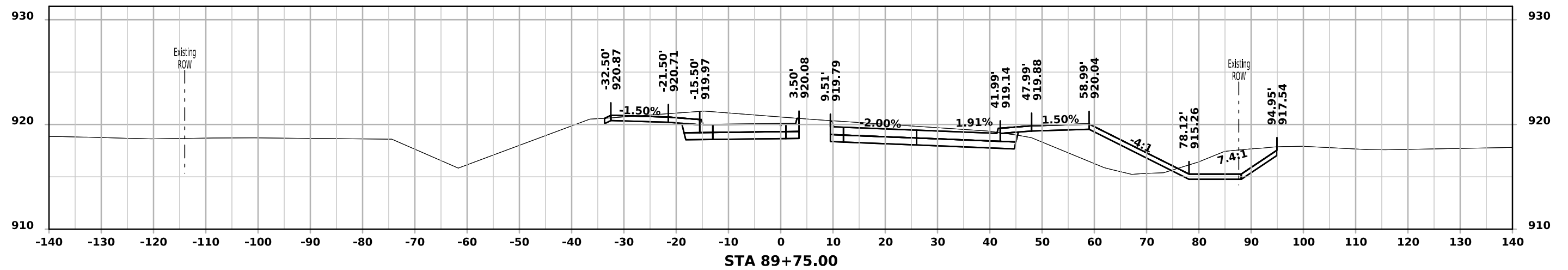
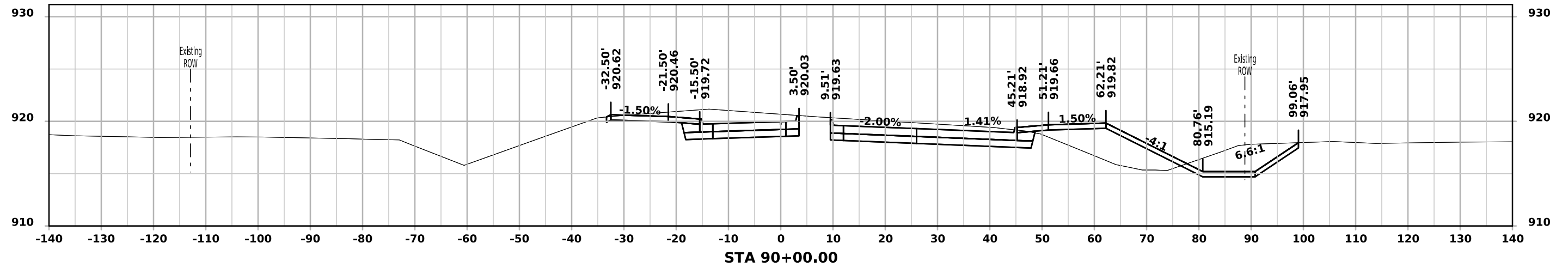
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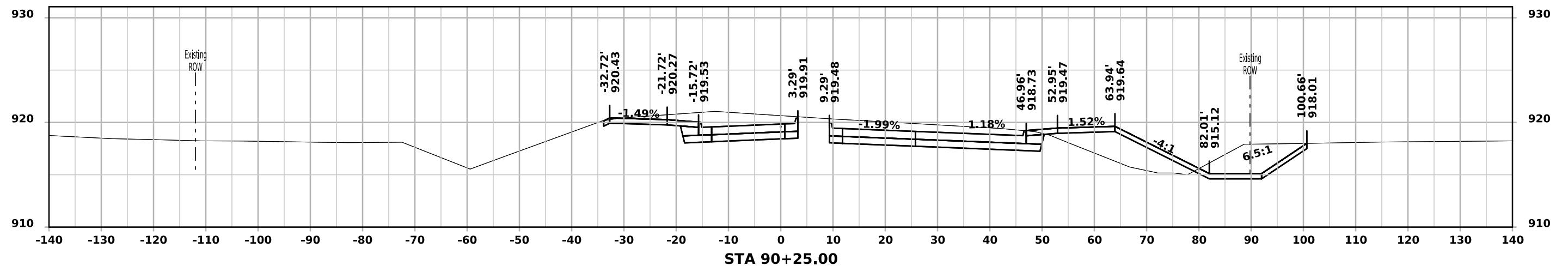
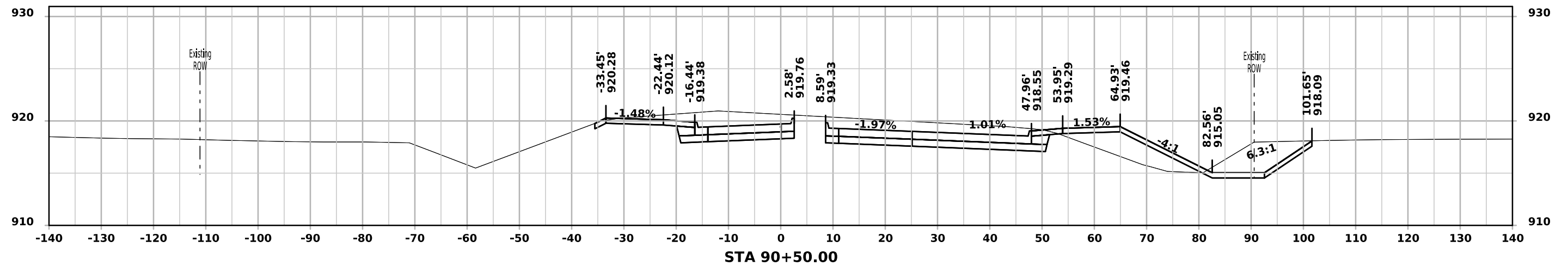
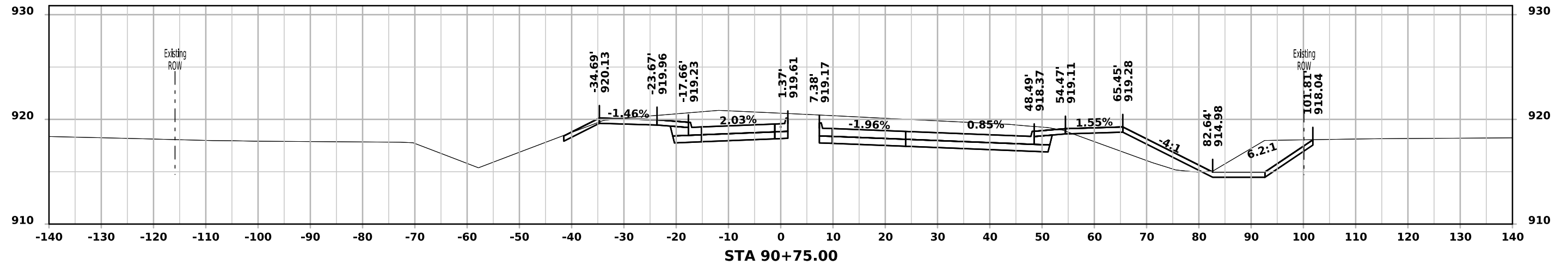
ML - IA 415



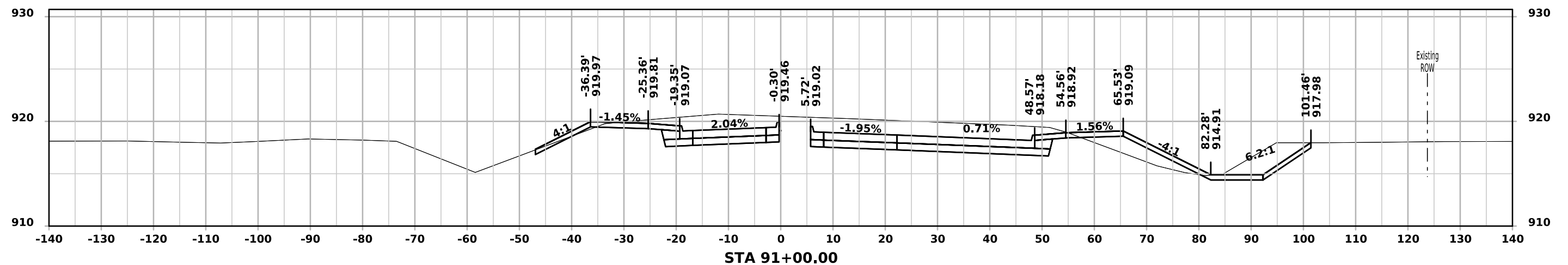
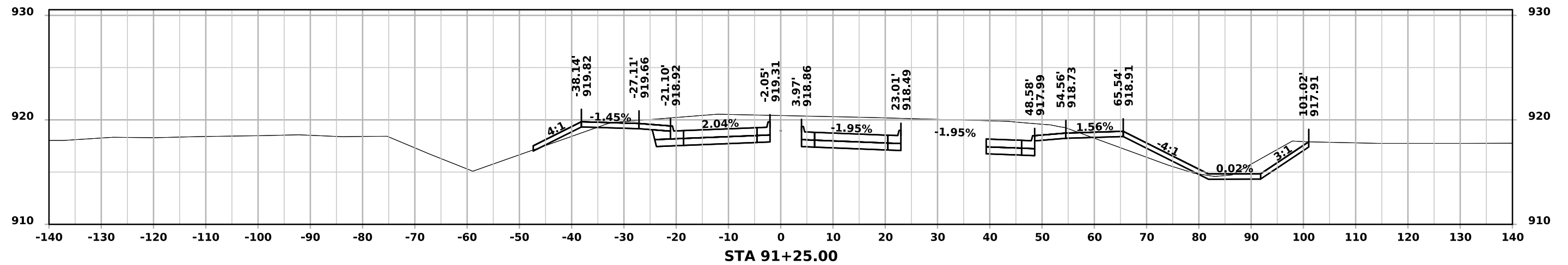
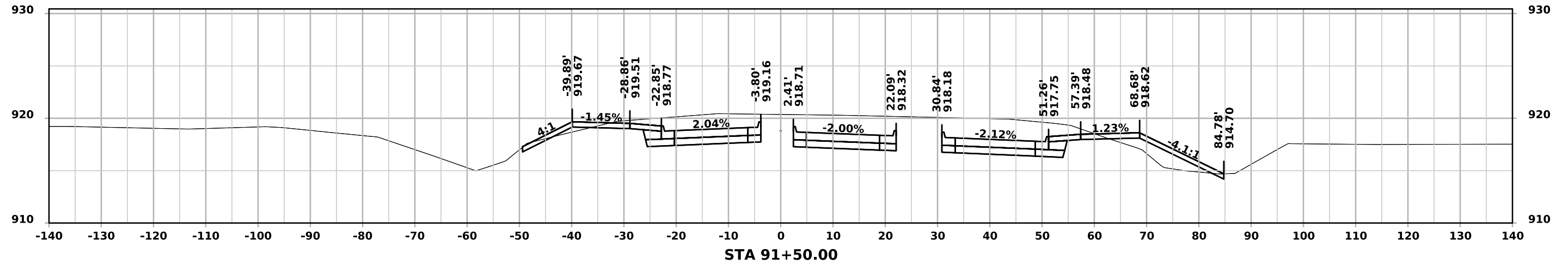
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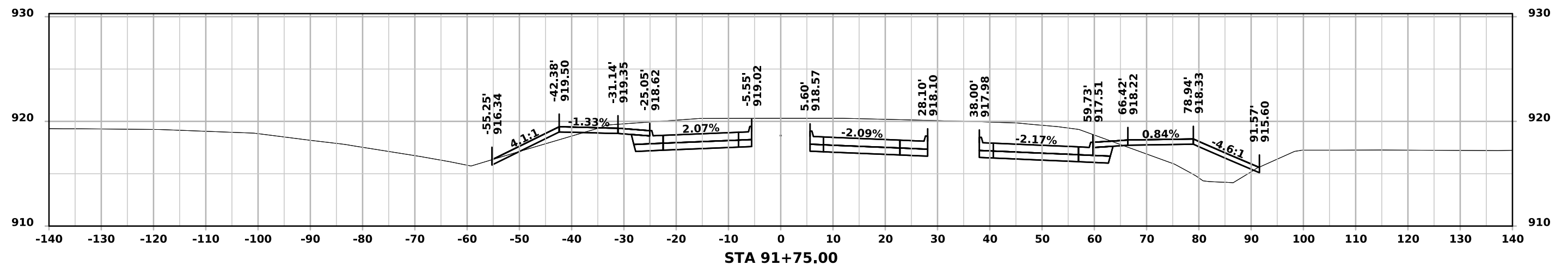
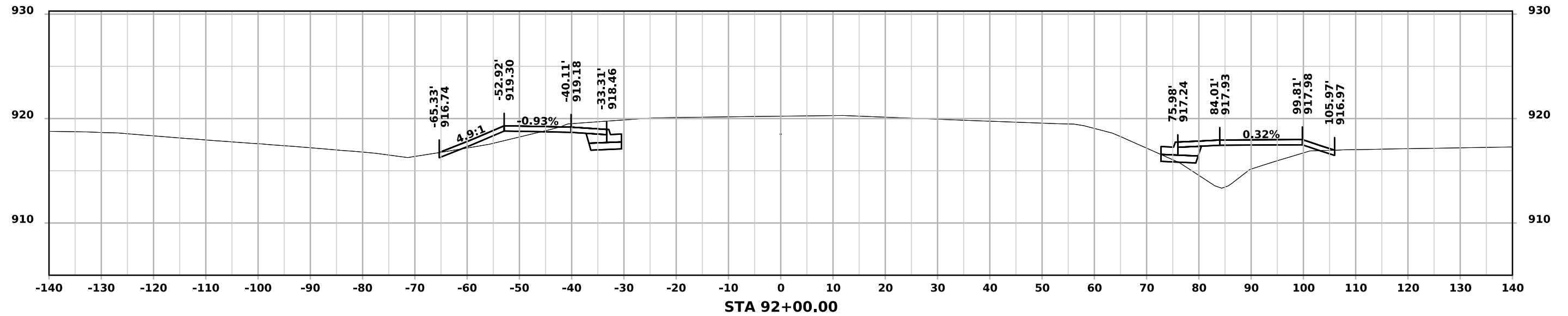
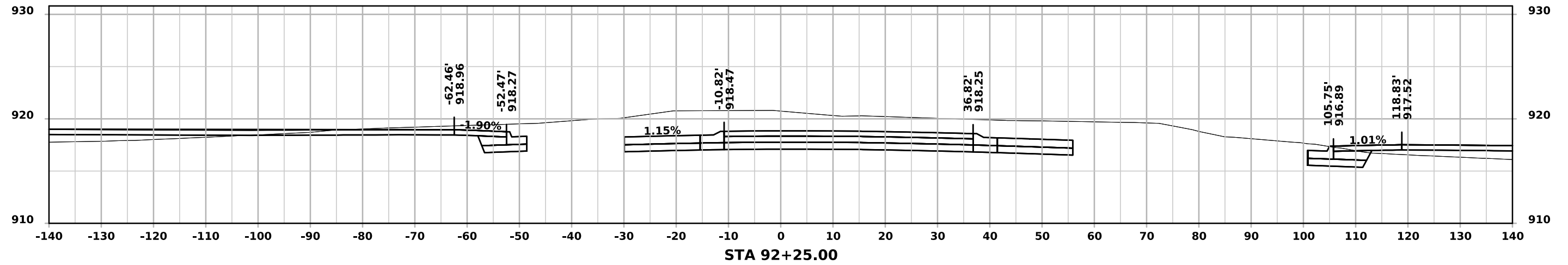
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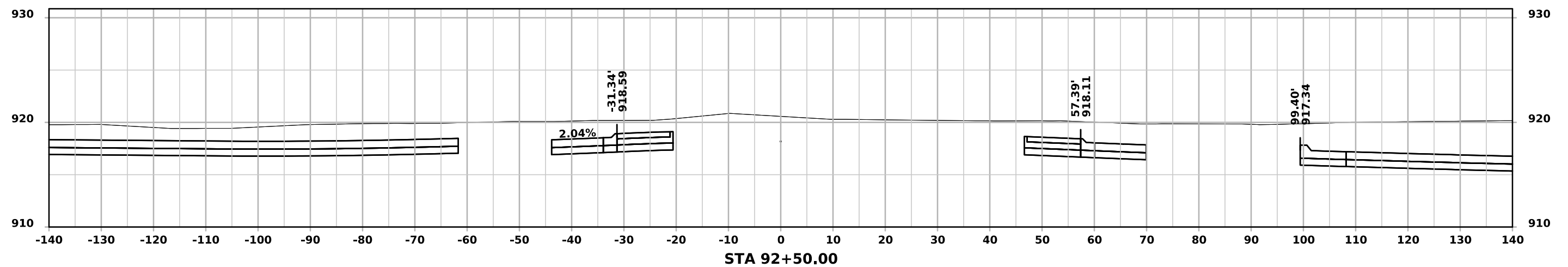
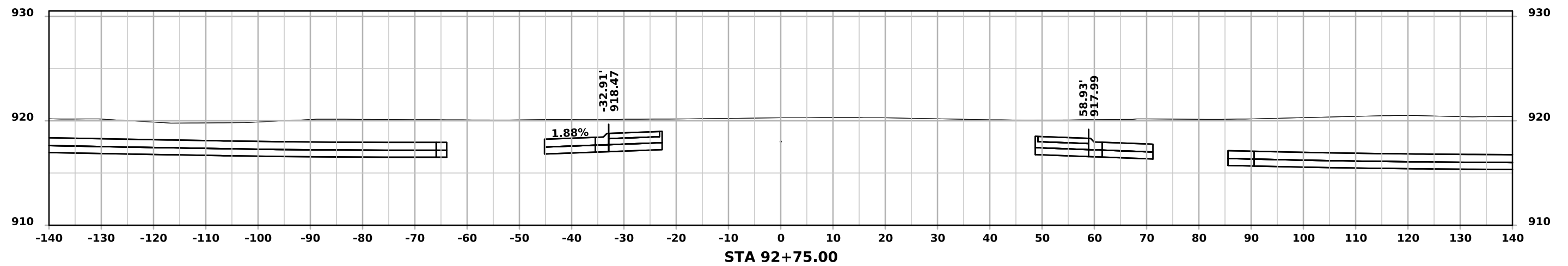
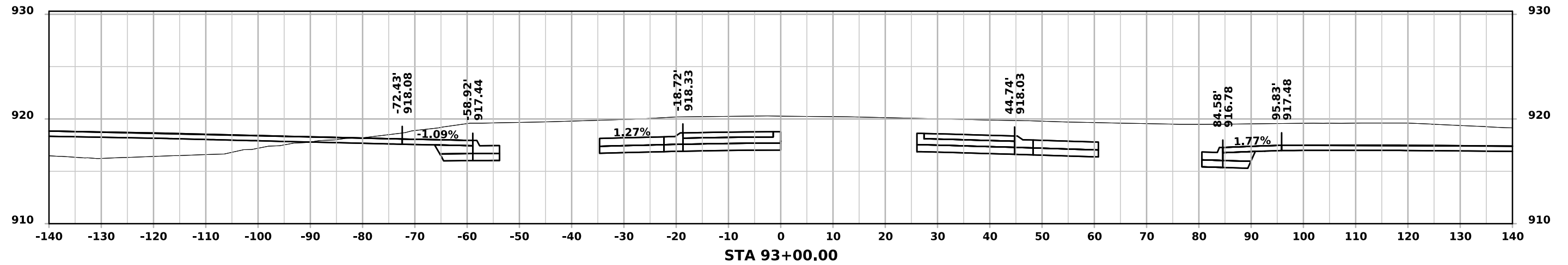
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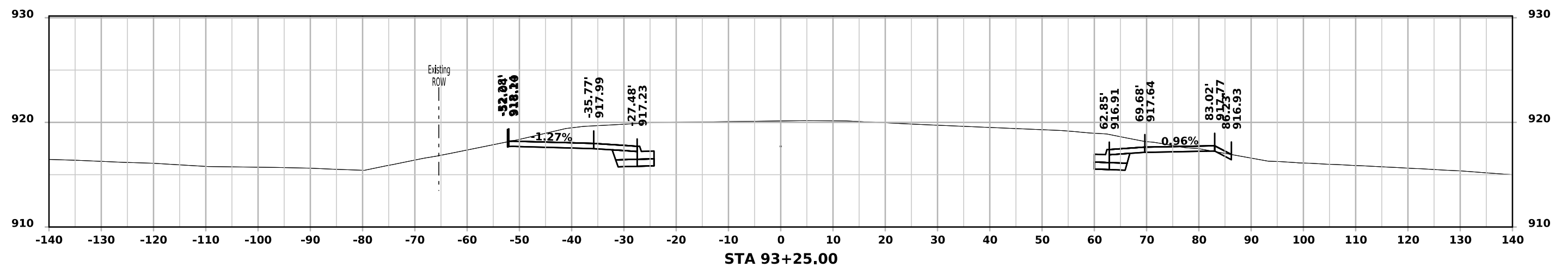
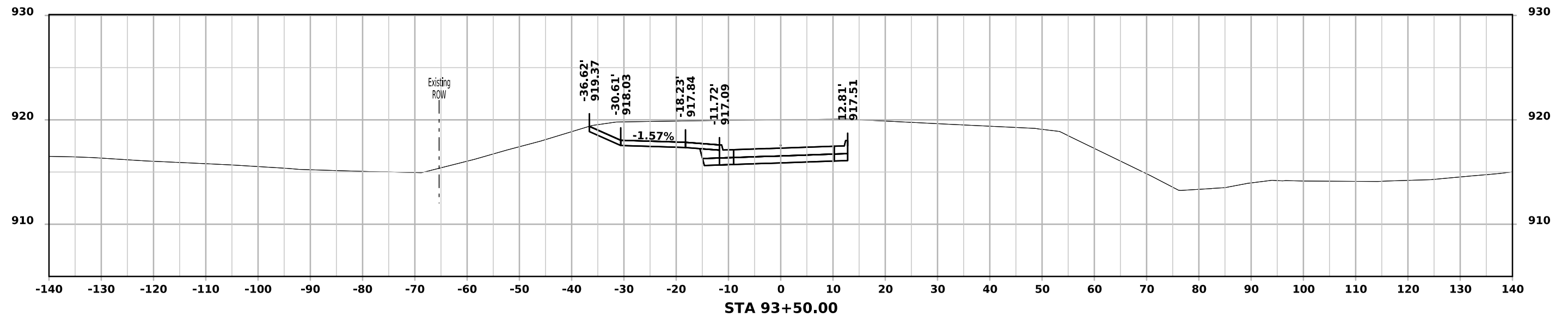
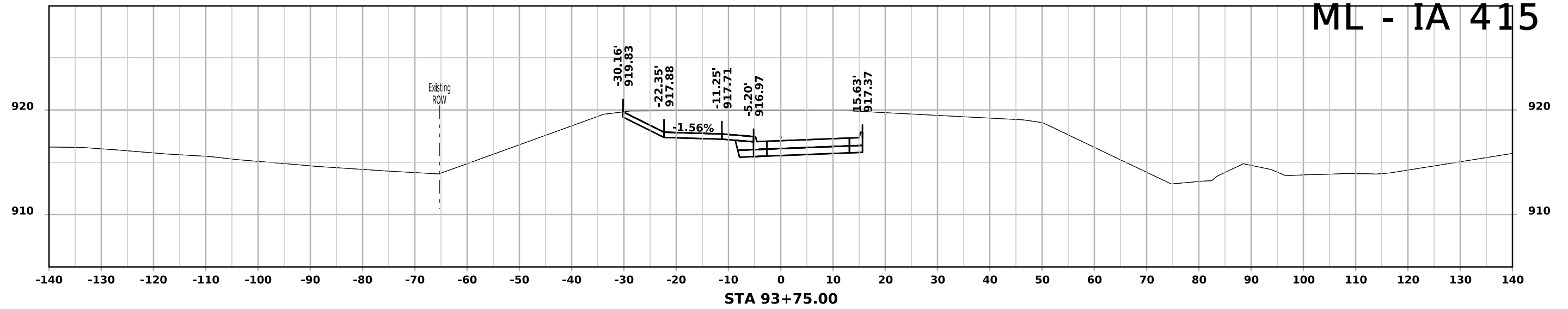
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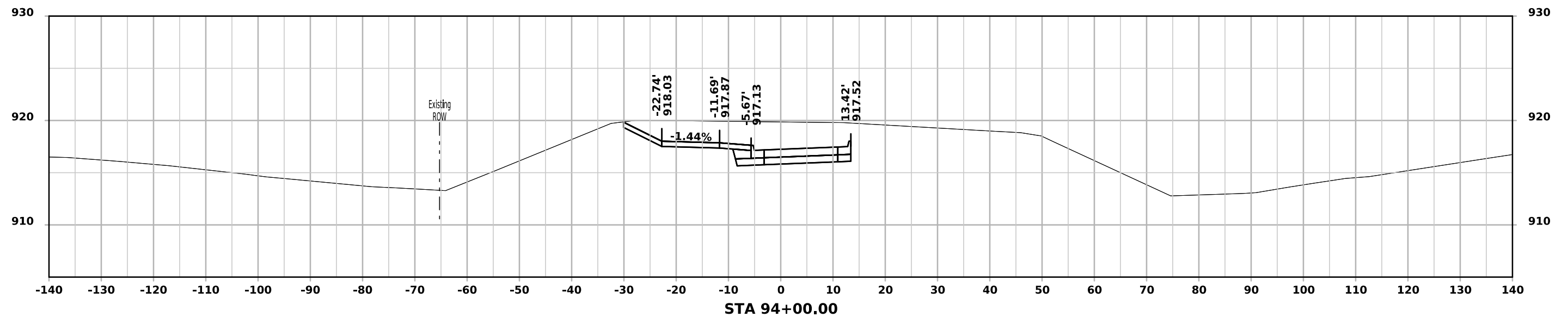
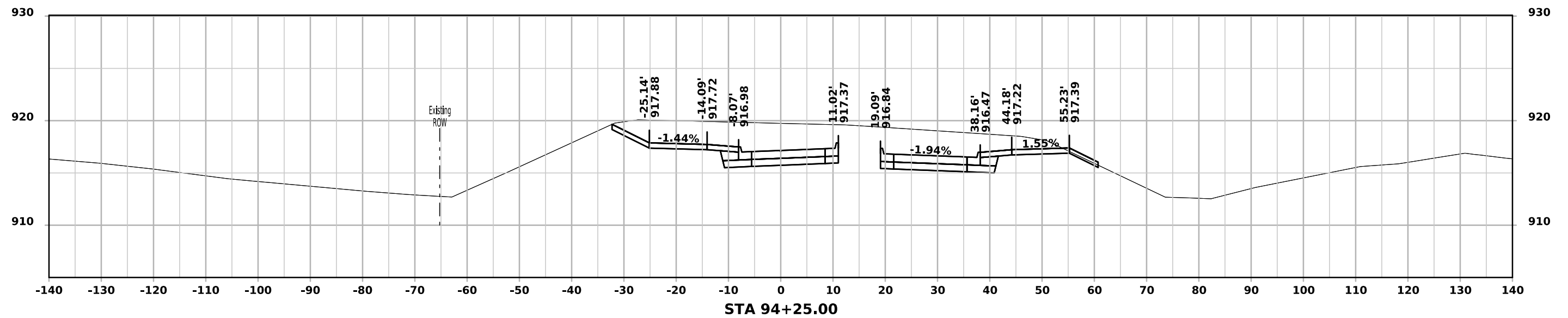
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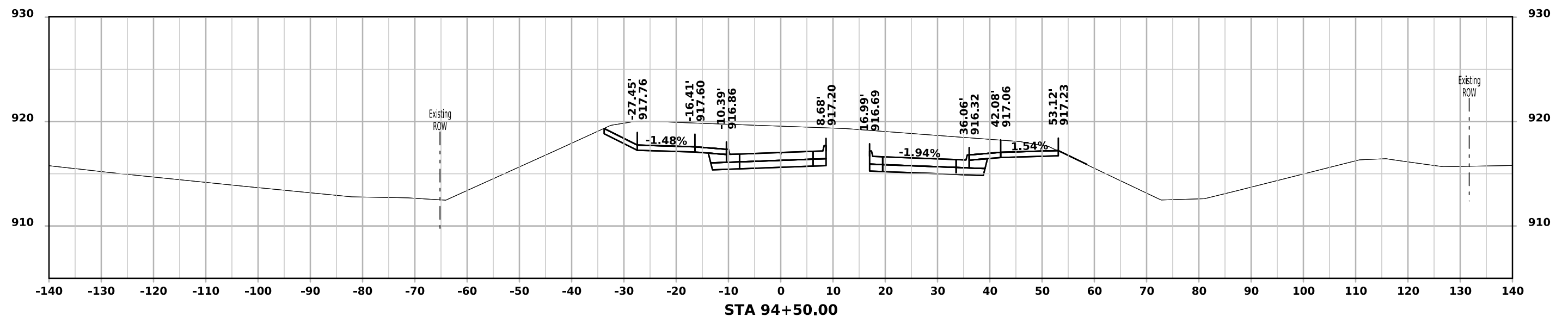
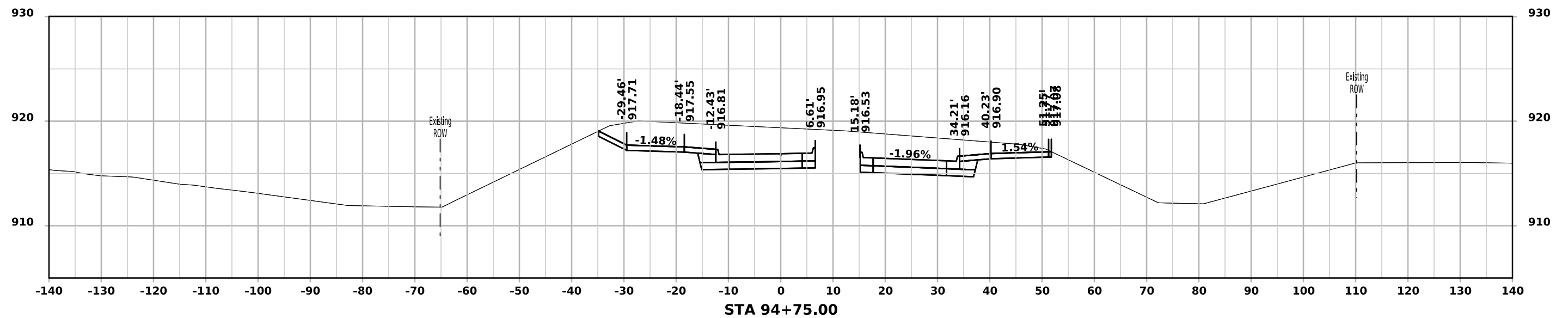
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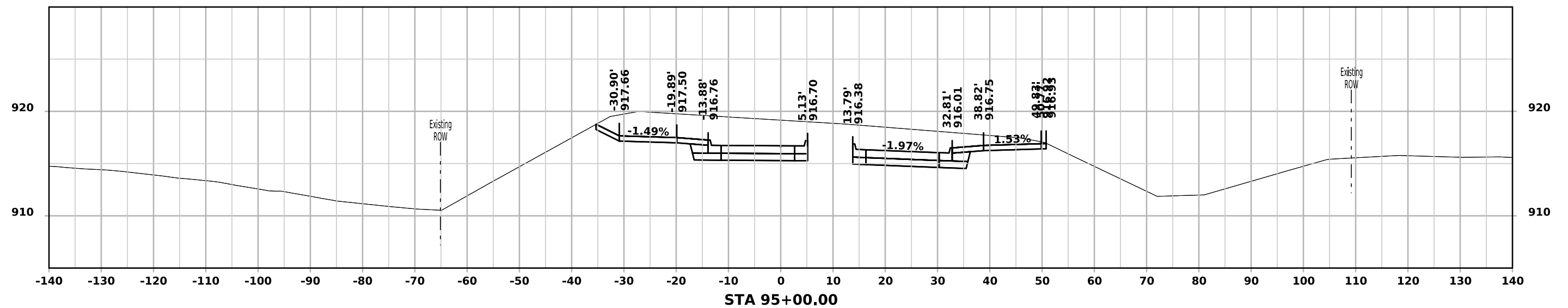
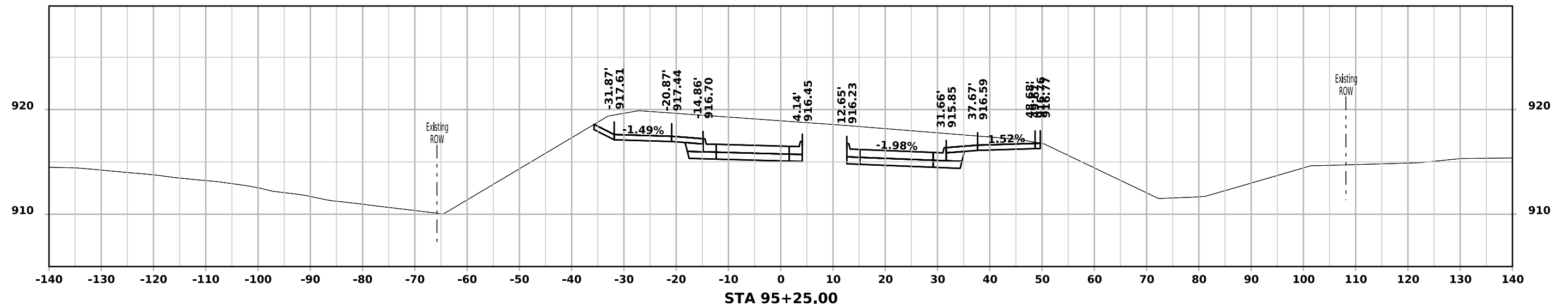
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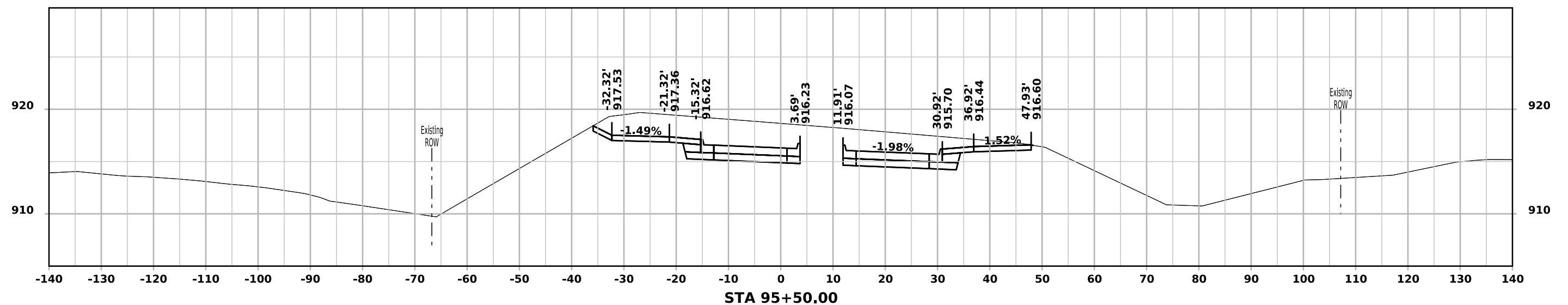
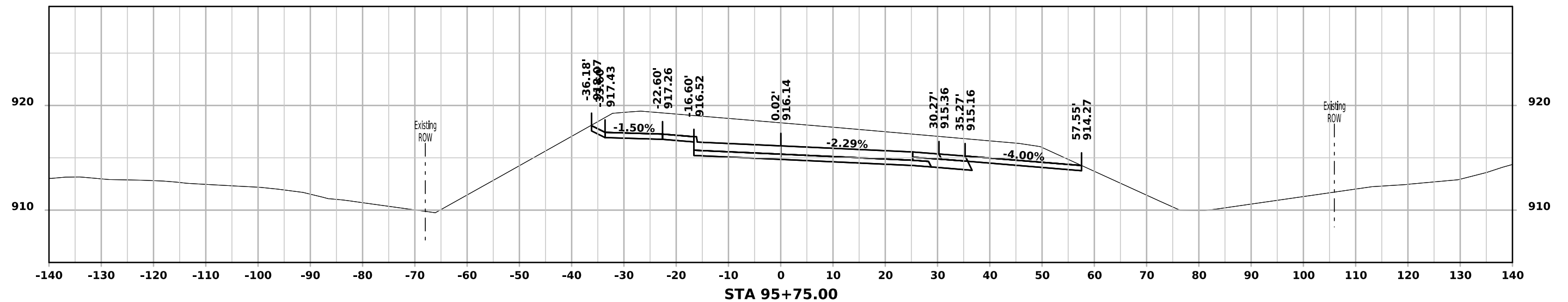
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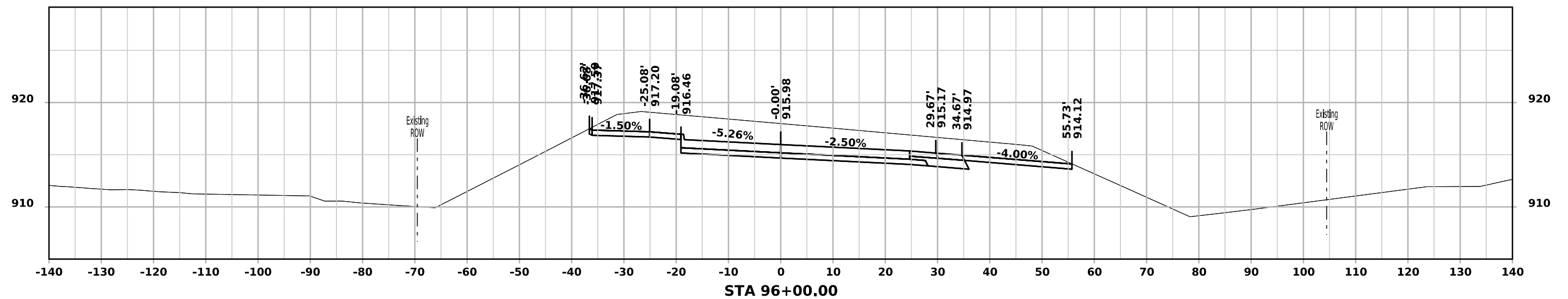
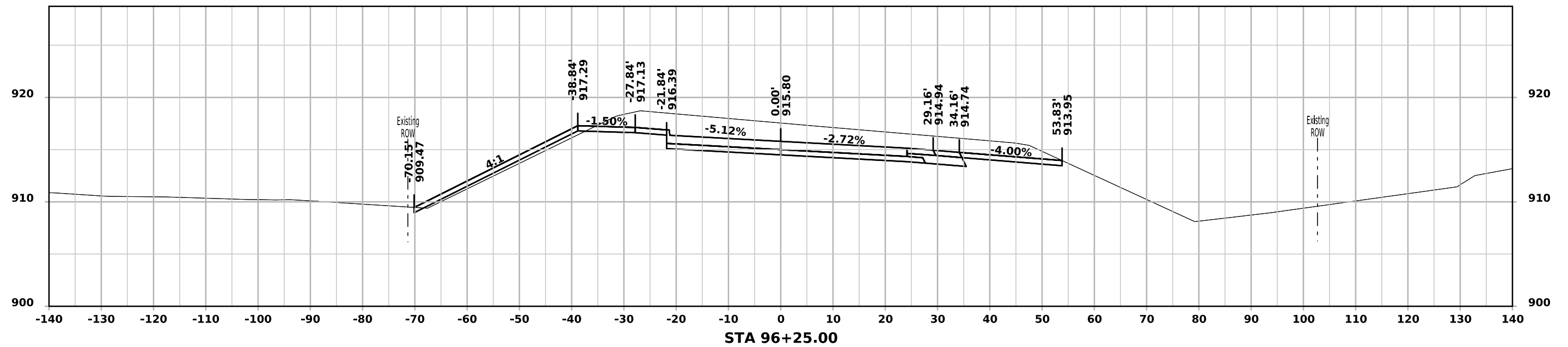
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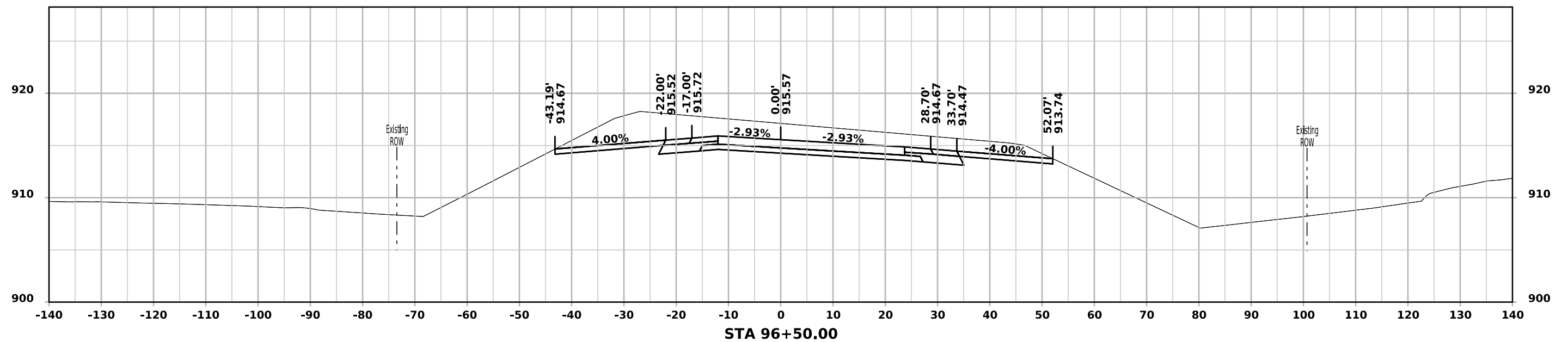
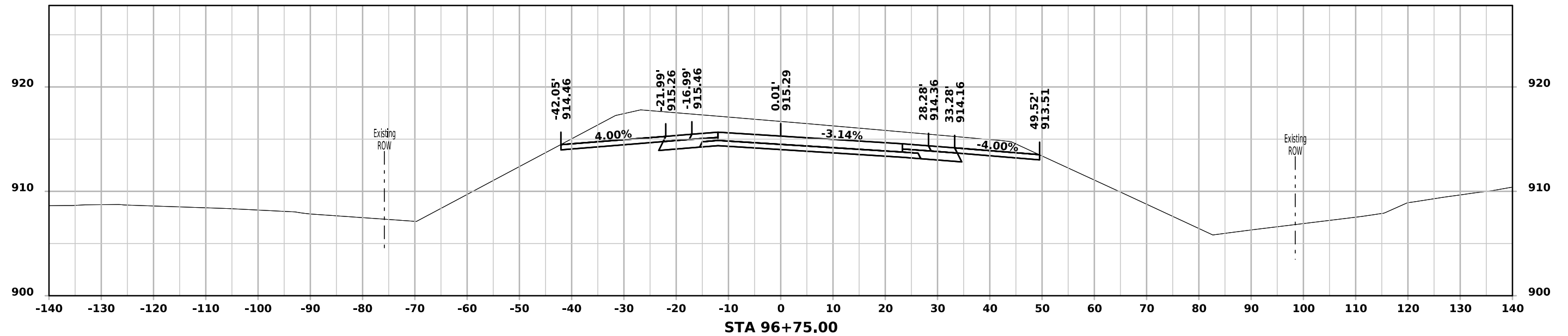
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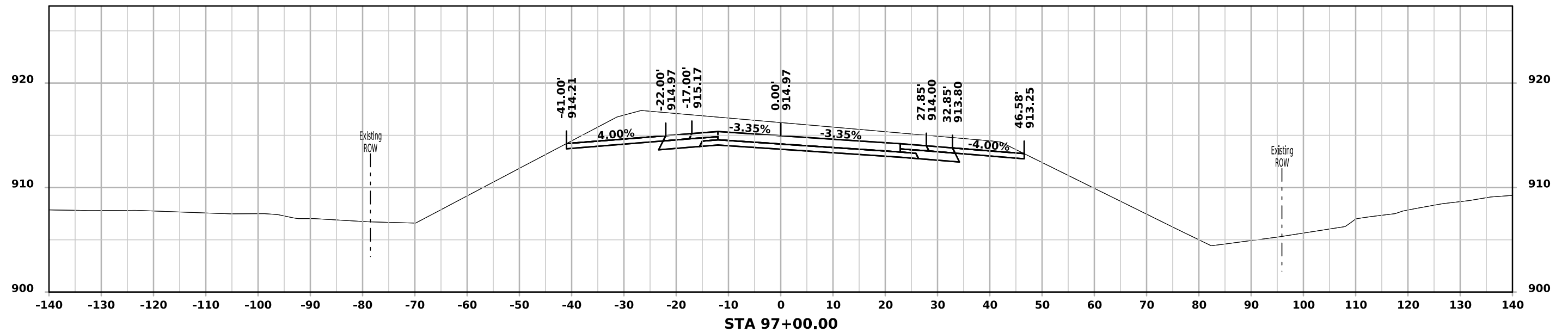
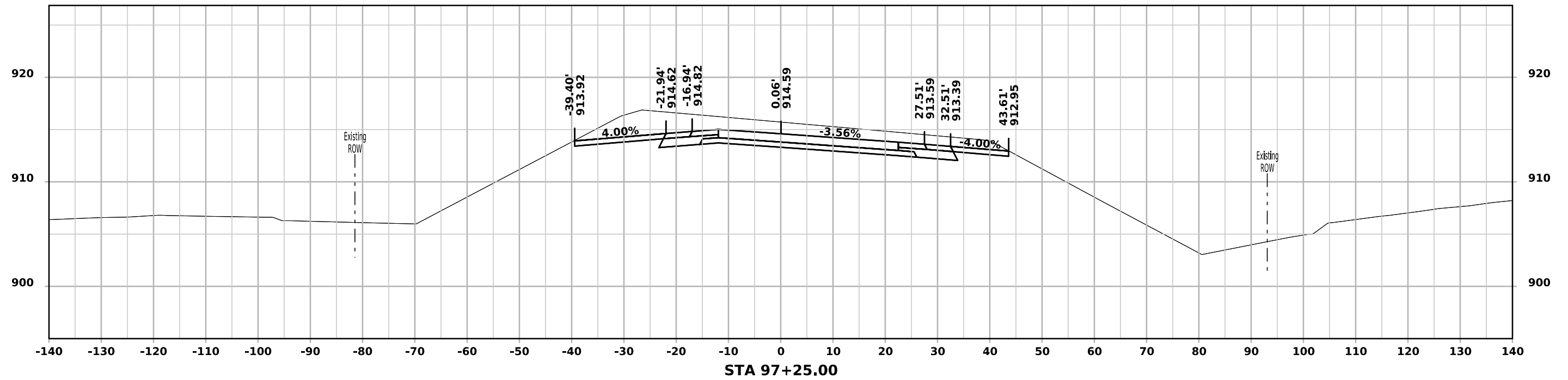
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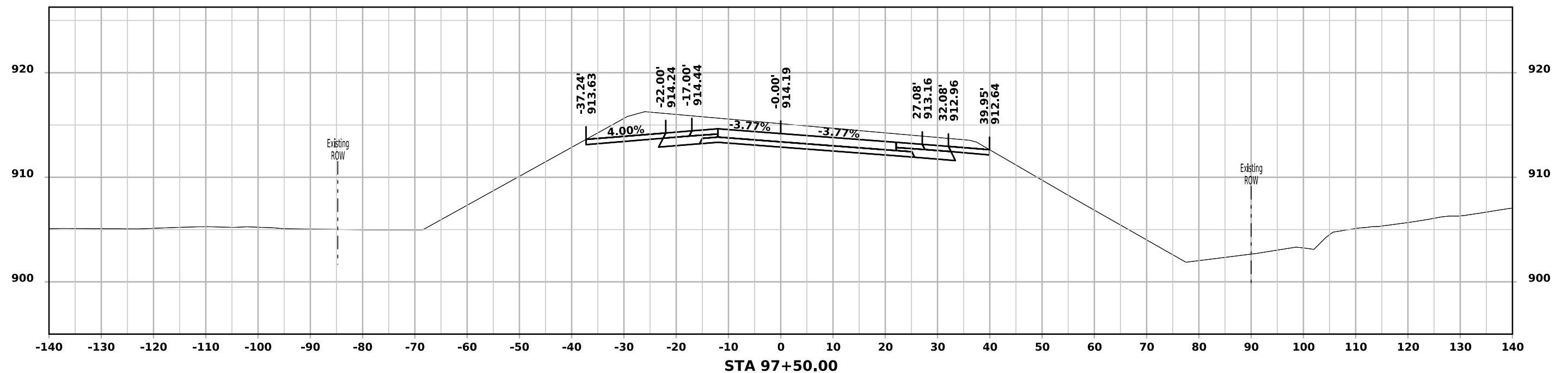
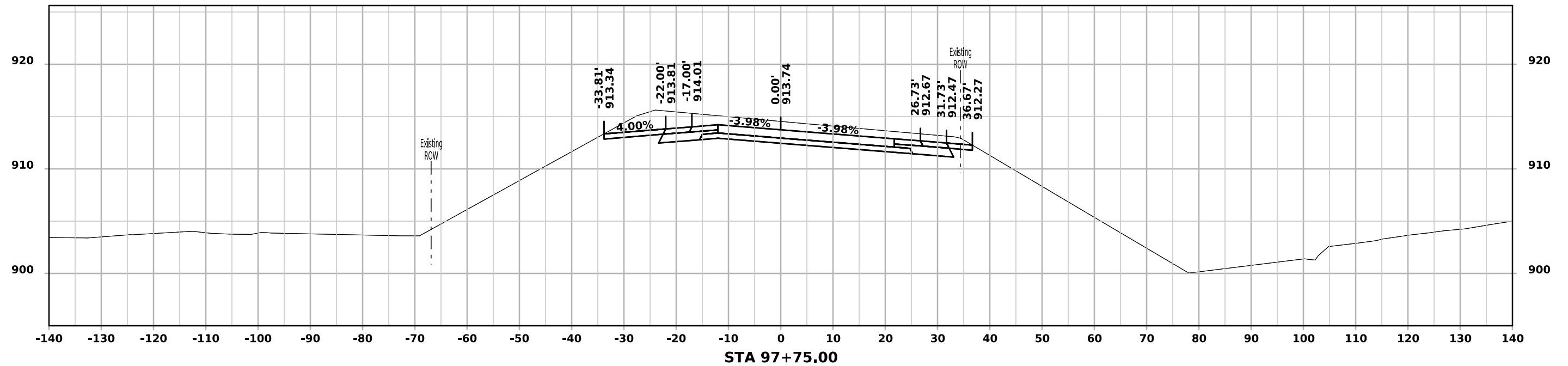
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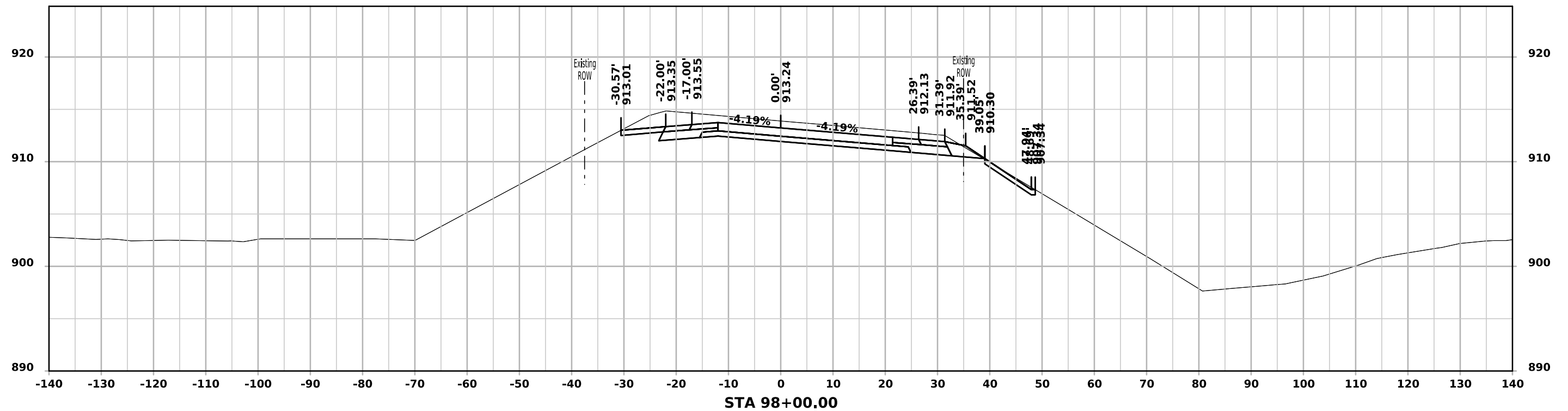
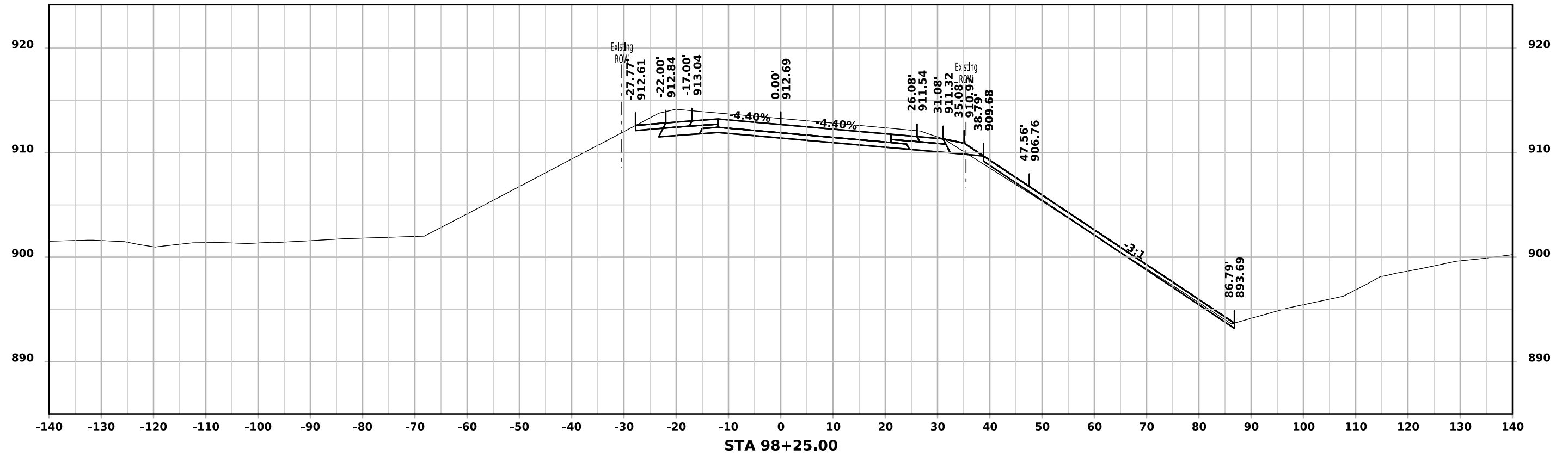
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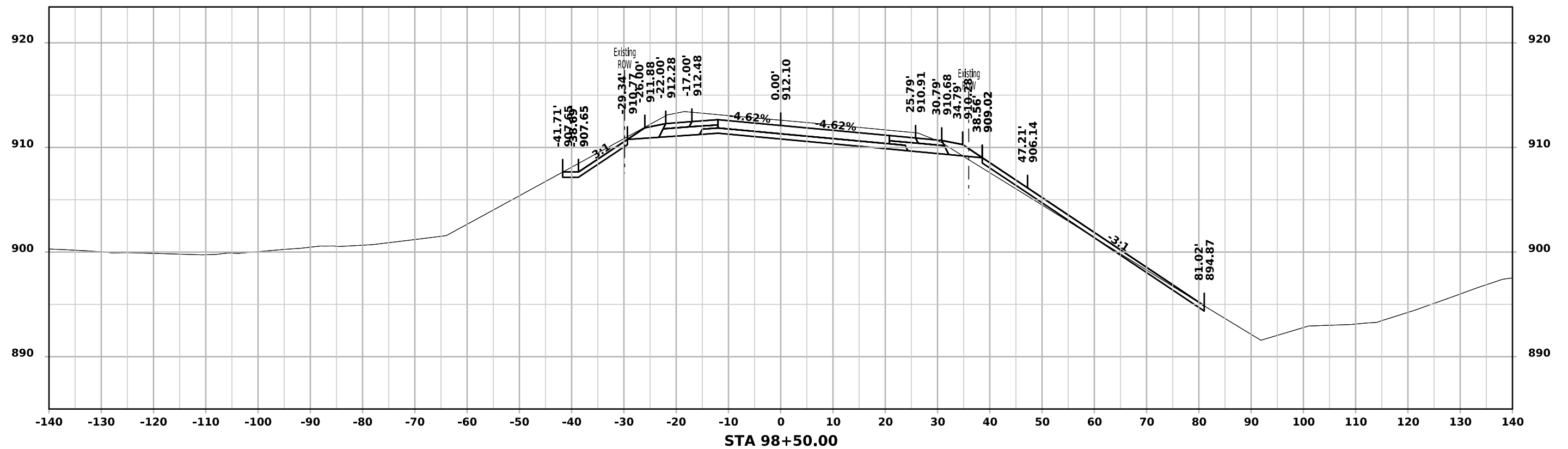
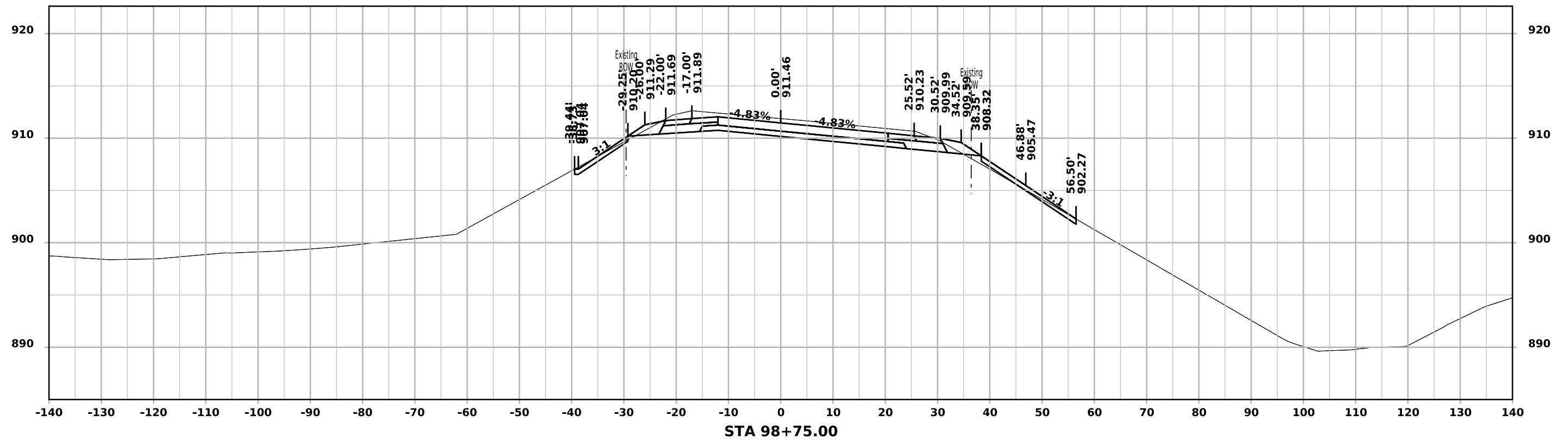
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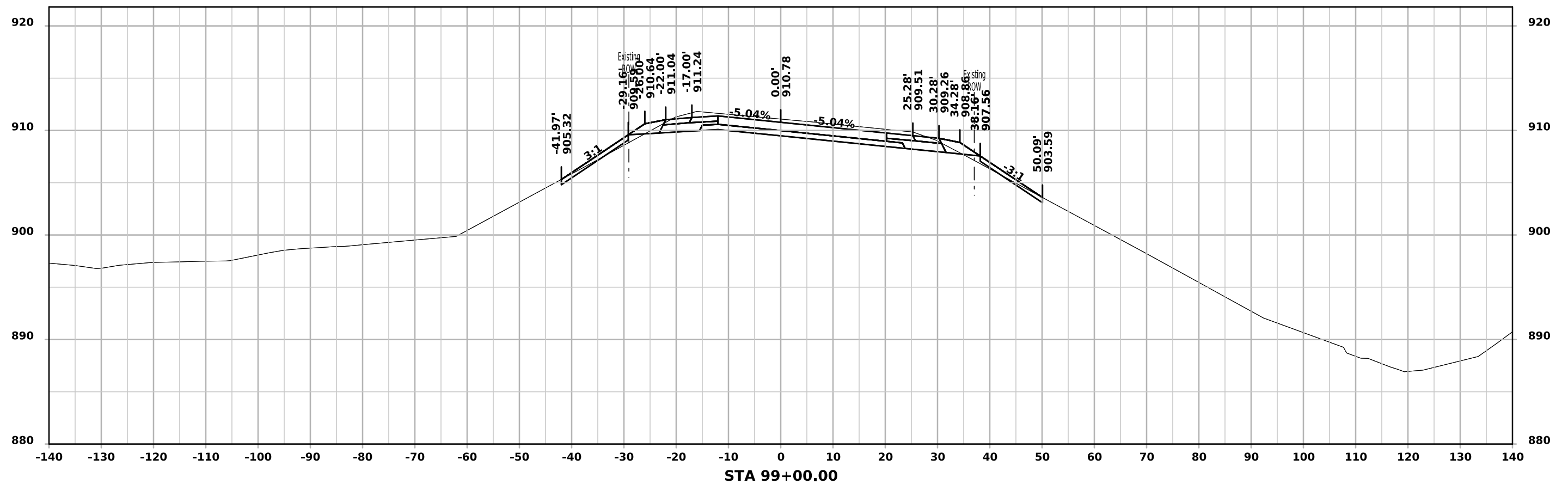
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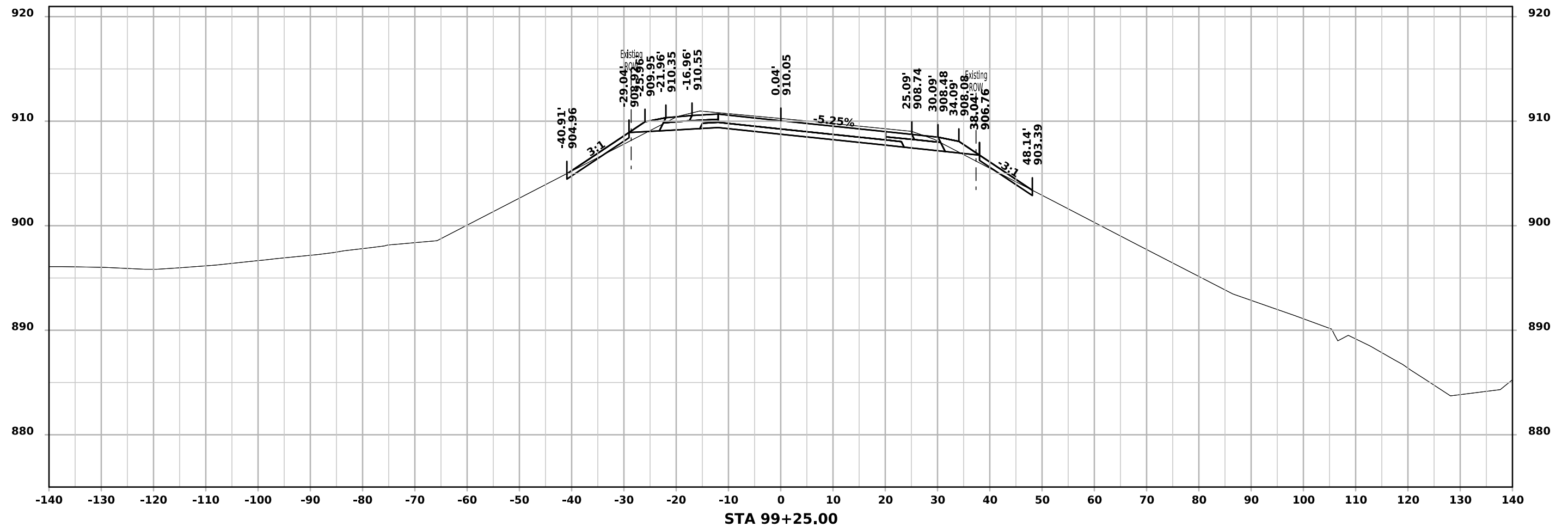
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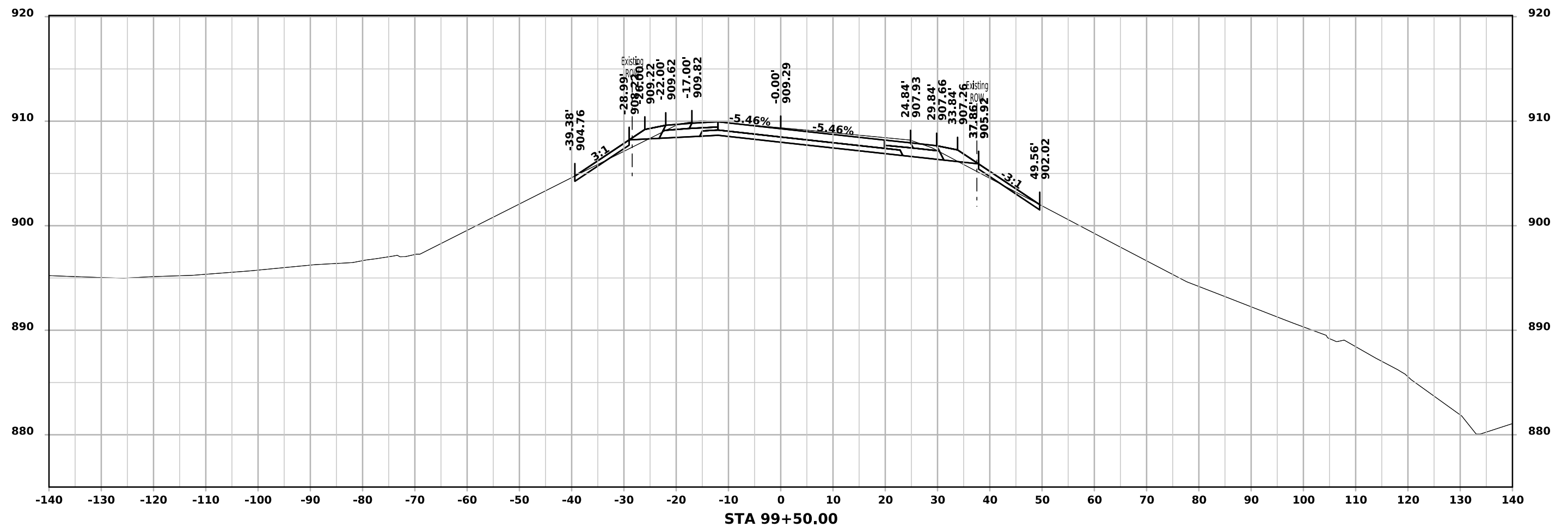
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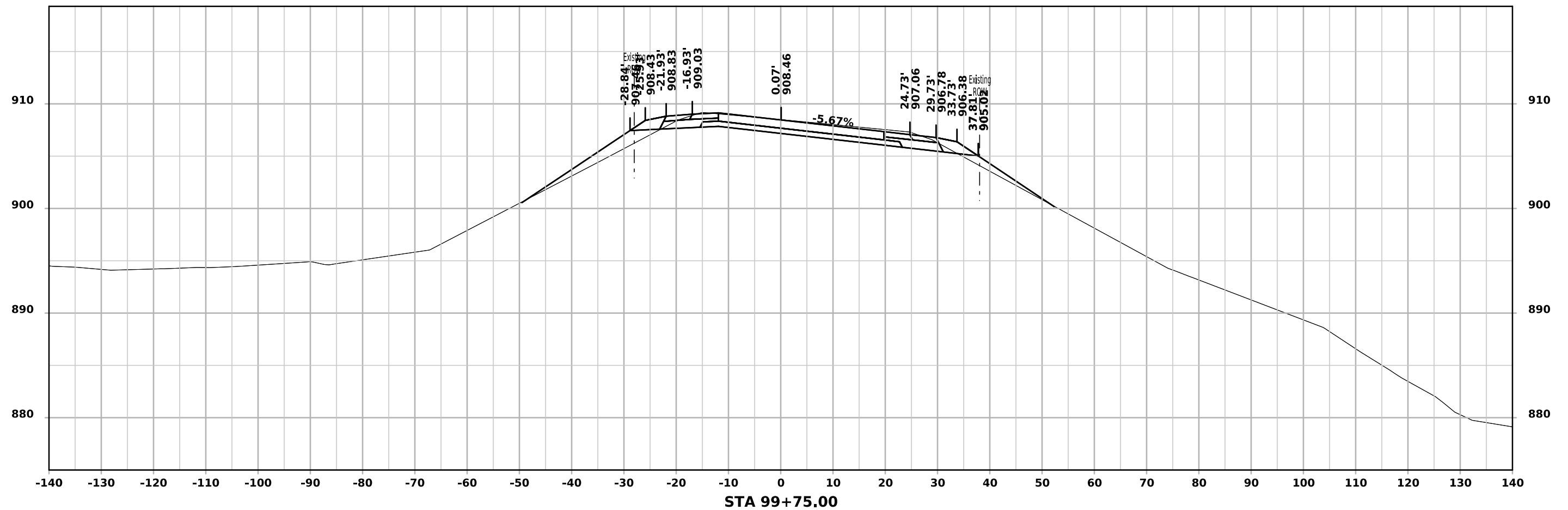
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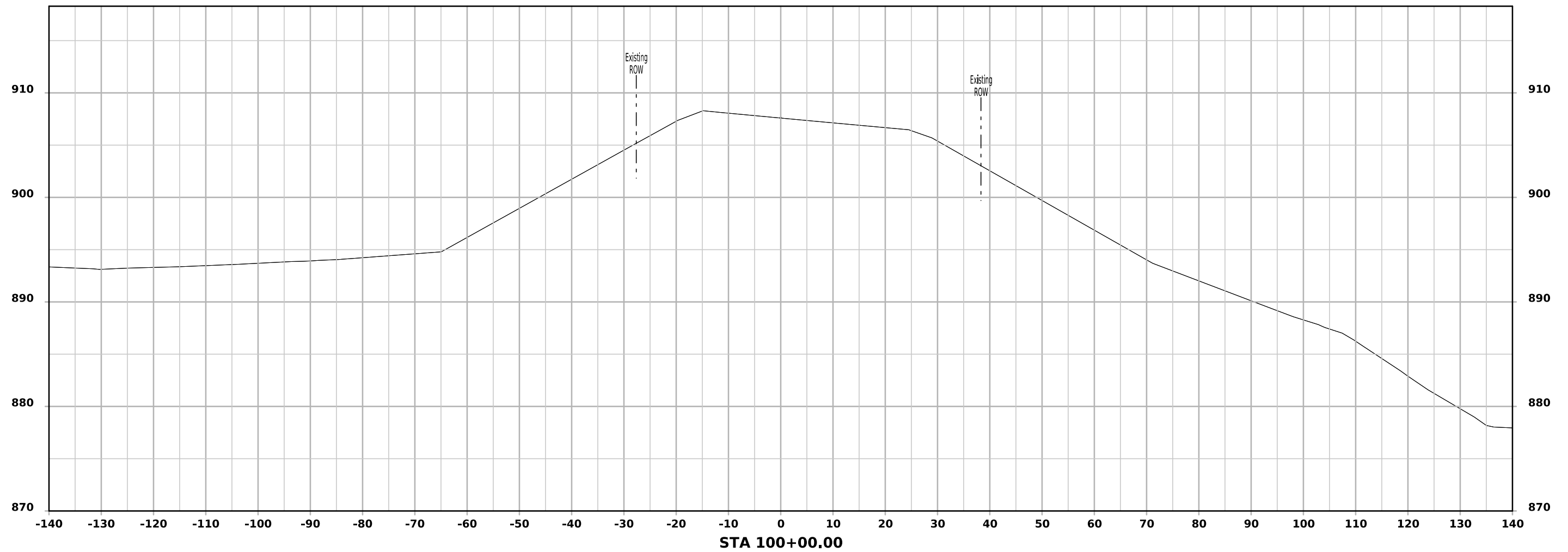
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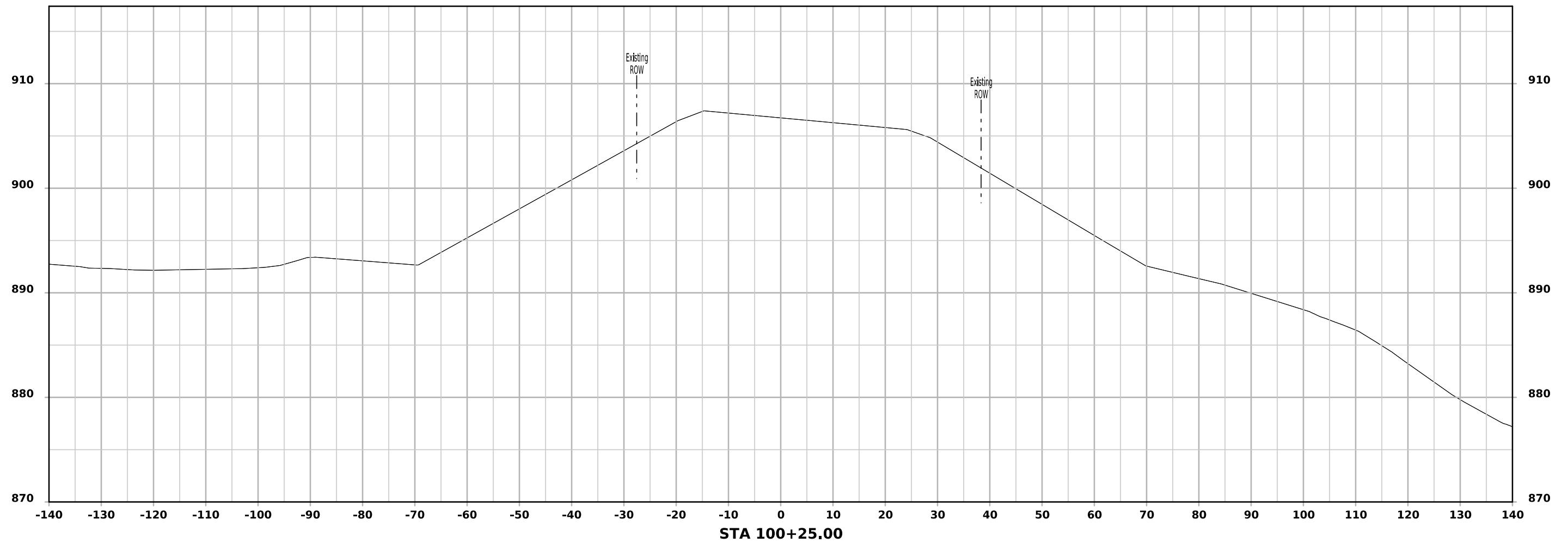
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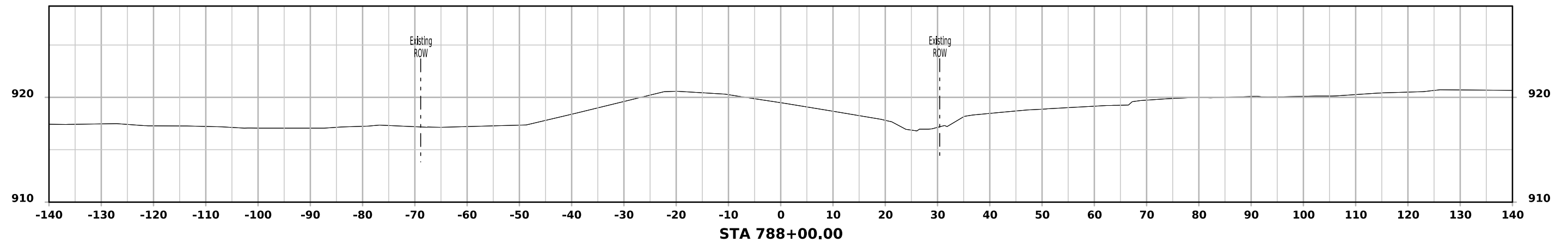
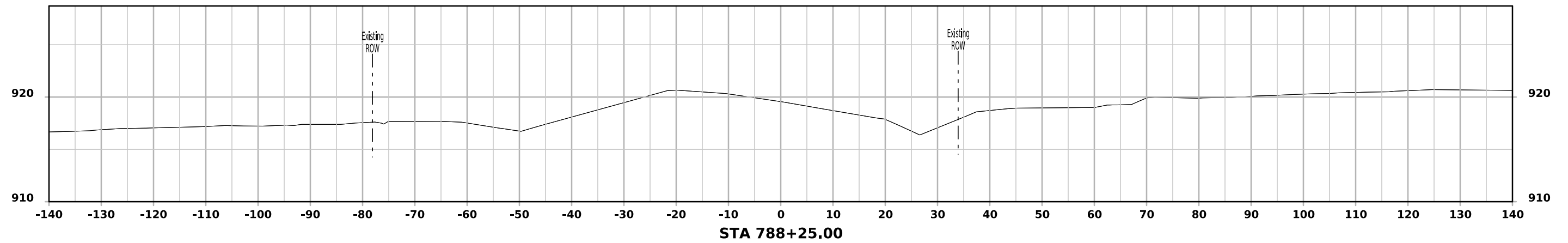
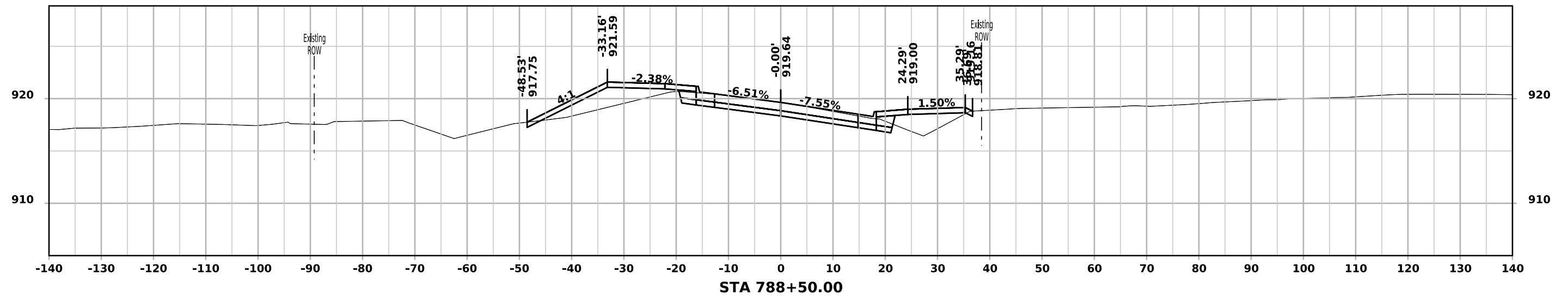
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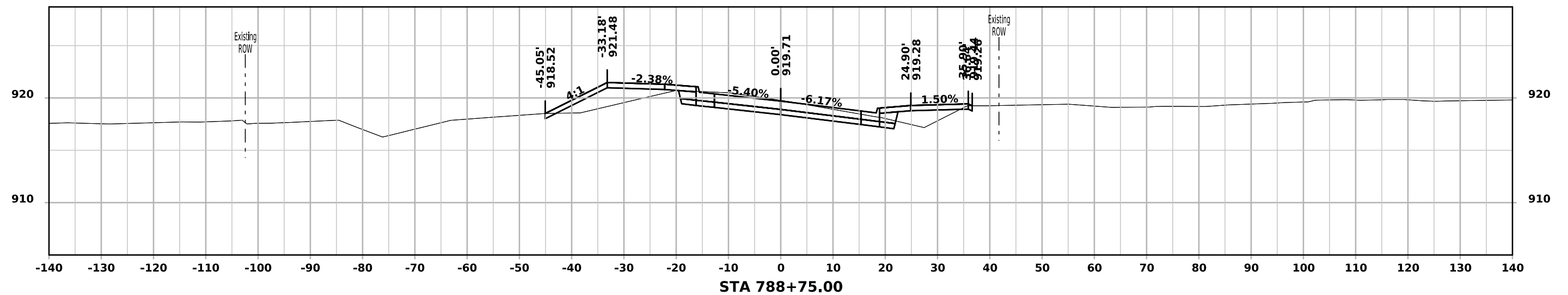
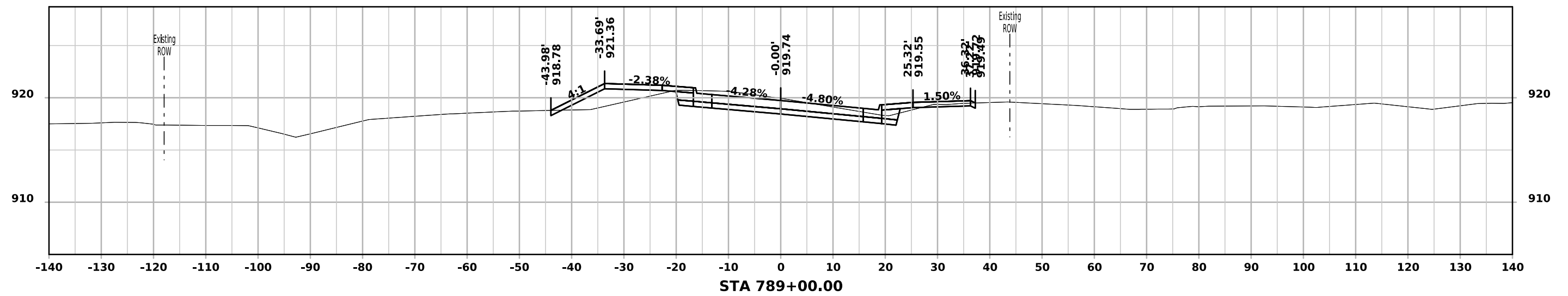
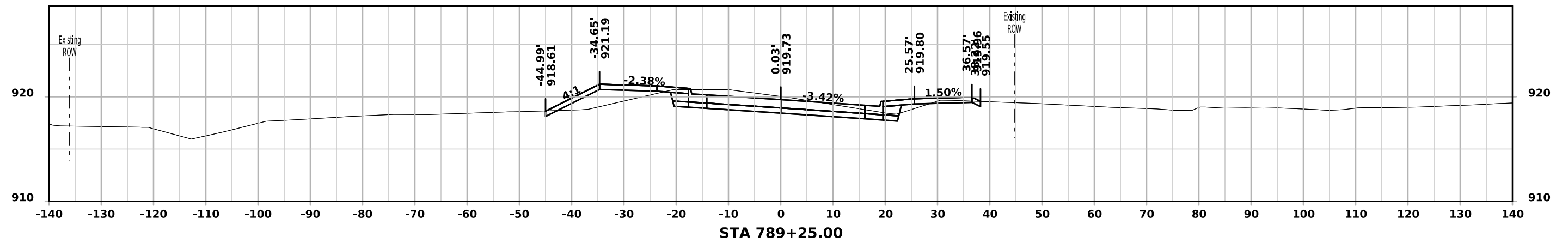
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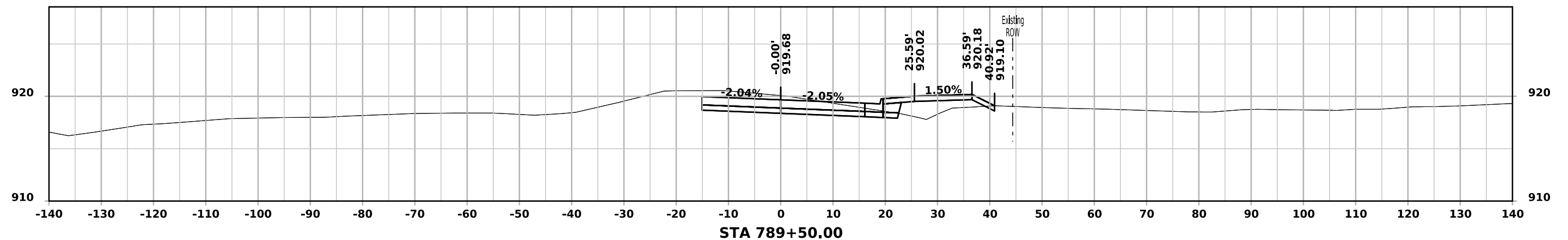
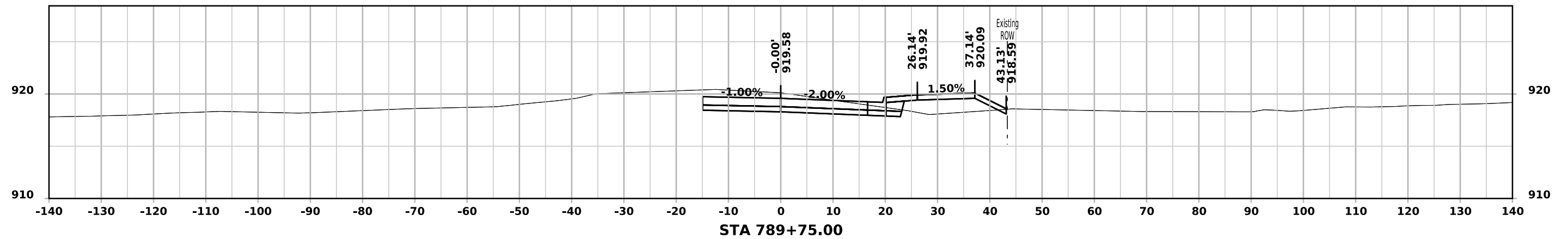
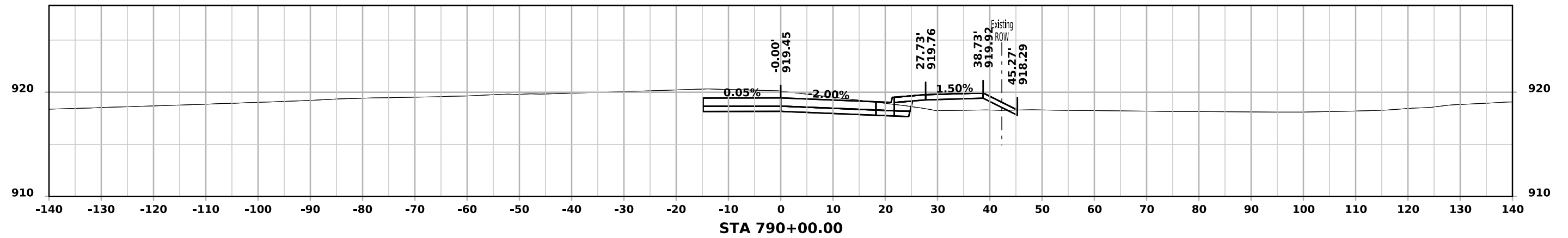
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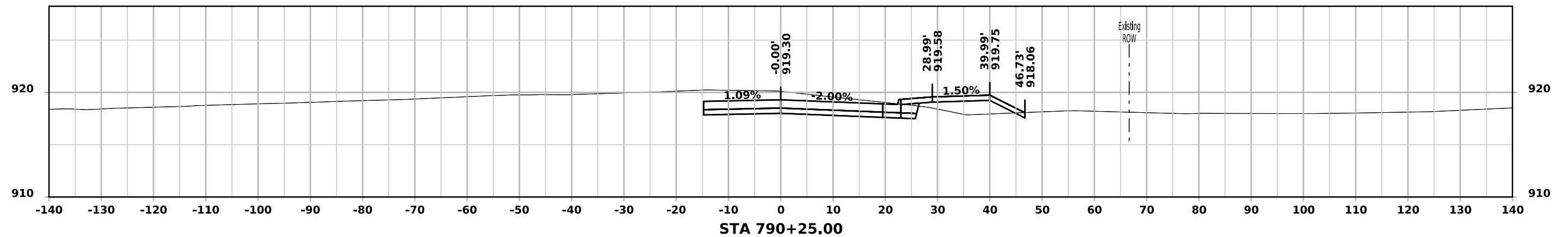
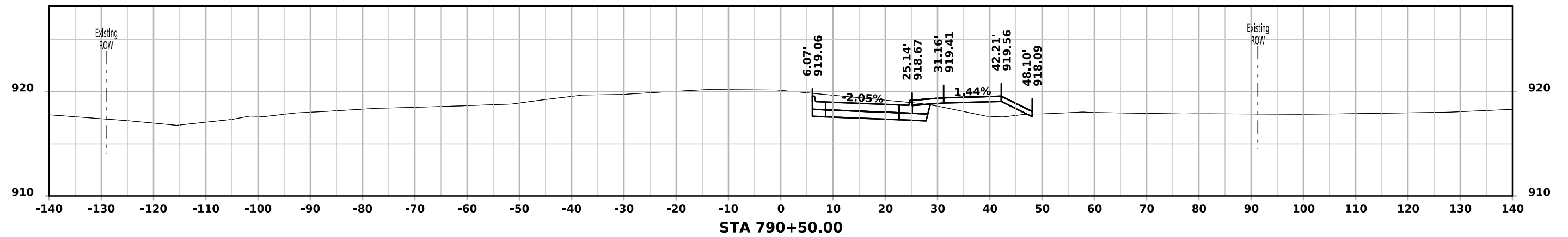
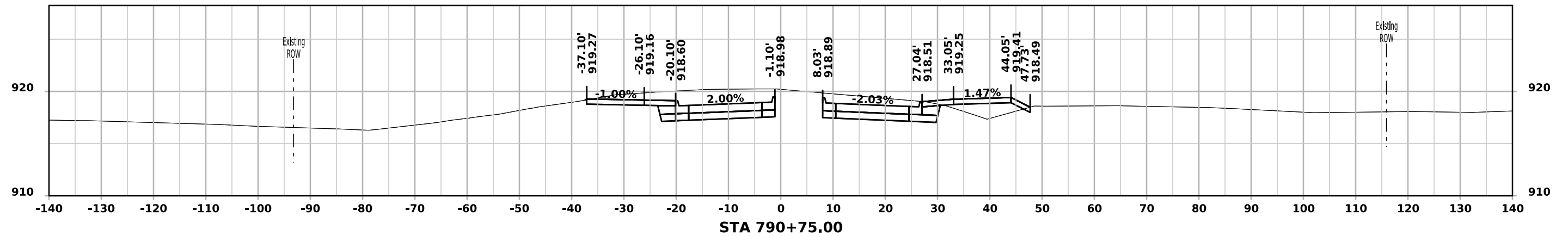
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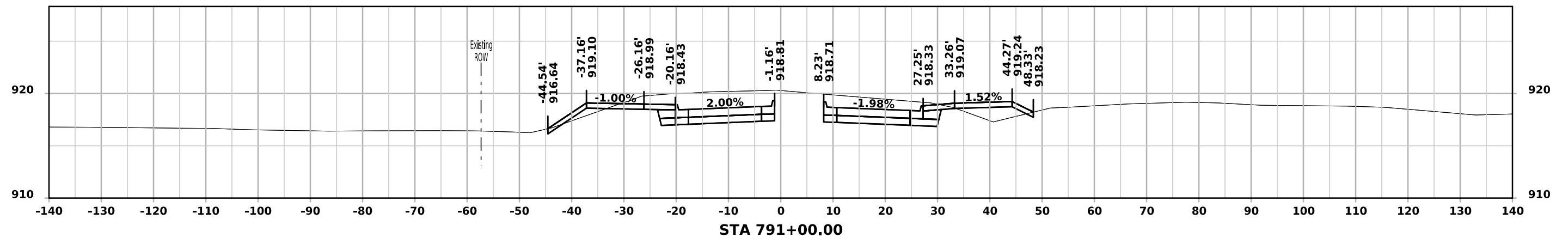
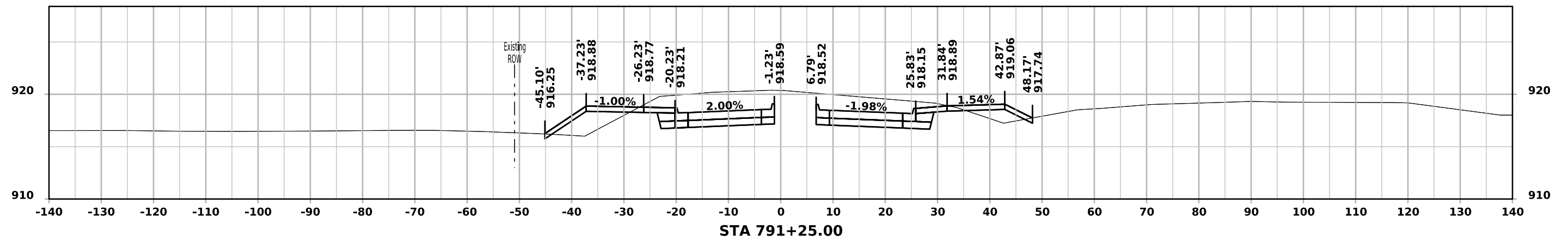
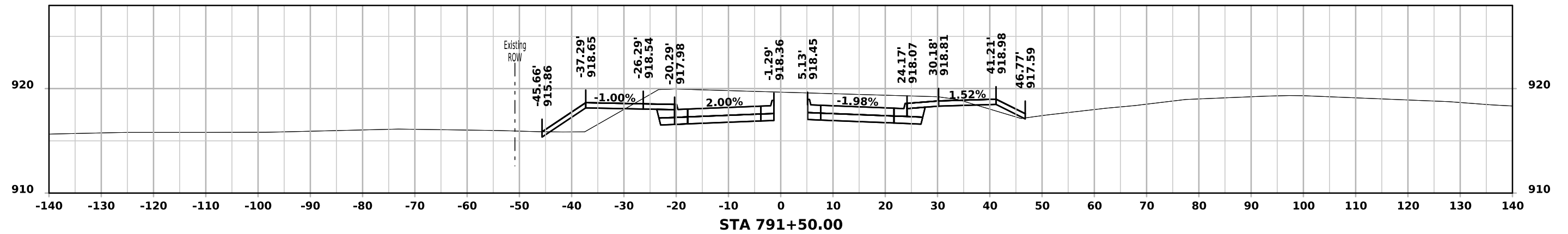
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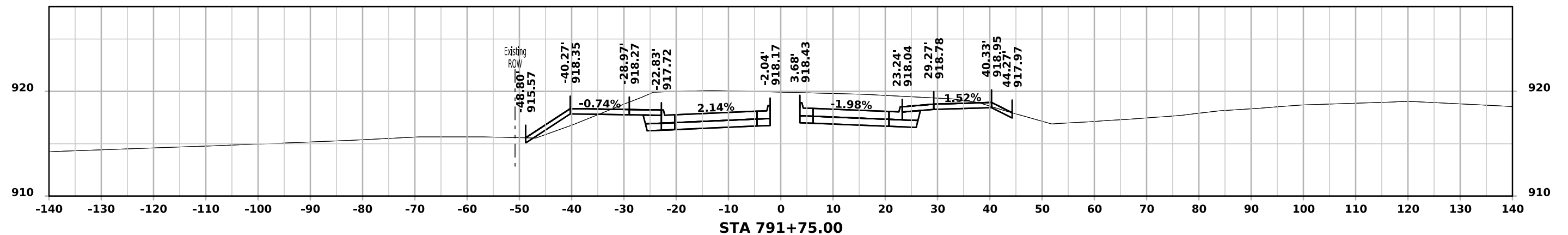
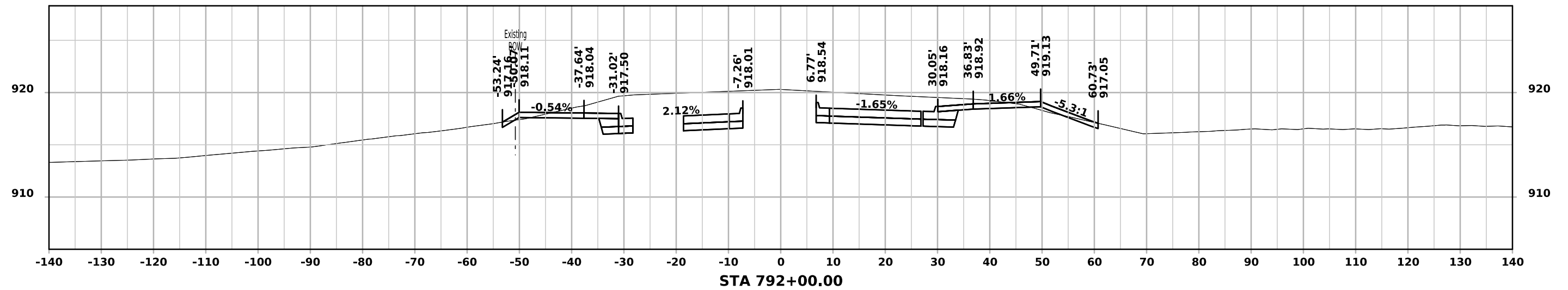
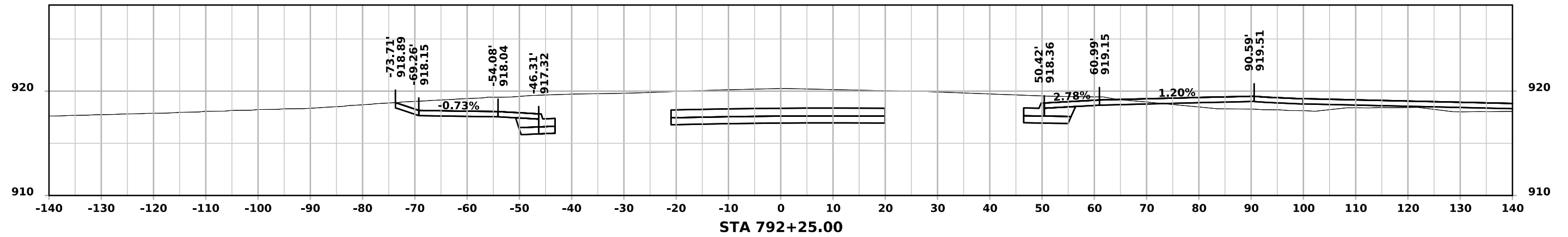
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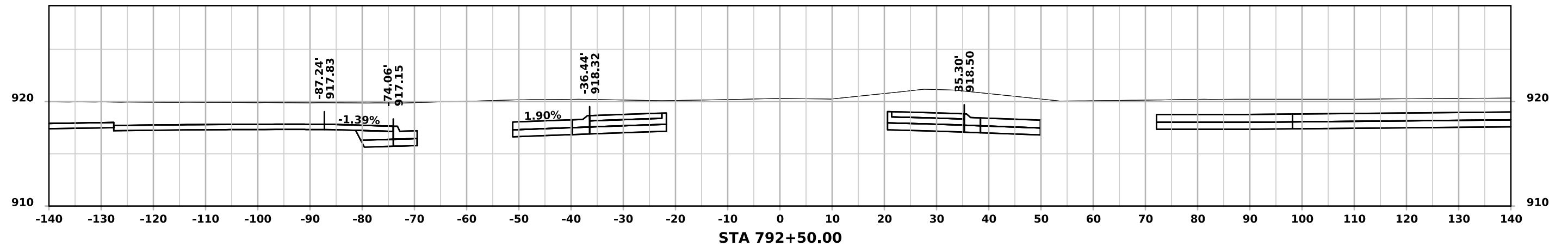
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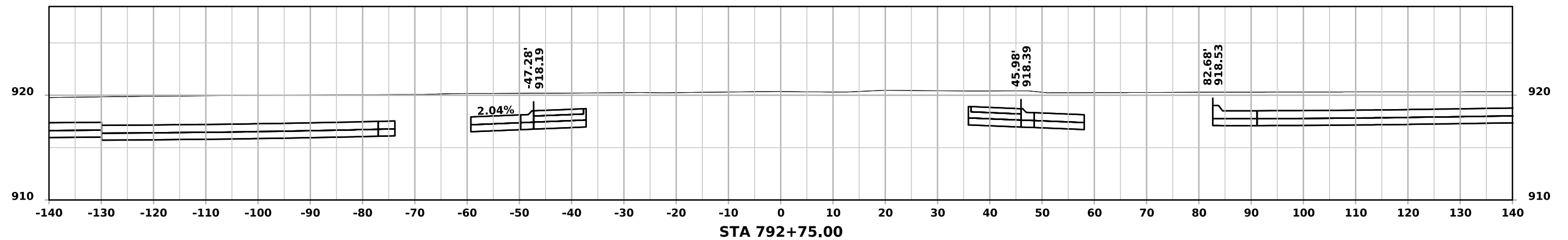
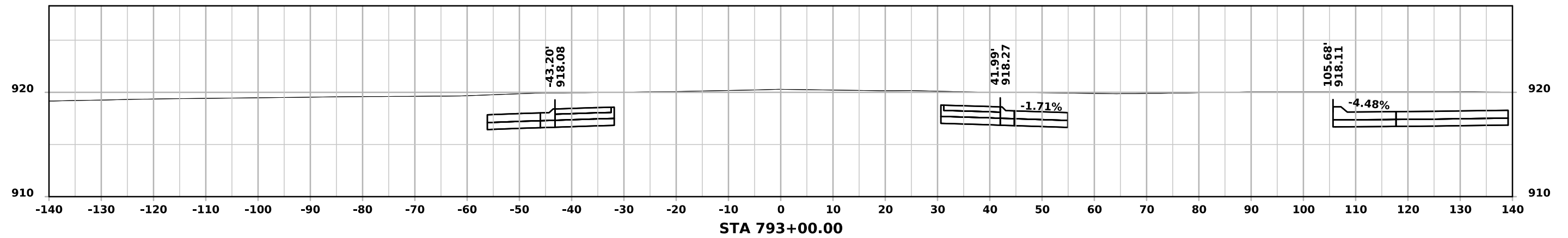
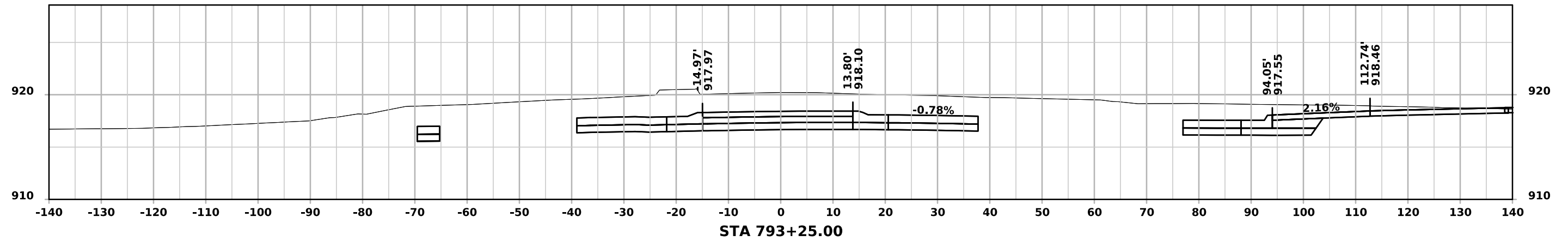
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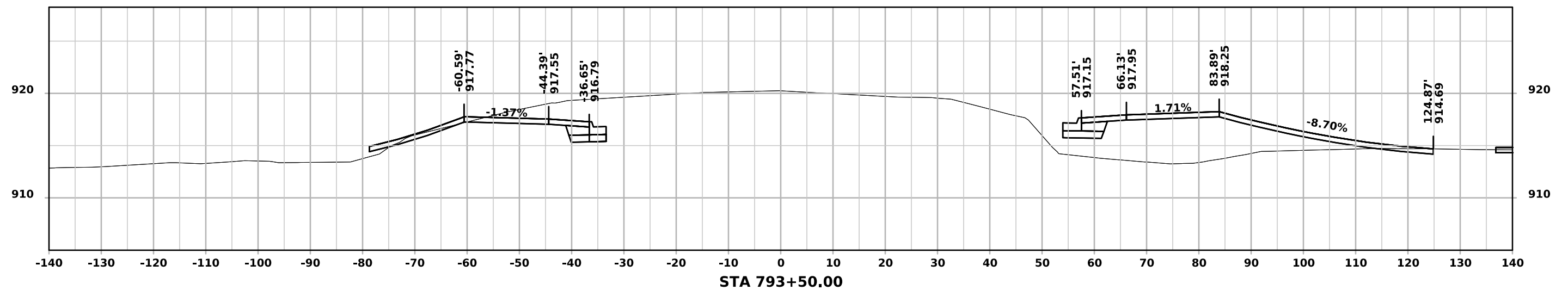
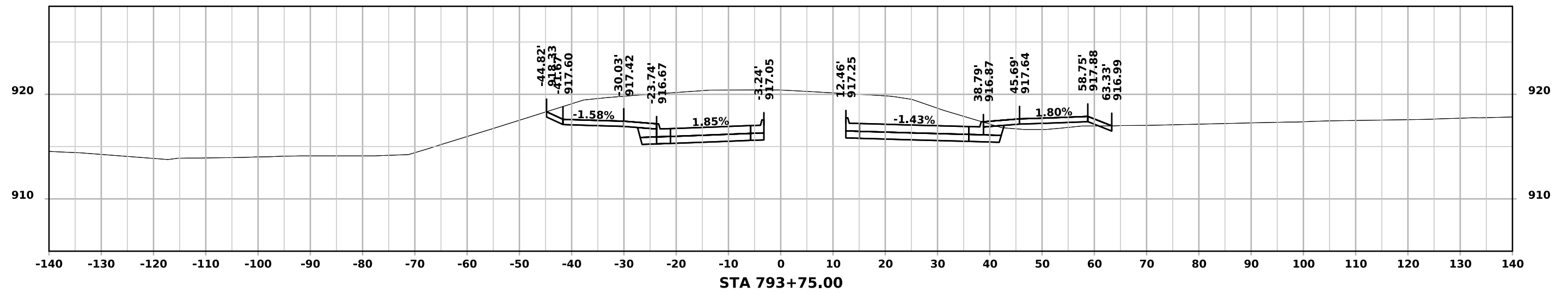
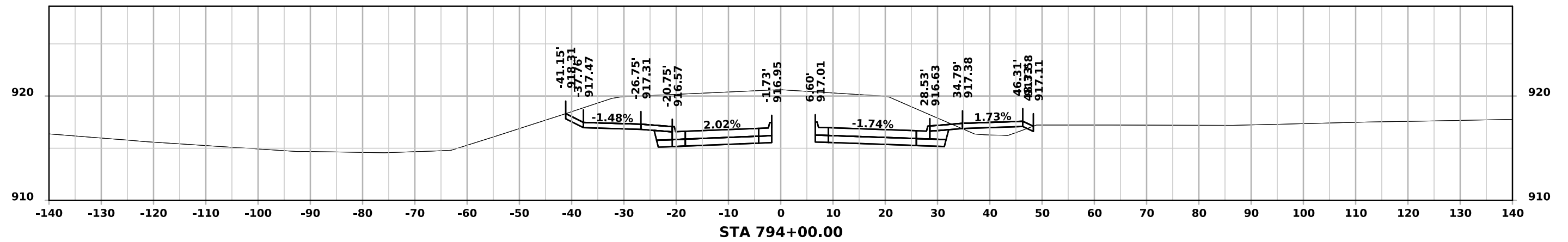
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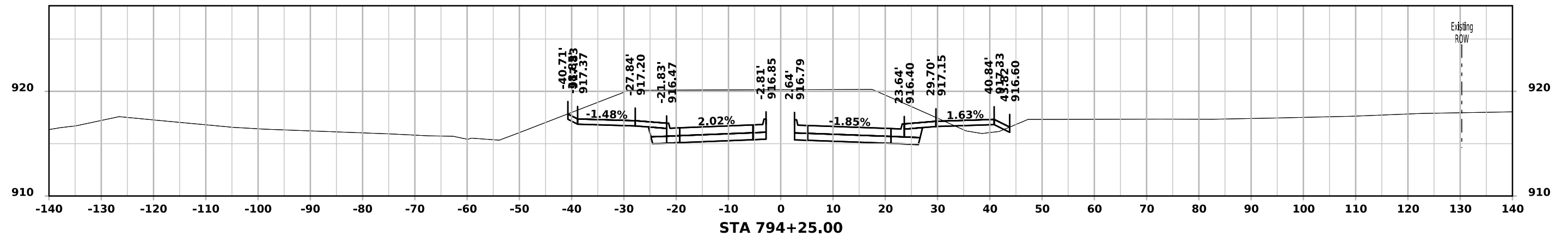
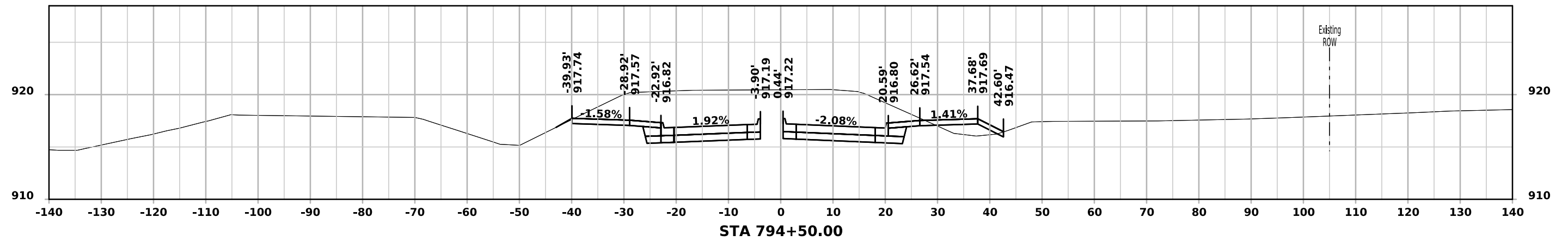
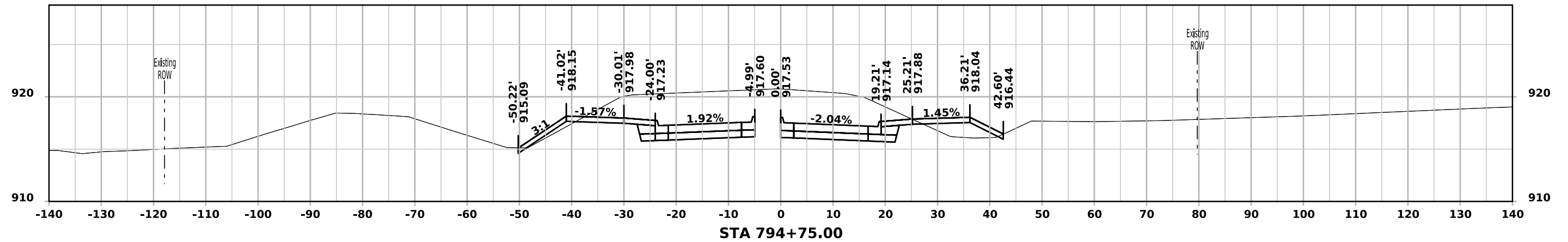
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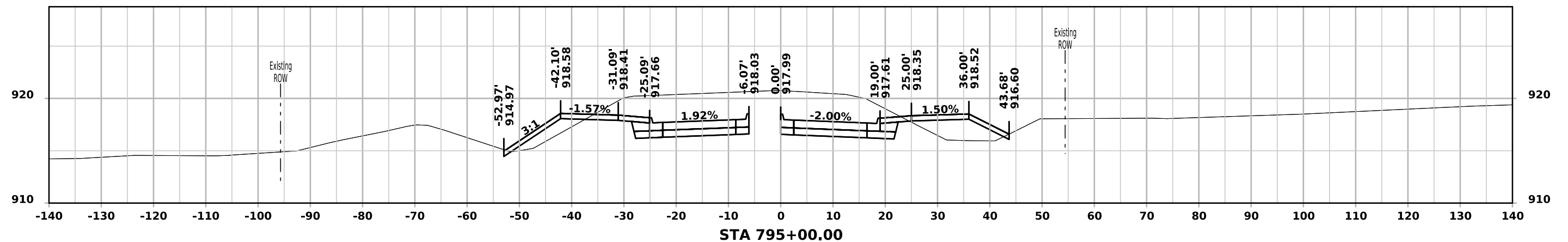
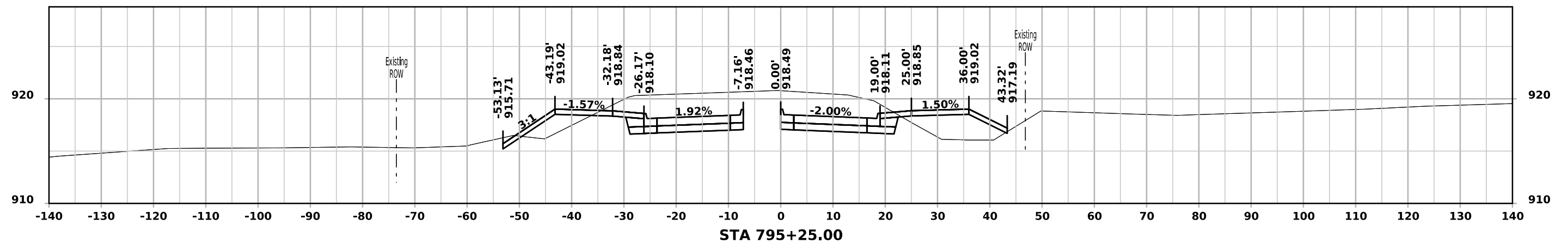
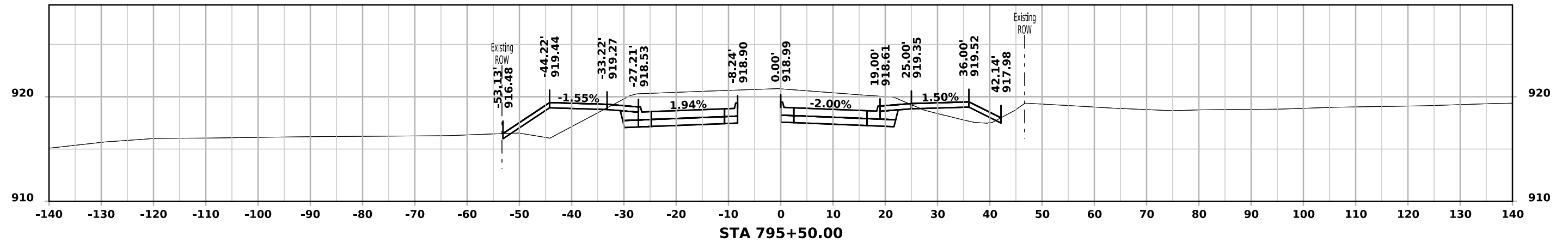
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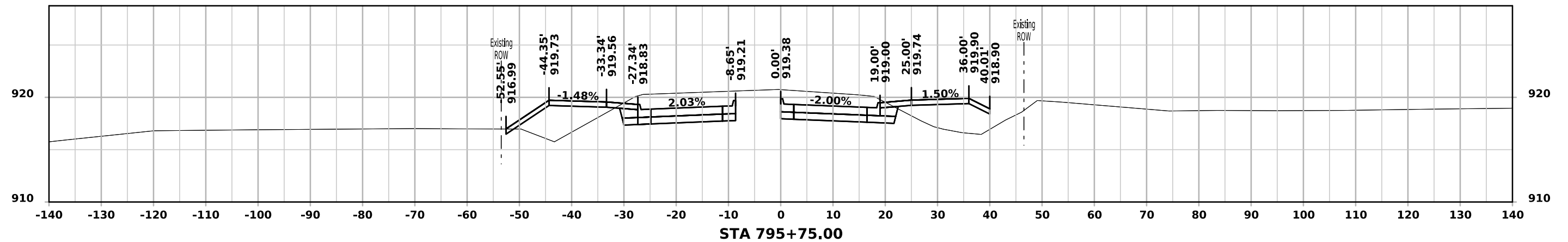
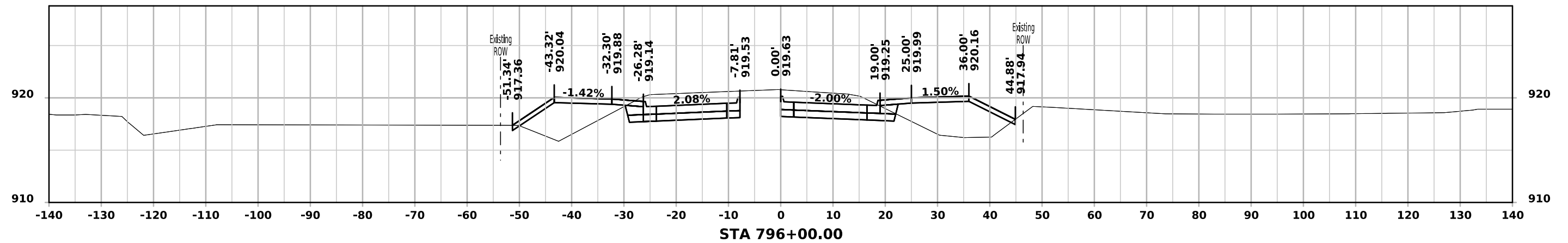
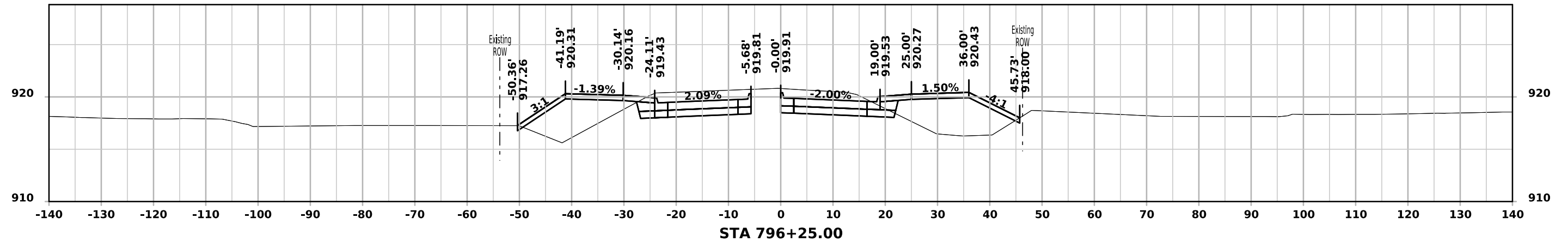
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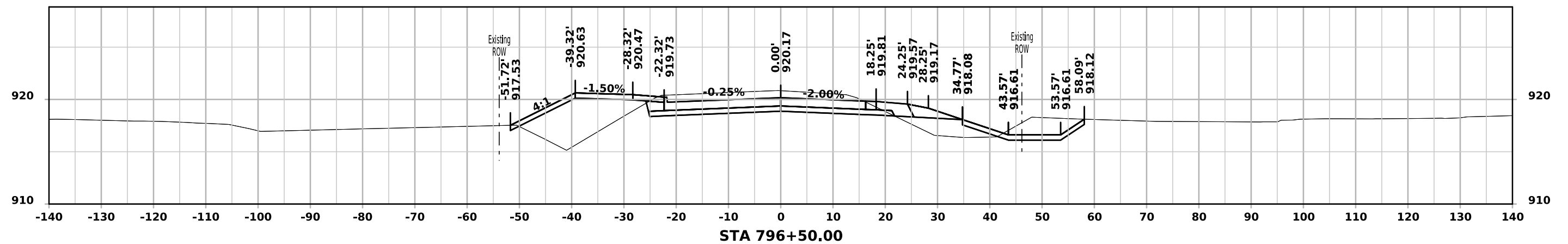
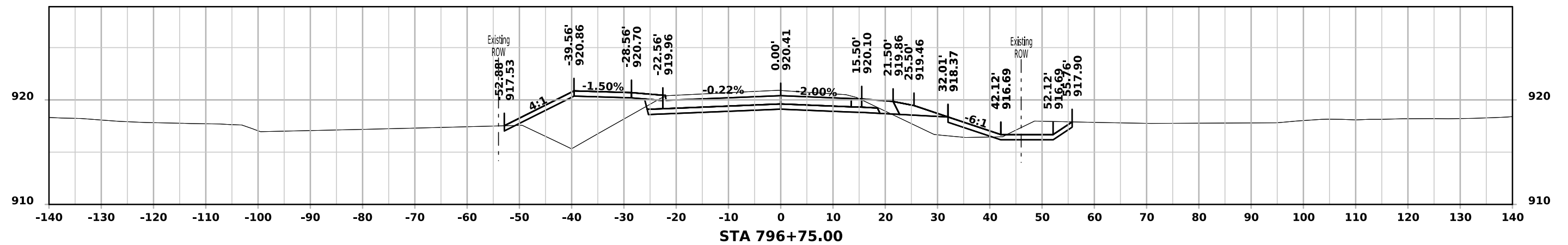
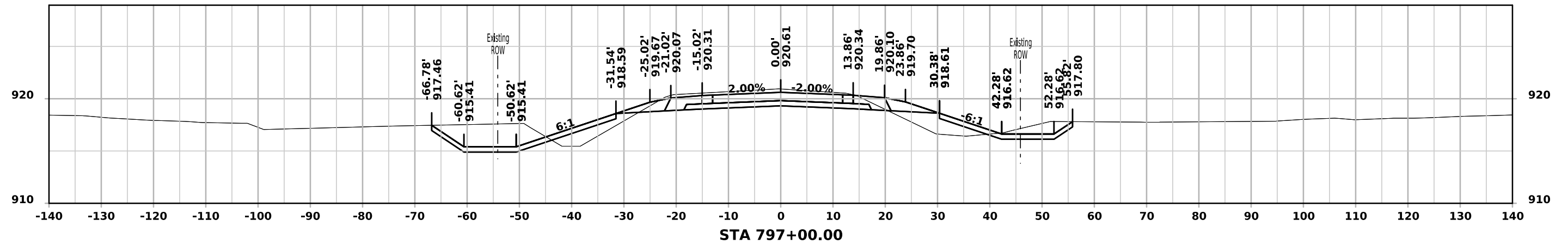
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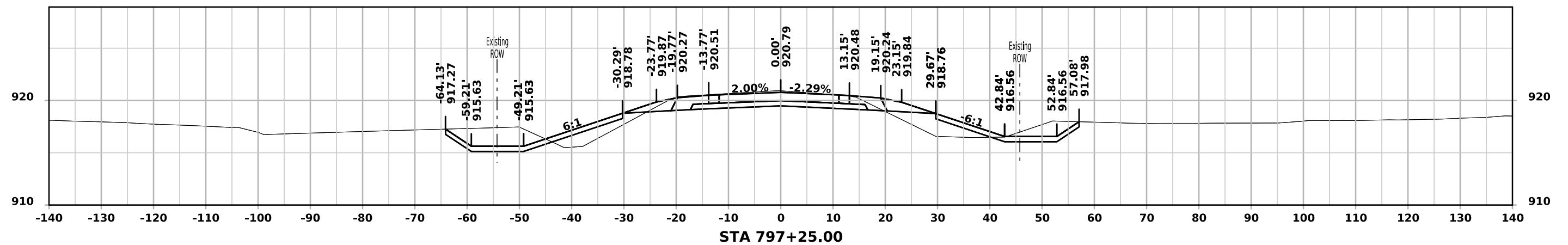
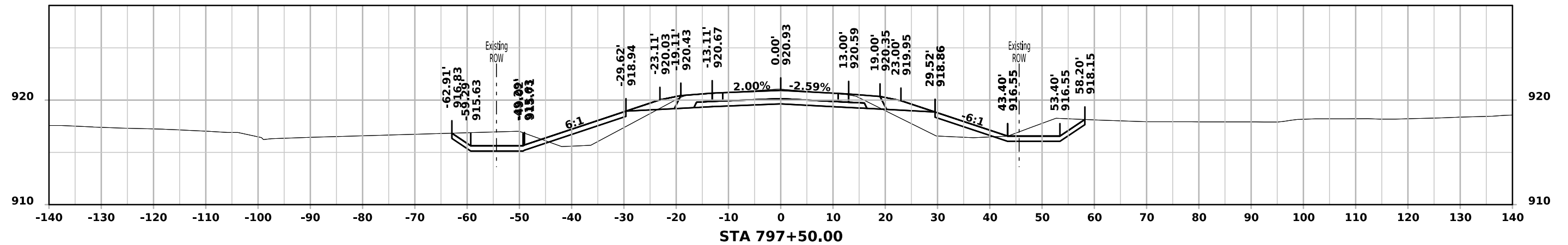
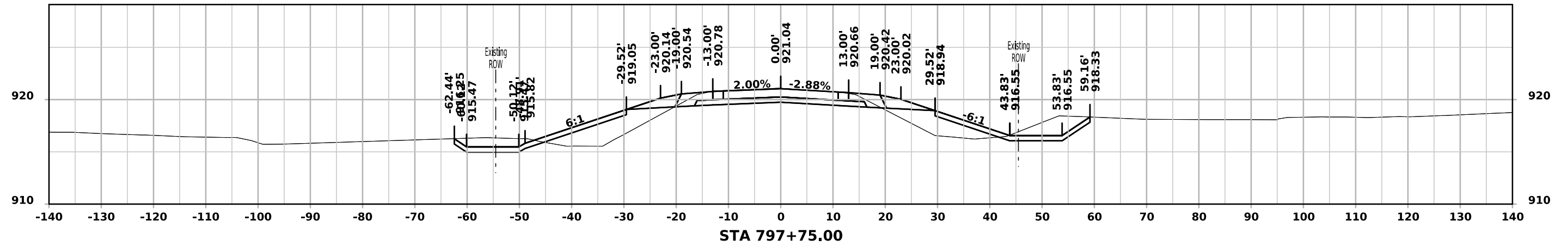
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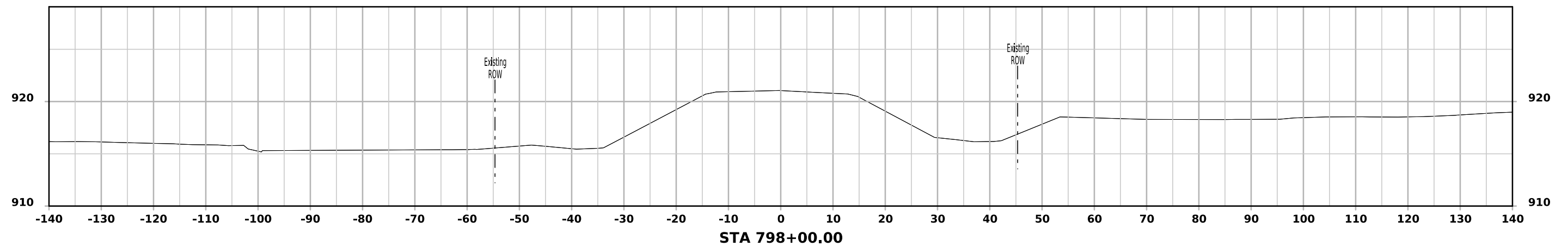
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FILE NO.

ENGLISH

DESIGN TEAM **Snyder & Associates, Inc.**

POLK COUNTY

PROJECT NUMBER **HSIPX-415-1(086)--3L-77**

SHEET NUMBER **X.15**