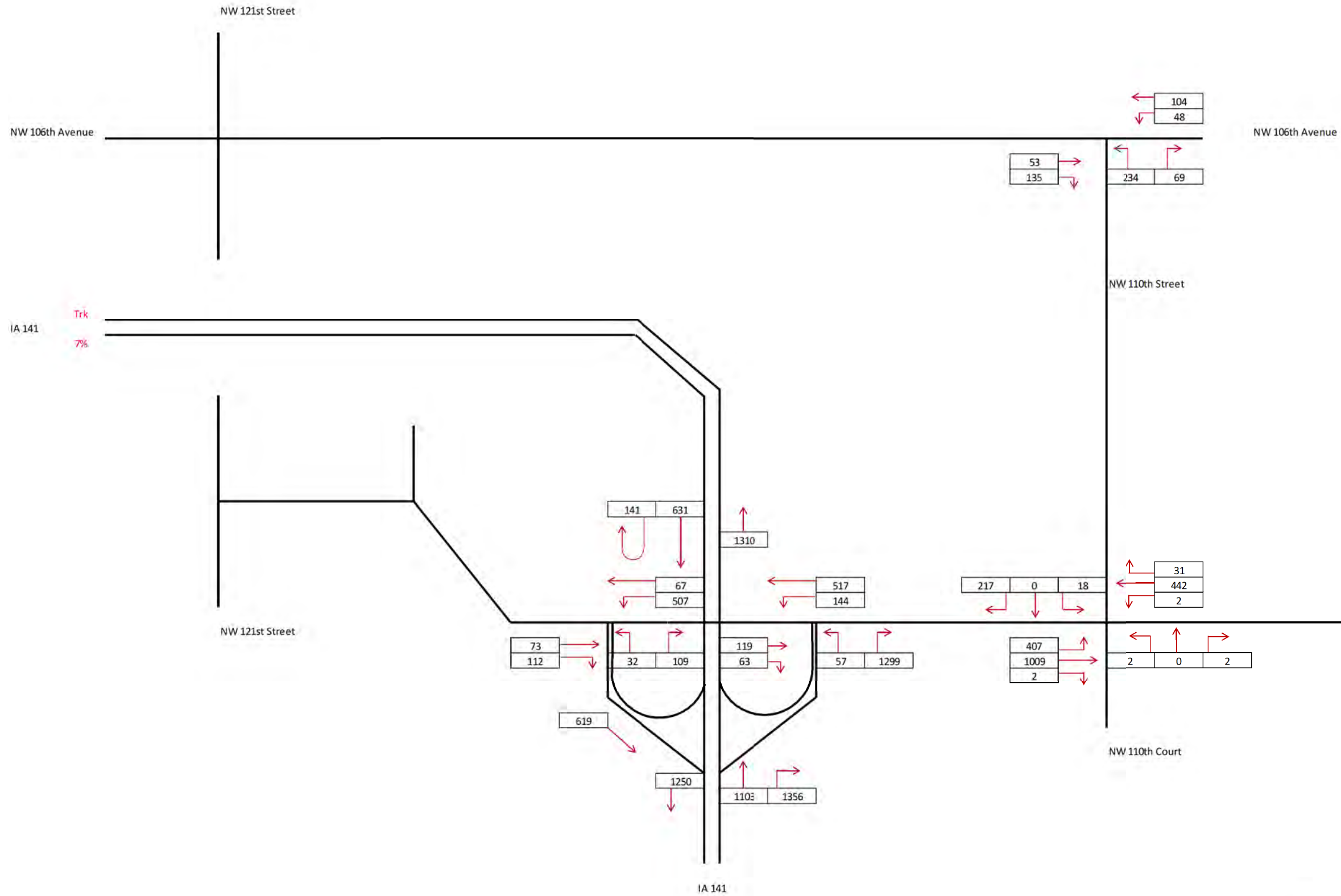


IA 141 & IA 415
 Polk County
 Exhibit 9: AM Ult. Build Total Traffic
 Year 2050



FILE NO. 5/37-09 PM 5/11/2022 ENGLISH jmenadoza DESIGN TEAM Snyder & Associates, Inc. c:\pwwork\jmenadoza\1088741\SH_77141056208_A06-A09.dgn

Roadway	Highway 141		
PIN Number	17-77-141-020	Submittal Date	05/11/22
Project Number	NHSX-141-7(56)--3H-77	Approval Date	
District	District 1	Assistant District Engineer	Allison Smith
County	POLK	or	
Route	Highway 141	Office Director	
Location	Along IA 141 between Towner Drive and Highway 17		
Work Type	Widening & Median Crossover removals		
Segment Manager			
Designer	Snyder & Associates, Inc.		

Design Manual Section 1C-1 Last Updated: 04-29-19				Rural Expressways (Rural Arterials)	
Design Element	Preferred	Acceptable Criteria	Project Values		
Design speed (mph)	70	50	70		
Maximum superelevation rate (Refer to Section 2A-2)	6%	8%	6%		
Design lane width (ft)	12	12	12		
Full depth paved width (ft)	Outside lane	12'	12		
	Inside lane(s)	12	12		
Right turn lane or an auxiliary lane (ft)	12	10	Offset RTL		
Left turn lane (ft)	12	10	12		
Pavement cross-slope (on tangent sections)	Through lanes	2%, However, when adjacent lanes slope in the same direction, increase slope by 0.5% per lane up to 3%	1.5% minimum, 3% maximum		
	Auxiliary and turn lanes	3%	3% maximum		
	Crown break at centerline	4%	4% maximum		
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)	Design speed = 50 or 55 mph	6-inch sloped	6-inch standard		
	Design speed ≥ 60 mph	4-inch sloped	6-inch sloped		
Foreslope (For fill areas greater than 40 ft, contact the Soils Design Section for assistance)	Adjacent to shoulder	10:1 for 4' then 6:1	3:1		
	Beyond standard ditch depth and design clear zone	3.5:1	3:1		
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)	Curbed roadways	2%	not steeper than 3:1		
		3:1	2.5:1		
Transverse Slopes	w/ drainage structures	8:1	6:1		
	w/o drainage structures	10:1	6:1		
Ditches (Refer to Section 3G-1)	Outside ditch (depth x width) (ft)	5 x 10	--		
	Median ditch depth (ft)	4	2		
Median width (ft) (Refer to Section 3E-1)	64	50	64		
Bridge width—new*	Bridge length ≤ 200 ft	design lane widths + effective shoulder widths	design lane widths + effective shoulder widths		
	Bridge length > 200 ft	design lane widths + effective shoulder widths	design lane width + 4' right and left of the design lane widths		
Bridge width—existing*		design lane widths + no less than 2 ft left and right	design lane widths + 2 ft left and right of the design lane widths		
Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks)	Over primary	16.5	16		
	Over non-primary	16.5 at interchange locations, 15 at all other locations	14		
	Over railroad	23.3	23.3		
	Sign trusses and pedestrian crossings	17.5	17		
Structural Capacity	Contact Office of Bridges and Structures		Contact Office of Bridges and Structures		
Level of Service	B		B		

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

Design year ADT = 40500		Effective Shoulder Width and Type for Multilane Arterials							
Preferred (Values shown in feet)				Acceptable (Values shown in feet)				Project Values	
		Rural Roadways		Urban Roadways		Rural Roadways		Urban Roadways	
Auxiliary lanes or turn lanes with shoulders	6	6	6	Auxiliary lanes or turn lanes with shoulders	6	0	6	0	6
Turn lanes with curbs	6	See Section 3C-2		6	6	0	6	0	6
Expressways	Outside		Median Side		Outside		Median Side		Outside = 6' Paved 4' Gravel Median = 4' Paved 6' Gravel
	Effective Shoulder Width	Paved Width	Effective Shoulder Width	Paved Width	Effective Shoulder Width	Paved Width	Effective Shoulder Width	Paved Width	
Routes where bicycles are to be accommodated	10	10	6	6	8	4	4	4	
On roadways approaching urban areas (due to increased bike traffic)	10	10	6	6	8	4	4	4	
On all curves with a superelevation rate of 7.0% or greater	10	10	6	6	8	0*	4	4	
On roadways with design year ADT > 6500 vpd	10	6	6	6	8	0*	4	4	
On all other Expressways (Multilane Arterials)	10	6	6	6	8	0*	4	4	

*Requires safety edge-See 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

Roadway Design Speed (mph) = 70		Design Criteria for High Speed Roadways														
		Preferred Criteria						Acceptable Criteria						Project Values		
Design Element		Design Speed, mph						Design Speed, mph								
Stopping sight distance (ft) (Refer to Section 6D-1)		425	495	570	645	730	820	425	495	570	645	730	820	730		
Minimum horizontal curve radius (ft) (Refer to Sections 2A-2 and 2A-3)	Method 5 superelevation and side friction distribution	e _{max} = 6%		833	1060	1330	1660	2040	2500	833	1060	1330	1660	2040	2500	UAC
		e _{max} = 8%		--	--	--	--	--	--	758	960	1200	1480	1810	2210	
Minimum vertical curve length (ft) (Refer to Section 2B-1)		150	165	180	195	210	225	150	165	180	195	210	225	UAC		
Minimum rate of vertical curvature (K)	crest vertical curves	84	114	151	193	247	312	84	114	151	193	247	312	UAC		
	sag vertical curves	96	115	136	157	181	206	96	115	136	157	181	206	UAC		
(Refer to Section 2B-1)	roadways without fixed-source lighting	96	115	136	157	181	206	54	66	78	91	106	121	UAC		
(Refer to Section 2B-1)	roadways with fixed-source lighting	96	115	136	157	181	206	54	66	78	91	106	121	UAC		
Minimum gradient (%) (Refer to Section 2B-1)		0.5						0.3% with a curb, 0.0% without a curb						UAC		
Maximum gradient (%) (Refer to Section 2B-1)	Urban roadways	4		3				7	6	6	--	--	--	UAC		
	Rural roadways	4		3				5	5	4	4	4	4	UAC		
	Interstates	4		3				5	5	4	4	4	4	UAC		
Clear zone		See "Preferred Clear Zone" table in Section 8A-2						See "Acceptable Clear Zone" table in Section 8A-2						34		

POLK COUNTY PROJECT NUMBER NHSX-141-7(56)--3H-77 SHEET NUMBER A.6 REVISED X

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FILE NO. ENGLISH DESIGN TEAM Snyder & Associates, Inc. POLK COUNTY PROJECT NUMBER NHSX-141-7(56)--3H-77 SHEET NUMBER A.7 REVISED X

Roadway	Highway 415		
PIN Number	17-77-141-020	Submittal Date	05/11/22
Project Number	NHSX-141-7(56)--3H-77	Approval Date	
District	District 1	Assistant District Engineer	Allison Smith
County	POLK	or	
Route	Highway 141	Office Director	
Location	Highway 415 @ 110th Street		
Work Type	Widening		
Segment Manager			
Designer	Snyder & Associates, Inc.		

Design Manual Section 1C-1 Last Updated: 04-29-19				Rural Two-Lane Highways (Rural Arterials)	
Design Element	Preferred	Acceptable	Project Values		
Design speed (mph)	60	50	60		
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	12		
Climbing Lane (ft)	12	12	N/A		
Left turn lane (ft)	12	10	16'-12' lane and 4' Med		
Pavement cross-slope (on tangent sections)	Through lanes	1.5% minimum, 2% maximum	2%		
	Auxiliary and turn lanes	3% maximum	3%		
	Crown break at centerline	4% maximum	4%		
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)	Design speed = 50 or 55 mph	6-inch sloped	6-inch standard		N/A
	Design speed ≥ 60 mph	4-inch sloped	6-inch sloped		No Curb
Foreslope (For fill areas greater than 40 ft, contact the Soils Design Section for assistance)	Adjacent to shoulder	10:1 for 4' then 6:1	3:1		10:1 for 4' then 6:1
	Beyond standard ditch depth and design clear zone	3.5:1	3:1		3.5:1
	Curbed roadways	2%	not steeper than 3:1		N/A
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)	3:1	2.5:1		3:1	
Transverse Slopes	w/ drainage structures	8:1	6:1		8:1
	w/o drainage structures	10:1	6:1		10:1
Ditches (Refer to Section 3G-1)	Outside ditch (depth x width) (ft)	5 x 10	-		4 x 5
Bridge width—new*	Bridge length ≤ 200 ft	design lane widths + effective shoulder widths	design lane widths + effective shoulder widths		N/A
	Bridge length > 200 ft	design lane widths + effective shoulder widths	design lane width + 4' right and left of the design lane 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)	Over primary	16.5	16		N/A
	Over non-primary	16.5 at interchange locations, 15 at all other locations	14		N/A
	Over railroad	23.3	23.3		N/A
	Sign trusses and pedestrian bridges	17.5	17		N/A
Structural Capacity		Contact Office of Bridges and Structures	Contact Office of Bridges and Structures		N/A
Level of Service	B		B		B

*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 =		16900		Effective Shoulder Width and Type for Two-Lane Highways			
Design Manual Section 1C-1 Last Updated: 04-29-19				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	Rural Roadways	Urban Roadways			
Turn lanes with shoulders	6	6	Turn lanes with shoulders	6	0	N/A	
Turn lanes with curbs	6	See Section 3C-2	Turn lanes with curbs	6	0	N/A	
	Effective Shoulder Width	Paved Width		Effective Shoulder Width	Paved Width		
Climbing Lanes	6	4	Climbing Lanes	4	0	N/A	
Two-Lane Highways	Effective Shoulder Width	Paved Width	Two-Lane Highways	Effective Shoulder Width	Paved Width		
Routes where bicycles are to be accommodated	10	10	Design year ADT > 2000 vpd	8	0*	5' Paved and 5' Granular (Matches Existing)	
On roadways approaching urban areas (due to increased bike traffic)	10	10					
On all curves with a superelevation rate of 7.0% or greater	10	10					
On roadways with design year ADT > 5000	10	6	Design year ADT between 400 - 2000 vpd	6	0*		
On all other NHS	10	6					
On non-NHS routes with design year ADT > 3000	10	6	Design year ADT < 400 vpd	4	0*		
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

Roadway Design Speed (mph) =		60		Design Criteria for High Speed Roadways												
Design Manual Section 1C-1 Last Updated: 04-29-19				Design Criteria for High Speed Roadways												
Design Element	Preferred Criteria Design Speed, mph						Acceptable Criteria Design Speed, mph						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	570			
Minimum horizontal curve radius (ft) (Refer to Sections 2A-2 and 2A-3)	Method 5 superelevation and side friction distribution	e _{max} = 6%		833	1060	1330	1660	2040	2500	833	1060	1330	1660	2040	2500	UAC
		e _{max} = 8%		-	-	-	-	-	-	-	758	960	1200	1480	1810	2210
Minimum vertical curve length (ft) (Refer to Section 2B-1)	crest vertical curves	150	165	180	195	210	225	150	165	180	195	210	225	N/A		
Minimum rate of vertical curvature (K) (Refer to Section 2B-1)	sag vertical curves	roadways without fixed-source lighting		84	114	151	193	247	312	84	114	151	193	247	312	N/A
		roadways with fixed-source lighting		96	115	136	157	181	206	96	115	136	157	181	206	N/A
Minimum gradient (%)	(Refer to Section 2B-1)	0.5						0.3% with a curb, 0.0% without a curb						UAC		
Maximum gradient (%)	(Refer to Section 2B-1)	Urban roadways		4		3		7	6	6	-	-	-	N/A		
		Rural roadways		4		3		5	5	4	4	4	4	UAC		
		Interstates		4		3		5	5	4	4	4	4	N/A		
Clear zone		See "Preferred Clear Zone" table in Section 8A-2						See "Acceptable Clear Zone" table in Section 8A-2						30		

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FILE NO. ENGLISH DESIGN TEAM Snyder & Associates, Inc. POLK COUNTY PROJECT NUMBER NHSX-141-7(56)--3H-77 SHEET NUMBER A.8 REVISED

Roadway	110th Street		
PIN Number	17-77-141-020	Submittal Date	05/11/22
Project Number	NHSX-141-7(56)--3H-77	Approval Date	
District	District 1	Assistant District Engineer	Allison Smith
County	POLK	or	
Route	Highway 141	Office Director	
Location	110th Street Extension		
Work Type	Grade and Pave		
Segment Manager			
Designer	Snyder & Associates, Inc.		

[Design Manual Section 1C-1](#)
Last Updated: 04-29-19

Urban Multilane Roadways (Urban Arterials)

Design Element		Preferred	Acceptable Criteria	Project Values	
Design speed (mph)		The anticipated posted speed limit	30	45	
Maximum superelevation rate (Refer to Section 2A-2)		4%	8%	4%	
Design lane width (ft)		12	11	11	
Full depth paved width (ft)	Outside lane	Design lane width + curb and gutter unit or 12 feet for roadways with shoulders	Match design lane width	13	
	Inside lane(s)	Design lane width + curb and gutter unit. 12' for roadways without a curb and gutter unit	Match design lane width	13	
Right turn lane or an auxiliary lane (ft)		12	10	12	
Left turn lane (ft)	With raised or painted median	12 ft + median	10 ft + median	15	
	With depressed median	12	10	N/A	
Two-way left turn lane (ft)		14	11	N/A	
Parking lane width (ft)		10	7	N/A	
Pavement cross-slope (on tangent sections)	Through lanes	2%, However, when adjacent lanes slope in the same direction, increase slope by 0.5% per lane up to 3%	1.5% minimum, 3% maximum	2% & 3%	
	Auxiliary and turn lanes	3%	3% maximum	3%	
	Crown break at centerline	4%	4% maximum	4%	
Shoulder cross-slope (on tangent sections)	Shoulders	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 and gutter units	Match pavement cross-slope		6% maximum	Pvmt Slope
	Parking lanes	1% greater than pavement cross-slope		6% maximum	N/A
Curb type (Refer to Section 3C-2)	Design speed ≤ 45 mph	6-inch standard	any shape	6-inch standard	
Foreslope (For fill areas greater than 40 ft, contact the Soils Design Section for assistance)	Adjacent to shoulder	10:1 for 4' then 6:1	3:1	N/A	
	Beyond standard ditch depth and design clear zone	3.5:1	3:1	4:1	
	Curbed roadways	2%	not steeper than 3:1	4%	
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)	w/ drainage structures	8:1	6:1	8:1	
	w/o drainage structures	10:1	6:1	10:1	
Ditches (Refer to Section 3G-1)		Outside ditch (depth x width) (ft)	5 x 10	5 x 5	
Median width (ft) (Refer to Section 3E-1)		See Section 3E-1	0	N/A	
Bridge width—new*	Bridge length ≤ 200 ft	design lane widths + effective shoulder widths or design lane width + 3 ft each side in curb and gutter section	design lane widths + effective shoulder widths or curb-to-curb width in curb and gutter section**	N/A	
	Bridge length > 200 ft	design lane widths + effective shoulder widths or design lane width + 3 ft each side in curb and gutter section	design lane widths + 4 ft offset each side for roadways with shoulders or curb-to-curb width in curb and gutter section**	N/A	
Bridge width—existing*		design lane widths + no less than 2 ft left and right	design lane widths + 2 ft left and right of the design widths	N/A	
Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks)	Over primary	16.5	16	N/A	
	Over non-primary	16.5 at interchange locations, 15 at all other locations	14	N/A	
	Over railroad	23.3	23.3	N/A	
	Sign truss and pedestrian crossings	17.5	17	N/A	
Structural Capacity		Contact Office of Bridges and Structures	Contact Office of Bridges and Structures	N/A	
Level of Service		C	D	C	

*FHWA notification via email is required if acceptable criteria is not met on the NHS system (No formal design exception required)
** If travel lanes are less than 12 ft wide contact the Methods Section for assistance.

Design year ADT = 2000

[Design Manual Section 1C-1](#)
Last Updated: 04-29-19

Effective Shoulder Width and Type for Multilane Arterials

Design Element	Preferred (Values shown in feet)				Acceptable (Values shown in feet)				Project Values
	Rural Roadways		Urban Roadways		Rural Roadways		Urban Roadways		
	Effective Shoulder Width	Paved Width	Effective Shoulder Width	Paved Width	Effective Shoulder Width	Paved Width	Effective Shoulder Width	Paved Width	
Auxiliary lanes or turn lanes with shoulders	6		6		6		0		0'
Turn lanes with curbs	6		See Section 3C-2		6		0		C&G
Expressways	Outside		Median Side		Outside		Median Side		2' C&G Section
	Effective Shoulder Width	Paved Width	Effective Shoulder Width	Paved Width	Effective Shoulder Width	Paved Width	Effective Shoulder Width	Paved Width	
Routes where bicycles are to be accommodated	10	10	6	6	8	4	4	4	2' C&G Section
On roadways approaching urban areas (due to increased bike traffic)	10	10	6	6	8	4	4	4	
On all curves with a superelevation rate of 7.0% or greater	10	10	6	6	8	0*	4	4	
On roadways with design year ADT > 6500 vpd On all other Expressways (Multilane Arterials)	10	6	6	6	8	0*	4	4	

*Requires safety edge-See 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

Roadway Design Speed (mph) = 45

[Design Manual Section 1C-1](#)
Last Updated: 05-26-17

Design Criteria for Low Speed Roadways

Design Element	Preferred Criteria					Acceptable Criteria					Project Values					
	Design Speed, mph					Design Speed, mph										
	25	30	35	40	45	25	30	35	40	45						
Stopping sight distance (ft) (Refer to Section 6D-1)	155	200	250	305	360	155	200	250	305	360	360					
Minimum horizontal curve radius (ft) and superelevation rate (Refer to Sections 2A-2 and 2A-3)	Method 2 superelevation and side friction distribution e = 4% max					See Table 10 in Section 2A-3					711					
	Method 5 superelevation and side friction distribution e _{max} = 6%					144	231	340	485	643	144	231	340	485	643	N/A
Minimum vertical curve length (ft) (Refer to Section 2B-1)	e _{max} = 8%					--	--	--	--	--	134	214	314	444	587	N/A
	crest vertical curves					75	90	105	120	135	75	90	105	120	135	135
Minimum rate of vertical curvature (K) (Refer to Section 2B-1)	roadways without fixed-source lighting					12	19	29	44	61	12	19	29	44	61	61
	roadways with fixed-source lighting					26	37	49	64	79	26	37	49	64	79	79
	roadways with fixed-source lighting					26	37	49	64	79	14	20	27	35	44	79
Minimum gradient (%) (Refer to Section 2B-1)	Urban roadways					0.5					0.3% with a curb, 0.0% without a curb					0.6
Maximum gradient (%) (Refer to Section 2B-1)	Rural roadways					5					--	9	8	8	7	5
											--	--	--	6	6	N/A
Clear zone	See "Preferred Clear Zone" table in Section 8A-2					See "Acceptable Clear Zone" table in Section 8A-2										10

FILE NO. 537-19 PM 5/11/2022 ENGLISH jmenodoza DESIGN TEAM Snyder & Associates, Inc. c:\pw\work\pwn\ah\jesus.menodoza\1088741\SH_77141056208_A06-A09.dgn POLK COUNTY PROJECT NUMBER NHSX-141-7(56)--3H-77 SHEET NUMBER A.9 REVISED X

Roadway	NW 102nd Ave, NW 110th Ct, NW 106th Ave		
PIN Number	17-77-141-020	Submittal Date	05/11/22
Project Number	NHSX-141-7(56)--3H-77	Approval Date	
District	District 1	Assistant District Engineer	Allison Smith
County	POLK	or	
Route	Highway 141	Office Director	
Location	NW 102nd Ave Extension, NW 106th Ave Widening, NW 110th Ct Widening		
Work Type	Grade and Pave		
Segment Manager			
Designer	Snyder & Associates, Inc.		

Design Manual Section 1C-1 Last Updated: 04-29-19				Rural Two-Lane Highways (Rural Arterials)	
Design Element	Preferred	Acceptable	Project Values		
Design speed (mph)	60	50	55		
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	12		
Climbing Lane (ft)	12	12	N/A		
Left turn lane (ft)	12	10	12		
Pavement cross-slope (on tangent sections)	Through lanes	1.5% minimum, 2% maximum		2%	
	Auxiliary and turn lanes	3% maximum		3%	
	Crown break at centerline	4% maximum		4%	
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)	Design speed = 50 or 55 mph	6-inch sloped	6-inch standard		No Curb
	Design speed ≥ 60 mph	4-inch sloped	6-inch sloped		No Curb
Foreslope (For fill areas greater than 40 ft, contact the Soils Design Section for assistance)	Adjacent to shoulder	10:1 for 4' then 6:1	3:1		10:1 for 4' then 6:1
	Beyond standard ditch depth and design clear zone	3.5:1	3:1		3.5:1
	Curbed roadways	2%	not steeper than 3:1		N/A
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)	3:1	2.5:1		3:1	
Transverse Slopes	w/ drainage structures	8:1	6:1		8:1
	w/o drainage structures	10:1	6:1		10:1
Ditches (Refer to Section 3G-1)	Outside ditch (depth x width) (ft)	5 x 10	-		4 x 5
Bridge width—new*	Bridge length ≤ 200 ft	design lane widths + effective shoulder widths	design lane widths + effective shoulder widths		N/A
	Bridge length > 200 ft	design lane widths + effective shoulder widths	design lane width + 4' right and left of the design lane 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)	Over primary	16.5	16		N/A
	Over non-primary	16.5 at interchange locations, 15 at all other locations	14		N/A
	Over railroad	23.3	23.3		N/A
	Sign trusses and pedestrian bridges	17.5	17		N/A
Structural Capacity		Contact Office of Bridges and Structures	Contact Office of Bridges and Structures		N/A
Level of Service		B	B		

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

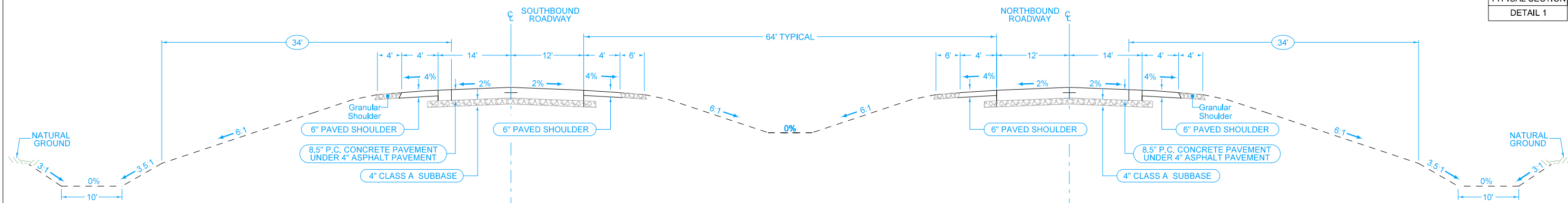
*Requires safety edge-Refer to Section 3C-6

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

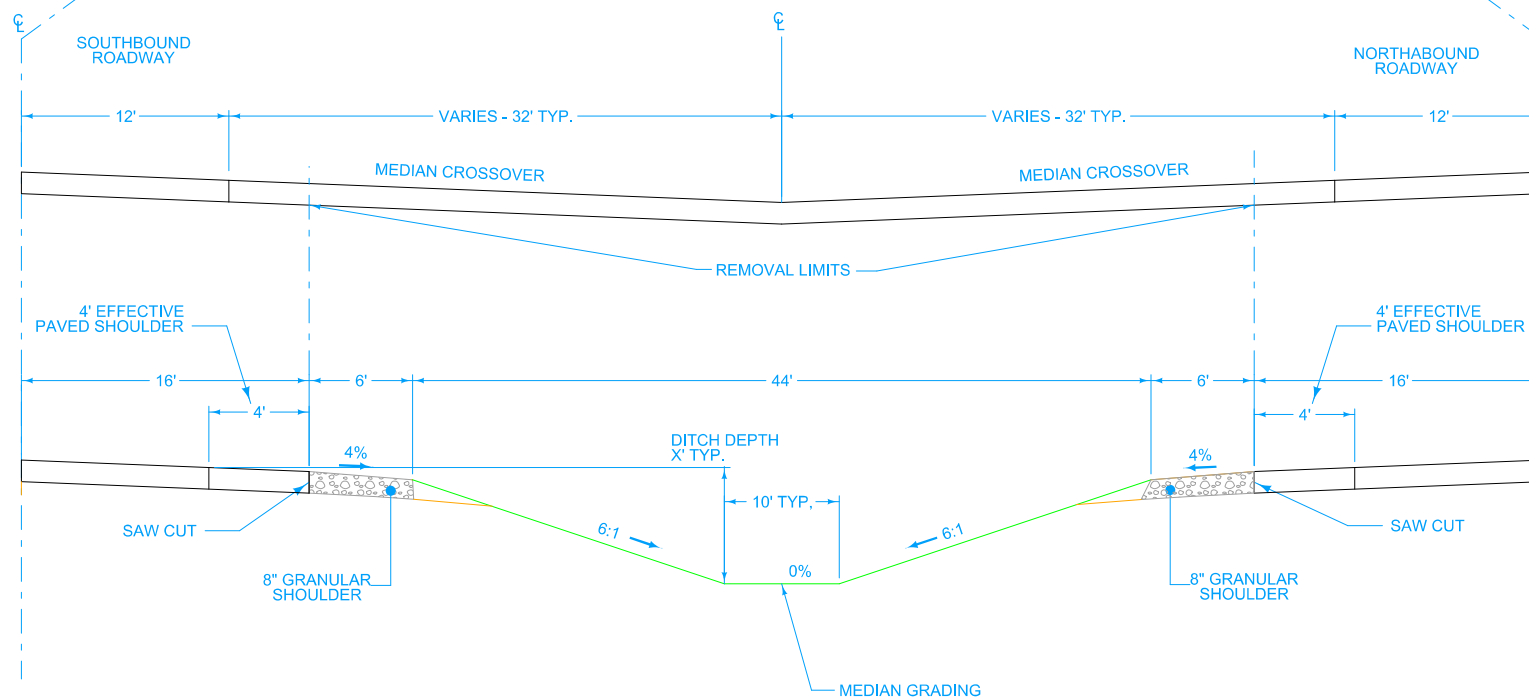
Roadway Design Speed (mph) =		55		Design Criteria for High Speed Roadways											
Design Manual Section 1C-1 Last Updated: 04-29-19				Design Criteria for High Speed Roadways											
Design Element	Preferred Criteria	Design Speed, mph						Acceptable Criteria						Project Values	
		50	55	60	65	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	495	
Minimum horizontal curve radius (ft) (Refer to Sections 2A-2 and 2A-3)	Method 5 superelevation and side friction distribution	833	1060	1330	1660	2040	2500	833	1060	1330	1660	2040	2500	1060	
	$e_{max} = 6\%$														
	$e_{max} = 8\%$	-	-	-	-	-	-	758	960	1200	1480	1810	2210	N/A	
Minimum vertical curve length (ft) (Refer to Section 2B-1)	crest vertical curves	150	165	180	195	210	225	150	165	180	195	210	225	165	
Minimum rate of vertical curvature (K) (Refer to Section 2B-1)	sag vertical curves	roadways without fixed-source lighting	84	114	151	193	247	312	84	114	151	193	247	312	114
		roadways with fixed-source lighting	96	115	136	157	181	206	96	115	136	157	181	206	115
Minimum gradient (%)	(Refer to Section 2B-1)	0.5						0.3% with a curb, 0.0% without a curb						0.5	
Maximum gradient (%)	(Refer to Section 2B-1)	Urban roadways	4		3			7	6	6	-	-	-	N/A	
		Rural roadways	4		3			5	5	4	4	4	4	4%	
		Interstates	4		3			5	5	4	4	4	4	N/A	
Clear zone		See "Preferred Clear Zone" table in Section 8A-2						See "Acceptable Clear Zone" table in Section 8A-2						18	

TYPICAL SECTION
DETAIL 1

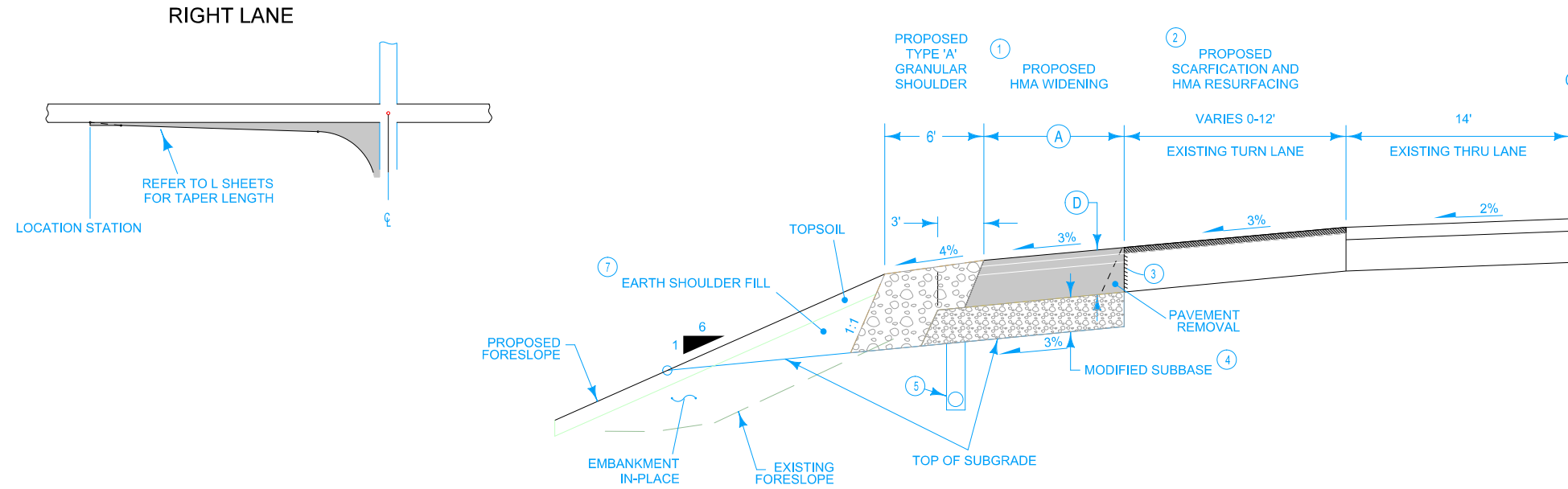


TYPICAL SECTION
IA 141 - EXISTING PAVEMENT

TYPICAL SECTION
DETAIL 2



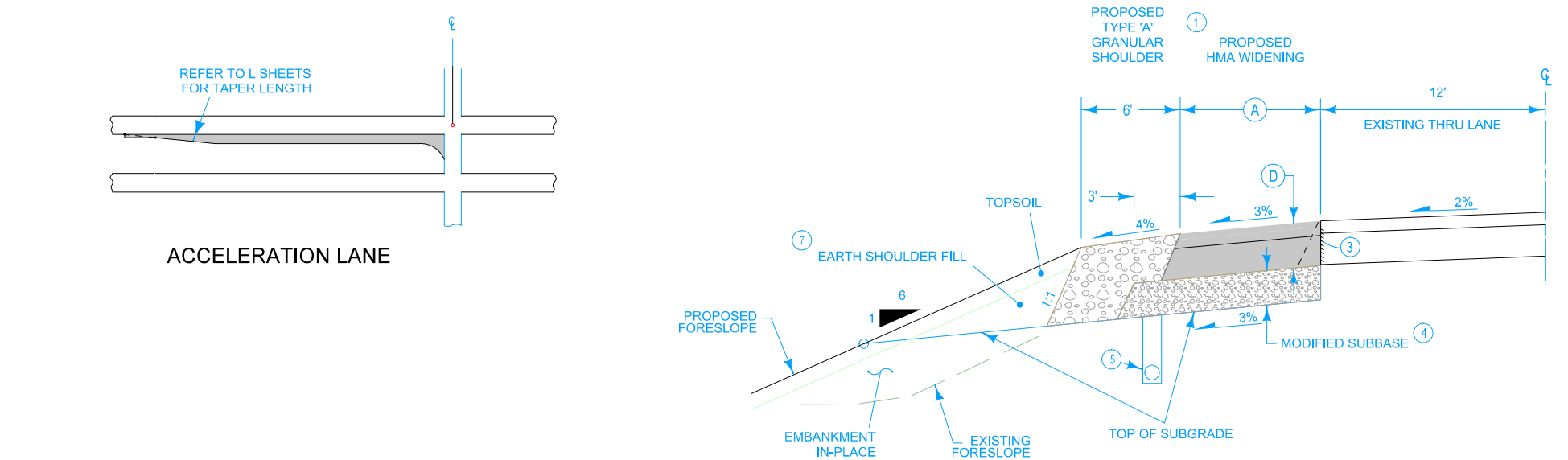
TYPICAL SECTION
IA 141 - MEDIAN CROSSOVER REMOVALS
STA. XXX+XX TO STA. XXX+XX
STA. XXX+XX TO STA. XXX+XX



- NOTES:
NORMAL SECTION SHOWN MAY BE MODIFIED APPROPRIATELY IN AREAS OF SUPERELEVATED CURVES OR OTHER LOCATIONS SPECIFICALLY DESIGNATED BY THE ENGINEER.
- REFER TO PLAN SHEETS AND CROSS SECTIONS FOR ADDITIONAL INFORMATION.
- ① PAVEMENT WIDENING INCLUDES THE FOLLOWING MATERIALS
- 2.0" SURFACE COURSE
- 2.5" INTERMEDIATE COURSE
- 6.5" BASE COURSE
 - ② 2.0" PAVEMENT SCARIFICATION AND SURFACE COURSE THICKNESS.
 - ③ SAWCUT (CREATE NEAR VERTICAL SURFACE); INCIDENTAL TO PAVEMENT REMOVAL.
 - ④ 12" MODIFIED SUBBASE THICKNESS.
 - ⑤ LONGITUDINAL SUBDRAIN WITH OUTLETS ARE REQUIRED.
 - ⑦ MATERIAL VOLUME IS INCLUDED IN THE EMBANKMENT-IN-PLACE BID ITEM, AND THE SHAPING IS INCLUDED IN THE EARTH SHOULDER FINISHING BID ITEM.
 - ⑧ INCLUDES TAPER.

LOCATION STATION	SIDE	D Inches	A Feet	X	TOTAL QUANTITIES PER LOCATION															
					HOT MIX ASPHALT COURSES Tons ⑧			ASPHALT BINDER Tons	SPECIAL BACKFILL Tons	GRANULAR SHOULDER Tons	PAVEMENT REMOVAL Sq.Yds.	PAVEMENT SCARIFIC. Sq.Yds.	CLASS 13 EXCAVATION Cu.Yds.	TOPSOIL STRIPPING Cu.Yds.	TOPSOIL PLACEMENT Cu.Yds.	EMBANK- IN-PLACE Cu.Yds.	EARTH SHOULDER FINISHING Stas.			
					SURFACE	INTERMEDIATE	BASE													

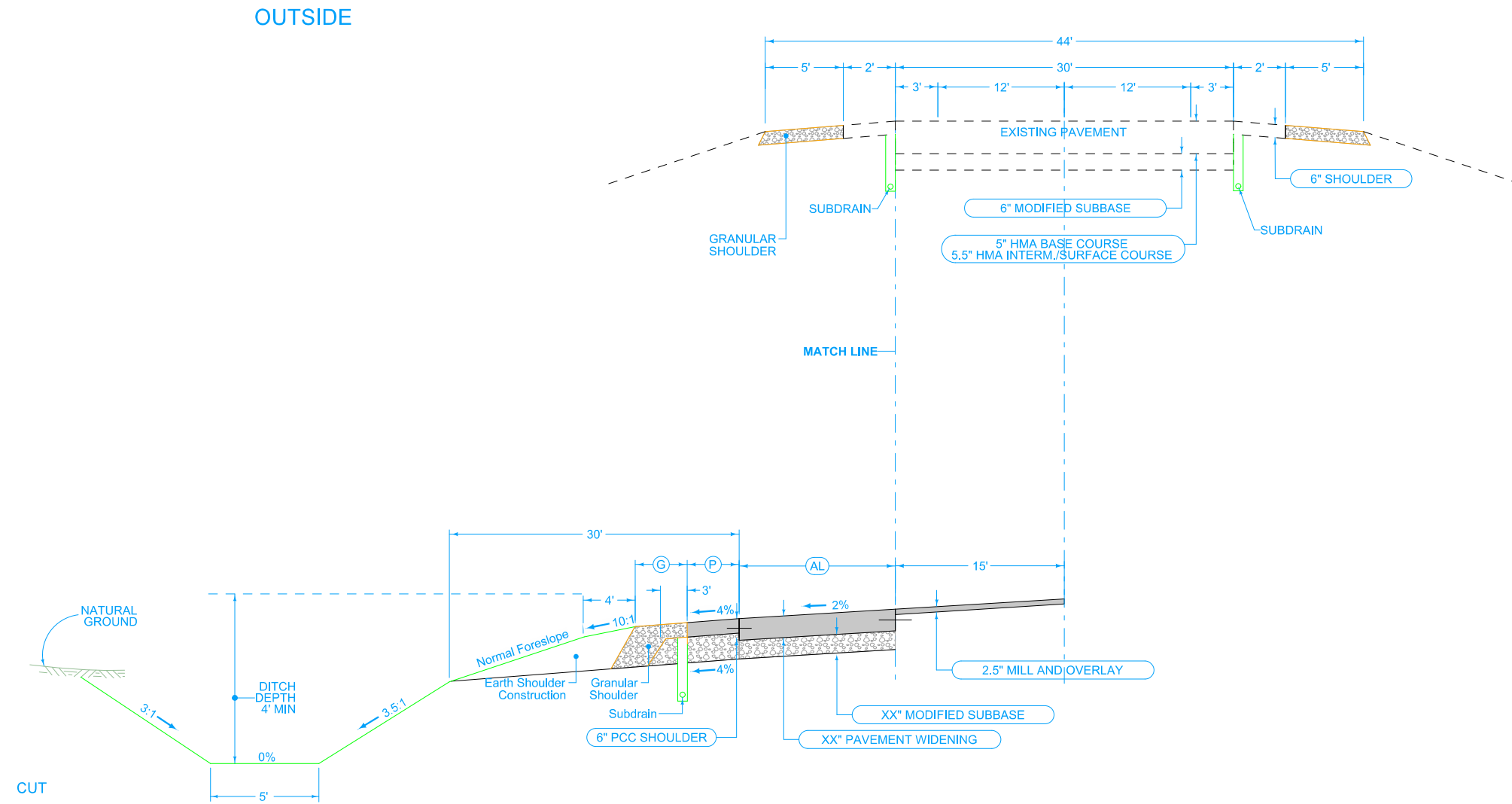
TYPICAL SECTION
SOUTHBOUND IA 141
HMA WIDENING FOR
OFFSET RIGHT TURN LANE



- NOTES:
NORMAL SECTION SHOWN MAY BE MODIFIED APPROPRIATELY IN AREAS OF SUPERELEVATED CURVES OR OTHER LOCATIONS SPECIFICALLY DESIGNATED BY THE ENGINEER.
- REFER TO PLAN SHEETS AND CROSS SECTIONS FOR ADDITIONAL INFORMATION.
- ① PAVEMENT WIDENING INCLUDES THE FOLLOWING MATERIALS
- 2.0" SURFACE COURSE
- 2.5" INTERMEDIATE COURSE
- 6.5" BASE COURSE
 - ② 2.0" PAVEMENT SCARIFICATION AND SURFACE COURSE THICKNESS.
 - ③ REMOVE EXISTING 4' PAVED SHOULDER AND GRANULAR SHOULDER. CREATE NEAR VERTICAL SURFACE.
 - ④ 12" MODIFIED SUBBASE THICKNESS.
 - ⑤ LONGITUDINAL SUBDRAIN WITH OUTLETS ARE REQUIRED.
 - ⑦ MATERIAL VOLUME IS INCLUDED IN THE EMBANKMENT-IN-PLACE BID ITEM, AND THE SHAPING IS INCLUDED IN THE EARTH SHOULDER FINISHING BID ITEM.
 - ⑧ INCLUDES TAPER.

LOCATION STATION	SIDE	D Inches	A Feet	B Feet	X	TOTAL QUANTITIES PER LOCATION														
						HOT MIX ASPHALT COURSES Tons ⑧			ASPHALT BINDER Tons	SPECIAL BACKFILL Tons	GRANULAR SHOULDER Tons	PAVEMENT REMOVAL Sq.Yds.	PAVEMENT SCARIFIC. Sq.Yds.	CLASS 13 EXCAVATION Cu.Yds.	TOPSOIL STRIPPING Cu.Yds.	TOPSOIL PLACEMENT Cu.Yds.	EMBANK- IN-PLACE Cu.Yds.	EARTH SHOULDER FINISHING Stas.		
						SURFACE	INTERMEDIATE	BASE												

TYPICAL SECTION
NORTHBOUND IA 141
HMA WIDENING FOR
ACCELERATION LANE &
DECELERATION LANE



COMBINATION SHOULDER

SHOULDER JOINTING: L OR KT
LONGITUDINAL JOINT: B

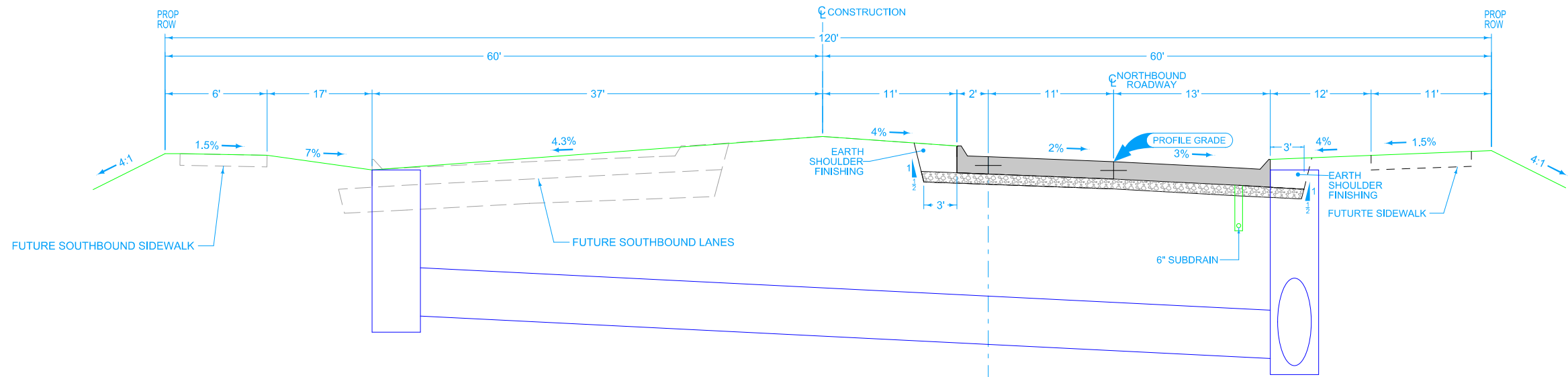
Direction of Travel	BEGIN STATION	END STATION	4_C_ 04-21-20	
			P Feet	G Feet
WB			5'	5'

AUXILIARY LANE

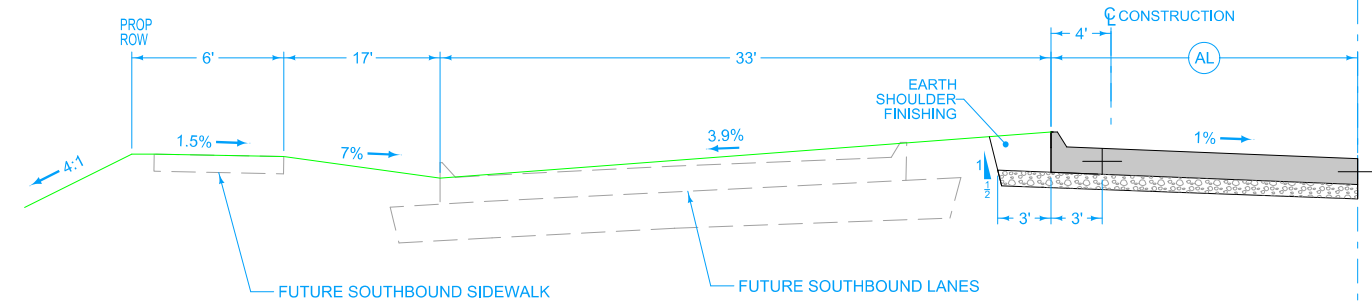
LONGITUDINAL JOINT: L OR KT
TRANSVERSE JOINT: MATCH MAINLINE

DIRECTION OF TRAVEL	BEGIN STATION	END STATION	4_AUXLANE_PCC_ 10-18-16
			AL FEET
			0-16

**TYPICAL SECTION
IA 415
WIDENING**



TWO LANE URBAN SECTION WITH RAISED MEDIAN TABLE	
BEGIN STATION	END STATION

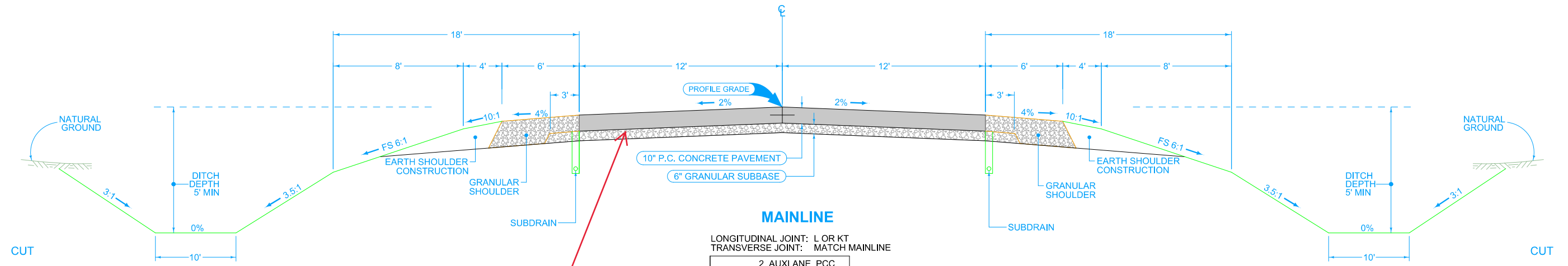


AUXILIARY LANE

LONGITUDINAL JOINT: L OR KT
TRANSVERSE JOINT: MATCH MAINLINE

2_AUXLANE_PCC_	
10-18-16	
STATION TO STATION	(AL)
	Feet

**TYPICAL SECTION
NW 110TH ST
2 LANE URBAN ROAD**

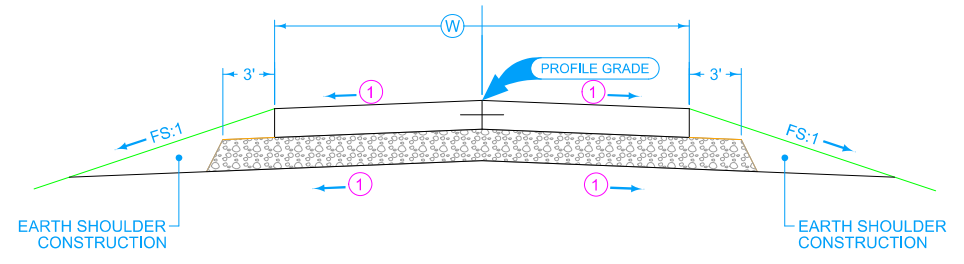
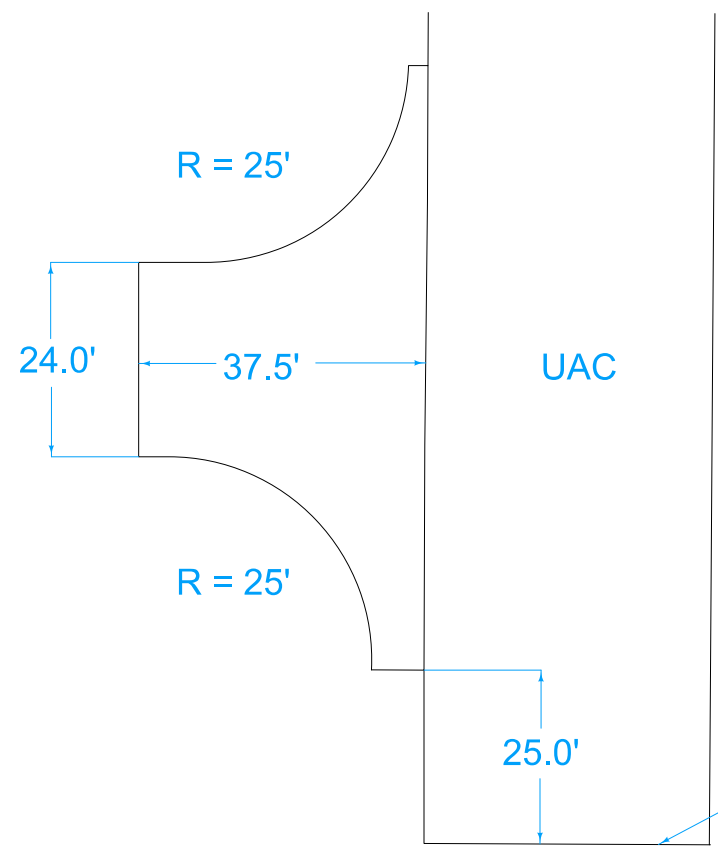


Discussion on
Urban vs Rural
roadway

MAINLINE
LONGITUDINAL JOINT: L OR KT
TRANSVERSE JOINT: MATCH MAINLINE

2_AUXLANE_PCC_	
10-18-16	
STATION TO STATION	

**TYPICAL SECTION
NW 102ND AVE
2 LANE RURAL ROAD**

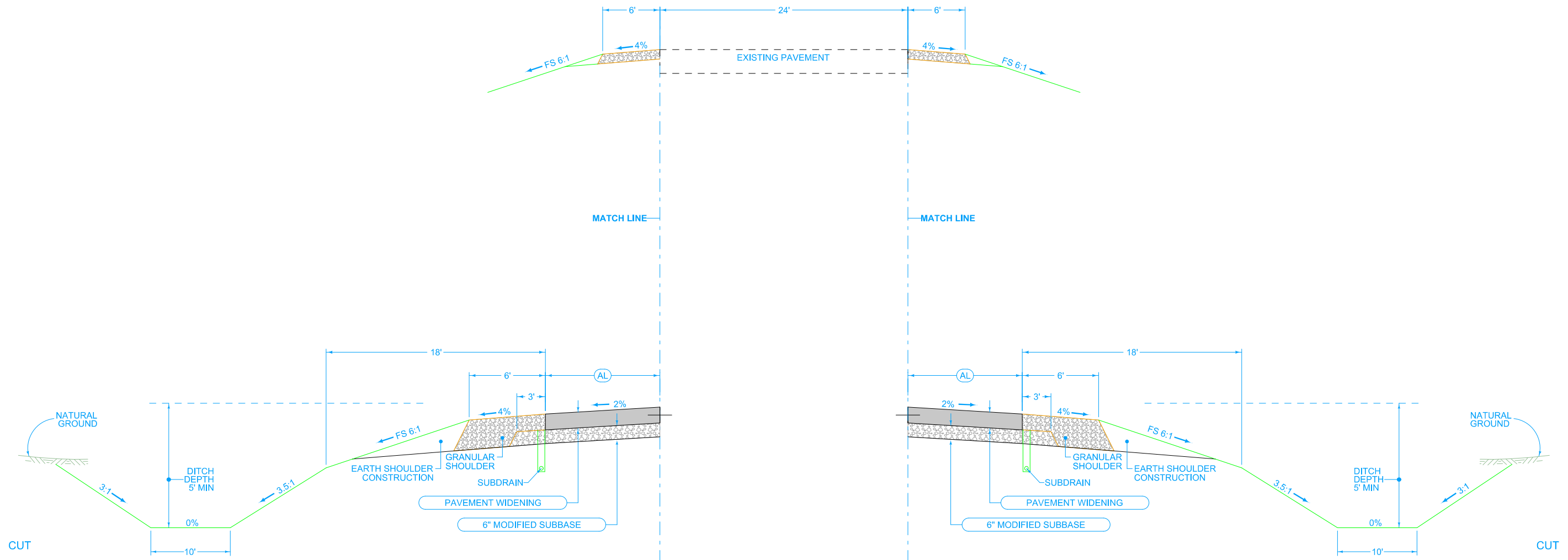


① SUBGRADE PARALLELS PAVEMENT SLOPE.
SEE L SHEETS FOR DETAILS.

LOCATION		DIMENSIONS
ROAD IDENTIFICATION	STATION TO STATION	Ⓜ FEET
121ST AVE		
TOWNER		

MAINLINE JOINTING:
TRANSVERSE JOINTS: CD AT 17' SPACING
LONGITUDINAL JOINT: L-2

**TYPICAL SECTION
121ST AVE AND TOWNER
PAVED TURN-AROUND**



AUXILIARY LANE

LONGITUDINAL JOINT: L OR KT
TRANSVERSE JOINT: MATCH MAINLINE

4_AUXLANE_PCC_			
10-18-16			
DIRECTION OF TRAVEL	BEGIN STATION	END STATION	(AL) Feet

**TYPICAL SECTION
NW 110TH CT WIDENING
NW 106TH AVE WIDEING**

SURVEY SYMBOLS

- IN Storm Sewer Intake
- FW Wire Fence
- INB Storm Sewer Beehive Intake
- PR Electric Riser Pole
- GP Guard Post (Less Than 4 Posts)
- SL Speed Limit Sign
- SI Sign
- TIL Tile Line
- GDL Guard Rail Steel
- LUM Luminaire
- UE Utility Elevation
- WV Water Valve
- GPR Guard Post (4 or More Posts)
- FP Filler Pipe
- OUT Tile Outlet
- MIS Miscellaneous
- PPA Power Pole Co. 1
- AST Above Ground Storage Tank
- LP L.P. Tank
- FLG Flag Poles
- WHD Water Hydrant
- WEL Well
- MH Utility Access (Manhole)
- TPD Telephone Pedestal
- MM Mile Marker Post
- FCL Chain Link and Security Fence
- EB Electrical Box
- TV Satellite TV Dish
- UB Utility Box
- UST Underground Tank
- GV Gas Valve
- WHU WHU RV Water Hook Up
- SEP Septic Tank
- FHD Fire Hydrants
- FWD Wood Fence
- RET Retaining Walls
- D Centerline Draw or Stream (Down)
- BNK Stream Bank
- RIP Rip-Rap
- EW Edge of Water
- DU Centerline Draw or Stream (Up)
- ENT Centerline BL of Entrance
- ENU Edge Unpaved Entrance & Parking
- EG Edge of Gravel Road
- SNP Unpaved Shoulder
- DIK Centerline of Dike or Dam

UTILITY LEGEND

- (CTLIA01) CENTURYLINK
Contact Name : Tom Sturmer
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Contact Email: Thomas.sturmer@centurylink.com
- (GAG) GRANGER, CITY OF
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Contact Phone: 5154905353
Contact Email: grangerpubworks@mchsi.com
- (M57E) MIDAMER-ELEC
Contact Name : Craig Ranfeld
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Contact Email: keith.good@nngco.com
- (POK) POLK COUNTY PUBLIC WORKS
Contact Name : Kurt Bailey
Contact Phone: 5152863705
Contact Email: kurt.bailey@polkcountyiowa.gov
- (W16) IOWA DOT
Contact Name : Scott Smyth
Contact Phone: 5152505290
Contact Email: scott.smyth@iowadot.us

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.	
Yellow	(4)	Highlight for Critical Notes or Features
Red	(3)	Delineates Restricted Areas
Lavender	(9)	Temporary Pavement Shading
Gray, Light	(48)	Proposed Pavement Shading
Gray, Med	(80)	Proposed Granular Shading
Gray, Dark	(112)	Proposed Grade and Pave Shading "In conjunction with a paving project"
Brown, Light	(236)	Grading Shading
Tan	(8)	Proposed Sidewalk Shading
Blue, Light	(230)	Proposed Sidewalk Landing Shading
Pink	(11)	Proposed Sidewalk Ramp Shading

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.	
Green	(2)	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

STATION

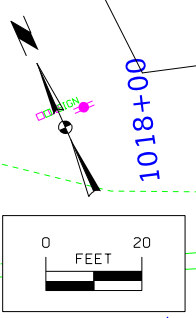
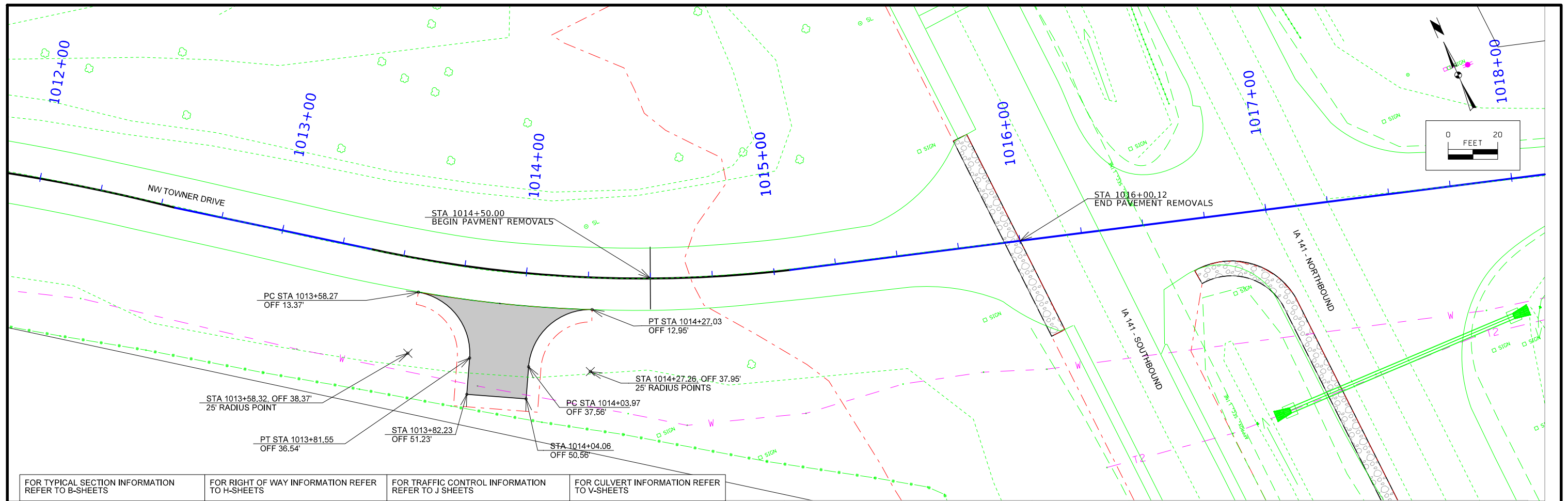
- Reference Point
- Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- Clearing & Grubbing Area
- Pavement Removal
- Sanitary Sewer Line
- Rumble Strips
- Chain Link Fence
- Concrete Barrier

RIGHT-OF-WAY LEGEND

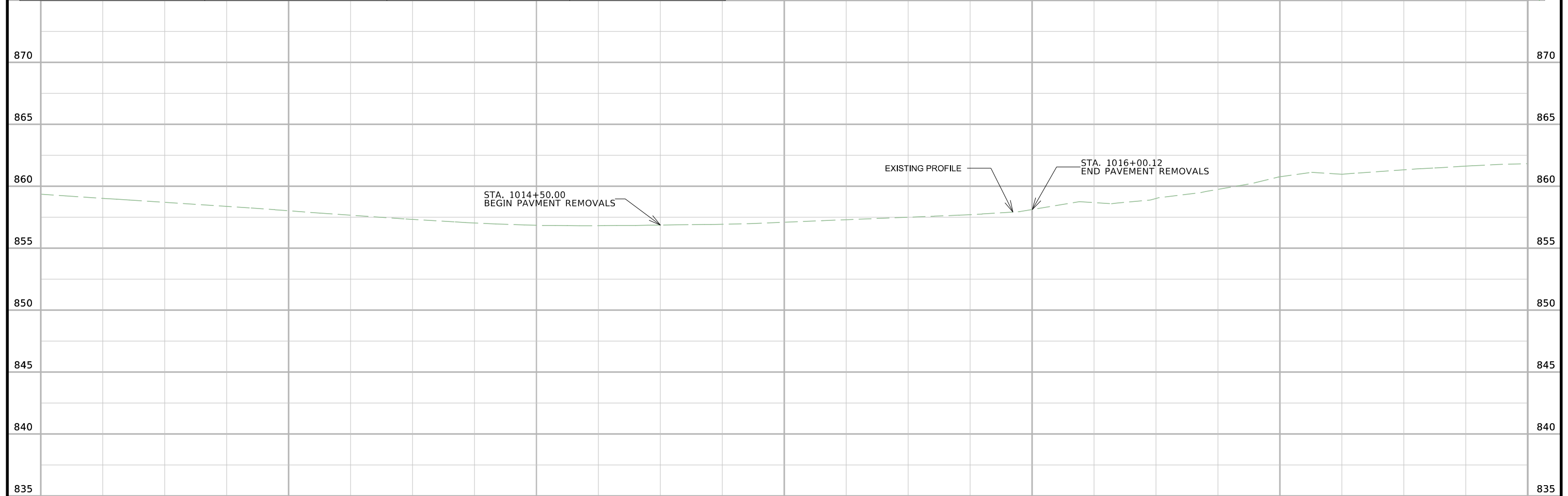
- Proposed Right-of-Way
- Existing Right of Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Easement (Temporary)
- Easement
- Access Control
- Property Line

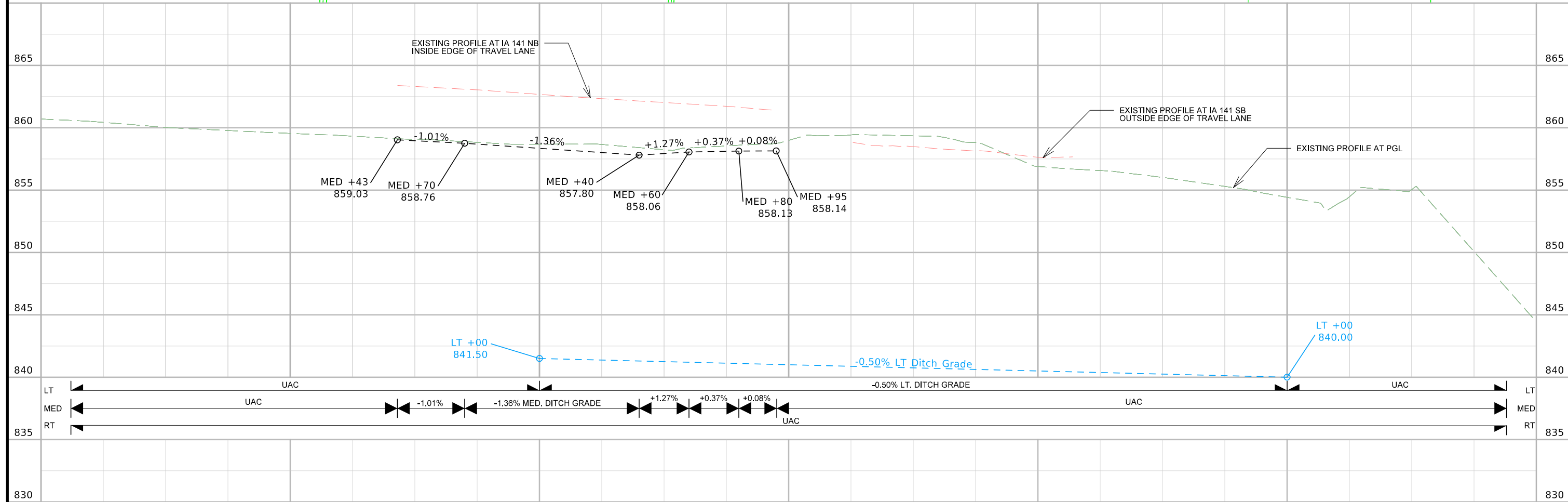
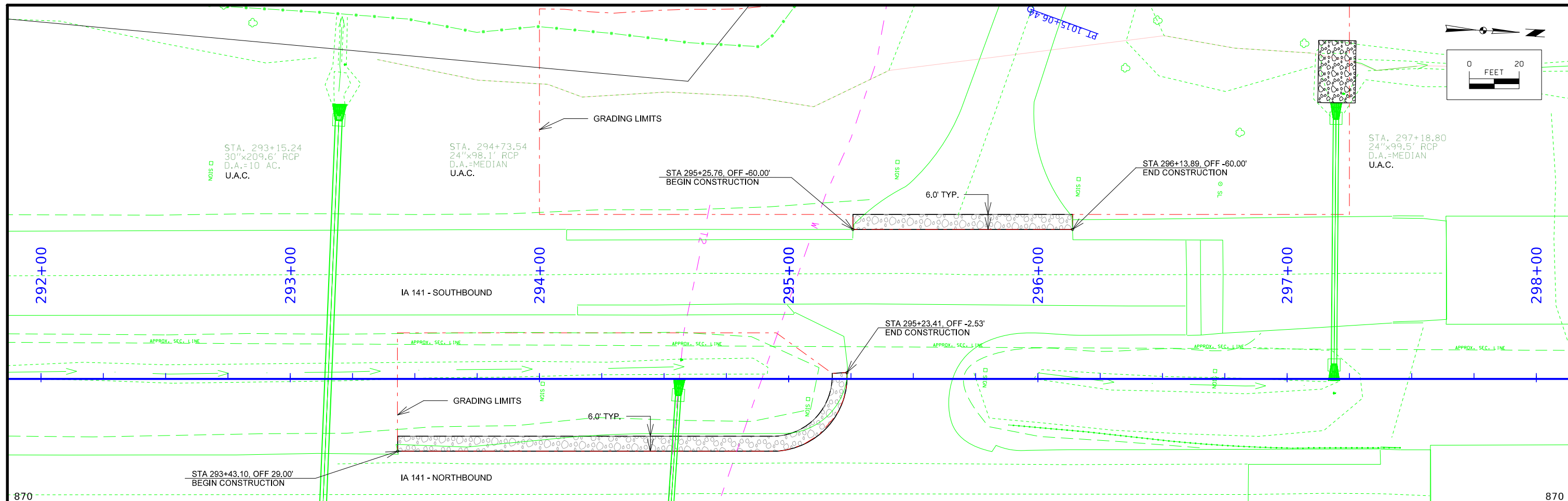
PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

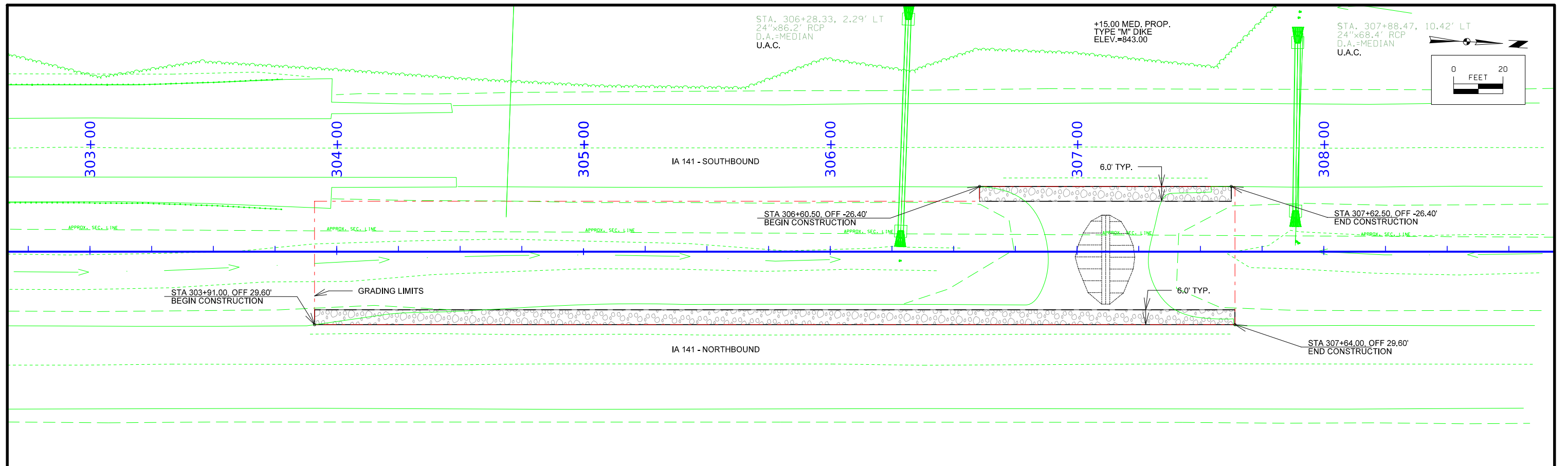
(COVERS SHEET SERIES D & E)



FOR TYPICAL SECTION INFORMATION REFER TO B-SHEETS	FOR RIGHT OF WAY INFORMATION REFER TO H-SHEETS	FOR TRAFFIC CONTROL INFORMATION REFER TO J SHEETS	FOR CULVERT INFORMATION REFER TO V-SHEETS
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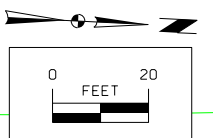




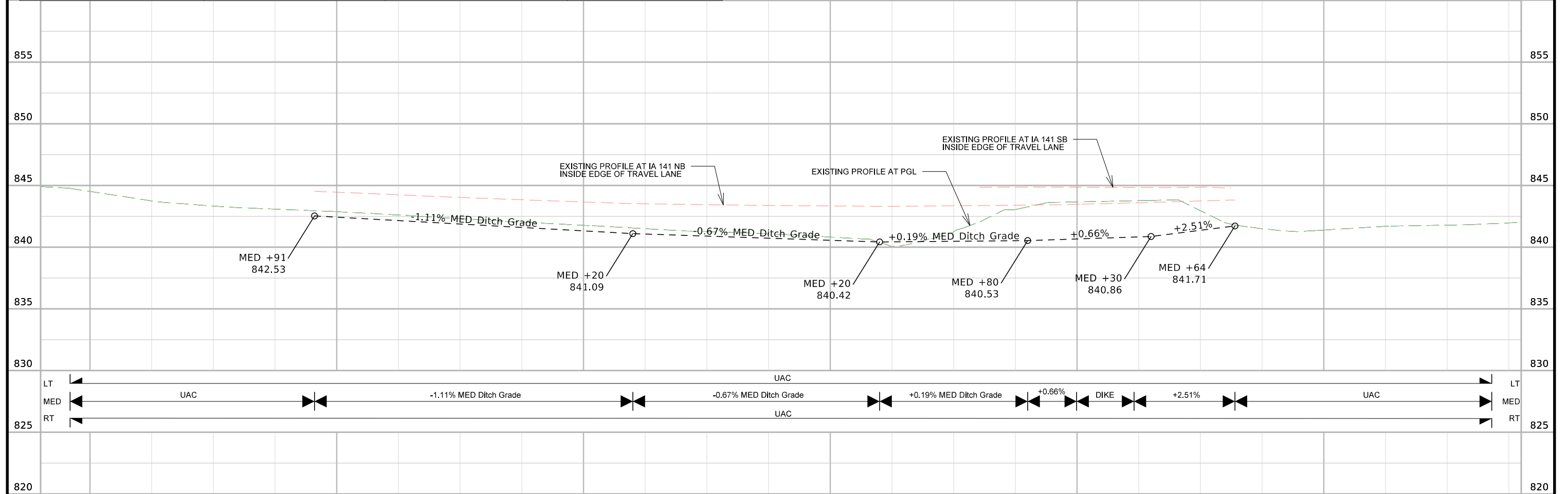
STA. 306+28.33, 2.29' LT
24"x86.2' RCP
D.A.=MEDIAN
U.A.C.

+15.00 MED. PROP.
TYPE "M" DIKE
ELEV.=843.00

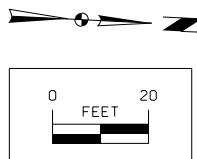
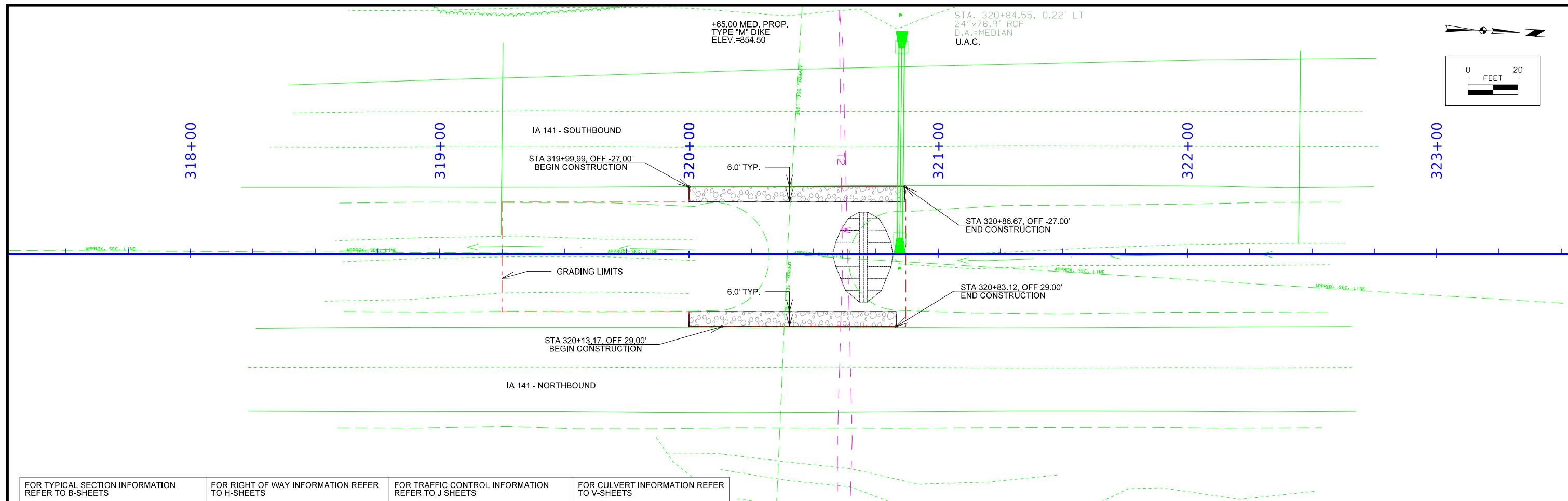
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24"x68.4' RCP
D.A.=MEDIAN
U.A.C.



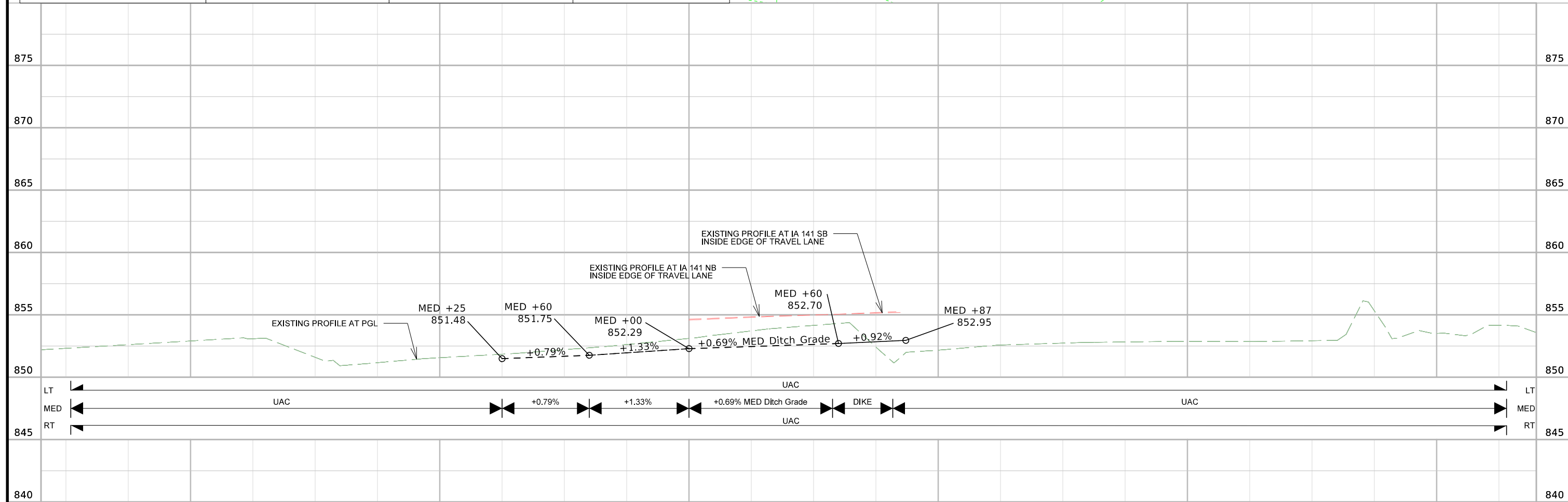
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FOR TRAFFIC CONTROL INFORMATION REFER TO J SHEETS
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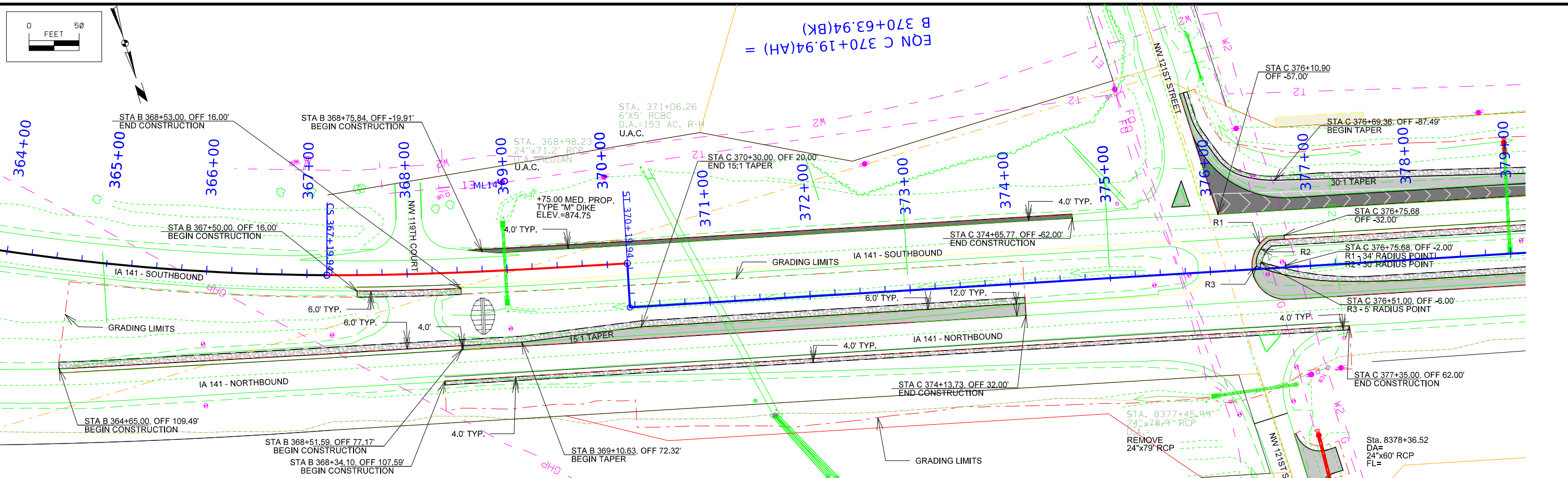


820 303+00 304+00 305+00 306+00 307+00 308+00 825 830 835 840 845 850 855

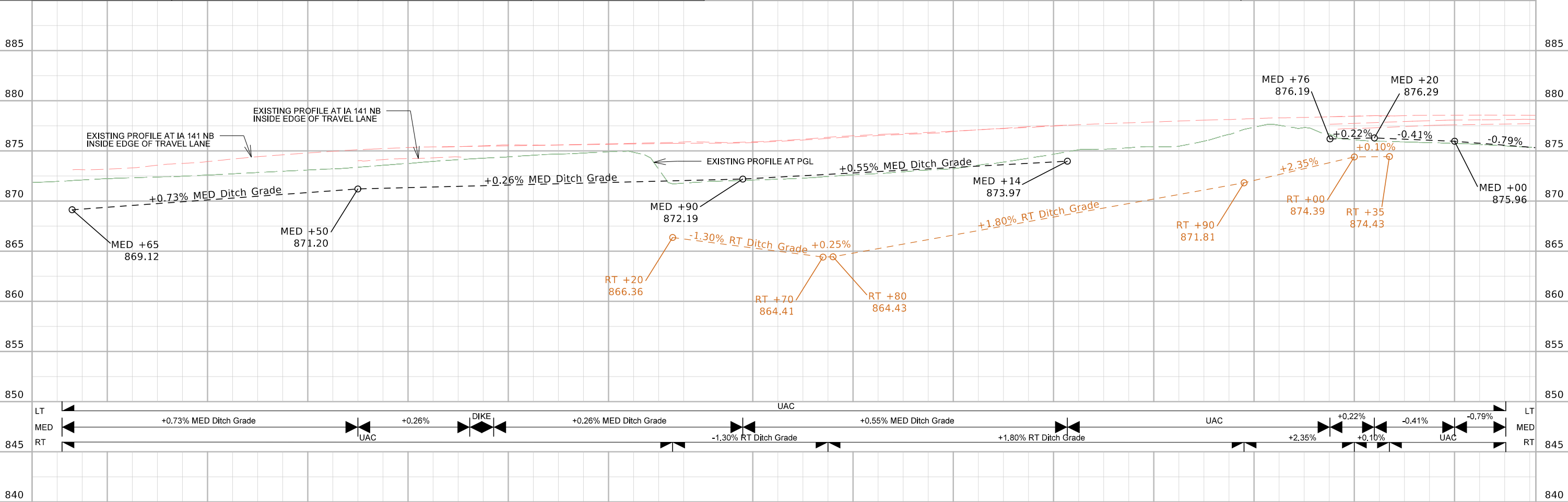


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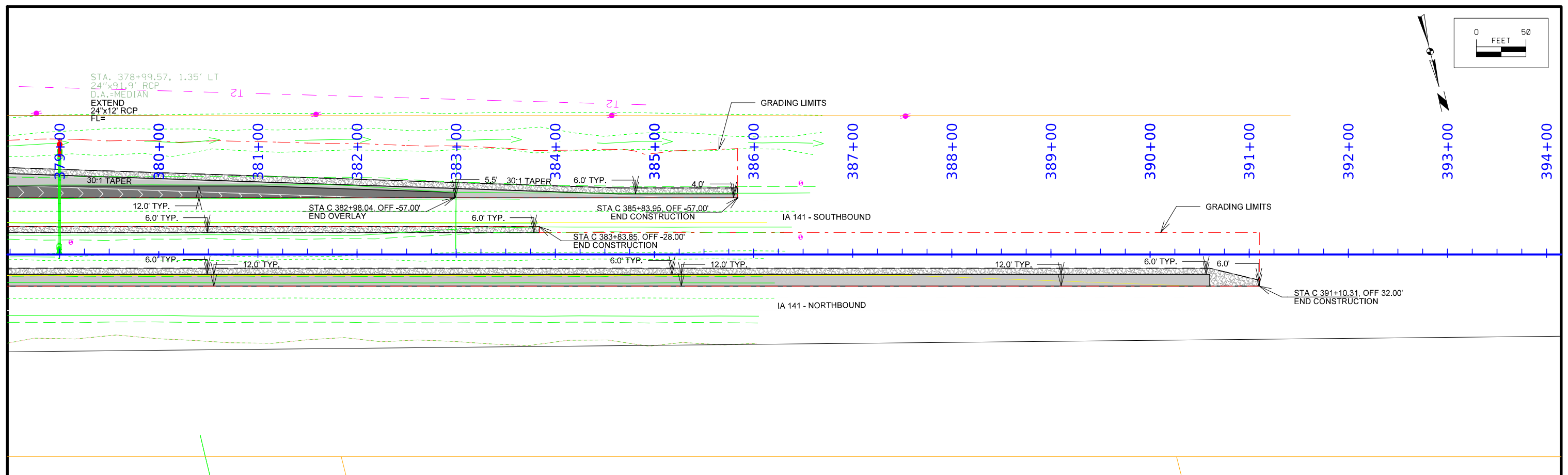
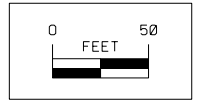




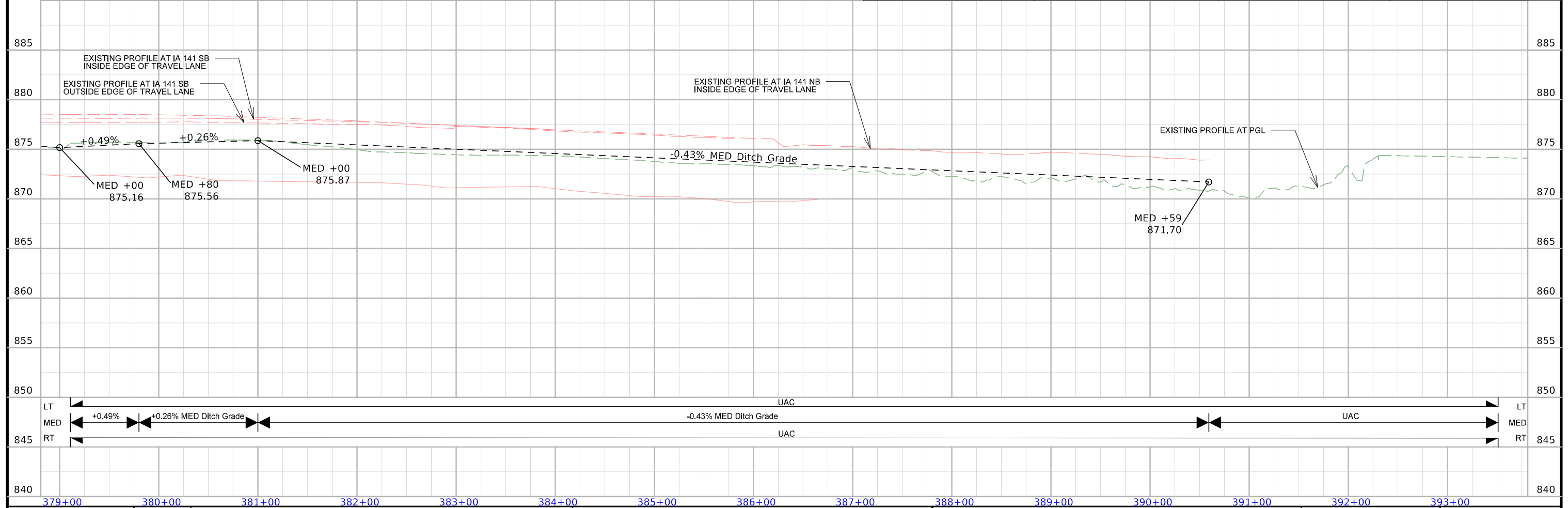
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 FOR RIGHT OF WAY INFORMATION REFER TO H-SHEETS
 FOR TRAFFIC CONTROL INFORMATION REFER TO J SHEETS
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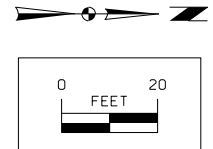
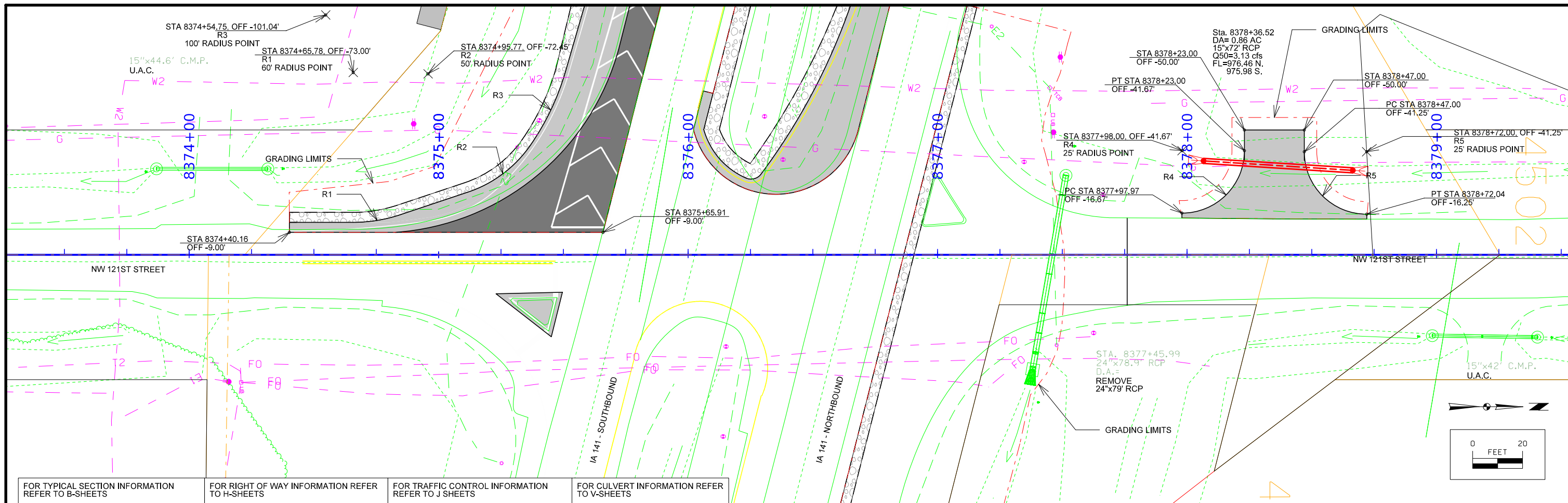


FILE NO.	ENGLISH	DESIGN TEAM	Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER	NHSX-141-7(56)--3H-77	SHEET NUMBER	D.6
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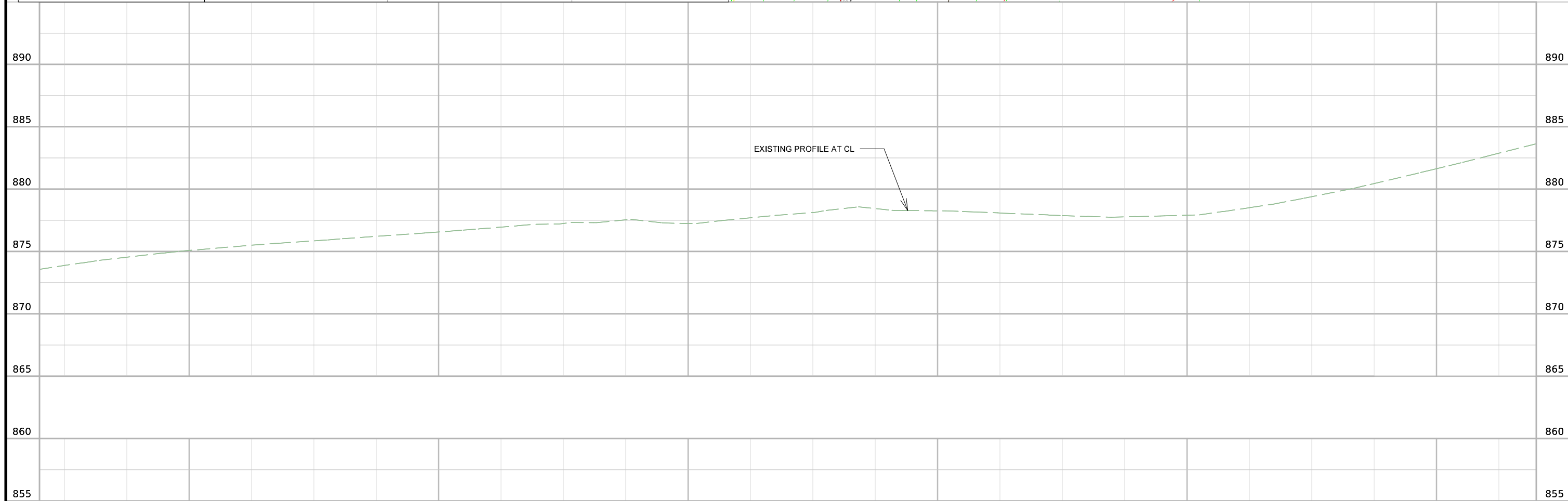


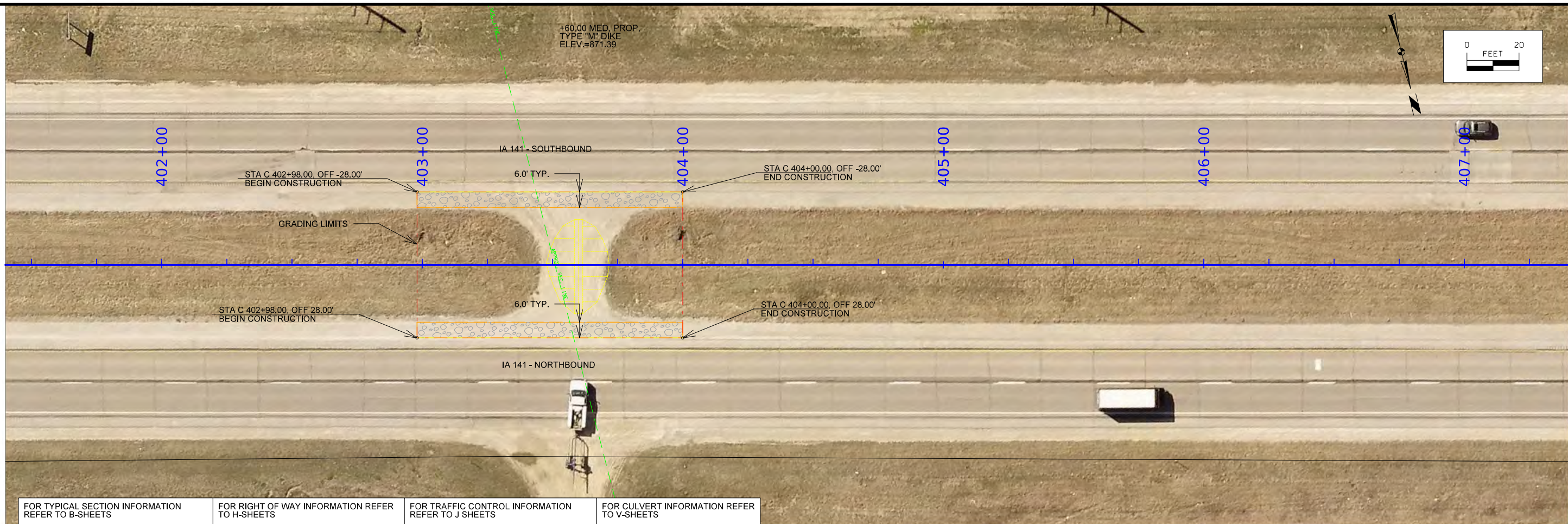
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 FOR RIGHT OF WAY INFORMATION REFER TO H-SHEETS
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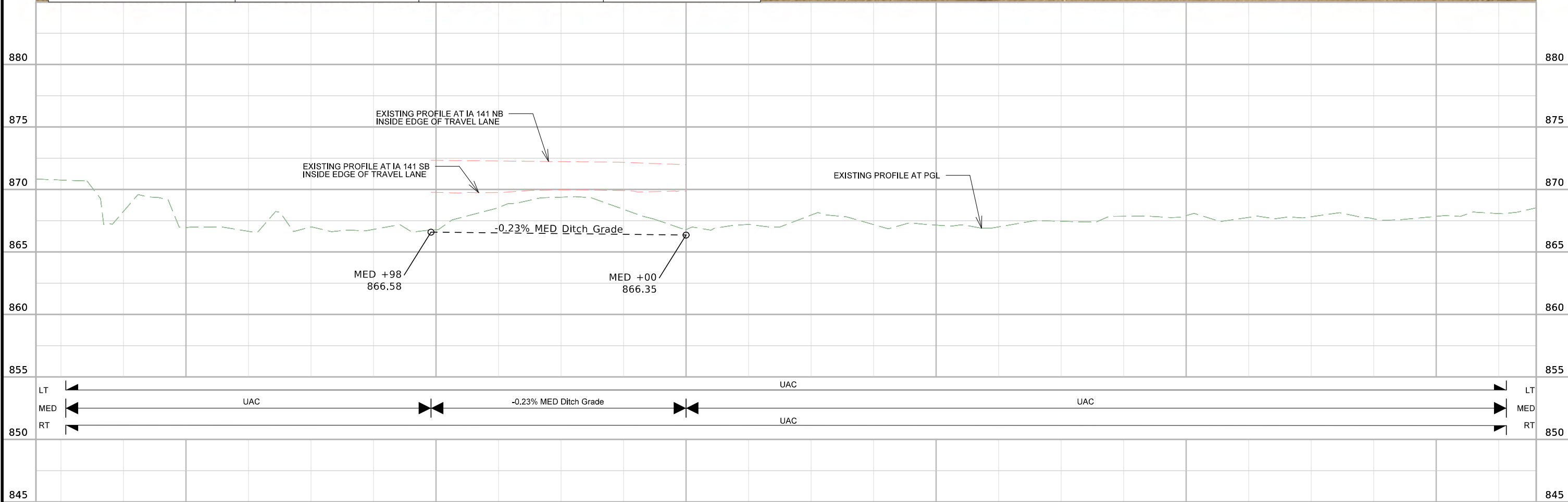


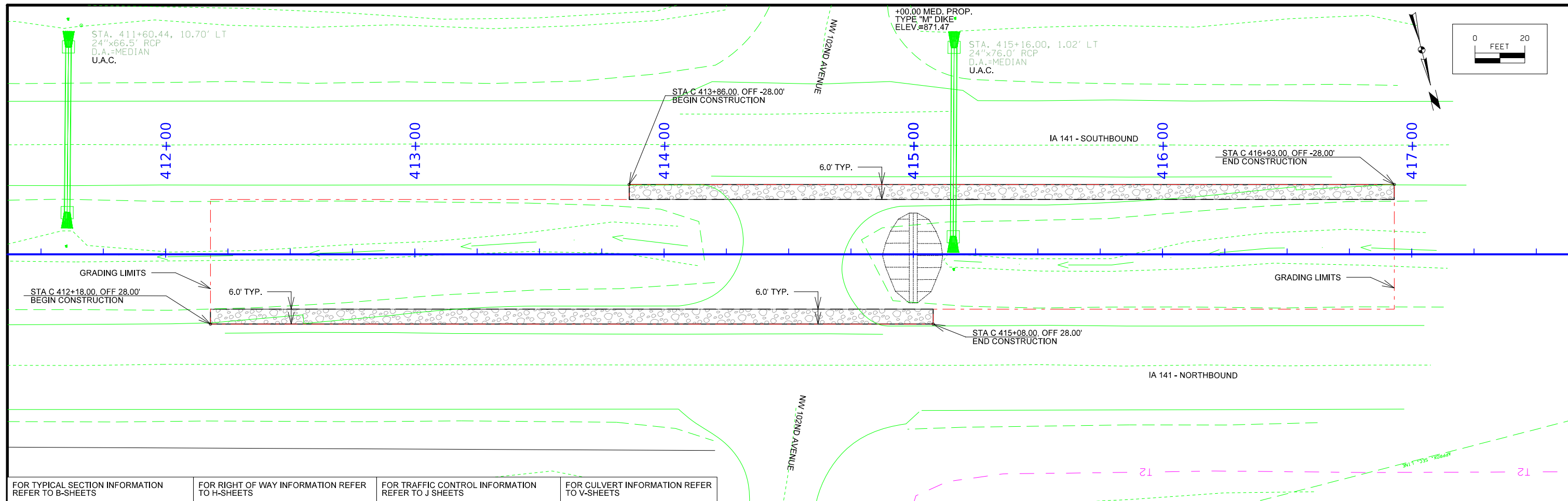
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FOR TYPICAL SECTION INFORMATION REFER TO B-SHEETS FOR RIGHT OF WAY INFORMATION REFER TO H-SHEETS FOR TRAFFIC CONTROL INFORMATION REFER TO J SHEETS FOR CULVERT INFORMATION REFER TO V-SHEETS



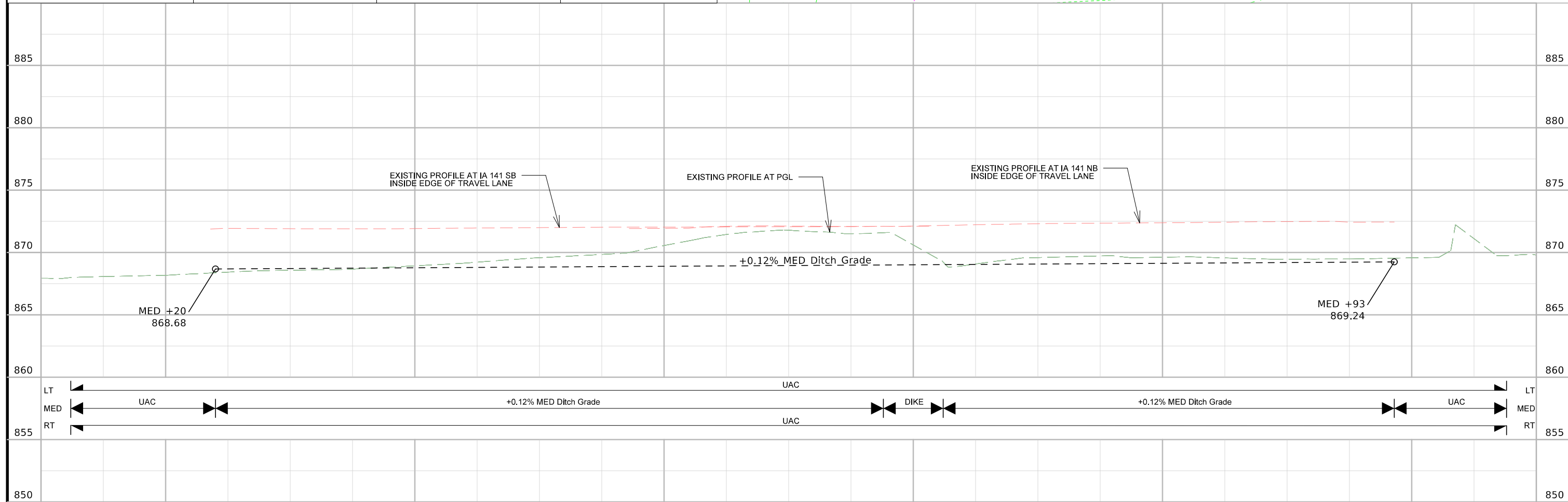


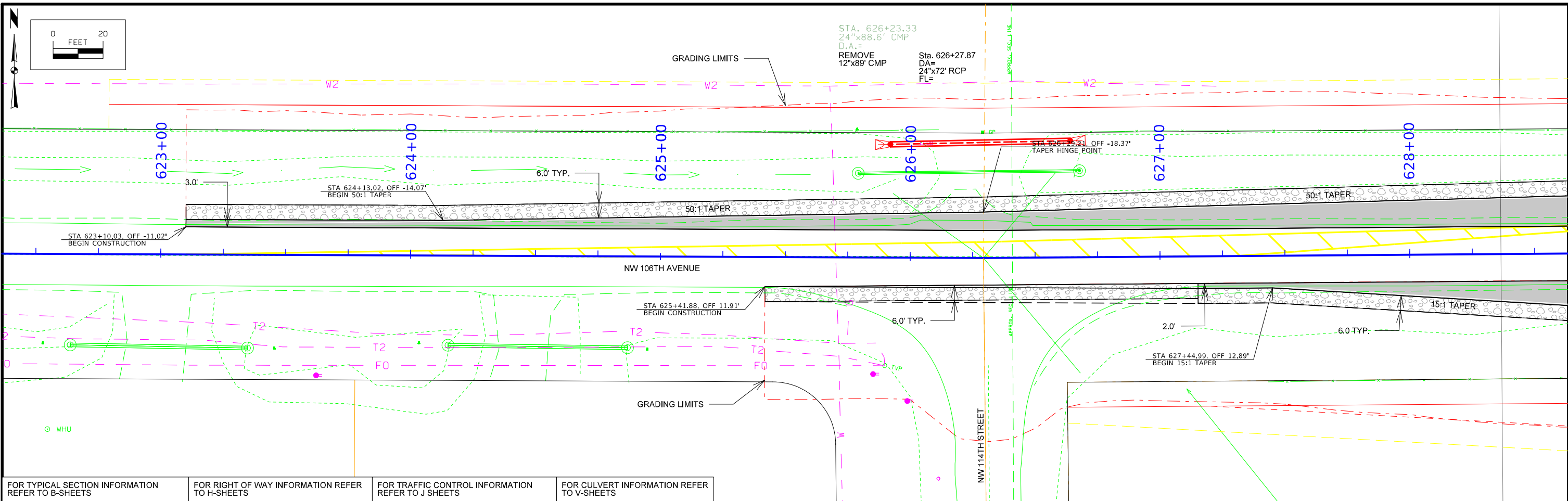
FOR TYPICAL SECTION INFORMATION REFER TO B-SHEETS

FOR RIGHT OF WAY INFORMATION REFER TO H-SHEETS

FOR TRAFFIC CONTROL INFORMATION REFER TO J SHEETS

FOR CULVERT INFORMATION REFER TO V-SHEETS



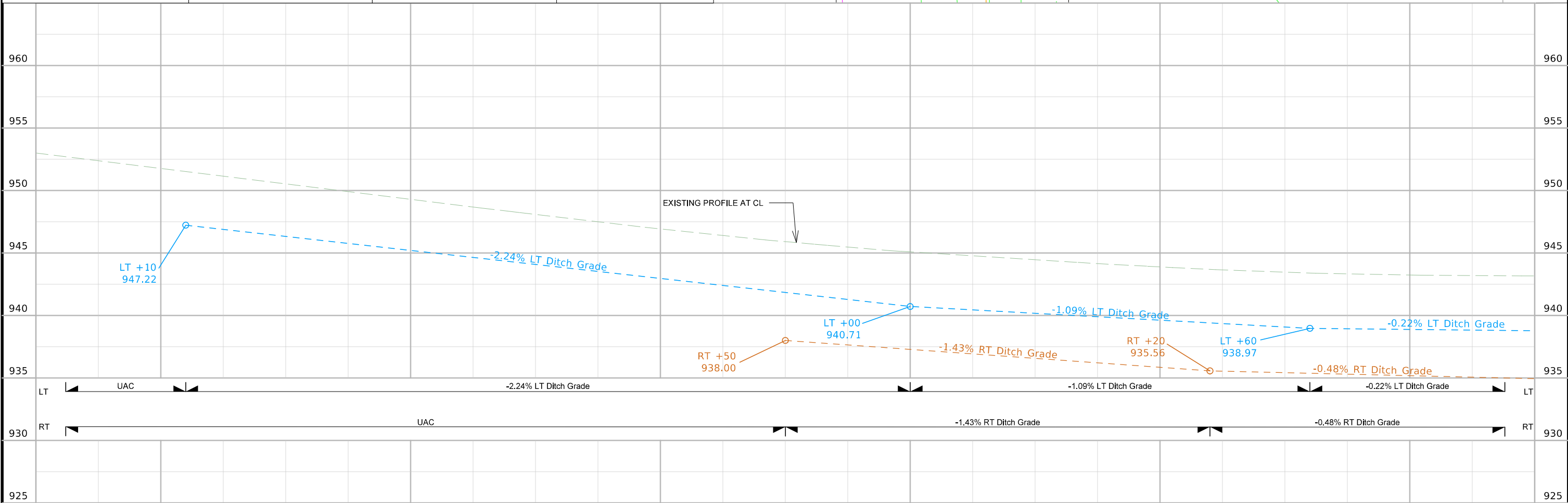


FOR TYPICAL SECTION INFORMATION REFER TO B-SHEETS

FOR RIGHT OF WAY INFORMATION REFER TO H-SHEETS

FOR TRAFFIC CONTROL INFORMATION REFER TO J SHEETS

FOR CULVERT INFORMATION REFER TO V-SHEETS

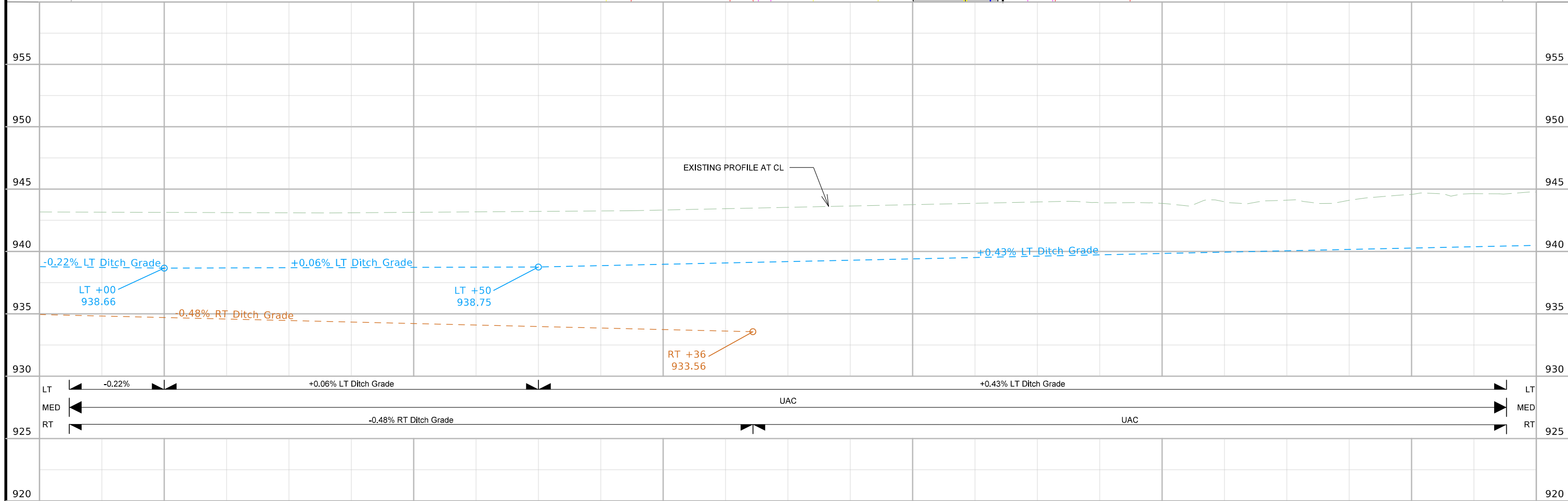
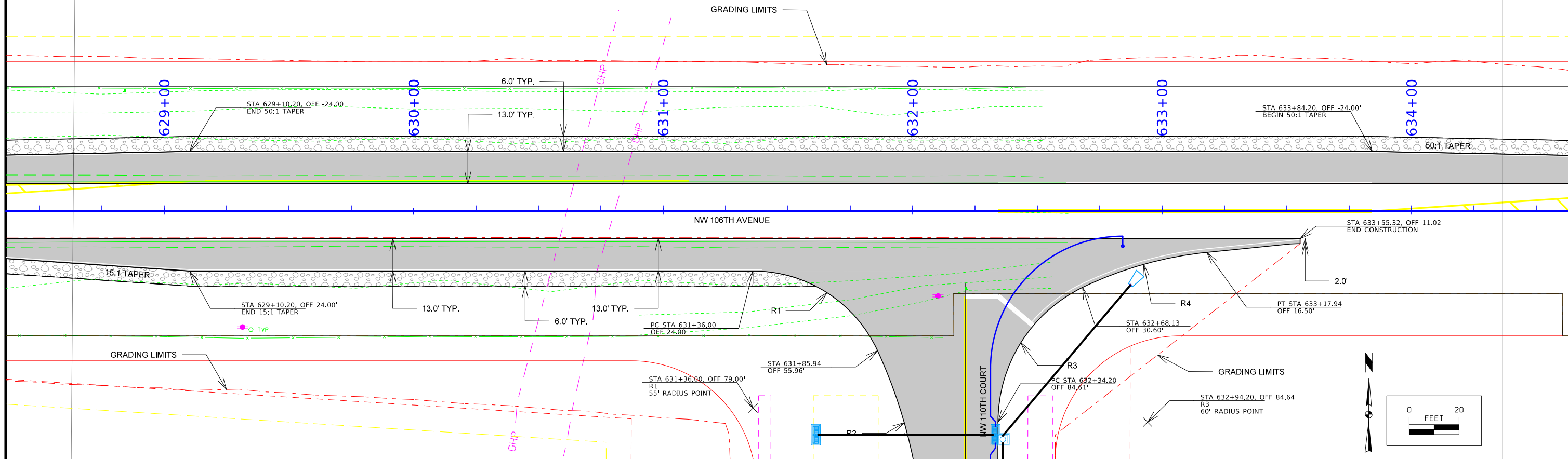


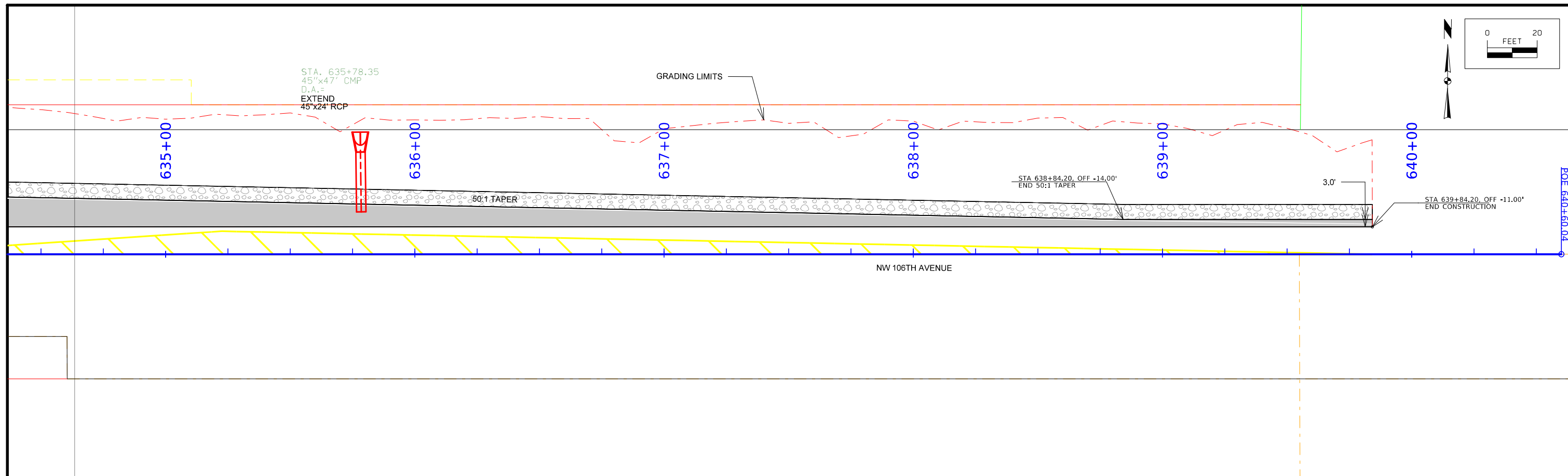
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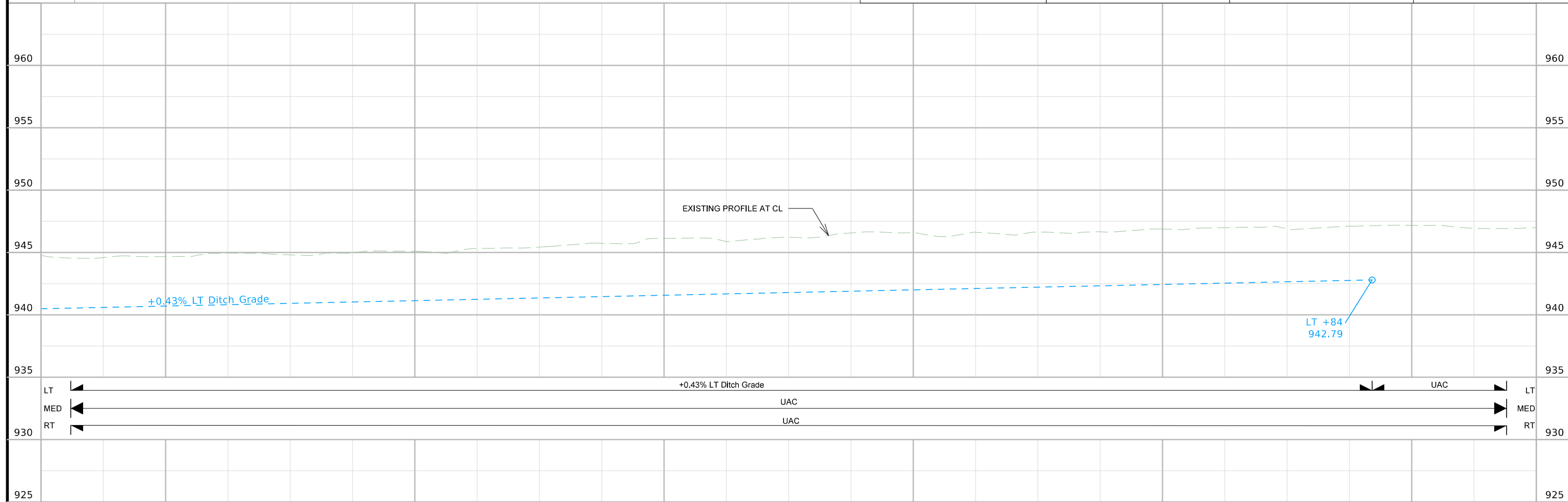
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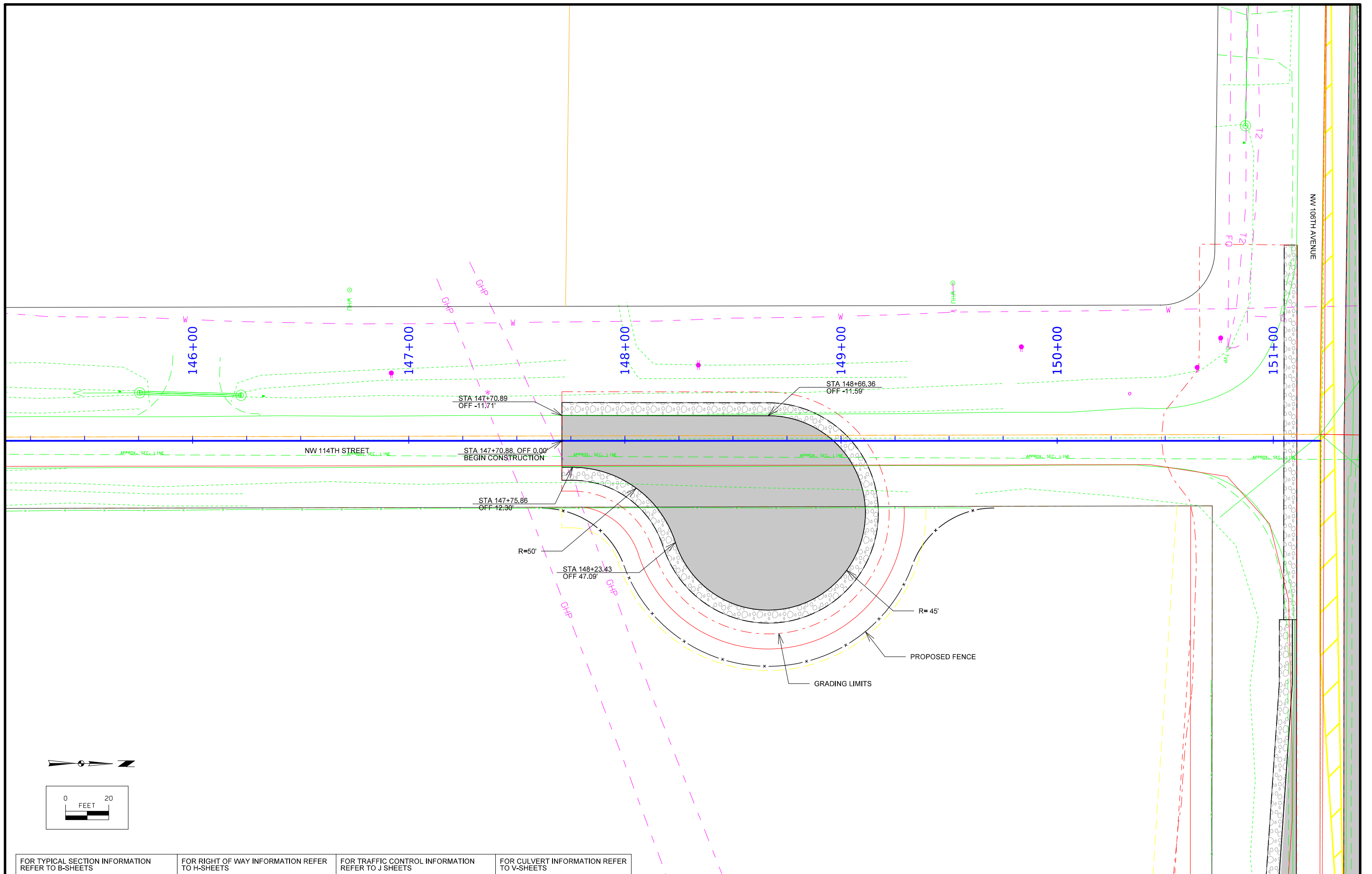
FOR CULVERT INFORMATION REFER TO V-SHEETS





FOR TYPICAL SECTION INFORMATION REFER TO B-SHEETS	FOR RIGHT OF WAY INFORMATION REFER TO H-SHEETS	FOR TRAFFIC CONTROL INFORMATION REFER TO J SHEETS	FOR CULVERT INFORMATION REFER TO V-SHEETS
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FOR TYPICAL SECTION INFORMATION REFER TO B-SHEETS

FOR RIGHT OF WAY INFORMATION REFER TO H-SHEETS

FOR TRAFFIC CONTROL INFORMATION REFER TO J SHEETS

FOR CULVERT INFORMATION REFER TO V-SHEETS

FILE NO.

ENGLISH

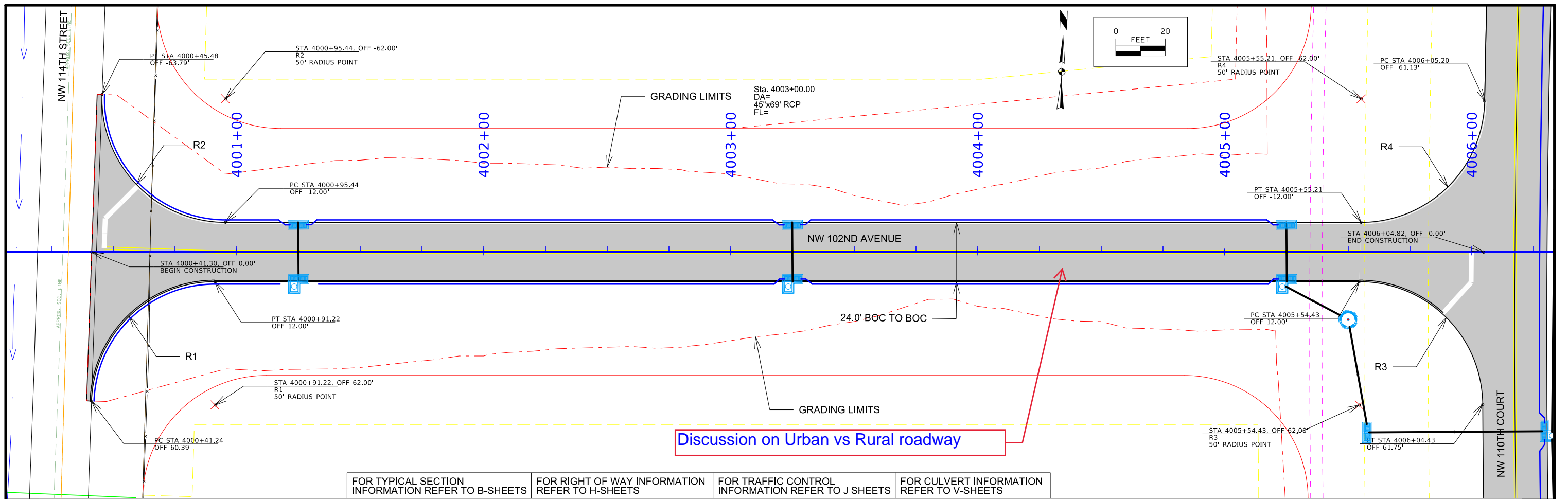
DESIGN TEAM Snyder & Associates, Inc.

Polk COUNTY

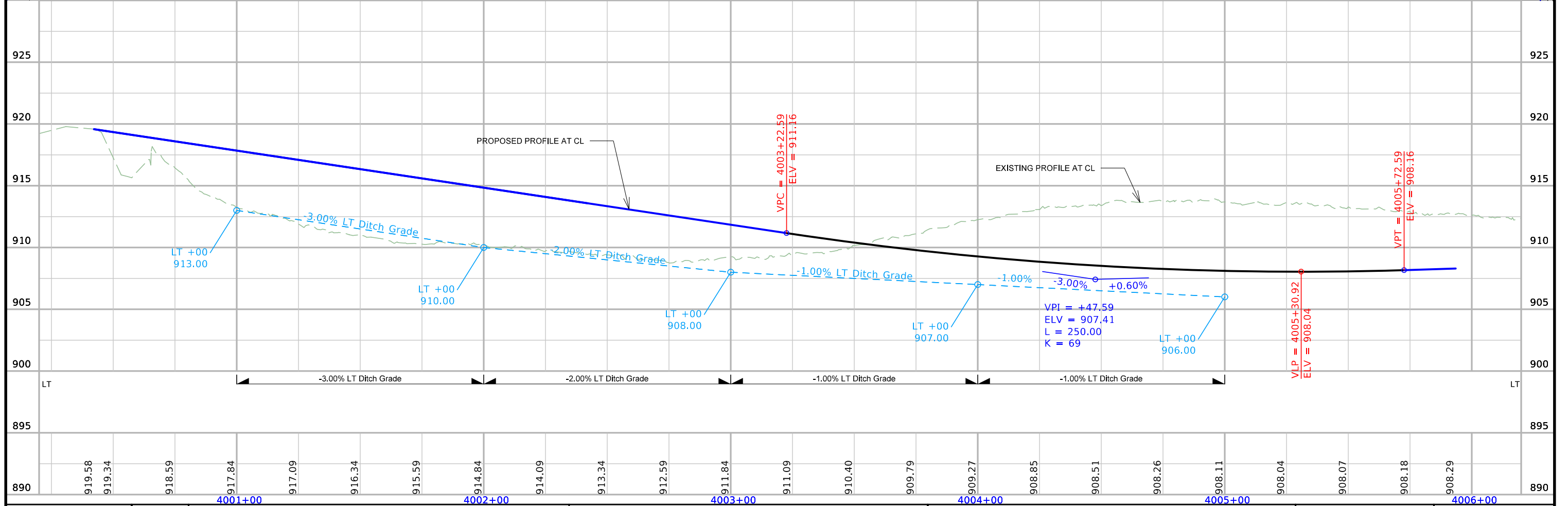
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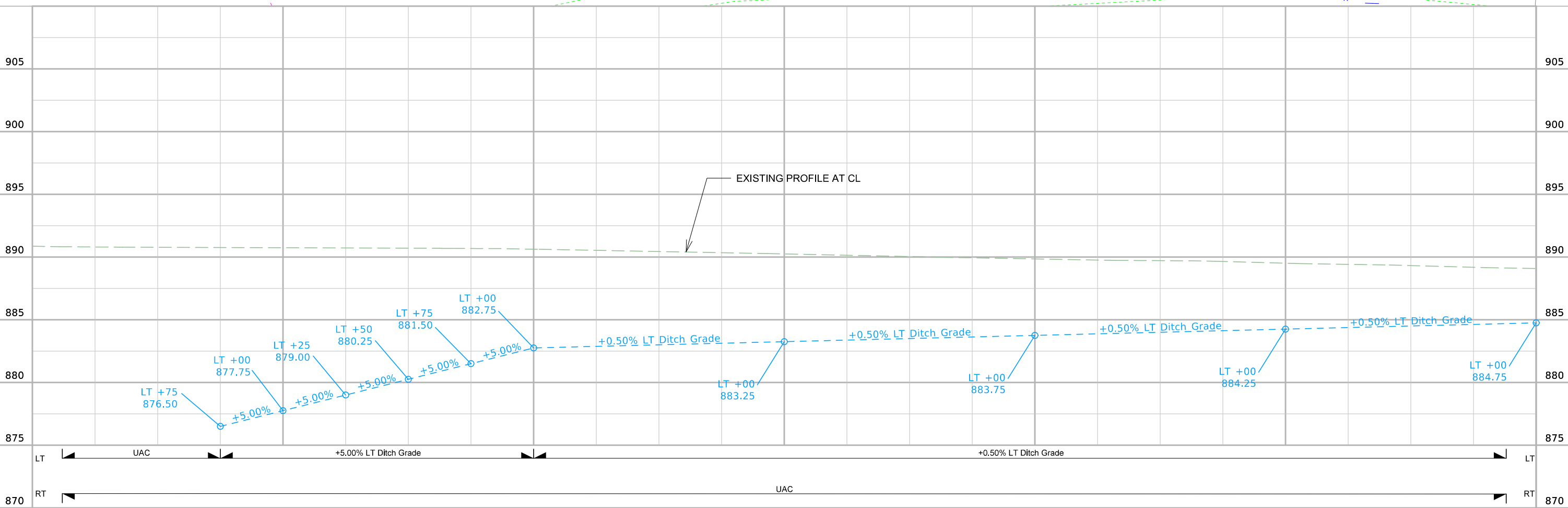
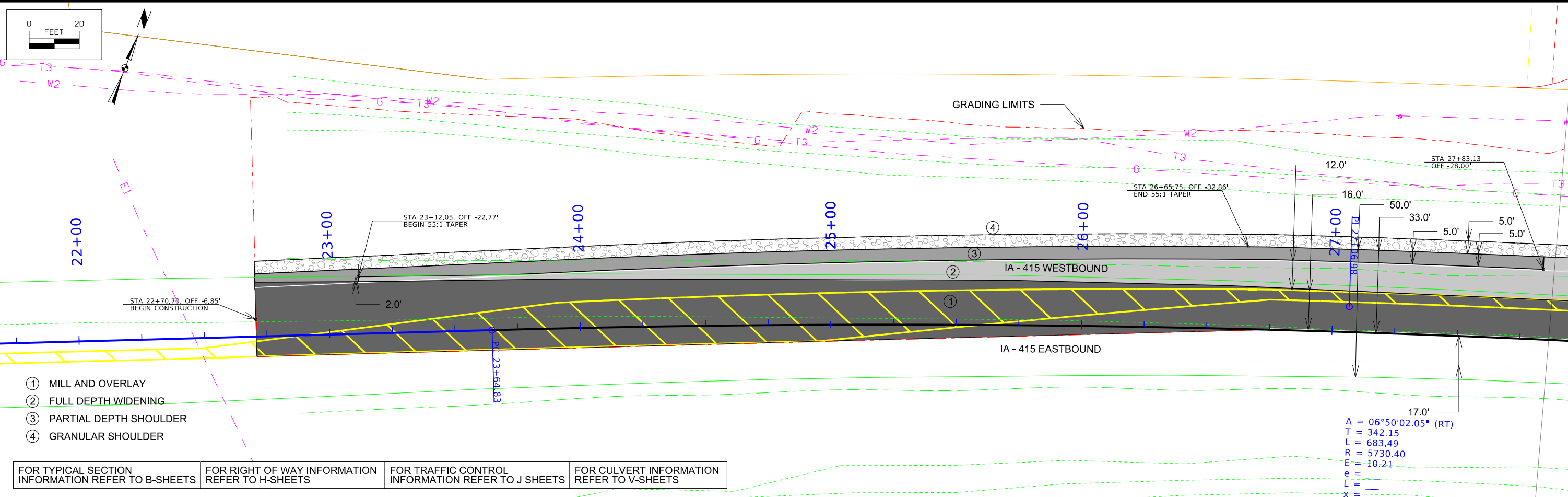
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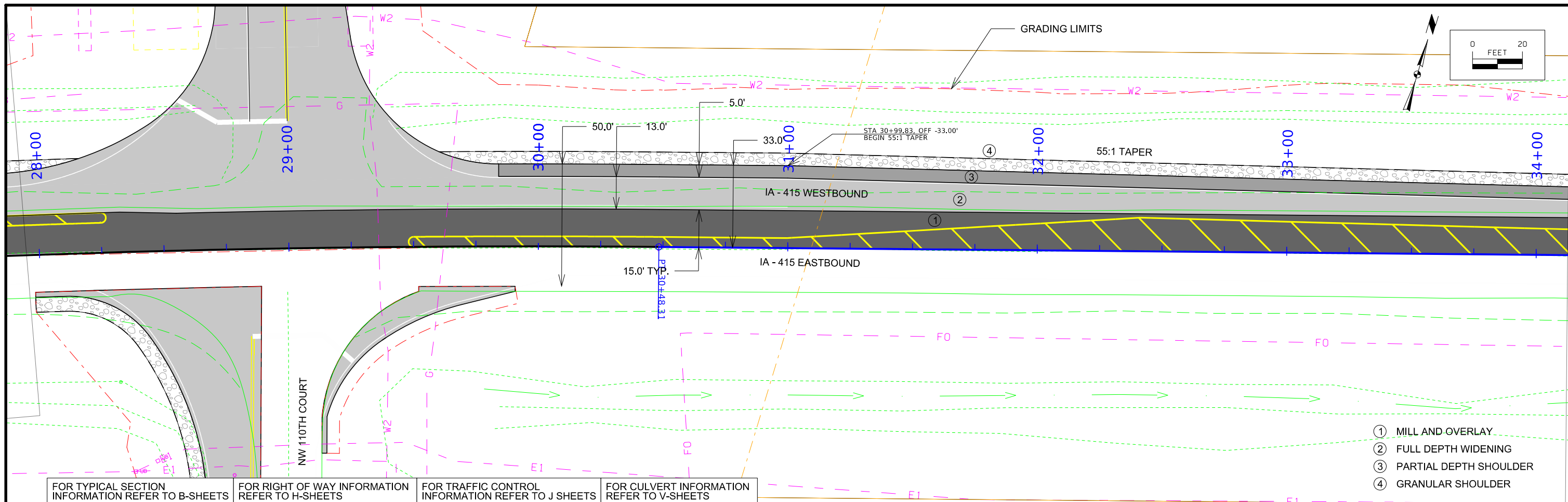
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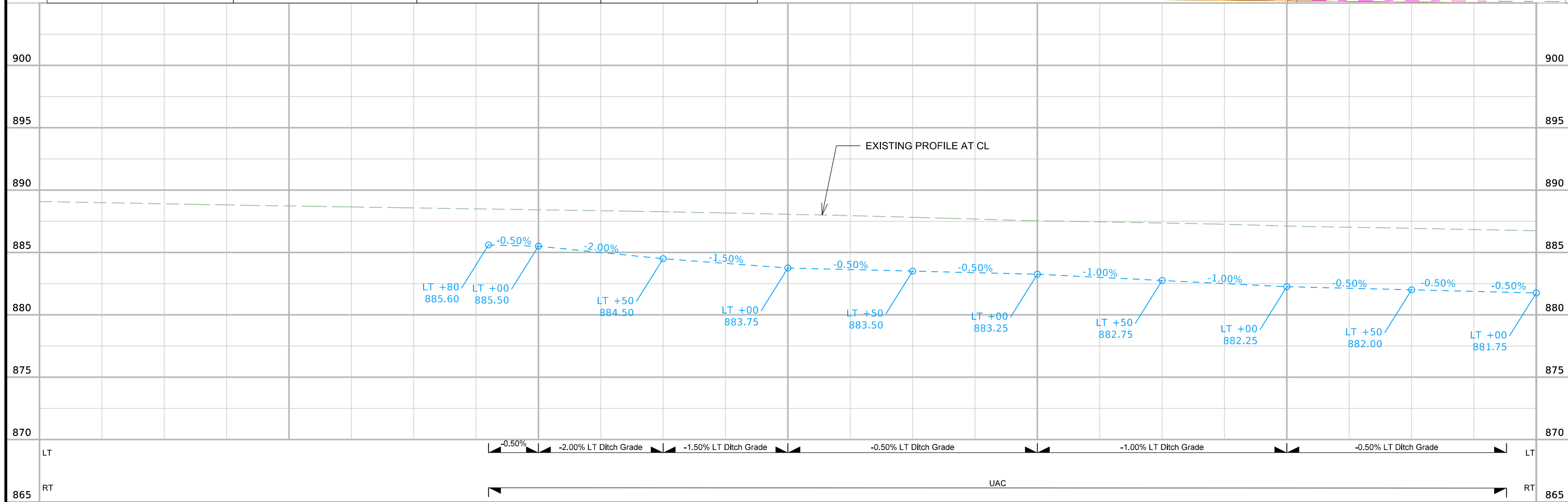
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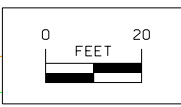
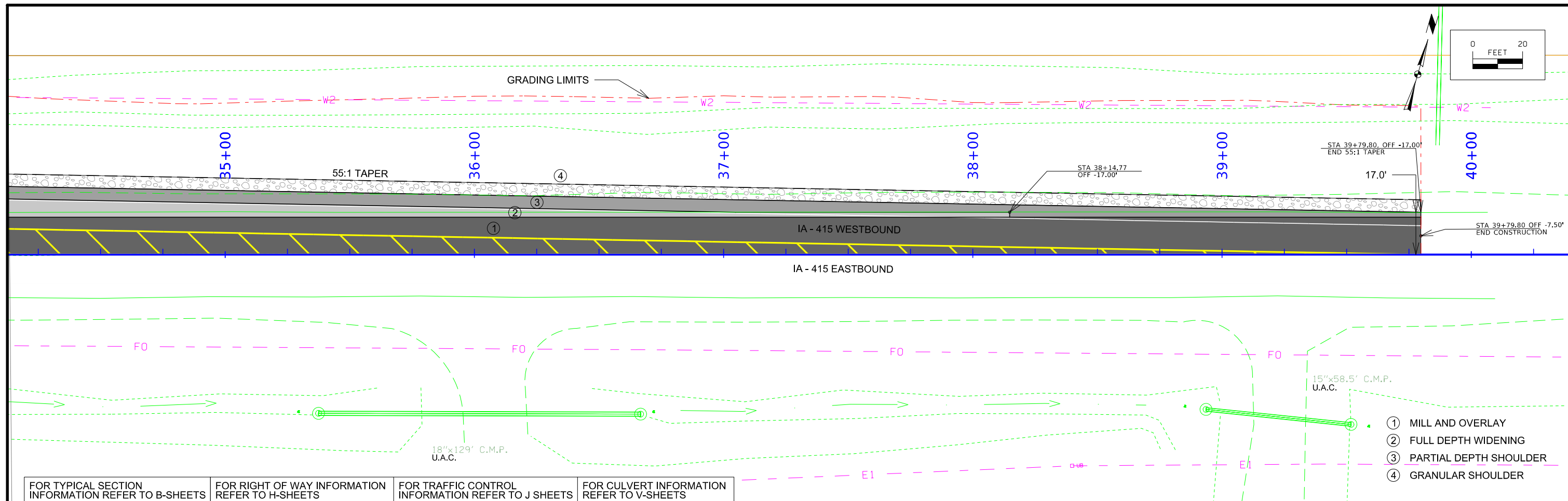






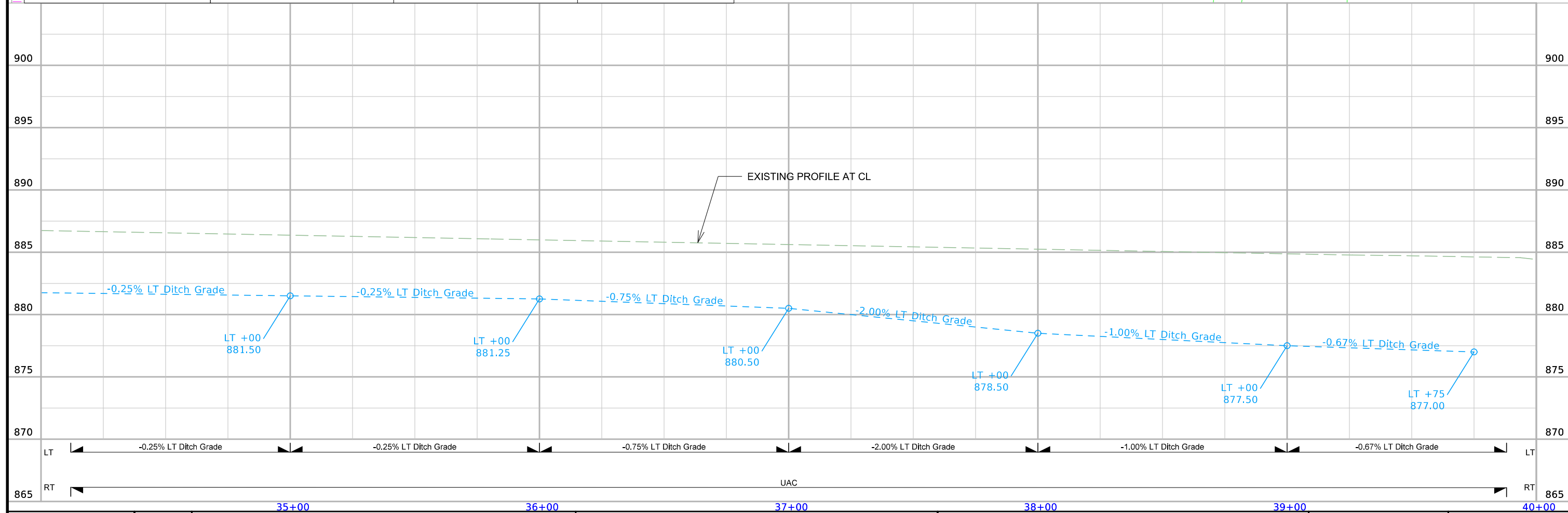
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- ② FULL DEPTH WIDENING
- ③ PARTIAL DEPTH SHOULDER
- ④ GRANULAR SHOULDER

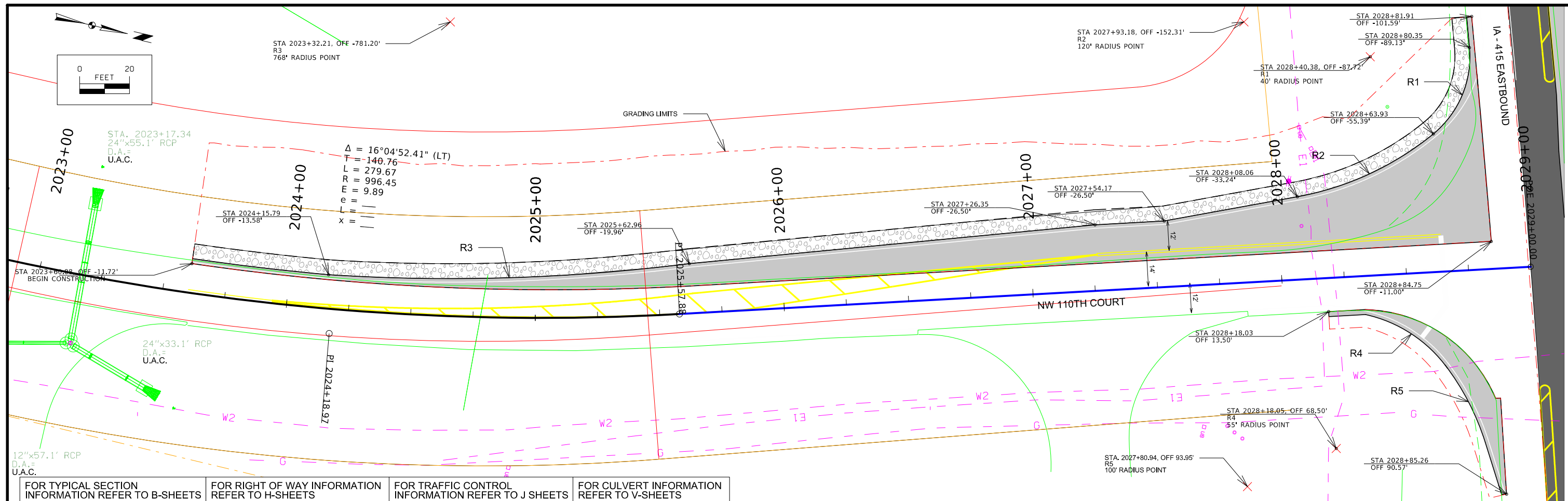




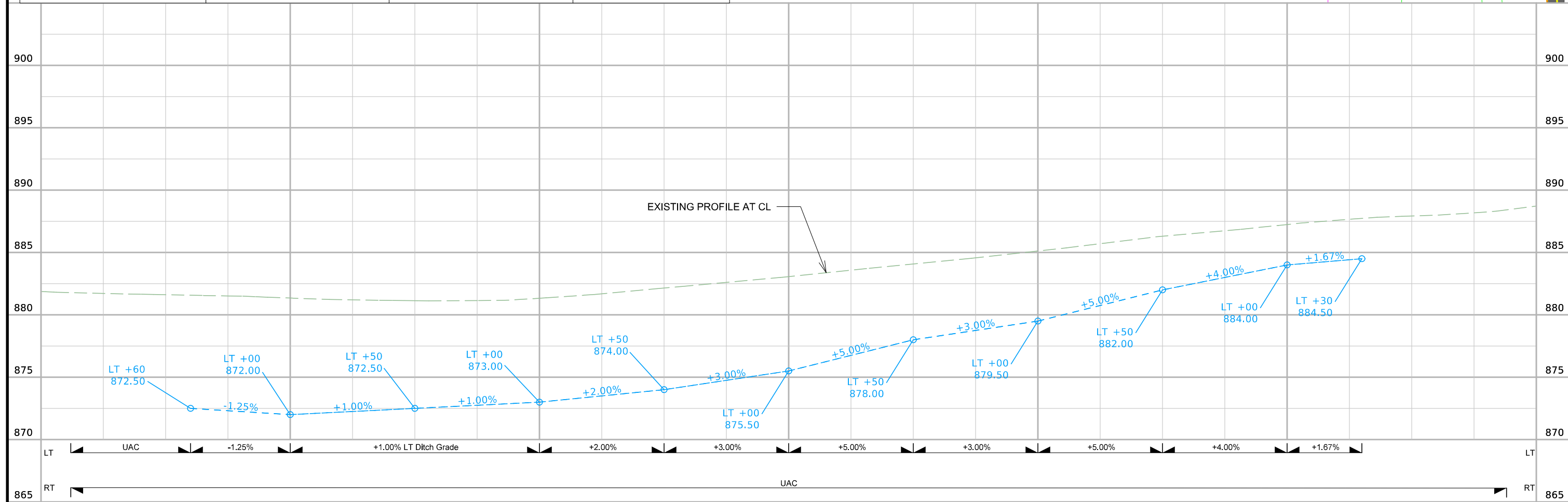
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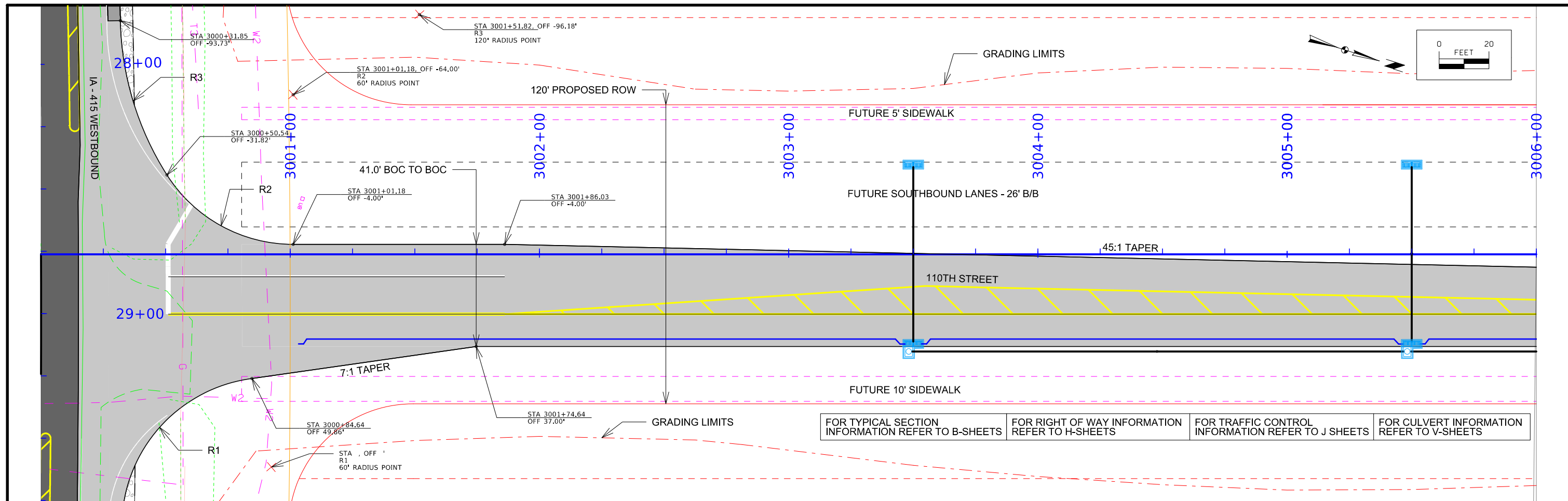
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- ② FULL DEPTH WIDENING
- ③ PARTIAL DEPTH SHOULDER
- ④ GRANULAR SHOULDER





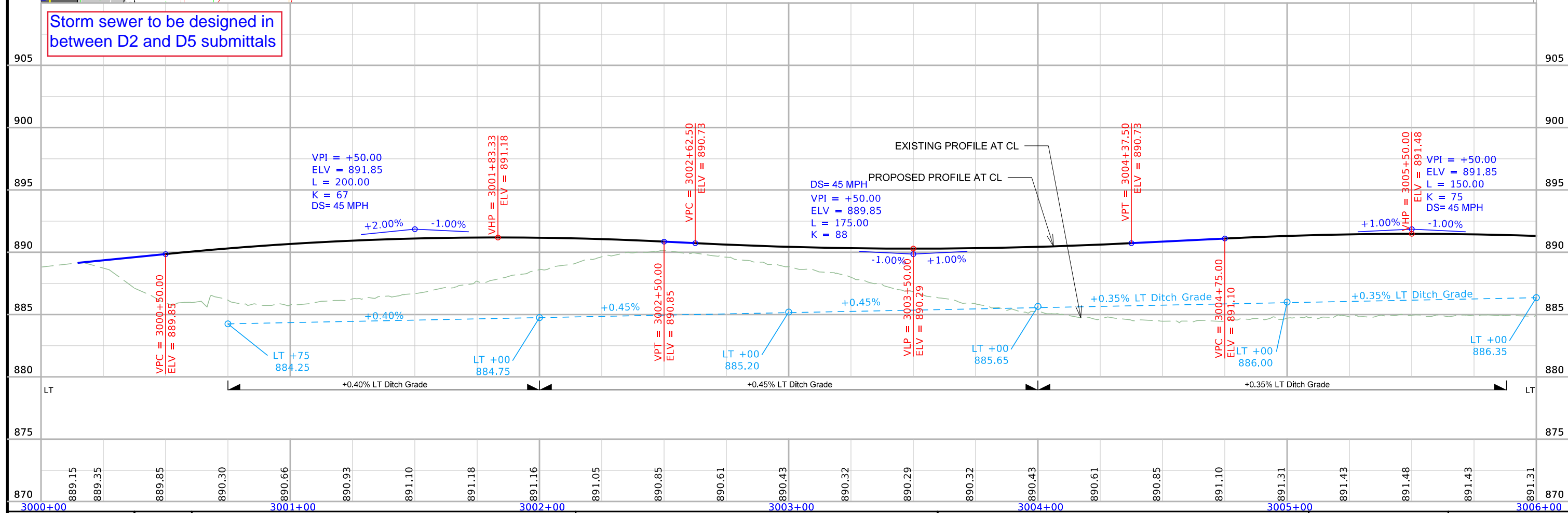
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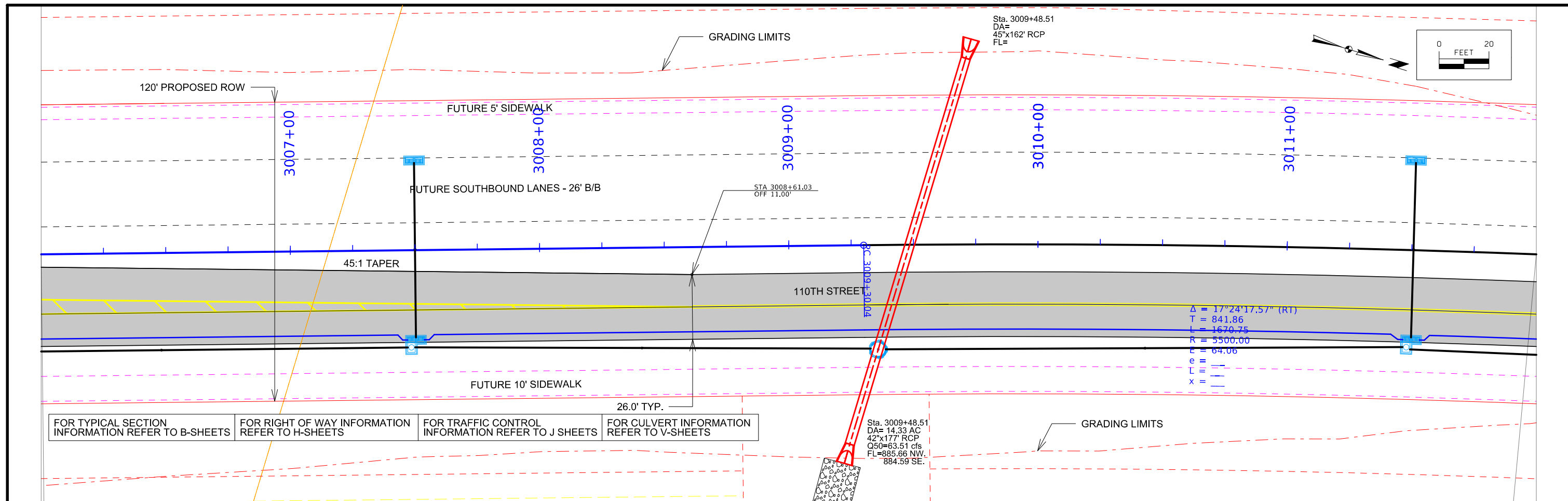




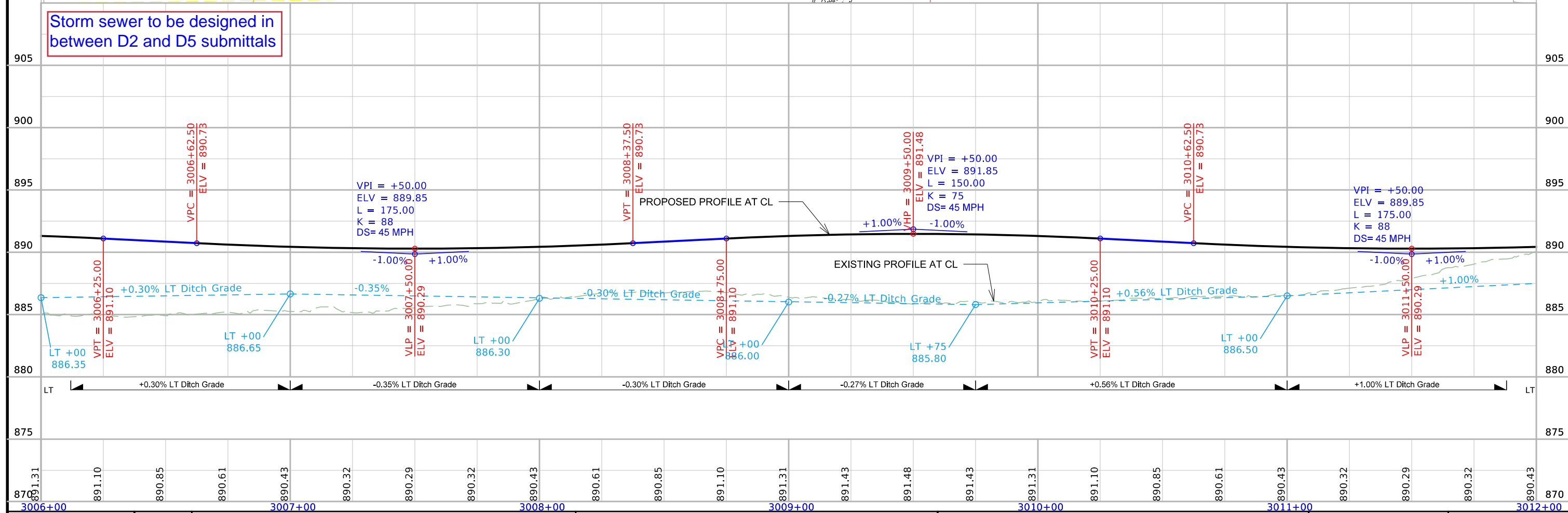
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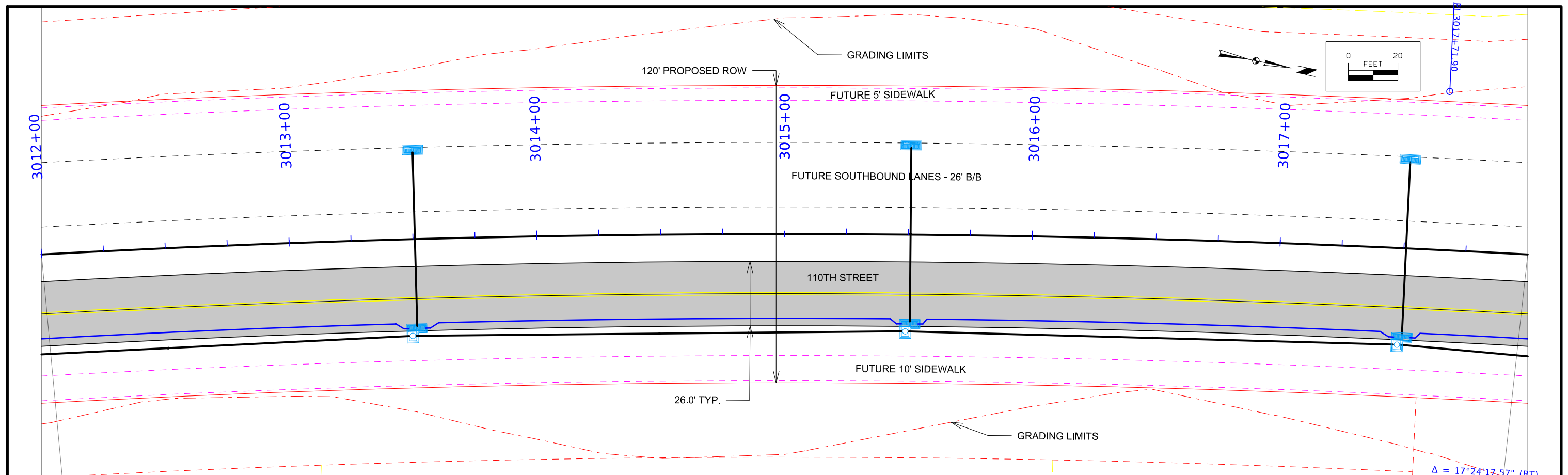
Storm sewer to be designed in between D2 and D5 submittals





Storm sewer to be designed in between D2 and D5 submittals

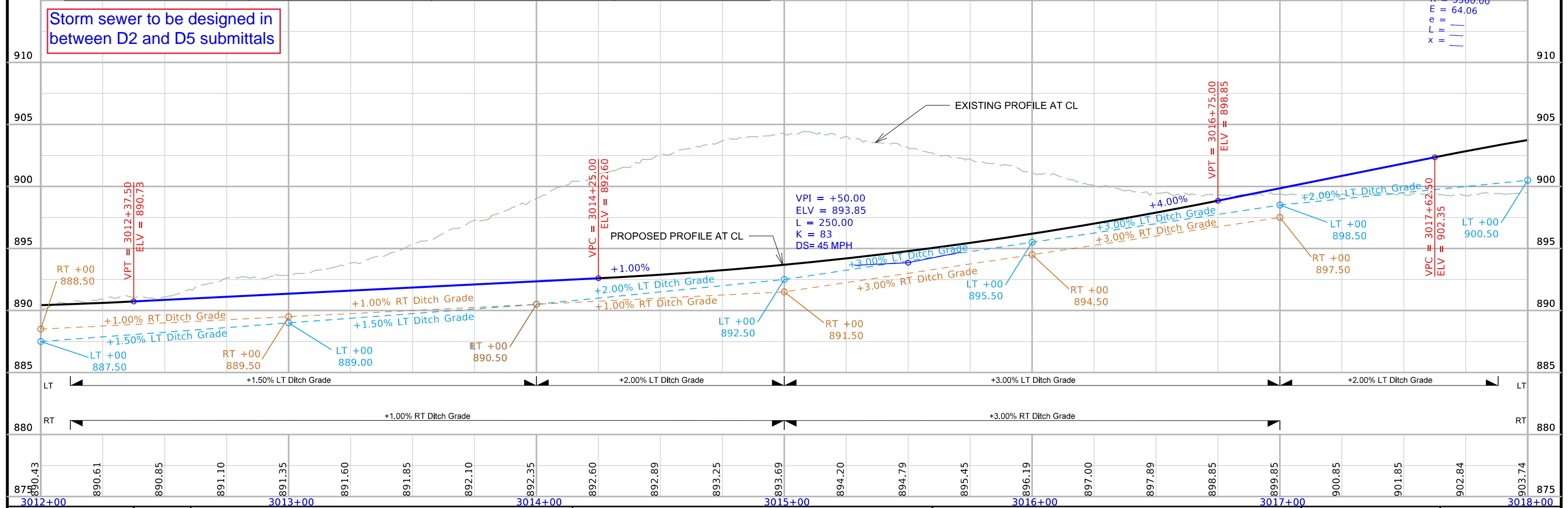


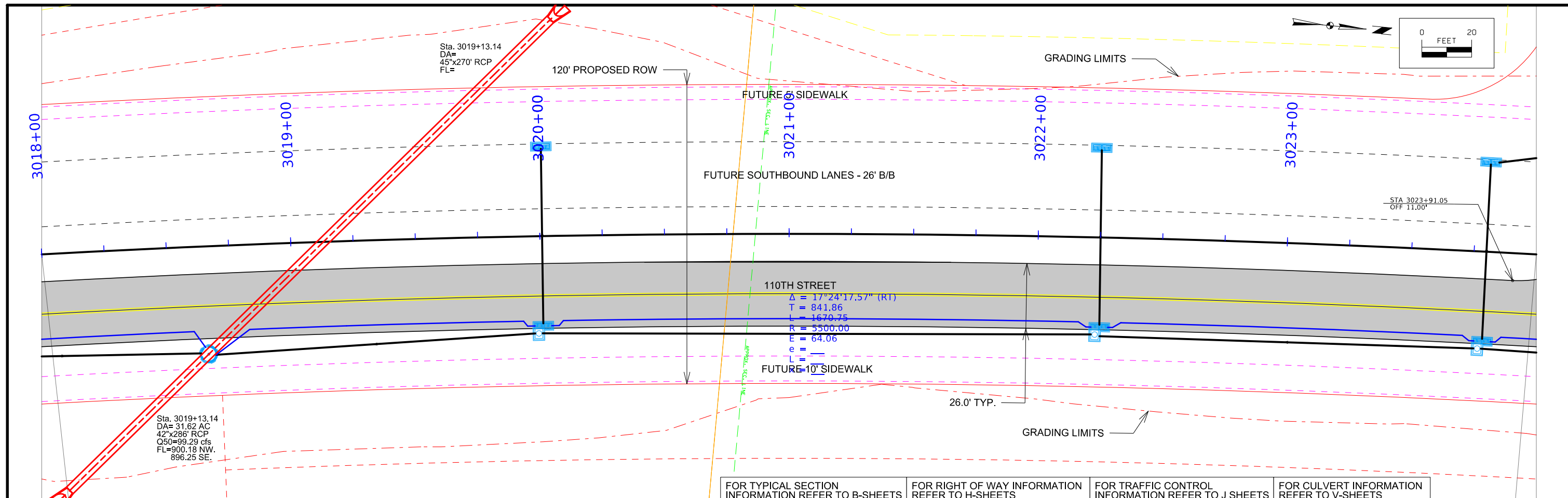


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 FOR RIGHT OF WAY INFORMATION REFER TO H-SHEETS
 FOR TRAFFIC CONTROL INFORMATION REFER TO J SHEETS
 FOR CULVERT INFORMATION REFER TO V-SHEETS

$\Delta = 17^{\circ}24'17.57''$ (RT)
 $T = 841.86$
 $L = 1670.75$
 $R = 5500.00$
 $E = 64.06$
 $x =$
 $y =$

Storm sewer to be designed in between D2 and D5 submittals

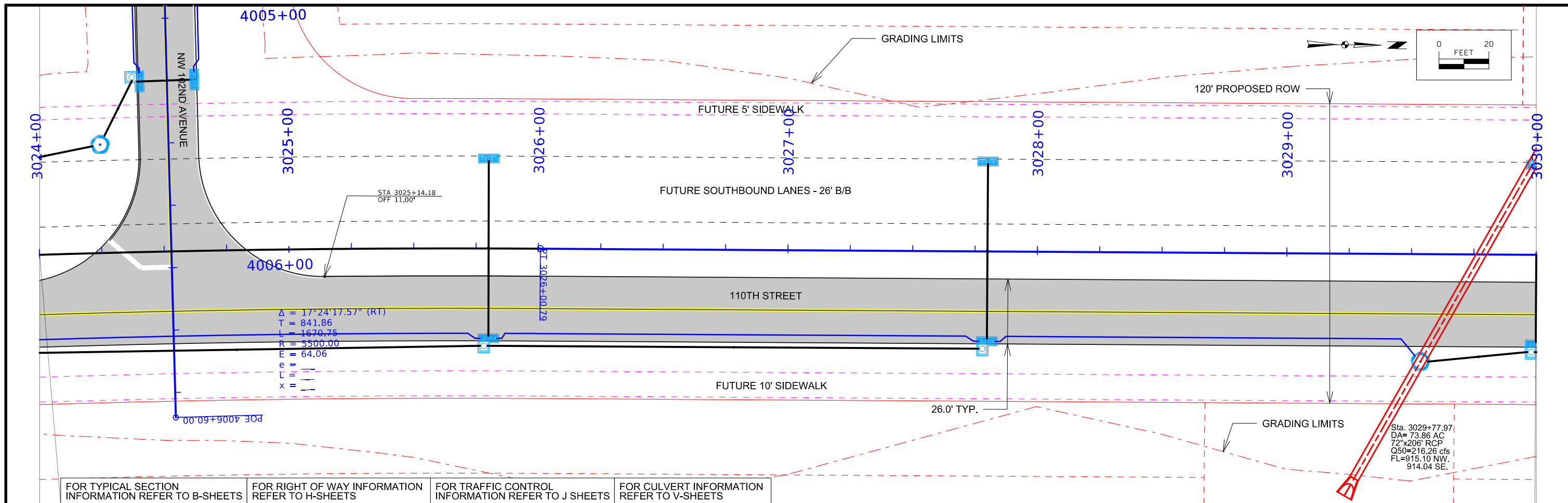




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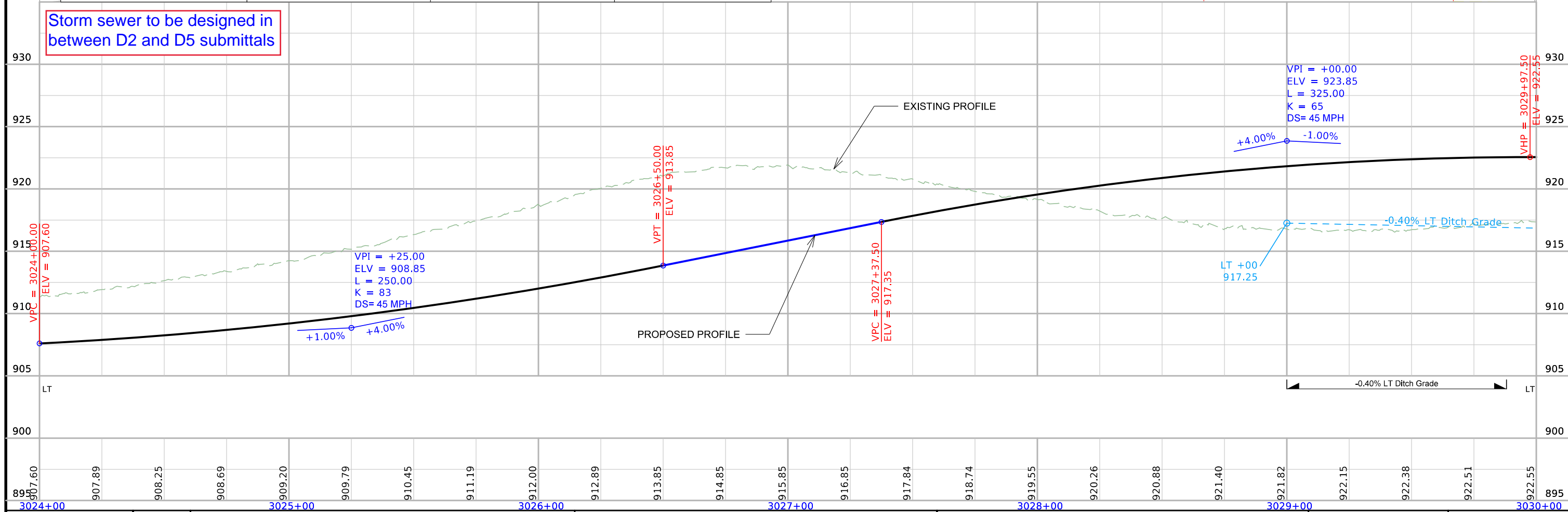
Storm sewer to be designed in between D2 and D5 submittals

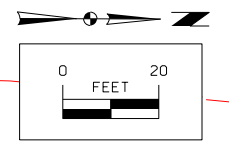




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 FOR TRAFFIC CONTROL INFORMATION REFER TO J SHEETS
 FOR CULVERT INFORMATION REFER TO V-SHEETS

Storm sewer to be designed in between D2 and D5 submittals





Sta. 3029+77.97
DA= 45'x190' RCP
FL=

GRADING LIMITS

120' PROPOSED ROW

3031+00

3032+00

3033+00

3034+00

3035+00

FUTURE 5' SIDEWALK

FUTURE SOUTHBOUND LANES - 26' B/B

110TH STREET

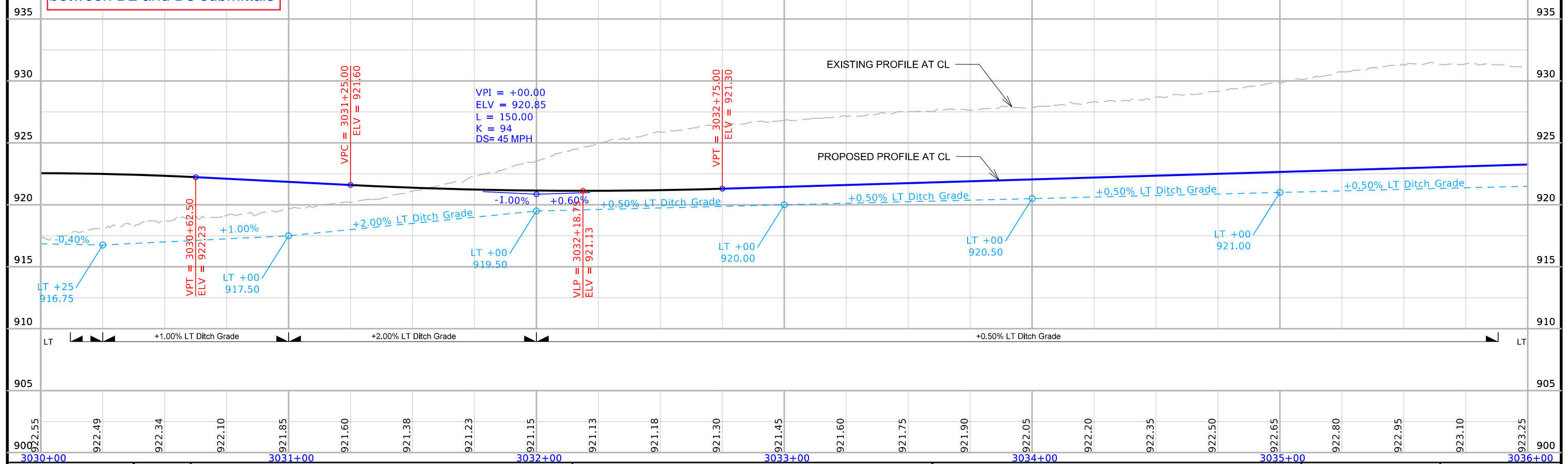
FUTURE 10' SIDEWALK

GRADING LIMITS

26.0' TYP.

FOR TYPICAL SECTION INFORMATION REFER TO B-SHEETS
FOR RIGHT OF WAY INFORMATION REFER TO H-SHEETS
FOR TRAFFIC CONTROL INFORMATION REFER TO J SHEETS
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Storm sewer to be designed in between D2 and D5 submittals



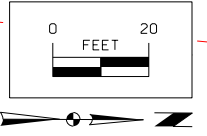
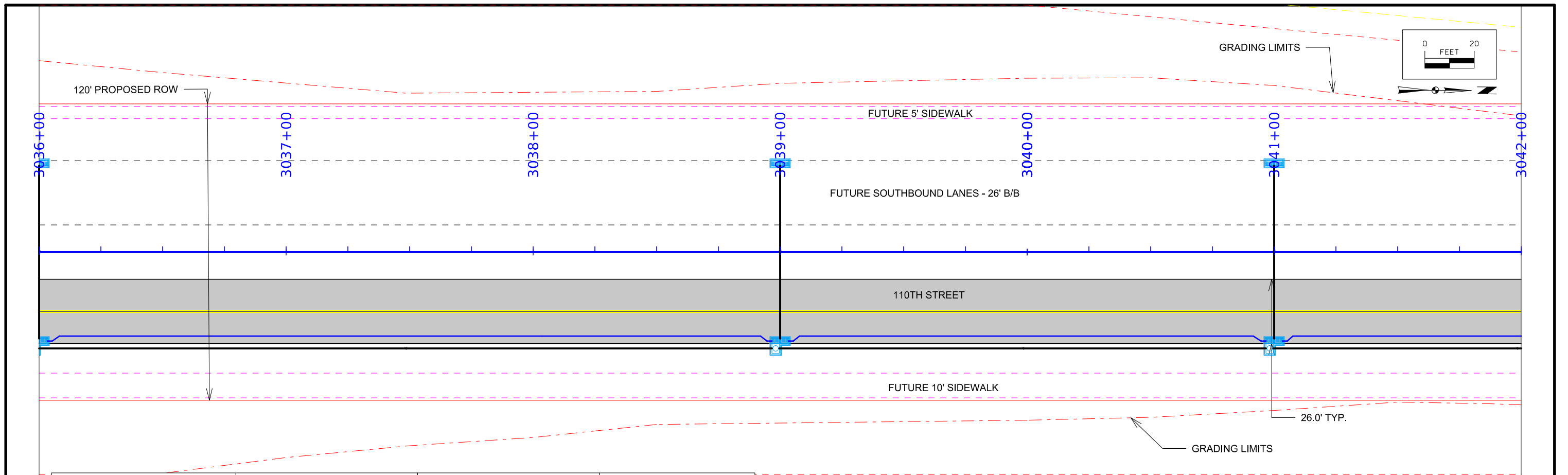
VPI = +00.00
ELV = 920.85
L = 150.00
K = 94
DS = 45 MPH

VPC = 3031+25.00
ELV = 921.60

VPT = 3032+75.00
ELV = 921.30

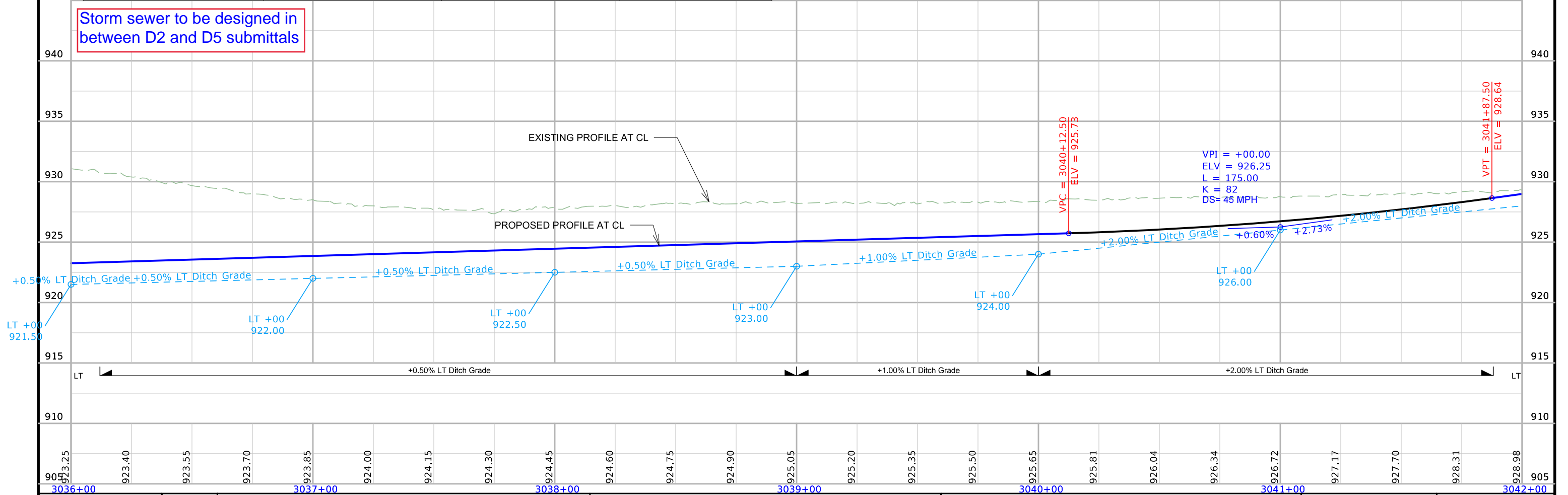
VPT = 3030+62.50
ELV = 922.23

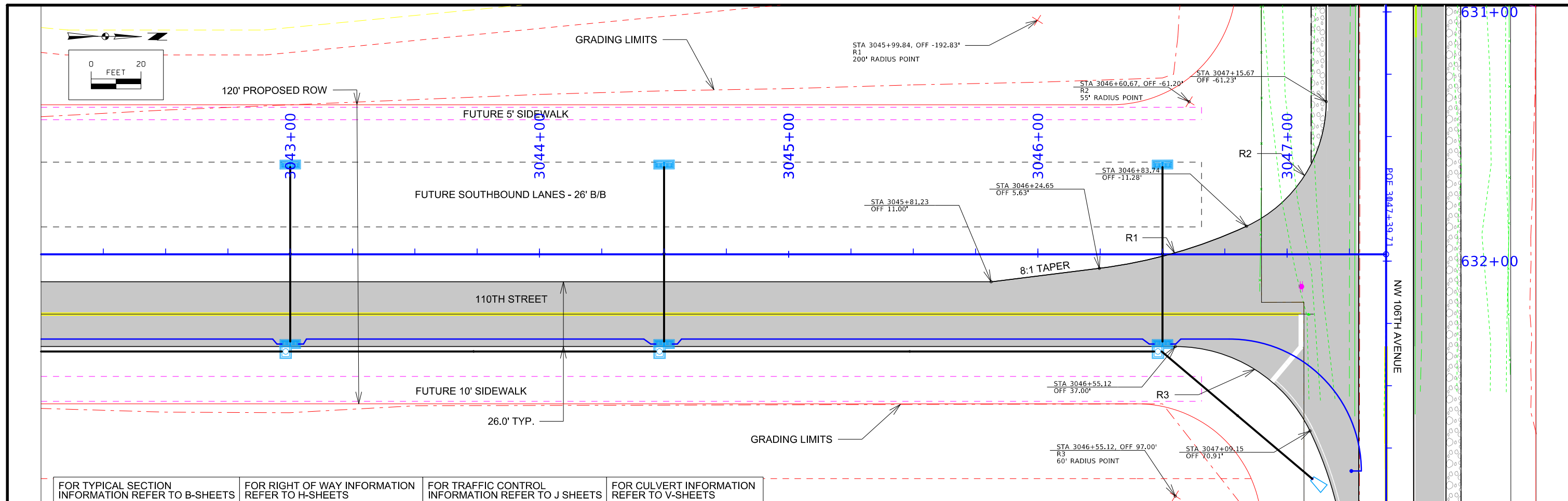
VLP = 3032+18.75
ELV = 921.13



FOR TYPICAL SECTION INFORMATION REFER TO B-SHEETS FOR RIGHT OF WAY INFORMATION REFER TO H-SHEETS FOR TRAFFIC CONTROL INFORMATION REFER TO J SHEETS FOR CULVERT INFORMATION REFER TO V-SHEETS

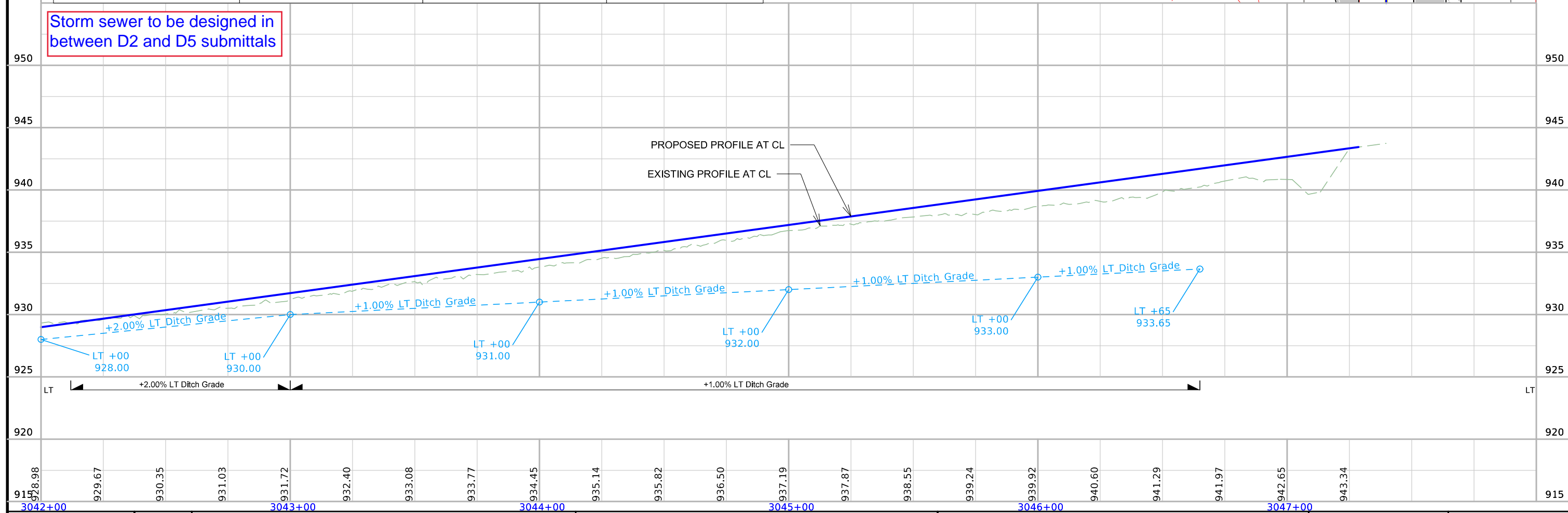
Storm sewer to be designed in between D2 and D5 submittals





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Storm sewer to be designed in between D2 and D5 submittals



SURVEY INFORMATION

POLK COUNTY
NHSX-141-7(58)—3H-77
HWY 141/NW 121ST ST INTERSECTION
PIN 17-77-141-020
SAP-09491

GENERAL INFORMATION

MEASUREMENT UNITS FOR THIS SURVEY ARE US SURVEY FEET. THIS SURVEY IS FOR PRELIMINARY ENGINEERING SURVEY FOR THE PROPOSED IMPROVEMENTS TO THE NW 121ST INTERSECTION AND LOCAL ROAD CONNECTIONS.

VERTICAL CONTROL

VERTICAL DATUM FOR THIS SURVEY IS RELATIVE TO NAVD88 GEOID 12B. VERTICAL DATUM ORIGINATED FROM PROJECT 19-77-415-010, SAP 0949. CP 10 WAS HELD AS THE PRIMARY CONTROL POINT. ADDITIONAL PRIMARY CONTROL POINTS ELEVATIONS WERE ADDED WITH A MINIMUM OF TWO HOUR STATIC OBSERVATIONS AND POST PROCESSED

HORIZONTAL CONTROL

PROJECT COORDINATE SYSTEM RELATIVE TO THE IOWA REGIONAL COORDINATE SYSTEM, ZONE 8. HORIZONTAL CONTROL ORIGINATED FROM PROJECT 19-77-415-010, SAP 0949. CP 10 WAS HELD AS THE PRIMARY CONTROL POINT. ADDITIONAL PRIMARY CONTROL POINT COORDINATES WERE ADDED WITH A MINIMUM OF TWO HOUR STATIC OBSERVATIONS AND POST PROCESSED

ALIGNMENT INFORMATION

IA HWY 141

THIS HORIZONTAL ALIGNMENT WAS PROVIDED BY THE STATE FROM PROJECT TSF-141-7(54)—92-77 AND IS A RETRACE OF AS-BUILT PLANS FN-141-7(7)—21-77. ALIGNMENT WAS EXTENDED BACK FROM PLAN TS AT STATION 338+06.27 TO 290+00. THERE ARE TWO LATERAL OFFSETS IN THE ALIGNMENT AT STATIONS 338+06.27 AND 370+19.94. EQUATIONS ARE LOCATED AT THESE TO OFFSET POSITIONS.

NW 121ST ST

THIS HORIZONTAL ALIGNMENT WAS PROVIDED BY THE STATE FROM PROJECT TSF-141-7(54)—92-77 AND IS A RETRACE OF AS-BUILT PLANS FN-141-7(7)—21-77. ALIGNMENT WAS EXTENDED BACK FROM PLAN POT AT STATION 8376+22.44 TO 8360+94.54.

NW 102ND AVENUE

THE HORIZONTAL ALIGNMENT FOR THIS SURVEY IS A RETRACE OF AS-BUILT PLANS FN-141-7(7)—21-77. SURVEY STATIONING WAS EQUATED TO THE PLAN POT AT STATION 9414+96.52 AND RUN AHEAD AND BACK WITHOUT EQUATION. NO CENTERLINE MONUMENTATION WAS FOUND ALONG NW 102ND AVE. CENTERLINE AND EDGE OF ROADWAY WERE USED TO CREATE THE ALIGNMENT NORTH AND SOUTH OF IA 141.

NW 106TH AVENUE

ROADWAY IS LOCAL ROADWAY. NO CENTERLINE MONUMENTATION WAS FOUND AND SECTION CORNERS, CENTERLINE AND EDGE OF ROADWAY WERE USED TO CREATE THE ALIGNMENT. SURVEY STATIONING WAS EQUATED TO 600+00 AT THE INTERSECTION OF NW 121ST STREET AND NW 106TH AVENUE.

NW 114TH STREET

ROADWAY IS LOCAL ROADWAY. THE HORIZONTAL ALIGNMENT FOR THIS SURVEY IS A RETRACE OF AS-BUILT PLANS STP-S-C077(106)—5E-77. NO CENTERLINE MONUMENTATION WAS FOUND AND CENTERLINE AND EDGE OF ROADWAY WERE USED TO CREATE THE ALIGNMENT. SURVEY STATIONING WAS EQUATED TO 100+00 AT THE INTERSECTION OF NW SAYLORVILLE DRIVE AND THE SOUTHERLY EXTENSION OF NW 114TH AVENUE.

NW 110TH COURT

ROADWAY IS LOCAL ROADWAY. THE HORIZONTAL ALIGNMENT FOR THIS SURVEY IS A RETRACE OF AS-BUILT PLANS STP-S-C077(106)—5E-77. SURVEY STATIONING WAS EQUATED TO PLAN PI AT STATION 2029+00 AND RAN BACK WITHOUT EQUATION.

NW SAYLORVILLE DRIVE

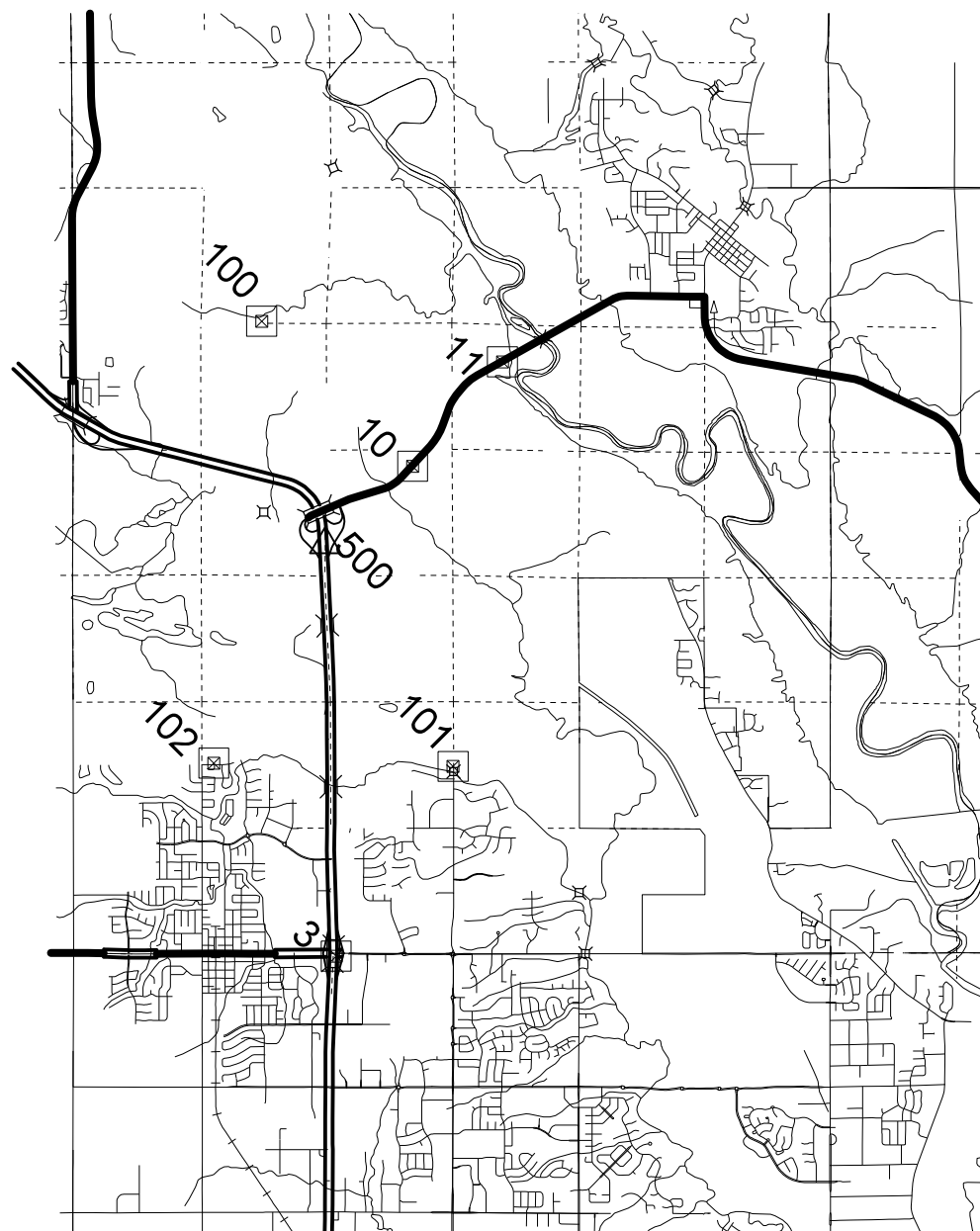
ROADWAY IS A LOCAL ROADWAY. THIS HORIZONTAL ALIGNMENT WAS PROVIDED BY THE STATE AND IS A RETRACE OF AS-BUILT PLANS STP-S-C077(106)—5E-77.

NW TOWNER DRIVE

ROADWAY IS LOCAL ROADWAY. FOUND CENTERLINE MONUMENTATION AND SECTION CORNERS WERE USED TO CREATE THE ALIGNMENT AS SHOWN ON THE RETRACEMENT SURVEY RECORDED IN BOOK 16788, PAGE 794. SURVEY STATIONING WAS EQUATED TO 100+00.

CONTROL POINT VICINITY MAP

THIS MAP IS A GUIDE TO THE VICINITY OF THE PRIMARY PROJECT CONTROL POINTS
PRIMARY CONTROL IS FOR USE WITH RTK BASE STATIONS AND FOR RTN VALIDATION.
FUTURE SURVEYS WILL USE PRIMARY PROJECT CONTROL TO ESTABLISH TEMPORARY
CONTROL AS NEEDED FOR CONSTRUCTION OR OTHER SURVEYING APPLICATIONS.



HORIZ. DATUM: NAD83(2011) EPOCH 2010.00

VERT. DATUM: NAVD88

IA. REGIONAL COORDINATE SYSTEM ZONE 8

COORDINATE LISTING FROM NEXT SHEET WILL BE USED WITH IARTN FOR MONUMENT
RECOVERY. NO OTHER REFERENCE TIES ARE GIVEN.

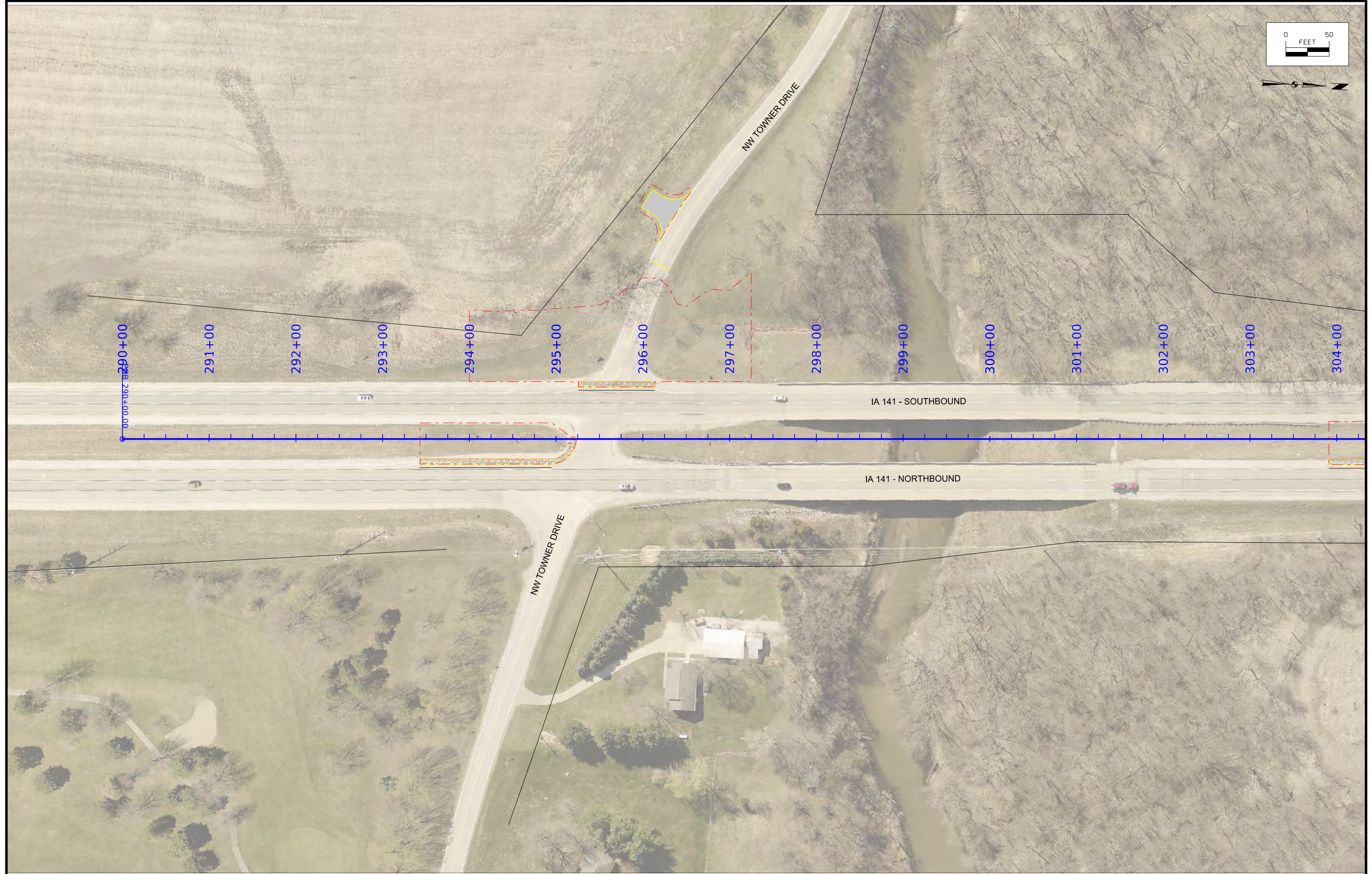
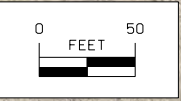
HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING

HORIZ. DATUM: NAD83(2011) EPOCH 2010.00

VERT. DATUM: NAVD88

IA. REGIONAL COORDINATE SYSTEM ZONE 8

Point Name	Northing	Easting	Elevation	Feature Definition
500	7541344.39	18483913.45	859.45	BM FD IHC BM PLUG INLET HDWL 4 X 5 RCB > BM # 1 AB PLANS PROJECT # STP-S-CO77(106)--5E-77
3	7523987.38	18484369.23	982.45	FENO MONUMENT ON A BACKSLOPE IN THE SW QUAD INTERSECTION IA HWY 141 & E. 1ST ST. THE MARK IS 99' S. OF E.B. E. 1ST ST./ 71' E. OF THE CENTERLINE OF N.B. IA HWY 141/ 49' SE IDOT PLUG SE WING OF N.B. IA HWY 141 BRIDGE/ 44' NE OF TRAFFIC CAMERA POLE/ AND .5'W. OF CONTROL POINT SIGN/ .5' BELOW GROUND LEVEL
10	7544630.13	18487591.86	882.89	FENO MONUMENT ON A FORESLOPE JUST S. OF IA HWY 415/ 162' SW TOP OF OUTLET CONCRETE APRON SECTION/ 68' SE OF MILE MARKER SIGN 16/ 37' SE OF THE CENTERLINE OF IA HWY 415/ .5' BELOW GROUND LEVEL
11	7549033.32	18491375.10	898.41	FENO MONUMENT ON THE SHOULDER OF IA HWY 415. THE MARK IS 24' SE OF IA HWY 415/ 84' SW OF SW CORNER SW WING BRIDGE OVER SAYLORVILLE LAKE/ 24' E. OF THE W. END OF GUARDRAIL/ 3' SE OF GUARDRAIL/ .5' BELOW GROUND LEVEL
100	7550741.22	18481230.99	935.50	FENO MONUMENT/ IDOT ALUM. CAP IN NW QUAD INTERSECTION NW 121ST ST & NW 110TH/ +/-30' N. OF 1ST LIGHT POLE/ W. OF NW 121ST ST.
101	7531983.89	18489294.32	862.05	FENO MONUMENT/ IDOT ALUM. CAP IN SW QUAD INTERSECTION NW 100TH ST. & NW 82ND AVE./ +/-5' W. OF BACK OF CURB/ +/-30' S. OF CENTERLINE OF NW 82ND AVE.
102	7532122.30	18479213.80	919.77	FENO MONUMENT/ IDOT ALUM. CAP IN NW QUAD INTERSECTION NE 27TH ST. & NE BRENTWOOD CIR./ +/-15' W. OF LIGHT POLE



290+00
290+00.00

291+00

292+00

293+00

294+00

295+00

296+00

297+00

298+00

299+00

300+00

301+00

302+00

303+00

304+00

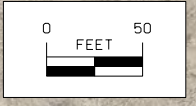
IA 141 - SOUTHBOUND

IA 141 - NORTHBOUND

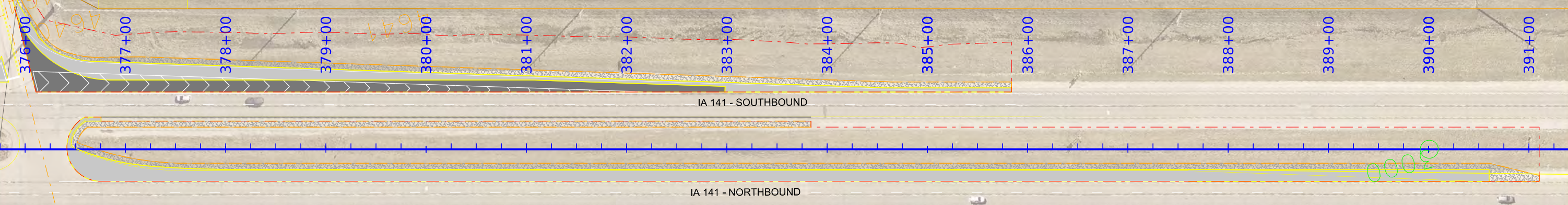
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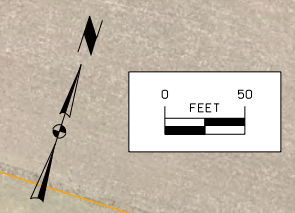
NW TOWNER DRIVE





MICHAEL P SCHNEIDER
16257/189





SAYLORVILLE FARMS LLC
15429/989

SAYLORVILLE FARMS LLC
16050/714

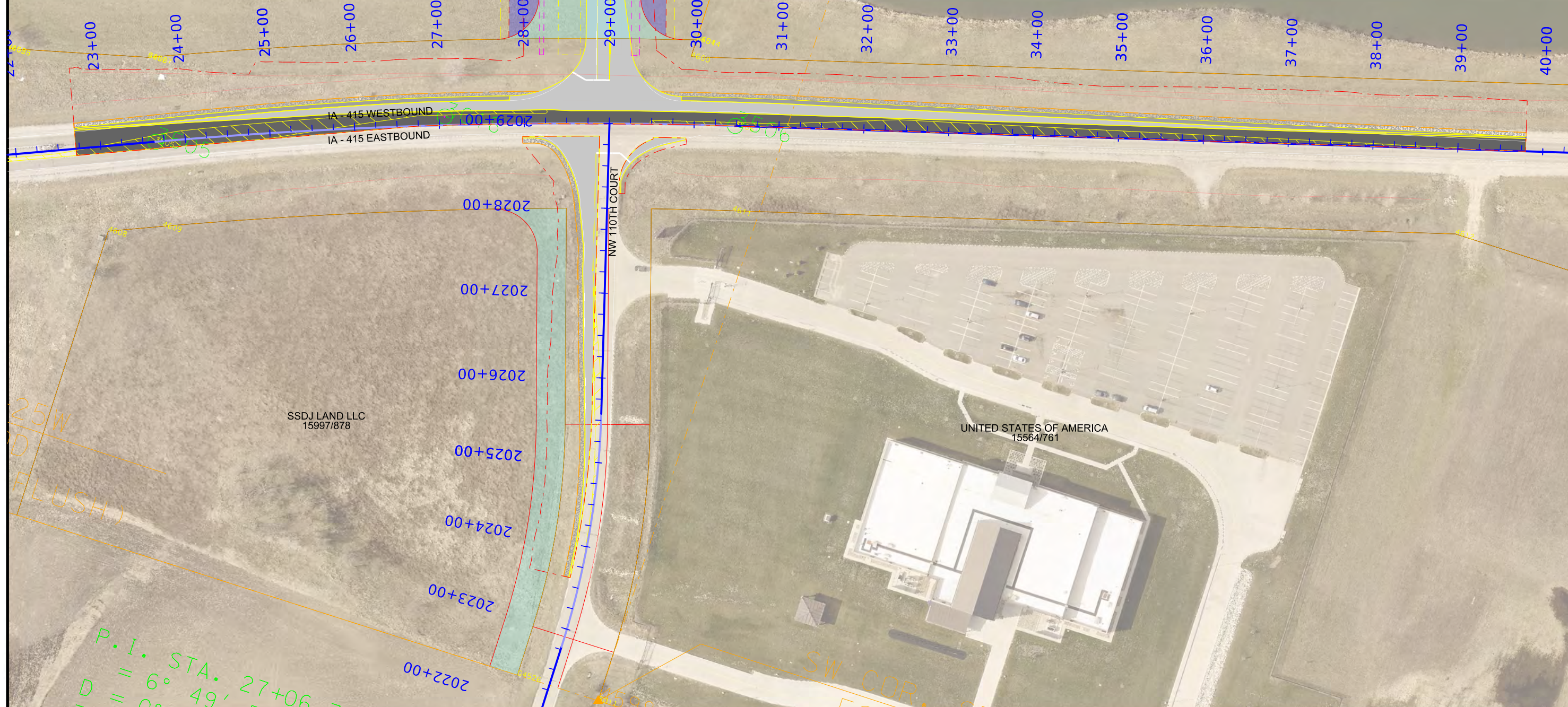
NW 110TH STREET

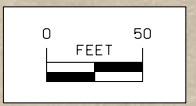
IA - 415 WESTBOUND
IA - 415 EASTBOUND

NW 110TH COURT

SSDJ LAND LLC
15997/878

UNITED STATES OF AMERICA
15564/761





SAYLORVILLE FARMS LLC
15429/989

LAMAR KOETHE
11019/316

LAMAR KOETHE
11019/316

3001+00 3002+00 3003+00 3004+00 3005+00 3006+00 3007+00 3008+00 3009+00 3010+00 3011+00 3012+00 3013+00 3014+00 3015+00 3016+00

NW 110TH STREET

POB 3009+00

35.0'
120.0'
30.0'

35.0'
120.0'
30.0'

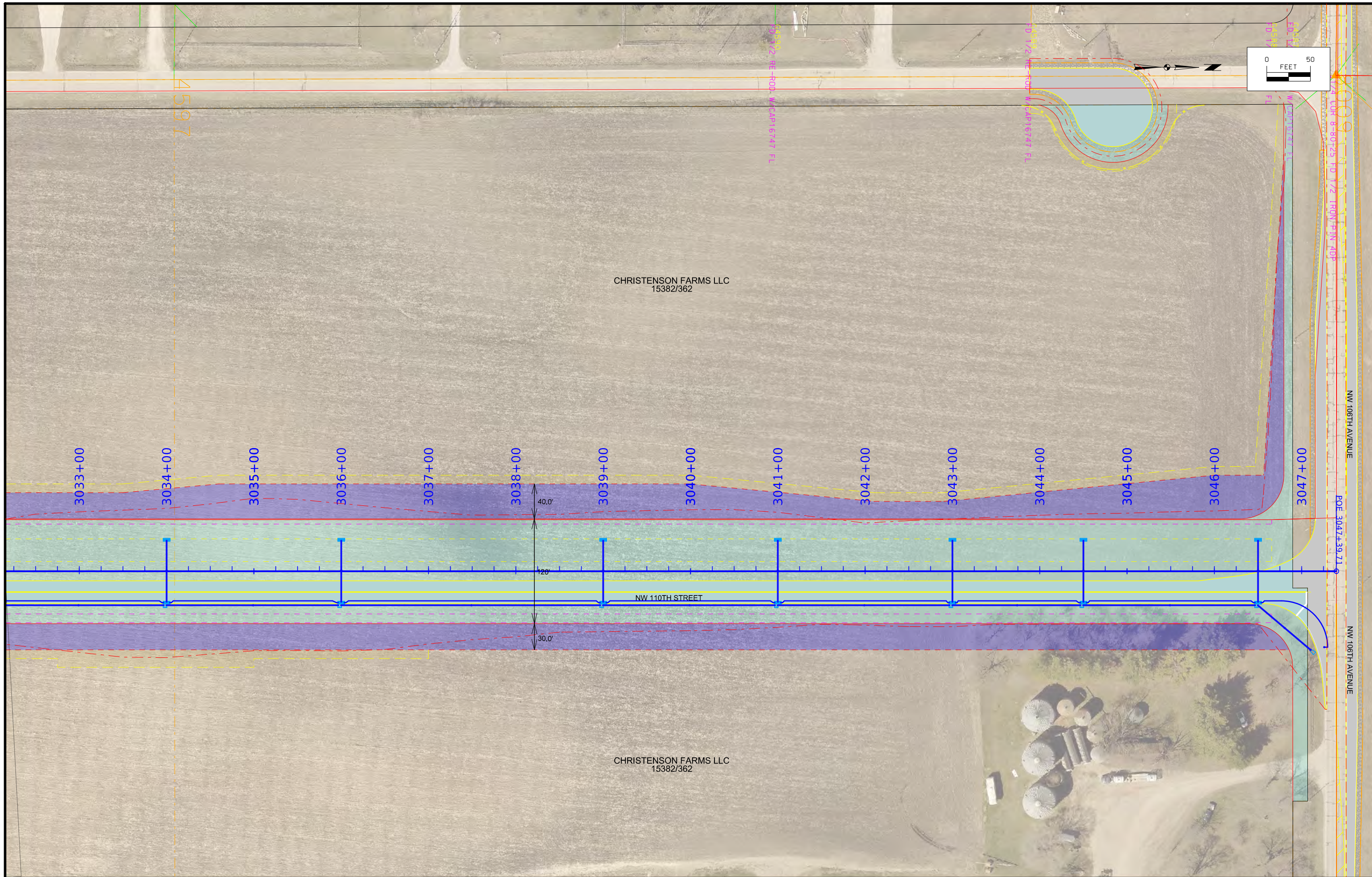
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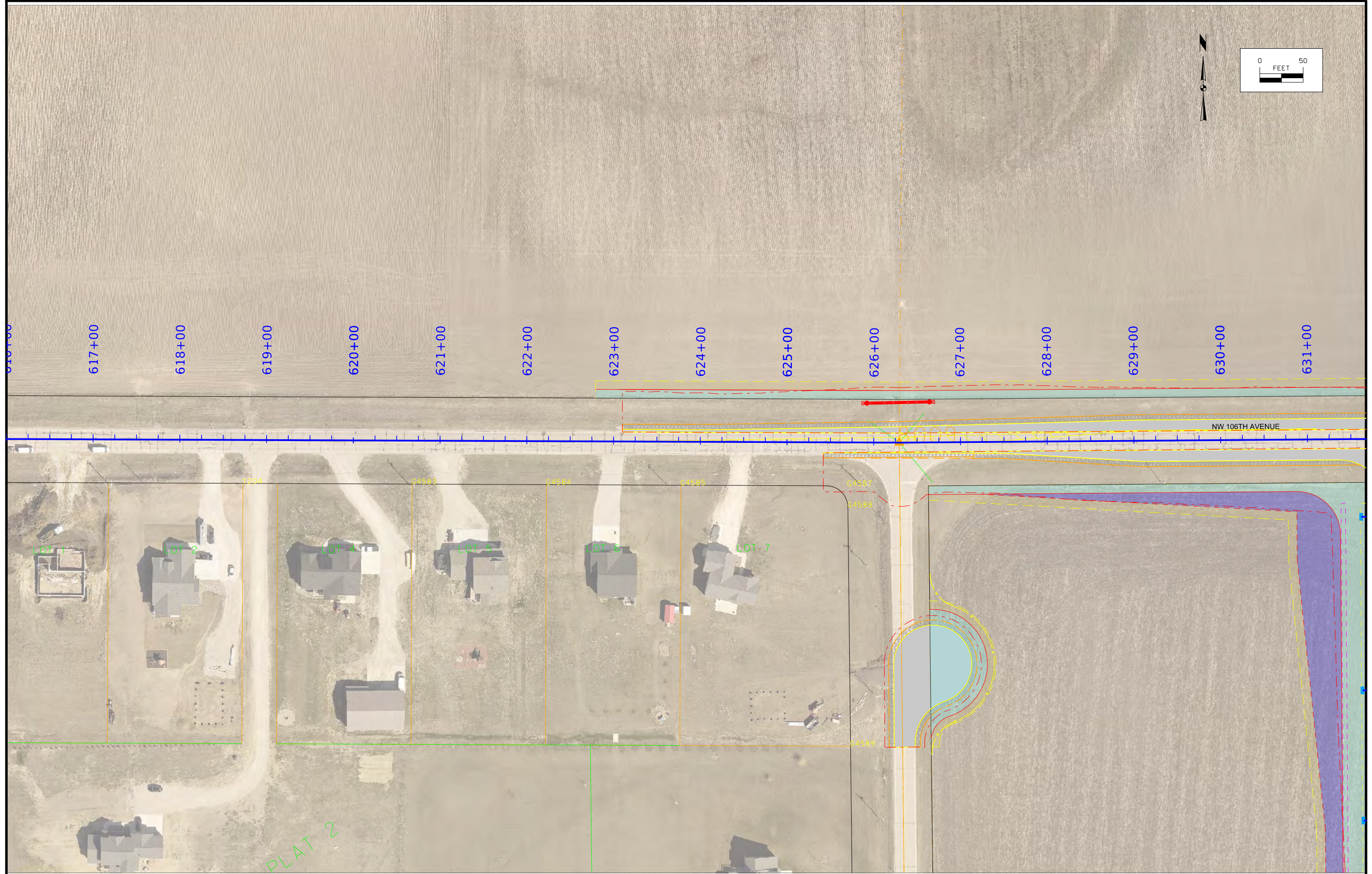
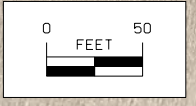
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FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc. Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER NHSX-141-7(56)--3H-77	SHEET NUMBER H.5
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617+00

618+00

619+00

620+00

621+00

622+00

623+00

624+00

625+00

626+00

627+00

628+00

629+00

630+00

631+00

NW 106TH AVENUE

LOT 1

LOT 2

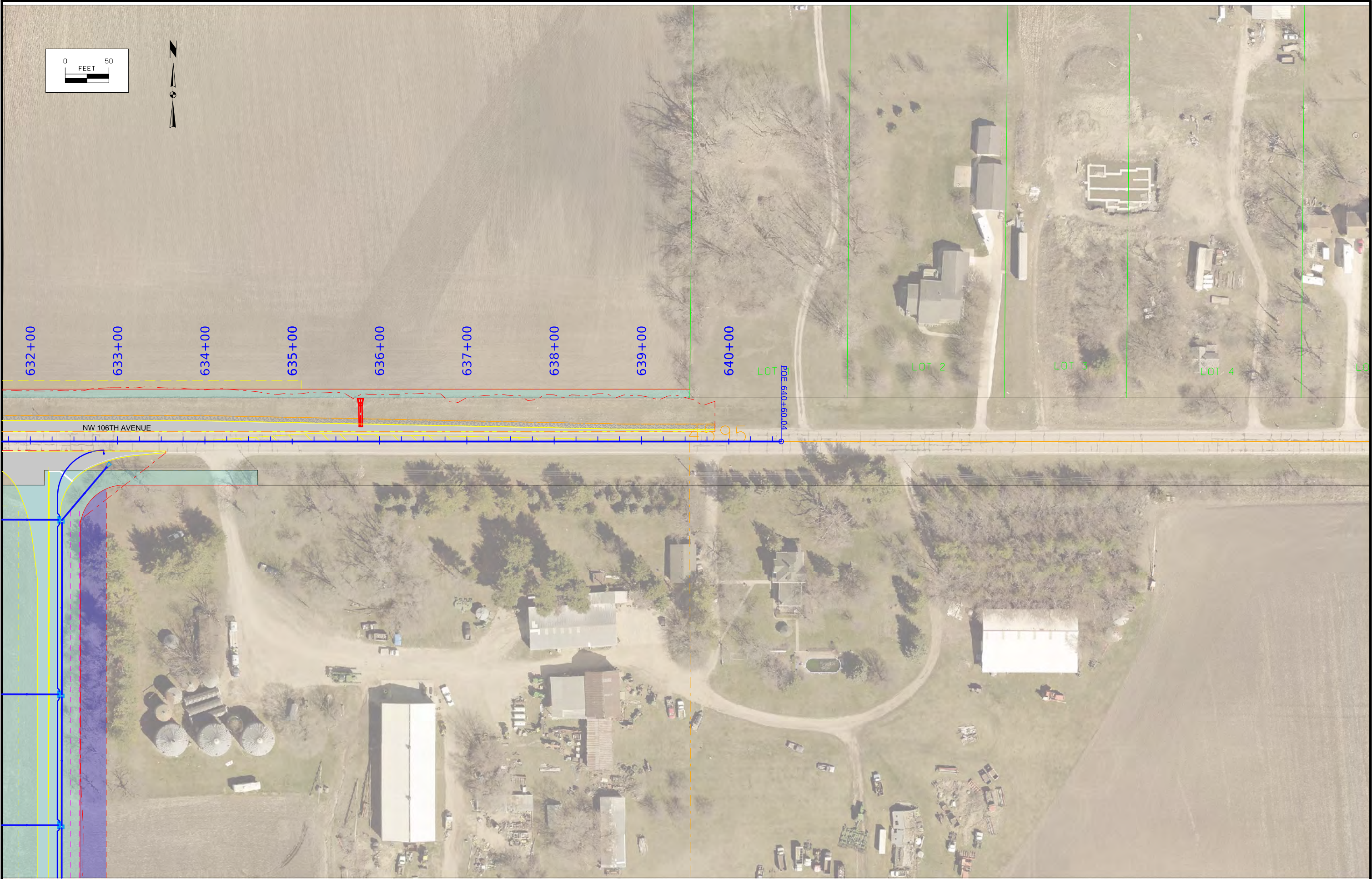
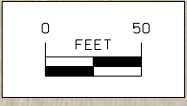
LOT 4

LOT 5

LOT 6

LOT 7

PLAT 2



TRAFFIC CONTROL PLAN

Traffic control on this project shall be in accordance with the standard road plans 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 specification.

The Contractor shall coordinate traffic control with other projects in the area.

The Contractor shall be responsible for furnishing, installing, maintaining, and removing the signage as shown in the staging sheets.

The Engineer may require modifications to the pavement marking details shown. Conflicting permanent edge lines, centerlines, or lane lines shall be removed. Where applicable, permanent edge lines, centerlines, and lane lines shall be placed before the roadway is returned to normal traffic. The current Standard Specifications and Supplemental Specifications shall apply.

The Contractor shall maintain clean pavement in and out of the work area at all times.

Through traffic will be maintained on IA-141, IA-415, NW 110th Ct, NW 106th Ave, and NW 114th St. throughout the project corridor at all times. The Contractor shall be responsible for installings and maintaining temporary and permanent signing along the project corridor.

Access for garbage and postal service must be maintained at all times unless arranged otherwise by agreement between the Contractor and property owner.

All signs to be in place longer than three days must be post mounted.

The Contractor will be responsible for securing a safe storage area for equipment and materials to be used on the project.

Refer to the remaining J-Sheets for special layouts for each individual stage of construction.

1. IA 141
No lane closures will be allowed on IA 141 from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM from Monday through Friday. No Lane lane closures will be allowed on Saturdays, Holidays, or during the dates of special events listed by the Engineer. These dates and times are considered "Peak Times." Temporary single lanes closures may be allowed on IA 415 during "off-peak" travel periods. However the time, length, and duration of each lane closure shall be approved by the Resident Construction Engineer. The Iowa DOT reserves the right to modify these restrictions to accommodate specific contractor activities, unforeseen traffic conditions and special events.
2. IA 415
A minimum of 1 lane of traffic in each direction will be maintained at all times, except for days during paving removals and paving installations of which head to head traffic with flaggers shall be utilized except during the peak hours from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM from Monday through Friday and all of Saturday.
3. NW 110th Ct, NW 114th Street, NW 106th Ave
A minimum of 1 lane of traffic in each direction will be maintained at all times, except for days during paving removals and paving installations of which head to head traffic with flaggers shall be utilized.

STAGING NOTES

IA 141 and IA 415 are high volume roadways, construction activity in the area will disrupt traffic on both these roadways. Therefore, Therefore, it is advisable to adopt a construction sequence that directs activities in an orderly manner and minimizes disruptions to traffic as much as practical.

It is recognized that as the various activities related to construction progress, certain situations may arise which will preclude adhering to the original construction sequence or which, in the opinion of the Contractor, should result in more efficient staging operations. Should the Contractor desire to deviate from the original plan, they shall submit a written alternative plan to the Resident Construction Engineer for approval.

Stage 1 - IA 415, NW 106th Ave, NW 102nd Ave, NW 110th Ct, NW 110th Street

Stage 1A
- Install traffic control on IA 415, NW 114th Street, and 106th Ave per Standard Road Plan TC-202 for Shoulder Closure during grading, subgrade and subbase preparation, and storm sewer construction.

Stage 1B
- Install traffic control on IA 415, NW 114th Street, and 106th Ave per Standard Road Plan TC-213 for lane Closure during paving removals and paving installation.

Stage 1C
- Install traffic control on NW 110th Ct and IA 415 per Standard Road Plan TC-202 for Shoulder Closure during grading, subgrade and subbase preparation, and storm sewer construction.

Stage 1D
- Install traffic control on NW 110th Ct per Standard Road Plan TC-213 for lane Closure during paving removals and paving installation.
- Maintain traffic control on IA 415 per Standard Road Plan TC-202 for Shoulder Closure during

Stage 1E
- Install traffic control on NW 106th Ave per Standard Road Plan TC-202 for Shoulder Closure during grading, subgrade and subbase preparation, and storm sewer construction.

Stage 1F
- Install traffic control on NW 106th Ave per Standard Road Plan TC-213 for lane Closure during paving removals and paving installation.

Stage 2 - IA 141, NW Towner Drive, NW 119th Ct, NW 121st Street, NW 102nd Ave

Stage 2A
- Install traffic control on IA 141 per Standard Road Plan TC-415 for inside lane closure during left turn lane removal and granular shoulder construction.

Stage 2B
- Install traffic control on IA 141 per Standard Road Plan TC-415 for outside lane closure during NW Towner Drive access to IA 141 removal and granular shoulder construction.

Stage 2C and 2D
- Install traffic control on IA 141 per Standard Road Plan TC-415 for inside lane closure during median crossover removal and granular shoulder construction.

Stage 2E
- Install traffic control on IA 141 per Standard Road Plan TC-415 for inside lane closure during left turn lane and median removal at NW 119th Ct, left turn lane extension at NW 121st Street, acceleration lane installation at NW 121st and left turn lane removal at NW 121st Street.










Stage 2F
- Install traffic control on IA 141 per Standard Road Plan TC-415 for outside lane closure during right turn lane removal at NW 121st Street and right turn lane widening at NW 121st Street. and left turn lane removal at NW 121st Street.

Stage 2G and 2D
- Install traffic control on IA 141 per Standard Road Plan TC-415 for inside lane closure during median crossover removal and granular shoulder construction.

**CROSS SECTION VIEW COLOR LEGEND
OF TRAFFIC CONTROL AND STAGING SHEETS**

SHADING	Design Color No.	
Green, Light	(225)	Existing Pavement Shading
Gray, Light	(48)	Previously Constructed Pavement Shading
Gray, Med	(80)	Previously Constructed Granular Surface Shading
Blue, Light	(230)	Proposed Pavement Shading
Lavender	(9)	Temporary Pavement Shading
Brown, Med	(237)	Future Proposed Pavement Shading

**CROSS SECTION VIEW PATTERN AND SYMBOL LEGEND
OF TRAFFIC CONTROL AND STAGING SHEETS**













	Pavement Removal		Proposed Granular Shoulder
	Proposed Granular Subbase		Temporary Shoulder
	Proposed Special Backfill		Existing Shoulder Strengthening
	Temporary Barrier Rail		Permanent Barrier Rail
			Channelizing Device

PLAN VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Topographic Features and Labels
Magenta	(5)	Pavement Marking Call Outs
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Yellow	(4)	Pavement Markings, Yellow
Off White	(254)	Pavement Markings, White
Violet	(15)	Temporary barrier rail, Unpinned
Flush Orange	(228)	Temporary barrier rail, Pinned

SHADING	Design Color No.	
Green, Light	(225)	Existing Pavement Shading
Gray, Light	(48)	Previously Constructed Pavement Shading
Gray, Med	(80)	Proposed Granular Surface Shading
Gray, Med	(80)	Previously Constructed Granular Surface Shading
Blue, Light	(230)	Proposed Pavement Shading
Lavender	(9)	Temporary Pavement Shading
Brown, Light	(236)	Proposed Grading Limits Shading
Pink, Dark	(13)	Proposed MSE or CIP Wall Shading
Red	(3)	Proposed Bridge Shading and Sign Trusses
Black w/Gray, Light Fill	(0,48)	Previously Constructed Structure

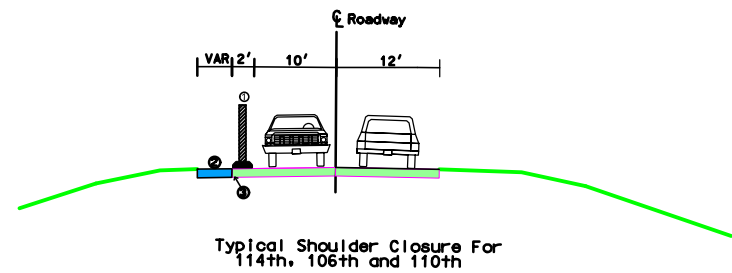
**PLAN VIEW PATTERN AND SYMBOL LEGEND
OF TRAFFIC CONTROL AND STAGING SHEETS**

●	Channelizing Device		Crash Cushion (Temp or Perm)
✕	Drum		Traffic Signal
■	Temporary Lane Separator		Flagger
◆	Tubular Marker		Temporary Floodlighting
+	Channelizer Marker		Traffic Sign
△	Concrete Barrier Marker		Type III Barricade
↵	Delineator		Type A Warning Light
—	Temporary Barrier Rail		Direction of Traffic
	Pavement Removal		Safety Closure
	Sand Barrel Layout		Lane Identification

NOTE: Device spacing according to Standard Road Plans unless specifically dimensioned.

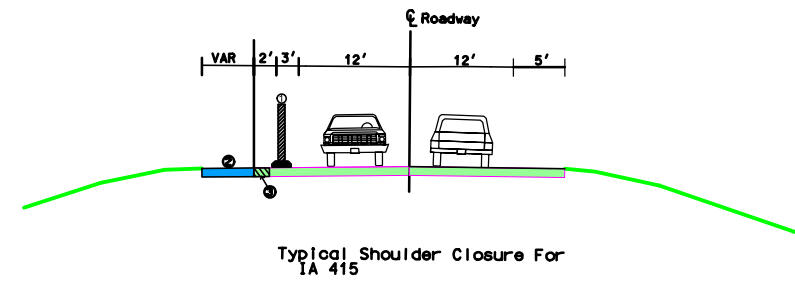
**TRAFFIC CONTROL
AND
STAGING**

(COVERS SHEET SERIES J)



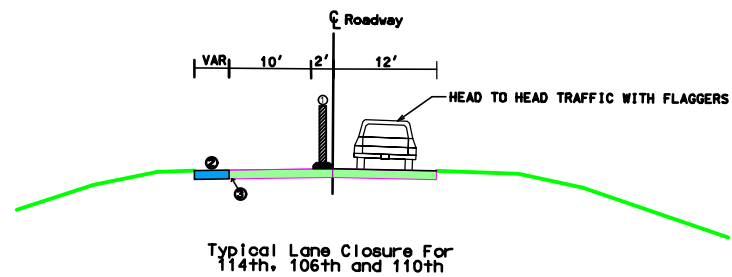
Typical Shoulder Closure For 114th, 106th and 110th

NOTES:
 1 CHANNELIZER
 2 WORK COMPLETED DURING SHOULDER CLOSURE SHALL CONSIST OF GRADING, SUBGRADE, SUBBASE, AND STORM SEWER.
 3 SAW CUT EDGE OF EXISTING PAVEMENT TO PROVIDE SMOOTH PAVEMENT EDGE FOR WIDENING. PLANS ASSUME 1' WIDTH.



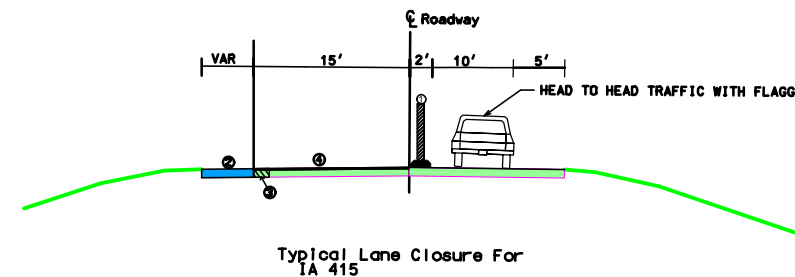
Typical Shoulder Closure For IA 415

NOTES:
 1 CHANNELIZER
 2 WORK COMPLETED DURING SHOULDER CLOSURE SHALL CONSIST OF GRADING, SUBGRADE, SUBBASE, AND STORM SEWER.
 3 SAW CUT EXISTING 2' PAVED SHOULDER.



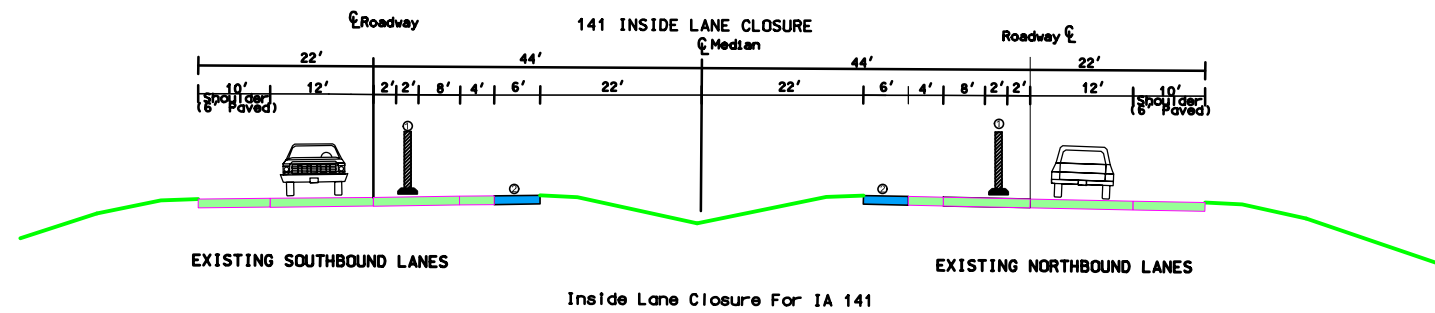
Typical Lane Closure For 114th, 106th and 110th

NOTES:
 1 CHANNELIZER
 2 WORK COMPLETED DURING LANE CLOSURE SHALL CONSIST OF PAVEMENT REMOVALS AND PAVING.
 3 SAW CUT EDGE OF EXISTING PAVEMENT TO PROVIDE SMOOTH PAVEMENT EDGE FOR WIDENING. PLANS ASSUME 1' WIDTH.



Typical Lane Closure For IA 415

NOTES:
 1 CHANNELIZER
 2 WORK COMPLETED DURING LANE CLOSURE SHALL CONSIST OF PAVEMENT REMOVALS AND PAVING.
 3 SAW CUT EXISTING 2' PAVED SHOULDER.
 4 MILL AND OVERLAY TO CENTERLINE OF ROADWAY. OVERLAY JOINTING SHALL MATCH PROPOSED LANE LINES.

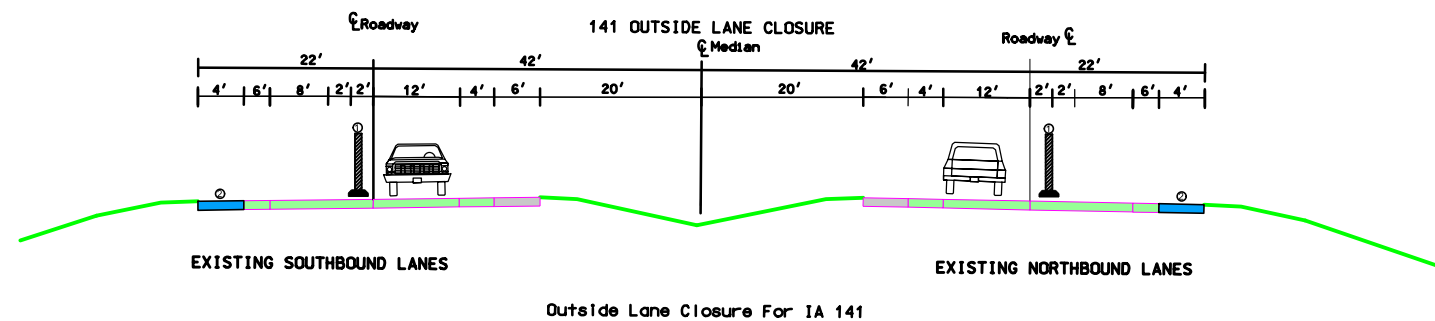


EXISTING SOUTHBOUND LANES

EXISTING NORTHBOUND LANES

Inside Lane Closure For IA 141

NOTES:
 1 CHANNELIZER
 2 WORK CONSISTS OF REMOVAL OF EXISTING TURN LANES OR CROSSINGS OR INSTALLATION OF NEW TURN LANE OR ACCELERATION LANE

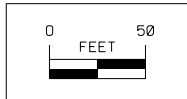


EXISTING SOUTHBOUND LANES

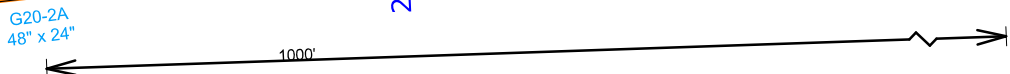
EXISTING NORTHBOUND LANES

Outside Lane Closure For IA 141

NOTES:
 1 CHANNELIZER
 2 WORK CONSISTS OF REMOVAL OF EXISTING TURN LANE OR INSTALLATION OF NEW TURN LANE



END ROAD WORK
G20-2A
48" x 24"



ROAD WORK AHEAD
W20-1
48" x 48"

20+00

25+00

30+00

IA-415

110TH STREET

NW 110TH COURT

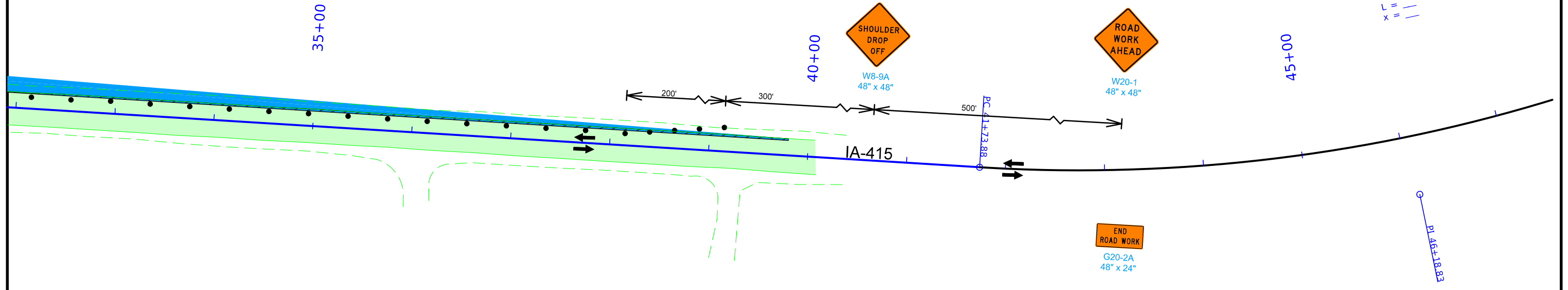
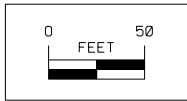
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 R = 5730.40
 E = 10.21
 e = |
 L = |
 x = |

PC 23+64.83

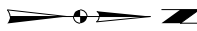
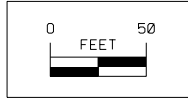
PI 27+06.98

PI 30+48.31

Staging Plan - Stage 1A



Staging Plan - Stage 1A



120+00

END ROAD WORK
G20-2A
48" x 24"

125+00

130+00

ROAD WORK AHEAD
W20-1
48" x 48"

4000+00

NW 114TH AVENUE



ROAD WORK AHEAD
W20-1
48" x 48"

SHOULDER DROP OFF
W8-9A
48" x 48"

END ROAD WORK
G20-2A
48" x 24"

NW 102ND AVENUE

3020+00

3025+00

4005+00

3030+00

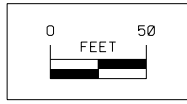
PL 3017+11.90

Staging Plan - Stage 1A

110TH STREET

POE 4006+60.00

IT 4+00.79



625+00

630+00

635+00

NW 106TH AVENUE

NW 114TH AVENUE

110TH STREET

END ROAD WORK
G20-2A
48" x 24"

ROAD WORK AHEAD
W20-1
48" x 48"

SHOULDER DROP OFF
W8-9A
48" x 48"

ROAD WORK AHEAD
W20-1
48" x 48"

END ROAD WORK
G20-2A
48" x 24"

SHOULDER DROP OFF
W8-9A
48" x 48"

ROAD WORK AHEAD
W20-1
48" x 48"

END ROAD WORK
G20-2A
48" x 24"

500'

300'

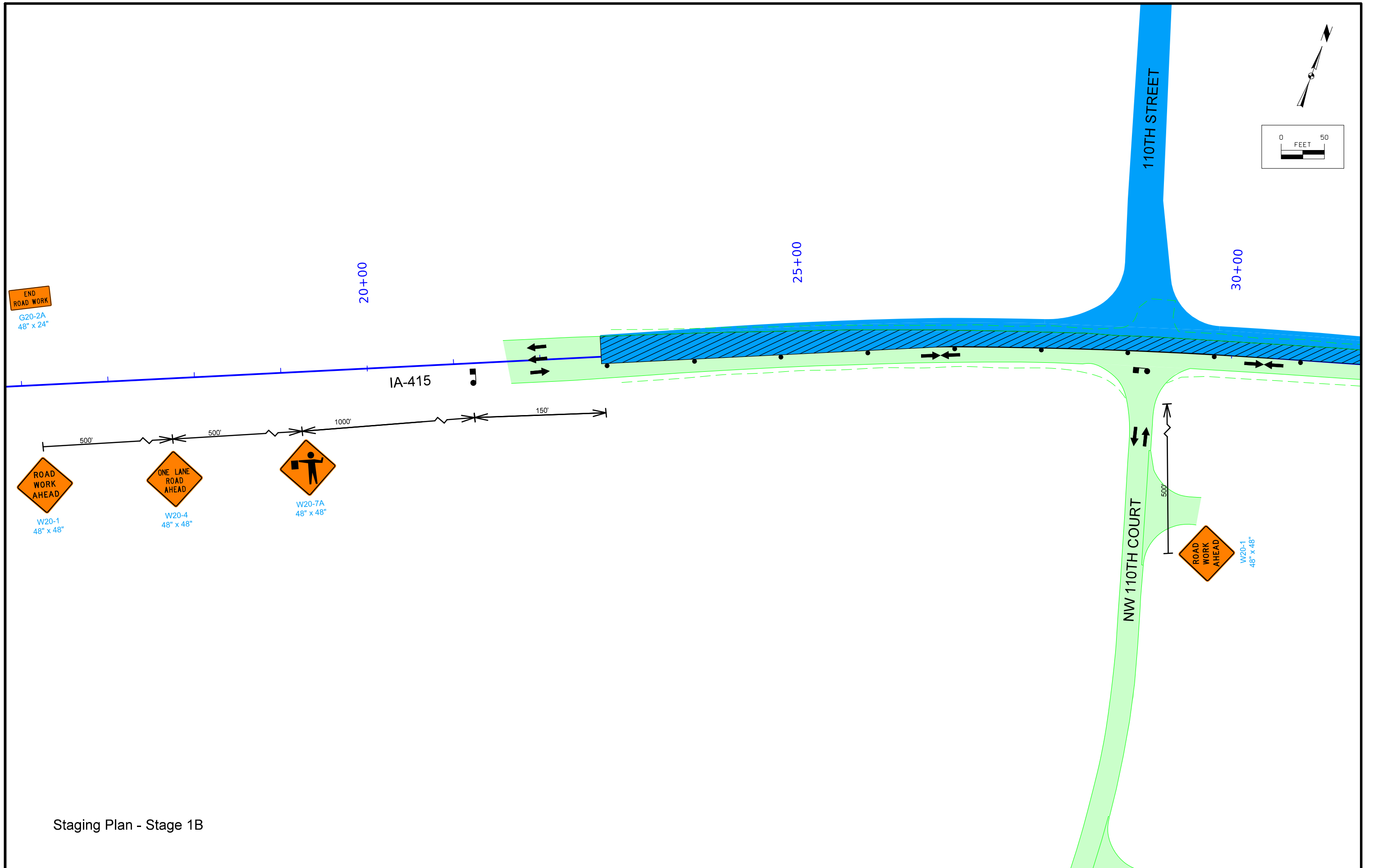
200'

1000'

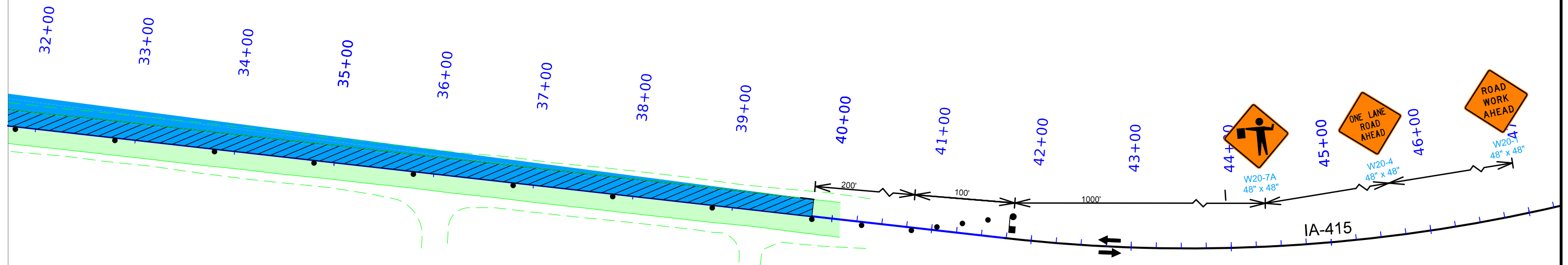
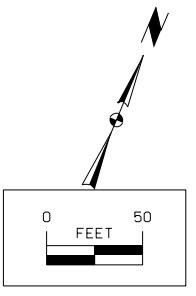
500'

500'

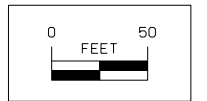
Staging Plan - Stage 1A



Staging Plan - Stage 1B



Staging Plan - Stage 1B



125+00

130+00

135+00

NW 114TH AVENUE

NW 102ND AVENUE



W20-7A
48" x 48"



W20-4
48" x 48"



W20-1
48" x 48"



W20-1
48" x 48"



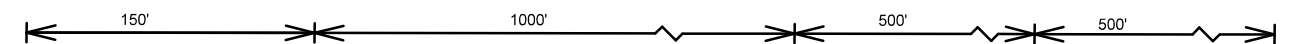
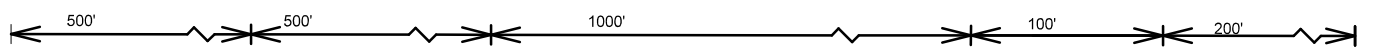
W20-4
48" x 48"



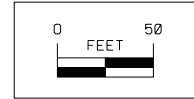
W20-7A
48" x 48"



G20-2A
48" x 24"



Staging Plan - Stage 1B



615+00

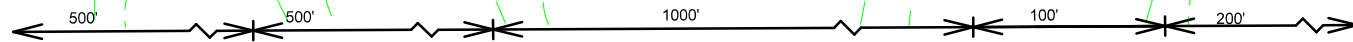
620+00

625+00

630+00

END ROAD WORK
G20-2A
48" x 24"

NW 106TH AVENUE



ROAD WORK AHEAD
W20-1
48" x 48"

ONE LANE ROAD AHEAD
W20-4
48" x 48"

W20-7A
48" x 48"

00+051

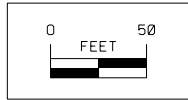
NW 114TH AVENUE



END ROAD WORK
G20-2A
48" x 24"

ROAD WORK AHEAD
W20-1
48" x 48"

Staging Plan - Stage 1B

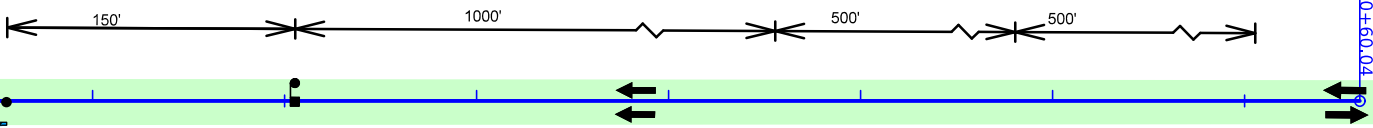


630+00

635+00

NW 106TH AVENUE

110TH STREET



W20-7A
48" x 48"



W20-4
48" x 48"



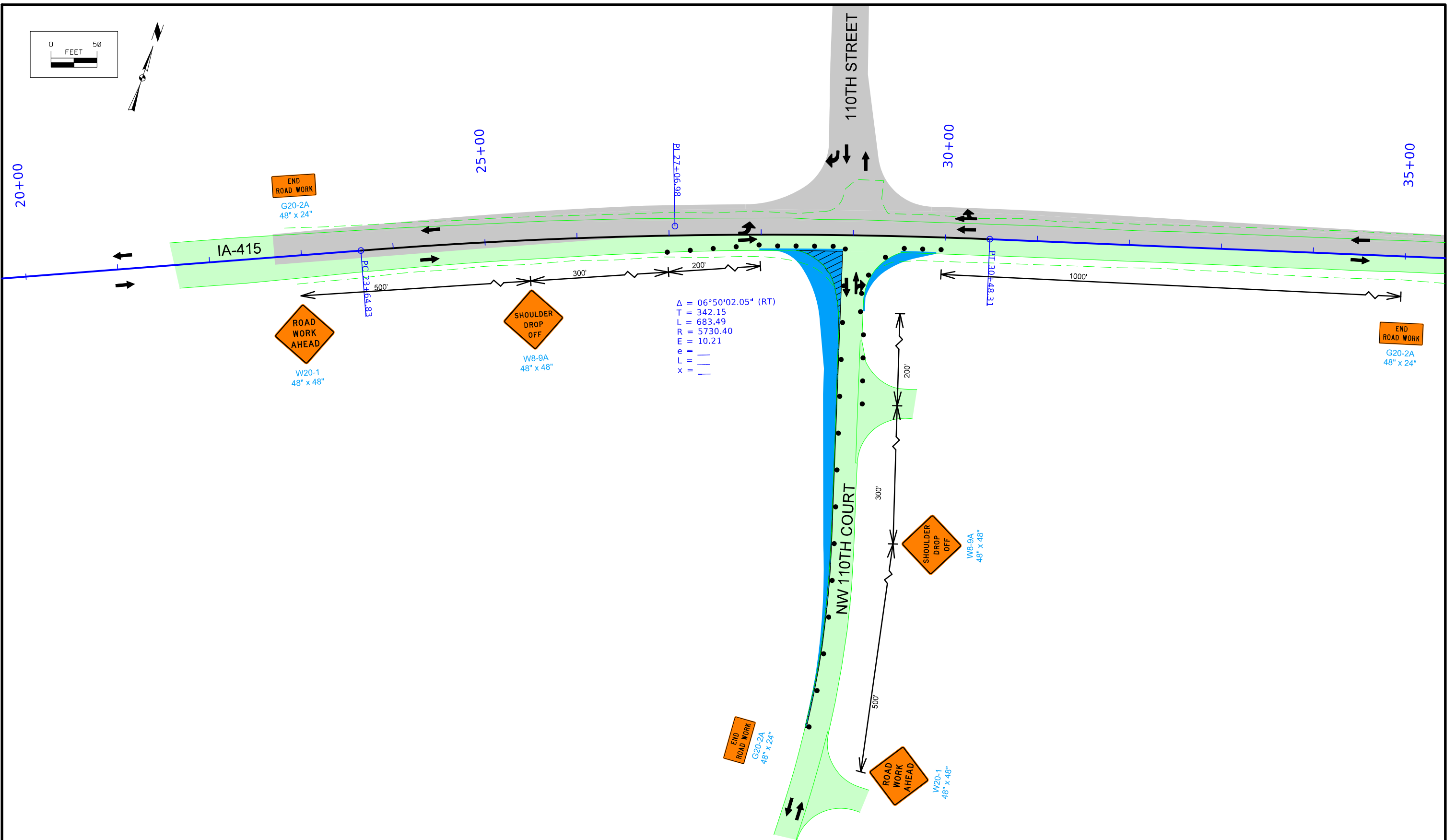
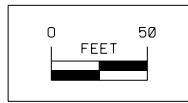
W20-1
48" x 48"

END
ROAD WORK

G20-2A
48" x 24"

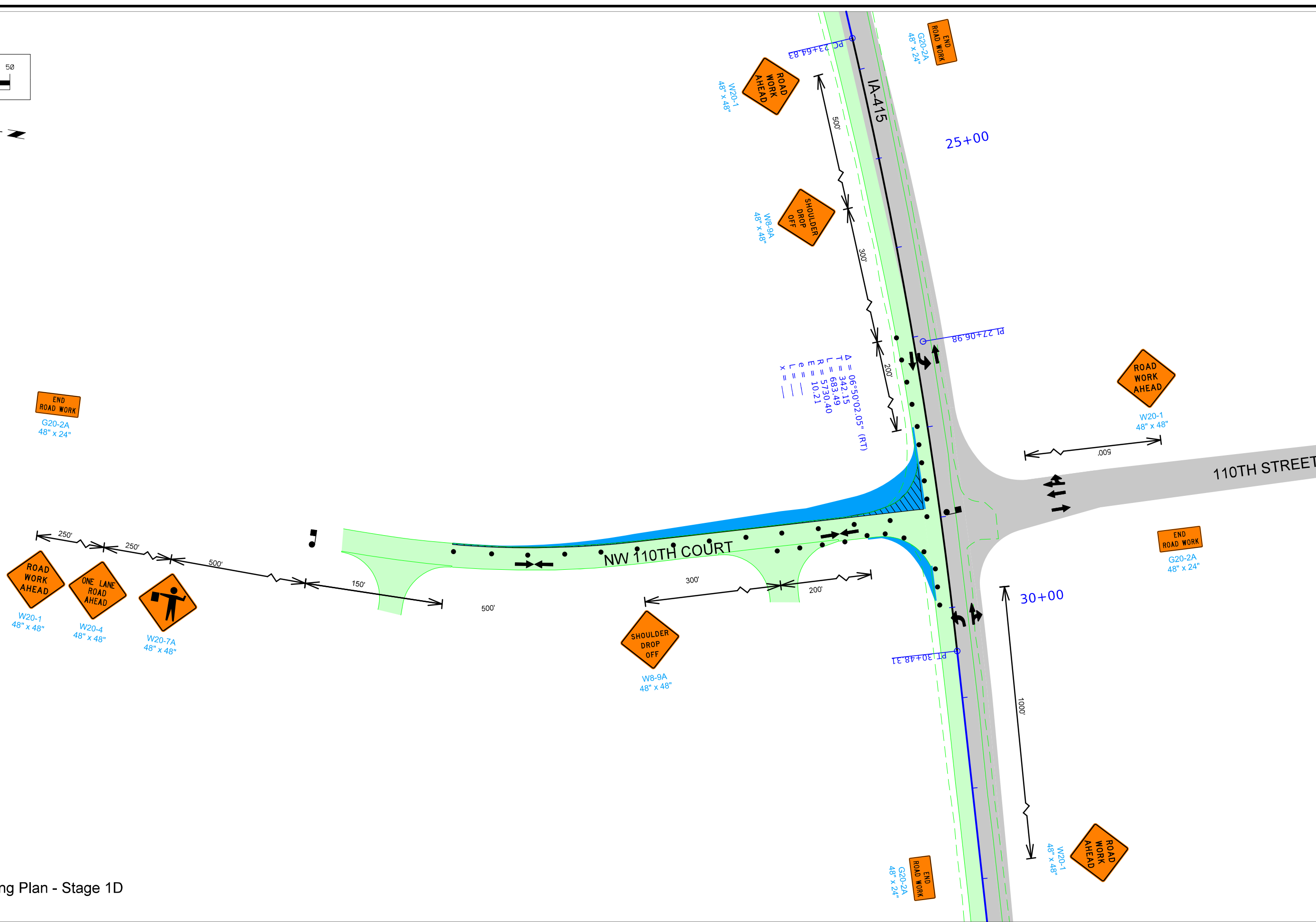
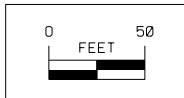
POE 640+60.04

Staging Plan - Stage 1B

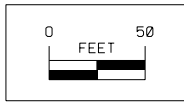


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 $T = 342.15$
 $L = 683.49$
 $R = 5730.40$
 $E = 10.21$
 $e = \text{---}$
 $L = \text{---}$
 $x = \text{---}$

Staging Plan - Stage 1C



Staging Plan - Stage 1D



620+00

END ROAD WORK

G20-2A
48" x 24"

NW 106TH AVENUE

625+00

630+00



W20-1
48" x 48"

500'

00+051

POE 151+211

NW 114TH AVENUE

110TH STREET

Staging Plan - Stage 1E

FILE NO.

ENGLISH

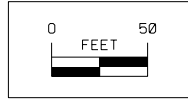
DESIGN TEAM Snyder & Associates, Inc.

Polk COUNTY

PROJECT NUMBER NHSX-141-7(56)--3H-77

SHEET NUMBER J.15

SYSTEMTIME SYSTEMDATE USERNAME DGNSPEC



635+00

640+00

NW 106TH AVENUE

BOE 640+50.04

200'

300'

500'



W8-9A
48" x 48"



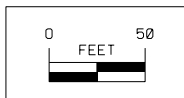
W20-1
48" x 48"



G20-2A
48" x 24"



Staging Plan - Stage 1E



620+00

625+00

630+00

NW 106TH AVENUE

POE 151+211.86

00+051

NW 114TH AVENUE

110TH STREET

END ROAD WORK

G20-2A
48" x 24"



W20-1
48" x 48"



W20-4
48" x 48"



W20-7A
48" x 48"

END ROAD WORK

G20-2A
48" x 24"

Staging Plan - Stage 1F

FILE NO.

ENGLISH

DESIGN TEAM Snyder & Associates, Inc.

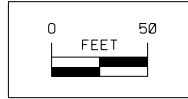
Polk COUNTY

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SHEET NUMBER

J.17

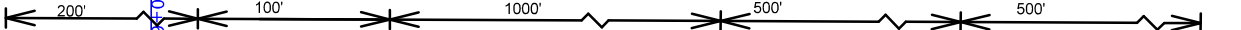
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635+00

640+00

POE 640+260.04



W20-7A
48" x 48"



W20-4
48" x 48"



W20-1
48" x 48"

NW 106TH AVENUE

END ROAD WORK

G20-2A
48" x 24"

110TH STREET



W20-7A
48" x 48"



W20-4
48" x 48"

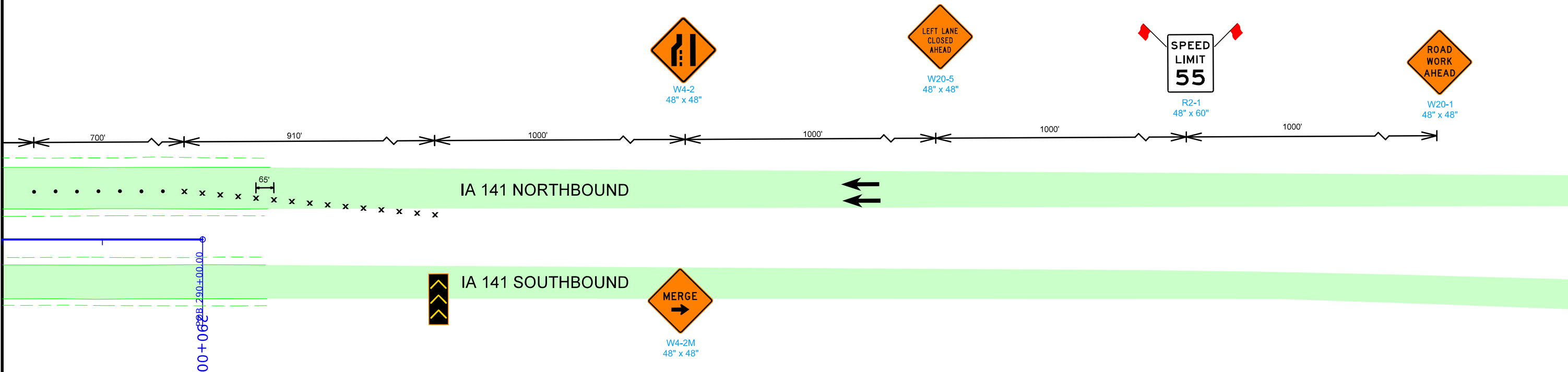
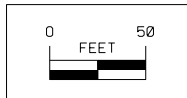


W20-1
48" x 48"

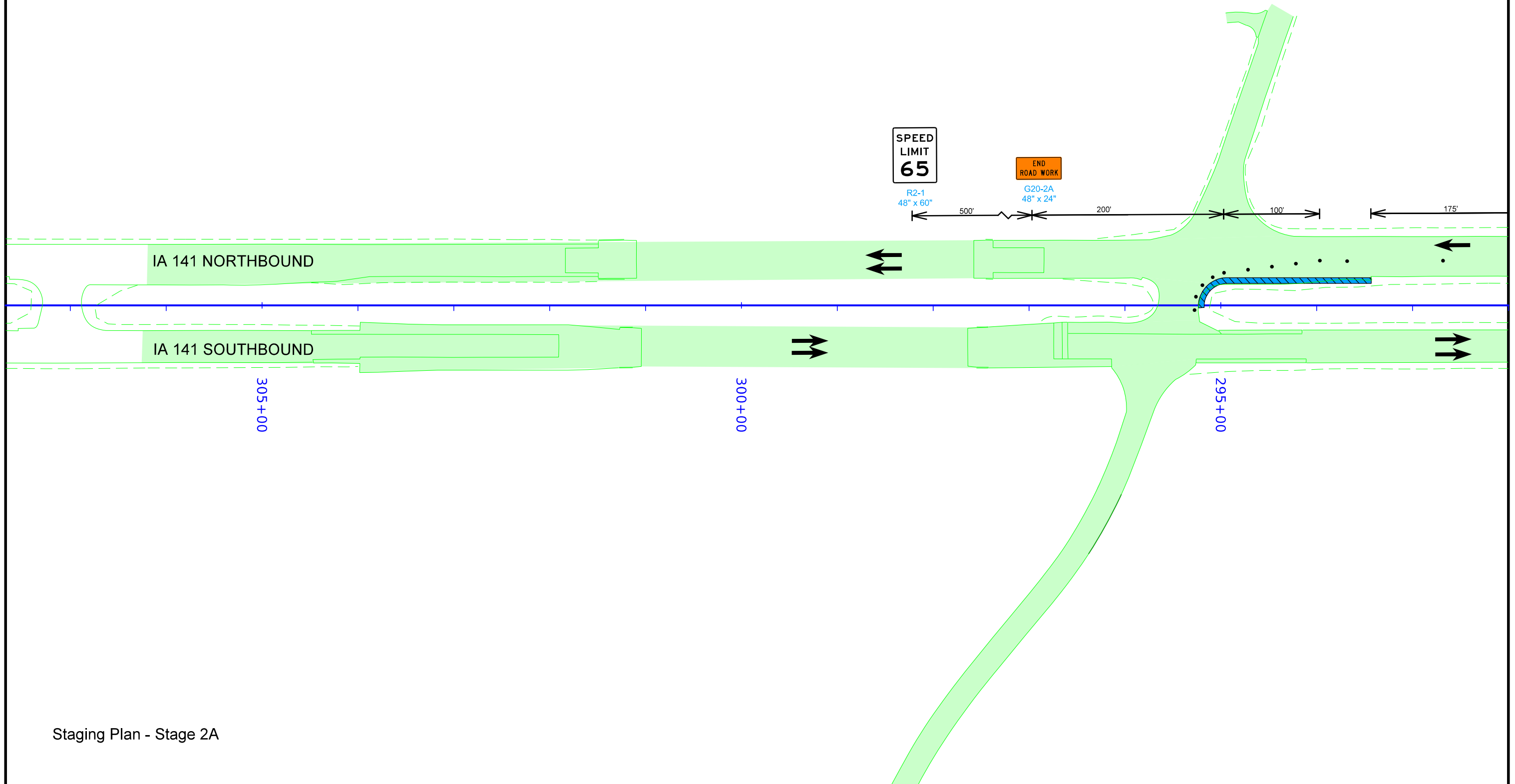
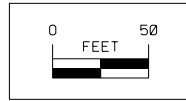
END ROAD WORK

G20-2A
48" x 24"

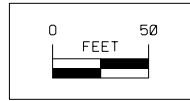
Staging Plan - Stage 1F



Staging Plan - Stage 2A



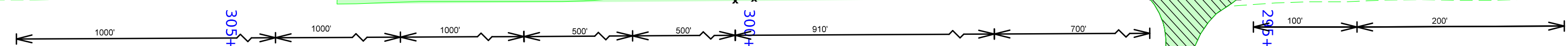
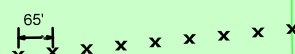
Staging Plan - Stage 2A



W4-2
48" x 48"

IA 141 NORTHBOUND

IA 141 SOUTHBOUND



W20-1
48" x 48"



R2-1
48" x 60"



W20-5
48" x 48"

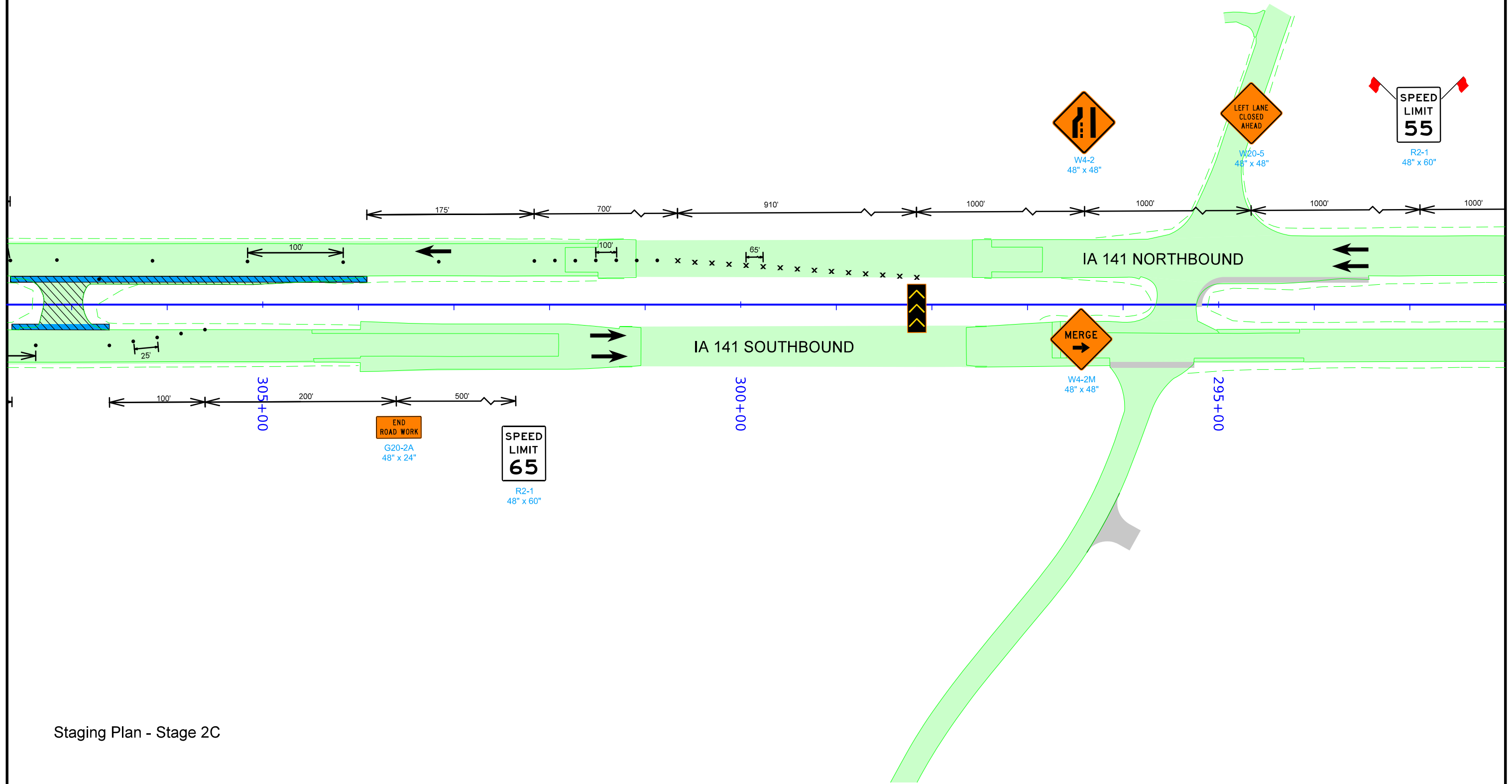
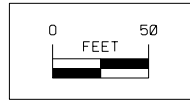


W4-2M
48" x 48"

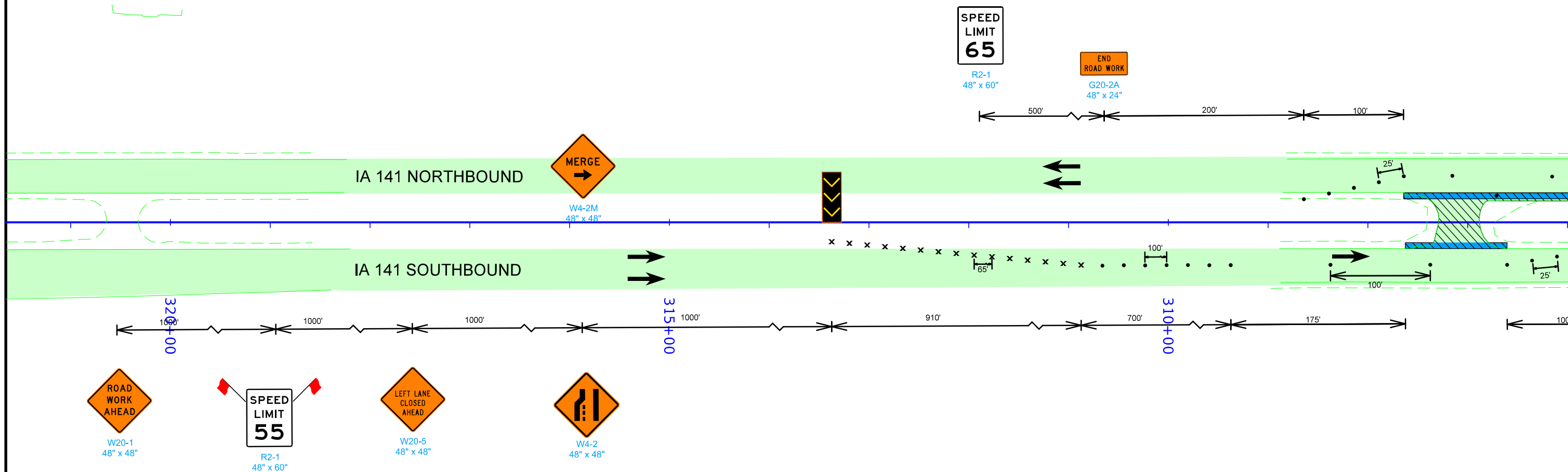
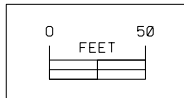


G20-2A
48" x 24"

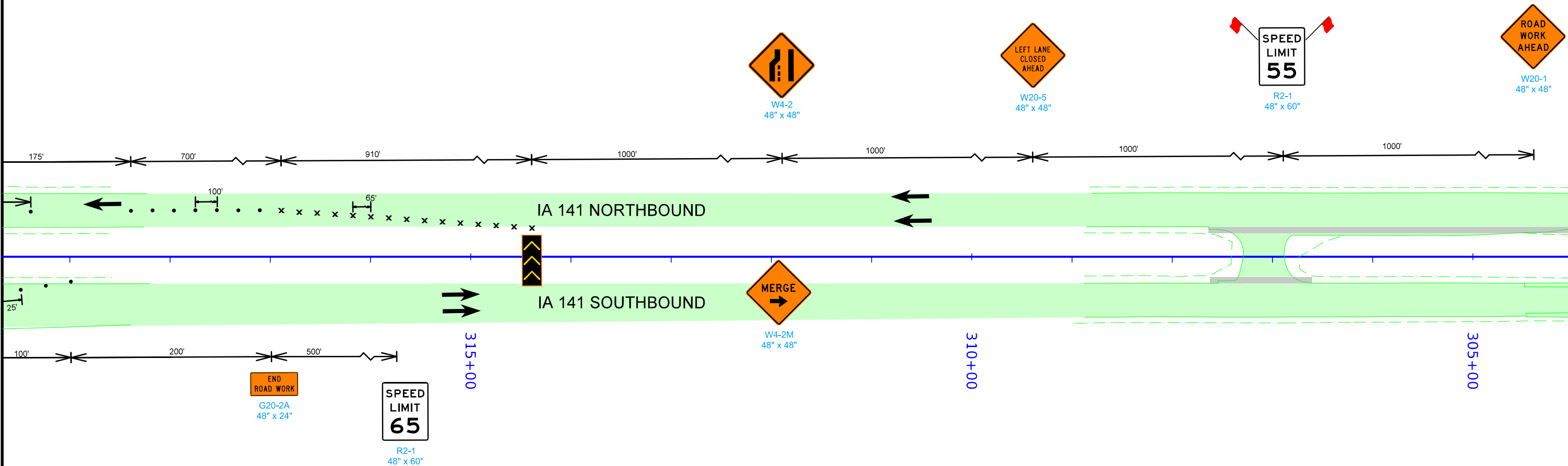
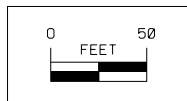
Staging Plan - Stage 2B



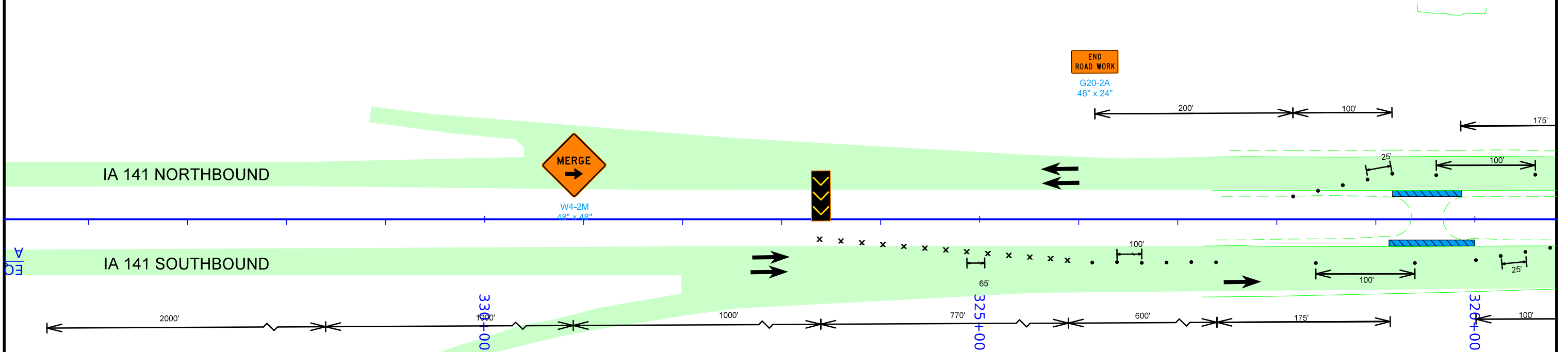
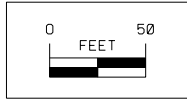
Staging Plan - Stage 2C



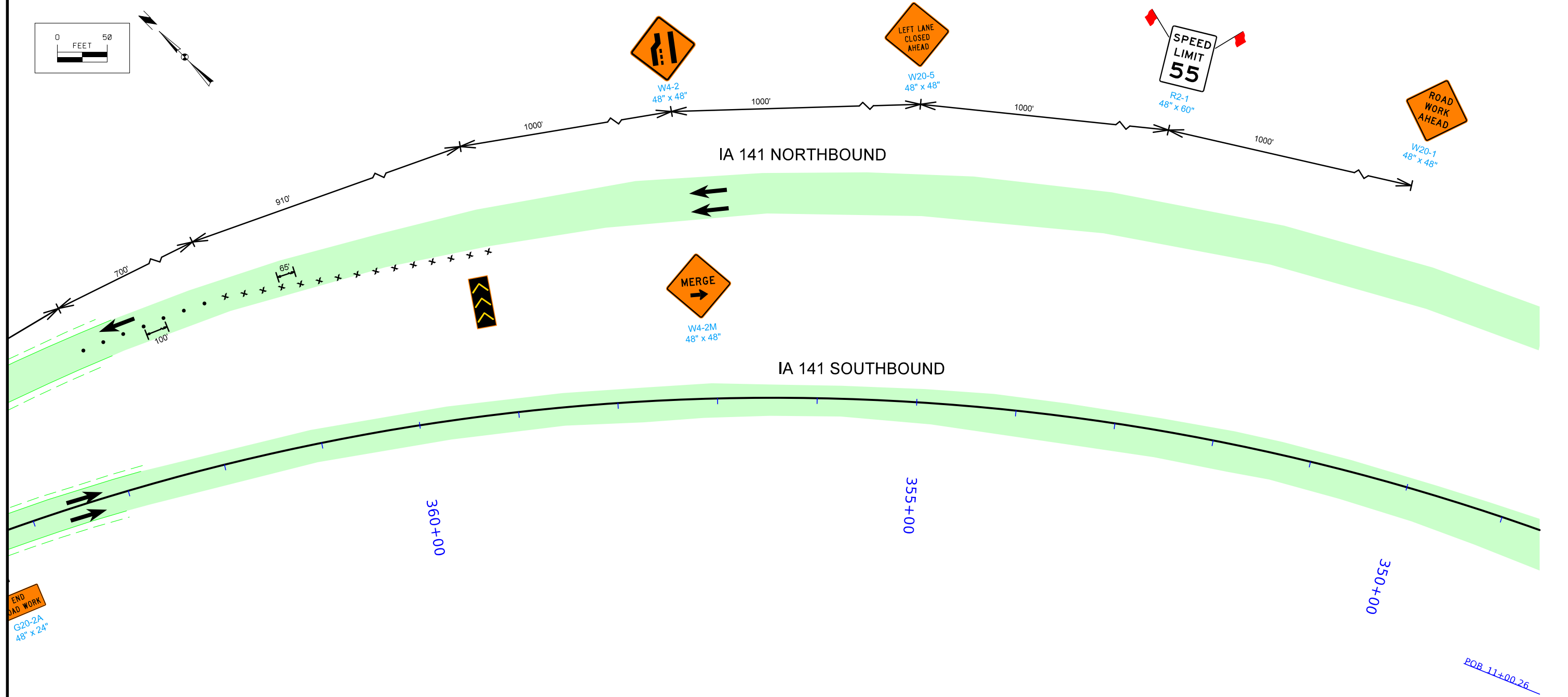
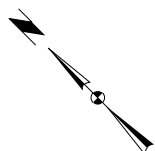
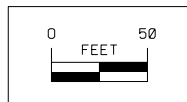
Staging Plan - Stage 2C



Staging Plan - Stage 2D

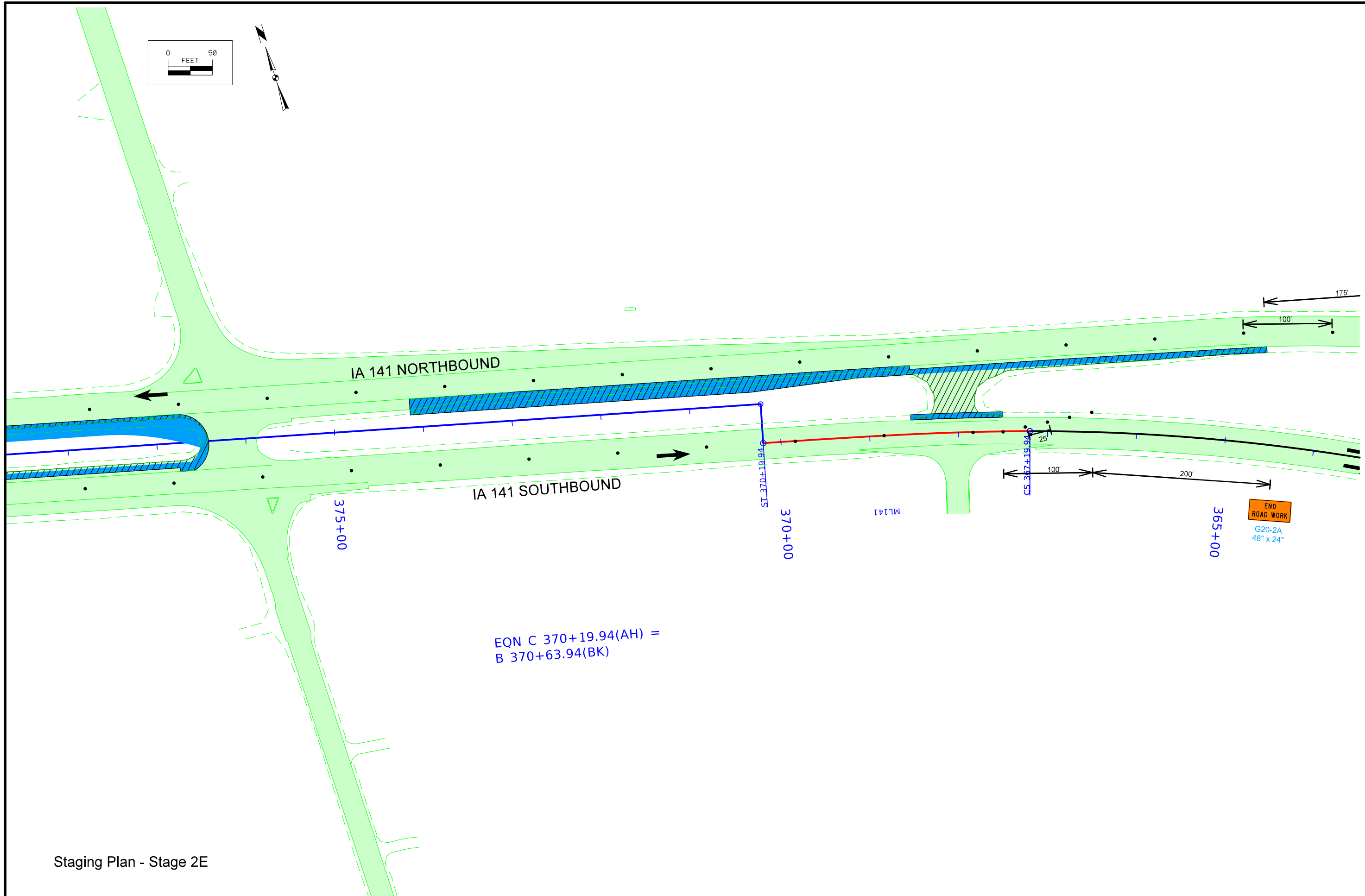
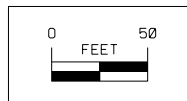


Staging Plan - Stage 2D

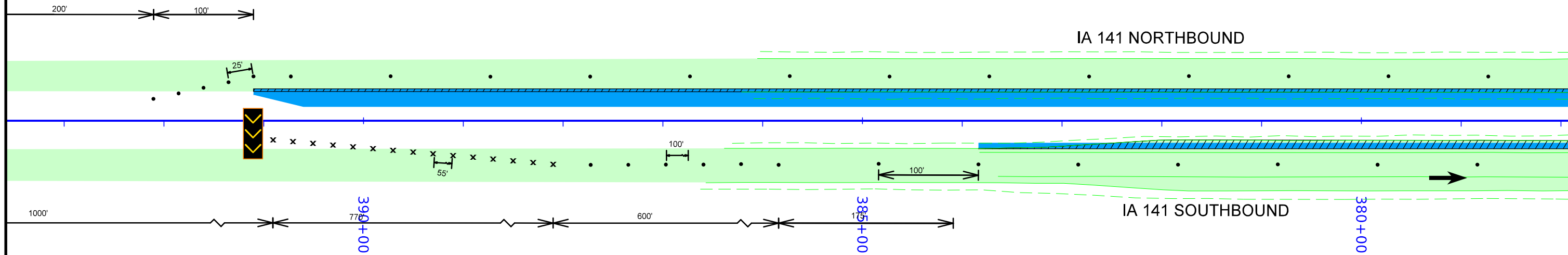
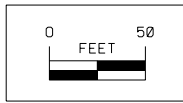


$\Delta = 65^{\circ}20'30.00"$ (LT)
 $T = 1469.68$
 $L = 2613.67$
 $R = 2291.83$
 $E = 430.75$
 $L = 430.75$
 $R = 2291.83$
 $L = 430.75$
 $E = 430.75$
 $L = 430.75$
 $R = 2291.83$
 $L = 430.75$
 $E = 430.75$
 $L = 430.75$

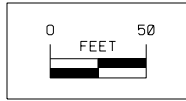
Staging Plan - Stage 2E



Staging Plan - Stage 2E



Staging Plan - Stage 2E



IA 141 NORTHBOUND



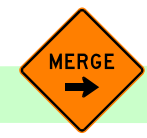
IA 141 SOUTHBOUND



END ROAD WORK

G20-2A
48" x 24"

200'



W4-2M
48" x 48"

405+00

2000'

400+00

1000'

395+00

1000'



W20-1
48" x 48"

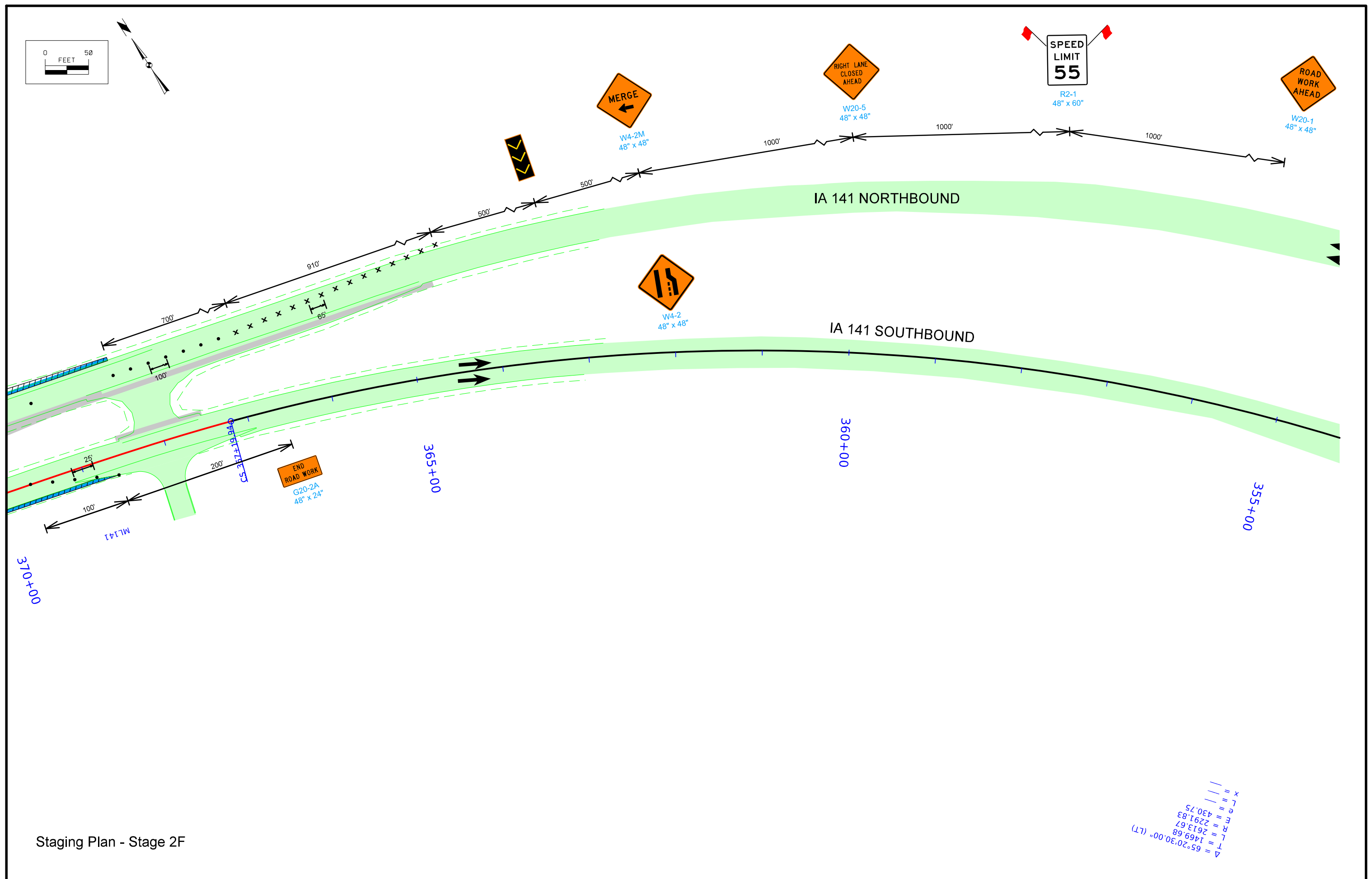
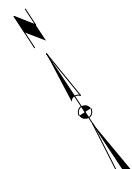
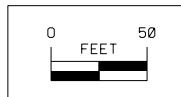


W20-5
48" x 48"



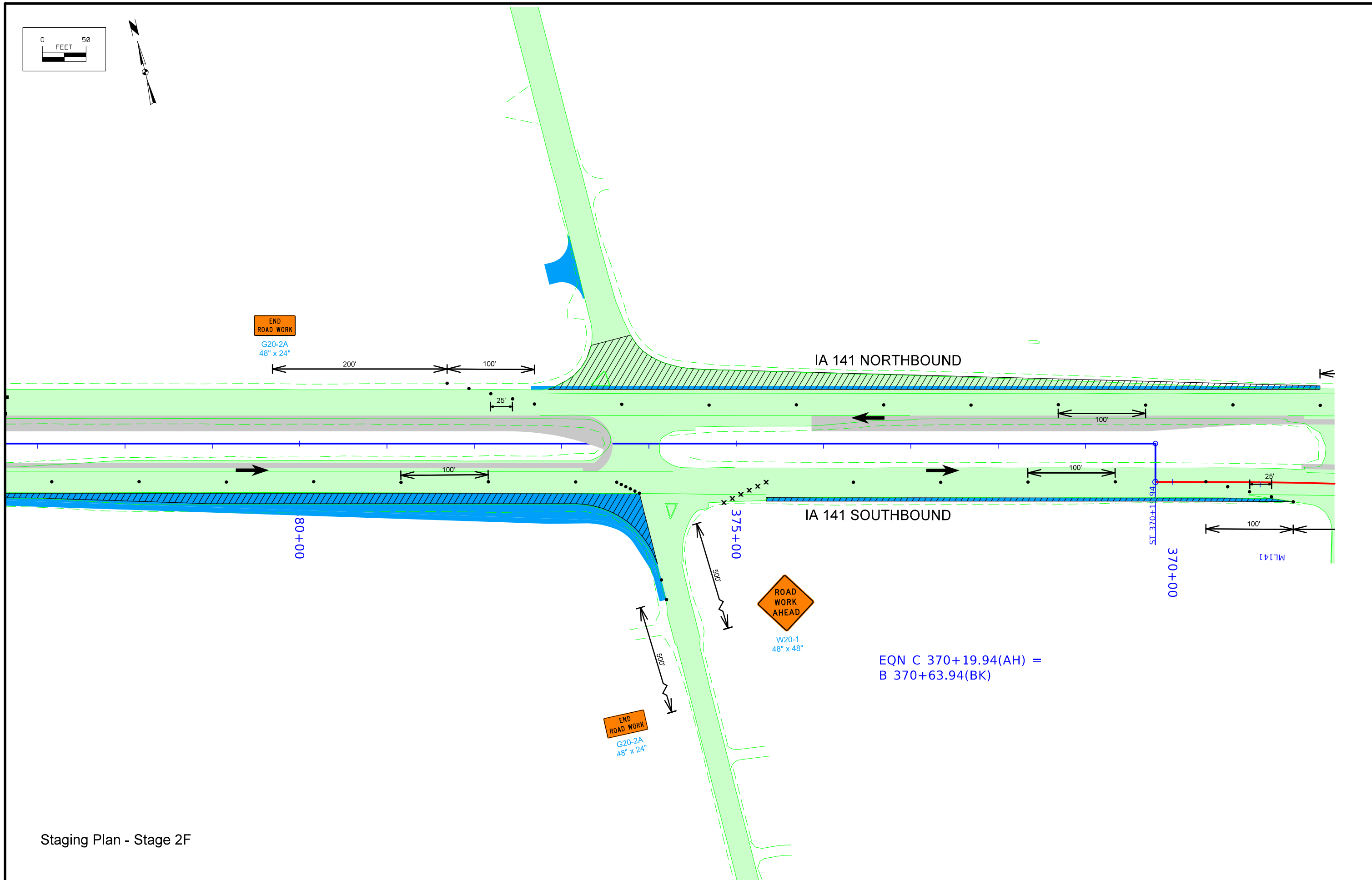
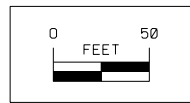
W4-2
48" x 48"

Staging Plan - Stage 2E

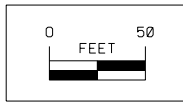


Staging Plan - Stage 2F

$\Delta = 65^{\circ}20'30.00''$ (LT)
 $T = 1469.68$
 $L = 2613.67$
 $R = 2291.83$
 $E = 430.75$
 $L_e = 430.75$
 $x =$



Staging Plan - Stage 2F

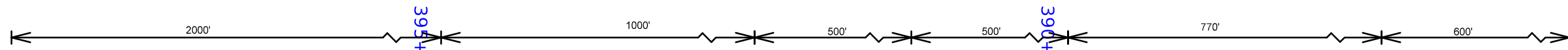


W4-2
48" x 48"

IA 141 NORTHBOUND



IA 141 SOUTHBOUND



W20-1
48" x 48"



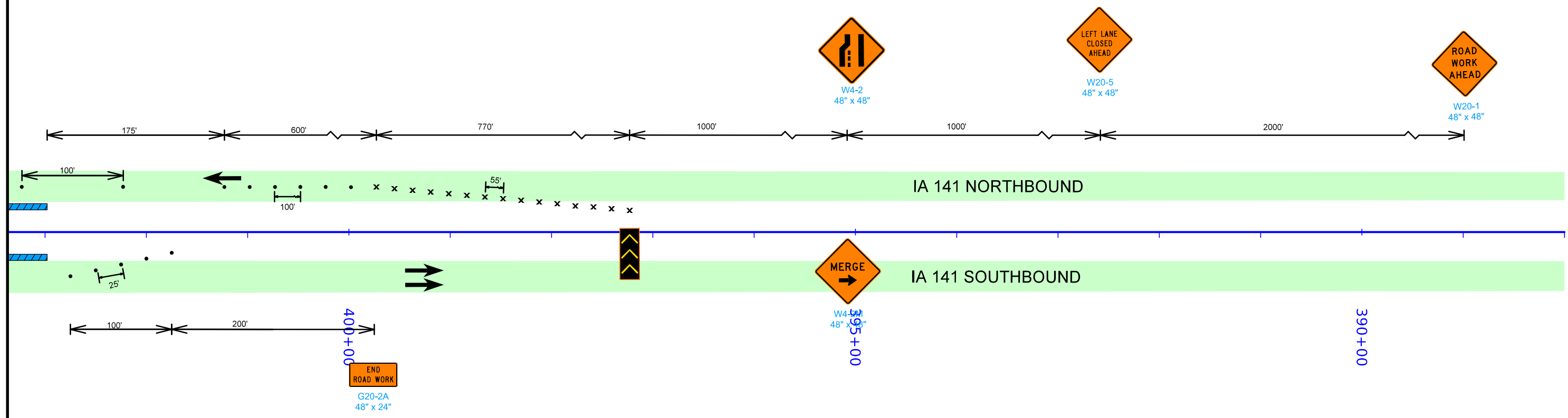
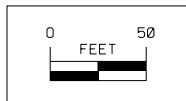
W20-5
48" x 48"



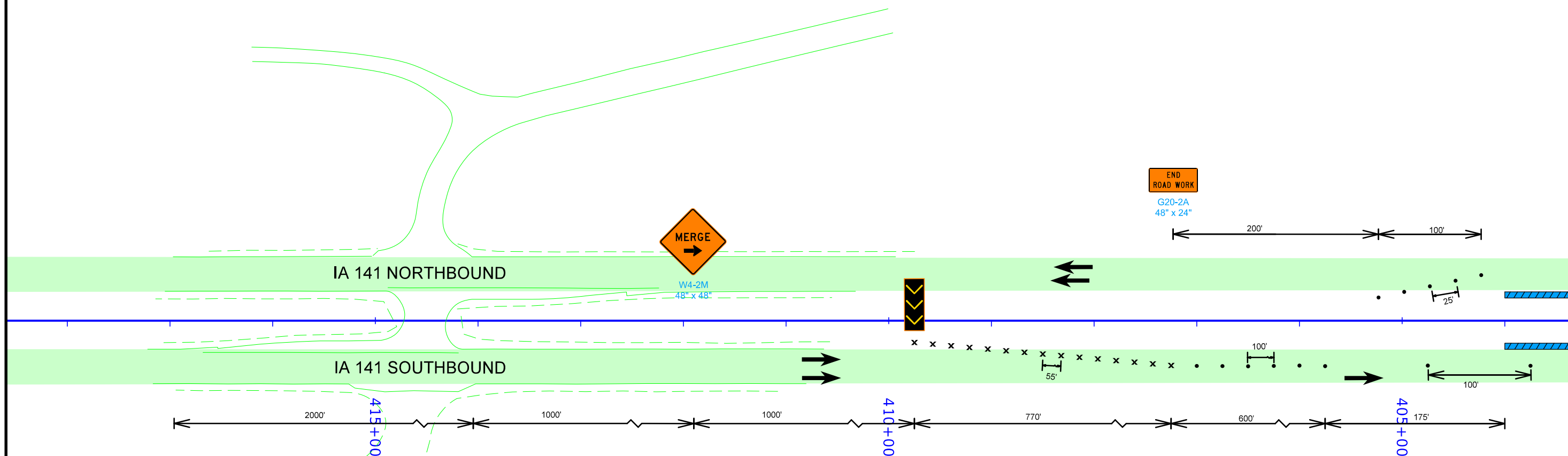
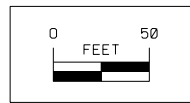
W4-2M
48" x 48"



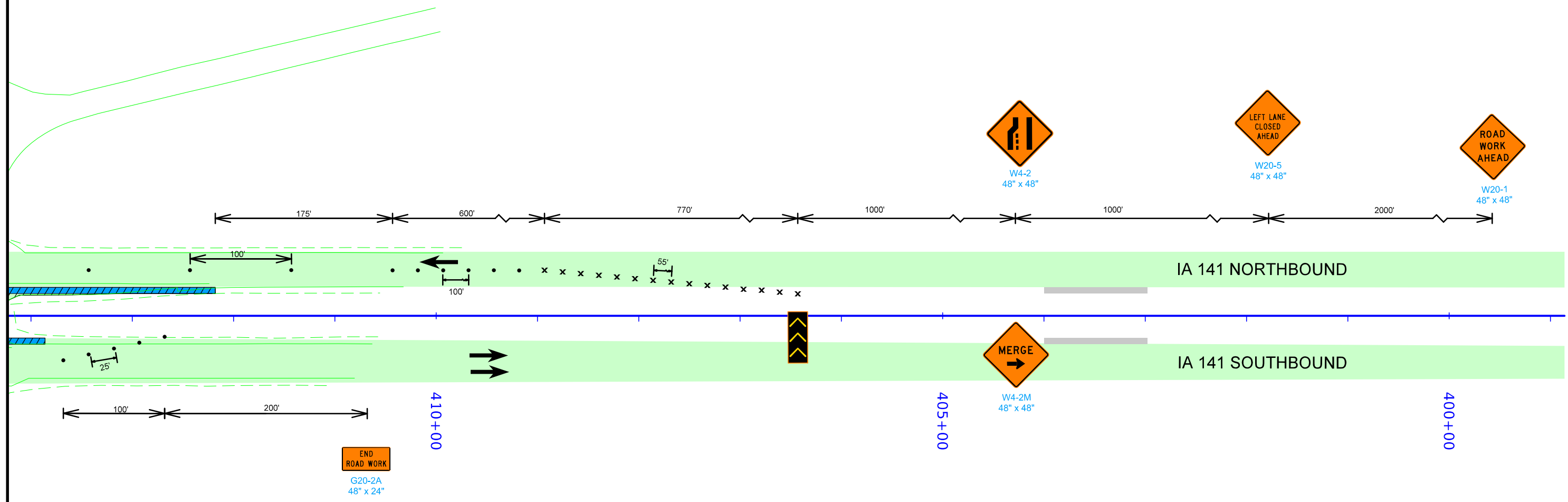
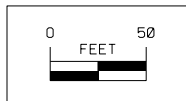
Staging Plan - Stage 2F



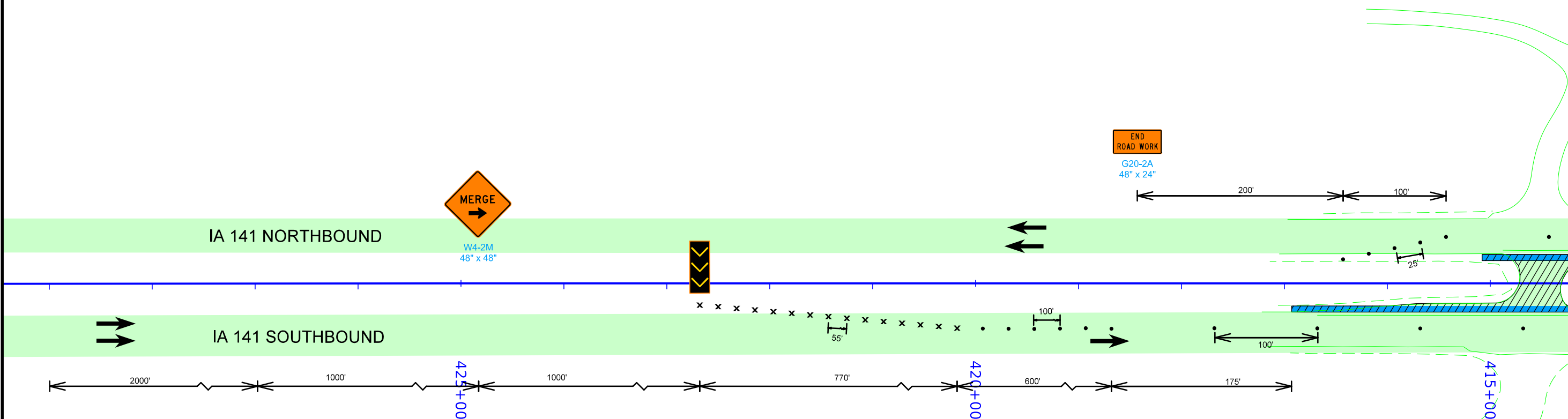
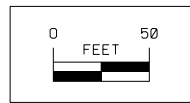
Staging Plan - Stage 2G



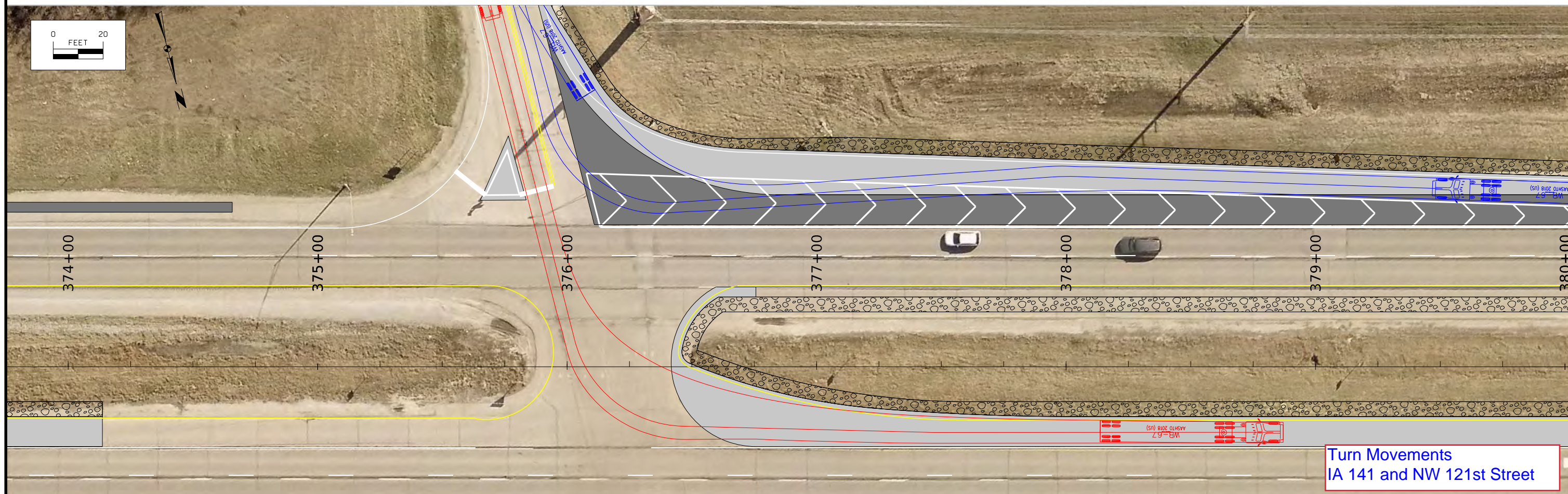
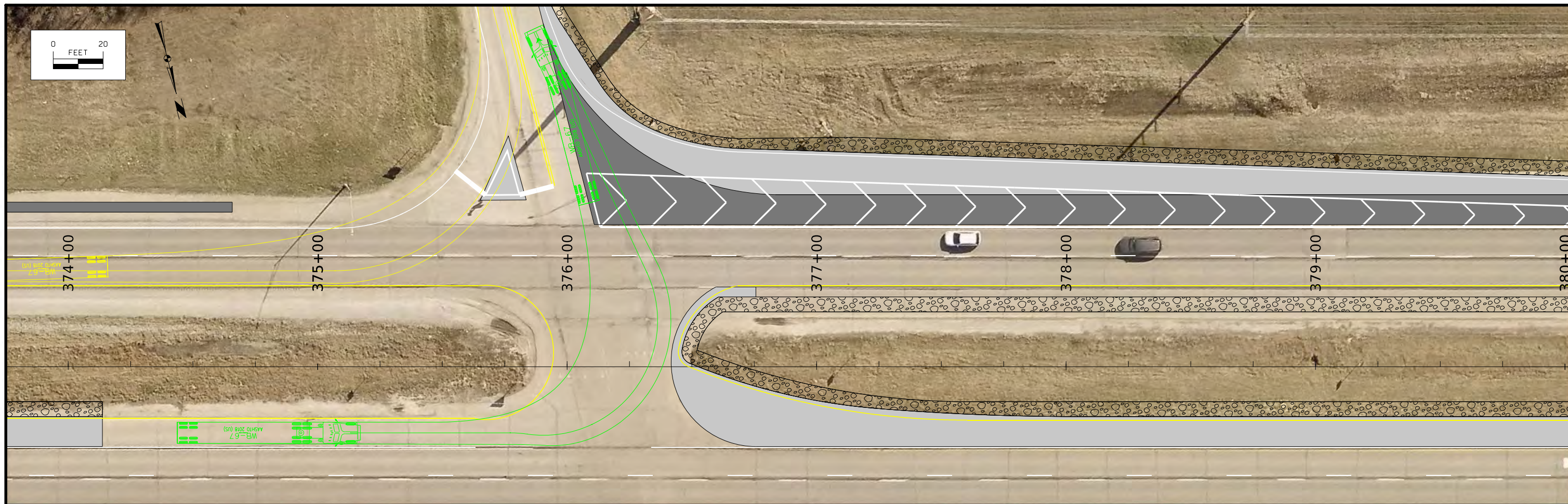
Staging Plan - Stage 2G



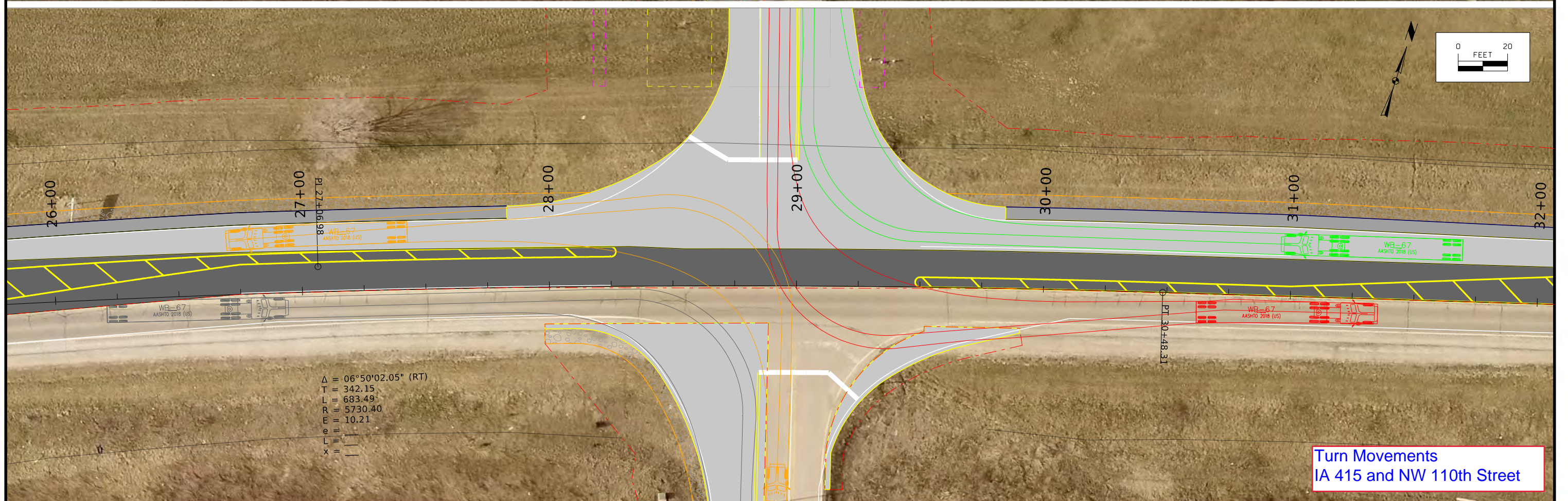
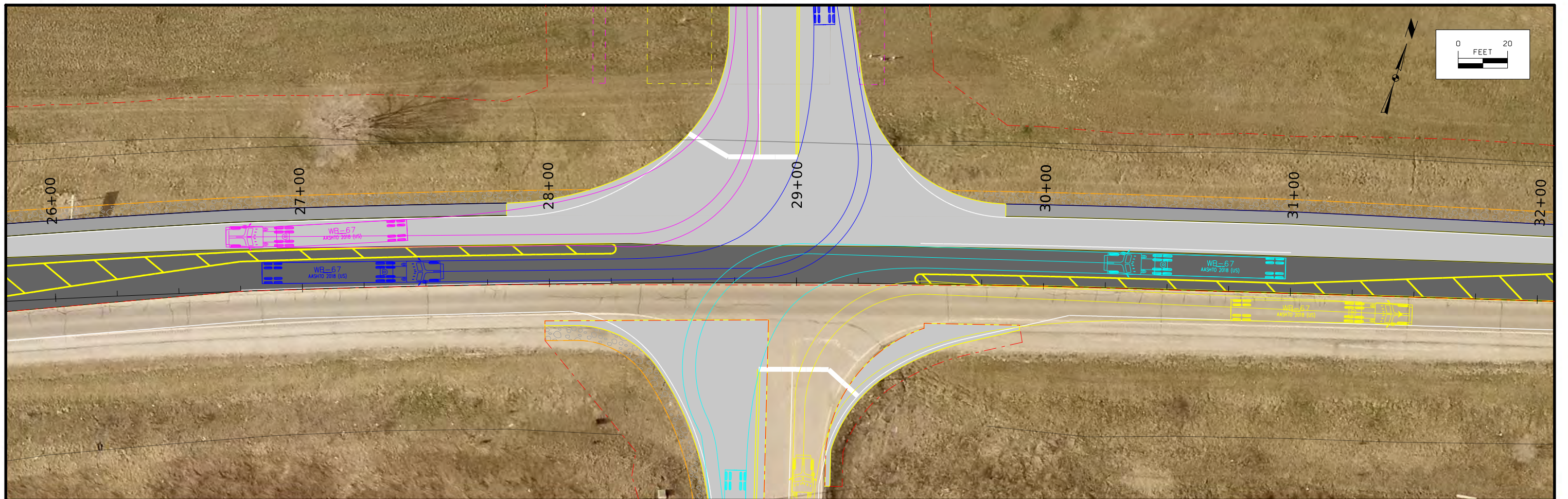
Staging Plan - Stage 2H



Staging Plan - Stage 2H

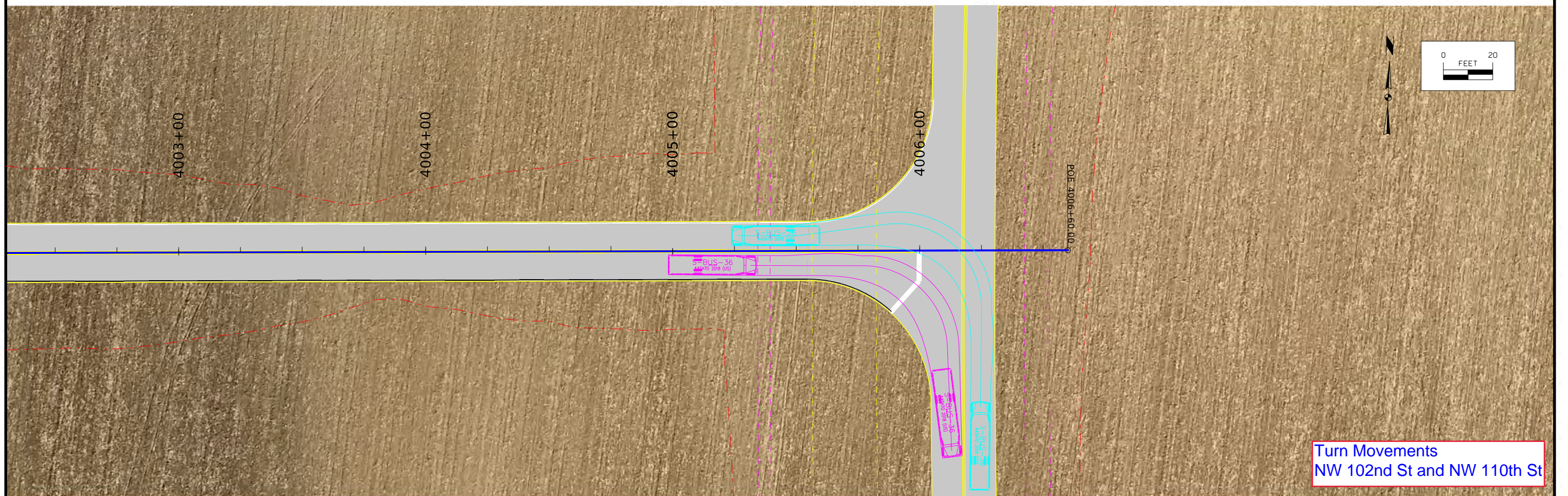
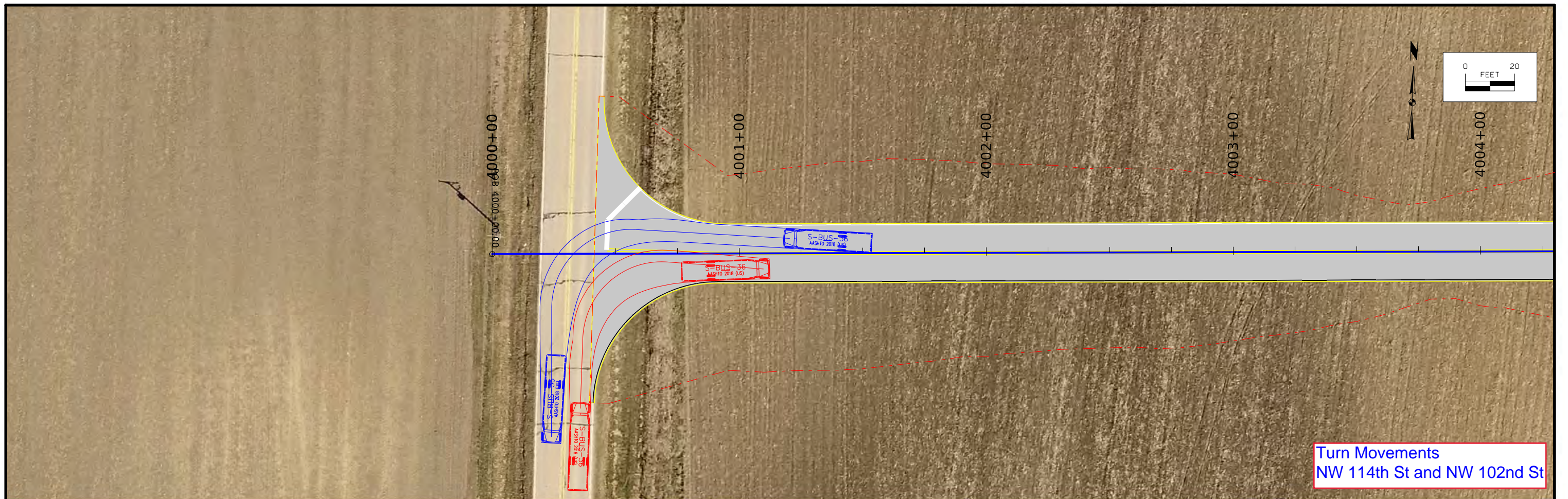


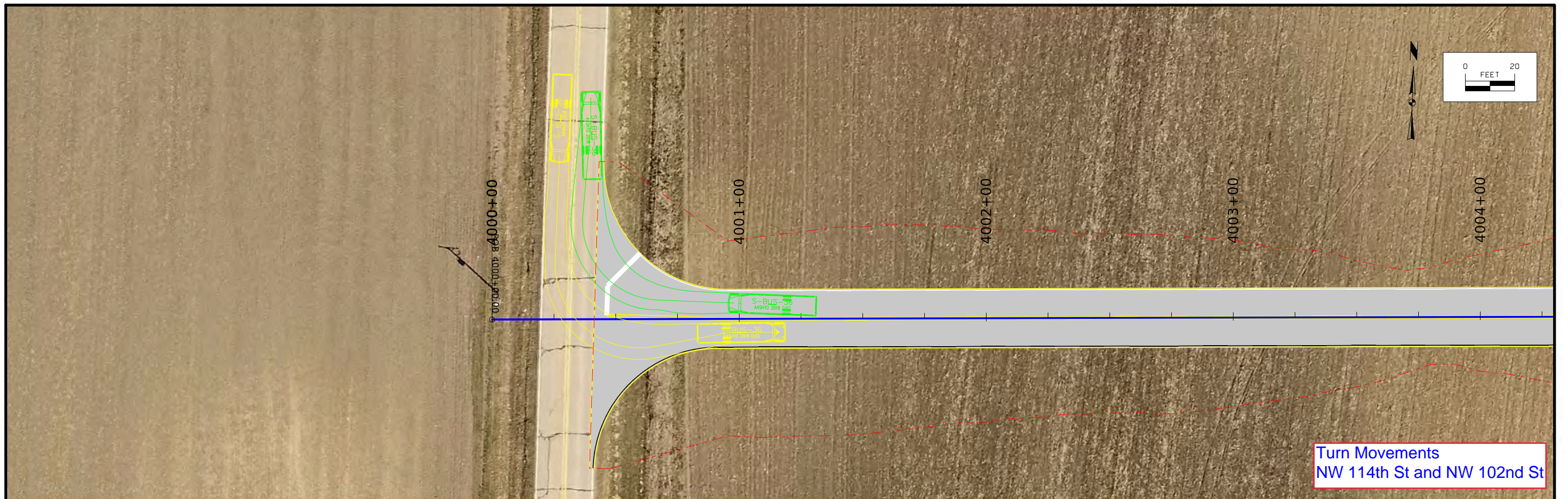
Turn Movements
IA 141 and NW 121st Street



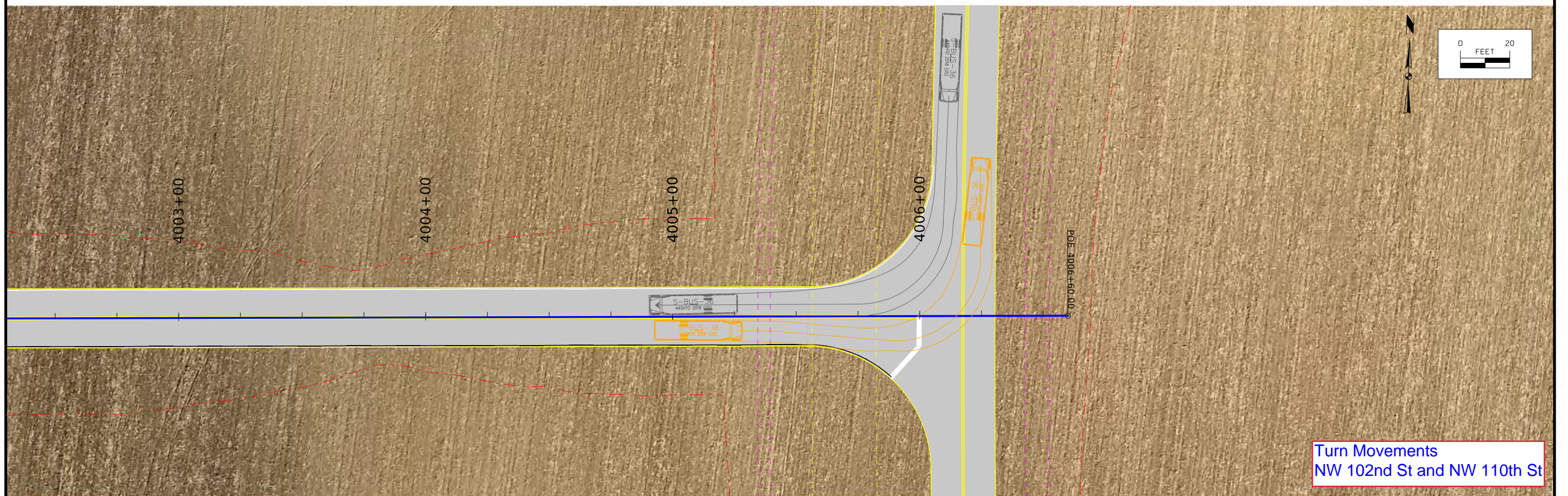


Turn Movements
NW 110th St and NW 106th St



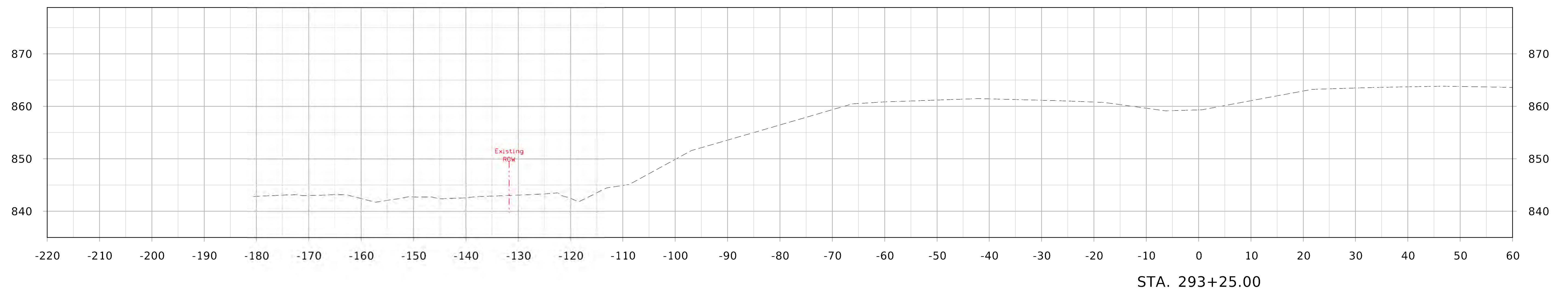
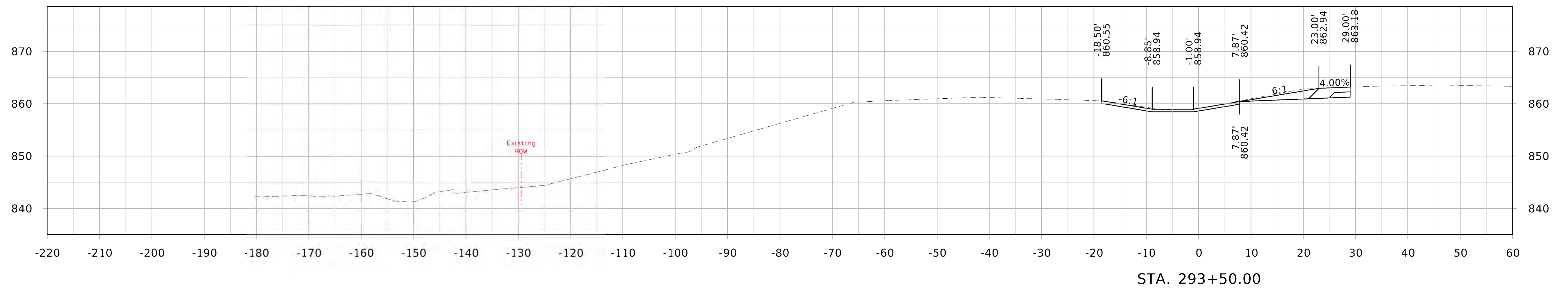
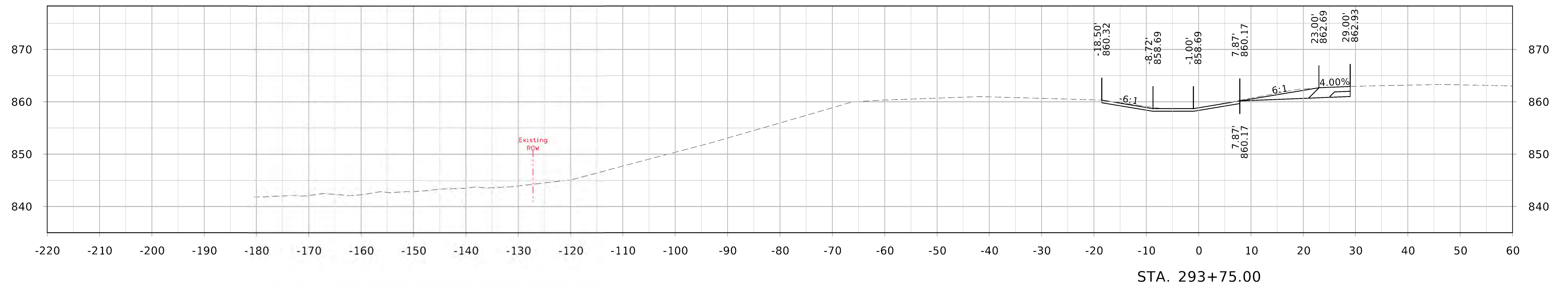


Turn Movements
NW 114th St and NW 102nd St

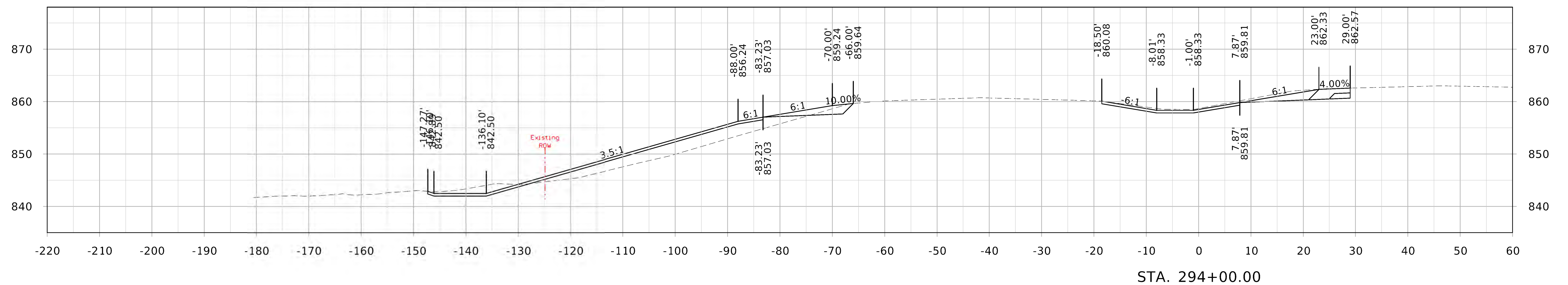
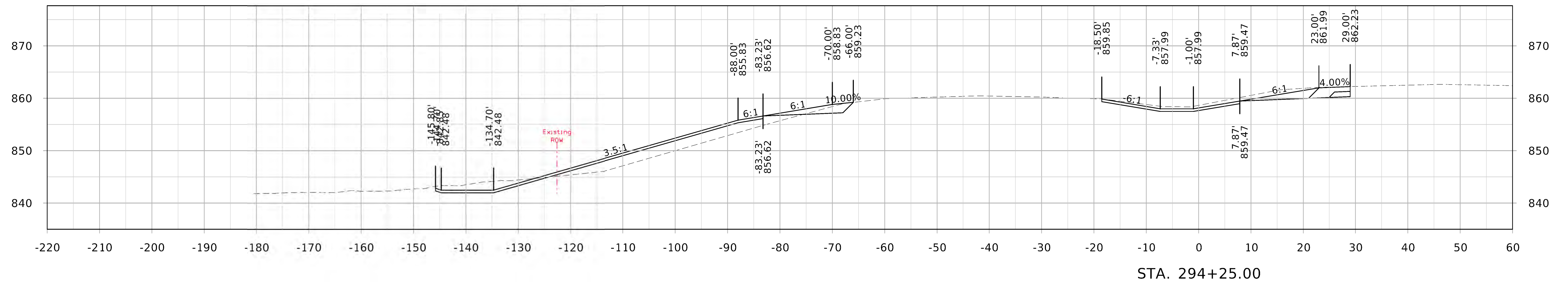
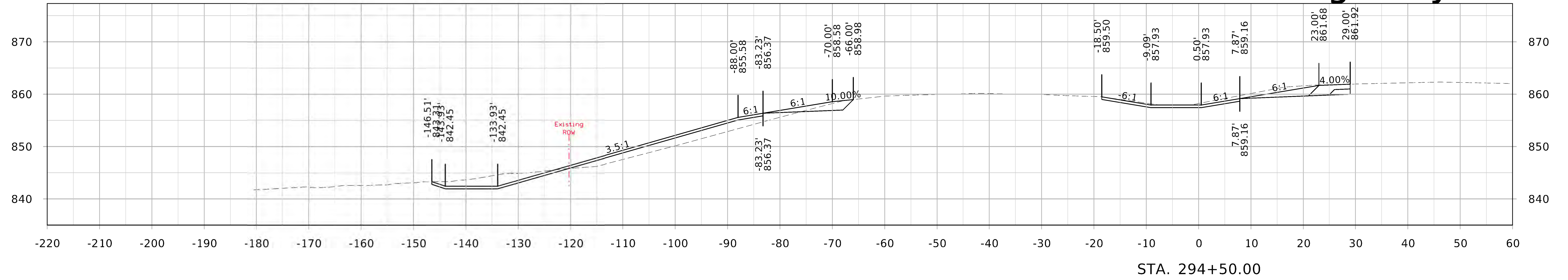


Turn Movements
NW 102nd St and NW 110th St

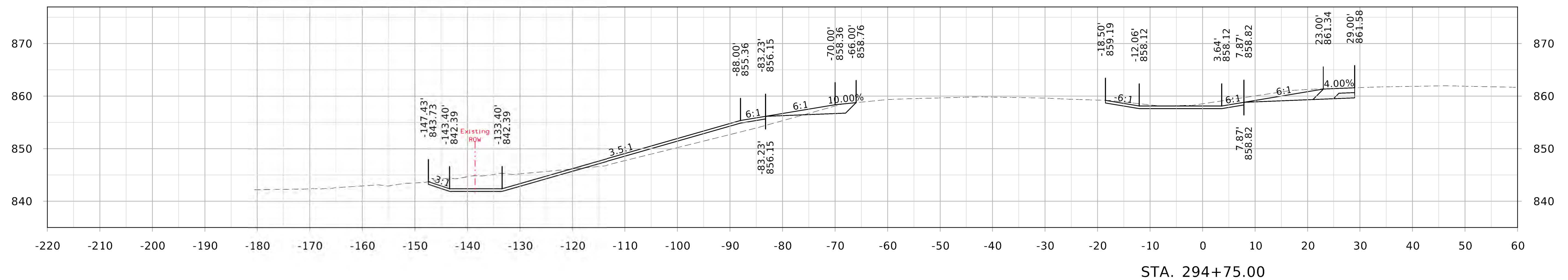
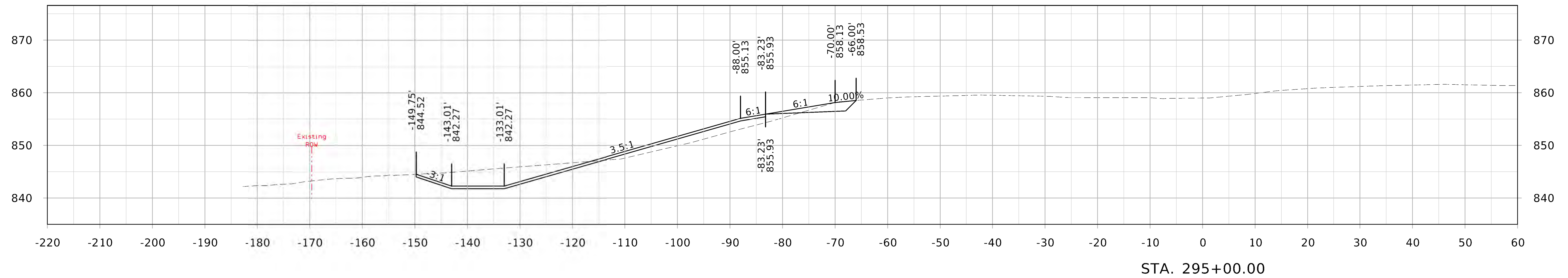
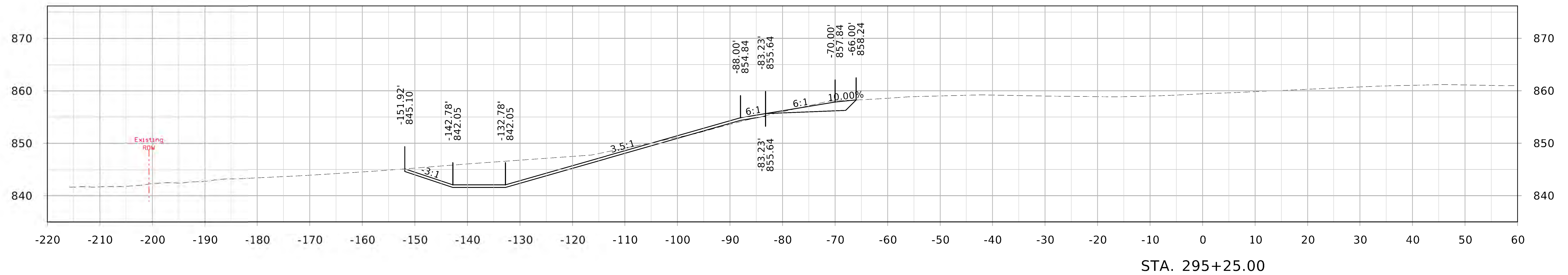
IA Highway 141



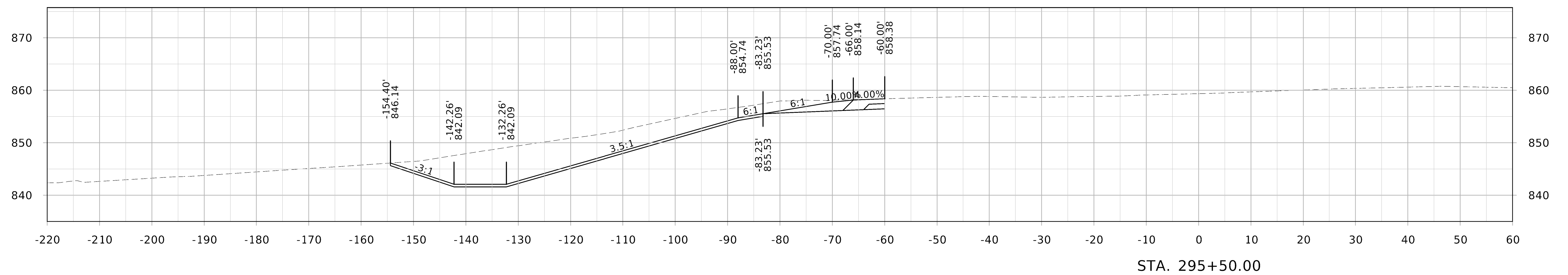
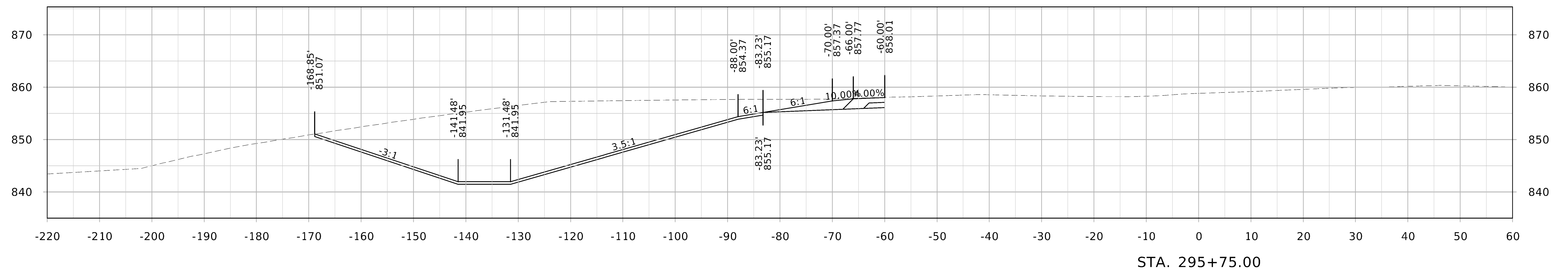
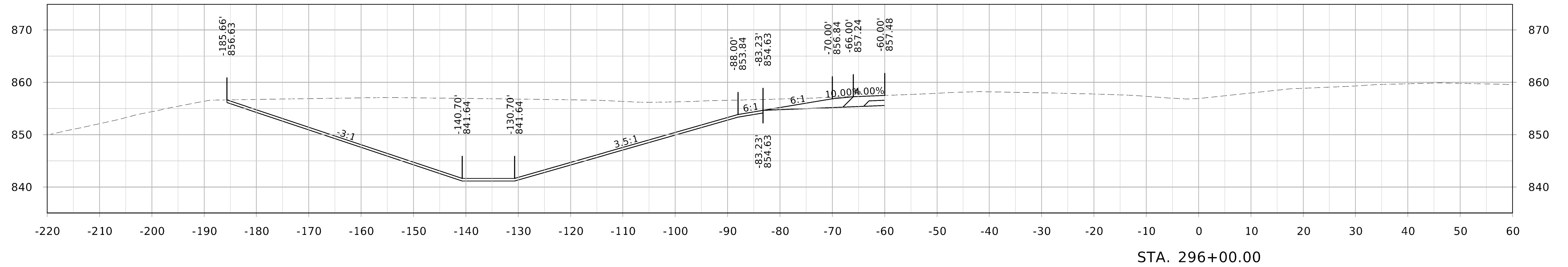
IA Highway 141



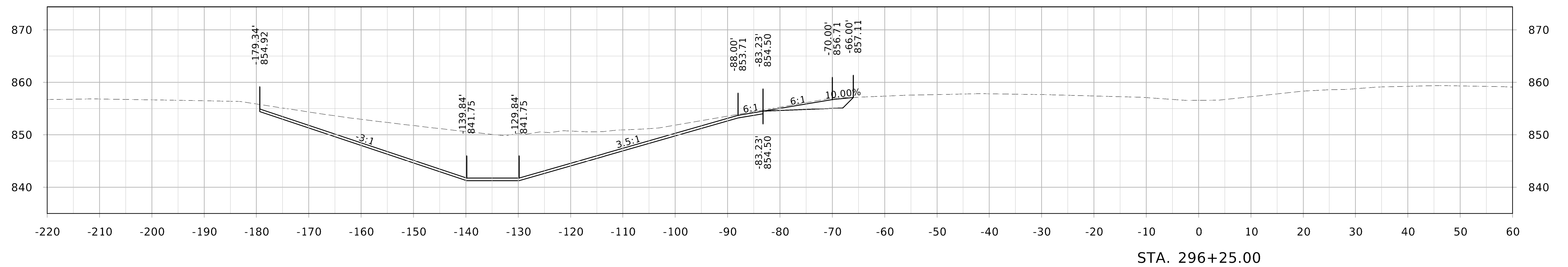
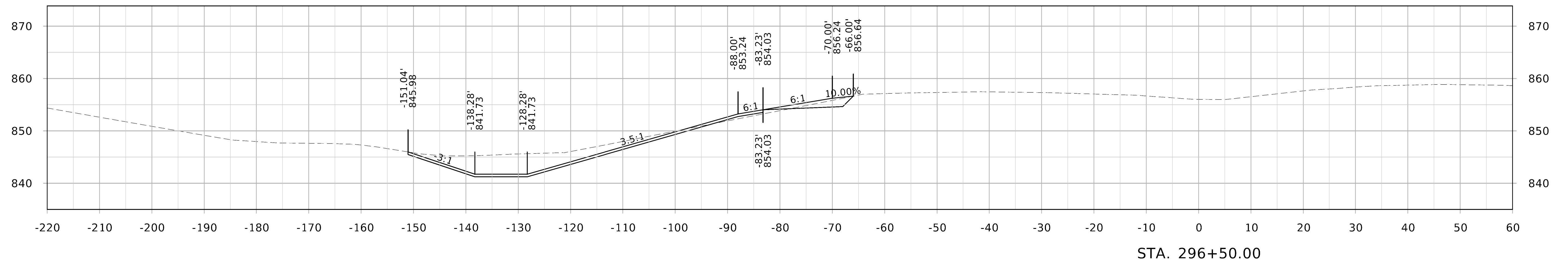
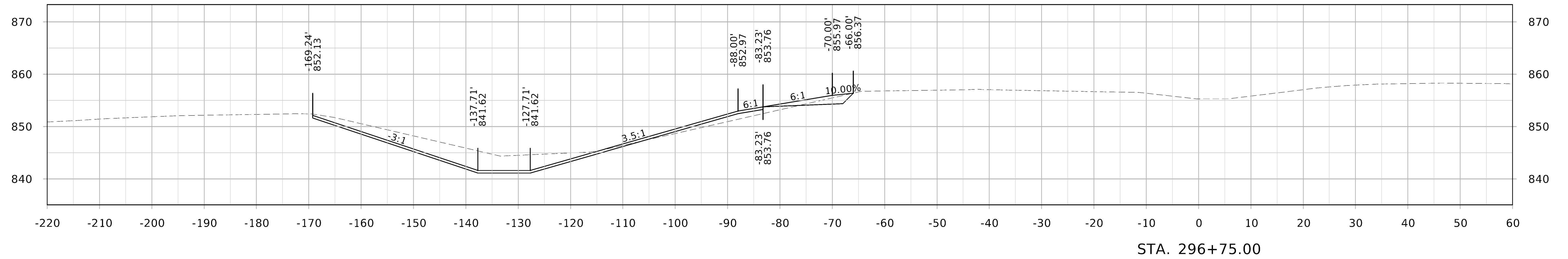
IA Highway 141



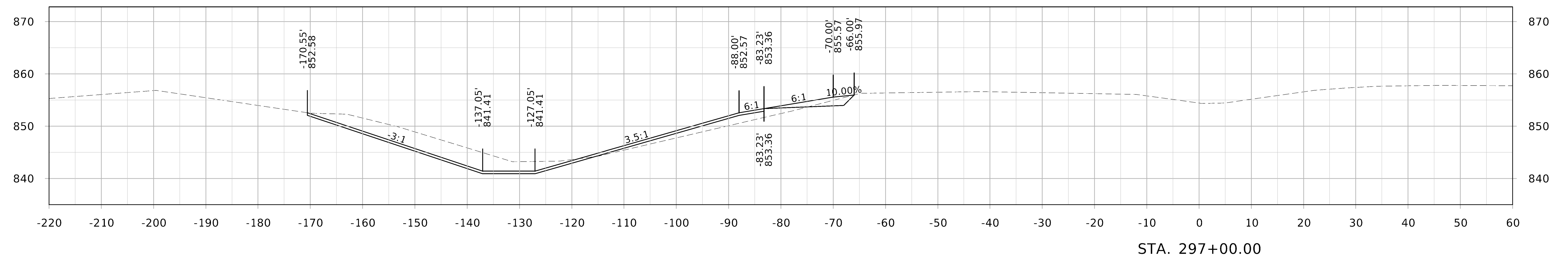
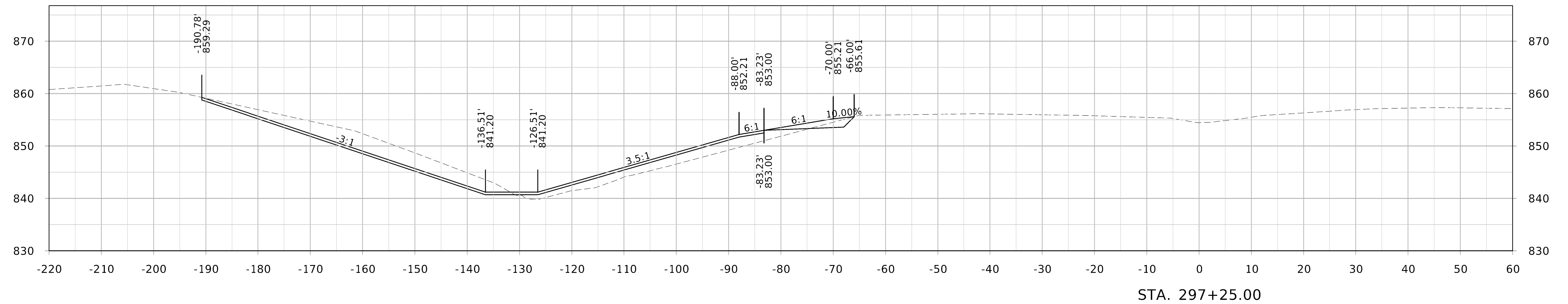
IA Highway 141



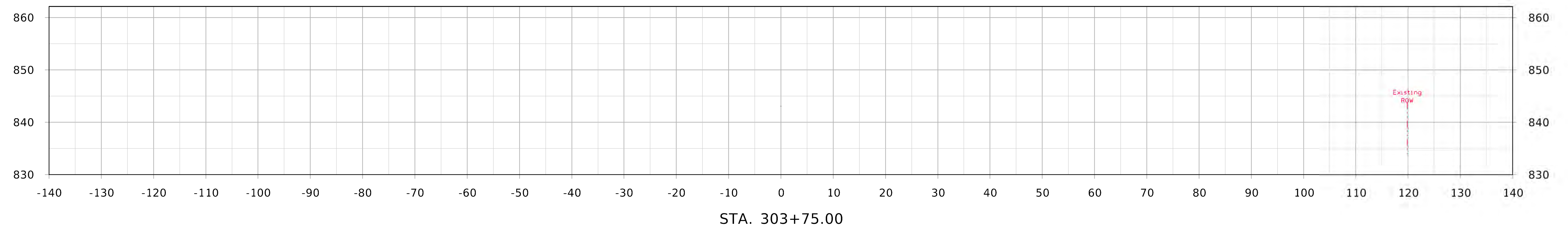
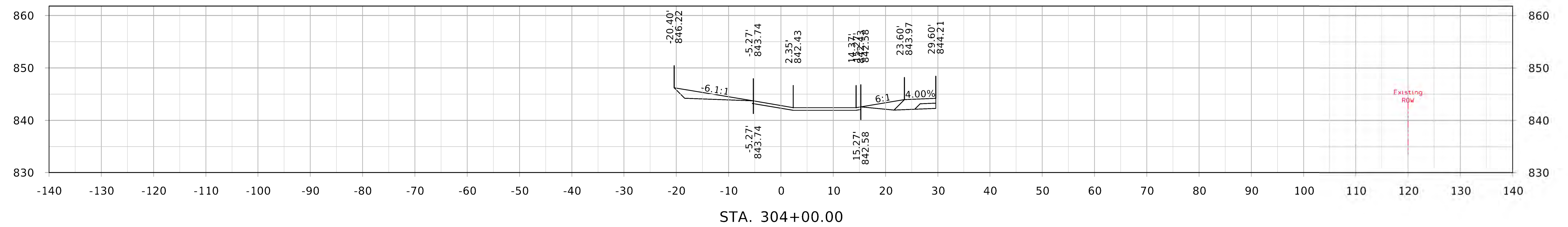
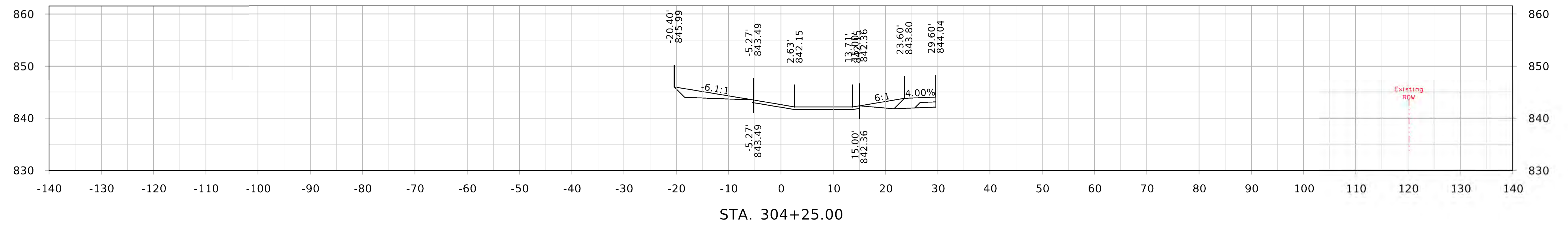
IA Highway 141



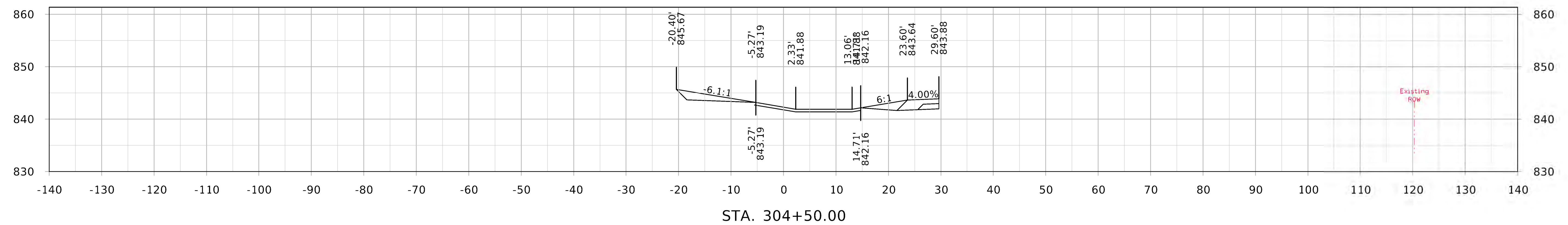
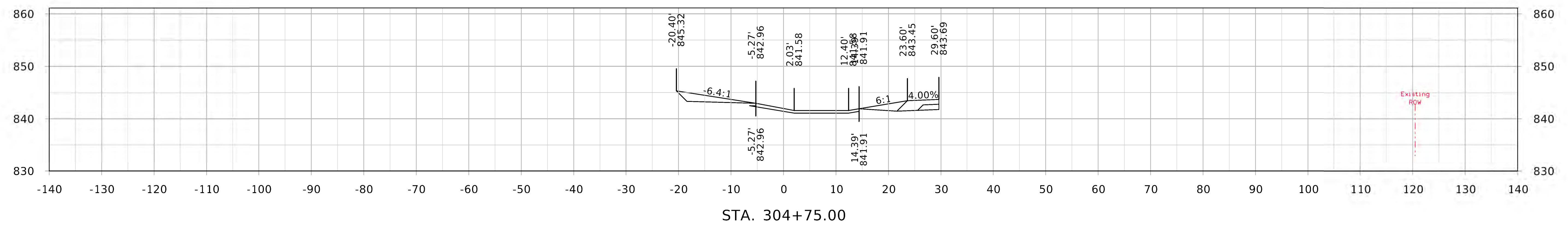
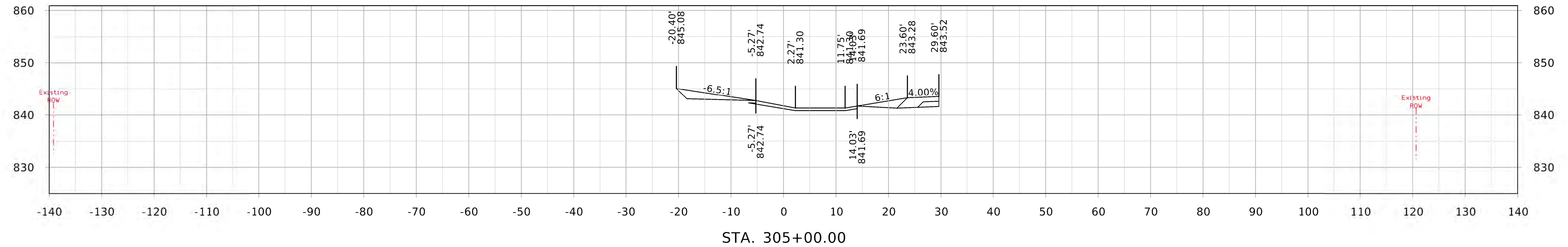
IA Highway 141



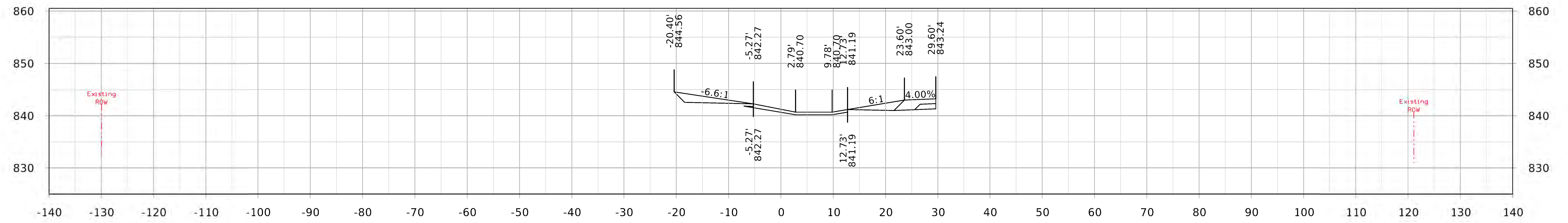
IA Highway 141



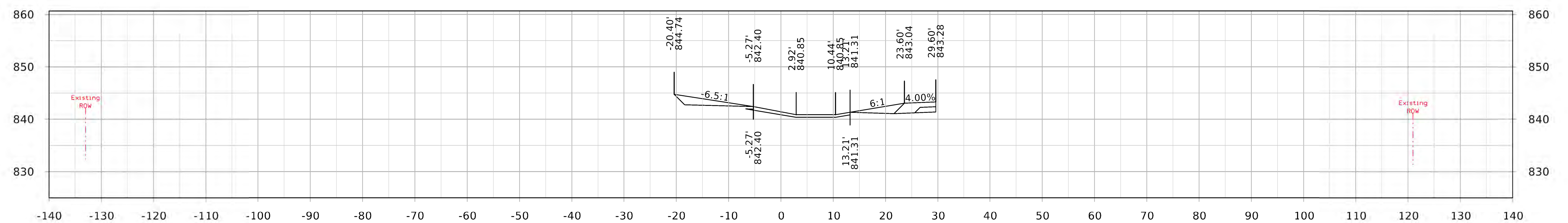
IA Highway 141



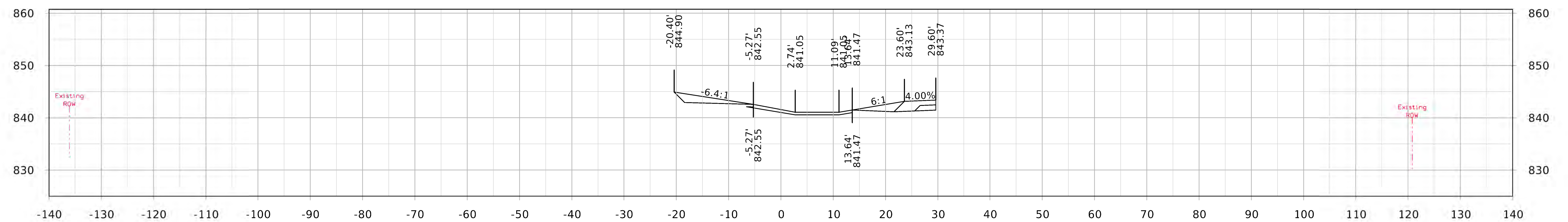
IA Highway 141



STA. 305+75.00

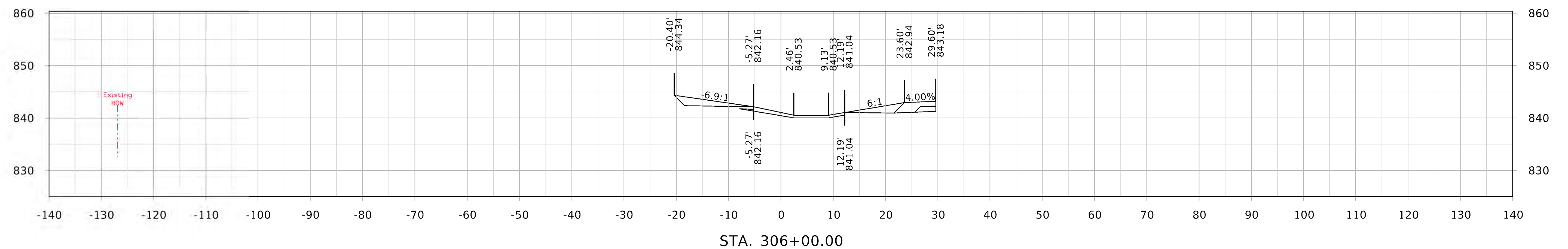
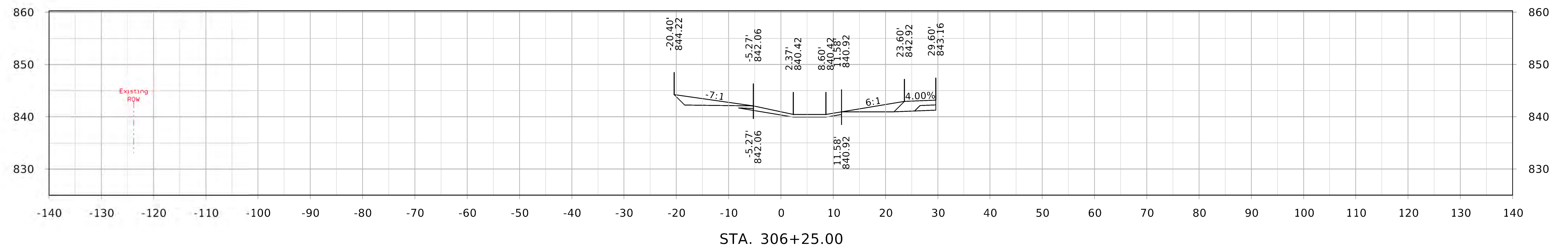
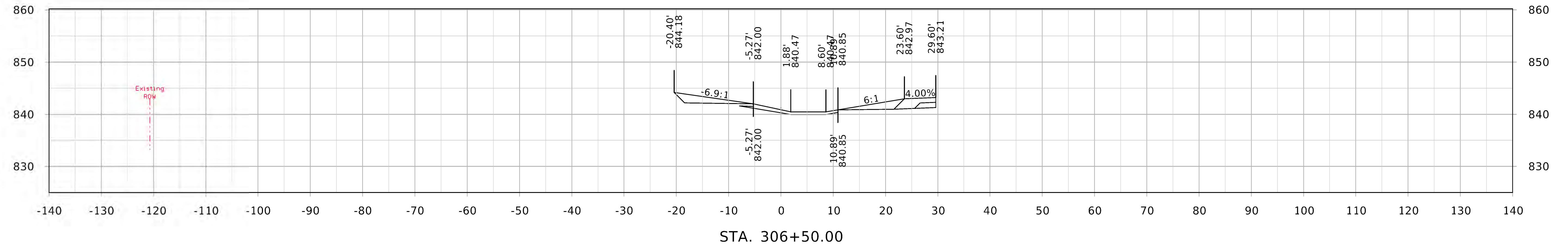


STA. 305+50.00

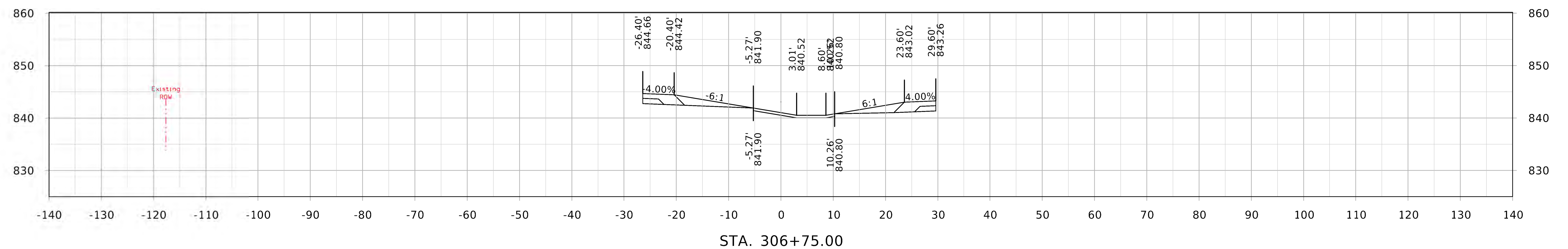
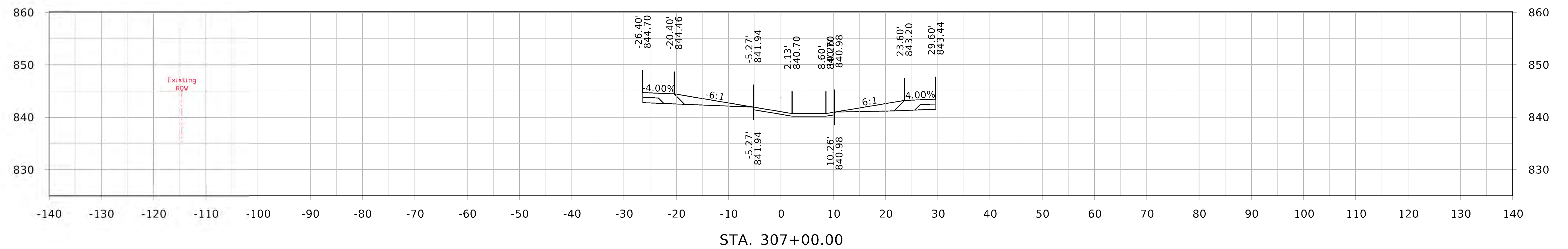
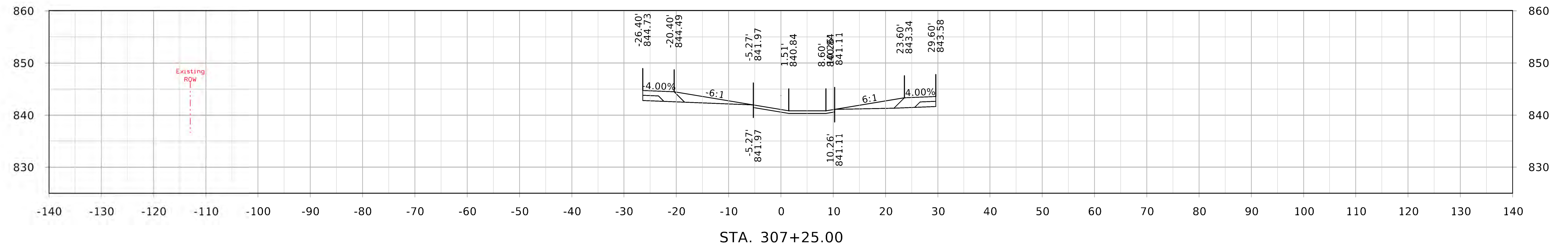


STA. 305+25.00

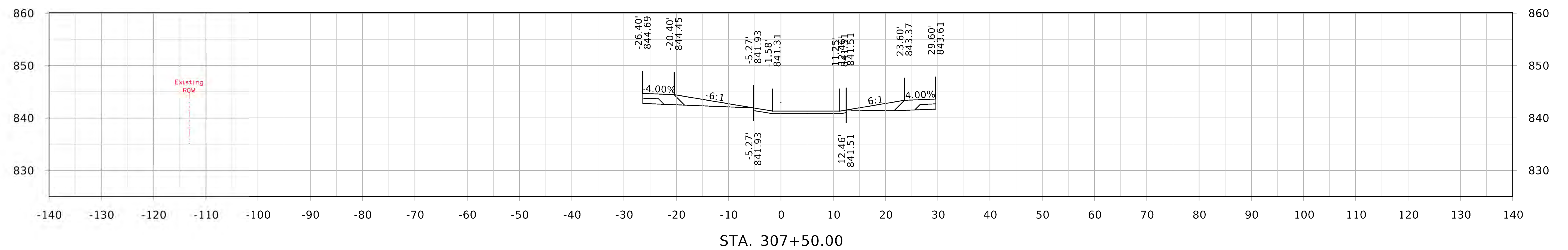
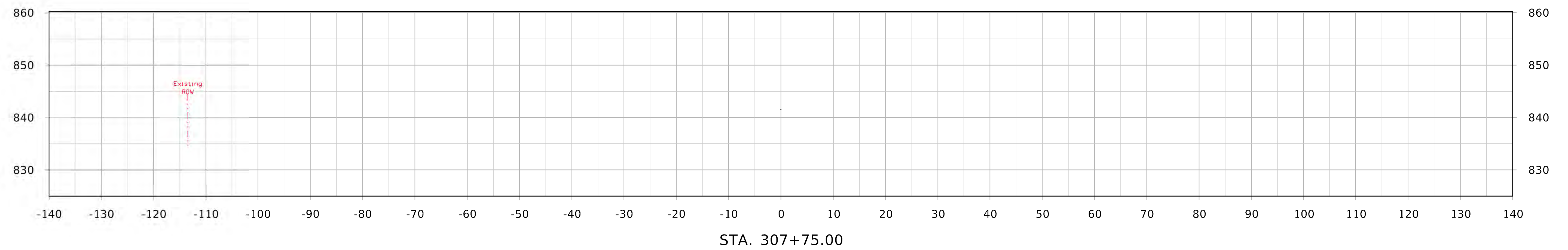
IA Highway 141



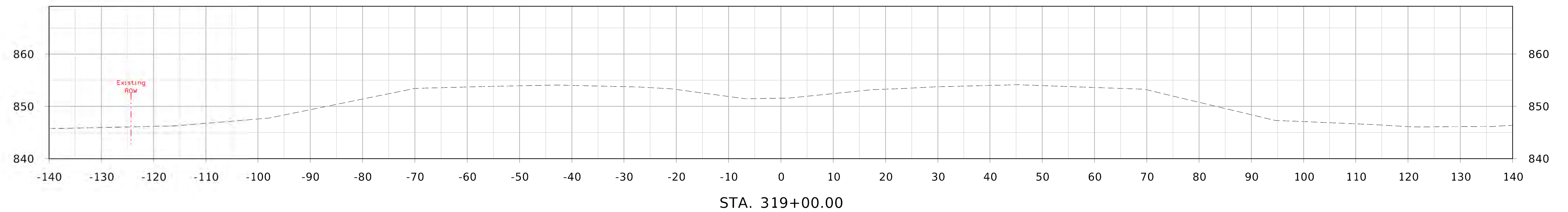
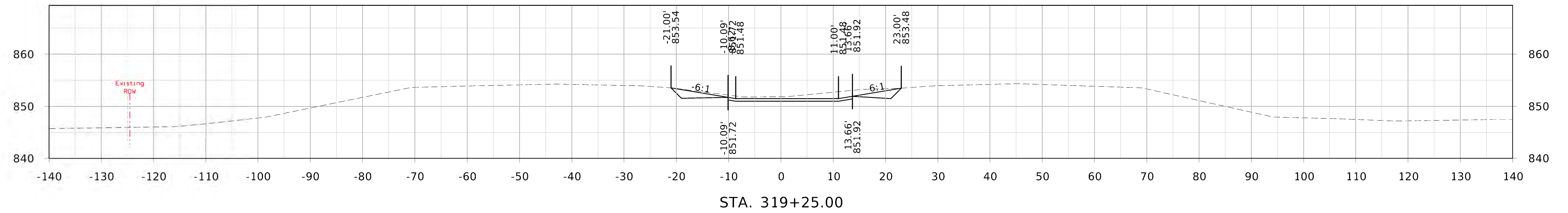
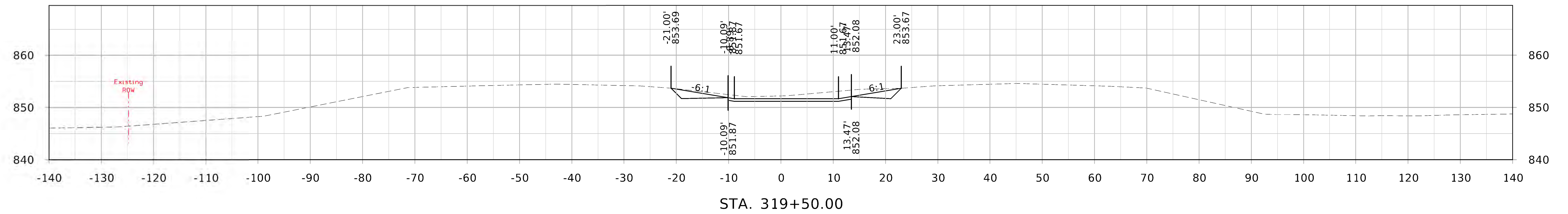
IA Highway 141



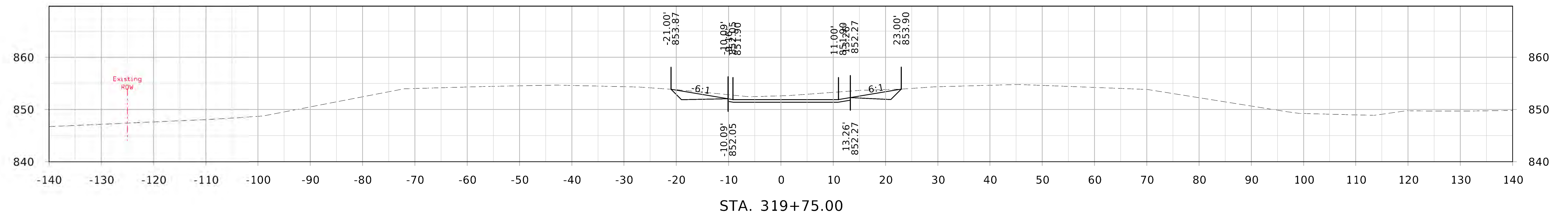
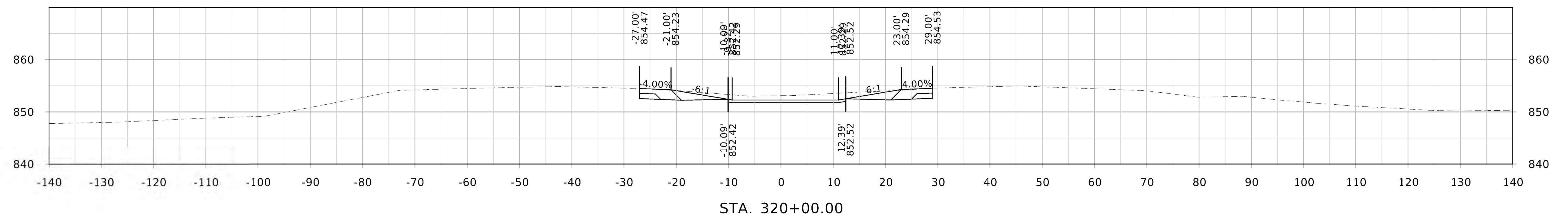
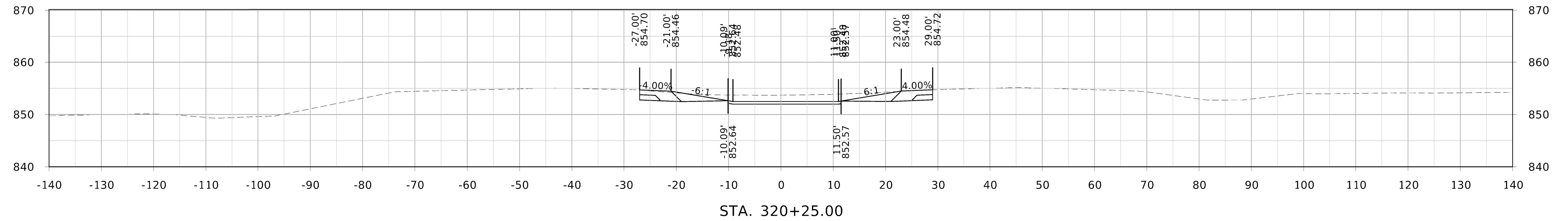
IA Highway 141



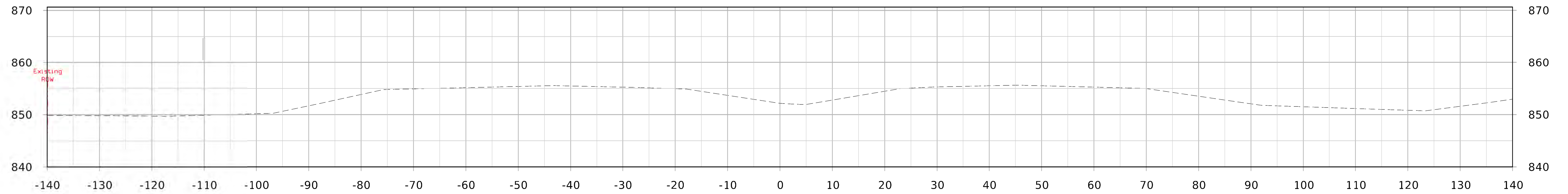
IA Highway 141



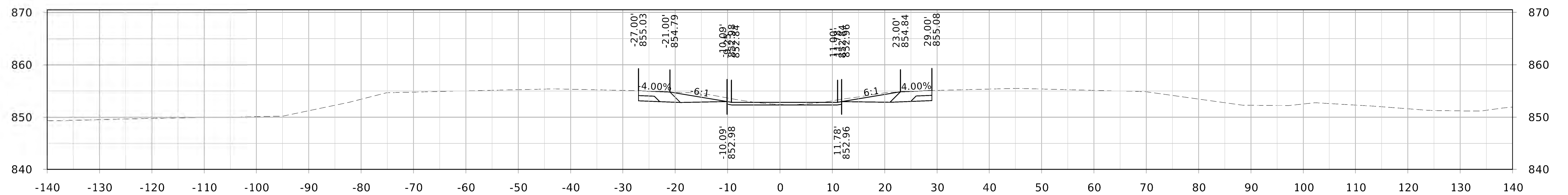
IA Highway 141



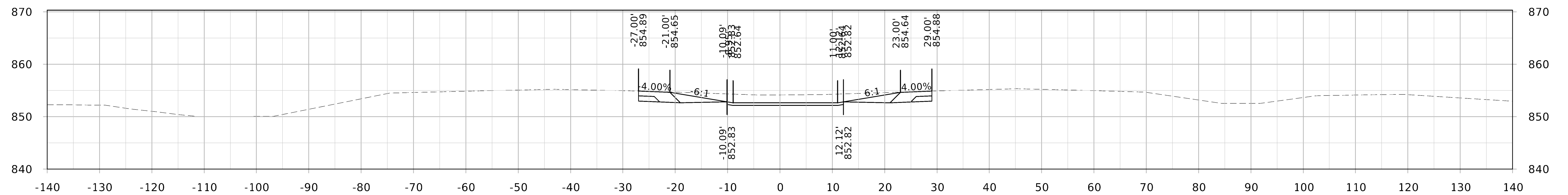
IA Highway 141



STA. 321+00.00

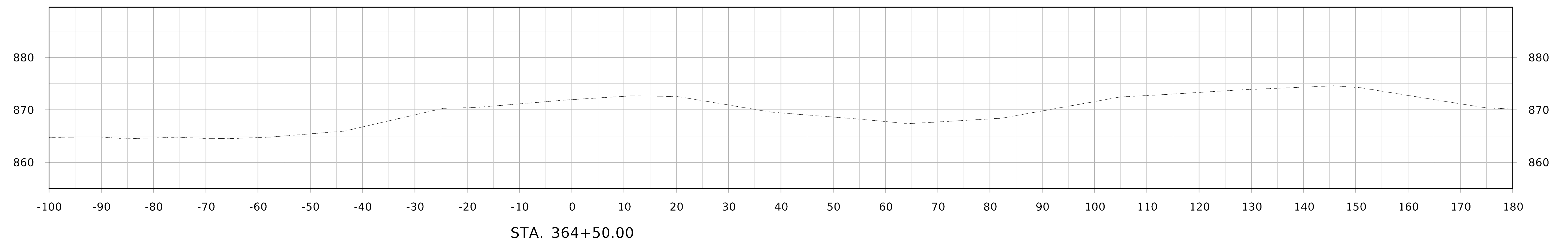
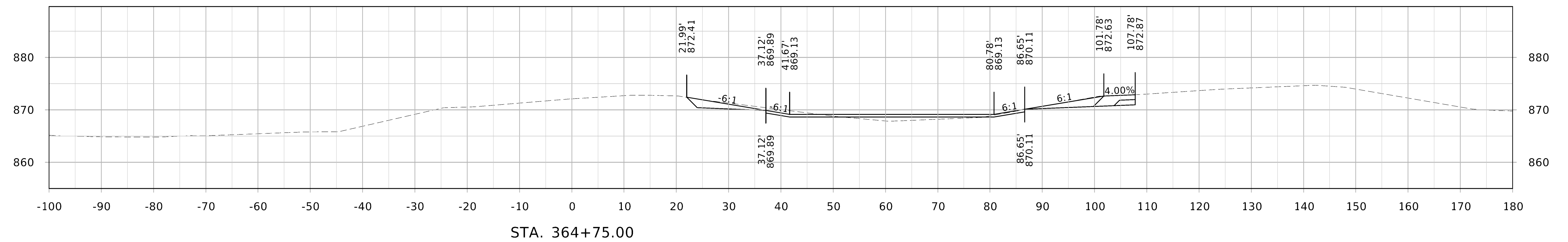
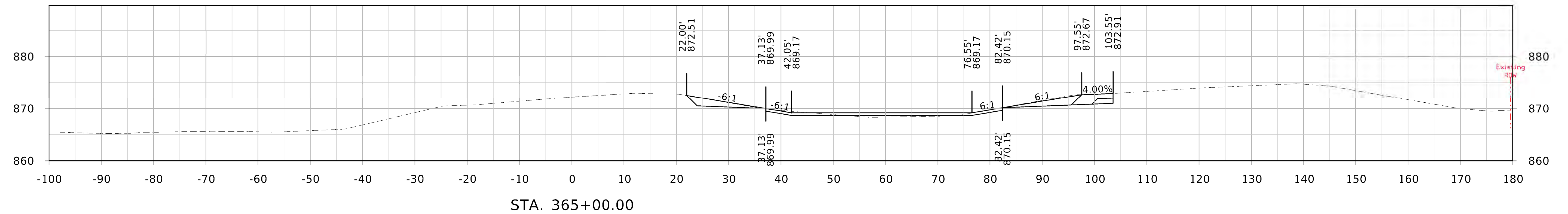


STA. 320+75.00

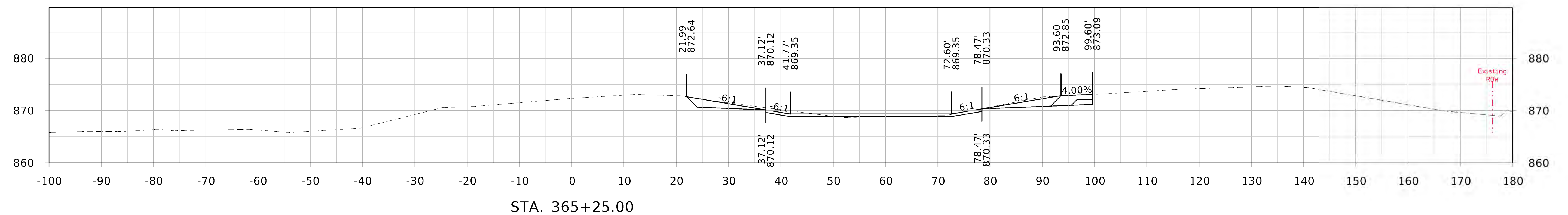
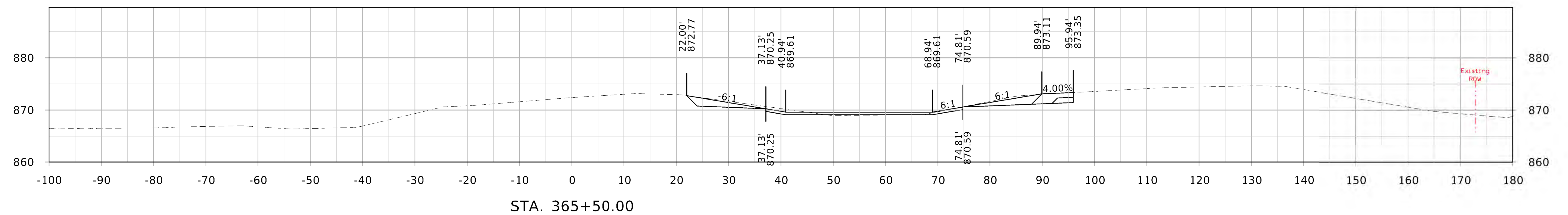
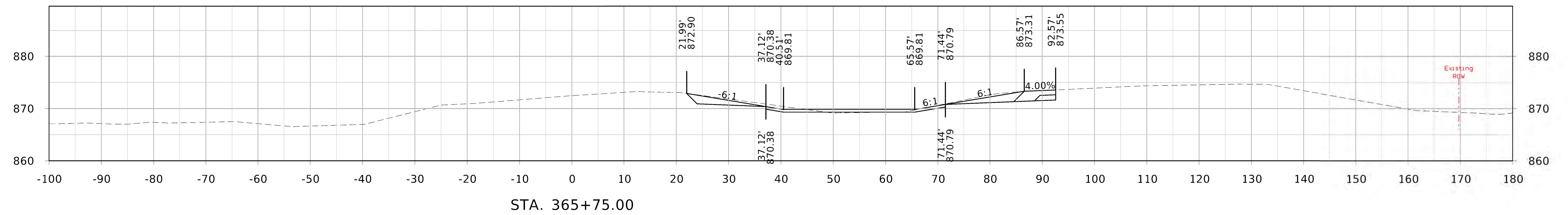


STA. 320+50.00

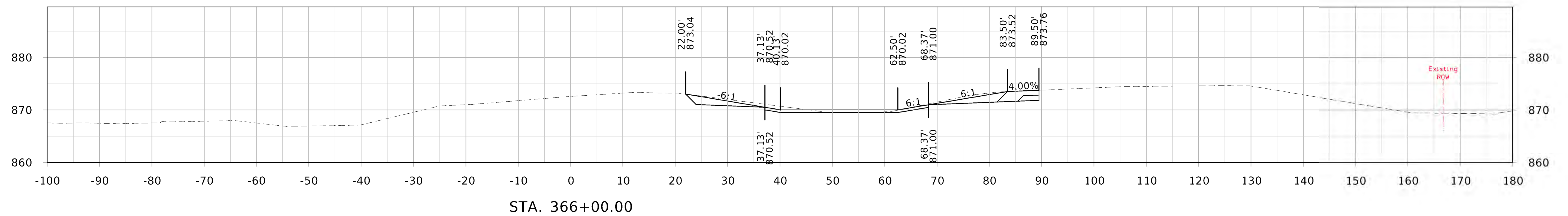
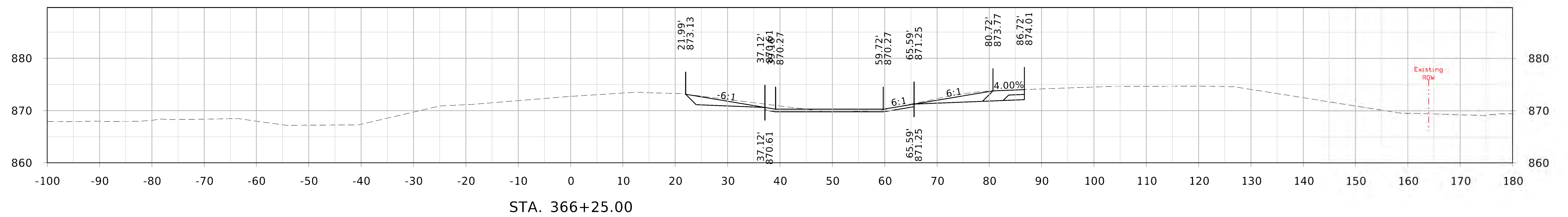
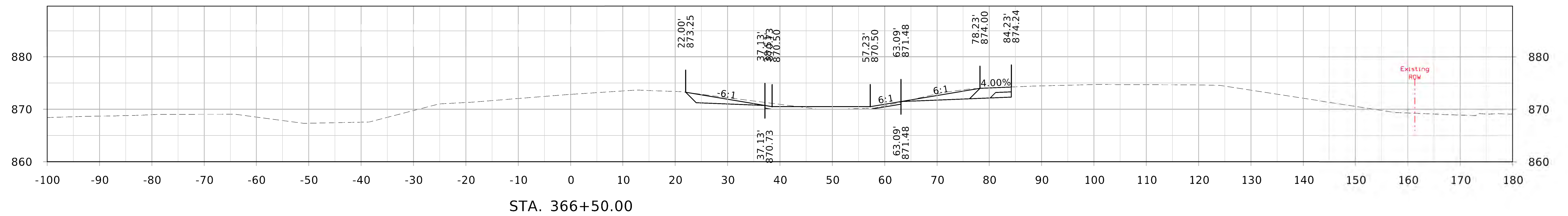
IA Highway 141



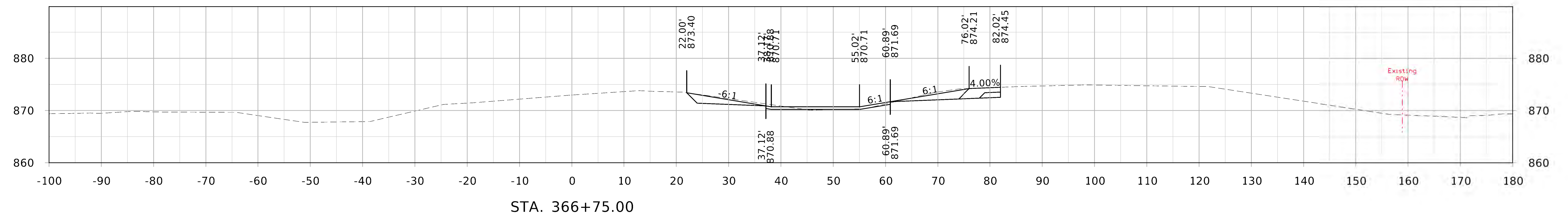
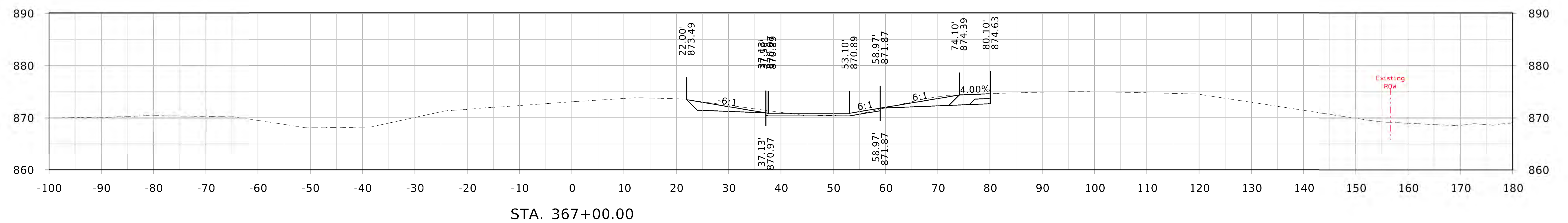
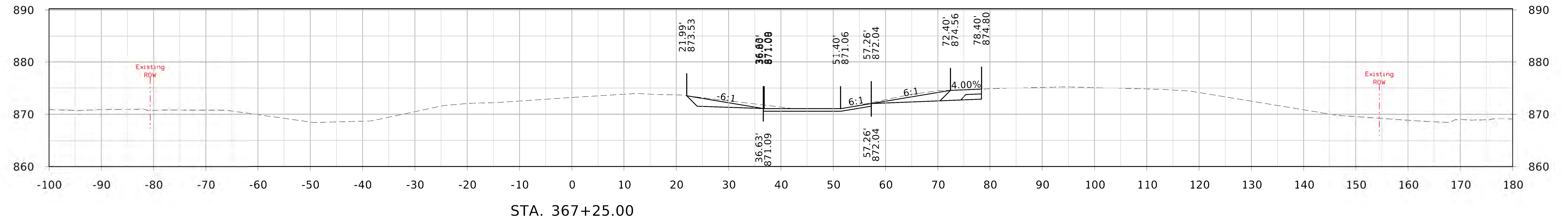
IA Highway 141



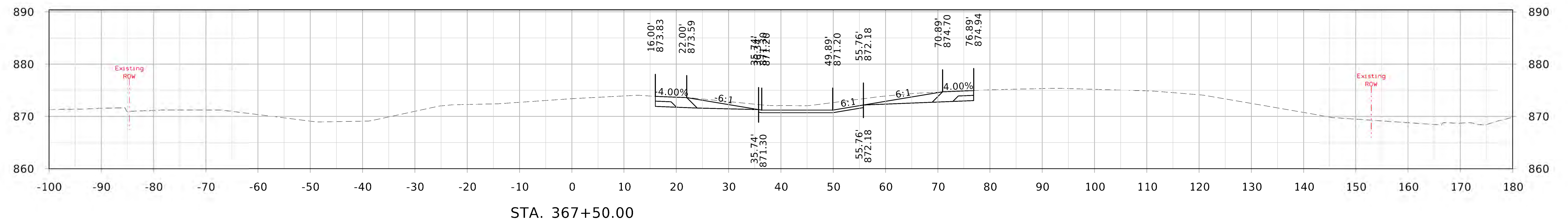
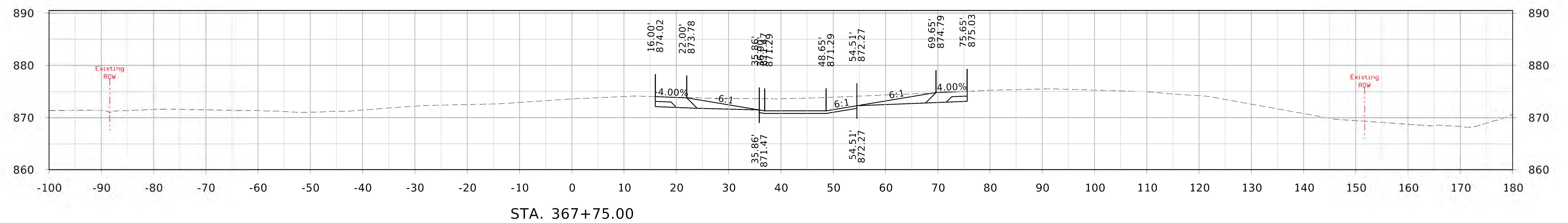
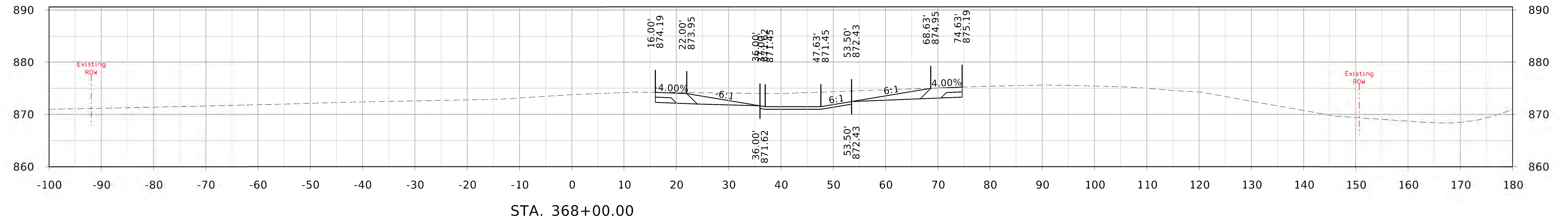
IA Highway 141



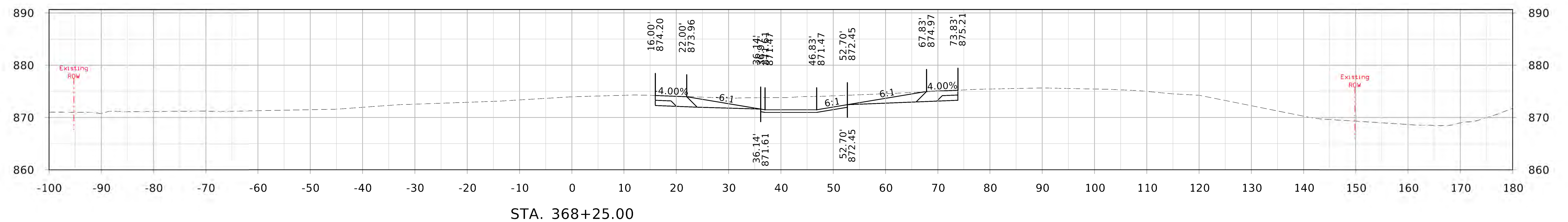
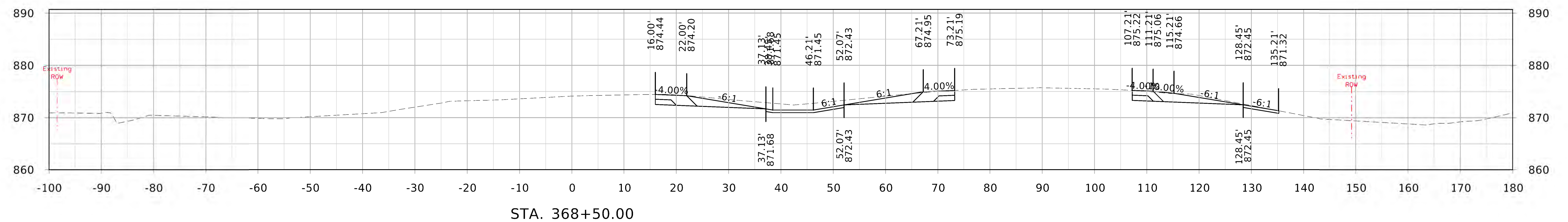
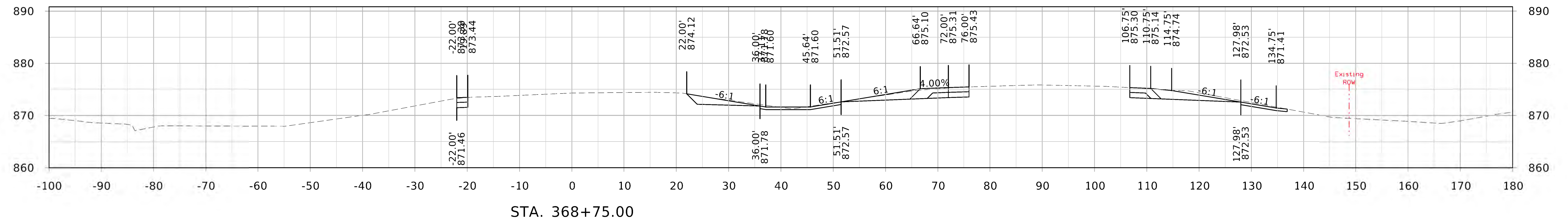
IA Highway 141



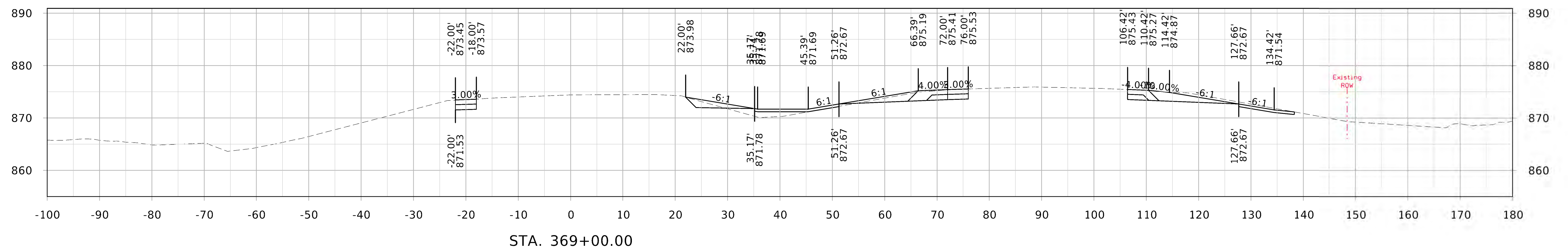
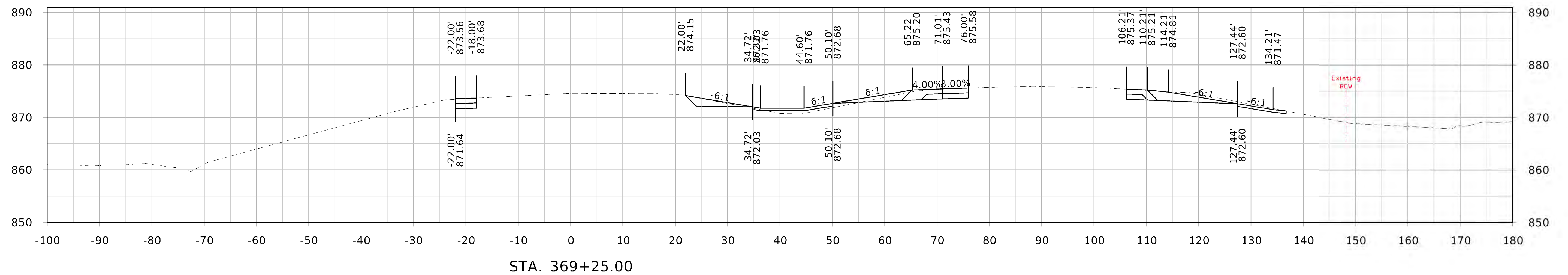
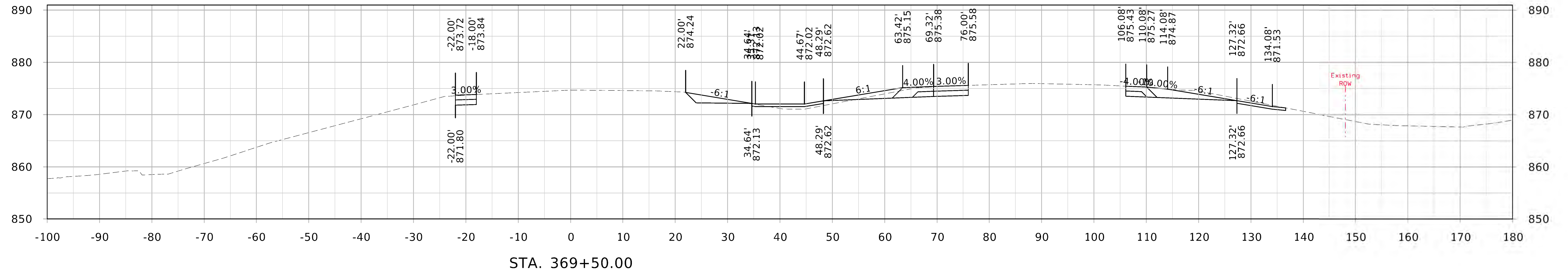
IA Highway 141



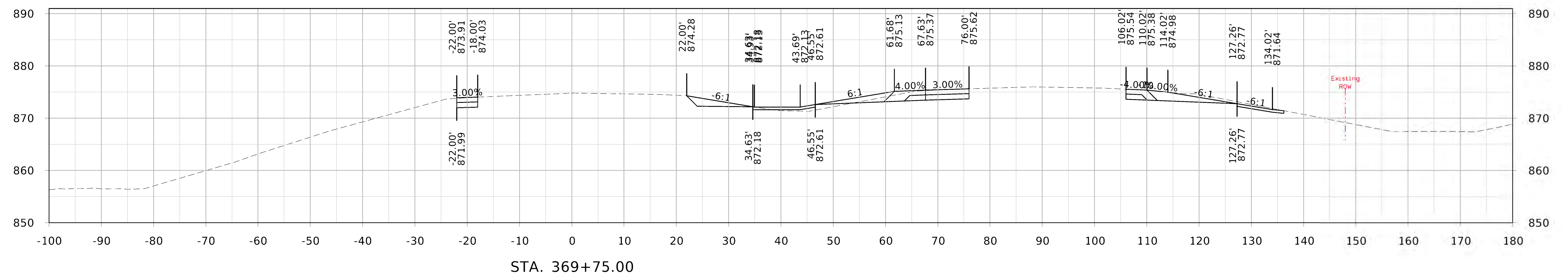
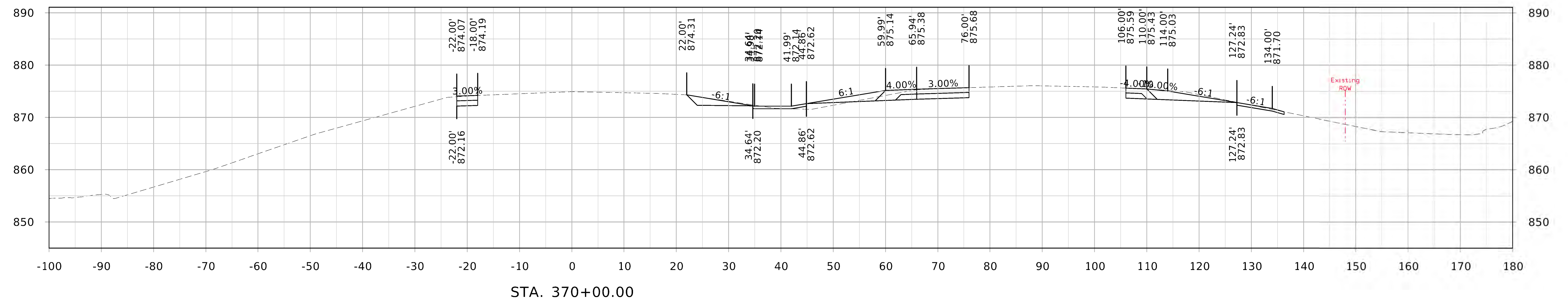
IA Highway 141



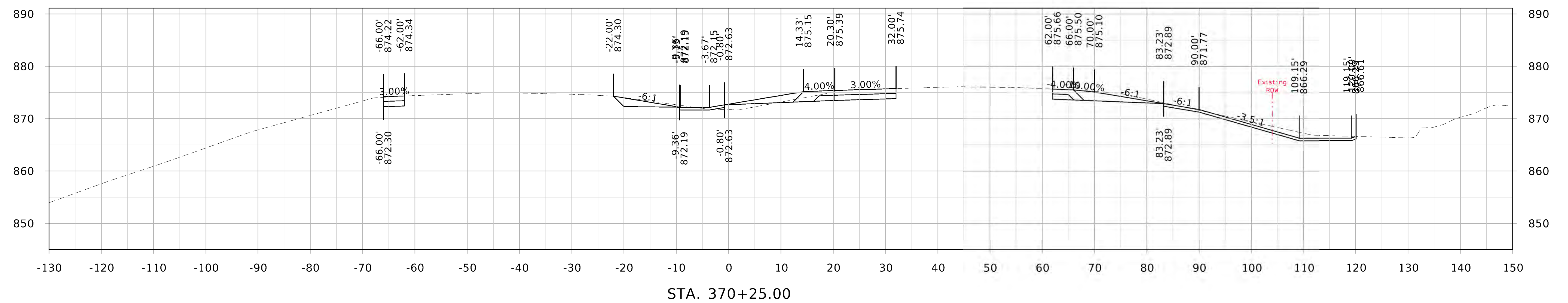
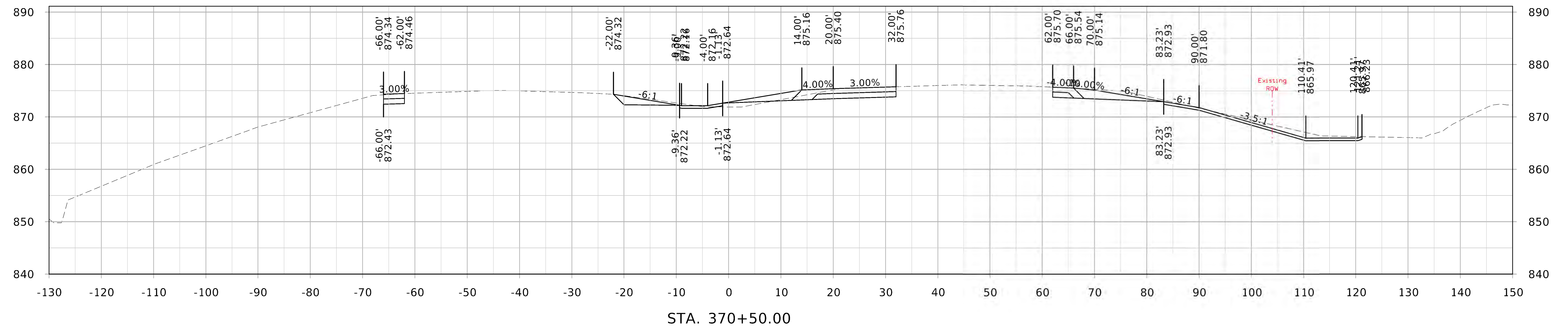
IA Highway 141



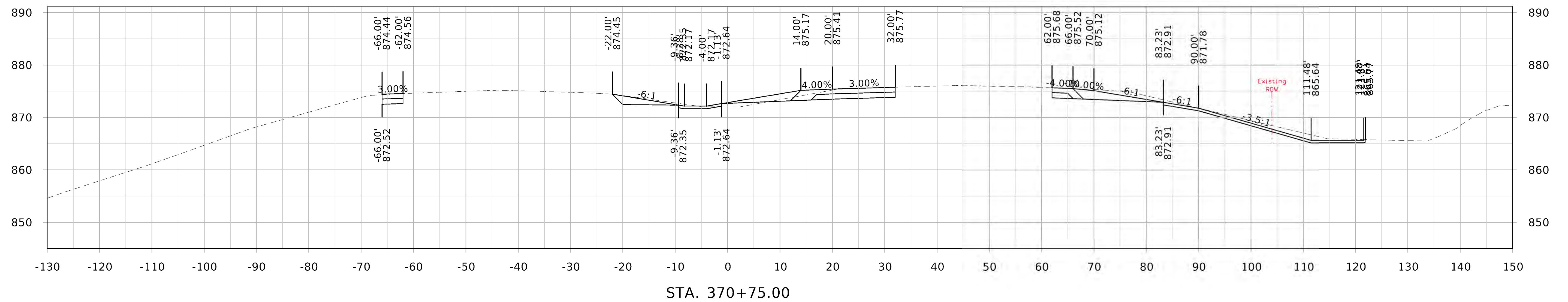
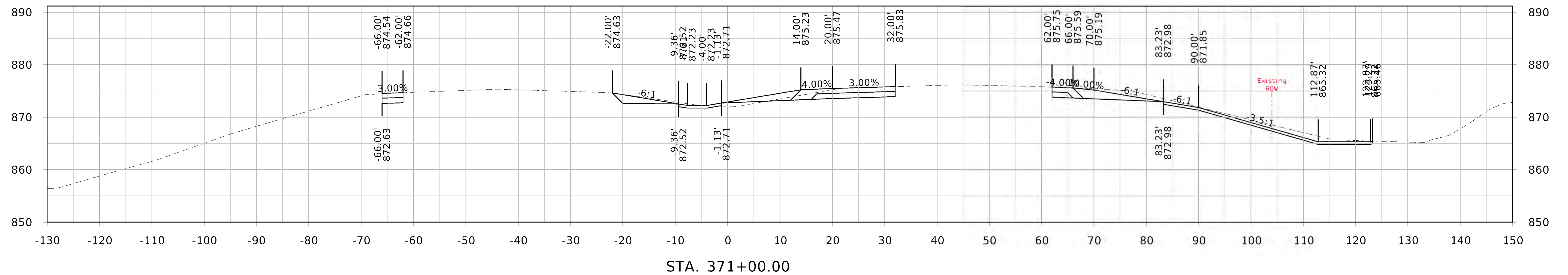
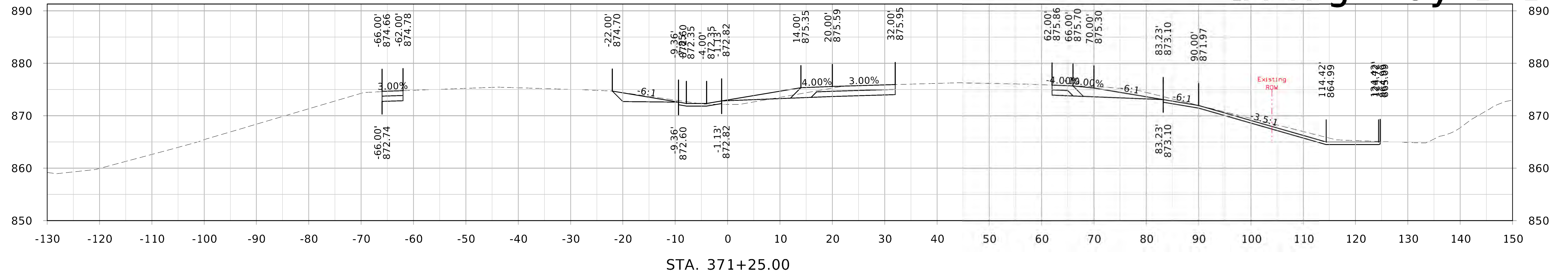
IA Highway 141



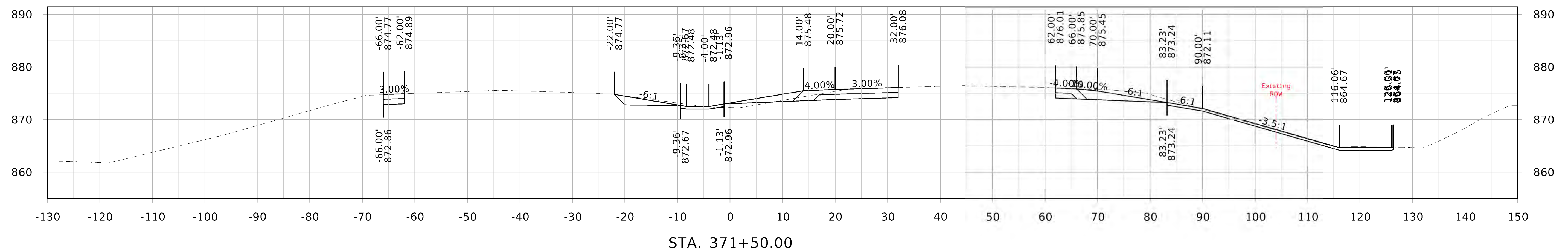
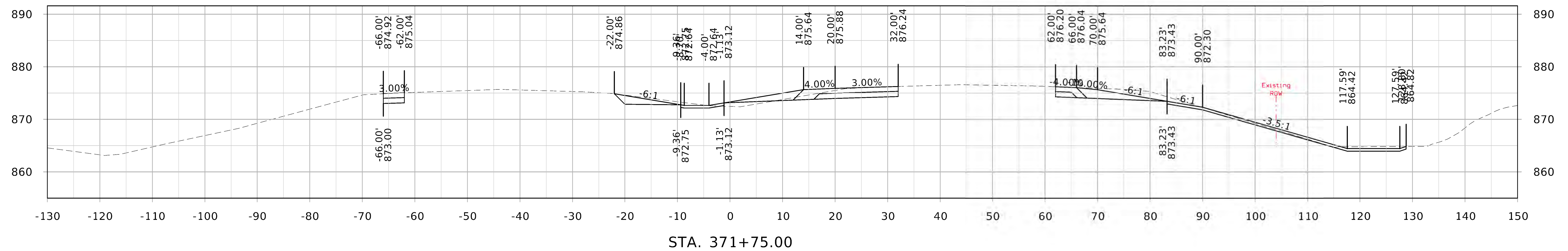
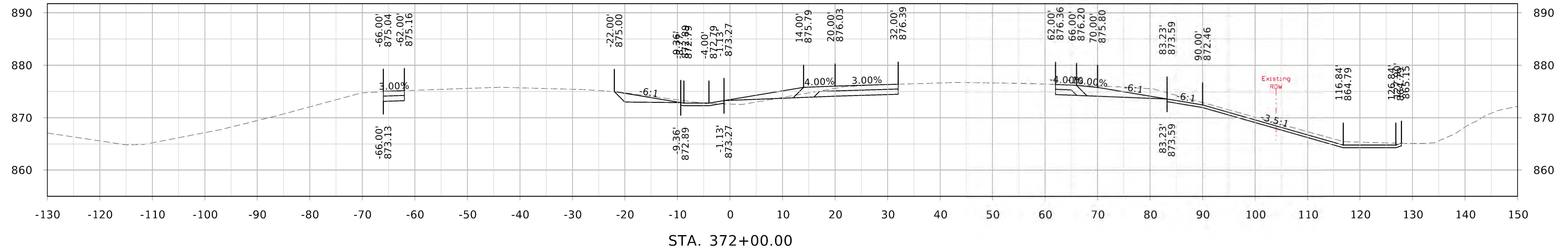
IA Highway 141



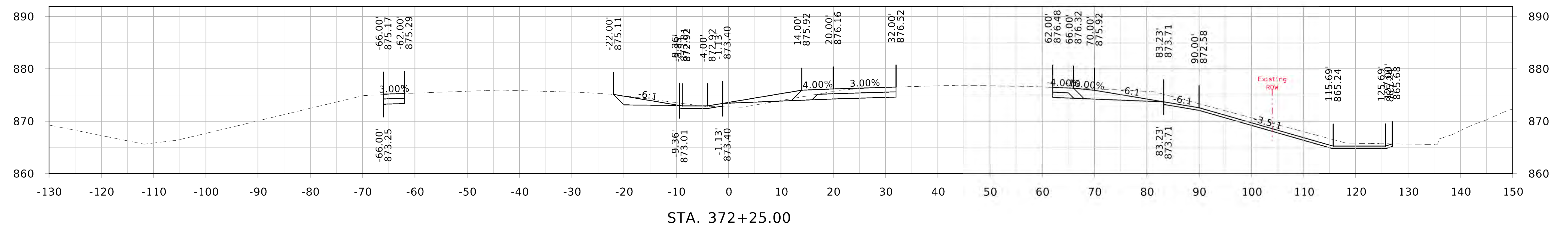
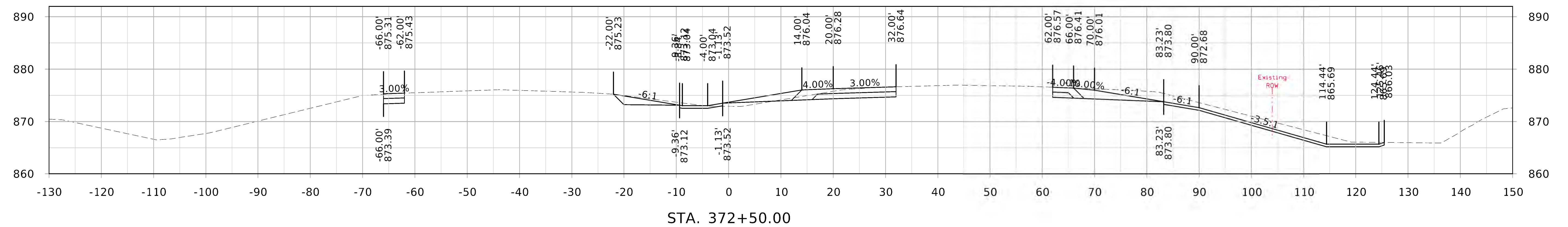
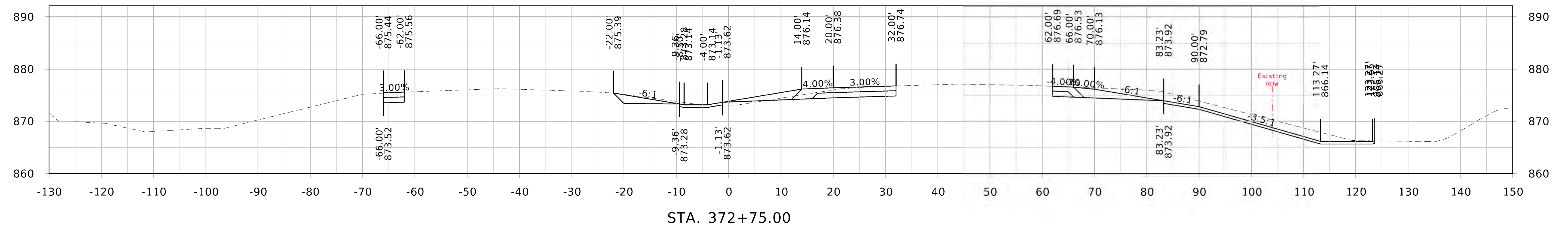
IA Highway 141



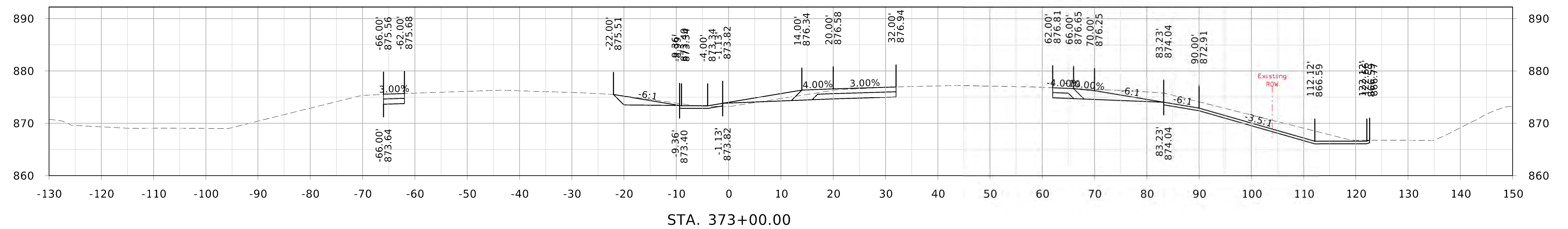
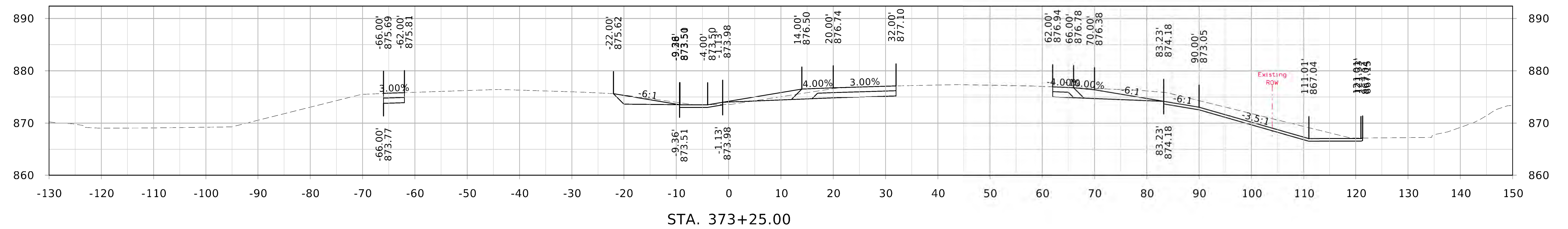
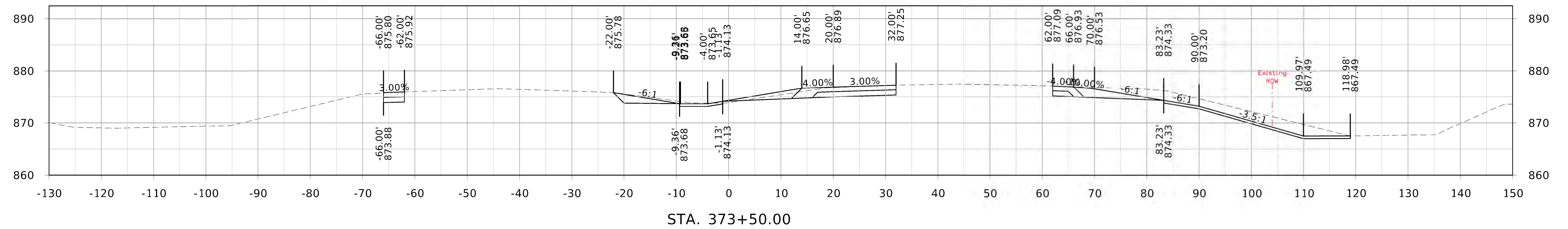
IA Highway 141



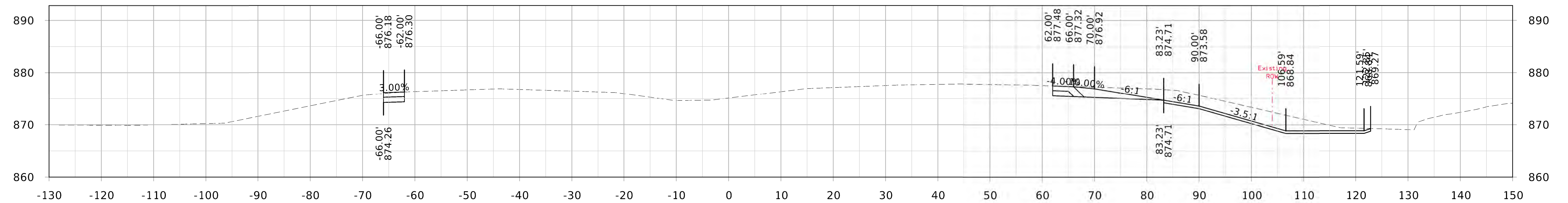
IA Highway 141



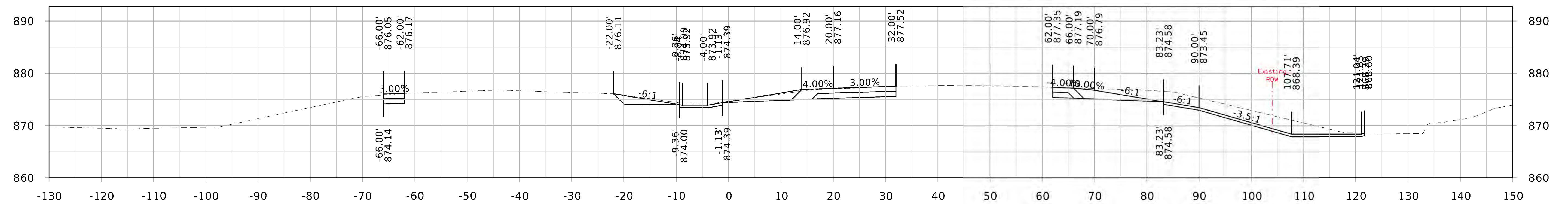
IA Highway 141



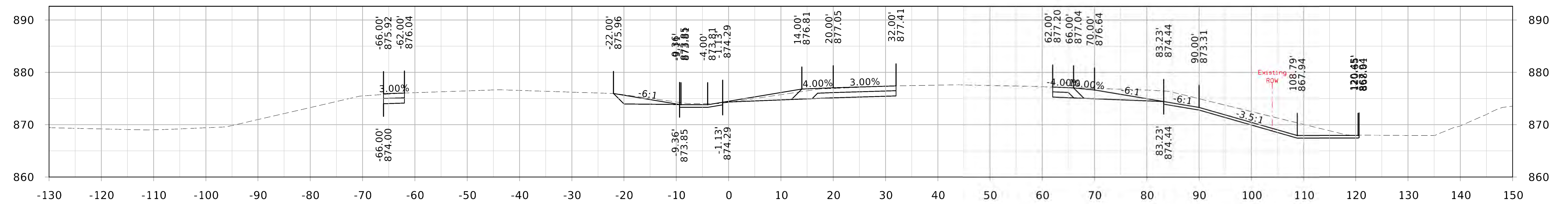
IA Highway 141



STA. 374+25.00

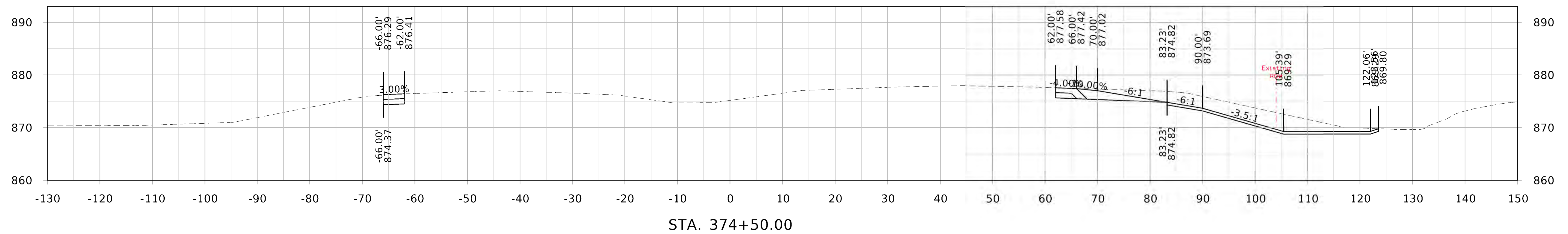
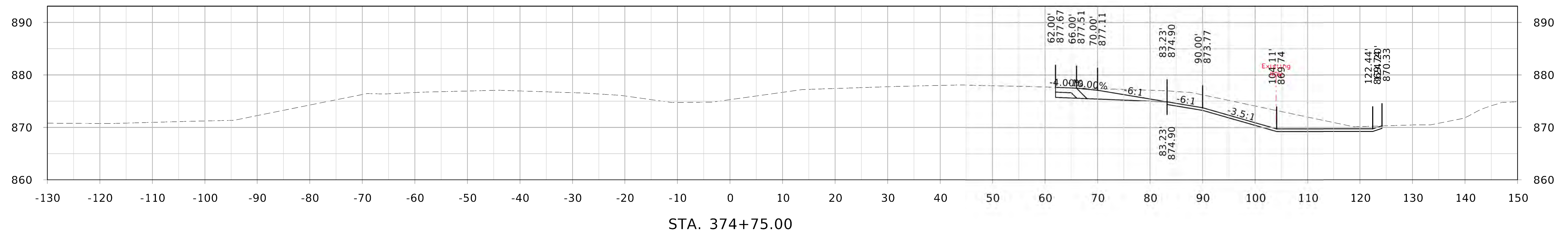
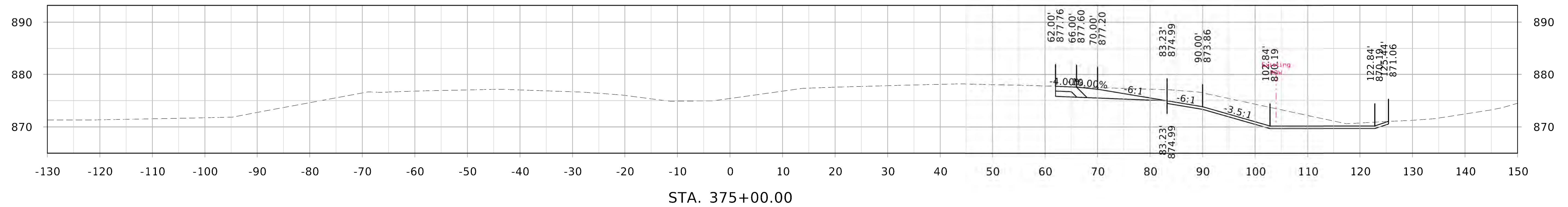


STA. 374+00.00

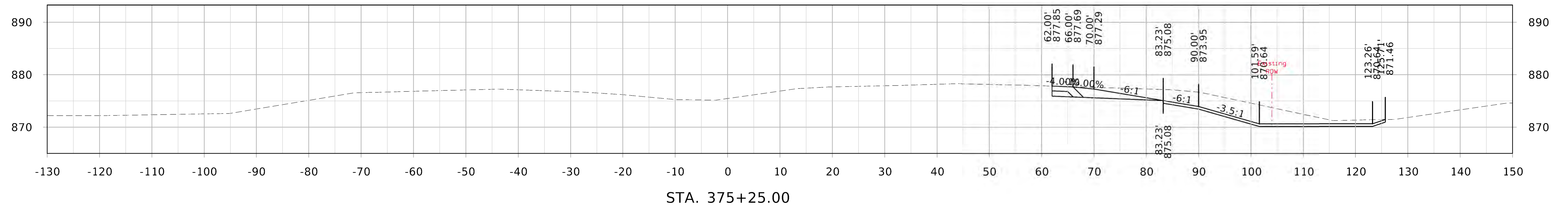
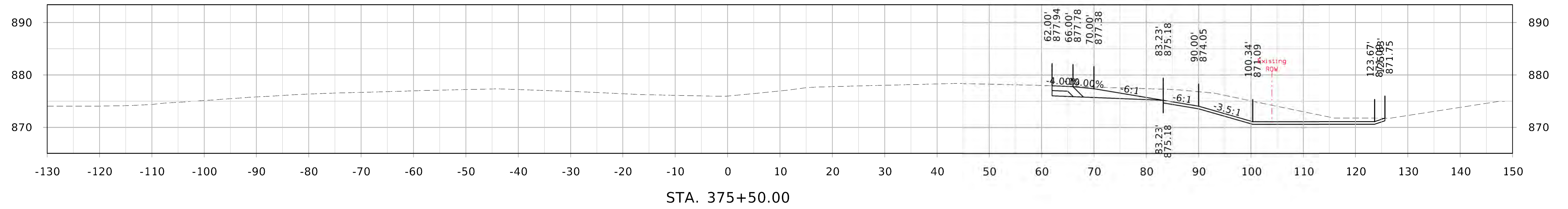
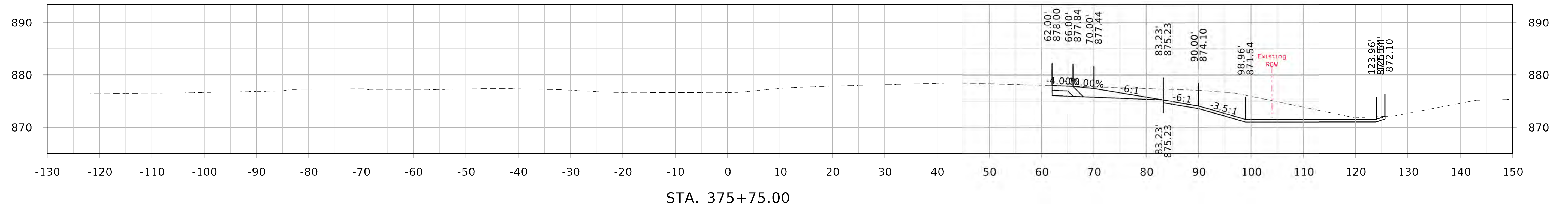
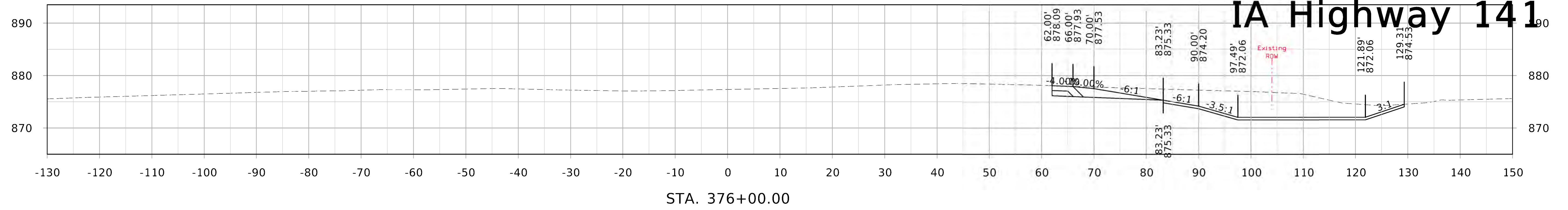


STA. 373+75.00

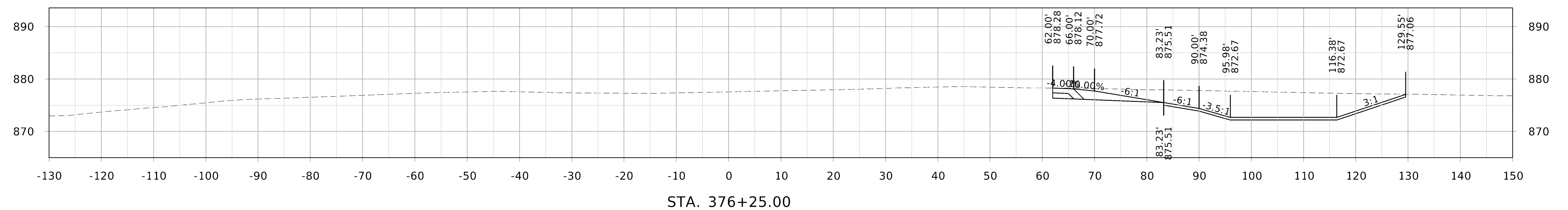
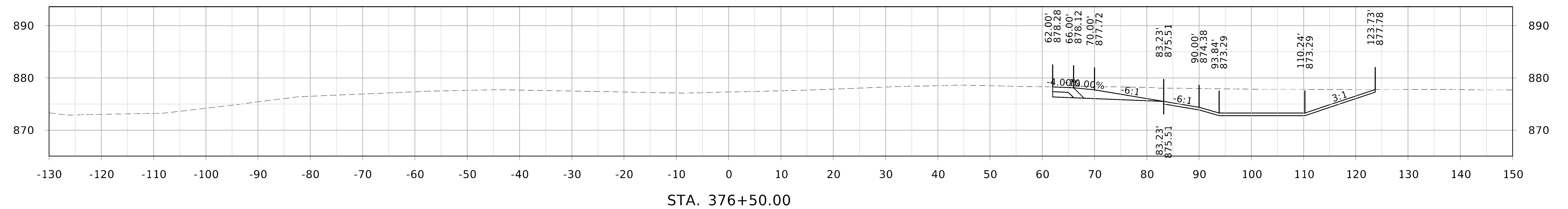
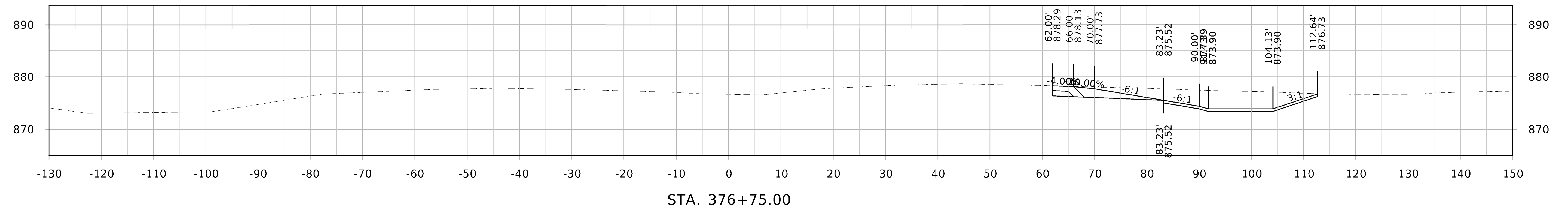
IA Highway 141



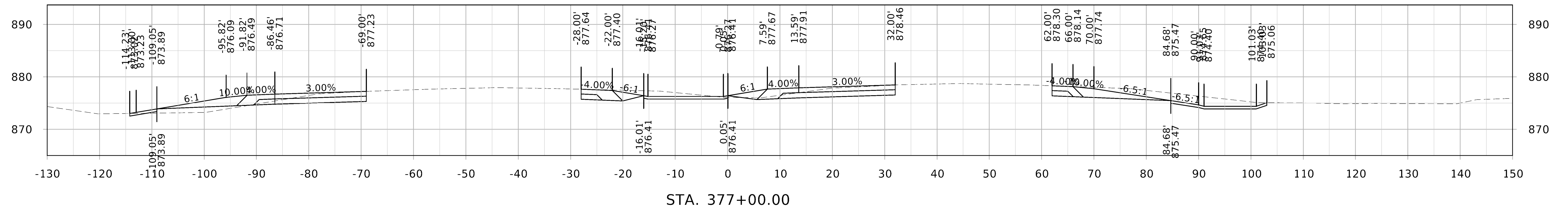
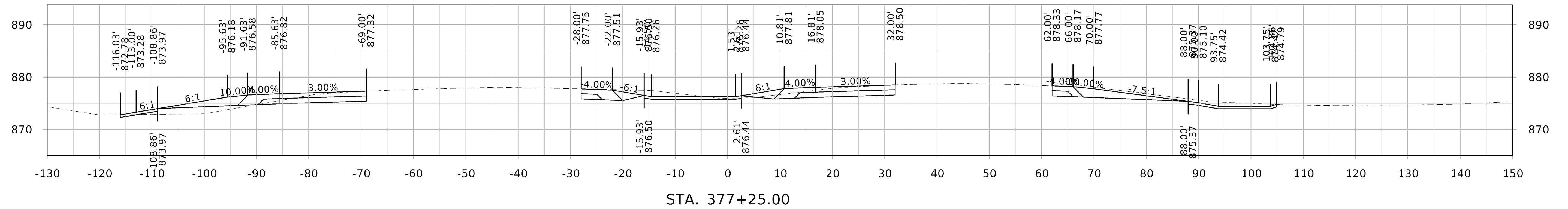
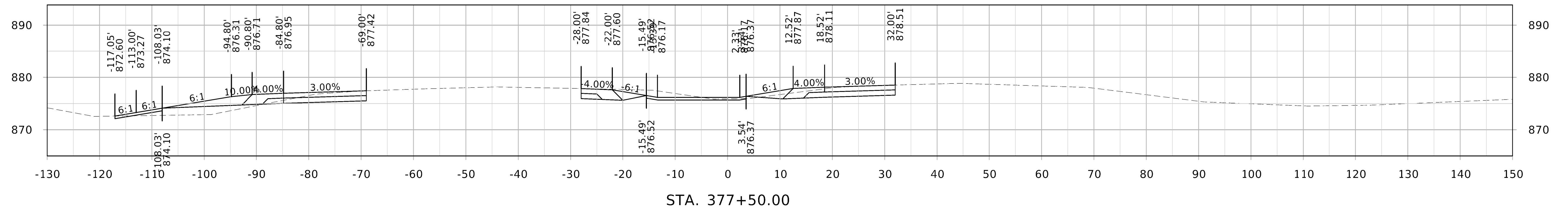
IA Highway 141



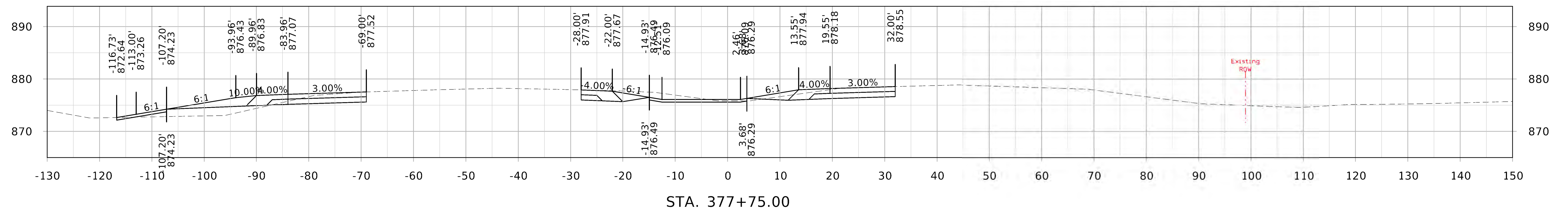
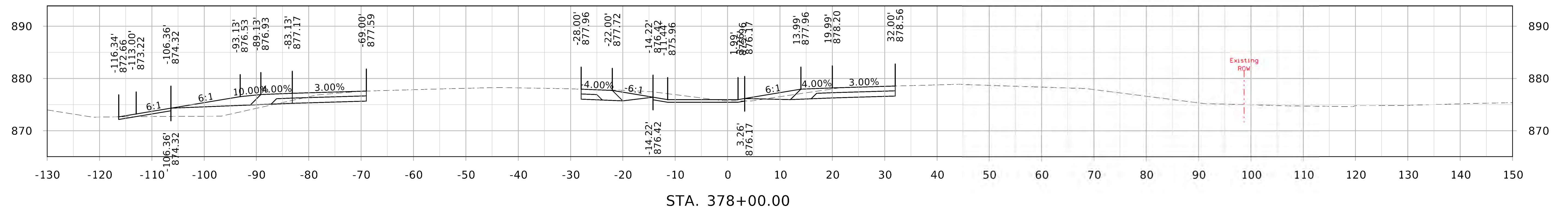
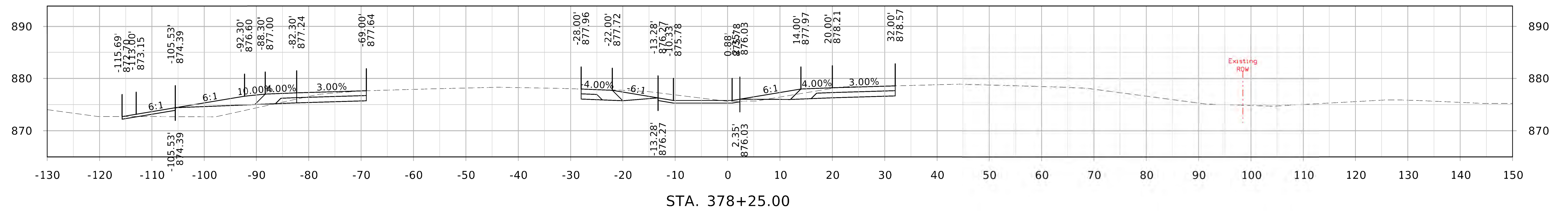
IA Highway 141



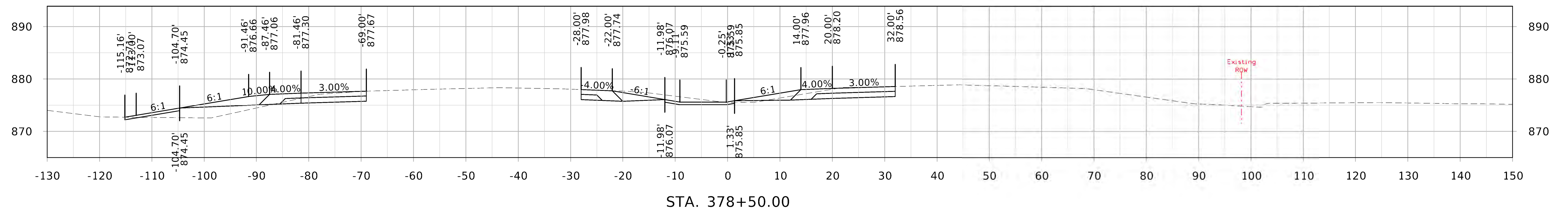
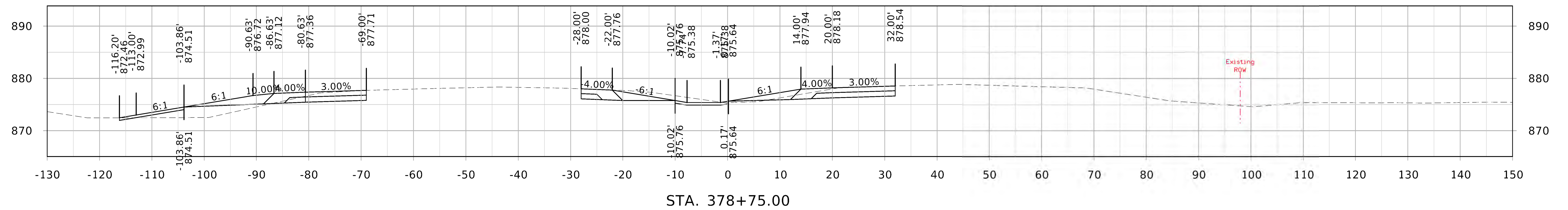
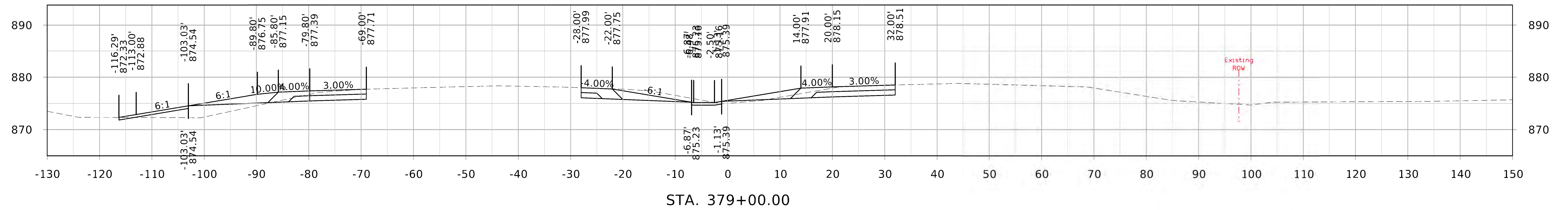
IA Highway 141



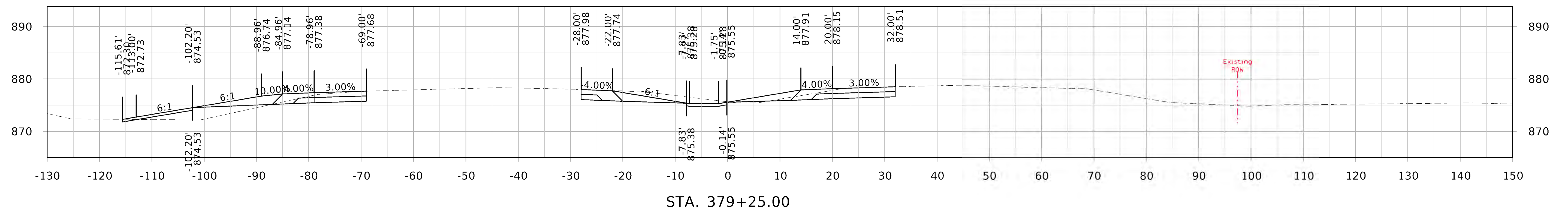
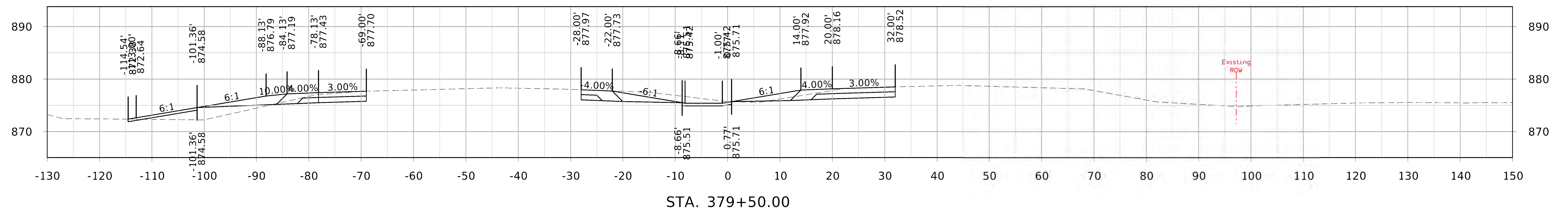
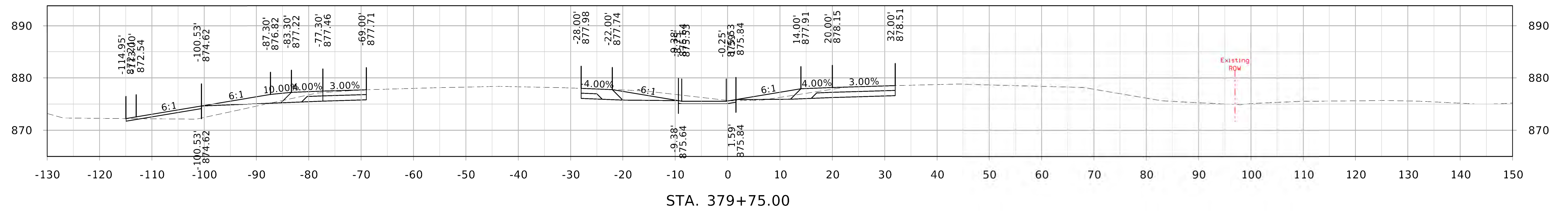
IA Highway 141



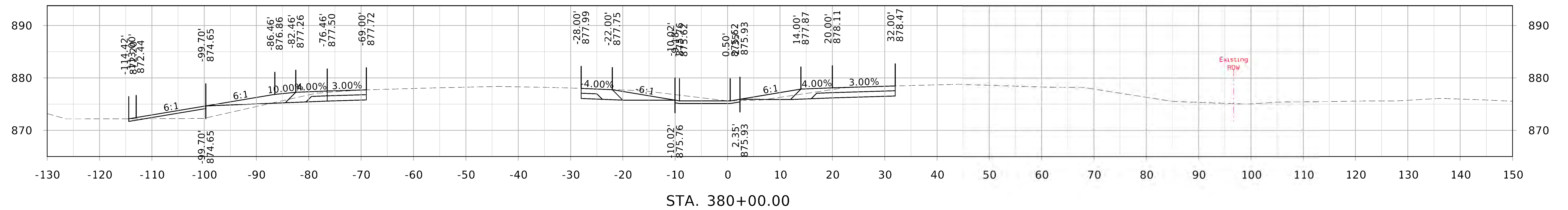
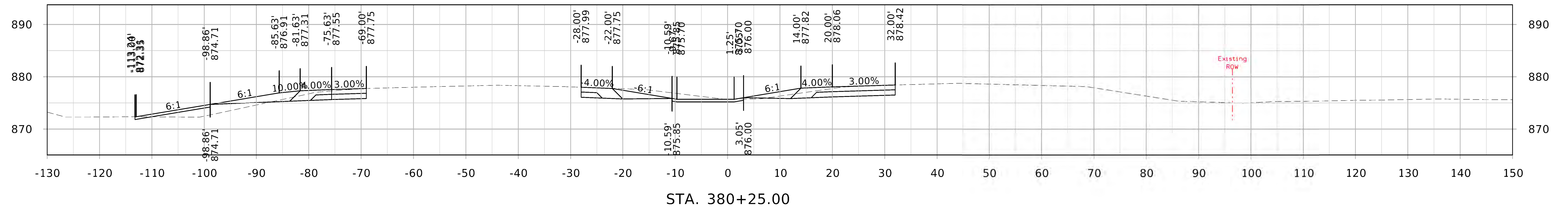
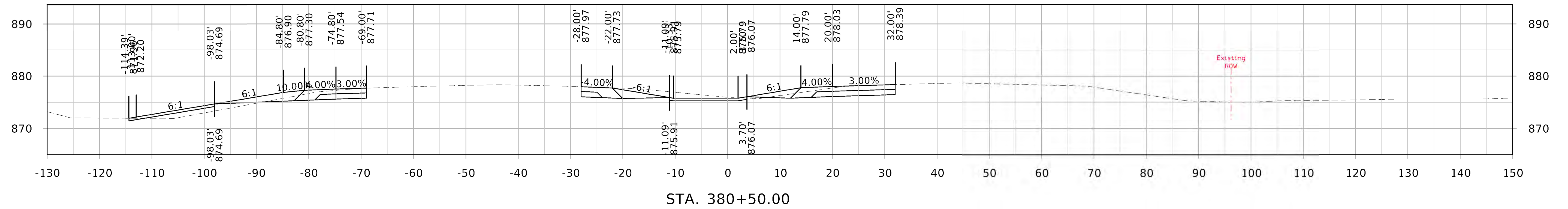
IA Highway 141



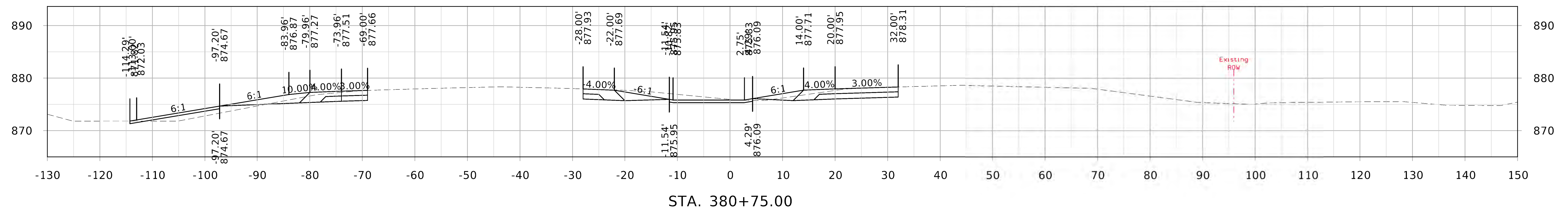
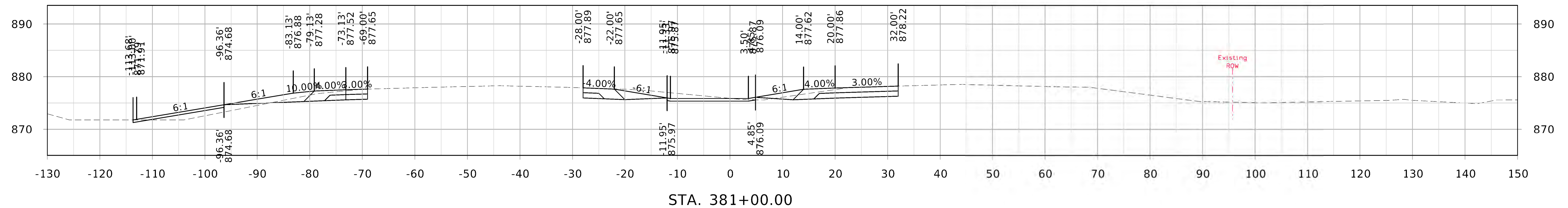
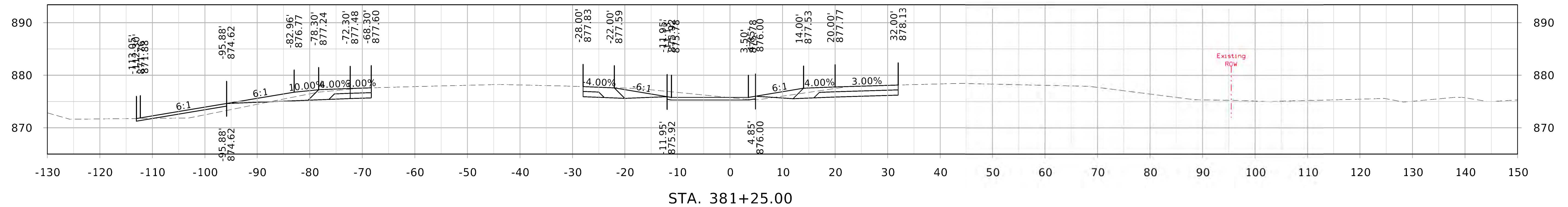
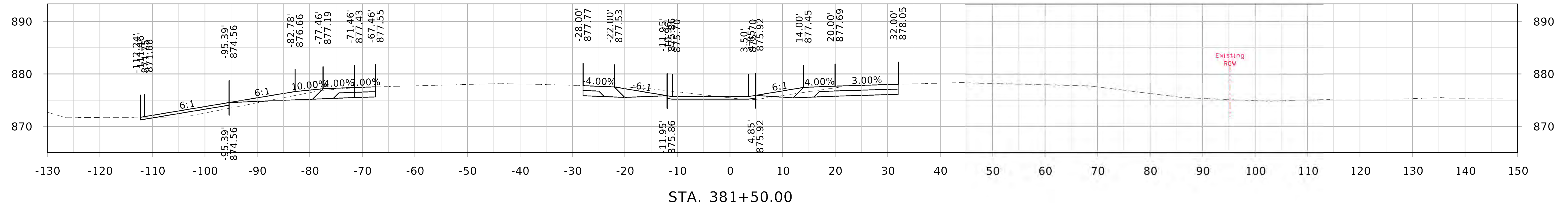
IA Highway 141



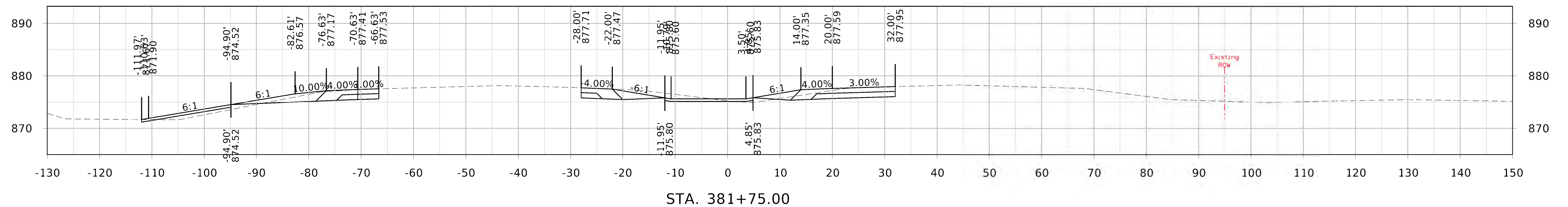
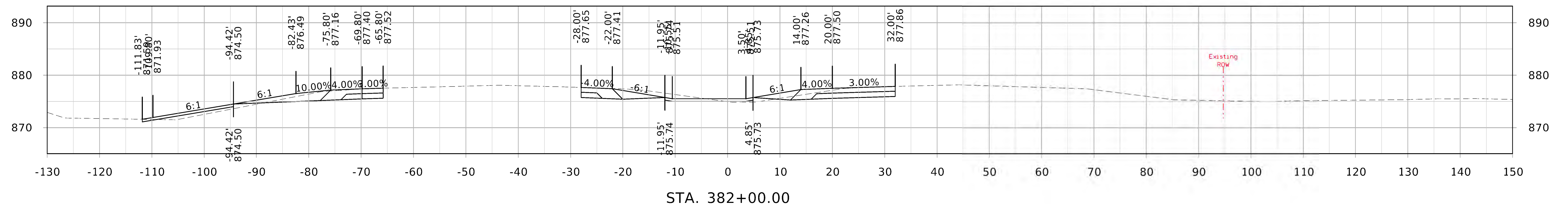
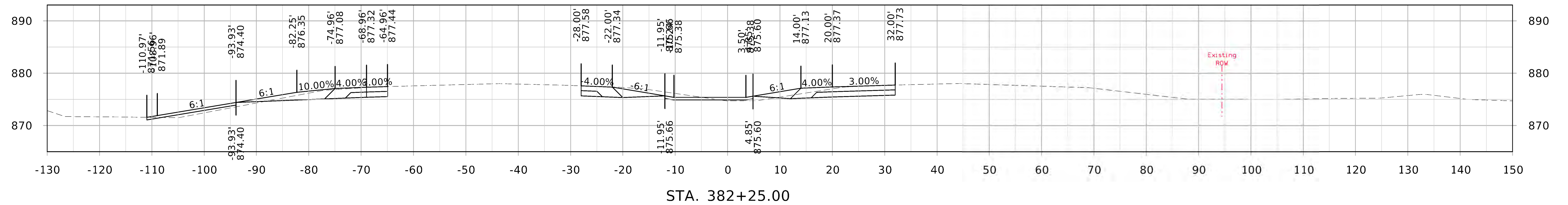
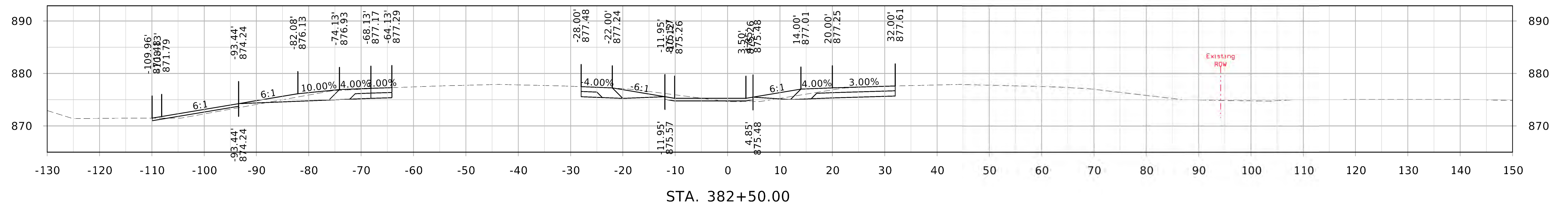
IA Highway 141



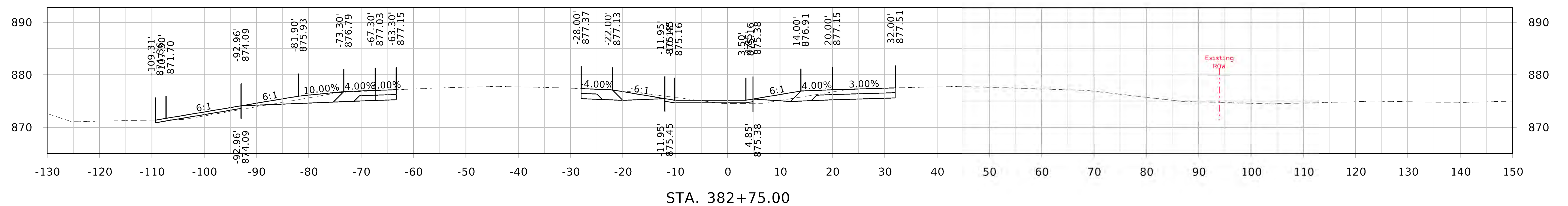
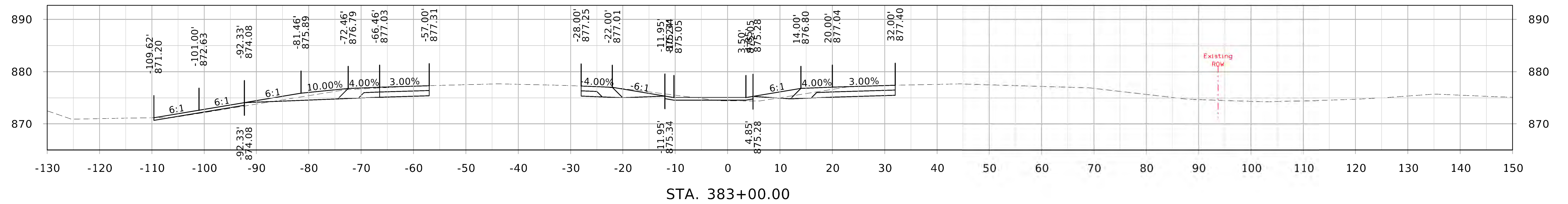
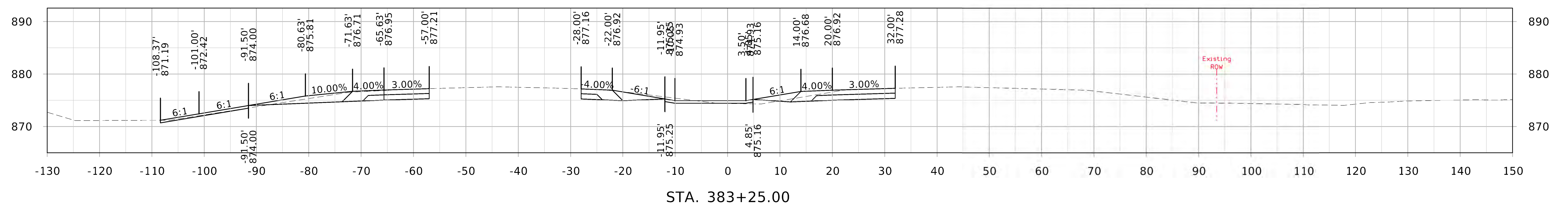
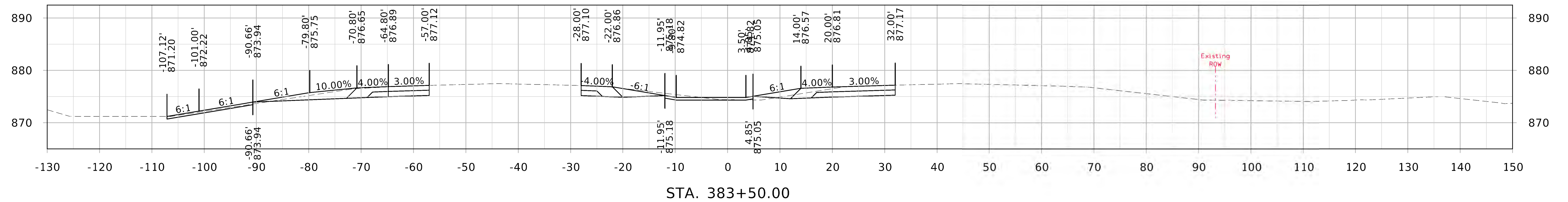
IA Highway 141



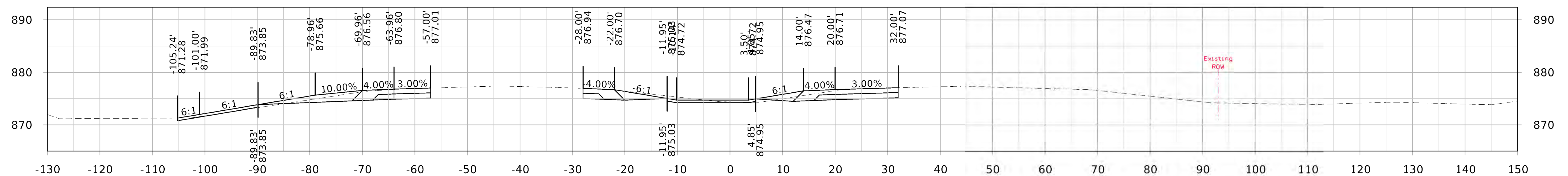
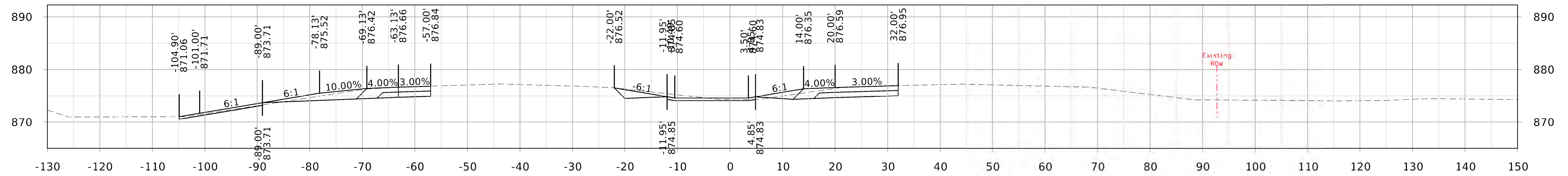
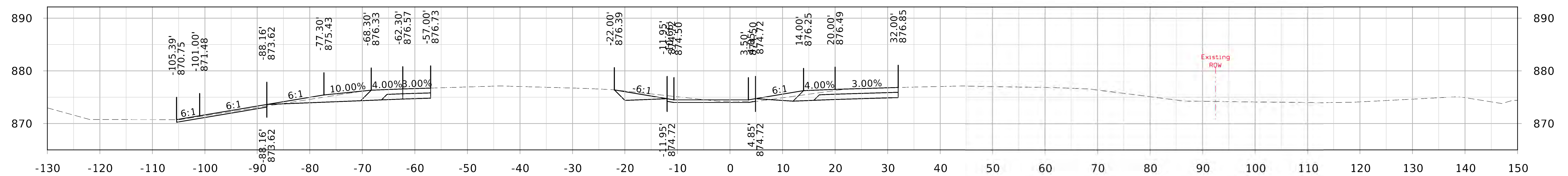
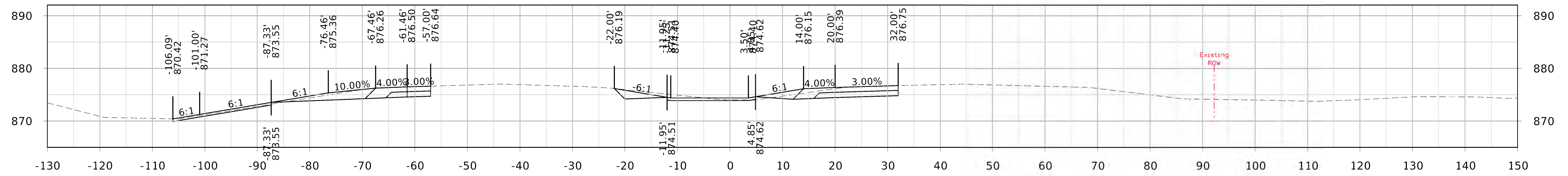
IA Highway 141



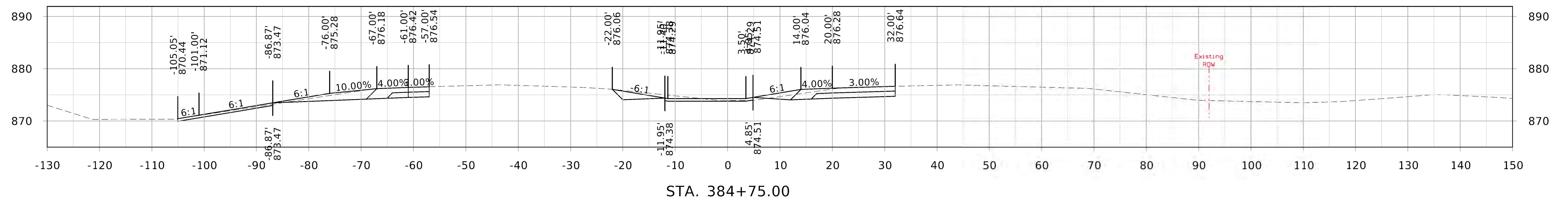
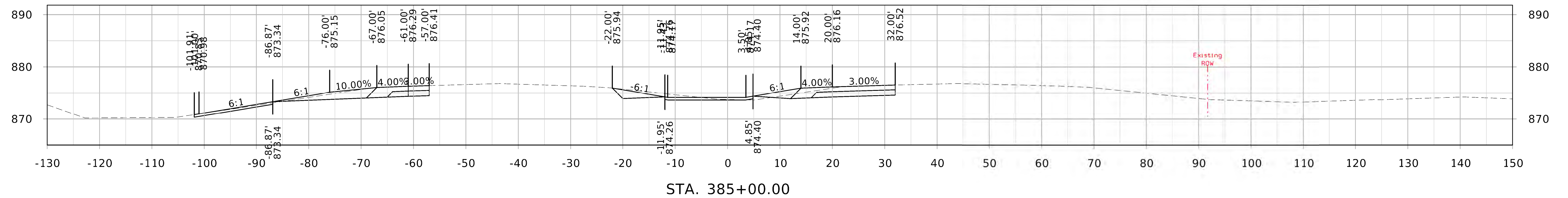
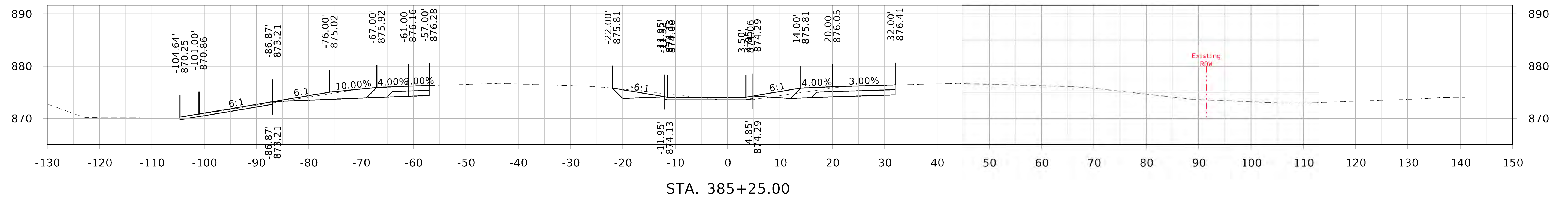
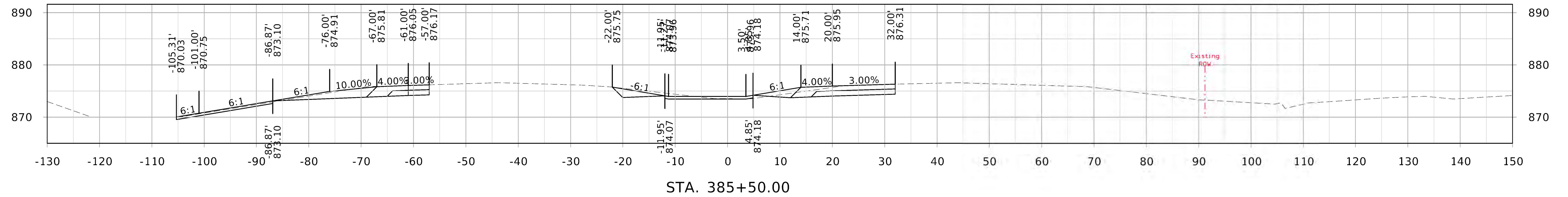
IA Highway 141



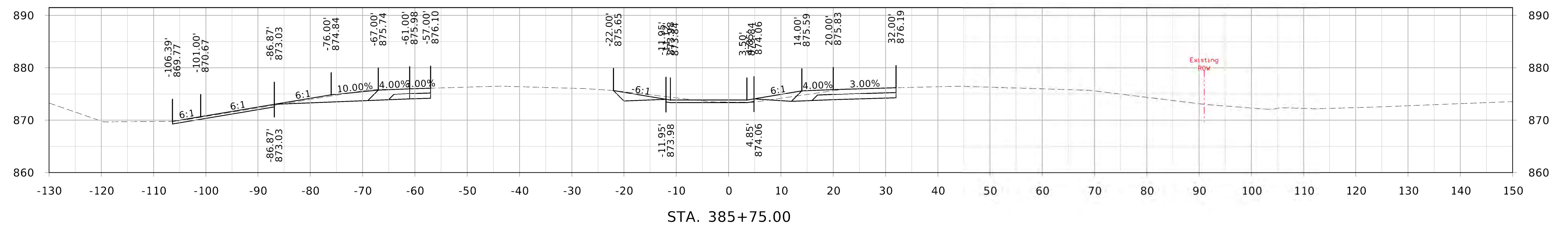
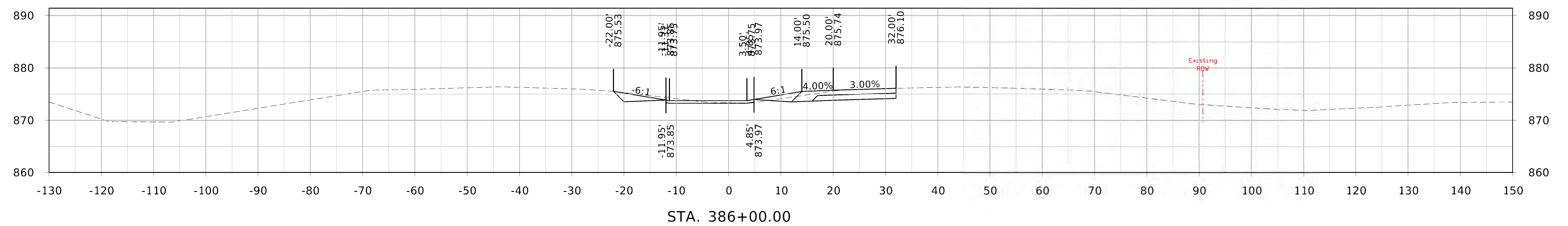
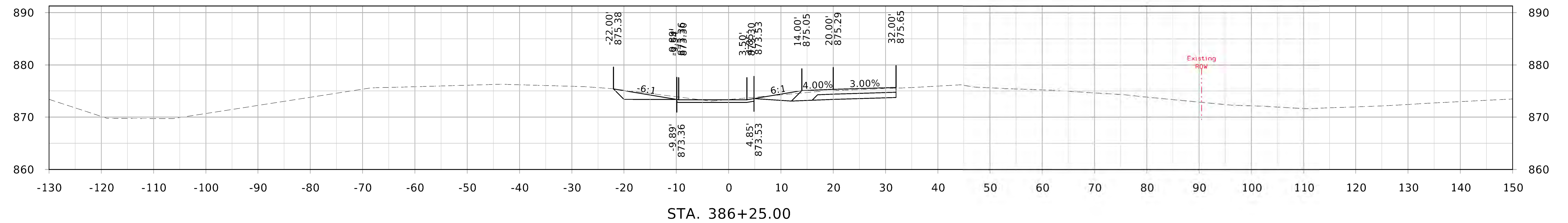
IA Highway 141



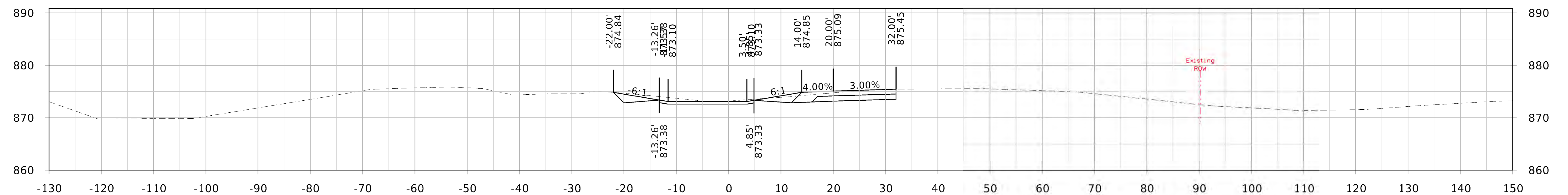
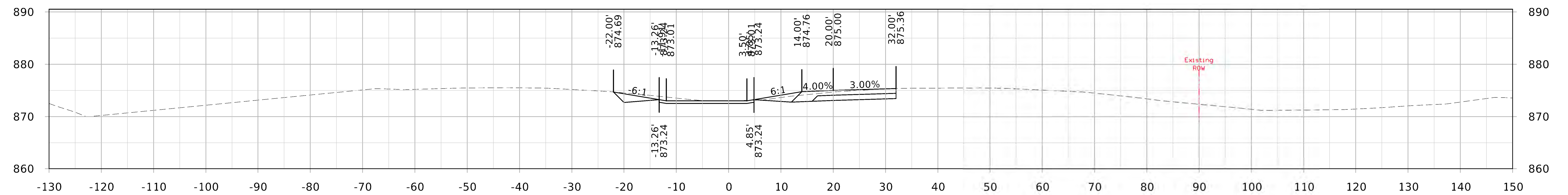
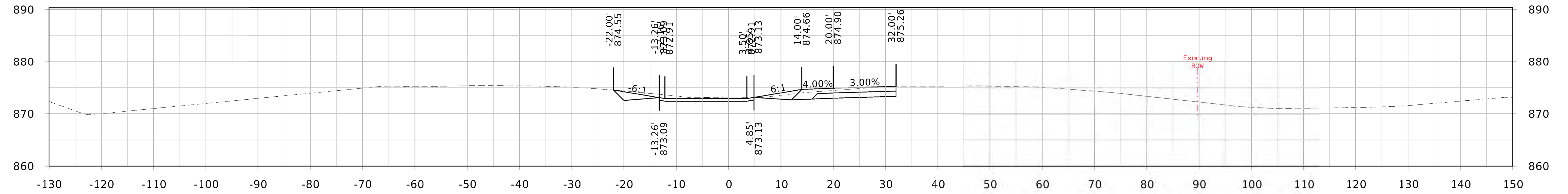
IA Highway 141



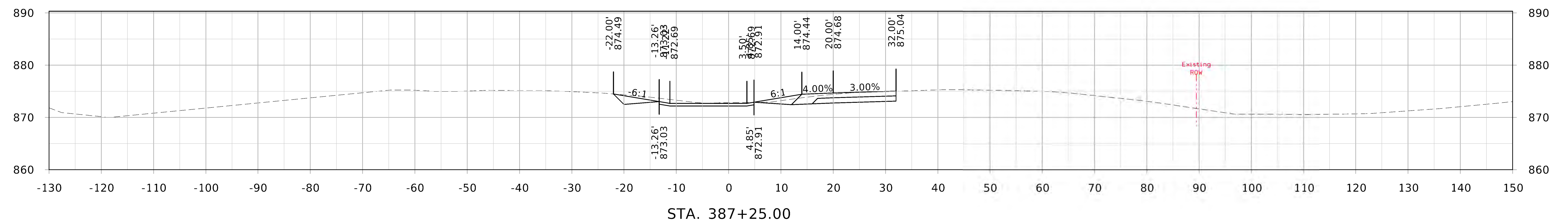
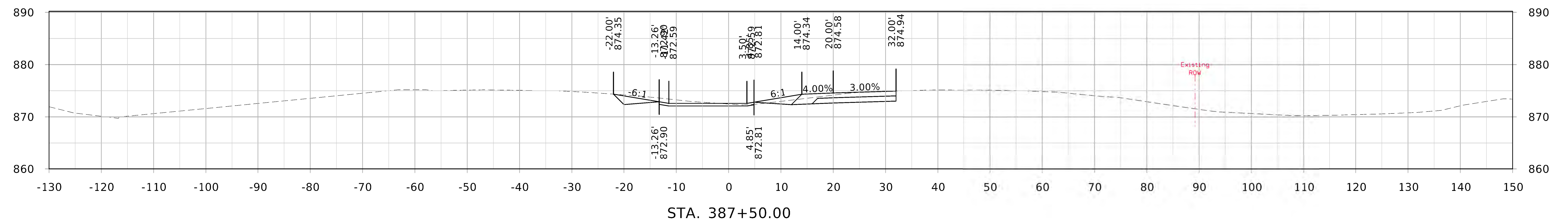
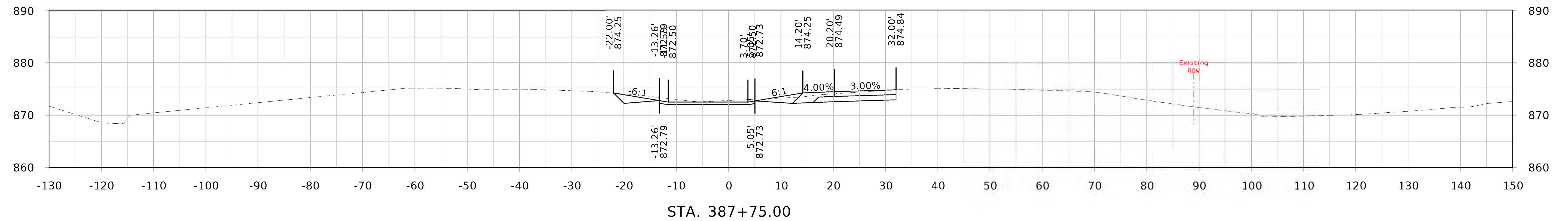
IA Highway 141



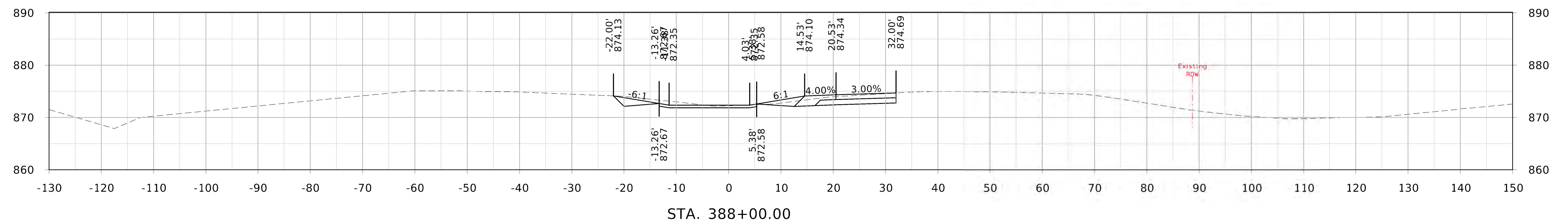
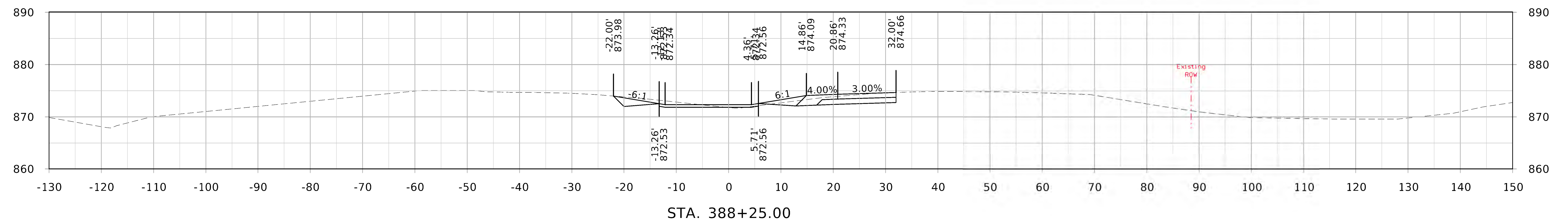
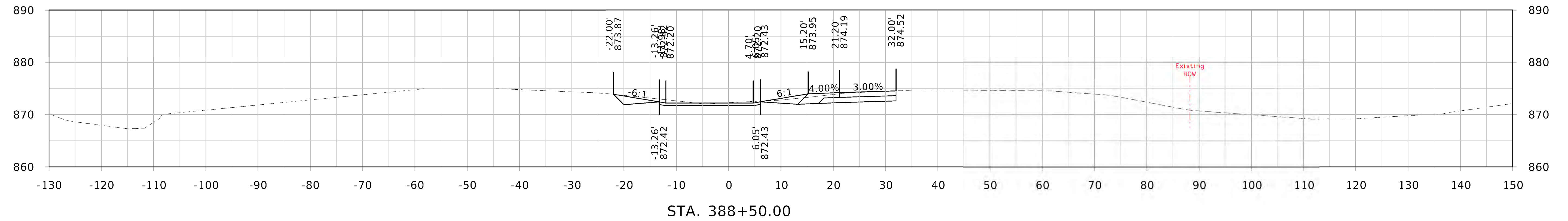
IA Highway 141



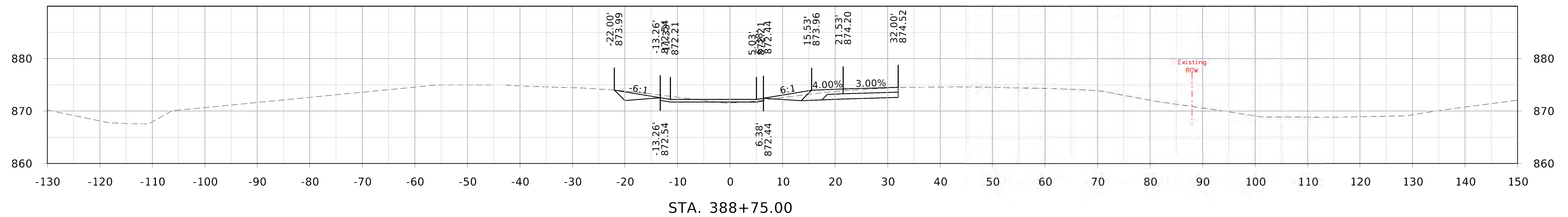
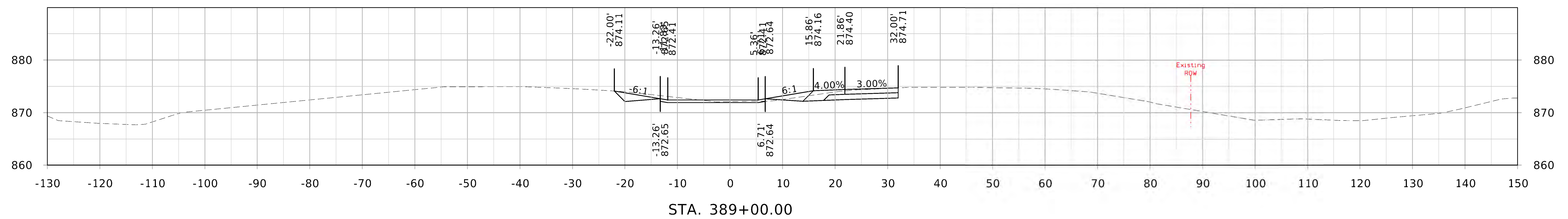
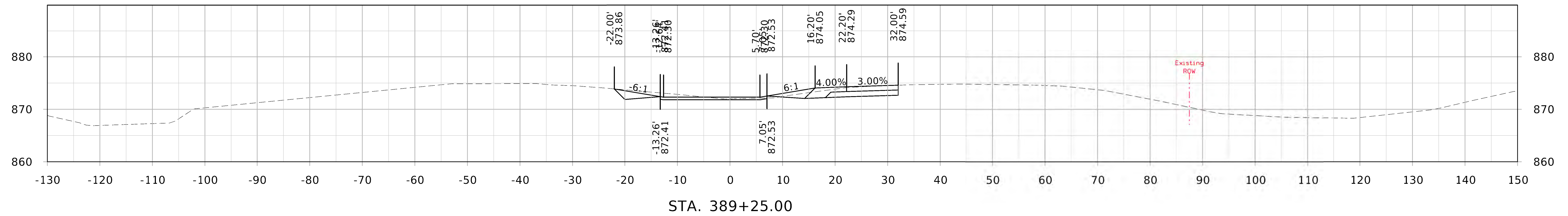
IA Highway 141



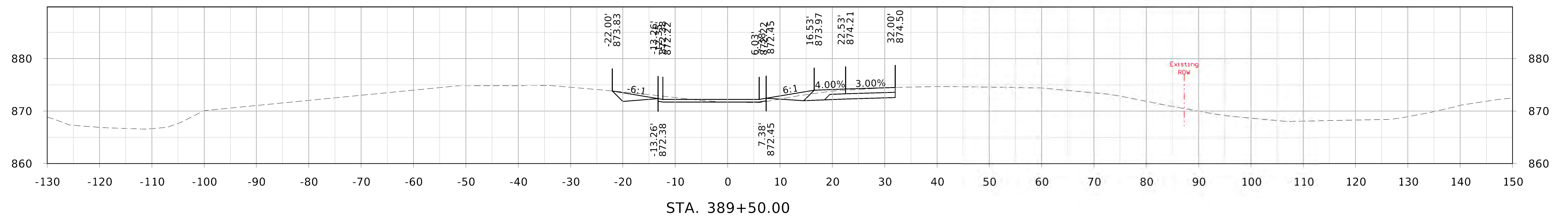
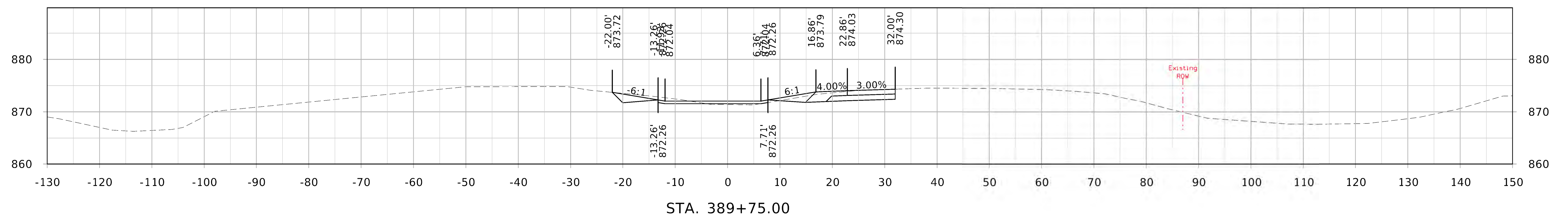
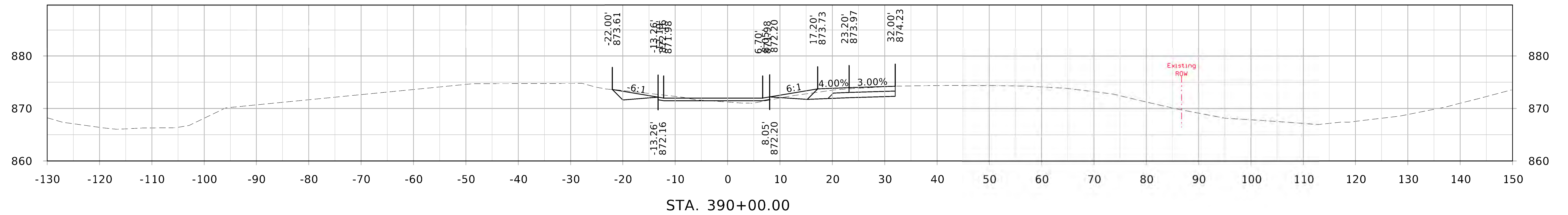
IA Highway 141



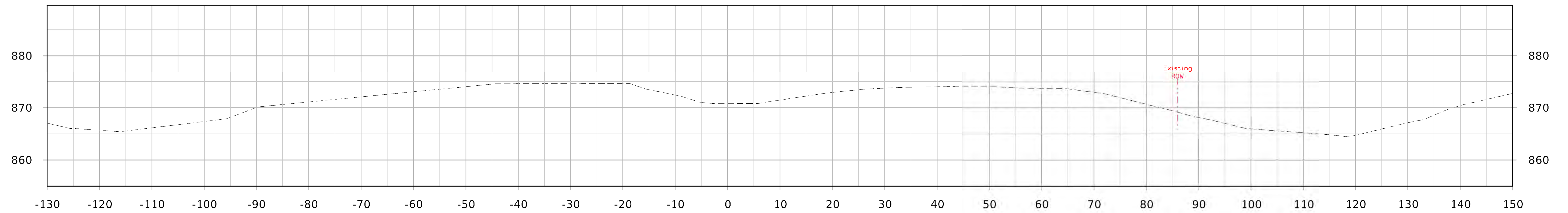
IA Highway 141



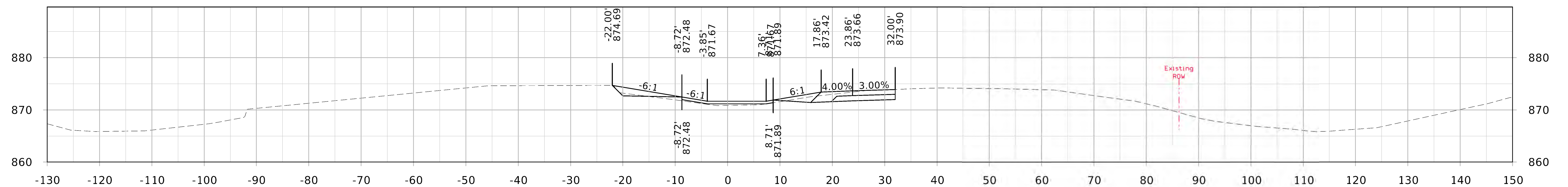
IA Highway 141



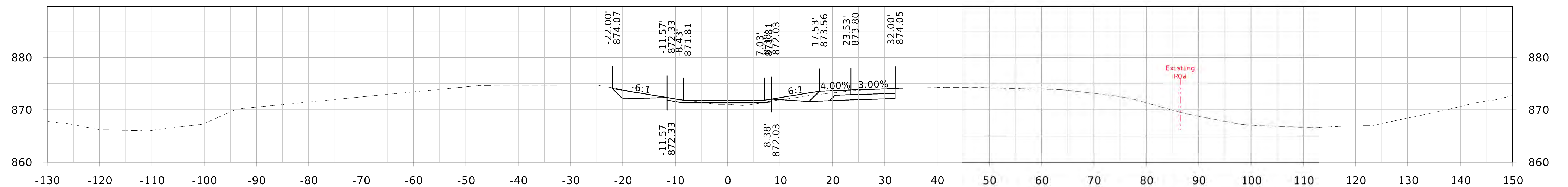
IA Highway 141



STA. 390+75.00

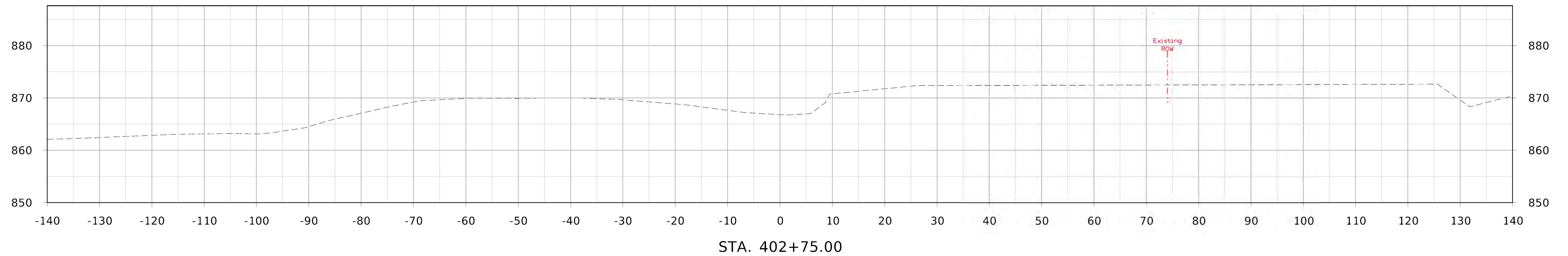
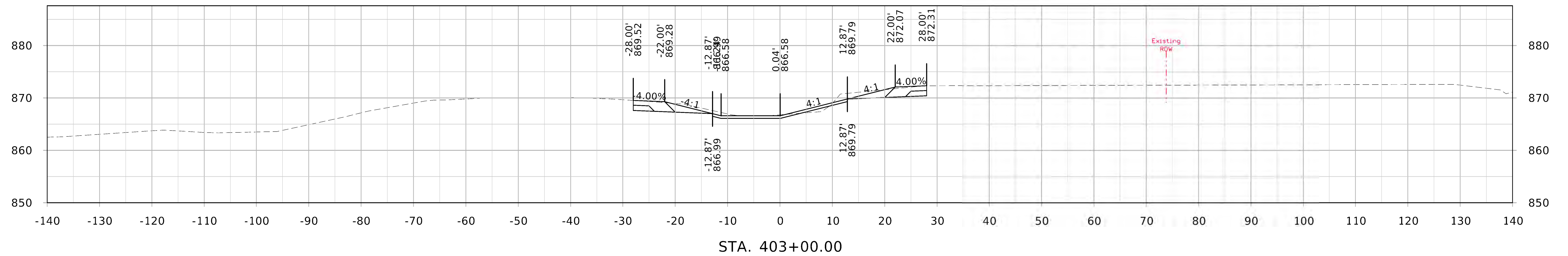
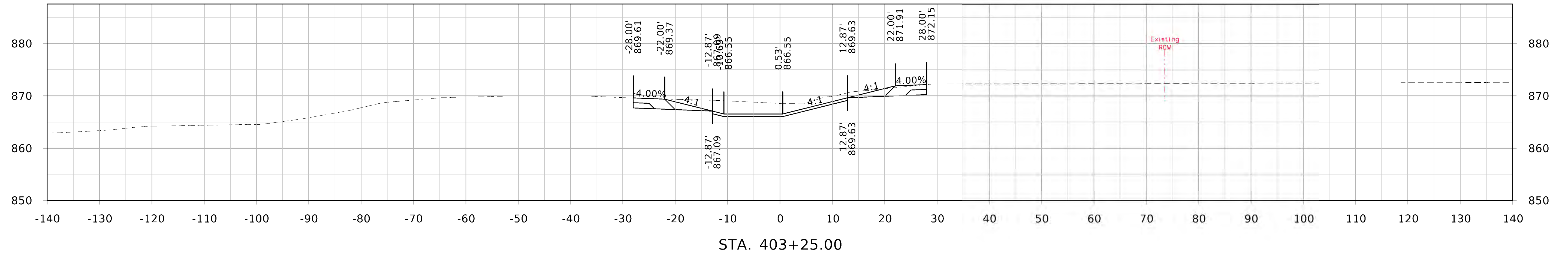


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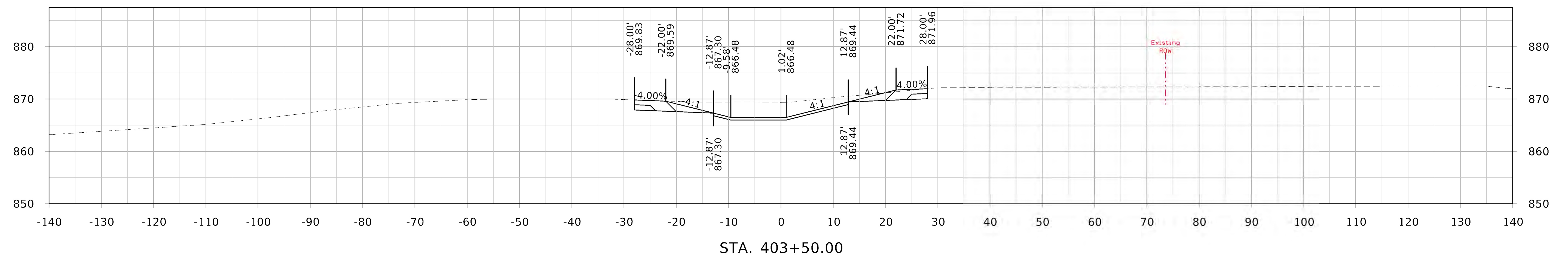
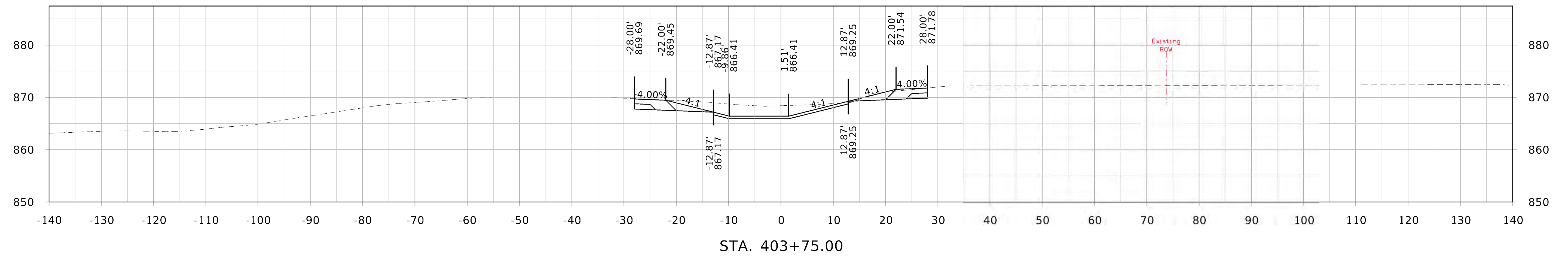
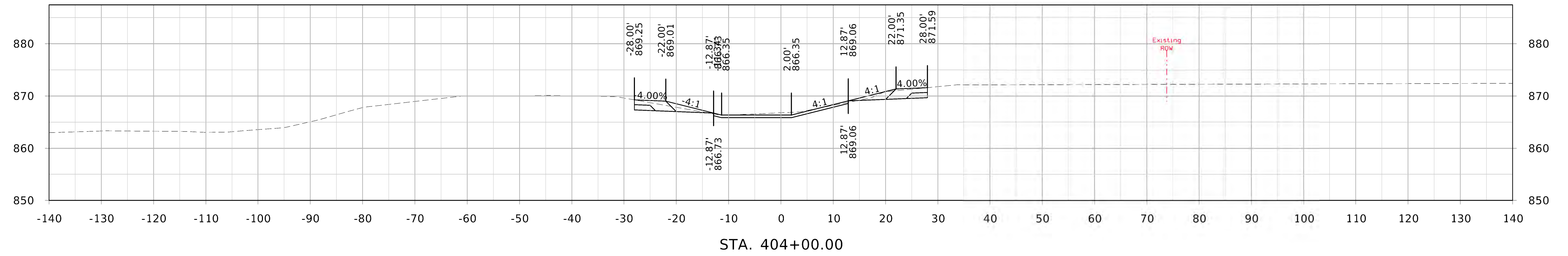


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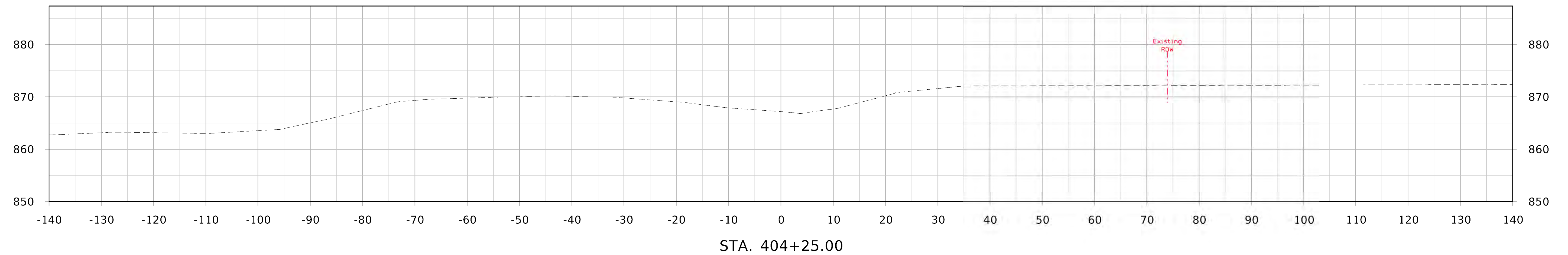
IA Highway 141



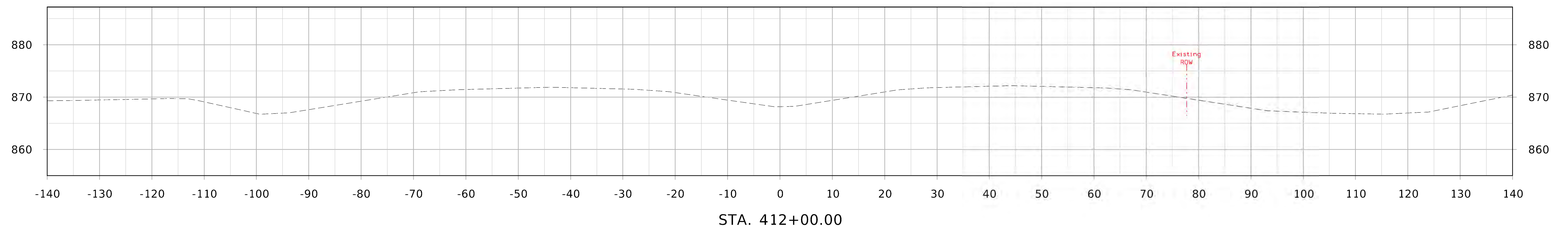
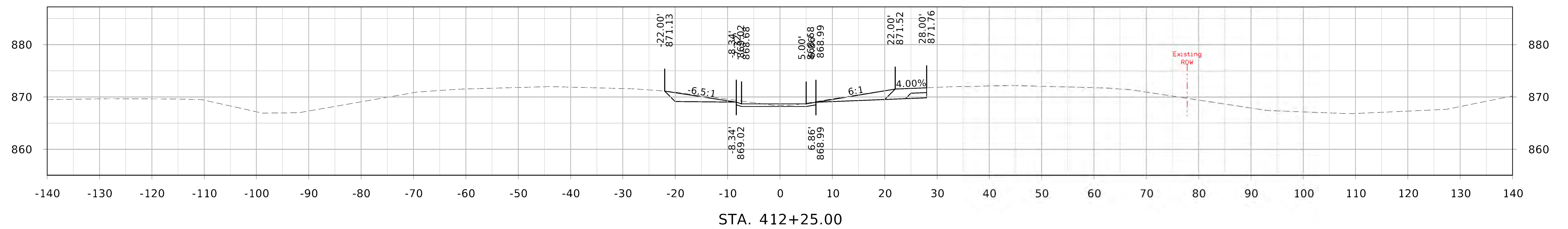
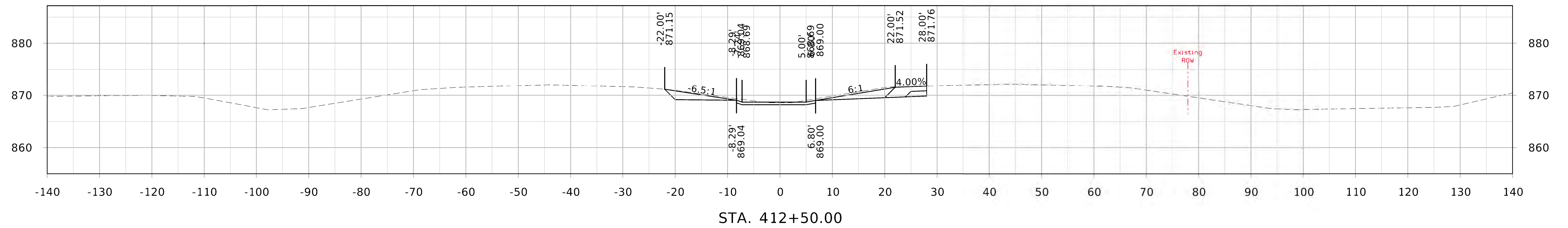
IA Highway 141



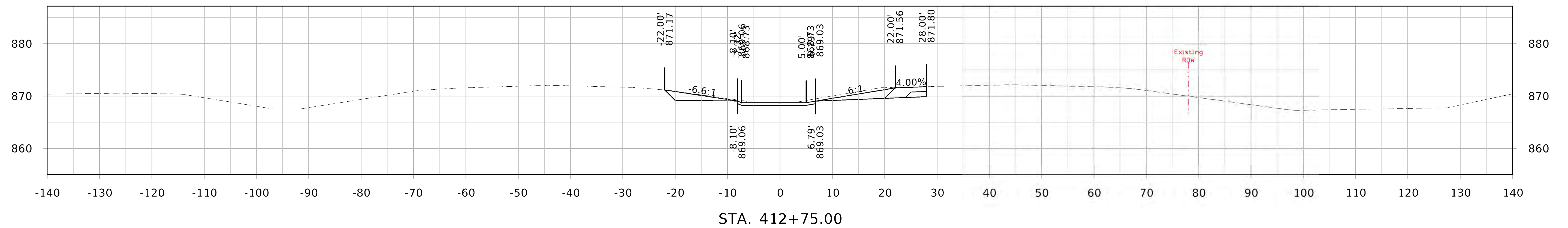
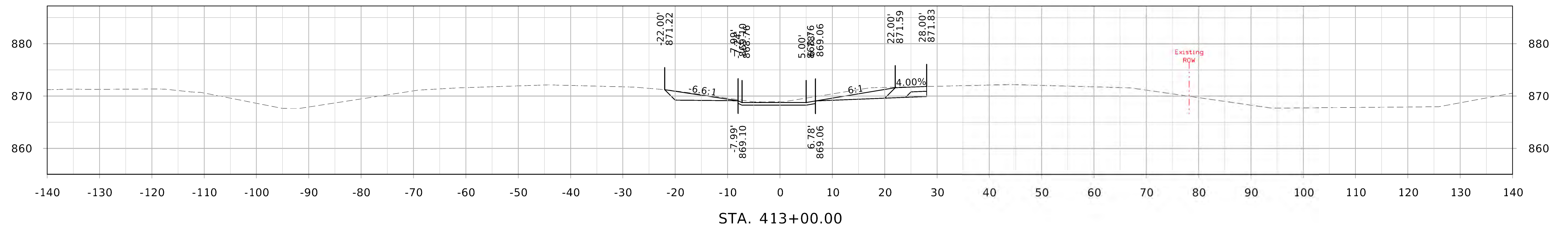
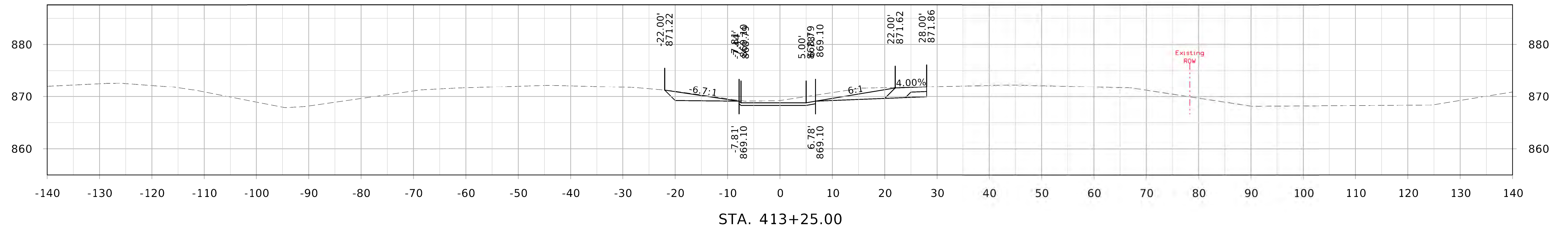
IA Highway 141



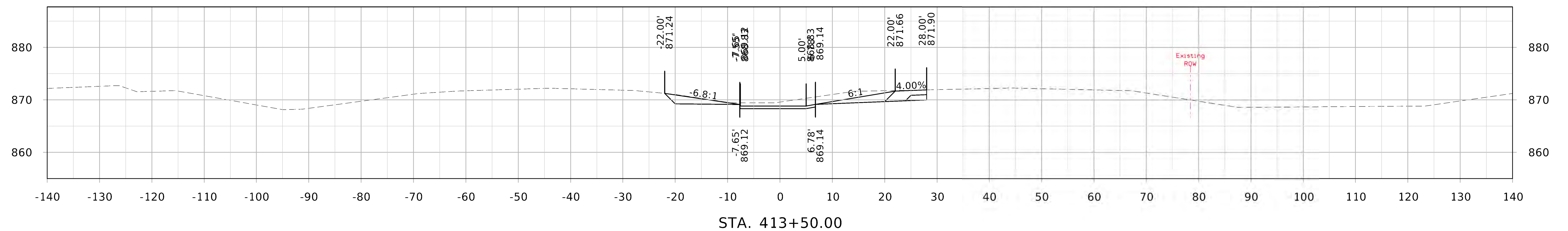
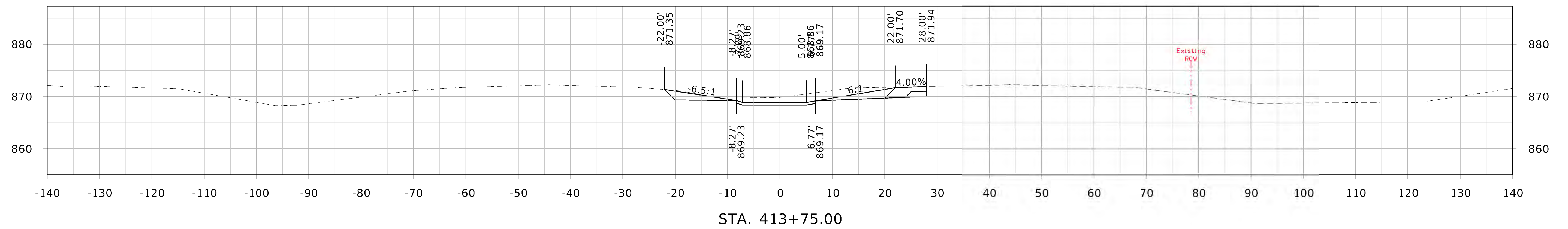
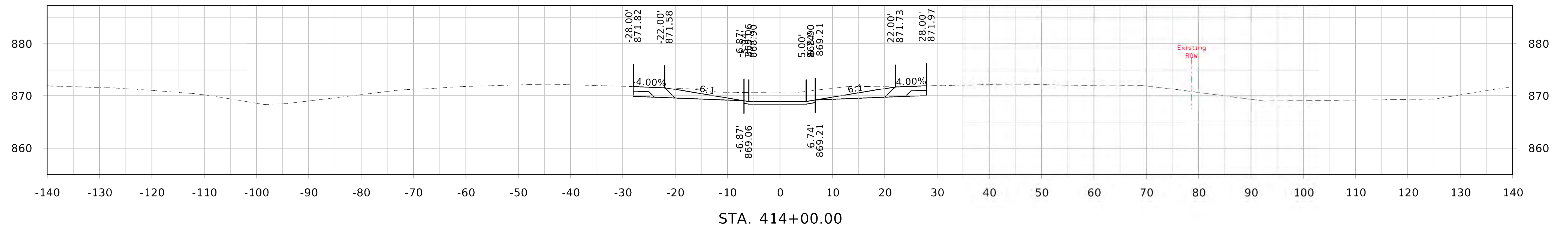
IA Highway 141



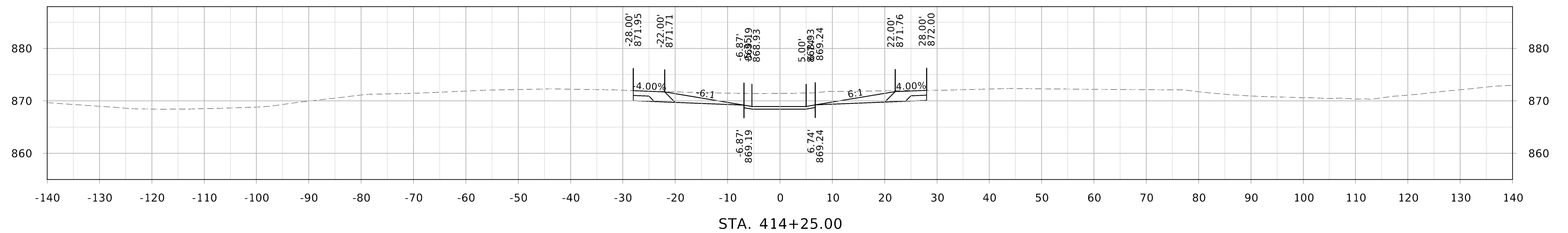
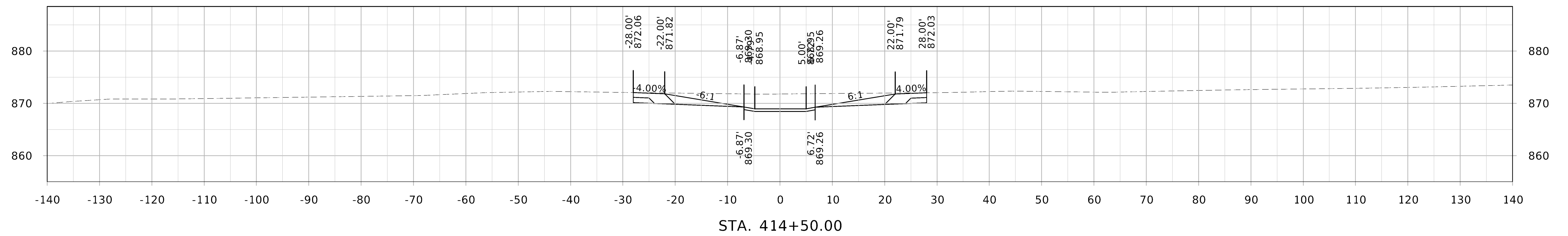
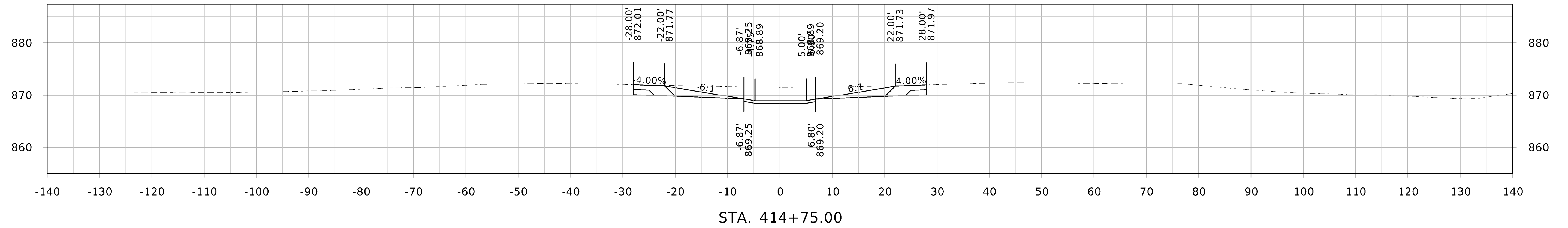
IA Highway 141



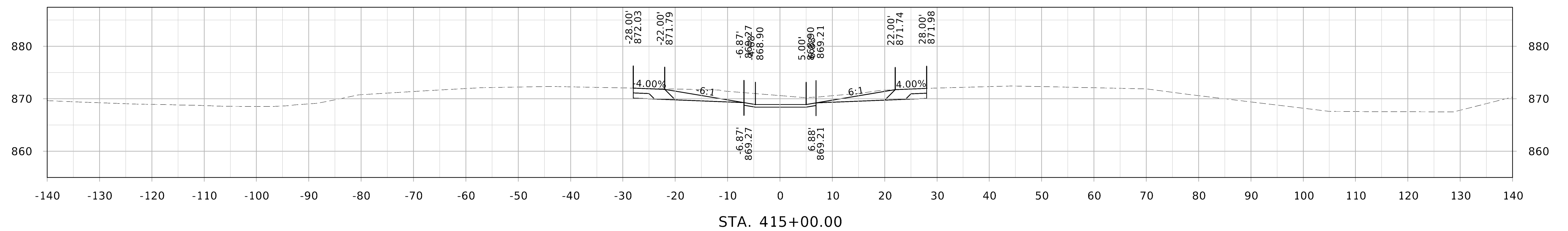
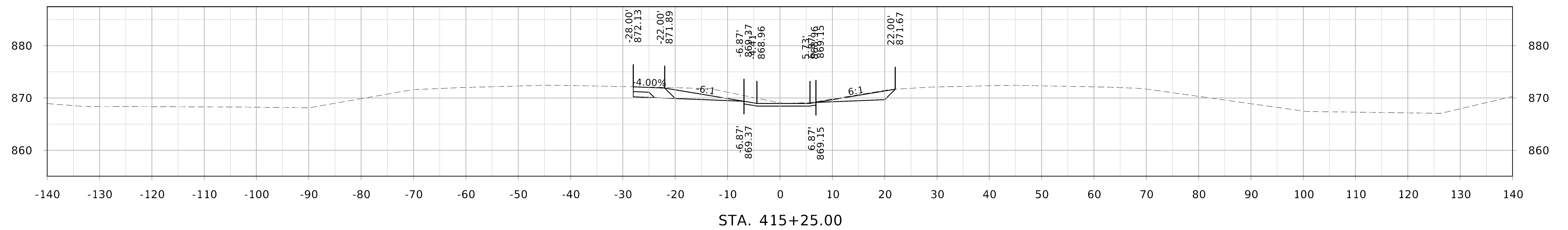
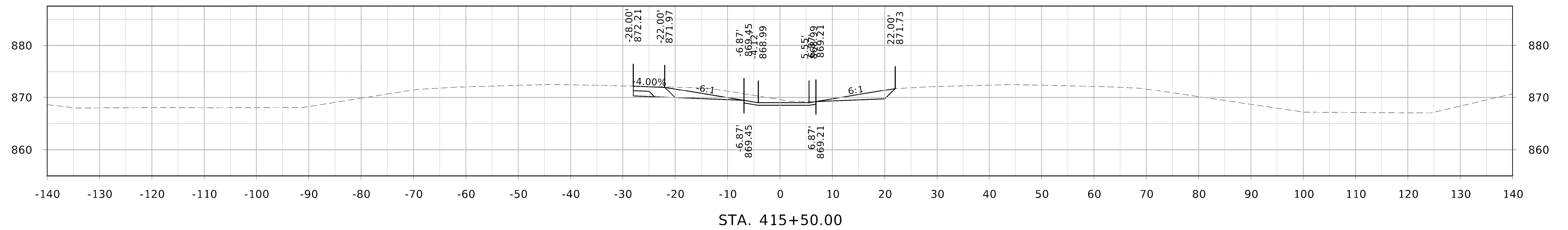
IA Highway 141



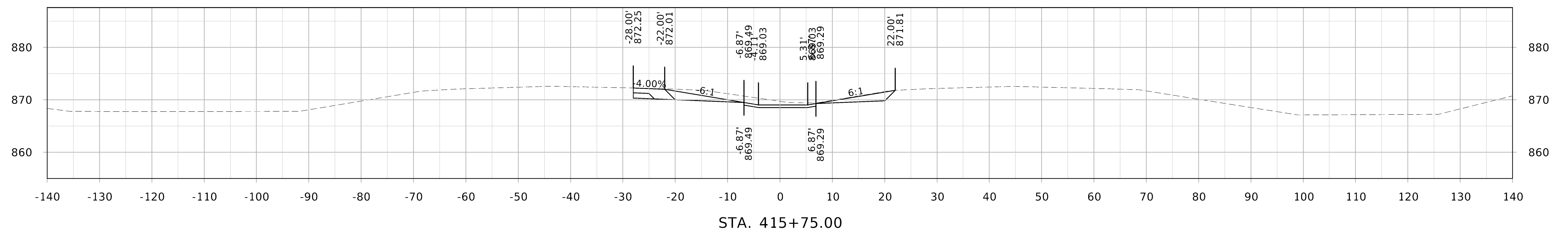
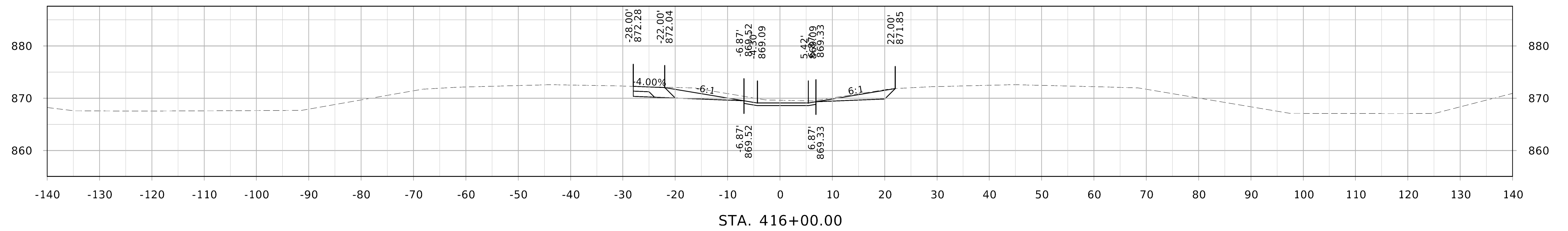
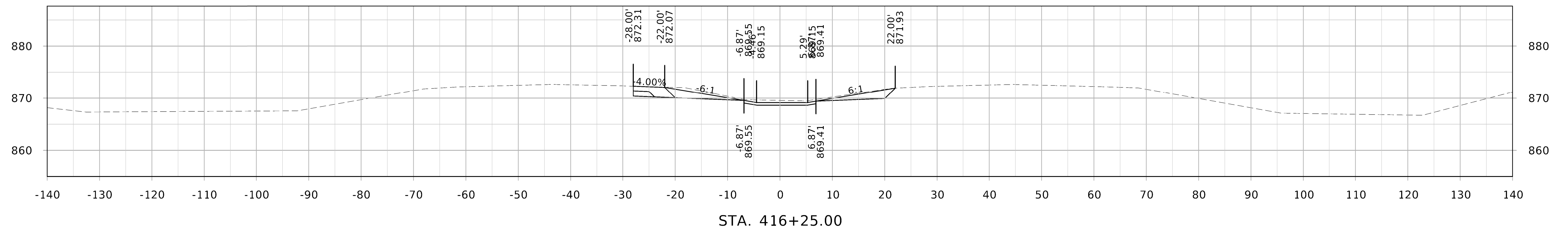
IA Highway 141



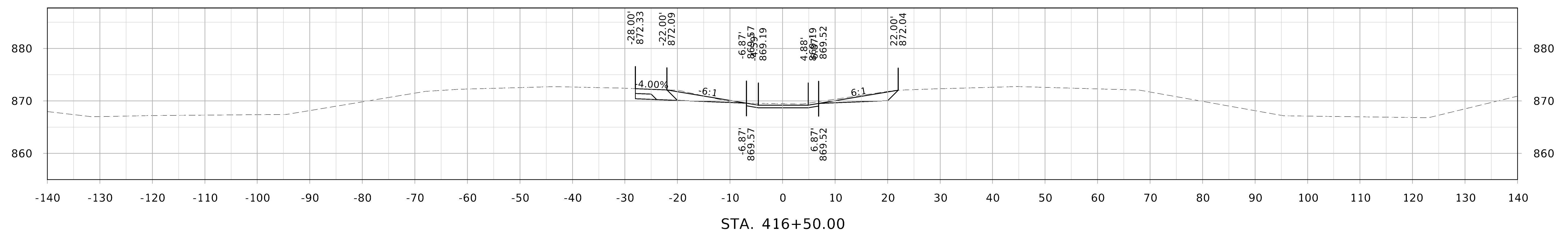
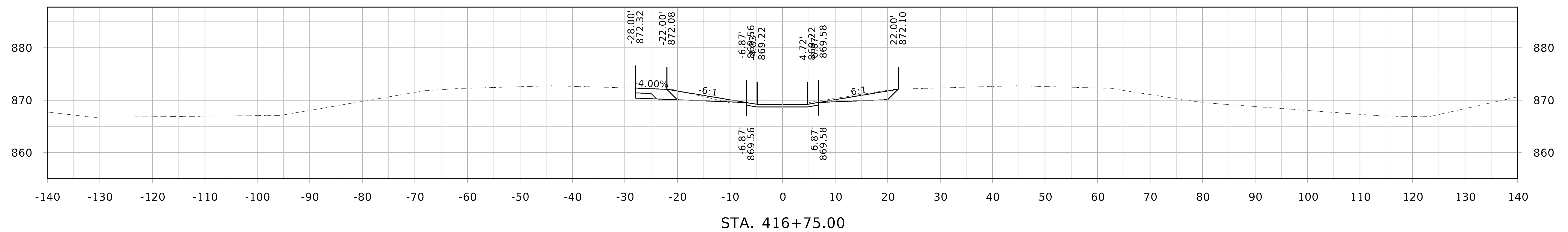
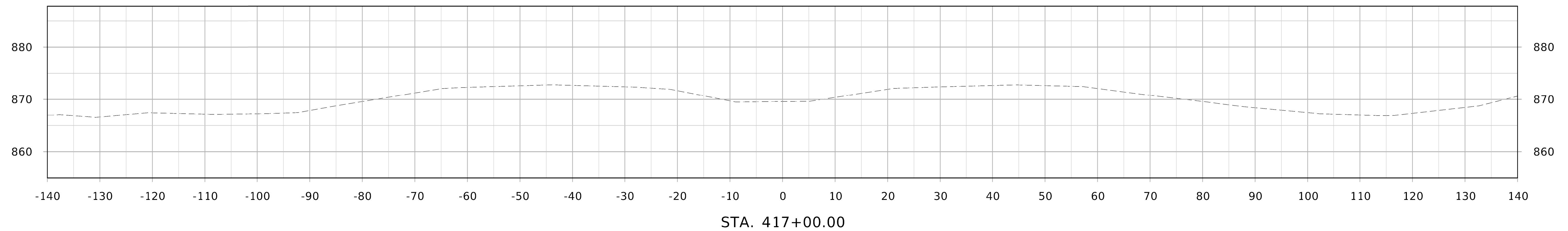
IA Highway 141



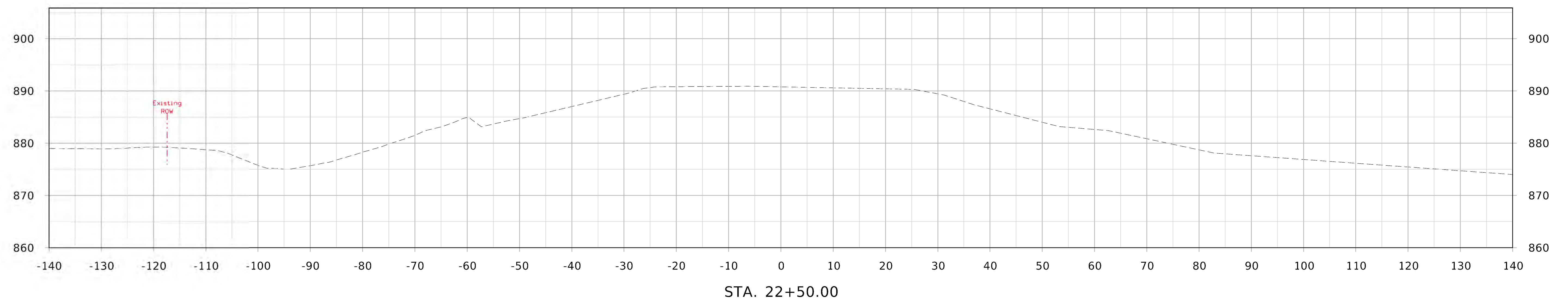
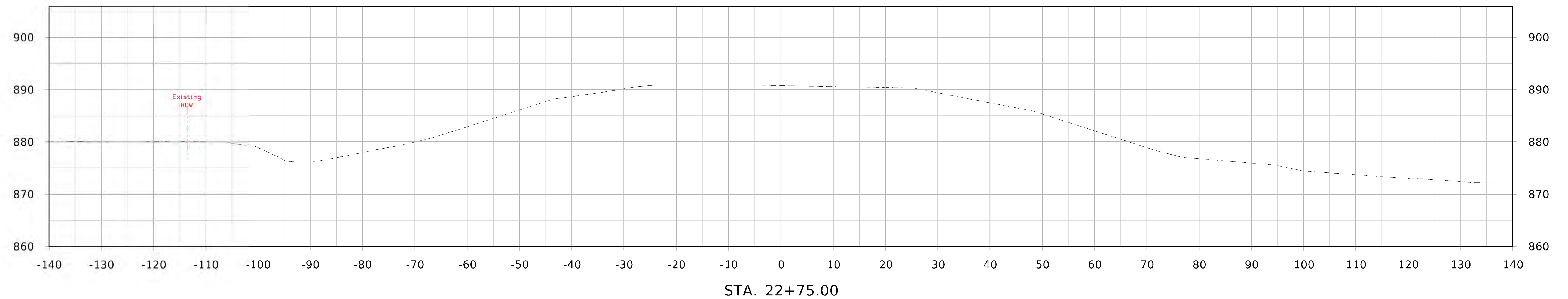
IA Highway 141



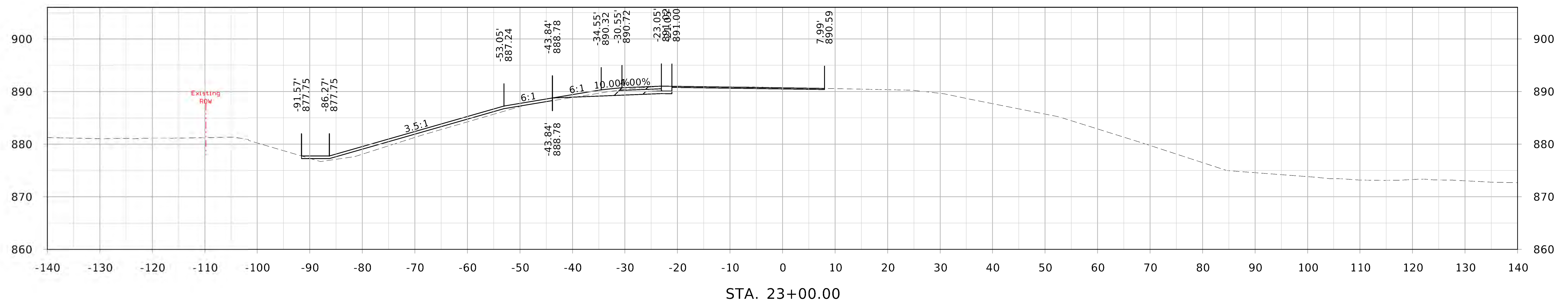
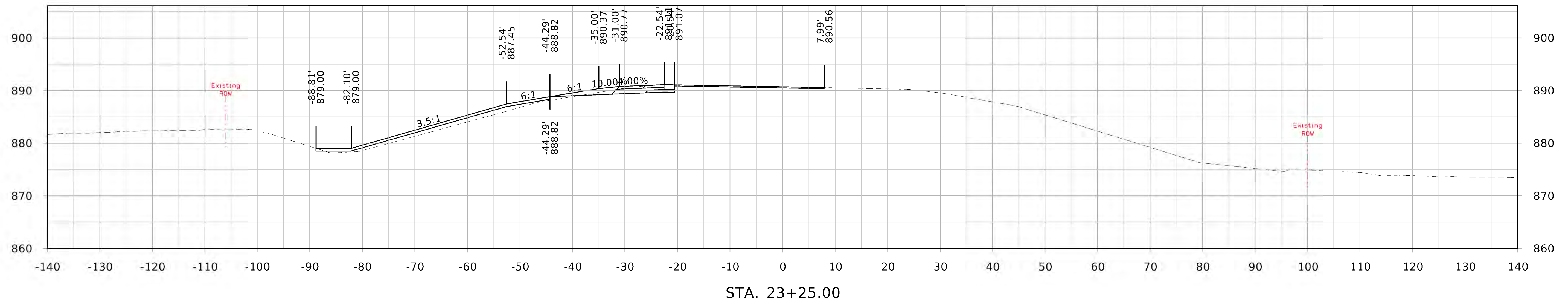
IA Highway 141



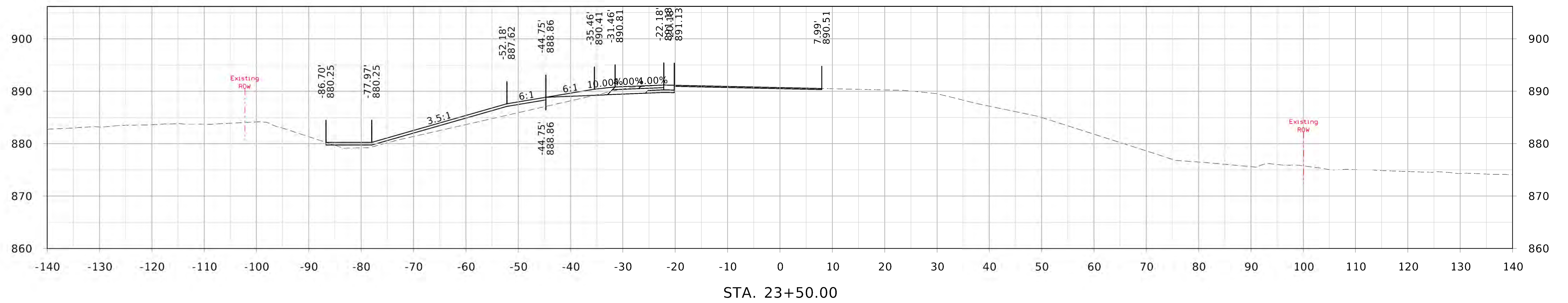
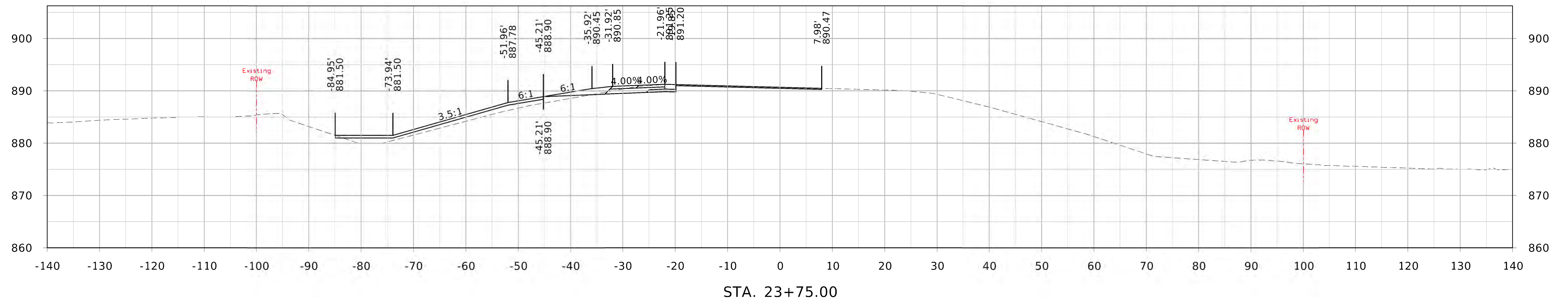
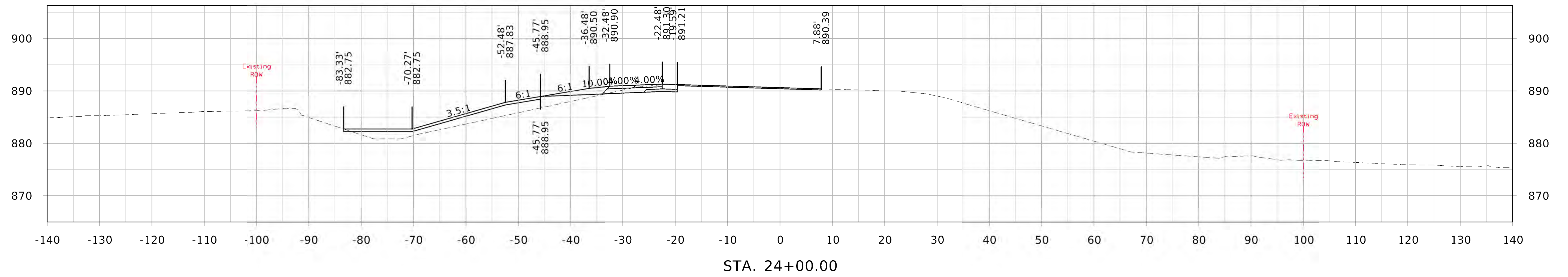
IA Highway 415



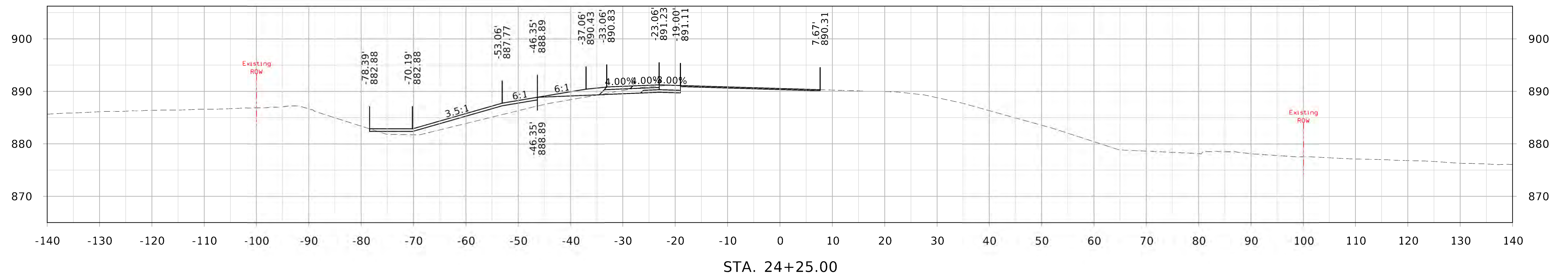
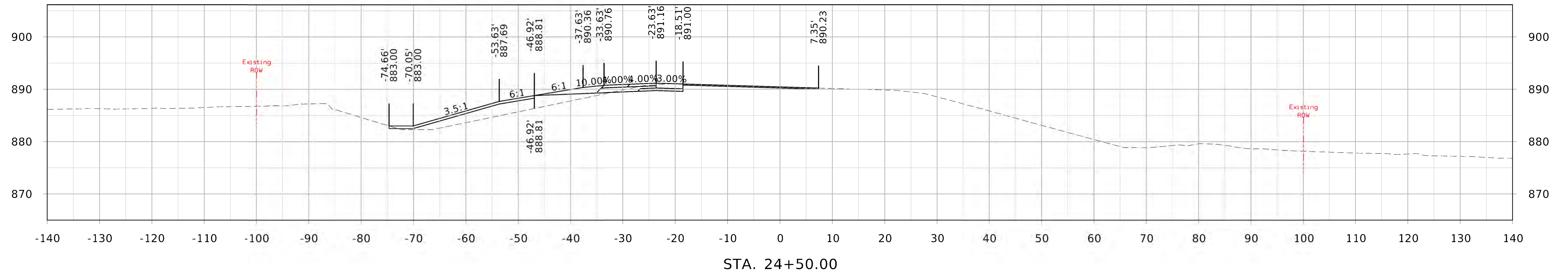
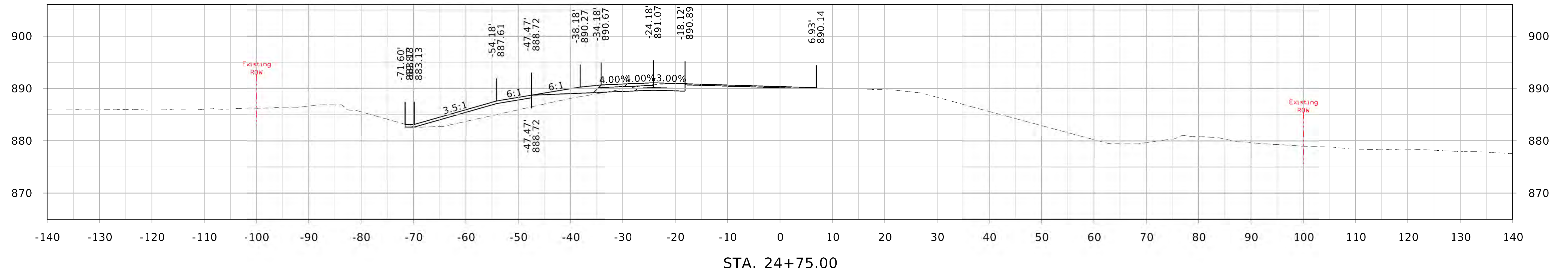
IA Highway 415



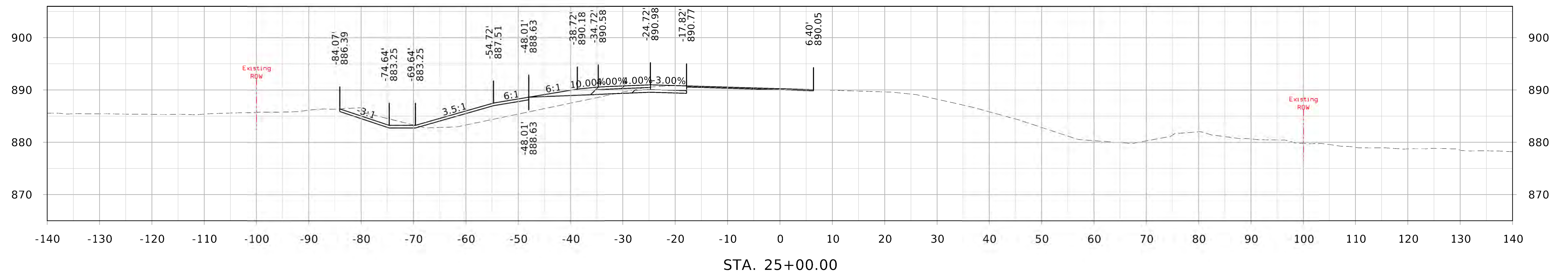
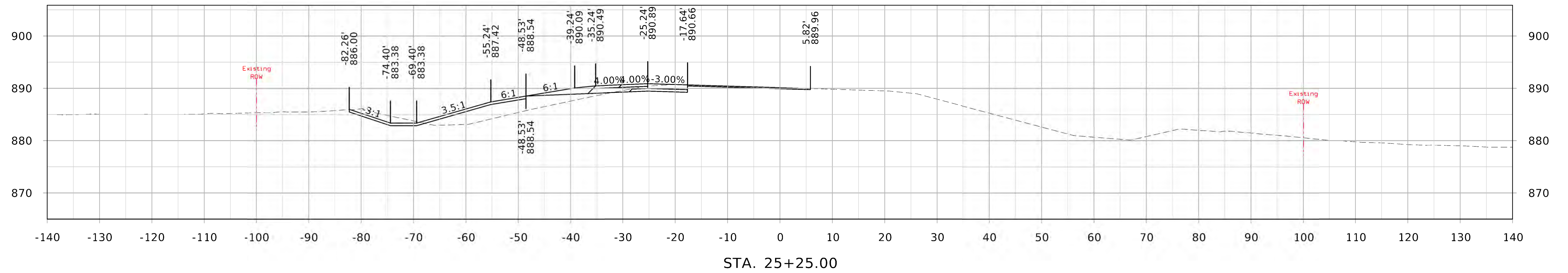
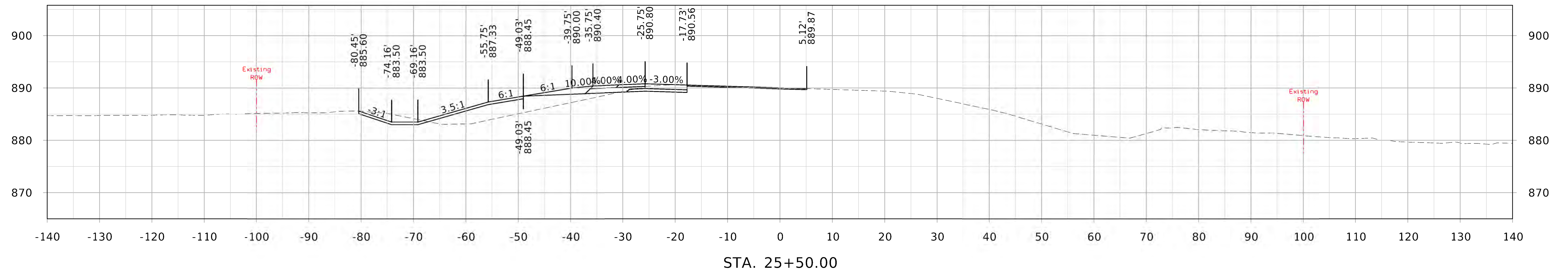
IA Highway 415



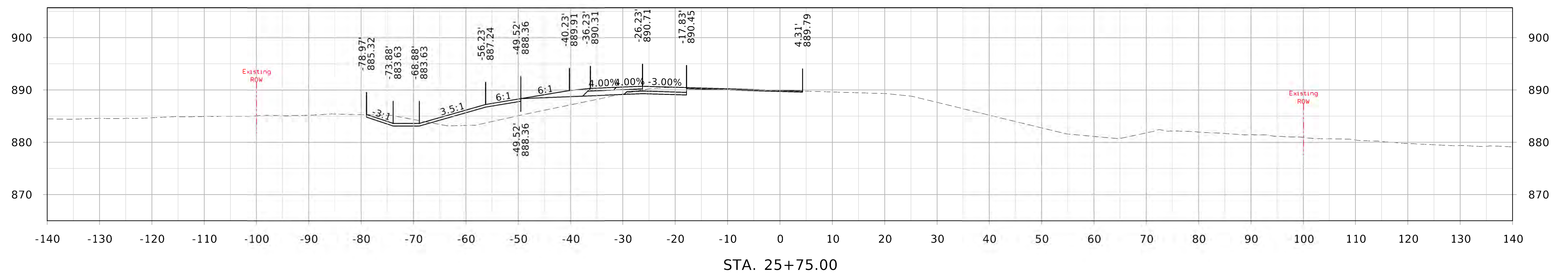
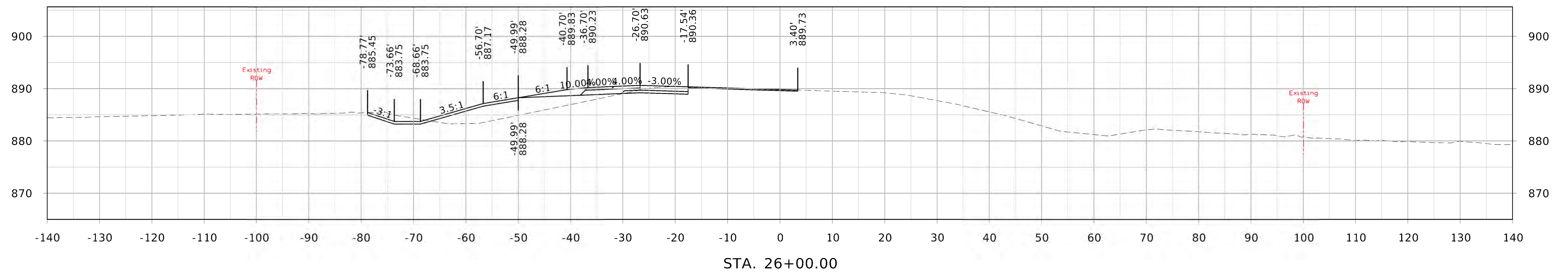
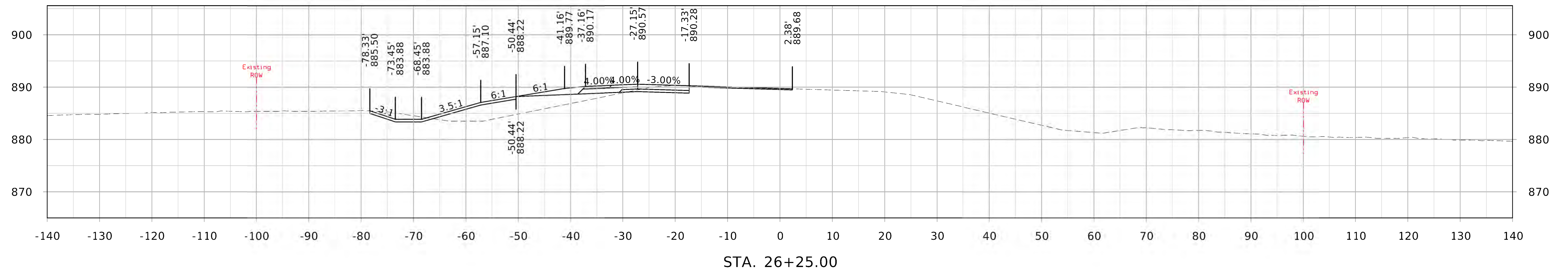
IA Highway 415



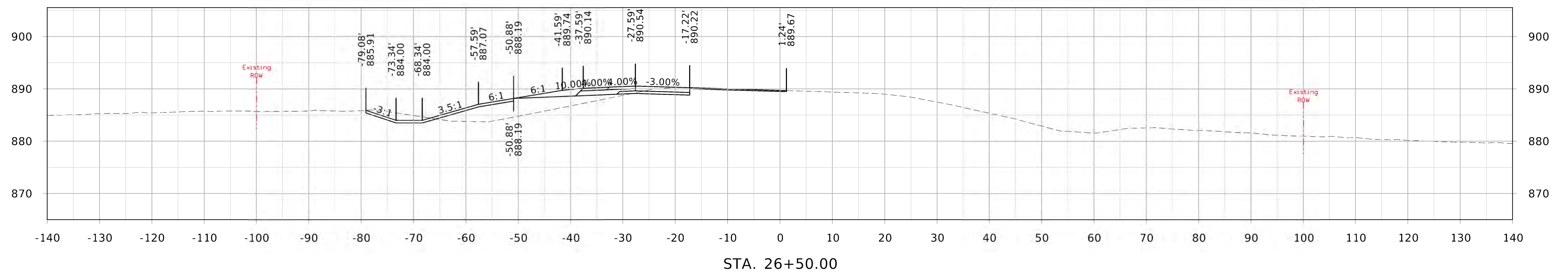
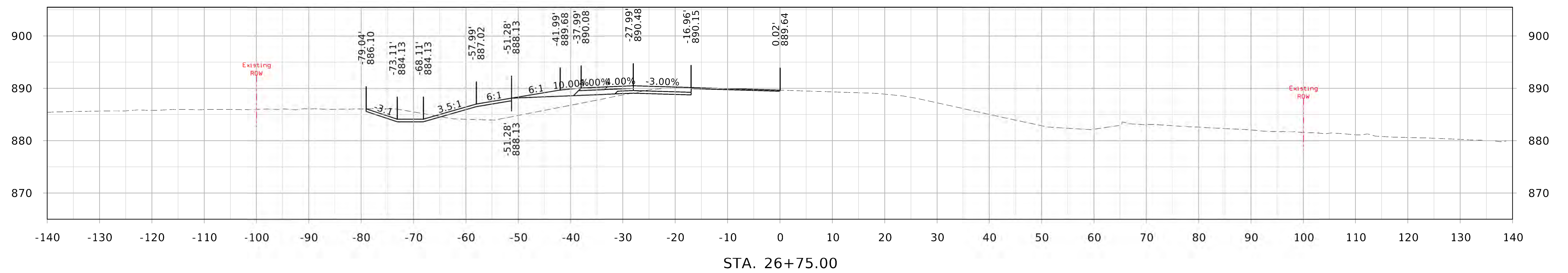
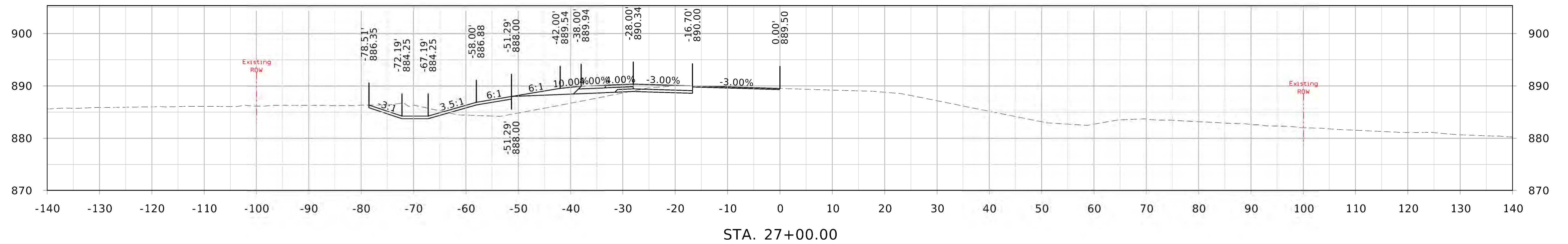
IA Highway 415



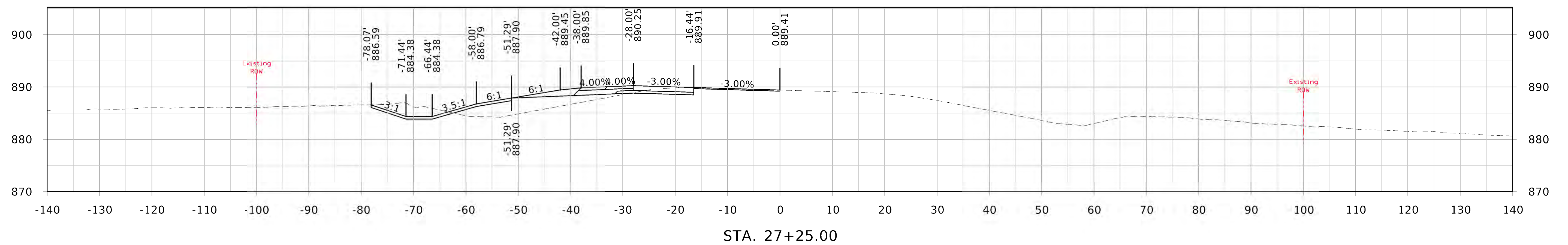
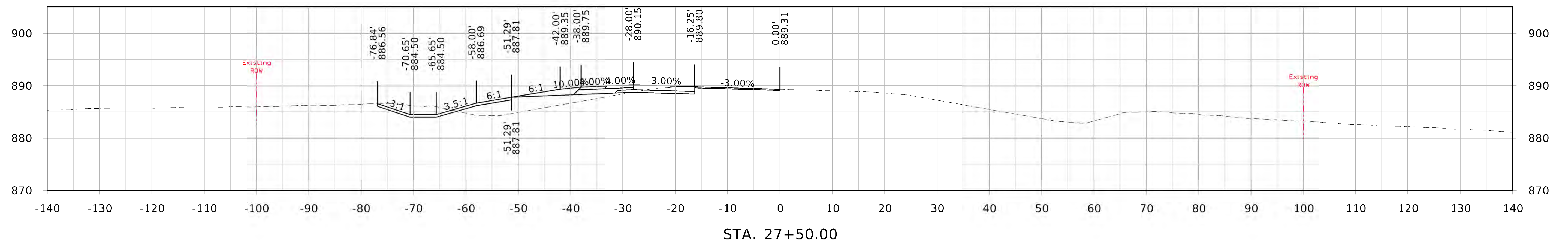
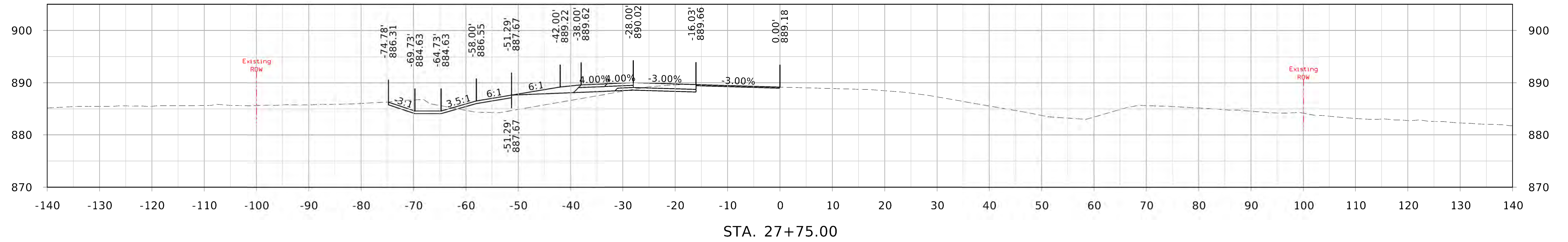
IA Highway 415



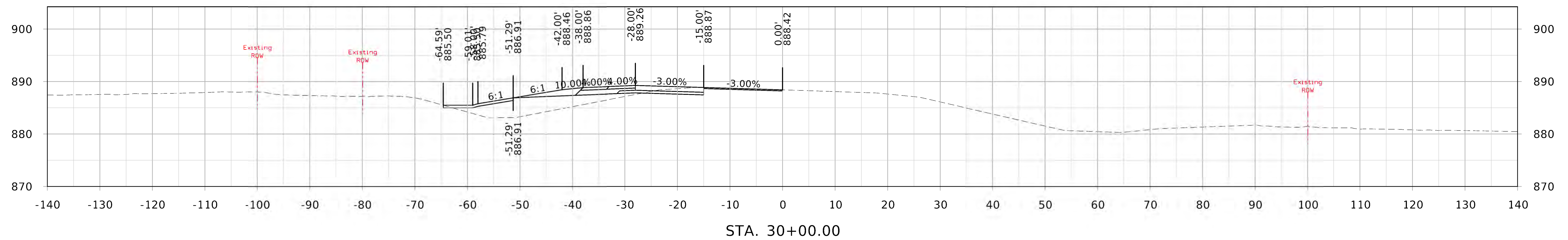
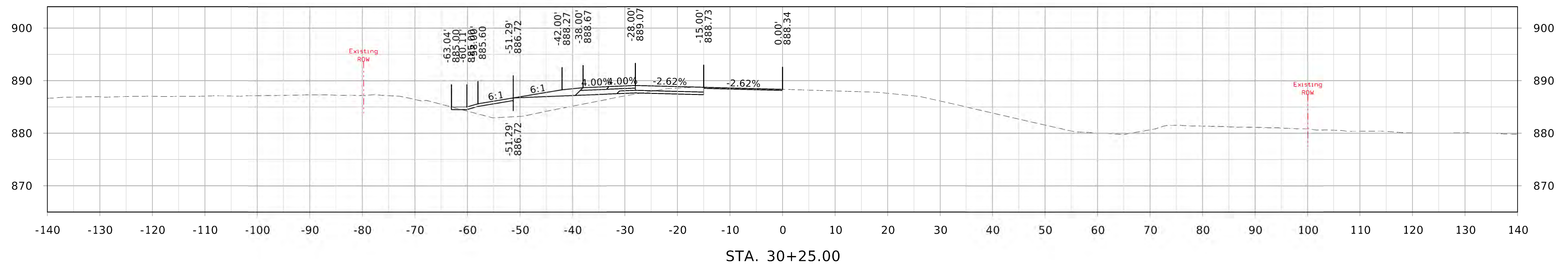
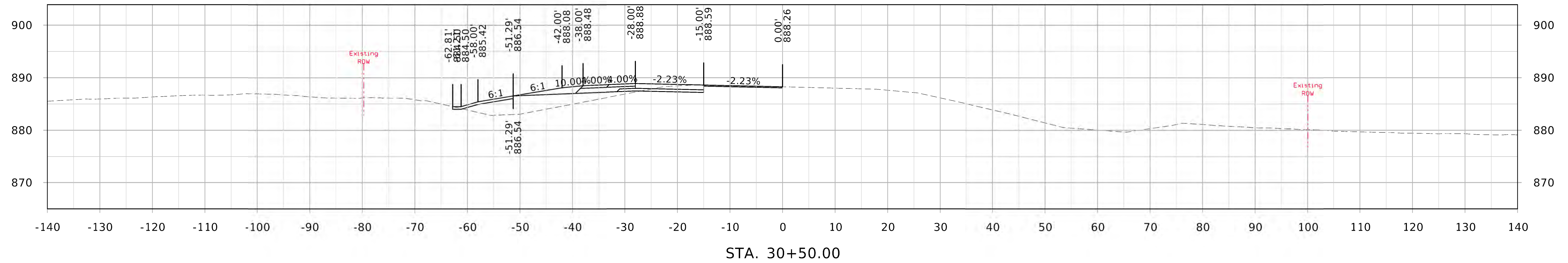
IA Highway 415



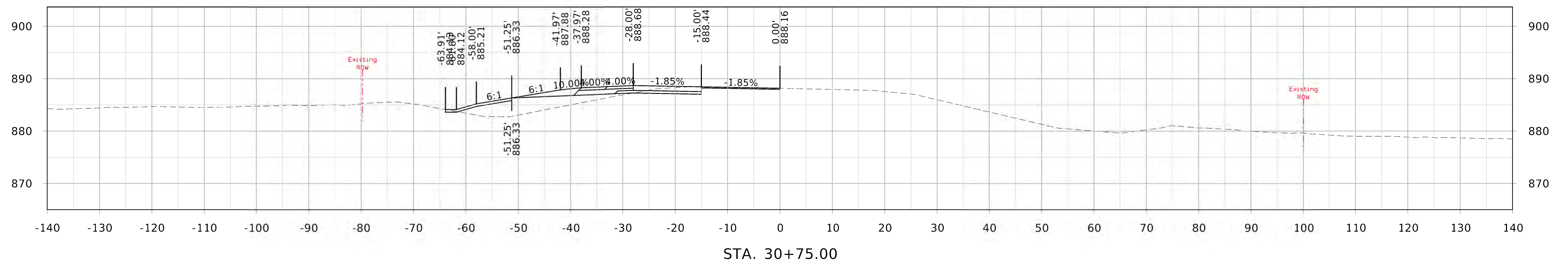
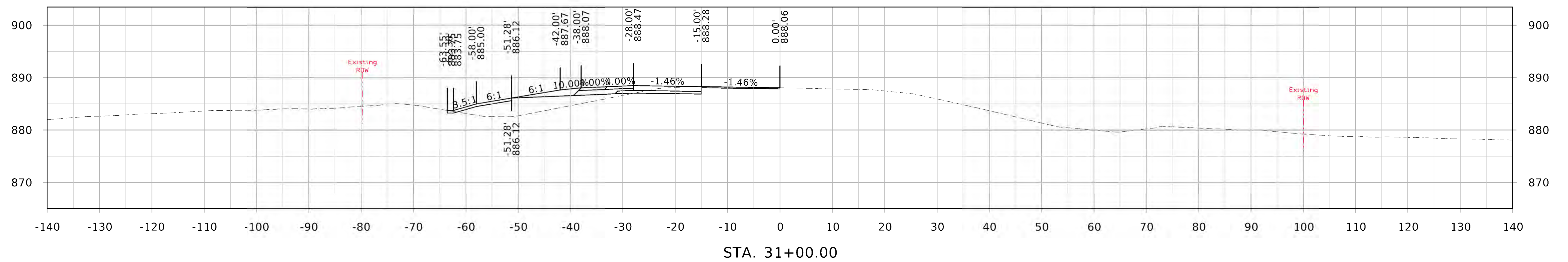
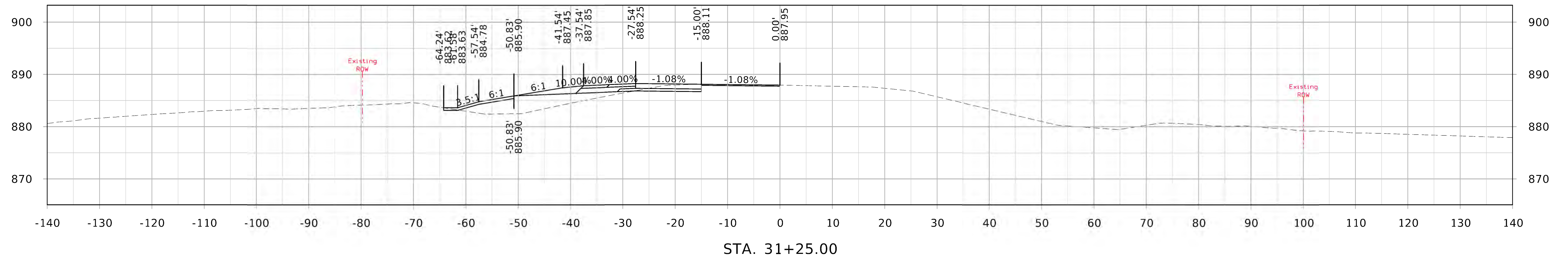
IA Highway 415



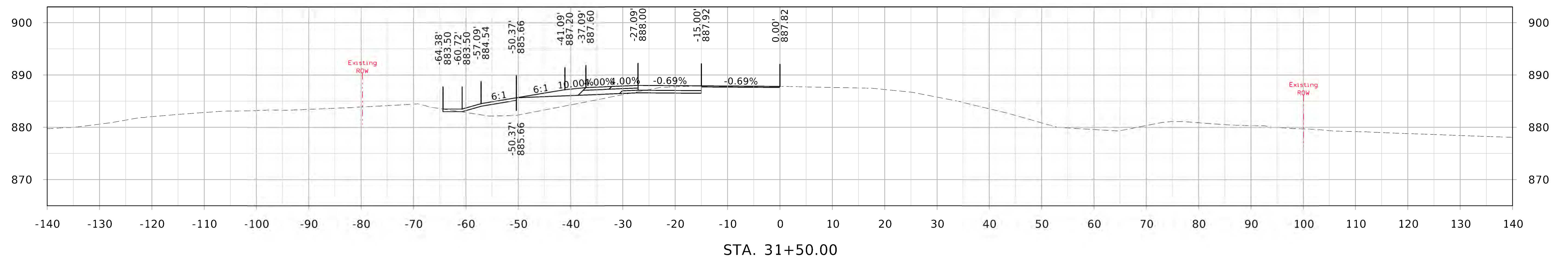
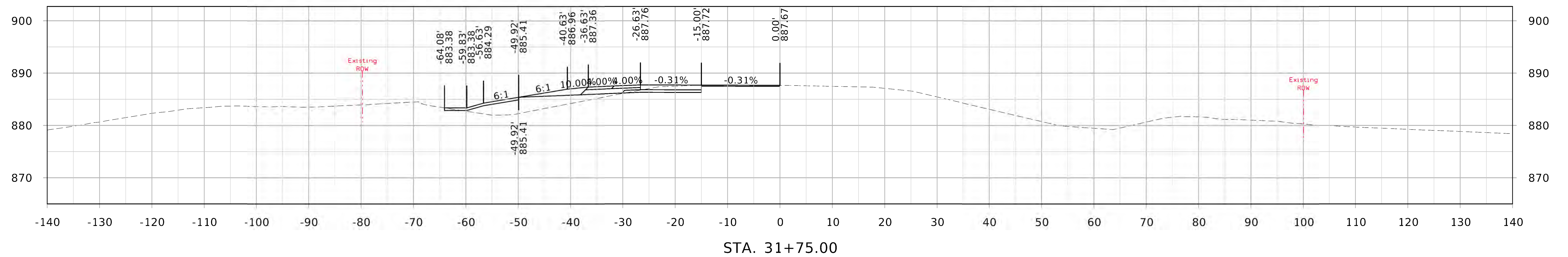
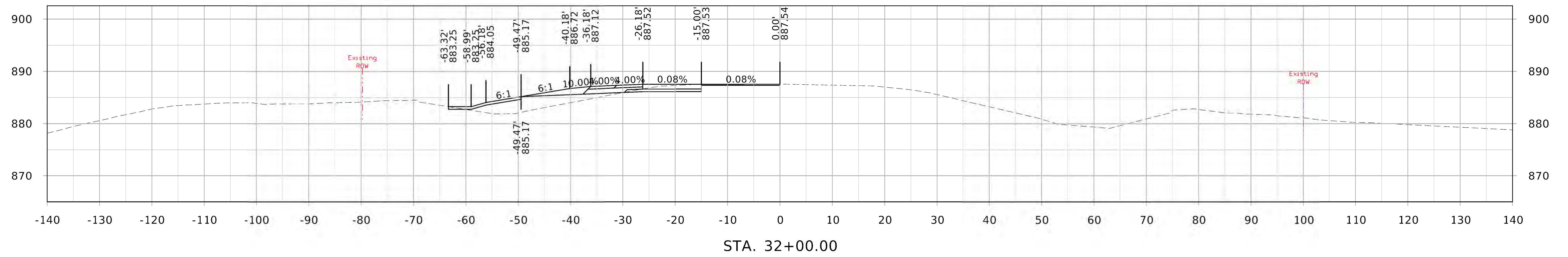
IA Highway 415



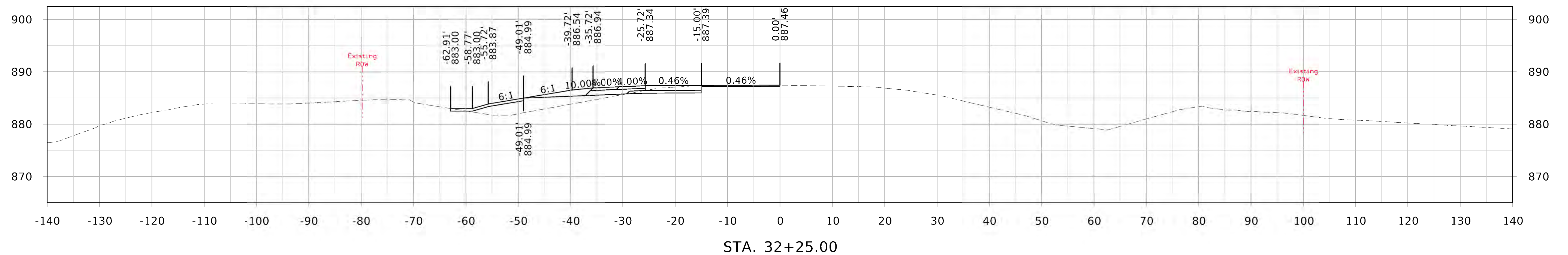
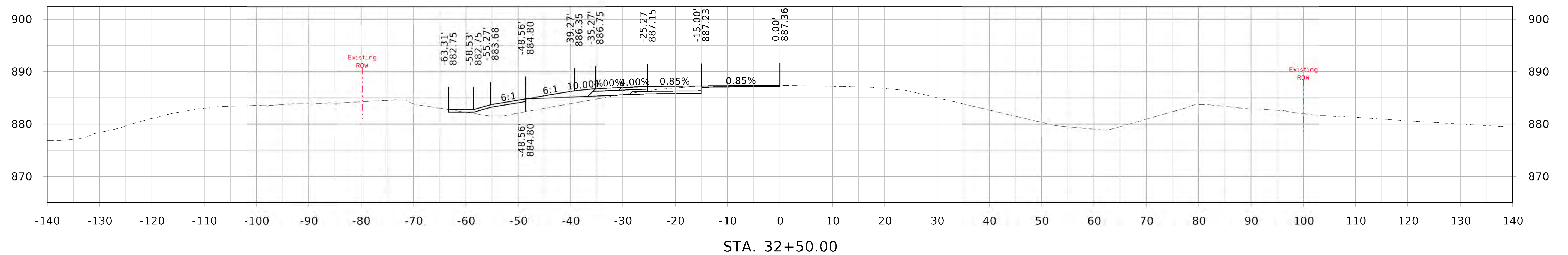
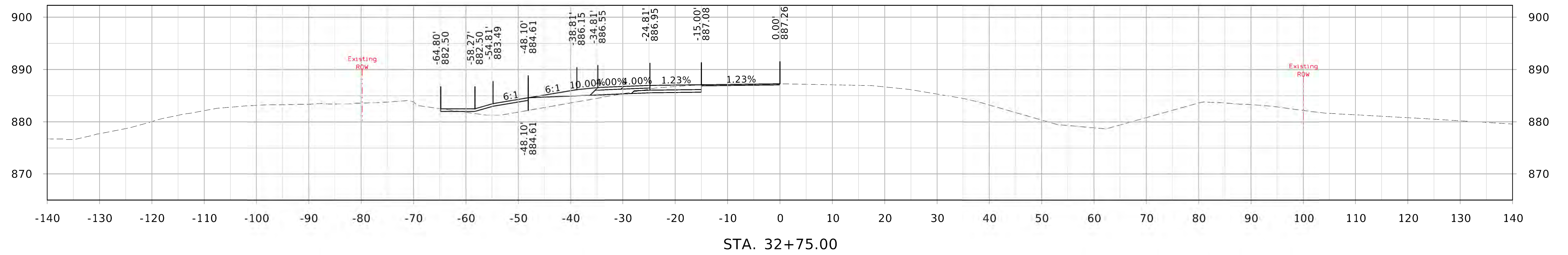
IA Highway 415



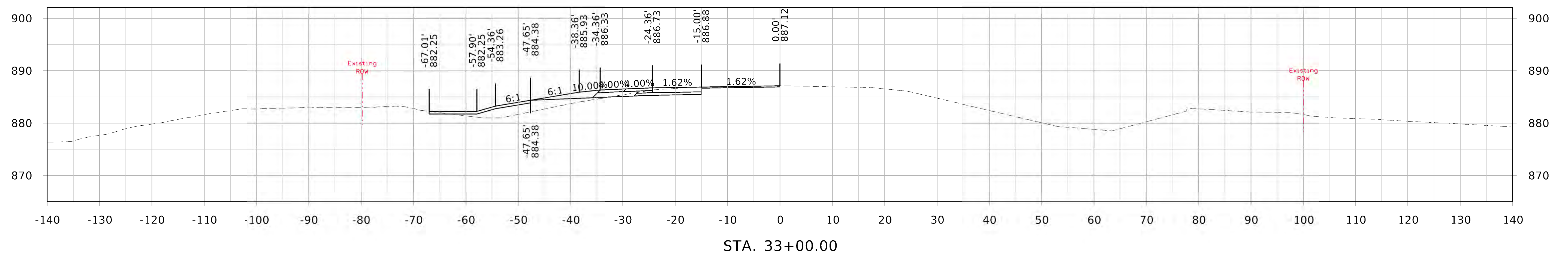
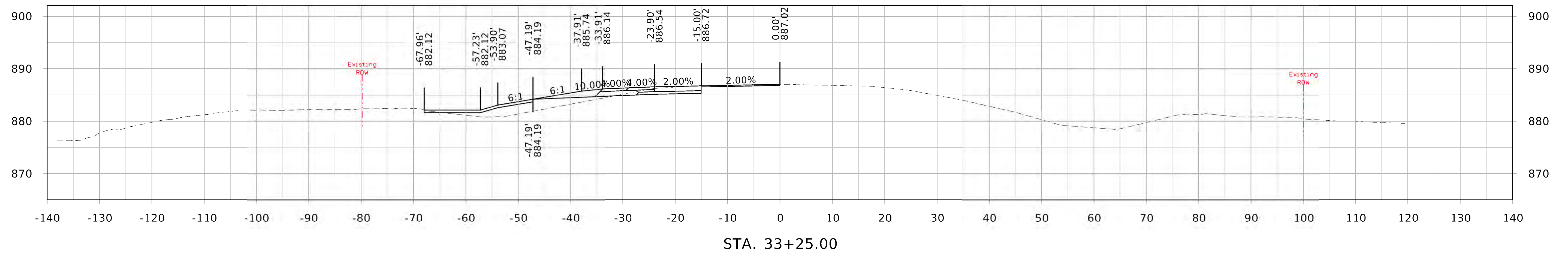
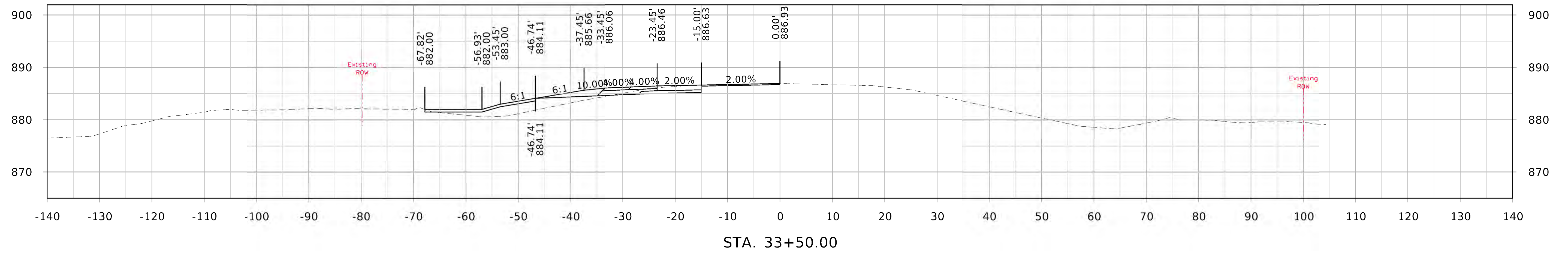
IA Highway 415



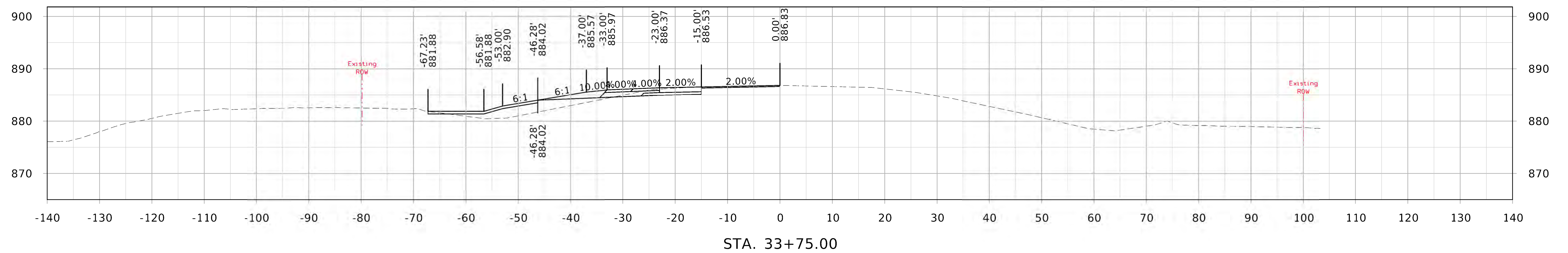
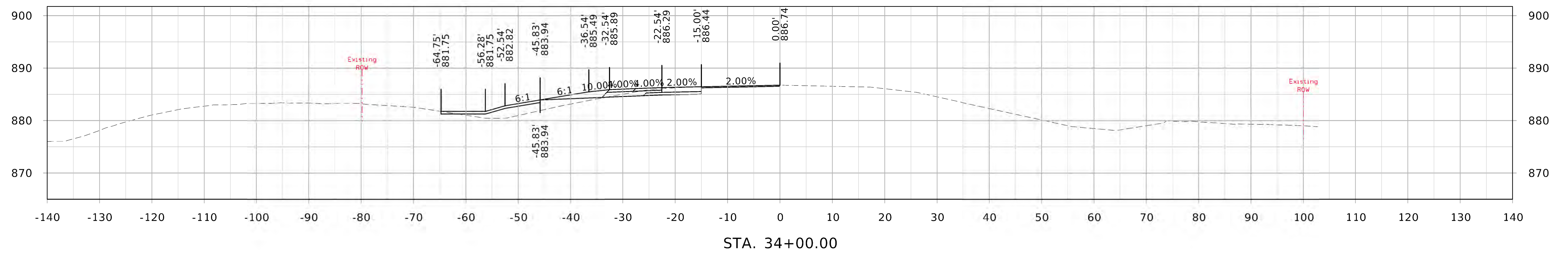
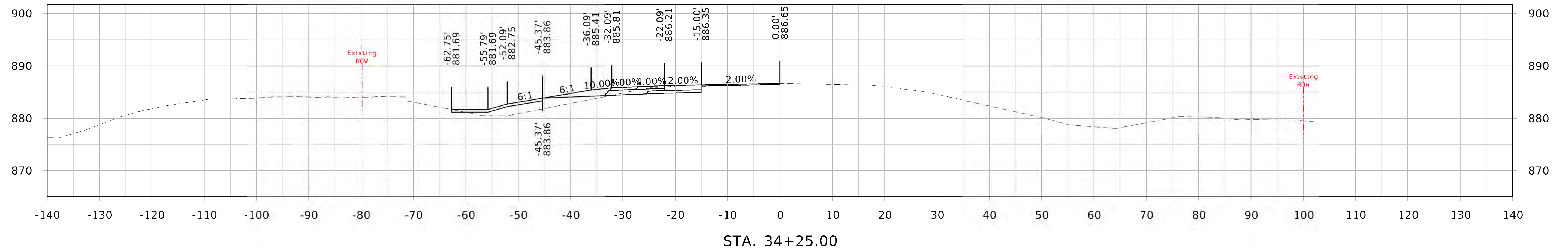
IA Highway 415



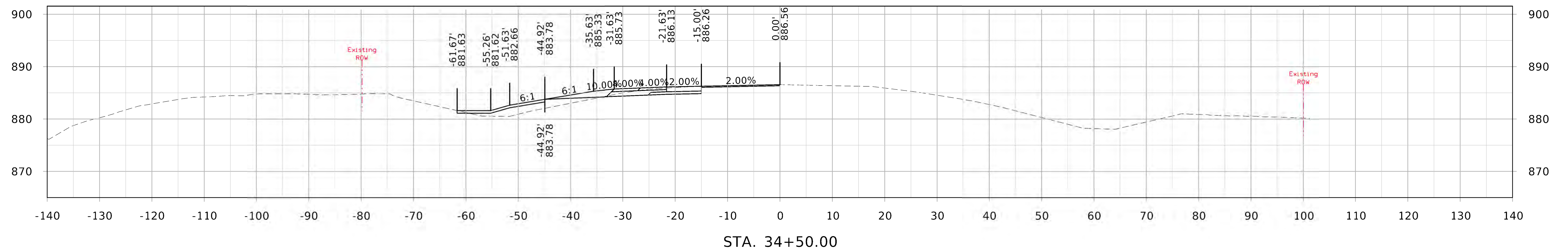
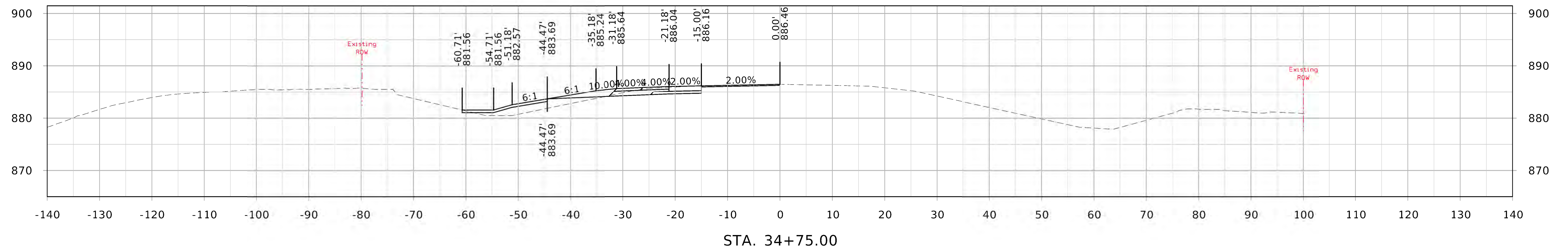
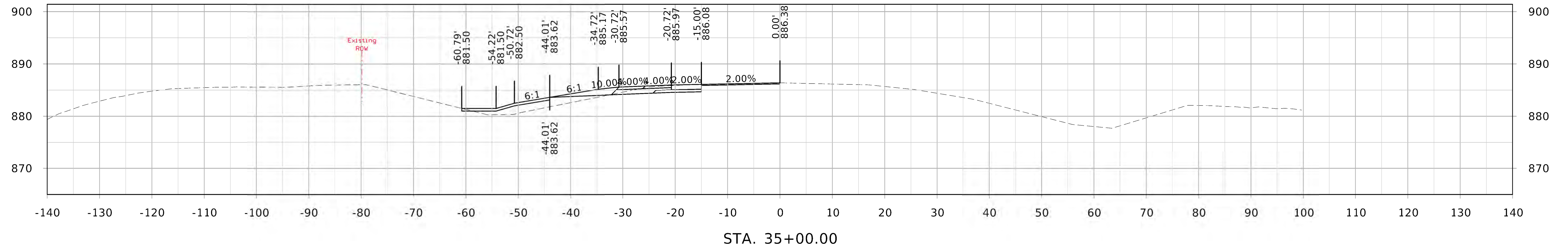
IA Highway 415



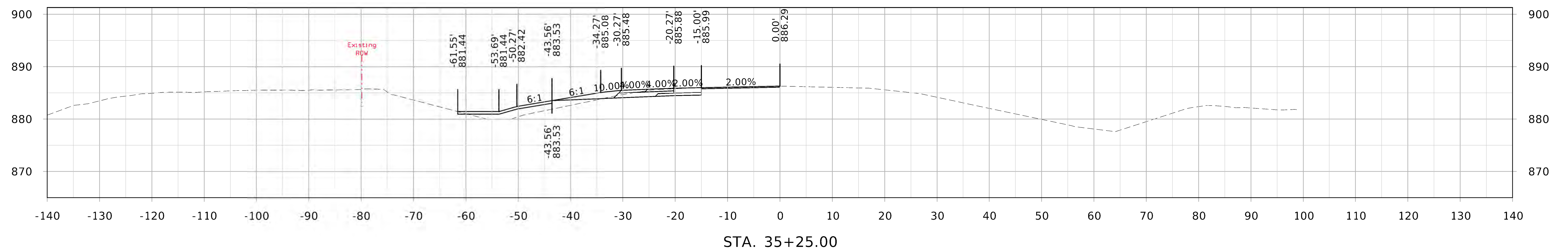
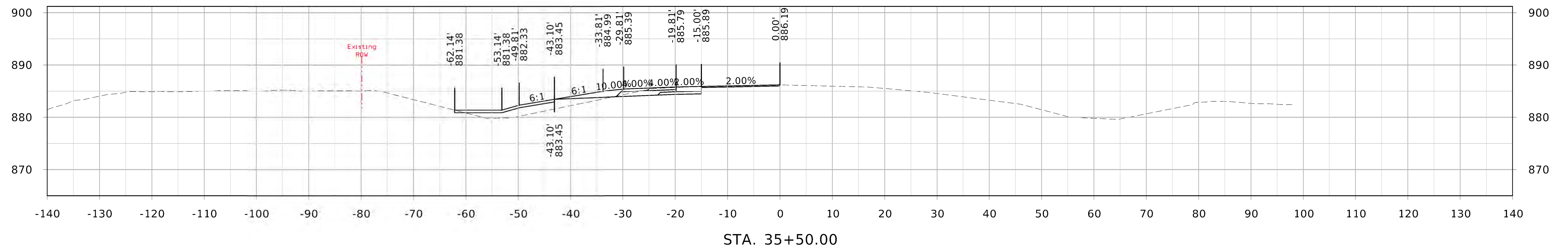
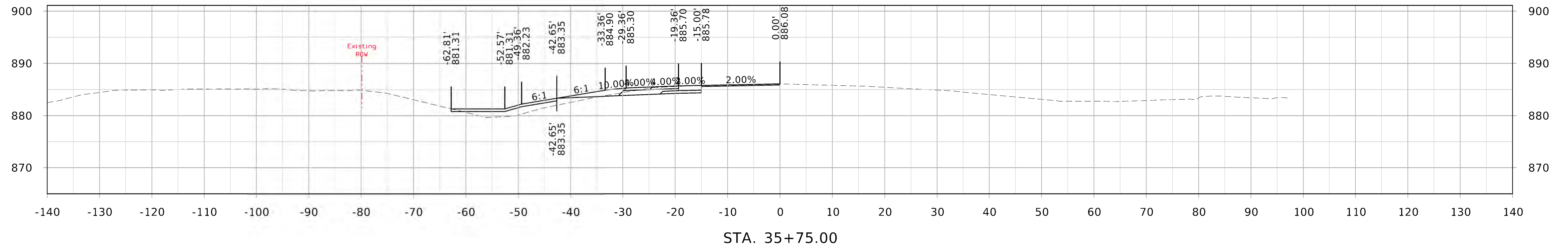
IA Highway 415



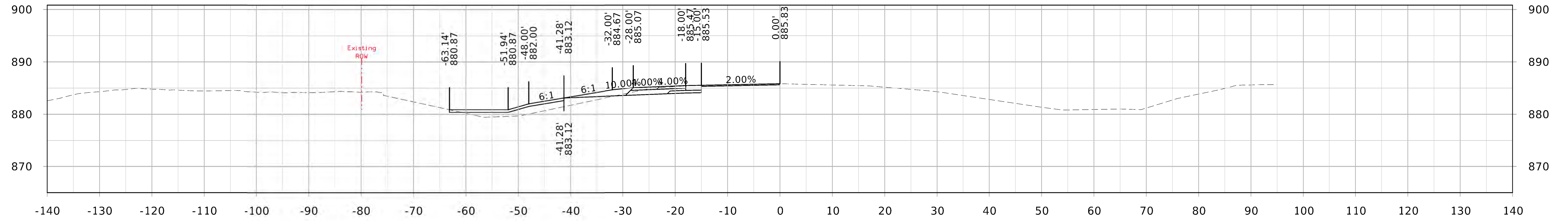
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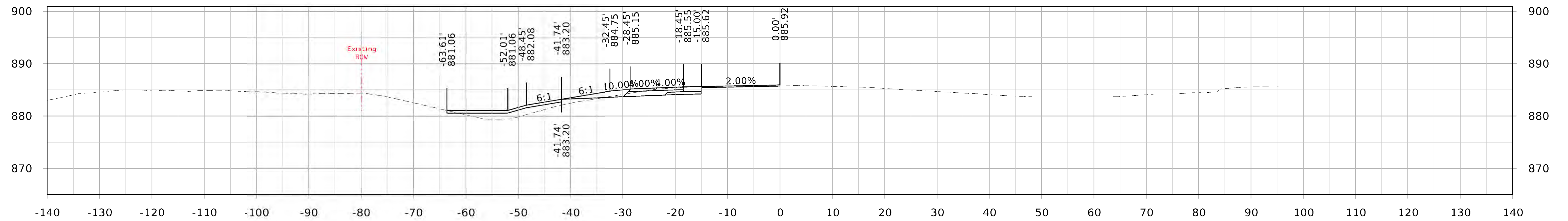
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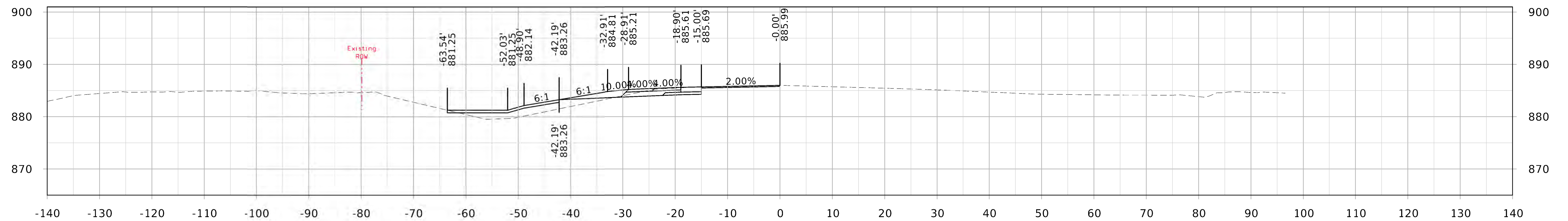
IA Highway 415



STA. 36+50.00

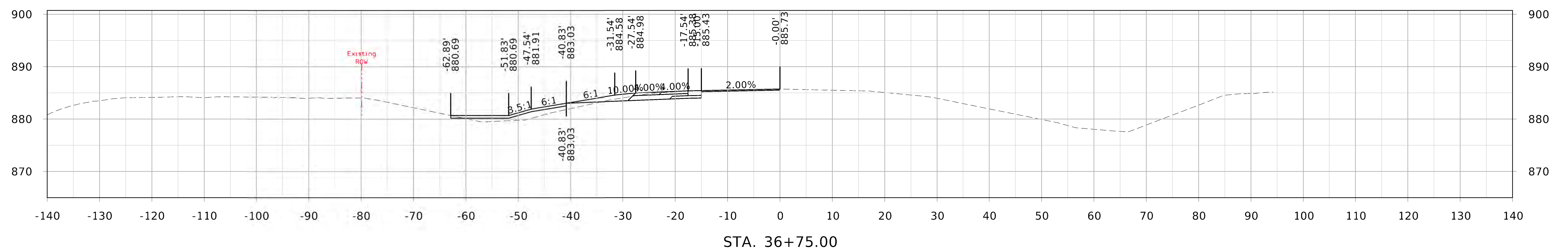
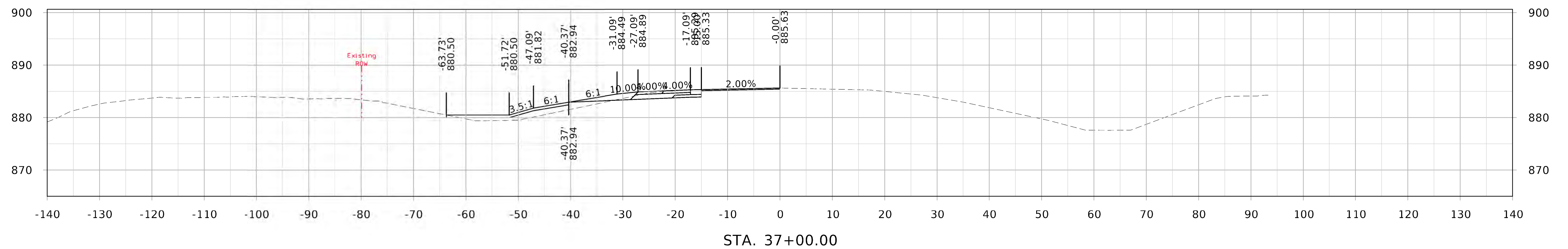
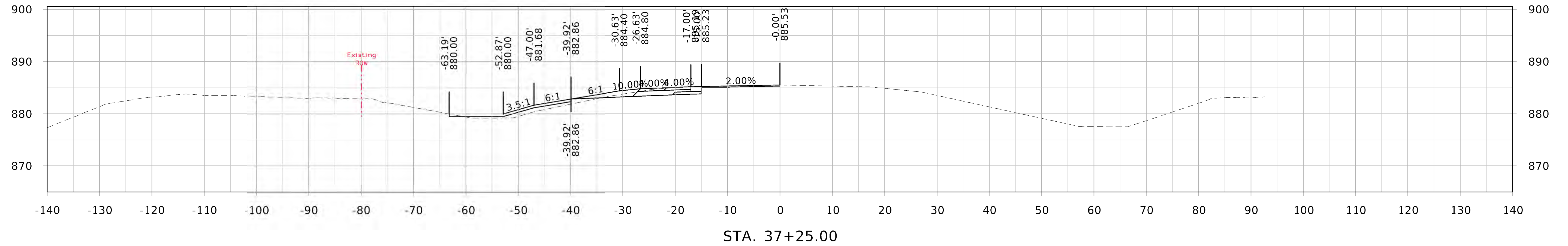


STA. 36+25.00

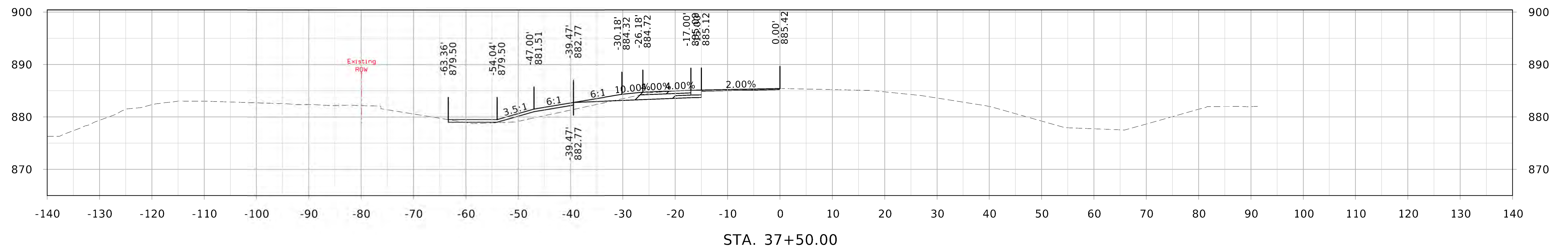
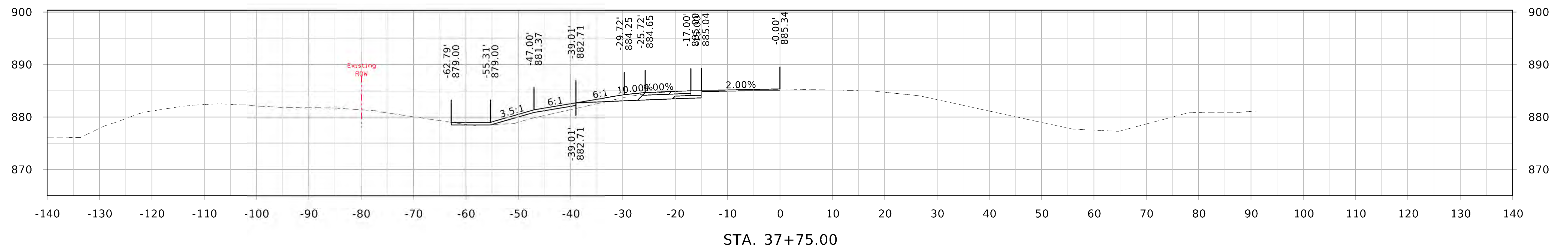
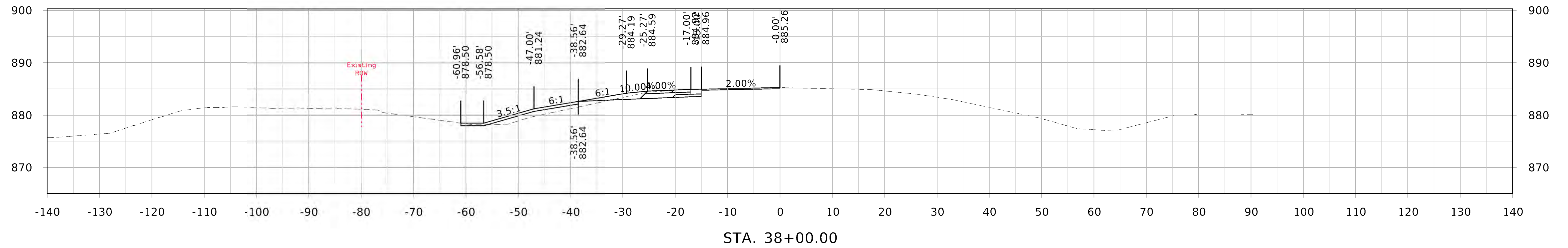


STA. 36+00.00

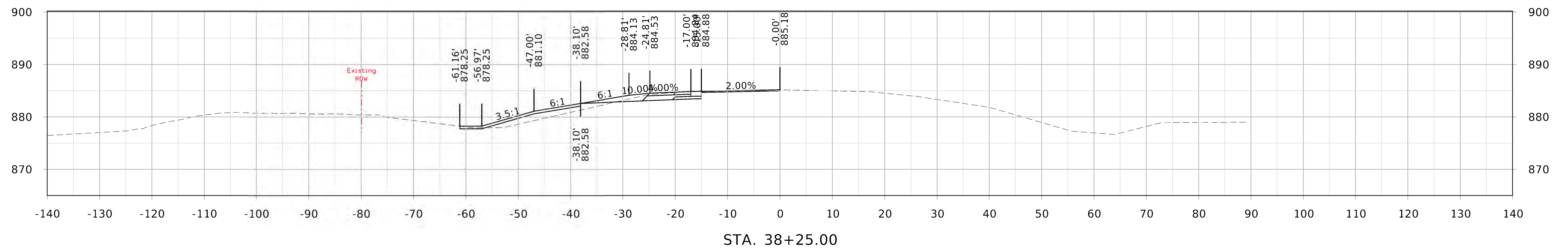
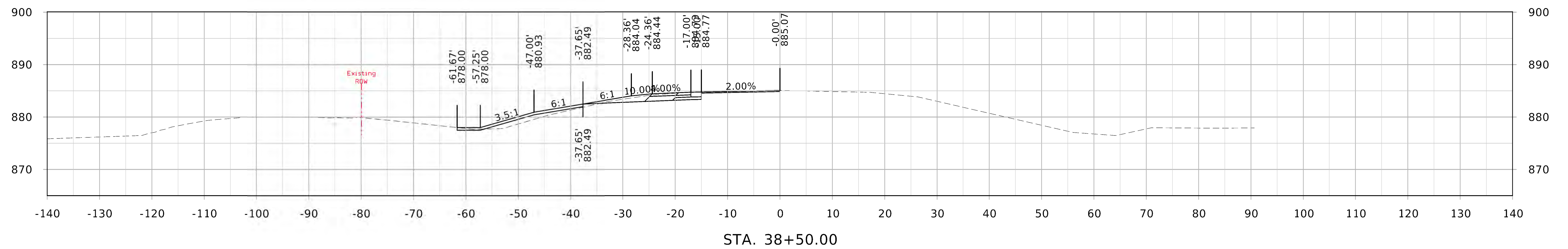
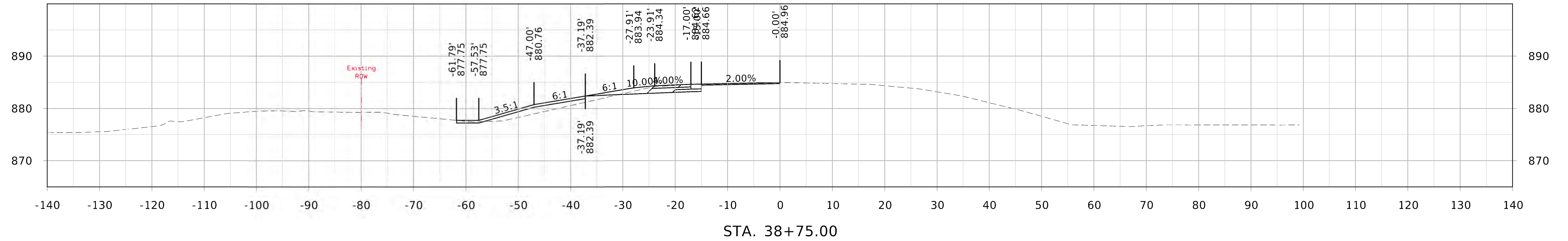
IA Highway 415



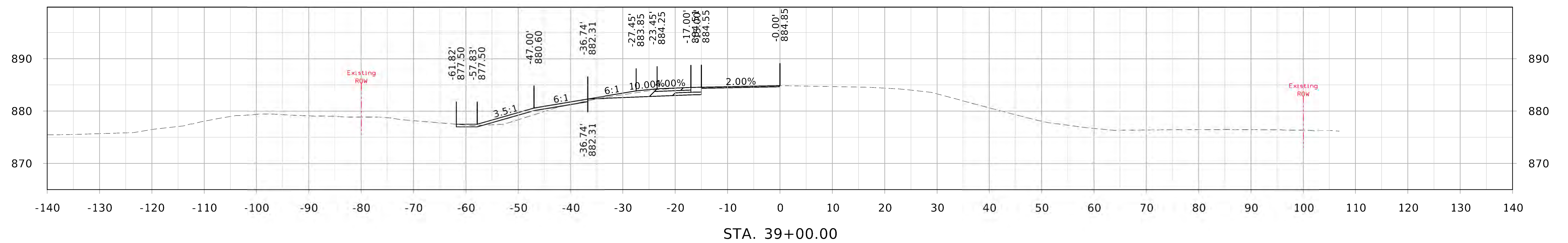
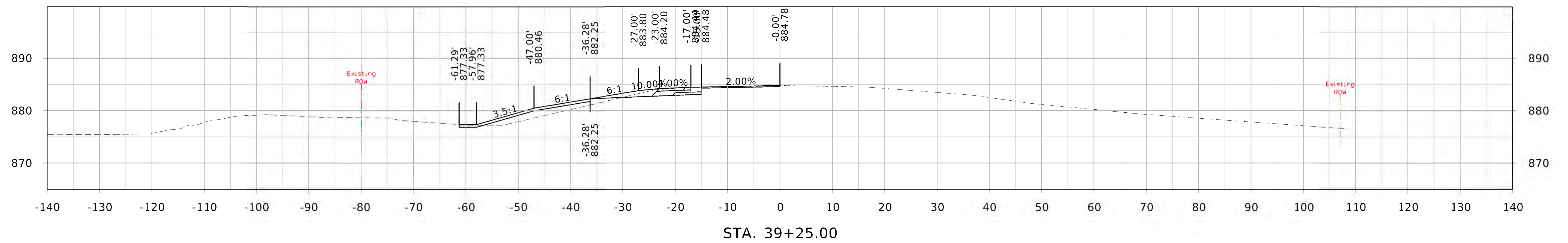
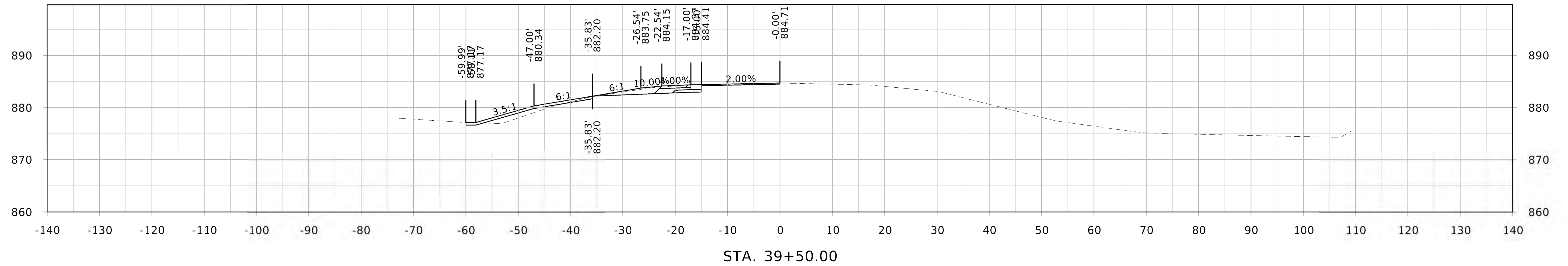
IA Highway 415



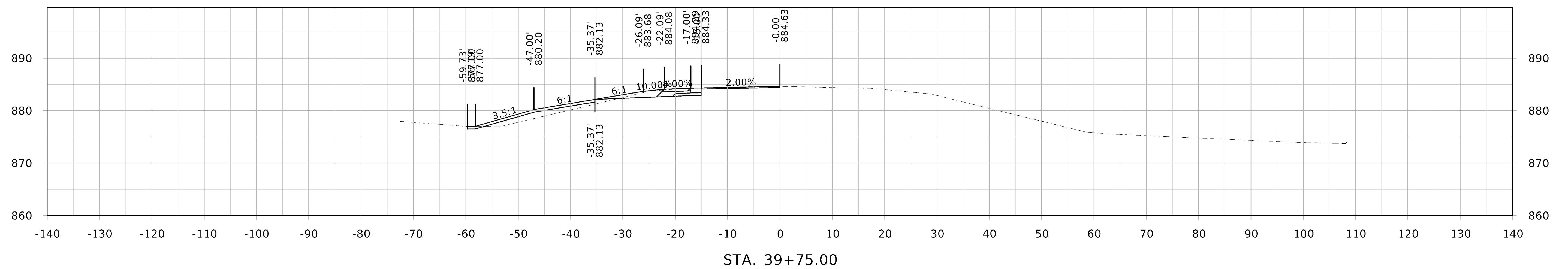
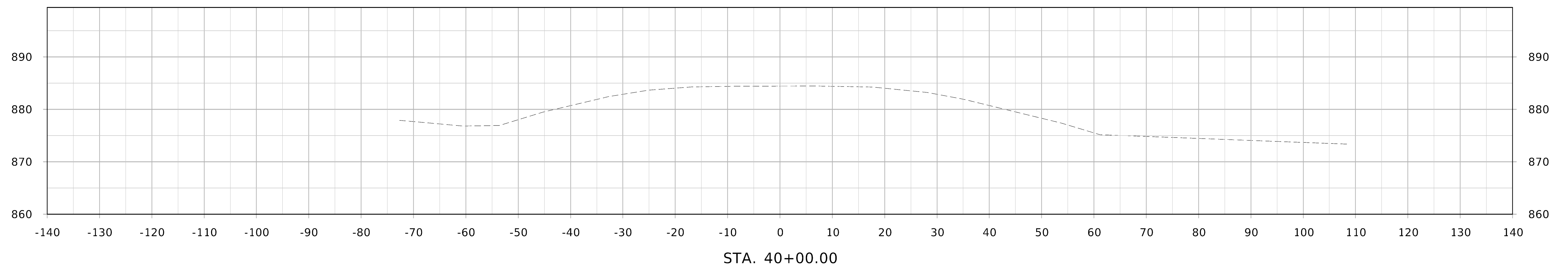
IA Highway 415



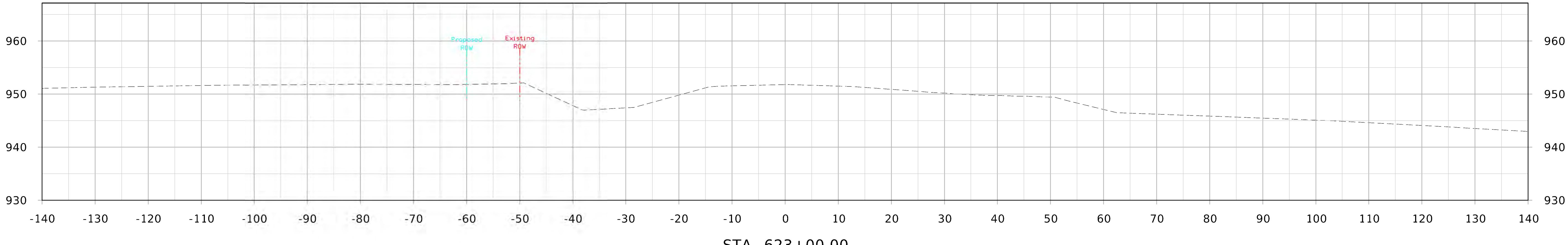
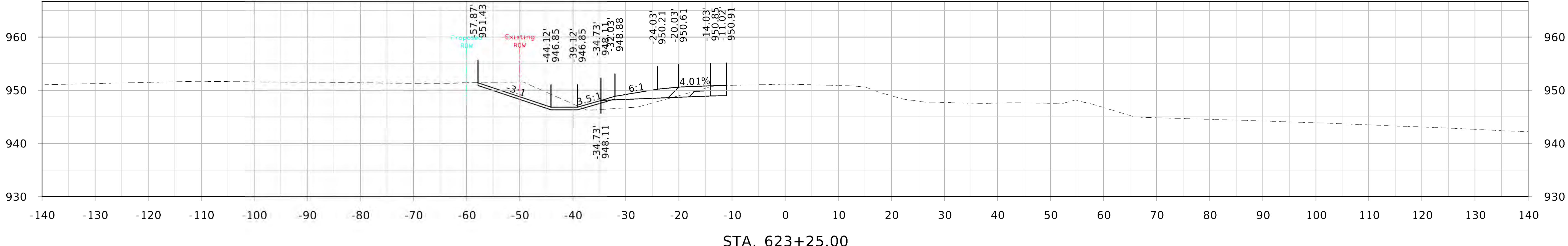
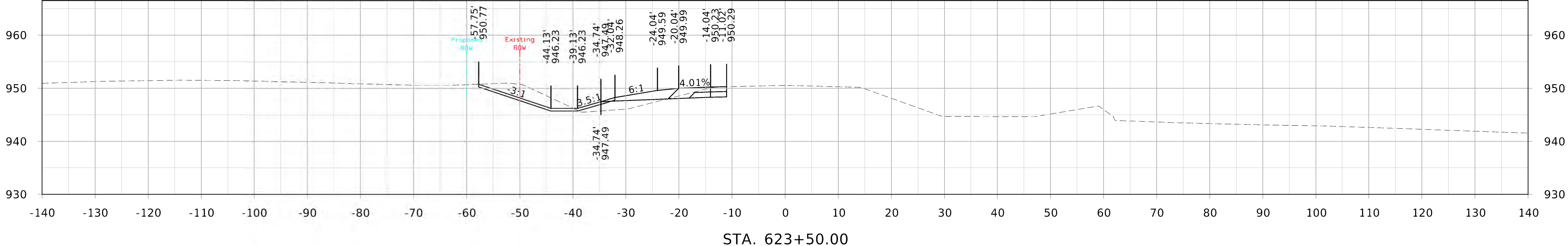
IA Highway 415



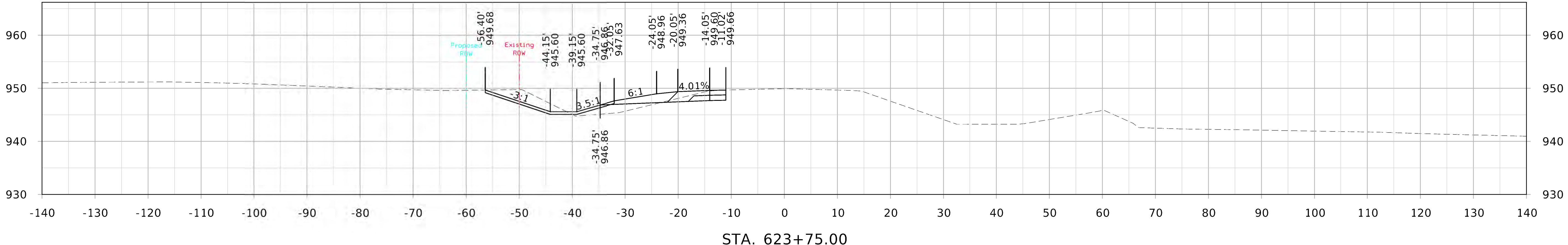
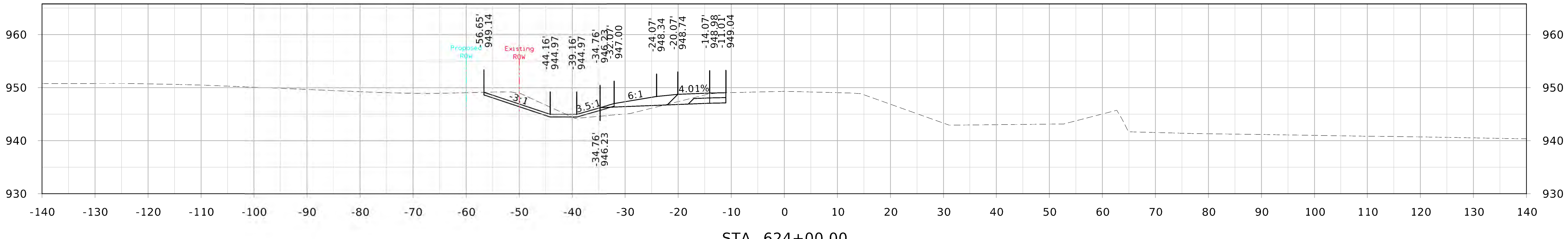
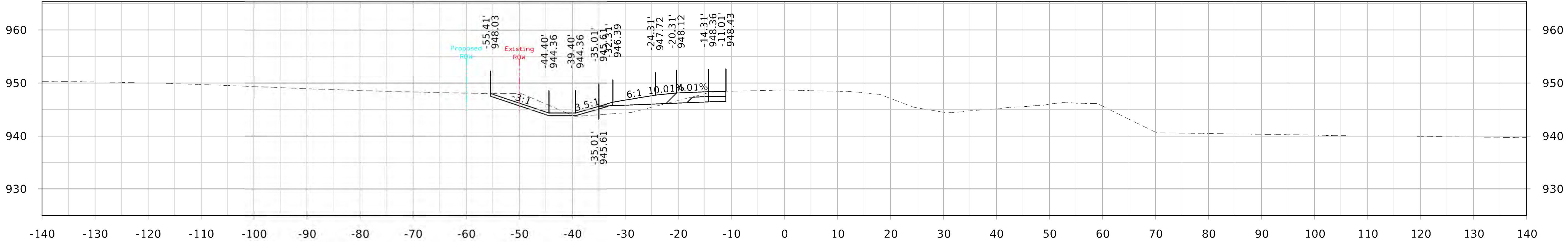
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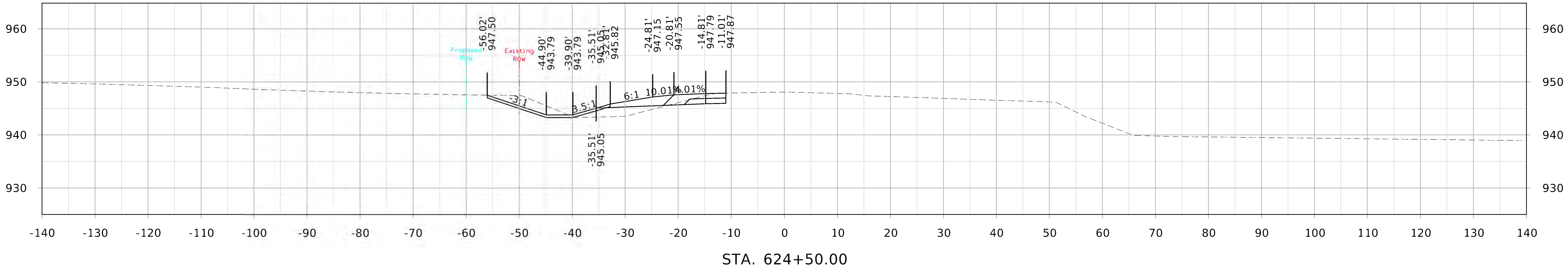
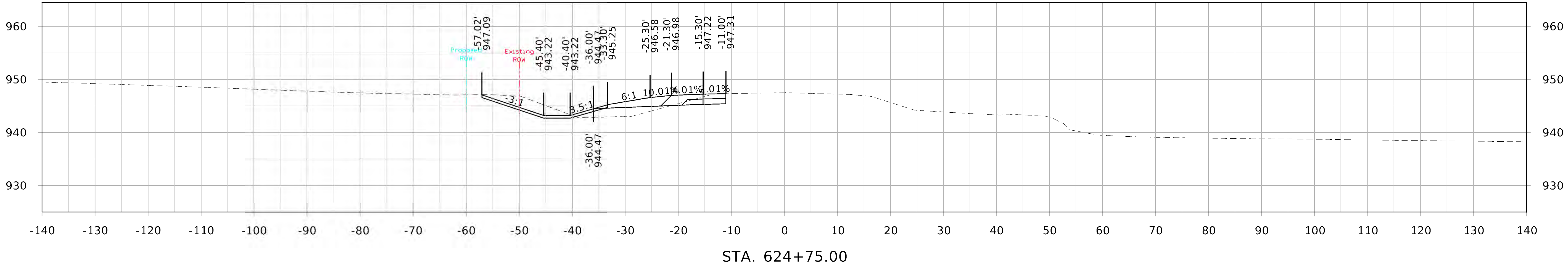
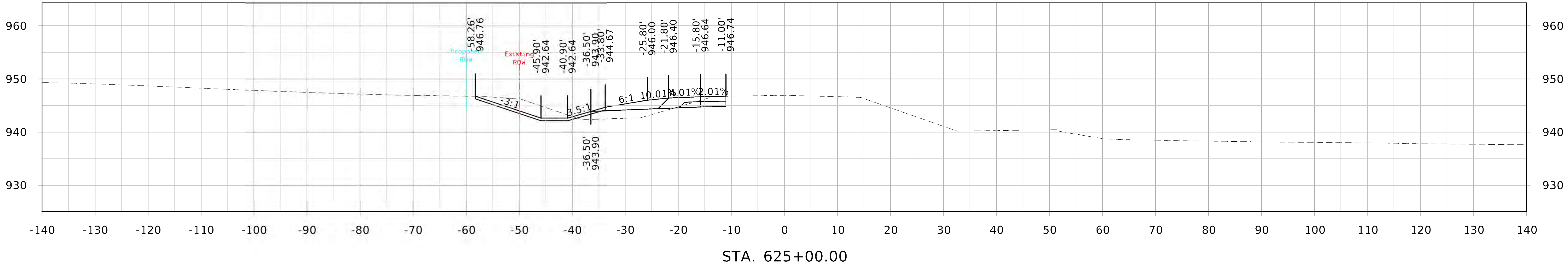
NW 106th Avenue



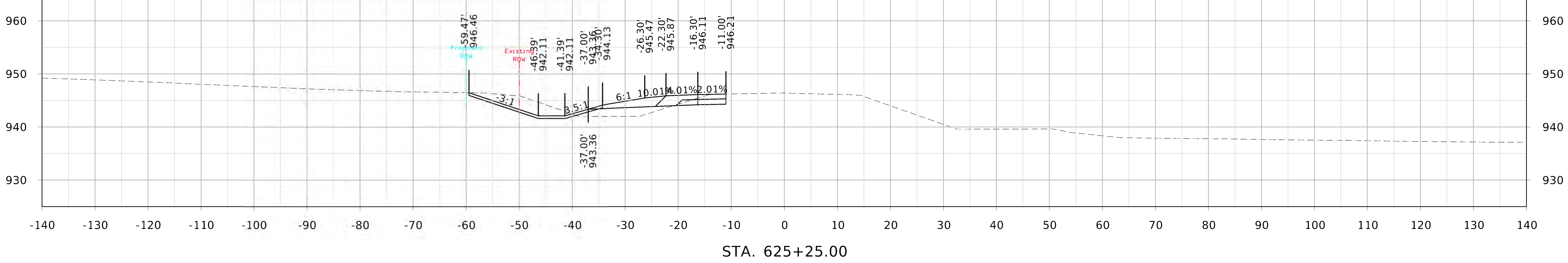
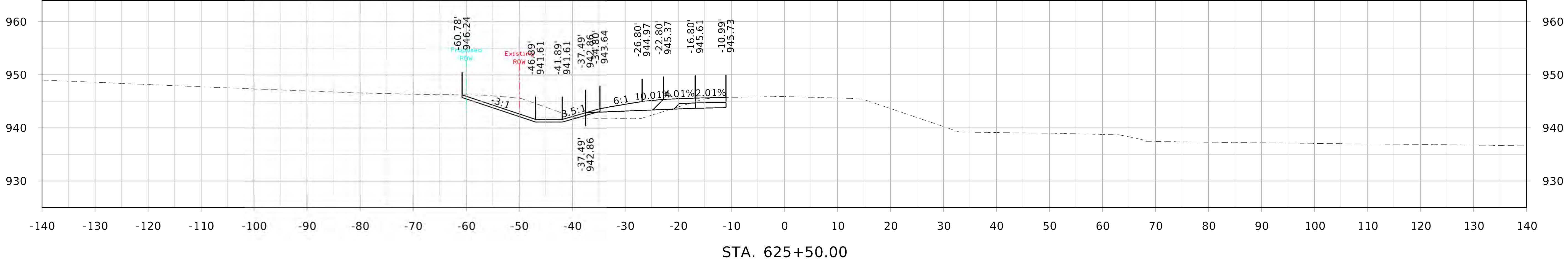
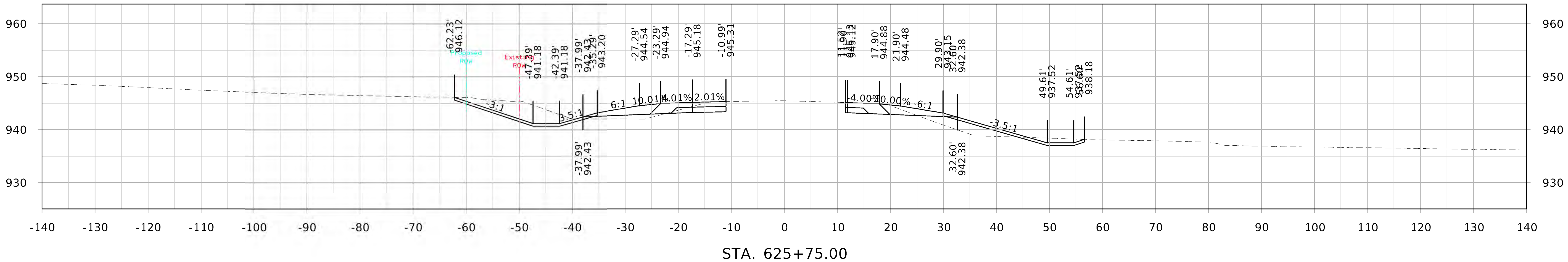
NW 106th Avenue



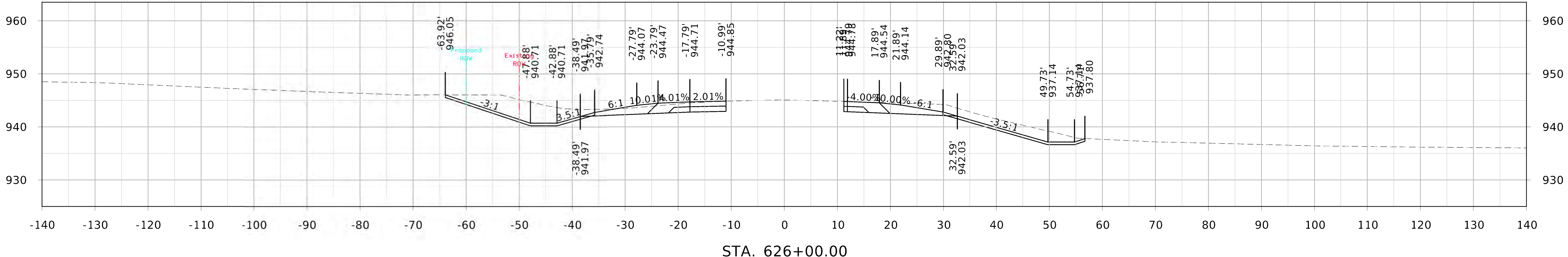
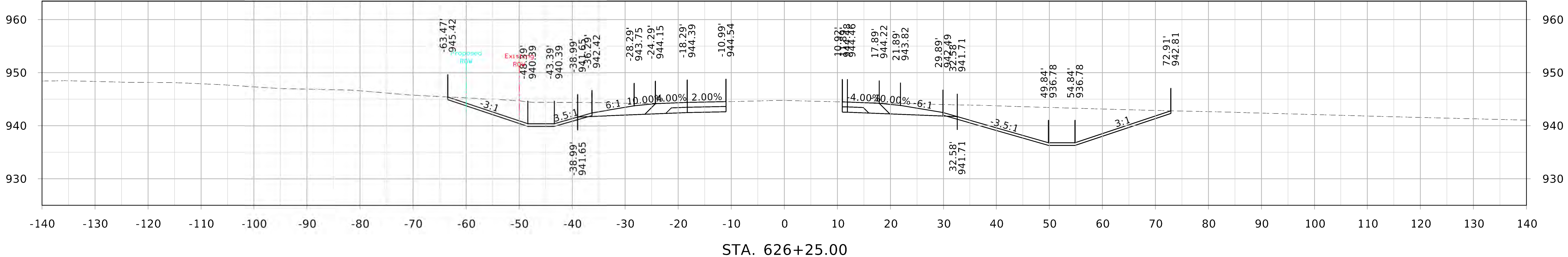
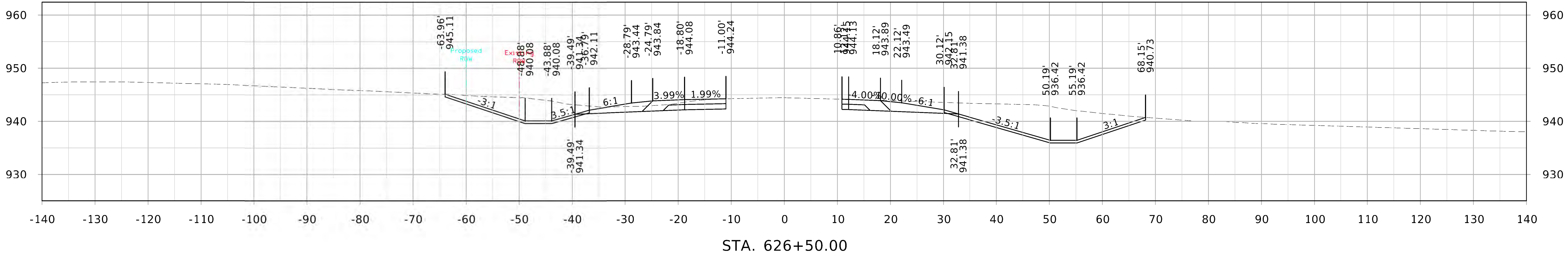
NW 106th Avenue



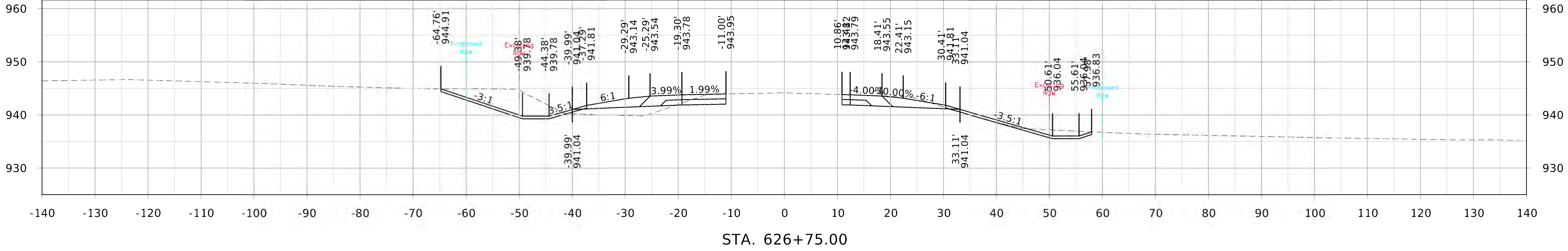
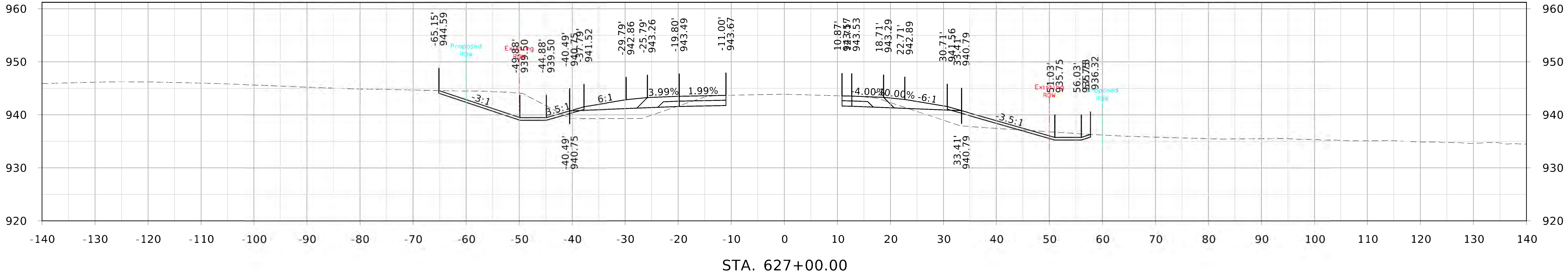
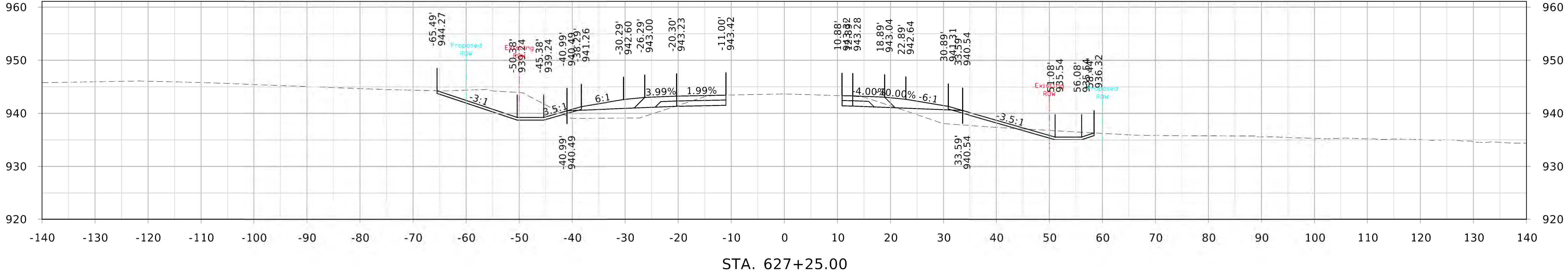
NW 106th Avenue



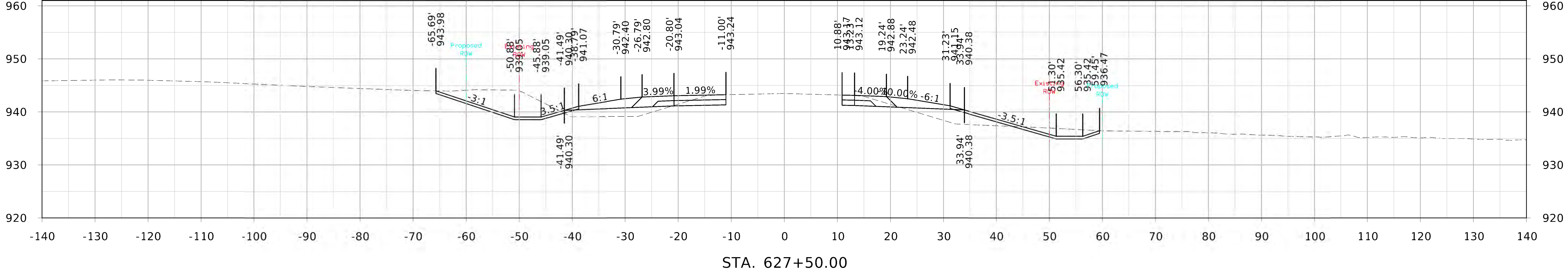
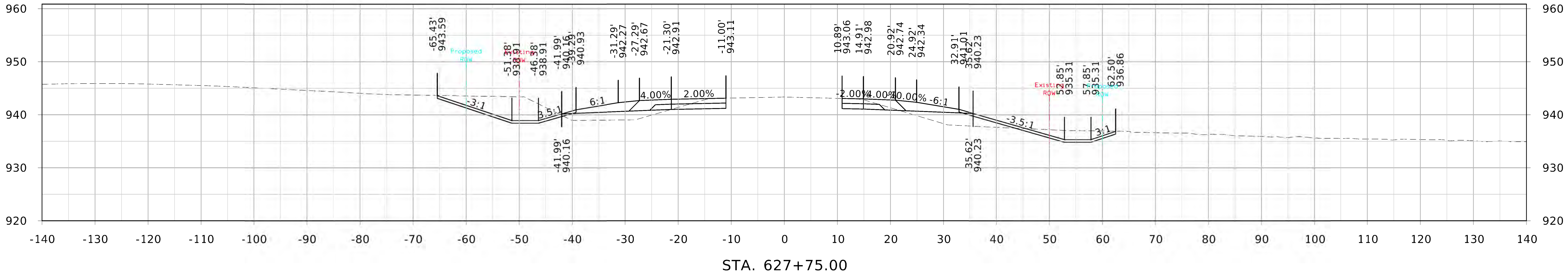
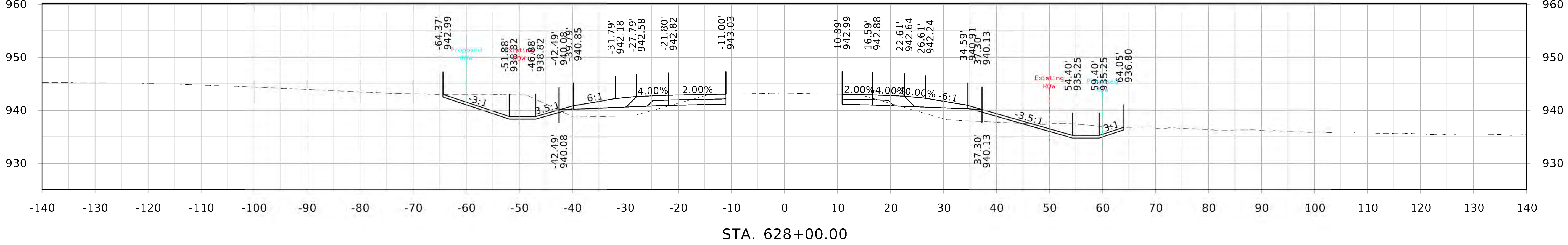
NW 106th Avenue



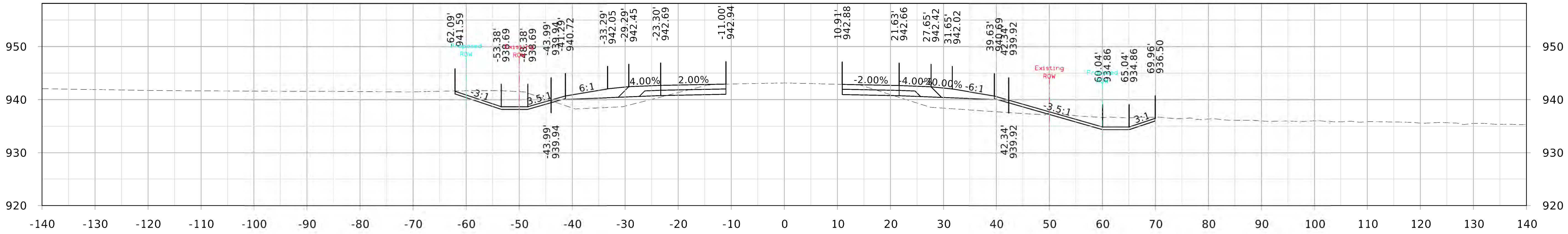
NW 106th Avenue



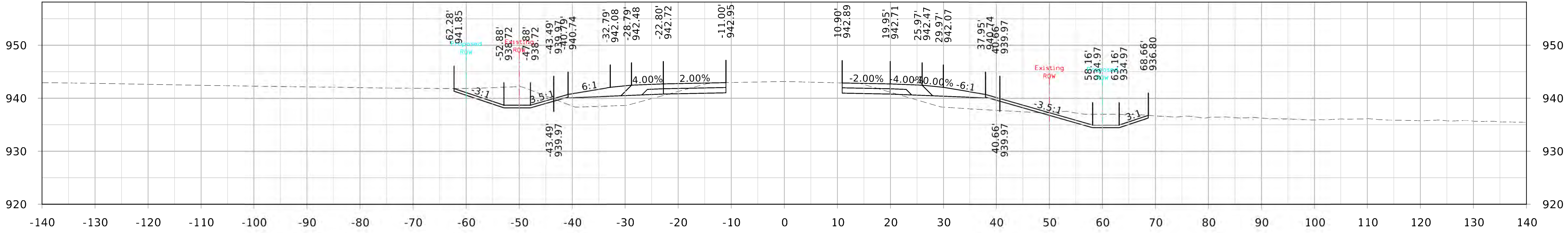
NW 106th Avenue



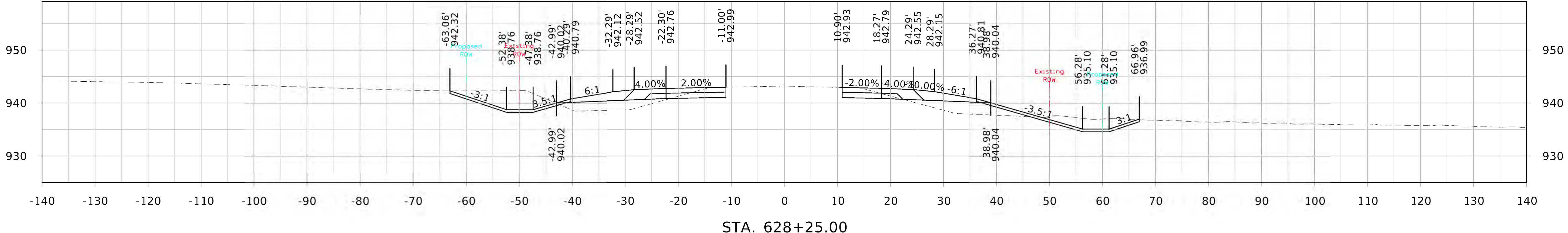
NW 106th Avenue



STA. 628+75.00

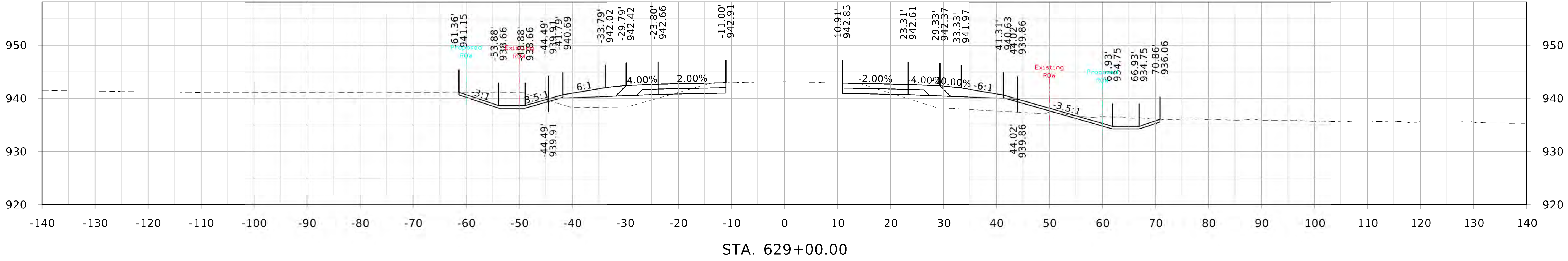
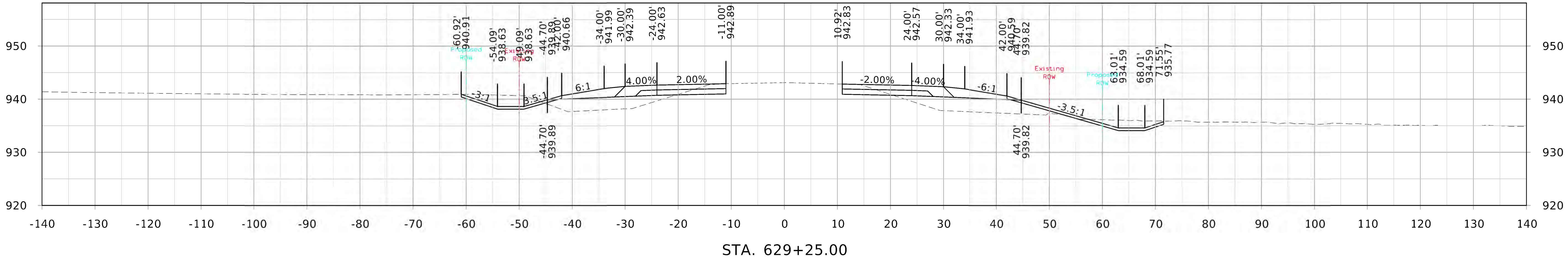
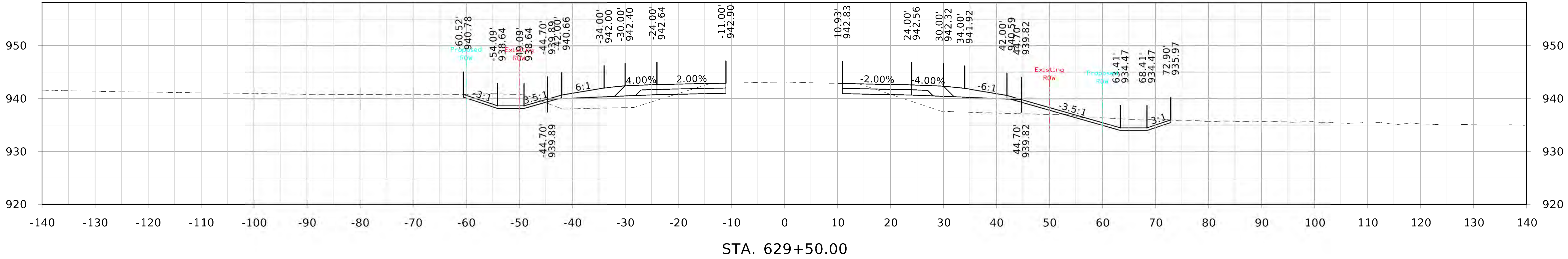


STA. 628+50.00

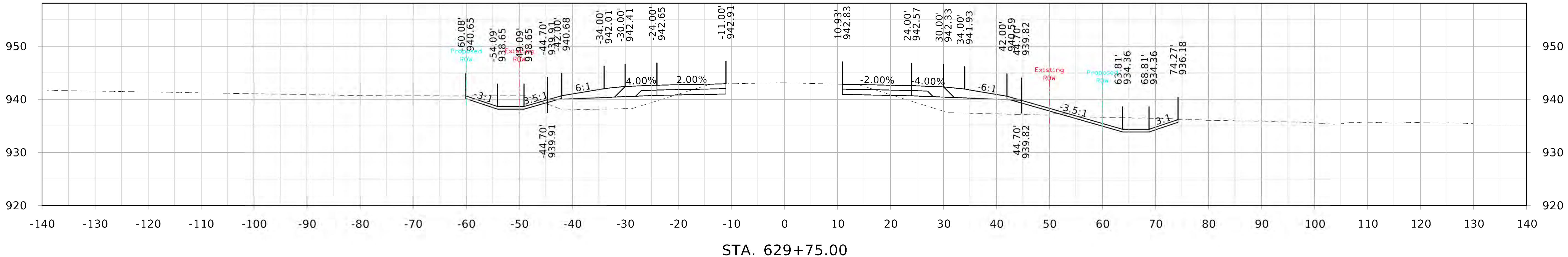
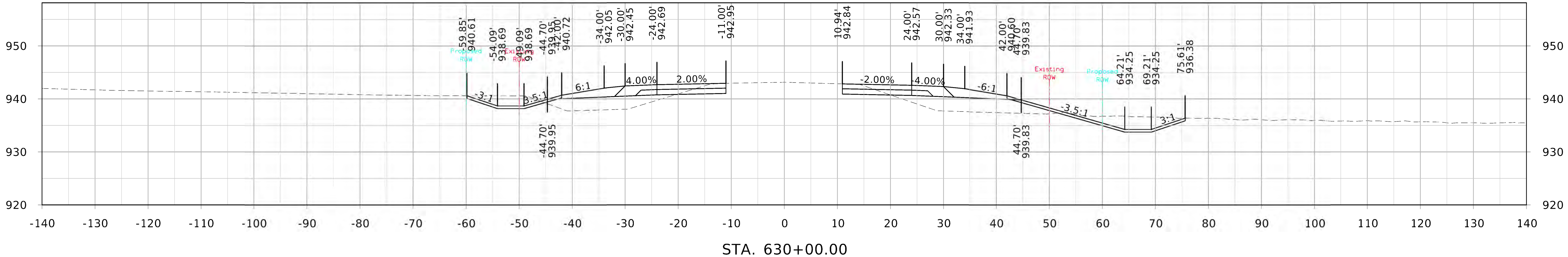
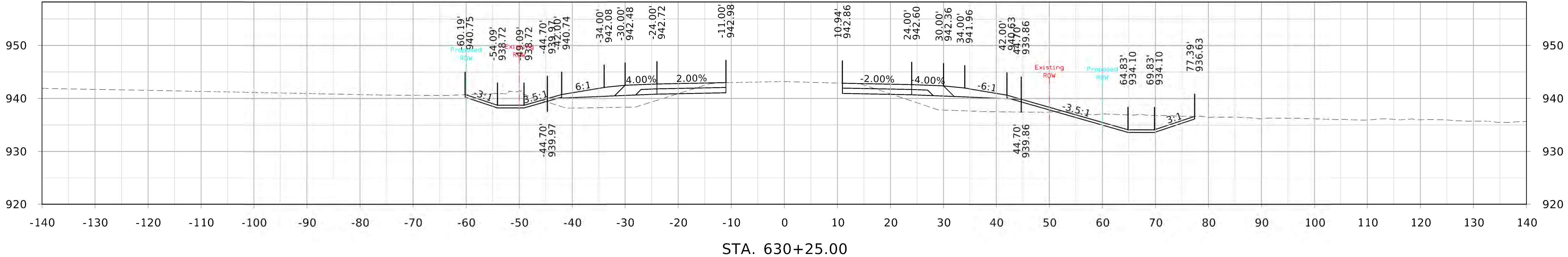


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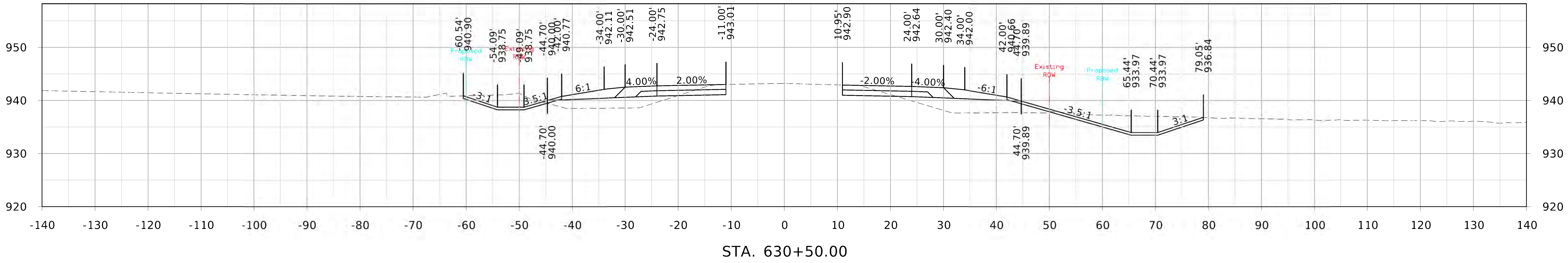
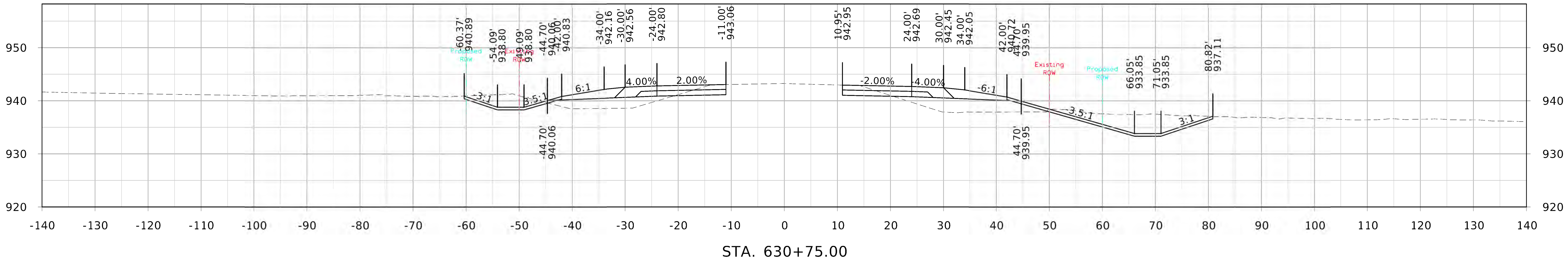
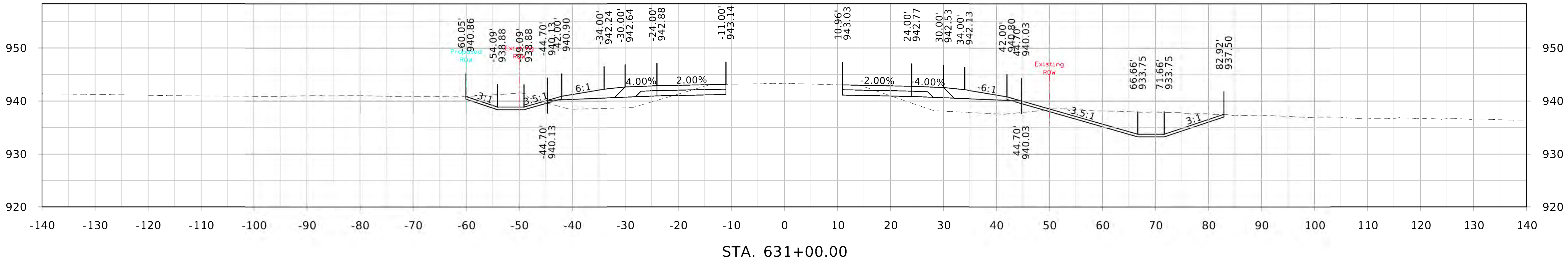
NW 106th Avenue



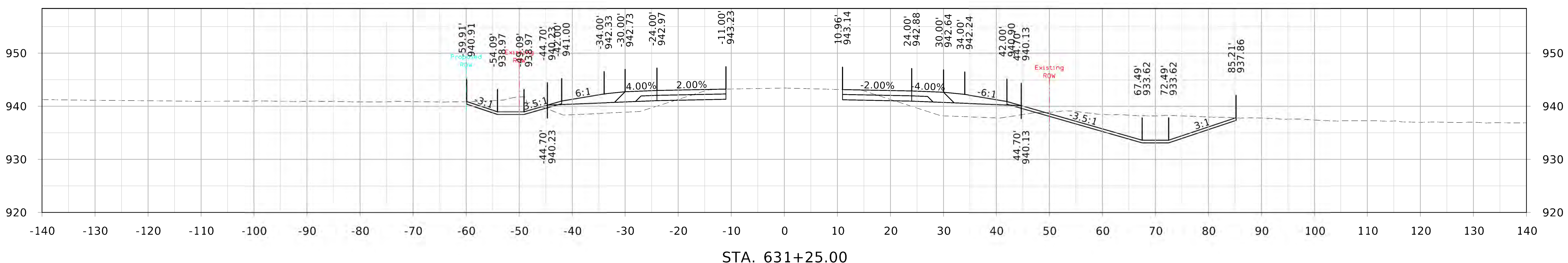
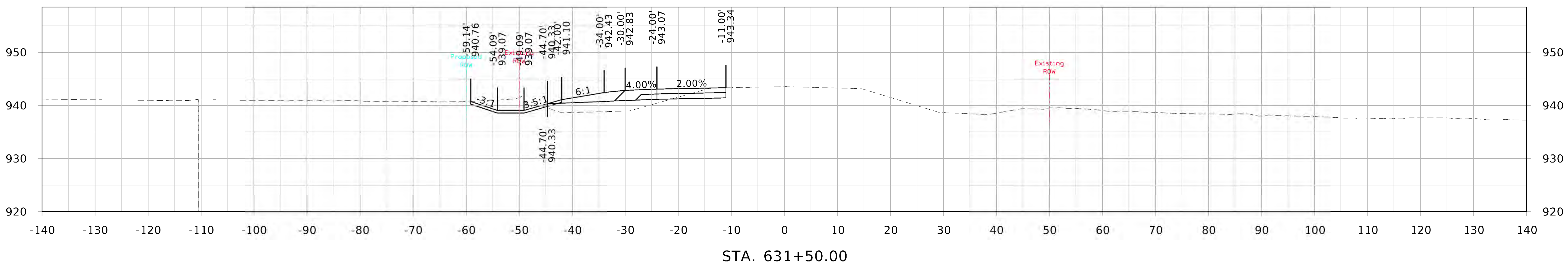
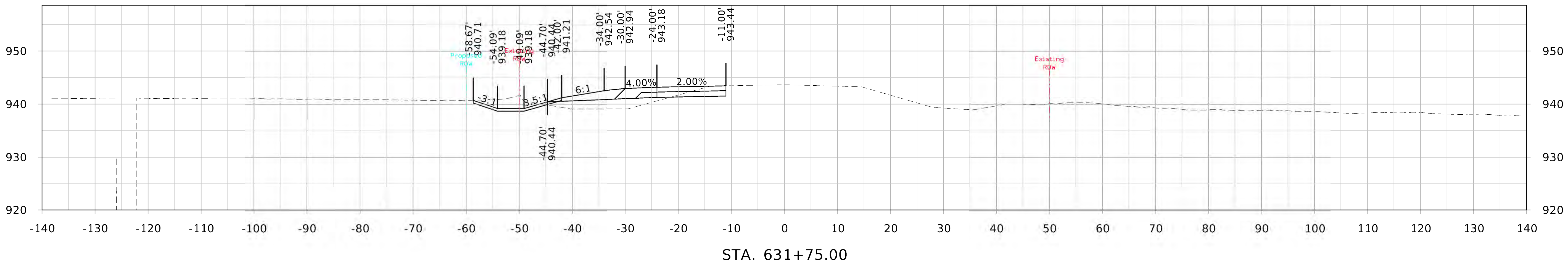
NW 106th Avenue



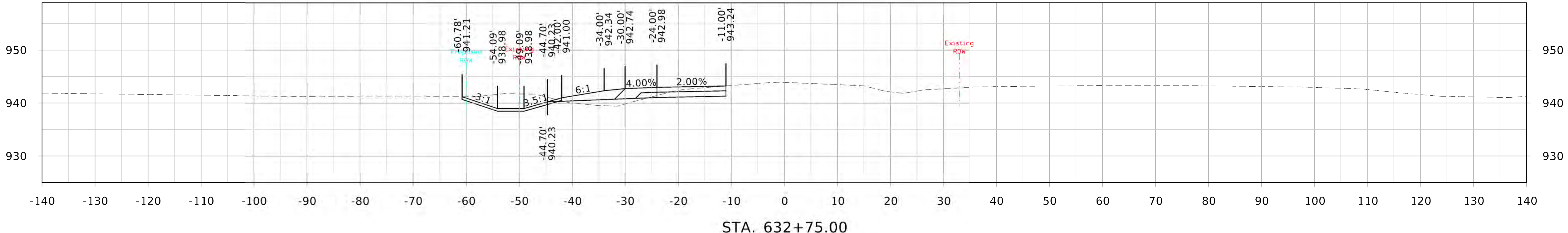
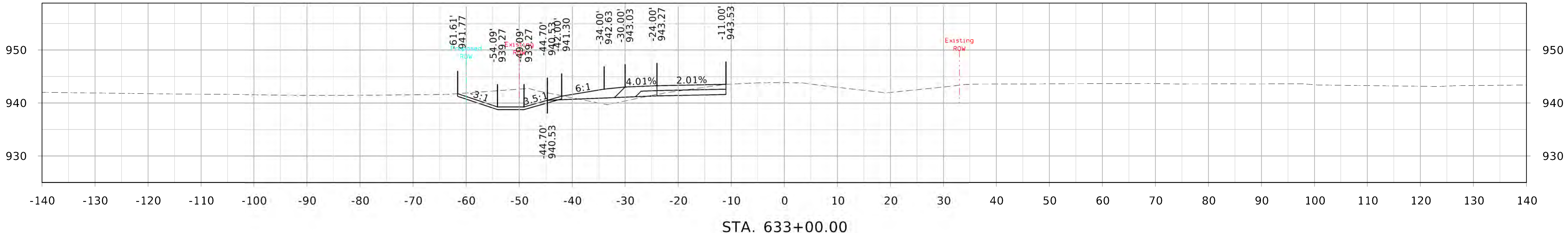
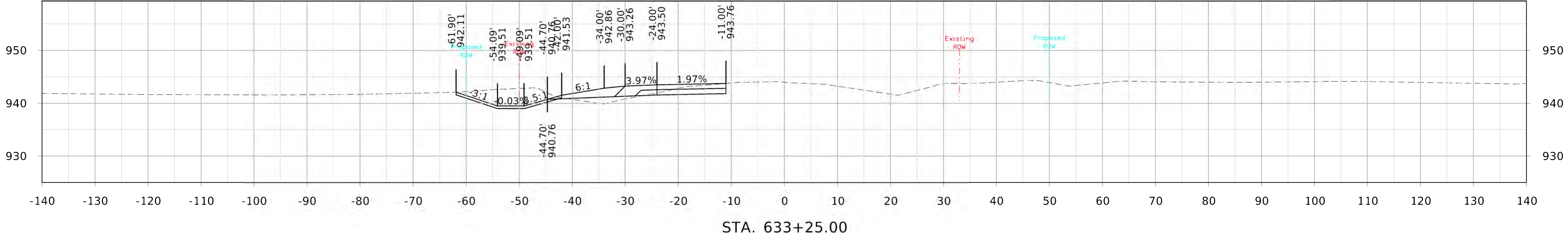
NW 106th Avenue



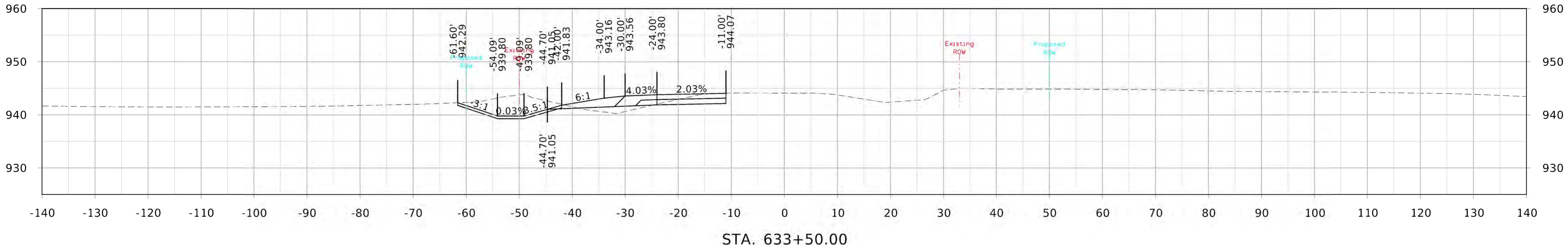
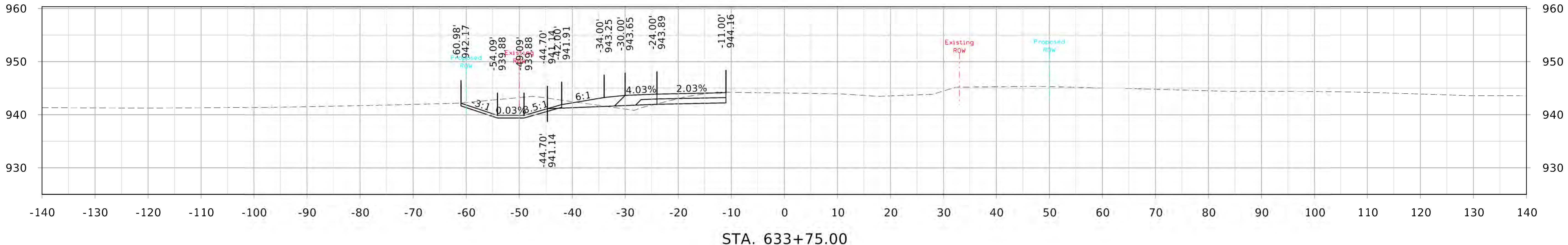
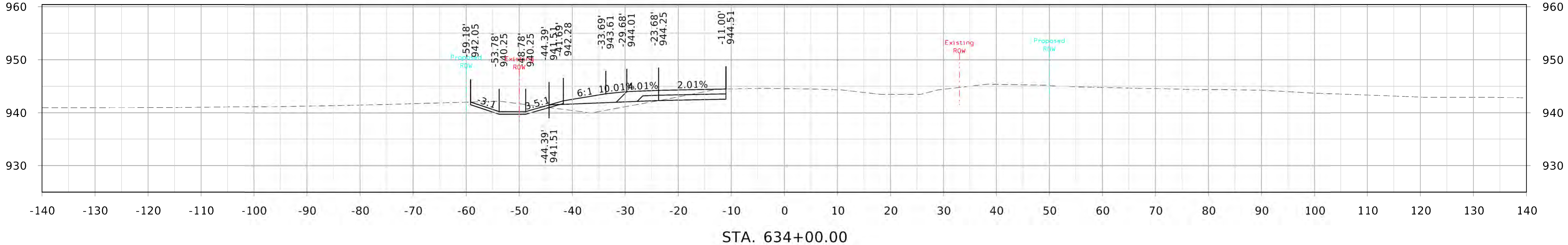
NW 106th Avenue



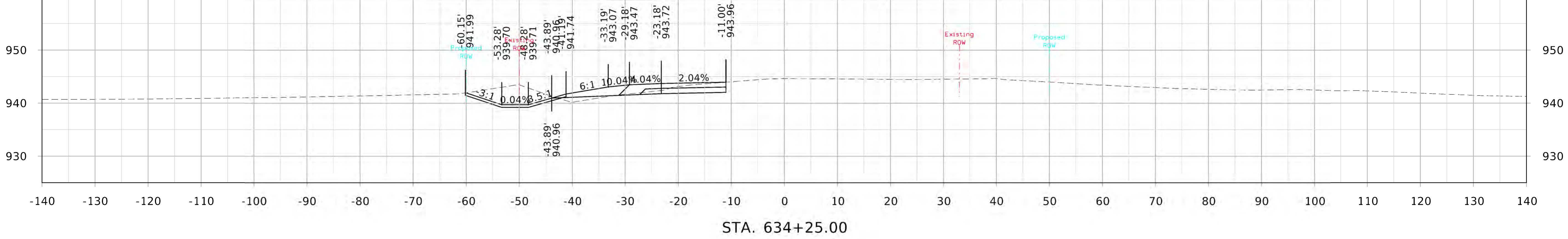
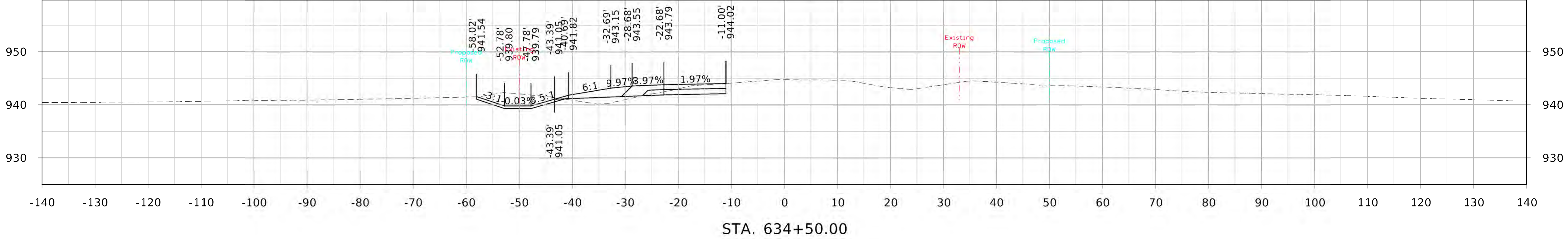
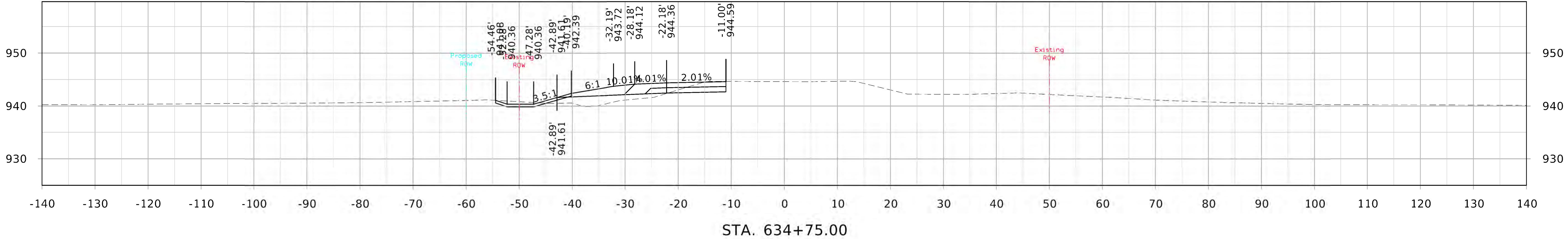
NW 106th Avenue



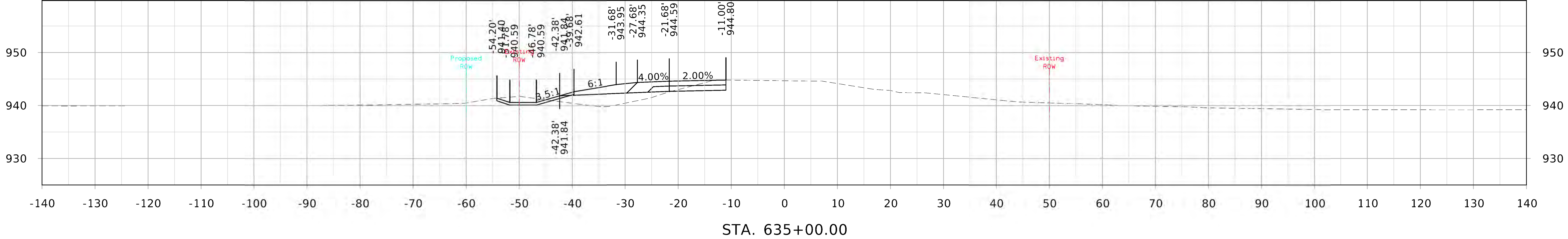
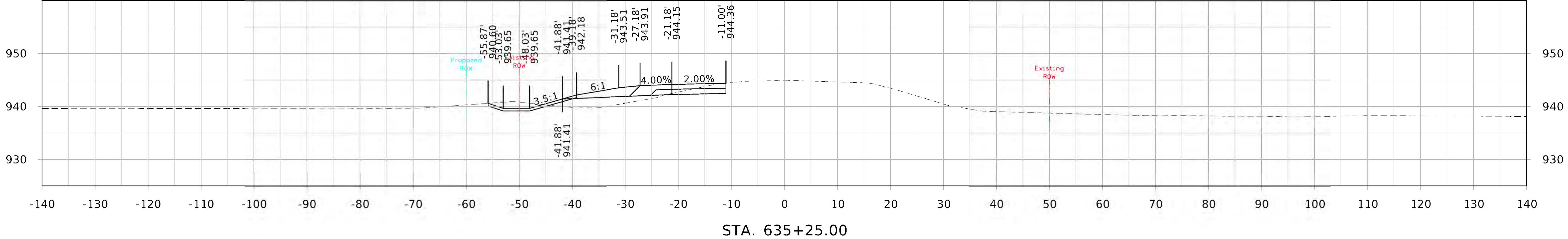
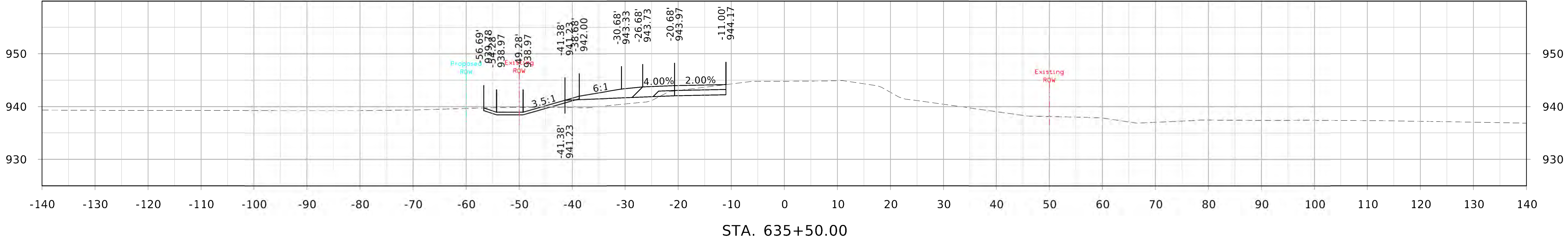
NW 106th Avenue



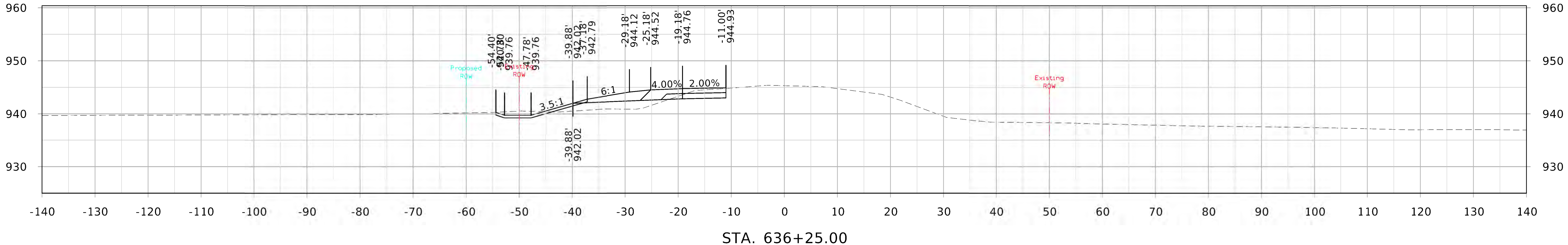
NW 106th Avenue



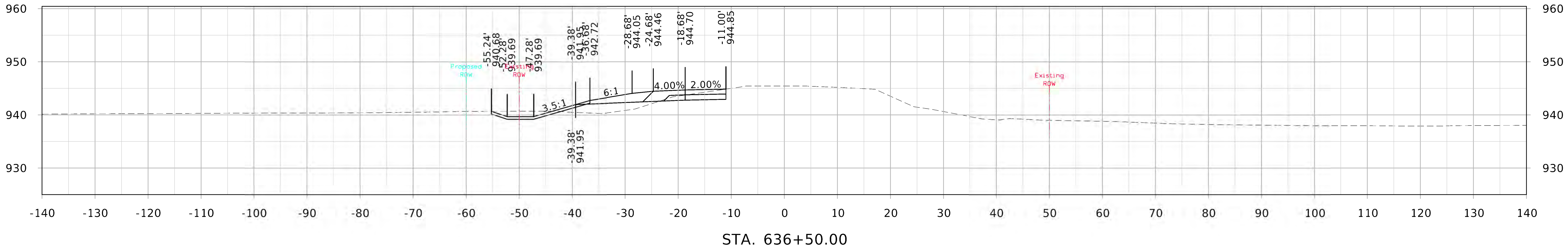
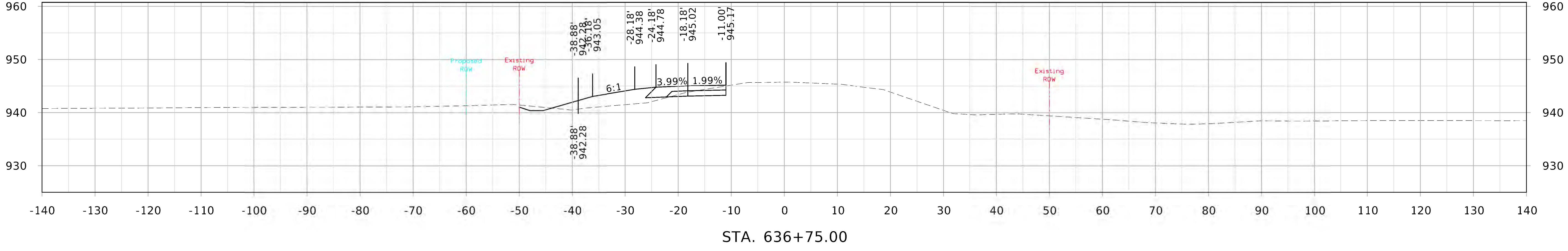
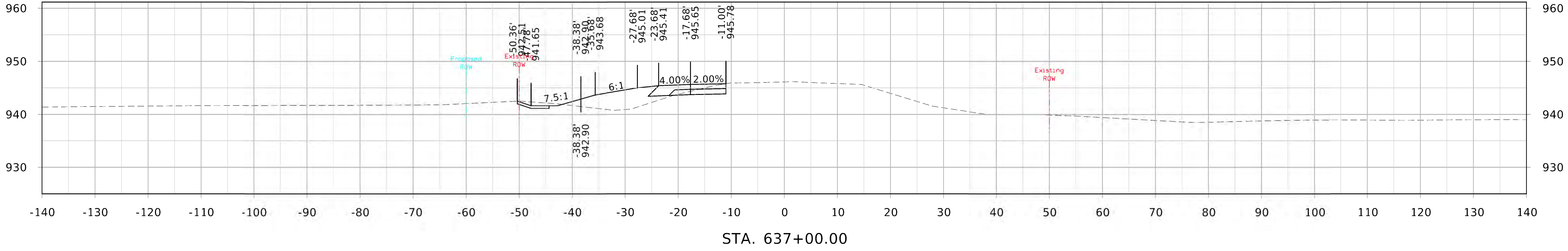
NW 106th Avenue



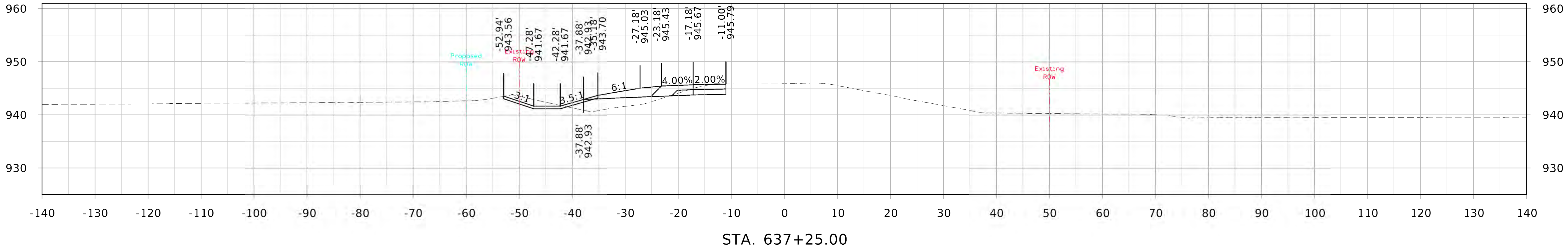
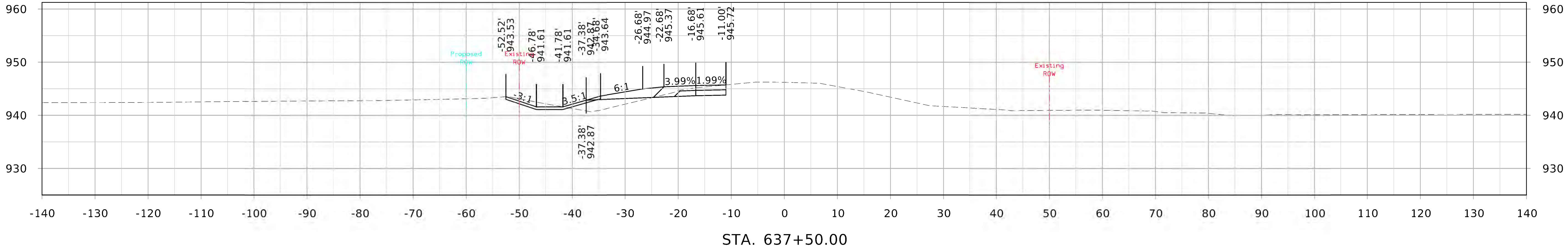
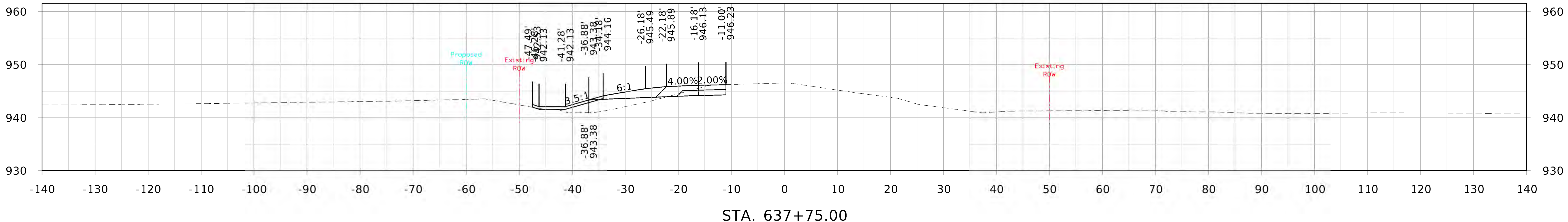
NW 106th Avenue



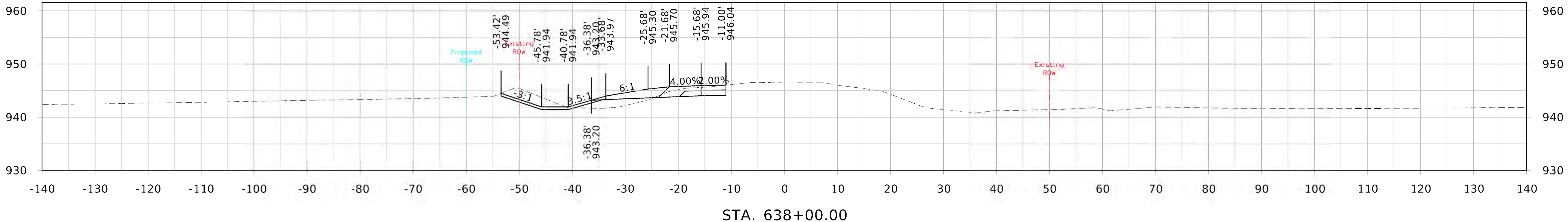
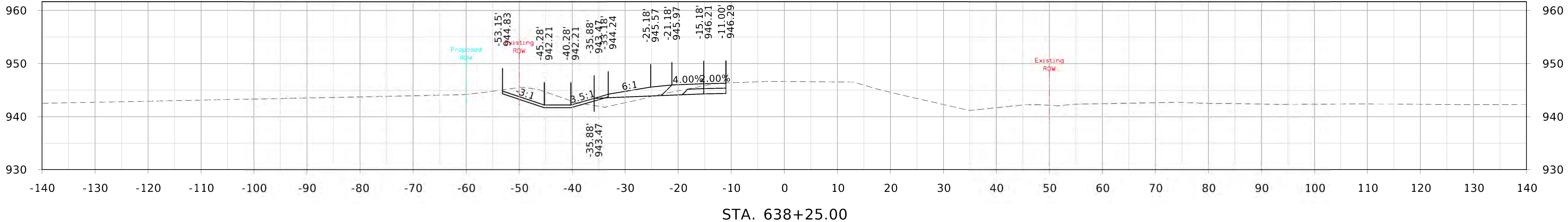
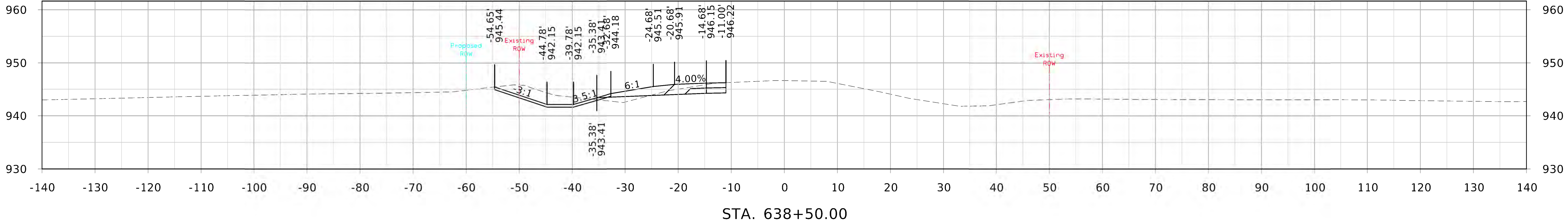
NW 106th Avenue



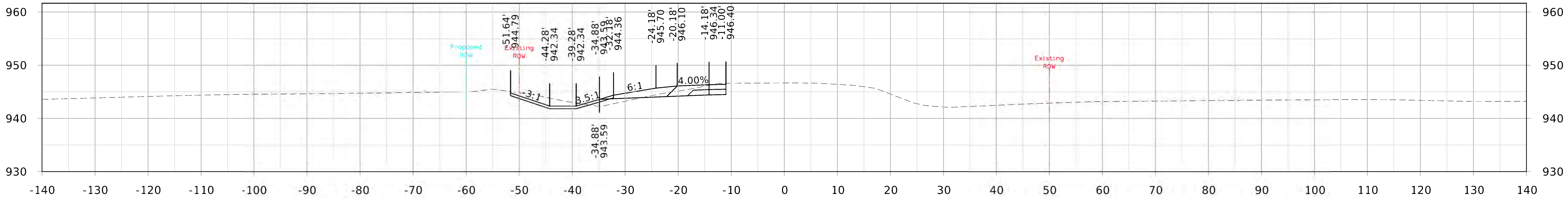
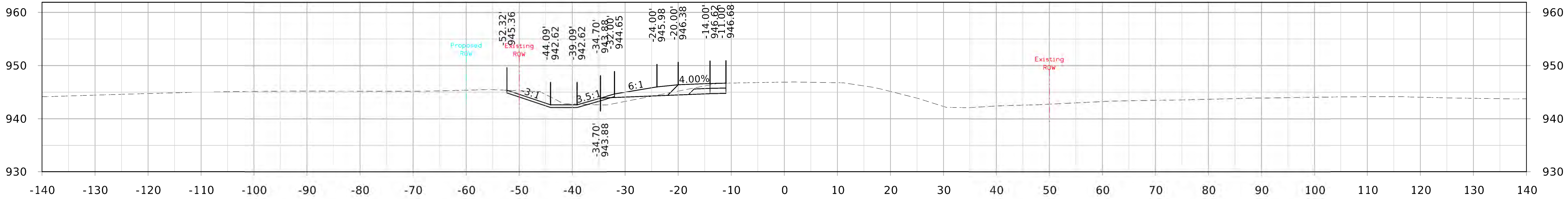
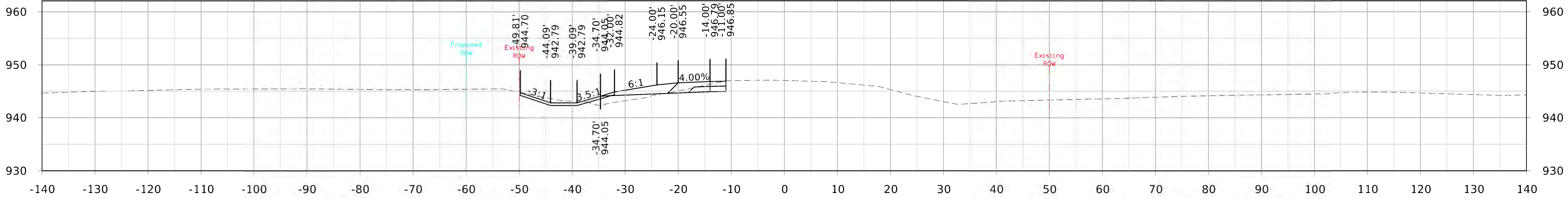
NW 106th Avenue



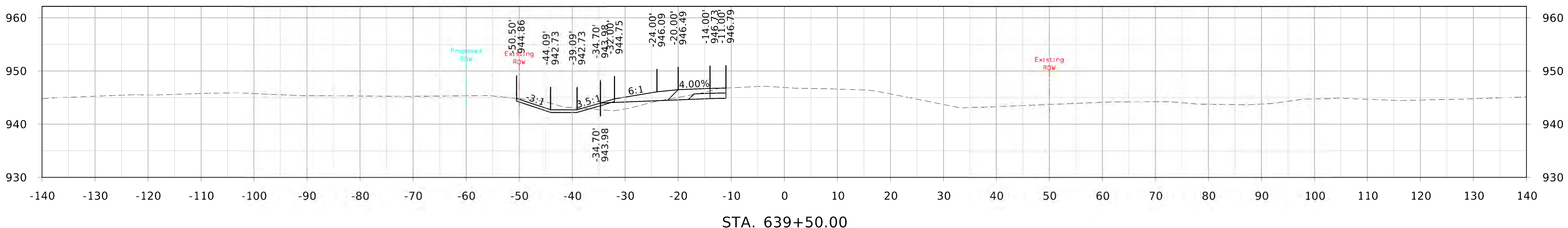
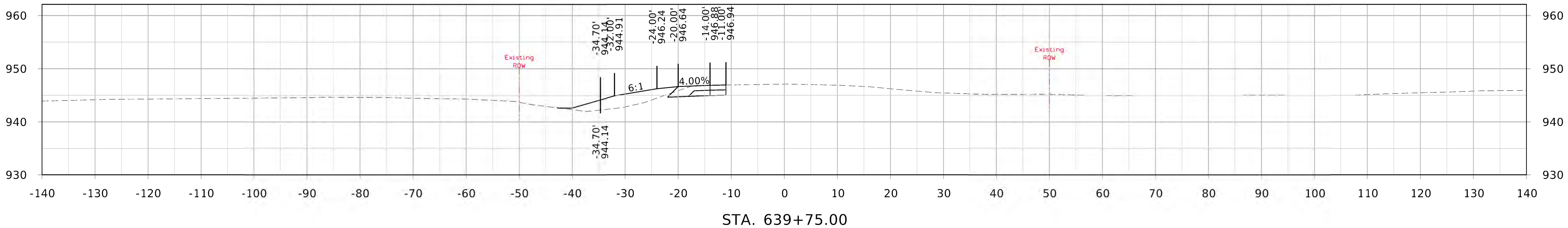
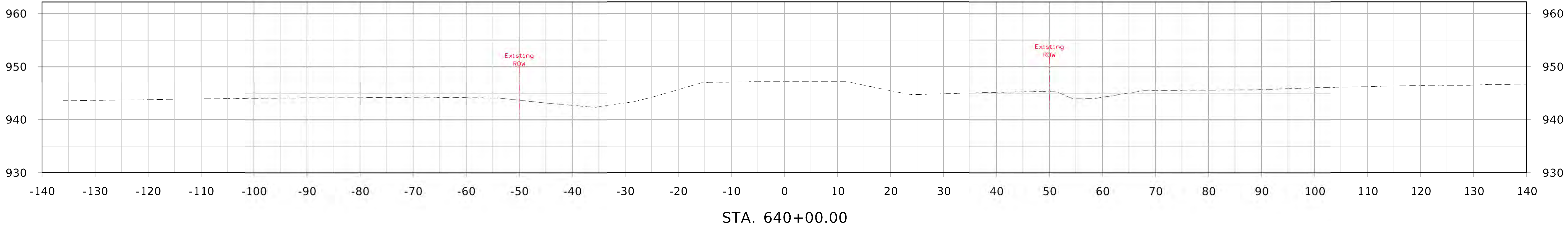
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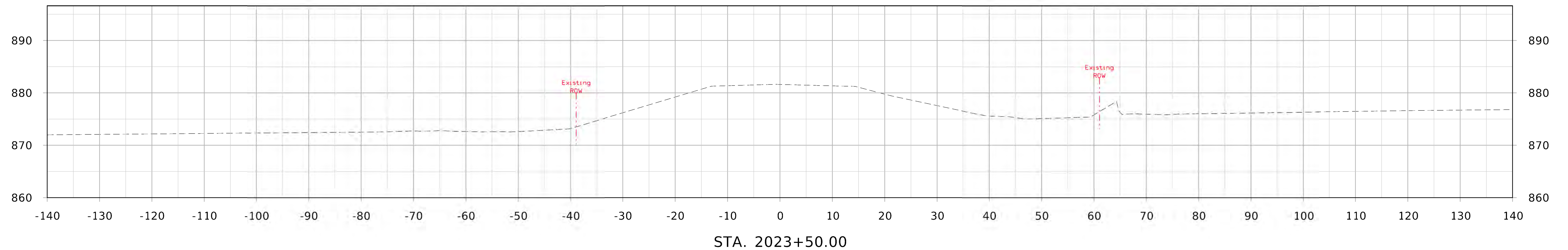
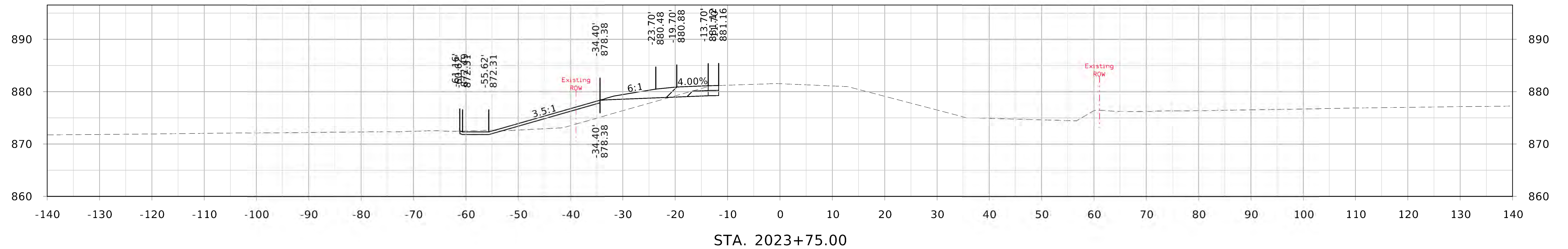
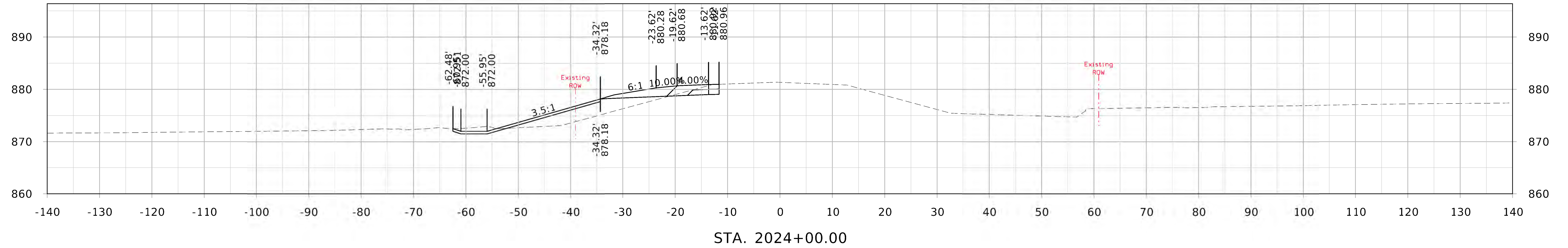
NW 106th Avenue



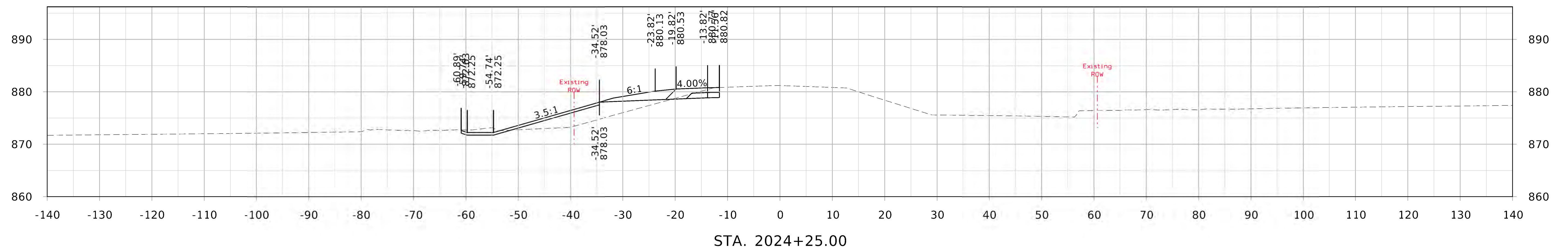
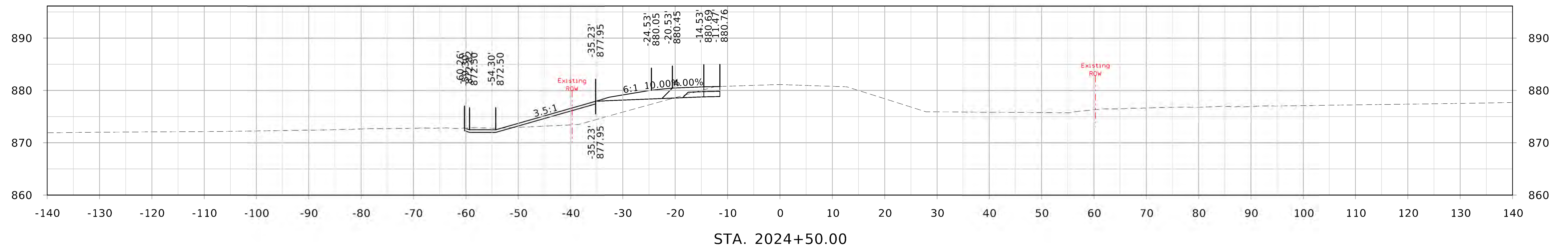
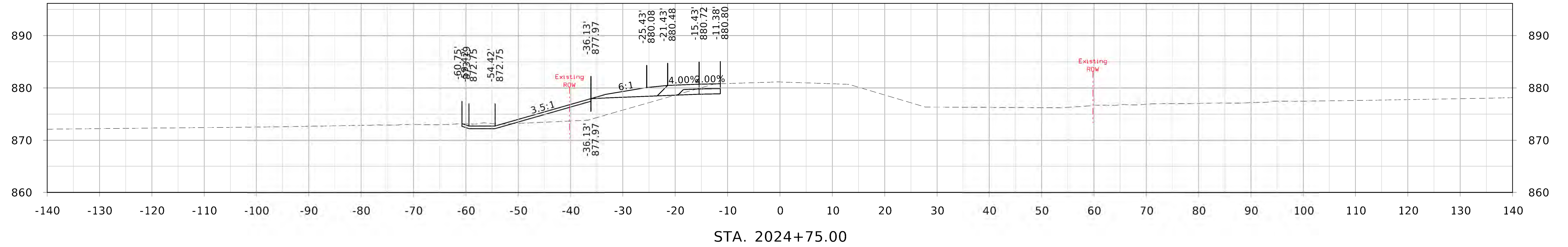
NW 106th Avenue



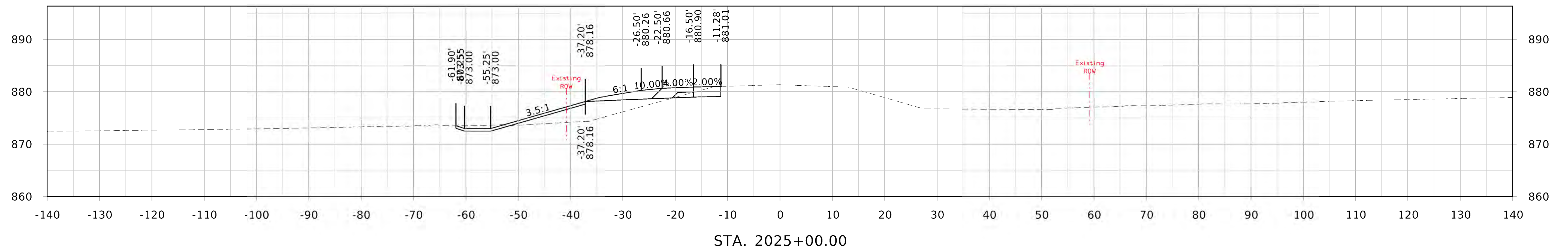
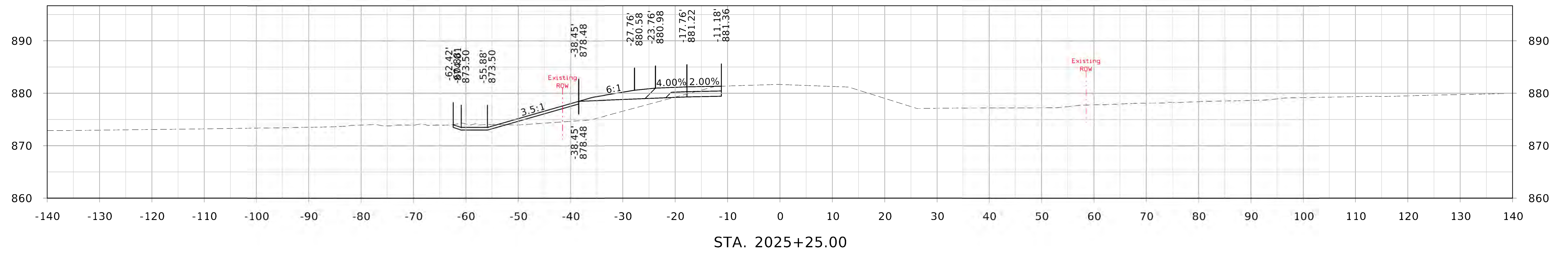
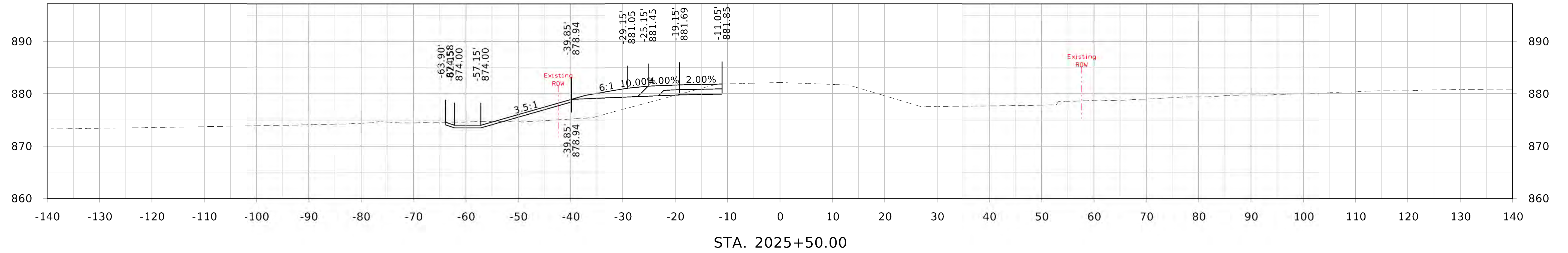
NW 110th Court



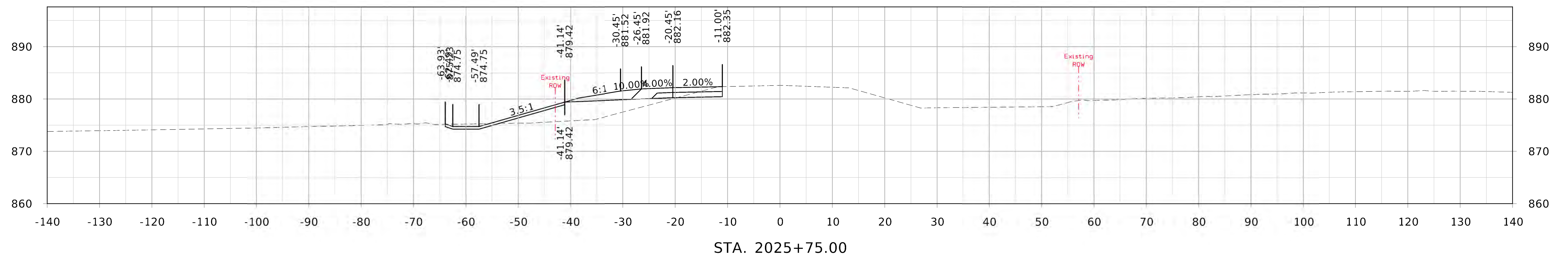
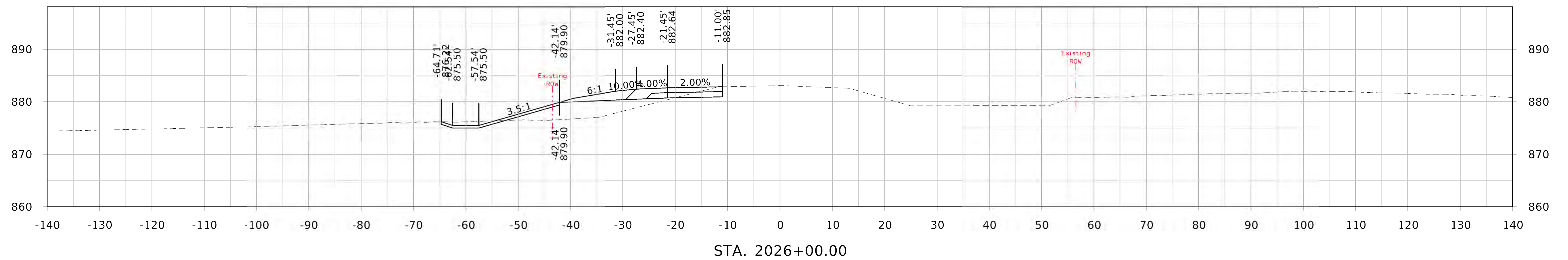
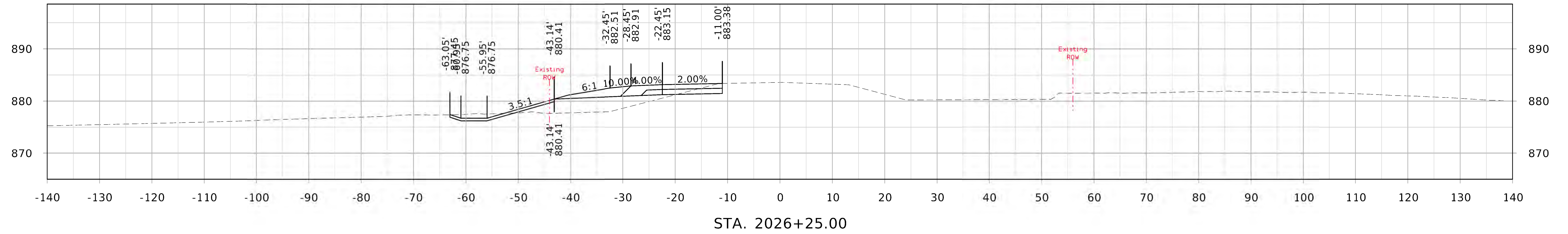
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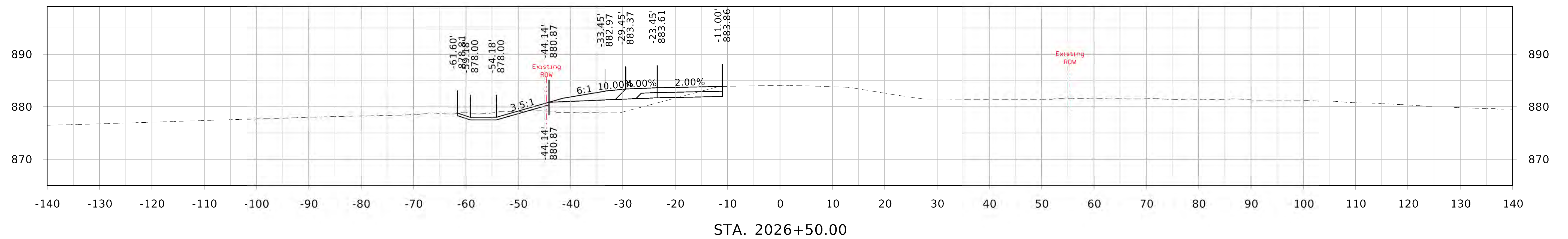
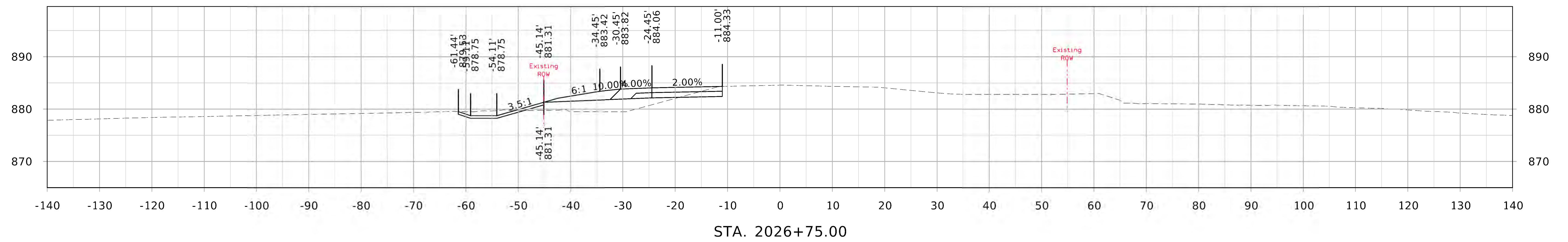
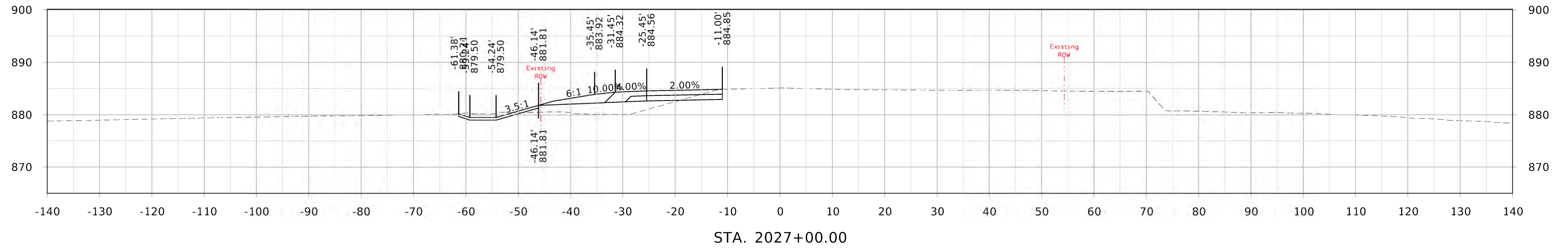
NW 110th Court



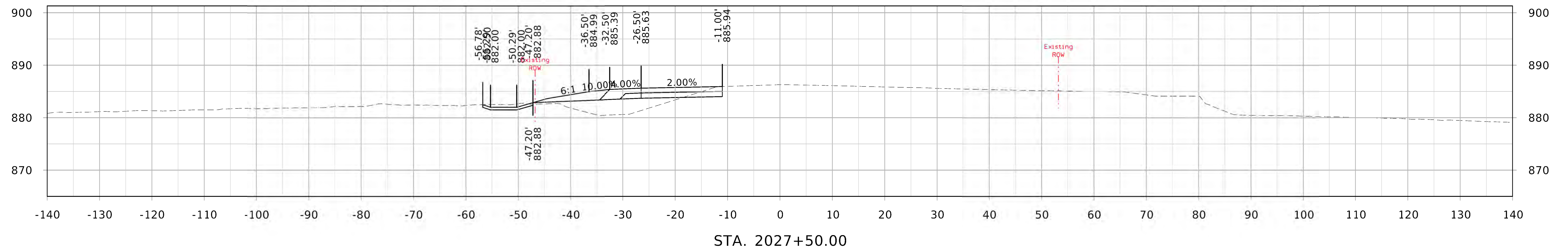
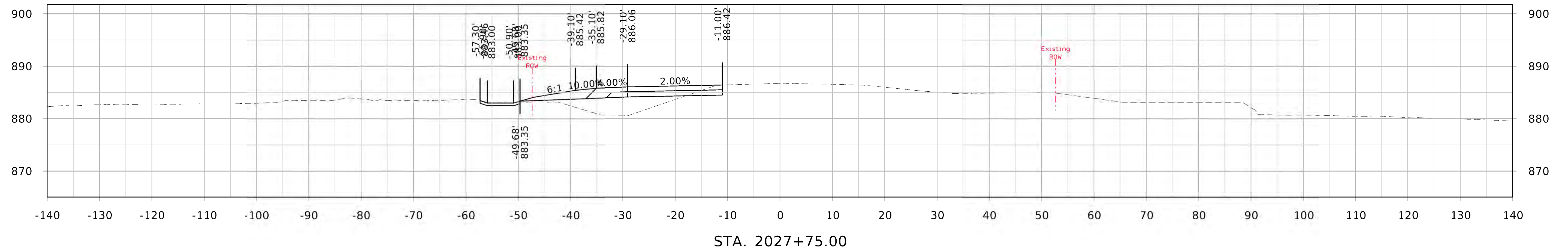
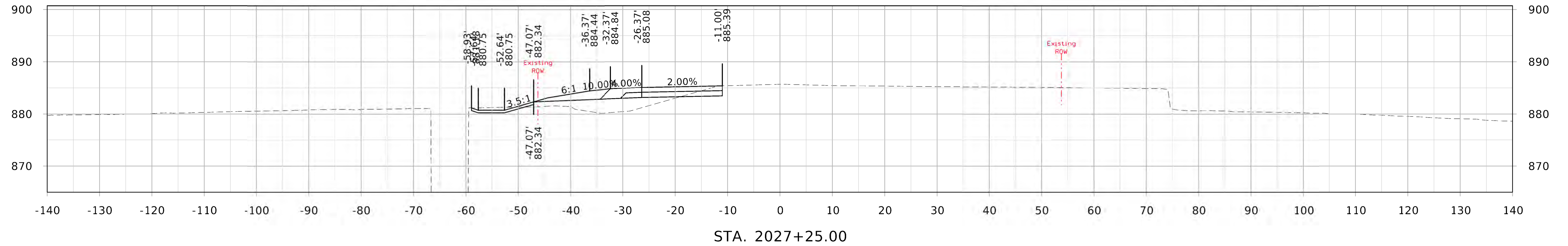
NW 110th Court



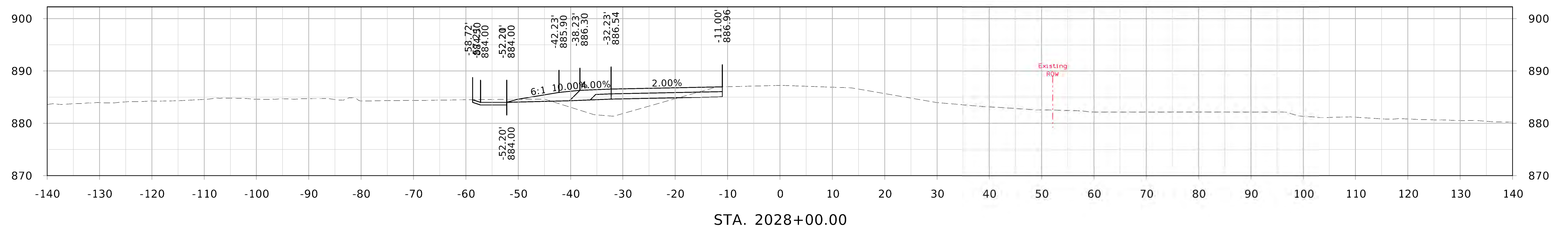
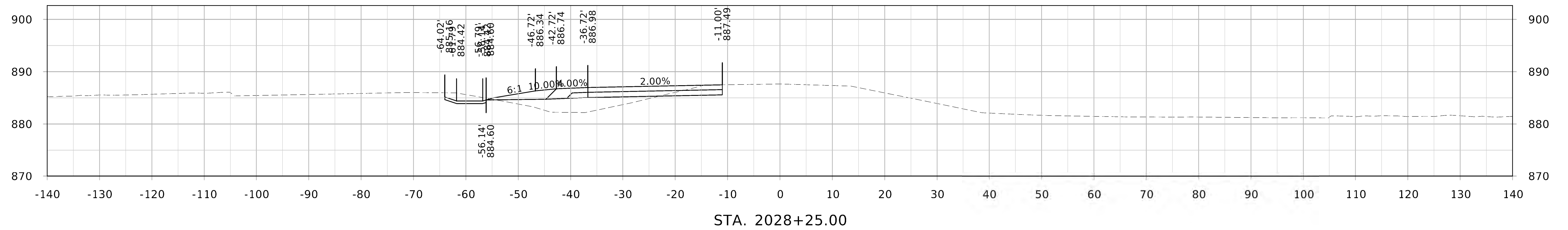
NW 110th Court



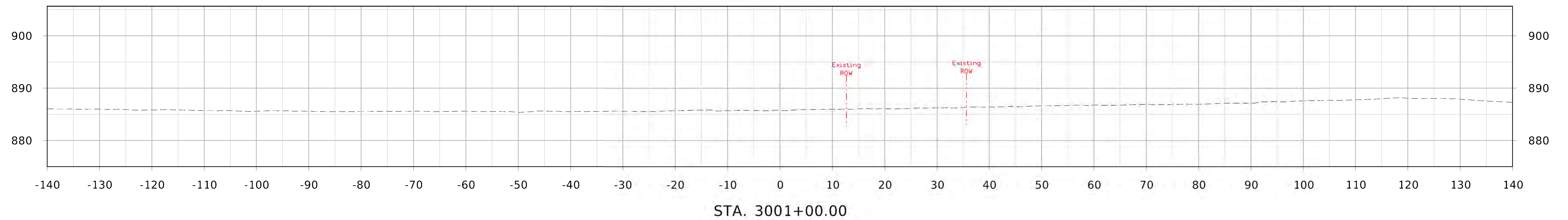
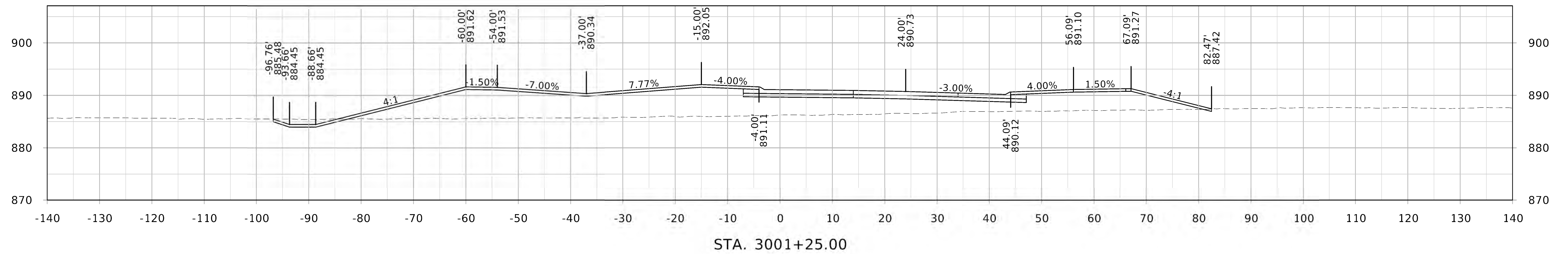
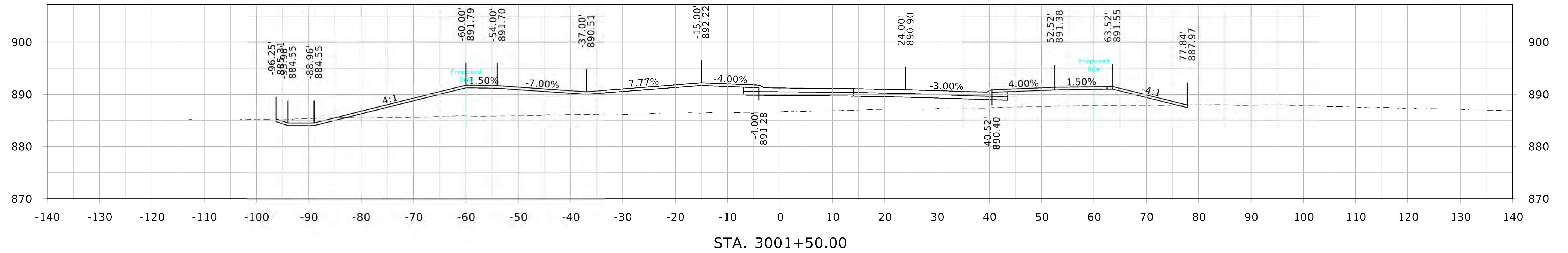
NW 110th Court



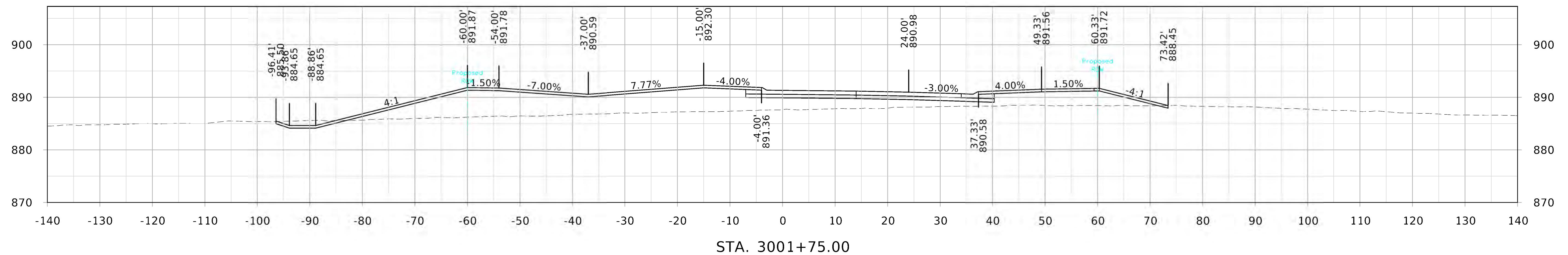
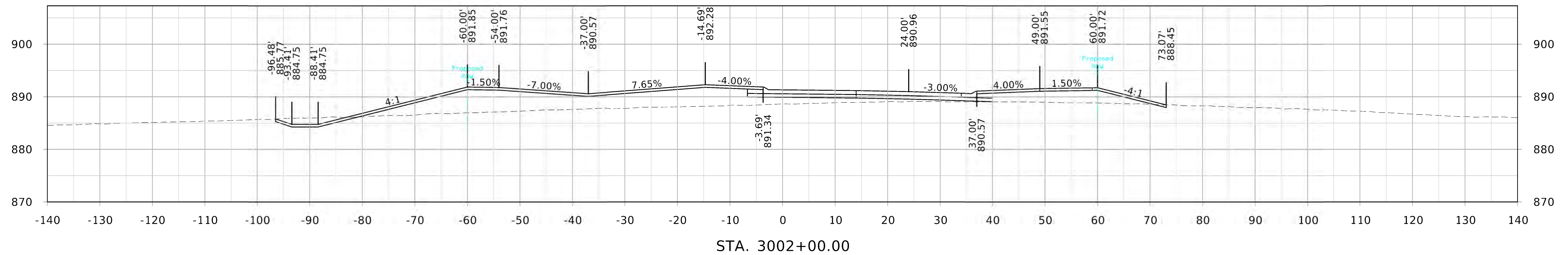
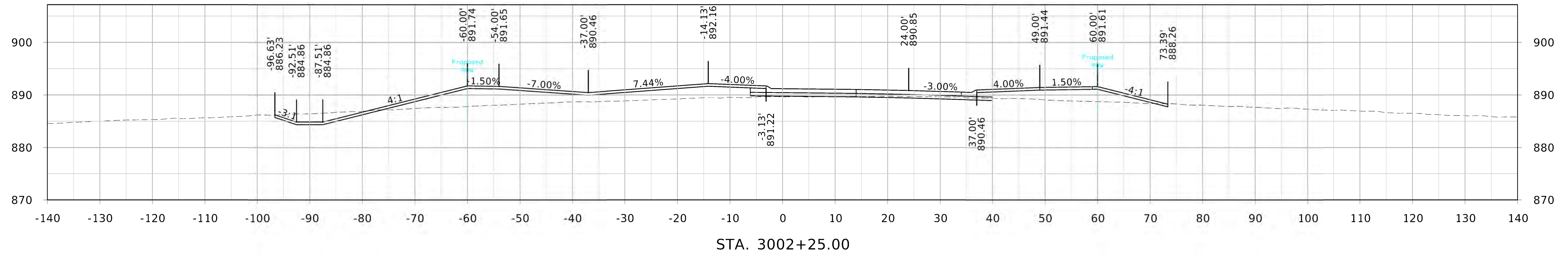
NW 110th Court



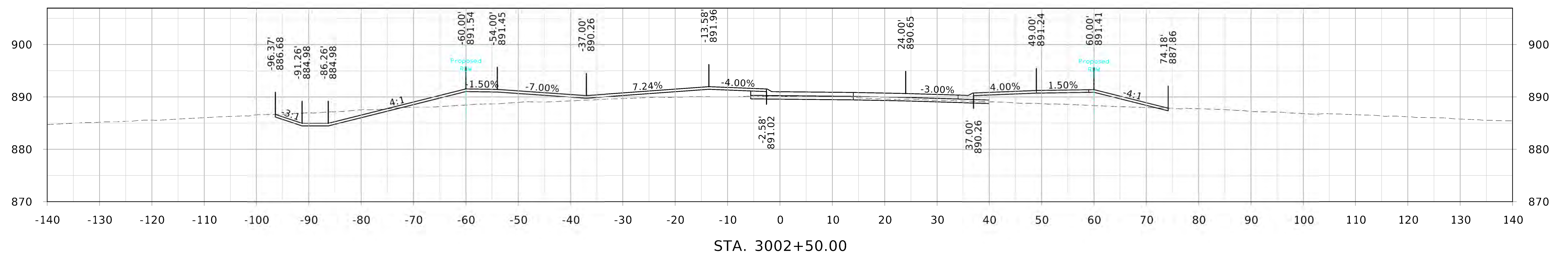
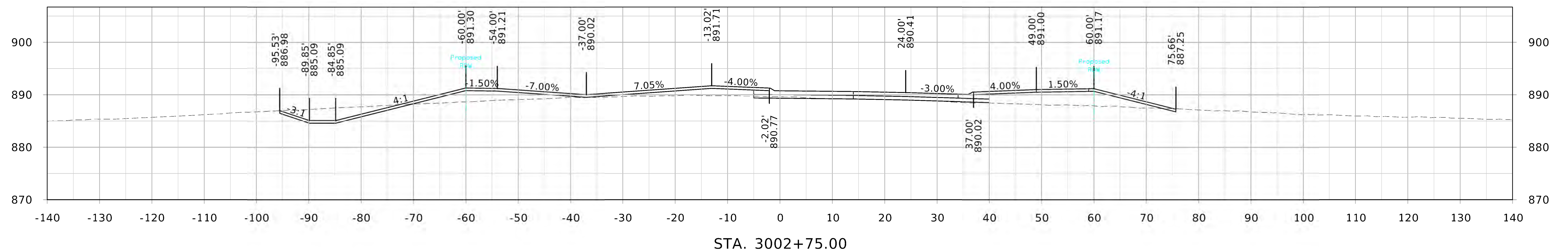
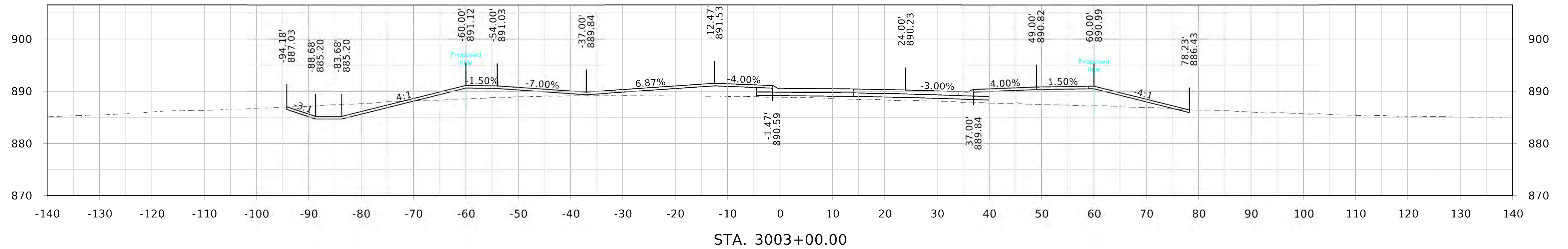
110th Street



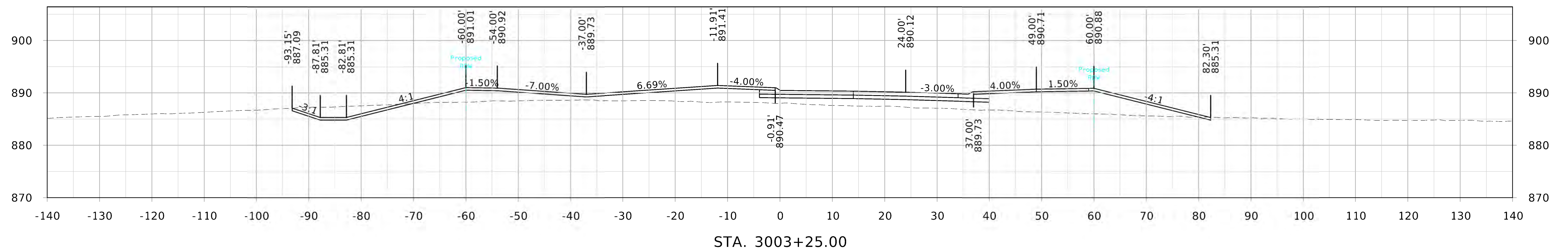
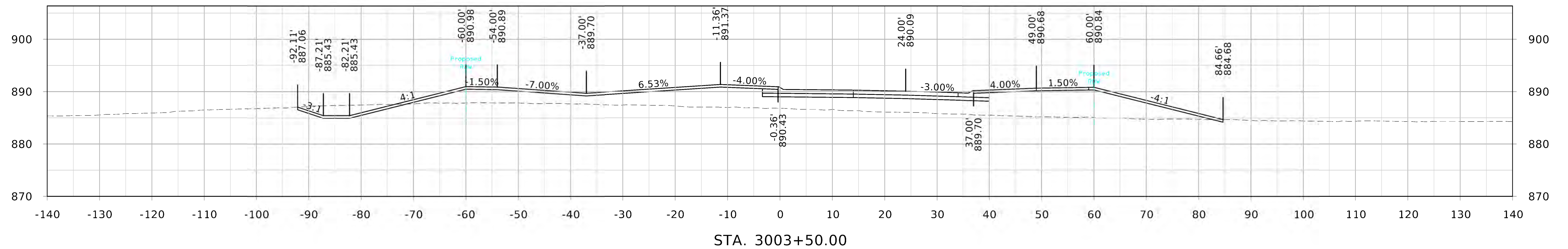
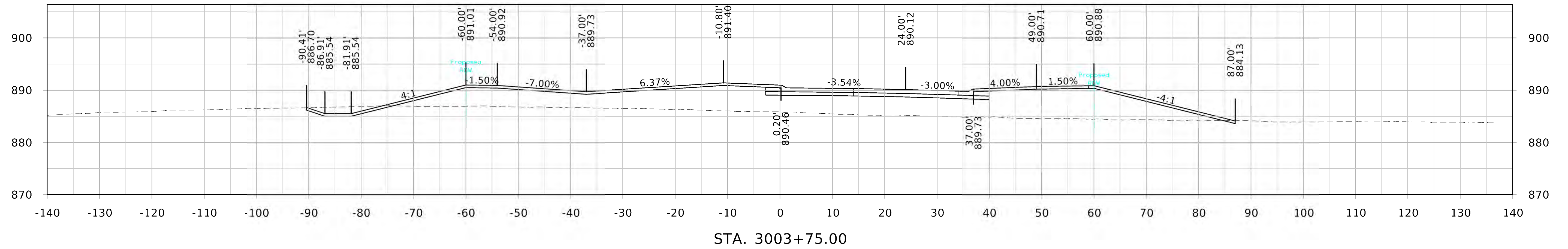
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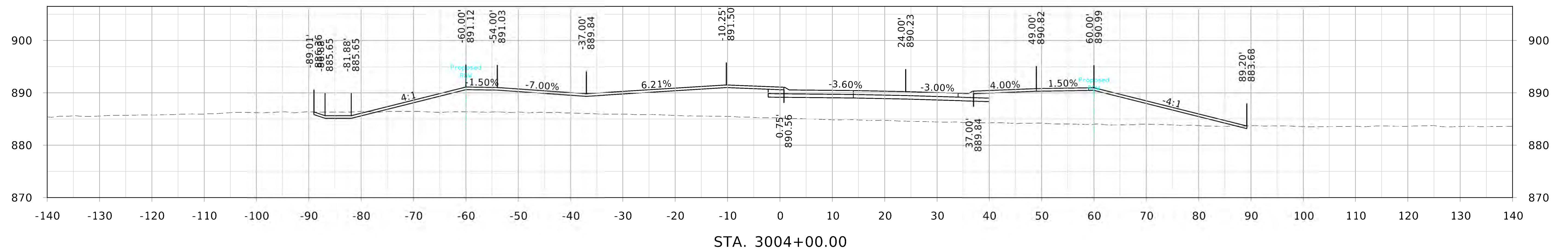
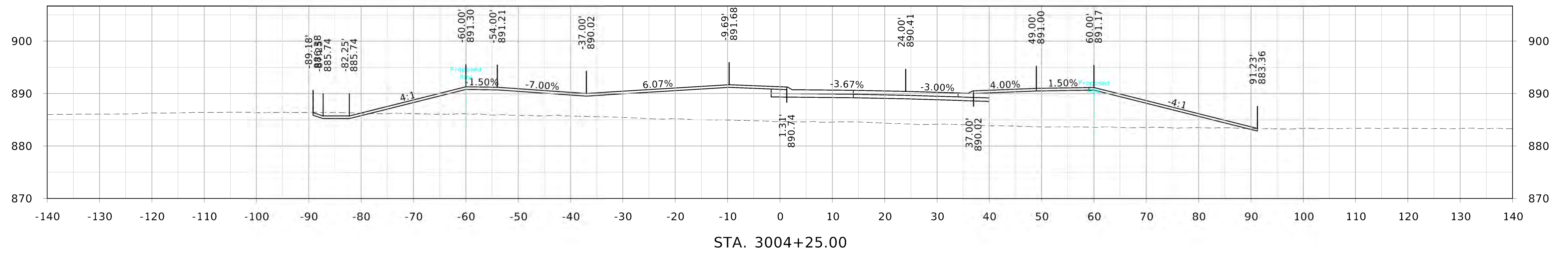
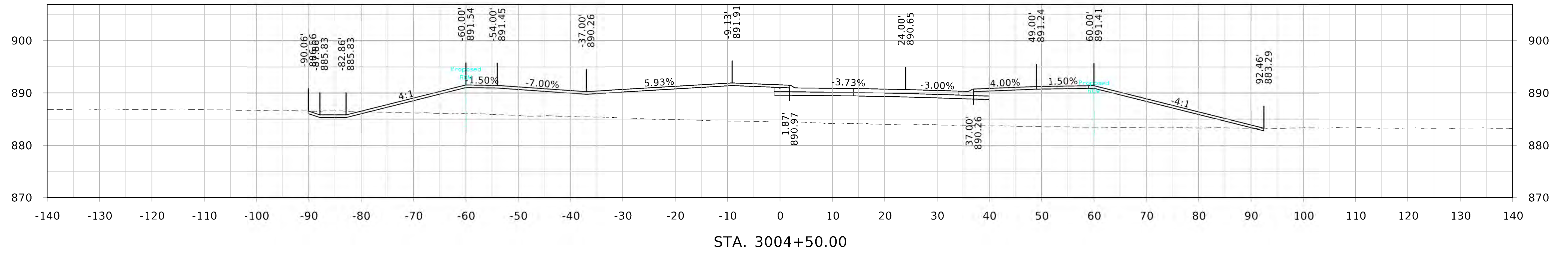
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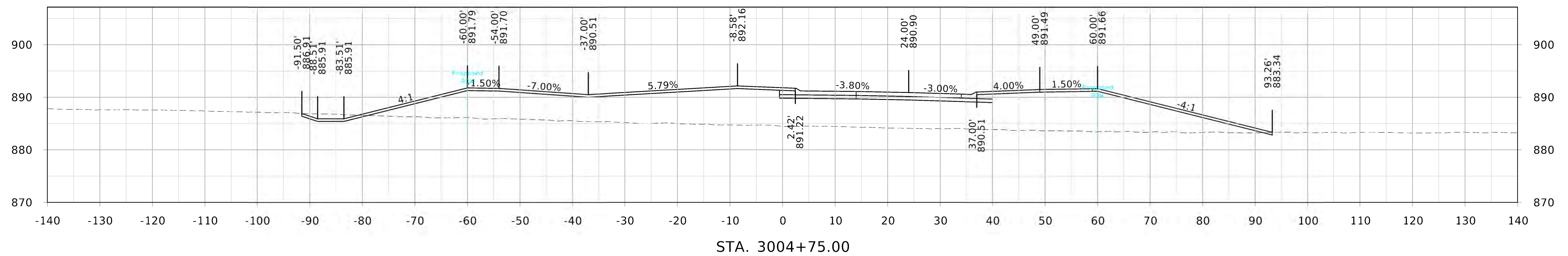
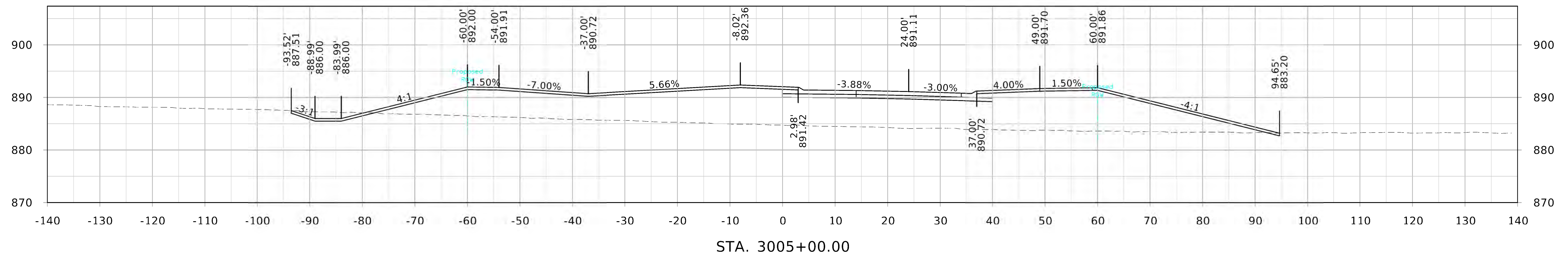
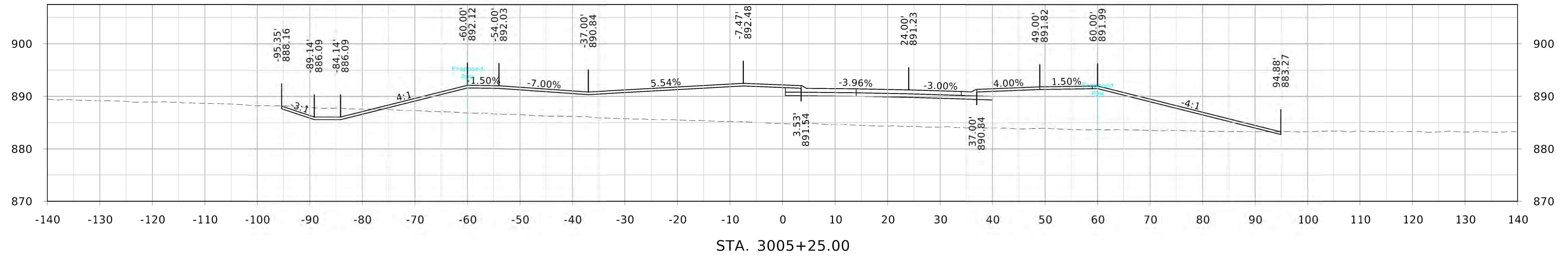
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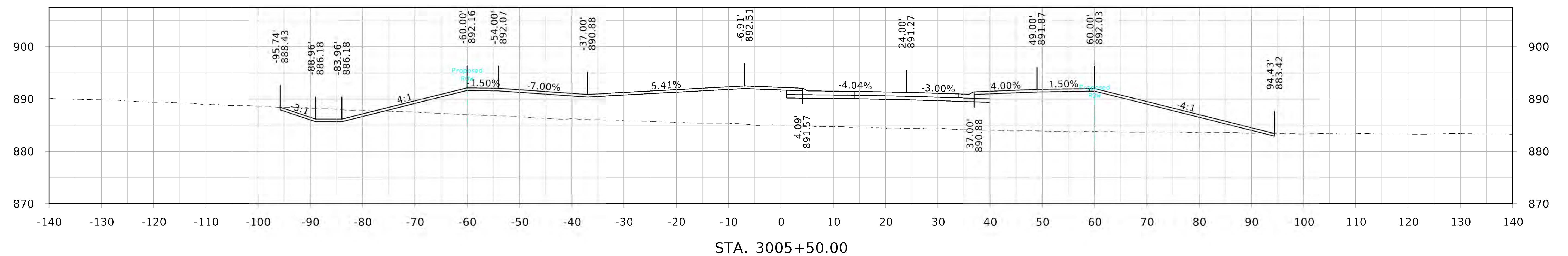
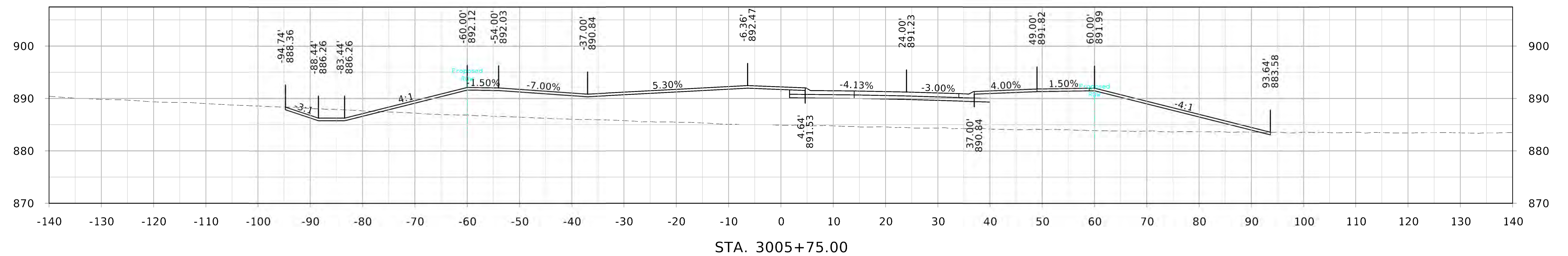
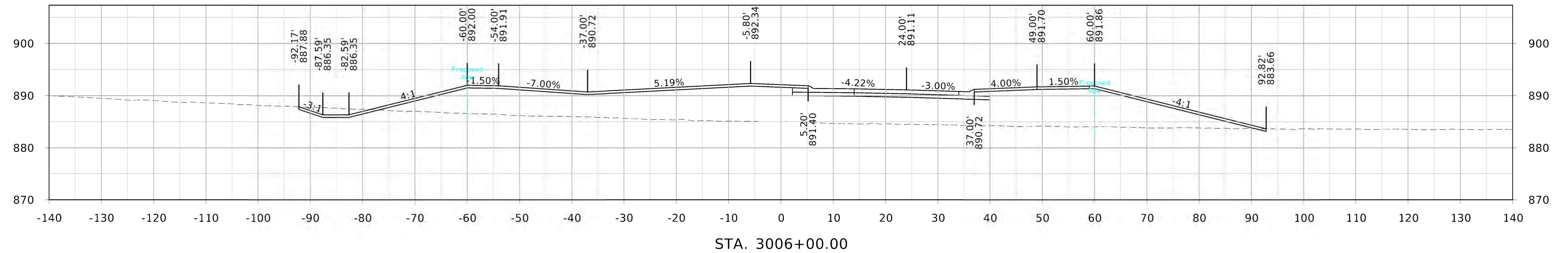
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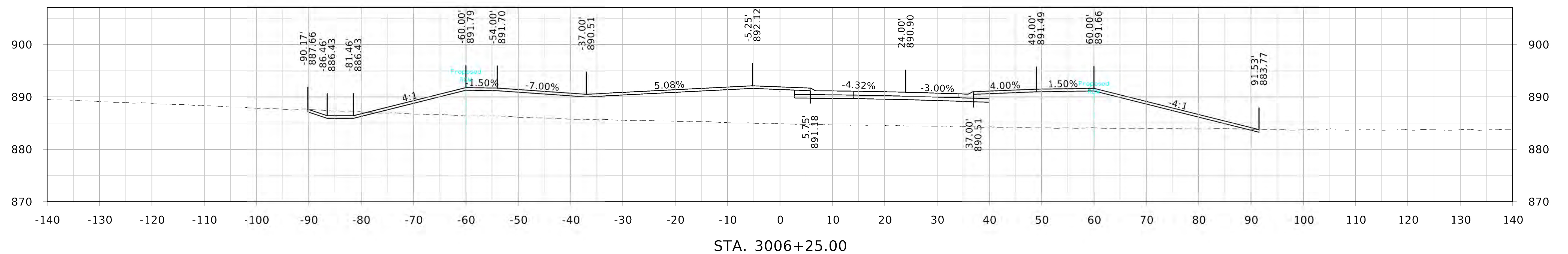
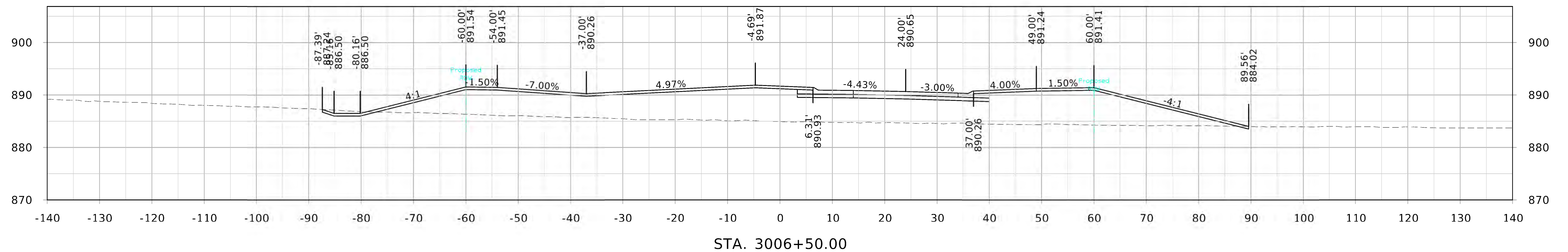
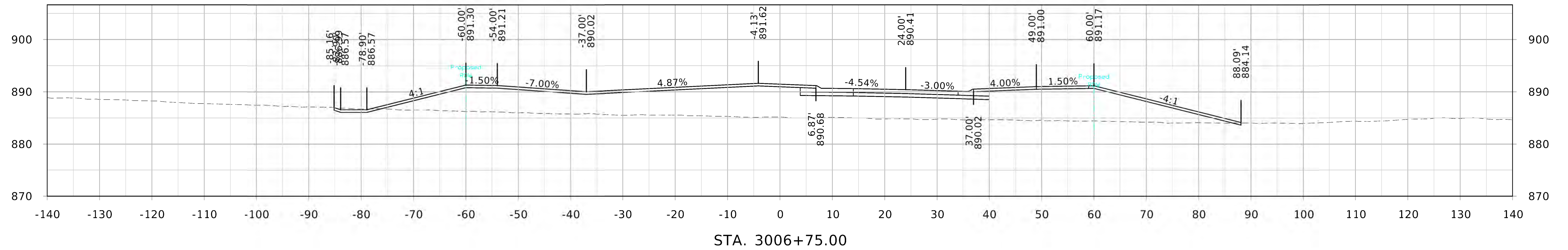
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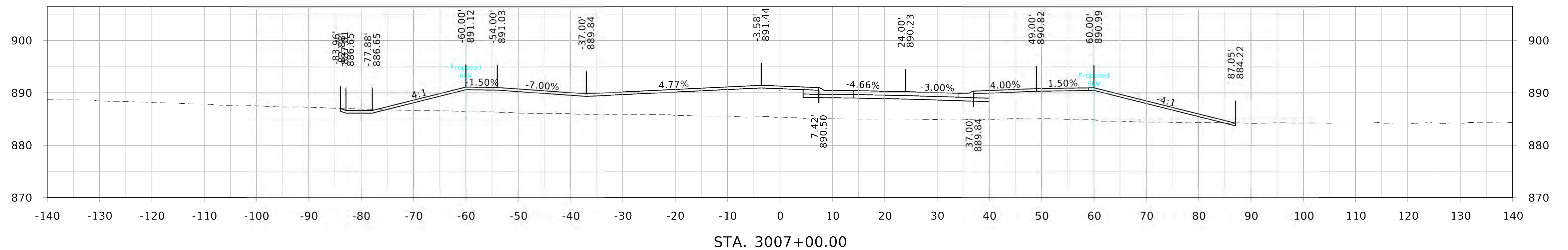
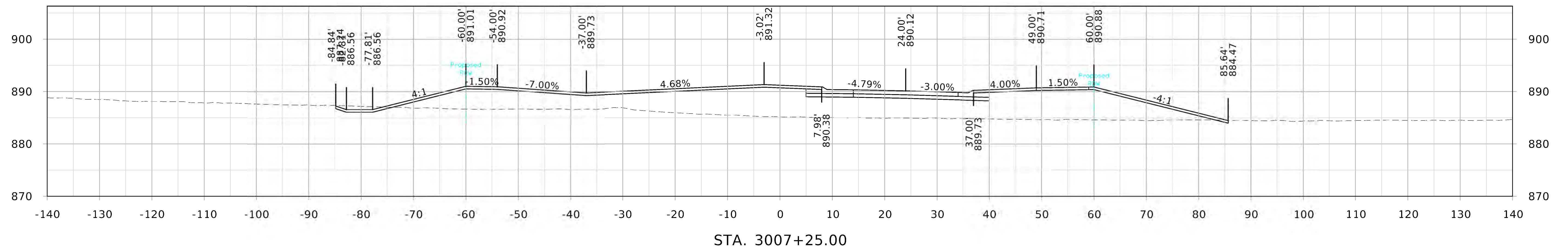
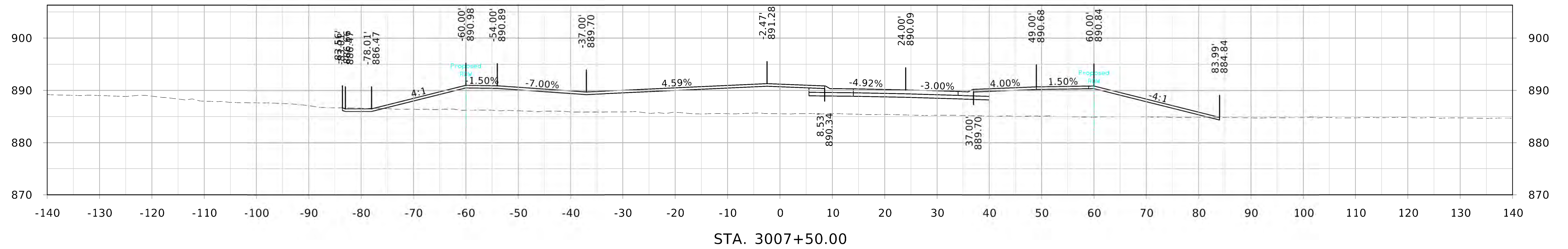
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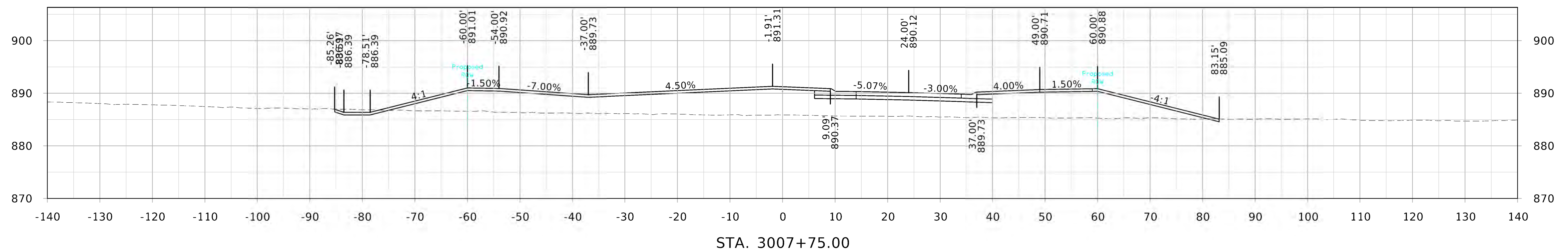
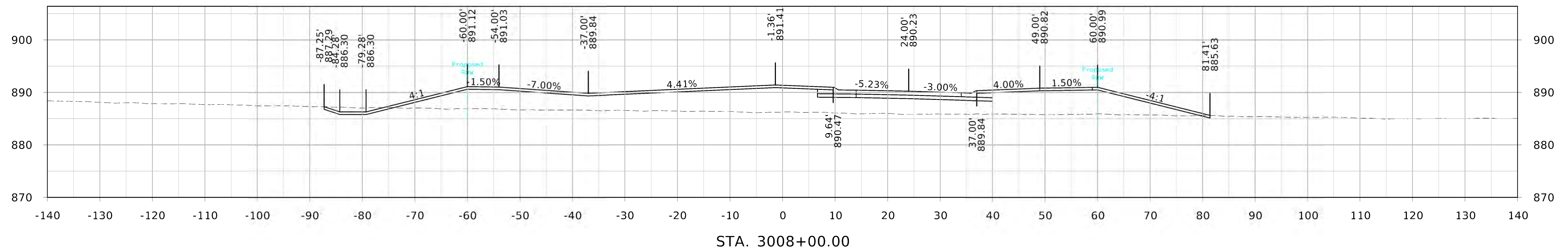
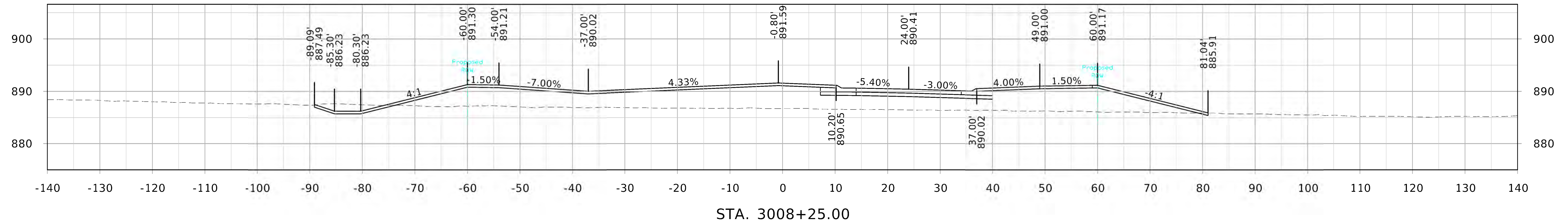
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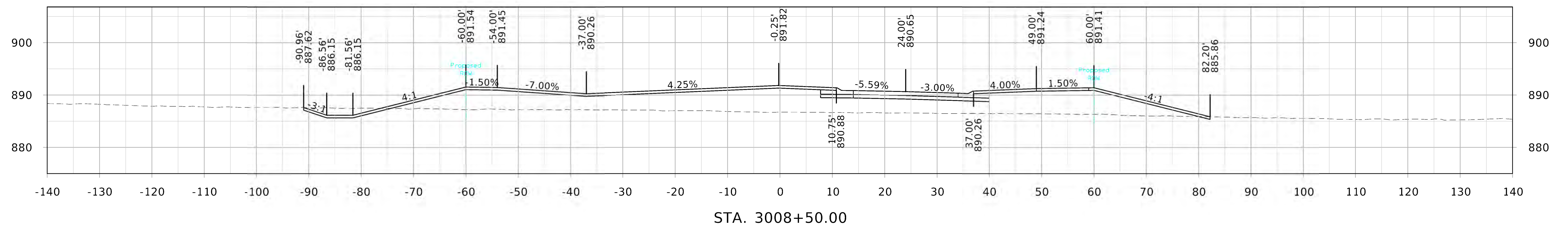
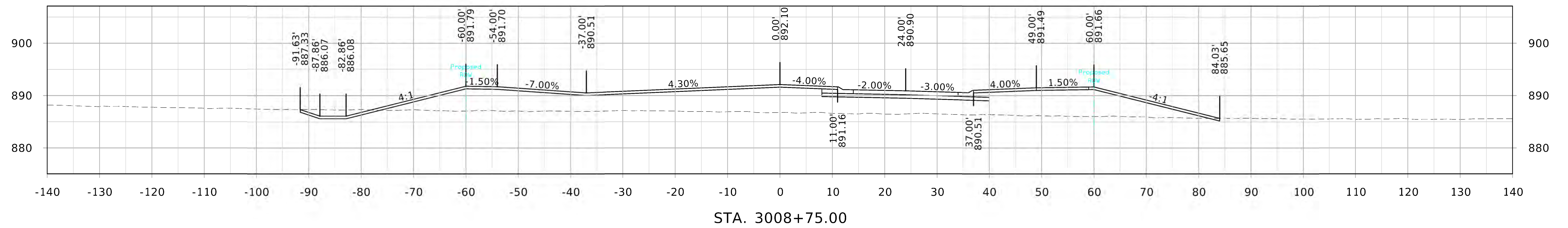
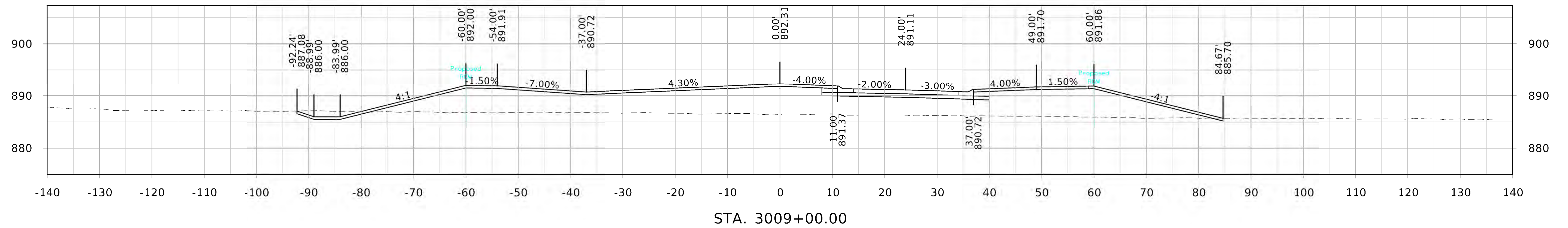
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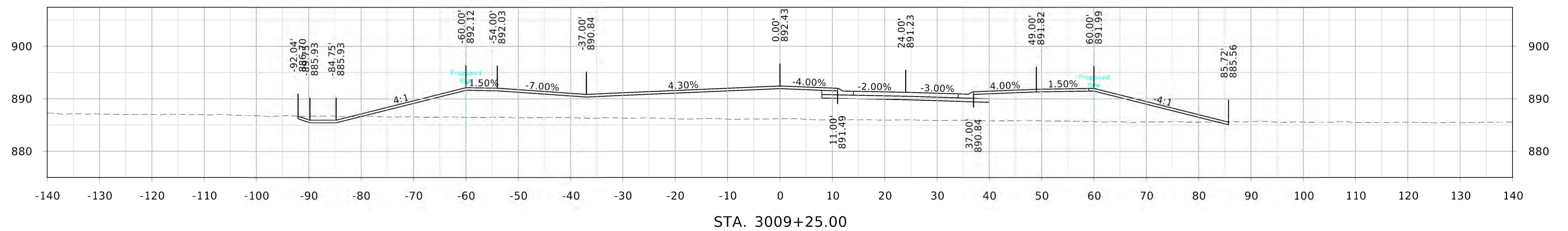
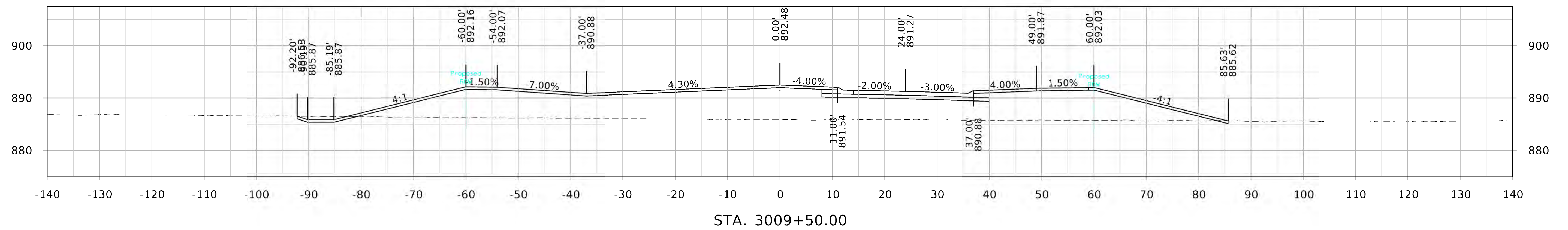
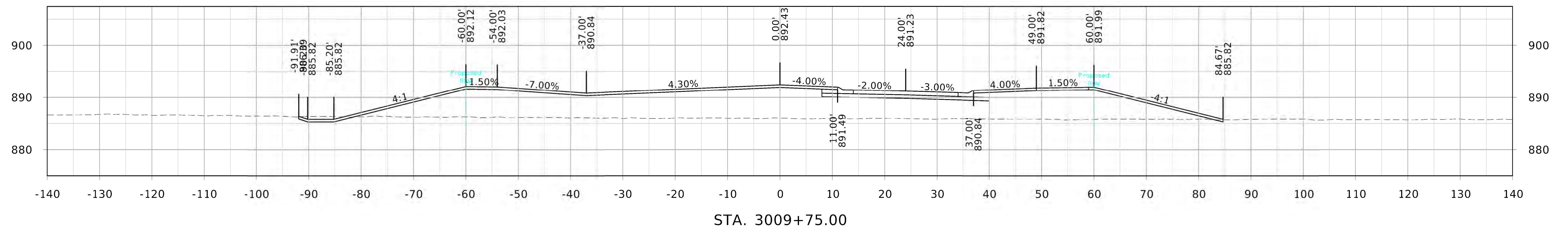
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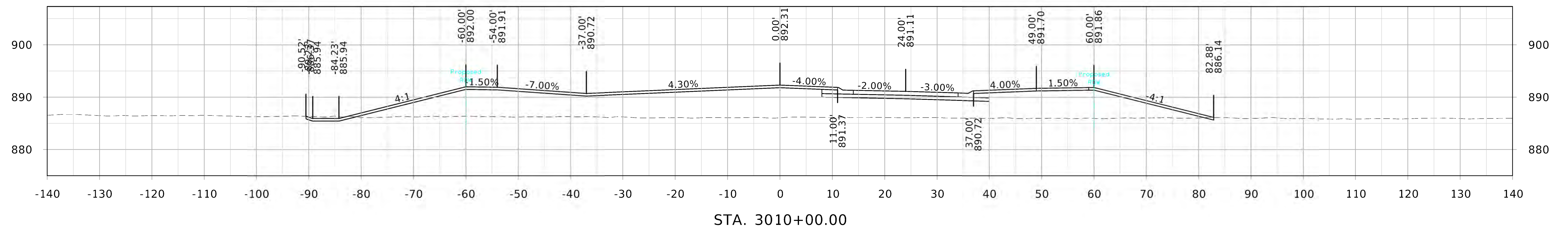
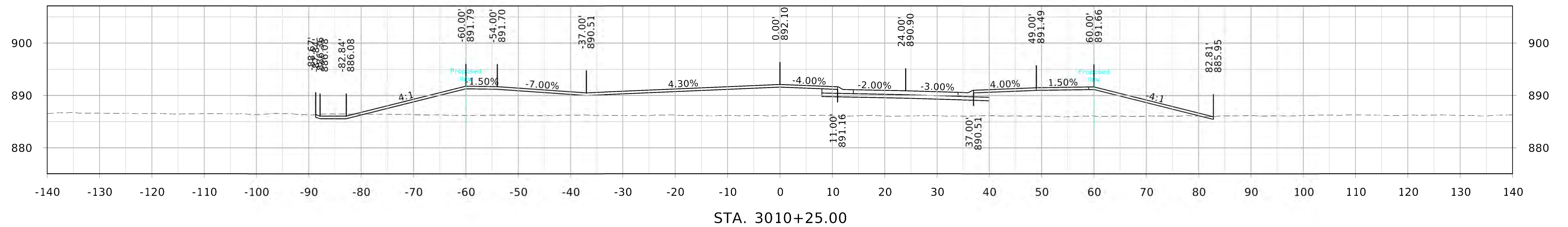
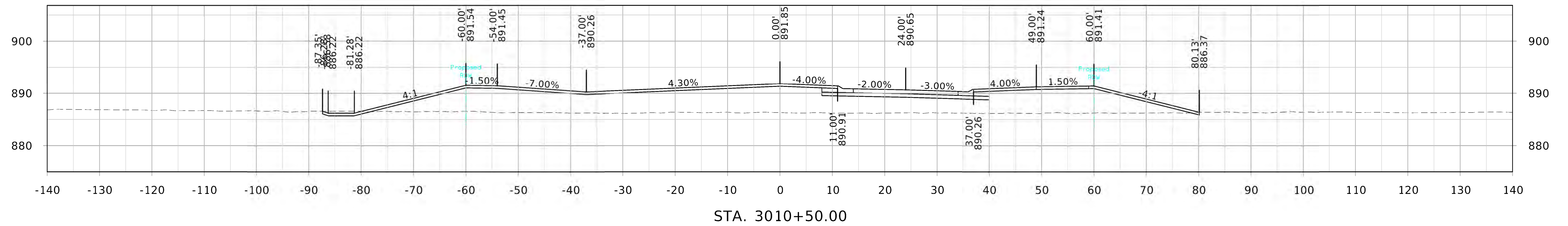
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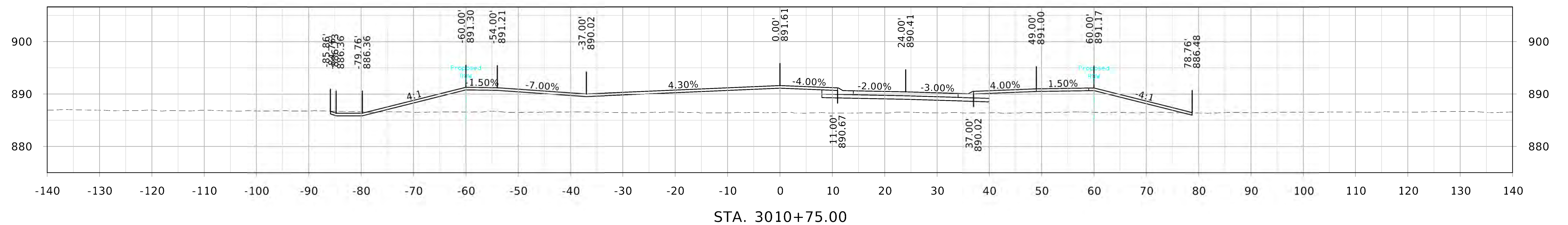
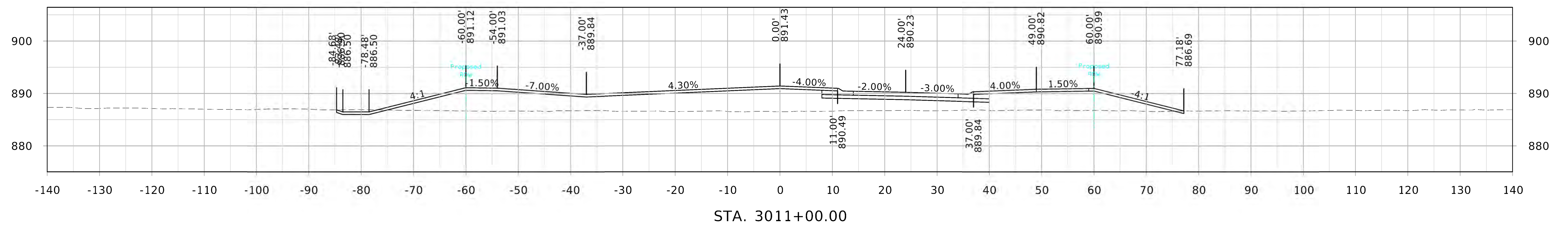
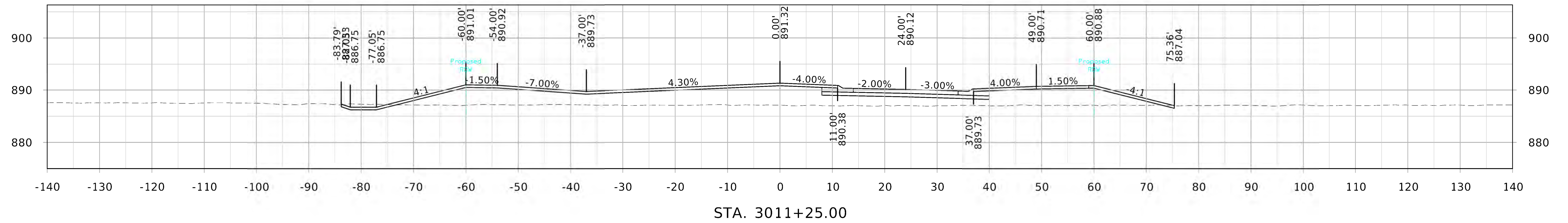
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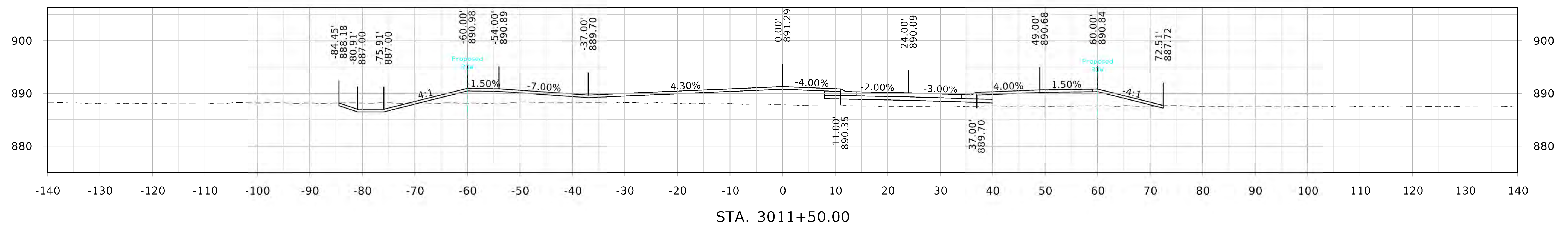
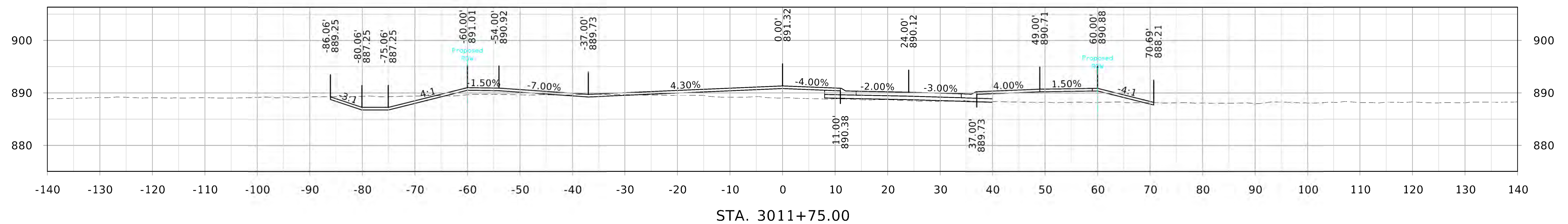
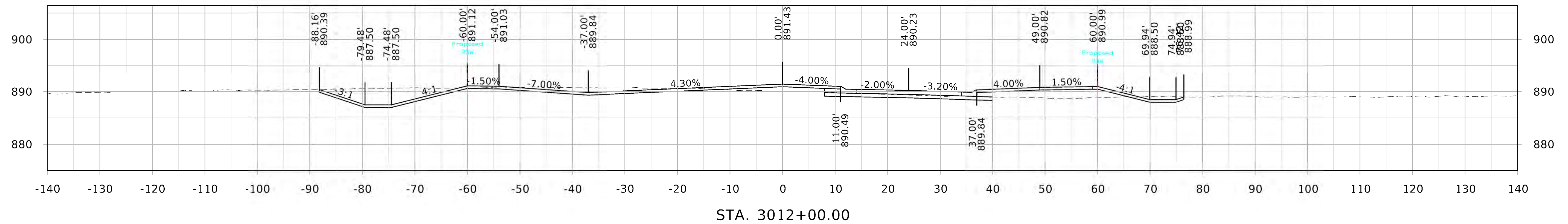
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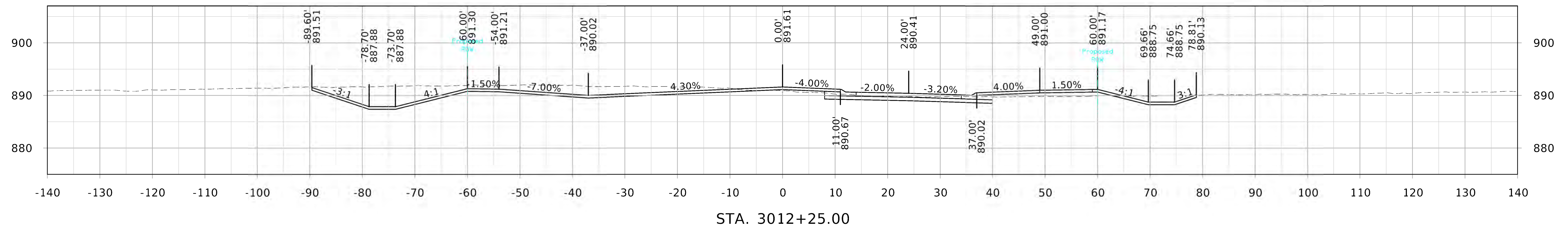
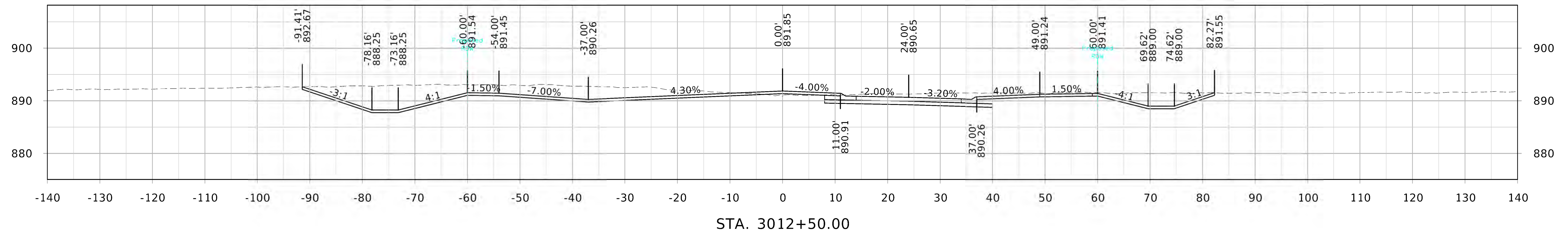
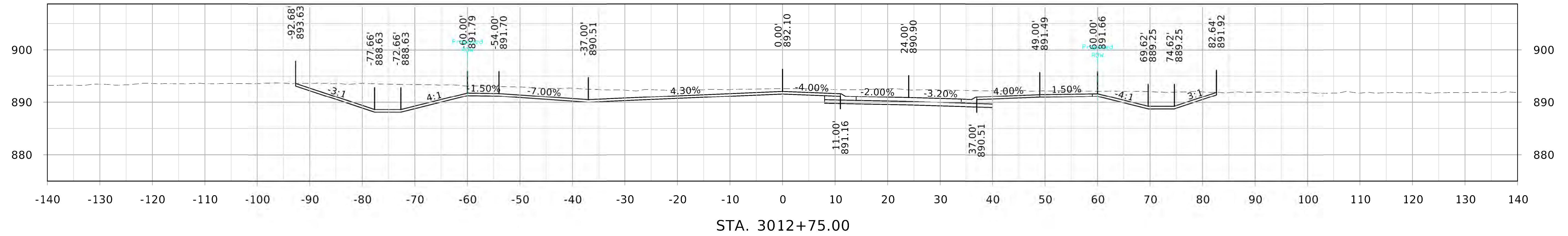
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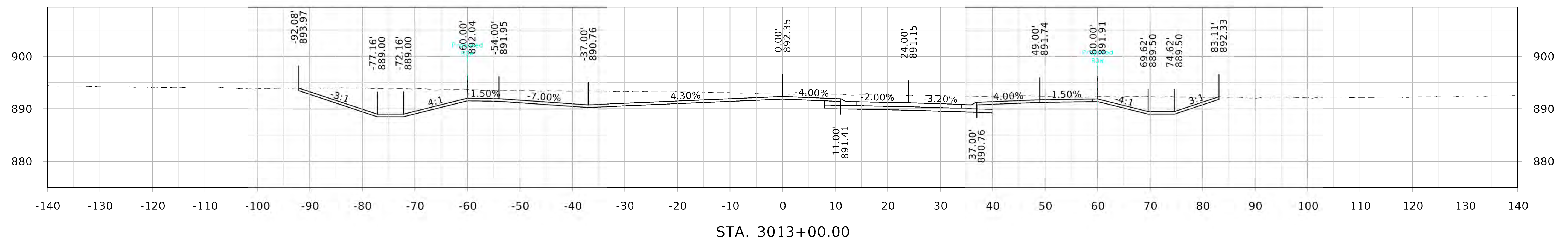
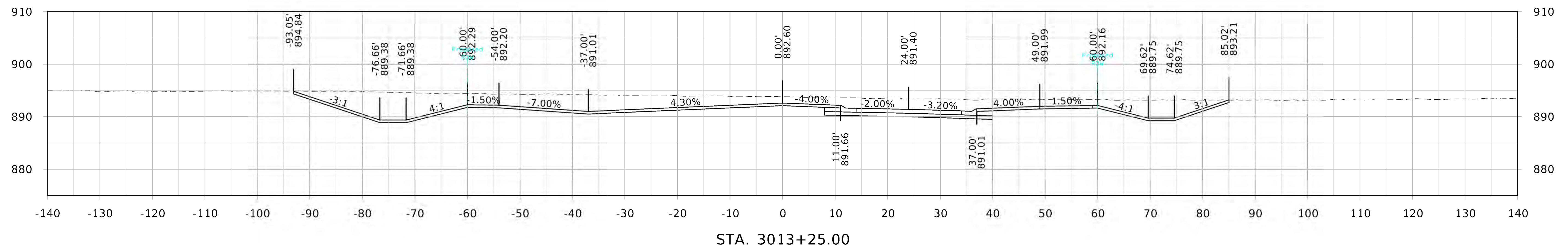
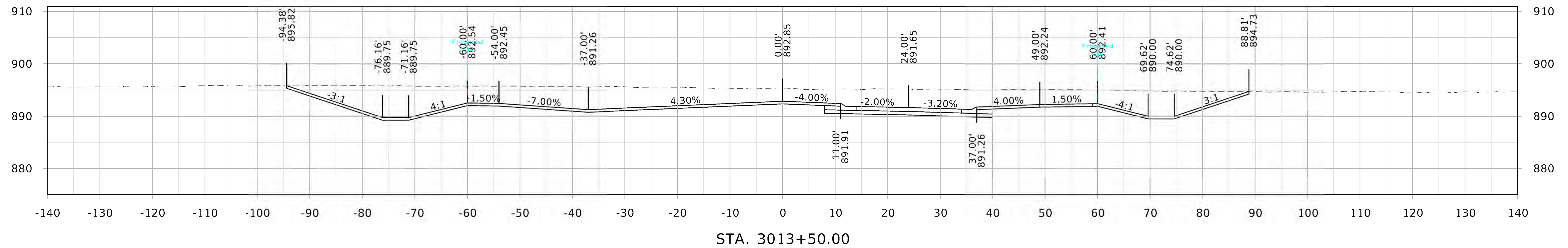
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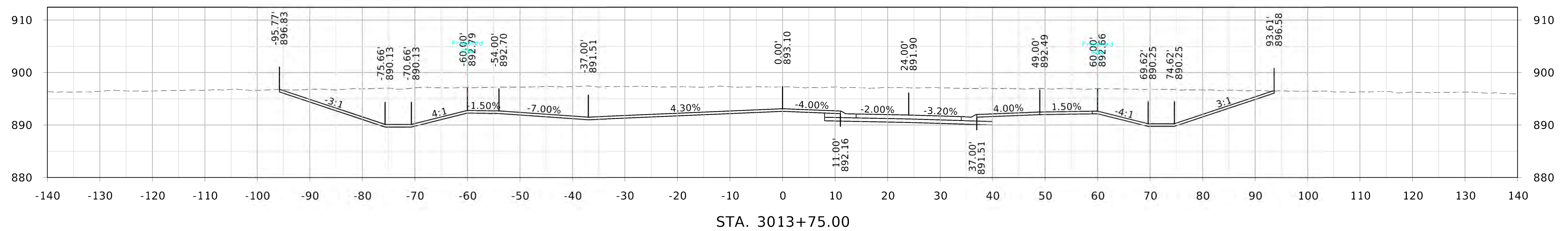
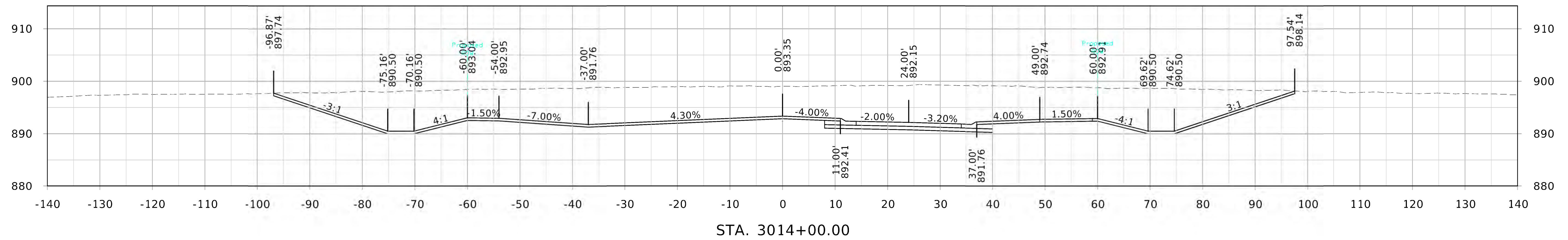
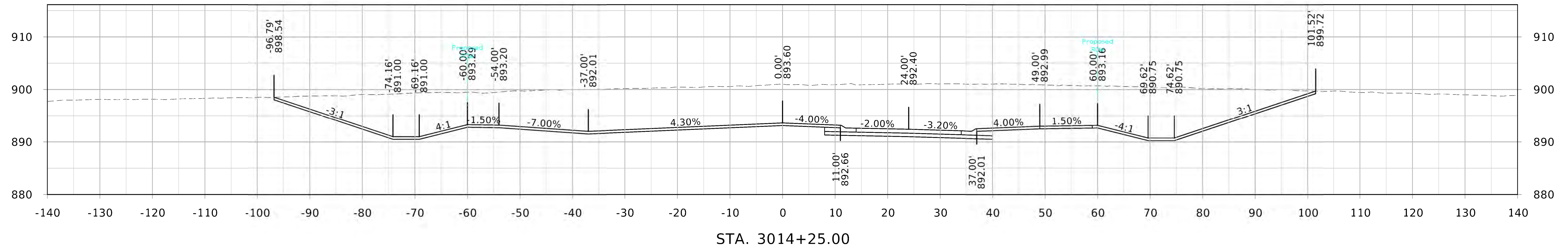
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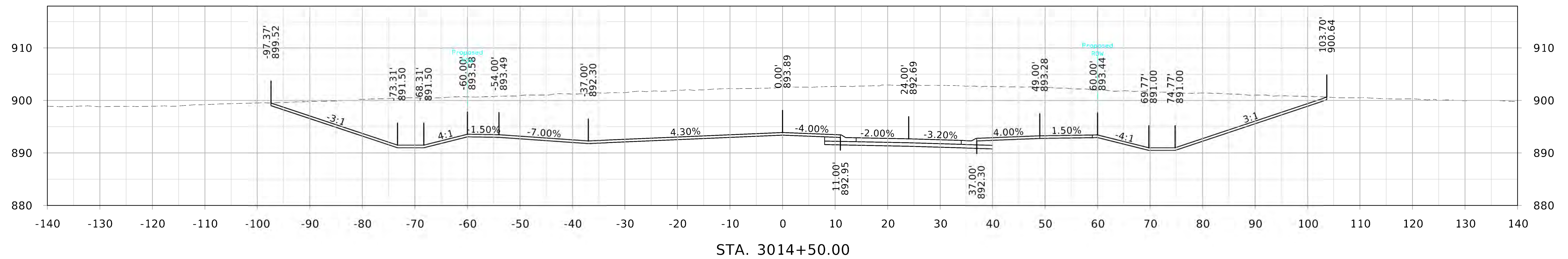
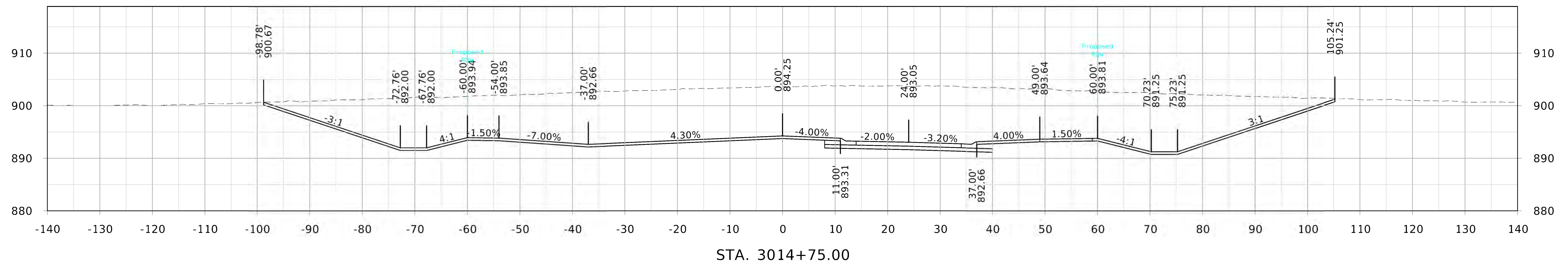
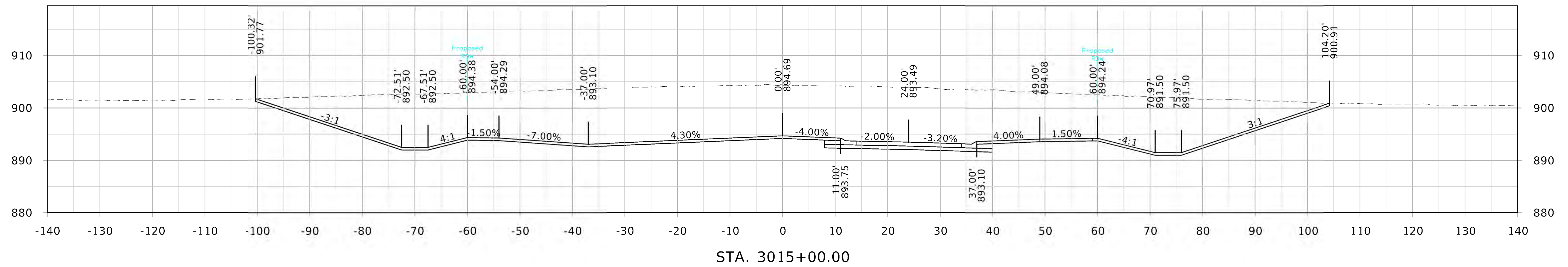
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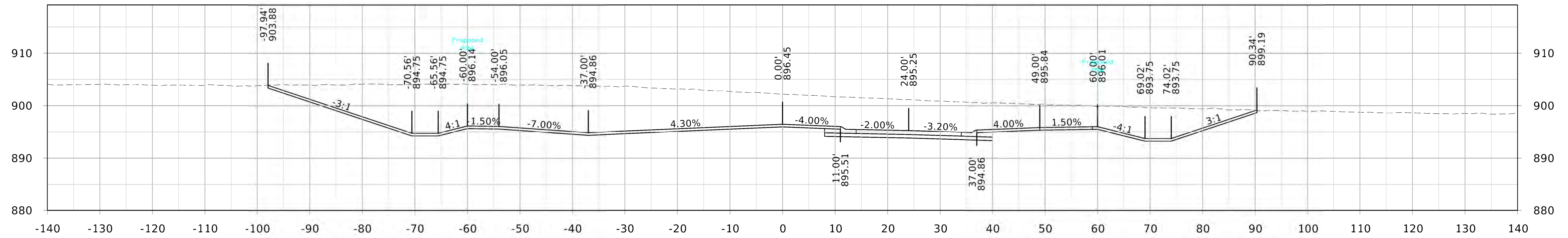
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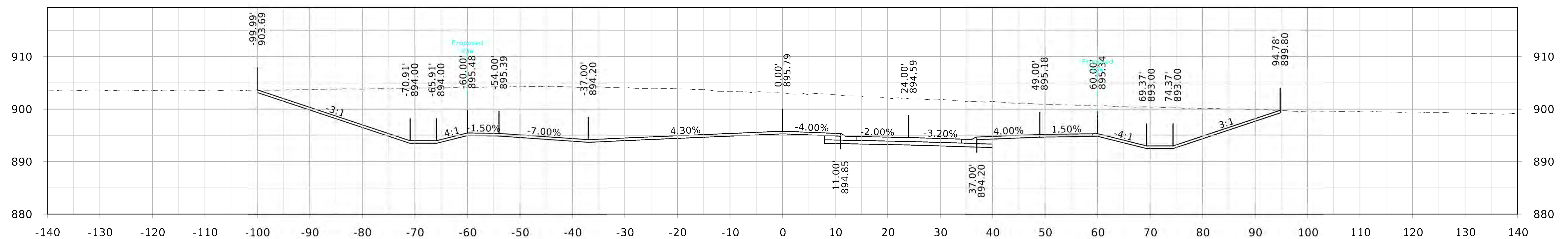
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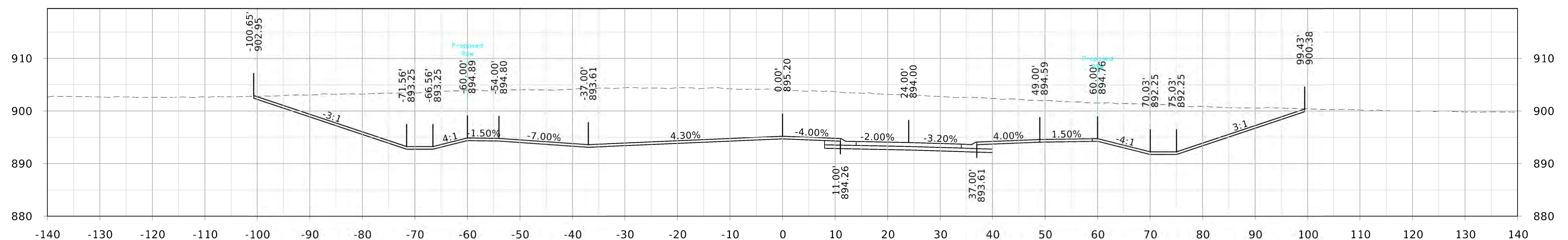
110th Street



STA. 3015+75.00

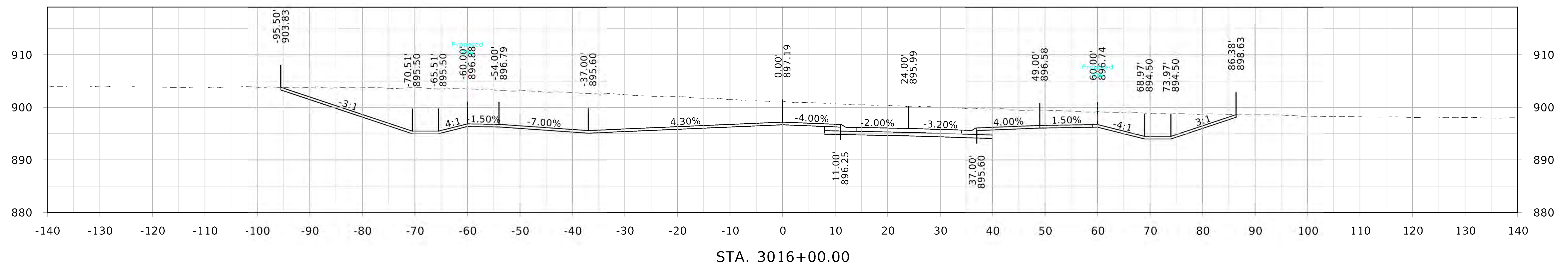
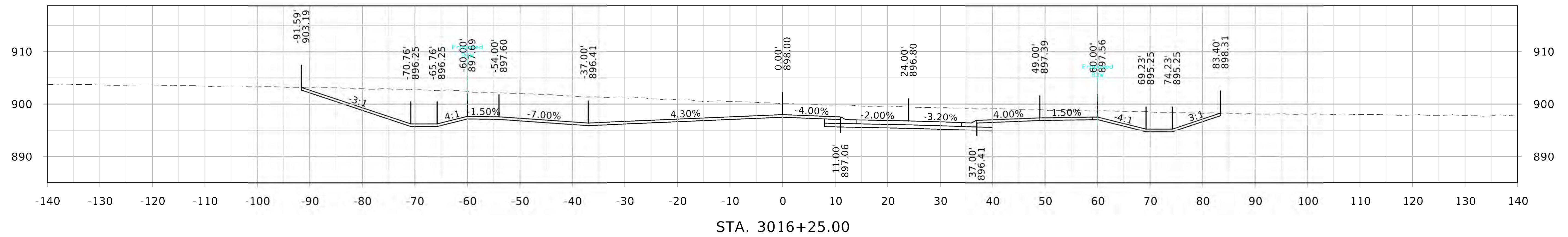
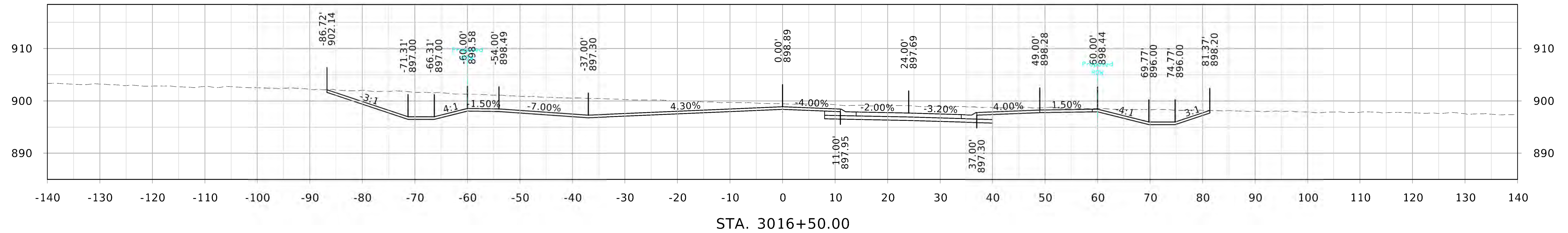


STA. 3015+50.00

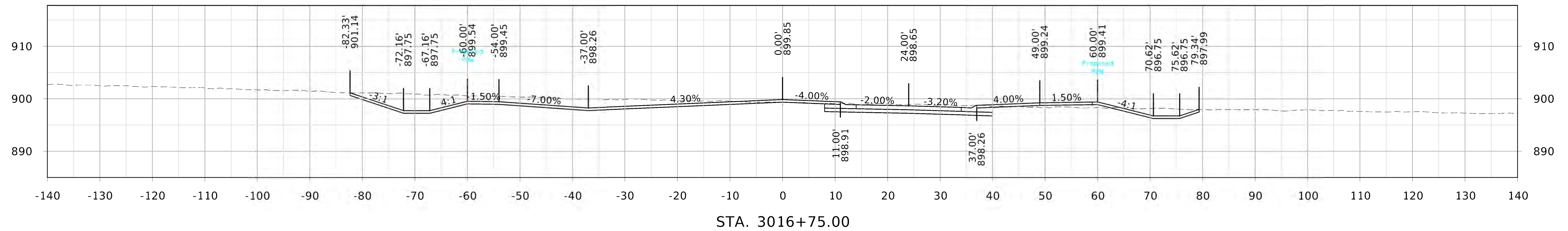
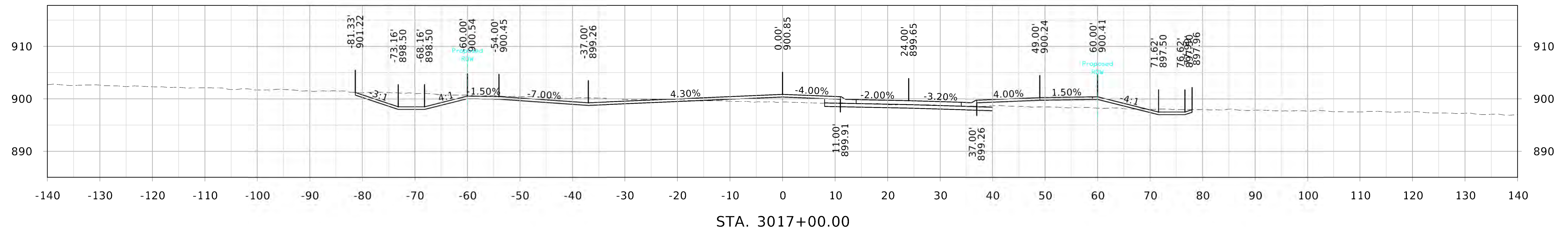
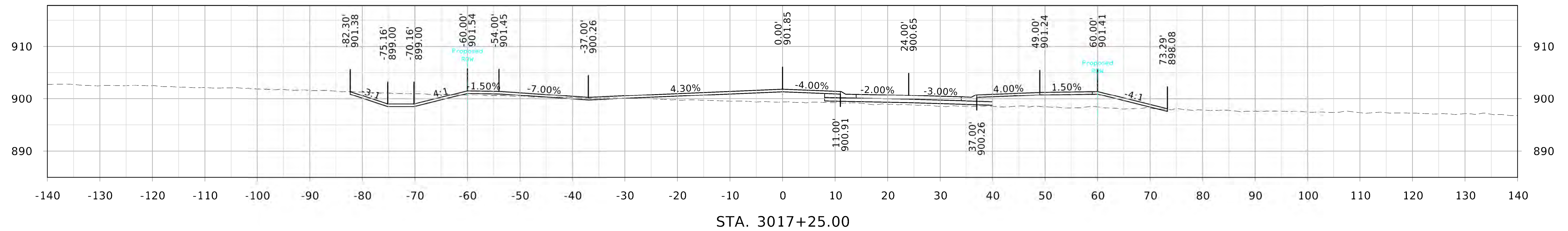


STA. 3015+25.00

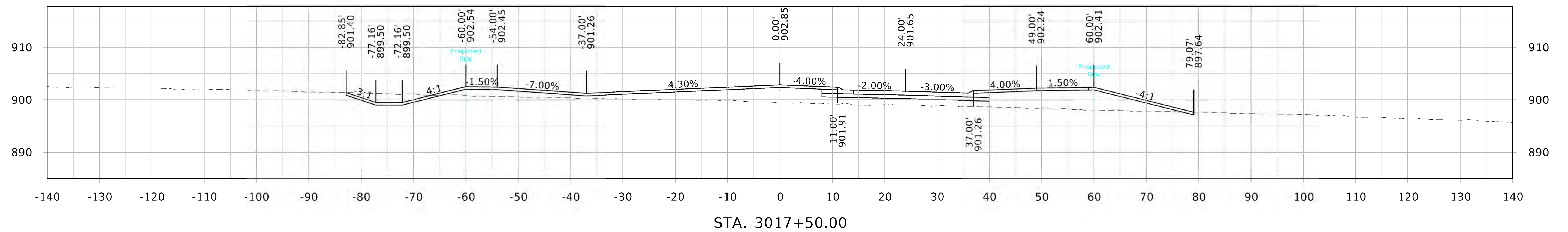
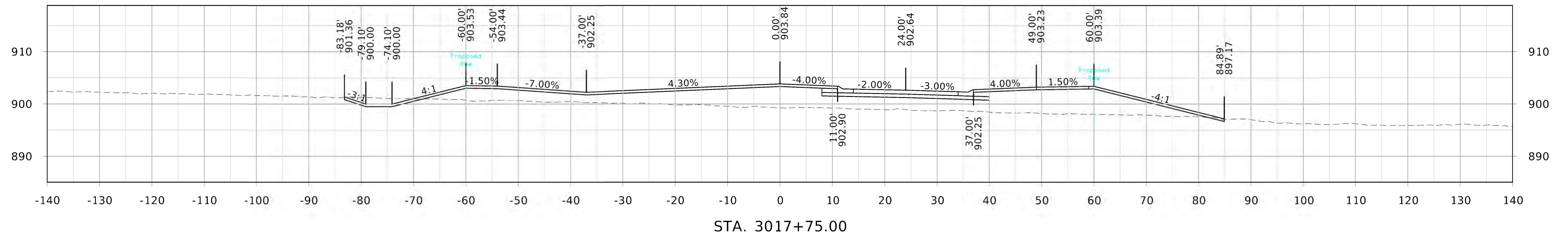
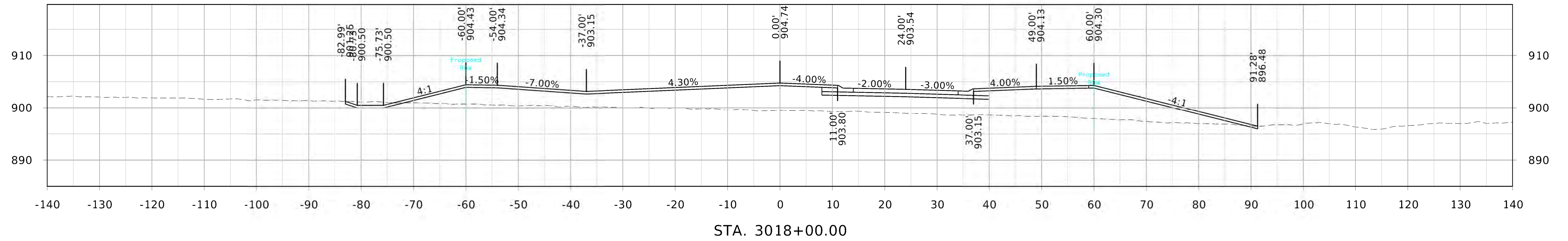
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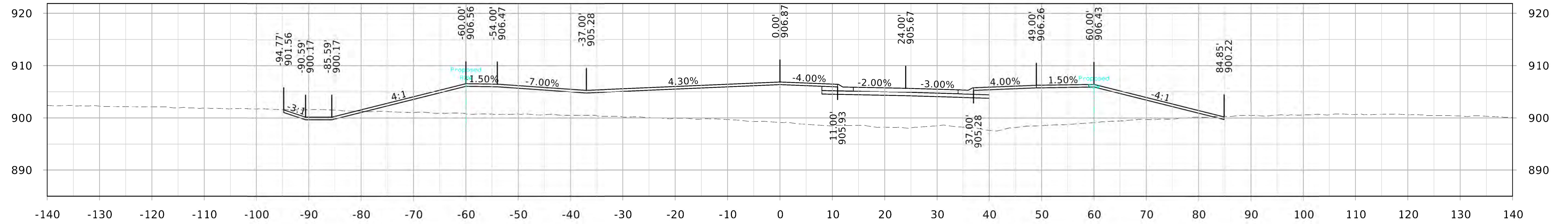
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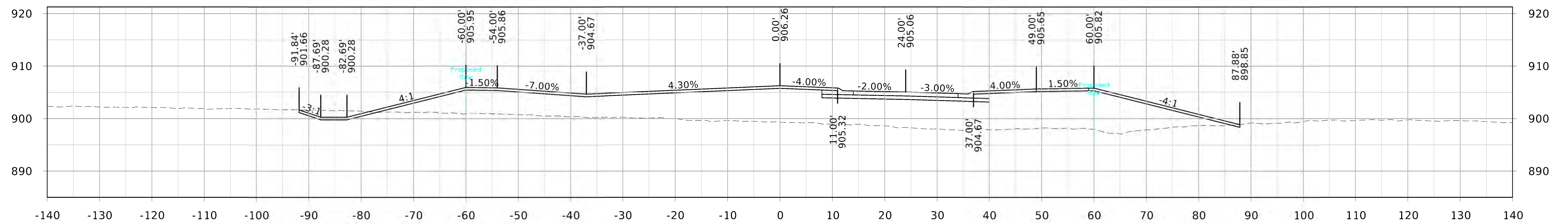
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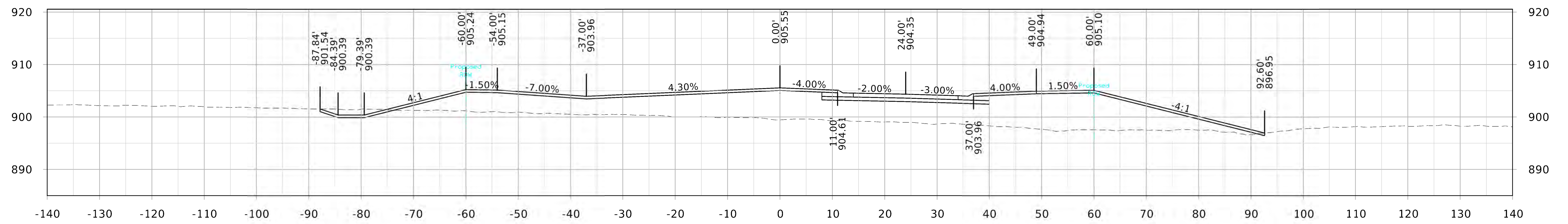
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STA. 3018+75.00

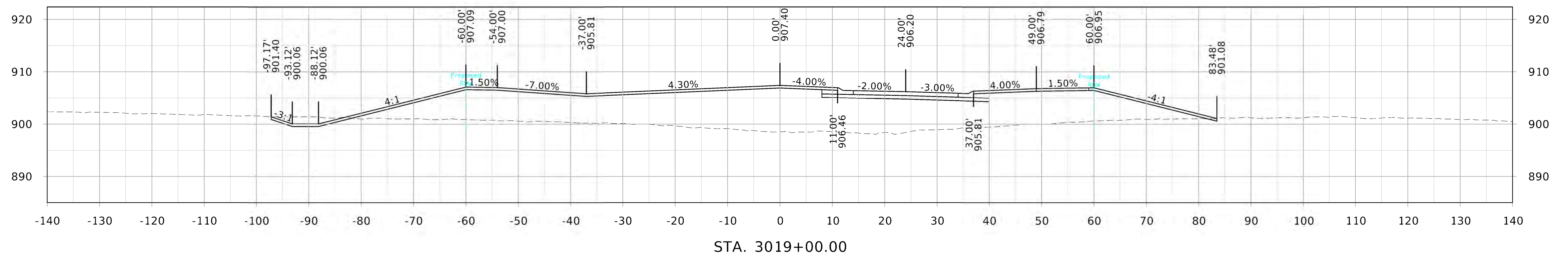
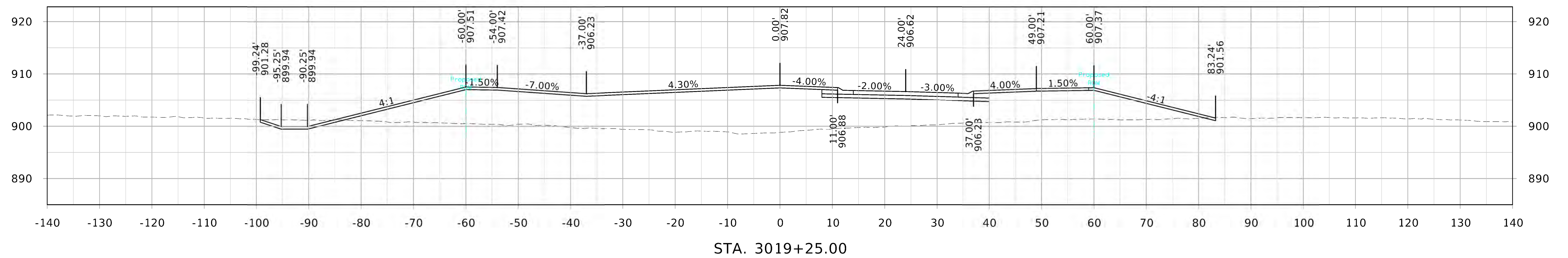
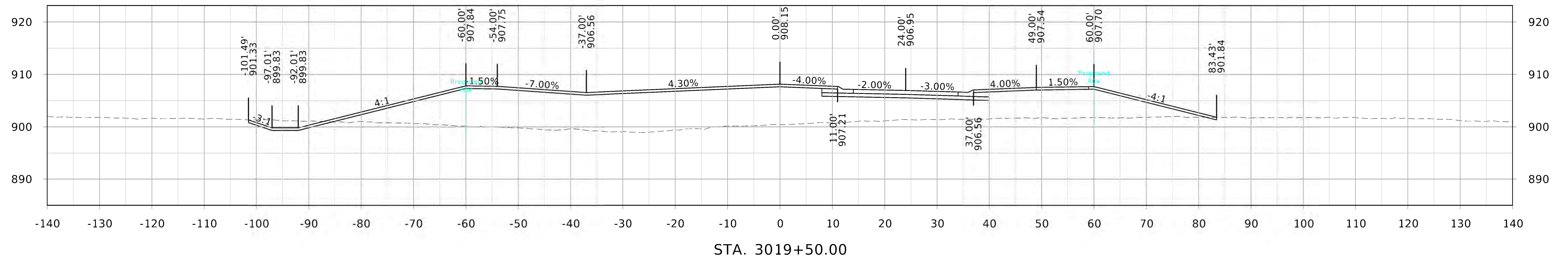


STA. 3018+50.00

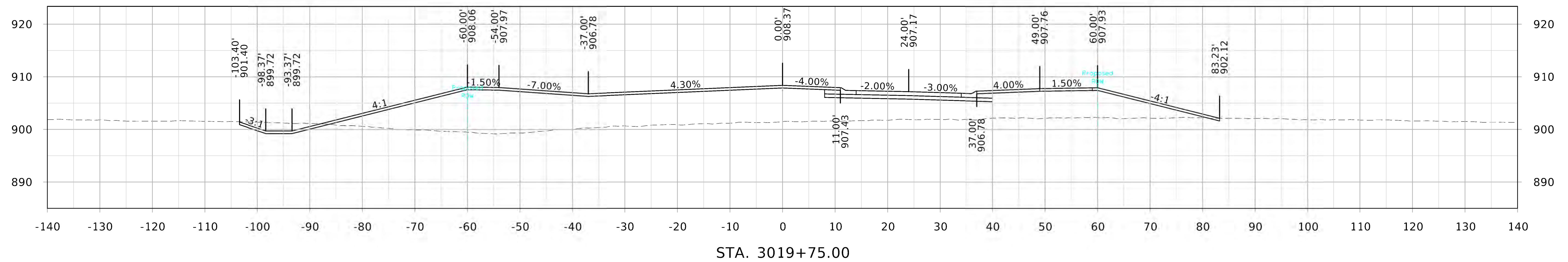
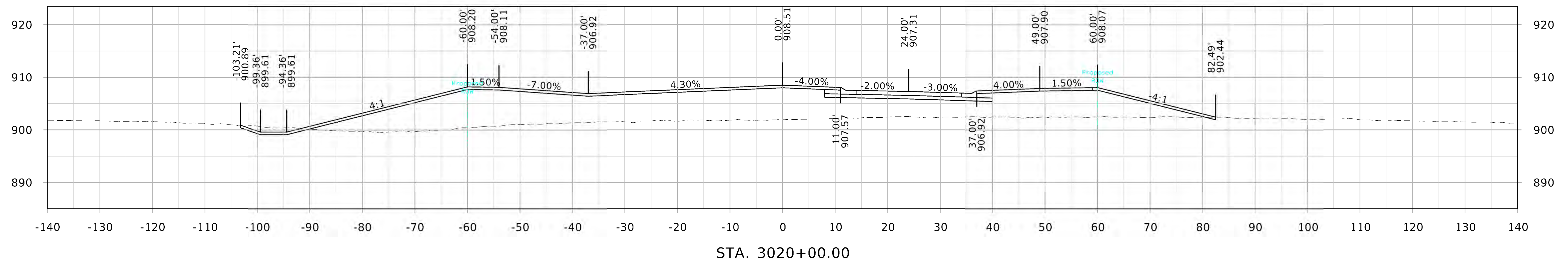
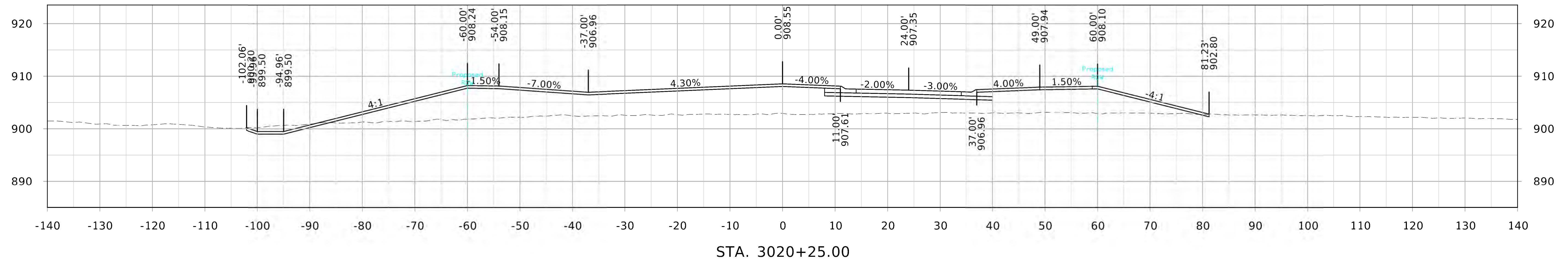


STA. 3018+25.00

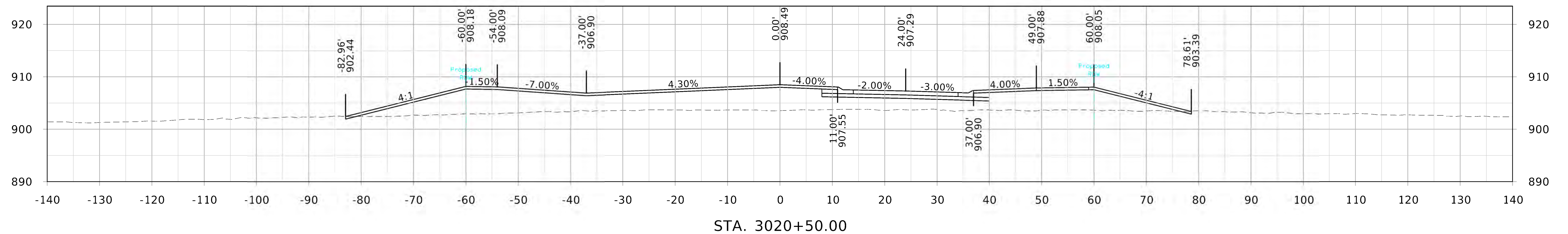
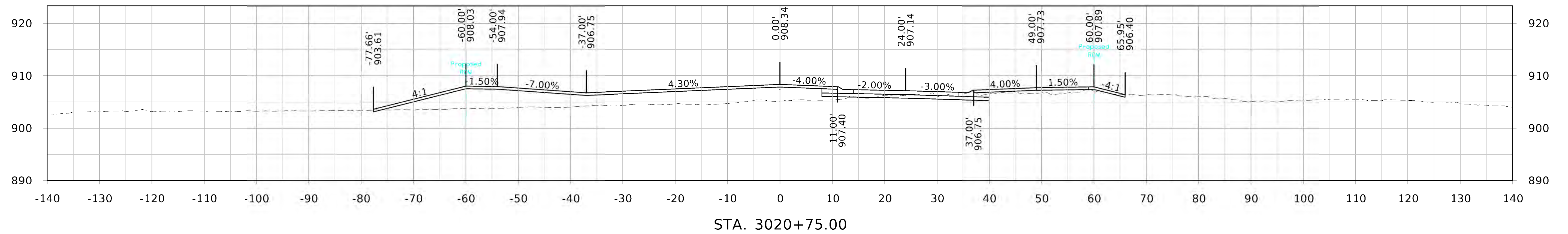
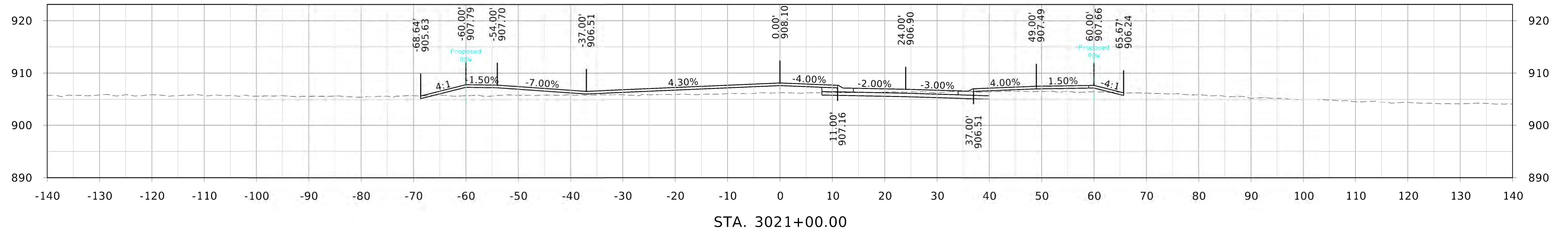
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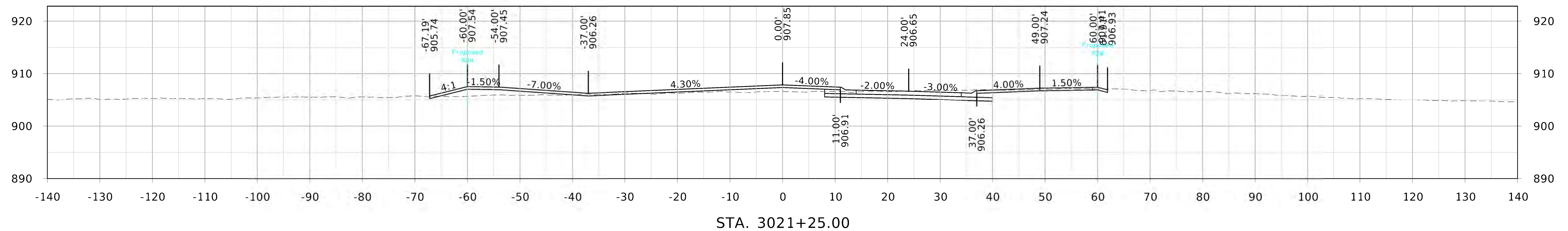
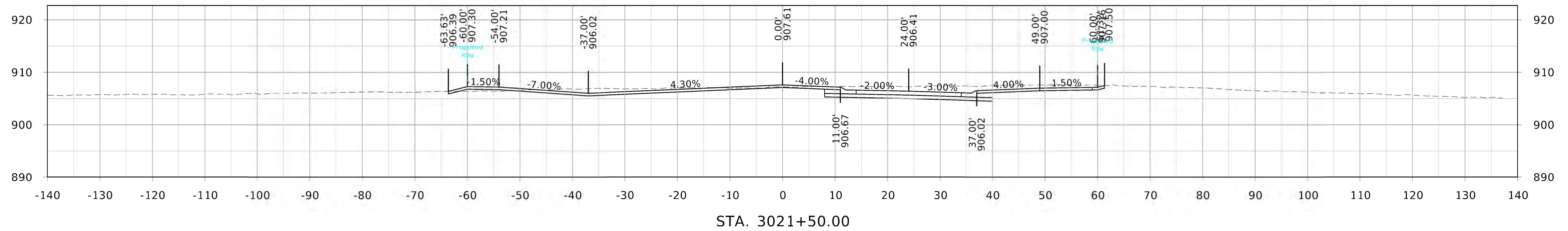
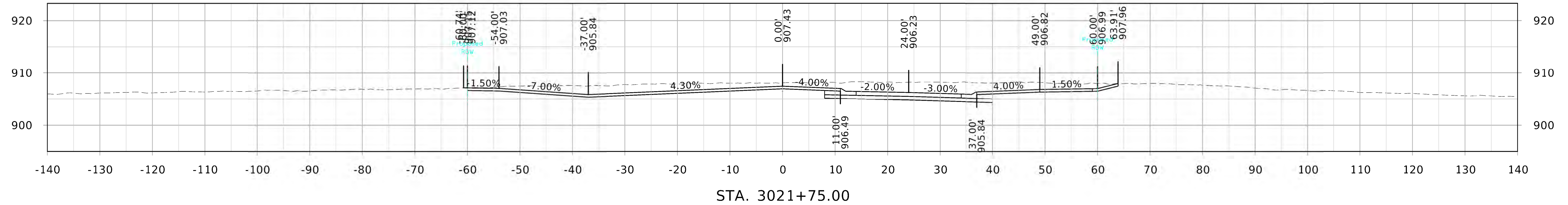
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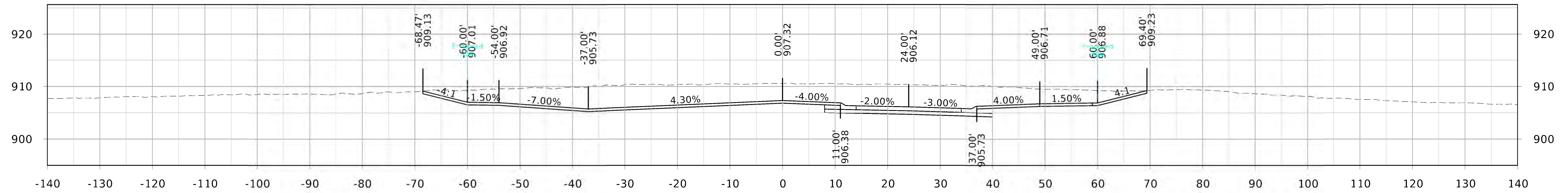
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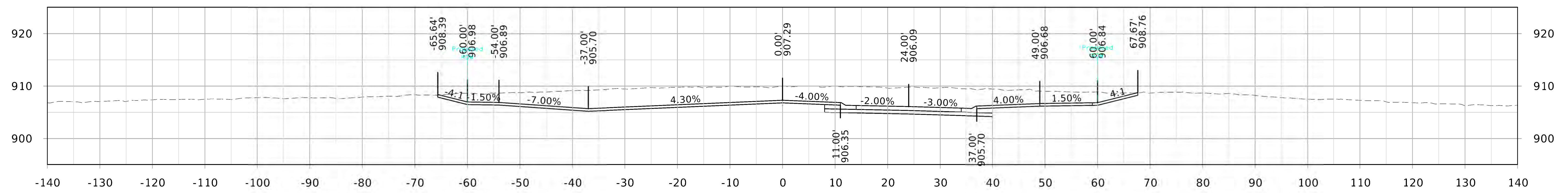
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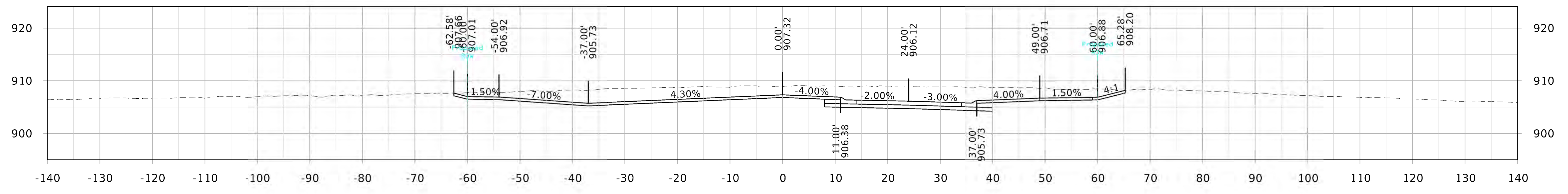
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STA. 3022+50.00

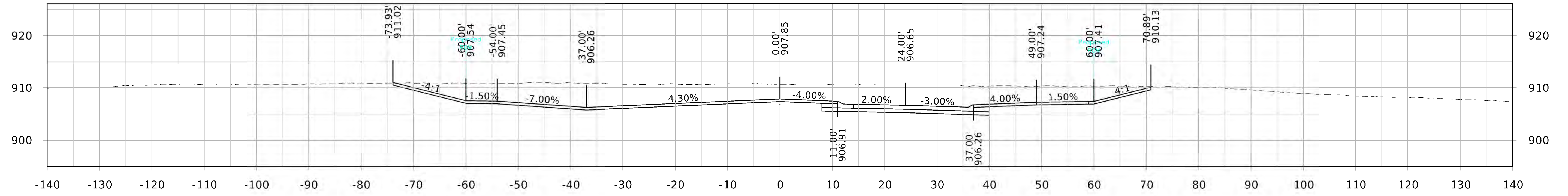


STA. 3022+25.00

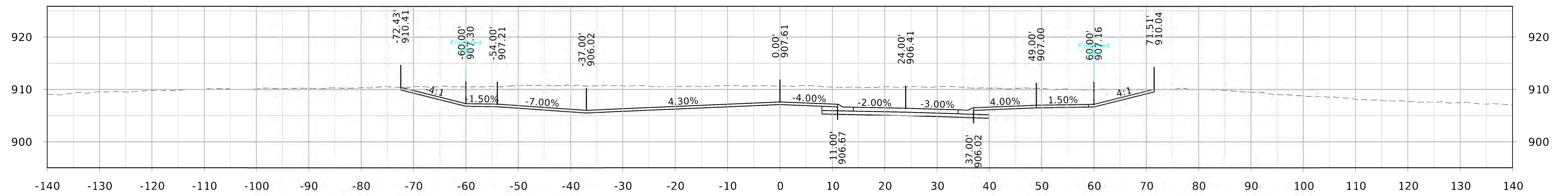


STA. 3022+00.00

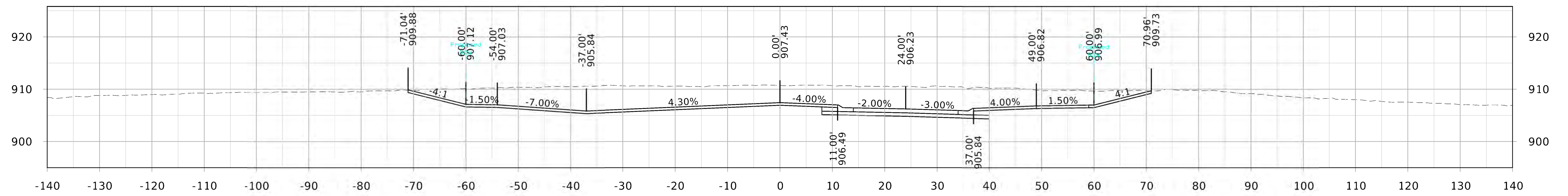
110th Street



STA. 3023+25.00

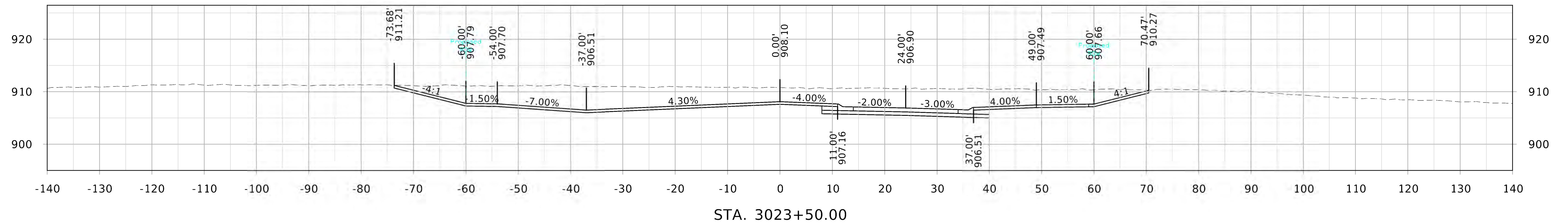
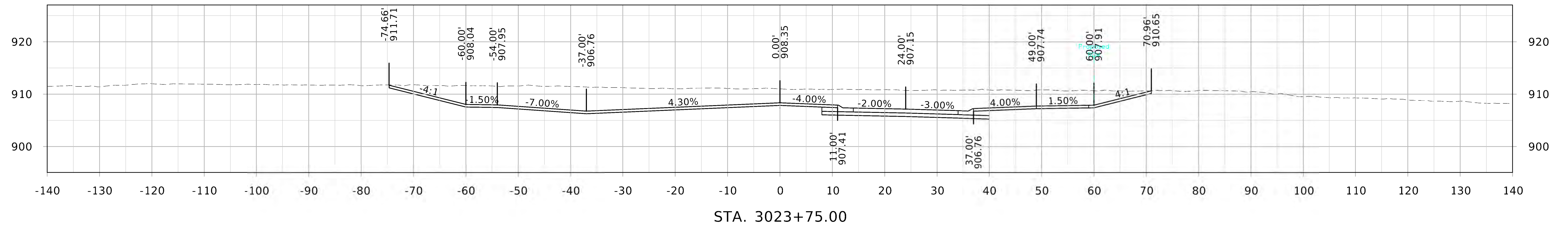
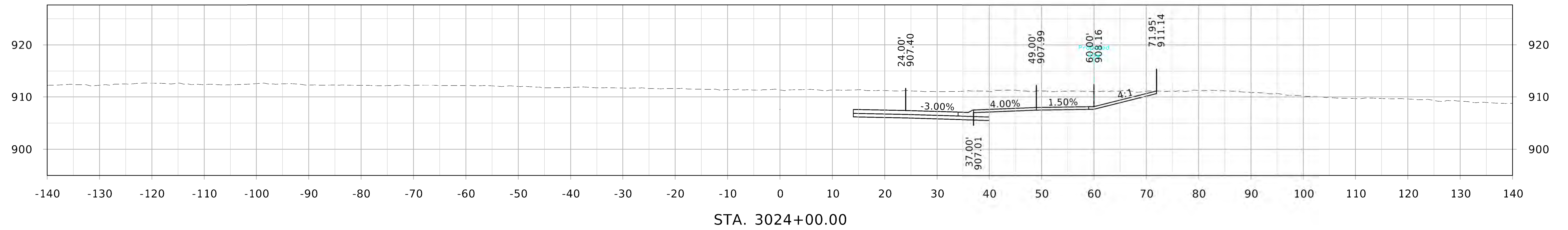


STA. 3023+00.00

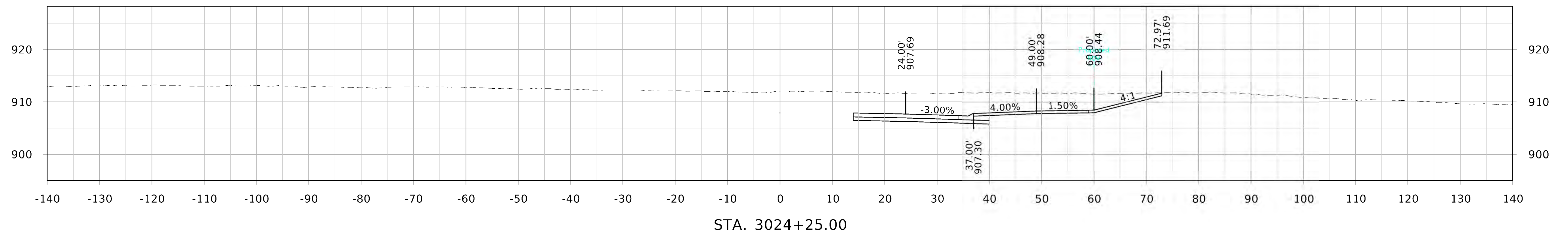
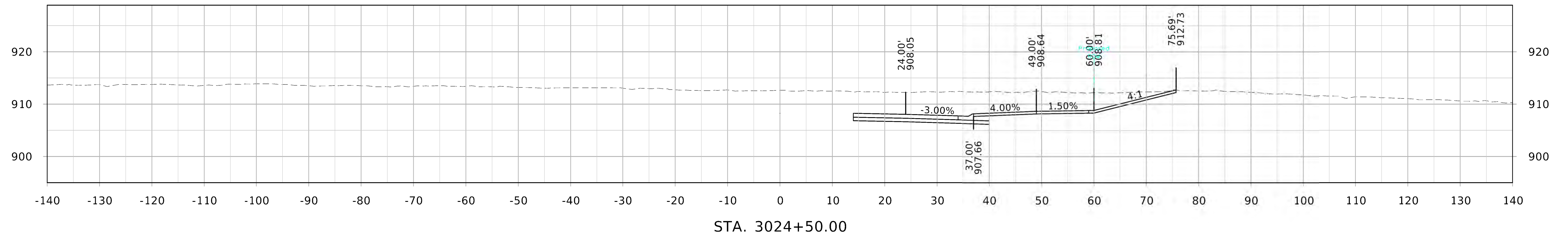
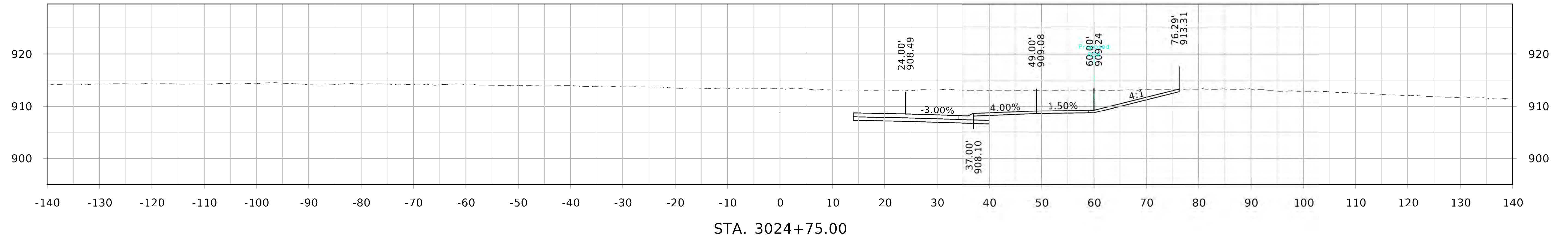


STA. 3022+75.00

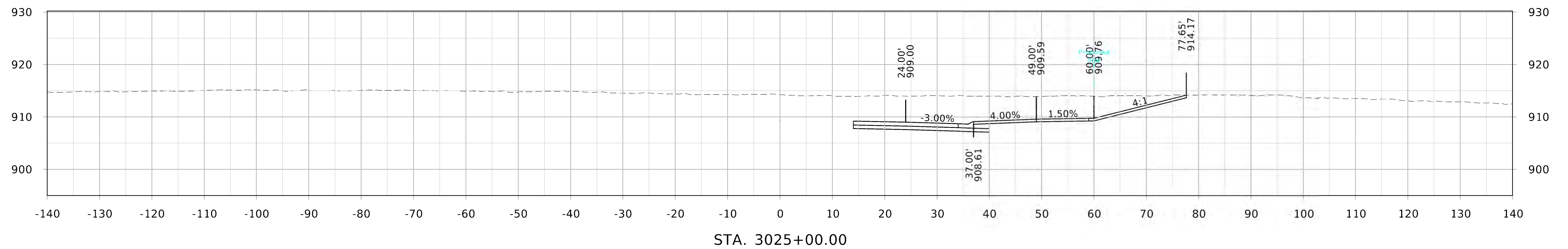
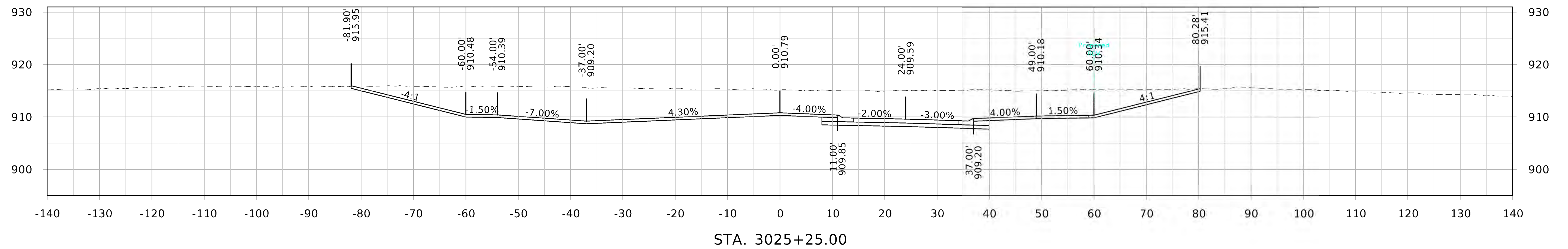
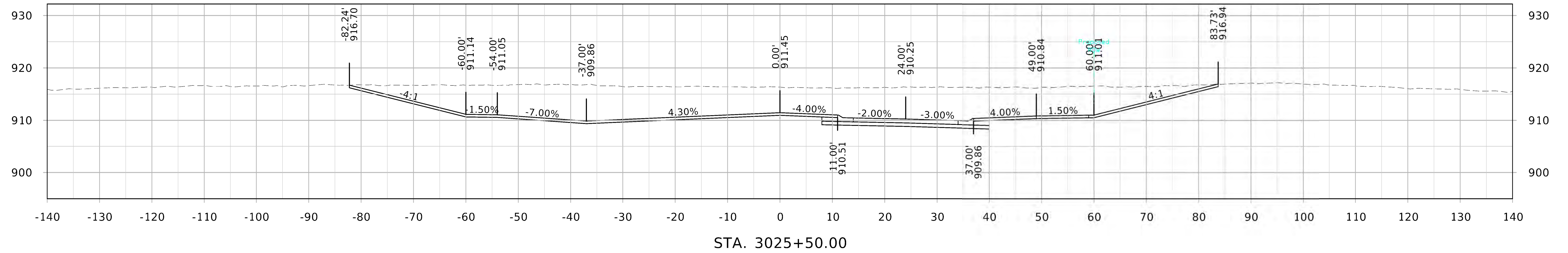
110th Street



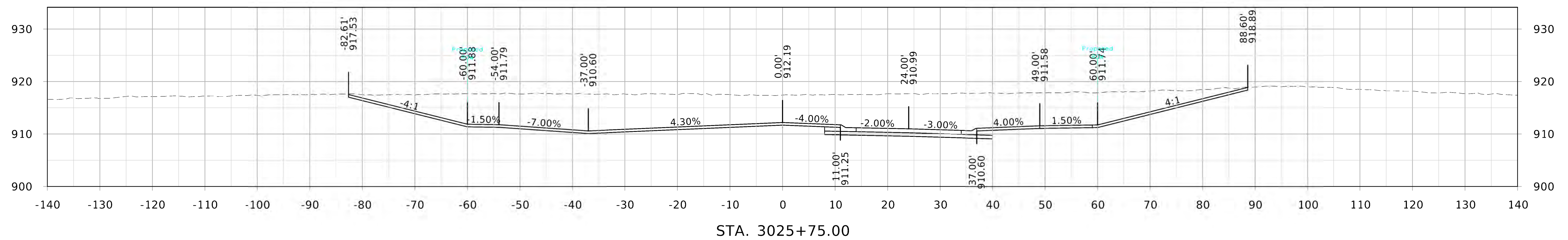
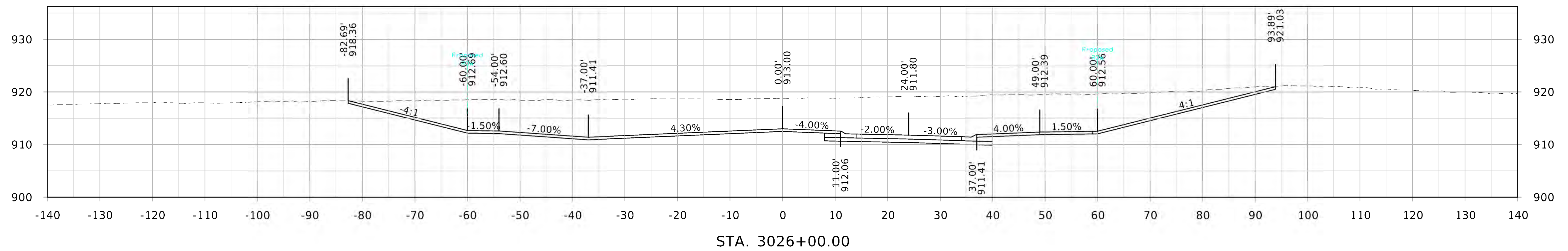
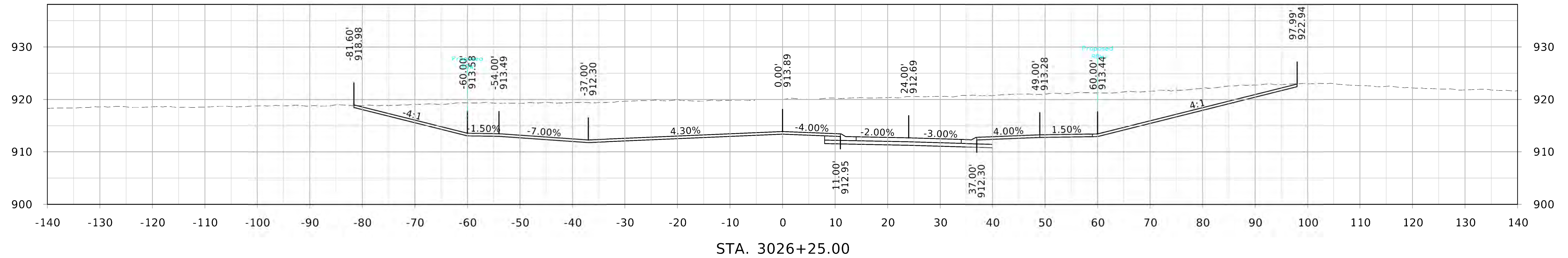
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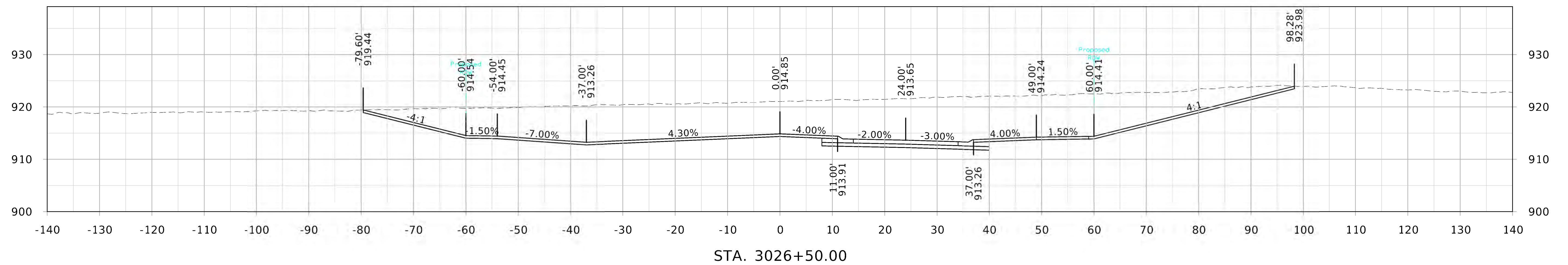
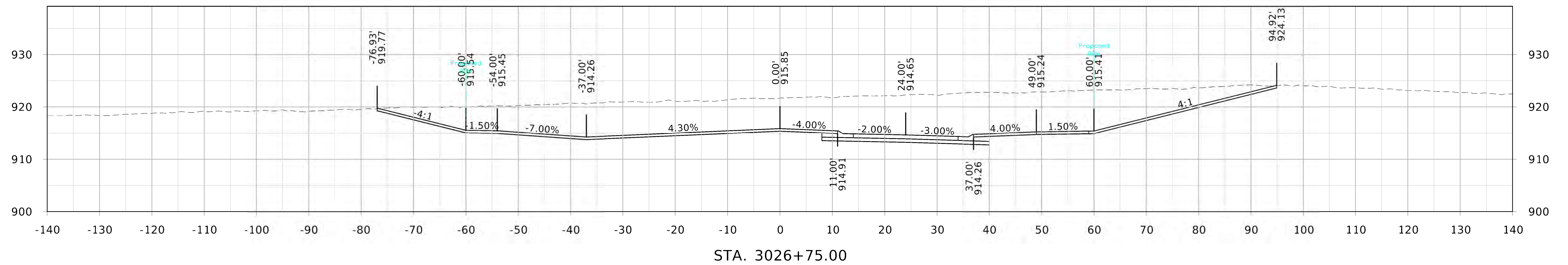
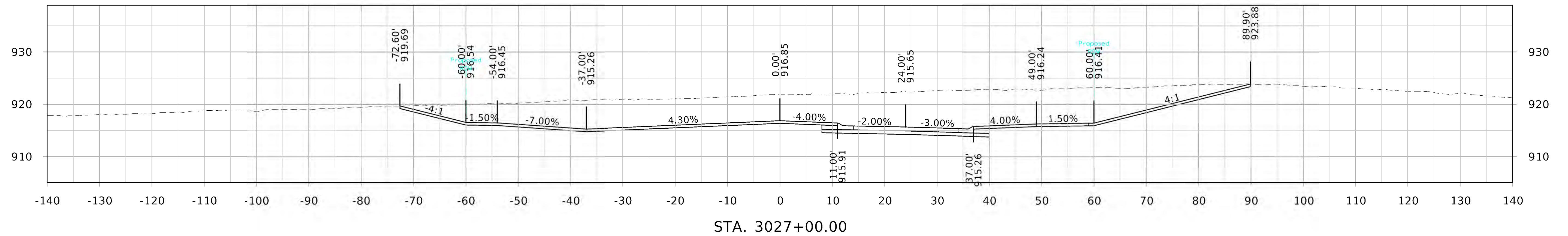
110th Street



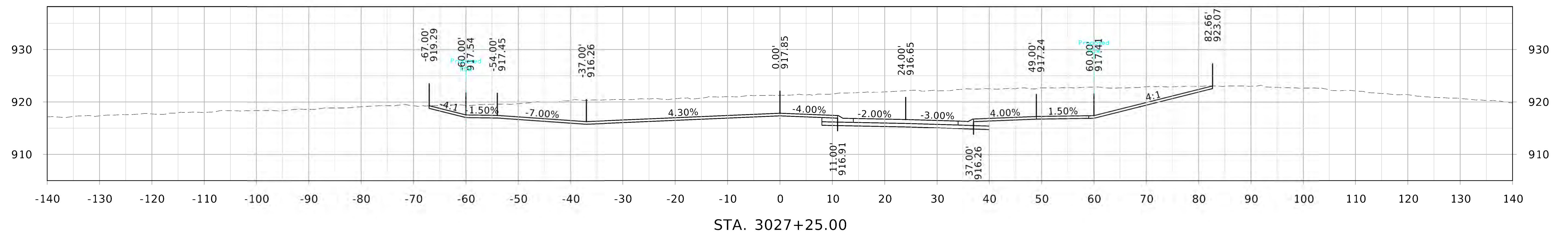
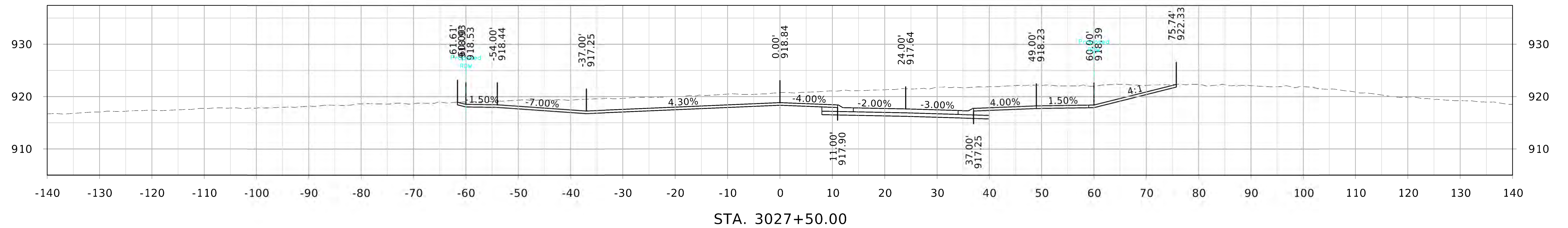
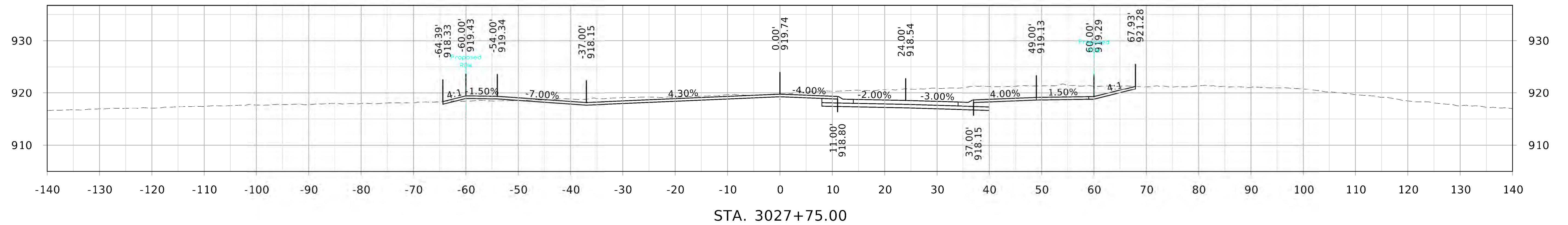
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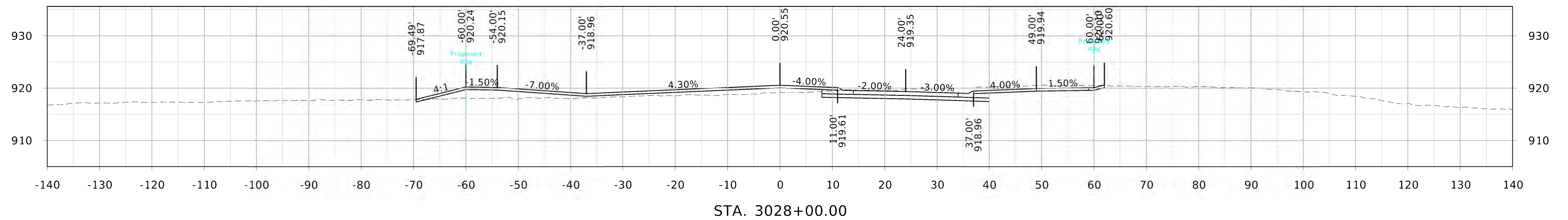
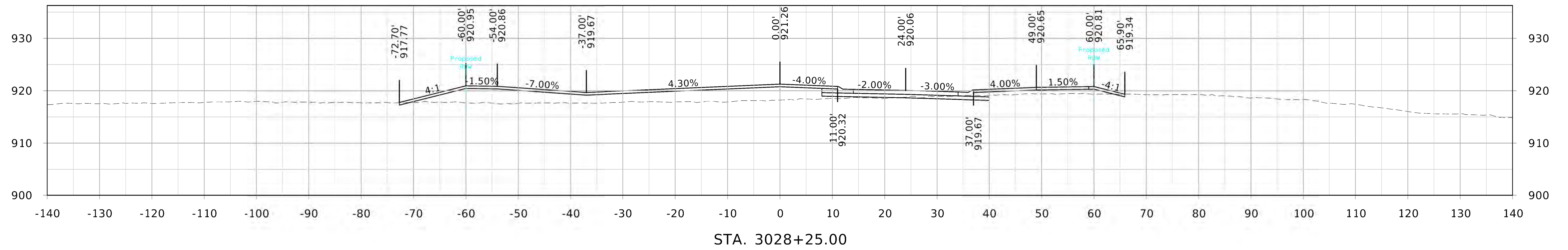
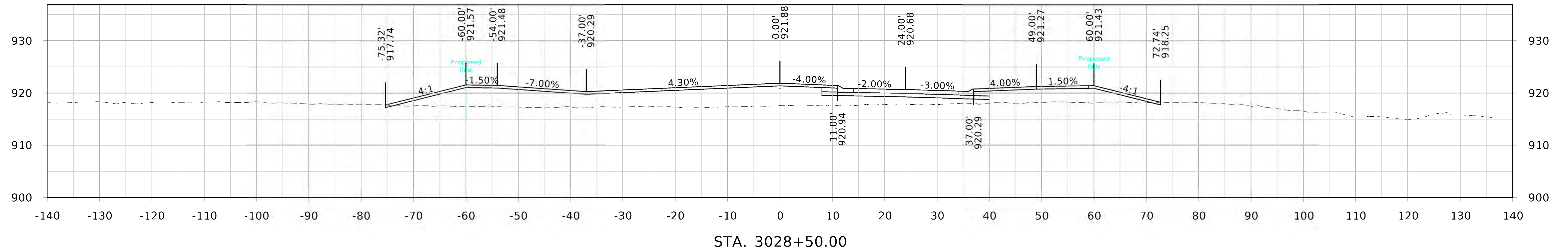
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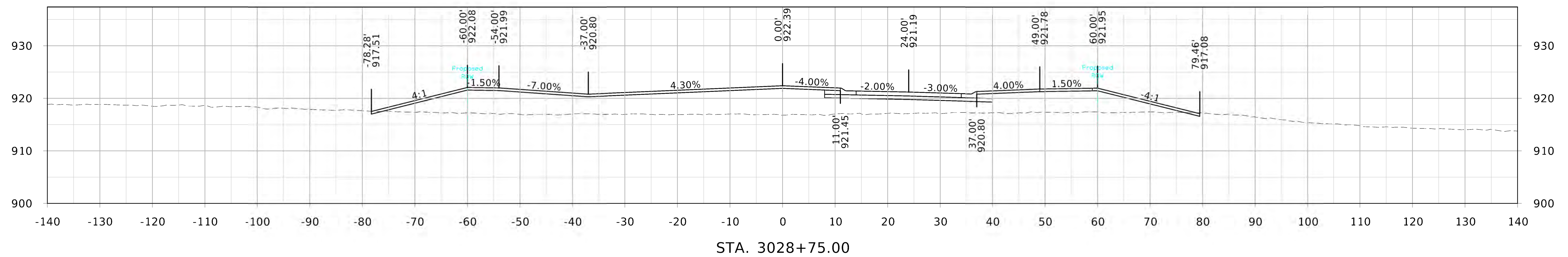
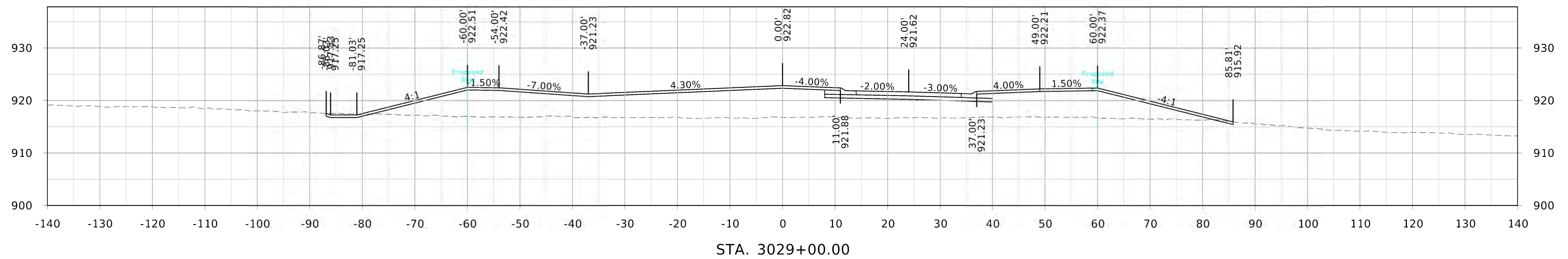
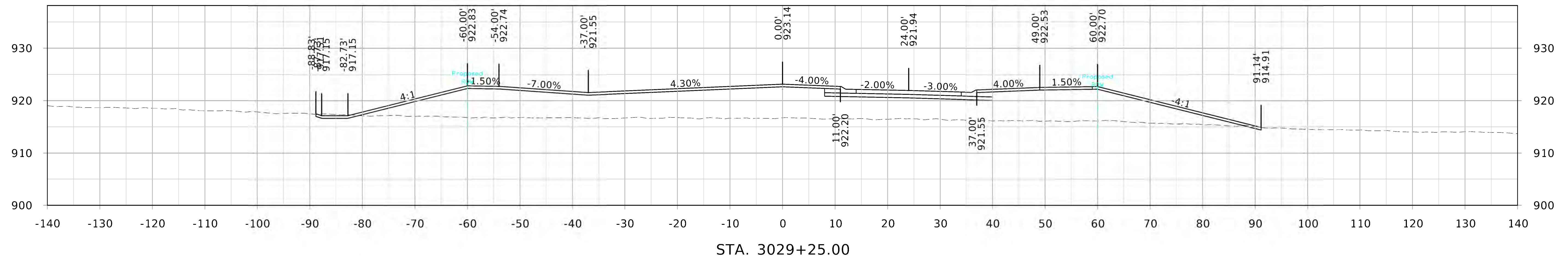
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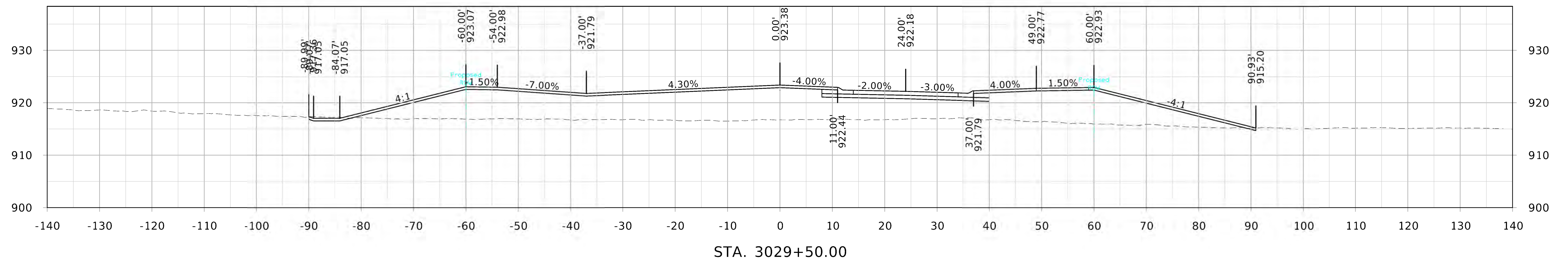
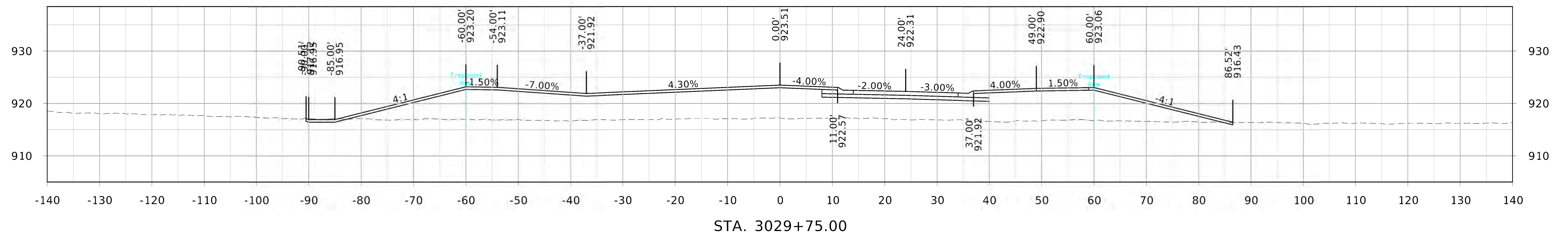
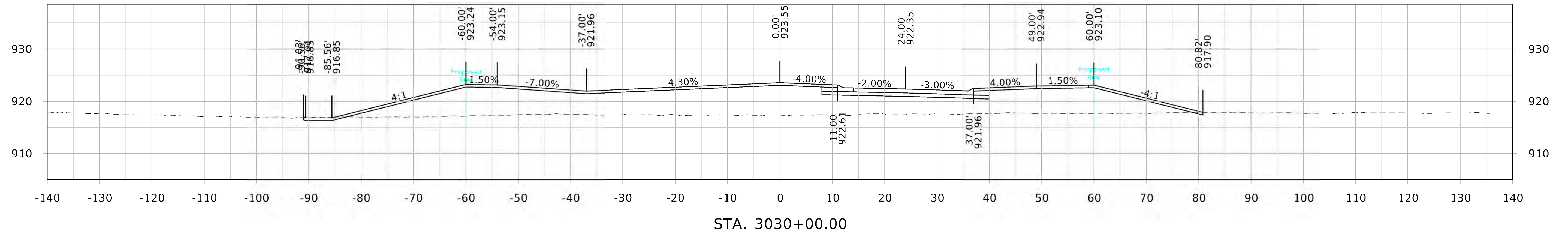
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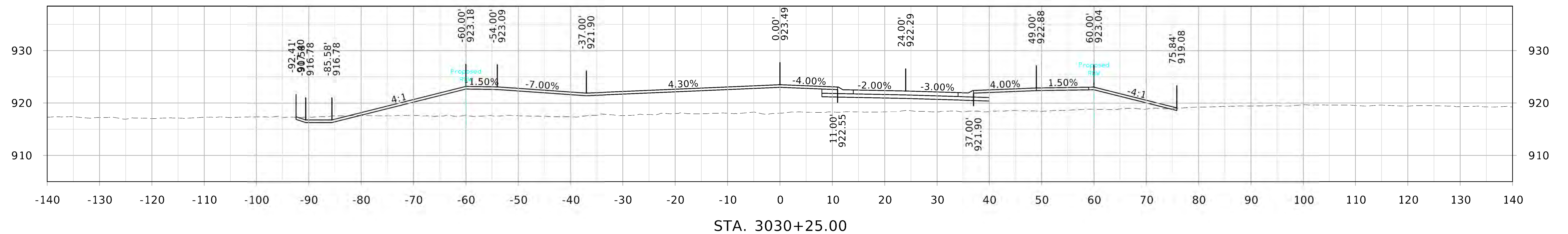
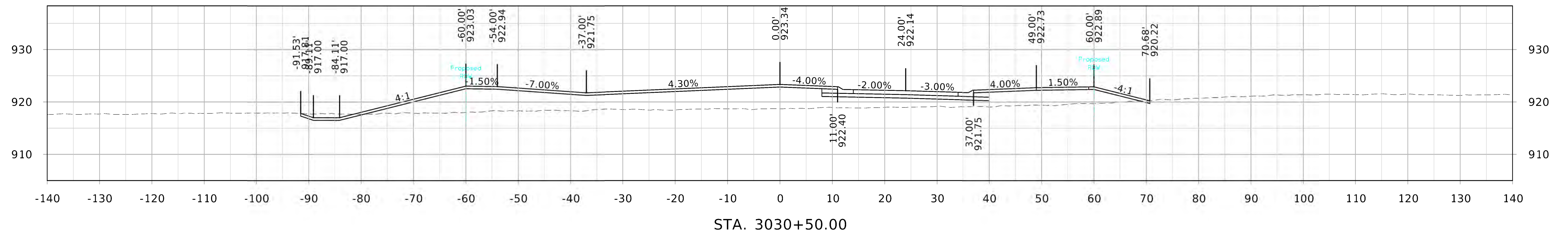
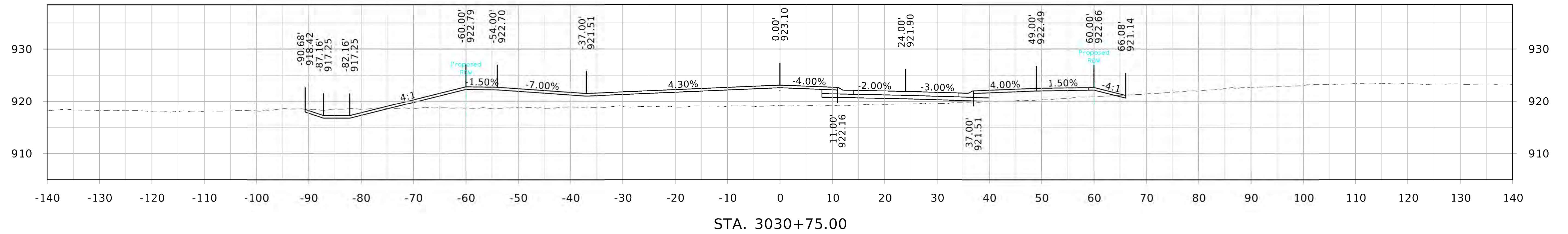
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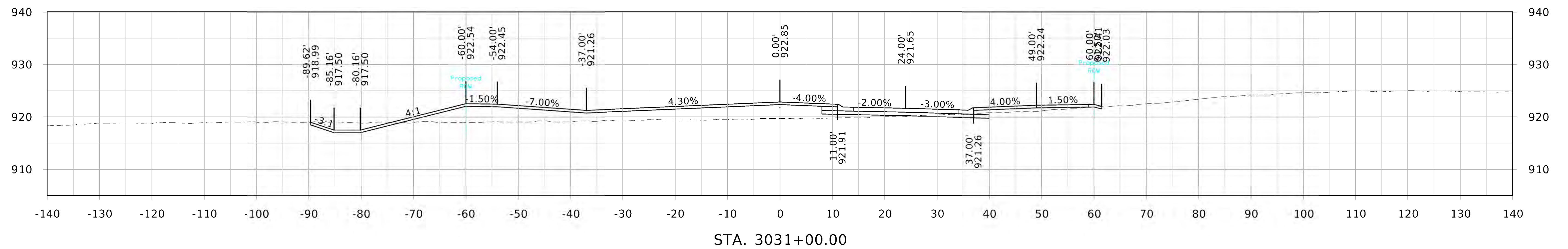
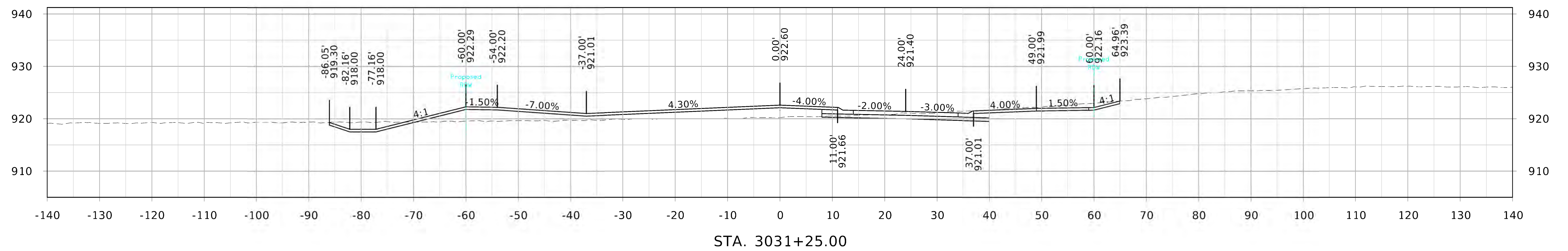
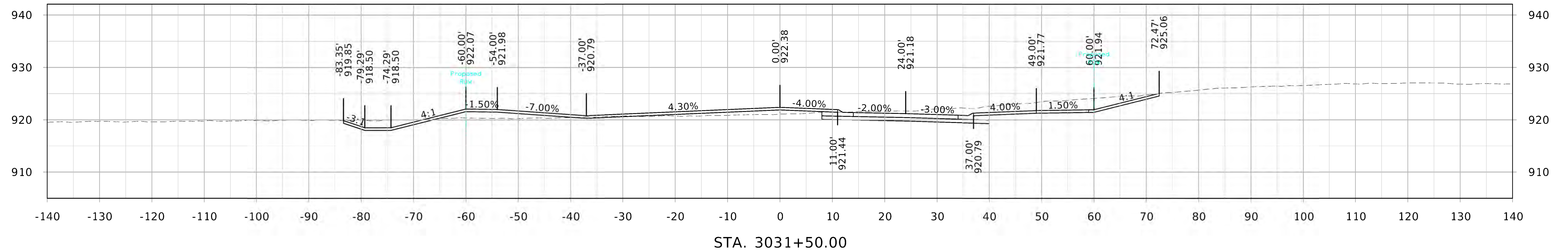
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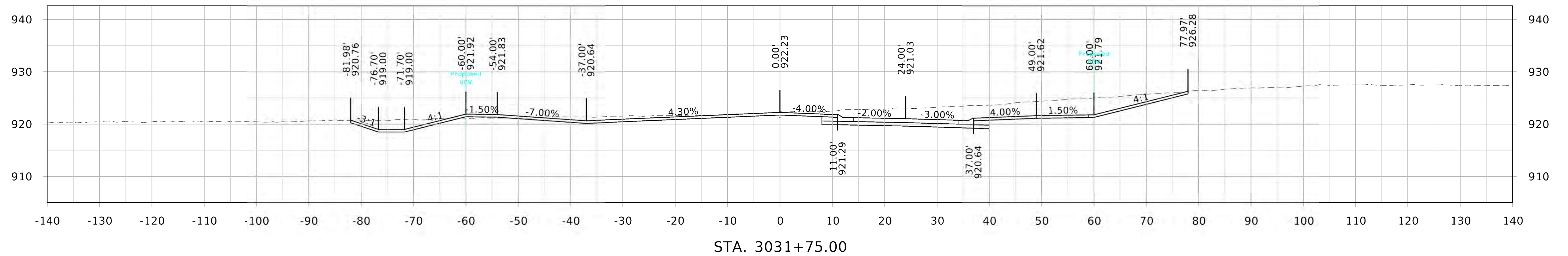
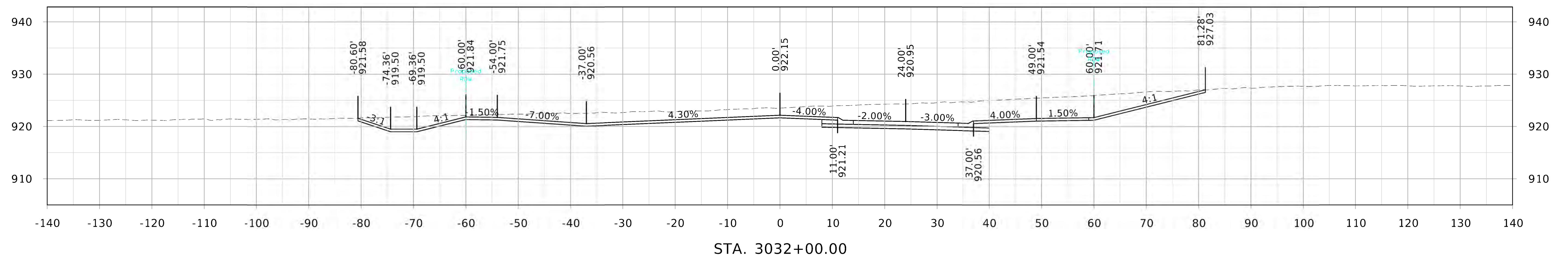
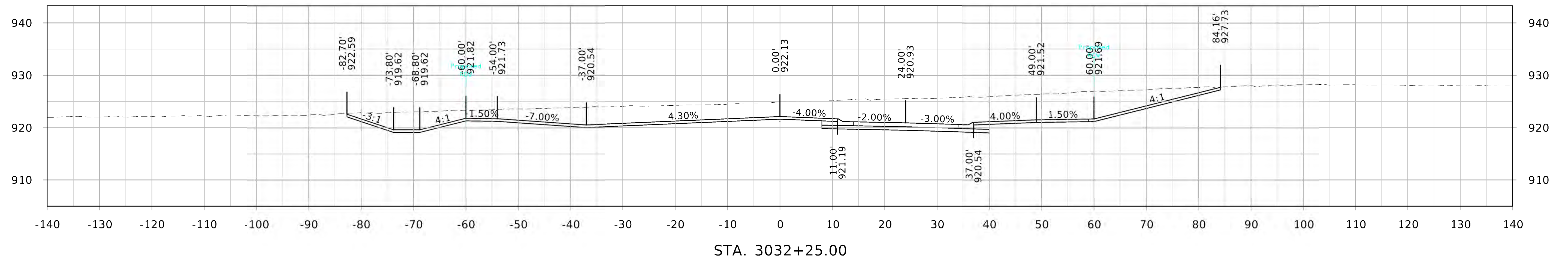
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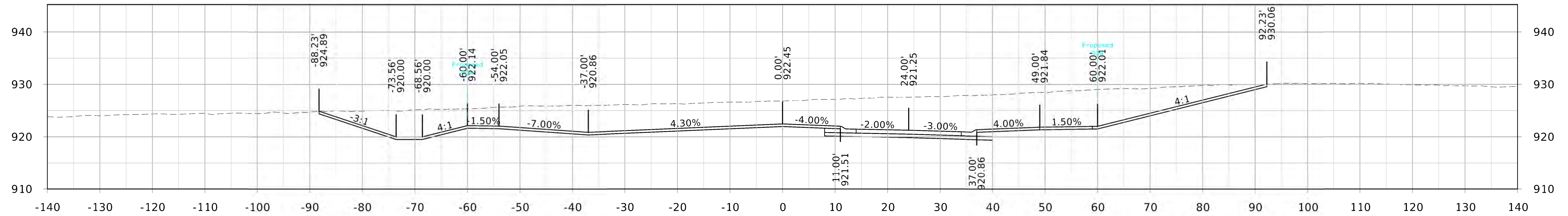
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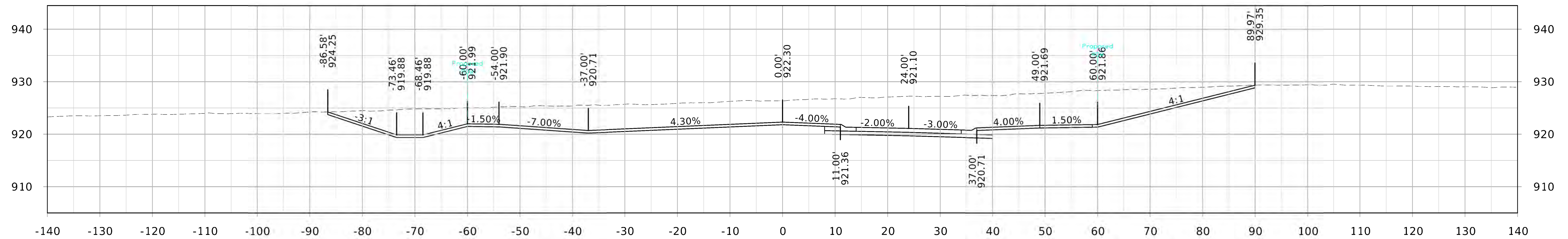
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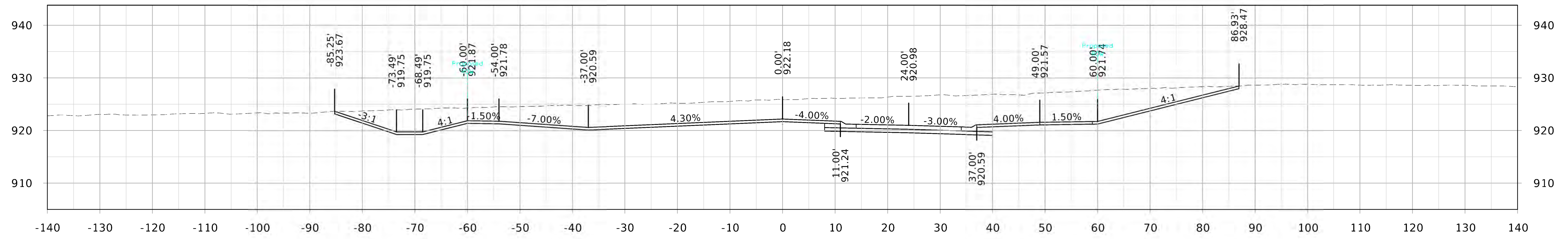
110th Street



STA. 3033+00.00

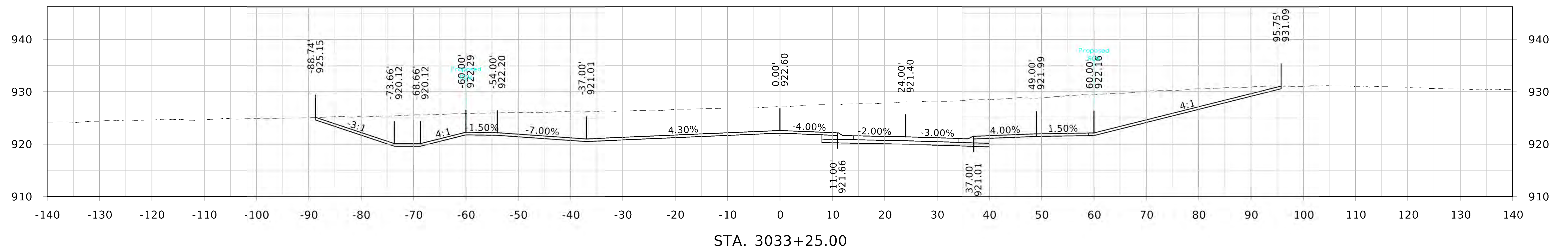
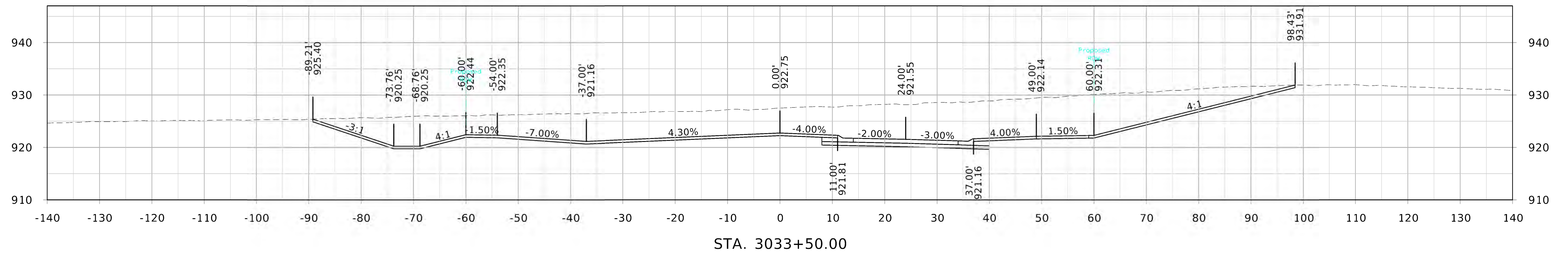
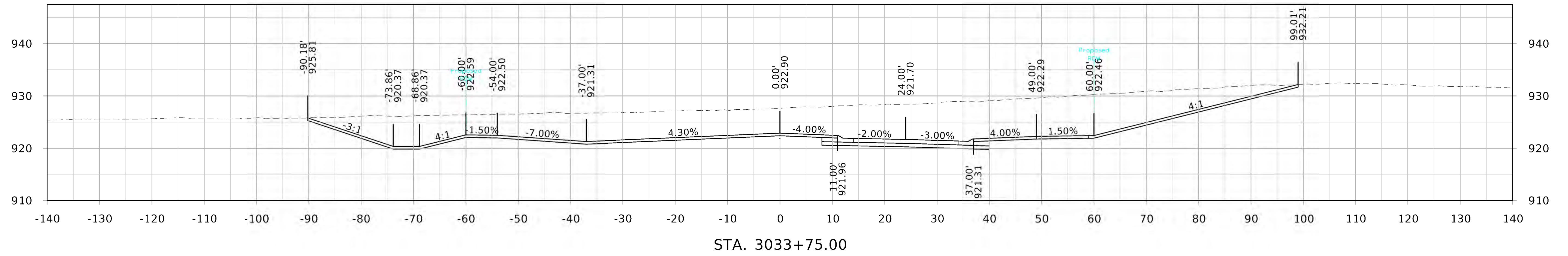


STA. 3032+75.00

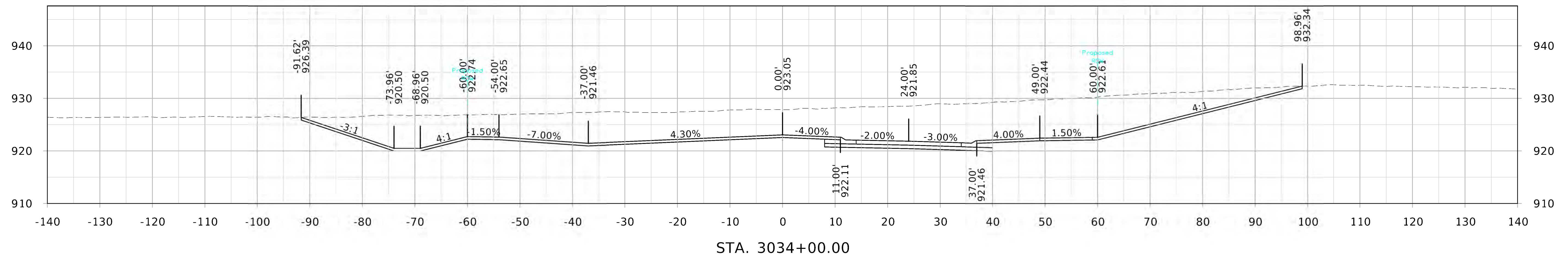
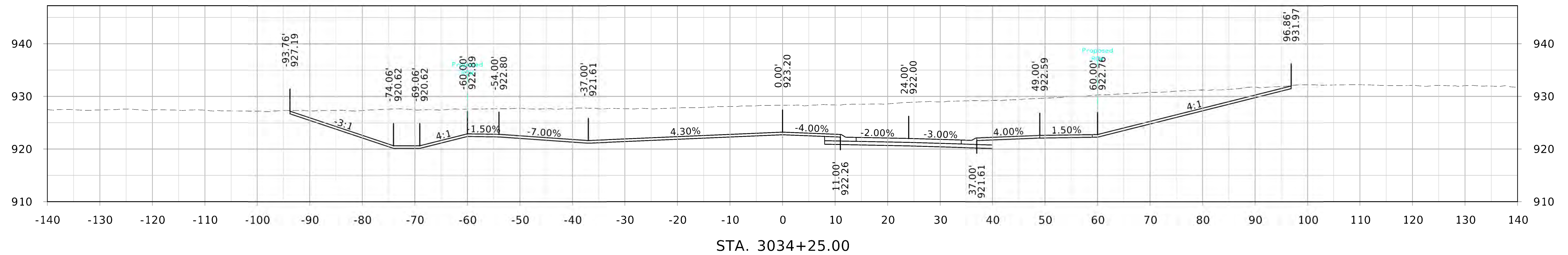
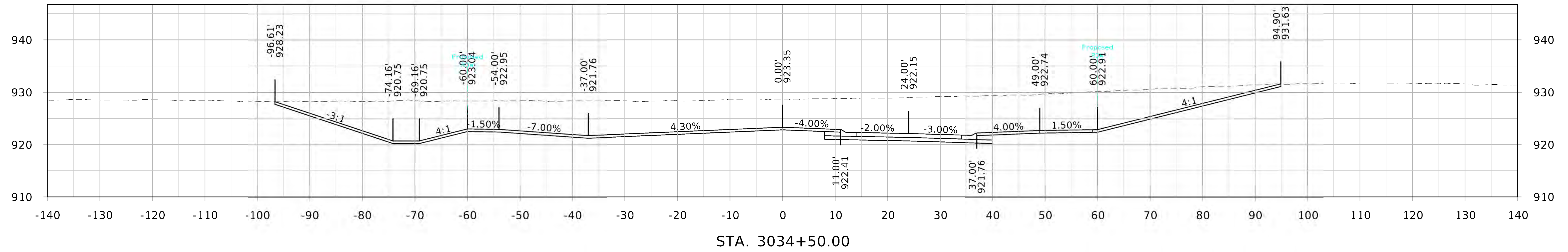


STA. 3032+50.00

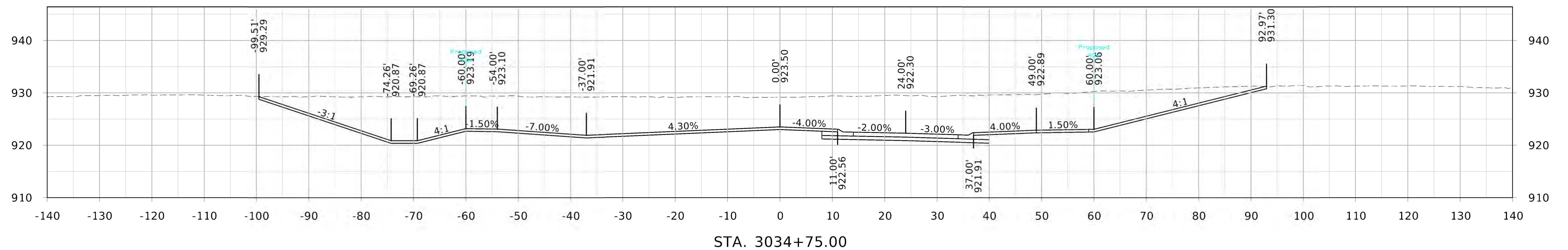
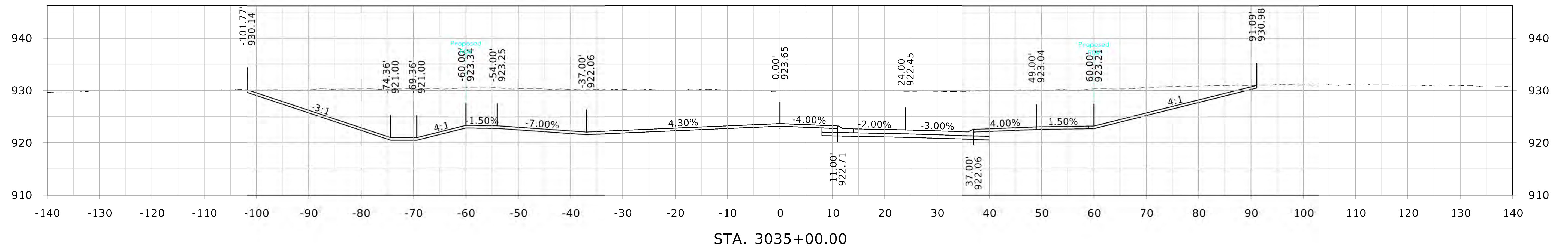
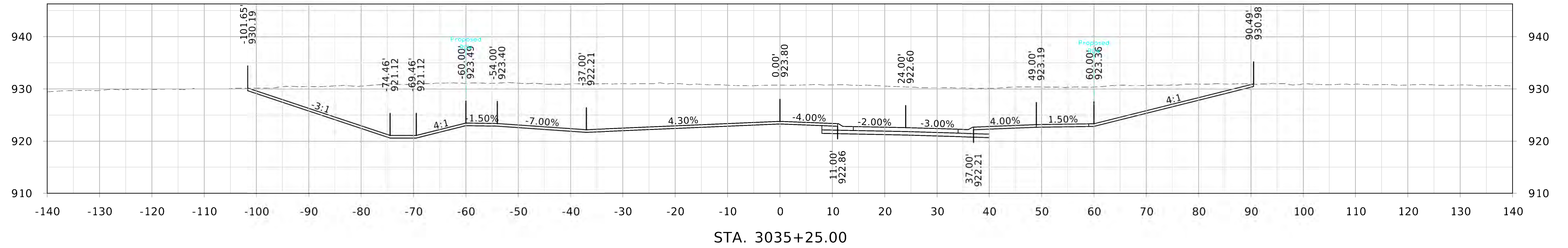
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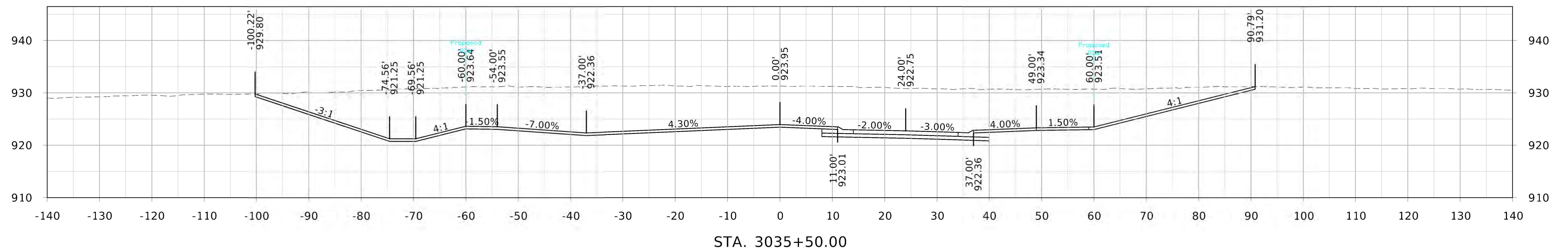
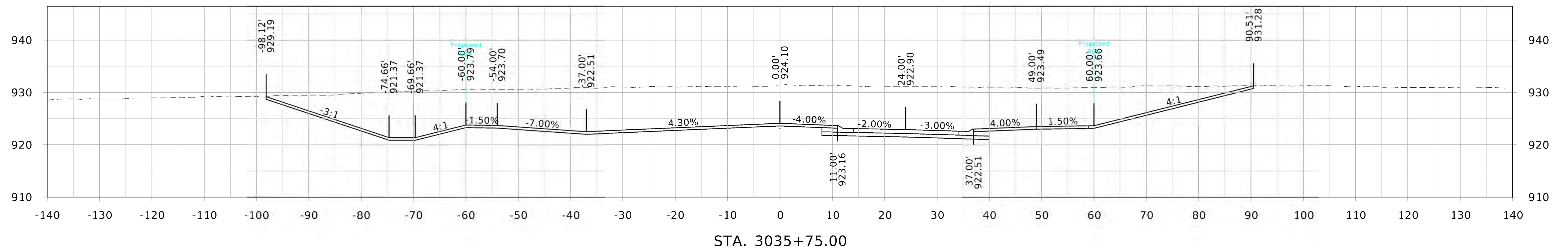
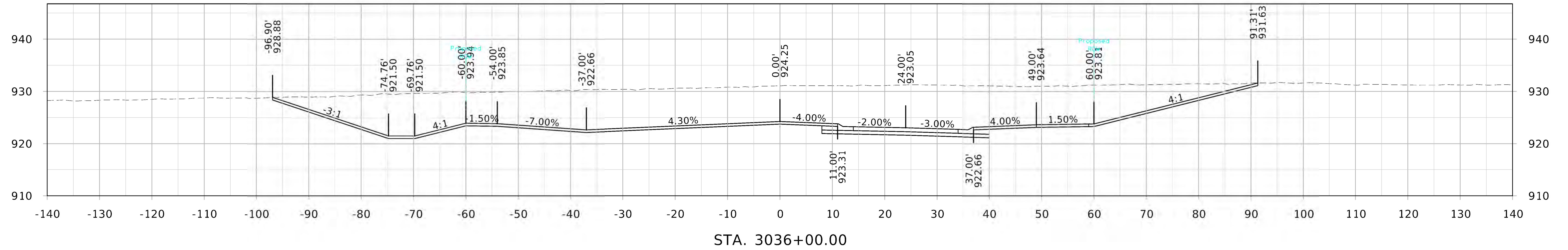
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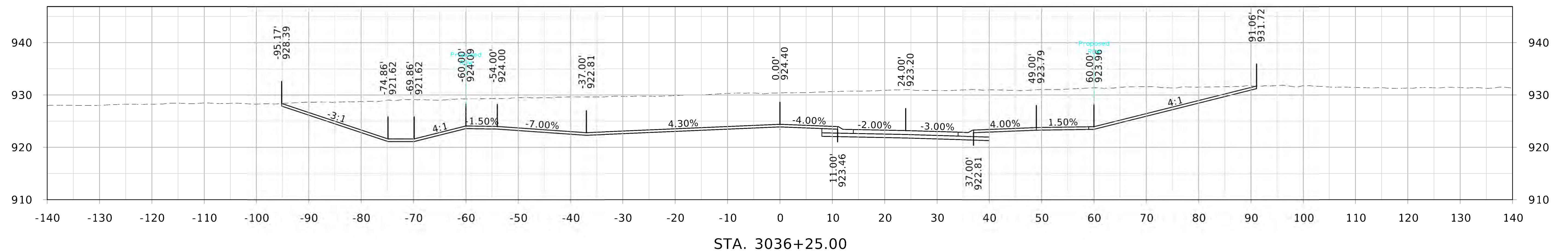
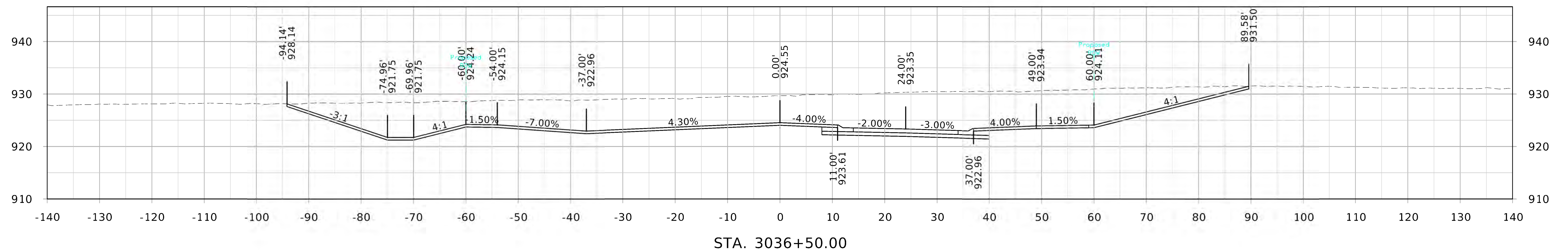
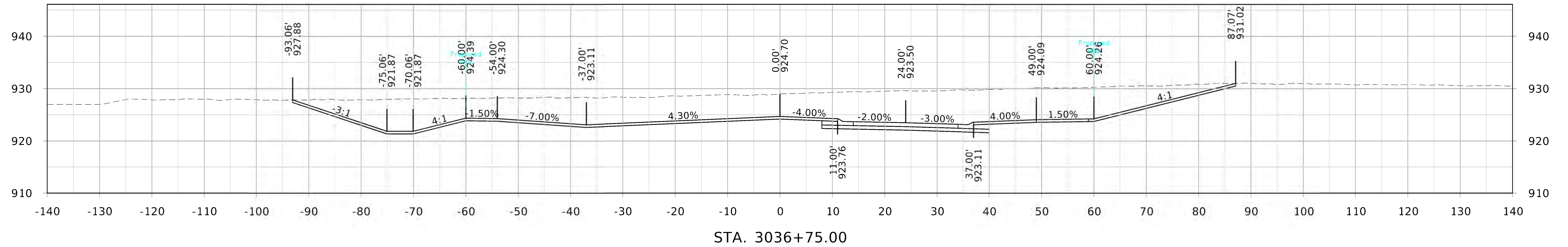
110th Street



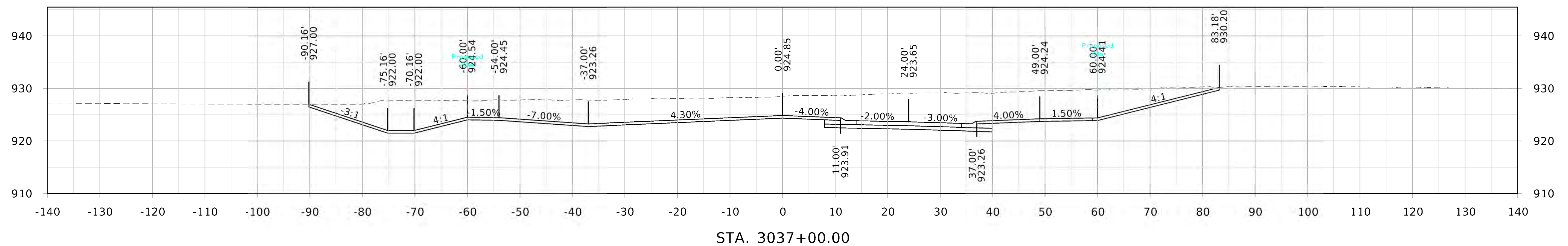
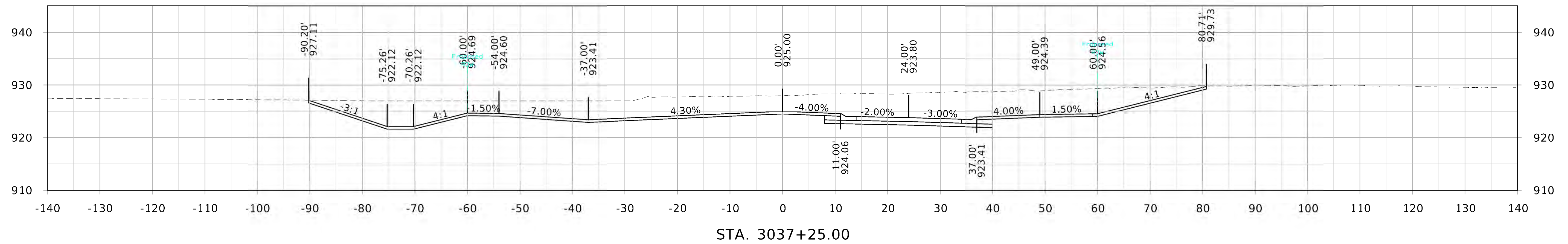
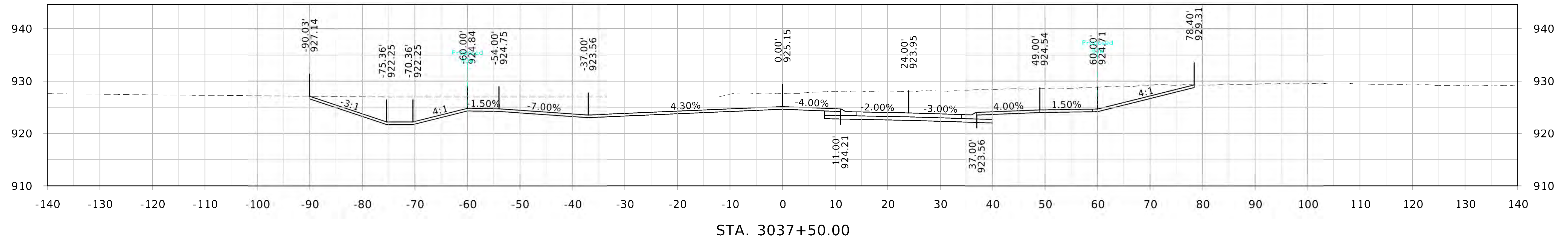
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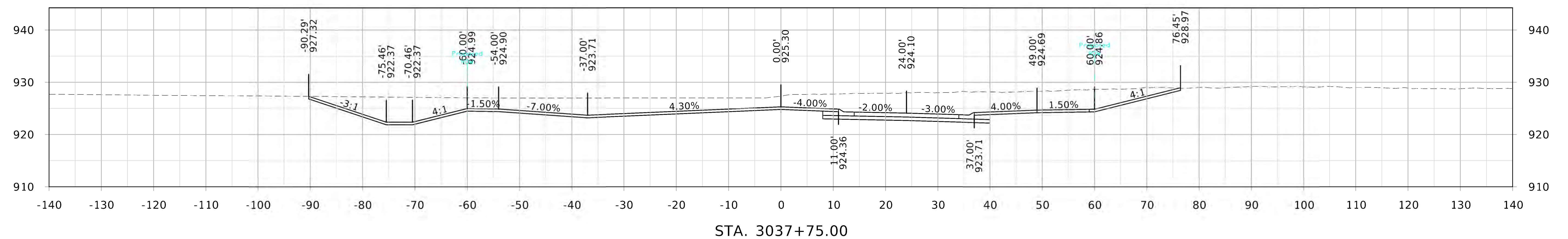
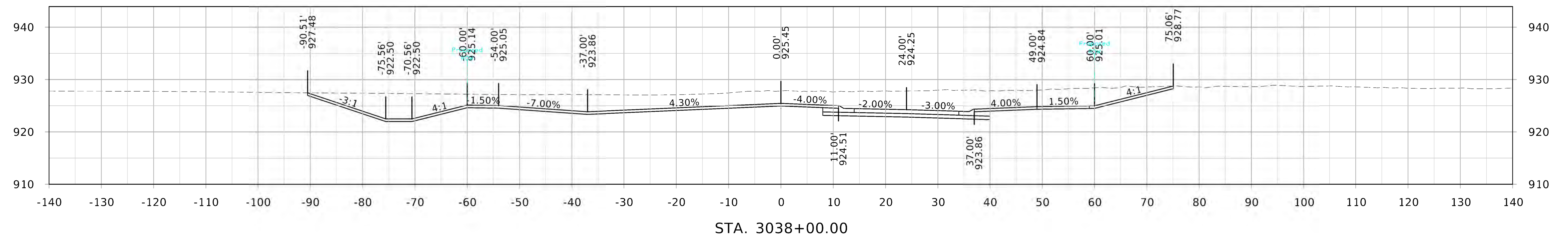
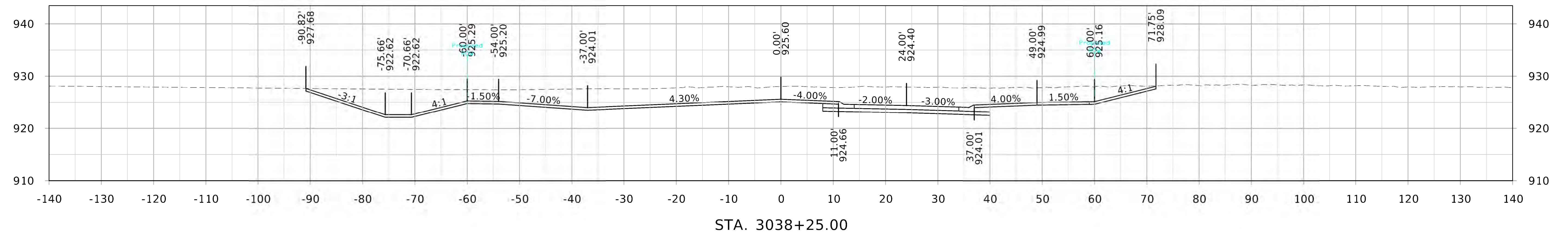
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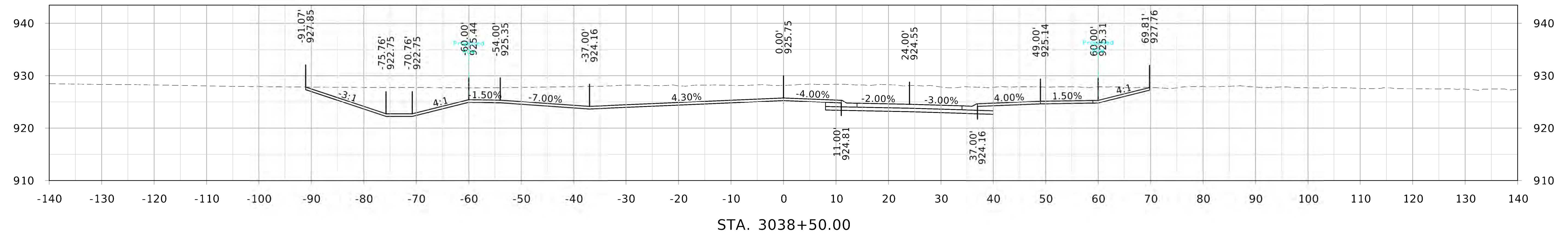
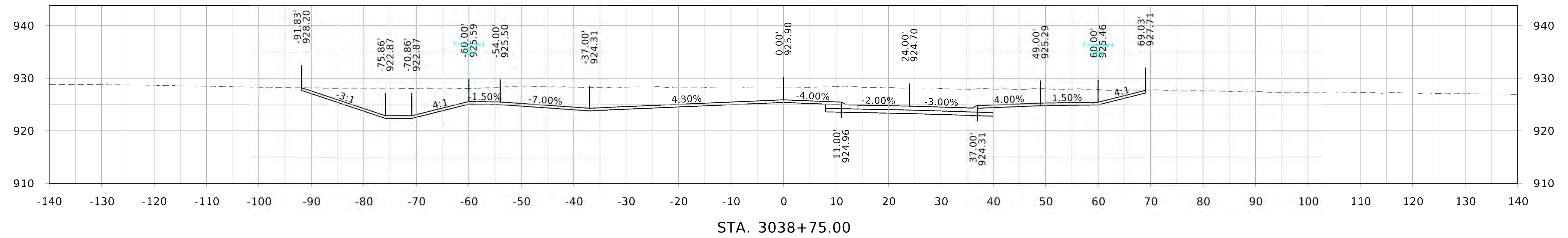
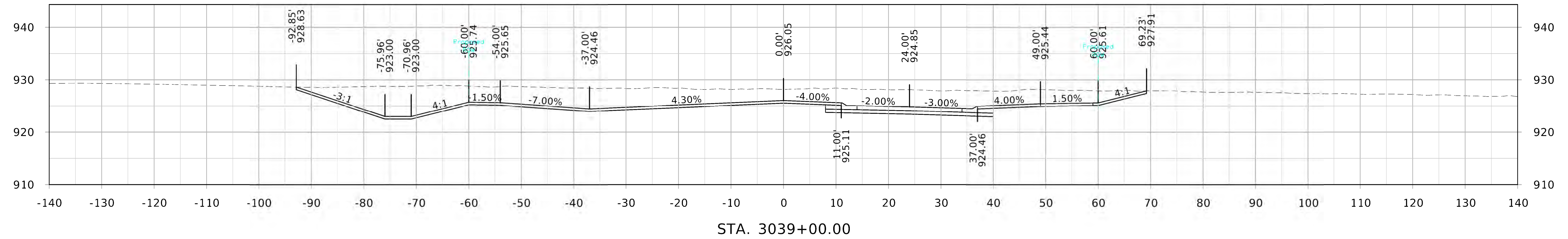
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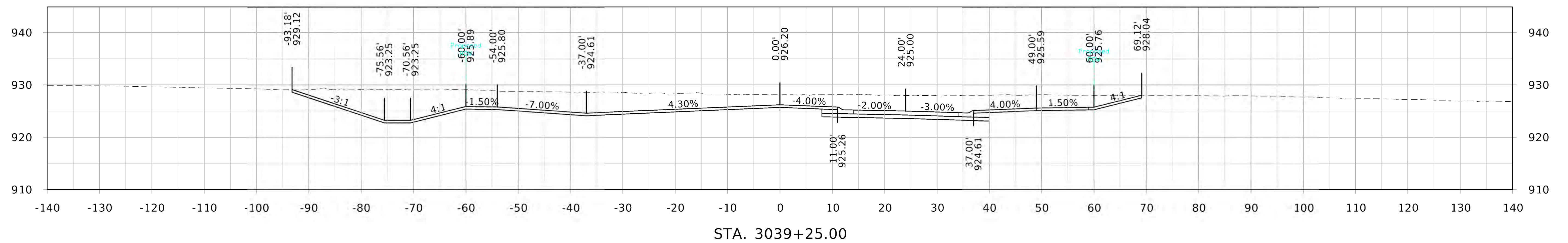
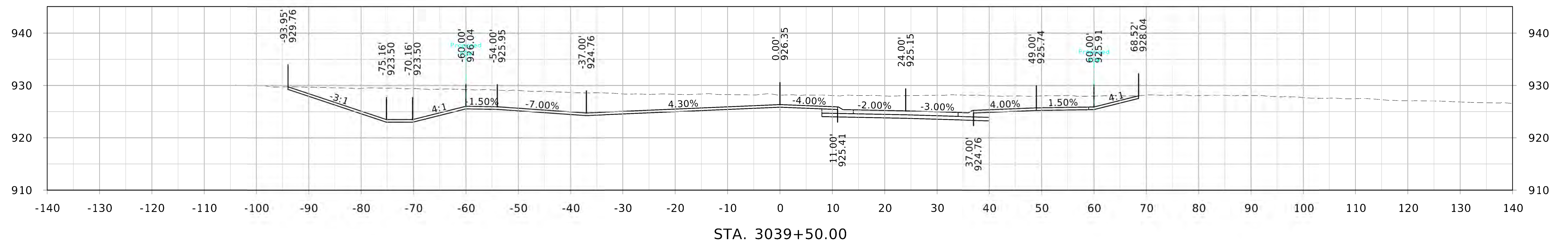
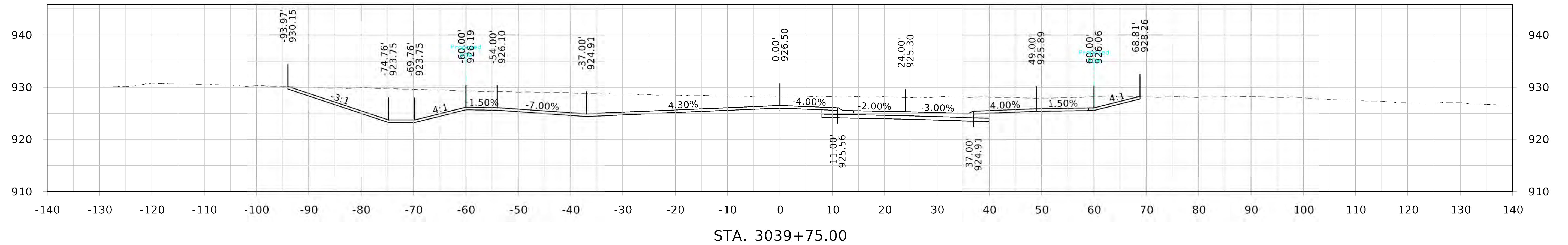
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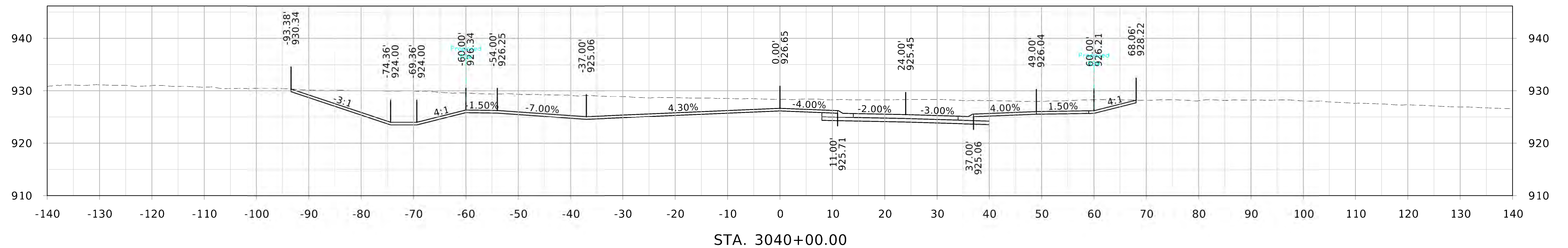
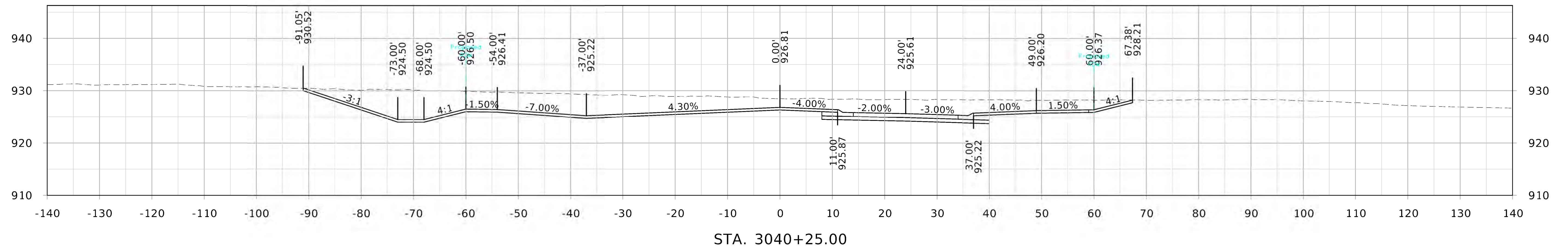
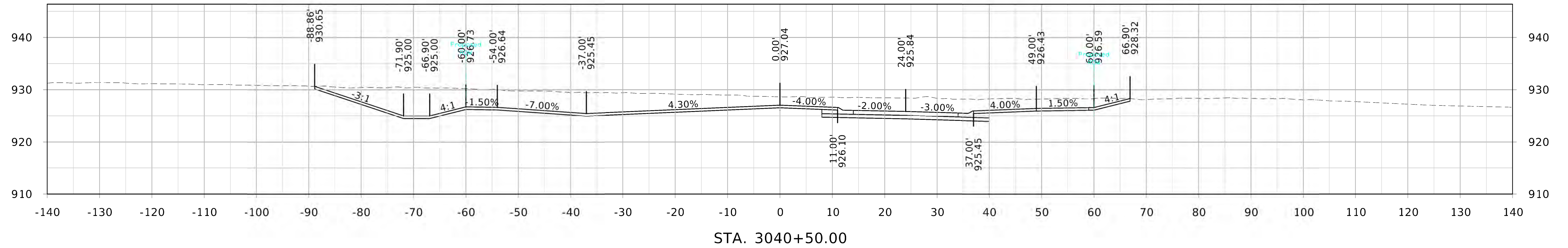
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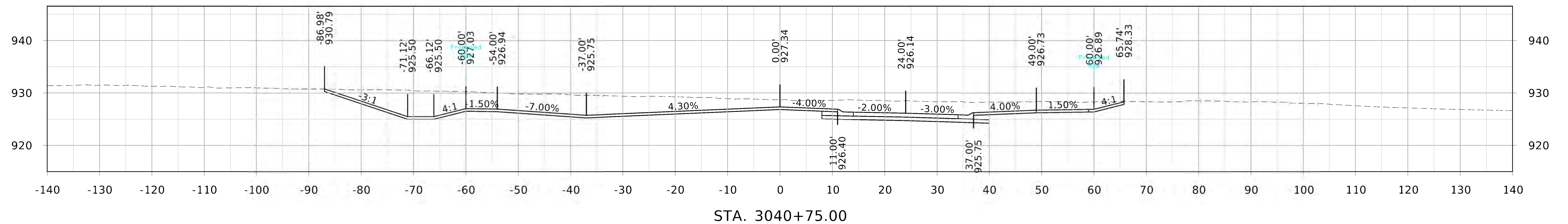
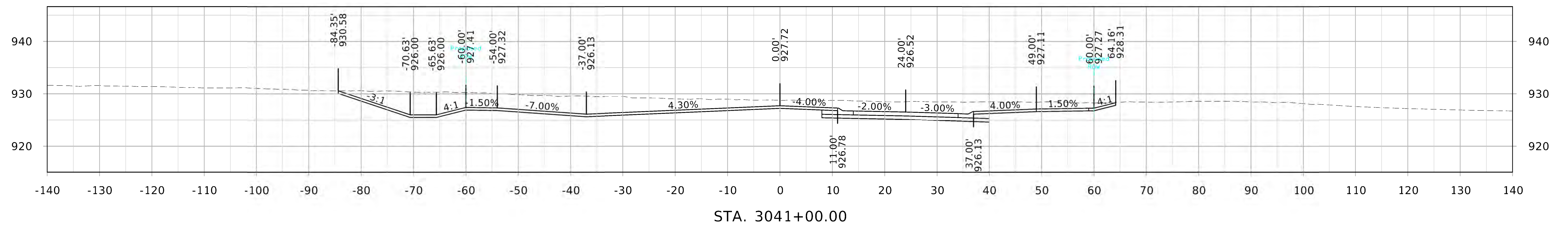
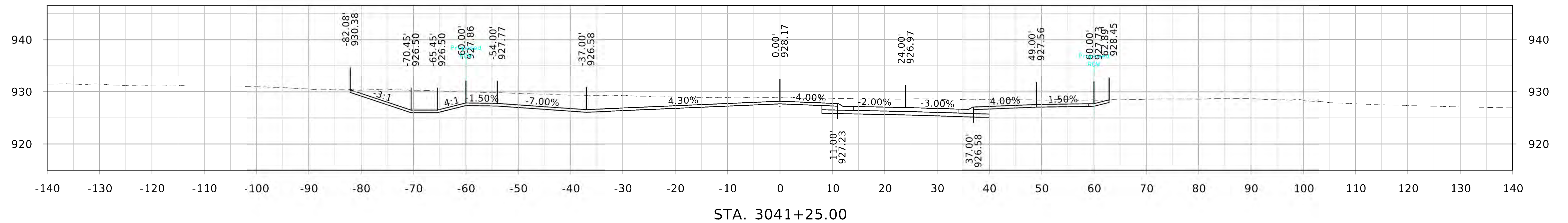
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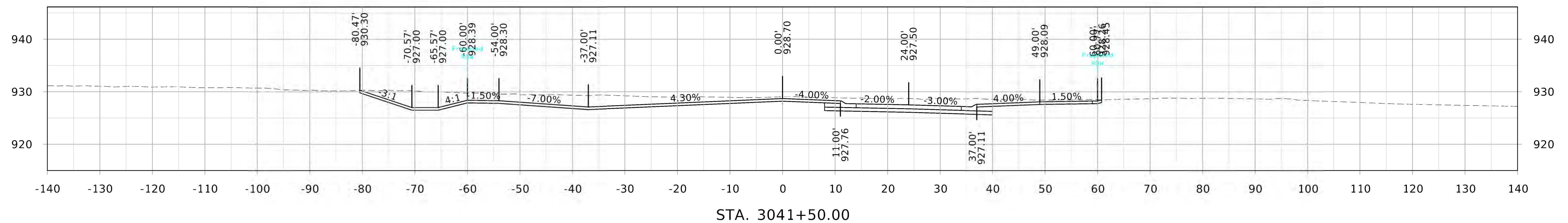
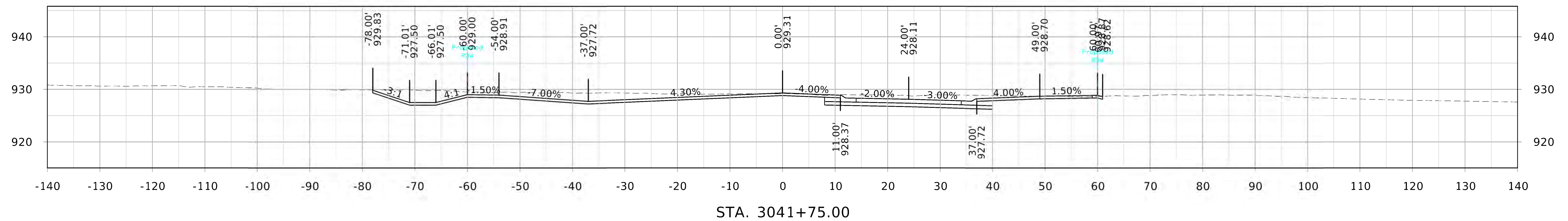
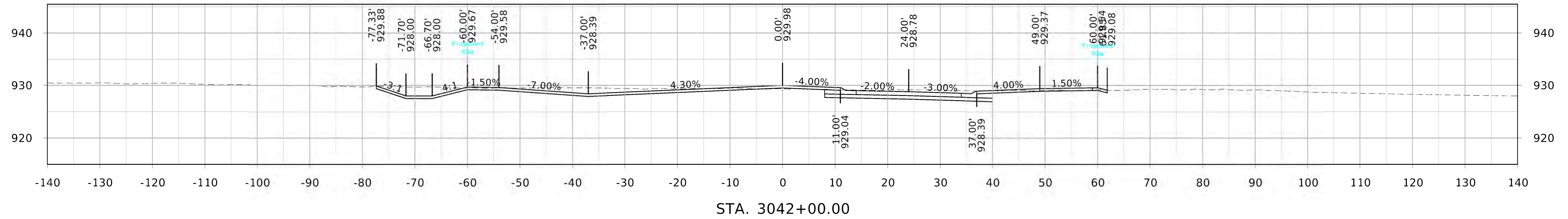
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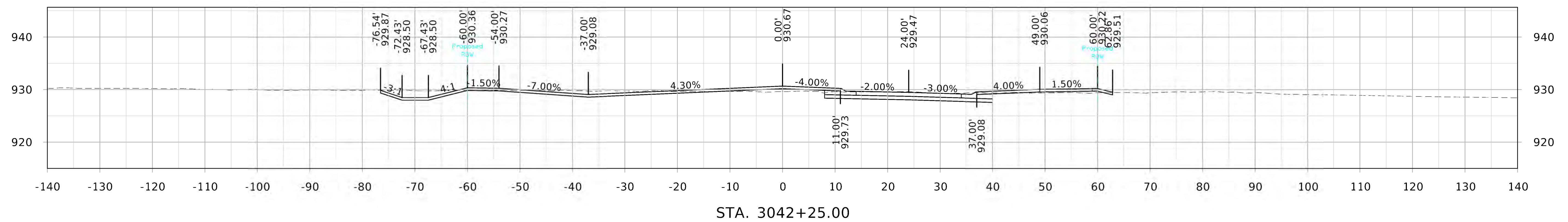
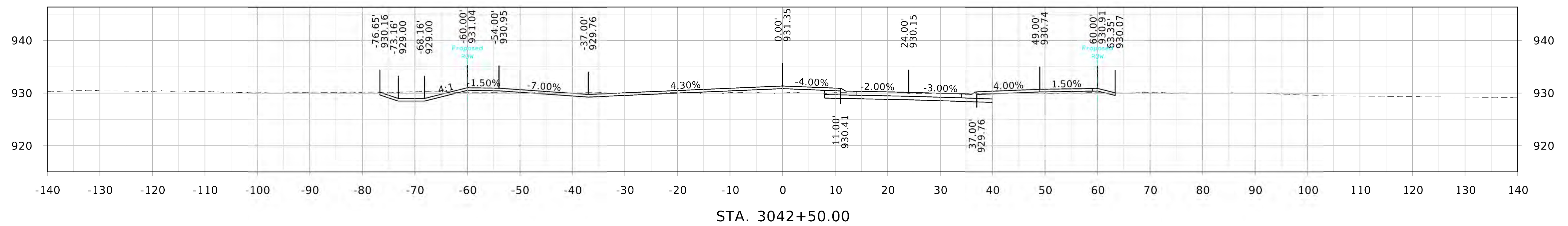
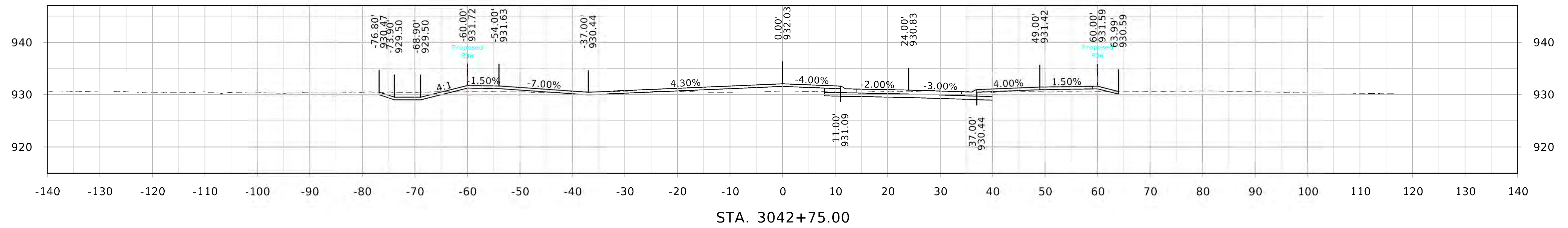
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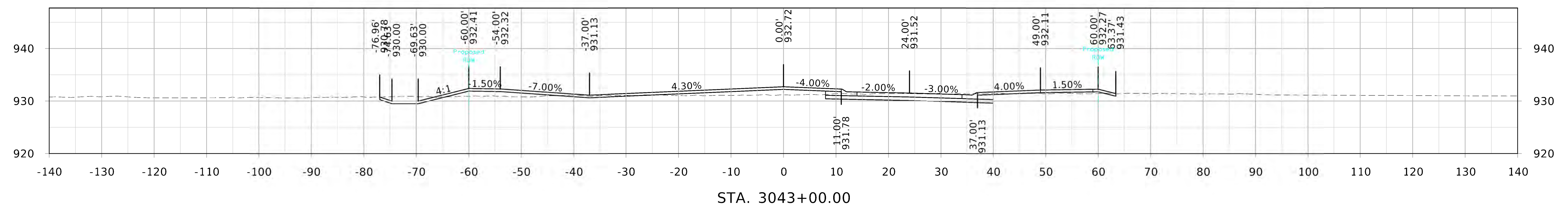
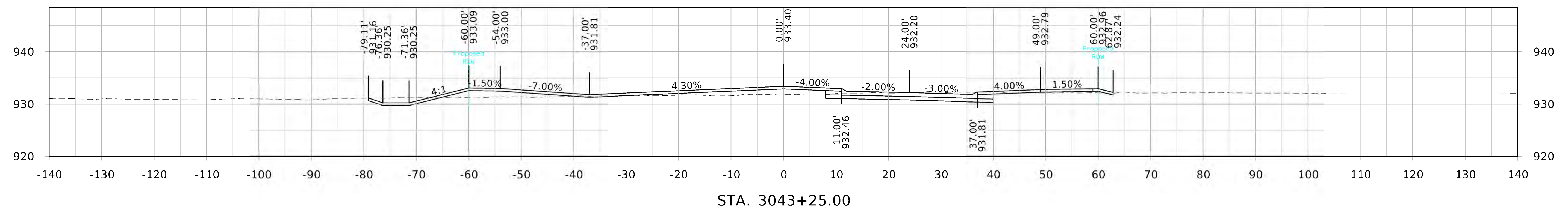
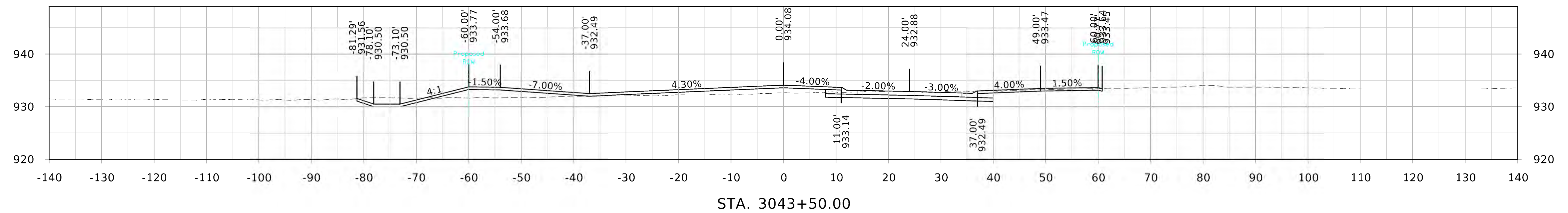
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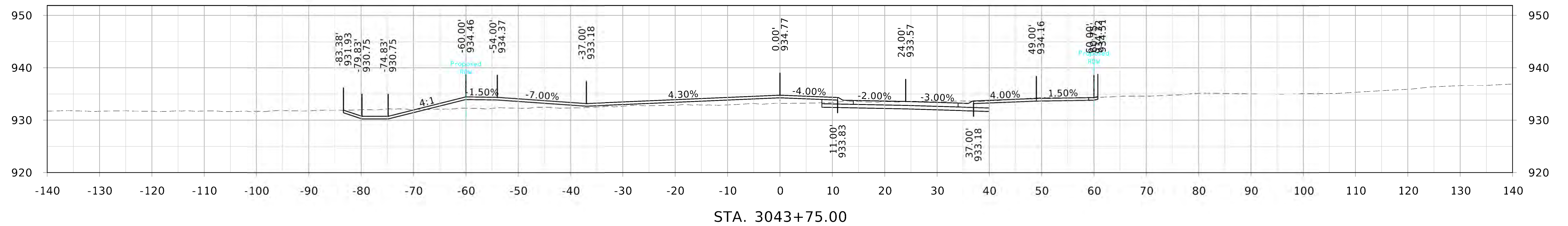
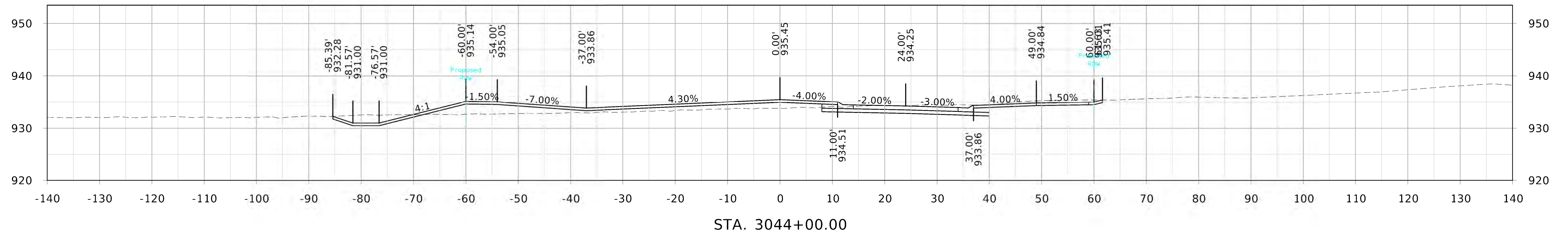
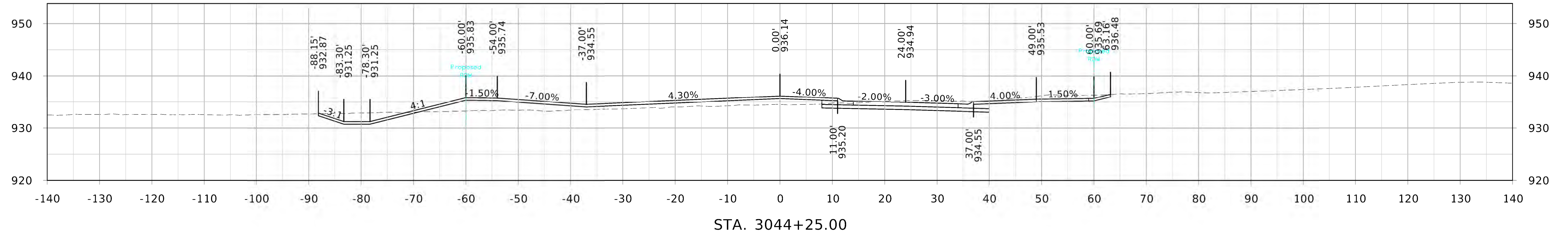
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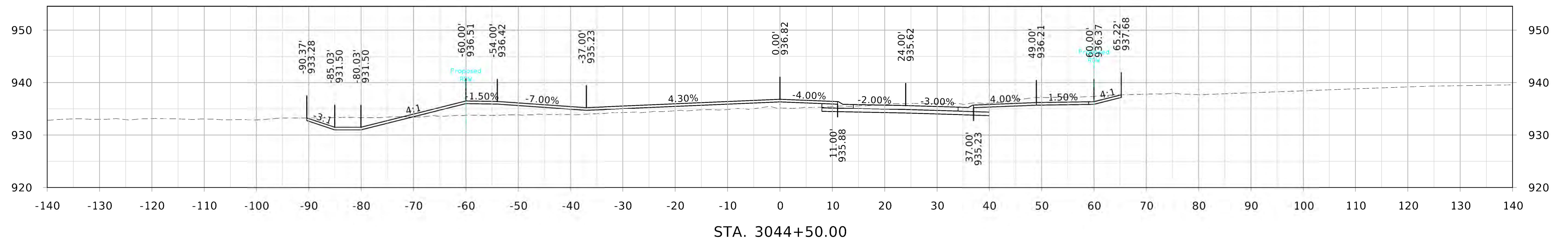
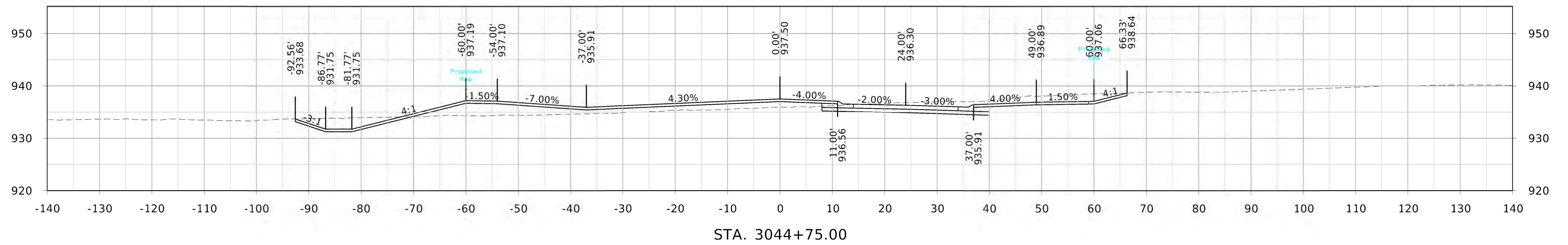
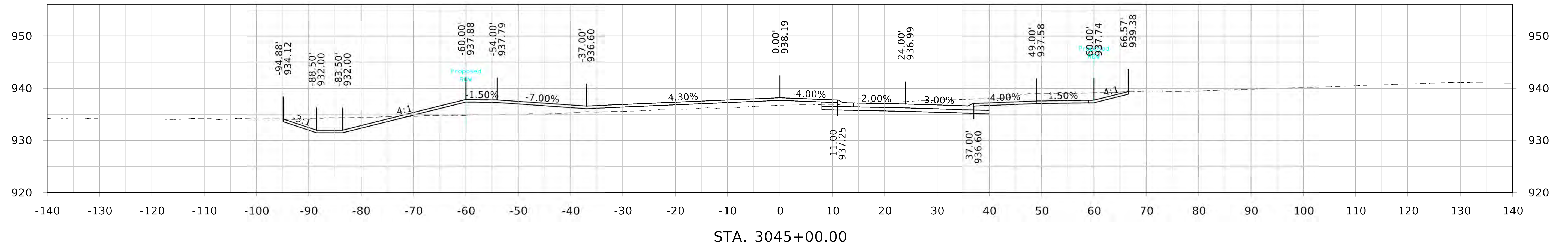
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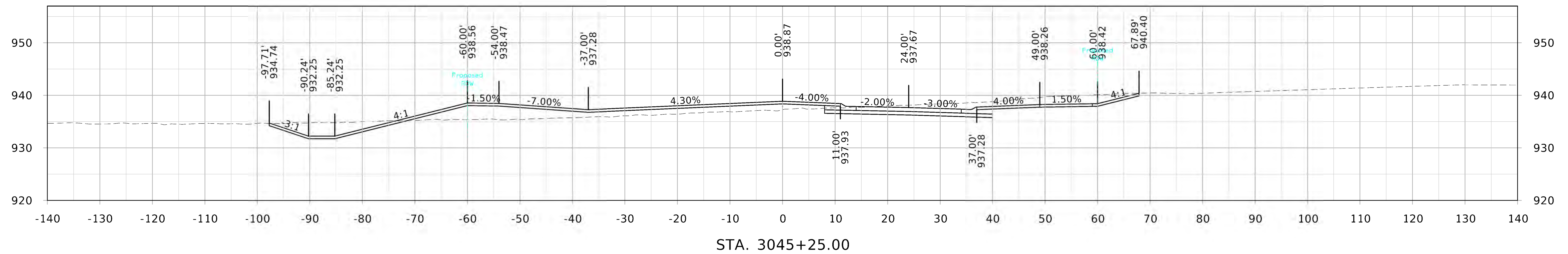
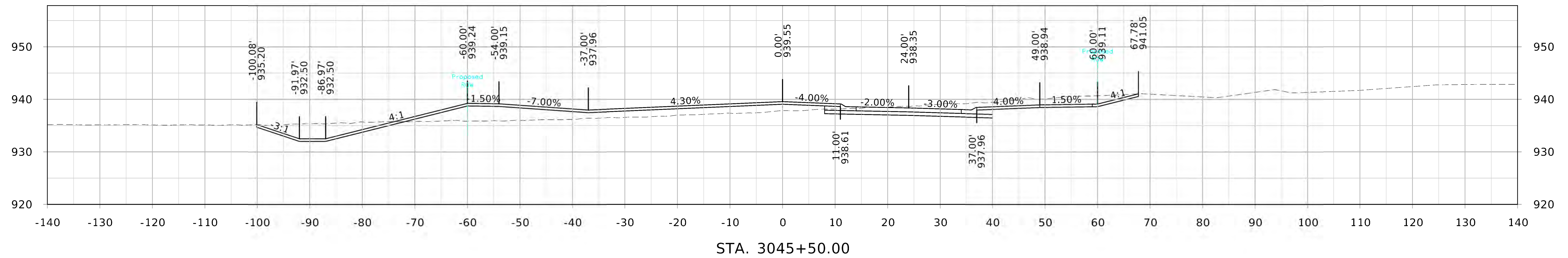
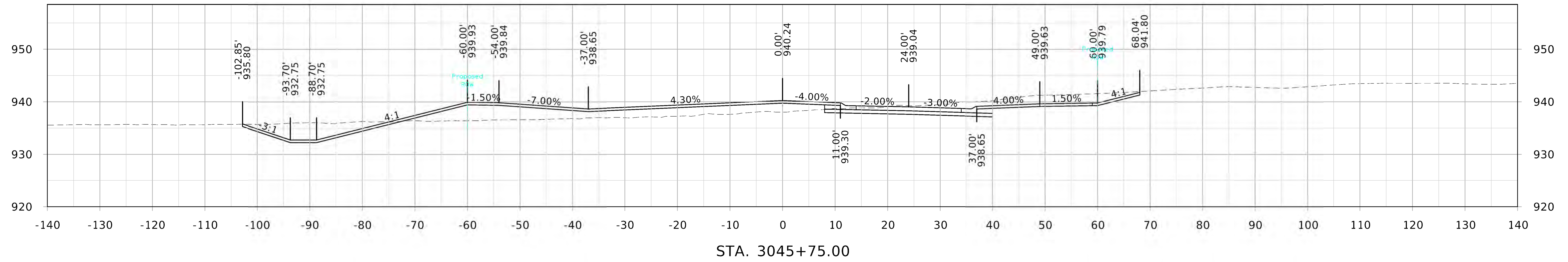
110th Street



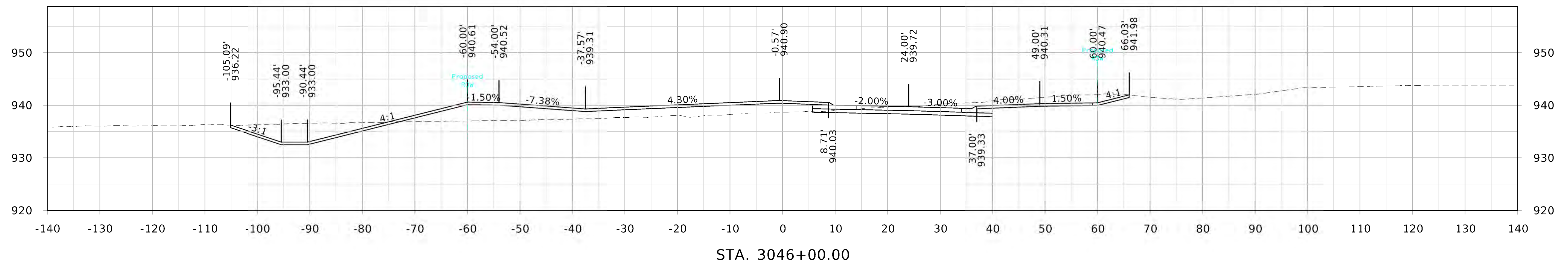
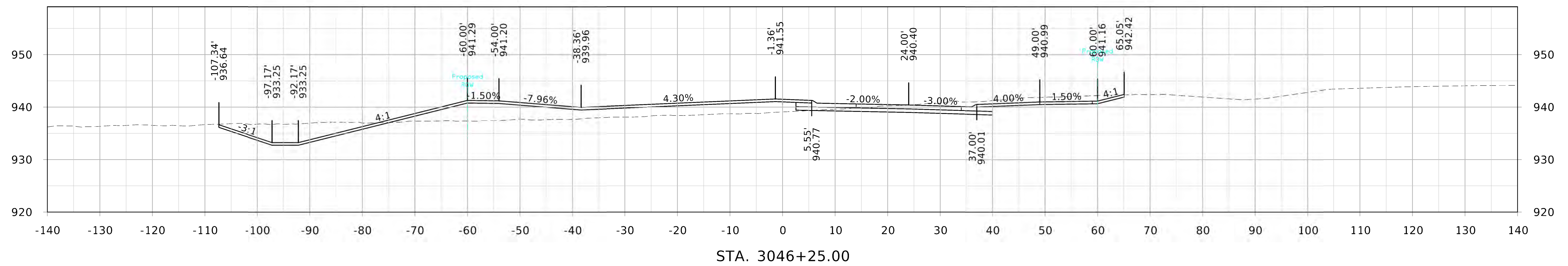
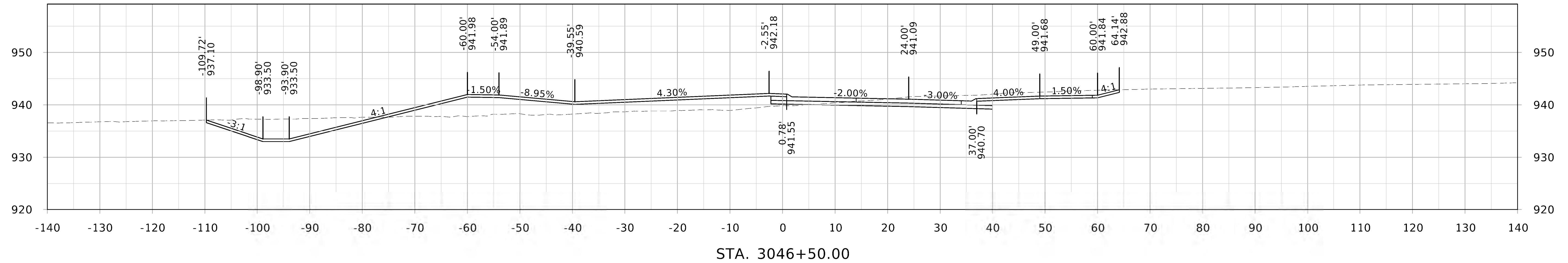
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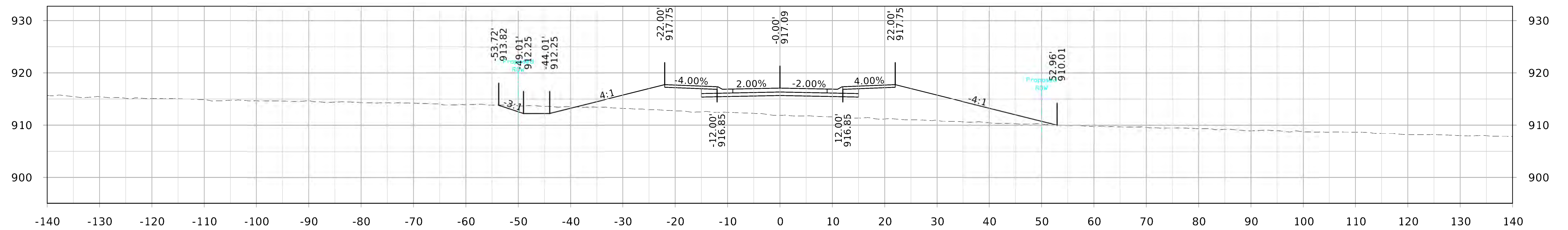
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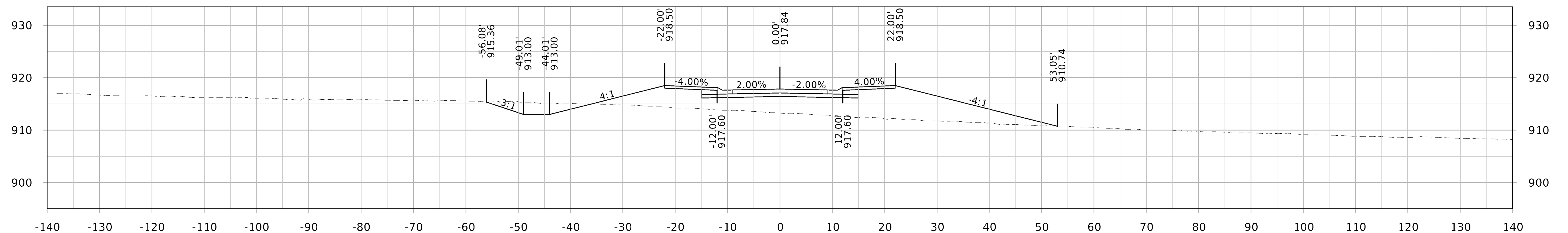
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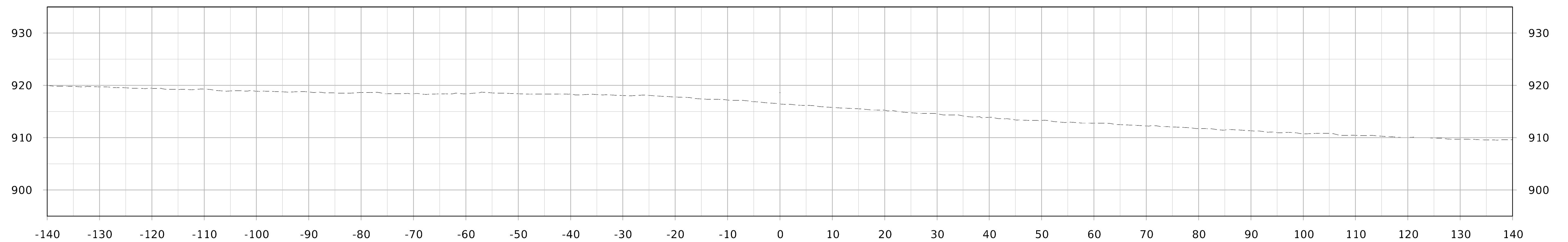
NW 102nd Avenue



STA. 4001+25.00

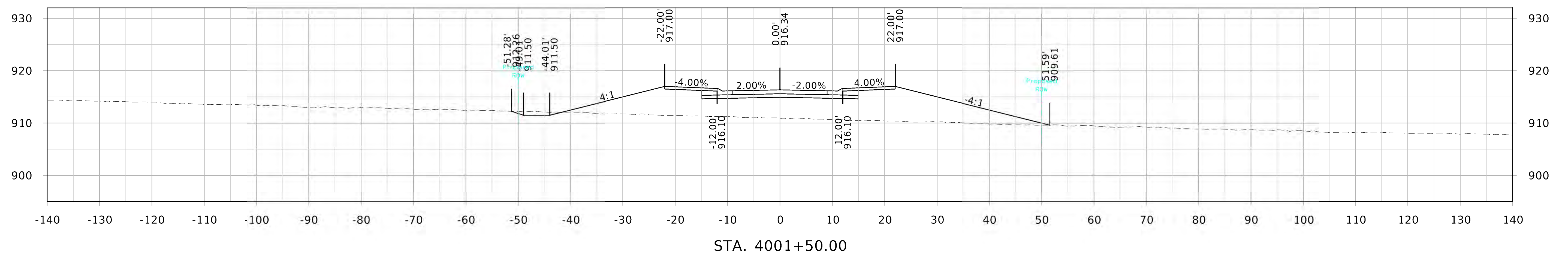
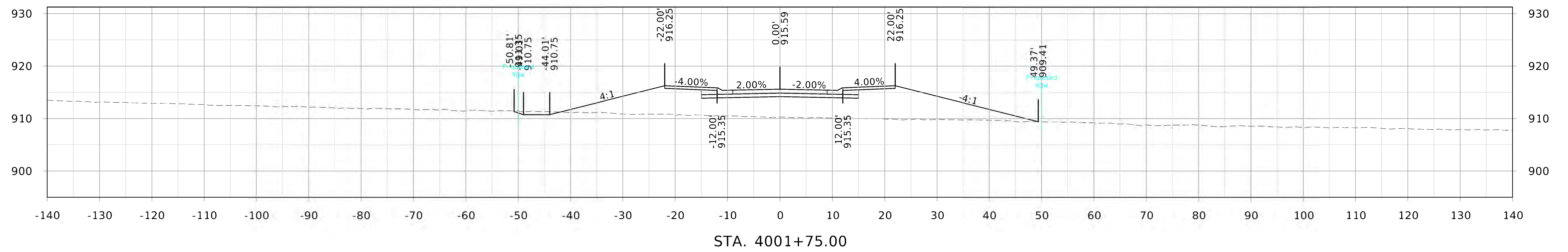
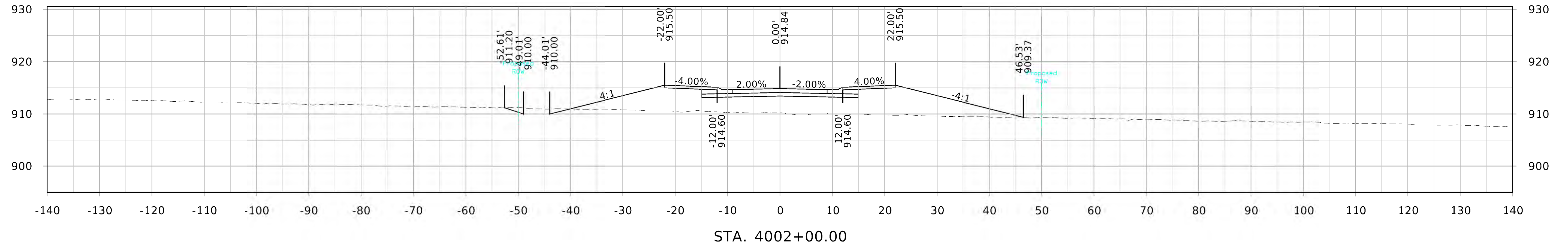


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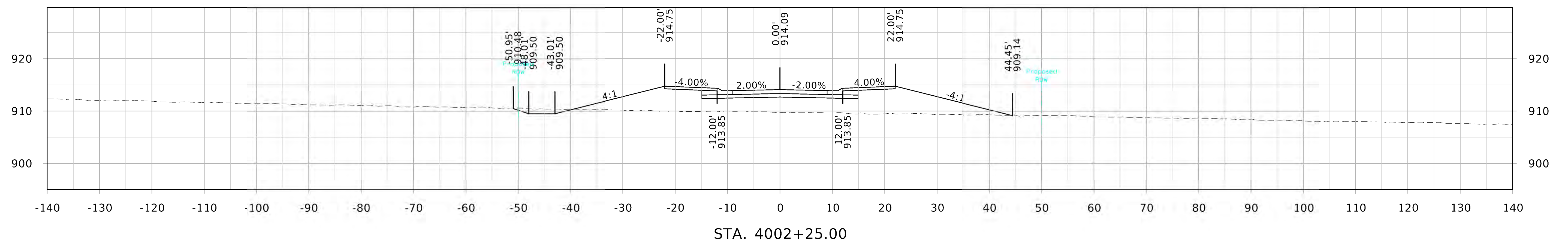
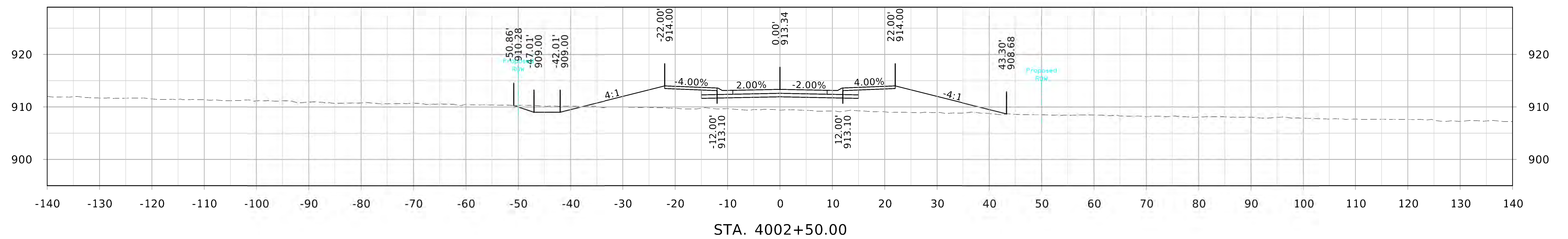
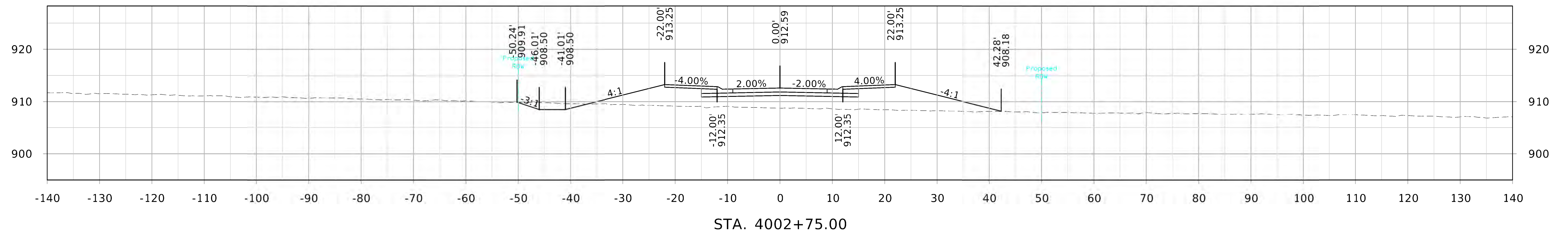


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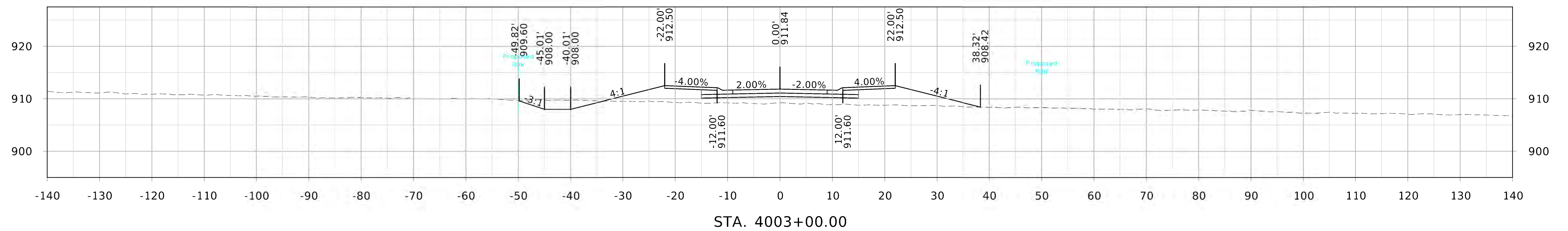
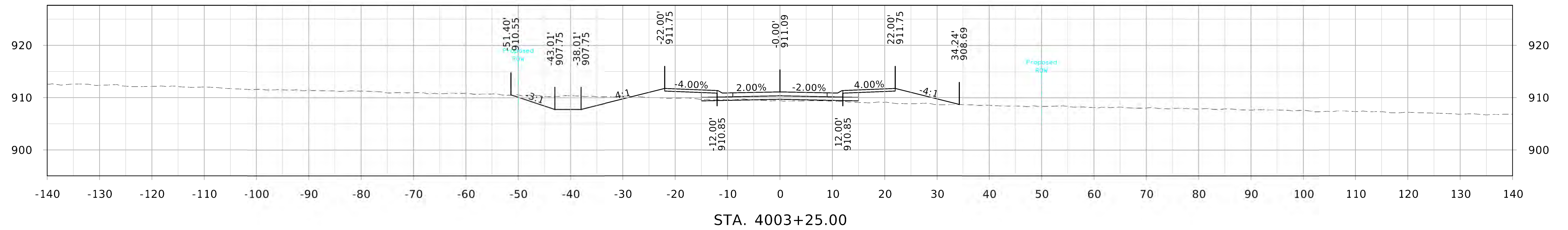
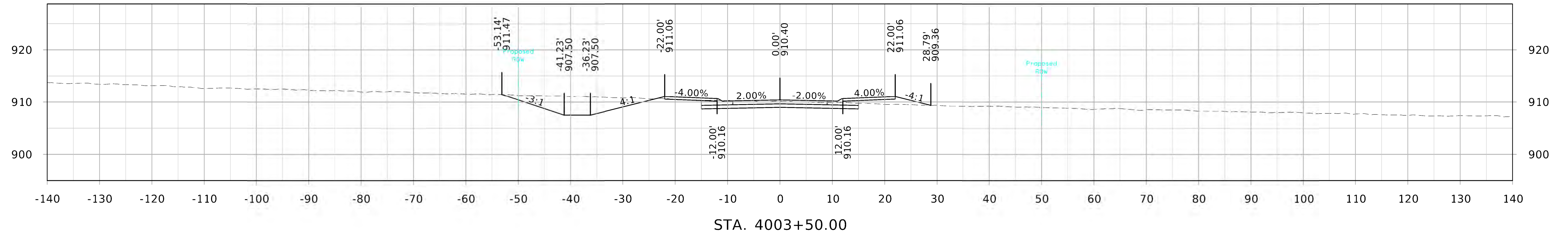
NW 102nd Avenue



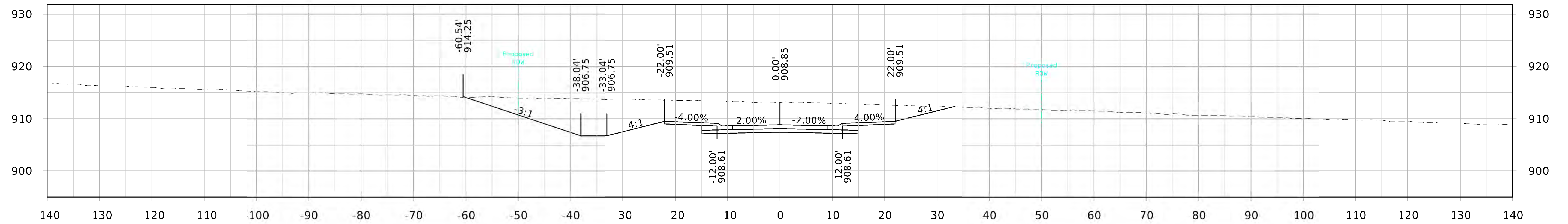
NW 102nd Avenue



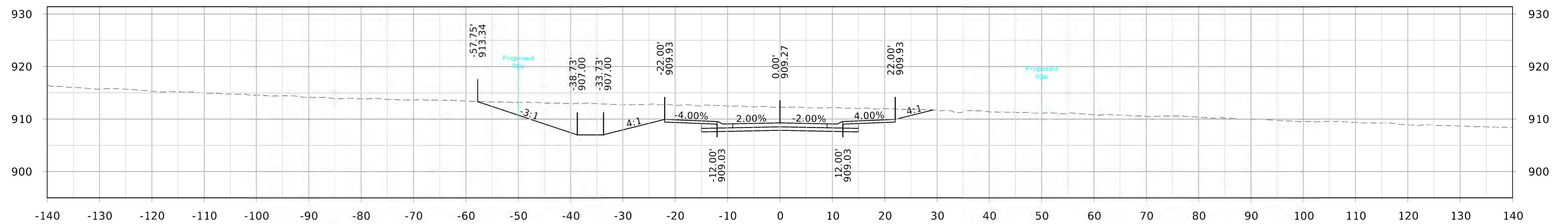
NW 102nd Avenue



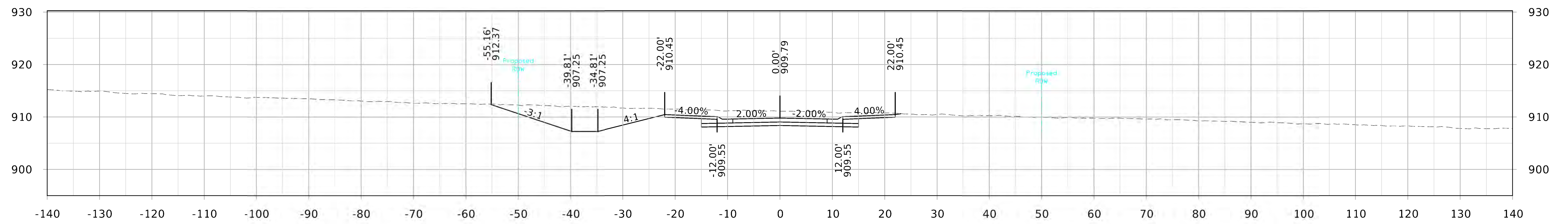
NW 102nd Avenue



STA. 4004+25.00

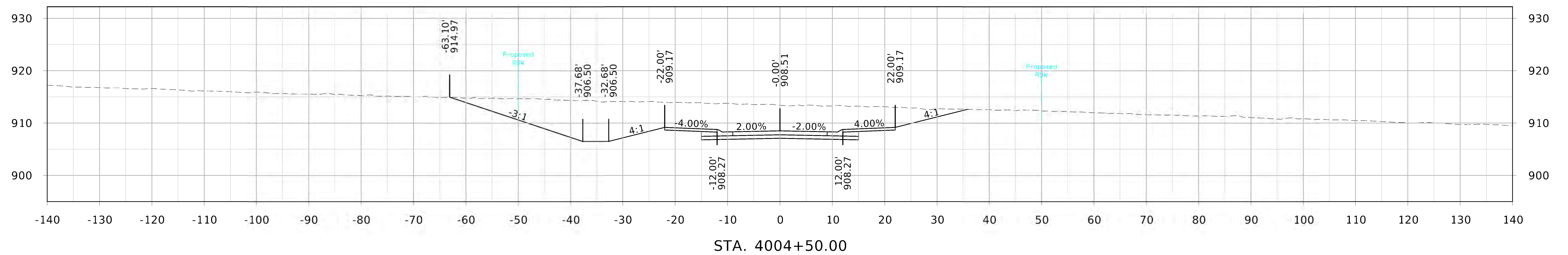
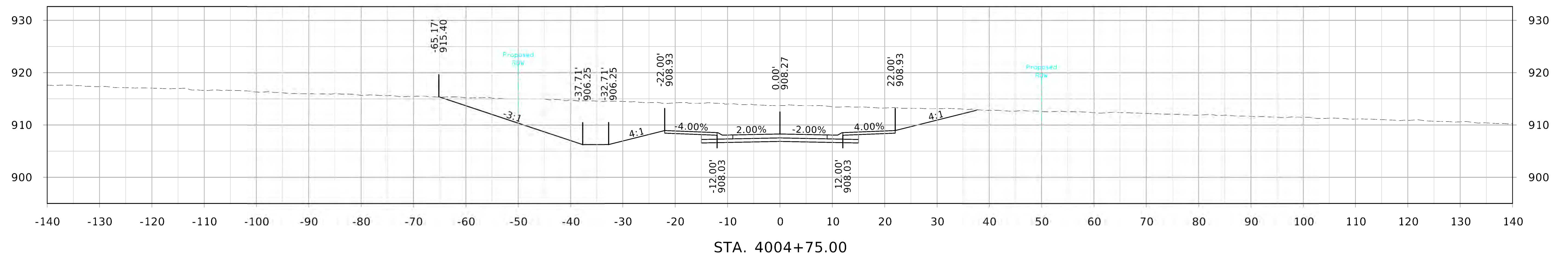
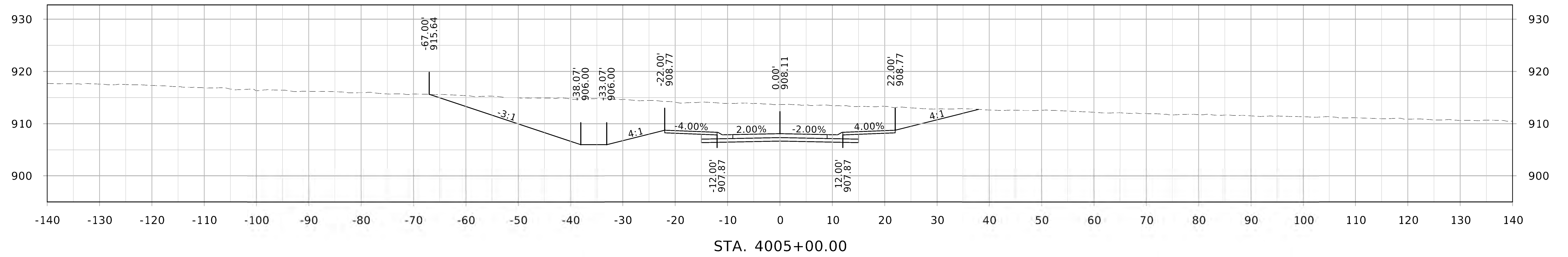


STA. 4004+00.00



STA. 4003+75.00

NW 102nd Avenue



NW 102nd Avenue

