



PLANS OF PROPOSED IMPROVEMENT ON THE  
**PRIMARY ROAD SYSTEM**  
**MARSHALL COUNTY**  
PCC Pavement - Grade and New  
Durham Ave Intersection at State Center

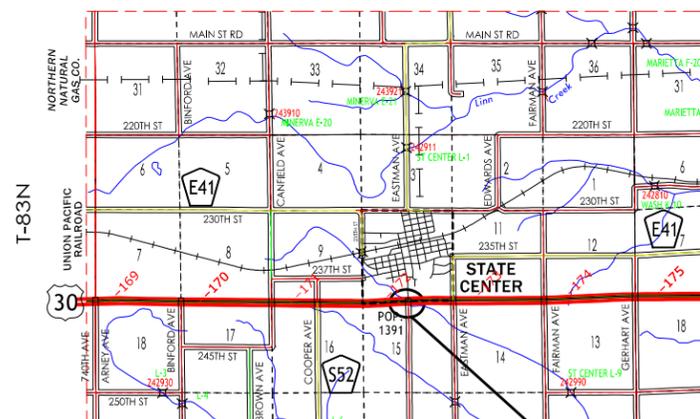
SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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



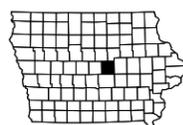
No.	DESCRIPTION
<b>A Sheets</b>	<b>Title Sheets</b>
* A.1	Title Sheet and Location Map Sheet
<b>B Sheets</b>	<b>Typical Cross Sections and Details</b>
* B.1 - 5	Typical Cross Sections and Details
<b>C Sheets</b>	<b>Quantities and General Information</b>
C.1 - 3	Estimated Project Quantities & Reference Information
C.3 - 8	Tabulations
C.9	Standard Road Plans
<b>D Sheets</b>	<b>Mainline Plan and Profile Sheets</b>
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - 3	"US 30"
<b>E Sheets</b>	<b>Side Road Plan and Profile Sheets</b>
* E.1 - 2	"Durham Ave. and 3rd Ave. SW
<b>G Sheets</b>	<b>Survey Sheets</b>
G.1 - 3	Reference Ties and Bench Marks
G.4	Horizontal Control Tabs.
<b>J Sheets</b>	<b>Traffic Control and Staging Sheets</b>
J.1 - 2	Traffic Control Plan, 511 travel restrictions, Stg. Notes
* J.3	Side Road Detour Map
<b>L Sheets</b>	<b>Geometric, Staking and Jointing Sheets</b>
L.1 - 2	Geometric & Staking WB 30/Durham Ave
L.3 - 5	Edge Profiles WB 30/Durham Ave
L.6 - 7	Geometric & Staking EB 30/3rd Ave SW
L.8 - 10	Edge Profiles EB 30/3rd Ave SW
L.11 - 14	Jointing US 30 WB & EB
L.15	Jointing Durham Ave & 3rd Ave SW
<b>R Sheets</b>	<b>Erosion Control Sheets</b>
RC.1 - 3	Est. Quantities, PPP, General Notes and Tabulations
<b>T Sheets</b>	<b>Earthwork Quantity Sheets</b>
T.1	Earthwork Quantity Sheets
<b>U Sheets</b>	<b>500 Series, Mod.Stds. and Detail Sheets</b>
* U.1 - 4	Raised Island Details
<b>V Sheets</b>	<b>Bridge and Culvert Situation Plans</b>
V.1	Bridge and Culvert Situation Plans
<b>W Sheets</b>	<b>Mainline Cross Sections</b>
* W.1 - 12	Mainline Cross Sections
<b>X Sheets</b>	<b>Side Road Cross Sections</b>
* X.1 - 5	3rd Ave SW and Durham Ave. Cross Sections
	* Color Plan Sheets



R-20W

PROJECT LOCATION

Schedule:  
DM5: 02/02/2026  
D8: 03/03/2026



US 30 DESIGN DATA RURAL			
2024	AADT	7000	V.P.D.
2044	AADT	9717	V.P.D.
20	- DHV	-	V.P.H.
	TRUCKS	15.21	%
	Total		
	Design ESALs	4,016,535	

INDEX OF SEALS			
SHEET NO.	NAME	TYPE	BID QUANTITY SHEETS
A.1	Jeremy J. Vortherms	Primary Signature Block	C.1
V.1	Brian J. Birkland	Situation Plan	V.1

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

**PRELIMINARY PLANS**

Signature: *Jeremy J. Vortherms*  
Printed or Typed Name: **Jeremy J. Vortherms**

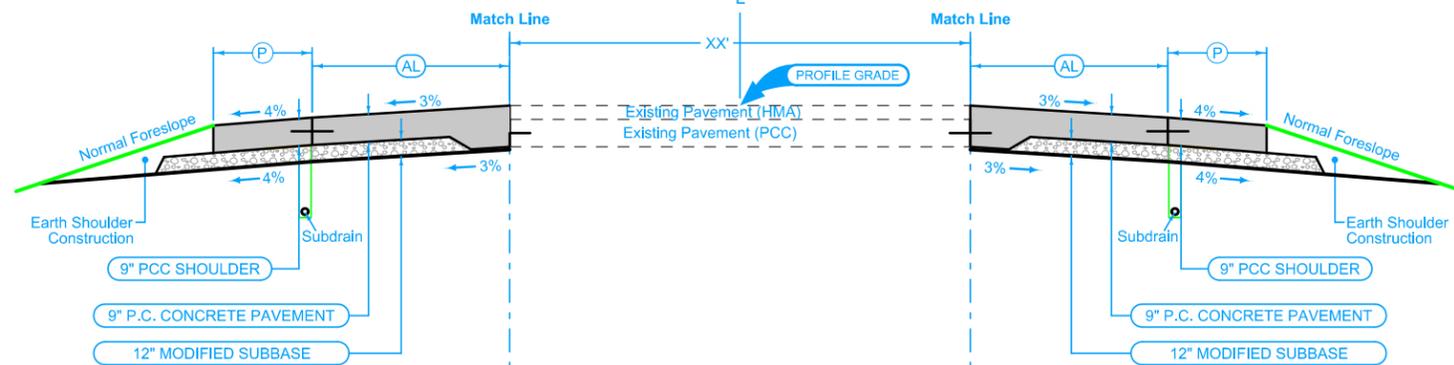
Date: \_\_\_\_\_

Subject to change by final design.

My license renewal date is December 31, 20\_\_26\_\_

Pages or sheets covered by this seal: \_\_\_\_\_

2E\_10-19-10



**Auxiliary Lane Full Depth Shoulder**

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

**Auxiliary Lane**

Longitudinal joint: L or BT  
 Transverse joint: Match Mainline

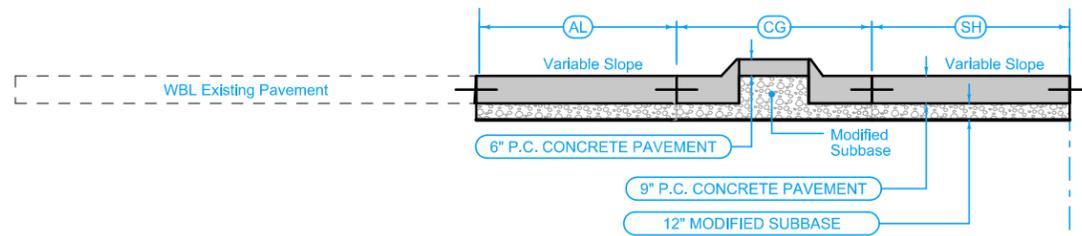
2_AL_Shldr_FullPCC_04-15-25		4_AuxLane_PCC_04-15-25			
(P) Feet	Direction of Travel	BEGIN STATION	END STATION	(AL) Feet	
4.0	EB	2854+44.00	2855+50.00	0	
4.0	EB	2855+50.00	2857+20.86	Vari	
4.0	EB	2857+20.86	2862+12.87	8.5	
4.0	EB	2862+12.87	2863+54.16	Vari	

**Auxiliary Lane Full Depth Shoulder**

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 Longitudinal joint: L-2  
 Transverse joints: C at 17' spacing

Longitudinal joint: L or BT  
 Transverse joint: Match Mainline

4_AuxLane_PCC_04-15-25		2_AL_Shldr_FullPCC_04-15-25		
Direction of Travel	BEGIN STATION	END STATION	(AL) Feet	(P) Feet
EB	2853+88.83	2855+31.46	Vari.	4.0
EB	2855+31.46	2856+53.98	12	4.0
EB	2856+53.98	2863+29.51	Vari.	4.0



Refer to U Sheets for Median and Paved Island Details

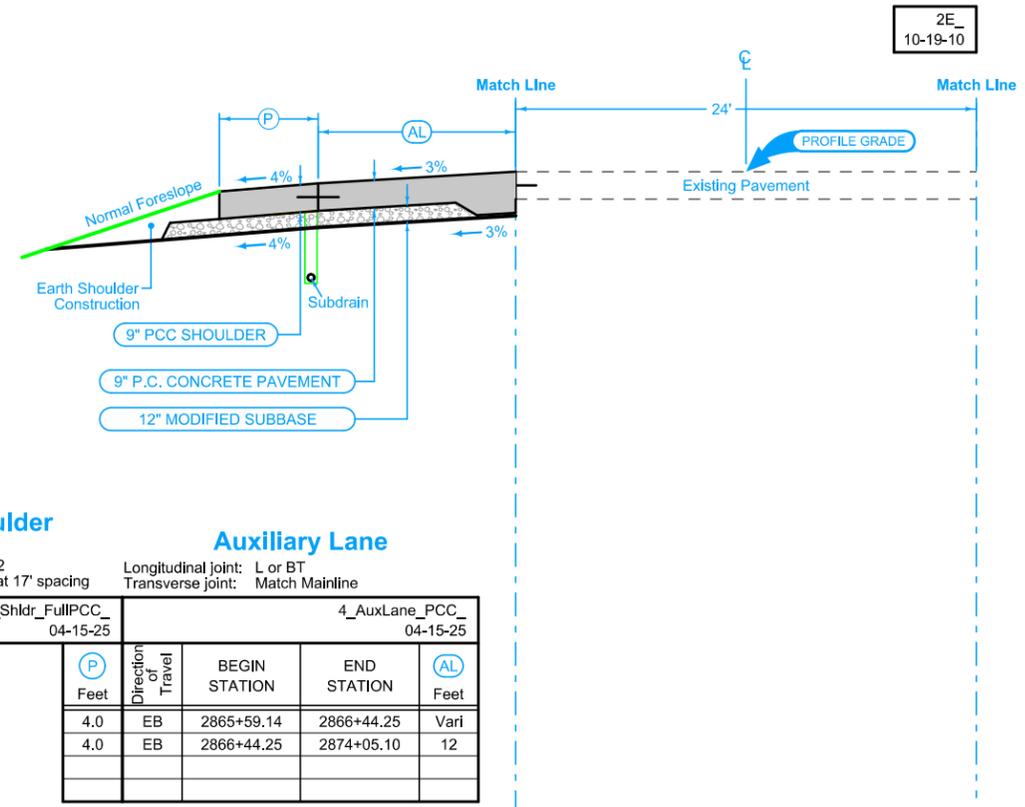
**Median Crossing**

Longitudinal joint: L or BT  
 Transverse joint: Match Mainline

4_AuxLane_PCC_MOD					
Direction of Travel	BEGIN STATION	END STATION	(AL) Feet	(CG) Feet	(SH) Feet
EB	2863+54.16	2865+64.30	Vari	Vari	Vari

US 30 - Eastbound

2E  
10-19-10



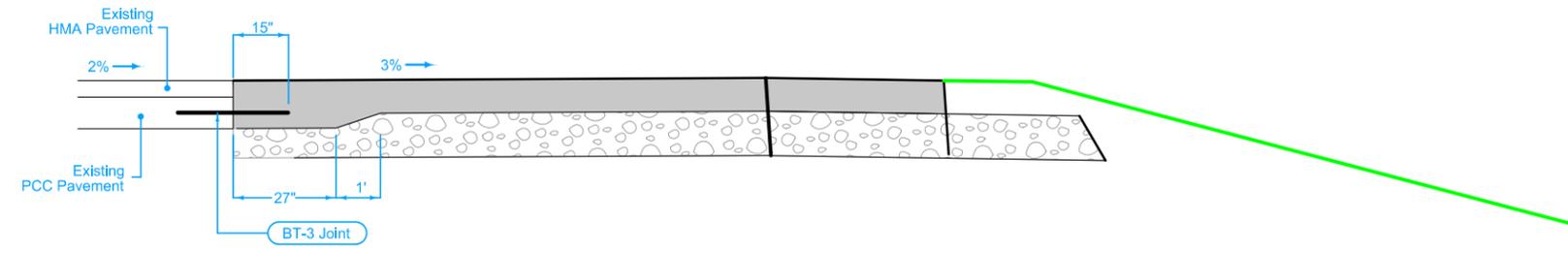
**Auxiliary Lane  
Full Depth Shoulder**

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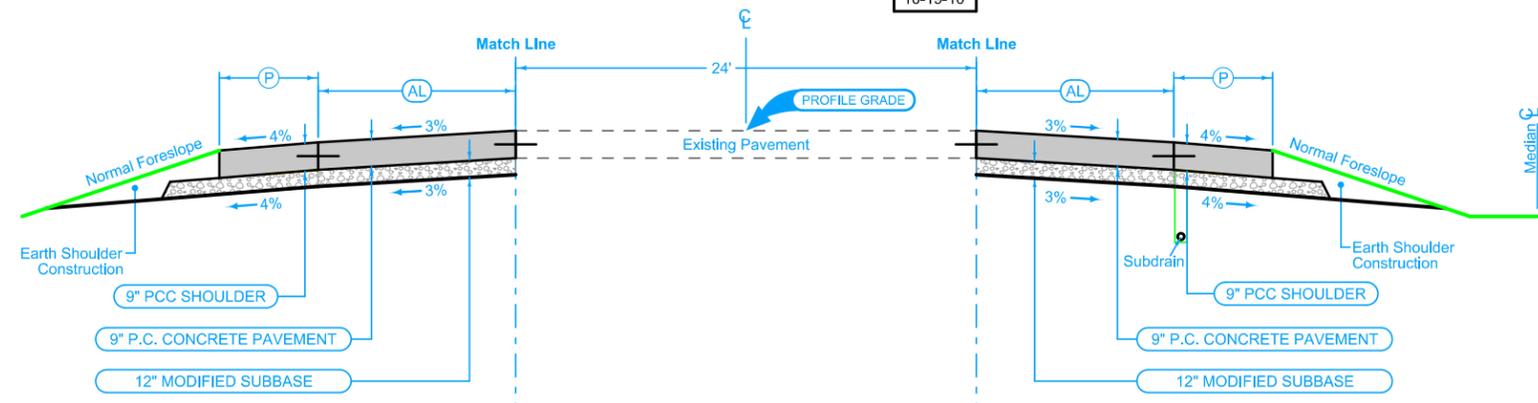
2_AL_Shldr_FullPCC_04-15-25		4_AuxLane_PCC_04-15-25		
Ⓟ Feet	Direction of Travel	BEGIN STATION	END STATION	Ⓜ Feet
4.0	EB	2865+59.14	2866+44.25	Vari
4.0	EB	2866+44.25	2874+05.10	12



**Thickened Edge  
Tie-In Detail**

**US 30 - Eastbound**

2E  
10-19-10



**Auxiliary Lane Full Depth Shoulder**

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

**Auxiliary Lane**

Longitudinal joint: L or BT  
Transverse joint: Match Mainline

2_AL_Shldr_FullPCC_04-15-25		4_AuxLane_PCC_04-15-25		
Feet	Direction of Travel	BEGIN STATION	END STATION	Feet
4.0	WB	2862+20.14	2862+95.00	12
4.0	WB	2865+50.89	2872+15.17	Vari.
4.0	WB	2872+15.17	2873+40.77	12
4.0	WB	2873+40.77	2874+83.30	Vari.

**Auxiliary Lane Full Depth Shoulder**

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

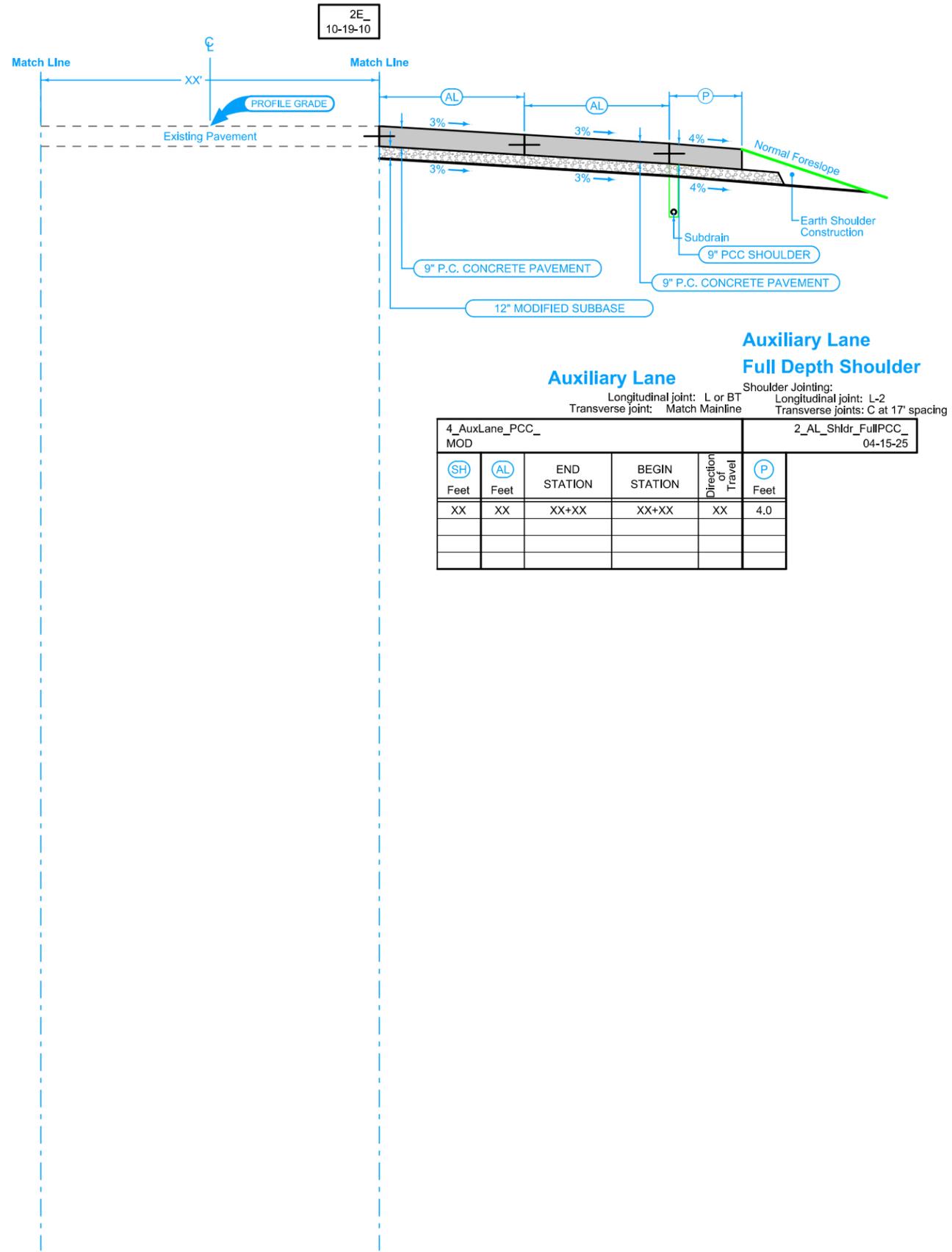
**Auxiliary Lane**

Longitudinal joint: L or BT  
Transverse joint: Match Mainline

4_AuxLane_PCC_04-15-25		2_AL_Shldr_FullPCC_04-15-25		
Direction of Travel	BEGIN STATION	END STATION	Feet	Feet
WB	2854+75.37	2862+58.80	12	4.0
WB	2863+54.13	2862+58.80	Vari.	4.0
WB	2865+59.14	2866+87.17	Vari.	4.0
WB	2866+87.17	2869+16.79	12	4.0
WB	2869+16.79	2870+62.72	Vari.	4.0

US 30 - Westbound

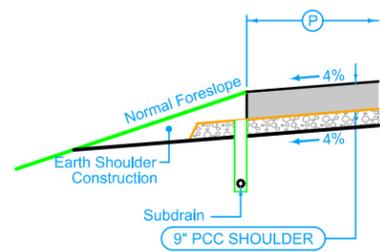
2E  
10-19-10



**Auxiliary Lane**  
**Auxiliary Lane**  
**Full Depth Shoulder**  
 Shoulder Jointing:  
 Longitudinal joint: L or BT  
 Transverse joint: Match Mainline  
 Longitudinal joint: L-2  
 Transverse joints: C at 17' spacing

4_AuxLane_PCC_ MOD					2_AL_Shldr_FullPCC_ 04-15-25	
(SH) Feet	(AL) Feet	END STATION	BEGIN STATION	Direction of Travel	(P) Feet	
XX	XX	XX+XX	XX+XX	XX	4.0	

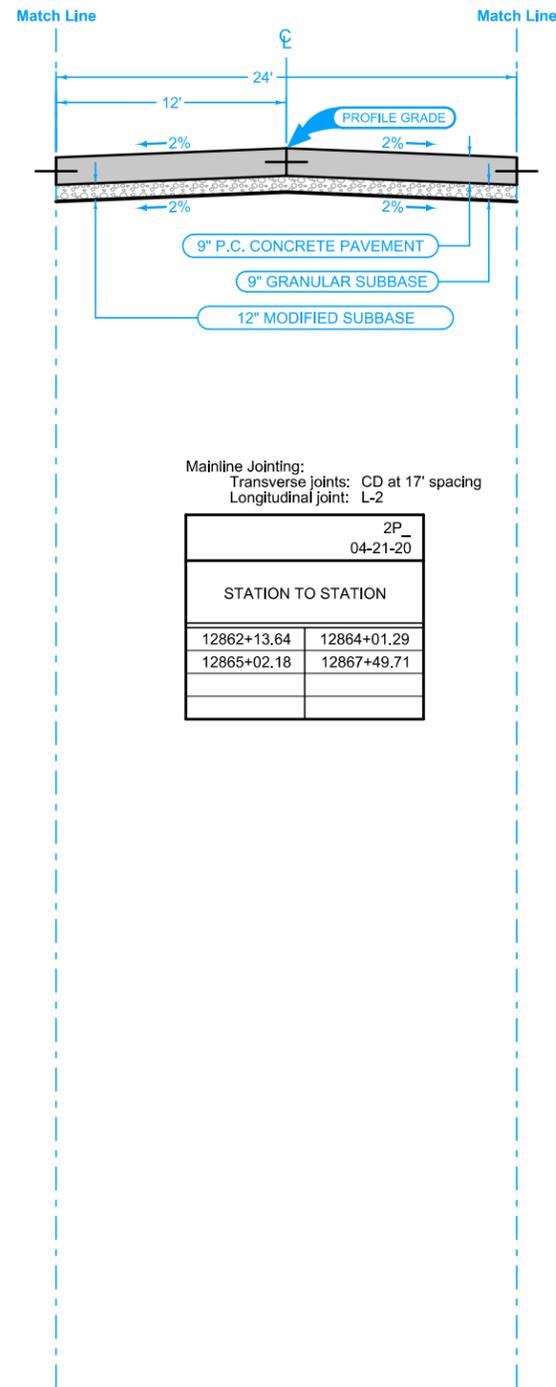
US 30 - Westbound



**Full Depth PCC Shoulder**

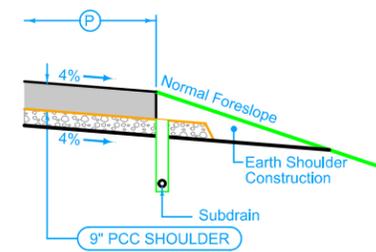
Shoulder Jointing:  
 Longitudinal joint: BT-2, or L-2  
 Transverse joints: C at 17' spacing

2_P_FullPCC_04-15-25		
STATION TO STATION		(P) Feet
12862+13.64	12864+01.29	4.0



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

2P_04-21-20	
STATION TO STATION	
12862+13.64	12864+01.29
12865+02.18	12867+49.71



**Full Depth PCC Shoulder**

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

2_P_FullPCC_04-15-25		
(P) Feet	STATION TO STATION	
4.0	XX+XX	XX+XX

Durham Ave./ 3rd Ave SW

# ESTIMATED PROJECT QUANTITIES AND REFERENCE NOTES

Roadway Items : Roadway Items

Item no.	Item Code	Item	Unit	Quantities		Estimate Reference Notes
				Estimated	Roadway Items	
1	2102-2625001	EMBANKMENT-IN-PLACE, CONTRACTOR FURNISHED	CY	772		Refer to Tab. 107-28 on T Sheets.
2	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	8,767		Refer to Tab. 107-28 on T Sheets.
3	2104-2710020	EXCAVATION, CLASS 10, CHANNEL	CY	677.9		Refer to Sheet V.1. Dispose of excess material according to Article 1106.07 of the current specifications.
4	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD	CY	4,001		Refer to Tab. 103-10 and the T Sheets and Tab. 103-4 on the C Sheets. Quantity will be computed on the basis of a uniform 8 inch cut, or the depth as specified in the contract documents over the area involved. Sufficient field measurements will be taken to assure reasonable conformity with the required depth of cut.
5	2115-0100000	MODIFIED SUBBASE	CY	3,756.1		Refer to Tab. 100-24 on C Sheets and B Sheet Typical.
6	2301-1083090	STANDARD OR SLIP FORM PORTLAND CEMENT CONCRETE PAVEMENT, CLASS M, CLASS 3 DURABILITY, 9 IN.	SY	11,268.3		
7	2301-4875006	MEDIAN, P.C. CONCRETE, 6 IN.	SY	860.9		Refer to Tab. 112-4 on C Sheets and U Sheets for details.
8	2416-0100024	APRONS, CONCRETE, 24 IN. DIA.	EACH	2		Refer to Tab. 104-3 on C Sheets.
9	2416-0100036	APRONS, CONCRETE, 36 IN. DIA.	EACH	1		Refer to Tab. 104-3 on C Sheets.
10	2416-0100042	APRONS, CONCRETE, 42 IN. DIA.	EACH	2		
11	2416-1180024	CULVERT, CONCRETE ROADWAY PIPE, 24 IN. DIA.	LF	36		
12	2416-1180036	CULVERT, CONCRETE ROADWAY PIPE, 36 IN. DIA.	LF	24		
13	2416-1180042	CULVERT, CONCRETE ROADWAY PIPE, 42 IN. DIA.	LF	18		
14	2507-3250005	ENGINEERING FABRIC	SY	1,008.4		Refer to Sheet V.1. Use material specified for embankment erosion control according to Article 4196.01, B, 3. Material will be measured in sq. yds. of actual area covered.

Item no.	Item Code	Item	Unit	Quantities		Estimate Reference Notes
				Estimated		
				Roadway Items		
15	2507-6800032	REVETMENT, CLASS C	TON	1,084.7		Class C revetment shall meet the requirements of Article 4130. Refer to details on Sheet V.1.
16	2510-6745850	REMOVAL OF PAVEMENT	SY	5,914.7		Refer to Tabs.110-1 and 102-5 on C Sheets.
17	2512-1725256	CURB AND GUTTER, P.C. CONCRETE, 2.5 FT.	LF	1,195		Refer to Tab. 112-4 on C Sheets.
18	2527-9263146	PAINTED SYMBOLS AND LEGENDS,	EACH	18		Refer to Tab. 108-29 on C Sheets.
19	2527-9263209	PAINTED PAVEMENT MARKINGS, WATERBORNE OR SOLVENT-BASED	STA	247.96		Refer to Tab. 108-22 on C Sheets.
20	2527-9270112	GROOVES CUT FOR PAVEMENT MARKINGS	STA	183.8		
21	2527-9270120	GROOVES CUT FOR SYMBOLS AND LEGENDS	EACH	18		Refer to Tab. 108-29 on C Sheets.
22	2528-8445110	TRAFFIC CONTROL	LS	1		Refer to Traffic Control Plan on J Sheets.
23	2533-4980005	MOBILIZATION	LS	1		--
24	2601-2636015	NATIVE GRASS SEEDING	ACRE	4.2		Seed all areas outside eight feet adjacent to outside shoulder along mainline, side roads, and infield areas at interchanges with "Native Grass Seeding".  Supply all seed for "Native Grass Seeding".  Apply all forb seed through the native grass drill wildflower or small seed box.  Do not mix and apply Forb seed with the native grass seed.  Apply cover crop through the cool season or through cover crop seed box.  Do not mix and apply cover crop seed with the native grass seed.  Remove seed remaining in the drill at the end of each day. At the completion of all seeding, remove remaining seed from the drill by vacuum or other means. Hand broadcast remaining seed on the project.  The Engineer will review the limits with the Contractor prior to seeding. Seeding and seed bed preparation shall be as described in the Standard Specifications Section 2601 and as shown on the plans.
25	2601-2636041	SEEDING AND FERTILIZING	ACRE	4.2		
26	2601-2636043	SEEDING AND FERTILIZING (RURAL)	ACRE	4.2		Seed and fertilize all areas 8 foot adjacent to the shoulder mainline, medians, and side according to Article 2601.03, C, 3, of the Standard Specifications.
27	2602-0000020	SILT FENCE	LF	4,815		Refer to Tab. 100-17 on C Sheets. The tabulation includes estimated locations for placement of "Silt Fence" to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 25% additional quantity for field adjustments and replacements.  See Standard Road Plan EC-201. The engineer may adjust silt fence locations to fit field conditions.

Item no.	Item Code	Item	Unit	Quantities		Estimate Reference Notes
				Estimated	Roadway Items	
28	2602-0000030	SILT FENCE FOR DITCH CHECKS	LF	1,222.5		<p>Refer to Tab 100-18 on C Sheets.</p> <p>The tabulation includes estimated locations for placement of "Silt Fence for Ditch Checks" to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 50% additional quantity for field adjustments and replacements.</p> <p>See Standard Road Plan EC-201.</p> <p>The engineer may adjust silt fence locations to fit field conditions.</p>
29	2602-0000071	REMOVAL OF SILT FENCE OR SILT FENCE FOR DITCH CHECKS	LF	3,018.8		<p>This item is included for silt fence and silt fence for ditch check removal required for staging reasons, removal to allow for replacement (replacement to be paid separately), or for areas that have achieved 70% permanent growth. This item is included for silt fence and silt fence for ditch check removal. Remove silt fence and posts after mulching or vegetation is established and approved by the engineer.</p>
30	2602-0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK	LF	603.8		<p>Refer to Tabs. 100-17 and 100-18 on C Sheets.</p> <p>This item is included for clean-out and repair of the silt fence and silt fence for ditch checks during the project.</p>

100-1D  
10-18-05

### PROJECT DESCRIPTION

Project involves Median modifications include modifying the median for left turns only from eastbound and westbound U.S. 30, adding turnarounds to the west and east for sideroad traffic to travel eastbound or westbound, adding an offset right turn lane from westbound to 3rd Avenue SW and adding an offset right turn lane eastbound to Durham Ave, curbs and islands, lighting, and sign installations.







PAVEMENT MARKING SYMBOLS AND LEGENDS

Refer to PM-111

Road Identification	Location		↑	↶	↷	↵	↶↷	↷↶	↑	↗	↘	⊗	♻️	♿	♿	SCHOOL	XING	STOP	AHEAD	ONLY	BIKE	LANE	EXIT	Groove Cuts	Remarks	
	Station	Side	STAW	RTAW	LTAW	CSRW	CSLW	CSTW	CRLW	FERW	LLRW	RLRW	RRCW	BLSW	WCSW	WPSB	SCLW	XNGW	STPW	AHDW	ONLW	BIKW	LANW	XITW		EACH
US 30 EB	2858+75.00	Rt		1																					1	
	2858+75.00	Med			1																				1	
	2859+75.00	Rt																			1				1	
	2859+75.00	Med																			1				1	
	2860+75.00	Rt		1																					1	
	2860+75.00	Med			1																				1	
	2869+00.00	Med			1																				1	
	2870+00.00	Med																			1				1	
	2871+00.00	Med			1																				1	
	US 30 WB	2858+00.00	Med			1																				1
2859+00.00		Med																			1				1	
2860+00.00		Med			1																				1	
2865+75.00		Med			1																				1	
2866+75.00		Med																			1				1	
2867+75.00		Med			1																				1	
2866+75.00		Lt		1																					1	
2867+75.00		Lt																			1				1	
2868+75.00	Lt		1																					1		
																							Grooves Cut	18		
																							Painted Symbols	18		

### STANDARDS

The following Standards apply to construction work on this project.

Number	Date	Title
BA-401	04-20-21	Temporary Barrier Rail (Precast Concrete)
BA-500	04-20-21	Temporary Crash Cushions Sand Barrel
DR-101	04-18-17	Pipe Culvert (Bedding and Backfill)
DR-102	04-21-15	Pipe Culvert (Cover and Camber)
DR-103	04-21-15	Pipe Culvert (Installation Details)
DR-121	04-18-23	Connected Pipe Joints
DR-201	10-17-23	Concrete Aprons
DR-613	04-17-18	Concrete Pipewith 'D' Section
DR-621	04-18-17	Pipe Extension
EC-201	04-20-21	Silt Fence
EC-204	10-19-21	Perimeter, Slope and Ditch Check Sediment Control Devices
PM-110	10-15-24	Line Types
PM-111	04-21-20	Symbols and Legends
PM-115	04-15-25	Grooving for Line Types
PM-116	04-16-24	Grooving for Symbols and Legends
PM-120	10-15-24	Stop Lines and Islands
PV-20	10-21-14	Paved Islands
PV-101	10-21-25	Joints
PV-102	10-21-25	PCC Curb Details
TC-202	04-18-23	Work Within 15 ft of Traveled Way
TC-402	04-18-23	Work Within 15 ft of Traveled Way
TC-418	04-18-23	Lane Closure on Divided Highway
TC-421	10-21-25	Lane Closure with TBR
TC-433	10-17-17	Pavement Marking Operations

### SURVEY SYMBOLS

	AST, Above Ground Storage Tank		PR, Electric Riser Pole
	BB, Billboard		PRO, Profile Shot
	BBB, Bottom of Bridge Beam		PT, Curve Point
	BCL, Bridge Centerline		REF, Reference Tie Point
	BD, Bridge Deck		RET, Retaining Walls
	BIN, Grain Bin		RIP, Rip-Rap
	BL, Topo Breakline		ROC, Rock Outcropping
	BLD, Building or Foundation		ROW, Right of Way Mark
	BLS, Bridge Low Steel		RR, Centerline of Railroad Tracks
	BM, Bench Mark		RRB, Railroad Signal Box
	BNK, Stream Bank		RRF, Railroad Frog
	BRG, Bridge		RRR, Railroad Rail
	C, Centerline BL of Road -ML or SR		RRS, Railroad Signal
	CAV, Cave		RRW, Railroad Switch
	CEL, Cell Phone Tower		RT, Radio Tower
	CIS, Cistern		S, Soil Sampling Site -Wetlands
	CON, Concrete or A/C Slab		SBR, Size of Bridge
	CP, Control Point		SC, Spiral Point
	CRP, Corporation Line		SCR, Section Corner
	CS, Curve Point		SEP, Septic Tank
	CU, Back of Curb		SF, Silt Fence -Wetlands
	CUL, Culvert		SG, Staff Gauge -Wetlands
	D, Centerline Draw or Stream -Down		SH, Paved Shoulder
	DAB, Drainage Area Boundary		SHR, Shrub
	DIK, Centerline of Dike or Dam		SI, Sign
	DTM, Photogrammetry Elevation Control Check		SL, Speed Limit Sign
	DU, Centerline Draw or Stream -Up		SLN, Section Line
	EB, Electrical Box		SLO, Silo
	EG, Edge of Gravel Road		SNK, Sink Hole
	ENP, Edge Paved Entrance and Park Lot		SNP, Unpaved Shoulder
	ENT, Centerline BL of Entrance		SP, Stream Profile
	ENU, Edge Unpaved Entrance and Parking		STP, Stump
	EP, Edge of Paved Roads -ML or SR		SWK, Sidewalk
	EW, Edge of Water		SWP, Swamp or Marsh
	FCL, Chain Link and Security Fence		TA, Tower Anchor
	FENO, FENO Monument		TBO, Telephone Booth
	FHD, Fire Hydrants		TCB, Traffic Signal Box
	FLG, Flag Poles		TDC, Tree Deciduous
	FP, Filler Pipe		TD, Traffic Detection Loop
	FW, Wire Fence		TER, Terrace
	FWD, Wood Fence		TEV, Evergreen Tree
	GDC, Guard Rail Cable		TFR, Tree Fruit
	GDL, Guard Rail Steel		TGP, Telegraph Pole
	GP, Guard Post -Less Than 4 Posts		TIL, Tile Line
	GPR, Guard Post -4 or More Posts		TLNL, Tree Line Left
	GR, Ground Shot		TLNR, Tree Line Right
	GRV, Grave		TOP, Top of Bridge Pier
	GU, Gutter In Front of Curb		TPA, Telephone Pole Co. 1
	GV, Gas Valve		TPB, Telephone Pole Co. 2
	HDG, Hedge Row		TPC, Telephone Pole Co. 3
	HS, Hydric Soil -Wetlands		TR, Telephone Riser Pole
	HT, Electrical Highline Tower		TRL, Trail
	IN, Storm Sewer Intake		TS, Spiral Point
	INB, Storm Sewer Beehive Intake		TSB, Telephone Switch Box
	LC, Lot Corner		TSG, Traffic Signal
	LIN, Miscellaneous Line		TSL, Traffic Signal and Luminare
	LP, L.P. Tank		TV, Satellite TV Dish
	LUM, Luminaire		TVP, TV Pedestal
	MH, Utility Access -Manhole		TW, Top of Water
	MIS, Miscellaneous		UB, Utility Box
	MM, Mile Marker Post		UE, Utility Elevation
	OUT, Tile Outlet		UPH, Utility Pot Hole - Quality A
	PC, Curve Point		UST, Underground Tank
	PCP, Photo Control Point		UV, Underground Utility Vault
	PCT, Photo Control Target		VS, Channel Cross Section
	PI, Tangent Point		WC, Wild Card -Misc. Field Shot
	PIP, Pipe Culvert		WEL, Well
	PL, Location of Photo -Wetlands		WHD, Water Hydrant
	PLG, Location of General Photo		WHU, RV Water Hook Up
	POC, Curve Point		WM, Wind Mill
	POST, Spiral Point		WND, Wind Turbine
			WV, Water Valve

### UTILITY LEGEND

	GL1D, Alliant Energy - Quality D
	PPA, City of State Center
	EL1D, City of State Center - Quality D
	SA1D, City of State Center- Quality D
	EL2D, Iowa DOT - Quality D
	WL1D, Iowa Regional Utility Association - Quality D
	FO1D, Partner Communications - Quality D

### PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK		Design Color No.	
Green	(2)		Existing Topographic Features and Labels
Blue	(1)		Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)		Existing Utilities
SHADING		Design Color No.	Transparency
Pink, Dark	(13)		Temporary Pavement Shading 50%
Yellow	(4)		Proposed Pavement Shading 50%
Orange	(6)		Proposed Granular Shading 50%
Orange	(70)		Proposed Shoulder Granular Shading 50%
Yellow	(68)		Proposed Shoulder Paved Full Depth Shading 50%
Yellow	(132)		Proposed Shoulder Paved Partial Depth Shading 50%
Brown, Light	(236)		Grading Shading 50%
Orange, Light	(134)		Proposed Granular Entrance Shading 50%
Yellow	(220)		Proposed Paved Entrance Shading 50%
Tan	(8)		Proposed Sidewalk Shading 50%
Blue, Light	(230)		Proposed Sidewalk Landing Shading 50%
Pink	(11)		Proposed Sidewalk Ramp Shading 50%
Red	(3)		Proposed Structure Shading 50%
Red	(3)		Delineates Restricted Areas 0%

### PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

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

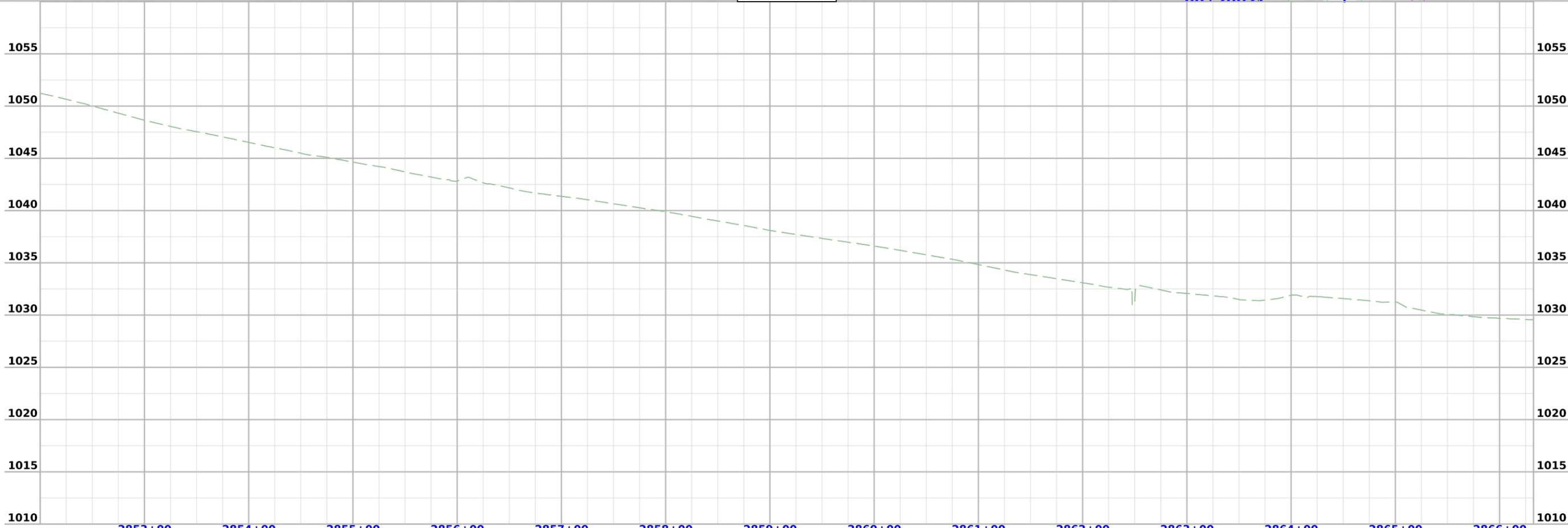
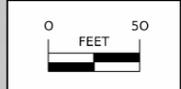
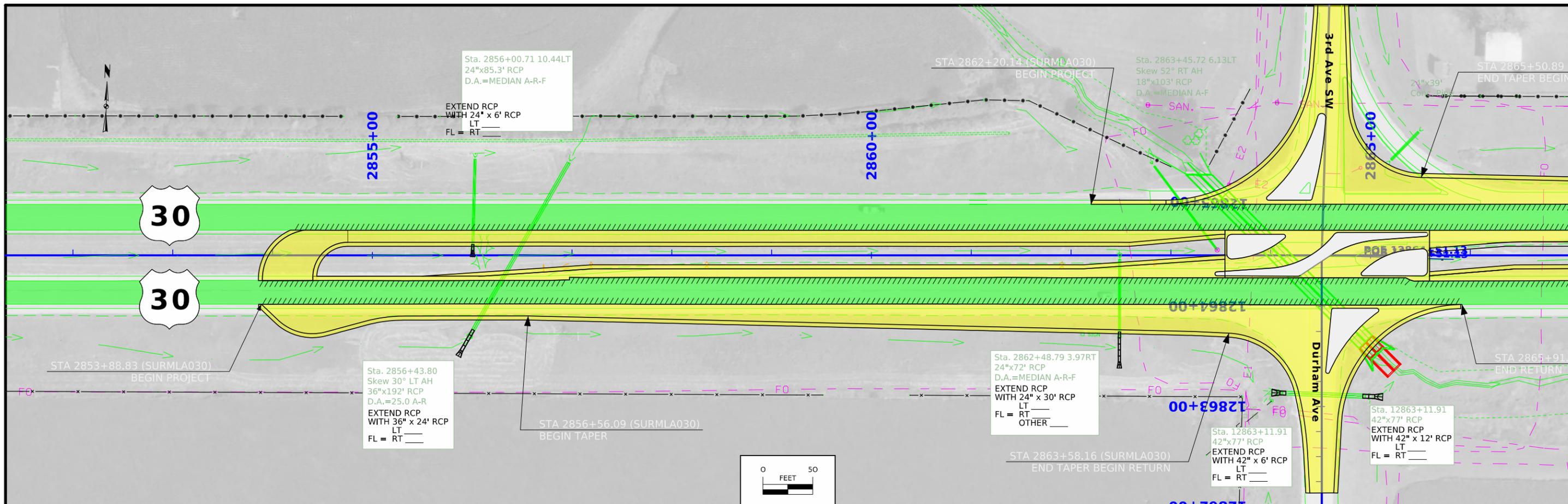
Reference Point	
	Station
	Section Corner
	Ground Line Intercept
	Saw Cut
	Guardrail
	Trench Drain
	HighTension Cable Guardrail
	Sheet Pile
	Pavement Removal
	Clearing & Grubbing Area

### RIGHT-OF-WAY LEGEND

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

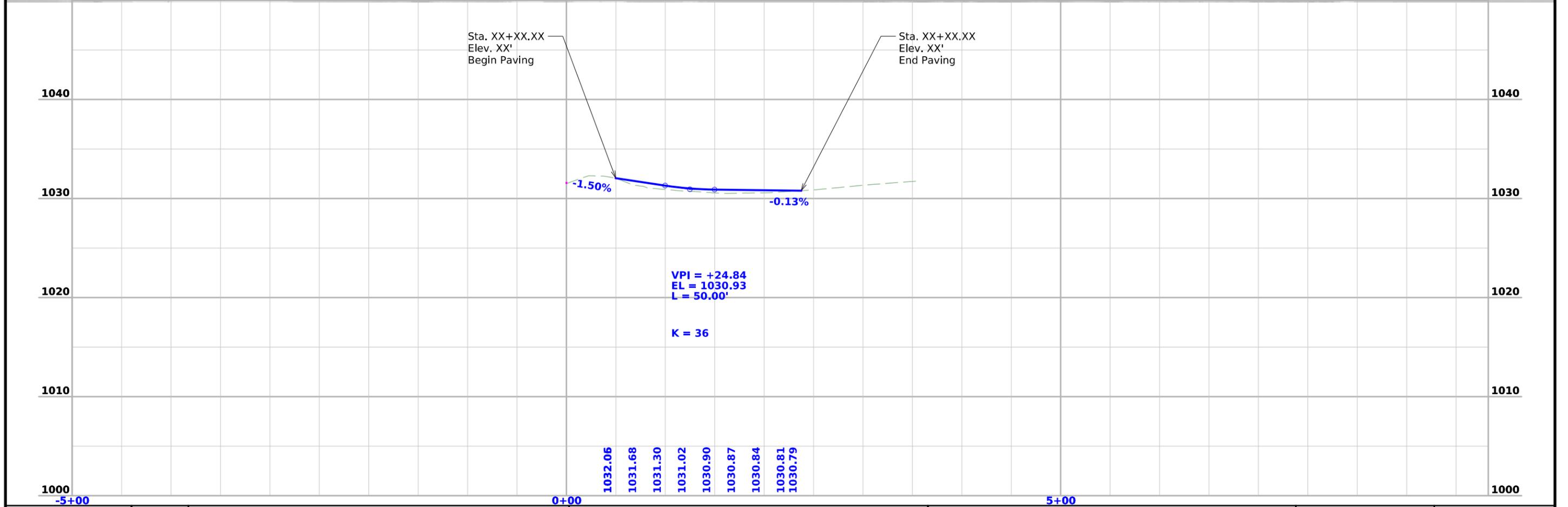
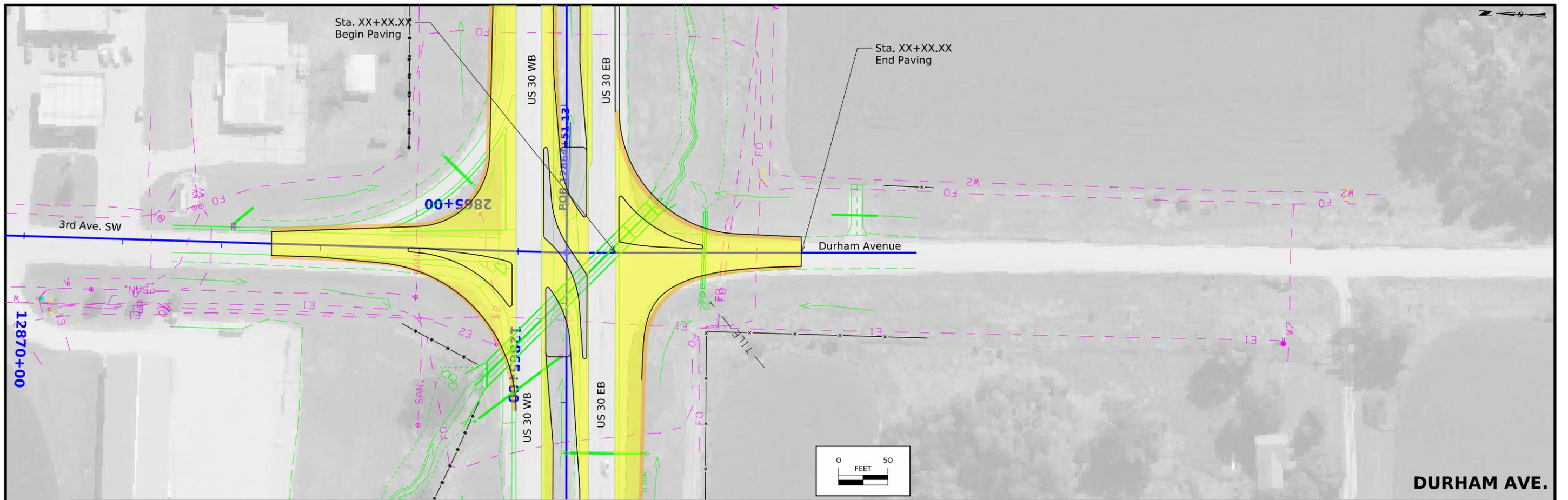
## PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

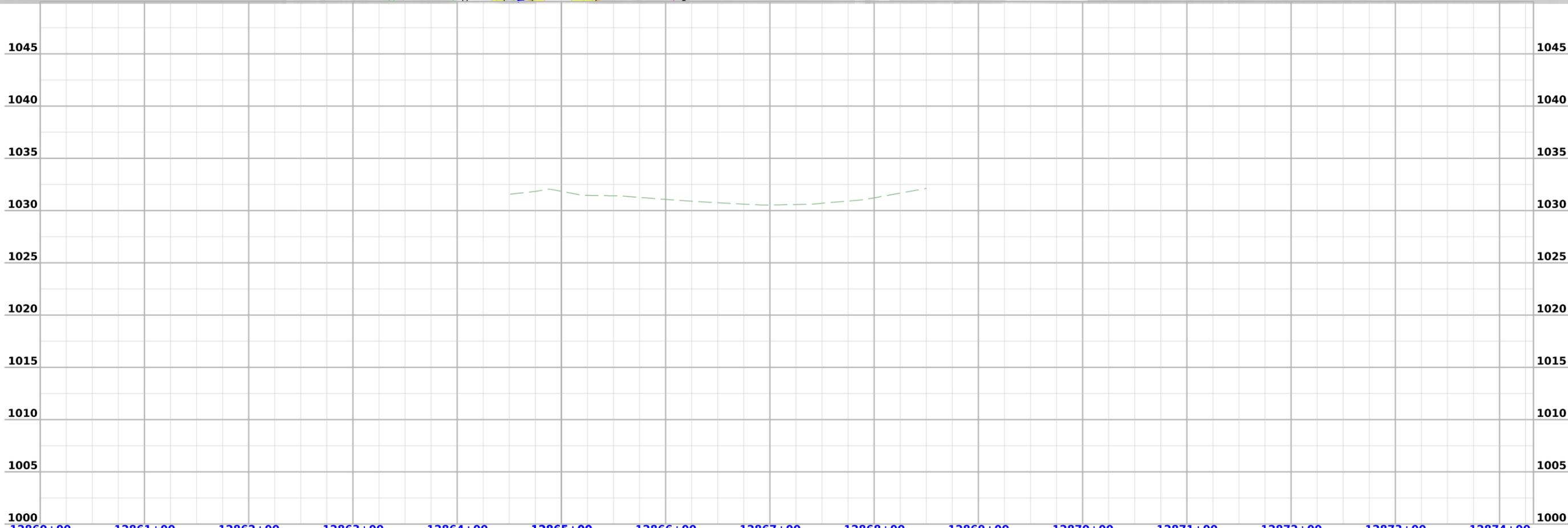
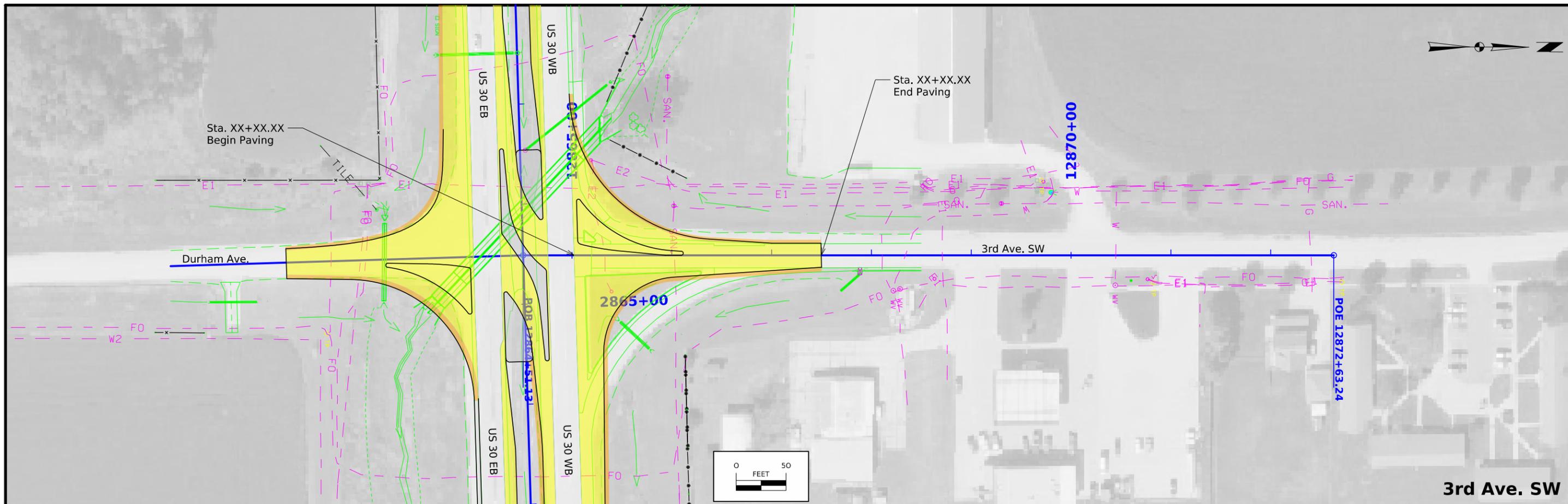
(COVERS SHEET SERIES D, E, F, & K)



FILE NO.	ENGLISH	DESIGN TEAM	Vortherms/Tamrakar/Ringgenberg	MARSHALL COUNTY	PROJECT NUMBER	HSIPX-030-5(328)--3L-64	SHEET NUMBER	D.2
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FILE NO.	ENGLISH	DESIGN TEAM	Vortherms/Tamrakar/Ringgenberg	MARSHALL COUNTY	PROJECT NUMBER	HSIPX-030-5(328)--3L-64	SHEET NUMBER	E.2
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Survey Information

**SURVEY INDEX**

**County: Marshall**

**PIN: 25-64-030-020**

**Project Number: HSIPX-030-5(328)—3L-64**

**Location: US Highway 30 and Durham Ave Intersection at State Center**

**Type of Work: Intersection Improvements**

**Project Directory: 6403002025**

**Survey Personnel**

Daniel Duncan – Survey Party Chief  
Paul Harry – Survey Party Chief  
Bob Fredrickson– Assistant Survey Party Chief

**Date(s) of Survey**

Begin Date 02/05/2025  
End Date 03/18/2025

**General Information**

This survey is for US Hwy 30 intersection(s) improvement at the Durham Ave intersection in State Center. This project is a Full Field DTM survey.

**Utility Information**

For logging data and other utility details see Utility Survey and Ownership Report in the Utility folder of the PrelimSurvey project directory.

**Project Control**

The Iowa Real Time Network reference stations were utilized to verify the published coordinates for the Survey Project Primary Control points. Three five-minute observations were taken with a minimum of two-hour time span between and used in a weighted average to verify the published coordinates. Once all control points were verified the published coordinates for GSVS122 were held and was occupied with the base for three -five minute base-rover observations with a minimum of two-hour time span between rounds and used a weighted average to obtain final coordinate values of the other control points (GSVS121, GSVS123, G029, CP1, CP2). For additional details of the control survey, contact the Preliminary Survey department.

**PROJECT DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 ADJUSTMENT)**  
**COORDINATE SYSTEM: IOWA REGIONAL COORDINATE SYSTEM ZONE 09**  
**(U.S. SURVEY FOOT)**  
**VERTICAL DATUM: NAVD88**  
**GEOID MODEL: 2018u3**

**Alignment Information**

The horizontal alignment for U.S. Hwy 30 this survey is a retrace of As-built Plans No. NHSX-30-5(211)—35-85 and NHSX-30-5(214)—3H-64. Survey stationing was equated to the plan PC at Sta. 2837+11.63 and carried back and ahead without equation throughout the survey.

Survey stationing relates to as built plan stationing as follows:

POT Sta. 2760+43.61 As-built Plans Project No. NHSX-30-5(211)—35-85  
Survey POT Sta. 2760+43.79

PC Sta. 2837+11.63.1 As-built Plans Project No. NHSX-30-5(211)—35-85  
Survey PC Sta. 2837+11.63

PI Sta. 2840+24.48 As-built Plans Project No. NHSX-30-5(211)—35-85  
Survey PI Sta. 2840+24.65

PI Sta. 2880+51.77 As-built Plans Project No. NHSX-30-5(211)—35-85  
Survey PI Sta. 2880+51.83

PI Sta. 2903+72.85 As-built Plans Project No. NHSX-30-5(214)—3H-64  
Survey PI Sta. 2903+72.94

The horizontal alignment for Marshall Co. Rte. 3<sup>rd</sup> Ave SW (Durham Ave) this survey is a retrace of As-built Plans No. NHSX-30-5(211)—35-85. Survey stationing was equated to the plan PI at Sta. POT 22890+74.43 and carried ahead without equation throughout the survey.

Survey stationing relates to as built plan stationing as follows:

POT Sta. 12864+51.13 As-built Plans Project No. NHSX-30-5(211)—35-85  
Survey POT 12864+51.13

The horizontal alignment for Marshall Co. Rte. 6<sup>th</sup> Ave SE (Eastman Ave) this survey is a retrace of As-built Plans No. F-1055(3). Survey stationing was equated to the plan PI at Sta. POT 22890+74.43 and carried ahead without equation throughout the survey.

Survey stationing relates to as built plan stationing as follows:

POT Sta. 22890+74.43 As-built Plans Project No. NHSX-30-5(211)—35-85  
Survey POT 22890+74.43

### CONTROL POINT VICINITY MAP

This map is a guide to the vicinity of the primary project control points. Primary control is for use with RTK base stations and for RTN validation. Future surveys will use primary project control to establish temporary control as needed for construction or other surveying applications.



HORIZ. DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 Adjustment) - Iowa RCS Zone 09 (U.S. Survey Foot)

VERT. DATUM: NAVD88 - Geoid Model: 2018u3

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

HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING  
 HORIZ. DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 Adjustment)  
 Ia. Regional Coordinate System Zone 09 (U.S. Survey Foot)  
 VERT. DATUM: NAVD88  
 Geoid Model: 2018u3

Point Name	Northing	Easting	Elevation	Code-Description
GSVS122	7840560.79	19407825.00	1045.10	CP FOUND NGS MONUMENT AS DESCRIBED
GSVS121	7840656.88	19402331.77	1069.19	CP FOUND NGS MONUMENT AS DESCRIBED
CP1	7839536.31	19405253.59	1041.46	CP SET FENO MONUMENT 2IN DEEP
G029	7840515.75	19410946.23	1060.40	CP FOUND FENO MONUMENT AS DESCRIBED
GSVS123	7840543.71	19413104.06	1059.46	CP FOUND NGS MONUMENT AS DESCRIBED
CP2	7841241.61	19405301.78	1037.52	CP SET FENO MONUMENT 2IN DEEP

**ALIGNMENT COORDINATES**

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
1	SURMLA030	276043.788 R1	7840680.37	19394872.95															
2	SURMLA030																		
4	SURMLA030						2837+11.63	7840557.29	19402539.81	284024.653 R1	7840552.26	19402852.79	284337.551 R1	7840562.63	19403165.64				
6	SURMLA030						2877+47.04	7840675.48	19406573.26	288051.831 R1	7840685.57	19406877.89	288356.512 R1	7840681.62	19407182.65				
7	SURMLA030	293904.128 R1	7840651.83	19412730.10			2900+72.94	7840659.32	19408898.93	290372.942 R1	7840655.43	19409198.91	290672.939 R1	7840655.12	19409498.91				
1	SURSR3RDAVESW	1286451.130 R1	7840632.59	19405278.06															
1	SURSR3RDAVESW	1287263.239 R1	7841444.69	19405275.95															

**SPIRAL OR CIRCULAR CURVE DATA**

Name	Location	ΔSCS	Horizontal Alignment Data												Remarks										
			Spiral Data						Curve Data																
			OS	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	ΔC	T	L	R		E									
C1	SURMLA030																								
C2	SURMLA030																								
C3	SURMLA030																								

108-23A  
08-01-08

### TRAFFIC CONTROL PLAN

Traffic shall be maintained at all times on US with the following exceptions:

- Close inside US 30 Eastbound and Westbound lane for construction of proposed Left turn lanes and Median.
- Close outside US 30 Eastbound and Westbound lane for construction of proposed turn lanes. Refer to Modified TC-418 for lane closure on divided highway.

During construction Durham Ave and 3rd Ave SW will have to be closed and traffic will be redirected along the designated detour route.

108-25  
10-21-14

### 511 TRAVEL RESTRICTIONS

Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
Durham Ave.	NB	Marshall	Durham Ave will be closed during construction	US 30	Traffic Control Device		Horizontal					
3rd Ave SW	SB	Marshall	3rd Ave SW will be closed during construction	US 30	Traffic Control Device		Horizontal					

### STAGING NOTES

\*\*\*\*\* Stage 1 \*\*\*\*\*

- Traffic:
- Maintain traffic on existing outside lanes on US 30.
  - Close Durham Ave. and 3rd Ave. SW.

- Construction:
- Construct the median turn lane and the R-cut turnaround.

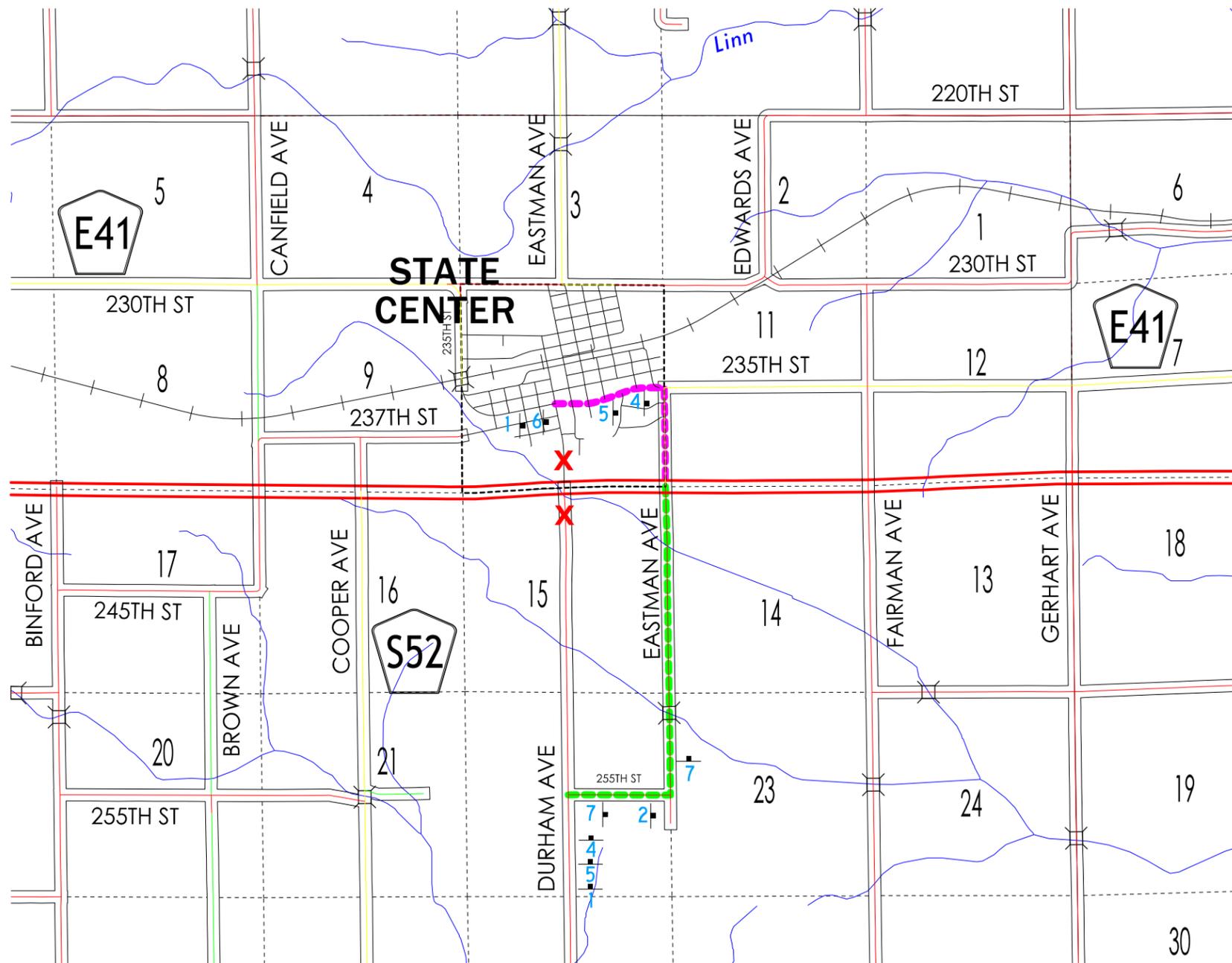
\*\*\*\*\* Stage 2 \*\*\*\*\*

- Traffic:
- Maintain traffic on existing inside lanes on US 30.
  - Close Durham Ave. and 3rd Ave. SW.

- Construction:
- Construct the right-turn lanes and the intersection connection to the side roads

\*\*\*\*\* Stage 3 \*\*\*\*\*

- Traffic:
- All lanes on US 30 will be open to traffic.
  - Durham Ave. and 3rd Ave. SW. will be open to traffic.



1 2 3 4 5 6

DETOUR AHEAD 1500 FEET

DETOUR 30 (Left)

DETOUR 30 (Left Turn)

DETOUR 30 (Right)

DETOUR 30 (Right Turn)

DETOUR 30 (Up)

7

DETOUR 30

LEGEND	
DETOUR ROUTE FOR DURHAM AVENUE	
DETOUR ROUTE FOR 3RD AVE, SW	
Closed	

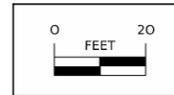
Point Radius  
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 =STA: -0+00.00 Lt.-50.00ft (CUR20010)

STA 2853+88.83 (SURMLA030)  
 BEGIN EB LOON & RIGHT TURN LANE

$\Delta = 58^\circ 22' 16.12''$  (LT)  
 T = 27.93'  
 L = 50.94'  
 R = 50.00'  
 E = 7.27'

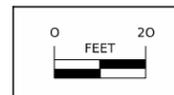
$\Delta = 14^\circ 51' 35.10''$  (RT)  
 T = 19.56'  
 L = 38.90'  
 R = 150.00'  
 E = 1.27'

Point Radius  
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 =STA: 0+38.90 Rt.150.00ft (CUR20011)

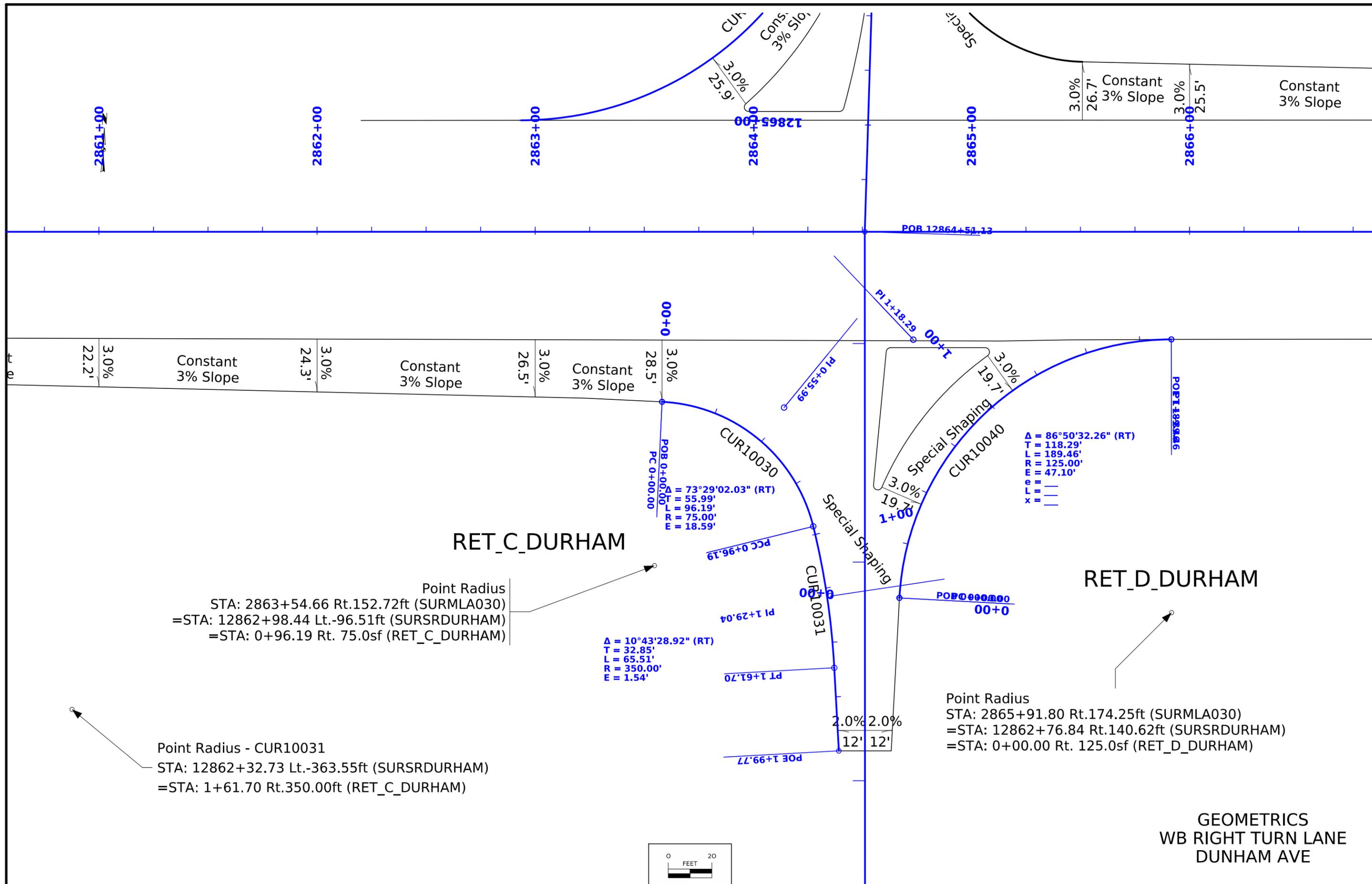


GEOMETRICS  
 WB RIGHT TURN LANE  
 DUNHAM AVE

Constant 3% Slope	15'	3.0%	Constant 3% Slope	17.4'	3.0%	Constant 3% Slope	19.9'	3.0%	Constant 3% Slope	22.2'	3.0%	Constant 3% Slope	24.3'	3.0%	Constant 3% Slope	26.5'
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GEOMETRICS  
 WB RIGHT TURN LANE  
 DUNHAM AVE

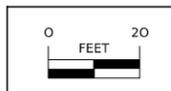


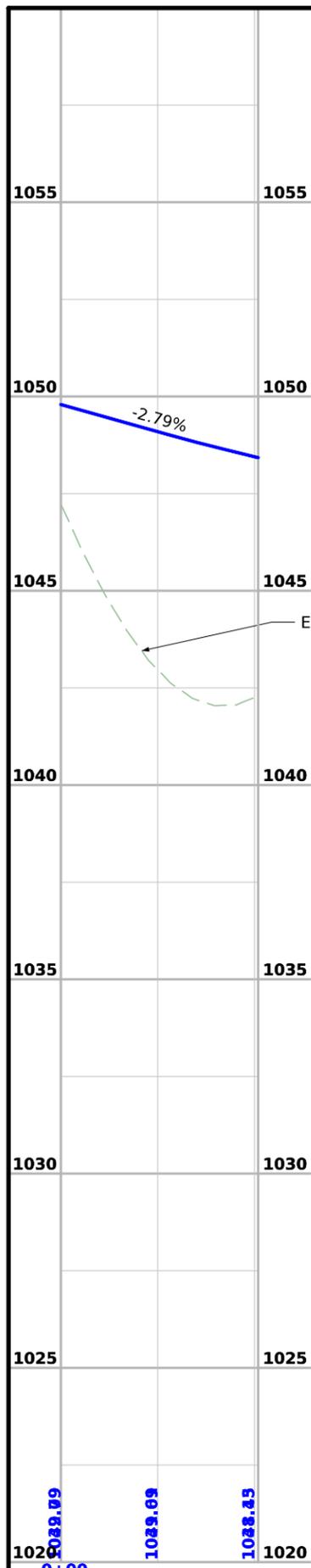
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 =STA: 12862+98.44 Lt. -96.51ft (SURSRDURHAM)  
 =STA: 0+96.19 Rt. 75.0sf (RET\_C\_DURHAM)

Point Radius - CUR10031  
 STA: 12862+32.73 Lt. -363.55ft (SURSRDURHAM)  
 =STA: 1+61.70 Rt. 350.00ft (RET\_C\_DURHAM)

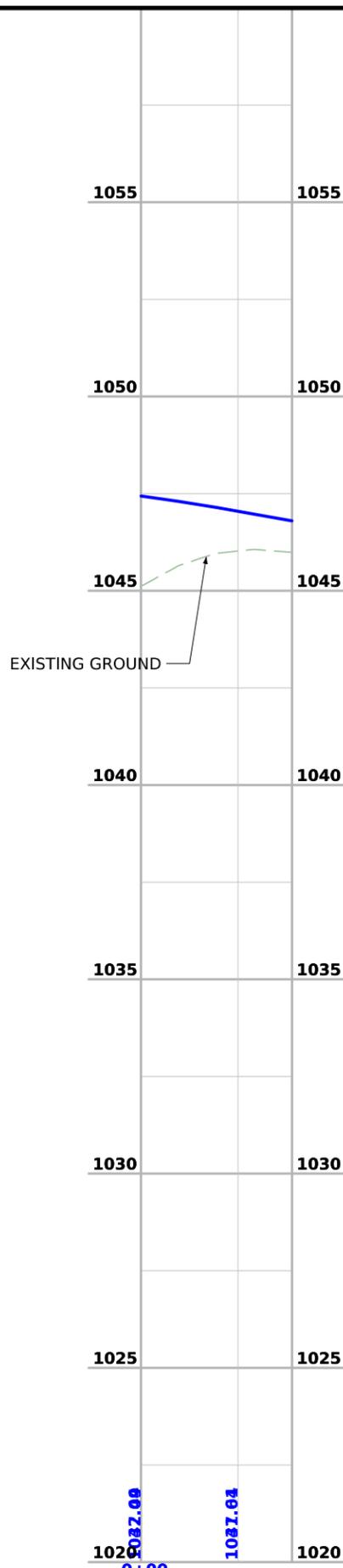
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GEOMETRICS  
 WB RIGHT TURN LANE  
 DUNHAM AVE

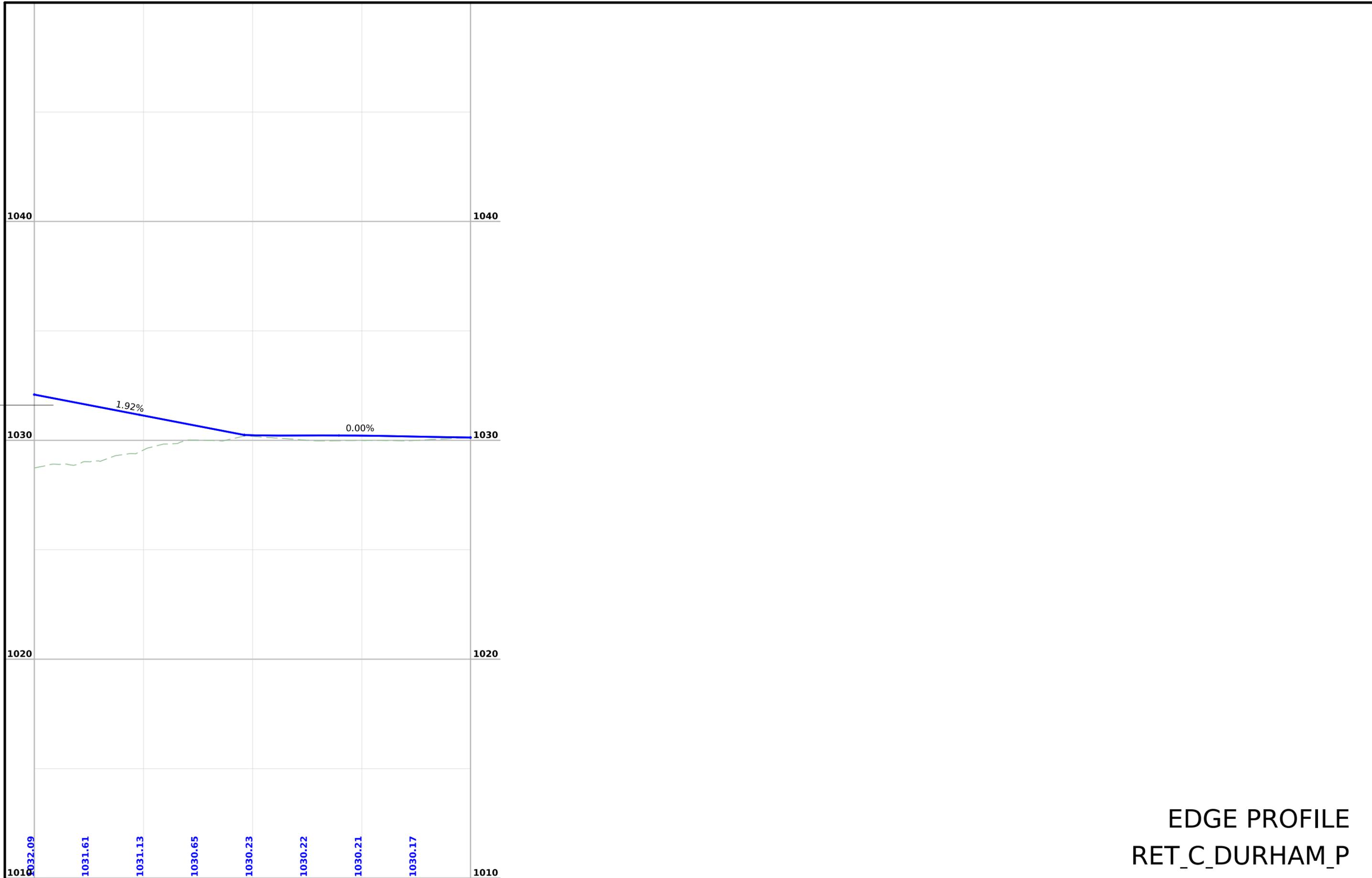




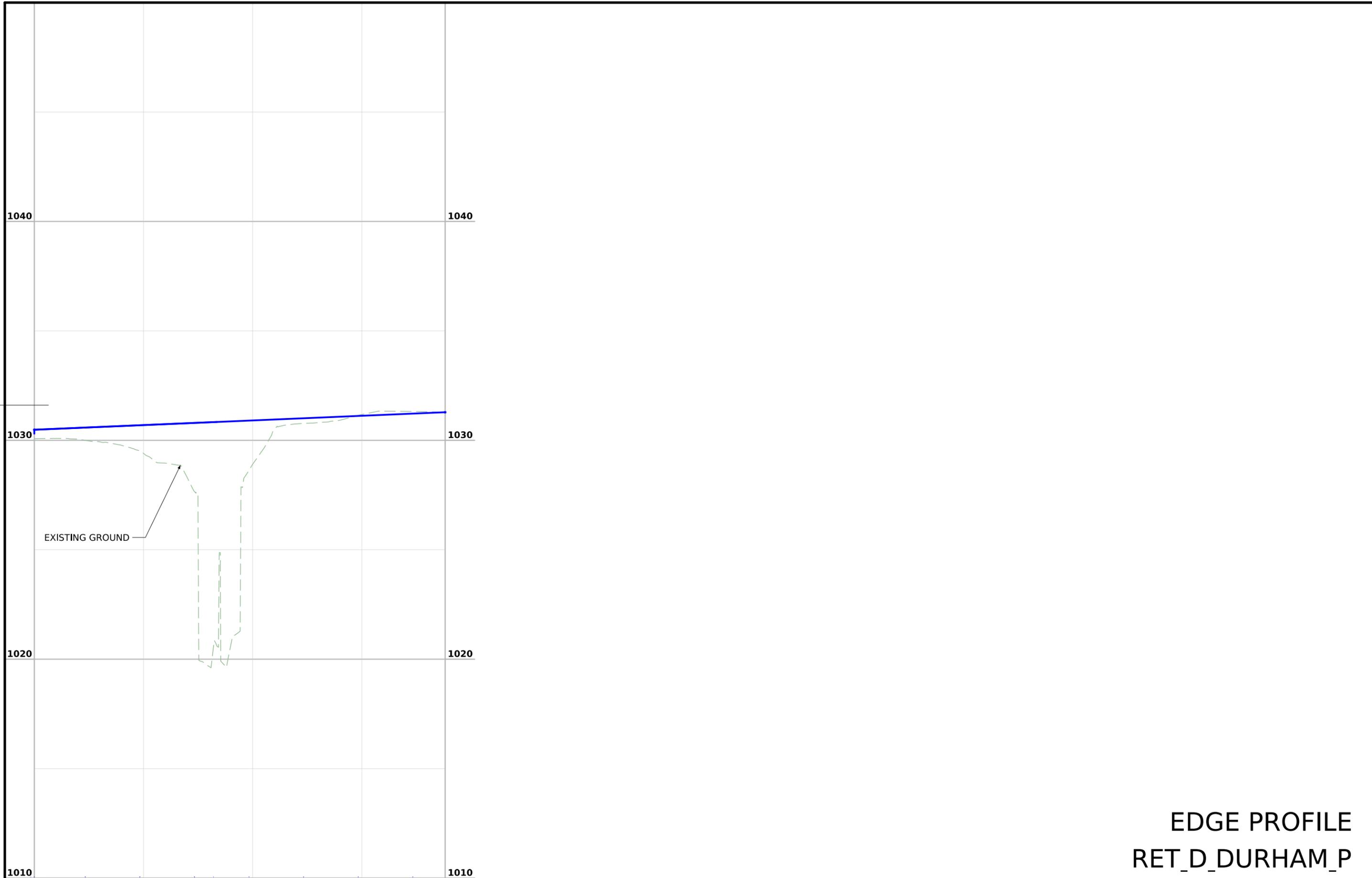
EDGE PROFILE  
EB LOON  
CUR20010



EDGE PROFILE  
EB LOON  
CUR20011



EDGE PROFILE  
RET\_C\_DURHAM\_P



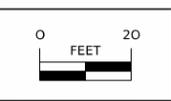
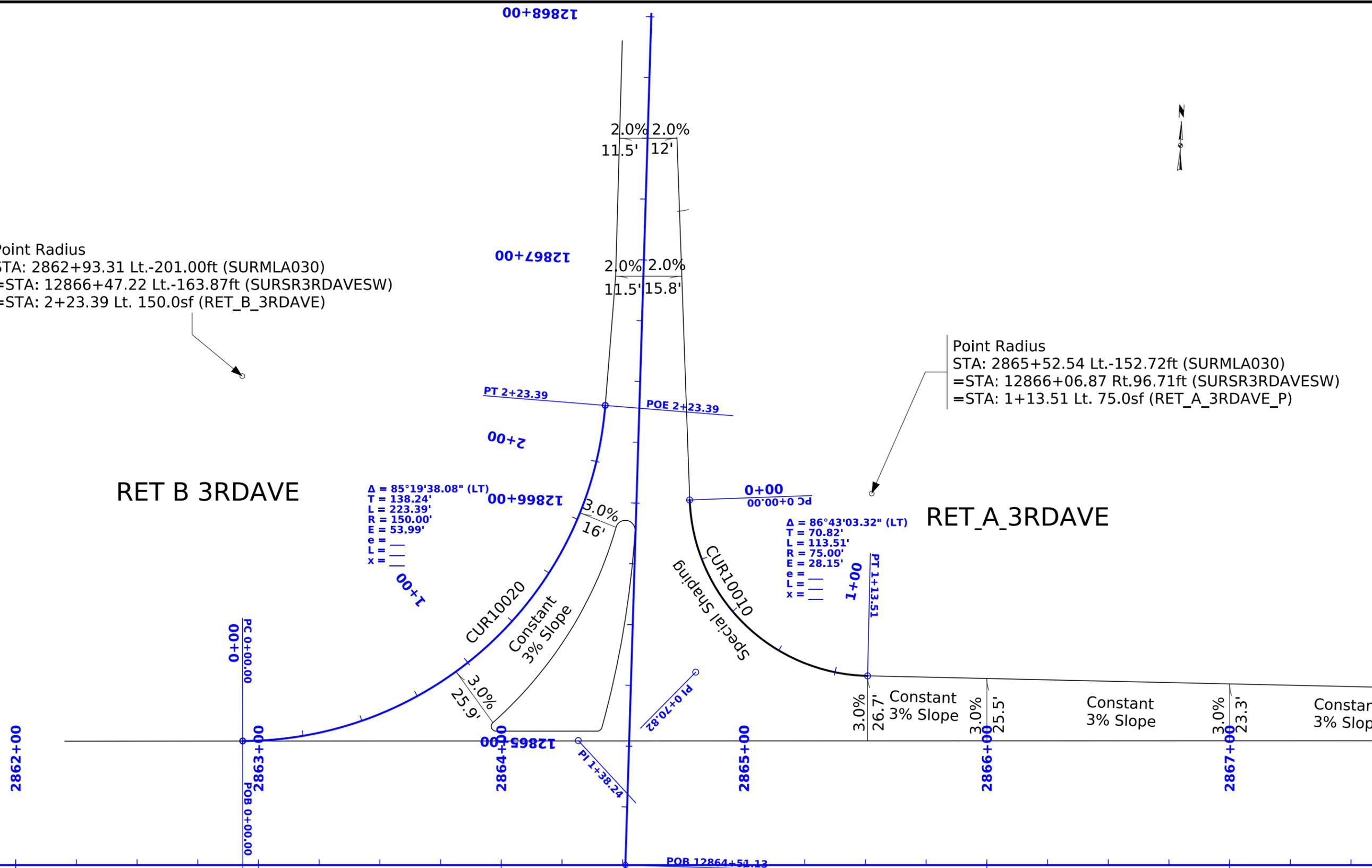
EDGE PROFILE  
RET\_D\_DURHAM\_P

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 =STA: 12866+47.22 Lt.-163.87ft (SURSR3RDAVESW)  
 =STA: 2+23.39 Lt. 150.0sf (RET\_B\_3RDAVE)

Point Radius  
 STA: 2865+52.54 Lt.-152.72ft (SURMLA030)  
 =STA: 12866+06.87 Rt.96.71ft (SURSR3RDAVESW)  
 =STA: 1+13.51 Lt. 75.0sf (RET\_A\_3RDAVE\_P)

RET B 3RDAVE

RET\_A\_3RDAVE



GEOMETRICS  
 WB RIGHT TURN LANE  
 3RD AVE SW

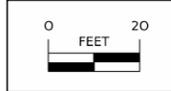
2870+00



Constant 3% Slope	3.0%	23.3'	Constant 3% Slope	3.0%	21.1'	Constant 3% Slope	3.0%	18.9'	Constant 3% Slope	3.0%	16.7'	Constant 3% Slope	3.0%	14'	Constant 3% Slope	3.0%	12'
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GEOMETRICS

WB RIGHT TURN LANE  
3RD AVE SW



Point Radius  
 STA: 2873+40.75 Lt.-213.13ft (SURMLA030)  
 =STA: 0+39.25 Lt.-150.00ft (CUR10010)

$\Delta = 58^{\circ}22'16.12''$  (RT)  
 T = 27.93'  
 L = 50.94'  
 R = 50.00'  
 E = 7.27'

$\Delta = 14^{\circ}59'39.29''$  (LT)  
 T = 19.74'  
 L = 39.25'  
 R = 150.00'  
 E = 1.29'

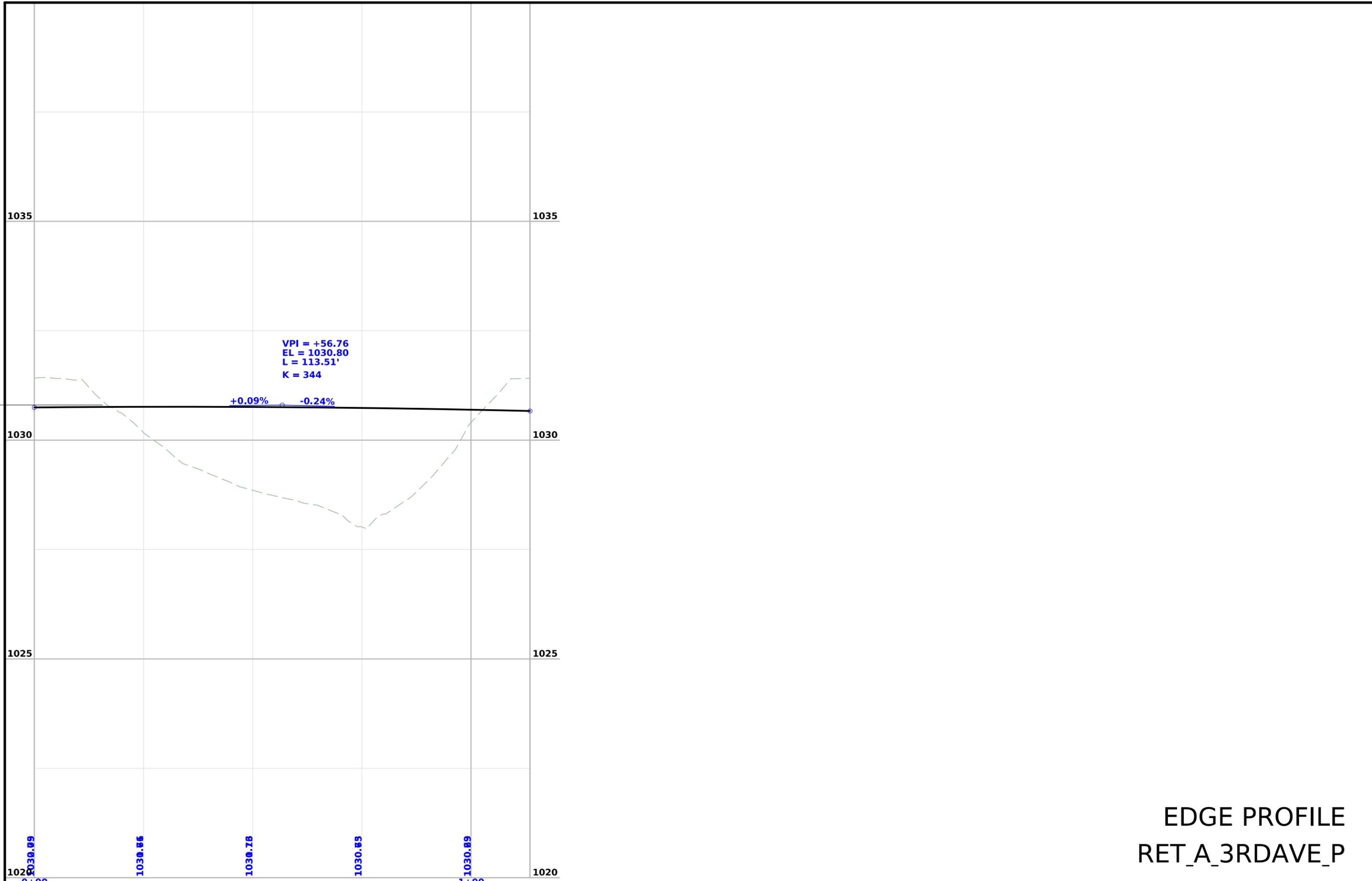
2875+00

STA 2874+83.80 (SURMLA030)  
 END WB LOON & RIGHT TURN LANE

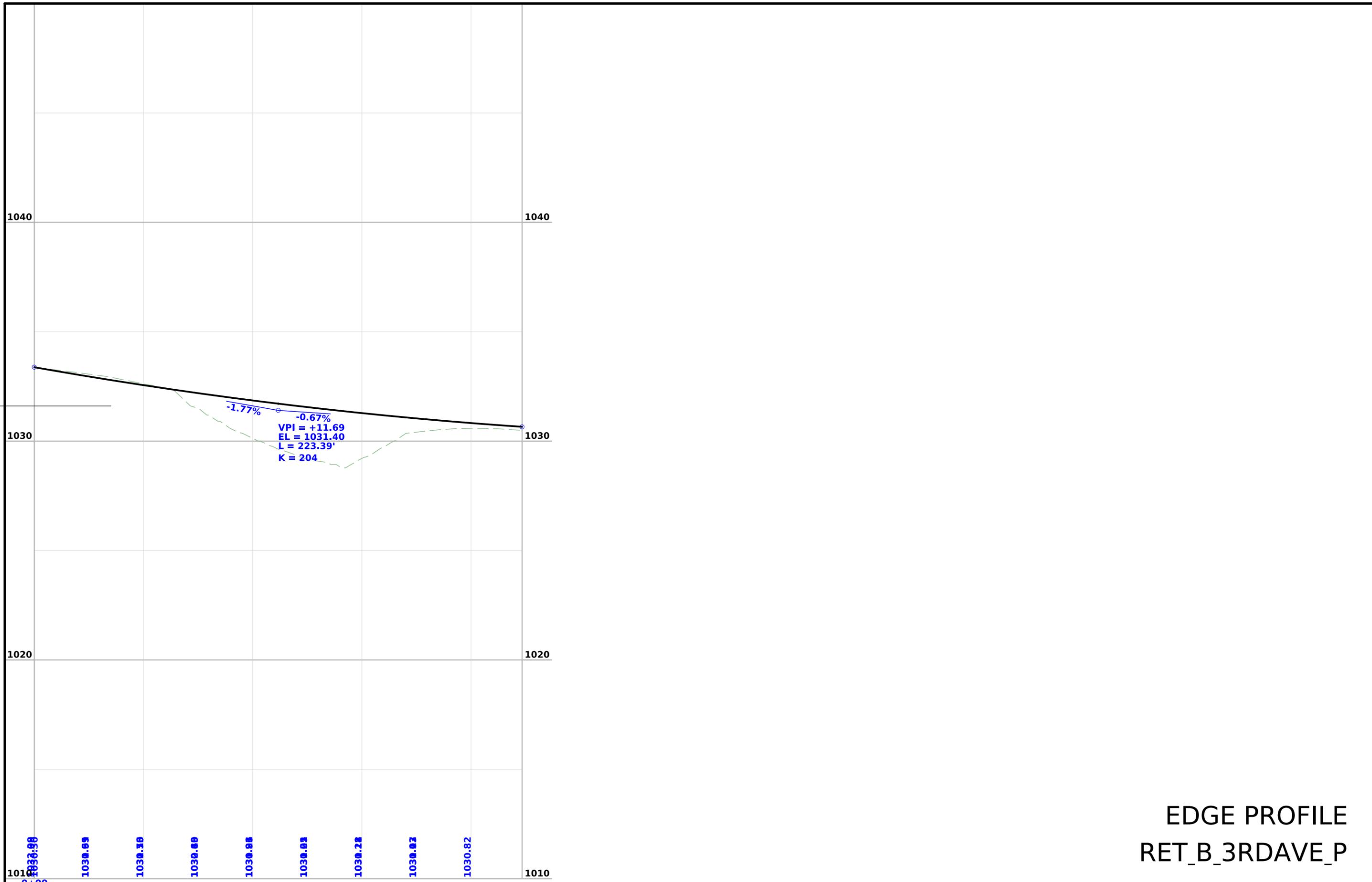
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 =STA: 0+50.94 Rt.50.00ft (CUR10011)

GEOMETRICS  
 WB RIGHT TURN LANE  
 3RD AVE SW

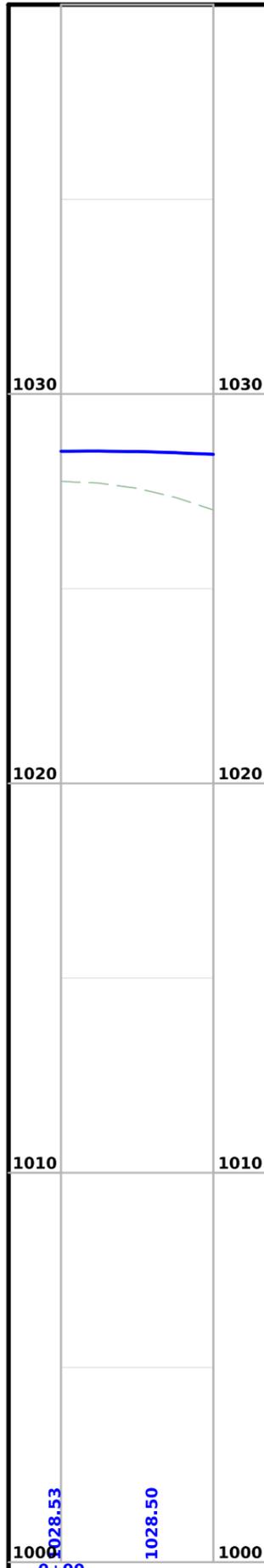




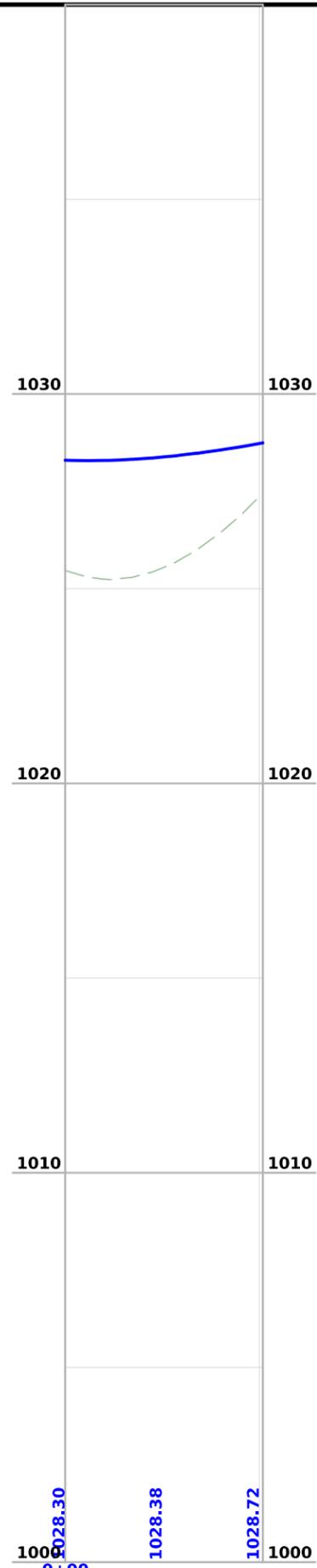
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 RET\_A\_3RDAVE\_P



EDGE PROFILE  
RET\_B\_3RDAVE\_P



EDGE PROFILE  
WB LOON  
CUR10010

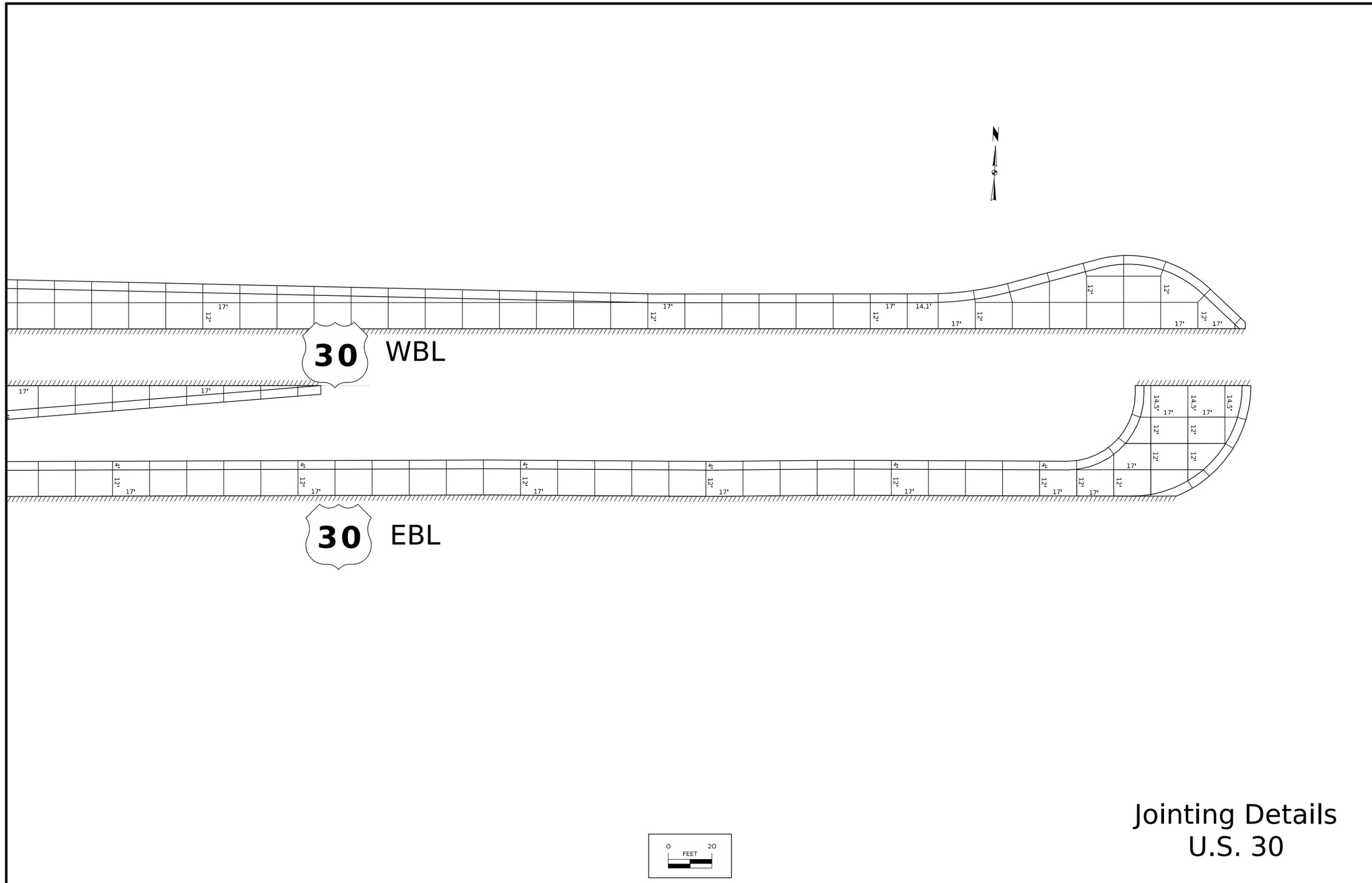


EDGE PROFILE  
WB LOON  
CUR10011





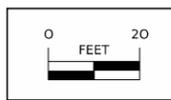


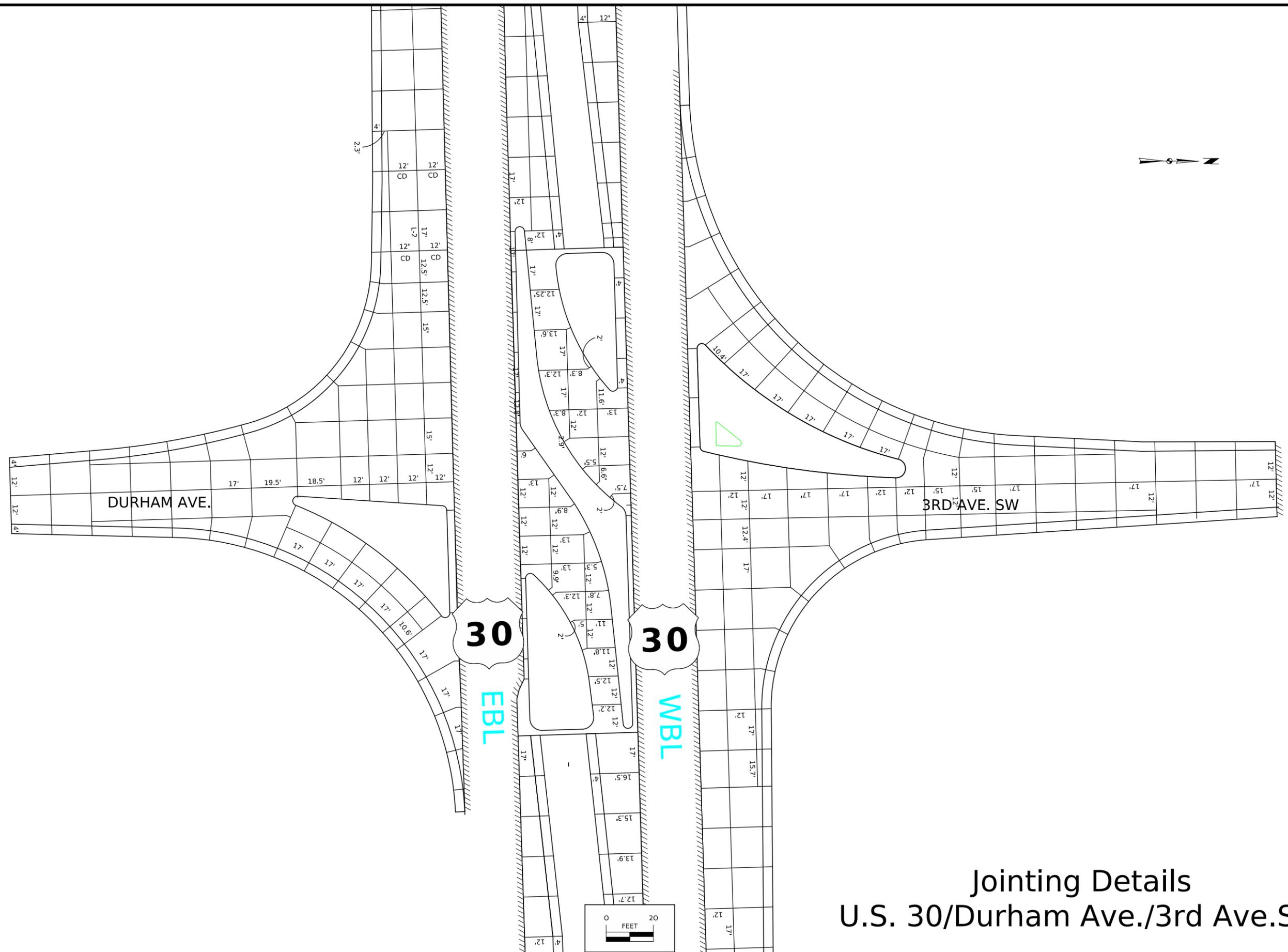


**30** WBL

**30** EBL

Jointing Details  
U.S. 30





# Jointing Details U.S. 30/Durham Ave./3rd Ave.SW

**POLLUTION PREVENTION PLAN**

This project is regulated by the requirements of the Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) General Permit No. 2 OR an Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) individual storm water permit. The Contractor shall carry out the terms and conditions of this permit and the Pollution Prevention Plan (PPP).

This Base PPP includes information on Roles and Responsibilities, Project Site Description, Controls, Maintenance Procedures, Inspection Requirements, Non-Storm Water Controls, Potential Sources of Off Right-of-Way Pollution, and Definitions. This plan references other documents rather than repeating the information contained in the documents. A copy of this Base Pollution Prevention Plan, amended as needed during construction, will be readily available for review.

All contractors shall conduct their operations in a manner that controls pollutants, minimizes erosion, and prevents sediments from entering waters of the state and leaving the highway right-of-way. The Contractor shall be responsible for compliance and implementation of the PPP for their entire contract. This responsibility shall be further shared with subcontractors whose work is a source of potential pollution as defined in this PPP.

**I. ROLES AND RESPONSIBILITIES****A. Designer:**

1. Prepares Base PPP included in the project plan.
2. Prepares Notice of Intent (NOI) submitted to Iowa DNR.
3. Is signature authority on the Base PPP. If consultant designed, signature from Contracting Authority is also required.

**B. Contractor:**

1. Signs a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP. All co-permittees are legally required under the Clean Water Act and the Iowa Administrative Code to ensure compliance with the terms and conditions of this PPP.
2. Designates a Water Pollution Control Manager (WPCM), who has the duties and responsibilities as defined in Section 2602 of the Standard Specifications.
3. Submits an Erosion Control Implementation Plan (ECIP) and ECIP updates according to Section 2602 of the Standard Specifications.
4. Installs and maintains appropriate controls. This work may be subcontracted as documented through Subcontractor Request Forms (Form 830231).
5. Supervises and implements good housekeeping practices according to Paragraph III, C, 2.
6. Conducts joint required inspections of the site with inspection staff. When Contractor is not mobilized on site, Contractor may delegate this responsibility to a trained or certified subcontractor. Contracting Authority also may waive joint inspection requirement during winter shutdown. In both circumstances, WPCM (or trained or certified delegate from the Contractor) is still responsible to review and sign inspection reports.
7. Complies with training and certification requirements of Section 2602 of the Standard Specifications.
8. Submits amended PPP site map according to Section 2602 of the Standard Specifications.

**C. Subcontractors:**

1. Sign a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP if: responsible for sediment or erosion controls; involved in land disturbing activities; or performing work that is a source of potential pollution as defined in this PPP. Subcontracted work items are identified in Subcontractor Request Forms (Form 830231). All co-permittees are legally required under the Clean Water Act and the Iowa Administrative Code to ensure compliance with the terms and conditions of this PPP.
2. Implement good housekeeping practices according to Paragraph III, C, 2.

**D. RCE/Project Engineer:**

1. Is Project Storm Water Manager.
2. Takes actions necessary to ensure compliance with storm water requirements including, where appropriate, issuing stop work orders, and directing additional inspections at construction project sites that are experiencing problems with achieving permit compliance.
3. Orders the taking of measures to cease, correct, prevent, or minimize the consequences of non-compliance with the storm water requirements of the Applicable Permit.
4. Supervises all work necessary to meet storm water requirements at the Project, including work performed by contractors and subcontractors.
5. Requires employees, contractors, and subcontractors to take appropriate responsive action to comply with storm water requirements, including requiring any such person to cease or correct a violation of storm water requirements, and to order or recommend such other actions as necessary to meet storm water requirements.
6. Is familiar with the Project PPP and storm water site map.
7. Is the point of contact for the Project for regulatory officials, Inspector, contractors, and subcontractors regarding storm water requirements.
8. Is signature authority on Notice of Discontinuation.
9. Maintains an up-to-date record of contractors, subcontractors, and subcontracted work items through Subcontractor Request Forms (Form 830231).
10. Makes information to determine permit compliance available to the DNR upon their request.

**E. Inspector:**

1. Updates PPP through fieldbook entries and storm water site inspection reports if there is a change in design, construction, operation, or maintenance which has a significant effect on the discharge of pollutants from the project.
2. Makes information to determine permit compliance available to the DNR upon their request.
3. Conducts joint required inspections of the site with the contractor/subcontractor.
4. Completes an inspection report after each inspection.
5. Is signature authority on storm water inspection reports.

**II. PROJECT SITE DESCRIPTION**

- A. This Pollution Prevention Plan (PPP) is for the construction of a \*Describe Type of Facility\*.
- B. This PPP covers approximately \*Provide # Of Acres\* acres with an estimated \*Provide # of Acres\* acres being disturbed. The portion of the PPP covered by this contract has \*Provide # of Acres\* acres disturbed.
- C. The PPP is located in an area of \*Provide # of Types Of Soil Association\* soil association (\*Provide Soil Association Type or \*Types\*). The estimated weighted average runoff coefficient number for this PPP after completion will be \*Provide runoff coefficient Number\*.
- D. Storm Water Site Map - Multiple sources of information comprise the base storm water site map including:
  1. Drainage Patterns - Plan and Profile sheets and Situation plans.
  2. Proposed Slopes - Cross Sections.
  3. Areas of Soil Disturbance - Construction limits shown on Plan and Profile sheets.
  4. Location of Structural Controls - Tabulations in C sheets.
  5. Locations of Non-structural Controls - Tabulations in C sheets.
  6. Locations of Stabilization Practices - Generally within construction limits shown on Plan and Profile sheets.
  7. Surface Waters (including wetlands) - Project Location Map and Plan and Profile sheets.
  8. Locations where Storm Water is Discharged - Plan and Profile sheets.

**POLLUTION PREVENTION PLAN**

- E. The base storm water site map is amended by contract modifications and progress payments (fieldbook entries) of completed erosion control work. Also, due to project phasing, erosion and sediment controls shown on project plans may not be installed until needed, based on site conditions. For example, silt fence ditch checks will typically not be installed until the ditch has been installed. Installed locations may also be modified from tabulation locations by field staff. Installed locations will be documented by fieldbook entries and amended PPP site map.
- F. Runoff from this work will flow into \*List Outlets for Runoff\*.

**III. CONTROLS**

- A. The Contractor's ECIP specified in Article 2602.03 of the Standard Specifications for accomplishment of storm water controls should clearly describe the intended sequence of major activities, and for each activity define the control measure and the timing during the construction process that the measure will be implemented.
- B. Preserve vegetation in areas not needed for construction.
- C. Sections 2601 and 2602 of the Standard Specifications define requirements to implement erosion and sediment control measures. Actual quantities used and installed locations may vary from the Base PPP and amendment of the plan will be documented via fieldbook entries, amended PPP site map, or by contract modification. Additional erosion and sediment control items may be required as determined by the inspector and/or contractor during storm water site inspections. If the work involved is not applicable to any contract items, the work will be paid for according to Article 1109.03 paragraph B of the Standard Specifications.

**1. EROSION AND SEDIMENT CONTROLS****a. Stabilization Practices**

- 1) Site plans will ensure that existing vegetation or natural buffers are preserved where attainable and disturbed portions of the site will be stabilized.
- 2) Initialize stabilization of disturbed areas immediately after clearing, grading, excavating, or other earth disturbing activities have:
  - a) Permanently ceased on any portion of the site, or
  - b) Temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days.
- 3) Staged permanent and/or temporary stabilizing seeding and mulching shall be completed as the disturbed areas are completed. Incomplete areas shall be stabilized according to paragraph III, C, 1, a, 2, b above.
- 4) Permanent and Temporary Stabilization practices to be used for this project are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C sheets. Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation (105-4) in the C sheets.
- 5) Preservation of existing vegetation within right-of-way or easements will act as vegetative buffer strips.
- 6) Preservation of topsoil: Bid items to be used for this project are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C sheets. Additional information may be found in Tabulations in the C or T sheets or is referenced in Section 2105 of Standard Specifications.

**b. Structural Practices**

- 1) Structural practices will be implemented to divert flows from exposed soils and detain or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. Additionally, structural practices may include: silt basins that provide 3600 cubic feet of storage per acre drained or equivalent sediment controls, outlet structures that withdraw water from surface when discharging basins, and controls to direct storm water to vegetated areas.
- 2) Structural practices to be used for this project are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C sheets, as well as all other item specific Tabulations. Typical drawings detailing construction of the devices to be used on this project can be found in the B sheets or are referenced in the Standard Road Plans Tabulation (105-4) located in the C sheets.

**c. Storm Water Management**

Measures shall be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. This may include velocity dissipation devices at discharge locations and along length of outfall channel as necessary to provide a non-erosion velocity flow from structure to water course. If included with this project, these items are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C sheets, as well as all other item specific Tabulations. Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation (105-4) in the C sheets. The installation of these devices may be subject to Section 404 of the Clean Water Act.

**2. OTHER CONTROLS**

Contractor disposal of unused construction materials and construction material wastes shall comply with applicable state and local waste disposal, sanitary sewer, or septic system regulations. In the event of a conflict with other governmental laws, rules and regulations, the more restrictive applicable laws, rules or regulations shall apply.

- a. Vehicle Entrances and Exits - Construct and maintain entrances and exits to prevent tracking of sediments onto roadways.
- b. Material Delivery, Storage and Use - Implement practices to prevent discharge of construction materials during delivery, storage, and use.
- c. Stockpile Management - Install controls to reduce or eliminate pollution of storm water from stockpiles of soil and paving.
- d. Waste Disposal - Do not discharge any materials, including building materials, into waters of the state, except as authorized by a Section 404 permit.
- e. Spill Prevention and Control - Implement chemical spill and leak prevention and response procedures to contain and clean up spills and prevent material discharges to the storm drain system and waters of the state.
- f. Concrete Residuals and Washout Wastes - Waste shall not be discharged to a surface water and is not allowed to adversely affect a water of the state. Designate temporary concrete washout facilities for rinsing out concrete trucks. Provide directions to truck drivers where designated washout facilities are located. Designated washout areas should be located at least 50 feet away from storm drains, streams or other water bodies. Care should be taken to ensure these facilities do not overflow during storm events.
- g. Concrete Grooving/Grinding Slurry - Do not discharge slurry to a waterbody or storm drain. Slurry may be applied on foreslopes or removed from the project.
- h. Vehicle and Equipment Storage and Maintenance Areas - Perform on site fueling and maintenance in accordance with all environment laws such as proper storage of onsite fuels and proper disposal of used engine oil or other fluids on site. Employ washing practices that prevent contamination of surface and ground water from wash water. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge.
- i. Litter Management - Ensure employees properly dispose of litter. Minimize exposure of trash if exposure to precipitation or storm water would result in a discharge of pollutants.
- j. Dewatering - Properly treat water to remove suspended sediment before it re-enters a waterbody or discharges off-site. Measures are also to be taken to prevent scour erosion at dewatering discharge point.

**3. APPROVED STATE OR LOCAL PLANS**

During the course of this construction, it is possible that situations will arise where unknown materials will be encountered. When such situations are encountered, they will be handled according to all federal, state, and local regulations in effect at the time.

### POLLUTION PREVENTION PLAN

IV. MAINTENANCE PROCEDURES

The Contractor is required to maintain all temporary erosion and sediment control measures in proper working order, including cleaning, repairing, or replacing them throughout the contract period. This shall begin when the features have lost 50% of their capacity.

V. INSPECTION REQUIREMENTS

- A. Inspections shall be made jointly by the Contractor and the Contracting Authority's inspector at least once every seven calendar days. Storm water site inspections will include:
  - 1. Date of the inspection.
  - 2. Summary of the scope of the inspection.
  - 3. Name and qualifications of the personnel making the inspection.
  - 5. Review of erosion and sediment control measures within disturbed areas for the effectiveness in preventing impacts to receiving waters.
  - 6. Major observations related to the implementation of the PPP.
  - 7. Identification of corrective actions required to maintain or modify erosion and sediment control measures.
- B. Include storm water site inspection reports in the amended PPP. Incorporate any additional erosion and sediment control measures determined as a result of the inspection. Immediately begin corrective actions on all deficiencies found within 3 calendar days of the inspection and complete within 7 calendar days following the inspection. If it is determined that making the corrections less than 72 hours after the inspection is impracticable, it should be documented why it is impracticable and indicate an estimated date by which the corrections will be made.

VI. NON-STORM WATER DISCHARGES

This includes subsurface drains (i.e. longitudinal and standard subdrains) and slope drains. The velocity of the discharge from these features may be controlled by the use of headwalls or blocks, Class A stone, erosion stone or other appropriate materials. This also includes uncontaminated groundwater from dewatering operations, which will be controlled as discussed in Section III of the PPP.

VII. POTENTIAL SOURCES OF OFF RIGHT-OF-WAY (ROW) POLLUTION

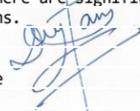
Silts, sediment, and other forms of pollution may be transported onto highway right-of-way (ROW) as a result of a storm event. Potential sources of pollution located outside highway ROW are beyond the control of this PPP. Pollution within highway ROW will be conveyed and controlled per this PPP.

VIII. DEFINITIONS

- A. Base PPP - Initial Pollution Prevention Plan.
- B. Amended PPP - Base PPP amended during construction. May include Plan Revisions or Contract Modifications for new items, storm water site inspection reports, fieldbook entries made by the inspector, amended PPP site map by the Contractor, ECIP, NOI, co-permittee certifications, and Subcontractor Request Forms. Items amending the PPP are stored electronically and are readily available upon request.
- C. Fieldbook Entries - This contains the inspector's daily diary and bid item postings.
- D. Controls - Methods, practices, or measures to minimize or prevent erosion, control sedimentation, control storm water, or minimize contaminants from other types of waste or materials. Also called Best Management Practices (BMPs).
- E. Signature Authority - Representative authorized to sign various storm water documents.

CERTIFICATION STATEMENT

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information; the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature 

Printed or Typed Name

Signature

Printed or Typed Name





12865+00

STA: 2863+61.14  
OFF: 15.92' LT

STA: 2864+12.86  
OFF: 18.90' LT

51.71'

R 5'

R 2'

R 5'

Median Island 1  
1038 sf

STA: 2863+61.14  
OFF: 1.29' LT

14.63'

R 90'

2864+00

R 90'

Median

POR 12864+51.13



R 5'

53.31'

R 2'

38.43'

80.86'

R 5'

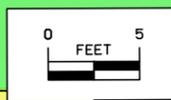
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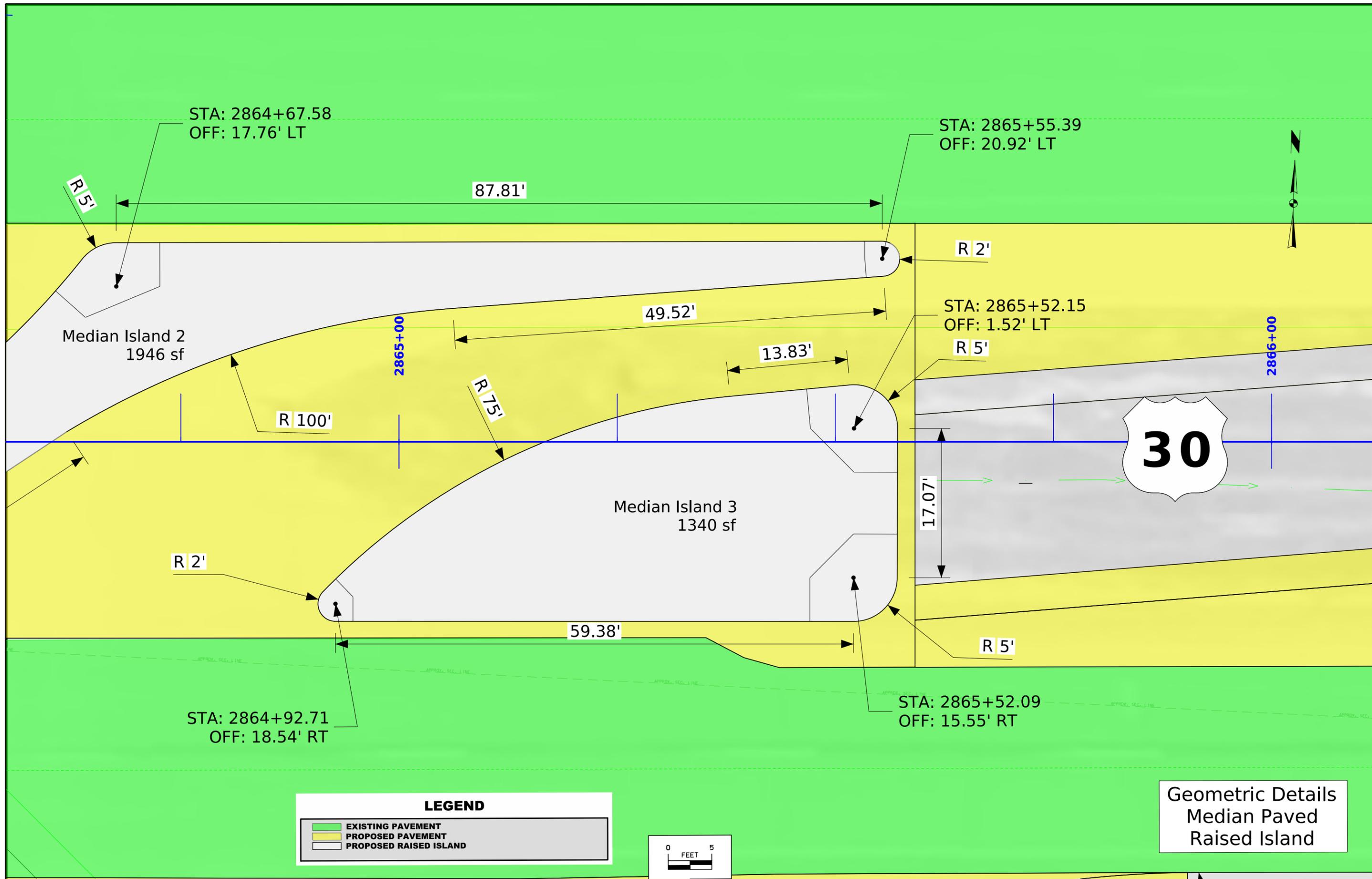
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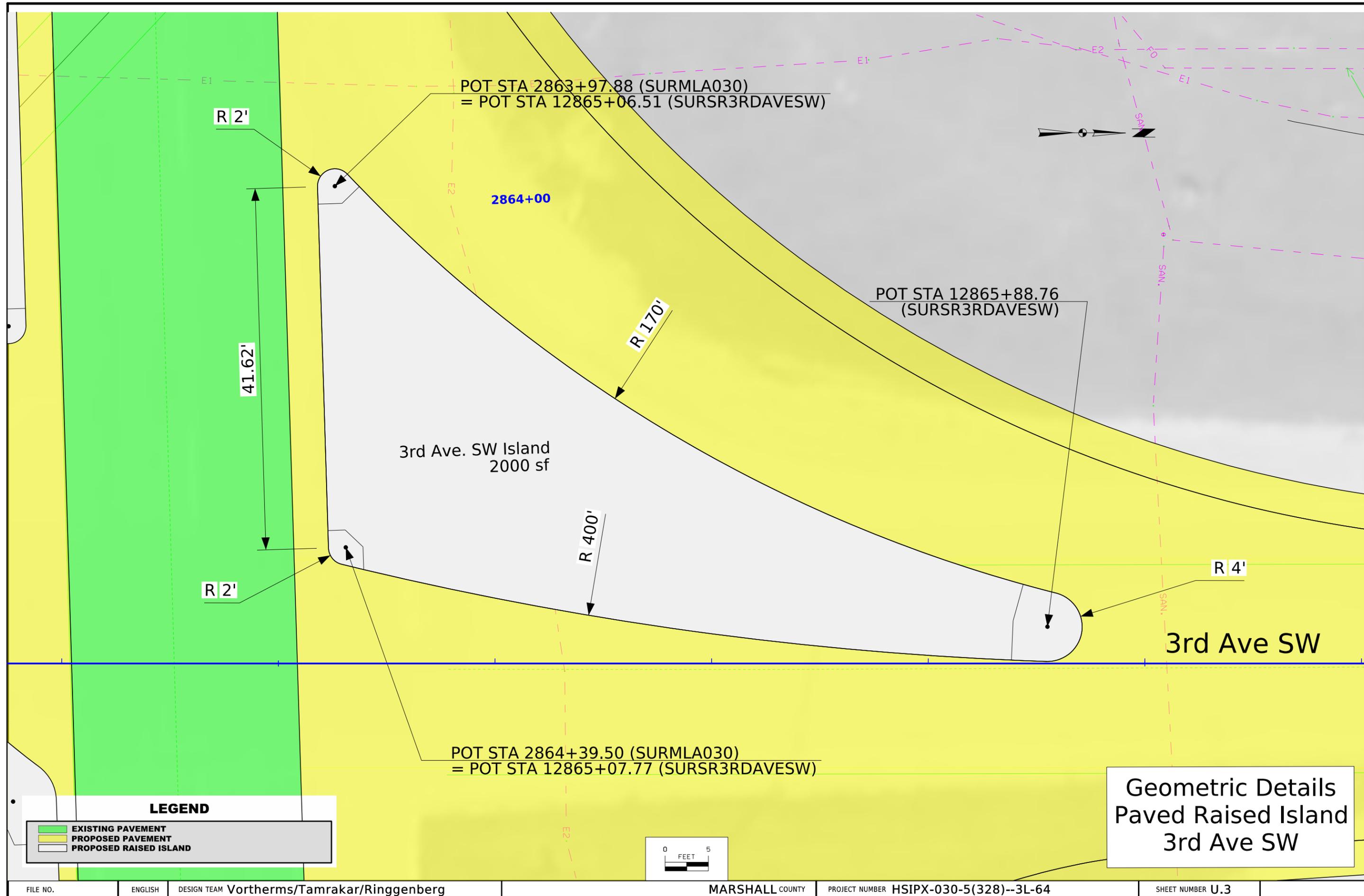
Geometric Details  
Median Paved  
Raised Island

**LEGEND**

	EXISTING PAVEMENT
	PROPOSED PAVEMENT
	PROPOSED RAISED ISLAND







POT STA 2863+97.88 (SURMLA030)  
= POT STA 12865+06.51 (SURSR3RDAVESW)

2864+00

POT STA 12865+88.76  
(SURSR3RDAVESW)

3rd Ave. SW Island  
2000 sf

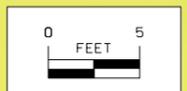
3rd Ave SW

POT STA 2864+39.50 (SURMLA030)  
= POT STA 12865+07.77 (SURSR3RDAVESW)

Geometric Details  
Paved Raised Island  
3rd Ave SW

**LEGEND**

- EXISTING PAVEMENT
- PROPOSED PAVEMENT
- PROPOSED RAISED ISLAND



# DURHAM AVE

Durham Ave

POT STA 12863+96.10 RT 11.82' (SURSRDURHAM)  
= POT STA 2864+62.96 RT 55.02' (SURMLA030)

STA 12863+35.04 RT 5.95'  
(SURSRDURHAM)

Dunham Ave. Island  
1424 sf

R 144.0

61.34'

R 2'

43.32'

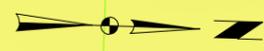
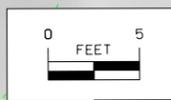
R 2'

POT STA 12863+96.08 RT 55.14' (SURSRDURHAM)  
= POT STA 2865+06.28 RT 55.04' (SURMLA030)

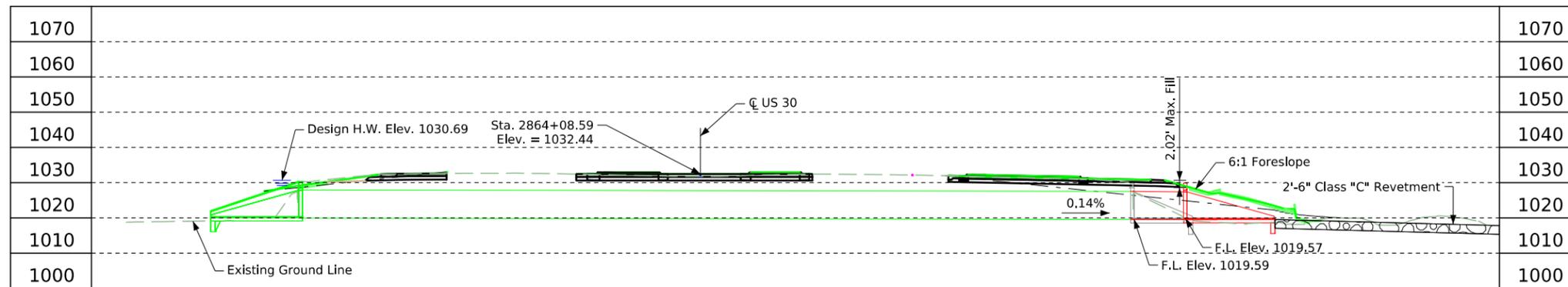
Geometric Details  
Paved Raised Island  
Durham Ave

## LEGEND

- EXISTING PAVEMENT
- PROPOSED PAVEMENT
- PROPOSED RAISED ISLAND



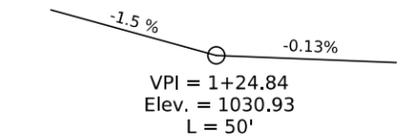
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**Longitudinal Section Along Centerline of Culvert**

Design Fill = 2'-0"  
 Anticipated Settlement = TBD

U.A.C.  
**Profile Grade - Centerline US 30**



**Profile Grade - Centerline Durham Ave.**

**Hydraulic Data**

RIDB: NA  
 Drainage Area = 1.57 Sq. Mi.  
 Site Stream Slope = 0.20%

Hydrology based on the USDA NRCS TR-55 method

Overtopping of 3<sup>rd</sup> Ave. SW  
 Overtopping El. = 1030.52  
 (Existing 3<sup>rd</sup> Ave. P.G. low point)

Proposed 3<sup>rd</sup> Ave. SW profile grade shall be at or below existing profile grade to meet a no-rise condition of upstream headwater.

US 30 edge of shoulder encroachment occurs at El. 1031.5, after overtopping 3<sup>rd</sup> Ave. SW

Q<sub>25</sub> = 1,110 cfs  
 Headwater (HW) Elevation = 1028.51  
 Exit Velocity = 10.5 fps

Q<sub>50</sub> (Design) = 1,360 cfs  
 Headwater (HW) Elevation = 1030.69  
 (without 3<sup>rd</sup> Ave. SW overtopping)  
 Exit Velocity = 12.0 fps

**General Notes:**

--This design is for the extension of the existing Twin 8'x8'x235'-2" Reinforced Concrete Box Culvert, Marshall County Design No. 2559 & 289, Asset ID No. 901050.

**Plan Notes:**

--Headwall shall be placed level.  
 --Revetment stone is embedded.  
 --Faint lines indicate existing contours.

**Utilities Note:**

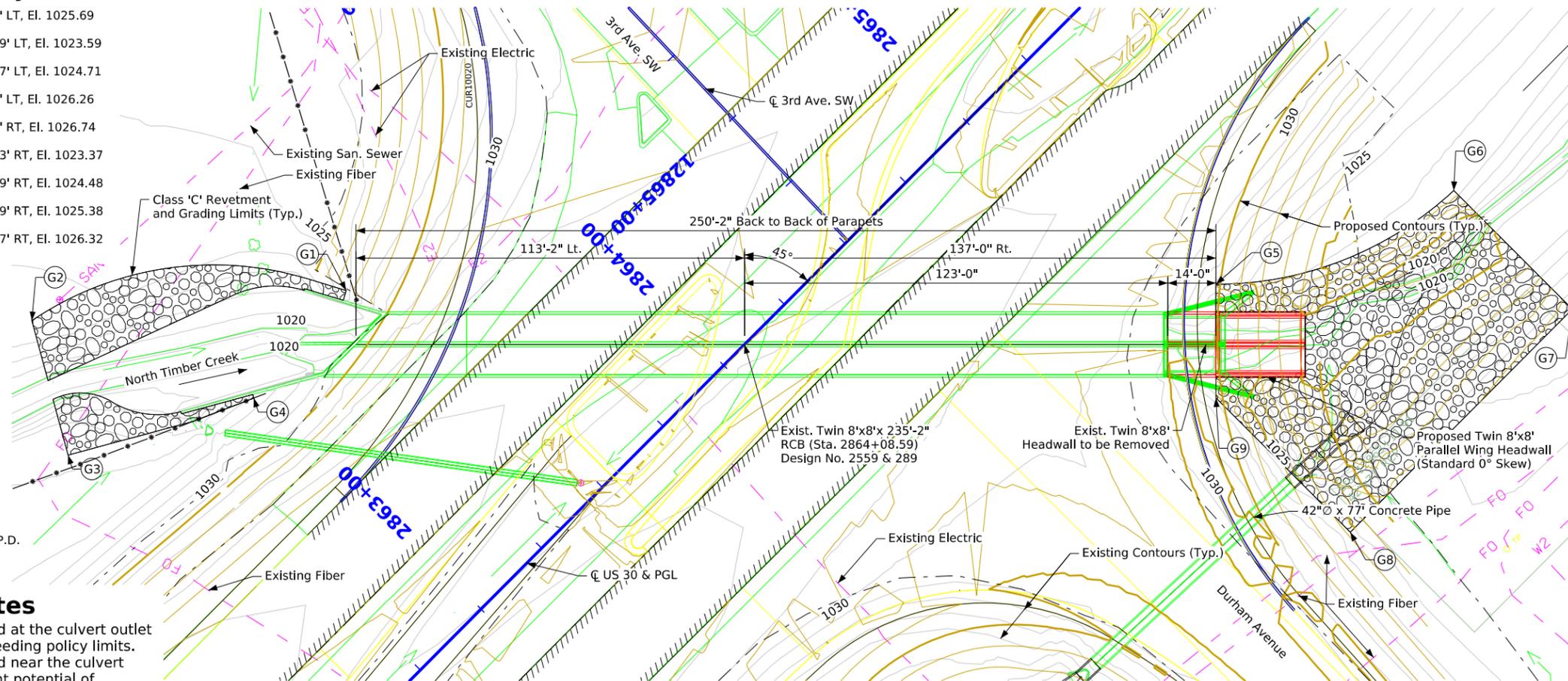
Utilities shown on this sheet are for information only. See Road Design sheets for utility information. Conflicts with existing utilities and need for potential relocations to be confirmed in Final Design.

**General Utility Symbols:**

E - Electric Line      FO - Fiber Optic Line  
 SAN. - Sanitary Sewer  
 Preliminary

**Grading Control /Revetment Layout:**

- G1 Sta. 2863+37.77, 93.12' LT, El. 1025.69
- G2 Sta. 2862+66.92, 151.69' LT, El. 1023.59
- G3 Sta. 2862+46.74, 116.67' LT, El. 1024.71
- G4 Sta. 2862+96.64, 90.10' LT, El. 1026.26
- G5 Sta. 2865+17.92, 84.76' RT, El. 1026.74
- G6 Sta. 2865+86.03, 114.53' RT, El. 1023.37
- G7 Sta. 2865+86.03, 163.29' RT, El. 1024.48
- G8 Sta. 2864+94.56, 163.29' RT, El. 1025.38
- G9 Sta. 2864+94.56, 108.07' RT, El. 1026.32



**Situation Plan**

**Traffic Data**

2023 AADT      7,000 V.P.D.  
 TRUCKS      15 %

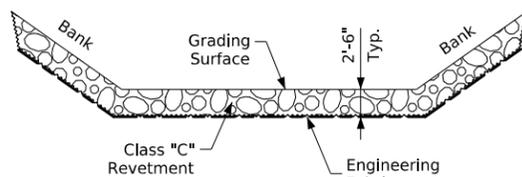
**Designer Notes**

--Revetment is proposed at the culvert outlet due to the velocity exceeding policy limits.  
 --Revetment is proposed near the culvert inlet due to the apparent potential of sediment accumulation.

**Estimated Revetment Quantities Included With Road Plans**

Location	Revetment Class "C" (Ton)	Engineering Fabric (SY)	CL. 10 Channel Excavation (CY)
Inlet	256.5	288.1	160.3
Outlet	828.3	720.2	517.7
Totals	1084.7	1008.4	677.9

Excavation quantity calculated from grading surface. Excavation quantity is for embedded revetment core out only, and does not include excavation to the grading surface. Excavation quantity to the grading surface is determined by Road Design and included in the Road Plans. Quantities shown for information only. See Road Sheets.



**Outlet Protection**

0 20  
 Scale In Feet

**Location:**  
 US 30 Over North Timber Creek  
 T-83N R-20W  
 Section 10 & 15  
 State Center Township  
 Marshall County  
 Maint. No. 6472.3B030  
 Asset ID No. 901050  
 Latitude: 42.007673  
 Longitude: -93.165174

**Hydraulic Design**

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.



*Brian J. Birkland*      1-21-2026  
 Signature      Date  
 Brian J. Birkland  
 Printed or Typed Name  
 My license renewal date is December 31,      2026

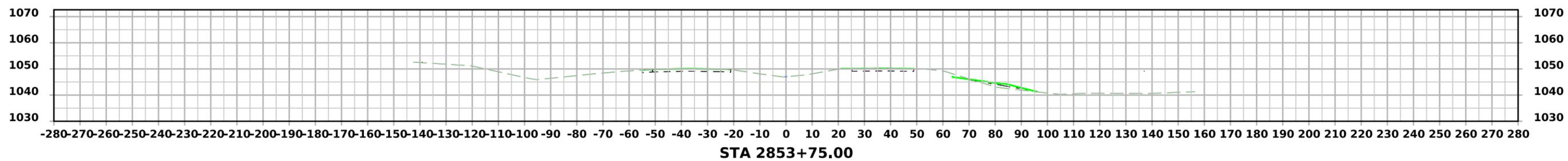
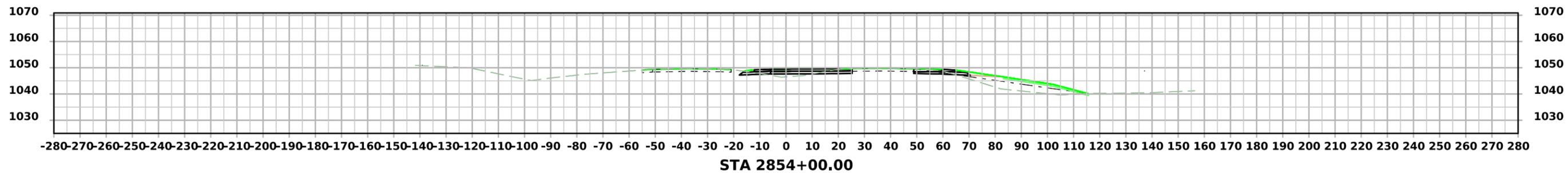
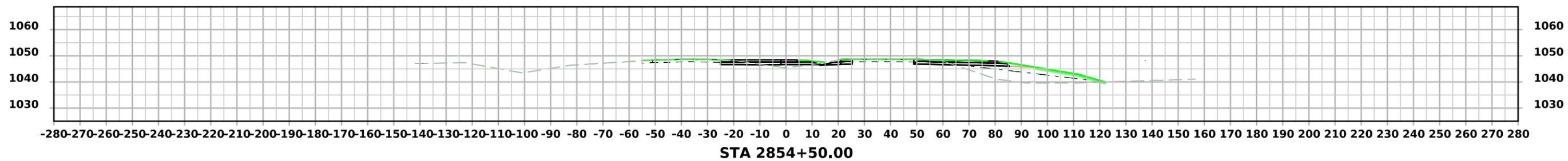
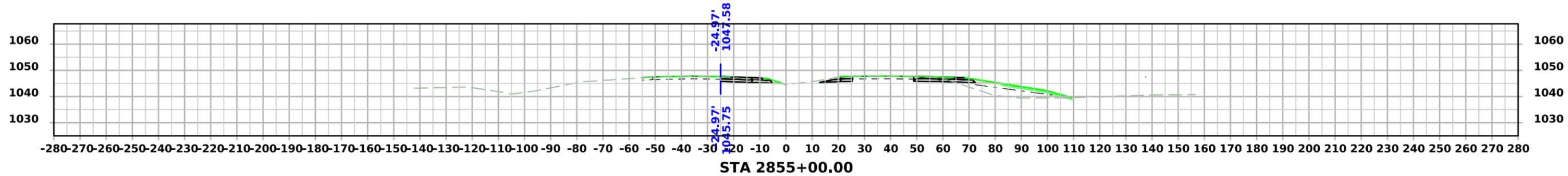
Pages or sheets covered by this seal:      V.1

Design For 45 Degree RA  
**Twin 8'x8' Reinforced Concrete Box Culvert Extension**

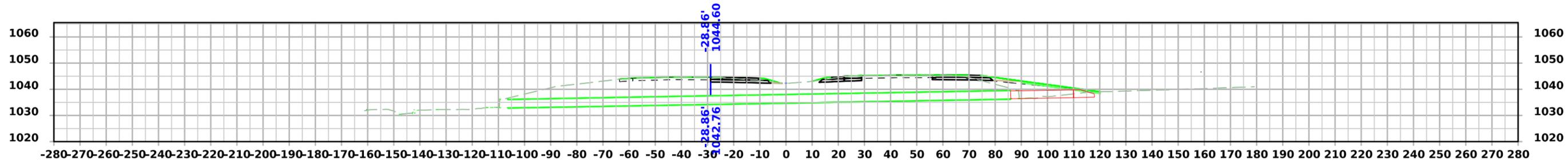
**Situation Plan**

STA. 2864+08.59 (US 30)      Turn-in Date: Jan 2026  
**Marshall County**  
 IOWA DEPARTMENT OF TRANSPORTATION  
 Design No. 126      Design Sheet No. 1 of 1      FHWA/Asset 901050

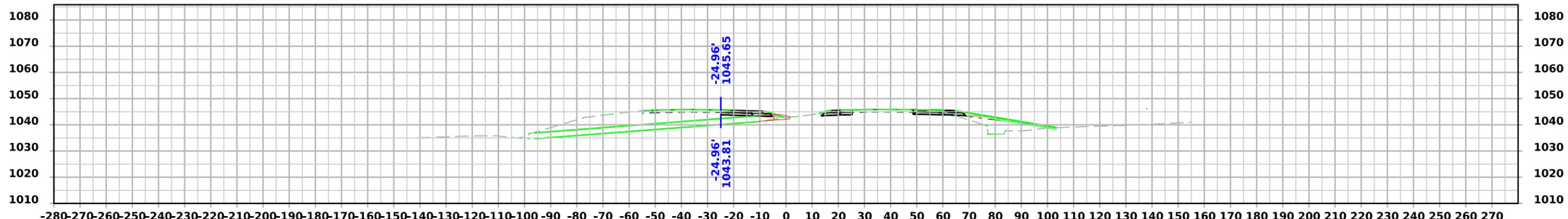
# ML - U.S. 30



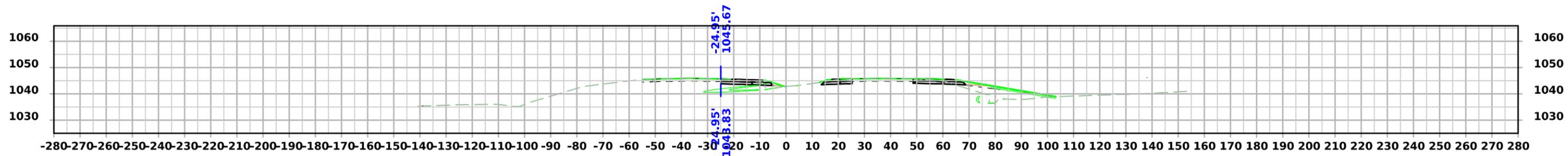
# ML - U.S. 30



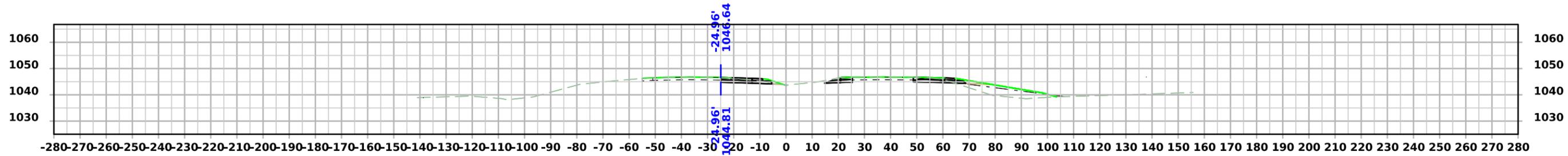
STA 2856+43.79  
Skewed Section



STA 2856+00.44  
Skewed Section

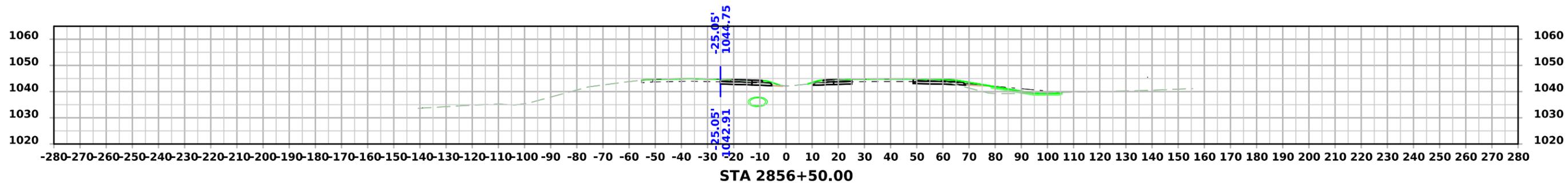
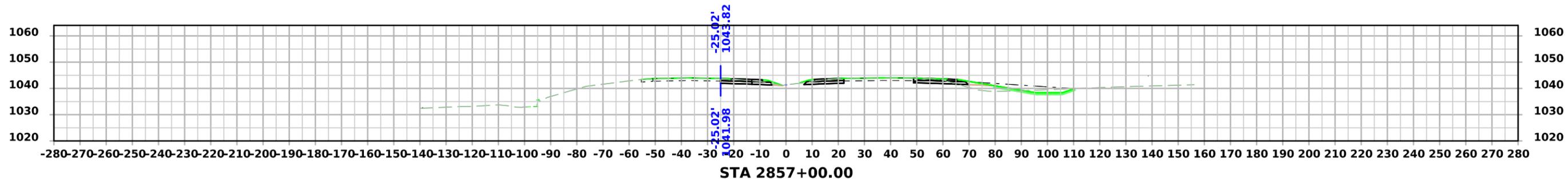
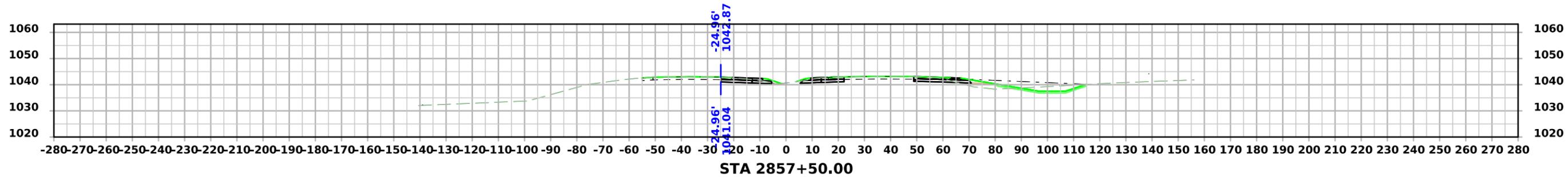
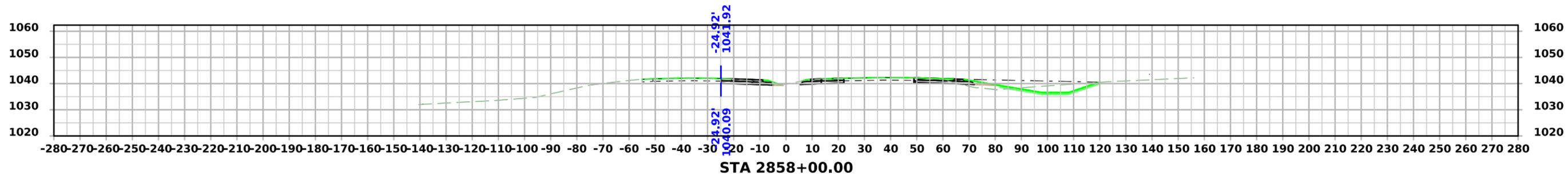


STA 2856+00.00

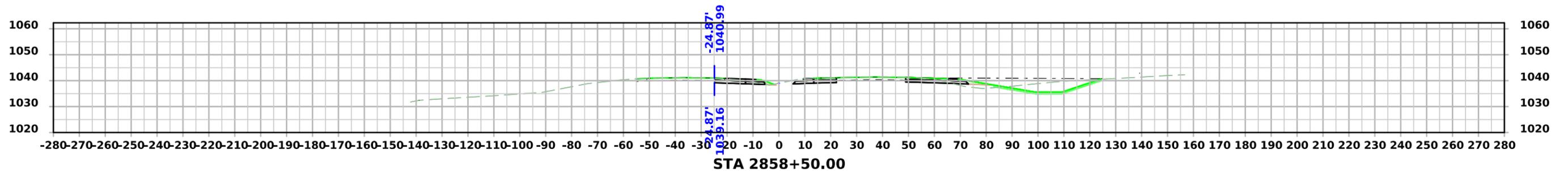
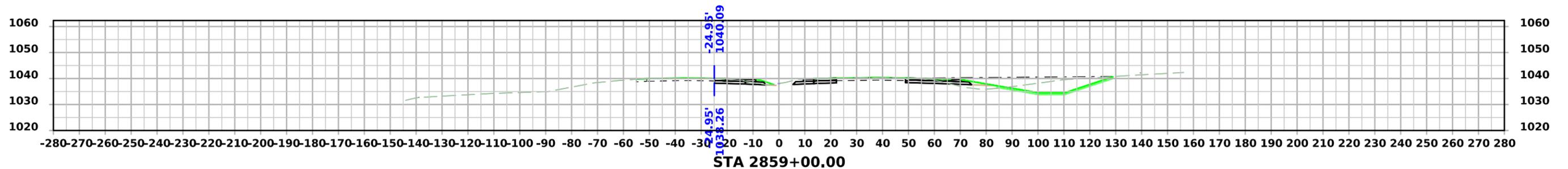
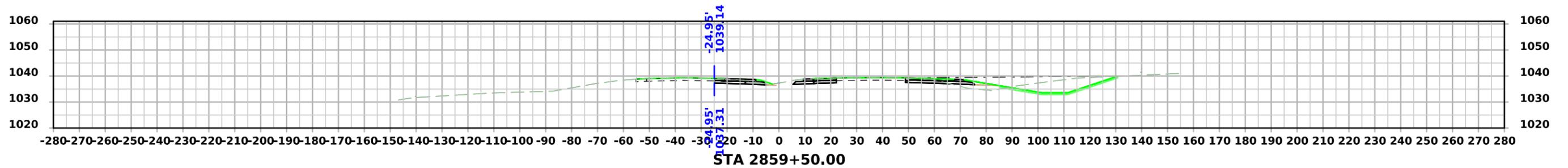
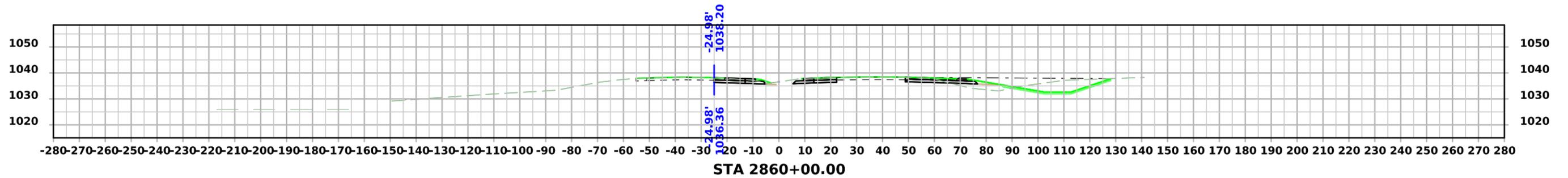


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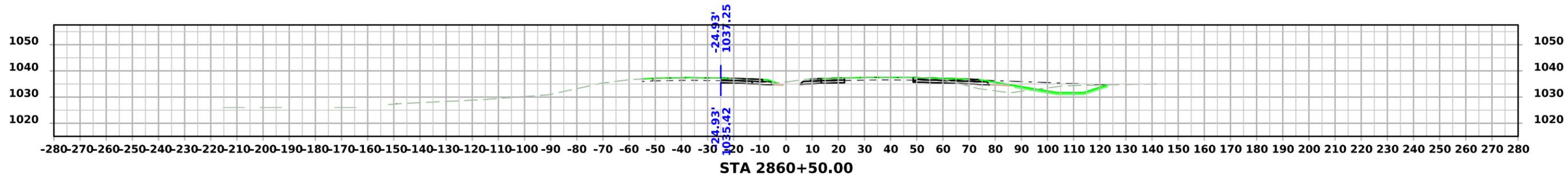
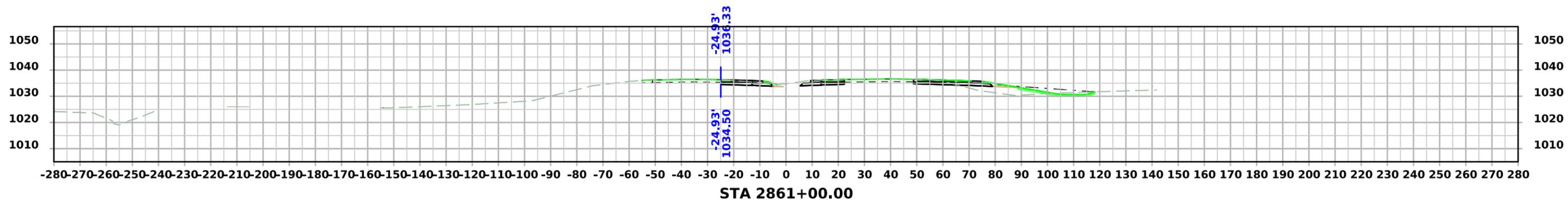
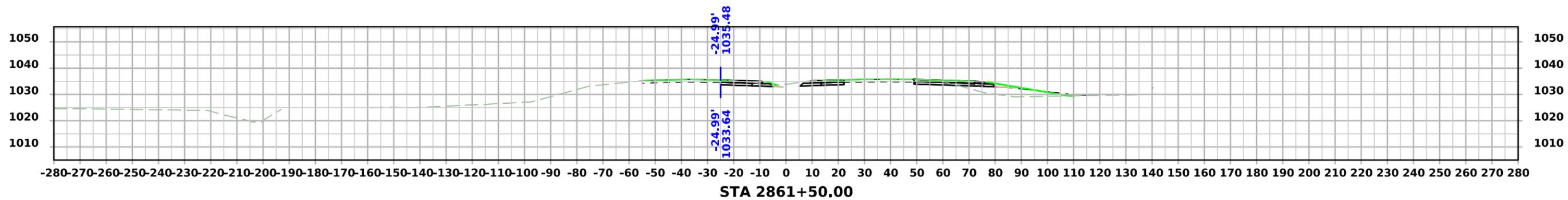
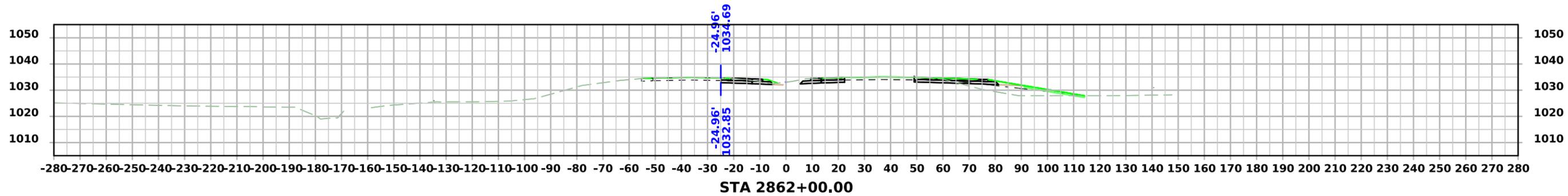
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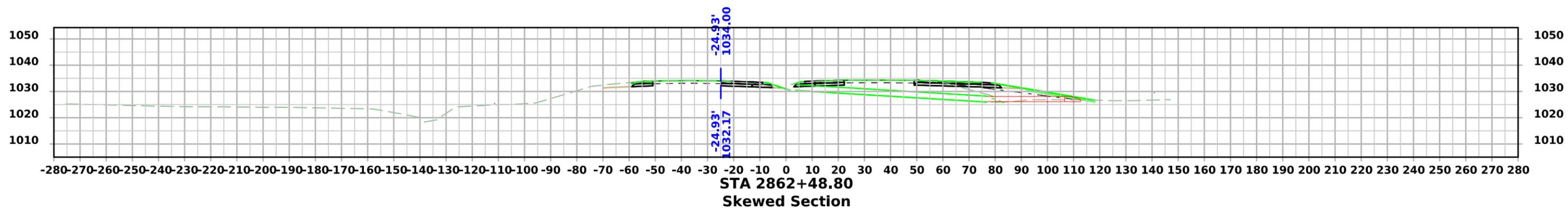
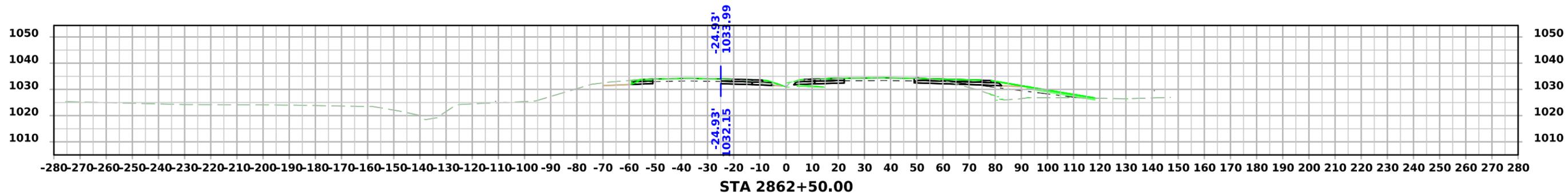
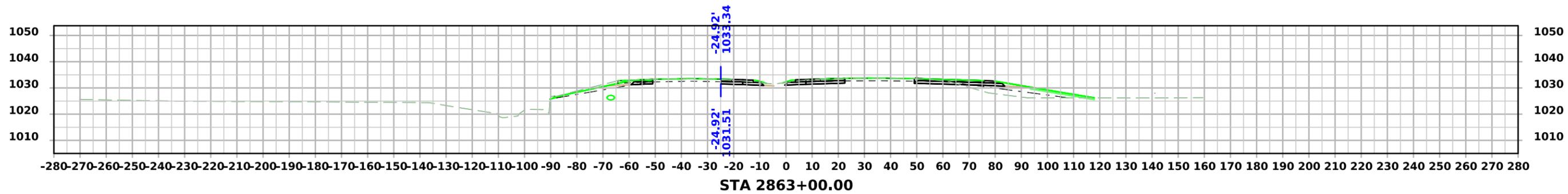
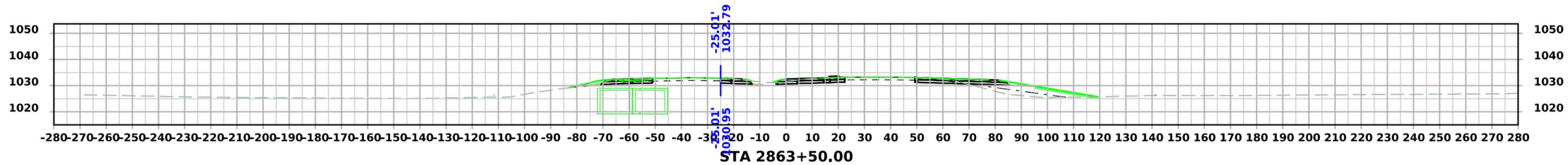
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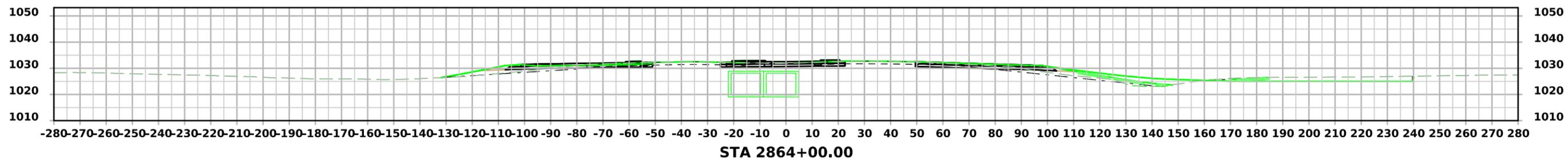
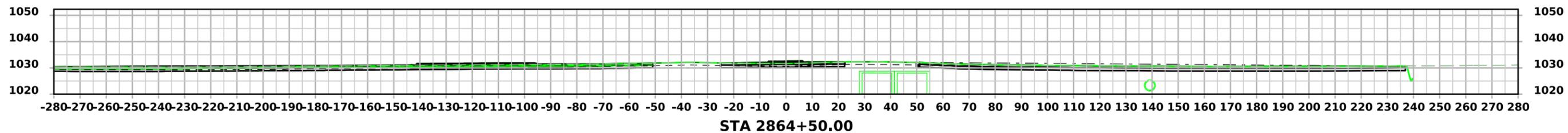
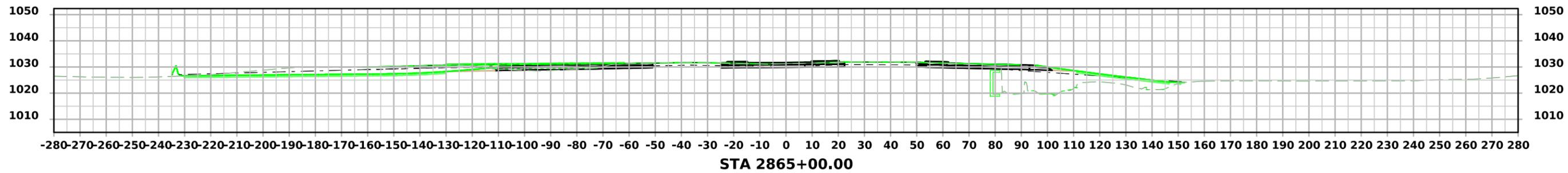
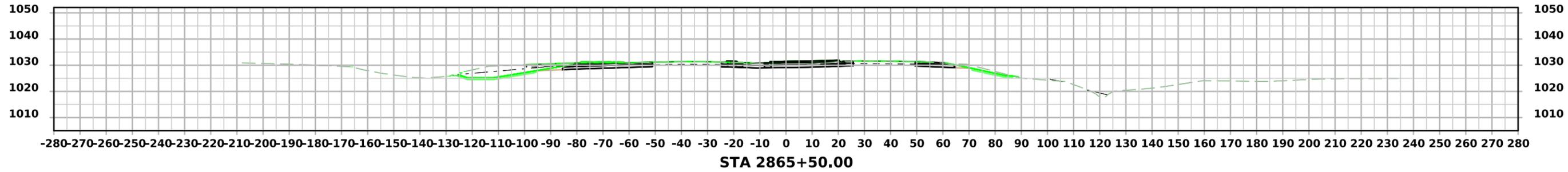
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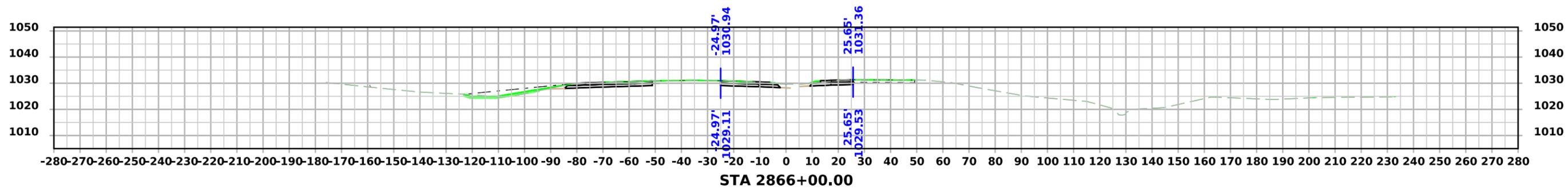
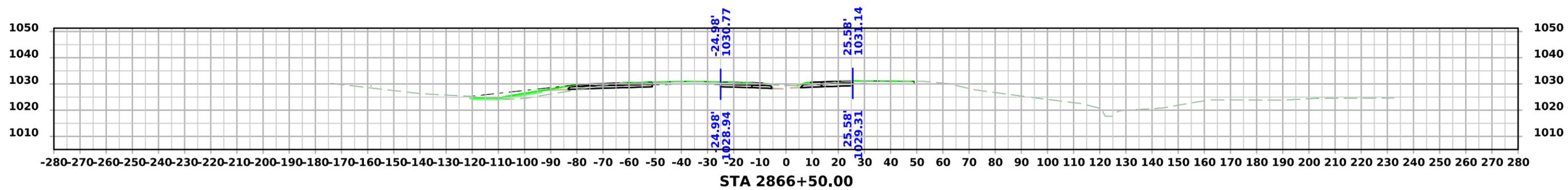
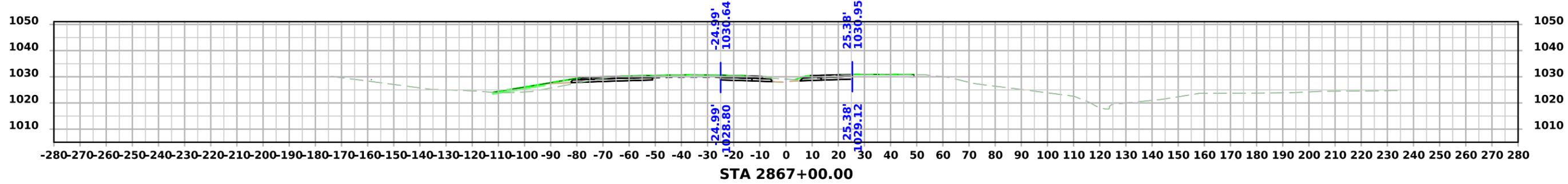
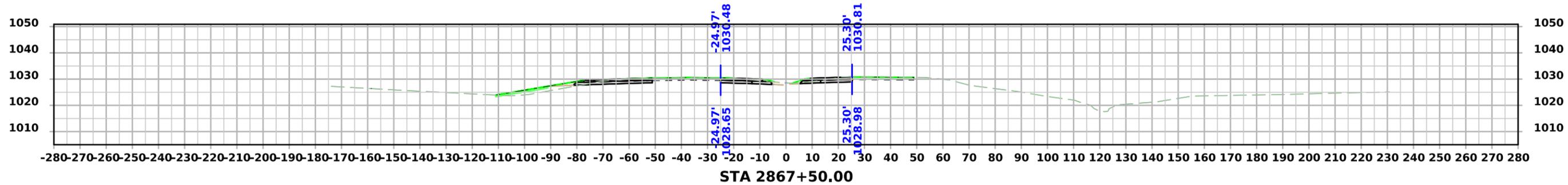
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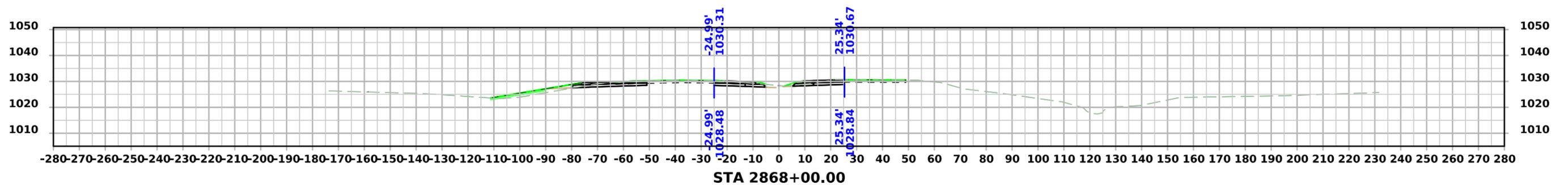
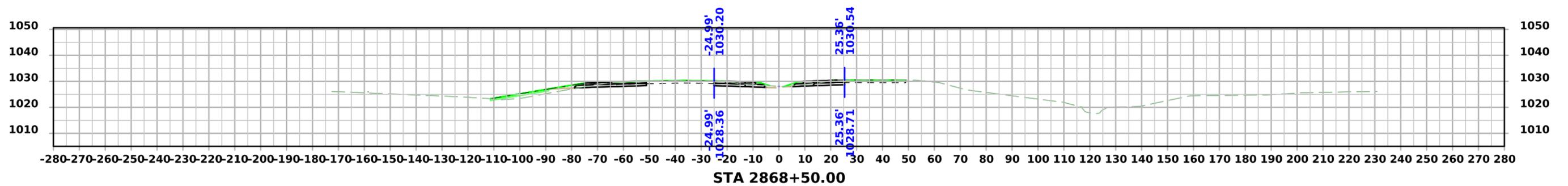
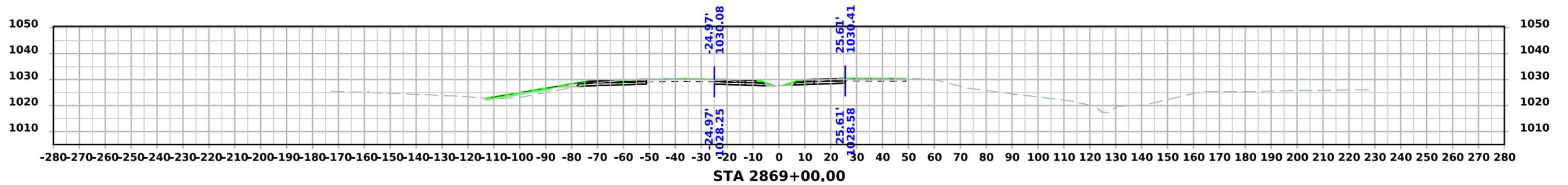
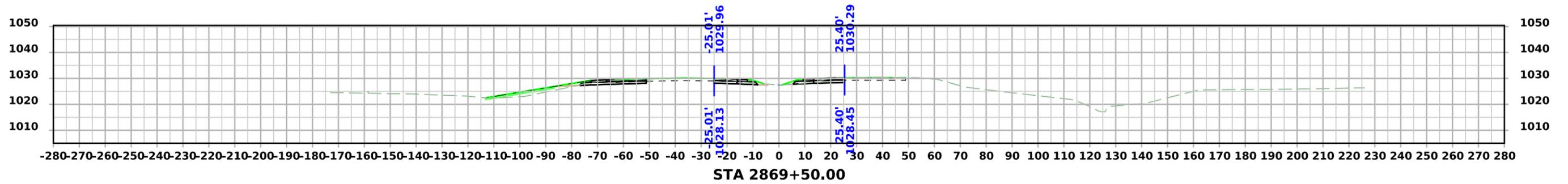
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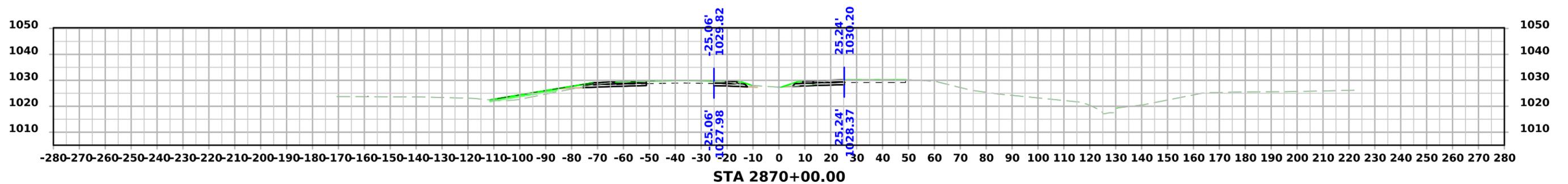
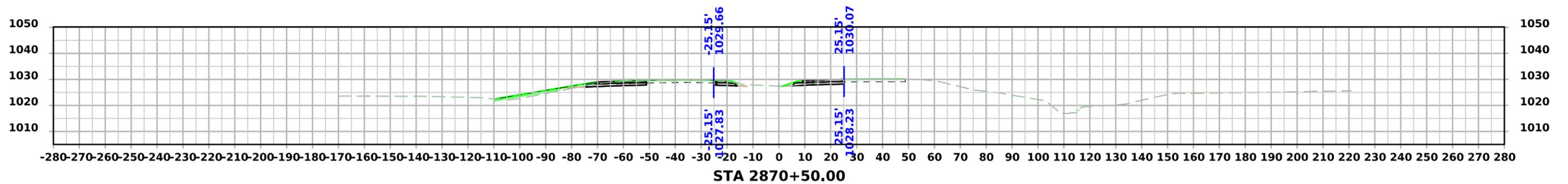
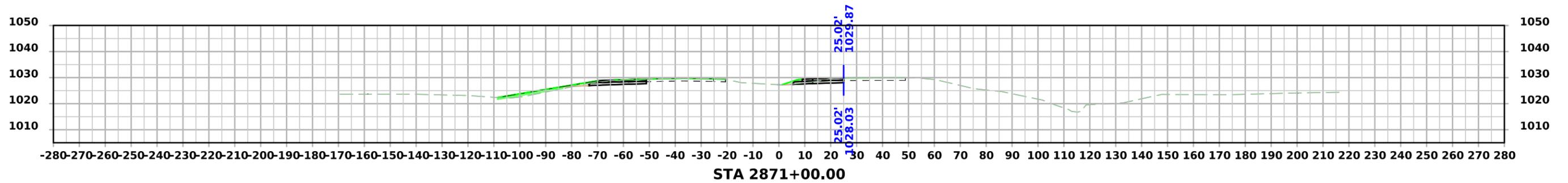
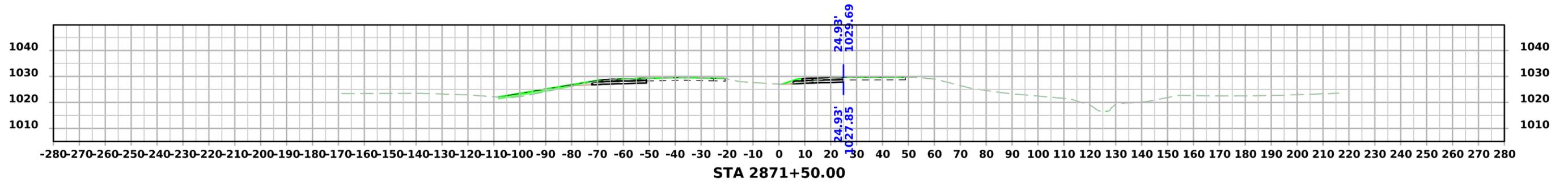
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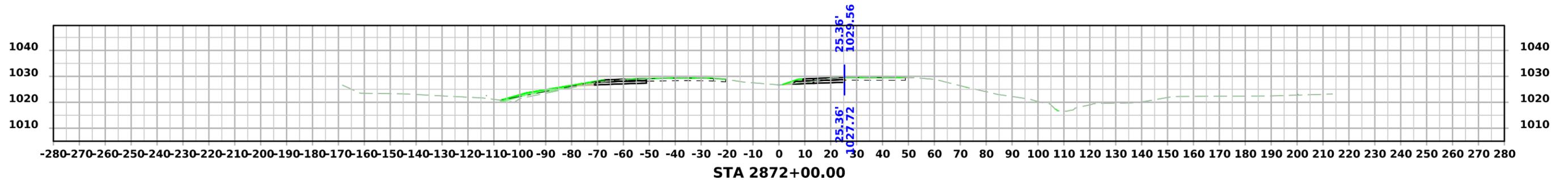
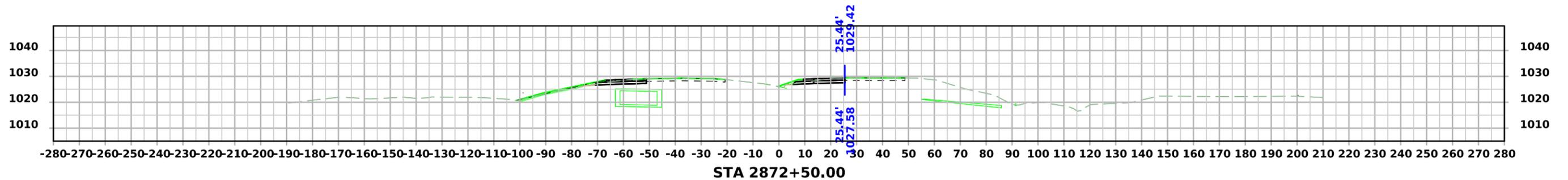
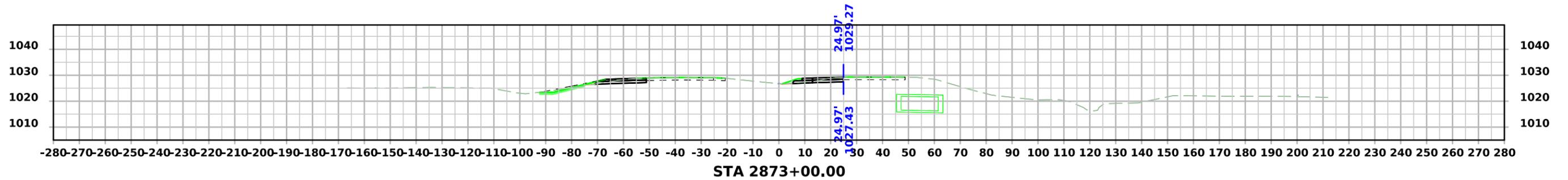
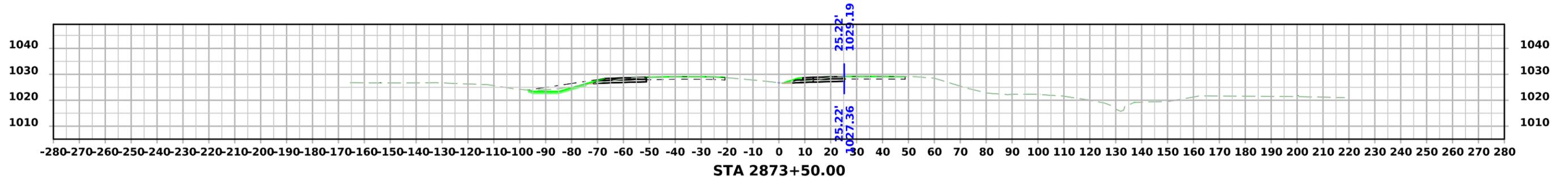
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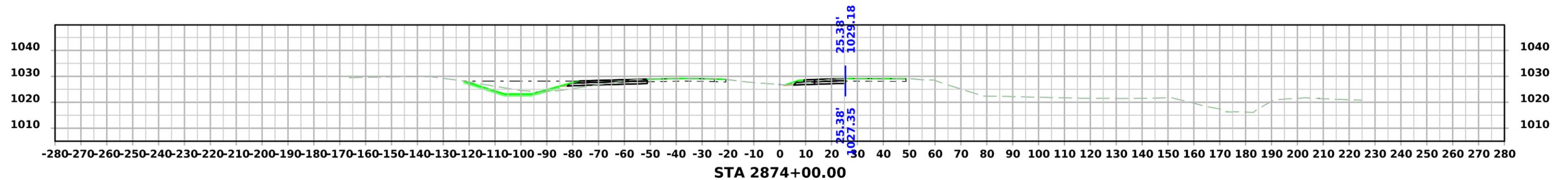
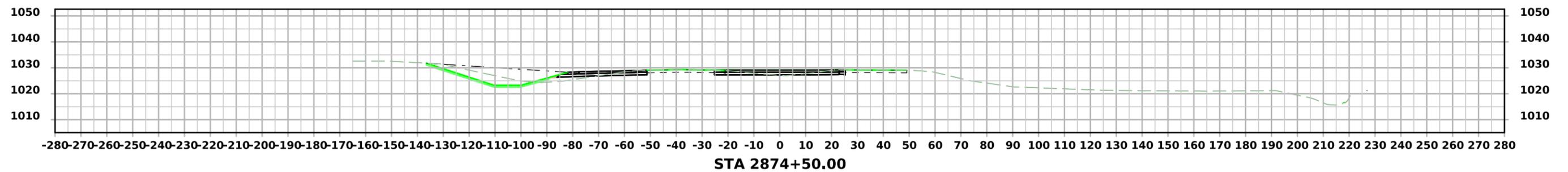
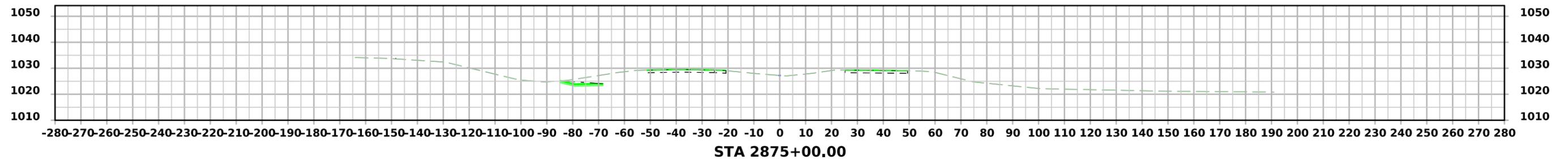
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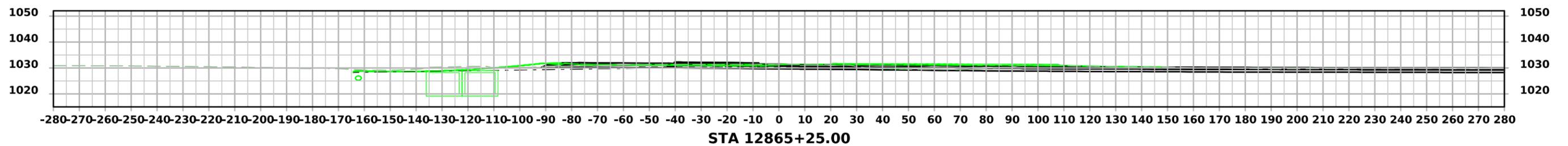
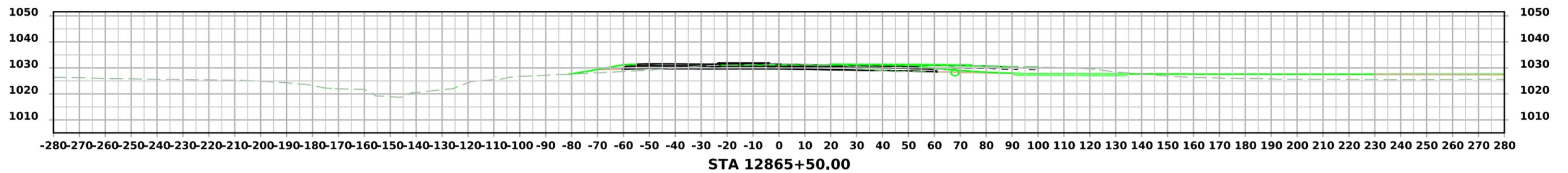
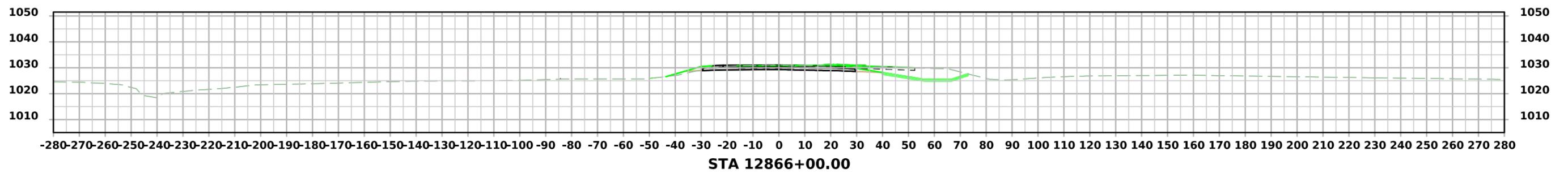
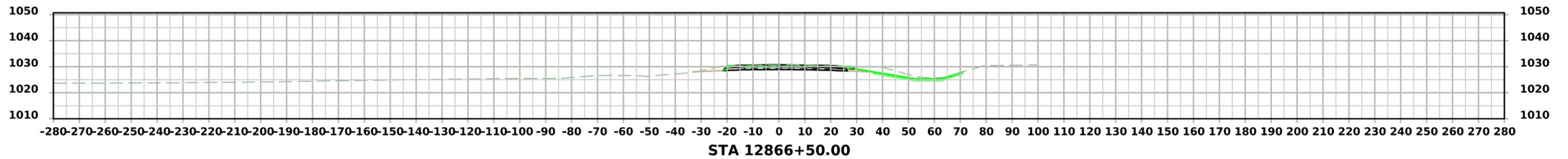
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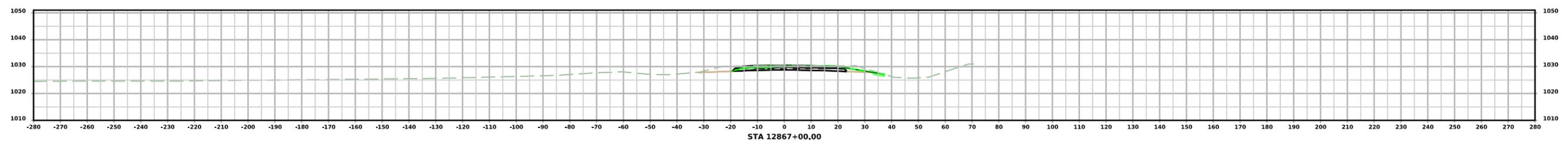
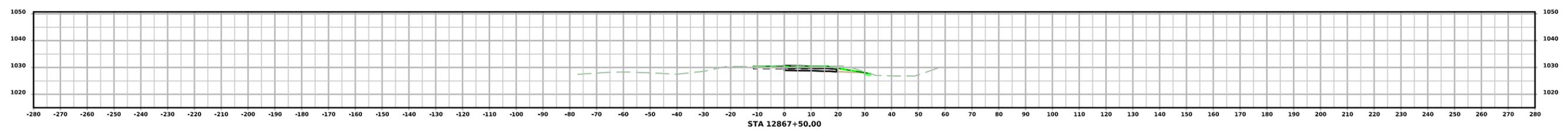
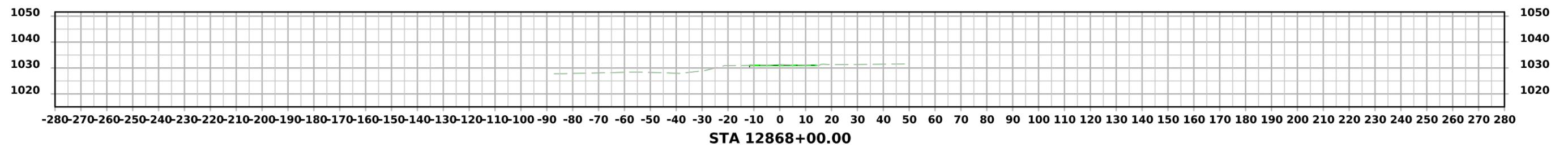
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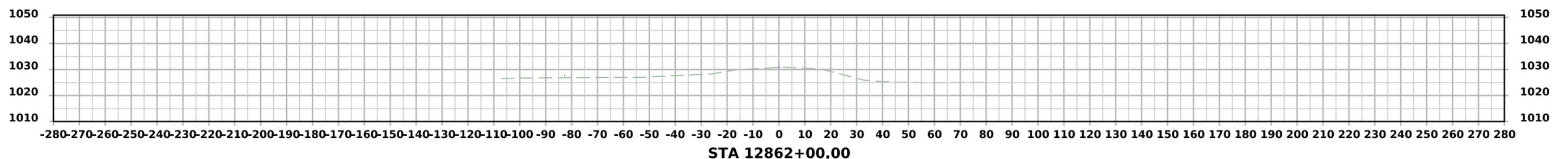
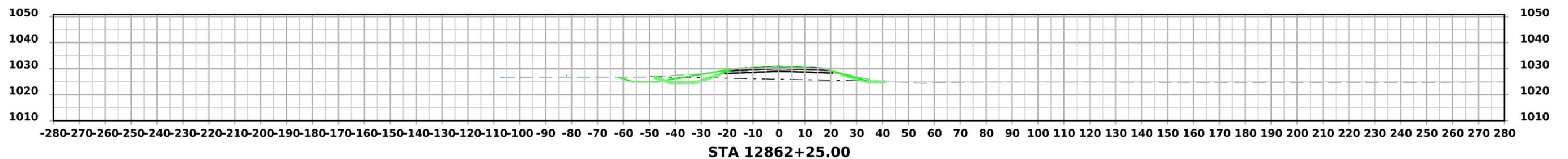
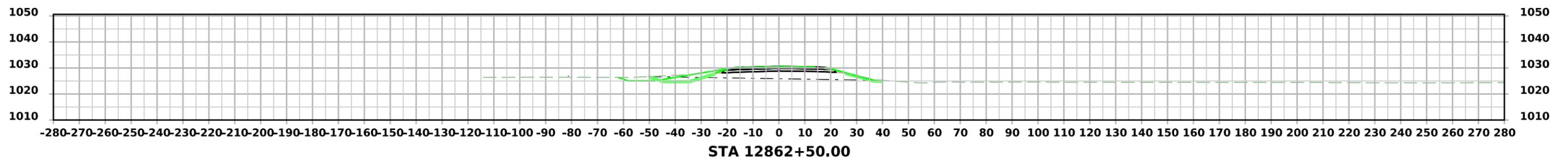
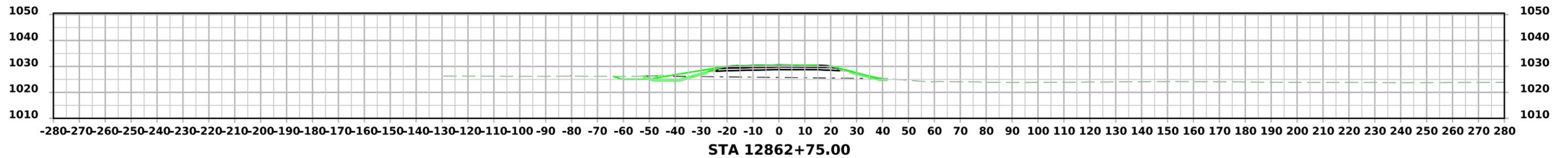
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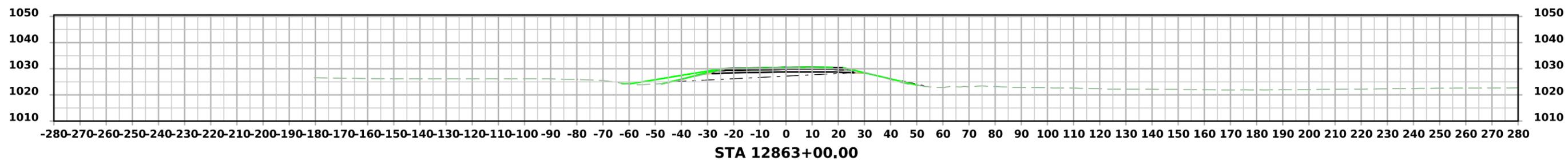
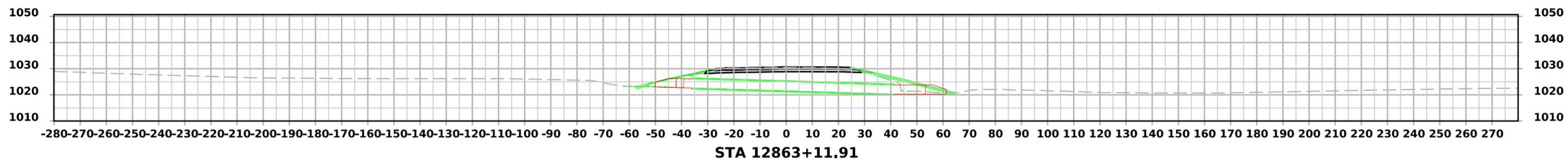
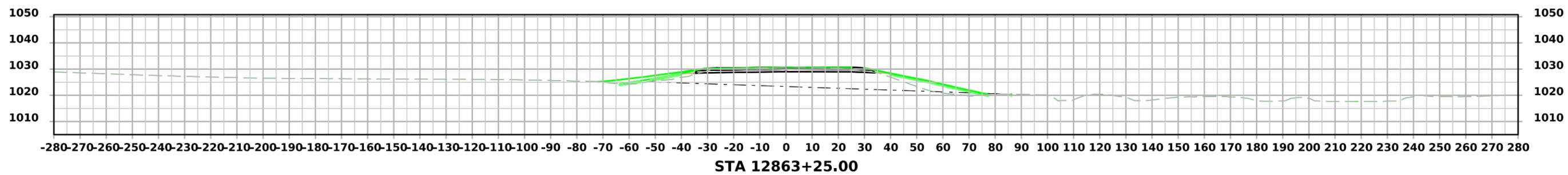
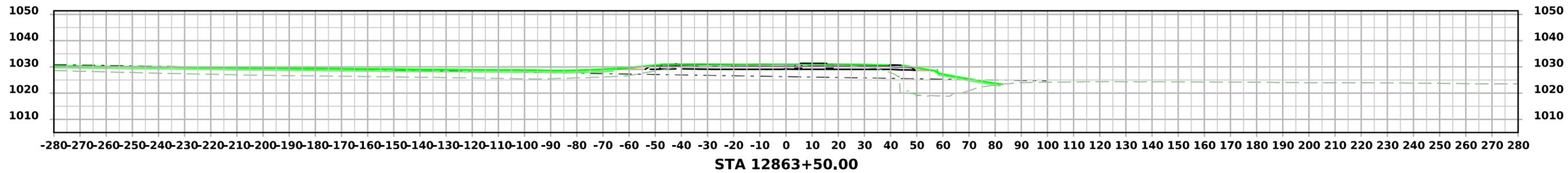
# 3rd AVE SW



# DURHAM AVE



# DURHAM AVE



# DURHAM AVE

