

INDEX OF SHEETS	
No.	DESCRIPTION
<b>A Sheets</b>	<b>Title Sheets</b>
A.1	Title Sheet
A.2	Location Map Sheet
<b>B Sheets</b>	<b>Typical Cross Sections and Details</b>
B.1 - 3	Typical Cross Sections and Details
<b>D Sheets</b>	<b>Mainline Plan and Profile Sheets</b>
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - 3	IA 10
<b>E Sheets</b>	<b>Side Road Plan and Profile Sheets</b>
* E.1 - 2	Jay Ave
* E.3	Roundabout
<b>G Sheets</b>	<b>Survey Sheets</b>
G.1	Reference Ties and Bench Marks
G.2	Horizontal Control Tab. & Super for all Alignments
<b>J Sheets</b>	<b>Traffic Control and Staging Sheets</b>
* J.1	Traffic Control Plan
* J.2	Staging Notes Stage
* J.3	Traffic Control & Staging Legend & Symbol Info. Sheet
* J.4	Staging and Traffic Control Sheets Stage ??
<b>L Sheets</b>	<b>Geometric, Staking and Jointing Sheets</b>
L.1	Geometric & Staking Roundabout
L.3	Jointing Roundabout
<b>V Sheets</b>	<b>Bridge and Culvert Situation Plans</b>
V.1	Retaining Wall
<b>W Sheets</b>	<b>Mainline Cross Sections</b>
W.1 - 8	Mainline Cross Sections
<b>X Sheets</b>	<b>Side Road Cross Sections</b>
X.1 - 5	Jay Ave
X.6 - 10	Roundabout
	* Color Plan Sheets



PLANS OF PROPOSED IMPROVEMENT ON THE  
**PRIMARY ROAD SYSTEM**  
**SIoux COUNTY**  
PCC Pavement - Grade and New  
Jay Ave Intersection in Orange City

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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



IA 10	
DESIGN DATA RURAL	
2020 AADT	6,780 V.P.D.
2023 AADT	9,500 V.P.D.
20 -- DHV	-- V.P.H.
TRUCKS	6 %
Total Design ESALs	--

Jay Ave	
DESIGN DATA RURAL	
2019 AADT	1,570 V.P.D.
20 -- AADT	-- V.P.D.
20 -- DHV	-- V.P.H.
TRUCKS	3 %
Total Design ESALs	--

REVISIONS

TOTAL

PROJECT IDENTIFICATION NUMBER	21-84-010-010
PROJECT NUMBER	HSIPX-010-1(87)--3L-84
R.O.W. PROJECT NUMBER	STPN-010-1(88)--2J-84

INDEX OF SHEETS

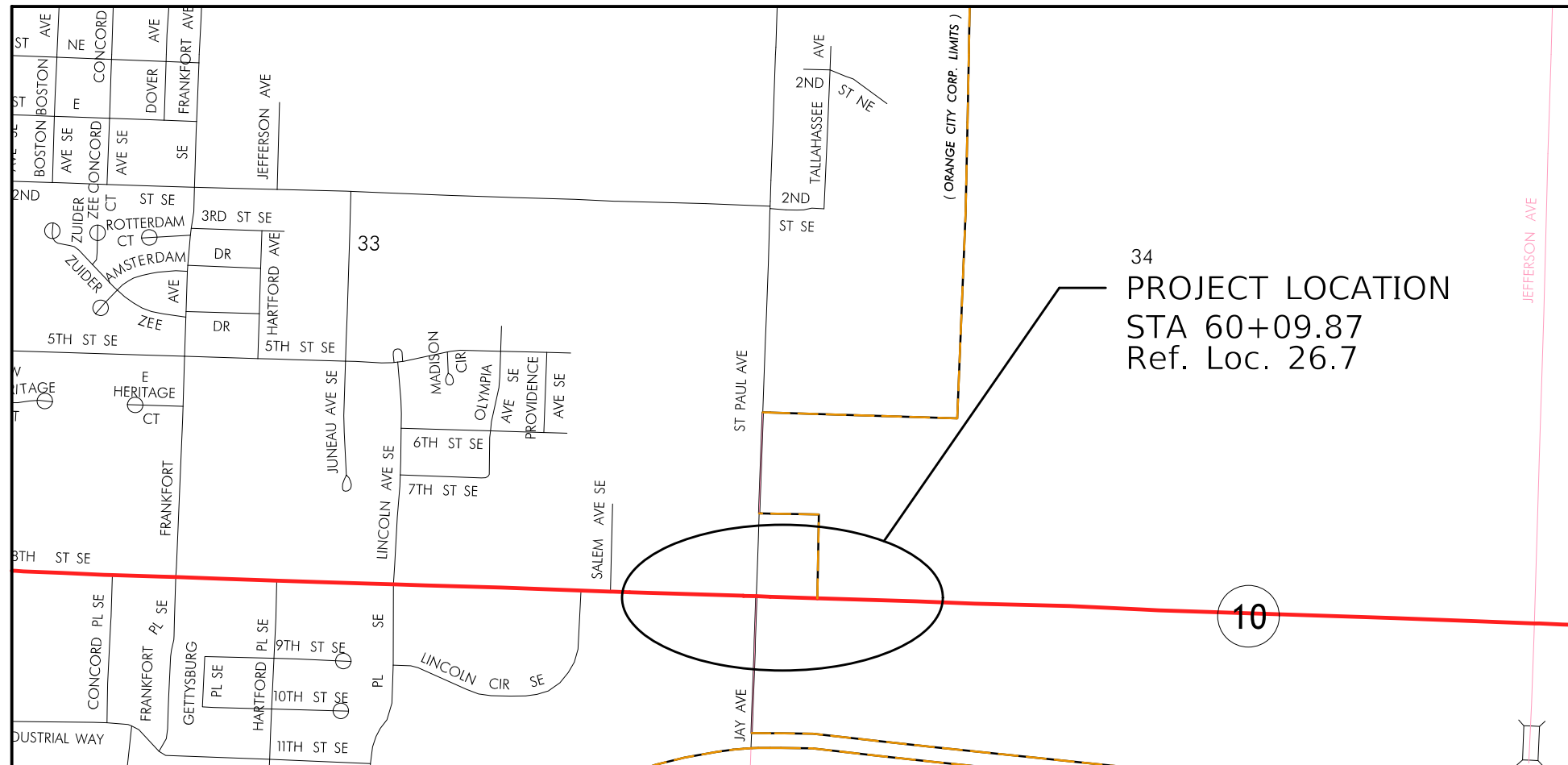
No.	DESCRIPTION
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PRELIMINARY PLANS

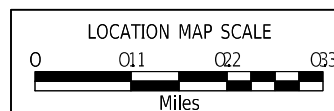
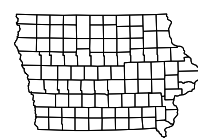
Subject to change by final design.

**D5 PLAN - Date: 11-9-2021**

R-44W



T-95N  
T-94N



### Curbed Shoulder

Shoulder Jointing:  
 Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2  
 Staged : KT-2  
 Transverse: C at 17' spacing

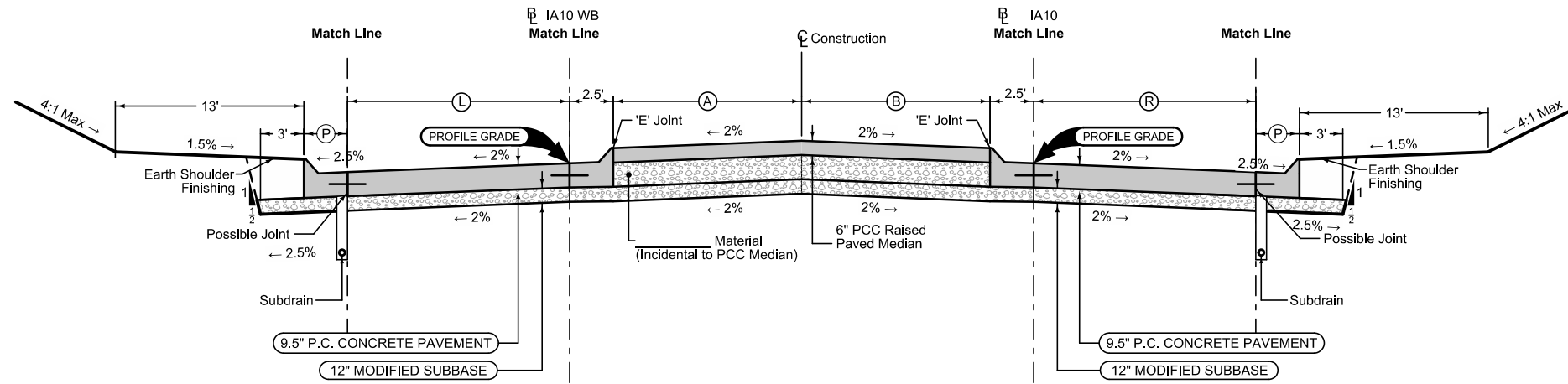
STATION TO STATION		(P) Feet	Curb Type See PV-102
158+50.00	159+67.46	2.5	6" Sloped
160+96.69	162+17.00	2.5	6" Sloped

### Curbed Shoulder

Shoulder Jointing:  
 Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2  
 Staged : KT-2  
 Transverse: C at 17' spacing

STATION TO STATION		(P) Feet	Curb Type See PV-102
160+96.69	161+50.00	2.5	6" Sloped



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

BEGIN STATION	END STATION	(L) Feet
158+50.00	159+67.46	Vari. (14-18)
160+96.69	163+00.00	Vari. (18-12)

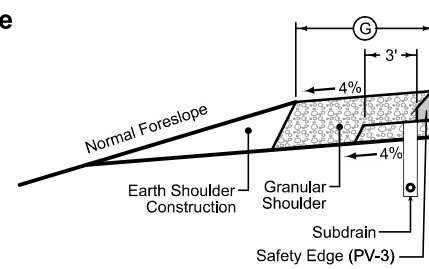
4DP_Raised_Out_L 04-21-20			
BEGIN STATION	END STATION	(A) Feet	(B) Feet
158+50.00	159+67.46		
160+96.69	162+98.00		

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

BEGIN STATION	END STATION	(R) Feet
158+50.00	159+67.46	Vari. (12-18)
160+96.69	163+00.00	Vari. (18-12)

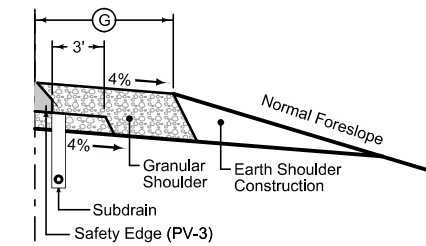
### Granular Shoulder with Safety Edge

STATION TO STATION		(G) Feet
162+17.00	163+00.00	10



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

2P_ 04-21-20		
STATION TO STATION	(AL) Feet	
158+50.00	158+55.00	14
163+98.00	163+00.00	14



### Granular Shoulder with Safety Edge

STATION TO STATION		(G) Feet
161+50.00	163+00.00	10

See Tab 100-24 or 100-25 for pavement quantities.  
 See Tab 112-9 for shoulder quantities.

### Curbed Shoulder

Shoulder Jointing:  
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2  
Staged: KT-2  
Transverse: C at 17' spacing

STATION TO STATION		(P) Feet	Curb Type See PV-102
2057+34.00	2059+32.46	2.5	6" Standard
2060+61.13	2061+38.00	2.5	6" Standard

### Curbed Shoulder

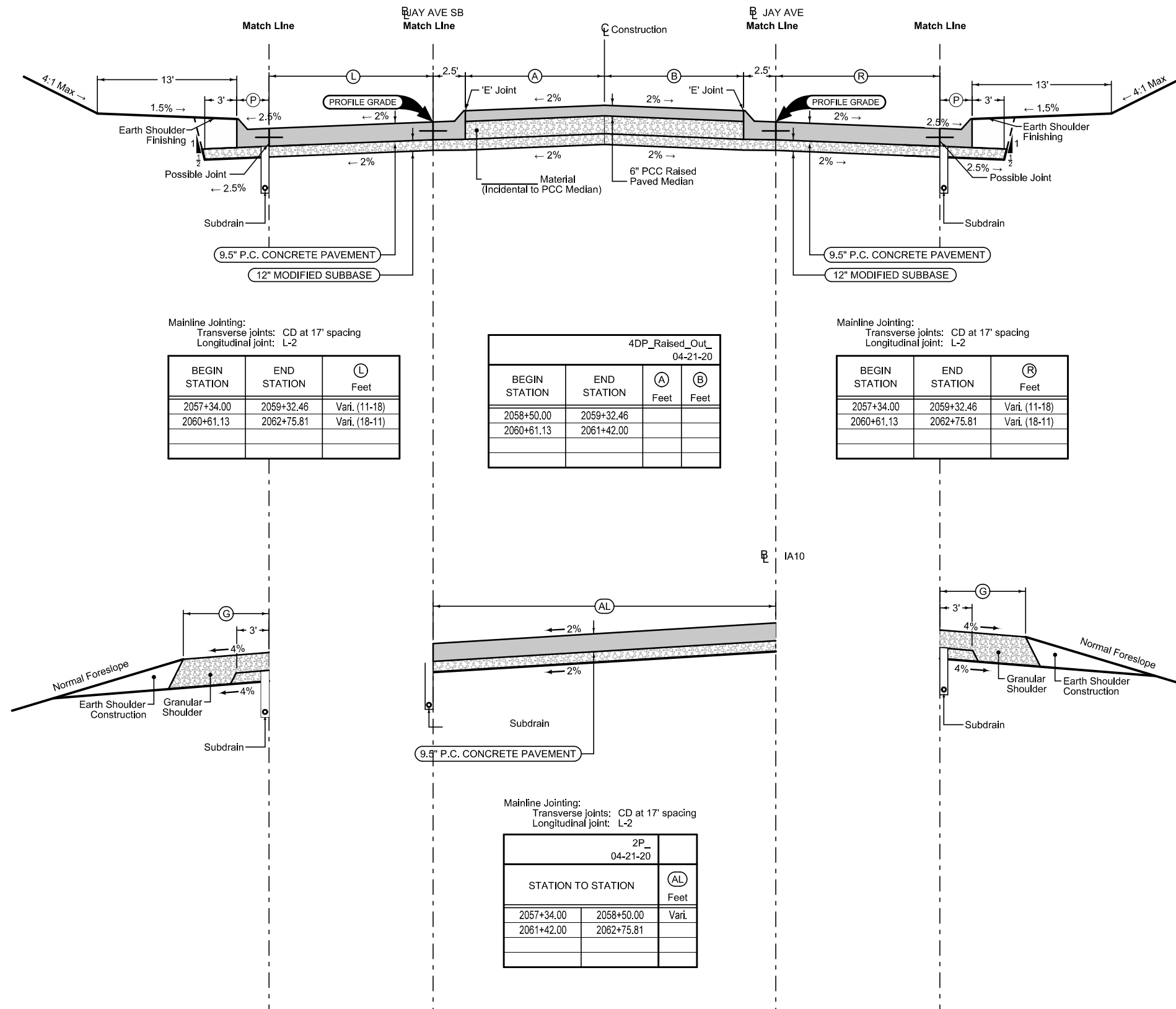
Shoulder Jointing:  
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2  
Staged: KT-2  
Transverse: C at 17' spacing

STATION TO STATION		(P) Feet	Curb Type See PV-102
2057+34.00	2059+32.46	2.5	6" Standard
2060+61.13	2061+15.00	2.5	6" Standard

### Granular Shoulder

STATION TO STATION		(G) Feet
2061+38.00	2062+75.81	3



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

BEGIN STATION	END STATION	(L) Feet
2057+34.00	2059+32.46	Vari. (11-18)
2060+61.13	2062+75.81	Vari. (18-11)

4DP_Raised_Out_L 04-21-20			
BEGIN STATION	END STATION	(A) Feet	(B) Feet
2058+50.00	2059+32.46		
2060+61.13	2061+42.00		

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

BEGIN STATION	END STATION	(R) Feet
2057+34.00	2059+32.46	Vari. (11-18)
2060+61.13	2062+75.81	Vari. (18-11)

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

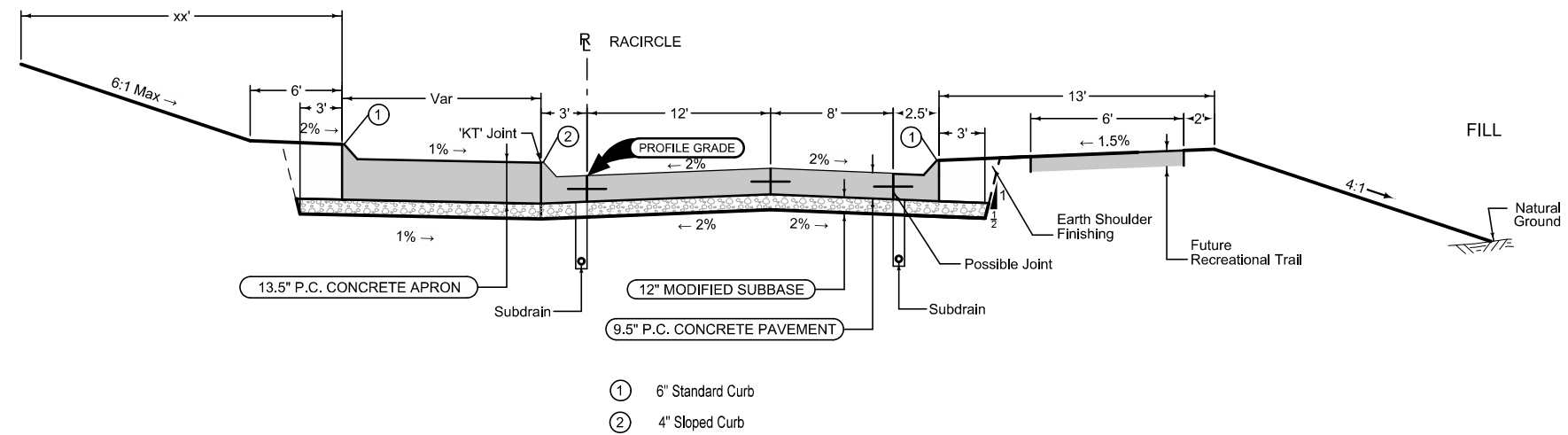
2P_ 04-21-20		(AL) Feet
2057+34.00	2058+50.00	Vari.
2061+42.00	2062+75.81	

### Granular Shoulder

STATION TO STATION		(G) Feet
2061+15.00	2062+75.81	3

See Tab 100-24 or 100-25 for pavement quantities.  
See Tab 112-9 for shoulder quantities.

## Jay Ave



LOCATION		
ROAD IDENTIFICATION	STATION TO STATION	
RACIRCLE	xx	xx

Note: See 'L' Sheets for Jointing Layout

See Tab 100-24 or 100-25 for pavement quantities.  
See Tab 112-9 for shoulder quantities.

### Roundabout

### SURVEY SYMBOLS

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

### UTILITY LEGEND

- T1
- T2
- T3
- T5
- E1
- F02
- G
- SAN
- W
- ST S
- Water Hydrant

### 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.	
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

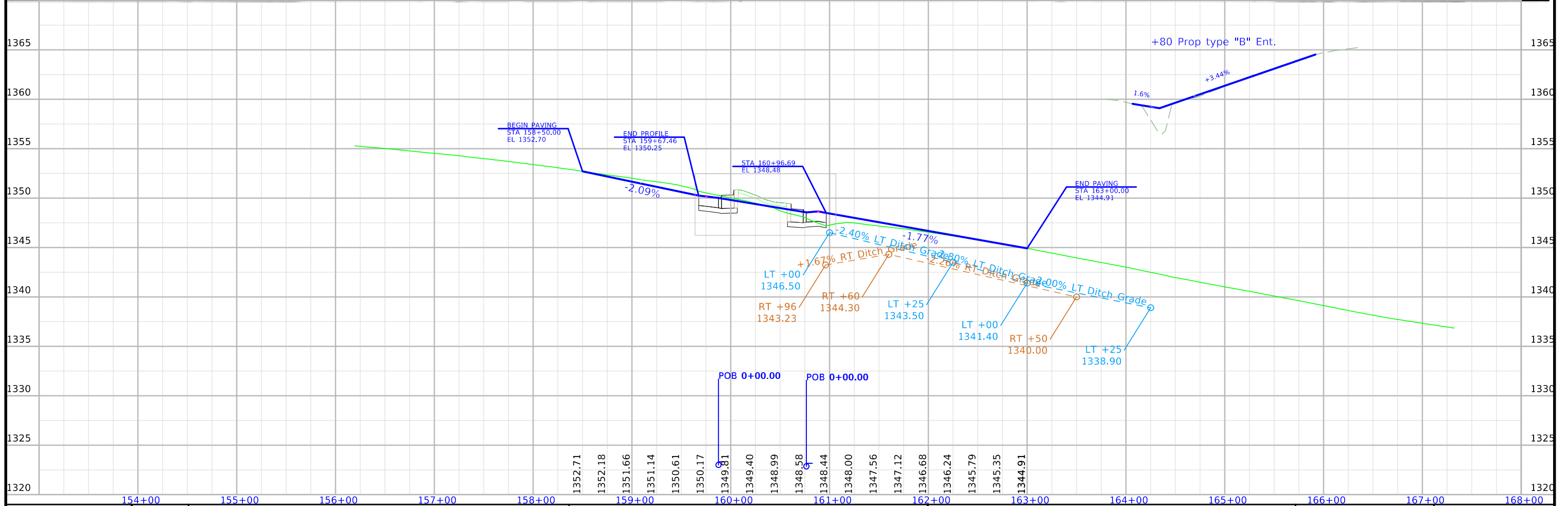
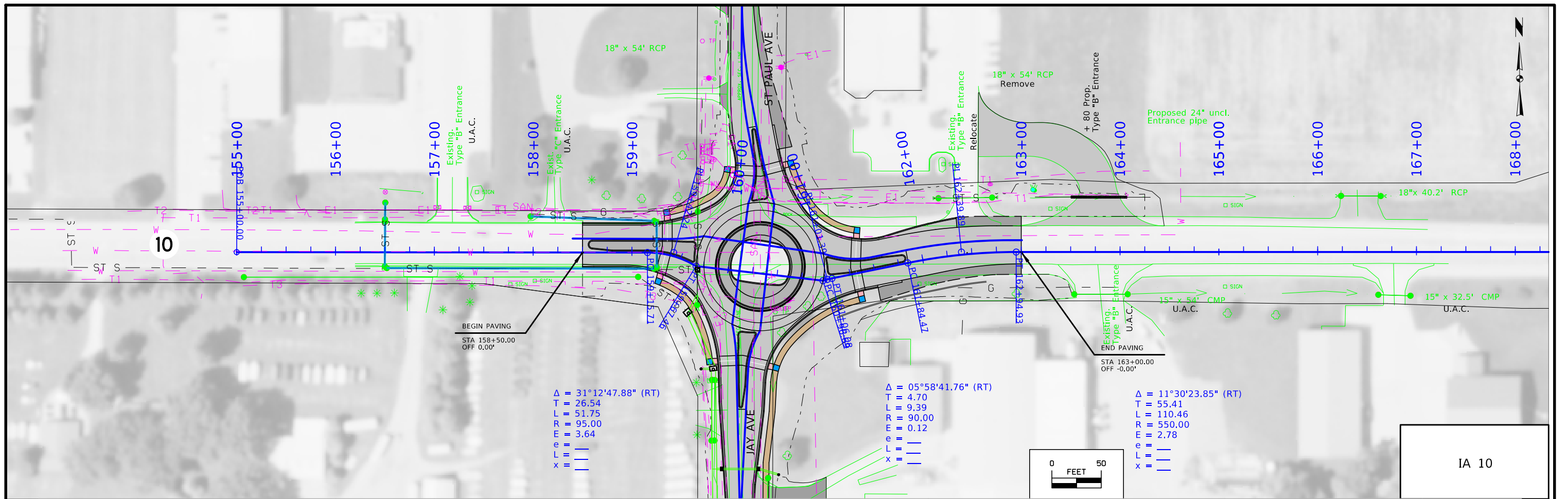
- Reference Point
- Station
- Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- Pavement Removal
- Clearing & Grubbing Area

### RIGHT-OF-WAY LEGEND

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

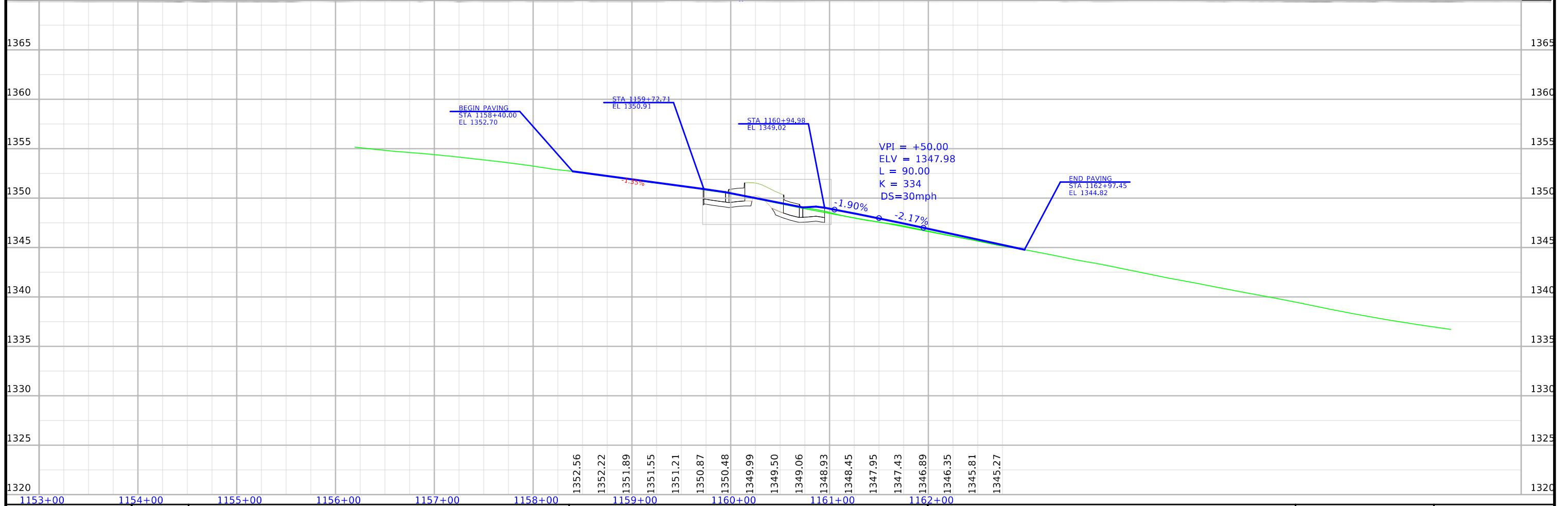
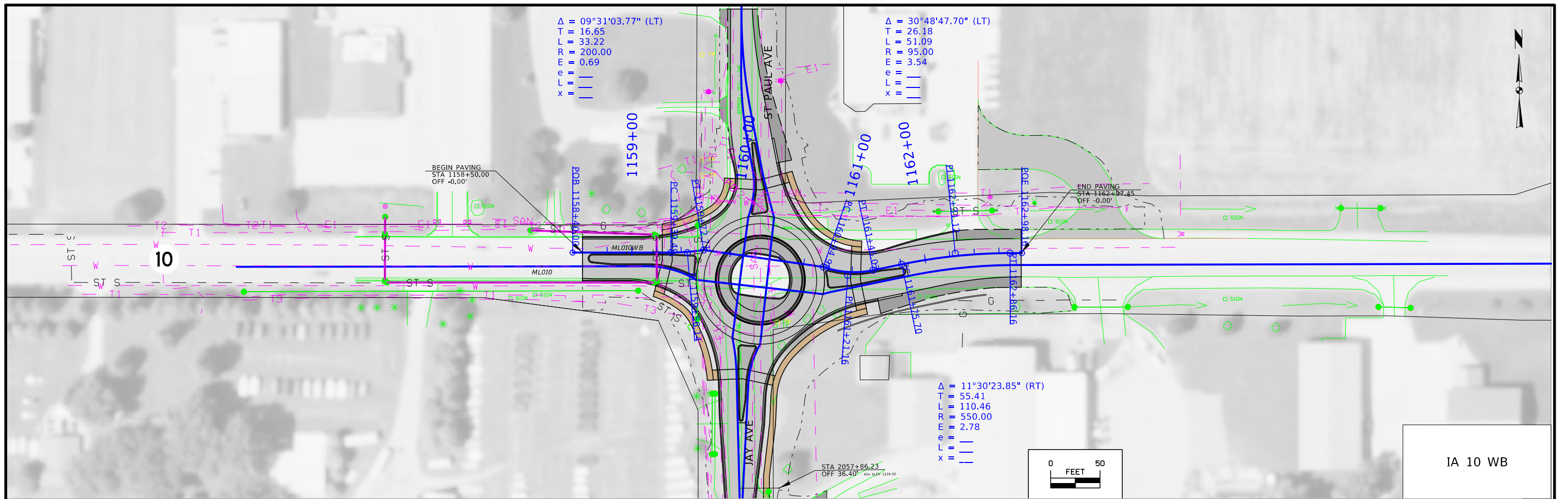
## PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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



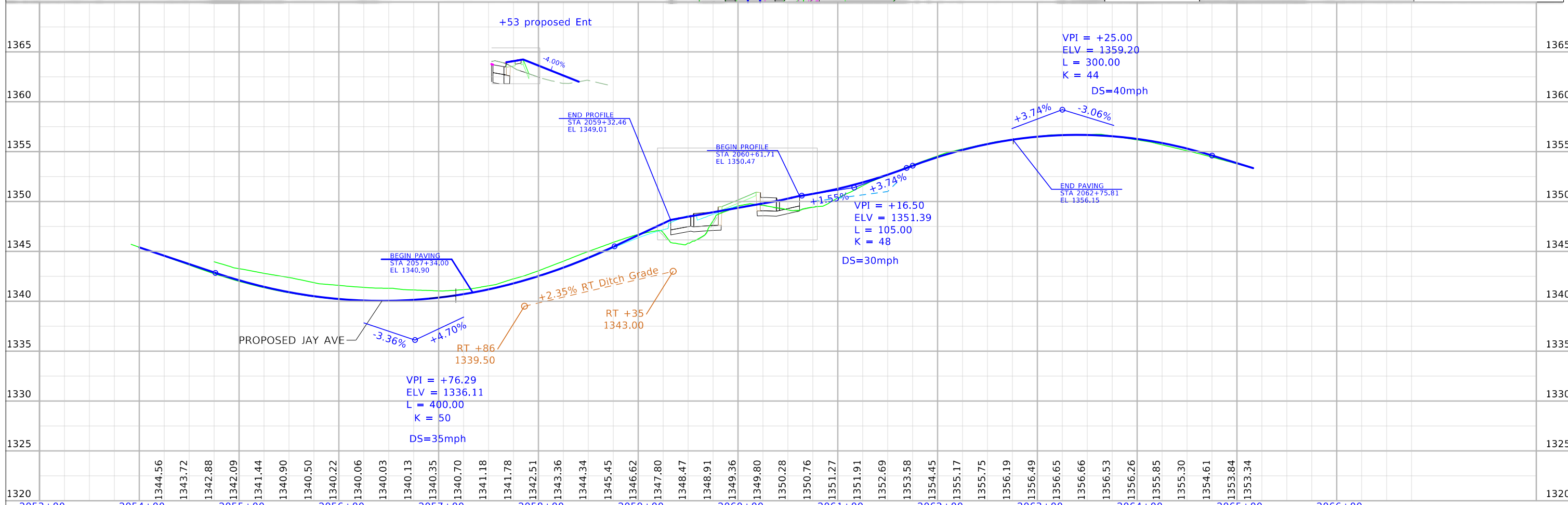
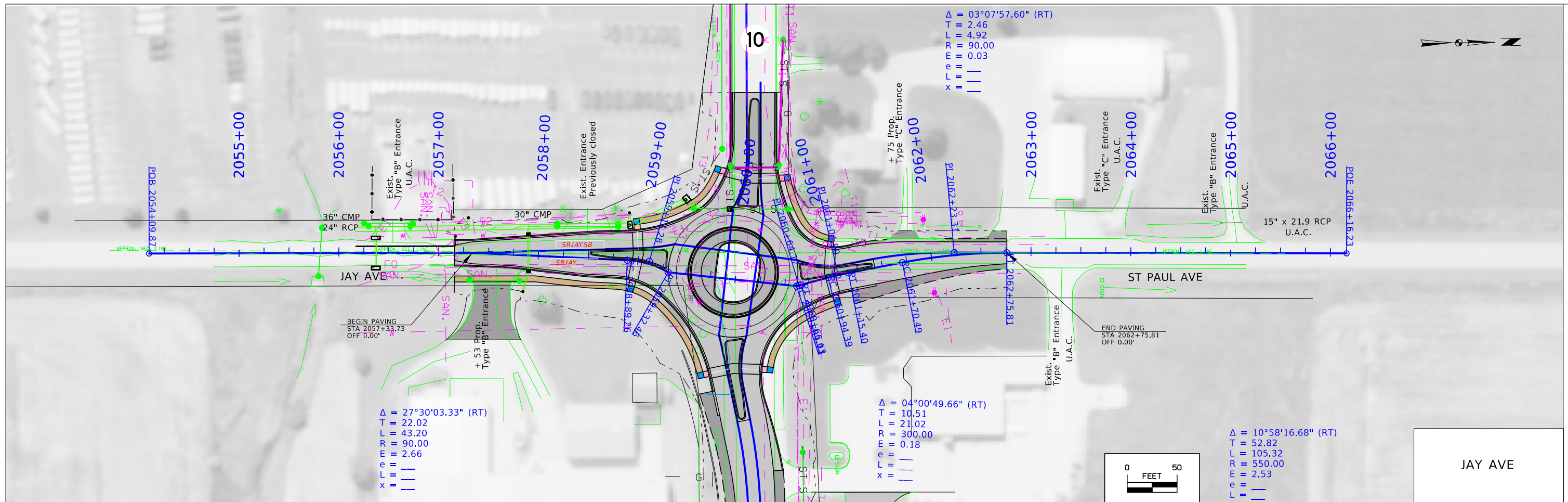
FILE NO.	ENGLISH	DESIGN TEAM Holst   Strum   Schrock	SIoux COUNTY	PROJECT NUMBER HSIPX-010-1(87)--3L-84	SHEET NUMBER D,2
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00+0 00+0

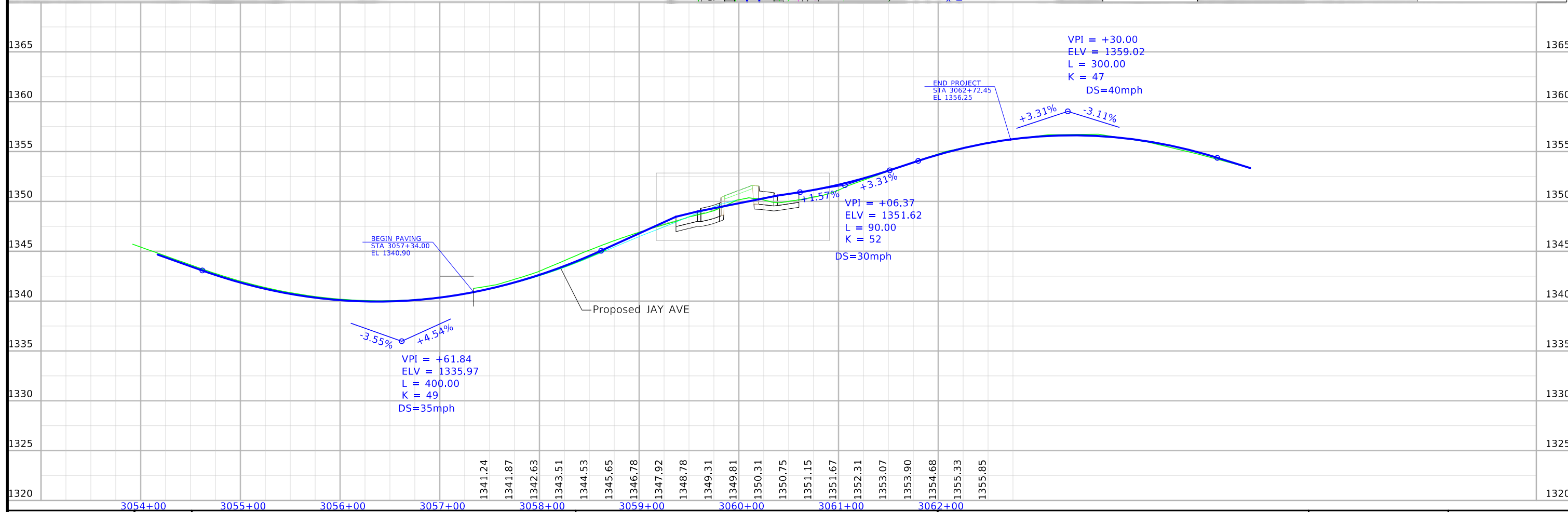
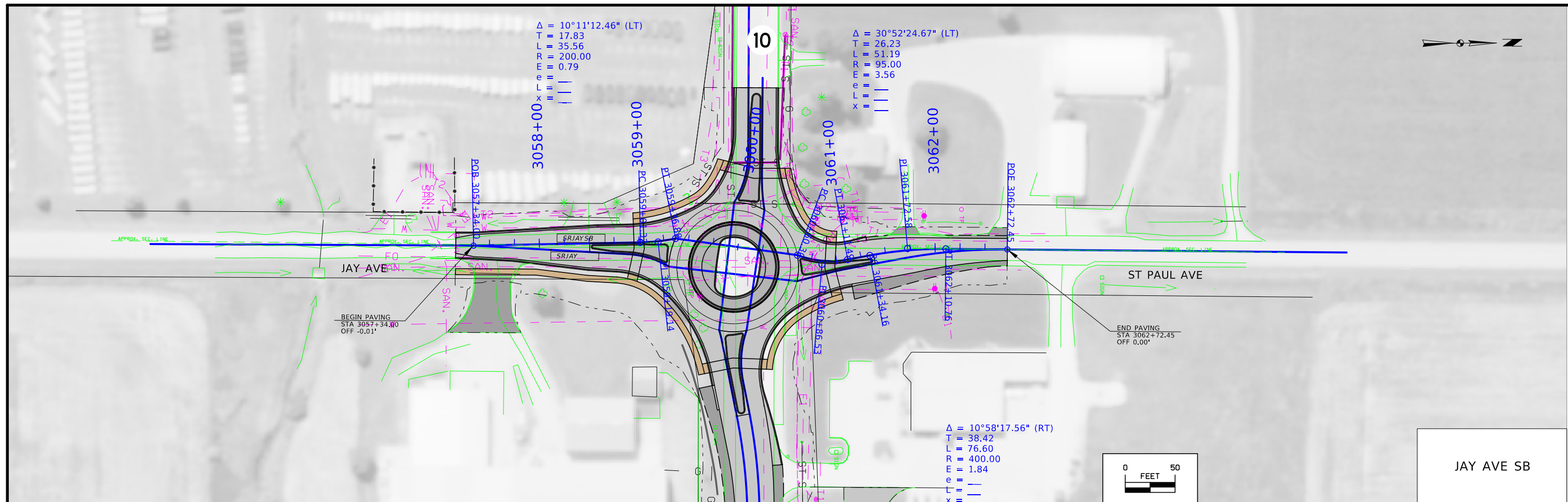


1153+00	1154+00	1155+00	1156+00	1157+00	1158+00	1159+00	1160+00	1161+00	1162+00	SIoux COUNTY	PROJECT NUMBER HSIPX-010-1(87)--3L-84	SHEET NUMBER D.3
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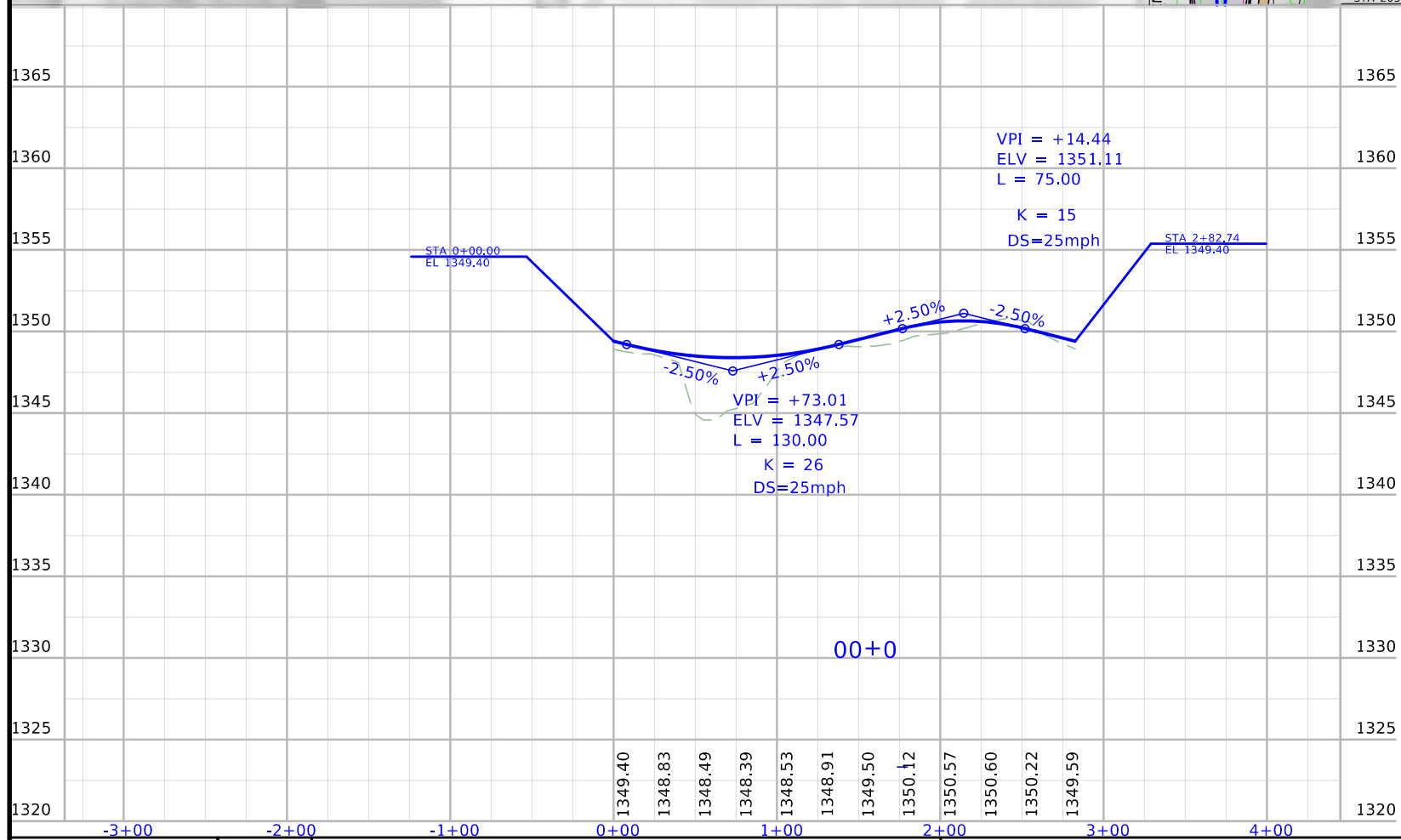
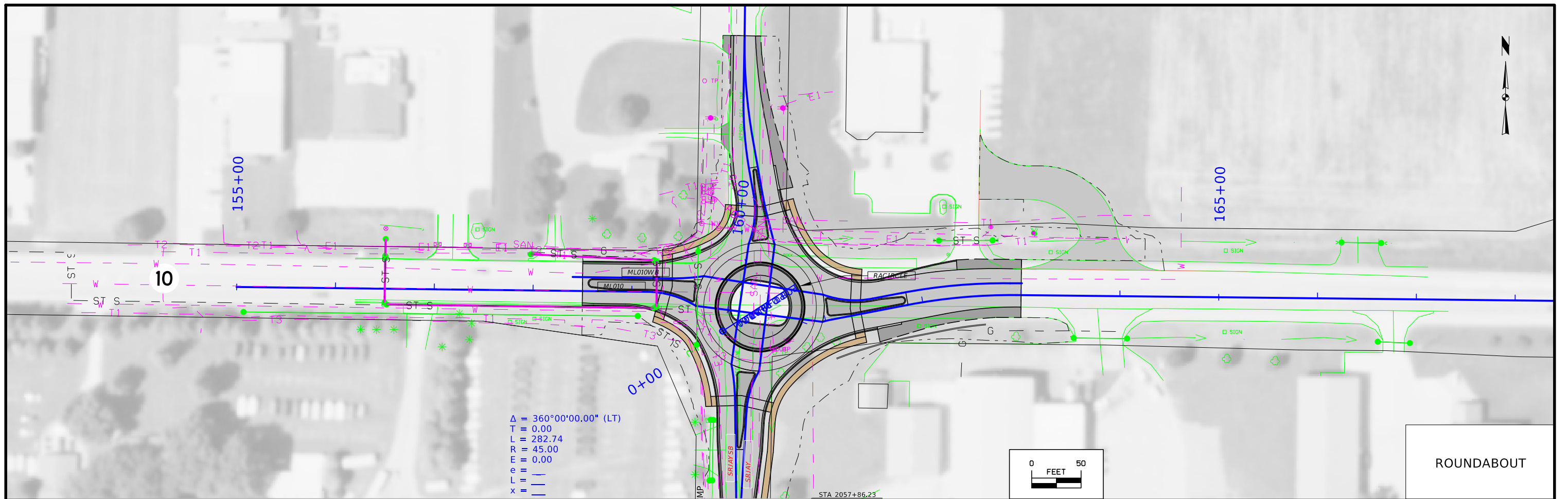




FILE NO.	ENGLISH	DESIGN TEAM	SIoux COUNTY	PROJECT NUMBER	SHEET NUMBER
		Holst   Strum   Schrock		HSIPX-010-1(87)--3L-84	E.1



FILE NO.	ENGLISH	DESIGN TEAM Holst \ Strum \ Schrock	SIoux COUNTY	PROJECT NUMBER HSIPX-010-1(87)--3L-84	SHEET NUMBER E,2
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## Survey Information

**Sioux County**  
**H SIPX-010-1(87)--3L-84**  
**Jay Ave Intersection in Orange City**  
**PCC Pavement - Grade and New**  
**PIN 16-07-020-030**  
**Sap-404.1**

### Party Personnel

Jim Sailor- Land Surveyor  
Kris Bliven- Survey Party Chief  
Jeffrey Duncan- Engineering Technician Senior

### Date(s) of Survey

Begin Date                    04/28/2021  
End Date                      05/03/2021

### General Information

Measurement units for this survey are US survey feet. This survey is for proposed roundabout at Jay Ave in Orange City. Project datum and control information is provided by Design Survey Office. This project is a Full DTM without Photo control.

### Project Control

Primary geodetic style three-dimensional project control monuments are found or placed at approximate ½ to 1 mile intervals throughout this project. Datum was accessed via GNSS static survey observations using Iowa Real Time Network reference stations in the area. Other legacy datum monuments in the area were surveyed comparing legacy coordinates to validate the results of the local project network adjustment. Comparisons validate results. For additional details of the control survey see the control survey report in the CONTROL file folder of the PrelimSurvey project directory.

**PROJECT DATUM: NAD83(2011) EPOCH 2010.00**  
**VERTICAL DATUM: NAVD88**  
**COORDINATE SYSTEM: IOWA REGIONAL COORDINATE SYSTEM ZONE 1**

### Alignment Information

The horizontal alignment for this survey was provided by District 3 R.O.W. office.

## 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

1a. Regional Coordinate System Zone 1

Coordinate listing from next sheet will be used with 1aRTN 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

1a. Regional Coordinate System Zone 1  
Project Control Marks are Bench Marks

Point Name	Northing	Easting	Elevation	Feature Definition-Description
CP1	9527101.573	11286449.02	1401.873	CP SET 5/8IN REBAR AT -6IN DP 105FT S OF S BACK OF CURB HWY 10 23FT W CL DRIVE ENT 20FT E OF NW COR PARKING LOT
CP2	9527054.661	11290443.25	1329.178	CP 3/4IN PIPE W/YELLOW DOT CAP 105FT S OF CL HWY 10 89FT SE TOP OF E OUTLET RCP 18FT E OF E BANK OF CREEK
CP3	9527054.469	11292054.53	1335.794	CP 3/4IN PIPE W/YELLOW DOT CAP 95FT WSW OF PP 77FT S CL HWY 10 40FT W OF EL OF ENT EXTENDED

**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

**TRAFFIC CONTROL PLAN** 108-23A  
08-01-08

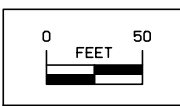
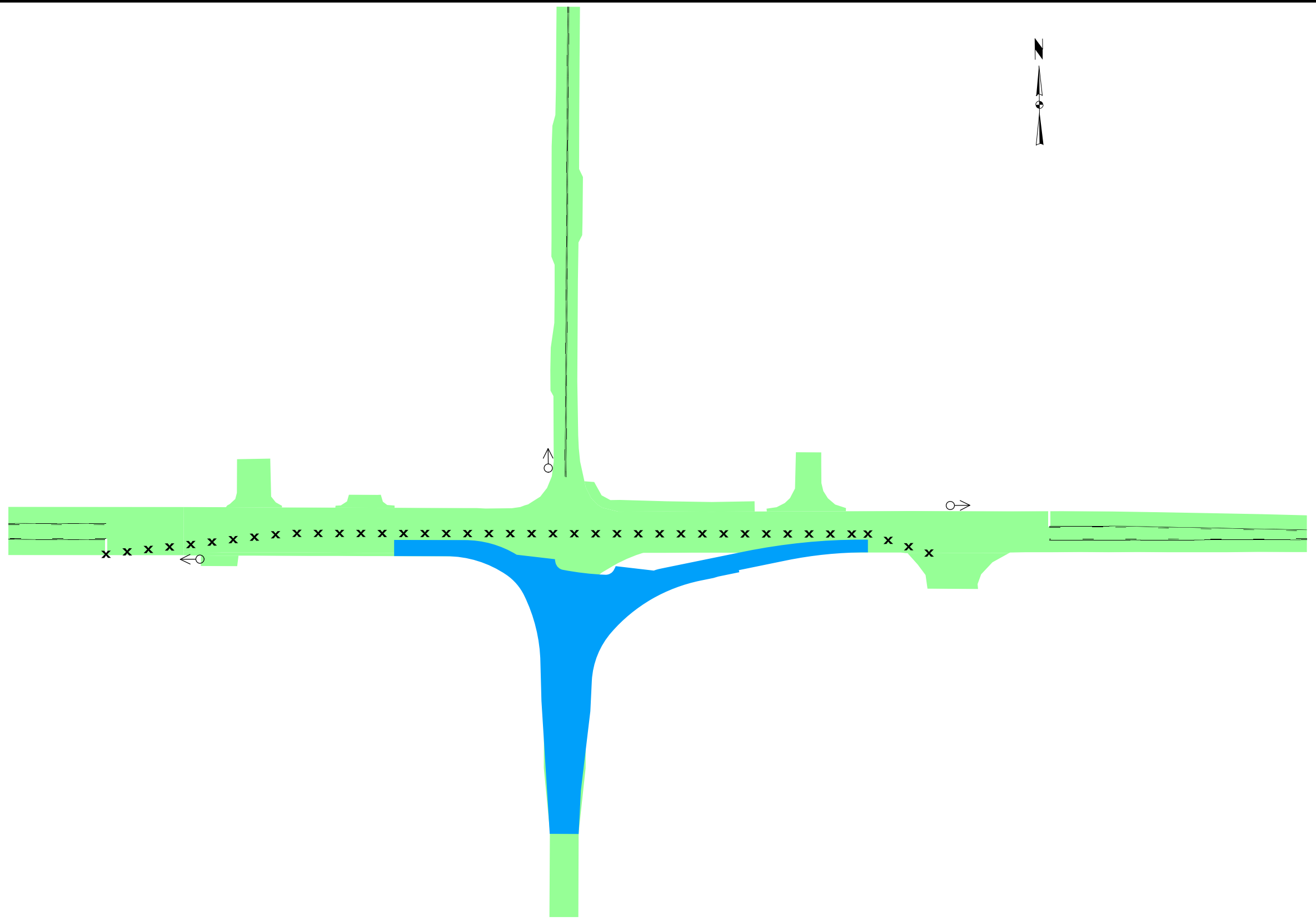
Maintain traffic along IA 10 during construction using signals.

**STAGING NOTES** 108-26A  
08-01-08

Stage 1  
 Close Jay Ave south of IA 10  
 Maintain Jay Ave north of IA 10 and a single lane of traffic on existing IA 10 using signals  
  
 Construct southern portion of off-alignment roundabout

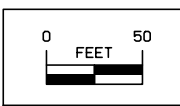
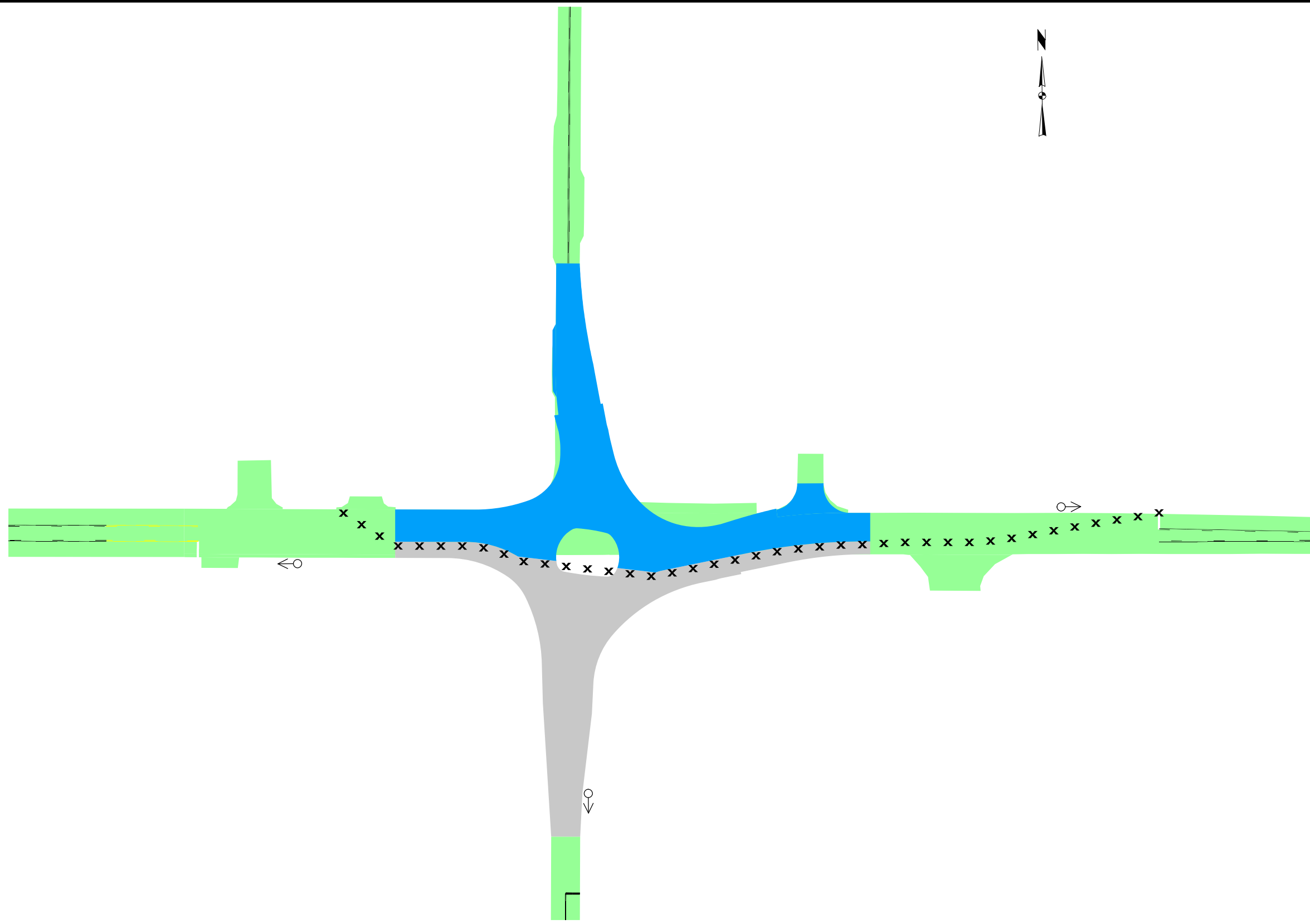
Stage 2  
 Close Jay Ave north of IA 10  
 Reopen Jay Ave south of IA 10  
 Shift single lane of IA 10 to new pavement  
  
 Finish construction of the roundabout

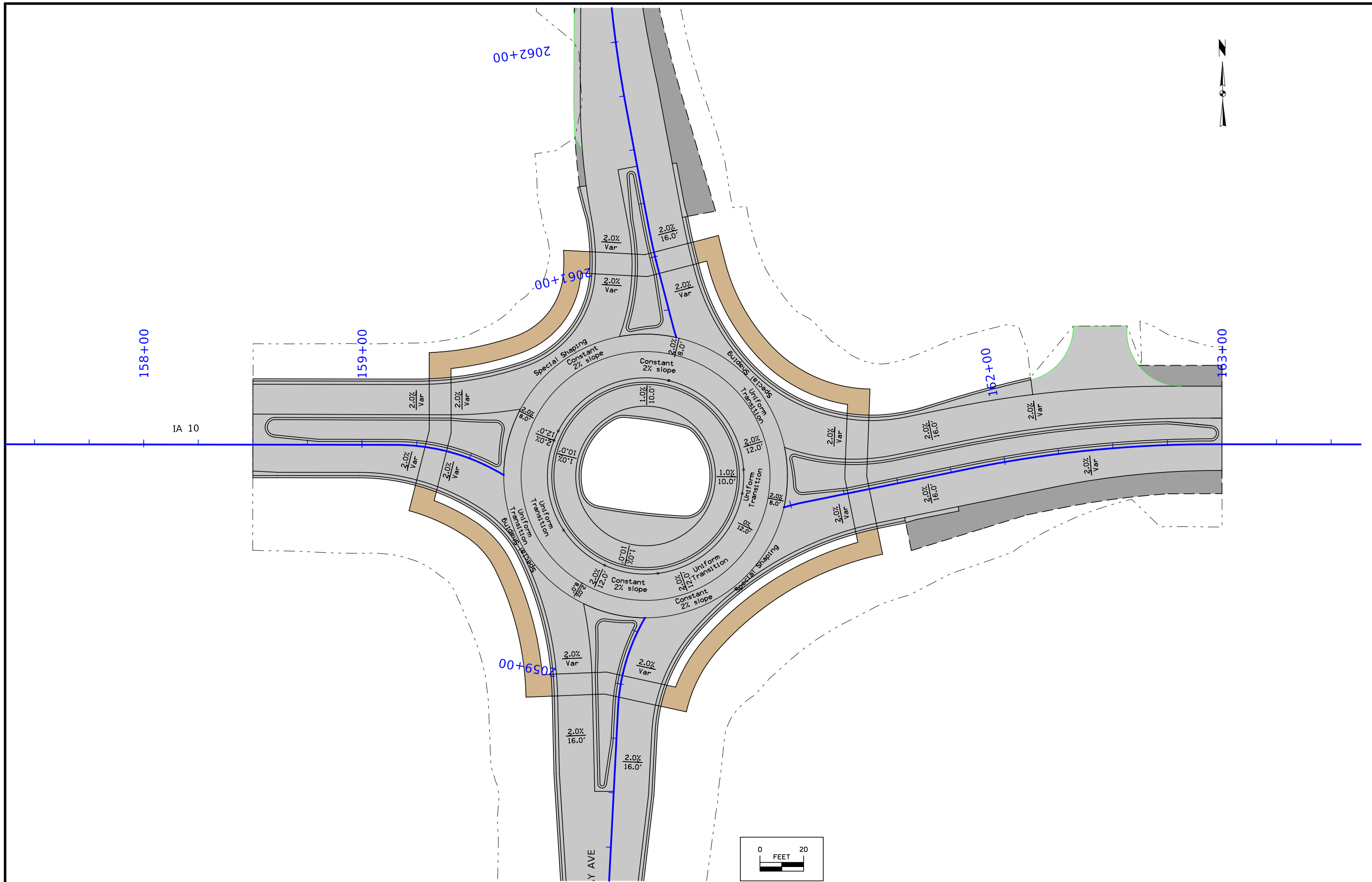
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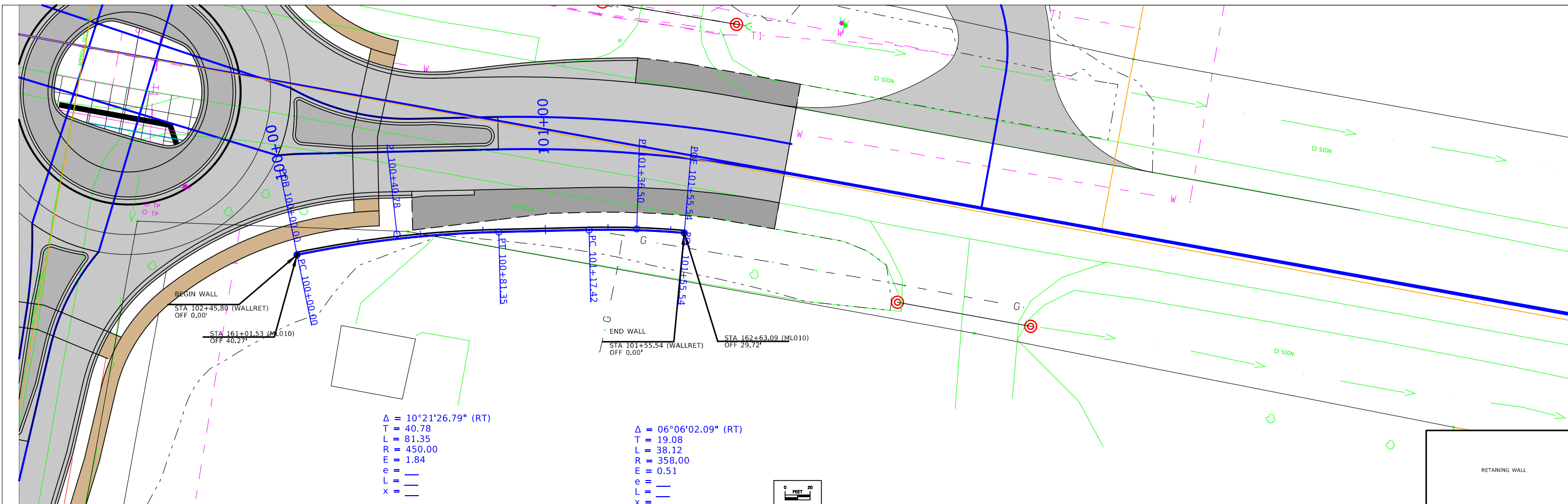


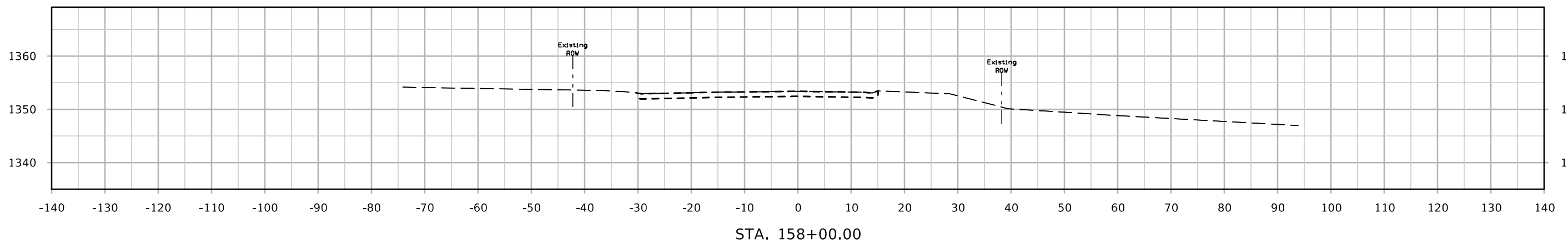
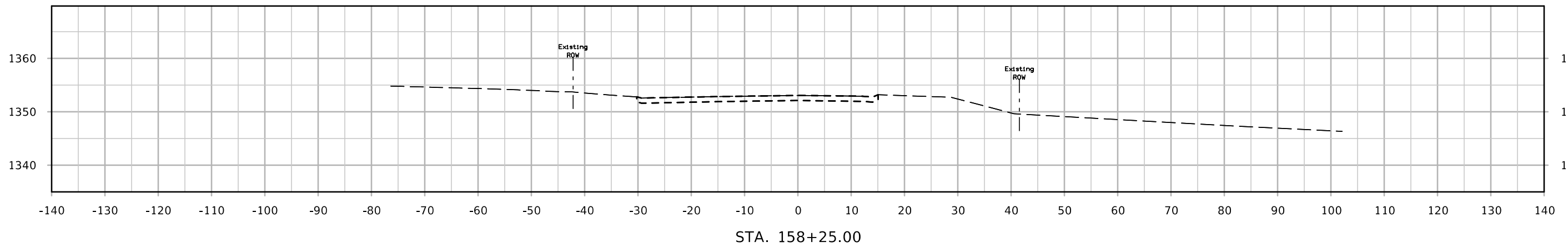
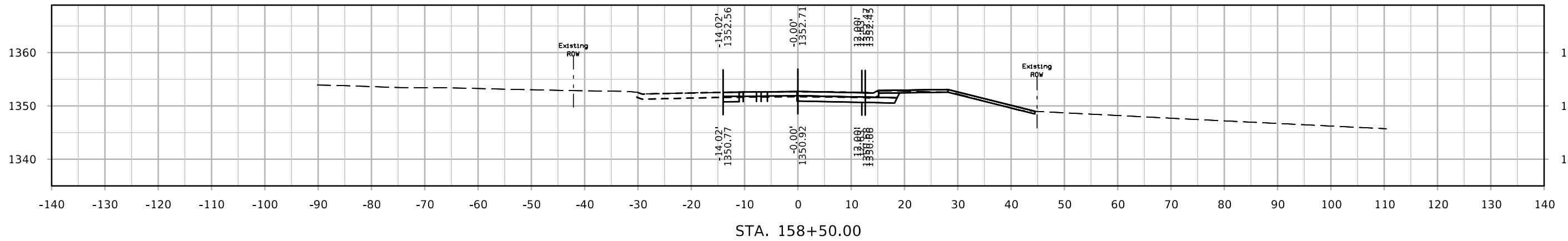


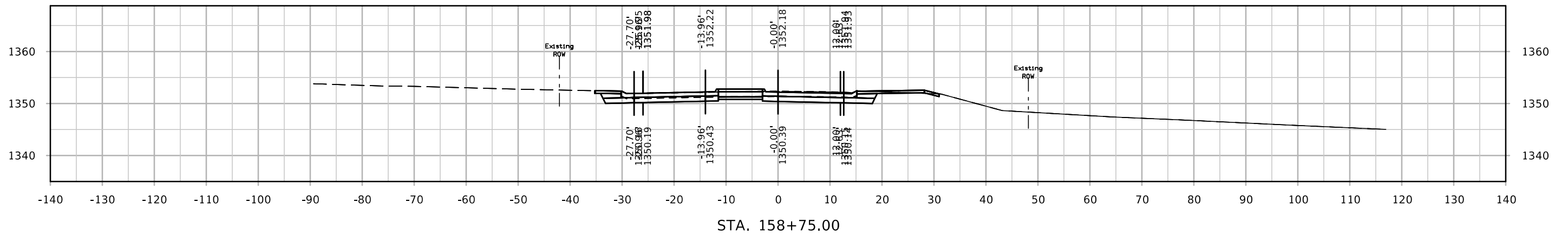
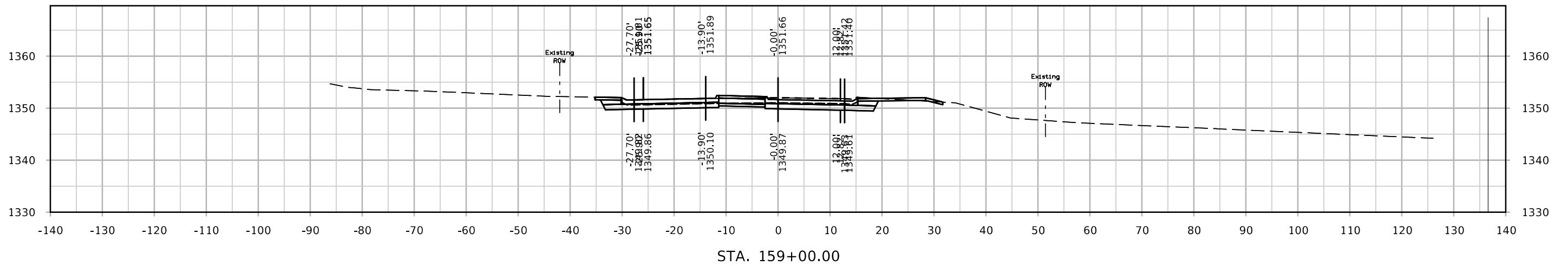
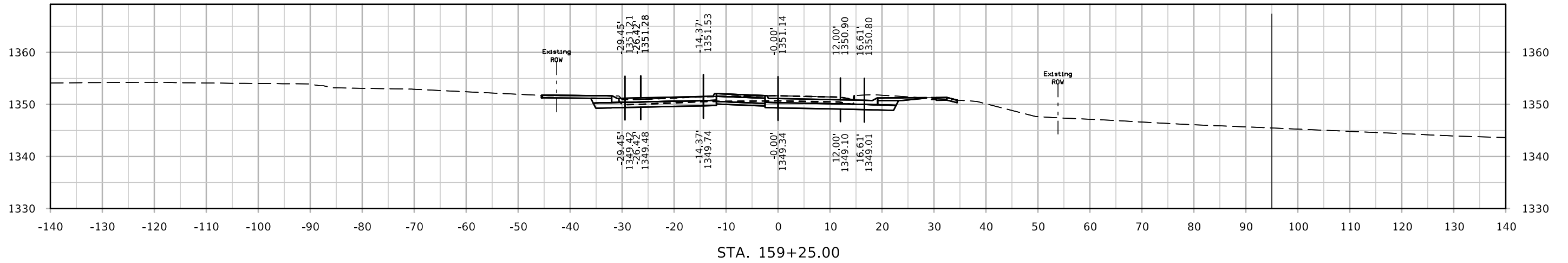
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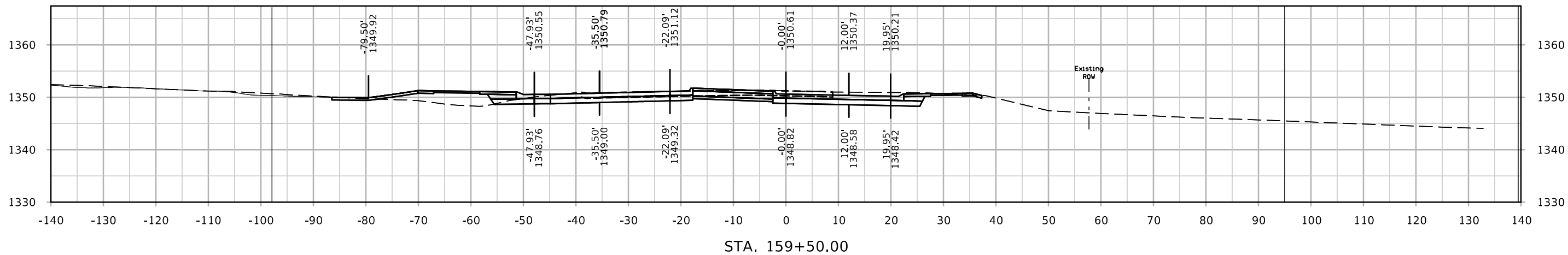
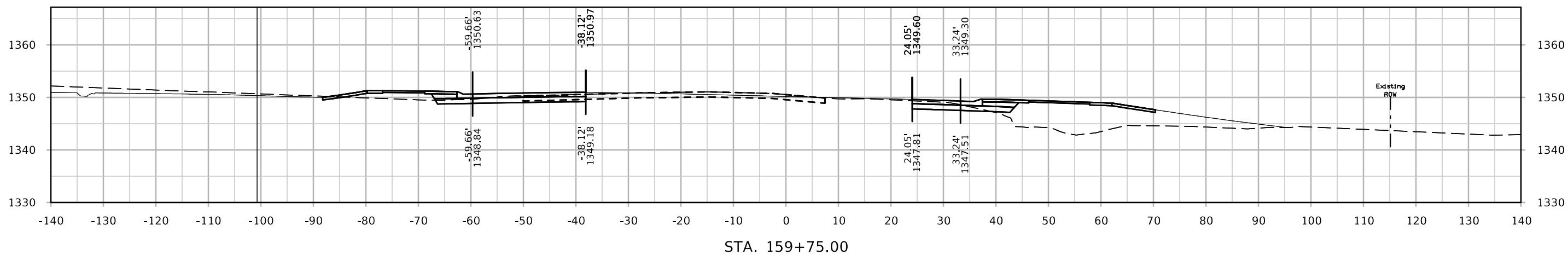
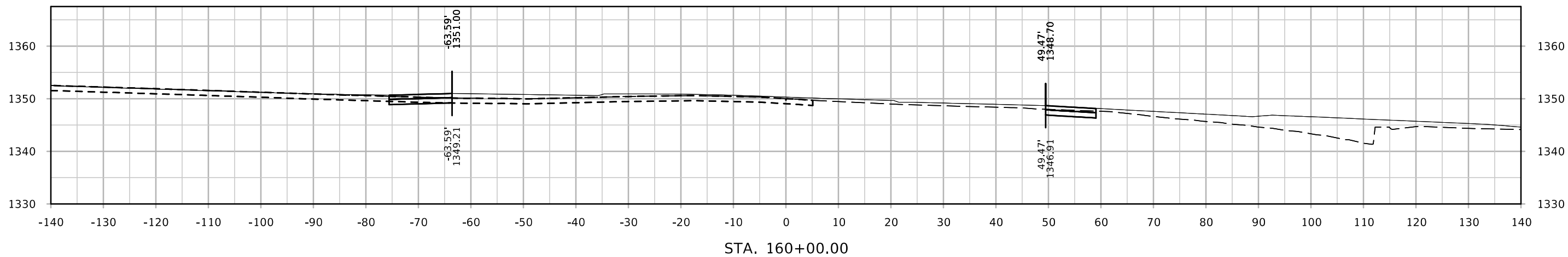


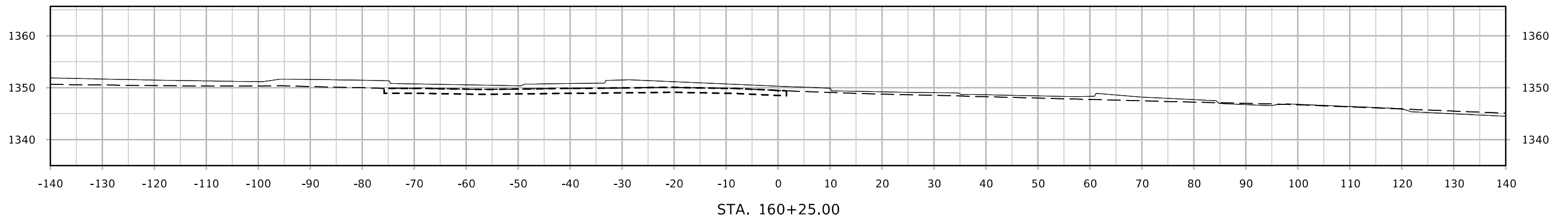
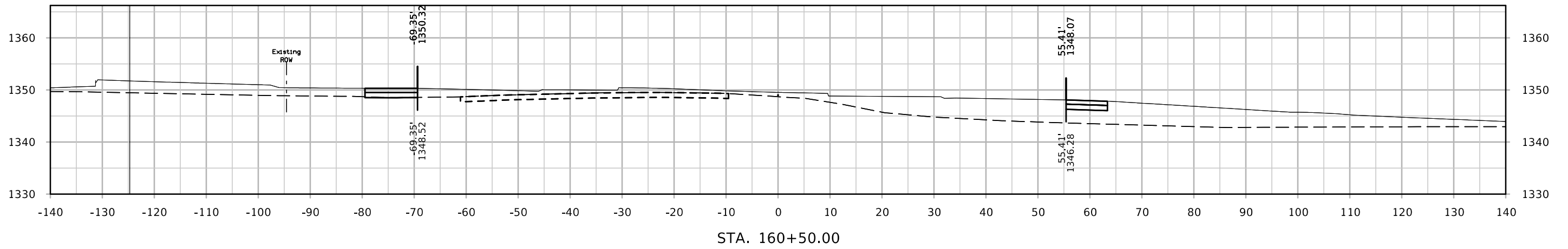
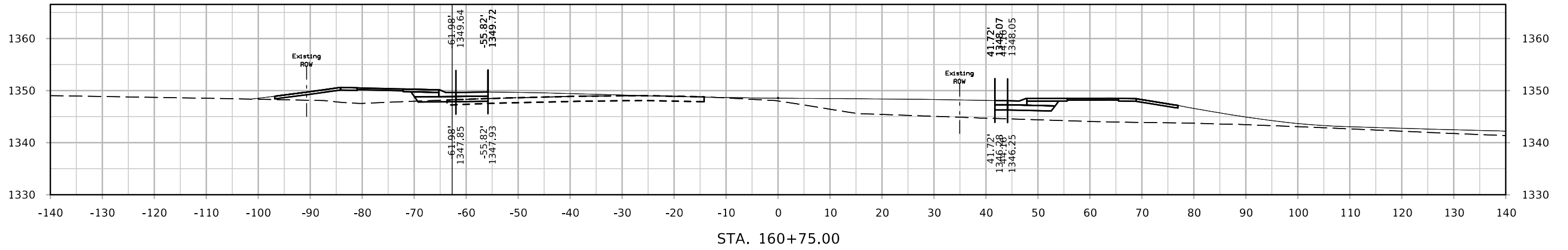


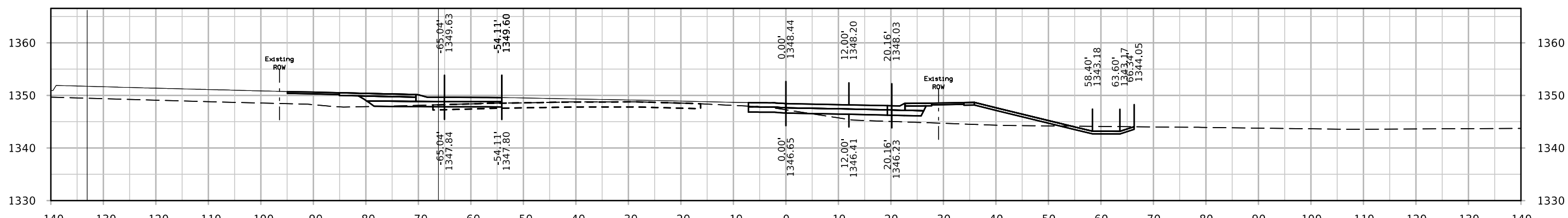
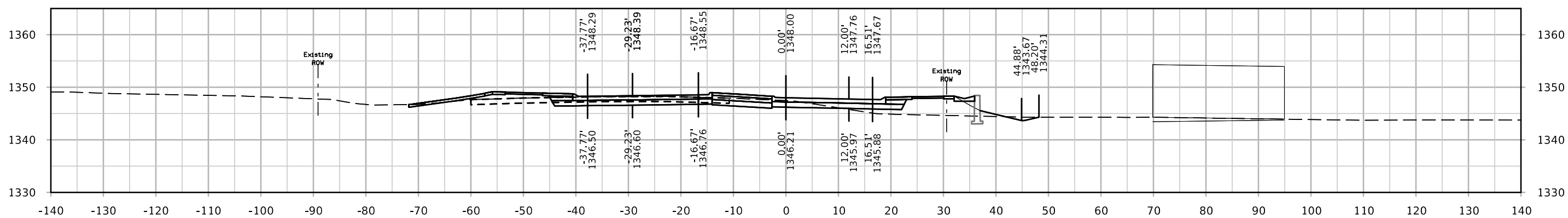
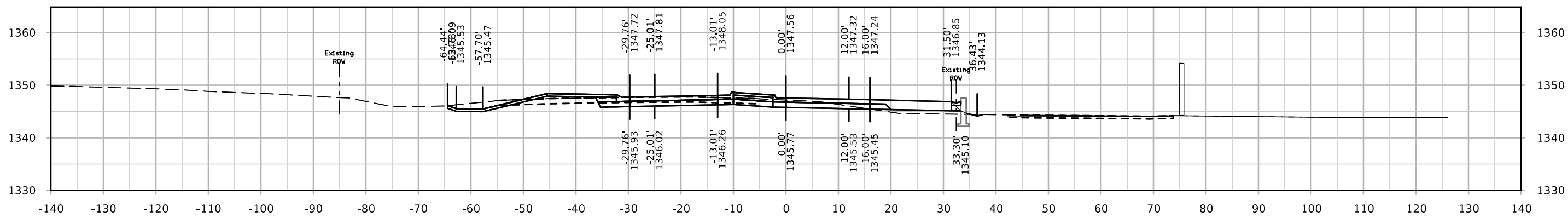




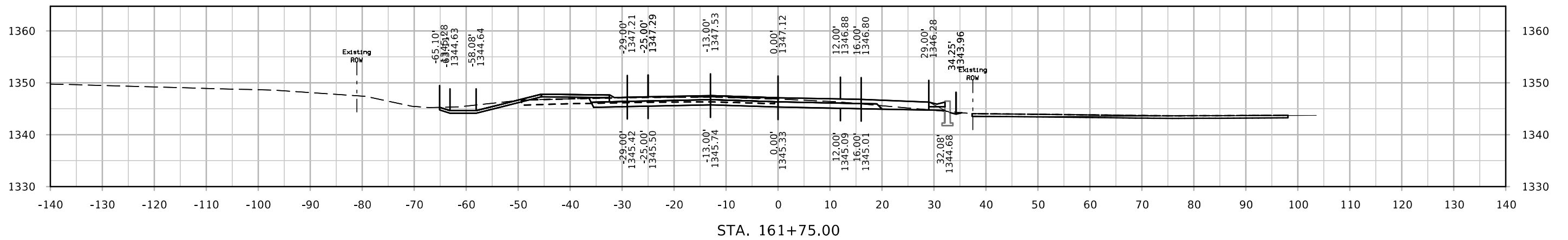
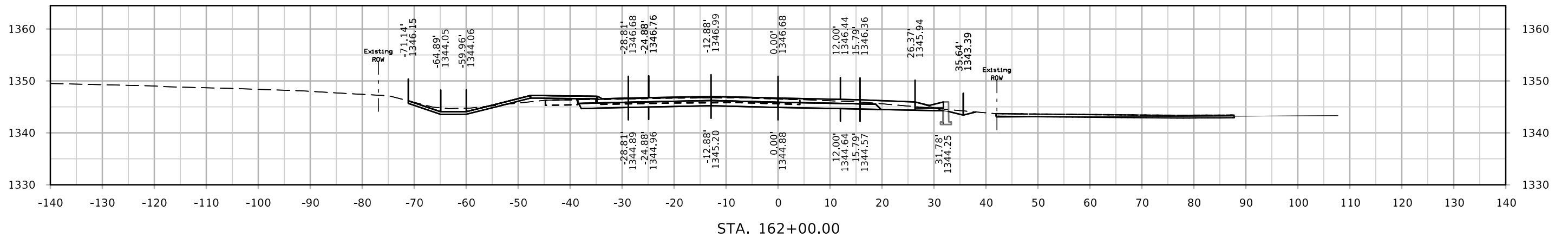
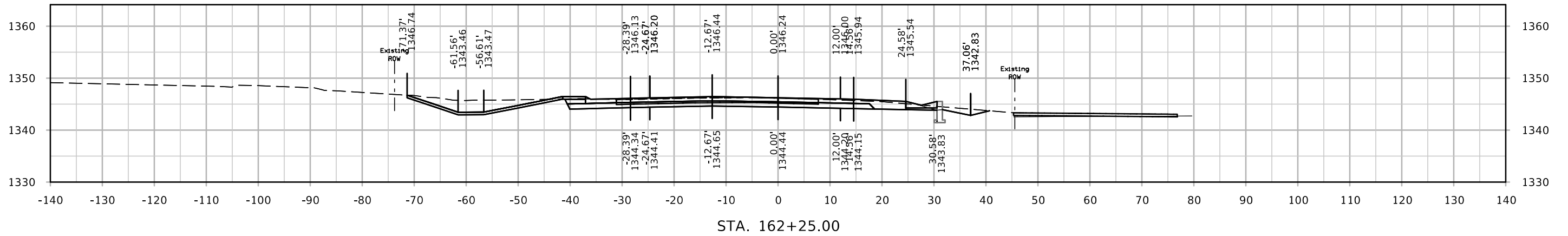


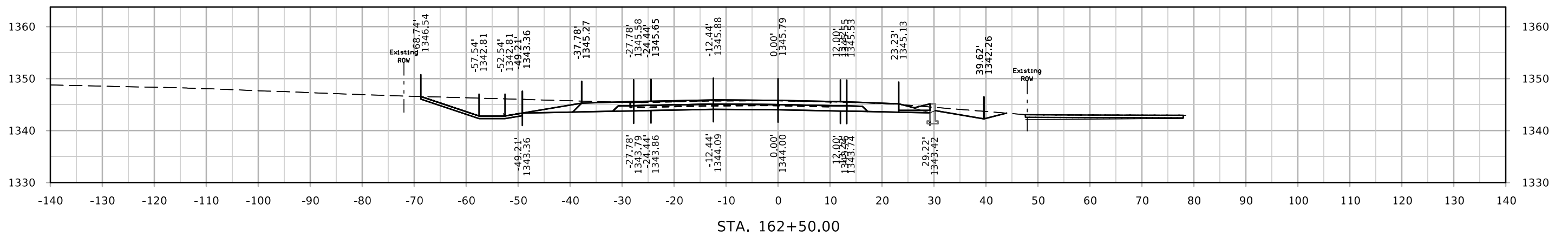
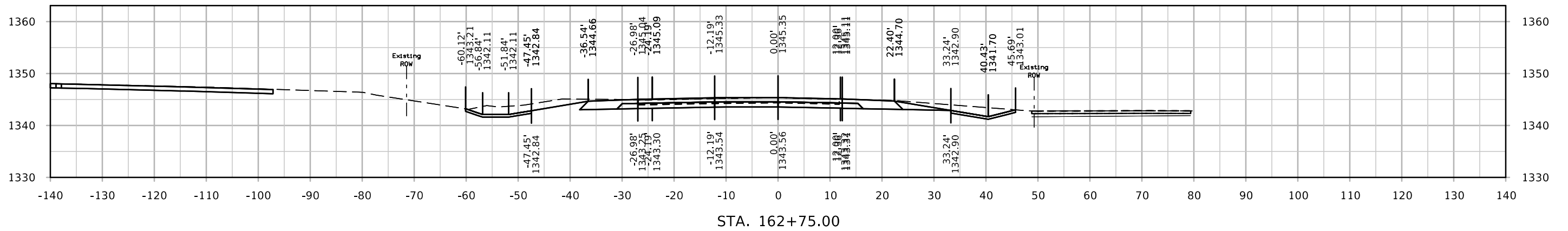
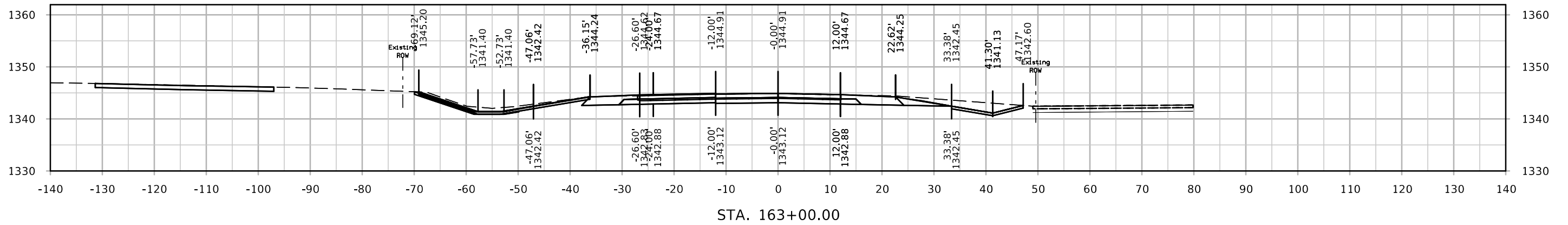


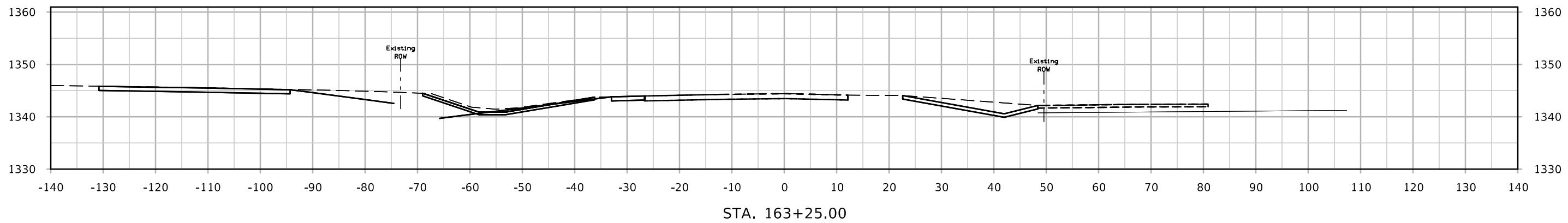
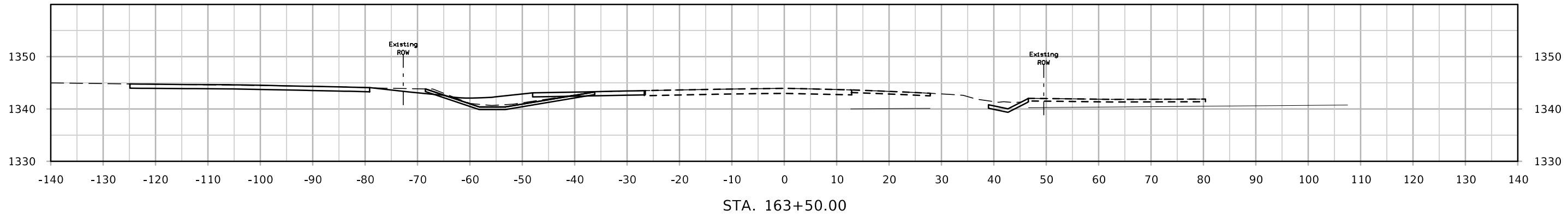




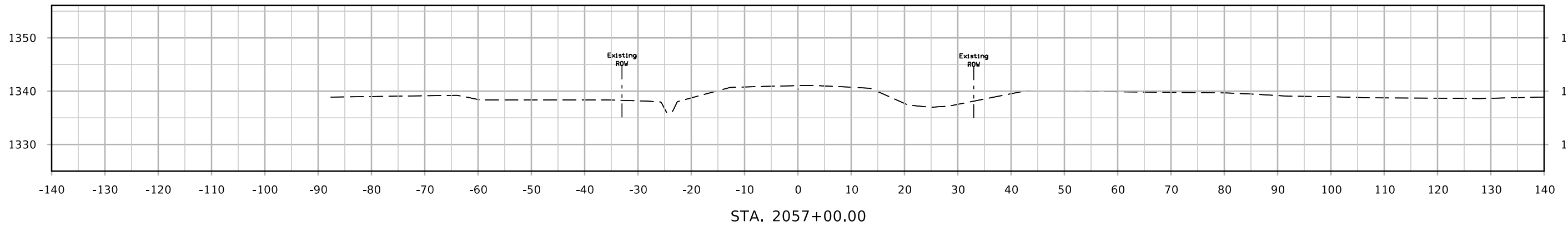
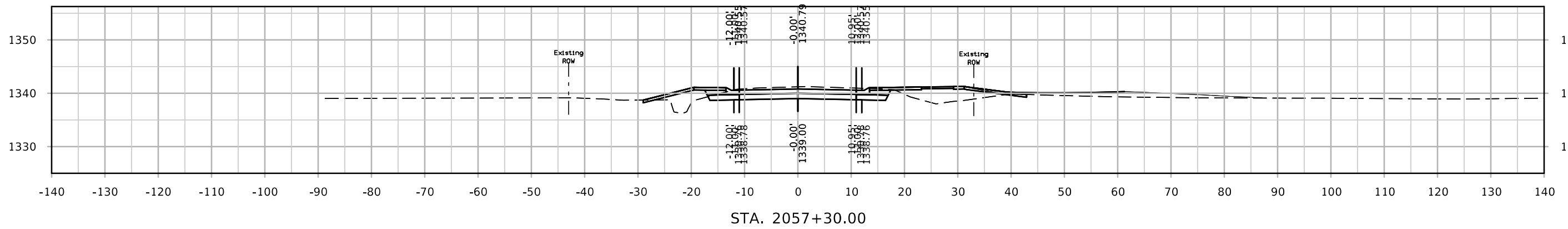
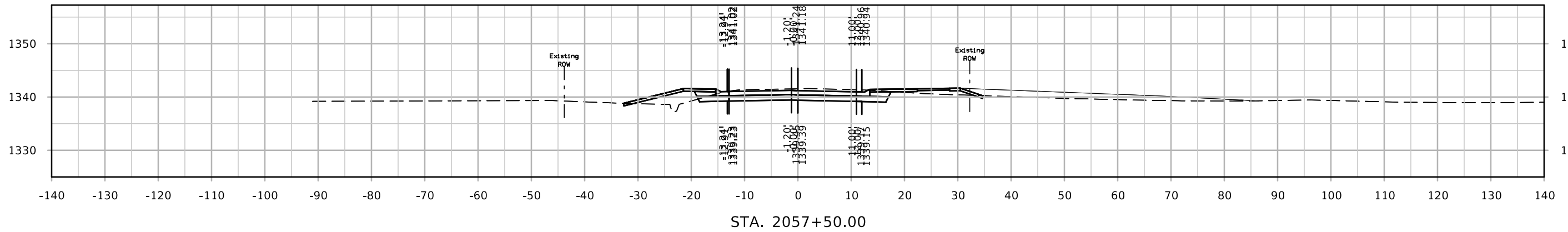




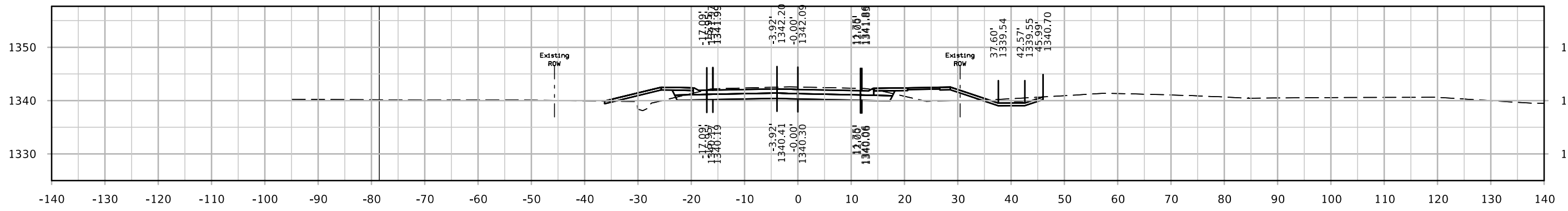
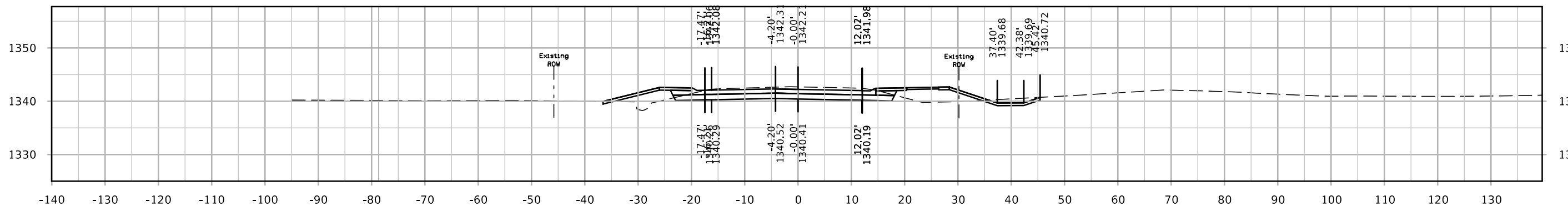
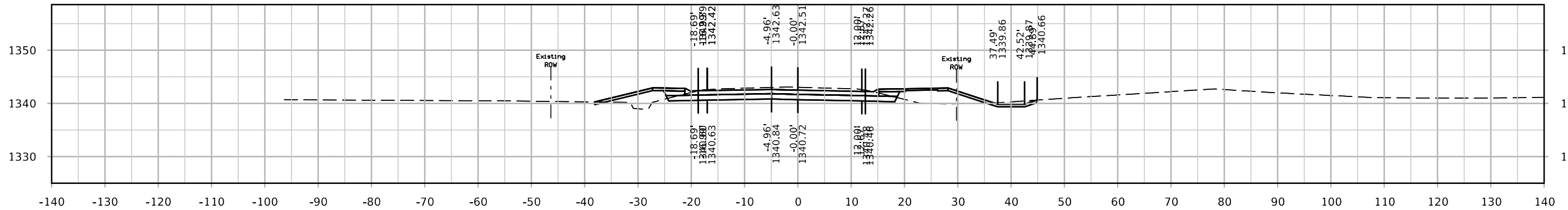




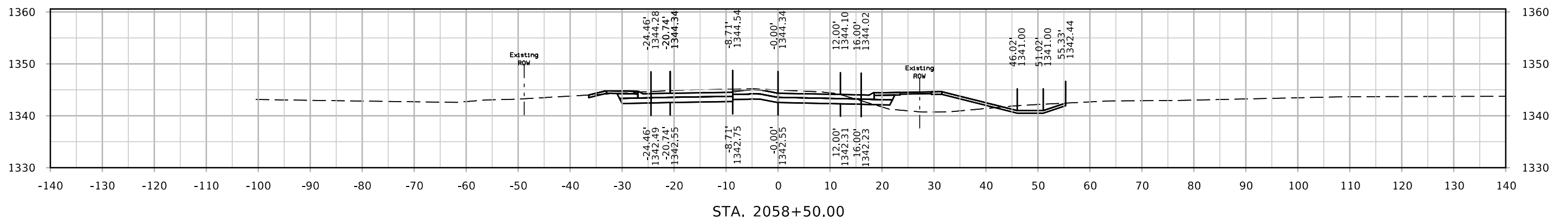
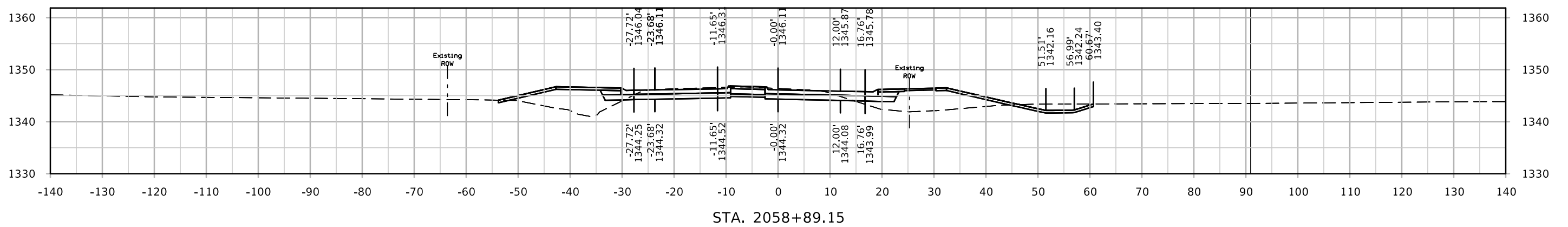
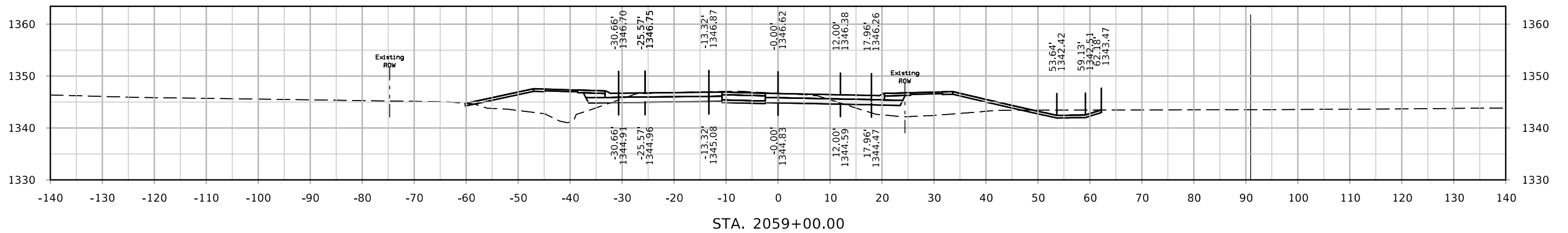
# Jay Ave



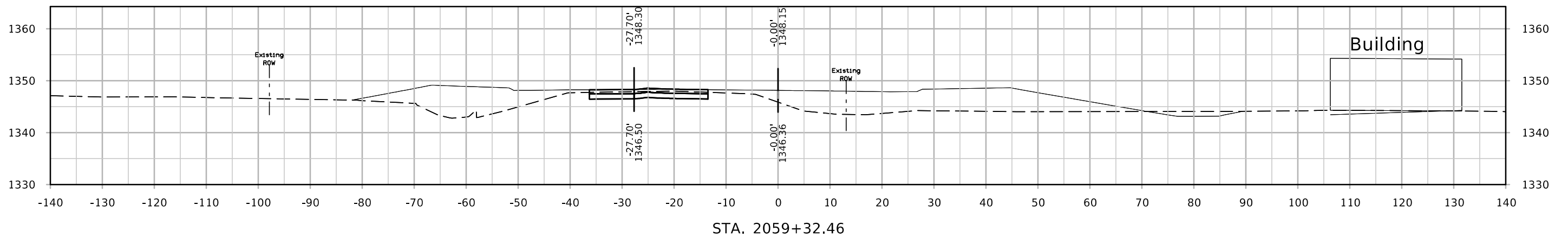
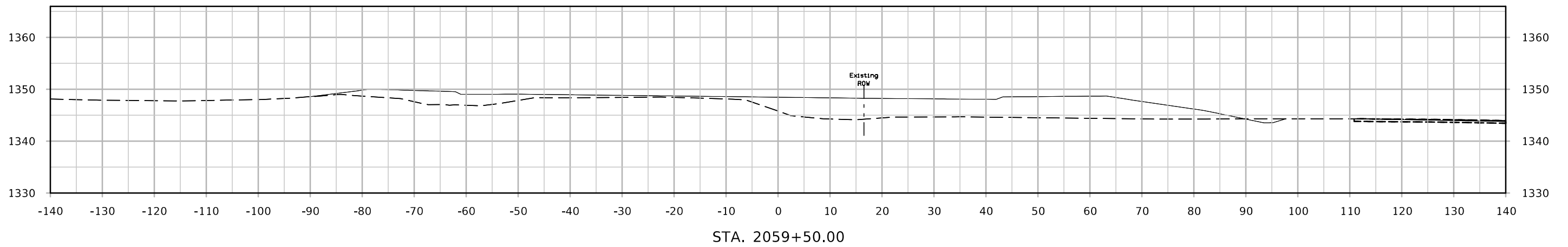
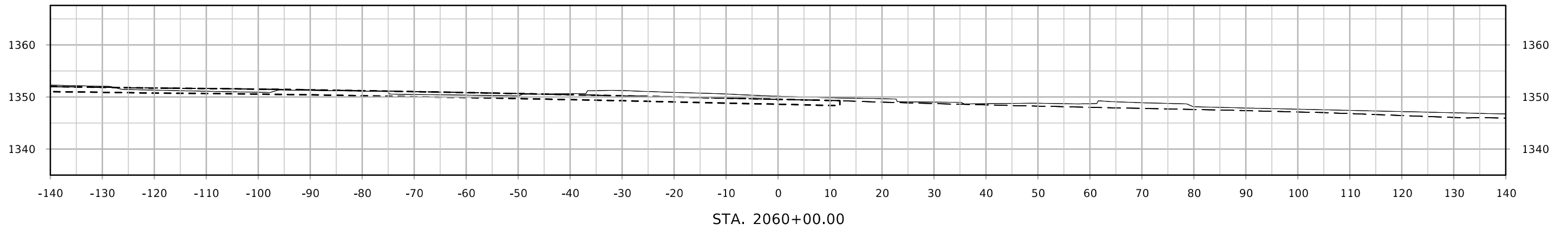
# Jay Ave



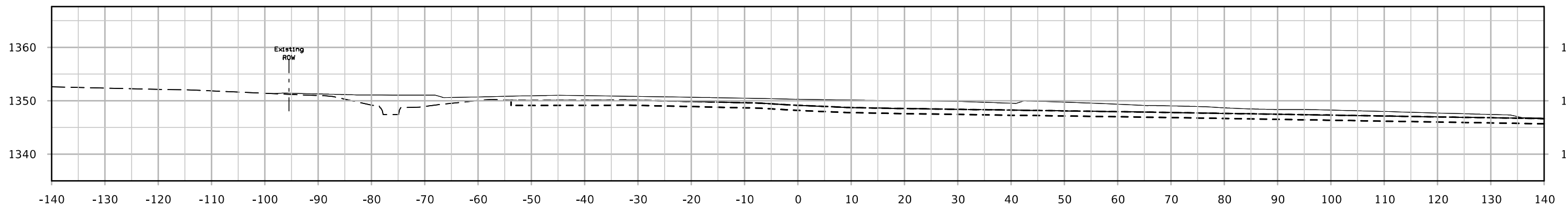
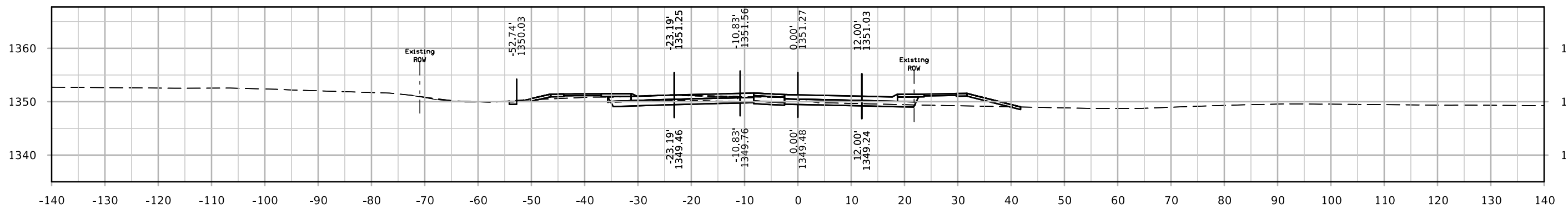
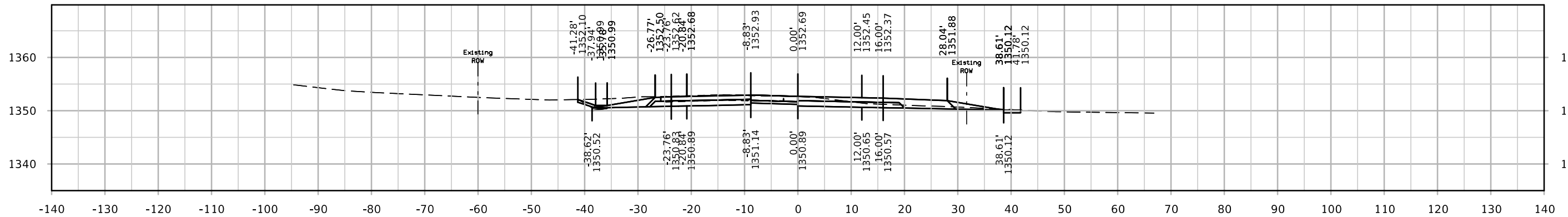
# Jay Ave



# Jay Ave

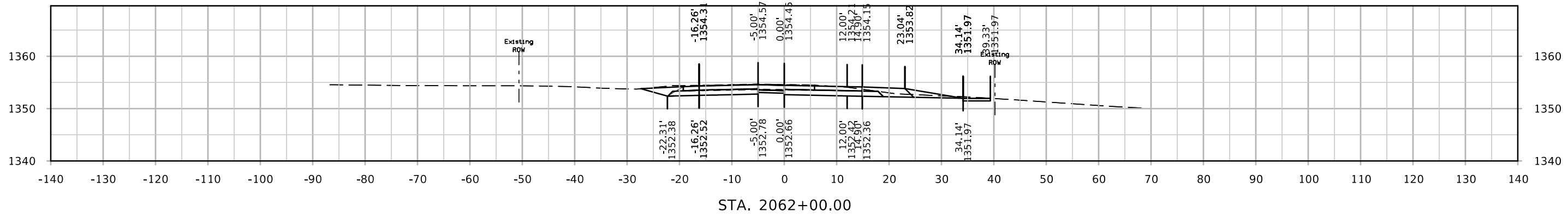
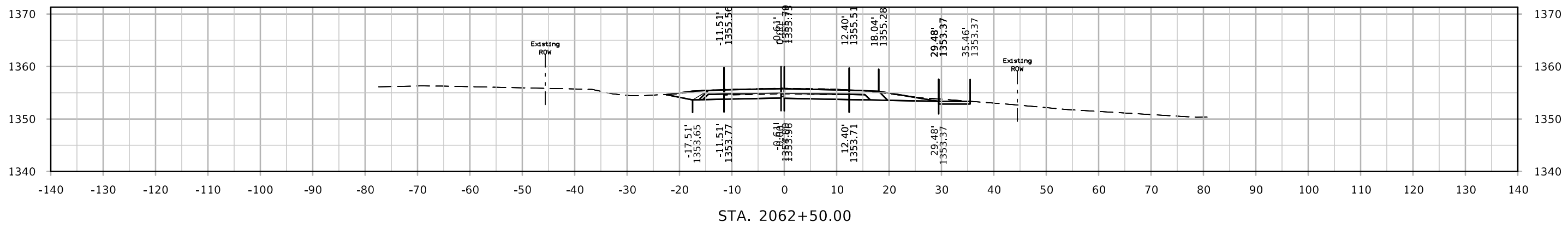
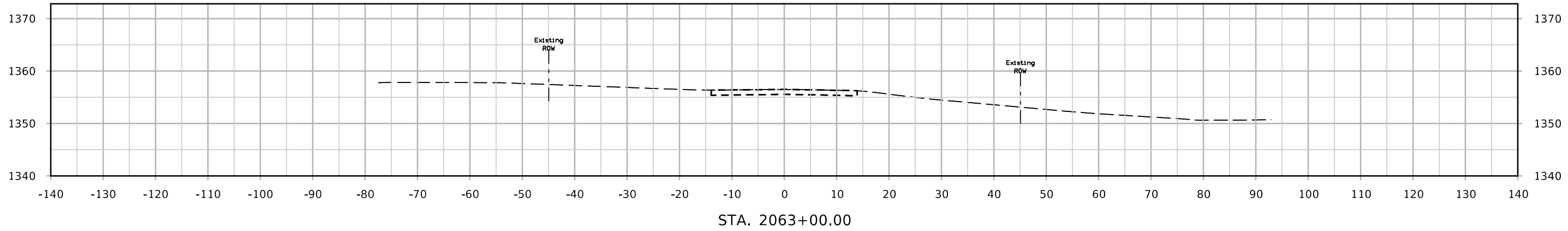


# Jay Ave

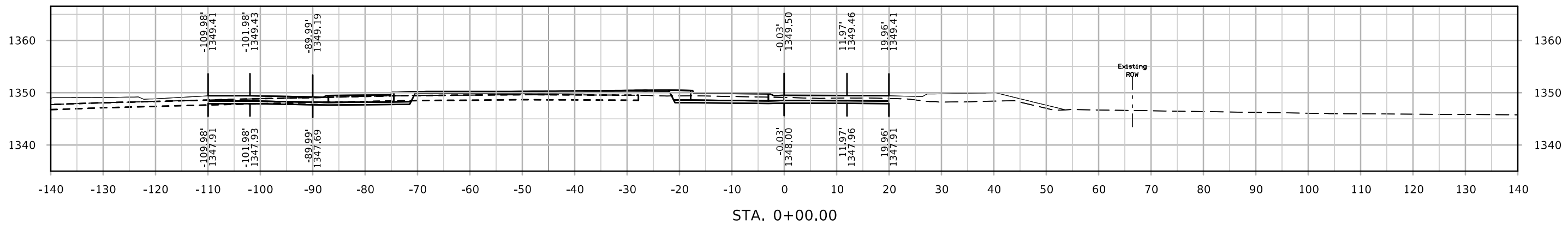
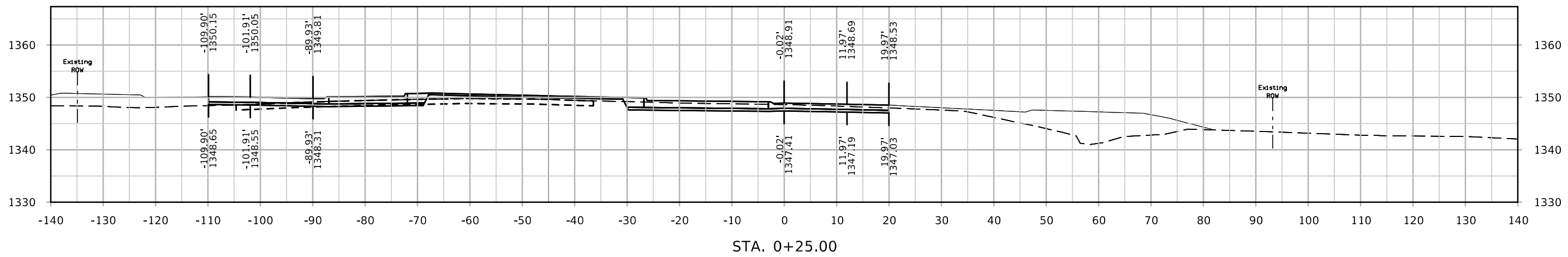
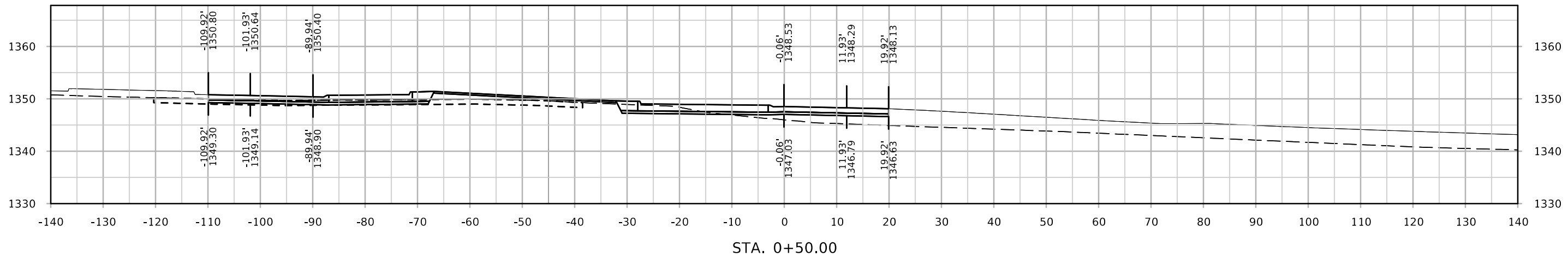




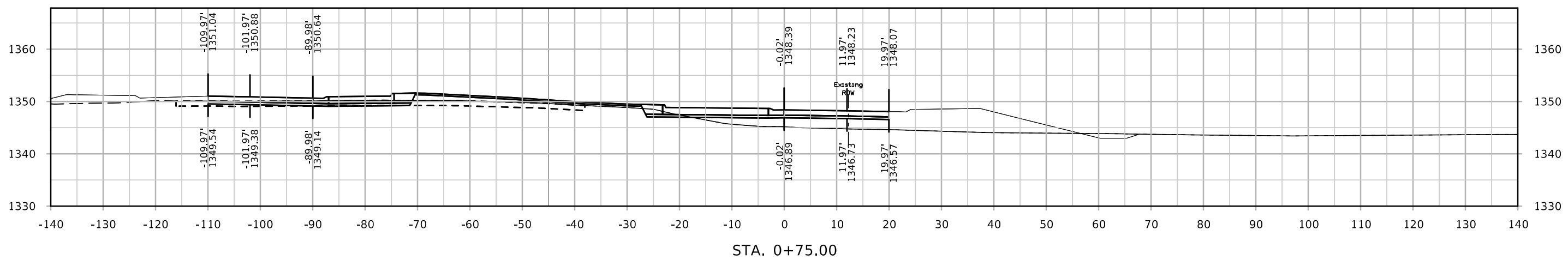
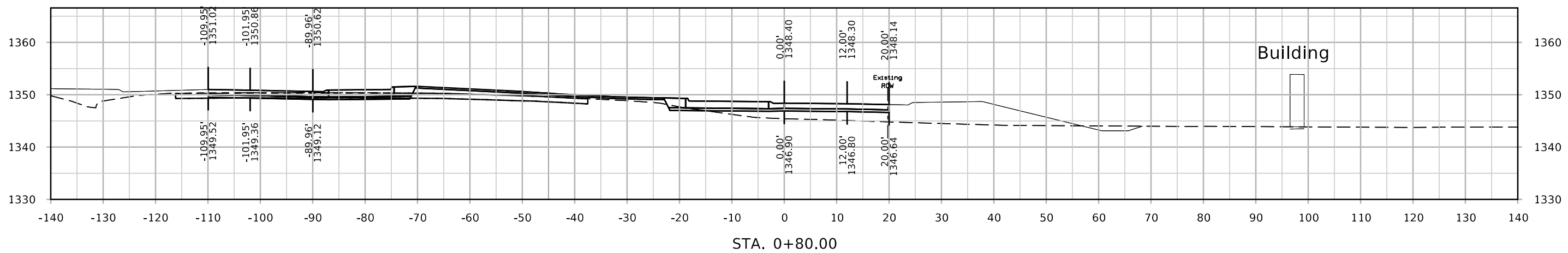
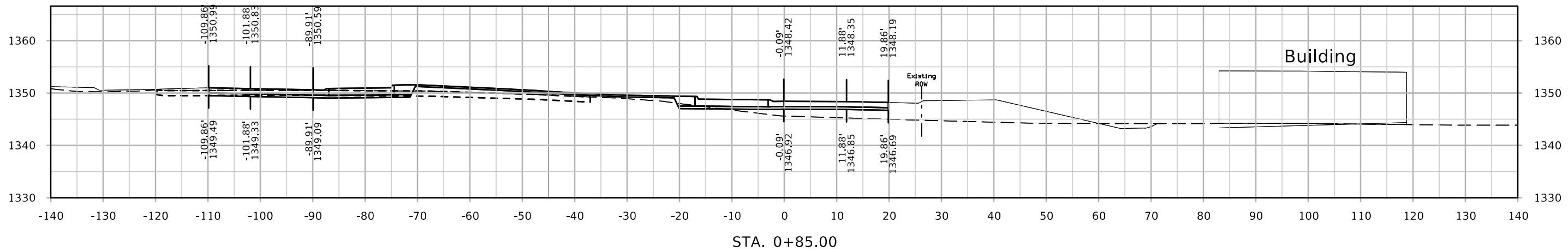
# Jay Ave



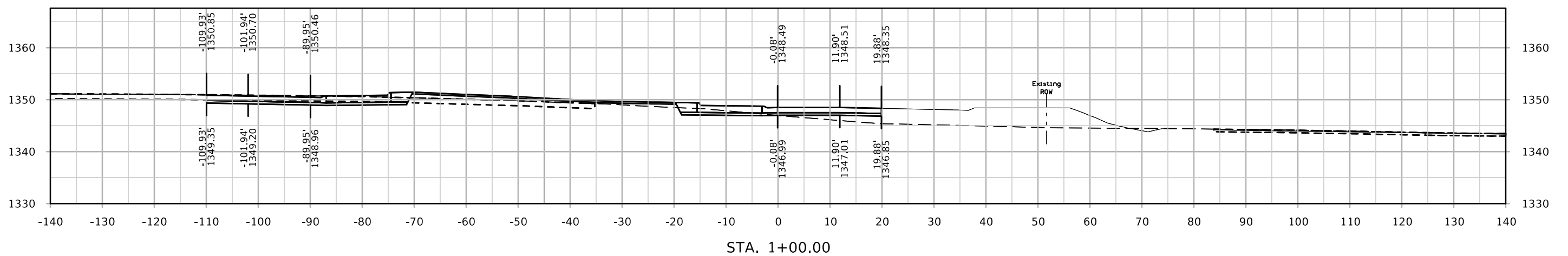
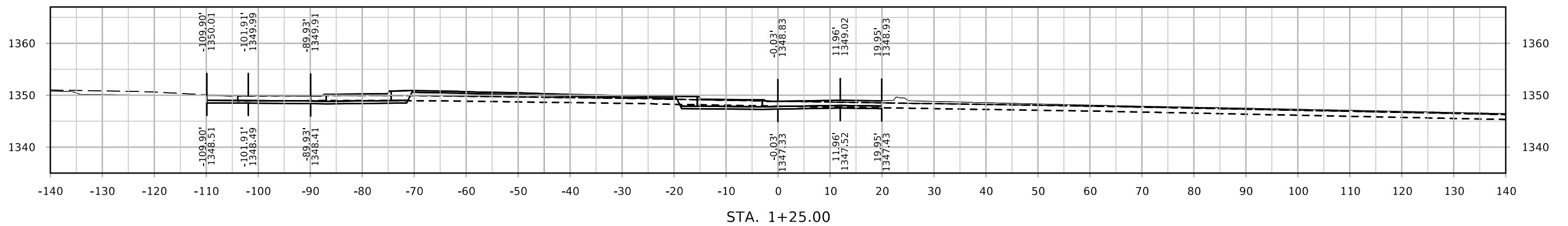
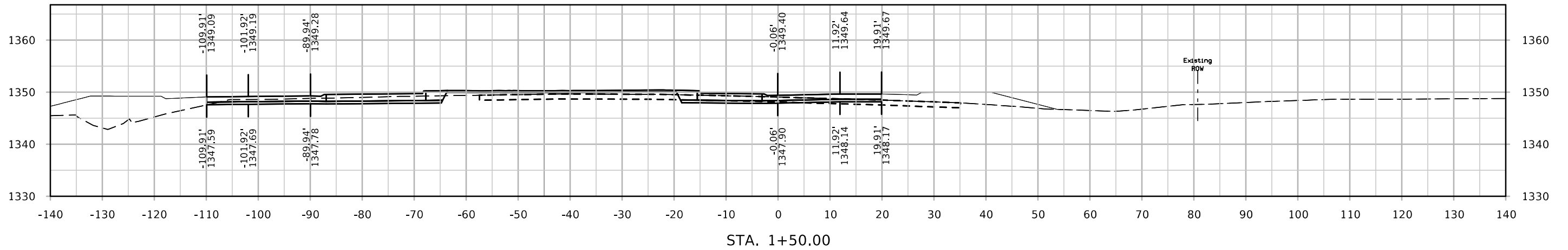
# Roundabout



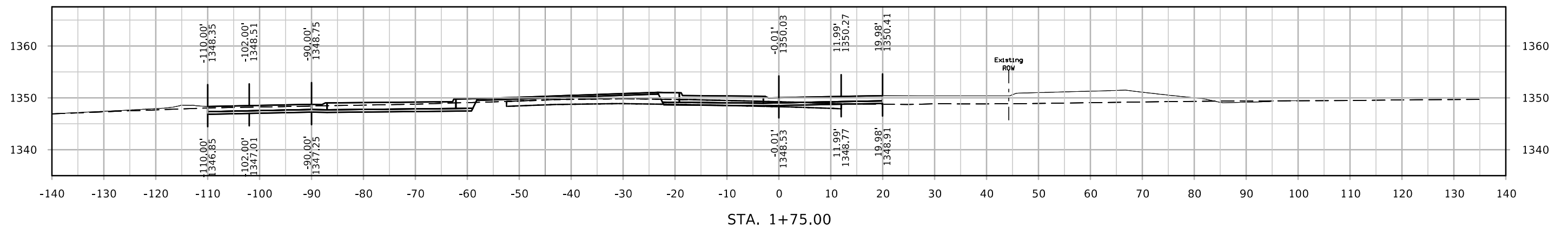
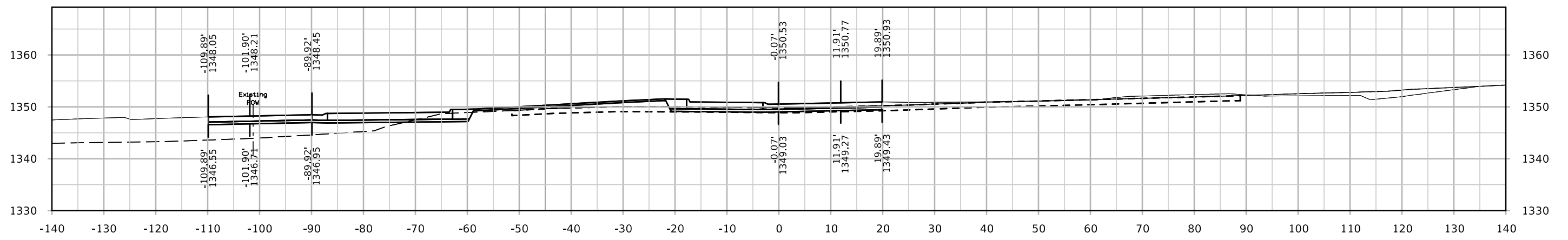
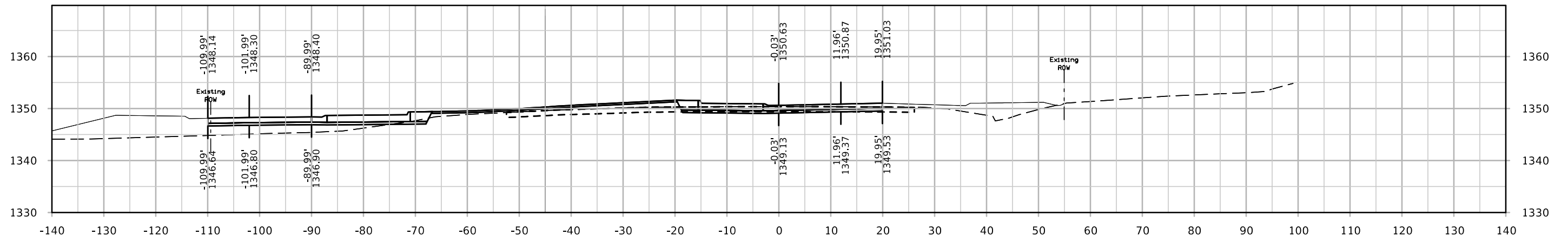
# Roundabout



# Roundabout



# Roundabout



# Roundabout

