

Median Crossover
HSIPX-018-2(171)--3L-21

Clay COUNTY

LETTING DATE
Jul 21 2026

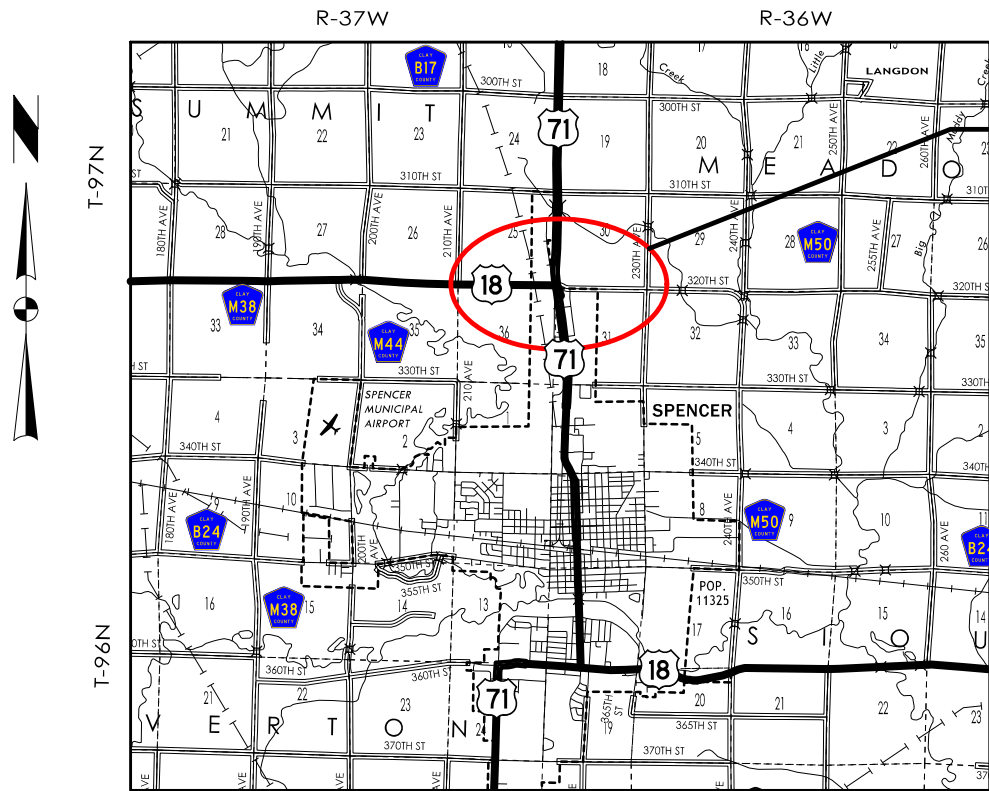


PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
Clay COUNTY
Median Crossover
N US 71 Intersection in Spencer

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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



PROJECT LOCATION
STA. 634+26 (US18)
STA. 56+92 (US71)
REF. LOC. 77.67

US 18			US 71			320th Ave		
DESIGN DATA RURAL			DESIGN DATA RURAL			DESIGN DATA RURAL		
20 27	AADT	2,800 V.P.D.	20 27	AADT	12,000 V.P.D.	20 27	AADT	960 V.P.D.
20 47	AADT	3,200 V.P.D.	20 47	AADT	13,250 V.P.D.	20 47	AADT	1,100 V.P.D.
20 -	DHV	- V.P.H.	20 -	DHV	- V.P.H.	20 -	DHV	- V.P.H.
TRUCKS 28 %			TRUCKS 6 %			TRUCKS 27 %		
Total Design ESALs -			Total Design ESALs -			Total Design ESALs --		

INDEX OF SEALS			
SHEET NO.	NAME	TYPE	BID QUANTITY SHEETS
A.1	Jason R. Strum	Primary Signature Block	C.1-C.2
RC.1	Rachel A. Harris	Landscape Design	RC.2

REVISIONS

TOTAL

78

PROJECT IDENTIFICATION NUMBER

23-21-018-020

PROJECT NUMBER

HSIPX-018-2(171)--3L-21

R.O.W. PROJECT NUMBER

INDEX OF SHEETS

No.	DESCRIPTION
A Sheets	Title Sheets
* A.1	Title Sheet
B Sheets	Typical Cross Sections and Details
B.1 - 2	Typical Cross Sections and Details
C Sheets	Quantities and General Information
C.1	Estimated Project Quantities and Reference Notes
C.3	Standard Road Plans
C.4 - 7	Tabulations (beg. with tab. of incidentals if needed)
F Sheets	Detour or Temporary Pavement Sheets
* F.1	Legend
* F.2 - 4	Detour Plan and Profile Sheets
G Sheets	Survey Sheets
G.1 - 3	Reference Ties and Bench Marks
G.4	Horizontal Control Tab. & Super for all Alignments
J Sheets	Traffic Control and Staging Sheets
* J.1 - 11	Staging and Traffic Control Sheets Stage ??
R Sheets	Erosion Control Sheets
RC.1 - 7	Est. Quantities, PPP, General Notes and Tabulations
* RR.1 - 4	Erosion Control Legend and Symbol Information Sheet
T Sheets	Earthwork Quantity Sheets
T.1 - 2	Legend
T.3	Earthwork Quantity Sheets
U Sheets	500 Series, Mod.Stds. and Detail Sheets
U.1 - 4	500 Series, Modified Standards and Detail Sheets
W Sheets	Mainline Cross Sections
* W.1	Legend
* W.2 - 11	DET200A crossover
* W.12 - 19	DET200B crossover
* W.20 - 31	DET US71 NB (DET400)
* Color Plan Sheets	

ROADWAY 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.

Signature: Jason R. Strum Date: 04-20-2026

Printed or Typed Name

My license renewal date is December 31, 20 27

Pages or sheets covered by this seal: A.1, B.1-B.2, C.1-C.7, F.1-F.4, G.4, J.1-J.11, U.1-U.4, W.1-W.31

FILE NO.

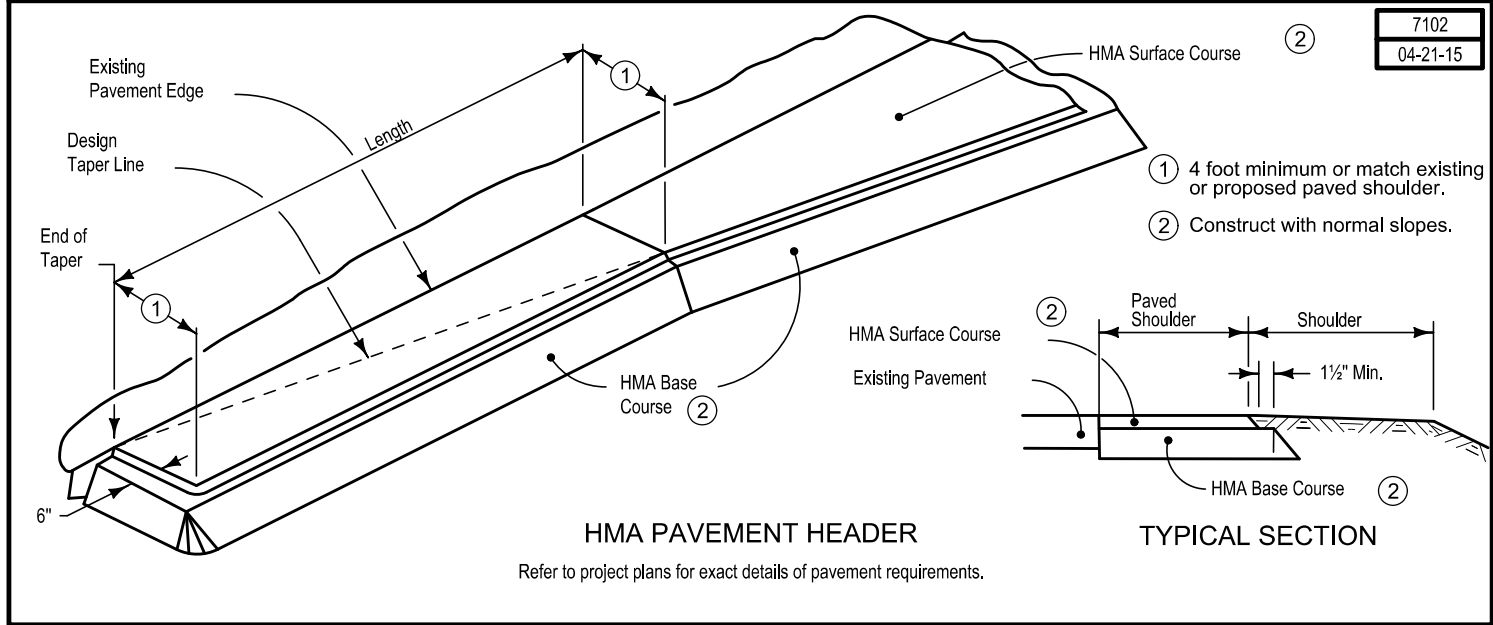
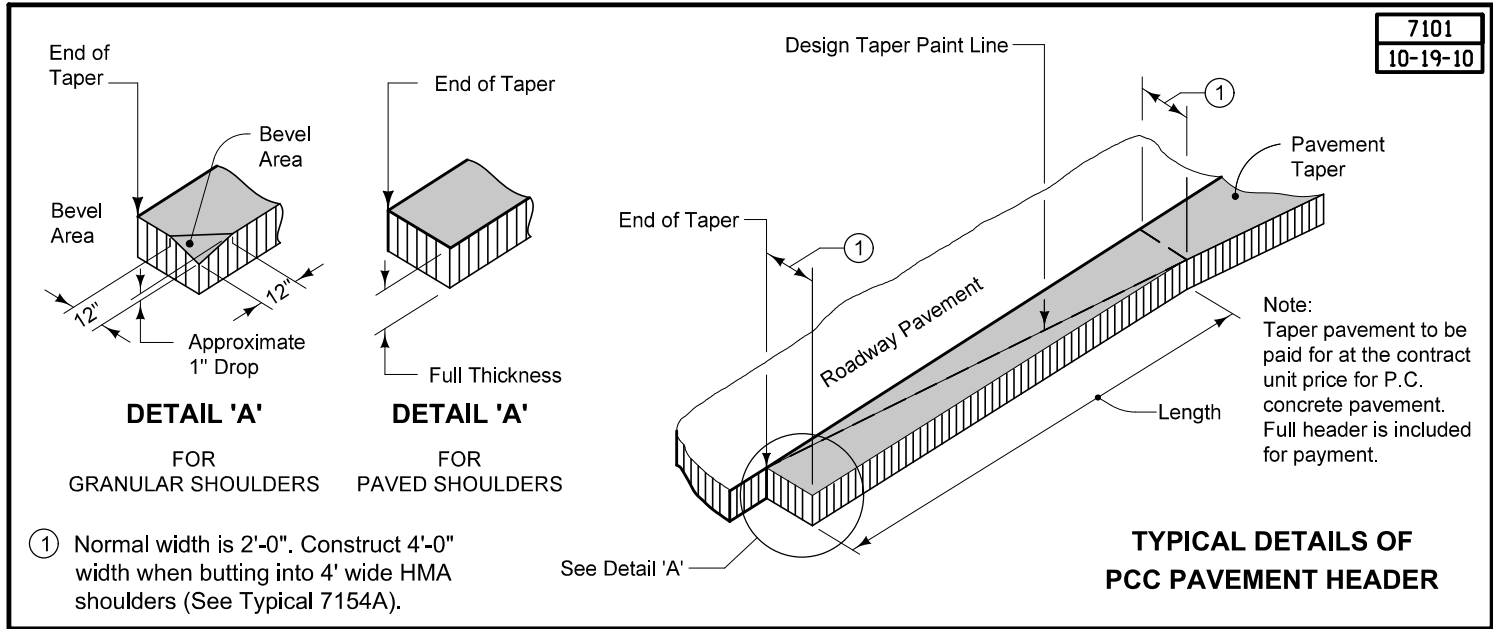
ENGLISH

DESIGN TEAM Strum/Janus

Clay COUNTY

PROJECT NUMBER HSIPX-018-2(171)--3L-21

SHEET NUMBER A.1



ESTIMATED PROJECT QUANTITIES AND REFERENCE NOTES

Roadway Items : Roadway Items

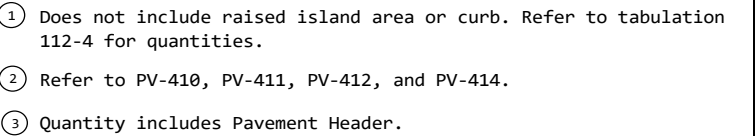
Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Roadway Items	
1	2102-0425071	SPECIAL BACKFILL	CY	1,725.2	Refer to DETOUR Typical on Sheet B.1, Tab. 100-24 and Tab. 112-8 on Sheet C.4.
2	2102-2625000	EMBANKMENT-IN-PLACE	CY	339	Refer to Tab 107-28 on Sheet T.03.
3	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	2,030	
4	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD	CY	642	Refer to Tab 107-28 on Sheet T.03. Depth - Quantity based on stripping 2 inches and spreading 4 inches. Spread the excess topsoil evenly on the foreslope.
5	2121-7425010	GRANULAR SHOULDERS, TYPE A	TON	544.4	Refer to DETOUR typical on Sheet B.1, Sheet U.1-U.2, Tab. 112-9 on Sheet C.5 and Tab. 112-8 on Sheet C.4
6	2304-0100000	DETOUR PAVEMENT 9 IN PCC or 12 IN HMA	SY	7,702.3	Refer to DETOUR Typical on Sheet B.1. Refer to Tab. 100-24 and Tab. 112-8 on Sheet C.4.
7	2312-8260250	GRANULAR SURFACING ON ROAD, CRUSHED STONE	TON	38.5	For an access point at STA 51+11. Quantity based on 6 IN thickness.
8	2402-2720100	EXCAVATION, CLASS 20, FOR ROADWAY PIPE CULVERT	CY	57.7	Refer to Tab. 104-3TEMP on Sheet C.5.
9	2416-0100018	APRONS, CONCRETE, 18 IN. DIA.	EACH	2	Refer to Tab. 104-3TEMP on Sheet C.5.
10	2416-0102224	APRON, LOW CLEARANCE CONCRETE, EQUIVALENT DIAMETER 24 IN.	EACH	2	
11	2416-1180018	CULVERT, CONCRETE ROADWAY PIPE, 18 IN. DIA.	LF	156	
12	2416-1200224	CULVERT, LOW CLEARANCE CONCRETE ROADWAY PIPE, EQUIVALENT DIAMETER 24 IN.	LF	296	
13	2417-2307024	DRAIN, CORRUGATED METAL SLOTTED PIPE, 24 IN., W/6 IN. GRATE	LF	102	Refer to Sheet U.3
14	2417-5895018	BEVELED PIPE AND GUARD, 18 INCH	EACH	2	Refer to Sheet U.3.
15	2422-1723018	CULVERT, UNCLASSIFIED ROADWAY PIPE, 18 IN. DIA.	LF	84	
16	2510-6745850	REMOVAL OF PAVEMENT	SY	2,343.7	Refer to Tabs.110-1 on Sheet C.6.
17	2526-8285040	CONSTRUCTION SURVEY, LOCATION SURVEY	LS	1	Refer to Tab. 108-22 on Sheet C.7.
18	2527-9263181	PAVEMENT MARKINGS REMOVED	STA	20.07	
19	2527-9263209	PAINTED PAVEMENT MARKINGS, WATERBORNE OR SOLVENT-BASED	STA	59.94	

Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Roadway Items	
20	2527-9263231	REMOVABLE TAPE MARKINGS, WET RETROREFLECTIVE	STA	38.24	Refer to Tab. 108-22 on Sheet C.7. Payment includes removal of wet retroreflective removable tape.
21	2528-2518000	SAFETY CLOSURE	EACH	8	Refer to Tab 108-13A on Sheet C.6 Safety closure is to become property of the DOT.
22	2528-2518005	CROSSOVER BARRICADE	EACH	1	Refer to Sheet U.4.
23	2528-8445110	TRAFFIC CONTROL	LS	1	Refer to Traffic Control Plan on Sheet J.1.
24	2528-9109020	TEMPORARY LANE SEPARATOR SYSTEM	LF	1,000	Refer to Tab. 108-35 on Sheet C.6.
25	2533-4980005	MOBILIZATION	LS	1	--
26	2599-9999005	('EACH' ITEM) Furnish and Install Long-Term Temporary Rumble Strip Array	EACH	8	Refer to Sheet J.3 and J.7 for locations. Refer to "Special Provisions for Long-Term Temporary Rumble Strips" for details. Rumble Strips to be removed at the end of the project, as directed by the Engineer.
27	2599-9999005	('EACH' ITEM) Maintain and Replace Temporary Rumble Strip	EACH	8	Refer to Sheet J.3 and J.7 for locations. Refer to "Special Provisions for Long-Term Temporary Rumble Strips" for details.

STANDARD ROAD PLANS

The following Standard Road Plans apply to construction work on this project

[illegible]



MEDIAN CROSSOVERS

* Not a bid item

FILE NO.	ENGLISH	DESIGN TEAM	Strum\Janus	CLAY COUNTY	PROJECT NUMBER	HSIPX-018-2(171)--3L-21	SHEET NUMBER	C.4
----------	---------	-------------	-------------	-------------	----------------	-------------------------	--------------	-----

- Calculations assume a HMA unit weight (lbs/cf) of 0, a Special Backfill unit weight (lbs/cf) of 140, and a Granular Shoulder unit weight (lbs/cf) of 140.

DRAINAGE STRUCTURE BY ROAD CONTRACTOR

Length of unclassified pipe calculated is based on using Corrugated Metal Pipe.

- [illegible]

REMOVAL OF PAVEMENT

* Not a Bid Item

TEMPORARY LANE SEPARATOR SYSTEM

SAFETY CLOSURES

Station	Closure Type		Remarks
	Road Qty.	Hazard Qty.	
Stage 1			
90+50.00	2		US 75 SB
51+25.00	2		US 75 SB & 4th Ave W
Stage 2			
51+25.00	2		US 75 SB & 4th Ave W (From Stage 1)
Stage 3			
266+10.00	1		DET200B
267+45.00	1		DET200B
171+70.00	1		
172+60.00	1		
	8		Total (New)

PAVEMENT MARKING LINE TYPES

*BCY4 - Place on the same side of the roadway to match existing markings near the project.
 **NPY4 - For estimating purposes only. No Passing Zone Lines will be located in the field.
 ***MNY4 - Factor of 1.00 as value includes number of 4-inch passes to cover median nose area.

ELY6: Edge Line Left (Yellow) @ 1.00	ELW6: Edge Line Right (White) @ 1.00	CHY8: Channelizing Line (Yellow) @ 1.33	CHW8: Channelizing Line (White) @ 1.33	SLW4: Solid Lane Line (White) @ 0.67
--------------------------------------	--------------------------------------	---	--	--------------------------------------

[illegible]

SURVEY SYMBOLS

	Interstate Highway Symbol		Septic Tank
	U.S. Highway Symbol		Cistern
	Iowa Highway Symbol		L.P. Gas Tank (No Footing)
	County Road Highway Symbol		Underground Storage Tank
	Evergreen Tree		Latrine
	Deciduous Tree		Satellite TV Dish
	Fruit Tree		Water Hook Up
	Shrub (Bushes)		Radio Tower
	Timber		Tower Anchor
	Hedge		Guardrail (Beam or Cable)
	Stump		Guard Post (one or two)
	Swamp		Guard Post (over two)
	Rock Outcrop		Filler Pipe
	Broken Concrete		Gas Valve
	Revetment (Rip Rap)		Water Valve
	Cemetery		Speed Limit Sign
	Grave		Mile Marker Post
	Cave		Sign
	Sink Hole		Traffic Signal Control Box
	Board Fence		Rail Road Signal Control Box
	Chain Link or Security Fence		Telephone Switch Box
	Wire Fence		Electric Box
	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)		

UTILITY LEGEND

	E1	Alliant Energy Billie Reid Real Estate and ROW Representative II billiereid@alliantenergy.com
	E2	Private Electrical Line (Owner Unknown)
	E3	Spencer Municipal Utilities Sean Hefner Electric Manager sean.hefner@smunet.net 712-240-3618
	E4	Iowa DOT Jason Dale ITS Maintenance Engineer Jason.Dale@iowadot.us
	E5	Iowa Lakes Electric Coop Brian Scott Field Superintendent brians@ilec.coop 7122604012
	F0	Spencer Municipal Utilities Mark White Public Works Director mwhite@spenceriowacity.com
	F02	LongLines Broadband Tom Connors Design/Construction Manager tconnors@longlines.biz 515-554-5227
	F03	H&D UNDERGROUND
	F04	Iowa Communications Network (ICN) David Augspurger Sr Telecom Specialist OSP Lead david.augspurger@icn.state.ia.us (515) 229-2013
	F05	CenturyLink Steve Parker Manager of Engineering & Construction Steven.Parker4@lumen.com 5073581978
	G	Northern Natural Gas Jeff Larson Senior Right of Way Agent Jeff.Larson@nngco.com
	G2	GL1D, Black Hills Energy - Quality D Morgan Post Design Engineer morgan.post@blackhillscorp.com 307-696-9394
	ST S(C)	
	T1	Lumen CenturyLink Steve Parker Manager of Engineering & Construction Steven.Parker4@lumen.com 5073581978
	W	Spencer Municipal Utilities (SMU) Mark White Public Works Director mwhite@spenceriowacity.com
	PPB	PPB, Iowa Lakes Electric Coop
	PPA	PPA, Spencer Municipal Utilities (SMU)
	F06	F05D, Mediacom - Quality D Jeff Anfinson Technical Operations Manager janfinson@mediacomcc.com
	F07	F05D, Private Midwestern Mechanical - Quality D
	F08	F05D, Premier 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.	
Lavender	(9)	Temporary Pavement Shading
Yellow	(4)	Proposed Pavement Shading
Orange	(6)	Proposed Granular Shading
Orange	(70)	Proposed Shoulder Granular Shading
Yellow	(68)	Proposed Shoulder Paved Full Depth Shading
Yellow	(132)	Proposed Shoulder Paved Partial Depth Shading
Gray, Dark	(112)	Proposed Grade and Pave Shading "In conjunction with a paving project"
Brown, Light	(236)	Grading Shading
Orange, Light	(134)	Proposed Granular Entrance Shading
Yellow	(220)	Proposed Paved Entrance Shading
Tan	(8)	Proposed Sidewalk Shading
Blue, Light	(230)	Proposed Sidewalk Landing Shading
Pink	(11)	Proposed Sidewalk Ramp Shading
Green, Light	(225)	Existing Pavement Shading
Red	(3)	Proposed Structure Shading
Red	(3)	Delineates Restricted Areas
Blue, Light	(7)	Proposed Paved Median Shading
Pink	(13)	Proposed Truck Apron Shading

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

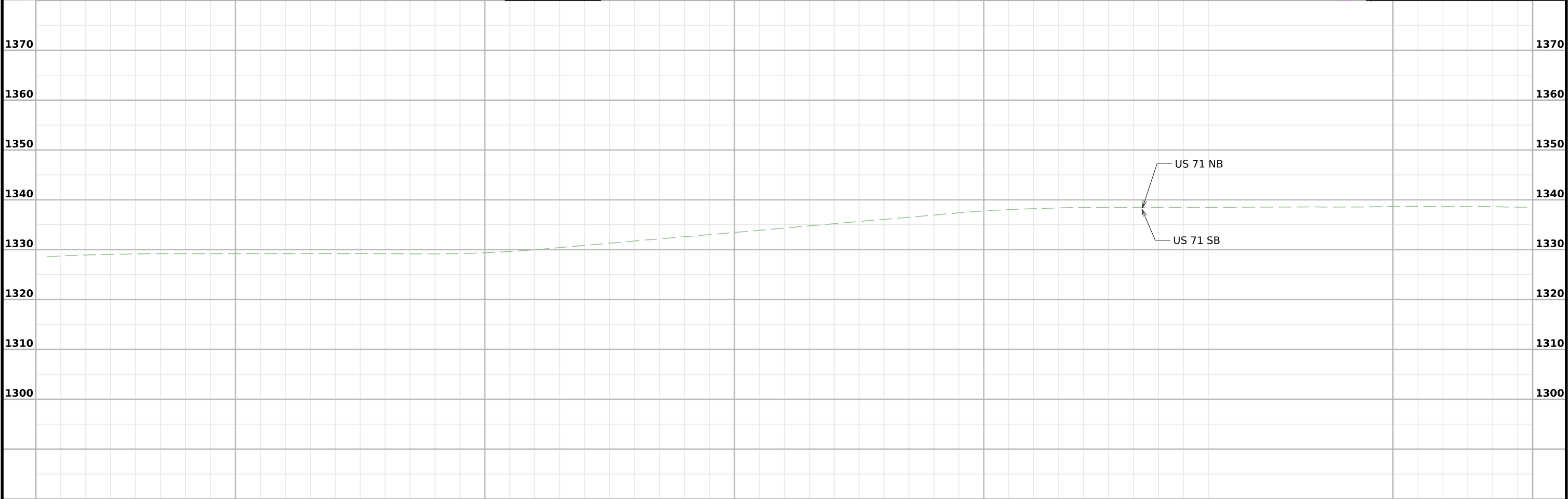
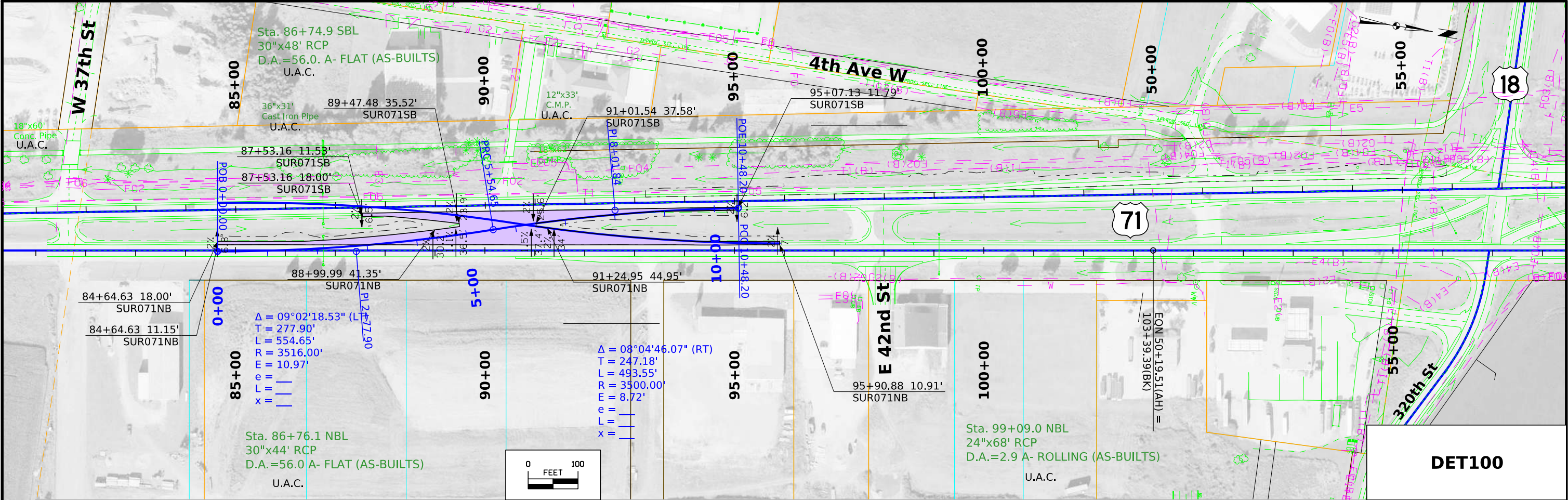
	Reference Point
	Station
	Survey Line
	Section Corner
	Ground Line Intercept
	Saw Cut
	Guardrail
	Trench Drain
	HighTension Cable Guardrail
	Sheet Pile
	Pavement Removal
	Clearing & Grubbing Area

RIGHT-OF-WAY LEGEND

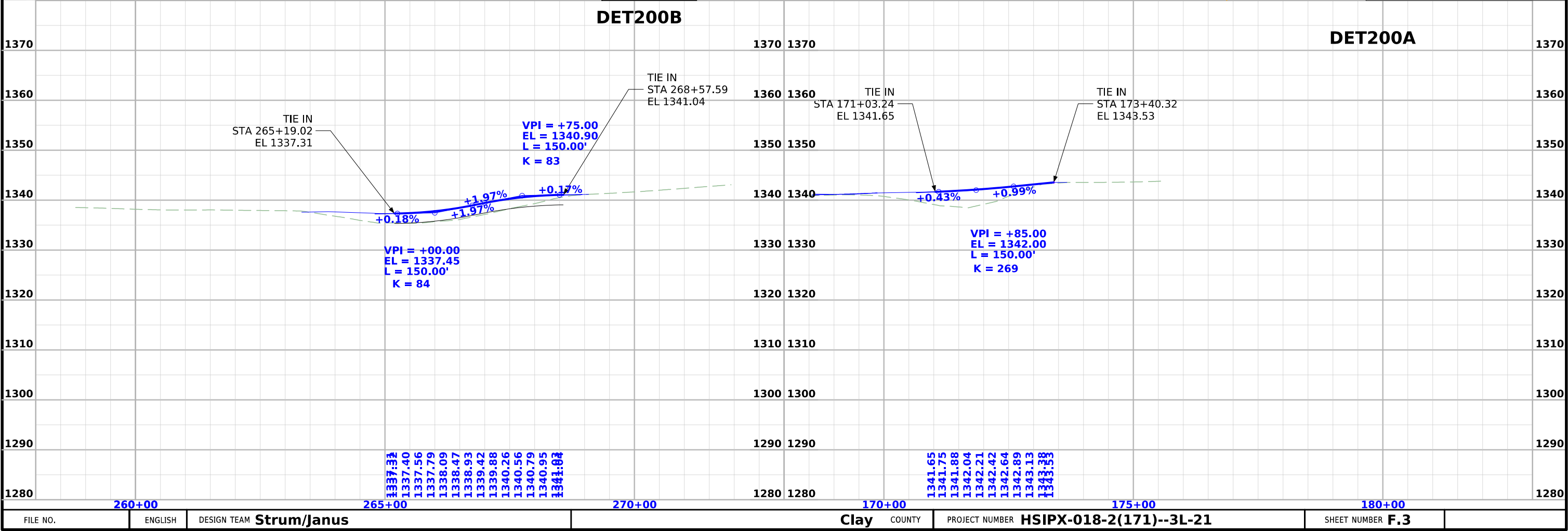
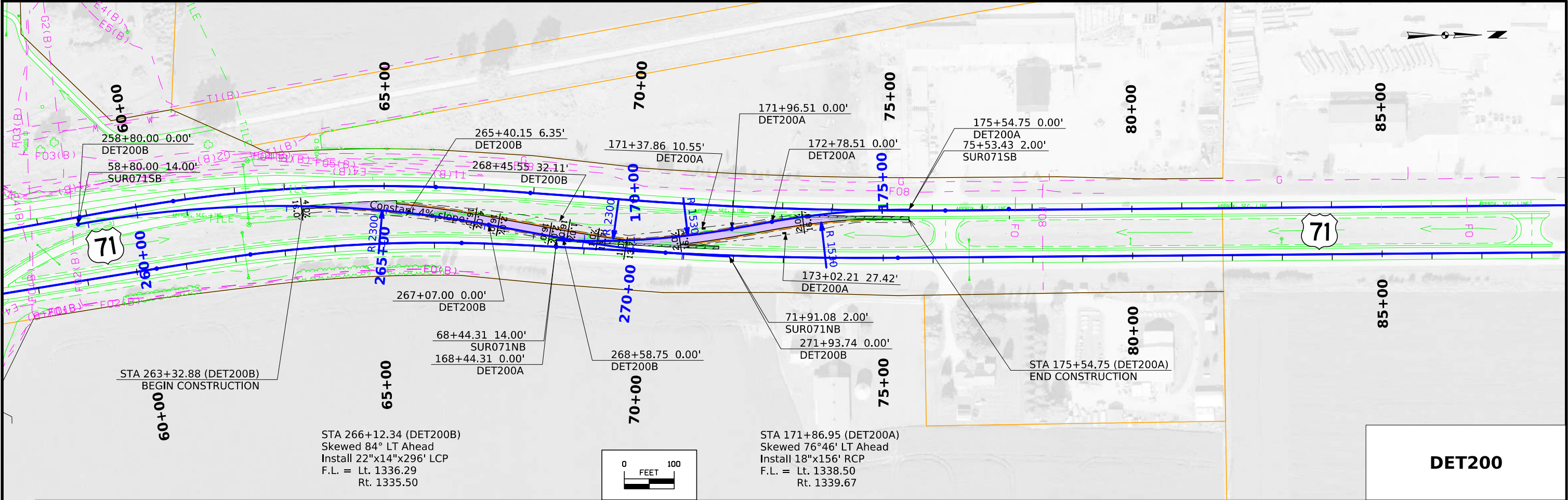
	Proposed Right-of-Way
	Existing Right of Way
	Existing and Proposed Right-of-Way
	Easement and Existing Right-of-Way
	Easement (Temporary)
	Easement
	Access Control
	Property Line

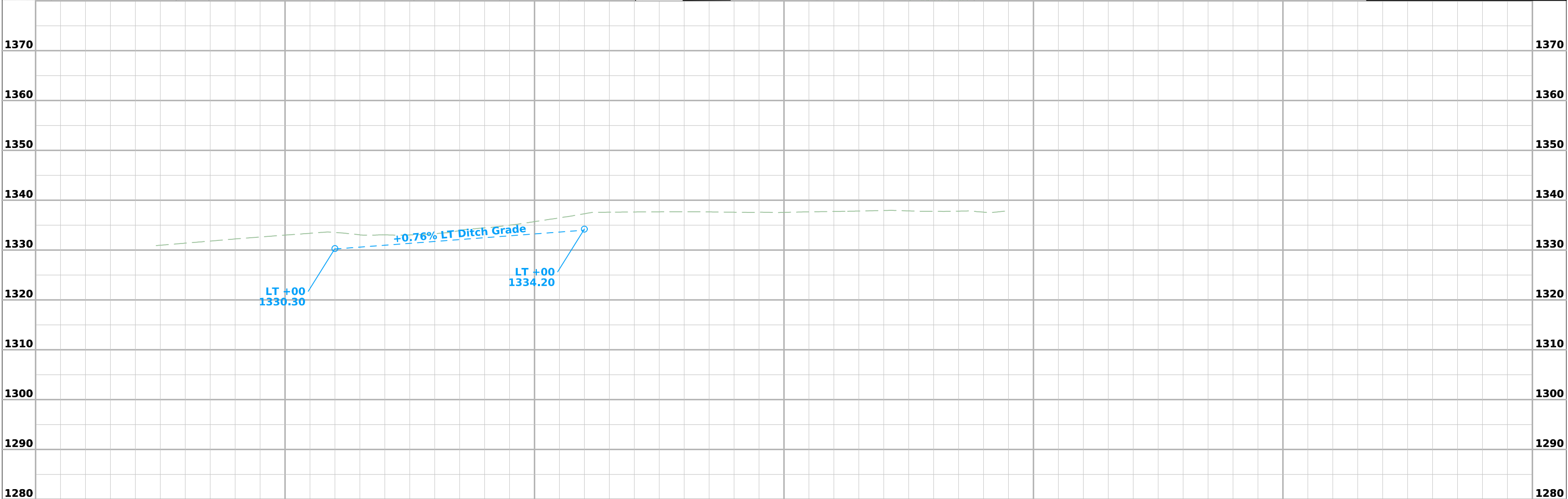
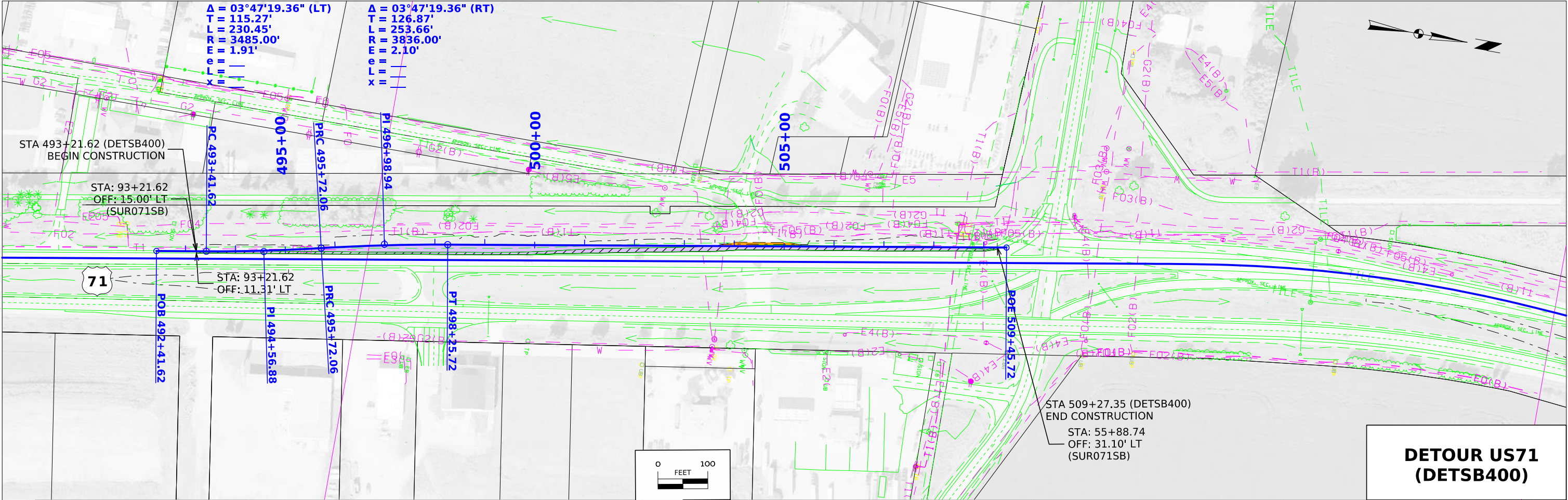
PLAN AND PROFILE
LEGEND AND SYMBOL
INFORMATION SHEET

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



FILE NO.	ENGLISH	DESIGN TEAM	Clay COUNTY	PROJECT NUMBER	SHEET NUMBER	
		Strum/Janus		HSIPX-018-2(171)--3L-21	F.2	





FILE NO.	ENGLISH	DESIGN TEAM	Strum/Janus	Clay COUNTY	PROJECT NUMBER	HSIPX-018-2(171)--3L-21	SHEET NUMBER	F.4
----------	---------	-------------	-------------	-------------	----------------	-------------------------	--------------	-----

Survey Information

SURVEY INDEX

County: Clay
PIN: 23-21-018-020
Project Number: HSIPX-018-2(142)--3L-21
Location: North US 71 US18 Intersection in Spencer
Type of Work: Round A-Bout
Project Directory: 2101802023

Survey Personnel

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

Date(s) of Survey

Begin Date	02/29/2024	Begin Date Add'l Survey	12/03/2024
End Date	04/02/2024	End Date Add'l Survey	12/12/2024

General Information

This survey is for US 18 US 71 North Intersection in Spencer Iowa. This survey request was for a Round A-Bout at this intersection. 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

Coordinates were determined for primary project control points by conducting concurrent six-hour static observations. Post processing is constrained to nearby Iowa Real Time Network reference stations. 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 01
(U.S. SURVEY FOOT)
VERTICAL DATUM: NAVD88
GEOID MODEL: 2018u3

Alignment Information

Horizontal alignments for this project were provided by the District 3 Land Survey 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) for EPOCH 2010.00 (IaRTN 2019 Adjustment) - Iowa RCS Zone 01 (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 01 (U.S. Survey Foot)
VERT. DATUM: NAVD88
Geoid Model: 2018u3

Point Name	Northing	Easting	Elevation	Code-Description
7034	9588735.20	11513395.58	1332.44	CP FND CLAY CO GPS CONTROL POINT AS DESCRIBED IN GOOD CONDITION
7038	9604529.12	11526413.10	1374.75	CP FND CLAY CO GPS CONTROL POINT AS DESCRIBED IN GOOD CONDITION
7052	9588741.07	11542038.91	1316.46	CP FND CLAY CO GPS CONTROL POINT AS DESCRIBED IN GOOD CONDITION
7089	9584230.48	11512621.90	1335.57	CP FND CLAY CO GPS CONTROL POINT AS DESCRIBED IN GOOD CONDITION
210180774	9594248.27	11525527.43	1333.08	CP SET FENO MONUMENT 270ft west of the Iowa State Patrol Driveway on North Side of US18
210180787	9588445.56	11527218.79	1327.65	CP SET FENO MONUMENT 330ft South of E 30th St along West side of the Bike Path
E18	9580940.21	11515583.45	1331.23	CP FND NGS SECOND ORDER CLASS 0 VERTICAL MARK AS DESCRIBED IN GOOD CONDITION

108-26A
08-01-08

STAGING NOTES

Stage 1

Construction:
Construct US 71 median crossovers

Traffic:
Shift US 71 traffic into outside lanes

Stage 2

Construction:
Construct southbound US 71 widening

Traffic:
Shift US 71 southbound traffic into median lane

Stage 3

Construction:
Complete

Traffic:
Return US 71 traffic to normal four-lane operation

108-23A
08-01-08

TRAFFIC CONTROL PLAN

U.S. 71

Maintain at least one lane of traffic in each direction at all times

All construction traffic control and staging shall be the responsibility of the Contractor including fabrication and installation of all traffic control signing

Traffic switches shall be made between 9:00 AM and 3:00 PM unless approved by the Engineer

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
			None Expected									

111-01
04-17-12

COORDINATED OPERATIONS

Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.

Project	Type of Work
None	

FILE NO.

DESIGN TEAM Strum\Janus

CLAY COUNTY

PROJECT NUMBER HSIPX-018-2(171)--3L-21

SHEET NUMBER J.1

3/19/2026 10:15:08 AM jstrum c:\pw_work\pwwmain\jstrum\d2668710\SHI_21018171_001.xlsm

CROSS SECTION VIEW COLOR LEGEND
OF TRAFFIC CONTROL AND STAGING SHEETS

SHADING	Design Color No.
Green, Light	(225)
Gray, Light	(48)
Gray, Med	(80)
Blue, Light	(230)
Lavender	(9)
Brown, Med	(237)

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

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

PLAN VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

LINEWORK	Design Color No.
Green	(2)
Magenta	(5)
Blue	(1)
Yellow	(4)
Off White	(254)
Violet	(15)
Flush Orange	(228)

SHADING	Design Color No.
Green, Light	(225)
Gray, Light	(48)
Gray, Med	(80)
Gray, Med	(80)
Blue, Light	(230)
Lavender	(9)
Brown, Light	(236)
Pink, Dark	(13)
Red	(3)
Black w/Gray, Light Fill	(0,48)

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

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

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

TRAFFIC CONTROL
AND
STAGING
LEGEND AND SYMBOL
INFORMATION SHEET

(COVERS SHEET SERIES J)

FILE NO.

ENGLISH

DESIGN TEAM

Clay COUNTY

PROJECT NUMBER

SHEET NUMBER

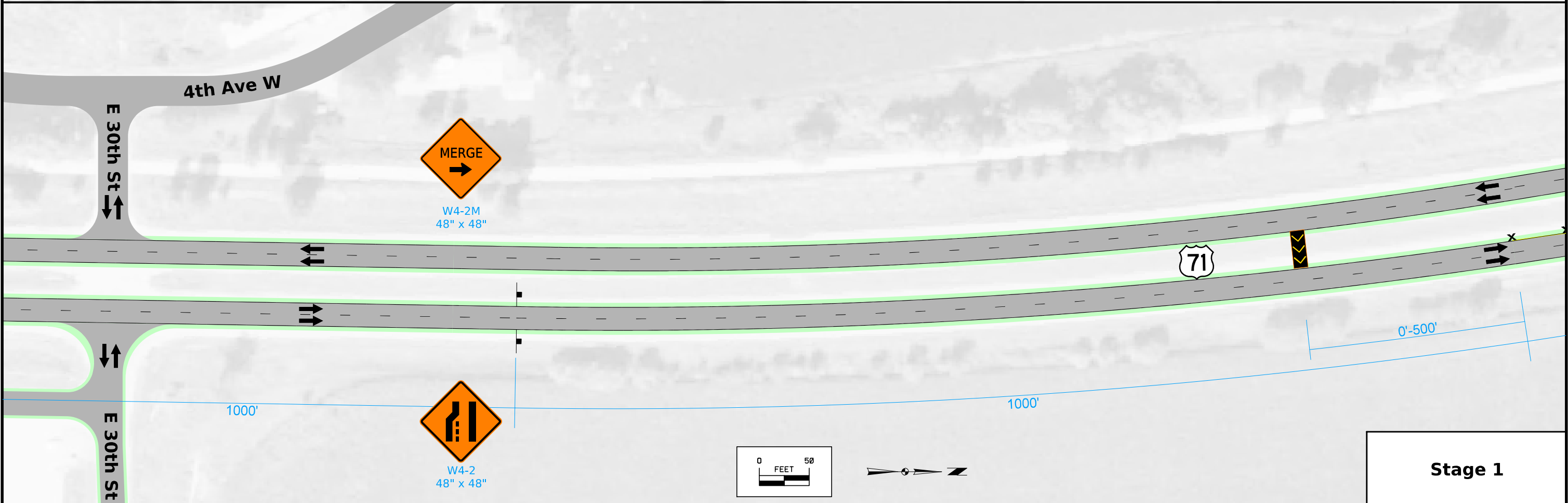
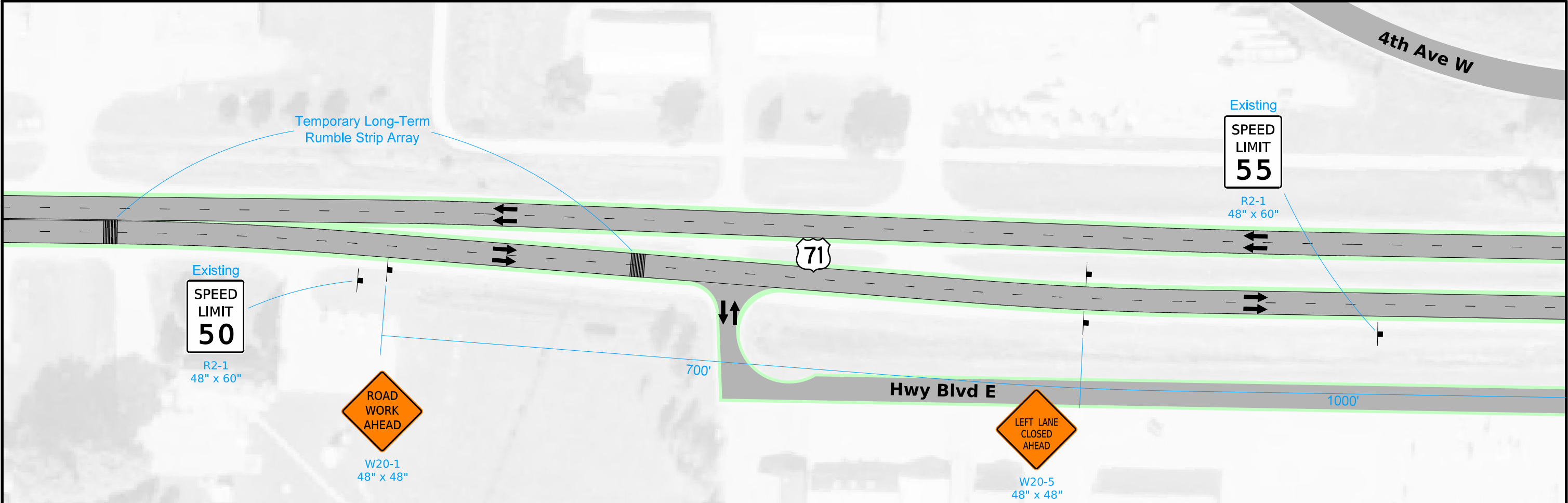
3/19/2026

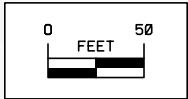
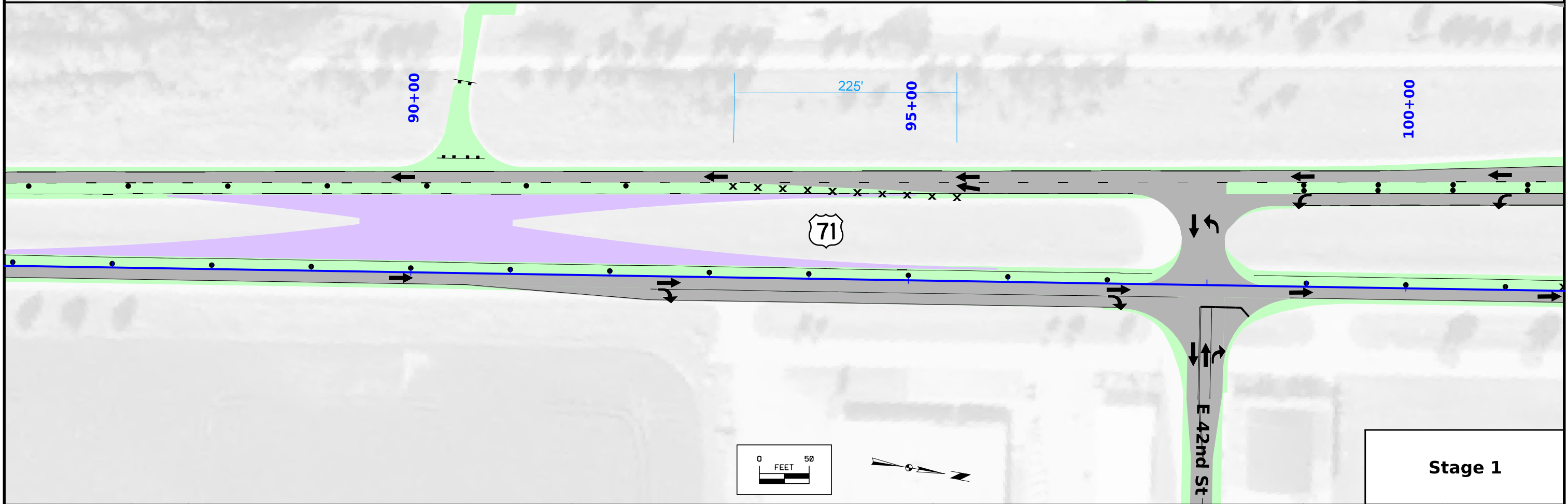
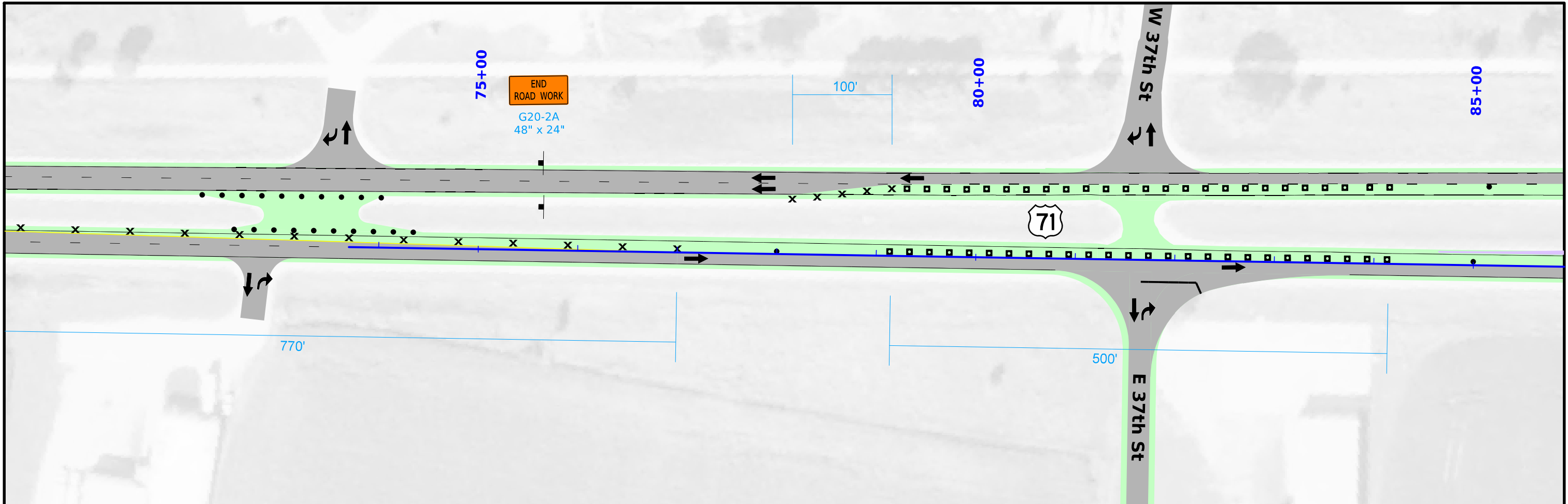
jstrum

pw:\NTPwint1.dot.int.lan:PWMain\Documents\Projects\2101802023\Design\HSIPX-018-2(171)--3L-21\CADD_Files\Sheet_Files\SHT_21018171_J02.dgn

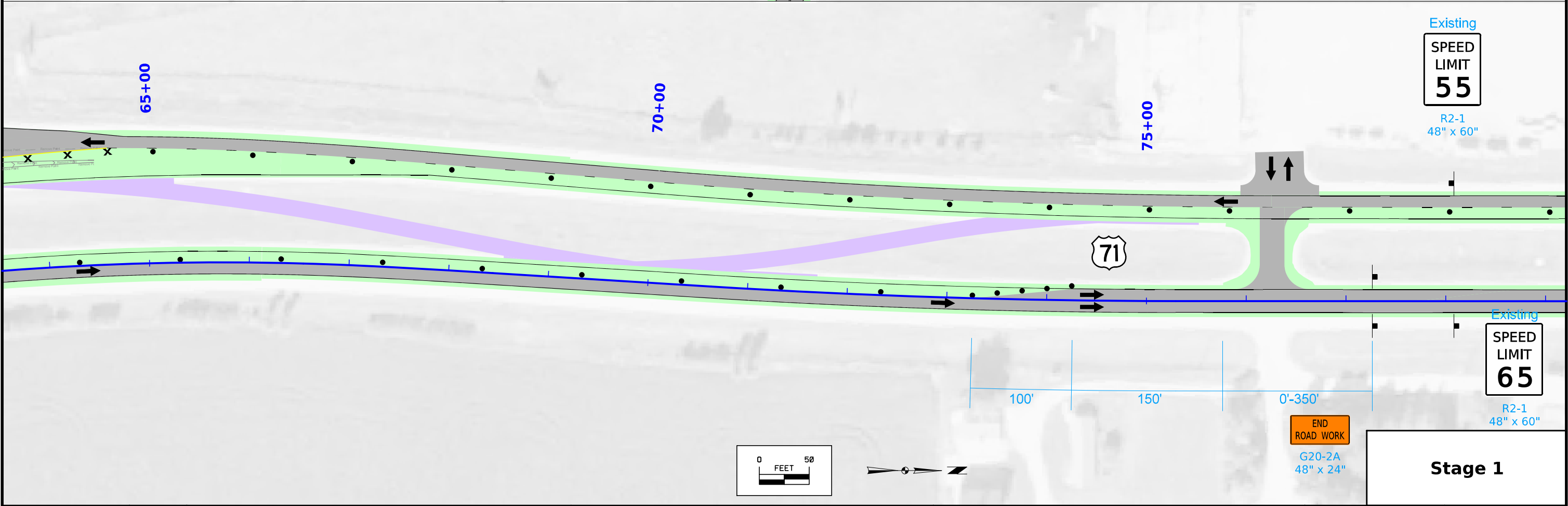
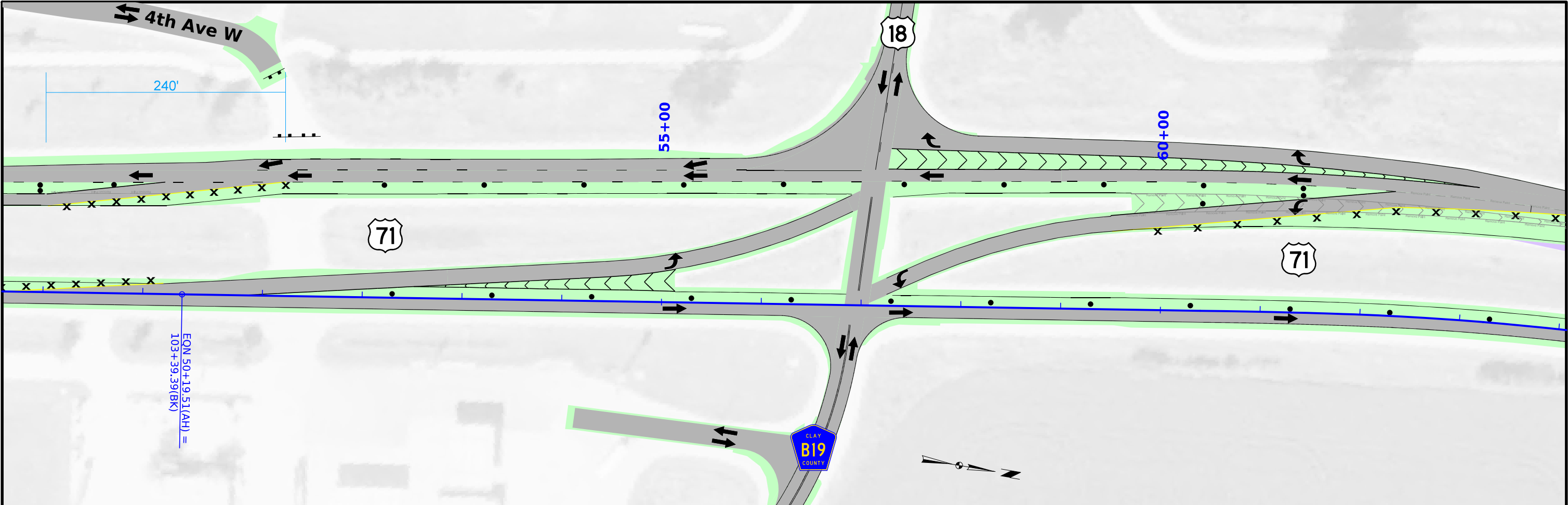
HSIPX-018-2(171)--3L-21

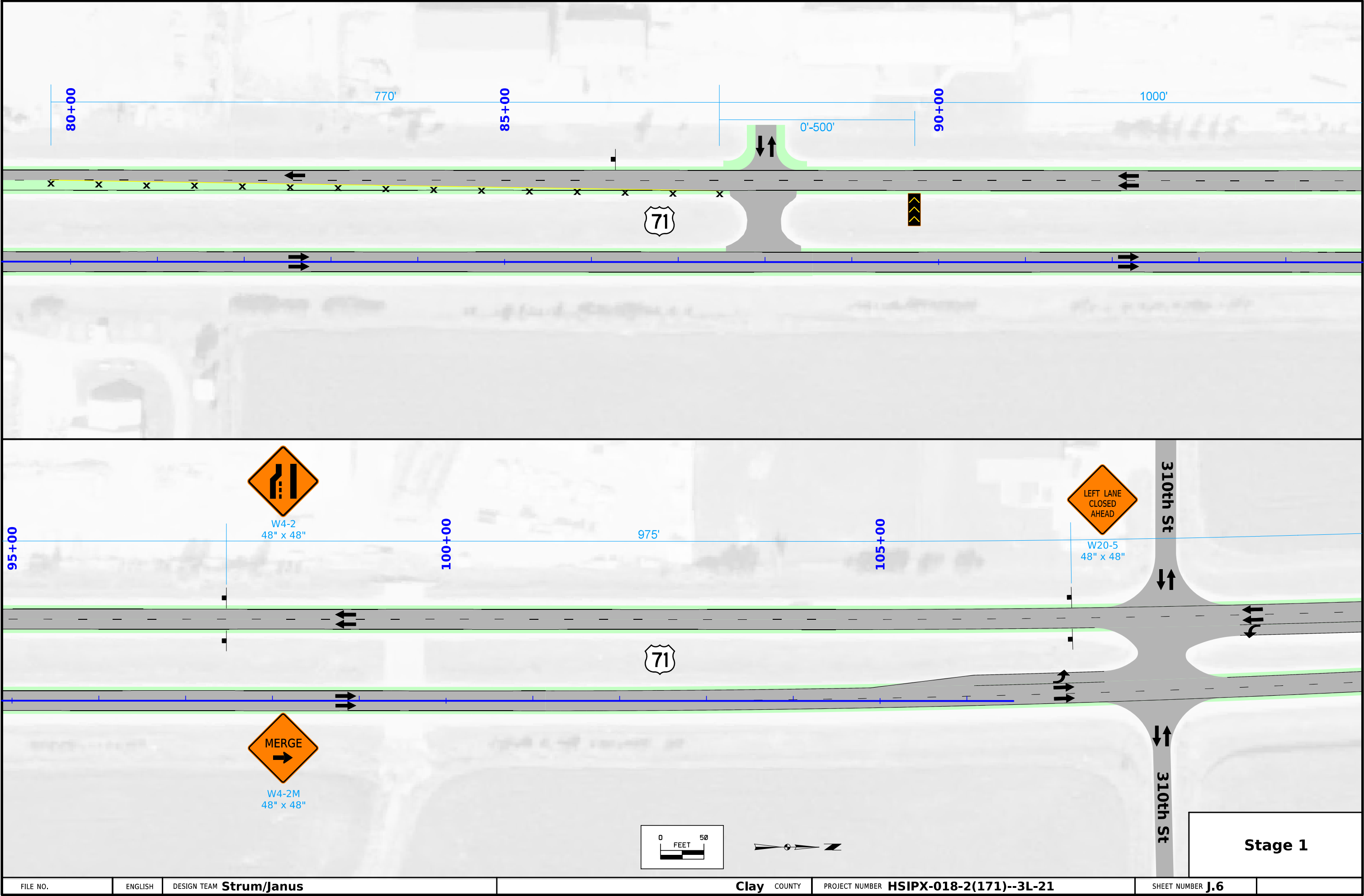
J.2

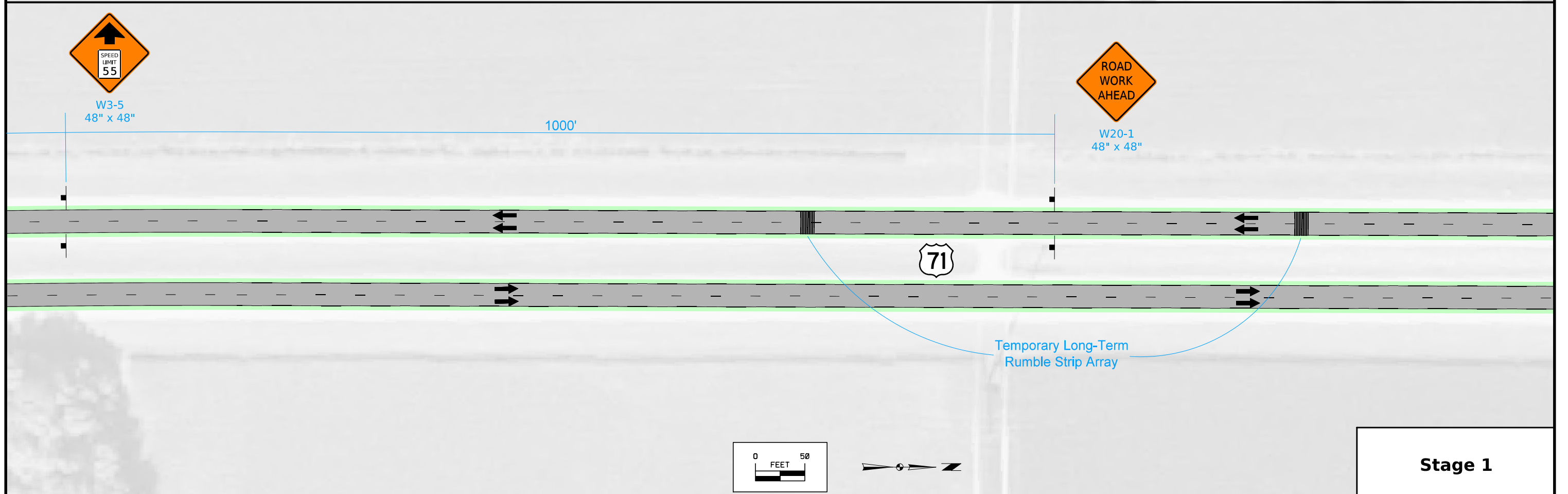
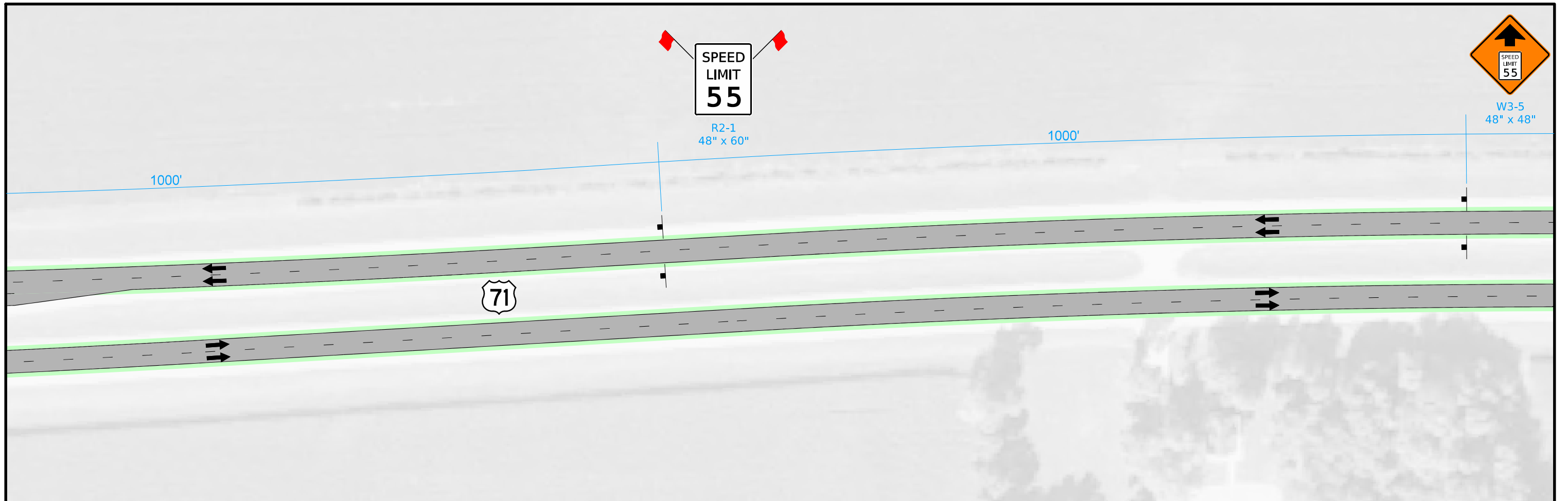


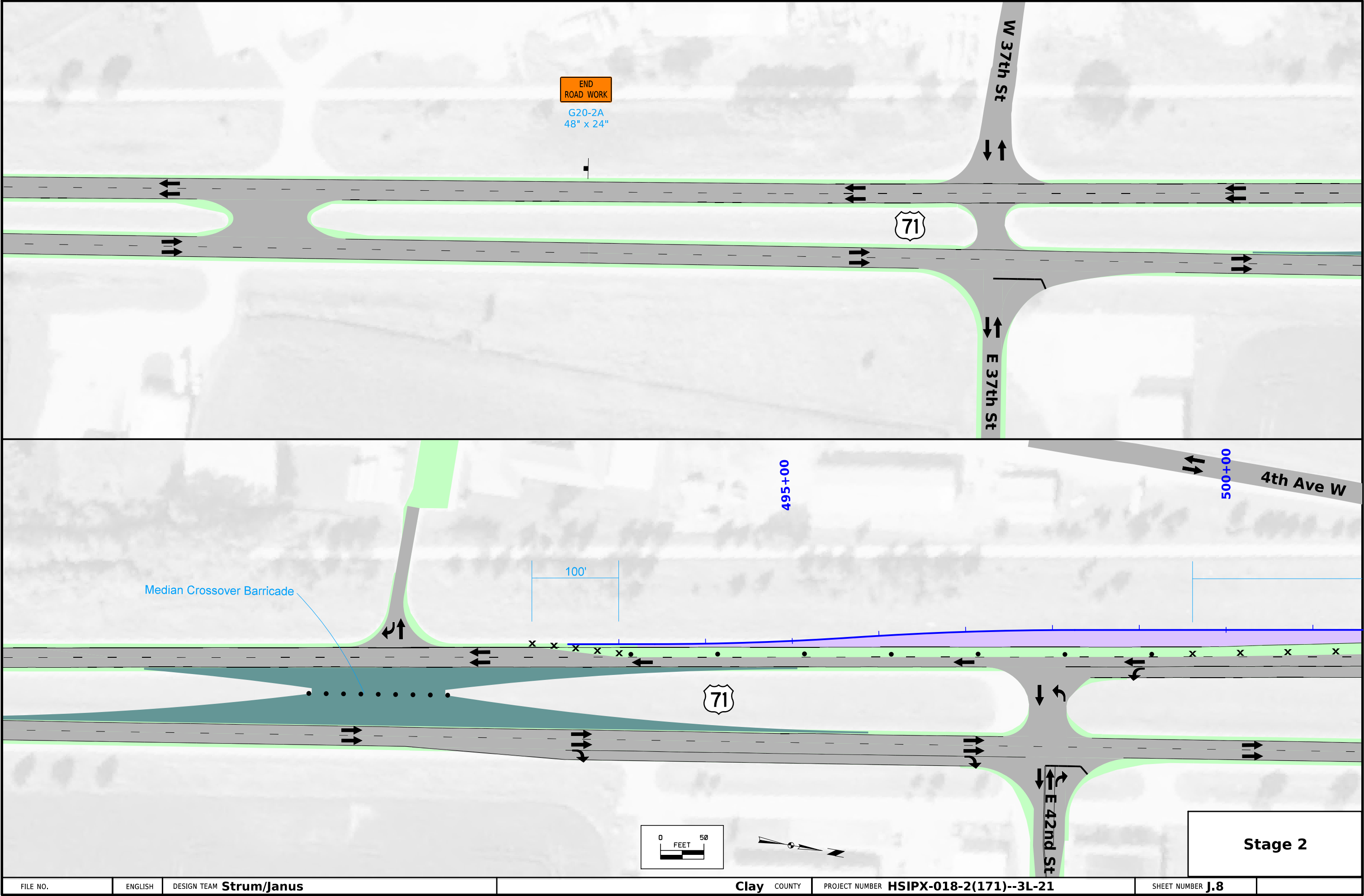


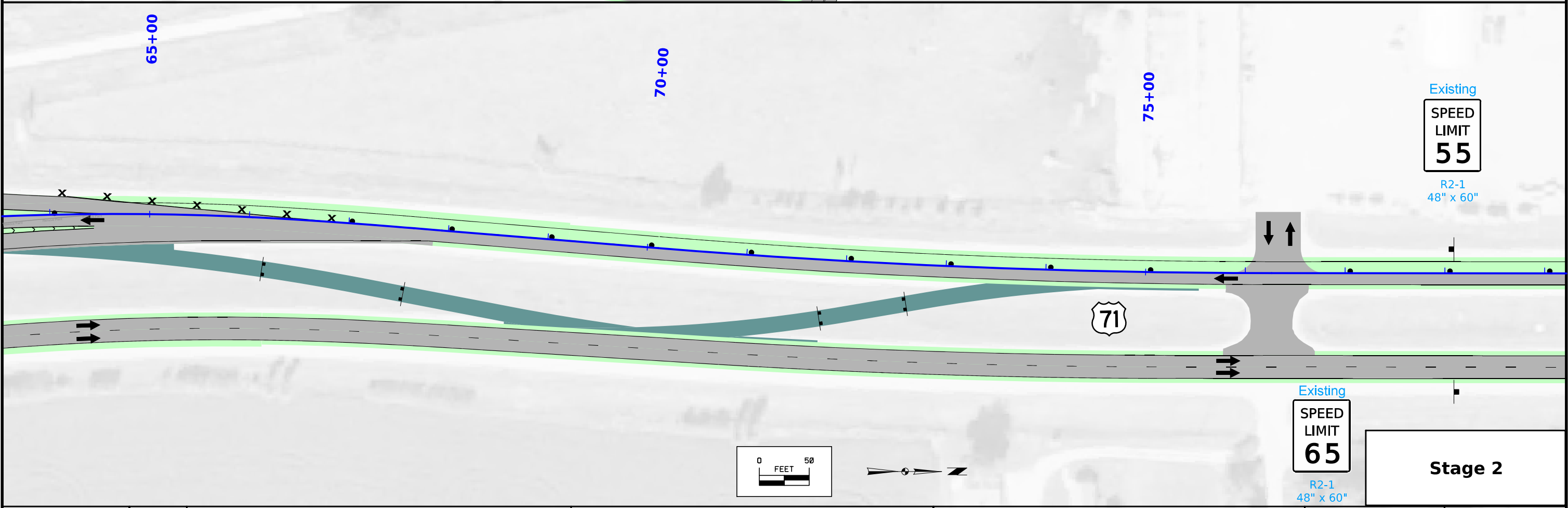
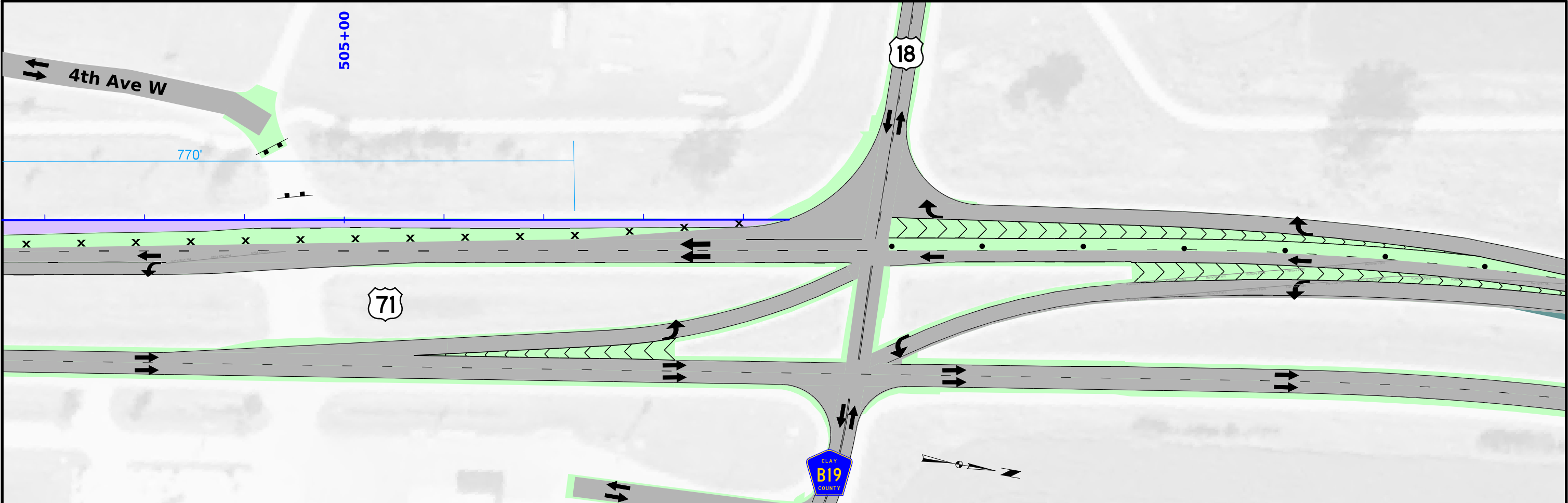
Stage 1

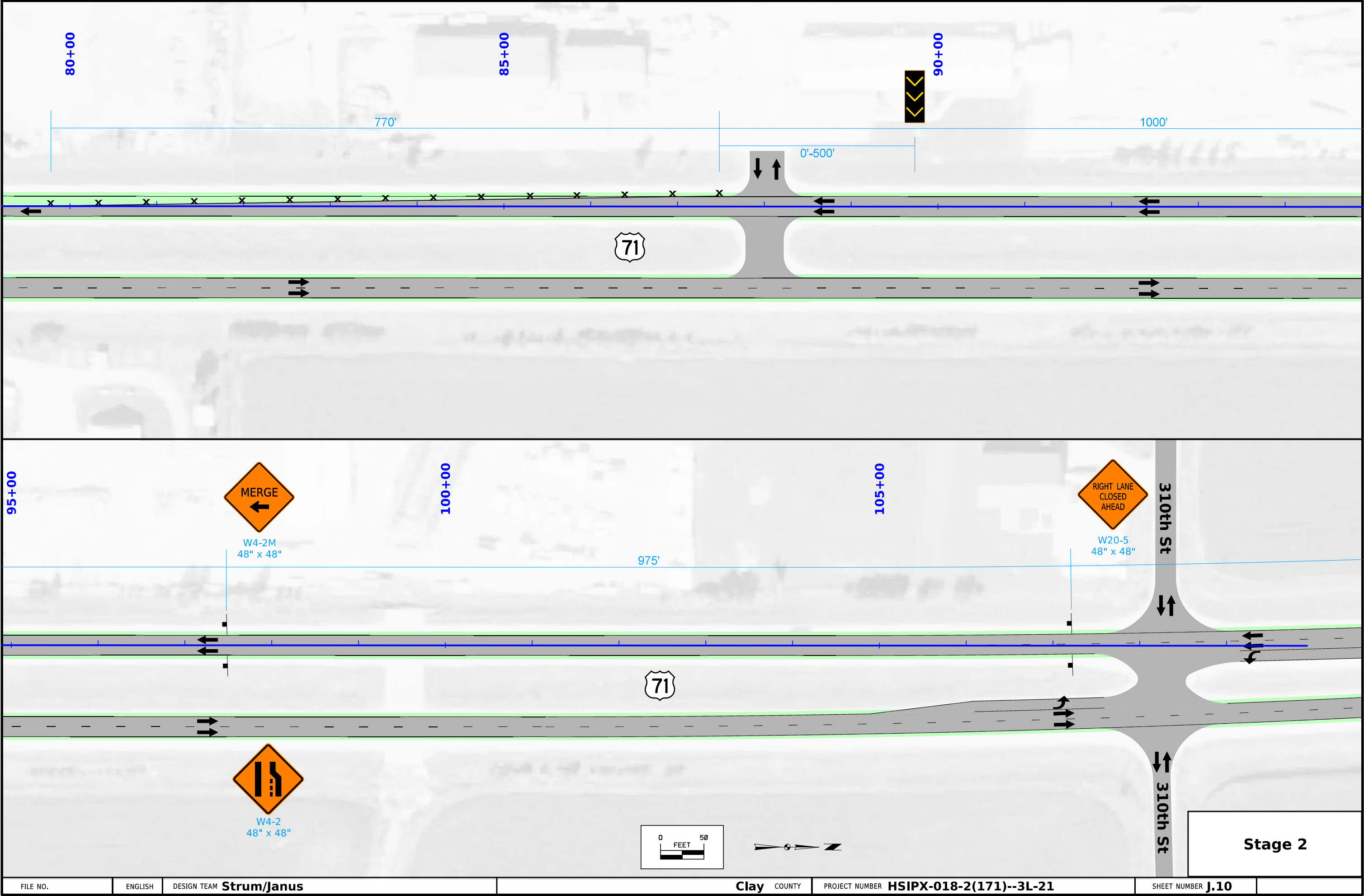


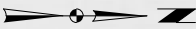
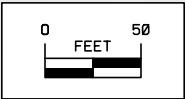
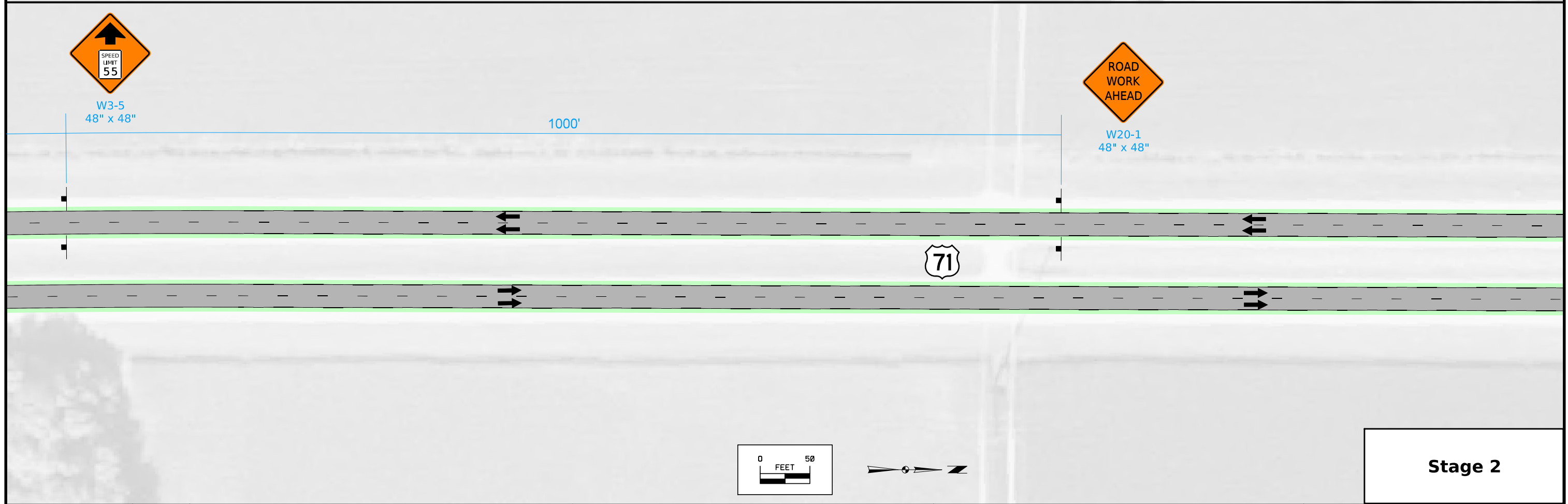
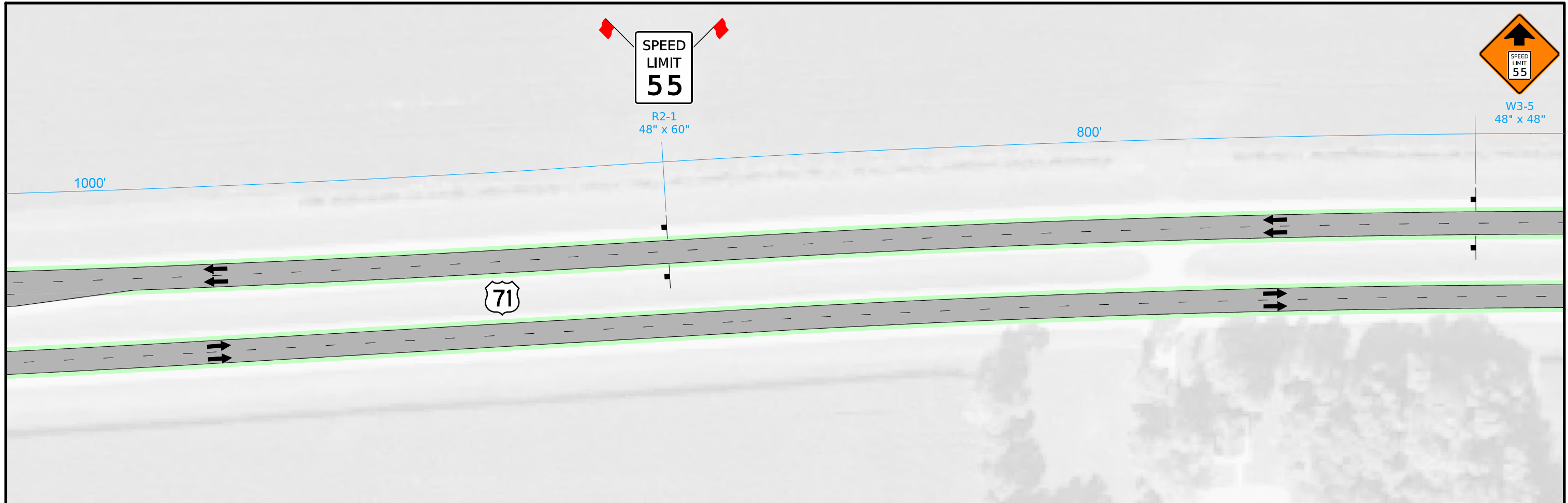




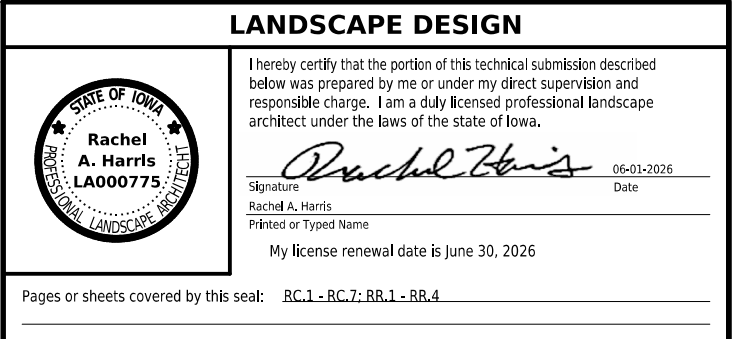








Stage 2



Signature Rachel Zanis Date 06-01-2026

My license renewal date is June 30, 2026

Pages or sheets covered by this seal: RC.1 - RC.7; RR.1 - RR.4

ESTIMATED PROJECT QUANTITIES AND REFERENCE NOTES

Roadside Items : Roadside Items

Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Roadside Items	
1	2601-2634100	MULCHING	ACRE	1.6	<p>Perform mulching according to Article 2601.03, E, 2, of the Standard Specifications. Anchor mulch into the soil using mulch anchoring equipment with a minimum of two passes.</p> <p>Item is included for areas requiring reshaping and seedbed preparation except where slope protection has been applied. Use mulch that is Certified Noxious Weed Seed Free Mulch as certified by the Iowa Crop Improvement Association or adjacent states Crop Improvement Associations.</p> <p>Mulch Rate: 1 1/2 tons of dry cereal straw or native grass straw per acre.</p>
2	2601-2642100	STABILIZING CROP - SEEDING AND FERTILIZING	ACRE	1.6	<p>Seed and fertilize all disturbed areas according to Article 2601.03, C, 1, of the Standard Specifications. If permanent seeding cannot be placed due to the restrictive planting dates, stabilizing crop will need to be placed on all disturbed areas as temporary erosion control.</p> <p>When stabilizing crop must be used, place immediately following completions of finished grading. Reseeding of these areas will be required at contractors expense if damage occurs due to contractors negligence during the contract period.</p> <p>It is not necessary to place stabilizing crop in locations that have be covered by slope or special ditch protection.</p>
3	2602-0000150	STABILIZED CONSTRUCTION ENTRANCE, EC-303	LF	300	Refer to Standard Road Plan EC-303.
4	2602-0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.	LF	1,000	<p>Refer to Standard Road Plan EC-204.</p> <p>Item is included for temporary perimeter sediment control, inlet protection, and water velocity reduction on slopes or ditches at locations to be determined during construction. Verify specific locations with the Engineer prior to beginning placement.</p>
5	2602-0000320	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 20 IN. DIA.	LF	1,000	<p>Refer to Standard Road Plan EC-204.</p> <p>Item is included for temporary perimeter sediment control, inlet protection, and water velocity reduction on slopes or ditches at locations to be determined during construction. Verify specific locations with the Engineer prior to beginning placement.</p>
6	2602-0000351	REMOVAL OF PERIMETER AND SLOPE OR DITCH CHECK SEDIMENT CONTROL DEVICE	LF	2,000	
7	2602-0010010	MOBILIZATIONS, EROSION CONTROL	EACH	1	
8	2602-0010020	MOBILIZATIONS, EMERGENCY EROSION CONTROL	EACH	1	

281_03
11/9/23

STORM WATER BEST MANAGEMENT PRACTICES

When the following best management practices are used, they are intended to account for disturbed areas where storage volume cannot be provided: Perimeter and Slope Sediment Control Devices and Seeding.

111_25 4/21/26		
INDEX OF TABULATIONS		
Tabulation	Tabulation Title	Sheet No.
111_25	INDEX OF TABULATIONS	RC.4
105_04	STANDARD ROAD PLANS	RC.5
110_12	POLLUTION PREVENTION PLAN	RC.6 - RC.7

<div>105_04 4/21/26</div> <div>STANDARDS</div> <div>The following Standards apply to construction work on this project.</div>		
Number	Date	Title
EC-204	10-19-21	Perimeter, Slope and Ditch Check Sediment Control Devices
EC-303	10-19-21	Stabilized Construction Entrance
EC-502	04-21-15	Seeding in Rural Areas

<div>110_12 1/13/23</div> <div>POLLUTION PREVENTION PLAN</div> <div><p>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).</p><p>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.</p><p>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.</p><p>I. ROLES AND RESPONSIBILITES</p><p>A. Designer:</p><ol style="list-style-type: none">Prepares Base PPP included in the project plan.Prepares Notice of Intent (NOI) submitted to Iowa DNR.Is signature authority on the Base PPP. If consultant designed, signature from Contracting Authority is also required.<p>B. Contractor:</p><ol style="list-style-type: none">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.Designates a Water Pollution Control Manager (WPCM), who has the duties and responsibilities as defined in Section 2602 of the Standard Specifications.Submits an Erosion Control Implementation Plan (ECIP) and ECIP updates according to Section 2602 of the Standard Specifications.Installs and maintains appropriate controls. This work may be subcontracted as documented through Subcontractor Request Forms (Form 830231).Supervises and implements good housekeeping practices according to Paragraph III, C, 2.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.Complies with training and certification requirements of Section 2602 of the Standard Specifications.Submits amended PPP site map according to Section 2602 of the Standard Specifications.<p>C. Subcontractors:</p><ol style="list-style-type: none">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 perorming 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.Implement good housekeeping practices according to Paragraph III, C, 2.<p>D. RCE/Project Engineer:</p><ol style="list-style-type: none">Is Project Storm Water Manager.On projects where DOT is the Contracting Authority, is current with erosion control training or certification.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.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.Supervises all work necessary to meet storm water requirements at the Project, including work performed by contractors and subcontractors.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.Is familiar with the Project PPP and storm water site map.On projects where DOT is Contracting Authority, is responsible for periodically monitoring inspection reports to determine whether deficiencies identified in inspection reports were adequately and timely addressed, and if not, has the authority and responsibility to direct immediate actions to correct the deficiencies.Is the point of contact for the Project for regulatory officials, Inspector, contractors, and subcontractors regarding storm water requirements.Is signature authority on Notice of Discontinuation.Maintains an up-to-date record of contractors, subcontractors, and subcontracted work items through Subcontractor Request Forms (Form 830231).Makes information to determine permit compliance available to the DNR upon their request.</div>				<div>110_12 1/13/23</div> <div>POLLUTION PREVENTION PLAN</div> <div><p>E. Inspector:</p><ol style="list-style-type: none">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.Makes information to determine permit compliance available to the DNR upon their request.Conducts joint required inspections of the site with the contractor/subcontractor.Completes an inspection report after each inspection.Is signature authority on storm water inspection reports.<p>F. PROJECT SITE DESCRIPTION</p><p>A. This Pollution Prevention Plan (PPP) is for Median Crossovers in Clay County.</p><p>B. This PPP covers approximately 30.7 acres with an estimated 7.1 acres being disturbed. The portion of the PPP covered by this contract has 2.7 acres disturbed.</p><p>C. The PPP is located in an area of Galva - Primghar and Marna - Kossuth - Bode soil associations. The estimated weighted average runoff coefficient number for this PPP after completion will be 0.44.</p><p>D. Storm Water Site Map is located in the R sheets. Proposed slopes are shown in cross sections, details, or standard road plans. Supplemental information is located in the Tabulations in the C or CE sheets.</p><p>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.</p><p>F. Runoff from this work will flow into the Little Sioux River.</p><p>III. CONTROLS</p><p>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.</p><p>B. Preserve vegetation in areas not needed for construction.</p><p>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.</p><p>1. EROSION AND SEDIMENT CONTROLS</p><p>a. Stabilization Practices</p><ol style="list-style-type: none">Site plans will ensure that existing vegetation or natural buffers are preserved where attainable and disturbed portions of the site will be stabilized.Initialize stabilization of disturbed areas immediately after clearing, grading, excavating, or other earth disturbing activities have:<ol style="list-style-type: none">Permanently ceased on any portion of the site, orTemporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days.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.Permanent and Temporary Stabilization practices to be used for this project are located in the storm water site map, Estimated Project Quantities (100-0A, 100-1A, or 100-1C), and Estimate Reference Information (100-4A) located in the C or R 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 or R sheets.Preservation of existing vegetation within right-of-way or easements will act as vegetative buffer strips.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 or R sheets. Additional information may be found in the Tabulations in the C or T Tabulation sheets, or is referenced in Section 2105 of the Standard Specifications.<p>b. Structural Practices</p><ol style="list-style-type: none">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.Structural practices to be used for this project are located in the storm water site map, Estimated Project Quantities (100-0A, 100-1A, or 100-1C), and Estimate Reference Information (100-4A) located in the C or R 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 on the B or R sheets or are referenced in the Standard Road Plans Tabulation (105-4) located in the C or R sheets.</div>				
FILE NO.	ENGLISH	DESIGN TEAM	Harris/Pohlen/McDonald	CLAY COUNTY	PROJECT NUMBER	HSIPX-018-2(171)--3L-21	SHEET NUMBER	RC.6

4/16/2026 7:17:36 PM






baebanamecdonald@iowadot.us




<div>110_12 1/13/23</div> <div>POLLUTION PREVENTION PLAN</div>				<div>110_12 1/13/23</div> <div>POLLUTION PREVENTION PLAN</div>					
<div><div><div><div>c. Storm Water Management</div><div>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 storm water site map and Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C or R 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. The installation of these devices may be subject to Section 404 of the Clean Water Act.</div></div></div><div><div>2. OTHER CONTROLS</div><div>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 laws, rules or regulations shall apply.</div><div><div>a. Vehicle Entrances and Exits - Construct and maintain entrances and exits to prevent tracking of sediments onto roadways.</div><div>b. Material Delivery, Storage and Use - Implement practices to prevent discharge of construction materials during delivery, storage, and use.</div><div>c. Stockpile Management - Install controls to reduce or eliminate pollution of storm water from stockpiles of soil and paving.</div><div>d. Waste Disposal - Do not discharge any materials, including building materials, into waters of the state, except as authorized by a Section 404 permit.</div><div>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.</div><div>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.</div><div>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.</div><div>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.</div><div>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.</div><div>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.</div></div><div><div>3. APPROVED STATE OR LOCAL PLANS</div><div>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.</div></div></div><div><div>IV. MAINTENANCE PROCEDURES</div><div>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.</div></div><div><div>V. INSPECTION REQUIREMENTS</div><div><div>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:<div><div>1. Date of the inspection.</div><div>2. Summary of the scope of the inspection.</div><div>3. Name and qualifications of the personnel making the inspection.</div><div>5. Review of erosion and sediment control measures within disturbed areas for the effectiveness in preventing impacts to receiving waters.</div><div>6. Major observations related to the implementation of the PPP.</div><div>7. Identification of corrective actions required to maintain or modify erosion and sediment control measures.</div></div></div><div>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.</div></div></div><div><div>VI. NON-STORM WATER DISCHARGES</div></div></div>				<div>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.</div> <div><div>VII. POTENTIAL SOURCES OF OFF RIGHT-OF-WAY (ROW) POLLUTION</div><div>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.</div></div> <div><div>VIII. DEFINITIONS</div><div><div>A. Base PPP - Initial Pollution Prevention Plan.</div><div>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.</div><div>C. Fieldbook Entries - This contains the inspector’s daily diary and bid item postings.</div><div>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).</div><div>E. Signature Authority - Representative authorized to sign various storm water documents.</div></div><div>-----</div><div><div>CERTIFICATION STATEMENT</div><div>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.</div><div><div><div><div><div><div></div></div><div>Signature</div></div><div><div>Nathan J. Pohlen</div><div>Print Name</div></div></div></div></div></div></div>					
FILE NO.	ENGLISH	DESIGN TEAM	Harris/Pohlen/McDonald	CLAY COUNTY	PROJECT NUMBER	HSIPX-018-2(171)- -3L-21	SHEET NUMBER	RC.7	








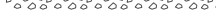
4/16/2026 7:17:36 PM








baebanamecdonald@iowadot.
us










LINE STYLE LEGEND OF LANDSCAPE SHEETS	
LINESTYLE	Design Element
-----	Living Snow Fence Single Row
-----	Living Snow Fence Double Row
-----	Mechanical Edge

















CELL LEGEND OF LANDSCAPE SHEETS		
CELL	Design Element	Plant Diameter
	Clearing	
	Proposed Shrub	6 FT
	Proposed Understory Tree	12 FT
	Proposed Conifer Tree	18 FT
	Proposed Overstory Tree	30 FT

PATTERN LEGEND OF LANDSCAPE SHEETS	
	Brush Clearing
	Clearing & Grubbing
	Spray Area

LINE STYLE LEGEND OF EROSION CONTROL SHEETS	
LINESTYLE	Design Element
	Silt Fence
	Perimeter and Slope Sediment Control Device (9")
	Perimeter and Slope Sediment Control Device (12")
	Perimeter and Slope Sediment Control Device (20")
	Open-Throat Curb Intake Sediment Filter
	Concentrated Flow
	Rock Check and Rock Check Dam
	Sheet Flow

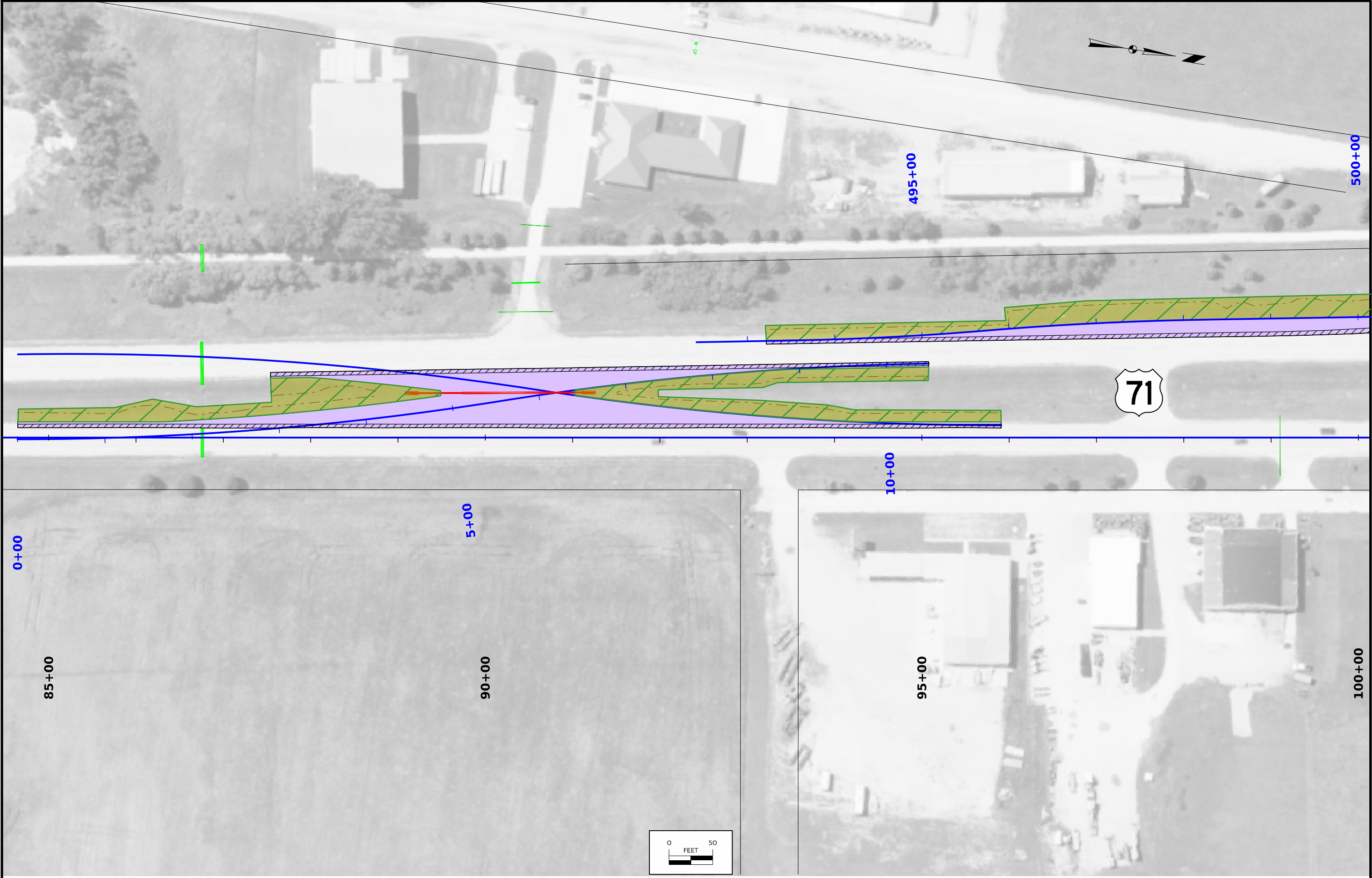
CELL LEGEND OF EROSION CONTROL SHEETS	
CELL	Design Element
	Temporary Sediment Control basin
	Erosion Control for Circular Intake or Manhole Well
	Erosion Control for Rectangular Intake or Manhole Well
	Grate Intake Sediment Filter Bag
	Silt Basin
	Silt Fence Tail
	Stormwater Drainage Basin Discharge Point

PLAN VIEW COLOR LEGEND OF EROSION CONTROL 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	
Black	(0)		Permanent Erosion Control Features	
Blaze Orange	(222)		Temporary Erosion Control Features	
SHADING	Design Color No.		Transparency	
Citron	(234)		Mulching, All Types	50%
Light Brown	(238)		Special Ditch Control, Wood Excelsior Mat	0%
Grass Green	(233)		8FT Mow Strip	50%
Red	(3)		Delineates Restricted Areas	0%

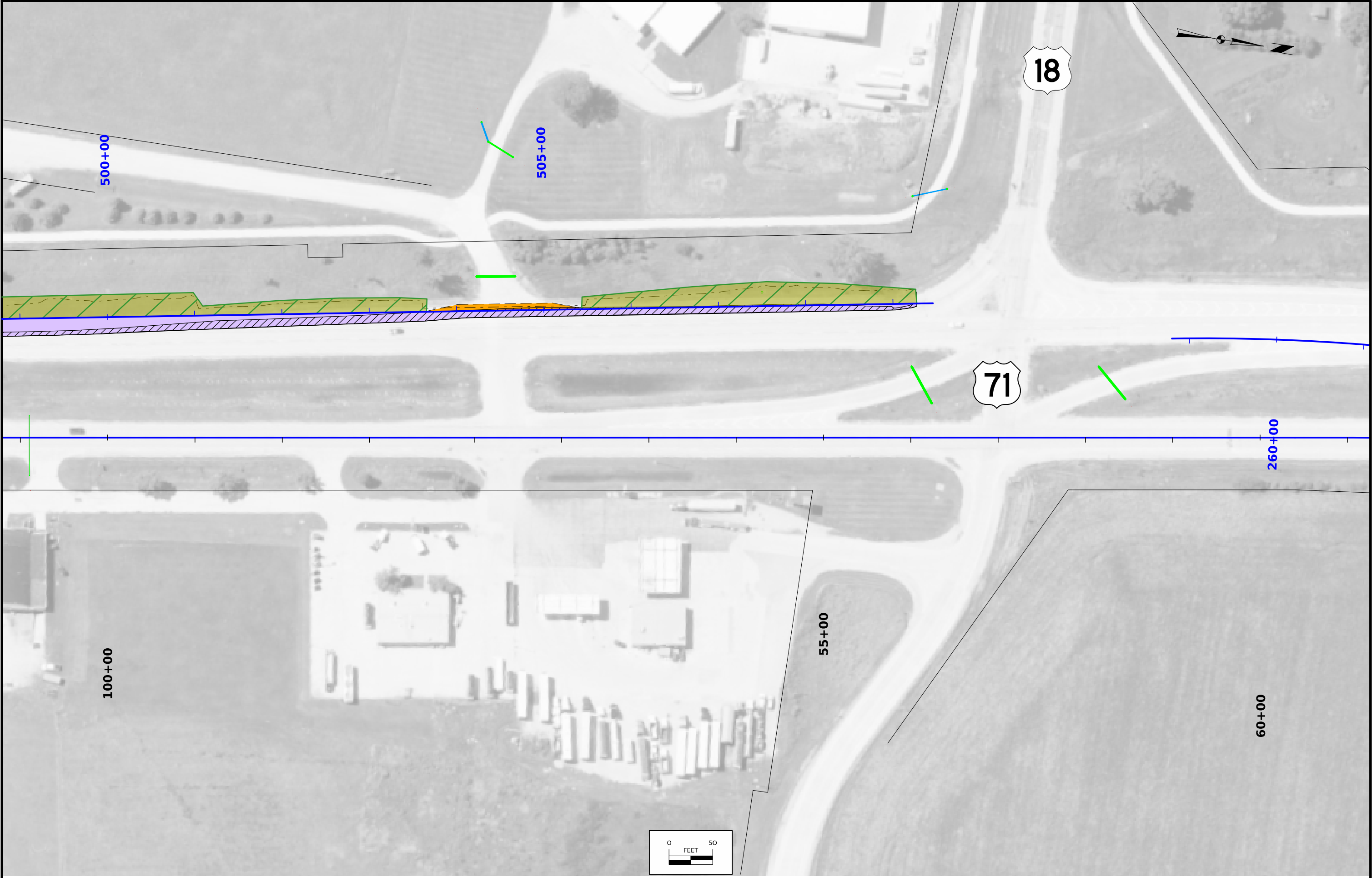
PATTERN LEGEND OF EROSION CONTROL SHEETS	
	Seeding and Fertilizing
	Seeding and Fertilizing (Rural)
	Seeding and Fertilizing (Urban)
	Native Grass Seeding
	Salt Tolerant Seeding
	Wetland Grass Seeding
	Wildflower Seeding
	Sodding
	Turf Reinforcement Mat Type 1
	Turf Reinforcement Mat Type 2
	Turf Reinforcement Mat Type 3
	Turf Reinforcement Mat Type 4
	Slope Protection, Wood Excelsior Mat
	Transition Mat
	Rock Features, Permanent
	Rock Features, Temporary

LEGEND AND SYMBOL
INFORMATION SHEET

(COVERS SHEET SERIES D & R)

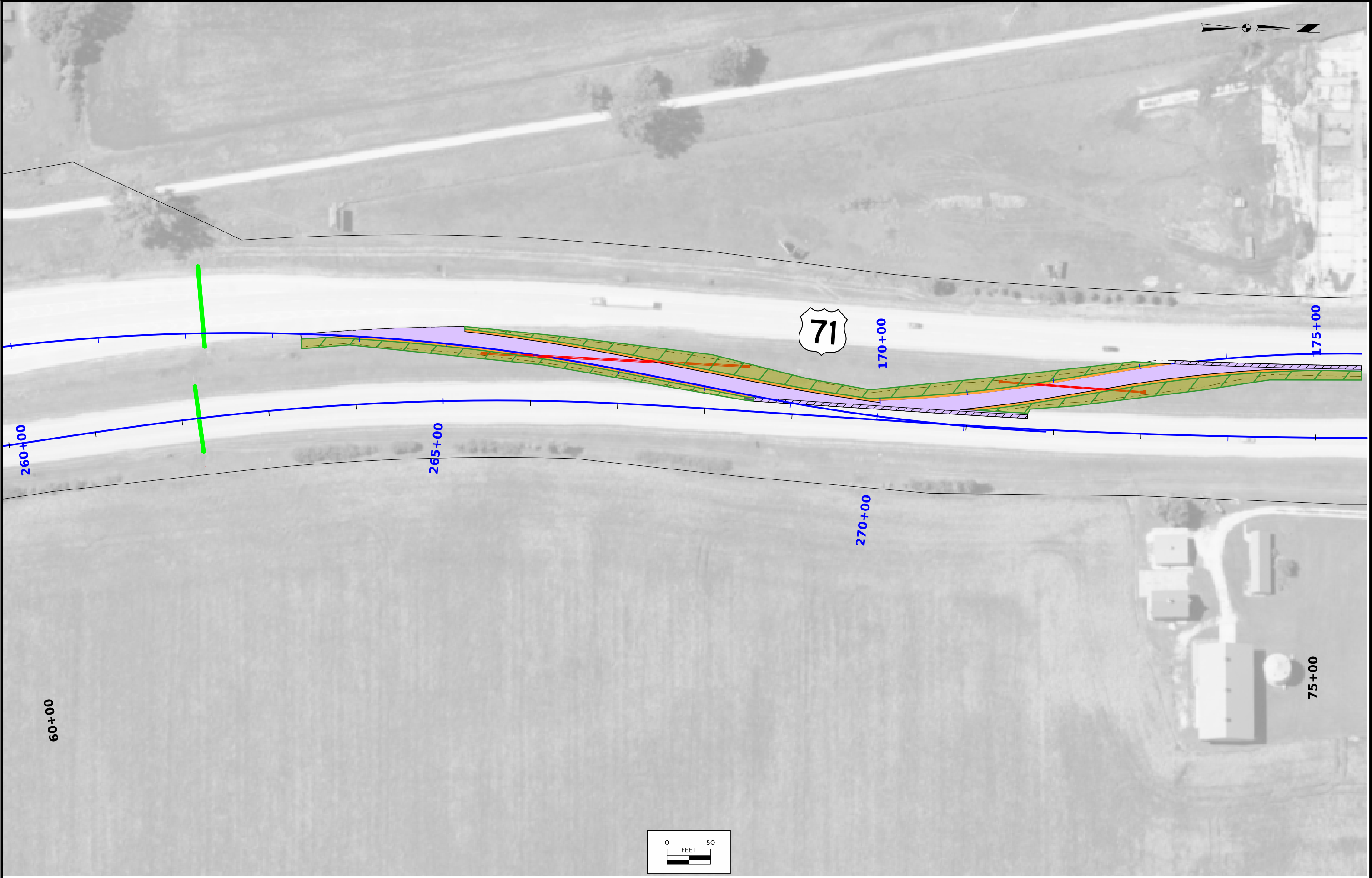


FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Clay COUNTY	PROJECT NUMBER HSIPX-018-2(171)--3L-21	SHEET NUMBER RR.2
----------	---------	------------------------------------	-------------	--	-------------------



FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Clay COUNTY	PROJECT NUMBER HSIPX-018-2(171)--3L-21	SHEET NUMBER RR.3
----------	---------	------------------------------------	-------------	--	-------------------

10:36:06 PM 4/16/2026 npohlen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\2101802023\Roadside\E04 (171)\21018171_Siteplan_SHT.dgn

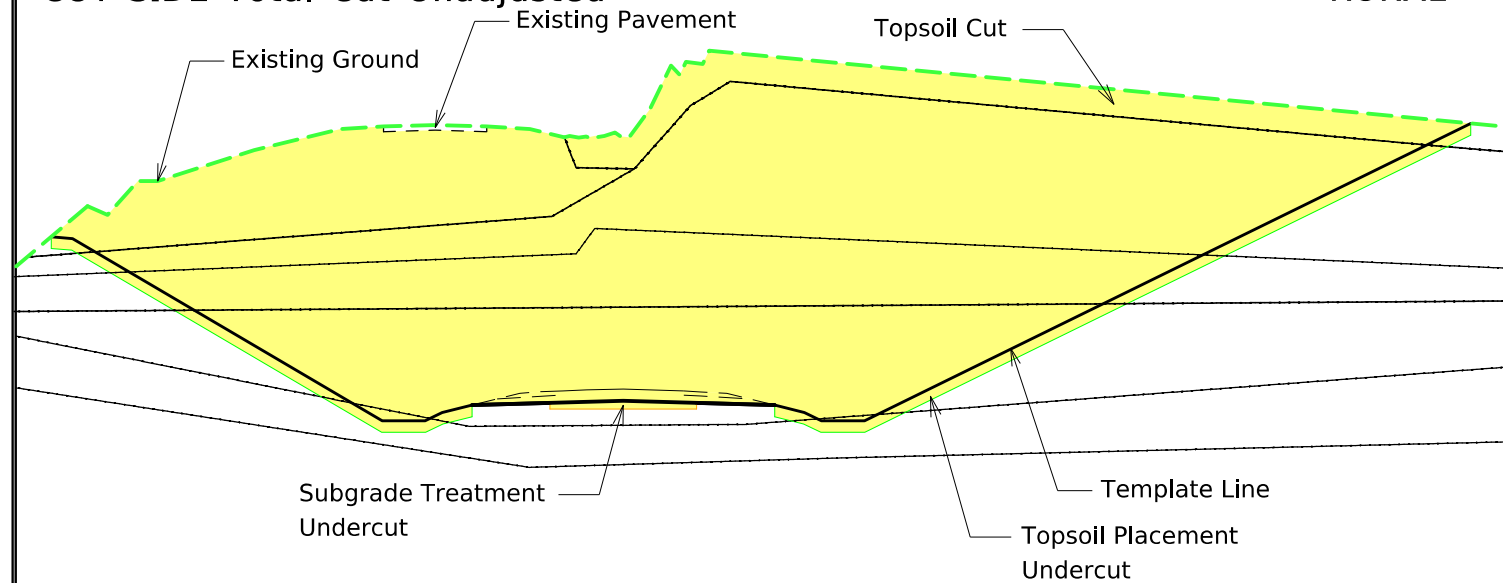


FILE NO.	ENGLISH	DESIGN TEAM Harris/Pohlen/McDonald	Clay COUNTY	PROJECT NUMBER HSIPX-018-2(171)--3L-21	SHEET NUMBER RR.4
----------	---------	------------------------------------	-------------	--	-------------------

10:36:49 PM 4/16/2026 npohlen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\2101802023\Roadside\E04 (171)\21018171_Siteplan_SHT.dgn

CUT SIDE Total Cut Unadjusted

RURAL

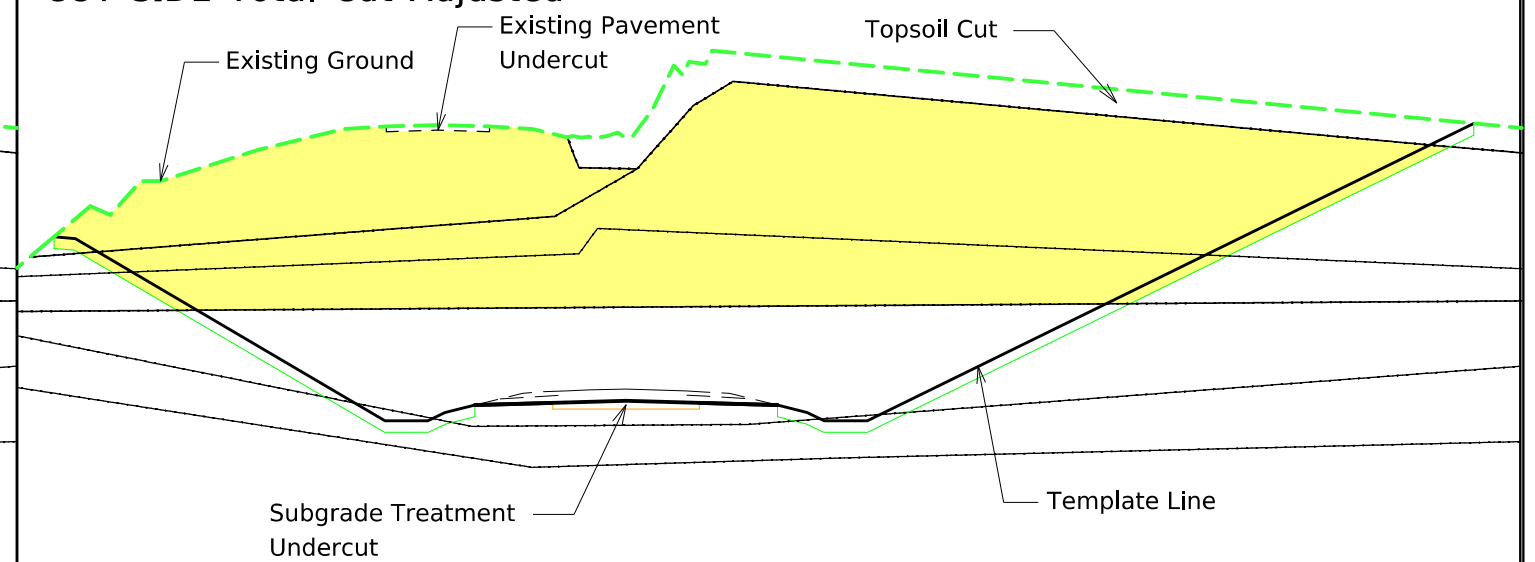


Notes:

1. "Total Cut Unadjusted" Column includes all cut values in the Station Range based on Typical, Topsoil and Subgrade Treatment needs.
2. "Total Cut Unadjusted" does not include and Existing Pavement values inside or outside the cut template as shown on cross sections.
3. Tabulated Plowing and Shaping operations are included in the "Total Cut Unadjusted" values.

CUT	SIDE	Total	Cut	Adjusted
D	Top	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
D	Bottom	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
E	Top	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
E	Bottom	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
F	Top	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
F	Bottom	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
G	Top	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
G	Bottom	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
H	Top	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
H	Bottom	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
I	Top	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
I	Bottom	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
J	Top	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
J	Bottom	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
K	Top	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
K	Bottom	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
L	Top	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
L	Bottom	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
M	Top	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
M	Bottom	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
N	Top	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
N	Bottom	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
O	Top	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
O	Bottom	0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00
		0.00	0.00	0.00

RURAL

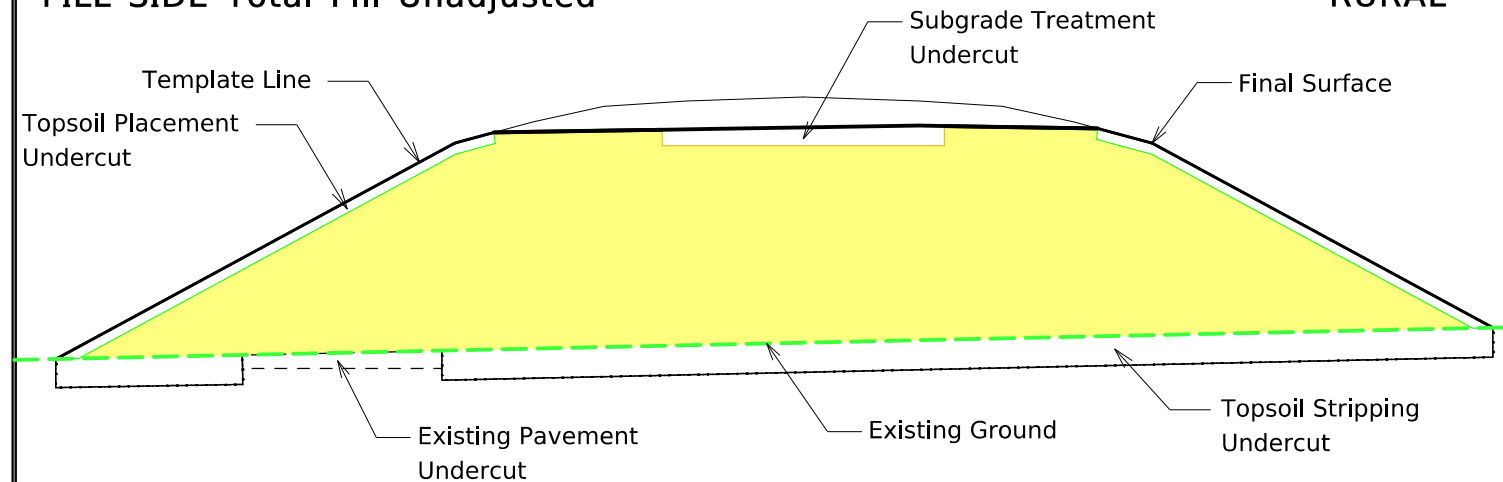


Notes:

1. "Total Cut Adjusted" Column includes all cut values usable as Class 10 material.
2. "Total Cut Adjusted" does not include and Existing Pavement , Existing Topsoil, or material to be wasted.

FILL SIDE Total Fill Unadjusted

RURAL

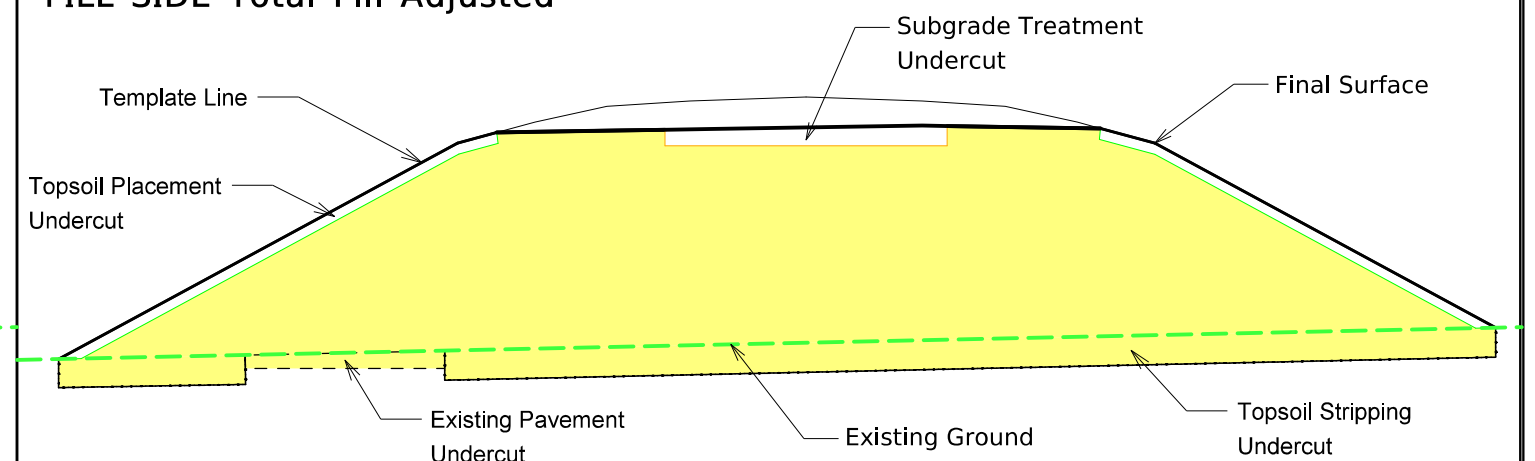


Notes:

1. "Total Fill Unadjusted" Column includes all Class 10, 12, and 13 fill. This excludes the topsoil, subgrade treatment, subbase, new pavement, and shoulder fill needs in that station range.
2. "Total Fill Unadjusted" Column does not include adjustments for additional fill from cuts such as existing pavement removed, plowing and shaping operations, entrances, dikes, or topsoil stripping.

	FILL	SIDE	Total	Fill	Adjusted
1	1	1	2	1	1
2	1	1	2	1	1
3	1	1	2	1	1
4	1	1	2	1	1
5	1	1	2	1	1
6	1	1	2	1	1
7	1	1	2	1	1
8	1	1	2	1	1
9	1	1	2	1	1
10	1	1	2	1	1
11	1	1	2	1	1
12	1	1	2	1	1
13	1	1	2	1	1
14	1	1	2	1	1
15	1	1	2	1	1
16	1	1	2	1	1
17	1	1	2	1	1
18	1	1	2	1	1
19	1	1	2	1	1
20	1	1	2	1	1
21	1	1	2	1	1
22	1	1	2	1	1
23	1	1	2	1	1
24	1	1	2	1	1
25	1	1	2	1	1
26	1	1	2	1	1
27	1	1	2	1	1
28	1	1	2	1	1
29	1	1	2	1	1
30	1	1	2	1	1
31	1	1	2	1	1
32	1	1	2	1	1
33	1	1	2	1	1
34	1	1	2	1	1
35	1	1	2	1	1
36	1	1	2	1	1
37	1	1	2	1	1
38	1	1	2	1	1
39	1	1	2	1	1
40	1	1	2	1	1
41	1	1	2	1	1
42	1	1	2	1	1
43	1	1	2	1	1
44	1	1	2	1	1
45	1	1	2	1	1
46	1	1	2	1	1
47	1	1	2	1	1
48	1	1	2	1	1
49	1	1	2	1	1
50	1	1	2	1	1
51	1	1	2	1	1
52	1	1	2	1	1
53	1	1	2	1	1
54	1	1	2	1	1
55	1	1	2	1	1
56	1	1	2	1	1
57	1	1	2	1	1
58	1	1	2	1	1
59	1	1	2	1	1
60	1	1	2	1	1
61	1	1	2	1	1
62	1	1	2	1	1
63	1	1	2	1	1
64	1	1	2	1	1
65	1	1	2	1	1
66	1	1	2	1	1
67	1	1	2	1	1
68	1	1	2	1	1
69	1	1	2	1	1
70	1	1	2	1	1
71	1	1	2	1	1
72	1	1	2	1	1
73	1	1	2	1	1
74	1	1	2	1	1
75	1	1	2	1	1
76	1	1	2	1	1
77	1	1	2	1	1
78	1	1	2	1	1
79	1	1	2	1	1
80	1	1	2	1	1
81	1	1	2	1	1</

RURAL

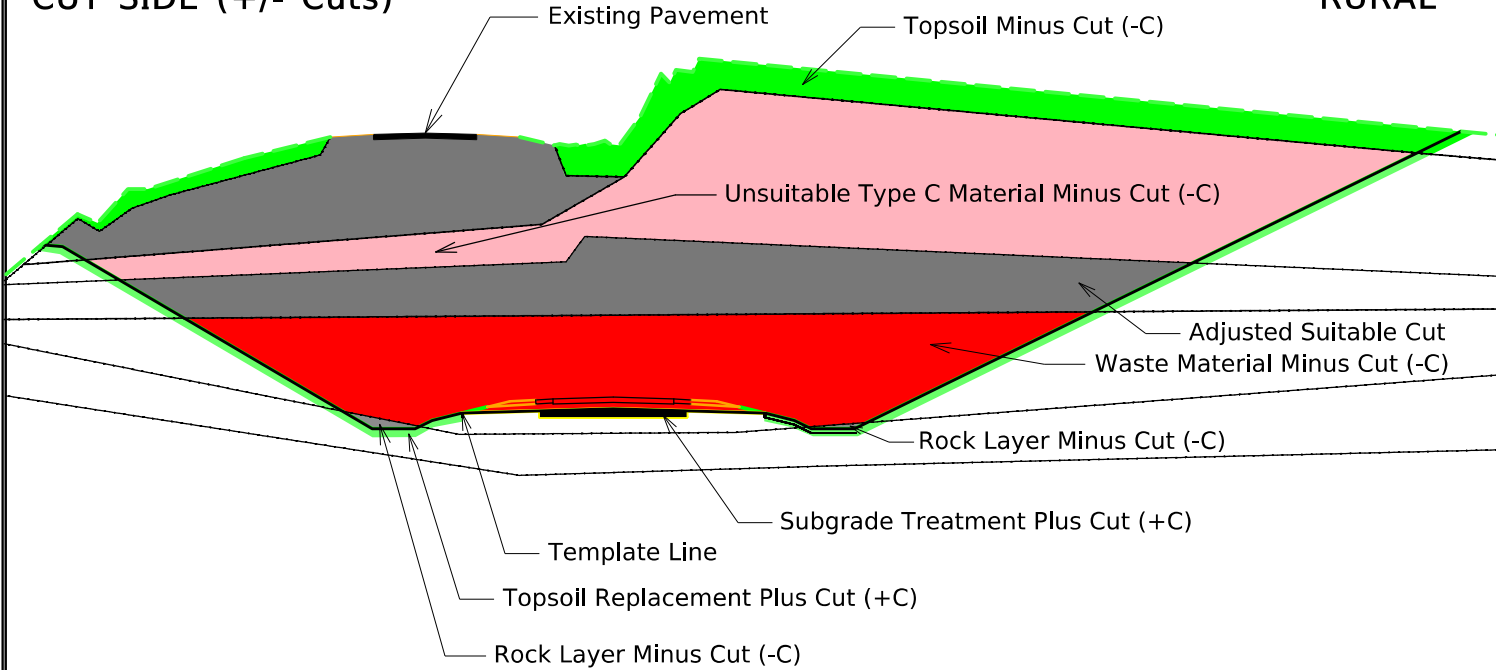


Notes:

1. "Total Fill Adjusted" Column includes all Class 10, 12, and 13 fill and adjustments for additional fill from cuts such as existing pavement, plowing and shaping operations, entrances, dikes, and topsoil stripping.
2. The available area to place unsuitable materials in the T Sheet tabulation does not include the undercut values from the topsoil stripping, existing pavement, or plowing and shaping

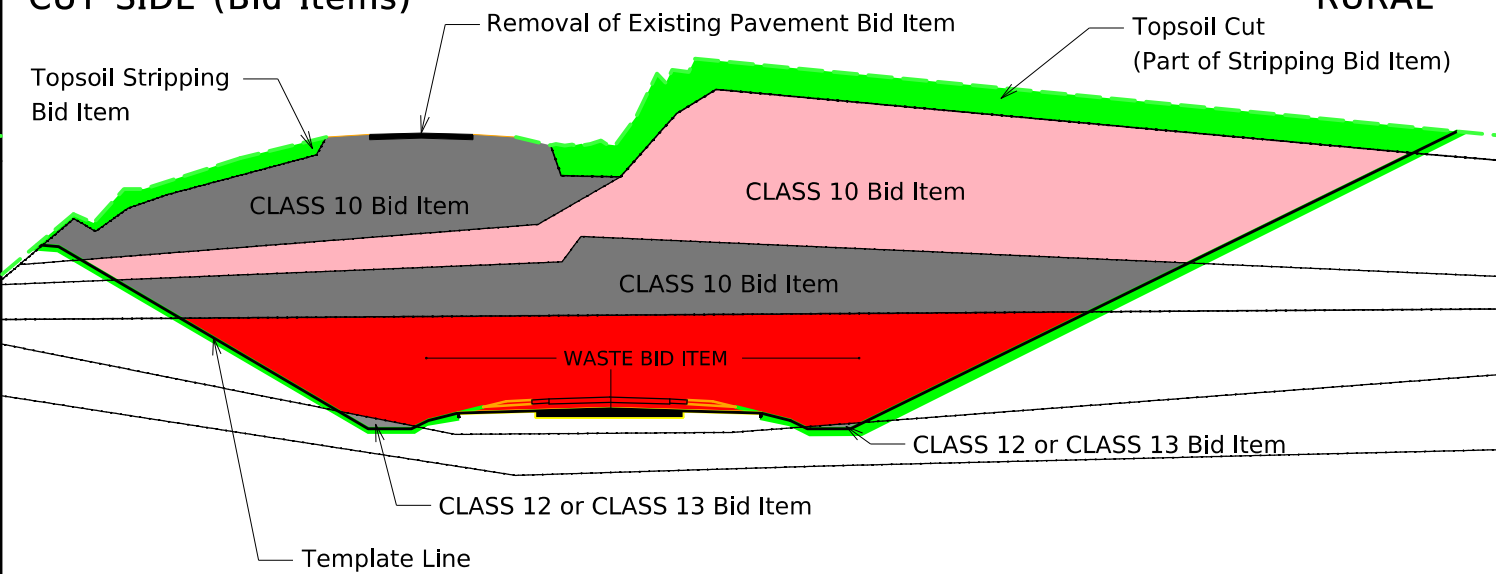
CUT SIDE (+/- Cuts)

RURAL



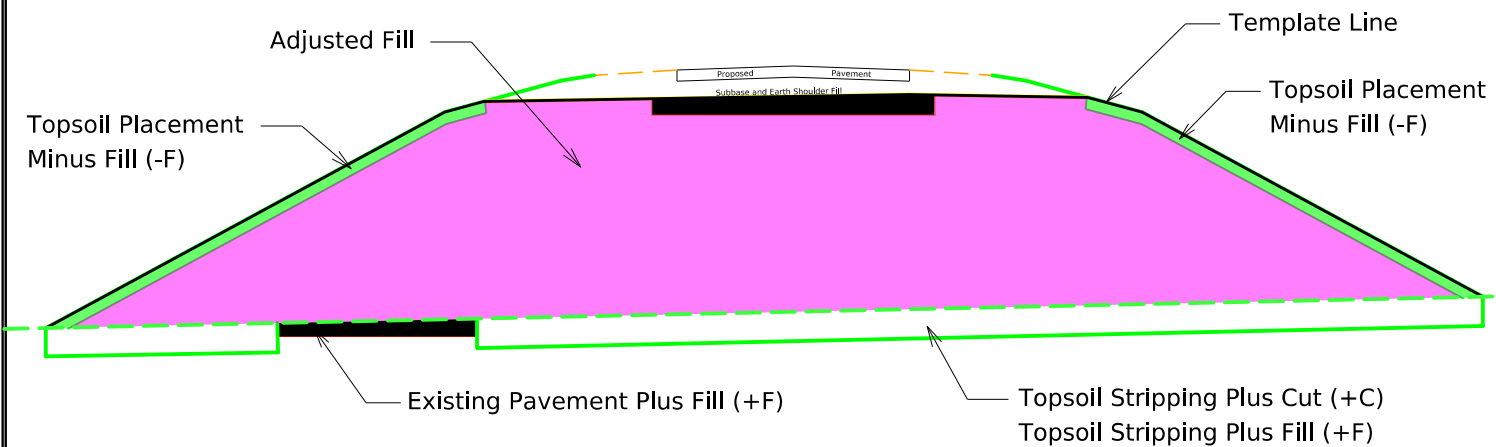
CUT SIDE (Bid Items)

RURAL



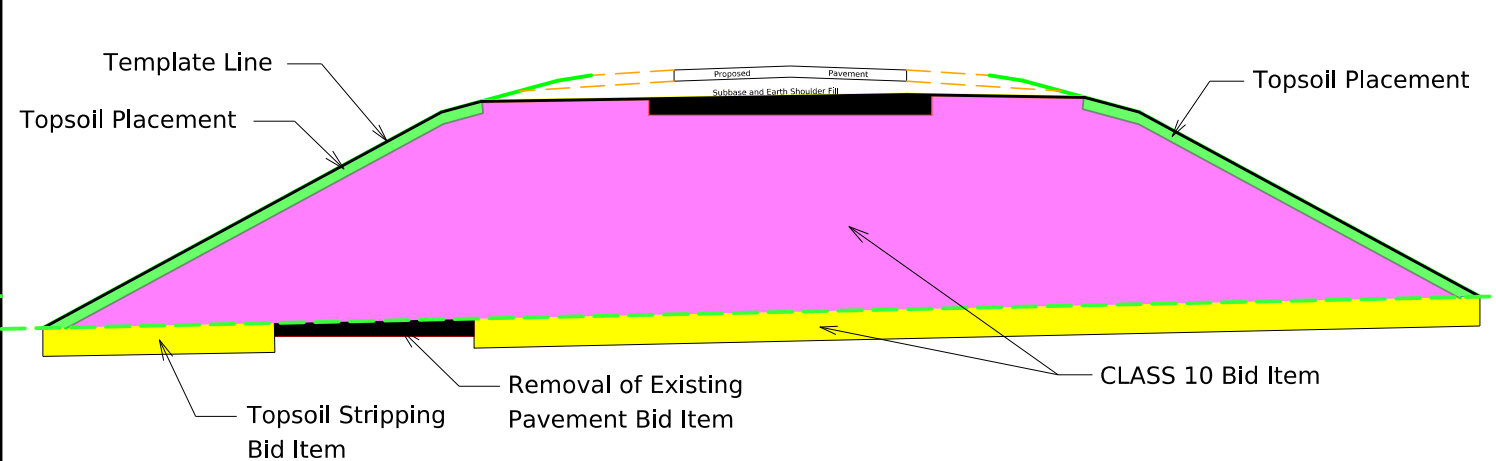
FILL SIDE (+/- Fills)

RURAL



FILL SIDE (Bid Items)

RURAL

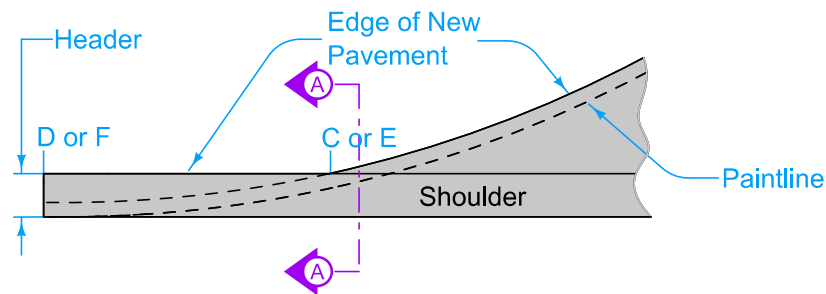


Notes:

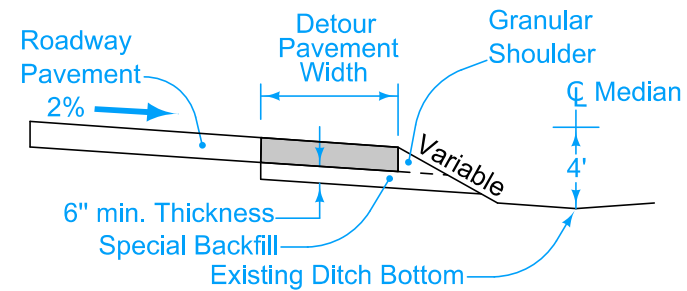
1. "Add Quantity +C" columns are additional cut encountered that is not Typical, Topsoil, or Subgrade Treatment Based. (Entrance, Dike, Etc.)
2. "-C" columns are either soil types or Class 10, 12, or 13 designated material that is encountered in the cut station range that is paid for by other bid items.
3. The "(SoilType) Cut" columns are soil types encountered in the cut that are paid by either Class 10, 12, or 13.
4. The "Adjusted Clas (10,12 or 13)" columns are the sum of all various soil types encountered in that station range, that are paid by Class 10, 12, or 13 bid items.
5. Refer to Standard Road Plan EW-102 for placement of unsuitable soil types.

Notes:

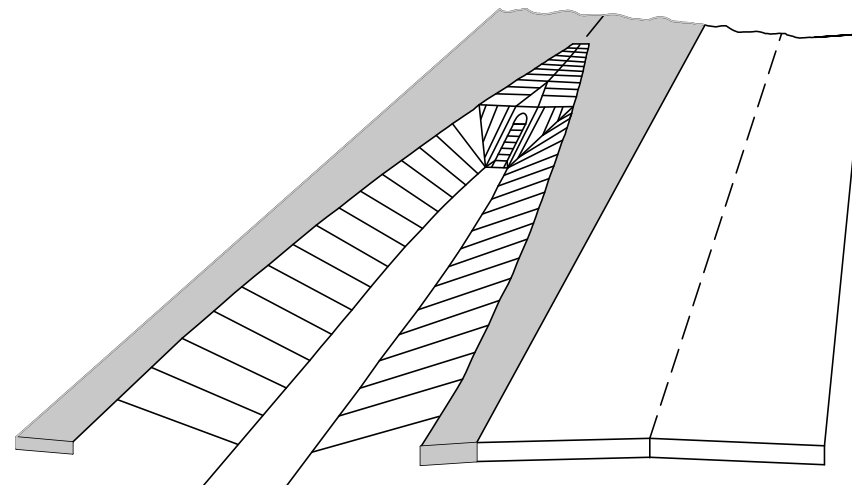
1. Refer to Standard Road Plan EW-102 for placement of unsuitable soil types.



DETAIL 'A'



SECTION A-A



PERSPECTIVE VIEW
DITCH SLOPE AND BEVELED PIPE

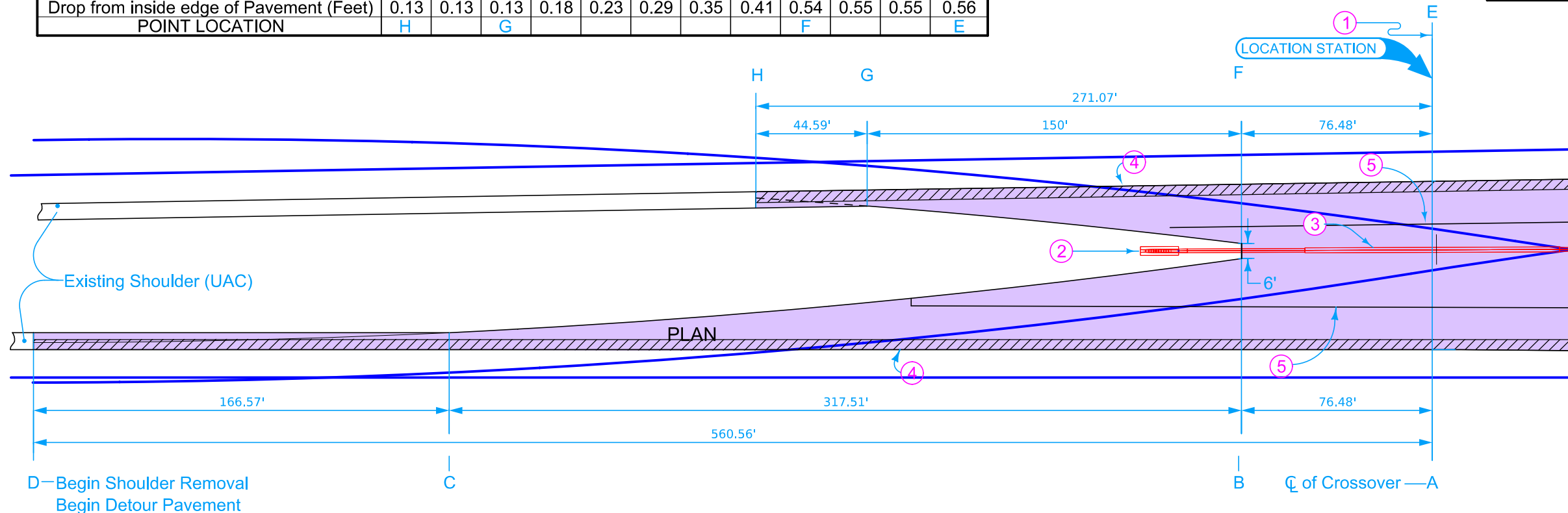
Detour Pavement options: 9" PCC or 12" HMA

For joint details, see PV-101.

- 1 Median crossover is asymmetrical about centerline.
- 2 Beveled pipe and guard. See DR-212.
- 3 Slotted drain for median crossover. See DR-502.
- 4 'BT-3' joint if mainline pavement is existing. 'B' joint if Detour Pavement is HMA.
- 5 For PCC Detour Pavement, 'L-2' or 'BT-2' spaced at one-quarter median width.
- 6 For PCC Detour Pavement, match existing roadway joints. 'CD' joints are required.
- 7 For PCC Detour Pavement, 2 foot 'C' Joint.

TABLE OF OFFSETS AND DROPS (PAVED SHOULDERS)												
Distance from Location Station (Feet)	271.07	250	226.48	200	175	150	125	100	76.48	50	25	0
Offset from inside edge of Pavement (Feet)	6.47	6.48	6.48	8.97	11.57	14.38	17.37	20.64	26.91	27.26	27.55	27.82
Cross-Slope from inside edge of Pavement	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Drop from inside edge of Pavement (Feet)	0.13	0.13	0.13	0.18	0.23	0.29	0.35	0.41	0.54	0.55	0.55	0.56
POINT LOCATION	H		G						F			E

DESIGN QUANTITY TABLE		
Detour Pavement Sq. Yds.	Special Backfill CY	Granular Shoulder Tons
3566	766.9	220



Detour Pavement

Possible Contract Items:
Detour Pavement
Embankment In Place
Excavation, Class 10, Roadway and Borrow
Excavation, Class 13, Roadway and Borrow
Removal of Pavement
Special Backfill
Granular Shoulders, Type A

Possible Tabulation:
112-8

TABLE OF OFFSETS AND DROPS (PAVED SHOULDERS)																							
Distance from Location Station (Feet)	560.56	550	525	500	475	450	393.99	375	350	325	300	275	250	225	200	175	150	125	100	76.48	50	25	0
Offset from inside edge of Pavement (Feet)	6.86	6.80	6.80	6.80	6.80	6.80	6.80	7.85	9.37	11.06	12.85	14.82	16.80	18.93	21.40	24.19	27.12	30.11	33.30	36.51	39.62	39.71	39.79
Cross-Slope from inside edge of Pavement	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	1.52%	1.08%	1.11%	1.18%	1.27%
Drop from inside edge of Pavement (Feet)	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.16	0.19	0.22	0.26	0.30	0.34	0.38	0.43	0.48	0.54	0.60	0.51	0.40	0.44	0.47	0.51
POINT LOCATION	D						C													B			A

MEDIAN CROSSOVER DET100
(VARIABLE MEDIAN WIDTH)

TABLE OF OFFSETS AND DROPS (PAVED SHOULDERS)																				
Distance from Location Station (Feet)	0	25	50	77.58	100	125	150	175	200	225	250	275	300	315.54	350	375	400	450	475	482.7
Offset from inside edge of Pavement (Feet)	27.82	28.05	28.26	28.65	23.10	20.44	17.95	15.63	13.47	11.51	9.84	8.35	6.97	6.19	6.19	6.19	6.19	6.19	6.19	6.19
Cross-Slope from inside edge of Pavement	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Drop from inside edge of Pavement (Feet)	0.56	0.56	0.57	0.57	0.46	0.41	0.36	0.31	0.27	0.23	0.20	0.17	0.14	0.12	0.12	0.12	0.12	0.12	0.12	0.12
POINT LOCATION	A			F										G						H

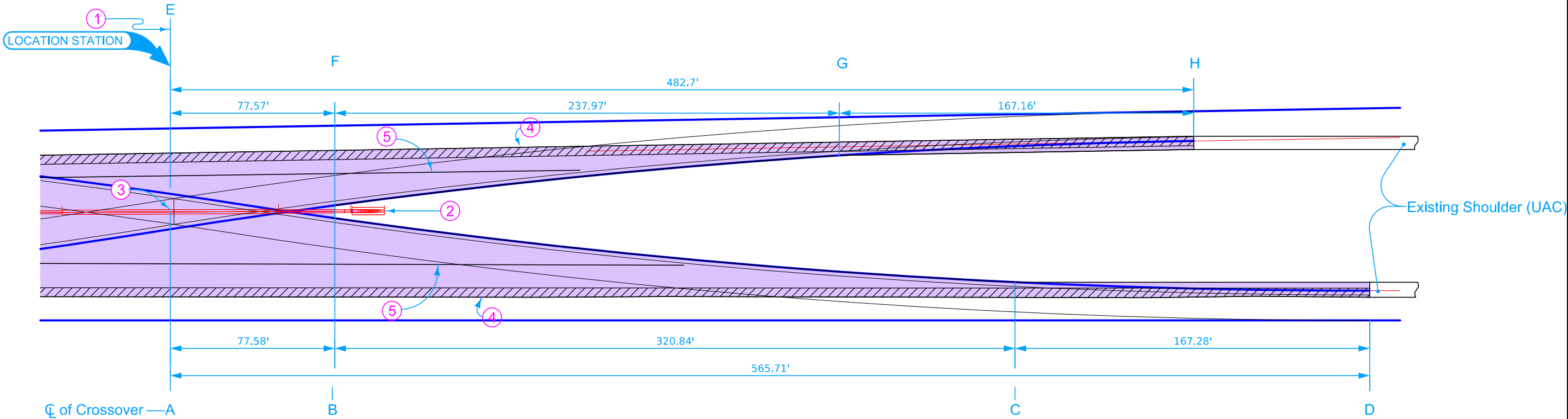
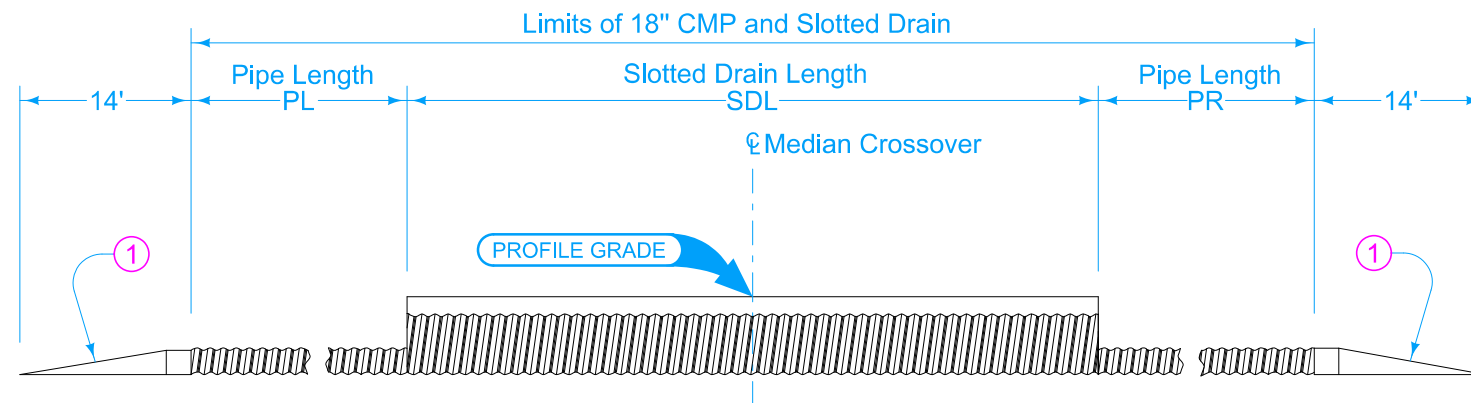


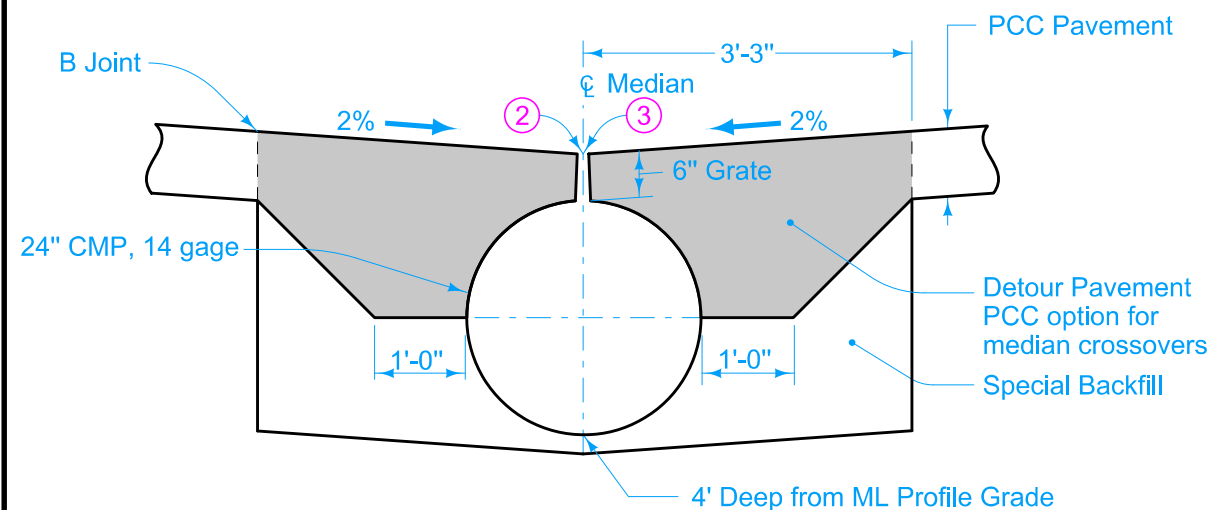
TABLE OF OFFSETS AND DROPS (PAVED SHOULDERS)																							
Distance from Location Station (Feet)	0	25	50	77.58	100	125	150	175	200	225	250	275	300	325	350	375	398.42	450	475	500	525	550	565.71
Offset from inside edge of Pavement (Feet)	39.79	40.00	40.30	40.67	34.19	30.84	27.83	25.00	22.12	19.43	17.08	15.00	13.07	11.16	9.44	8.16	7.12	7.1	7.1	7.1	7.1	7.1	7.1
Cross-Slope from inside edge of Pavement	1.27%	1.34%	1.50%	1.55%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Drop from inside edge of Pavement (Feet)	0.51	0.54	0.60	0.63	0.68	0.62	0.56	0.5	0.44	0.38	0.34	0.30	0.26	0.22	0.19	0.16	0.14	0.14	0.14	0.14	0.14	0.14	0.14
POINT LOCATION	A			B													C						D

MEDIAN CROSSOVER DET100
(VARIABLE MEDIAN WIDTH)

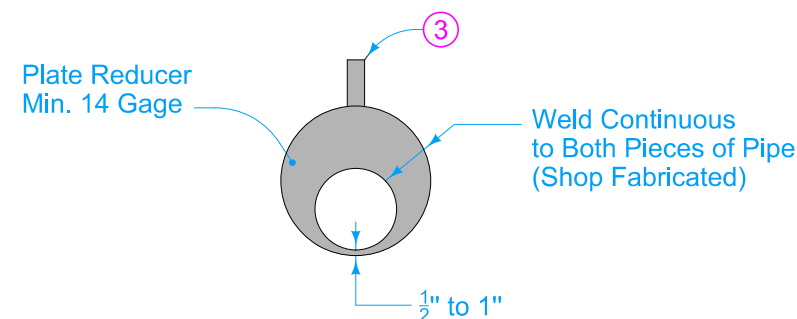


LONGITUDINAL SECTION THROUGH CMP SLOTTED DRAIN ASSEMBLY

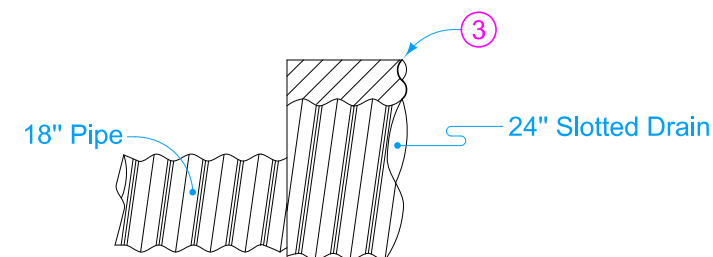
- ① Beveled pipe and guard. See DR-212.
- ② During construction of crossover pavement, cover slotted drain with duct tape or wood block.
- ③ Slotted grate 6 inches high x $1\frac{3}{4}$ inches opening width. Use $\frac{3}{16}$ inch material for spacers and bearing bars (sides). Refer to ASTM A 709 grade 36 for grate material. Refer to ASTM A123 for galvanizing requirements.



PCC PAVEMENT SITUATION



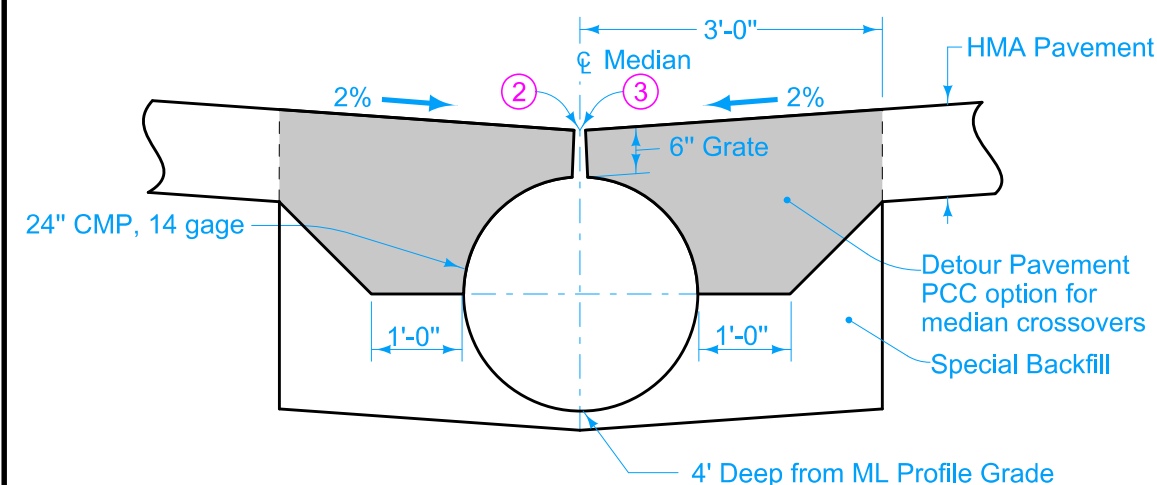
END VIEW OF PIPE REDUCER



SIDE VIEW OF PIPE REDUCER

Possible Contract Items:
 Beveled Pipe and Guard
 Culvert, Unclassified Roadway Pipe, 18" Dia.
 Detour Pavement
 Drain, Corrugated Metal Pipe Slotted, 24", w/6" Grate
 Special Backfill

Possible Tabulation:
 112-8



HMA PAVEMENT SITUATION

TABLE OF QUANTITIES	
Standard Road Plan	DETOUR 100 (Sheet U.1-U.2)
SDL Slotted Drain Length	102'
PL Pipe Length	50'
PR Pipe Length	34'
Bid Items	
24" Corrugated Metal Slotted Pipe Drain w/6" Grate	102'
18" dia. Corrugated Metal Roadway Pipe Culvert	84'

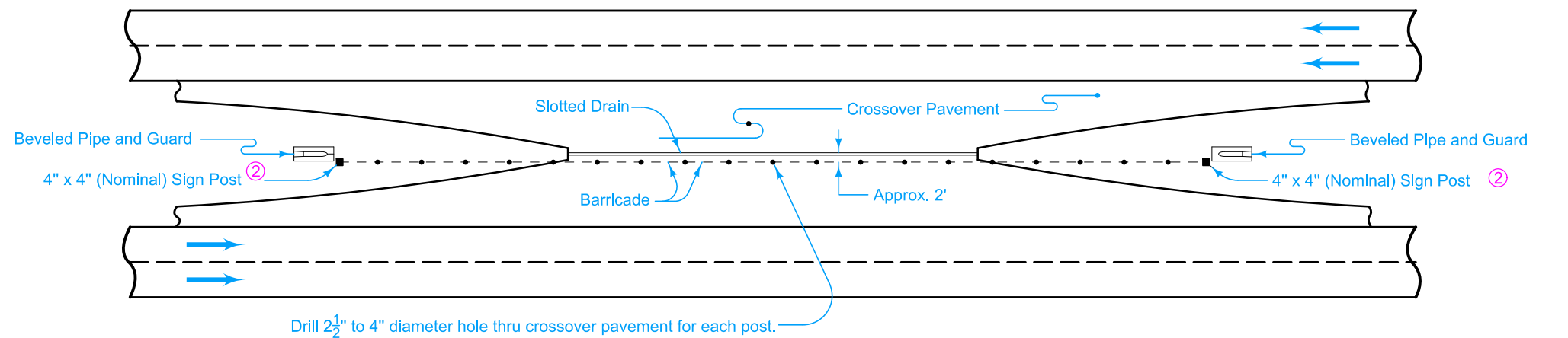
MODIFIED

MODIFICATIONS: Changed Corrugated Metal Pipe Slotted, 36", w/6" Grate to Corrugated Metal Pipe Slotted, 24", w/6" Grate

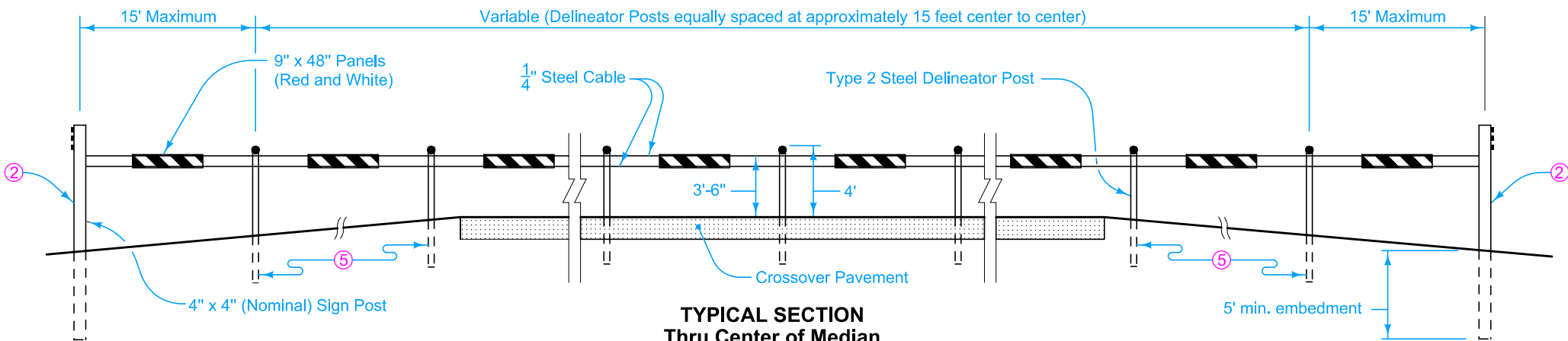
**SLOTTED DRAIN FOR
MEDIAN CROSSEVERS**

DR-502

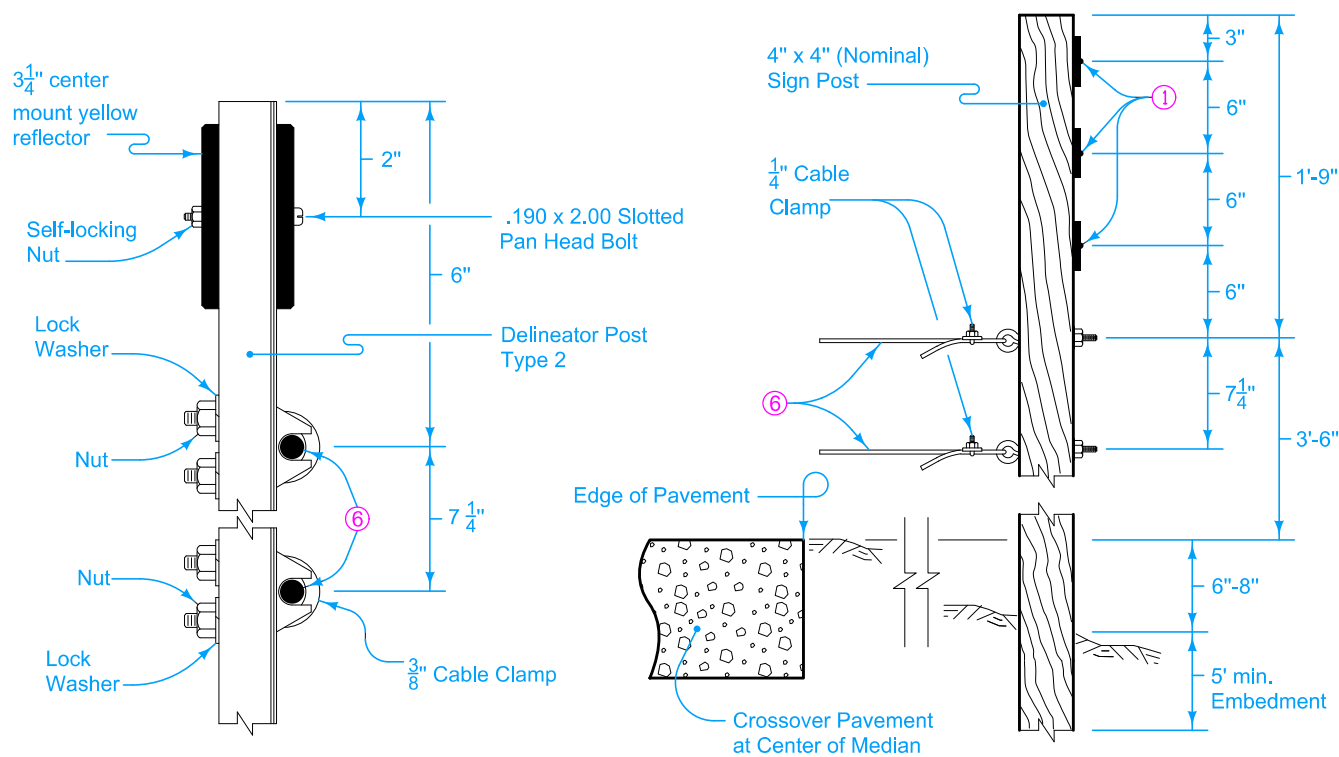
SHEET 1 of 1



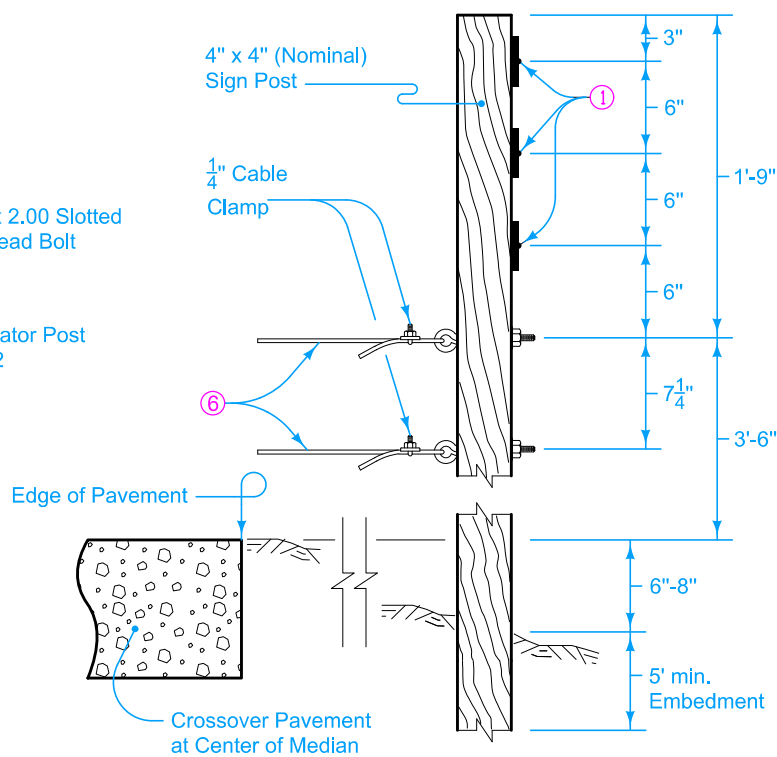
PLAN VIEW



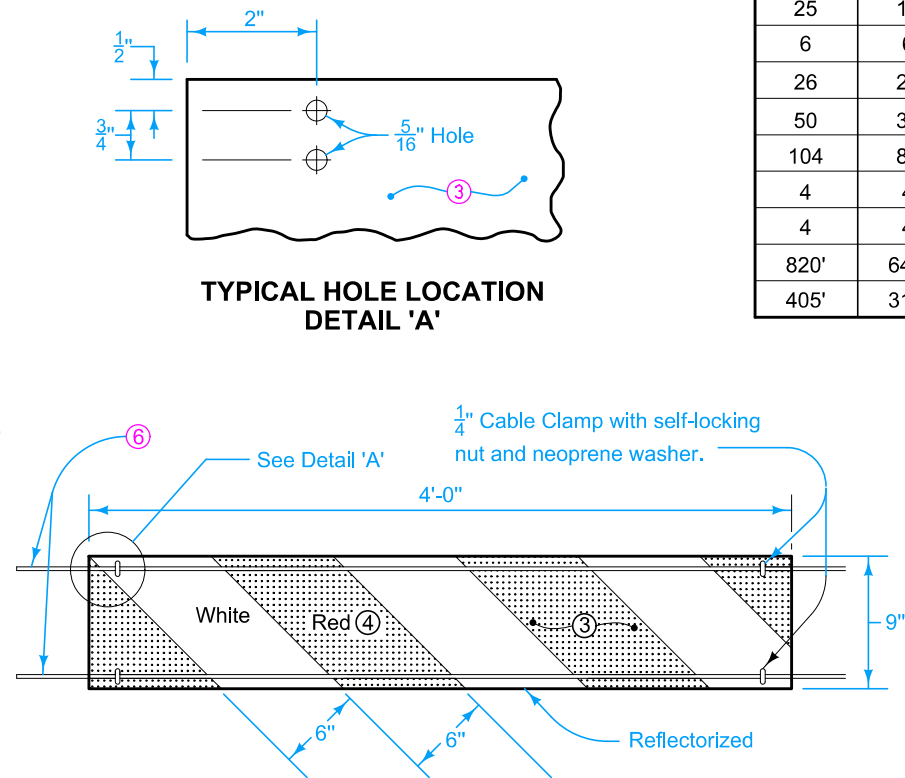
TYPICAL SECTION
Thru Center of Median



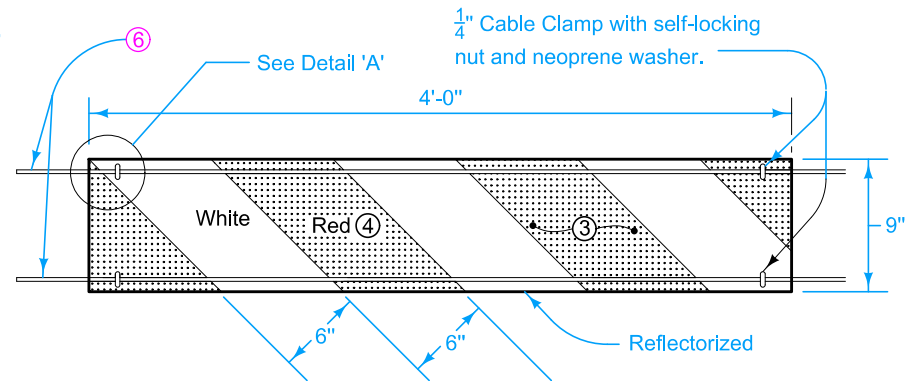
DELINEATOR POST
ATTACHMENT DETAILS



SIGN POST ATTACHMENT DETAILS



TYPICAL HOLE LOCATION
DETAIL 'A'



PANEL ATTACHMENT DETAILS

The price bid for "Crossover Barricade", each, is considered full compensation for furnishing all materials and work necessary to construct the barricade as detailed hereon.

- ① 3 1/4" center mount yellow reflector, attached to sign post with 0.190 x 1.25 slotted pan head screws.
- ② Extend the barricade to within 2 feet from the top end of the concrete collar.
- ③ 0.125 inch aluminum panel with Type III or IV retroreflective sheeting on both sides.
- ④ ReflectORIZED red stripes on both sides shall slope from upper left to lower right of panel.
- ⑤ Embed all delineator posts a minimum of 2'-6".
- ⑥ 1/4" inch diameter steel cable.

List Of Materials For
Barricading At Median Crossovers

Quantities for Standard Road Plans			Items
PV-500	PV-503	PV-506	
25	19	18	Type 2 Steel Delineator Posts
2	2	2	4" x 4" (Nominal) Sign Post
56	44	42	3 1/4" Yellow Reflectors, center mounted
25	19	18	0.190 x 2.00 slotted pan head bolts and self-locking nuts
6	6	6	0.190 x 1.25 slotted pan head screws
26	20	19	9" x 48" Aluminum panels (red on white)
50	38	36	3/8" Cable clamps, lock washers and nuts
104	80	76	1/4" Cable clamps, neoprene washers and self-locking nuts
4	4	4	3/8" x 6" Eye bolts, washers and nuts
4	4	4	1/4" Cable clamps
820'	640'	610'	Approximate length of 1/4" diameter Steel Cable
405'	315'	300'	Distance from Sign Post to Sign Post based on Note ②

IOWA DOT ROAD DESIGN DETAIL	REVISION	
	9	10-19-10
540-13		
SHEET 1 of 1		
Changed RV designation to PV.		
DETAILS OF BARRICADE AT CROSSOVER		

CROSS SECTION VIEW COLOR LEGEND			
Design Color No.	Feature	Design Color No.	Feature
Aggregate		Structural	
(64)	Choke Stone	(112)	Noise Wall
(42)	Engineering Fabric	(112)	Noise Wall Footing
(8)	Flooded Backfill	(112)	Retaining Wall Back
(92)	Macadam Stone	(112)	Retaining Wall Back Excavate
(20)	Modified	(112)	Retaining Wall Face
(12)	Plowing Shaping	(112)	Retaining Wall Front Excavate
(14)	Porous Backfill	(112)	Retaining Wall Front Footing
(8)	Revetment Class A	(112)	Retaining Wall MSE Gutter
(6)	Revetment Class B	(112)	Retaining Wall Reinforced Earth
(62)	Revetment Class C	Grading	
(188)	Revetment Class D	(8)	Behind Curb Cut
(28)	Revetment Class E	(6)	Granular
(12)	Shoulder Special Backfill	(13)	Granular Back Fill
(12)	Special Backfill	(48)	Rock Undercut
(20)	Subbase	(8)	Shoulder Earth Fill
(20)	Subbase Lower	(2)	Side Slopes
(20)	Subbase Upper	(226)	Side Slopes Dressing
(118)	Subgrade Treatment	Substrata	
Asphalt		(128)	Boulder Substrata
(207)	HMA Base Course	(48)	Broken Weathered Substrata
(207)	HMA Interim Course	(3)	Core Out Substrata
(207)	HMA Surface Course	(203)	Existing Pavement Substrata
Concrete		(6)	Loam Substrata
(0)	Barrier Concrete	(80)	Rock Substrata
(0)	Barrier Concrete Footing	(4)	Select Sand Substrata
(0)	Curb Gutter	(3)	Shale Substrata
(48)	Flowable Mortar	(10)	Topsoil Substrata
(0)	Median Concrete	Unsuitable / Waste	
(0)	PCC Pavement	(3)	Unsuitable Type A
(0)	Sidewalk	(13)	Unsuitable Type B
Shoulder		(11)	Unsuitable Type C
(209)	Shoulder HMA	(3)	Waste
(0)	Shoulder PCC		
(6)	Shoulder Granular		
Existing			
(0)	Existing Pavement		

NOTES:

Text

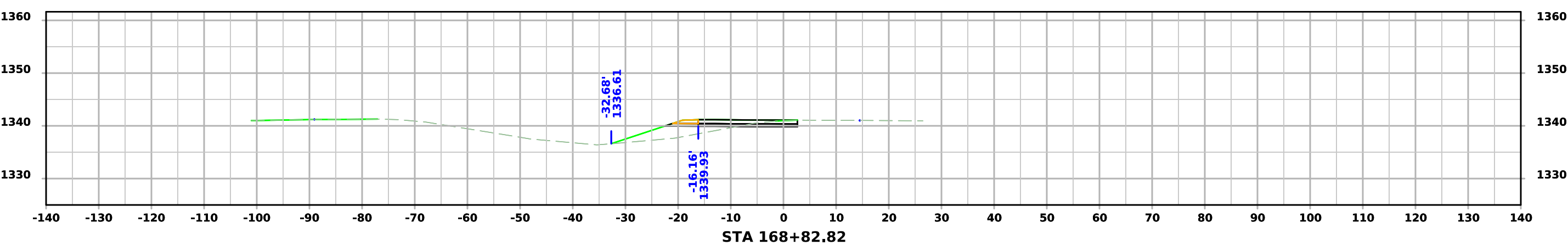
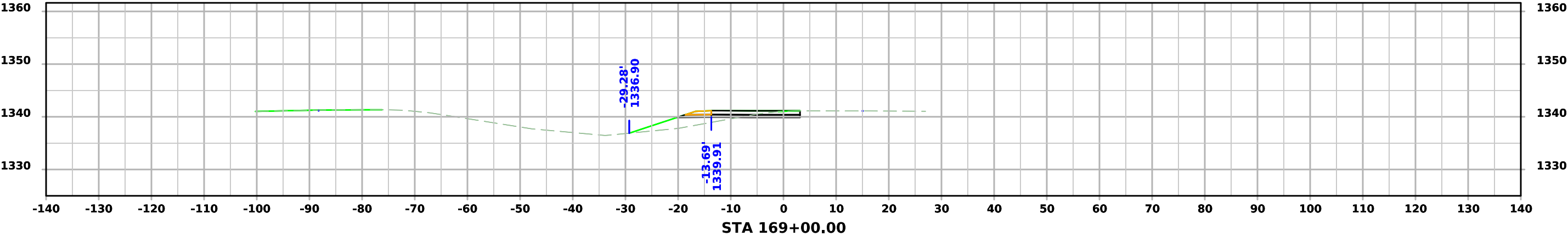
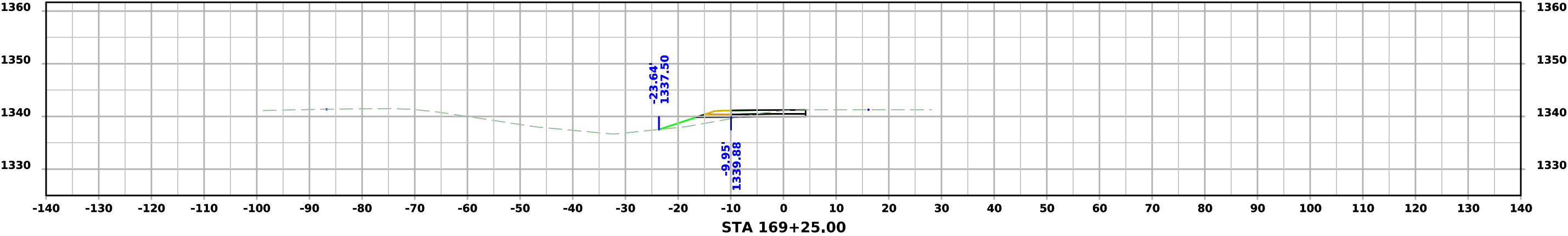
NOTES:

Text

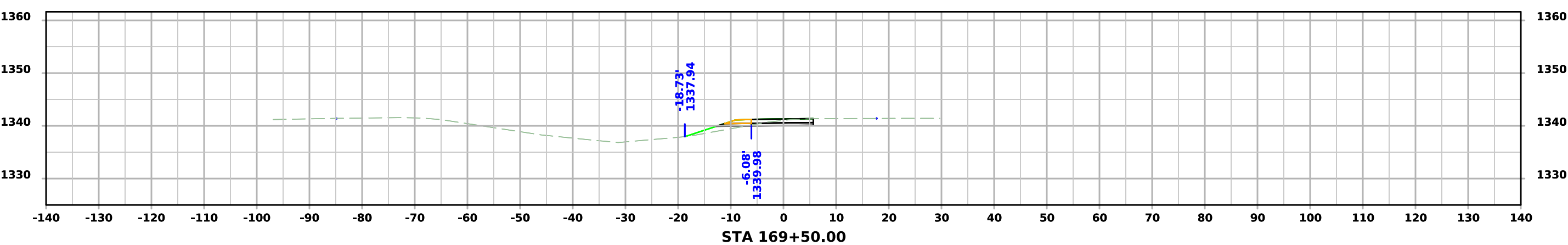
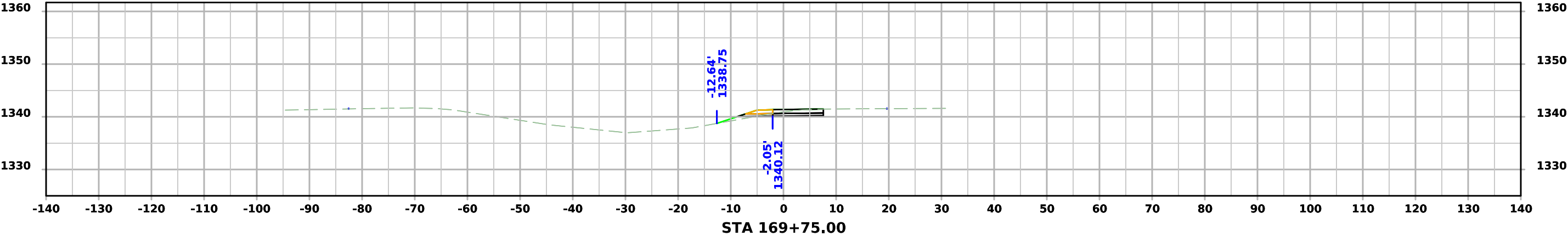
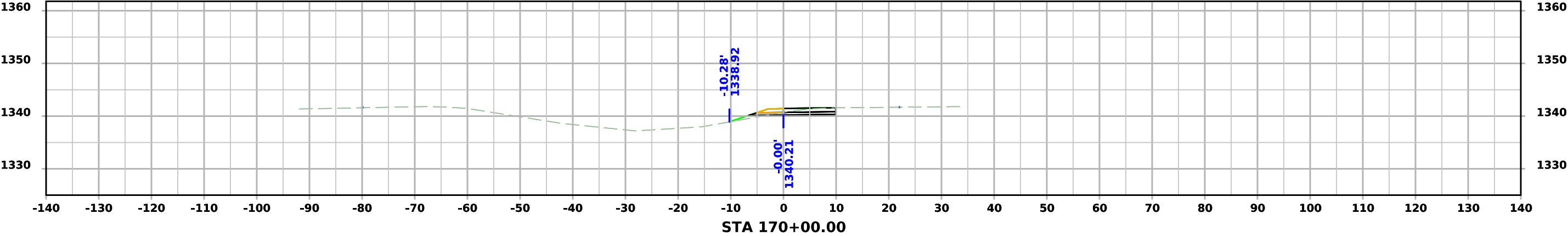
CROSS SECTIONS
LEGEND AND INFORMATION SHEET

(COVERS SHEET SERIES W, X, Y, & Z)

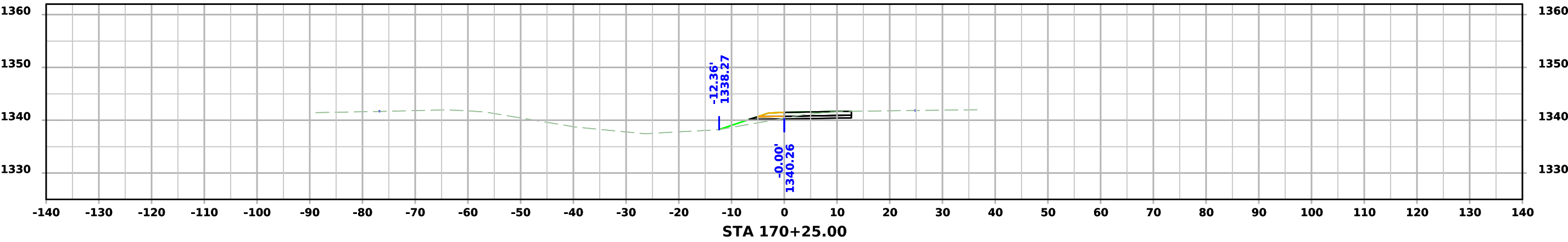
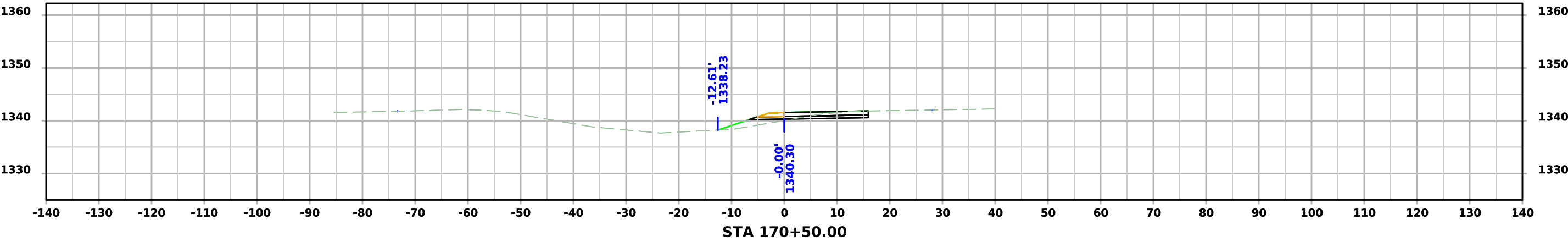
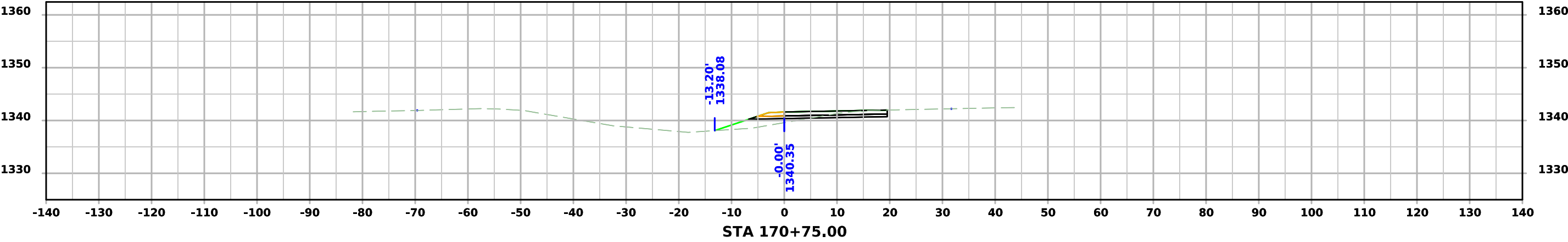
DET200A

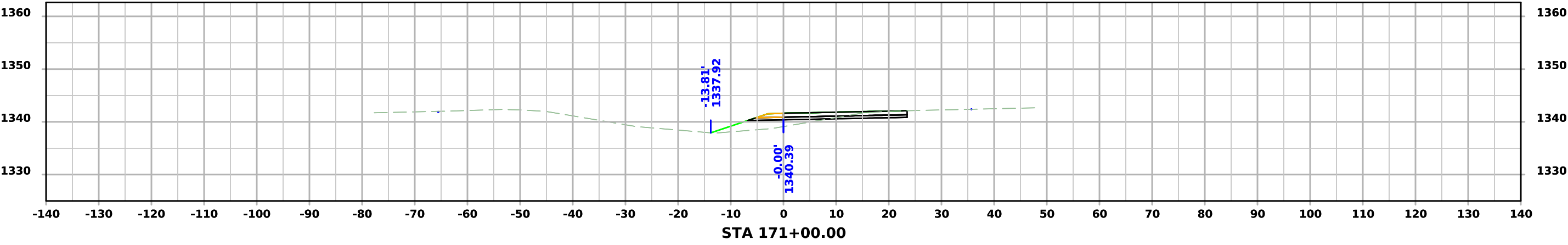
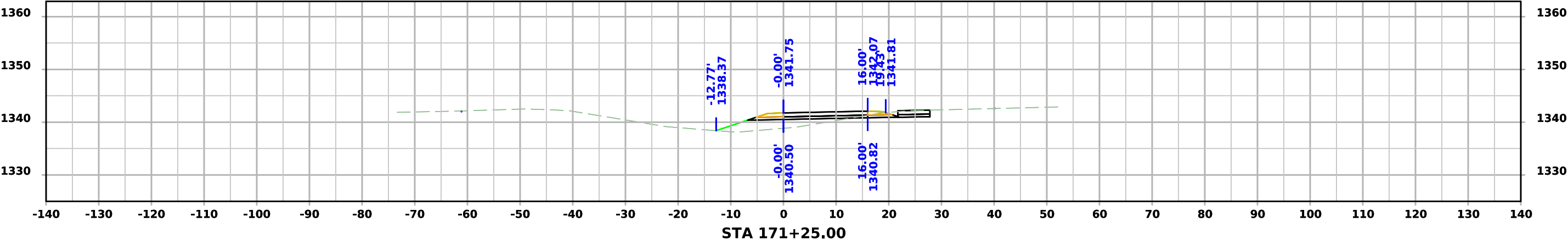
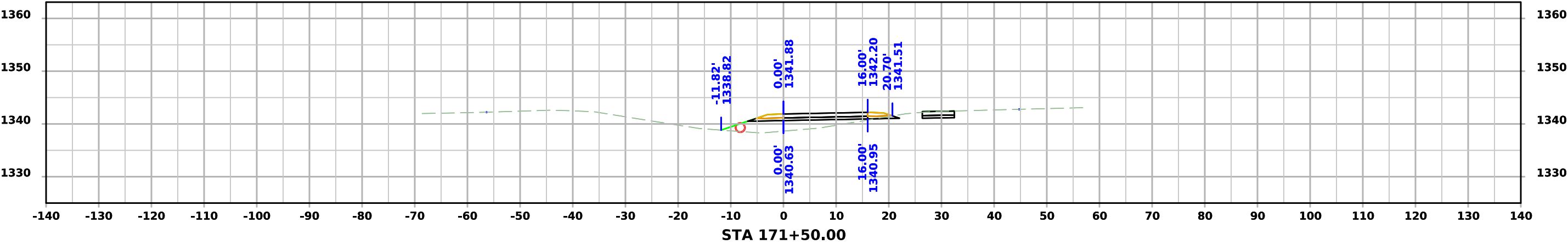


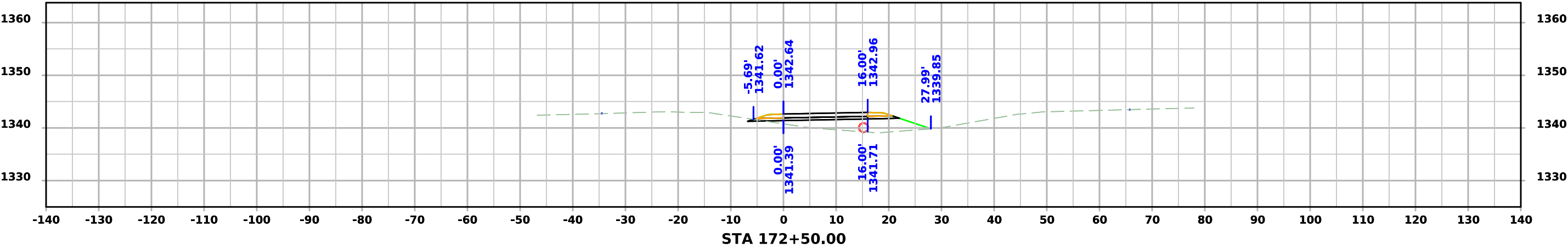
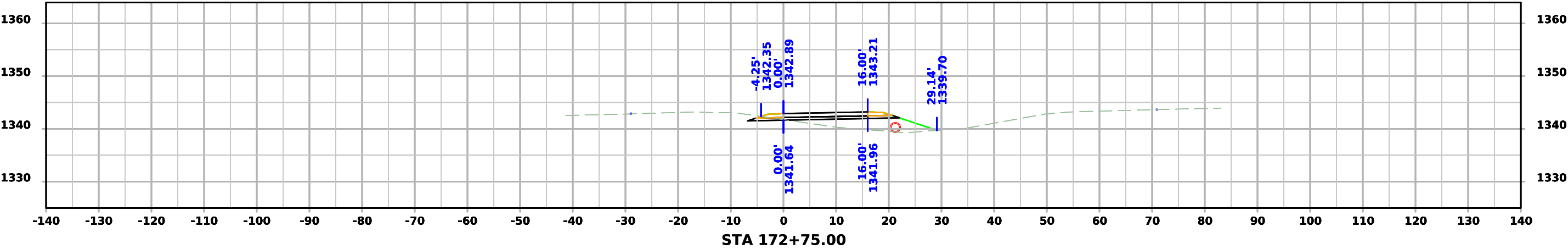
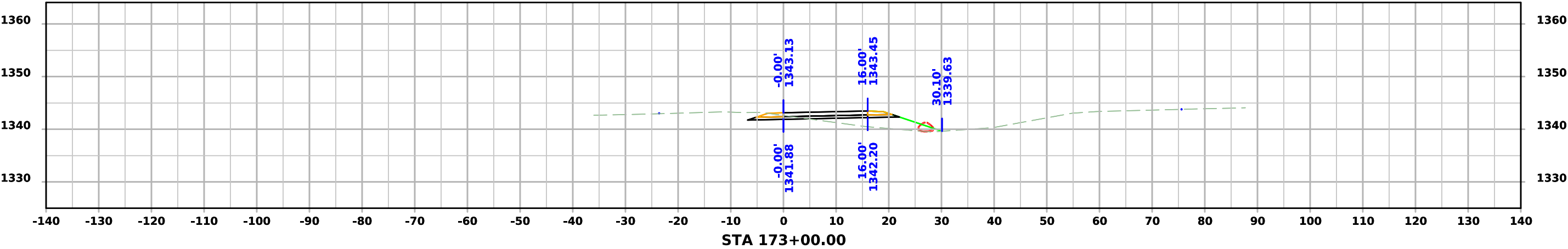
DET200A



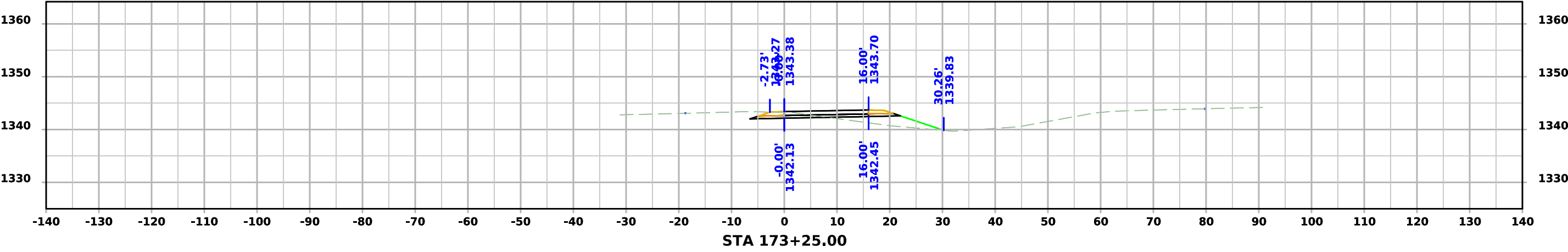
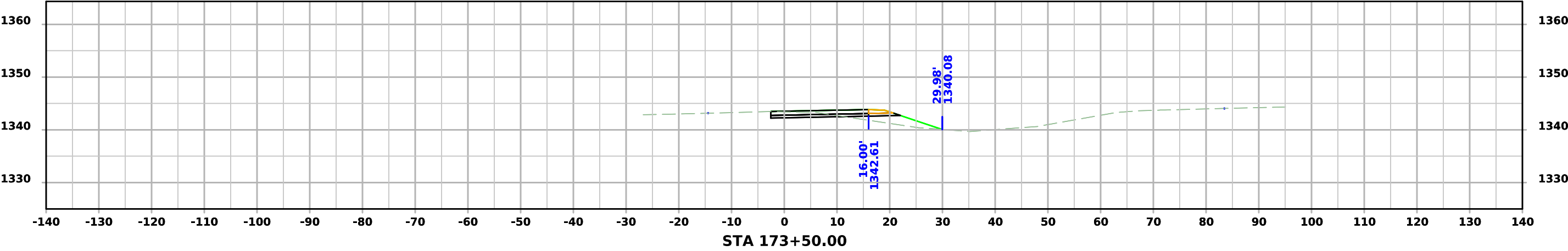
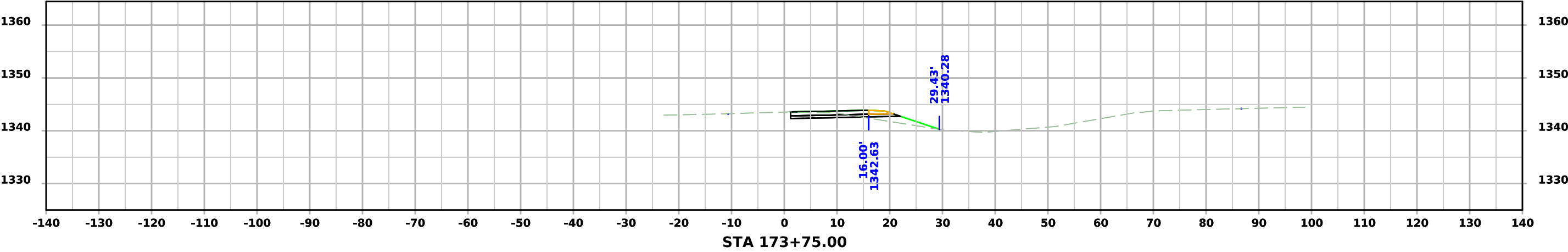
DET200A



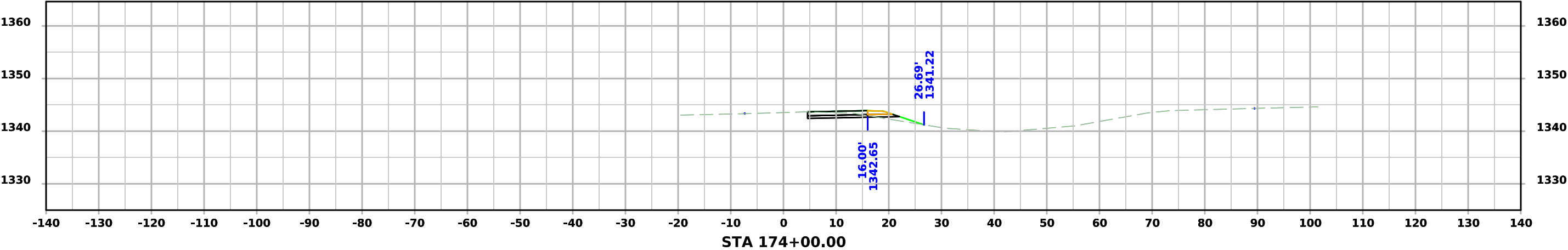
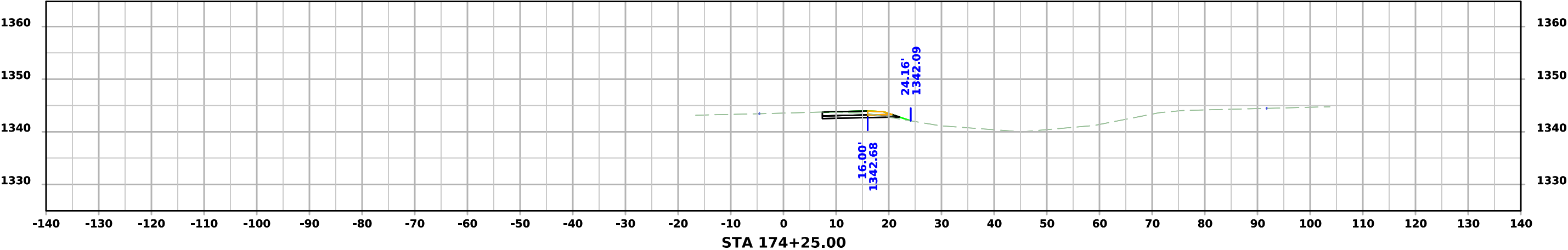
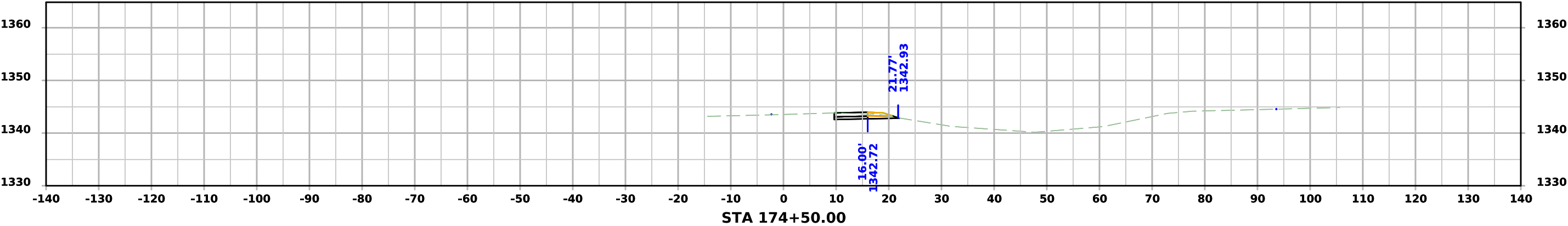




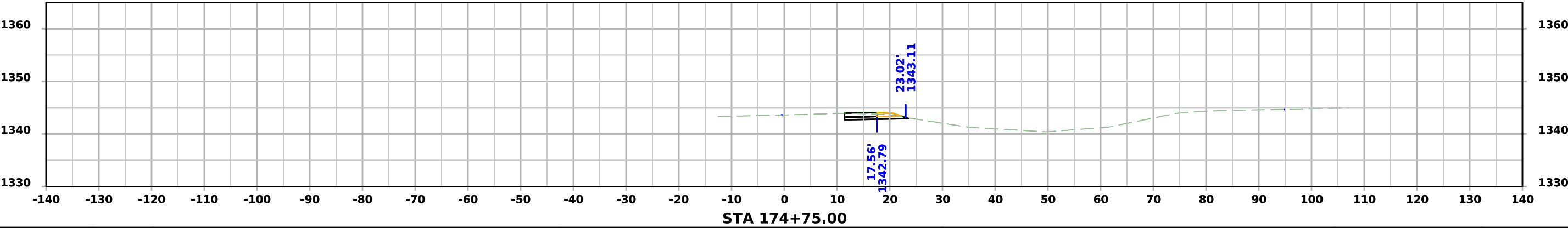
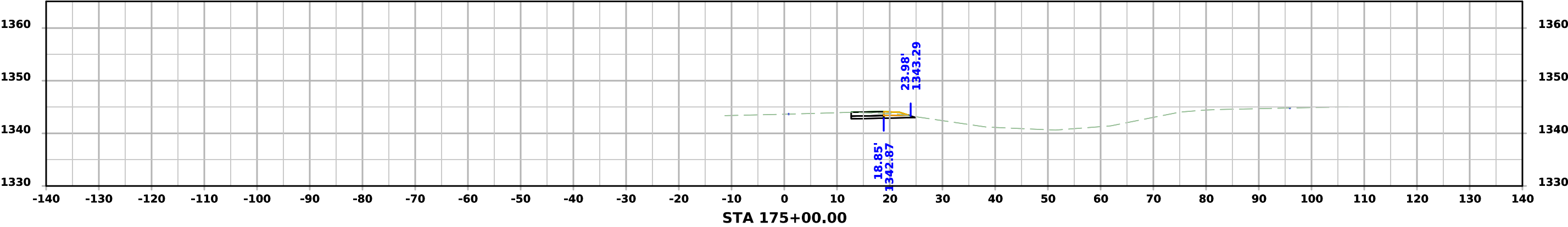
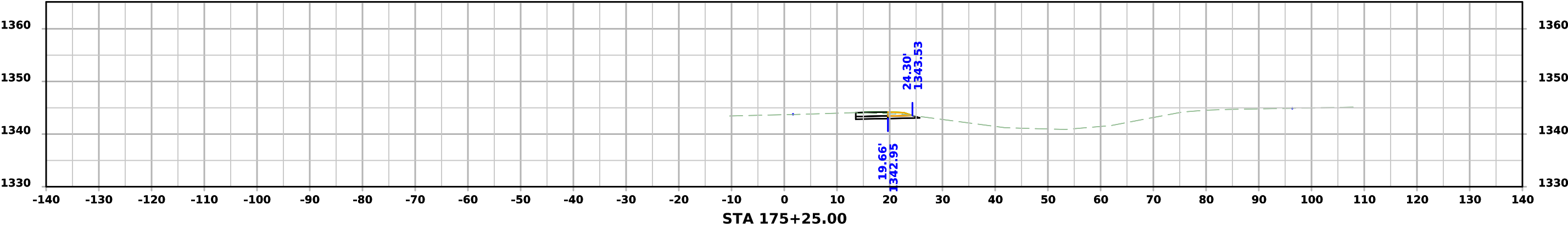
DET200A



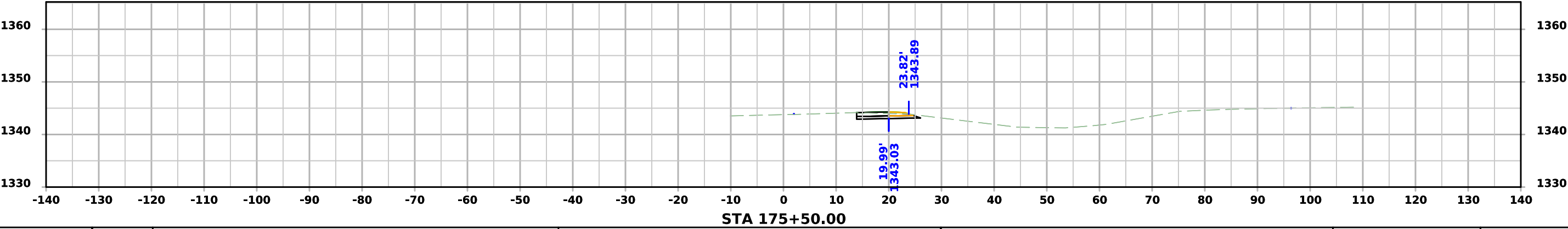
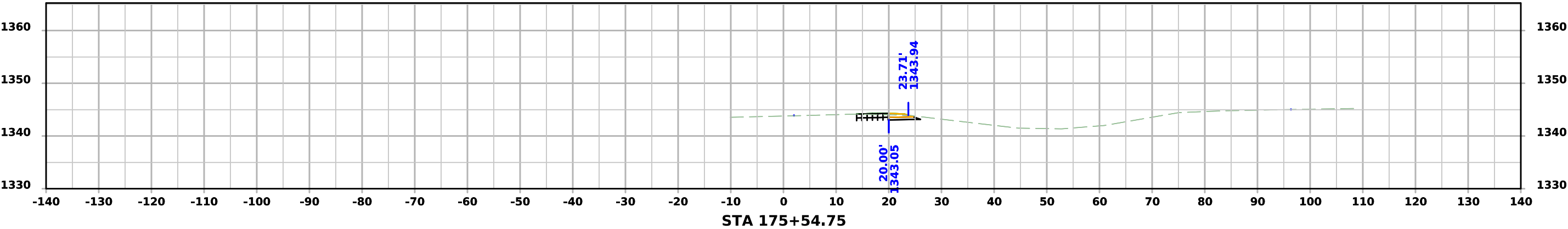
DET200A



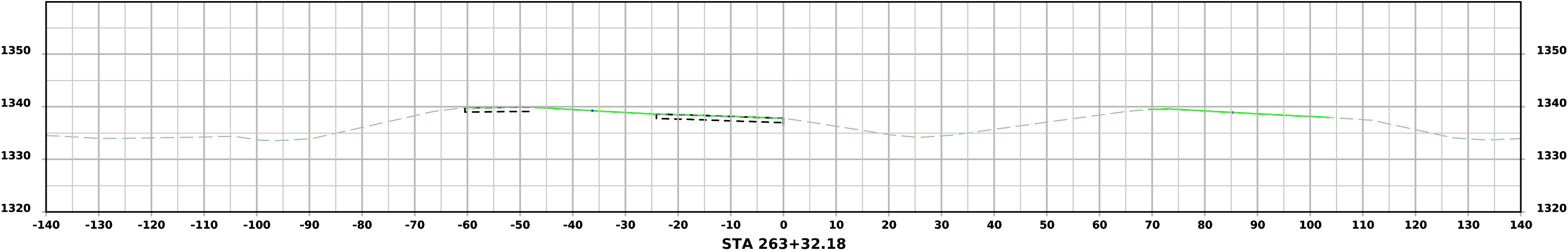
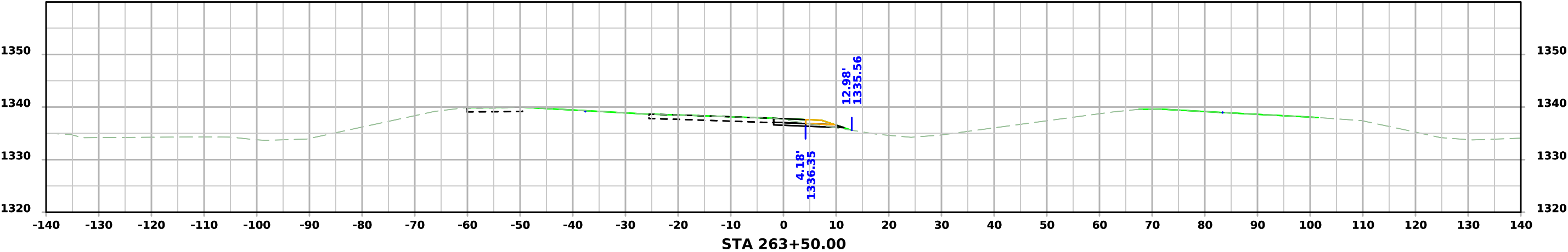
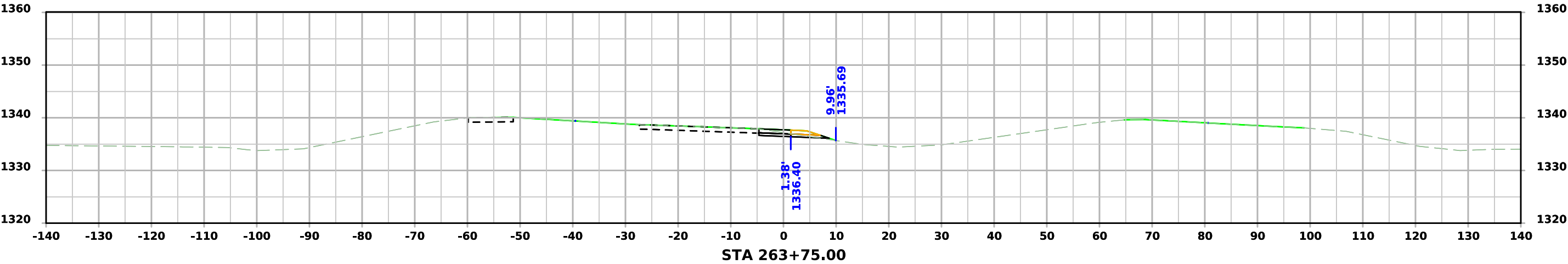
DET200A



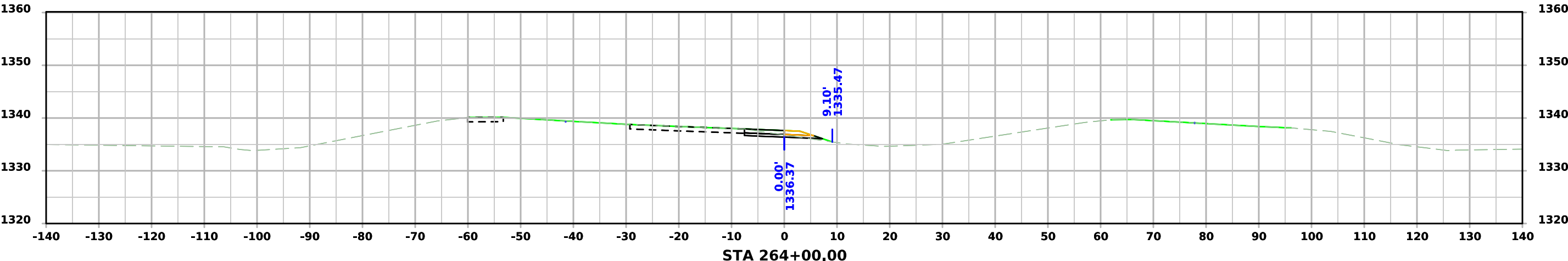
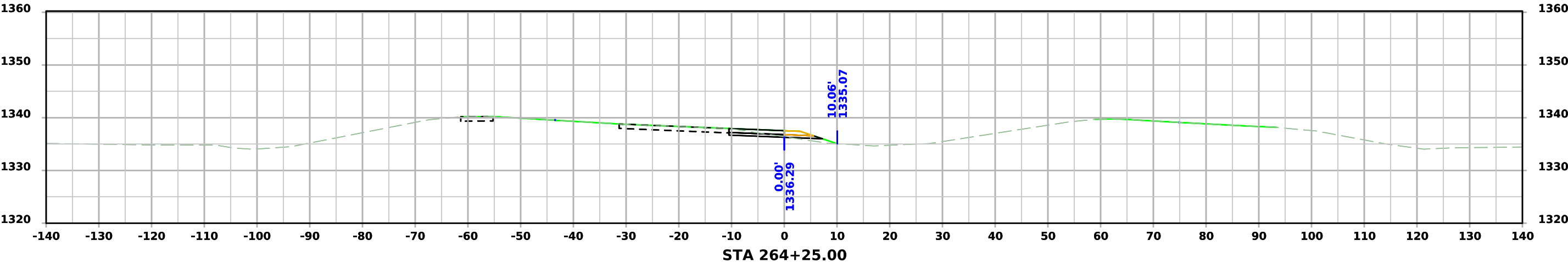
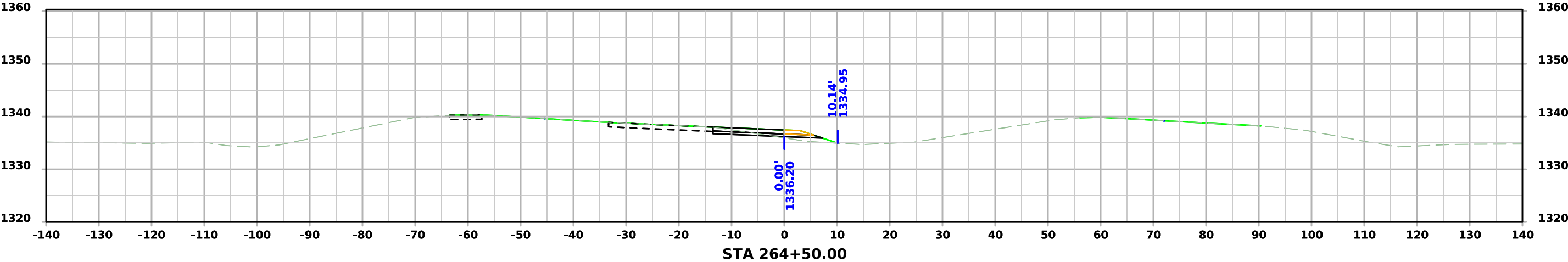
DET200A



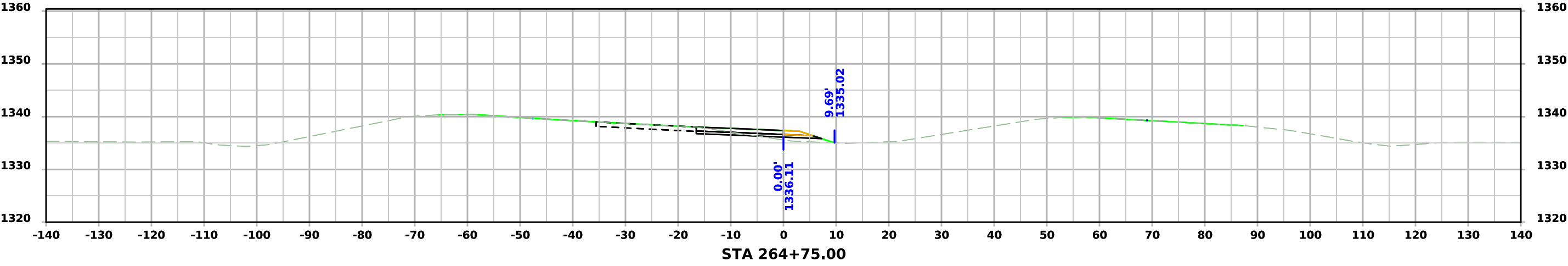
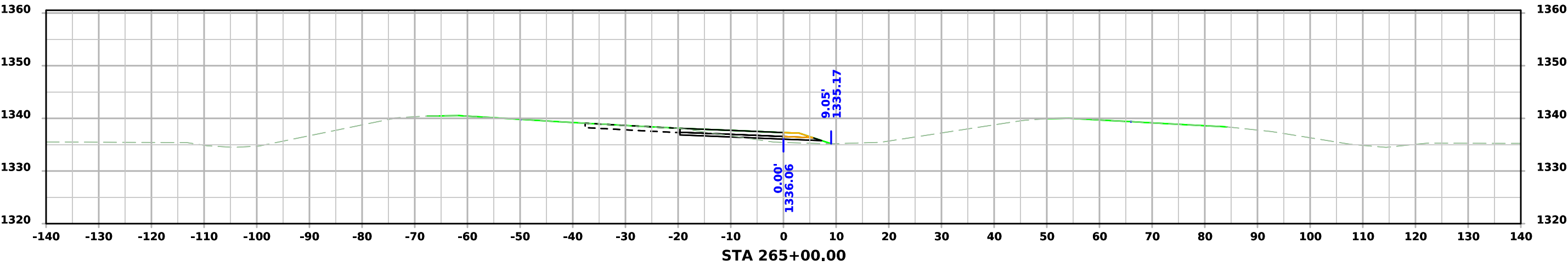
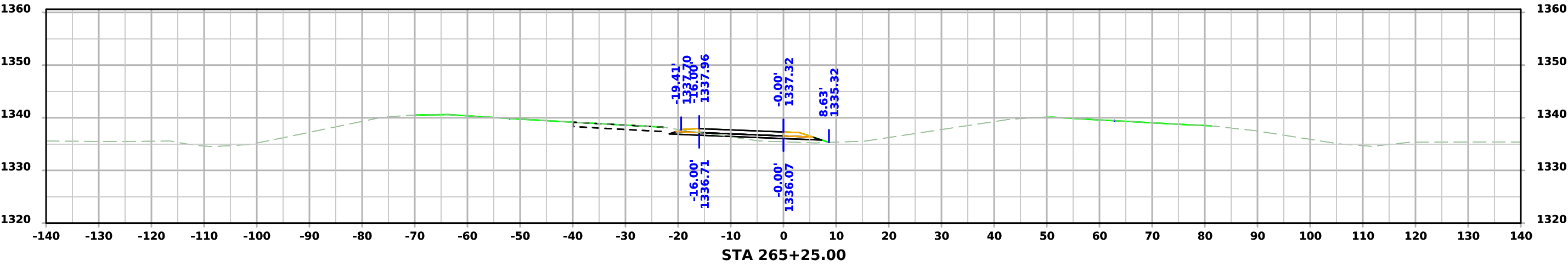
DET200B



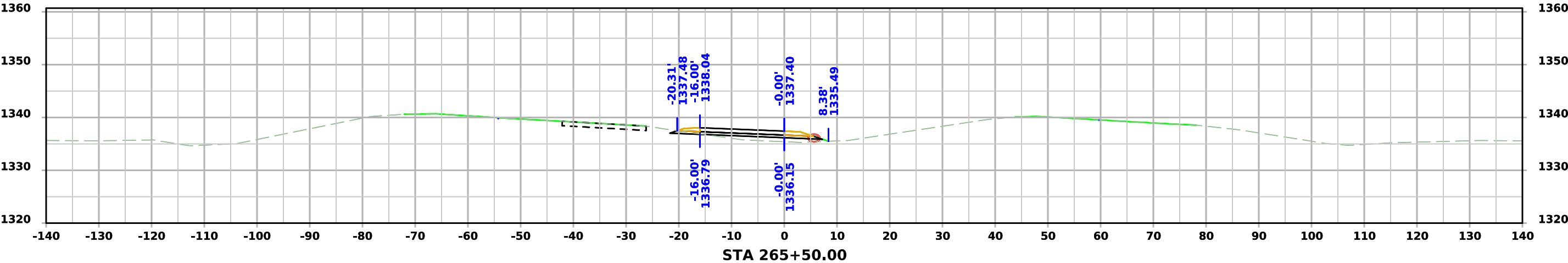
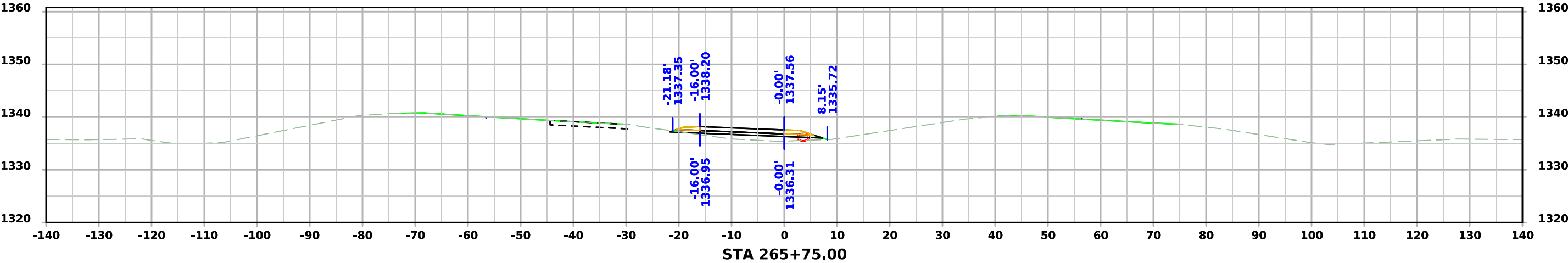
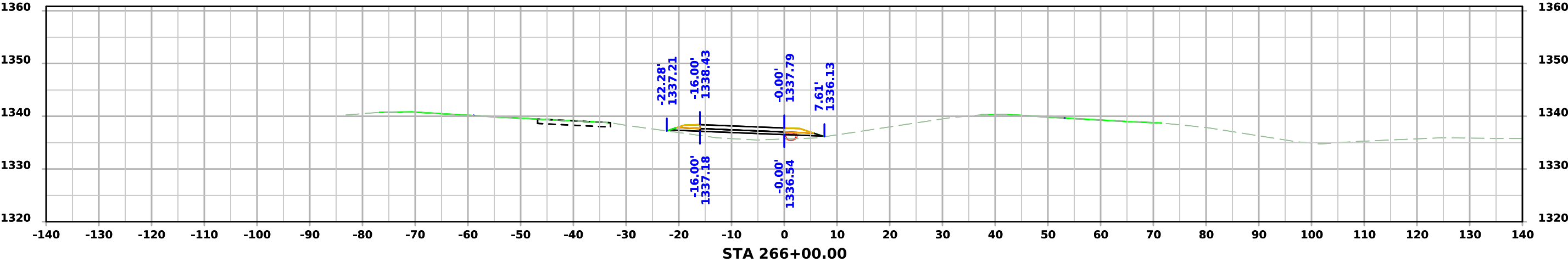
DET200B

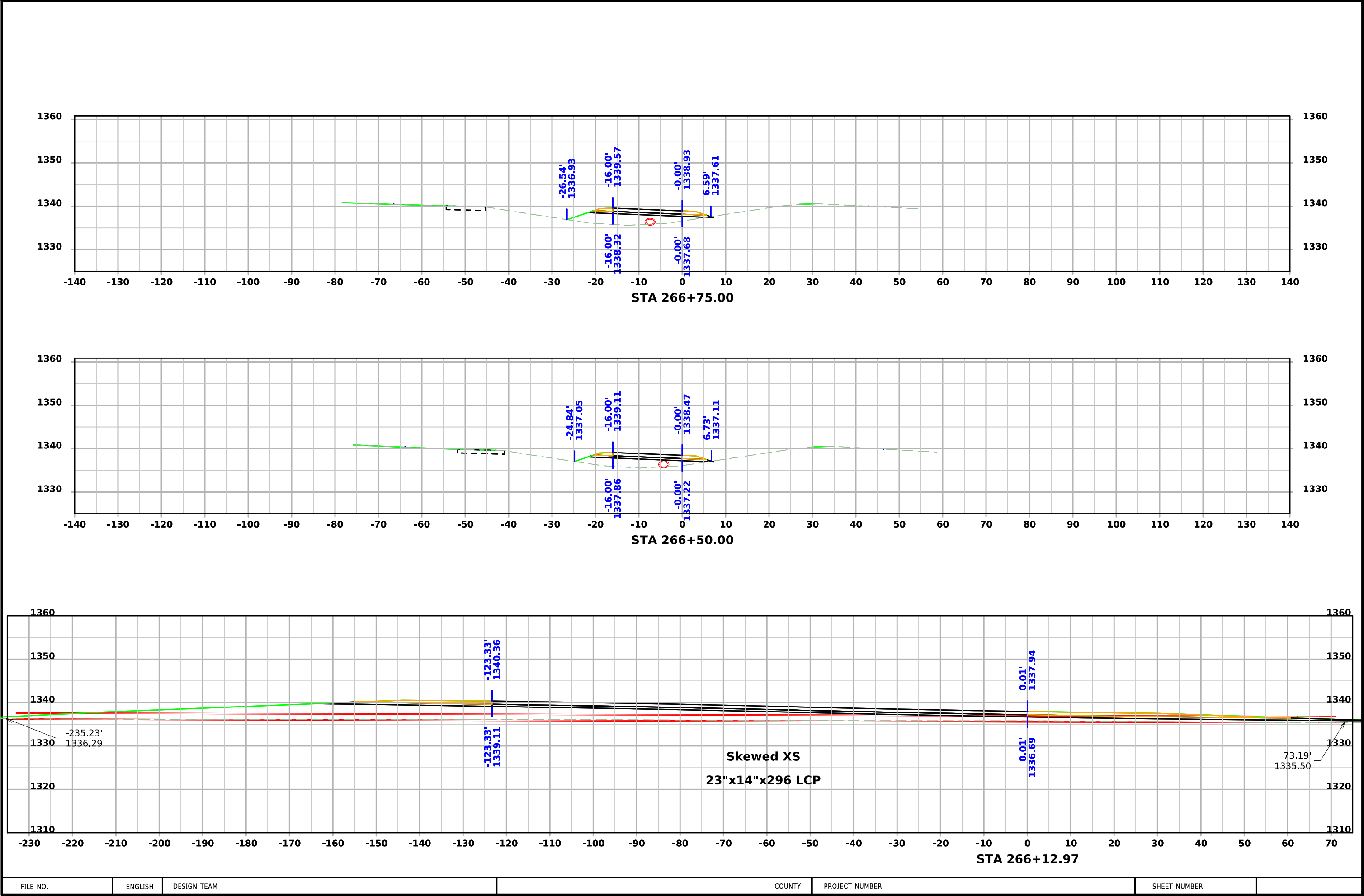


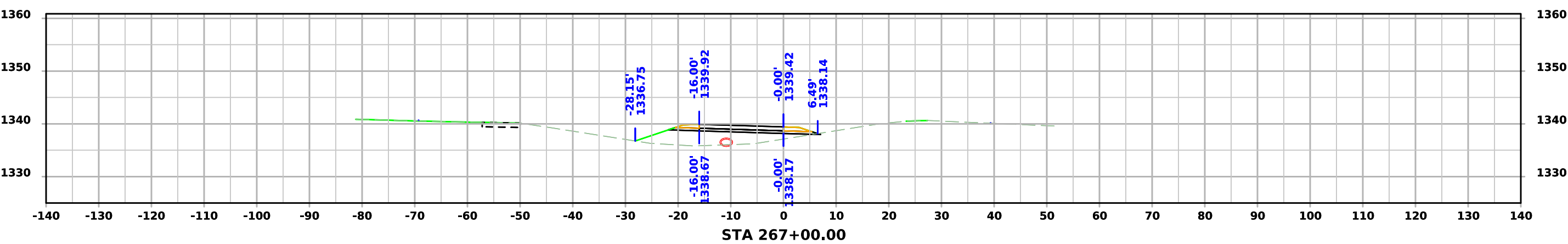
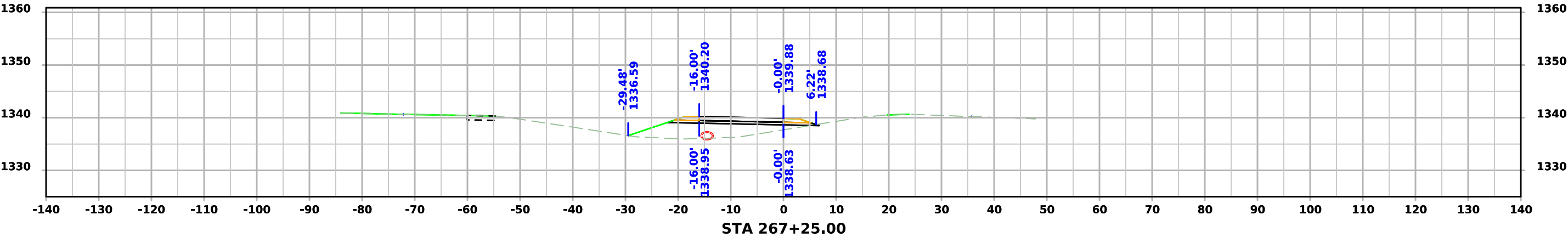
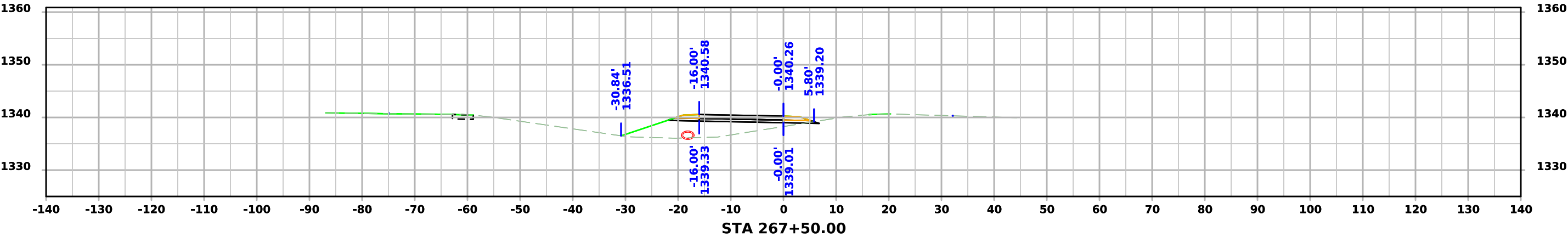
DET200B

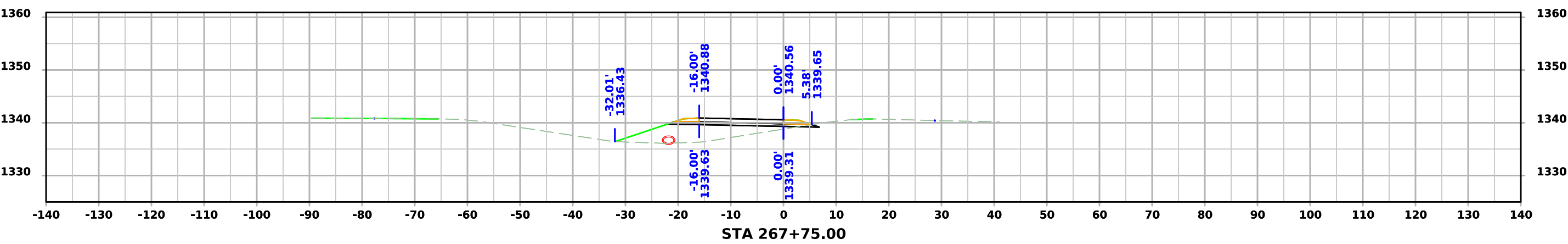
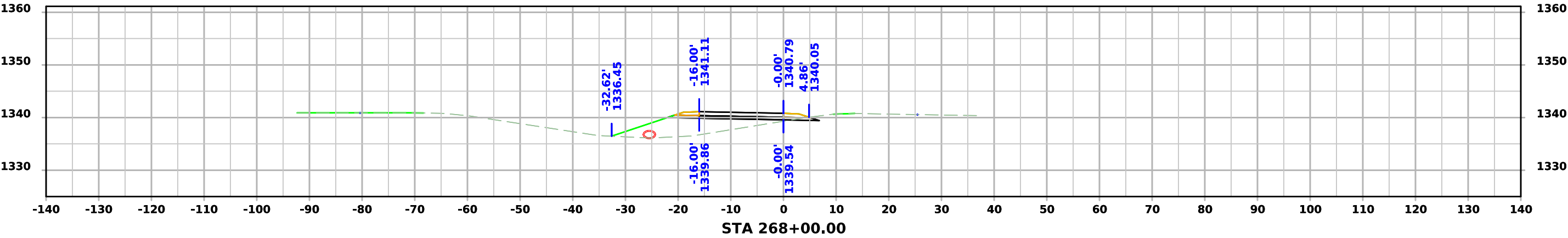
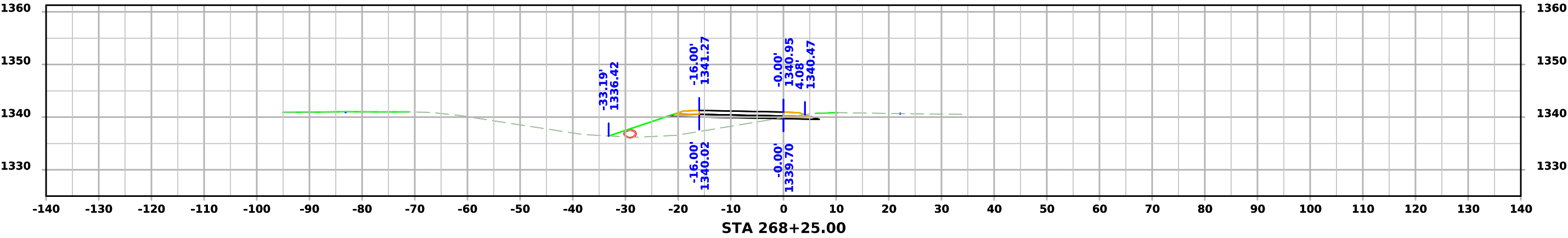


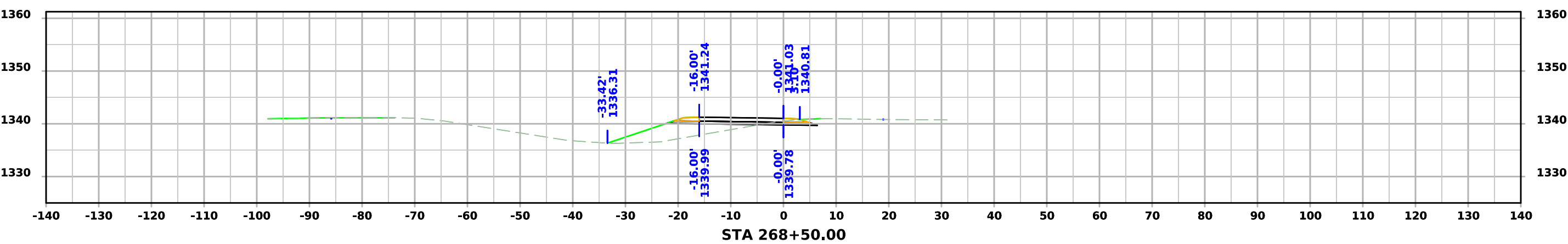
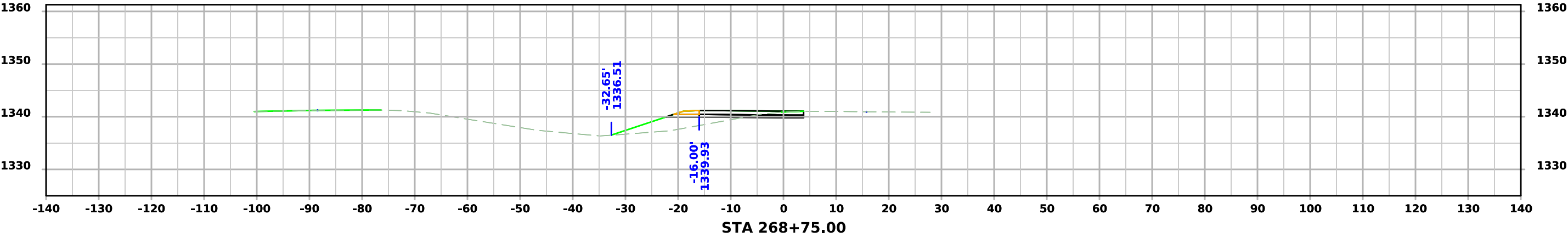
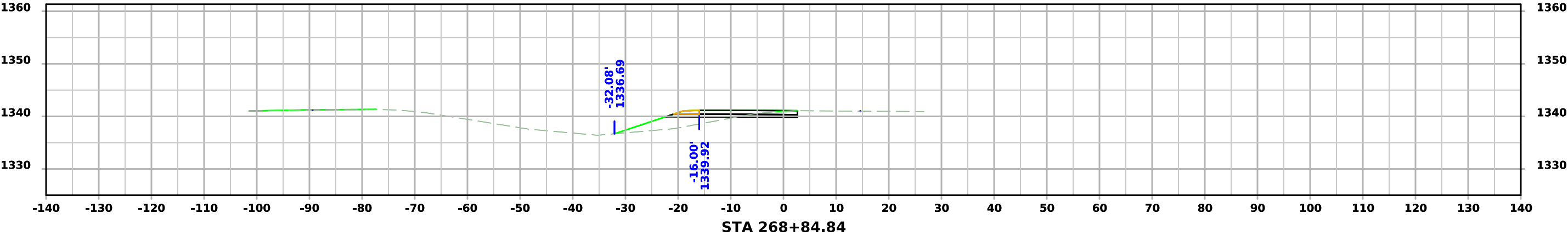
DET200B



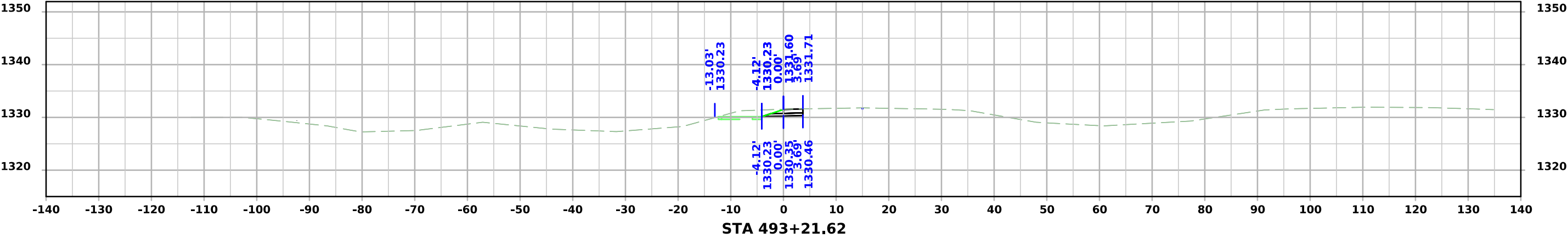
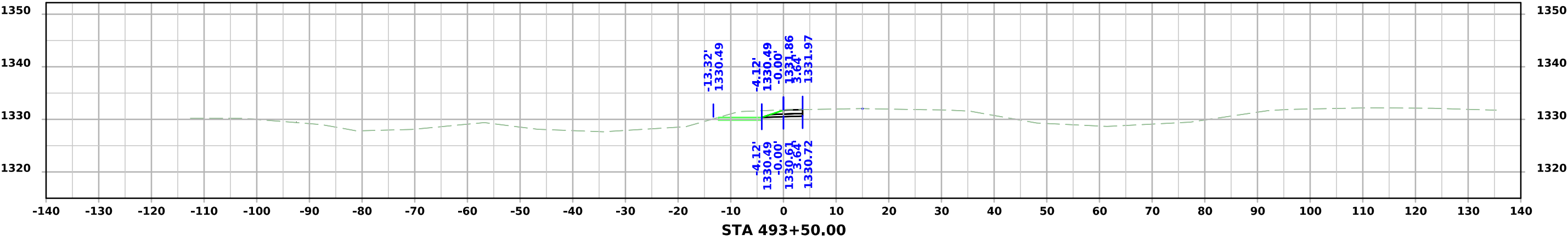
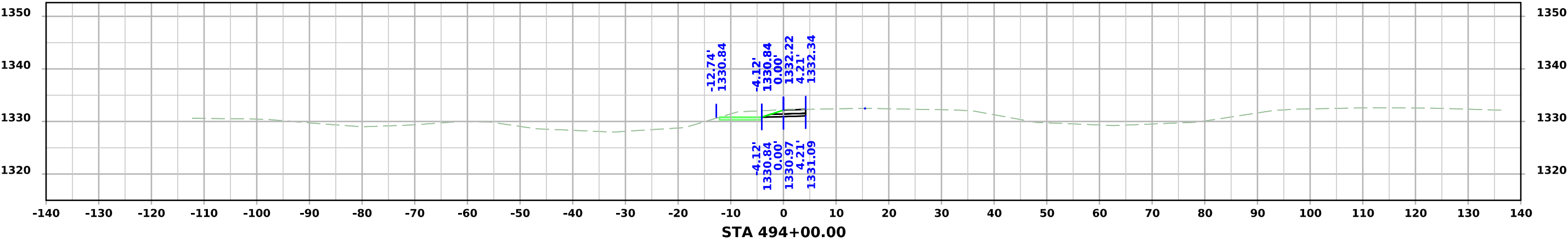




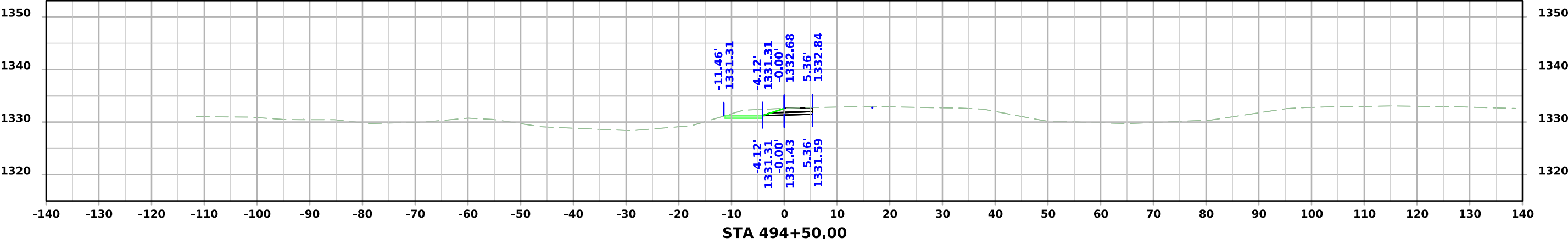
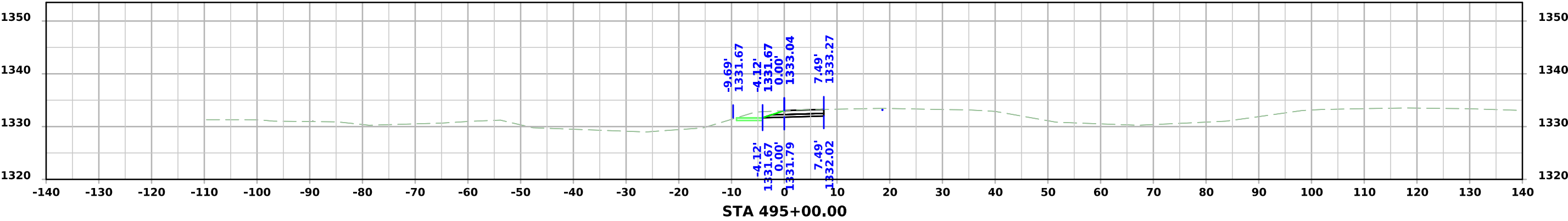
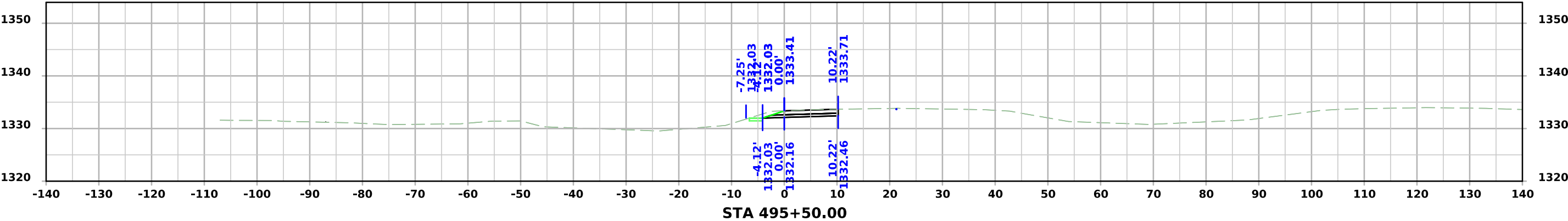




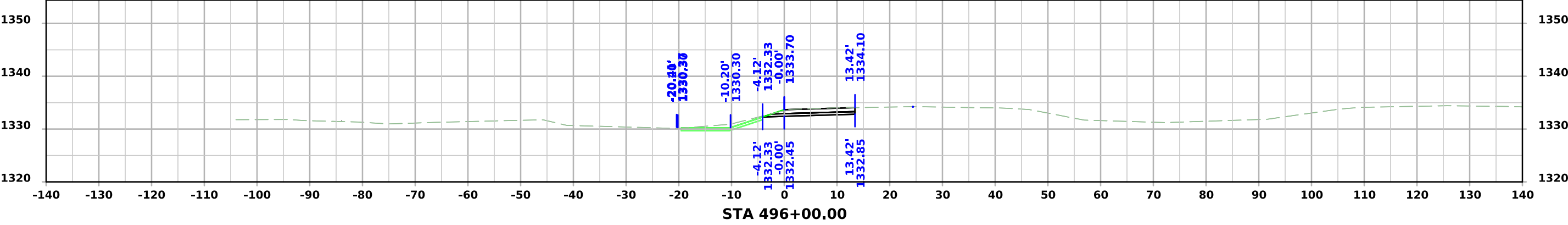
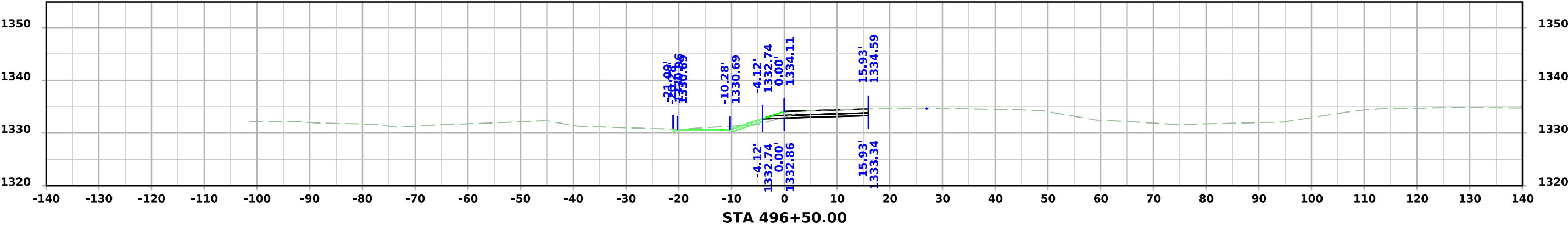
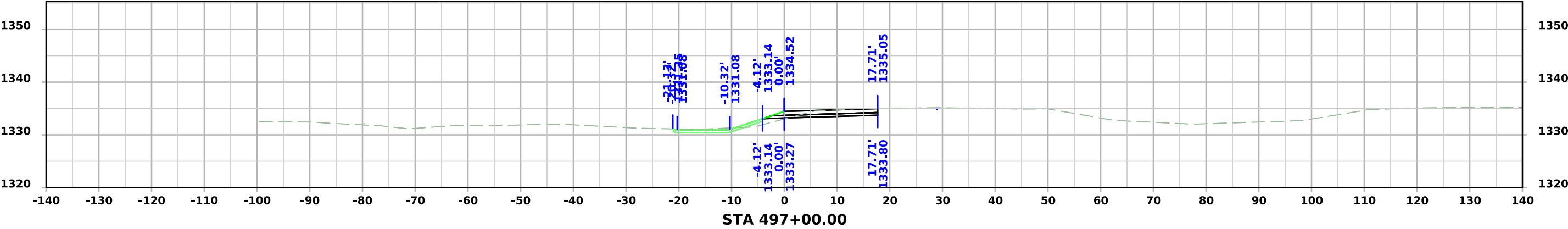
DET US71SB



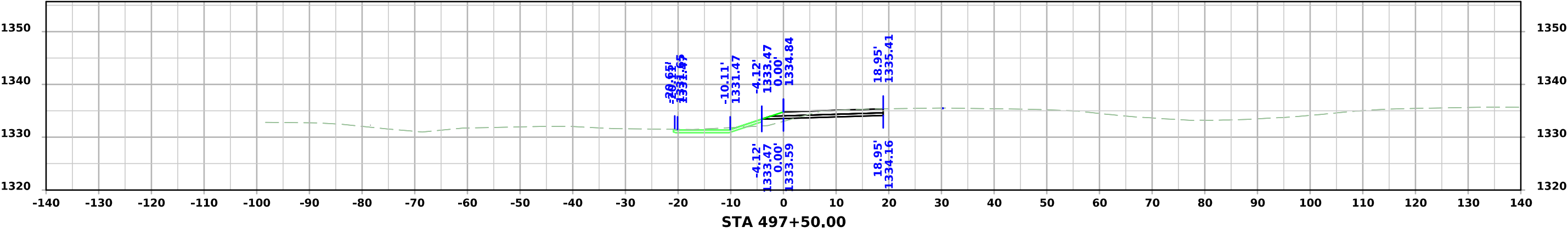
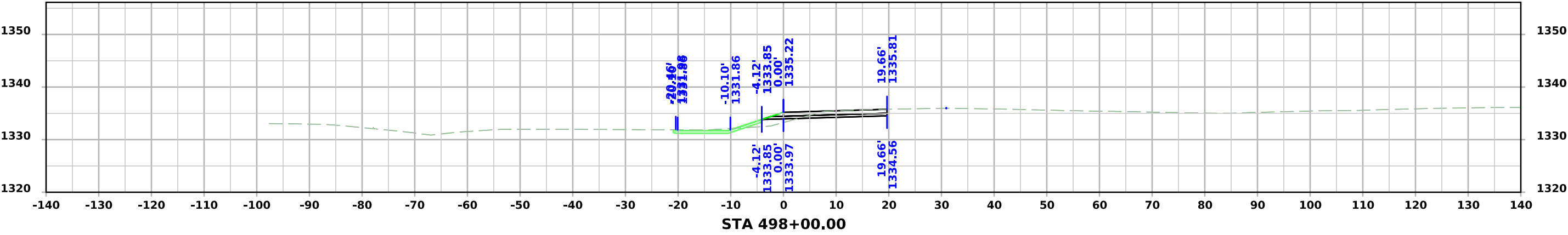
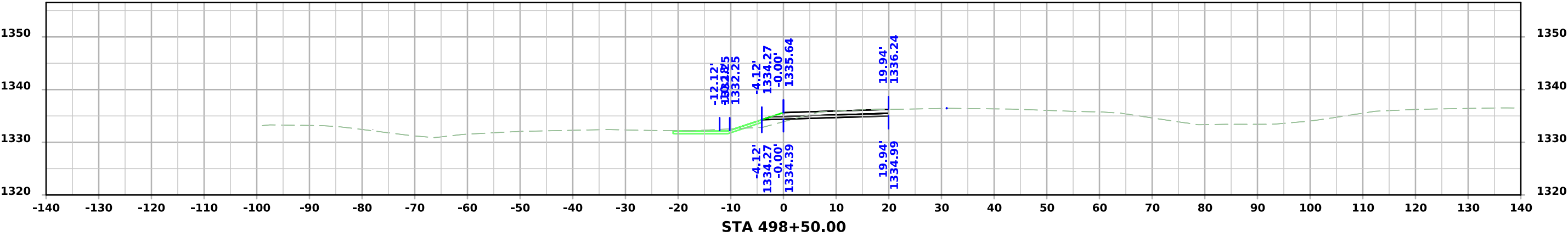
DET US71SB



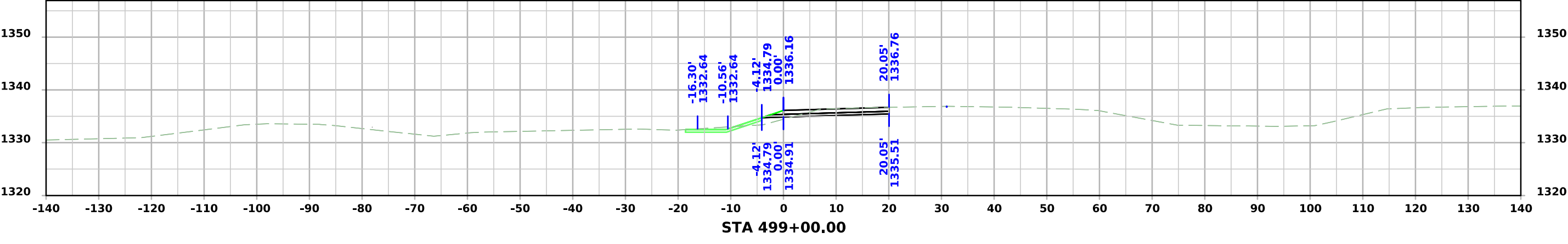
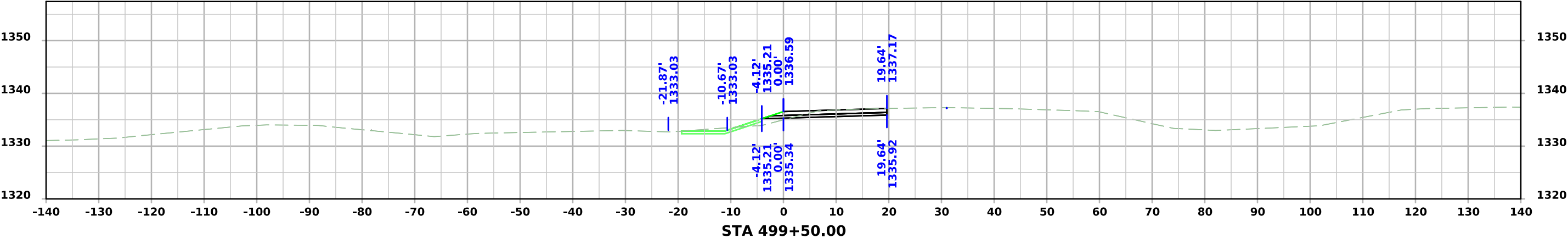
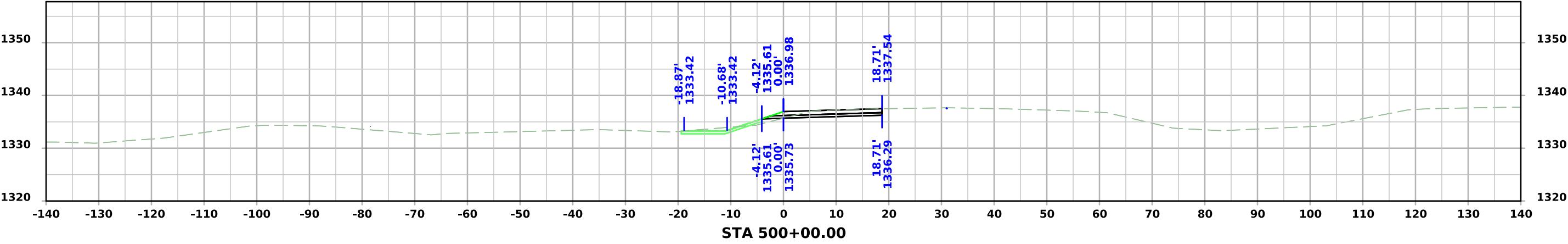
DET US71SB



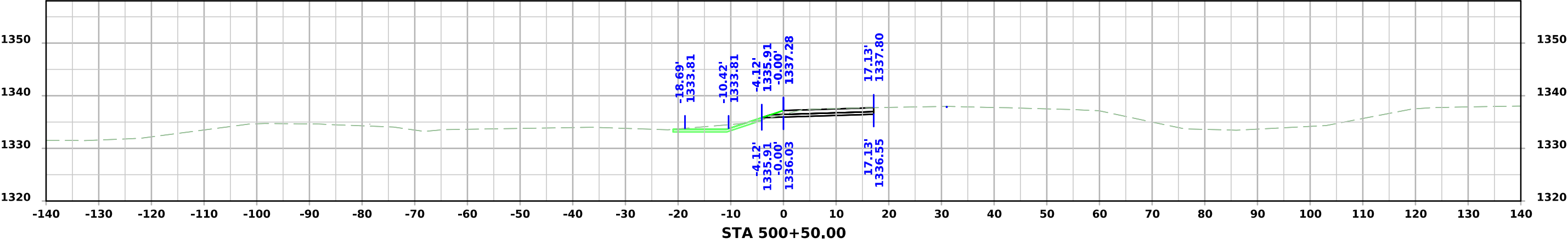
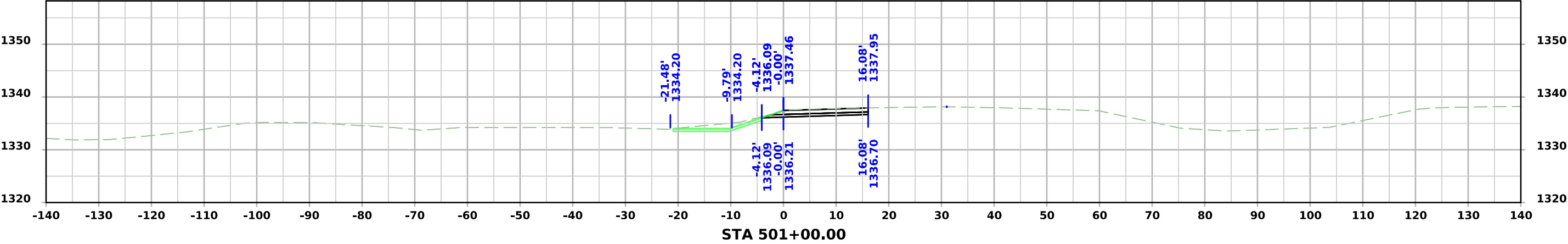
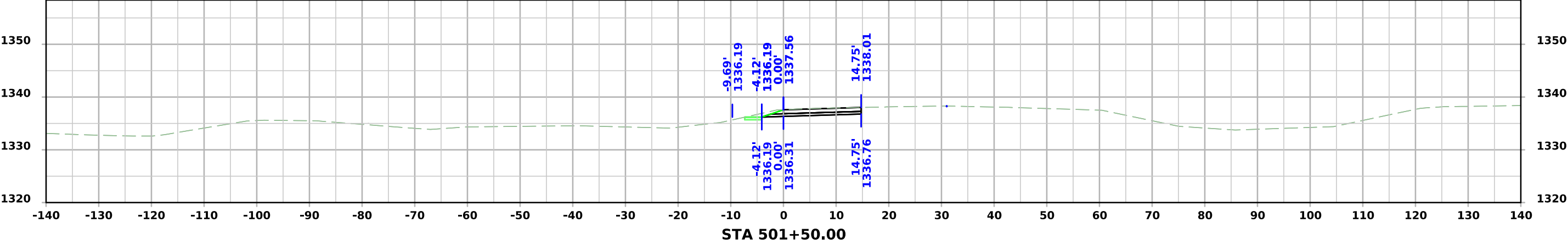
DET US71SB



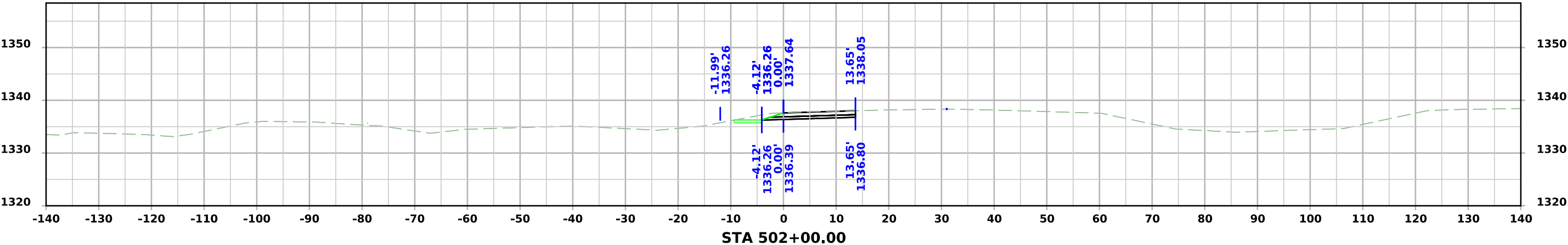
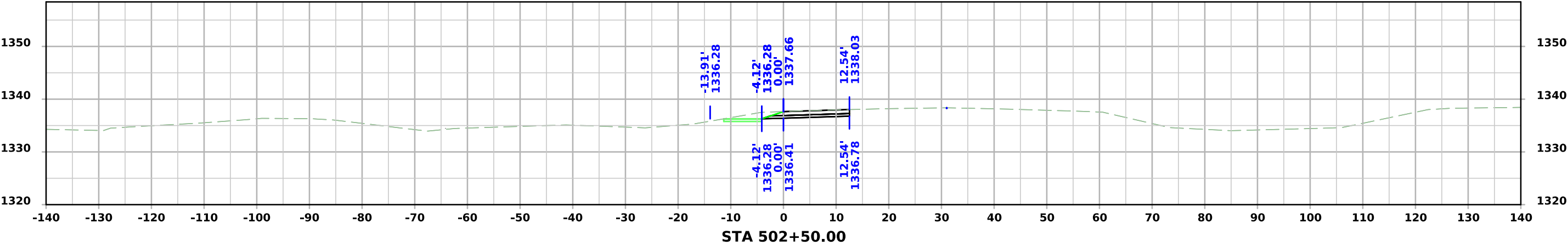
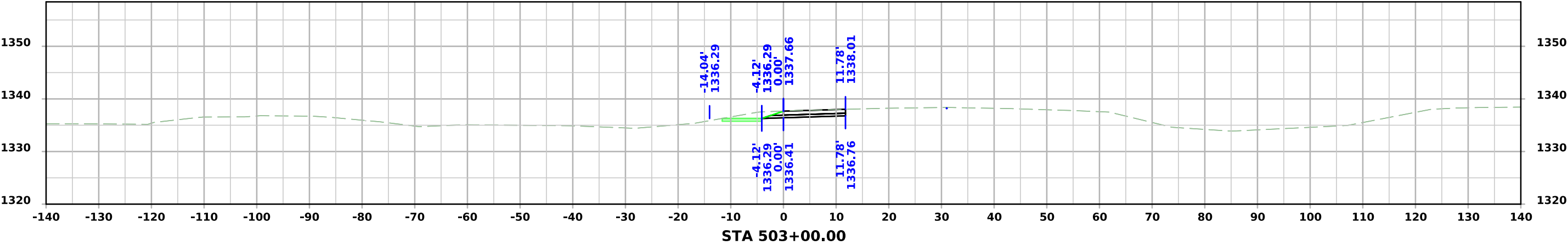
DET US71SB



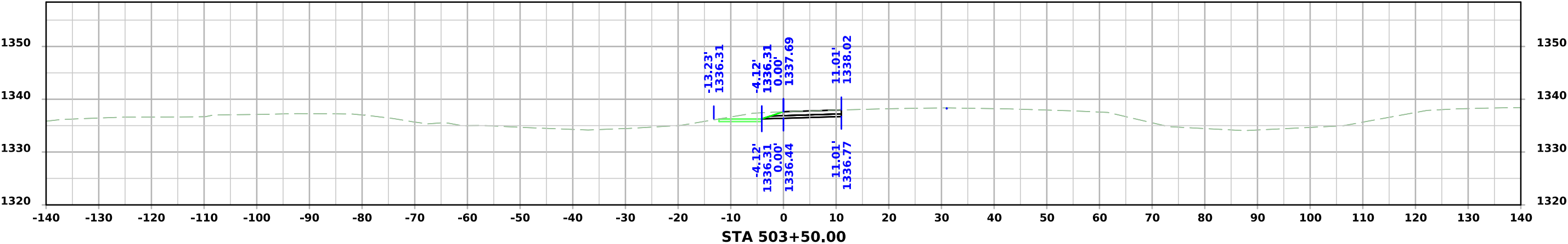
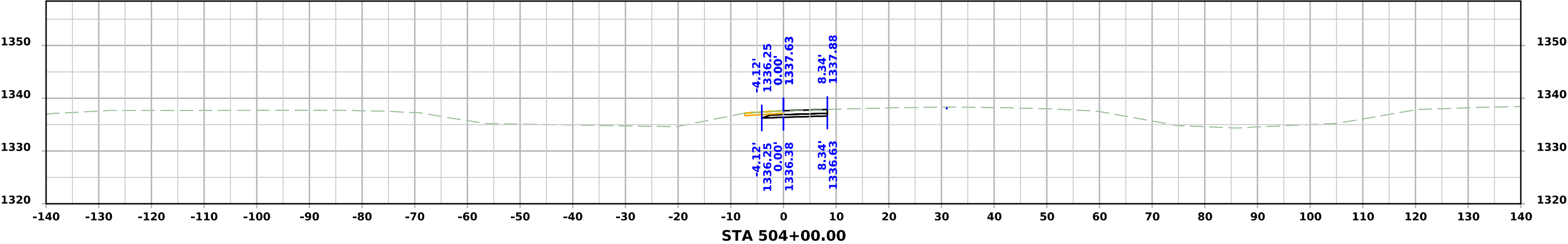
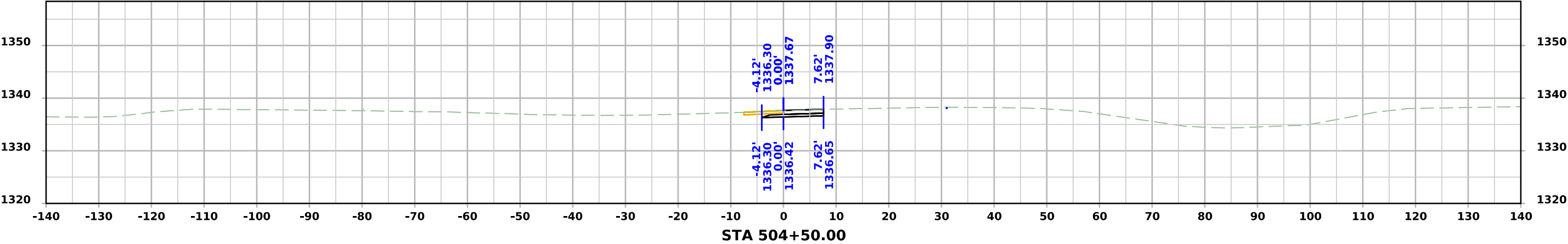
DET US71SB



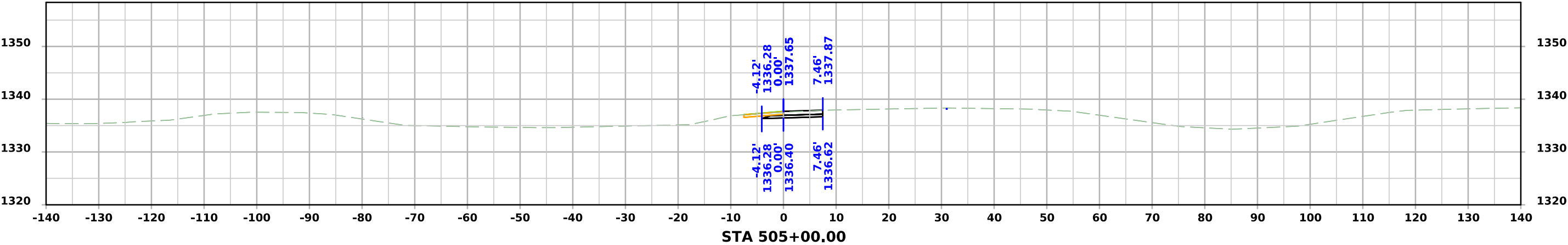
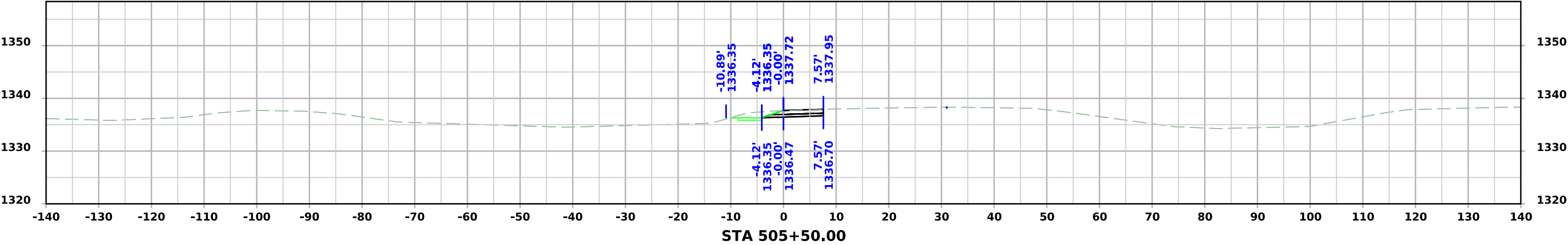
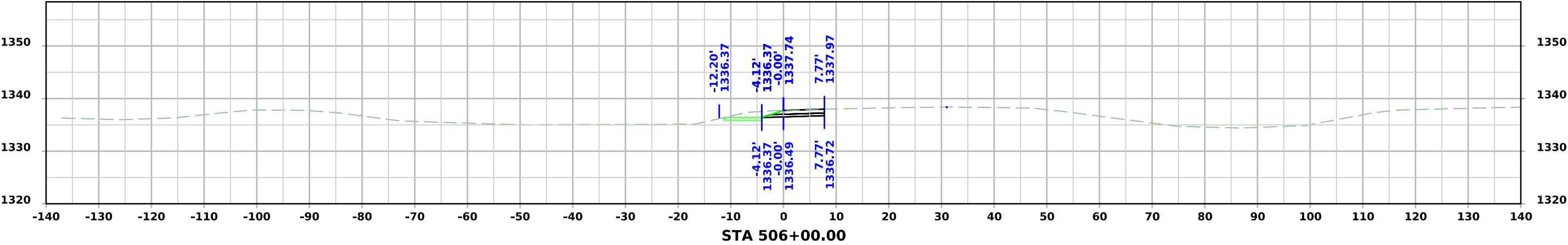
DET US71SB



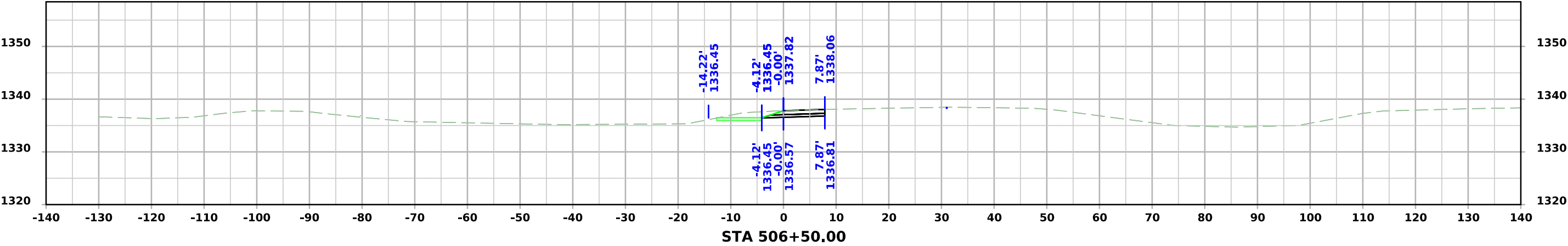
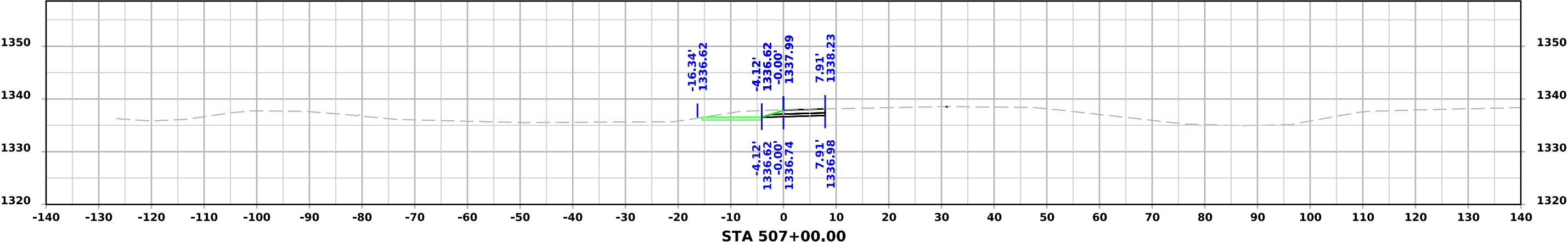
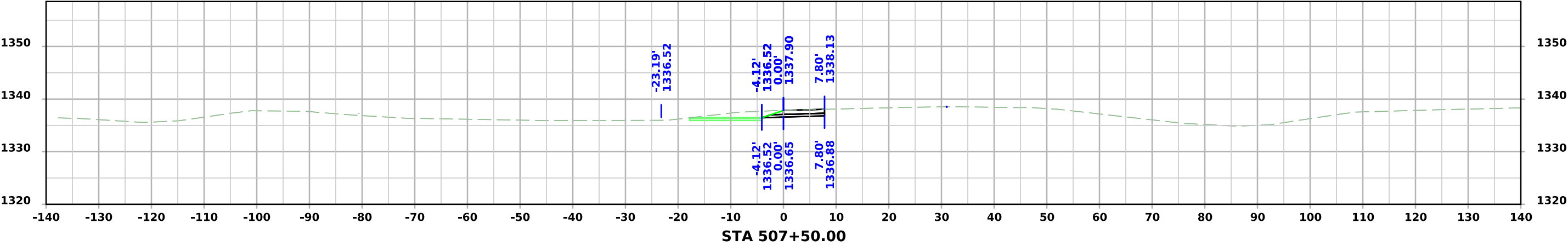
DET US71SB



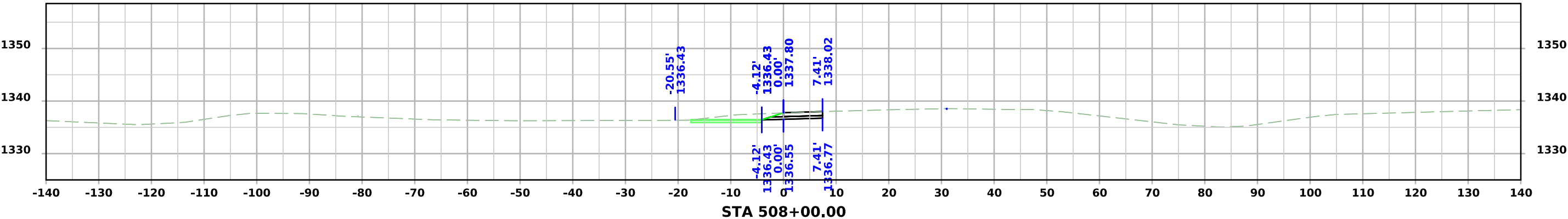
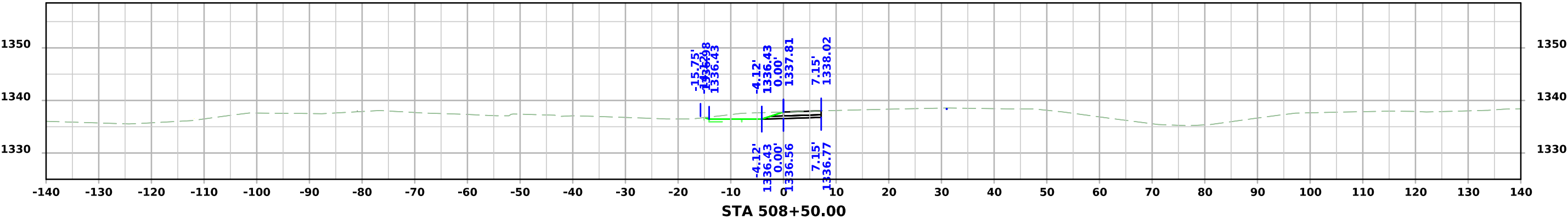
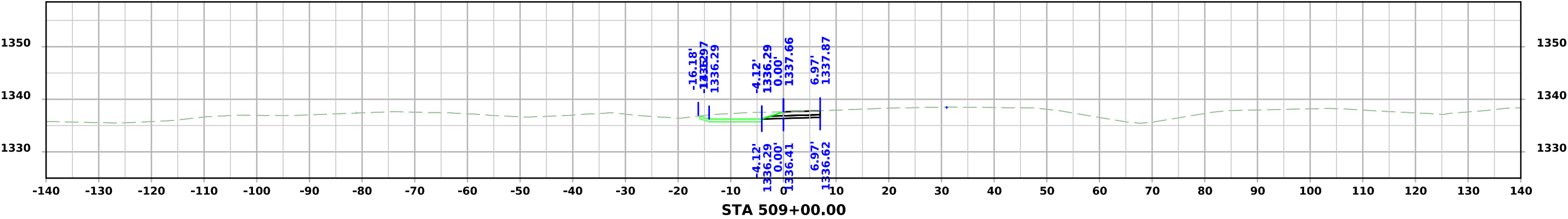
DET US71SB



DET US71SB



DET US71SB



DET US71SB

