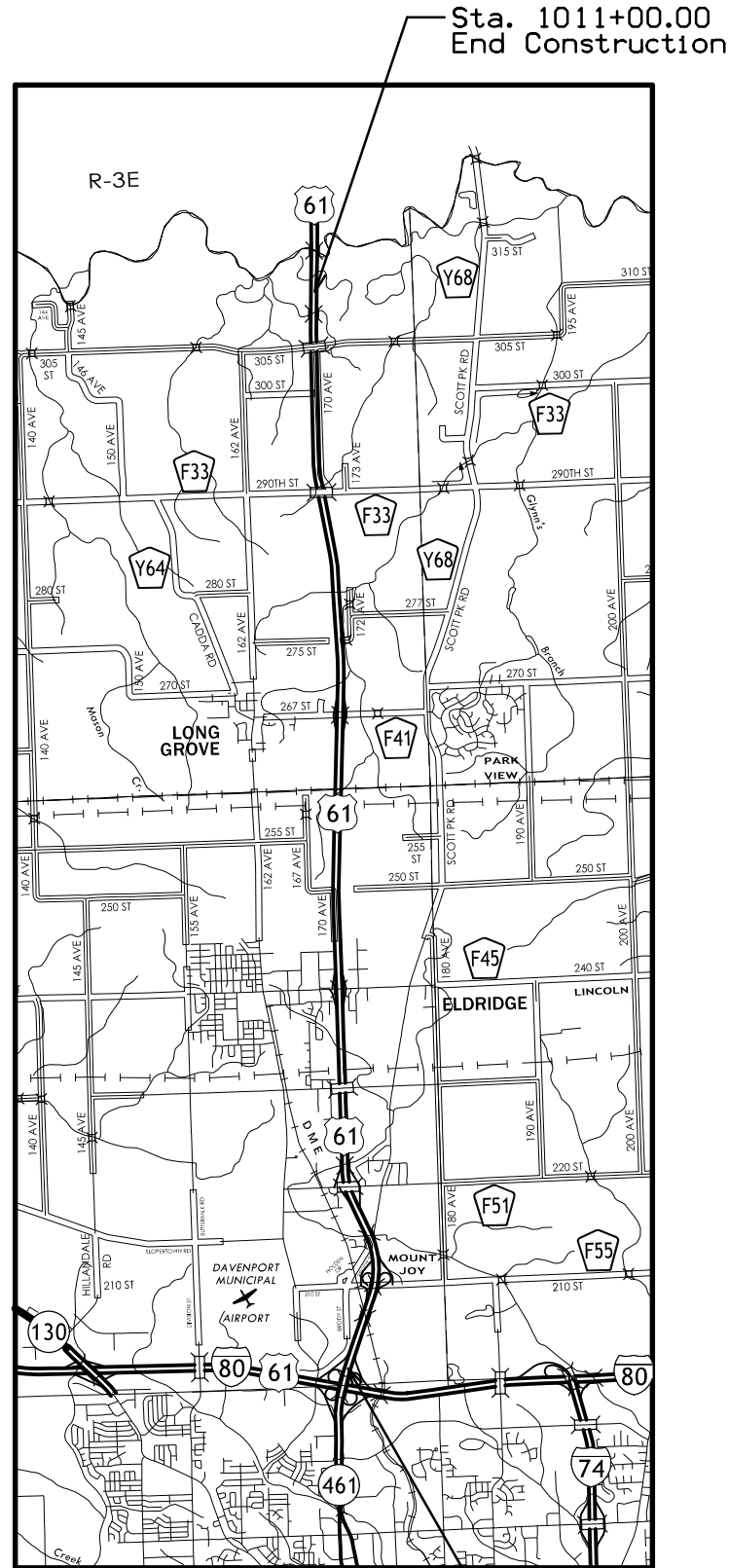


PIPE CULVERTS
NHSN-061-5(144)--2R-82

SCOTT CO.

LETTING DATE
12/17/2019



Highway Division
PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
SCOTT COUNTY
PIPE CULVERTS
0.3 MILES NORTH OF I-80 TO 0.3 MILES SOUTH OF THE WAPSIPINICON RIVER

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.
Value Engineering Saves. Refer to Article 1105.14 of the Specifications.



REVISIONS

TOTAL

52

PROJECT IDENTIFICATION NUMBER

17-82-061-010

PROJECT NUMBER

NHSN-061-5(144)--2R-82

R.O.W. PROJECT NUMBER

NHSN-061-5(144)--2R-82

INDEX OF SHEETS

No.	DESCRIPTION
A Sheets	Title Sheets
* A.1	Title Sheet with Location Map
B Sheets	Typical Cross Sections and Details
B.1 - 3	Typical Cross Sections and Details
C Sheets	Quantities and General Information
C.1 - 5	Tabulations
D Sheets	Mainline Plan and Profile Sheets
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - 27	Aerial and Background Sheets with Proposed Work Areas
G Sheets	Survey Sheets
G.1 - 8	Alignment Information
G.9	Reference Ties and Benchmarks
J Sheets	Traffic Control and Staging Sheets
J.1	Traffic Control Plan
* J.2	Detour Route
U Sheets	500 Series, Mod.Stds. and Detail Sheets
U.1 - 2	500 Series, Modified Standards and Detail Sheets
* U.3	Pipe Plan & Profile
V Sheets	Bridge and Culvert Situation Plans
* V.1 - 2	Bridge and Culvert Situation Plans
	* Color Plan Sheets

H Sheets

PRELIMINARY PLANS

Subject to change by final design.

D5 PLAN - Date: 3-16-2018

FILE NO.

ENGLISH

DESIGN TEAM

SNYDER AND ASSOCIATES, INC.

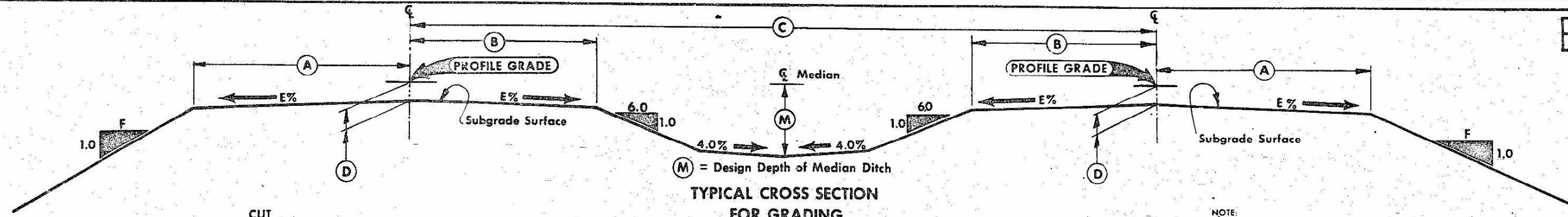
SCOTT COUNTY

PROJECT NUMBER

NHSN-061-5(144)--2R-82

SHEET NUMBER

A.1



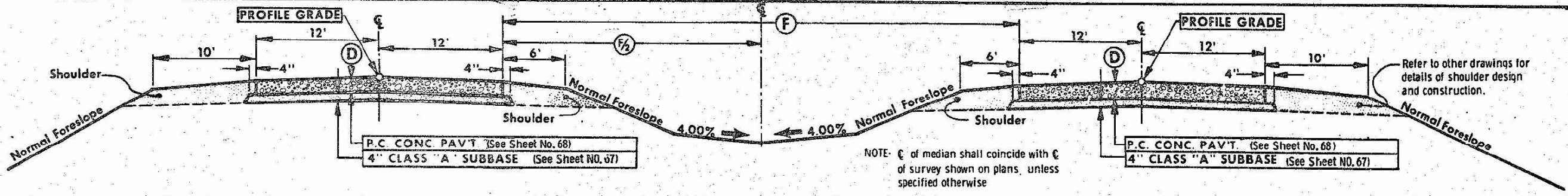
CUT
For typical cross sections of ditches and backslopes for roadway in cut refer to other detail drawings within the plans.

NOTE:
Normal section shown may be modified appropriately in areas of super-elevated curves or other locations specifically designated by the engineer.

€ Median shall coincide with € Survey shown on plans unless specified otherwise.

FOR INFORMATION ONLY

ROAD IDENT.	LOCATION		DIMENSIONS				SLOPE F	SLOPE E%
	-STATION TO	STATION	A	B	C	D		
Freeway No. 561	426+41.00	433+31.12	29.5	26.0'	Var.	13.5"	6.0	1.5
Freeway No. 561	433+31.12	439+00.00	29.5	26.0'	82.0'	13.5"	6.0	1.5

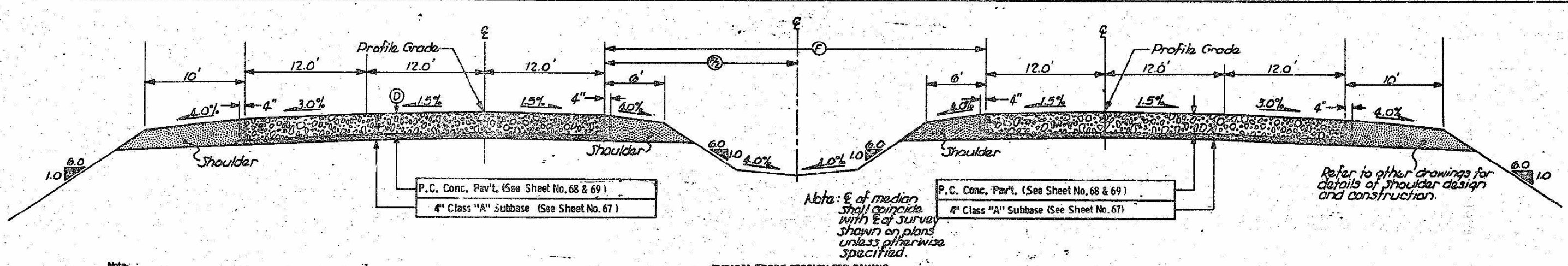


NOTE:
Normal section shown may be appropriate modified for areas specifically designated by the Engineer, such as intersections or super-elevated curves.

NOTE: TRANSVERSE JOINTS TO BE CD.

FOR INFORMATION ONLY

ROAD IDENT.	STATION TO STATION	D	F	SHLDR. TYPE	
Freeway No. 561	426+41.00	433+31.12	9.5"	Var.	3" Granular
Freeway No. 561	433+31.12	443+88.61	9.5"	64.0'	3" Granular
Freeway No. 561	456+29.04	666+00.00	9.5"	64.0'	3" Granular

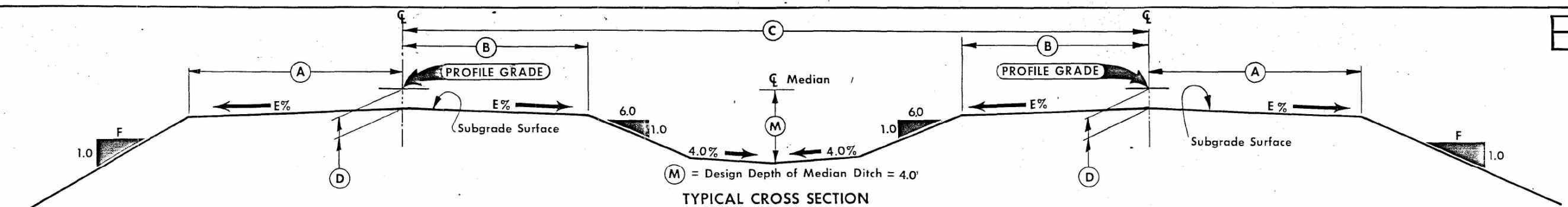


Note:
Normal Section shown may be appropriately modified for areas specifically designated by the Engineer, such as Tapers or Super-elevated Curves.

NOTE: TRANSVERSE JOINTS TO BE CD.

Road Ident.	Sta. to Sta.	D	F	Lane	Shoulder Type
Freeway No. 561	443+88.61	655+29.04	9.5"	64.0'	Rt. 3" Granular
Freeway No. 561	443+62.89	659+25.00	9.5"	64.0'	ll 3" Granular

FOR INFORMATION ONLY



CUT
For typical cross sections of ditches and backslopes for roadway in cut - refer to other detail drawings within the plans.

NOTE:
Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the engineer.

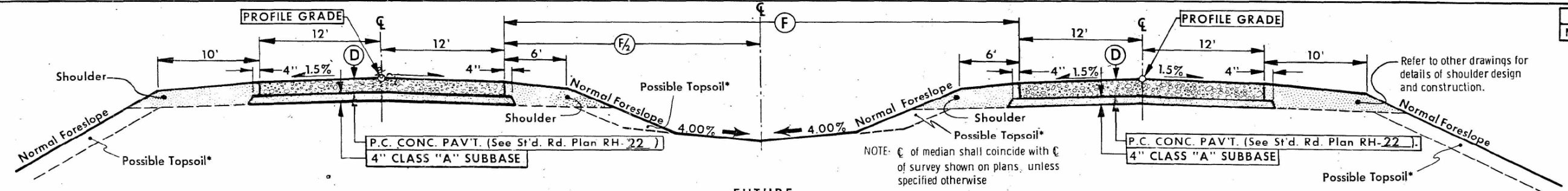
☐ Median shall coincide with ☐ Survey shown on plans unless specified otherwise.

TYPICAL CROSS SECTION FOR GRADING

PROPOSED HIGHWAY IMPROVEMENT

ROAD IDENT.	LOCATION		DIMENSIONS				SLOPE F	SLOPE E%
	STATION TO STATION		A	B	C	D		
Freeway No. 561	666+00	2+52.96	29.0'	25.5'	88'	13.5"	6.0	1.5

FOR INFORMATION ONLY



NOTE
Normal section shown may be appropriately modified for areas specifically designated by the Engineer, such as intersections or superelevated curves.

NOTE: ☐ of median shall coincide with ☐ of survey shown on plans, unless specified otherwise

* Paving contractor is to repair any foreslope topsoil, that is disturbed by the paving operation, as directed by the engineer. 12" of topsoil has been placed by the grading contractor, on the following foreslopes:
1. Sta. 844+80 to Sta. 853+10
2. Sta. 871+00 to Sta. 873+20
3. Sta. 916+00 to Sta. 953+40
4. Sta. 963+50 to Sta. 965+50
5. Sta. 972+00 to Sta. 2+52.96

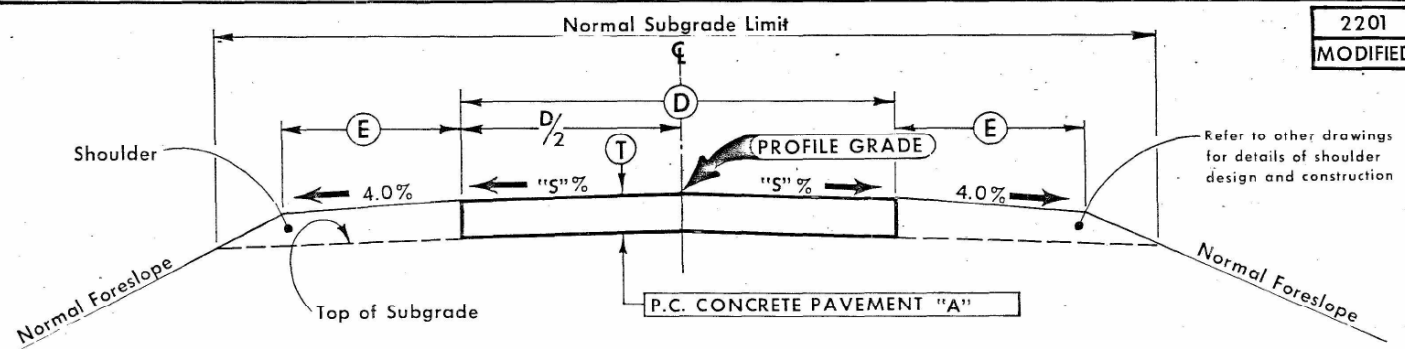
NOTE:
All traverse joints shall be "CD"
See Standard Road Plan RH-2.

FUTURE TYPICAL CROSS SECTIONS FOR PAVING

PROPOSED HIGHWAY IMPROVEMENT

ROAD IDENT.	STATION TO STATION	D	F	SHLDR. TYPE	
Freeway No. 561	666+00	2+52.96	9.5"	64'	Stabilized
					Granular

FOR INFORMATION ONLY

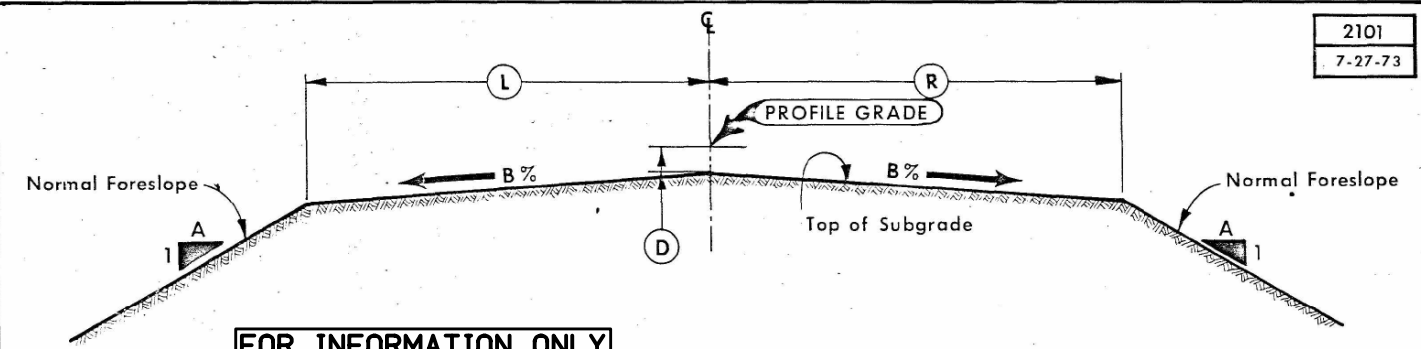


NOTE:
Normal sections shown may be appropriately modified for areas specifically designated by the engineer such as intersections or superelevated curves.

ROAD IDENT	STATION TO STATION	D	T	E	"A"	"S"	SHOULDER TYPE
Co. Rd. F-41	1777+87.82	1797+58	24'	9"	10'	Sheet no. 102	1.5 Earth**
Co. Rd. F-33	1898+50	1917+00	24'	6"	10'	Std. Plan RH-22	2.0 Earth

* Place 6' earth shoulders from ramp terminal to ramp terminal (See typical 7112 for exact location).
** Place 10' stabilized shoulders from ramp terminal to ramp terminal (See typical 7110 for exact location) with freeway 561 paving contract.

FOR INFORMATION ONLY



Note:
Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the engineer.

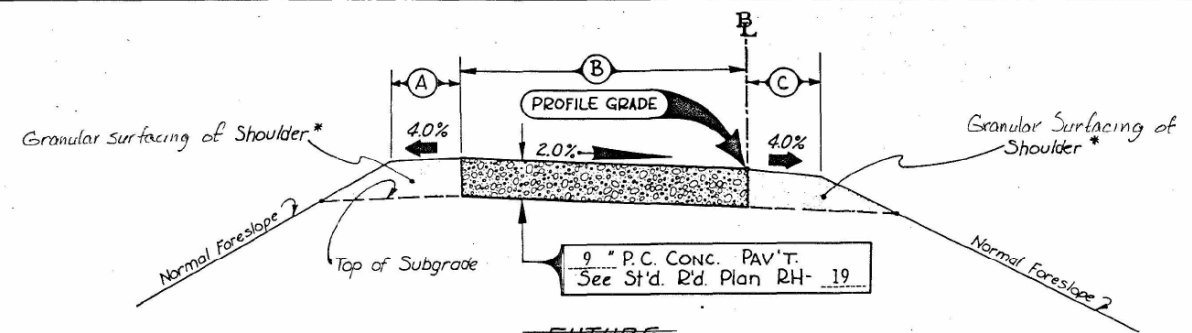
ROAD IDENT.	LOCATION		DIMENSIONS			SLOPES	
	STATION TO STATION		L	R	D	A	B%
Co. Rd. F-41	1777+87.82	1797+58	23.5'	23.5'	9"	3.0	1.5
Co. Rd. F-33	1898+50	1917+00	23.0'	23.0'	6"	3.0	2.0

See Typical Cross Section for details of ditches and backslopes.

FOR INFORMATION ONLY

GRADING TYPICAL CROSS SECTION

2502
7-20-66



FOR INFORMATION ONLY

FUTURE RAMP PAVEMENT TYPICAL CROSS SECTION

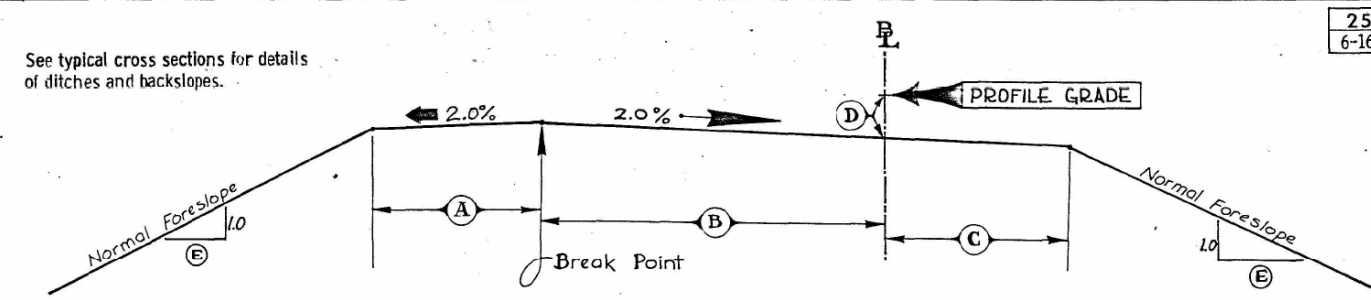
INTERCHANGE	RAMP	(A)	(B)	(C)
Co. Rd. F-41	All	4.0'	16.0'	6.0'

NOTE: Normal section shown may be appropriately modified at areas specifically designated by the engineer, such as intersections or super-elevated curves.

Note: Ramp "C" Rt. turn lane - from Sta 3585+27.27 to Sta 3588+35.60 is 18' wide. Refer to Standard Road Plan RH-39.

* Refer to other drawings for details of shoulder design and construction.

2501
6-16-67



RAMP GRADING TYPICAL CROSS SECTION

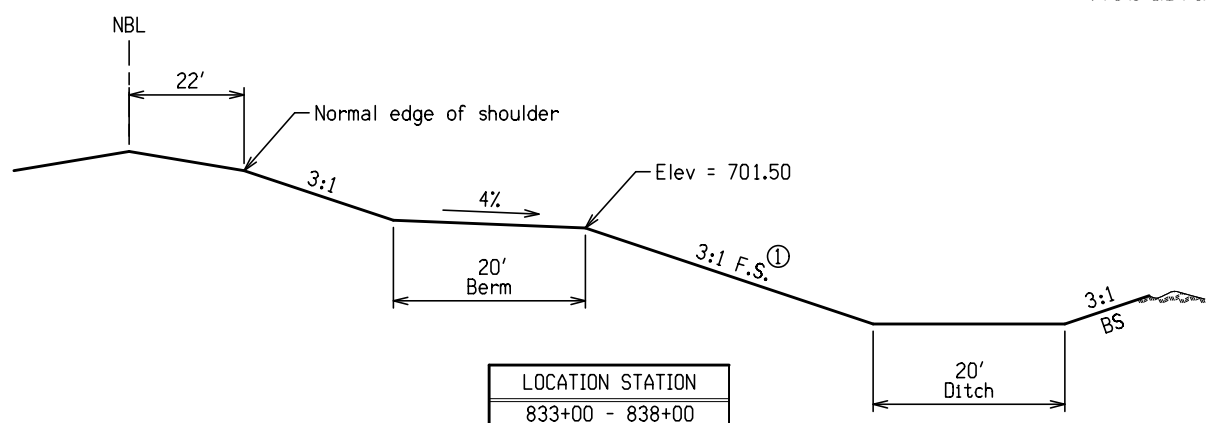
INTERCHANGE	RAMP	(A)	(B)	(C)	(D)	SLOPE (E)
Co. Rd. F-41	All	9.0'	16.0'	11.0'	9.0'	6.0

NOTE: This section is typical only. Refer to other drawings for additional details. Normal section shown may be appropriately modified at areas specifically designated by the engineer, such as intersections or super-elevated curves.

FOR INFORMATION ONLY

(Section view is in direction of Traffic.)

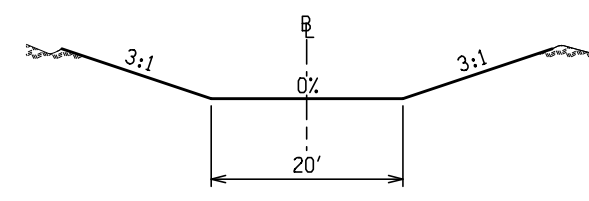
Rebuilding FS



LOCATION STATION
833+00 - 838+00

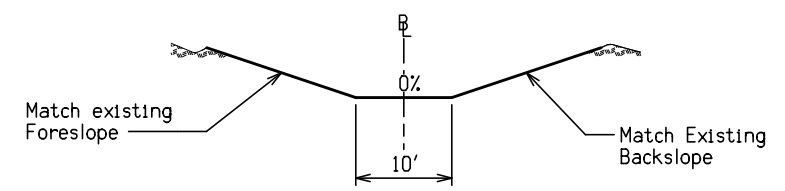
① Existing F.S. 2:1 or steeper. Transition at structures to match in.

Channel Change



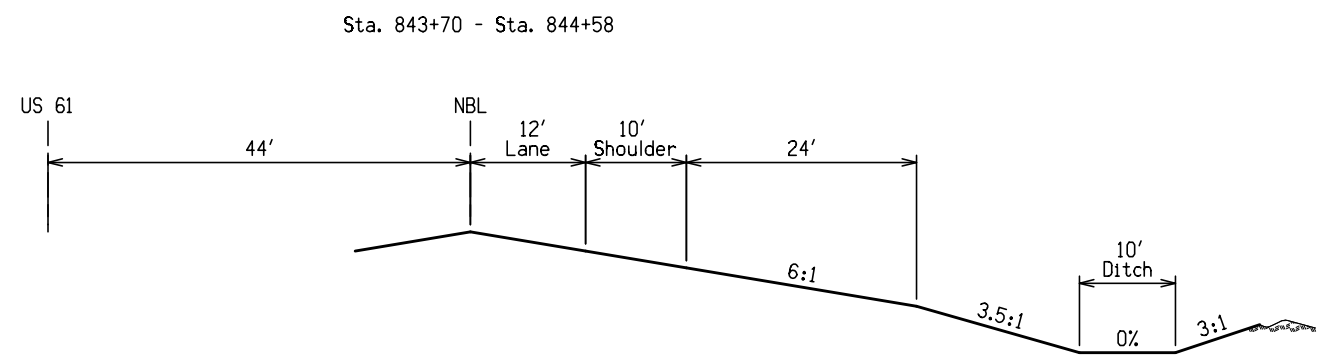
LOCATION STATION
12+00.51 - 13+30.51

Ditch Grading



LOCATION	
STATION	SIDE
503+00 - 507+74	Rt
755+00 - 759+00	Lt
803+63 - 805+89	Rt
813+00 - 814+16	Lt
910+62 - 911+49	Rt
972+97 - 973+71	Lt
1533+81 - 1542+50	Rt.
2585+18 - 2585+78	Rt
4583+50 - 4589+50	Rt

Grading Typical



LOCATION STATION
843+70 - 844+58

DRAINAGE STRUCTURE BY ROAD CONTRACTOR

Length of unclassified pipe calculated is based on using Reinforced Concrete Pipe.

- * Not a bid item
- ① Diameter or equivalent diameter
- ② UNCL = Unclassified Pipe CMP = Corrugated Metal Pipe RCP = Reinforced Concrete Pipe LCP = Arch or Elliptical Low Clearance Pipe SARC = Steel Arch Pipe
- ③ Backfill according to DR-101

Drainage Area ACRE	Location	Type	Size ① IN	Kind Of Pipe ②	Length New Const. LF	Bedding Class	Design Cover (H) FT	Camber* (DR-102) FT	Apron No.		Apron Guard* (DR-213) No.	Elbow* No.	Diaphragm* (DR-501) No.	Tee Section* (DR-142) No.	"D" Section* (DR-141) No.	Reducer* No.	Beveled Pipe and Guard (DR-121) No.	Tie Existing Pipe Joints		Type 'C' Connections* (DR-122) Type No.		Connected Pipe Joint* (DR-121) Type	4" Perforated Subdrain* FT	Flow Line Elevations				Dimensions Lin. Ft.				Skew Ahead Degrees		Dike			Class 20 CY	Flowable Mortar CY	Floodable* Backfill (A) CY	Porous* Backfill (B) CY	Flooded Backfill (A+B) CY	Remarks				
									LT	RT								LT	RT	LT	RT			LT	RT	LT	RT	Other	Other	Total Lt.	Total Rt.	Extensions Lt.	Extensions Rt.	Lt.	Rt.	Rt.							Location Station	Top Elev.	Type	
	I-80 Ramp A 1528+50.00 1535+00.00		24 24	RCP RCP														1	1			Type 3 Type 3																								
	439+00, 44' RT 442+50.00 447+00, 44' RT		24 48 24	RCP RCP RCP						1	1	1						1	1			Type 3 Type 3 Type 3																								
	DR-625 475+00.00	2000D 24	24 24	HDPE RCP	35 8	B B						2									C-3 C-1	1 1	Type 3			UAC UAC	736.00 757.21	744.23 UAC	736.10 757.50		UAC UAC	71.4 8.0		33.0								C=2' B=21.6' E=10' Verify FL other				
	Mt. Joy Inter. F55 2472+20.00 2472+67.00		48 42	RCP RCP														2	2			Type 3 Type 3																								
	Ramp A 1578+93.00 1583+00.00		30 30	RCP RCP	16	B				1	1	1						3	2			Type 3 Type 3				732.04	733.67			46.0	38.0	8.0	8.0													
	Ramp B 2578+33.00		42	RCP														3	3			Type 3																								
	Ramp C 3576+96.50 3577+03.50	2000D 2000D	36 36	RCP RCP	48 48	B B	3.0 3.0			1	1	1										Type 3 Type 3				734.50 734.50	735.30 735.30			19.0 19.0	39.0 39.0															
	Ramp D 4579+00.00 4588+50.00		24 24	RCP RCP						1	1	1							2	2			Type 3 Type 3																							
	Loop E 5590+00.00		30	RCP						1	1	1							3	2			Type 3																							
	489+00, 44' LT 503+00, 44' RT 510+00, 44' LT 515+00.00 515+25.00 528+00, 44' RT	2000D 24 24 24 36 36	24 24 24 36 36	RCP RCP RCP RCP RCP	10	B				1	1	1									C-1	1	Type 3 Type 3 Type 3 Type 3 Type 3			746.04	UAC	746.71		42.0	UAC	10.0												Verify FL other		
	Blackhawk Tr1. F51 1535+15.00		30	RCP															1	1			Type 3																							
	Ramp B 2523+75.00		36	RCP															1	1			Type 3																							
	Ramp C 3528+00.00		24	RCP															1				Type 3																							
	536+00.00 537+00, 44' LT		24 24	RCP RCP								1											Type 3 Type 3				UAC	30.0		8.0																
	546+32, 44' RT	2000D 500-6	24 15	RCP UNCL	8 37					1		1											Type 3			UAC																			See sheet U.1	
	546+32, 44' RT	24 24	24 24	RCP HDPE	28	B															C-3	1	Type 3			UAC	741.06	742.96		UAC	86.0		28.0											Verify FL other		
	557+00, 44' LT 568+00, 44' LT 578+00, 44' LT	24 24 24	24 24 24	RCP RCP RCP															2 3 3	2			Type 3 Type 3 Type 3																							
	Lincoln Rd. 1586+53.00 1588+56.00	2000D 24	24 24	RCP RCP	8	B													1	1			Type 3 Type 3			764.90	UAC	764.87		88.0	UAC	8.0														
	589+50, 44' LT 596+70.00 597+00, 44' LT 608+50.00 623+75.00 624+00, 44' LT	2000D 24 500-6 36 24 24 30 24	24 15 36 24 24 84 30 24	RCP UNCL RCP RCP RCP RCP	8 71	B						1											Type 3 Type 3 Type 3 Type 3 Type 3 Type 3 Type 3									8.0												See sheet U.1		

DRAINAGE STRUCTURE BY ROAD CONTRACTOR

Length of unclassified pipe calculated is based on using Reinforced Concrete Pipe.

- ① Not a bid item
- ② Diameter or equivalent diameter
- ③ UNCL = Unclassified Pipe CMP = Corrugated Metal Pipe RCP = Reinforced Concrete Pipe LCP = Arch or Elliptical Low Clearance Pipe SARC = Steel Arch Pipe
- ④ Backfill according to DR-101

Drainage Area ACRE	Location	Type	Size ① IN	Kind Of Pipe ②	Length New Const. LF	Bedding Class	Design Cover (H) FT	Camber* (DR-102) FT	Apron No.		Apron Guard* (DR-213) No.	Elbow* No.	Diaphragm* (DR-501) No.	Tee Section* (DR-142) No.	"D" Section* (DR-141) No.	Reducer* No.	Beveled Pipe and Guard (DR-121) No.	Tie Existing Pipe Joints		Type 'C' Connections* (DR-122) Type	Connected Pipe Joint* (DR-121) Type	4" Perforated Subdrain* FT	Flow Line Elevations				Dimensions Lin. Ft.		Skew Ahead Degrees		Dike			Class 20 CY	Flowable Mortar CY	Floodable* Backfill (A) CY	Porous* Backfill (B) CY	Flooded Backfill (A+B) CY	Remarks					
									Lt.	Rt.								Other	Other				Lt.	Rt.	Lt.	Rt.	Lt.	Rt.	Type	Top Elev.	Type	Rt.	Location Station							Top Elev.	Type	CY	CY	CY
	948+72.00		36	RCP														2	1		Type 3																							
	953+00, 44' LT		24	RCP														1	1		Type 3																							
	958+80.00		30	RCP															1	1		Type 3																						
	963+20, 44' RT		24	RCP														1	2		Type 3																							
	963+50.00		24	RCP														2	2		Type 3																							
	973+00, 44' LT		24	RCP														1	1		Type 3																							
	305th Street																																											
	1984+72.00		30	RCP														1	1		Type 3																							
	1986+74.00		30	RCP														1	1		Type 3																							
	991+00, 44' RT		24	RCP														1	2		Type 3																							
	1011+00, 44' RT		24	RCP														1	3		Type 3																							
	1022+00, 44' RT		24	RCP														1			Type 3																							

ROADWAY ITEMS FOR DRAINAGE STRUCTURES INSTALLED BY CULVERT CONTRACTOR

- * Not a Bid Item
- ① Backfill according to DR-111

Location	Design Number	Size	Kind	By Road Contractor					Floodable* Backfill ① CY	Porous* Backfill (B) CY	Flooded Backfill (A+B) CY	Flowable Mortar CY	Excavation		Revetment		Engineering Fabric SY	Remarks			
				Dike				Compacting Backfill Adjacent CY					Compaction w/Moisture Control CY	Compaction w/Moisture and Density CY	Type	Type			Quantity CY	Type	Quantity TONS
				Rt.	Location Station	Top. Elev.	Type														
746+02.00		10' x 10'	RCB									Class 10, Channel	30.0				Cl 10 RT end				
804+42.00		6' x 8'	RCB										Class E	X	X		Rip rap RT				
833+91.00		6' x 6'	RCB																		
853+78.00		10' x 10'	RCB									Class 10, Channel	100.0	Class E	X	X	RT side only				
910+50.00		8' x 6'	RCB										Class E	X	X		Rip rap LT				

ROCK EROSION CONTROL

Refer to EC-301

Location			Rock Erosion Control (REC)					Material Bid Quantities			Remarks			
Road Identification	Begin Station	End Station	Side Lt./Rt.	L FT	W FT	Type 1	Type 2	Type 3	Type 4	Type 5		Erosion Stone TON	Class E Revetment TON	Eng. Fabric SY
						Rock Ditch Check	Rock Ditch	Rock Flume	Rock Splash Basin	Rock Slope Protection				
U.S. 61	447+00.00		RT	10	8				X			8.8	18.7	
U.S. 61	475+00.00		LT	58.6	10.5			X				67.7	100.9	
F55 Ramp C	3576+96.00	3577+04.00	LT	10	16.4				X			18.0	31.7	
U.S. 61	489+00.00		LT	43	10.5			X				49.7	75.7	
U.S. 61	505+73.00	506+22.00	RT	49	16		X					86.2	117.8	
Blackhawk Trail	1535+15.00		LT	10	11.6				X			12.8	24.3	
U.S. 61	545+00.00		LT	20	37.9				X			83.4	111.7	
U.S. 61	545+50.00	546+30.00	LT	80	16		X					140.8	186.7	
U.S. 61	544+74.00	545+74.00	RT	100	16		X					176.0	231.1	
U.S. 61	545+86.00	546+86.00	RT	100	16		X					176.0	231.1	
U.S. 61	579+62.00		RT	16	54			X				95.0	128.9	
U.S. 61	746+10.00		RT	10	9.5				X			10.5	21.0	
F41 Ramp B	2585+10.00	2585+78.00	RT	68	16		X					119.7	160.0	
U.S. 61	803+63.00	804+35.00	RT	72	16		X					126.7	168.9	
U.S. 61	804+61.00	805+39.00	RT	78	16		X					137.3	182.2	
U.S. 61	833+43.00	834+30.00	RT	87	16		X					153.1	202.2	
U.S. 61	850+20.00	850+70.00	LT	50	16		X					88.0	120.0	
U.S. 61	929+50.00	929+80.00	RT	30	16		X					52.8	75.6	

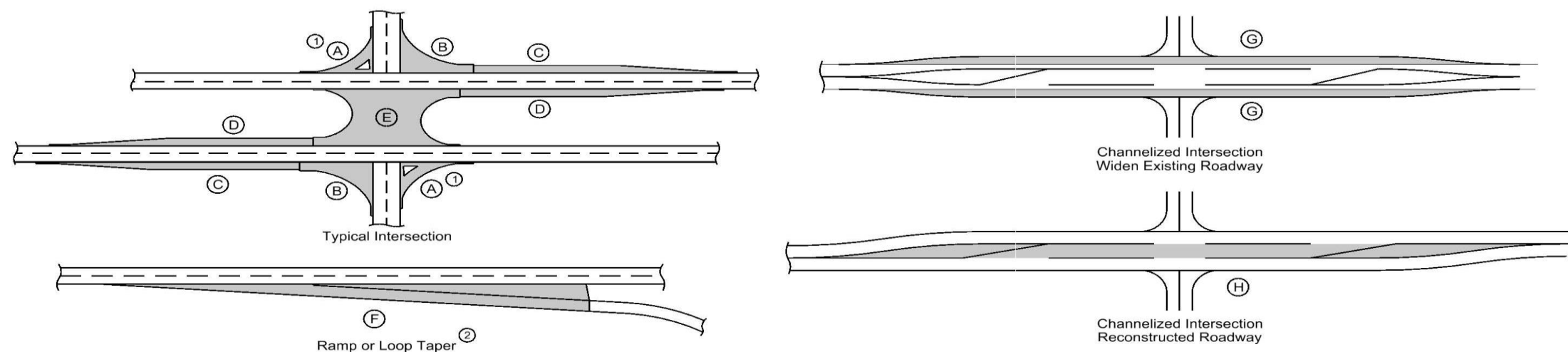
SHOULDERS

- ① Lane(s) to which the shoulder is adjacent.
- ② Bid Item
- ③ Applies only for Paved Shoulders constructed on project with existing granular shoulders.
- ④ Does not include shrink.

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.

Road Identification	Location			P Width FT	G Width FT	L Length FT	Class 13 Excavation CY ②	Quantities												Remarks					
	Direction Of Traffic	Station to Station						Side	Hot Mix Asphalt		Binder TONS	Paved Shoulder SY ②	Reinforced Paved Shoulder SY ②	Special Backfill				Modified Subbase CY ②	Granular Shoulder		Earth Shoulder Construction Alternates				
									TON	TON/STA				HMA Alternate		PCC Alternate			TON ②		TON/STA	STA ②	HMA CY ④	PCC CY ④	
														TON ②	TON/STA	TON ②	TON/STA								
F55	WB	2472+67.00		LT	6.0		75.0														0.8			Thru return	
F55	EB	2472+67.00		RT	6.0		20.0																		
F55 Ramp A		1583+00.00		RT		4.0	20.0										2.800	14.000							
F55 Ramp B		2578+33.00		RT		6.0	20.0										4.200	21.000							
F55 Ramp C		3576+86.00	3577+14.00	LT		6.0	28.0										5.880	21.000							
F55 Ramp C		3576+86.00	3577+14.00	RT		4.0	28.0										3.920	14.000							
F55 Loop E		5590+00.00		RT		6.0	20.0										4.200	21.000							
		5590+00.00		LT	4.0		20.0																		
U.S. 61	SB	578+00.00		RT		4.0	20.0										2.800	14.000							
F45 Ramp A		1542+00.00		LT		6.0	20.0										4.200	21.000							
F45 Ramp C		3539+00.00		RT		4.0	20.0										2.800	14.000							
U.S. 61	NB	744+50.00		LT		4.0	20.0										2.800	14.000							
U.S. 61	SB	825+00.00		RT		4.0	20.0										2.800	14.000							
U.S. 61	SB	850+00.00		RT		4.0	20.0										2.800	14.000							
U.S. 61	NB	1011+00.00		RT		4.0	20.0										2.800	14.000							

PCC PAVEMENT



- ① Does not include raised island area or curb. Refer to tabulation 112-4 for quantities.
- ② Refer to PV-410, PV-411, PV-412, and PV-414.
- ③ Quantity includes Pavement Header.

Road Identification	Location		Mainline			Area ③								Total Area By Pavement Thickness		Special Backfill TONS	Modified Subbase CY	Granular Subbase SY	Remarks	
	Direction of Travel	Station to Station		Width FT	Length FT	Area SY	A ① SY	B SY	C SY	D SY	E SY	F ② SY	G SY	H SY	SY					
															10 IN					10½ IN
F55 Ramp C		3576+86.00	3577+14.00	16.0	28.0	49.8														

CULVERT ABANDONMENT OR REMOVAL

Refer to Details 4315 and 4316

110-9
10-18-11

* Not a bid item

Location Station	Description	Culvert Removal	Fill Material		4" Perforated Subdrain*	Remarks
			Flowable Mortar	Granular Backfill*		
			LF	TON		
447+00.00	24" Half pipe	12.0				
	24" RCP	16.0				Remove from RT end of pipe
1583+00.00	30" RCP	16.0				8' each end. Also remove FES's
3576+96.00	36" RCP	46.0				Also remove FES's
3577+04.00	36" RCP	46.0				Also remove FES's
489+00.00	24" CMP	47.0				Also remove FES
537+00.00	15" CMP	49.0				Includes beveled pipe and guard, elbow
	24" RCP	8.0				Rmv pipe and FES as nec. to remove CMP
546+32.00	24" CMP	28.0				
579+62.00	24" CMP	42.0				Letdown in backslope RT
589+50.00	15" CMP	85.0				Includes beveled pipe and guard, elbow
	24" RCP	8.0				Rmv pipe and FES as nec. to remove CMP
742+16.00	42" CMP	94.0				Ditch letdown RT
2585+33.00	18" HDPE	50.0				F41 Ramp B, RT side
803+84.50	30" CMP	61.0				RT Ditch letdown
804+75.60	30" CMP	77.0				RT Ditch letdown
815+71.50	30" CMP					LT Ditch letdown
844+50.00	36" RCP	18.0				RT side
	36" Half Pipe	22.0				RT side
844+58.00	36" RCP	18.0				RT side
	36" Half pipe	15.0				RT side

REMOVAL OF PAVEMENT

Refer to Tabulation 102-5

110-1
04-16-13

* Not a Bid Item

Begin Station	End Station	Side	Pavement Type	Area		Saw Cut*	Remarks
				SY	LF		
				2472+67.00			
2472+67.00		RT	PCC	13.3	12.0		
3576+86.00	3577+14.00		PCC	49.8	32.0		

FENCING

Refer to MI-101, MI-102, MI-103, MI-104, 510-3, and 510-5

100-7
10-16-12

* Bid Item

Location				Side	Chain Link				Deer				Field				Channel Crossing		Remarks
From		To			Fence		Gate		Fence Length*	Brace Panels*	Gate		Fence Length*	Brace Panels*	Gate		Length*	Type	
Station	Offset	Station	Offset		Length*	Type	No.*	Type			No.*	Type			No.*	Type			
LF							EACH		LF	EACH	EACH		LF	EACH	EACH				
504+30.00	144.0	505+00.00	68.0	RT	109.0	72 IN.												Rmv ex chain link & field fence	
506+14.00	68.0	505+90.00	187.4	RT	125.0	72 IN.												Rmv ex chain link fence	
833+43.00	120.0	834+30.00	120.0	RT								87.0						Rmv ex field fence	

ROLLED EROSION CONTROL

Refer to EC-101, EC-103 and EC-104














100-22
04-21-15

Location				Side	L FT	W FT	Turf Reinforcement Mat (TRM) (EC-104)				Slope Protection (EC-103) Squares	Special Ditch Control (EC-101) Squares	Remarks
Road Identification	Begin Station	End Station	Type				Type 1	Type 2	Type 3	Type 4			
							Squares	Squares	Squares	Squares			
U.S. 61	447+00.00		R	16	33					5.3			
	475+00.00		L	8	26					2.1			
	489+00.00		L	8	15					1.2			
	504+25.00	505+00.00	R	75	16						12.0		
	505+46.00	505+73.00	R	27	16						4.3		
	812+88.00	814+14.00	L	126	103					129.8		On left backslope	
	833+43.00	834+30.00	R	87	56					48.7			







SURVEY SYMBOLS













UTILITY LEGEND









PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK		Design Color No.	
Green	(2)		Existing Topographic Features and Labels
Blue	(1)		Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)		Existing Utilities
SHADING		Design Color No.	
Yellow	(4)		Highlight for Critical Notes or Features
Red	(3)		Delineates Restricted Areas
Lavender	(9)		Temporary Pavement Shading
Gray, Light	(48)		Proposed Pavement Shading
Gray, Med	(80)		Proposed Granular Shading
Gray, Dark	(112)		Proposed Grade and Pave Shading "In conjunction with a paving project"
Brown, Light	(236)		Grading Shading
Tan	(8)		Proposed Sidewalk Shading
Blue, Light	(230)		Proposed Sidewalk Landing Shading
Pink	(11)		Proposed Sidewalk Ramp Shading

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

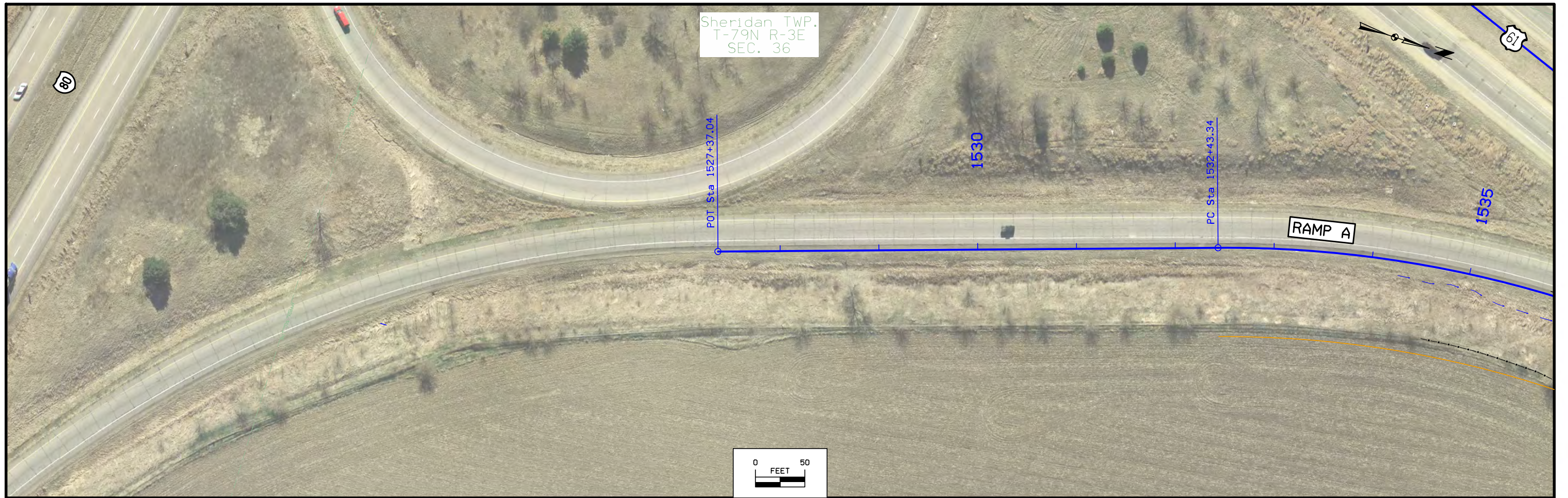
LINEWORK		Design Color No.	
Green	(2)		Existing Ground Line Profile
Blue	(1)		Proposed Profile and Annotation
Magenta	(5)		Existing Utilities
Blue, Light	(230)		Proposed Ditch Grades, Left
Black	(0)		Proposed Ditch Grades, Median
Rust	(14)		Proposed Ditch Grades, Right

	Reference Point
	Station
	Survey Line
	Section Corner
	Ground Line Intercept
	Saw Cut
	Guardrail
	Trench Drain
	High Tension 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)



Sheridan TWP.
T-79N R-3E
SEC. 36

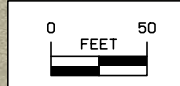
POT Sta 1527+37.04

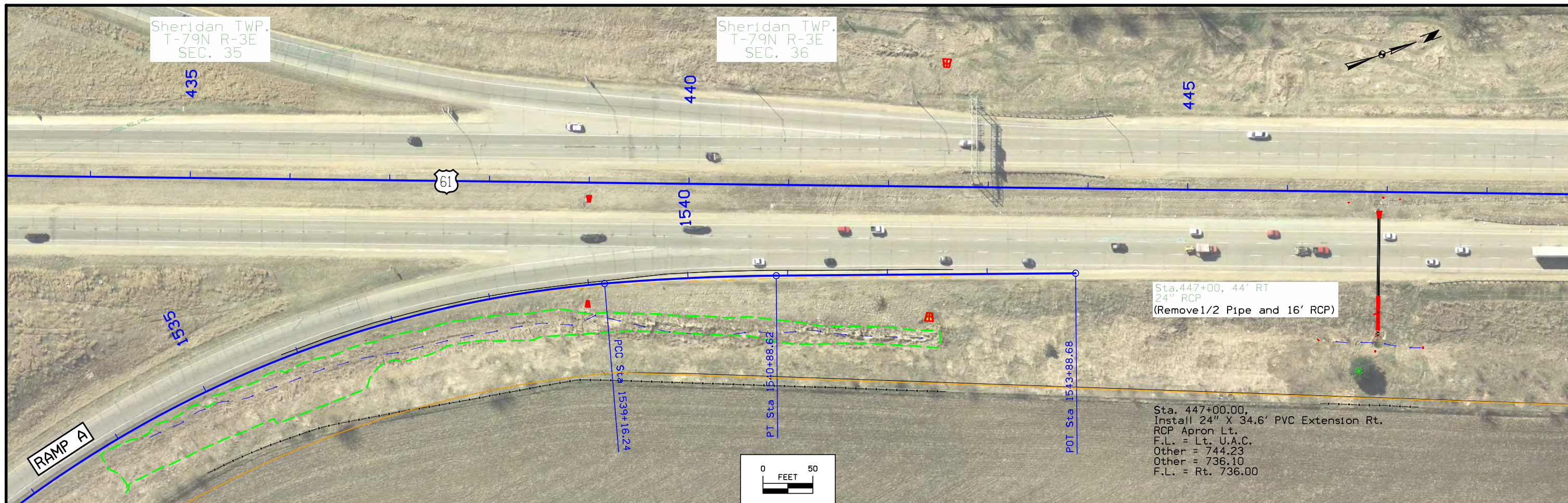
1530

PC Sta 1532+43.34

RAMP A

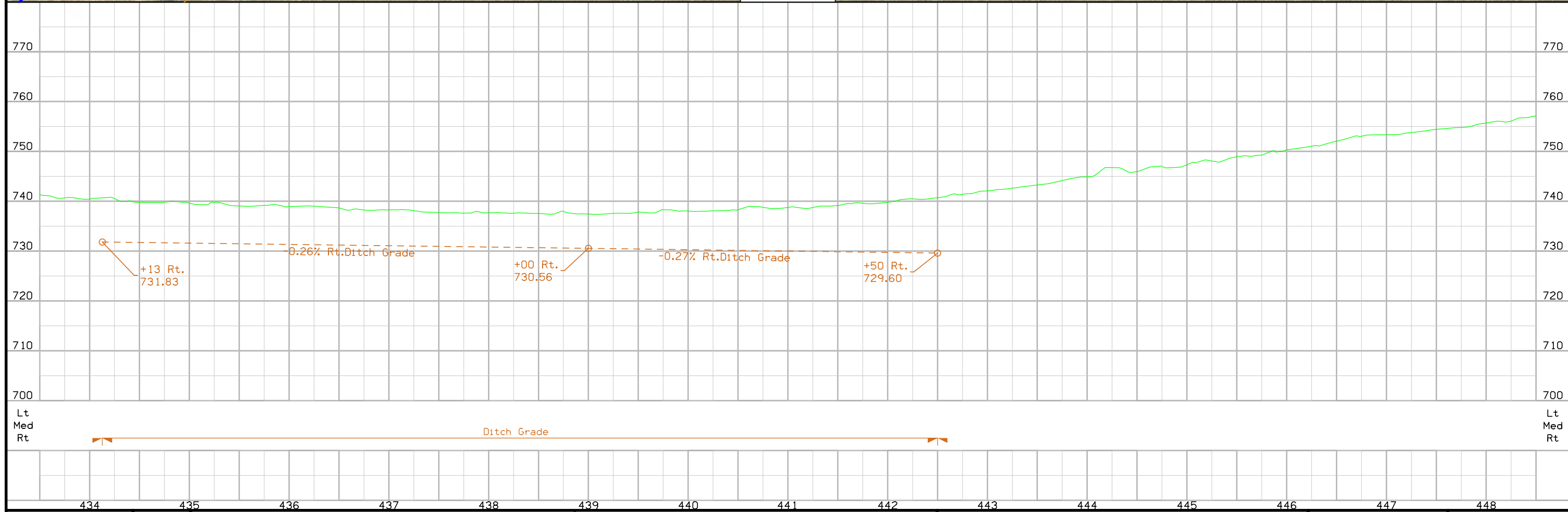
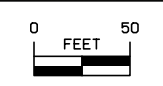
1535

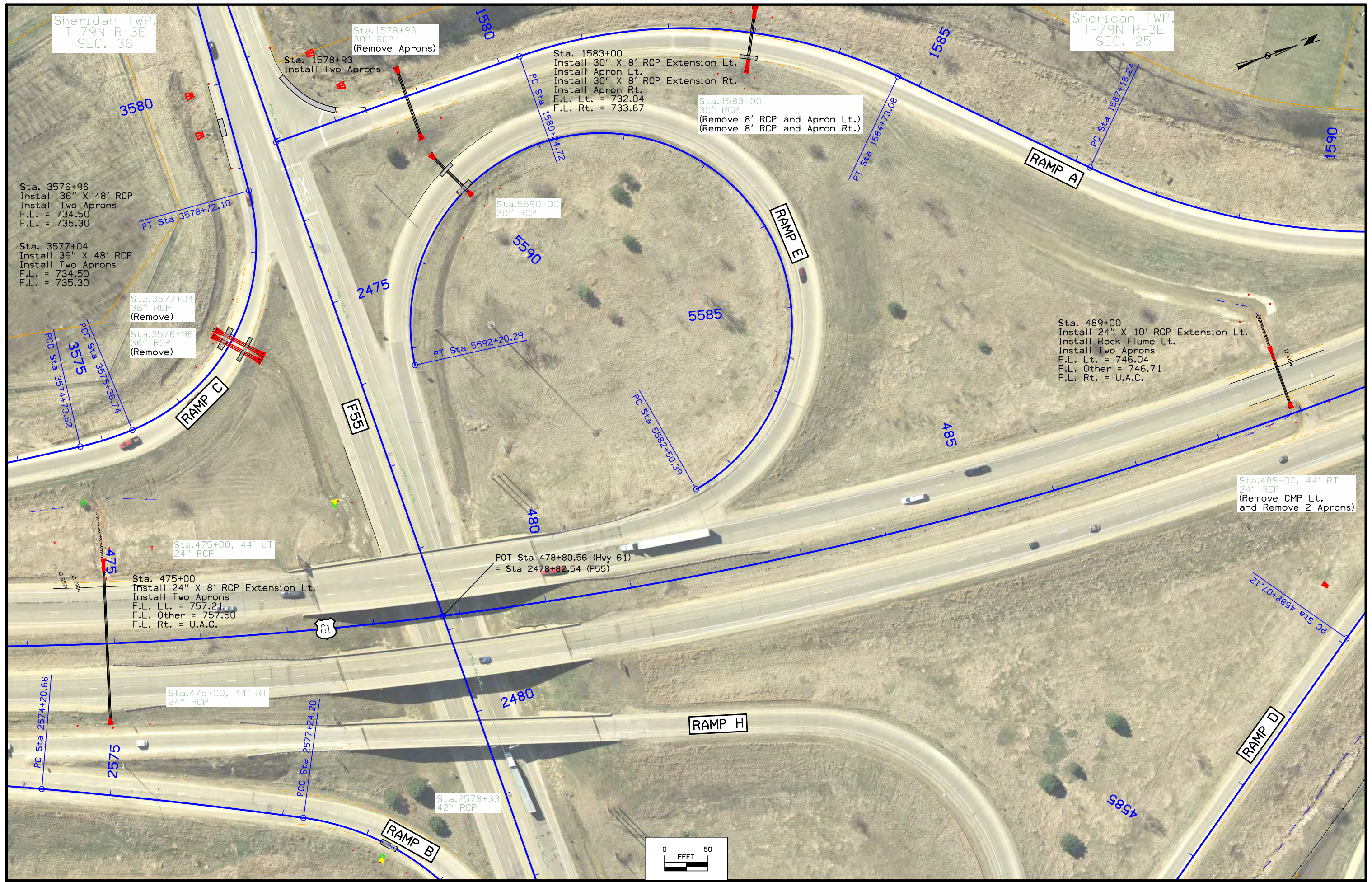


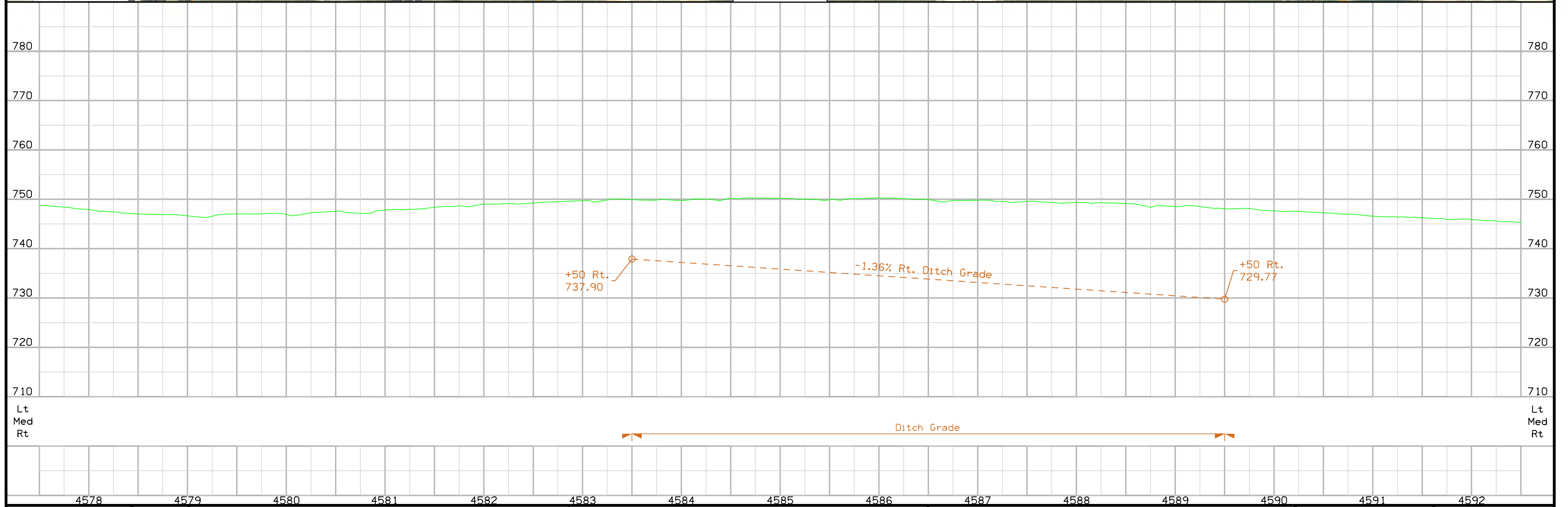
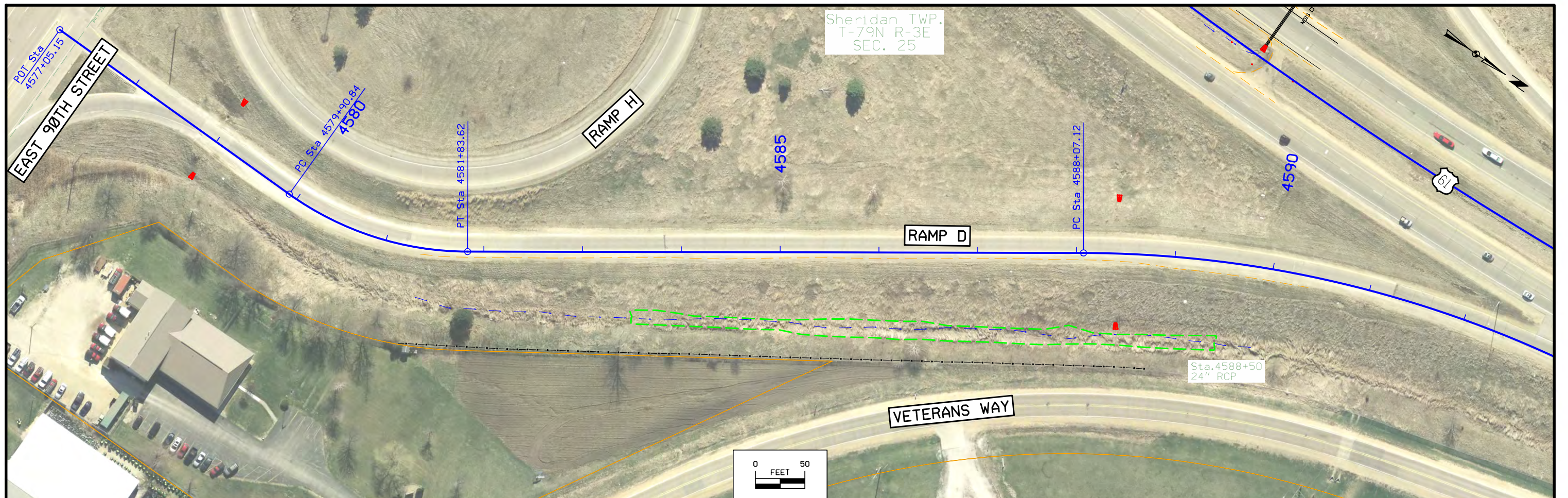


Sta. 447+00, 44' RT
24" RCP
(Remove 1/2 Pipe and 16' RCP)

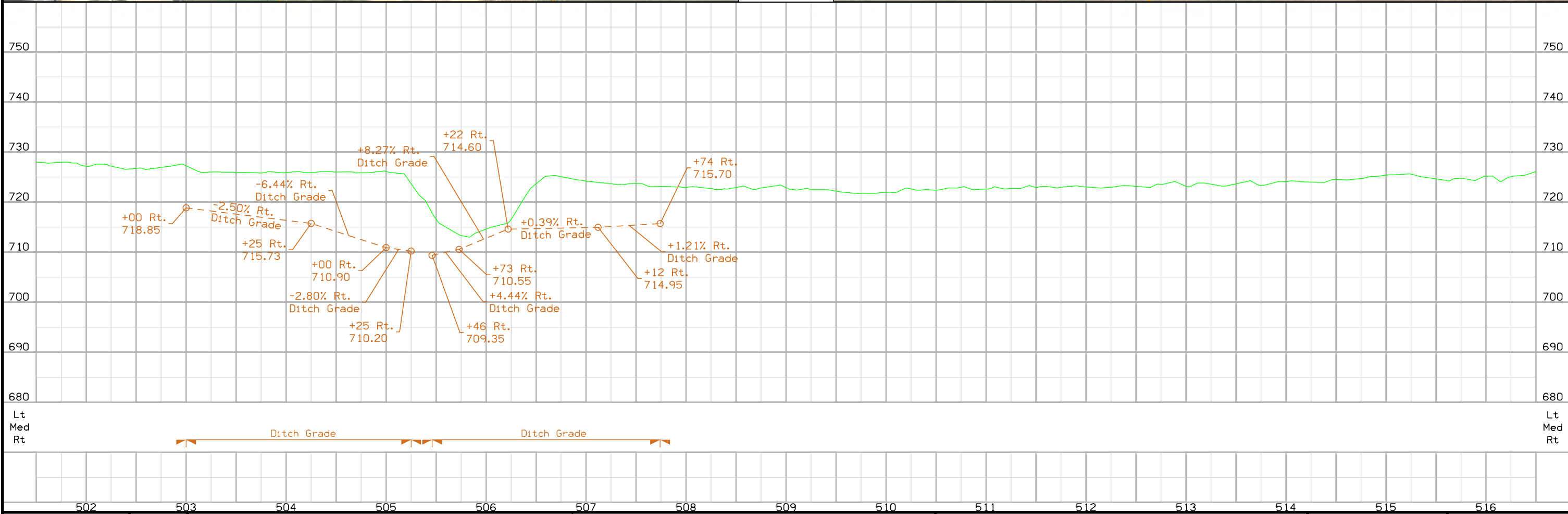
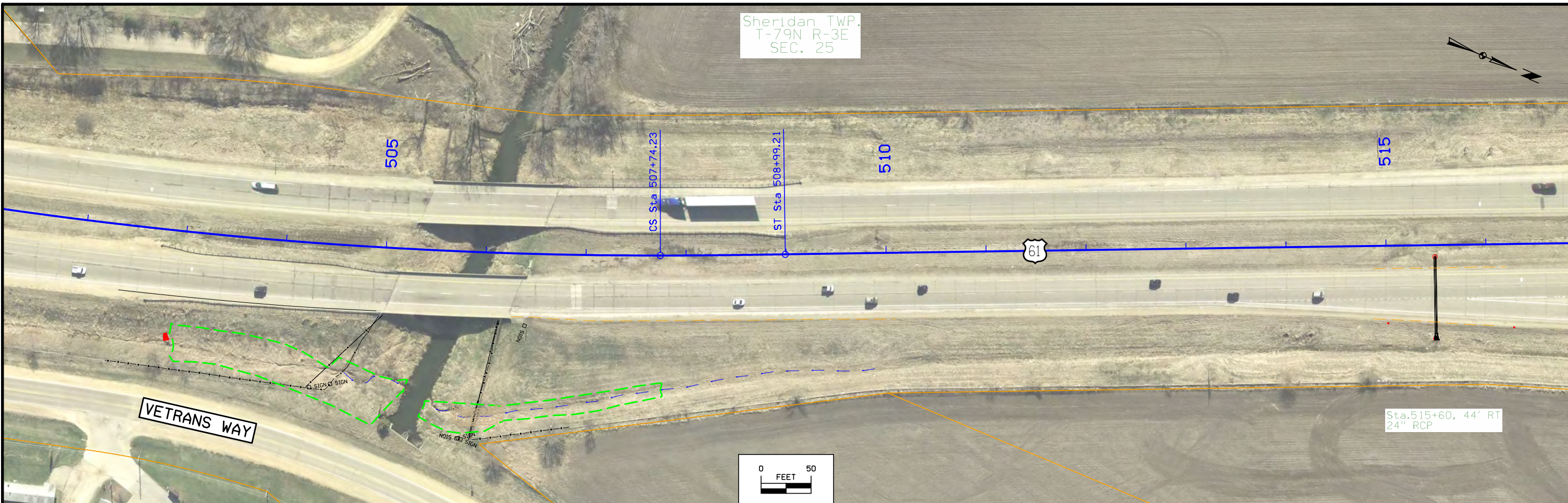
Sta. 447+00.00,
Install 24" X 34.6' PVC Extension Rt.
RCP Apron Lt.
F.L. = Lt. U.A.C.
Other = 744.23
Other = 736.10
F.L. = Rt. 736.00





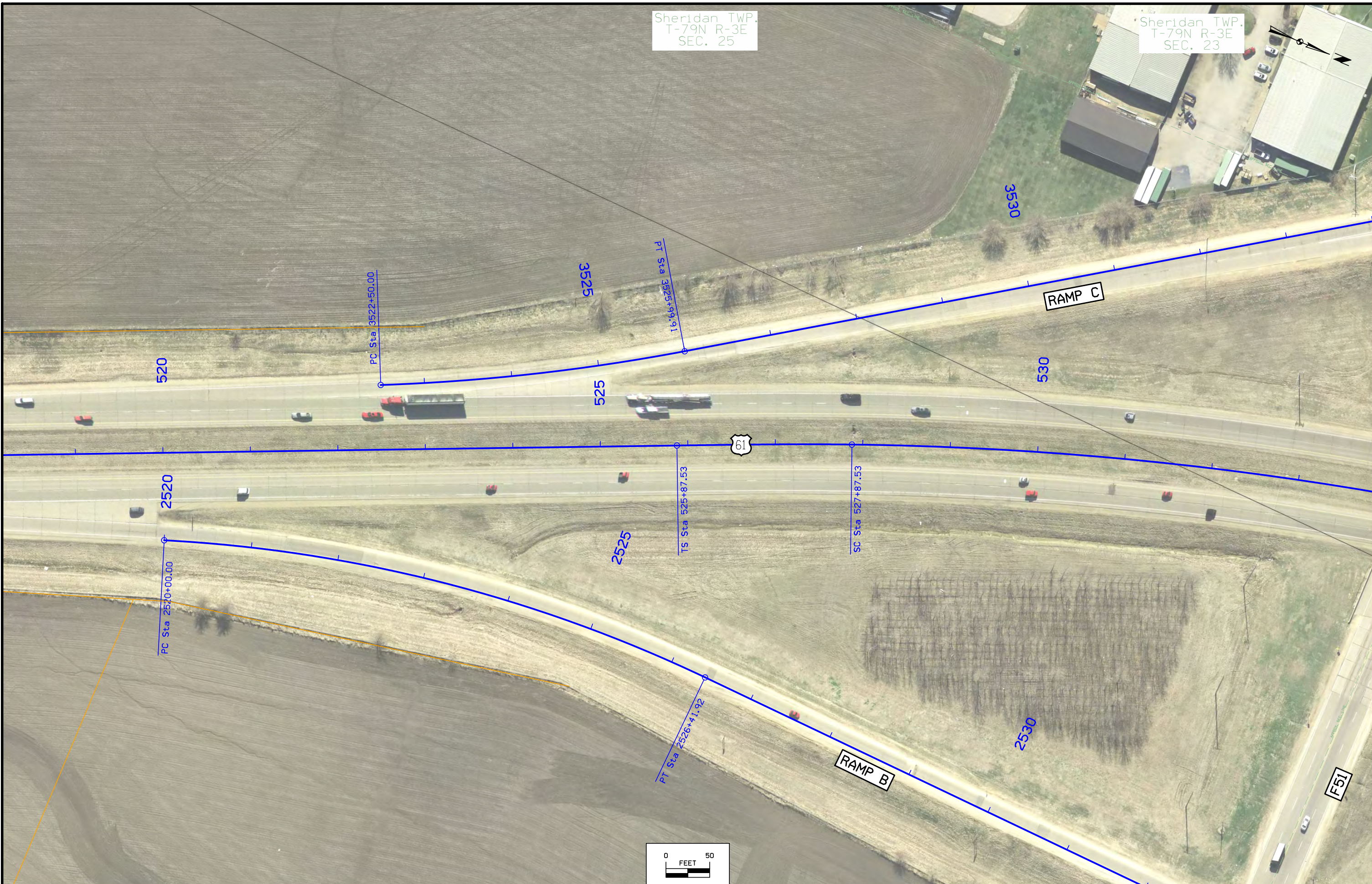


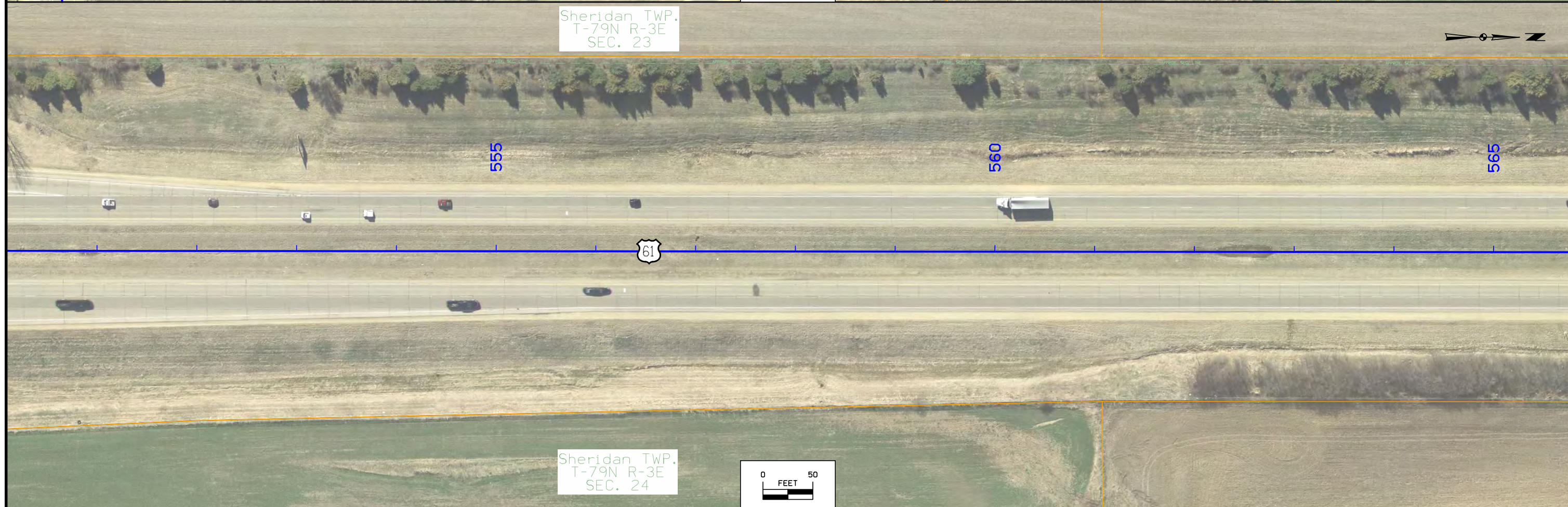
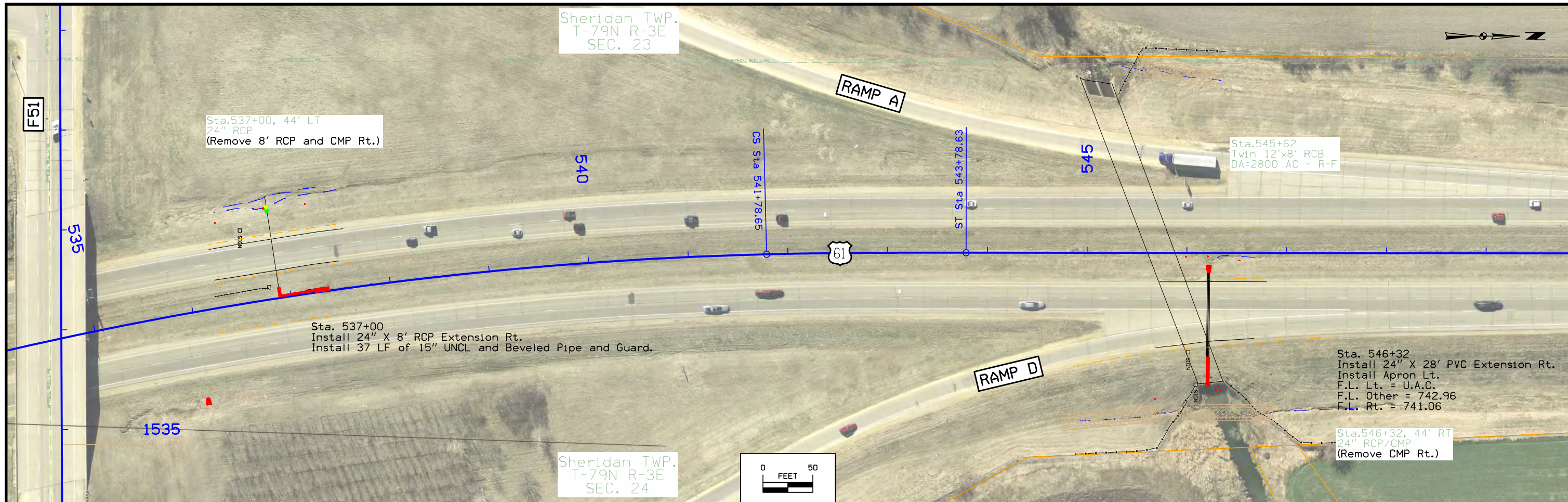
Sheridan TWP.
T-79N R-3E
SEC. 25



Sheridan TWP.
T-79N R-3E
SEC. 25

Sheridan TWP.
T-79N R-3E
SEC. 23







Sheridan TWP.
T-79N R-3E
SEC. 23

Sta.568+00, 44' LT
24" RCP

Sta.578+00, 44' LT
24" RCP

570

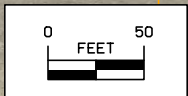
575

580

61

Sta. 579+62
Install Rock Flume

Sta.579+62, 157' RT
24" RCP
DA=10 AC - R
(Remove CMP)



Sheridan TWP.
T-79N R-3E
SEC. 24

Sheridan TWP.
T-79N R-3E
SEC. 23

Sheridan TWP.
T-79N R-3E
SEC. 14

Sta.1586+53
24" RCP

1586

590

Sta. 589+50, 44' Lt.
Install 24" x 8' RCP
Install 15" x 71' UNCL and Beveled Pipe and Guard

595

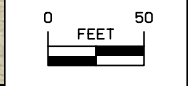
61

EAST LINCOLN ROAD

POT Sta 587+54.03 (Hwy 61)
= Sta 1587+54.03 (E. Lincoln Rd.)

Sta.589+50, 44' LT
24" RCP
(Remove 8' RCP and CMP Rt.)

1591



Sheridan TWP.
T-79N R-3E
SEC. 13

Sheridan TWP.
T-79N R-3E
SEC. 24

Sheridan TWP.
T-79N R-3E
SEC. 14

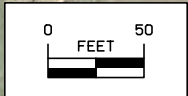
605

610

615

61

Sheridan TWP.
T-79N R-3E
SEC. 13



Sheridan TWP.
T-79N R-3E
SEC. 14

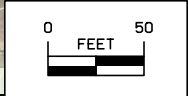
620

625

630

61

Sheridan TWP.
T-79N R-3E
SEC. 13



FILE NO.

ENGLISH

DESIGN TEAM **SNYDER AND ASSOCIATES, INC.**

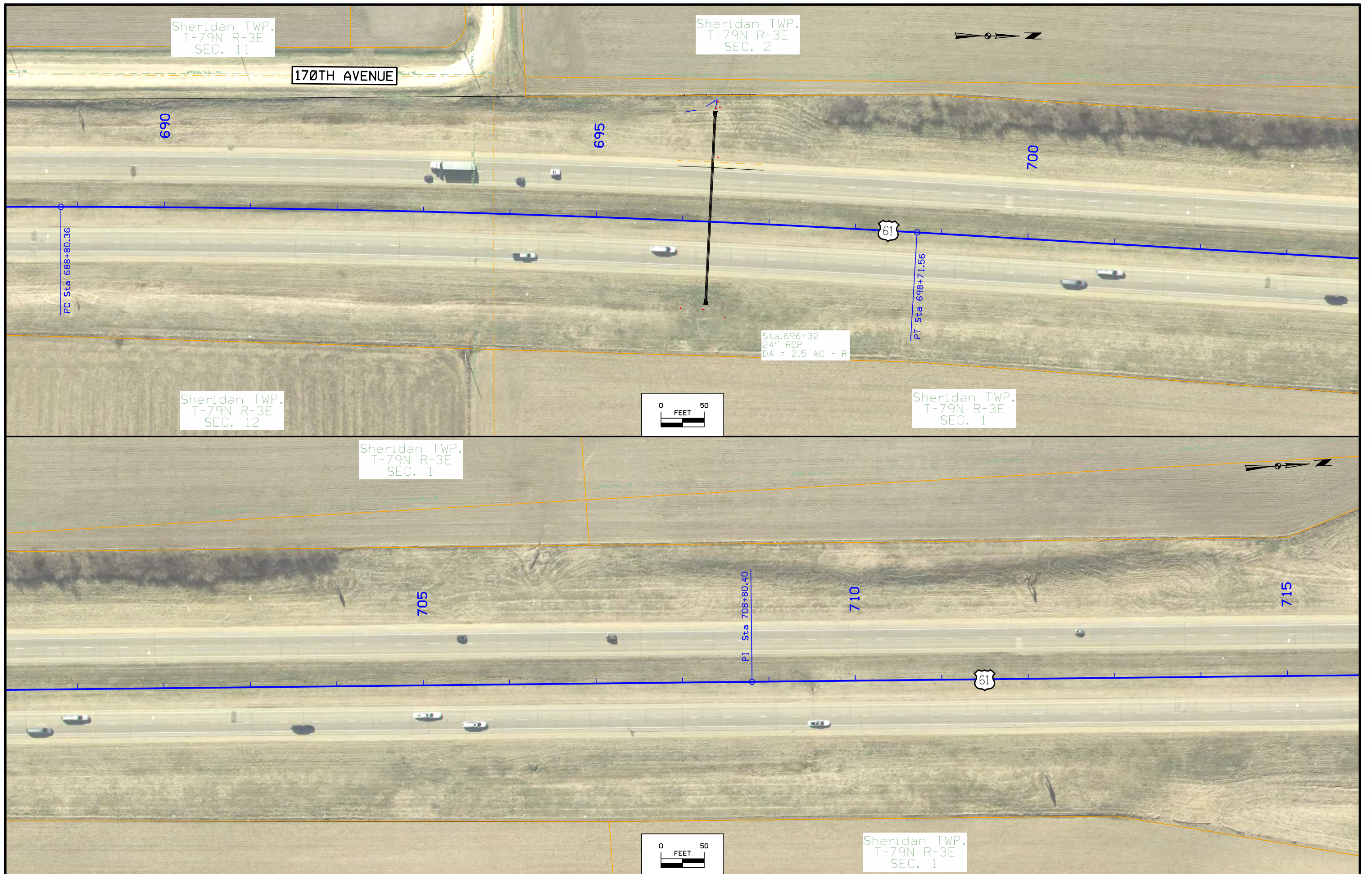
SCOTT COUNTY

PROJECT NUMBER

NHSN-061-5(144)--2R-82

SHEET NUMBER **D.10**





Sheridan TWP.
T-79N R-3E
SEC. 11

Sheridan TWP.
T-79N R-3E
SEC. 2

170TH AVENUE

690

695

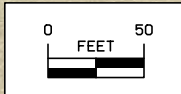
700

PC Sta 688+80.36

PT Sta 698+71.56

Sta. 696+32
24" RCP
DA = 2.5 AC - R

Sheridan TWP.
T-79N R-3E
SEC. 12



Sheridan TWP.
T-79N R-3E
SEC. 1

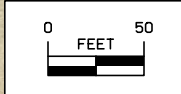
Sheridan TWP.
T-79N R-3E
SEC. 1

705

710

715

PI Sta 708+80.40



Sheridan TWP.
T-79N R-3E
SEC. 1

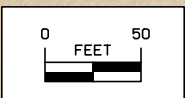
Sheridan TWP.
T-79N R-3E
SEC. 1

720

725

730

61



Sheridan TWP.
T-79N R-3E
SEC. 1

735

740

745

61

Sta. 744+50, 44' RT
24" CMP

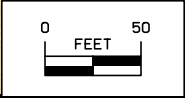
Sta. 745+16
Install 42" X 96' HDPE
F.L. Lt. = 753.91
F.L. Other = 737.14
F.L. Rt. = 736.98

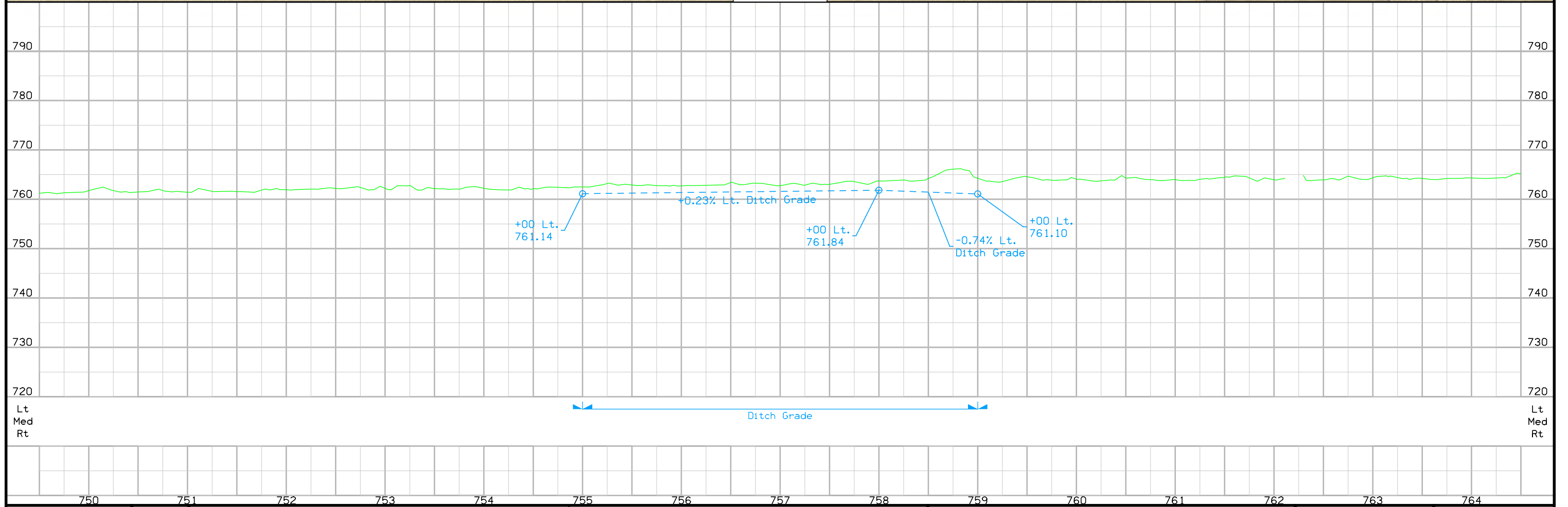
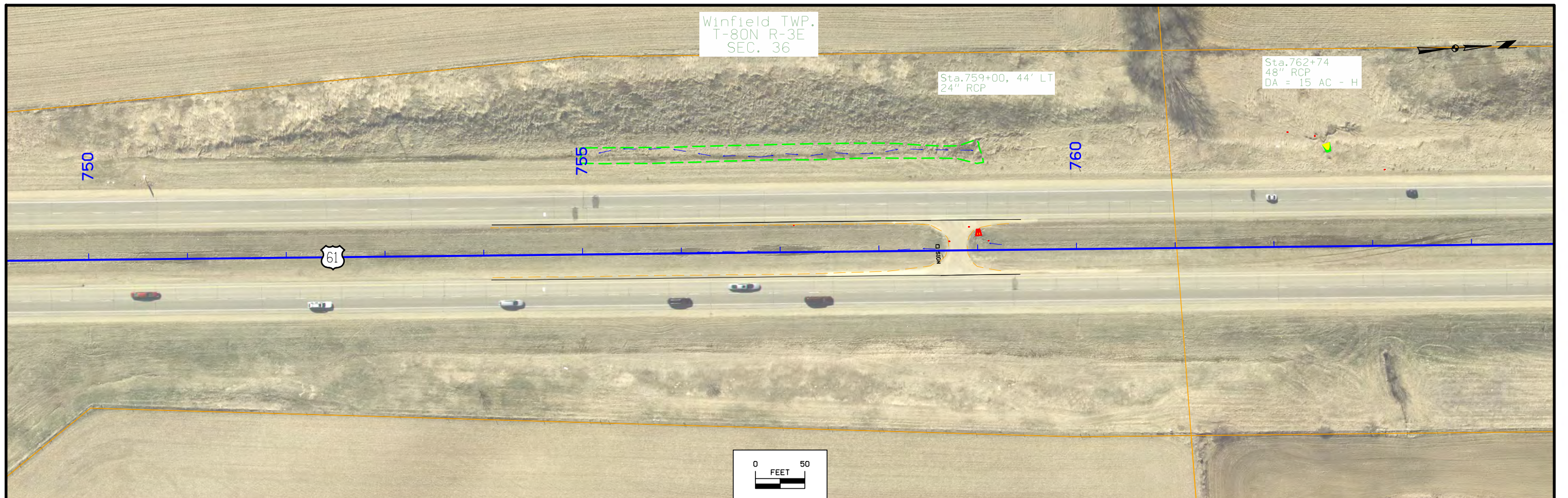
Sta. 745+16, 159' RT
42" CMP
(Remove)

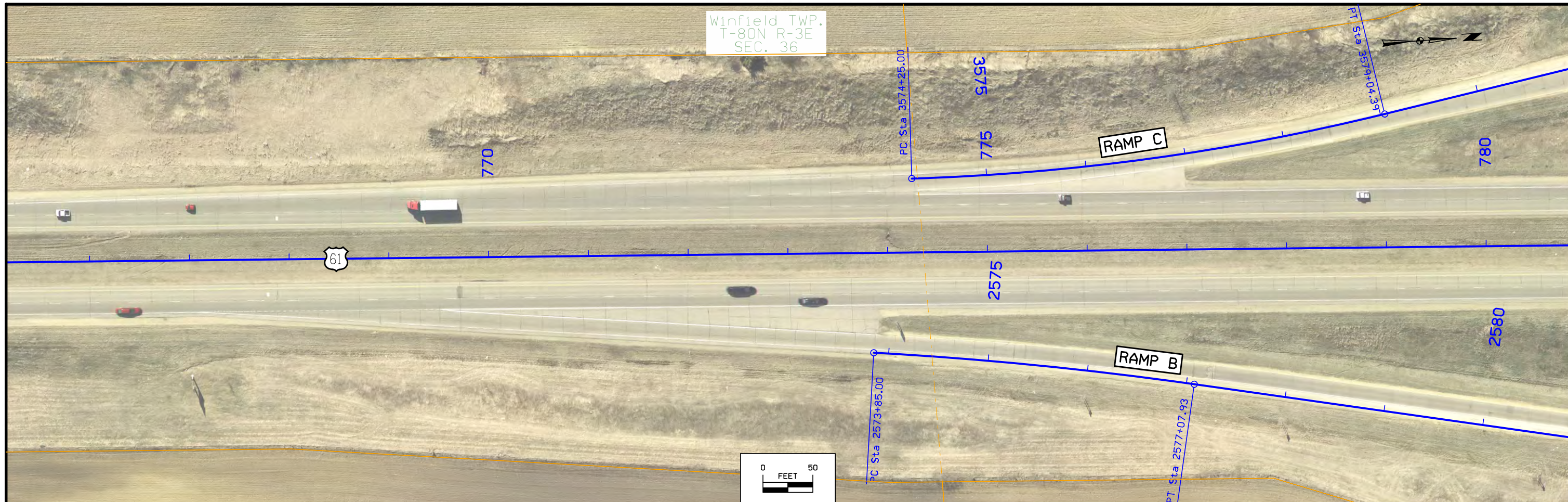
Sta. 745+3d
Install Type "F" Dike
Top Elev. = 758.41

Sta. 746+02
10'x10' RCB
DA=1176 AC - H-R-F
(Remove Headwalls)

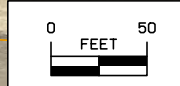
Sta. 733+00, 44' RT
24" RCP





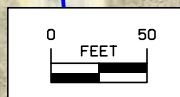


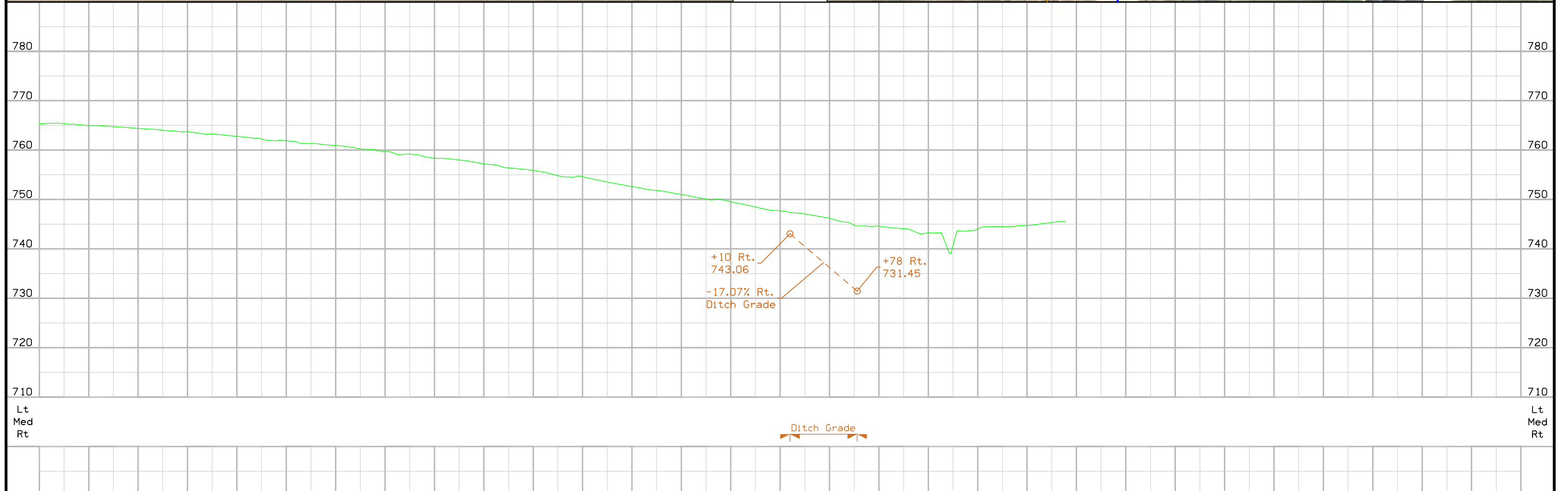
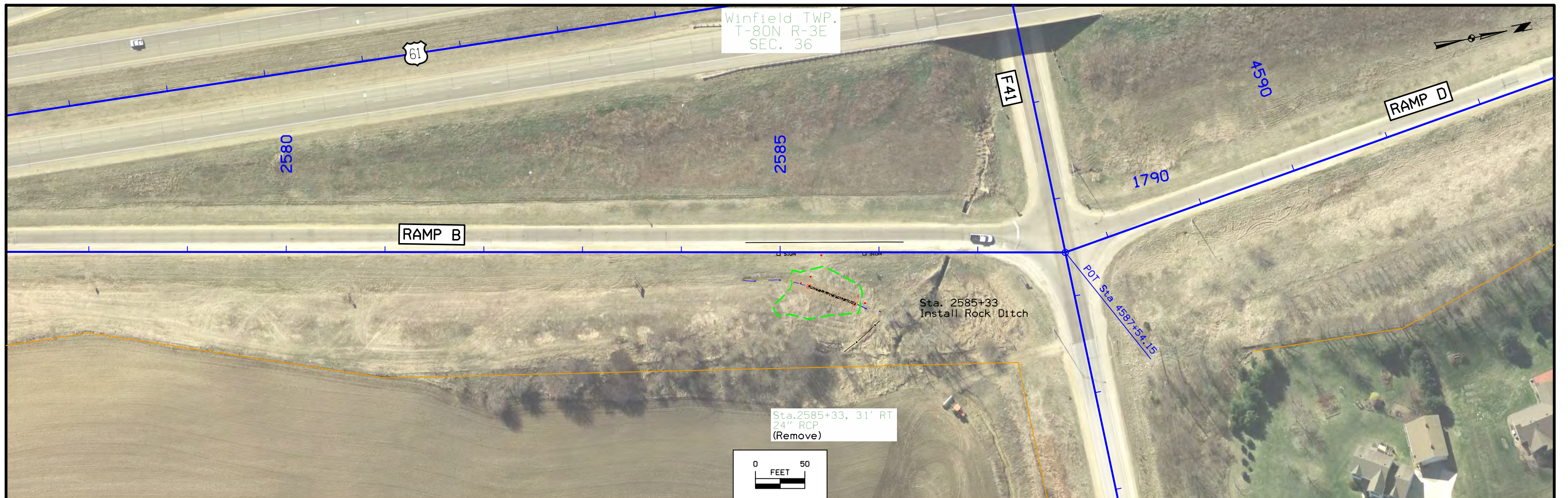
Winfield TWP.
T-80N R-3E
SEC. 36

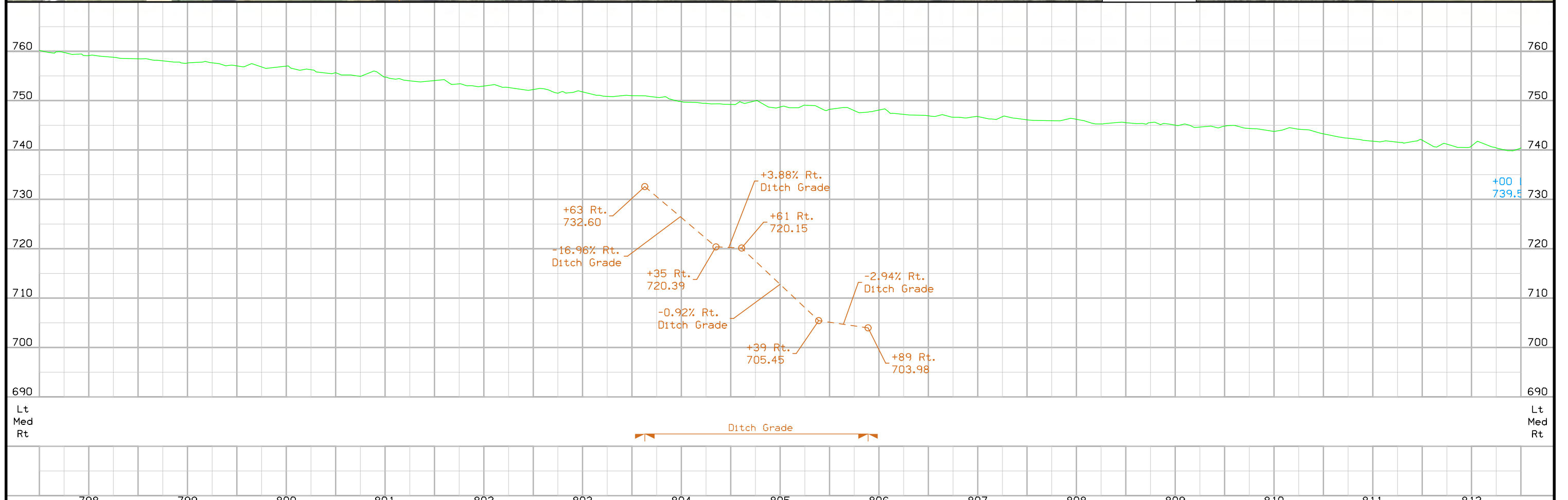


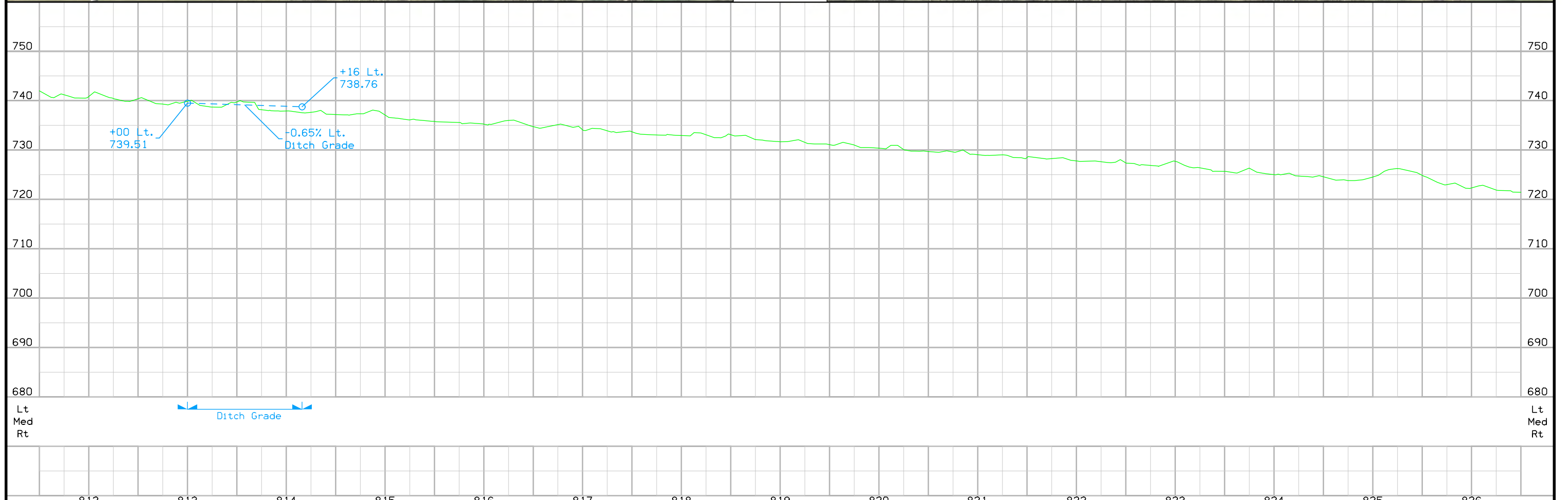
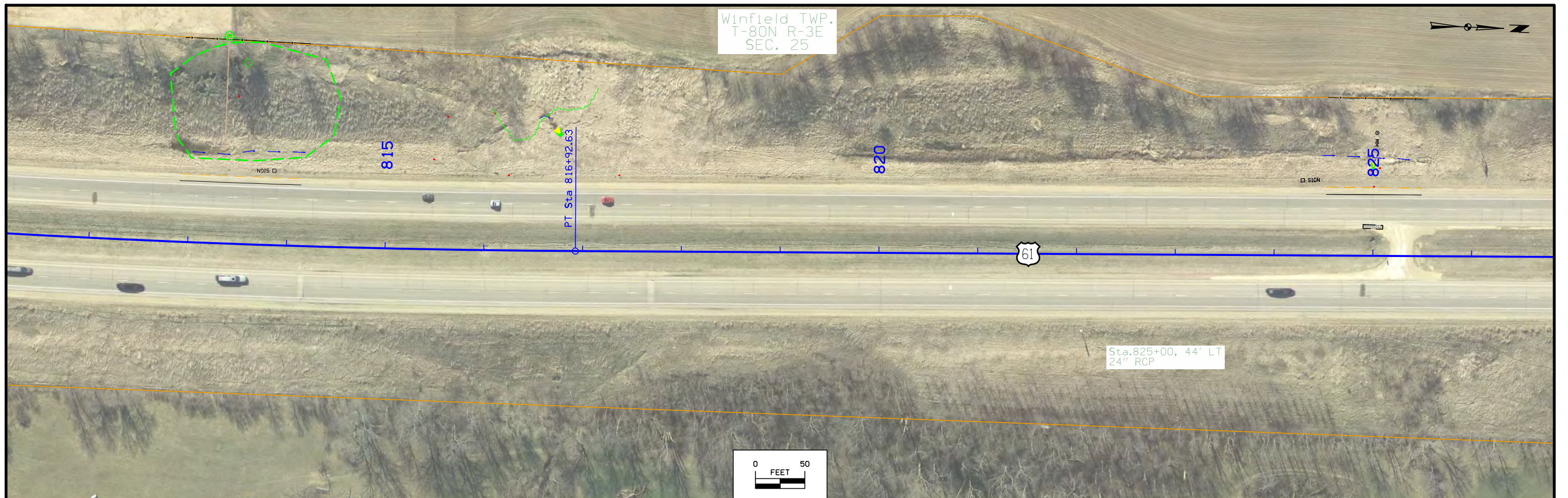


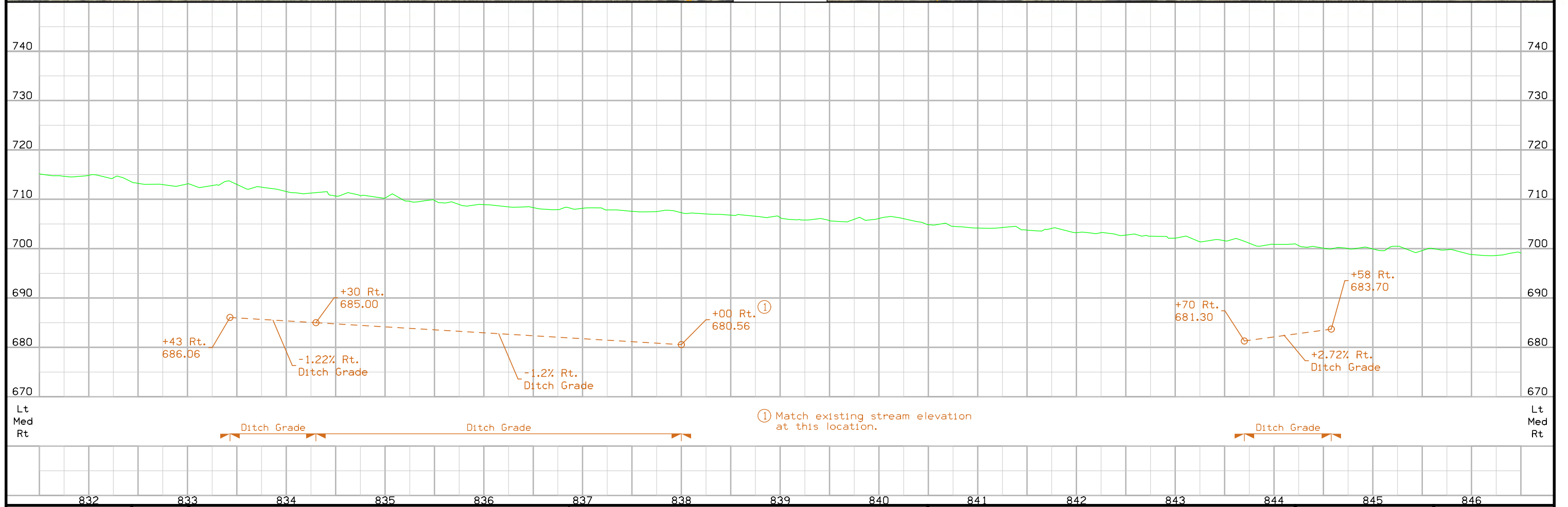
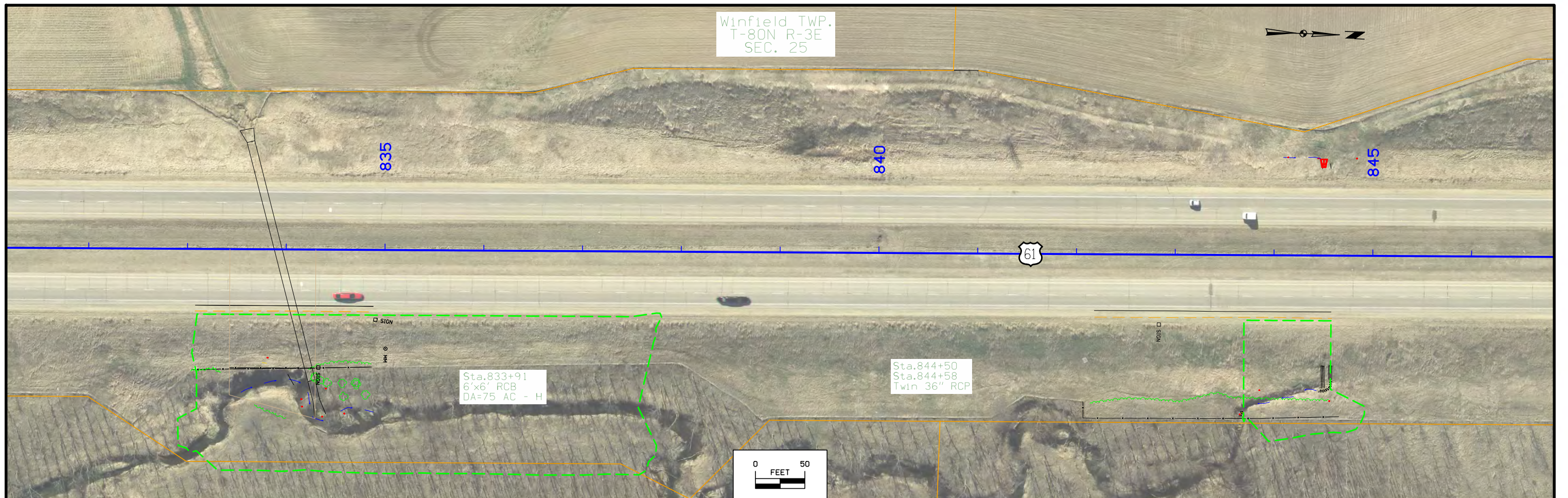
Winfield TWP.
T-80N R-3E
SEC. 36

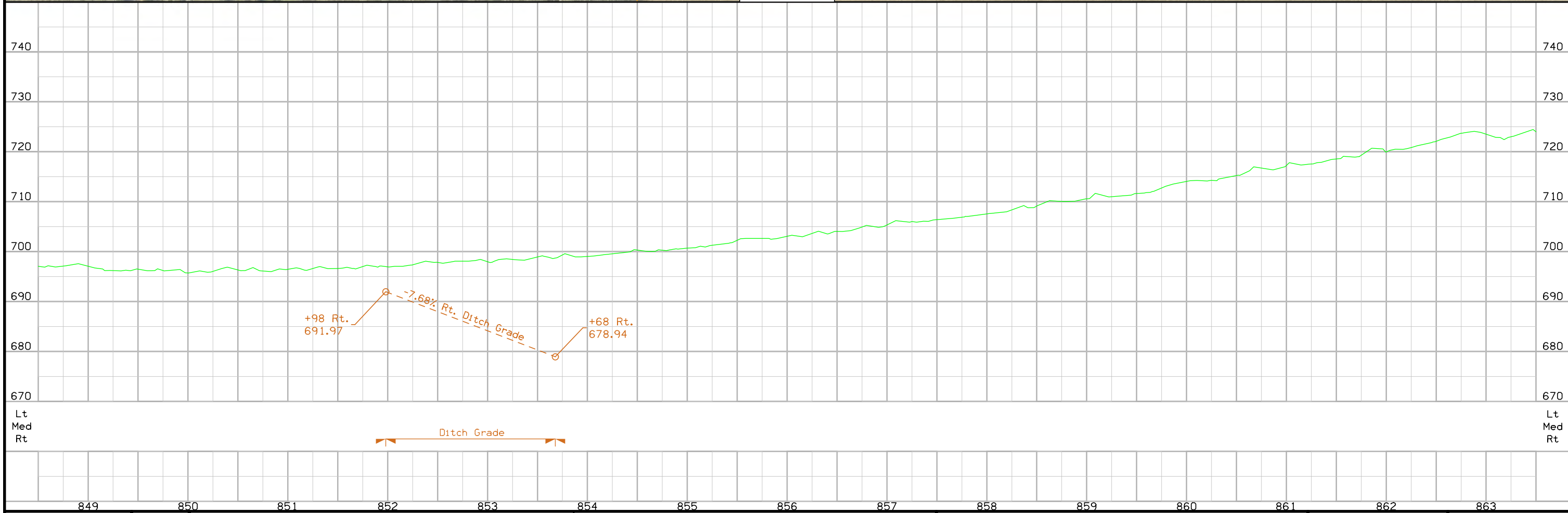
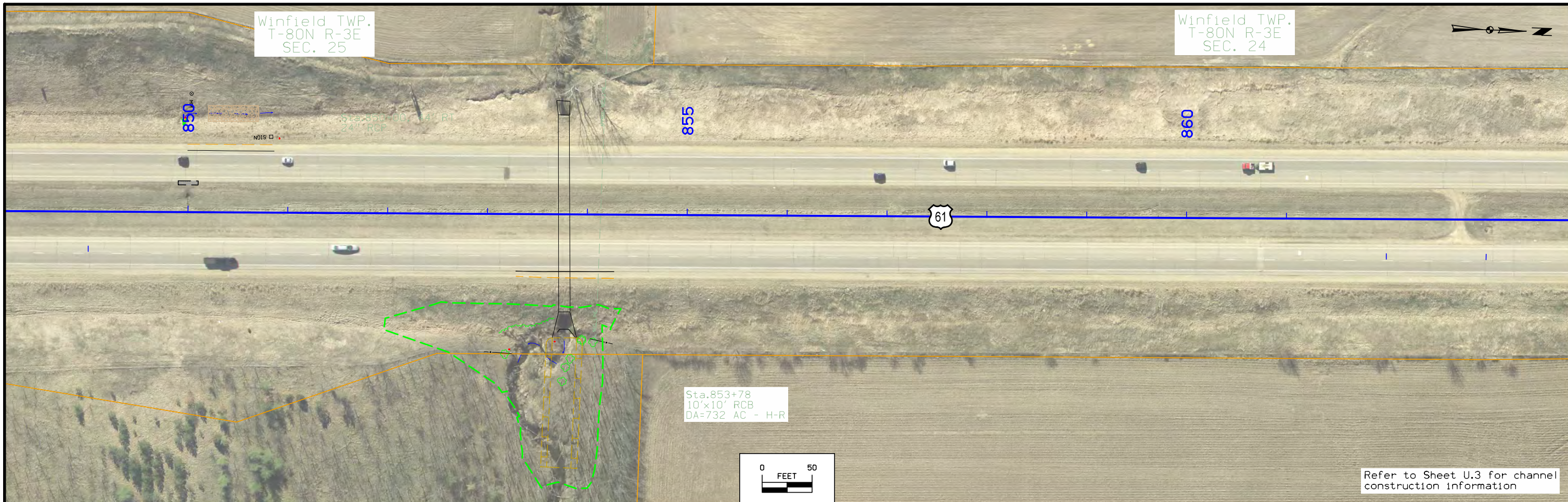


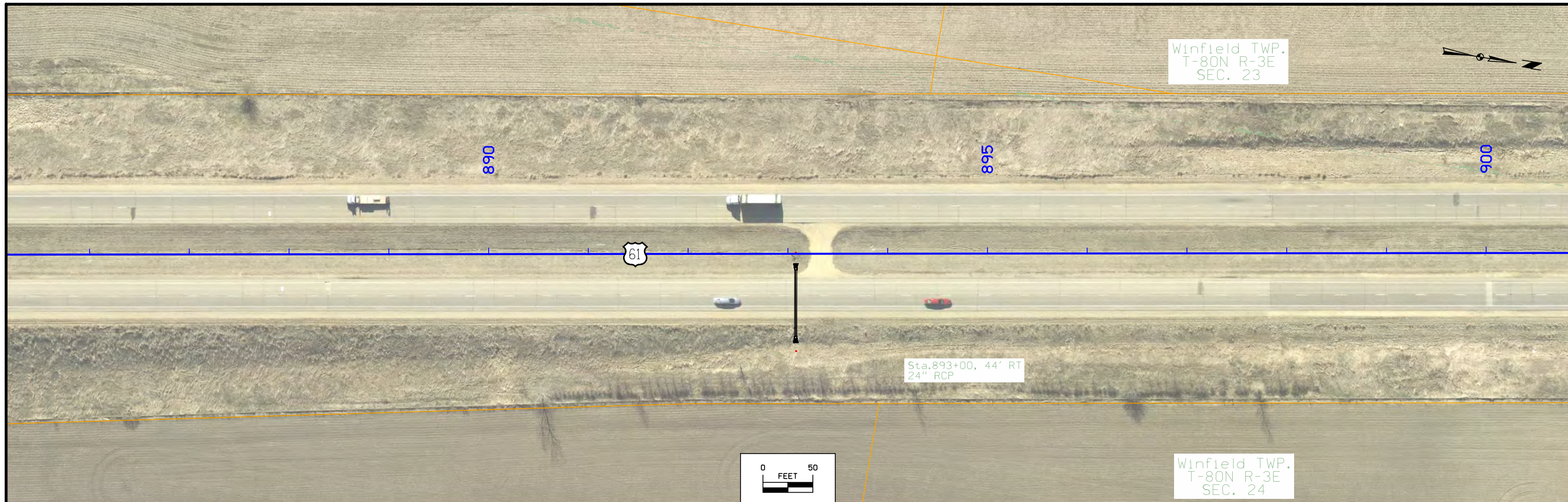


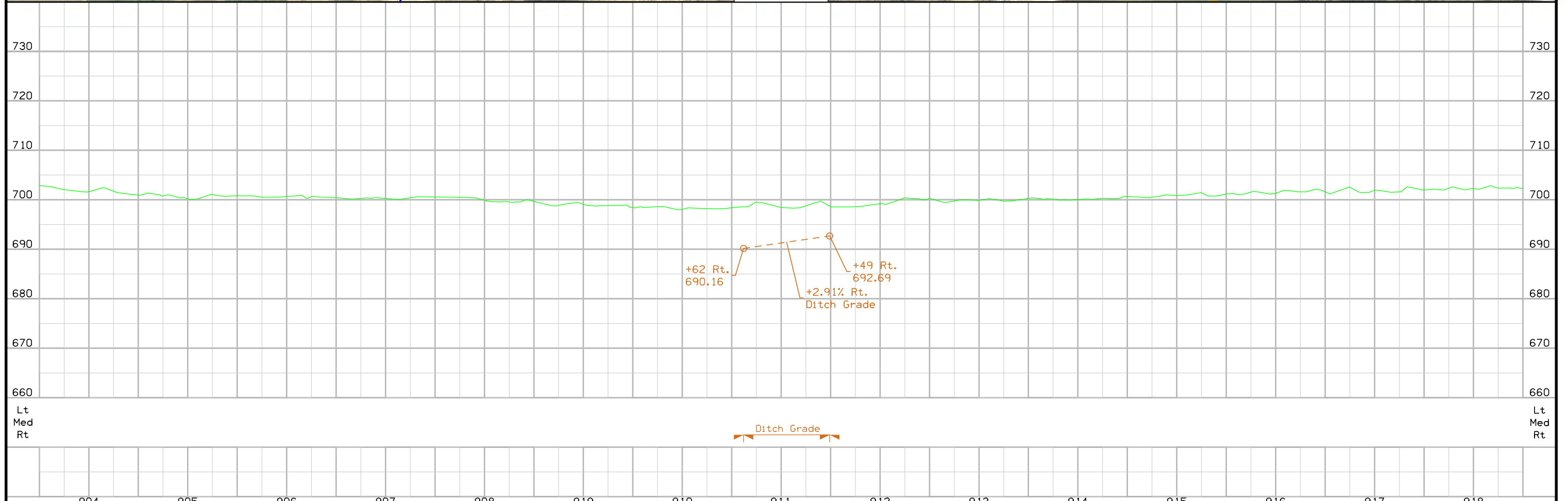
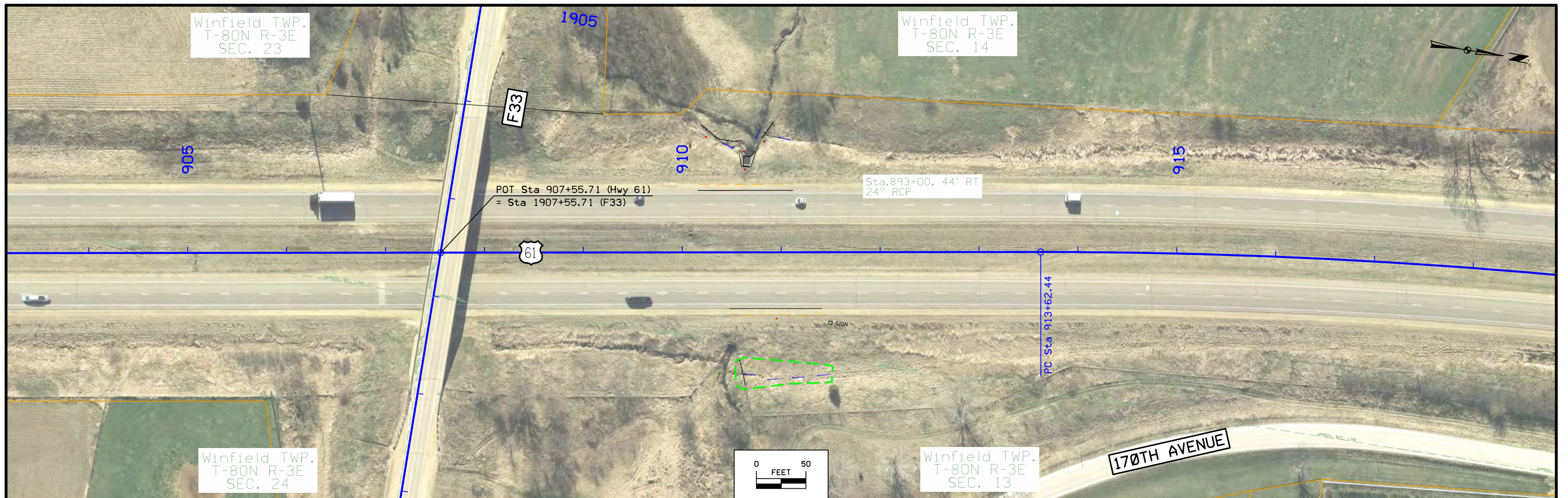












Winfield TWP.
T-80N R-3E
SEC. 14



925

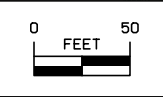
930

935

PT Sta 923+35.23

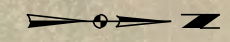


170TH AVENUE



Winfield TWP.
T-80N R-3E
SEC. 13

Winfield TWP.
T-80N R-3E
SEC. 14



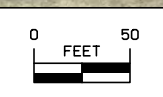
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950

955

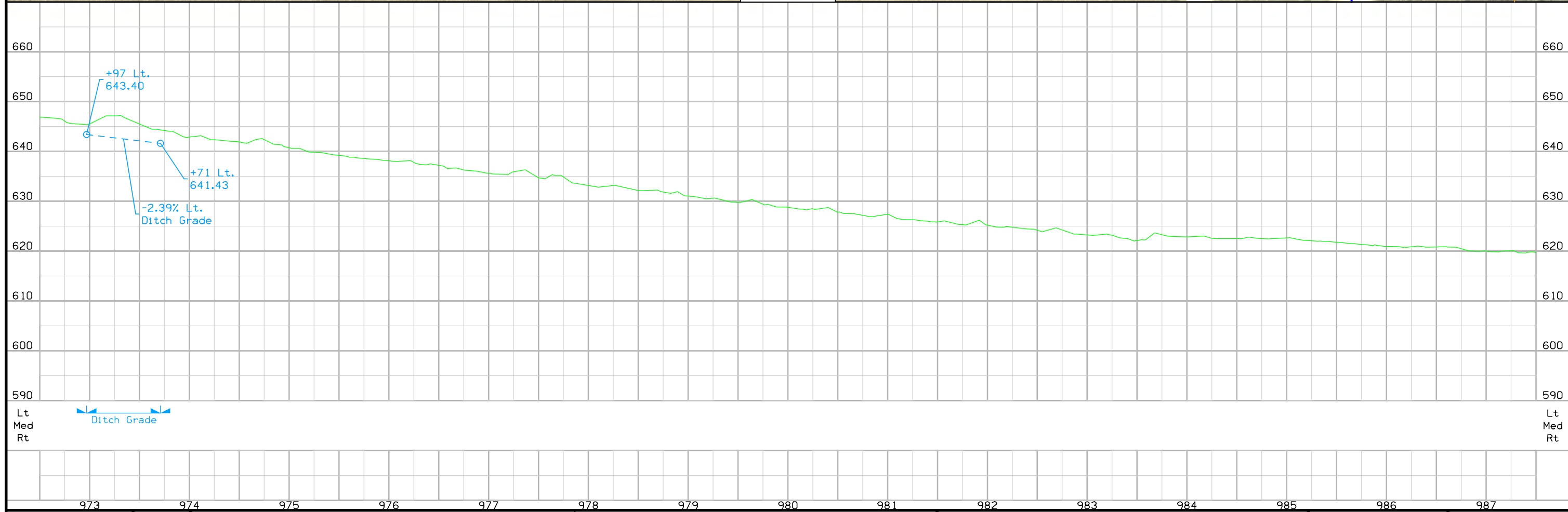
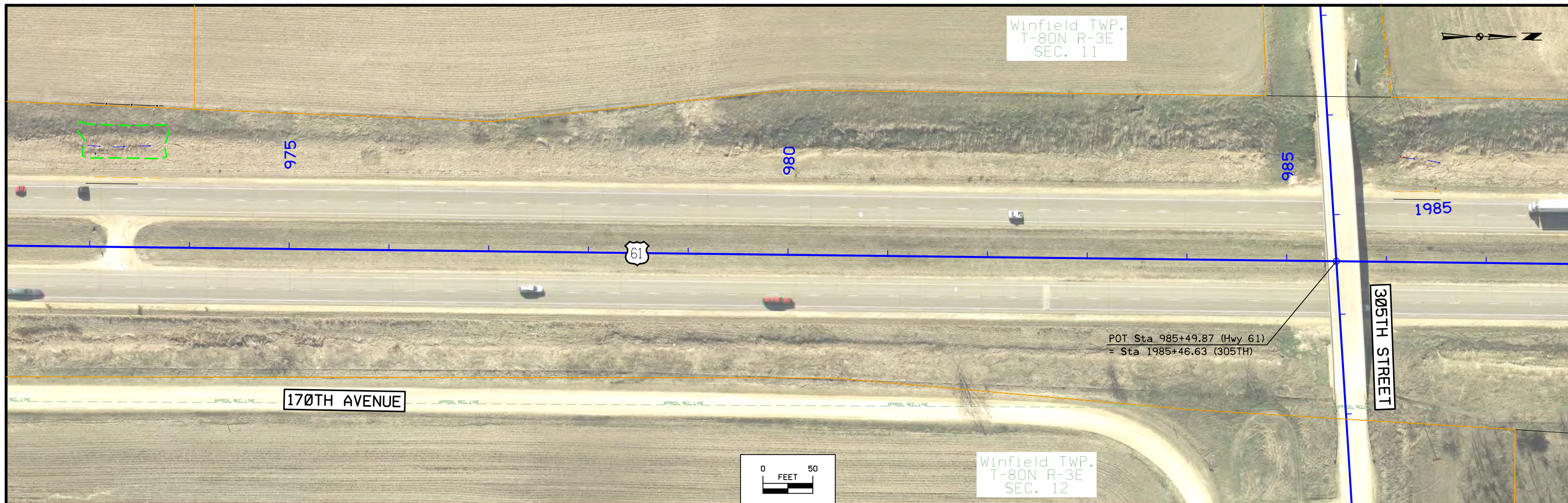


170TH AVENUE

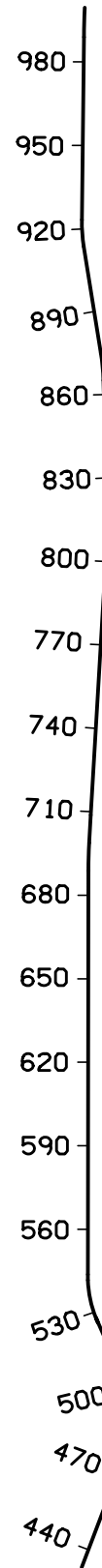


Winfield TWP.
T-80N R-3E
SEC. 13









HWY 61 ALIGNMENT DATA

Beginning chain ML61 description

Point ML1 N 8,091,608.3387 E 21,490,252.8066 Sta 433+13.37
 Course from ML1 to TS ML61-1B N 20° 40' 37.48" E Dist 3,875.3500

SCS ML61-1 found within chain ML61, contains:
 SPI ML61-1B CUR ML61-1 SPI ML61-1A

PISCS ML61-1 N 8,097,059.5426 E 21,492,310.1532 STA 491+39.89
 Total Back Tangent = 1,951.1669
 Total Ahead Tangent = 1,951.1570
 Total Length = 3,710.4859
 Total Delta = 44° 29' 23.90" (LT)
 Back Tangent = N 20° 40' 37.48" E
 Ahead Tangent = N 23° 48' 46.41" W

Beginning SCS ML61-1 description

Spiral Back
 Spiral ML61-1B Type 1 Spiral Element
 Angle 0° 46' 31.87" (LT) P 0.1410 BK N 20° 40' 37.48" E
 LS 125.0000 K 62.4996 AH N 19° 54' 05.61" E
 R 4,617.5300 LT 83.3341 CB N 20° 25' 06.86" E
 YS 0.5640 ST 41.6674 Defl 0° 15' 30.62"
 XS 124.9977 LC 124.9990 Deg 1° 14' 26.99"

Point	Spiral Coordinates		Station
	North	East	
TS	8,095,234.0594	21,491,621.1950	471+88.72
PI	8,095,312.0256	21,491,650.6204	472+72.05
SC	8,095,351.2046	21,491,664.8042	473+13.72
CC	8,096,923.0355	21,487,323.0383	

Circular Section

Curve ML61-1
 P.I. Station 491+29.78 N 8,097,058.8048 E 21,492,282.9994
 Delta = 42° 56' 20.60" (LT)
 Degree = 1° 14' 26.99"
 Tangent = 1,816.0572
 Length = 3,460.5059
 Radius = 4,617.5300
 External = 344.2889
 Long Chord = 3,380.0906
 Mid. Ord. = 320.3995
 P.C. Station 473+13.72 N 8,095,351.2046 E 21,491,664.8042
 P.T. Station 507+74.23 N 8,098,730.0296 E 21,491,572.3154
 C.C. N 8,096,923.0355 E 21,487,323.0383
 Back = N 19° 54' 05.61" E
 Ahead = N 23° 02' 14.99" W
 Chord Bear = N 1° 34' 04.69" W

Spiral Ahead
 Spiral ML61-1A Type 2 Spiral Element
 Angle 0° 46' 31.42" (LT) P 0.1409 BK N 23° 02' 14.99" W
 LS 124.9800 K 62.4896 AH N 23° 48' 46.41" W
 R 4,617.5300 LT 83.3208 CB N 23° 33' 15.94" W
 YS 0.5638 ST 41.6607 Defl 0° 15' 30.47"
 XS 124.9777 LC 124.9790 Deg 1° 14' 26.99"

Point	Spiral Coordinates		Station
	North	East	
CS	8,098,730.0296	21,491,572.3154	507+74.23
PI	8,098,768.3678	21,491,556.0122	508+15.89
ST	8,098,844.5954	21,491,522.3713	508+99.21
CC	8,096,923.0355	21,487,323.0383	

Ending SCS ML61-1 description

Course from ST ML61-1A to TS ML61-2B N 23° 48' 46.41" W Dist 1,688.3278

SCS ML61-2 found within chain ML61, contains:
 SPI ML61-2B CUR ML61-2 SPI ML61-2A

PISCS ML61-2 N 8,101,219.3011 E 21,490,474.3629 STA 534+94.88
 Total Back Tangent = 907.3511
 Total Ahead Tangent = 907.3415
 Total Length = 1,791.0997
 Total Delta = 23° 51' 59.89" (RT)
 Back Tangent = N 23° 48' 46.41" W
 Ahead Tangent = N 0° 03' 13.48" E

Beginning SCS ML61-2 description

Spiral Back
 Spiral ML61-2B Type 1 Spiral Element
 Angle 1° 30' 00.00" (RT) P 0.4363 BK N 23° 48' 46.41" W
 LS 200.0000 K 99.9977 AH N 22° 18' 46.42" W
 R 3,819.7200 LT 133.3381 CB N 23° 18' 46.43" W
 YS 1.7452 ST 66.6710 Defl 0° 29' 59.99"
 XS 199.9863 LC 199.9939 Deg 1° 30' 00.00"

Point	Spiral Coordinates		Station
	North	East	
TS	8,100,389.1939	21,490,840.7070	525+87.53
PI	8,100,511.1808	21,490,786.8715	527+20.87
SC	8,100,572.8597	21,490,761.5589	527+87.53
CC	8,102,023.0713	21,494,295.2747	

Circular Section

Curve ML61-2
 P.I. Station 534+90.88 N 8,101,223.5471 E 21,490,494.5215
 Delta = 20° 52' 00.44" (RT)
 Degree = 1° 30' 00.00"
 Tangent = 703.3513
 Length = 1,391.1197
 Radius = 3,819.7200
 External = 64.2167
 Long Chord = 1,383.4443
 Mid. Ord. = 63.1549
 P.C. Station 527+87.53 N 8,100,572.8597 E 21,490,761.5589
 P.T. Station 541+78.65 N 8,101,926.6744 E 21,490,476.7713
 C.C. N 8,102,023.0713 E 21,494,295.2747
 Back = N 22° 18' 46.42" W
 Ahead = N 1° 26' 45.98" W
 Chord Bear = N 11° 52' 46.20" W

Spiral Ahead
 Spiral ML61-2A Type 2 Spiral Element
 Angle 1° 29' 59.46" (RT) P 0.4362 BK N 1° 26' 45.98" W
 LS 199.9800 K 99.9877 AH N 0° 03' 13.48" E
 R 3,819.7200 LT 133.3248 CB N 0° 26' 46.33" W
 YS 1.7449 ST 66.6644 Defl 0° 29' 59.81"
 XS 199.9663 LC 199.9739 Deg 1° 30' 00.00"

Point	Spiral Coordinates		Station
	North	East	
CS	8,101,926.6744	21,490,476.7713	541+78.65
PI	8,101,993.3175	21,490,475.0889	542+45.32
ST	8,102,126.6423	21,490,475.2140	543+78.63
CC	8,102,023.0713	21,494,295.2747	

Ending SCS ML61-2 description

HWY 61 ALIGNMENT DATA (CONTINUED)

Course from ST ML61-2A to PC ML61-3 N 0° 03' 13.48" E Dist 14,501.7258

Curve Data

Curve ML61-3
 P.I. Station = 693+76.10 N 8,117,124.1005 E 21,490,489.2816
 Delta = 3° 19' 13.88" (RT)
 Degree = 0° 20' 06.00"
 Tangent = 495.7391
 Length = 991.2006
 Radius = 17,103.2200
 External = 7.1830
 Long Chord = 991.0619
 Mid. Ord. = 7.1800
 P.C. Station = 688+80.36 N 8,116,628.3616 E 21,490,488.8166
 P.T. Station = 698+71.56 N 8,117,618.9801 E 21,490,518.4599
 C.C. = N 8,116,612.3188 E 21,507,592.0291
 Back = N 0° 03' 13.48" E
 Ahead = N 3° 22' 27.35" E
 Chord Bear = N 1° 42' 50.42" E

Course from PT ML61-3 to ML2 N 3° 22' 27.35" E Dist 1,008.8383

Point ML2 N 8,118,626.0694 E 21,490,577.8381 Sta 708+80.40

Course from ML2 to PC ML61-4 N 3° 22' 27.37" E Dist 9,805.1801

Curve Data

Curve ML61-4
 P.I. Station = 811+89.43 N 8,128,917.2268 E 21,491,184.6076
 Delta = 5° 02' 06.89" (LT)
 Degree = 0° 30' 00.00"
 Tangent = 503.8493
 Length = 1,007.0500
 Radius = 11,459.1600
 External = 11.0716
 Long Chord = 1,006.7260
 Mid. Ord. = 11.0609
 P.C. Station = 806+85.58 N 8,128,414.2509 E 21,491,154.9520
 P.T. Station = 816+92.63 N 8,129,420.8644 E 21,491,170.0033
 C.C. = N 8,129,088.7149 E 21,479,715.6581
 Back = N 3° 22' 27.37" E
 Ahead = N 1° 39' 39.53" W
 Chord Bear = N 0° 51' 23.92" E

Course from PT ML61-4 to PC ML61-5 N 1° 39' 39.53" W Dist 4,814.9900

Curve Data

Curve ML61-5
 P.I. Station = 870+01.51 N 8,134,727.5151 E 21,491,016.1227
 Delta = 7° 23' 53.06" (LT)
 Degree = 0° 45' 00.00"
 Tangent = 493.8914
 Length = 986.4100
 Radius = 7,639.4400
 External = 15.9484
 Long Chord = 985.7249
 Mid. Ord. = 15.9152
 P.C. Station = 865+07.62 N 8,134,233.8313 E 21,491,030.4384
 P.T. Station = 874+94.03 N 8,135,215.2460 E 21,490,938.3584
 C.C. = N 8,134,012.3983 E 21,483,394.2083
 Back = N 1° 39' 39.53" W
 Ahead = N 9° 03' 32.59" W
 Chord Bear = N 5° 21' 36.06" W

Course from PT ML61-5 to PC ML61-6 N 9° 03' 32.59" W Dist 3,868.4100

Curve Data

Curve ML61-6
 P.I. Station = 918+50.00 N 8,139,516.8889 E 21,490,252.4997
 Delta = 9° 43' 40.43" (RT)
 Degree = 1° 00' 00.00"
 Tangent = 487.5668
 Length = 972.7900
 Radius = 5,729.5800
 External = 20.7077
 Long Chord = 971.6220
 Mid. Ord. = 20.6331
 P.C. Station = 913+62.44 N 8,139,035.4037 E 21,490,329.2682
 P.T. Station = 923+35.23 N 8,140,004.4225 E 21,490,258.1912
 C.C. = N 8,139,937.5395 E 21,495,987.3808
 Back = N 9° 03' 32.59" W
 Ahead = N 0° 40' 07.84" E
 Chord Bear = N 4° 11' 42.37" W

Course from PT ML61-6 to PC ML61-7 N 0° 40' 07.84" E Dist 6,559.2700

Curve Data

Curve ML61-7
 P.I. Station = 994+21.16 N 8,147,089.8709 E 21,490,340.9072
 Delta = 1° 45' 19.44" (RT)
 Degree = 0° 10' 00.00"
 Tangent = 526.6612
 Length = 1,053.2400
 Radius = 34,377.4700
 External = 4.0340
 Long Chord = 1,053.1988
 Mid. Ord. = 4.0335
 P.C. Station = 988+94.50 N 8,146,563.2456 E 21,490,334.7594
 P.T. Station = 999+47.74 N 8,147,616.0607 E 21,490,363.1842
 C.C. = N 8,146,161.9477 E 21,524,709.8870
 Back = N 0° 40' 07.84" E
 Ahead = N 2° 25' 27.28" E
 Chord Bear = N 1° 32' 47.56" E

Course from PT ML61-7 to ML3 N 2° 25' 27.28" E Dist 2,302.2600

Point ML3 N 8,149,916.2603 E 21,490,460.5662 Sta 1022+50.00

Ending chain ML61 description

RAMP A I-80 ALIGNMENT DATA

Beginning chain RPA80 description

Point RPA1 N 8,090,993.6724 E 21,490,738.7377 Sta 1527+37.04
 Course from RPA1 to PC RPA80-1 N 18° 25' 23.00" W Dist 506.3000

Curve Data

Curve RPA80-1
 P.I. Station = 1535+89.80 N 8,091,802.7307 E 21,490,469.2382
 Delta = 33° 38' 41.53" (RT)
 Degree = 4° 59' 59.93"
 Tangent = 346.4633
 Length = 672.9000
 Radius = 1,145.9200
 External = 51.2306
 Long Chord = 663.2737
 Mid. Ord. = 49.0382
 P.C. Station = 1532+43.34 N 8,091,474.0240 E 21,490,578.7313
 P.T. Station = 1539+16.24 N 8,092,137.0389 E 21,490,560.2044
 C.C. = N 18° 25' 23.00" W 8,091,836.1700 E 21,491,665.9217
 Back = N 18° 25' 23.00" W
 Ahead = N 15° 13' 18.53" E
 Chord Bear = N 1° 36' 02.24" W

Curve Data

Curve RPA80-2
 P.I. Station = 1540+02.47 N 8,092,220.2443 E 21,490,582.8448
 Delta = 4° 18' 34.21" (RT)
 Degree = 2° 30' 00.00"
 Tangent = 86.2307
 Length = 172.3800
 Radius = 2,291.8300
 External = 1.6217
 Long Chord = 172.3394
 Mid. Ord. = 1.6205
 P.C. Station = 1539+16.24 N 8,092,137.0389 E 21,490,560.2044
 P.T. Station = 1540+88.62 N 8,092,301.5131 E 21,490,611.6737
 C.C. = N 17° 22' 35.63" E 8,091,535.3038 E 21,492,771.6292
 Back = N 15° 13' 18.53" E
 Ahead = N 19° 31' 52.74" E
 Chord Bear = N 17° 22' 35.63" E

Course from PT RPA80-2 to RPA2 N 19° 31' 52.74" E Dist 300.0600

Point RPA2 N 8,092,584.3073 E 21,490,711.9903 Sta 1543+88.68

Ending chain RPA80 description

COUNTY ROAD F-55 ALIGNMENT DATA

Beginning chain SRF55 description

Point SR3 N 8,095,905.8667 E 21,490,745.5576 Sta 2468+03.44
 Course from SR3 to SR4 S 89° 24' 22.52" E Dist 2,782.3089
 Point SR4 N 8,095,877.0347 E 21,493,527.7171 Sta 2495+85.75

Ending chain SRF55 description

RAMP A F-55 ALIGNMENT DATA

Beginning chain RPAF55 description

Point RPA100 N 8,095,900.6854 E 21,491,245.5307 Sta 1577+27.21
 Course from RPA100 to PC RPAF55-1 N 0° 35' 37.48" E Dist 297.5100

Curve Data

Curve RPAF55-1
 P.I. Station = 1582+61.09 N 8,096,434.5334 E 21,491,251.0631
 Delta = 44° 50' 08.98" (RT)
 Degree = 9° 59' 59.86"
 Tangent = 236.3667
 Length = 448.3600
 Radius = 572.9600
 External = 46.8403
 Long Chord = 437.0074
 Mid. Ord. = 43.3004
 P.C. Station = 1580+24.72 N 8,096,198.1794 E 21,491,248.6137
 P.T. Station = 1584+73.08 N 8,096,600.4121 E 21,491,419.4480
 C.C. = N 0° 35' 37.48" E 8,096,192.2421 E 21,491,821.5430
 Back = N 0° 35' 37.48" E
 Ahead = N 45° 25' 46.46" E
 Chord Bear = N 23° 00' 41.97" E

Course from PT RPAF55-1 to PC RPAF55-2 N 45° 25' 46.46" E Dist 245.1600

Curve Data

Curve RPAF55-2
 P.I. Station = 1590+49.28 N 8,097,004.7805 E 21,491,829.9257
 Delta = 46° 51' 26.02" (LT)
 Degree = 7° 30' 00.13"
 Tangent = 331.0394
 Length = 624.7600
 Radius = 763.9400
 External = 68.6412
 Long Chord = 607.4945
 Mid. Ord. = 62.9821
 P.C. Station = 1587+18.24 N 8,096,772.4618 E 21,491,594.0971
 P.T. Station = 1593+43.00 N 8,097,335.7171 E 21,491,821.6780
 C.C. = N 22° 00' 03.45" E 8,097,316.6838 E 21,491,057.9751
 Back = N 45° 25' 46.46" E
 Ahead = N 1° 25' 39.56" W
 Chord Bear = N 22° 00' 03.45" E

Ending chain RPAF55 description

RAMP B F-55 ALIGNMENT DATA

Beginning chain RPB55 description

Point RPB1 N 8,094,555.6518 E 21,491,468.2307 Sta 2565+00.00
 Course from RPB1 to PC RPB55-1 N 24° 46' 17.10" E Dist 920.6552

Curve Data

 Curve RPB55-1
 P.I. Station = 2575+72.46 N 8,095,529.4318 E 21,491,917.5908
 Delta = 3° 02' 07.44" (RT)
 Degree = 1° 00' 00.00"
 Tangent = 151.8055
 Length = 303.5400
 Radius = 5,729.5800
 External = 2.0107
 Long Chord = 303.5045
 Mid. Ord. = 2.0100
 P.C. Station = 2574+20.66 N 8,095,391.5944 E 21,491,853.9844
 P.T. Station = 2577+24.20 N 8,095,663.7076 E 21,491,988.4068
 C.C. = N 24° 46' 17.10" E 8,092,990.9051 E 21,497,056.3665
 Back = N 24° 46' 17.10" E
 Ahead = N 27° 48' 24.54" E
 Chord Bear = N 26° 17' 20.82" E

Curve Data

 Curve RPB55-2
 P.I. Station = 2579+04.22 N 8,095,822.9452 E 21,492,072.3875
 Delta = 61° 56' 05.38" (RT)
 Degree = 19° 05' 54.94"
 Tangent = 180.0260
 Length = 324.2900
 Radius = 300.0000
 External = 49.8705
 Long Chord = 308.7303
 Mid. Ord. = 42.7620
 P.C. Station = 2577+24.20 N 8,095,663.7076 E 21,491,988.4068
 P.T. Station = 2580+48.49 N 8,095,823.7570 E 21,492,252.4117
 C.C. = N 27° 48' 24.54" E 8,095,523.7600 E 21,492,253.7645
 Back = N 27° 48' 24.54" E
 Ahead = N 89° 44' 29.92" E
 Chord Bear = N 58° 46' 27.23" E

Course from PT RPB55-2 to RPB2 N 89° 44' 29.92" E Dist 951.7400
 Point RPB2 N 8,095,828.0485 E 21,493,204.1421 Sta 2590+00.23

Ending chain RPB55 description

RAMP C F-55 ALIGNMENT DATA

Beginning chain RPCF55 description

Curve Data

 Curve RPC-1
 P.I. Station = 3568+51.79 N 8,094,946.2792 E 21,491,421.1800
 Delta = 12° 29' 10.30" (LT)
 Degree = 1° 00' 00.00"
 Tangent = 626.7926
 Length = 1,248.6200
 Radius = 5,729.5800
 External = 34.1823
 Long Chord = 1,246.1507
 Mid. Ord. = 33.9796
 P.C. Station = 3562+25.00 N 8,094,355.5549 E 21,491,211.6241
 P.T. Station = 3574+73.62 N 8,095,568.3387 E 21,491,498.0623
 C.C. = N 8,096,271.1286 E 21,485,811.7478
 Back = N 19° 31' 54.61" E
 Ahead = N 7° 02' 44.30" E
 Chord Bear = N 13° 17' 19.45" E

Curve Data

 Curve RPC-2
 P.I. Station = 3575+05.25 N 8,095,599.7319 E 21,491,501.9423
 Delta = 9° 28' 04.97" (LT)
 Degree = 15° 00' 00.26"
 Tangent = 31.6320
 Length = 63.1200
 Radius = 381.9700
 External = 1.3075
 Long Chord = 63.0482
 Mid. Ord. = 1.3031
 P.C. Station = 3574+73.62 N 8,095,568.3387 E 21,491,498.0623
 P.T. Station = 3575+36.74 N 8,095,631.3356 E 21,491,500.6053
 C.C. = N 8,095,615.1911 E 21,491,118.9767
 Back = N 7° 02' 44.30" E
 Ahead = N 2° 25' 20.66" W
 Chord Bear = N 2° 18' 41.82" E

Curve Data

 Curve RPC-3
 P.I. Station = 3577+41.75 N 8,095,836.1615 E 21,491,491.9403
 Delta = 83° 10' 11.18" (LT)
 Degree = 24° 48' 00.53"
 Tangent = 205.0091
 Length = 335.3600
 Radius = 231.0300
 External = 77.8447
 Long Chord = 306.6826
 Mid. Ord. = 58.2258
 P.C. Station = 3575+36.74 N 8,095,631.3356 E 21,491,500.6053
 P.T. Station = 3578+72.10 N 8,095,851.9175 E 21,491,287.5376
 C.C. = N 8,095,621.5708 E 21,491,269.7818
 Back = N 2° 25' 20.66" W
 Ahead = N 85° 35' 31.85" W
 Chord Bear = N 44° 00' 26.25" W

Course from PT RPC-3 to RPC2 N 85° 35' 31.85" W Dist 335.0000
 Point RPC2 N 8,095,877.6640 E 21,490,953.5285 Sta 3582+07.10

Ending chain RPCF55 description

RAMP D F-55 ALIGNMENT DATA

Beginning chain RPDF55 description

Point RPD200 N 8,095,886.4941 E 21,492,614.9272 Sta 4577+05.15
 Course from RPD200 to PC RPDF55-1 N 0° 35' 37.48" E Dist 285.6900

Curve Data

Curve RPDF55-1
 P.I. Station = 4580+90.43 N 8,096,271.7549 E 21,492,618.9197
 Delta = 35° 28' 17.52" (LT)
 Degree = 18° 24' 00.02"
 Tangent = 99.5914
 Length = 192.7800
 Radius = 311.3900
 External = 15.5384
 Long Chord = 189.7160
 Mid. Ord. = 14.7999
 P.C. Station = 4579+90.84 N 8,096,172.1688 E 21,492,617.8877
 P.T. Station = 4581+83.62 N 8,096,353.4571 E 21,492,561.9706
 C.C. = N 0° 35' 37.48" E 8,096,175.3956 E 21,492,306.5144
 Back = N 0° 35' 37.48" E
 Ahead = N 34° 52' 40.03" W
 Chord Bear = N 17° 08' 31.27" W

Course from PT RPDF55-1 to PC RPDF55-2 N 34° 52' 40.03" W Dist 623.5000

Curve Data

Curve RPDF55-2
 P.I. Station = 4590+57.43 N 8,097,070.3085 E 21,492,062.3011
 Delta = 24° 38' 38.06" (RT)
 Degree = 4° 59' 59.93"
 Tangent = 250.3109
 Length = 492.8800
 Radius = 1,145.9200
 External = 27.0200
 Long Chord = 489.0895
 Mid. Ord. = 26.3975
 P.C. Station = 4588+07.12 N 8,096,864.9600 E 21,492,205.4359
 P.T. Station = 4593+00.00 N 8,097,316.6372 E 21,492,017.8292
 C.C. = N 34° 52' 40.03" W 8,097,520.2290 E 21,493,145.5185
 Back = N 34° 52' 40.03" W
 Ahead = N 10° 14' 01.97" W
 Chord Bear = N 22° 33' 21.00" W

Ending chain RPDF55 description

LOOP E F-55 ALIGNMENT DATA

Beginning chain RPEF55 description

Curve Data

Curve RPEF55-1
 P.I. Station = 5585+49.91 N 8,095,923.9801 E 21,491,838.8480
 Delta = 252° 35' 44.39" (LT)
 Degree = 26° 02' 36.73"
 Tangent = 299.5175
 Length = 969.8977
 Radius = 220.0000
 External = 591.6325
 Long Chord = 354.6183
 Mid. Ord. = 350.2362
 P.C. Station = 5582+50.39 N 8,096,219.0342 E 21,491,787.3330
 P.T. Station = 5592+20.29 N 8,095,963.0781 E 21,491,541.8934
 C.C. = N 9° 54' 13.40" W 8,096,181.1957 E 21,491,570.6114
 Back = N 9° 54' 13.40" W
 Ahead = S 82° 29' 57.80" E
 Chord Bear = S 43° 47' 54.40" W

Ending chain RPEF55 description

COUNTY ROAD F-51 ALIGNMENT DATA

Beginning chain SRF51 description

Point SR100 N 8,101,217.0628 E 21,489,987.3890 Sta 1528+35.00
 Course from SR100 to SR101 N 89° 44' 13.46" E Dist 1,165.0000
 Point SR101 N 8,101,222.4089 E 21,491,152.3768 Sta 1540+00.00

Ending chain SRF51 description

RAMP B F-51 ALIGNMENT DATA

Beginning chain RPBF51 description

Curve Data

Curve RPBF51-1
 P.I. Station = 2523+25.14 N 8,100,197.5837 E 21,491,058.2138
 Delta = 22° 28' 02.03" (RT)
 Degree = 3° 30' 00.02"
 Tangent = 325.1369
 Length = 641.9200
 Radius = 1,637.0200
 External = 31.9763
 Long Chord = 637.8152
 Mid. Ord. = 31.3636
 P.C. Station = 2520+00.00 N 8,099,892.0528 E 21,491,169.4112
 P.T. Station = 2526+41.92 N 8,100,522.4189 E 21,491,072.2166
 C.C. = N 19° 59' 56.01" W 8,100,451.9168 E 21,492,707.7177
 Back = N 19° 59' 56.01" W
 Ahead = N 2° 28' 06.02" E
 Chord Bear = N 8° 45' 54.99" W

Course from PT RPBF51-1 to RPB101 N 2° 28' 06.02" E Dist 700.4104

Point RPB101 N 8,101,222.1795 E 21,491,102.3814 Sta 2533+42.33

Ending chain RPBF51 description

RAMP C F-51 ALIGNMENT DATA

Beginning chain RPCF51 description

```

Curve Data
*-----*
Curve RPCF51-1
P.I. Station = 3524+25.30 N 8,100,209.4425 E 21,490,835.3179
Delta = 8° 44' 51.92" (LT)
Degree = 2° 30' 00.00"
Tangent = 175.2956
Length = 349.9100
Radius = 2,291.8300
External = 6.6942
Long Chord = 349.5702
Mid. Ord. = 6.6747
P.C. Station = 3522+50.00 N 8,100,050.5173 E 21,490,909.2863
P.T. Station = 3525+99.91 N 8,100,355.2697 E 21,490,738.0398
C.C. = N 24° 57' 31.04" W 8,099,083.4484 E 21,488,831.4839
Back = N 33° 42' 22.95" W
Ahead = N 29° 19' 57.00" W
Chord Bear = N 29° 19' 57.00" W

```

Course from PT RPCF51-1 to PC RPCF51-2 N 33° 42' 22.95" W Dist 826.9400

```

Curve Data
*-----*
Curve RPCF51-2
P.I. Station = 3535+81.31 N 8,101,171.6881 E 21,490,193.4251
Delta = 52° 45' 56.51" (LT)
Degree = 18° 24' 00.02"
Tangent = 154.4592
Length = 286.7700
Radius = 311.3900
External = 36.2037
Long Chord = 276.7429
Mid. Ord. = 32.4329
P.C. Station = 3534+26.85 N 8,101,043.1947 E 21,490,279.1402
P.T. Station = 3537+13.62 N 8,101,181.1928 E 21,490,039.2587
C.C. = N 33° 42' 22.95" W 8,100,870.3929 E 21,490,020.0973
Back = N 86° 28' 19.47" W
Ahead = N 60° 05' 21.21" W
Chord Bear = N 60° 05' 21.21" W

```

Ending chain RPCF51 description

LINCOLN ROAD ALIGNMENT DATA

Beginning chain SRLINCOLN description

```

Point SRLINCOLN3 N 8,106,497.1271 E 21,489,775.3052 Sta 1580+50.00
Course from SRLINCOLN3 to SRLINCOLN4 N 89° 36' 01.48" E Dist 1,200.0000
Point SRLINCOLN4 N 8,106,505.4960 E 21,490,975.2760 Sta 1592+50.00
Ending chain SRLINCOLN description

```

COUNTY ROAD F-45 ALIGNMENT DATA

Beginning chain SRF45 description

```

Point SR300 N 8,111,814.5006 E 21,489,682.3917 Sta 1632+65.00
Course from SR300 to SR301 N 89° 58' 13.48" E Dist 1,605.0000
Point SR301 N 8,111,815.3294 E 21,491,287.3915 Sta 1648+70.00
Ending chain SRF45 description

```

RAMP A F-45 ALIGNMENT DATA

Beginning chain RPAF45 description

```

Point RPA200 N 8,111,814.7588 E 21,490,182.3916 Sta 1540+49.56
Course from RPA200 to PC RPAF45-1 N 10° 14' 37.61" E Dist 921.8570

```

```

Curve Data
*-----*
Curve RPAF45-1
P.I. Station = 1551+31.01 N 8,112,878.9673 E 21,490,374.7126
Delta = 6° 22' 37.19" (LT)
Degree = 2° 00' 00.00"
Tangent = 159.5898
Length = 318.8500
Radius = 2,864.7900
External = 4.4417
Long Chord = 318.6855
Mid. Ord. = 4.4348
P.C. Station = 1549+71.42 N 8,112,721.9214 E 21,490,346.3317
P.T. Station = 1552+90.27 N 8,113,038.1938 E 21,490,385.4749
C.C. = N 10° 14' 37.61" E 8,113,231.3863 E 21,487,527.2064
Back = N 3° 52' 00.42" E
Ahead = N 7° 03' 19.02" E
Chord Bear = N 7° 03' 19.02" E

```

Ending chain RPAF45 description

RAMP B F-45 ALIGNMENT DATA

Beginning chain RPB45 description

```

Curve Data
*-----*
Curve RPB45-1
P.I. Station = 2529+31.17 N 8,110,676.7731 E 21,490,592.8375
Delta = 5° 50' 30.47" (RT)
Degree = 2° 00' 00.00"
Tangent = 146.1716
Length = 292.0900
Radius = 2,864.7900
External = 3.7267
Long Chord = 291.9635
Mid. Ord. = 3.7218
P.C. Station = 2527+85.00 N 8,110,530.9326 E 21,490,583.0044
P.T. Station = 2530+77.09 N 8,110,820.8554 E 21,490,617.4636
C.C. = N 3° 51' 26.21" E 8,110,338.2141 E 21,493,441.3048
Back = N 9° 41' 56.69" E
Ahead = N 6° 46' 41.45" E
Chord Bear = N 6° 46' 41.45" E

```

Course from PT RPB45-1 to RPB201 N 9° 41' 56.69" E Dist 1,008.6330

Point RPB201 N 8,111,815.0712 E 21,490,787.3916 Sta 2540+85.72

Ending chain RPB45 description

RAMP C F-45 ALIGNMENT DATA

Beginning chain RPCF45 description

```

Curve RPCF45-1
P.I. Station = 3529+20.29 N 8,110,668.3127 E 21,490,404.3099
Delta = 12° 13' 04.82" (LT)
Degree = 2° 30' 00.00"
Tangent = 245.2902
Length = 488.7200
Radius = 2,291.8300
External = 13.0891
Long Chord = 487.7945
Mid. Ord. = 13.0148
P.C. Station = 3526+75.00 N 8,110,423.0672 E 21,490,408.9936
P.T. Station = 3531+63.72 N 8,110,907.0120 E 21,490,347.8305
C.C. = N 8,110,379.3057 E 21,488,117.5814
Back = N 1° 05' 38.77" W
Ahead = N 13° 18' 43.59" W
Chord Bear = N 7° 12' 11.18" W
    
```

Course from PT RPCF45-1 to PC RPCF45-2 N 13° 18' 43.59" W Dist 691.0900

```

Curve RPCF45-2
P.I. Station = 3540+25.25 N 8,111,745.3935 E 21,490,149.4584
Delta = 72° 50' 07.99" (LT)
Degree = 24° 48' 00.53"
Tangent = 170.4407
Length = 293.6900
Radius = 231.0300
External = 56.0673
Long Chord = 274.3105
Mid. Ord. = 45.1179
P.C. Station = 3538+54.81 N 8,111,579.5326 E 21,490,188.7032
P.T. Station = 3541+48.50 N 8,111,756.8447 E 21,489,979.4028
C.C. = N 8,111,526.3367 E 21,489,963.8810
Back = N 13° 18' 43.59" W
Ahead = N 86° 08' 51.58" W
Chord Bear = N 49° 43' 47.59" W
    
```

Ending chain RPCF45 description

RAMP C2 F-45 ALIGNMENT DATA

Beginning chain RPCF45-2 description

```

Point RPC600 N 8,111,589.0702 E 21,490,227.8900 Sta 13538+55.03
Course from RPC600 to RPC601 N 11° 23' 52.55" W Dist 230.2291
Point RPC601 N 8,111,814.7588 E 21,490,182.3916 Sta 13540+85.26
    
```

Ending chain RPCF45-2 description

COUNTY ROAD F-41 ALIGNMENT DATA

Beginning chain SRF41 description

```

Point SR402 N 8,126,488.2669 E 21,490,284.7221 Sta 1780+00.00
Course from SR402 to SR403 N 89° 57' 57.37" E Dist 2,000.0000
Point SR403 N 8,126,489.4559 E 21,492,284.7218 Sta 1800+00.00
    
```

Ending chain SRF41 description

RAMP A F-41 ALIGNMENT DATA

Beginning chain RPAF41 description

```

Point RPA400 N 8,126,488.5374 E 21,490,739.7220 Sta 1587+20.11
Course from RPA400 to PC RPAF41-1 N 14° 44' 56.12" E Dist 766.8500
    
```

```

Curve RPAF41-1
P.I. Station = 1596+76.25 N 8,127,413.1730 E 21,490,983.1397
Delta = 7° 33' 38.15" (LT)
Degree = 2° 00' 00.00"
Tangent = 189.2898
Length = 378.0300
Radius = 2,864.7900
External = 6.2468
Long Chord = 377.7558
Mid. Ord. = 6.2332
P.C. Station = 1594+86.96 N 8,127,230.1202 E 21,490,934.9496
P.T. Station = 1598+64.99 N 8,127,600.9750 E 21,491,006.8257
C.C. = N 8,127,959.4492 E 21,488,164.5523
Back = N 14° 44' 56.12" E
Ahead = N 7° 11' 17.97" E
Chord Bear = N 10° 58' 07.04" E
    
```

Ending chain RPAF41 description

RAMP B F-41 ALIGNMENT DATA

Beginning chain RPB41 description

```

Curve RPB41-1
P.I. Station = 2575+46.56 N 8,125,273.7980 E 21,491,080.7287
Delta = 4° 50' 38.21" (RT)
Degree = 1° 30' 00.00"
Tangent = 161.5612
Length = 322.9300
Radius = 3,819.7200
External = 3.4152
Long Chord = 322.8338
Mid. Ord. = 3.4122
P.C. Station = 2573+85.00 N 8,125,113.5066 E 21,491,060.5122
P.T. Station = 2577+07.93 N 8,125,431.8098 E 21,491,114.4083
C.C. = N 8,124,635.5376 E 21,494,850.2096
Back = N 7° 11' 18.16" E
Ahead = N 12° 01' 56.37" E
Chord Bear = N 9° 36' 37.26" E
    
```

Course from PT RPB41-1 to RPB301 N 12° 01' 56.37" E Dist 1,080.8300

```

Point RPB301 N 8,126,488.8941 E 21,491,339.7219 Sta 2587+88.76
    
```

Ending chain RPB41 description

RAMP C F-41 ALIGNMENT DATA

Beginning chain RPCF41 description

```

=====
Curve Data
*-----*
Curve RPCF41-1
P.I. Station = 3576+65.57 N 8,125,404.0717 E 21,490,898.5239
Delta = 11° 59' 05.12" (LT)
Degree = 2° 30' 00.00"
Tangent = 240.5728
Length = 479.3900
Radius = 2,291.8300
External = 12.5918
Long Chord = 478.5165
Mid. Ord. = 12.5230
P.C. Station = 3574+25.00 N 8,125,163.6808 E 21,490,889.1688
P.T. Station = 3579+04.39 N 8,125,641.1653 E 21,490,857.7577
C.C. = N 8,125,252.8034 E 21,488,599.0723
Back = N 2° 13' 43.06" E
Ahead = N 9° 45' 22.06" W
Chord Bear = N 3° 45' 49.50" W

```

Course from PT RPCF41-1 to PC RPCF41-2 N 9° 45' 22.06" W Dist 622.8800

```

=====
Curve Data
*-----*
Curve RPCF41-2
P.I. Station = 3587+09.28 N 8,126,434.4160 E 21,490,721.3649
Delta = 76° 27' 49.73" (LT)
Degree = 24° 48' 00.53"
Tangent = 182.0111
Length = 308.3200
Radius = 231.0300
External = 63.0838
Long Chord = 285.9439
Mid. Ord. = 49.5531
P.C. Station = 3585+27.27 N 8,126,255.0371 E 21,490,752.2076
P.T. Station = 3588+35.59 N 8,126,446.4154 E 21,490,539.7498
C.C. = N 8,126,215.8880 E 21,490,524.5188
Back = N 9° 45' 22.06" W
Ahead = N 86° 13' 11.79" W
Chord Bear = N 47° 59' 16.93" W

```

Ending chain RPCF41 description

RAMP D F-41 ALIGNMENT DATA

Beginning chain RPDF41 description

```

=====
Point RPD1 N 8,126,488.8941 E 21,491,339.7219 Sta 4587+54.15
Course from RPD1 to PC RPDF41-1 N 7° 39' 30.51" W Dist 950.3700

```

```

=====
Curve Data
*-----*
Curve RPDF41-1
P.I. Station = 4599+02.75 N 8,127,627.2508 E 21,491,186.6501
Delta = 9° 53' 13.22" (RT)
Degree = 2° 30' 00.00"
Tangent = 198.2321
Length = 395.4800
Radius = 2,291.8300
External = 8.5571
Long Chord = 394.9895
Mid. Ord. = 8.5253
P.C. Station = 4597+04.52 N 8,127,430.7868 E 21,491,213.0681
P.T. Station = 4601+00.00 N 8,127,825.3330 E 21,491,194.3584
C.C. = N 8,127,736.2143 E 21,493,484.4550
Back = N 7° 39' 30.51" W
Ahead = N 2° 13' 42.71" E
Chord Bear = N 2° 42' 53.90" W

```

Ending chain RPDF41 description

COUNTY ROAD F-33 ALIGNMENT DATA

Beginning chain SRF33 description

```

=====
Point SR500 N 8,138,439.8612 E 21,489,669.0976 Sta 1900+00.00
Course from SR500 to SR501 S 89° 43' 32.59" E Dist 1,500.0000
Point SR501 N 8,138,432.6806 E 21,491,169.0804 Sta 1915+00.00

```

Ending chain SRF33 description

305TH STREET ALIGNMENT DATA

Beginning chain SR305 description

```

=====
Point SR600 N 8,146,184.1798 E 21,489,785.1938 Sta 1980+00.00
Course from SR600 to SR601 N 86° 23' 07.84" E Dist 1,000.0000
Point SR601 N 8,146,247.2227 E 21,490,783.2046 Sta 1990+00.00

```

Ending chain SR305 description

Survey Information

SCOTT COUNTY
 PIN:17-82-061-010
 NHSN-061-5(144)-2R-82
 PIPE CULVERTS ALONG
 HWY 61 IN SCOTT COUNTY
 SAP:348.1

General Information

Measurement units for this survey are US survey feet. This survey is for the design of improvements relating to the proposed culvert updates for hwy 61 in Scott Co. IA. Project datum and control information is provided by Design Survey Office. This project is a complete field survey, except for underground utility information (surface features only).

Vertical Control

Vertical datum for this survey is relative to NAVD88, Geoid 12a (IARTN GPS Derived).

Horizontal Control

Measurement units for this survey are U.S. Survey Feet.

Horizontal datum for this survey is unmodified Iowa State IARCSZONE11 coordinate system. Horizontal positions were established by 120 second averaged observations utilizing the IARTN.

VERTICAL CONTROL

Point	North	East	Elevation	Feature	Description
C30277	8126213.3860	21491345.9700	749.1830	BM-1/2	IRS
D10044	8105708.7480	21490556.3200	765.8660	BM-1/2	IRS
C30428	8128087.2440	21491364.0700	736.9470	BM-1/2	IRS
G20602	8095582.9250	21491664.5900	766.3230	BM-1/2	IRS
D10086	8096912.4540	21491870.8600	750.6940	BM-1/2	IRS
D10017	8095582.9220	21491664.6100	766.3280	BM-1/2	IRS
P41344	8129463.6520	21491091.7300	735.2720	BM-1/2IRS	
D10087	8102305.4150	21490580.3600	750.2080	BM-1/2IRS	
D10062	8106717.9980	21490467.5800	769.2450	BM-CUT	SQUARE IN GAURD RAIL FOOTING
C31111	8122282.9310	21490659.9200	747.7360	BM-CUT	X TOP OF HEADWALL
D10238	8101428.9270	21490508.8800	744.8830	BM-CUTSQUAREINCON	
D10225	8106518.2880	21490380.9800	771.4080	BM-CUTX	
C30318	8122229.7090	21491013.3600	766.8670	BM-RR	SPIKE IN FIELD FENCE POST
D10000	8092915.8800	21490844.0200	756.2880	BM-RRSPIKEIN	G RAIL

CONTROL POINTS

ALL CONTROL POINTS SET ARE 1/2 IRON RODS WITH RED CAPS UNLESS OTHERWISE NOTED

Point	North	East	Elevation	Feature	Description
CP112	8102416.2870	21490567.3600	751.2260	CP	IRS RED CAP
CP110	8102317.6300	21490578.4500	750.2460	CP	IRS RED CAP
CP114	8106540.7560	21490409.7300	769.5480	CP	IRS RED CAP
CP10	8122186.5880	21490854.9430	762.6800	CP	IRS RED CAP
CP113	8106626.4800	21490410.7700	769.6080	CP	IRS RED CAP
CP13	8126324.0850	21491308.6760	743.0250	CP	IRS RED CAP
CP108	8096956.1410	21491872.8700	750.1820	CP	IRS RED CAP
CP25	8122209.2570	21490715.8840	762.7650	CP	IRS RED CAP
CP19	8132185.0770	21491157.1420	702.8430	CP	IRS RED CAP
CP102	8095593.6940	21491667.6000	766.2420	CP	IRS RED CAP
CP100	8092910.0520	21490843.4400	755.4880	CP	IRS RED CAP
CP20	8133011.0460	21491134.6410	699.2530	CP	IRS RED CAP
CP17	8131217.9760	21491184.5800	713.0760	CP	IRS RED CAP
CP18	8131968.7440	21491166.3400	704.6530	CP	IRS RED CAP
CP12	8126173.5360	21491278.1130	748.1280	CP	IRS RED CAP
CP11	8122455.6830	21490872.6770	762.4900	CP	IRS RED CAP
CP101	8092818.7940	21490813.9100	751.2320	CP	IRS RED CAP
CP16	8131036.1760	21491191.0040	715.2490	CP	IRS RED CAP
CP14	8128009.6440	21491212.3390	753.9490	CP	IRS RED CAP
CP109	8096837.8490	21491873.4600	752.7070	CP	IRS RED CAP
CP21	8133193.8060	21491129.4100	701.8840	CP	IRS RED CAP
CP22	8129141.7280	21491101.4560	739.9440	CP	IRS RED CAP
CP23	8129018.7960	21491101.6850	741.3740	CP	IRS RED CAP
CP27	8138681.9710	21490310.6460	700.8390	CP	IRS RED CAP
CP24	8122382.4630	21490725.7840	762.8720	CP	IRS RED CAP
CP26	8138776.2980	21490294.9950	700.9850	CP	IRS RED CAP
CP15	8128346.9570	21491225.3000	749.5070	CP	IRS RED CAP
CP118	8095933.1740	21491140.3700	742.3620	CP	IRS RED CAP
CP103	8095487.6320	21491633.5600	766.6200	CP	IRS RED CAP
CP117	8096010.8510	21491274.4400	741.1030	CP	IRS RED CAP
CP104	8105662.1200	21490551.3900	766.4210	CP	IRS RED CAP
CP107	8106800.3880	21490500.6700	769.4930	CP	IRS RED CAP
CP106	8106684.3450	21490502.7500	769.8480	CP	IRS RED CAP
CP105	8105762.4220	21490551.7900	766.7990	CP	IRS RED CAP

108-23A
08-01-08

TRAFFIC CONTROL PLAN

1. U.S. 61 shall remain open to traffic at all times. Lane and shoulder closures as necessary shall be per the TC- series of Standard Road Plans referenced elsewhere in these documents.
2. Ramps may be closed for construction as necessary. Refer to Sheet J.2 for detour.

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
IMN-080-8(308)278--0E-82	Pipe Culverts

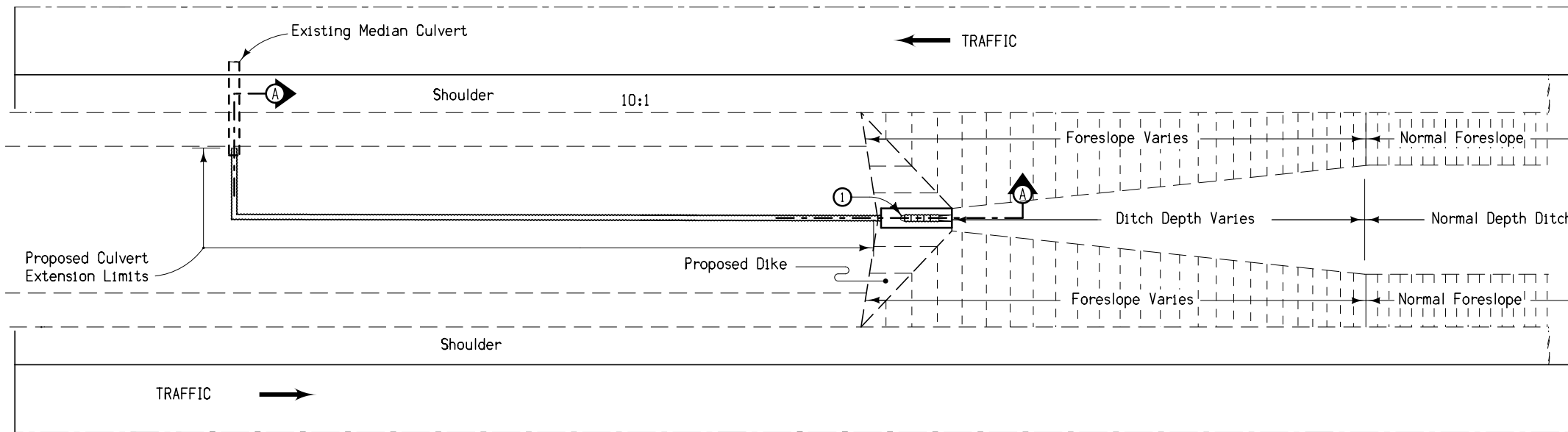


 W20-2 ①	 M4-8 M3-3 M1-4.2 M6-3 ②	 M4-8 M3-3 M1-4.2 M5-1 ③	 M4-8 M3-3 M1-4.2 M6-1L ④	 M4-8 M3-3 M1-4.2 M6-2 ⑤	 E5-2a ⑥	 ⑦
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LEGEND

- TRAFFIC SIGN
- TYPE III BARRICADE
- DETOUR ROUTE
- DETOUR ROUTE DIRECTION
- SAFETY CLOSURE

DETOUR ROUTE



CASE 'A'
Cable Guard Installation

Construct the extension by placing the appropriate size of HDPE Pipe into the existing culvert. After the HDPE pipe has been assembled at the proper angle and placed into the culvert, some adjusting may be required by rotating the HDPE Pipe to fit the new flow line. Seal the area between the existing concrete pipe and HDPE Pipe with concrete.

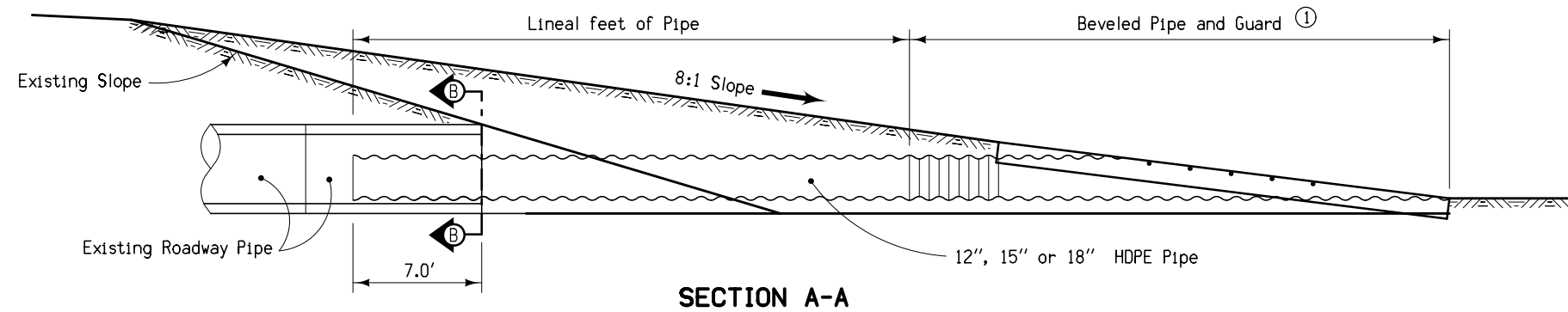
Construct the extension using Class 'C' concrete.

Excavating silt for pipe placement is incidental to pipe items.

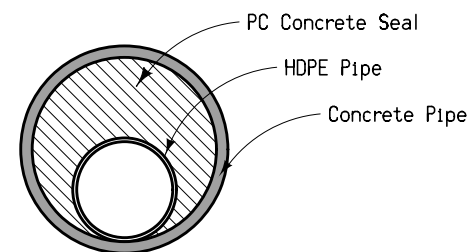
Place a silt fence ditch check immediately upstream from the inlet of the culvert. See EC-201 for construction details.

Metal pipe will not be allowed.

① For details of Beveled Pipe and Guard, see DR-212.



SECTION A-A



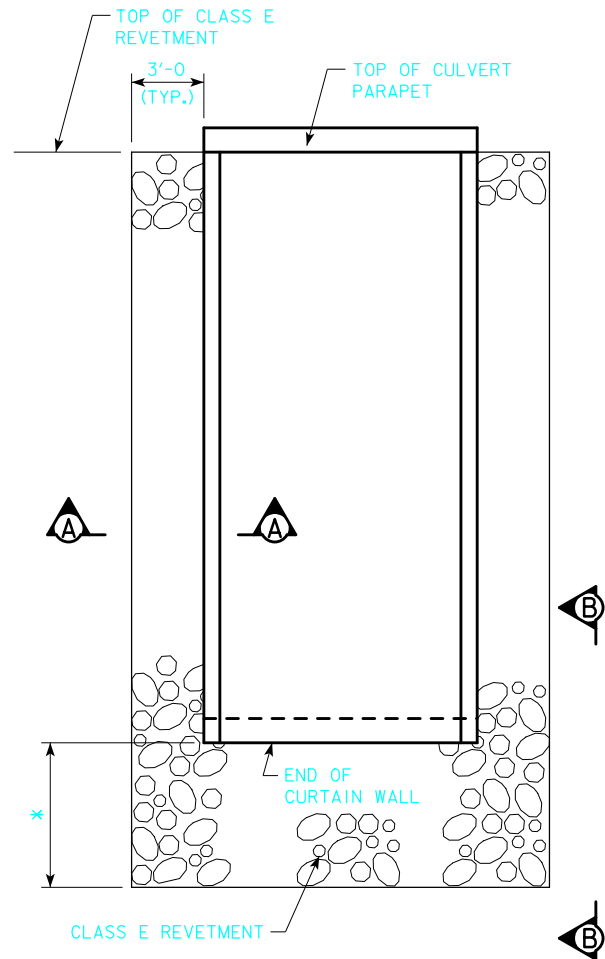
SECTION B-B

Contract Items:

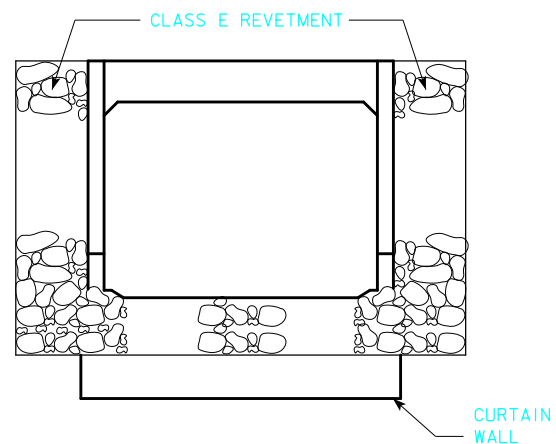
- Plastic Roadway Pipe
- Beveled Pipe and Guard

**MEDIAN CULVERT EXTENSIONS
WITH BEVELED PIPE AND GUARD**

* = SEE CULVERT PLANS FOR LIMITS OF REVETMENT AND ENGINEERING FABRIC.

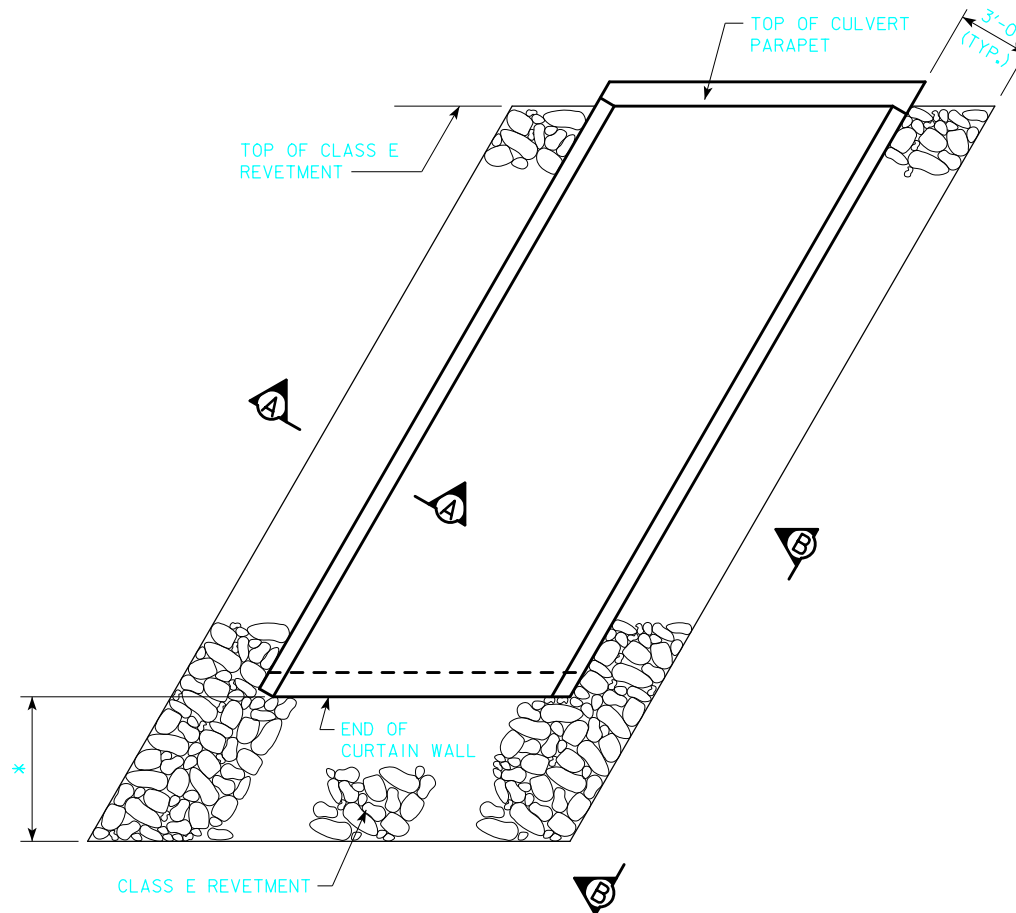


PLAN VIEW

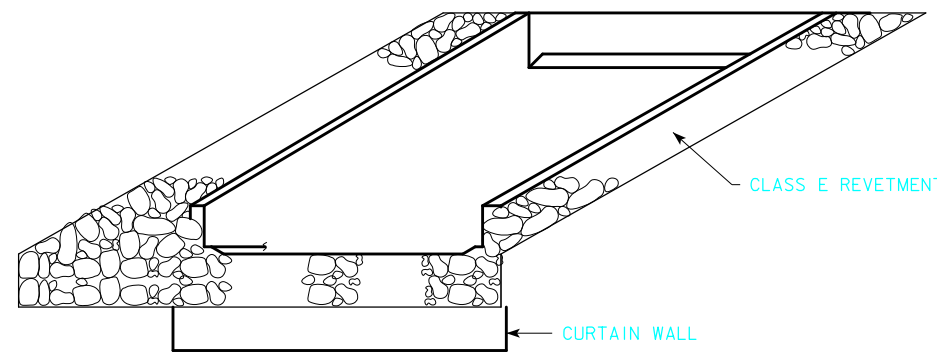


ELEVATION VIEW
0° SKEW HEADWALLS

* = SEE CULVERT PLANS FOR LIMITS OF REVETMENT AND ENGINEERING FABRIC.

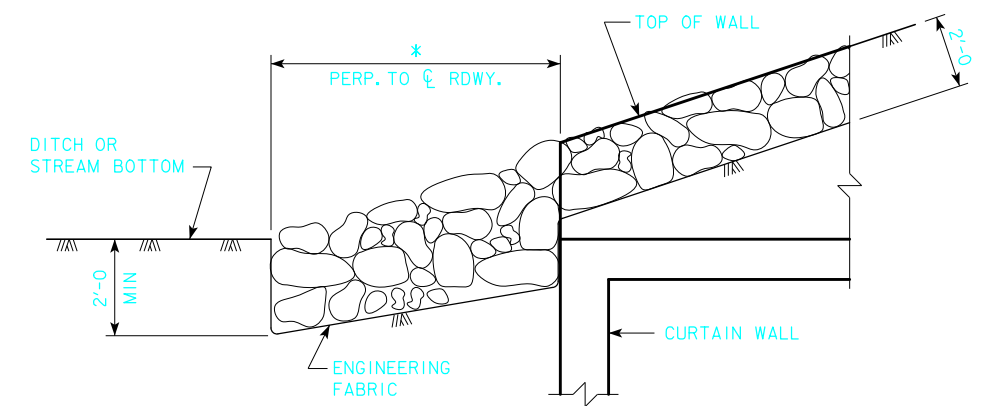


PLAN VIEW

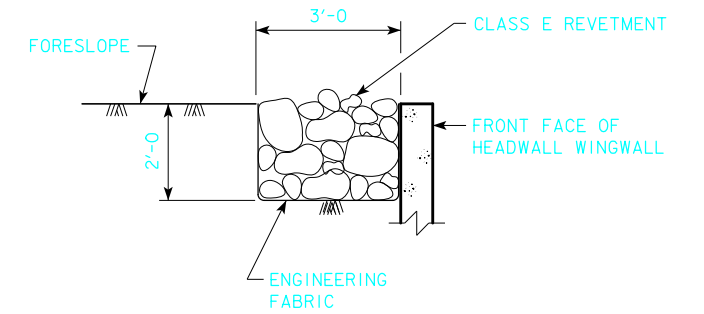


ELEVATION VIEW
---° SKEWED HEADWALL

* = SEE CULVERT PLANS FOR LIMITS OF REVETMENT AND ENGINEERING FABRIC.



VIEW B-B



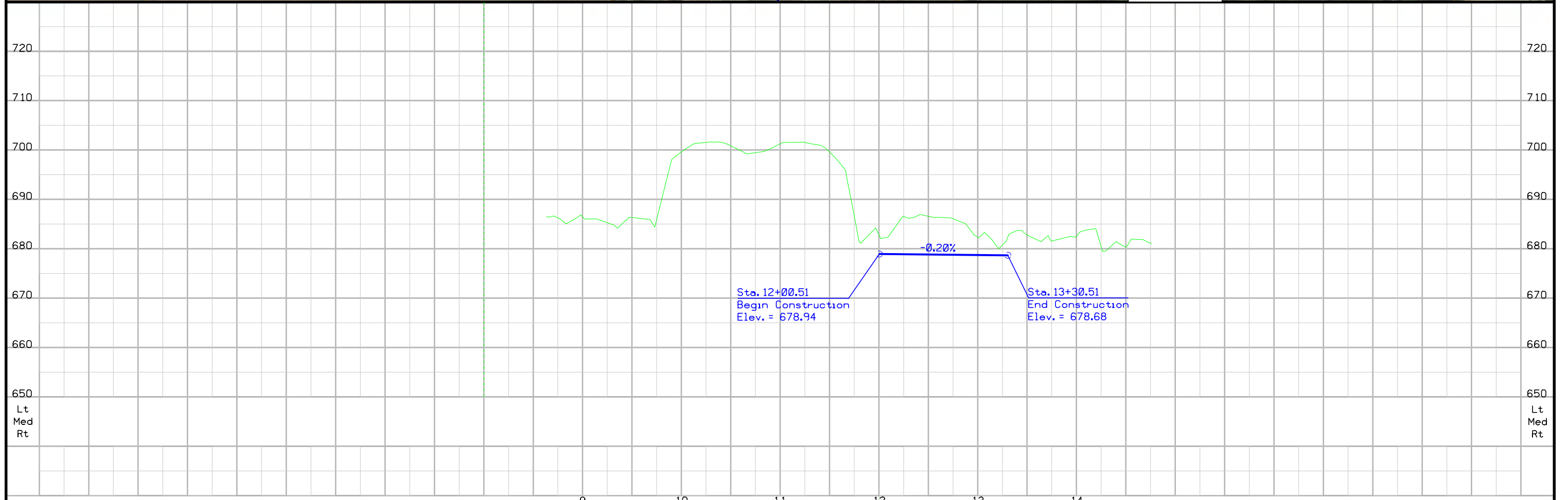
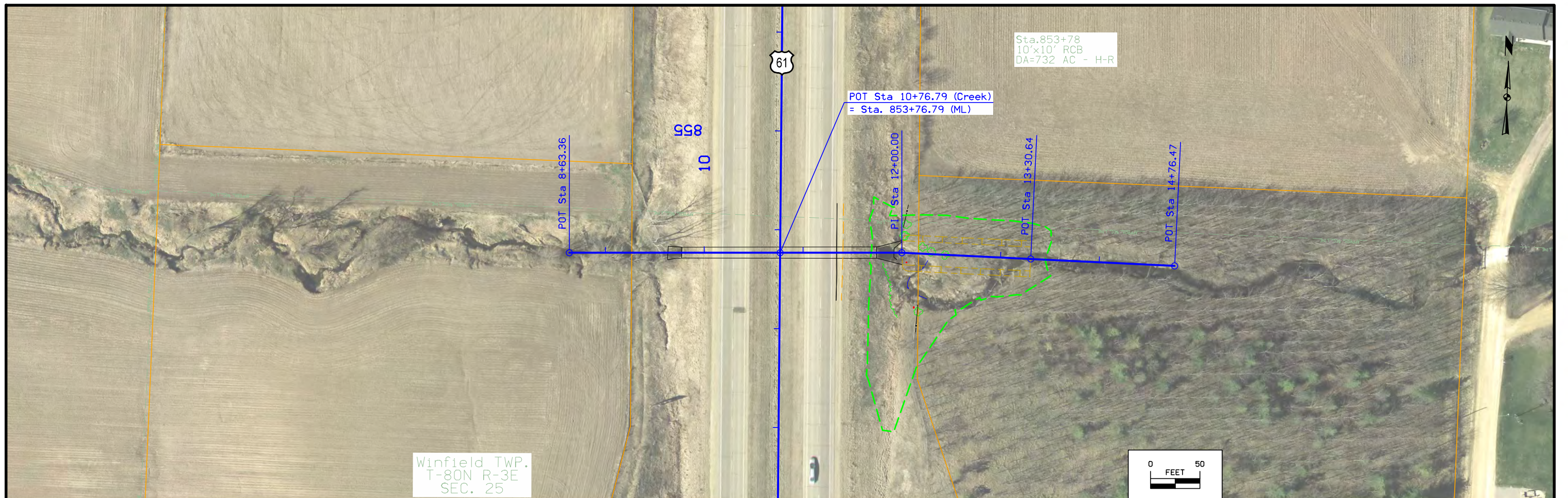
SECTION A-A

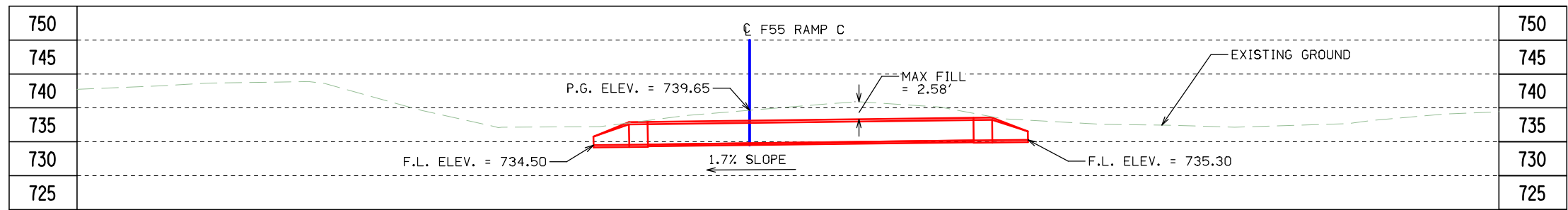
TYPICAL DETAILS

CONSTRUCTION NOTES:

CLASS E REVETMENT SHALL BE USED AND PLACED ACCORDING TO ARTICLE 2507.03, OF THE STANDARD SPECIFICATIONS.
THE ENGINEERING FABRIC SHALL MEET THE MATERIAL REQUIREMENTS IN ACCORDANCE WITH ARTICLE 4196.01, B, 3, OF THE STANDARD SPECIFICATIONS.

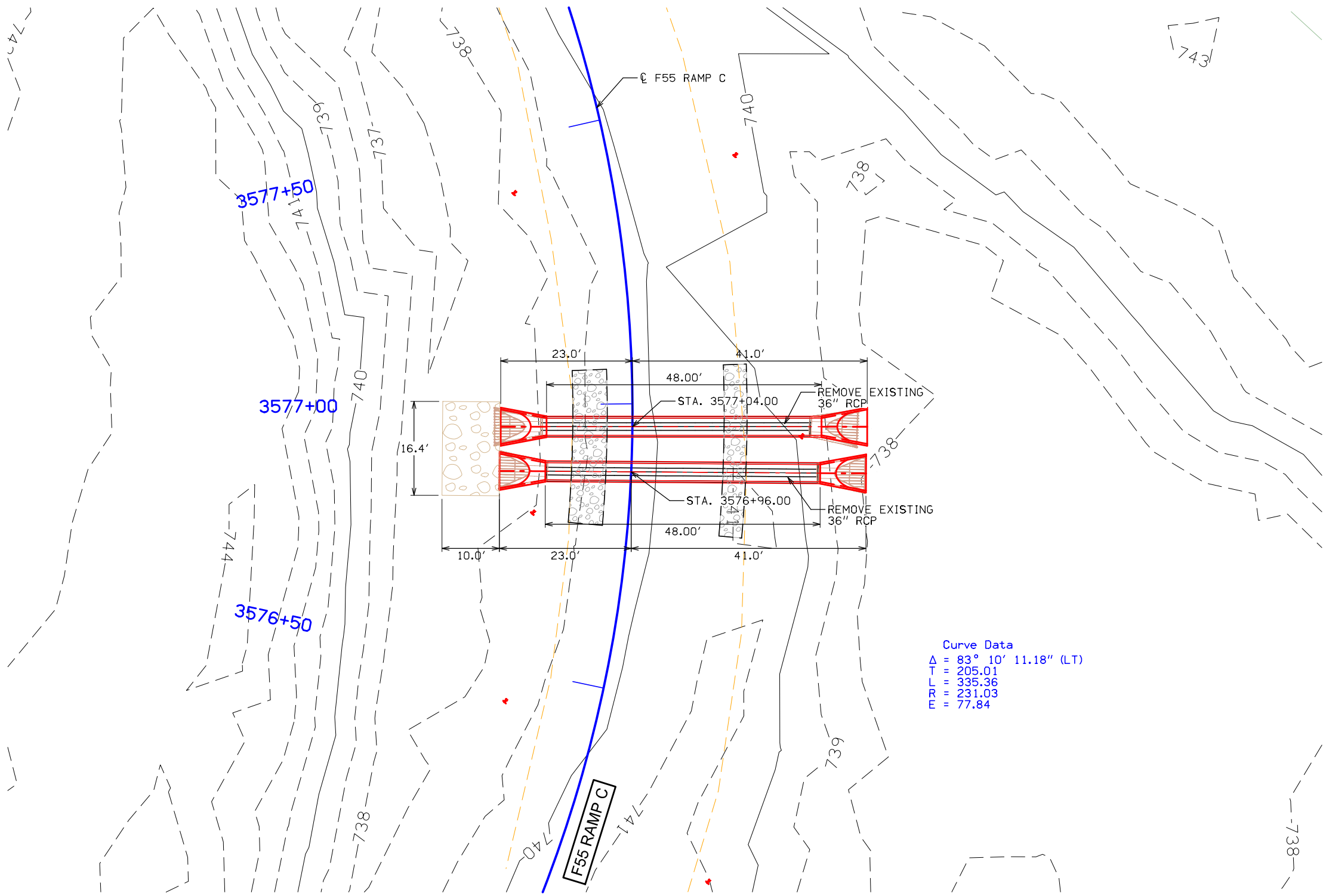
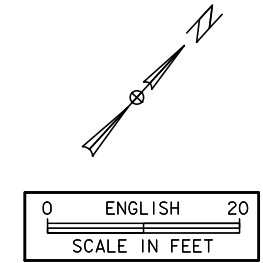
REVETMENT PROTECTION DETAILS





LONGITUDINAL SECTION ALONG CL CULVERT

BENCH MARK NO. D10017
 ELEV. 766.328
 STA. 3574+98.03, 164.62' RT
 1/2IN IRON ROD STEEL
 NOTE: STATION AND OFFSET BASED ON
 CL OF F55 Ramp C



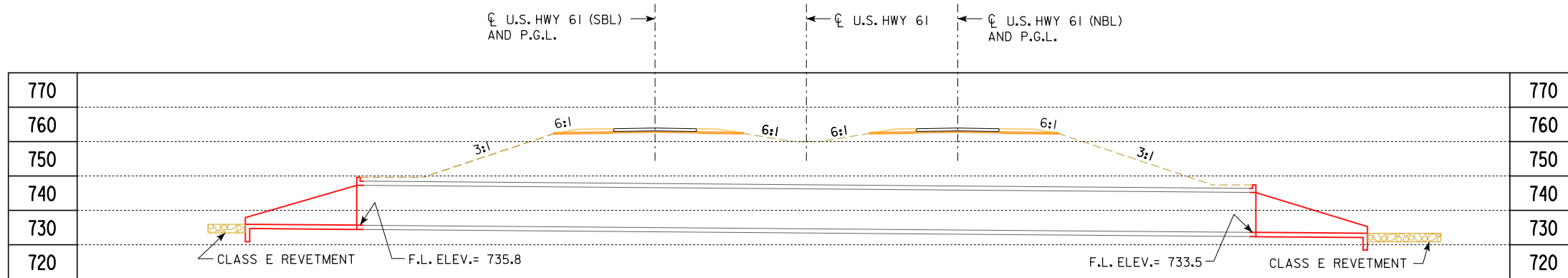
HYDRAULIC DATA
 DRAINAGE AREA = 150.6 ACRES FLAT
 $Q_{50} = 131.6$ CFS

LOCATION
 T-79N R-3E
 SECTION 36
 SHERIDAN TWP.
 SCOTT COUNTY

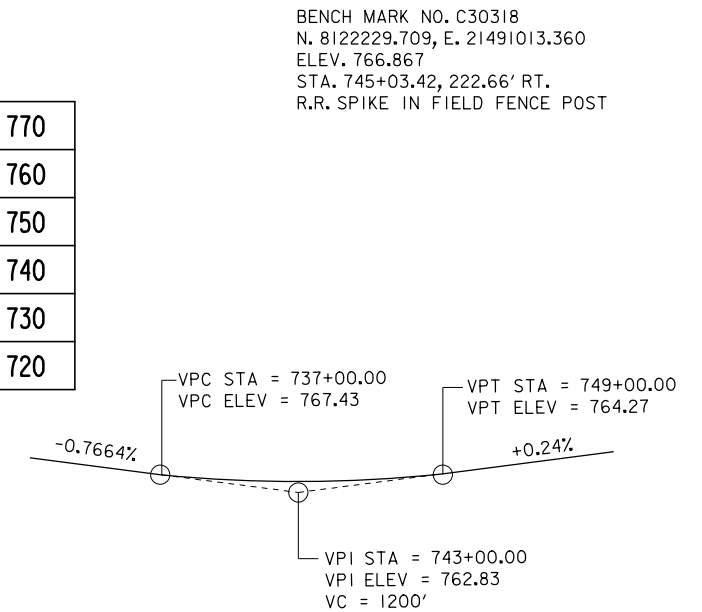
Curve Data
 $\Delta = 83^\circ 10' 11.18''$ (LT)
 $T = 205.01$
 $L = 335.36$
 $R = 231.03$
 $E = 77.84$

PLAT PLAN

DESIGN FOR 0° SKEW
36" X 48'
TWIN REINFORCED
CONCRETE PIPE CULVERT
PLAT PLAN
 STA. 3576+96.00 / STA. 3577+04.00 CL F55 Ramp C 12-17-2019
SCOTT COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. ___ OF ___ FILE NO. 31599 DESIGN NO. ___



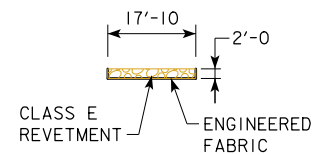
LONGITUDINAL SECTION ALONG CL CULVERT



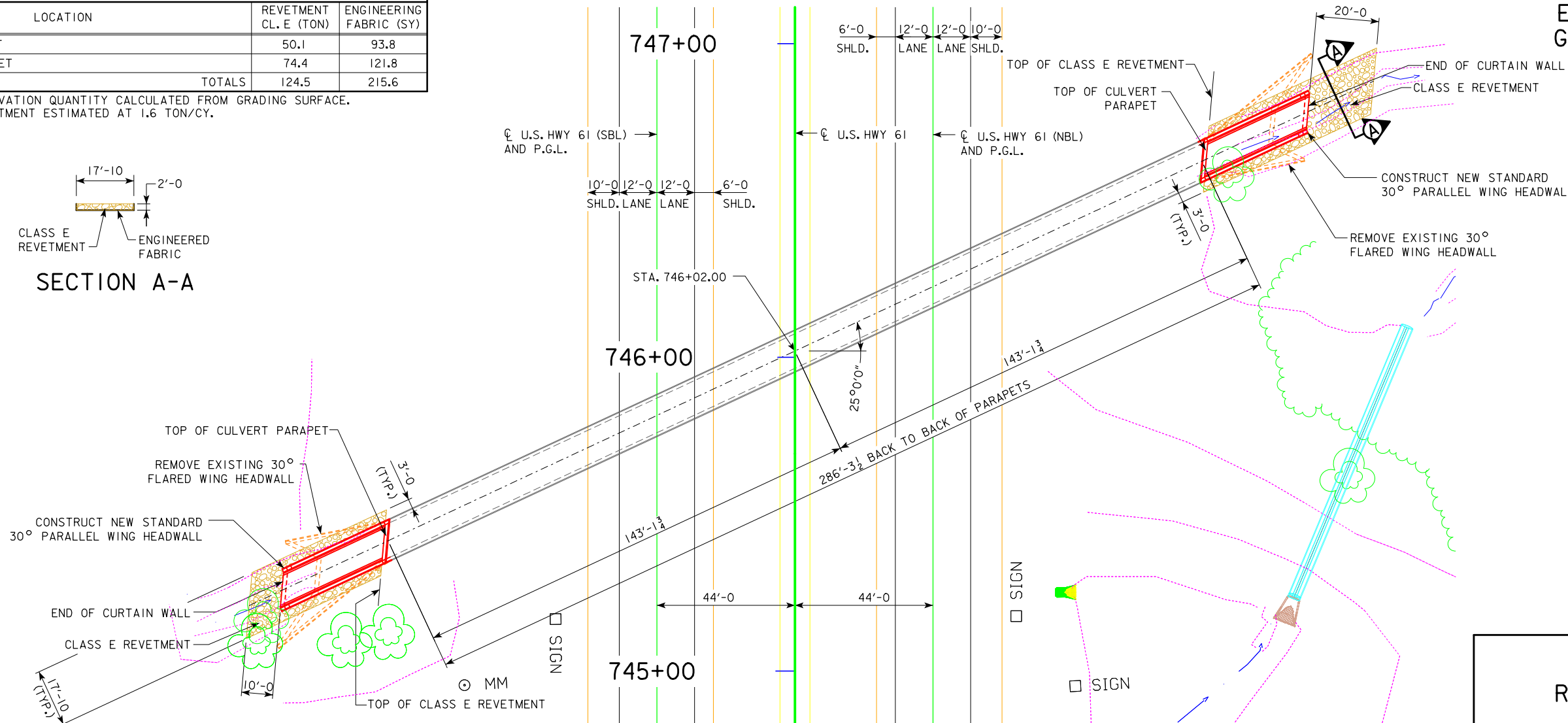
ESTIMATED REVETMENT QUANTITIES

LOCATION	REVETMENT CL. E (TON)	ENGINEERING FABRIC (SY)
INLET	50.1	93.8
OUTLET	74.4	121.8
TOTALS	124.5	215.6

EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE. REVETMENT ESTIMATED AT 1.6 TON/CY.



SECTION A-A



SITUATION PLAN

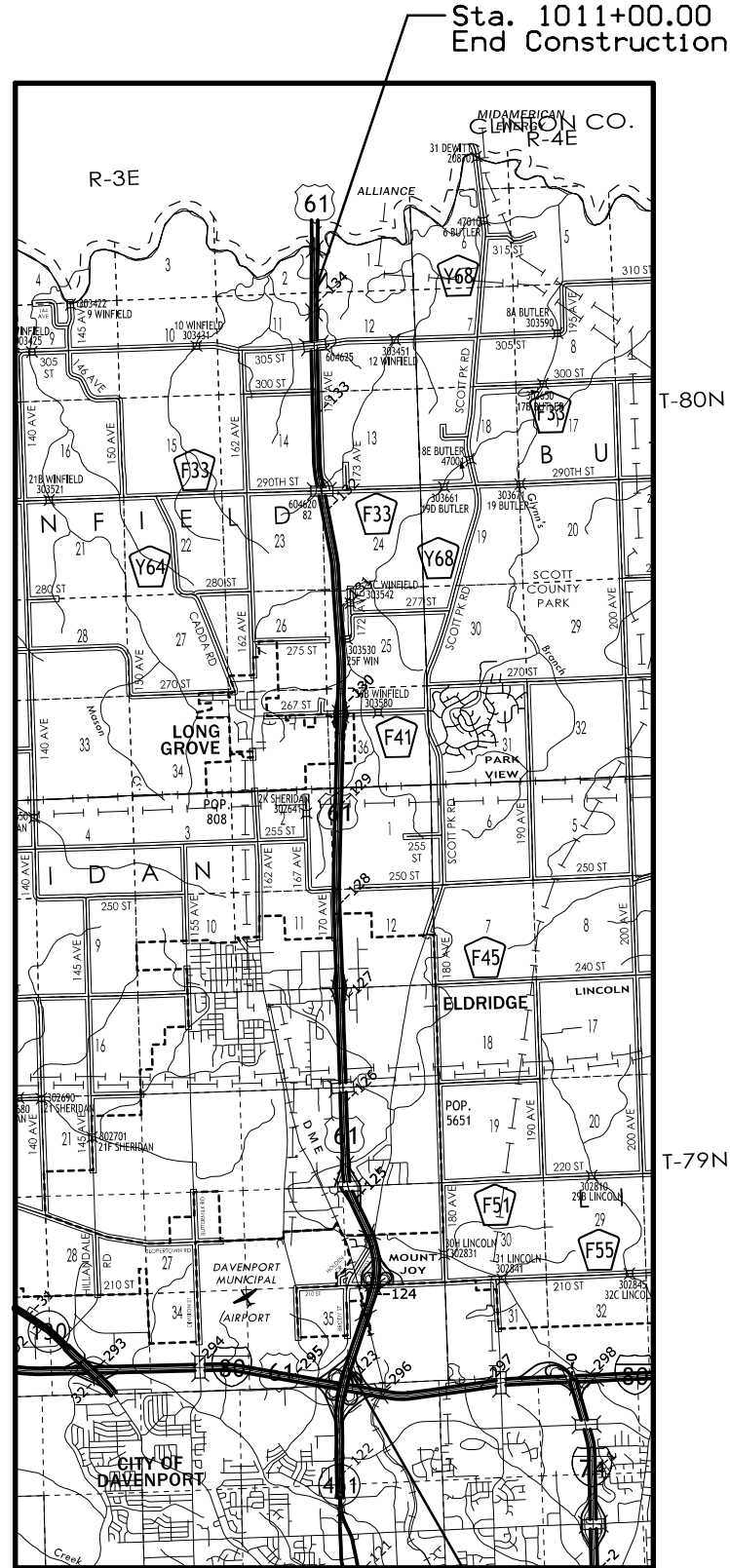
ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED

UTILITIES LEGEND:
NO KNOWN UTILITIES

LOCATION

U.S. 61 OVER McDONALD CREEK
T-79N R-3E
SECTION 1
SHERIDAN TOWNSHIP
SCOTT COUNTY
LATITUDE 41.683592°
LONGITUDE -90.567024°

DESIGN FOR 25° SKEW R.A.
10' X 10' X 286'-3 1/2'
REINFORCED CONCRETE BOX CULVERT
SITUATION PLAN
STA. 746+02.00 CL U.S. 61 MARCH 2018
SCOTT COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. ___ OF ? FILE NO. 31599 DESIGN NO. 1020



NOT TO SCALE — Sta. 447+00.00
 Begin Construction

Sta. 1011+00.00
 End Construction



Highway Division
 PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
SCOTT COUNTY
PIPE CULVERTS

**0.3 MILES NORTH OF I-80 TO 0.3 MILES
 SOUTH OF THE WAPSIPINICON RIVER**

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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

NO MILEAGE SUMMARY

DESIGN DATA URBAN			
2016	AADT	---	V.P.D.
2042	AADT	---	V.P.D.
2042	DHV	---	V.P.H.
	TRUCKS	---	%
	Total		
	Design ESALs	---	



REVISIONS

TOTAL

6

PROJECT IDENTIFICATION NUMBER

17-82-061-010

PROJECT NUMBER

NHSN-061-5(144)--2R-82

R.O.W. PROJECT NUMBER

NHSN-061-5(145)--2R-82

INDEX OF SHEETS

No.	DESCRIPTION
A Sheets	Title Sheets
* A.1	Title Sheet with Location Map
A.2	Right of Way Acquisition Data
D Sheets	Mainline Plan and Profile Sheets
* D.1	Legend & Symbol Information Sheet
H Sheets	Right-of-Way Sheets
* H.1 - 3	Highway 61
	* Color Plan Sheets

R1 Plans

Subject to change by final design.

R1 PLAN - Date: 06-30-2020

Scott	ROW: NHSN-061-5(145)--2R-82					PIN 17-82-061-010													
	0.3 mi N of I-80 to 0.3 mi S of the Wapsipinicon River																		
		STATE			COUNTY			CITY			TEMP EASE		BORROW						
PARCEL NO	OWNER NAME	FEE	EASE	FEE	EASE	FEE	EASE	FEE	EASE	EXCESS		FEE	T.E.	MITIGATION	OTHER	HOUSE	BUILDING(S)	A/C ONLY	
1	Donald Mark DeWolf - Fee										0.09 AC								
2	Roger L Venhorst - Fee	.49 AC									0.55 AC								
2 Parcels	"TOTALS	0.49 AC	0 AC	0 AC	0 AC	0 AC	0 AC	0 AC	0 AC	0 AC	0.64 AC	0 AC	0 AC	0 AC					
		0 SF	0 SF	0 SF	0 SF	0 SF	0 SF	0 SF	0 SF	0 SF	0 SF	0 SF	0 SF	0 SF					

NO ACCESS RIGHTS ARE TO BE ACQUIRED ON THIS PROJECT.

ACCESS CONTROL PREVIOUSLY ACQUIRED

SURVEY SYMBOLS

UTILITY LEGEND

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK		Design Color No.	
Green	(2)		Existing Topographic Features and Labels
Blue	(1)		Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)		Existing Utilities
SHADING		Design Color No.	
Yellow	(4)		Highlight for Critical Notes or Features
Red	(3)		Delineates Restricted Areas
Lavender	(9)		Temporary Pavement Shading
Gray, Light	(48)		Proposed Pavement Shading
Gray, Med	(80)		Proposed Granular Shading
Gray, Dark	(112)		Proposed Grade and Pave Shading "In conjunction with a paving project"
Brown, Light	(236)		Grading Shading
Tan	(8)		Proposed Sidewalk Shading
Blue, Light	(230)		Proposed Sidewalk Landing Shading
Pink	(11)		Proposed Sidewalk Ramp Shading

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK		Design Color No.	
Green	(2)		Existing Ground Line Profile
Blue	(1)		Proposed Profile and Annotation
Magenta	(5)		Existing Utilities
Blue, Light	(230)		Proposed Ditch Grades, Left
Black	(0)		Proposed Ditch Grades, Median
Rust	(14)		Proposed Ditch Grades, Right

	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)

DEWULF, DONALD MARK

Winfield TWP.
T-80N R-3E
SEC. 25

TEMPORARY EASEMENT FOR
INSTALLATION OF
SUBDRAIN AND SHAPING
4,025 Sq. Ft.

812+60
± 228'

814+65
± 222'

812+60±PL
± 208'

814+65±PL
± 202'

810

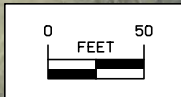
815

820

61

JOSEPH H. PROCHASKA

JANSEN, JAY & ERICA

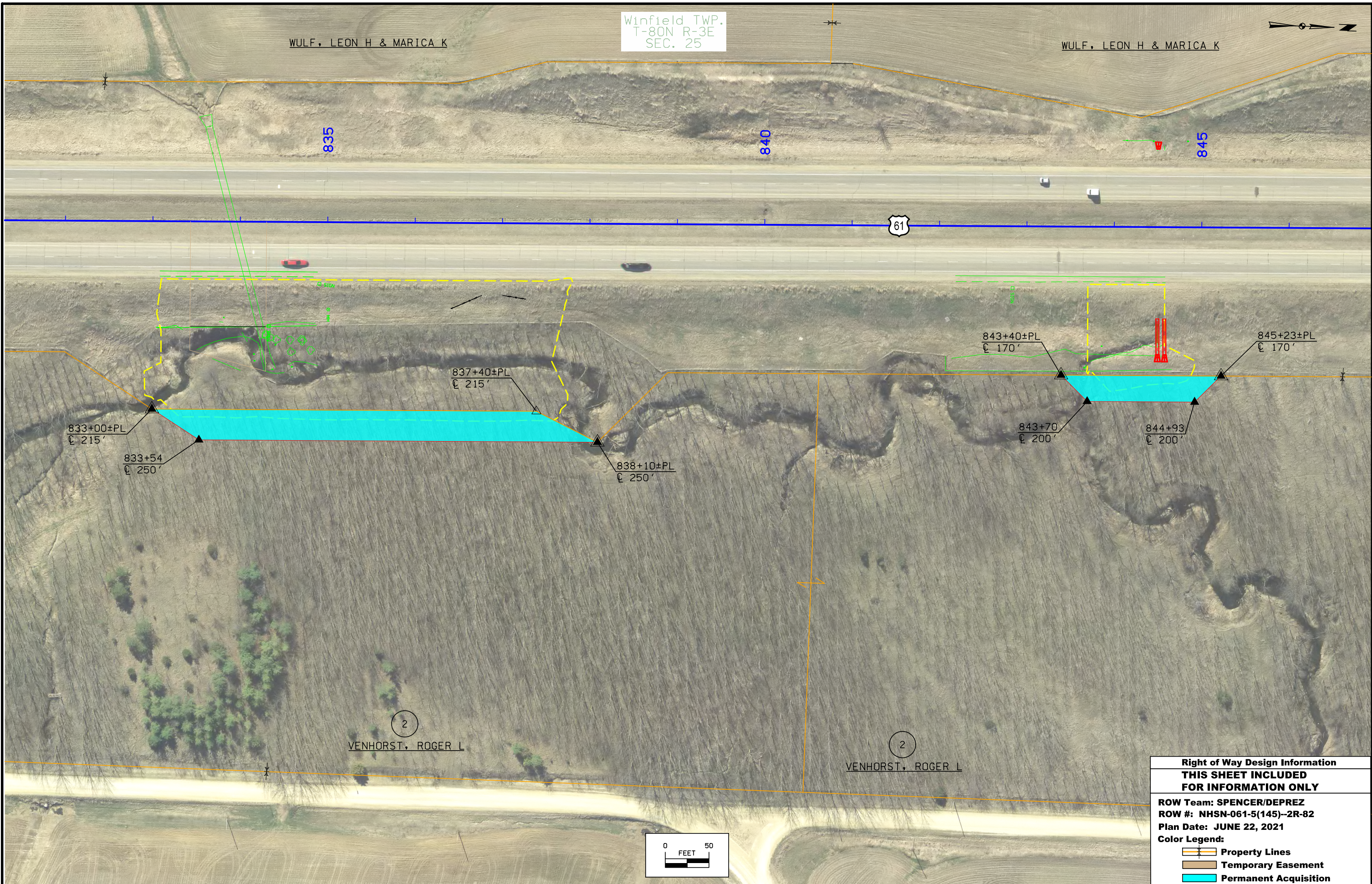


**Right of Way Design Information
THIS SHEET INCLUDED
FOR INFORMATION ONLY**

ROW Team: SPENCER/DEPREZ
ROW #: NHSN-061-5(145)--2R-82
Plan Date: JUNE 22, 2021

Color Legend:

-  Property Lines
-  Temporary Easement
-  Permanent Acquisition



Winfield TWP.
T-80N R-3E
SEC. 25

WULF, LEON H & MARICA K

WULF, LEON H & MARICA K

835

840

845



833+00±PL
℄ 215'

833+54
℄ 250'

837+40±PL
℄ 215'

838+10±PL
℄ 250'

843+40±PL
℄ 170'

843+70
℄ 200'

845+23±PL
℄ 170'

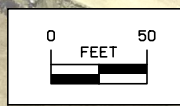
844+93
℄ 200'

2

VENHORST, ROGER L

2

VENHORST, ROGER L



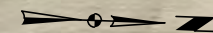
Right of Way Design Information	
THIS SHEET INCLUDED FOR INFORMATION ONLY	
ROW Team: SPENCER/DEPREZ	
ROW #: NHSN-061-5(145)--2R-82	
Plan Date: JUNE 22, 2021	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition

Winfield TWP.
T-80N R-3E
SEC. 25

WULF, LEON H & MARICA K

Winfield TWP.
T-80N R-3E
SEC. 24

KROEGER, KURT E & JUDITH A



858

855

860



852+50±PL
℄ 140'

854+56±PL
℄ 140'

854+56±PL
℄ 145'

852+36±PL
℄ 145'

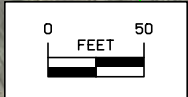
TEMPORARY EASEMENT FOR
CREEK GRADING AND SHAPING
23,773 Sq. Ft.

853+37
℄ 287'

854+52±PL
℄ 287'

2

VENHORST, ROGER L



BROIHER, FRANCIS & LESLIE A

Right of Way Design Information	
THIS SHEET INCLUDED FOR INFORMATION ONLY	
ROW Team: SPENCER/DEPREZ	
ROW #: NHSN-061-5(145)--2R-82	
Plan Date: JUNE 22, 2021	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition