

**WOODBURY CO.**  
**PCC PAVEMENT - GRADE AND REPLACE**  
**NHSX-020-1(179)--3H-97**

LETTING DATE  
**1-18-2023**



PLANS OF PROPOSED IMPROVEMENT ON THE  
**PRIMARY ROAD SYSTEM**  
**WOODBURY COUNTY**  
**PCC PAVEMENT - GRADE AND REPLACE**

**US 75 / IA 12 Interchange in Sioux City to Little Whiskey Creek (EB/WB)**

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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



**H Sheets**

REVISIONS

TOTAL

118

PROJECT IDENTIFICATION NUMBER

17-97-020-010

PROJECT NUMBER

NHSX-020-1(179)--3H-97

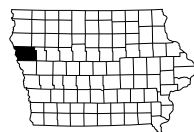
R.O.W. PROJECT NUMBER

NHSN-020-1(180)--2R-97

**INDEX OF SHEETS**

No.	DESCRIPTION
<b>A Sheets</b>	<b>Title Sheets</b>
A.1	Title Sheet
A.2	Location Map Sheet
<b>B Sheets</b>	<b>Typical Cross Sections and Details</b>
B.1 - 8	Typical Cross Sections and Details
<b>D Sheets</b>	<b>Mainline Plan and Profile Sheets</b>
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - 14	US Highway 20
<b>E Sheets</b>	<b>Side Road Plan and Profile Sheets</b>
* E.1	South Glenn Ellen Rd
* E.2	Buchanan Ave. N.
* E.3	Grandy Drive
* E.4 - 5	Buchanan Ave. S.
* E.6	Carroll Ave.
<b>J Sheets</b>	<b>Traffic Control and Staging Sheets</b>
J.1	Traffic Control Plan
<b>K Sheets</b>	<b>Interchange Sheets</b>
* K.1	Ramp A - Hwy 20/75
* K.2	Ramp B - Hwy 20/75
* K.3	Ramp D - Hwy 20/75
<b>W Sheets</b>	<b>Mainline Cross Sections</b>
W.1 - 46	Mainline Cross Sections
<b>X Sheets</b>	<b>Side Road Cross Sections</b>
X.100 - 102	Glen Ellen Cross Sections
X.200 - 203	Buchanan N. Cross Sections
X.300 - 301	Grandy Drive Cross Sections
X.400 - 408	Buchanan S. Cross Sections
X.500 - 501	Carroll Ave. Cross Sections
<b>Y Sheets</b>	<b>Ramp Cross Sections</b>
Y.100	Ramp A - Hwy 20/75 Cross Sections
Y.200 - 204	Ramp B - Hwy 20/75 Cross Sections
Y.300 - 311	Ramp D - Hwy 20/75 Cross Sections
	* Color Plan Sheets

For Project Location Map  
Refer to Sheet No. A.2



DESIGN DATA RURAL			
2020	AADT	11886	V.P.D.
2040	AADT	16195	V.P.D.
2040	DHV	1673	V.P.H.
	TRUCKS	13	%
Total			
Design ESALs		5,197,600	

INDEX OF SEALS		
SHEET NO.	NAME	TYPE
A.1	Kelly C. Bell	Primary Signature Block
CD.1	David R. Claman	Hydraulic Design
CS.1	Stephen J. Megivern	Geotechnical Design

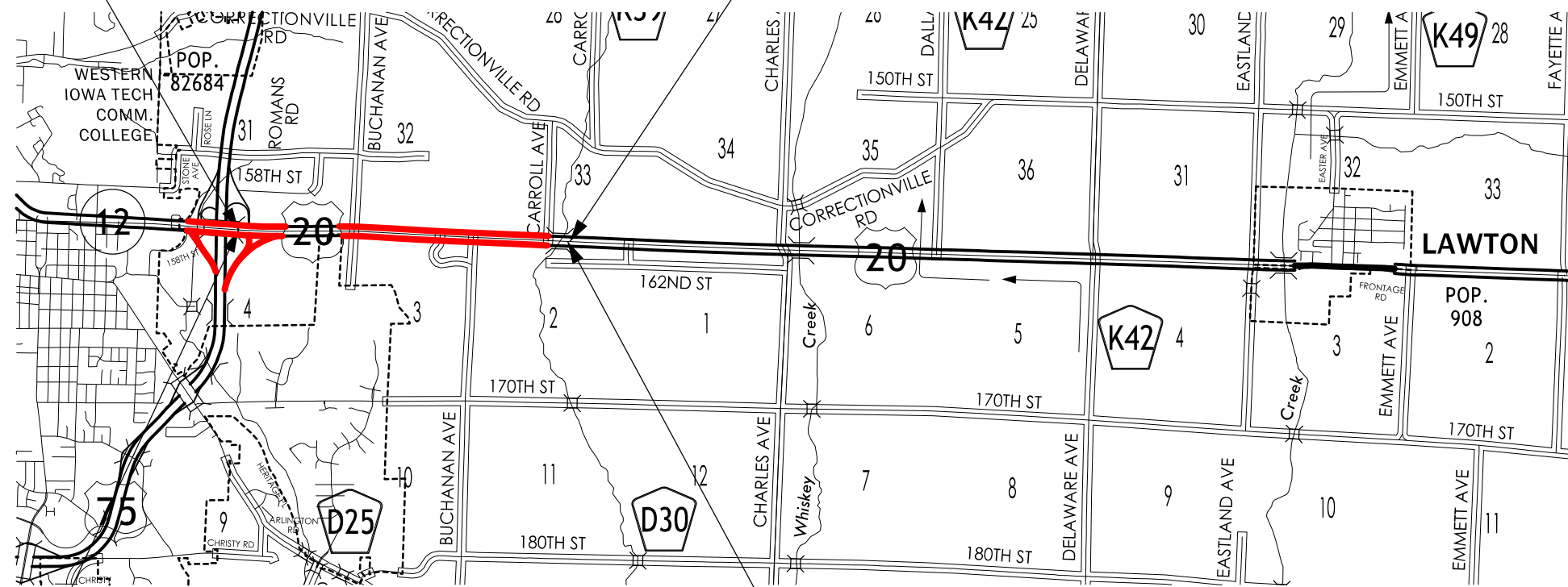
**PRELIMINARY PLANS**

Subject to change by final design.

**D5 Revisions**  
**Date: Sept 23, 2021**

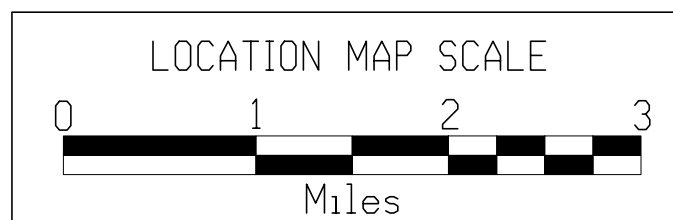
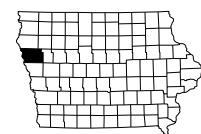
STA. 443+82.43  
BEGIN WB CONSTRUCTION

STA. 559+19.37  
END WB CONSTRUCTION

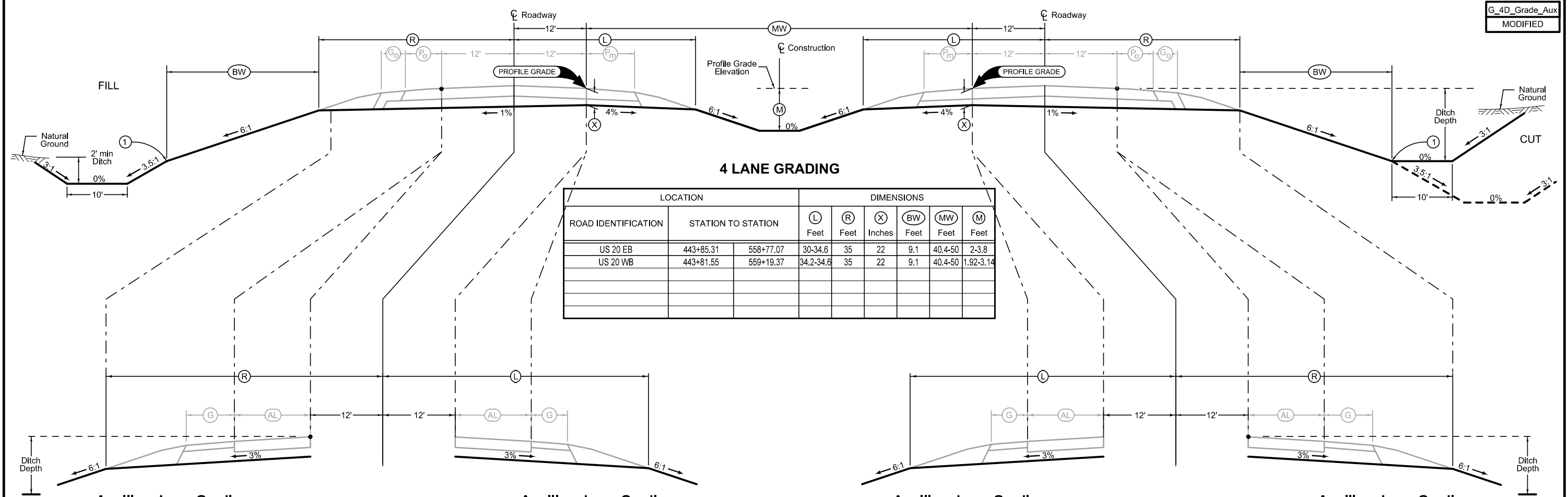


BEGIN EB CONSTRUCTION  
STA. 443+84.62

END EB CONSTRUCTION  
STA. 558+77.07







LOCATION		DIMENSIONS						
ROAD IDENTIFICATION	STATION TO STATION	L	R	X	BW	MW	M	
		Feet	Feet	Inches	Feet	Feet	Feet	
US 20 EB	443+85.31 - 558+77.07	30-34.6	35	22	9.1	40.4-50	2-3.8	
US 20 WB	443+81.55 - 559+19.37	34.2-34.6	35	22	9.1	40.4-50	1.92-3.14	

**Auxiliary Lane Grading**

LOCATION		R
ROAD IDENTIFICATION	STATION TO STATION	Feet
US 20 WB (Ramp A)	450+94.41 - 455+97.04	42.25
US 20 WB (Ramp A)	455+97.04 - 457+17.35	42.25-35.4
US 20 WB (Ramp A)	457+17.35 - 457+77.40	35.4
US 20 WB (DOT Site)	467+70.38 - 469+20.38	42.6
US 20 WB (DOT Site)	469+20.38 - 470+40.58	42.6-35.7
US 20 WB (DOT Site)	470+40.58 - 471+00.38	35.7
US 20 WB (Buchanan N)	488+88.97 - 490+38.33	42.6
US 20 WB (Buchanan N)	490+38.33 - 491+58.15	42.6-35.5
US 20 WB (Buchanan N)	491+58.15 - 492+17.95	35.5

**Auxiliary Lane Grading**

LOCATION		L
ROAD IDENTIFICATION	STATION TO STATION	Feet
US 20 WB (Glen Ellen)	488+63.93 - 490+13.61	42.6
US 20 WB (Glen Ellen)	490+13.61 - 491+33.10	Var.
US 20 WB (Glen Ellen)	491+33.10 - 491+93.37	34.6

**Auxiliary Lane Grading**

LOCATION		L
ROAD IDENTIFICATION	STATION TO STATION	Feet
US 20 EB (Ramp A)	445+57.44 - 446+17.24	30.2
US 20 EB (Ramp A)	446+17.24 - 447+37.29	Var.
US 20 EB (Ramp A)	447+37.29 - 448+87.49	Var.
US 20 EB (DOT Site)	462+76.85 - 463+36.65	34.6
US 20 EB (DOT Site)	463+36.65 - 464+56.65	Var.
US 20 EB (DOT Site)	464+56.65 - 466+06.85	Var.
US 20 EB (Buchanan N)	483+31.62 - 483+90.95	34.6
US 20 EB (Buchanan N)	483+90.95 - 485+11.64	Var.
US 20 EB (Buchanan N)	485+11.64 - 486+62.17	Var.

**Auxiliary Lane Grading**

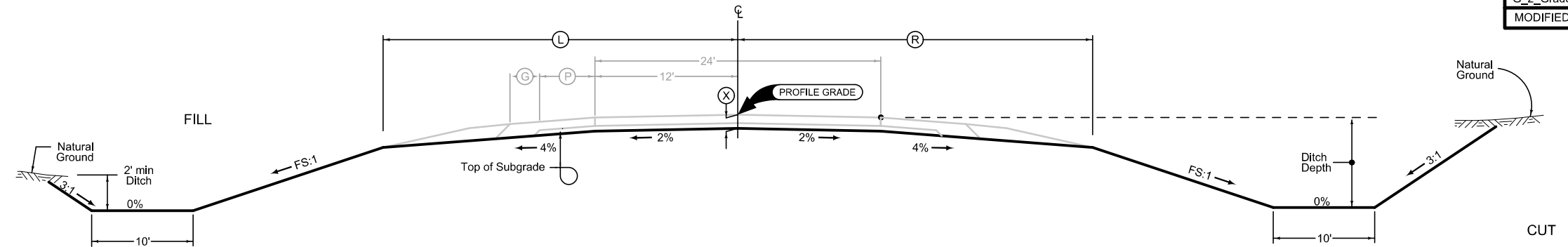
LOCATION		R
ROAD IDENTIFICATION	STATION TO STATION	Feet
US 20 EB (Glen Ellen)	482+99.57 - 483+59.37	31.8
US 20 EB (Glen Ellen)	483+59.37 - 484+79.87	31.8-38.6
US 20 EB (Glen Ellen)	484+79.87 - 486+30.50	38.6

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

See Plan & Profile sheets and cross sections for additional details of ditches and backslopes.

① Refer to project plan and cross sections for specific location of foreslope change.

LOCATION		DIMENSIONS				
ROAD IDENTIFICATION	STATION TO STATION	(L) Feet	(R) Feet	(X) Inches	FS	
Buchanan Ave. N	4488+11.42	4489+21.79	Var.	Var.	22	6
Buchanan Ave. N	4489+21.79	4490+14.89	28.7	Var.	22	6
Buchanan Ave. N	4490+14.89	4490+90.00	28.7	28.7	22	6
Glen Ellen	3484+25.00	3485+45.62	27.5	32.5	22	Var.
Glen Ellen	3485+45.62	3486+31.81	Var.	28.7	22	Var.
Glen Ellen	3486+31.81	3487+14.04	Var.	Var.	22	6
Grandy	5514+90.00	5514+90.50	21	21	22	6
Grandy	5514+90.50	5514+26.48	Var.	21	22	Var.
Grandy	5514+26.48	5516+33.45	Var.	Var.	22	Var.
Buchanan Ave. S	6518+50.00	6527+61.31	Var.	Var.	22	Var.



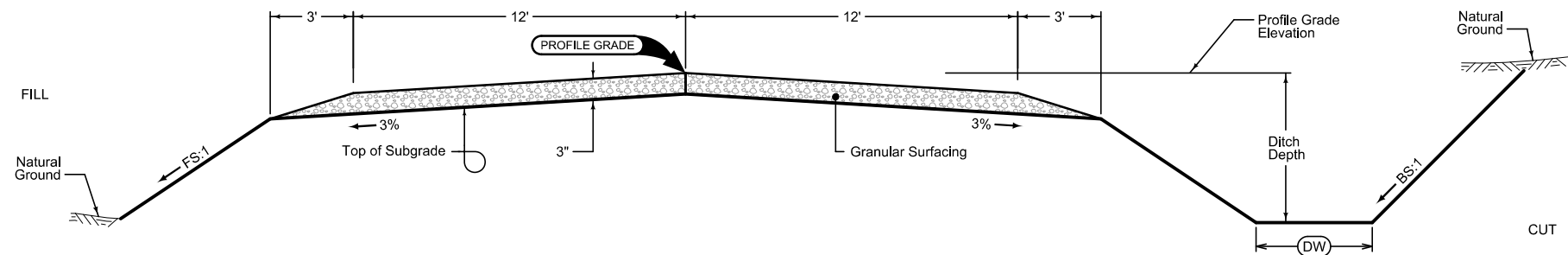
**2 LANE GRADING**

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

See plan & profile sheets and cross sections for additional details of ditches and backslopes.

G\_2\_Grade  
MODIFIED

LOCATION		DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION	FS	BS	(DW) Feet	
Carroll Ave.	7554+22.91	7556+00.00	3	3	5



**GRADING AND GRANULAR SURFACING**

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

See plan & profile sheets and cross sections for additional details of ditches and backslopes.

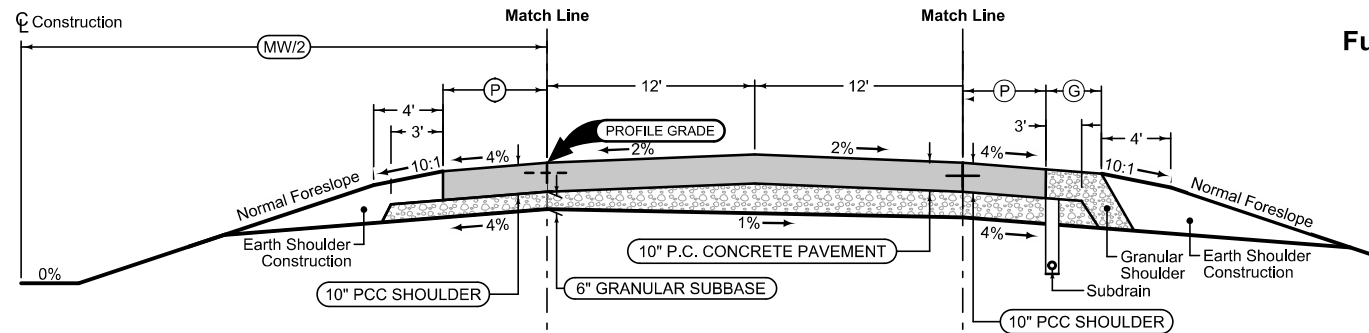
G\_2\_GradeGran  
10-17-17

DESIGNER  
INFO

**Paved Shoulder Alternates**

PCC Shoulder Jointing:  
 Longitudinal joint: BT-1 or BT-5  
 Transverse joints: C at 17' spacing  
 HMA Shoulder Jointing:  
 Longitudinal joint: B

4_P_ALT_04-21-20				
Direction of Travel	BEGIN STATION	END STATION	(P)	Feet
EB	443+84.62	558+77.07	6	6
WB	443+82.43	559+19.37	6	6



Section shown in the direction of traffic.

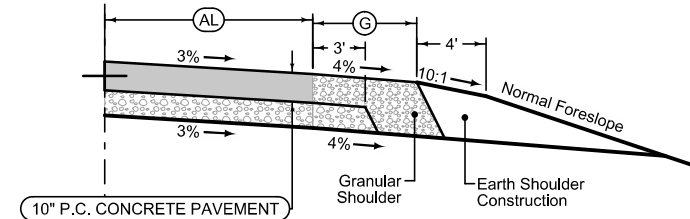
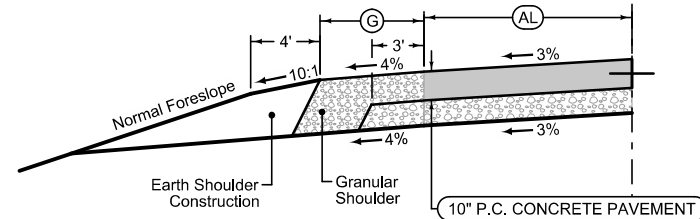
Mainline Jointing:  
 Transverse joints: CD at 17' spacing  
 Longitudinal joint: L-2

4DP_MODIFIED				
Direction of Travel	BEGIN STATION	END STATION	(MW)	Feet
EB	443+84.62	558+77.07	40.4-50	
WB	443+82.43	559+19.37	40.4-50	

**Full Depth PCC Combination Shoulder**

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

2_C_FullPCC_04-21-20				
STATION TO STATION	(P)	(G)	Feet	Feet
443+84.62	558+77.07	6	4	
443+82.43	559+19.37	6	4	



**Auxiliary Lane**

Longitudinal joint: L or KT  
 Transverse joint: Match Mainline

4_AuxLane_PCC_10-18-16				
Direction of Travel	BEGIN STATION	END STATION	(AL)	(G)
EB	445+57.44	446+47.41	6	4
EB	446+47.41	447+37.45	6-12	6
EB	447+37.45	448+87.45	12	6
EB	462+76.85	463+66.85	6	4
EB	463+88.65	464+56.85	6-12	6
EB	464+56.85	466+06.85	12	6
EB	483+31.62	484+21.64	6	4
EB	484+21.64	485+11.84	6-12	6
EB	485+11.84	486+62.16	12	6
WB	488+63.93	490+13.61	12	6
WB	490+13.61	491+03.42	12-6	6
WB	491+03.42	491+93.37	6	4

**Auxiliary Lane**

**Granular Shoulder**

2\_AL\_Shldr\_G\_04-21-20

**Auxiliary Lane**

Longitudinal joint: L or KT  
 Transverse joint: Match Mainline

4_AuxLane_PCC_10-18-16				
Direction of Travel	BEGIN STATION	END STATION	(AL)	(G)
EB	482+99.57	483+89.57	6	4
EB	483+89.57	484+79.86	6-12	6
EB	484+79.86	486+30.50	12	6
WB	450+94.41	455+96.63	12	6
WB	455+96.63	456+87.02	12-6	6
WB	456+87.02	457+77.40	6	4
WB	467+70.38	469+20.38	12	6
WB	469+20.38	470+10.38	12-6	6
WB	470+10.38	471+00.38	6	4
WB	488+88.97	490+38.33	12	6
WB	490+38.33	491+27.95	12-6	6
WB	491+27.95	492+17.95	6	4

**Auxiliary Lane**

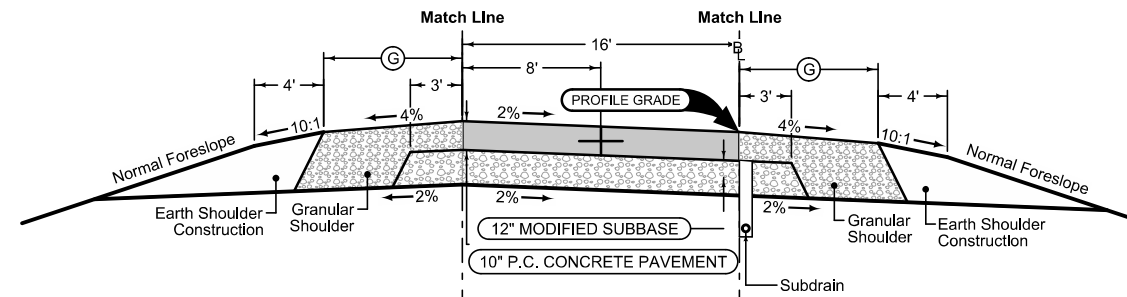
**Granular Shoulder**

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

**US Highway 20 EB/WB**

**Granular Shoulder**

1R_G_ 10-19-10		
BEGIN STATION	END STATION	Ⓞ Feet
7540+22.97	7543+65.07	6
4543+11.00	4553+35.90	4



Section shown in the direction of traffic.

Ramp Jointing:  
 Transverse joints: CD at 15' spacing.  
 Longitudinal joints: L-2

1RP_ 10-17-17	
BEGIN STATION	END STATION
7538+90.00	7543+65.07
4543+11.00	4553+35.90

**Granular Shoulder**

1R_G_ 10-19-10		
BEGIN STATION	END STATION	Ⓞ Feet
7538+90.00	7543+65.07	4
4543+11.00	4553+35.90	6

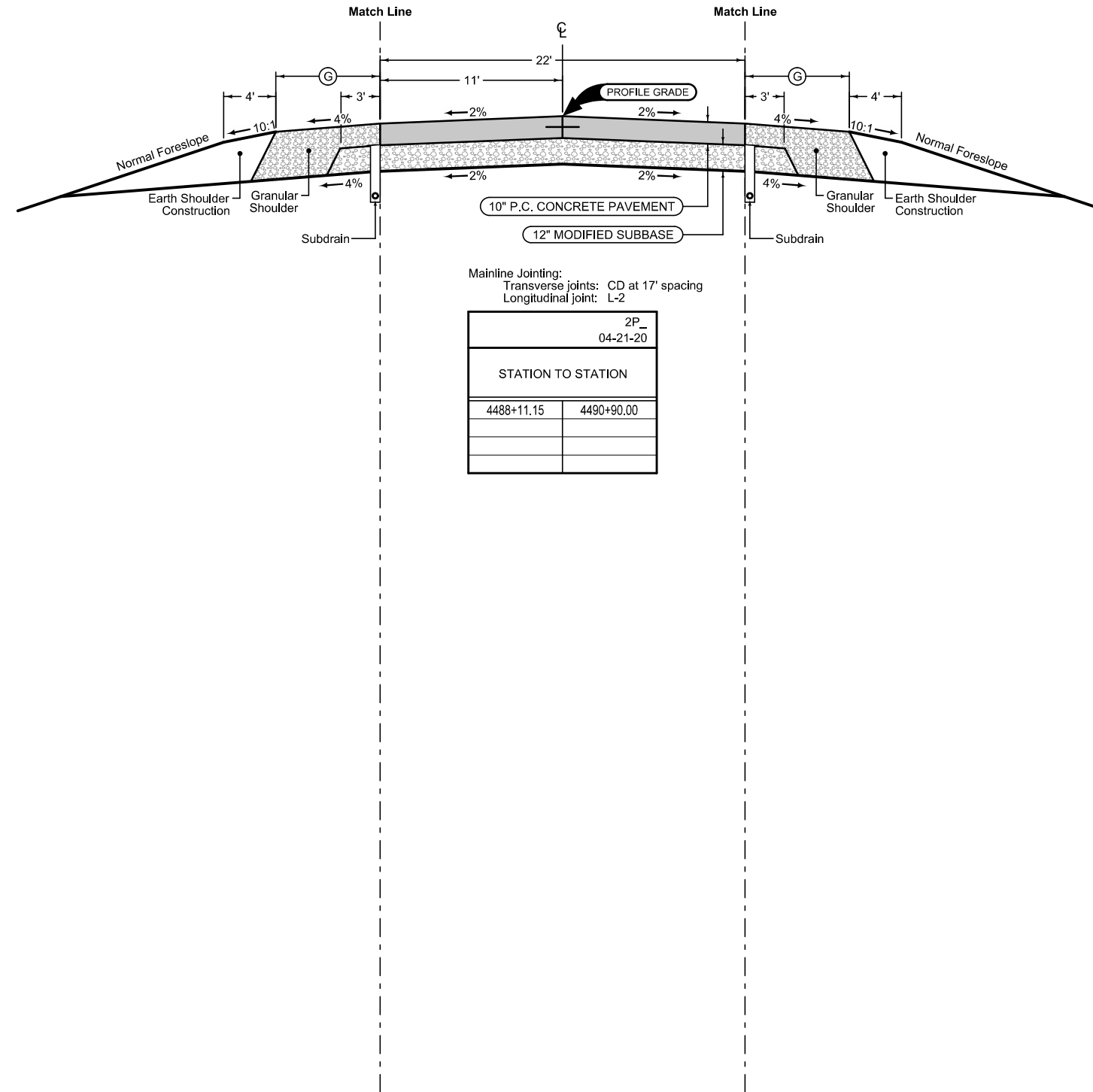
See Tab 100-24 or 100-25 for pavement quantities.  
 See Tab 112-9 for shoulder quantities.

**US 20/US 75 Interchange Ramps**



**Granular Shoulder**

2_G_SR_04-21-20		Ⓞ Feet
STATION TO STATION		
4488+11.15	4490+90.00	6



**Granular Shoulder**

2_G_SR_04-21-20		Ⓞ Feet
STATION TO STATION		
4488+11.15	4490+90.00	6

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

2P_04-21-20	
STATION TO STATION	
4488+11.15	4490+90.00

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

**Buchanan Ave. N**

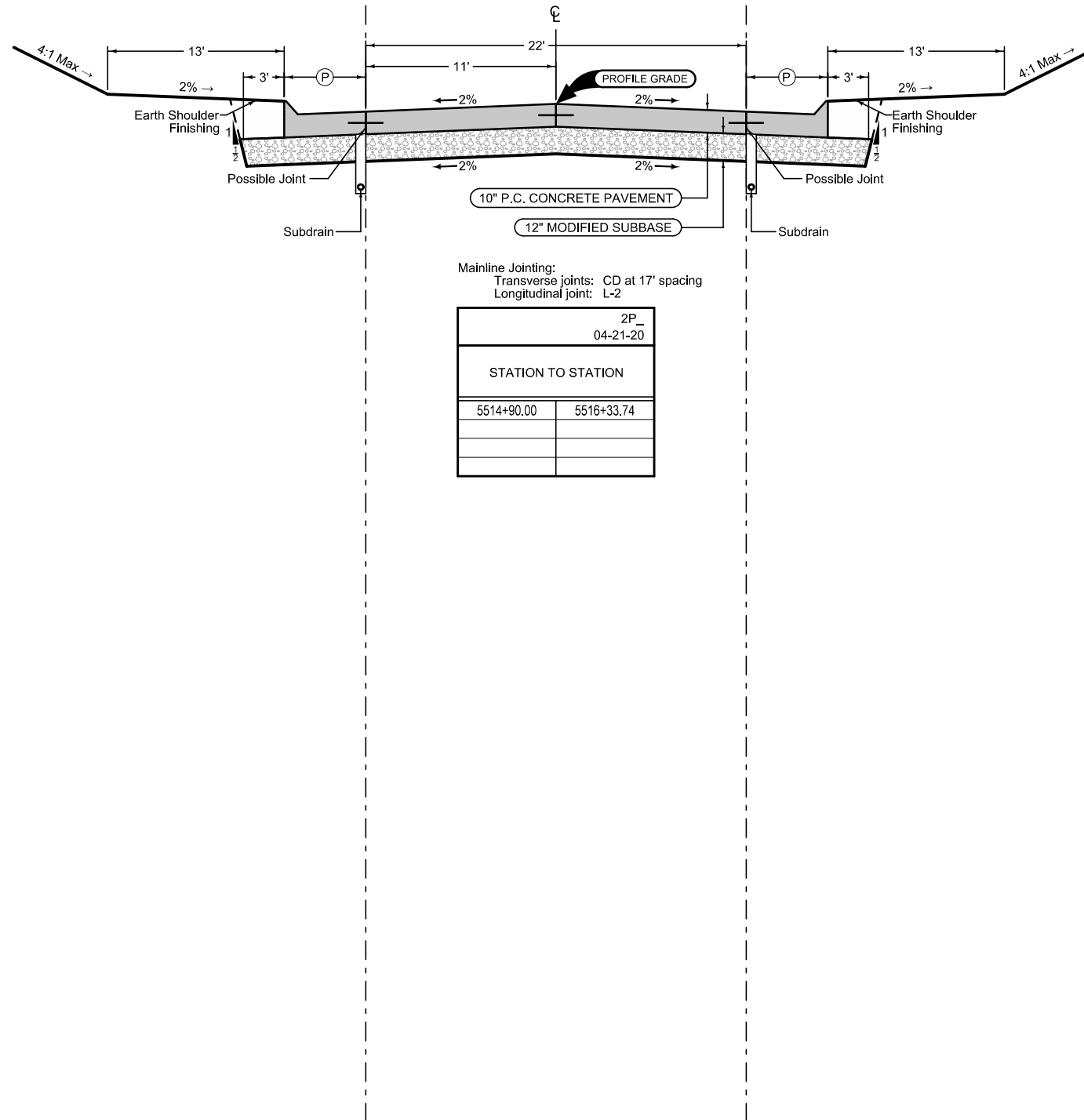


**Curbed Shoulder**

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

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

STATION TO STATION		(P) Feet	Curb Type See PV-102
5514+90.00	5516+33.74	1	



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

STATION TO STATION	
5514+90.00	5516+33.74

**Curbed Shoulder**

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

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

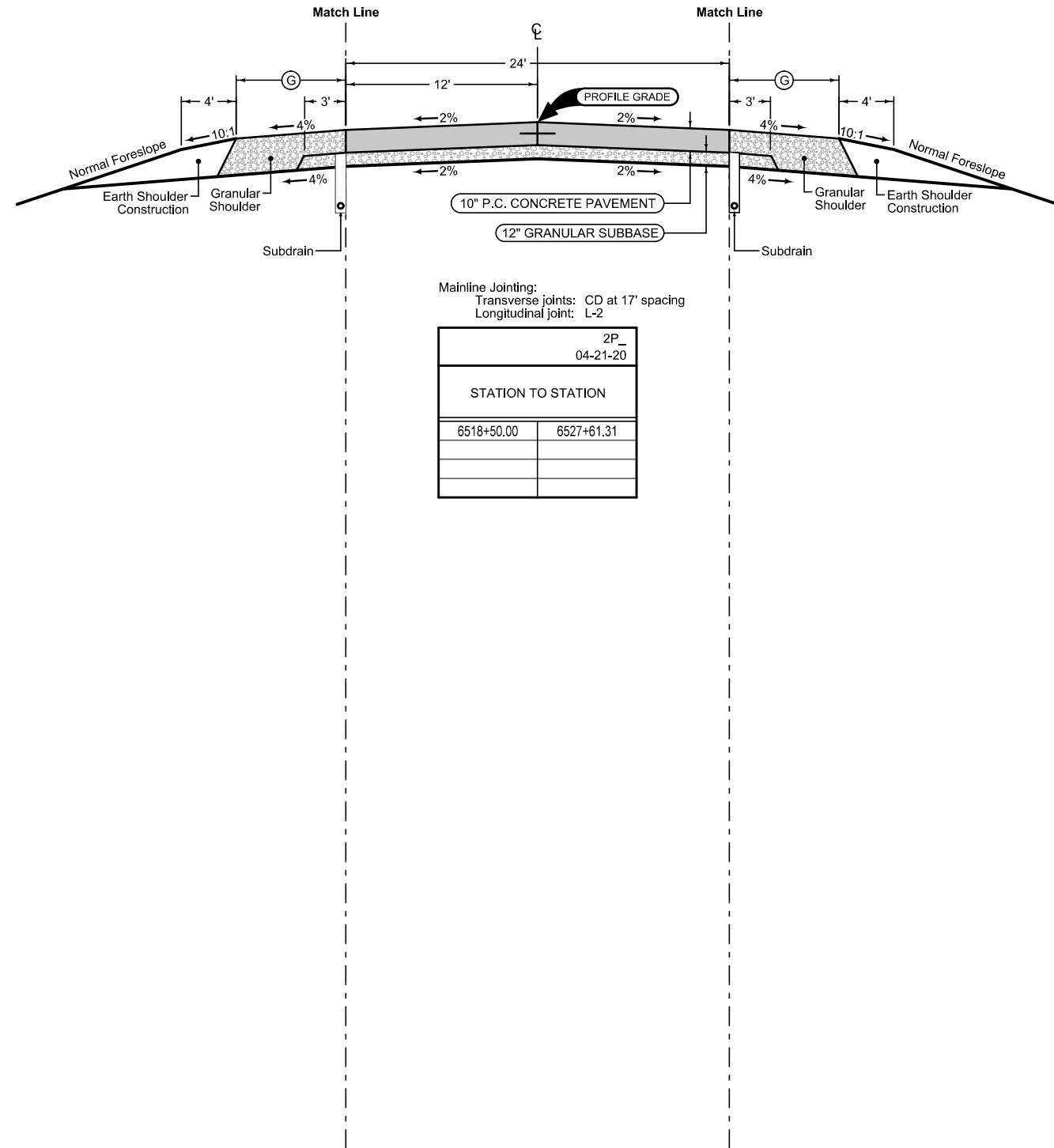
STATION TO STATION		(P) Feet	Curb Type See PV-102
5514+90.00	5516+33.74	1	

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

**Grandy Drive**

**Granular Shoulder**

2_G_SR_04-21-20		Ⓞ Feet
STATION TO STATION		
6519+41.02	6527+61.31	5



**Granular Shoulder**

2_G_SR_04-21-20		Ⓞ Feet
STATION TO STATION		
6518+50.00	6527+61.31	5

2P_04-21-20	
STATION TO STATION	
6518+50.00	6527+61.31














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

**Buchanan Ave. S**







**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
Yellow	(4)		Proposed Pavement Shading
Orange	(6)		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
Red	(3)		Proposed Structures

**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)

Concord TWP.  
T-89N R-46W  
SEC. 31

Sect. No. 31

US 20 WBL Sta. 1427+20.85, 52.54 Lt.  
0.75 x 2.5 Curb Intake  
W/ 2.5 x 3 Conc Basin

Curve Data  
Δ = 0° 57' 14.17" (RT)  
R = 95.56  
L = 191.11  
E = 11,478.44  
F = 0.40

US 20 WBL Sta. 1427+87.92, 47.25 Lt.  
0.6 x 2.5 Curb Intake  
W/ 2.5 x 3 Conc Basin  
18" x 42.5 RCP

US 20 WBL Sta. 1429+90.20, 142.35 Lt.  
0.5 x 7.0 Curb Intake  
W/ 2.5 x 2.5 Brick Basin

US 20 WBL Sta. 1428+49.51, 14.46 Lt.  
0.4 x 4 Curb Intake  
W/ 4 x 4 Conc Basin  
12" x 28.2 RCP

US 20 WBL Sta. 1431+85.48, 13.04 Lt.  
0.3 x 4 Curb Intake  
W/ 3 x 4 Conc Basin

US 20 WBL Sta. 1434+07.77, 12.64 Lt.  
0.3 x 4 Curb Intake  
W/ 3 x 4 Conc Basin  
18" x 71.1 Plastic

US 20 WBL Sta. 1434+02.46, 14.04 Rt.  
0.4 x 4 Curb Intake  
W/ 4 x 4 Conc Basin

US 20 WBL Sta. 1436+45.44, 21.46 Lt.  
0.3 x 4.5 Curb Intake  
W/ 4 x 5.5 Conc Basin  
24" x 18.75 Plastic

US 20 WBL Sta. 1436+45.55, 14.20 Rt.  
0.3 x 4 Curb Intake  
W/ 3 x 4 Conc Basin

US 20 WBL Sta. 1444+13.22, 37.49  
1.9 x 1.9 Flat Gate Intake  
W/ 48" Conc Basin  
12" x 82.4 CMP

US 20 WBL Sta. 1442+34.29  
284.5 Variable Width Prestressed  
Prestressed Conc Beam Bridge

PC Sta 1424+00.00  
PI Sta 1424+57.17  
PT Sta 1425+14.34  
PC Sta 1424+00.37  
PI Sta 1424+57.17  
PT Sta 1425+14.34

US 20 WBL Sta. 1429+97.59, 118.34 Lt.  
0.5 x 7.0 Curb Intake  
W/ 2.5 x 2.5 Brick Basin

430 1430

435 1435

Sta. 443+81.55  
Begin Construction WB

Sta. 443+85.31  
Begin Construction EB

US 20 EBL Sta. 2428+51.34, 15.81 Rt.  
0.4 x 4 Curb Intake  
W/ 3 x 4 Conc Basin  
12" x 18.9 RCP

US 20 EBL Sta. 2433+50.57  
6 x 8 x 1124.65 RCP  
W/ 8 x 8 Tapered Inlet  
D.A.=265 A-H

US 20 EBL Sta. 2430+68.95, 72.18 Rt.  
0.5 x 13.5 Curb Intake  
W/ 3 x 3 Conc Basin  
12" x 9.2 RCP

US 20 EBL Sta. 2434+00.21, 18.59 Lt.  
0.5 x 4 Curb Intake  
W/ 4 x 4 Conc Basin

US 20 EBL Sta. 2433+51.29, 21.99 Rt.  
0.5 x 4 Curb Intake  
W/ 3 x 4 Conc Basin

US 20 EBL Sta. 2439+17.46, 47.13 Rt.  
0.5 x 14.5 Curb Intake  
W/ 4 x 4 Conc Basin  
15" x 64.8 CMP

US 20 EBL Sta. 2437+74.09, 108.10 Rt.  
18" x 64.0 CMP  
D.A.= Roadway

US 20 EBL Sta. 2444+26.14  
24" x 141.4 RCP W/74.7 CMP Ext.  
D.A.= Median Only

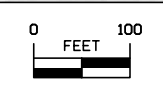
US 20 EBL Sta. 2444+15.41, 40.92 Rt.  
1.9 x 1.9 Flat Gate Intake  
W/ 48" Conc Basin  
12" x 65.2 CMP

US 20 EBL Sta. 2430+76.68, 53.25 Rt.  
12" x 125.5 CMP  
D.A.= Side Ditch Only

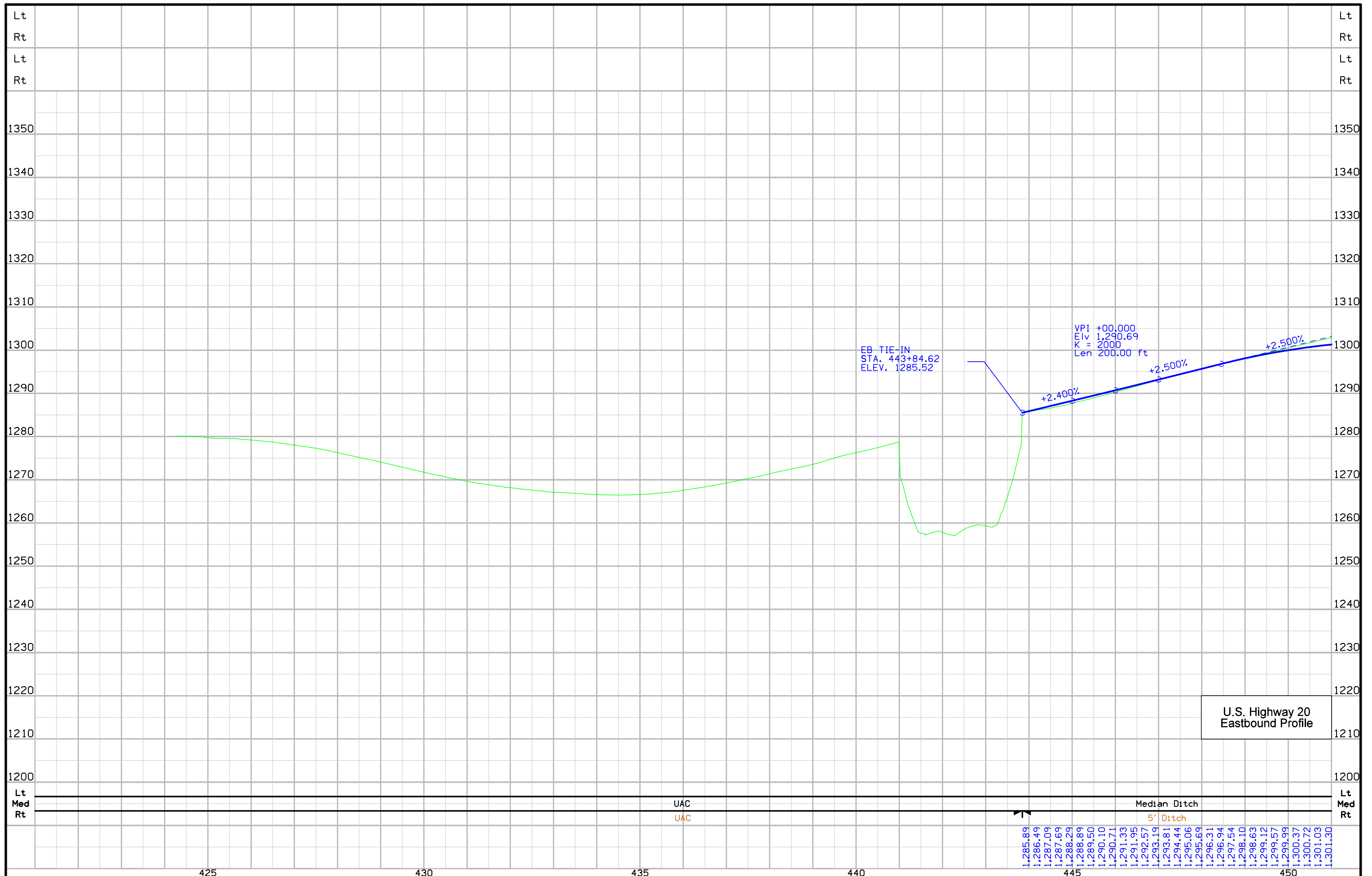
US 20 EBL Sta. 2442+38.26  
284.5 Variable Width Prestressed  
Prestressed Conc Beam Bridge

Sect. No. 4

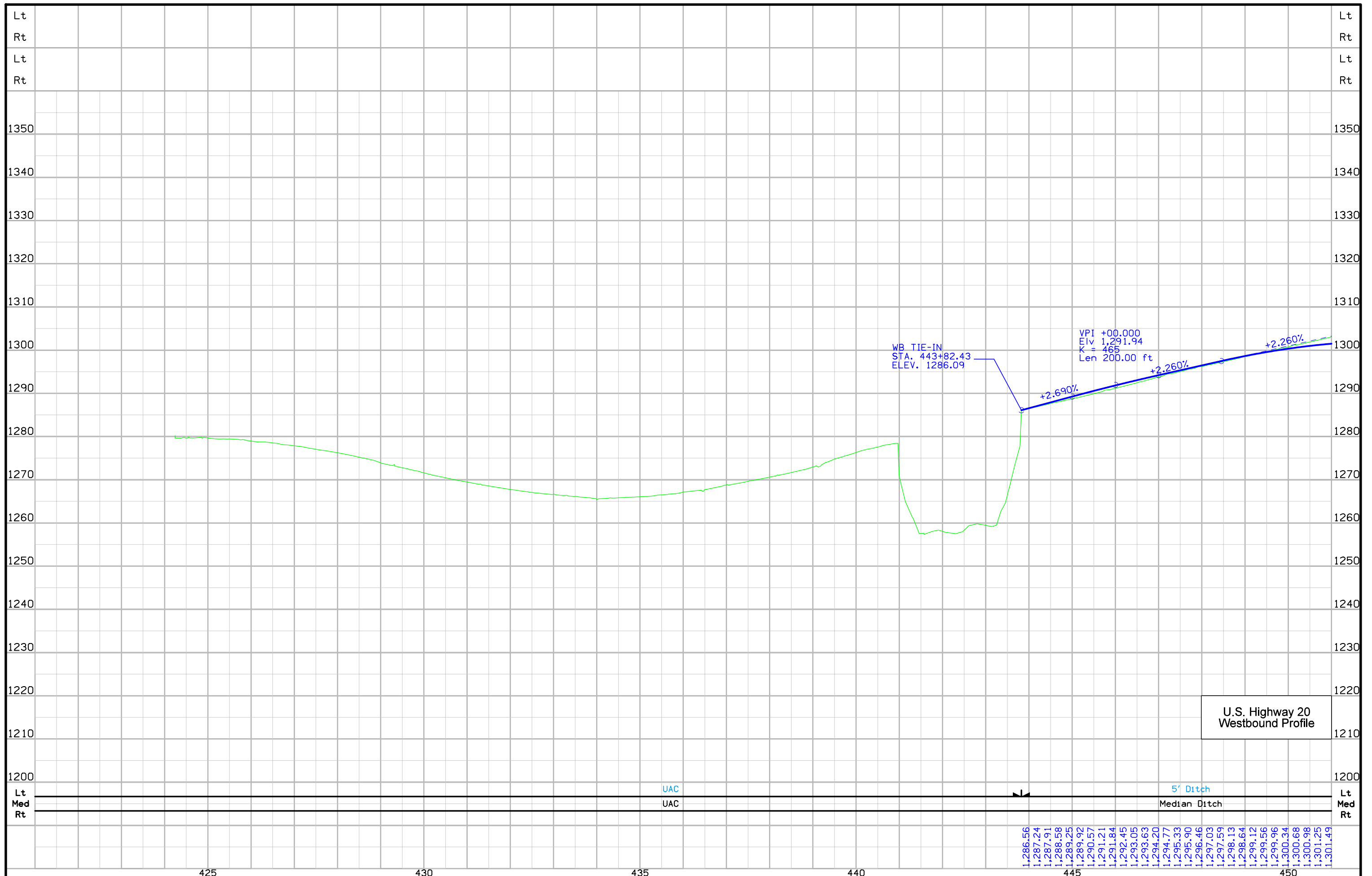
Woodbury TWP.  
T-88N R-47W  
SEC. 4



U.S. Highway 20



U.S. Highway 20  
Eastbound Profile





Concord TWP.  
T-89N R-46W  
SEC. 31

NEW DISTRICT OFFICE SITE

Curve Data  
Δ = 4° 23' 37.83" (LT)  
= 441.17  
= 881.90  
= 11,500.00  
= 8.46

20

Sect. No. 31

PC Sta 1451+74.64  
1455  
PI Sta 1455+73.41

EQUATION:  
Sta 2459+96.19 BK = P0T1 Sta 459+96.75 AH  
Sta 459+96.75 AH

Ramp D  
Sta. 2450+83.56, 35.32 Lt  
Flat Grate Intake  
3 Conc Basin  
RCP W/ 24" x 12.8 CMP Ext.

Obliterate  
PI Sta 2454+98.13  
PI Sta 455+35.43

Sta. 460+92.00  
Install 24" x 218' RCP  
F.L. = Lt. 1291.90  
Rt. 1281.49

US 20 EBL Sta. 462+50.91, 35.55 Ft.  
0.5 x 13.5 Curb Intake  
W/ 3 x 3 Conc Basin  
15" x 4.2 RCP

US 20 EBL Sta. 462+00.53, 32.24 Ft.  
1.8 x 2.8 Flat Grate Intake  
W/ 2.5 x 3 Conc Basin  
24" x 87.7 RCP

US 20 EBL Sta. 468+04.68  
24" x 57.0 RCP W/ CMP Ext.  
D.A.= Median Only

Sta. 469+45.77  
Jack 48" x 298' RCP 3000 D  
Skew = 28° Rt. Ahd.  
F.L. = Lt. 1270.00  
Rt. 1263.94

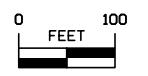
Sta. 469+45.77  
Build X' x X' 3:1 Flume & Basin  
Skew = 28° Rt. Ahd.  
F.L. = Lt. 1263.94  
Rt. 1245.18

US 20 EBL Sta. 473+00.96  
24" x 83.7 RCP  
D.A.= Median Only

Sta. 475+20.83  
Jack 48" x 204' RCP 2000 D  
F.L. = Lt. 1274.52  
Rt. 1270.28

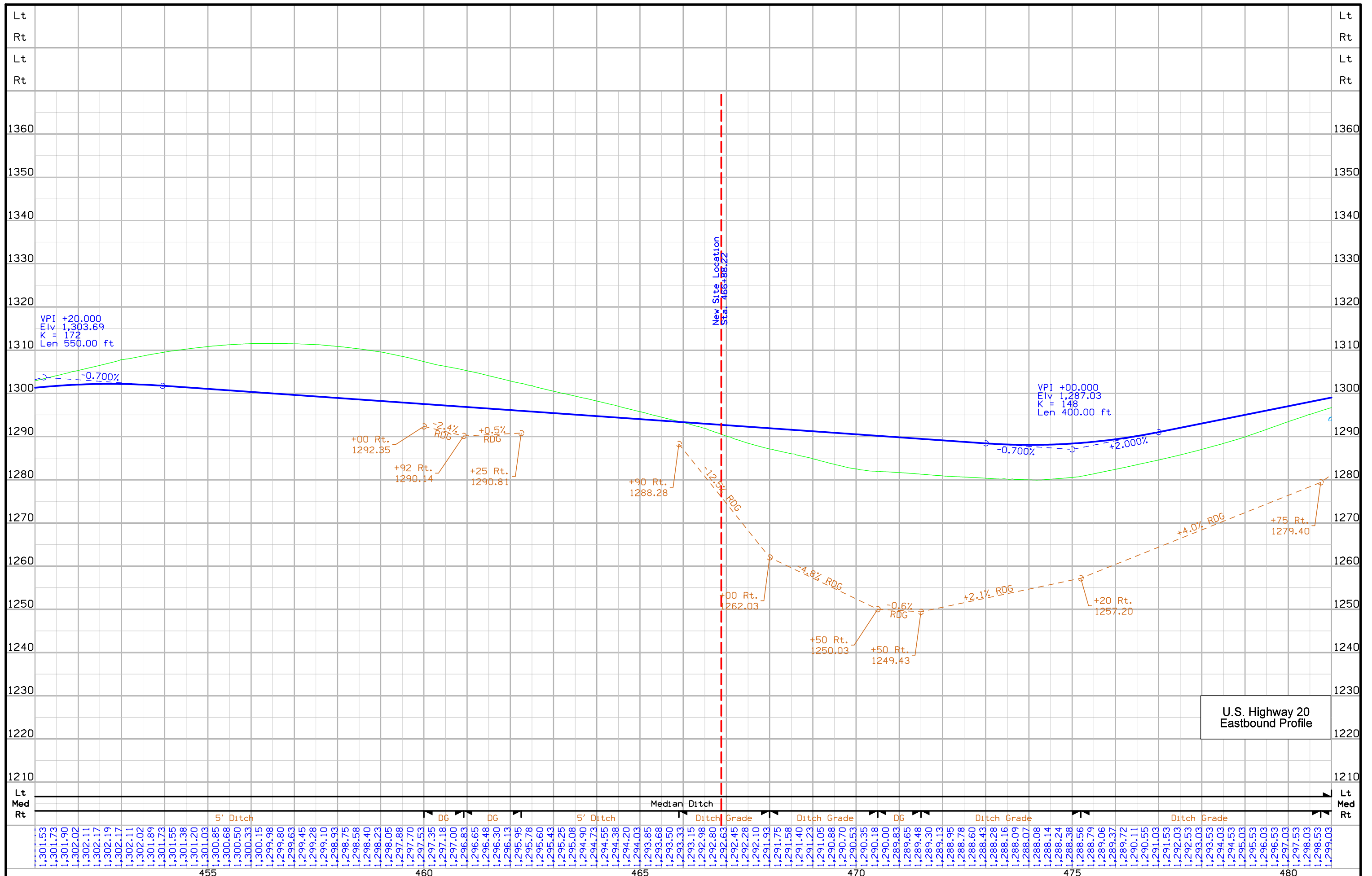
Sta. 475+20.83  
Build X' x X' 3:1 Flume & Basin  
F.L. = Lt. 1270.28  
Rt. 1252.18

TOTAL ACQUISITION

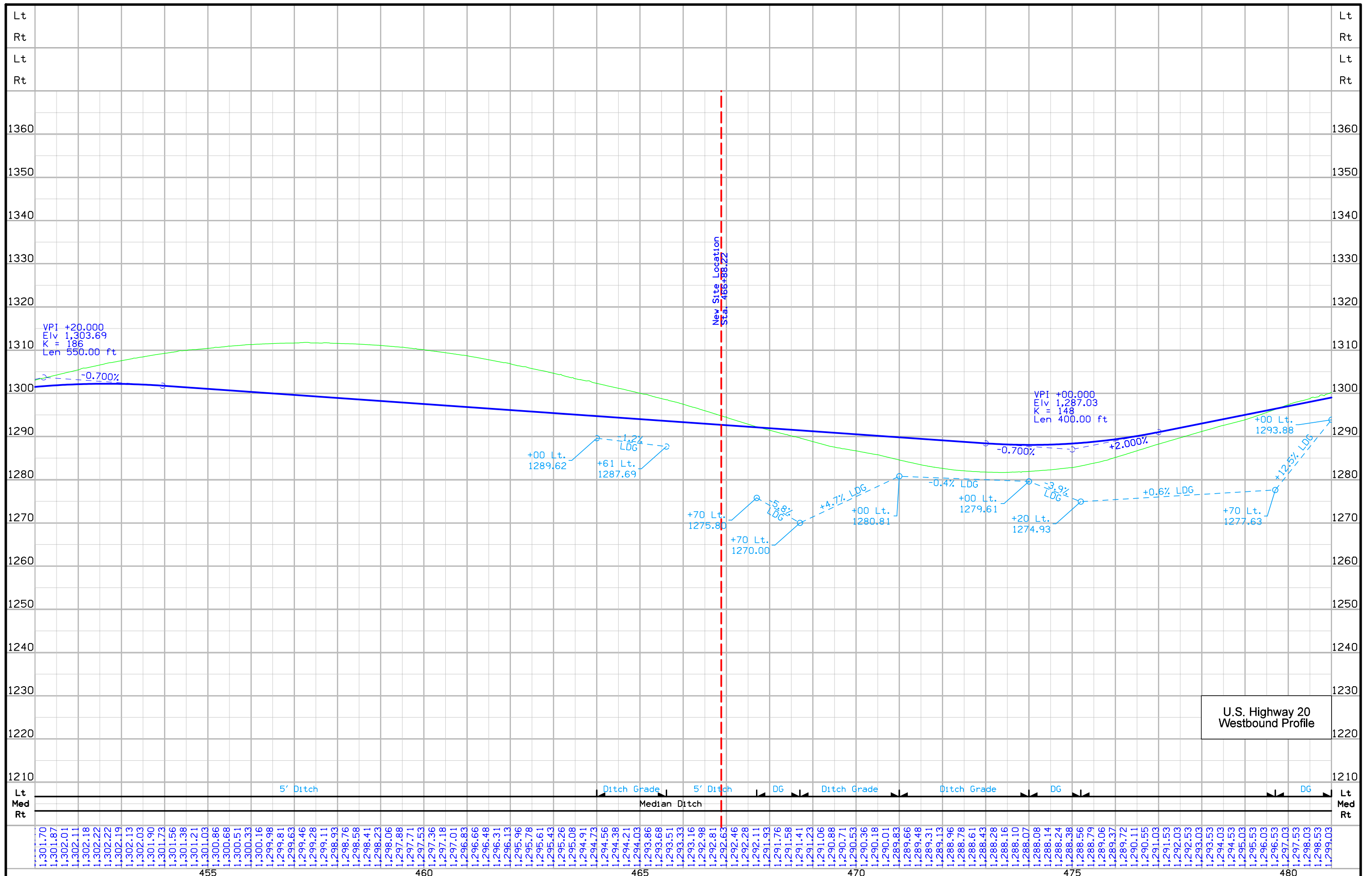


Woodbury TWP.  
T-88N R-47W  
SEC. 4

U.S. Highway 20



FILE NO.	ENGLISH	DESIGN TEAM	WOODBURY COUNTY	PROJECT NUMBER	SHEET NUMBER
		<b>Flattery \ Bell \ Hain</b>		<b>NHSX-020-1(179)--3H-97</b>	<b>D.6</b>



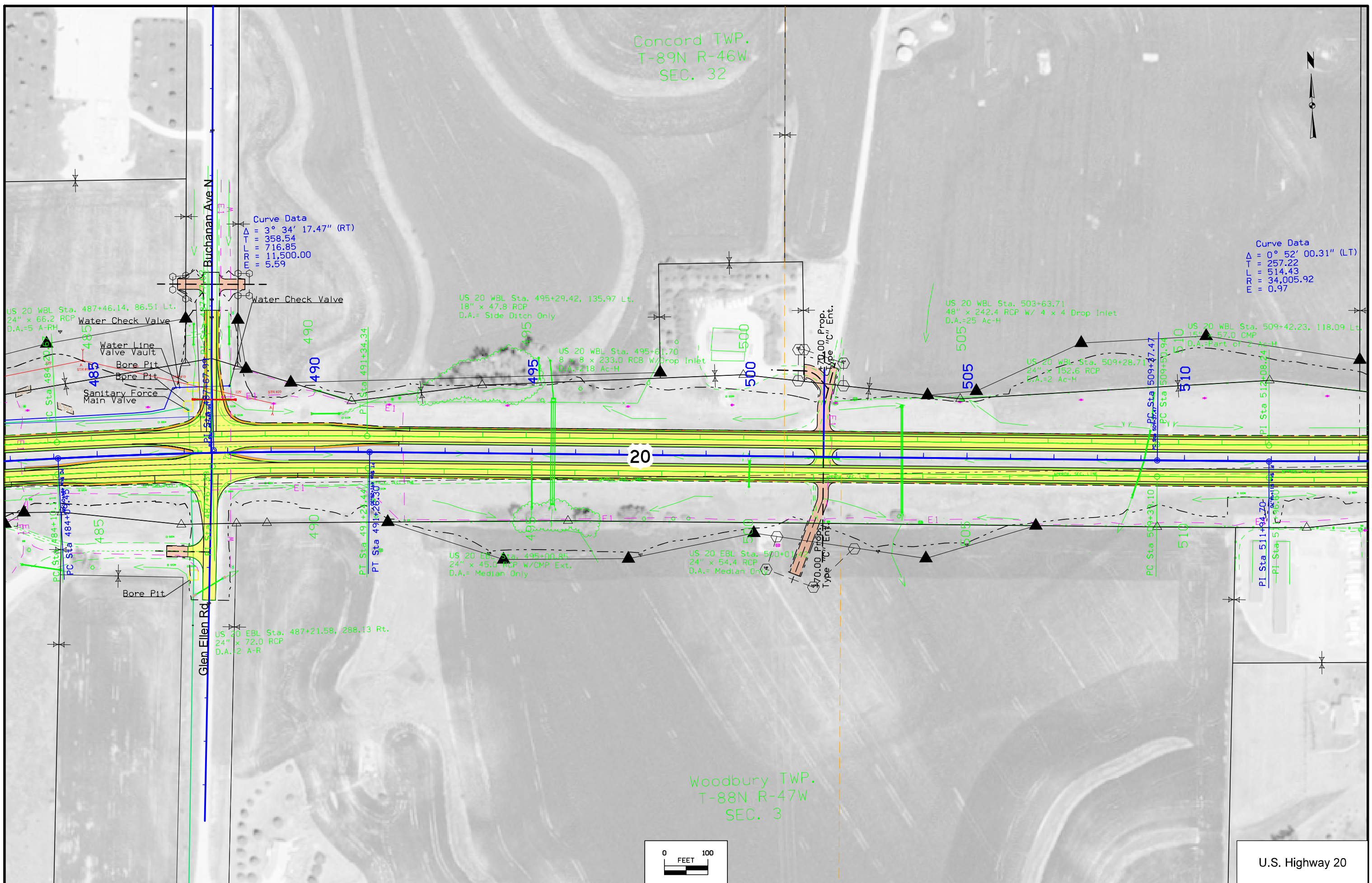
U.S. Highway 20  
Westbound Profile



Concord TWP.  
T-89N R-46W  
SEC. 32

Curve Data  
Δ = 0° 52' 00.31" (LT)  
T = 257.22  
L = 514.43  
R = 34,005.92  
E = 0.97

Curve Data  
Δ = 3° 34' 17.47" (RT)  
T = 358.54  
L = 716.85  
R = 11,500.00  
E = 5.59

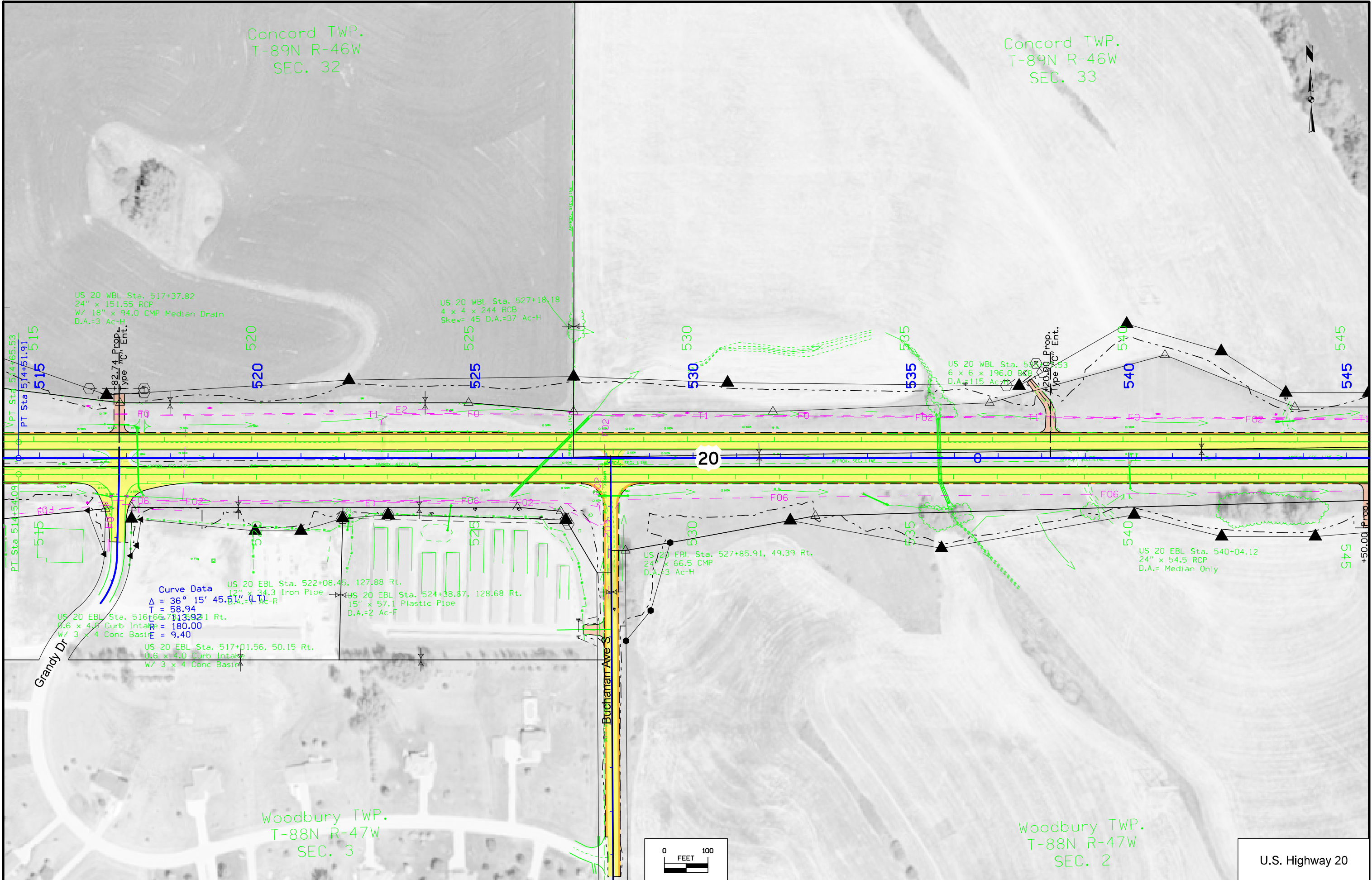


U.S. Highway 20



Concord TWP.  
T-89N R-46W  
SEC. 32

Concord TWP.  
T-89N R-46W  
SEC. 33



**Curve Data**

$\Delta = 36^\circ 15' 45.51''$  (L)  
 $T = 58.94$   
 $E = 180.00$   
 $E = 9.40$

US 20 EBL Sta. 516+66.71, 13.92 Rt.  
0.6 x 4.0 Curb Intake  
W/ 3 x 4 Conc Basin

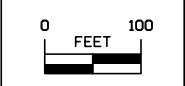
US 20 EBL Sta. 517+01.56, 50.15 Rt.  
0.6 x 4.0 Curb Intake  
W/ 3 x 4 Conc Basin

US 20 EBL Sta. 522+08.45, 127.88 Rt.  
12" x 34.3 Iron Pipe  
D.A.=3 Ac-R

US 20 EBL Sta. 524+38.67, 128.68 Rt.  
15" x 57.1 Plastic Pipe  
D.A.=2 Ac-F

US 20 EBL Sta. 527+85.91, 49.39 Rt.  
24" x 66.5 CMP  
D.A.=3 Ac-H

US 20 EBL Sta. 540+04.12  
24" x 54.5 RCP  
D.A.= Median Only



U.S. Highway 20





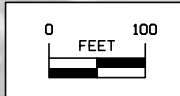
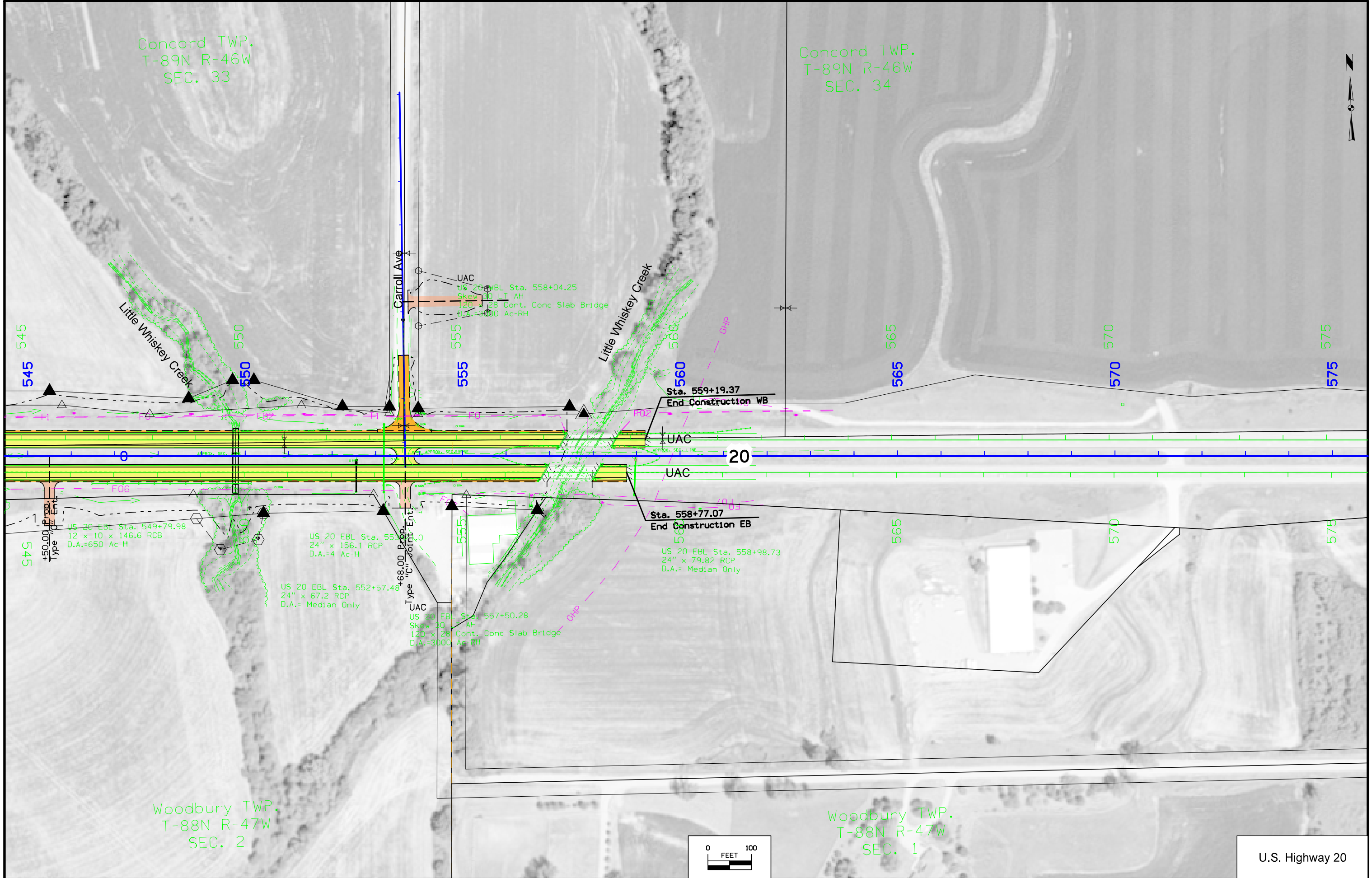
FILE NO.	ENGLISH	DESIGN TEAM	WOODBURY COUNTY	PROJECT NUMBER	SHEET NUMBER
		Flattery \ Bell \ Hain		NHSX-020-1(179)--3H-97	D.11

Concord TWP.  
T-89N R-46W  
SEC. 33

Concord TWP.  
T-89N R-46W  
SEC. 34

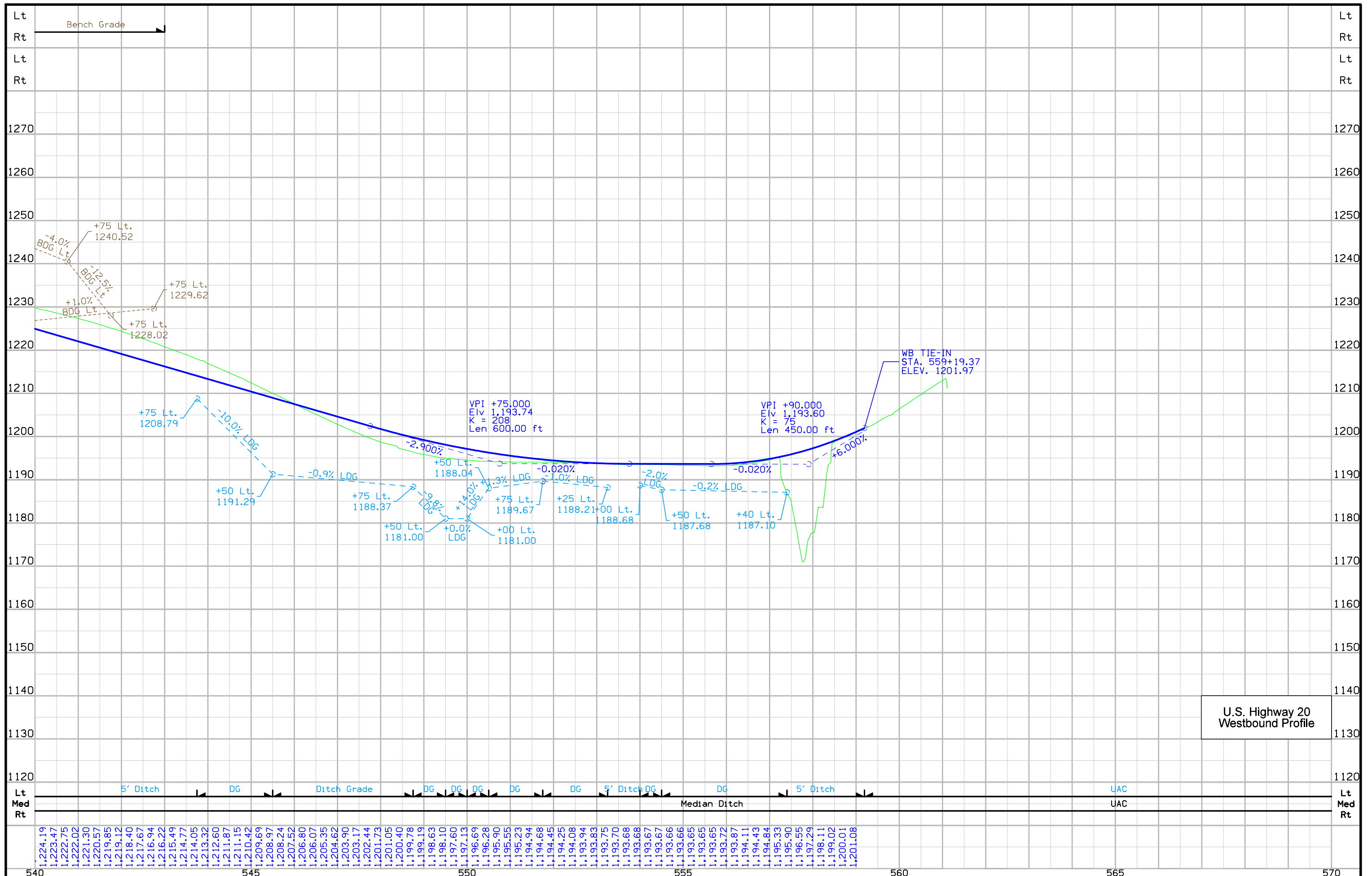
Woodbury TWP.  
T-88N R-47W  
SEC. 2

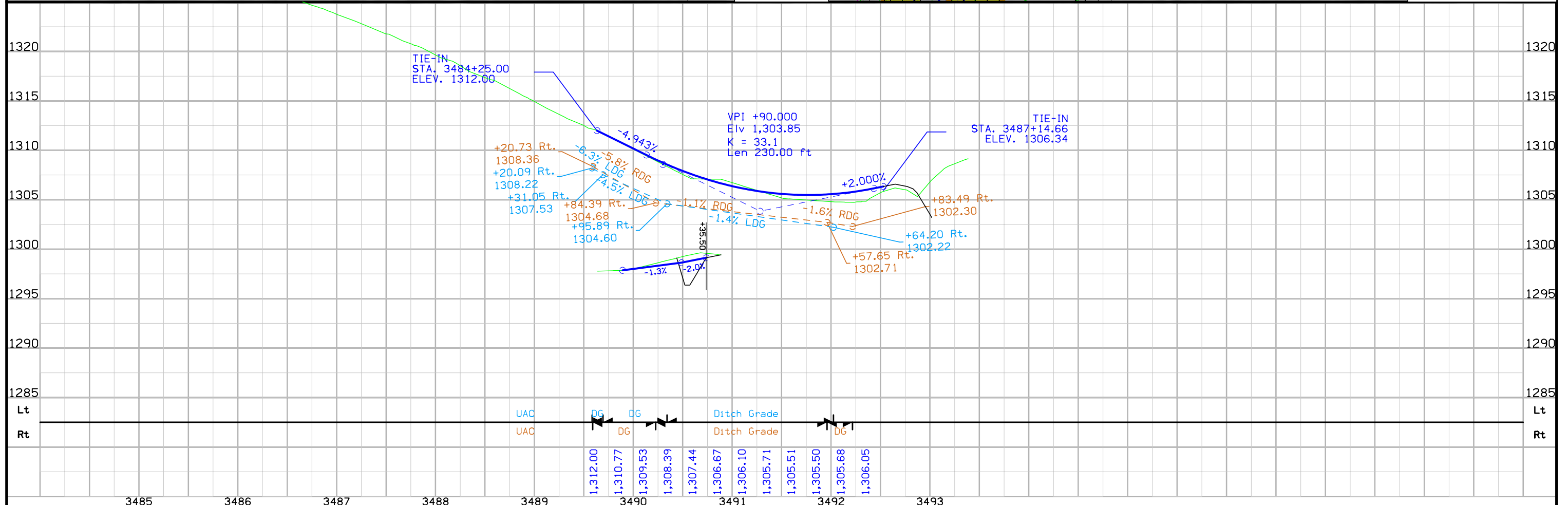
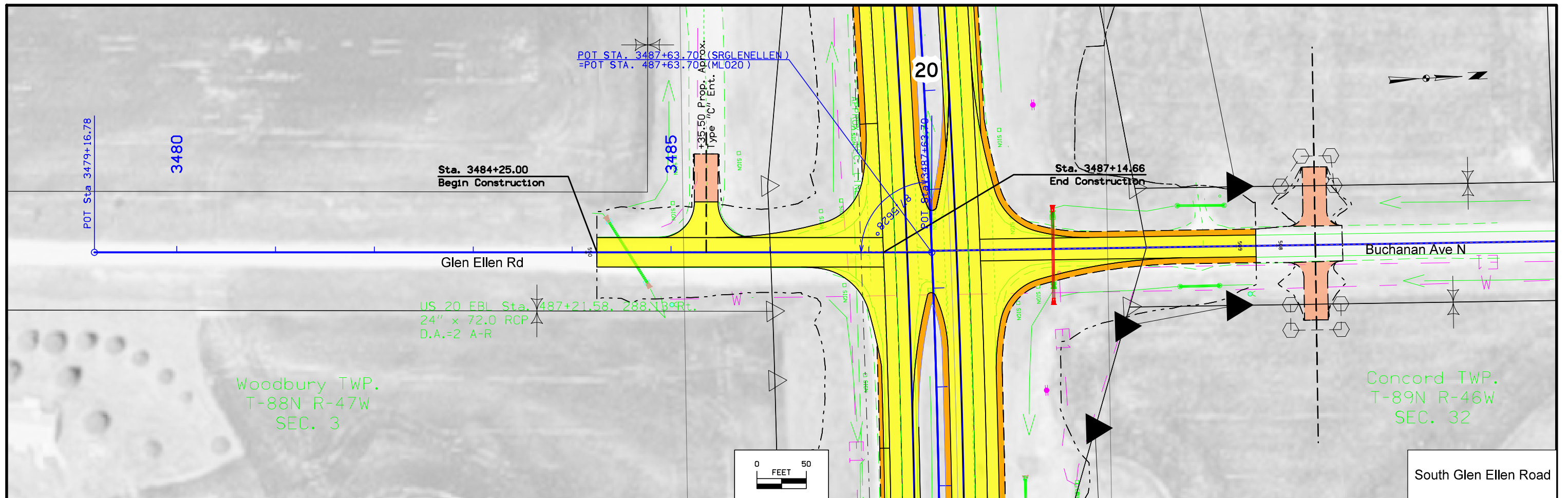
Woodbury TWP.  
T-88N R-47W  
SEC. 1



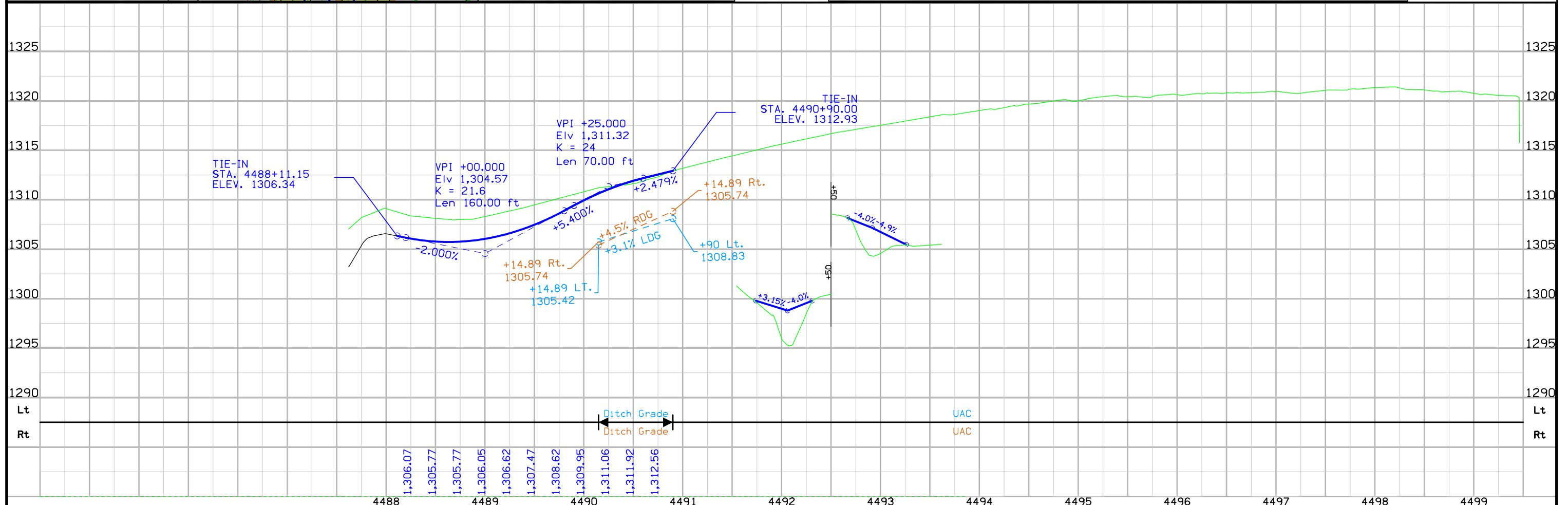
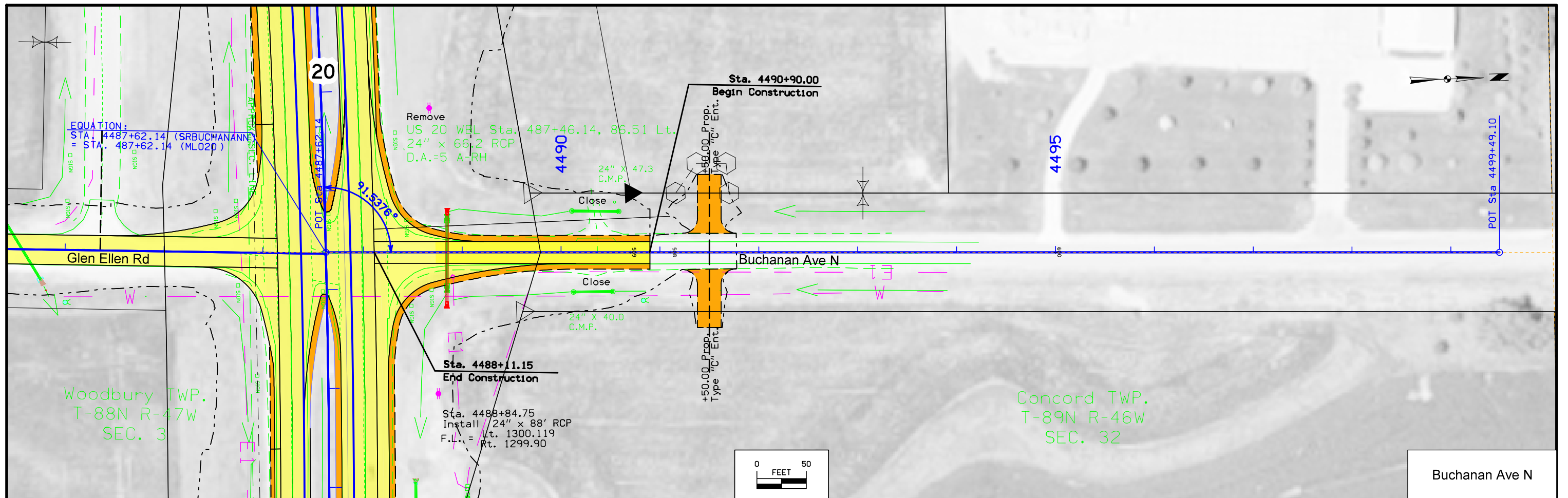
U.S. Highway 20



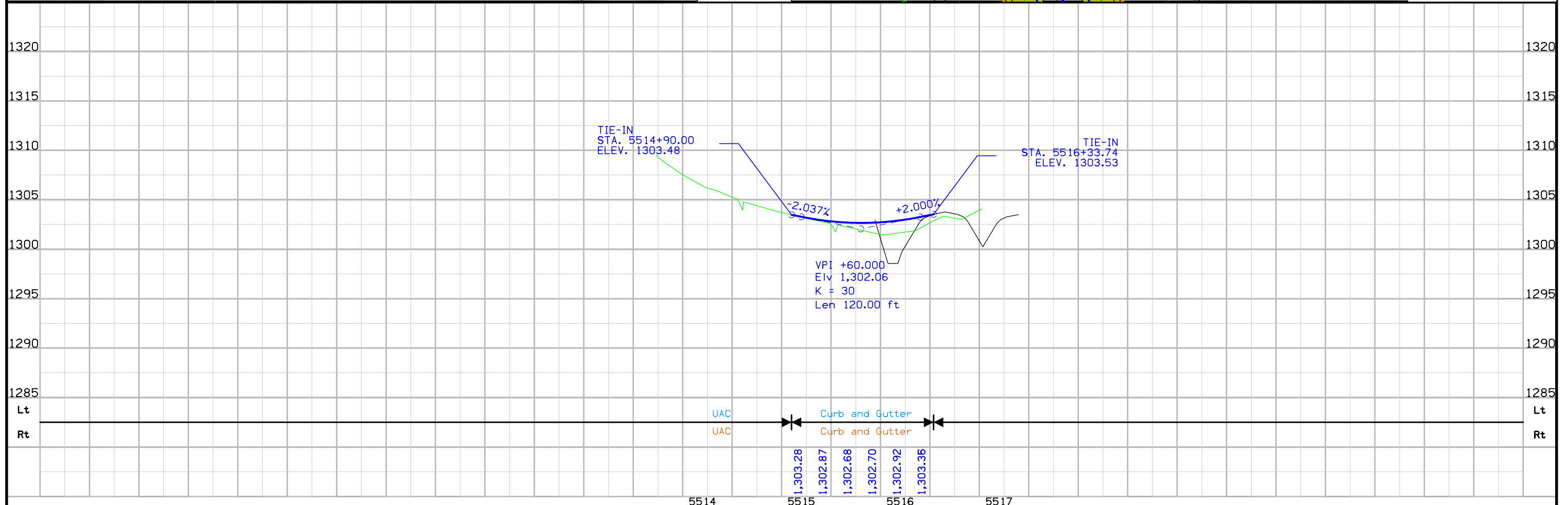
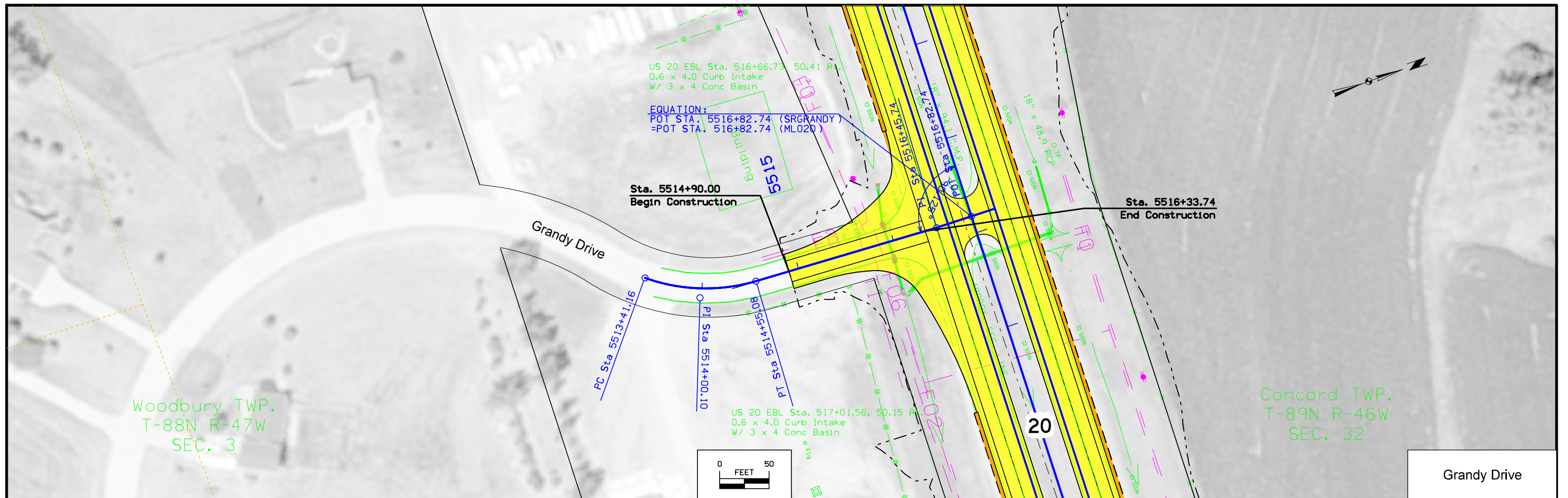


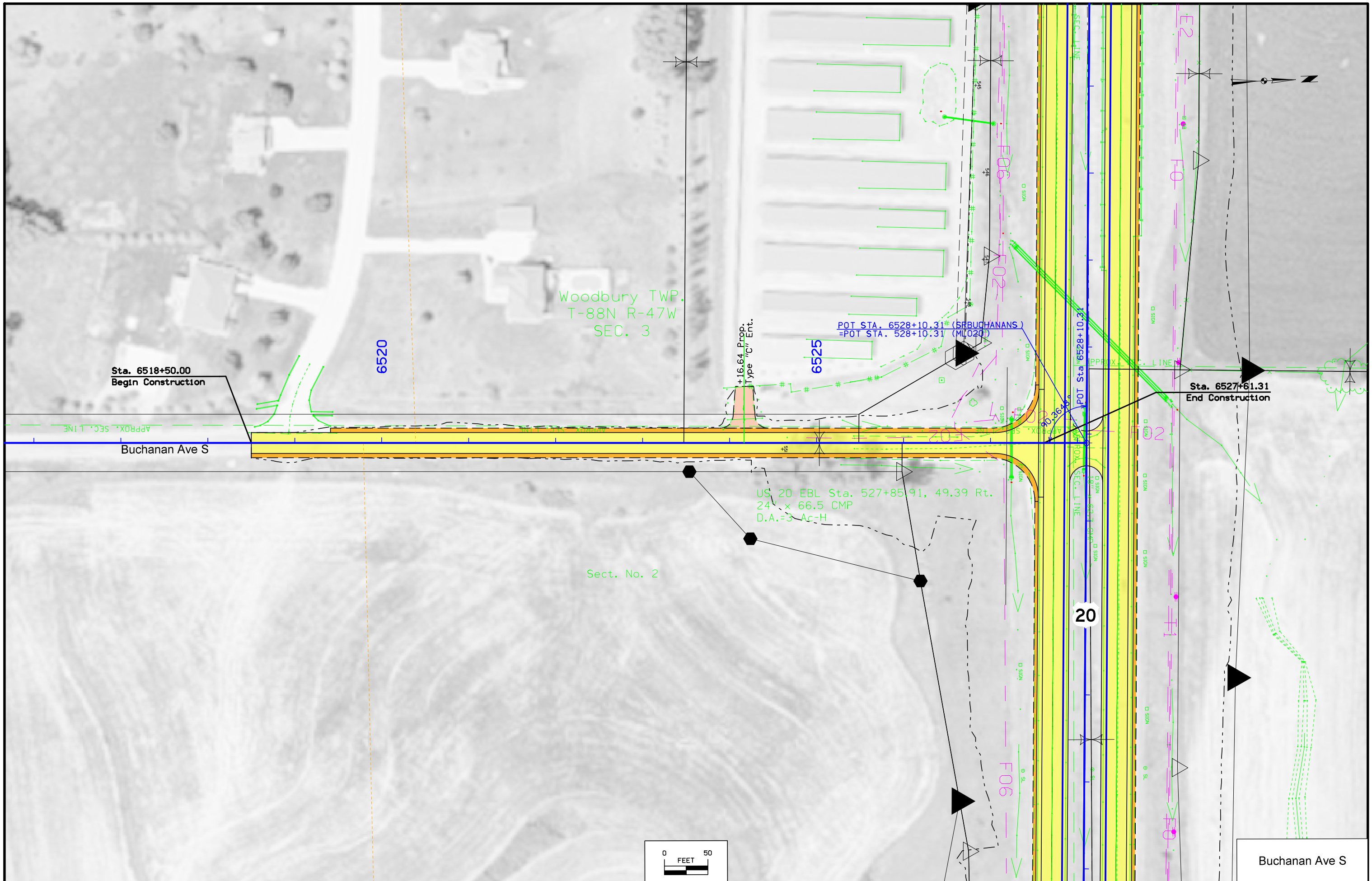




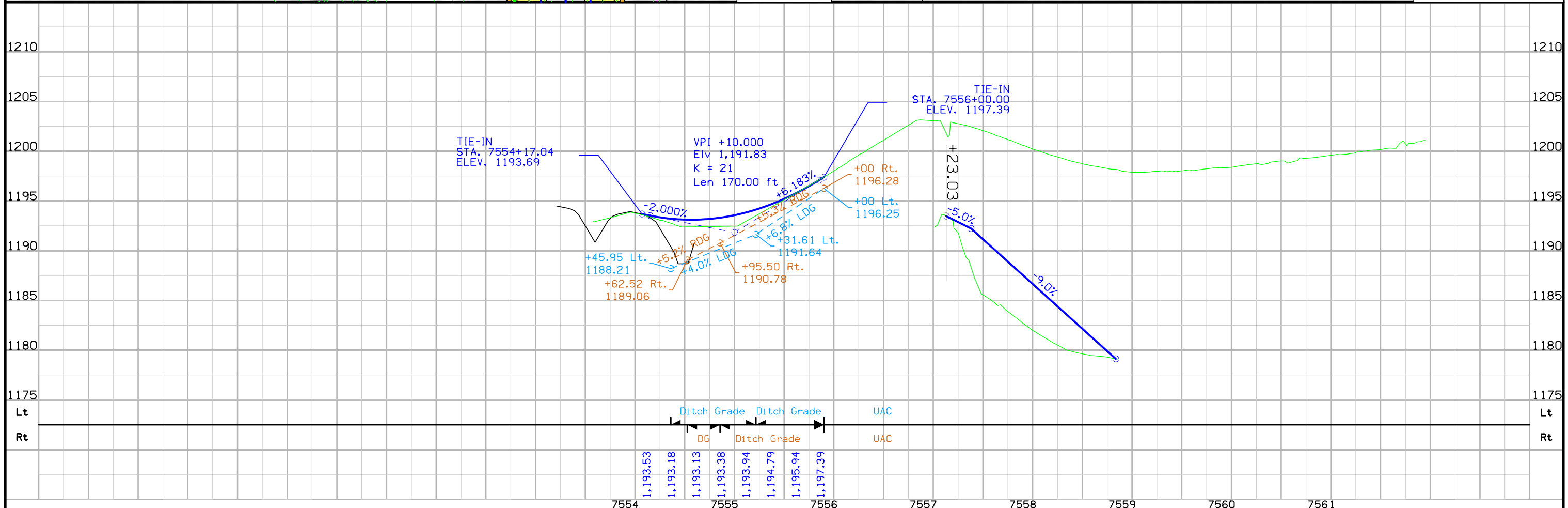
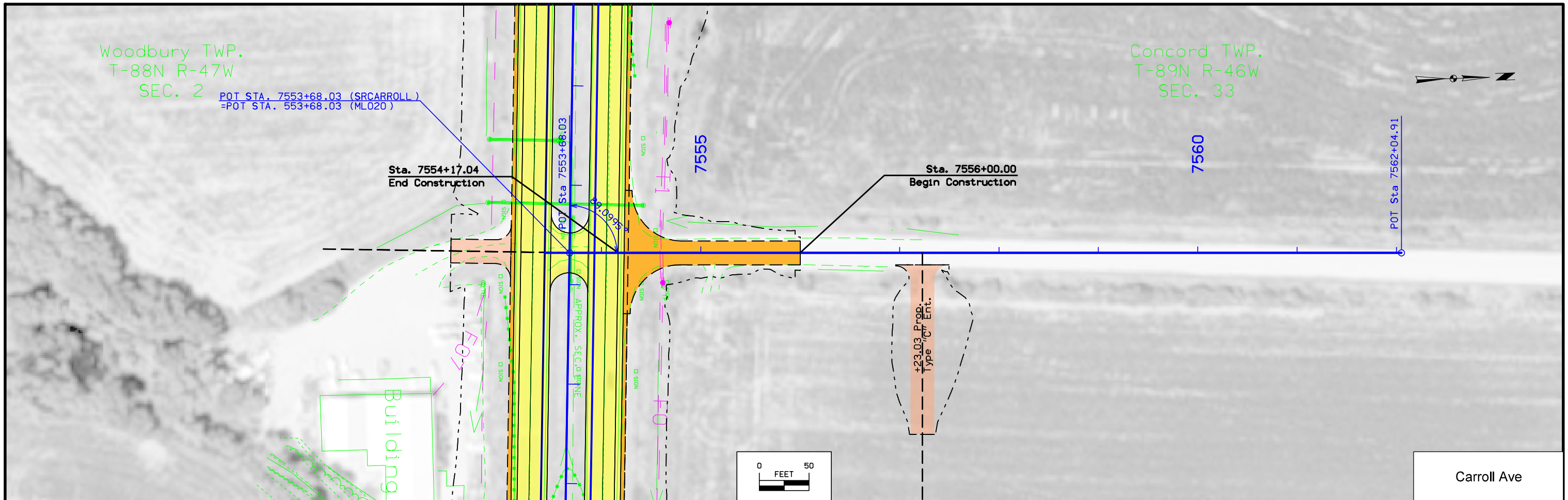














**To:** Nikki Cuva/Jeff Larson  
Office of Right of Way Design

**Final Draft:** August 31<sup>st</sup>, 2021

**District 3:** Tony Lazarowicz  
Shane Tymkowicz

**Project Details:**  
PIN: 17-97-020-010  
Project #: NHSX-020-1(179)—3H-97  
ROW #: NHSN-020-1(180)—2R-97

**TAS:** Jan Laaser-Webb  
Traffic & Safety Bureau

**From:** Leilah Armstrong  
Traffic & Safety Bureau

**WOODBURY COUNTY**  
**US 20 from US 75 / IA 12 Interchange in Sioux City to Little Whiskey Creek (EB/WB)**

**SUBJECT:** Access Review

---

**PROJECT LOCATION AND DESCRIPTION:**

This project includes the proposed re-alignment of NB US 20/US 75 to EB US 20 ramp, and the reconstruction of US 20 from US 75 / IA 12 Interchange in Sioux City to Little Whiskey Creek.

**ACCESS PRIORITY CLASSIFICATION:**

Access locations are based off Priority 3 with a minimum spacing requirement of 1,000 feet along US 20.

**ACCESS CONTROL LIMITS:**

**US 20**

Access rights were previously acquired from approximately Sta. 448+10 to Sta. 847+91 with pre-determined accesses within the project limits at the following locations: Buchanan Avenue North, Glen Ellen Road, Grandy Drive, Buchanan Avenue South, and Carroll Road.

**Buchanan Ave N**

If not already previously acquired access rights are to be acquired 300 feet away from the edge of traveled way in accordance with 112.11(3).

**Glen Ellen Rd**

If not already previously acquired access rights are to be acquired 300 feet away from the edge of traveled way in accordance with 112.11(3).

**Carroll Ave**

If not already previously acquired access rights are to be acquired 285 feet away from the edge of traveled way in accordance with 112.11(3).

**Buchanan Ave S**

If not already previously acquired access rights are to be acquired 300 feet away from the edge of traveled way in accordance with 112.11(3).



**Grandy Dr**

If not already previously acquired access rights are to be acquired 300 feet away from the edge of traveled way in accordance with 112.11(3), with the exception of the entrance at approximately Sta. 5513+85 on the east side of the road.

**ACCESS LOCATION DETAILS:**

<b>Location</b>	<b>Access</b>	<b>Comments</b>
443+81	<b>ML020</b>	Begin Project
458+67 LT	Type C Entrance	<b>Closed</b>
466+88 LT	Type B Entrance	SAC - Proposed
466+90	Median Crossing	Proposed - Paved
487+68 LT	<b>Buchanan Ave N</b>	Existing
487+68 RT	<b>Glen Ellen Rd</b>	Existing
501+47 RT	Type C Entrance	<b>Closed</b>
501+62 LT	Type C Entrance	<b>Closed</b>
501+70 LT	Type C Entrance	Proposed – Reserved?
501+70	Median Crossing	Proposed - Granular
501+70 RT	Type C Entrance	Proposed – Reserved?
516+75 RT	<b>Grandy Dr</b>	Existing
528+20 RT	<b>Buchanan Ave S</b>	Existing
538+20 LT	Type C Entrance	Proposed – Reserved?
538+30 LT	Type C Entrance	<b>Closed</b>
538+84	Median Crossing	<b>Closed</b>
539+06 RT	Type C Entrance	<b>Closed</b>
543+65 LT	Type C Entrance	<b>Closed</b>
545+50 RT	Type C Entrance	SAC – Proposed?
553+68 LT	<b>Carroll Ave</b>	Existing
553+68 RT	Type C Entrance	Proposed
559+19	<b>ML020</b>	End Project
-	-	-
4488+11	<b>SR Buchanan N</b>	Begin Construction
4490+35 RT	Type C Entrance	<b>Closed</b>
4490+35 LT	Type C Entrance	<b>Closed</b>
4491+50 LT	Type C Entrance	Proposed
4491+50 RT	Type C Entrance	Proposed
4490+90	<b>SR Buchanan N</b>	End Construction
-	-	-
3484+25	<b>SR Glen Ellen</b>	Begin Construction
3485+35 LT	Type C Entrance	Proposed
3487+15	<b>SR Glen Ellen</b>	End Construction
-	-	-

7554+17	<b>SR Carroll</b>	Begin Construction
7555+13 RT	Type C Entrance	<b>Closed</b>
7557+20 RT	Type C Entrance	Proposed
7556+00	<b>SR Carroll</b>	End Construction





Concord TWP.  
T-89N R-46W  
SEC. 31



SW1/4 SE1/4

SE1/4 SE1/4

FUTURE R/W LINE

FUTURE R/W LINE

FUTURE R/W LINE

474+17±R  
C200'

475

20

20

Obliterate

466+88  
C167'±EX. R/W

471+85  
C242'

475+97±R  
C190'

DAVID A. & SUS  
DZIURAWIEC

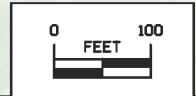
TOTAL ACQUISITION

3

GOVT LOT 1

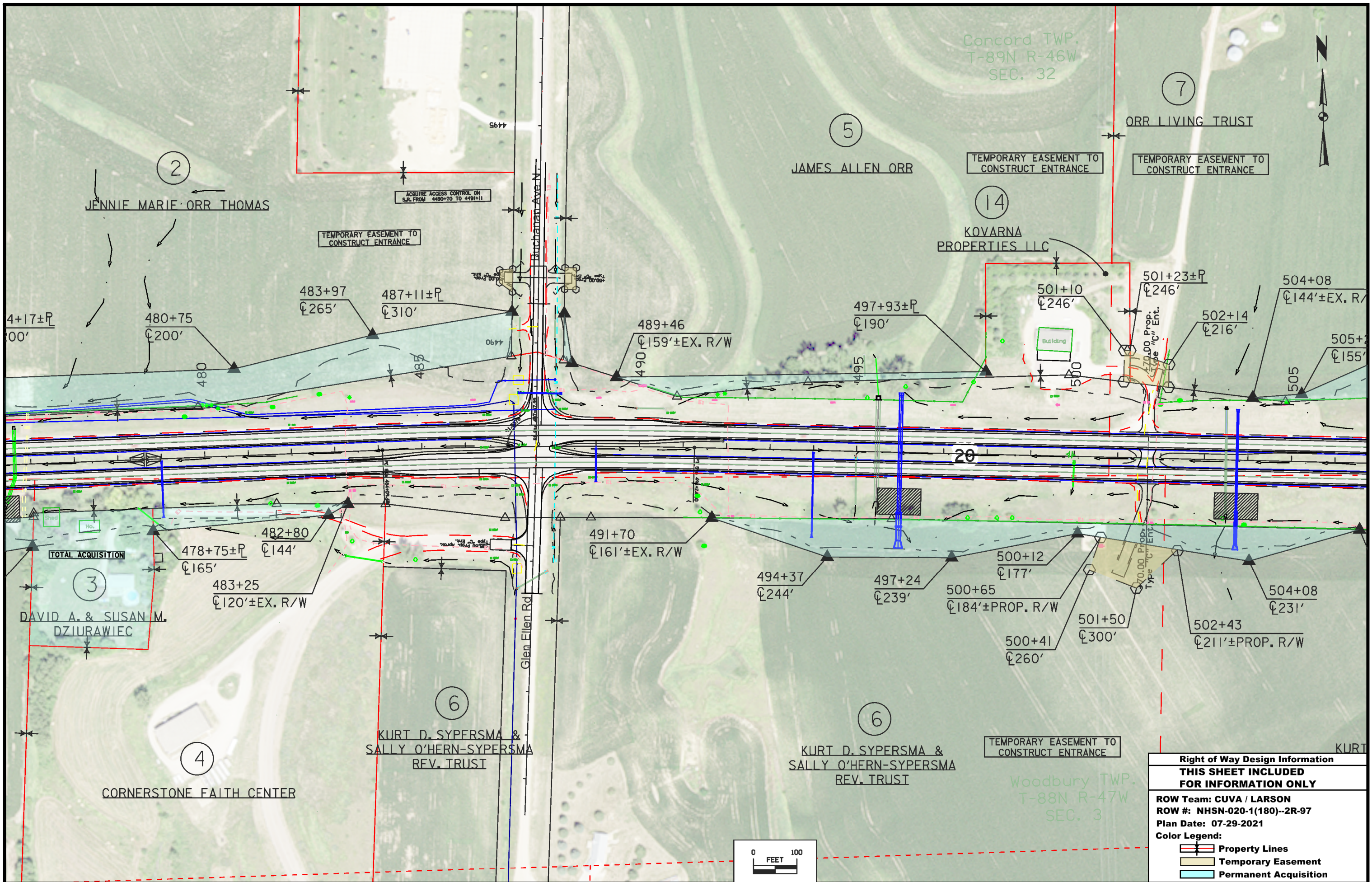
LONG LINES LTD

Woodbury TWP.  
T-88N R-47W  
SEC. 4



<b>Right of Way Design Information</b>	
<b>THIS SHEET INCLUDED FOR INFORMATION ONLY</b>	
ROW Team: CUVA / LARSON	
ROW #: NHSN-020-1(180)--2R-97	
Plan Date: 07-29-2021	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition

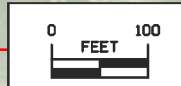




Concord TWP.  
T-89N R-46W  
SEC. 32

Woodbury TWP.  
T-88N R-47W  
SEC. 3

Right of Way Design Information	
<b>THIS SHEET INCLUDED FOR INFORMATION ONLY</b>	
ROW Team: CUVA / LARSON	
ROW #: NHSN-020-1(180)--2R-97	
Plan Date: 07-29-2021	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition





Concord TWP.  
T-89N R-46W  
SEC. 32



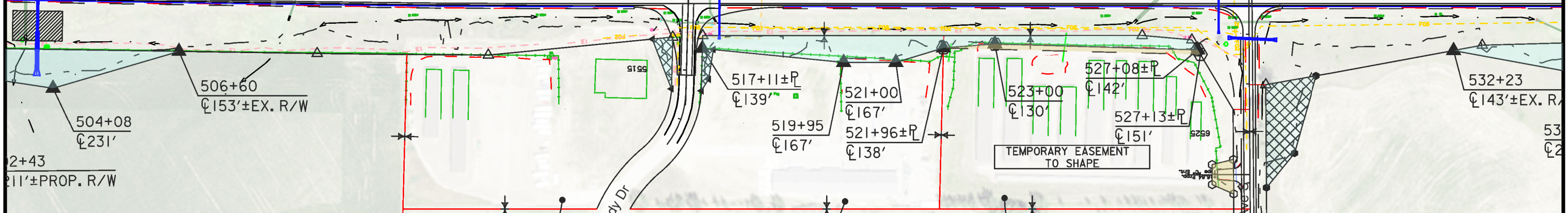
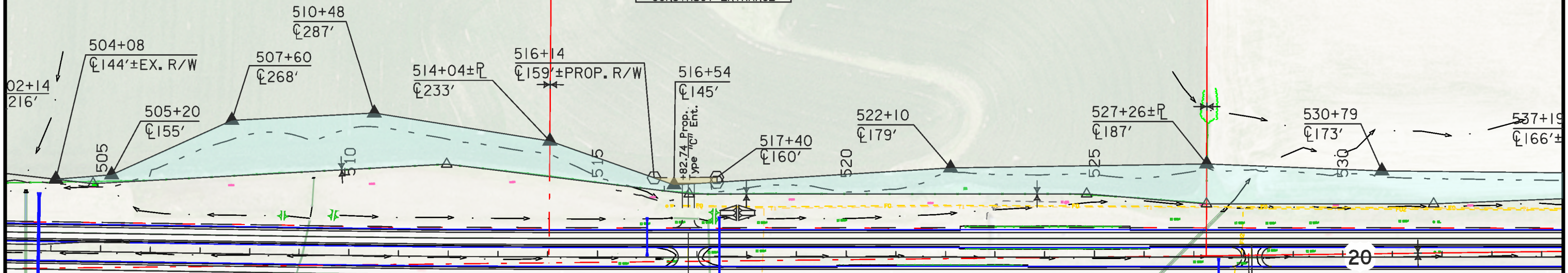
TRUST  
SEMENT TO  
NTRANCE

7  
ORR LIVING TRUST

9  
MADELYNN RENE ORR

11  
EVERETT A HORD JR

TEMPORARY EASEMENT TO  
CONSTRUCT ENTRANCE



6  
KURT D. SYBERSMA &  
SALLY O'HERN-SYBERSMA  
REV. TRUST

8  
MORNINGSIDE  
STORAGE LLC

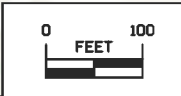
10  
DOUG & FRANCINE  
CARLSON

8  
MORNINGSIDE  
STORAGE LLC

12  
HENNINGS JOINT TRUST

TEMPORARY EASEMENT  
TO SHAPE

Woodbury TWP.  
T-88N R-47W  
SEC. 3



Right of Way Design Information	
<b>THIS SHEET INCLUDED FOR INFORMATION ONLY</b>	
ROW Team: CUVA / LARSON	
ROW #: NHSN-020-1(180)--2R-97	
Plan Date: 07-29-2021	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition



Concord TWP.  
T-89N R-46W  
SEC. 33

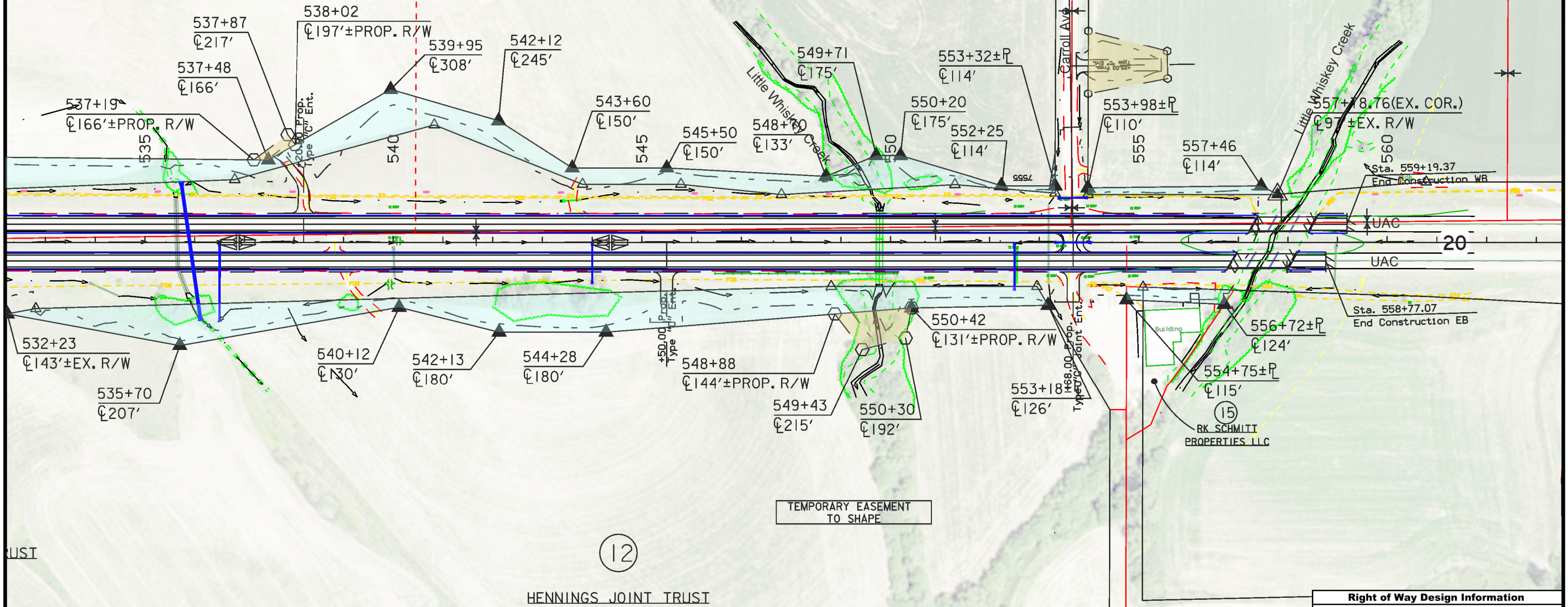
Concord TWP.  
T-89N R-46W  
SEC. 33

Concord TWP.  
T-89N R-46W  
SEC. 33

TEMPORARY EASEMENT TO  
CONSTRUCT ENTRANCE

EVERETT A HORD JR

ELEWELLING  
FARMS LTD



JUST

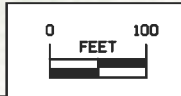
Woodbury TWP.  
T-88N R-47W  
SEC. 2

Woodbury TWP.  
T-88N R-47W  
SEC. 2

HENNINGS JOINT TRUST

RK SCHMITT  
PROPERTIES LLC

TEMPORARY EASEMENT  
TO SHAPE



<b>Right of Way Design Information</b>	
<b>THIS SHEET INCLUDED FOR INFORMATION ONLY</b>	
ROW Team: CUVA / LARSON	
ROW #: NHSN-020-1(180)--2R-97	
Plan Date: 07-29-2021	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition





6

KURT D. SYPERSMA &  
SALLY O'HERN-SYPERMA  
REV. TRUST

3480

3485

+35.50 Prop. Approx.  
Type "C" Ent.

Glen Ellen Rd

PT Sta 487+67.99

Woodbury TWP.  
T-88N R-47W  
SEC. 3

ACQUIRE ACCESS CONTROL ON  
S.R. FROM 3484+14 TO 3486+00

6

KURT D. SYPERSMA &  
SALLY O'HERN-SYPERMA  
REV. TRUST

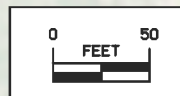
Right of Way Design Information

THIS SHEET INCLUDED  
FOR INFORMATION ONLY

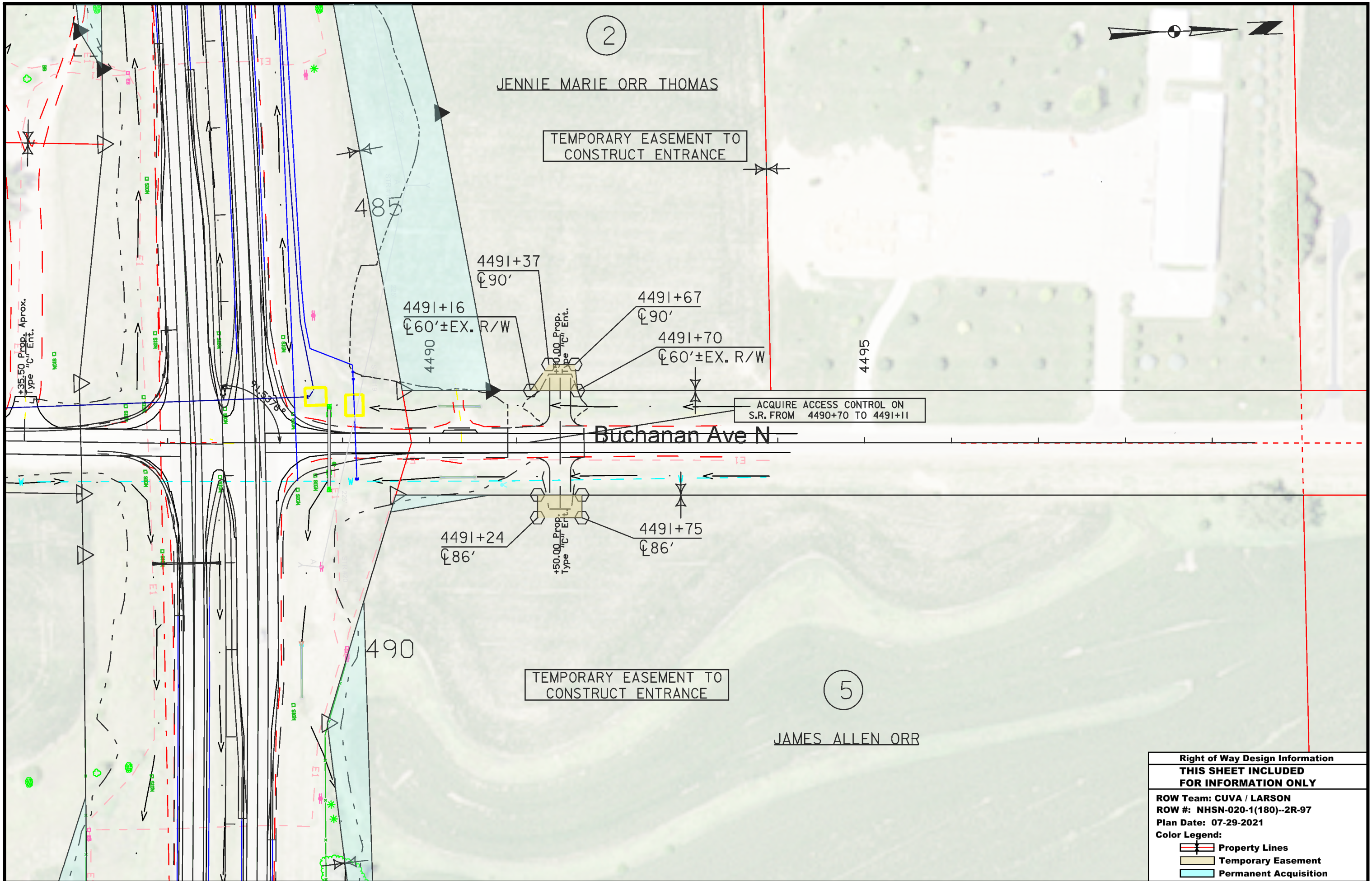
ROW Team: CUVA / LARSON  
ROW #: NHSN-020-1(180)--2R-97  
Plan Date: 07-29-2021

Color Legend:

-  Property Lines
-  Temporary Easement
-  Permanent Acquisition







2

JENNIE MARIE ORR THOMAS

TEMPORARY EASEMENT TO CONSTRUCT ENTRANCE

485

4491+37  
±90'

4491+16  
±60'±EX. R/W

4491+67  
±90'

4491+70  
±60'±EX. R/W

4495

ACQUIRE ACCESS CONTROL ON S.R. FROM 4490+70 TO 4491+11

Buchanan Ave N

4491+24  
±86'

+50.00 Prop. Type "C" Ent.

4491+75  
±86'

490

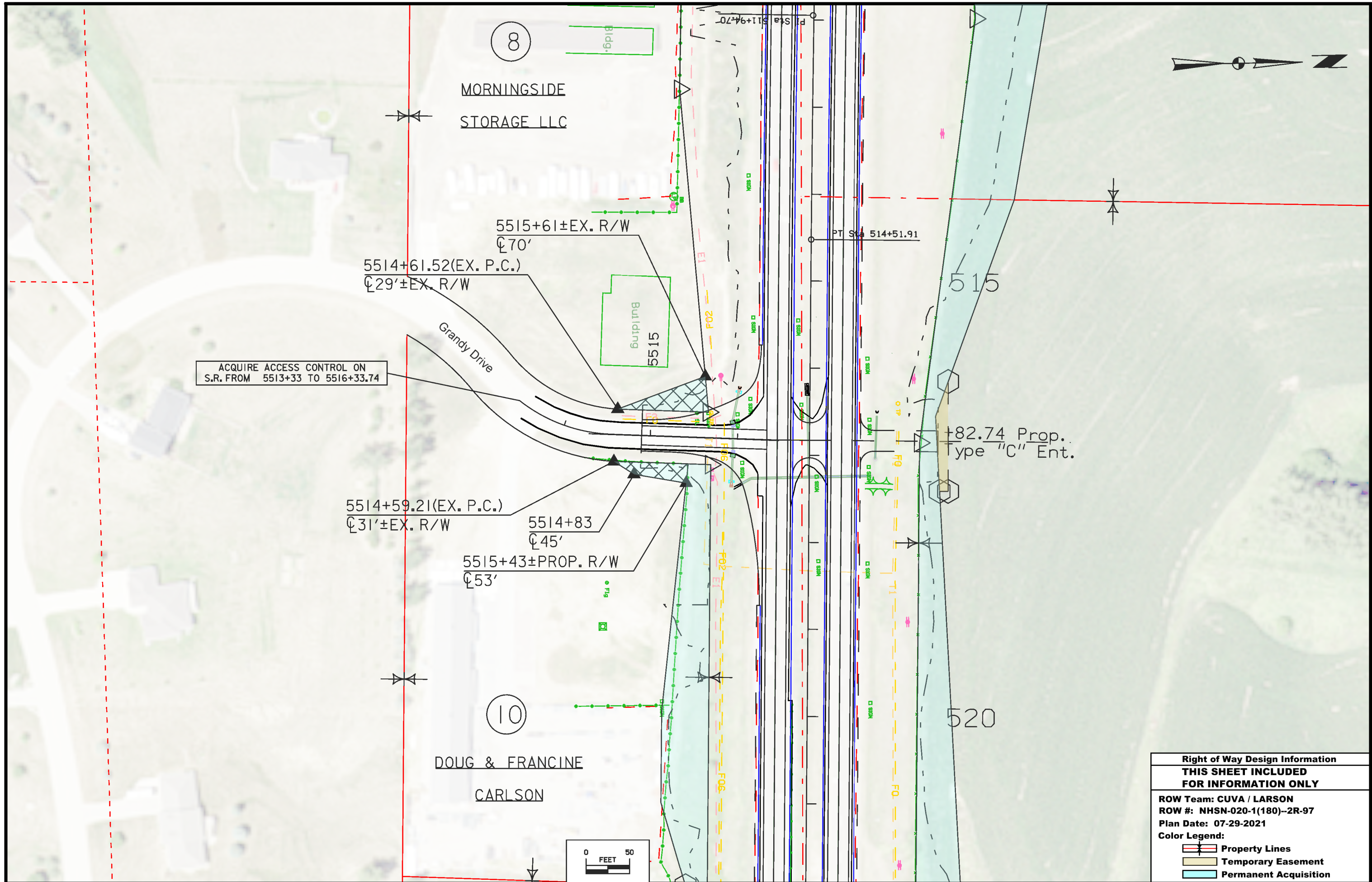
TEMPORARY EASEMENT TO CONSTRUCT ENTRANCE

5

JAMES ALLEN ORR

<b>Right of Way Design Information</b>	
<b>THIS SHEET INCLUDED FOR INFORMATION ONLY</b>	
ROW Team: CUVA / LARSON	
ROW #: NHSN-020-1(180)--2R-97	
Plan Date: 07-29-2021	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition





<b>Right of Way Design Information</b>	
<b>THIS SHEET INCLUDED FOR INFORMATION ONLY</b>	
ROW Team: CUVA / LARSON	
ROW #: NHSN-020-1(180)--2R-97	
Plan Date: 07-29-2021	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition





8

MORNINGSIDE  
STORAGE LLC

TEMPORARY EASEMENT TO  
CONSTRUCT ENTRANCE

525

6520

6523+97  
±76'

6524+37  
±76'

6523+78  
±33'±EX. R/W

6525  
±33'±EX. R/W

6524+47  
±33'±EX. R/W

Buchanan Ave S

6523+90  
±33'±EX. R/W

ACQUIRE ACCESS CONTROL ON  
S.R. FROM 6524+61 TO 6527+61

6524+59  
±90'

6526+15±EX. R/W  
±135'

530

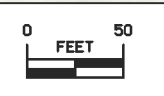
12

HENNINGS  
JOINT TRUST

Right of Way Design Information  
THIS SHEET INCLUDED  
FOR INFORMATION ONLY

ROW Team: CUVA / LARSON  
ROW #: NHSN-020-1(180)--2R-97  
Plan Date: 07-29-2021

Color Legend:  
Property Lines  
Temporary Easement  
Permanent Acquisition







11  
EVERETT A HORD JR

Concord TWP.  
T-89N R-46W  
SEC. 33

ACQUIRE ACCESS CONTROL ON  
S.R. FROM 7554+80 TO 7556+78

7554+83±PROP. R/W  
⌀45'  
7555+50  
⌀33'±EX. R/W

+68.00 Prop.  
Type "C" Joint Ent.

Carroll Ave

7556+67  
⌀35'±EX. R/W

7557+94  
⌀37'±EX. R/W

+23.03 Prop.  
Type "C" Ent.

555

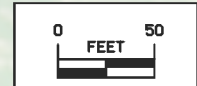
7556+95  
⌀195'

7557+50  
⌀195'

13  
FLEWELLING  
FARMS LTD

TEMPORARY EASEMENT TO  
CONSTRUCT ENTRANCE

Little Whiskey



<b>Right of Way Design Information</b>	
<b>THIS SHEET INCLUDED FOR INFORMATION ONLY</b>	
ROW Team: CUVA / LARSON	
ROW #: NHSN-020-1(180)--2R-97	
Plan Date: 07-29-2021	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition

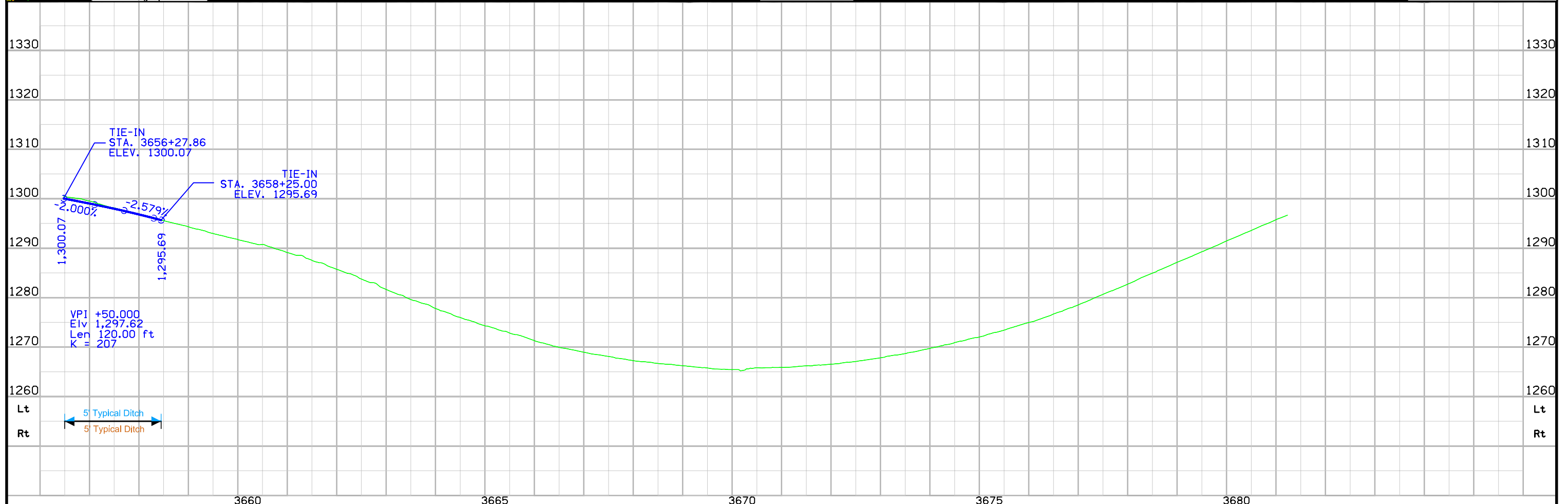
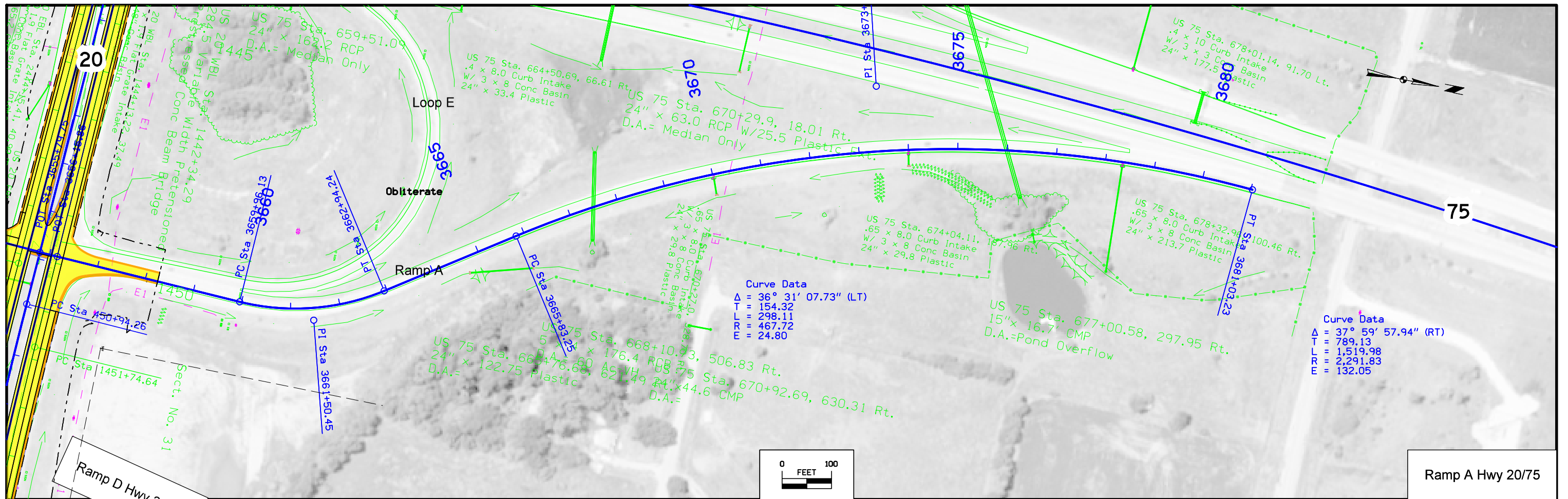
108-23A 08-01-08
<b>TRAFFIC CONTROL PLAN</b>
Traffic on US 20 shall be maintained at all times.

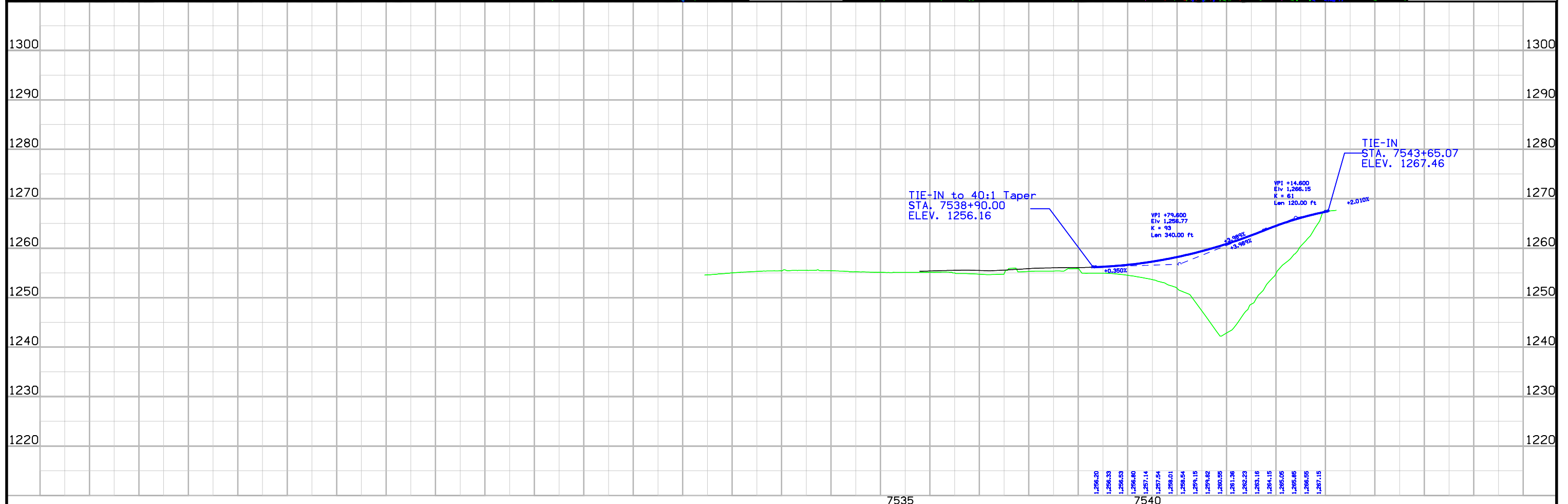
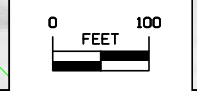
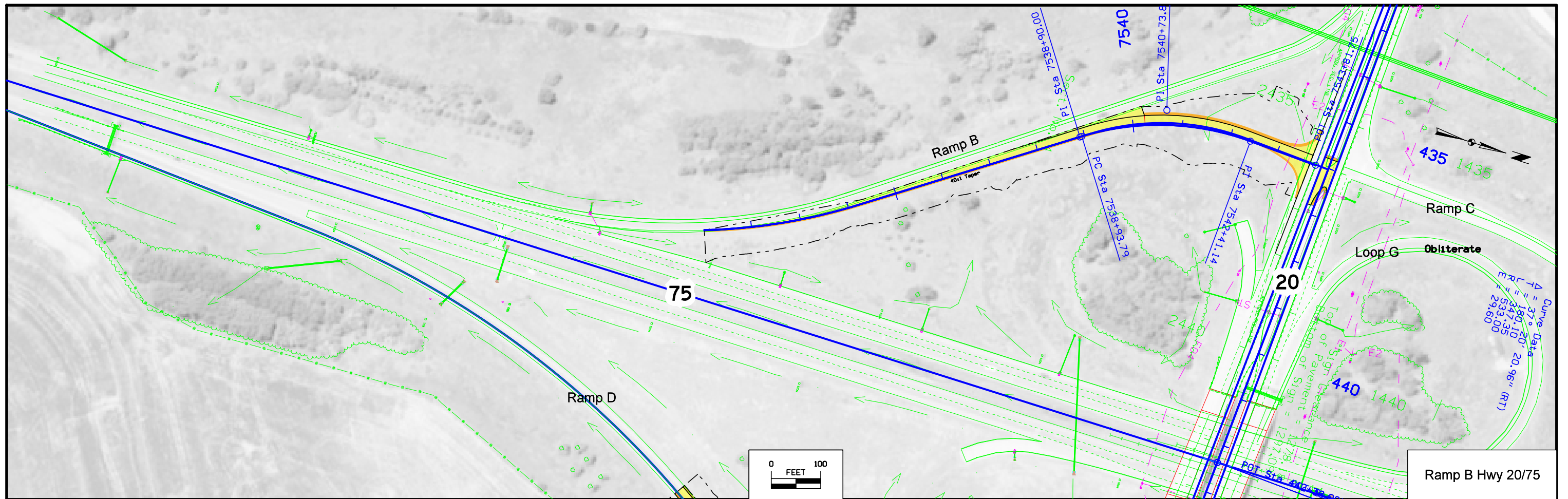
108-26A 08-01-08
<b>STAGING NOTES</b>
<p><b>Stage 1:</b>  <i>Traffic:</i>          US 20 on existing WB lanes</p> <p><i>Construction:</i>          Grade and pave new US 20 EB lanes          Grade and pave US 20/US 75 Ramp B and Ramp D</p> <p><b>Stage 2:</b>  <i>Traffic:</i>          US 20 on new EB lanes</p> <p><i>Construction:</i>          Grade and pave new US 20 WB lanes          Grade and pave US 20/US 75 Ramp A</p> <p><i>Removal:</i>          Remove Loop E and Loop G</p> <p><b>Stage 3:</b>  <i>Traffic:</i>          Open traffic on US 20 to final traffic patterns</p> <p><i>Construction:</i>          Construction Complete</p>

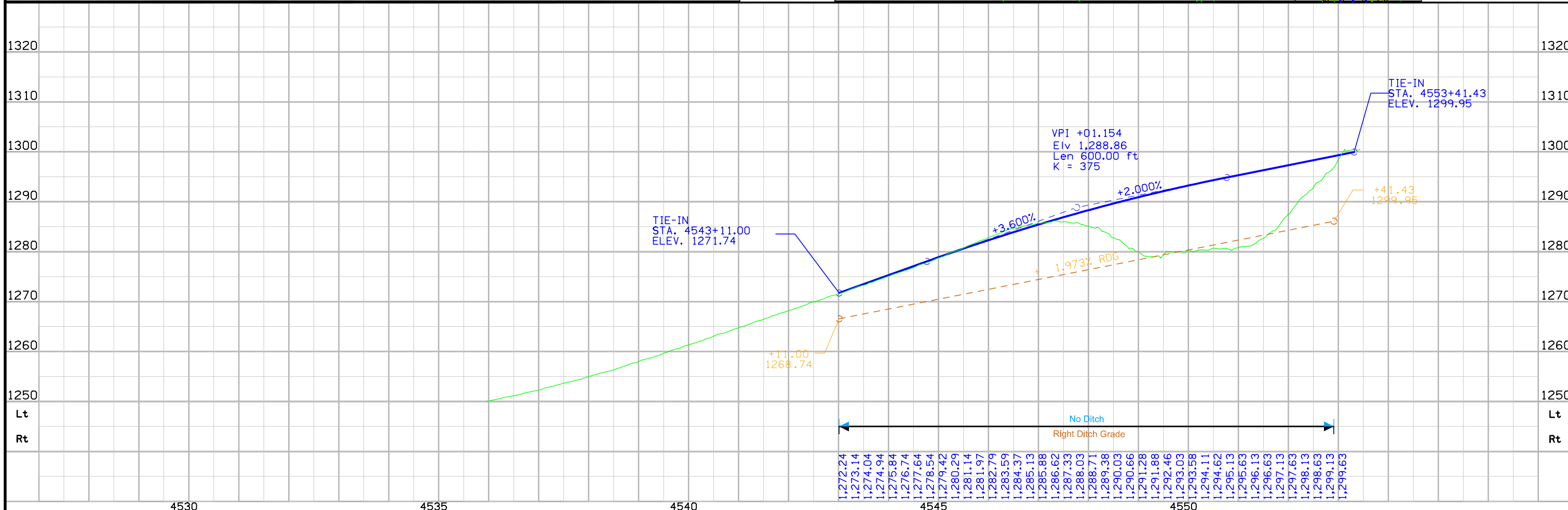
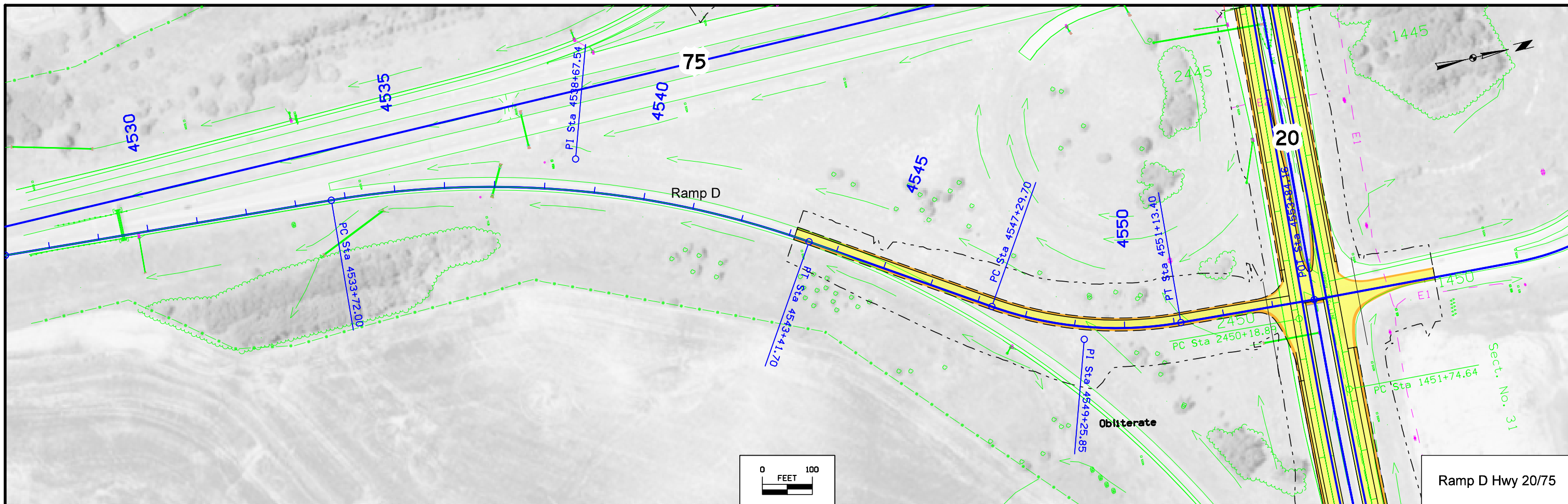
111-01 04-17-12												
<b>COORDINATED OPERATIONS</b>												
Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.												
<table border="1"> <thead> <tr> <th>Project</th> <th>Type of Work</th> </tr> </thead> <tbody> <tr> <td>None provided.</td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>	Project	Type of Work	None provided.									
Project	Type of Work											
None provided.												

108-25 10-21-14												
<b>511 TRAVEL RESTRICTIONS</b>												
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 Provided.									

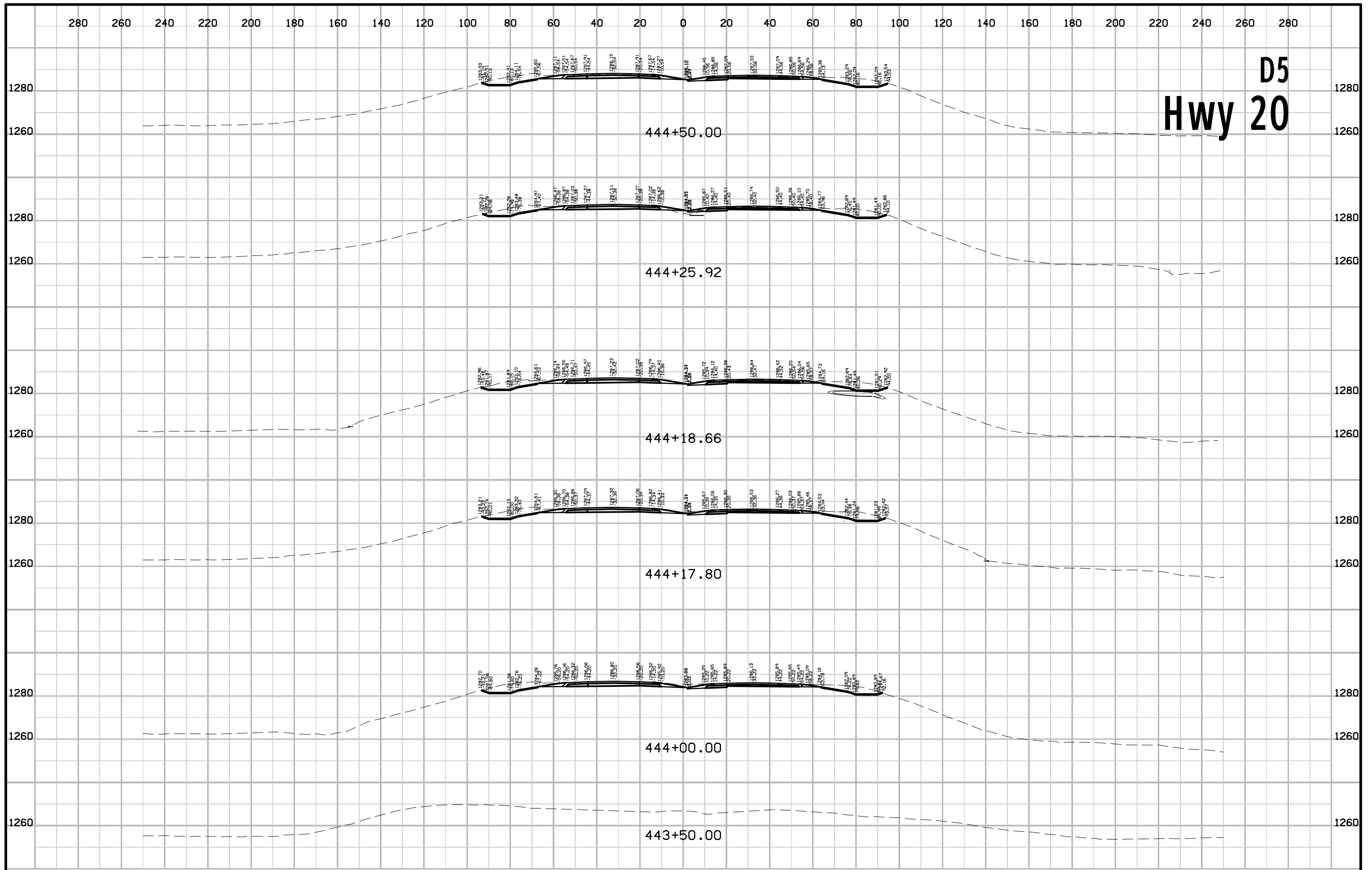






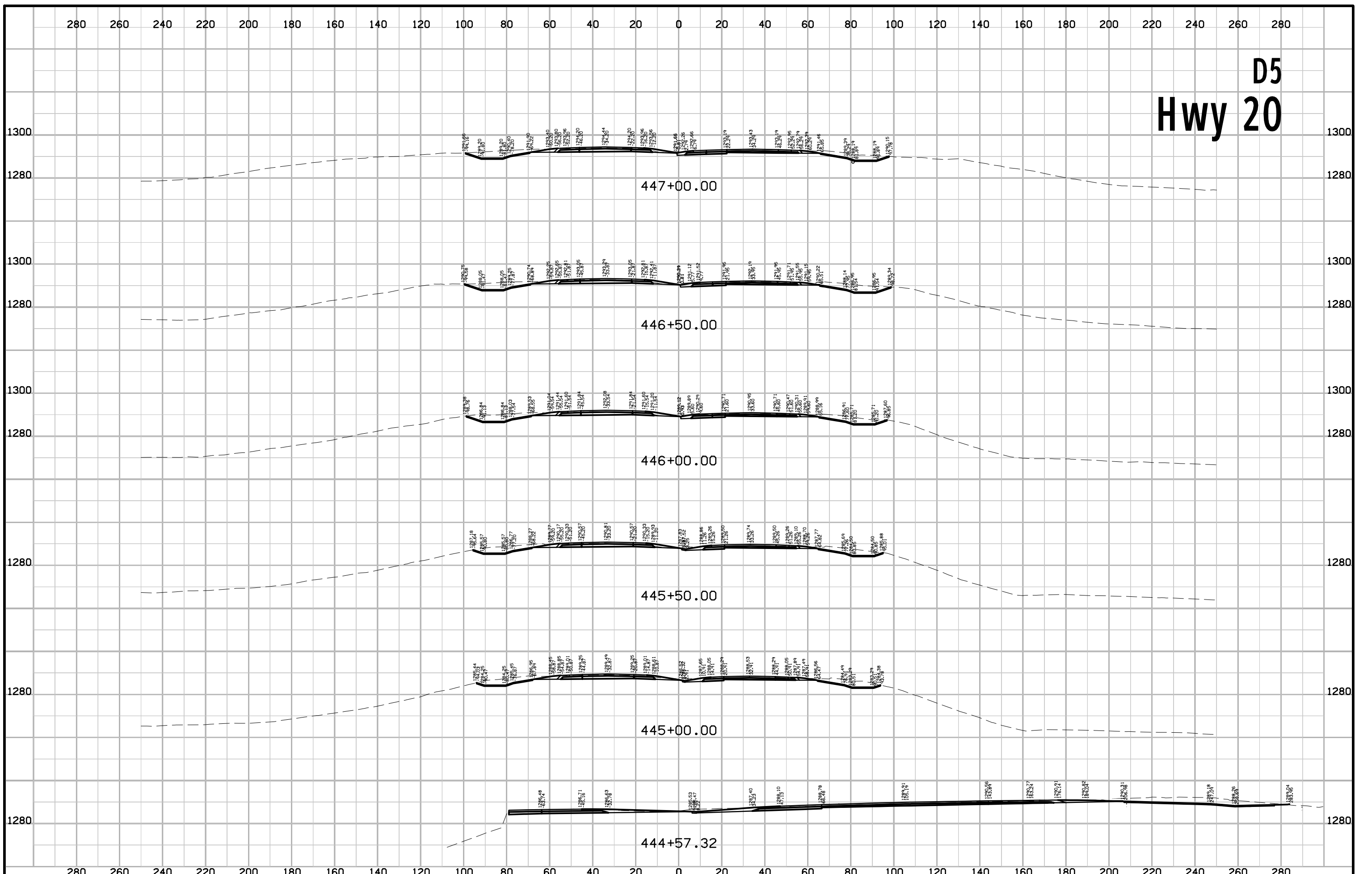




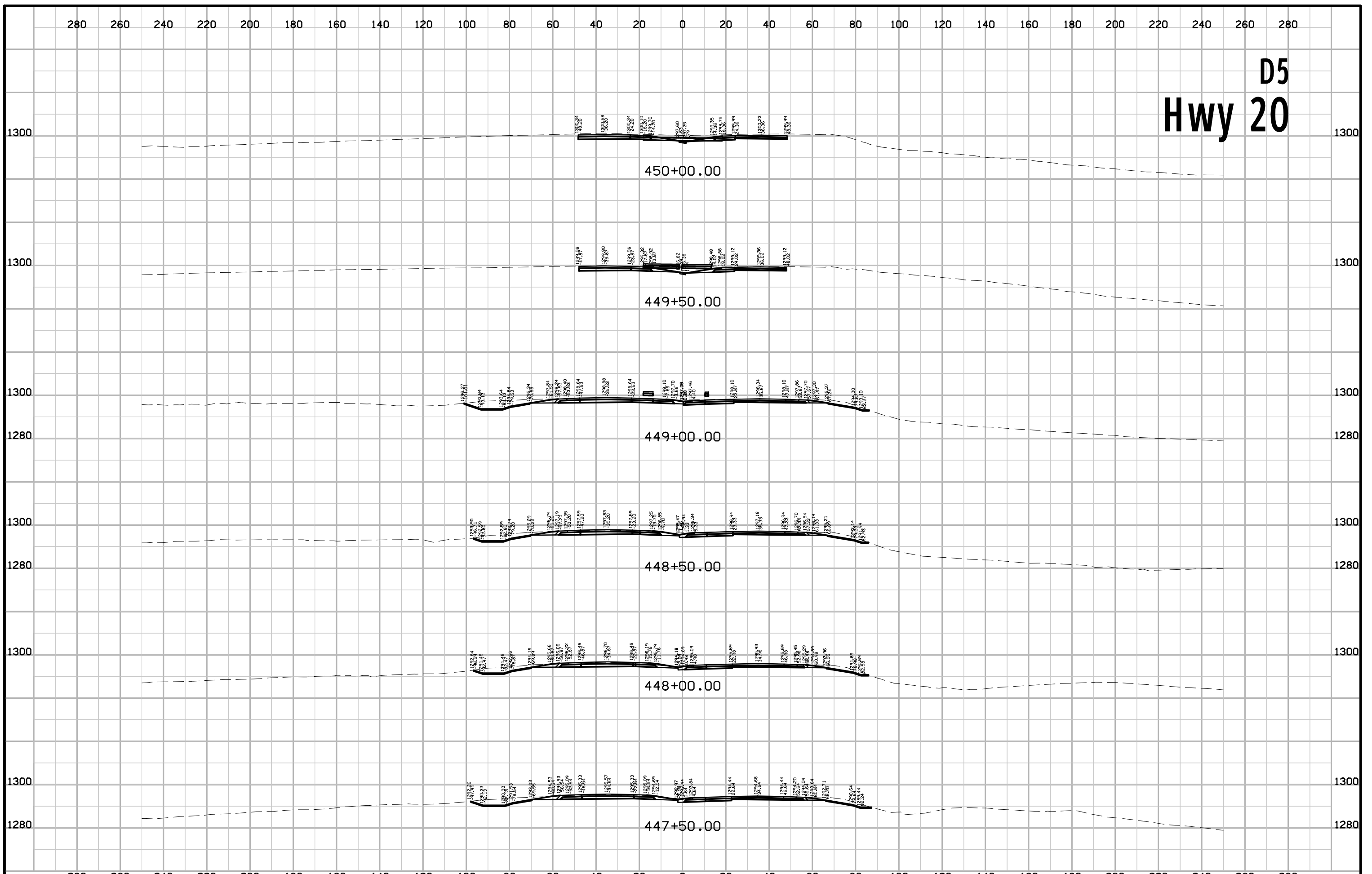


D5  
Hwy 20

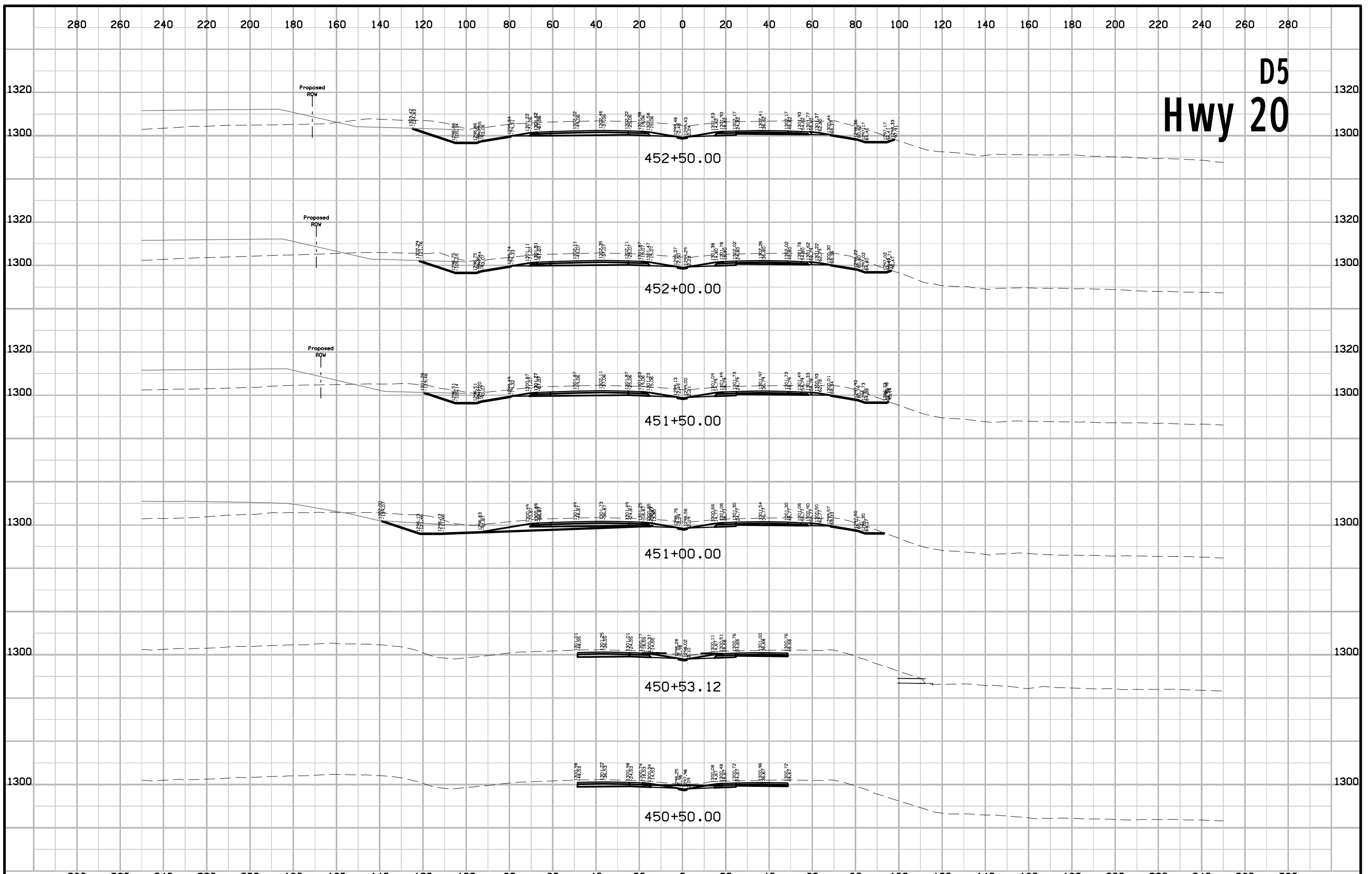
# D5 Hwy 20



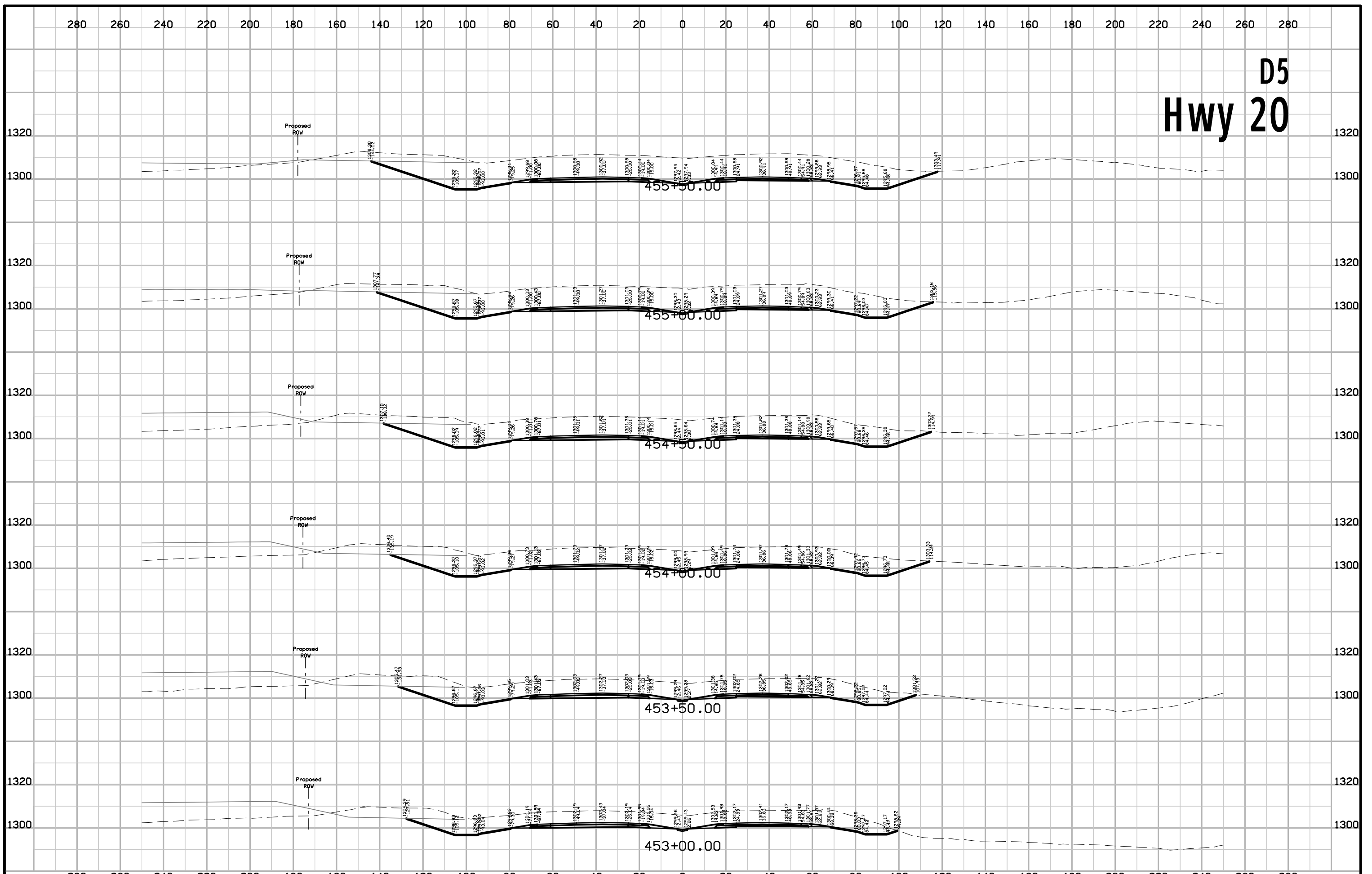
# D5 Hwy 20



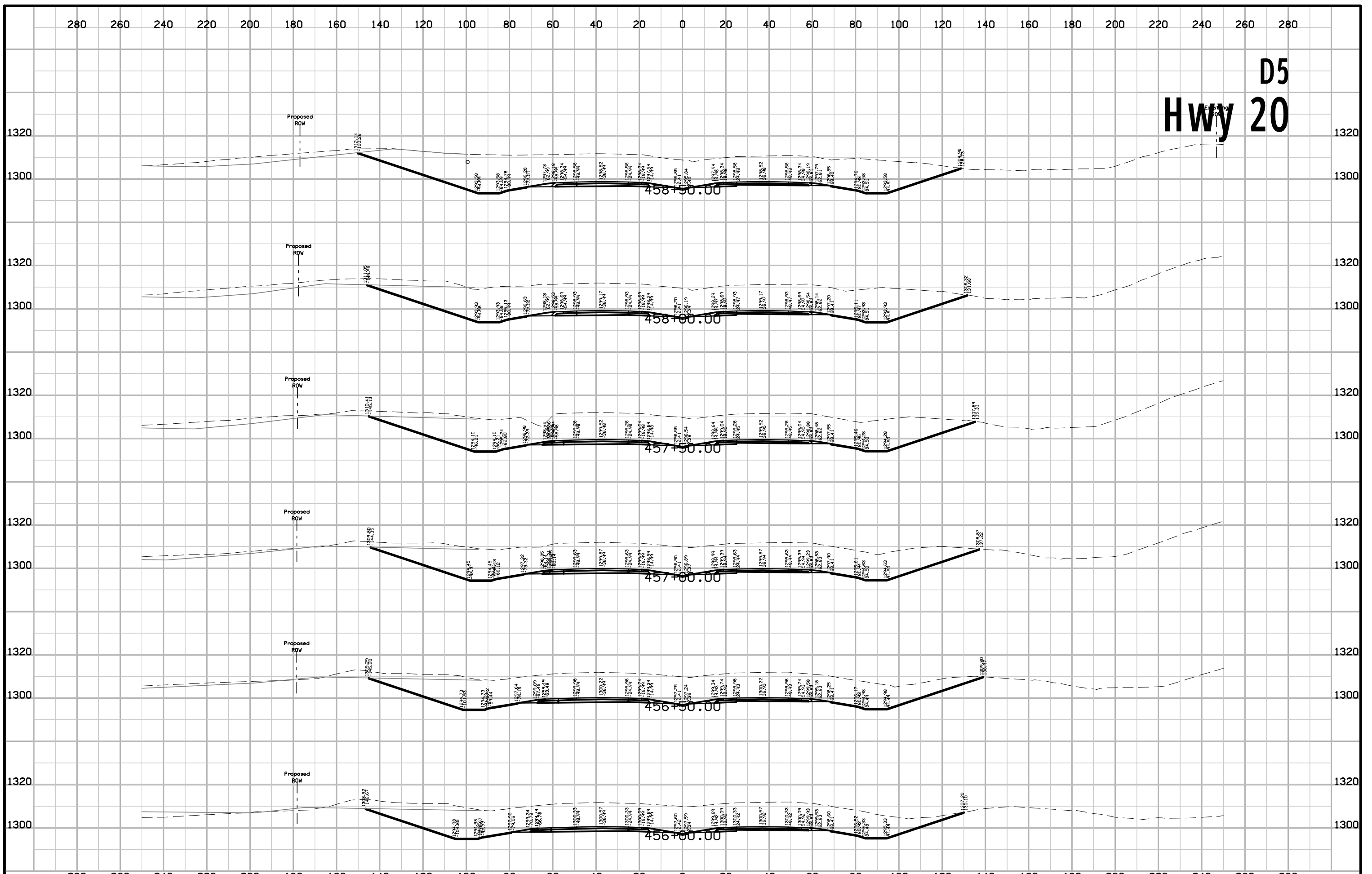
# D5 Hwy 20



# D5 Hwy 20



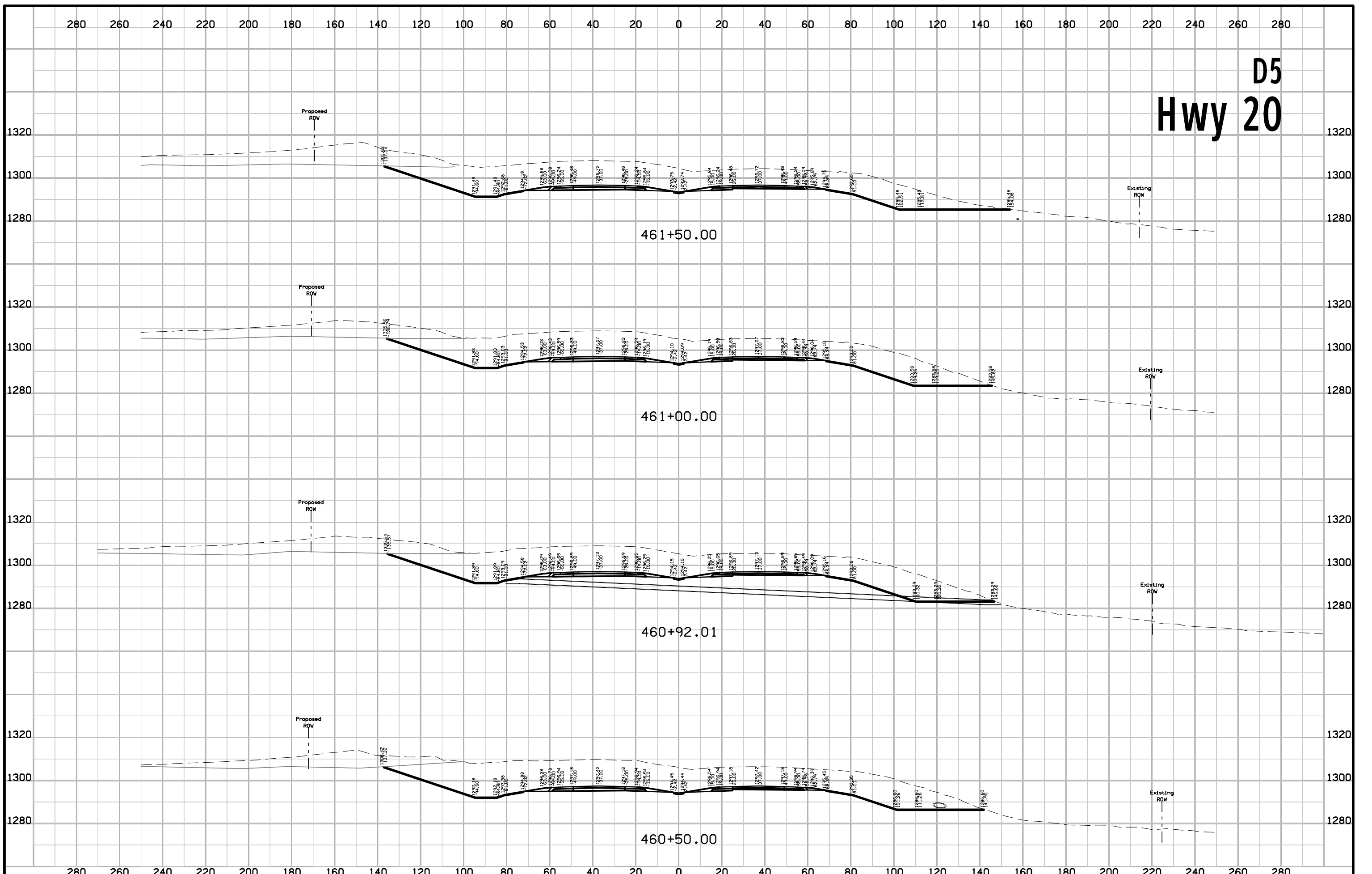
# D5 Hwy 20



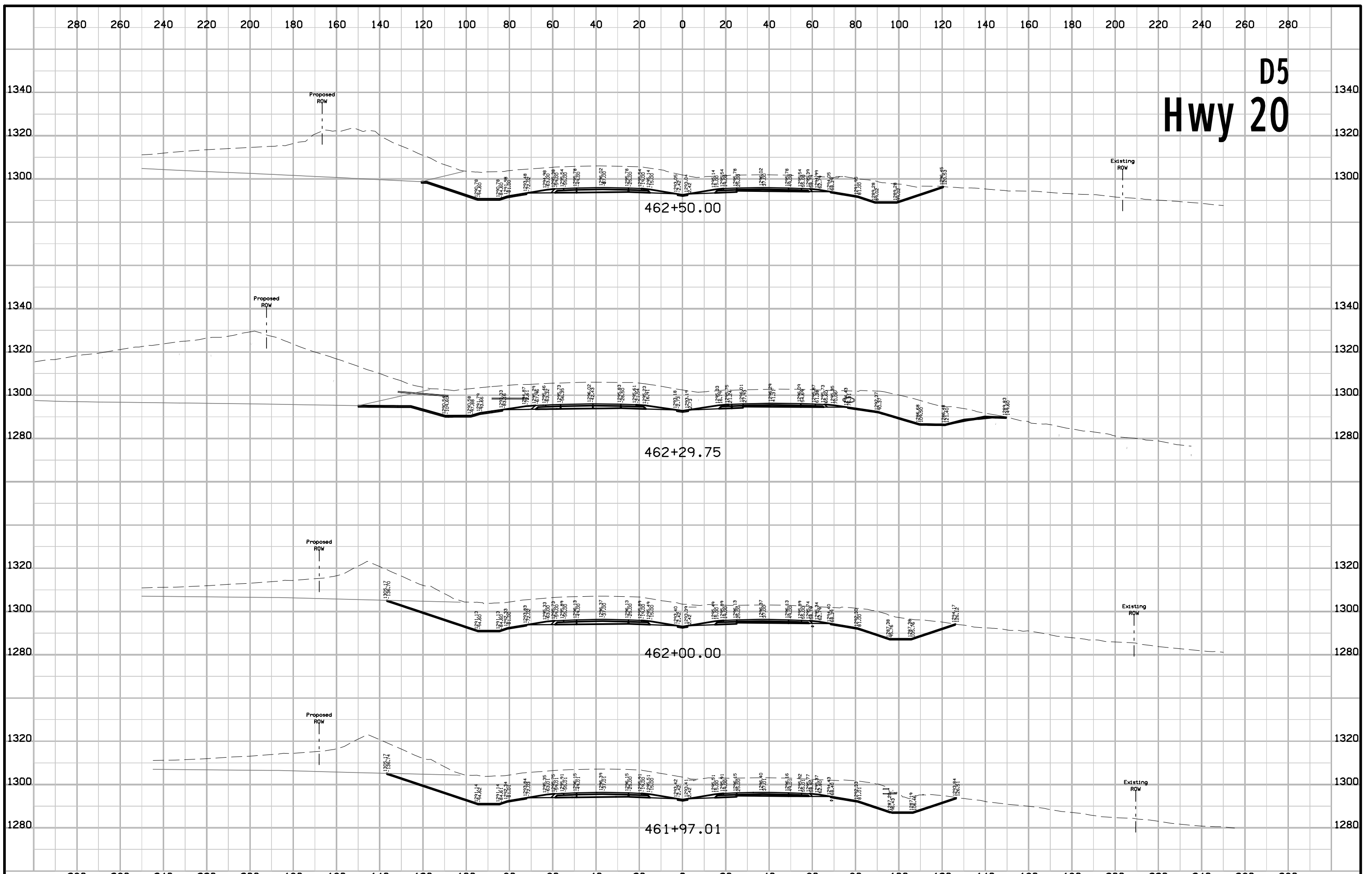




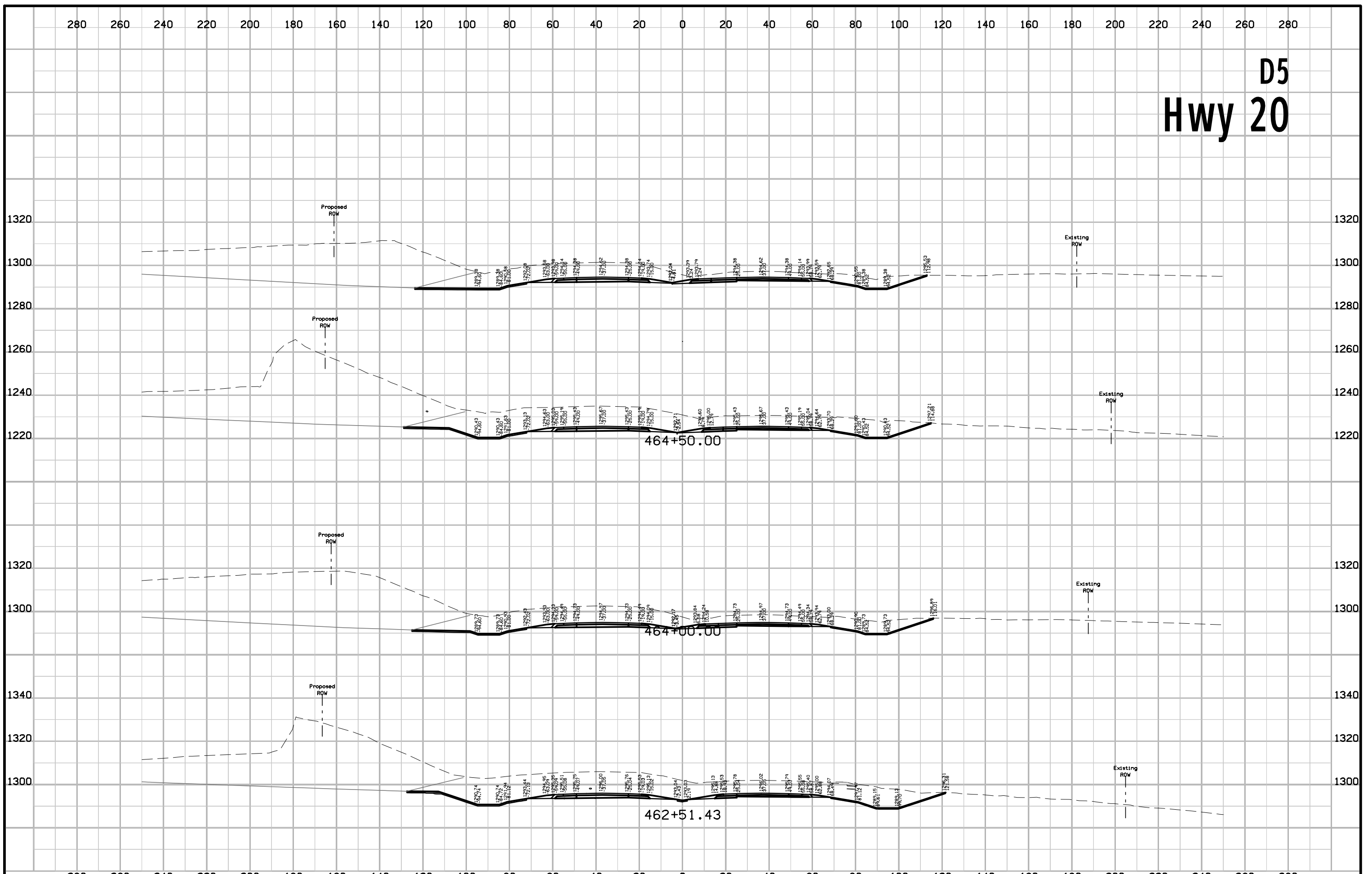
# D5 Hwy 20



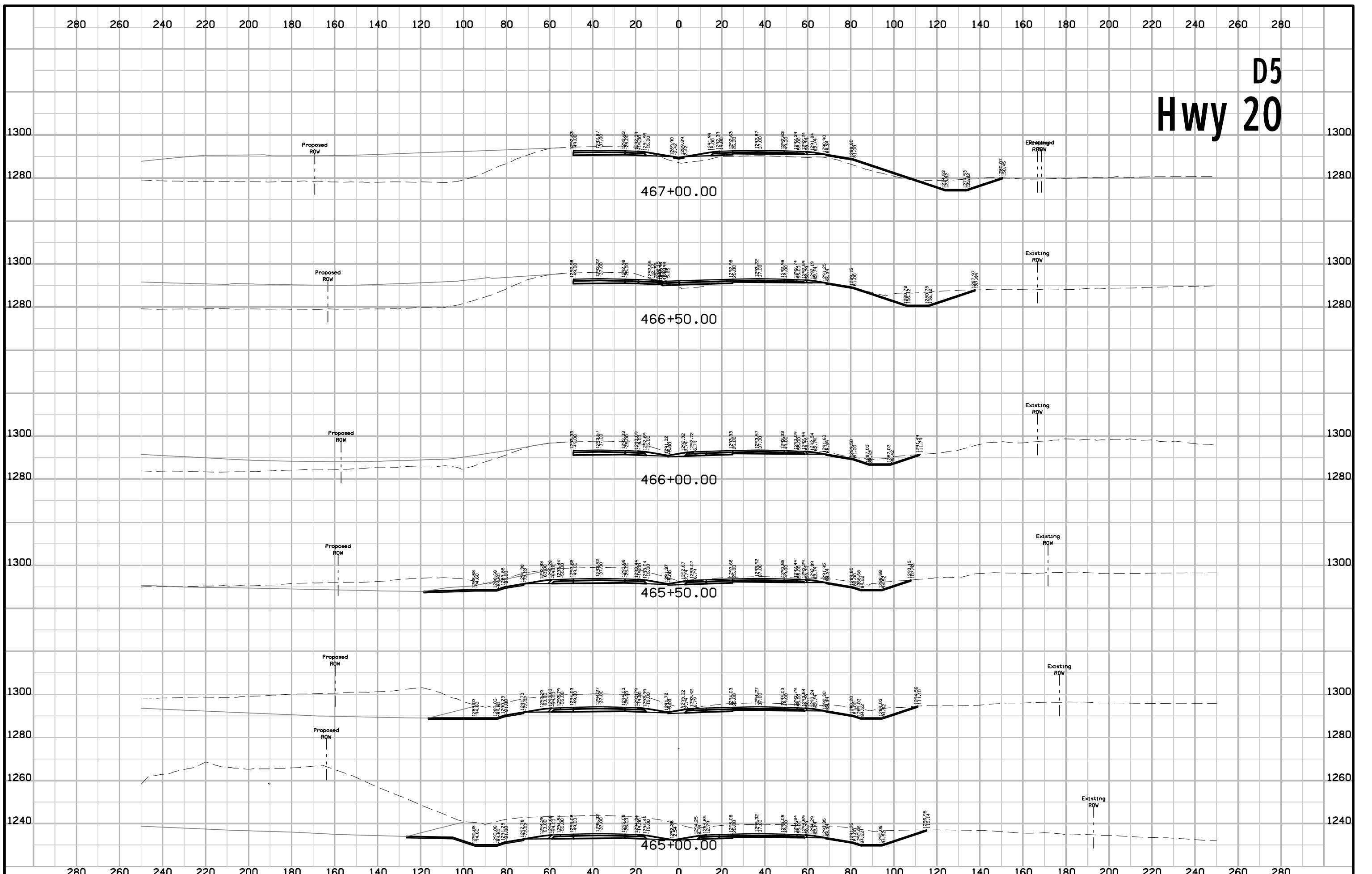
# D5 Hwy 20



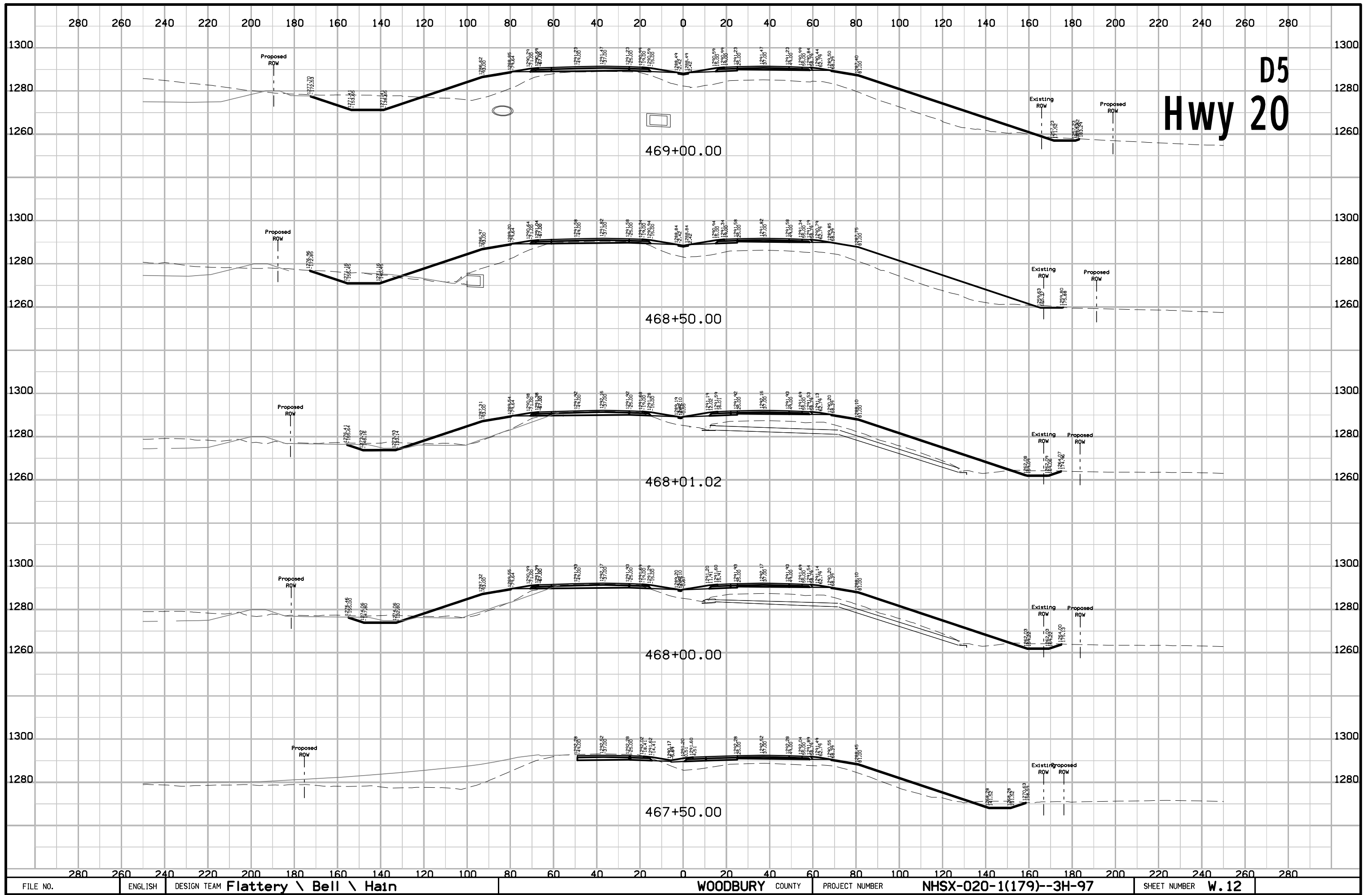
# D5 Hwy 20



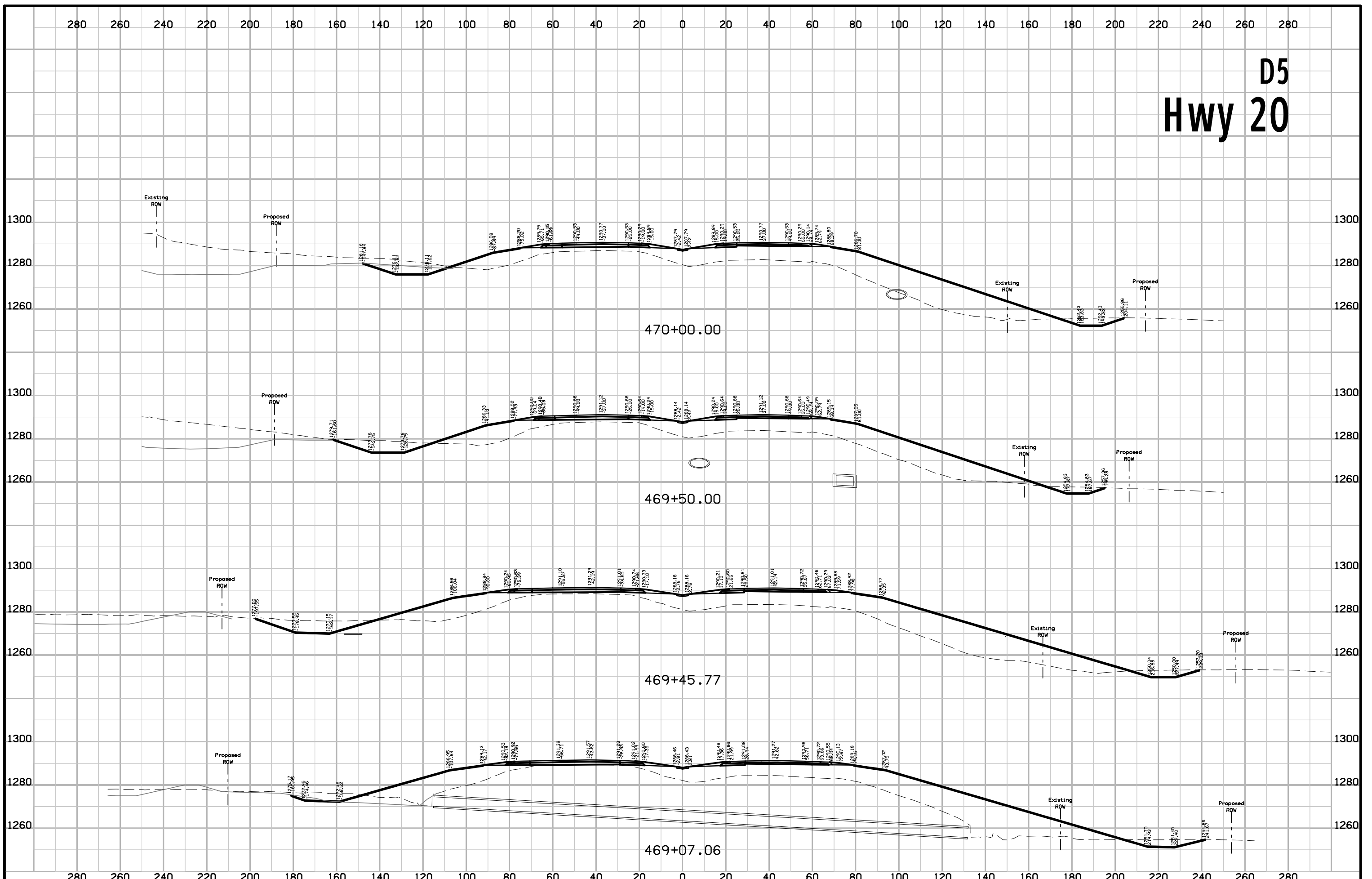
# D5 Hwy 20







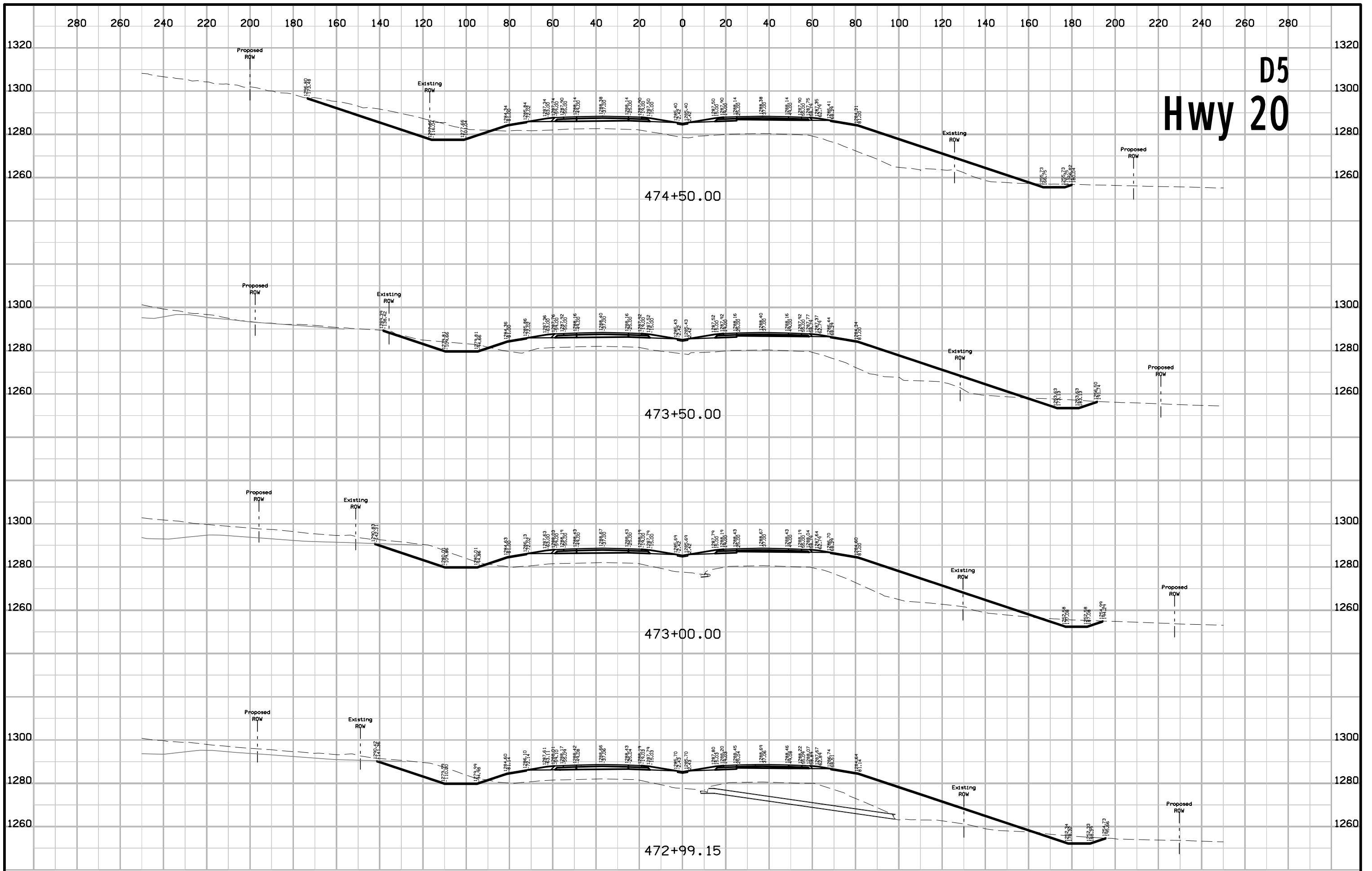
# D5 Hwy 20





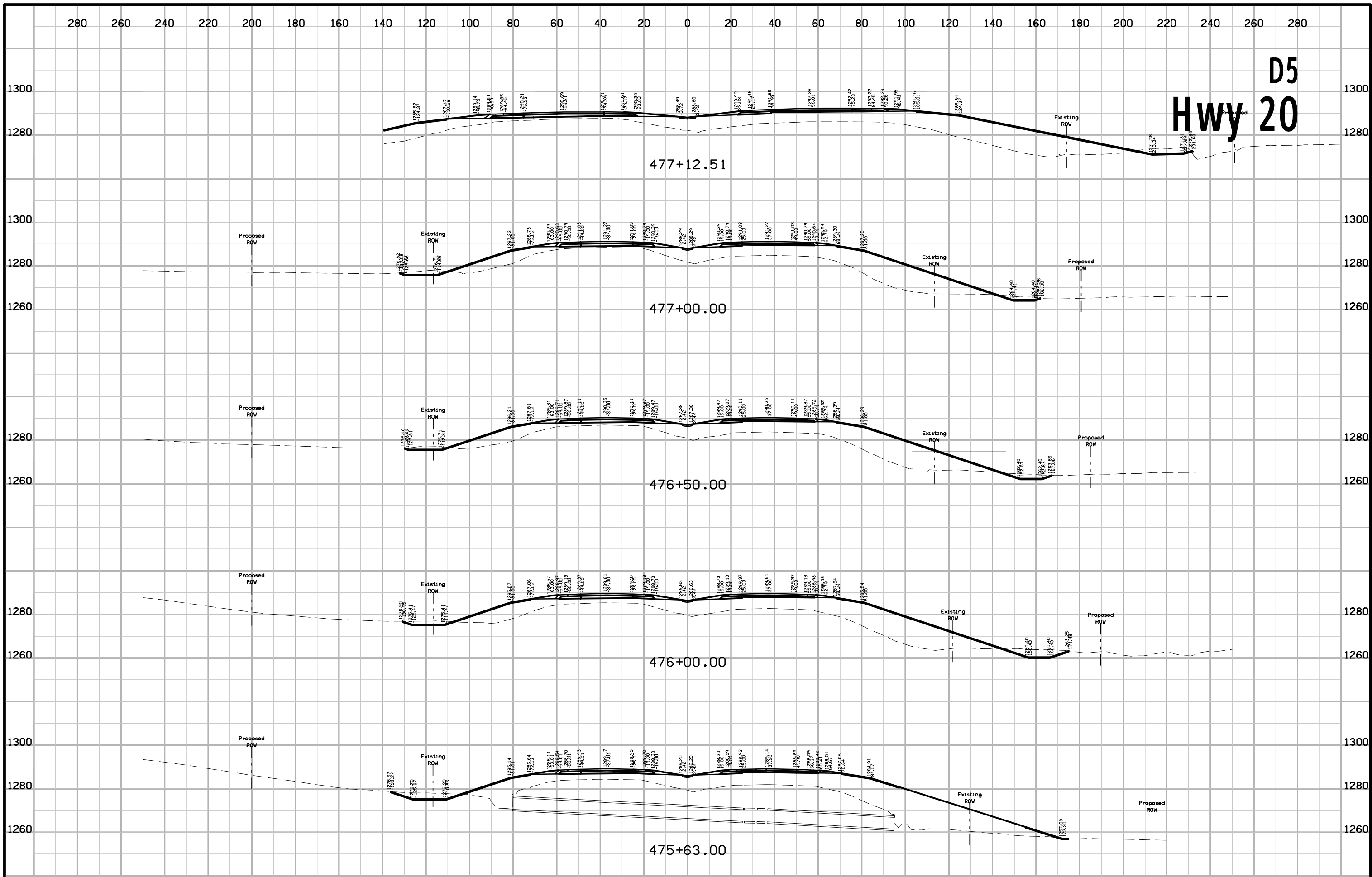


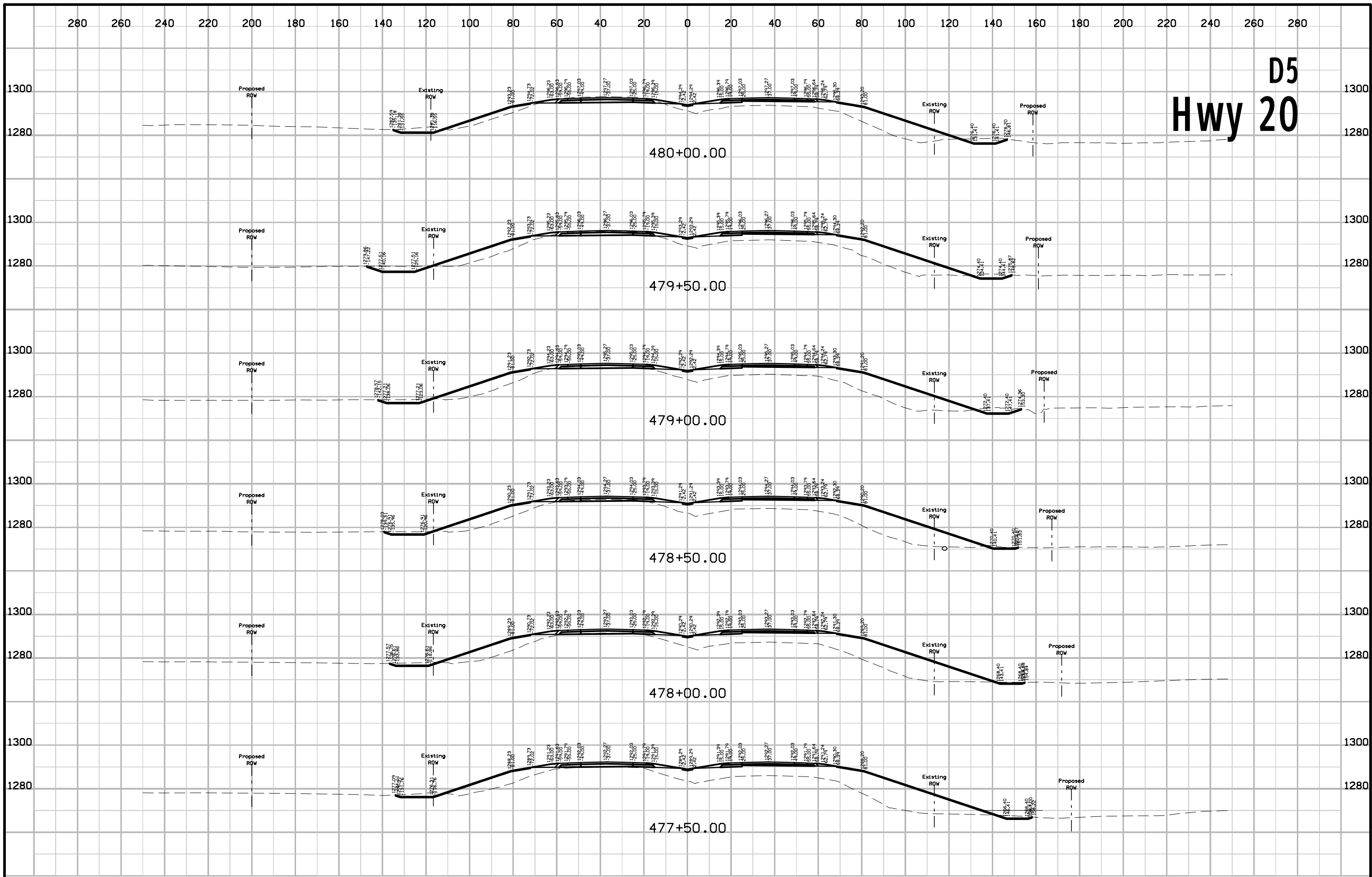




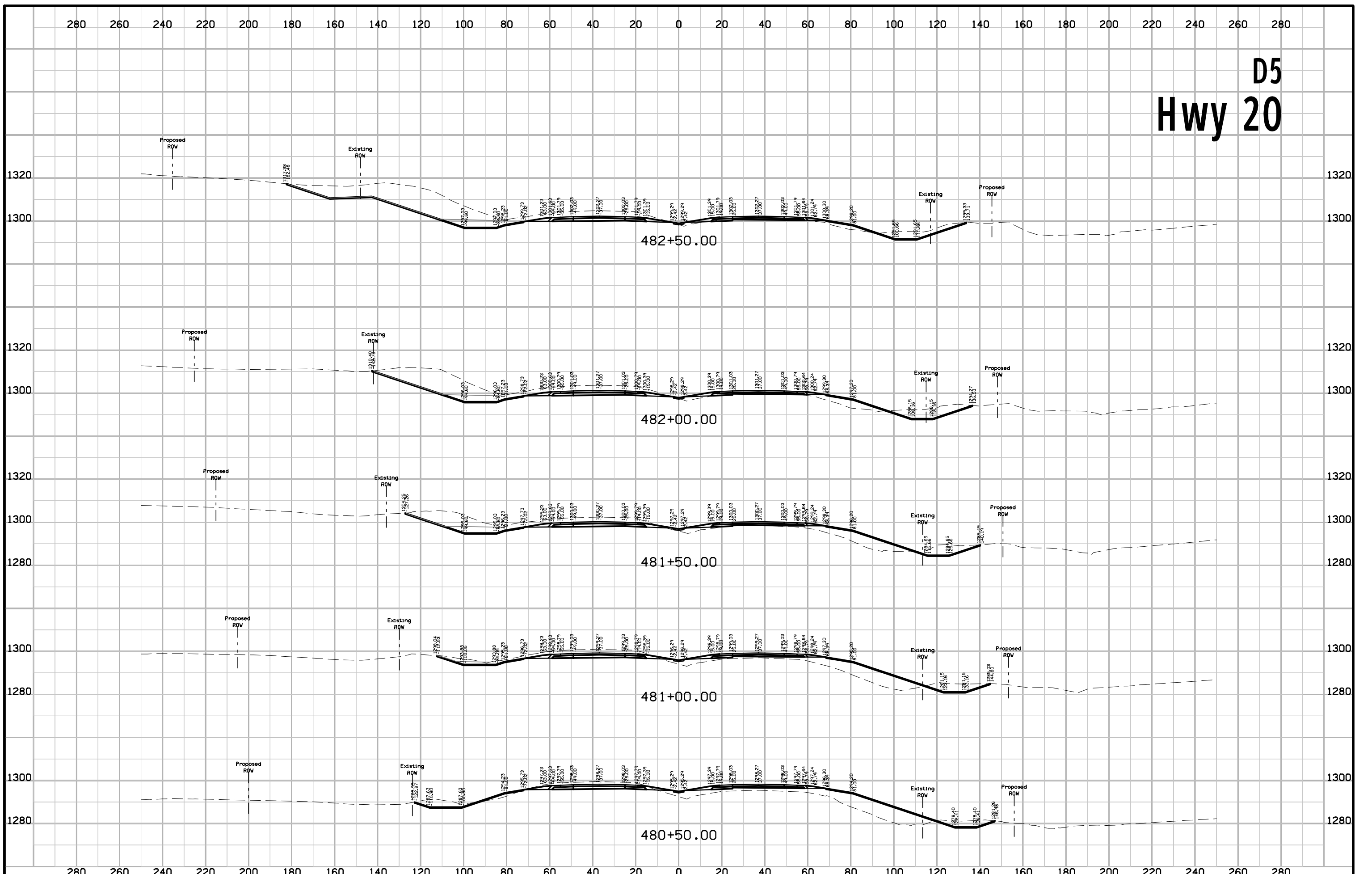




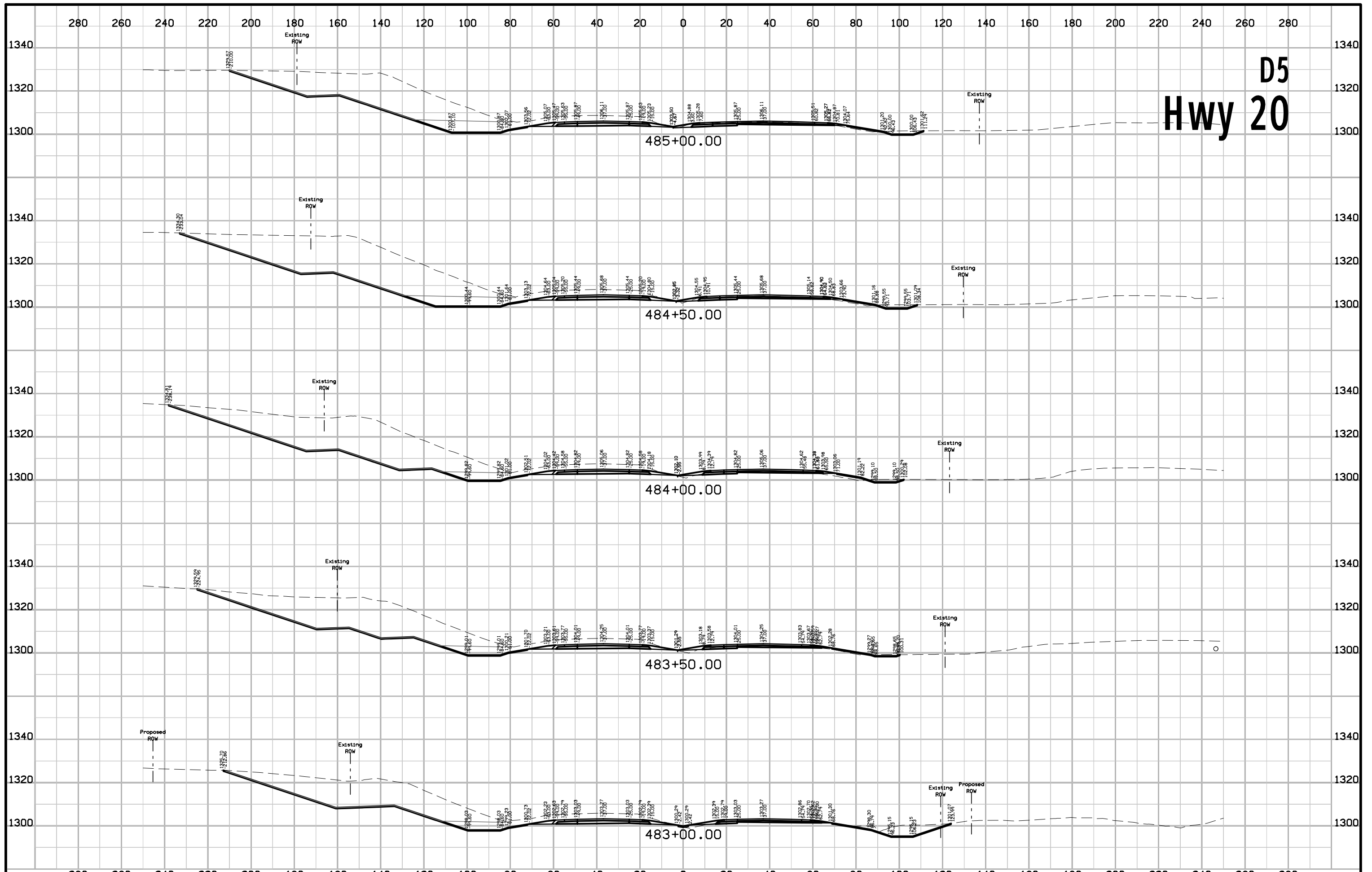


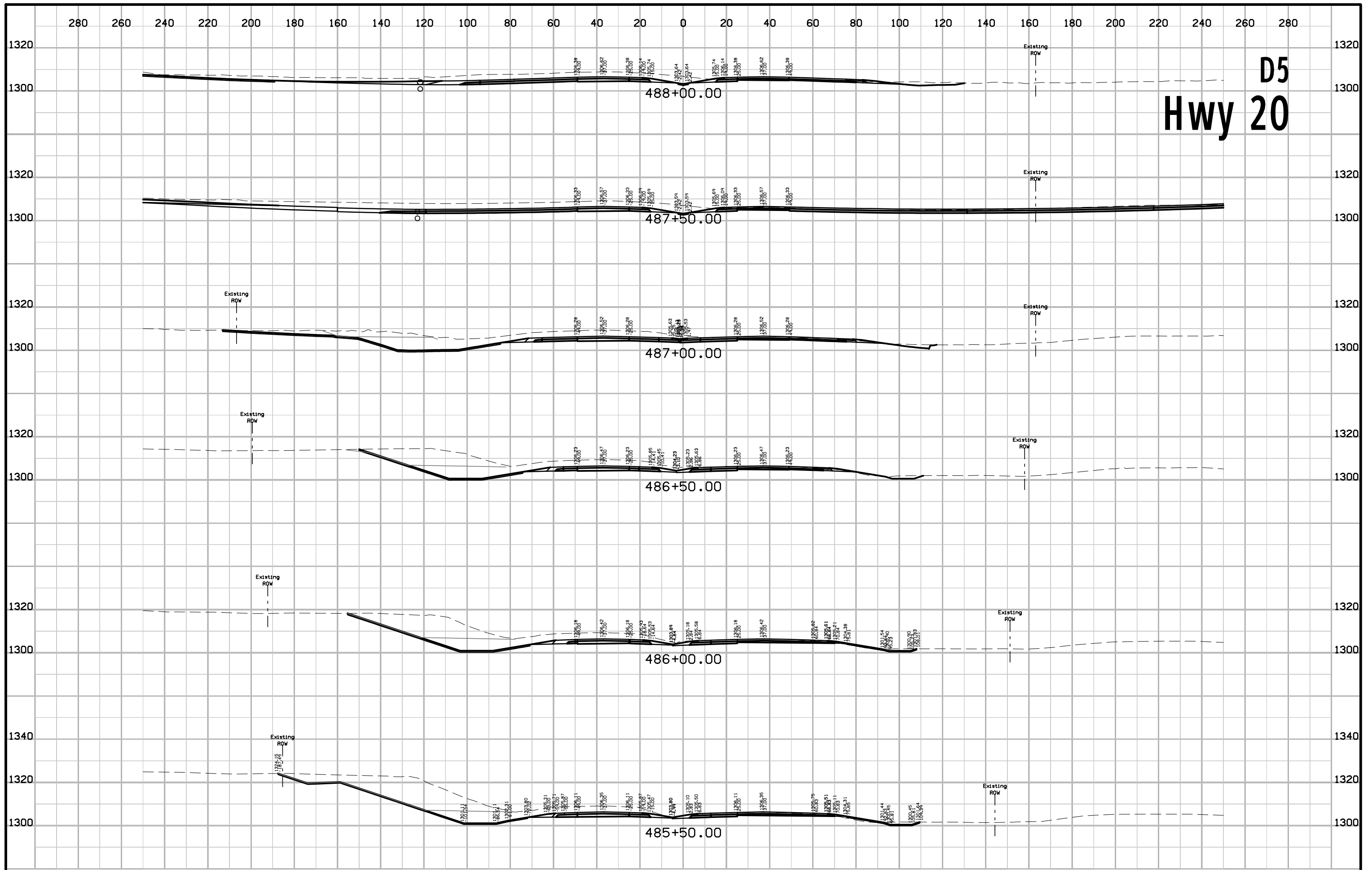


# D5 Hwy 20

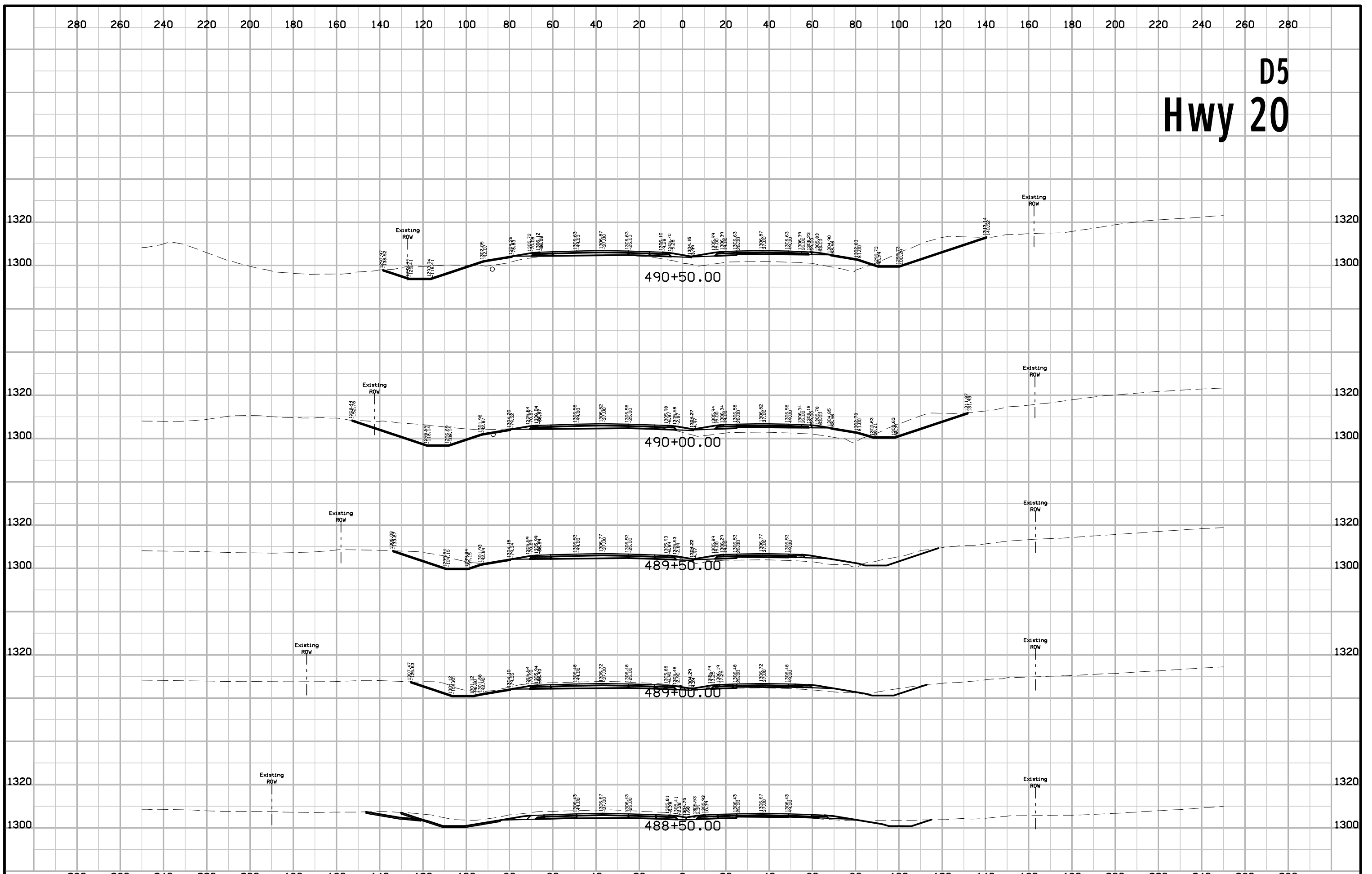






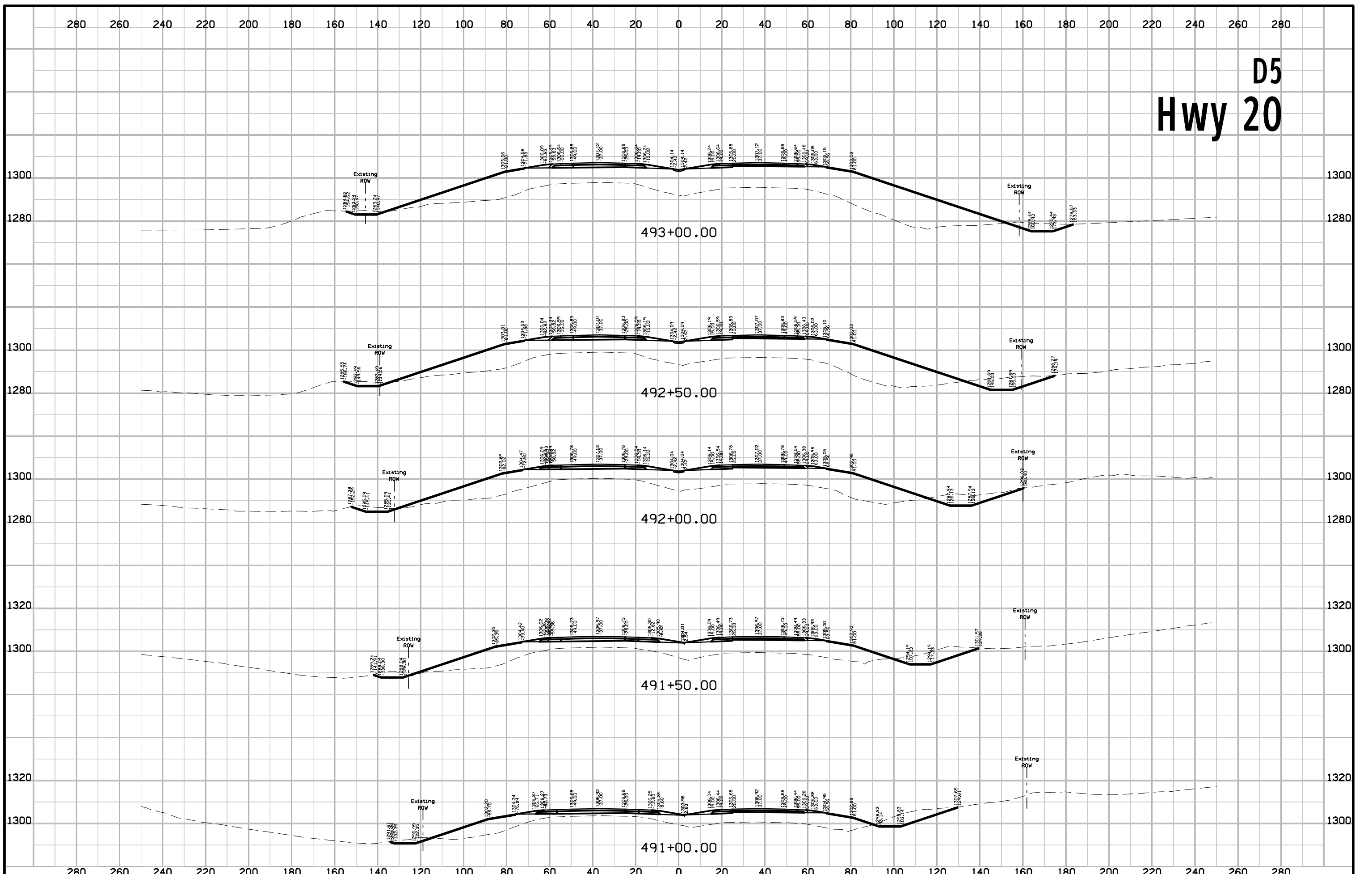


# D5 Hwy 20



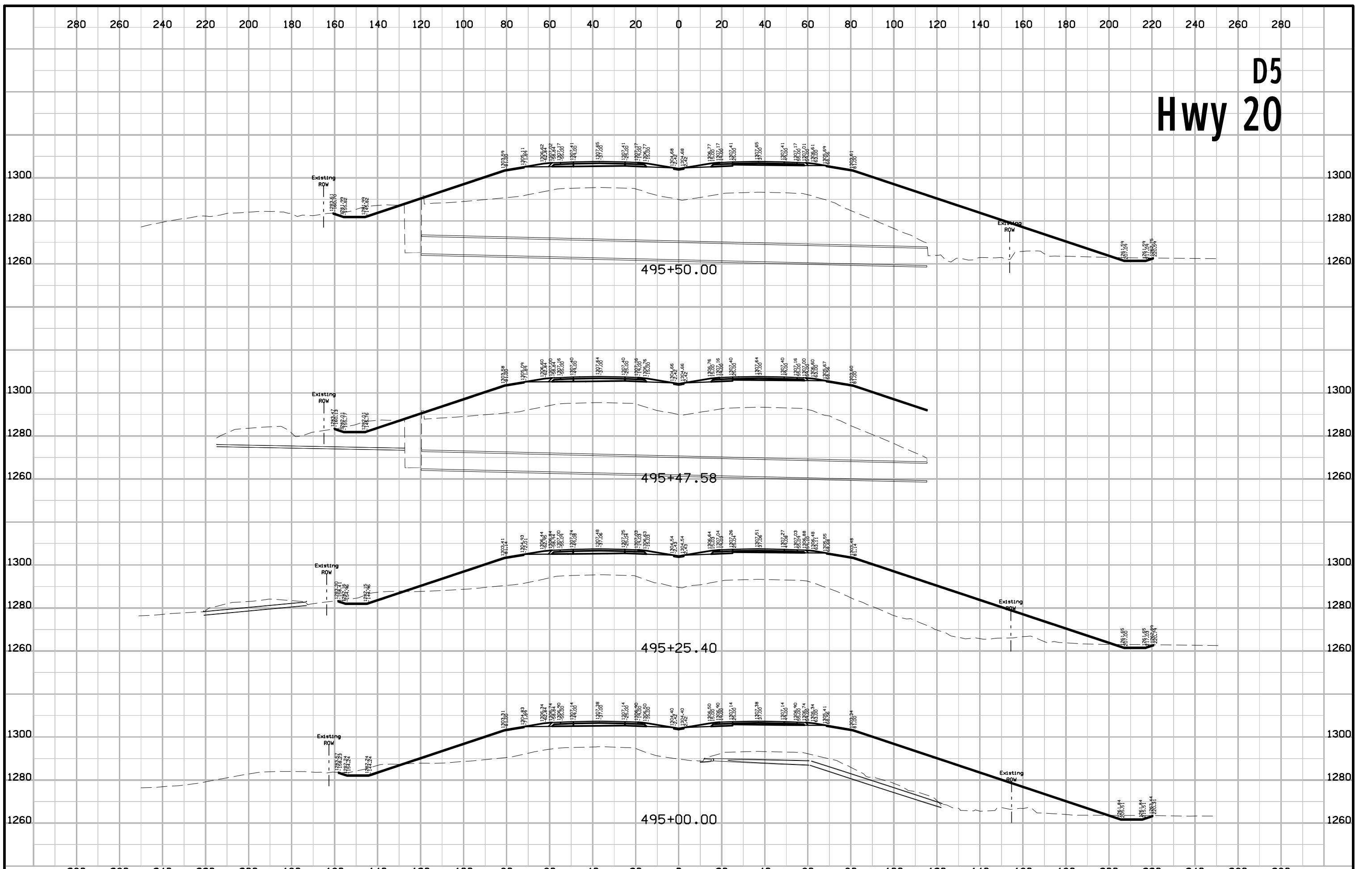


# D5 Hwy 20

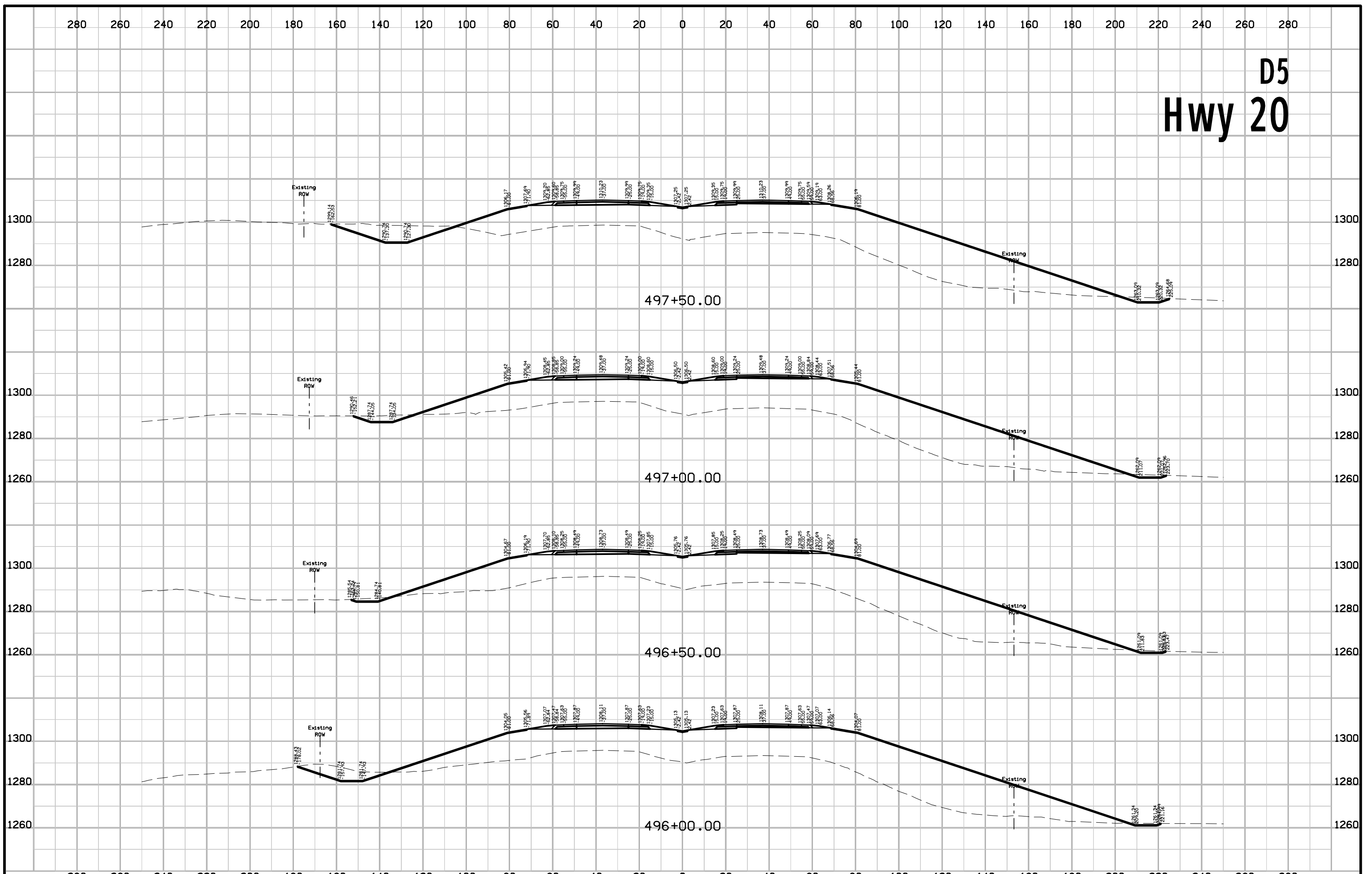




# D5 Hwy 20

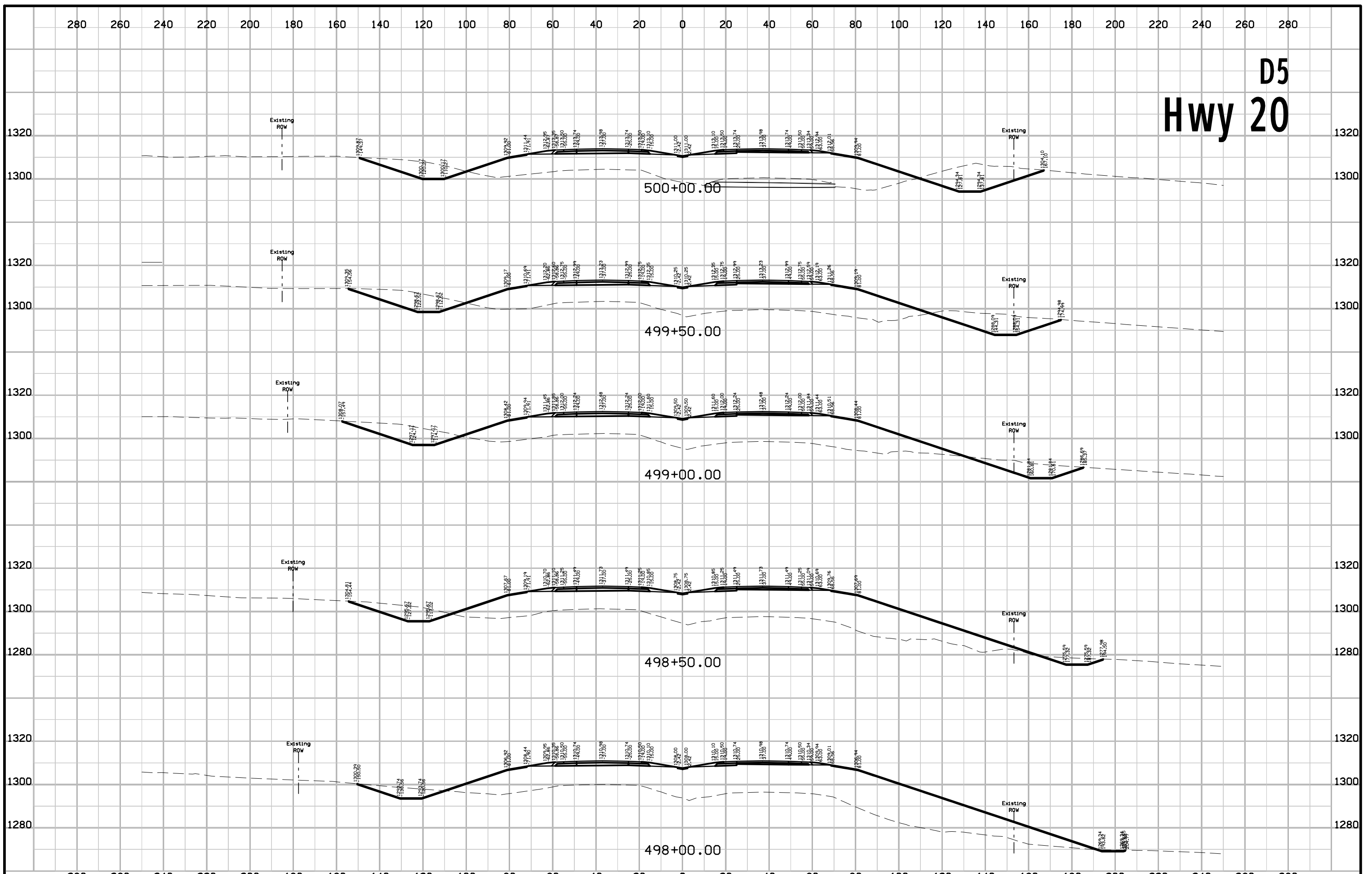


# D5 Hwy 20

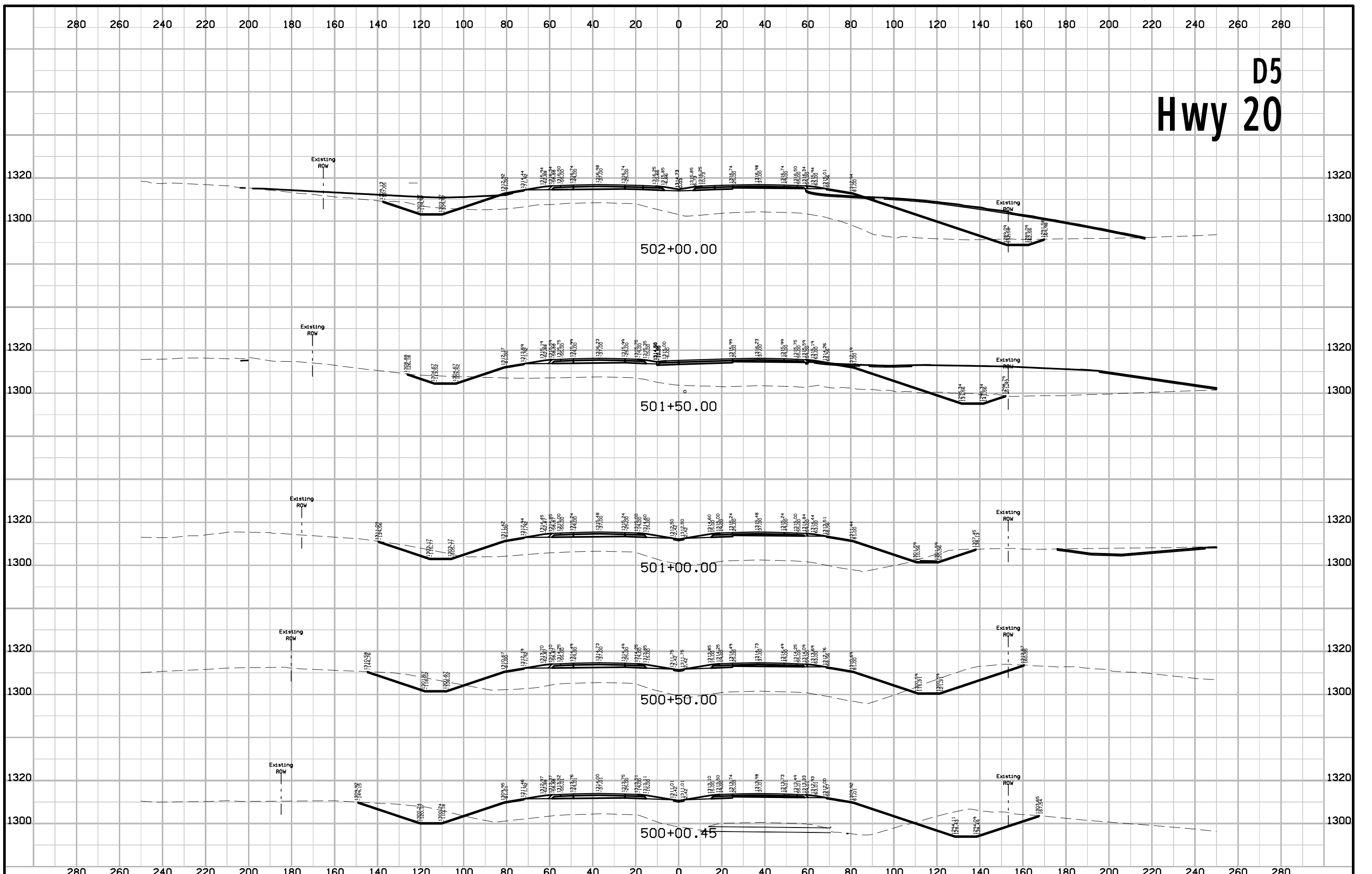




# D5 Hwy 20



# D5 Hwy 20

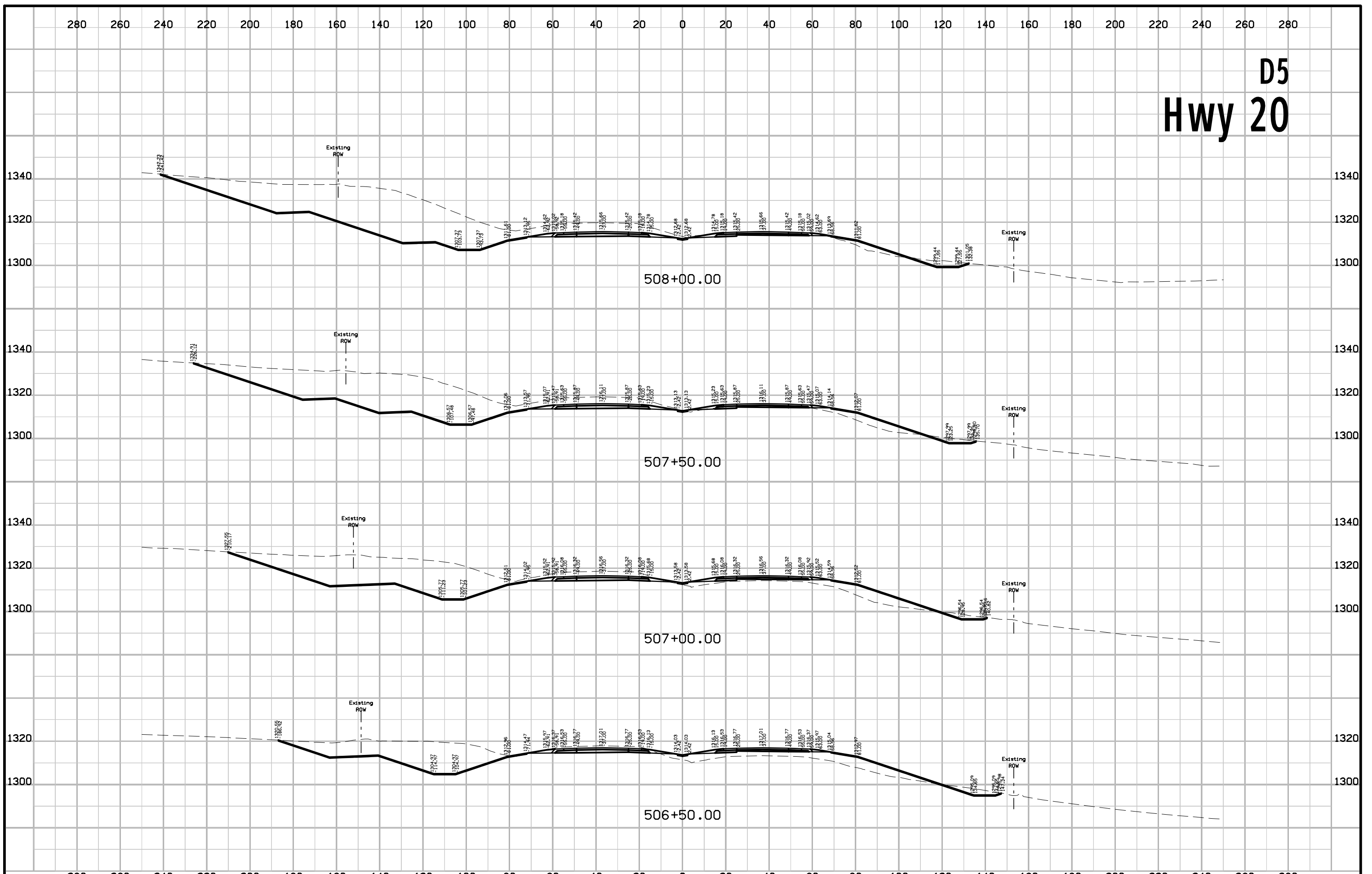




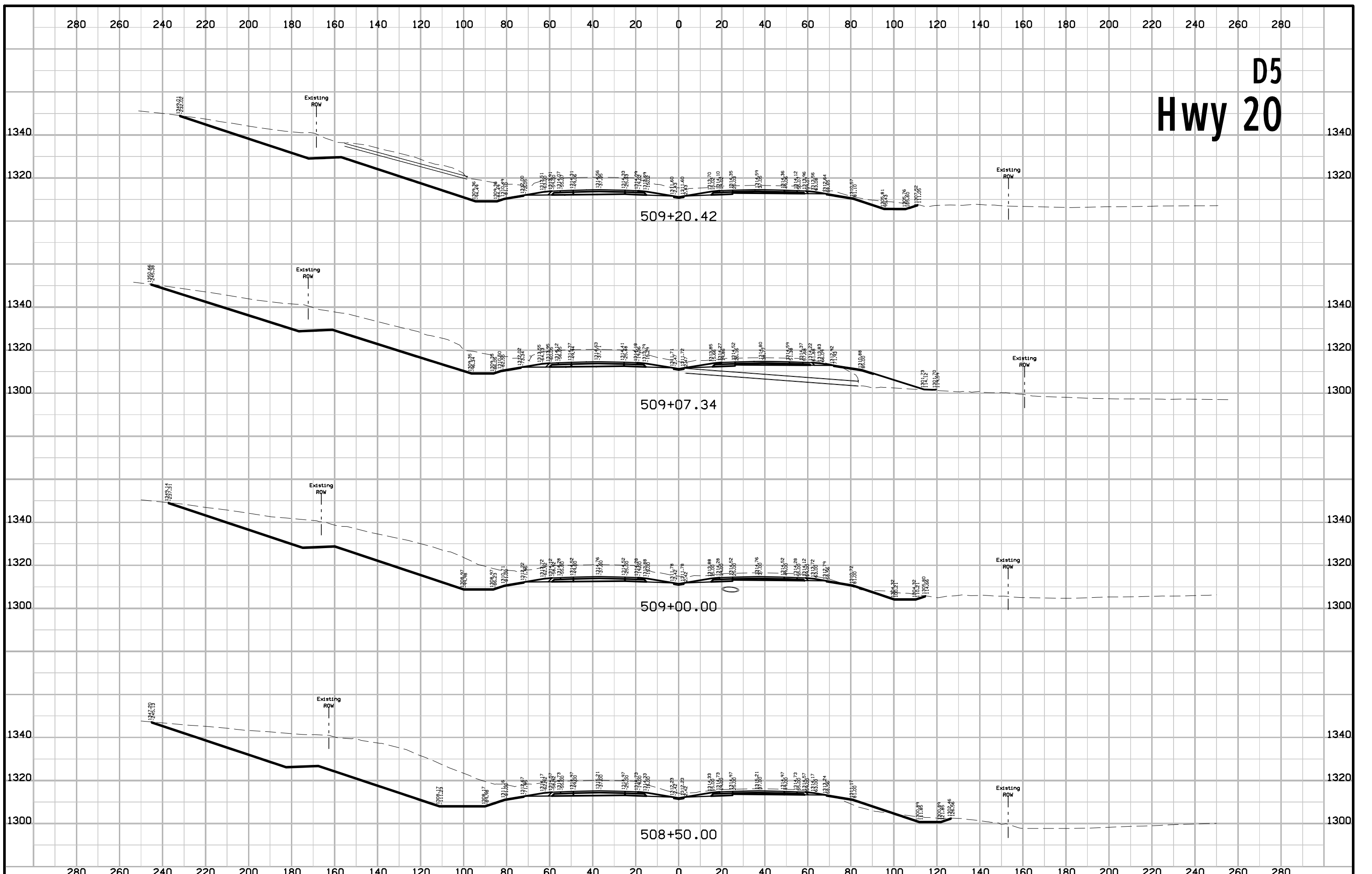




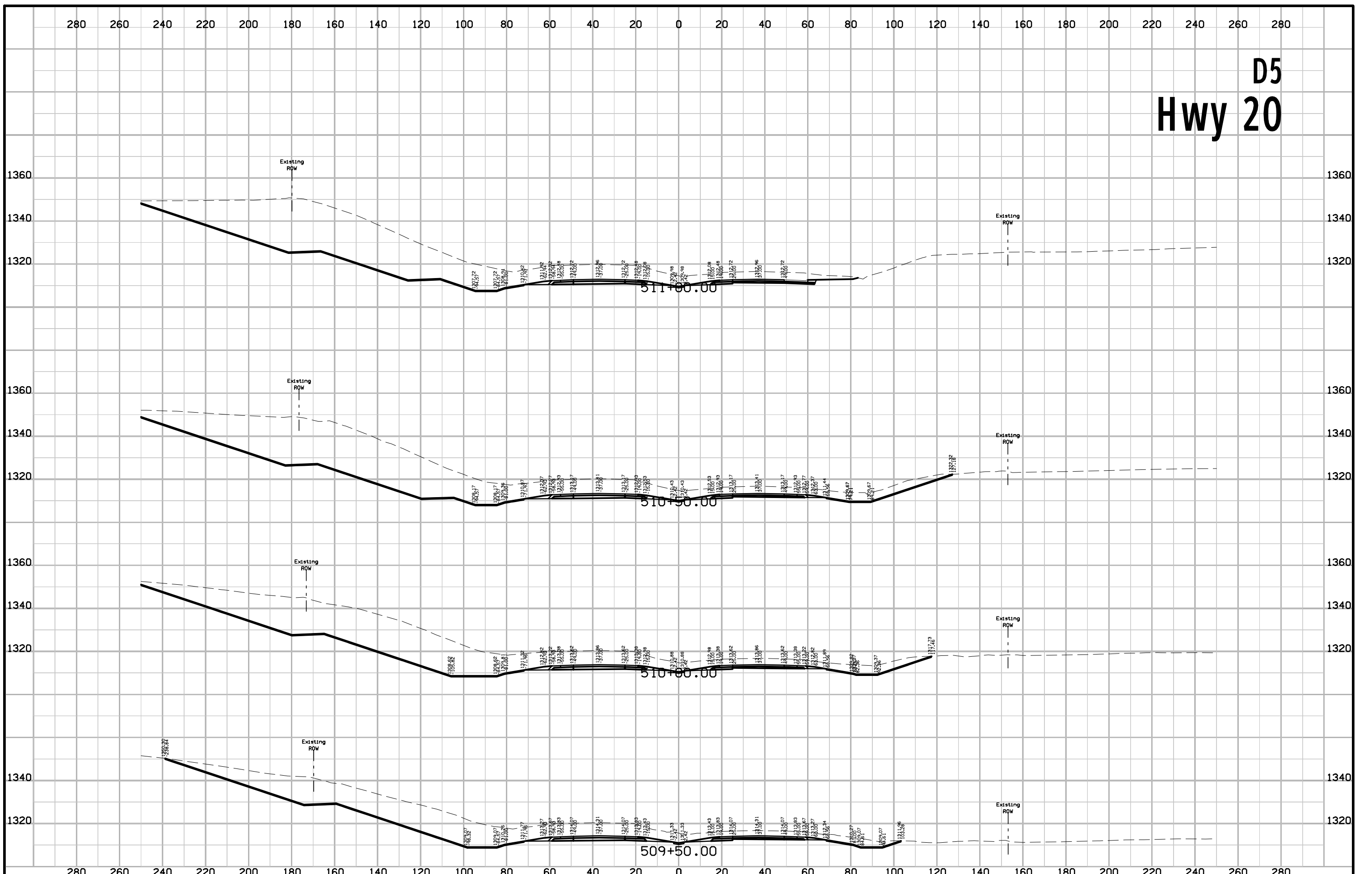
# D5 Hwy 20



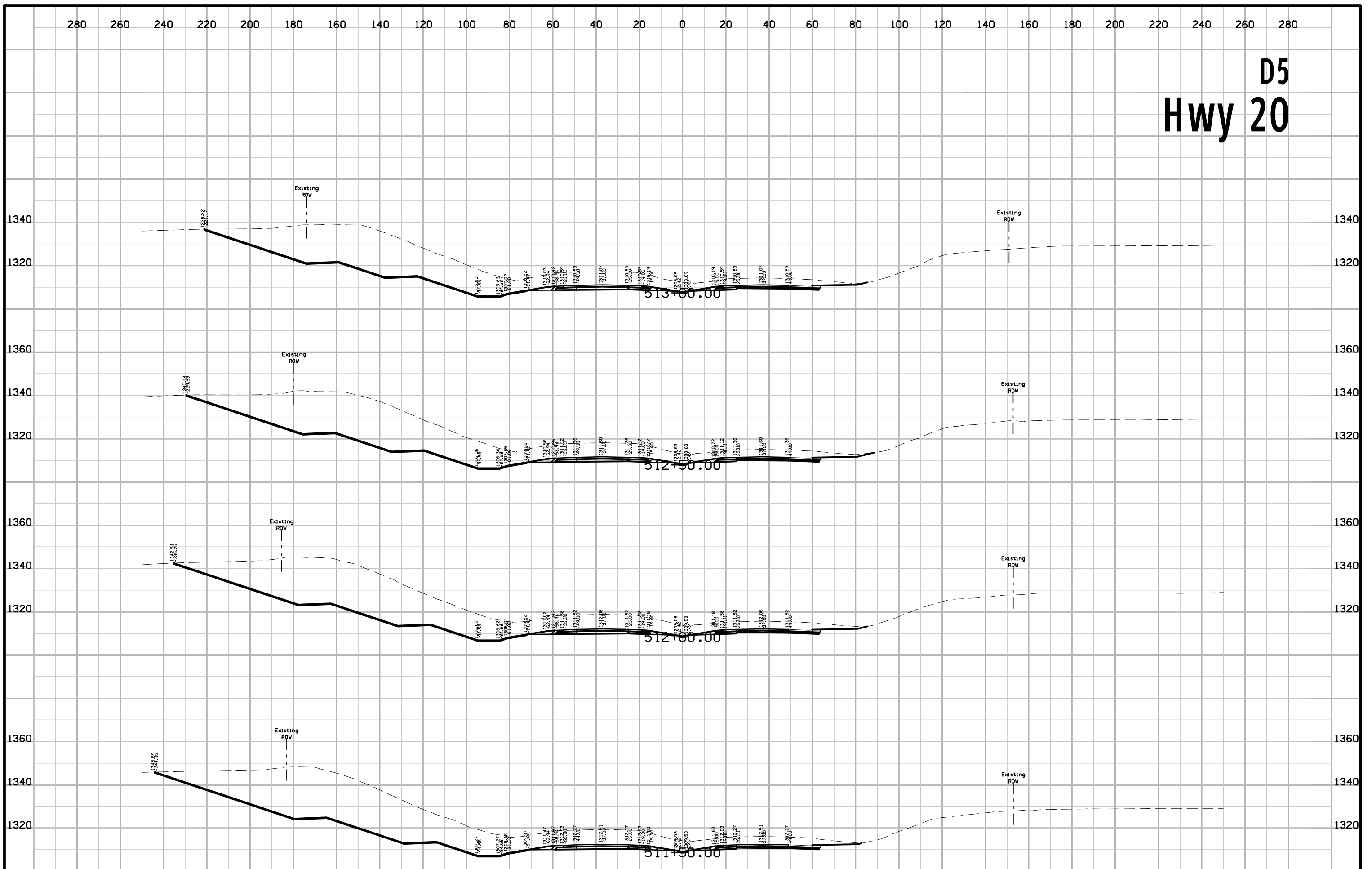
# D5 Hwy 20



# D5 Hwy 20

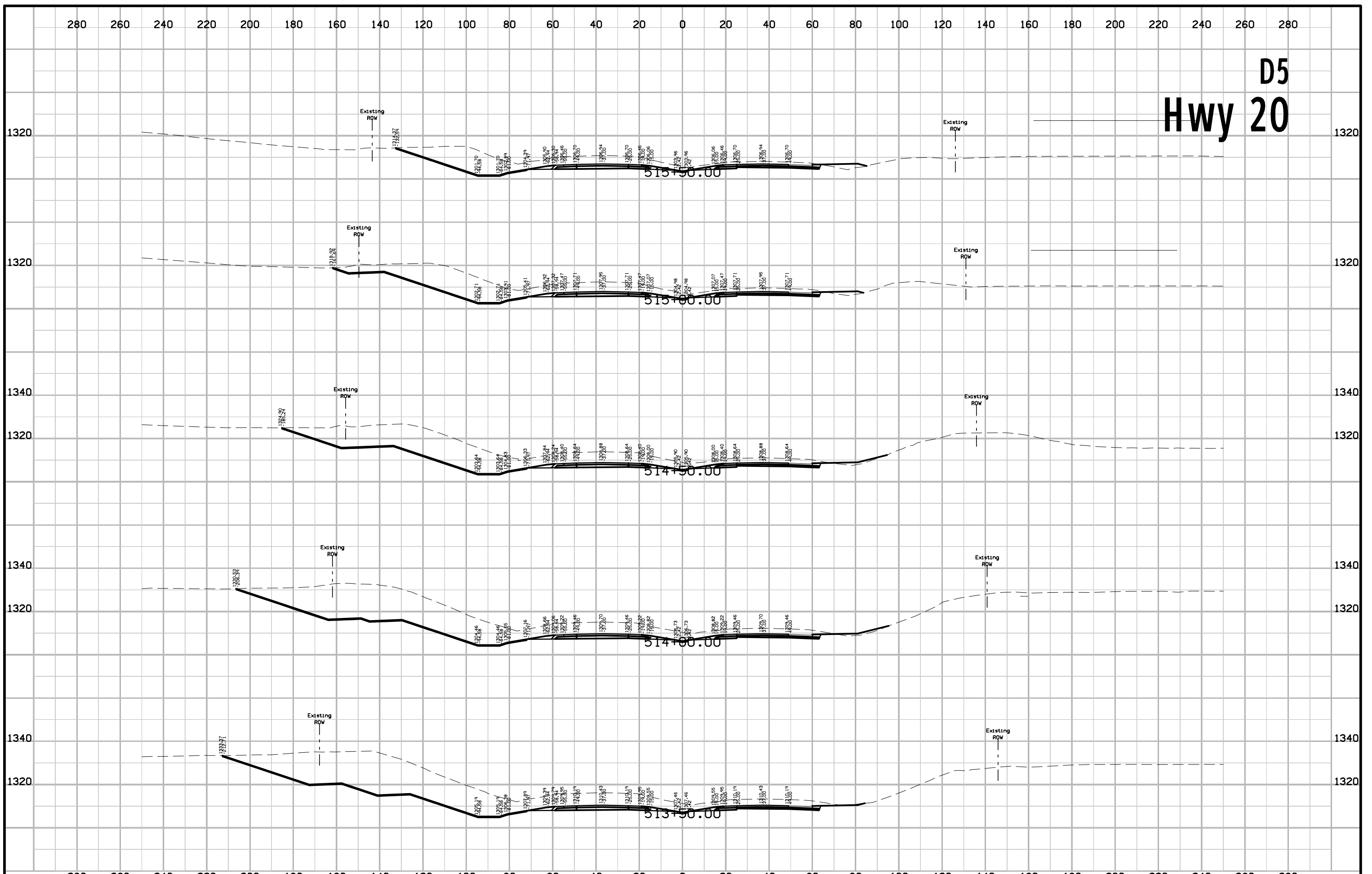


# D5 Hwy 20

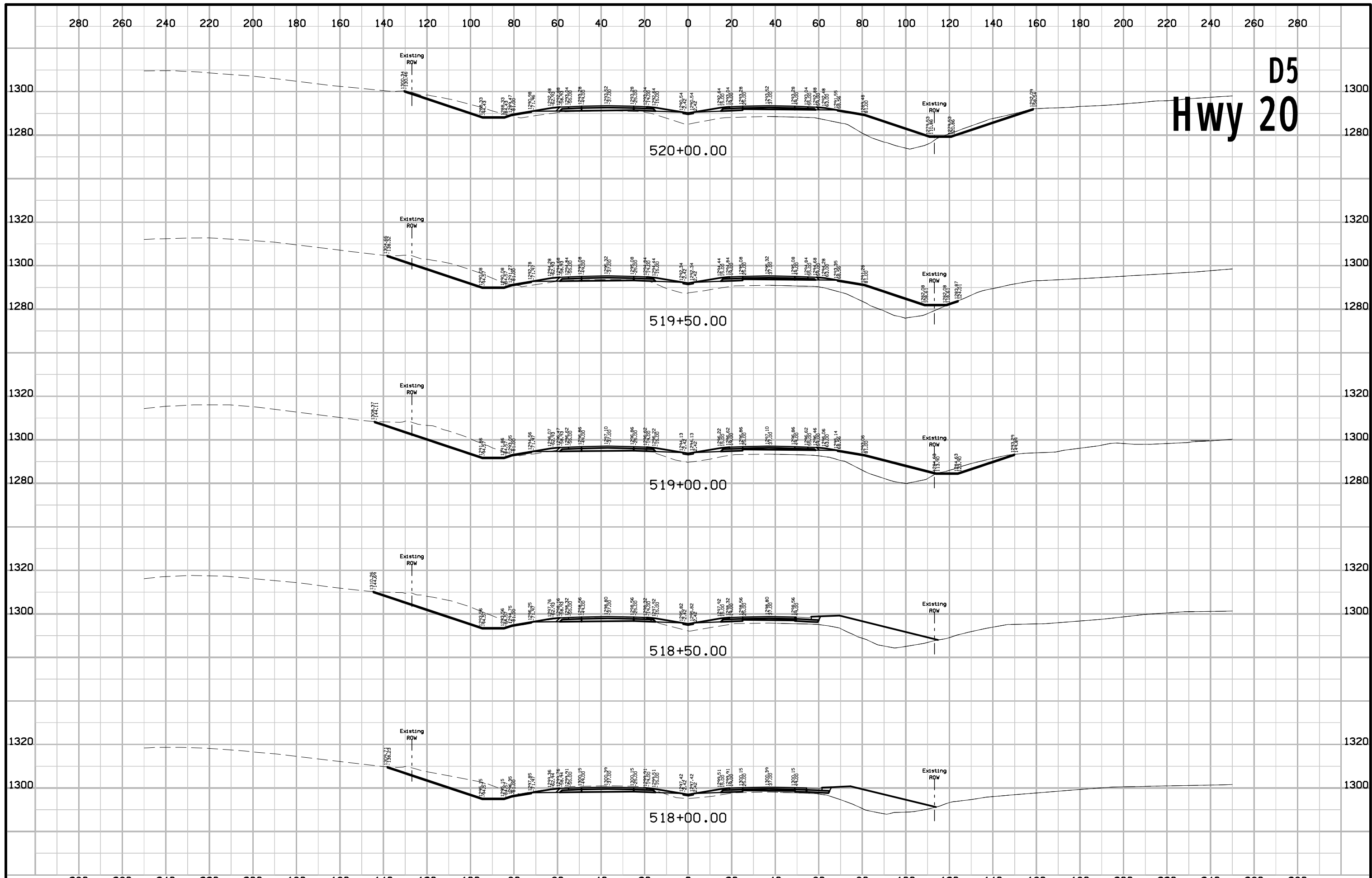




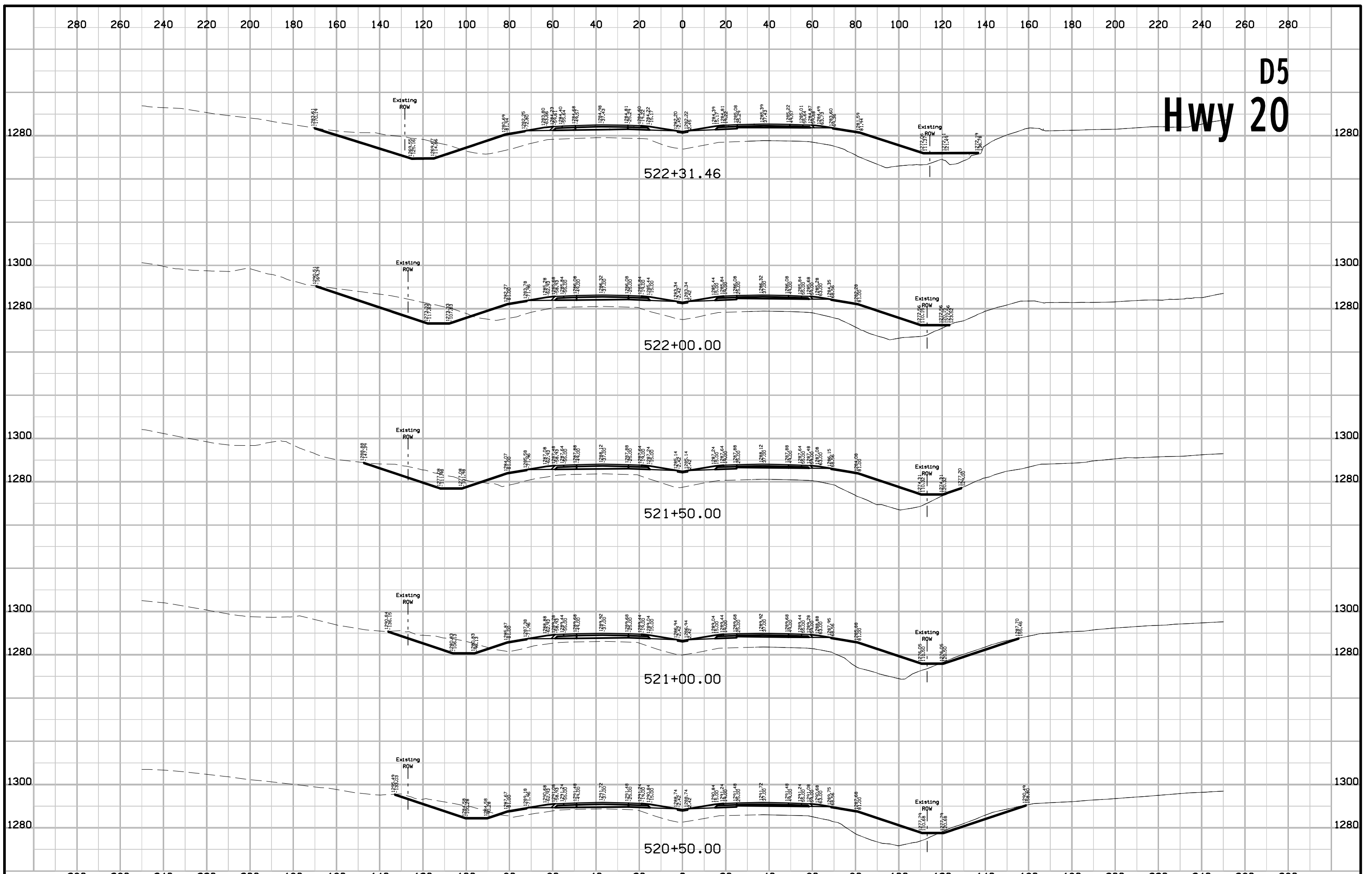
# D5 Hwy 20



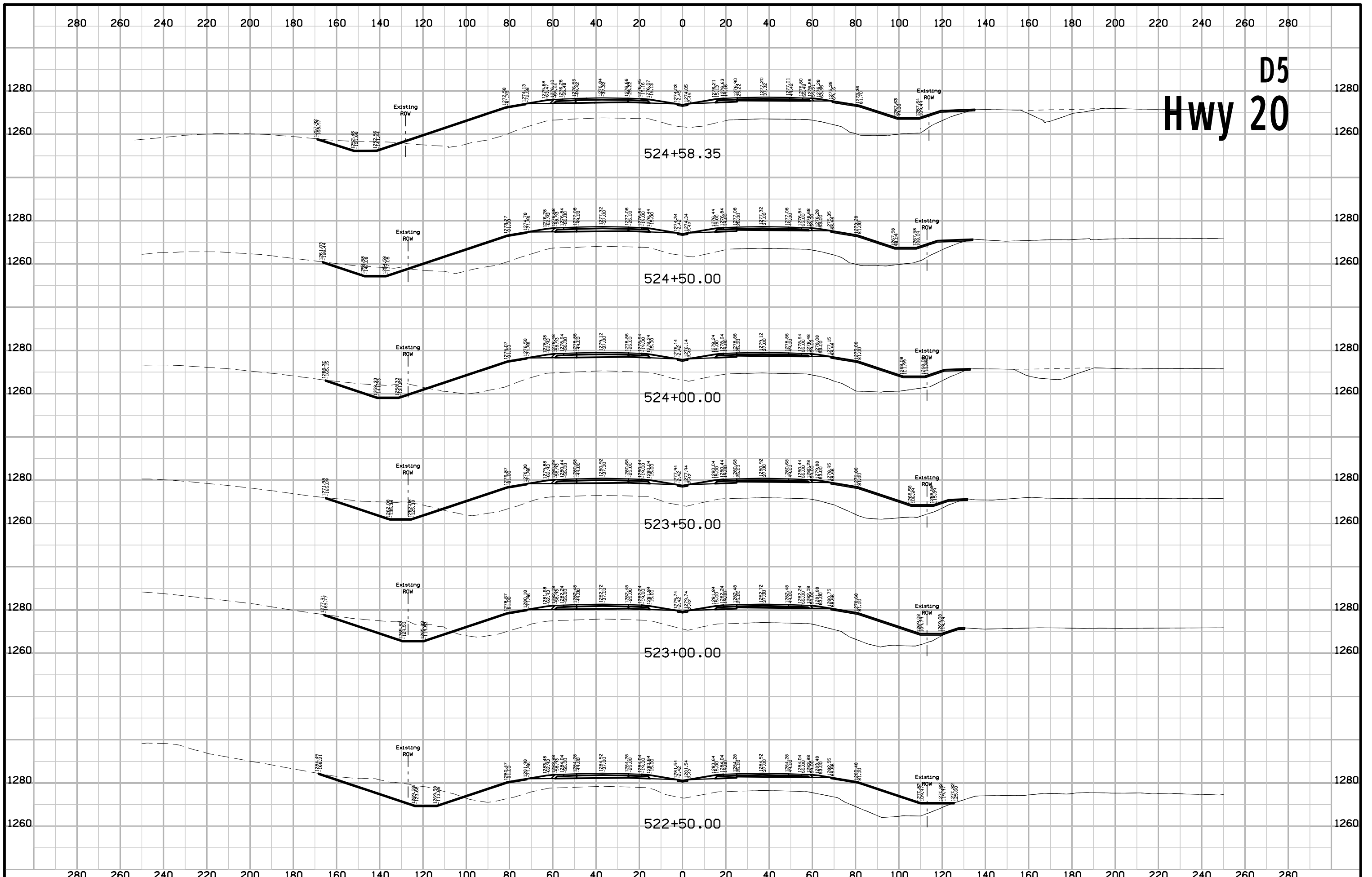




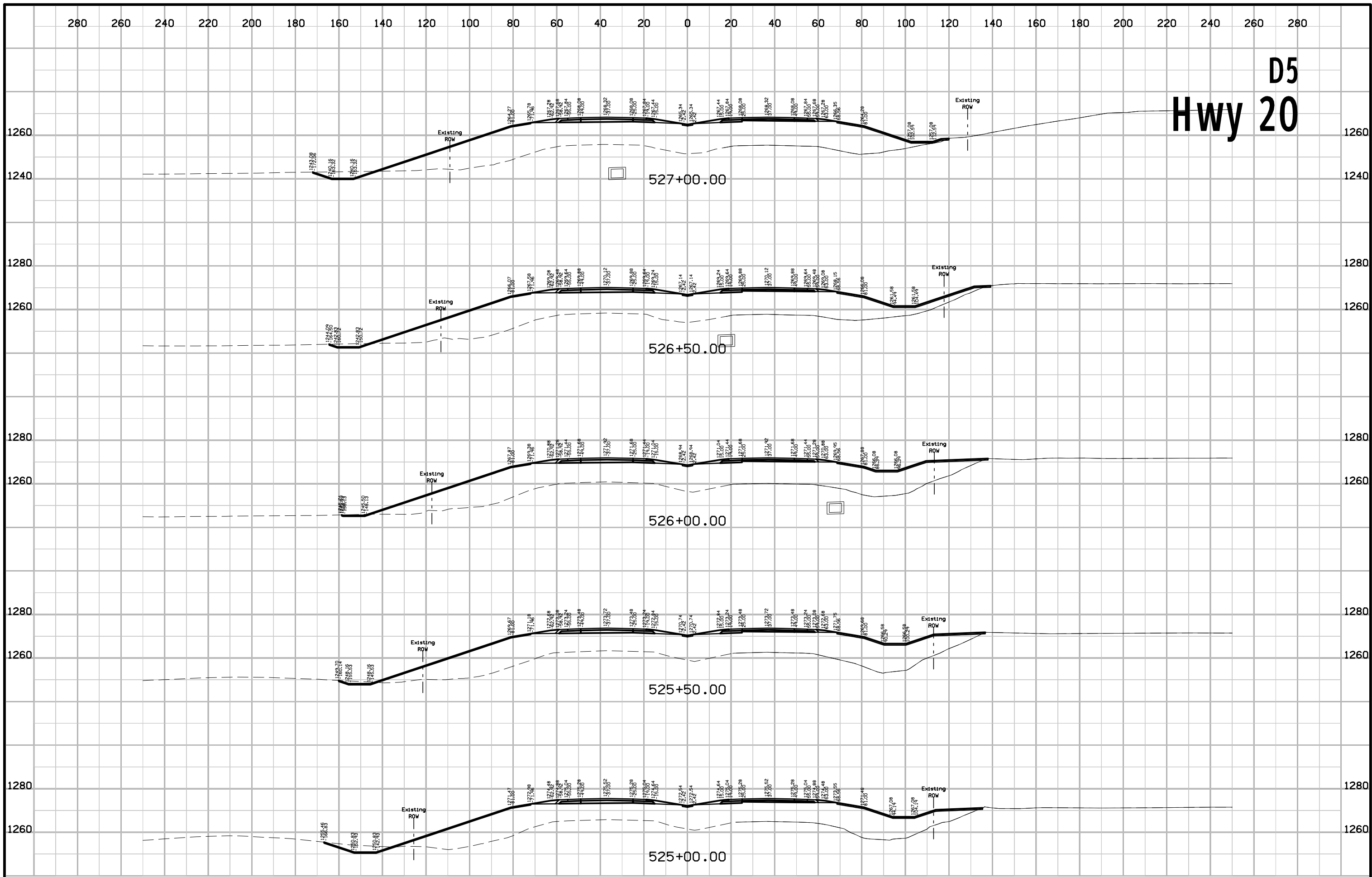
# D5 Hwy 20



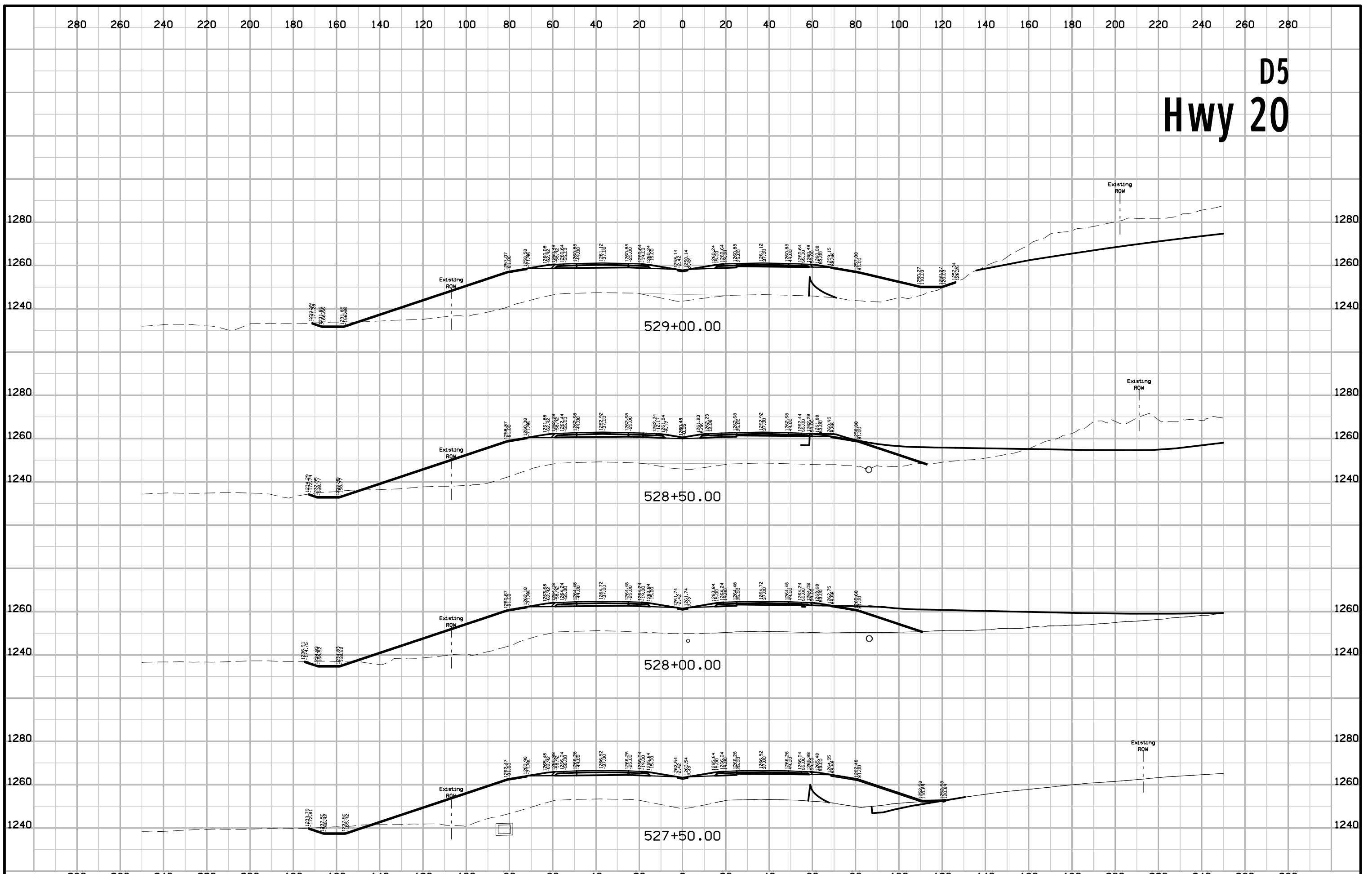


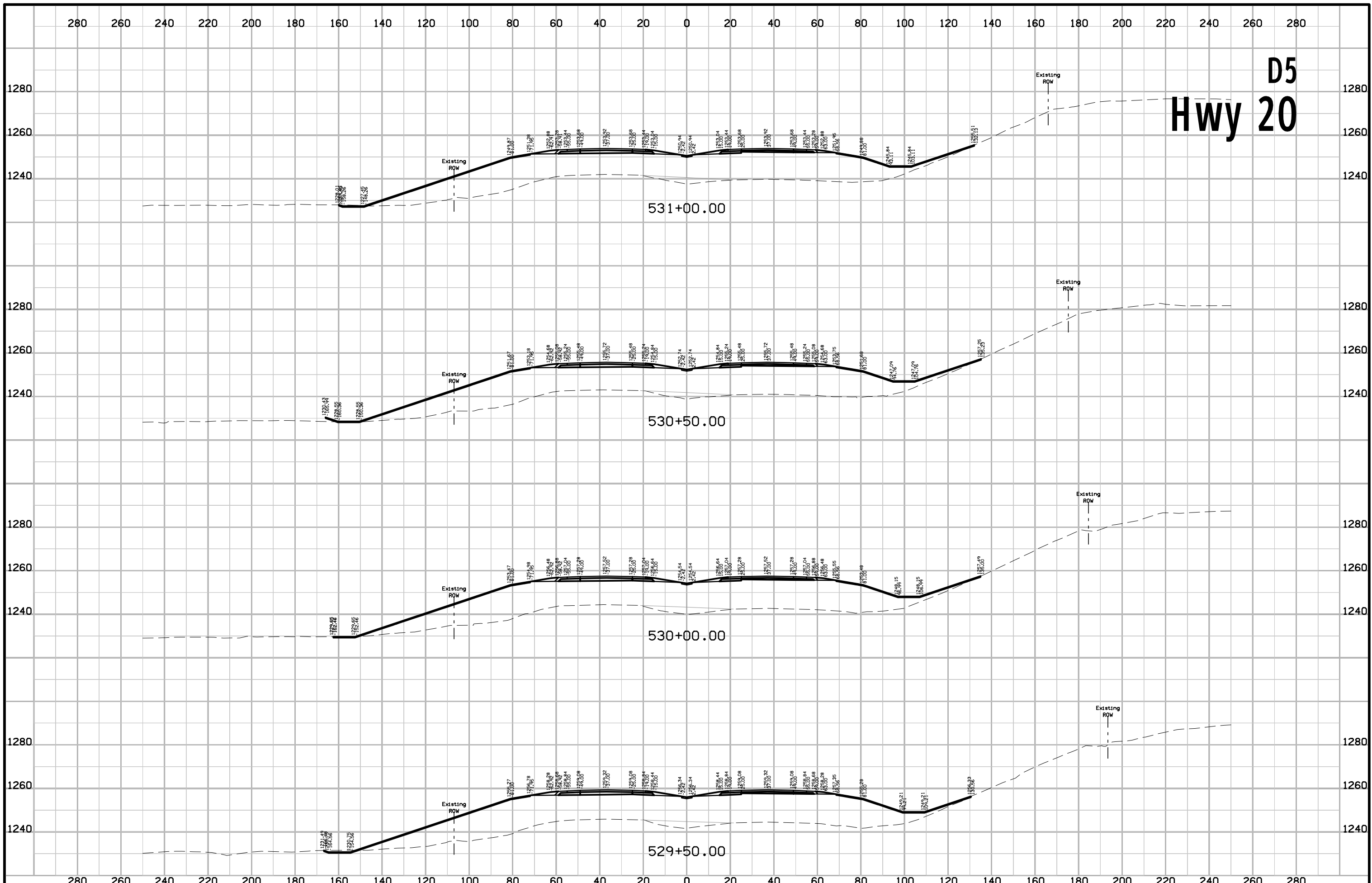


**D5  
Hwy 20**



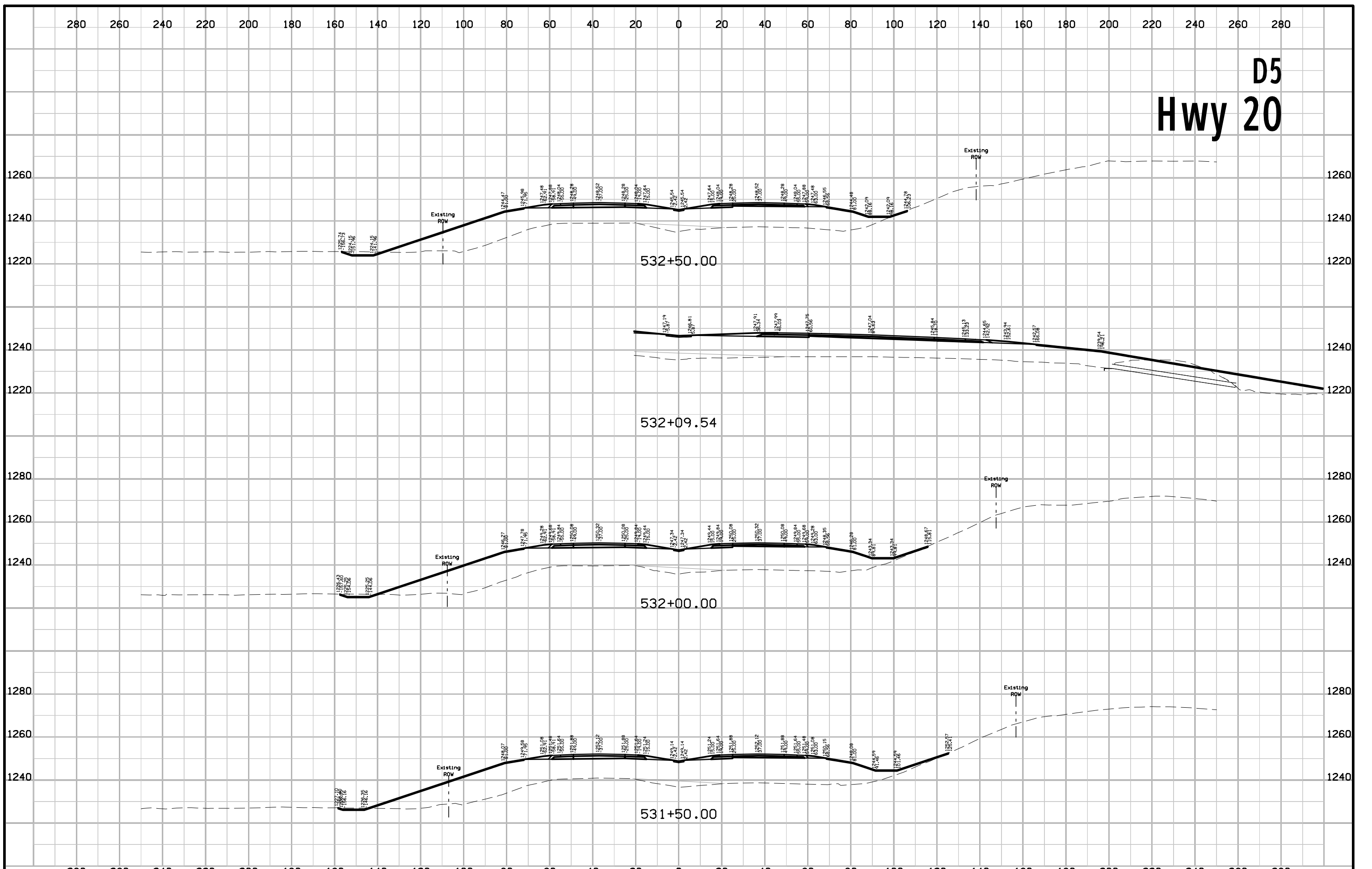
# D5 Hwy 20



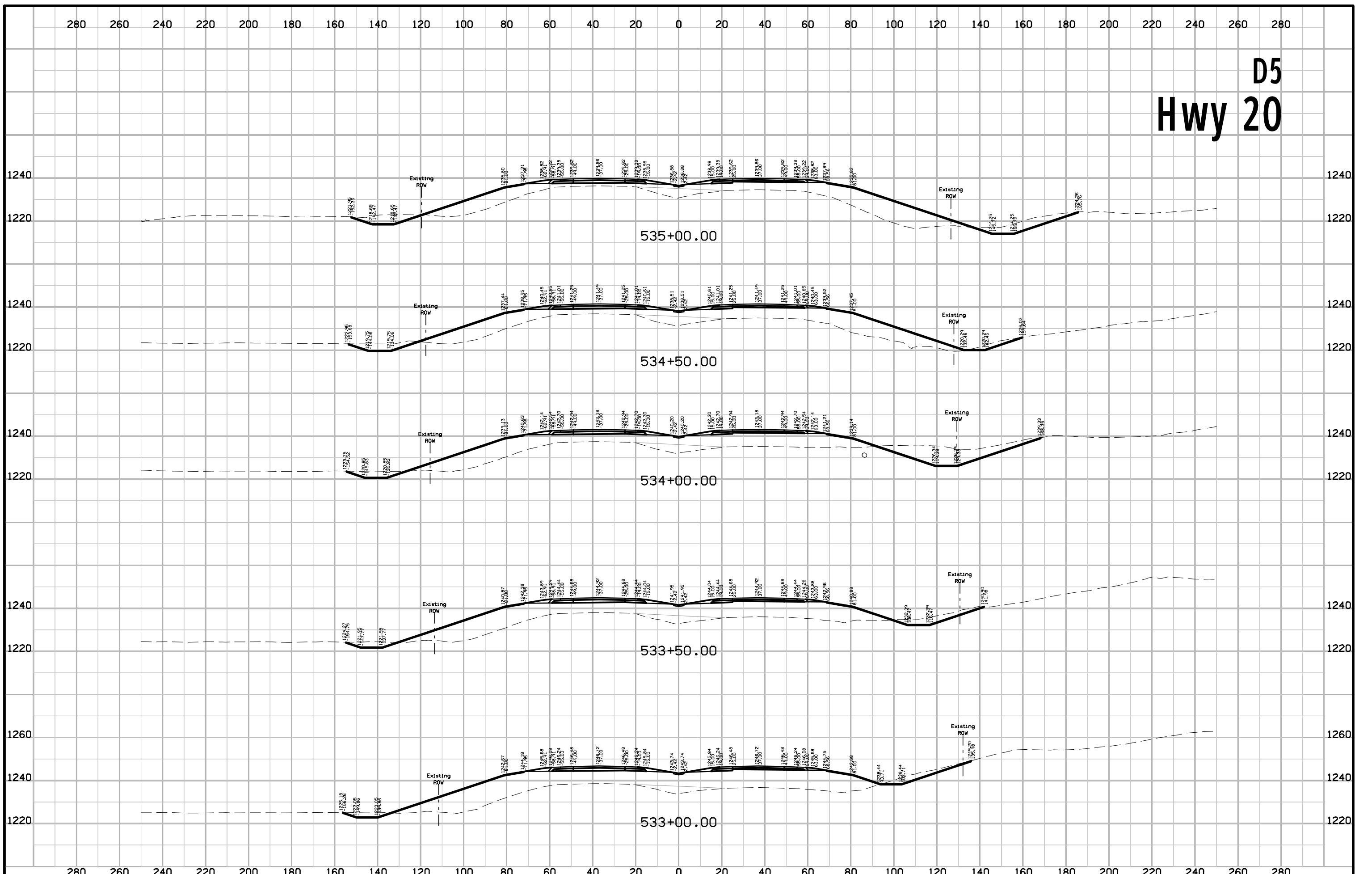




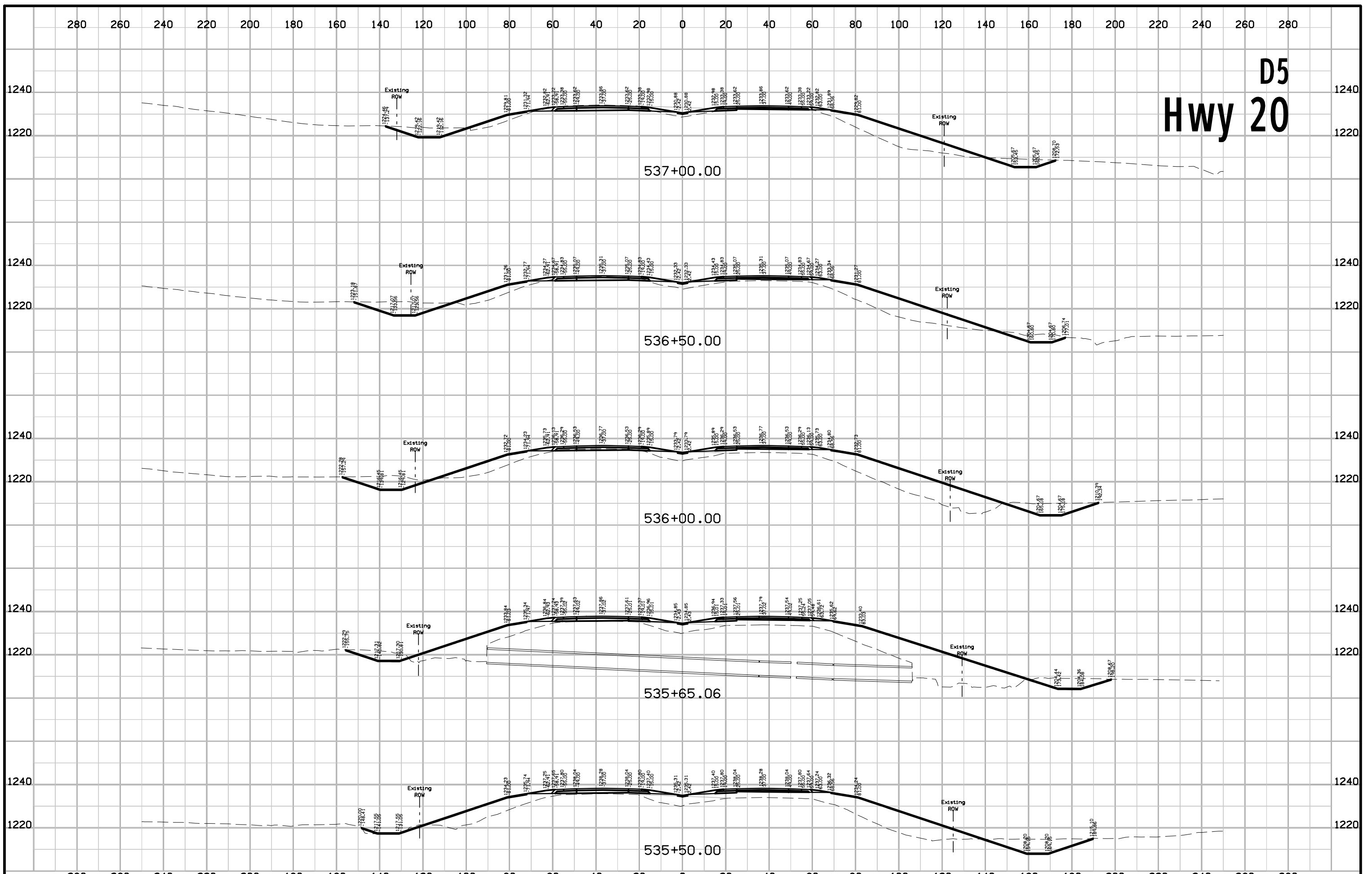
# D5 Hwy 20



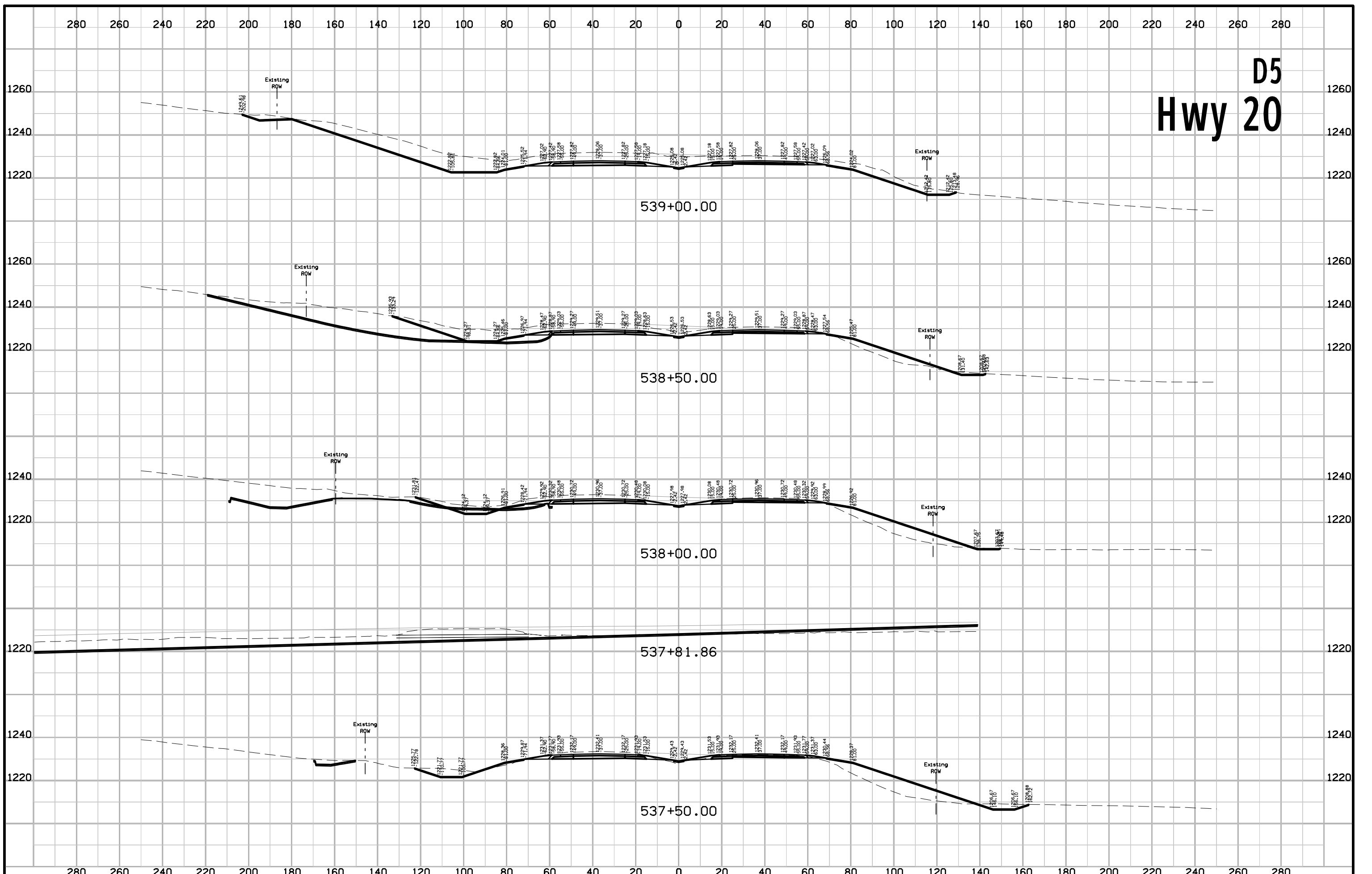
# D5 Hwy 20



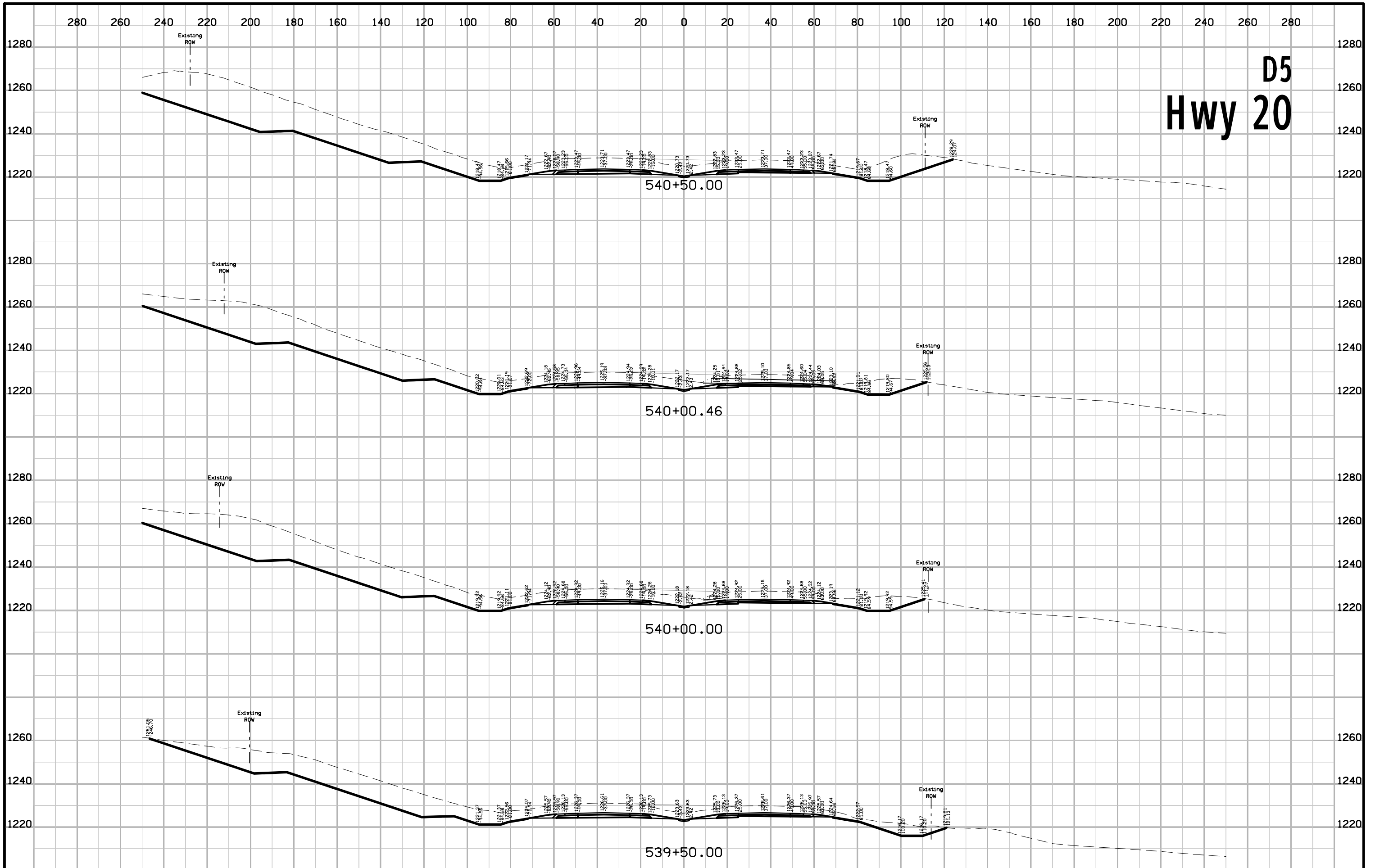
# D5 Hwy 20



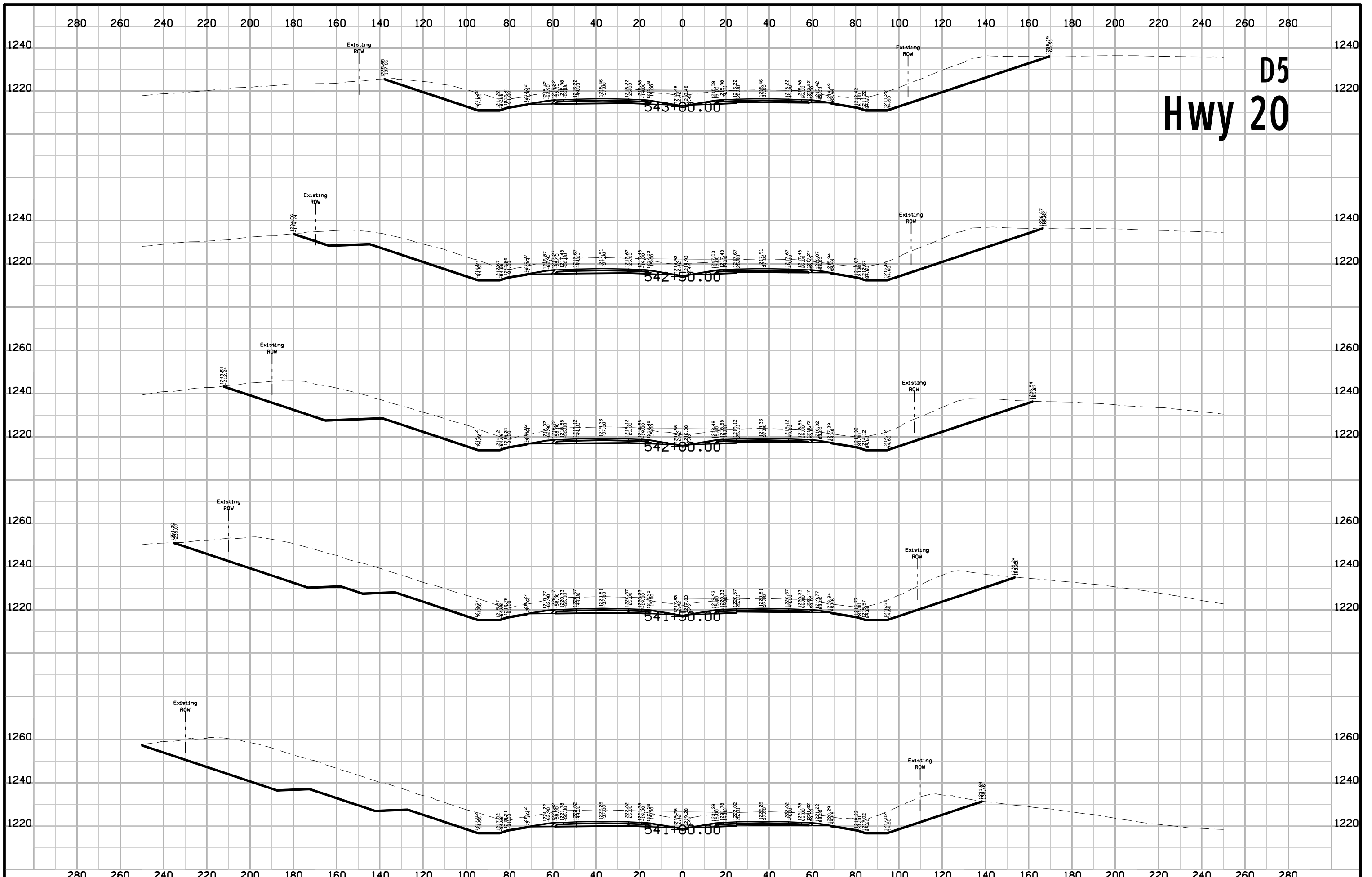
# D5 Hwy 20



# D5 Hwy 20

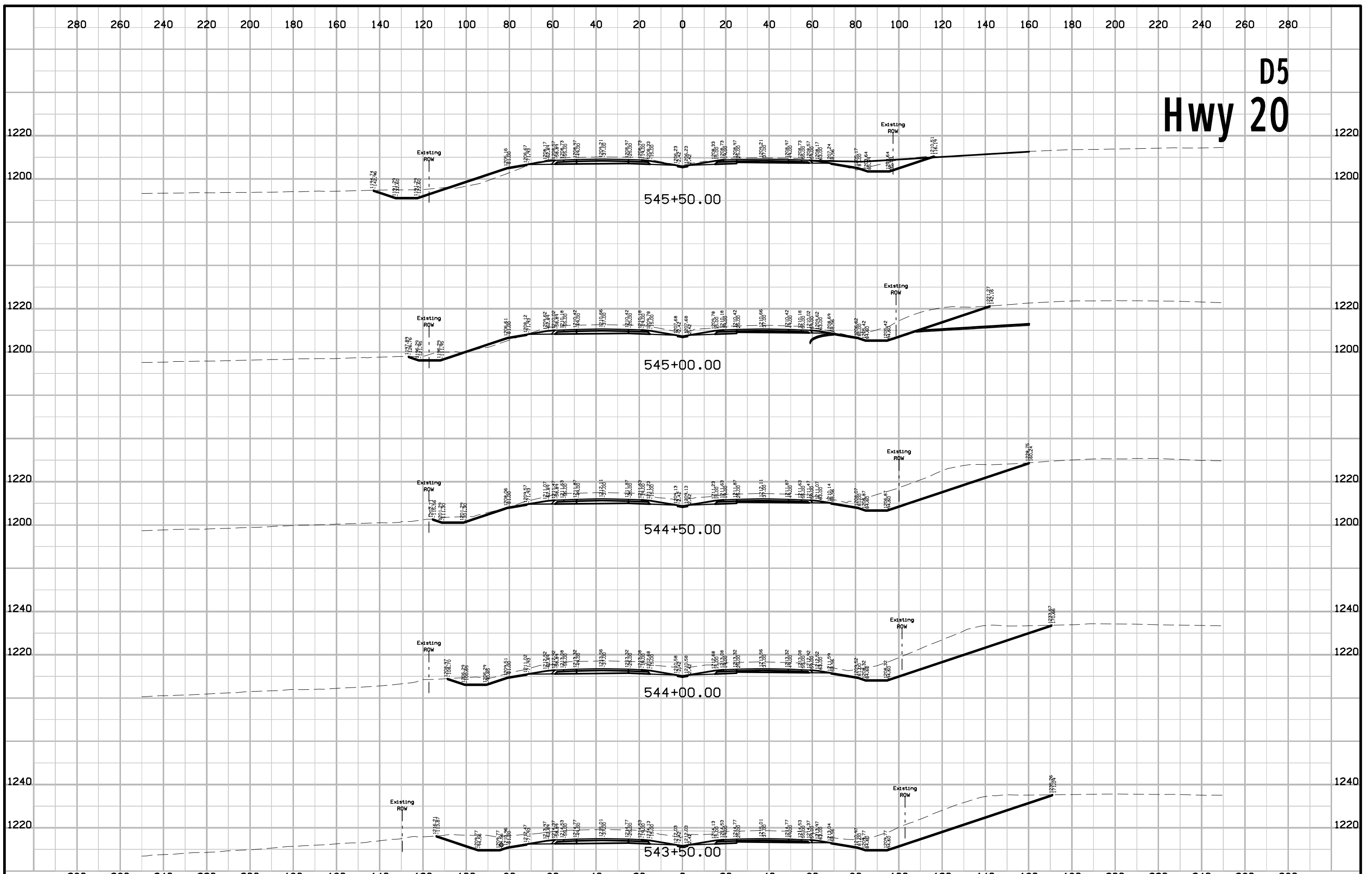






# D5 Hwy 20

# D5 Hwy 20





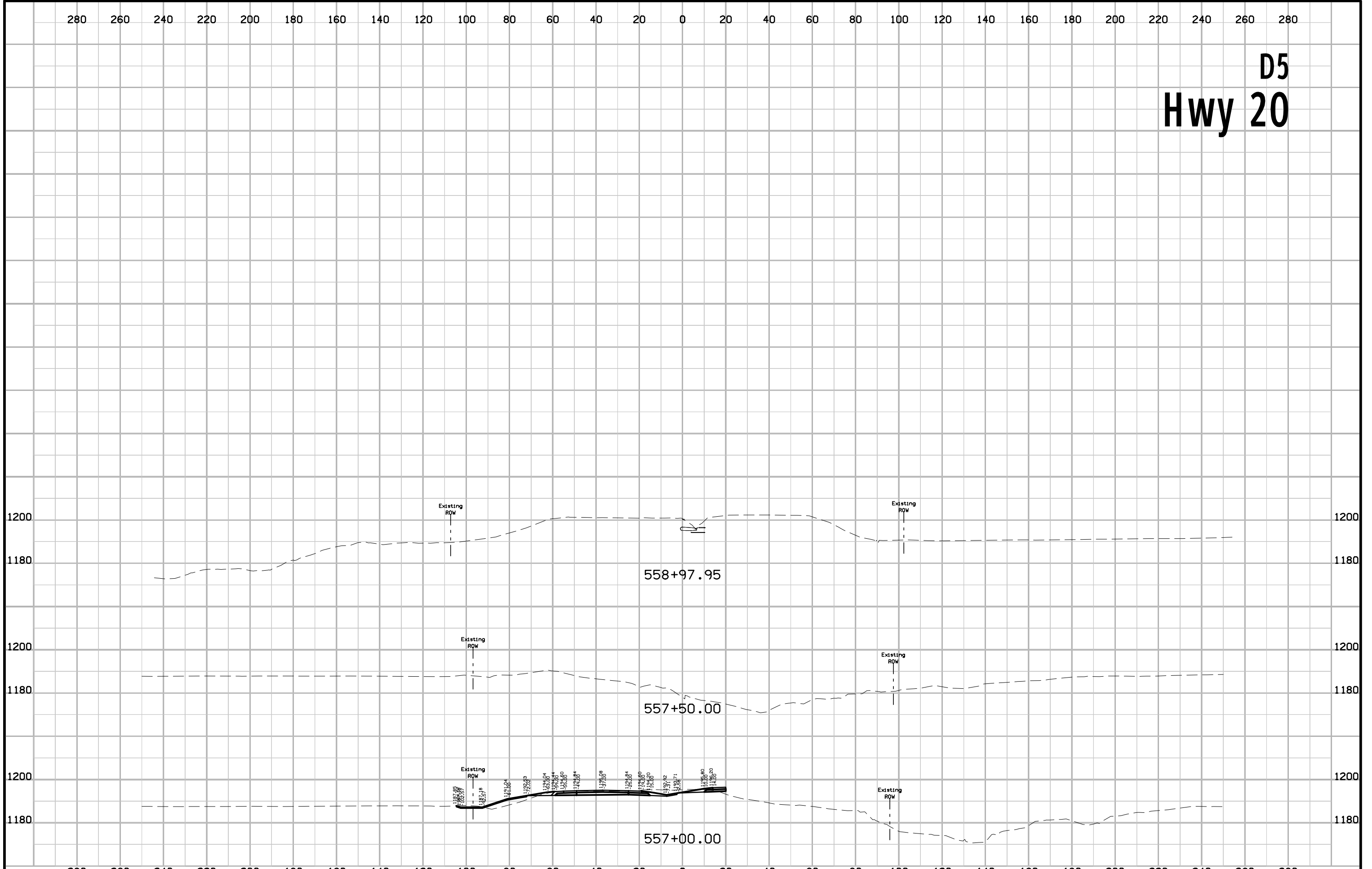




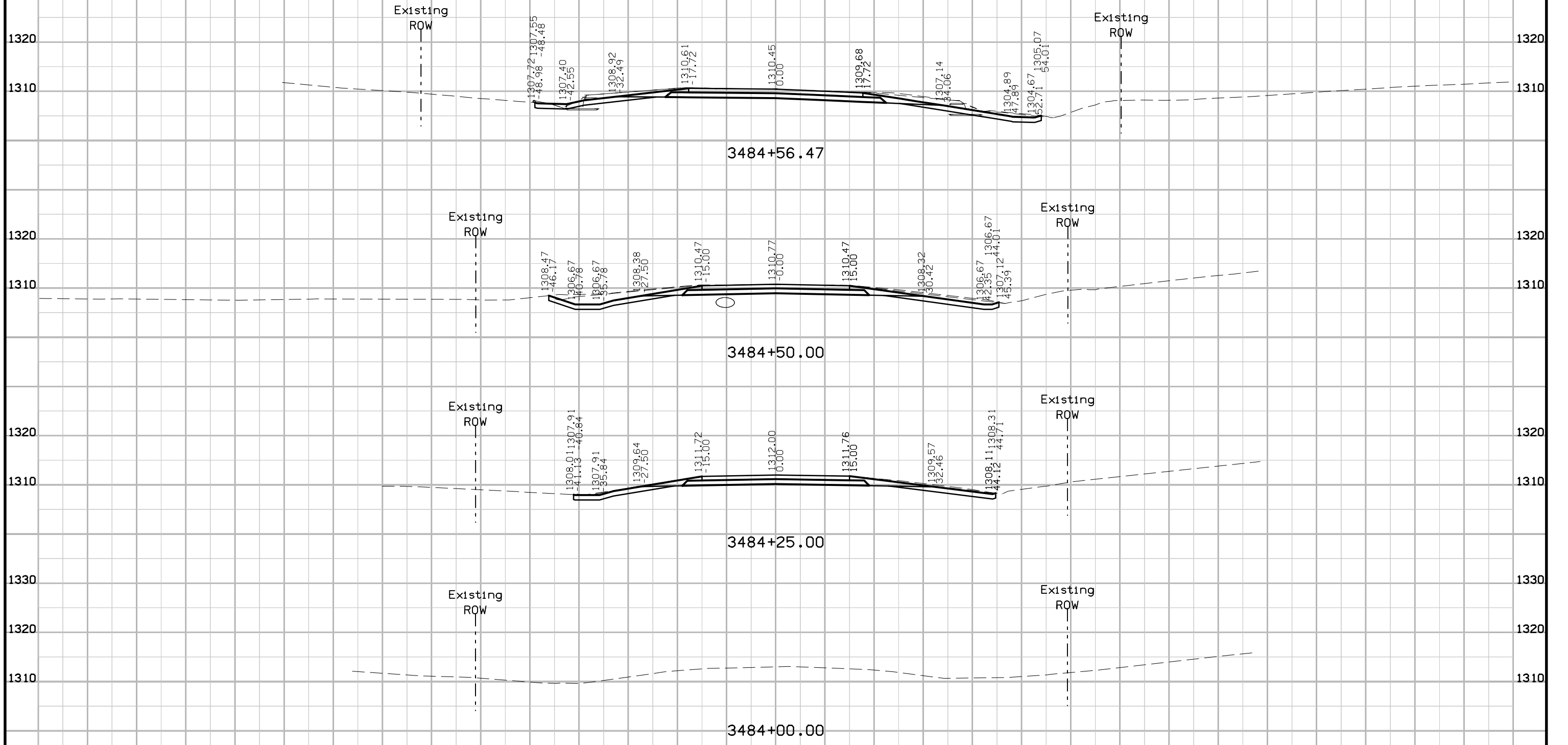




# D5 Hwy 20

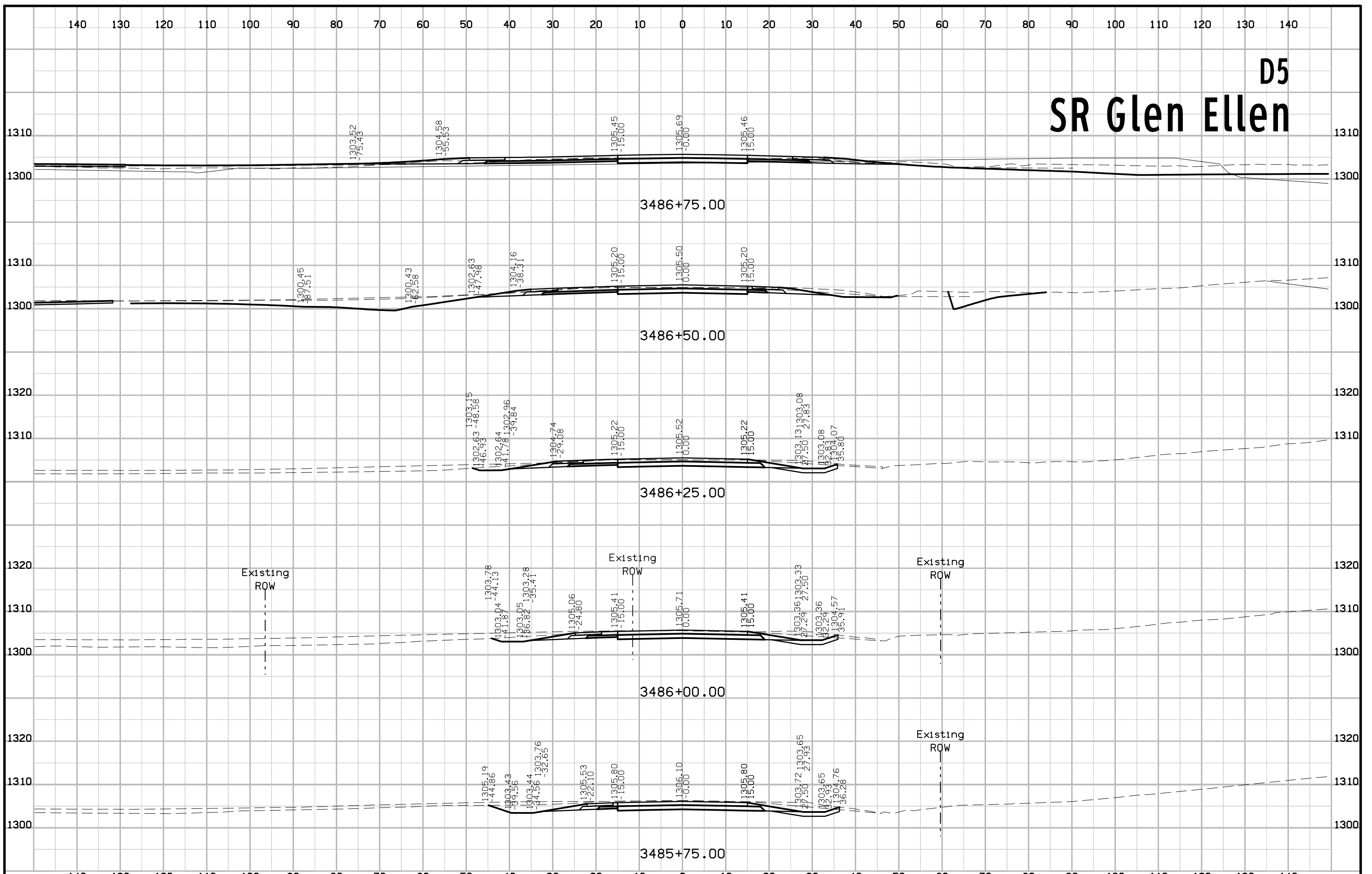


# D5 SR Glen Ellen



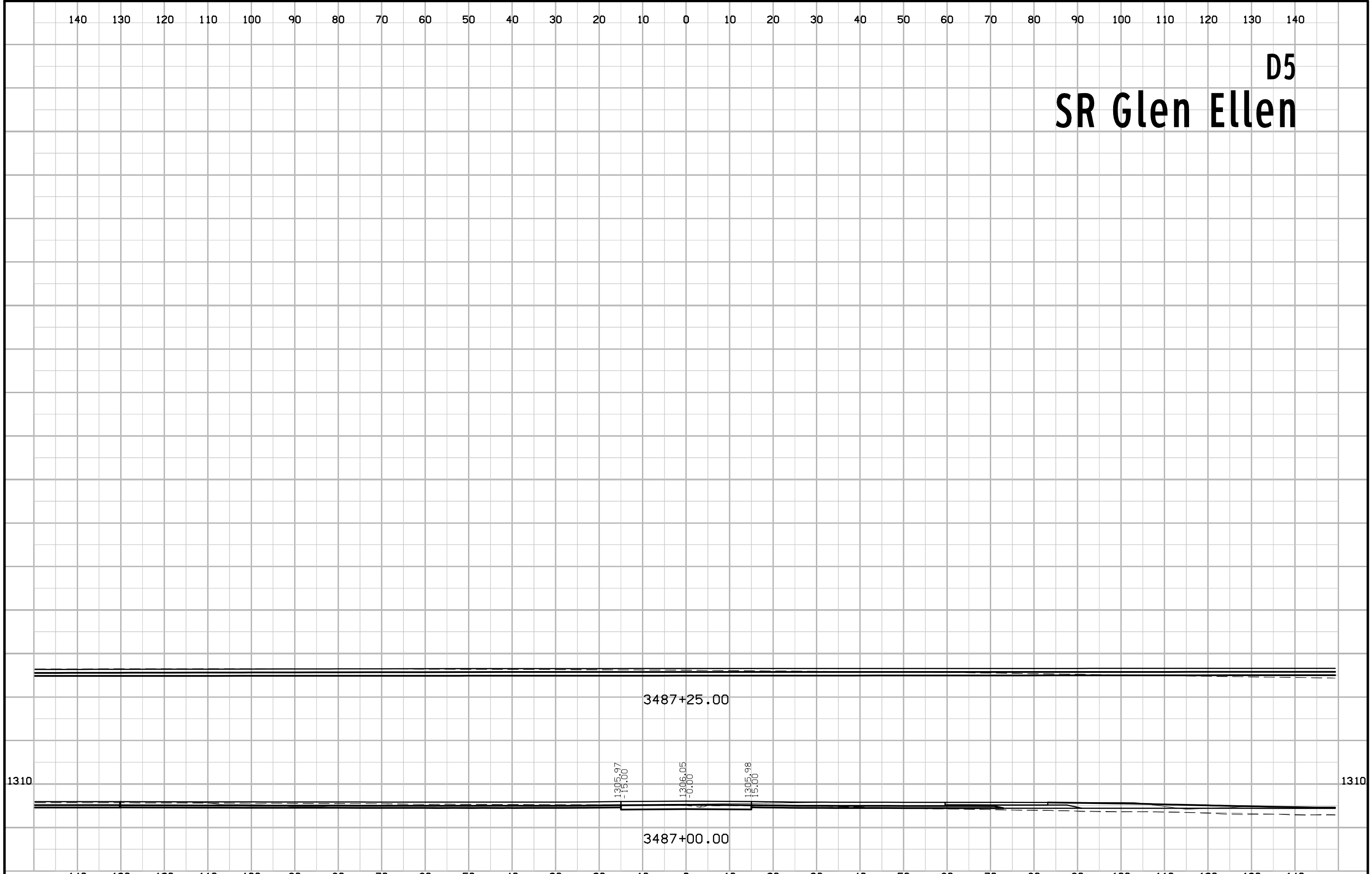


# D5 SR Glen Ellen



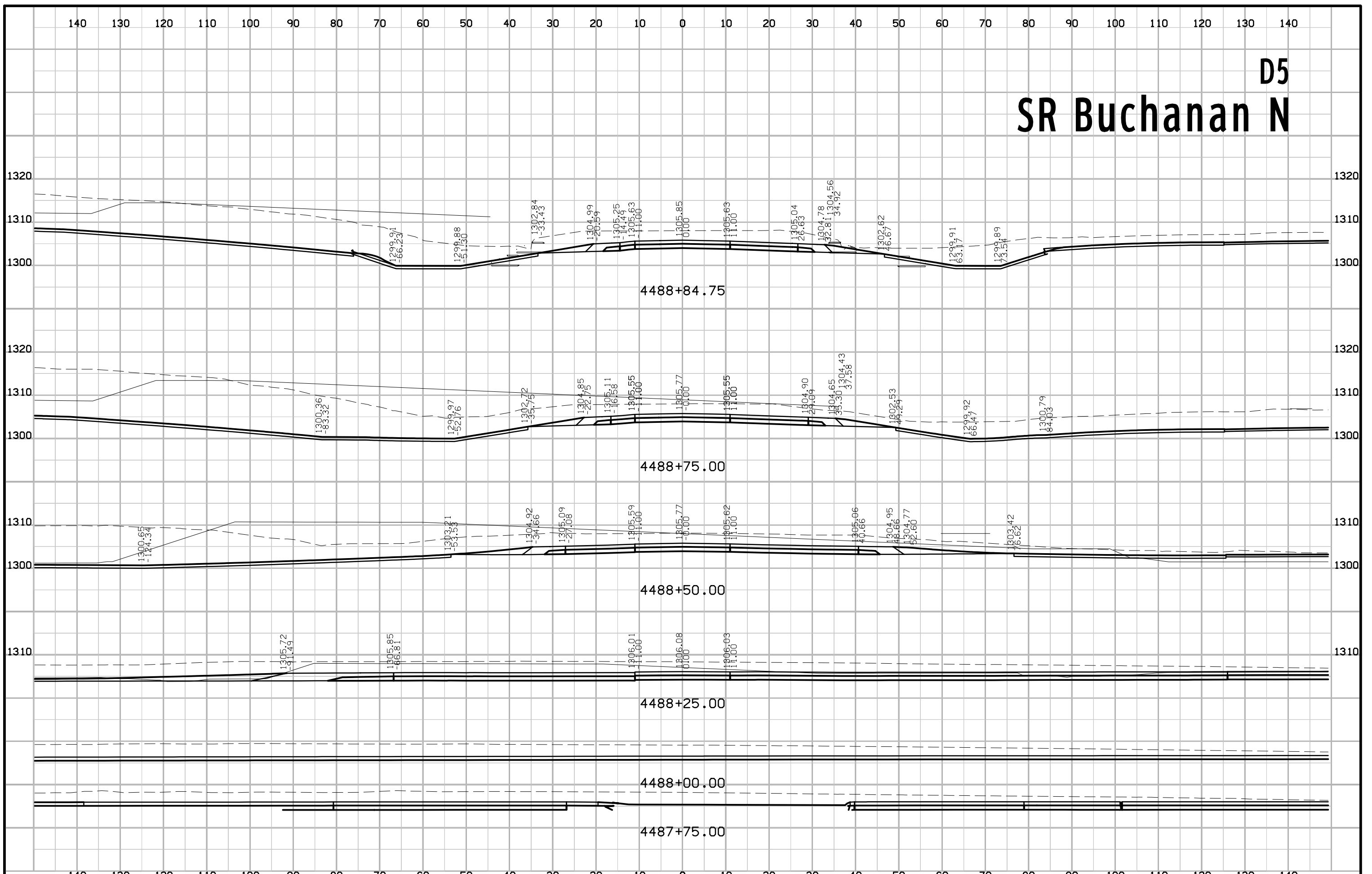


D5  
SR Glen Ellen

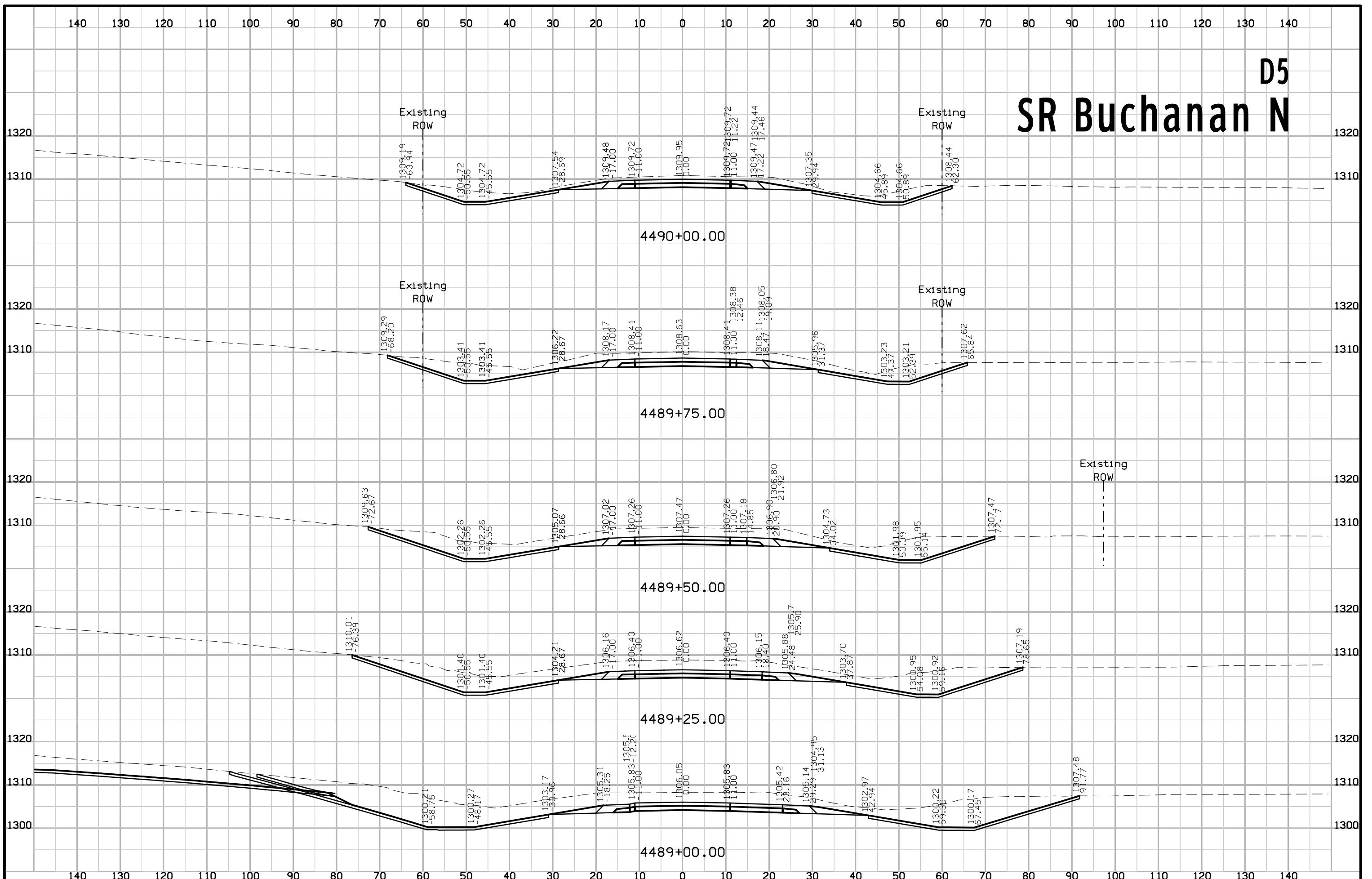


FILE NO.	ENGLISH	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER
					X.103

# D5 SR Buchanan N

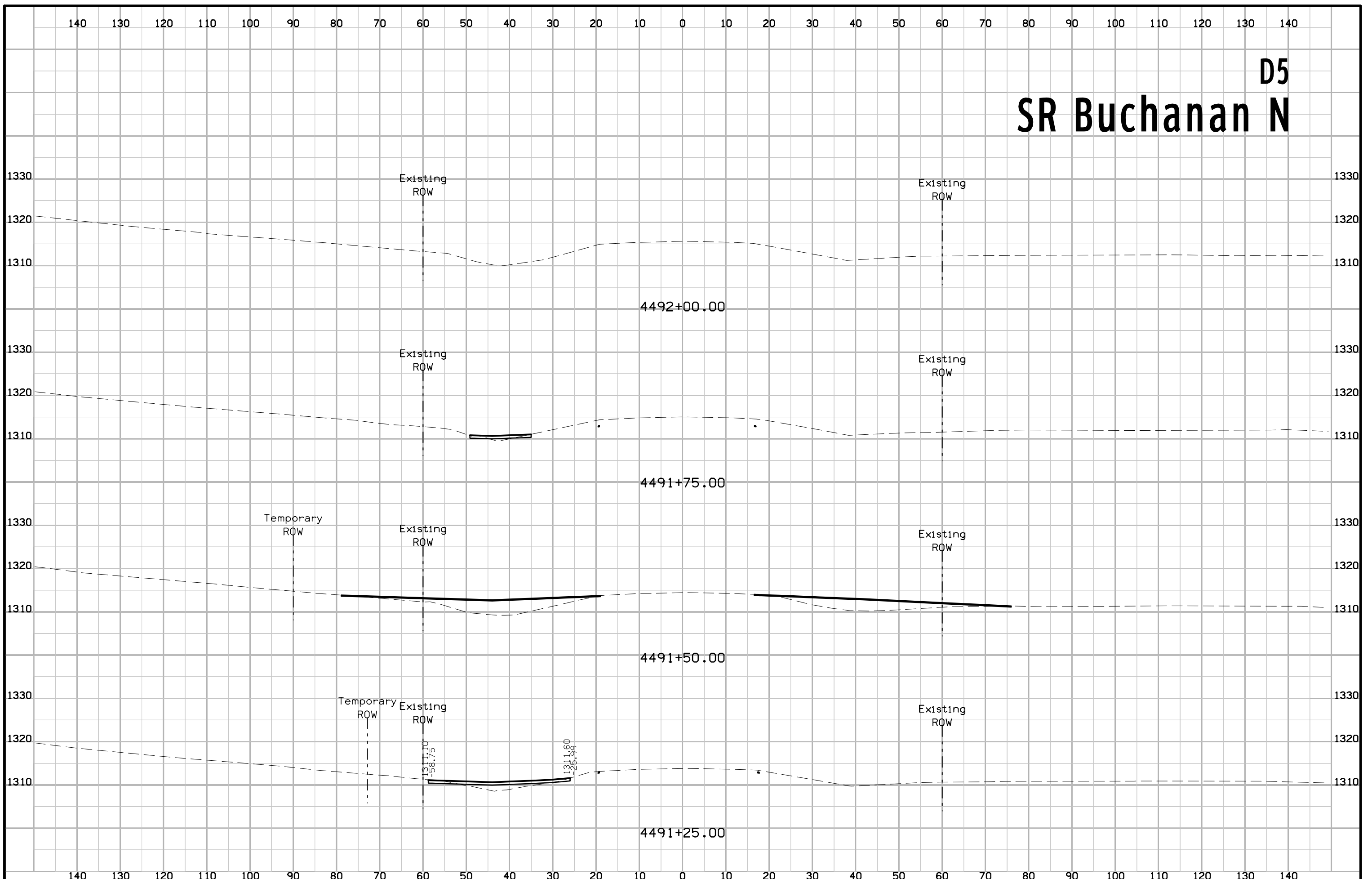


# D5 SR Buchanan N



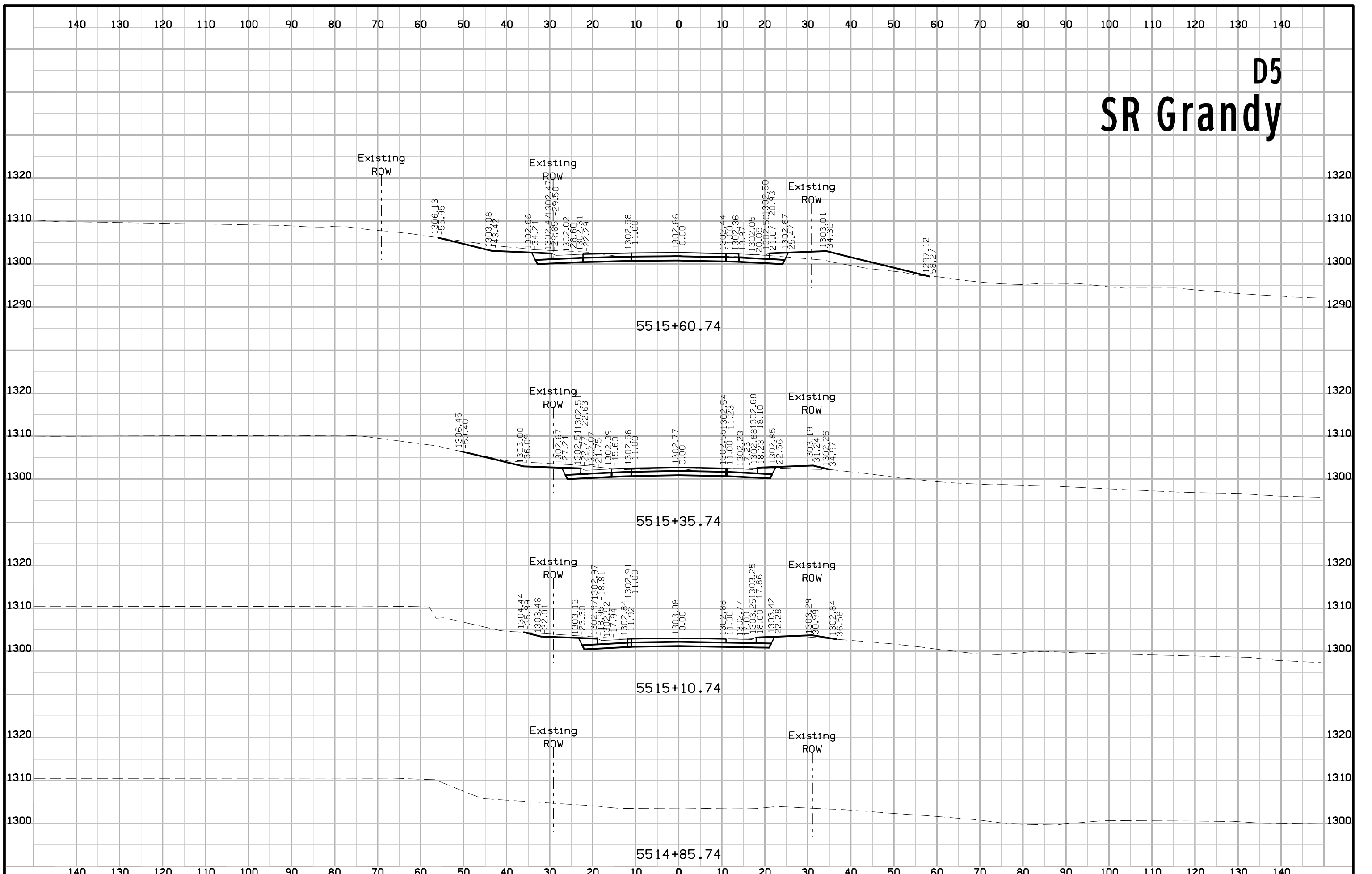


# D5 SR Buchanan N

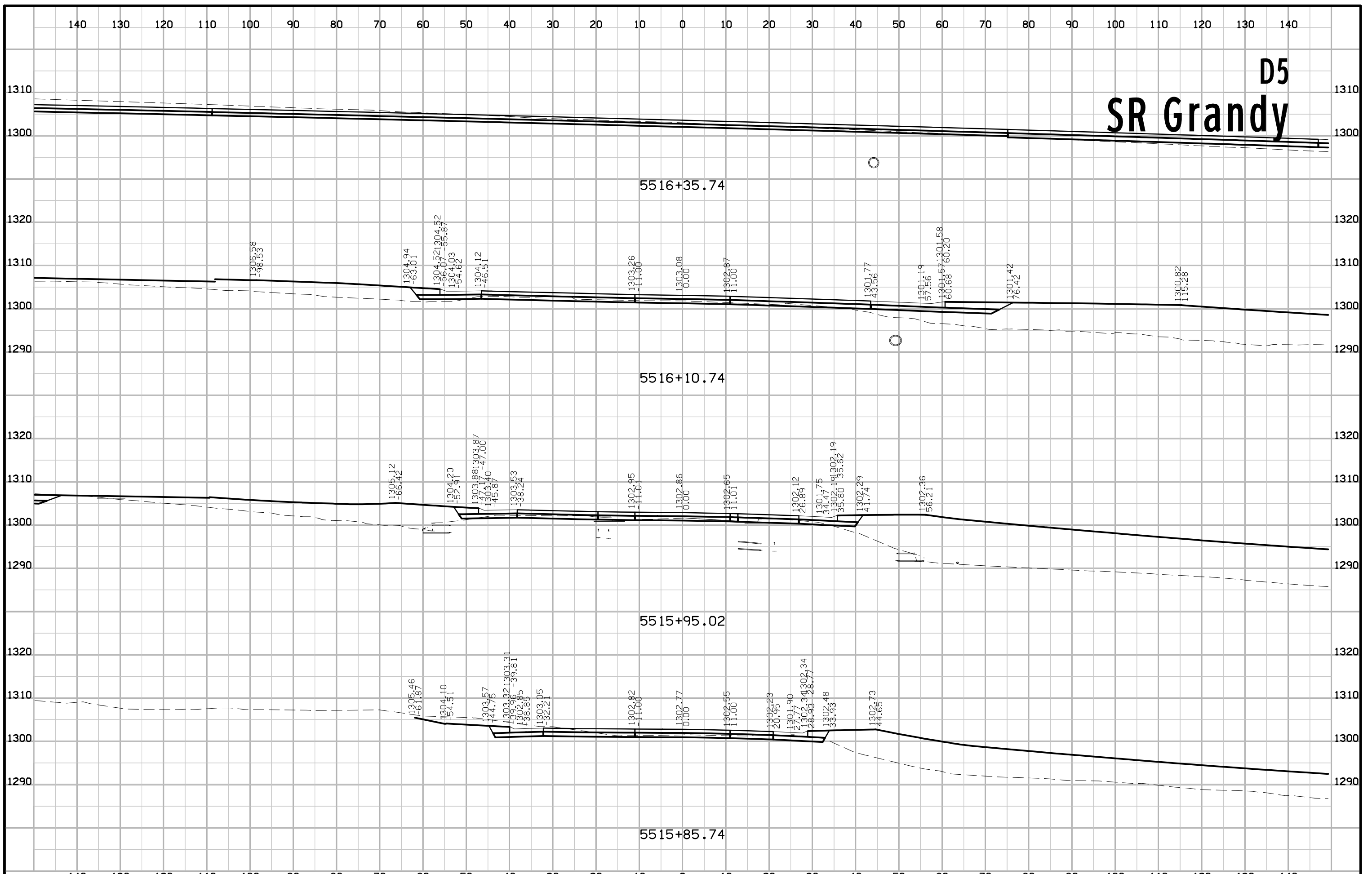




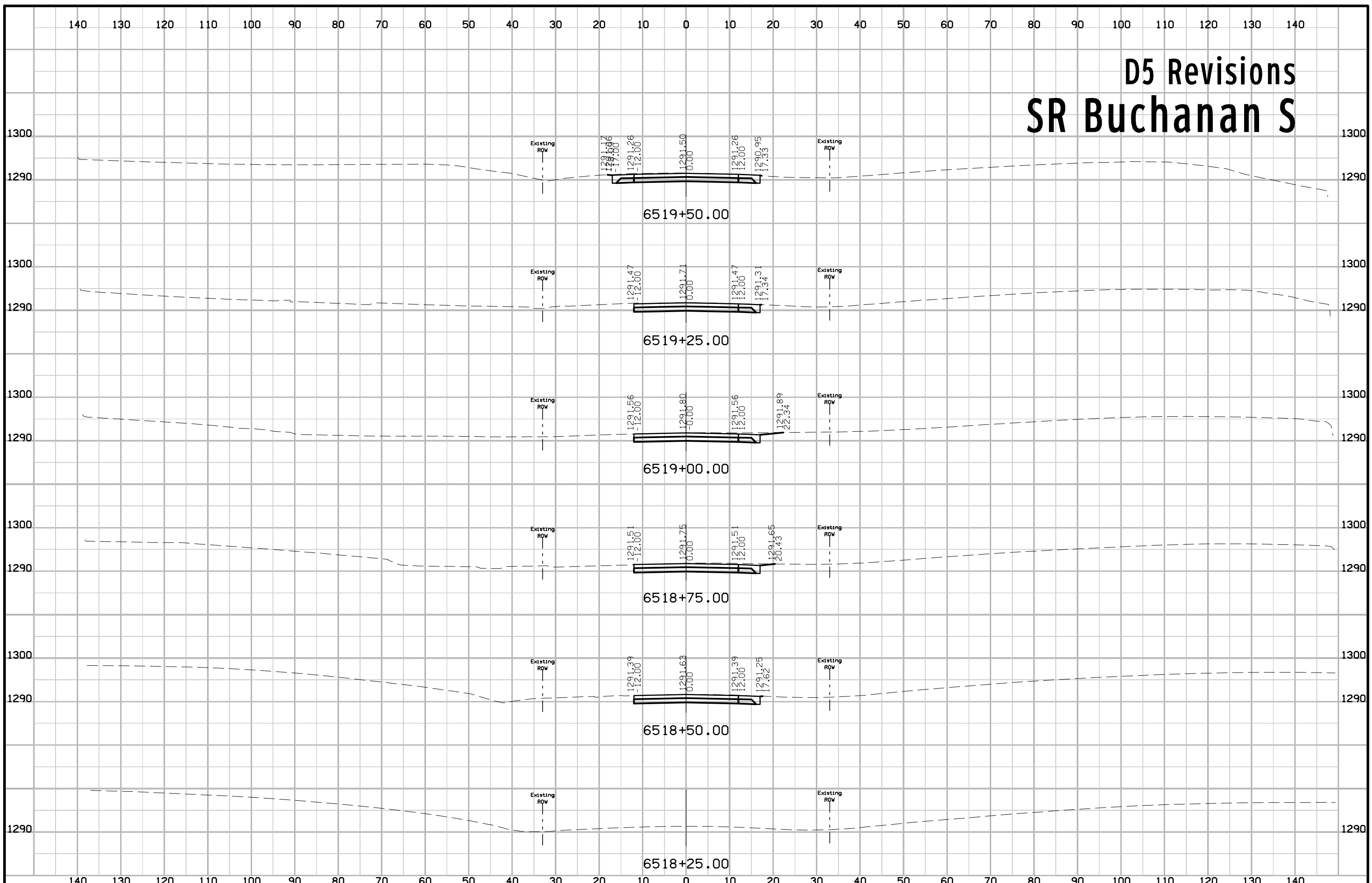
# D5 SR Grandy



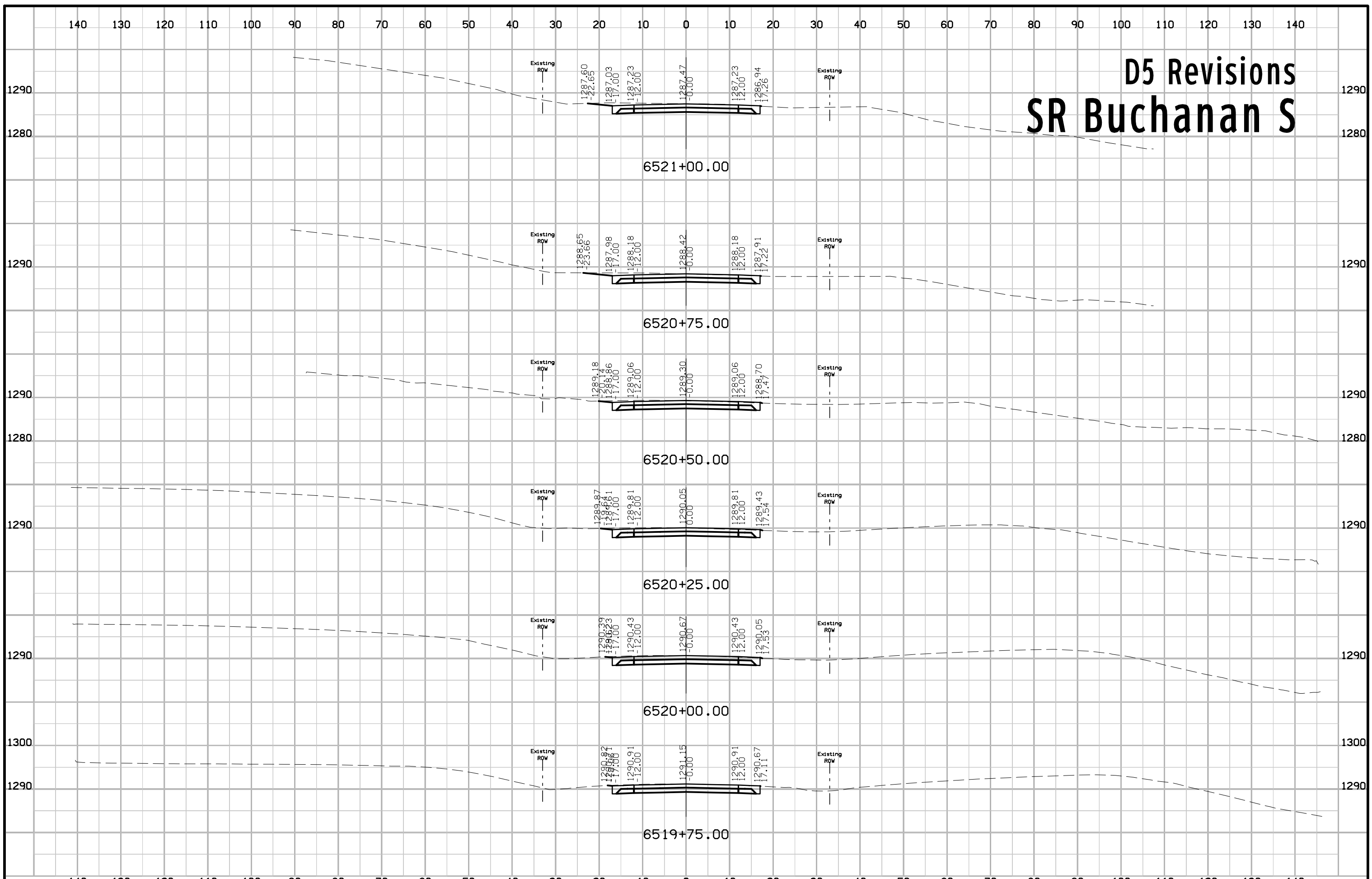
# D5 SR Grandy



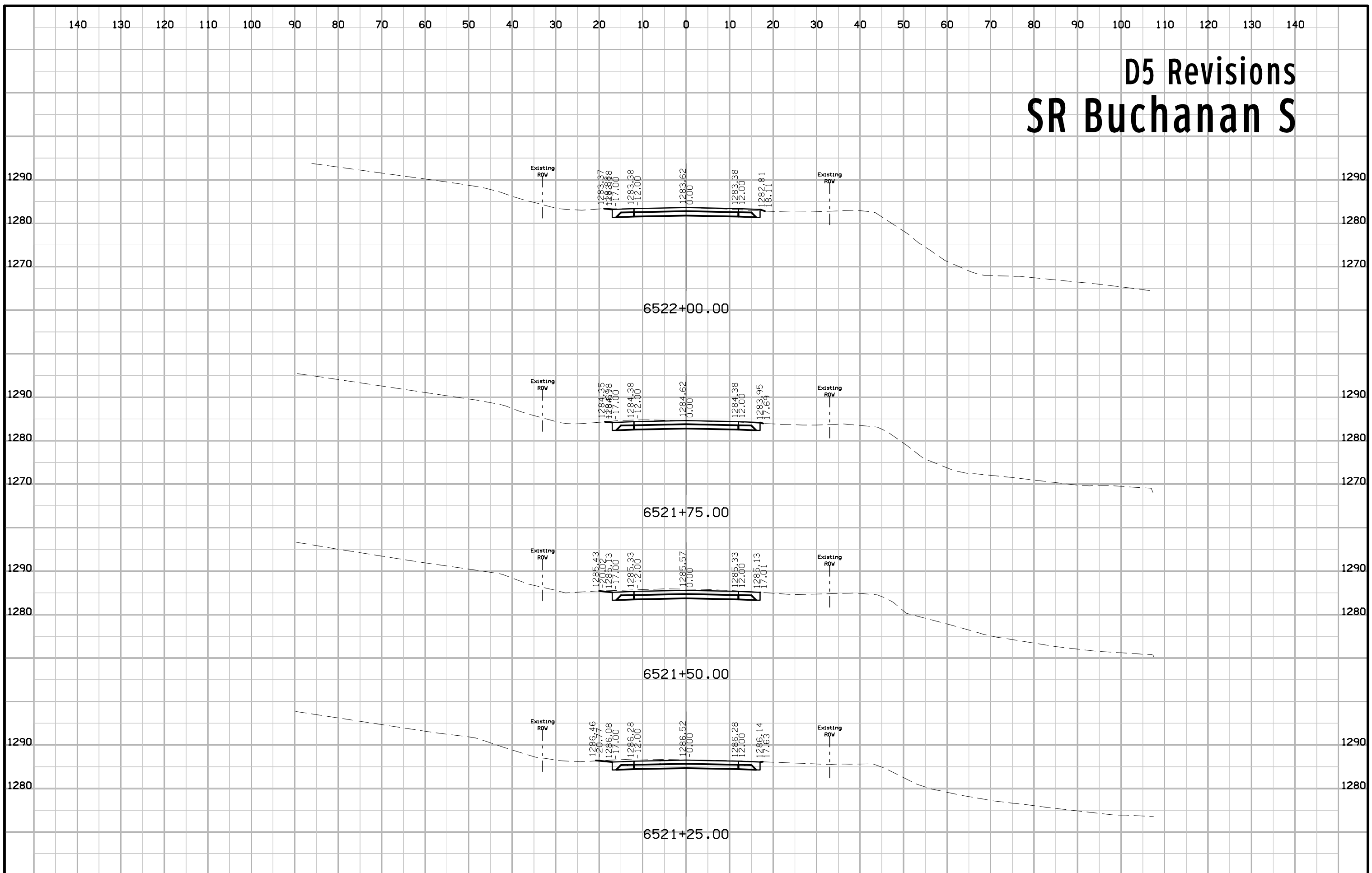
# D5 Revisions SR Buchanan S



# D5 Revisions SR Buchanan S

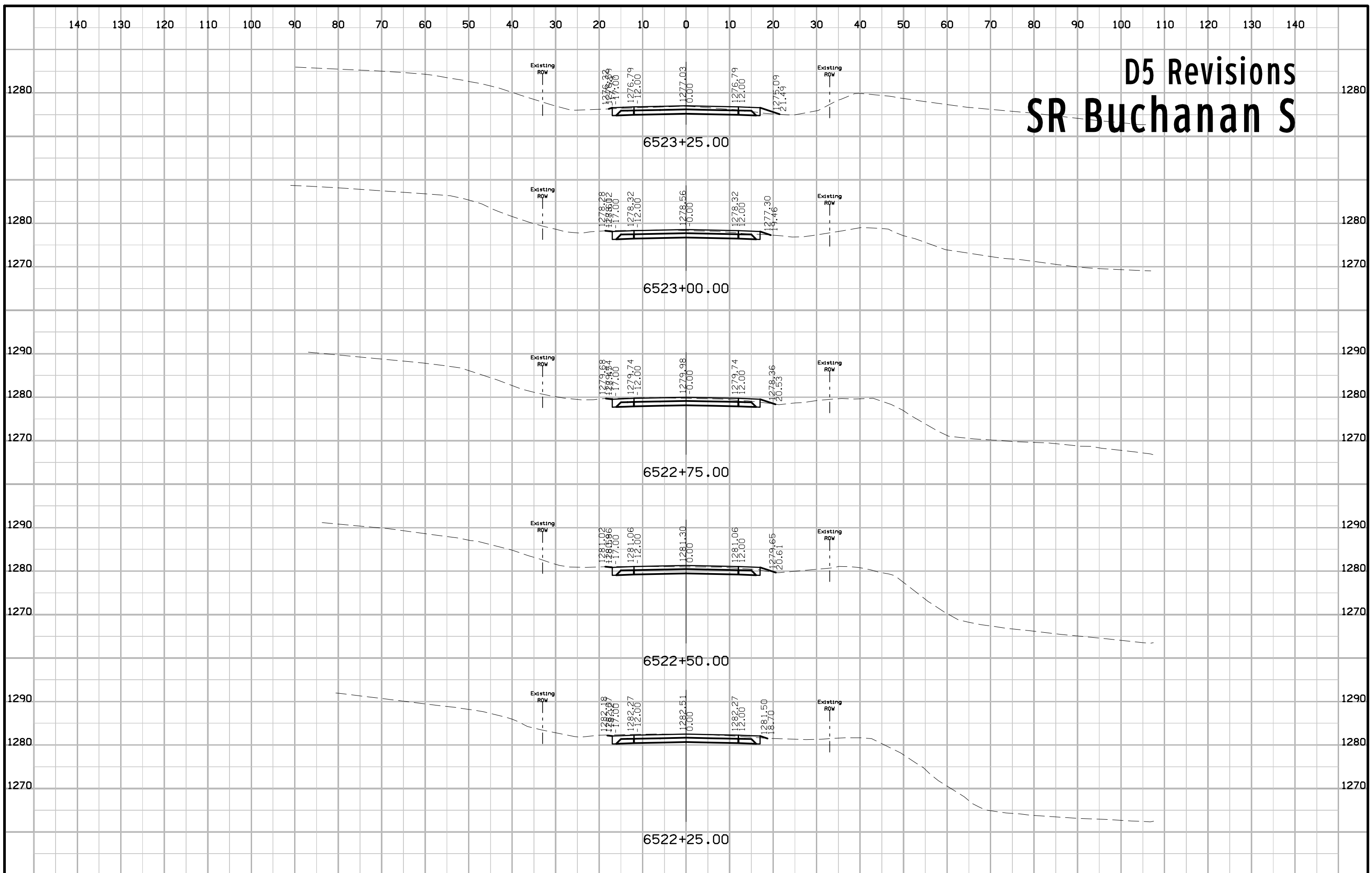


# D5 Revisions SR Buchanan S

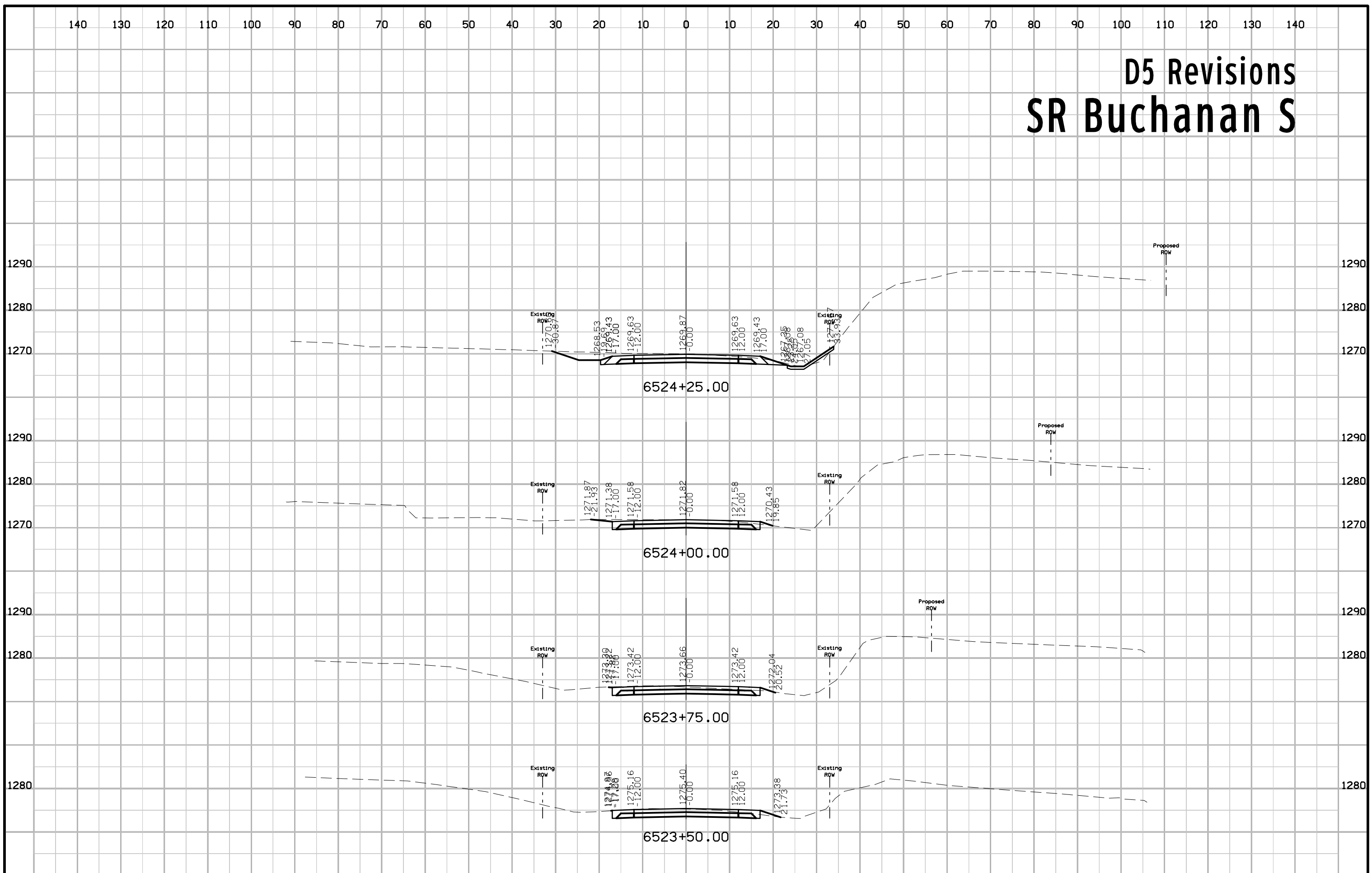




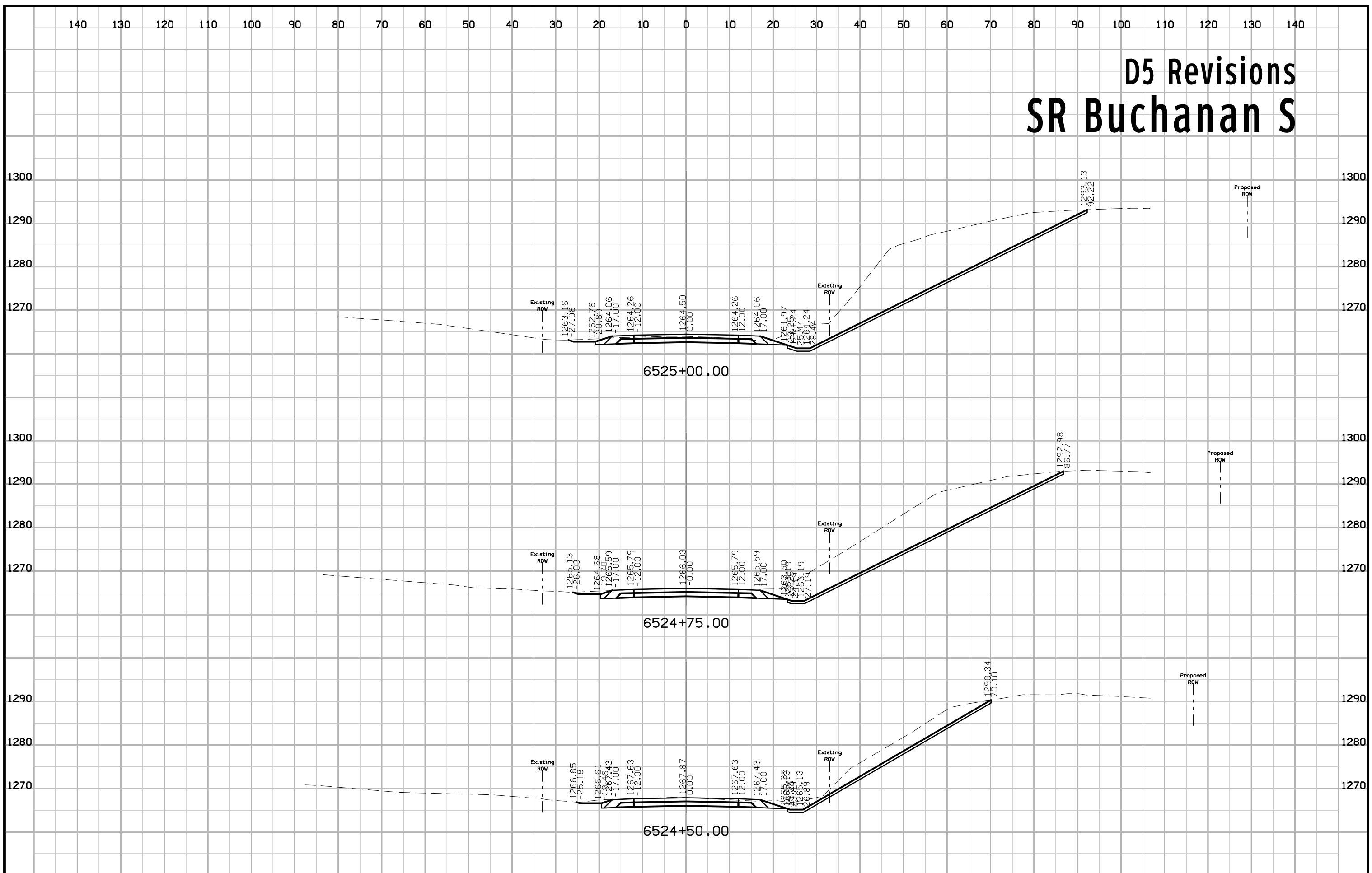
# D5 Revisions SR Buchanan S



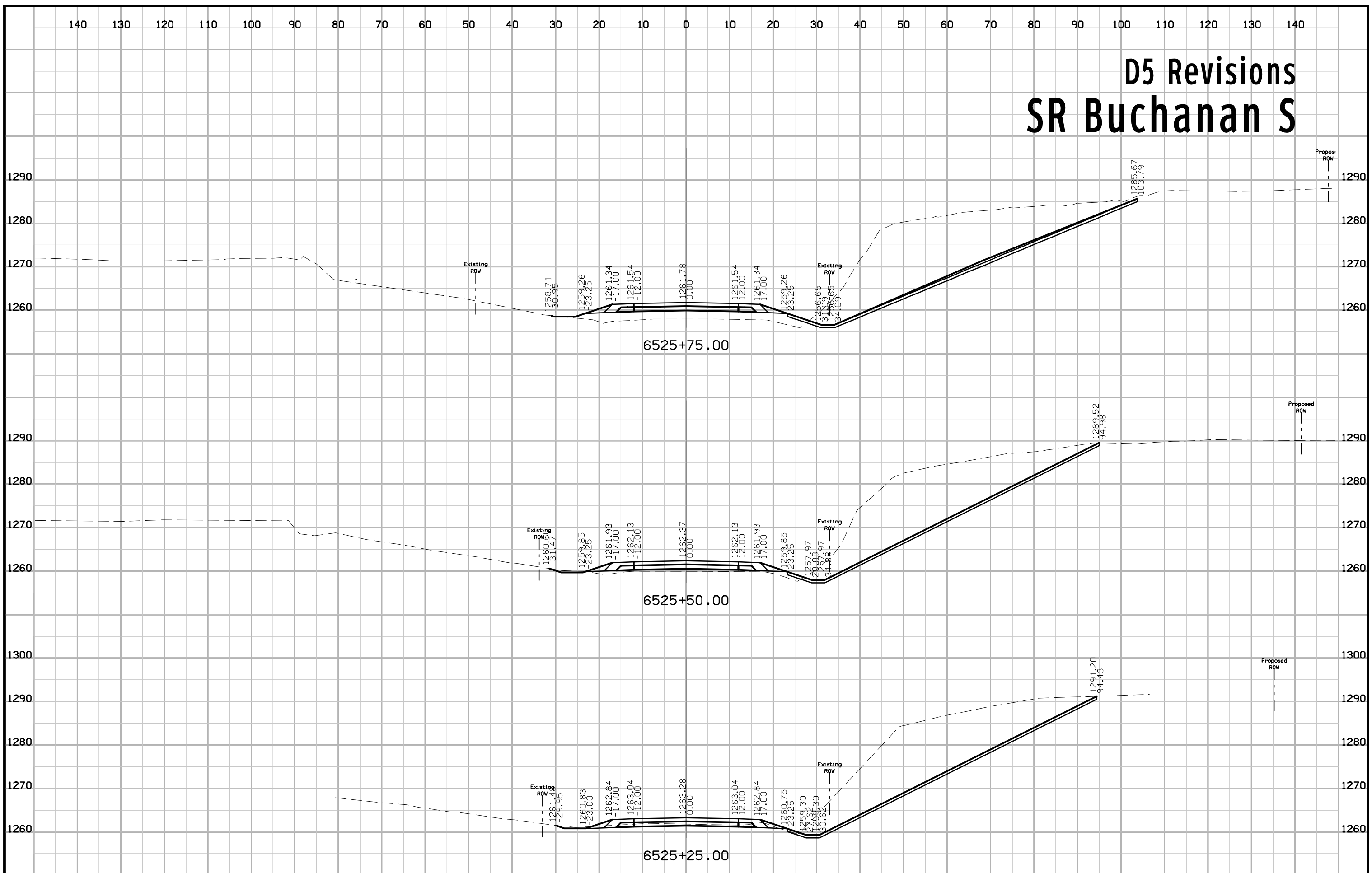
# D5 Revisions SR Buchanan S



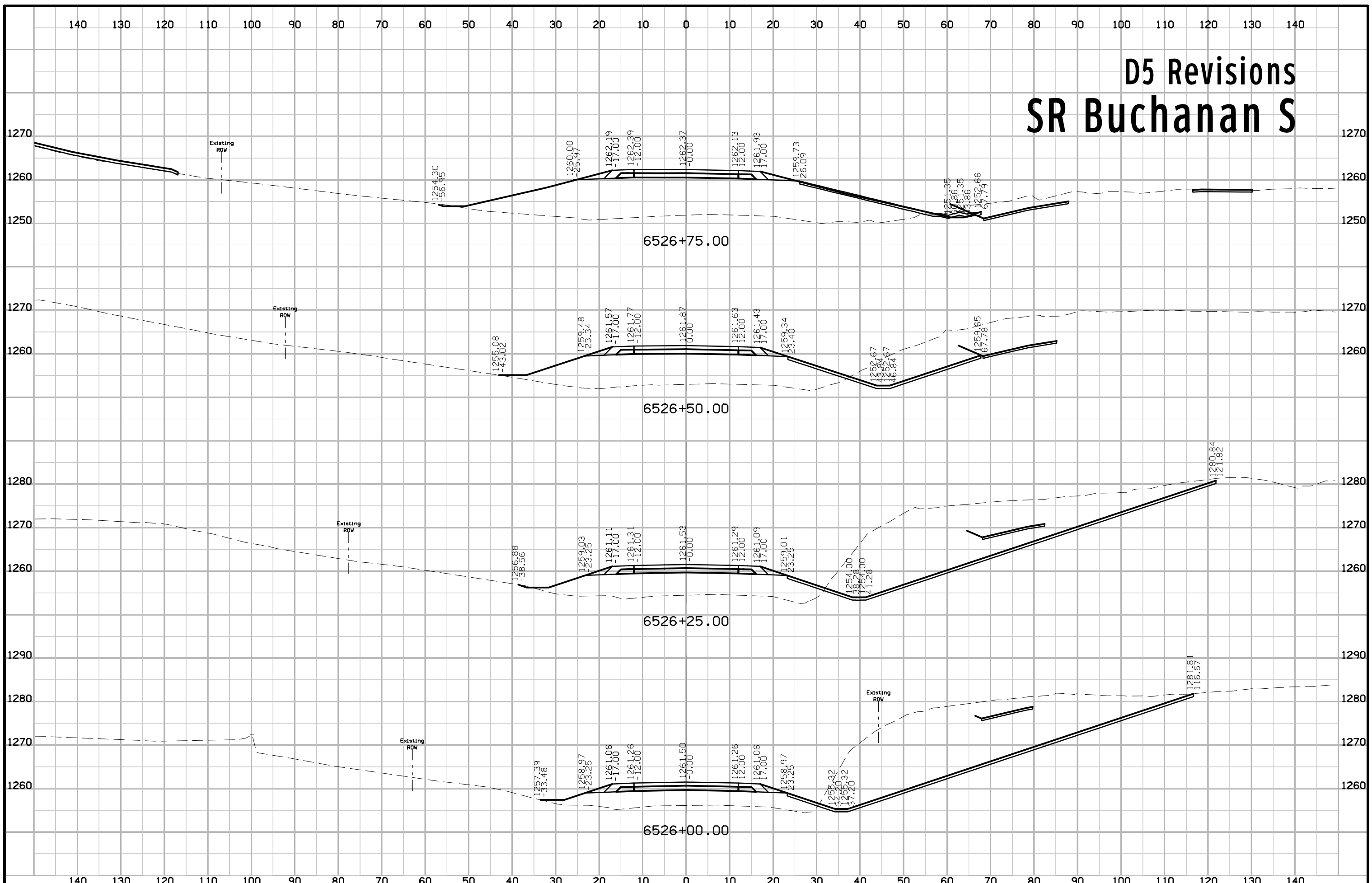
# D5 Revisions SR Buchanan S



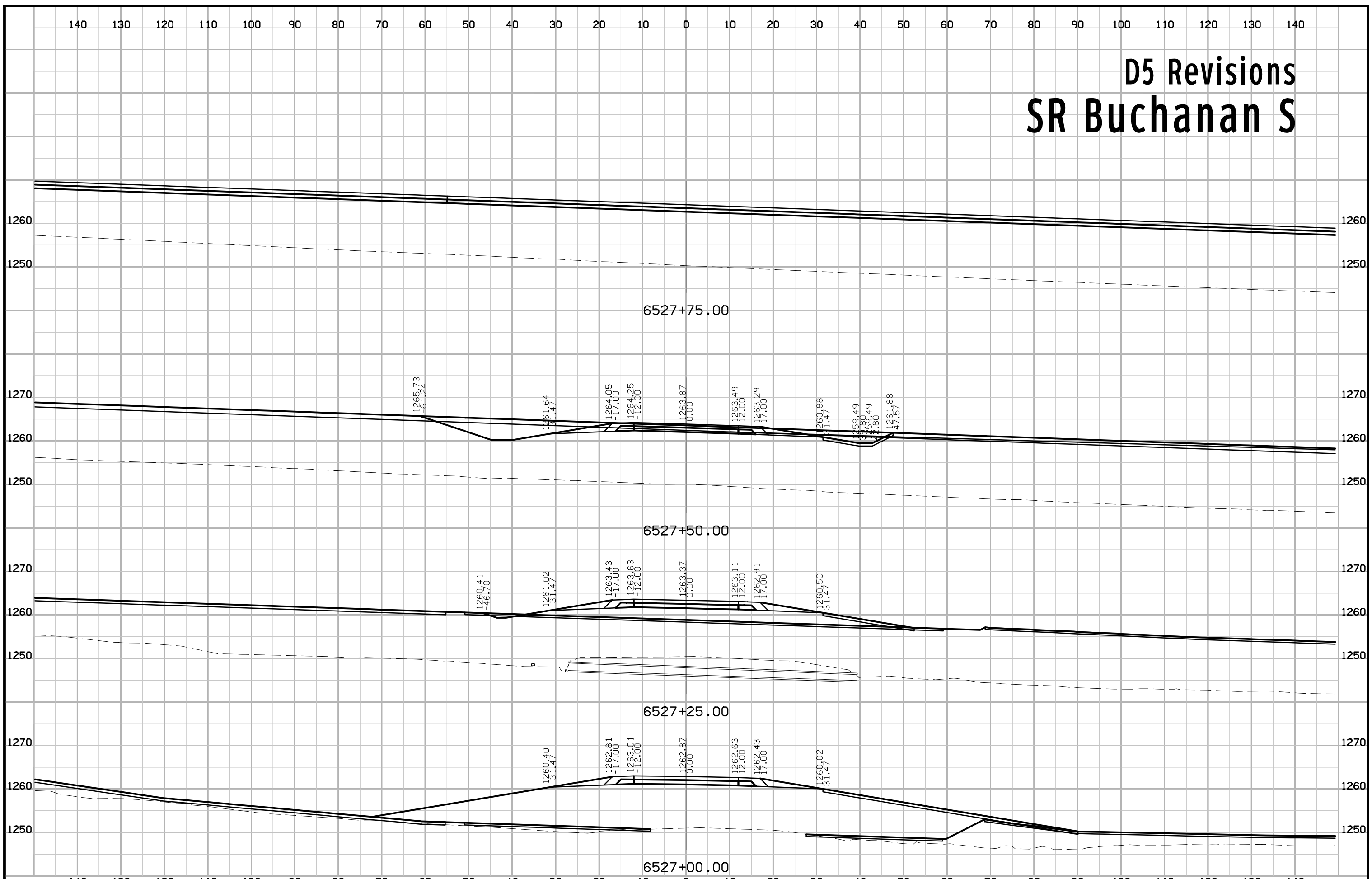
# D5 Revisions SR Buchanan S



# D5 Revisions SR Buchanan S

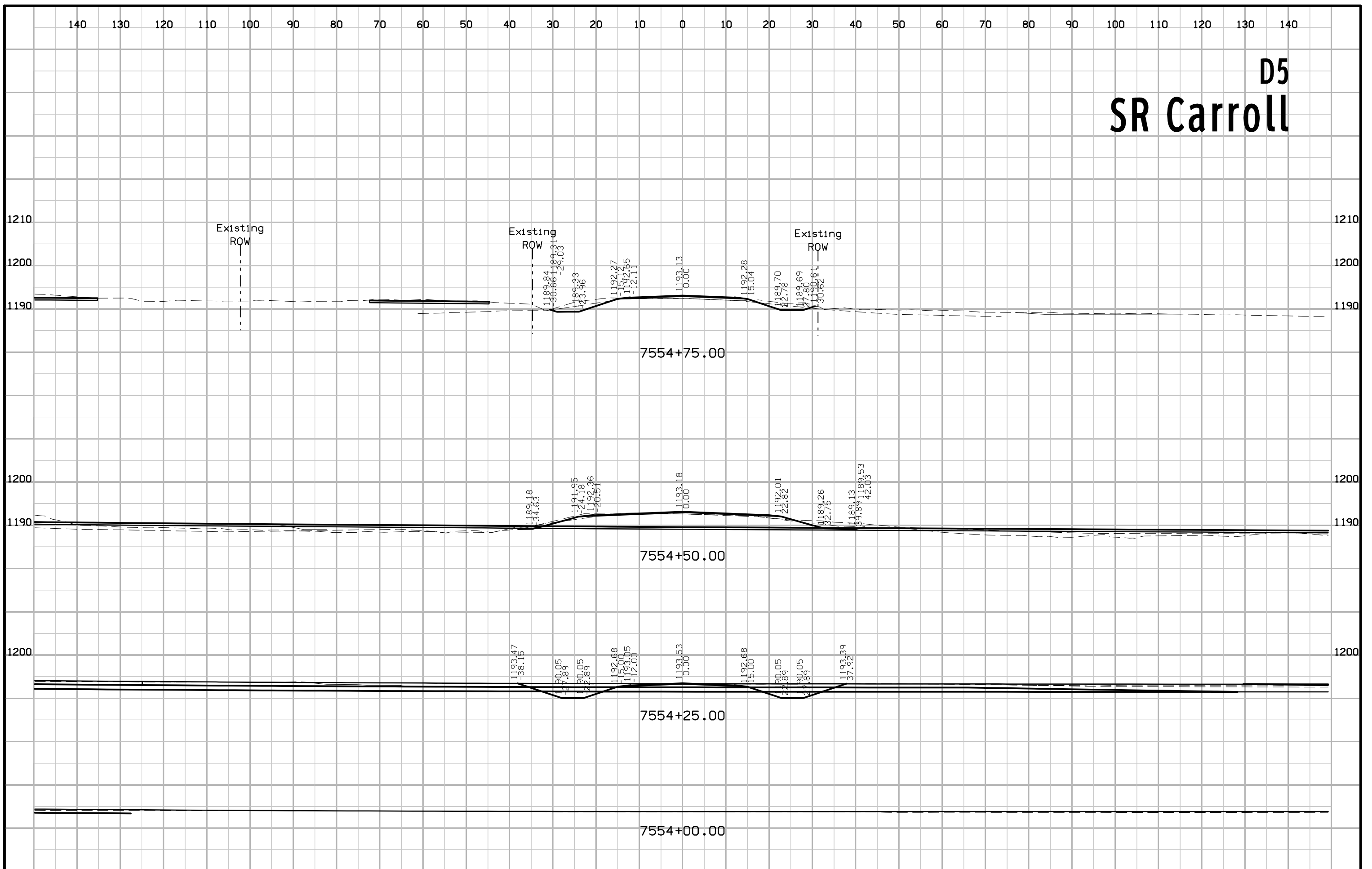


# D5 Revisions SR Buchanan S

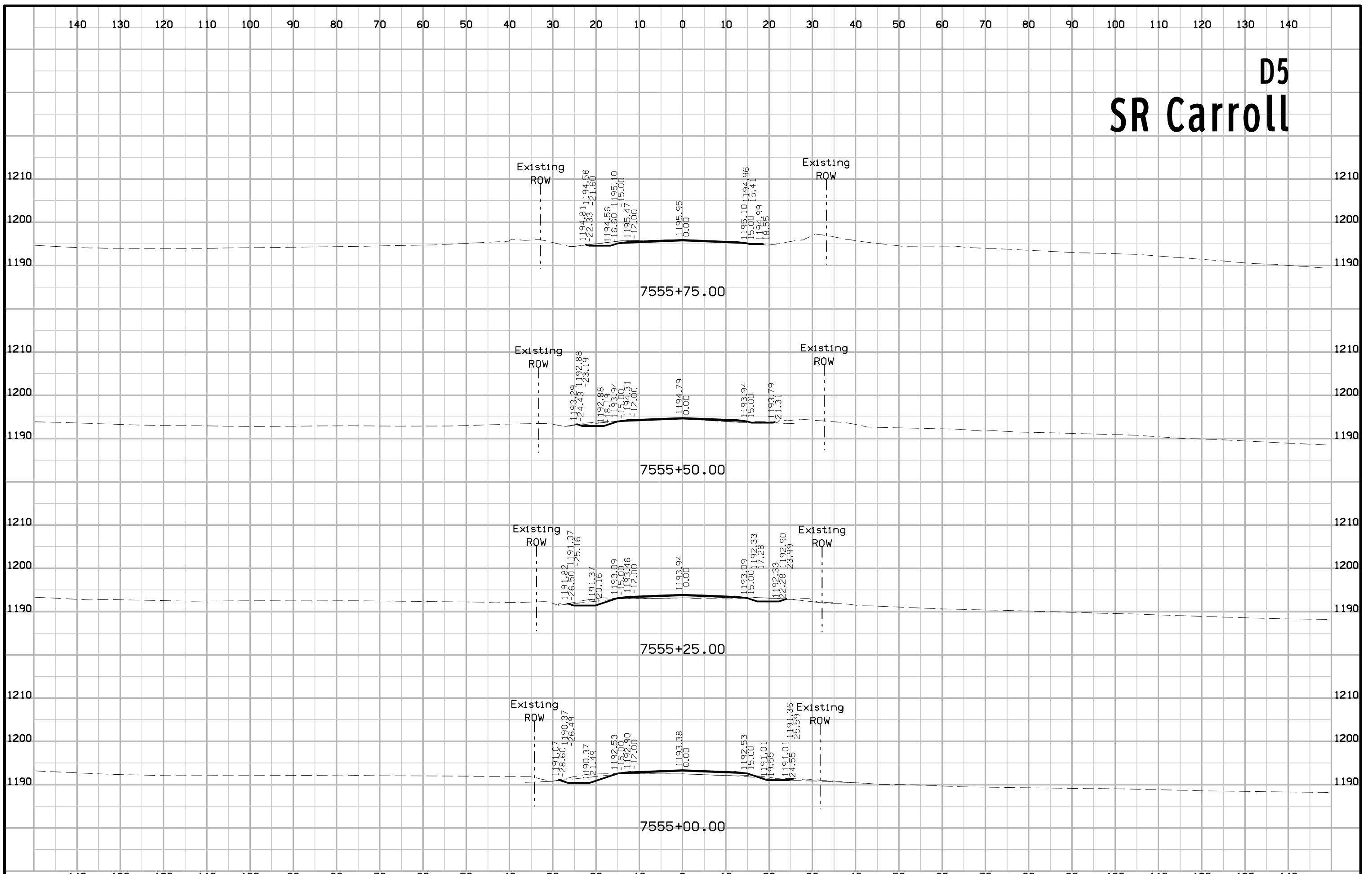




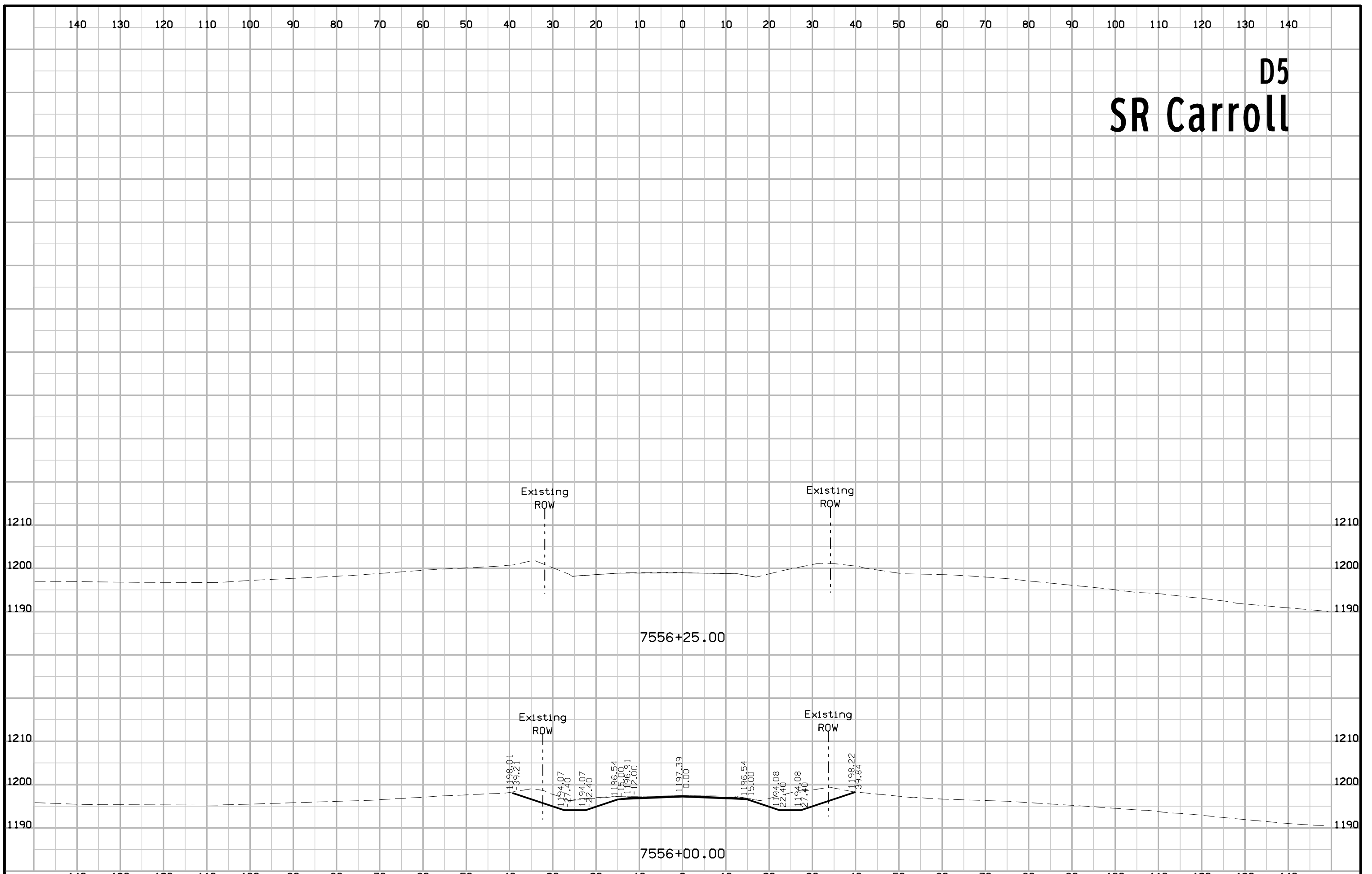
# D5 SR Carroll

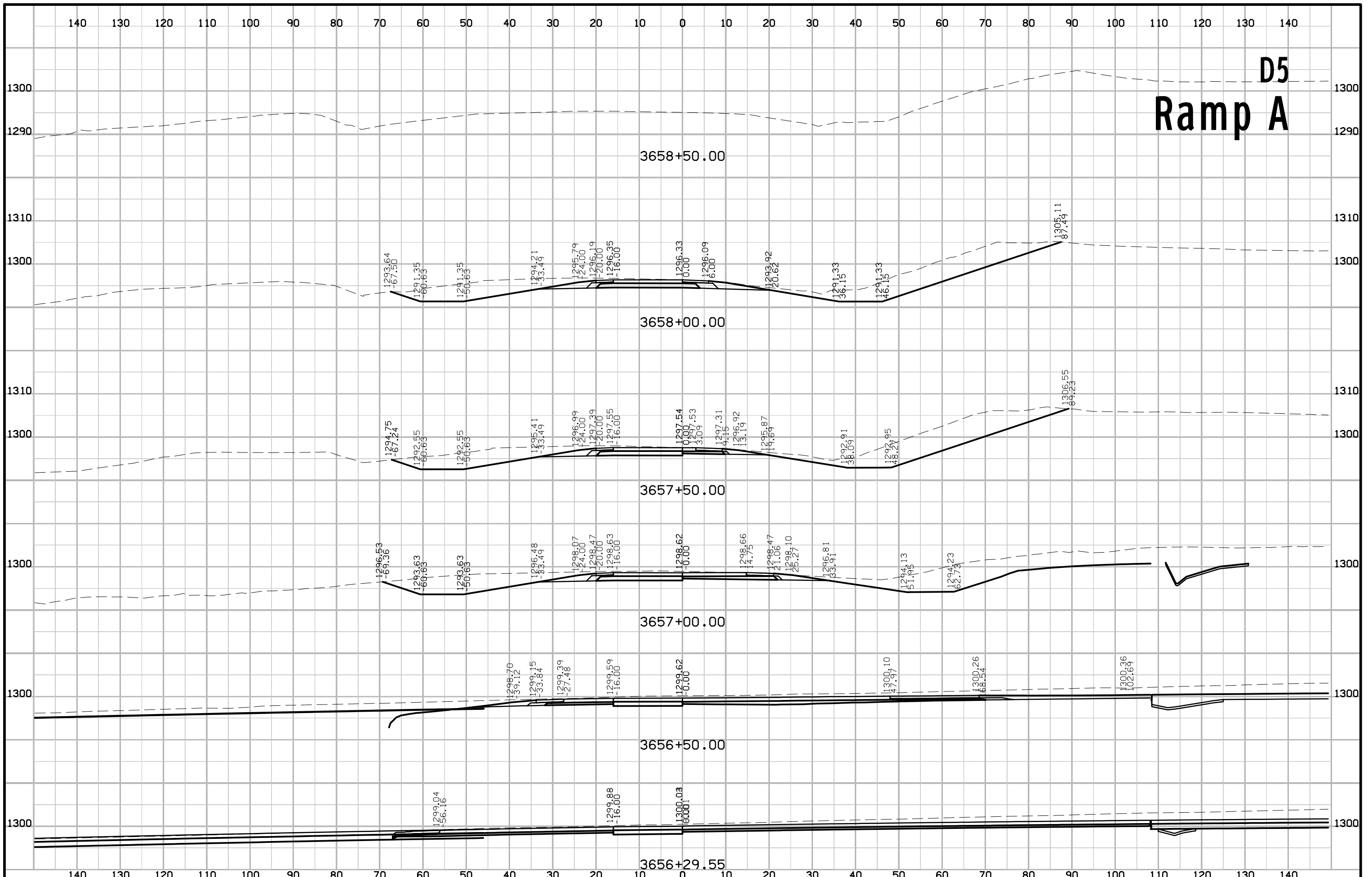


# D5 SR Carroll

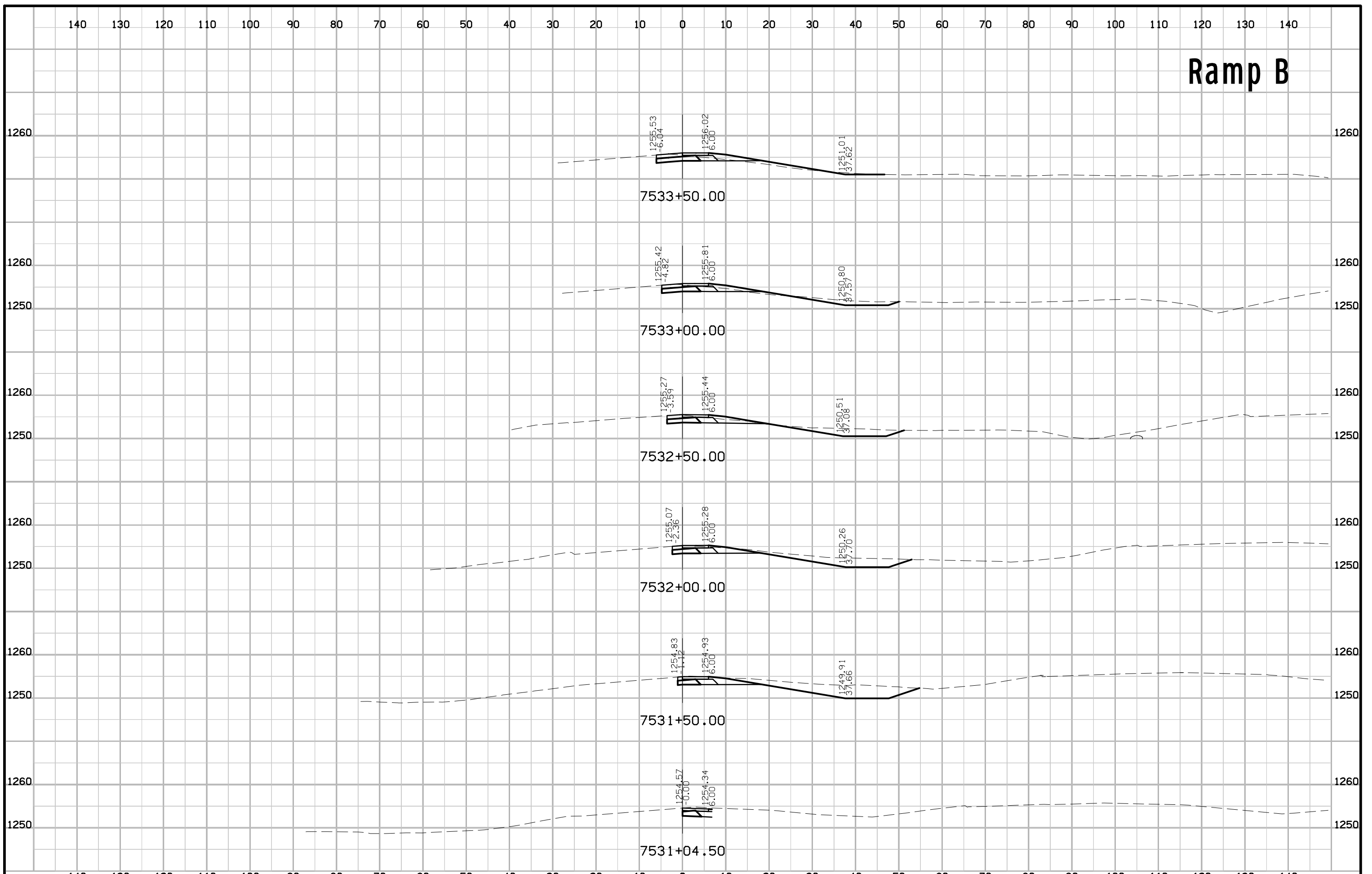


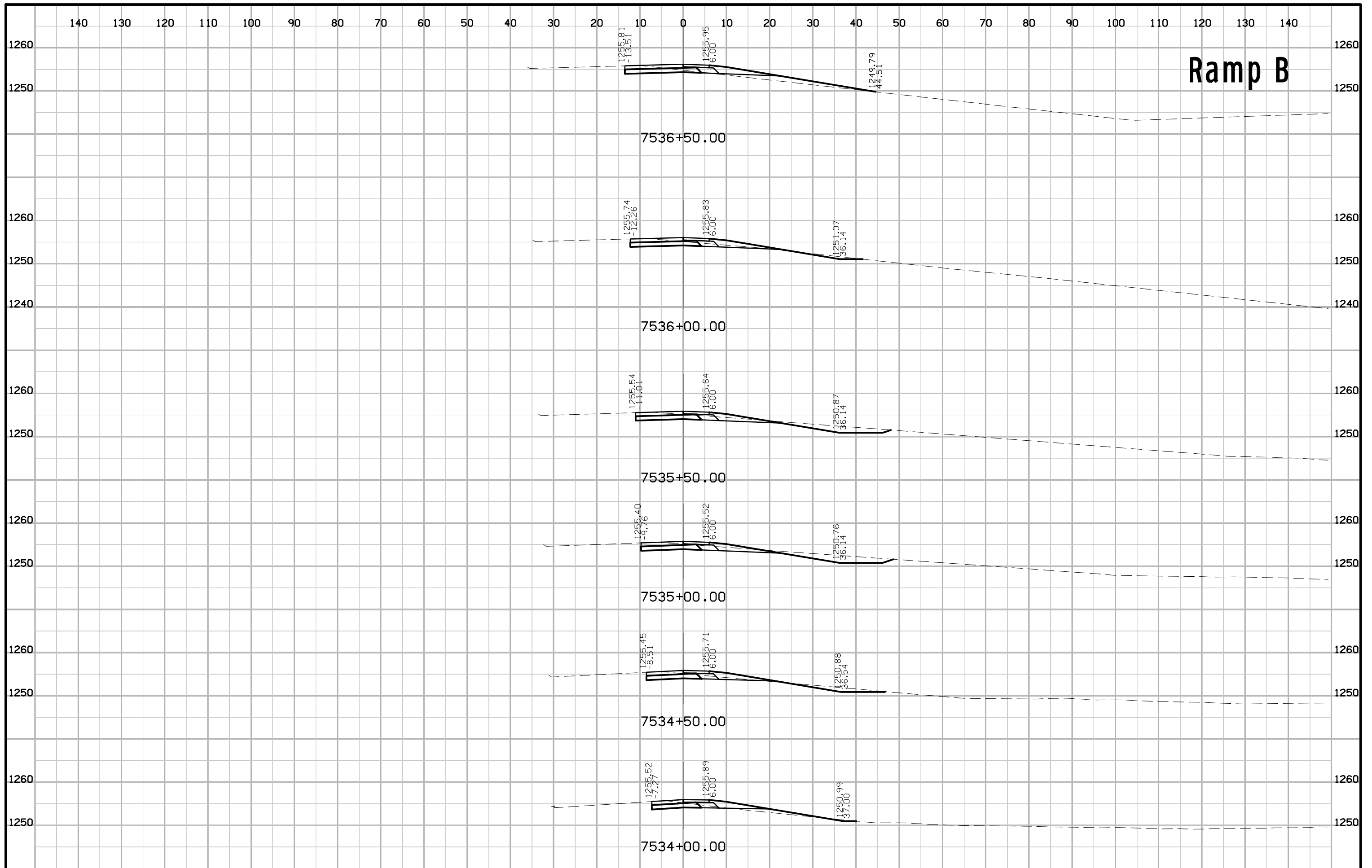
# D5 SR Carroll





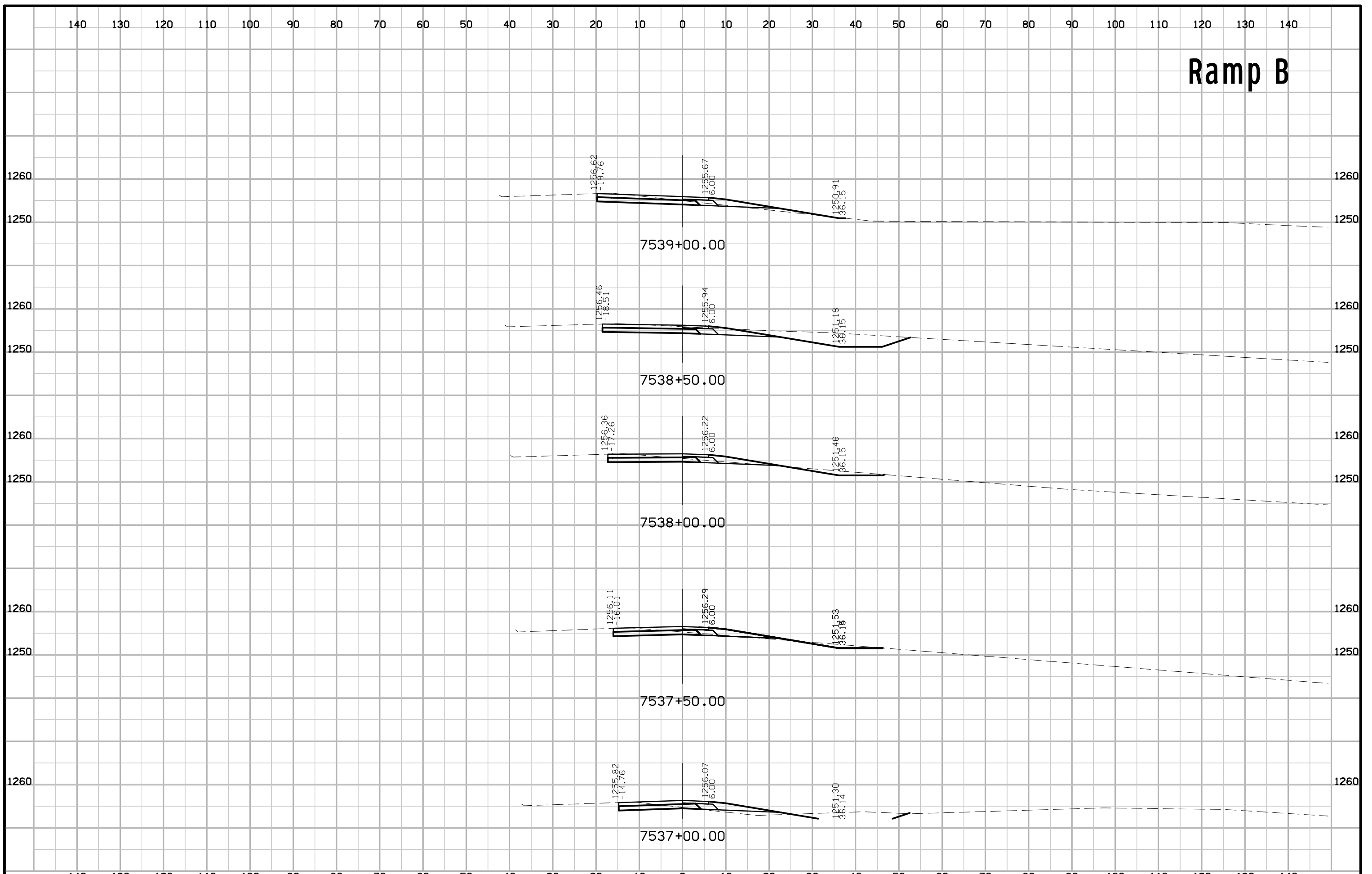
# Ramp B



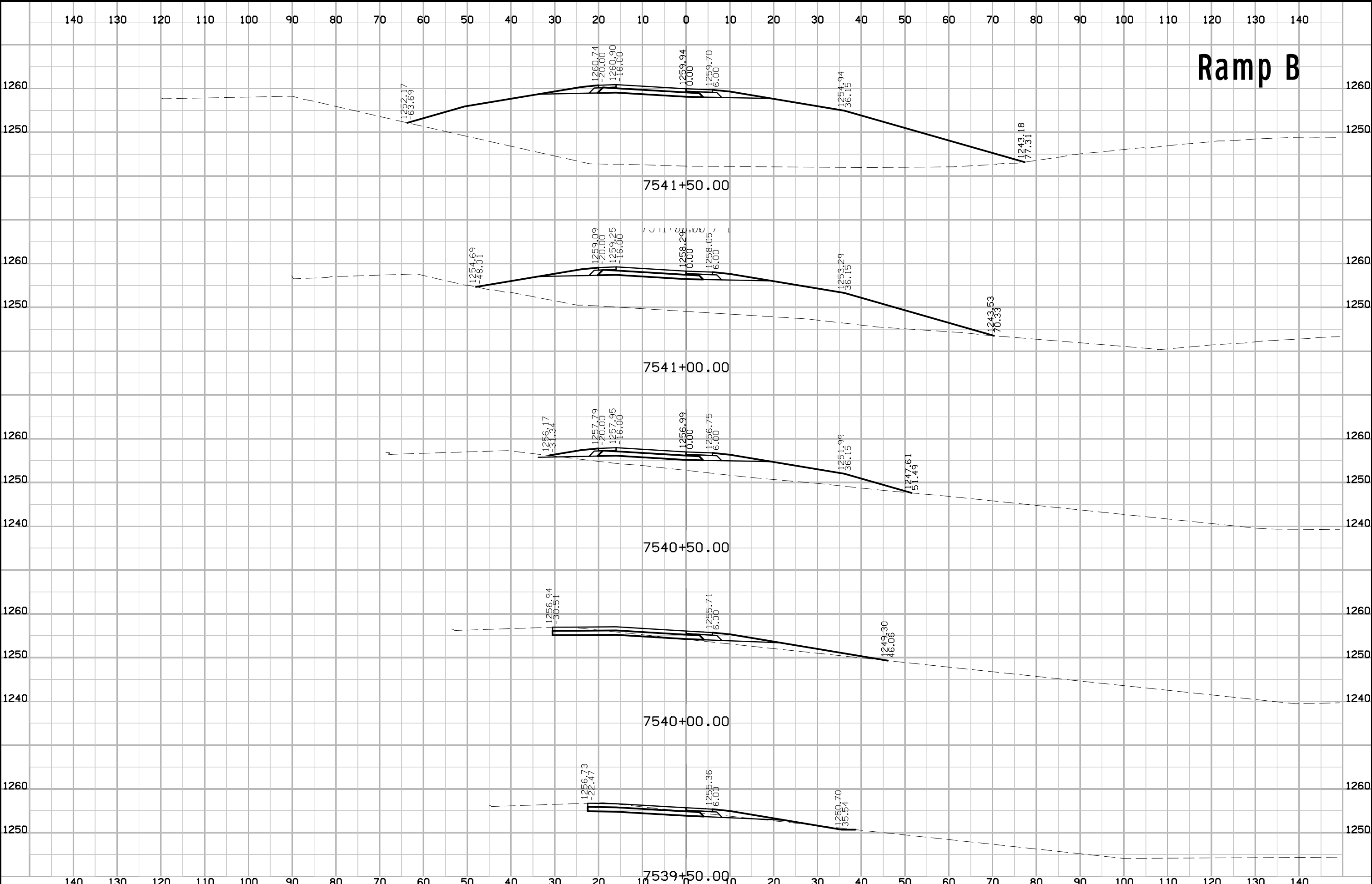




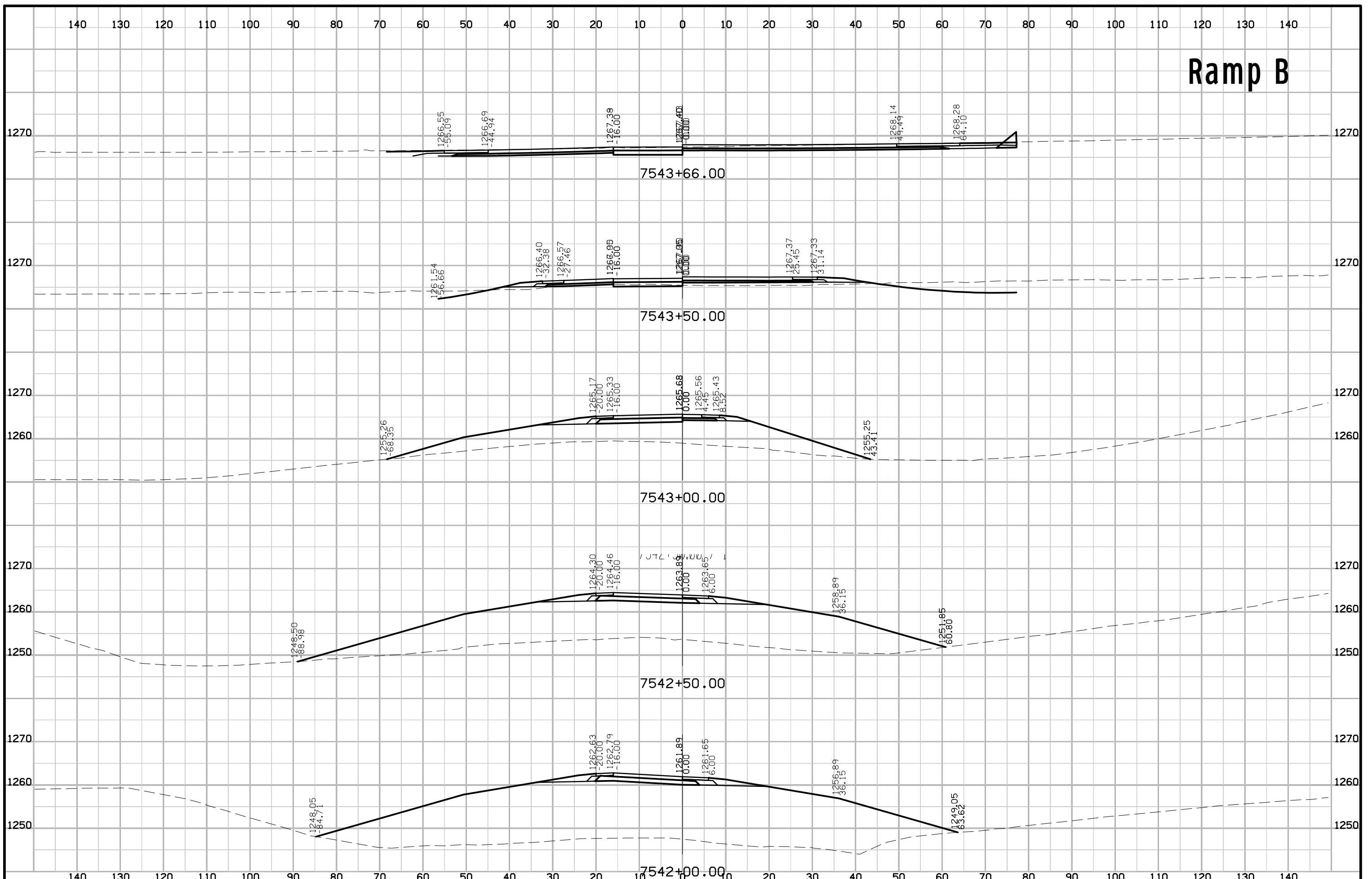
# Ramp B

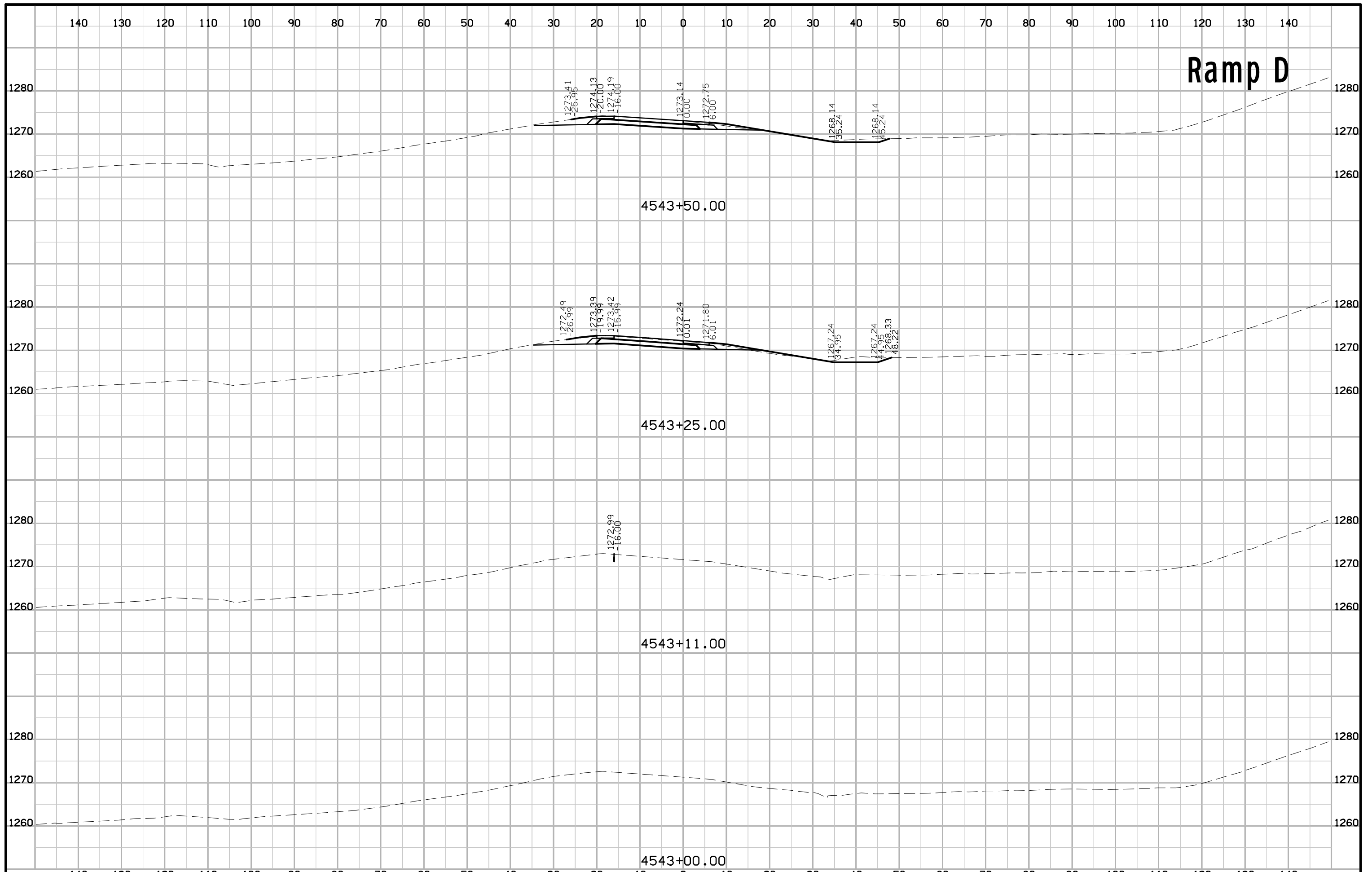


# Ramp B

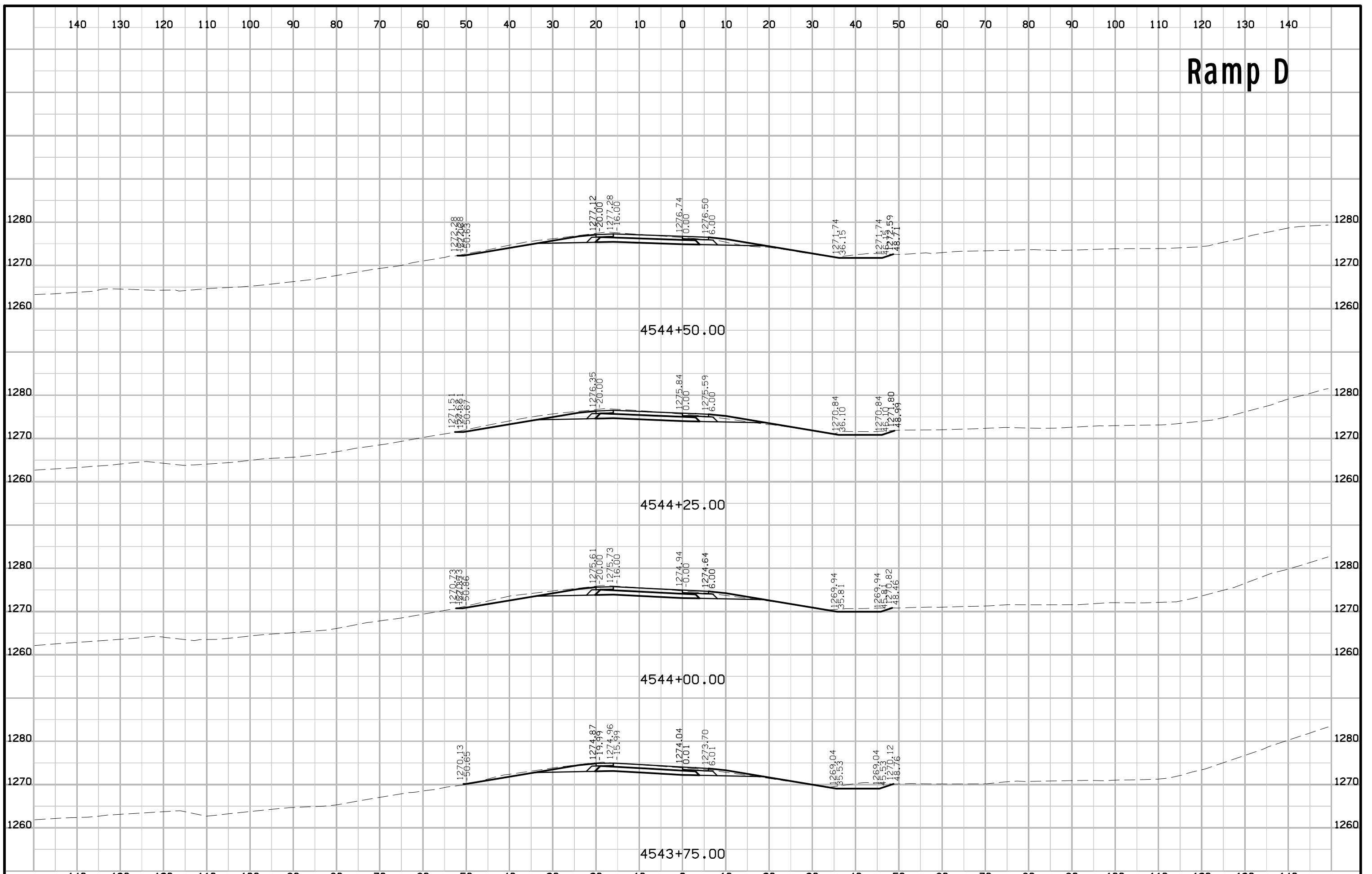


# Ramp B

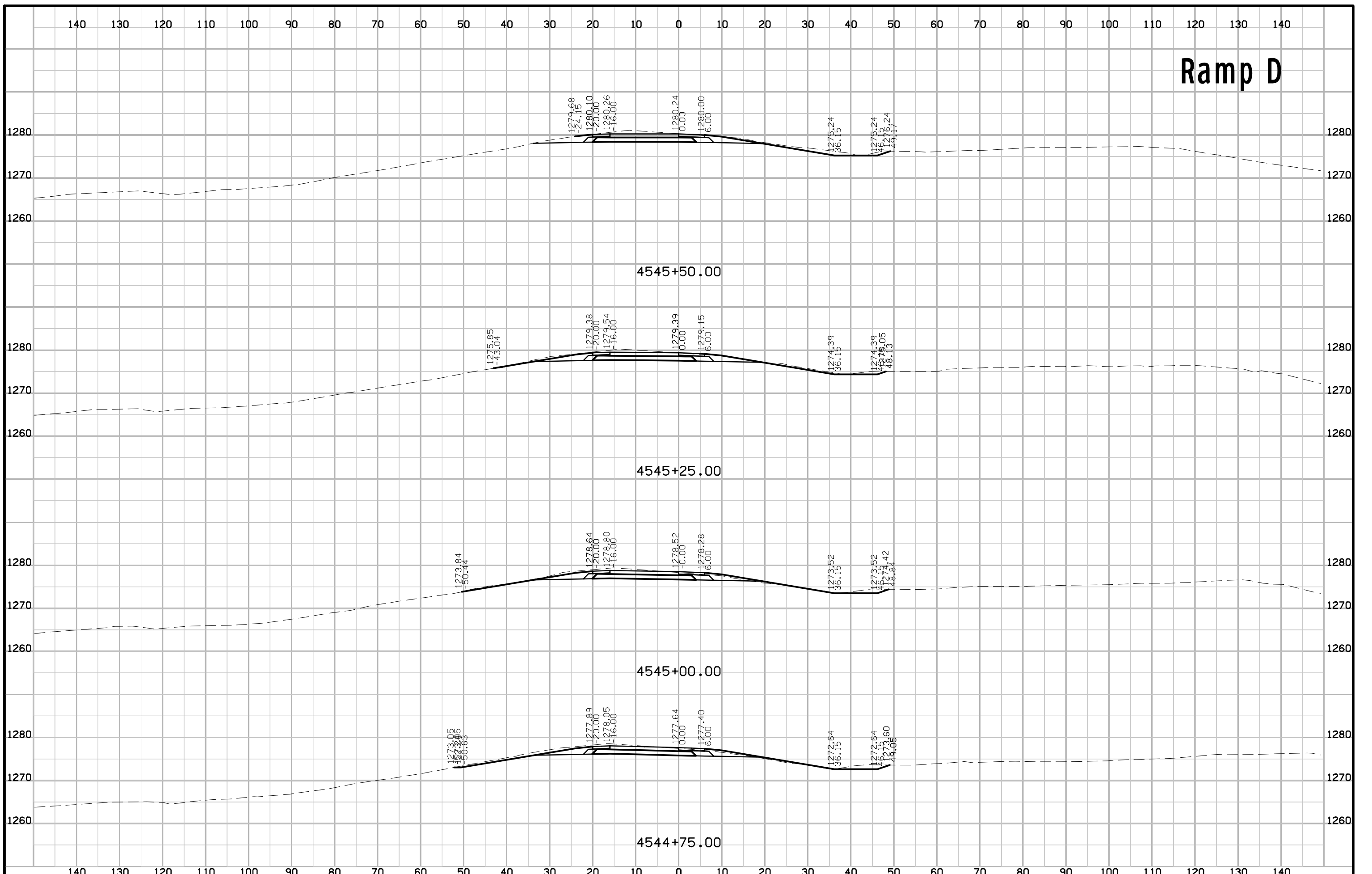




# Ramp D

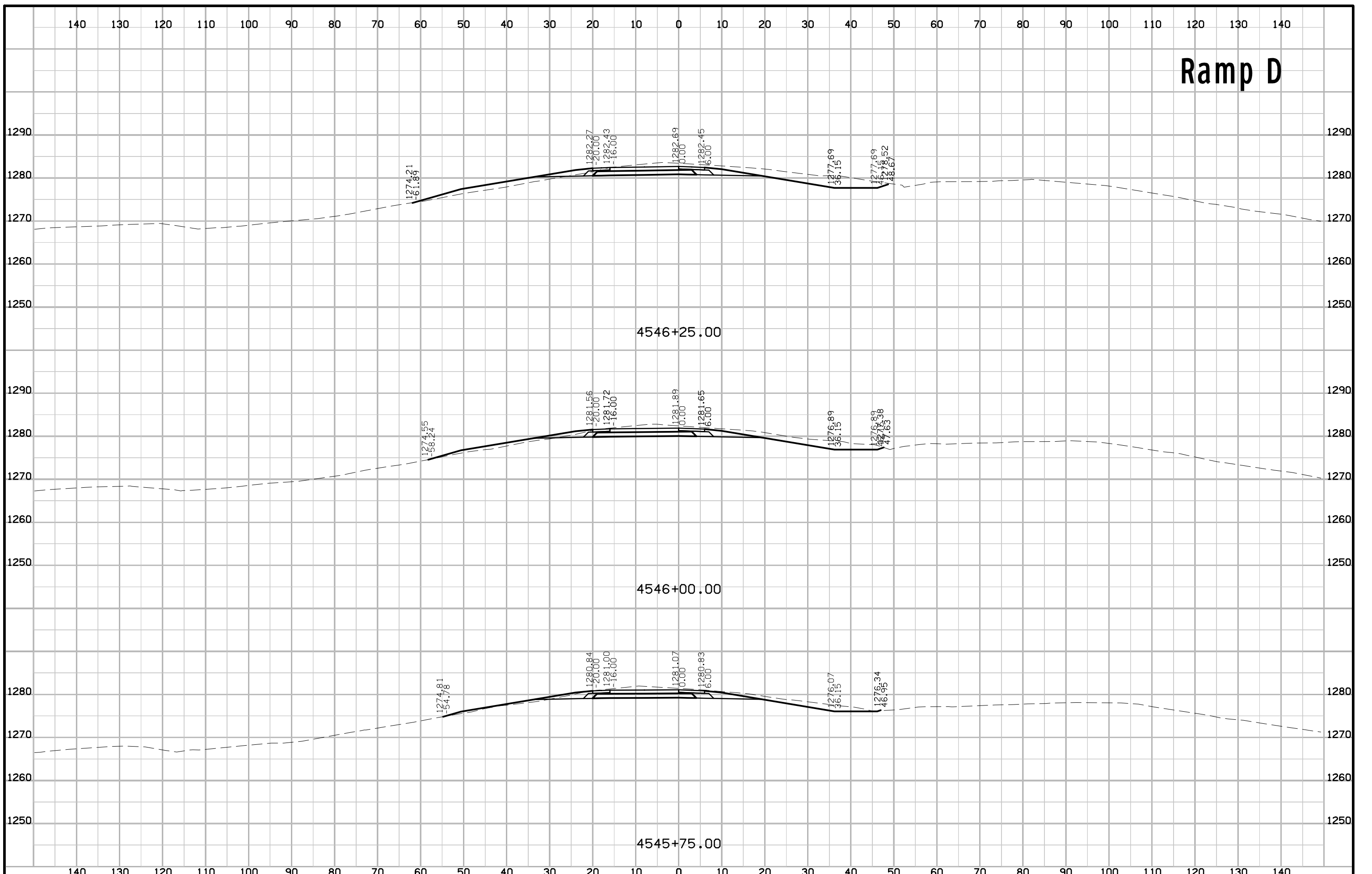


# Ramp D

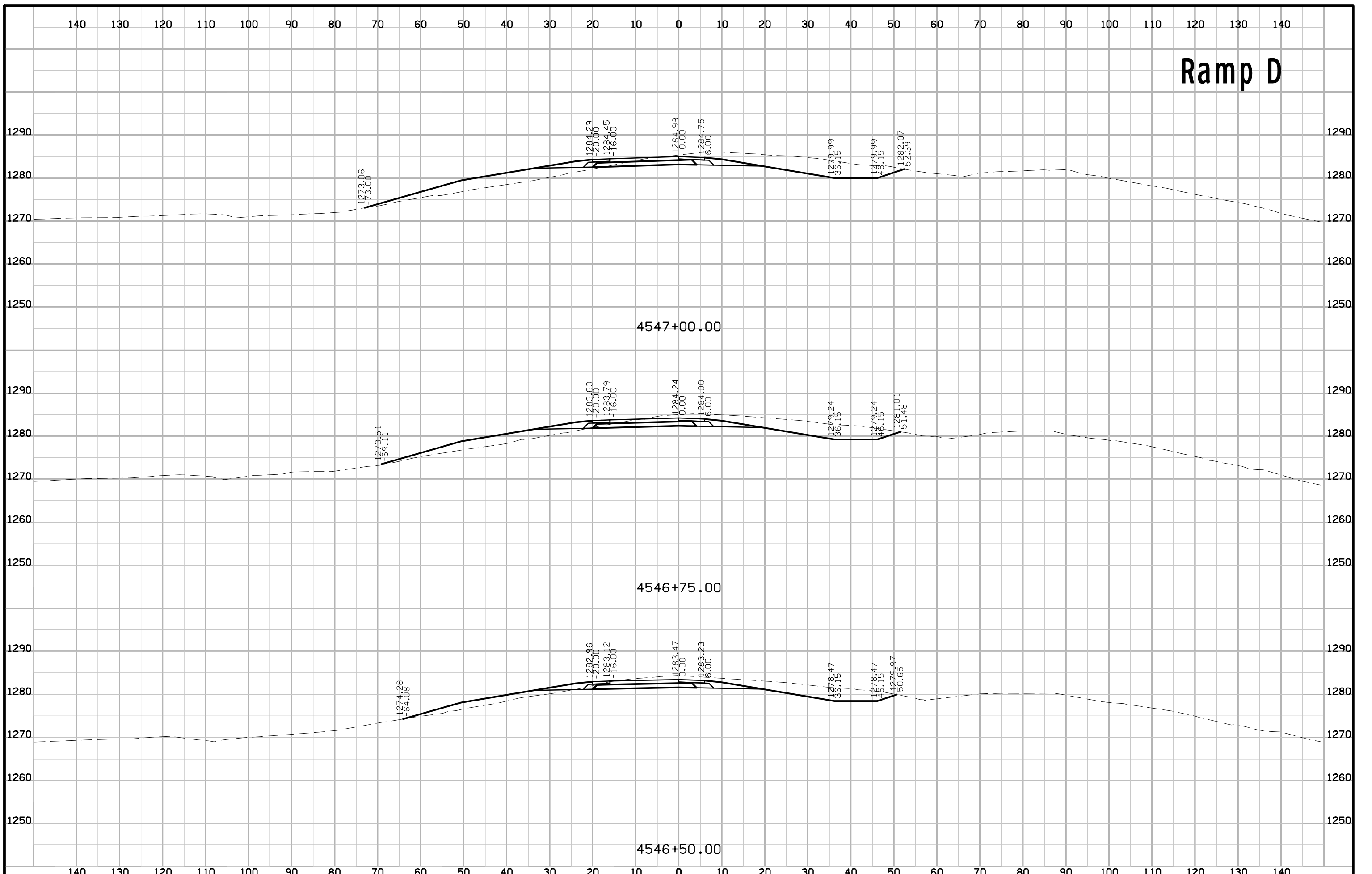




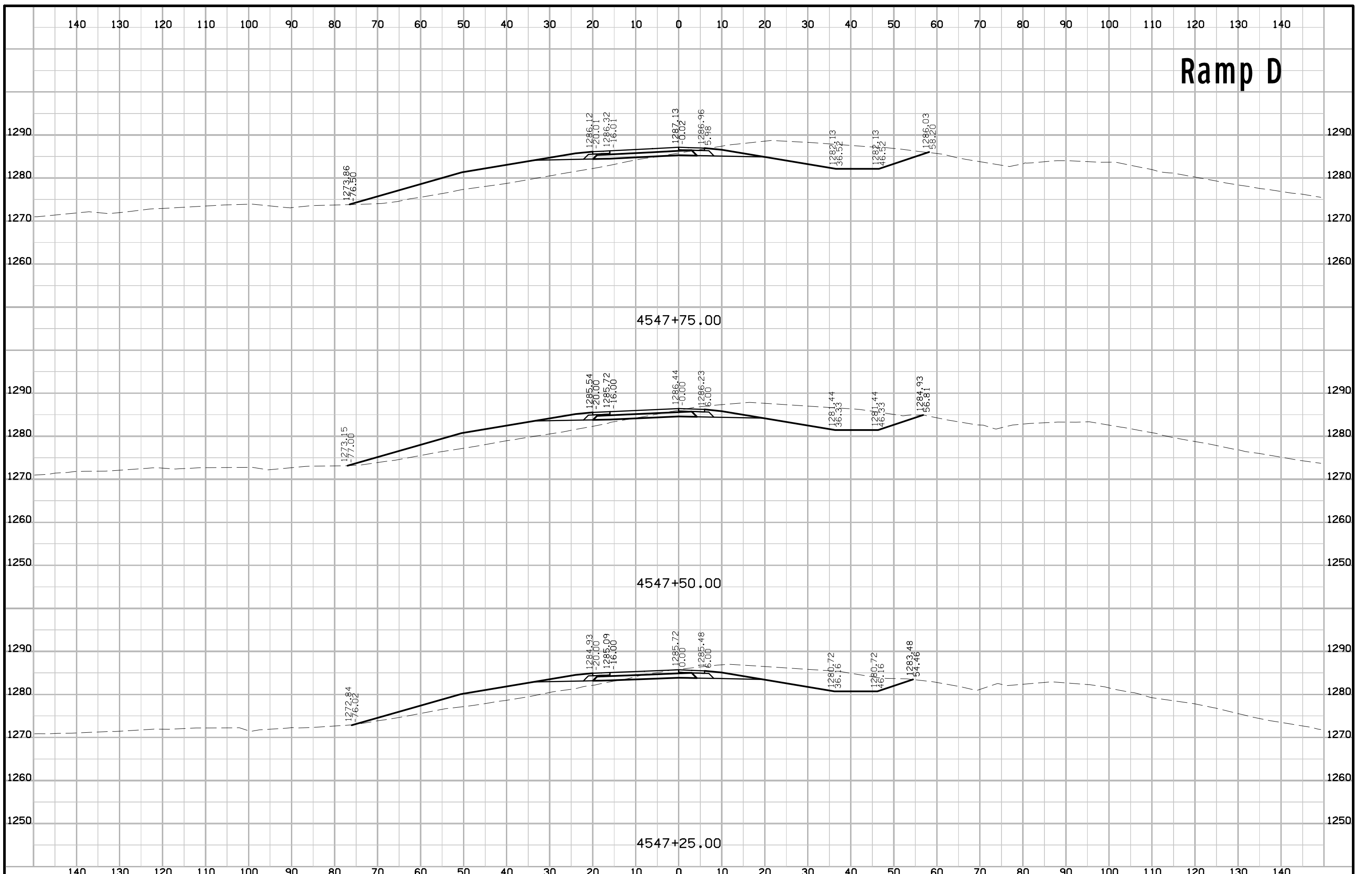
# Ramp D



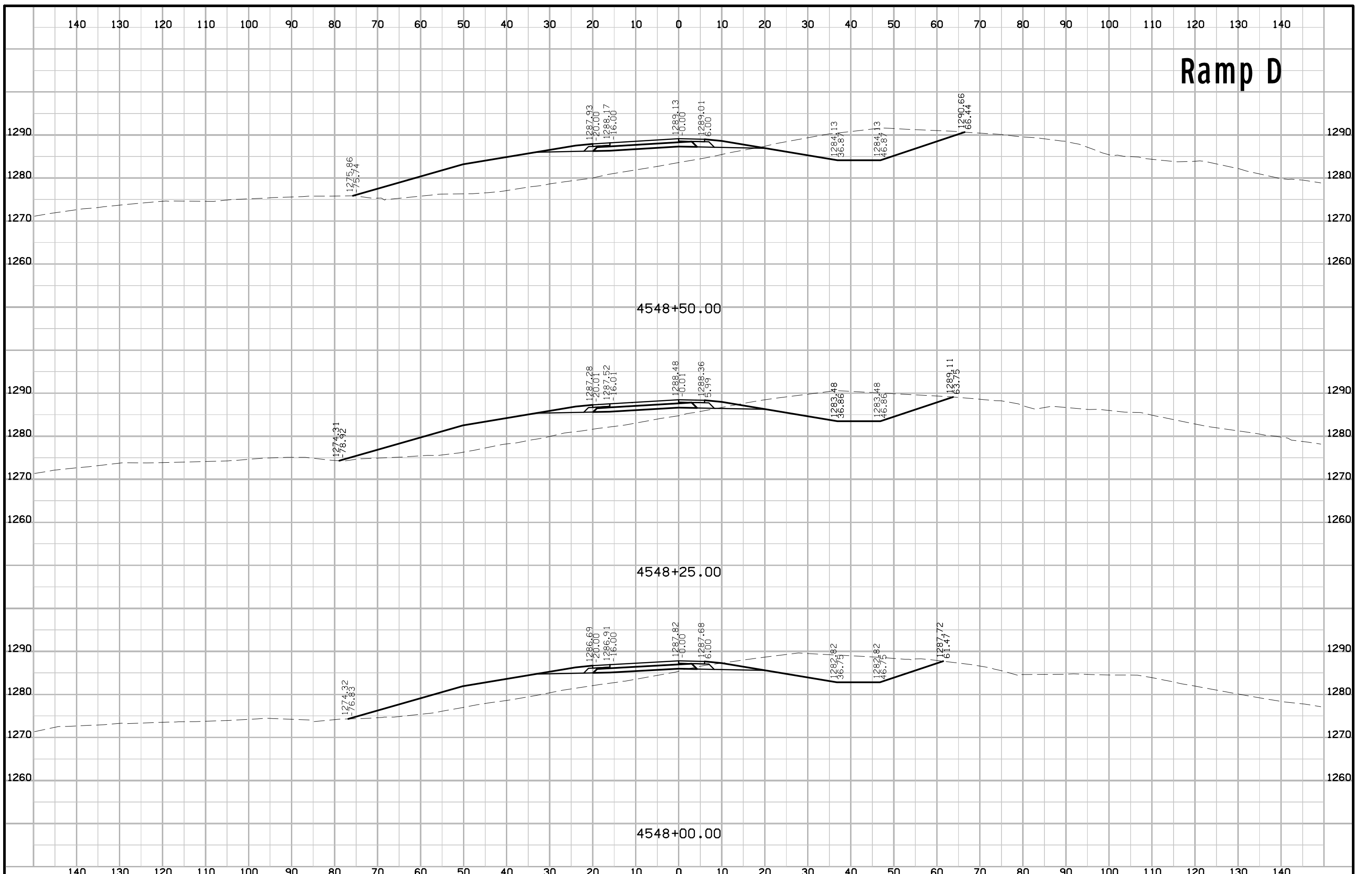
# Ramp D



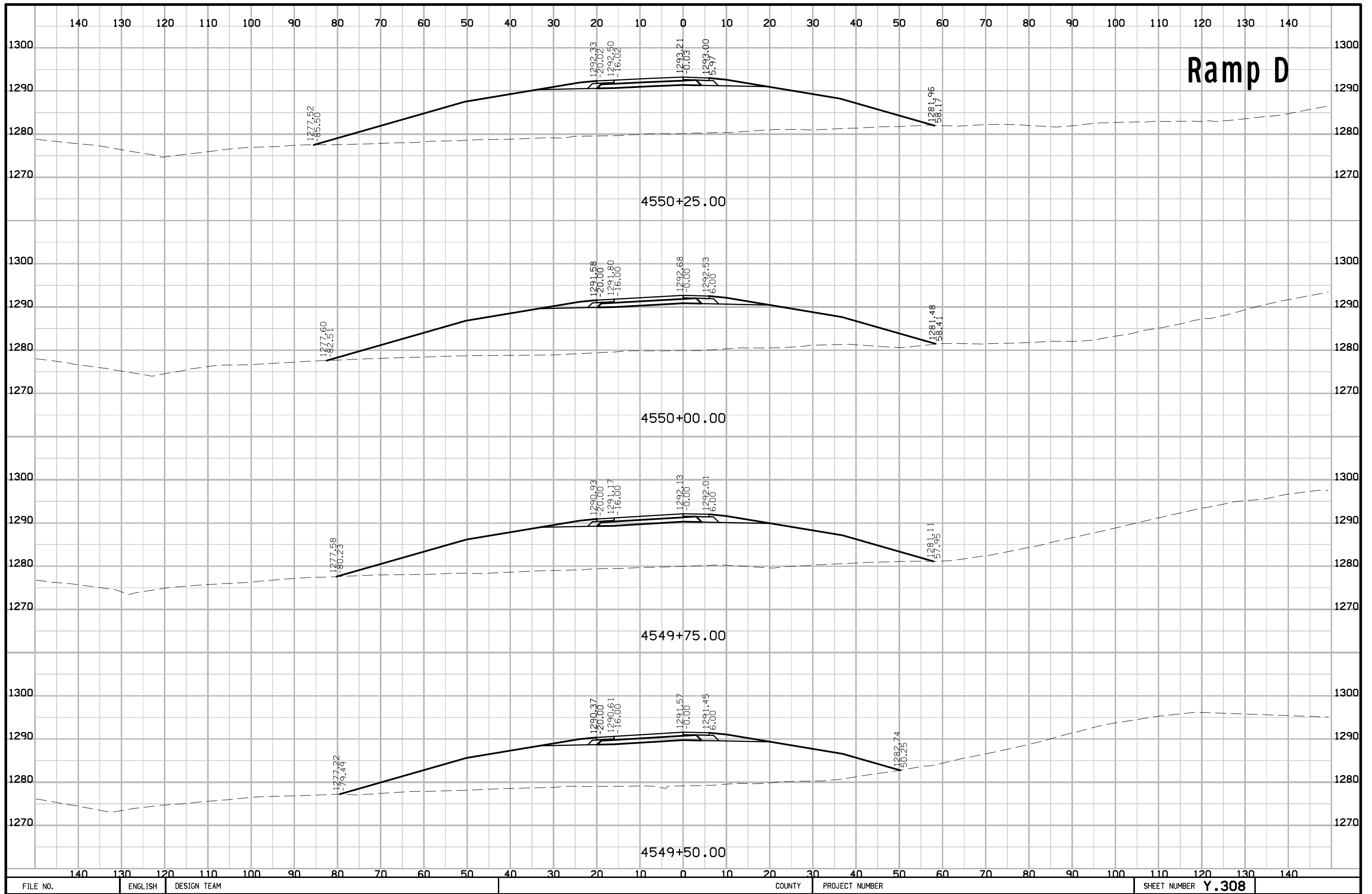
# Ramp D



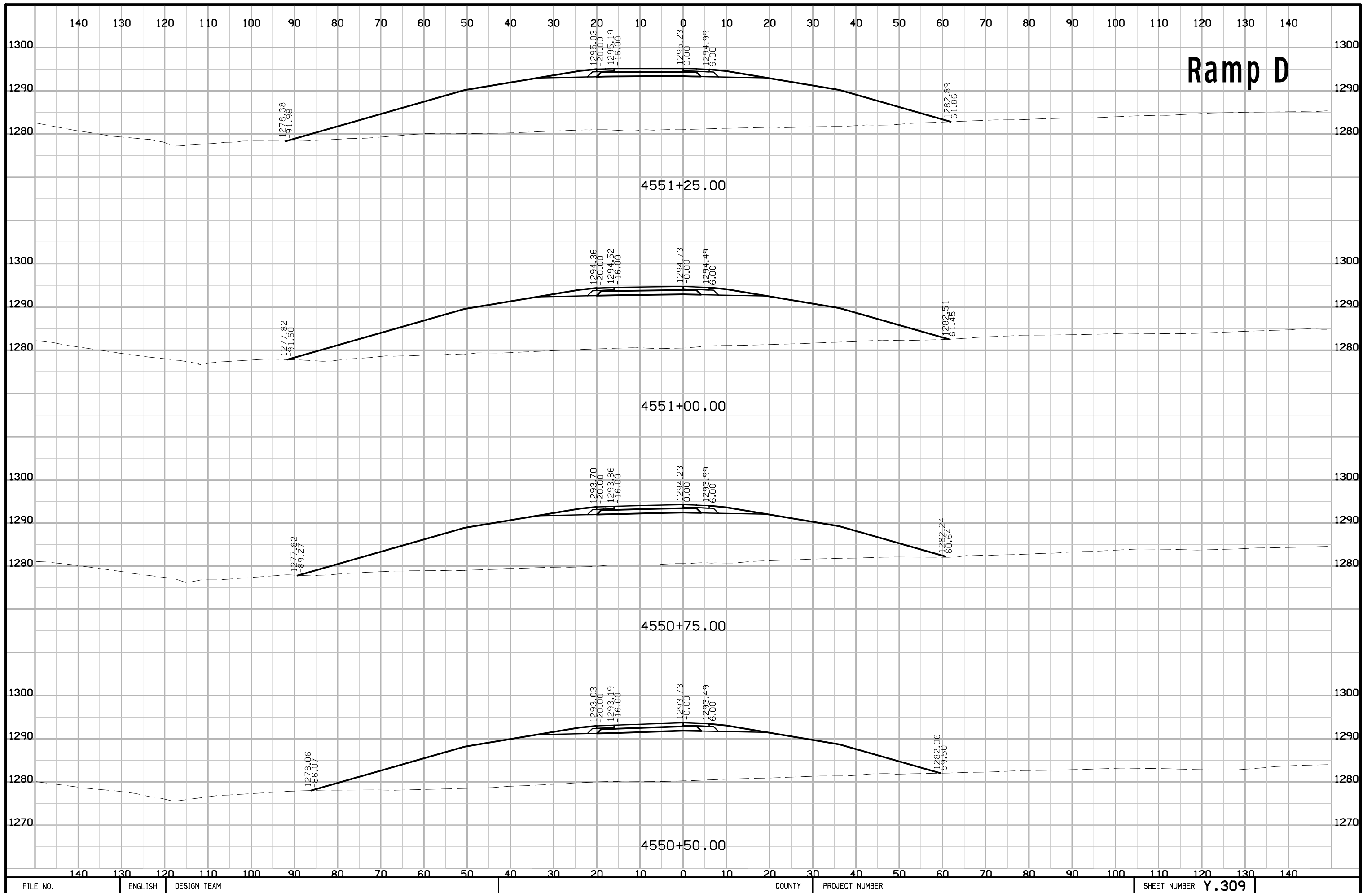
# Ramp D



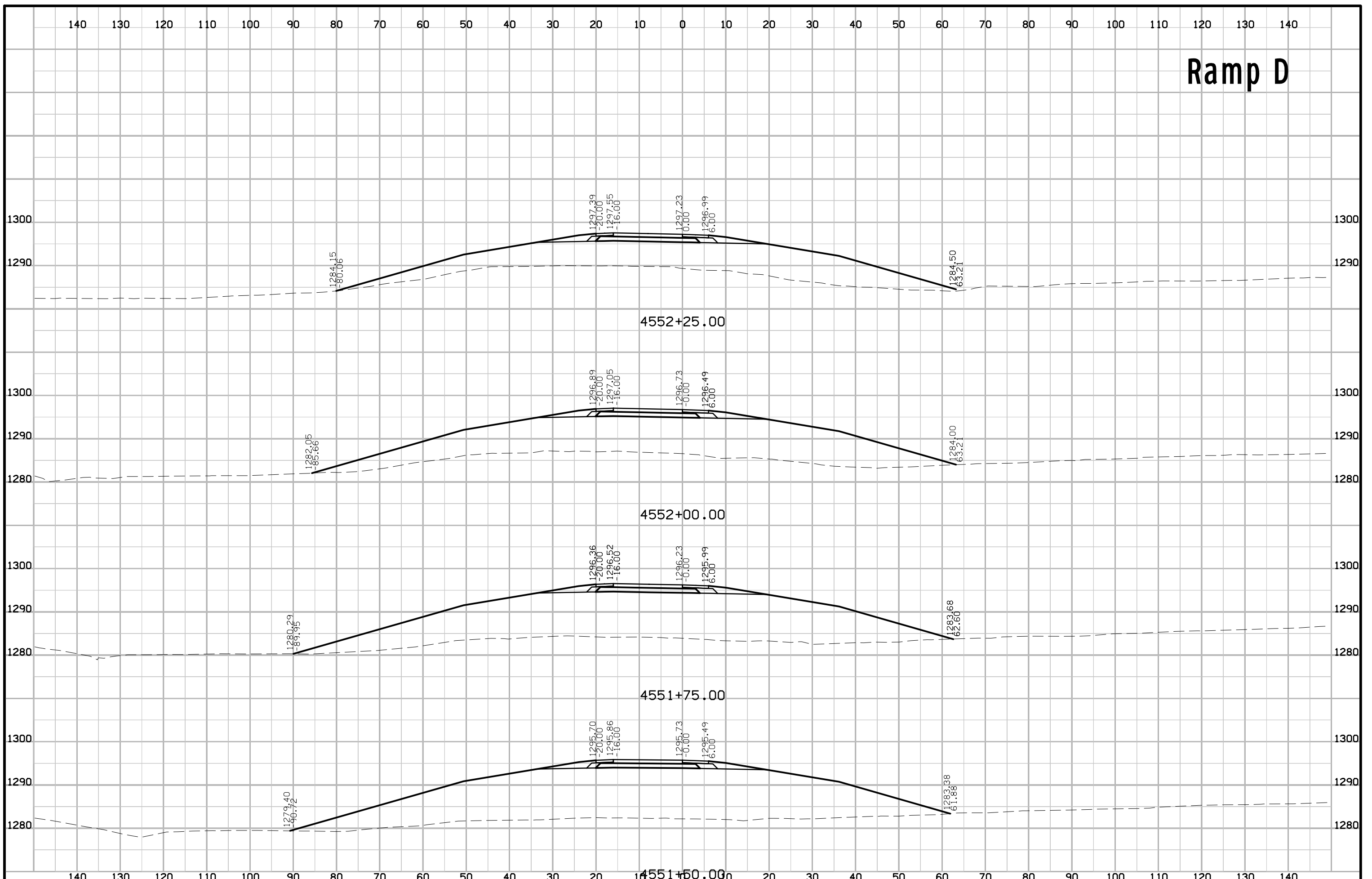








# Ramp D



# Ramp D

