

RCB CULVERT NEW - TRIPLE BOX  
BRFN-003-5(83)--39-12

**BUTLER CO.**

LETTING DATE  
01/17/2024

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## Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

# PRIMARY ROAD SYSTEM BUTLER COUNTY

## RCB CULVERT NEW - TRIPLE BOX HARTGRAVE CREEK OVERFLOW 0.5 MI W OF CO RD T16

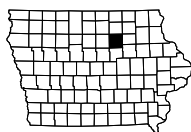
SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.15 of the Specifications.

MILEAGE SUMMARY			105-1 09-27-94
Div.	Location	Lin. Ft.	Miles
1	IA Highway 3 Sta. 104+50.00 to 109+45.00	495.00	0.094
	Sta. 119+03.27 to 119+89.64	86.37	0.016
1	Cedar Ave. Sta. 200+67.25 to 220+83.37	2,016.12	0.382
Total Length		2,597.49	0.492

Project Location Map on Sheet A.2



IA 3 DESIGN DATA RURAL			
2019 AADT	2000	V.P.D.	
2039 AADT	2100	V.P.D.	
20-- DHV	--	V.P.H.	
TRUCKS	19	%	
Total Design ESALs	--		

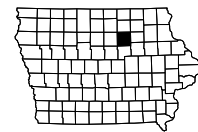
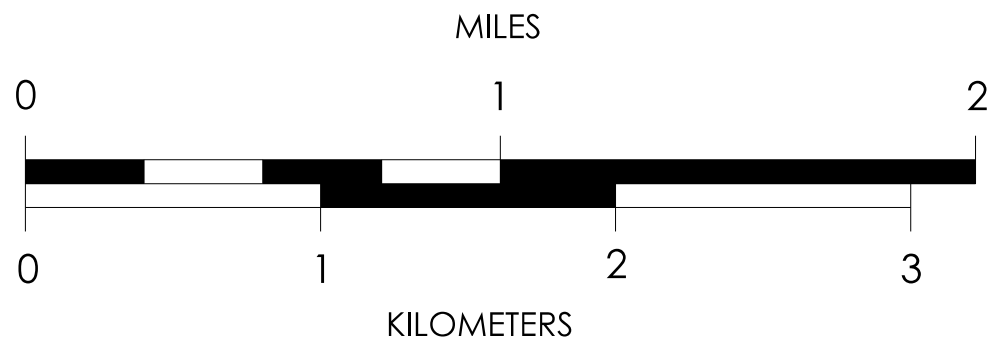
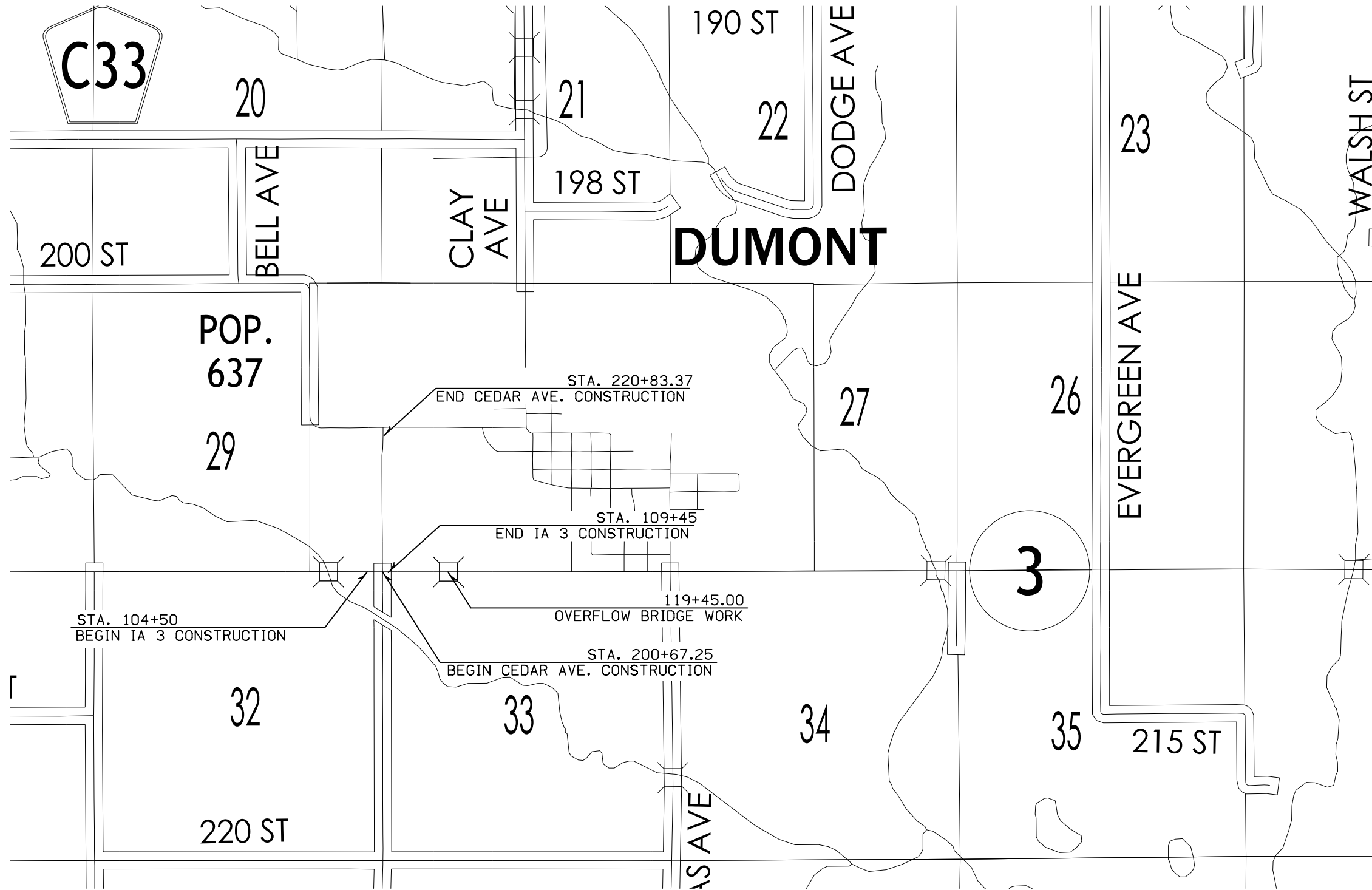
Cedar Ave DESIGN DATA RURAL			
2019 AADT	100	V.P.D.	
2039 AADT	100	V.P.D.	
20-- DHV	--	V.P.H.	
TRUCKS	N/A	%	
Total Design ESALs	--		

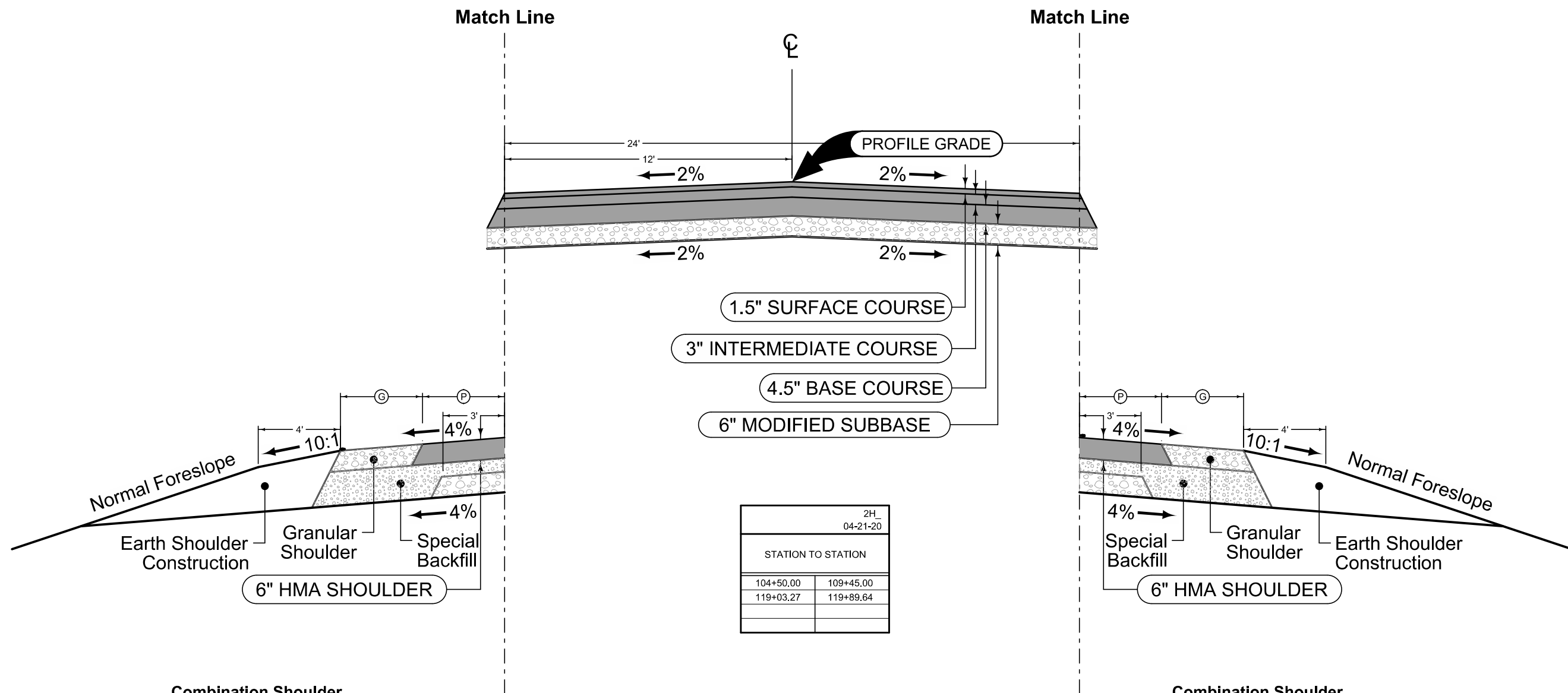
# PRELIMINARY PLANS

Subject to change by final design.

D5 PLAN - Date: 2/18/2022

REVISIONS		TOTAL
		99
PROJECT IDENTIFICATION NUMBER		
19-12-003-010		
PROJECT NUMBER		
BRFN-003-5(83)--19-12		
R.O.W. PROJECT NUMBER		





2H_04-21-20	
STATION TO STATION	
104+50.00	109+45.00
119+03.27	119+89.64

**Combination Shoulder**

2_C_04-21-20			
STATION TO STATION		(P) Feet	(G) Feet
104+50.00	109+45.00	4	7
119+03.27	119+89.64	4	7

**Combination Shoulder**

2_C_04-21-20			
STATION TO STATION		(P) Feet	(G) Feet
104+50.00	109+45.00	4	4
119+03.27	119+89.64	4	4

**Iowa Highway 3**

2H 04-21-20	
STATION TO STATION	
200+67.25	220+83.37

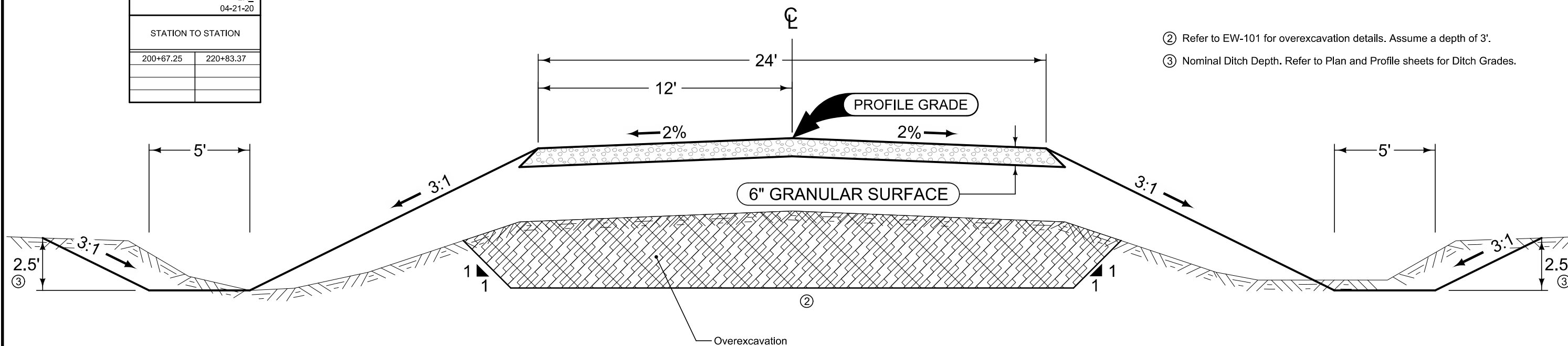
### Cedar Ave.

#### Notes:

Section shown looking North

② Refer to EW-101 for overexcavation details. Assume a depth of 3'.

③ Nominal Ditch Depth. Refer to Plan and Profile sheets for Ditch Grades.



### South Dike

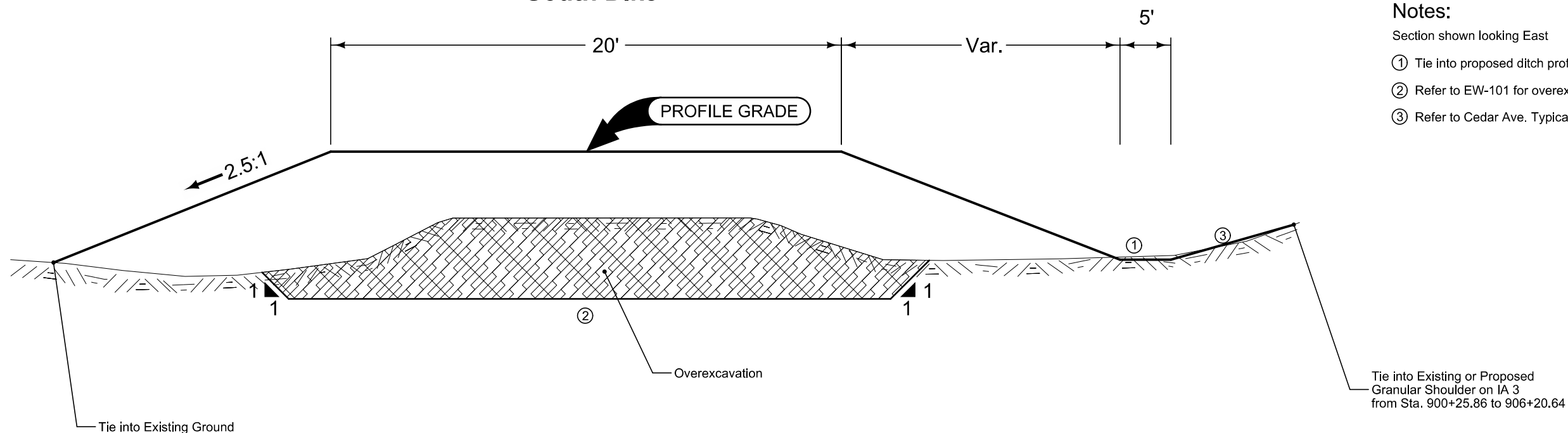
#### Notes:

Section shown looking East

① Tie into proposed ditch profile from Sta. 201+14 to 203+50

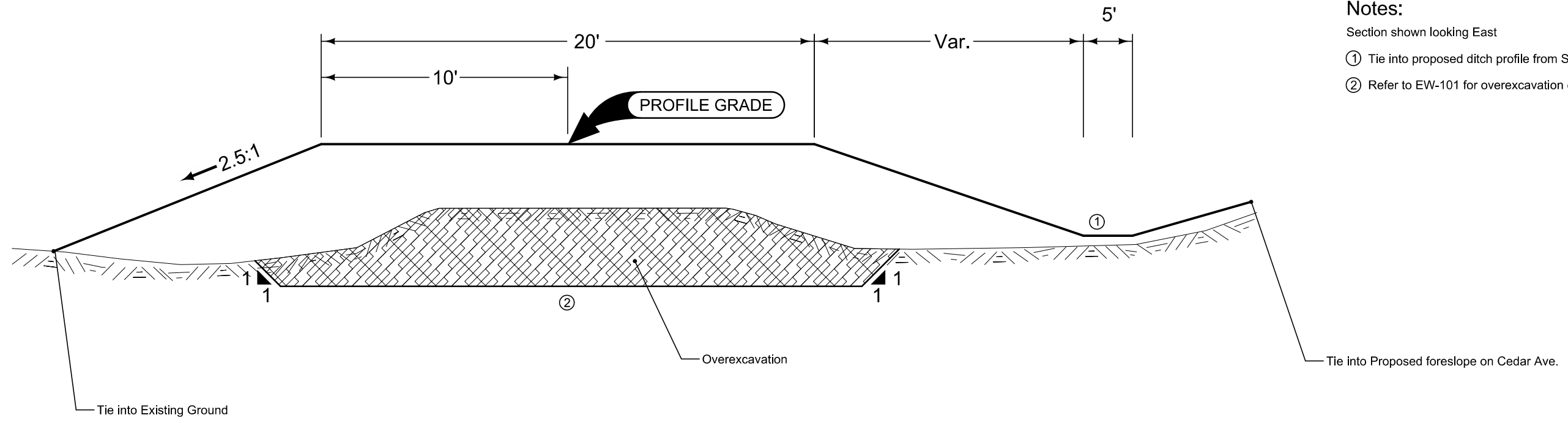
② Refer to EW-101 for overexcavation details. Assume a depth of 3'.

③ Refer to Cedar Ave. Typical above for foreslope details





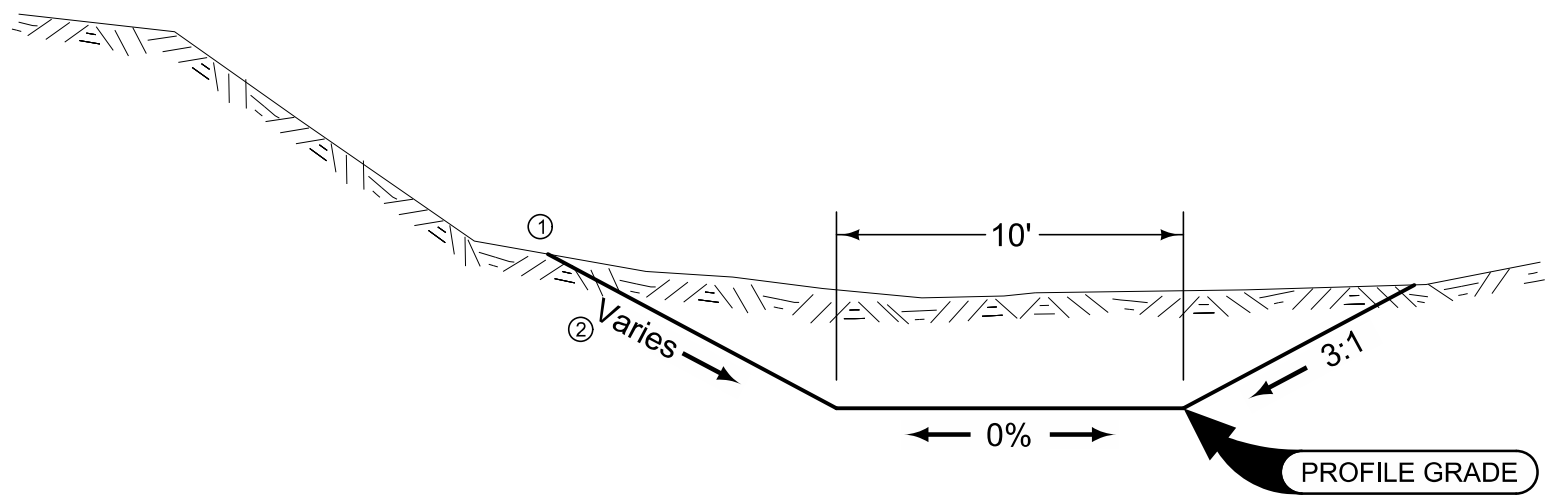
### North Dike



**Notes:**

- Section shown looking East
- ① Tie into proposed ditch profile from Sta. 400+16.36 to 403+89.94
- ② Refer to EW-101 for overexcavation details. Assume a depth of 3'.

### Low Flow Ditch (IA 3 South Ditch)



**Notes:**

- Section shown looking East
- ① Tie into existing IA 3 ditch.
- ② Foreslope varies. Tie in to existing toe of IA 3 south ditch.

**EXISTING PAVEMENT**

No.	Location					Year	Type	Project Number	Surface		Base		Subbase		Removal		Coarse Aggregate			Reinforcement	Remarks
	County	Route	Dir. of Travel	Begin Ref. Loc. Sign	End Ref. Loc. Sign				Type	Depth	Type	Depth	Type	Depth	Type	Depth	Source	Type	Durability Class	Type	
1	12	IA 003	1	191.81	202.77	2004		STPN-3-5(66)--2J-12	AAC	1.5	AAC	2.5									
						1985		FN-3-5(38)--21-12	AAC	1.5	TBB	1.5			Mill		Jensen	Gravel			
						1961		FN-502*<2>	AAC	3							Lillybridge	C. Lst.			
						1928		P-558	PC7	7							Alden	C. Lst.			

**SURVEY SYMBOLS**

- SIGN SI Sign
- ⊗ SHR Shrub
- ⊕ LUM Luminaire
- ⊗ TDC Tree Deciduous
- SIGN SL Speed Limit Sign
- ✱ TEV Evergreen Tree
- ⊙ TA TA Tower Anchor
- ⊙ Flg FLG Flag Poles
- ✱ TSG Traffic Signal
- ⊗ STP Stump
- ⊗ WEL Well
- ⊗ IN Storm Sewer Intake
- ⊙ MIS Miscellaneous
- ⊙ MM MM Mile Marker Post
- ⊙ FP FP Filler Pipe
- ✱ TSL Traffic Signal and Luminare
- BB BB Billboard
- LC Lot Corner
- GP GP Guard Post (Less Than 4 Posts)
- PIP Pipe Culvert
- ⊙ OUT Tile Outlet
- ⊕ MH Utility Access (Manhole)
- LIN Miscellaneous Line
- HDG Hedge Row
- FCL Chain Link and Security Fence
- BLD Building or Foundation
- FWD Wood Fence
- RET Retaining Walls
- FW Wire Fence
- CUL Culvert
- TIL Tile Line
- EP Edge of Paved Roads (ML or SR)
- CU Back of Curb
- GU Gutter In Front of Curb
- SWK Sidewalk
- SNP Unpaved Shoulder
- D Centerline Draw or Stream (Down)
- ← DU Centerline Draw or Stream (Up)
- SH Paved Shoulder
- CON Concrete or A/C Slab
- ENP Edge Paved Entrance & Park Lot
- ENT Centerline BL of Entrance
- EG Edge of Gravel Road
- CP Control Point
- TPD Telephone Pedestal
- GV Gas Valve
- ⊕ PPA Power Pole Co. 1
- ⊙ WV Water Valve
- ⊕ FHD Fire Hydrants
- ⊕ TR Telephone Riser Pole
- EB EB Electrical Box
- UB UB Utility Box
- ⊕ PR Electric Riser Pole

- E1 — MidAmerican Electric  
Jordyn Weber  
319-291-4728  
jlweber@midamerican.com
- G — MidAmerican Gas  
Jordyn Weber  
319-291-4728  
jlweber@midamerican.com
- SAN. — City of Dumont  
Rhonda Schmidt  
641-857-3441  
citydumont@netins.net
- T1 — Dumont Telephone  
Roger Kregel  
641-857-3211  
dumontel@netins.net

**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
Gray, Light	(48)	Proposed PCC Pavement Shading
Gray, Dark	(112)	Proposed HMA Shoulder Shading
Gray, Medium	(80)	Proposed Granular Shoulder/Roadway Shading
Brown, Light	(236)	Proposed Guardrail Blister Grading

**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

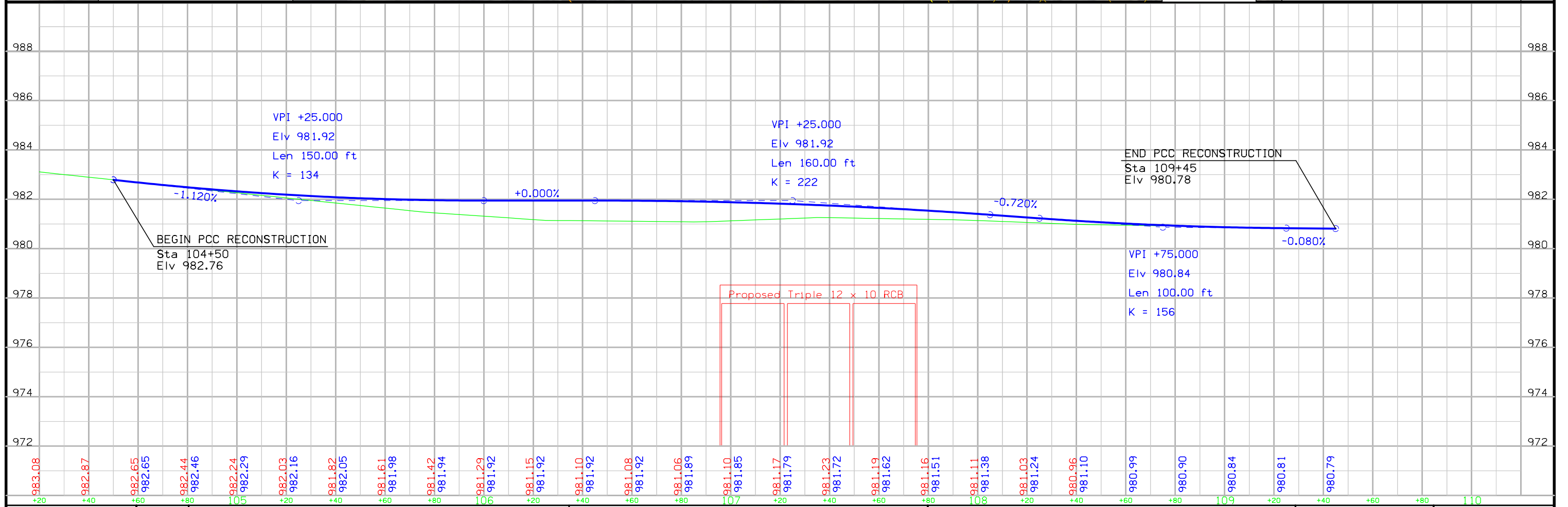
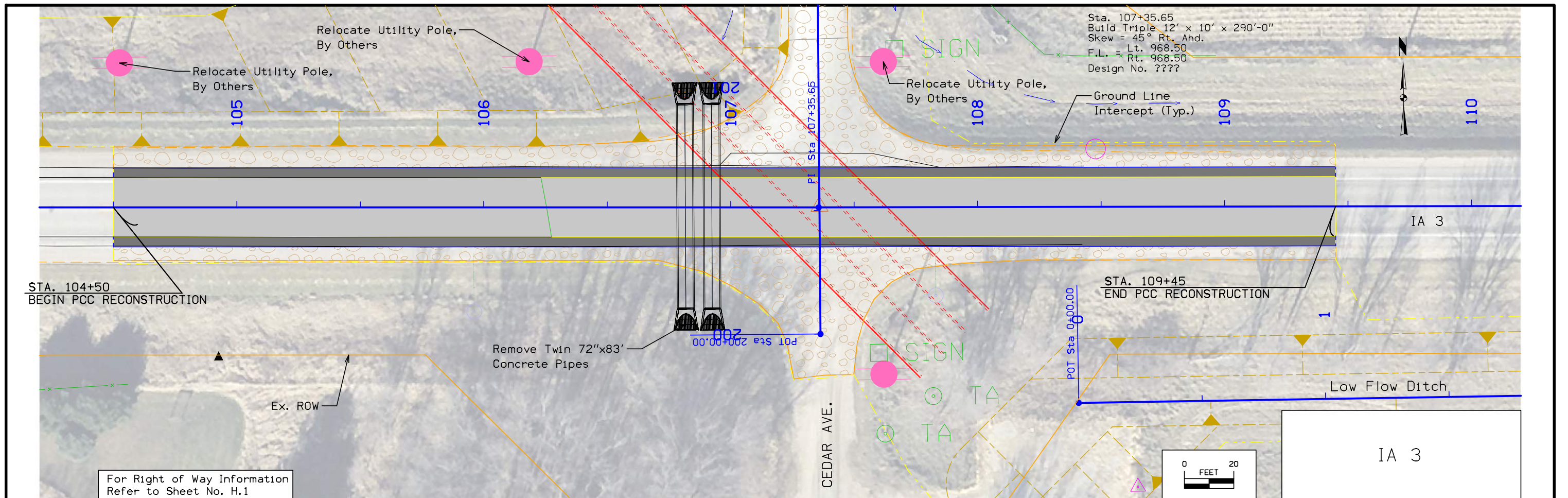
- Reference Point — Survey Line
- Station
- ▲ Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- ▨ Pavement Removal
- ▩ Clearing & Grubbing Area

**RIGHT-OF-WAY LEGEND**

- ▲ Proposed Right-of-Way
- △ Existing Right of Way
- ▲ Existing and Proposed Right-of-Way
- ▩ Easement and Existing Right-of-Way
- Easement (Temporary)
- ⊕ Easement
- C/A Access Control
- Property Line

**PLAN AND PROFILE  
LEGEND AND SYMBOL  
INFORMATION SHEET**

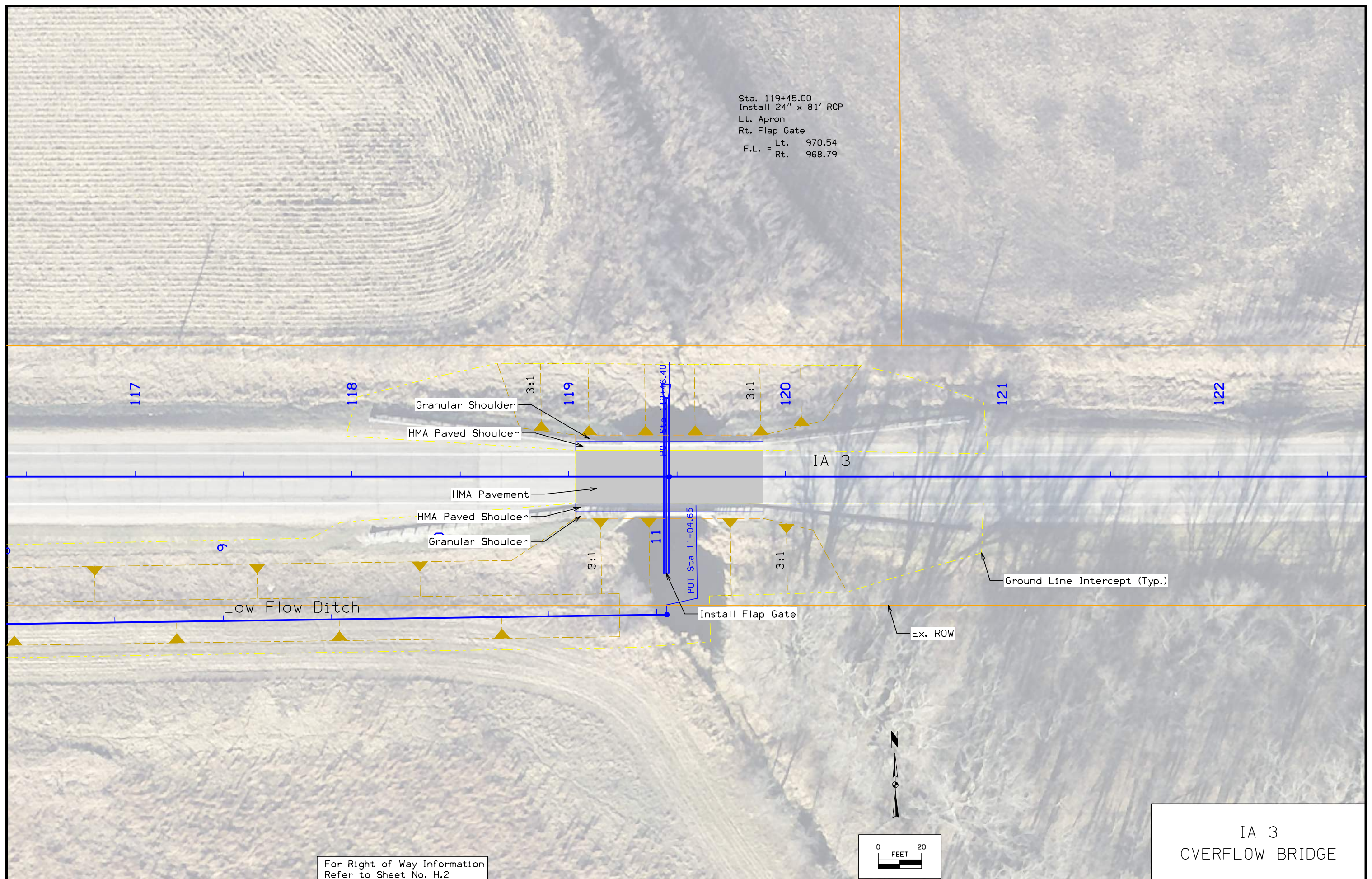
(COVERS SHEET SERIES D & E)



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+20	+40	+60	+80	+105	+20	+40	+60	+80	+106	+20	+40	+60	+80	+107	+20	+40	+60	+80	+108	+20	+40	+60	+80	+109	+20	+40	+60	+80	+110																		



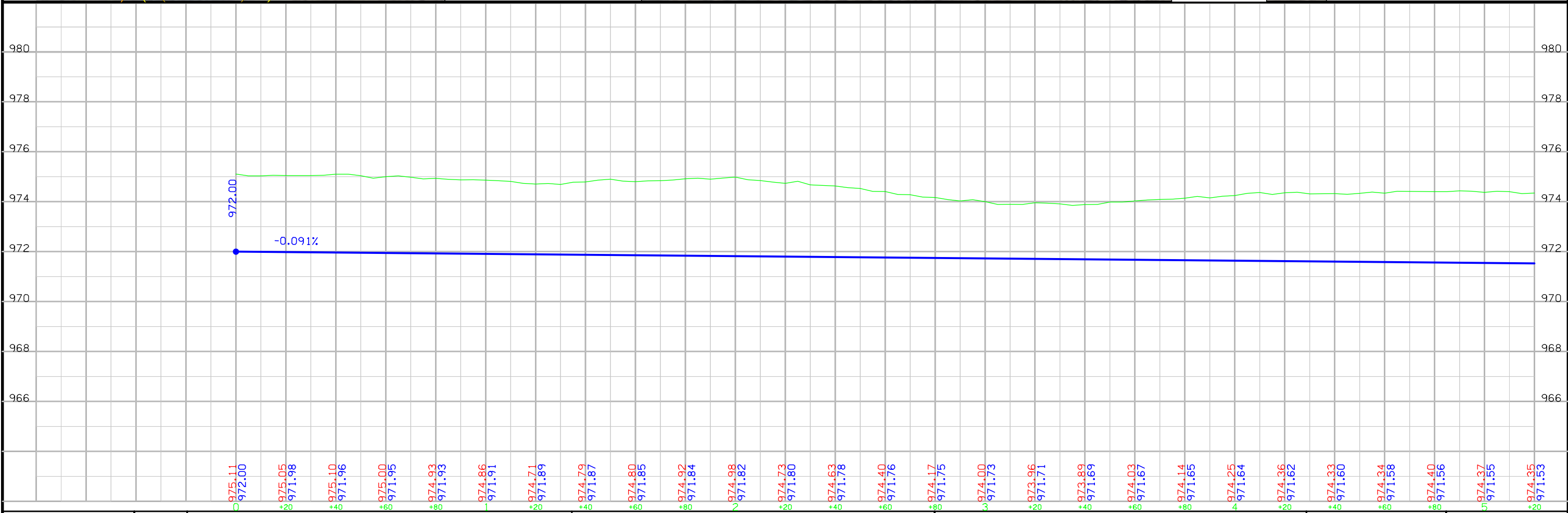
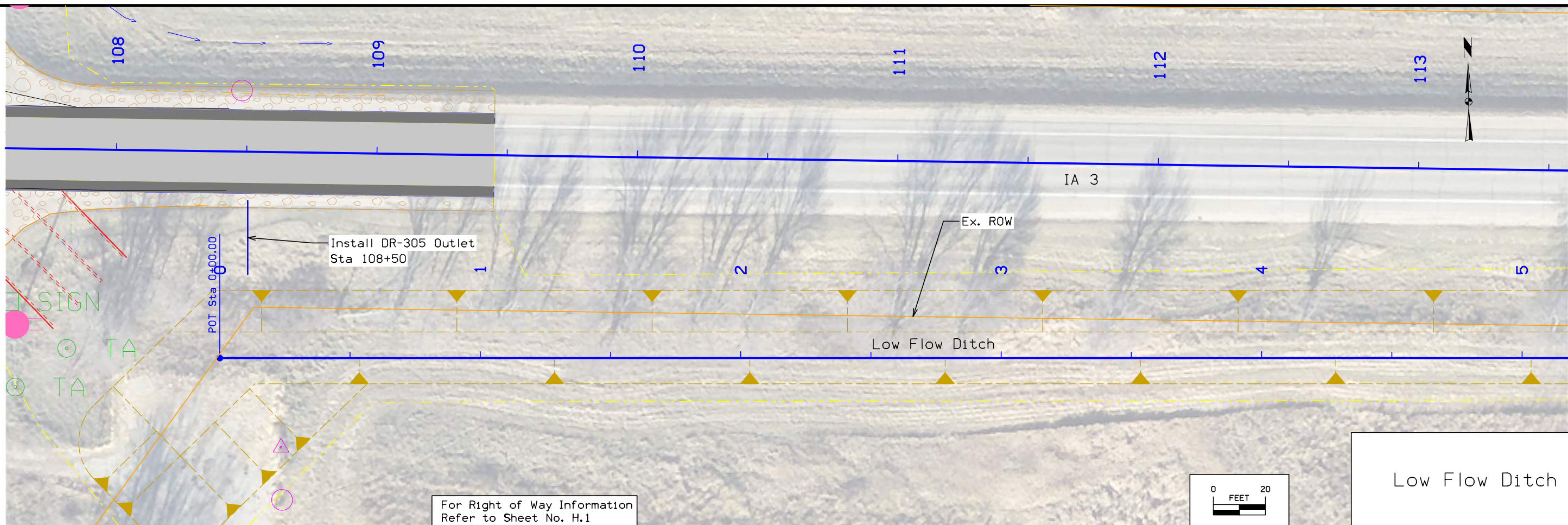
Sta. 119+45.00  
 Install 24" x 81' RCP  
 Lt. Apron  
 Rt. Flap Gate  
 F.L. = Lt. 970.54  
       Rt. 968.79



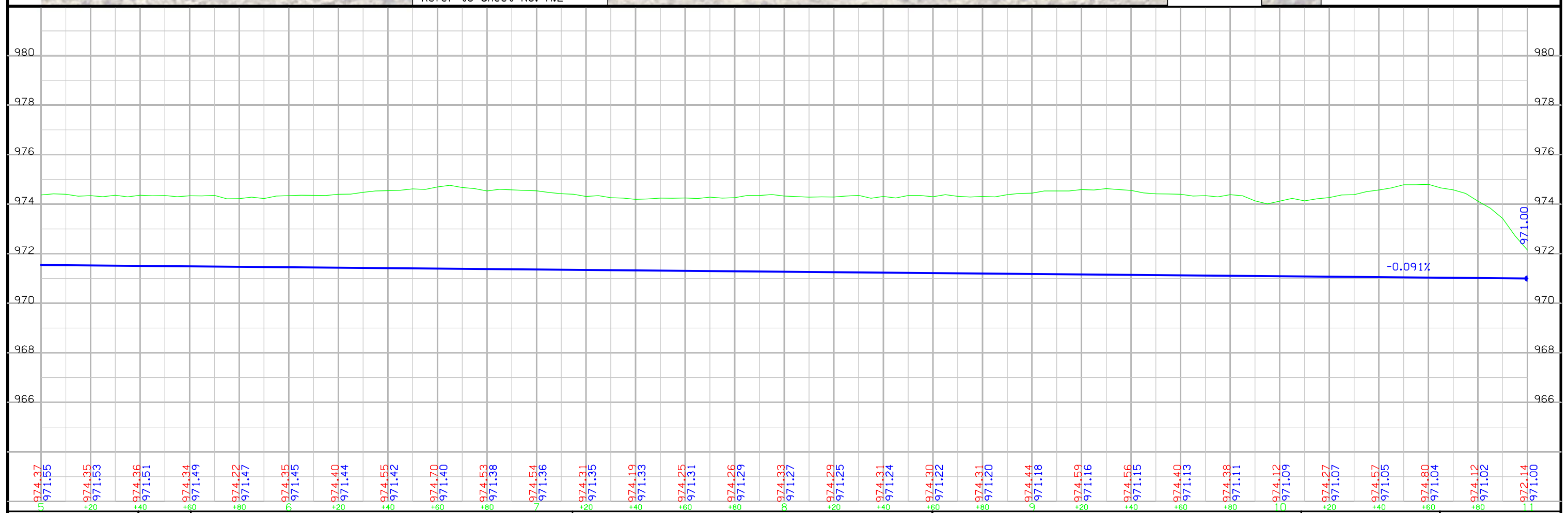
For Right of Way Information  
 Refer to Sheet No. H.2

IA 3  
 OVERFLOW BRIDGE

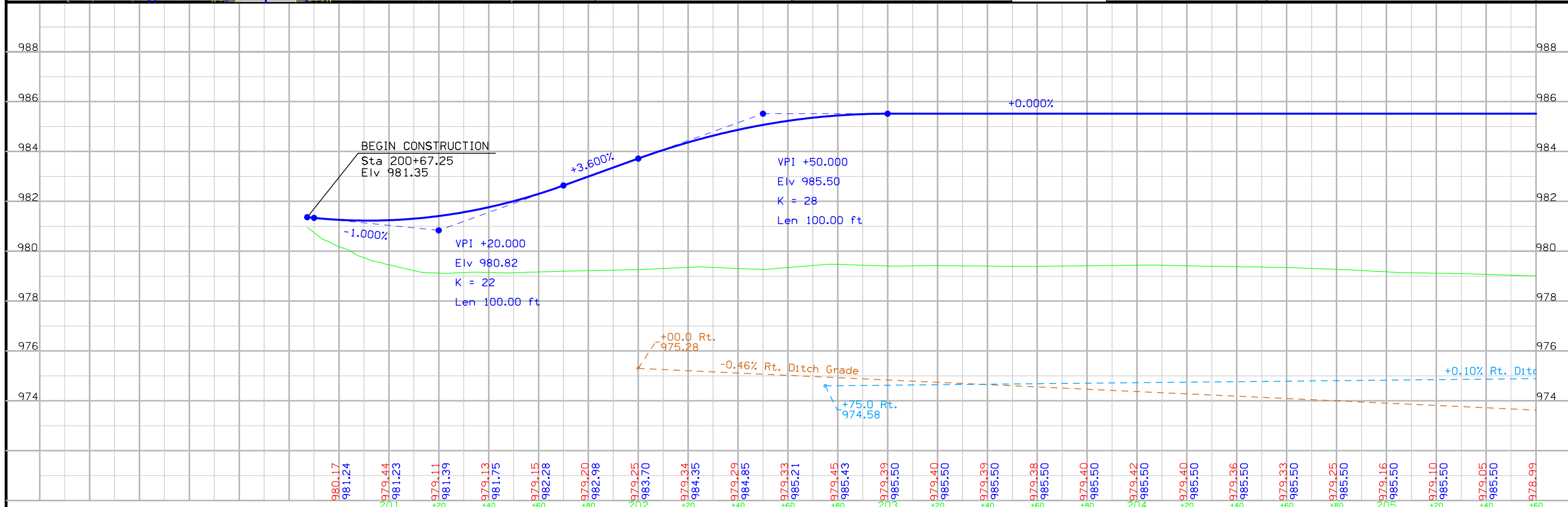
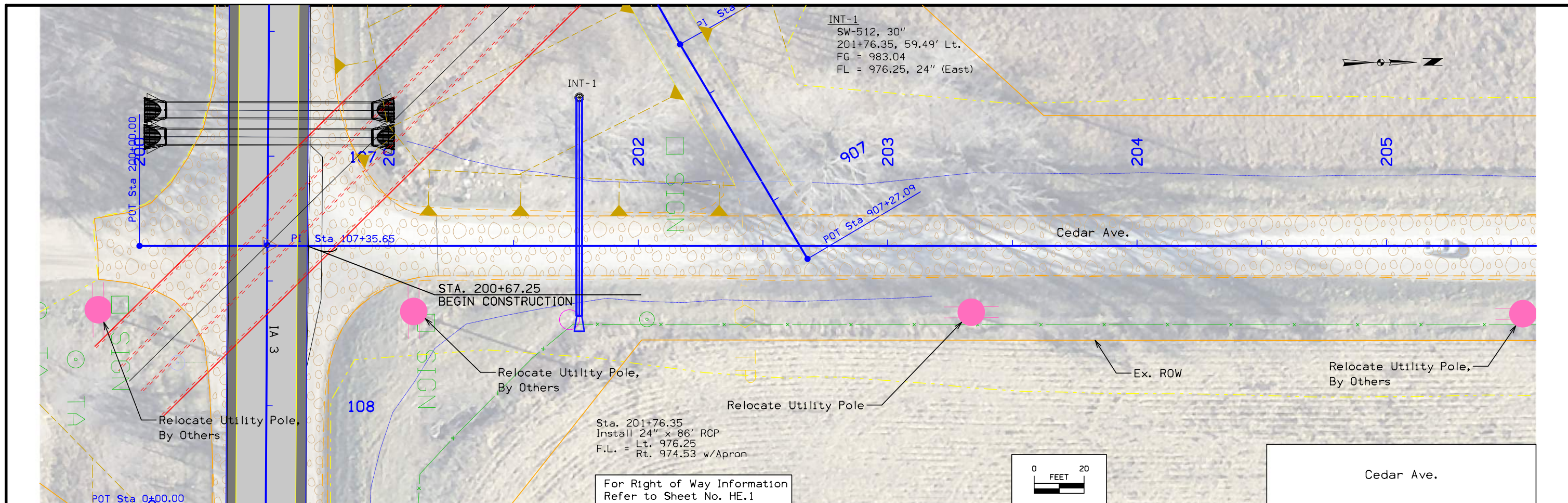




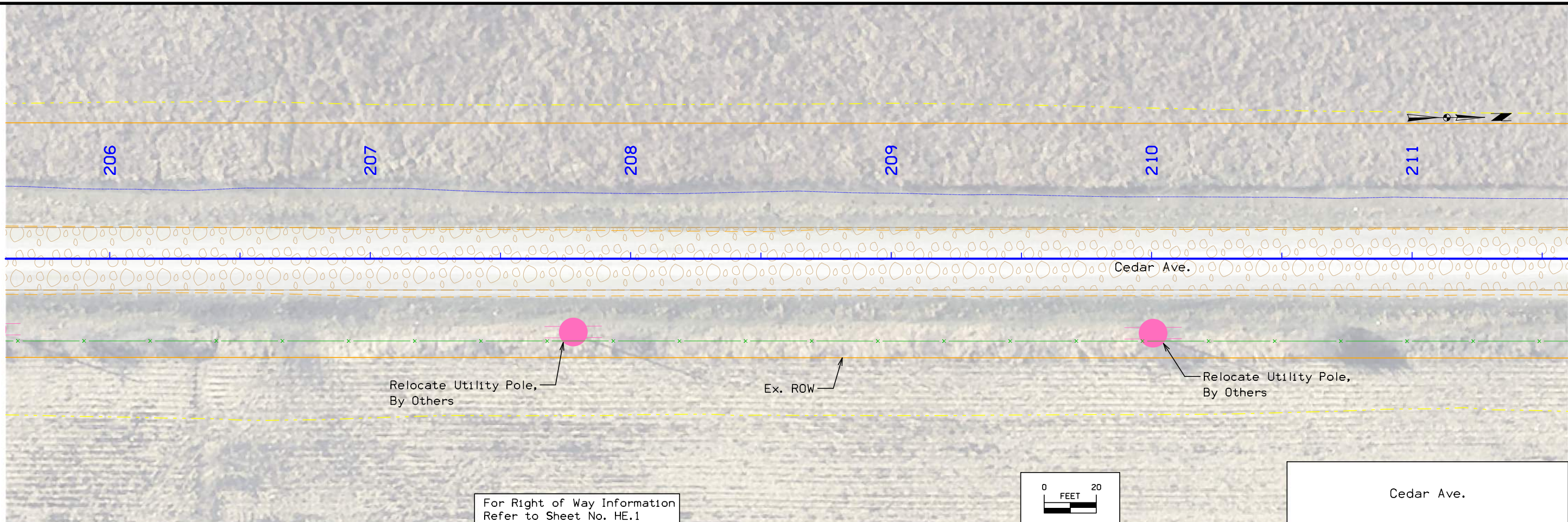




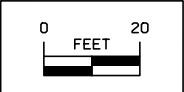




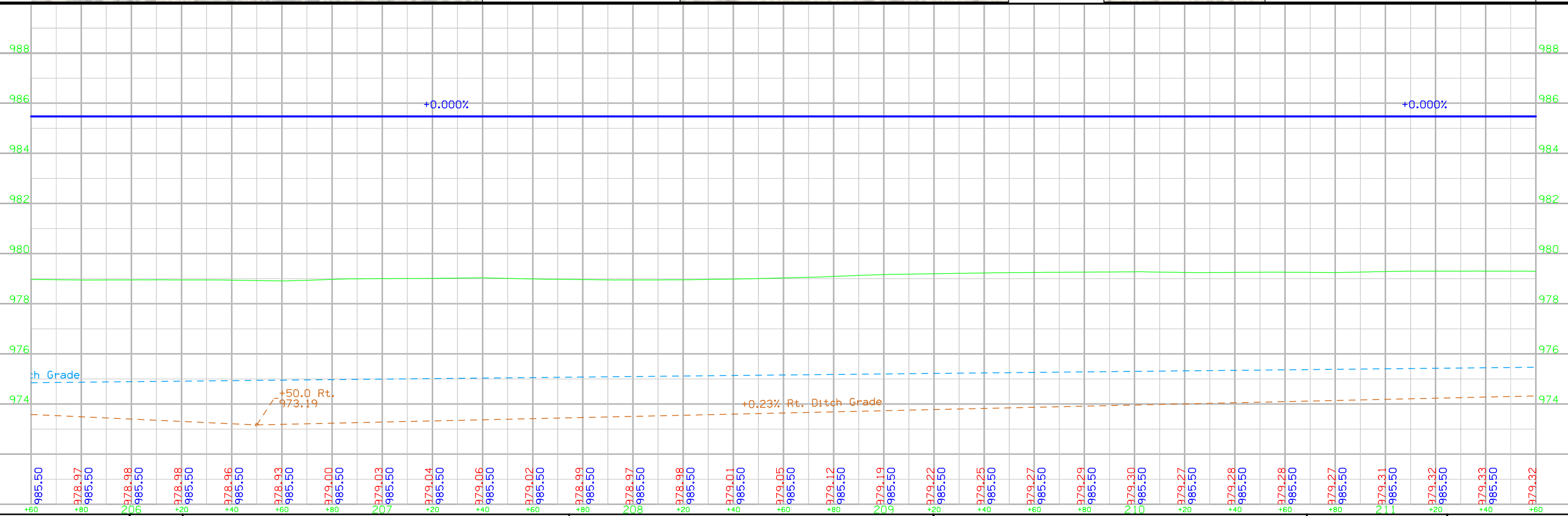




For Right of Way Information  
Refer to Sheet No. HE.1

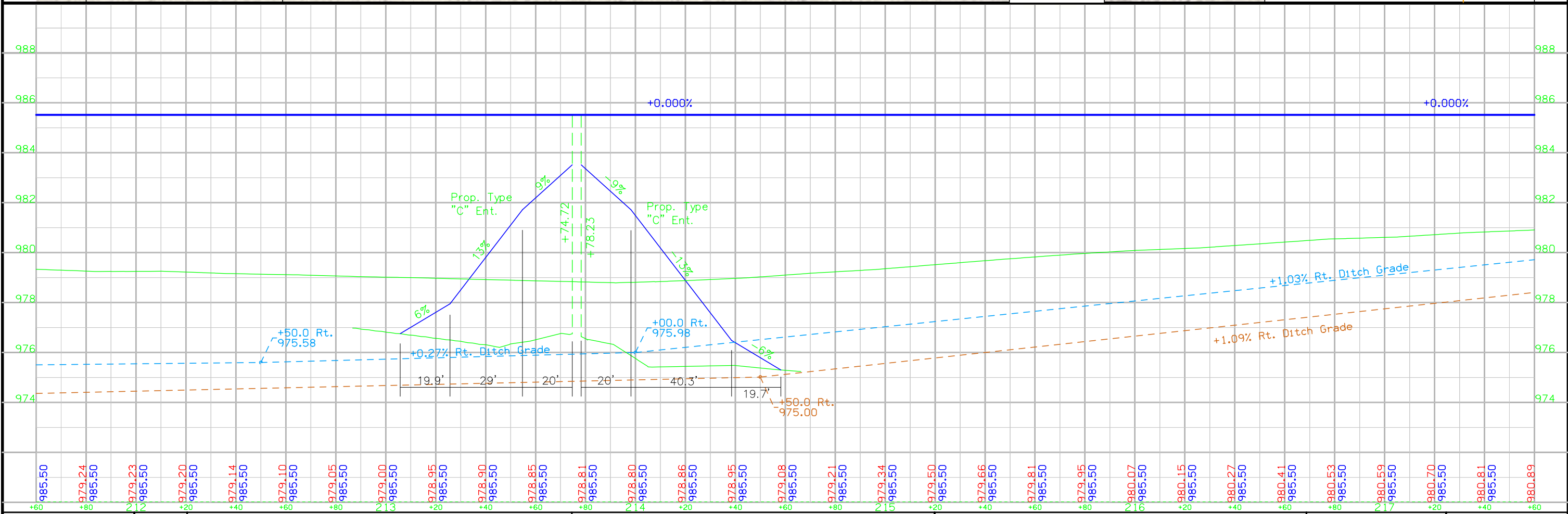
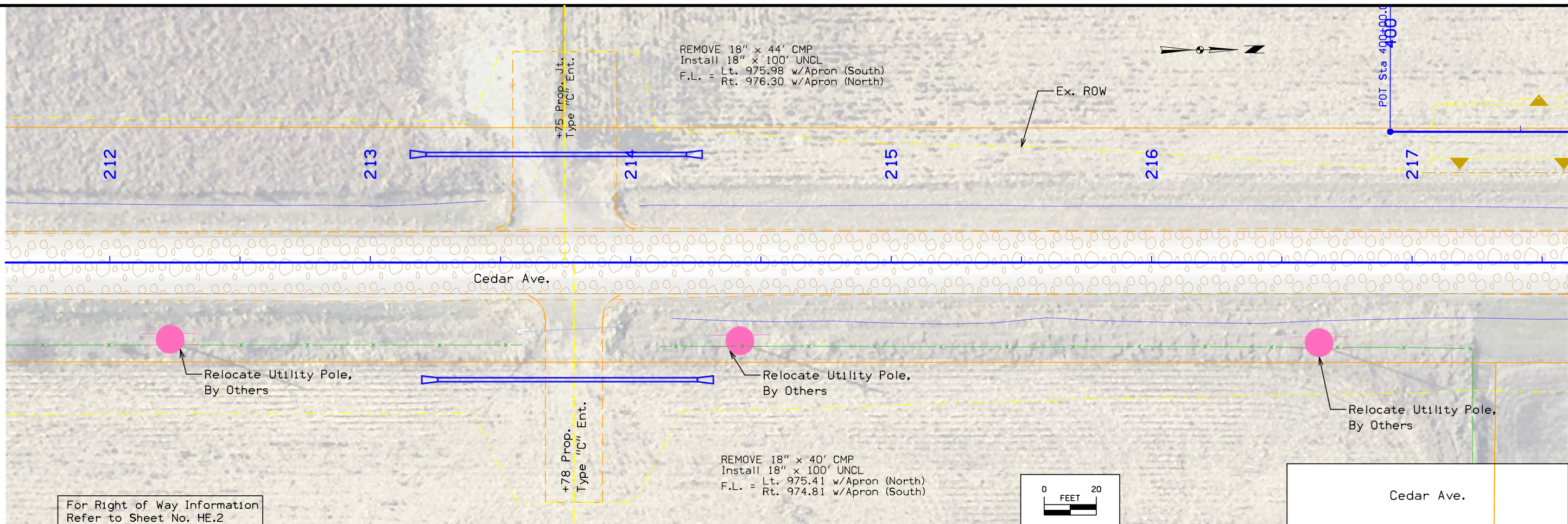


Cedar Ave.

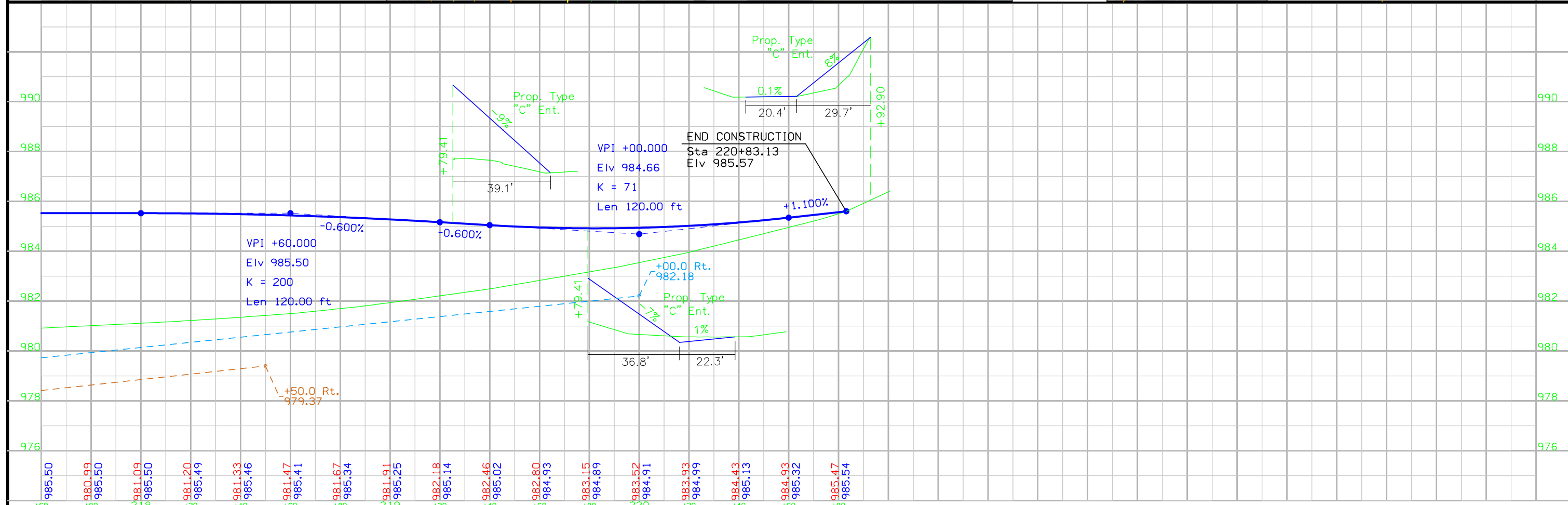
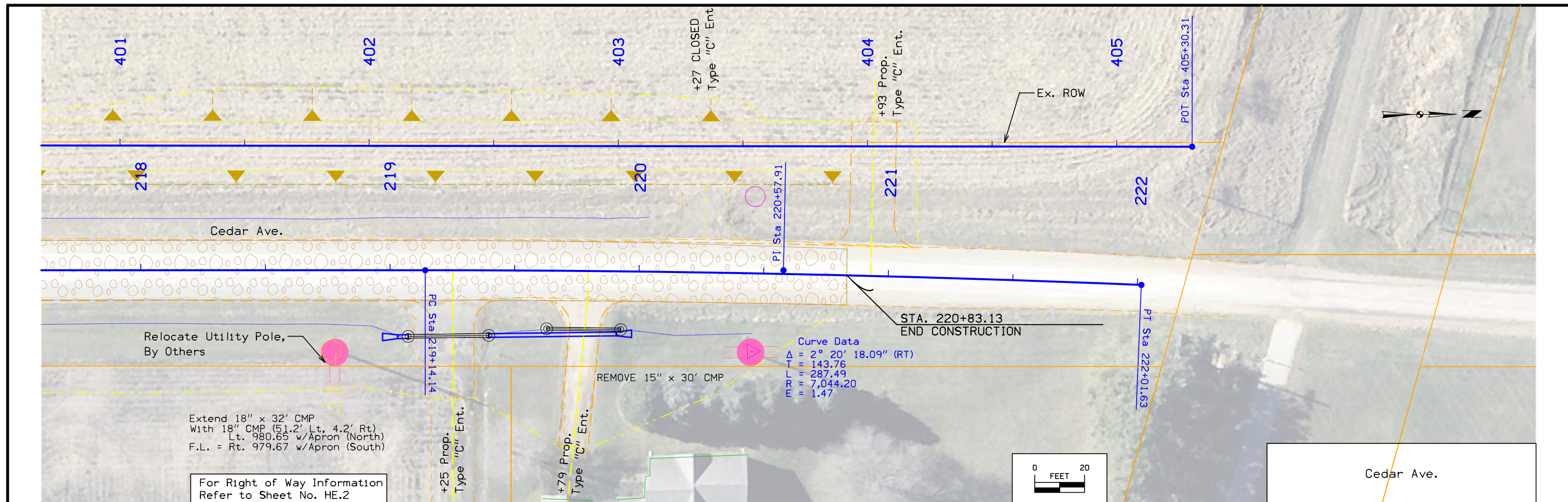


FILE NO.	ENGLISH	DESIGN TEAM	WHKS & CO.	BUTLER COUNTY	PROJECT NUMBER	BRFN-003-5(83)--39-12	SHEET NUMBER	E.2
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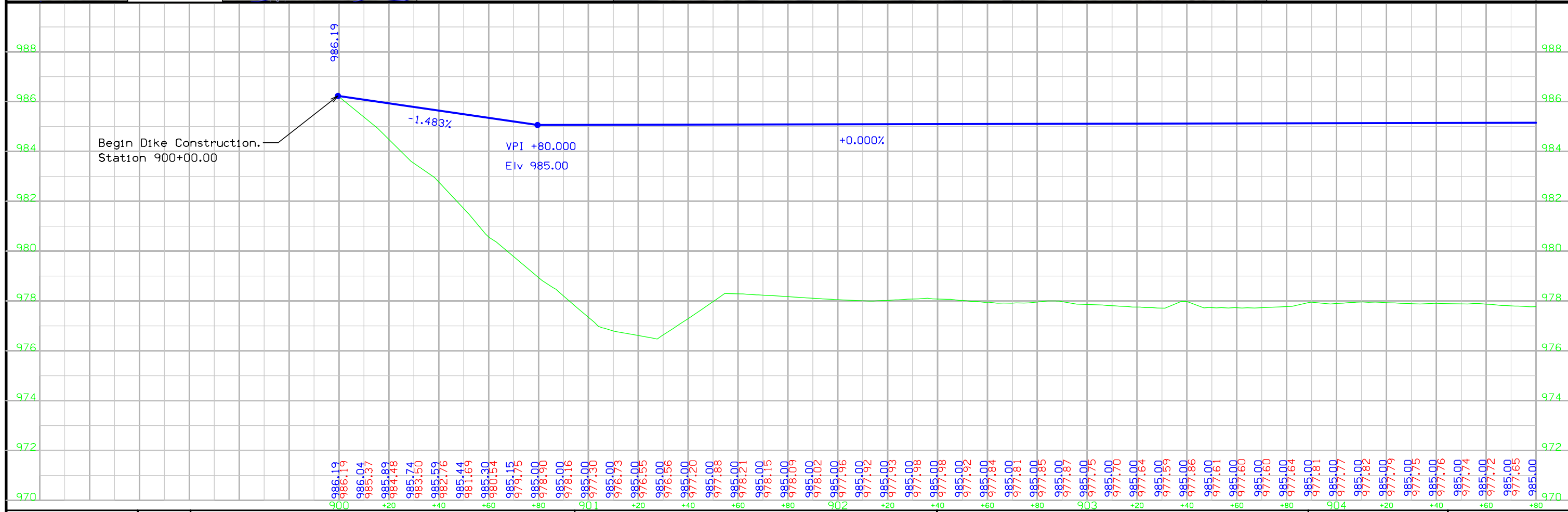
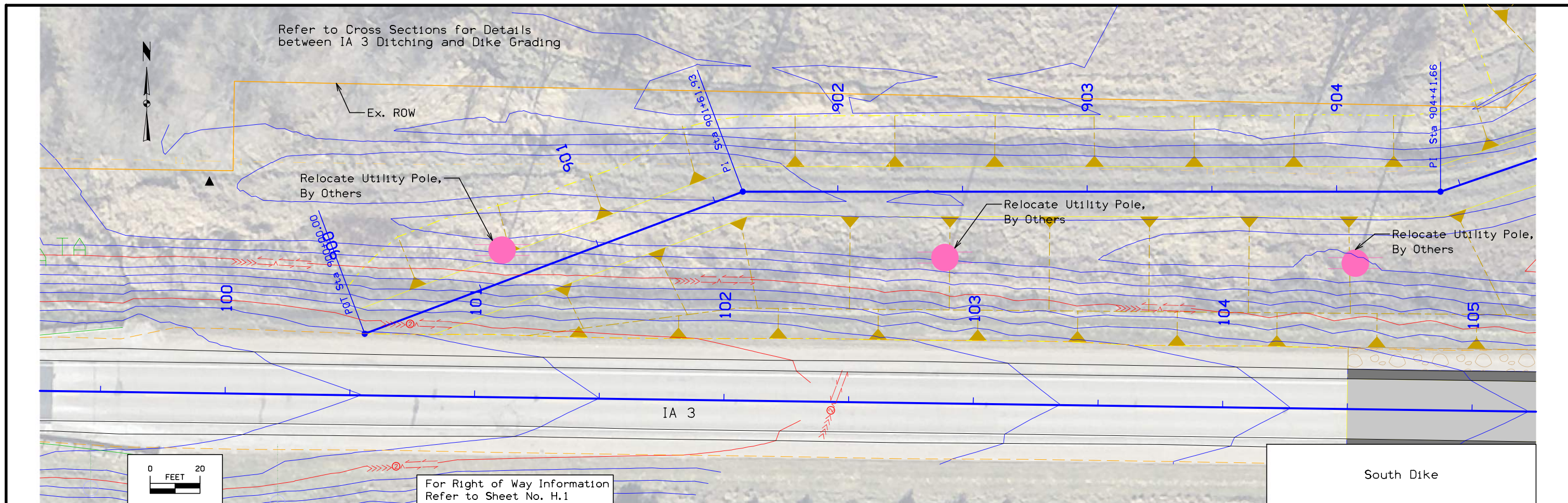




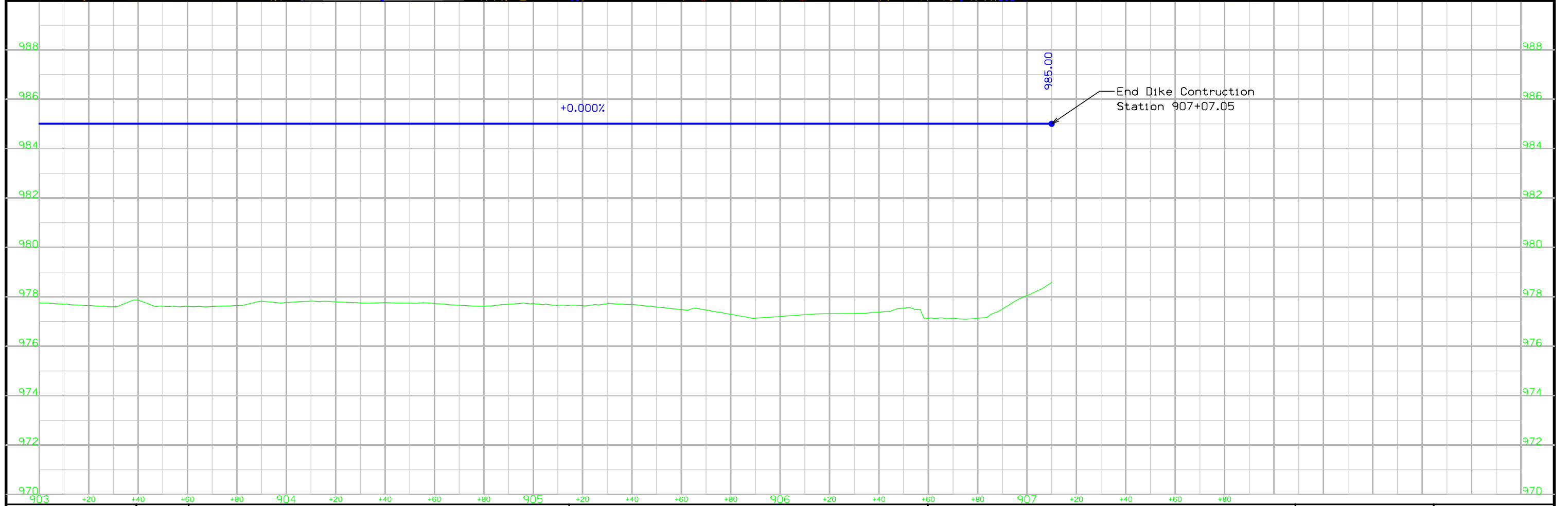
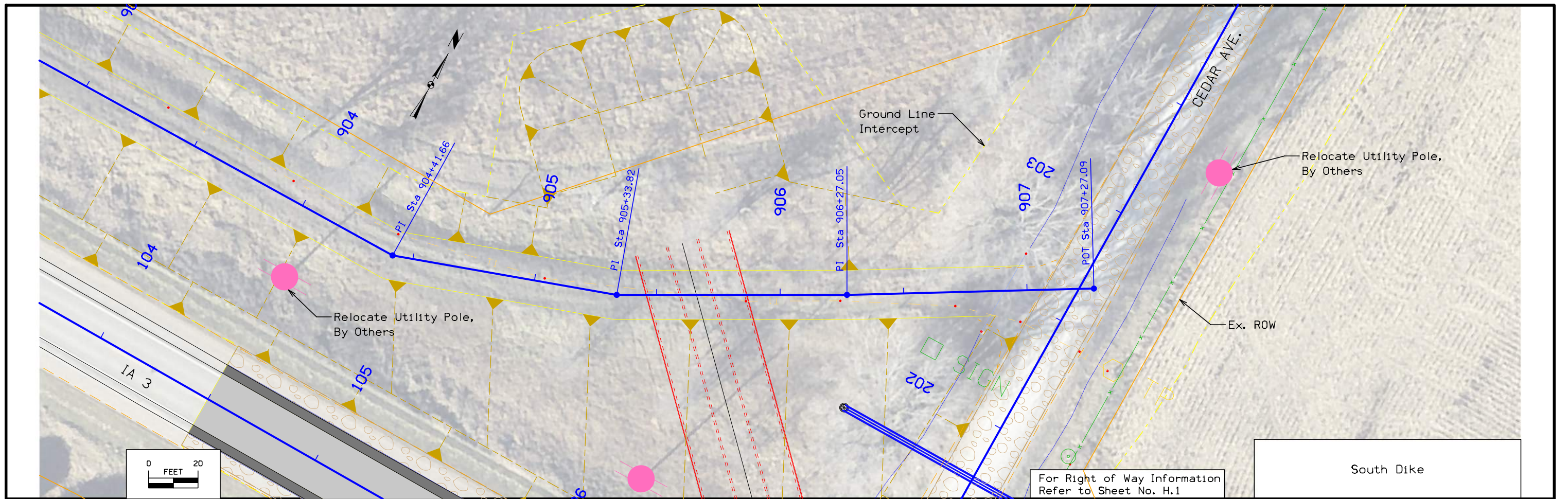




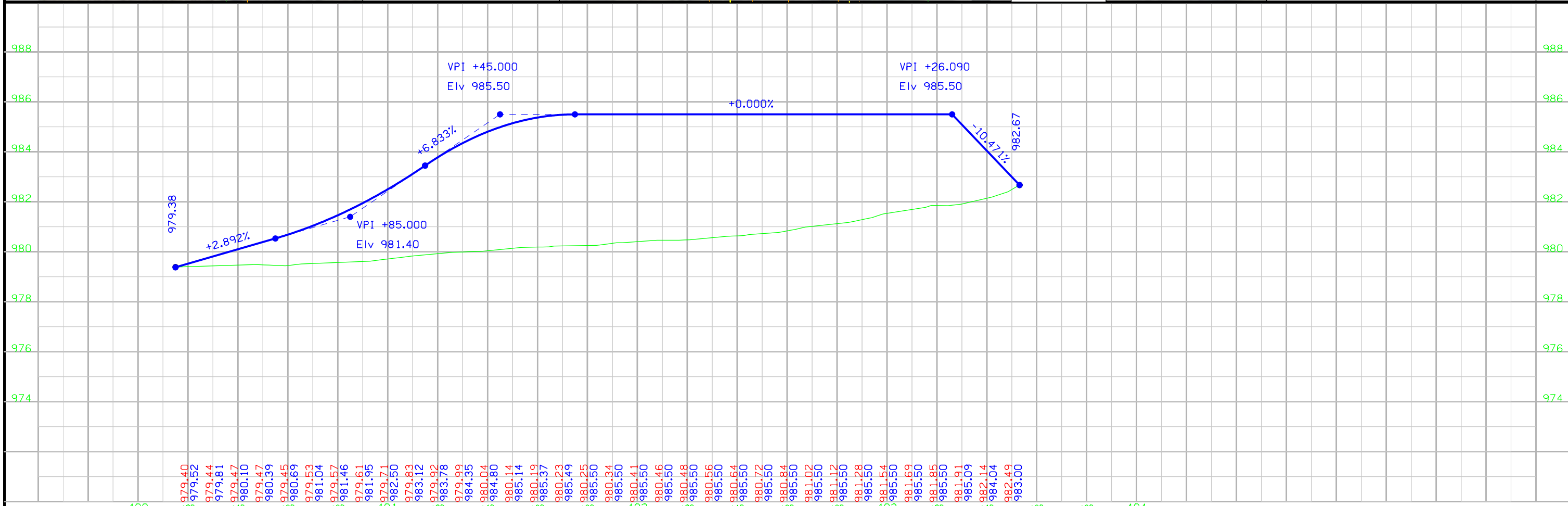
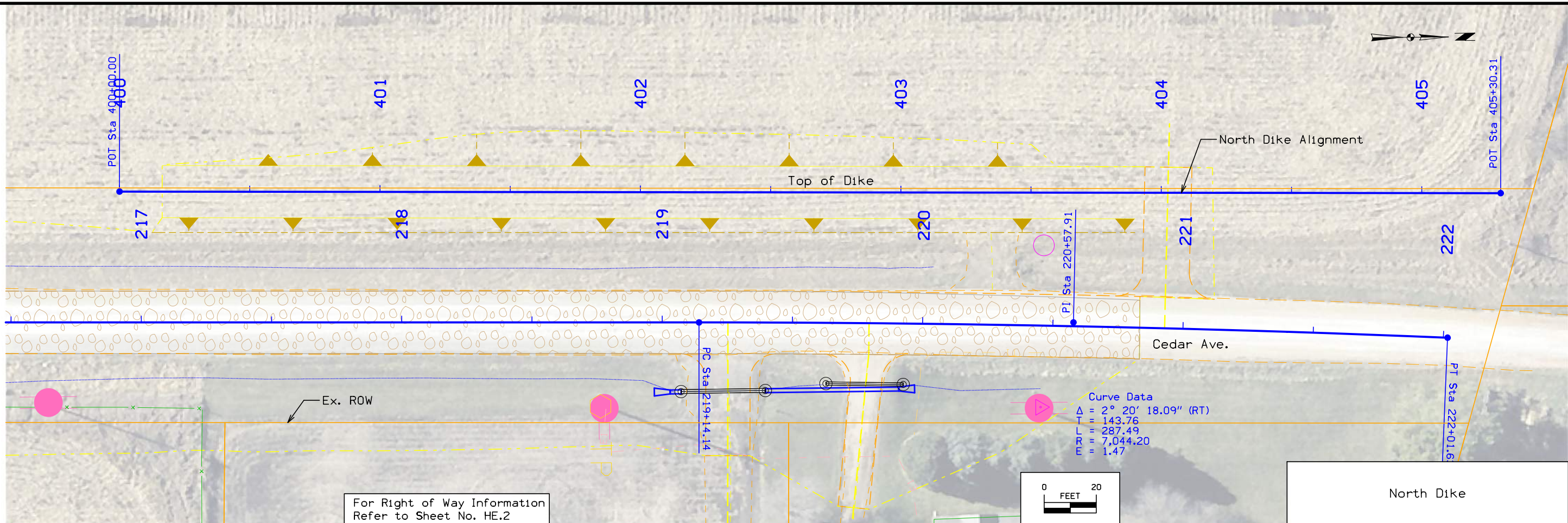












979.40	979.52	979.44	979.81	980.10	980.39	979.45	980.69	979.53	981.04	979.57	981.46	979.61	981.95	979.71	982.50	979.83	983.12	979.92	983.78	979.99	984.35	980.04	984.80	980.14	985.14	980.19	985.37	980.23	985.49	980.25	985.50	980.34	985.50	980.41	985.50	980.46	985.50	980.48	985.50	980.56	985.50	980.64	985.50	980.72	985.50	980.84	985.50	981.02	985.50	981.12	985.50	981.28	985.50	981.54	985.50	981.69	985.50	981.85	985.50	981.91	985.09	982.14	984.04	982.49	983.00
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## Survey Information

Butler County  
BRFN-003-8(68)--39-12  
PIN 19-12-003-010  
IA 3 Additional Survey of IA 3 at Hartgrave Creek, Cedar Ave, and T-16 intersections  
SAP 0588.3

### General Information

Measurement units for this survey are US survey feet. Project datum and control was established using previously established control. This is an additional survey of IA 3. Starting 300 feet West and 300 feet East of Hartgrave Creek, from IA 3 North 2000 feet along Cedar Ave., and 700 feet West and 900 feet East of intersection T-16.

### Vertical Control

Vertical datum for this survey is relative to NAVD88. Geoid 18 was used in this survey. CP1,CP2,K29,J29,105, and 171 were then calibrated from CP100. Additional benchmarks were placed throughout the project using RTK GPS.

BM#500 EL=975.929, Set RR Spk E Side Fence Post  
BM#501 EL=974.582, Fd IHC on InHdwl  
BM#502 EL=990.717, Fd IHC NE Wing of Br  
BM#503 EL=991.232, Fd IHC SW Wing of Br  
BM#504 EL=978.338, Set RR Spk S Side PP  
BM#505 EL=981.423, Set RR Spk S Side PP  
BM#506 EL=976.890, Set RR Spk S Side PP  
BM#507 EL=977.712, Set RR Spk W Side PP  
BM#508 EL=983.603, Set RR Spk W Side PP  
BM#509 EL=975.959, Set RR Spk S Side PP  
BM#510 EL=974.515, Fd IHC on InHdwl

### Horizontal Control

The project coordinate system for this survey is IaRCS Zone 12(U.S. Survey Feet). This survey control is relative to 2-hour static sessions that were processed using OPUS. We establish 4 control points surrounding the perimeter of the project limits, observing each for 180 epochs. CP101-CP104 were then calibrated from CP100. Additional control points were placed throughout the project using GNSS Base-Rover setup relative to CP100.

### Alignment Information

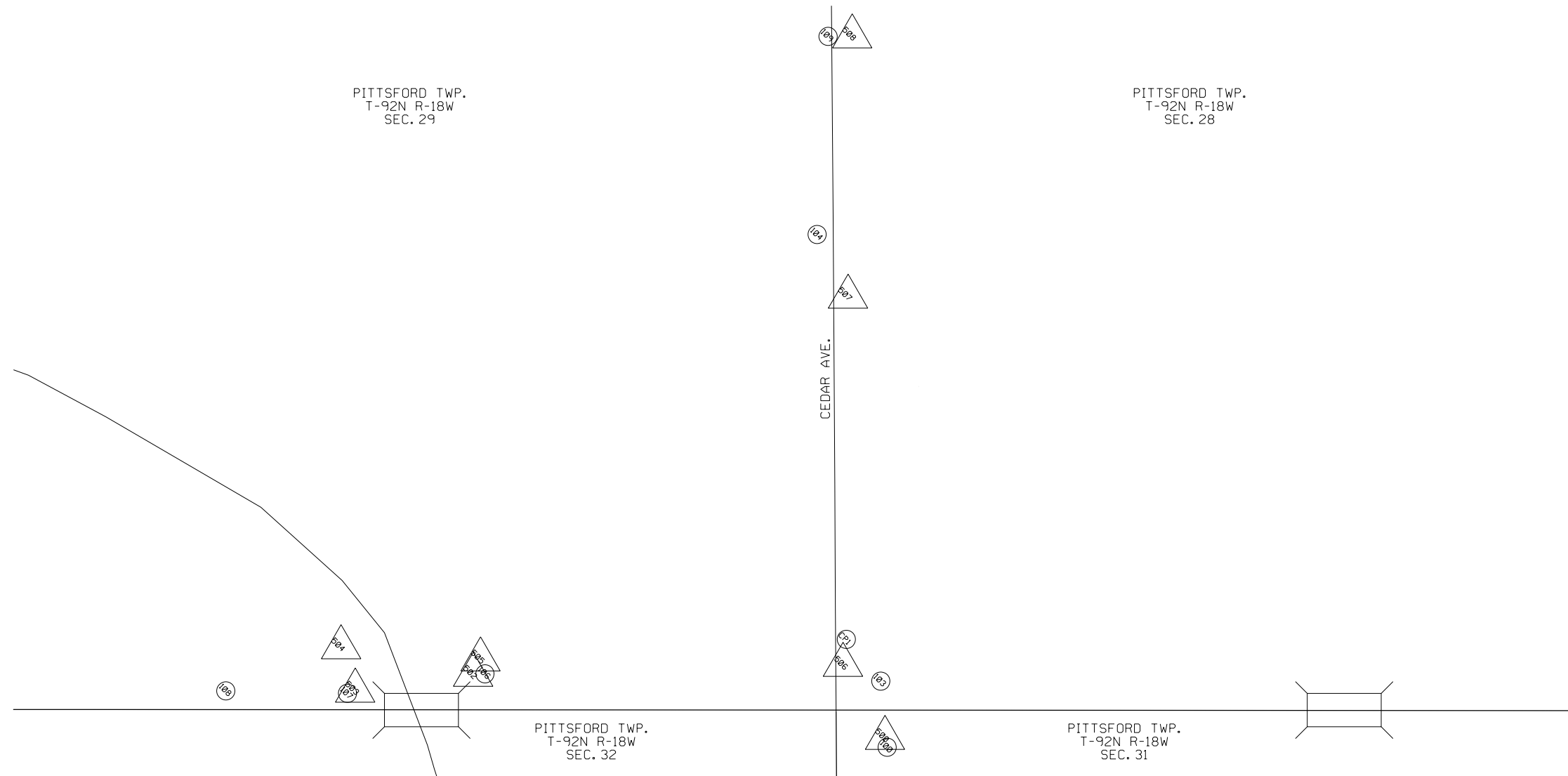
The horizontal alignment for this survey is a retrace of As-Built Grading & Paving Plans BRF-3-5(32)38-12. Survey stationing was equated to the plan POT at STA 107+41.70 at point #5559, Found Mag Nail Flush in Pavement, and run back and forward without equation to the throughout the survey.

Survey stationing relates to as-built plan stationing as follows:

POT Sta. 107+41.70 Project BRF-3-5(32)38-12  
Survey PI Sta. 9107+41.70

## CONTROL POINT VICINITY MAP

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



HORIZ. DATUM: NAD83(2011) EPOCH 2010.00

VERT. DATUM: NAVD88

1a. Regional Coordinate System Zone 5

Coordinate listing from next sheet will be used with 1aRTN for monument  
 recovery. No other reference ties are given.



# CONTROL POINT VICINITY MAP

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



HORIZ. DATUM: NAD83(2011) EPOCH 2010.00

VERT. DATUM: NAVD88

Ia. Regional Coordinate System Zone 5

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

# HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING

HORIZ. DATUM: NAD83(2011) EPOCH 2010.00

VERT. DATUM: NAVD88

Ia. Regional Coordinate System Zone 5

Point Name	Northing	Easting	Elevation	Feature Definition	Description
100	8935343.862	15302436.852	975.177	CP	Set Rebar
101	8935442.788	15306702.644	974.912	CP	Cut "X" on SW Corner of Intake
102	8935461.931	15305073.316	976.061	CP	Set Rebar 6" Deep
103	8935500.988	15302421.493	979.908	CP	Set Rebar 6" Deep
104	8936800.317	15302270.392	978.460	CP	Set Rebar 6" Deep
105	8930888.341	15291547.783	998.738	CP	FD Butler Co GPS 98-105
106	8935518.539	15301470.039	987.706	CP	Set Rebar 6" Deep
107	8935472.251	15301164.757	987.756	CP	Set Rebar 6" Deep
108	8935477.650	15300866.643	986.537	CP	Set Rebar 6" Deep
171	8930104.231	15307574.092	971.825	CP	FD Butler Co GPS 171
CP1	8935600.139	15302339.894	977.008	CP	FD IDOT ROW Rail Drilled Hole in Ball
CP2	8935506.222	15304635.695	976.919	CP	FD IDOT ROW Rail Drilled Hole in Ball
J29	8941284.354	15291757.551	990.649	CP	FD USC&GS BM J29
K29	8938176.729	15300994.796	990.474	CP	FD USC&GS BM K29
500	8935364.127	15302436.356	975.929	BM	RR Spk E Side Fence Post
501	8935454.838	15306275.709	974.582	BM	Fd IHC on InHdwl
502	8935514.086	15301458.490	990.717	BM	Fd IHC NE Wing of Br
503	8935476.383	15301178.422	991.232	BM	Fd IHC SW Wing of Br
504	8935579.425	15301145.026	978.338	BM	Set RR Spk S Side PP
505	8935550.529	15301476.135	981.423	BM	Set RR Spk S Side PP
506	8935537.476	15302336.516	976.890	BM	Set RR Spk S Side PP
507	8936650.762	15302348.535	977.712	BM	Set RR Spk W Side PP
508	8937473.008	15302358.448	983.603	BM	Set RR Spk W Side PP
509	8935452.281	15306290.887	975.959	BM	Set RR Spk S Side PP
510	8935459.694	15305927.501	974.515	BM	Fd IHC on InHdwl

**ALIGNMENT COORDINATES**

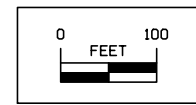
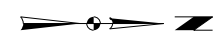
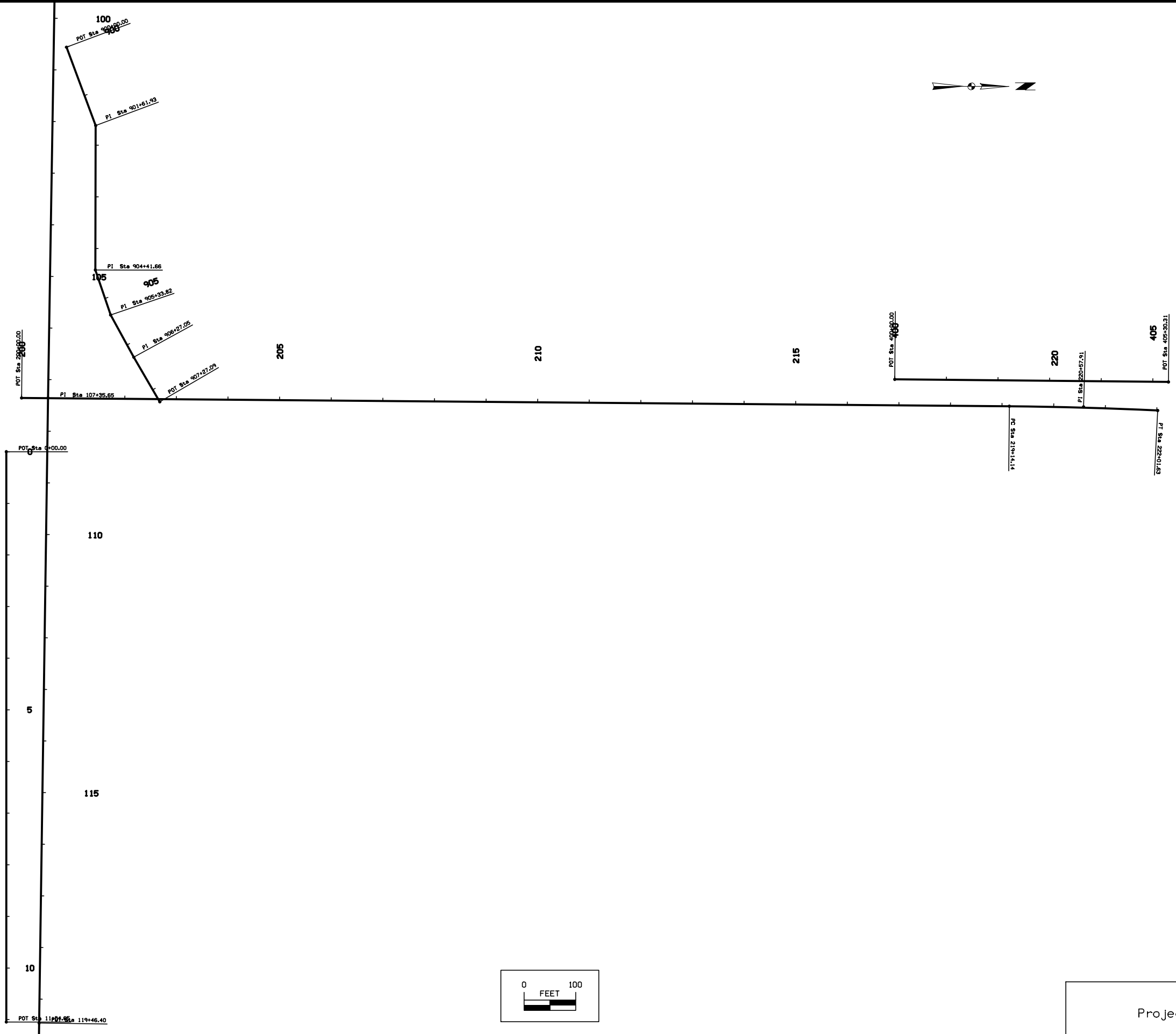
101-16  
10-20-09

Name	Location	Point on Tangent		Begin Spiral		Begin Curve		Simple Curve PI or Master PI of SCS			End Curve		End Spiral			
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
MLO03W																
Point 21		54+54.30	8,935,565.055	15,297,028.290												
Point 22		107+36.65	8,935,479.194	15,302,308.942												
Point 23		119+46.40	8,935,461.975	15,303,519.570												
Point 24		160+06.40	8,935,404.237	15,307,579.159												
MLCEDAR																
MLCEDAR1		200+00.00	8,935,427.937	15,302,308.819												
MLCEDAR.3						219+14.14	8,937,342.014	15,302,324.867	220+57.91	8,937,485.773	15,302,326.072	222+01.63	8,937,629.363	15,302,333.142		
MLDIKEBOX (South Dike)																
MLDIKEBOX1		900+00.00	8,935,514.937	15,301,629.424												
MLDIKEBOX3		901+61.93	8,935,571.501	15,301,781.155												
MLDIKEBOX5		904+41.66	8,935,570.849	15,302,060.887												
MLDIKEBOX7		905+33.82	8,935,600.512	15,302,148.137												
MLDIKEBOX9		906+27.05	8,935,645.378	15,302,229.863												
MLDIKEBOX10		907+27.09	8,935,695.759	15,302,316.288												
MLNORTHDIKE																
Point 31		400+00.00	8,937,119.933	15,302,272.804												
Point 32		405+30.31	8,937,650.220	15,302,277.839												
MLCULVERTDITCH																
Point 41		0+00.00	8,935,398.362	15,302,412.937												
Point 42		11+04.65	8,935,398.362	15,303,517.586												

**SPIRAL OR CIRCULAR CURVE DATA**

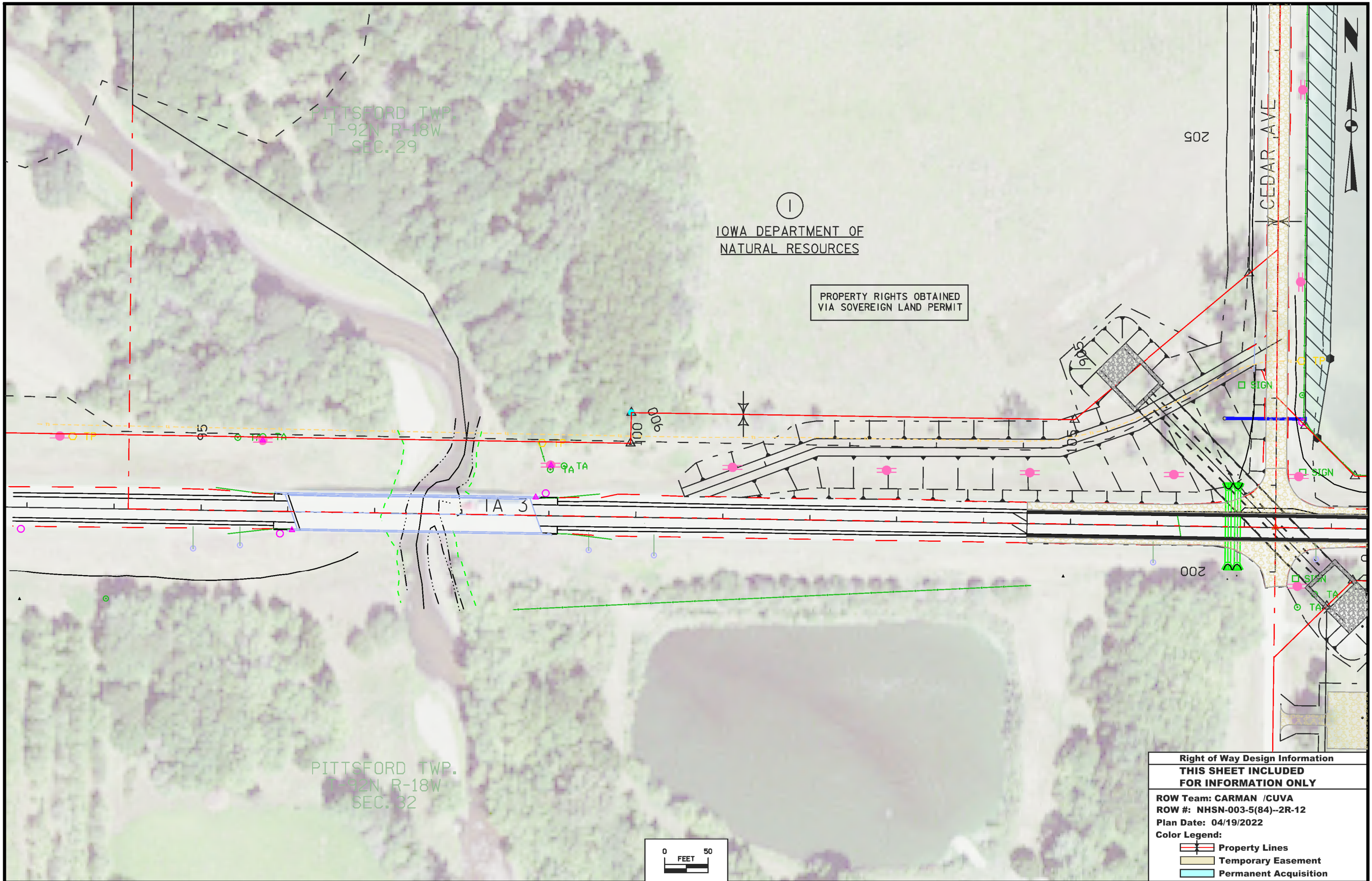
101-17  
04-19-11




Name	Location	$\Delta_{scs}$	Horizontal Alignment Data												Remarks										
			Spiral Data						Curve Data																
			$\theta_s$	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	$\Delta_c$	T	L	R		E									
MLCEDAR.3																									



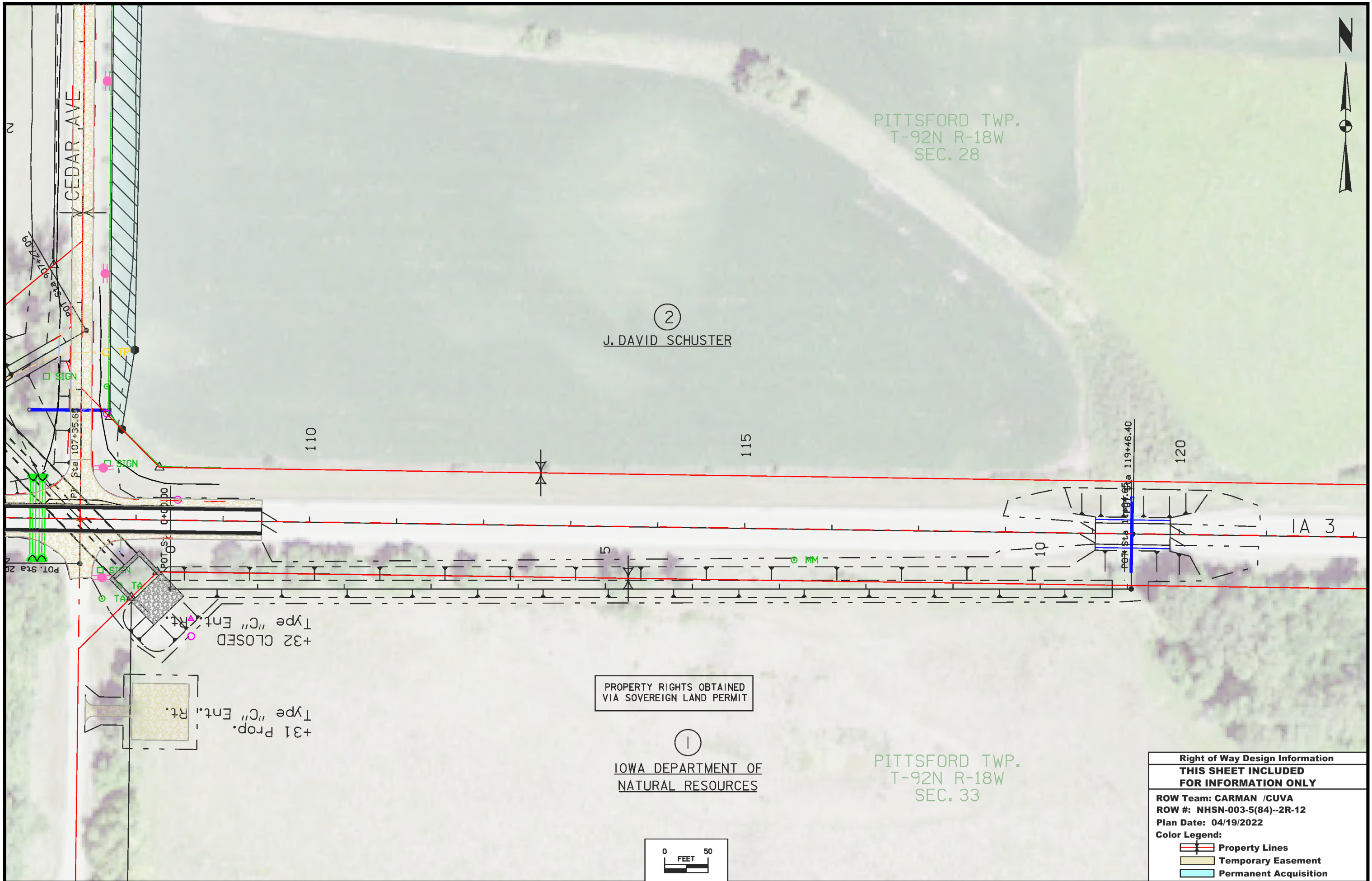
Project Alignments

NO ACCESS RIGHTS ARE TO BE ACQUIRED ON THIS PROJECT.



<b>Right of Way Design Information</b>	
<b>THIS SHEET INCLUDED FOR INFORMATION ONLY</b>	
ROW Team: CARMAN /CUVA	
ROW #: NHSN-003-5(84)--2R-12	
Plan Date: 04/19/2022	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition





PITTSFORD TWP.  
T-92N R-18W  
SEC. 28

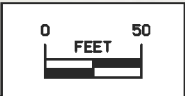
②  
J. DAVID SCHUSTER

PROPERTY RIGHTS OBTAINED  
VIA SOVEREIGN LAND PERMIT

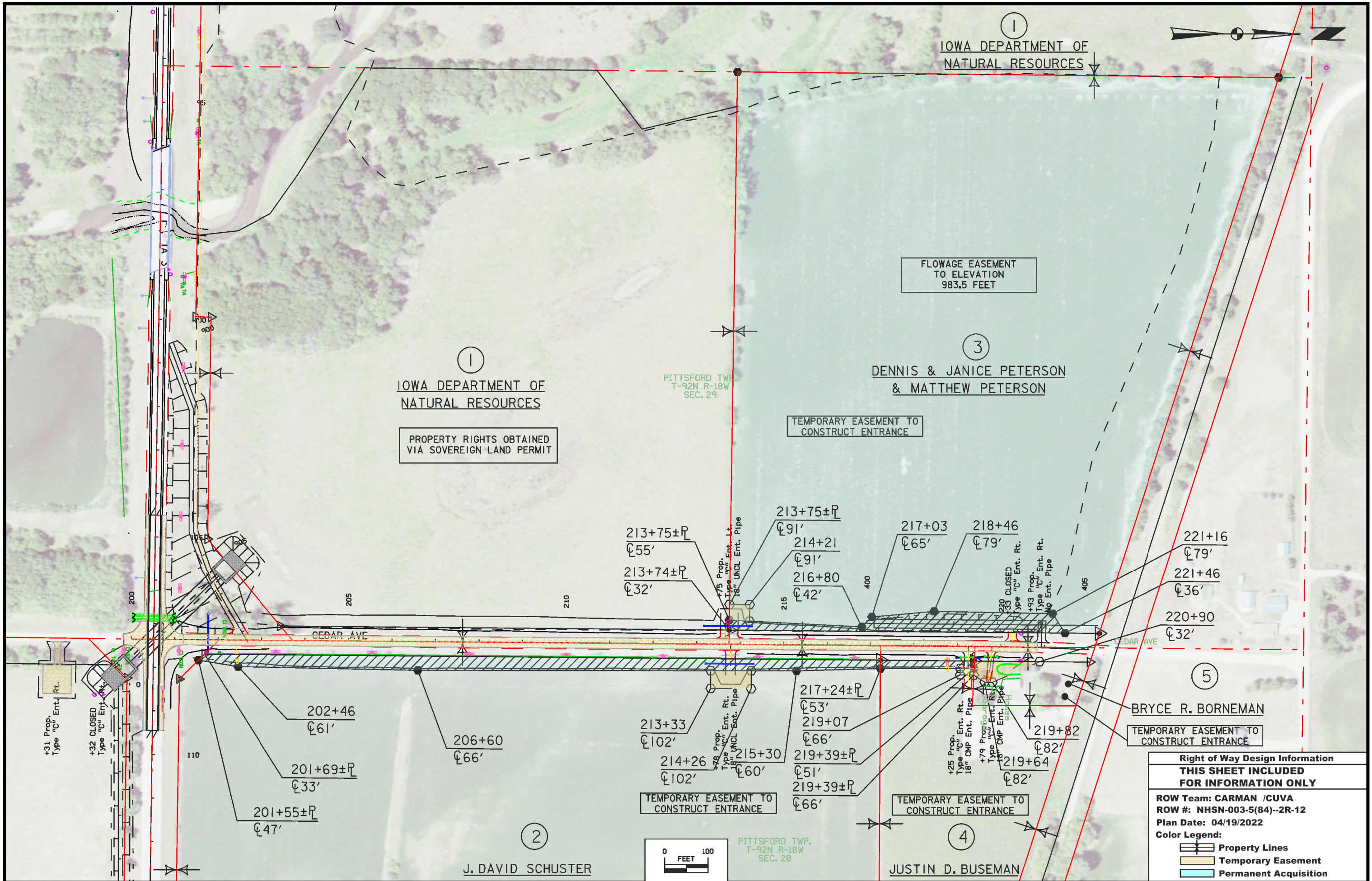
①  
IOWA DEPARTMENT OF  
NATURAL RESOURCES

PITTSFORD TWP.  
T-92N R-18W  
SEC. 33

<b>Right of Way Design Information</b>	
<b>THIS SHEET INCLUDED FOR INFORMATION ONLY</b>	
ROW Team: CARMAN /CUVA	
ROW #: NHSN-003-5(84)--2R-12	
Plan Date: 04/19/2022	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition







Right of Way Design Information	
<b>THIS SHEET INCLUDED FOR INFORMATION ONLY</b>	
ROW Team: CARMAN /CUVA	
ROW #: NHSN-003-5(84)--2R-12	
Plan Date: 04/19/2022	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition



### TRAFFIC CONTROL PLAN

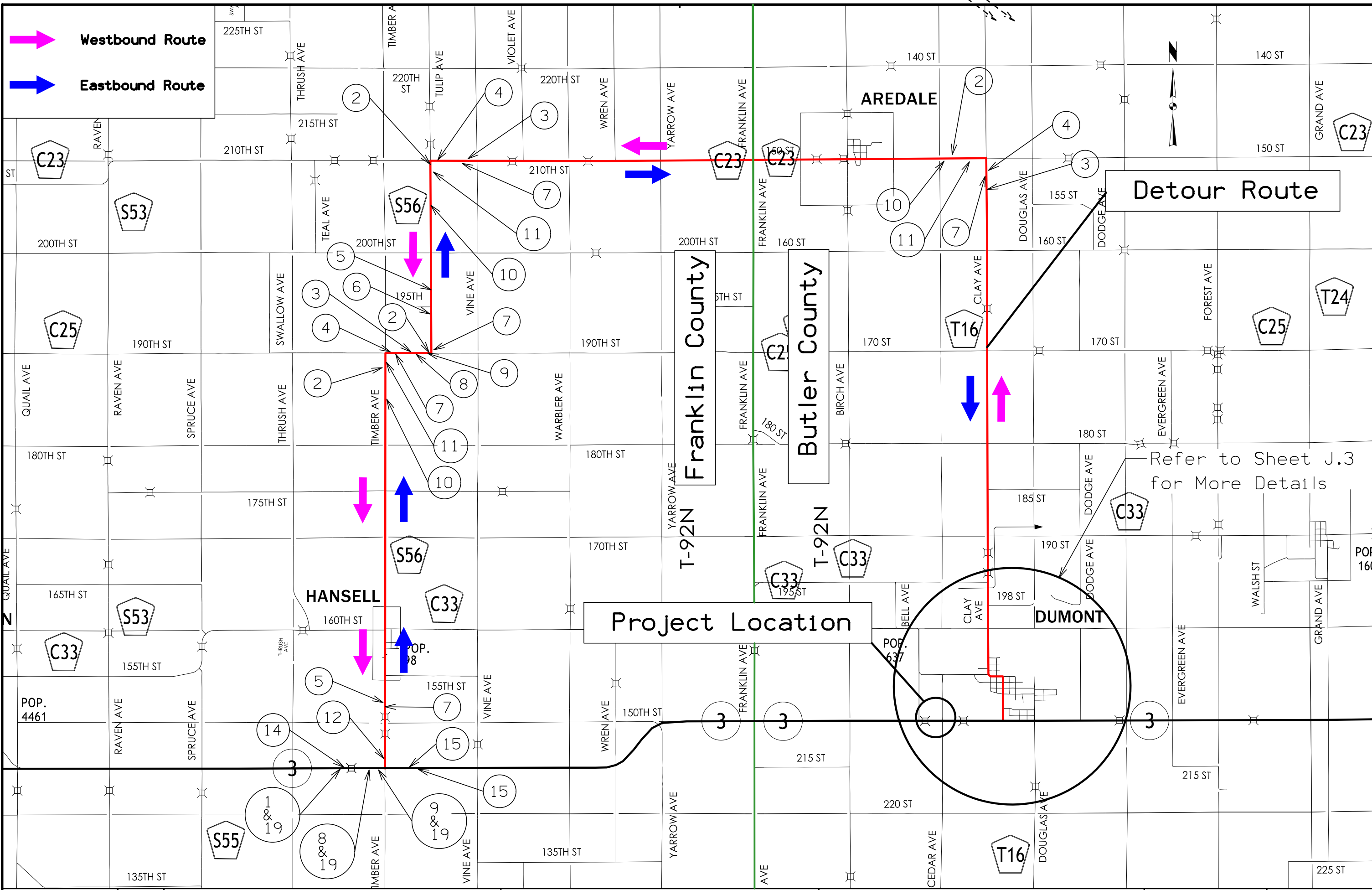
This project will utilize a full road closure per the Standard Road Plans listed in Tab. 105-4 on the C Sheets.

EB & WB traffic on IA 3 will be detoured around the project. Refer to Sheet J.2 for detour details. The detour route is as follows:

EB Detour: Traffic will travel North on Timber Ave. (6.2 miles West of the project) from IA 3 to 190th St. for 4.5 miles. Then travel East to Tulip Ave. for 0.5 miles. Then travel North to County Road C23 for 2 miles. Then travel East to Clay Ave. for 6 miles. Then travel South to Broadway St. in Dumont for 5.6 miles. Then travel East to Main St. for 0.1 miles. Then travel South to IA 3 for 0.5 miles. Total detour length is 19.2 miles. Refer to Detour Route Details on Sheet J.2 for details and sign locations.

WB Detour: Traffic will travel North on Main St. from IA 3 to Broadway St. in Dumont for 0.5 miles. Then travel West to Clay Ave. for 0.1 miles. Then travel North to County Road C23 for 5.6 miles. Then travel West to Tulip Ave. for 6 miles. Then travel South to 190th St. for 2 miles. Then travel West to Timber Ave. for 0.5 miles. Then travel South to IA 3 for 4.5 miles (6.2 miles West of the project). Total detour length is 19.2 miles. Refer to Detour Route Details on Sheet J.2 for details and sign locations.

Installation, maintenance, and removal of detour signage shall be the responsibility of the Contractor.

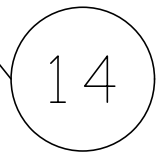
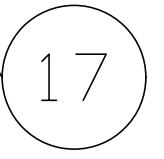
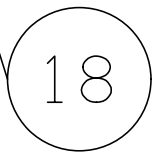
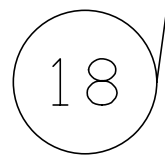
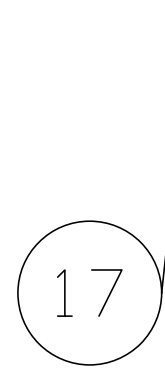
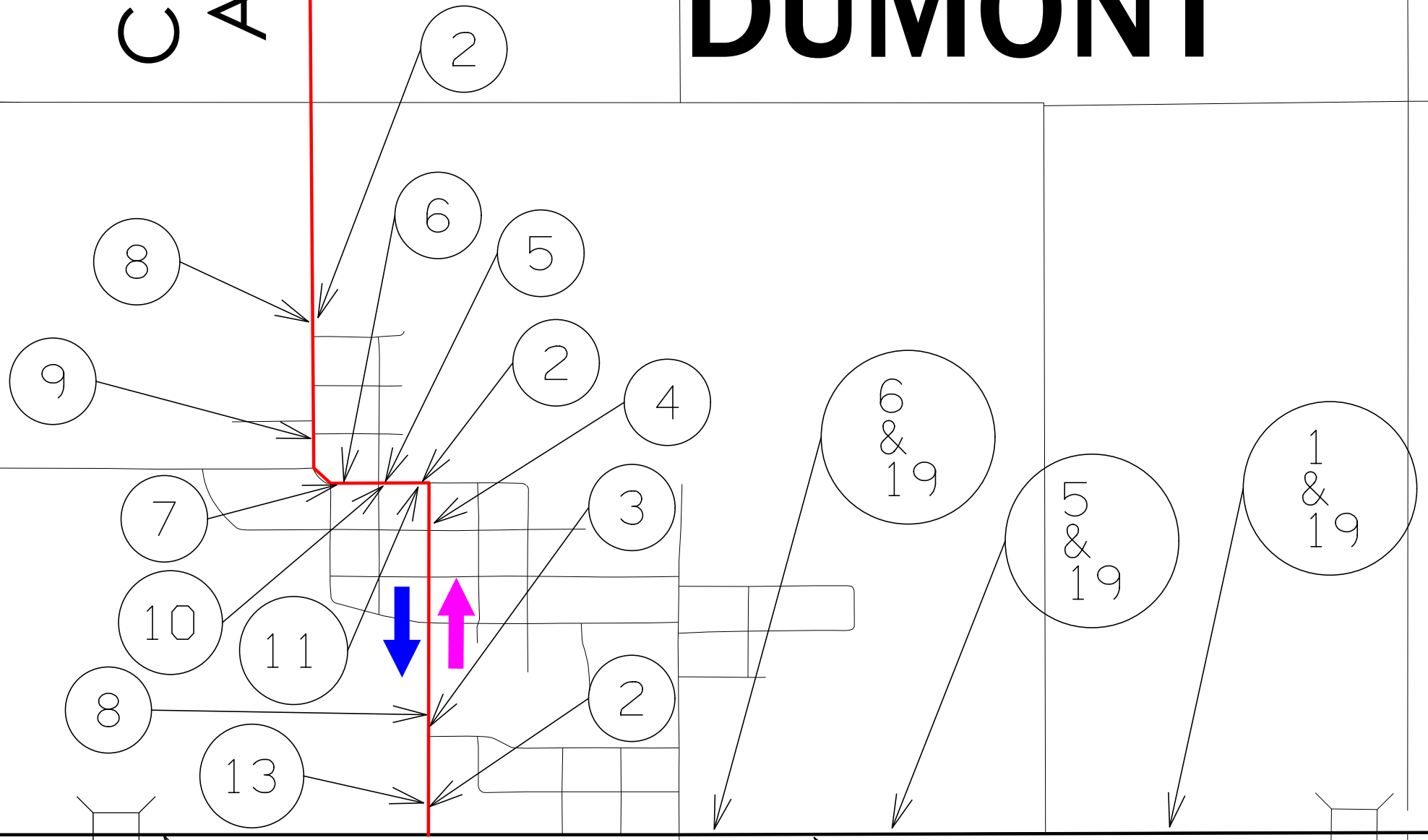


BEL

CL  
A'

DUMONT

POP.  
637





W20-2  
48" x 48"

1



M4-8  
24" x 12"



M3-4  
24" x 12"



M1-6A  
24" x 24"



M6-3  
24" x 12"

2



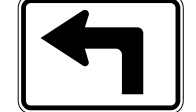
M4-8  
24" x 12"



M3-4  
24" x 12"



M1-6A  
24" x 24"



M5-1B  
24" x 12"

3



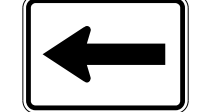
M4-8  
24" x 12"



M3-2  
24" x 12"



M1-6A  
24" x 24"



M6-1  
24" x 12"

4



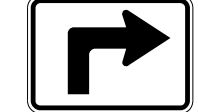
M4-8  
24" x 12"



M3-4  
24" x 12"



M1-6A  
24" x 24"



M5-1  
24" x 12"

5



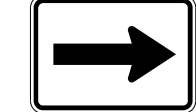
M4-8  
24" x 12"



M3-4  
24" x 12"



M1-6A  
24" x 24"



M6-1  
24" x 12"

6



M4-8  
24" x 12"



M3-2  
24" x 12"



M1-6A  
24" x 24"



M6-3  
24" x 12"

7



M4-8  
24" x 12"



M3-2  
24" x 12"



M1-6A  
24" x 24"



M5-1B  
24" x 12"

8



M4-8  
24" x 12"



M3-2  
24" x 12"



M1-6A  
24" x 24"



M6-1  
24" x 12"

9



M4-8  
24" x 12"



M3-2  
24" x 12"



M1-6A  
24" x 24"



M5-1  
24" x 12"

10



M4-8  
24" x 12"



M3-2  
24" x 12"



M1-6A  
24" x 24"



M6-1  
24" x 12"

11



M2-1  
24" x 12"



M4-8  
24" x 12"



M3-4  
24" x 12"



M1-6A  
24" x 24"

12



M2-1  
24" x 12"



M4-8  
24" x 12"



M3-2  
24" x 12"



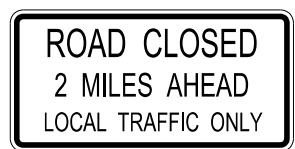
M1-6A  
24" x 24"

13



DOT Stock  
812 514056  
60" x 36"

14



R11-3a  
60" x 30"



M4-10L  
60" x 36"

15



R11-3a  
60" x 30"



M4-10R  
48" x 18"

16



W20-3  
48" x 48"

17



W20-3  
48" x 48"

18



19

**TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS**

Station	Cut				Fill						Checks (EW-102)		Topsoil				[17]	[18]	[19]	[20]	[21]	[22]		
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]								
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink								
IA3_1																								
104+50.00	47	47	0	47	0		20	20	26	21	0	0	0	0	0	0								
104+75.00	46	46	0	46	0		20	20	26	20	0	0	0	0	0	0								
105+00.00	42	42	0	42	0		20	20	26	16	0	0	0	0	0	0								
105+25.00	37	37	0	37	0		20	20	26	11	0	0	0	0	0	0								
105+50.00	31	31	0	31	1		20	21	27	4	0	0	0	0	0	0								
105+75.00	27	27	0	27	1		20	21	27	0	0	0	0	0	0	0								
106+00.00	22	22	0	22	2		20	22	29	-7	0	0	0	0	0	0								
106+25.00	18	18	0	18	3		20	23	30	-12	0	0	0	0	0	0								
106+50.00	17	17	0	17	5		20	25	33	-16	0	0	0	0	0	0								
106+75.00	20	20	0	20	9		20	29	38	-18	0	0	0	0	0	0								
107+00.00	26	26	0	26	5		21	26	34	-8	0	0	0	0	0	0								
107+25.00	36	36	0	36	0		23	23	30	6	0	0	0	0	0	0								
107+50.00	39	39	0	39	0		21	21	27	12	0	0	0	0	0	0								
107+75.00	35	35	0	35	0		20	20	26	9	0	0	0	0	0	0								
108+00.00	38	38	0	38	0		20	20	26	12	0	0	0	0	0	0								
108+25.00	40	40	0	40	0		20	20	26	14	0	0	0	0	0	0								
108+50.00	41	41	0	41	0		20	20	26	15	0	0	0	0	0	0								
108+75.00	43	43	0	43	0		20	20	26	17	0	0	0	0	0	0								
109+00.00	43	43	0	43	0		20	20	26	17	0	0	0	0	0	0								
109+25.00	34	34	0	34	0		16	16	21	13	0	0	0	0	0	0								
109+45.00																								
IA3_1																								
Totals:	682	682	0	682	26	0	401	427	556	127	0	0	0	0	0	0								

**TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS**

Station	Cut				Fill					Checks (EW-102)		Topsoil				[17]	[18]	[19]	[20]	[21]	[22]	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]						
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink						
MLDIKEBOX																						
900+00.00	2	0	2	0	11	2	17	30	39	-39	0	0	2	0	0	2						
900+10.00	3	0	3	0	20	3	22	45	59	-59	0	0	3	0	0	3						
900+20.00	4	0	4	0	30	4	27	61	79	-79	0	0	4	0	0	4						
900+30.00	5	0	5	0	40	5	29	74	96	-96	0	0	5	0	0	5						
900+40.00	5	0	5	0	52	5	31	88	114	-114	0	0	5	0	0	5						
900+50.00	6	0	6	0	65	6	33	104	135	-135	0	0	6	0	0	6						
900+60.00	6	0	6	0	75	6	34	115	150	-150	0	0	6	0	0	6						
900+70.00	7	0	7	0	84	7	35	126	164	-164	0	0	7	0	0	7						
900+80.00	7	0	7	0	93	7	35	135	176	-176	0	0	7	0	0	7						
900+90.00	8	0	8	0	102	8	36	146	190	-190	0	0	8	0	0	8						
901+00.00	9	0	9	0	112	9	36	157	204	-204	0	0	9	0	0	9						
901+10.00	10	0	10	0	121	10	36	167	217	-217	0	0	10	0	0	10						
901+20.00	11	0	11	0	128	11	37	176	229	-229	0	0	11	0	0	11						
901+30.00	12	0	12	0	136	12	38	186	242	-242	0	0	12	0	0	12						
901+40.00	8	0	8	0	146	8	39	193	251	-251	0	0	8	0	0	8						
901+50.00	9	0	9	0	158	9	40	207	269	-269	0	0	9	0	0	9						
901+60.00	14	0	14	0	162	14	40	216	281	-281	0	0	14	0	0	14						
901+70.00	8	0	8	0	162	8	41	211	274	-274	0	0	8	0	0	8						
901+80.00	8	0	8	0	164	8	41	213	277	-277	0	0	8	0	0	8						
901+90.00	13	0	13	0	166	13	42	221	287	-287	0	0	13	0	0	13						
902+00.00	13	0	13	0	168	13	42	223	290	-290	0	0	13	0	0	13						
902+10.00	13	0	13	0	171	13	42	226	294	-294	0	0	13	0	0	13						
902+20.00	13	0	13	0	171	13	42	226	294	-294	0	0	13	0	0	13						
902+30.00	13	0	13	0	170	13	42	225	293	-293	0	0	13	0	0	13						
902+40.00	13	0	13	0	171	13	42	226	294	-294	0	0	13	0	0	13						
902+50.00	13	0	13	0	171	13	42	226	294	-294	0	0	13	0	0	13						
902+60.00	13	0	13	0	173	13	42	228	296	-296	0	0	13	0	0	13						
902+70.00	13	0	13	0	174	13	42	229	298	-298	0	0	13	0	0	13						
902+80.00	13	0	13	0	174	13	42	229	298	-298	0	0	13	0	0	13						
902+90.00	13	0	13	0	176	13	42	231	300	-300	0	0	13	0	0	13						
903+00.00	13	0	13	0	177	13	42	232	302	-302	0	0	13	0	0	13						
903+10.00	13	0	13	0	178	13	43	234	304	-304	0	0	13	0	0	13						
903+20.00	13	0	13	0	178	13	43	234	304	-304	0	0	13	0	0	13						
903+30.00	13	0	13	0	178	13	43	234	304	-304	0	0	13	0	0	13						
903+40.00	13	0	13	0	178	13	43	234	304	-304	0	0	13	0	0	13						
903+50.00	13	0	13	0	179	13	43	235	306	-306	0	0	13	0	0	13						
903+60.00	13	0	13	0	180	13	43	236	307	-307	0	0	13	0	0	13						
903+70.00	13	0	13	0	180	13	43	236	307	-307	0	0	13	0	0	13						
903+80.00	13	0	13	0	179	13	43	235	306	-306	0	0	13	0	0	13						
903+90.00	14	0	14	0	176	14	42	232	302	-302	0	0	14	0	0	14						
904+00.00	14	0	14	0	176	14	42	232	302	-302	0	0	14	0	0	14						
904+10.00	14	0	14	0	176	14	43	233	303	-303	0	0	14	0	0	14						
904+20.00	14	0	14	0	176	14	43	233	303	-303	0	0	14	0	0	14						
904+30.00	14	0	14	0	177	14	43	234	304	-304	0	0	14	0	0	14						
904+40.00	14	0	14	0	178	14	43	235	306	-306	0	0	14	0	0	14						
904+50.00	15	0	15	0	188	15	43	246	320	-320	0	0	15	0	0	15						
904+60.00	16	0	16	0	202	16	42	260	338	-338	0	0	16	0	0	16						
904+70.00	17	0	17	0	213	17	42	272	354	-354	0	0	17	0	0	17						
904+80.00	17	0	17	0	225	17	42	284	369	-369	0	0	17	0	0	17						
904+90.00	18	0	18	0	236	18	42	296	385	-385	0	0	18	0	0	18						
905+00.00	19	0	19	0	248	19	42	309	402	-402	0	0	19	0	0	19						
905+10.00	20	0	20	0	262	20	42	324	421	-421	0	0	20	0	0	20						
905+20.00	21	0	21	0	272	21	43	336	437	-437	0	0	21	0	0	21						
905+30.00	23	0	23	0	282	23	43	348	452	-452	0	0	23	0	0	23						
905+40.00	25	0	25	0	301	25	43	369	480	-480	0	0	25	0	0	25						
905+50.00	27	0	27	0	319	27	43	389	506	-506	0	0	27	0	0	27						
905+60.00	28	0	28	0	337	28	43	408	530	-530	0	0	28	0	0	28						
905+70.00	29	0	29	0	366	29	43	438	569	-569	0	0	29	0	0	29						
905+80.00	30	0	30	0	399	30	43	472	614	-614	0	0	30	0	0	30						
905+90.00	31	0	31	0	435	31	43	509	662	-662	0	0	31	0	0	31						
906+00.00	32	0	32	0	464	32	43	539	701	-701	0	0	32	0	0	32						
906+10.00	32	0	32	0	476	32	43	551	716	-716	0	0	32	0	0	32						
906+20.00	32	0	32	0	489	32	43	564	733	-733	0	0	32	0	0	32						
906+30.00	26	0	26	0	416	26	43	485	631	-631	0	0	26	0	0	26						
906+40.00	18	0	18	0	304	18	43	365	475	-475	0	0	18	0	0	18						
906+50.00	15	0	15	0	258	15	43	316	411	-411	0	0	15	0	0	15						
906+60.00	11	0	11	0	218	11	43	272	354	-354	0	0	11	0	0	11						
906+70.00	7	0	7	0	176	7	44	227	295	-295	0	0	7	0	0	7						
Subtotals:	982	0	982	0	13,320	982	2,691	16,993	22,091	-22,091	0	0	982	0	0	982						

**TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS**

Station	Cut				Fill						Checks (EW-102)		Topsoil				[17]	[18]	[19]	[20]	[21]	[22]		
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]								
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink								
906+70.00	5	0	5	0	128	5	45	178	231	-231	0	0	5	0	0	5								
906+80.00	4	0	4	0	82	4	36	122	159	-159	0	0	4	0	0	4								
906+90.00																								
MLDIKEBOX																								
Totals:	991	0	991	0	13,530	991	2,772	17,293	22,481	-22,481	0	0	991	0	0	991								

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Table with 22 columns: Station, Cut (Unadjusted Volume, Total Class 10 Unadjusted Volume, Topsoil Cut Volume, Total Cut Adjusted), Fill (Unadjusted Volume, Existing Topsoil Stripping Undercut (+Fill), Existing Pavement Undercut (+Fill), Total Fill Adjusted, Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor, Total Cut Adjusted Minus Fill w/ Shrink), Checks (EW-102) (Approx. Fill Vol. Below 5' & Above 20' w/ Shrink, Approx. Fill Volume Below 3' w/ Shrink), Topsoil (Stripping Undercut Volume, Placement Undercut Volume, Placement With 1.4 Shrink Factor, Stripping Minus Topsoil Placement w/Shrink), and columns [17] through [22].



### TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut				Fill						Checks (EW-102)		Topsoil				[17]	[18]	[19]	[20]	[21]	[22]	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]							
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink							
217+50.00	79	31	48	31	217	48	87	352	458	-427	0	0	48	0	0	48							
217+75.00	76	25	51	25	240	51	86	377	490	-465	0	0	51	0	0	51							
218+00.00	75	20	55	20	276	55	85	416	541	-521	0	0	55	0	0	55							
218+25.00	73	15	58	15	305	58	83	446	580	-565	0	0	58	0	0	58							
218+50.00	67	9	58	9	309	58	81	448	582	-573	0	0	58	0	0	58							
218+75.00	50	3	47	3	289	47	78	414	538	-535	0	0	47	0	0	47							
219+00.00	36	0	36	0	291	36	75	402	523	-523	0	0	36	0	0	36							
219+25.00	35	0	35	0	264	35	72	371	482	-482	0	0	35	0	0	35							
219+50.00	34	0	34	0	212	34	68	314	408	-408	0	0	34	0	0	34							
219+75.00	32	0	32	0	170	32	65	267	347	-347	0	0	32	0	0	32							
220+00.00	35	5	30	5	102	30	63	195	254	-249	0	0	30	0	0	30							
220+25.00	20	5	15	5	24	15	36	75	98	-93	0	0	15	0	0	15							
220+40.00																							
ML CEDAR AVE. Totals:	7,261	3,859	3,402	3,859	26,729	3,402	7,672	37,803	49,144	-45,285	0	0	3,402	0	0	3,402							

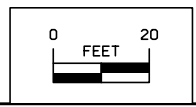
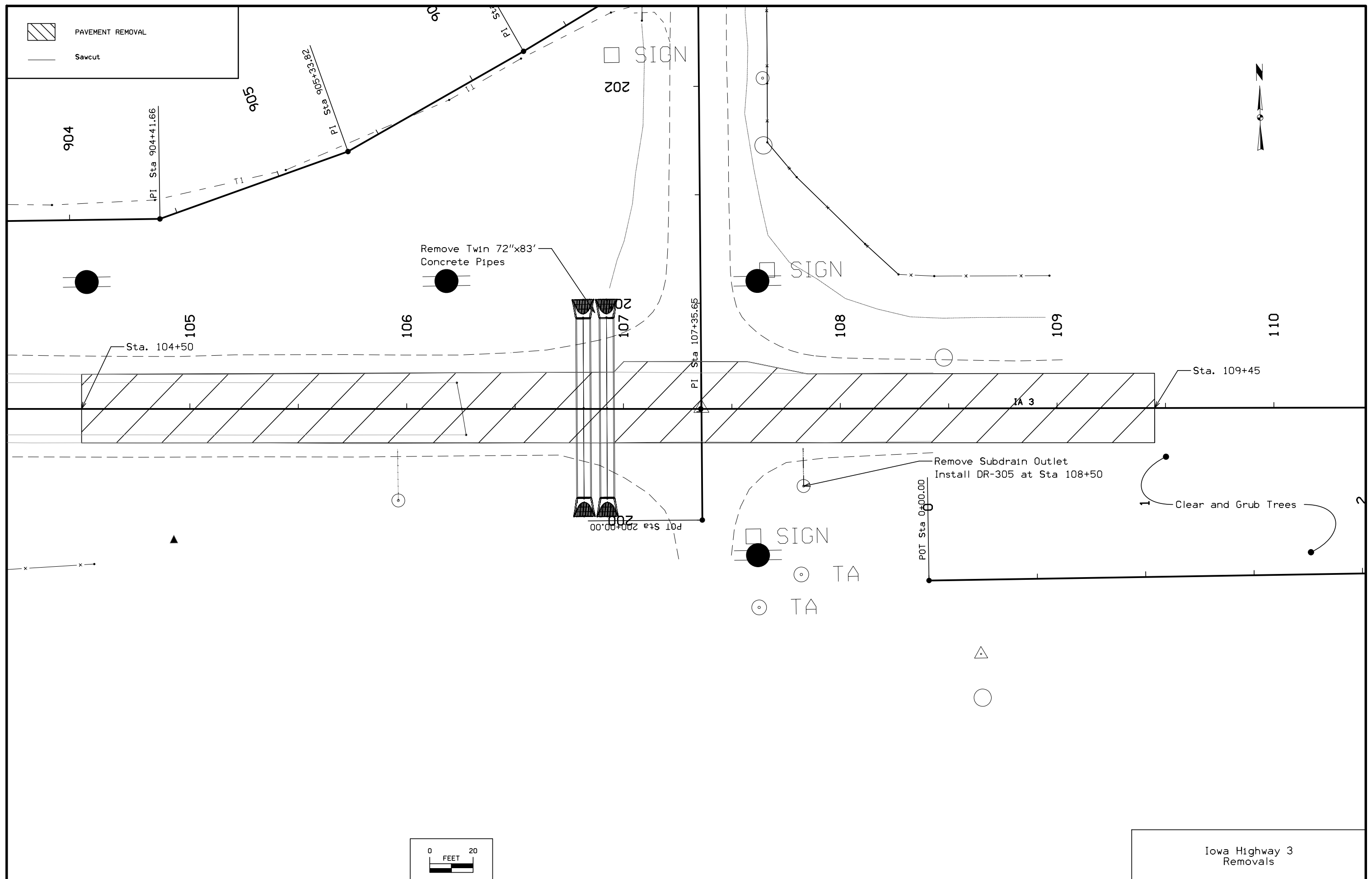
**TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS**

Station	Cut				Fill						Checks (EW-102)		Topsoil				[17]	[18]	[19]	[20]	[21]	[22]
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]						
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink						
SouthDitch																						
+00.00	104	77	27	77	0	27	27	35	42	0	0	27	0	0	27							
+25.00	100	75	25	75	0	25	25	33	43	0	0	25	0	0	25							
+50.00	100	75	25	75	0	25	25	33	43	0	0	25	0	0	25							
+75.00	100	75	25	75	0	25	25	33	43	0	0	25	0	0	25							
1+00.00	100	75	25	75	0	25	25	33	43	0	0	25	0	0	25							
1+25.00	101	76	25	76	0	25	25	33	44	0	0	25	0	0	25							
1+50.00	100	76	24	76	0	24	24	31	45	0	0	24	0	0	24							
1+75.00	103	78	25	78	0	25	25	33	46	0	0	25	0	0	25							
2+00.00	102	77	25	77	0	25	25	33	45	0	0	25	0	0	25							
2+25.00	96	71	25	71	0	25	25	33	39	0	0	25	0	0	25							
2+50.00	90	65	25	65	0	25	25	33	33	0	0	25	0	0	25							
2+75.00	86	62	24	62	0	24	24	31	31	0	0	24	0	0	24							
3+00.00	86	62	24	62	0	24	24	31	31	0	0	24	0	0	24							
3+25.00	85	61	24	61	0	24	24	31	30	0	0	24	0	0	24							
3+50.00	83	60	23	60	0	23	23	30	30	0	0	23	0	0	23							
3+75.00	84	62	22	62	0	22	22	29	33	0	0	22	0	0	22							
4+00.00	90	68	22	68	0	22	22	29	39	0	0	22	0	0	22							
4+25.00	90	68	22	68	0	22	22	29	39	0	0	22	0	0	22							
4+50.00	87	66	21	66	0	21	21	27	39	0	0	21	0	0	21							
4+75.00	88	66	22	66	0	22	22	29	37	0	0	22	0	0	22							
5+00.00	89	67	22	67	0	22	22	29	38	0	0	22	0	0	22							
5+25.00	91	68	23	68	0	23	23	30	38	0	0	23	0	0	23							
5+50.00	90	67	23	67	0	23	23	30	37	0	0	23	0	0	23							
5+75.00	89	66	23	66	0	23	23	30	36	0	0	23	0	0	23							
6+00.00	91	68	23	68	0	23	23	30	38	0	0	23	0	0	23							
6+25.00	96	72	24	72	0	24	24	31	41	0	0	24	0	0	24							
6+50.00	100	76	24	76	0	24	24	31	45	0	0	24	0	0	24							
6+75.00	100	75	25	75	0	25	25	33	43	0	0	25	0	0	25							
7+00.00	97	73	24	73	0	24	24	31	42	0	0	24	0	0	24							
7+25.00	92	69	23	69	0	23	23	30	39	0	0	23	0	0	23							
7+50.00	89	67	22	67	0	22	22	29	38	0	0	22	0	0	22							
7+75.00	86	65	21	65	0	21	21	27	38	0	0	21	0	0	21							
8+00.00	84	63	21	63	0	21	21	27	36	0	0	21	0	0	21							
8+25.00	87	65	22	65	0	22	22	29	36	0	0	22	0	0	22							
8+50.00	87	66	21	66	0	21	21	27	39	0	0	21	0	0	21							
8+75.00	83	63	20	63	0	20	20	26	37	0	0	20	0	0	20							
9+00.00	83	63	20	63	0	20	20	26	37	0	0	20	0	0	20							
9+25.00	82	63	19	63	0	19	19	25	38	0	0	19	0	0	19							
9+50.00	77	59	18	59	0	18	18	23	36	0	0	18	0	0	18							
9+75.00	72	54	18	54	0	18	18	23	31	0	0	18	0	0	18							
10+00.00	72	54	18	54	0	18	18	23	31	0	0	18	0	0	18							
10+25.00	79	61	18	61	0	18	18	23	38	0	0	18	0	0	18							
10+50.00	80	62	18	62	0	18	18	23	39	0	0	18	0	0	18							
10+75.00																						
SouthDitch Totals:	3,871	2,901	970	2,901	0	970	0	970	1,261	1,640	0	0	970	0	0	970						

### TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

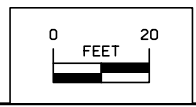
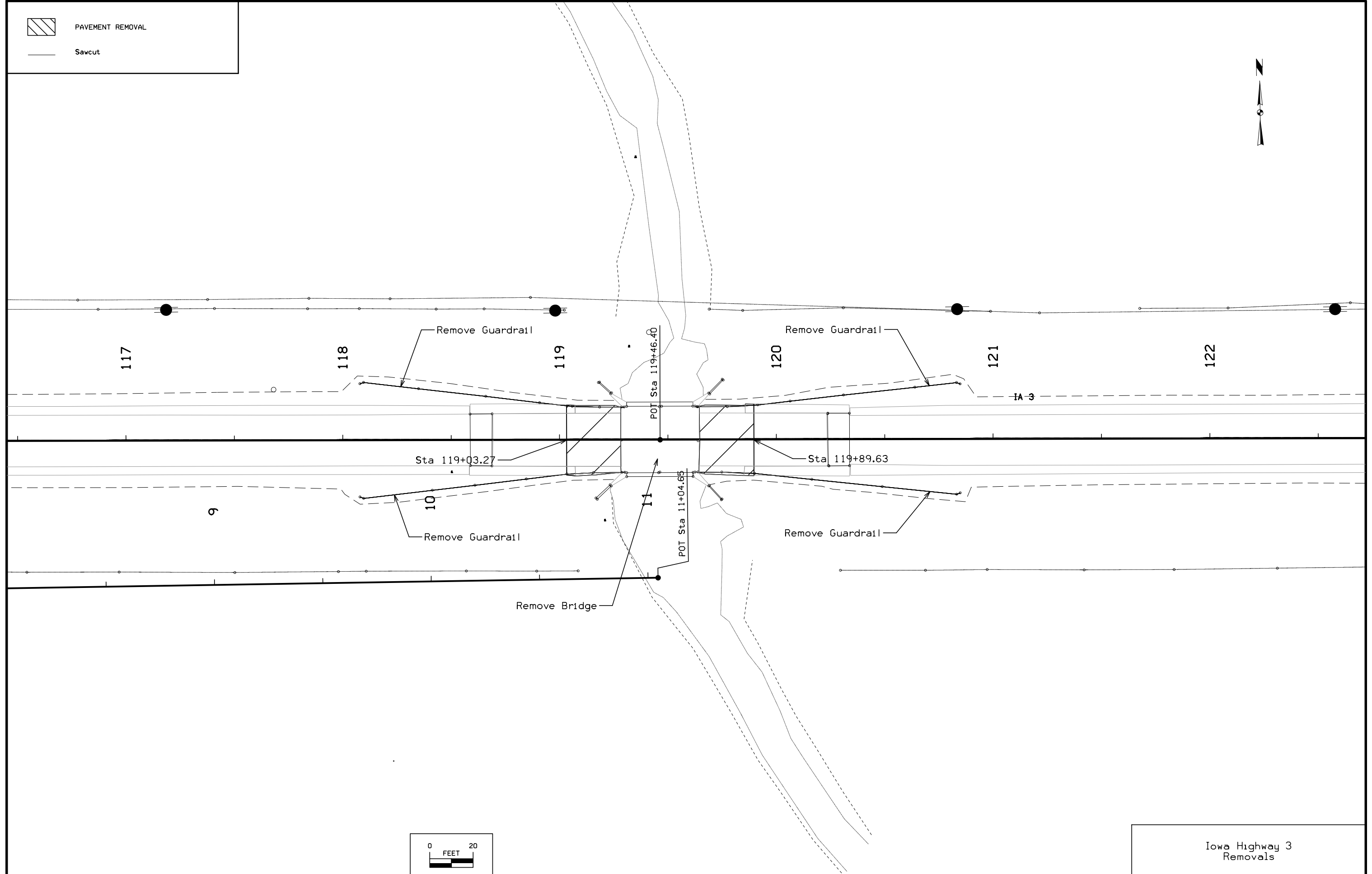
Station	Cut				Fill						Checks (EW-102)		Topsoil				[17]	[18]	[19]	[20]	[21]	[22]	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]							
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink							
<b>Summary:</b>																							
IA3 1	682	682	0	682	26	0	401	427	556	127	0	0	0	0	0	0							
MLDIKEBOX	991	0	991	0	13,530	991	2,772	17,293	22,481	-22,481	0	0	991	0	0	991							
ML CEDAR AVE.	7,261	3,859	3,402	3,859	26,729	3,402	7,672	37,803	49,144	-45,285	0	0	3,402	0	0	3,402							
SouthDitch	3,871	2,901	970	2,901	0	970	0	970	1,261	1,640	0	0	970	0	0	970							
<b>Project Totals:</b>	<b>12,805</b>	<b>7,442</b>	<b>5,363</b>	<b>7,442</b>	<b>40,285</b>	<b>5,363</b>	<b>10,845</b>	<b>56,493</b>	<b>73,442</b>	<b>-65,999</b>	<b>0</b>	<b>0</b>	<b>5,363</b>	<b>0</b>	<b>0</b>	<b>5,363</b>							
<b>BID ITEM TOTALS:</b>																							
<u>Excavation, Class 10, Roadway &amp; Borrow</u>																							
			7,442	CY																			
			[4]																				
<u>Embankment-In-Place</u>																							
			65,999 / 1.3 = 50768	CY																			
			[10] / 1.3																				
<u>Topsoil, Strip, Salvage &amp; Spread</u>																							
			5,363	CY																			
			[16]																				
<u>Excavation, Class 10, Unsuitable or Unstable Material</u>																							
			10,845	CY																			
			[7]																				

 PAVEMENT REMOVAL  
 Sawcut







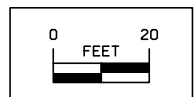
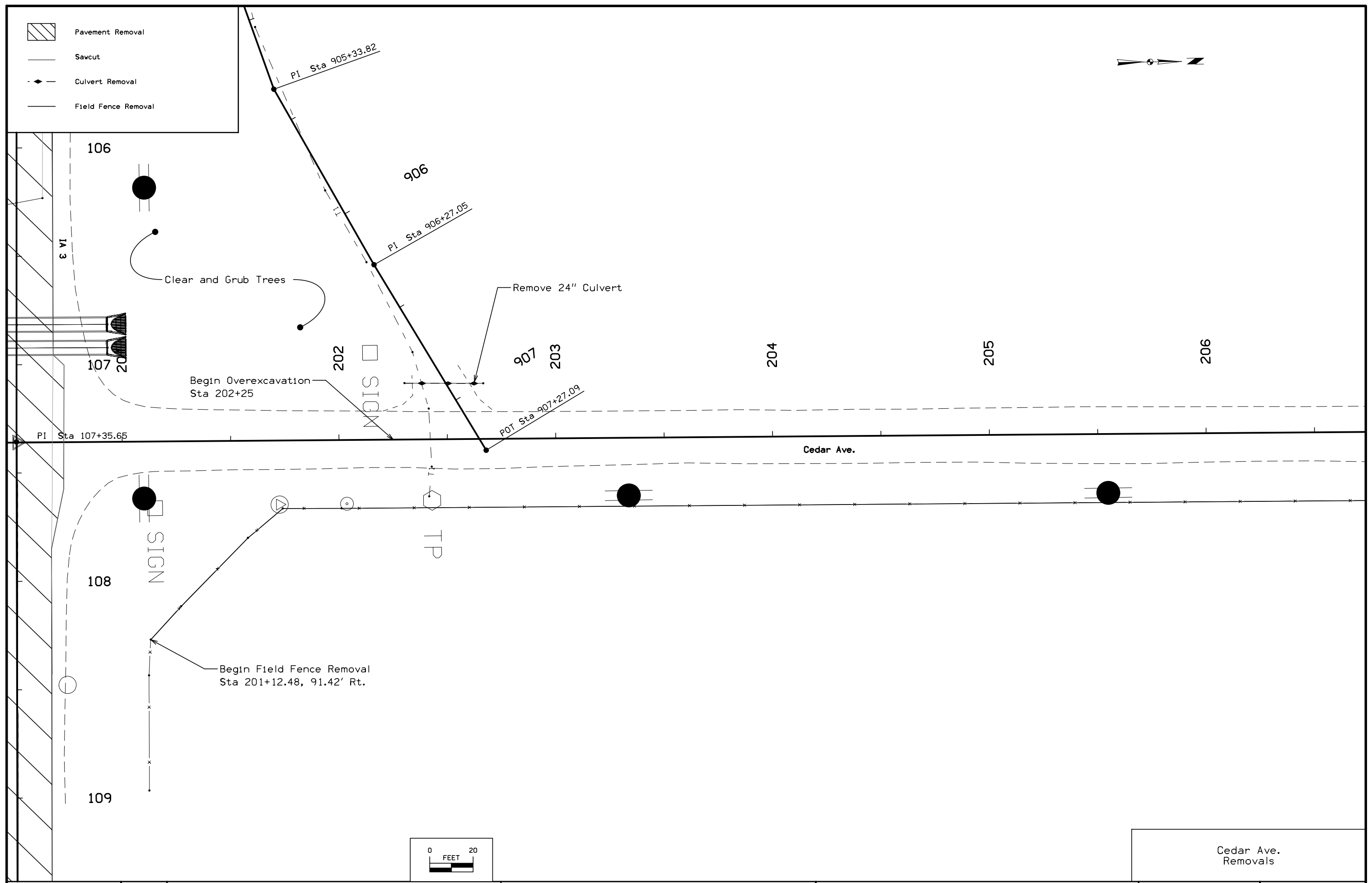
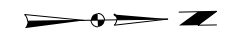
Iowa Highway 3  
Removals

 PAVEMENT REMOVAL  
 Sawcut







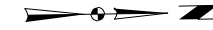
Iowa Highway 3  
Removals

 Pavement Removal  
 Sawcut  
 Culvert Removal  
 Field Fence Removal



Cedar Ave.  
Removals

-  Pavement Removal
-  Sawcut
-  Culvert Removal
-  Field Fence Removal



207

208

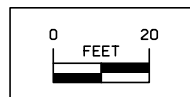
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210





211

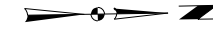
212

Cedar Ave.



Cedar Ave.  
Removals

-  Pavement Removal
-  Sawcut
-  Culvert Removal
-  Field Fence Removal



213

214

215

216

217

218

401

POT Sta 400+00.00

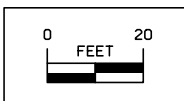
Cedar Ave.

Stop Field Fence Removal  
Sta 213+58.50, 31.75' Rt.

Remove 18" Culvert





Resume Field Fence Removal  
Sta 214+11.10, 32.32' Rt.

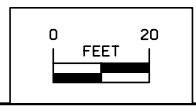
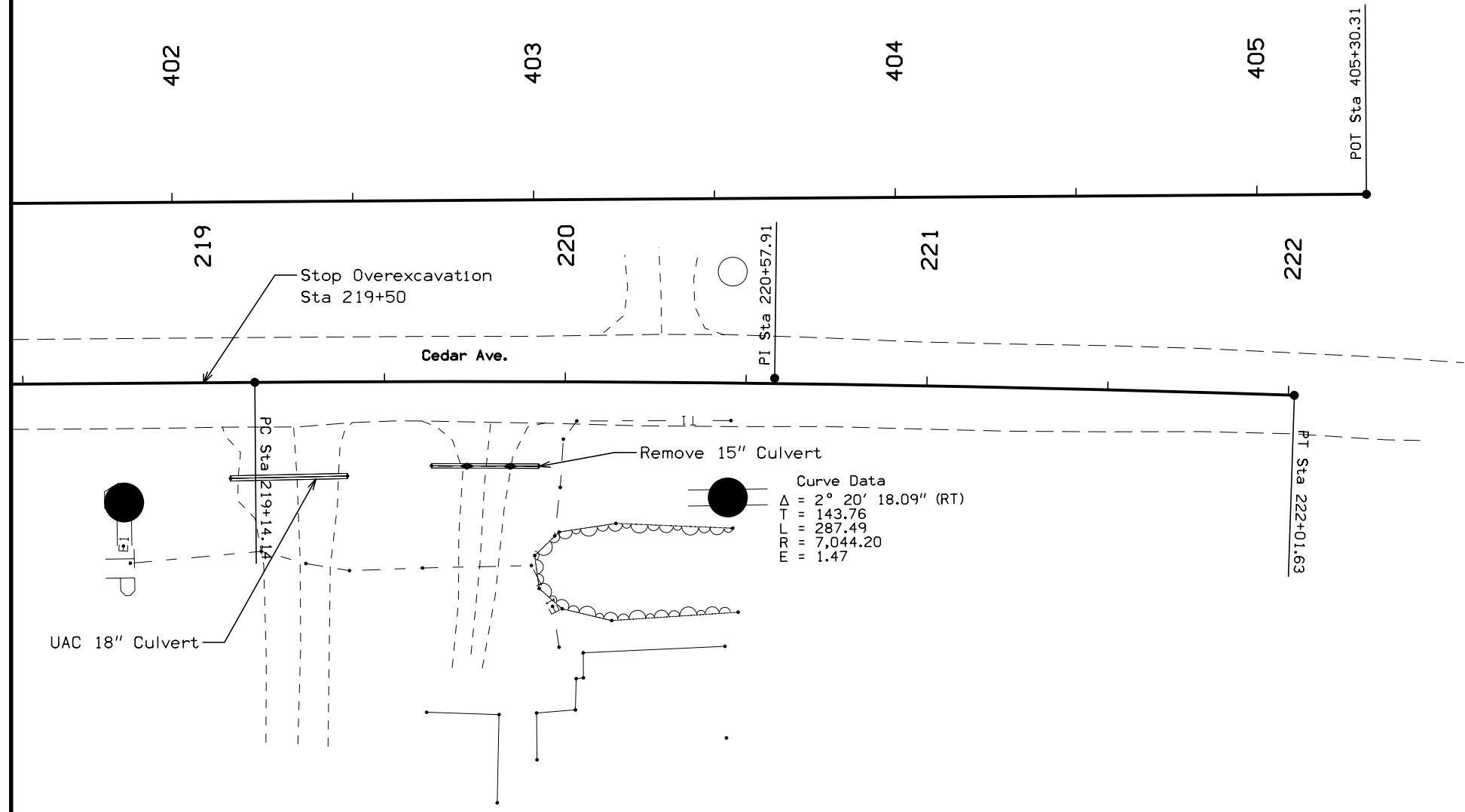
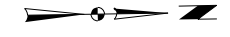
End Field Fence Removal  
Sta 217+23.17, 51.71' Rt.



Cedar Ave.  
Removals

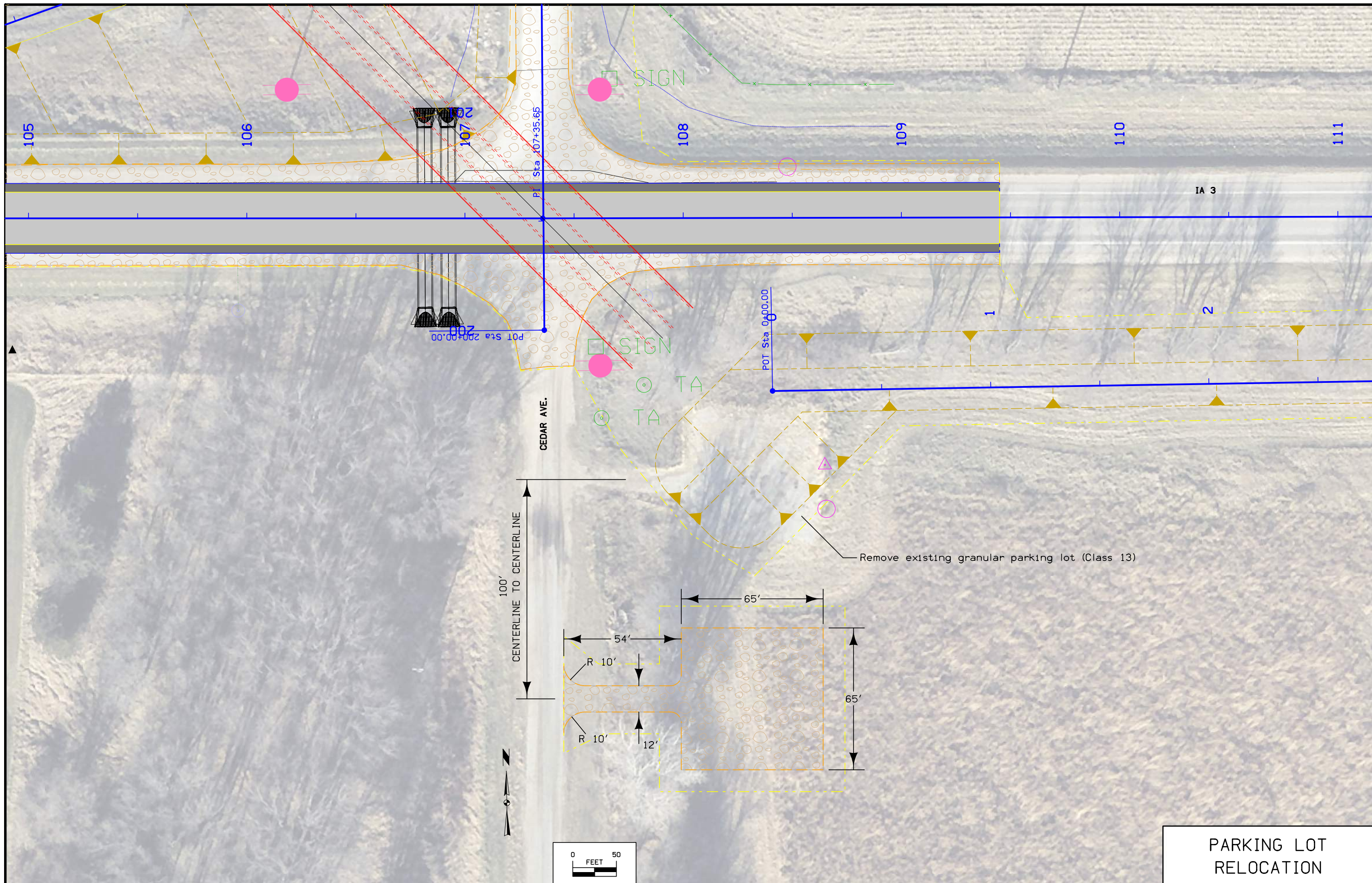


-  Pavement Removal
-  Sawcut
-  Culvert Removal
-  Field Fence Removal



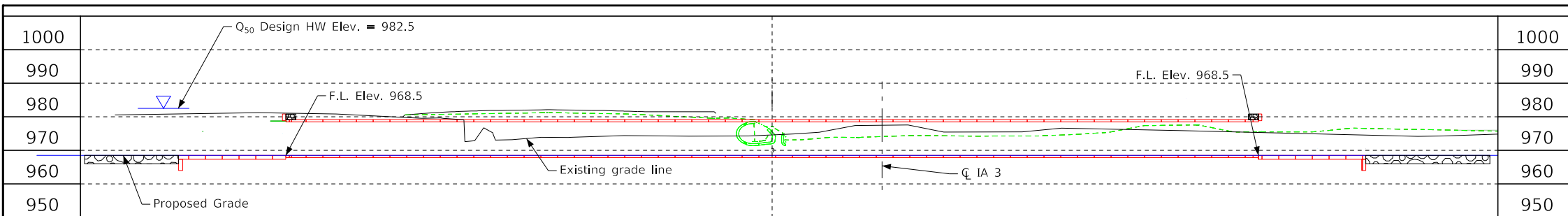
Cedar Ave.  
Removals





PARKING LOT  
RELOCATION





Control Point: BM No. 1: N. 8935364.127, E. 15302436.356, Elev. 975.929 RR spike E. side of fence post.

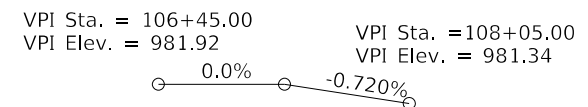
This design is for the replacement of the existing 33' x 30' Concrete Slab Bridge, Design No. 257, FHWA No. 16490, Maint No. 1294.15003.

All units are in feet unless otherwise noted or shown.

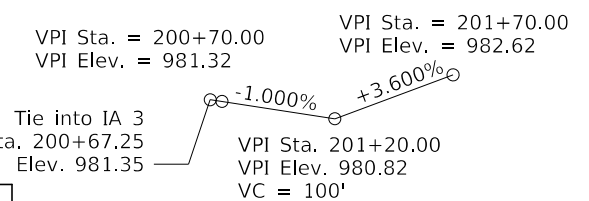
Lintel beam and curtain walls shall form one continuous line and shall not be staggered or offset.

Flow line of the culvert has been set 2' below streambed.

Existing Structure  
33'x30' Concrete Slab Bridge  
0° Skew  
Design No. 257  
Sta. 119+52.13  
(To be Removed)



Proposed Profile Grade IA 3



Profile Grade Cedar Ave.

Hydraulic Data

Drainage Area = 180.1 SQ. MI.  
Q<sub>50</sub> = 2,610 CFS  
HW Elev. = 982.5  
Q<sub>100</sub> = 2,818 CFS  
HW Elev. = 983.3  
Stream Slope = 3.56 Ft./Mi.

IA 3 Traffic Estimate

2019 AADT 2000 V.P.D.  
2039 AADT 2100 V.P.D.  
Trucks 19 %  
Total  
Design ESALs N.A.

Location

On IA 3 over Hartgraves Creek Overflow  
T-92N R-18W  
Sections 28, 29, 32, 33  
Pittsford Township  
Butler County  
Bridge Maint. No. 1294.15003  
FHWA No. 16490  
Latitude 42.744985°  
Longitude -92.985919°

Preliminary

Design For 45° Skew (RA)  
Triple 12' x 10' x 290'-0" Precast Reinforced Concrete Box Culvert

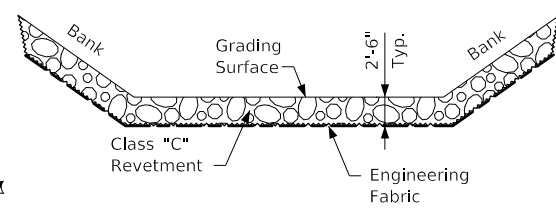
Situation Plan

STA. 107+35.65 (IA 3) February 2022  
BUTLER COUNTY  
IOWA DEPARTMENT OF TRANSPORTATION  
Design No. xxx Design Sheet No. 1 of 1 FHWA No. 16490

Estimated Revetment Quantities Included With Road Plans

Location	Revetment Class "C" (Ton)	Engineering Fabric (SY)	Excavation (CY)
Inlet	246.4	286.4	154
Outlet	308.8	338.7	193
Totals	555.2	625.1	347.0

Excavation quantity calculated from grading surface. Quantities shown for information only. See Road Sheets.



Proposed Revetment Data

Location	Station	Offset
A1	105+59.93	209.19' LT.
A2	105+26.46	175.72' LT.
B1	108+56.03	87.33' RT.
B2	108+22.49	120.74' RT.

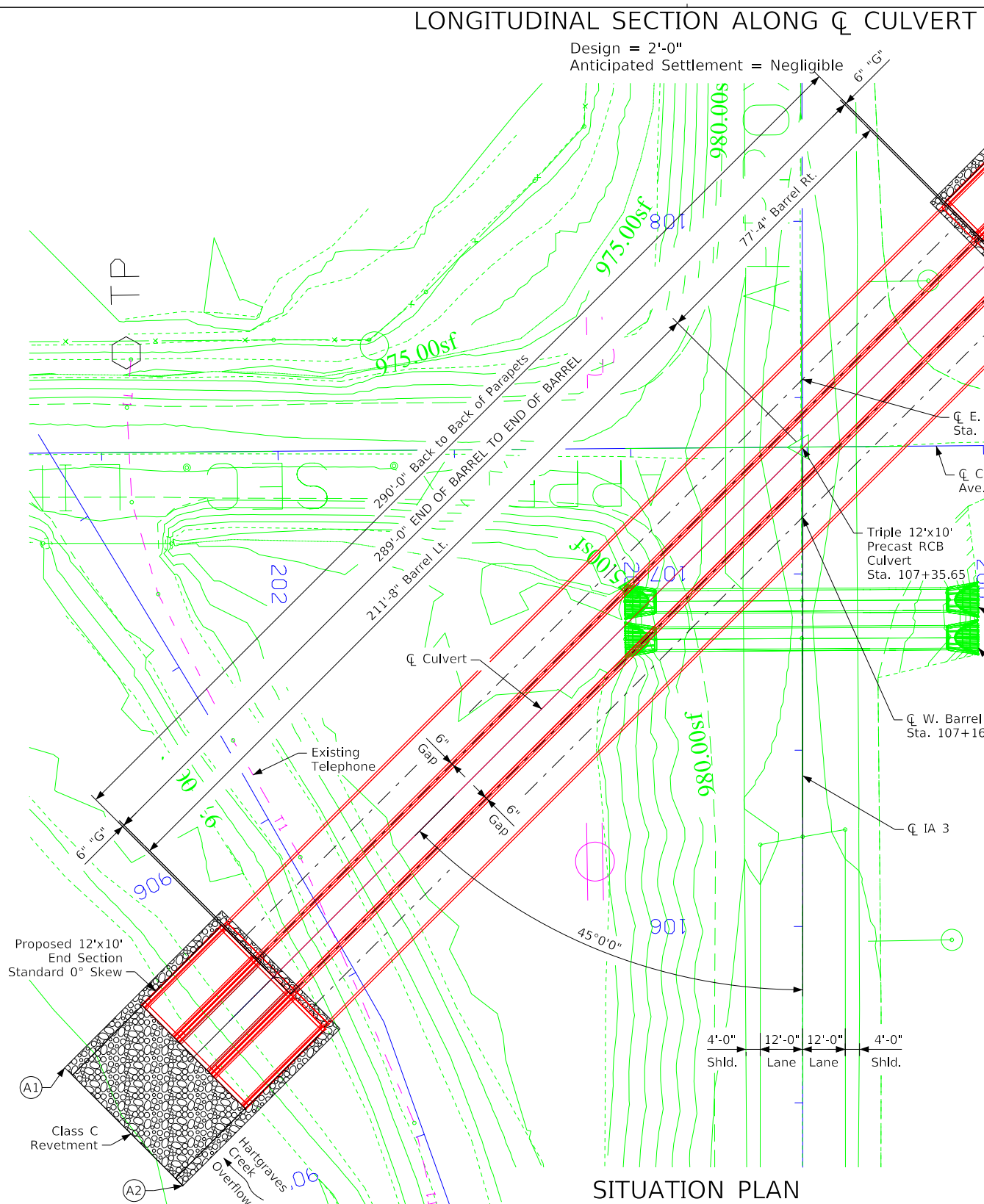
Berm slope elevations reflect the grading surface.

Utilities Legend

Sub-Surface Utility Mapping Quality Level is in accordance with CI/ASCE 38-02 Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data.

Remark Abbreviations  
QLA Quality Level A Highest guideline quality level  
QLD Quality Level D Lowest guideline quality level

- T1 — Telephone Line - Dumont Telephone
- Power Pole - Mid America



SITUATION PLAN

**LINE STYLE LEGEND OF CROSS SECTION SHEETS (ROAD)**

- Existing Ground Line
- ===== Proposed Template
- ===== Proposed Topsoil Placement
- Additional Topsoil Removal
- Subgrade Treatment
- Granular Shoulder
- ===== Pavement
- Existing Pipe\RCB
- ===== Proposed Pipe\RCB
- ===== Proposed Dike
- ===== All Elements Associated with Proposed Entrances

**LINE STYLE LEGEND OF CROSS SECTION SHEETS (SOILS)**

- Topsoil (Class 10)
- SLOPE DRESSING ----- Slope Dressing Only
- Class 10 Materials
- Select Loams And Clay-Loams
- Select Sand
- Unsuitable Type A Disposal
- Unsuitable Type B Disposal
- Unsuitable Type C Disposal
- Shale
- Waste
- Broken and Weathered Rock
- Solid Rock
- Boulders

Note: All layer lines and descriptions identify layers above the line.

Note: Vertical or near vertical lines connecting soil layers at edges of cross sections are only for the purpose of calculating template quantities and do not depict soil stratification.

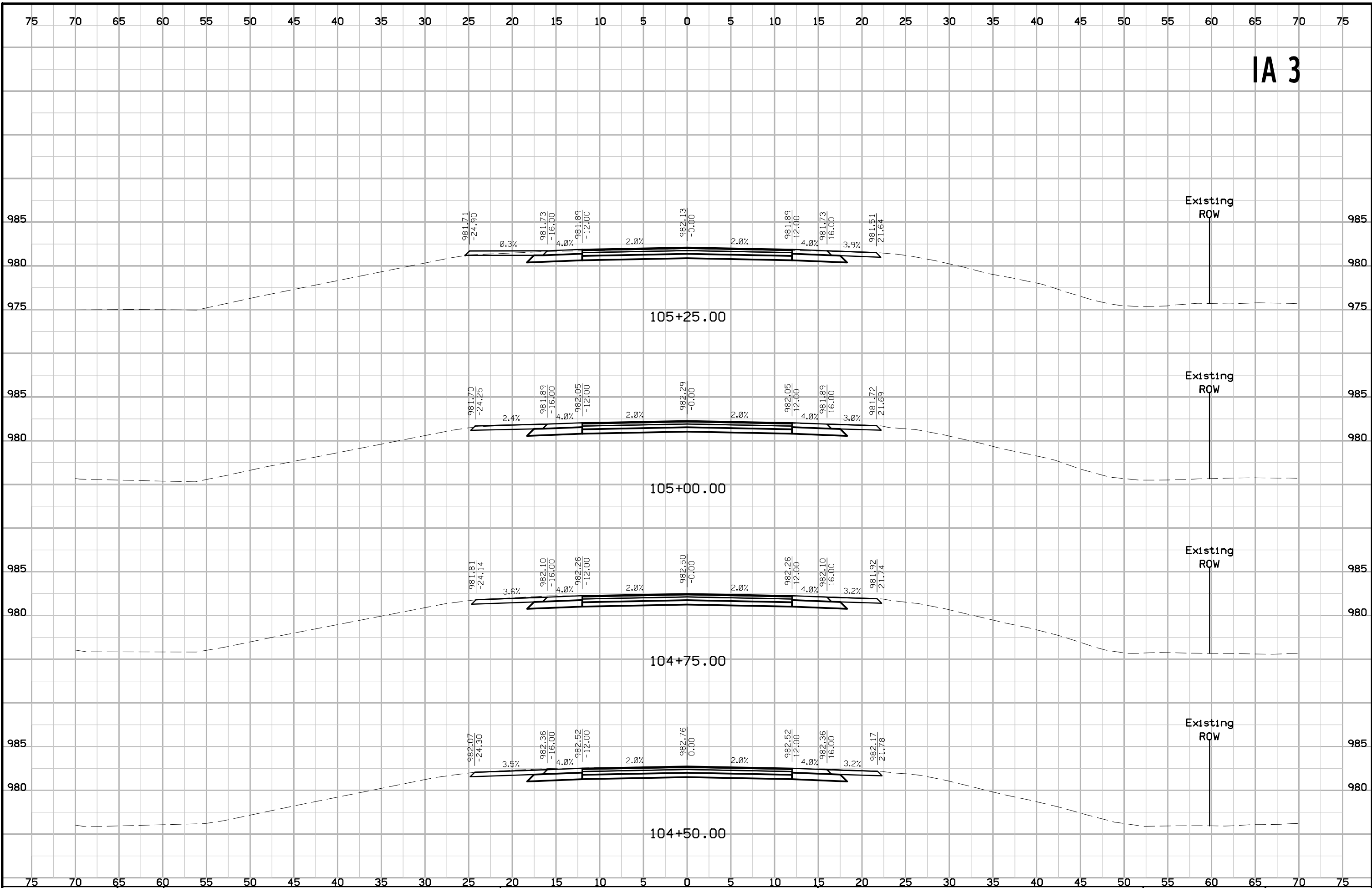
**SYMBOL LEGEND OF CROSS SECTION SHEETS**

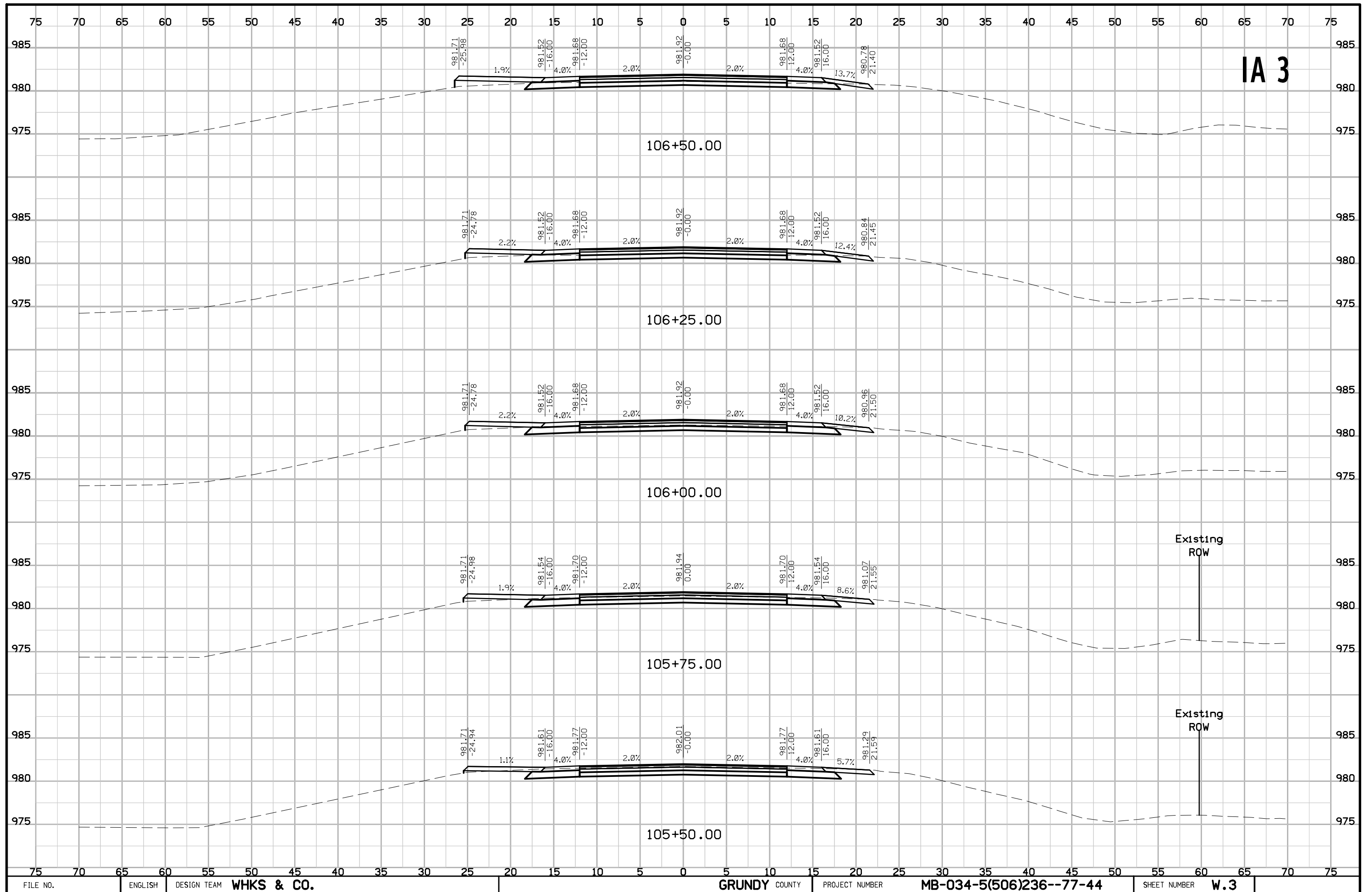
- Existing ROW  
----- Existing Right-of-Way Limit
- Proposed ROW  
----- Proposed Right-of-Way Limit
- Temporary ROW  
----- Temporary Right-of-Way Limit

CROSS SECTION

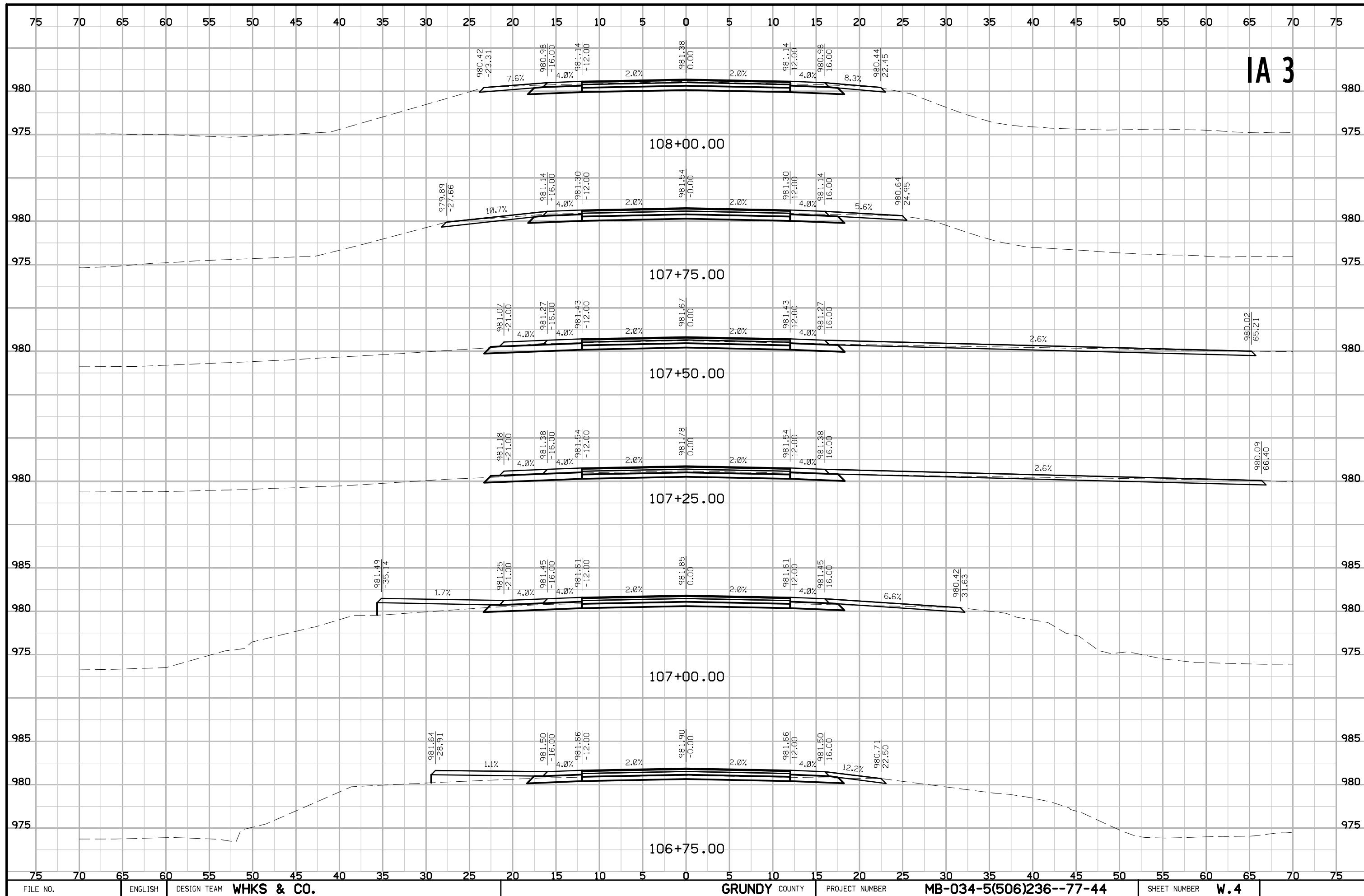
(COVERS SHEET SERIES W, X, Y, & Z)

# IA 3

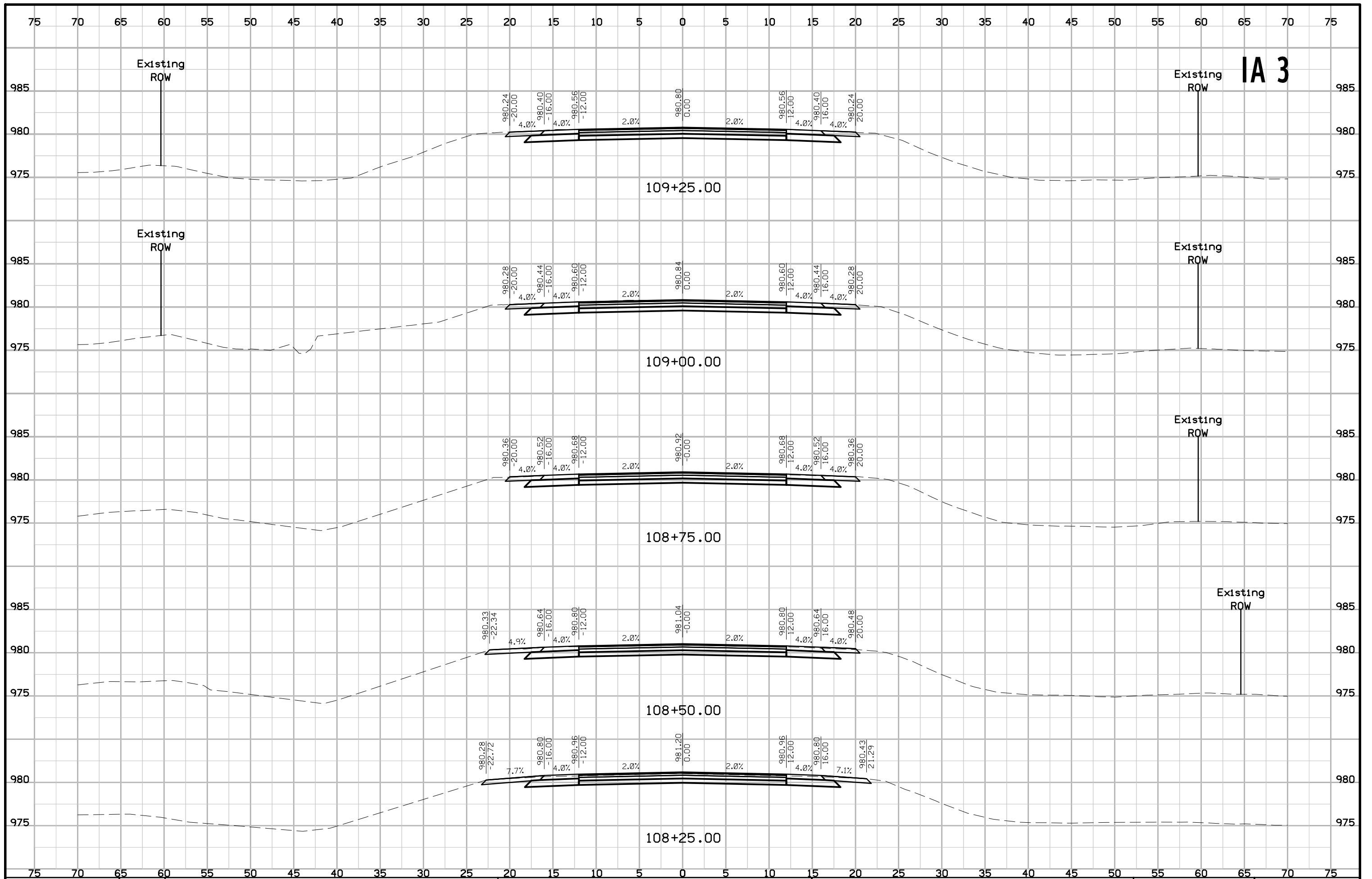






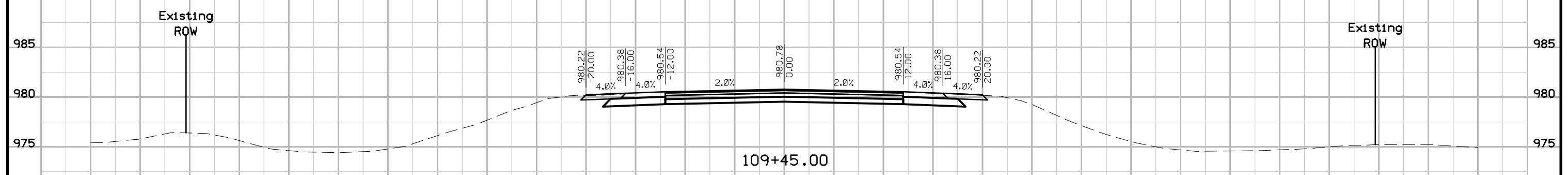


IA 3



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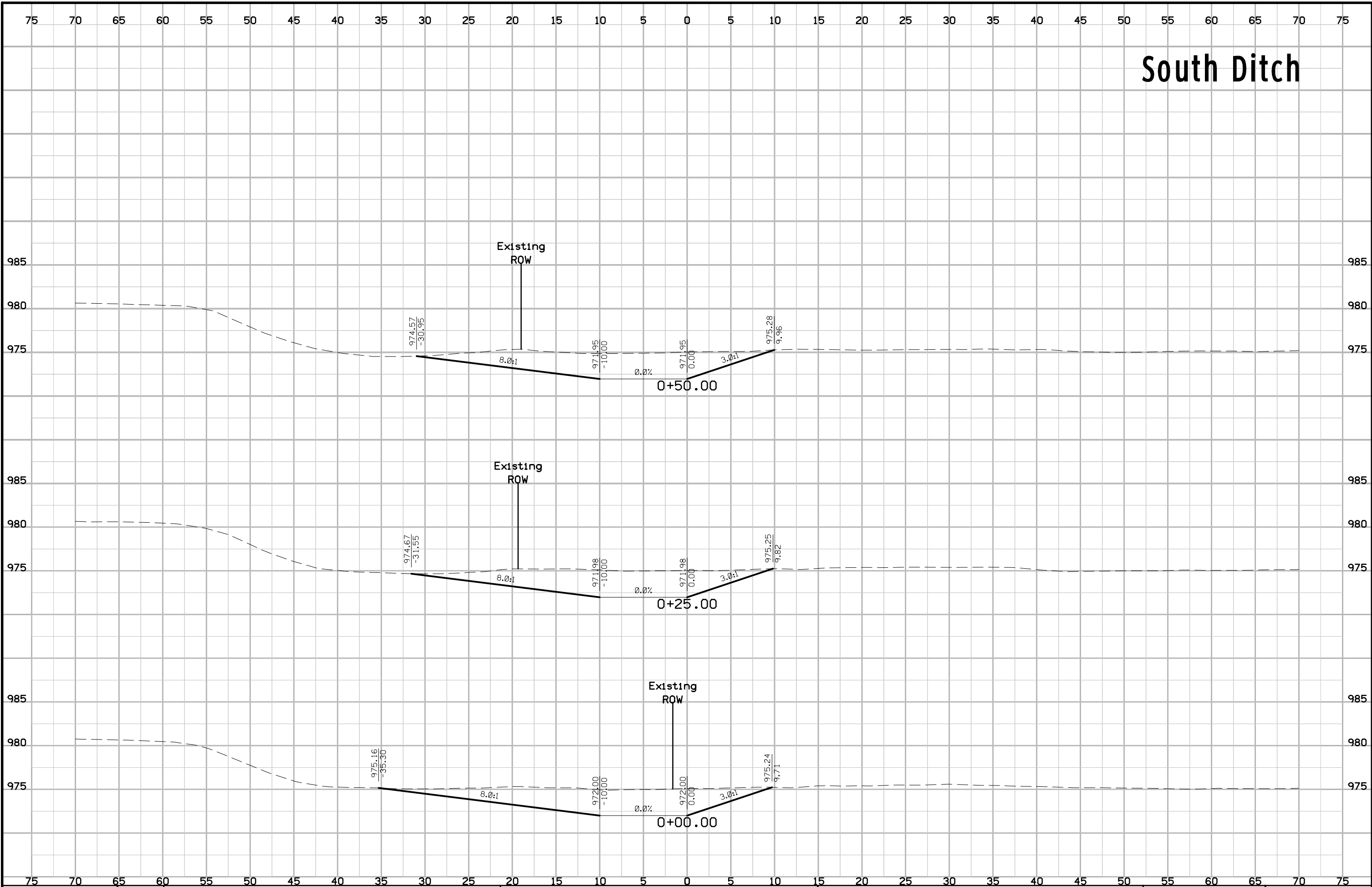
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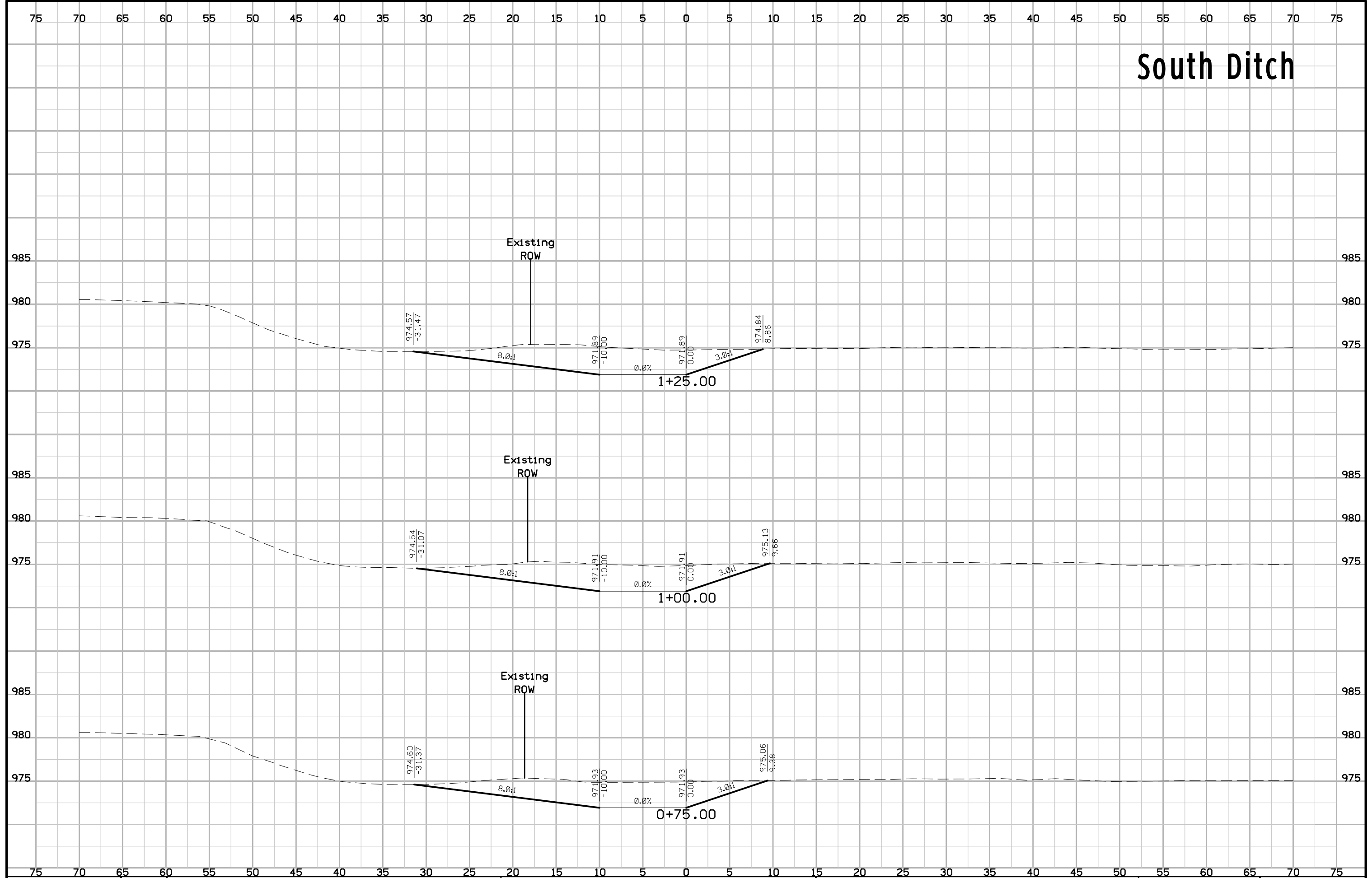
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FILE NO.	ENGLISH	DESIGN TEAM	<b>WHKS &amp; CO.</b>	GRUNDY COUNTY	PROJECT NUMBER	<b>MB-034-5(506)236--77-44</b>	SHEET NUMBER	<b>W.6</b>
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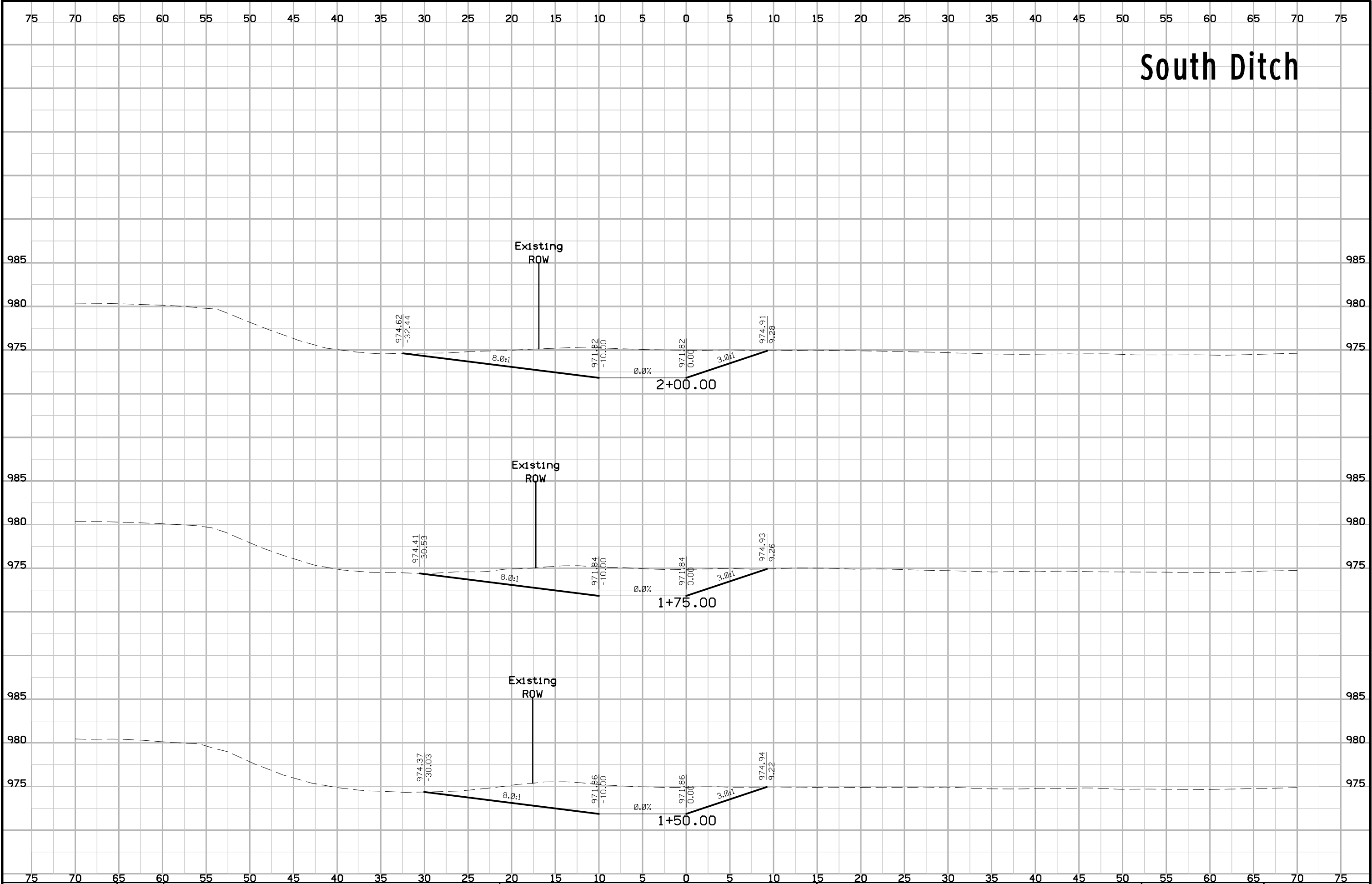
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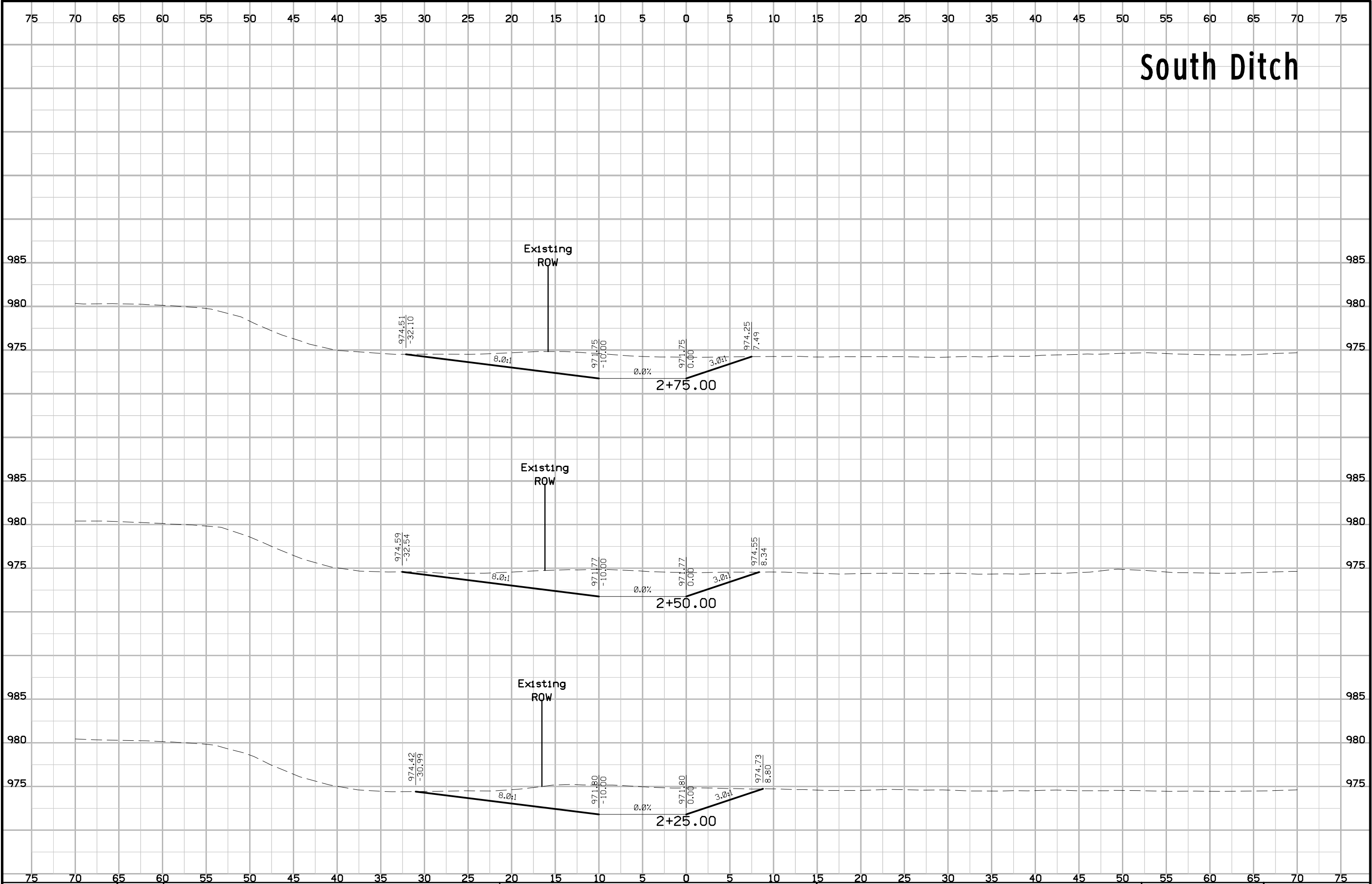
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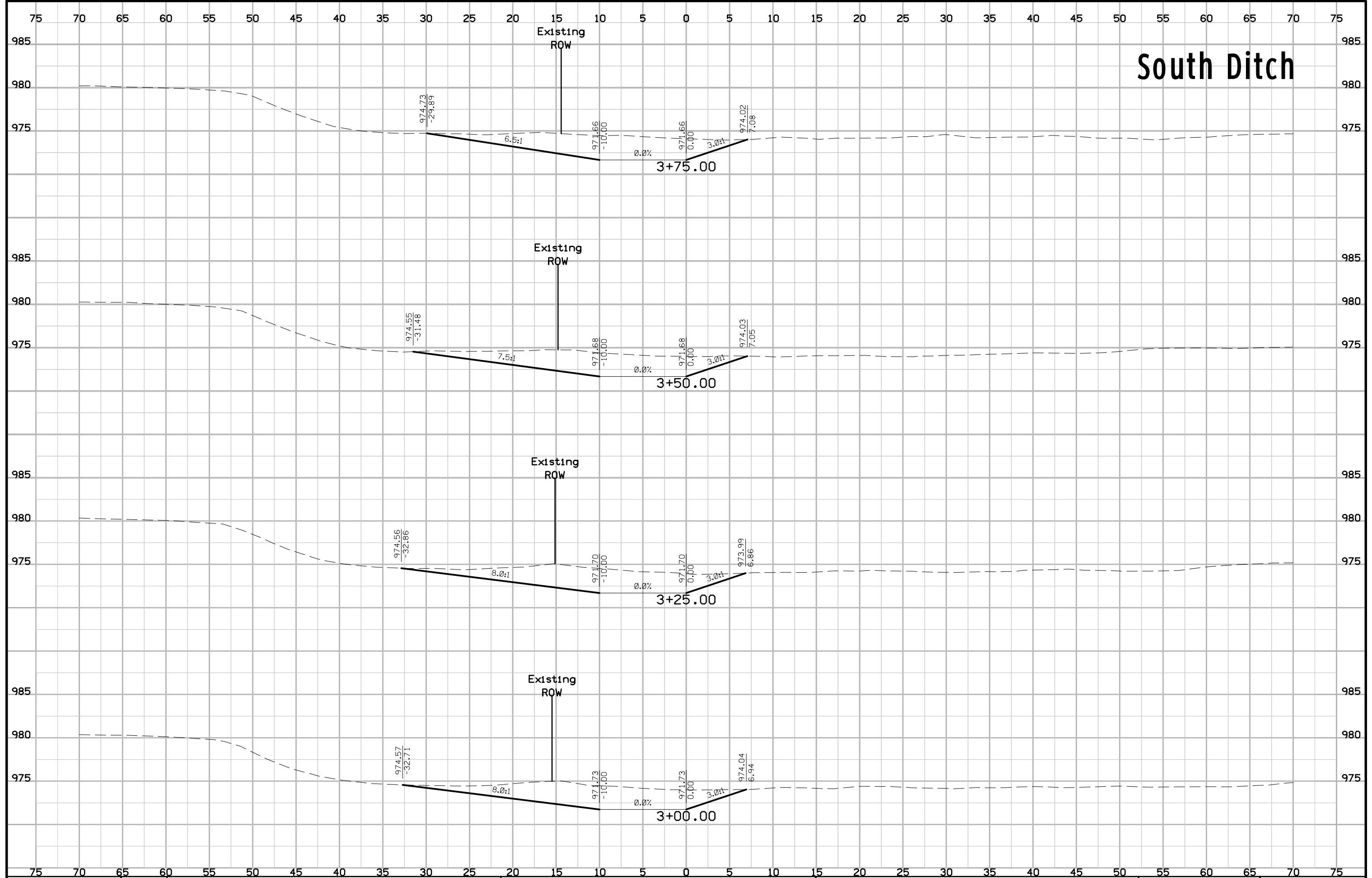
# South Ditch



# South Ditch

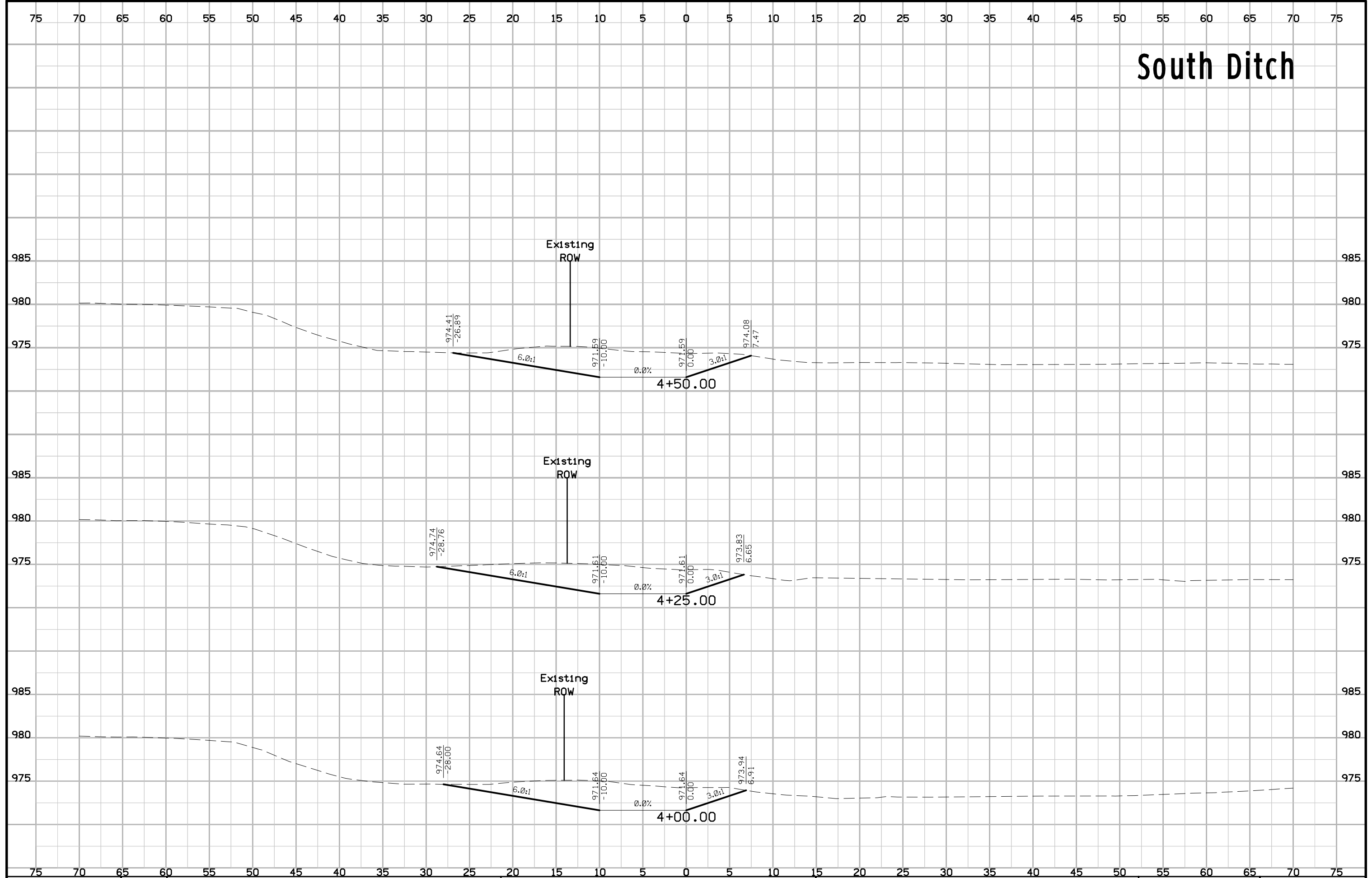


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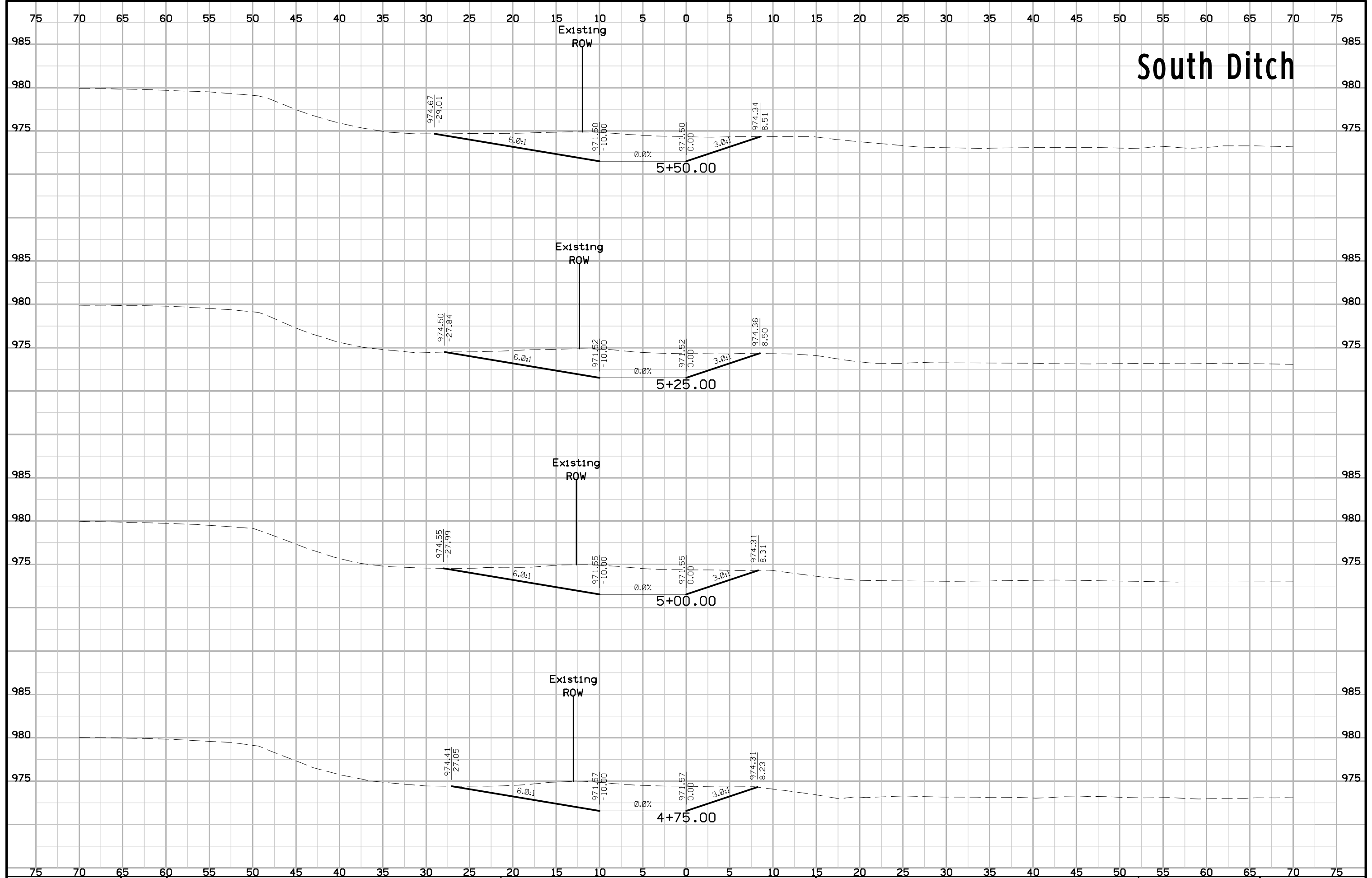




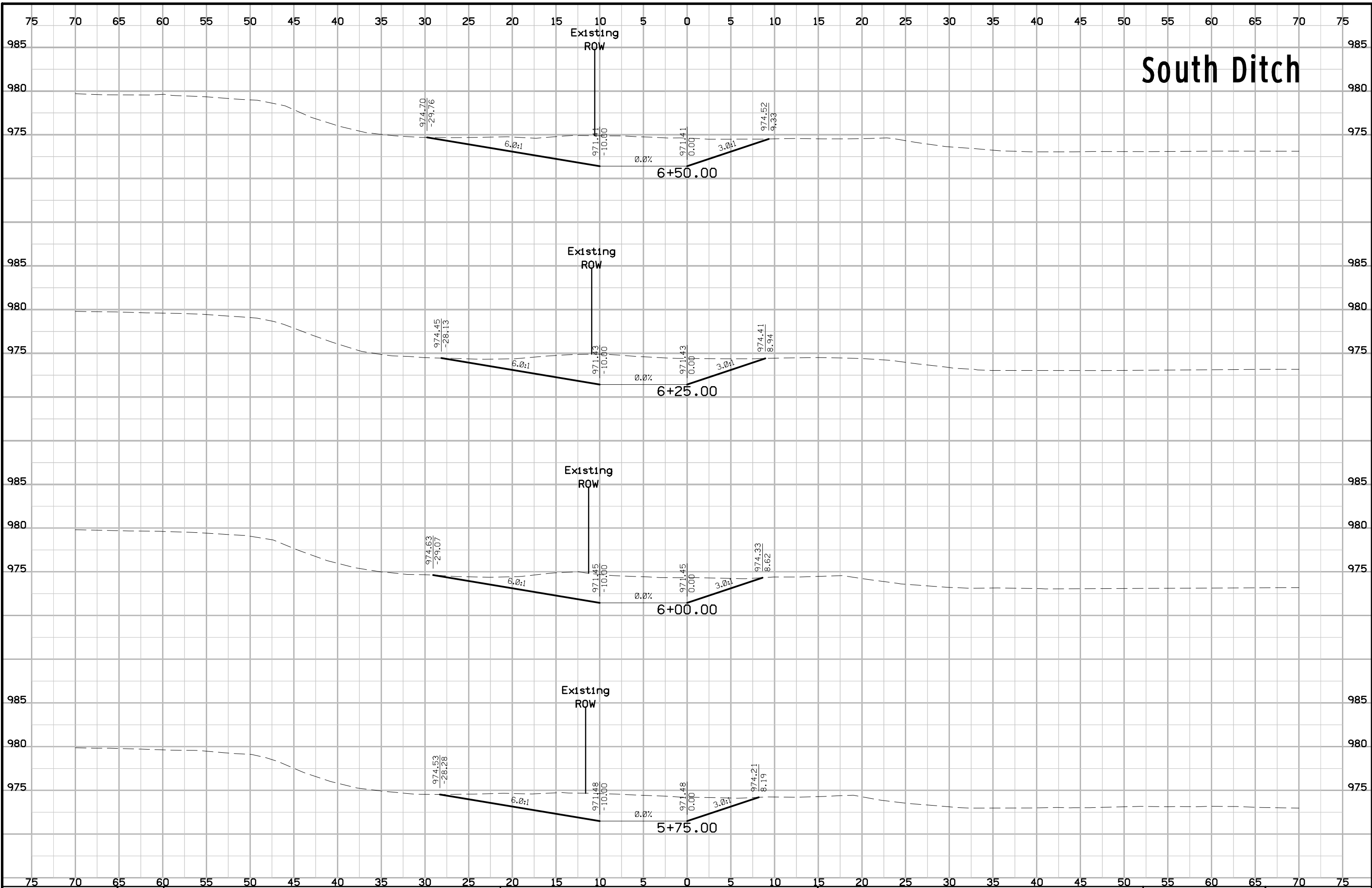
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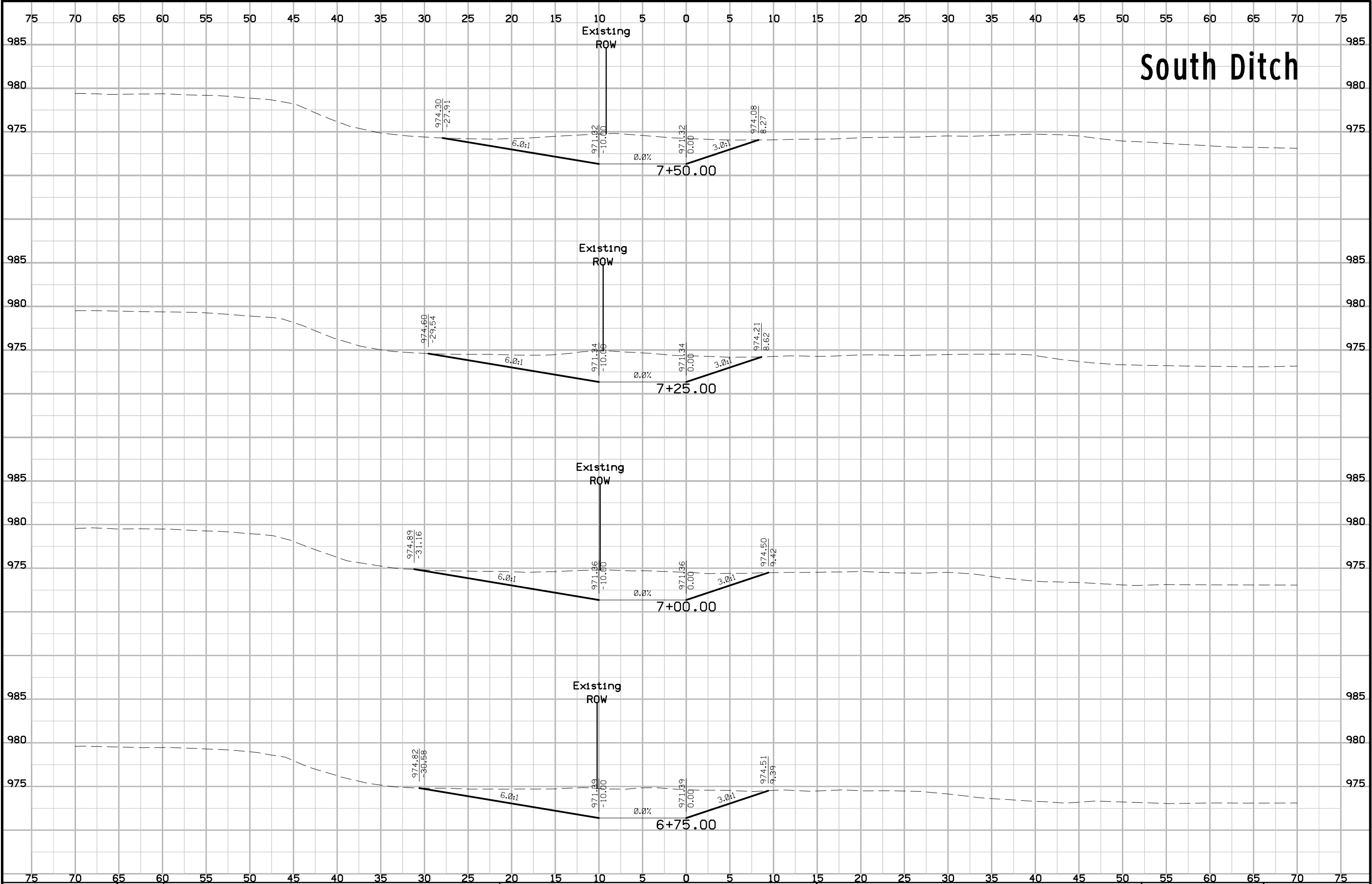
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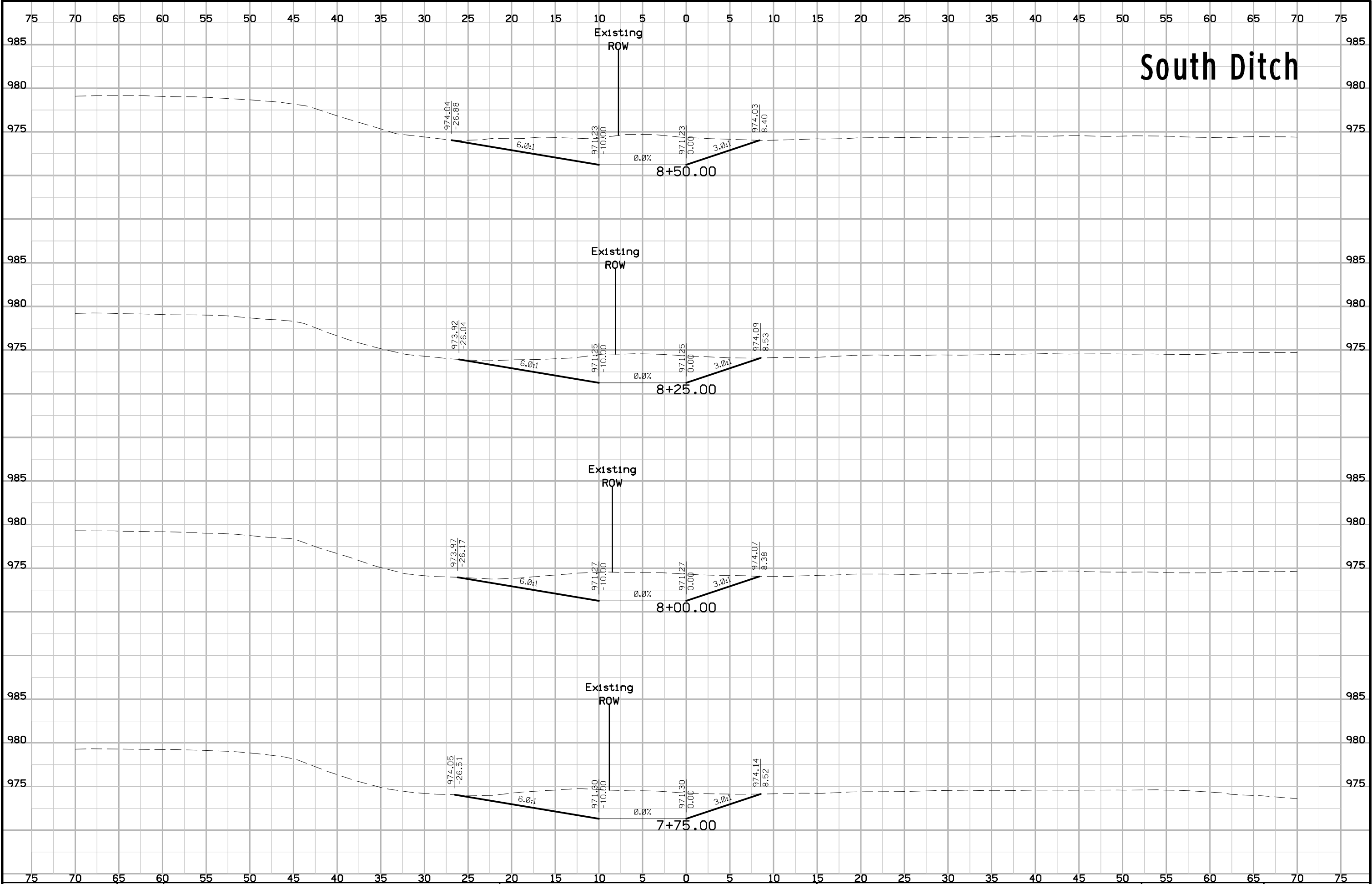
# South Ditch



# South Ditch

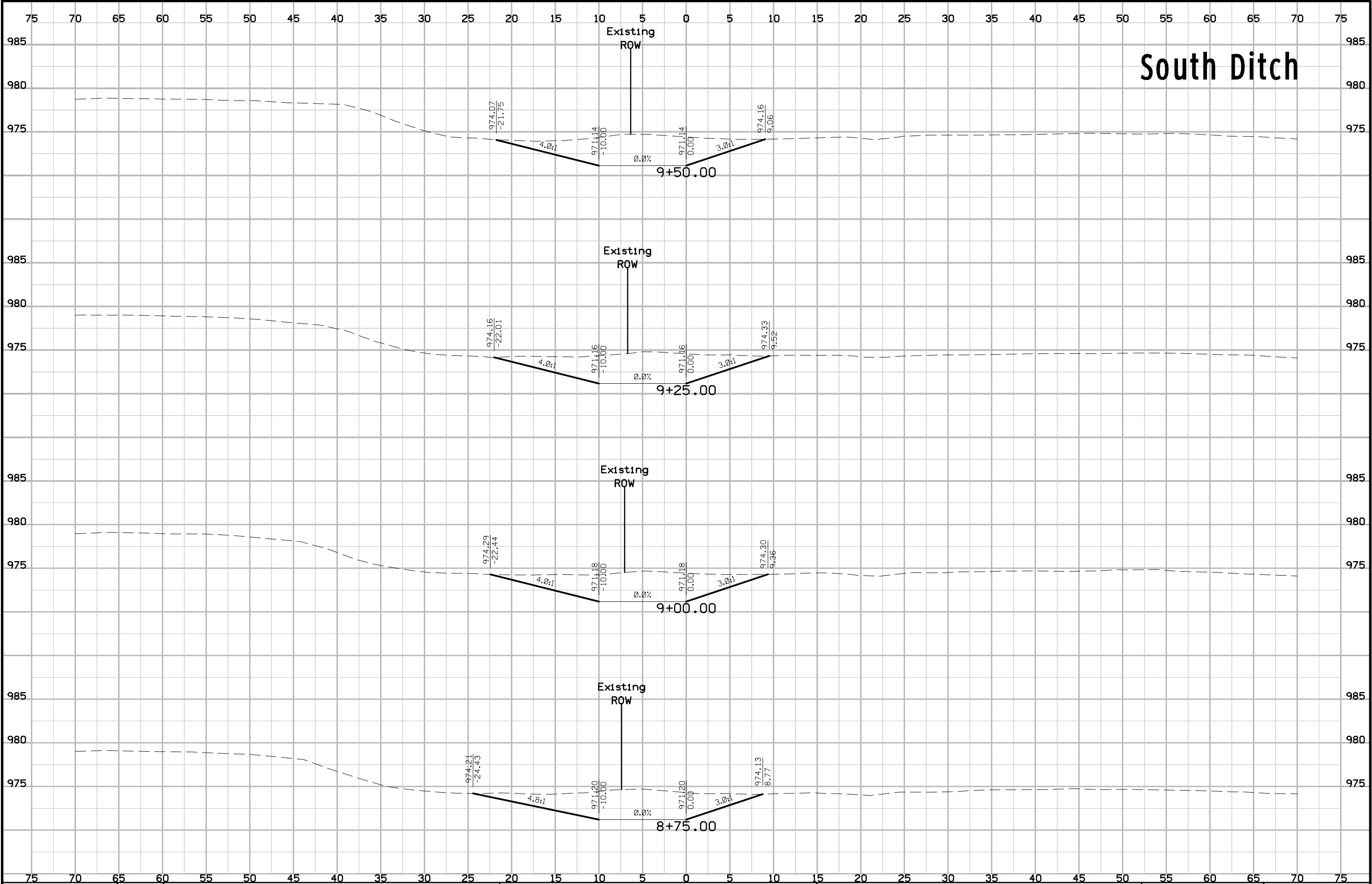


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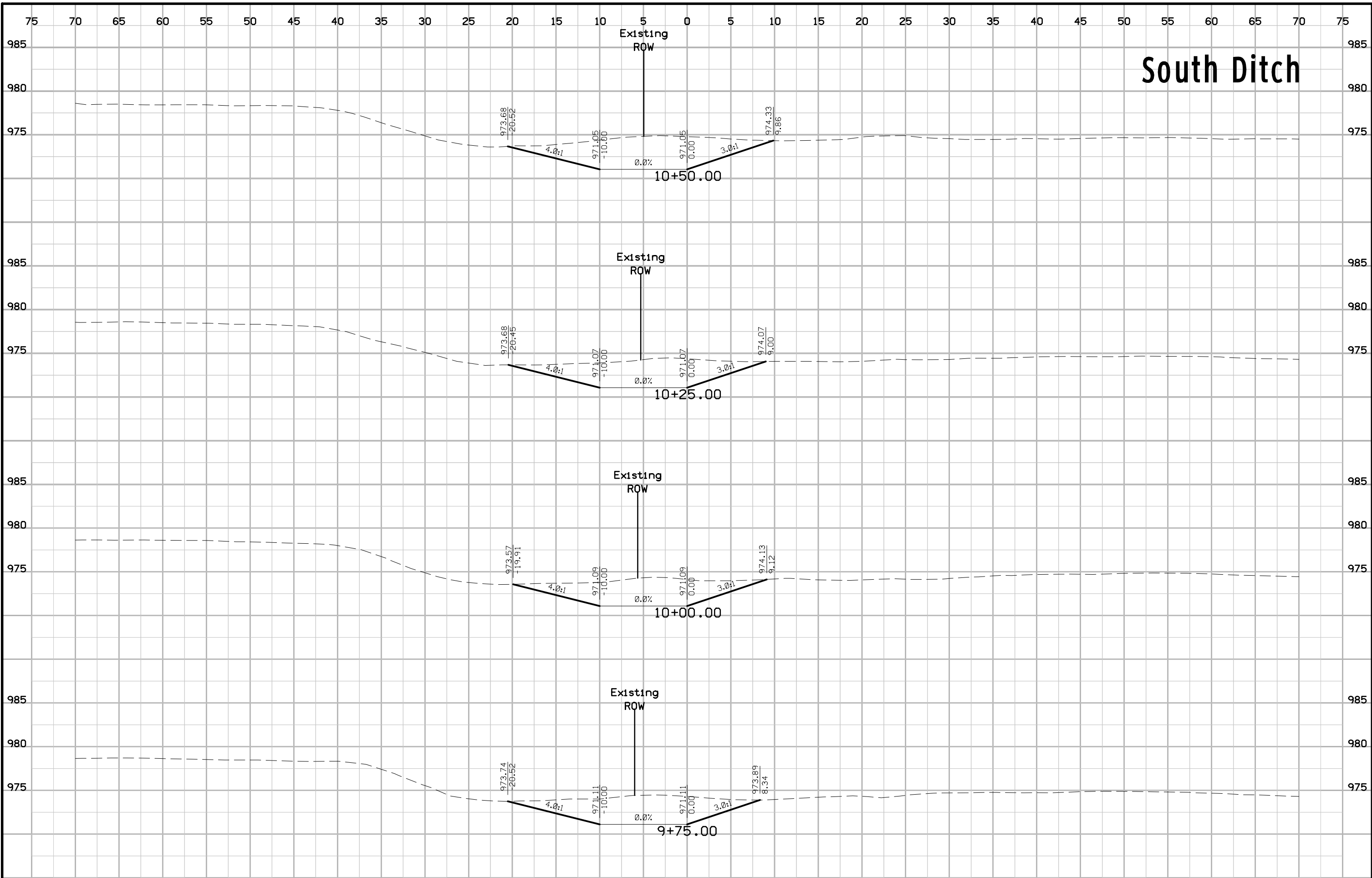




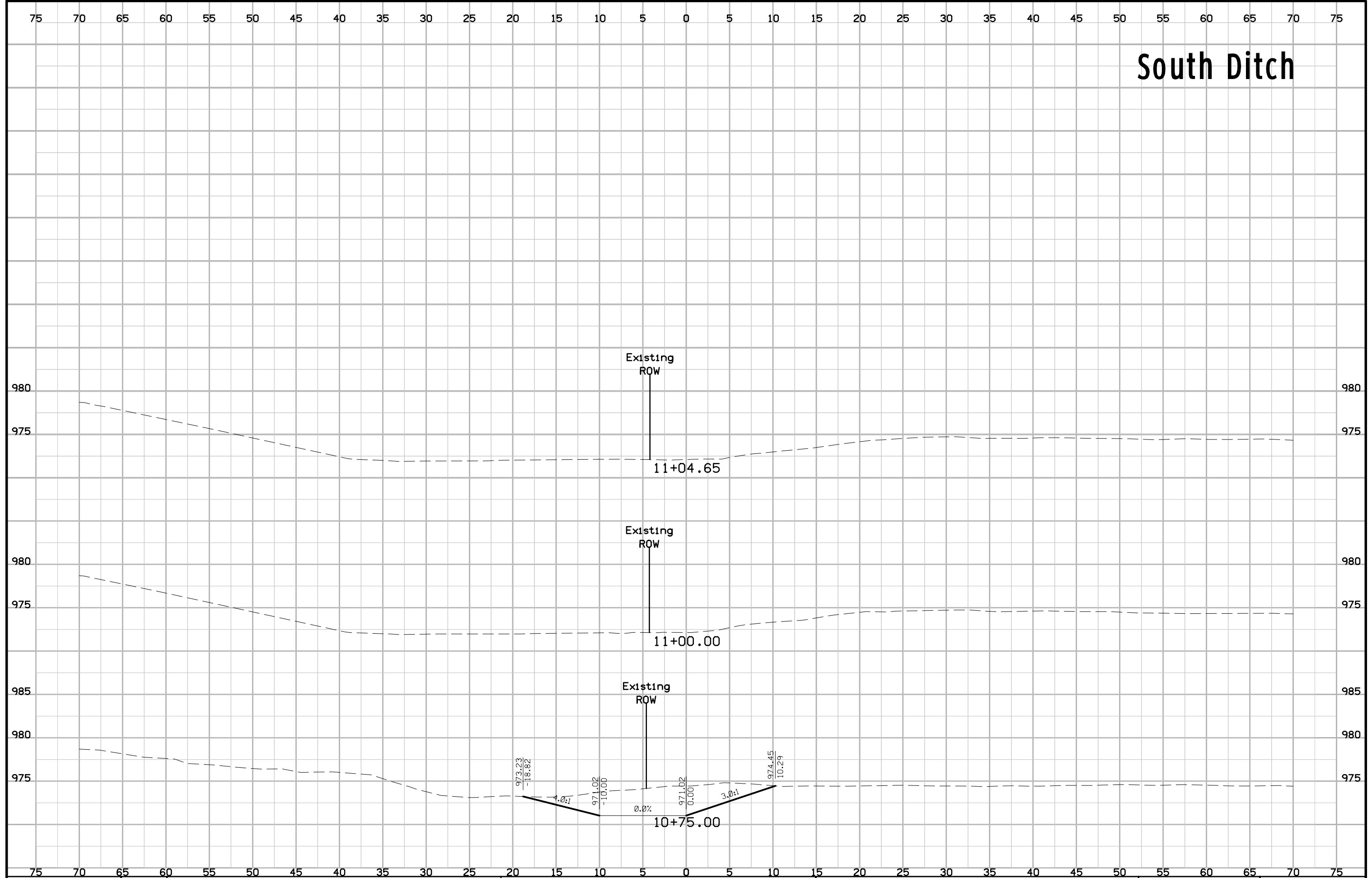
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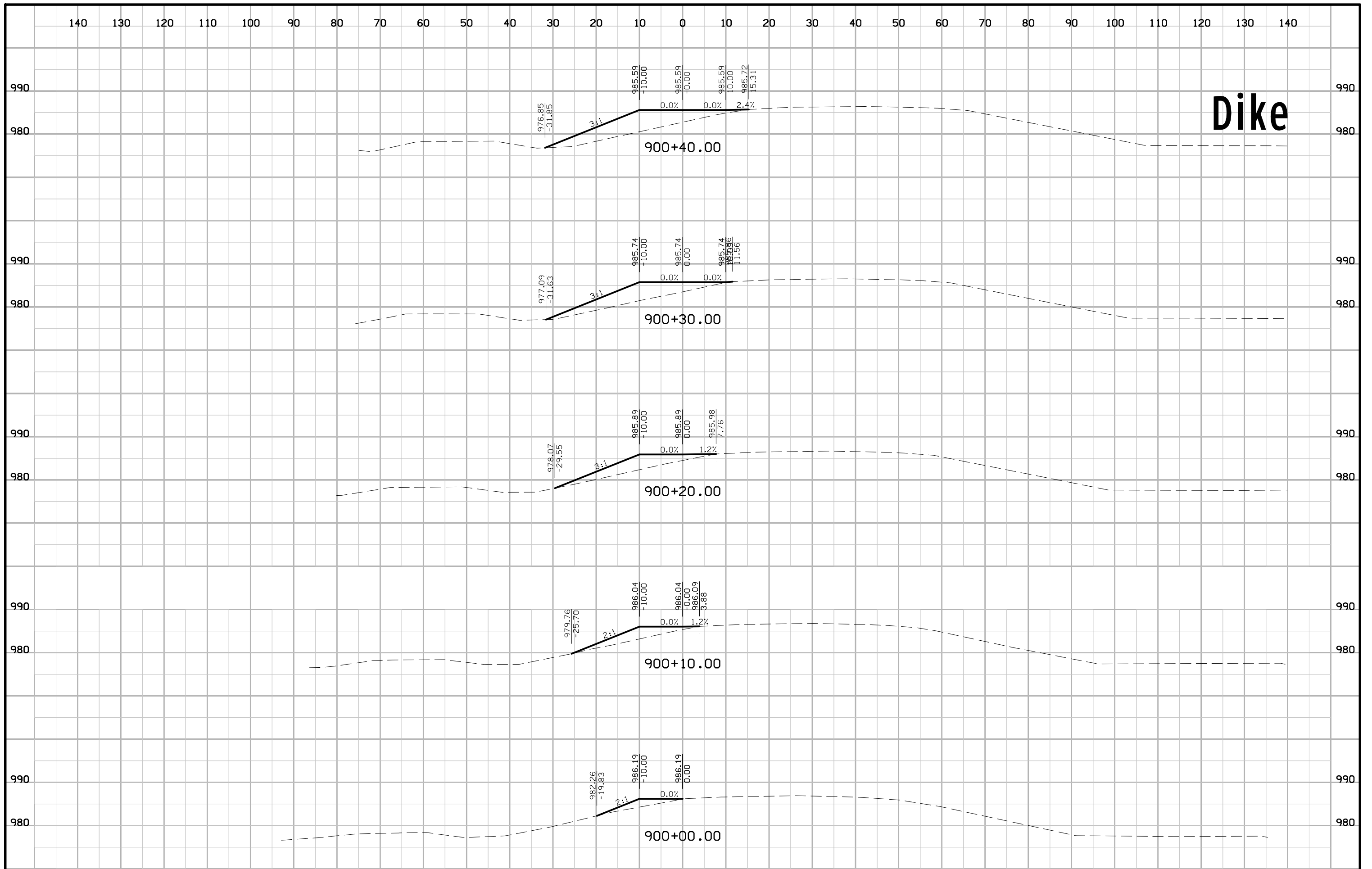


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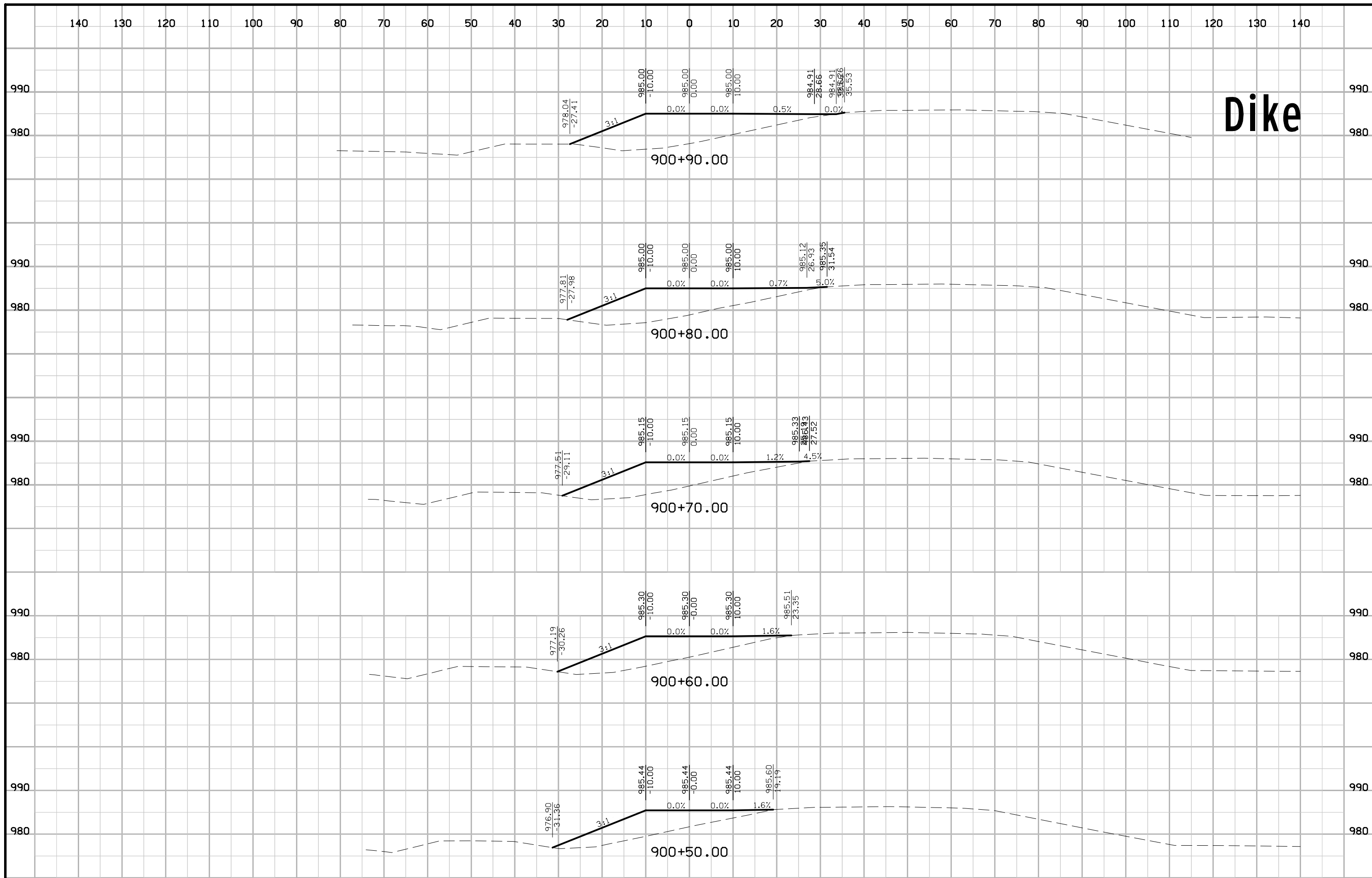


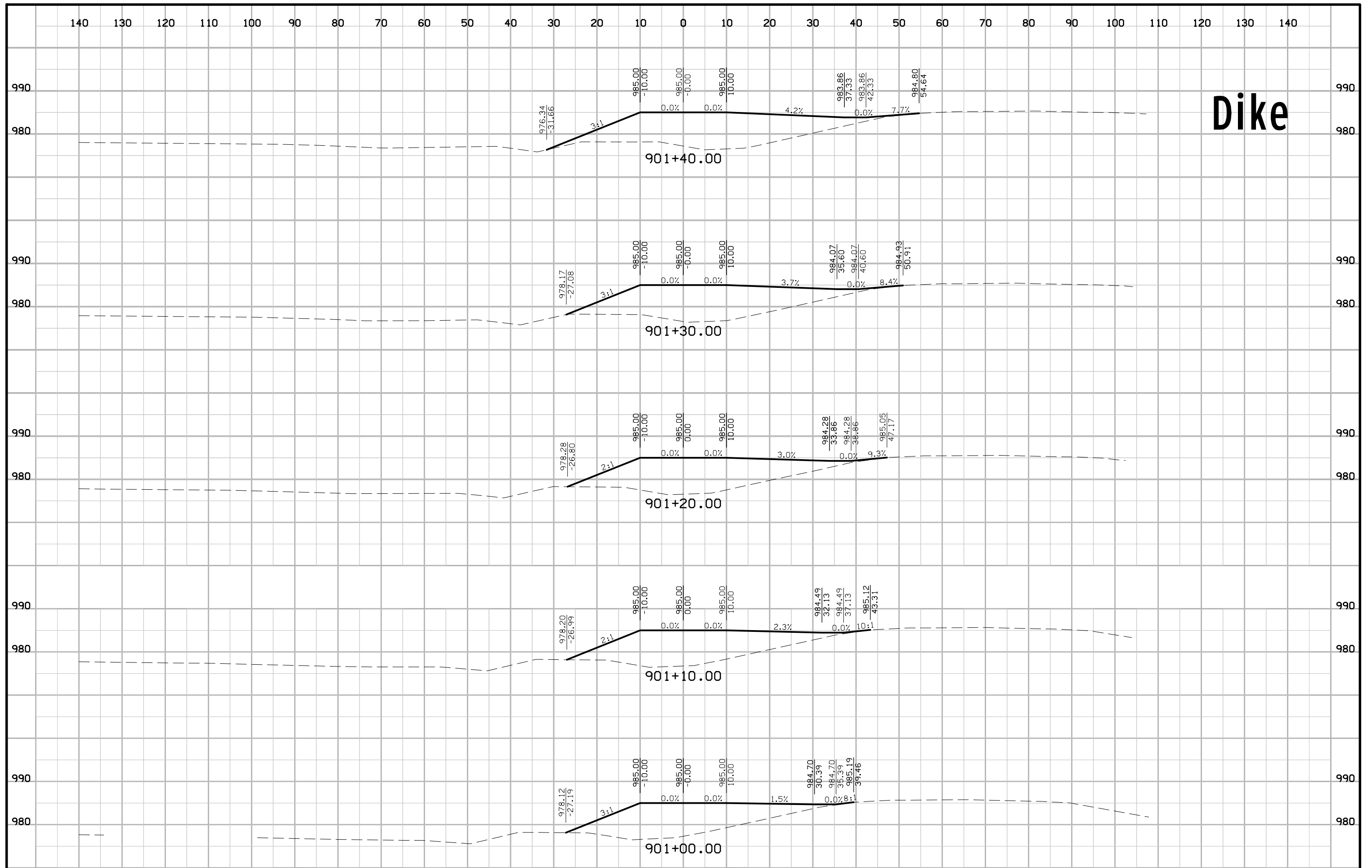
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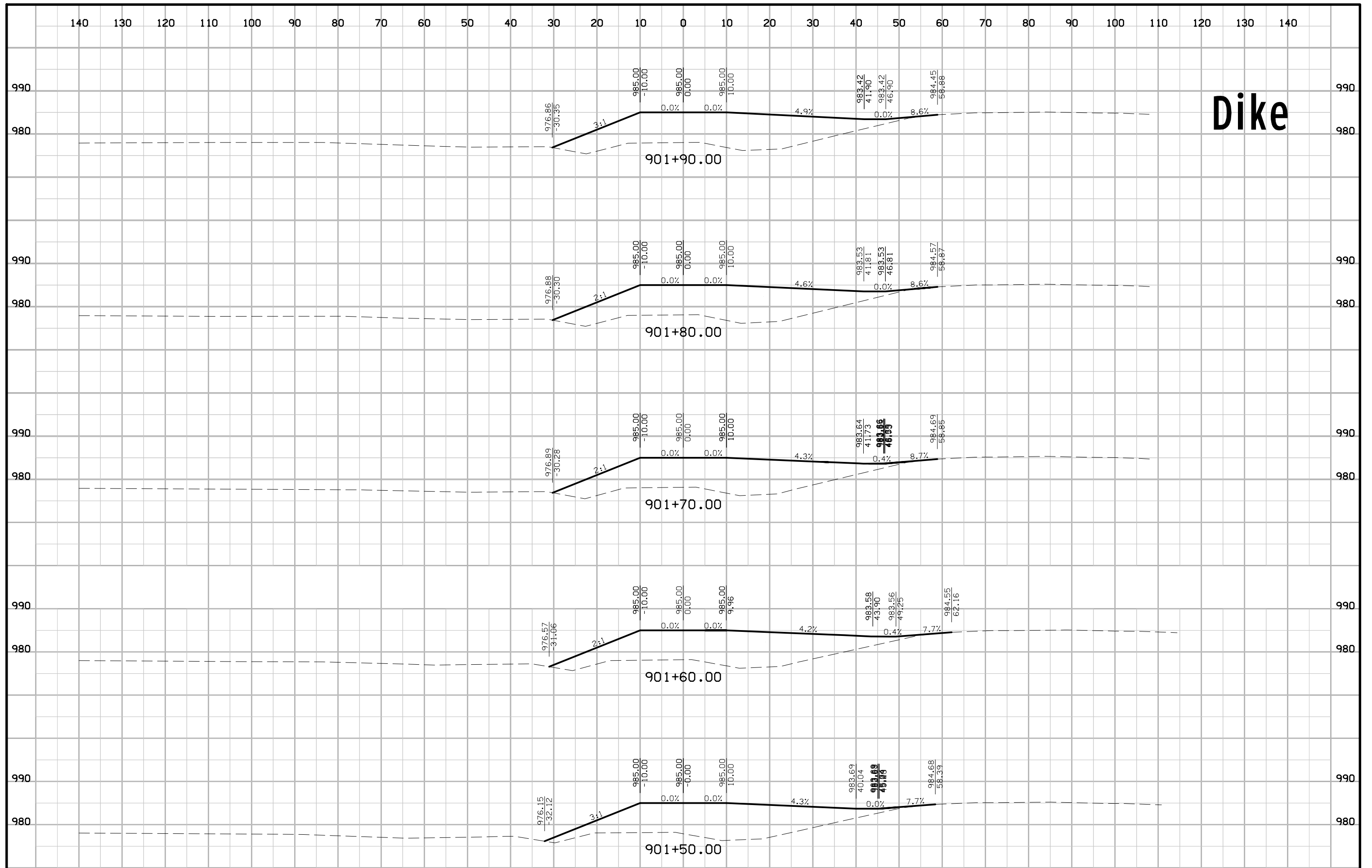


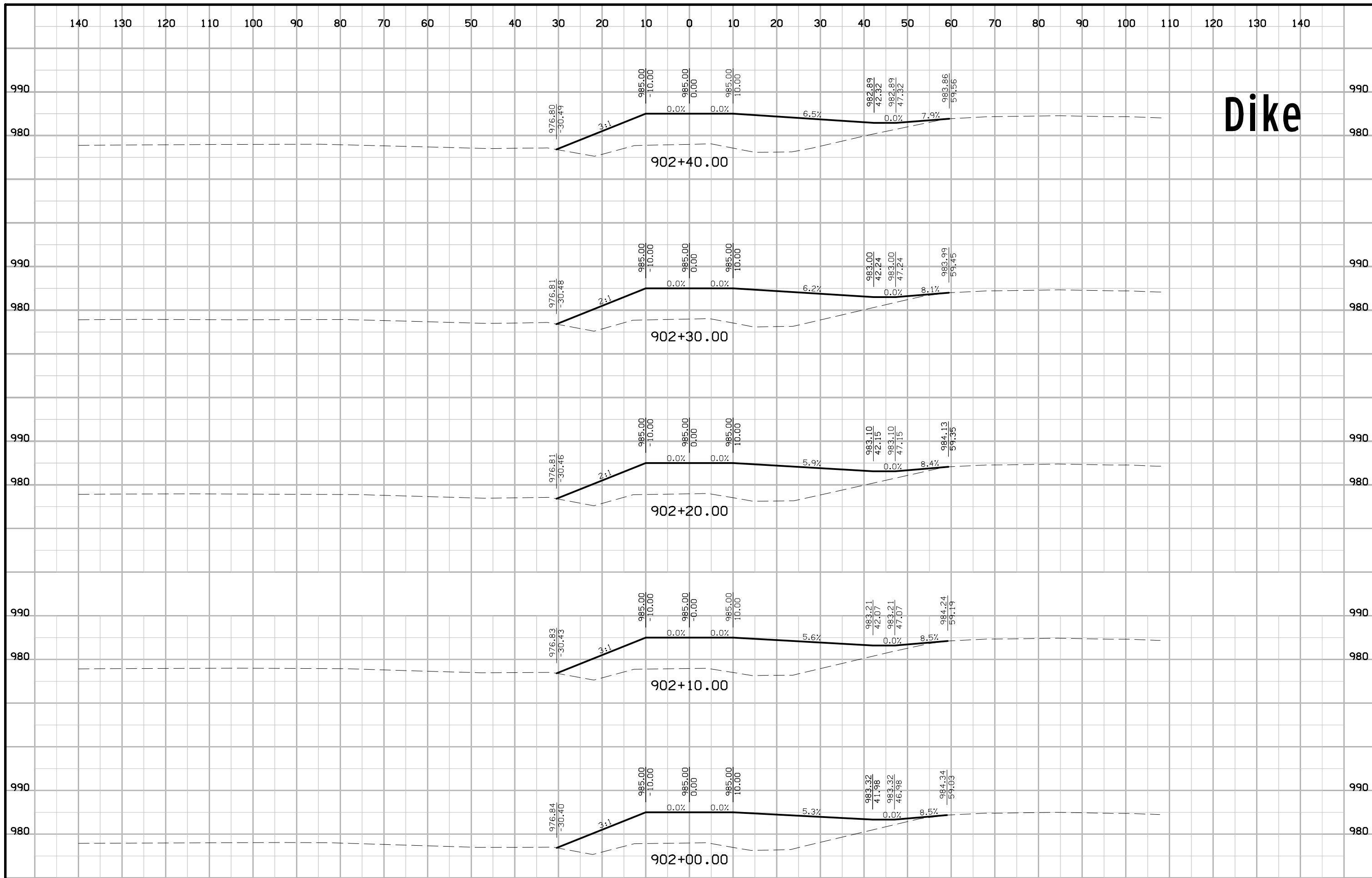






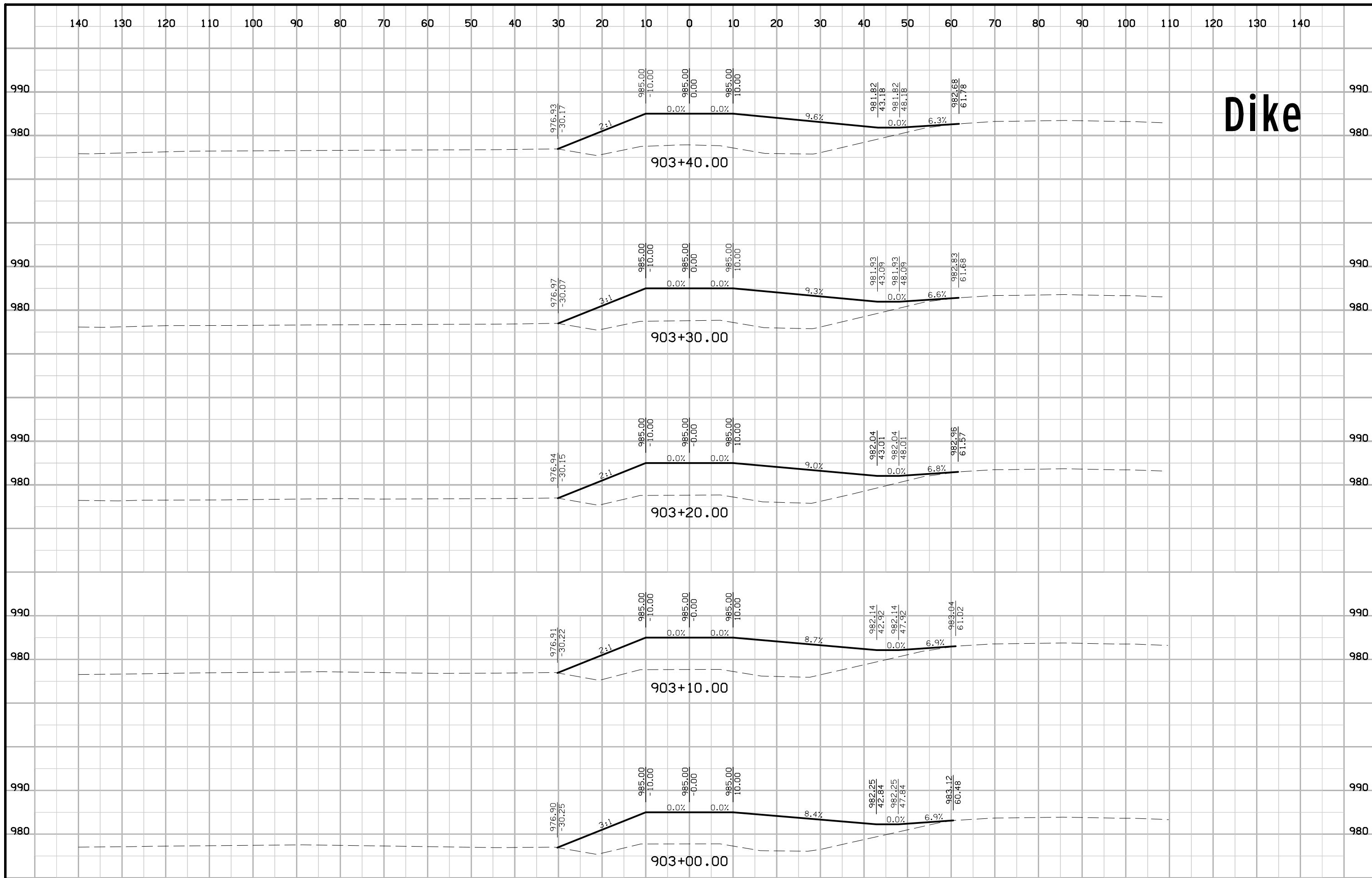


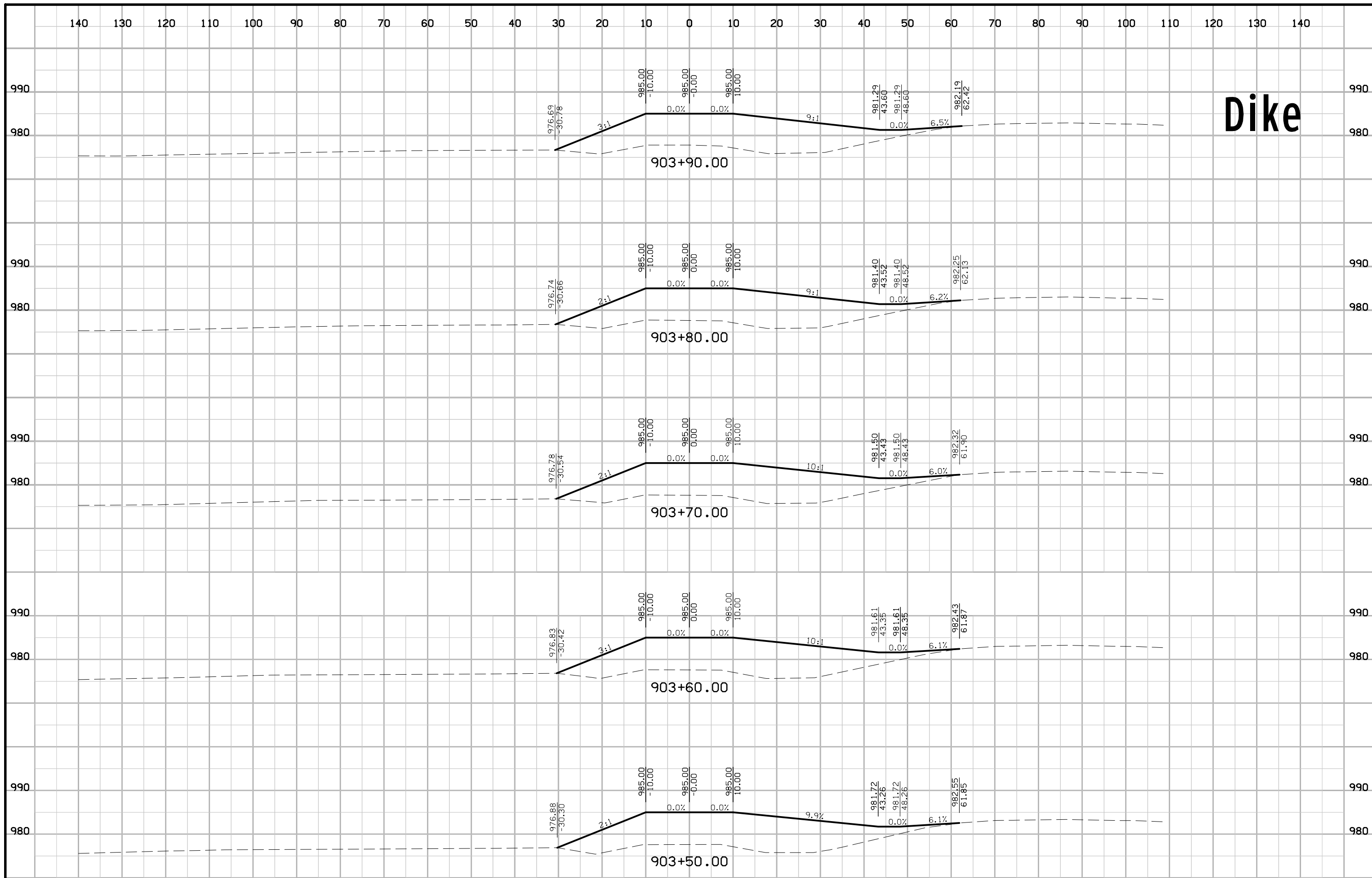


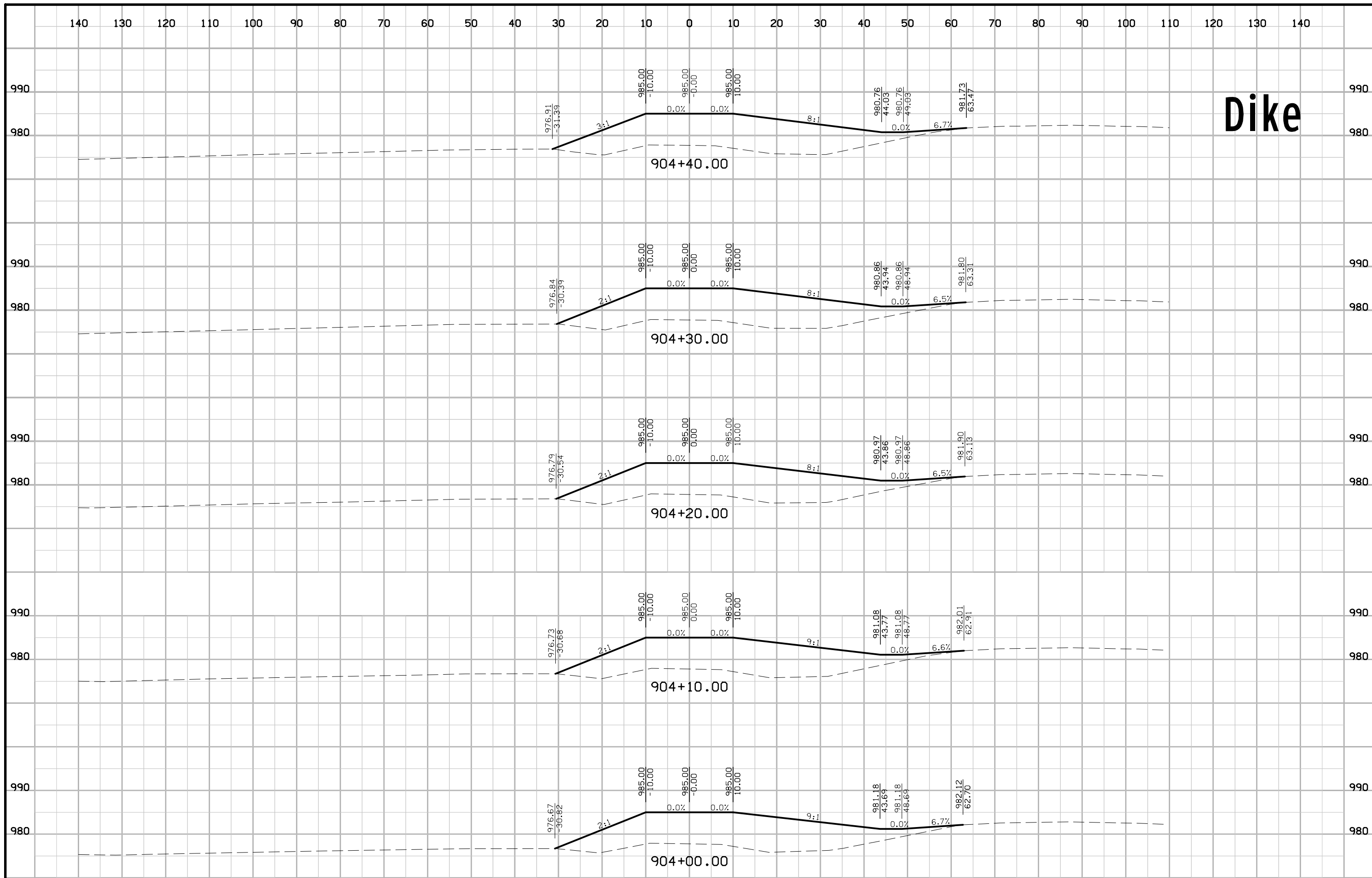


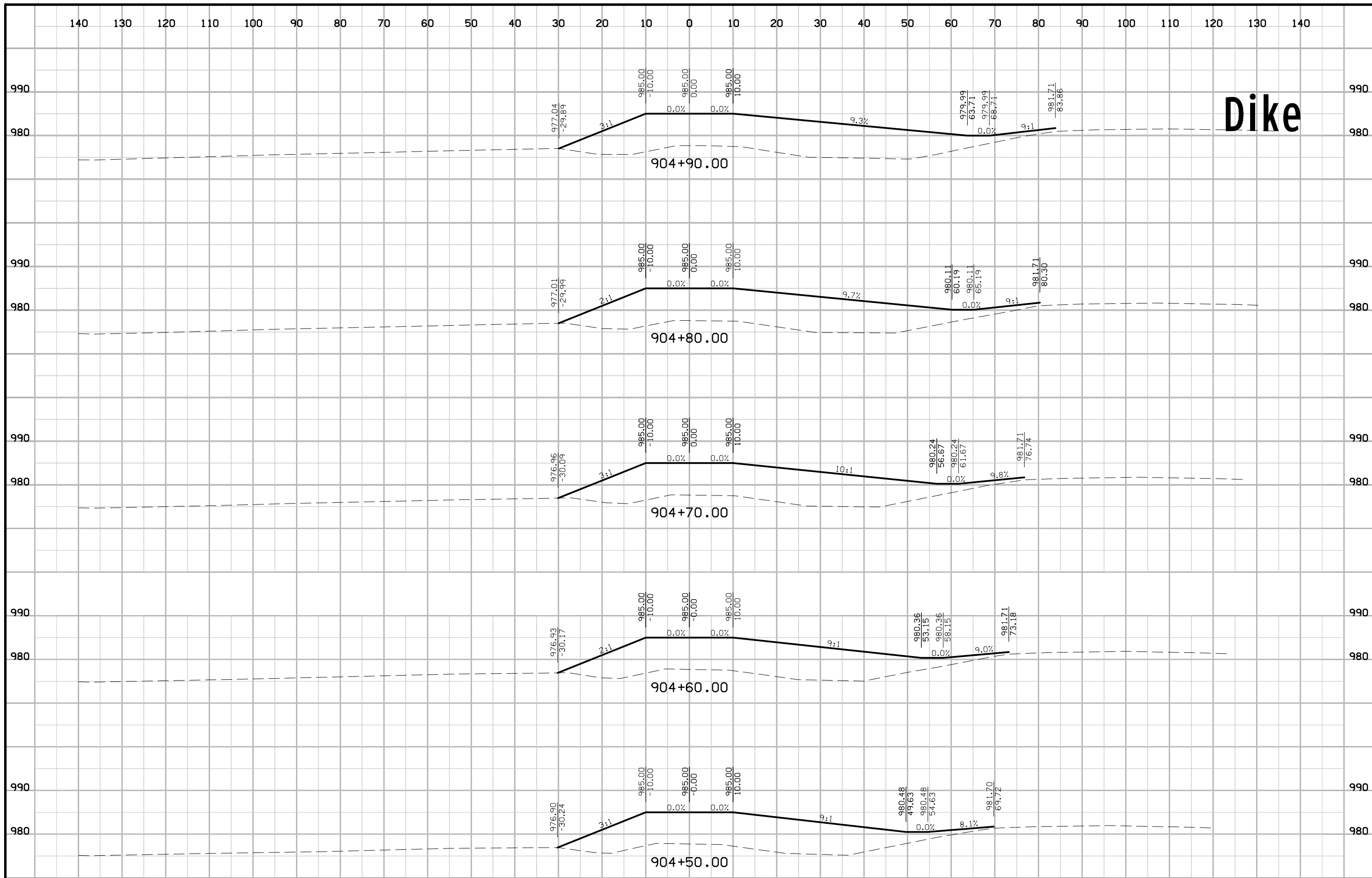




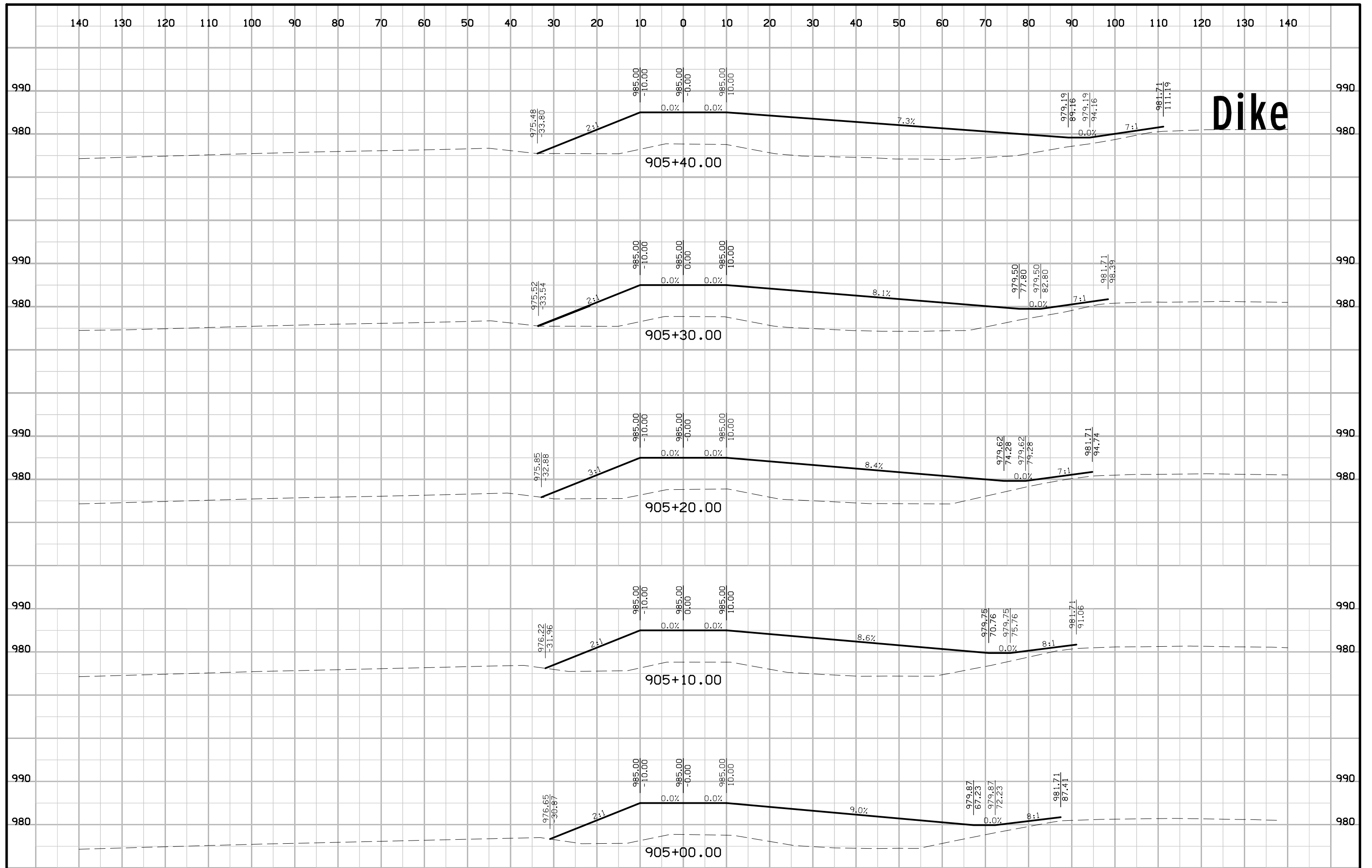






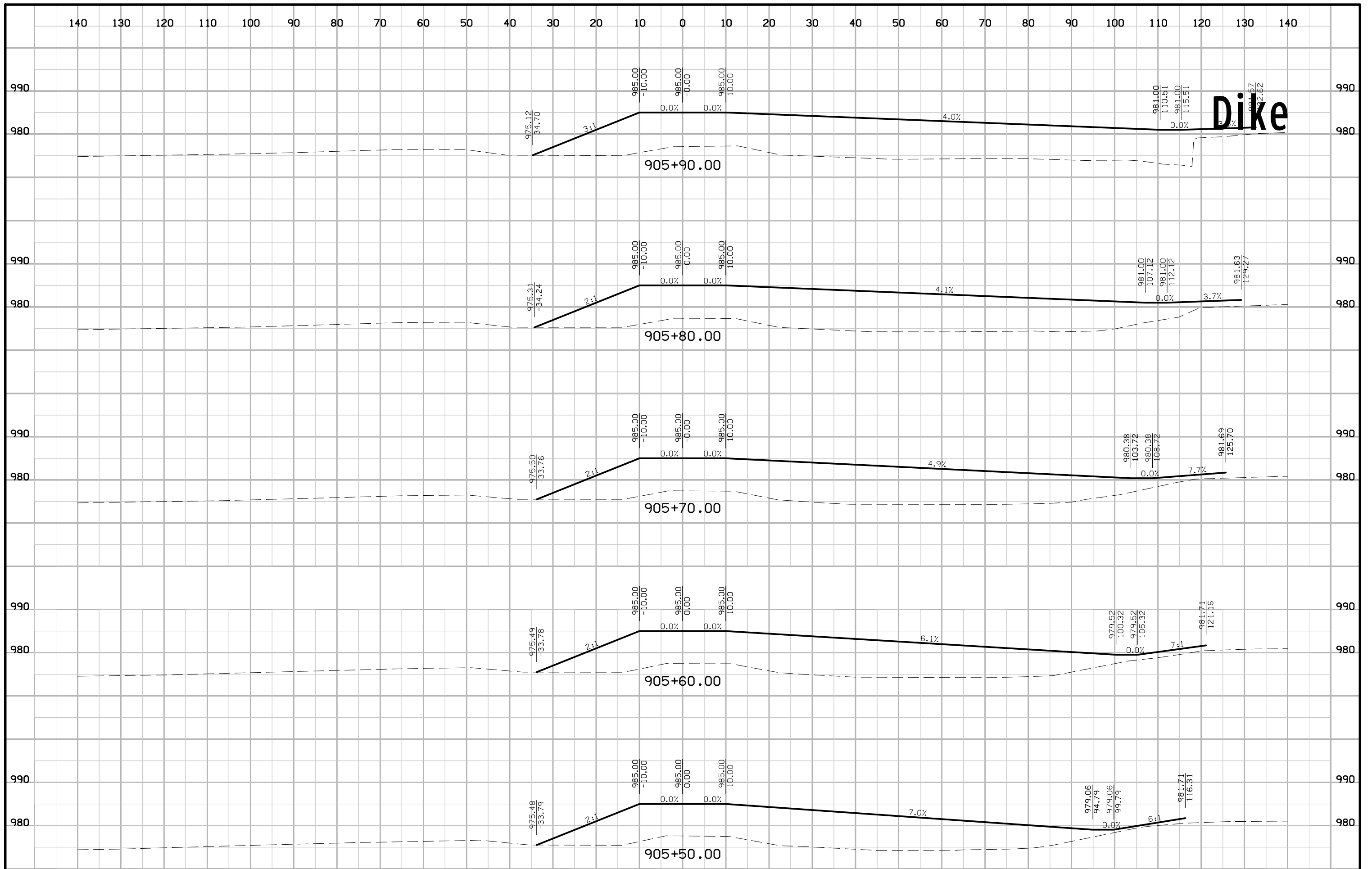


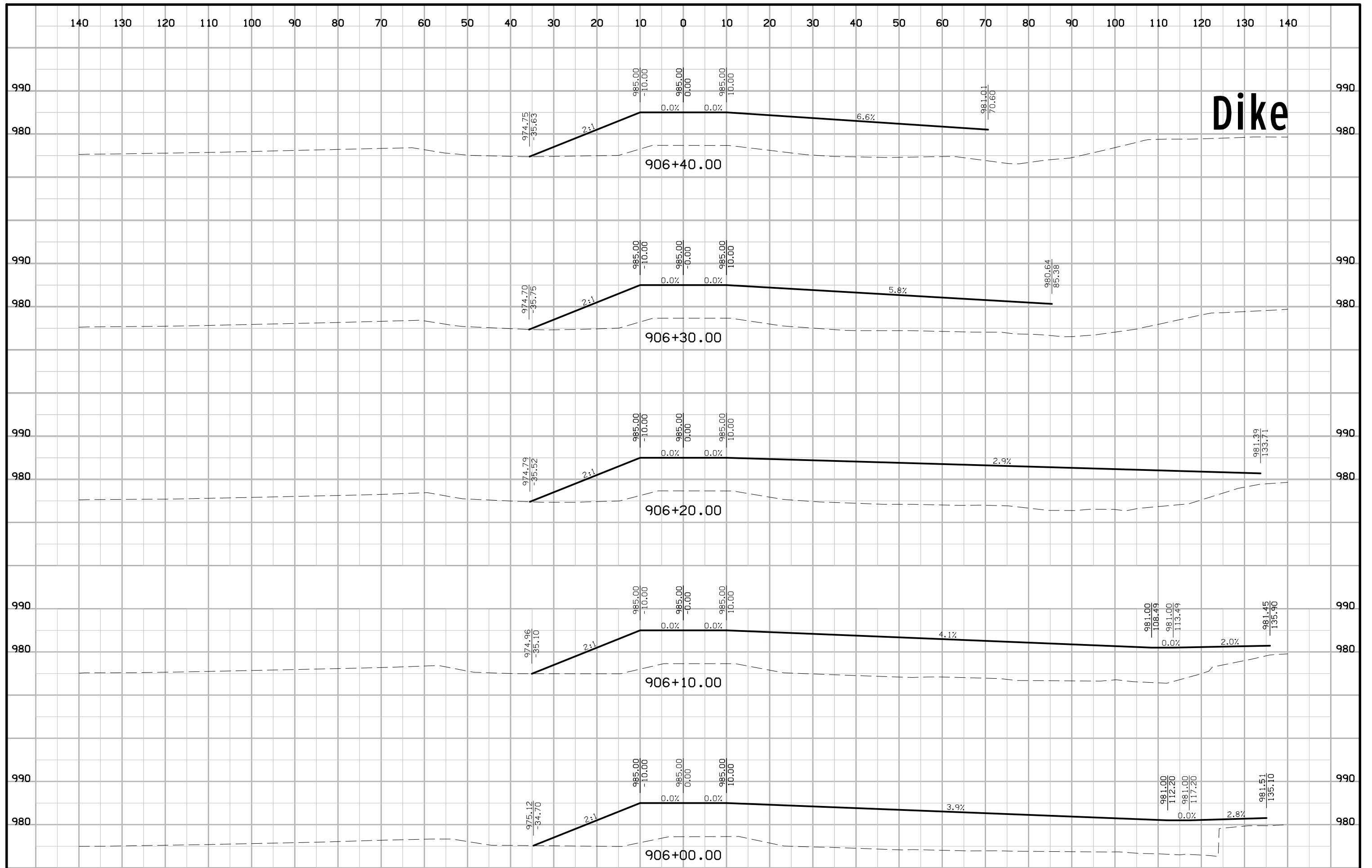
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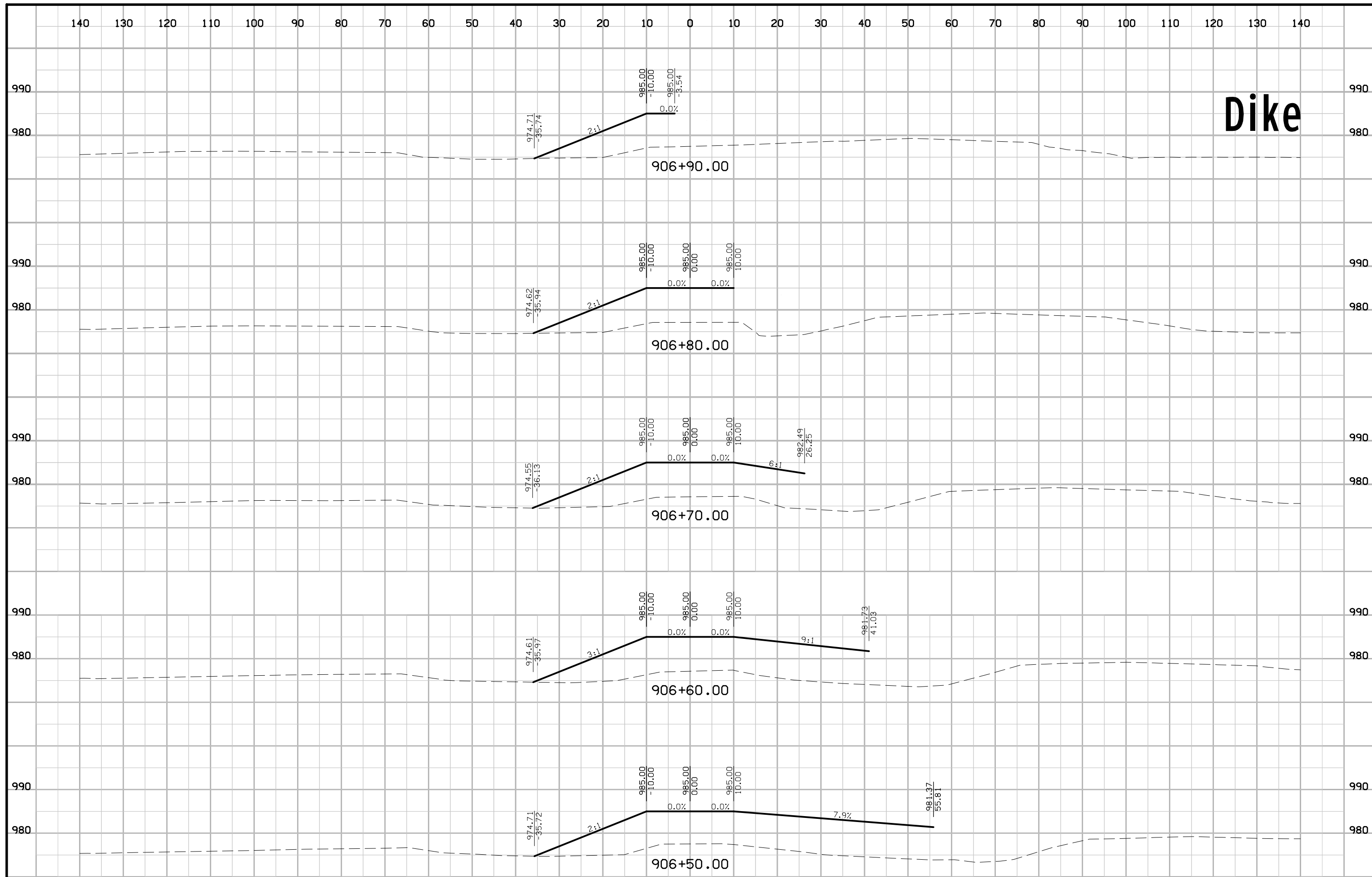


**Dike**





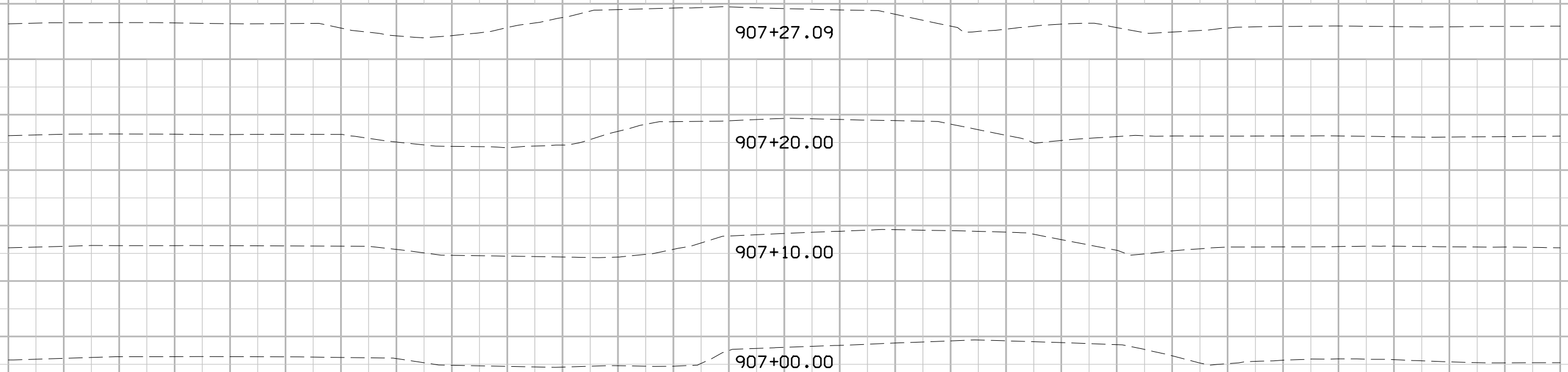


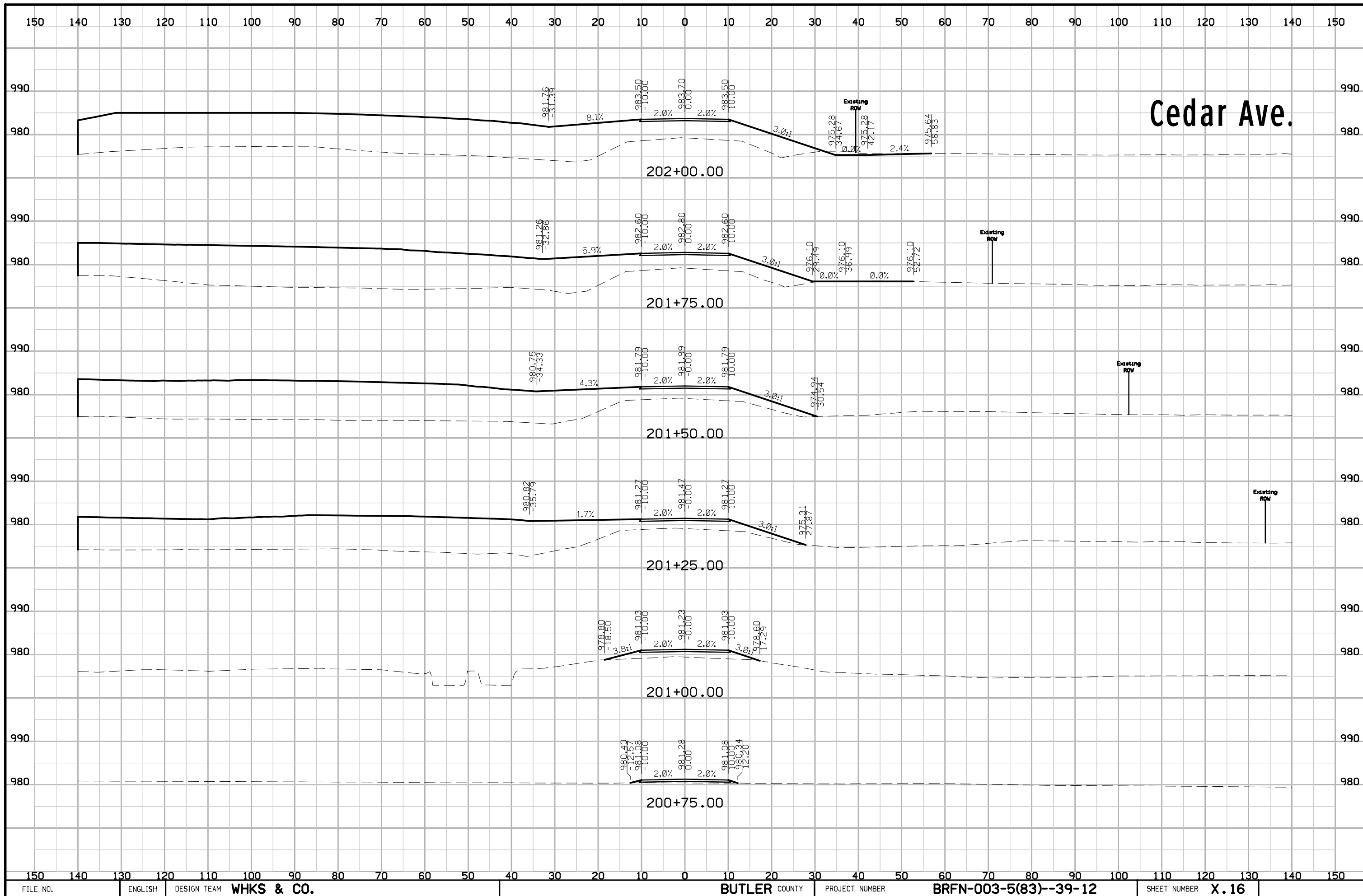


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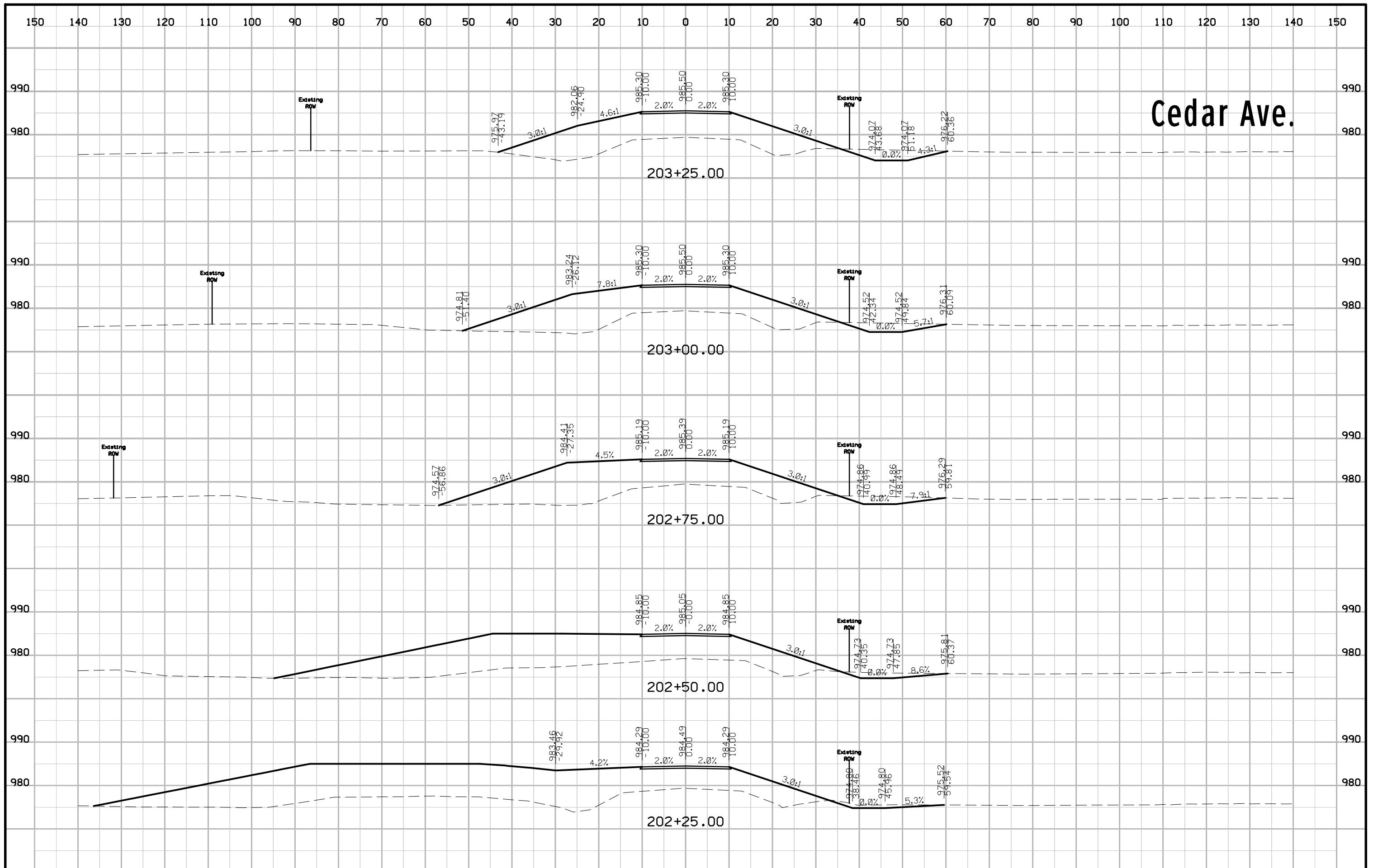
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# Dike

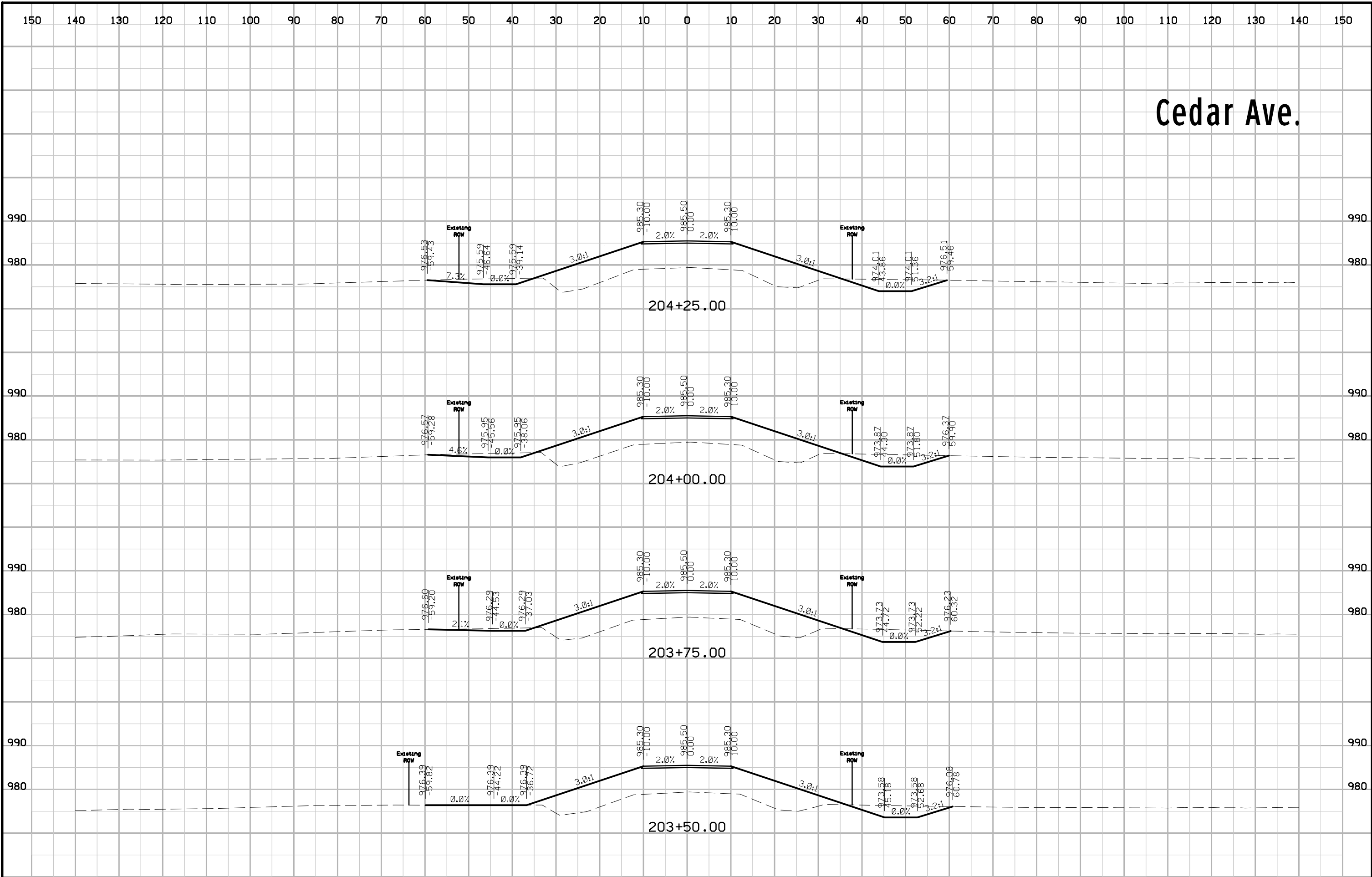




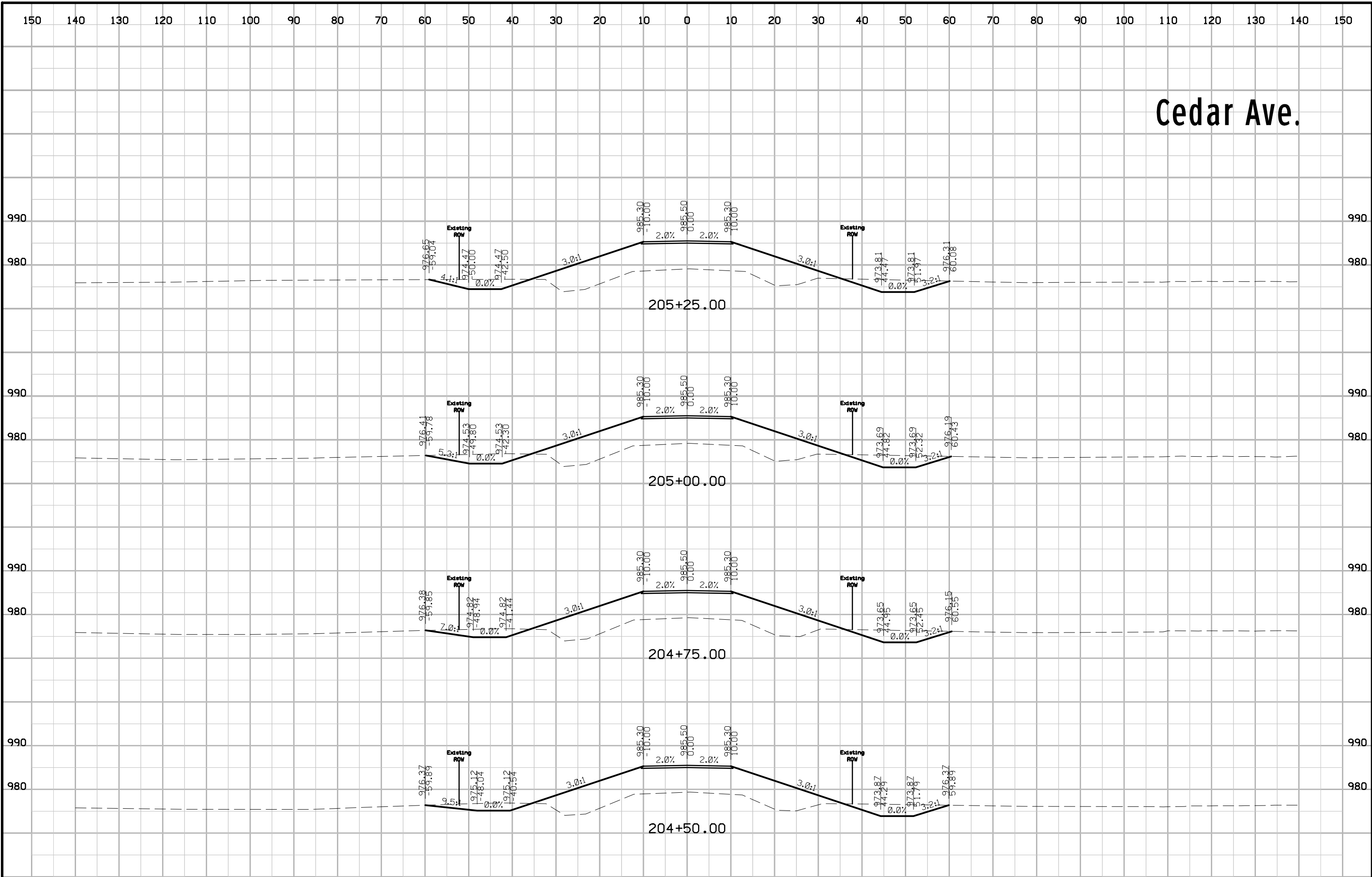




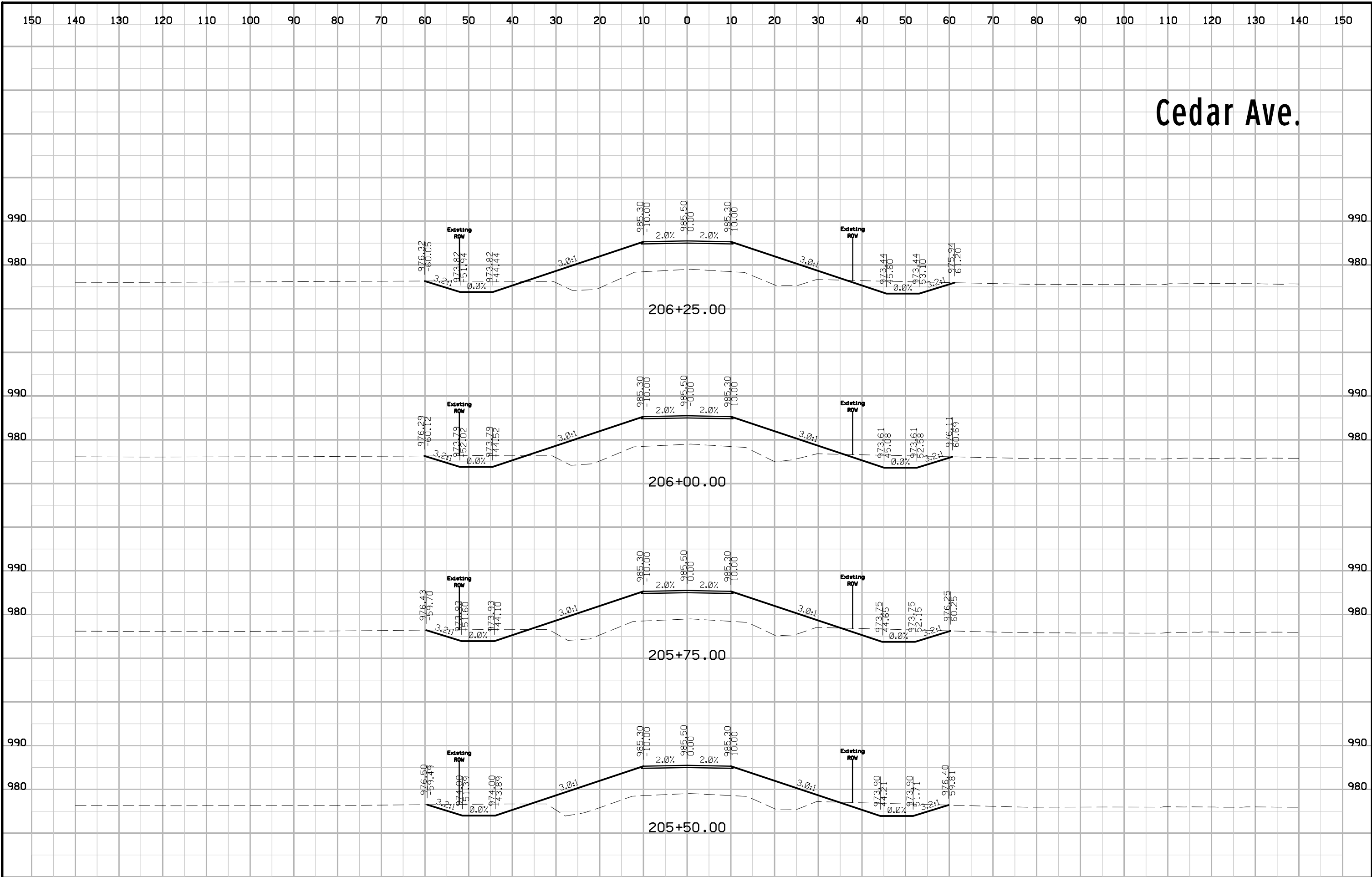
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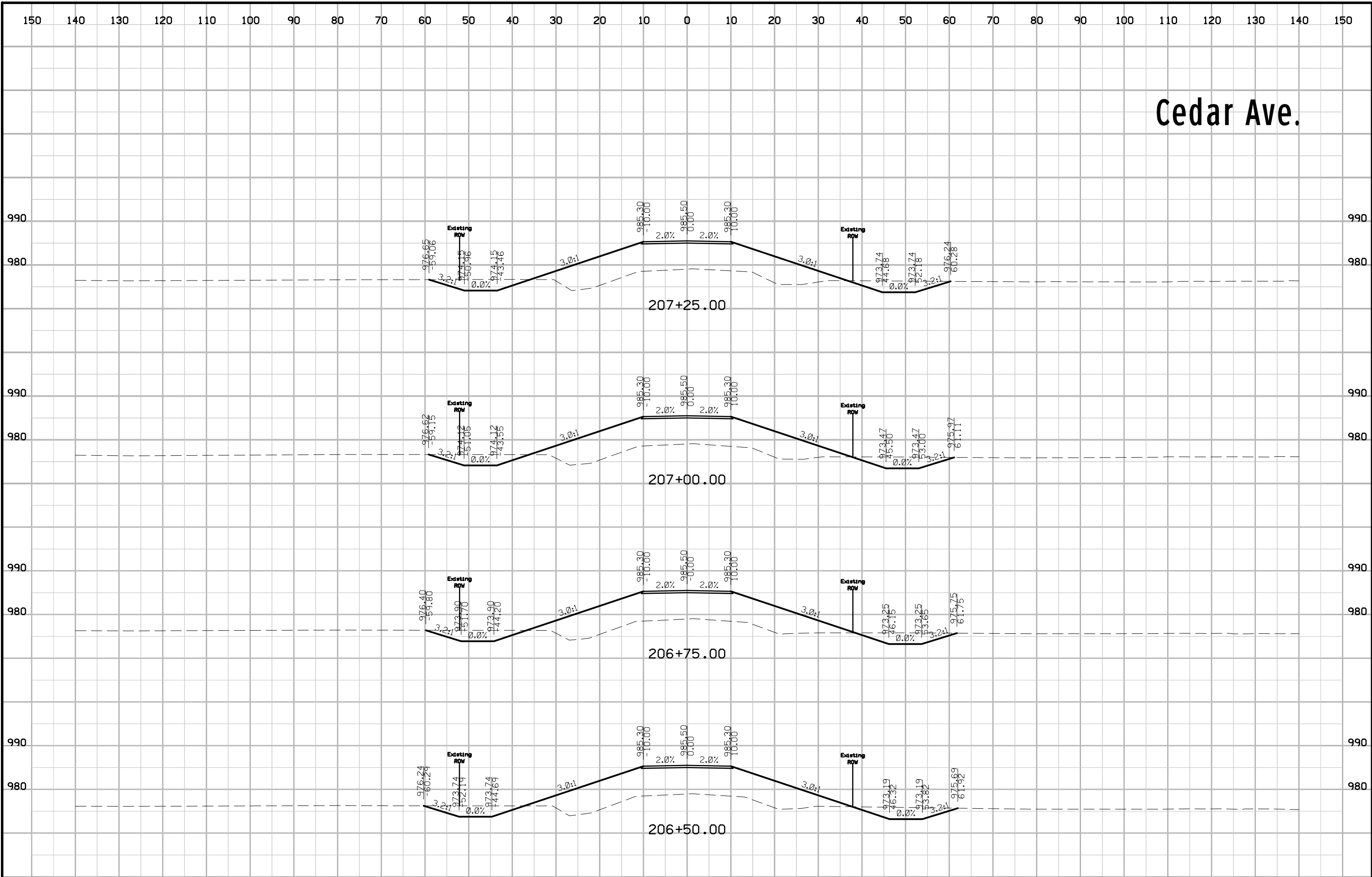
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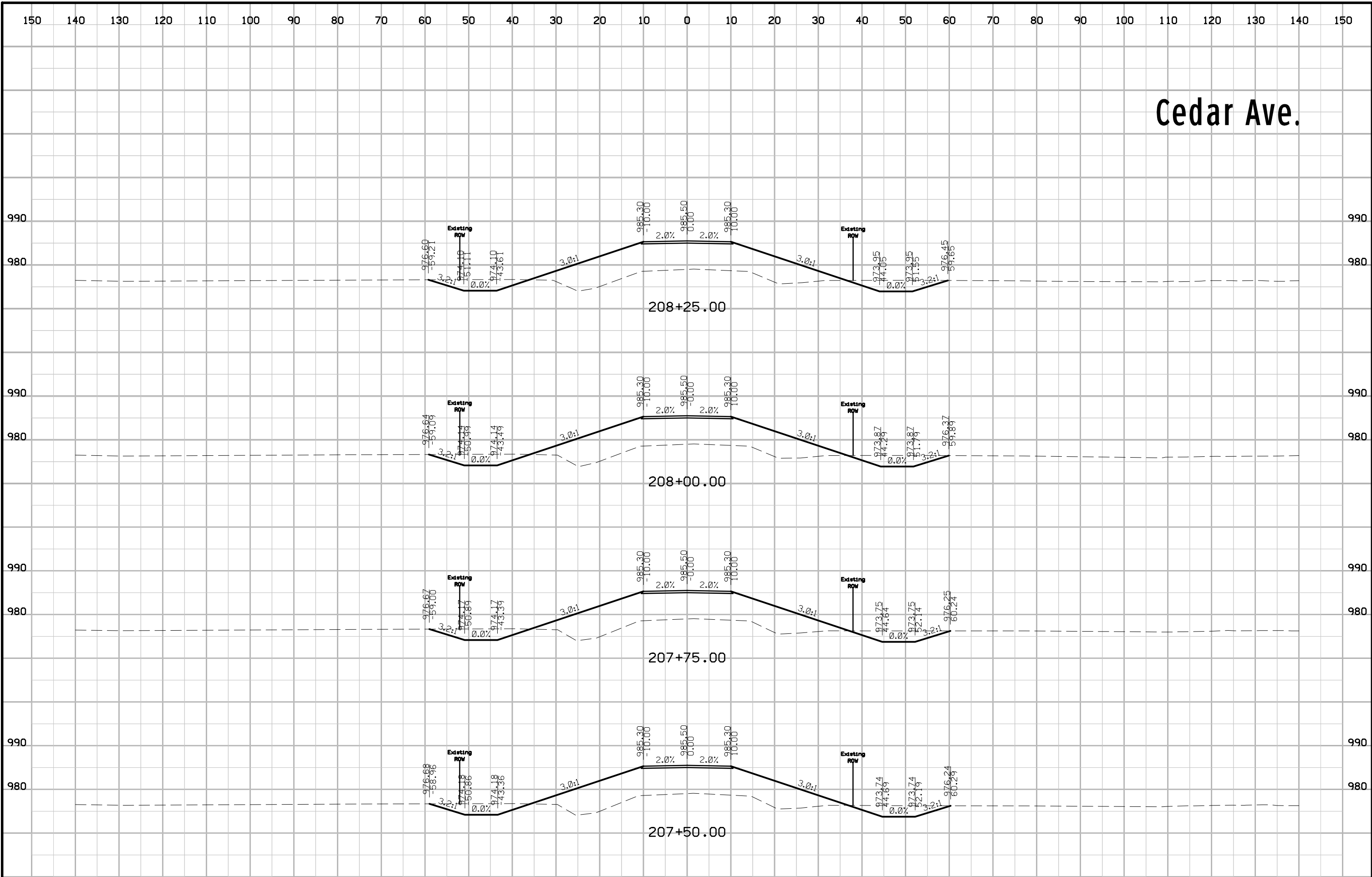
# Cedar Ave.



# Cedar Ave.

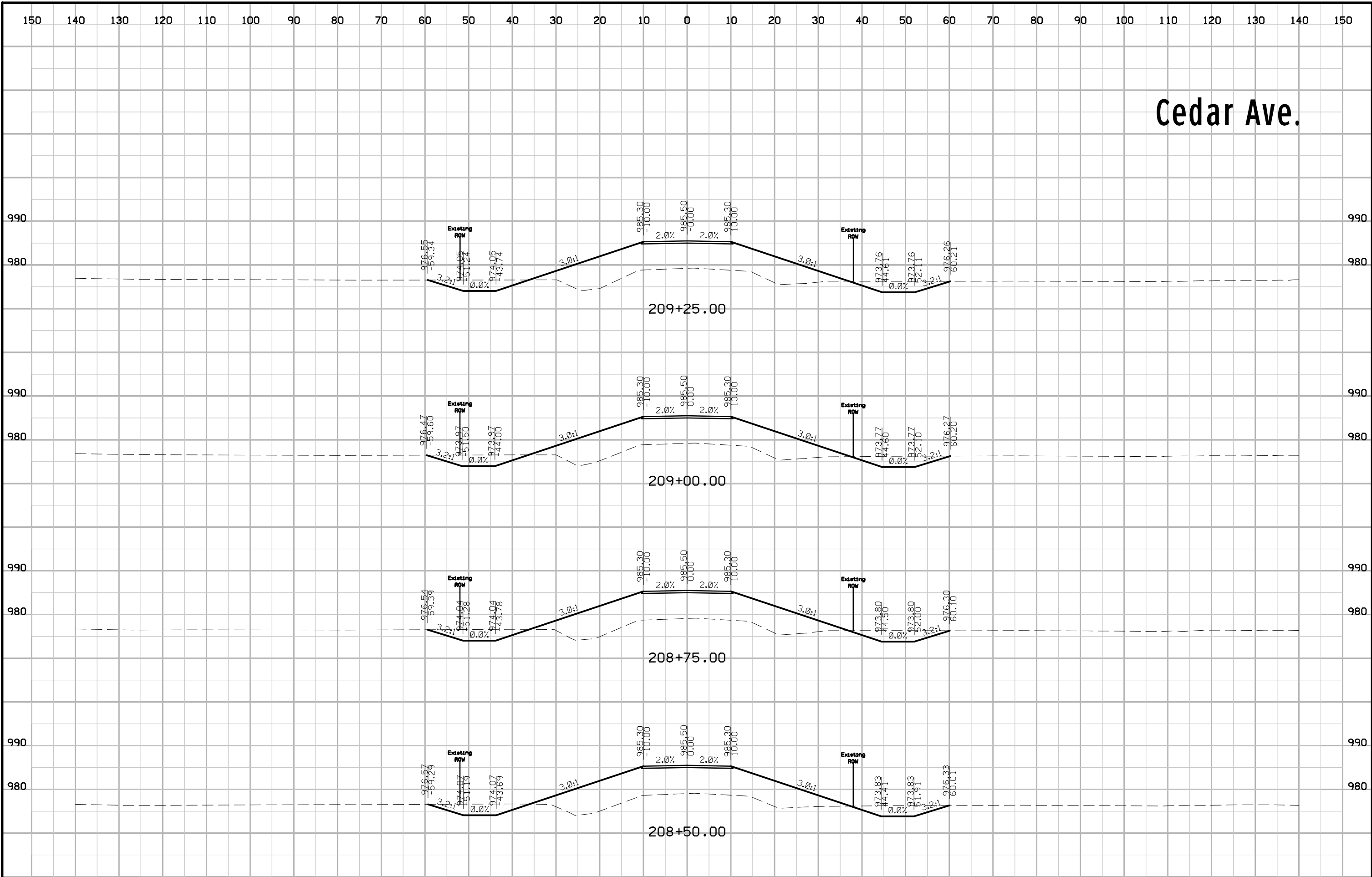


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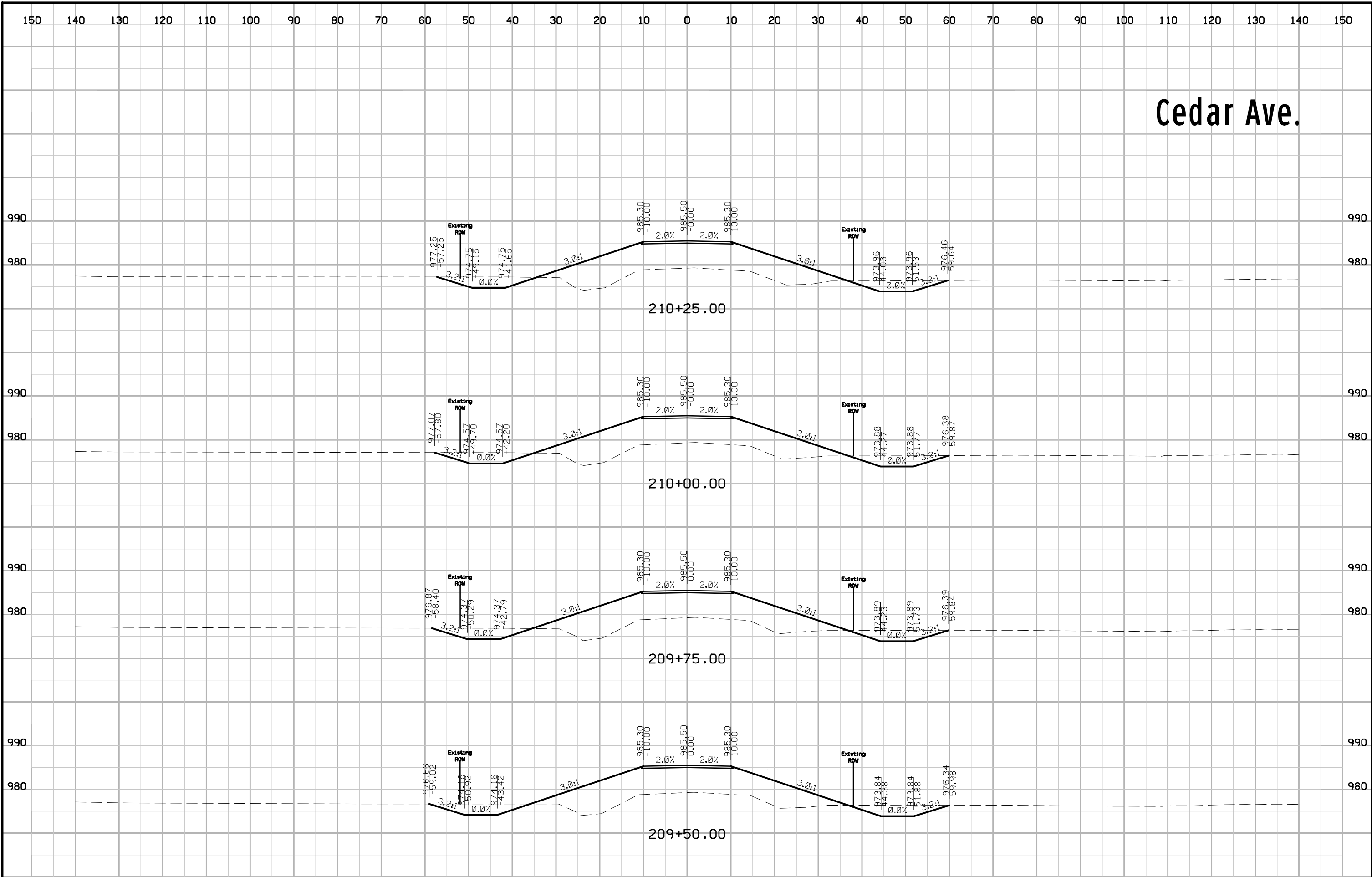




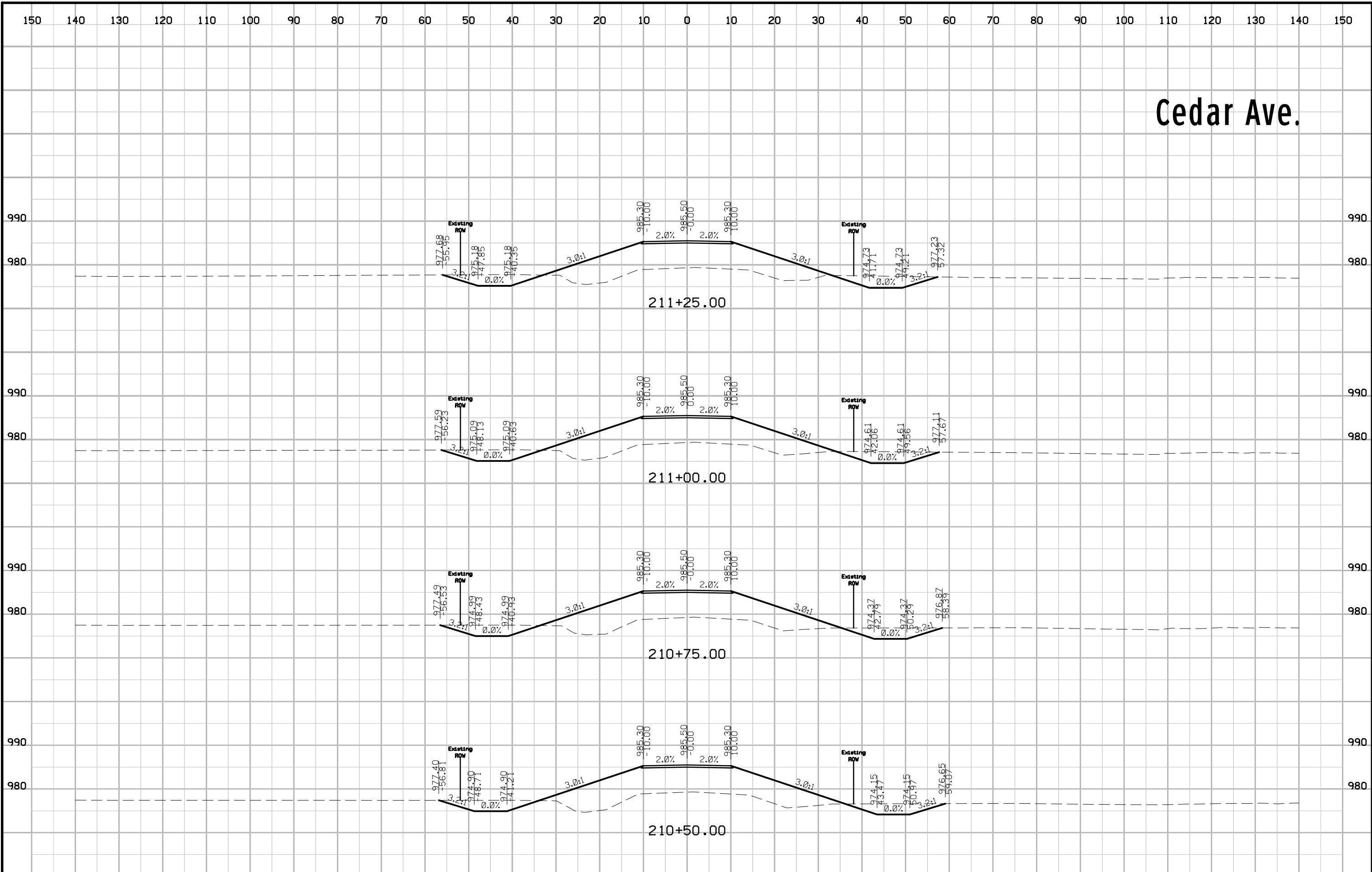
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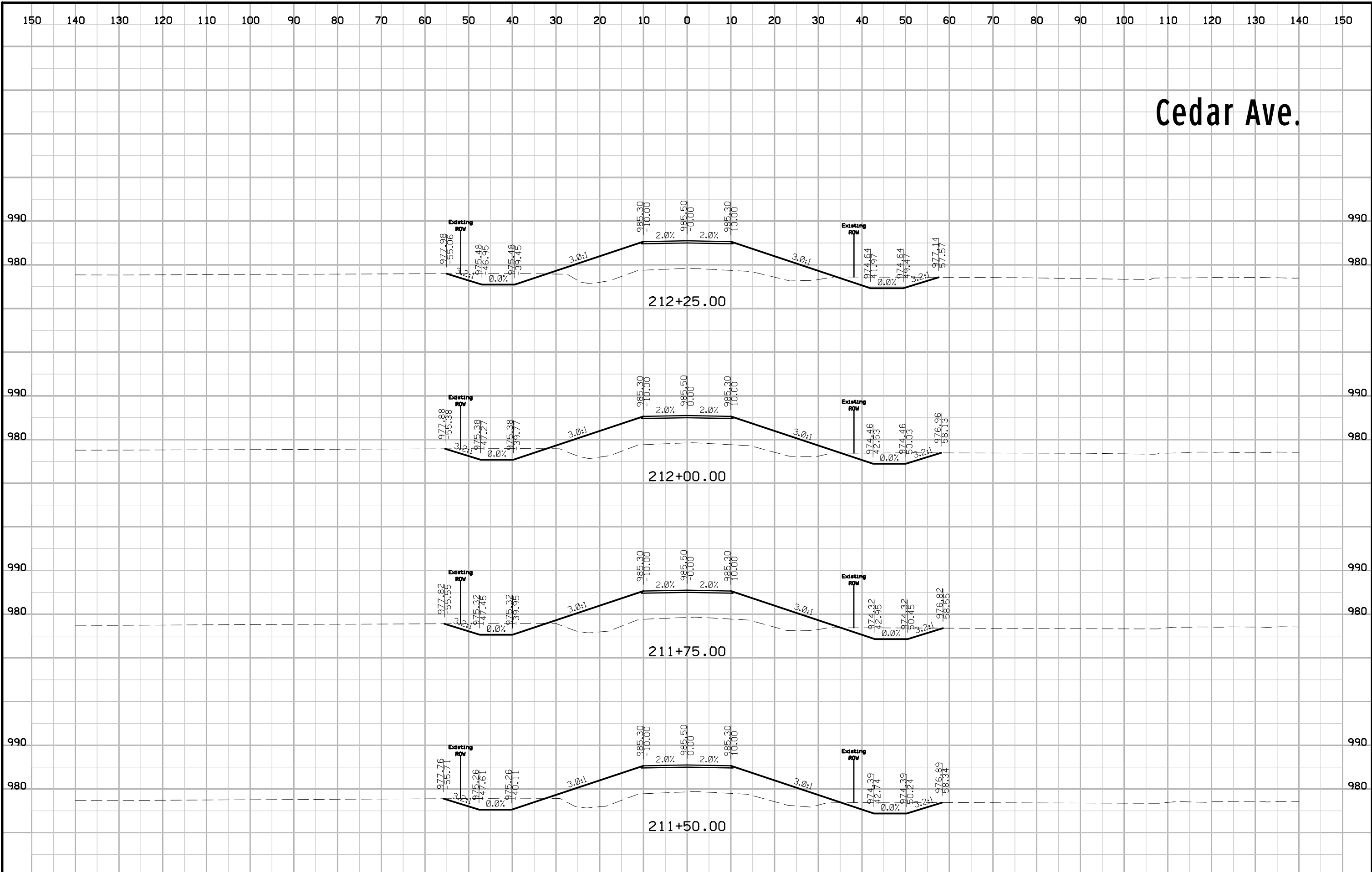
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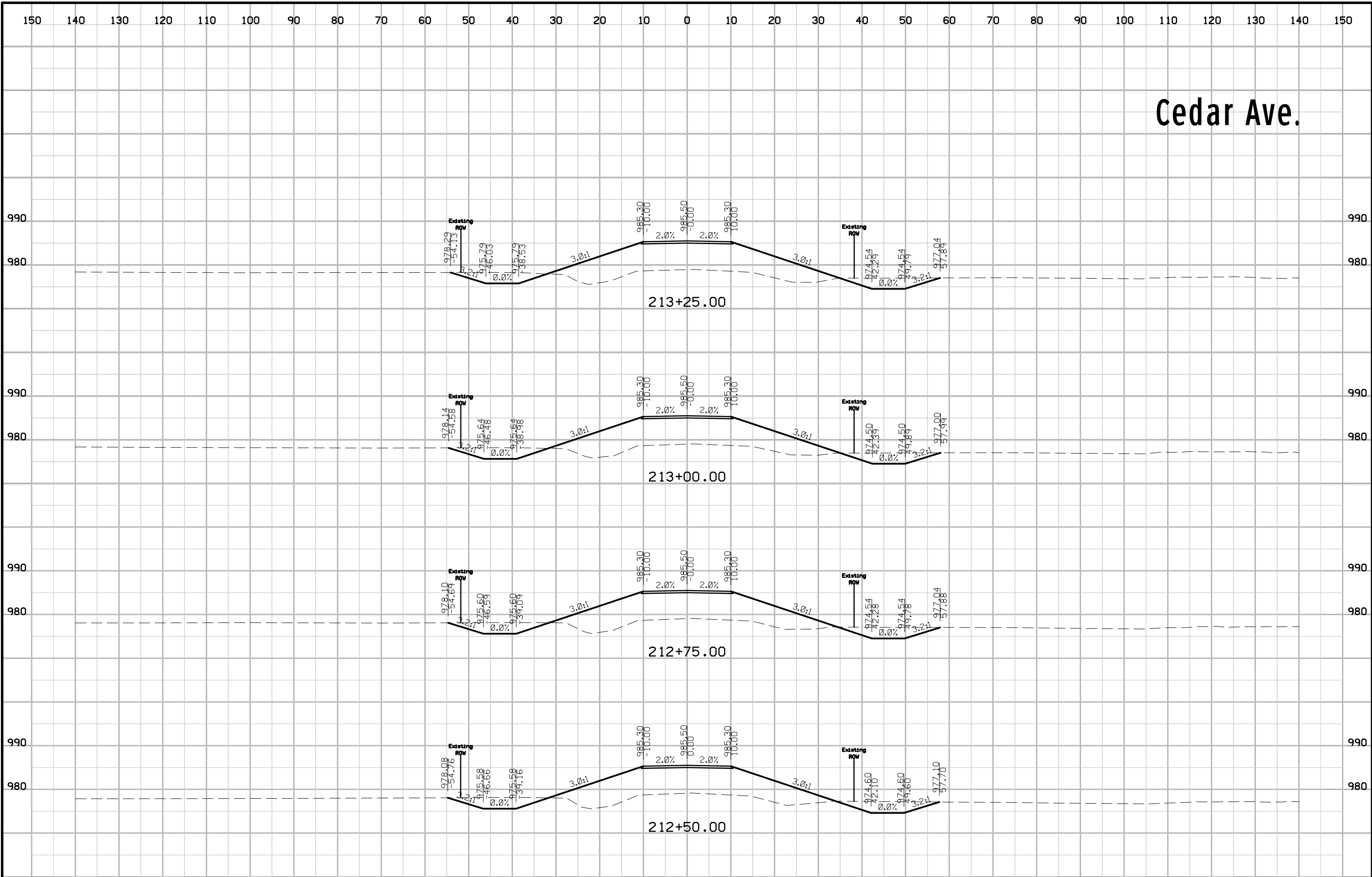
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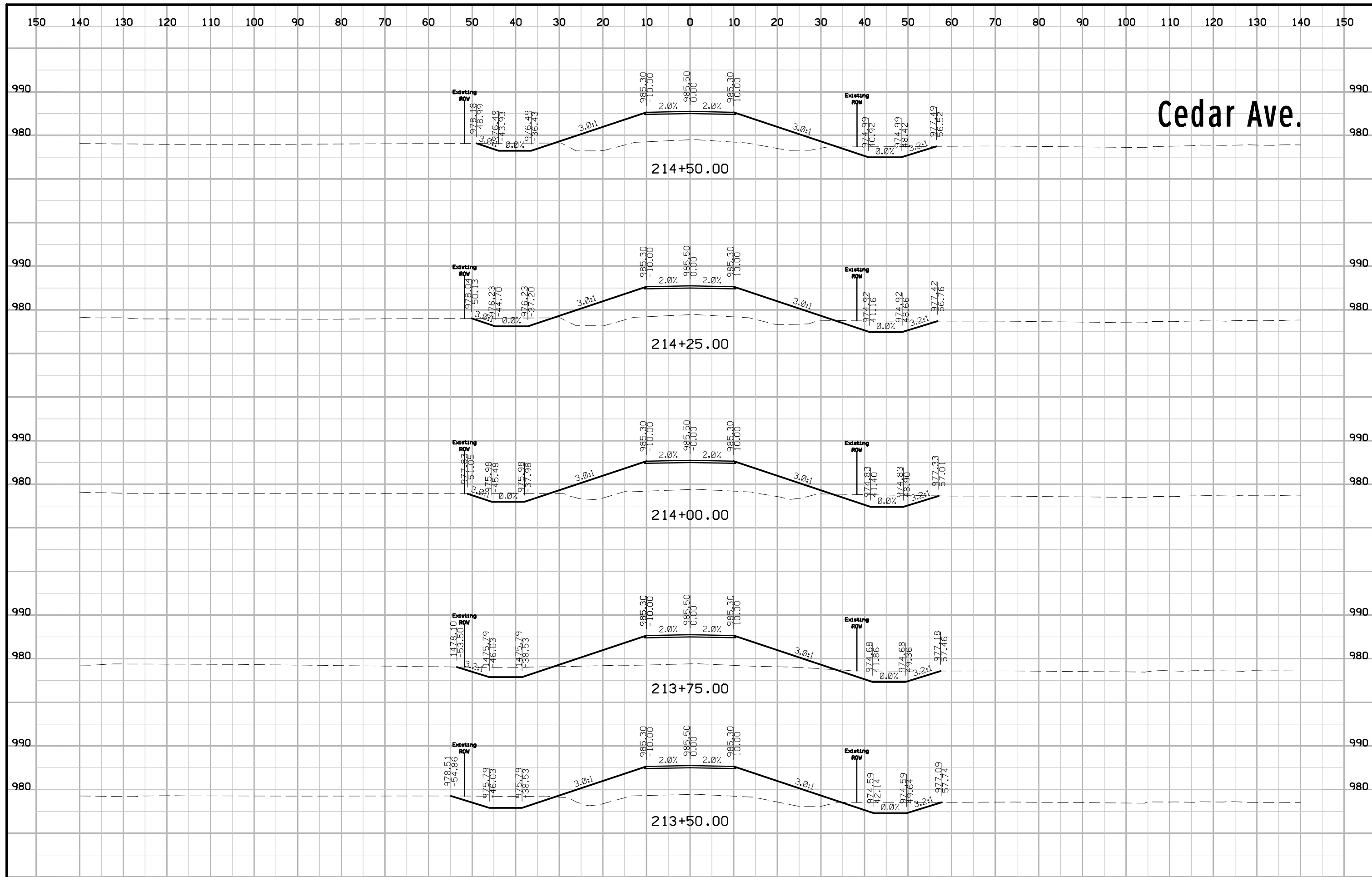


# Cedar Ave.



# Cedar Ave.

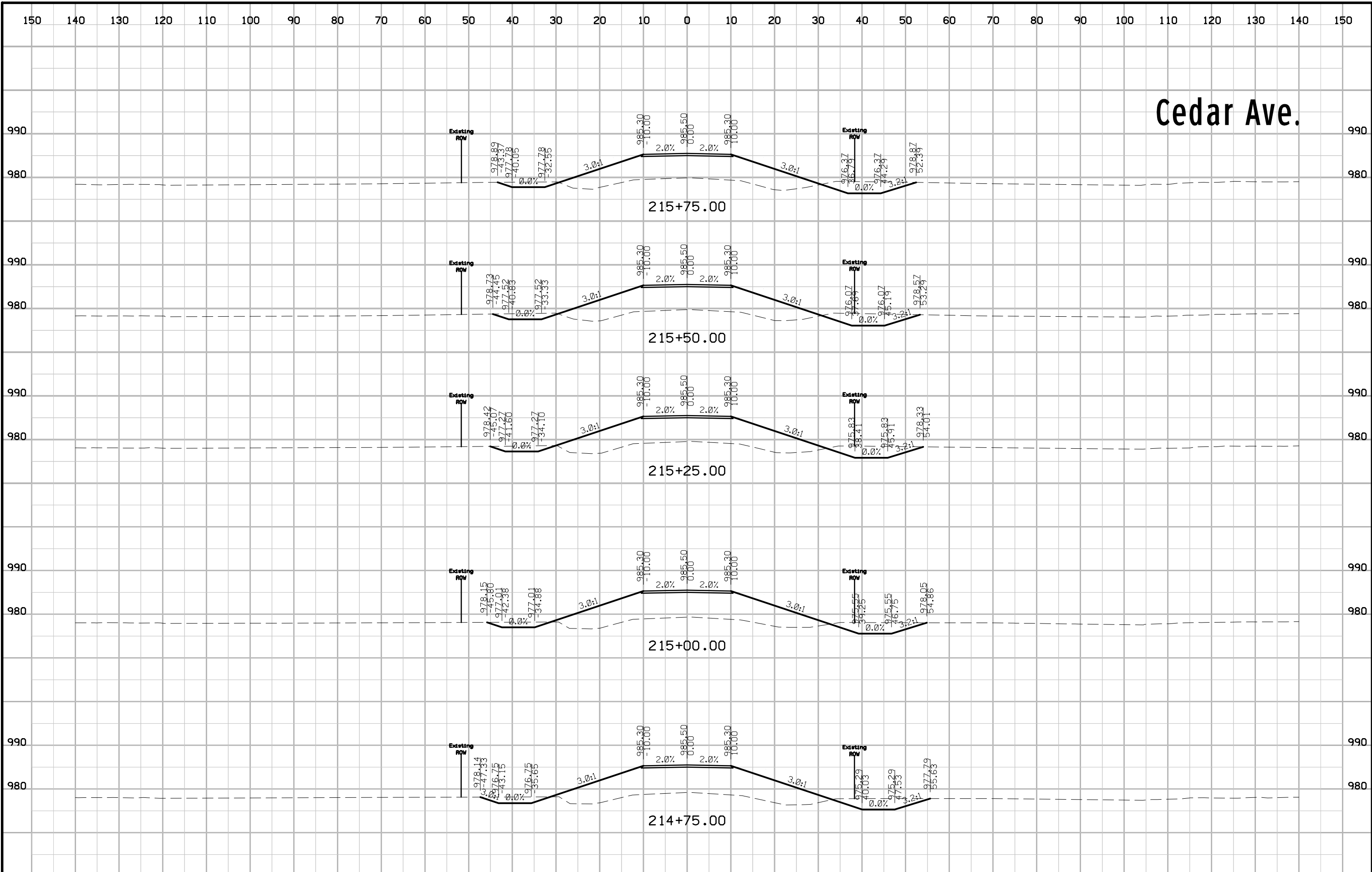




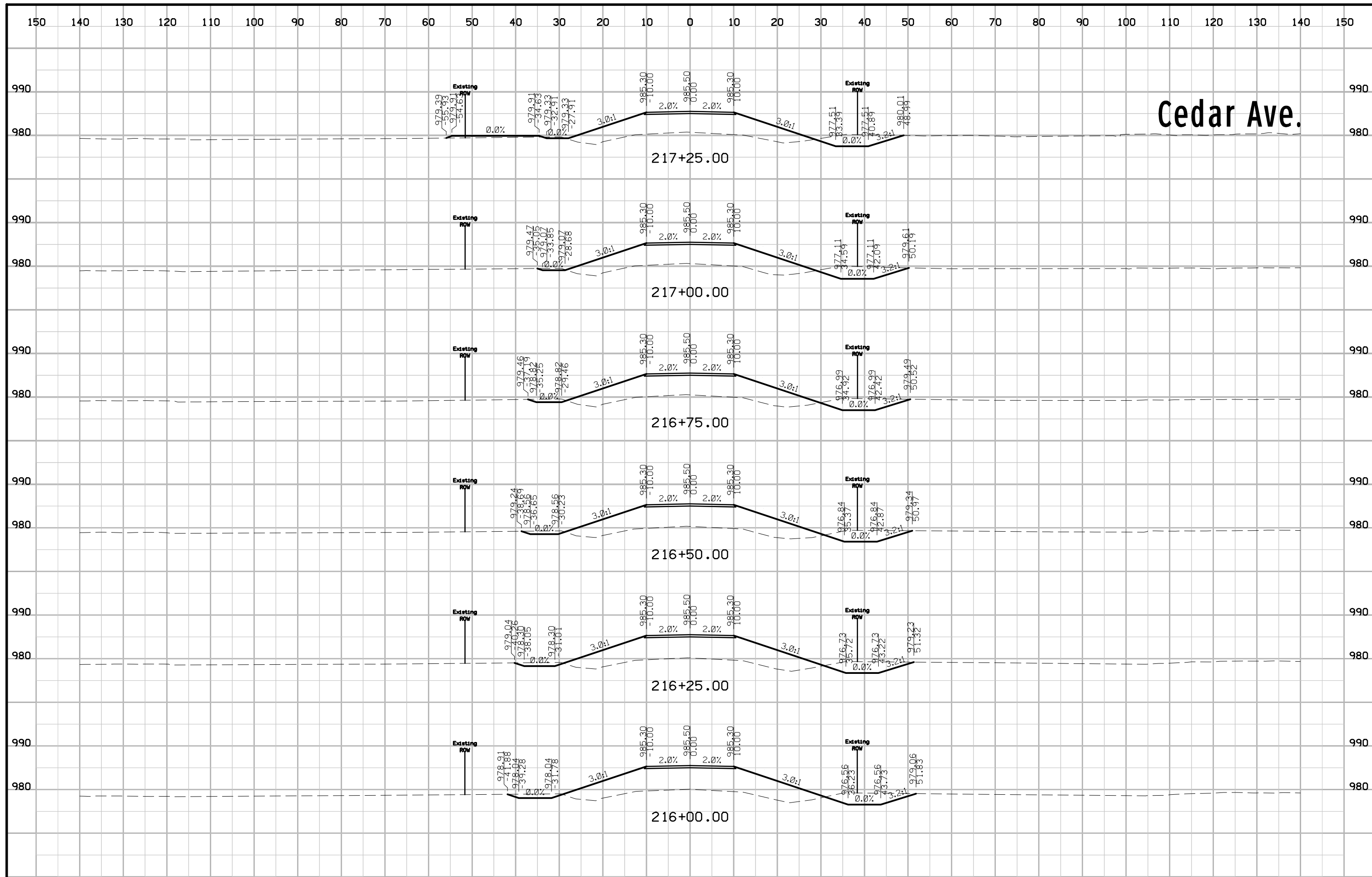
Cedar Ave.



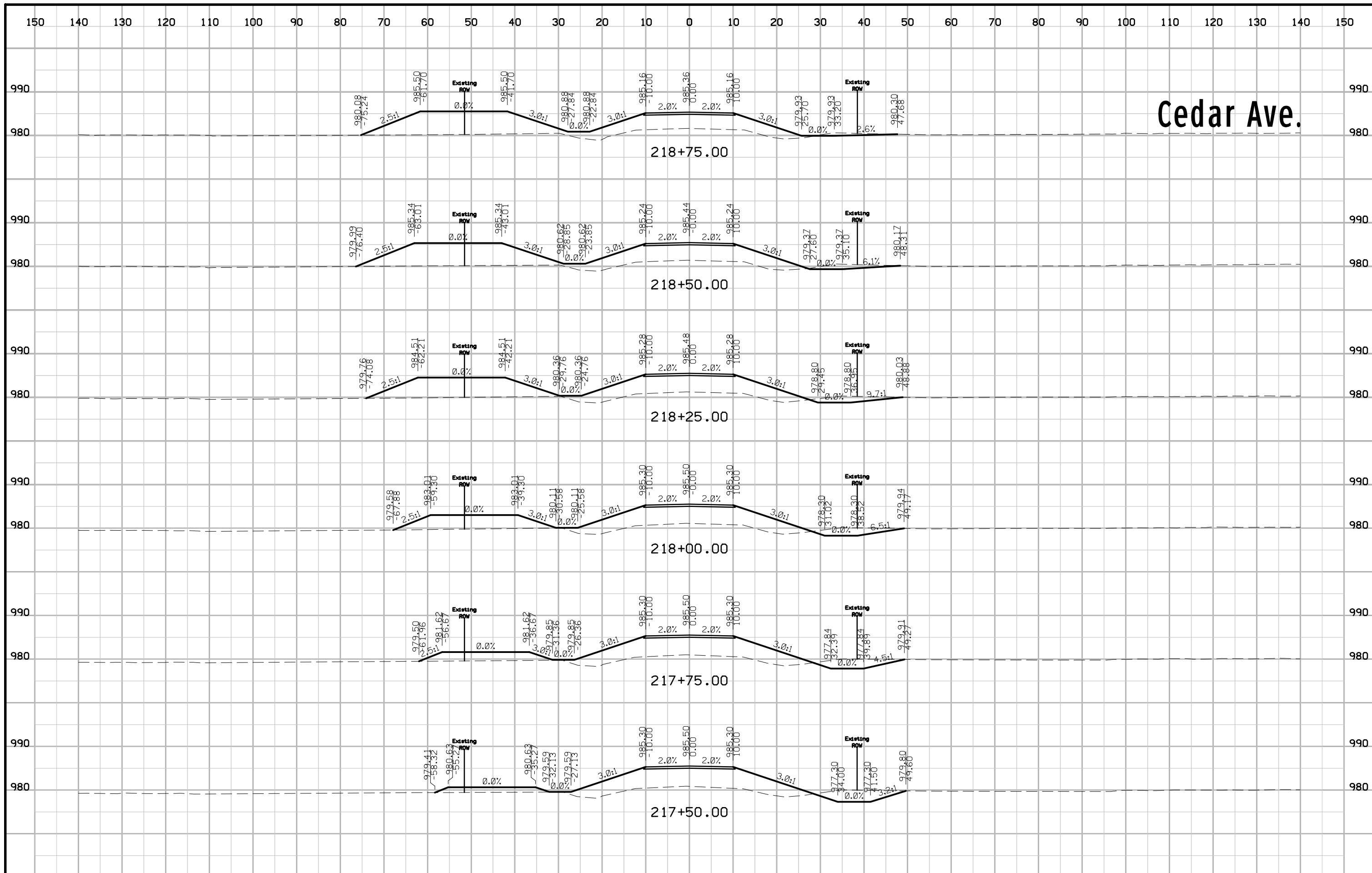
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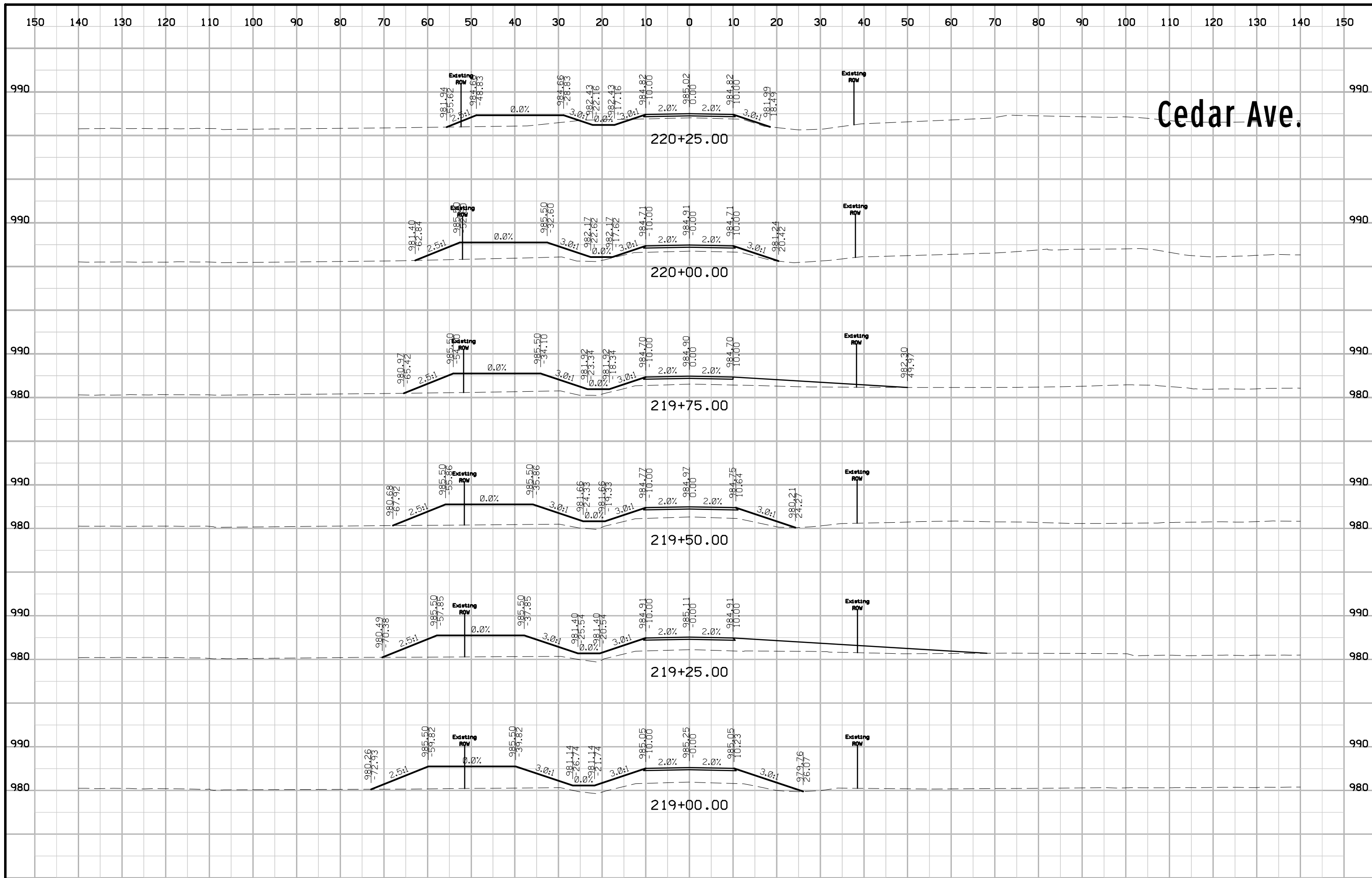
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Cedar Ave.



Cedar Ave.

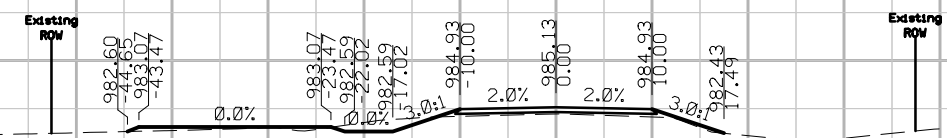


Cedar Ave.

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# Cedar Ave.

990 990



220+40.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150