



CONSTRUCTION PLANS FOR ORANGE COUNTY SOLID WASTE FACILITY ACCESS ROAD IMPROVEMENTS

100% DESIGN
ORANGE COUNTY, FLORIDA

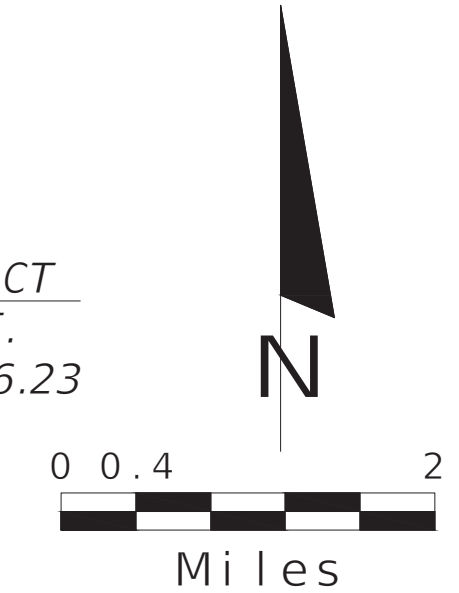
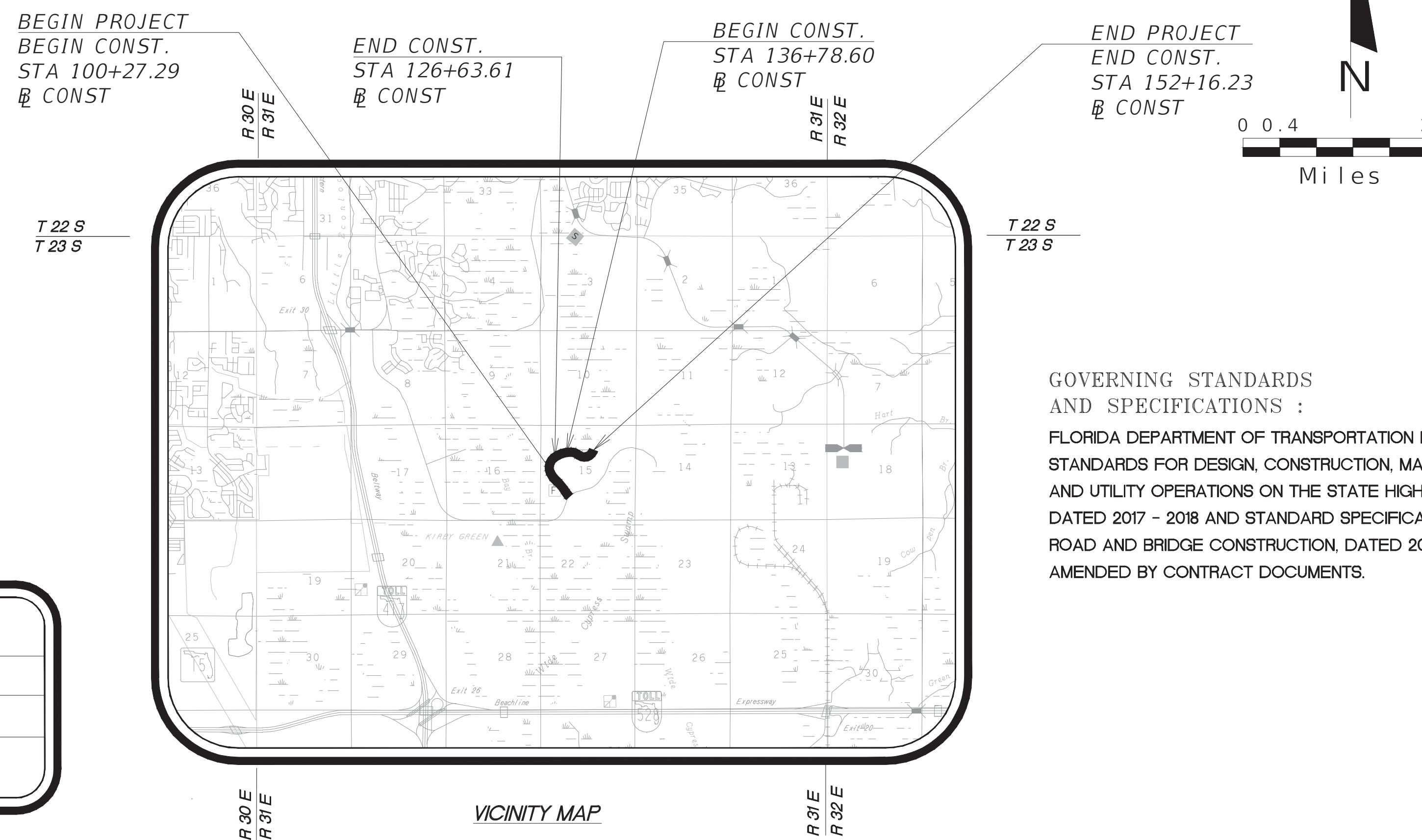
CIP #: 4410-038-1106-6310
SEQ #: 66786

SOURCE OF BENCHMARK DATUM

- B.M. #1
4"X4" CM STAMPED "BFA TRAV PT 316173"
N: 1511783.23' E: 593471.21'
STA: 105+76.12 OFF: 4511.973' (RT)
EL: 85.85'
- B.M. #2
4"X4" CM STAMPED "BFA TRAV PT 525172"
N: 1509425.97' E: 591208.75'
STA: 146+01.53 OFF: 1771.986' (RT)
EL: 84.88"
- B.M. #3
4"X4" CM STAMPED "BFA TRAV PT 316172"
N: 1509926.75' E: 591818.07'
STA: 147+80.27 OFF: 1505.648' (RT)
EL: 83.66"

SEE PROJECT LAYOUT SHEETS FOR
ADDITIONAL B.M. INFORMATION

PROJECT LENGTH:	FEET	MILES
ROADWAY:	4,174	0.791
EXIST. BRIDGES:	0.00	0.000
TOTAL LENGTH:	4,174	0.791



GOVERNING STANDARDS
AND SPECIFICATIONS :
FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN
STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE
AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM,
DATED 2017 - 2018 AND STANDARD SPECIFICATIONS FOR
ROAD AND BRIDGE CONSTRUCTION, DATED 2018 AS
AMENDED BY CONTRACT DOCUMENTS.

VICINITY MAP

NOTE

PLANS WERE PREPARED ACCORDING TO AVAILABLE INFORMATION TO ADEQUATELY ADDRESS CONDITIONS AS THEY EXISTED AT THE TIME OF PLANS PREPARATION. NEEDS, CONDITIONS AND OWNERSHIP OF PROPERTIES MAY HAVE CHANGED SINCE PROJECT DESIGN. THE COUNTY'S REPRESENTATIVE WILL ADDRESS CHANGES AND NEEDS WITH THE PROPERTY OWNER OR THEIR REPRESENTATIVES. CONTRACTOR SHALL WORK WITH THE COUNTY'S REPRESENTATIVE IN ADDRESSING AND MEETING NEEDS AND CONDITIONS THAT MAY HAVE CHANGED SINCE PLANS PREPARATION.

CERTIFICATION TO PLANS

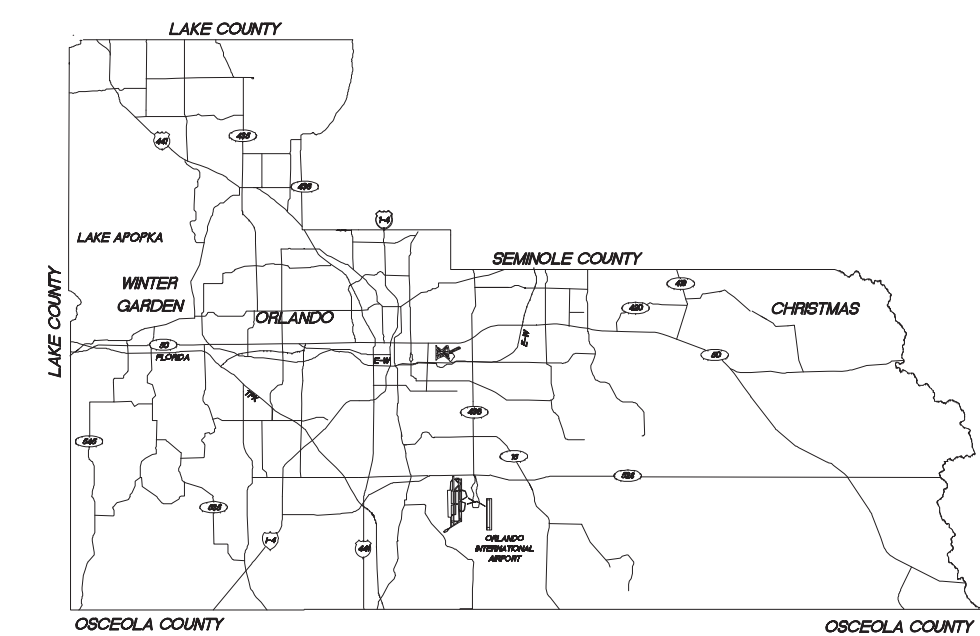
I HEREBY CERTIFY THAT THE DESIGN FOR THIS PROJECT AND THE ATTACHED CONSTRUCTION PLANS COMPLY WITH THE REQUIREMENTS OF SECTION 336.045 OF THE FLORIDA STATUTES AND ARE IN SUBSTANTIAL CONFORMANCE WITH THE STANDARDS CONTAINED IN THE EDITION OF THE "MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS" IN EFFECT ON THIS DATE AS ADOPTED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION PURSUANT TO SUBSECTION 336.045(1) OF THE FLORIDA STATUTES.

DATE: 4/19/19 ENGINEER: CLINT PLETZER, P.E. NO. 69221

JERRY L. DEMINGS, COUNTY MAYOR

BOARD OF COUNTY
COMMISSIONERS

- | | |
|-----------------------|------------|
| BETSEY VANDERLEY | DISTRICT 1 |
| CHRISTINE MOORE | DISTRICT 2 |
| MAYRA URIBE | DISTRICT 3 |
| MARIBEL GOMEZ CORDERO | DISTRICT 4 |
| EMILY BONILLA | DISTRICT 5 |
| VICTORIA SIPLIN | DISTRICT 6 |



LOCATION MAP

INDEX OF SHEETS

SHEET	DESCRIPTION
1	KEYSHEET
2	MAINTENANCE OF TRAFFIC
3	PROJECT LAYOUT
4	SUMMARY OF PAY ITEMS
5 - 7	DRAINAGE MAP
8 - 9	TYPICAL SECTIONS
10 - 20	PLAN PROFILE SHEETS
21 - 22	DRAINAGE CROSS SECTIONS
23 - 38	ROADWAY CROSS SECTIONS
G01	REPORT OF TESTS
G02 - G03	REPORT OF ROADWAY AUGER BORINGS
G04	REPORT OF SPT BORINGS
S01	BOX CULVERT TABLE OF VARIABLES
S02 - S03	BOX CULVERT REINFORCING BAR LIST



PREPARED BY:



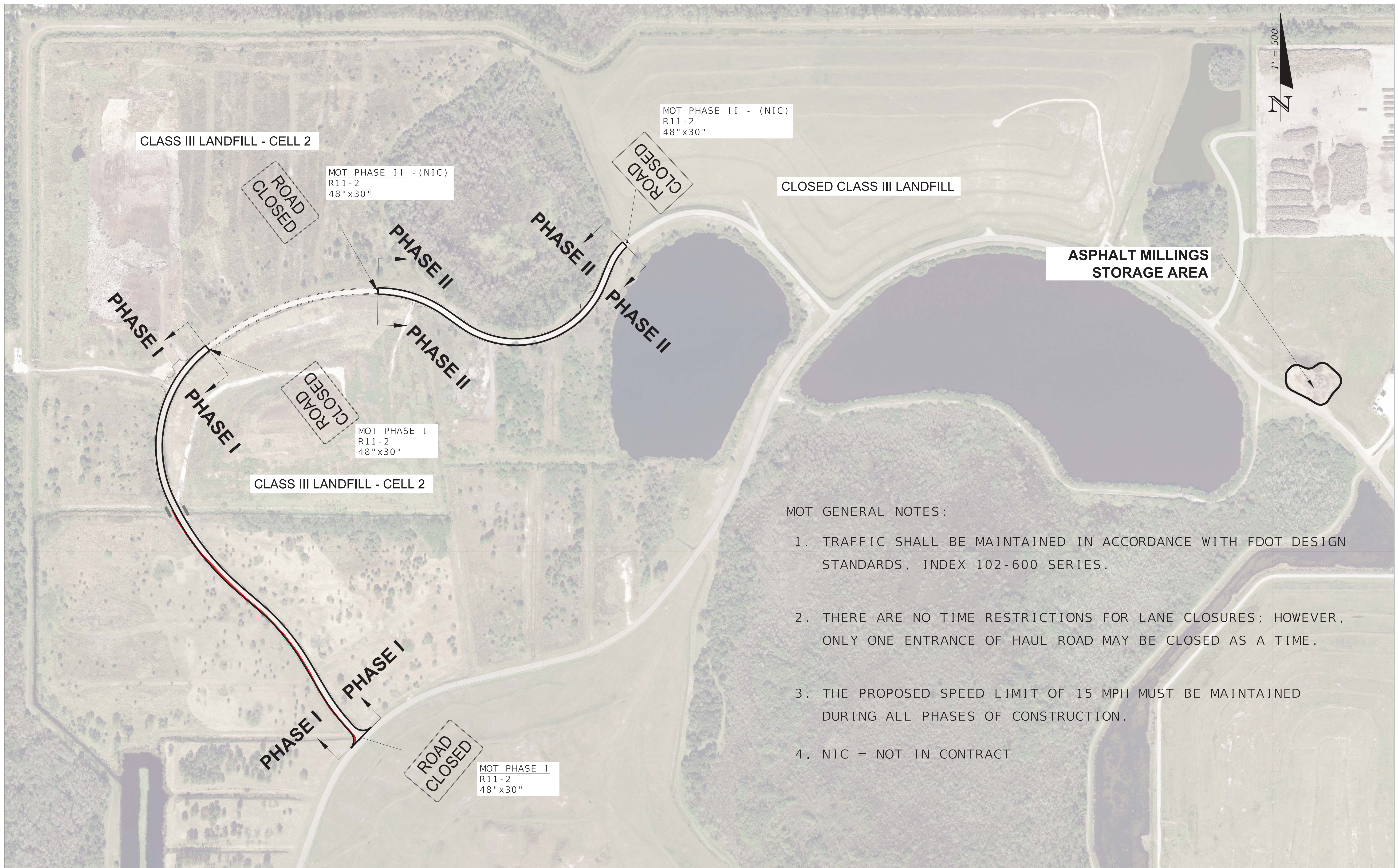
AVCON, INC.
5555 MICHIGAN STREET, SUITE 200
ORLANDO, FLORIDA 32822-2779
PHONE: (407) 599-1122
FAX: (407) 599-1133
www.avconinc.com

REVISIONS

DATE BY

DESIGNED BY: CNW DATE: 4/19/19
DRAWN BY: CNW DATE: 4/19/19
CHECKED BY: CJP DATE: 4/19/19
APPROVED BY: RVB DATE: 4/19/19
PROJECT NO:

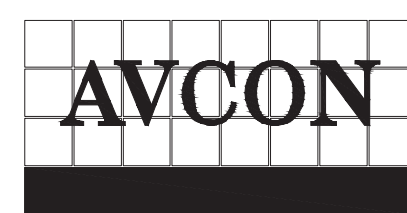
SHEET 1
OF 45



MOT GENERAL NOTES:

1. TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH FDOT DESIGN STANDARDS, INDEX 102-600 SERIES.
2. THERE ARE NO TIME RESTRICTIONS FOR LANE CLOSURES; HOWEVER, ONLY ONE ENTRANCE OF HAUL ROAD MAY BE CLOSED AS A TIME.
3. THE PROPOSED SPEED LIMIT OF 15 MPH MUST BE MAINTAINED DURING ALL PHASES OF CONSTRUCTION.
4. NIC = NOT IN CONTRACT

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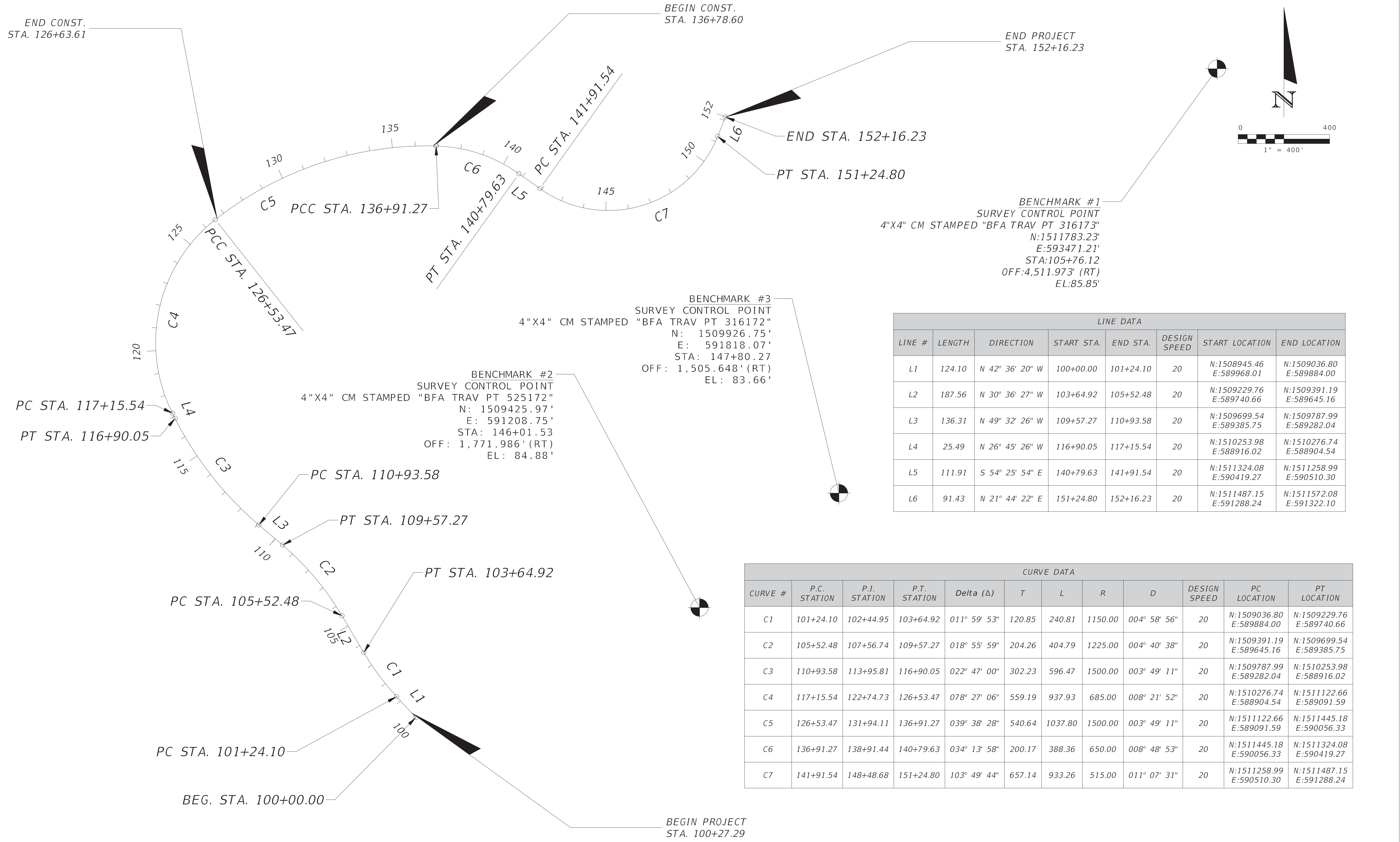
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MAINTENANCE OF TRAFFIC

SHEET NO.

2



LINE DATA							
LINE #	LENGTH	DIRECTION	START STA.	END STA.	DESIGN SPEED	START LOCATION	END LOCATION
L1	124.10	N 42° 36' 20" W	100+00.00	101+24.10	20	N:1508945.46 E:589968.01	N:1509036.80 E:589884.00
L2	187.56	N 30° 36' 27" W	103+64.92	105+52.48	20	N:1509229.76 E:589740.66	N:1509391.19 E:589645.16
L3	136.31	N 49° 32' 26" W	109+57.27	110+93.58	20	N:1509699.54 E:589385.75	N:1509787.99 E:589282.04
L4	25.49	N 26° 45' 26" W	116+90.05	117+15.54	20	N:1510253.98 E:588916.02	N:1510276.74 E:588904.54
L5	111.91	S 54° 25' 54" E	140+79.63	141+91.54	20	N:1511324.08 E:590419.27	N:1511258.99 E:590510.30
L6	91.43	N 21° 44' 22" E	151+24.80	152+16.23	20	N:1511487.15 E:591288.24	N:1511572.08 E:591322.10

CURVE DATA											
CURVE #	P.C. STATION	P.I. STATION	P.T. STATION	Delta (Δ)	T	L	R	D	DESIGN SPEED	PC LOCATION	PT LOCATION
C1	101+24.10	102+44.95	103+64.92	011° 59' 53"	120.85	240.81	1150.00	004° 58' 56"	20	N:1509036.80 E:589884.00	N:1509229.76 E:589740.66
C2	105+52.48	107+56.74	109+57.27	018° 55' 59"	204.26	404.79	1225.00	004° 40' 38"	20	N:1509391.19 E:589645.16	N:1509699.54 E:589385.75
C3	110+93.58	113+95.81	116+90.05	022° 47' 00"	302.23	596.47	1500.00	003° 49' 11"	20	N:1509787.99 E:589282.04	N:1510253.98 E:588916.02
C4	117+15.54	122+74.73	126+53.47	078° 27' 06"	559.19	937.93	685.00	008° 21' 52"	20	N:1510276.74 E:588904.54	N:1511122.66 E:589091.59
C5	126+53.47	131+94.11	136+91.27	039° 38' 28"	540.64	1037.80	1500.00	003° 49' 11"	20	N:1511122.66 E:589091.59	N:1511445.18 E:590056.33
C6	136+91.27	138+91.44	140+79.63	034° 13' 58"	200.17	388.36	650.00	008° 48' 53"	20	N:1511445.18 E:590056.33	N:1511324.08 E:590419.27
C7	141+91.54	148+48.68	151+24.80	103° 49' 44"	657.14	933.26	515.00	011° 07' 31"	20	N:1511258.99 E:590510.30	N:1511487.15 E:591288.24

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PROJECT LAYOUT

SHEET NO.
3

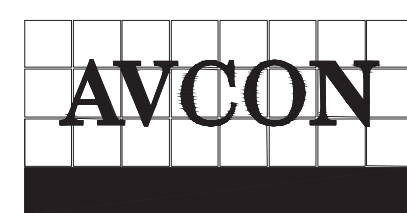
SUMMARY OF PAY ITEMS

ITEM	DESCRIPTION	UNIT	QUANTITY
101-1	MOBILIZATION	LS	1
102-1	MAINTENANCE OF TRAFFIC	LS	1
104-10-3	SEDIMENT BARRIER	LS	1
110-1-1	CLEARING & GRUBBING	LS	1
120-1	REGULAR EXCAVATION	LS	1
120-6	EMBANKMENT	LS	1
160-4	TYPE B STABILIZATION (MIN. LBR 40) (12")	LS	1
285-7-08	LIMEROCK (MIN LBR 100) (9")	LS	1
334-1-52	SUPERPAVE ASPH CONC, TRAFFIC B, PG 76-22	LS	1
400-4-1	CONCRETE CLASS IV, CULVERTS	LS	1
425-1-501	INLETS, DITCH BOTTOM, TYPE A, <10'	LS	1
425-2-93	MANHOLES, J8, PARTIAL	LS	1
430-94-2	DESILTING PIPE, 25" - 36"	LS	1
430-174-124	PIPE CULVERT, RCP, 24" SD	LS	1
430-174-218	PIPE CULVERT, ERCP, 14"x23" SD	LS	1
430-984-625	MITERED END SECTION, ERCP 14"x23" SD	LS	1
521-72-3	SHOULDER CONCRETE BARRIER, RIGID-SHOULDER"	LS	1
530-3-4	RIPRAP, RUBBLE, F&I, DITCH LINING	LS	1
544-75-1	CRASH CUSHION	LS	1
570-1-1	PERFORMANCE TURF	LS	1
700-1-11	SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF	LS	1
711-16-101	THERMOPLASTIC, STANDARD-OTHER SURFACES, WHITE, SOLID, 6"	LS	1
711-16-201	THERMOPLASTIC, STANDARD-OTHER SURFACES, YELLOW, SOLID, 6"	LS	1
900-1	AS-BUILT PLANS	LS	1
900-2	INDEMNIFICATION	LS	1

NOTES:

PROJECT IS LUMP SUM. PAY ITEM NUMBERS ARE PROVIDED TO REFERENCE FDOT SPECIFICATIONS. FDOT DIVISION TWO SPECIFICATIONS APPLY FOR THIS PROJECT, HOWEVER, DIVISION ONE SPECIFICATIONS ARE PROVIDED AS A PART OF THIS PROJECT'S SPECIFICATIONS PACKAGE.

REVISIONS			
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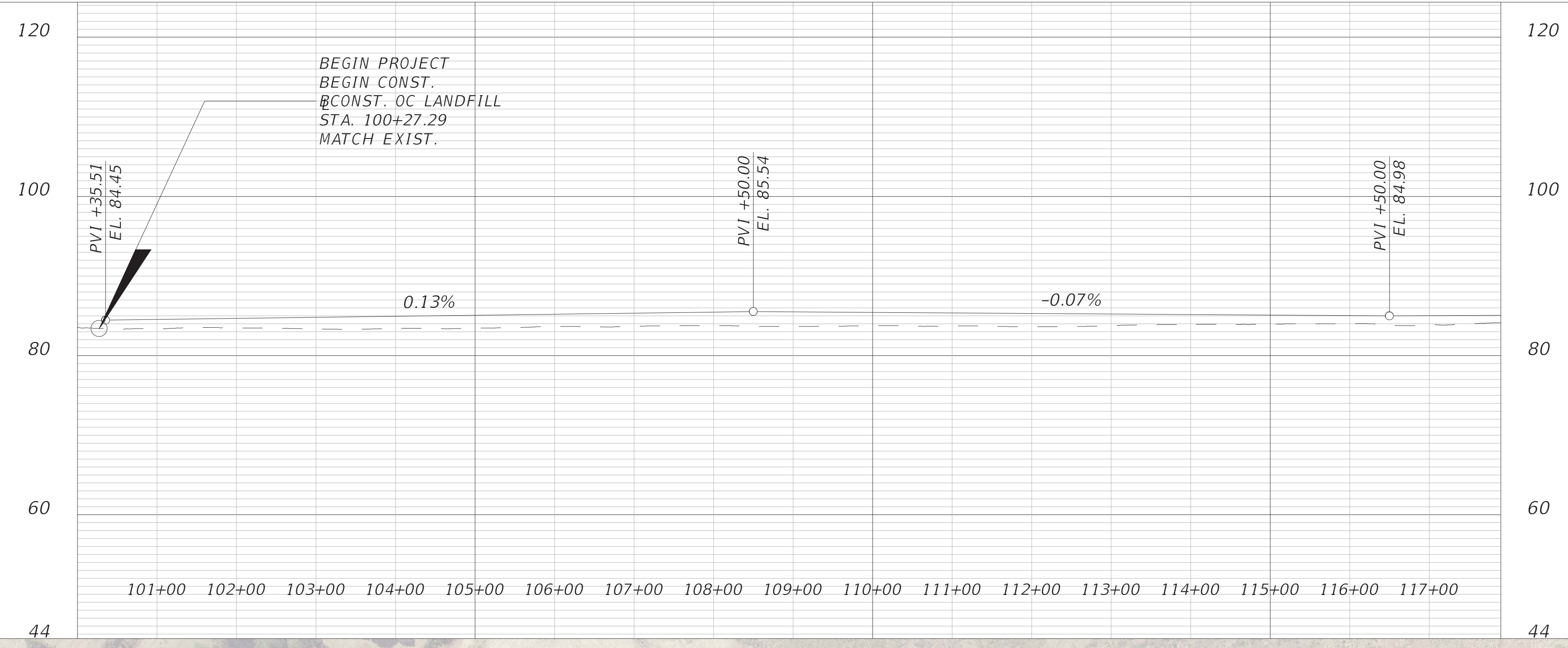
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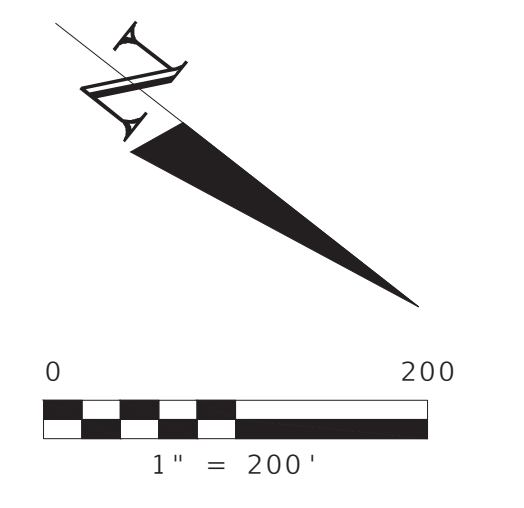
SUMMARY OF PAY ITEMS

SHEET NO.

4



SCALE: 1" = 200' Horizontal
1" = 20' Vertical



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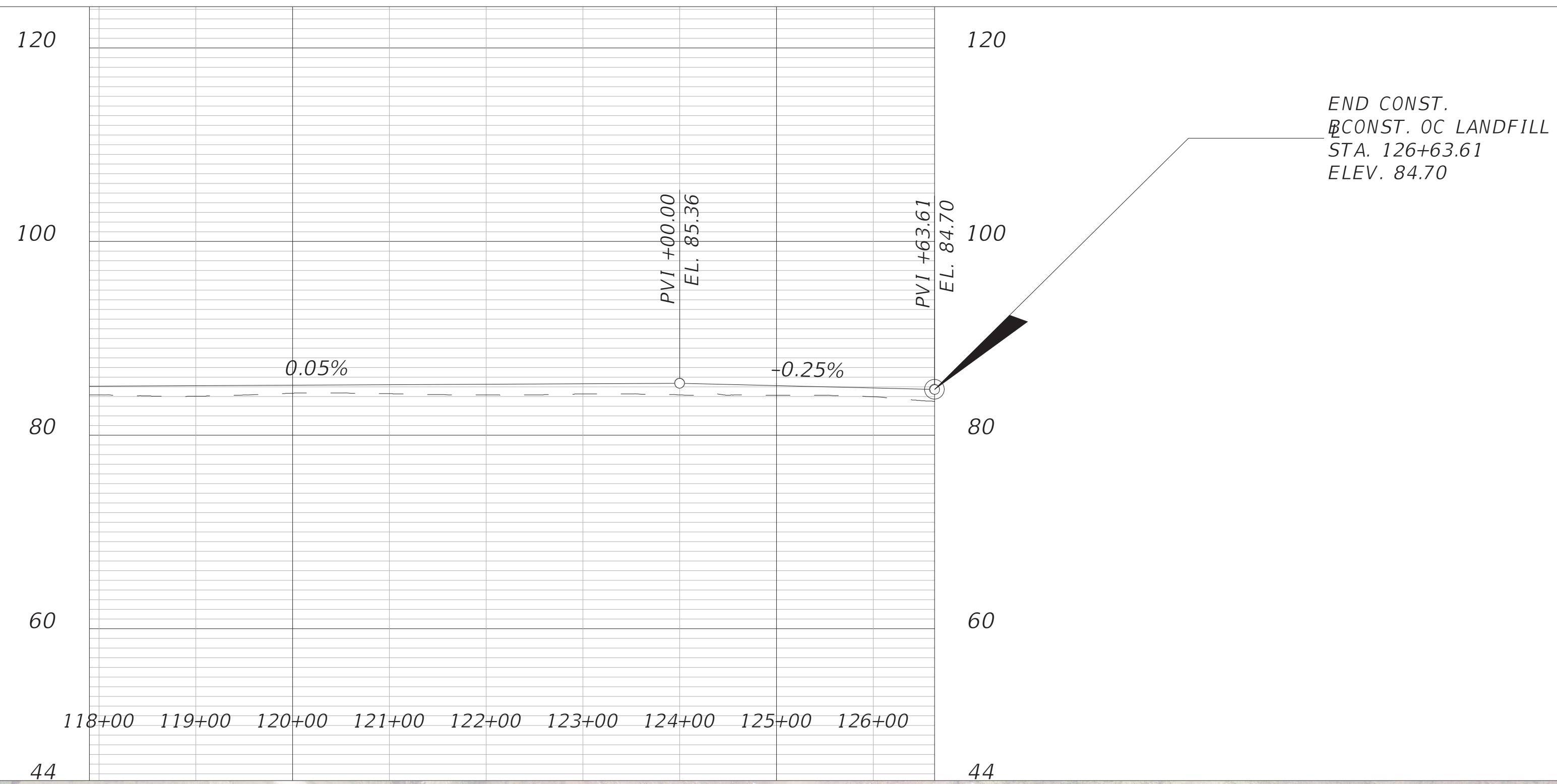
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DRAINAGE MAP

SHEET NO.
3



SCALE: 1" = 200' Horizontal
1" = 20' Vertical



REVISIONS			
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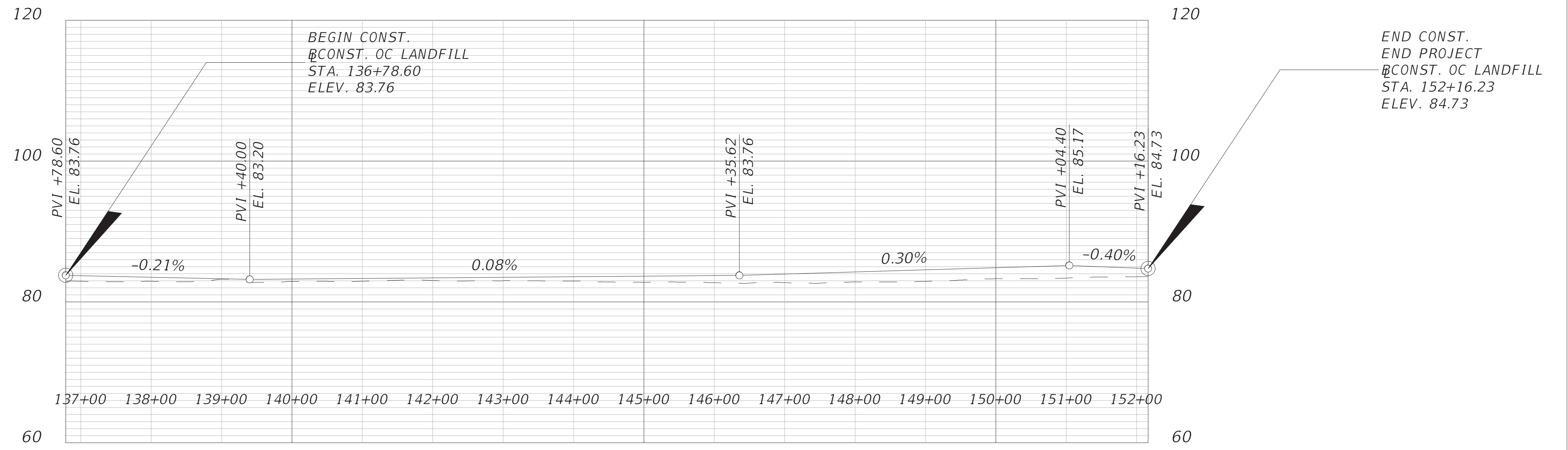
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DRAINAGE MAP

SHEET NO.

4



SCALE: 1" = 200' Horizontal
1" = 20' Vertical



REVISIONS			
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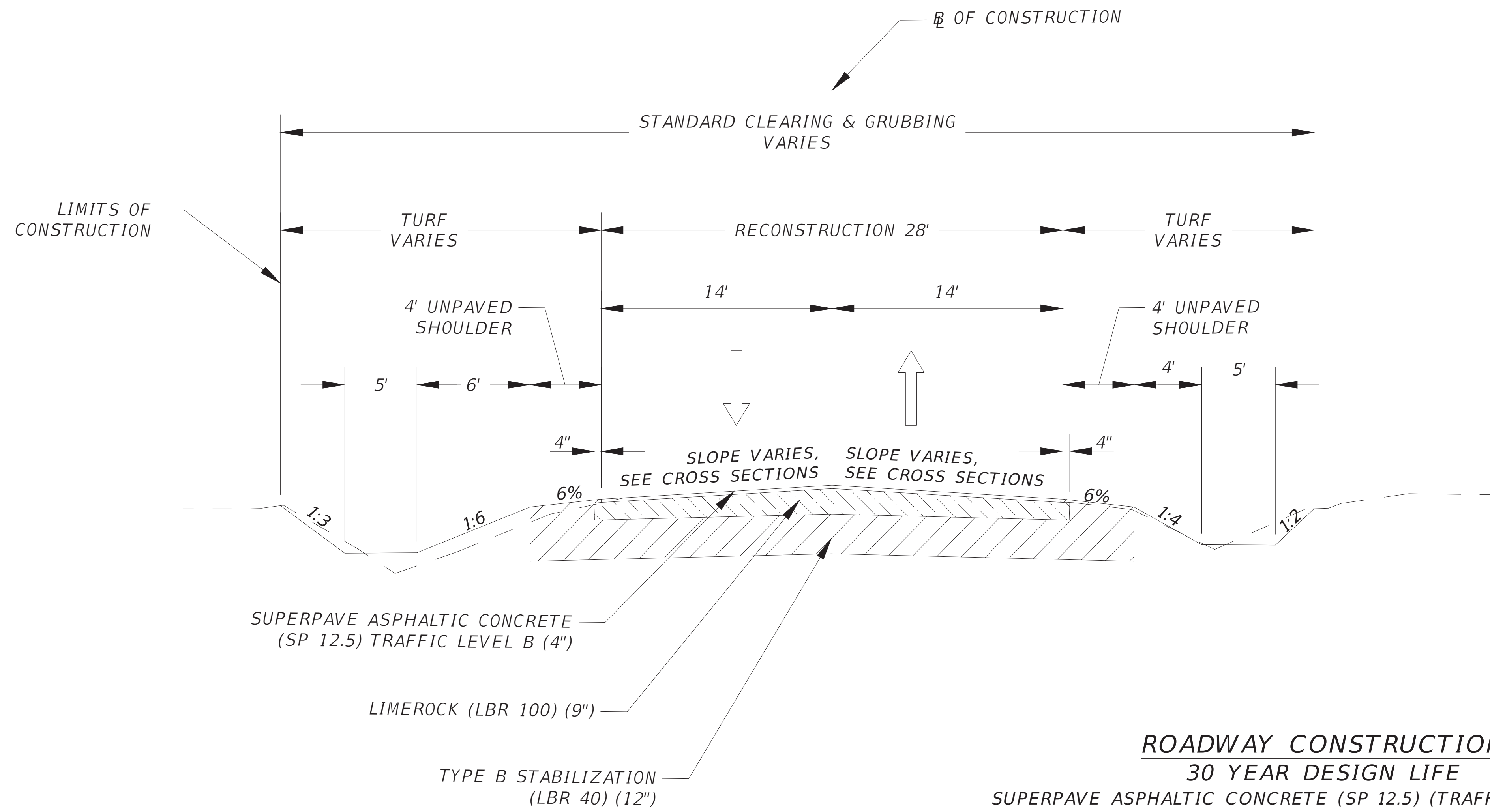
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DRAINAGE MAP

SHEET NO.
5

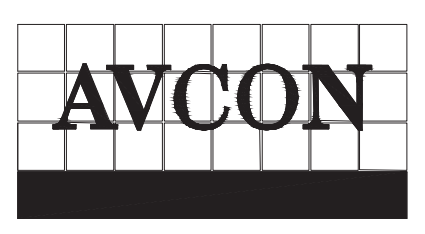


ROADWAY CONSTRUCTION
30 YEAR DESIGN LIFE
 SUPERPAVE ASPHALTIC CONCRETE (SP 12.5) (TRAFFIC LEVEL B) (4")
 LIMEROCK (LBR 100) (9")
 TYPE B STABILIZATION (MIN. LBR 40) (12")

TRAFFIC DATA
 CURRENT YEAR = 2017 AADT = 300
 ESTIMATED OPENING YEAR = 2018 AADT = 300
 ESTIMATED DESIGN YEAR = 2048 AADT = 417
 D = 0.5 T = 100
 DESIGN SPEED = 20 MPH
 POSTED SPEED = 15 MPH

TYPICAL SECTION - PHASE I
ROADWAY IMPROVEMENTS
STA. 100+27.29 TO STA. 126+63.61
 N.T.S.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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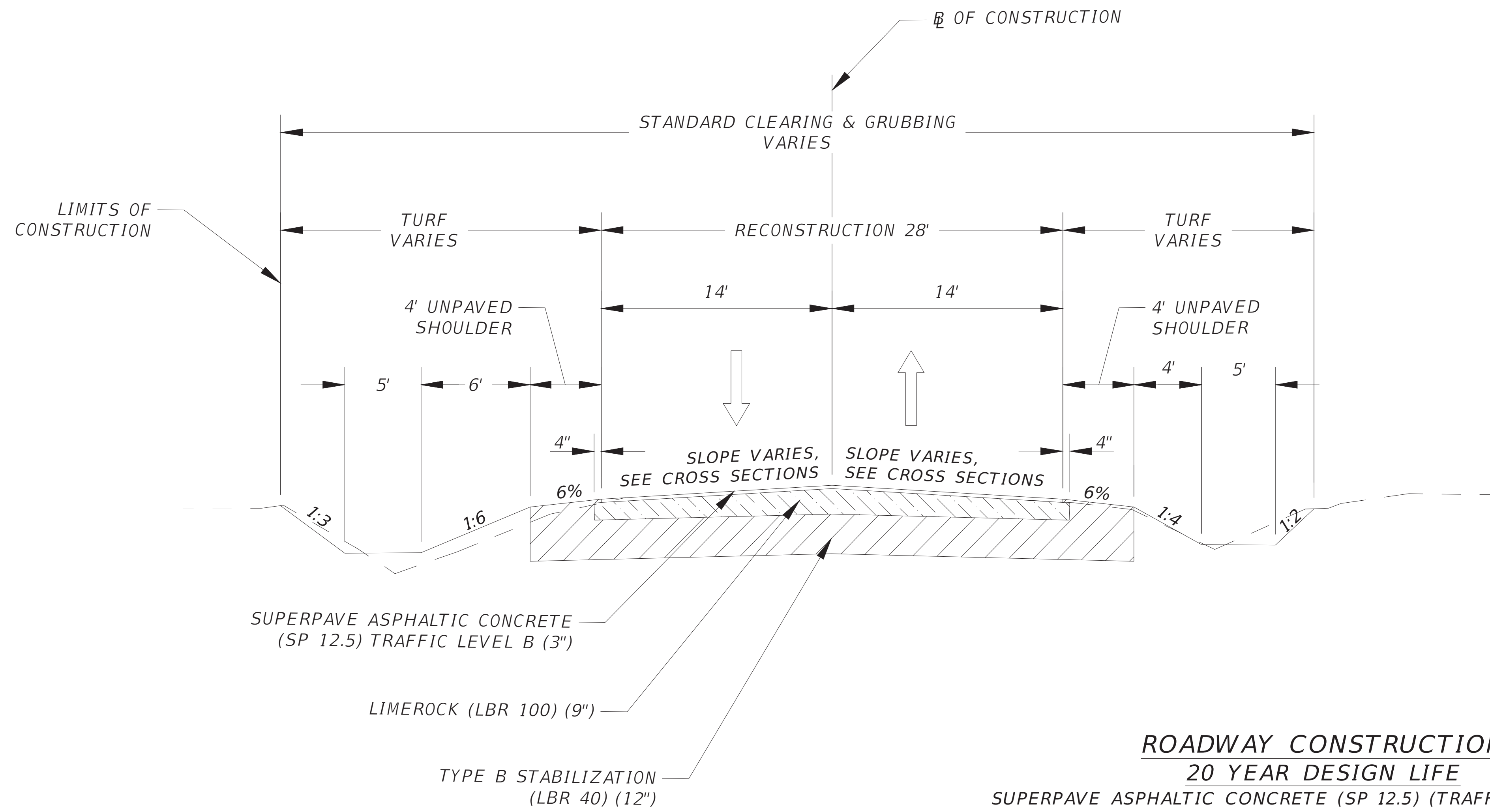
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WINARDI, CHRIS 4/19/2019 10:31:09 AM

TYPICAL SECTIONS

SHEET NO.
 8



ROADWAY CONSTRUCTION
20 YEAR DESIGN LIFE
 SUPERPAVE ASPHALTIC CONCRETE (SP 12.5) (TRAFFIC LEVEL B) (3")
 LIMEROCK (LBR 100) (9")
 TYPE B STABILIZATION (MIN. LBR 40) (12")

TRAFFIC DATA
 CURRENT YEAR = 2017 AADT = 300
 ESTIMATED OPENING YEAR = 2018 AADT = 300
 ESTIMATED DESIGN YEAR = 2048 AADT = 373
 D = 0.5 T = 100
 DESIGN SPEED = 20 MPH
 POSTED SPEED = 15 MPH

TYPICAL SECTION - PHASE II
(NOT IN CONTRACT)
ROADWAY IMPROVEMENTS
STA. 136+78.60 TO STA. 152+16.23
 N.T.S.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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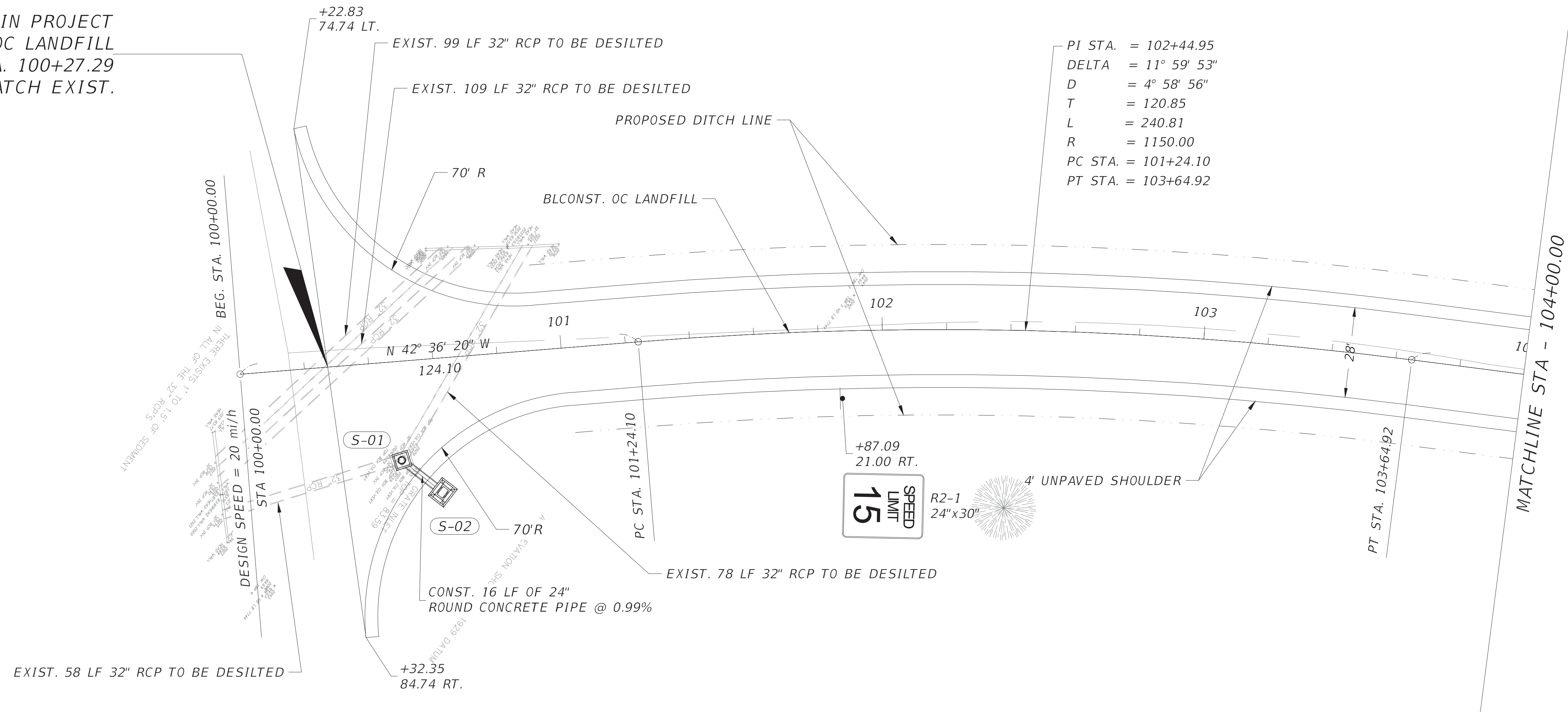
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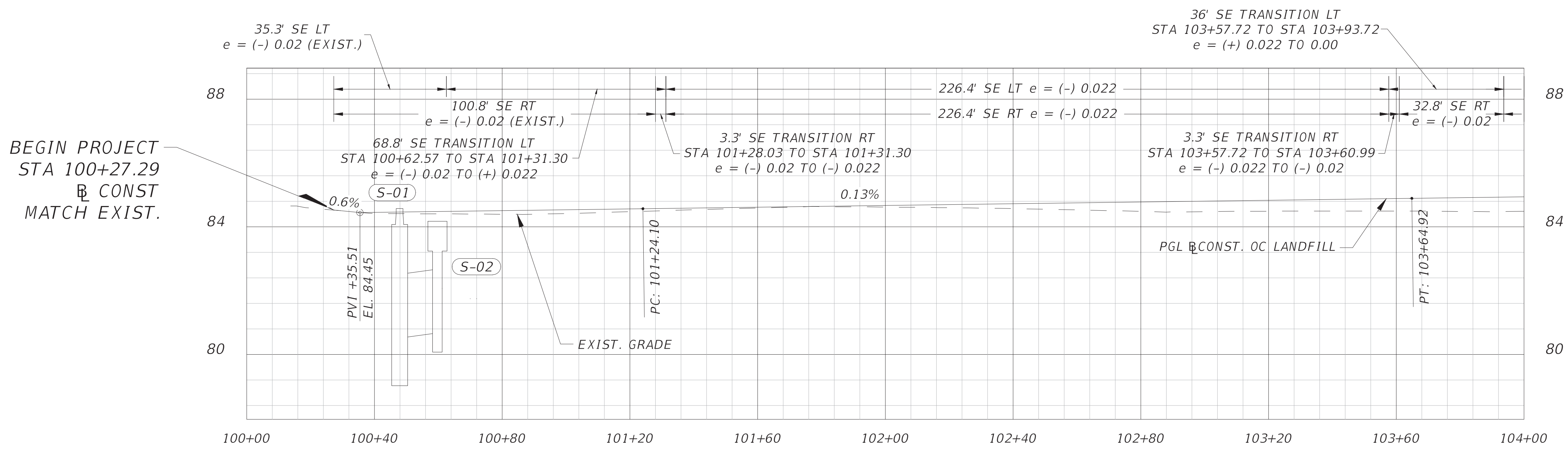
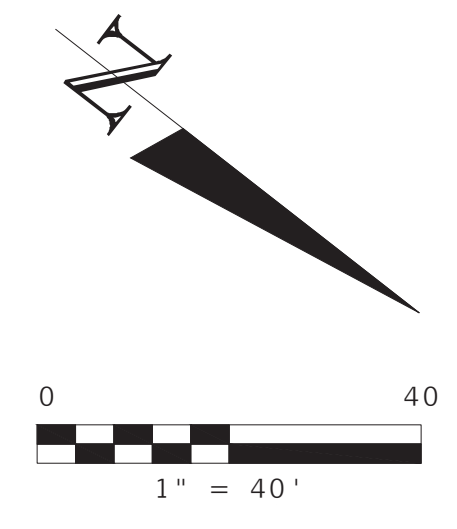
TYPICAL SECTIONS

SHEET NO.
 9

BEGIN PROJECT
 B CONST. OC LANDFILL
 STA. 100+27.29
 MATCH EXIST.

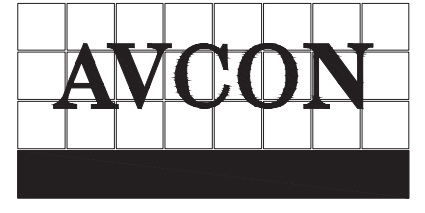


PI STA. = 102+44.95
 DELTA = 11° 59' 53"
 D = 4° 58' 56"
 T = 120.85
 L = 240.81
 R = 1150.00
 PC STA. = 101+24.10
 PT STA. = 103+64.92



1" = 40' Horizontal
 1" = 4' Vertical

REVISIONS			
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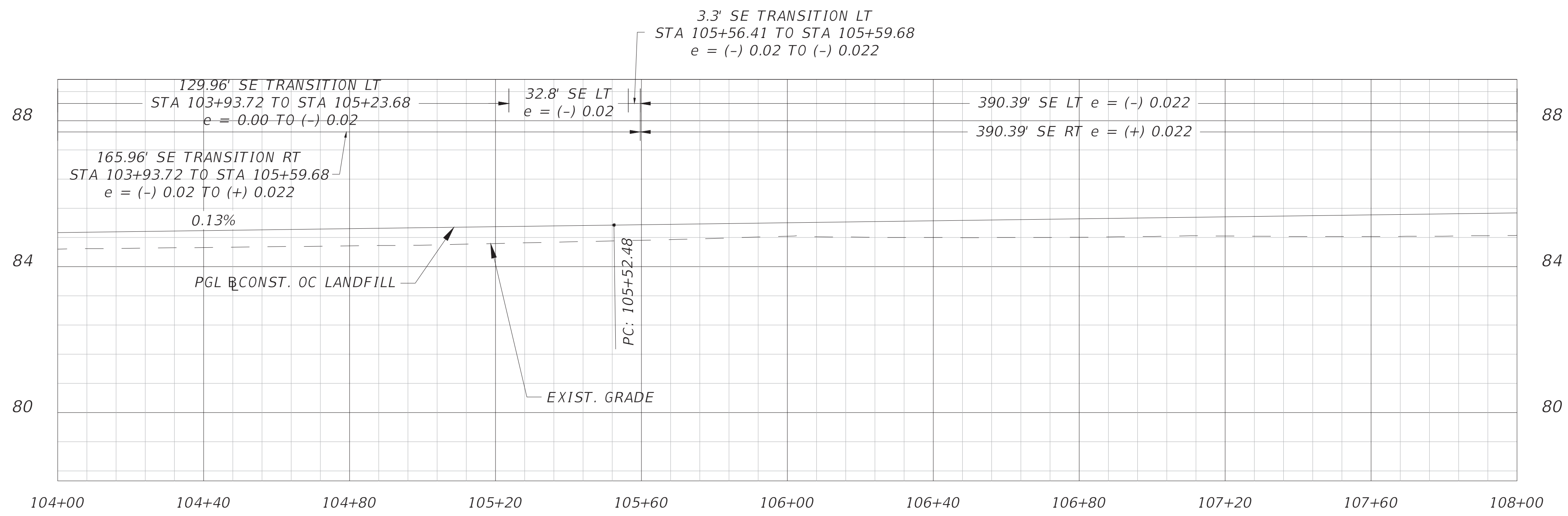
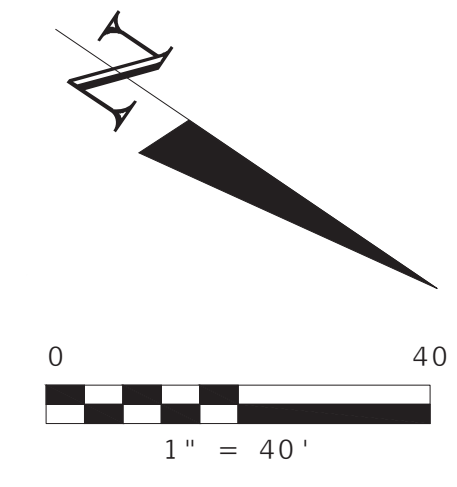
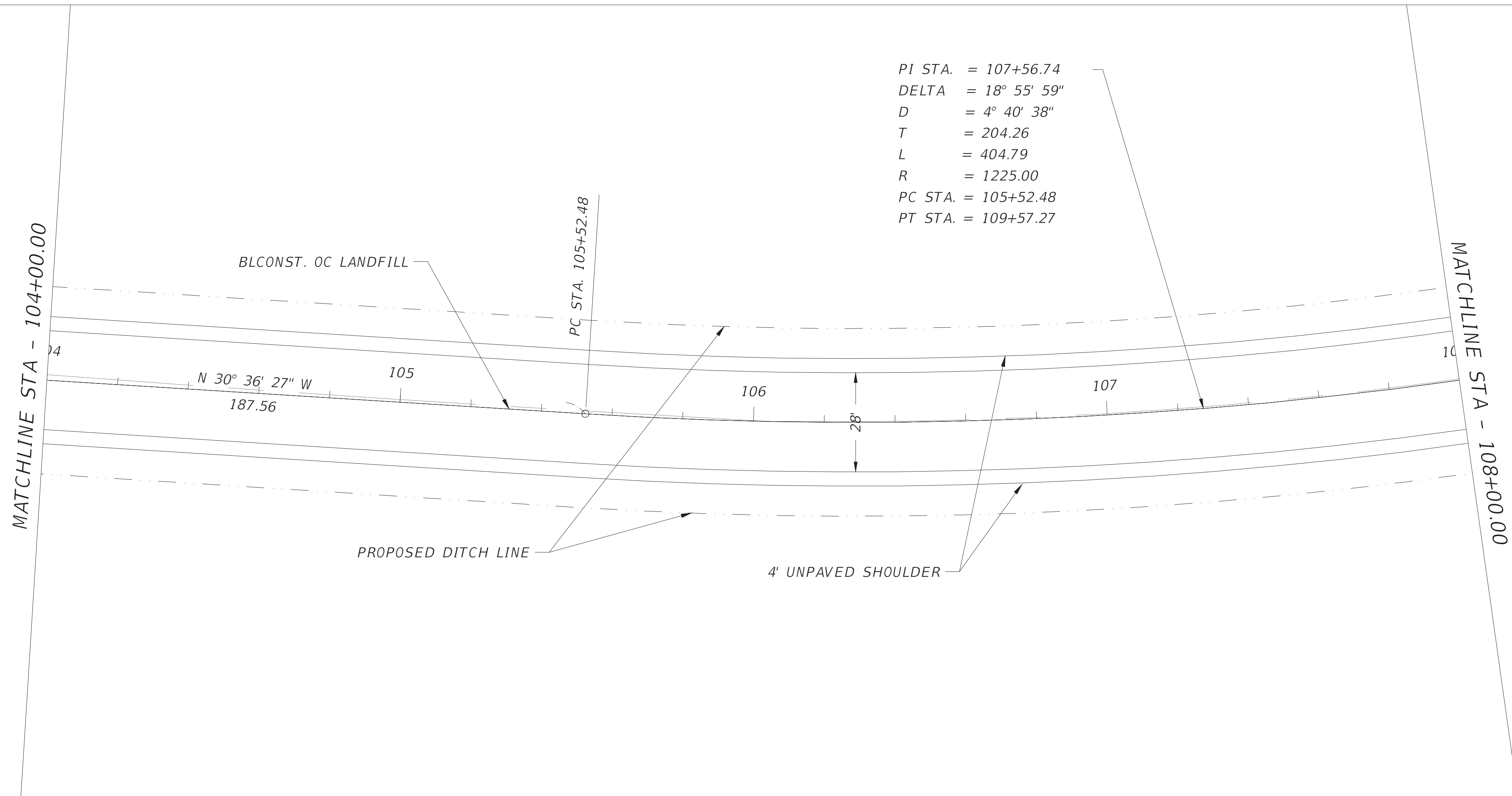
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PLAN AND PROFILE

SHEET NO.
 10



1" = 40' Horizontal
1" = 4' Vertical

REVISIONS			
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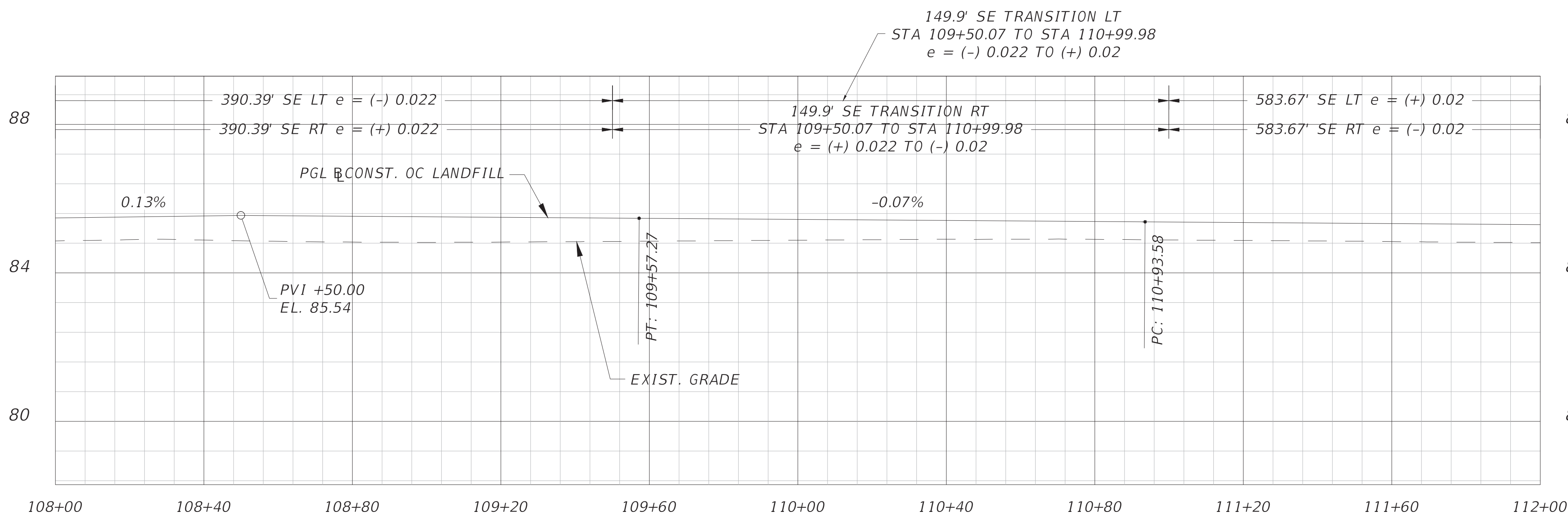
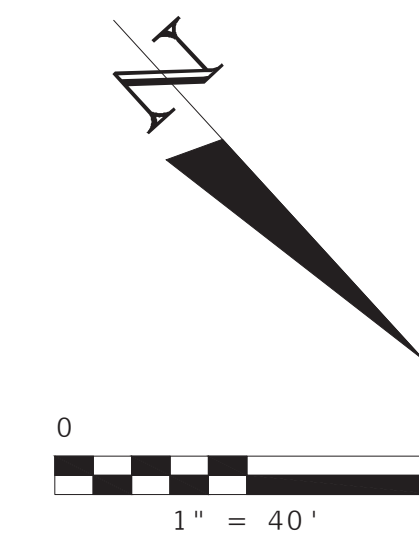
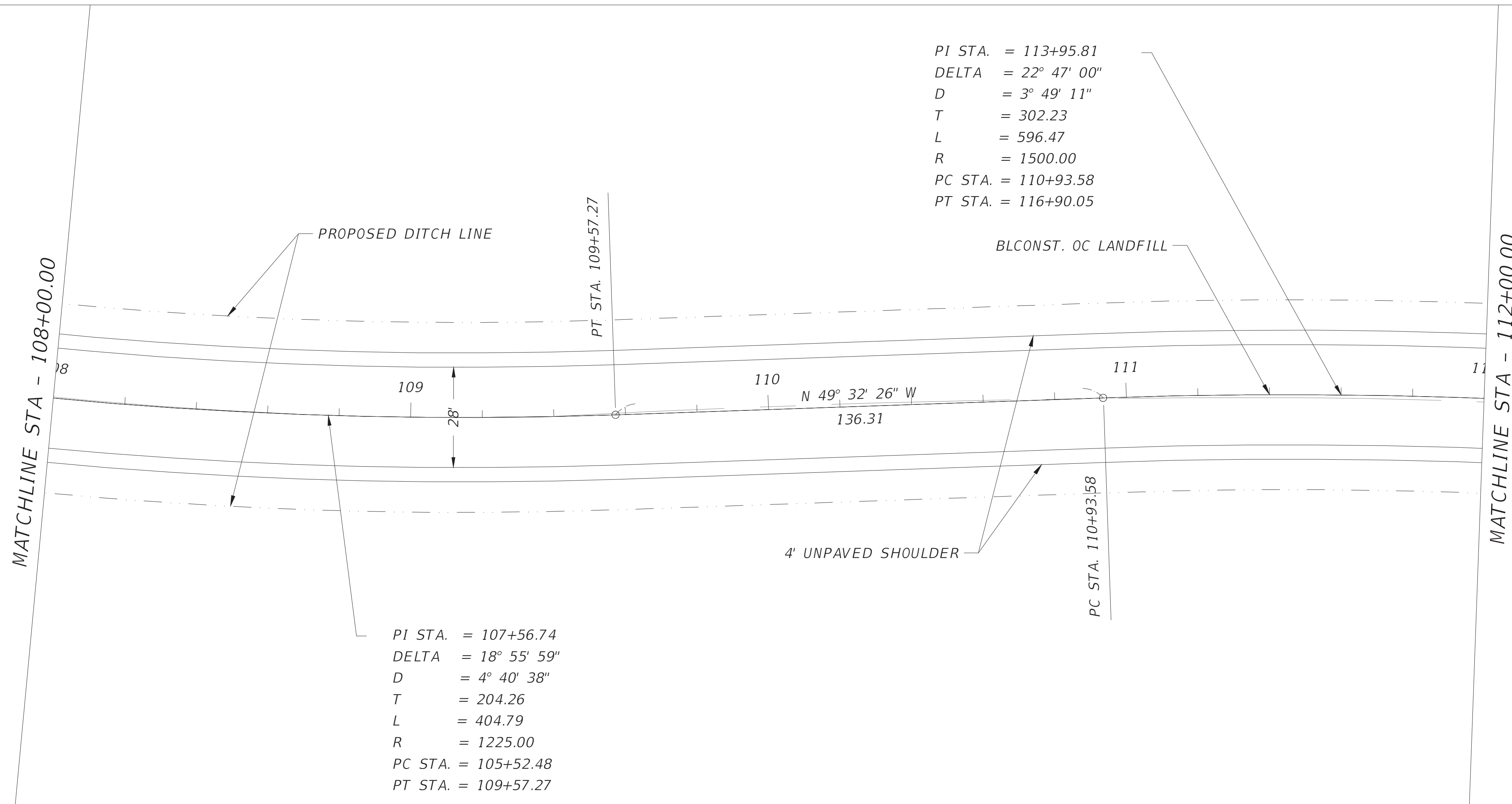
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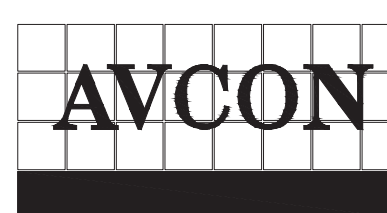


PLAN AND PROFILE

SHEET NO.
9



REVISIONS			
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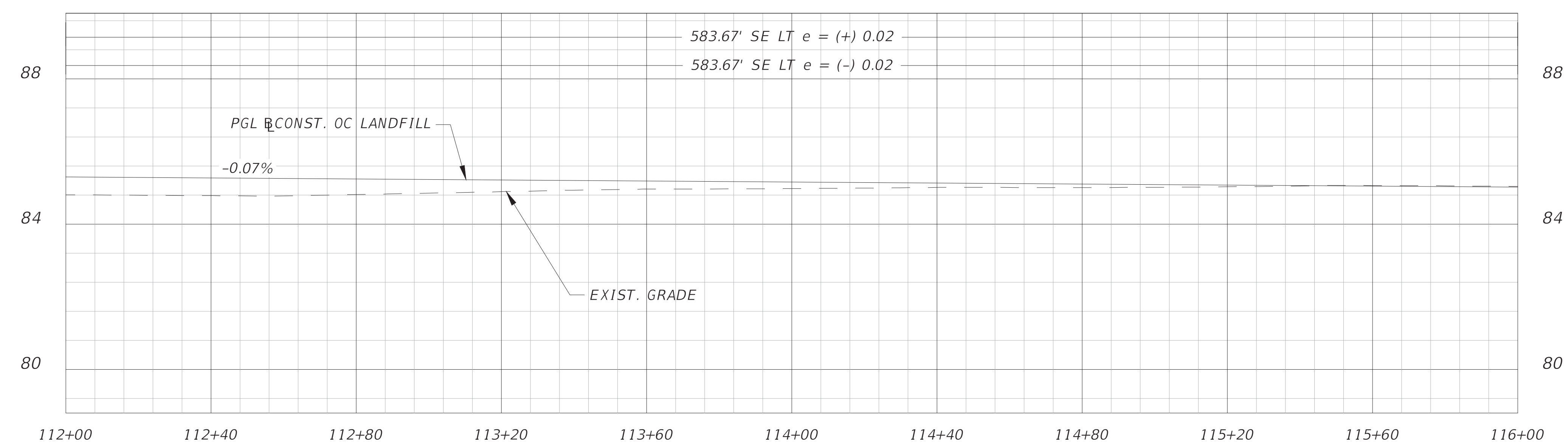
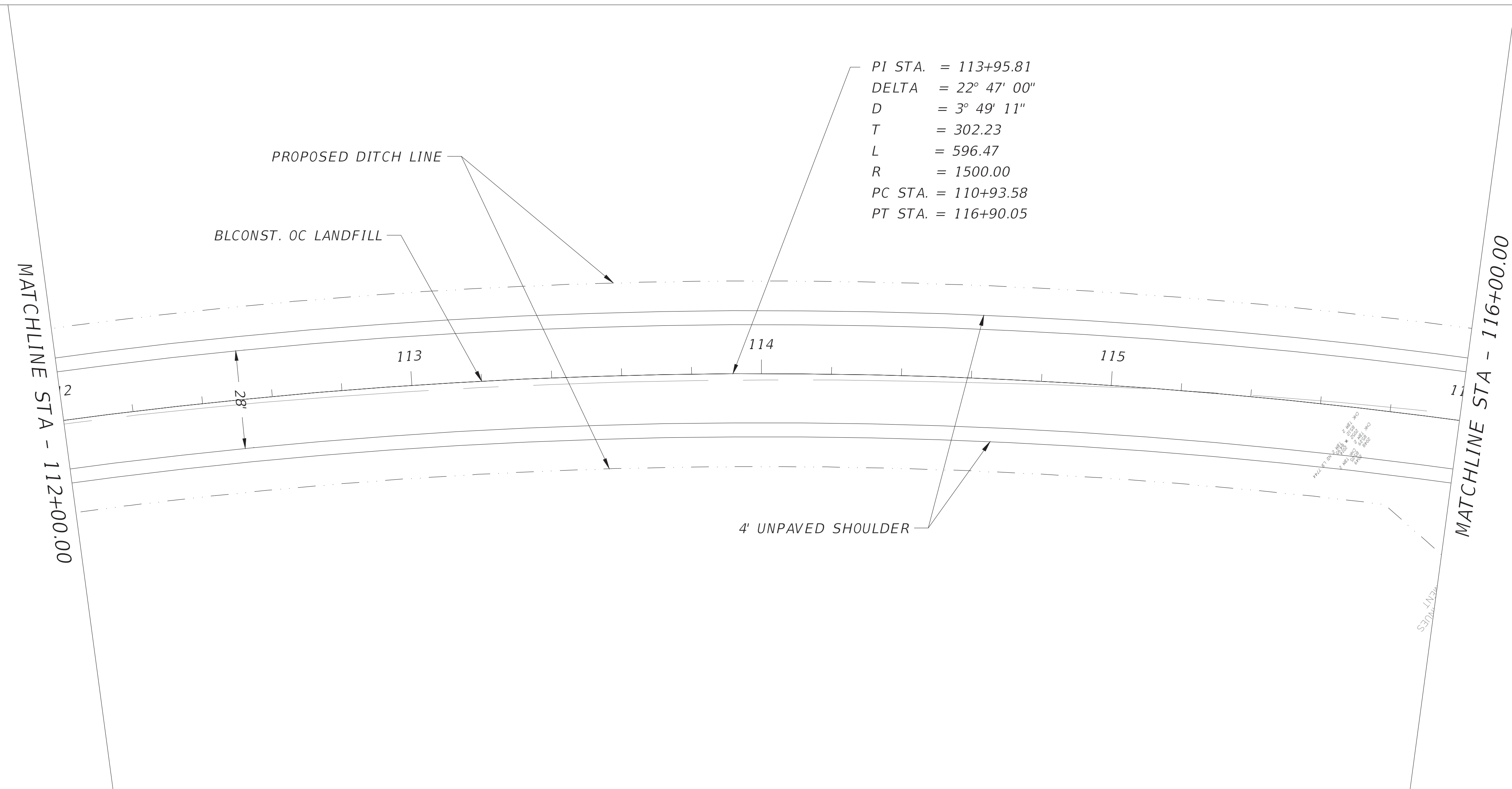
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PLAN AND PROFILE

SHEET NO.

12

T:\2017\2017.109.01 - Orange County Landfill Roadway\CAD\Roadway\PLPRR01.dwg



1" = 40' Horizontal
1" = 4' Vertical

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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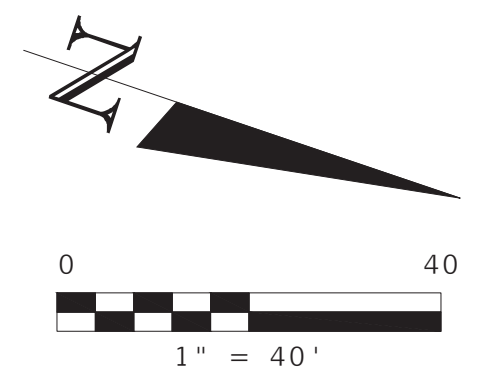
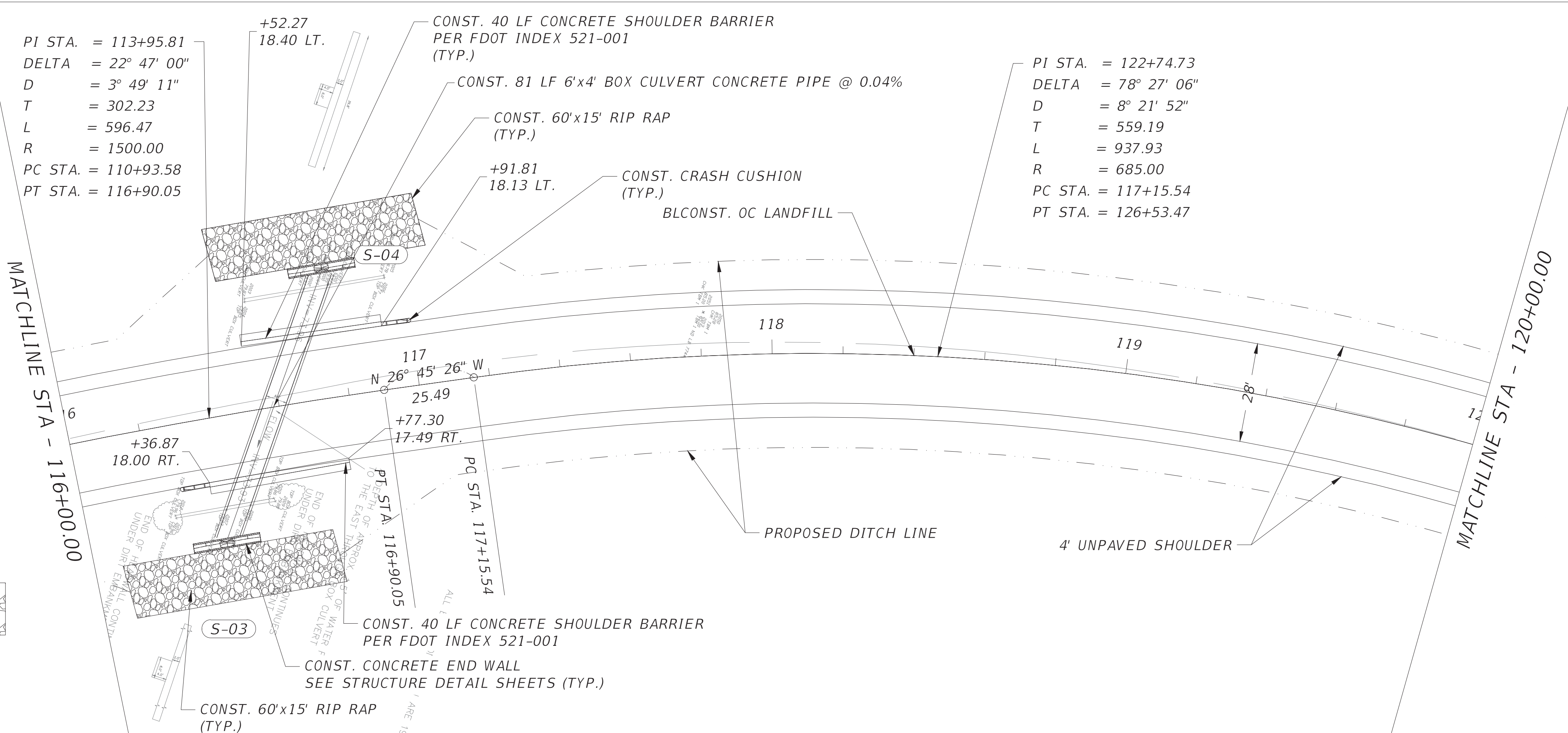
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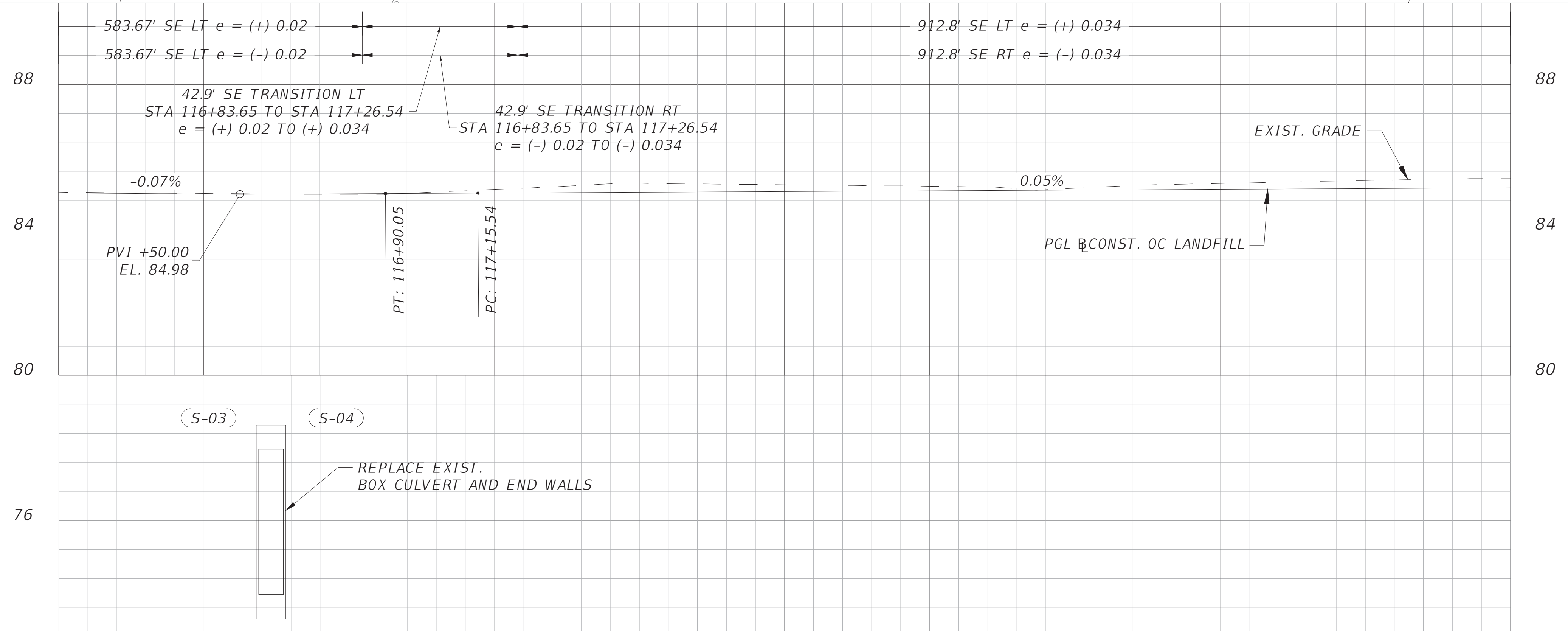
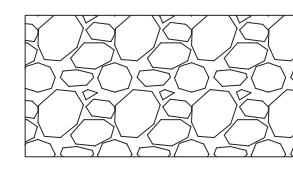


PLAN AND PROFILE

SHEET NO.
 13



RIP RAP



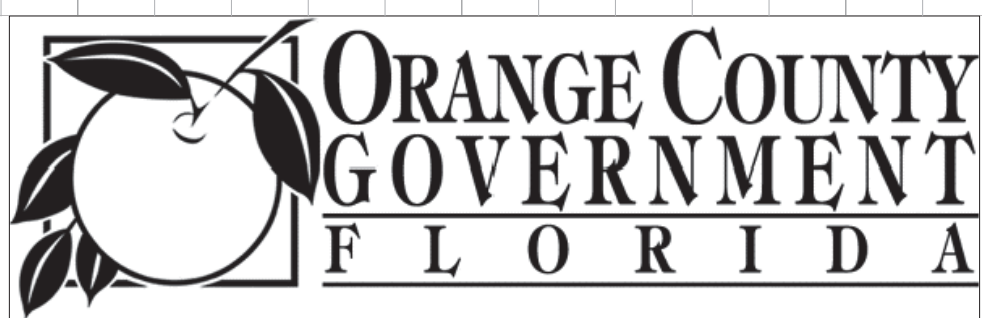
1" = 40' Horizontal
1" = 4' Vertical

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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ENGINEER OF RECORD: CLINT PLETZER, P.E. NO. 69221



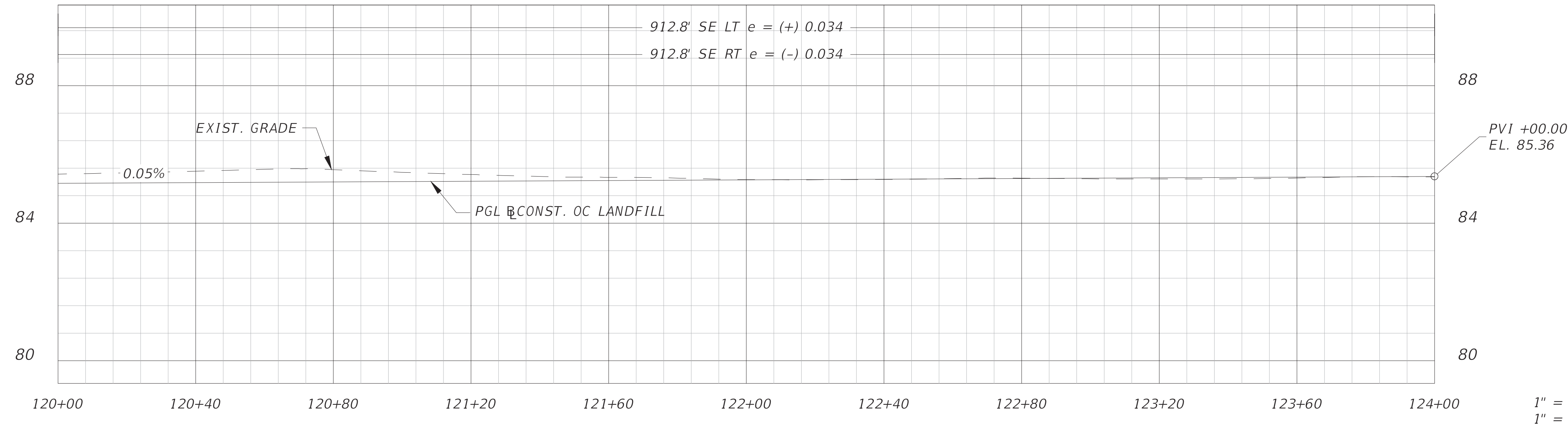
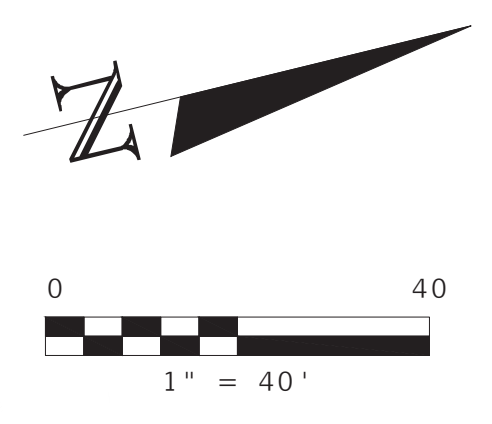
PLAN AND PROFILE

SHEET NO.
14

PI STA. = 122+74.73
 DELTA = 78° 27' 06"
 D = 8° 21' 52"
 T = 559.19
 L = 937.93
 R = 685.00
 PC STA. = 117+15.54
 PT STA. = 126+53.47

MATCHLINE STA - 120+00.00

MATCHLINE STA - 124+00.00



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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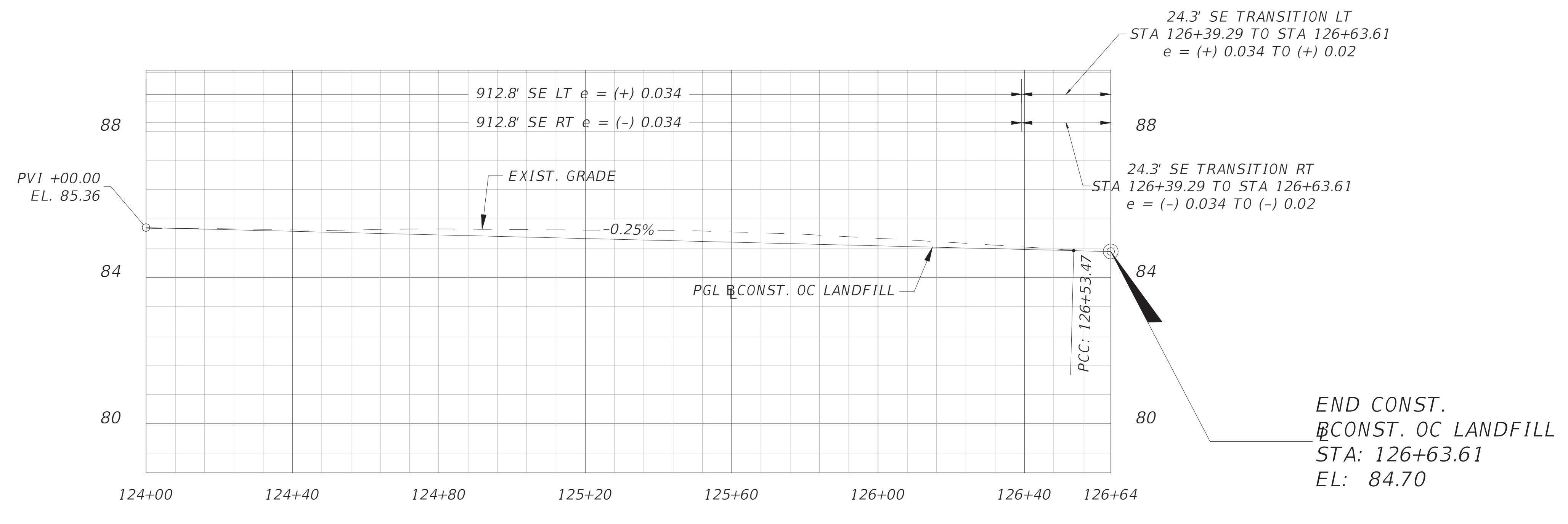
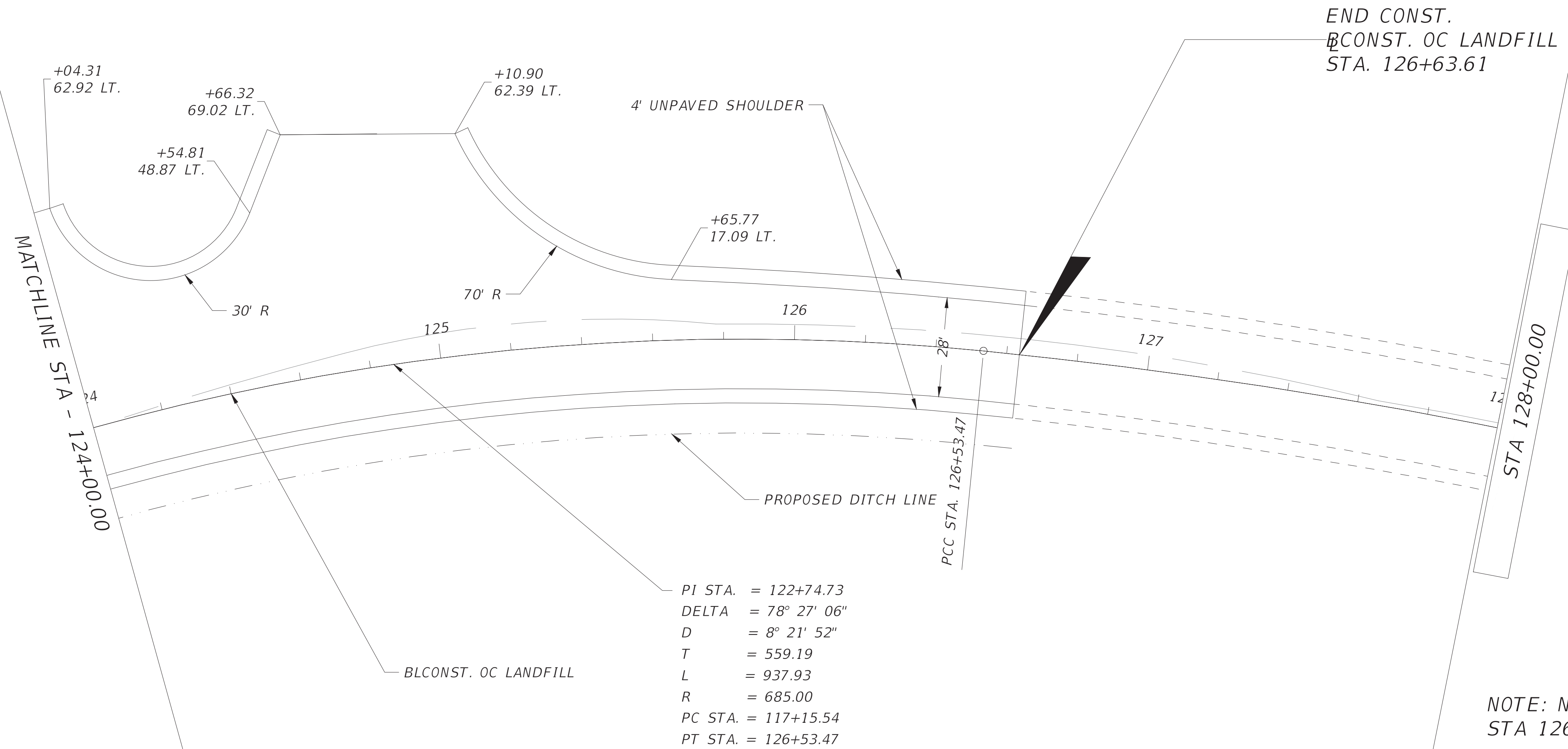
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PLAN AND PROFILE

SHEET NO.
 15



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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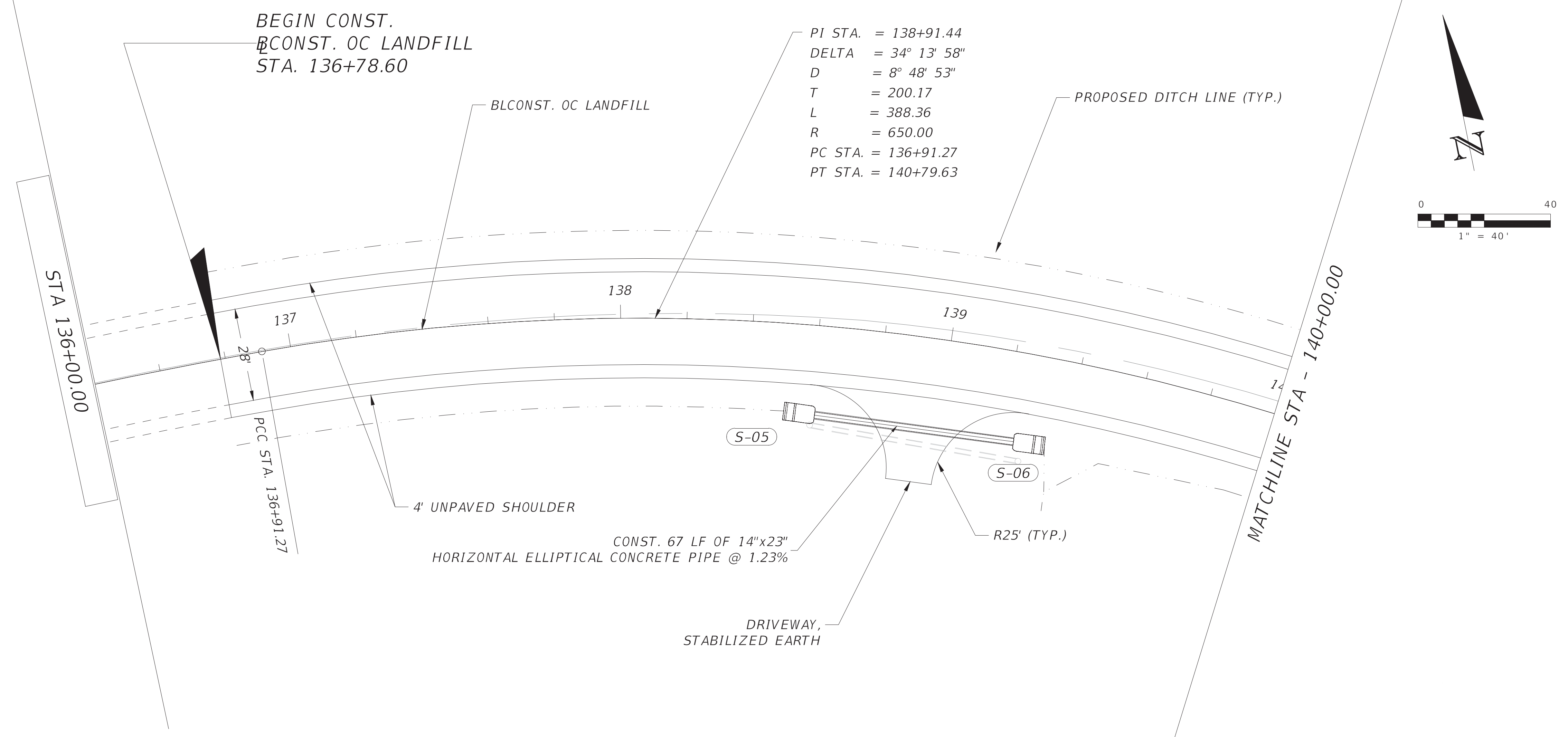


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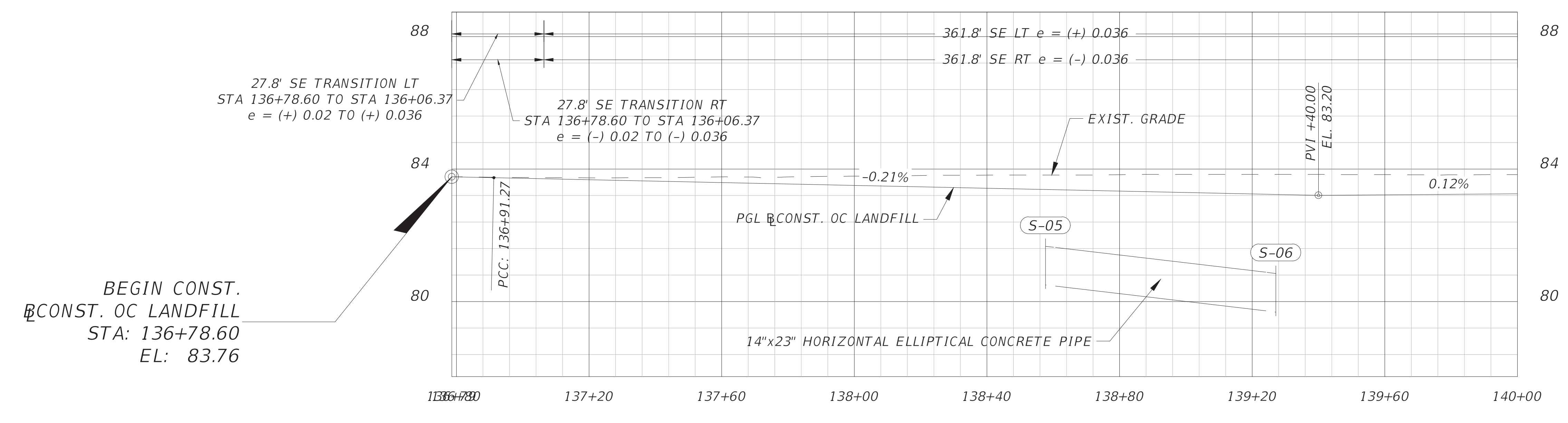


PLAN AND PROFILE

SHEET NO.
 16

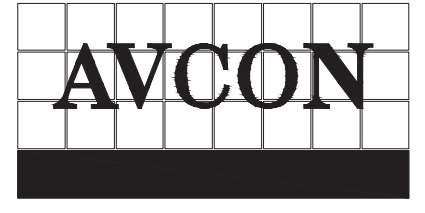


NOTE: NO CONSTRUCTION
STA 126+63.61 - STA 136+78.60



1" = 40' Horizontal
1" = 4' Vertical

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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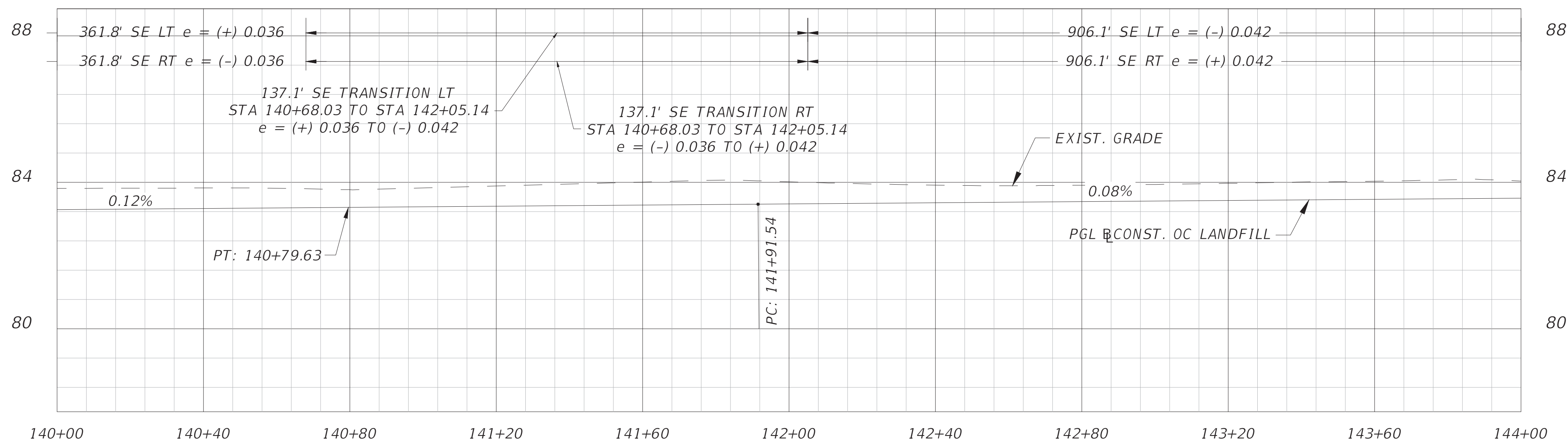
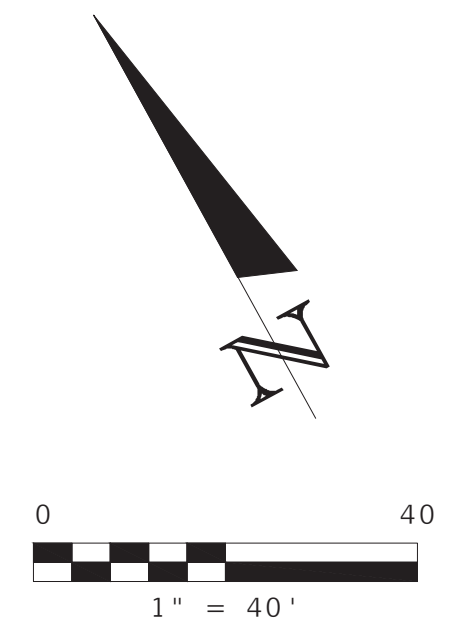
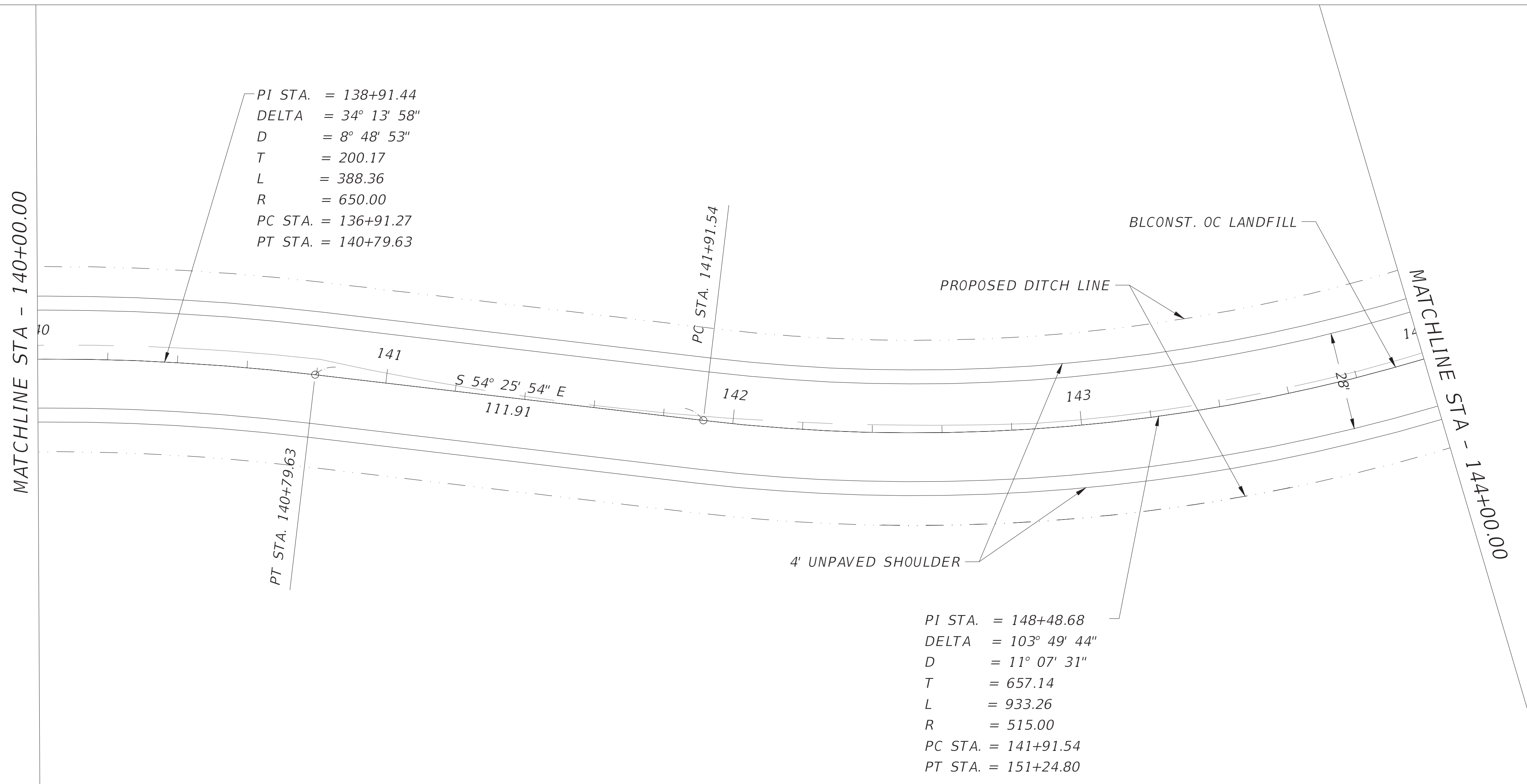
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PLAN AND PROFILE

SHEET NO.
17



1" = 40' Horizontal
1" = 4' Vertical

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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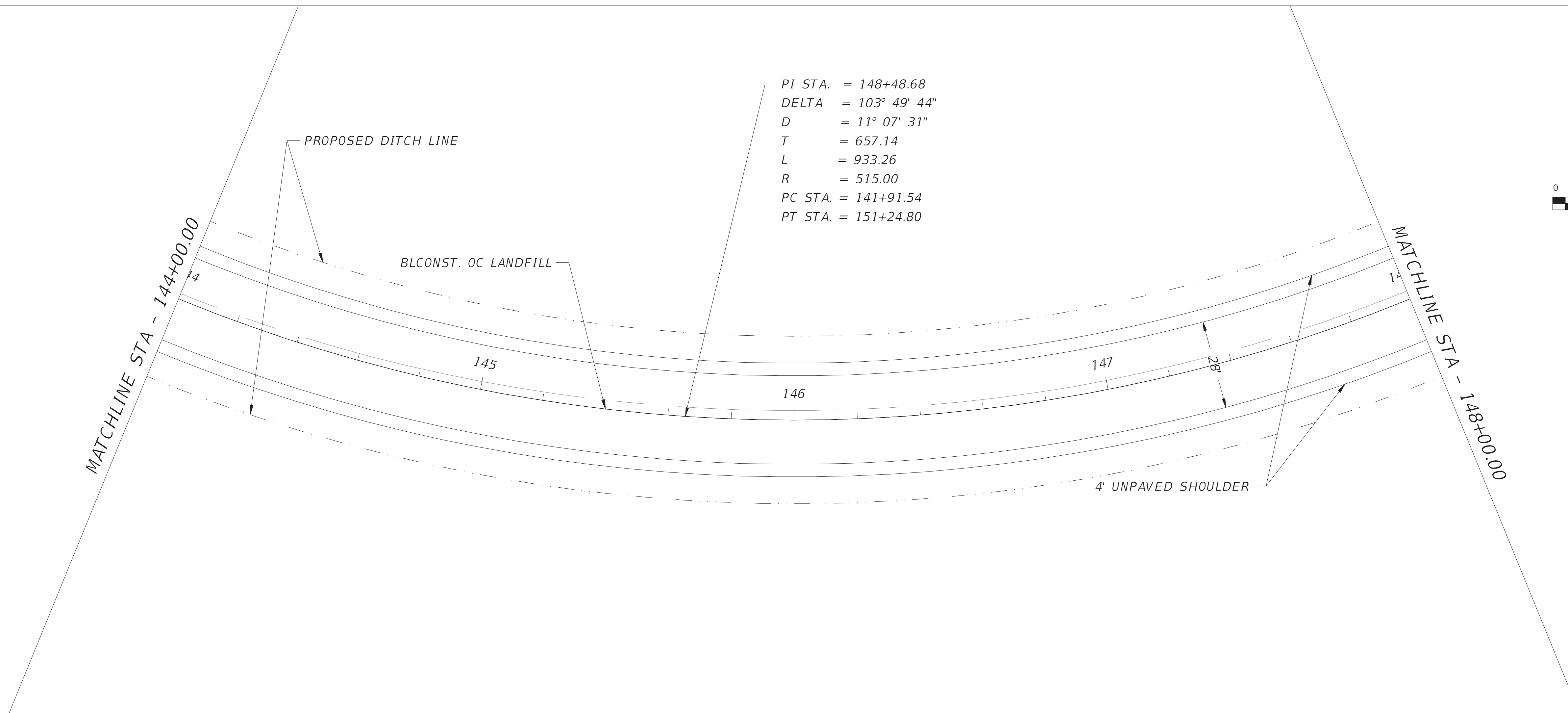
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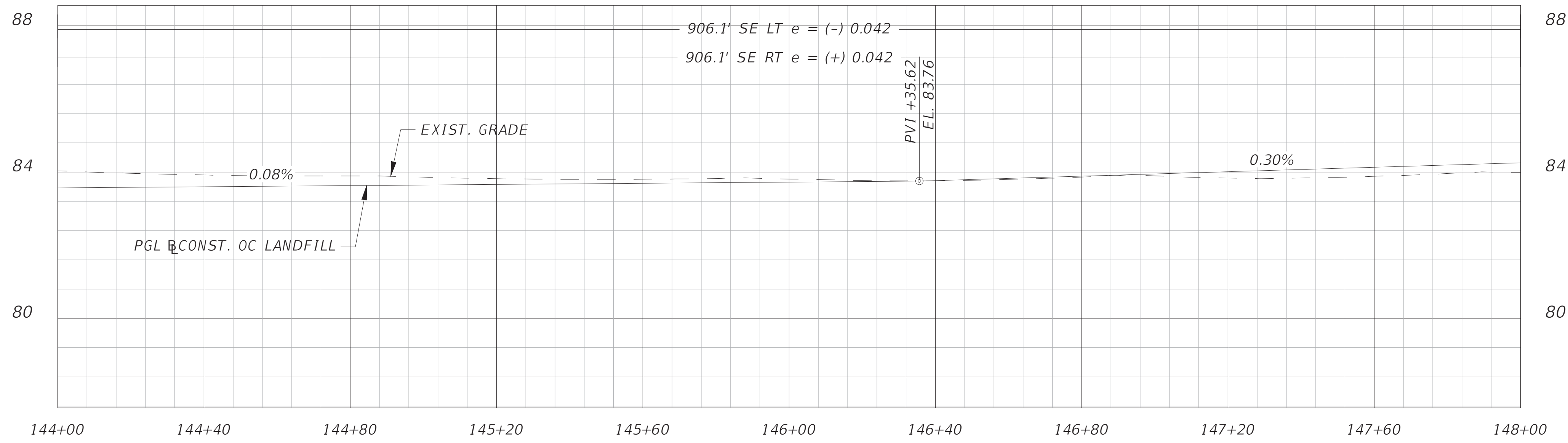
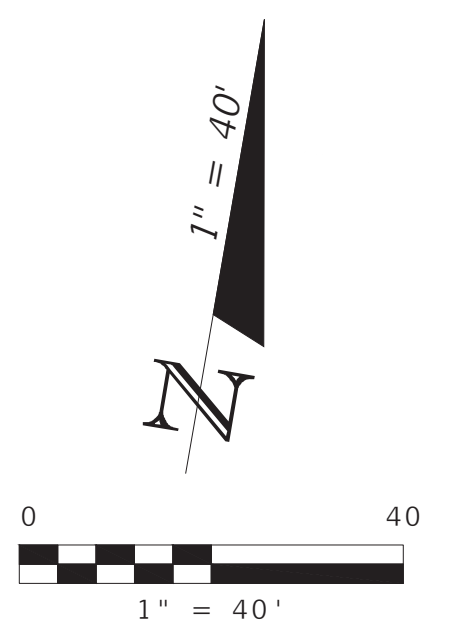


PLAN AND PROFILE

SHEET NO.
18



PI STA. = 148+48.68
 DELTA = 103° 49' 44"
 D = 11° 07' 31"
 T = 657.14
 L = 933.26
 R = 515.00
 PC STA. = 141+91.54
 PT STA. = 151+24.80



1" = 40' Horizontal
 1" = 4' Vertical

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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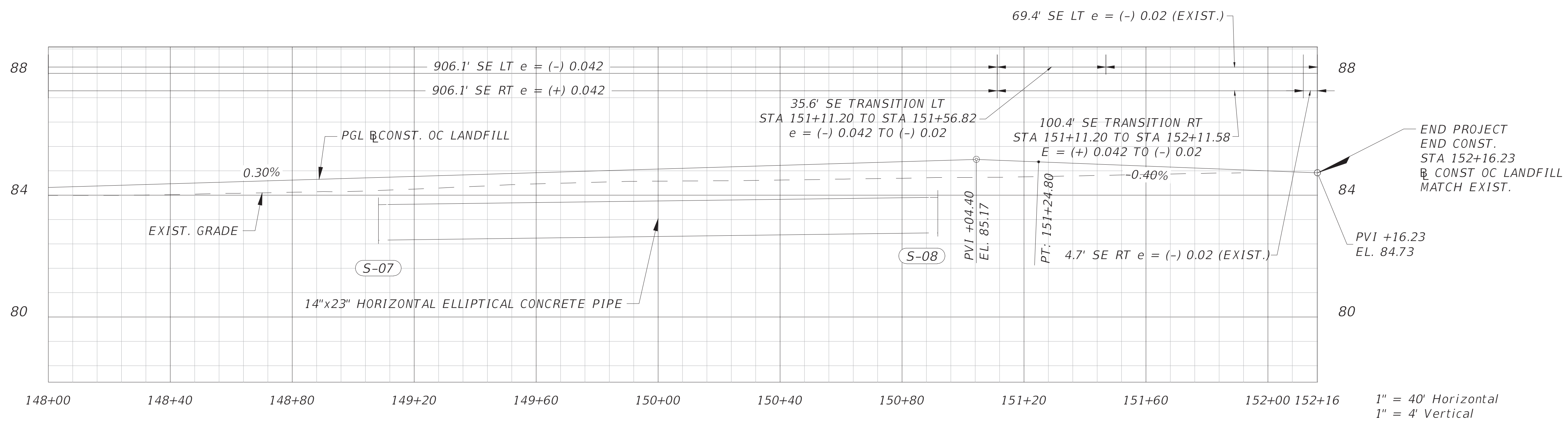
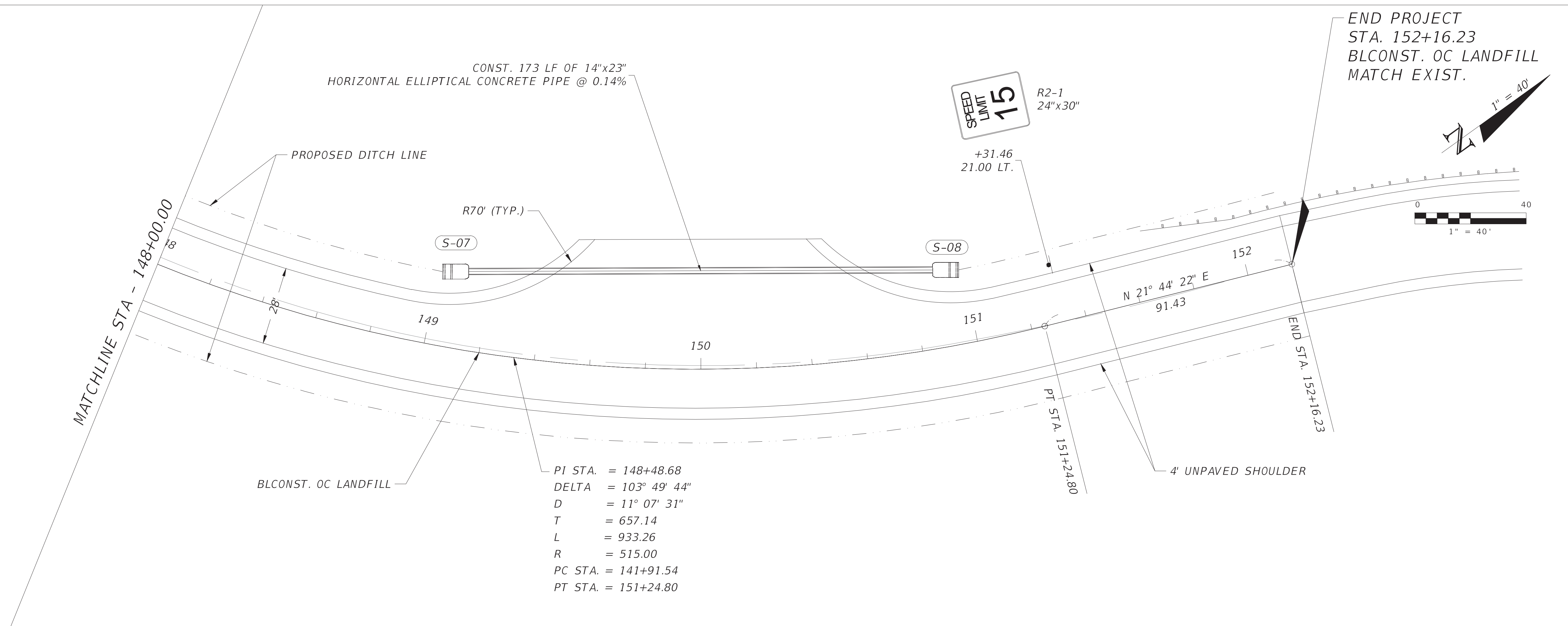
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PLAN AND PROFILE

SHEET NO.
 19



REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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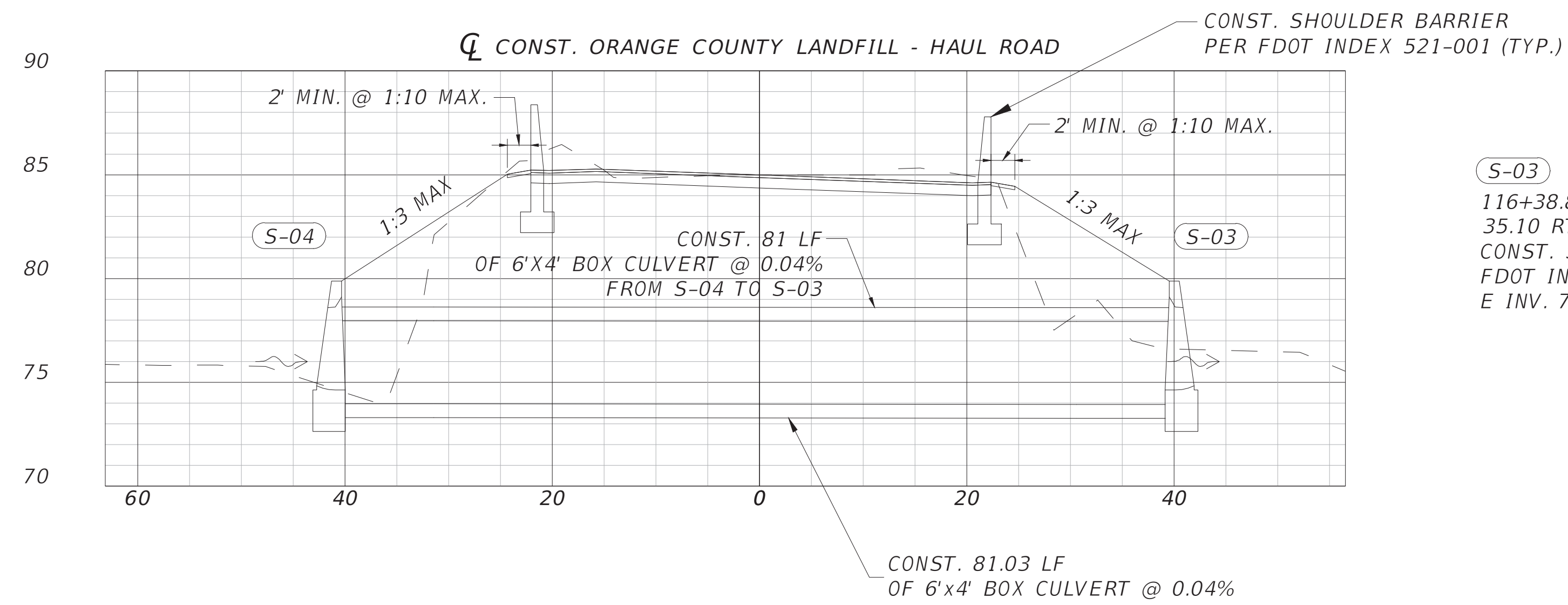
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PLAN AND PROFILE

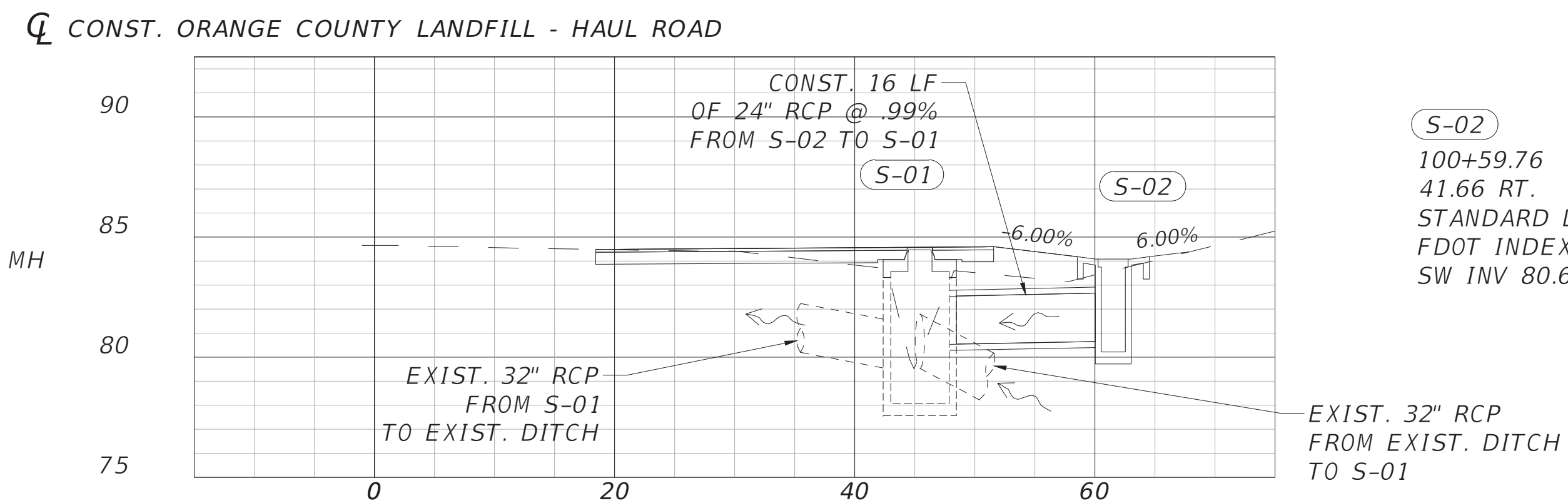
SHEET NO.
20

S-04
 116+77.58
 36.07 LT.
 CONST. STRAIGHT CONC. END WALL
 FDOT INDEX 430-030
 INV. 73.96



S-03
 116+38.86
 35.10 RT.
 CONST. STRAIGHT CONC. END WALL
 FDOT INDEX 430-030
 E INV. 73.93

S-01
 100+47.91
 30.76 RT.
 REPLACE TOP WITH 5' RECT. TYPE J MH
 FDOT INDEX 425-010
 RIM ELEV. 84.57
 NE INV. 80.51
 EXIST. SE INV. 79.52
 EXIST. W INV. 79.55



S-02
 100+59.76
 41.66 RT.
 STANDARD DBI TYPE A - 4' H
 FDOT INDEX 425-050
 SW INV 80.67

SCALE:
 1" = 20' HORIZONTAL
 1" = 10' VERTICAL

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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WINARDI, CHRIS 4/19/2019 10:35:09 AM

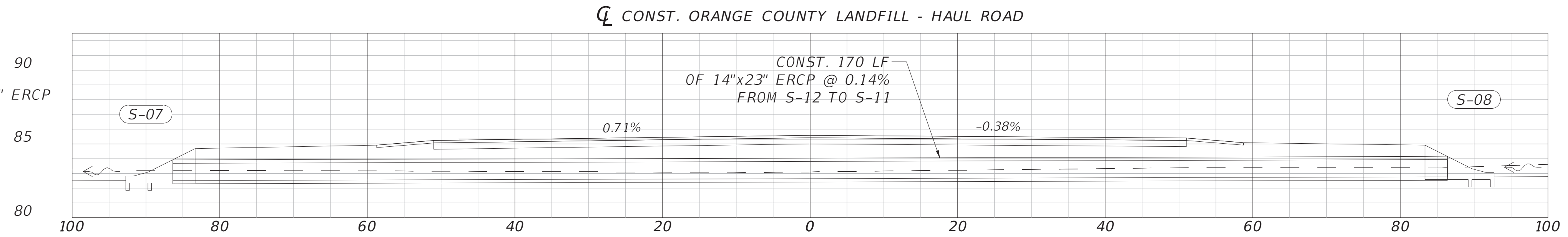
DRAINAGE CROSS SECTIONS

SHEET NO.

21

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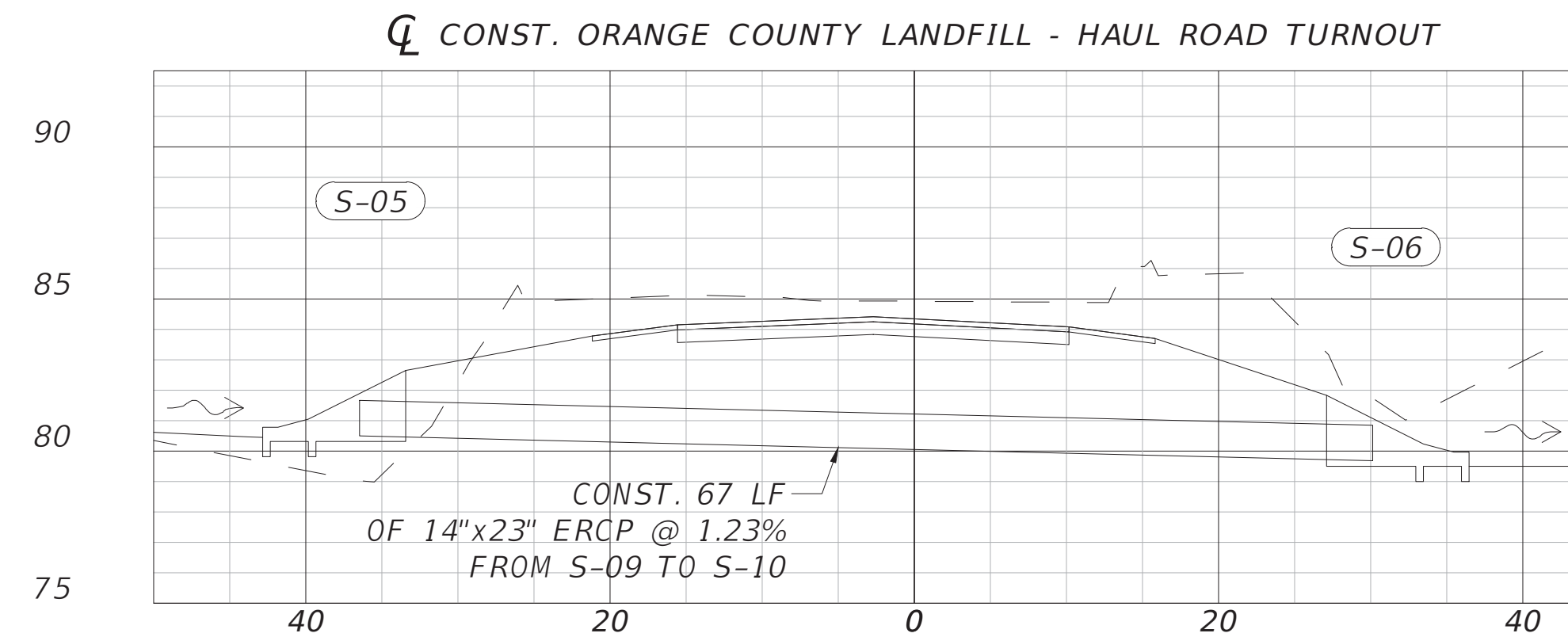
S-07
 150+00.00
 27.89 LT.
 CONST. MES 1:4 - SINGLE 14"x23" ERCP
 FDOT INDEX 430-022
 INV. 82.52



S-08
 150+00.00
 27.88 LT.
 CONST. MES 1:4 - SINGLE 14"x23" ERCP
 FDOT INDEX 430-022
 INV. 82.76

150+00.00
 35.38 LT

S-05
 138+57.63
 26.88 RT.
 CONST. MES 1:4 - SINGLE 14"x23" ERCP
 FDOT INDEX 430-022
 INV. 80.50



S-06
 139+27.12
 26.87 RT.
 CONST. MES 1:4 - SINGLE 14"x23" ERCP
 FDOT INDEX 430-022
 INV. 79.68

138+95.69
 27.75 RT

SCALE:
 1" = 20' HORIZONTAL
 1" = 10' VERTICAL

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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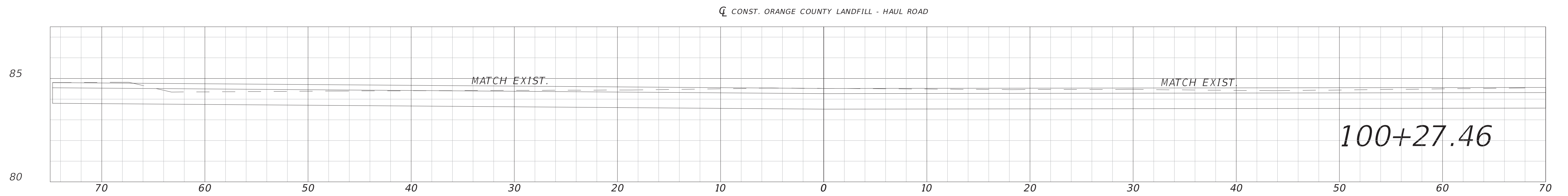
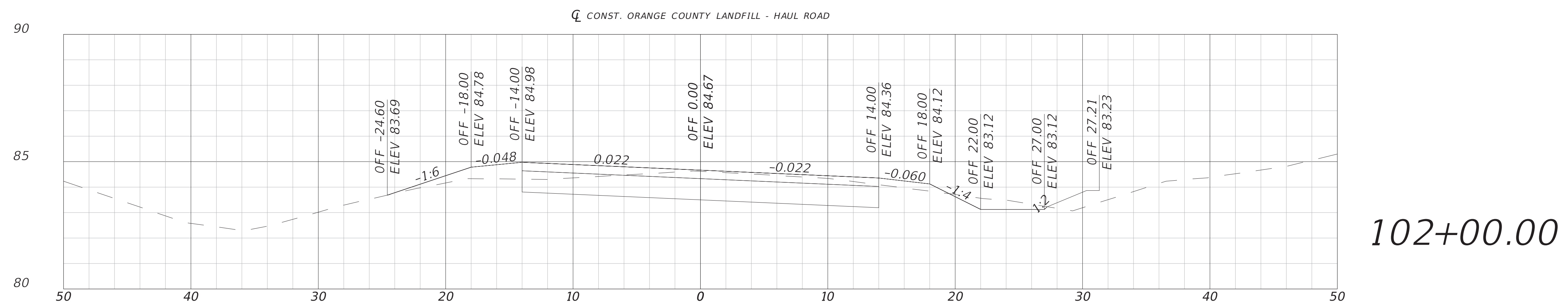
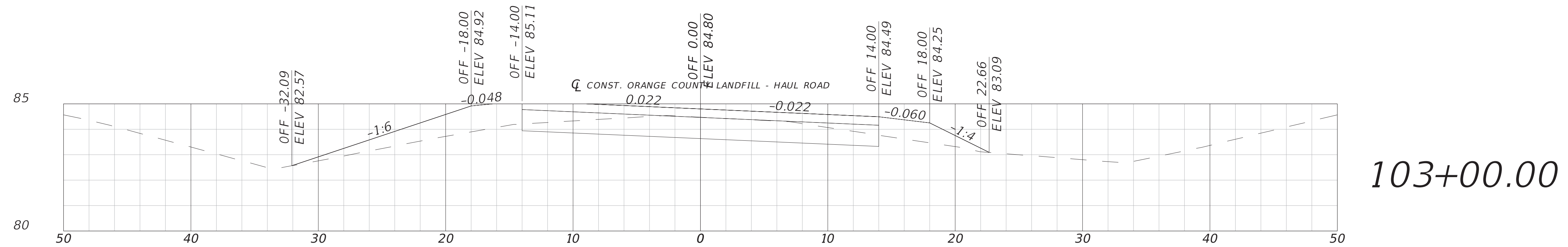
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DRAINAGE CROSS SECTIONS

SHEET NO.

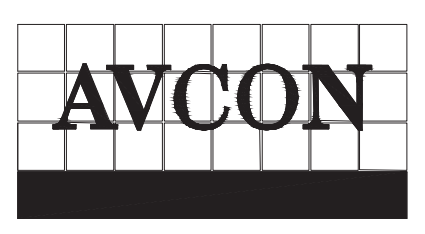
22

T:\2017\2017.109.01 - Orange County Landfill Roadway\CAD\Drainage\DRXSRO01.dwg



1" = 10' Horizontal
1" = 5' Vertical

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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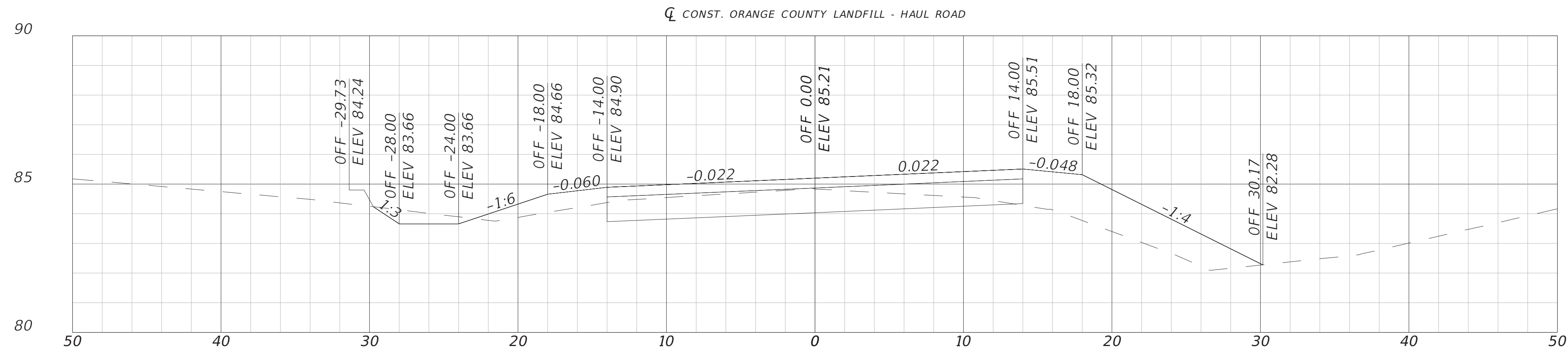
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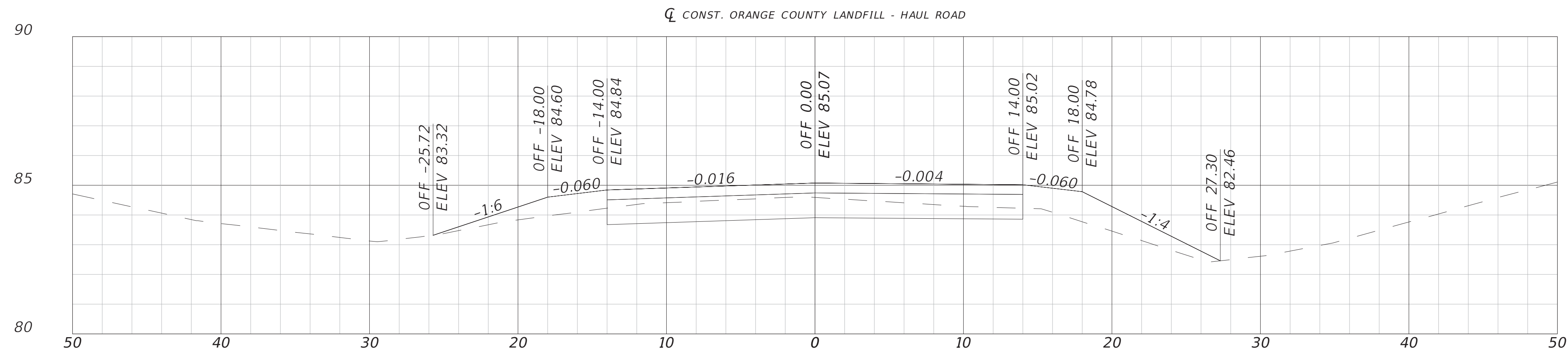


ROADWAY CROSS SECTIONS

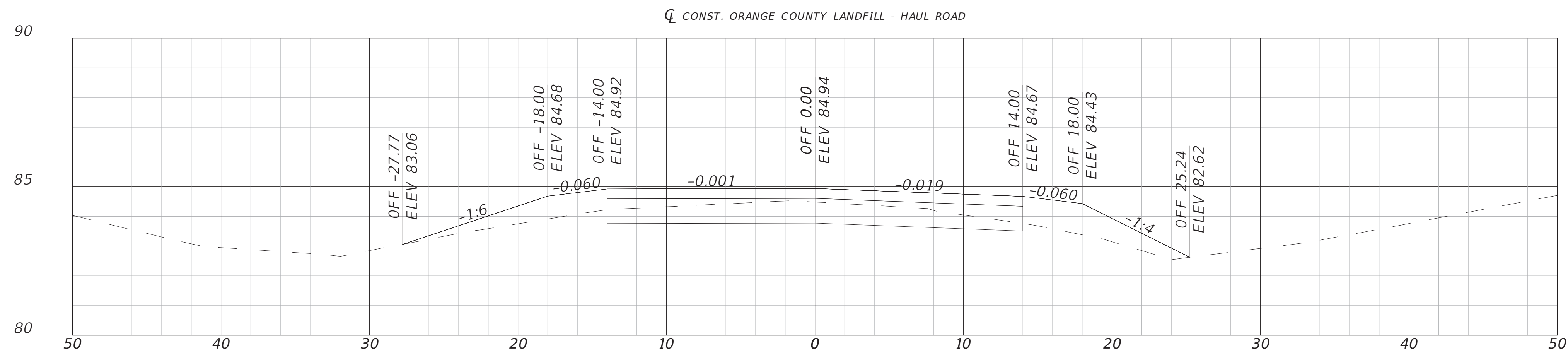
SHEET NO.
23



106+00.00



105+00.00



104+00.00

1" = 10' Horizontal
1" = 5' Vertical

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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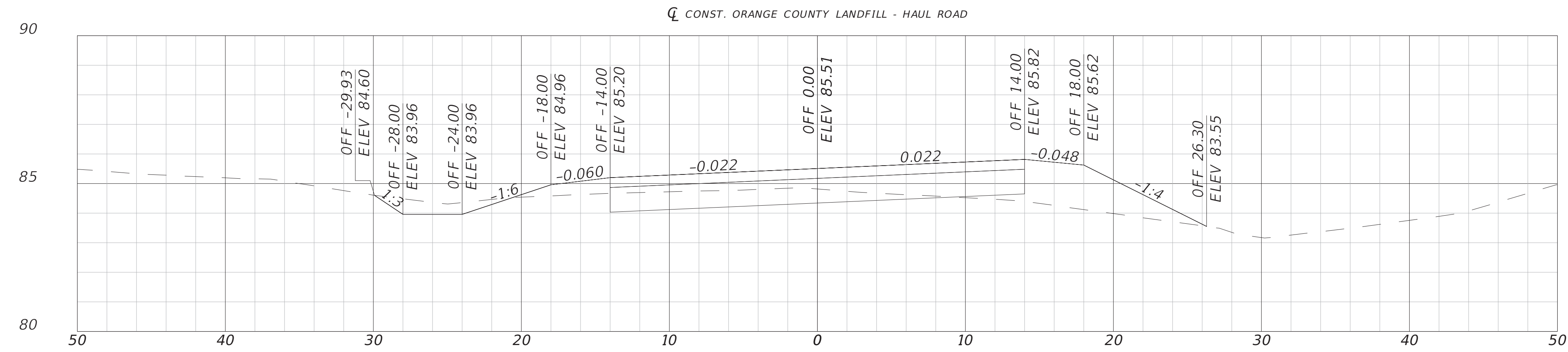
ENGINEER OF RECORD: CLINT PLETZER, P.E. NO. 69221



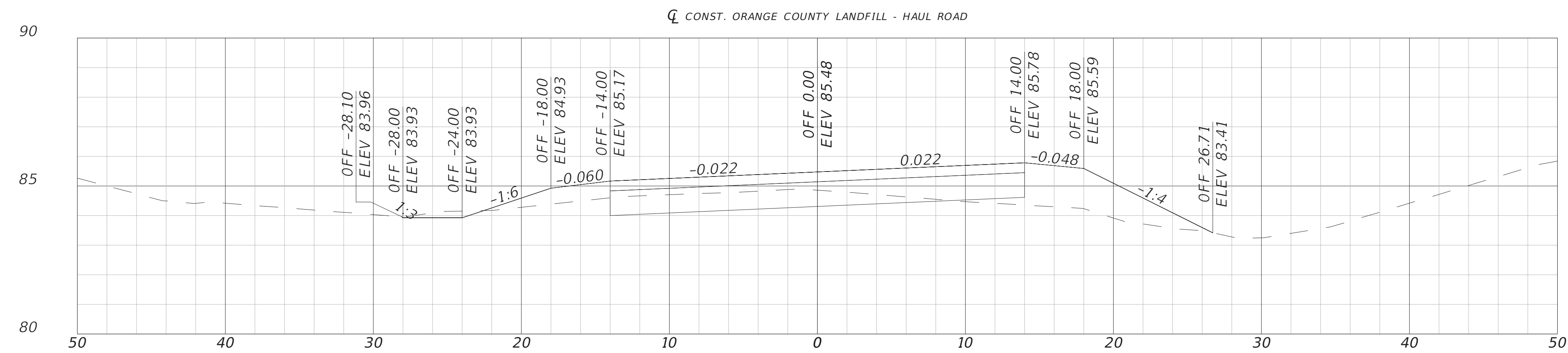
ROADWAY CROSS SECTIONS

SHEET NO.

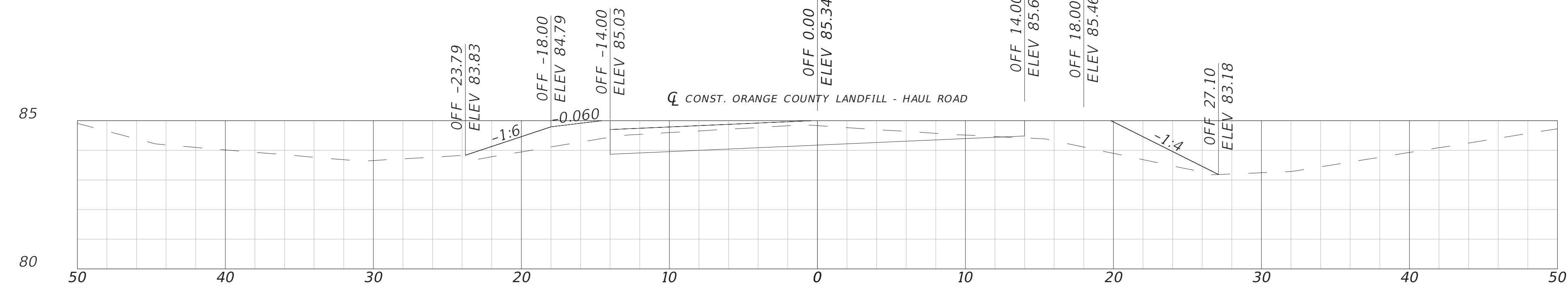
24



109+00.00



108+00.00



107+00.00

1" = 10' Horizontal
1" = 5' Vertical

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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ROADWAY CROSS SECTIONS

SHEET NO.

25

112+00.00

111+00.00

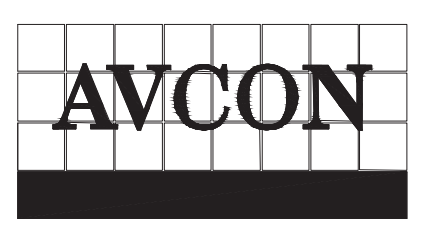
110+00.00

1" = 10' Horizontal
1" = 5' Vertical

CONST. ORANGE COUNTY LANDFILL - HAUL ROAD

CONST. ORANGE COUNTY LANDFILL - HAUL ROAD

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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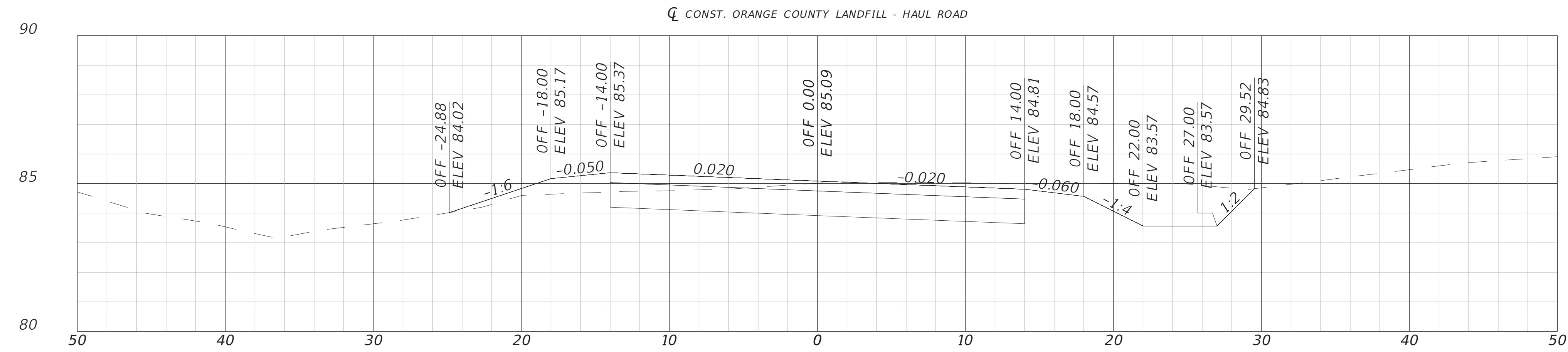
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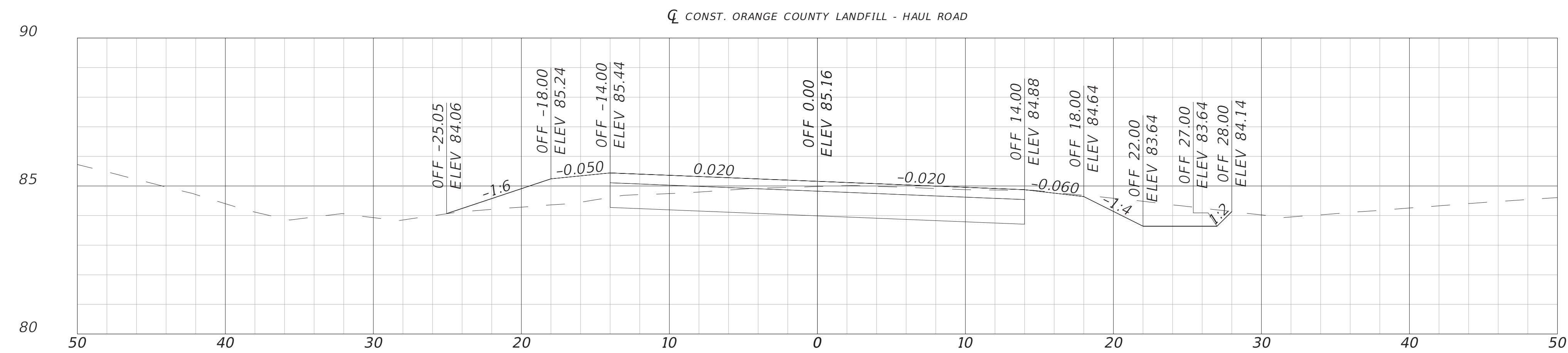


ROADWAY CROSS SECTIONS

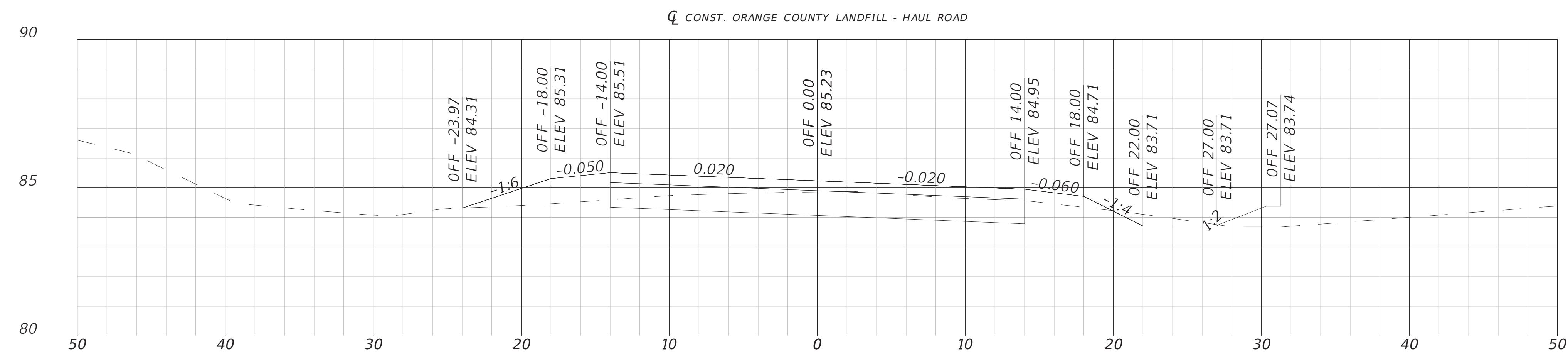
SHEET NO.
26



115+00.00



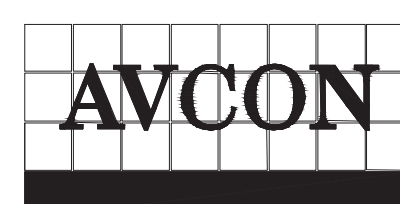
114+00.00



113+00.00

1" = 10' Horizontal
1" = 5' Vertical

REVISIONS			
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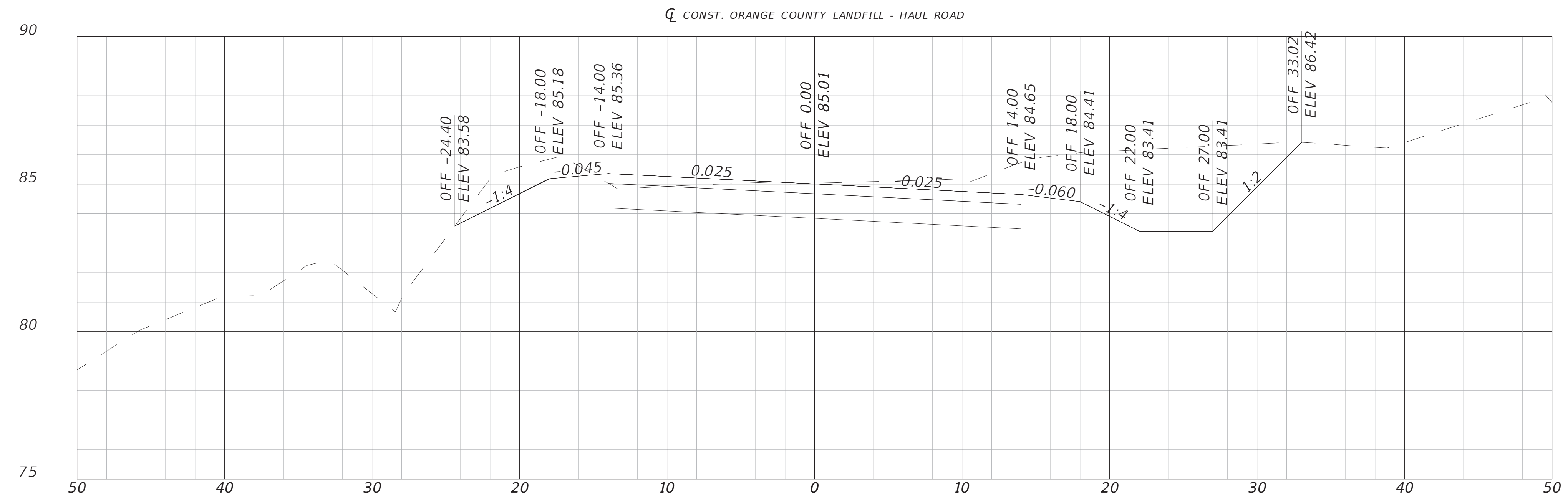
ENGINEER OF RECORD: CLINT PLETZER, P.E. NO. 69221



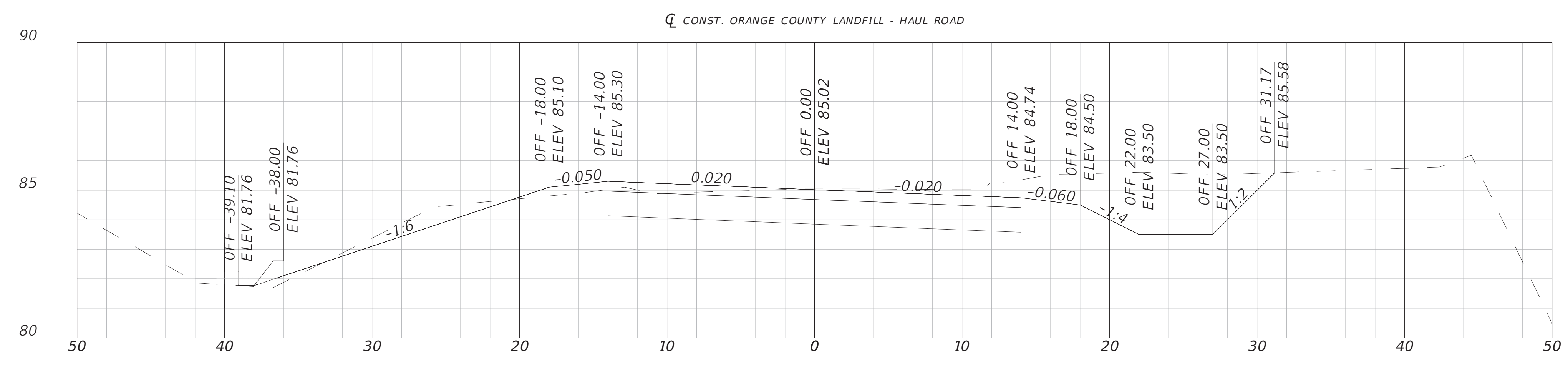
ROADWAY CROSS SECTIONS

SHEET NO.

27



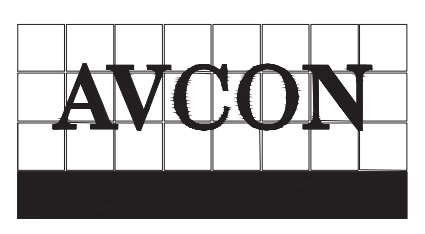
117+00.00



116+00.00

1" = 10' Horizontal
1" = 5' Vertical

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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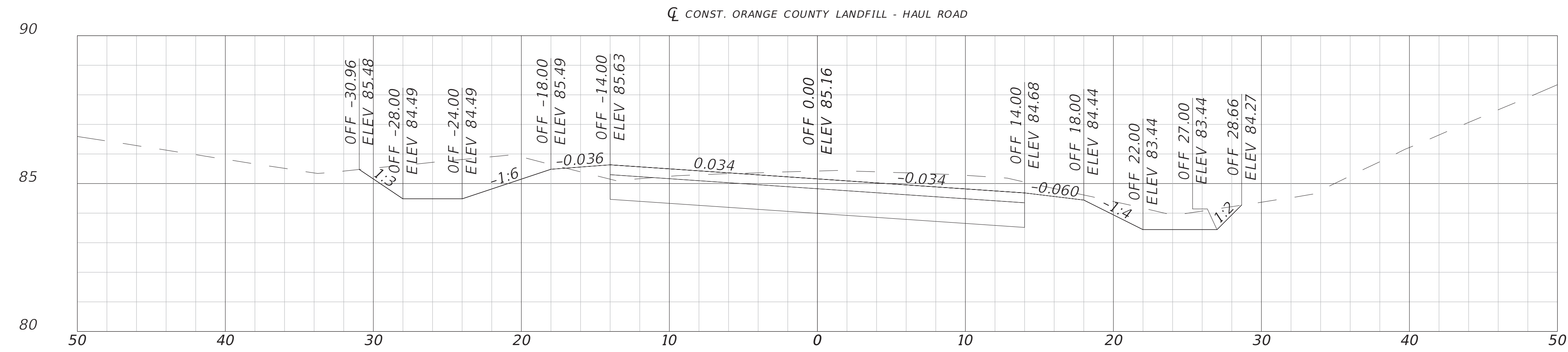
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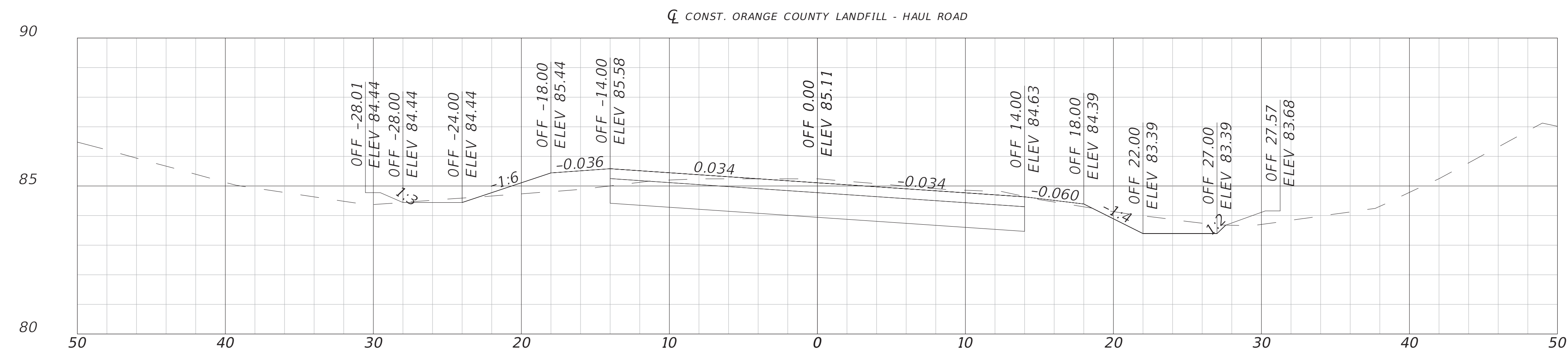


ROADWAY CROSS SECTIONS

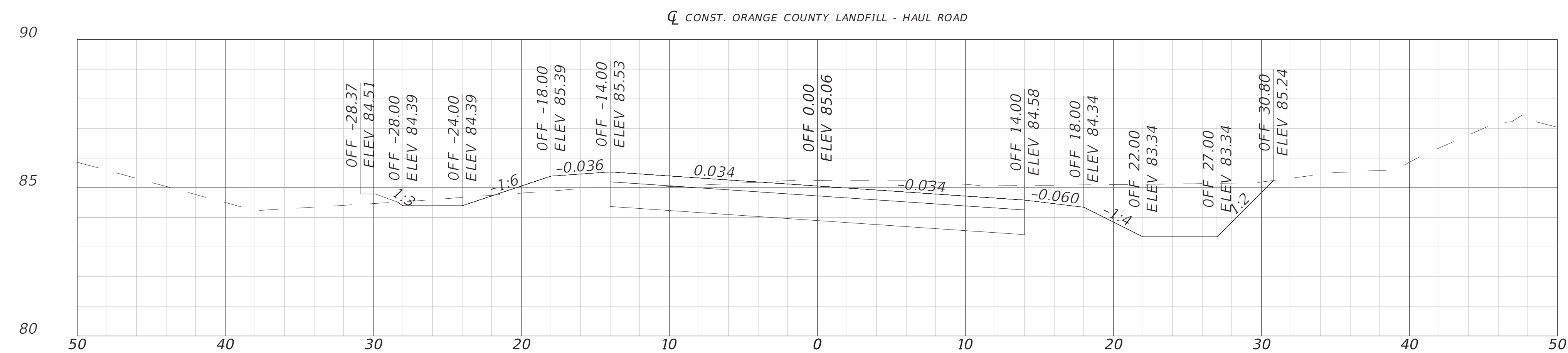
SHEET NO.
28



120+00.00



119+00.00



118+00.00

1" = 10' Horizontal
1" = 5' Vertical

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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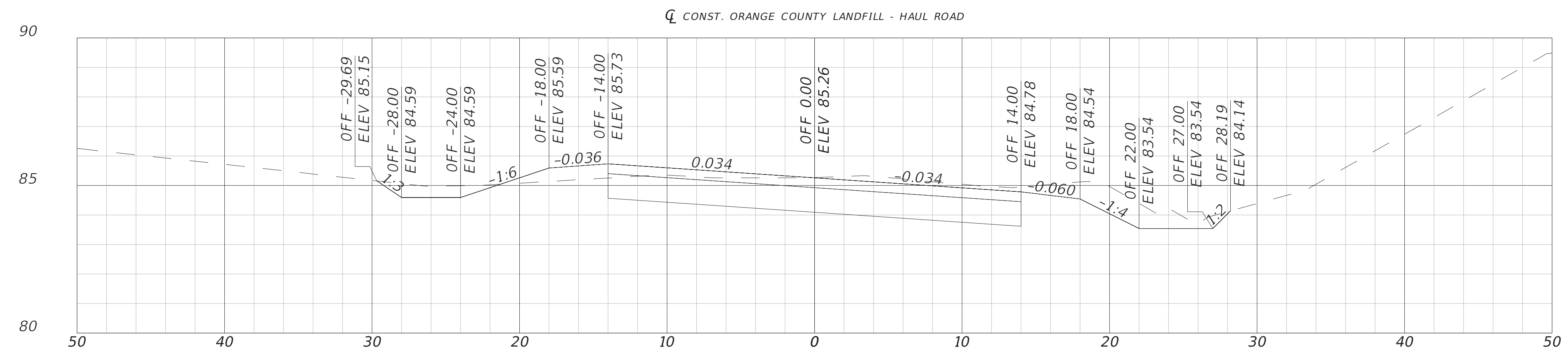
ENGINEER OF RECORD: CLINT PLETZER, P.E. NO. 69221



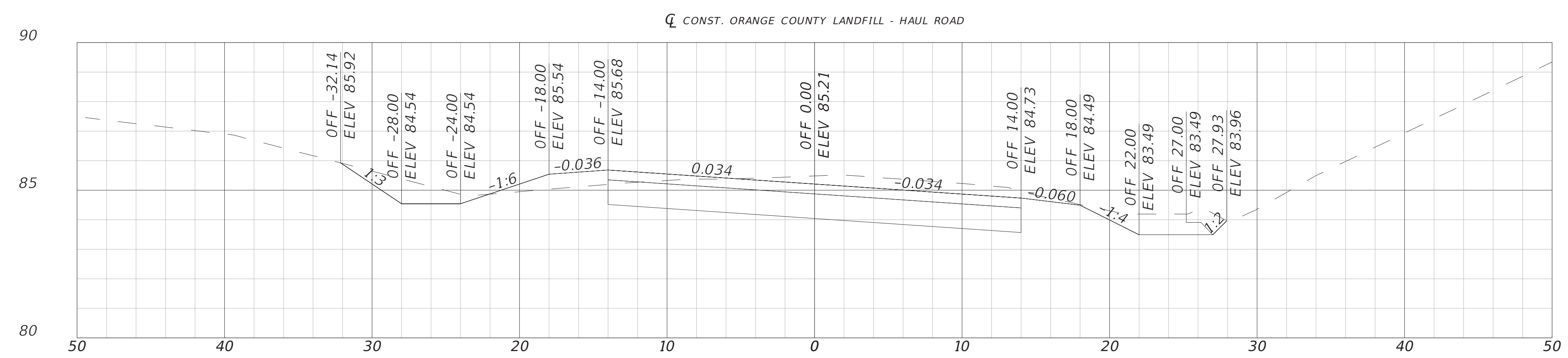
ROADWAY CROSS SECTIONS

SHEET NO.

29



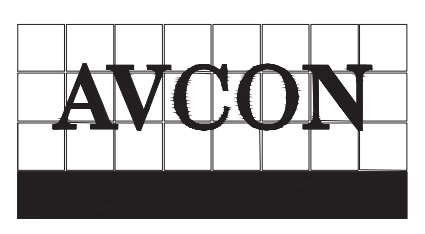
122+00.00



121+00.00

1" = 10' Horizontal
1" = 5' Vertical

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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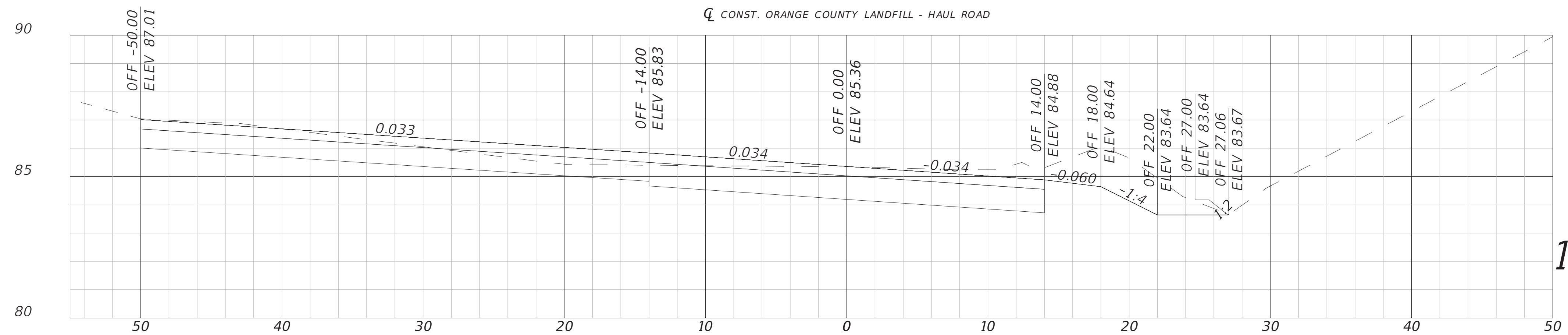
AVCON, INC.
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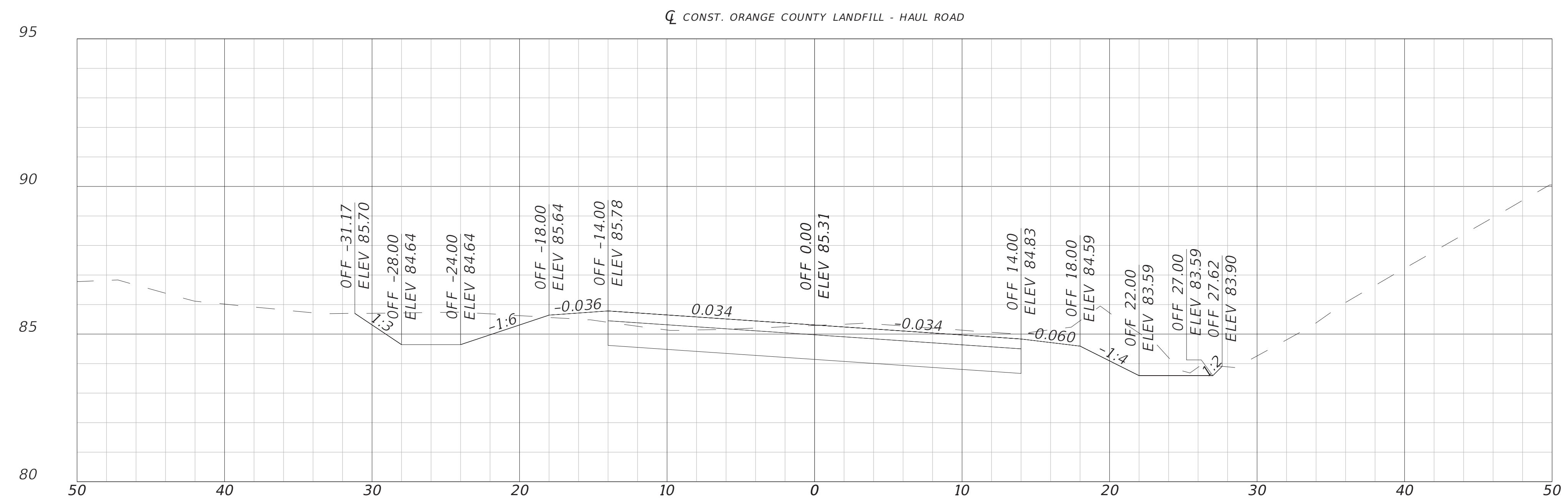


ROADWAY CROSS SECTIONS

SHEET NO.
30



124+00.00



123+00.00

1" = 10' Horizontal
1" = 5' Vertical

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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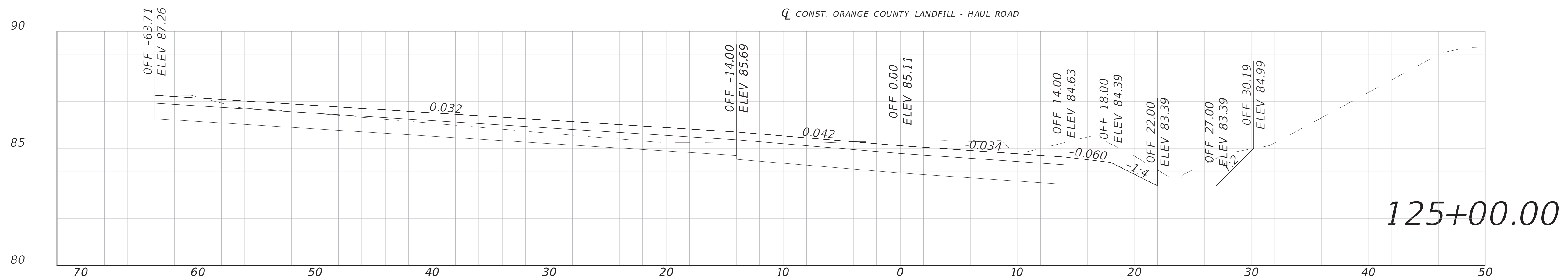
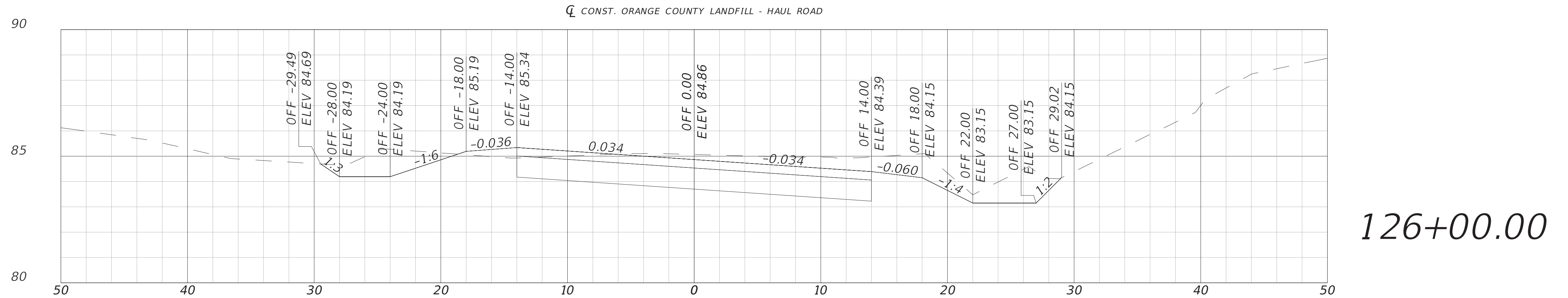
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ROADWAY CROSS SECTIONS

SHEET NO.
31



1" = 10' Horizontal
1" = 5' Vertical

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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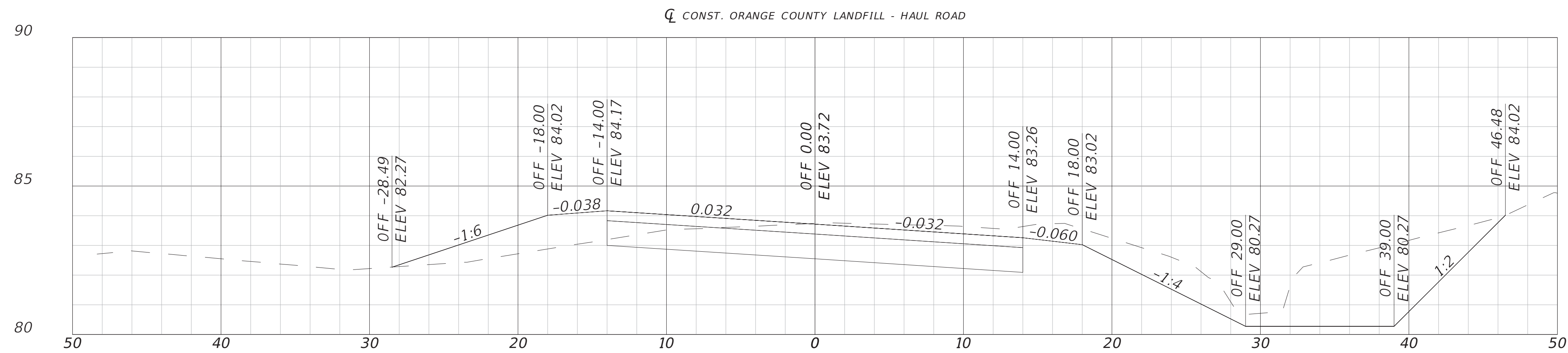
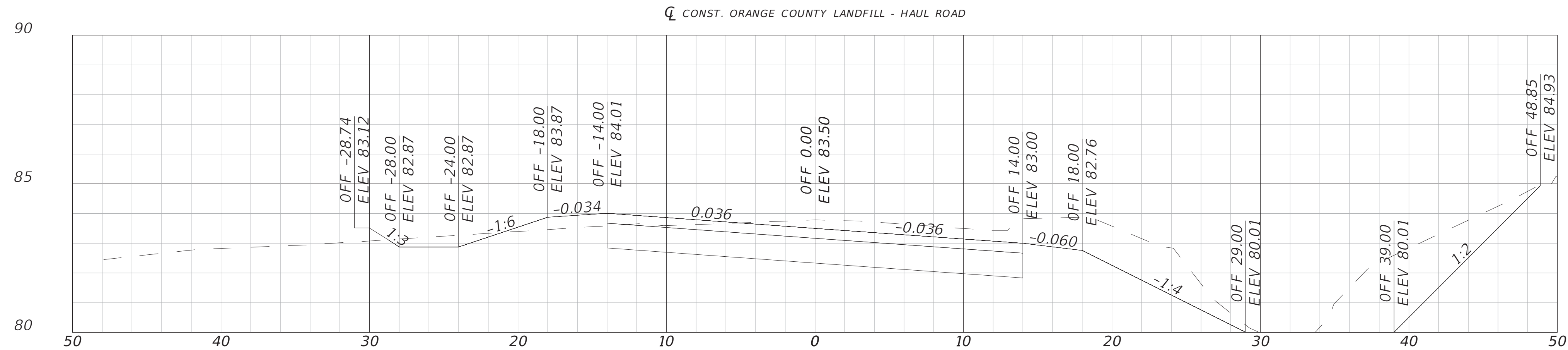
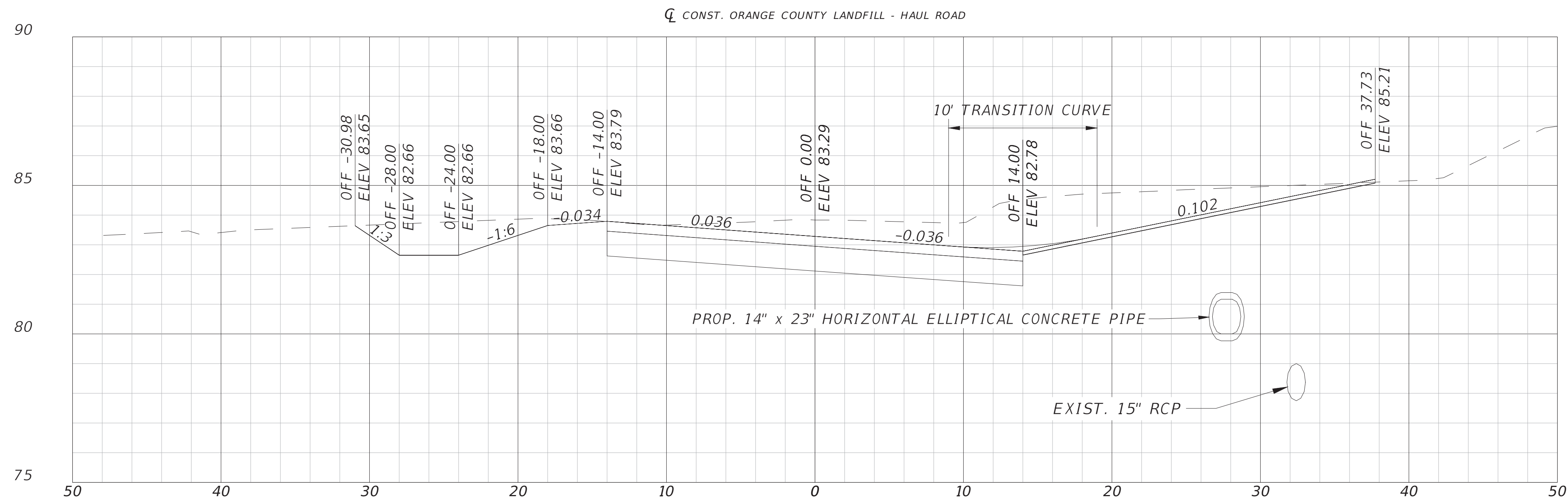
ENGINEER OF RECORD: CLINT PLETZER, P.E. NO. 69221



ROADWAY CROSS SECTIONS

SHEET NO.

32



1" = 10' Horizontal
1" = 5' Vertical

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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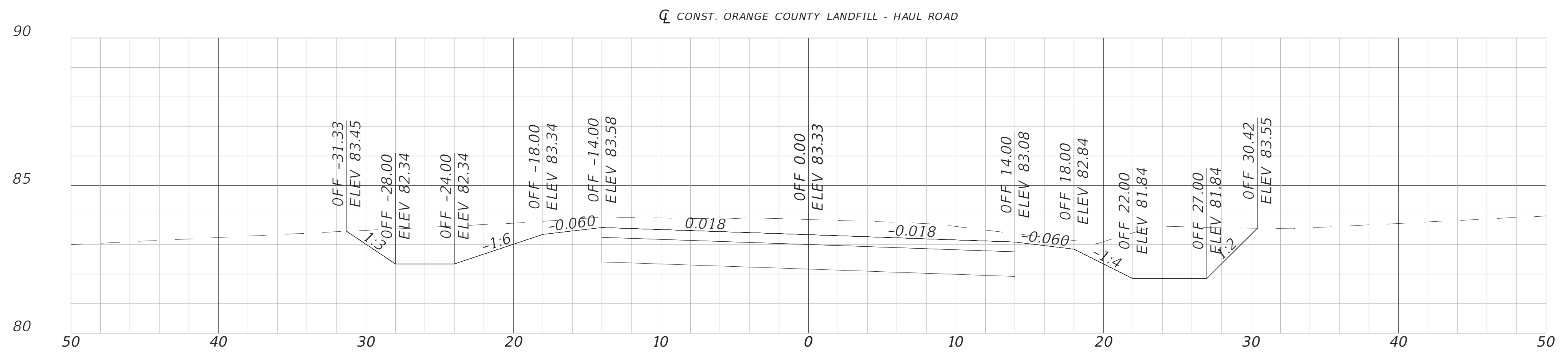
ENGINEER OF RECORD: CLINT PLETZER, P.E. NO. 69221



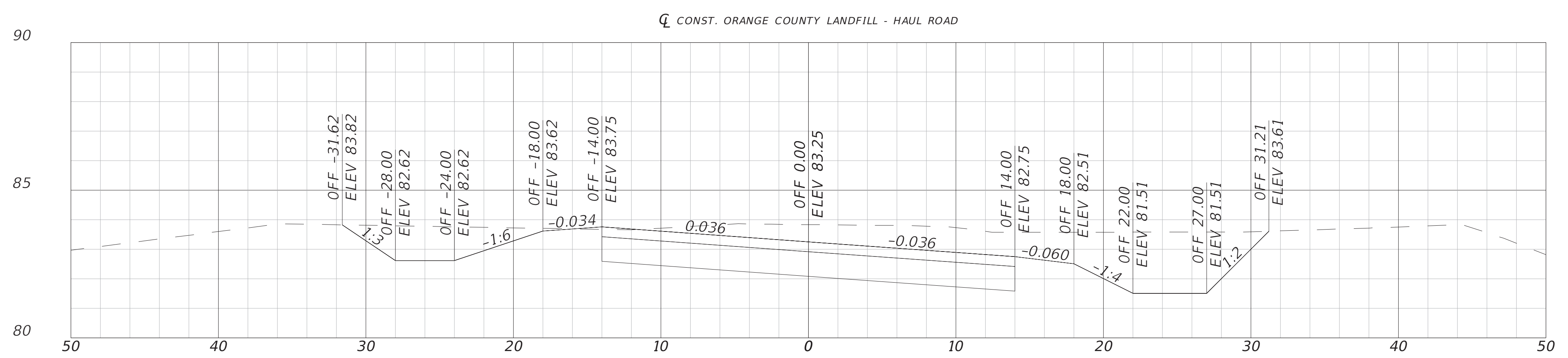
ROADWAY CROSS SECTIONS

SHEET NO.

33



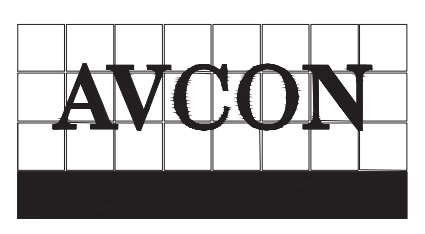
141+00.00



140+00.00

1" = 10' Horizontal
1" = 5' Vertical

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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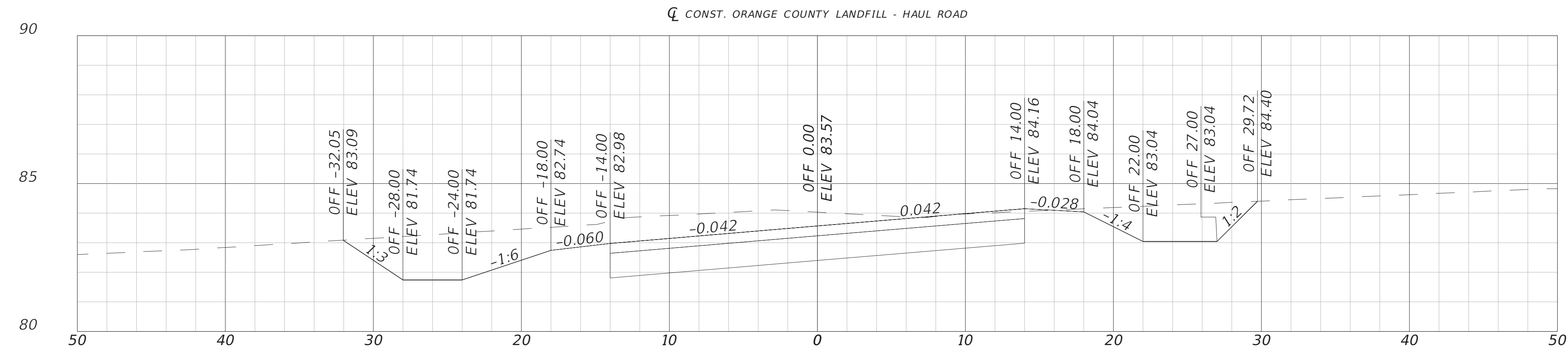
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ENGINEER OF RECORD: CLINT PLETZER, P.E. NO. 69221

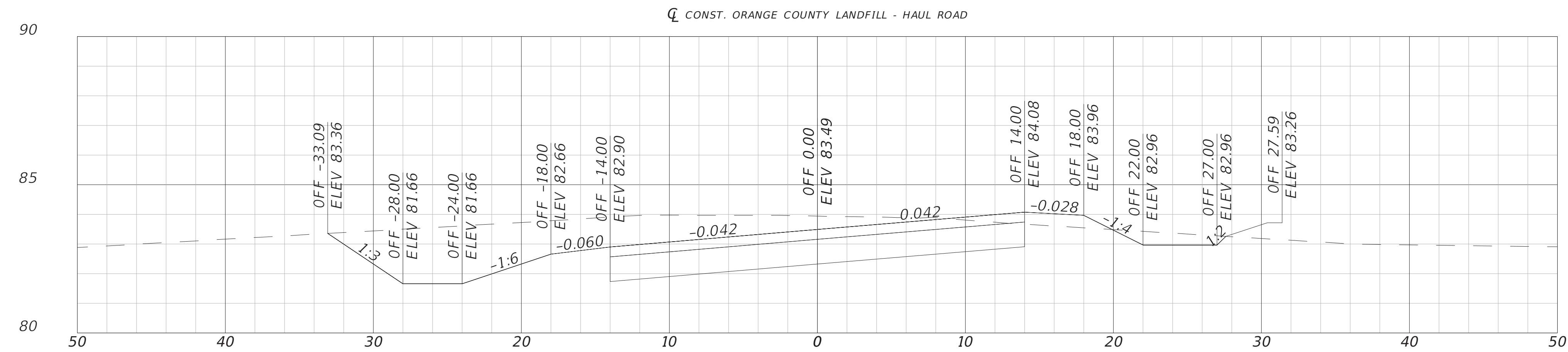


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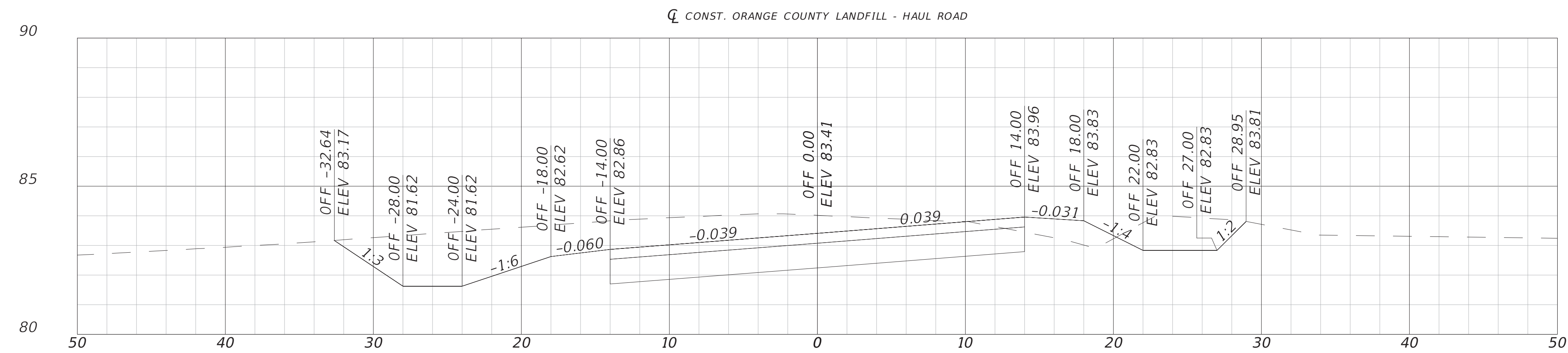
SHEET NO.
34



144+00.00



143+00.00



142+00.00

1" = 10' Horizontal
1" = 5' Vertical

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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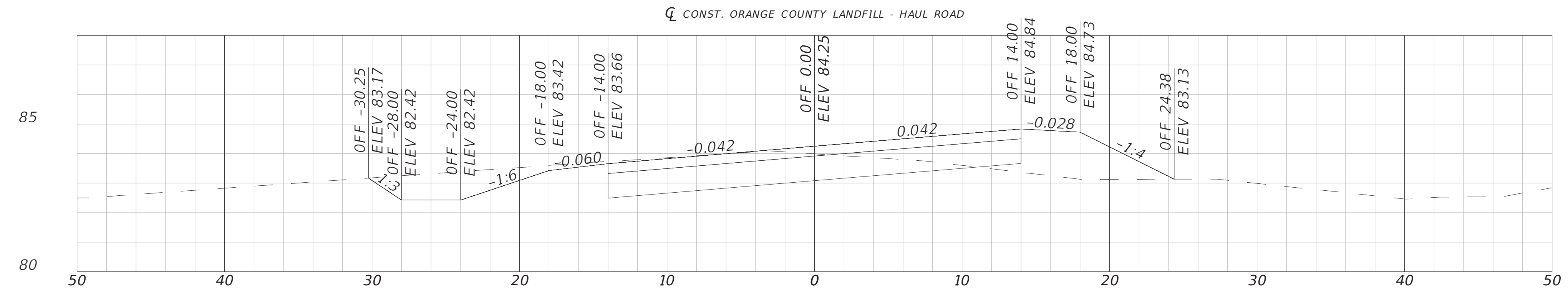
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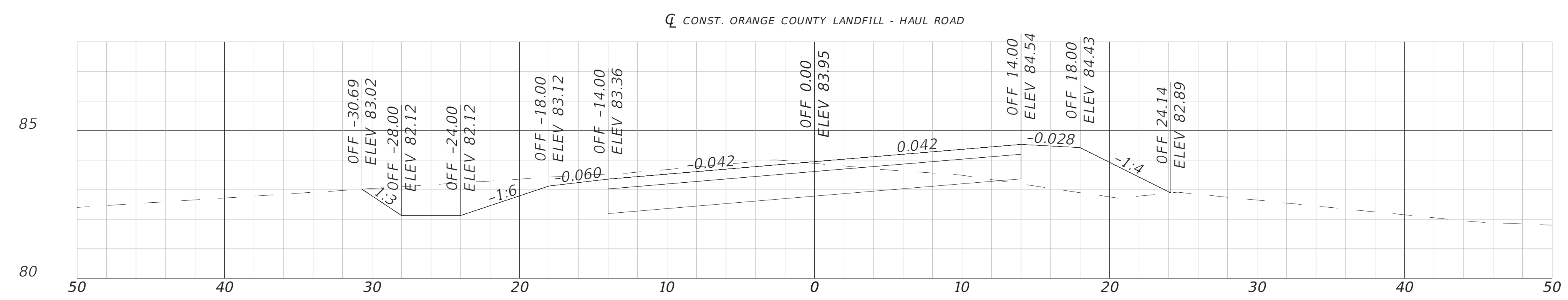
ROADWAY CROSS SECTIONS

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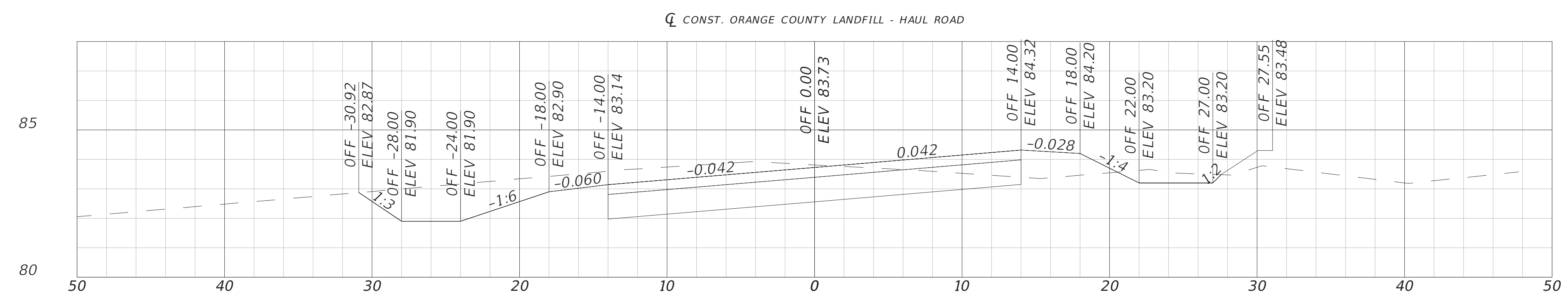
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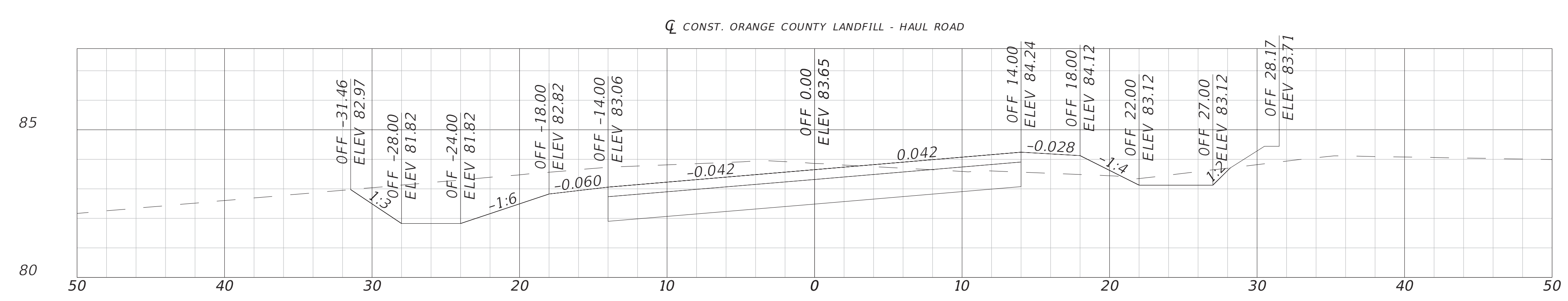
148+00.00



147+00.00



146+00.00



145+00.00

1" = 10' Horizontal
1" = 5' Vertical

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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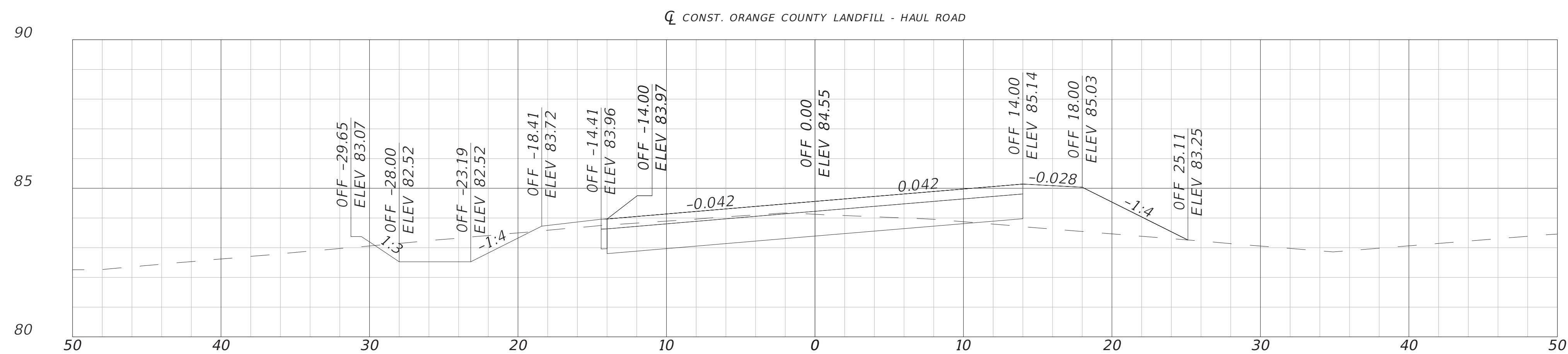
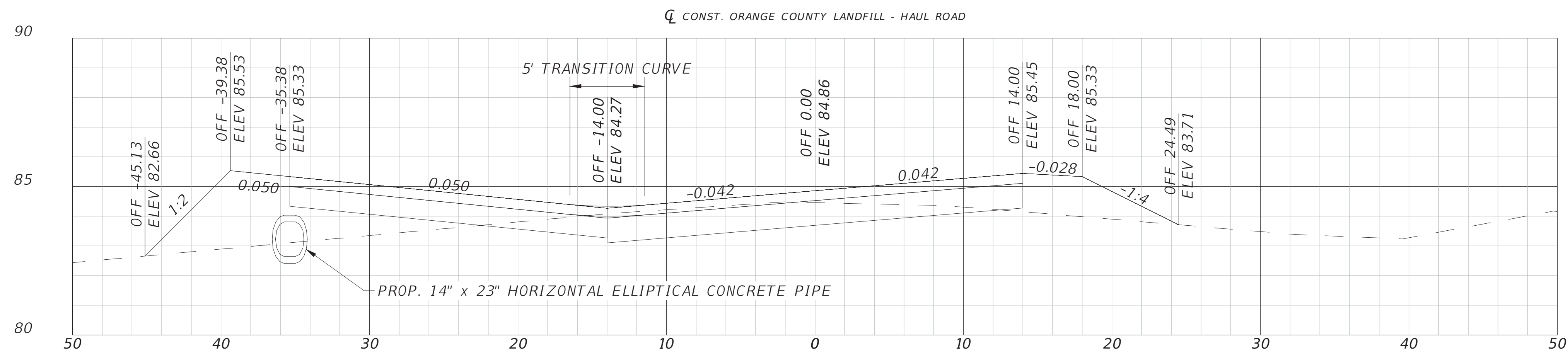
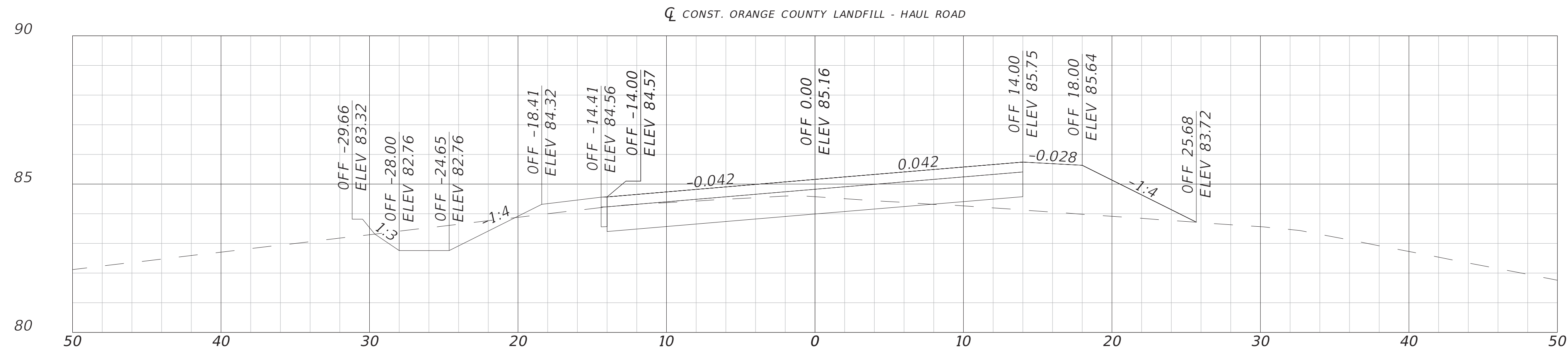
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ROADWAY CROSS SECTIONS

SHEET NO.
36



1" = 10' Horizontal
1" = 5' Vertical

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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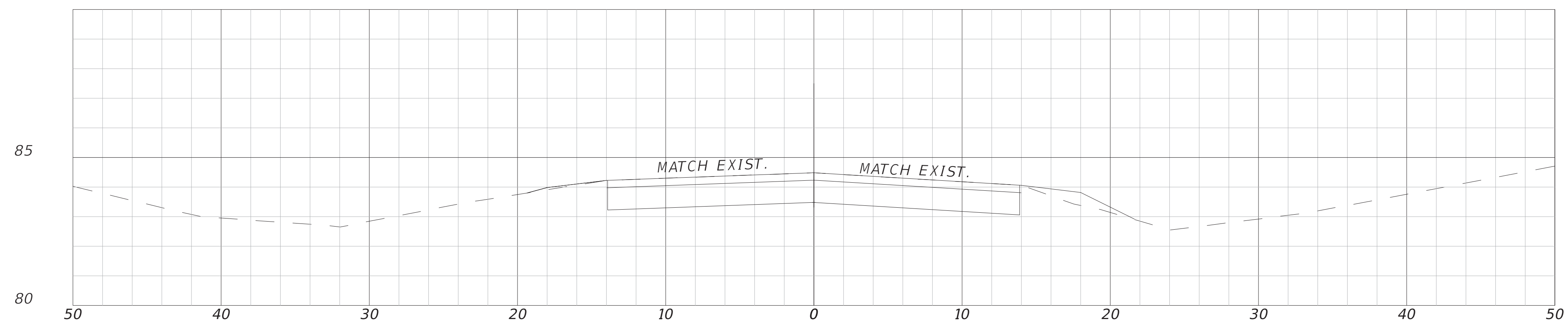


ROADWAY CROSS SECTIONS

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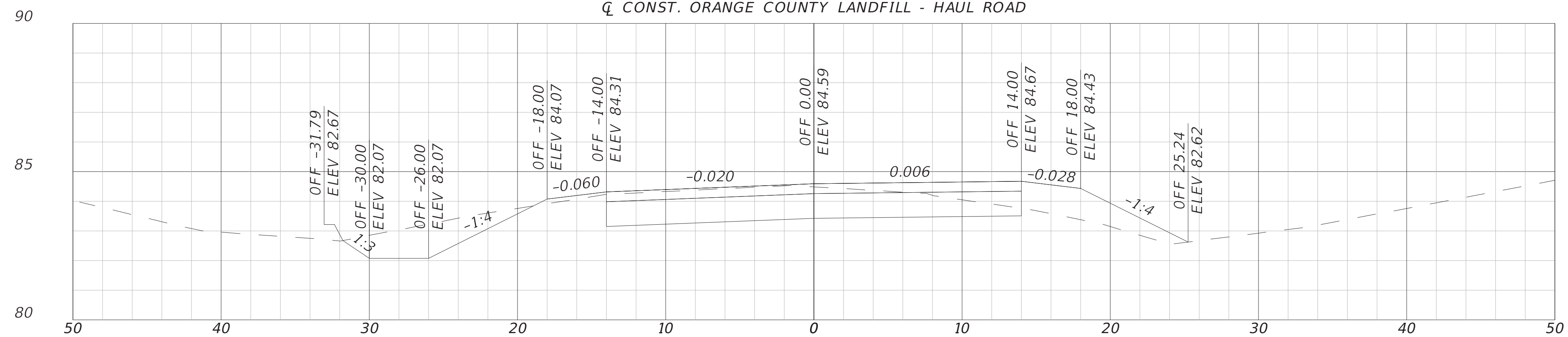
37

CONST. ORANGE COUNTY LANDFILL - HAUL ROAD



152+16.23

CONST. ORANGE COUNTY LANDFILL - HAUL ROAD



152+00.00

1" = 10' Horizontal
1" = 5' Vertical

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION
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ROADWAY CROSS SECTIONS

SHEET NO.

38

ROADWAY SOILS SURVEY REPORT OF TESTS

TOWNSHIP: 23 SOUTH
RANGE: 31 EAST
SECTION: 15

PROJECT NO.: AEA PROJ. NO. 201713-1
ROAD NO.: OC LANDFILL CLASS III CELL 2 ACCESS ROAD
SUBMITTED BY: ANTILLIAN ENGINEERING ASSOCIATES, INC.

DATE OF SURVEY: 11/04/17, 11/13/17
SURVEYED BY: ANTILLIAN ENGINEERING ASSOCIATES, INC.
SURVEY BEGINS STA. NO.: 0+00
SURVEY ENDS STA. NO.: 152+00
DATE REPORTED: 12/04/17

STRATUM NO.	LBR VALUE	ORGANIC CONTENT			SIEVE ANALYSIS RESULTS (% PASSING)						ATTERBERG LIMITS (%)			AASHTO GROUP	DESCRIPTION	CORROSION TEST RESULTS				ENVIRONMENTAL CLASSIFICATION (SUBSTRUCTURE)	
		NO. OF TESTS	% ORGANIC	MOISTURE CONTENT %	NO. OF TESTS	#10 MESH	#40 MESH	#60 MESH	#100 MESH	#200 MESH	NO. OF TESTS	LIQUID LIMIT	PLASTICITY INDEX			RESISTIVITY ohm-cm	CHLORIDES ppm	SULFATES ppm	pH	CONCRETE	STEEL
1	15	2	4-7	22-23	14	--	--	--	--	5-9	--	--	--	A-3	BROWN, DARK BROWN, VERY DARK BROWN, DARK GRAYISH BROWN, VERY DARK GRAYISH BROWN AND DARK YELLOWISH BROWN, OCCASIONALLY GRAY, PALE BROWN, VERY PALE BROWN FINE SAND, OCCASIONALLY WITH ROOTS AND ORGANIC MATTER	--	--	--	--	--	--
2	16	--	--	--	7	--	--	--	--	3-5	--	--	--	A-3	PALE BROWN, BROWN, AND VERY PALE BROWN TO GRAY, DARK GRAY, VERY DARK BROWN AND GRAYISH BROWN, OCCASIONALLY DARK BROWN, DARK GRAYISH BROWN, BLACK AND LIGHT GRAYISH BROWN FINE SAND, OCCASIONALLY WITH ROOTS	--	--	--	--	--	--
3	--	--	--	--	5	--	--	--	--	11-20	--	--	--	A-2-4	BROWN AND VERY DARK BROWN SILTY FINE SAND	--	--	--	--	--	--
4	--	2	6-13	21-47	2	--	--	--	--	12	--	--	--	A-8	VERY DARK BROWN, VERY DARK GRAYISH BROWN AND BLACK SILTY FINE SAND WITH ORGANIC MATTER	--	--	--	--	--	--
5	--	--	--	--	--	--	--	--	--	--	--	--	--	A-3	DARK BROWN FINE SAND, OCCASIONALLY WITH ROOTS AND WOODY FIBER (POSSIBLE BURIED TREE)	--	--	--	--	--	--

NOTES

1. THE SYMBOL "--", IF PRESENT, REPRESENTS UNMEASURED SOIL PARAMETERS.
2. SOIL BOUNDARIES ARE APPROXIMATE AND REPRESENT SOIL STRATA AT EACH BORING LOCATION ONLY. ANY SUBSOIL CONNECTING LINES SHOWN ARE FOR ESTIMATING EARTHWORK ONLY AND DO NOT INDICATE ACTUAL STRATUM LIMITS. SUBSURFACE VARIATIONS BETWEEN BORINGS SHOULD BE ANTICIPATED AS INDICATED IN SECTION 2-4 OF THE FDOT STANDARD SPECIFICATIONS.
3. -- ENCOUNTERED GROUNDWATER LEVEL AT THE TIME OF SURVEY
4. -- ESTIMATED HIGH GROUNDWATER LEVEL FOR PAVEMENT DESIGN PURPOSES ONLY
5. GNE -- GROUNDWATER NOT ENCOUNTERED
6. STRATUM 4, STRATUM 5 AND ANY ORGANIC MATERIAL ENCOUNTERED DURING CONSTRUCTION SHALL BE REMOVED IN ACCORDANCE WITH FDOT STANDARD INDEX 500.
7. PLASTIC MATERIAL SHALL BE REMOVED IF ENCOUNTERED, IN ACCORDANCE WITH FDOT STANDARD INDEX 500.
8. ALL MATERIAL USED IN EMBANKMENT CONSTRUCTION SHALL BE IN ACCORDANCE WITH FDOT STANDARD INDEX 505.
9. SUBSURFACE VARIATIONS BETWEEN BORINGS SHOULD BE ANTICIPATED AS INDICATED IN SECTION 2-4 OF THE FDOT STANDARD SPECIFICATIONS.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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PETER G. SUAH, P.E.
P.E. LICENSE NO. 46910
ANTILLIAN ENGINEERING ASSOCIATES, INC.
3331 BARTLETT BOULEVARD
ORLANDO, FLORIDA 32811
CERTIFICATE OF AUTHORIZATION EB6685

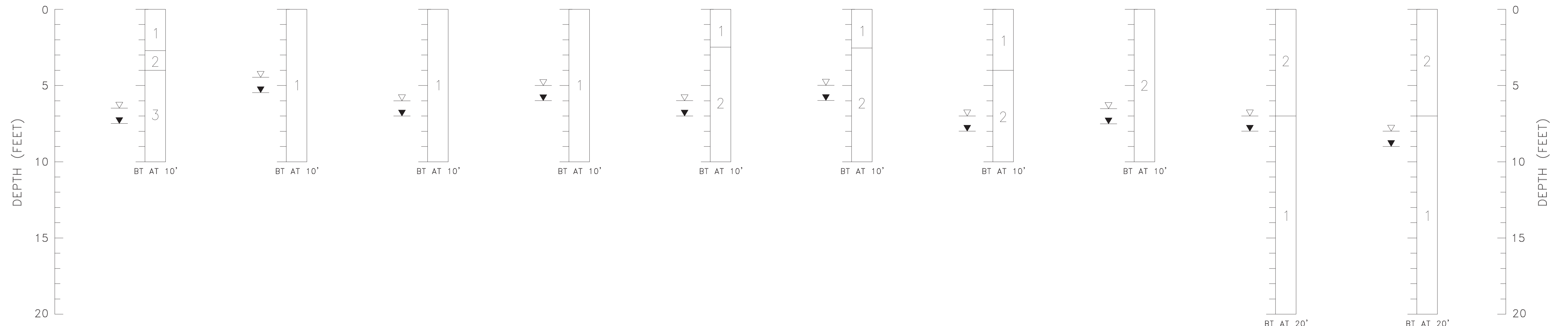


ROADWAY SOILS SURVEY

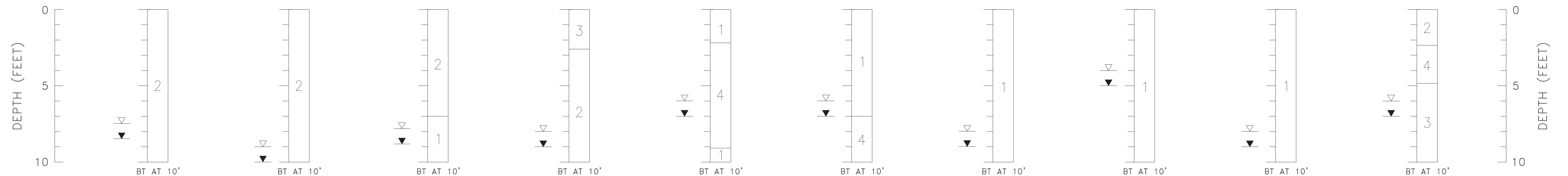
SHEET NO.

G01

BORING:	AB-1	AB-2	AB-3	AB-4	AB-5	AB-6	AB-7	AB-8	B-1	B-2	BORING:
STATION:	100+30	102+80	104+80	106+80	109+00	111+00	113+10	115+20	116+20	117+00	STATION:
OFFSET:	30' LT	20' RT	25' LT	20' RT	30' LT	20' RT	35' LT	20' RT	20' LT	25' LT	OFFSET:
DATE DRILLED:	11/04/17	11/04/17	11/04/17	11/04/17	11/04/17	11/04/17	11/04/17	11/04/17	11/13/17	11/13/17	DATE DRILLED:



BORING:	AB-9	AB-10	AB-11	AB-12	AB-13	AB-14	AB-15	AB-16	AB-17	AB-18	BORING:
STATION:	118+50	120+80	122+80	124+80	126+80	128+80	130+80	132+80	134+80	136+80	STATION:
OFFSET:	20' LT	20' RT	20' LT	20' RT	20' LT	20' RT	20' LT	20' RT	20' LT	20' RT	OFFSET:
DATE DRILLED:	11/04/17	11/04/17	11/04/17	11/04/17	11/04/17	11/04/17	11/04/17	11/04/17	11/04/17	11/04/17	DATE DRILLED:



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	BROWN, DARK BROWN, VERY DARK BROWN, DARK GRAYISH BROWN, VERY DARK GRAYISH BROWN AND DARK YELLOWISH BROWN, OCCASIONALLY GRAY, PALE BROWN, VERY PALE BROWN FINE SAND, OCCASIONALLY WITH ROOTS AND ORGANIC MATTER
2	A-3	PALE BROWN, BROWN, AND VERY PALE BROWN TO GRAY, DARK GRAY, VERY DARK BROWN AND GRAYISH BROWN, OCCASIONALLY DARK BROWN, DARK GRAYISH BROWN, BLACK AND LIGHT GRAYISH BROWN FINE SAND, OCCASIONALLY WITH ROOTS
3	A-2-4	BROWN AND VERY DARK BROWN SILTY FINE SAND
4	A-8	VERY DARK BROWN, VERY DARK GRAYISH BROWN AND BLACK SILTY FINE SAND WITH ORGANIC MATTER
5	A-3	DARK BROWN FINE SAND, OCCASIONALLY WITH ROOTS AND WOODY FIBER (POSSIBLE BURIED TREE)

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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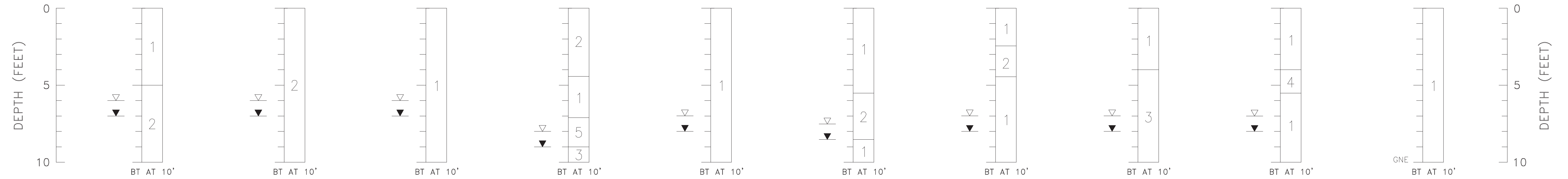


REPORT OF ROADWAY
AUGER BORINGS (1 OF 2)

SHEET NO.

G02

BORING:	AB-19	AB-20	AB-20L	AB-21	AB-22	AB-22L	AB-23	AB-24	AB-25	AB-26	BORING:
STATION:	138+80	140+80	141+00	142+80	144+80	145+00	146+80	148+80	150+80	152+00	STATION:
OFFSET:	20' LT	20' RT	20' LT	25' LT	20' RT	35' LT	20' LT	20' RT	20' LT	20' RT	OFFSET:
DATE DRILLED:	11/04/17	11/04/17	11/13/17	11/04/17	11/04/17	11/13/17	11/04/17	11/04/17	11/04/17	11/04/17	DATE DRILLED:



STRATUM NO.	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	BROWN, DARK BROWN, VERY DARK BROWN, DARK GRAYISH BROWN, VERY DARK GRAYISH BROWN AND DARK YELLOWISH BROWN, OCCASIONALLY GRAY, PALE BROWN, VERY PALE BROWN FINE SAND, OCCASIONALLY WITH ROOTS AND ORGANIC MATTER
2	A-3	PALE BROWN, BROWN, AND VERY PALE BROWN TO GRAY, DARK GRAY, VERY DARK BROWN AND GRAYISH BROWN, OCCASIONALLY DARK BROWN, DARK GRAYISH BROWN, BLACK AND LIGHT GRAYISH BROWN FINE SAND, OCCASIONALLY WITH ROOTS
3	A-2-4	BROWN AND VERY DARK BROWN SILTY FINE SAND
4	A-8	VERY DARK BROWN, VERY DARK GRAYISH BROWN AND BLACK SILTY FINE SAND WITH ORGANIC MATTER
5	A-3	DARK BROWN FINE SAND, OCCASIONALLY WITH ROOTS AND WOODY FIBER (POSSIBLE BURIED TREE)

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION
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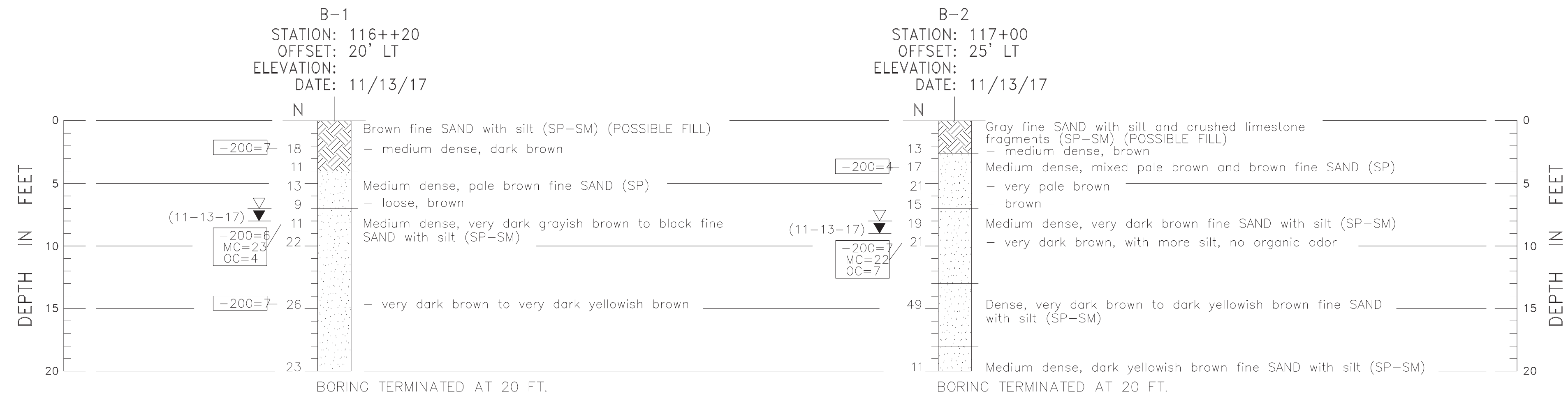
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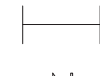
REPORT OF ROADWAY
AUGER BORINGS (2 OF 2)

SHEET NO.

G03



LEGEND

	POSSIBLE FILL		STANDARD PENETRATION TEST (SPT) BORING LOCATION
	SAND		CHANGE IN SOIL STRATA
		N	SPT N-VALUE IN BLOWS PER FOOT (ASTM D 1586)
		(11-13-17) ▽	GROUNDWATER LEVEL ENCOUNTERED DURING DRILLING
		▽	ESTIMATED SEASONAL HIGH GROUNDWATER LEVEL
		(SP)	UNIFIED SOIL CLASSIFICATION SYSTEM GROUP SYMBOL BASED ON VISUAL EXAMINATION AND LABORATORY TESTS
		-200	PERCENT PASSING U.S. STANDARD NO. 200 SIEVE
		MC	NATURAL MOISTURE CONTENT IN PERCENT
		OC	ORGANIC CONTENT

NOTES

1. PLAN VIEW IS PRELIMINARY FOR SHOWING BORING LOCATIONS ONLY AND MAY NOT BE INDICATIVE OF FINAL PLAN.
2. BORINGS WERE DRILLED BY RELIABLE FIELD SERVICES ON 11/13/17 USING A BR2500 RIG. SPT WAS CONDUCTED WITH A SAFETY HAMMER.

SOIL CONSISTENCY (BASED ON EMPIRICAL CORRELATION WITH SPT N-VALUE)	
GRANULAR SOILS	
VERY LOOSE	- LESS THAN 4 BLOWS/FT.
LOOSE	- 4 TO 10 BLOWS/FT.
MEDIUM DENSE	- 10 TO 30 BLOWS/FT.
DENSE	- 30 TO 50 BLOWS/FT.
VERY DENSE	- MORE THAN 50 BLOWS/FT.
FINE-GRAINED SOILS	
VERY SOFT	- LESS THAN 2 BLOWS/FT.
SOFT	- 2 TO 4 BLOWS/FT.
FIRM	- 4 TO 8 BLOWS/FT.
STIFF	- 8 TO 15 BLOWS/FT.
VERY STIFF	- 15 TO 30 BLOWS/FT.
HARD	- MORE THAN 30 BLOWS/FT.

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION
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REPORT OF SPT BORINGS

SHEET NO.

G04

BOX CULVERT DATA TABLES

BOX, HEADWALL AND CUTOFF WALL DATA TABLE (inches unless shown otherwise)																				
LOCATION	STRUCTURE /BRIDGE NUMBER	BOX									HEADWALL AND CUTOFF WALL									
		Wc(ft)	Hc(ft)	Tt	Tw	Tb	Ti	#cells	Lc(ft)	Cover	Blhw	Hlhw	Brhw	Hrhw	Blcw	Hlcw	Brcw	Hrcw	SL(deg)	SR(deg)
		6	4	8	8	8	8	1	81	2	14	24	14	24	12	24	12	24	29	29

LEFT SIDE WINGWALLS DATA TABLE (inches unless shown otherwise)																		
STRUCTURE /BRIDGE NUMBER	LEFT END WINGWALL									LEFT BEGIN WINGWALL								
	Rt	Rw	Rh	Rd	SW(deg)	β (deg)	He(ft)	Hs(ft)	Lw(ft)	Rt	Rw	Rh	Rd	SW(deg)	β (deg)	He(ft)	Hs(ft)	Lw(ft)
	18	8	36	16	119	26.6	6	6	10	18	8	36	16	61	26.6	6	6	10

NOTES:

- ENVIRONMENTAL CLASS: MODERATELY AGGRESSIVE
- REINFORCING STEEL, GRADE 60
- CONCRETE CLASS IV, $f'c = 5.5$ ksi
- SOIL PROPERTIES:
FRICTION ANGLE = 30°
MODULUS OF SUBGRADE REACTION = 150 pci
NOMINAL BEARING RESISTANCE = 4000 PSF
- WORK THIS DRAWING WITH FDOT STANDARD PLANS INDEX NO. 400-289 AND REINFORCING BAR LIST, SHEET NO. S02 & S03
- SETTLEMENT CRITERIA FOR PRECAST BOX CULVERT OPTION (INDEX NO. 29)
LONG TERM DIFERENTIAL SETTLEMENT (ΔY) = 0.083 ft.
EFFECTIVE LENGTH FOR SETTLEMENT (L) = 81 ft.

RIGHT SIDE WINGWALLS DATA TABLE (inches unless shown otherwise)																		
STRUCTURE /BRIDGE NUMBER	RIGHT END WINGWALL									RIGHT BEGIN WINGWALL								
	Rt	Rw	Rh	Rd	SW(deg)	β (deg)	He(ft)	Hs(ft)	Lw(ft)	Rt	Rw	Rh	Rd	SW(deg)	β (deg)	He(ft)	Hs(ft)	Lw(ft)
	18	8	36	16	61	26.6	6	6	10	18	8	36	16	119	26.6	6	6	10

ESTIMATED CONCRETE QUANTITIES (CY)																				
STRUCTURE /BRIDGE NUMBER	BOX								LEFT END WINGWALL			LEFT BEGIN WINGWALL			RIGHT END WINGWALL			RIGHT BEGIN WINGWALL		
	Left Cutoff Wall	Right Cutoff Wall	Bottom Slab	Walls	Top Slab	Left Head Wall	Right Head Wall	Sub Total	Footing	Wall	Sub Total	Footing	Wall	Sub Total	Footing	Wall	Sub Total	Footing	Wall	Sub Total
		0.414	0.414	15.2	16	14.7	0.483	0.483	47.8	2.8	1.48	4.28	2.68	1.48	4.16	2.68	1.48	4.16	2.8	1.48

MAIN STEEL REINFORCEMENT SPACING (inches)																			
STRUCTURE /BRIDGE NUMBER	BOX															HEADWALLS		CUTOFF WALLS	
	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115, 116...	803	806	809	812
	9	9	9	9	9	9	9	9	12	12	12	12	12	12	12	12	12	15	15

WINGWALL STEEL REINFORCEMENT SPACING (inches)																												
STRUCTURE /BRIDGE NUMBER	LEFT END WINGWALL							LEFT BEGIN WINGWALL							RIGHT END WINGWALL							RIGHT BEGIN WINGWALL						
	401 (407(8))	402 (403)	404 (405)	406	409	410	411	501 (507(8))	502 (503)	504 (505)	506	509	510	511	601 (607(8))	602 (603)	604 (605)	606	609	610	611	701 (707(8))	702 (703)	704 (705)	706	709	710	711
	8	8	12	8	12	12	12	8	8	12	8	12	12	12	8	8	12	8	12	12	12	8	8	12	8	12	12	12

WINGWALL NOTE: Bar designations in "()" are only required for variable height wingwalls.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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**CONCRETE BOX CULVERT
TABLE OF VARIABLES**

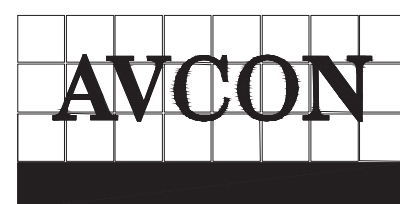
SHEET NO.
S01

MARK	LENGTH	NO	TYP	STY	B	C	D	E	F	H	J	K	N	Ø										
SIZE	DES	FT	IN	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	NO	ANG
LOCATION					MAIN BOX										NO. REQUIRED = 1									
5	101	7-0		104	1			7-0																
5	201	VARY		4	1			5- 4 1/4																
		3- 4		0	1			1- 3 1/4																
5	301	VARY		4	1			5- 4 1/4																
		3- 4		0	1			1- 3 1/4																
5	102	7-0		104	1			7-0																
5	202	VARY		4	1			5- 4 1/4																
		3- 4		0	1			1- 3 1/4																
5	302	VARY		4	1			5- 4 1/4																
		3- 4		0	1			1- 3 1/4																
5	103	7-0		108	1			7-0																
5	203	VARY		4	1			5- 4 1/4																
		3- 4		0	1			1- 3 1/4																
5	303	VARY		4	1			5- 4 1/4																
		3- 4		0	1			1- 3 1/4																
5	104	7-0		108	1			7-0																
5	204	VARY		4	1			5- 4 1/4																
		3- 4		0	1			1- 3 1/4																
5	304	VARY		4	1			5- 4 1/4																
		3- 4		0	1			1- 3 1/4																
5	105	5-2		216	10			1- 9		3- 4 1/2														
5	106	5-2		216	10			1- 9		3- 4 1/2														
5	108	5-0		216	1			5-0																
3	109	85-0		8	2			1- 3 1/2		83- 8														1
3	110	82-0		8	2			1- 3 1/2		80- 8														1
3	111	81-4		8	2			1- 3 1/2		80- 0 1/4													1	
3	112	85-0		8	2			1- 3 1/2		83- 8														1
3	113	82-0		10	2			1- 3 1/2		80- 8														1
3	114	82-0		10	2			1- 3 1/2		80- 8														1
LOCATION					LEFT END WINGWALL										NO. REQUIRED = 1									
4	401	5-9		16	1			5-9																
4	402	9-8		10	1			9-8																
4	404	9-8		7	1			9-8																
4	406	5-9		11	1			5-9																
4	407	4-5		16	10			1-10		2-7														
4	409	4-10		11	1			4-10																
4	410	4-10		11	1			4-10																
4	411	9-8		12	1			9-8																
5	412	2-0		10	1			2-0																
LOCATION					LEFT BEGIN WINGWALL										NO. REQUIRED = 1									
4	501	5-9		16	1			5-9																
4	502	9-8		10	1			9-8																
4	504	9-8		7	1			9-8																
4	506	5-9		11	1			5-9																
4	507	4-5		16	10			1-10		2-7														
4	509	4-10		11	1			4-10																
4	510	4-10		11	1			4-10																
4	511	9-8		12	1			9-8																
5	512	2-0		10	1			2-0																

NOTES:

1. Reinforcing Steel, Grade 60
2. Work this Drawing with FDOT Standard Plans Index 400-289 and 415-001 and Sheet Nos. S01 & S03

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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AVCON, INC.
5555 MICHIGAN STREET, SUITE 200
ORLANDO, FLORIDA 32822-2779
PHONE:(407) 599-1122
FAX:(407) 599-1133
www.avconinc.com

ENGINEER OF RECORD: LUCA DELVERME, P. E., NO. 63055
CERTIFICATE OF AUTHORIZATION NO. 5057



CONCRETE BOX CULVERT
REINFORCING BAR LIST

SHEET NO.

S02

MARK	LENGTH	NO	TYP	STY	B	C	D	E	F	H	J	K	N	Ø												
SIZE	DES	FT	IN	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	NO	ANG		
LOCATION					RIGHT END WINGWALL										NO. REQUIRED = 1											
4	601	5-9	16	1				5-9																		
4	602	9-8	10	1				9-8																		
4	604	9-8	7	1				9-8																		
4	606	5-9	11	1				5-9																		
4	607	4-5	16	10				1-10	2-7																	
4	609	4-10	11	1				4-10																		
4	610	4-10	11	1				4-10																		
4	611	9-8	12	1				9-8																		
5	612	2-0	10	1				2-0																		
LOCATION					RIGHT BEGIN WINGWALL										NO. REQUIRED = 1											
4	701	5-9	16	1				5-9																		
4	702	9-8	10	1				9-8																		
4	704	9-8	7	1				9-8																		
4	706	5-9	11	1				5-9																		
4	707	4-5	16	10				1-10	2-7																	
4	709	4-10	11	1				4-10																		
4	710	4-10	11	1				4-10																		
4	711	9-8	12	1				9-8																		
5	712	2-0	10	1				2-0																		
LOCATION					LEFT HEADWALL										NO. REQUIRED = 1											
6	801	8-1	2	1				8-0 1/2																		
6	802	8-1	2	1				8-0 1/2																		
3	803	5-2	9	27				1-7 1/2	0-6	0-4	0-5	1-2 1/2	0-8	0-8												
10	0	0-0	0	0																						
LOCATION					RIGHT HEADWALL										NO. REQUIRED = 1											
6	804	8-1	2	1				8-0 1/2																		
6	805	8-1	2	1				8-0 1/2																		
3	806	5-2	9	27				1-7 1/2	0-6	0-4	0-5	1-2 1/2	0-8	0-8												
10	0	0-0	0	0																						
LOCATION					LEFT CUTOFF WALL										NO. REQUIRED = 1											
3	807	8-1	2	1				8-0 1/2																		
3	808	8-1	2	1				8-0 1/2																		
3	809	4-11	7	7				1-7 1/2	0-8	0-6	0-6															
10	0	0-0	0	0																						
LOCATION					RIGHT CUTOFF WALL										NO. REQUIRED = 1											
3	810	8-1	2	1				8-0 1/2																		
3	811	8-1	2	1				8-0 1/2																		
3	812	4-11	7	7				1-7 1/2	0-8	0-6	0-6															
10	0	0-0	0	0																						
END OF LIST																										

NOTES:

1. Reinforcing Steel, Grade 60
2. Work this Drawing with FDOT Standard Plans Index 400-289 and 415-001 and Sheet Nos. S01 & S02

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
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CONCRETE BOX CULVERT
 REINFORCING BAR LIST

SHEET NO.
 S03