

LARIMER COUNTY, COLO.

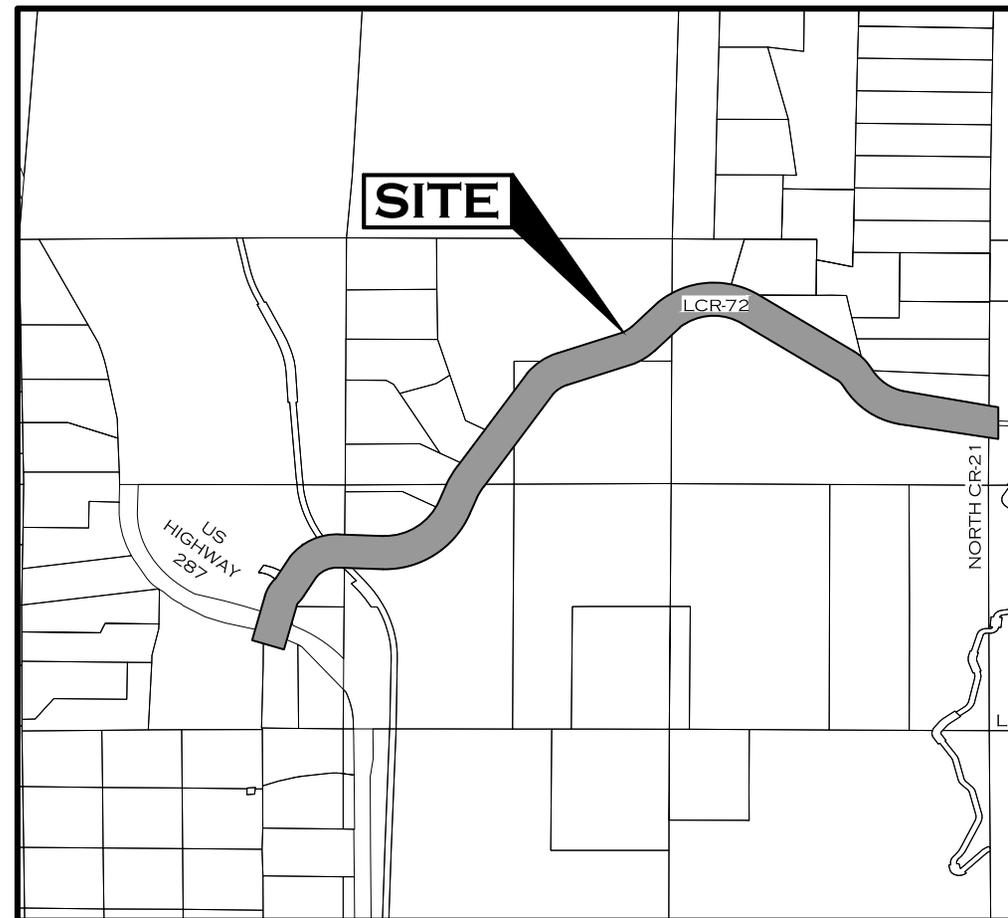
DIVISION OF PUBLIC WORKS

PUBLIC WORKS PROJECT NO. 2017-001

COUNTY ROAD 72 FROM NORTH CR 21 TO

TABULATION OF LENGTH AND DESIGN DATA

STATION	DESCRIPTION	ROADWAY	
		LINEAR FEET	MILES
STA 100+00	BEGIN PROJECT LIMITS		
STA 258+41.51	END PROJECT LIMITS	15,842	3.00
TOTAL		15,842	3.00
* FOR INFORMATION ONLY			
DESIGN DATA			
ARTERIAL			
STA 100+00 TO 258+42			
DESIGN SPEED		55 MPH	
POSTED SPEED		50 MPH	
DESIGN TRAFFIC (2016)		3000 ADT	
CLEAR ZONE		26'	
MINIMUM CENTERLINE RADIUS		450.00'	
MAXIMUM GRADE		8.0%	
MINIMUM S.S.D. VERTICAL		495'	
STA 109+70 - 258+42			



PROJECT LOCATION MAP

SCALE: 1"=3000'

PROJECT BENCHMARK

GENERAL NOTES

ALL WORK SHALL BE DONE IN ACCORDANCE WITH LARIMER COUNTY RURAL AREA STREET STANDARDS, THE CDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2019 EDITION, AND THE PROJECT SPECIAL PROVISIONS.

FOR PRELIMINARY PLAN QUANTITIES OF PAVEMENT STRUCTURE MATERIALS, THE FOLLOWING RATES OF APPLICATION WERE USED:
 BITUMINOUS PAVEMENT (GRADING S&X) @ 153 LBS PER CU. FT.
 AGGREGATE BASE COURSE @ 139 LBS PER CU. FT.

A TACK COAT OF DILUTED EMULSIFIED ASPHALT (SLOW SETTING) IS REQUIRED PRIOR TO THE PLACEMENT OF SUBSEQUENT LIFTS OF HOT BITUMINOUS PAVEMENT. PRIOR TO PLACEMENT OF TACK COAT, THE CONTRACTOR SHALL CLEAN THE SURFACE THAT WILL RECEIVE TACK COAT AS DIRECTED BY THE ENGINEER. EMULSIFIED ASPHALT AND CLEANING SHALL NOT BE MEASURED OR PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF HOT BITUMINOUS PAVEMENT.

EMULSIFIED ASPHALT (SLOW SETTING) SHALL BE DILUTED USING 1 PART EMULSIFIED ASPHALT (SLOW SETTING) AND 1 PART WATER. RATE OF APPLICATION SHALL BE AS DETERMINED BY THE ENGINEER AT THE TIME OF APPLICATION.

THE FOLLOWING SHALL BE FURNISHED WITH EACH BITUMINOUS PAVER:

1. SKI TYPE DEVICE AT LEAST 40 FEET IN LENGTH
2. SHORT SKI OR MATCHING SHOE
3. TRANSFER DEVICE
 (TO TRANSFER ASPHALT MIX FROM WINDROW TO PAVING HOPPER – TOP LAYER ONLY)

ANY LAYER OF HOT MIX ASPHALT THAT IS TO HAVE A SUCCEEDING LAYER PLACED THEREON SHALL BE COMPLETED FULL WIDTH BEFORE THE SUCCEEDING LAYER IS PLACED, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

DRIVEWAY APPROACHES SHALL BE PAVED WITH TWO 2-INCH LIFTS OF HOT MIX ASPHALT TO THE LIMITS SHOWN ON THE PLANS AND ACCORDING TO THE DRIVEWAY TYPICAL SECTION. APPROACH RADII SHALL BE 15' OR AS SHOWN ON THE PLANS. ABC SHALL BE PLACED FROM THE HBP TO THE LIMITS SHOWN ON THE PLANS OR AS DIRECTED.

CONTRACTOR SHALL MAINTAIN INGRESS AND EGRESS TRAFFIC AT ALL APPROACHES AT ALL TIMES UNLESS OTHERWISE APPROVED BY THE ENGINEER.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE TEMPORARY MAILBOXES DURING CONSTRUCTION TO FACILITATE MAIL DELIVERY.

DEPTH OF MOISTURE-DENSITY CONTROL OF THIS PROJECT, INCLUDING DETOUR, SHALL BE AS FOLLOWS:
 FULL DEPTH OF ALL EMBANKMENTS
 BASES OF CUTS AND FILLS: 0.5 FOOT

EXCAVATION REQUIRE FOR COMPACTION OF BASES OF CUTS AND FILLS WILL BE CONSIDERED AS SUBSIDIARY TO THAT OPERATION AND WILL NOT BE PAID FOR SEPARATELY.

TYPE OF COMPACTION FOR EMBANKMENT ON THIS PROJECT WILL BE AASHTO T99 OR T180 AS DIRECTED BY THE ENGINEER. WATER SHALL BE USED AS A DUST PALLIATIVE WHERE REQUIRED TO REDUCE MIGRATION OF AIR BORNE SOIL PARTICLES. CONTRACTOR SHALL PROVIDE WATER AS DUST PALLIATIVE AS DIRECTED BY THE ENGINEER. WATER AS DUST PALLIATIVE WILL NOT BE MEASURED AND PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.

CR 72 PAVEMENT STRIPING AND SIGN INSTALLATION WILL BE DONE BY COUNTY FORCES IN COORDINATION WITH THE CONTRACTOR.

EXISTING SIGNS ALONG CR 72 SHALL BE REMOVED BY THE CONTRACTOR AND SALVAGED FOR RE-USE IF POSSIBLE. HWY 287 SIGNAGE TO BE REMOVED SHALL BE SALVAGED AND TAKEN TO CDOT'S LIVERMORE SHOP AT HWY 287 AND CR 74E.

SEEDING AND HYDRO-MULCHING WILL BE DONE BY OTHERS.

UTILITY INFORMATION AS SHOWN ON THE PLAN SHEETS ARE PLOTTED FROM THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL CALL "811" FOR UTILITY LOCATIONS AT LEAST 3 WORKING DAYS PRIOR TO ANY DIGGING, NOT INCLUDING THE DAY OF ACTUAL CONTACT.

REQUIRED UTILITY RELOCATIONS ARE NOT SHOWN ON THESE PLANS. ALL UTILITY RELOCATION WORK SHALL BE PERFORMED BY EACH RESPECTIVE UTILITY COMPANY AND/OR ITS CONTRACTOR.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING, AT HIS EXPENSE, ANY PROPERTY PINS OR SURVEY MONUMENTS REMOVED OR DESTROYED DURING CONSTRUCTION, AS PER SECTION 629 OF THE SPECIFICATIONS.

Property Owner	Removal of Fence (LF)	Removal of Gate (EA)
Stout	105	1
Spence	136	-
Swartz RT	1,805	2
Weaver STA 120+80 to 165+50 RT	3,922	1
State of Colorado RT	1,859	-
Weaver STA 184+50 to 202+00 RT	355	-
Weaver STA 206+00 to 211+00 RT	418	-
Weaver STA 215+00 to 252+50 RT	202	-
Peden	-	-
Martins	503	-
Swartz LT	1,056	1
Monell	663	1
Mortimer	1,045	1
Kindsfater	925	1
Weaver LT	1,215	1
State of Colorado LT	456	-
Brubaker	-	-
Rydell	360	-
Harvey	76	-
Total	15,101	9

**END AND CORNER BRACING POS
 ***5 STRAND BARB WIRE WITH ON

Utility Company Contact List

Utility Type	Utility Owner
Buried Phone	Century Link
Buried Fiber Optic	CSU Telecom

BID TABULATION

BID NO.	CONTRACT ITEM NO.	CONTRACT ITEM	UNIT	PROJECT TOTALS	
				PLAN	AS CONST.
1	201000	Clearing and Grubbing	LS	1	
2	202000	Removal of Structures and Obstructions	LS	1	
3	202024	Removal of Tree	LS	1	
4	202011	Removal of Structure	LS	1	
5	202071	Removal of Pipe	EA	15	
6	202095	Removal of Ground Sign*	EA	18	
7	202191	Removal of Pavement Marking	SF	1,165	
8	202210	Removal of Fence	LF	15,101	
9	202215	Removal of Gate	EA	7	
10	202220	Removal of Guard Rail Type 3	LF	578	
11	203020	Unclassified Excavation (Complete in Place)	CY	39,559	
12	203101	Rock Excavation (Complete in Place)	CY	11,040	
13	203055	Unsuitable Material (Complete in Place)	TON	1,400	
14	203170	Blading	HR	180	
15	204010	Haul & Dispose	CY	18,442	
16	206000	Structure Excavation	CY	250	
17	206010	Structure Backfill (Special)	CY	148	
18	207000	Topsoil	CY	6,656	
19	207010	Stockpile Topsoil	CY	6,449	
20	208008	Erosion Log (12 Inch) (weed free)	LF	4,806	
21	208014	Concrete Washout Structure	EA	1	
22	208031	Vehicle Tracking Pad	EA	2	
23	208040	Erosion Control Supervisor	LS	1	
24	209002	Dust Palliative	GAL	25,400	
25	210013	Reset Mailbox Structure (Type 1)	EA	4	
26	210019	Reset Mailbox Structure (Type 5)	EA	1	
27	210050	Reset Ground Sign**	EA	4	
28	210101	Reset Gate (Metal)	EA	1	
29	216030	Soil Retention Blanket (Jute)	SY	15,033	
30	304042	Aggregate Base Course (Class 5)	TON	43,014	
31	304046	Aggregate Base Course (Class 5)(Shoulder)	TON	5,936	
32	307500	Cement Treated Subgrade (12 inch)	SY	77,973	
33	403111	Hot Mix Asphalt (S)(75)(64-22)	TON	20,518	
34	403143	Hot Mix Asphalt (SX)(75)(64-22)	TON	8,318	
35	403085	Hot Mix Asphalt (SX)(75)(64-22)(Patching)	TON	163	
36	506002	Riprap (9 inch)	CY	273	
37	506004	Riprap (12 inch)	CY	139	
38	601060	Concrete Class D (Wall)	CY	19	

BID NO.	CONTRACT ITEM NO.	
39	602010	Reinforcing
40	603006	18 Inch Rein
41	603008	24 Inch Rein
42	603012	36 Inch Rein
43	603029	30 Inch x 19
44	603033	38 Inch x 24
45	603030	45 Inch x 29
46	603206	18 Inch RCP
47	603208	24 Inch RCP
48	603212	36 Inch RCP
49	603222	30 Inch x 19
50	603223	38 Inch x 24
51	603220	45 Inch x 29
52	603494	15x4 foot Co
53	606010	Guardrail Ty
54	606132	End Anchor
55	607010	Fence Barbe
56	607026	Fence Smoo
57	607162	12 Foot Gate
58	607166	16 Foot Gate
59	607200	End Post
60	607205	Corner and L
61	611013	15 Foot Catti
62	614006	Ground Sign
63	620002	Field Office
64	620020	Sanitary Faci
65	621000	Temporary C
66	621020	Temporary C
67	625000	Construction
68	626000	Mobilization
69	627000	Pavement M
70	627045	Preformed T
71	630000	Construction
72	630010	Flagging
73	630020	Pilot Car Op
74	630029	Traffic Contr
75	630032	Traffic Contr
76	630086	Portable Me

MILE 1

LARAMER COUNTY ROAD 72 - SUMMARY OF EARTHWORK		Cubic Yards
Pay Items		
Unclassified Excavation (Complete in Place)		22,981
Structure Excavation		190
Unsuitable Material (Complete in Place)		1400*
Rock Excavation		11,040
Topsoil Stockpile		6,449
Topsoil		6,656
FOR INFORMATION ONLY		
Unclassified Excavation (from cross-sections)		44,021
Embankment (from cross sections)		27,928
Embankment (Owl Canyon Trail)		1,400
Earthwork Balance		
Unclassified Excavation less 15%		37,418
Structure Excavation less 15%		162
Excess Embankment		8,251
Top Soil		
Stripped Topsoil (4 Inches)		6,449
Replace 4 inches deep on shoulder areas		6,656

* UNSUITABLE MATERIAL MEASURED AND PAID FOR BY THE TON, NOT CUBIC YARD

EARTHWORK TABULATION NOTES:

- EXCAVATED CLAYSTONE SHALL NOT BE PLACED AS EMBANKMENT WITHIN THE TOP 12 INCHES OF THE SUBGRADE WITHIN EMBANKMENT SUPPORTING THE ROADWAY SHOULDERS AND PAVEMENT.
- EXCESS EMBANKMENT SHALL BE DISTRIBUTED ON SITE AS FIELD DIRECTED OR BECOME PROPERTY OF THE CONTRACTOR.

NOTE:

LARAMER COUNTY ROAD 72 - SUMMARY OF EARTHWORK		Cubic Yards
Pay Items		
Unclassified Excavation (Complete in Place)		22,981
Structure Excavation		190
Unsuitable Material (Complete in Place)		1400*
Rock Excavation		11,040
Topsoil (Remove, Stockpile, & Redistribute)		6,449
Topsoil		6,656
FOR INFORMATION ONLY		
Unclassified Excavation (from cross-sections)		44,021
Embankment (from cross sections)		27,928
Embankment (Owl Canyon Trail)		1,400
Earthwork Balance		
Unclassified Excavation less 15%		37,418
Structure Excavation less 15%		162
Excess Material		8,251
Top Soil		
Stripped Topsoil (4 Inches)		6,449
Replace 4 inches deep on shoulder areas		6,656
Excess Top Soil		

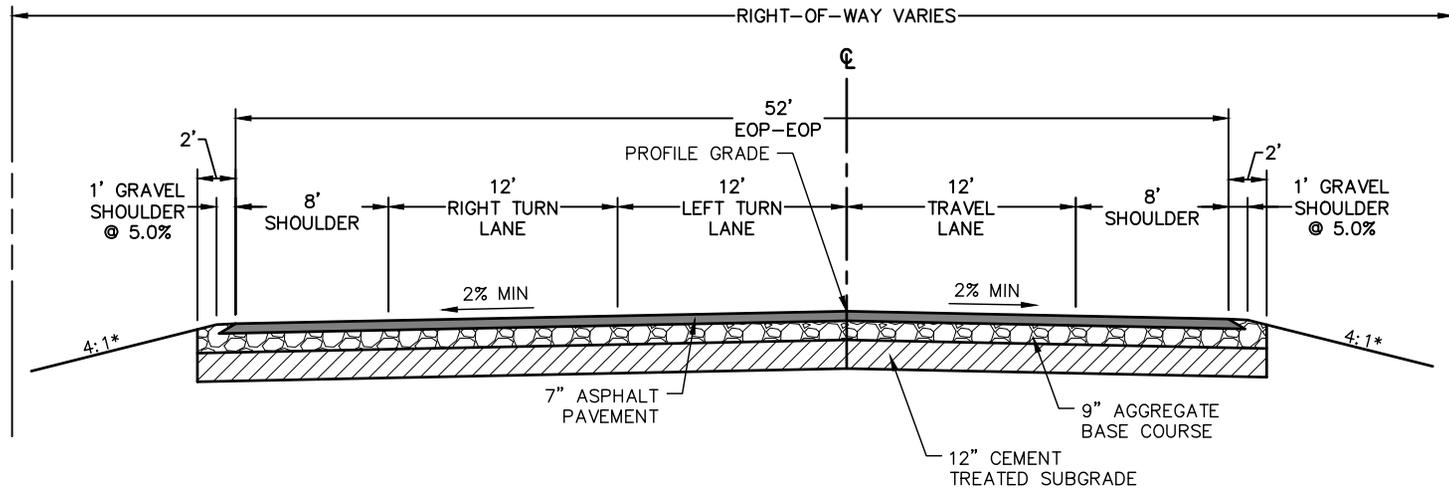
MILE 3

LARAMER COUNTY ROAD 72 - SUMMARY OF EARTHWORK		Cubic Yards
Pay Items		
Unclassified Excavation (Complete in Place)		22,981
Structure Excavation		190
Unsuitable Material (Complete in Place)		1400*
Rock Excavation		11,040
Topsoil (Remove, Stockpile, & Redistribute)		6,449
Topsoil		6,656
FOR INFORMATION ONLY		
Unclassified Excavation (from cross-sections)		44,021
Embankment (from cross sections)		27,928
Embankment (from cross sections)		1,400
Earthwork Balance		
Unclassified Excavation less 15%		37,418
Structure Excavation less 15%		162
Additional Fill Required		8,251
Top Soil		
Stripped Topsoil (4 Inches)		6,449
Replace 4 inches deep on shoulder areas		6,656
Excess Top Soil		

PLAN NUMBER	M STANDARD TITLE	PAGE NUMBER	M STANDARD TITLE	PLAN NUMBER	PAGE NUMBER
<input type="checkbox"/> M-100-1	STANDARD SYMBOLS (3 SHEETS)	1-3	MIDWEST GUARDRAIL SYSTEM TYPE 3 W-BEAM 31 INCHES (19 SHEETS) (<i>REVISED ON MARCH 5, 2020</i>)	■ M-606-1	79-97
<input type="checkbox"/> M-100-2	ACRONYMS AND ABBREVIATIONS (4 SHEETS)	4-7	GUARDRAIL TYPE 7 F-SHAPE BARRIER (4 SHEETS)	<input type="checkbox"/> M-606-13	98-101
<input type="checkbox"/> M-203-1	APPROACH ROADS	8	PRECAST TYPE 7 CONCRETE BARRIER (4 SHEETS) (<i>REVISED ON AUGUST 21, 2020</i>)	■ M-606-14	102-104
<input type="checkbox"/> M-203-2	DITCH TYPES	9	GUARDRAIL TYPE 9 SINGLE SLOPE BARRIER (11 SHEETS) (<i>REVISED ON MARCH 5, 2020</i>)	<input type="checkbox"/> M-606-15	105-115
<input type="checkbox"/> M-203-11	SUPERELEVATION CROWNED AND DIVIDED HIGHWAYS (3 SHEETS)	10-12	WIRE FENCES AND GATES (3 SHEETS)	■ M-607-1	116-118
<input type="checkbox"/> M-203-12	SUPERELEVATION STREETS (2 SHEETS)	13-14	CHAIN LINK FENCE (3 SHEETS)	<input type="checkbox"/> M-607-2	119-121
■ M-206-1	EXCAVATION AND BACKFILL FOR STRUCTURES (2 SHEETS)	15-16	BARRIER FENCE	<input type="checkbox"/> M-607-3	122
<input type="checkbox"/> M-206-2	EXCAVATION AND BACKFILL FOR BRIDGES (2 SHEETS)	17-18	DEER FENCE, GATES, AND GAME RAMPS (7 SHEETS) (<i>REVISED ON JULY 13, 2020</i>)	<input type="checkbox"/> M-607-4	123-127
■ M-208-1	TEMPORARY EROSION CONTROL (11 SHEETS)	19-29	PICKET SNOW FENCE	<input type="checkbox"/> M-607-10	128
■ M-210-1	MAILBOX SUPPORTS (2 SHEETS)	30-31	ROAD CLOSURE GATE (9 SHEETS)	<input type="checkbox"/> M-607-15	129-137
<input type="checkbox"/> M-214-1	NURSERY STOCK DETAILS	32	CURB RAMPS (10 SHEETS)	<input type="checkbox"/> M-608-1	138-147
■ M-216-1	SOIL RETENTION COVERING (2 SHEETS)	33-34	CURBS, GUTTERS, AND SIDEWALKS (4 SHEETS)	<input type="checkbox"/> M-609-1	148-151
<input type="checkbox"/> M-412-1	CONCRETE PAVEMENT JOINTS (5 SHEETS)	35-39	CATTLE GUARD (2 SHEETS)	■ M-611-1	152-153
<input type="checkbox"/> M-412-2	CONCRETE PAVEMENT CRACK REPAIR (4 SHEETS) (<i>NEW, ISSUED ON OCTOBER 7, 2019</i>)	35-39	DEER GUARD (2 SHEETS)	<input type="checkbox"/> M-611-2	154-155
<input type="checkbox"/> M-510-1	STRUCTURAL PLATE PIPE H-20 LOADING	40	RUMBLE STRIPS (3 SHEETS)	<input type="checkbox"/> M-614-1	156-158
<input type="checkbox"/> M-601-1	SINGLE CONCRETE BOX CULVERT (CAST-IN-PLACE) (2 SHEETS)	41-42	SAND BARREL ARRAYS (2 SHEETS)	<input type="checkbox"/> M-614-2	159-160
■ M-601-2	DOUBLE CONCRETE BOX CULVERT (CAST-IN-PLACE) (2 SHEETS)	43-44	EMBANKMENT PROTECTOR TYPE 3	<input type="checkbox"/> M-615-1	161
<input type="checkbox"/> M-601-3	TRIPLE CONCRETE BOX CULVERT (CAST-IN-PLACE) (2 SHEETS)	45-46	EMBANKMENT PROTECTOR TYPE 5	<input type="checkbox"/> M-615-2	162
<input type="checkbox"/> M-601-10	HEADWALL FOR PIPES	47	INVERTED SIPHON	<input type="checkbox"/> M-616-1	163
<input type="checkbox"/> M-601-11	TYPE "S" SADDLE HEADWALLS FOR PIPE	48	FIELD LABORATORY CLASS 1	<input type="checkbox"/> M-620-1	164
<input type="checkbox"/> M-601-12	HEADWALLS AND PIPE OUTLET PAVING	49	FIELD LABORATORY CLASS 2 (2 SHEETS)	<input type="checkbox"/> M-620-2	165-166
■ M-601-20	WINGWALLS FOR PIPE OR BOX CULVERTS (2 SHEETS)	50-51	FIELD OFFICE CLASS 1	<input type="checkbox"/> M-620-11	167
<input type="checkbox"/> M-603-1	METAL PIPE (4 SHEETS)	52-55	FIELD OFFICE CLASS 2	<input type="checkbox"/> M-620-12	168
■ M-603-2	REINFORCED CONCRETE PIPE	56	SURVEY MONUMENTS (2 SHEETS)	■ M-629-1	169-170
■ M-603-3	PRECAST CONCRETE BOX CULVERT (<i>REVISED ON SEPTEMBER 10, 2020</i>)	57			
<input type="checkbox"/> M-603-4	CORRUGATED POLYETHYLENE PIPE (AASHTO M294) AND POLYPROPYLENE PIPE (AASHTO M330)	58			
<input type="checkbox"/> M-603-5	POLYVINYL CHLORIDE (PVC) PIPE (AASHTO M304)	59			
<input type="checkbox"/> M-603-6	STEEL REINFORCED POLYETHYLENE RIBBED PIPE (AASHTO MP 20)	60			
■ M-603-10	CONCRETE AND METAL END SECTIONS	61			
<input type="checkbox"/> M-603-12	TRAVERSABLE END SECTIONS AND SAFETY GRATES (3 SHEETS)	62-64			
<input type="checkbox"/> M-604-10	INLET, TYPE C	65			
<input type="checkbox"/> M-604-11	INLET, TYPE D	66			
<input type="checkbox"/> M-604-12	CURB INLET TYPE R (2 SHEETS)	67-68			
<input type="checkbox"/> M-604-13	CONCRETE INLET TYPE 13	69			
<input type="checkbox"/> M-604-20	MANHOLES (3 SHEETS)	70-72			
<input type="checkbox"/> M-604-25	VANE GRATE INLET (5 SHEETS)	73-77			

COLORADO
 DEPARTMENT OF TRANSPORTATION
 M&S STANDARDS PLANS LIST
 July 31, 2019
 Revised on December 3, 2020

ALL OF THE M&S STANDARD PLANS, AS SUPPLEMENTED
 AND REVISED, APPLY TO THIS PROJECT WHEN USED
 BY DESIGNATED PAY ITEM OR SUBSIDIARY ITEM.



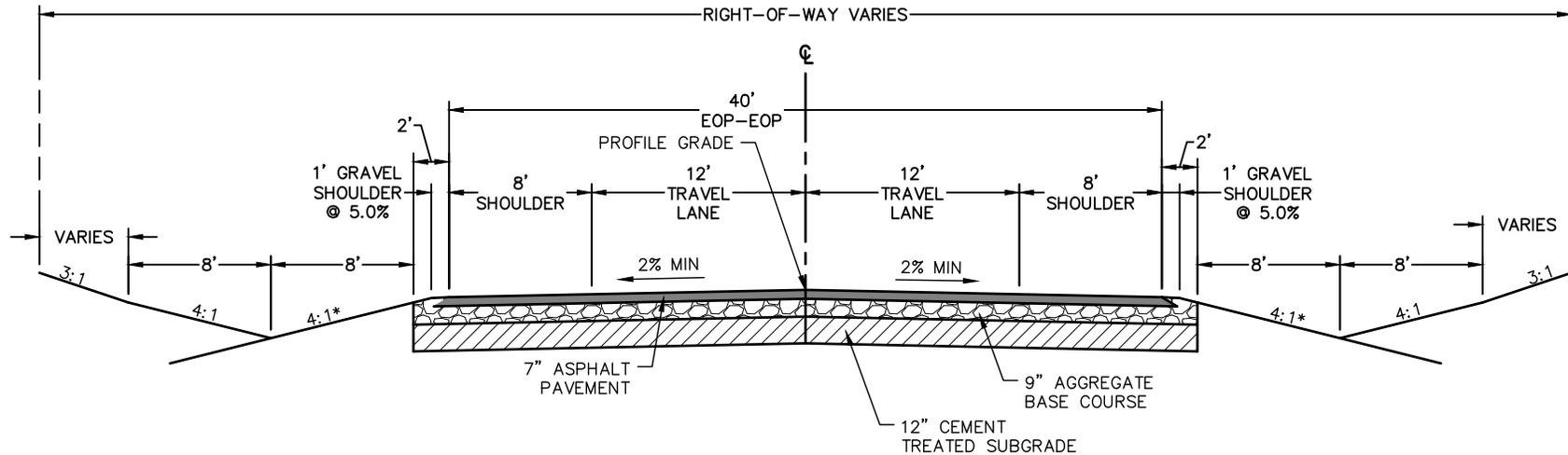
LARIMER COUNTY ROAD 72

STA: 100+00 TO 102+55

TYPICAL SECTION

N.T.S.

*OR AS SHOWN ON CROSS SECTIONS



LARIMER COUNTY ROAD 72

STA: 102+55 TO 194+43,

198+68 TO 208+28 & 214+00 TO 258+41

TYPICAL SECTION

N.T.S.

*OR AS SHOWN ON CROSS SECTIONS

PAVEMENT SECTION:

FULL DEPTH ASPHALT SECTION

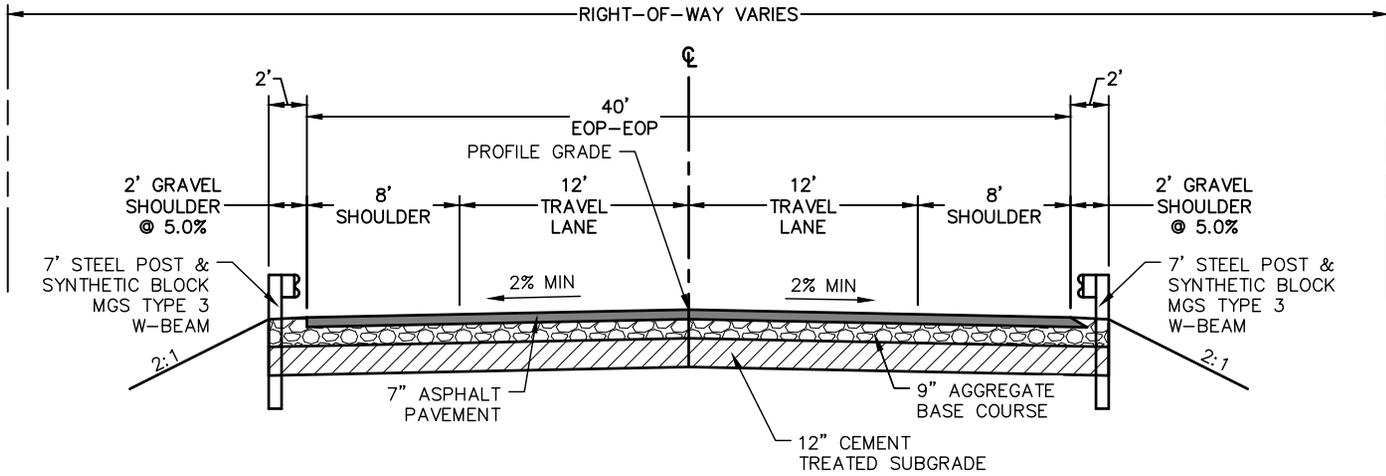
2" HOT MIX ASPHALT (GRADING SX)(ASPH)

2" HOT MIX ASPHALT (GRADING S)(ASPH)

3" HOT MIX ASPHALT (GRADING S)(ASPH)

9" AGGREGATE BASE COURSE (CLASS 5)

12" CEMENT TREATED SUBGRADE



**LARIMER COUNTY ROAD 72 STA: 194+43 TO 198+68
& STA: 208+28 TO 214+00 TYPICAL SECTION**

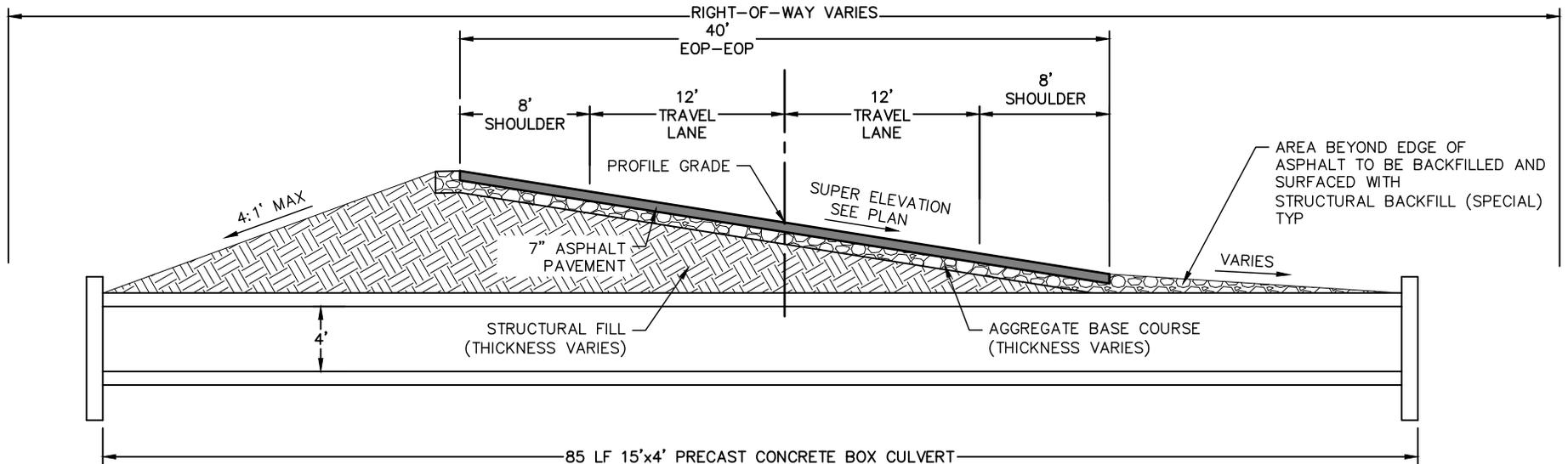
N.T.S.

*SEE PLAN VIEW FOR EXACT STATION LIMITS OF GUARDRAIL

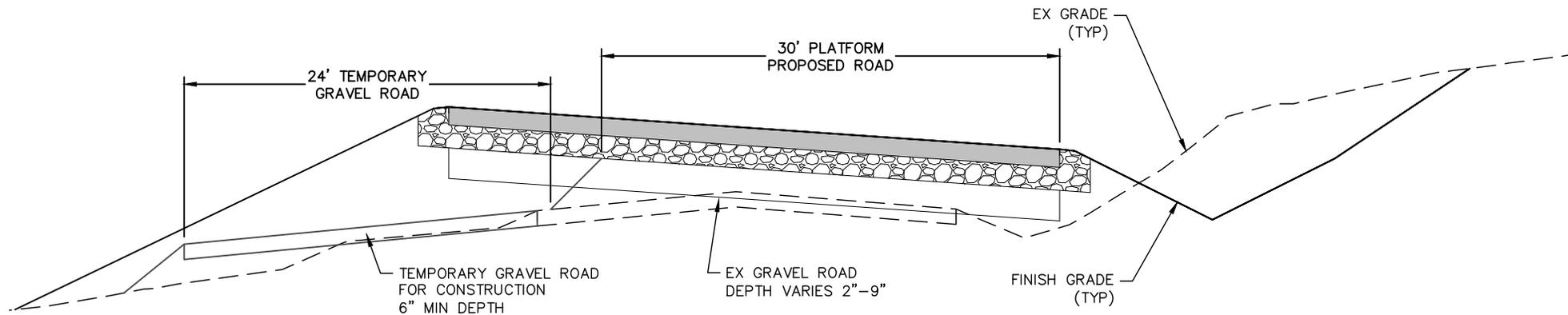
ROCK OVER EXCAVATION NOTE:

1. STA 207+00 TO 213+00 REQUIRES OVER EXCAVATION BELOW ROADWAY SUBGRADE. MAINTAIN A MINIMUM OF 3 FEET SEPARATION FROM BOTTOM OF STANDARD 9 INCH AGGREGATE BASE COURSE TO TOP OF EXISTING CLAYSTONE OR SANDSTONE LAYER. BRIDGE GAP WITH ADDITIONAL AGGREGATE BASE MATERIAL OR AS APPROVED BY THE PROJECT ENGINEER. FINAL LIMITS OF OVER EXCAVATION TO BE FIELD VERIFIED.

LARIM



**LARIMER COUNTY ROAD 72
STA: 120+21 TO 120+35**

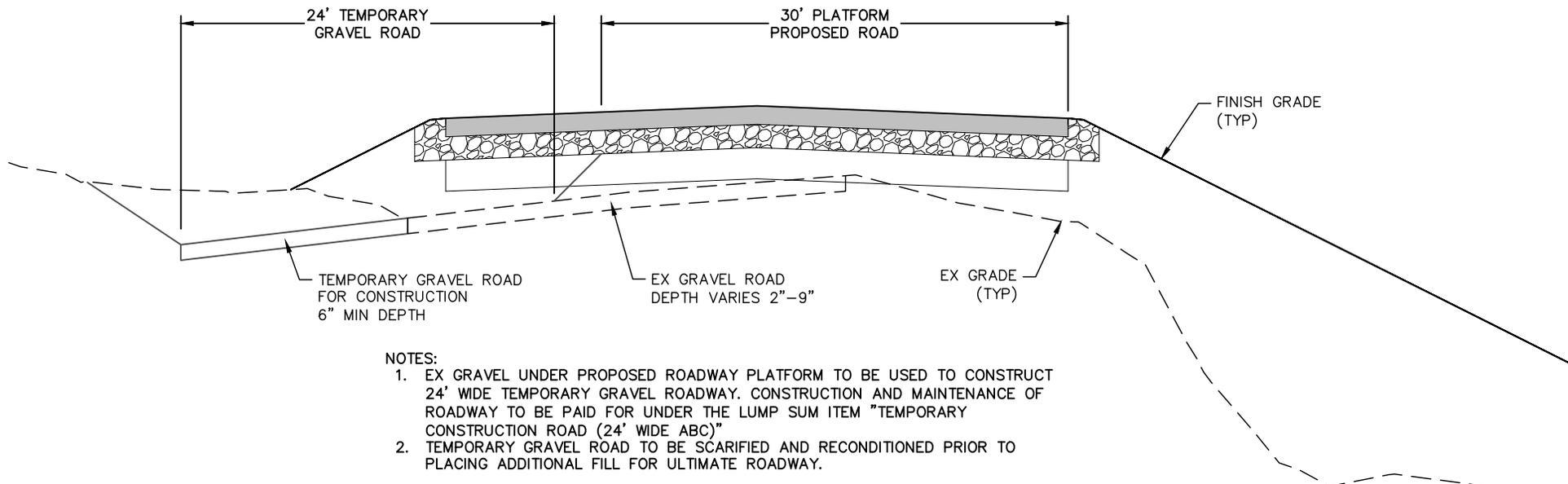


NOTES:

1. EX GRAVEL UNDER PROPOSED ROADWAY PLATFORM TO BE USED TO CONSTRUCT 24' WIDE TEMPORARY GRAVEL ROADWAY. CONSTRUCTION AND MAINTENANCE OF ROADWAY TO BE PAID FOR UNDER THE LUMP SUM ITEM "TEMPORARY CONSTRUCTION ROAD (24' WIDE ABC)"
2. TEMPORARY GRAVEL ROAD TO BE SCARIFIED AND RECONDITIONED PRIOR TO PLACING ADDITIONAL FILL FOR ULTIMATE ROADWAY.

24' TEMPORARY GRAVEL ROAD TYPICAL SECTION - FILL CONDITION

1"=10'



NOTES:

1. EX GRAVEL UNDER PROPOSED ROADWAY PLATFORM TO BE USED TO CONSTRUCT 24' WIDE TEMPORARY GRAVEL ROADWAY. CONSTRUCTION AND MAINTENANCE OF ROADWAY TO BE PAID FOR UNDER THE LUMP SUM ITEM "TEMPORARY CONSTRUCTION ROAD (24' WIDE ABC)"
2. TEMPORARY GRAVEL ROAD TO BE SCARIFIED AND RECONDITIONED PRIOR TO PLACING ADDITIONAL FILL FOR ULTIMATE ROADWAY.

TO ESTABLISH GEOMETRIC CONTROL FOR THE CONSTRUCTION OF THIS PROJECT, THE DEPARTMENT HAS PROVIDED THE FOLLOWING INFORMATION:

- 3D Design Modeling Electronic Files _____
- Horizontal Control _____
- Vertical Control _____
- Roadway Alignment _____
- Original Terrain Data _____
- Other: _____

* Specify the information format, ie., plan sheet, computer printout, or other. The information marked is either contained on the plans or is available from the Engineer.

TYPE OF PROJECT

- Landscaping
- Signalization
- Safety Improvement
- Asphalt Overlay
- Concrete Overlay
- Minor Widening
- Major Reconstruction
- New Roadway Construction
- Bridge Replacement
- Bridge Widening
- New Bridge
- Other: _____

SURVEY WORK TO BE PERFORMED BY OTHERS: _____

WORK PERFORMED BY THE CONTRACTOR'S SURVEYOR UNDER SECTION 625:

- A complete passing Base Line report (completed within 6 months prior to the start of the project)
- An instrument calibration Certification (completed within 6 months prior to the start of the project)
- Establish and Maintain Project Centerline or Engineer Approved Offset Line(s)
- Verification and Maintenance of Horizontal and Vertical Control
- Verify or Determine existing grades and alignments
- Verify or Determine existing topography
- Clearing and Grubbing Limits (Section 201)
- Removal Limits (Section 202)
- Reset Items (Section 210)
- Excavation and Embankment (Section 203)

Excavation	Slope Staking (Y/N)	Grid (Y/N)	Grade (Y/N)	Special Interval
<input checked="" type="checkbox"/>	-	-	✓	*
<input type="checkbox"/>	-	-	-	-
<input checked="" type="checkbox"/>	✓	-	✓	-
<input type="checkbox"/>	-	-	-	-

Embankment	Slope Staking (Y/N)	Grid (Y/N)	Grade (Y/N)	Special Interval
<input checked="" type="checkbox"/>	-	-	-	*
<input type="checkbox"/>	-	-	-	-
<input type="checkbox"/>	-	-	-	-

- Pavements
 - HMA - Hot Mix Asphalt (Section 403)
 - Concrete (Section 412)
 - Heating & Sealing Treatment
 - Prime Coat, Tack Coat & Rejuvenating Agent (Section 407)
 - Seal Coat or Chip Seal (Section 409)
 - Other: _____

- Roadway Elements
 - Curb and Gutter (Section 609)
 - Drop inlets - alignment and grades (Section 604)
 - Retaining Walls
 - Guard Rail (Section 606)
 - Sidewalk (Section 608)
 - Overlay Stationing
 - Other: _____
- Riprap (Perm) (Section 506)
- Slope and Ditch Paving (Section 507)

- Minor Structures
 - Structure Excavation Limits (Section 206)
 - Culverts (Section 603)
 - Culverts w/ Headwalls and Wingwalls (Section 601)
 - Concrete Box Culverts w/ Headwalls and Wingwalls
 - Pipes (Section 603)
 - Sanitary Sewer
 - Storm Sewer
 - Water
 - Irrigation
 - Miscellaneous
 - Manholes (Section 604)
 - Inlets (Section 604)
 - Permanent Water Quality BMP (Section 208)
 - Other: _____

- Major Structures - Overhead Signs (Section 614), Concrete Box Culverts, B and all other structures assigned a structure number
 - Structure Excavation Limits (Section 206)
 - Concrete Box Culverts (Section 603) w/ Headwalls and Wingwalls (Section 502)
 - Piling locations and cut off elevations (Section 502)
 - Calsson locations and elevations (Section 503)
 - Footing locations, alignment, and elevations
 - Abutment/Pier locations, alignment, and elevations
 - Wingwall skew angles/offsets
 - Structural concrete form locations
 - Substructure AS-constructed survey required for Bridges (Subsection 601.i2) and Overhead signs
 - Bridge expansion joint(s) alignment and grade (longitudinal and transverse)
 - Deck grades at Girder 10th or "n" th point locations and elevation
 - Slope and Ditch Paving (Section 507)
 - Other: _____

- Fencing (Section 607)
 - Temporary
 - Permanent
 - Sound Barrier
 - Other: _____
- Delineators (Section 612)
 - Temporary
 - Permanent
- Lighting (Section 613) and Traffic Control Devices (Permanent) (Section 614)
 - Signal pole locations and elevations
 - Light pole locations and elevations
 - Sign locations

Grid (Y/N)	Special Interval
-	-
-	-
-	-
-	-
-	-

Tangent Interval	Curve Interval
-	-

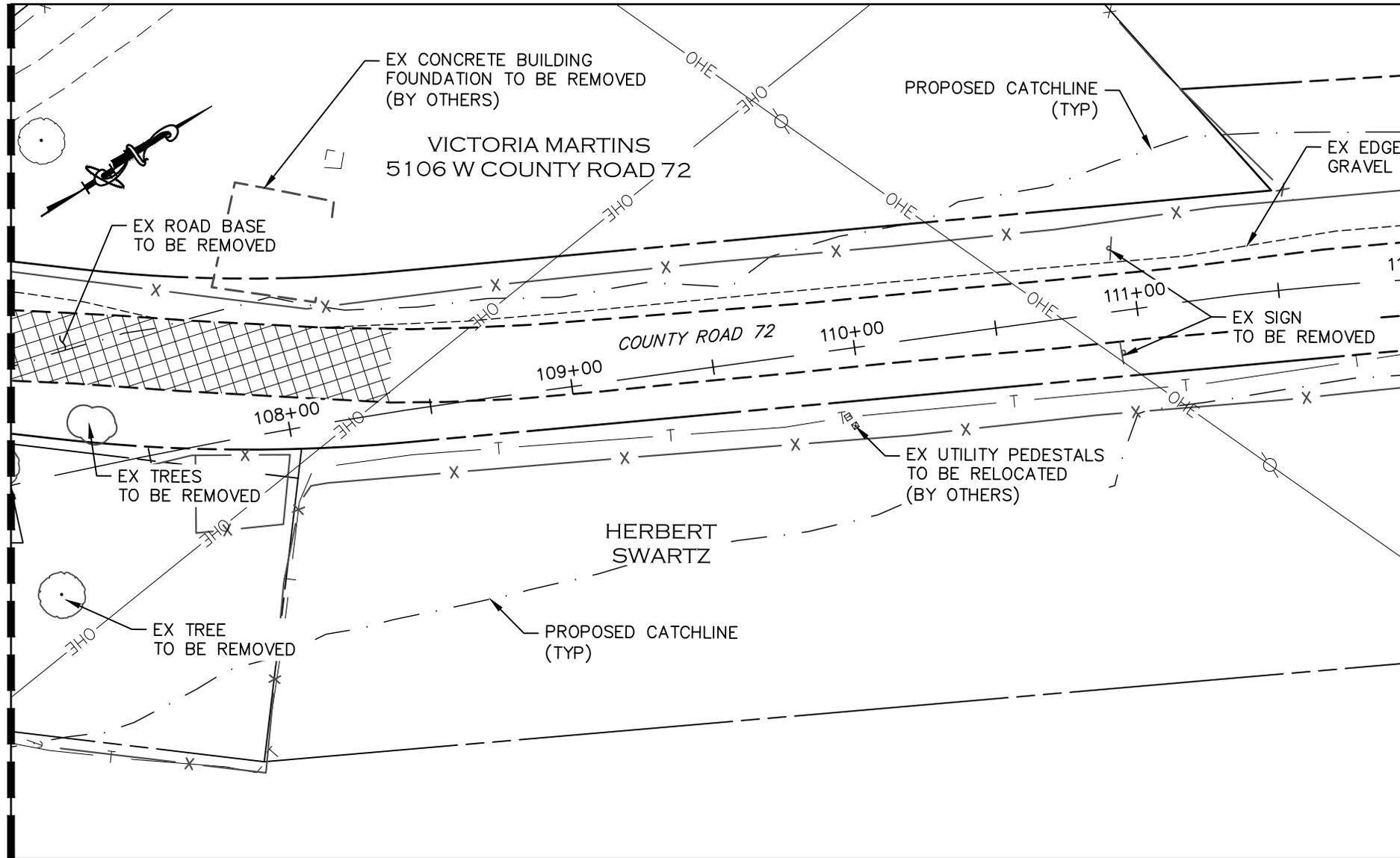
Left Interval	Center Interval
-	-

Grid (Y/N)	Grade (Y/N)	Special Interval	Special Offset
5			
9			

LINE TABLE			
LINE	LENGTH	DIRECTION	START (N,E)
L1	753.45	N18° 35' 40.28"E	N 520216.23, E 89718.69
L2	247.48	N24° 51' 05.61"E	N 521133.16, E 90039.74
L3	338.25	S86° 40' 17.70"E	N 521912.64, E 91070.59
L4	510.16	N17° 15' 42.48"E	N 522787.51, E 92699.87
L5	2153.16	N26° 26' 25.12"E	N 523542.05, E 92958.46
L6	989.98	N68° 41' 56.41"E	N 525936.94, E 94428.03
L7	536.40	N41° 41' 57.50"E	N 526642.97, E 95848.77
L8	734.67	S51° 53' 14.36"E	N 527168.70, E 97610.37
L9	1121.77	S52° 32' 19.85"E	N 526715.25, E 98188.41
L10	249.39	S29° 50' 11.54"E	N 525748.57, E 99327.69
L11	861.67	S77° 23' 44.54"E	N 525073.00, E 100075.03

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	CHORD DIRECTION	CHORD LENGTH	STAR
C1	218.41	2000.00	6.26°	S21° 43' 23"W	218.30	N 521133.16
C2	1147.34	960.00	68.48°	S59° 05' 24"W	1080.26	N 521912.64
C3	1692.71	1275.00	76.07°	N55° 17' 42"E	1571.10	N 521893.00
C4	288.35	1800.00	9.18°	S21° 51' 04"W	288.04	N 523542.05
C5	708.05	960.00	42.26°	S47° 34' 11"W	692.11	N 525936.94
C6	612.60	1300.00	27.00°	N55° 11' 57"E	606.95	N 526296.57
C7	1553.44	1030.00	86.41°	S84° 54' 22"W	1410.34	N 527168.70
C8	380.38	960.00	22.70°	N41° 11' 16"W	377.90	N 525748.57
C9	796.86	960.00	47.56°	S53° 36' 58"E	774.18	N 525532.22

MATCHLINE STA 107+00
SEE SHEET 12



EX CONCRETE BUILDING
FOUNDATION TO BE REMOVED
(BY OTHERS)

VICTORIA MARTINS
5106 W COUNTY ROAD 72

PROPOSED CATCHLINE
(TYP)

EX EDGE
GRAVEL

EX ROAD BASE
TO BE REMOVED

111+00

COUNTY ROAD 72

110+00

EX SIGN
TO BE REMOVED

109+00

108+00

EX TREES
TO BE REMOVED

EX UTILITY PEDESTALS
TO BE RELOCATED
(BY OTHERS)

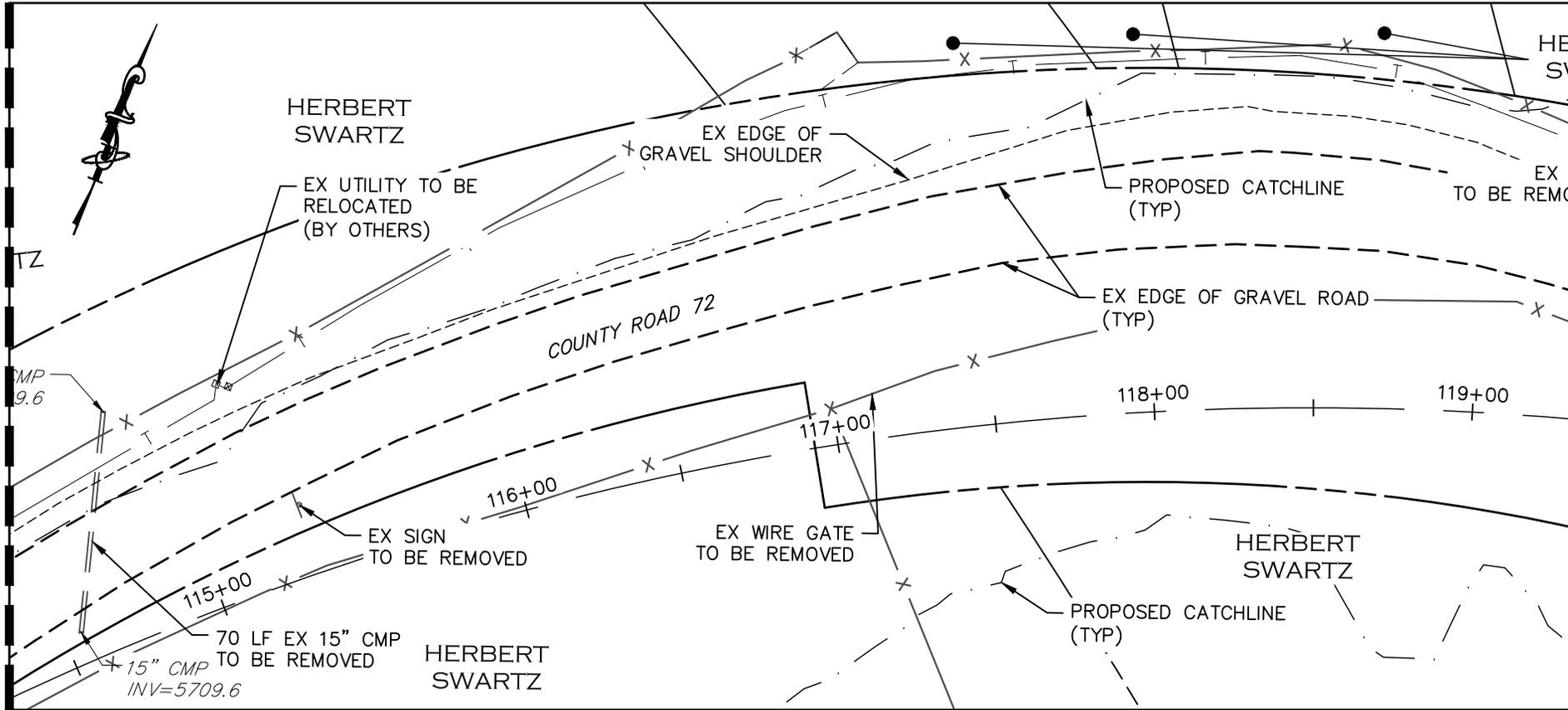
HERBERT
SWARTZ

PROPOSED CATCHLINE
(TYP)

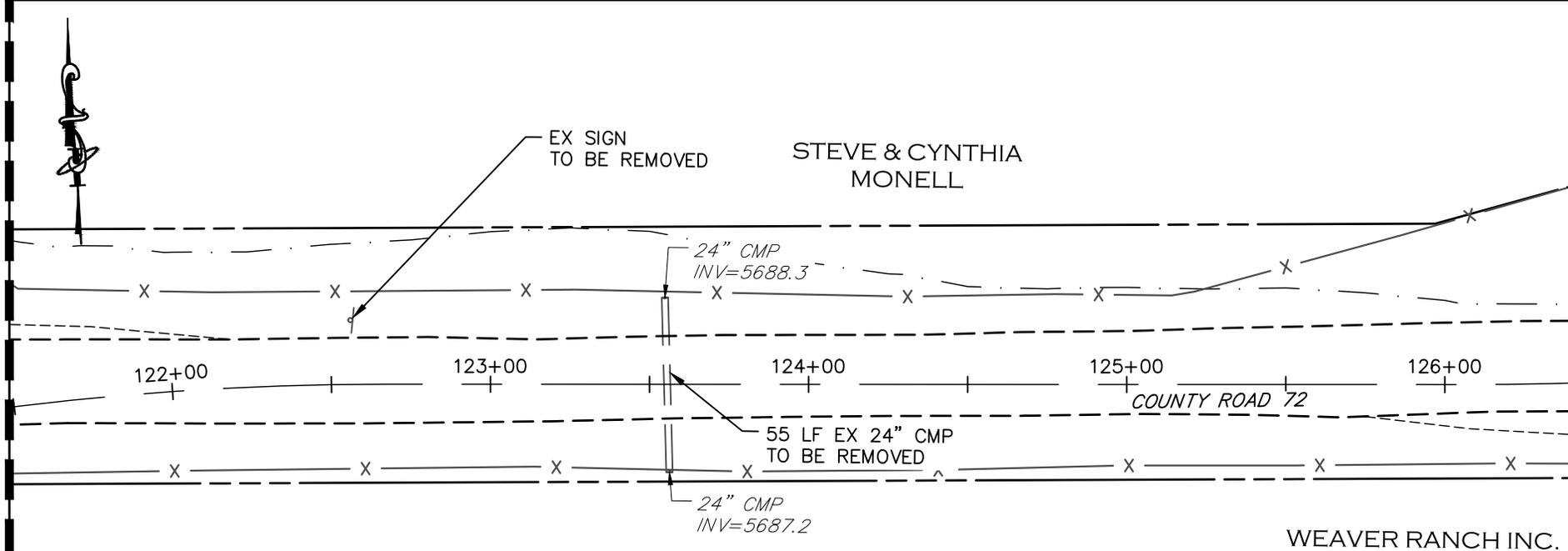
EX TREE
TO BE REMOVED

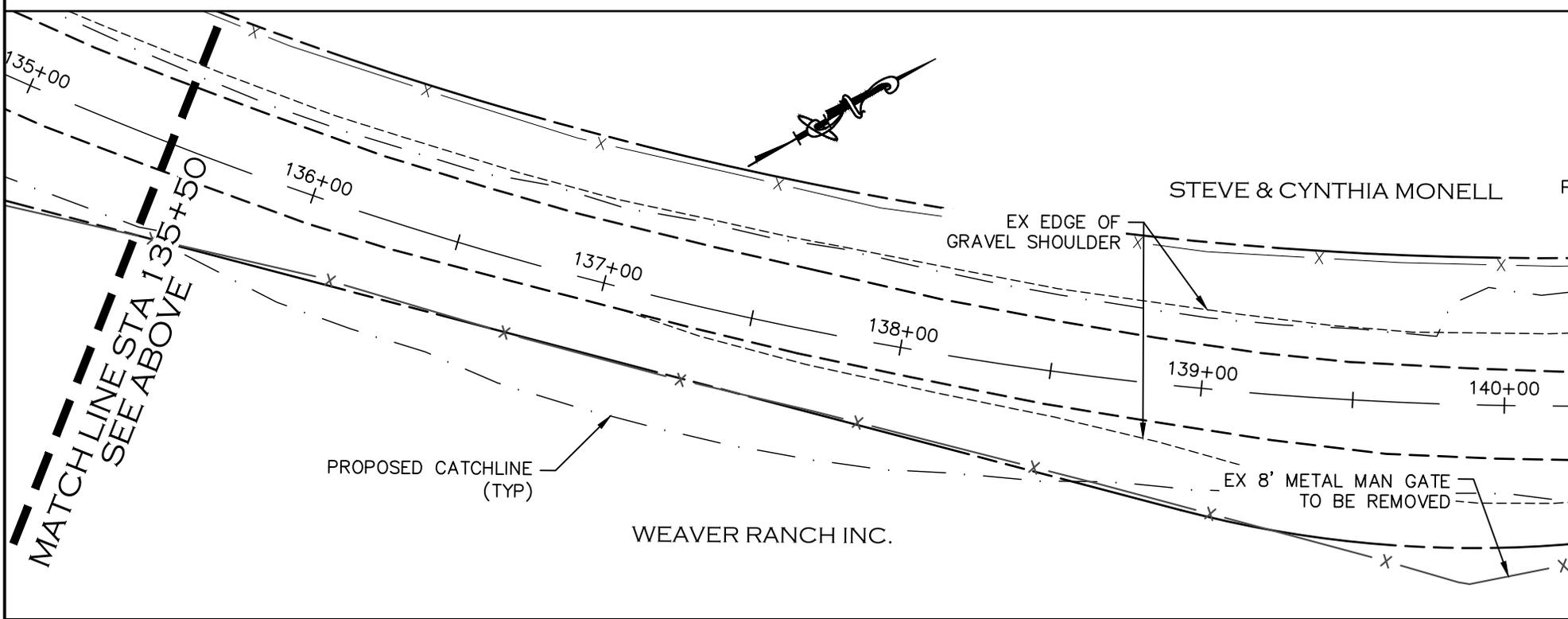
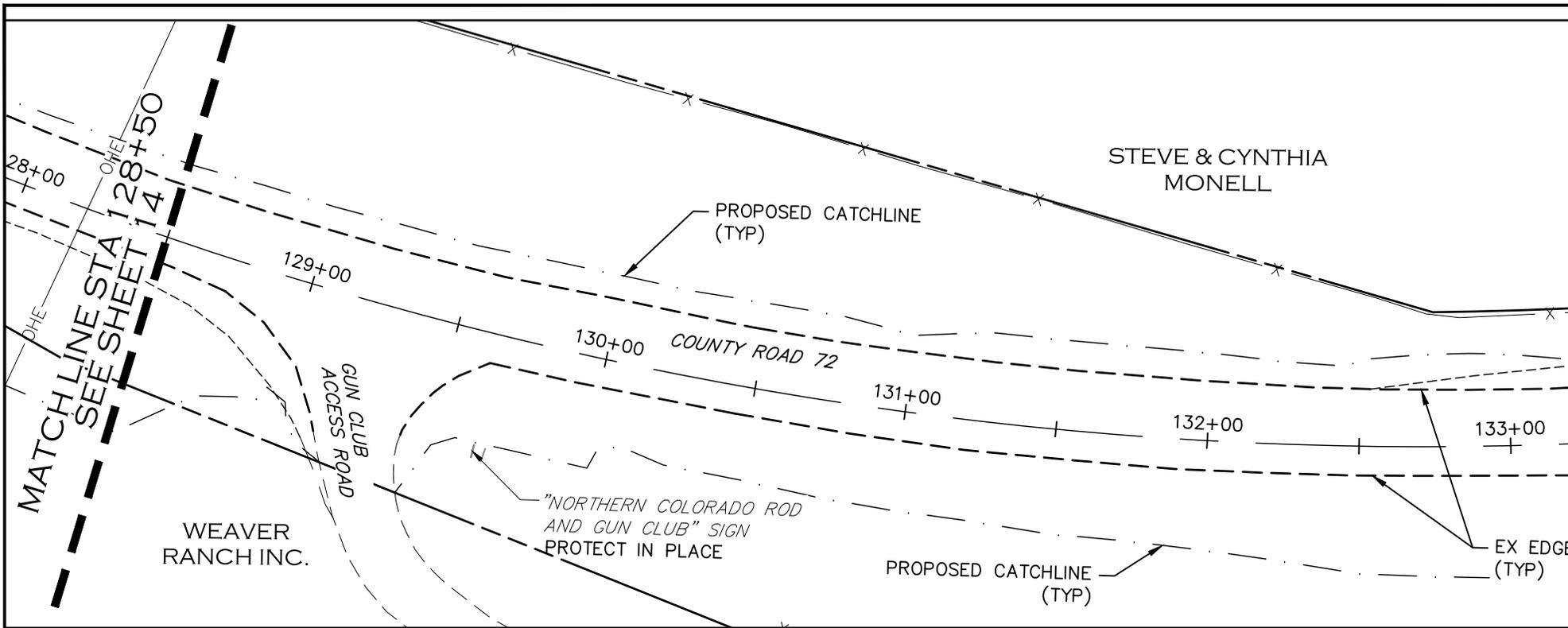
REMOVAL NOTES

MATCHLINE STA 114+50
SEE SHEET 12

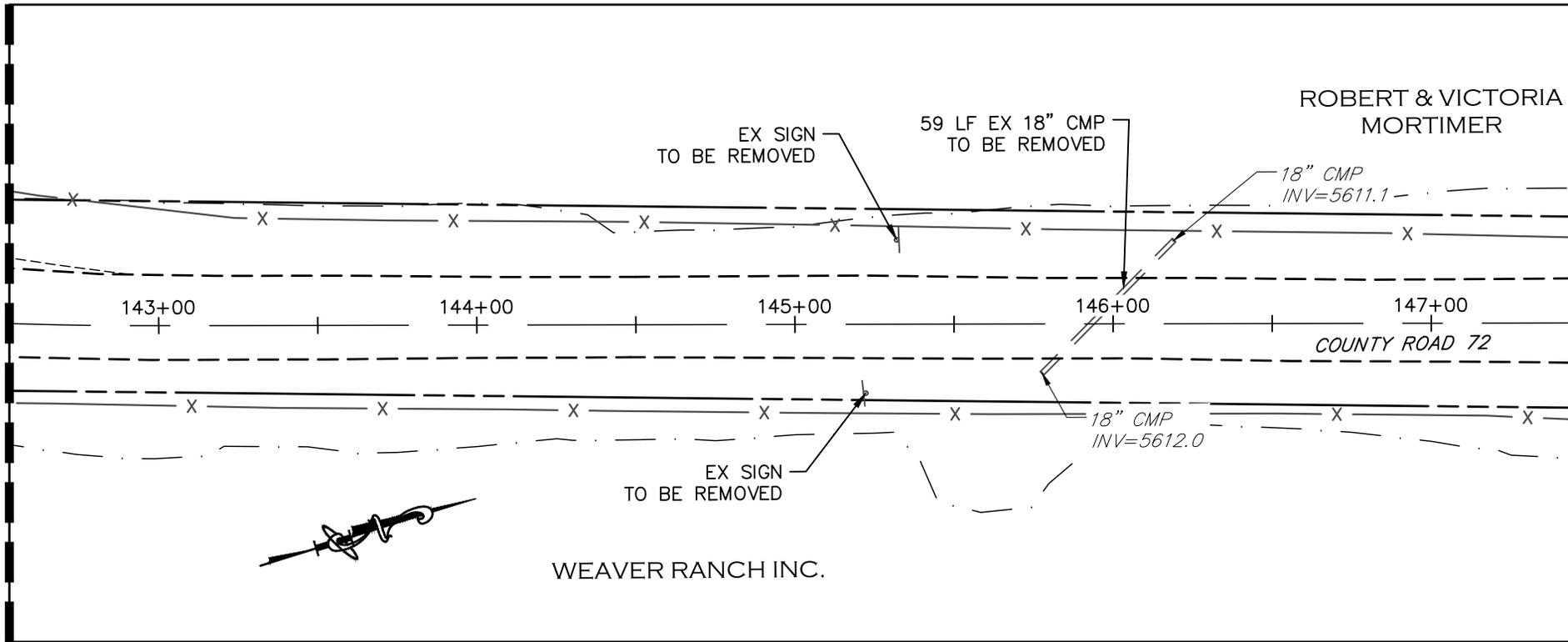


MATCHLINE STA 121+50
SEE ABOVE

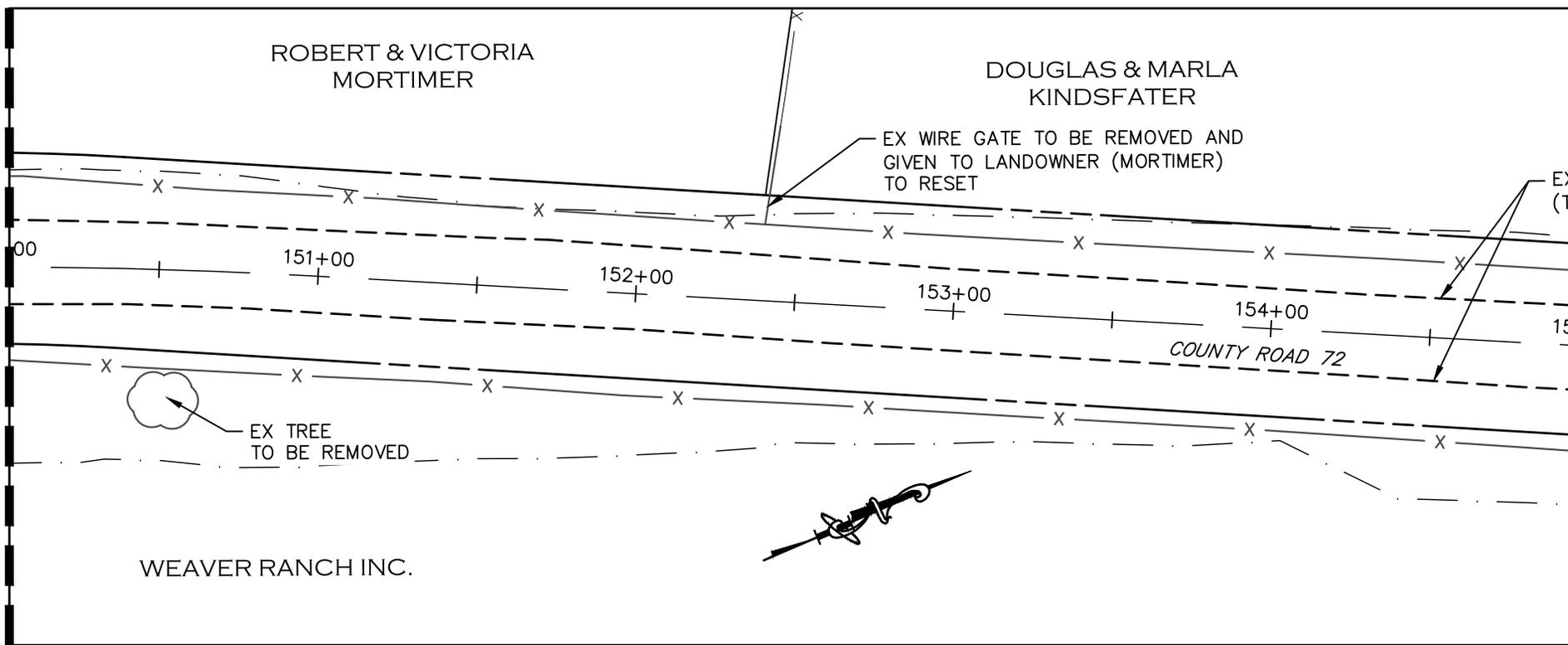




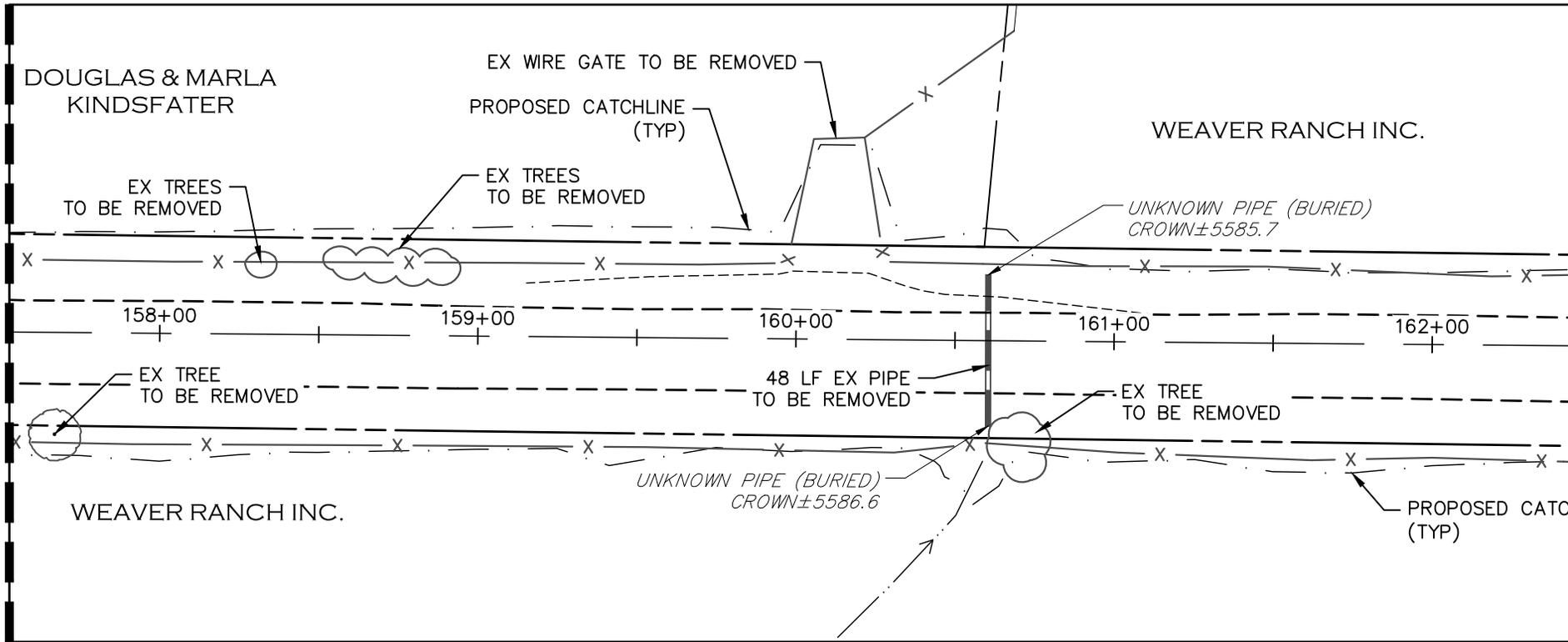
MATCHLINE STA 142+50
SEE SHEET 15



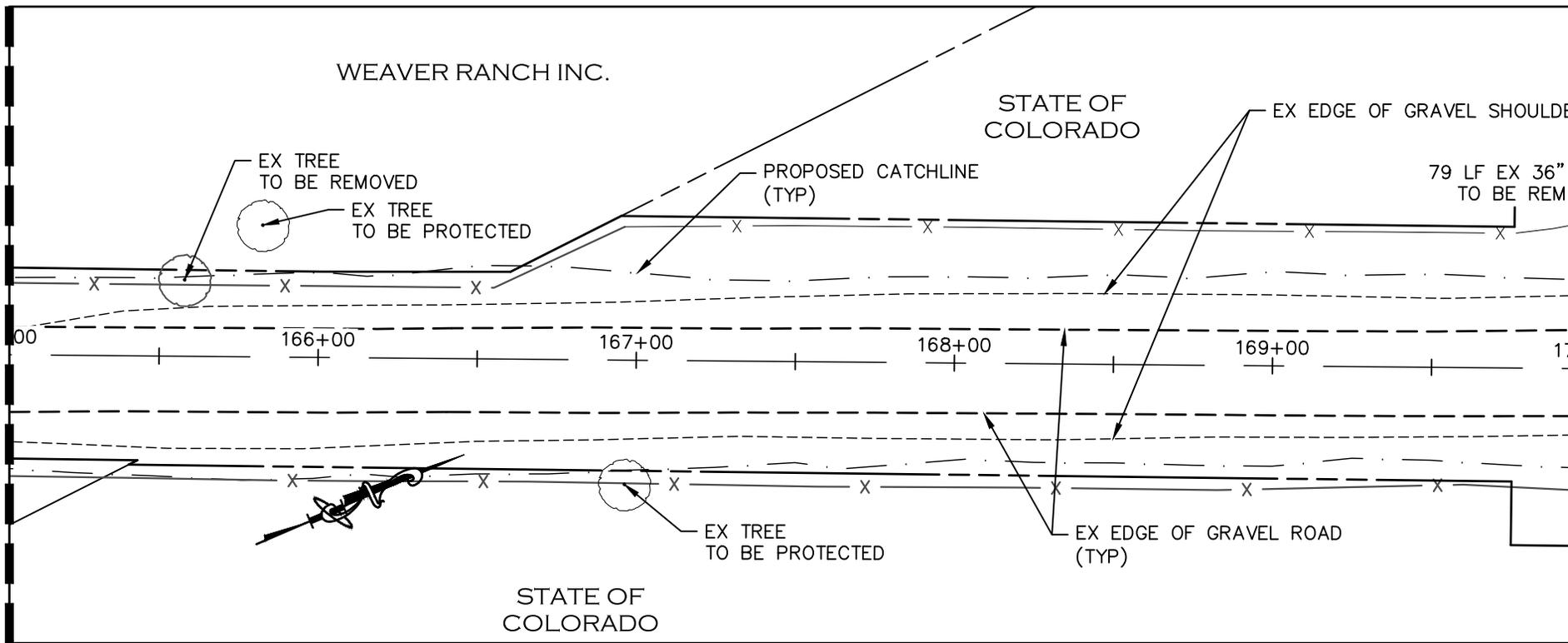
MATCHLINE STA 150+00
SEE ABOVE

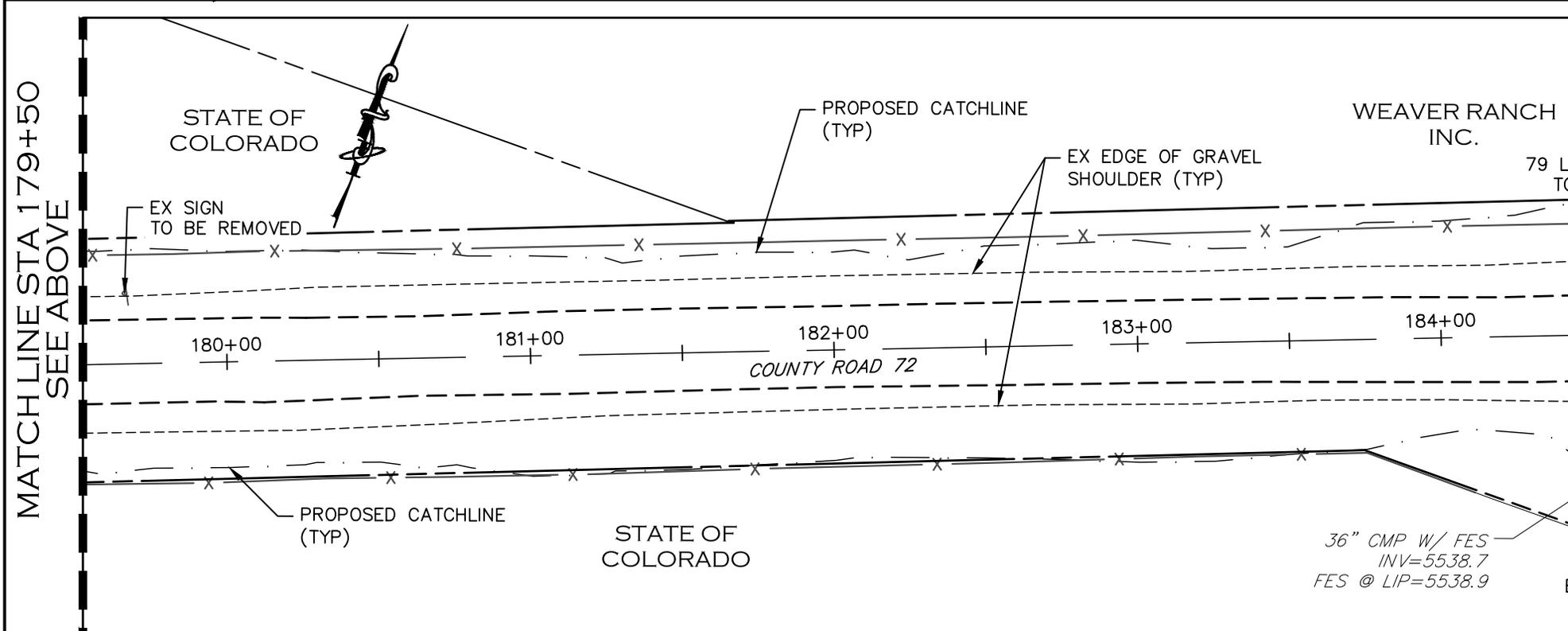
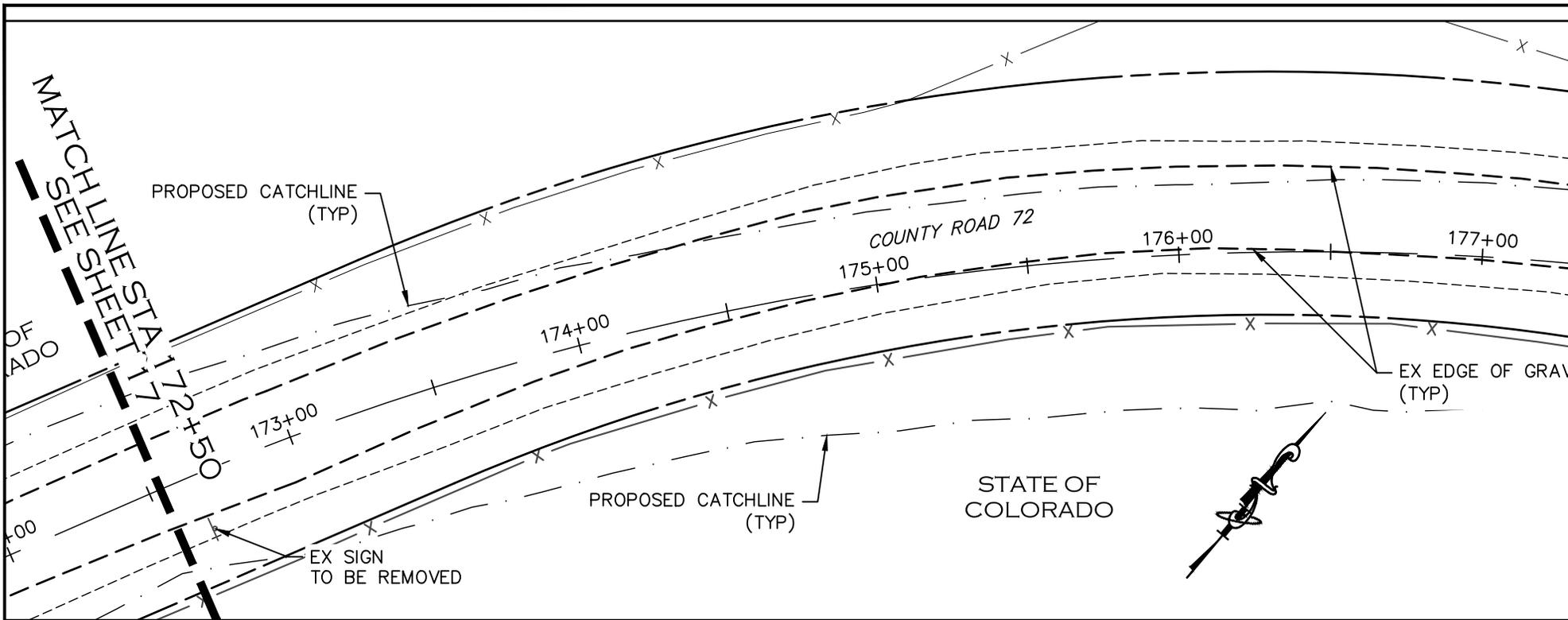


MATCHLINE STA 157+50
SEE SHEET 16

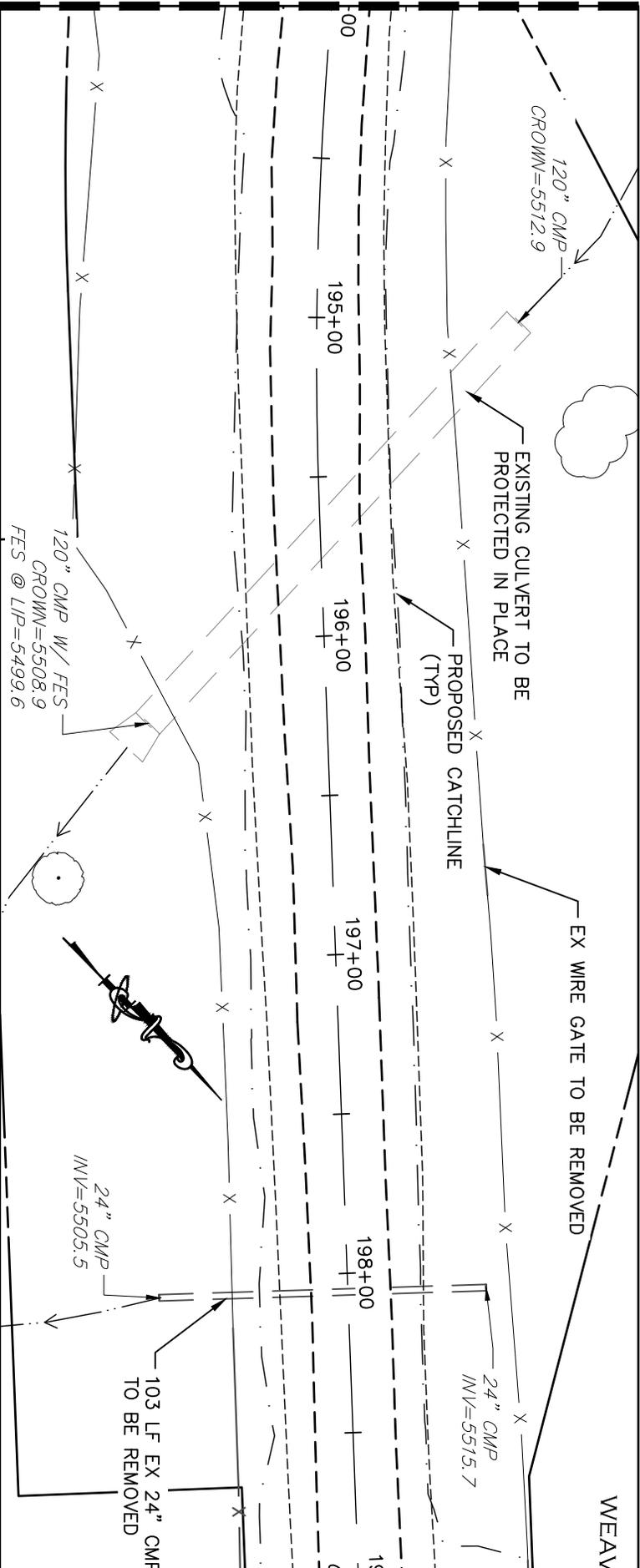


MATCHLINE STA 165+00
SEE ABOVE

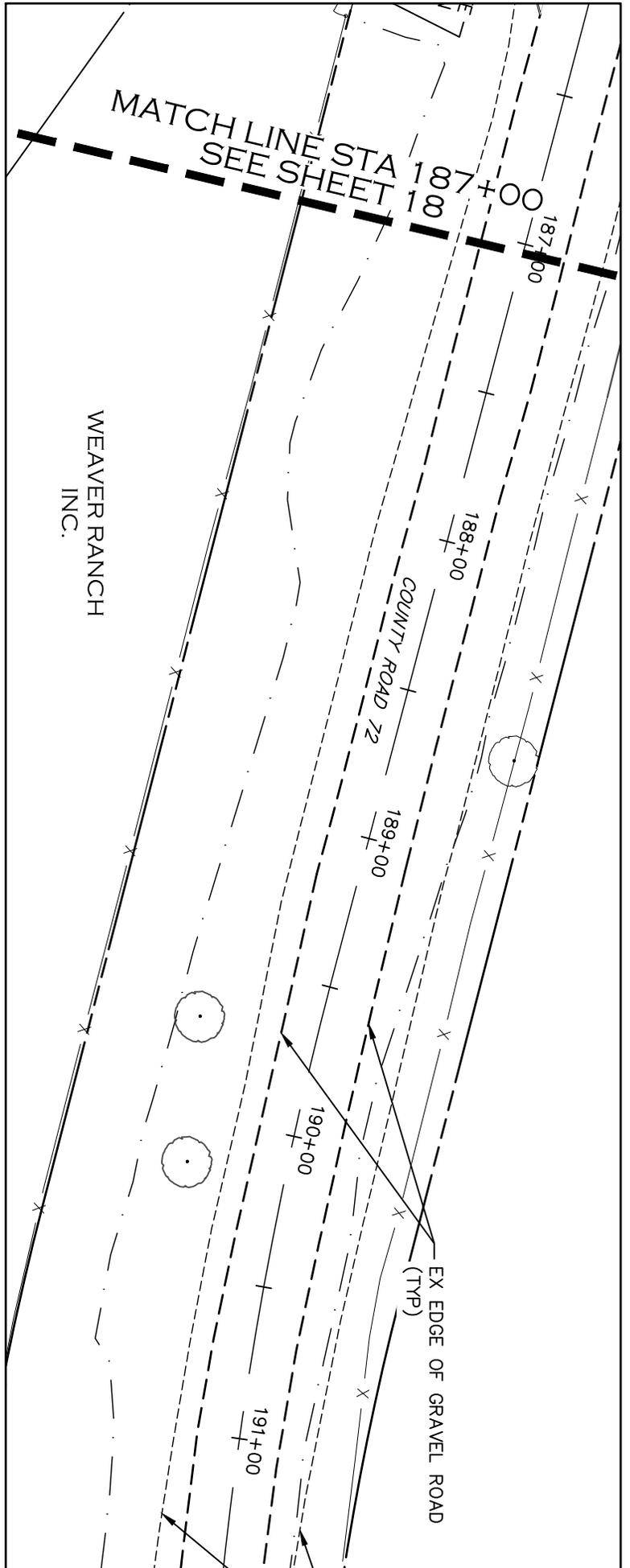


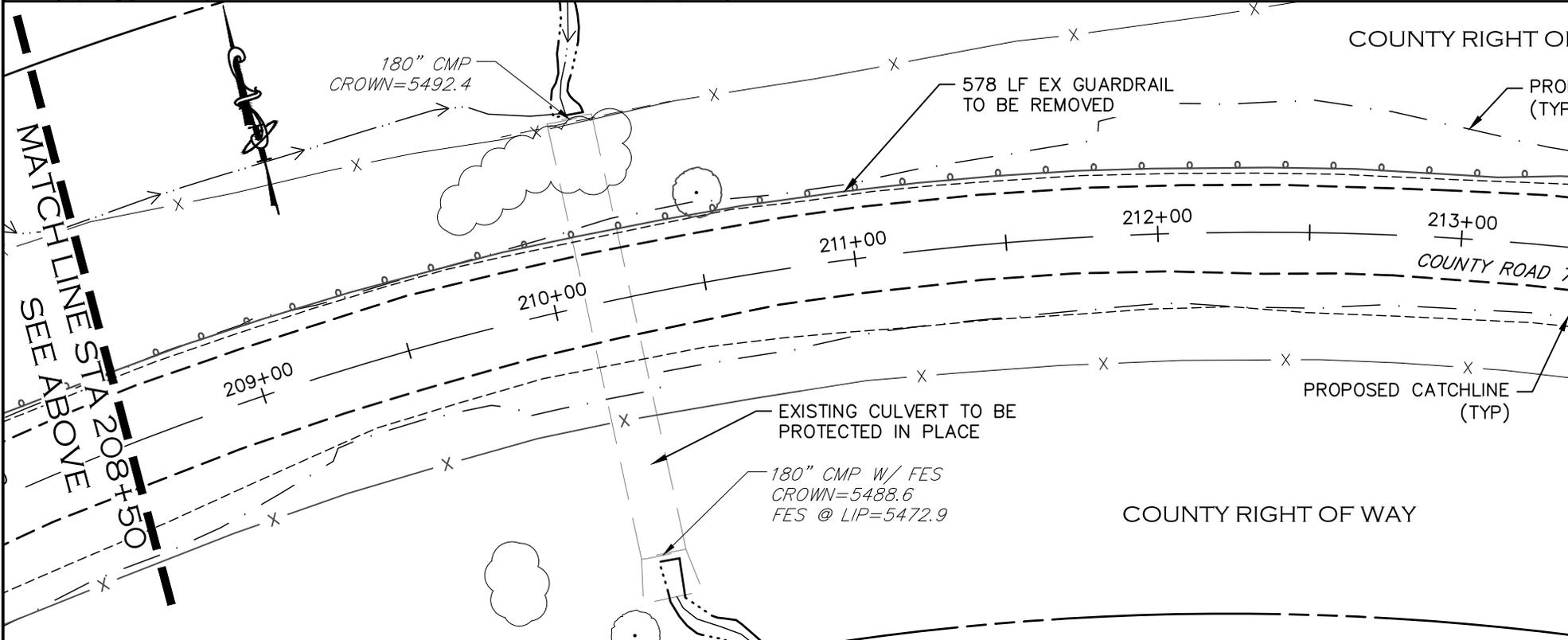
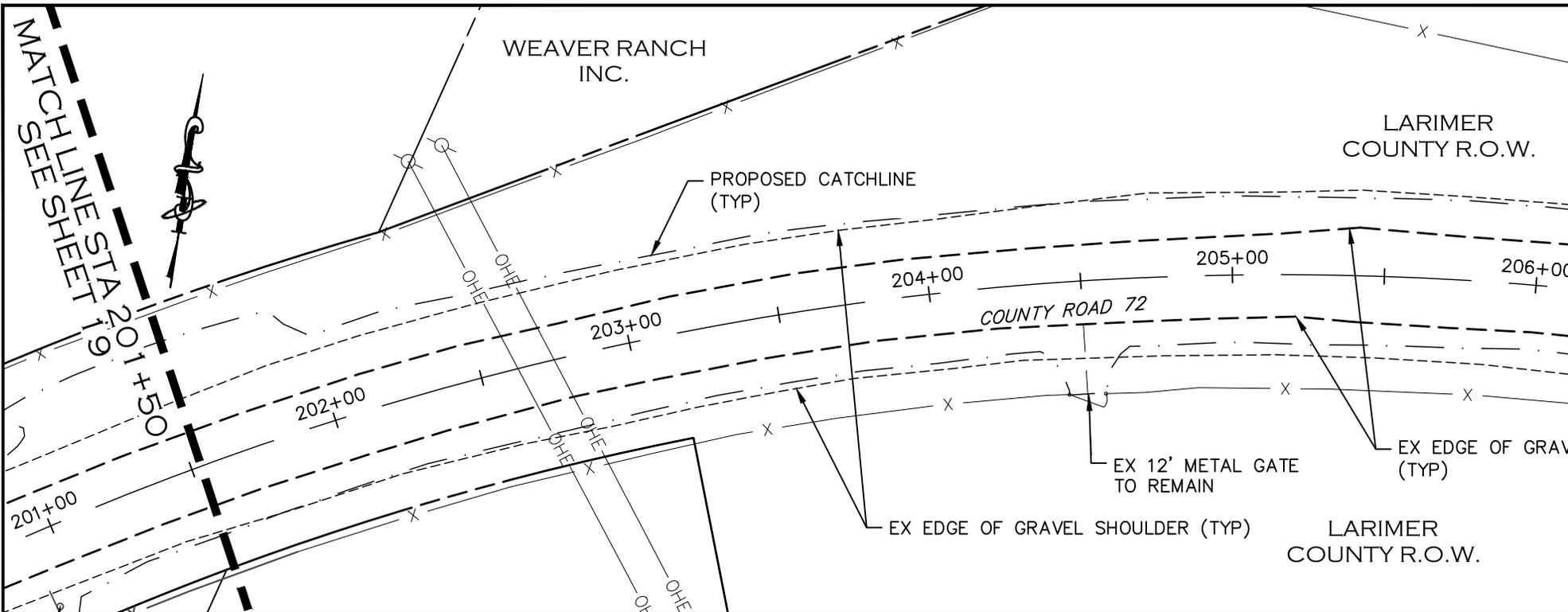


MATCH LINE STA 194+00
SEE ABOVE



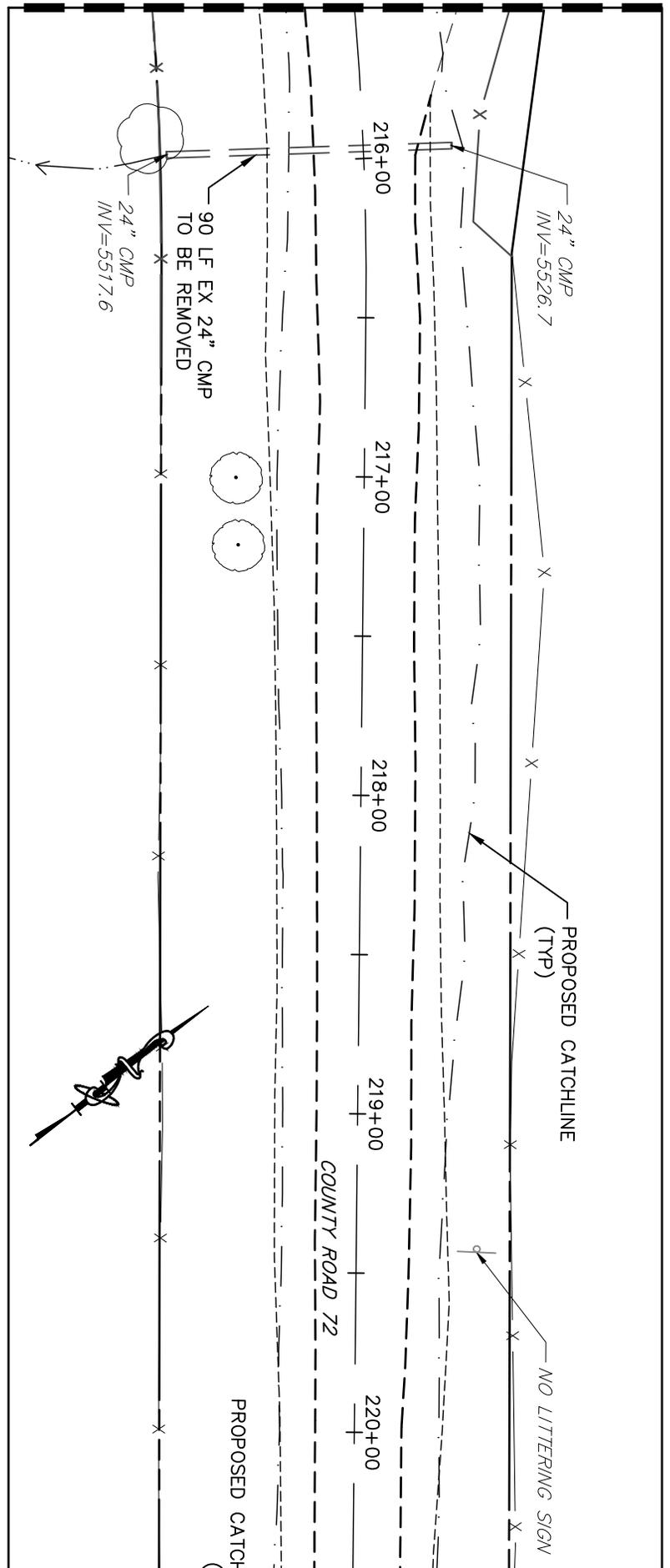
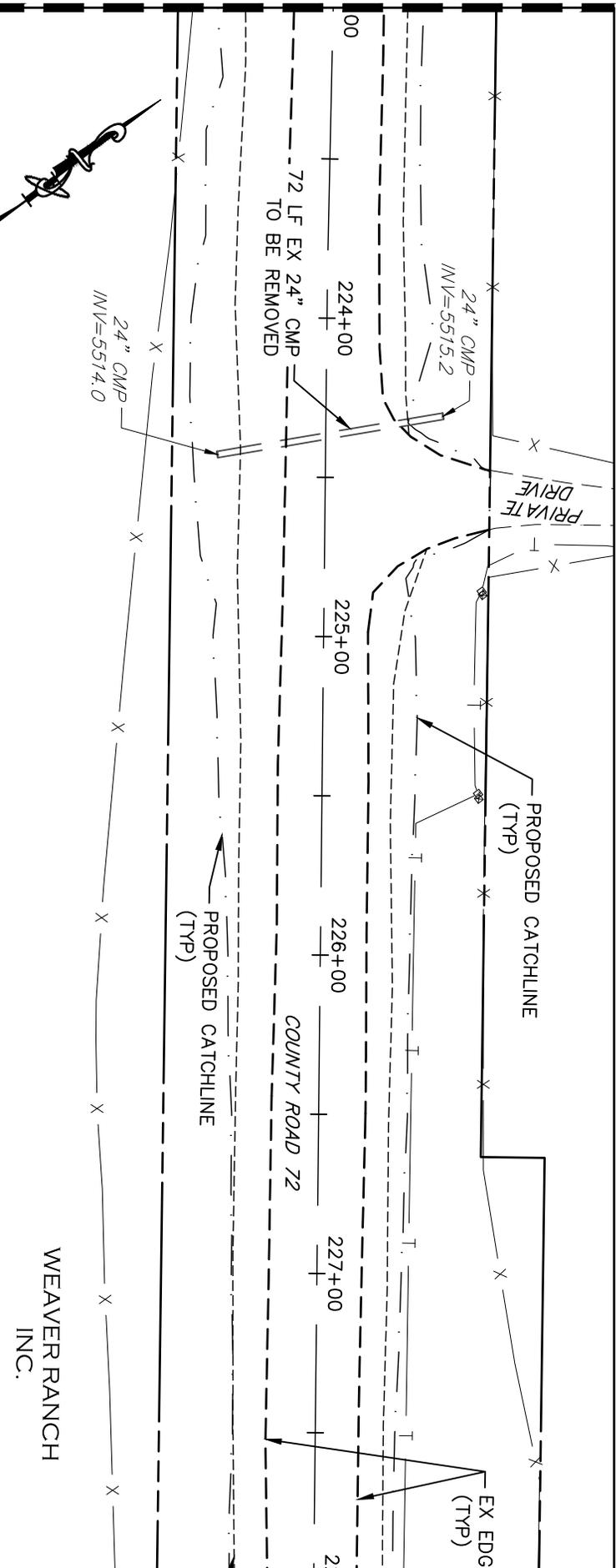
MATCH LINE STA 187+00
SEE SHEET 188





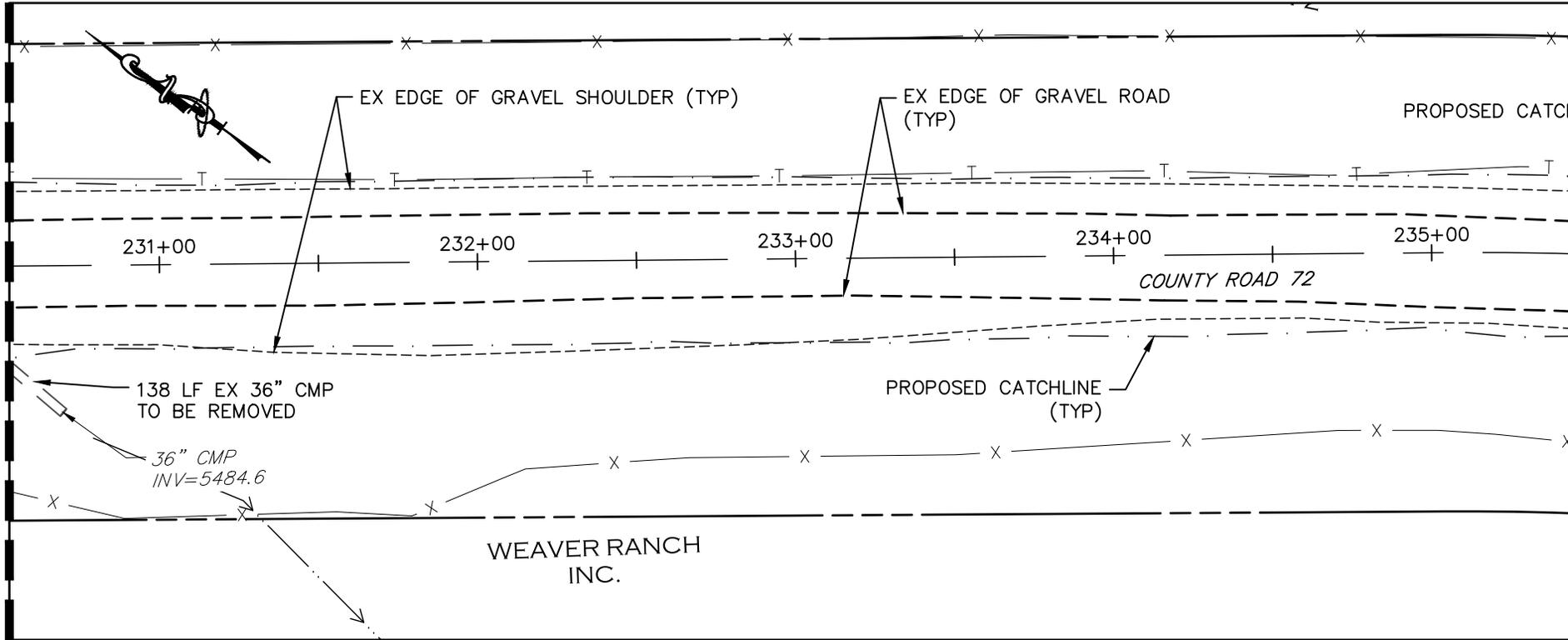
MATCH LINE STA 223+00
SEE ABOVE

MATCH LINE STA 215+50
SEE SHEET 20

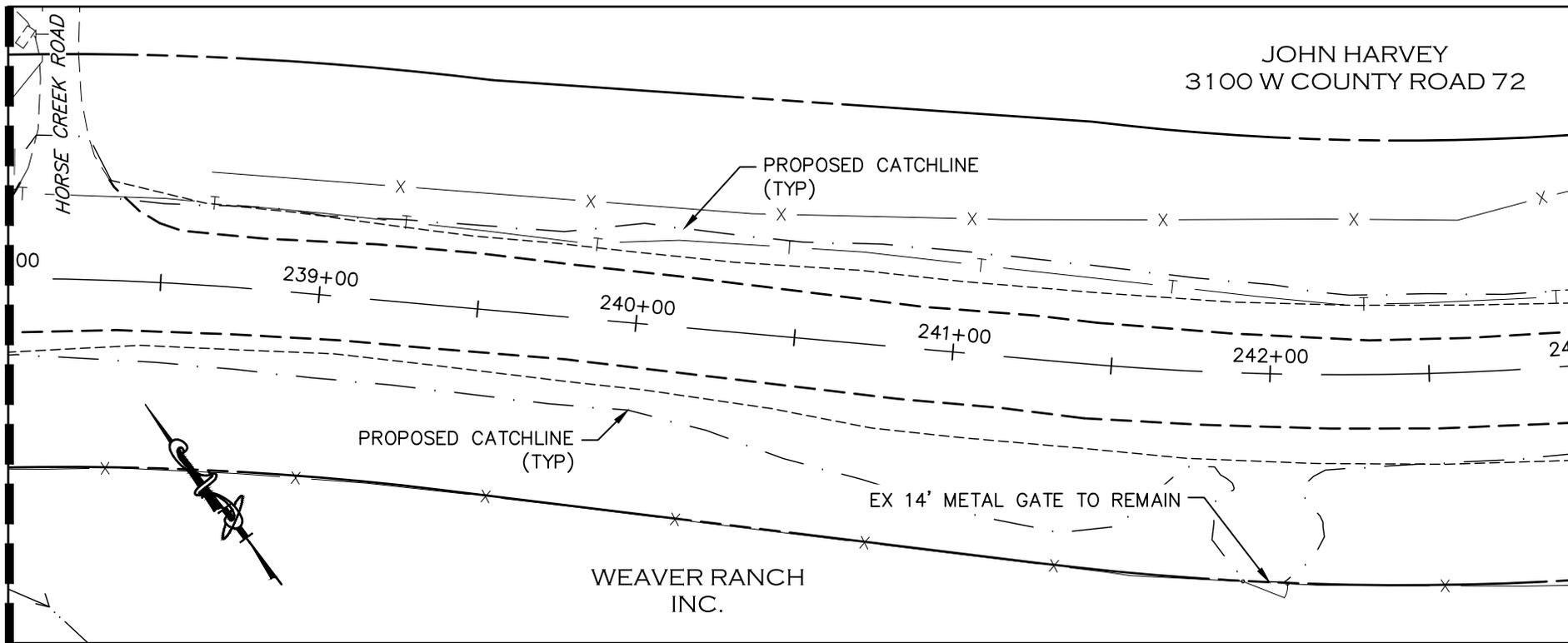


WEAVER RANCH
INC.

MATCHLINE STA 230+50
SEE SHEET 21



MATCHLINE STA 238+00
SEE ABOVE



JOHN HARVEY
3100 W COUNTY ROAD 72

MATCHLINE STA 245+00
SEE SHEET 22

EX EDGE OF GRAVEL
SHOULDER (TYP)

PROPOSED CATCHLINE
(TYP)

EX EDGE OF GRAVEL ROAD
(TYP)

246+00

247+00

248+00

249+00

PROPOSED CATCHLINE
(TYP)

SCHOOL BUS STOP
AHEAD SIGN

RESIDENT ADDRESS BOARD

STARRY NIGHT ROAD

DEED OF DEDICATION
PUBLIC HIGHWAY
LARIMER COUNTY
REC. NO. 92006366
(WIDTH VARIES)

JOHN HARVEY
3100 W COUNTY ROAD 72

EX SIGN
TO BE REMOVED

INTERSECTION AHEAD

00

253+00

254+00

255+00

256+00

COUNTY ROAD 72

EX 14' METAL GATE TO REMAIN

MATCHLINE STA 252+00
SEE ABOVE

WEAVER RANCH INC

STA 42+00
BEGIN SAWCUT &
PAVEMENT REMOVAL

EX STRIPING TO BE REMOVED
SEE HWY 287 STRIPING PLAN
FOR FULL LIMITS OF REMOVAL

CDOT
RIGHT-OF-WAY

EX SIGN TO BE
RESET

EX SIGN

41+00

42+00

43+00

44+00

45+00

HIGHWAY 287

SAWCUT LINE ON
EX SHOULDER STRIPE

OWL CANYON ROAD

CDOT
RIGHT-OF-WAY

US HIGHWAY 287

48+00

49+00

50+00

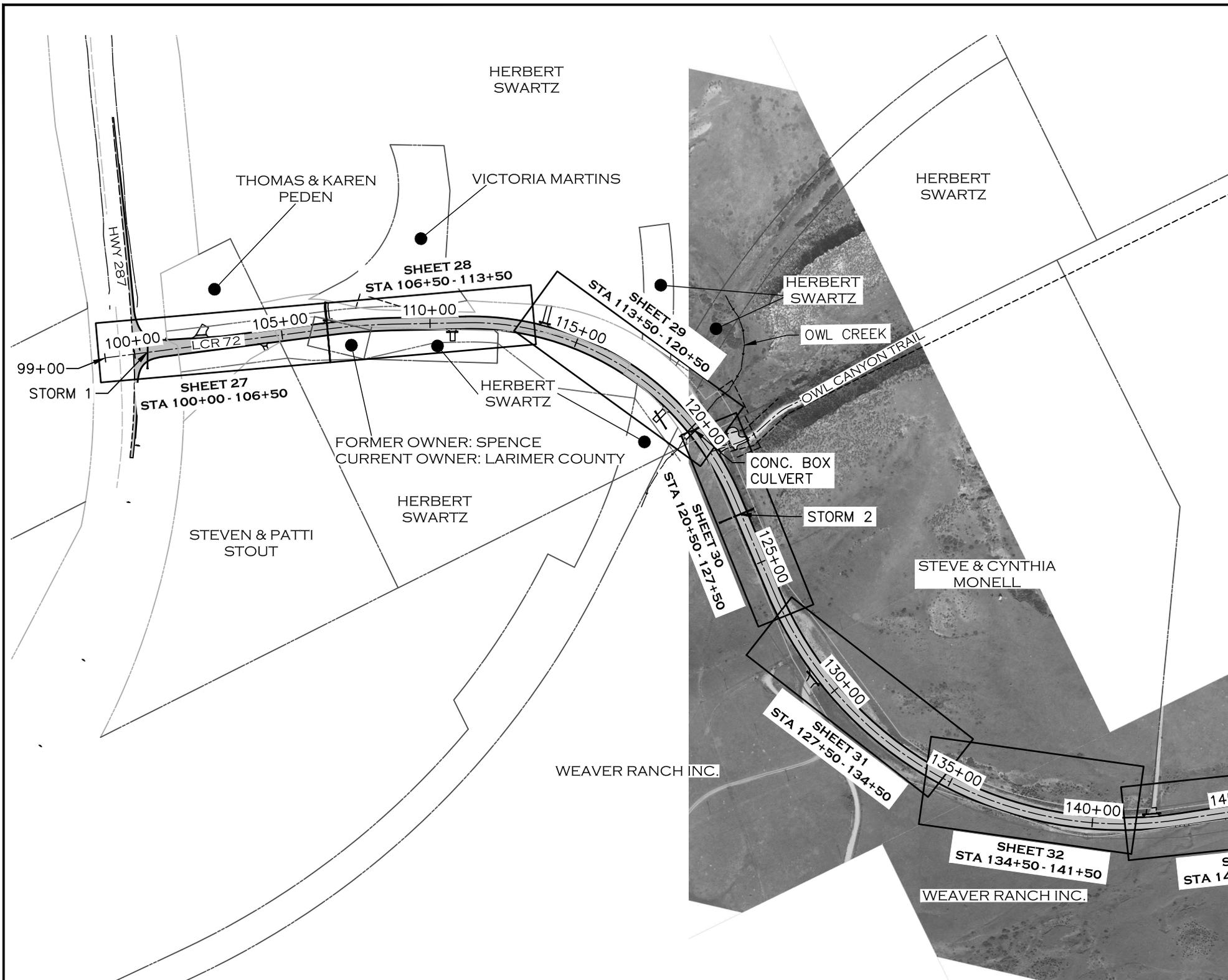
51+00

52+00

1622 SY EX ASPHALT
TO BE REMOVED
SEE NOTE 6

00+66

P



HERBERT SWARTZ

THOMAS & KAREN PEDEN

VICTORIA MARTINS

HERBERT SWARTZ

HWY 287

SHEET 28
STA 106+50 - 113+50

SHEET 29
STA 113+50 - 120+50

HERBERT SWARTZ

OWL CREEK

OWL CANYON TRAIL

99+00

100+00

105+00

110+00

115+00

120+00

SHEET 27
STA 100+00 - 106+50

STORM 1

HERBERT SWARTZ

FORMER OWNER: SPENCE
CURRENT OWNER: LARIMER COUNTY

CONC. BOX CULVERT

STORM 2

HERBERT SWARTZ

SHEET 30
STA 120+50 - 127+50

STEVEN & PATTI STOUT

STEVE & CYNTHIA MONELL

125+00

WEAVER RANCH INC.

SHEET 31
STA 127+50 - 134+50

135+00

SHEET 32
STA 134+50 - 141+50

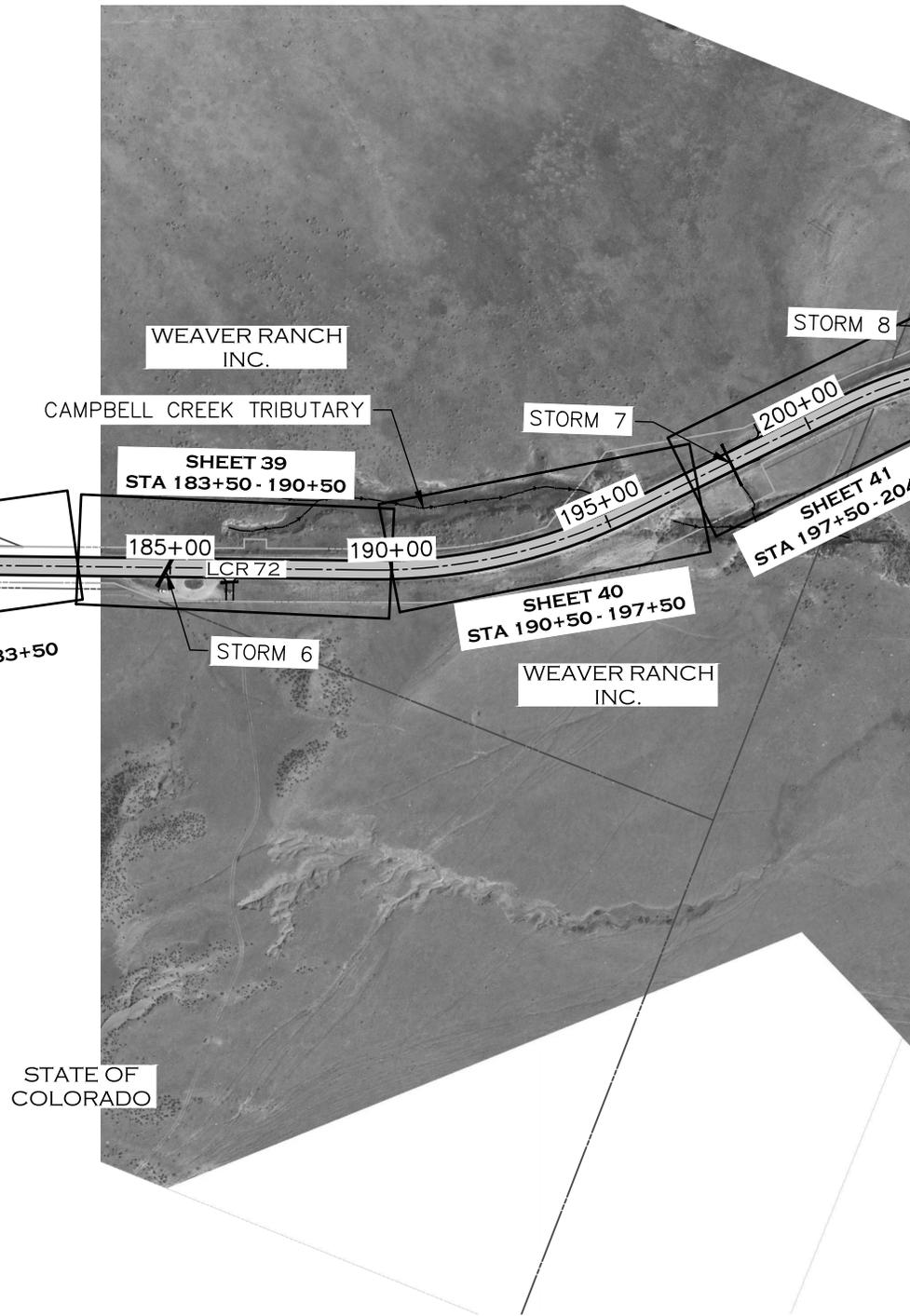
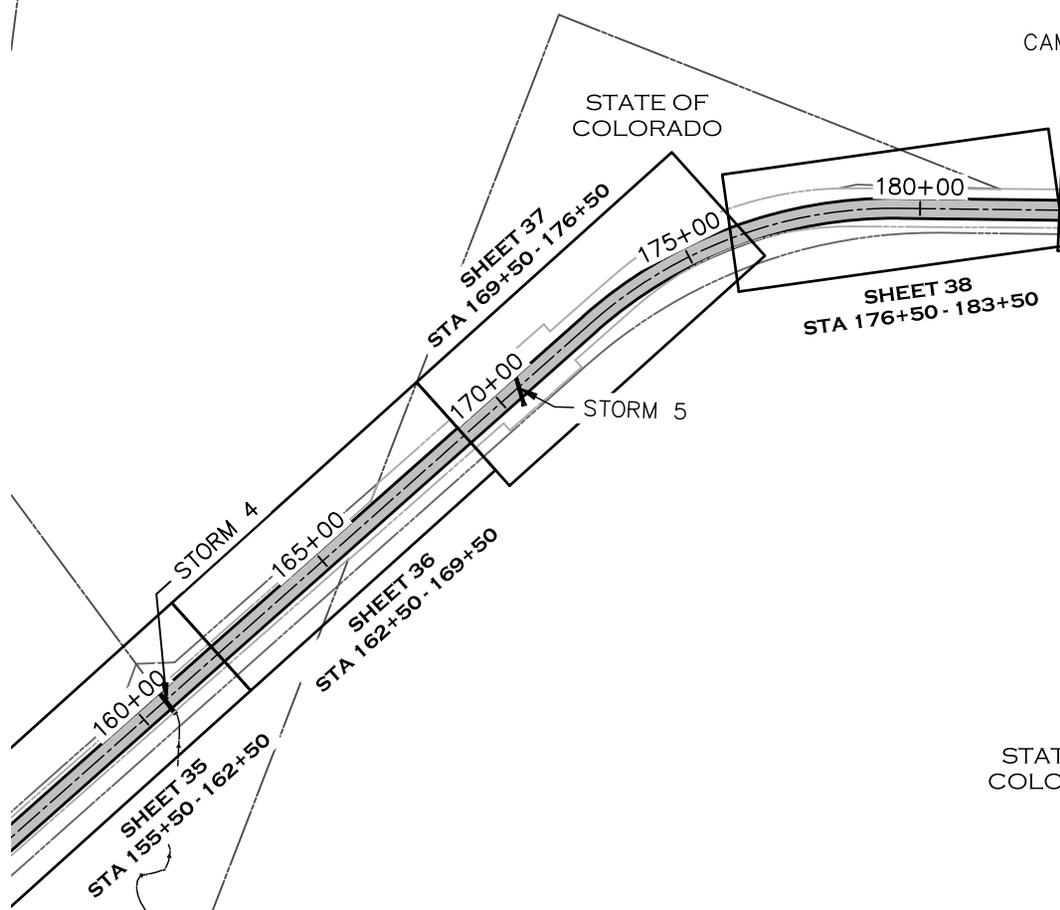
WEAVER RANCH INC.

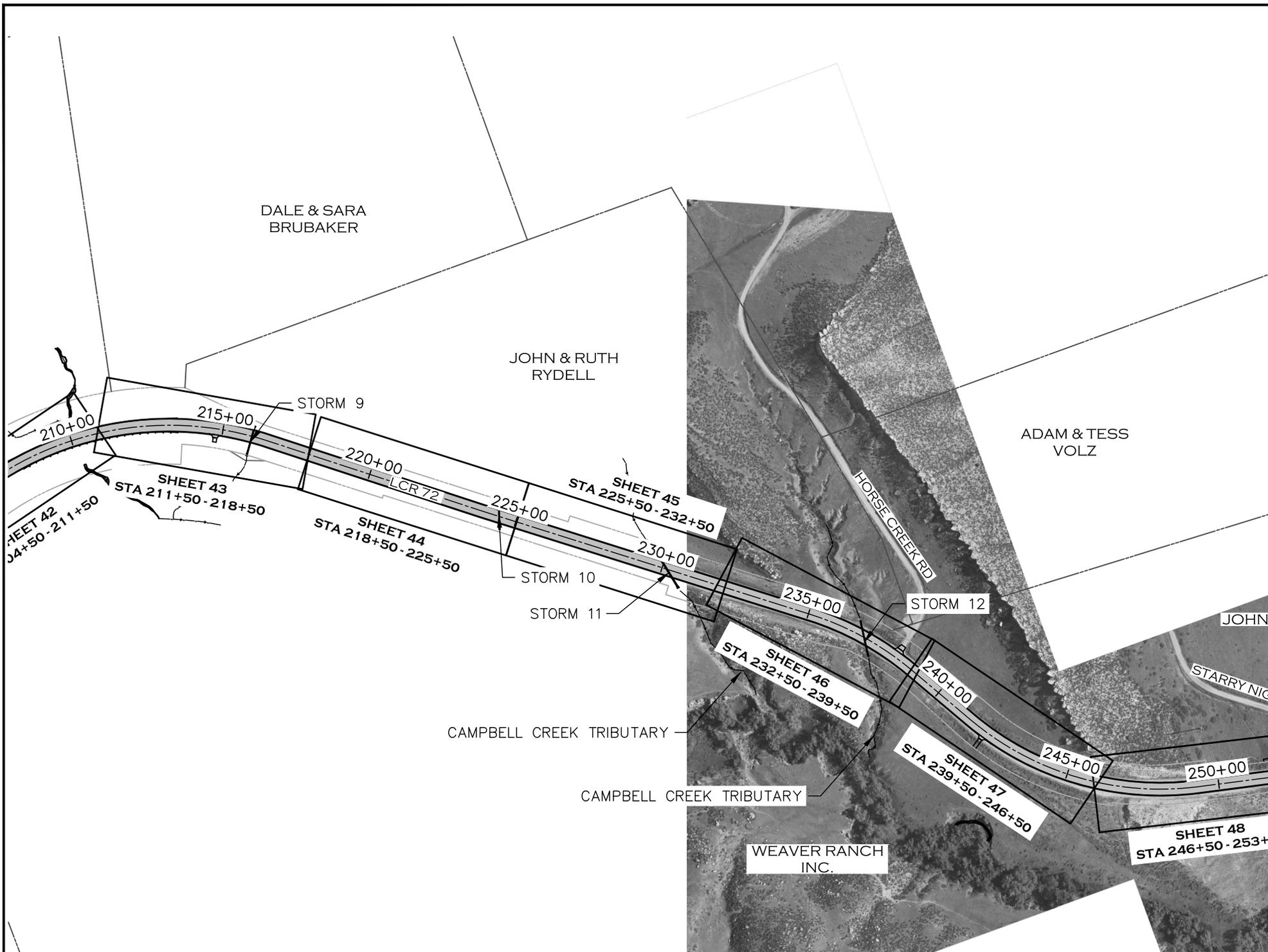
130+00

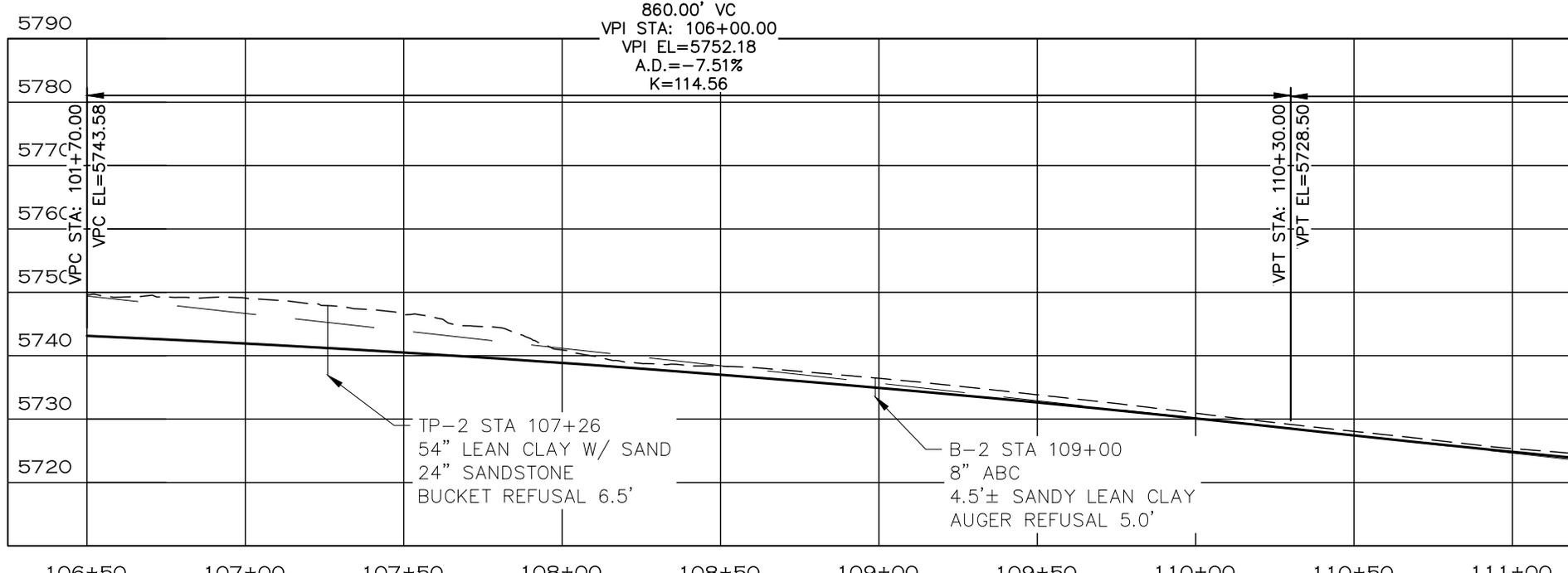
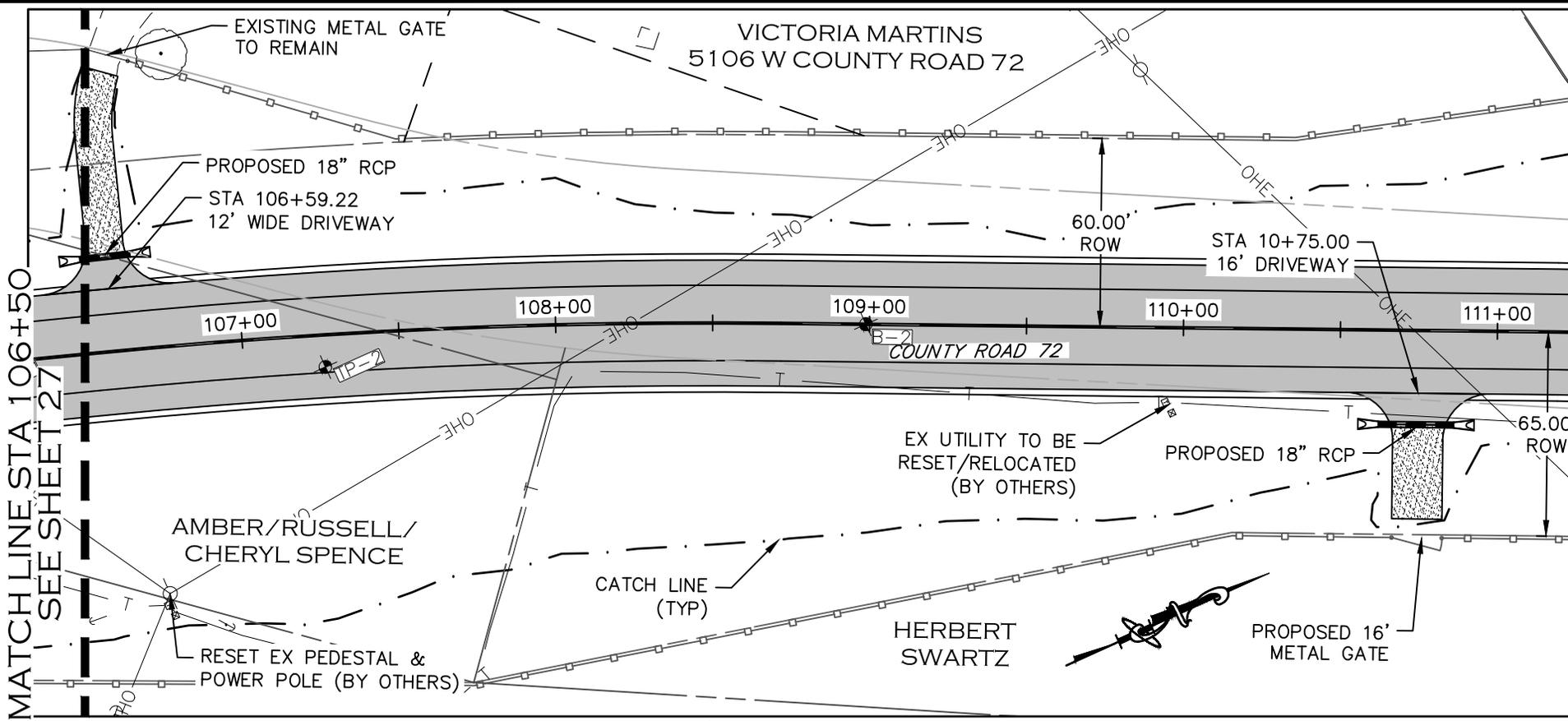
140+00

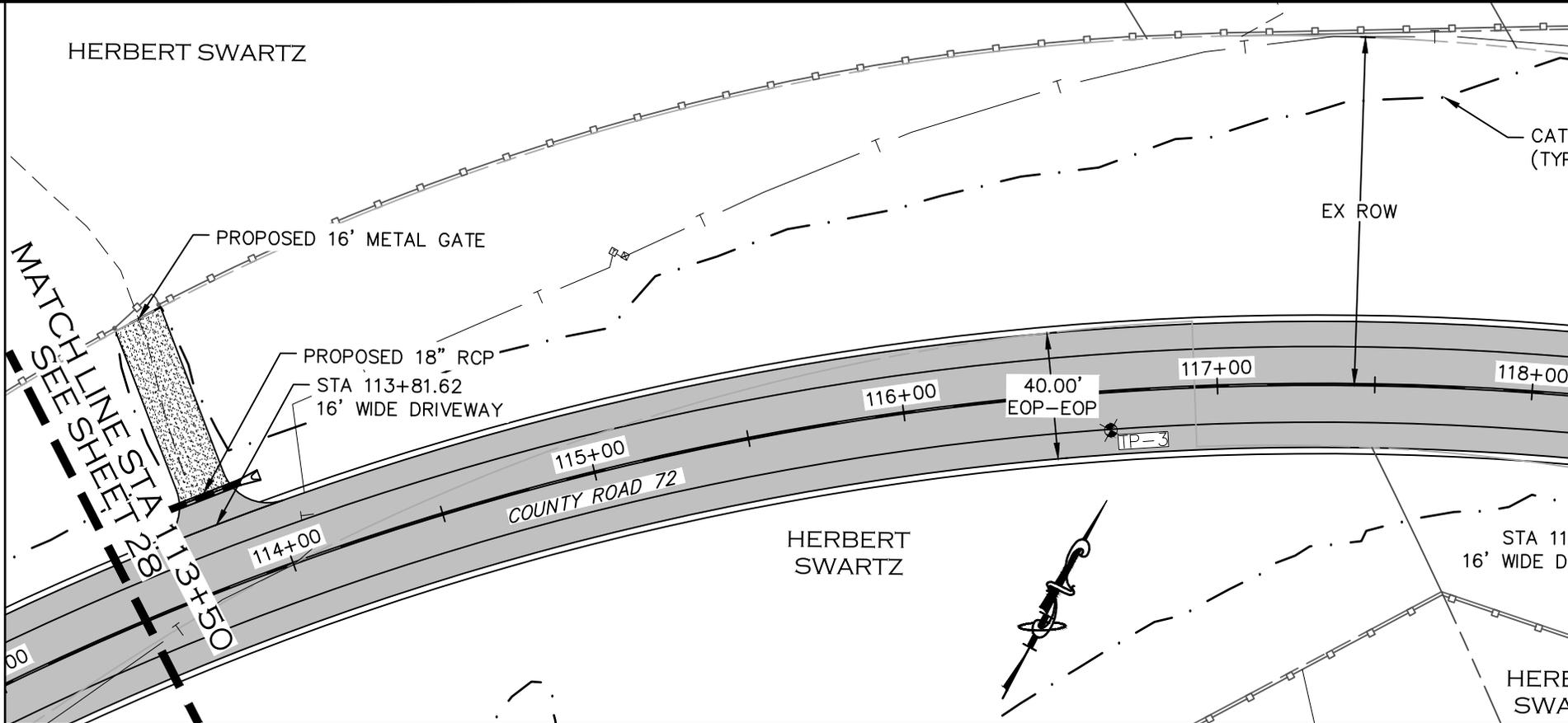
145+00

STA 145+00

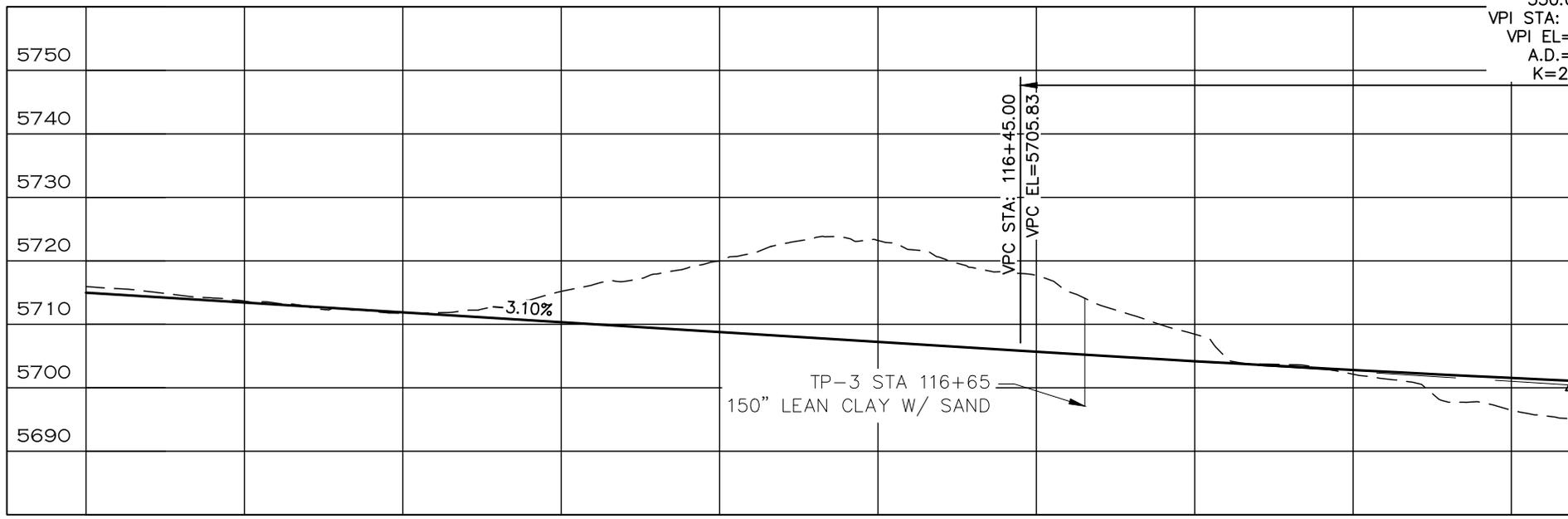




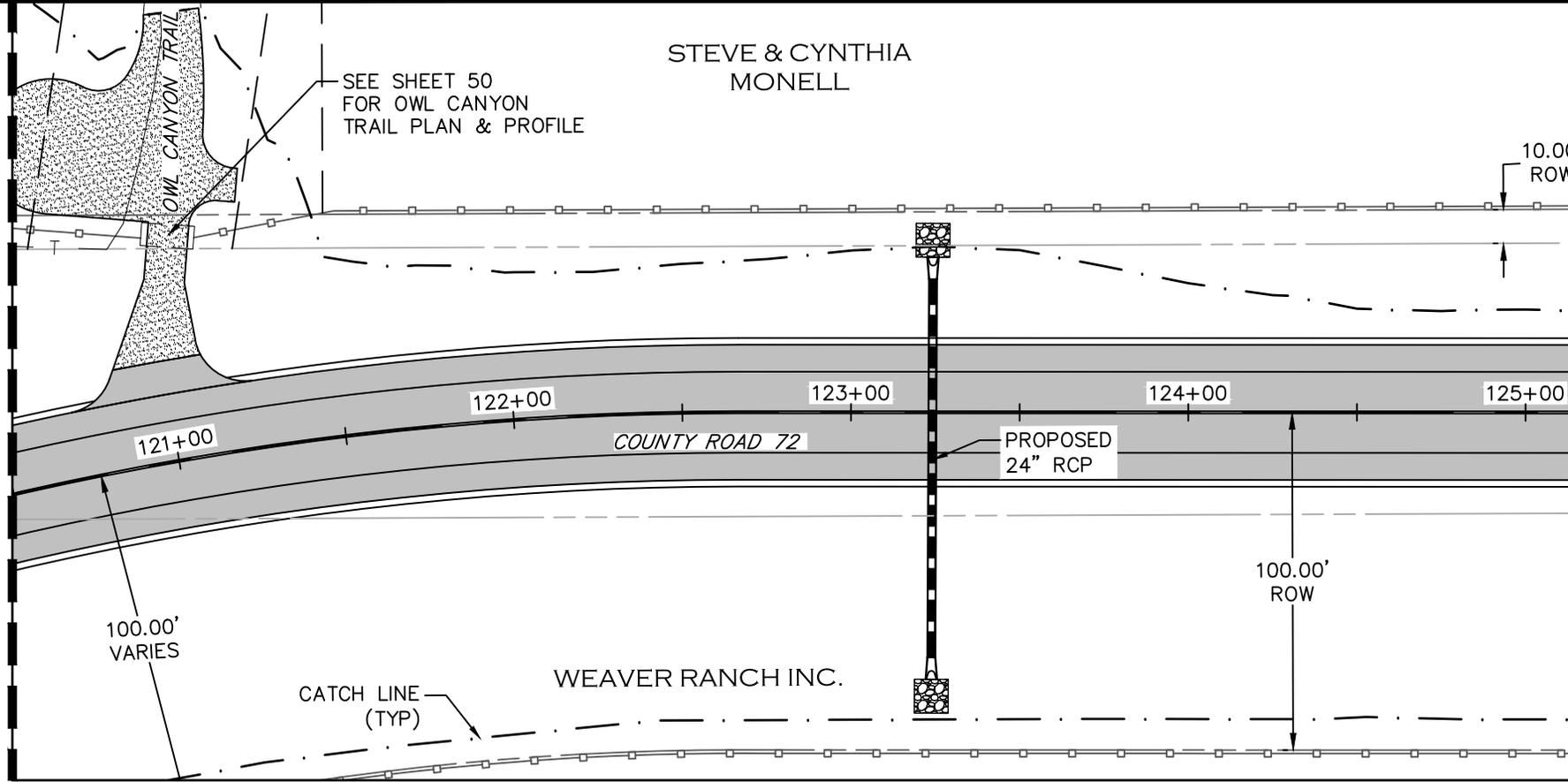




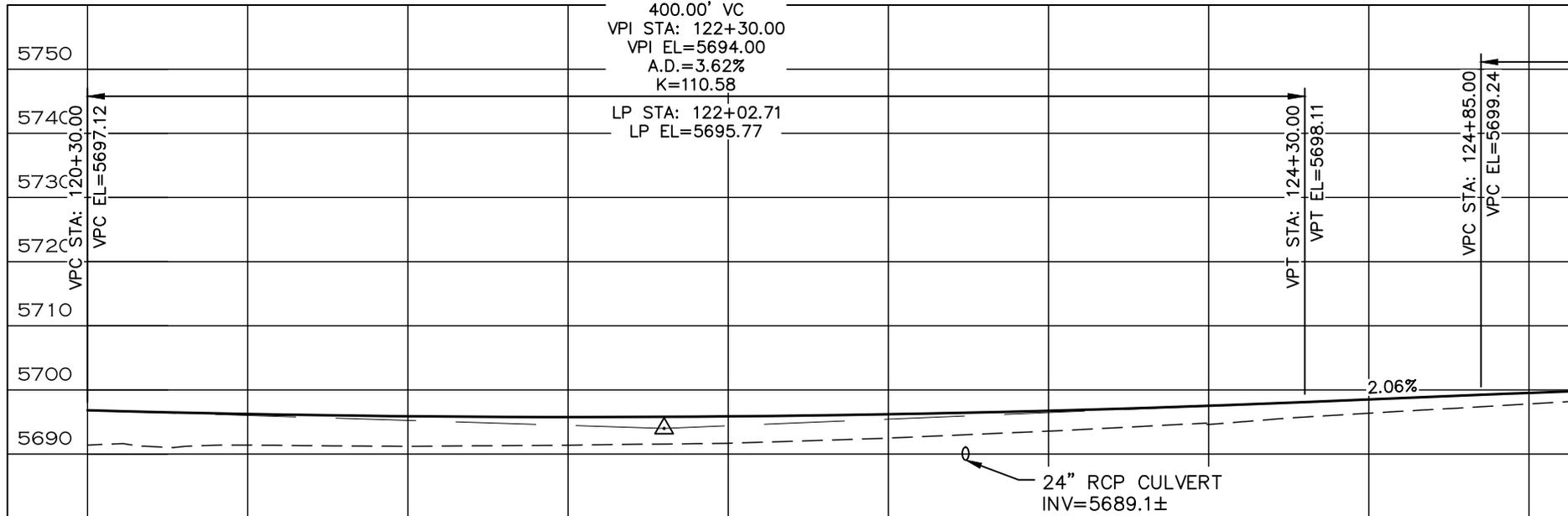
5760

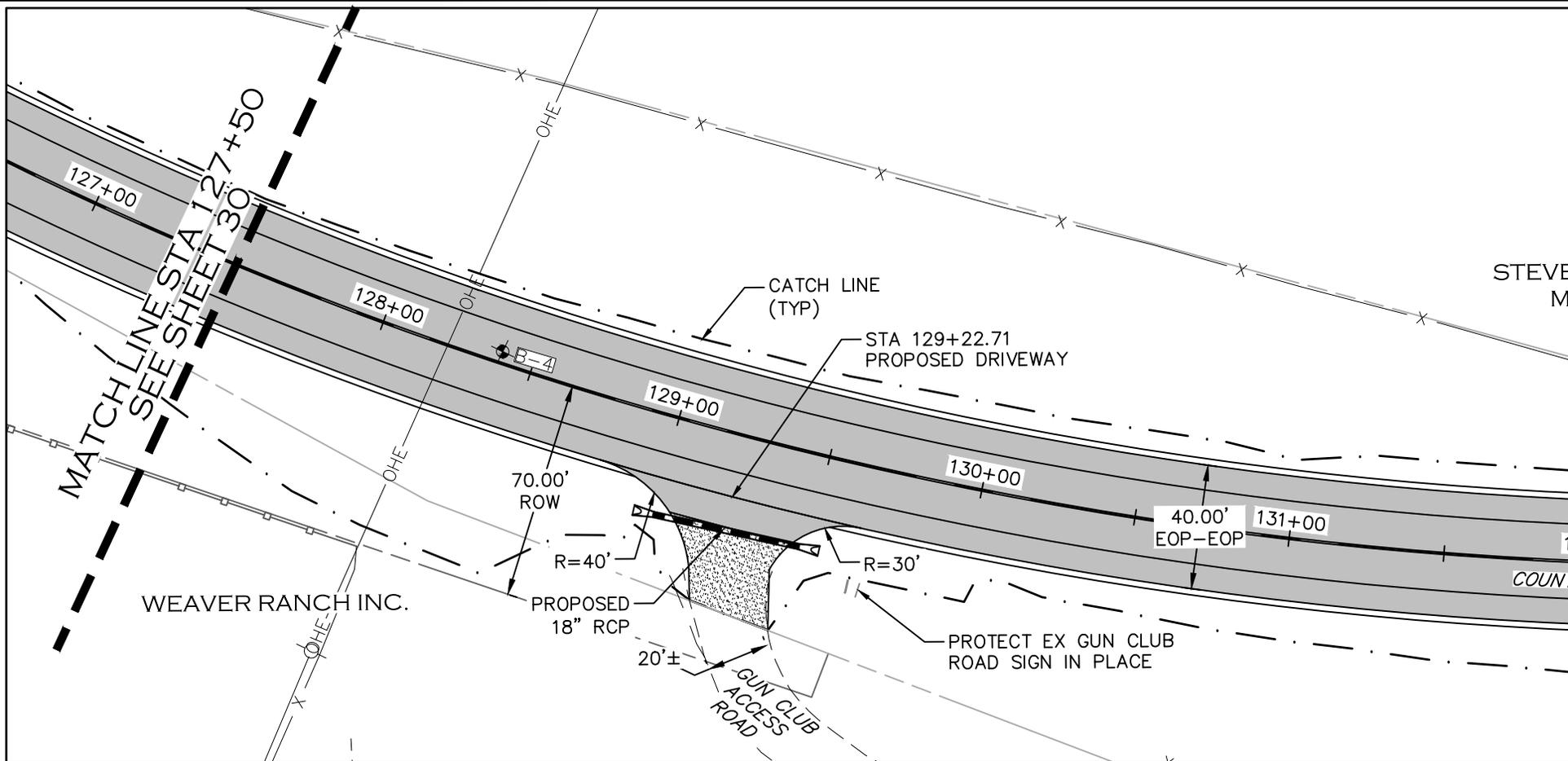


MATCHLINE STA 120+50
SEE SHEET 29

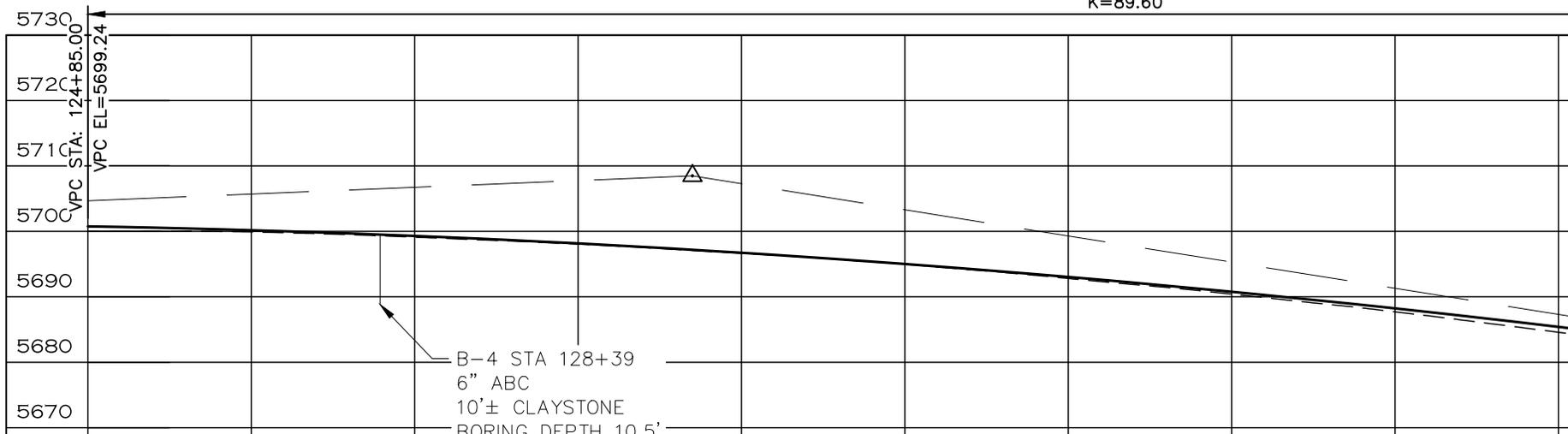


5760

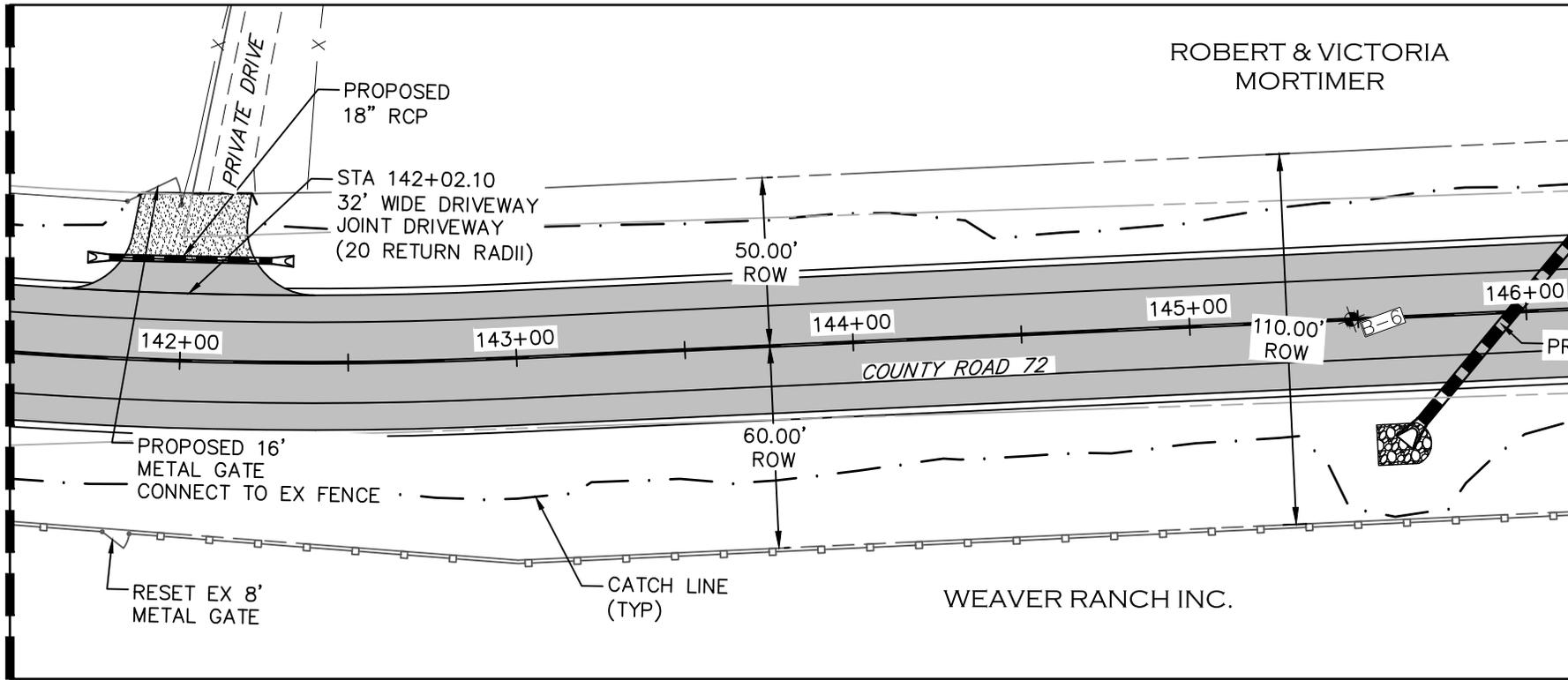




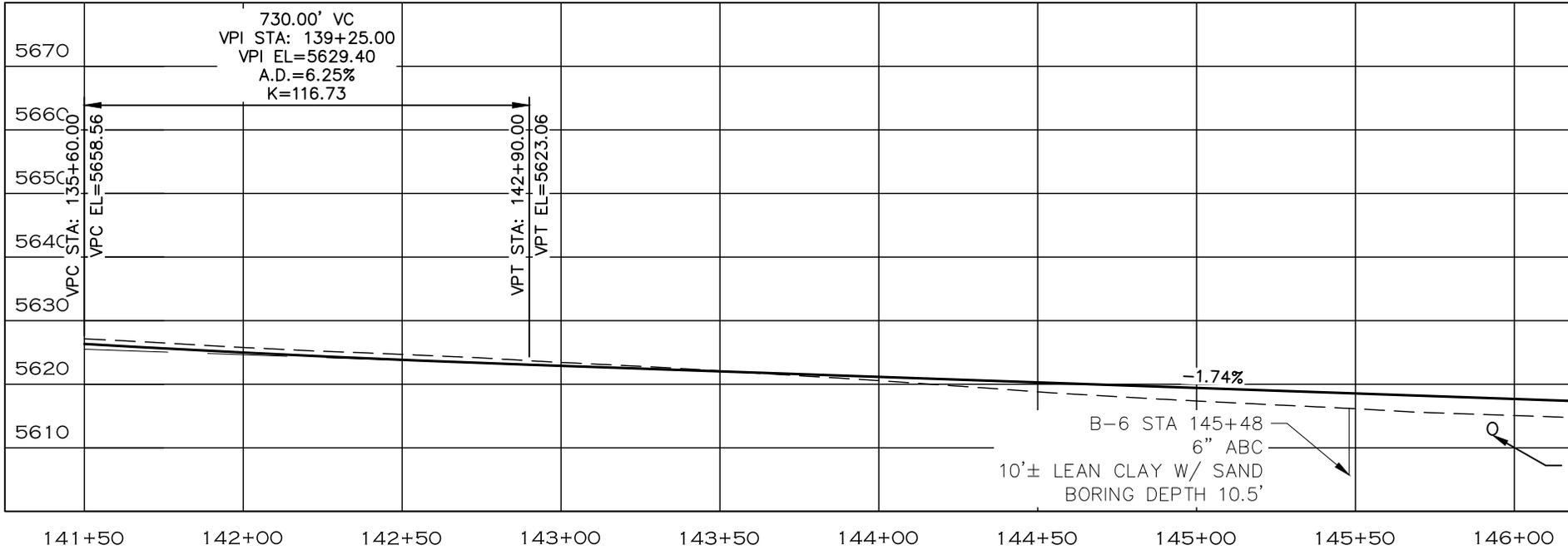
900.00' VC
 VPI STA: 129+35.00
 VPI EL=5708.49
 A.D.= -10.04%
 K=89.60



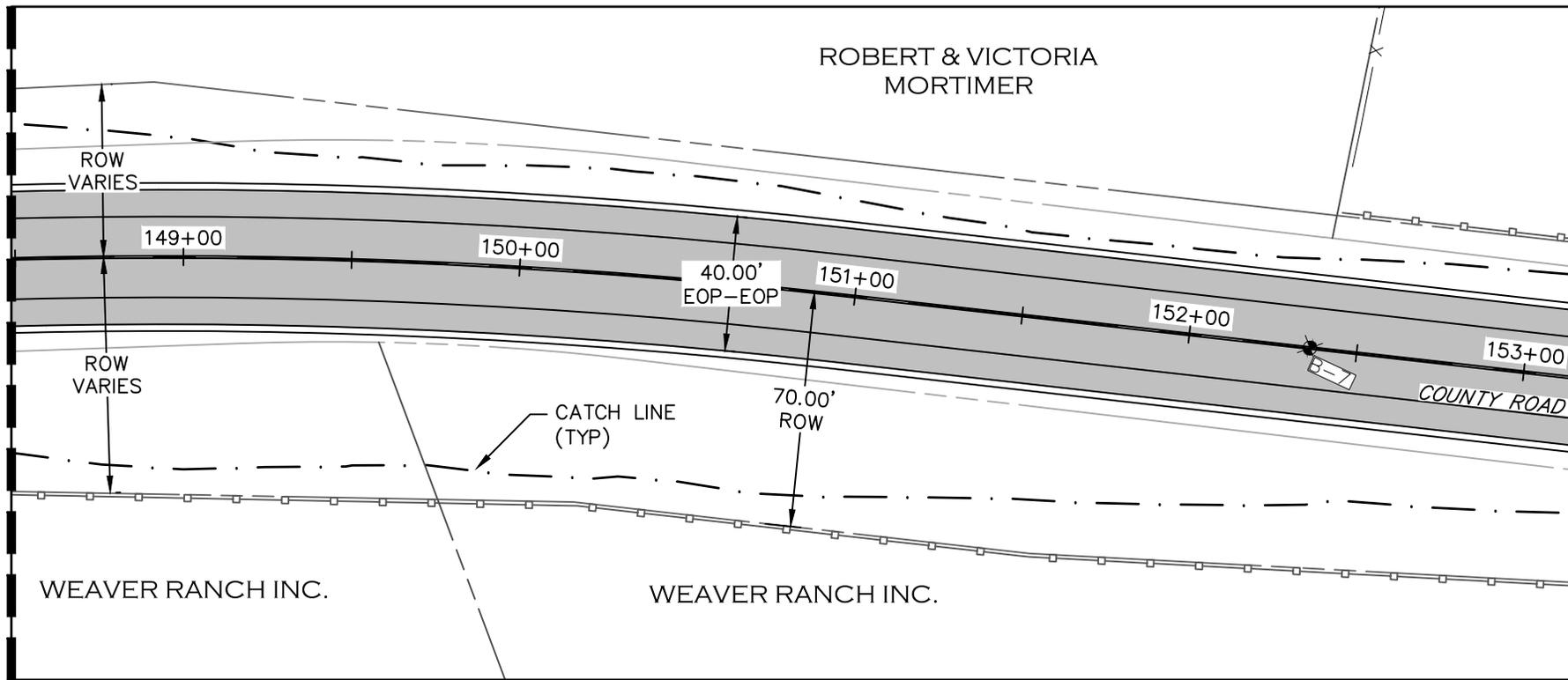
MATCH LINE STA 141+50
SEE SHEET 31



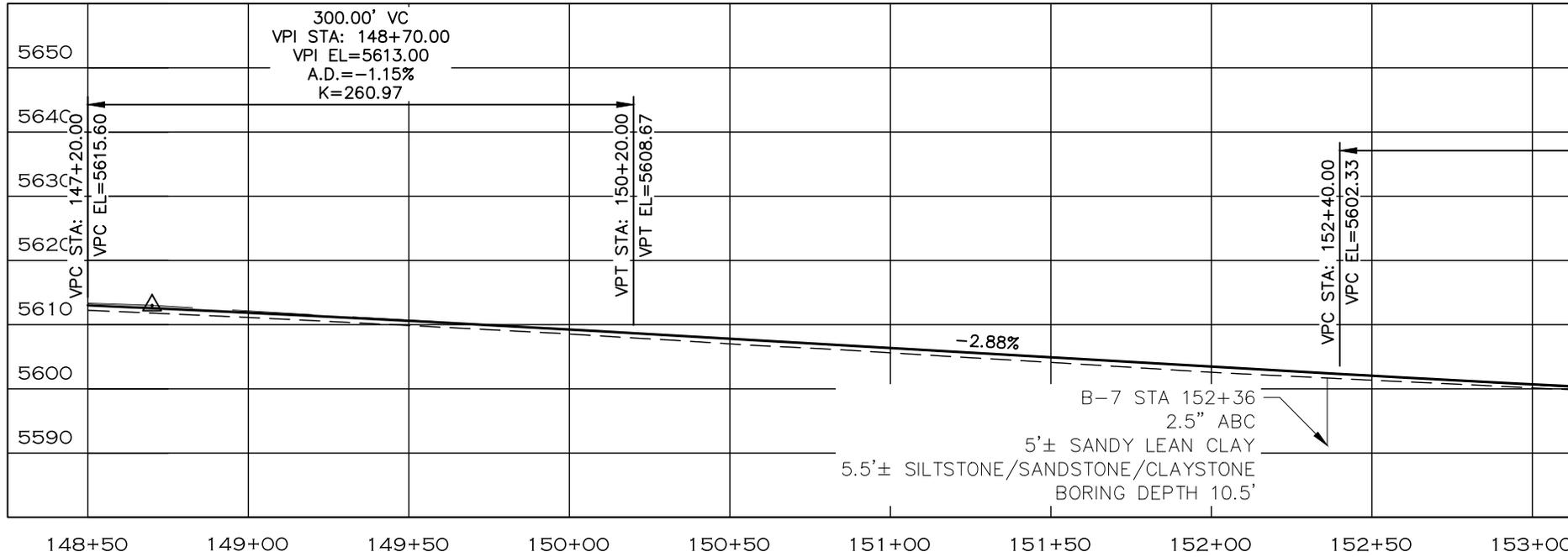
5680



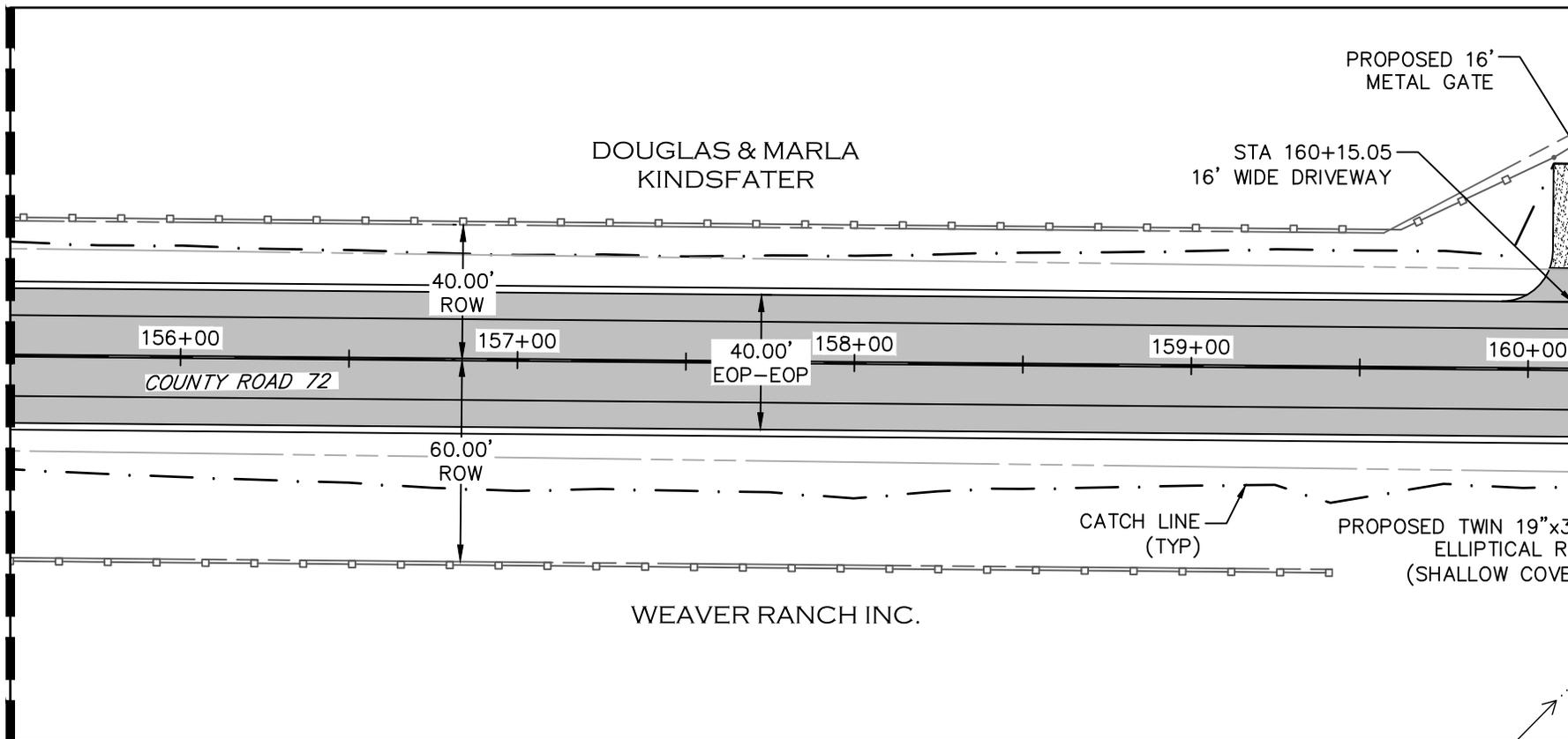
MATCHLINE STA 148+50
SEE SHEET 33



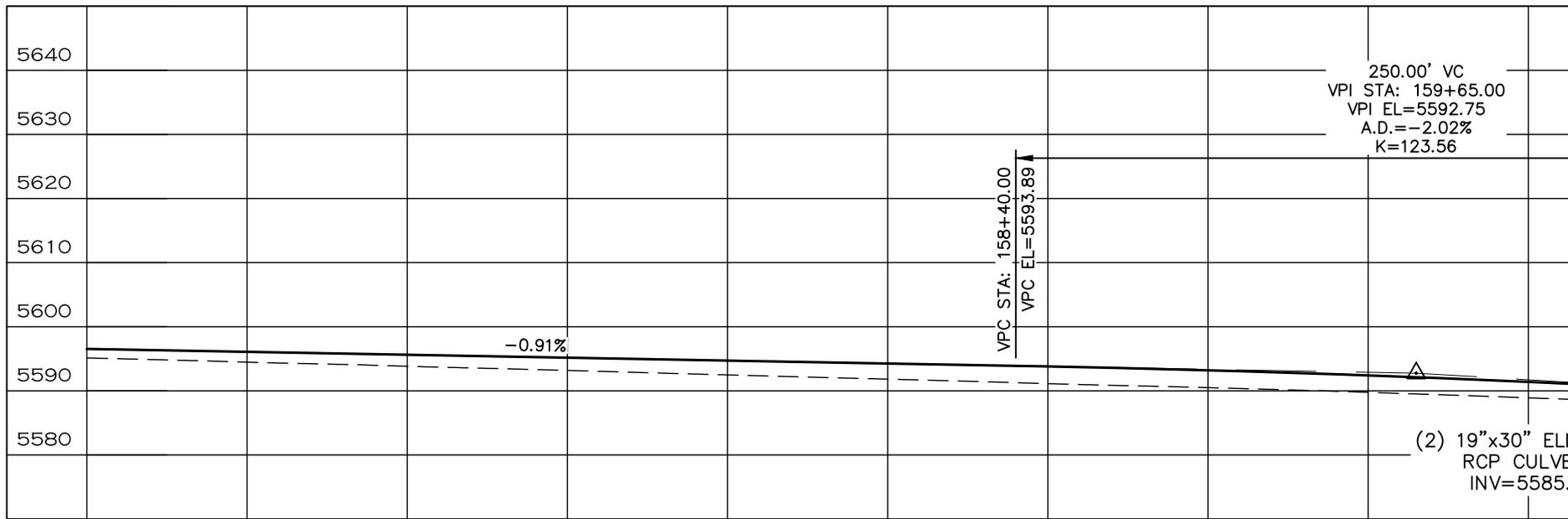
5660



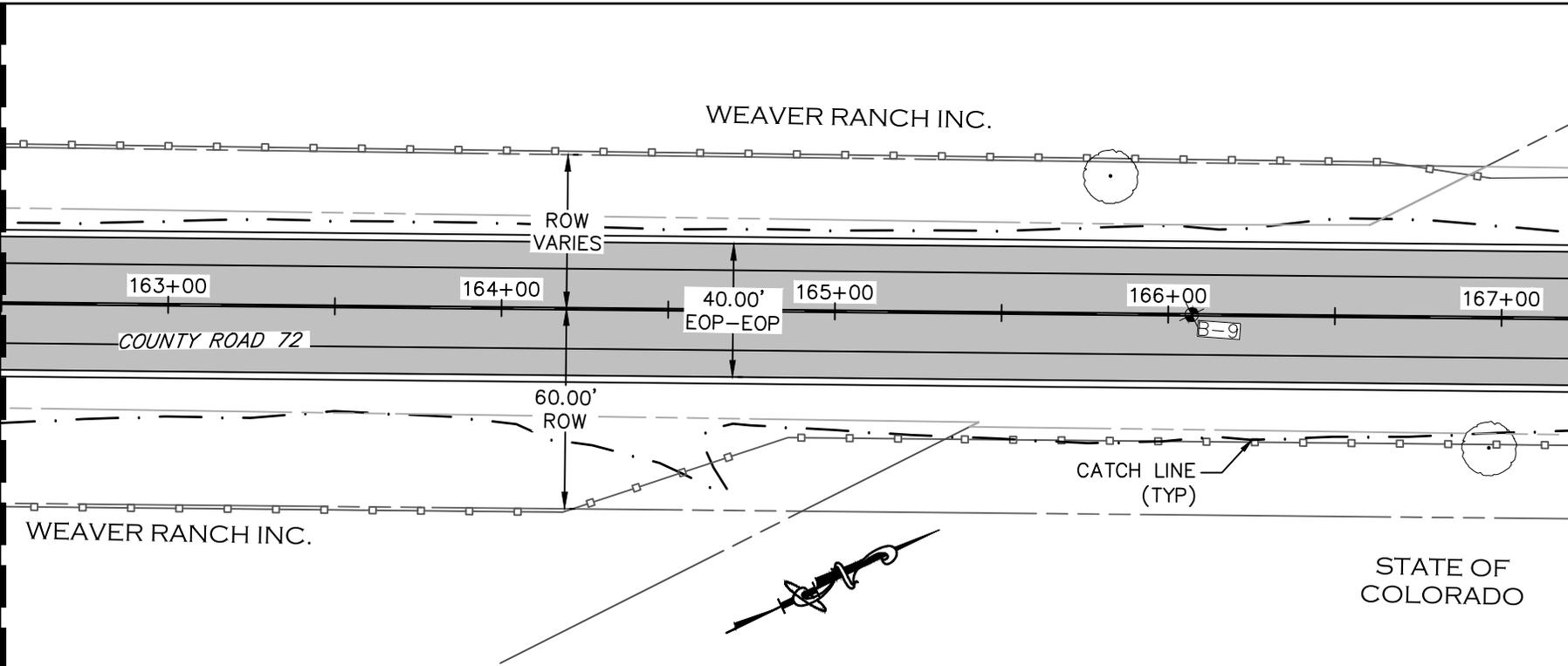
MATCH LINE STA 155+50
SEE SHEET 34



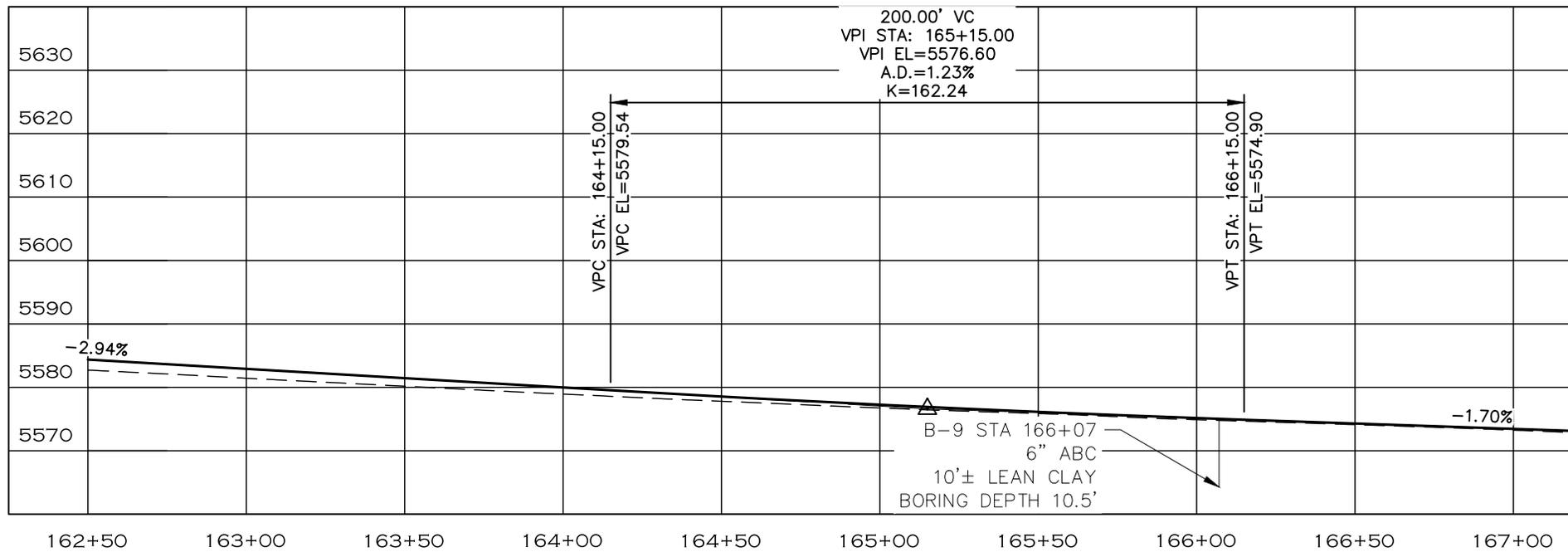
5650



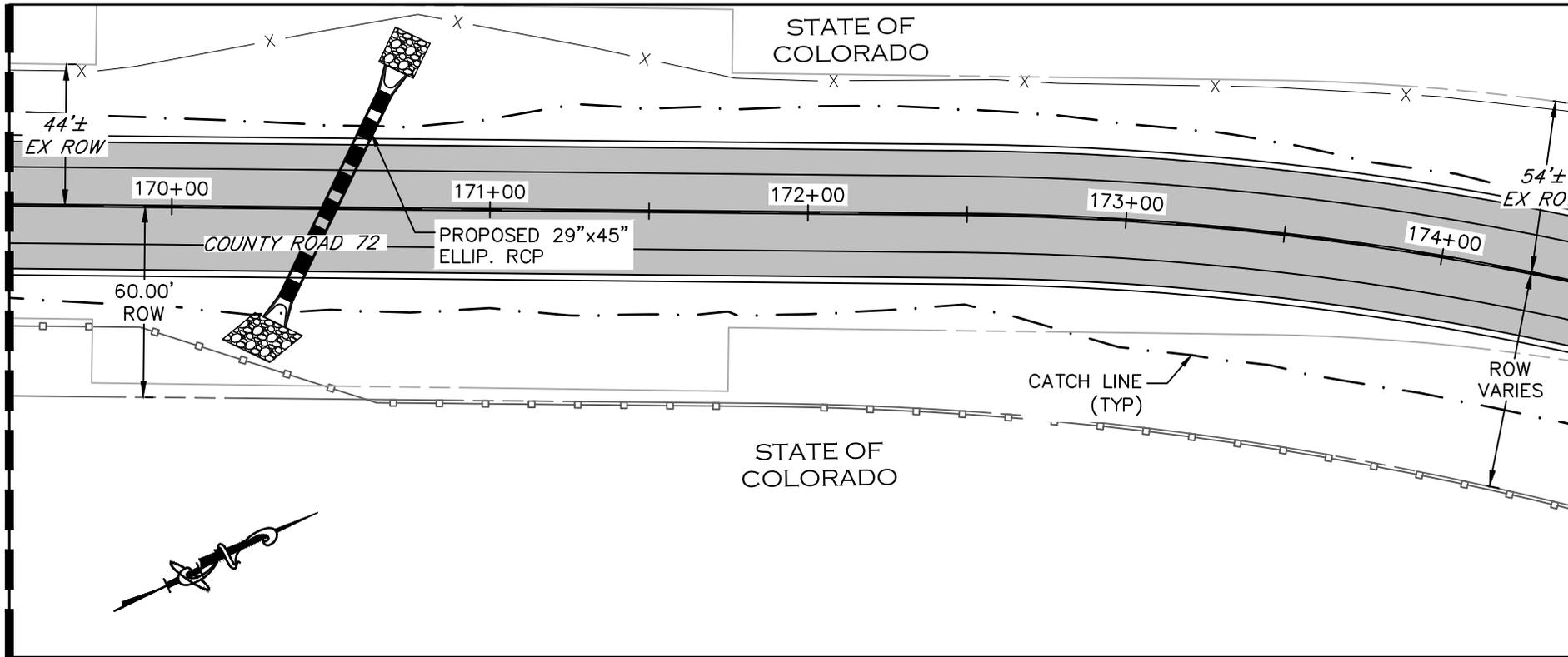
MATCH LINE STA 162+50
SEE SHEET 35



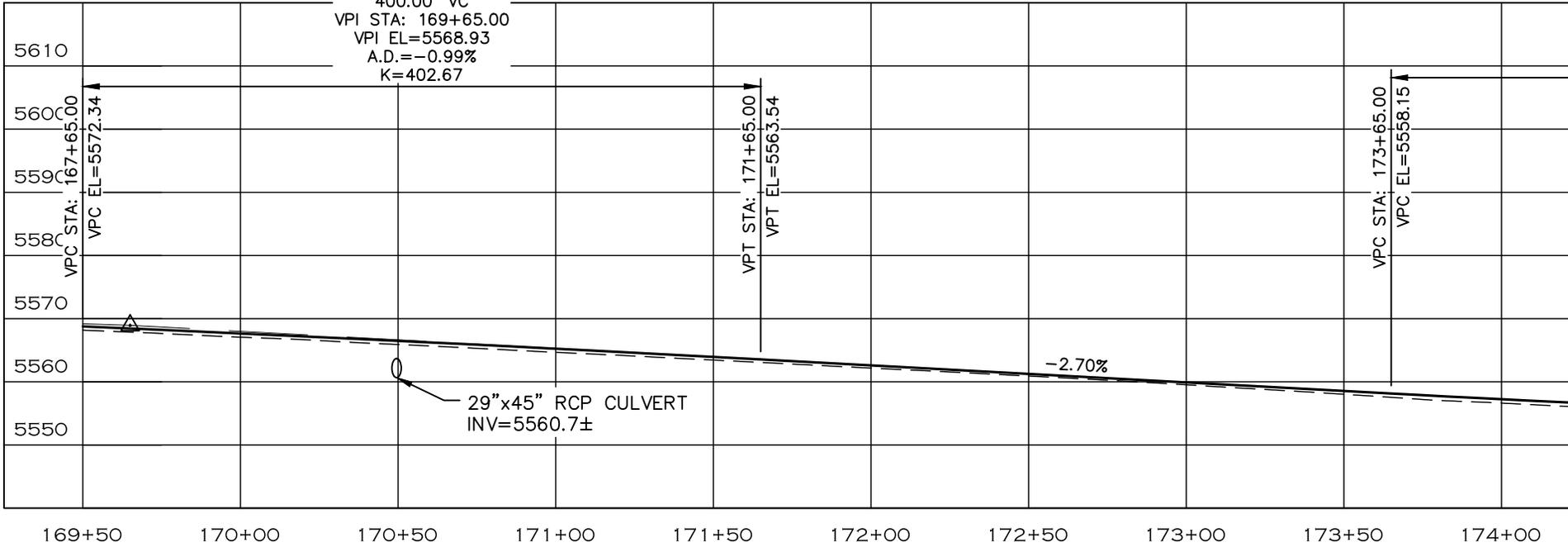
5640



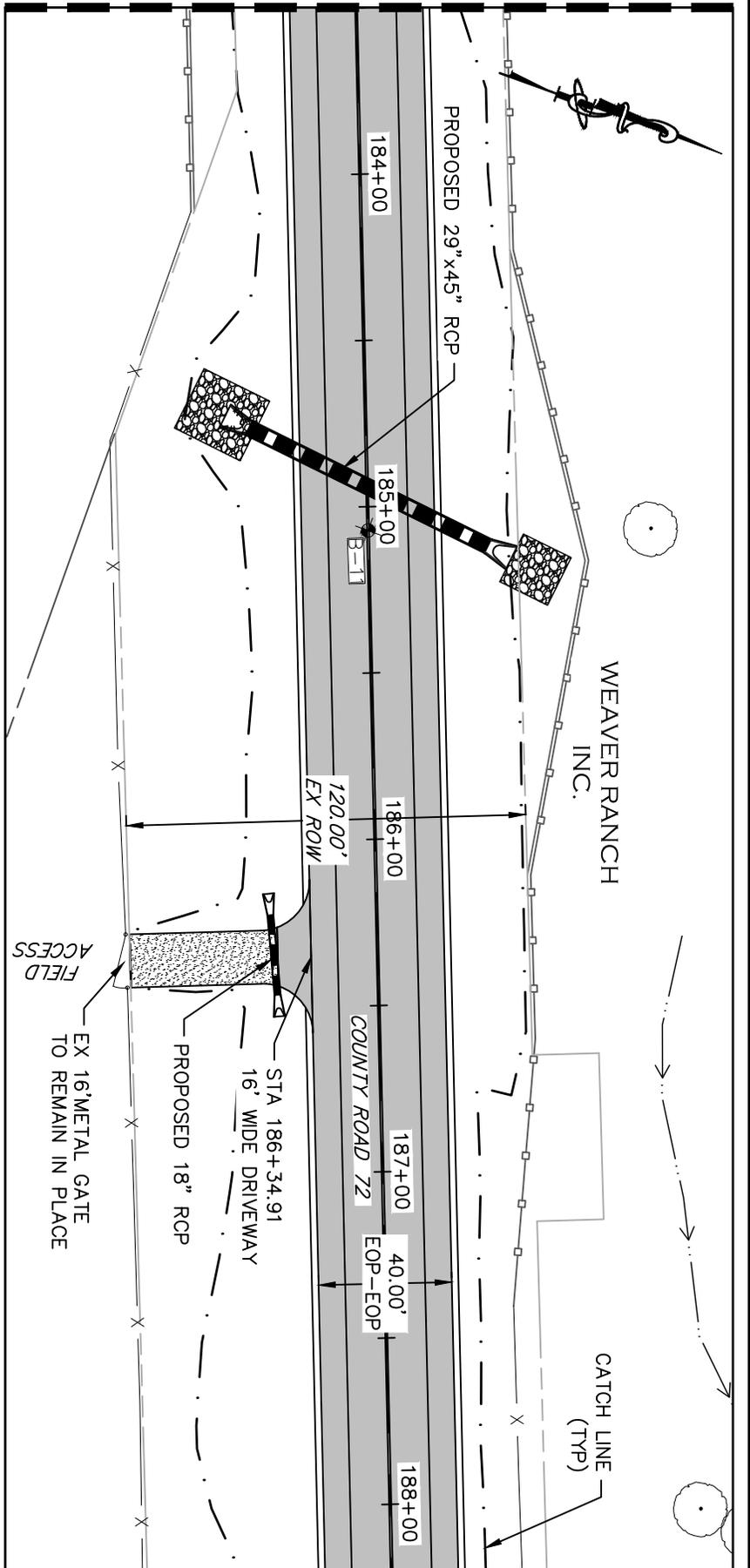
MATCH LINE STA 169+50
SEE SHEET 36



5620



MATCH LINE STA 183+50
SEE SHEET 38



5590										
5580										
5570										
5560										
5550										
5540										
5530										
5520										

VPI STA: 184+00.00
VPI EL=5545.60

29" x 45" RCP CULVERT
INV=5538.01

B-11 STA 185+07
9.5" ABC
9.5' ± CLAYEY SAND
BORING DEPTH 10.5'

-1.26%

FIELD ACCESS
EX 16' METAL GATE
TO REMAIN IN PLACE

PROPOSED 18" RCP
16' WIDE DRIVEWAY
STA 186+34.91

COUNTY ROAD 72

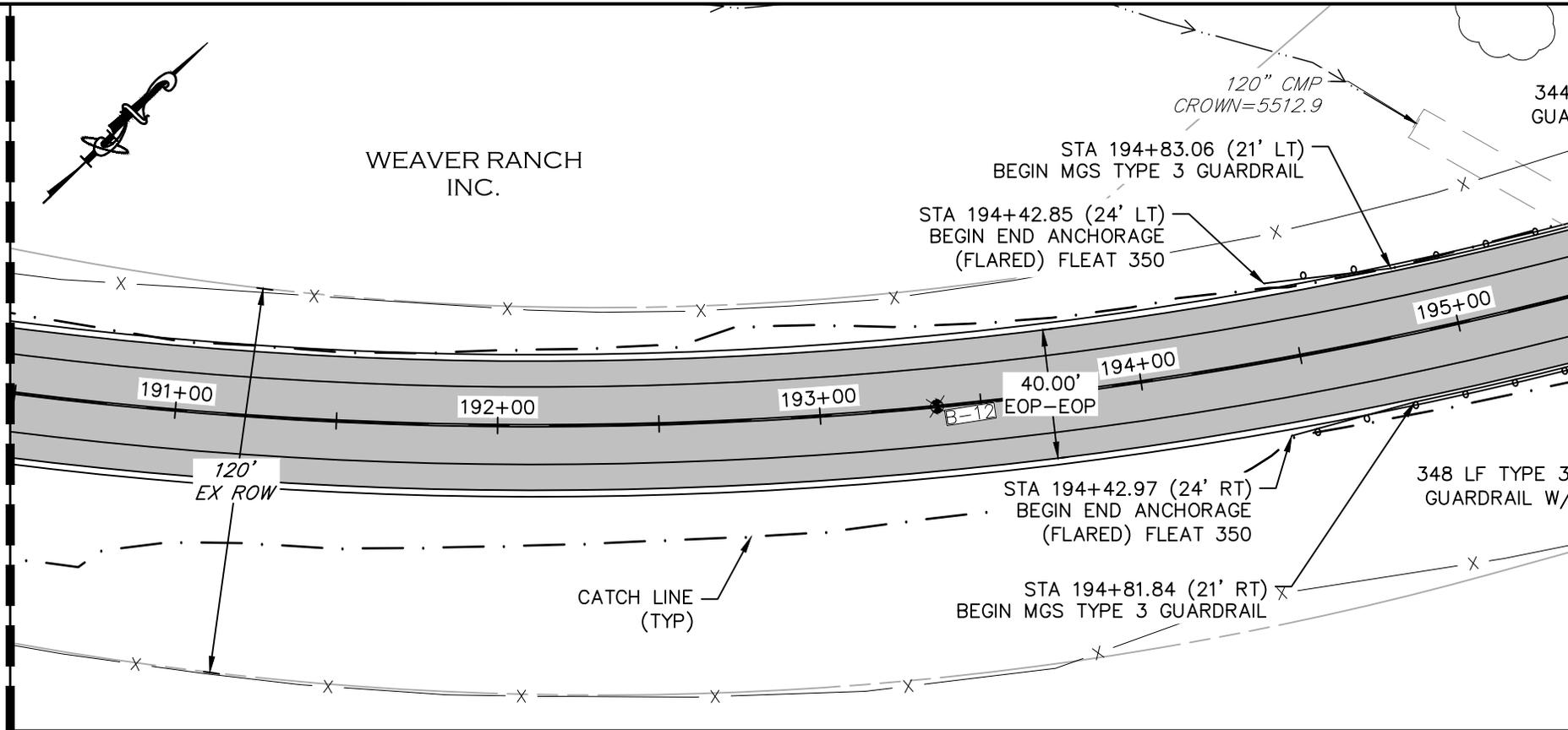
40.00'
EOP-EOP

CATCH LINE
(TYP)

183+50 184+00 184+50 185+00 185+50 186+00 186+50 187+00 187+50 188+00

MATCH LINE STA 190+50
SEE SHEET 39

WEAVER RANCH
INC.



200.00' VC
VPI STA: 189+65.00
VPI EL=5538.50

A.D. = -1.42%

K=140.68

VPC STA: 188+65.00

VPC EL=5539.76

VPT STA: 190+65.00

VPT EL=5535.82

VPC STA: 194+15.00

VPC EL=5526.45

VPT STA: 194+15.00

VPT EL=5526.45

VPC STA: 194+15.00

VPC EL=5526.45

VPT STA: 194+15.00

VPT EL=5526.45

VPC STA: 194+15.00

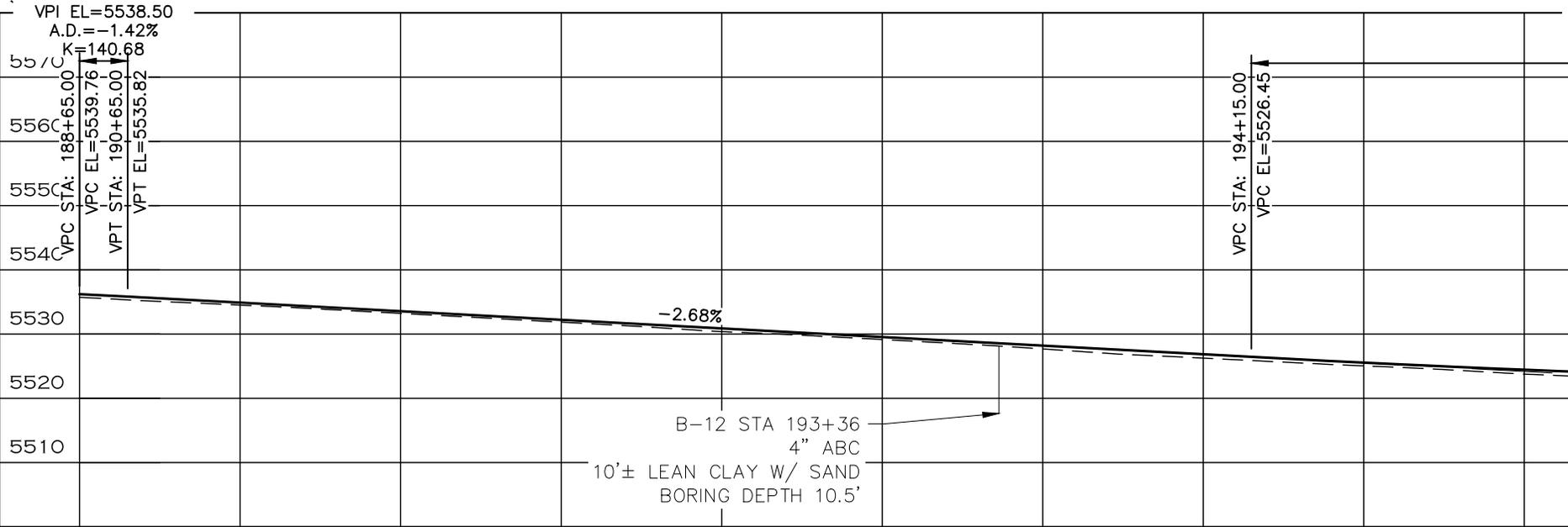
VPC EL=5526.45

VPT STA: 194+15.00

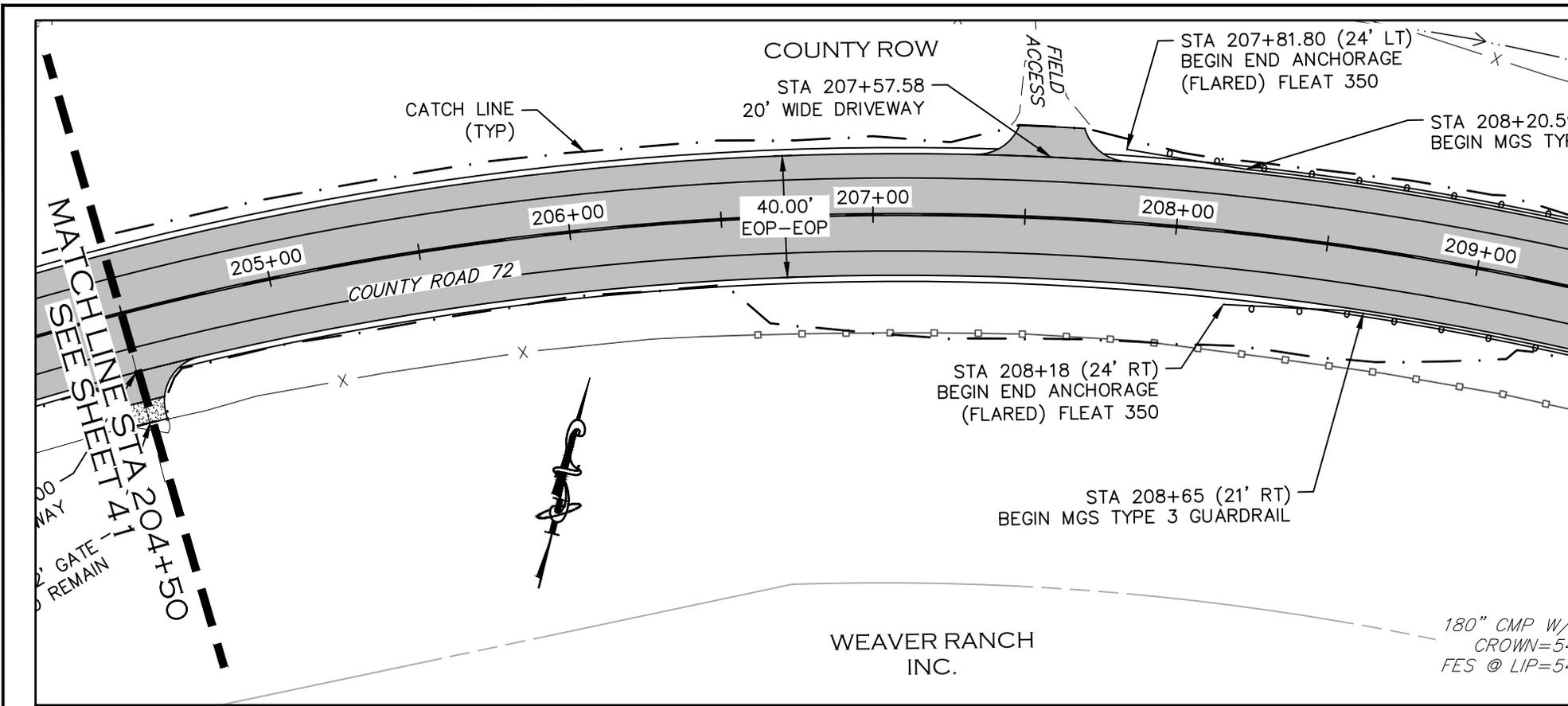
VPT EL=5526.45

VPC STA: 194+15.00

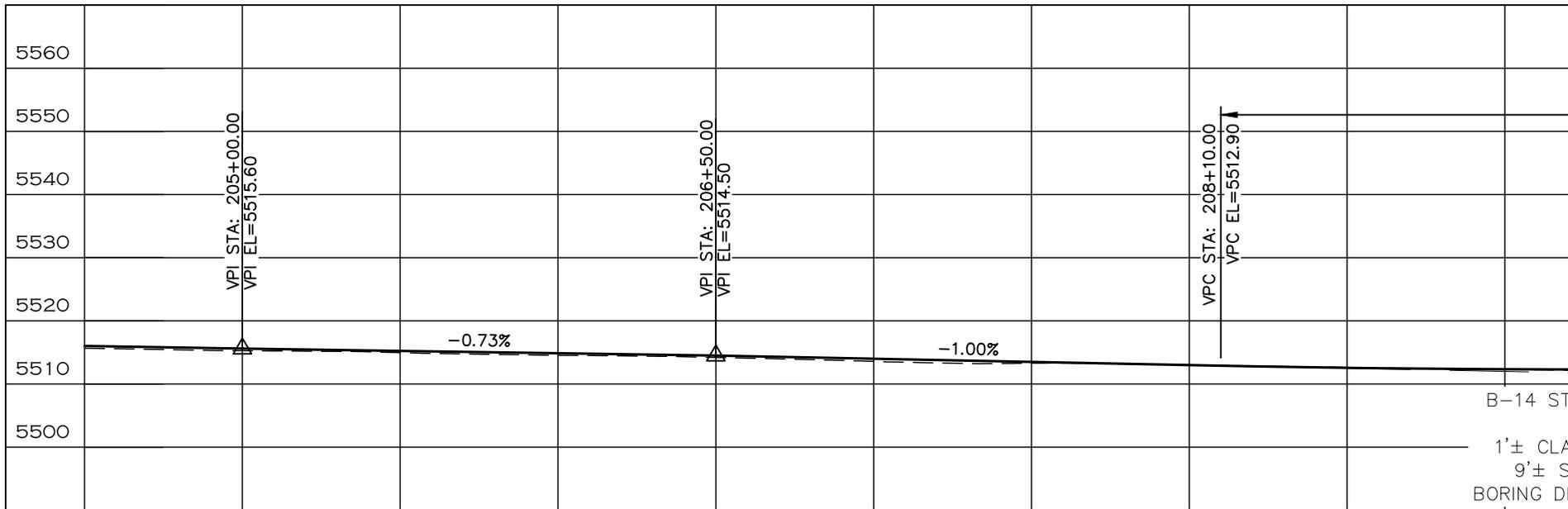
VPC EL=5526.45



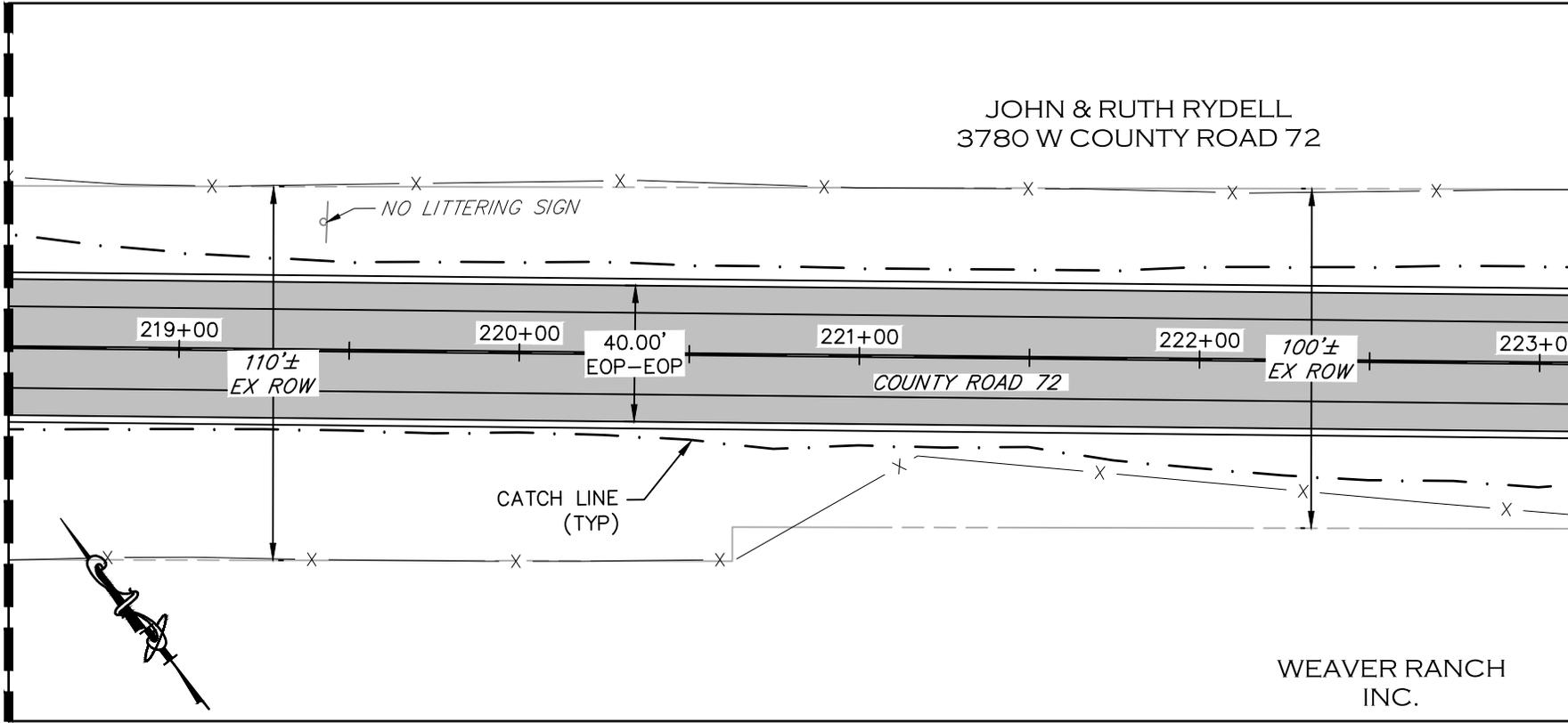
B-12 STA 193+36
4" ABC
10'± LEAN CLAY W/ SAND
BORING DEPTH 10.5'



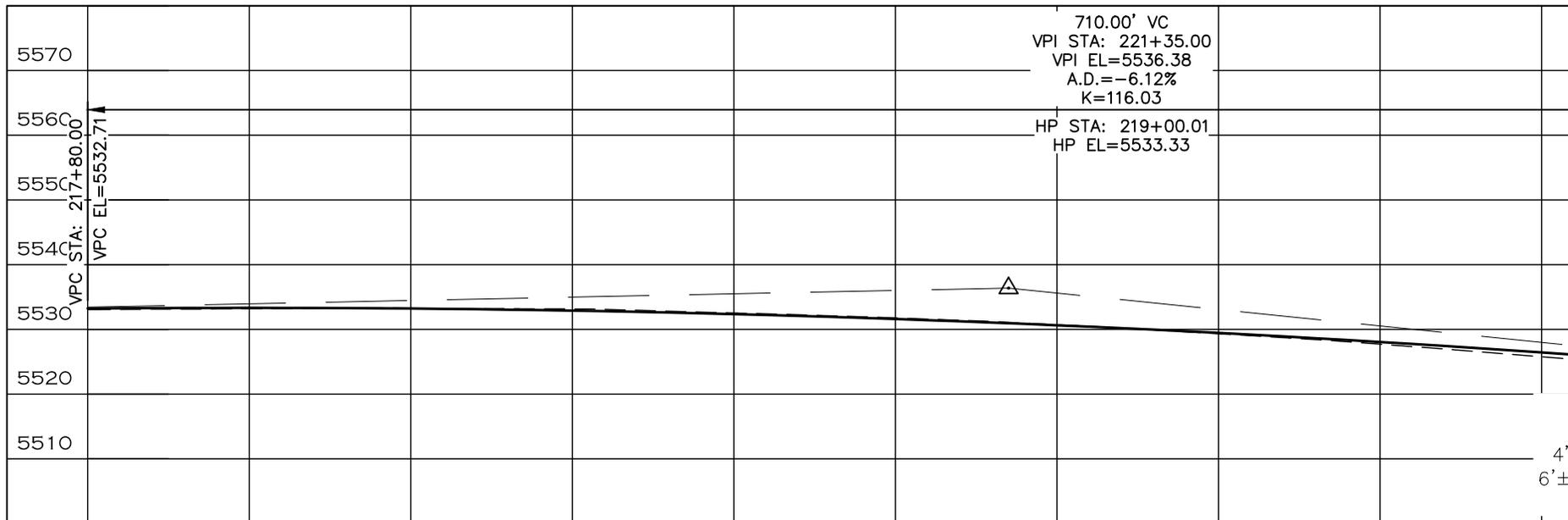
5570



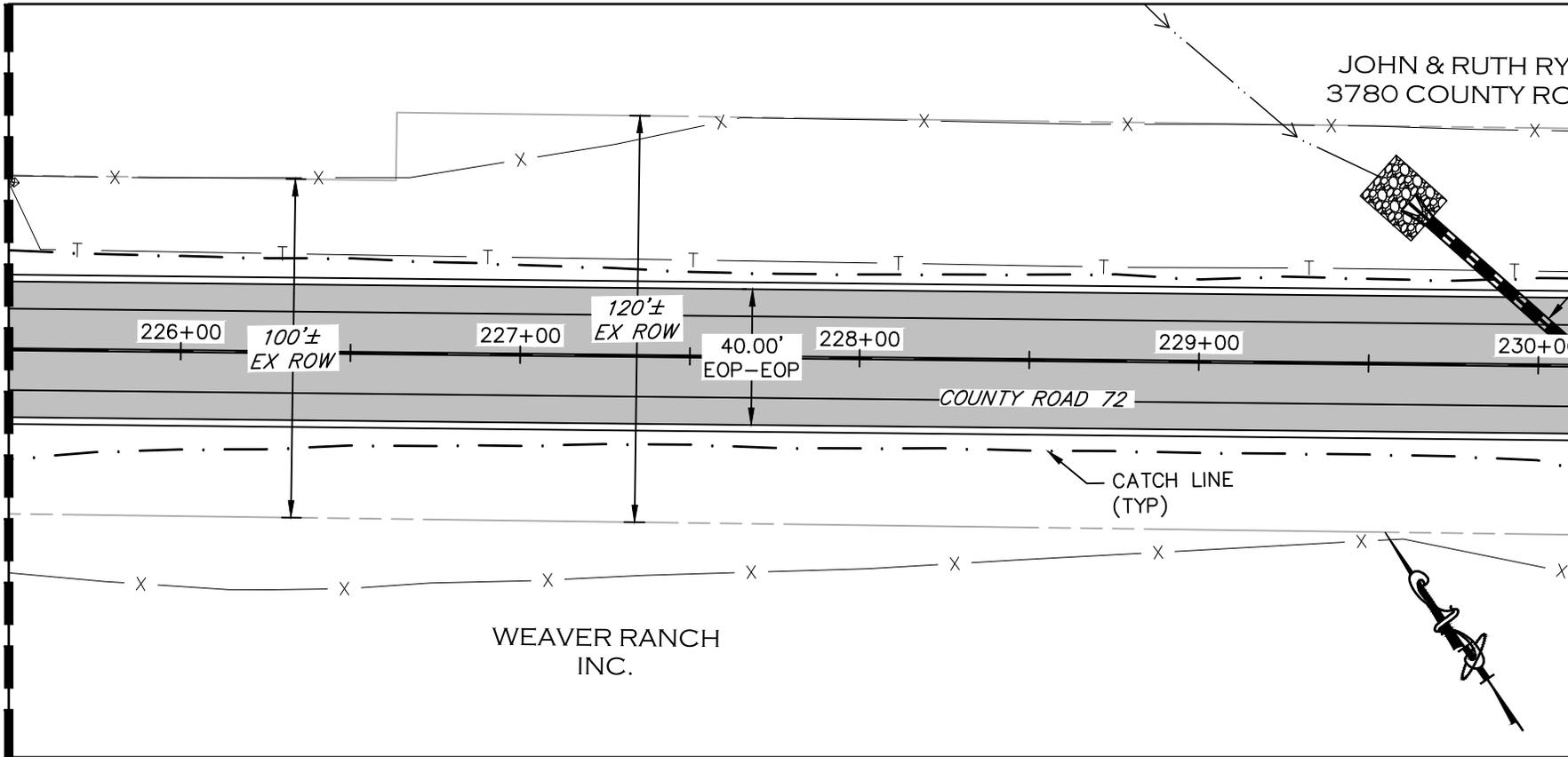
MATCH LINE STA 218+50
SEE SHEET 43



5580

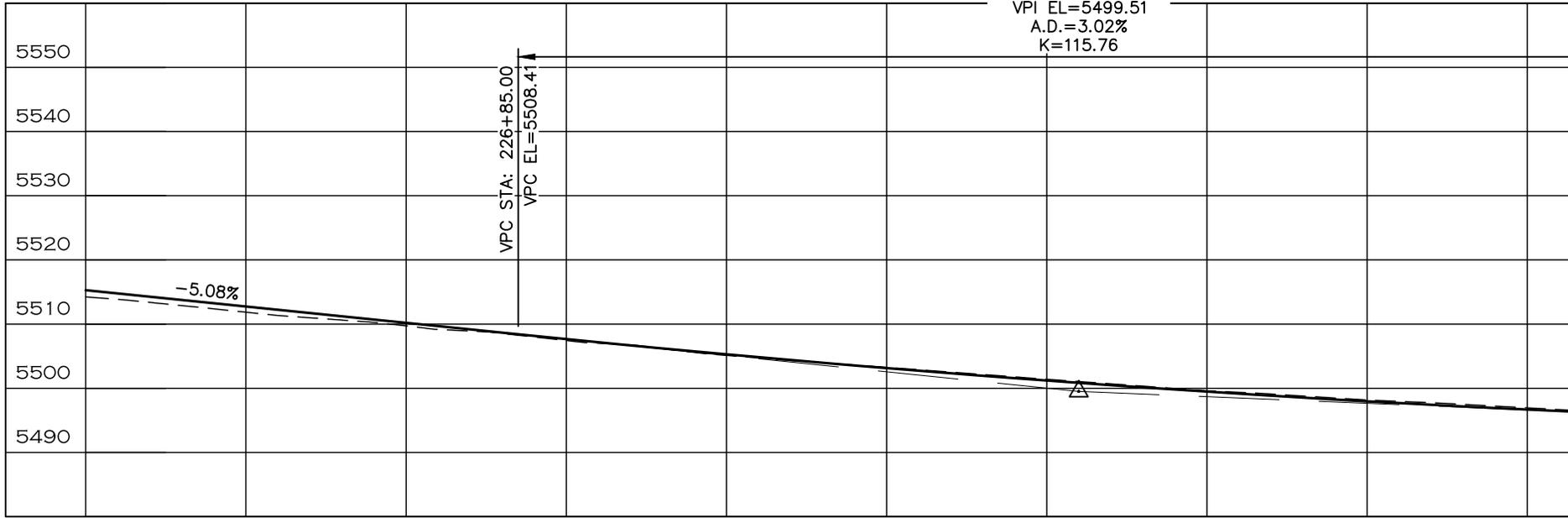


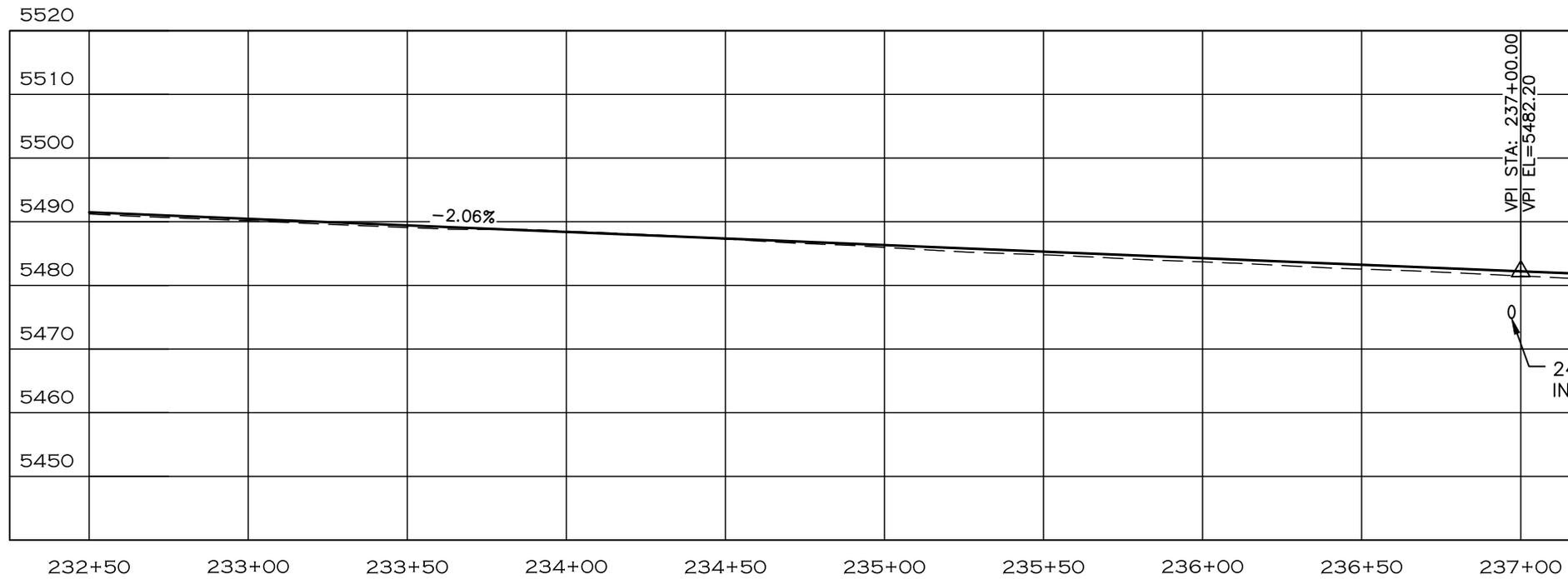
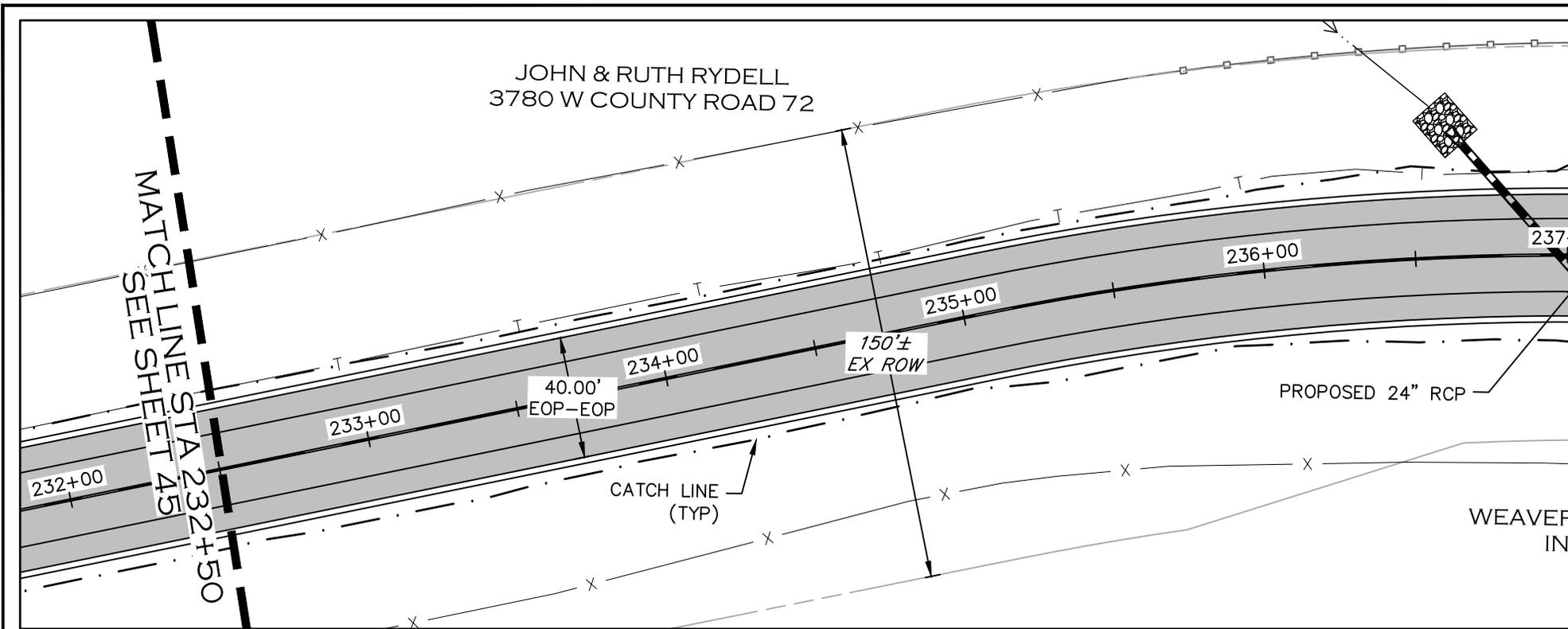
MATCHLINE STA 225+50
SEE SHEET 44

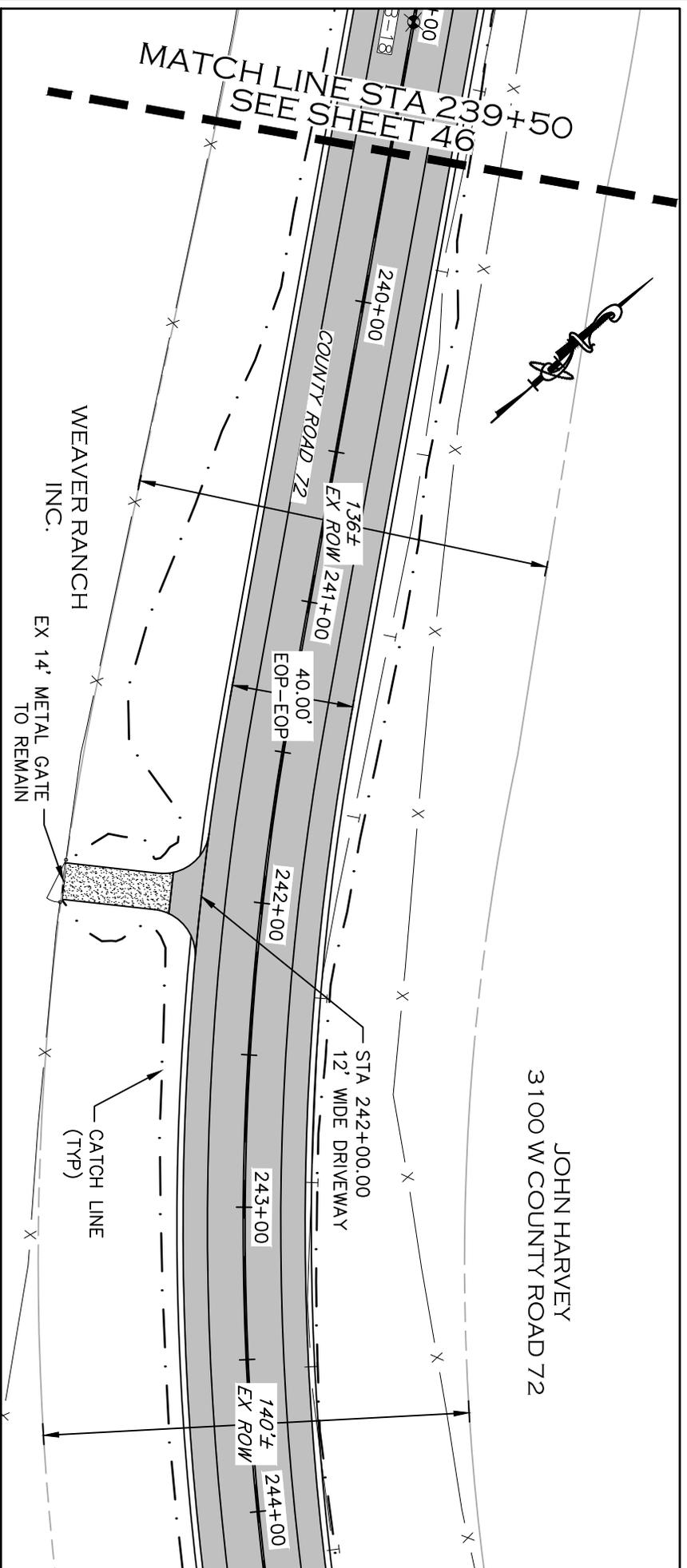


5560

350.00' VC
VPI STA: 228+60.00
VPI EL=5499.51
A.D.=3.02%
K=115.76



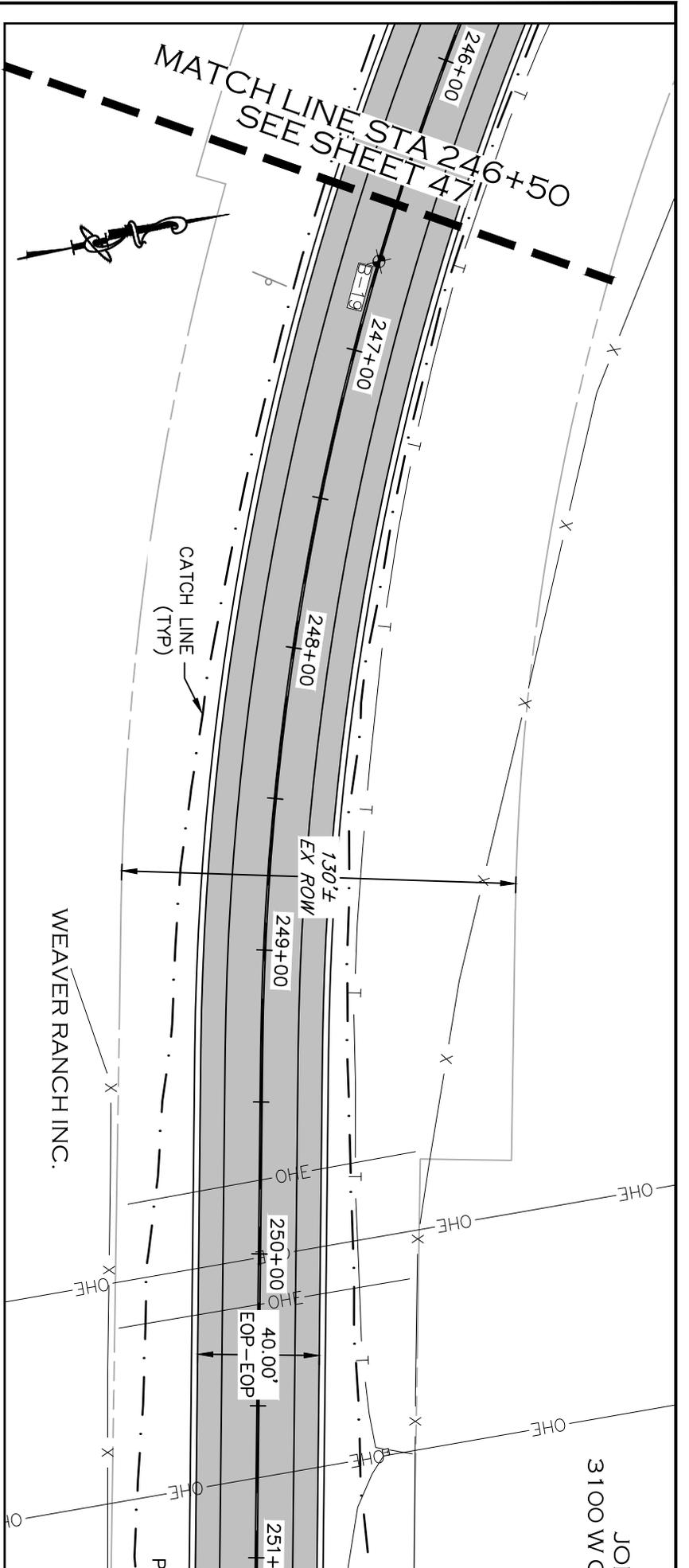




5520																			
5510																			
5500																			
5490																			
5480																			
5470																			
5460																			
5450																			

VPI STA: 241+15.00
VPI EL=5474.00

-2.40%

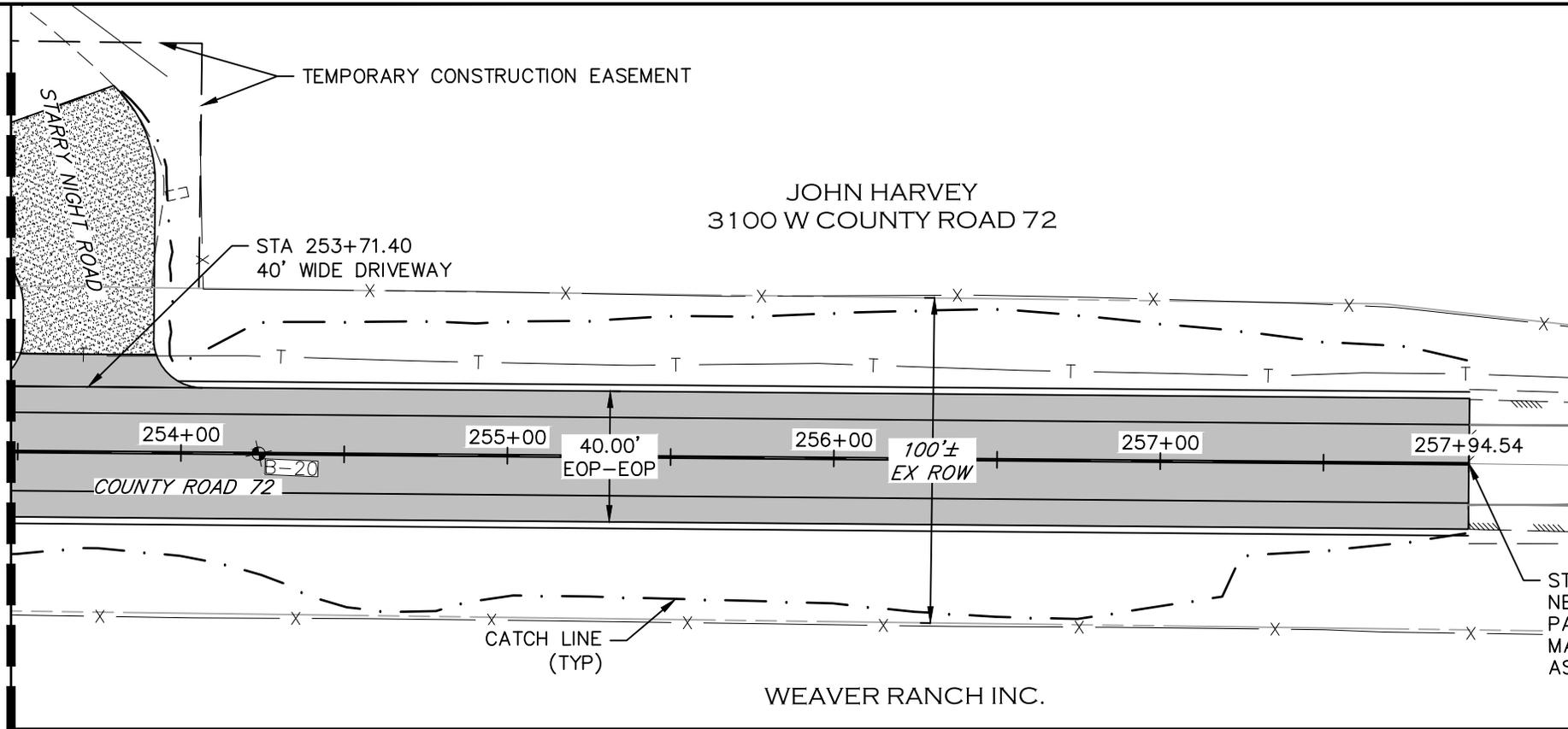


5500	200.00' VC VPI STA: 247+15.00 VPI EL=5460.20 A.D.=0.65% K=307.13	
5490		
5480		
5470	VPC STA: 246+15.00 VPC EL=5462.30	
5460		VPT STA: 248+15.00 VPT EL=5458.75
5450		
5440		
5430		

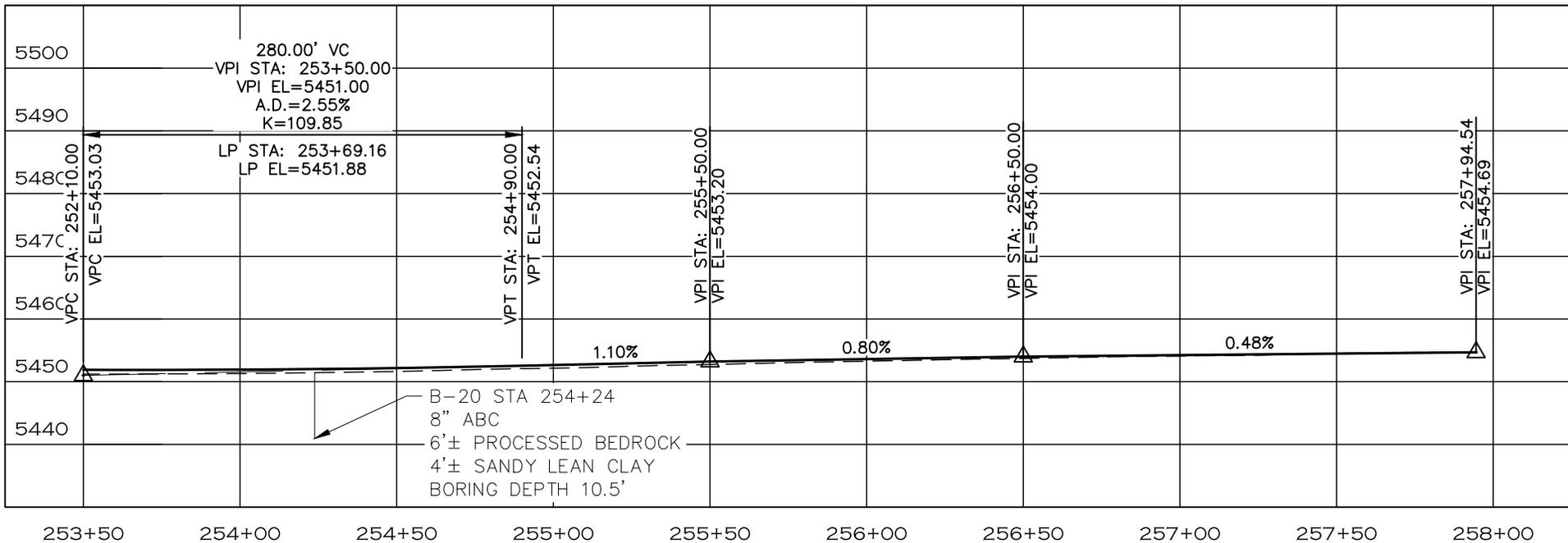
-1.45%

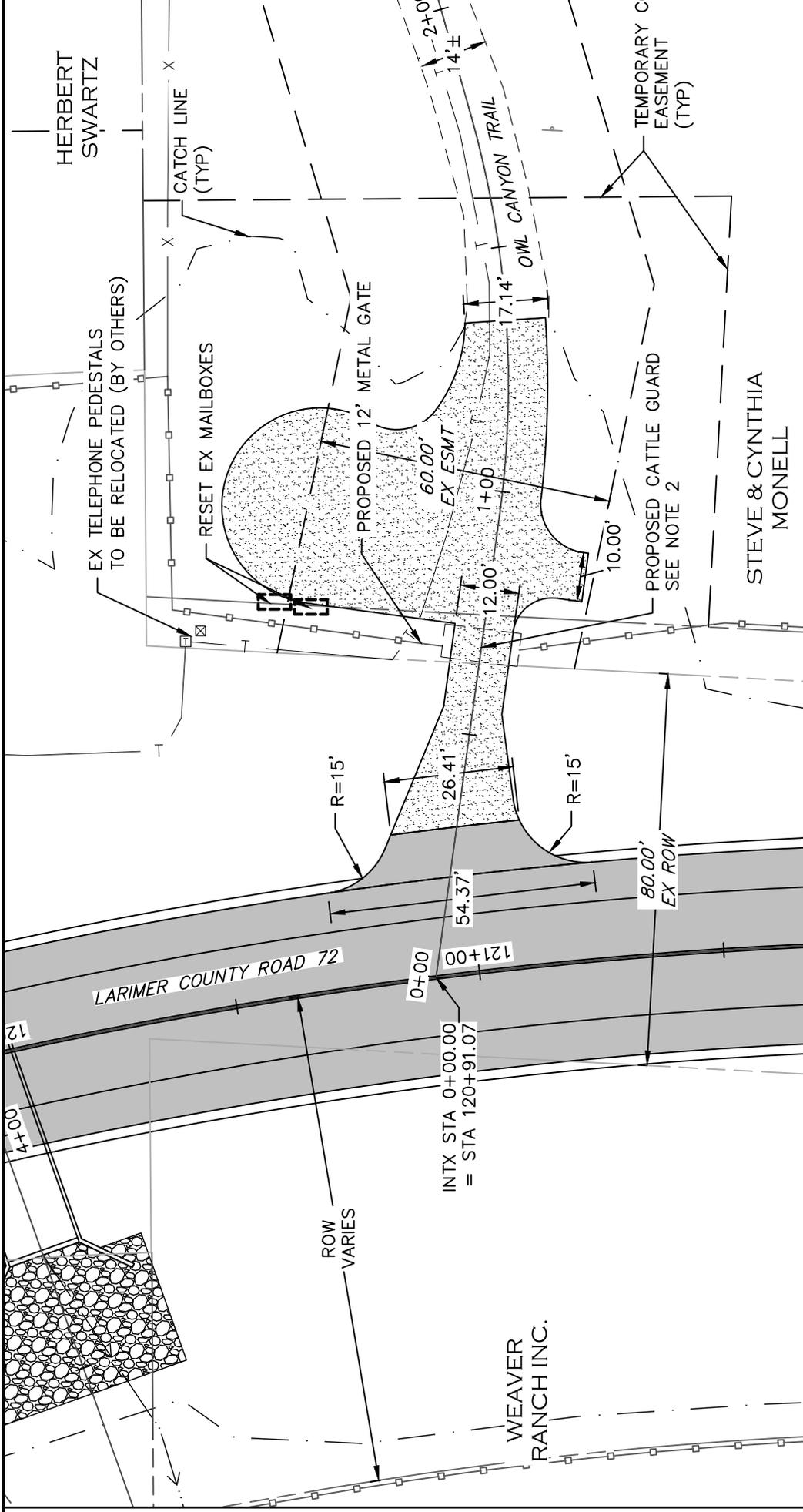
B-19 STA 246+70
0" ABC
2'± PROCESSED BEDROCK
8.5'± SILTSTONE/SANDSTONE
BORING DEPTH 10.5'

MATCHLINE STA 253+50
SEE SHEET 48



5510

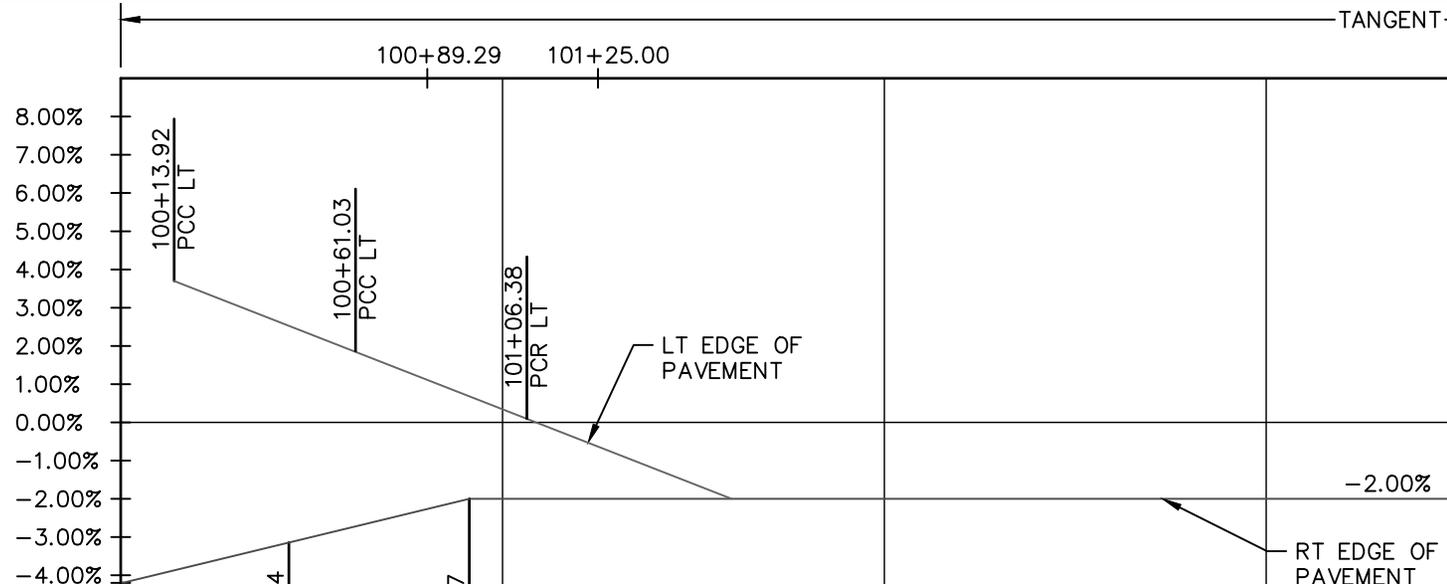
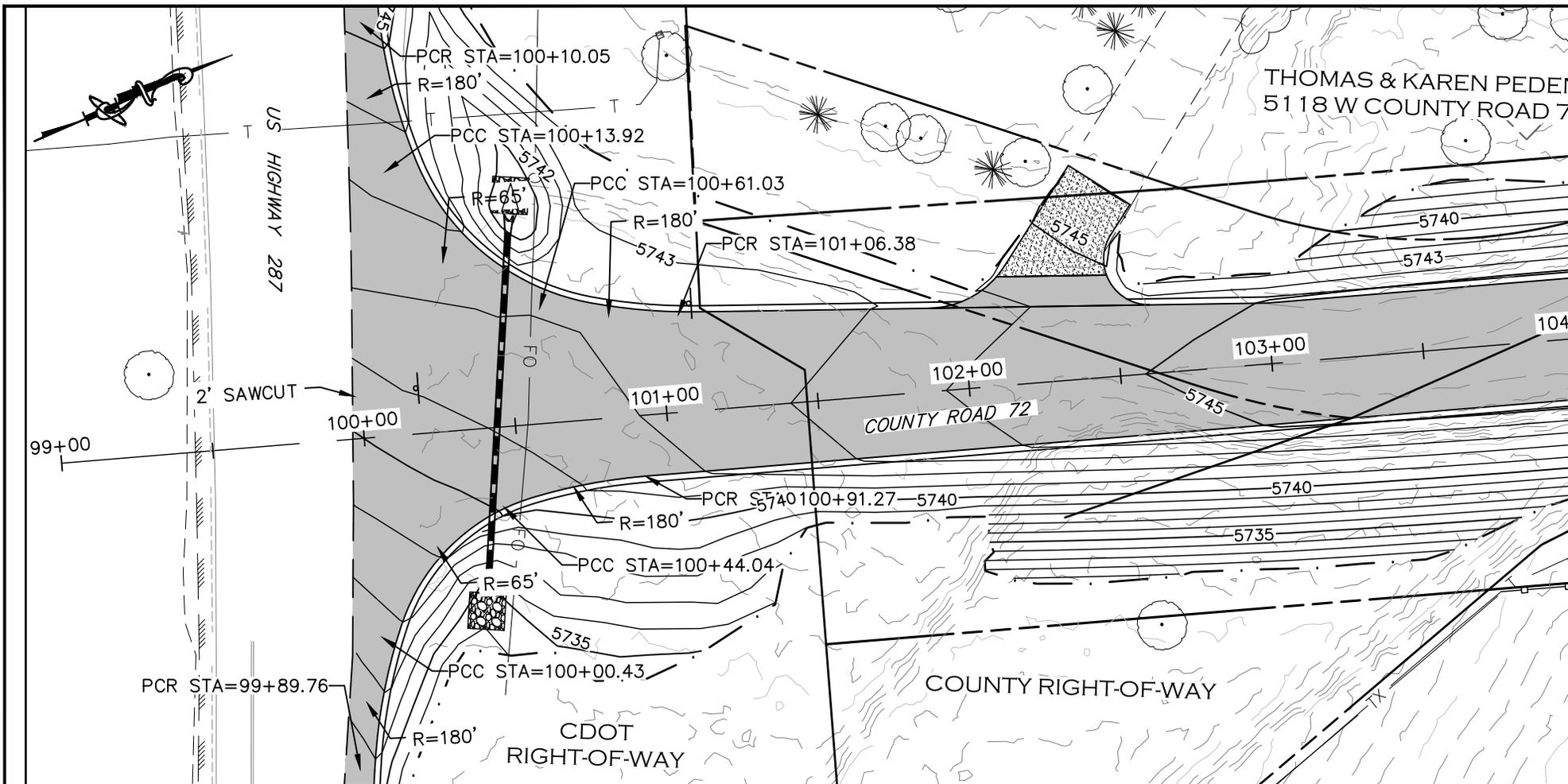




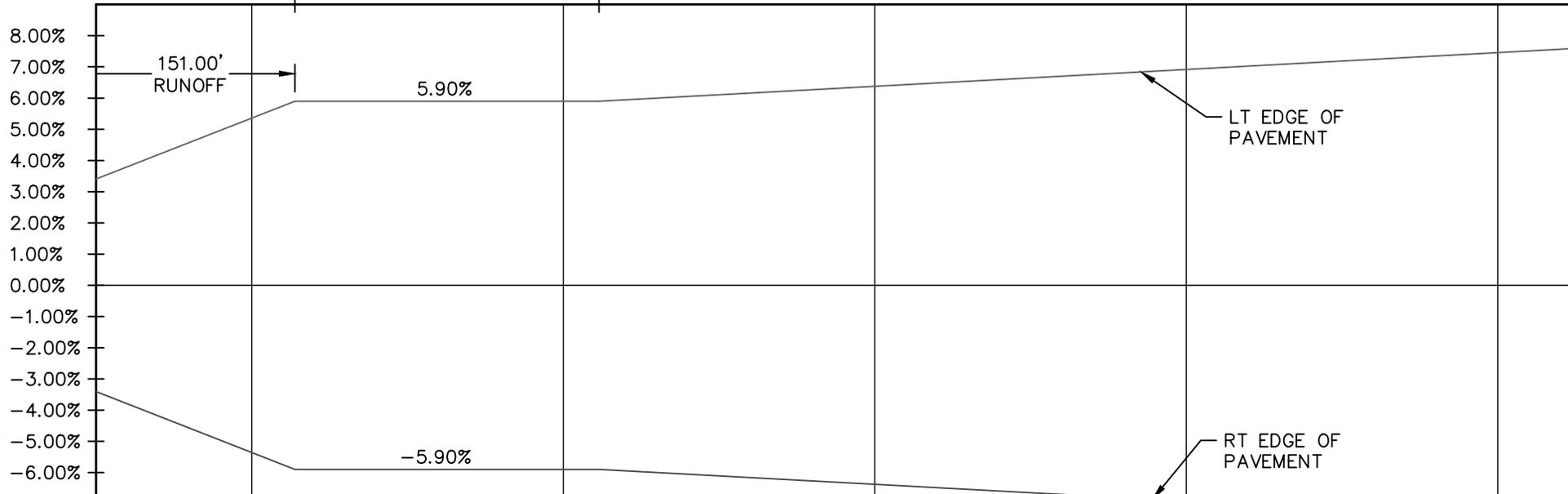
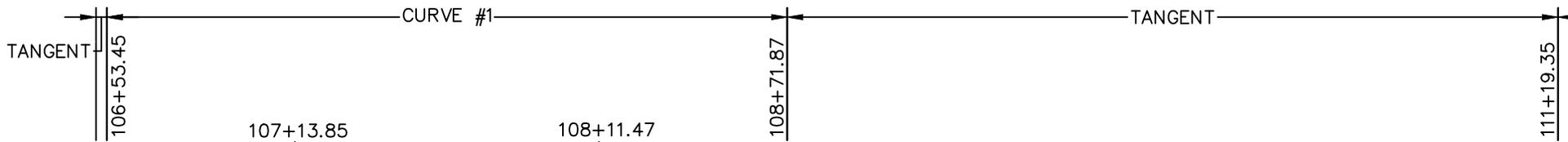
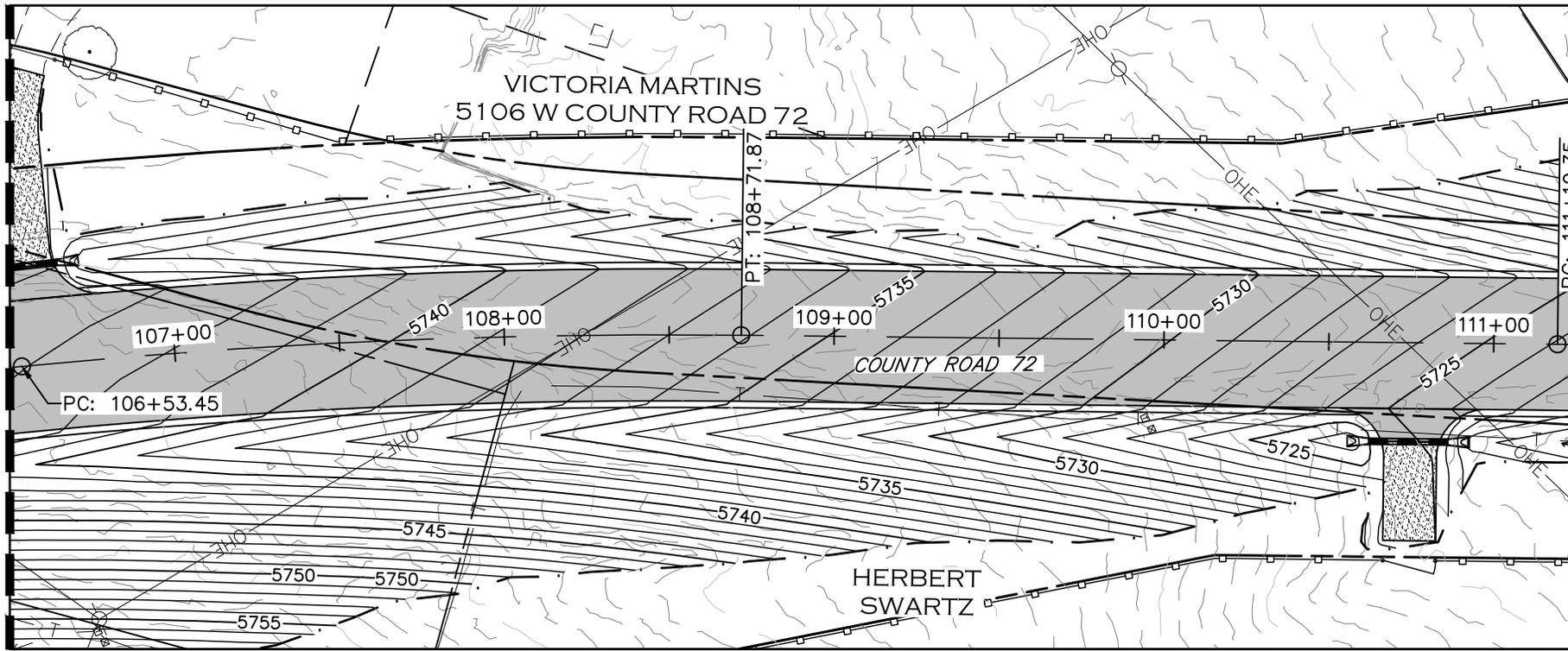
5730						
5720						
5710						
5700						

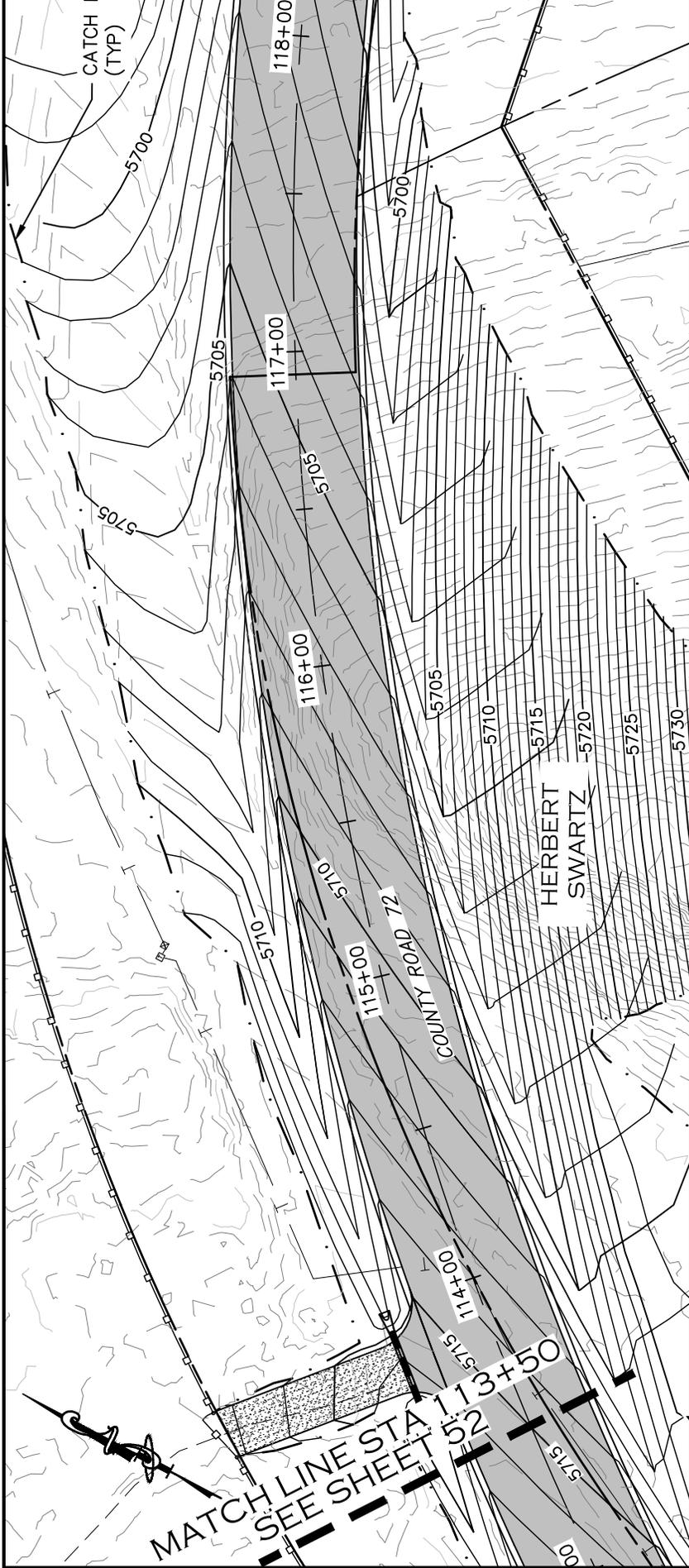
VPI STA: 0+00.00 VPI EL=5696.34
 VPI STA: 0+20.69 VPI EL=5697.89
 VPI STA: 0+31.02 VPI EL=5698.10
 VPI STA: 0+54.96 VPI EL=5697.62
 VPI STA: 0+94.70 VPI EL=5698.41
 VPI STA: 1+35.00 VPI EL=5700.00

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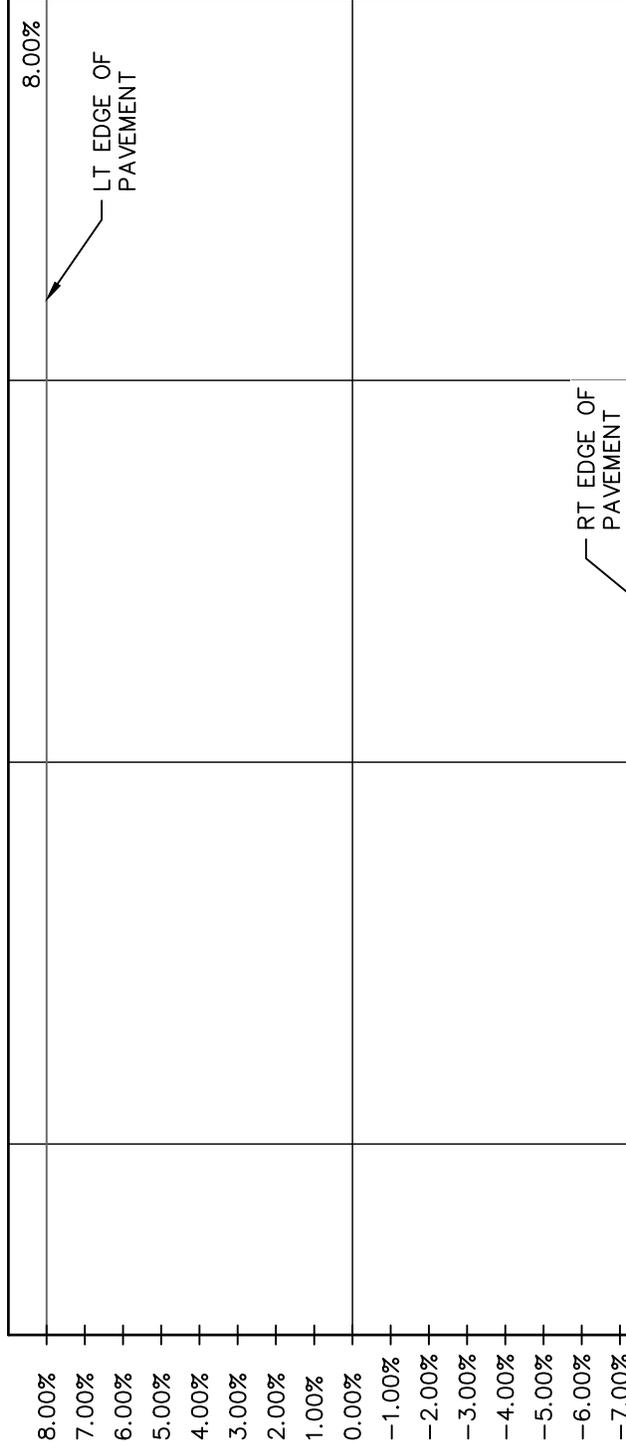


MATCH LINE STA 106+50
SEE SHEET 51

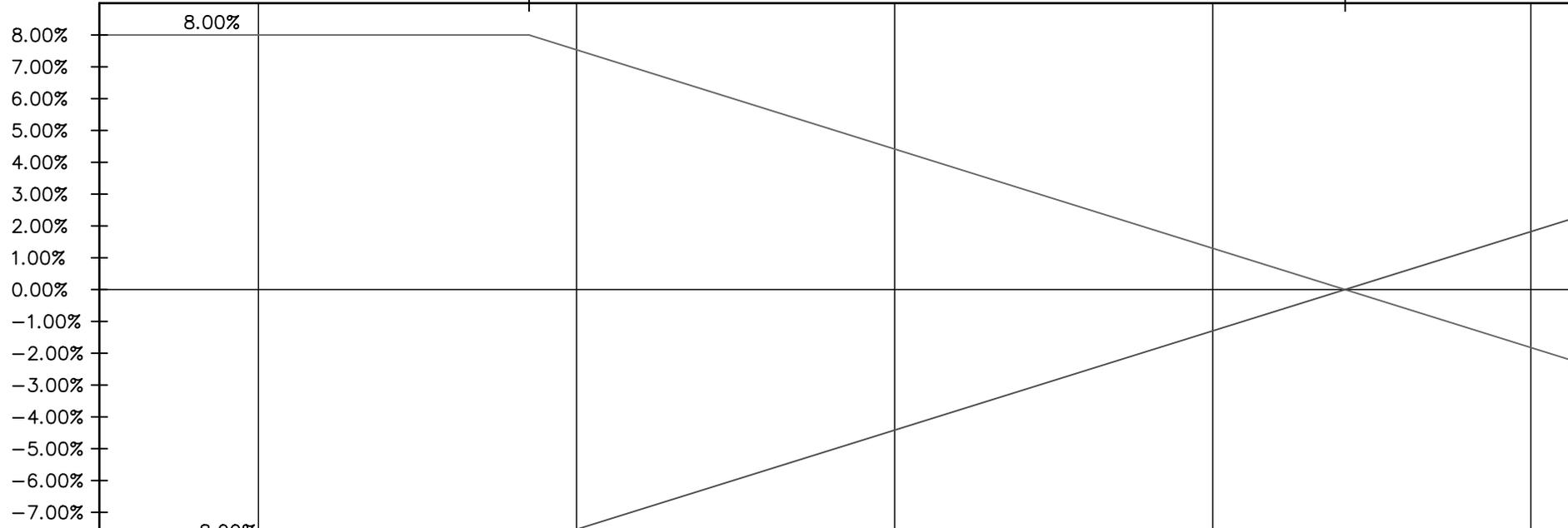
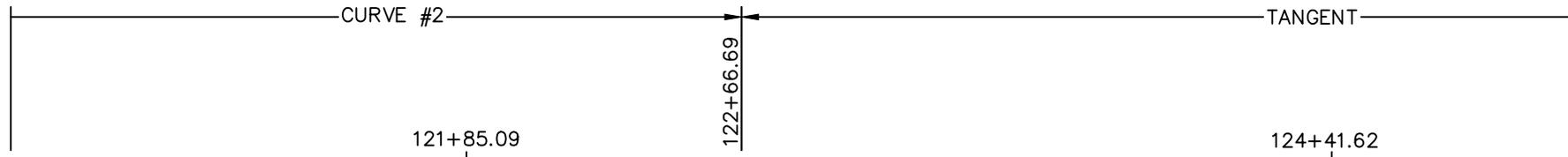
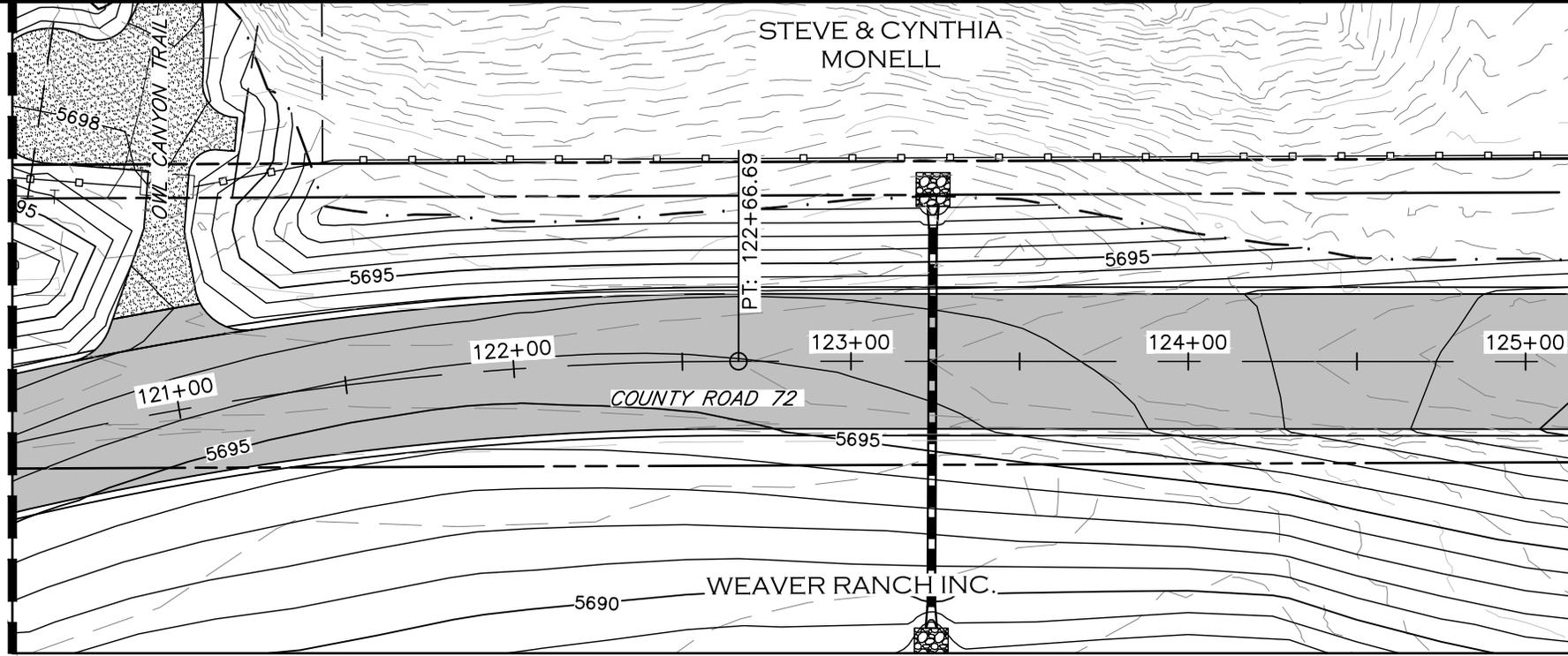


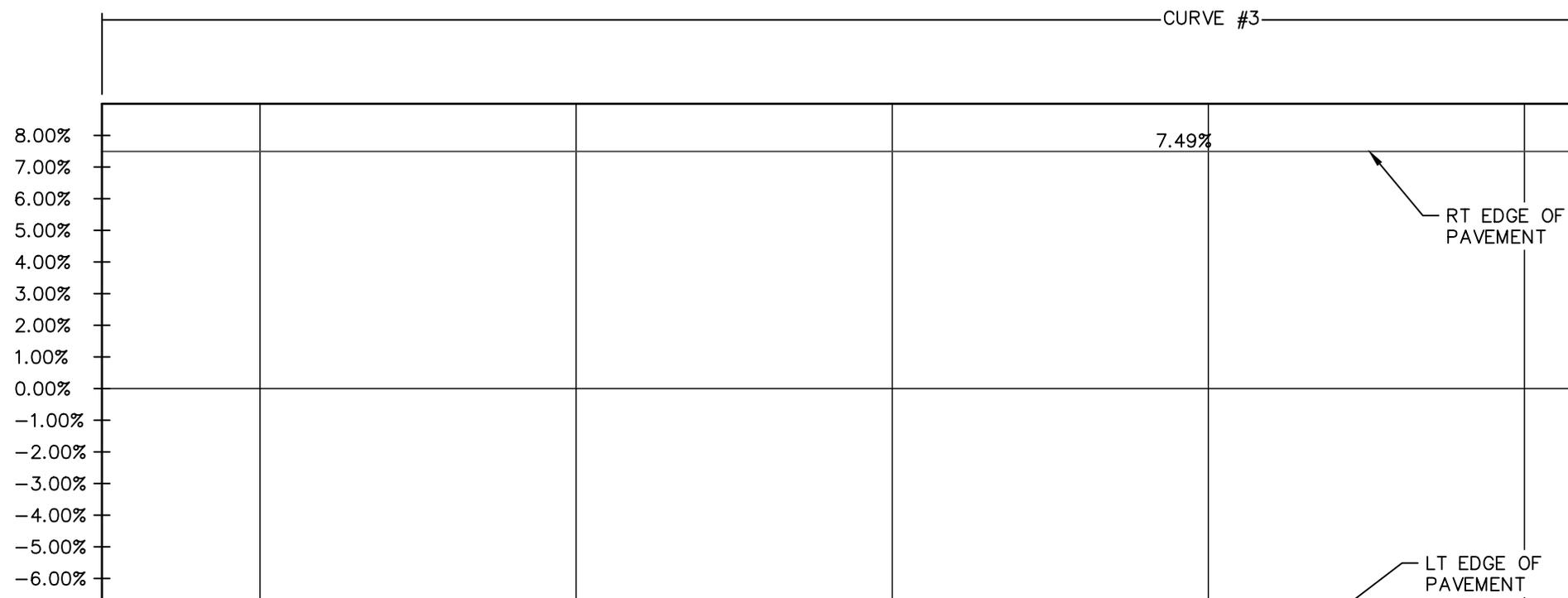
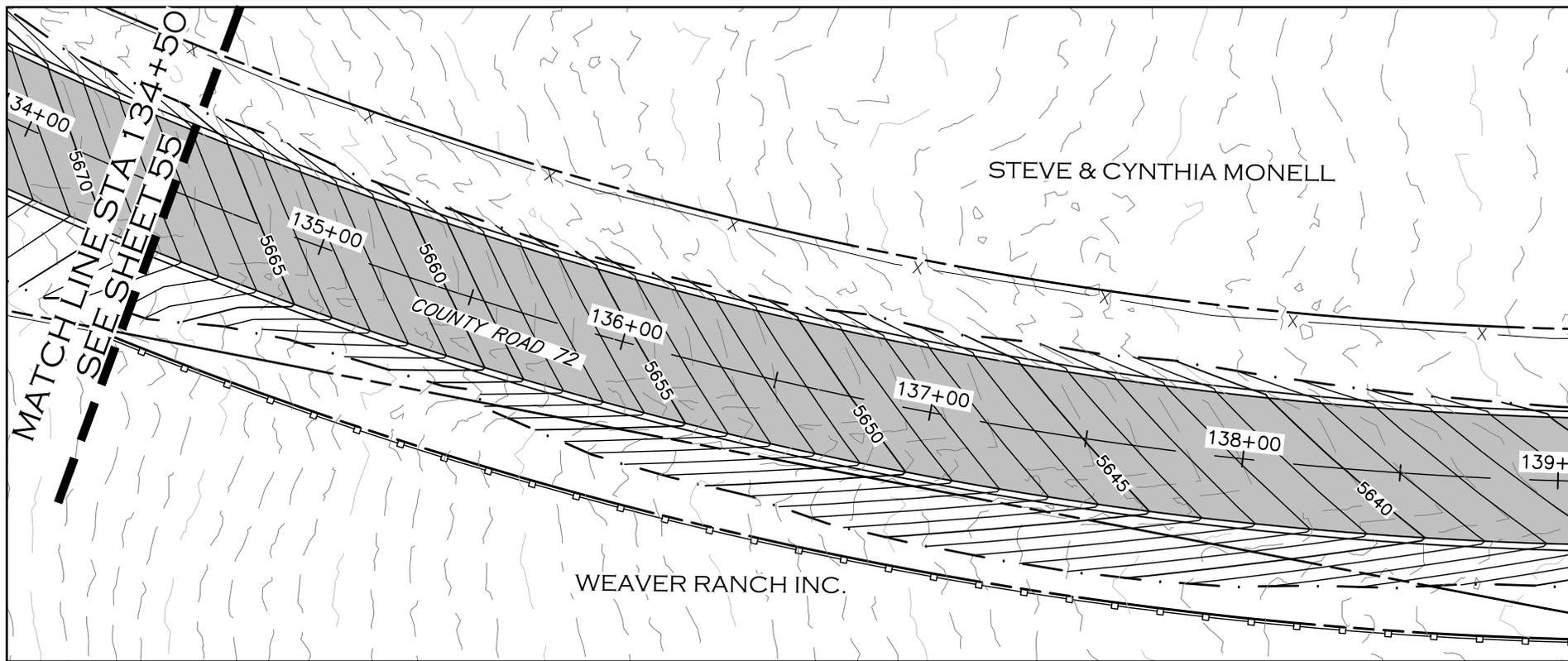


CURVE #2



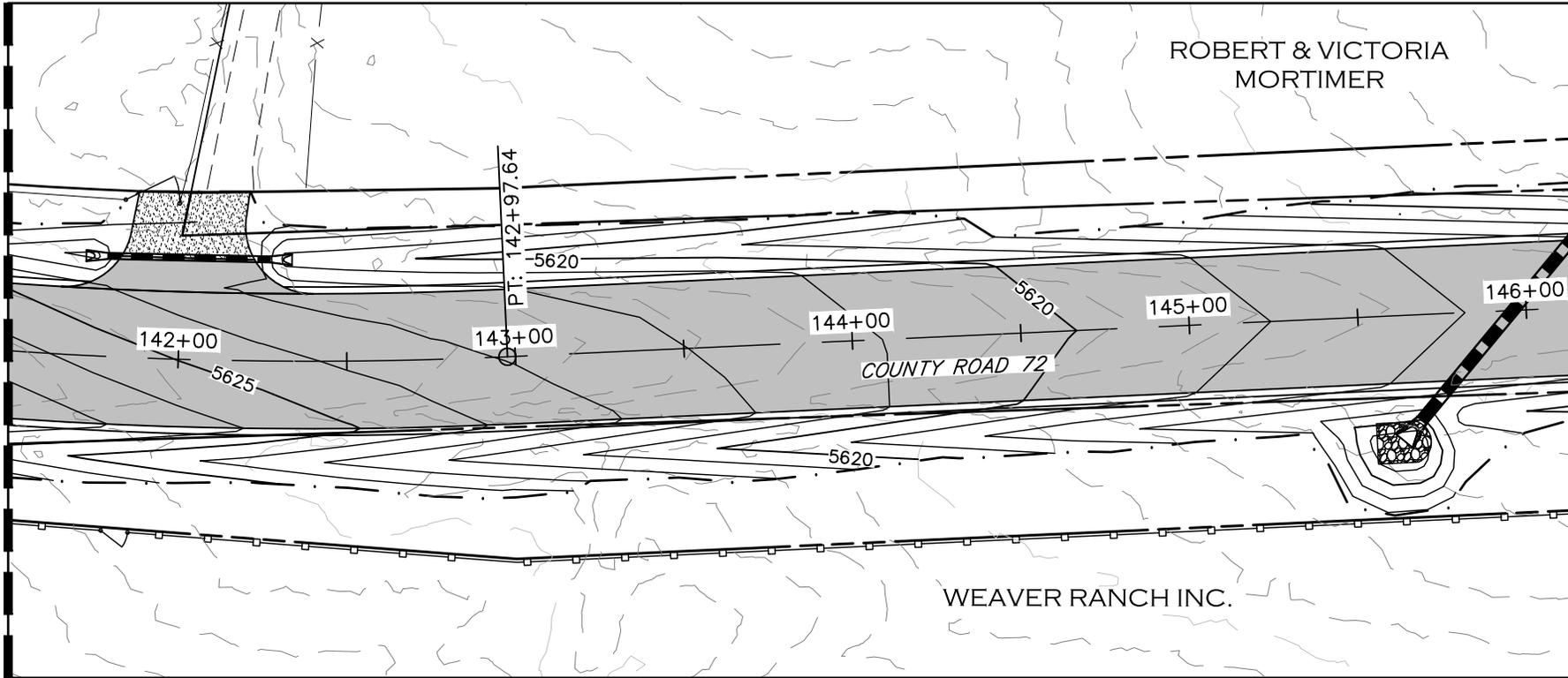
MATCHLINE STA 120+50
SEE SHEET 53





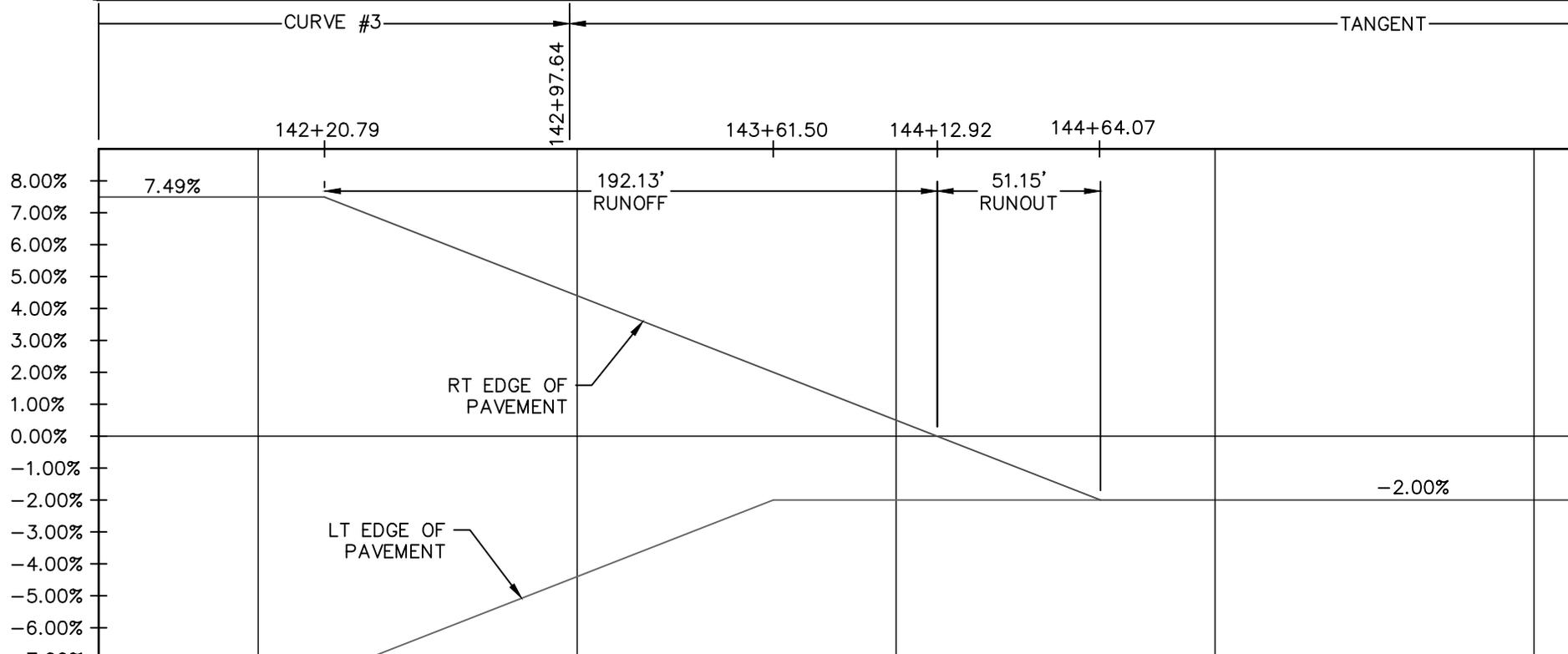
MATCH LINE STA 141+50
SEE SHEET 56

ROBERT & VICTORIA
MORTIMER

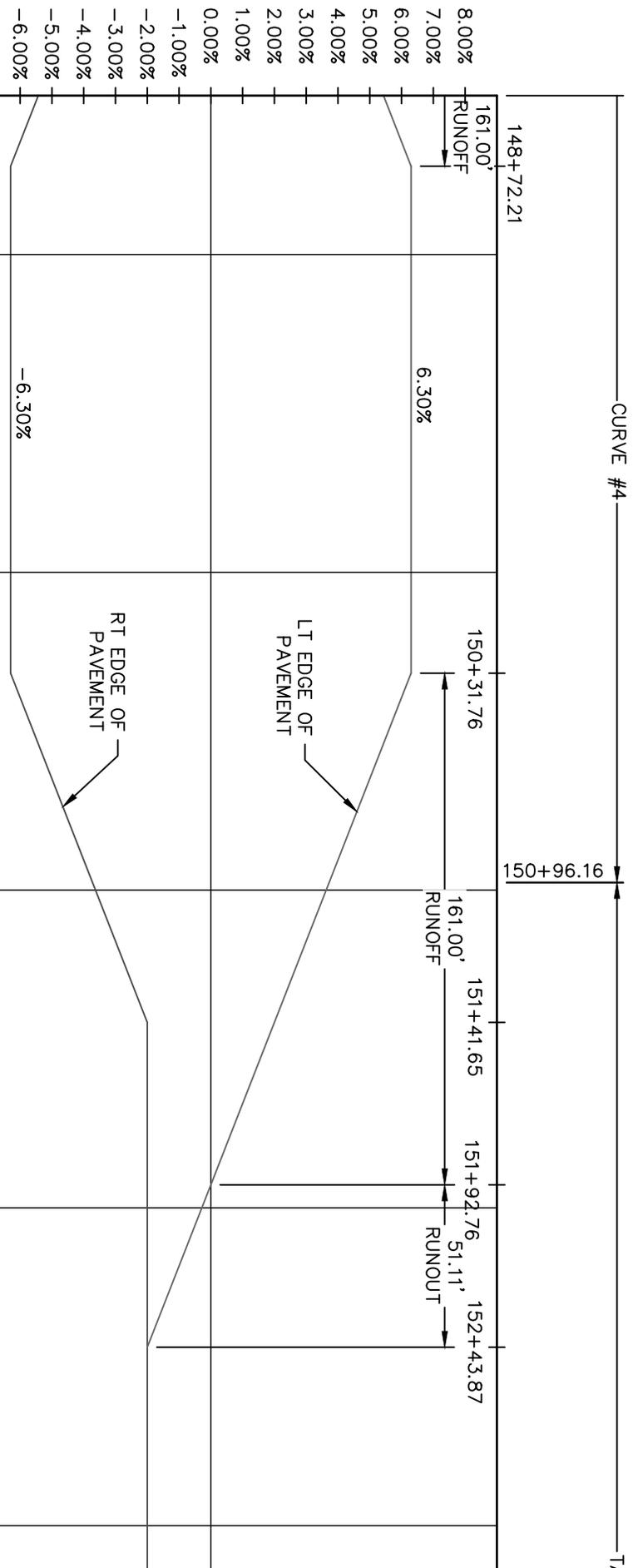
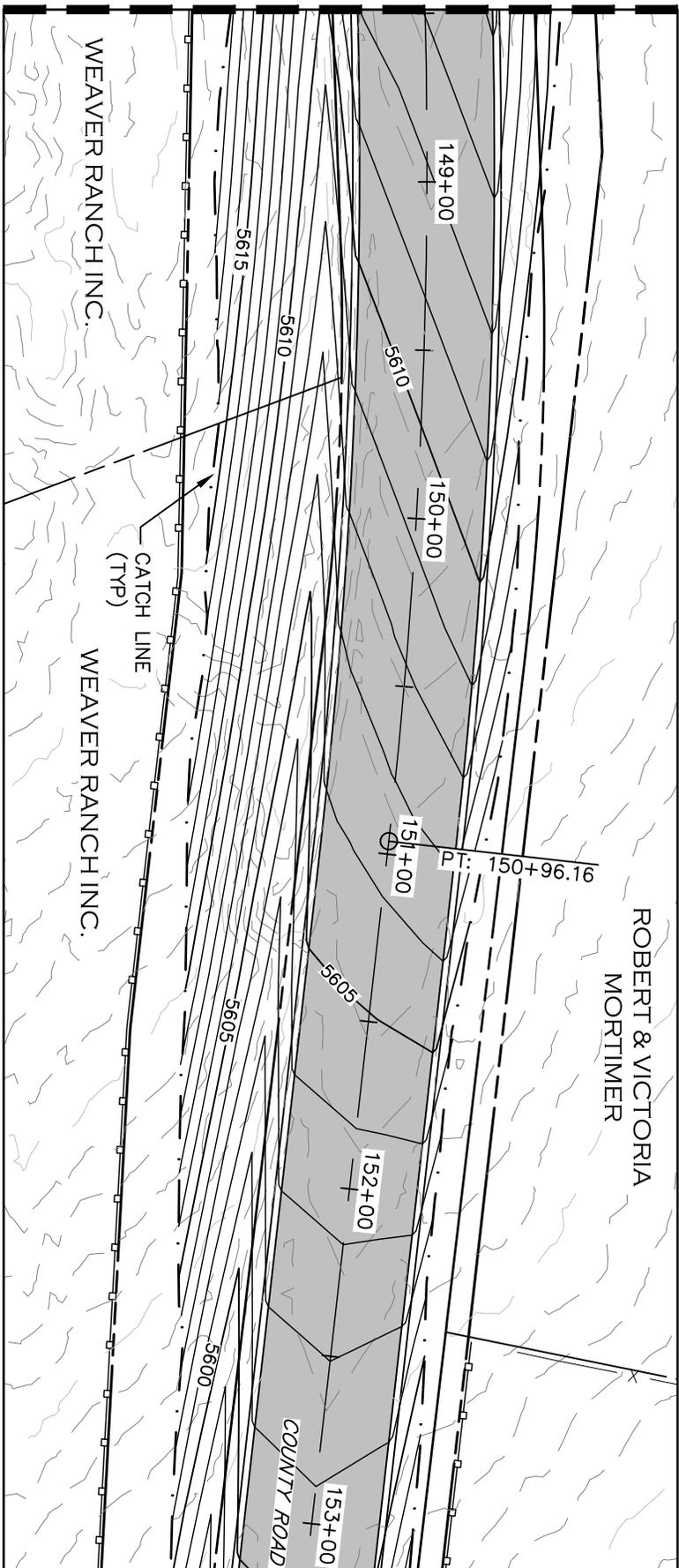


CURVE #3

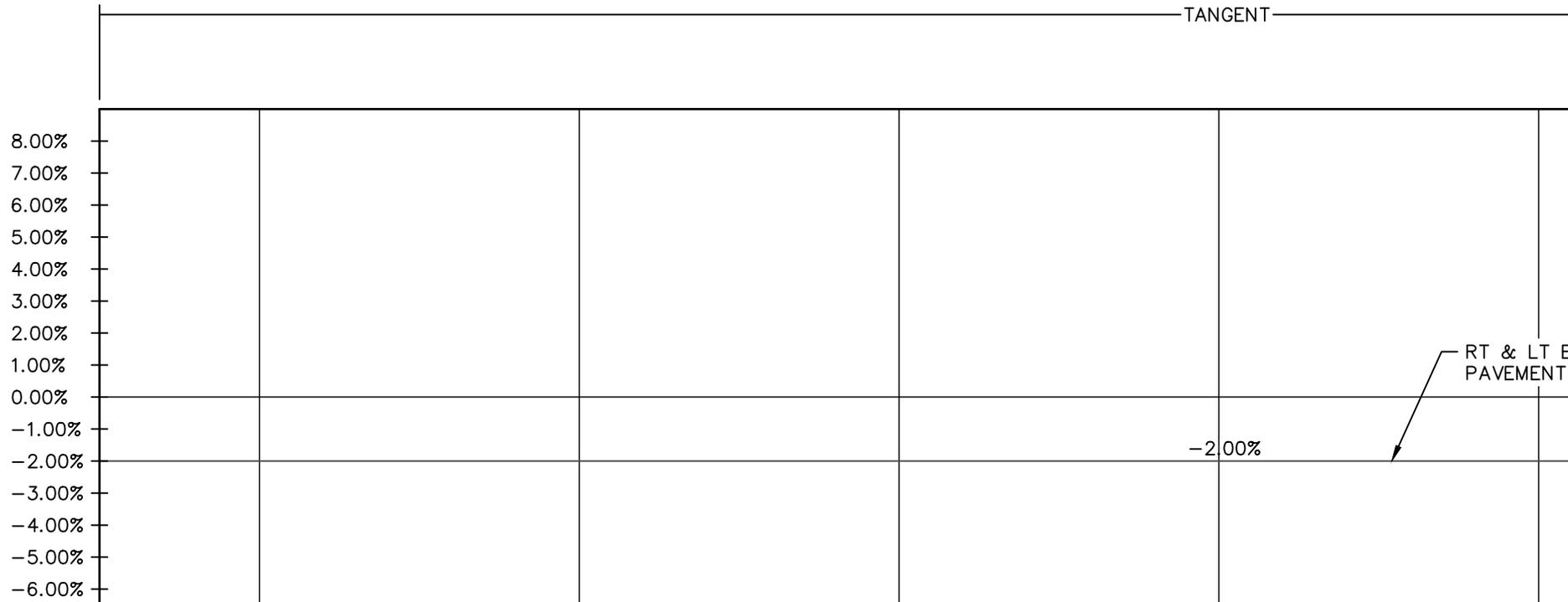
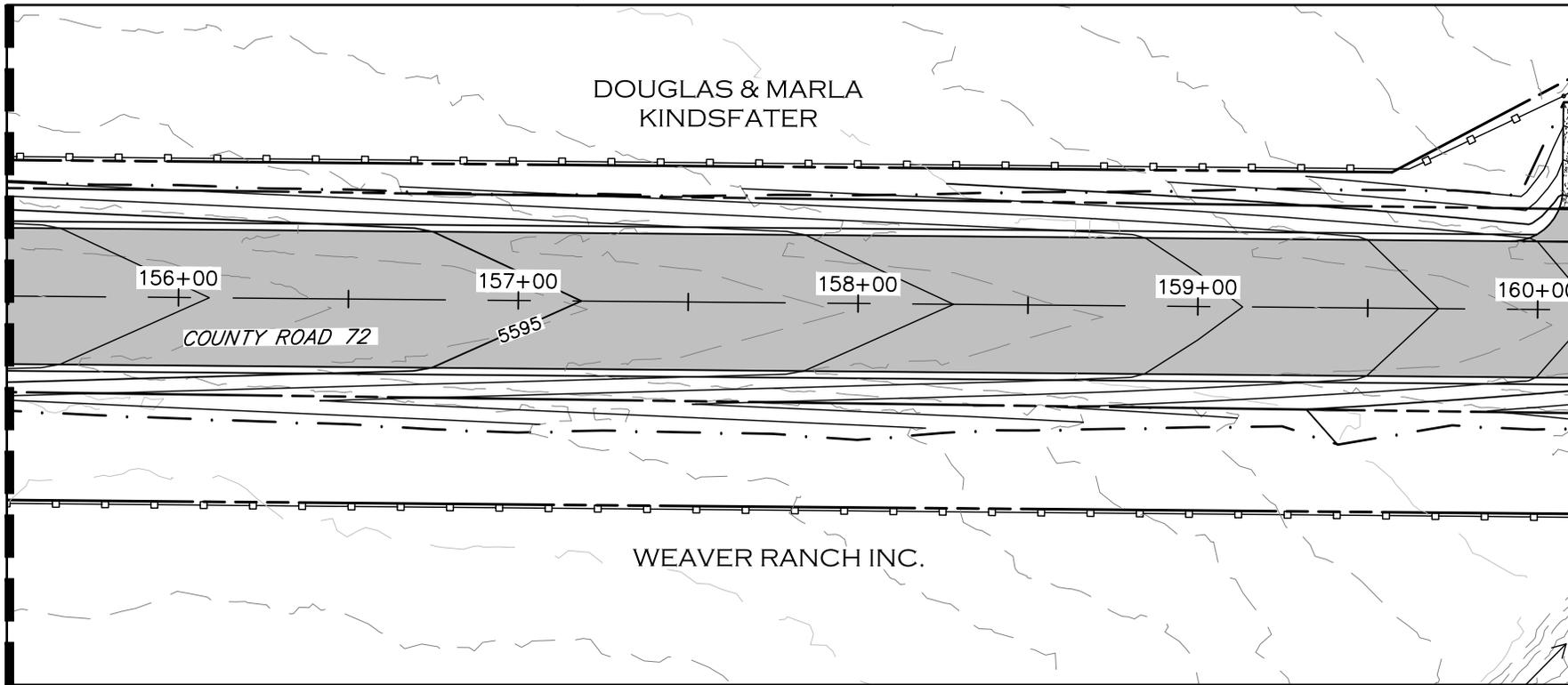
TANGENT



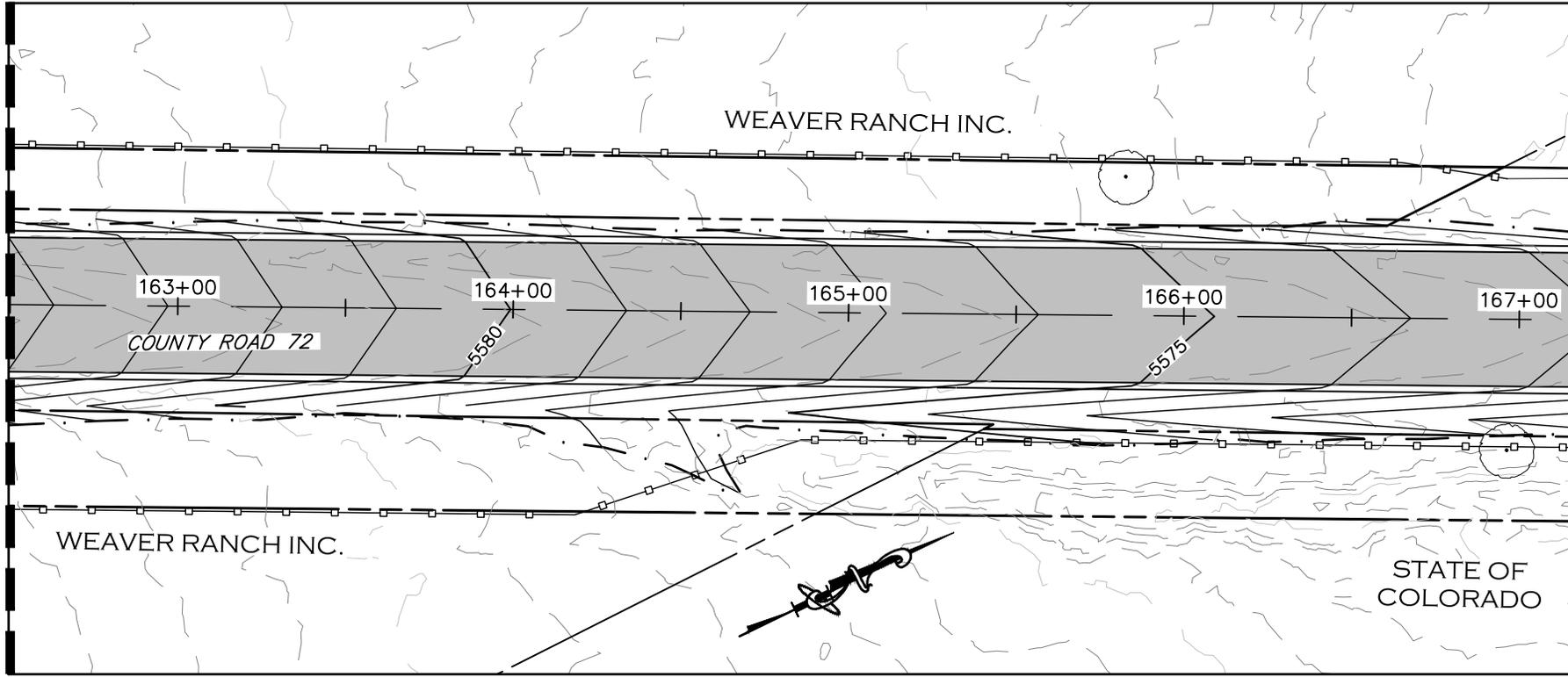
MATCH LINE STA 148+50
SEE SHEET 57



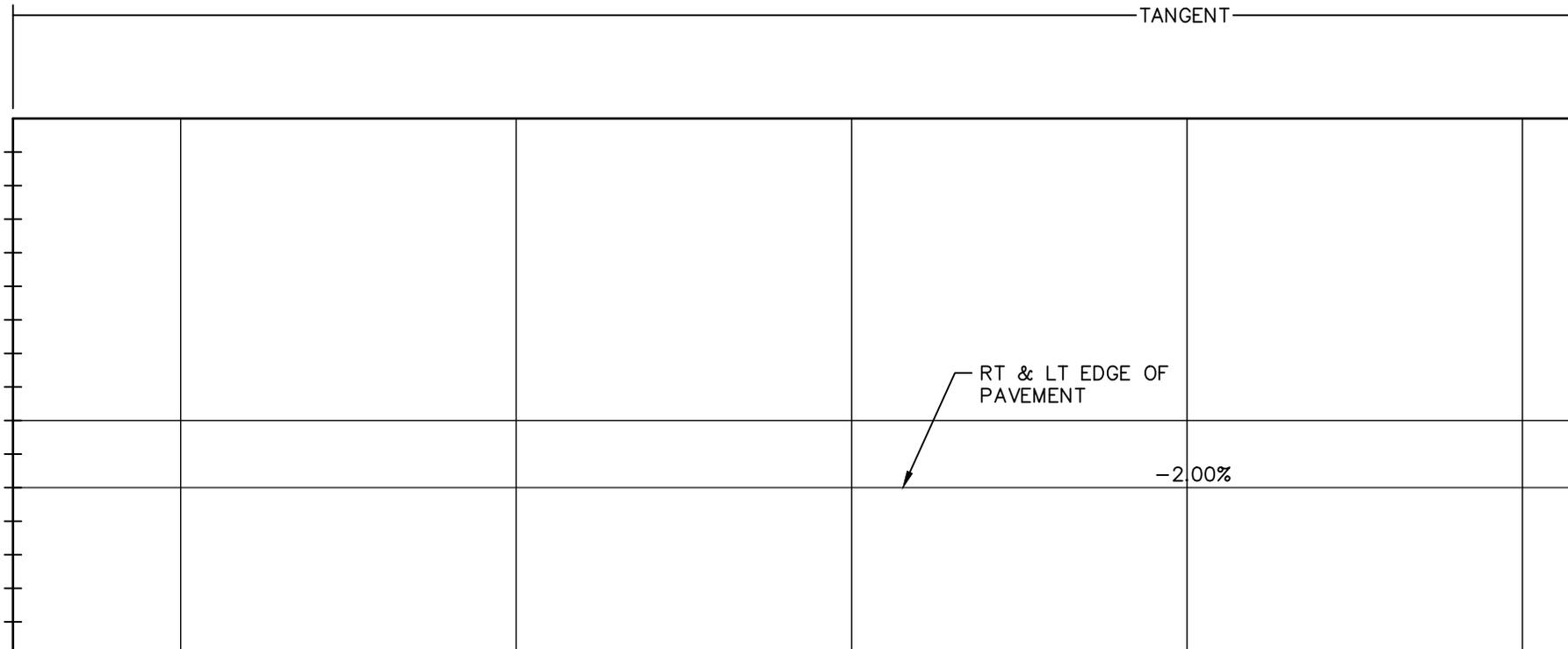
MATCH LINE STA 155+50
SEE SHEET 58



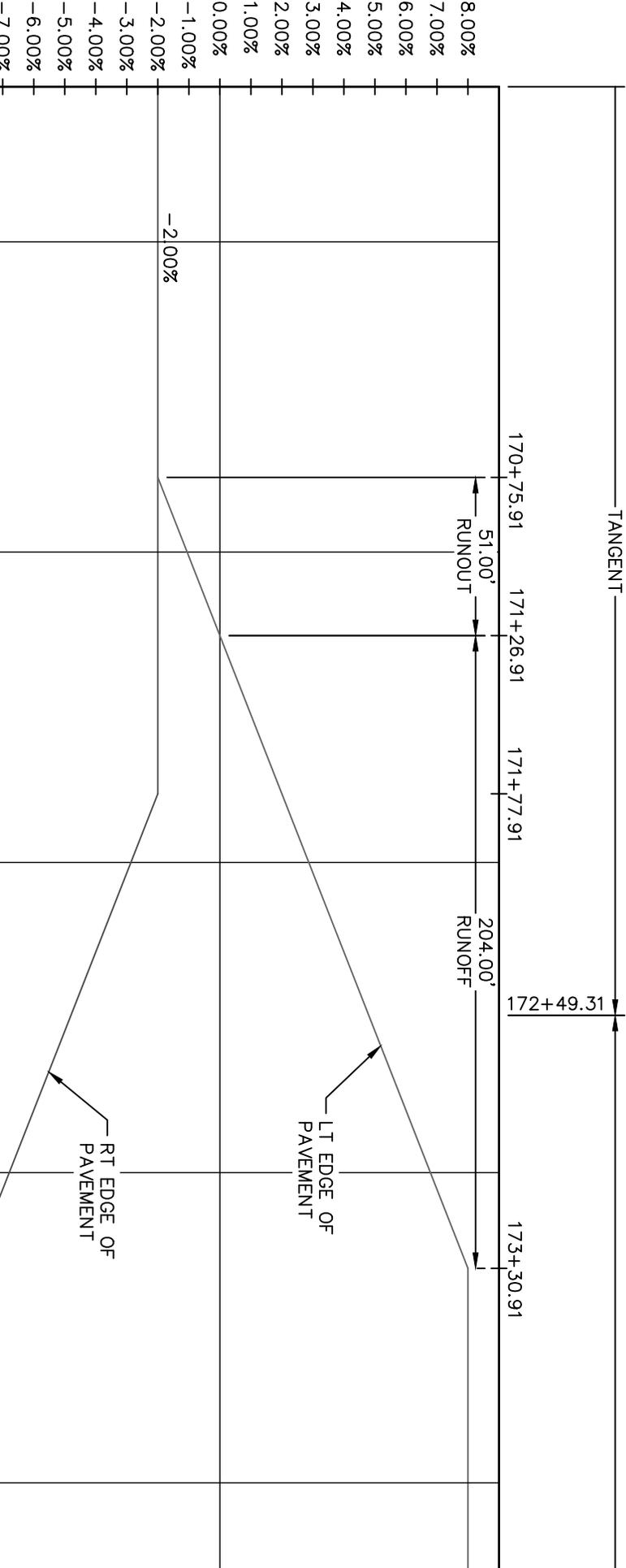
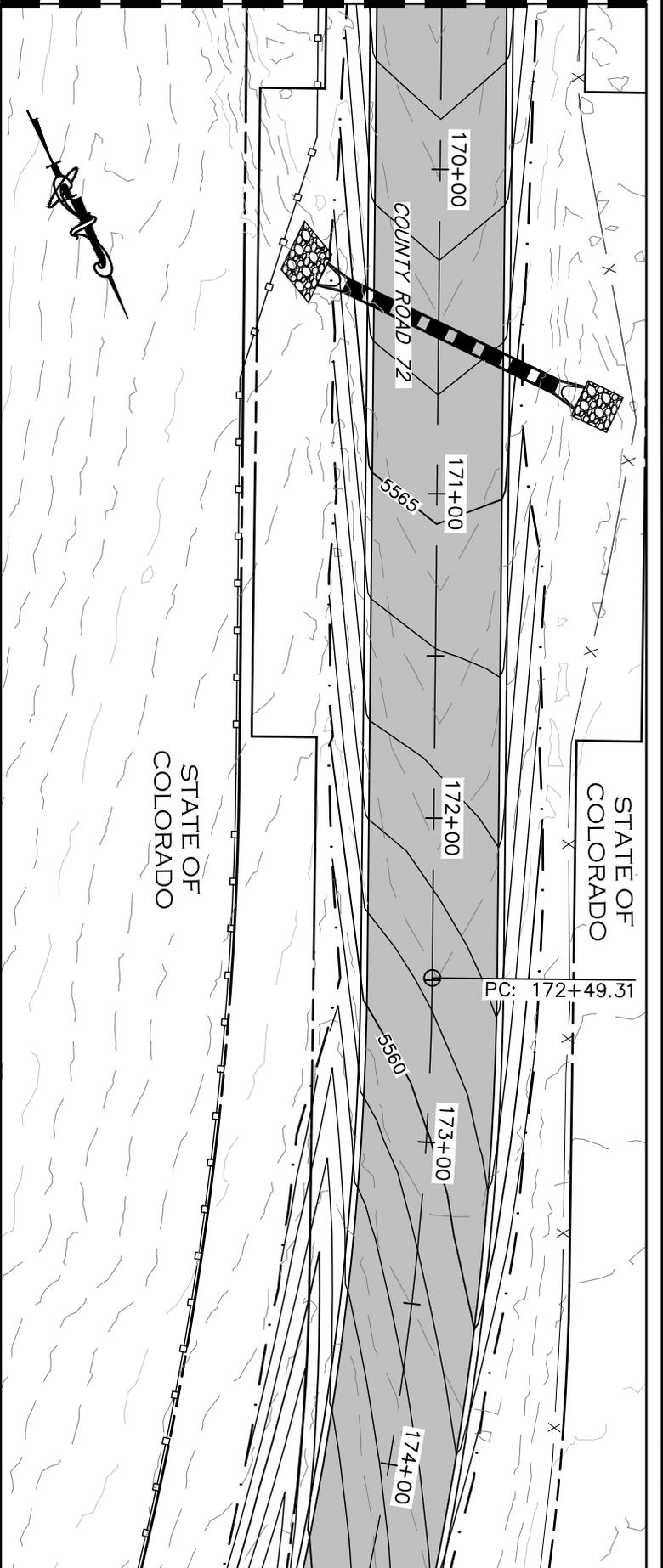
MATCH LINE STA 162+50
SEE SHEET 59



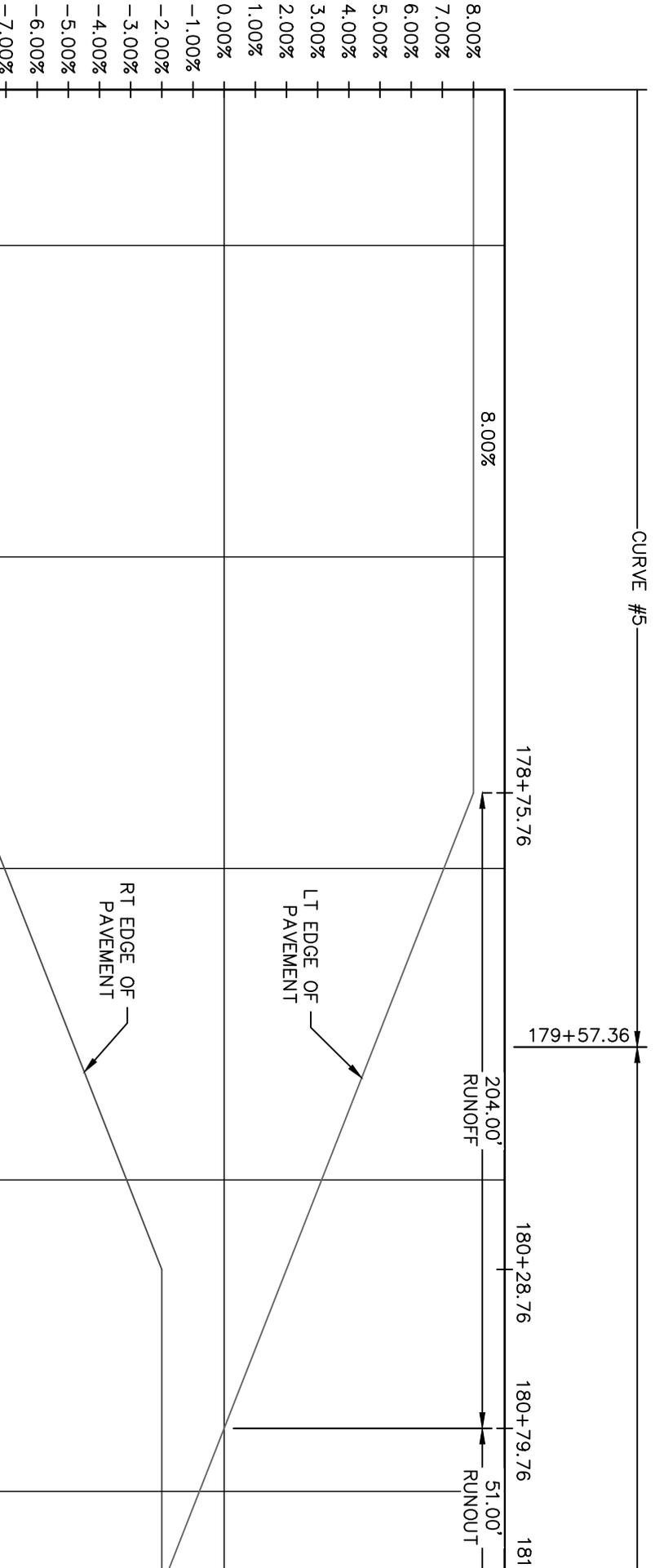
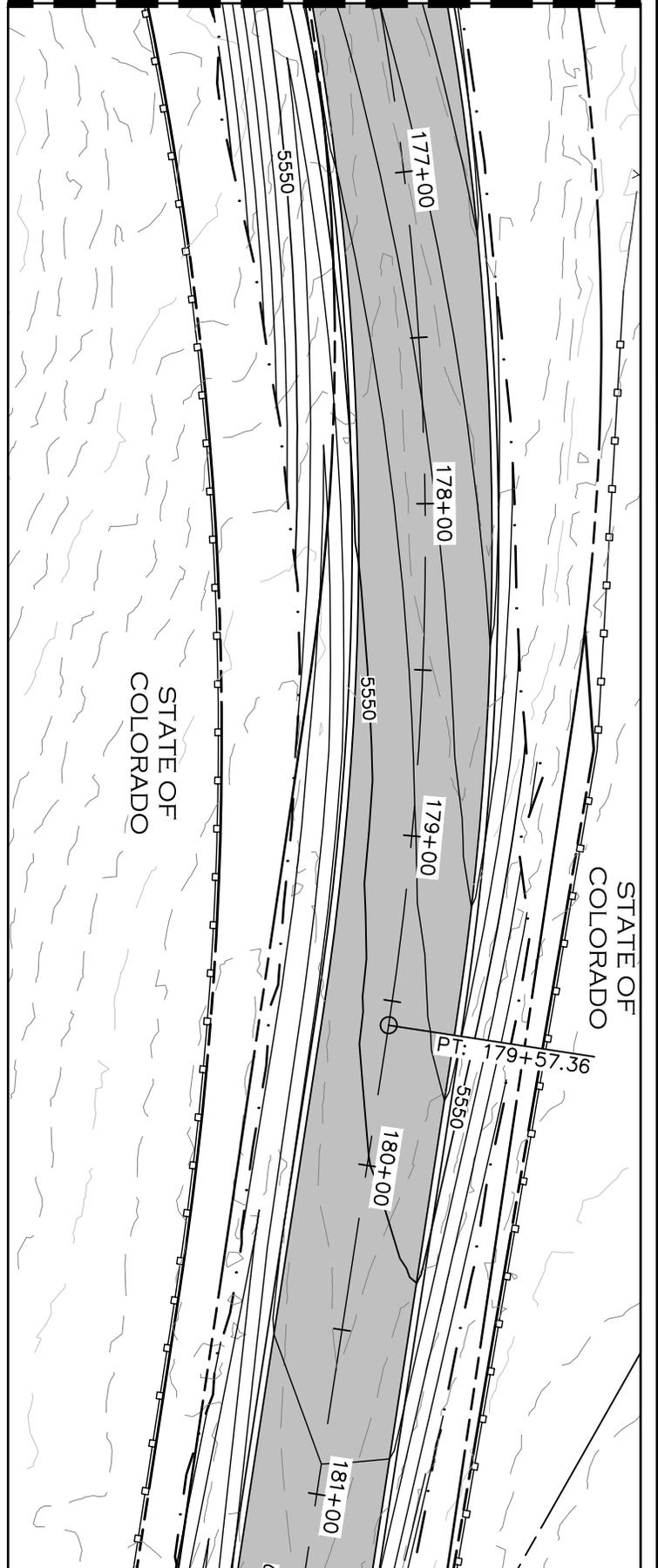
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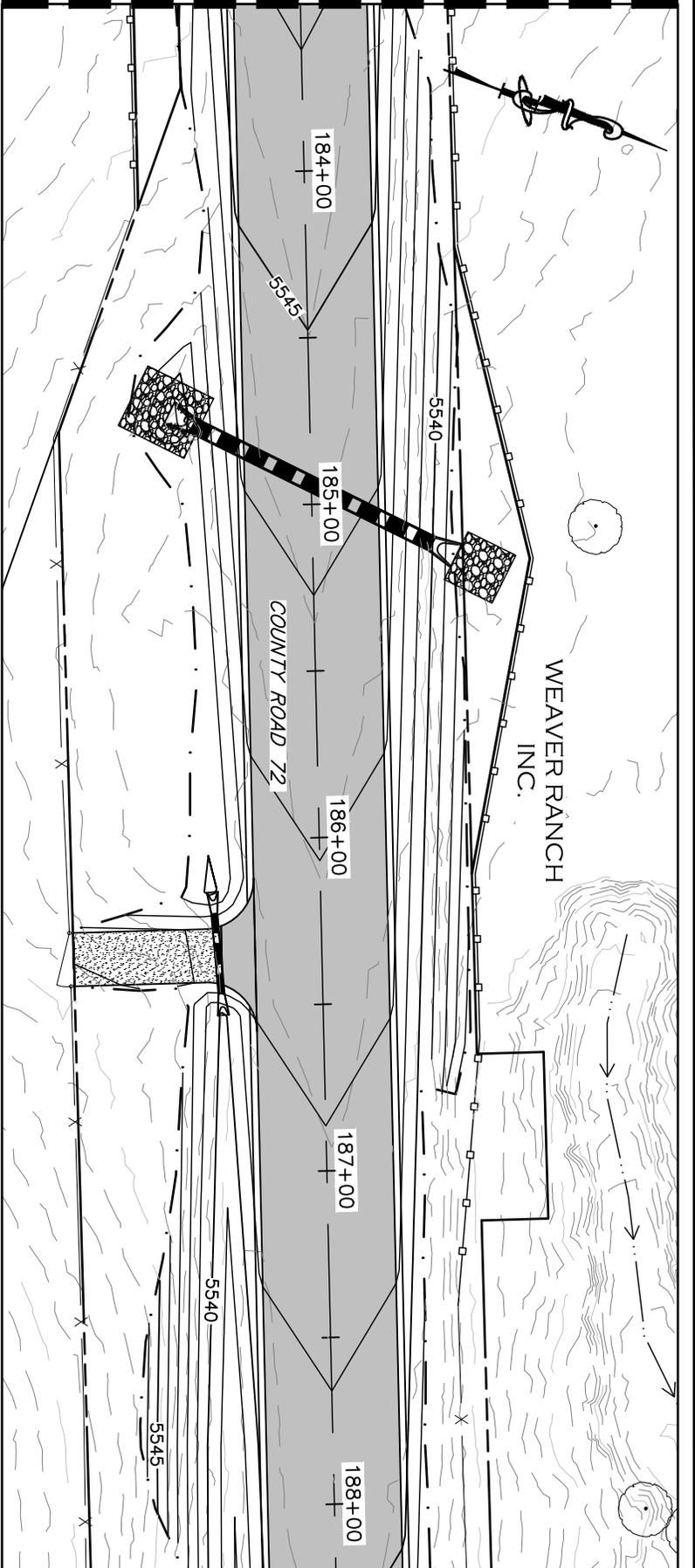
MATCH LINE STA 169+50
SEE SHEET 60



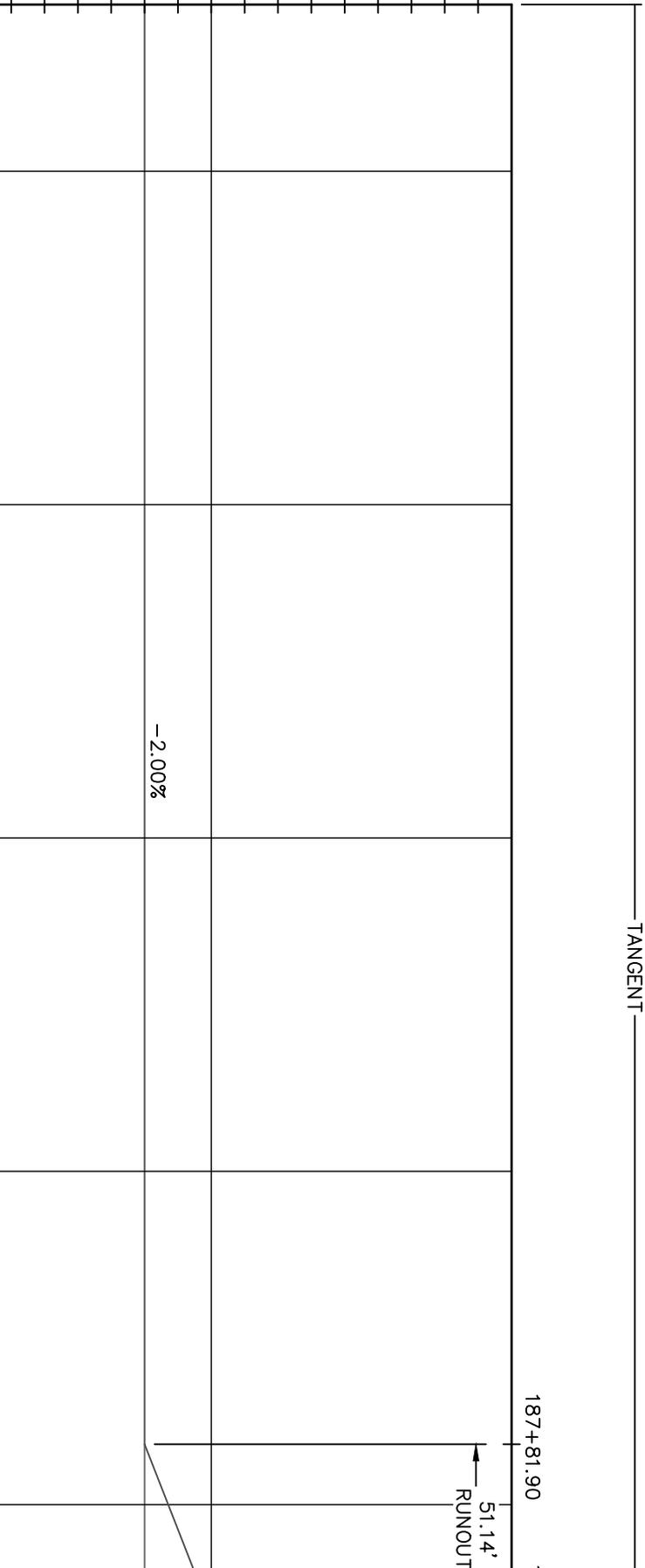
MATCH LINE STA 176+50
SEE SHEET 61



MATCH LINE STA 183+50
SEE SHEET 62



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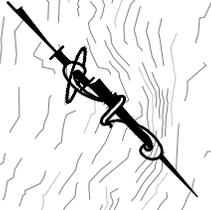


187+81.90

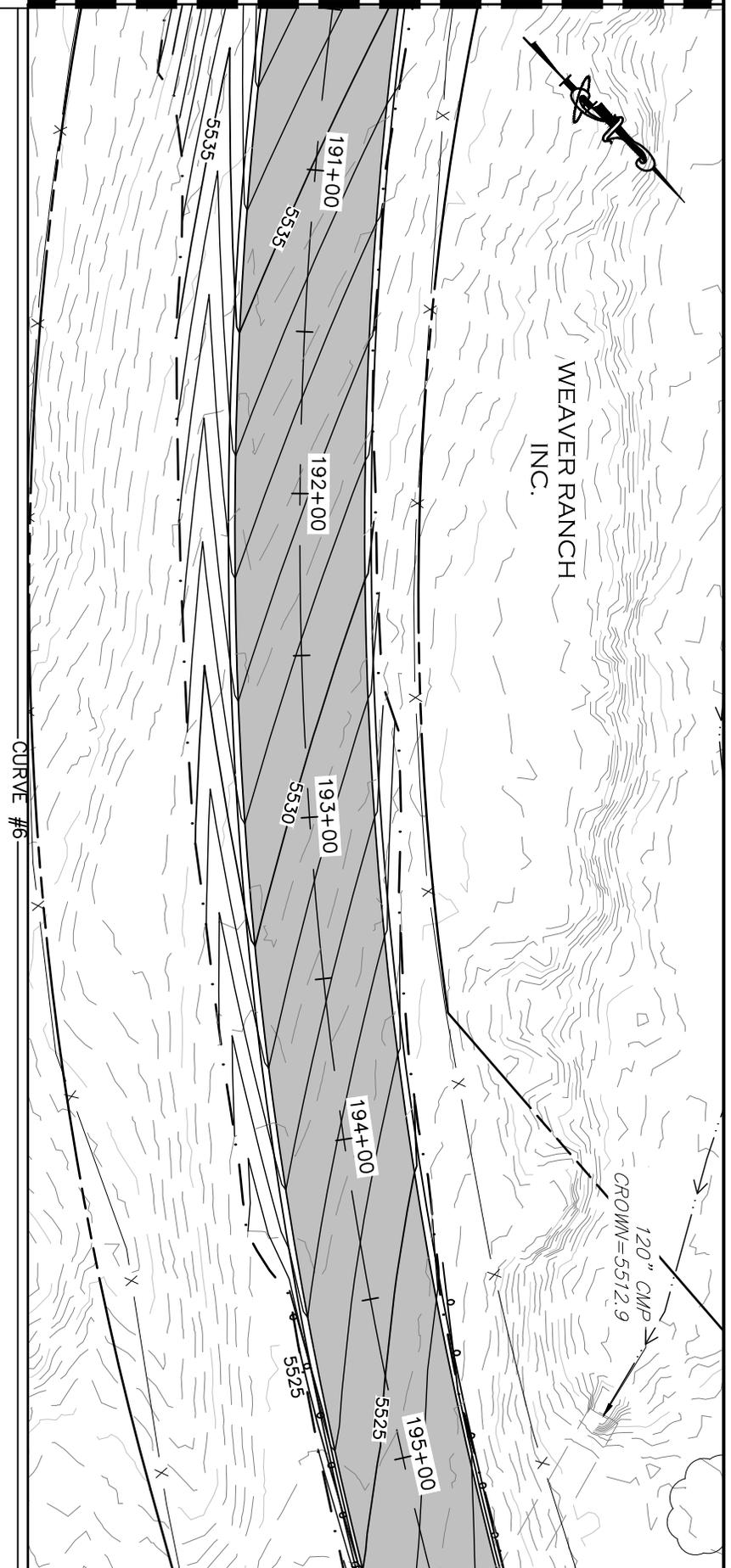
51.14'
RUNOUT

TANGENT

MATCH LINE STA 190+50
SEE SHEET 63



WEAVER RANCH
INC.



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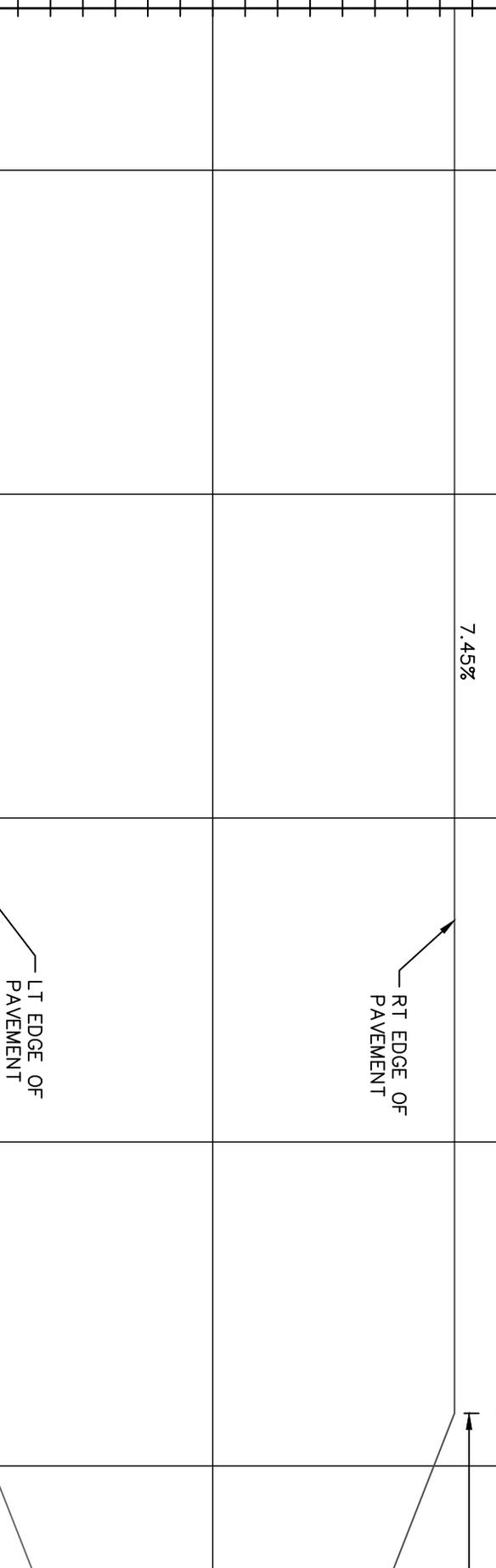
7.45%

CURVE #6

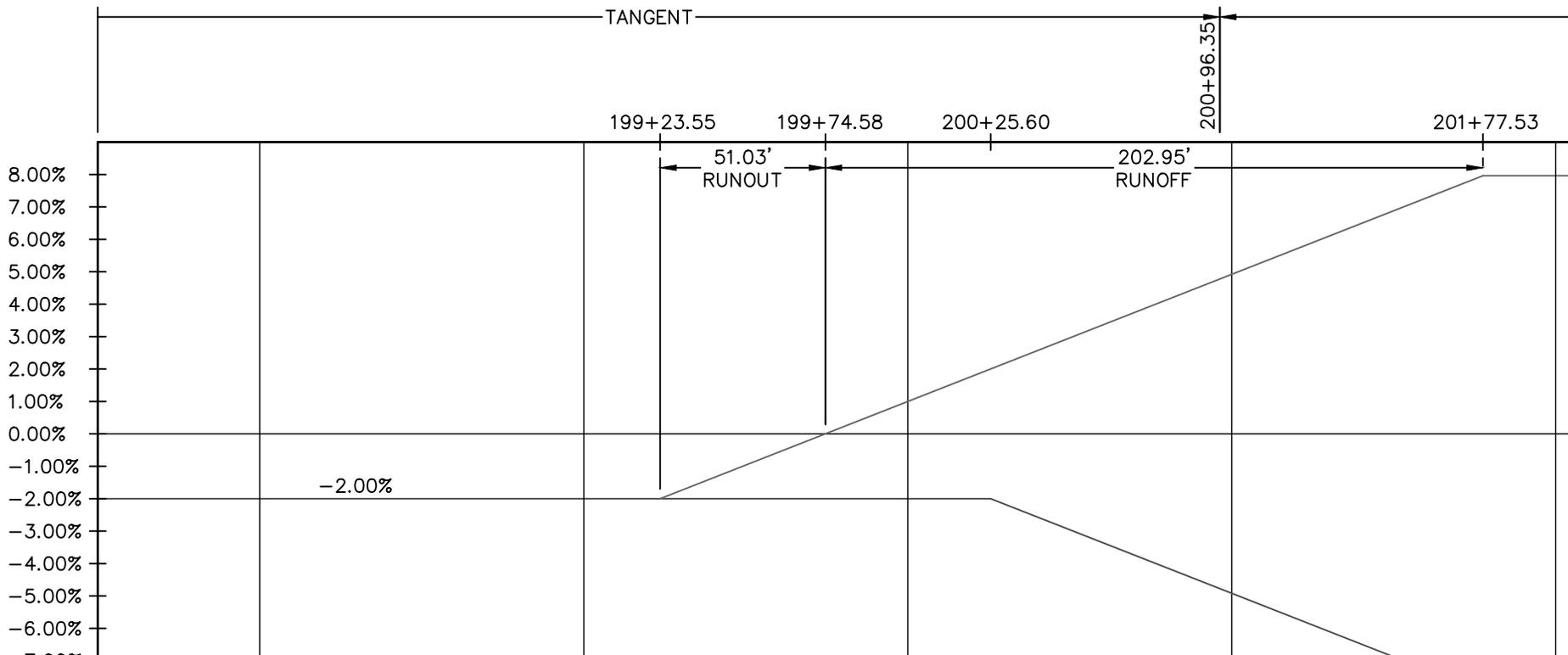
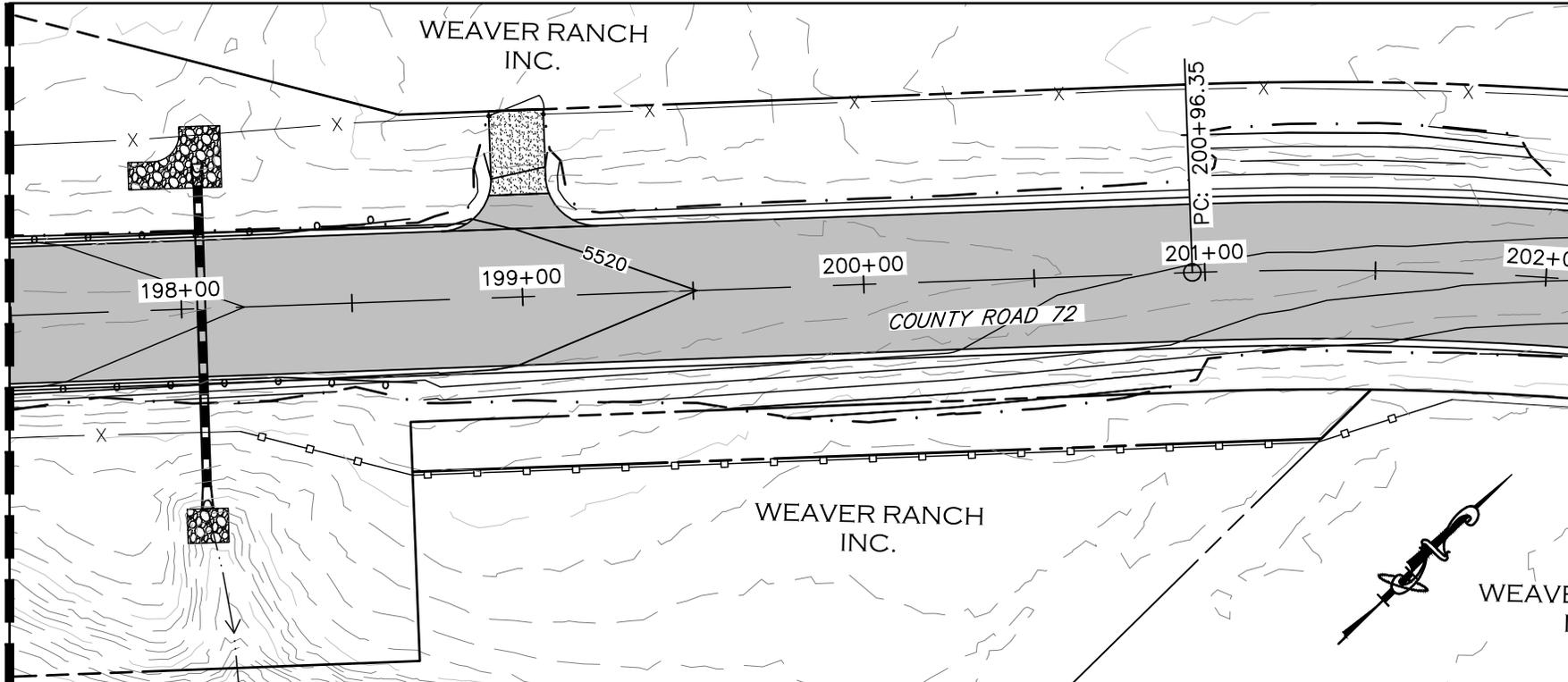
RT EDGE OF
PAVEMENT

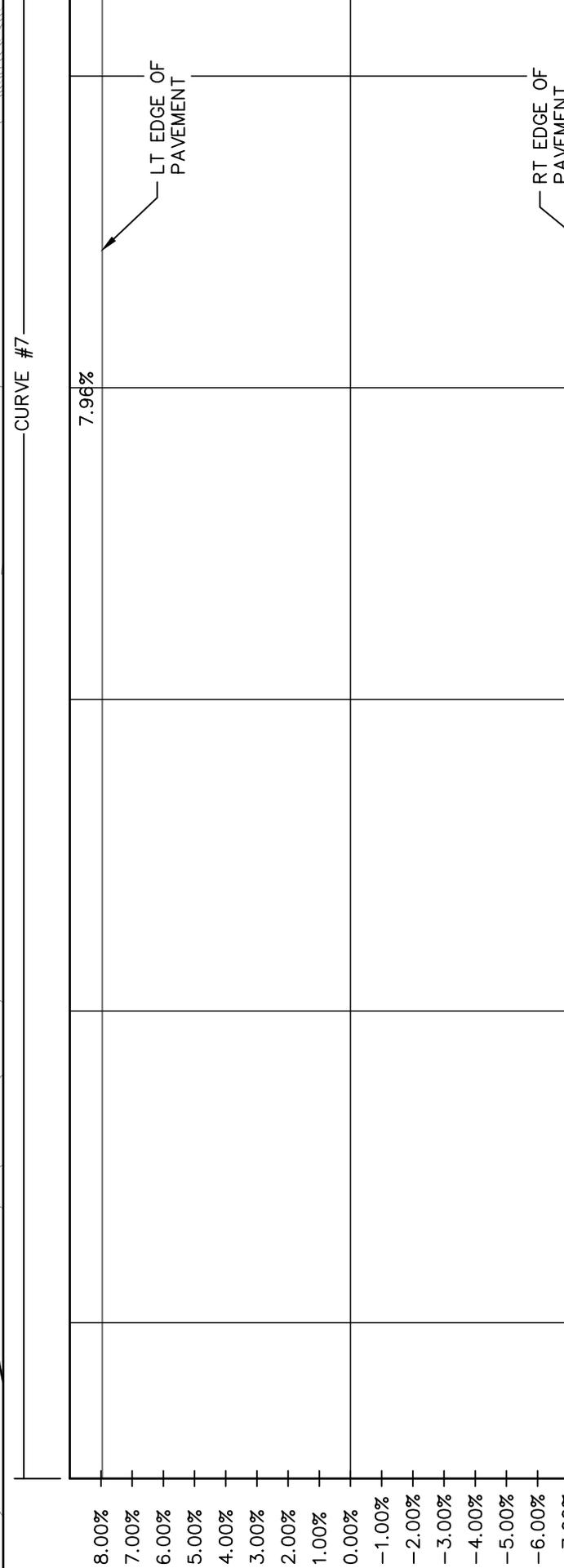
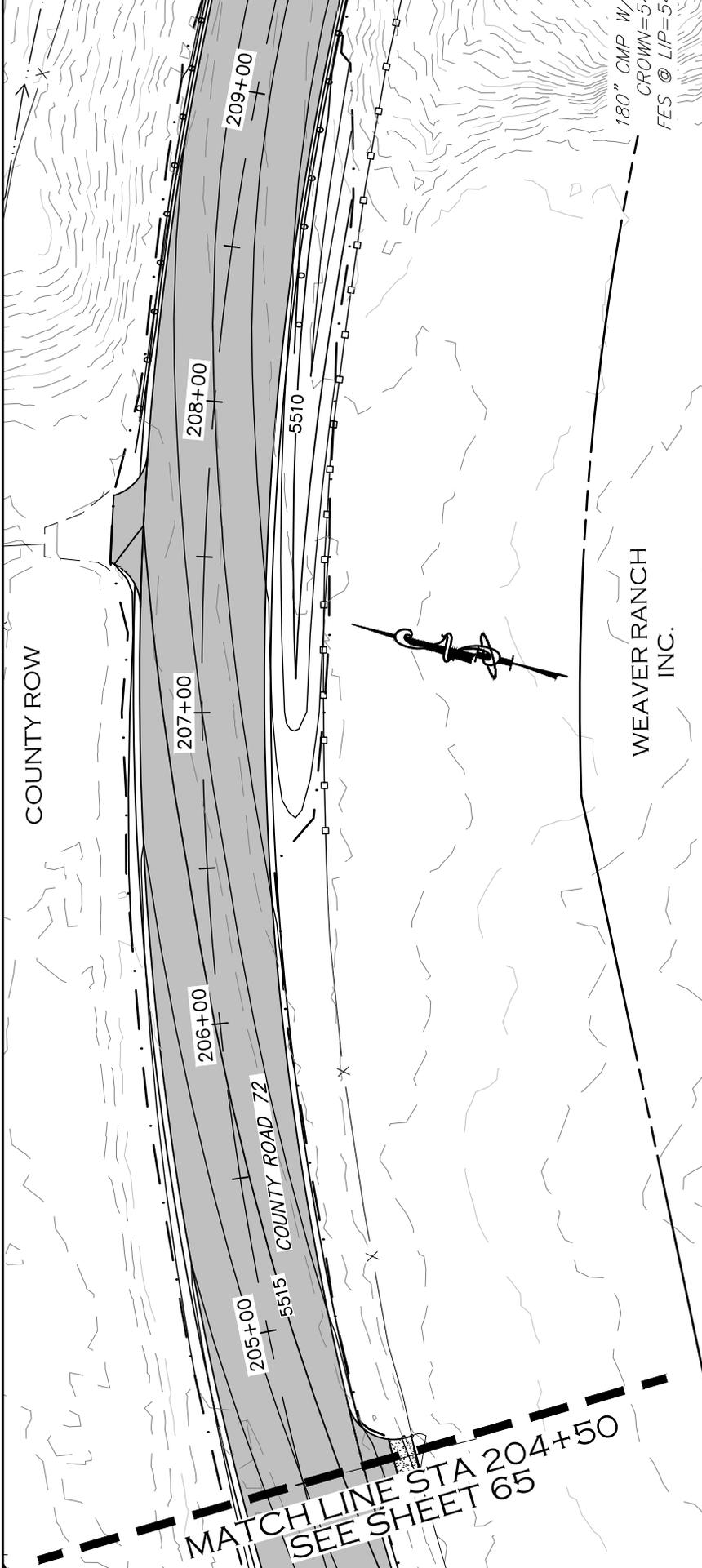
LT EDGE OF
PAVEMENT

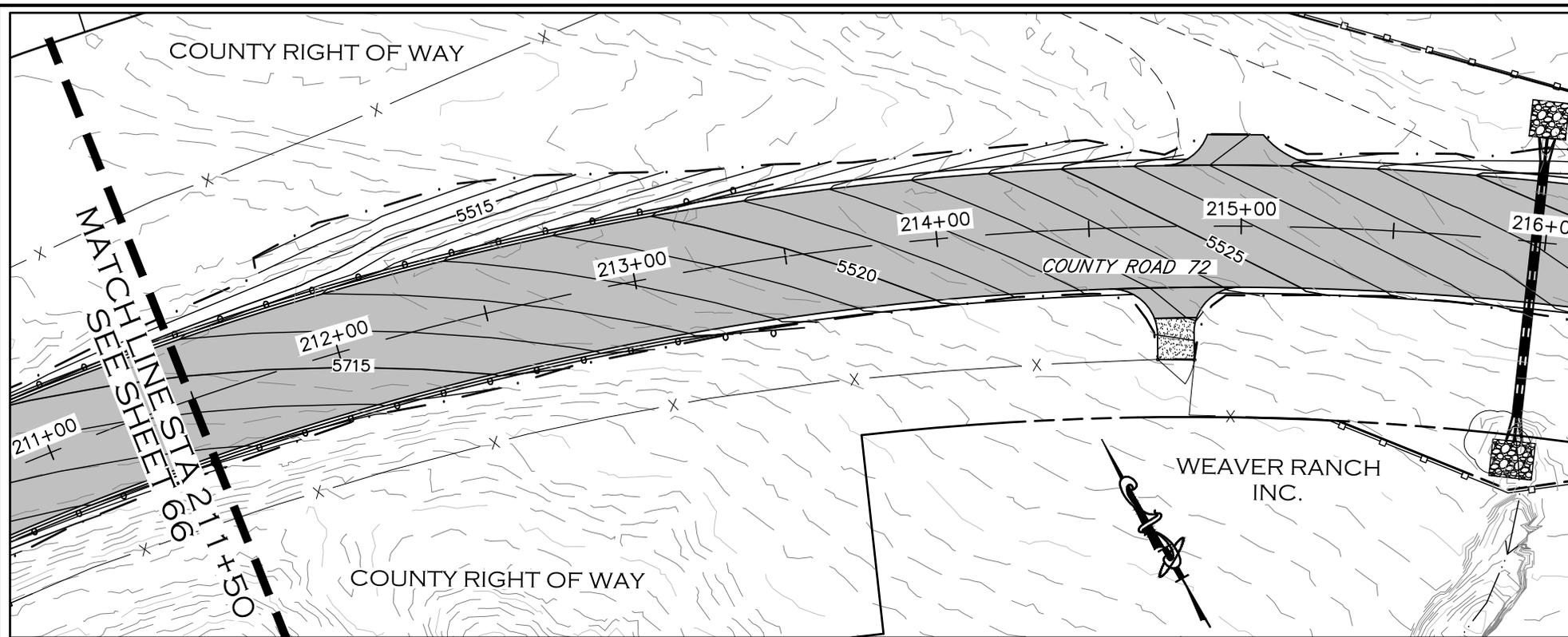
194+83.75



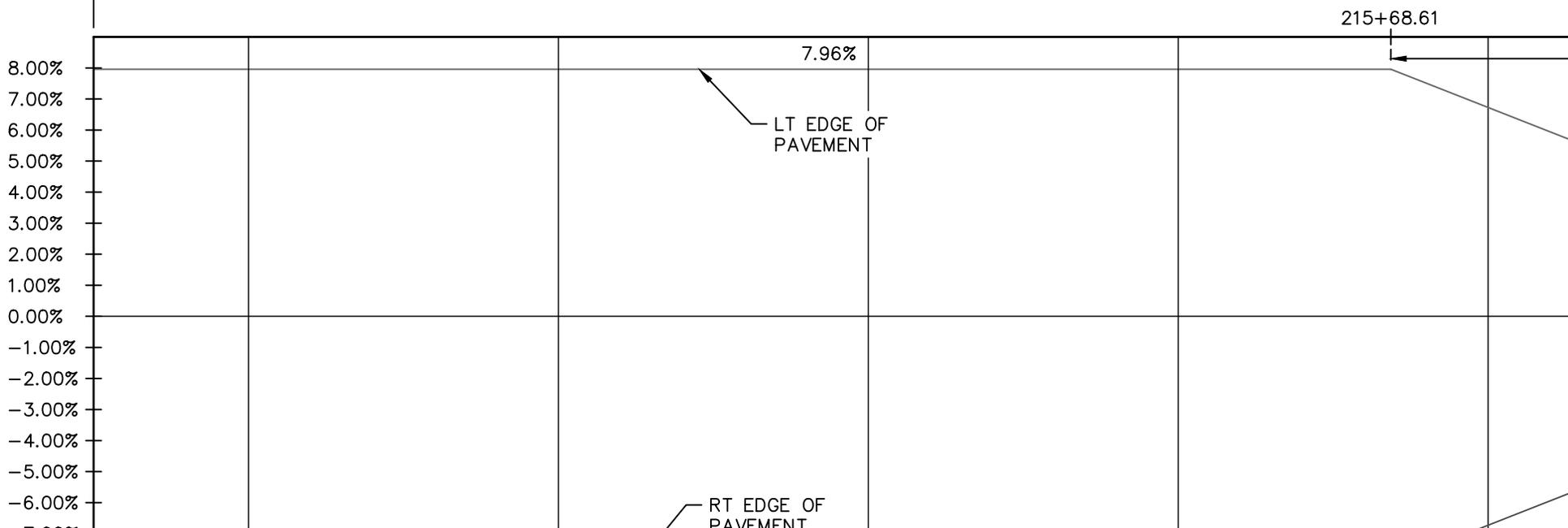
MATCHLINE STA 197+50
SEE SHEET 64



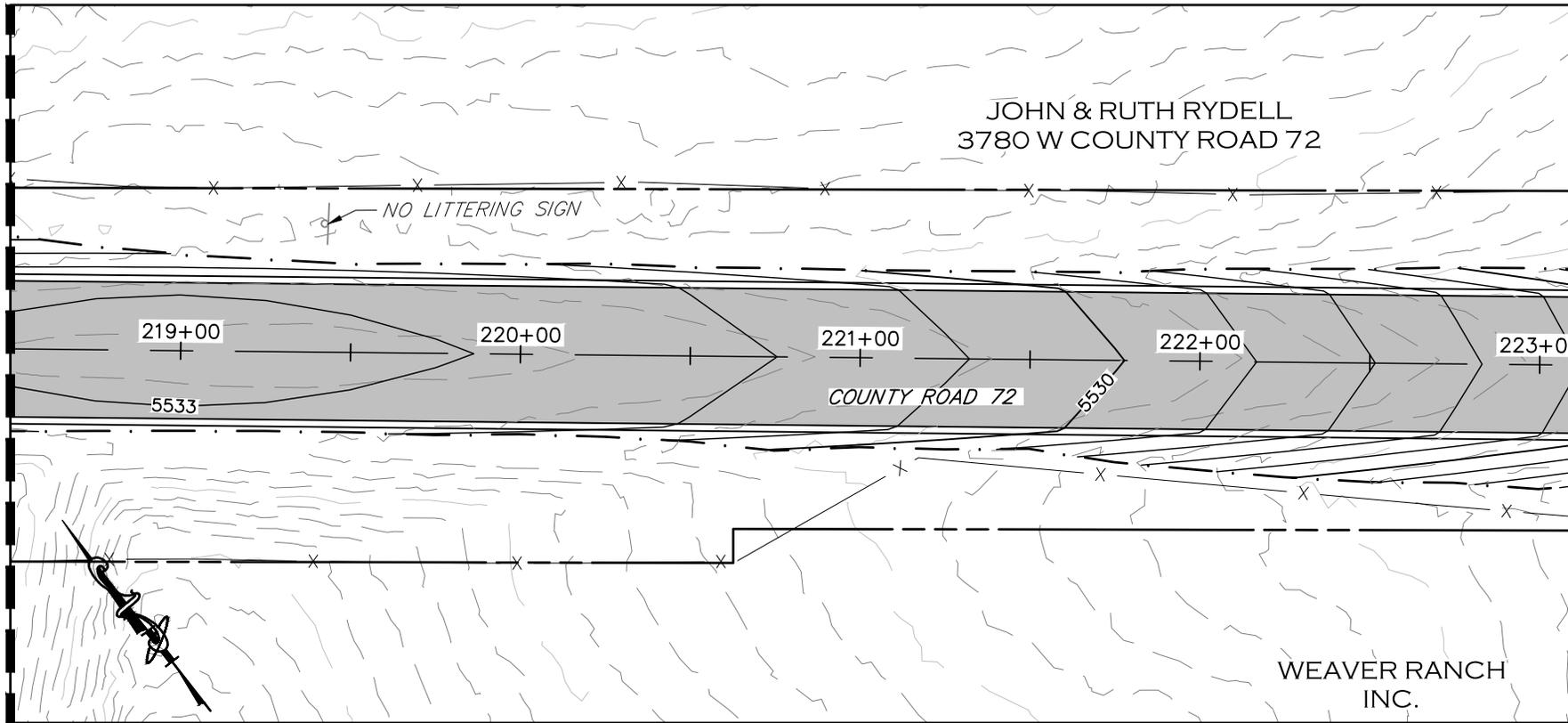




CURVE #7

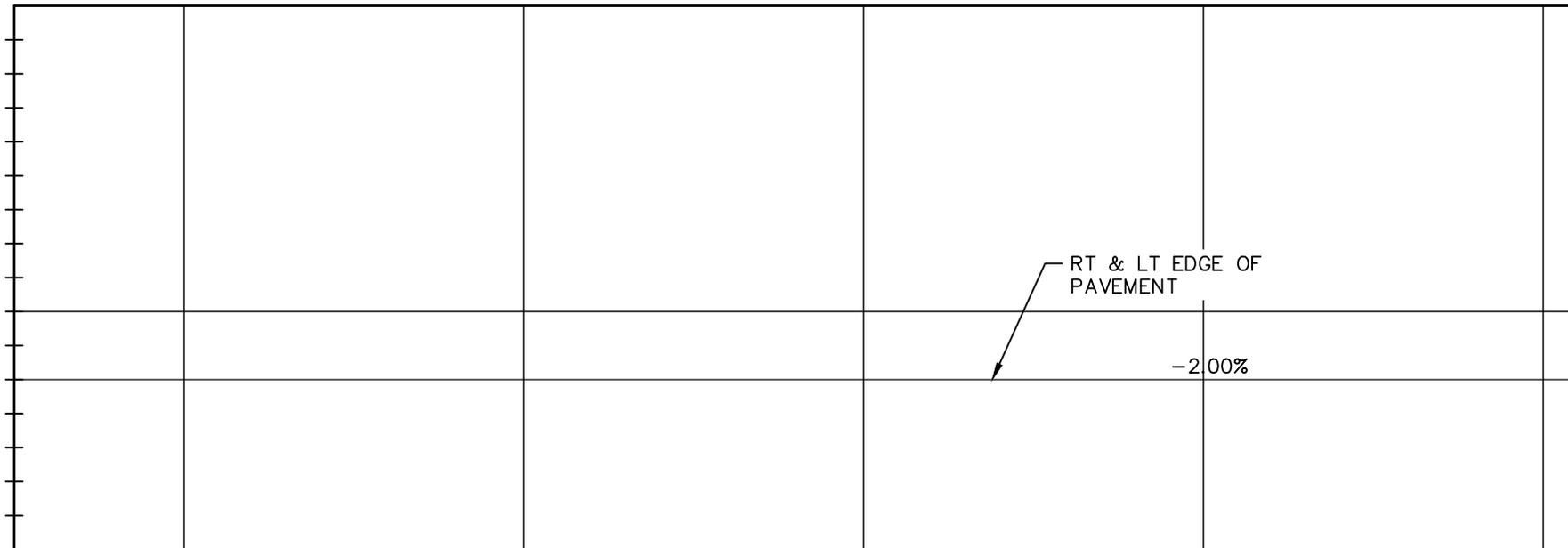


MATCH LINE STA 218+50
SEE SHEET 67

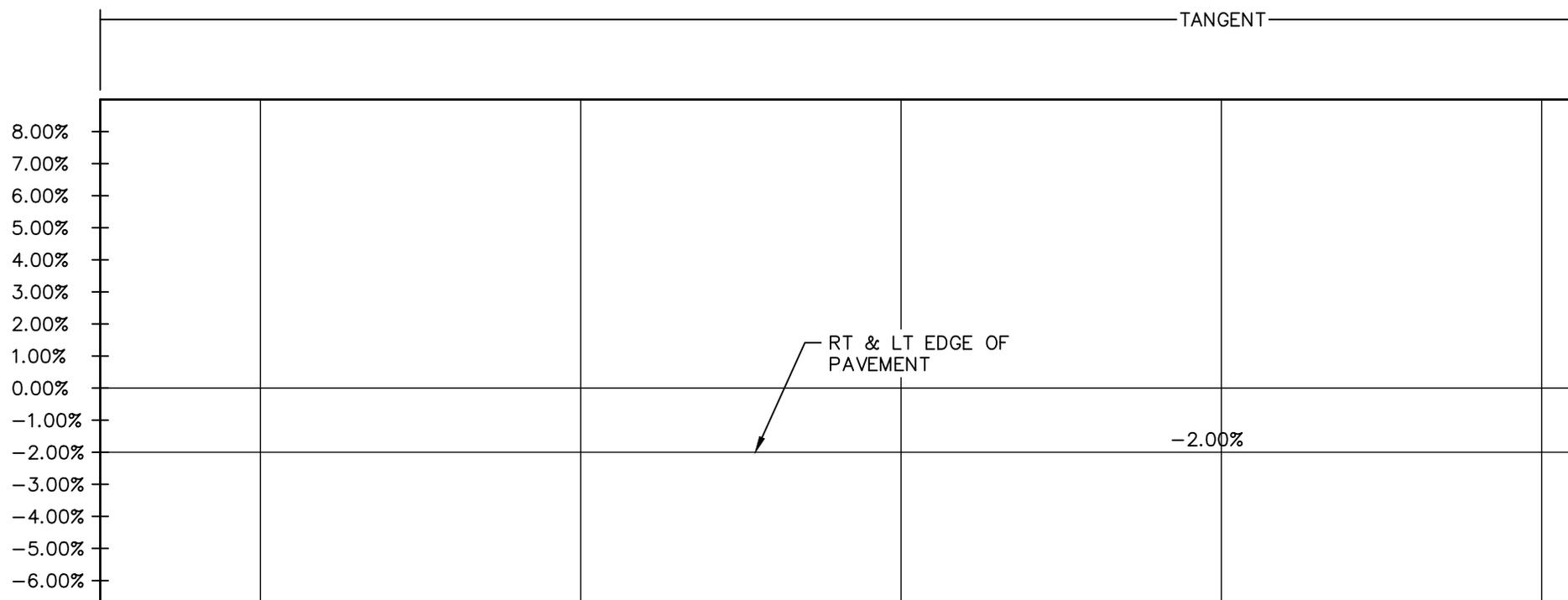
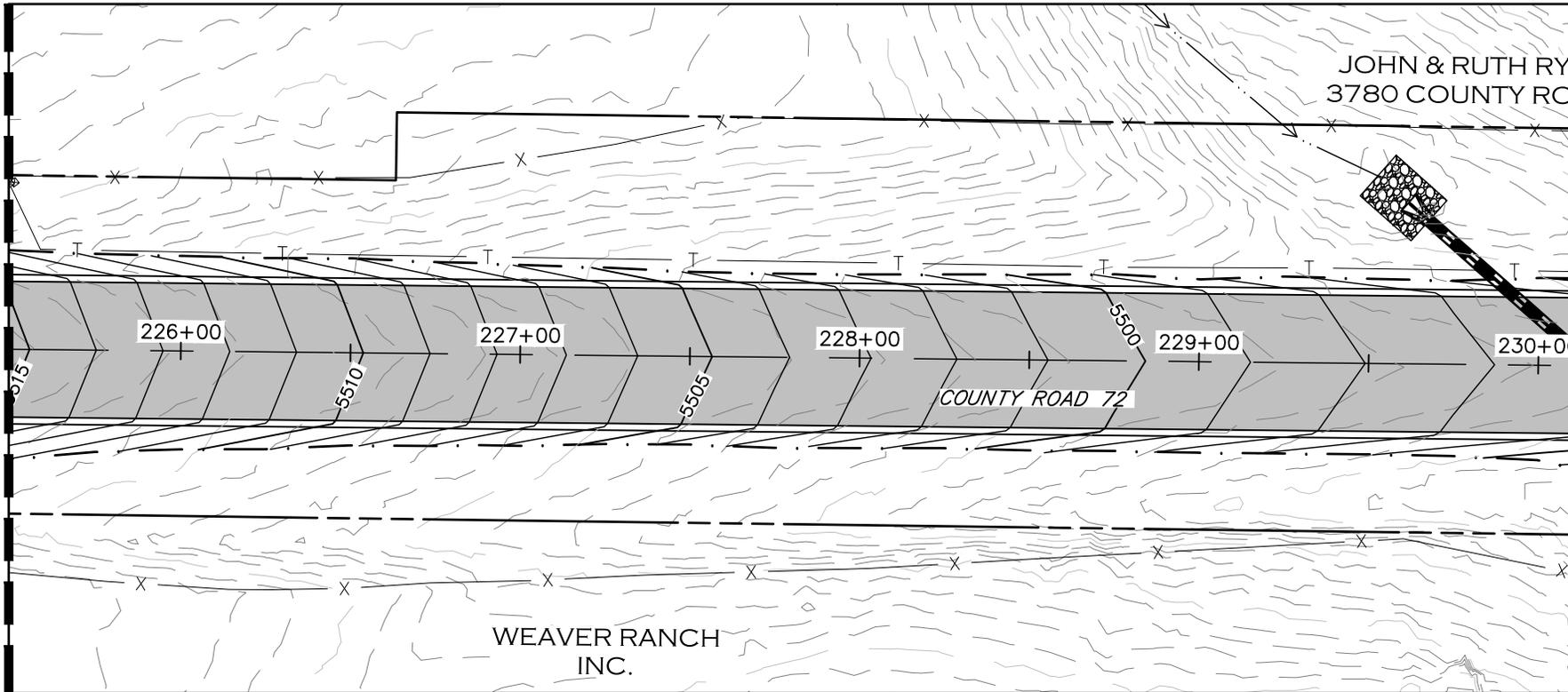


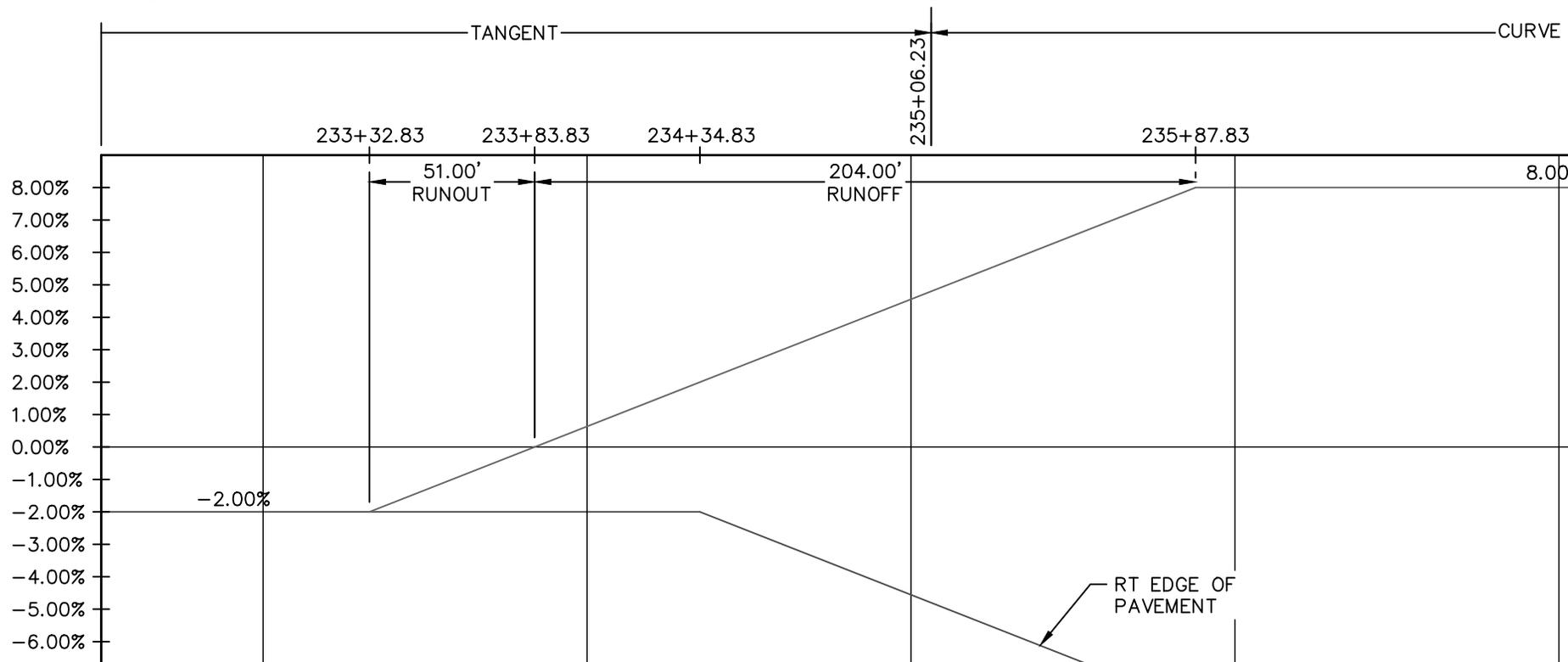
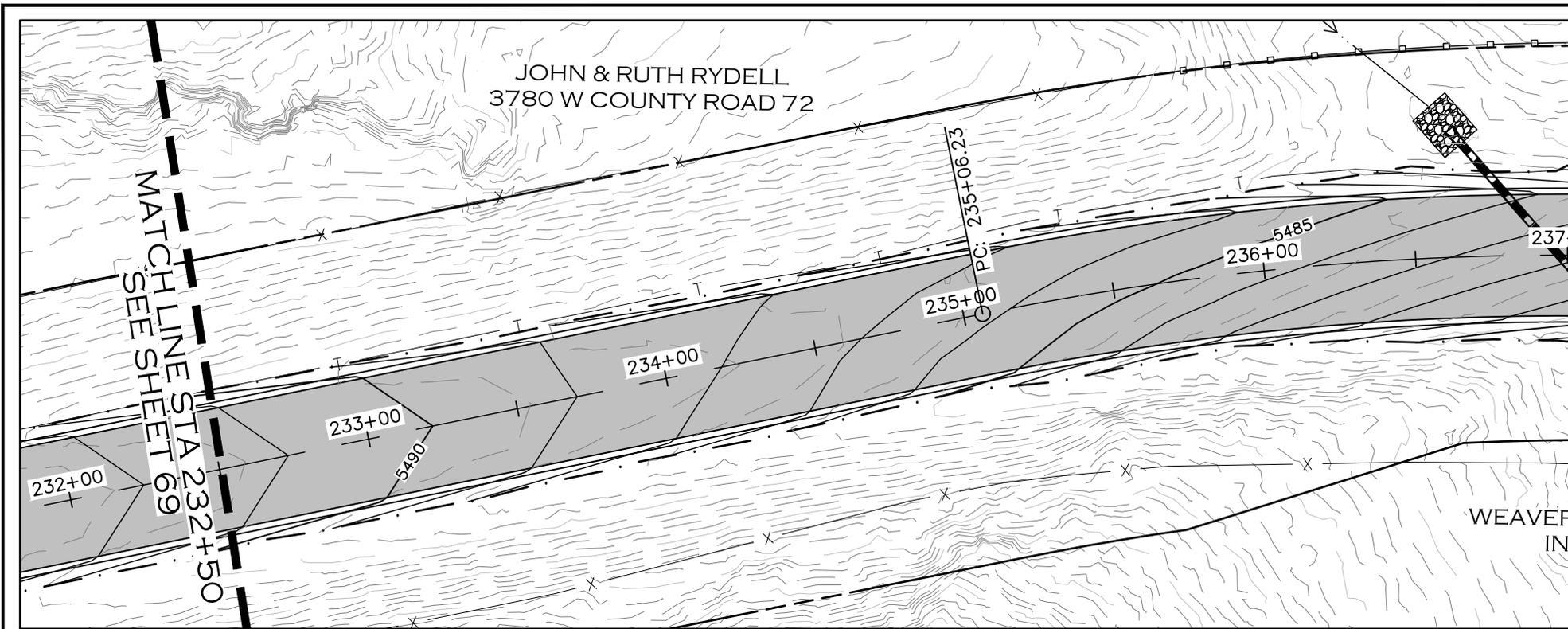
TANGENT

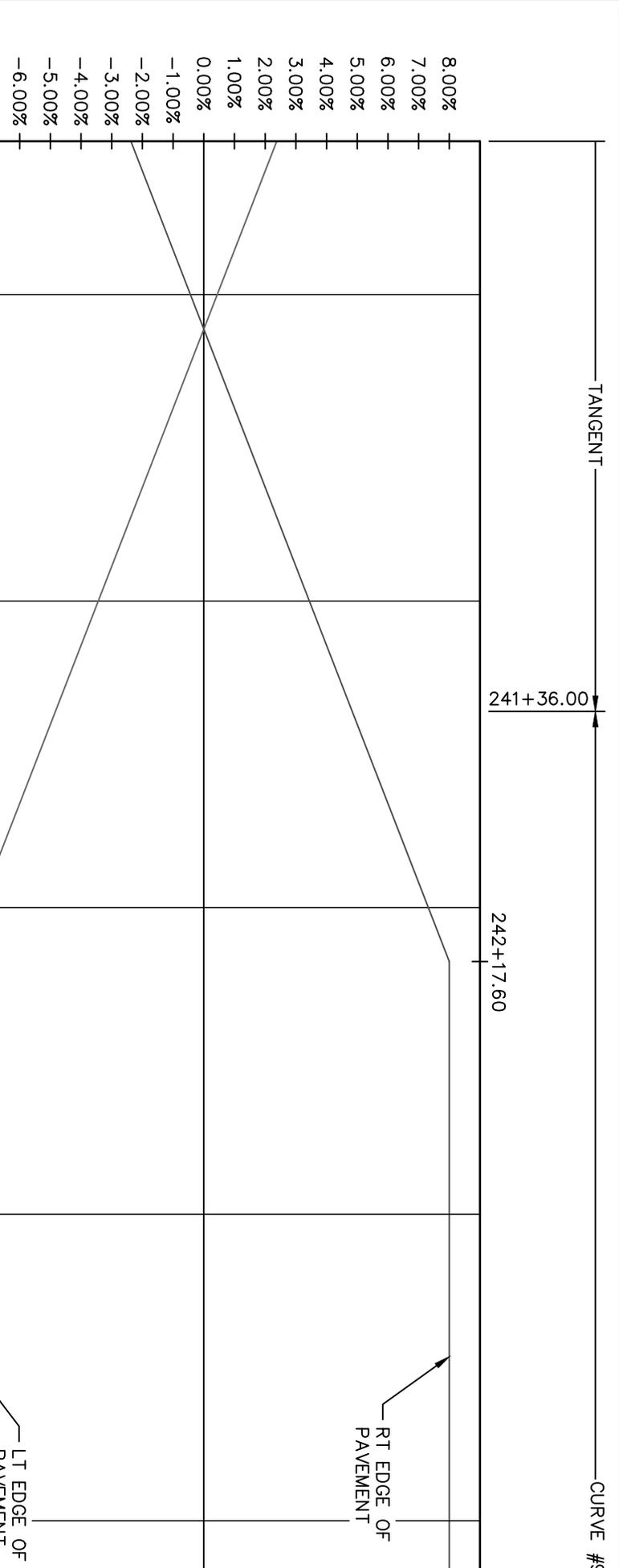
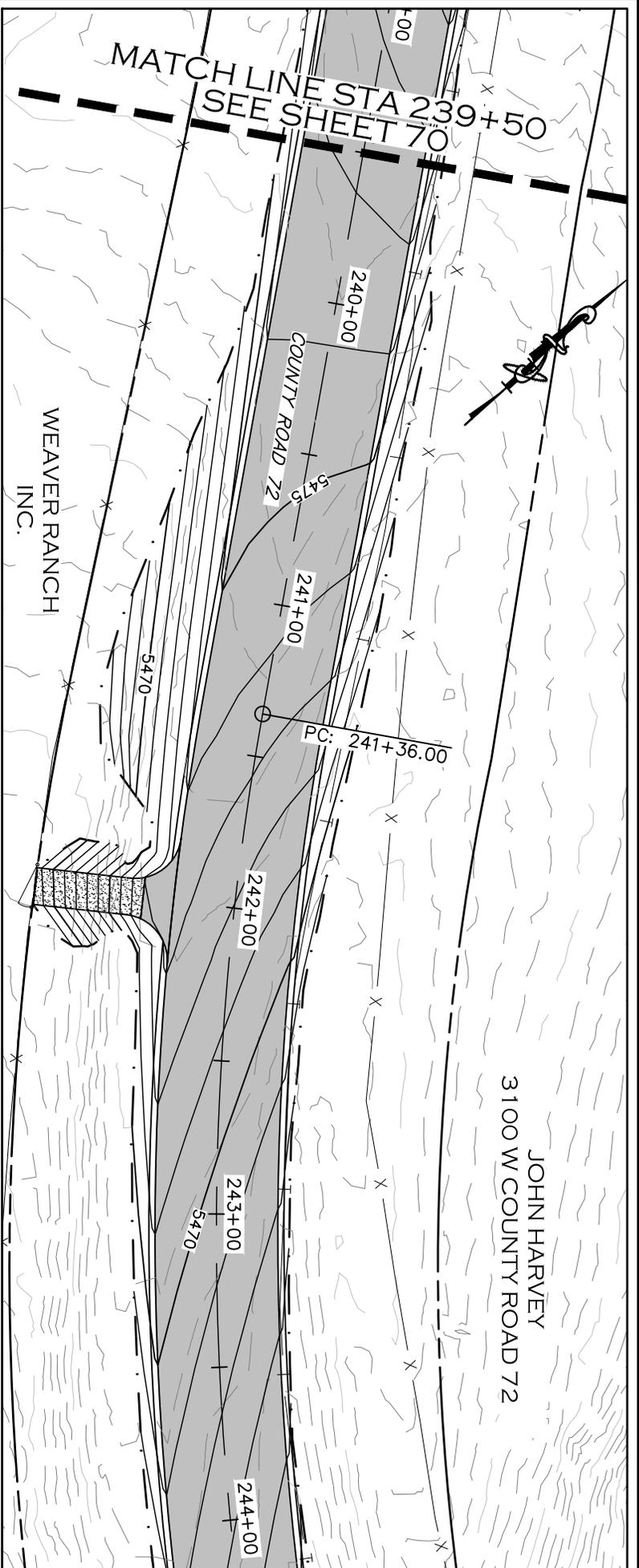
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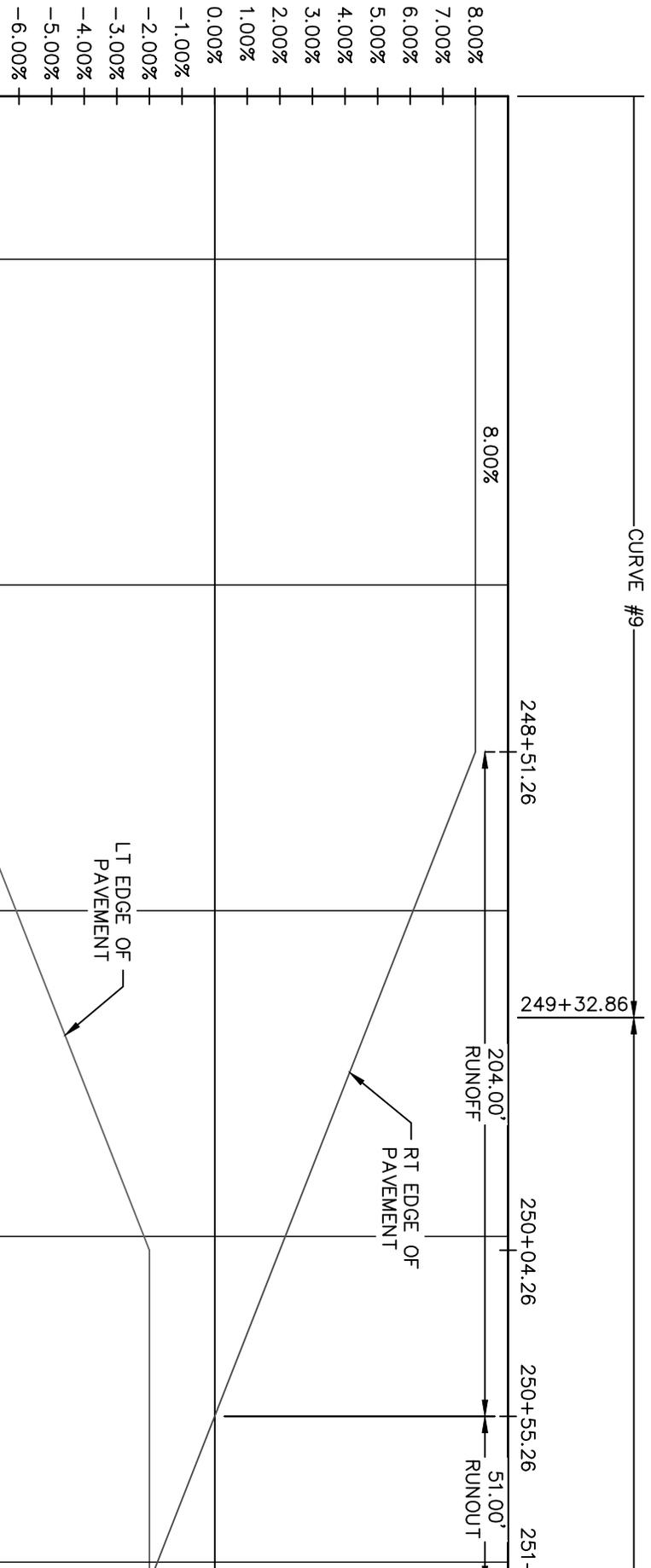
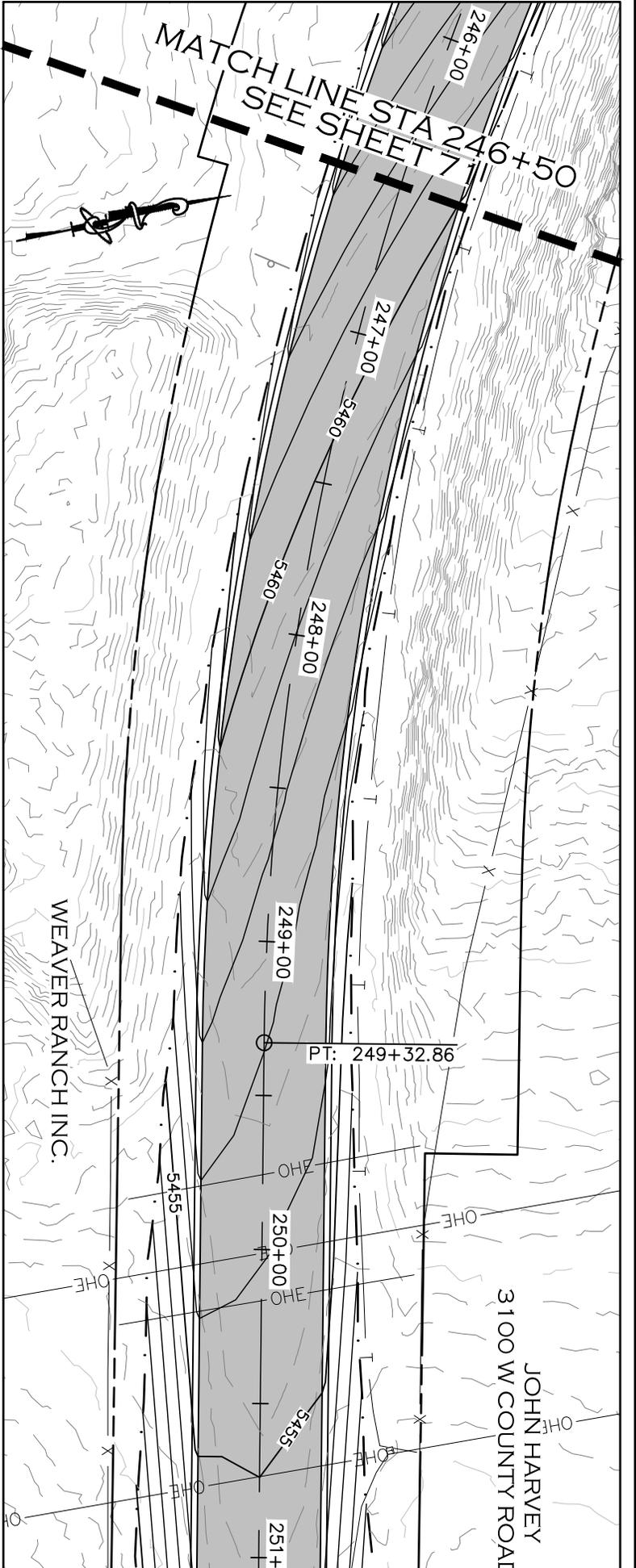


MATCH LINE STA 225+50
SEE SHEET 68



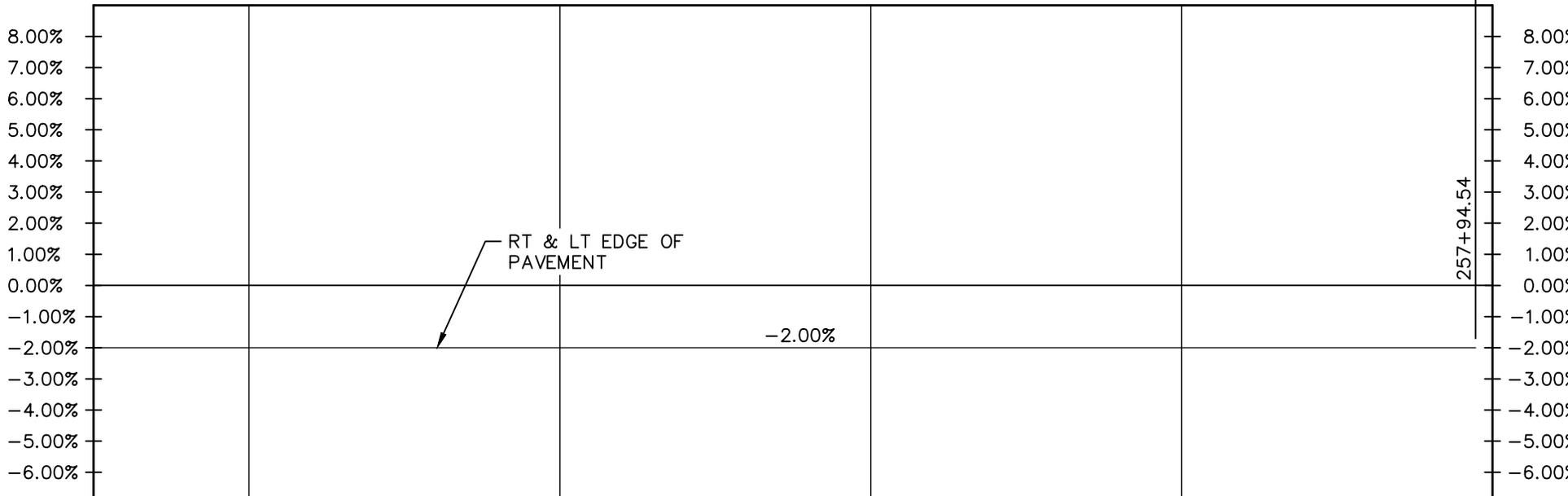
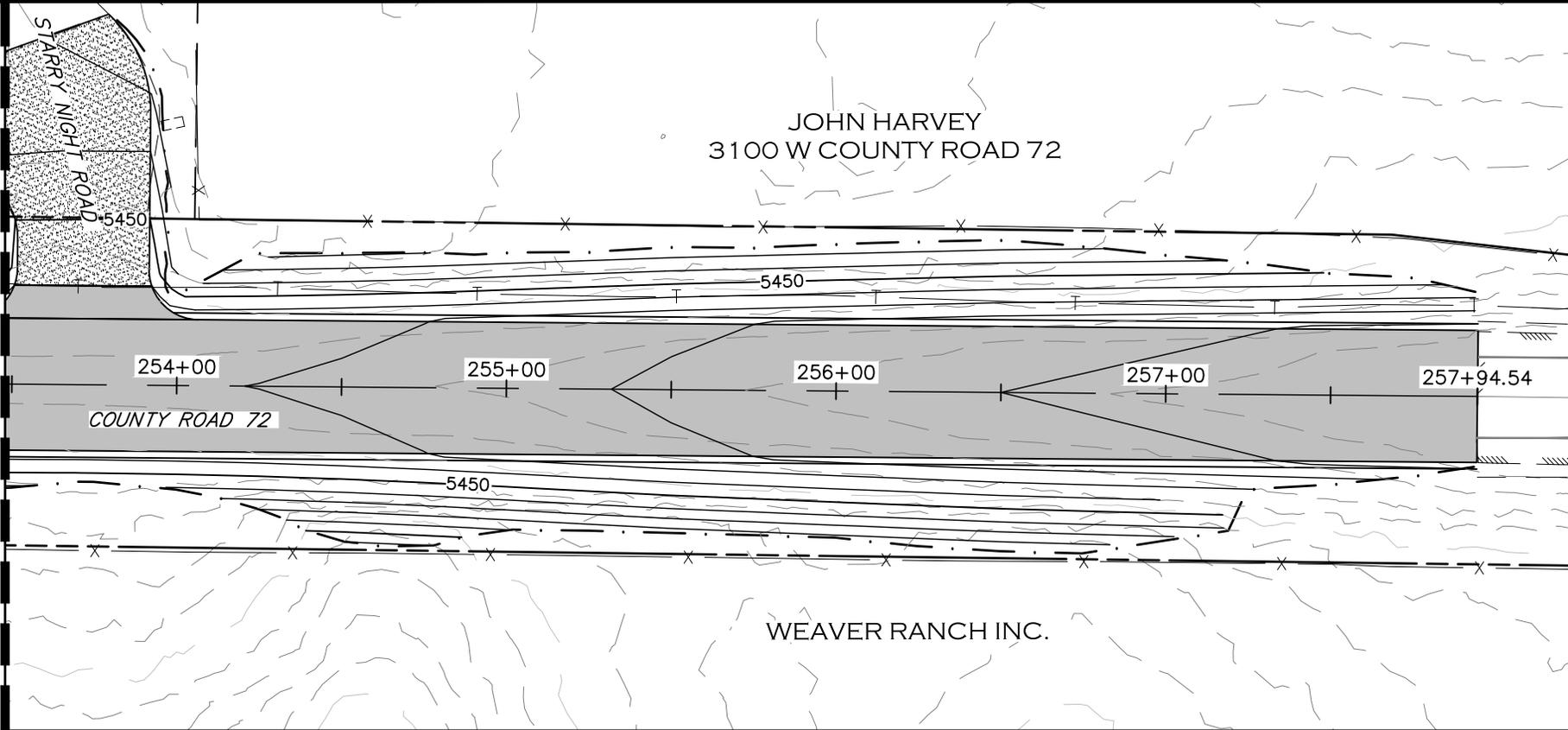






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- 6.00%

MATCH LINE STA 253+50
SEE SHEET 72



EROSION CONTROL TABULATION:

EL-1: 87 EA @ 8 LF = 696 LF

EL-2: 22 EA @ 16 LF = 352 LF

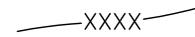
EL-3: 22 EA @ 8 LF = 176 LF

EL-4: 3,582 LF

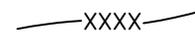
TB: 15,400 LF (FOR INFORMATION ONLY, SEE NOTE 5)

SRB: 15,033 SY

LEGEND



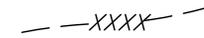
PROPOSED MINOR CONTOUR



PROPOSED MAJOR CONTOUR



EXISTING MINOR CONTOUR



EXISTING MINOR CONTOUR



PROPOSED FENCE



TEMPORARY CONSTRUCTION EASEMENT



PROPOSED RIGHT-OF-WAY



EXISTING RIGHT-OF-WAY



EXISTING PROPERTY LINE



EROSION LOG (12 INCH)
DRAINAGE DITCH APPLICATIONS



EROSION LOG (12 INCH)
CULVERT INLET PROTECTION



EROSION LOG (12 INCH)
CULVERT OUTLET PROTECTION



EROSION LOG (12 INCH)
TOE OF SLOPE PROTECTION

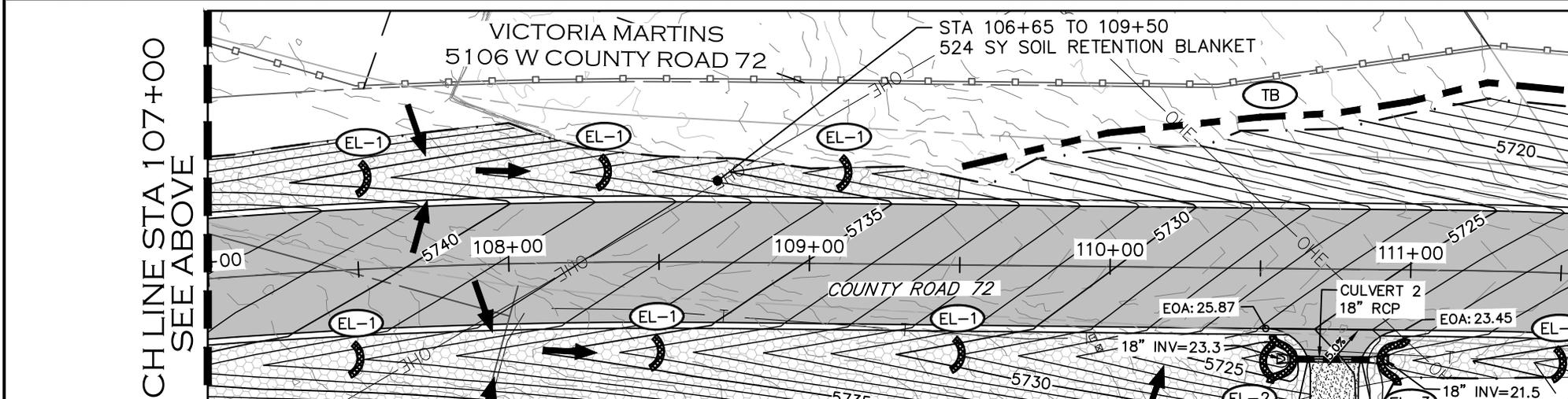
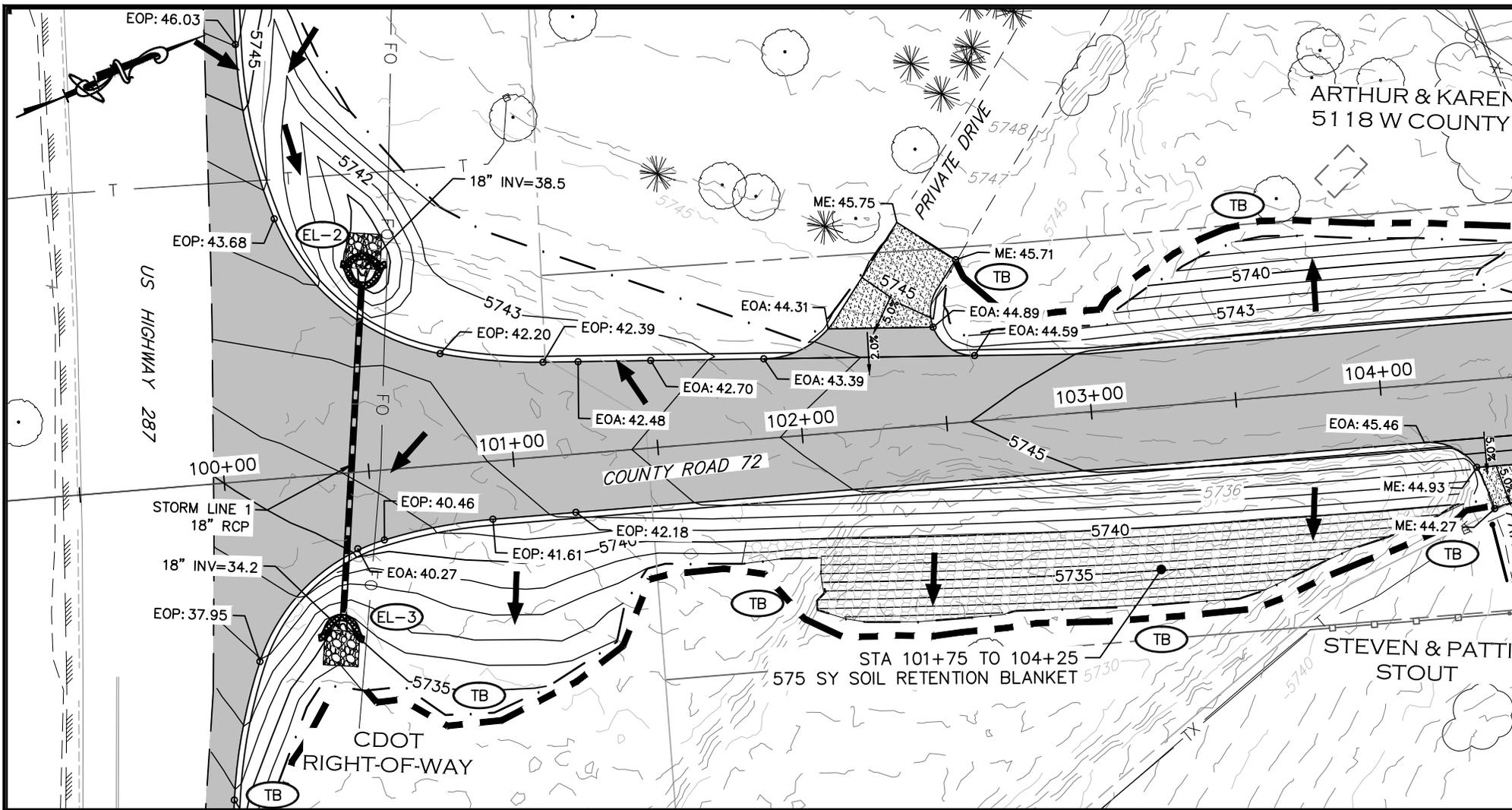


TEMPORARY BERM
SEE NOTE 5

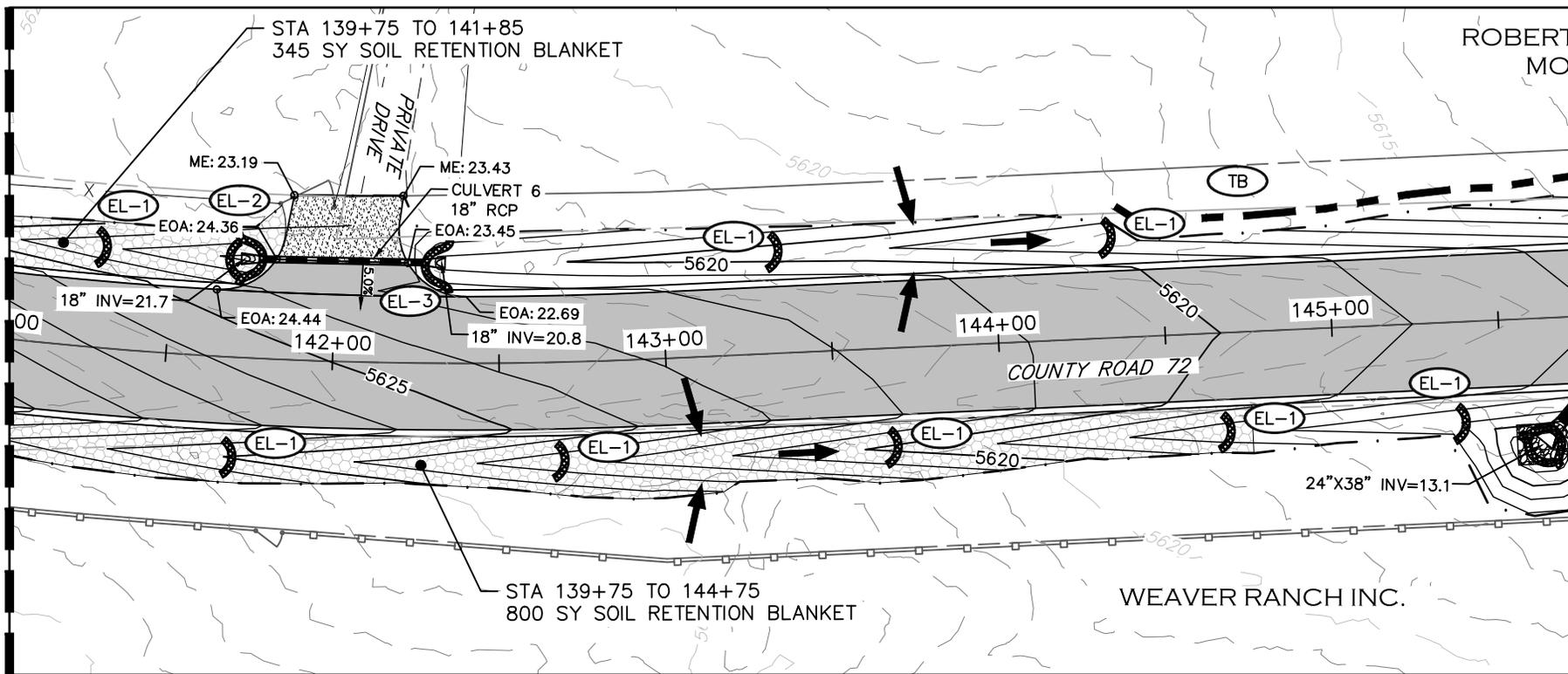


SOIL RETENTION BLANKET

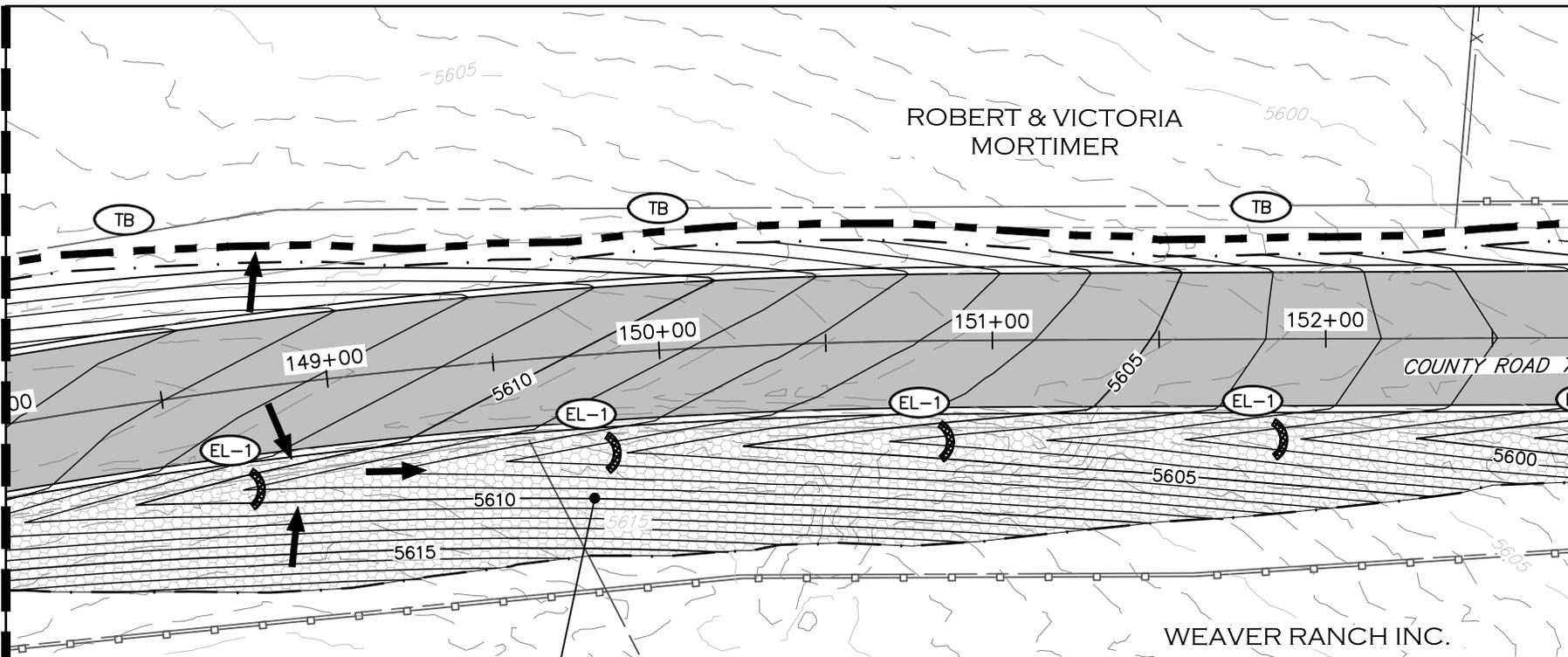




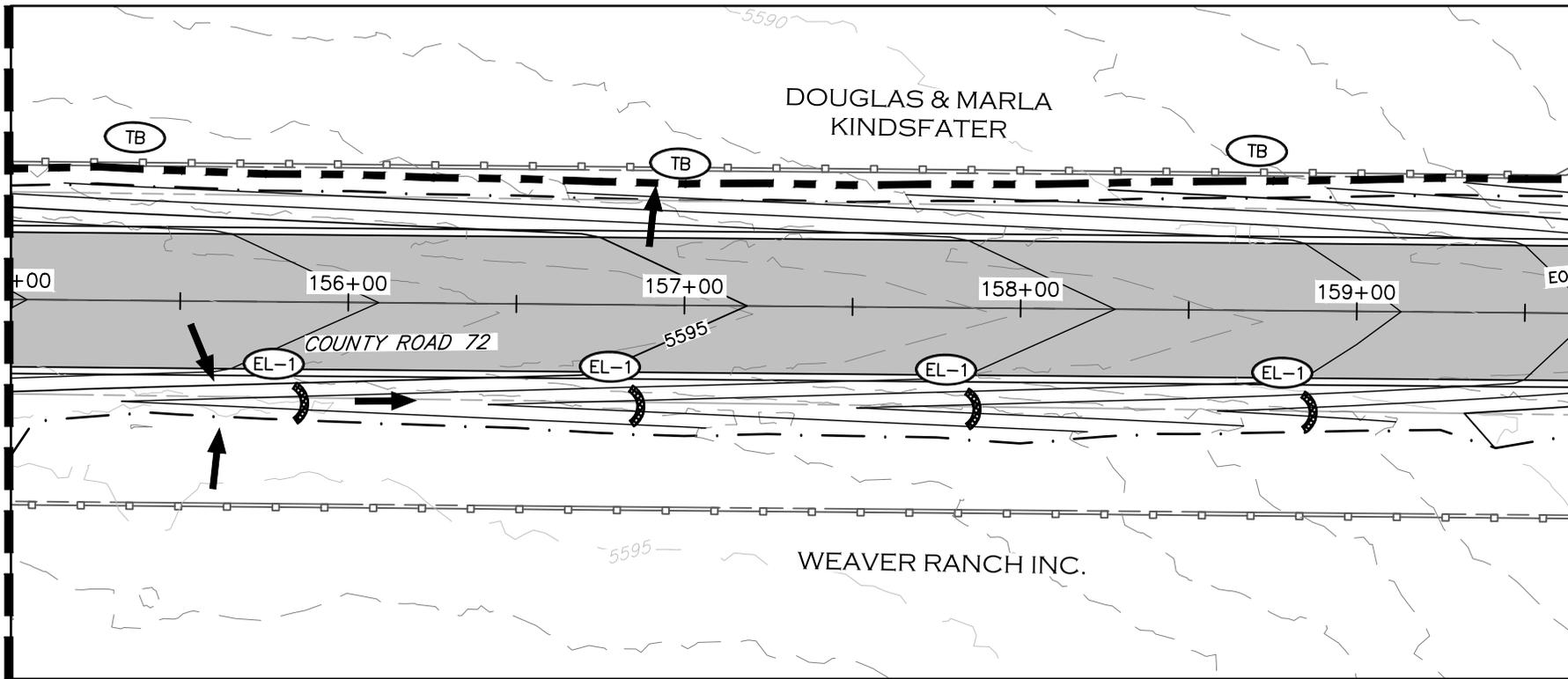
MATCHLINE STA 141+00
SEE SHEET 77



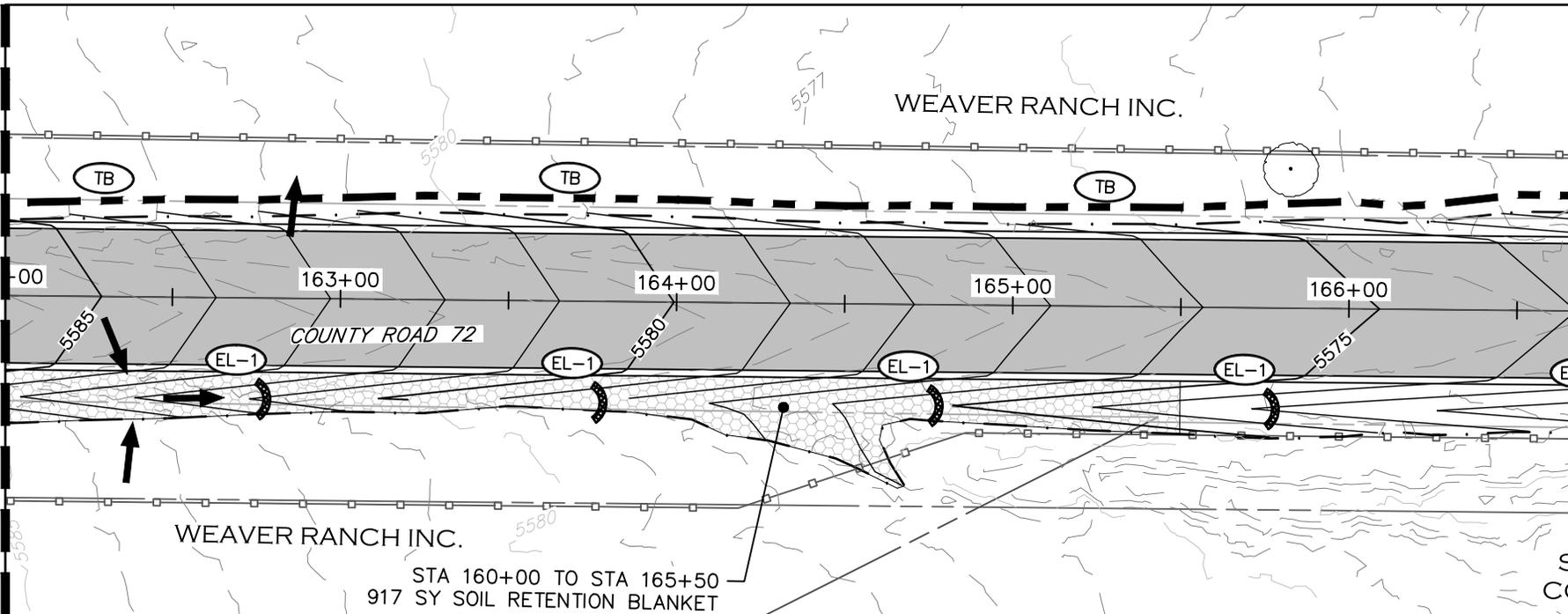
MATCHLINE STA 148+00
SEE ABOVE



MATCHLINE STA 155+00
SEE SHEET 78

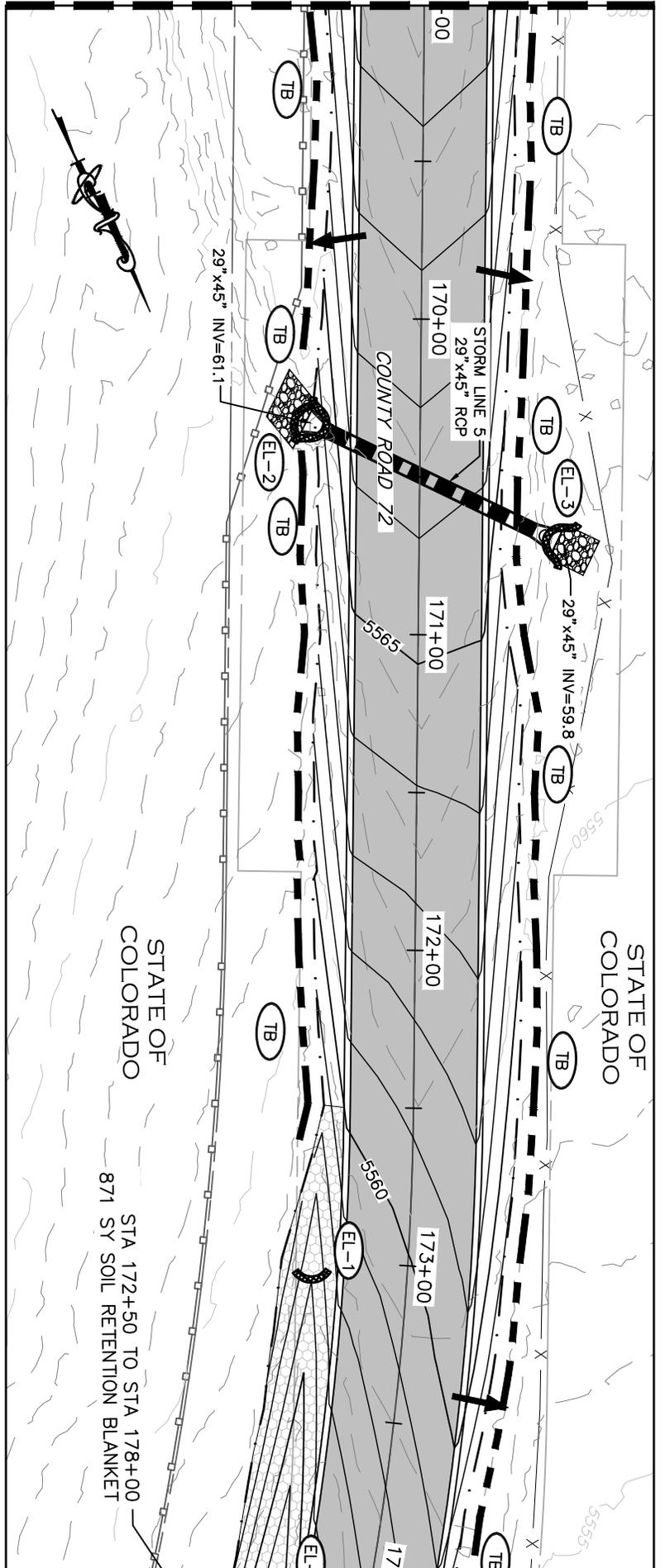
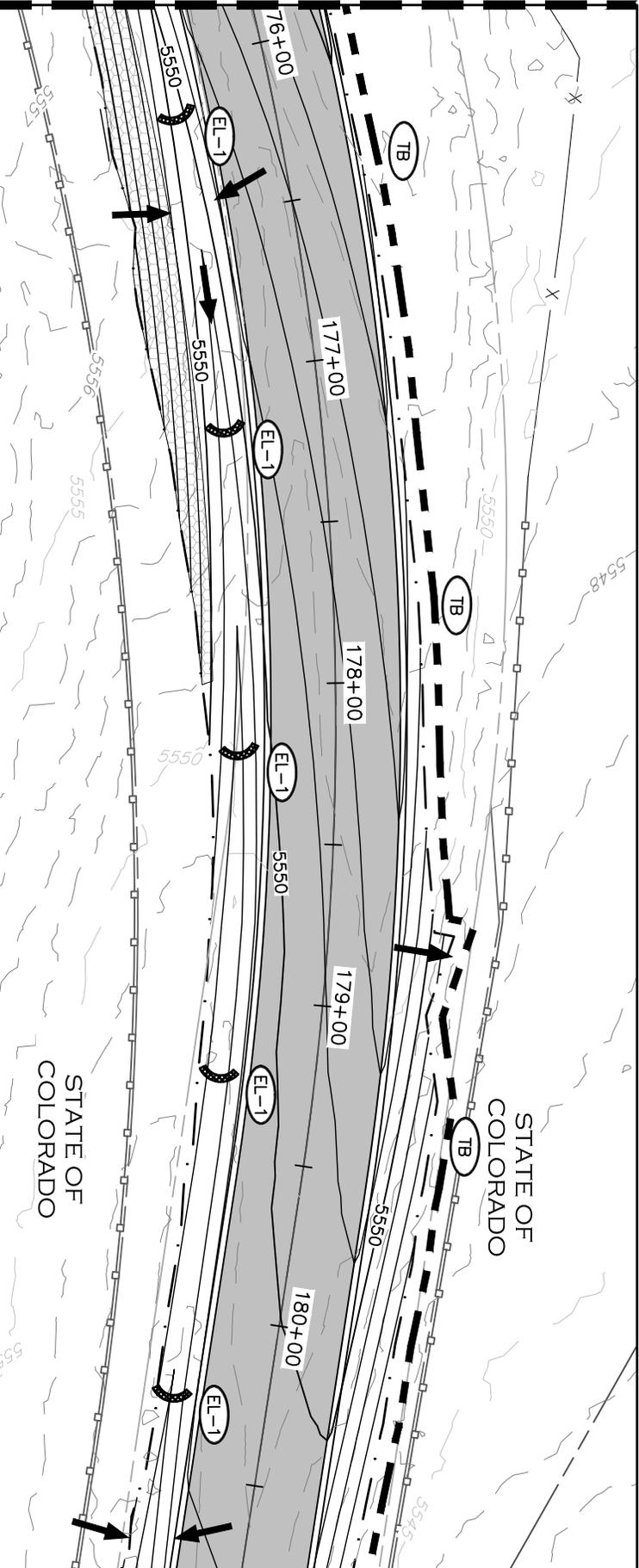


MATCHLINE STA 162+00
SEE ABOVE

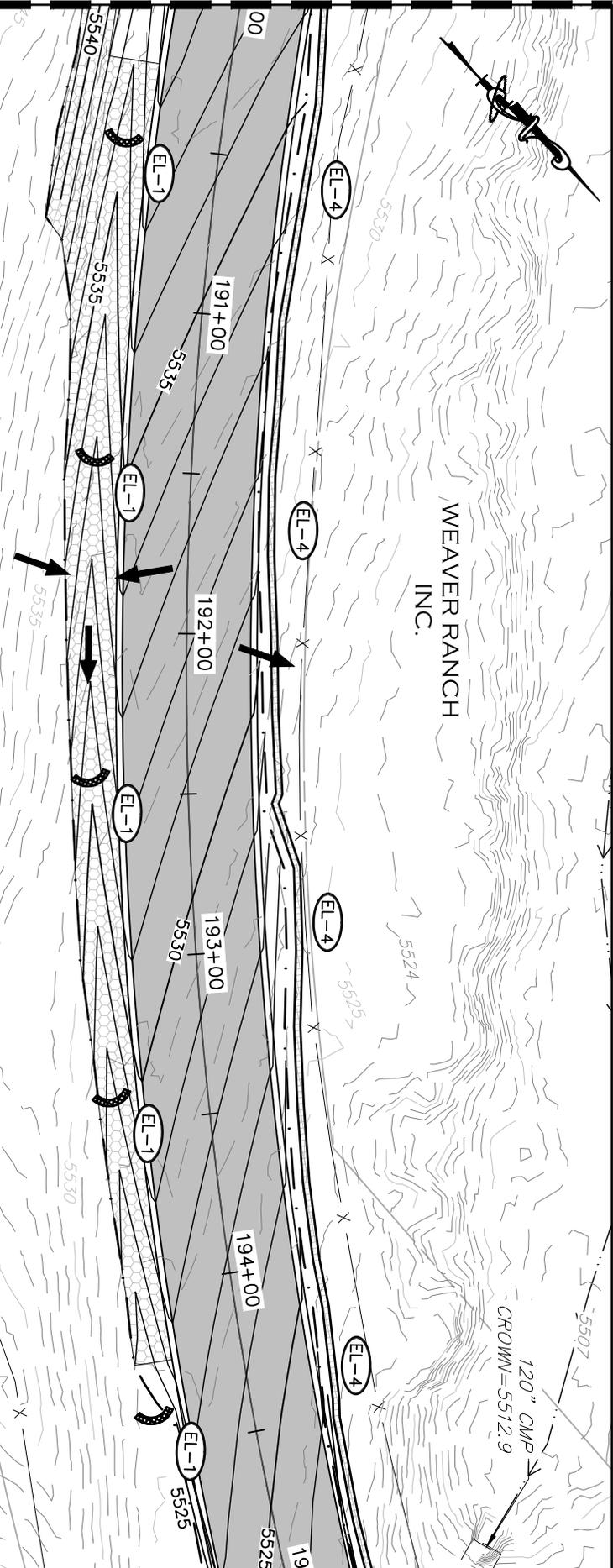


MATCH LINE STA 169+00
SEE SHEET 79

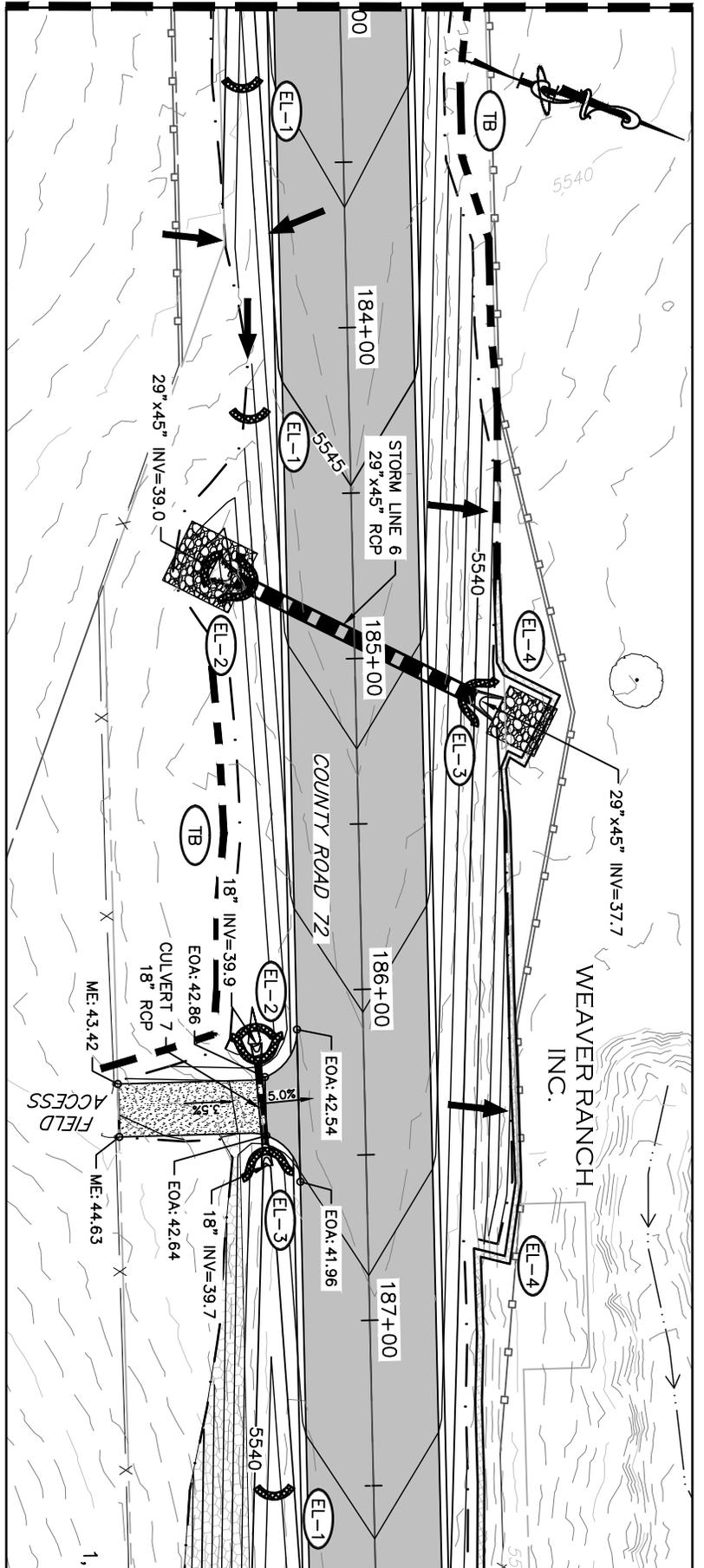
MATCH LINE STA 176+00
SEE ABOVE



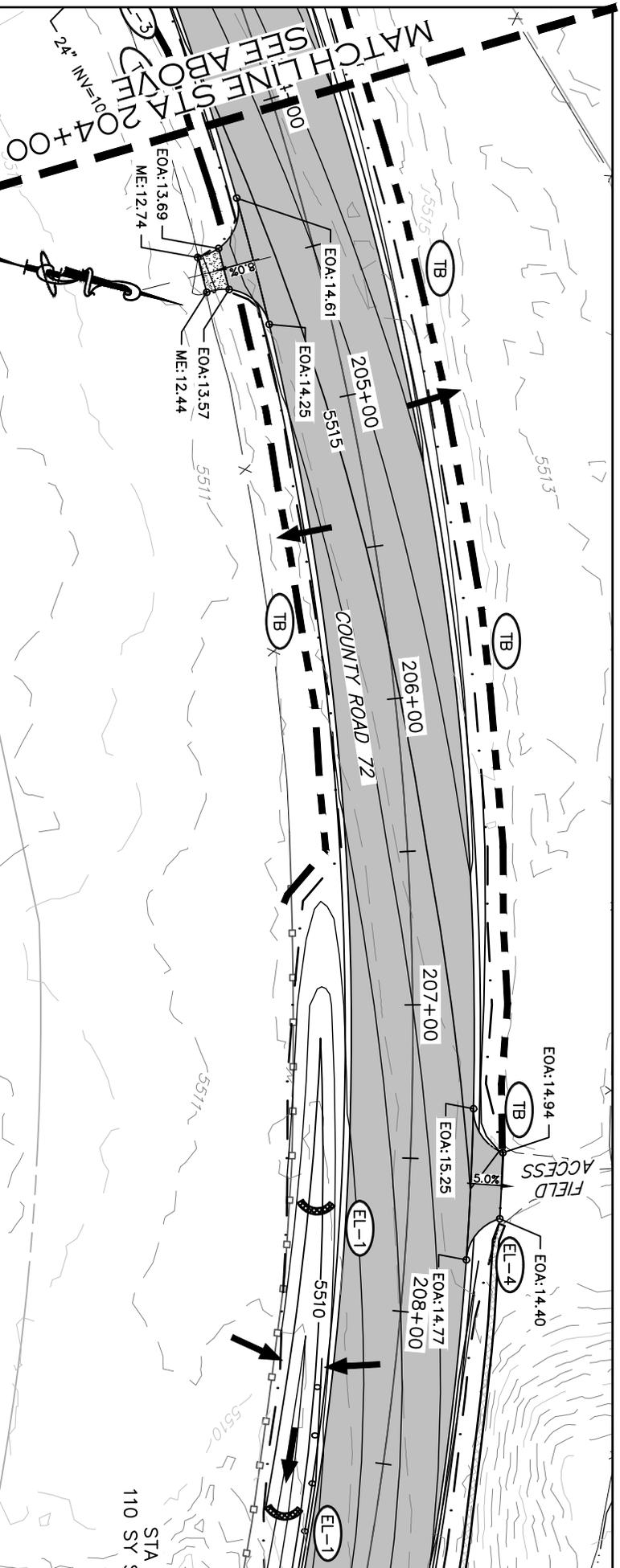
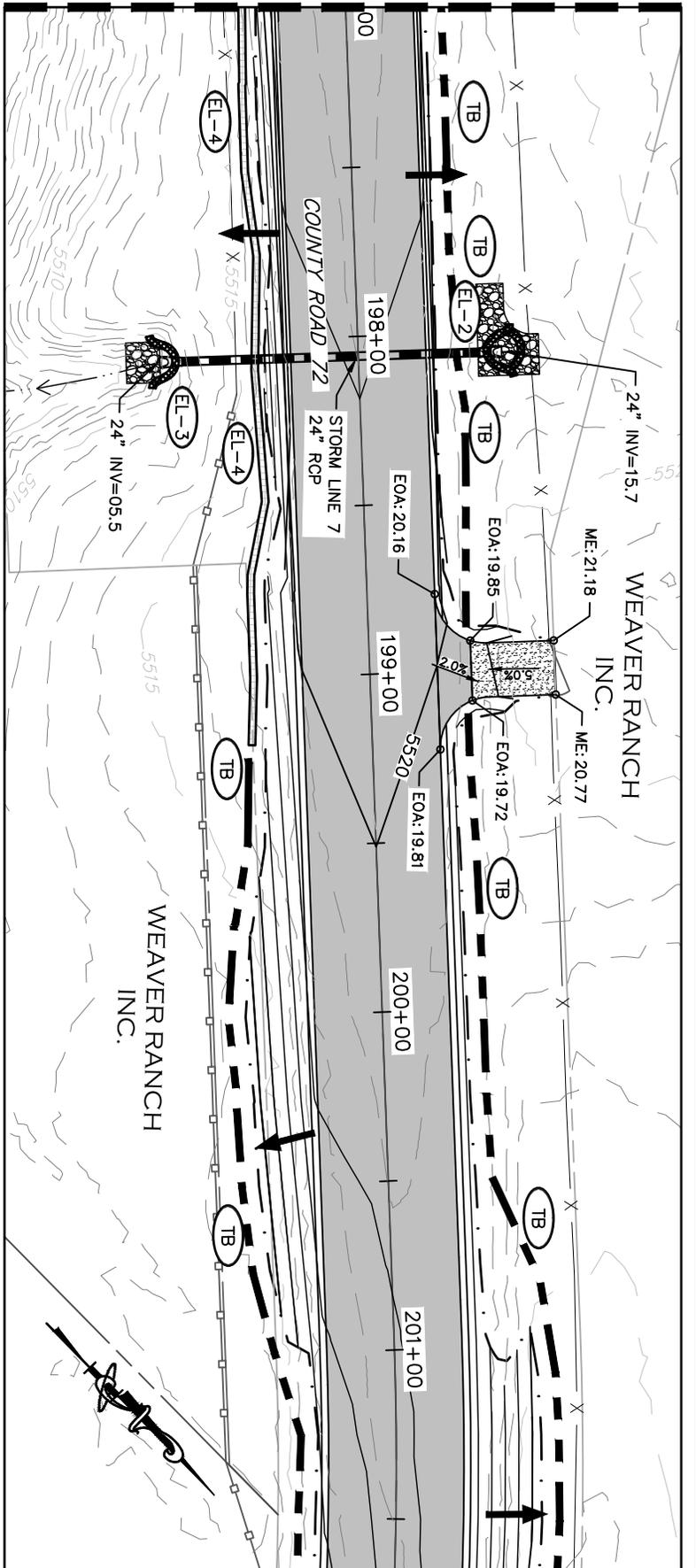
MATCH LINE STA 190+00
SEE ABOVE



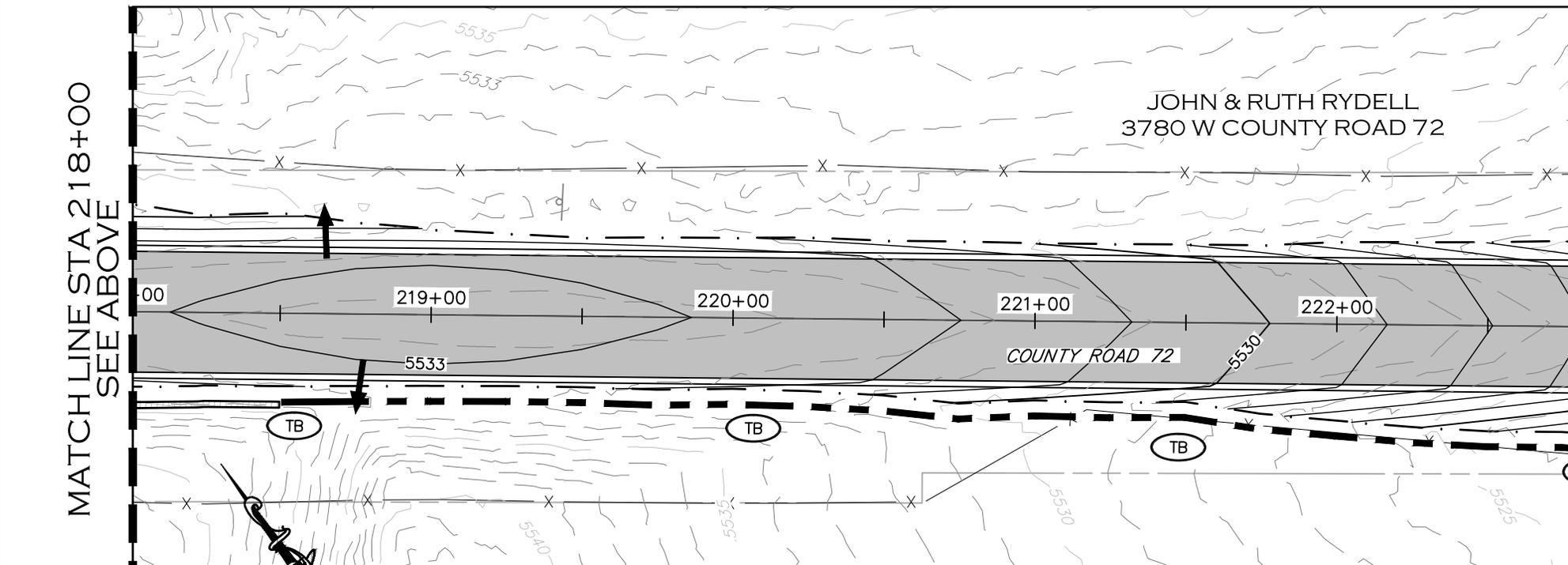
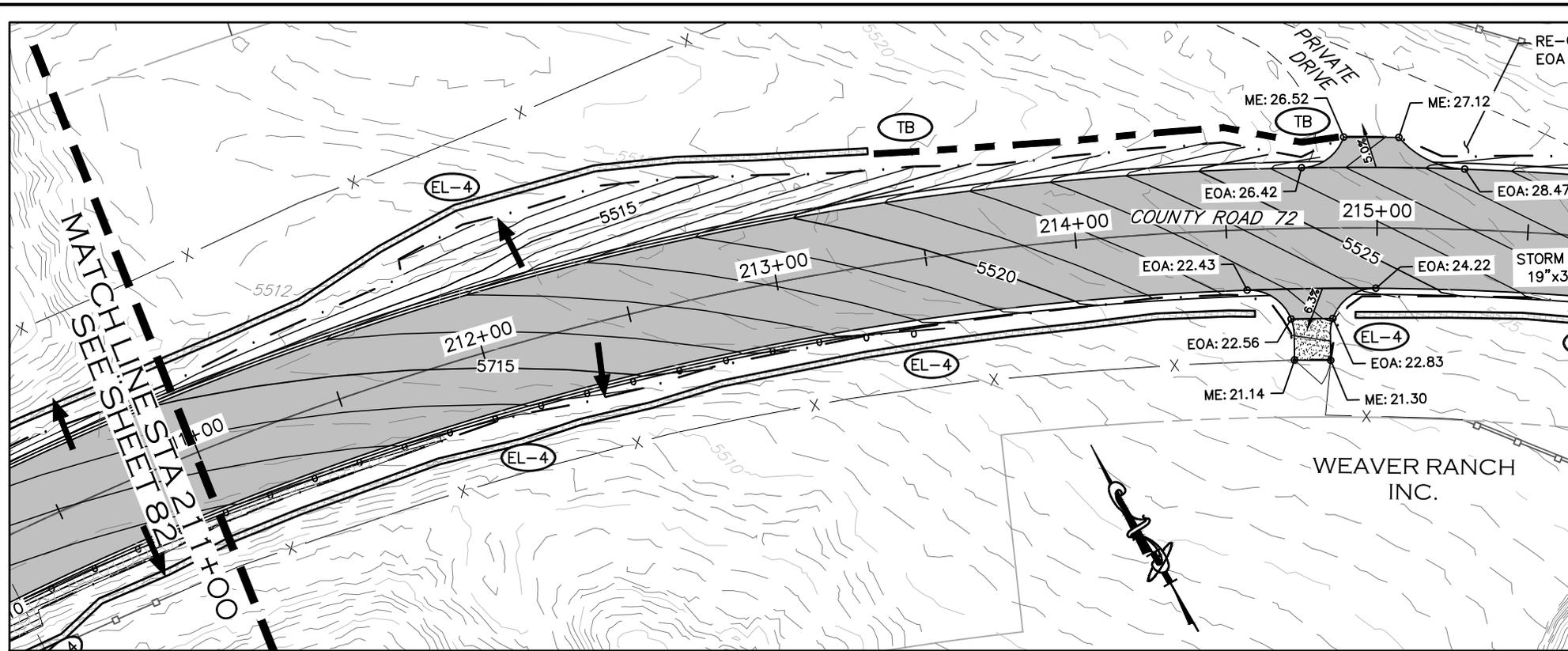
MATCH LINE STA 183+00
SEE SHEET 80



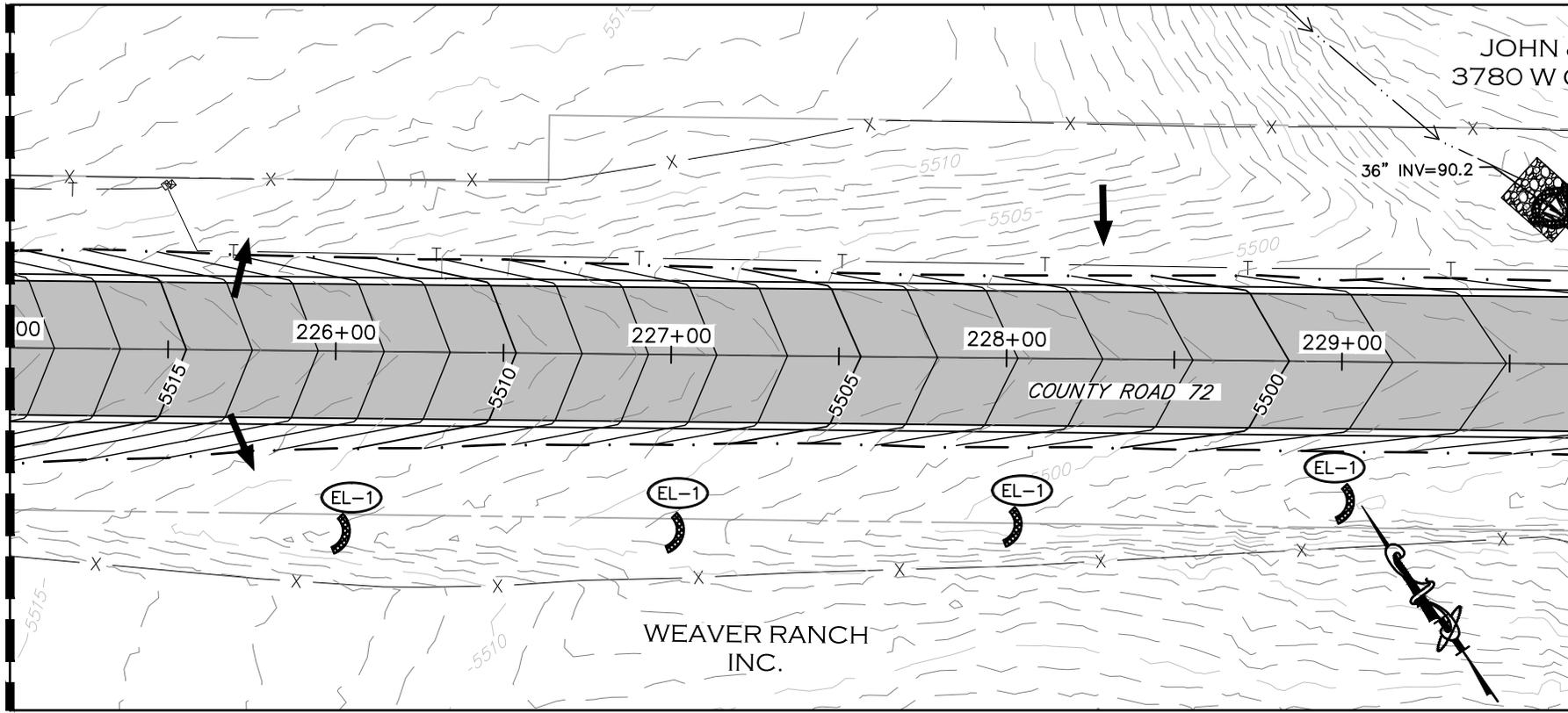
MATCH LINE STA 197+00
SEE SHEET 81



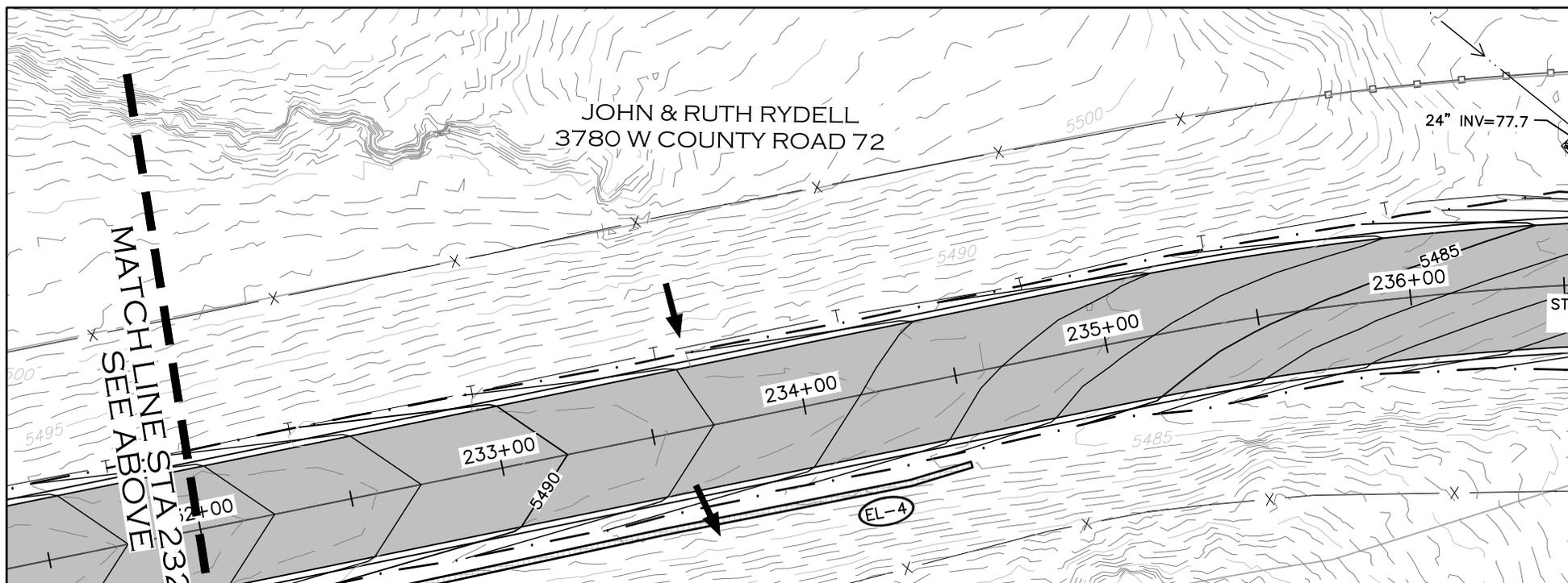
STA
110 SY 9

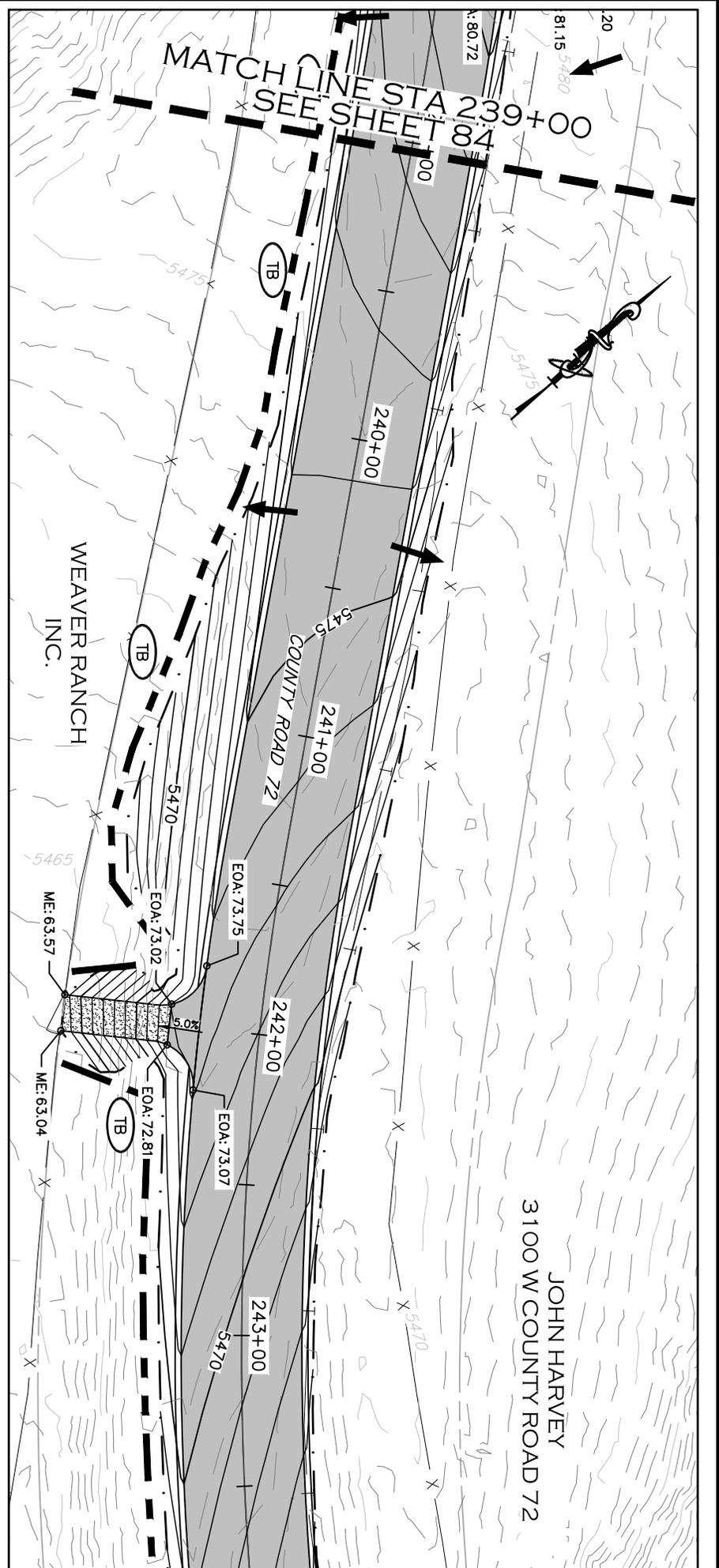
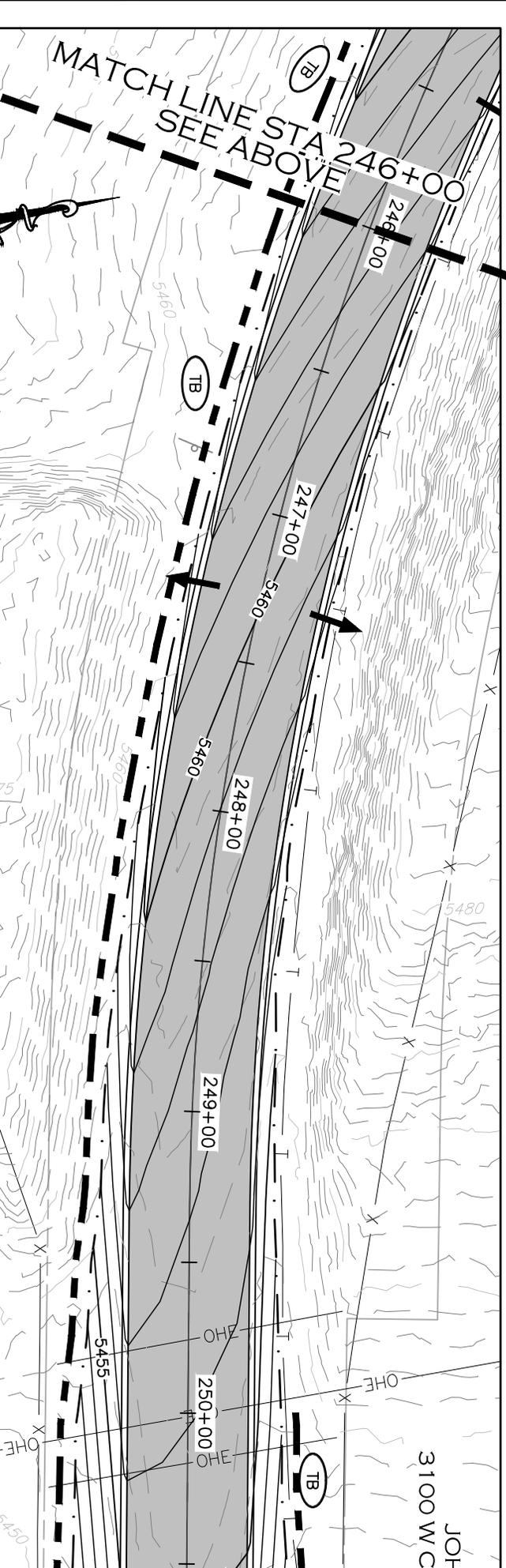


MATCH LINE STA 225+00
SEE SHEET 83

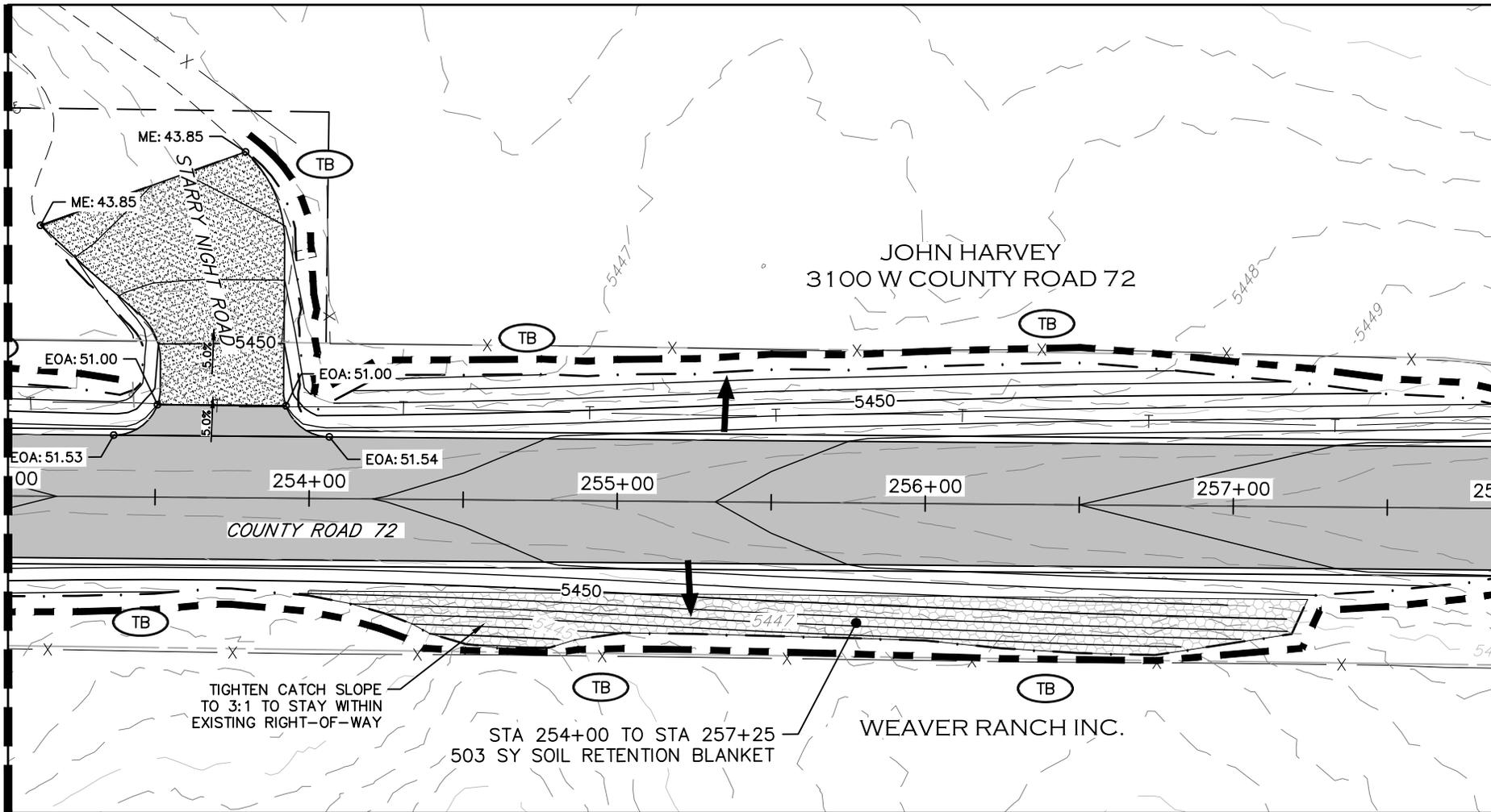


MATCH LINE STA 232+00
SEE ABOVE





MATCHLINE STA 253+00
SEE SHEET 85



1. SITE DESCRIPTION

The Contractor shall comply with all CDOT contractual requirements and all requirements associated with the CDPS-SCP on this project. The SWMP Administrator for Construction shall update to reflect current project site conditions.

A. **PROJECT SITE LOCATION:** Larimer County Road (LCR) 72 is located in Northeast Larimer County. The improvements to LCR 72 extend from Highway 287 to County Road 21.
Location or address of construction office: To Be Determined

B. **PROJECT SITE DESCRIPTION:** LCR 72 Roadway improvements include re-alignment of multiple horizontal curves and re-grading of several large vertical curves to improve sight distance and increase the design speed along the corridor. The new roadway will be paved with asphalt and have two 12-foot travel lanes and 8-foot paved shoulders. Catch slopes will be constructed to improve the overall safety of the roadway. Improvements also include removing and replacing multiple culverts to maintain historic drainage patterns in the area. The project also includes the addition of a concrete box culvert at Owl Creek.

C. **PROPOSED SEQUENCING FOR MAJOR CONSTRUCTION ACTIVITIES:** The construction will follow the following general sequence:

1. Install perimeter control and pre-construction Best Management Practices (BMPs), including installation of temporary tree protection.
2. Clearing, grubbing, and tree removal.
3. Removal of existing roadway material.
4. Strip and Stockpile topsoil.
5. Excavation and grading for new roadway profile.
6. Installation of precast concrete box culverts.
7. Installation of storm sewer and culverts.
8. Roadway paving.
9. Stabilize disturbed areas (seeding and mulching)
10. Remove BMPs upon site stabilization and County approval.

D. ACRES OF DISTURBANCE:

1. Total area of construction site (LOC (PERMITTED AREA)): 2,187,880 sq. ft. (50.22 acres)
2. Total area of proposed disturbance (LDA): 1,325,950 sq. ft. (30.45 acres)
3. Total area of seeding: 505,460 sq. ft. (11.60 acres)
4. Total area of pre-project impervious surface: 9,280 sq. ft. (0.21 acres)
Asphalt: 9,280 sq. ft. (0.21 acres)
Gravel: 670,705 sq. ft. (15.40 acres)
5. Total area of final impervious surface: 641,980 sq. ft. (14.74 acres)

E. **EXISTING SOIL DATA:** Existing soil type includes: Connerton-Sylvandale complex, Kirtley-Robertsbranch complex, Baller-Rock outcrop complex, Hartan loam, and Rock outcrop.

F. EXISTING VEGETATION, INCLUDING PERCENT COVER:

During design the SWMP Administrator for Design in consultation with the Engineer will determine if the SWMP Administrator for Design or the SWMP Administrator for Construction will conduct the Vegetation Transects as outlined in Chapter 4.11.2 of the CDOT's Erosion Control and Stormwater Quality Guide.
<https://www.codot.gov/programs/environmental/landscape-architecture/erosion-storm-quality/swachapter4.pdf>]

Pre-Construction Date of survey: _____ % Density: _____

Description of existing vegetation: _____

Map or table showing transect locations in SWMP tab 17:

Post-Construction Date of survey: _____ % Density: _____

Description of existing vegetation: _____

Map or table showing transect locations in SWMP tab 17:

H. RECEIVING WATER:

1. Outfall locations: There are 13 storm drainage patterns. There are also 6 private driveway access locations. The major two large existing culverts that convey that will not be impacted with this project constructed with this project to eliminate drainage is identified as Owl Creek. A and profile sheets.
2. Names of immediate receiving water
3. Ultimate receiving water(s): Dry Creek
4. Horizontal distance to nearest ultimate receiving water
5. Description of all stream crossings

Location	Stream Name
STA 120+00	Owl Creek
STA 170+50	Unnamed DRN 3 – tributary to Owl Creek
STA 195+60	Campbell Creek
STA 210+20	Campbell Creek
STA 216+00	Unnamed DRN 2 – tributary to Campbell Creek
STA 230+20	Unnamed DRN 1 – tributary to Campbell Creek

I. ALLOWABLE NON-STORMWATER DISCHARGES:

1. Groundwater and stormwater discharge activities may be allowed if:
 - a. the source is groundwater and not surface water
 - b. the source and BMPs/Control Measures do not leave the site
 - c. discharges do not leave the site
 - d. The contractor shall protect all facilities subject to flooding, restore to no cost to the ownerAny dewatering shall be done in accordance with the above.

CONTAMINATED:

2. If discharges do not meet the above criteria, the contractor shall obtain approval from the CDPHE. See standard specifications for Contaminated Water.

Discharge Description
Dewatering*
Uncontaminated Spring
Concrete Wash Water (in-ground wash structure)
Landscape Irrigation Return Flows
Emergency Fire Fighting

*Refer to CDPHE Low Risk Discharge Guidelines at <https://www.colorado.gov/pacific/sif>

*If ground water does not meet water quality requirements, it shall be treated before discharge.

2. SITE MAP COMPONENTS:

Pre-construction

- A. PROJECT CONSTRUCTION POTENTIAL SITE BOUNDARIES See limits of grading on the Grading & Erosion Control Plan.
- B. ALL AREAS OF GROUND SURFACE DISTURBANCE See limits of grading on the Grading & Erosion Control Plan.
- C. AREAS OF CUT AND FILL See roadway Plan and Profile and the Grading & Erosion Control Plan.
- D. LOCATION OF ALL STRUCTURAL CONTROL MEASURES IDENTIFIED IN THE SWMP See Grading & Erosion Control Plan.
- E. LOCATION OF NON-STRUCTURAL CONTROL MEASURES AS APPLICABLE IN THE SWMP SWMP Contractor to identify the need and location for non-structural BMPs.
- F. STREAMS, SPRINGS, WETLANDS AND OTHER STATE WATERS, INCLUDING AREAS THAT REQUIRE PRE-EXISTING VEGETATION BE MAINTAINED WITHIN 50 FEET OF A RECEIVING WATER See Grading & Erosion Control Plan.
- G. PROTECTION OF TREES, SHRUBS AND CULTURAL RESOURCES See Demolition Plan for trees to remain in place.
- H. FLOW ARROWS THAT DEPICT STORMWATER FLOW DIRECTIONS ON-SITE AND RUNOFF DIRECTION See Grading & Erosion Control Plan.
- I. AREAS USED FOR STORING AND STOCKPILING OF MATERIALS, STAGING AREAS (field trailer, fueling, etc.) WASTE ACCUMULATION and BATCH PLANTS INCLUDING MASONRY MIXING STATIONS Contractor to identify.
- J. LOCATIONS OF ALL STREAM CROSSING LOCATED WITHIN THE CONSTRUCTION SITE BOUNDARY see Plan & Profile Key Map.

3. QUALIFIED STORMWATER MANAGERS:

- A. SWMP ADMINISTRATOR FOR DESIGN: CDOT Certified individual responsible for developing SWMP Plan Sheets and SWMP Site Maps during the design phase. [The 207 & 212 requires that topsoil testing and the topsoil amendment requirements be completed by the SWMP Administrator for Design, for additional information see the SWMP development tools on the Landscape Architecture Section Website <https://www.codot.gov/programs/environmental/landscape-architecture/207-and-212-psp-required-swmp-development-tools-1>]

Name/Title	Contact Information	Certification #
Skylar Brower	sbrower@interwestgrp.com	

- C. SWMP ADMINISTRATOR FOR CONSTRUCTION: (As defined in Subsection 208) The Contractor shall designate a SWMP Administrator for Construction upon accepting co-permittee of the permit. The SWMP Administrator for Construction shall become the operator for the SWMP and assume responsibility for all design changes to the SWMP implementation and maintenance in accordance to 208.03, the SWMP shall remain the property of CDOT. The SWMP Administrator for Construction shall be responsible for implementing, maintaining and revising SWMP, including the file and contact information. The activities and responsibilities of the SWMP Administrator for Construction shall address all aspects of the project's SWMP. (Update the information below for each new SWMP Administrator for Construction) (Copy of TECS Certification must also be included in the SWMP.)

C. EROSION CONTROL INSPECTOR:
Erosion Control Inspector, The Erosion Control Act, 208.03 (c) (Copy of TECS Certification

Name/Title	Contact Information (email)

D. PERMANENT STABILIZATION SUBJECT:
Environmental Staff member, or an independent expert is a project team leader responsible for Project Special Provisions as follows, and will verify requirements. <https://www.codot.gov/programs/verification-checklist-for-successful-roadside->

- 1. Review the Topsoil Management
- 2. Attend the Environmental Pre-
- 3. Coordinate the Site Pre-vegetation
- 4. Review and recommend appropriate
- 5. Review and recommend appropriate
- 6. Attend the Substantial Landscape
- 7. Attend the Final Landscape Control

Name/Title

4. STORMWATER MANAGEMENT CONTROL:

THE CONTRACTOR SHALL PERFORM THE FOLLOWING:

- A. POTENTIAL POLLUTANT SOURCE CONTROL:
Evaluate, identify, locate and control potential pollutants with subsection 107.25, CDPS. Pollutants shall be shown on the Construction Control Plan.
- B. OFFSITE DRAINAGE (RUN ON WATER):
1. Describe and record contractor address off site run-on water in the Construction Control Plan.
- C. VEHICLE TRACKING CONTROL:
1. Control measures shall be included in the Construction Control Plan.
- D. PERIMETER CONTROL:
1. Perimeter control shall be included in the Construction Control Plan.
2. Perimeter control may consist of measures as approved.

5. DURING CONSTRUCTION

RESPONSIBILITIES OF THE SWMP Administrator for Construction

The SWMP should be considered a "living document" that is continuously reviewed and modified throughout the construction phasing. During construction, the following items shall be added, updated, or amended as needed by the SWMP Administrator for Construction in accordance with subsection 208.03.

During construction, indicate how items that have not been addressed during design are being handled in construction. If items are covered in the template or other sections of the SWMP, indicate below what section the discussion takes place.

A. **MATERIALS HANDLING AND SPILL PREVENTION:** prior to construction commencing the Contractor shall submit a Spill Prevention, Control and Countermeasure Plan, see subsection 208.06. Materials handling shall be in accordance with subsection 208.06.

B. **STOCKPILE MANAGEMENT:** shall be done in accordance with subsections 107.25 and 208.07

C. **CONCRETE WASHOUT:** Concrete wash out water or waste from field laboratories and paving equipment shall be contained in accordance with subsection 208.03.

D. **SAW CUTTING:** shall be done in accordance with subsections 107.25, 208.04, 208.05

E. **STREET SWEEPING:** shall be done in accordance with subsection 208.04

6. INSPECTIONS

- A. Water Quality Inspections shall be in accordance with subsection 208.03(c).
- B. Permanent Stabilization Inspections shall be in accordance with subsections 207.03 and 212.05.

7. CONTROL MEASURE MAINTENANCE

A. Maintenance shall be in accordance with subsection 208.04(f).

8. RECORD KEEPING

A. Records shall be kept in accordance with subsection 208.03(d).

9. INTERIM, PERMANENT STABILIZATION and LONG TERM STORMWATER MANAGEMENT

The Contractor shall comply with all interim stabilization and permanent stabilization requirements in accordance with subsection 208.04(e).

A. **SEEDING PLAN** Soil Preparation, soil conditioning or topsoil, seeding (native), mulching (weed free) and mulch tackifier will be required on an estimated 10.76 acres of disturbed area within the right-of-way limits which are not surfaced. The following types and rates shall be used:

[The CDOT Landscape Architects or the CDOT Seed Calculator located on the Landscape Architects website can be utilized to develop a seed mix. <https://www.codot.gov/programs/environmental/landscape-architecture/native-seed-calculator>]
The following seed mixes as shown on the Permanent Stabilization Site Maps and rates shall be used:

COMMON NAME	BOTANICAL NAME	LEBS. PLS PER ACRE
TBD	TBD	TBD
TOTAL		

into the soil. In small areas not acc
rake 0.25 inch to 0.5 inch into the s

SEEDING METHOD (subsection 212.05)
Seeding (Native) Drill, CDOT Pay Item
Seeding (Native) Hydraulic, CDOT Pay
Seeding (Native) Broadcast, CDOT Pay
Seeding (Wetland) Drill, CDOT Pay Item
Seeding (Wetland)Hydraulic, CDOT F
Seeding (Wetland) Broadcast, CDOT

The Contractor shall provide the lo
the Engineer. Seed stored by the C

C. **MULCHING APPLICATION:** Apply certified weed free straw per acre and soil in combination with an organic m

- 1. Prior to winter shutdown or the mulched with 2 tons of mulch in combination with an organic n

D. **SPECIAL REQUIREMENTS:**

- 1. The Contractor shall increase th hydraulic and broadcast meth
- 2. Soil amendments, seedbed pre accomplished within four worki subgrades. If placed topsoil is days, the Contractor shall com 208.04(e) at no additional cost
- 3. Permanent stabilization mulchin native seed.
- 4. The Contractor shall submit a p approval showing how the SWM damage to seeded areas.

E. **SOIL AMENDMENT REQUIREMENTS:** receive seeding (Native). [select meth delete all others. Round quantities up

Pay Item	Description
212-00700	Organic Fer
212-00701	Compost (N Applied)
212-00703	Humate
212-00704	Mycorrhizae
212-00705	Elemental S

Pay Item	Description	Total
212-00700	Organic Fer	
	Biotic Soil A	

Total Acres of Seeding (Native) Broadcast

Pay Item	Description	Amount/Acre	Units	Total For This Method
212-00700	Organic Fertilizer		Pounds	
212-00701	Compost (Mechanically Applied)		CY	
212-00703	Humate		Pounds	
212-00704	Mycorrhizae		Pounds	
212-00705	Elemental Sulfur		Pounds	

F. **SOIL RETENTION COVERING:** On slopes and ditches requiring a blanket or turf reinforcement mat (trm), the blanket/trm shall be placed in lieu of mulch and mulch tackifier and placed after seeding (native). See SWMP Site Map for blanket/trm locations.

G. **Permanent Stabilization Application Under Structures:** Under structures shade patterns should be considered and the use of Median Cover Material (Stone) or other stabilized options with an approved Project Special Provision should be used. See SWMP Site Map for locations. [The SWMP Administrator for Design should review the selected material for use under structures with the region environmental staff and hydraulic engineer]

H. **RESEEDING OPERATIONS/CORRECTIVE STABILIZATION:**

Prior to partial acceptance. [Select item(s) that apply]

1. All seeded areas shall be reviewed during the 7 day inspections by the SWMP Administrator for Construction and or Erosion Control Inspector for bare soils caused by surface or wind erosion. Bare areas caused by surface or gully erosion, blown away mulch, etc. shall be re-graded, seeded, and have the designated mulching applied as necessary, at no additional cost to the project.
2. The Contractor shall maintain seeding/mulch/tackifier/blanket/TRM, mow to control weeds or apply herbicide to control weeds in the seeded areas until Partial Acceptance of the stormwater construction work.

I. **LONG TERM STORMWATER MANAGEMENT**

See Item # 18 (as defined in section 208.03(D)(1) of the SWMP for long term management practices to control pollutants in stormwater discharges that will occur after construction operations are completed. [The SWMP Administrator for Design should work with the design team to determine if permanent water quality is required on the project]

10. PRIOR TO PROJECT FINAL ACCEPTANCE

- A. Partial Acceptance shall be in accordance with subsections 107.25 (d), 208.10 and 214.04. At the Partial Acceptance of the project, it shall be determined by the SWMP Administrator for Construction and the Engineer which temporary control measures shall remain until 70% revegetation is established or which shall be removed. When directed by the Engineer, removal and disposal of temporary control measures shall be included in the cost of work.
- B. At the end of the project, all ditch checks shall either consist of temporary erosion logs (or equivalent) or permanent riprap.
- C. All storm drains shall be cleaned prior to the Final Acceptance of the project. Work shall be included in 202 Clean Culvert. [**Check with Region Water Quality staff to see if CLEAN CULVERT PSP is needed and what Pay Item to use.**]

11. NARRATIVES: [Below are the CDOT narratives covered in CDOT's Standard Specifications and M Standard Plans. Proposed non-standard control measures during M-208 Standard or "X" for Non-Standard and provide a narrative. The narrative shall include what, when, where and why the control measure is being used. Also place a "B" in the Initial Activities Column for any control measures that must be installed before construction activity starts.]

Control Measure Matrixes During Construction:

1. Control measure narratives have been included for the CDOT Standard Specifications and Standard Plan M-208 and M-216 along with any non-standard control measures not included in the SWMP is proposed and approved by the Engineer the SWMP Administrator for Construction shall do the following: Place Control Measure Specification and Narrative covering the what, when, where and why the control measure is being used shall be add to the SWMP. The app
2. The SWMP Administrator for Construction shall place an "X" in the column in Use On Site when the control measure has been installed.
3. A "B" in the Initial Activities Column indicates that the control measure shall be installed **before** construction activity starts. Locations and quantities will be distributed in the Initial Activities Column. Regional Water Pollution Control Manager.

STRUCTURAL Control Measures that may be potentially used on the project for erosion and sediment control; practices may include, but are not limited to:

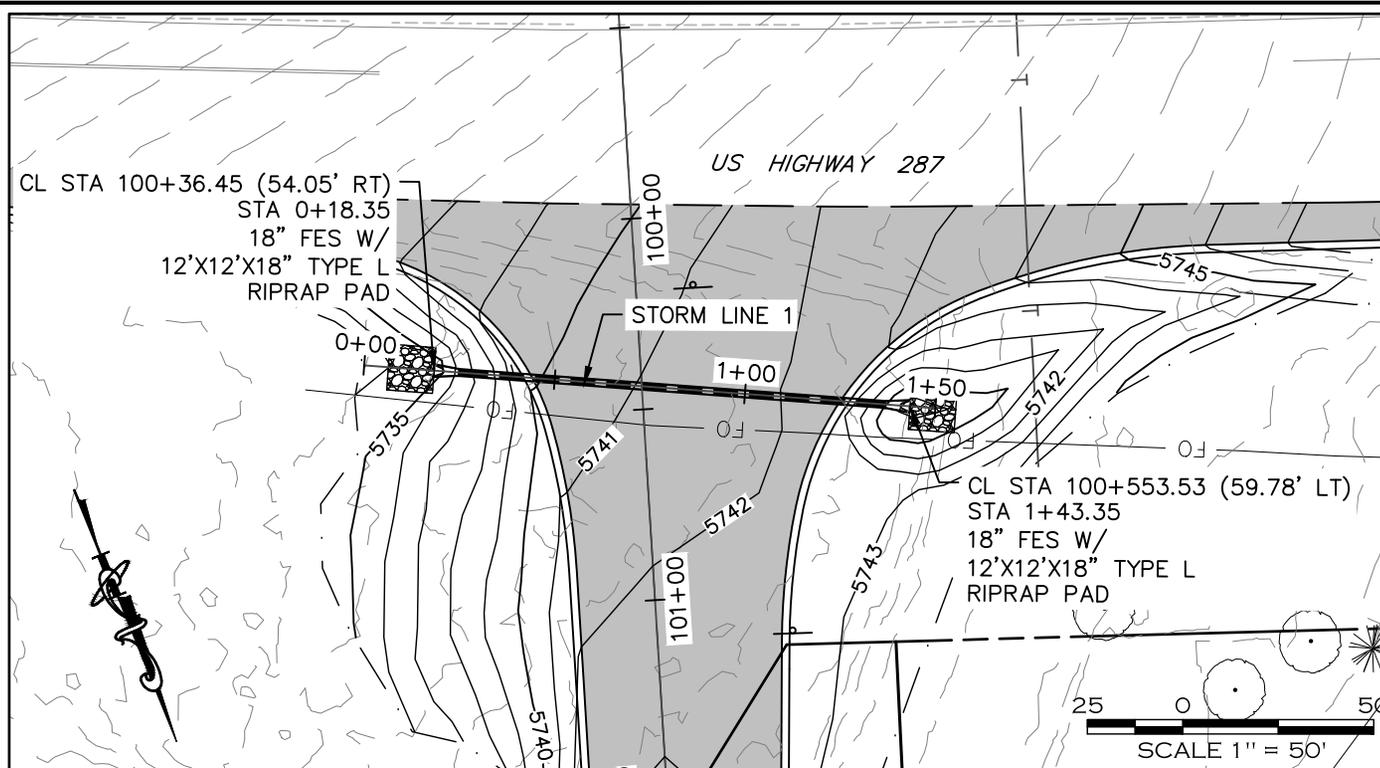
APPLICATION, CONTROL MEASURE	NARRATIVE
PROTECTION OF EXISTING WETLANDS Fence (plastic) and erosion logs	Fence (plastic) shall be placed in combination with erosion logs to prevent encroachment of construction traffic and sediment into state waters prior to start of construction disturbances. Fence (plastic) shall be placed adjacent to the wetlands; erosion logs shall be placed between the plastic fence and disturbance area. Logs shall be placed to direct flows away from or filter water running into wetlands from disturbance areas.
PROTECTION OF EXISTING TREES/LANDSCAPING Fence (plastic)	Fence (plastic) shall be used in areas indicated in the plans to prevent encroachment of construction traffic and sediment for the protection of mature trees and/or existing landscaping prior to start of construction disturbances.
CHECK DAM/DITCH CHECK Erosion log, silt berm, silt dike, rock check dam	Placed in ditches immediately upon completion of ditch grading to reduce velocity of runoff in ditch. For existing ditches, place prior to start of construction disturbances.
Storm Drain Inlet Protection In Paved Roadways (Type 1, 2 and 3 as shown on M-208-1, sheet 5 of 11)	Manufactured storm drain inlet protection placed prior to construction disturbances as detailed in M-208-1, to protect existing inlets or immediately upon completion of new inlets to prevent sediment from entering the inlet throughout construction.
Storm Drain Inlet Protection In Native Seed Areas (M-604 Standard Inlets Type C and D)	Erosion logs or aggregate bags placed around inlet grate to prevent sediment from entering inlet. Place prior to construction disturbances to protect existing inlets or immediately upon completion of new inlets.
CULVERT INLET/OUTLET PROTECTION Erosion logs, aggregate bags	Placed at mouth of culvert inlets and over top of culvert at inlet and outlet where disturbance may be occurring adjacent to pipe to prevent sediment laden water from entering pipe or drainage. Place prior to start of construction disturbances.
TYPE C, TYPE D AND TYPE 13 PROTECTION Erosion logs, aggregate bags, erosion bales	Placed around inlet grate or slope and ditch paving to prevent sediment from entering inlet. Place prior to start of construction disturbances.
STOCKPILE PROTECTION Temporary berm, erosion logs, aggregate bags*	Placed within specified distance, in accordance with subsection 208.06, from toe to contain sediment around stockpile. * Aggregate bags are easily moved and replaced for access during the work day. Place prior to start of stockpile, increase control as stockpile increases size.
TOE OF FILL PROTECTION Erosion logs, temporary berm, silt fence, topsoil windrow*	Place prior to slope/embankment work to capture sediment and protect and delineate undisturbed areas. *Can be used to stockpile topsoil for salvage.
PERIMETER CONTROL Erosion logs, silt fence, temporary berm, topsoil windrow*	Placed prior to construction commencing to address potential run-on water from off site, and to divert around disturbed area. *Can be used to stockpile topsoil for salvage.
SEDIMENT CONTROL/ SLOPE CONTROL Silt fence, erosion logs	Placed on the contour of a slope to contain and slow down construction runoff. Place prior to start of construction disturbances.
TEMPORARY SEDIMENT TRAP	Used to capture sediment laden runoff from disturbed areas < 5 acres during construction. Place prior

Riprap, or approved other	Construction control, used for waste management of concrete and concrete equipment cleaning. Place prior to start of concrete activities.	M-208
CONCRETE WASHOUT In-ground or fabricated	Source control, placed to prevent tracking of sediment from disturbed area to offsite surface. Place prior to start of construction disturbances.	M-208
VEHICLE TRACKING PAD	Constructed early in project, prior to storm sewer/ditches and in accordance with 208.05(p) to capture storm flow. Outlet structure and/or outfall shall be modified for temporary sediment control using an approved non-standard detail. Outlets that withdraw water from or near the surface shall be installed when discharging from basins and impoundments, unless infeasible	
Engineered SEDIMENT BASIN	Shall be done in such a manner to prevent potential pollutants from entering state waters.	
DEWATERING (Contractor is responsible for obtaining a permit from Colorado Department of Health and Environment.)	Constructed over stream or drainage to prevent discharge of pollutants from construction equipment into water.	
TEMPORARY STREAM CROSSING	Placed to divert clean surface or ground water around disturbance area to prevent it from mixing with construction runoff.	
CLEAN WATER DIVERSION		
OTHER		

NON-STRUCTURAL Control Measures that may be potentially used on the project for erosion and sediment control; practices may include, but are not limited to: Erosion control devices are used to limit the amount of soil loss on site. Sediment control devices are designed to capture sediment on the project site. Construction controls are construction control locations are indicated on the SWMP Site Map.

* **Use of vegetative buffer strip requirements.** The CDPHE Water Quality Control Division Technical Memorandum dated August 27, 2015 clarifies the requirements for utilization of existing measure, while maintaining compliance with the CDPS permit for Stormwater Discharges Associated with Construction Activity – CDPS Permit No. COR4000000. In general, the division implemented as a sediment removal control measure for runoff from disturbed areas at construction sites, unless implemented as a "finishing" component of a treatment train component. Measures. The entire memorandum can be found at: <https://www.colorado.gov/pacific/sites/default/files/Vegetative%20Buffer%20Memo.pdf>

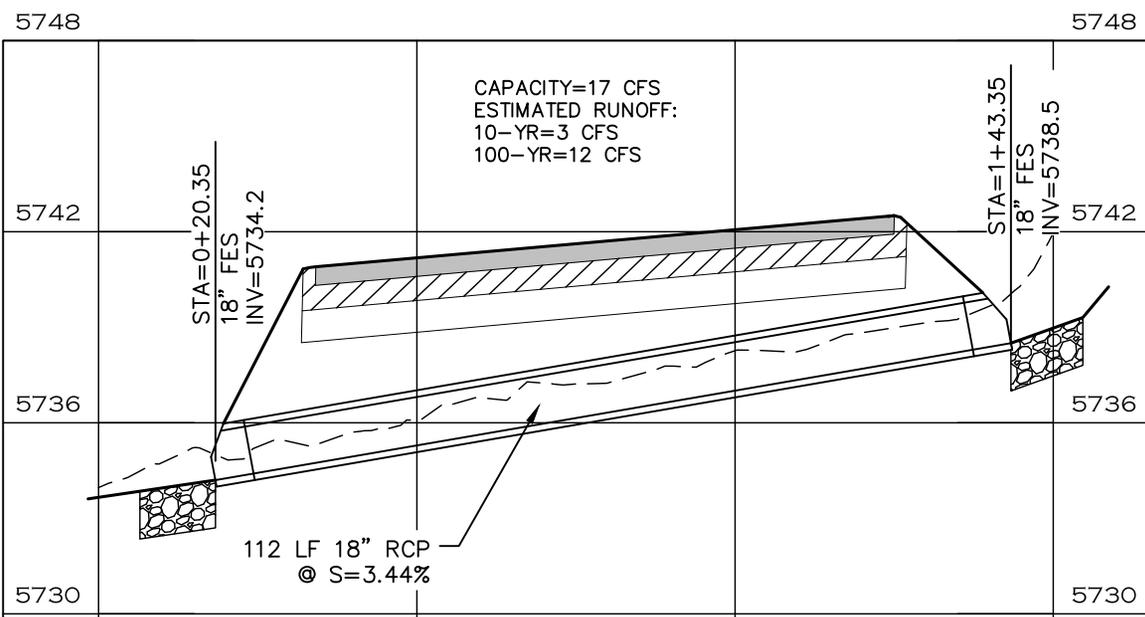
APPLICATION, CONTROL MEASURE	NARRATIVE	M- STANDARD or "For NON- STANDARD
* VEGETATIVE BUFFER STRIP Fence (plastic)	Finishing component for filtering sediment-laden runoff from disturbance area. Area within CDOT ROW or temporary easement to be identified on SWMP prior to construction starting.	
GRADING APPLICATIONS (LANDFORM)	Existing or created landforms may be used as a control measure if they prevent sediment from entering or leaving the disturbance area. If a landform directs flow of water to a concentrated outfall point, the outfall point shall be protected to prevent erosion. Area to be identified on SWMP prior to construction starting.	M-208
TOPSOIL MANAGEMENT STOCKPILE/SALVAGE Windrow or stockpile	Prior to any site disturbance work commencing, existing topsoil shall be scraped to a depth four inches or as specified, and placed in stockpiles or windrows. Upon completion of final grading, topsoil shall be evenly distributed over embankment to a depth of four inches or as specified.	M-208
SURFACE ROUGHENING / GRADING TECHNIQUES	Temporary stabilization of disturbance and to minimize wind and erosion.	
SEEDING (TEMPORARY)	Temporary stabilization used for over wintering of disturbance or used to control erosion for areas scheduled for future construction.	
BONDED FIBER MATRIX or MULCHING (HYDRAULIC)	Not to be used in areas of concentrated flows, i.e. ditch lines. To be for either Interim or Permanent Stabilization placed as a surface cover for erosion control. May be used as surface cover when work is temporarily halted and as approved by the Engineer for stockpiles.	
Straw or Hay MULCH/MULCH TACKIFIER	Interim or Permanent Stabilization placed as a surface cover for erosion control and or seeding establishment. To be installed as Interim Stabilization as a surface cover when work is temporarily halted and as approved by the Engineer	
SPRAY-ON MULCH BLANKET (Not to be used in areas of concentrated flows. i.e. ditch lines.)	Interim or Permanent Stabilization placed as a surface cover for erosion control and or seeding establishment. To be installed as temporary surface cover when work is temporarily halted and as approved by the Engineer	



CL STA 123+23.85 (79.07' RT)
 STA 0+17.00
 24" FES W/
 10'X10'X18" TYPE L
 RIPRAP PAD

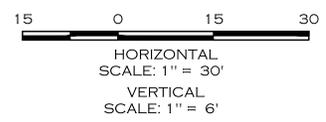
WEAVER RANCH IN

STORM LINE 1



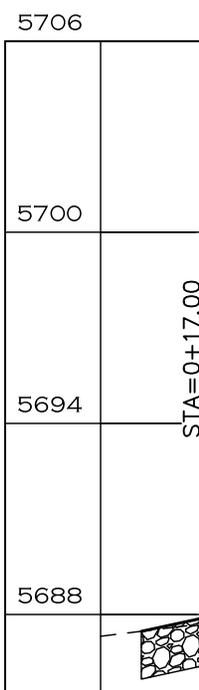
FOR INFORMATION ONLY

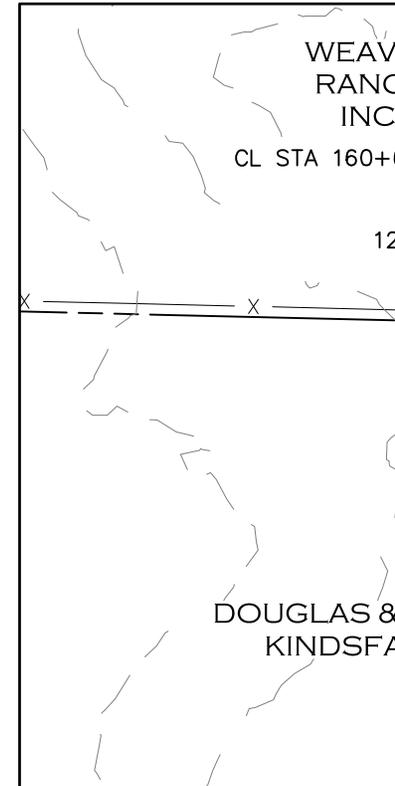
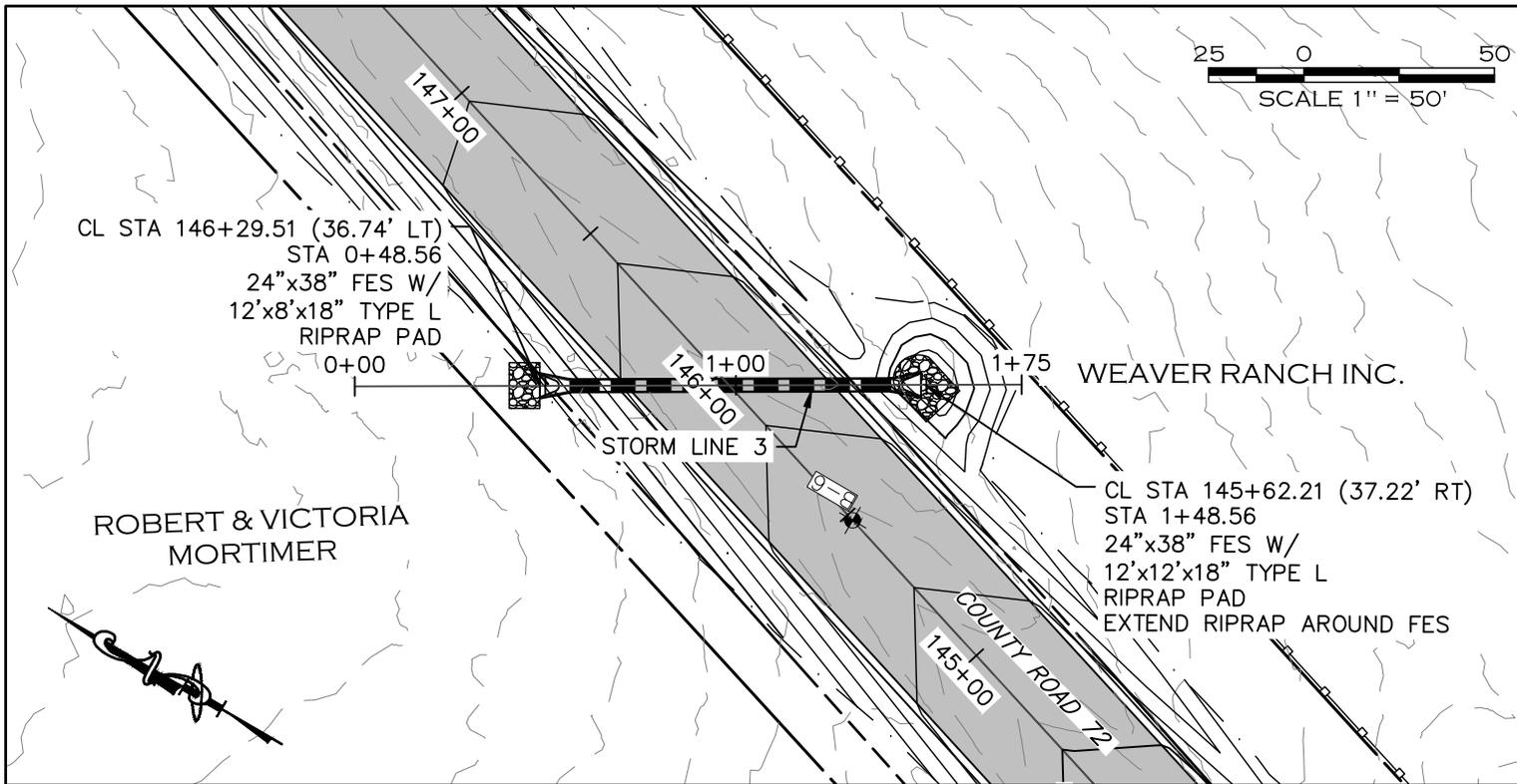
1. STORM CAPACITY IS FOR ENGINEERING DOCUMENTATION ONLY. ESTIMATED RUNOFF WAS CALCULATED USING STREAMSTATS.USGS.GOV
2. IT IS ANTICIPATED THAT WHILE TRAFFIC IS ON THE TEMP. 24' ROAD, STORM PIPE CONSTRUCTION WILL OCCUR FROM ROADWAY STATION RIGHT TO LEFT. A 1:1 TRENCH SLOPE WAS ASSUMED TO BE USED FROM THE EDGE OF THE 24' ROAD TO THE BOTTOM OF TRENCH. WHEN TRAFFIC IS FLIPPED OVER TO THE 30' BENCH (ULTIMATE ROAD SUBGRADE), THE REMAINDER OF THE STORM PIPE CAN BE CONSTRUCTED. FOR THE DEEPER STORM LINES (3, 7, 9, 11 AND 13), IT IS ANTICIPATED THAT ONE LANE OF TRAFFIC, 14-16' WIDE, CAN BE MAINTAINED WHILE COMPLETING THE STORM CONSTRUCTION.



NOTE

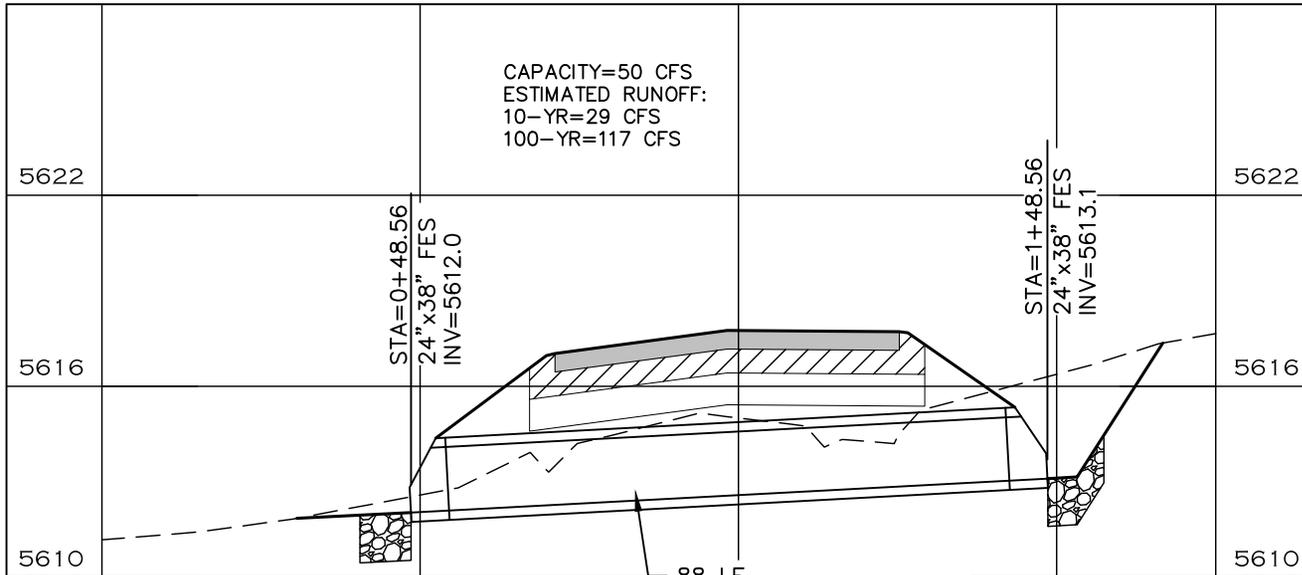
1. RIPRAP PAD SHALL BE TYPE L RIPRAP





STORM LINE 3

5628 5628

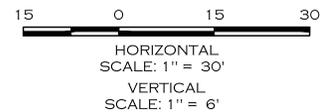


CAPACITY=50 CFS
ESTIMATED RUNOFF:
10-YR=29 CFS
100-YR=117 CFS

STA=0+48.56
24"x38" FES
INV=5612.0

STA=1+48.56
24"x38" FES
INV=5613.1

88 LF
24"x38" ELLIPTICAL RCP
@ S=1.10%



NOTE

STATE OF COLORADO

CL STA 170+70.07 (43.63' LT)
STA 0+18.42
29"x45" FES W/
12'X12'X18" TYPE L
RIPRAP PAD

CL STA 170+32.58 (35.99' RT)
STA 1+06.42
29"x45" FES W/
13'X16'X18" TYPE L
RIPRAP PAD

STATE OF COLORADO

WEAVER RANCH INC.

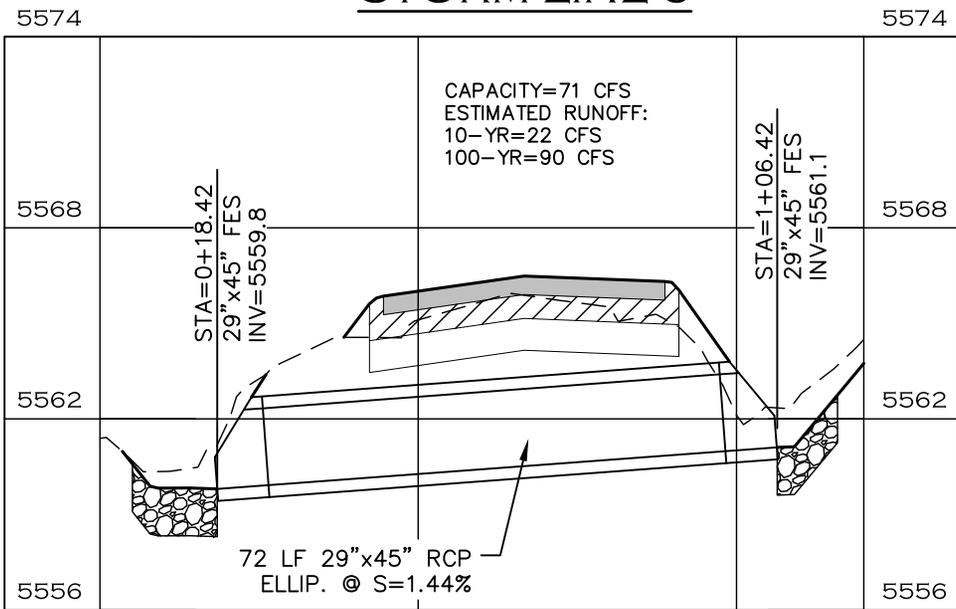
CL STA 185+16.32 (4
STA
29"x45
16'x16'x18
RIP

0+00 1+00 1+20

COUNTY ROAD 72
170+00



STORM LINE 5

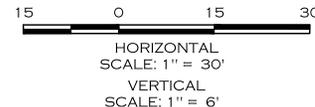


CAPACITY=71 CFS
ESTIMATED RUNOFF:
10-YR=22 CFS
100-YR=90 CFS

STA=0+18.42
29"x45" FES
INV=5559.8

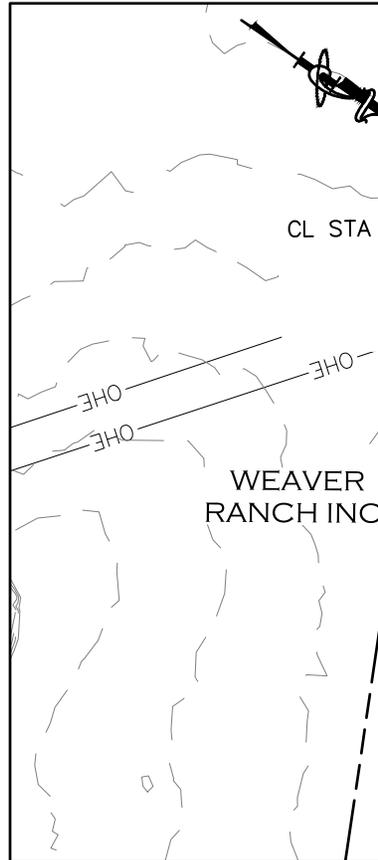
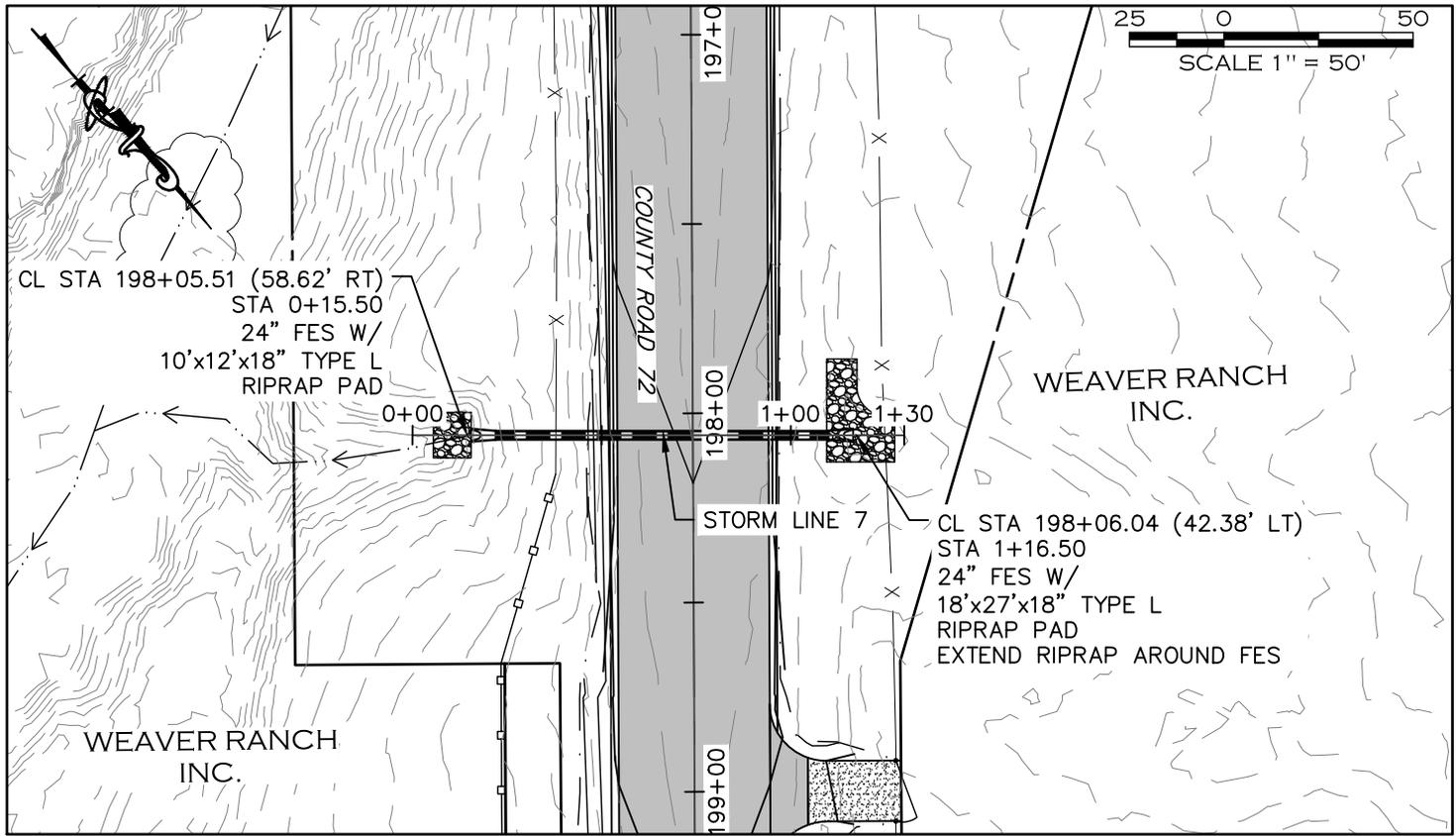
STA=1+06.42
29"x45" FES
INV=5561.1

72 LF 29"x45" RCP
ELLIP. @ S=1.44%

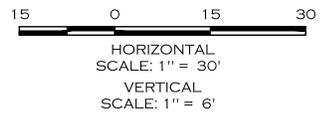
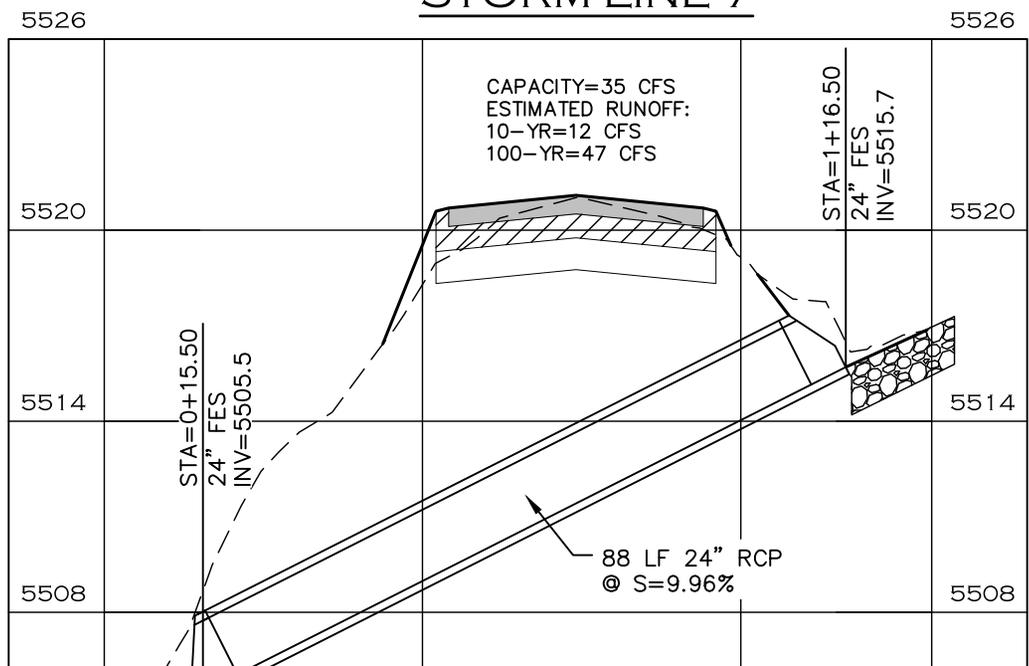


NOTE

1. RIPRAP PAD SHALL BE TYPE L RIPRAP D50=9" PER

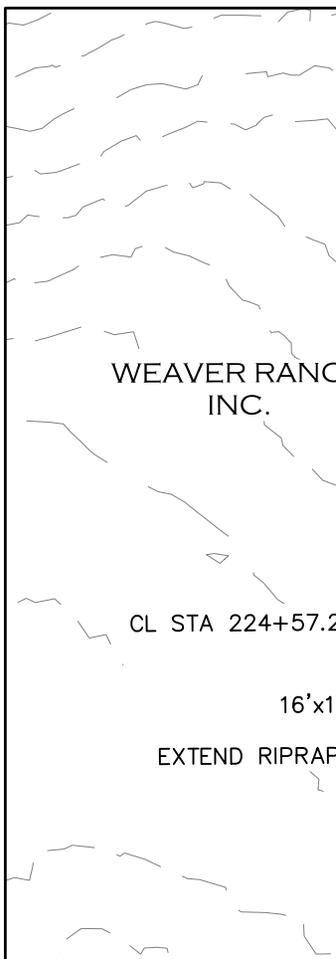
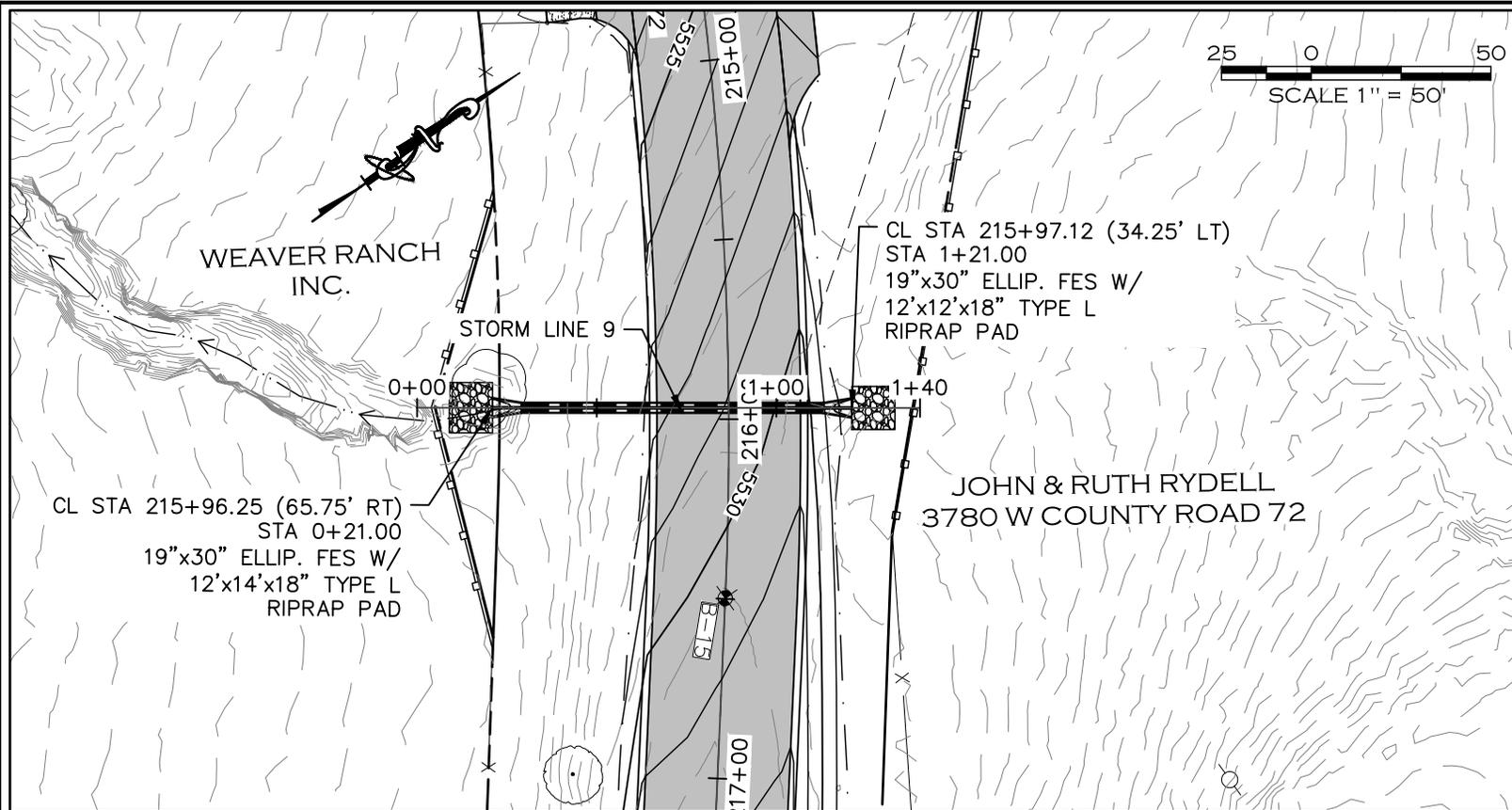


STORM LINE 7

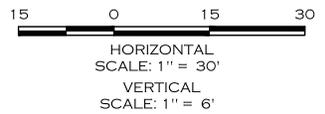
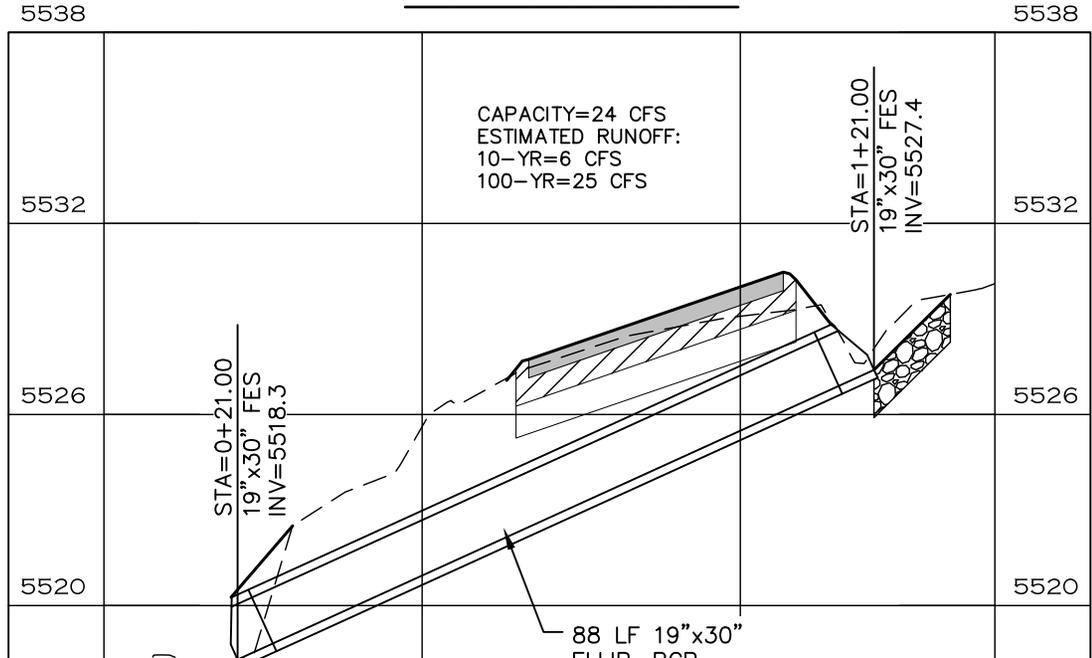


NOTE

1. RIPRAP PAD SHALL BE TYPE L RIPRAP D50=9" PER CDOT SECTION 506 PLACED

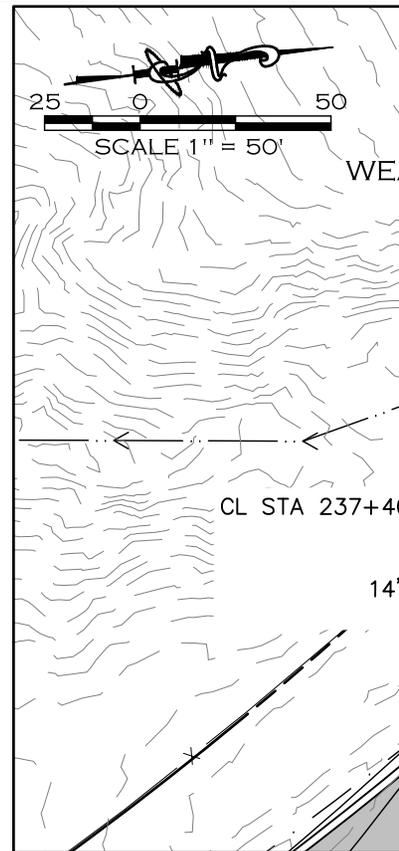
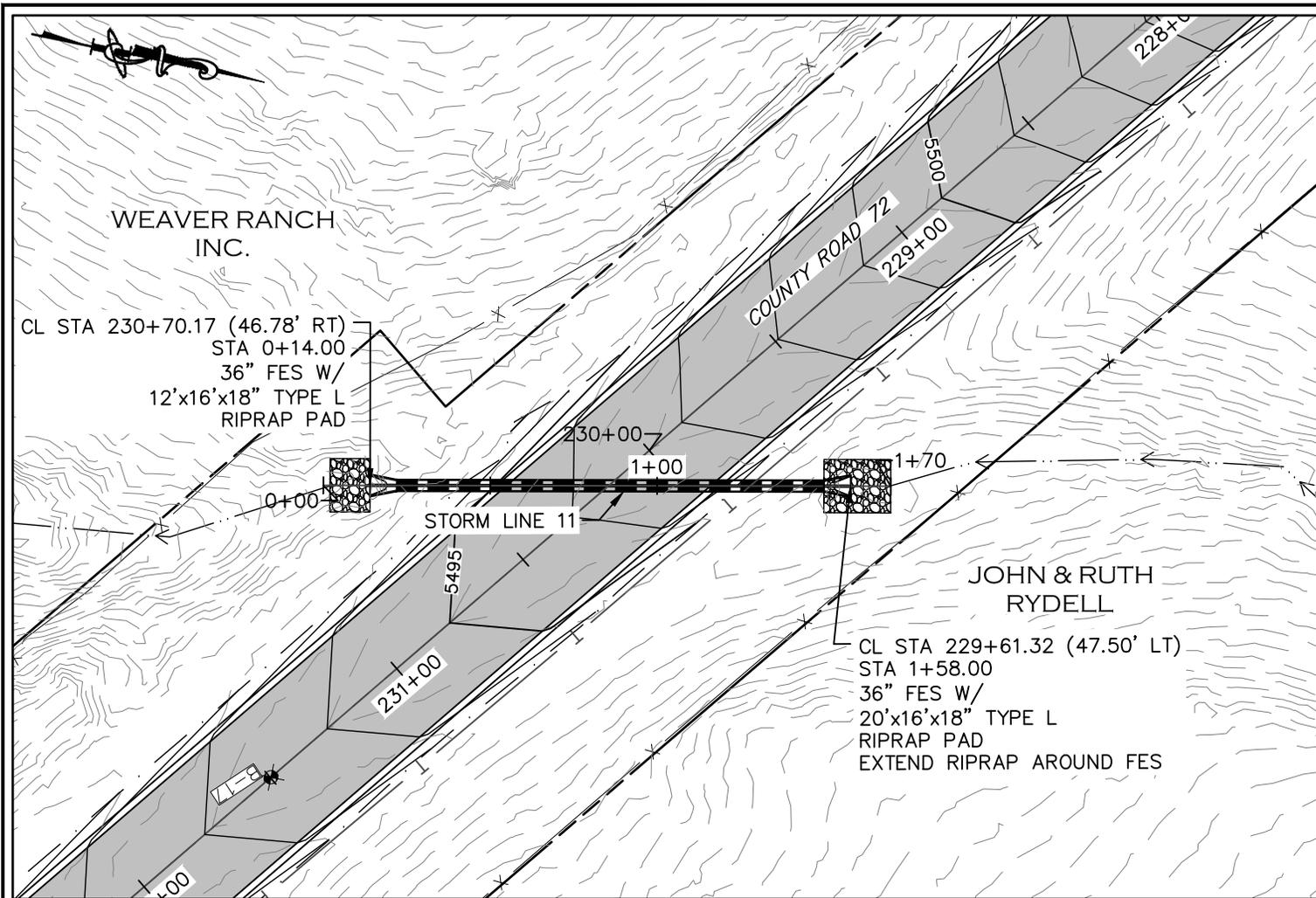


STORM LINE 9

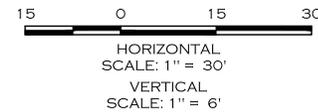
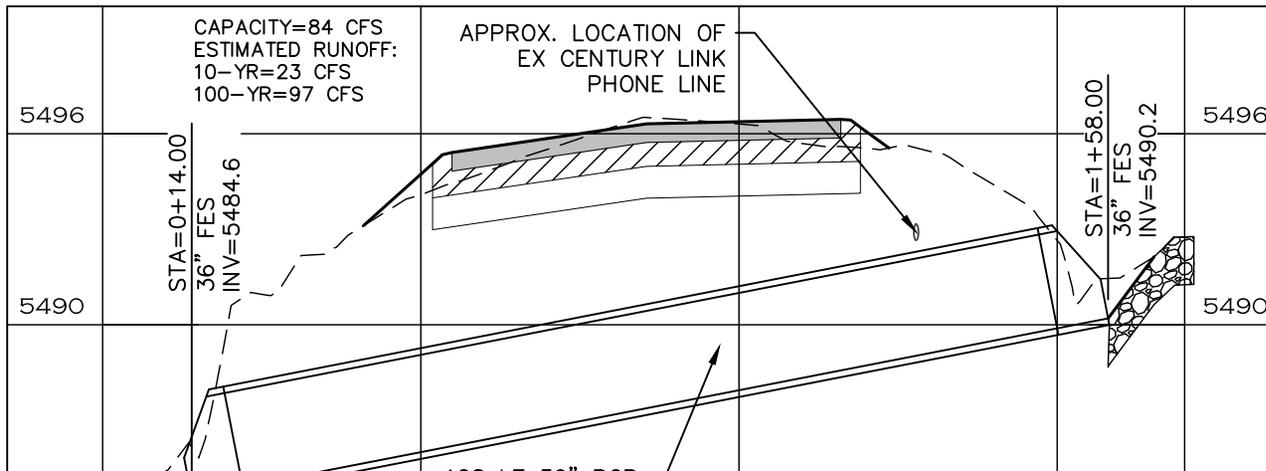


NOTE

1. RIPRAP PAD SHALL BE TYPE L RIPRAP DEC. 6" PER



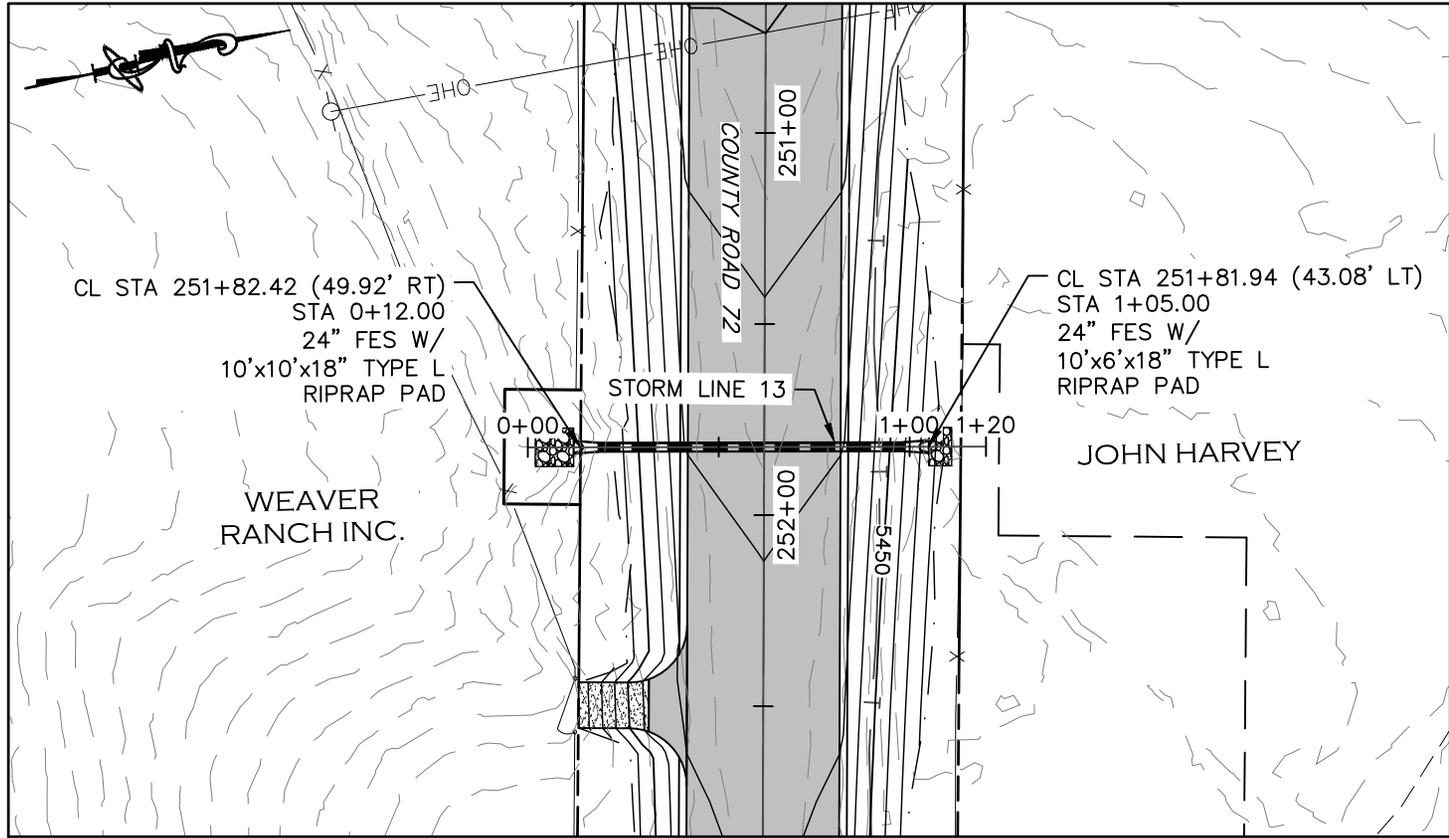
STORM LINE 11



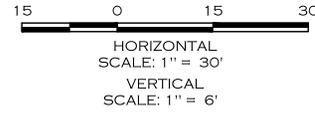
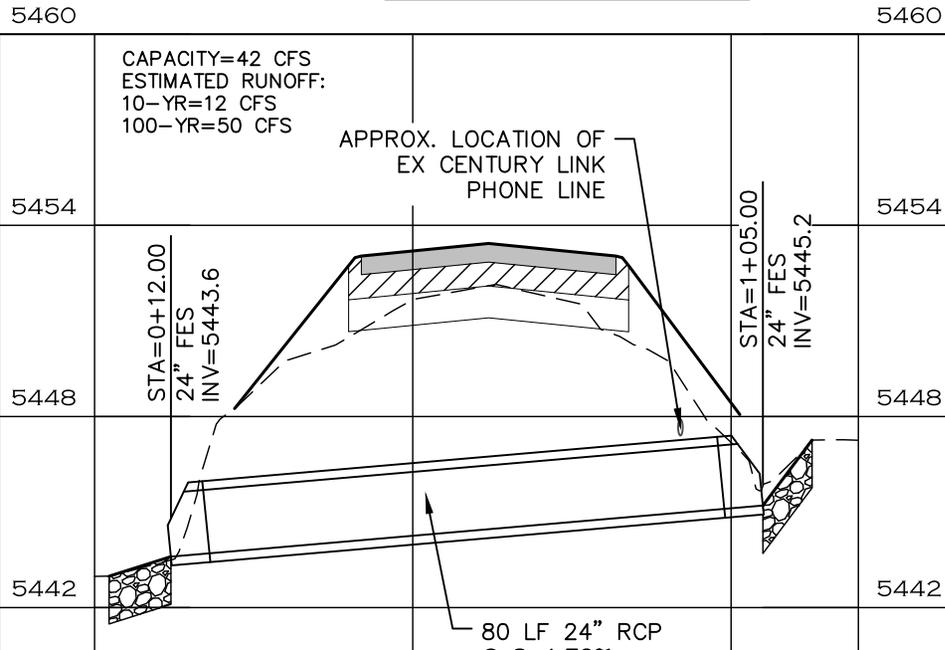
NOTE

- RIPRAP PAD SHALL BE TYPE L RIPRAP D50=9" PER CDOT SECTION 506 PLACED ON APPROVED GEOTEXTILE FABRIC

5496	CAP ESTI 10-100
5490	
5484	
5478	
5472	

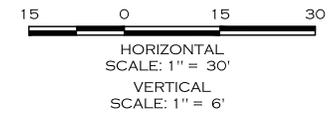
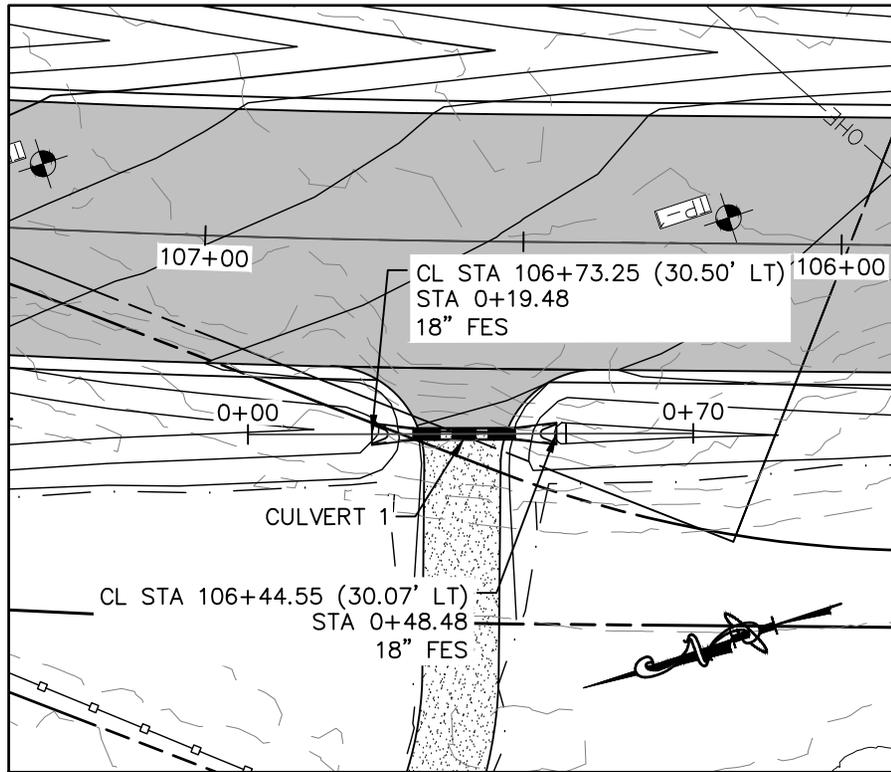


STORM LINE 13



NOTE

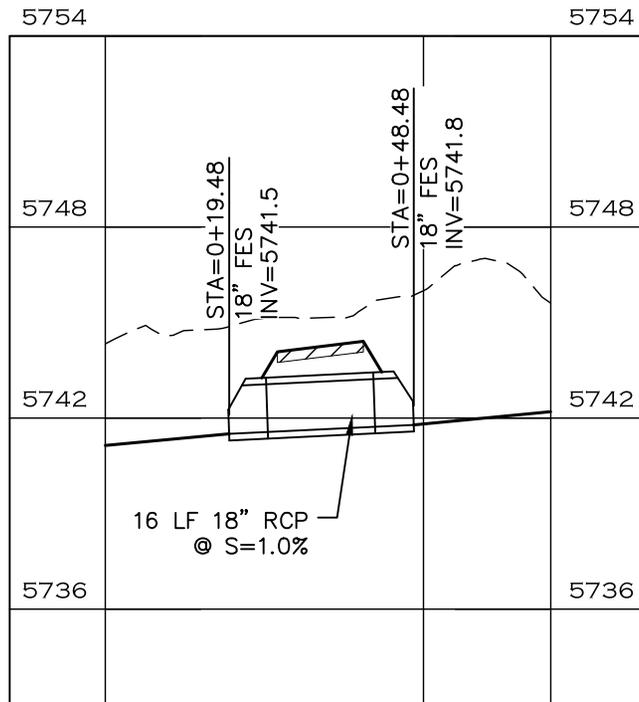
1 RIPRAP PAD SHALL BE TYPE L RIPRAP D50-0" PER

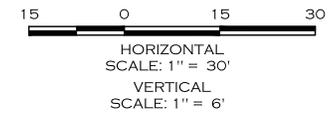
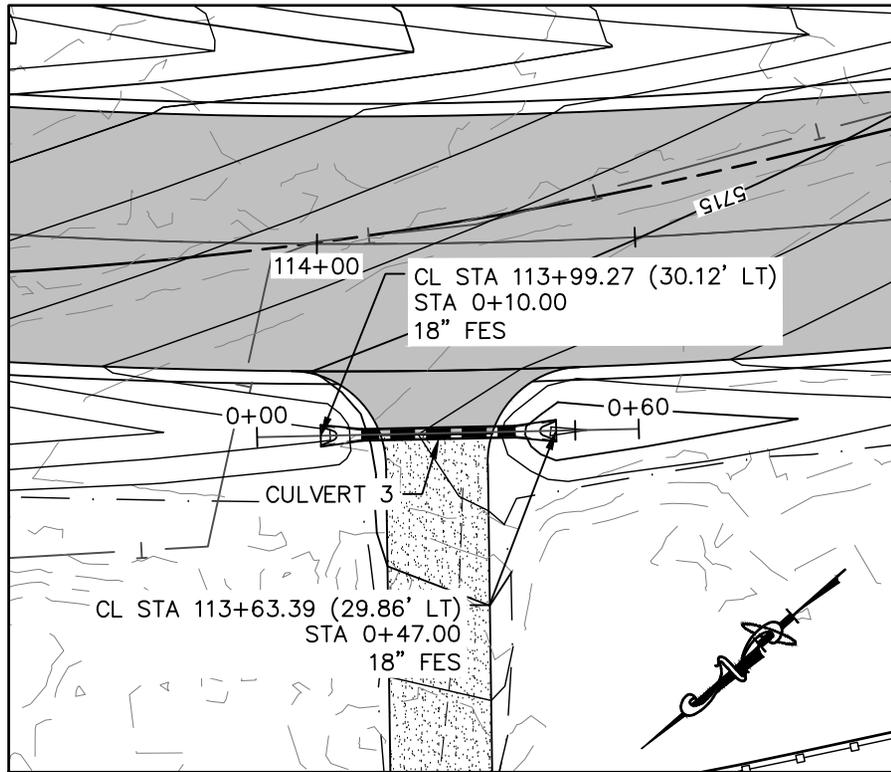


NOTE

1. RIPRAP PAD SHALL BE TYPE L RIPRAP D50=9" PER CDOT SECTION 506 PLACED ON APPROVED GEOTEXTILE FABRIC.
2. LENGTH OF PIPE DOES NOT INCLUDE FLARED END SECTION.

CULVERT 1



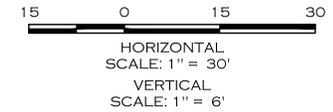
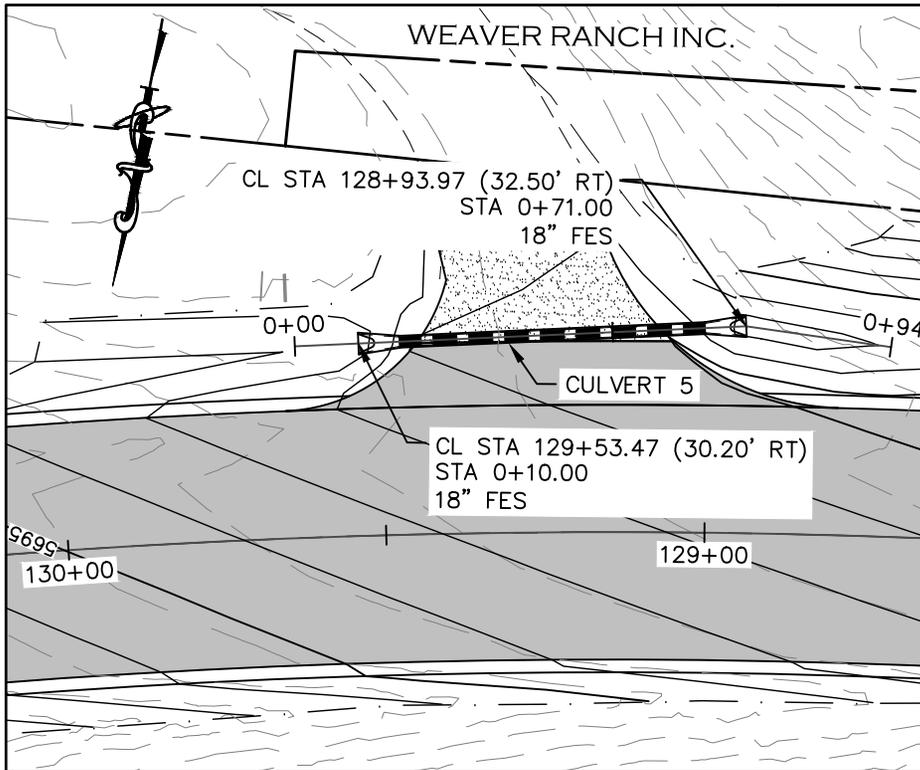


NOTE

1. RIPRAP PAD SHALL BE TYPE L RIPRAP D50=9" PER CDOT SECTION 506 PLACED ON APPROVED GEOTEXTILE FABRIC.
2. LENGTH OF PIPE DOES NOT INCLUDE FLARED END SECTION.

CULVERT 3

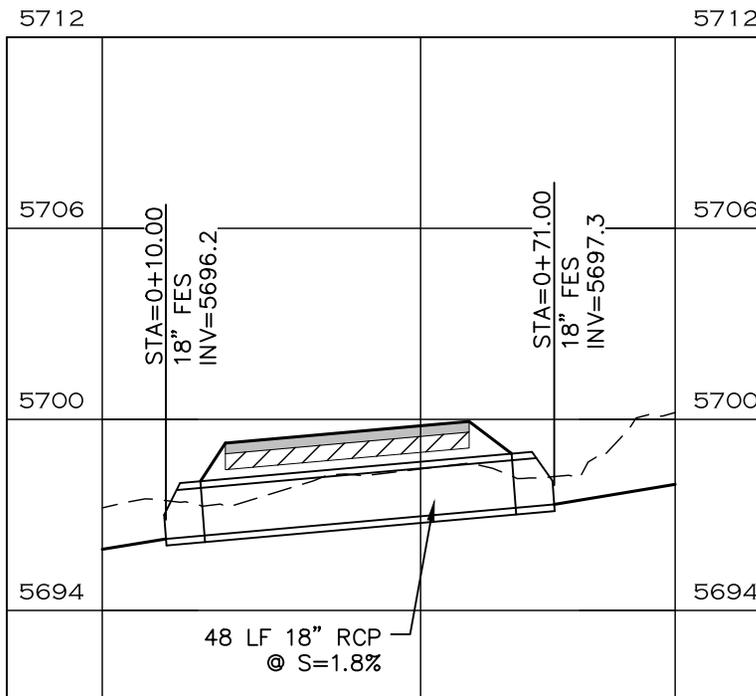
5724		5724
5718	STA=0+10.00 18" FES INV=5712.8	5718
5712		5712
5706	STA=0+47.00 18" FES INV=5713.9	5706
	24 LF 18" RCP @ S=3.0%	

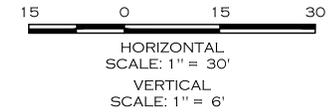
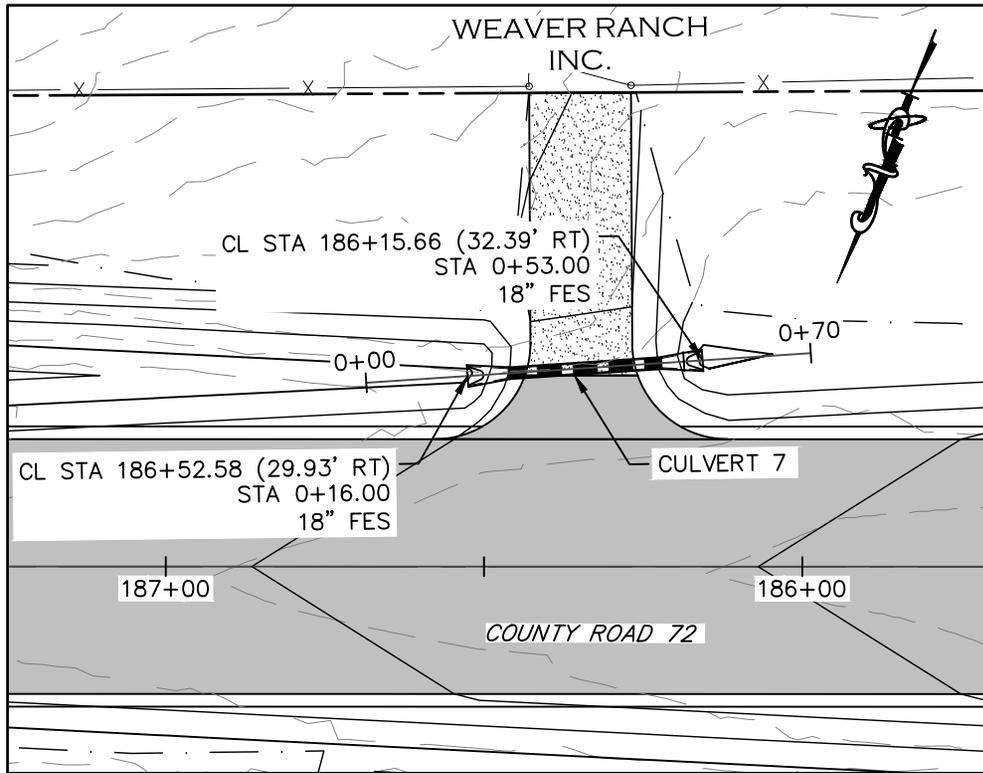


NOTE

1. RIPRAP PAD SHALL BE TYPE L RIPRAP D50=9" PER CDOT SECTION 506 PLACED ON APPROVED GEOTEXTILE FABRIC.
2. LENGTH OF PIPE DOES NOT INCLUDE FLARED END SECTION.

CULVERT 5

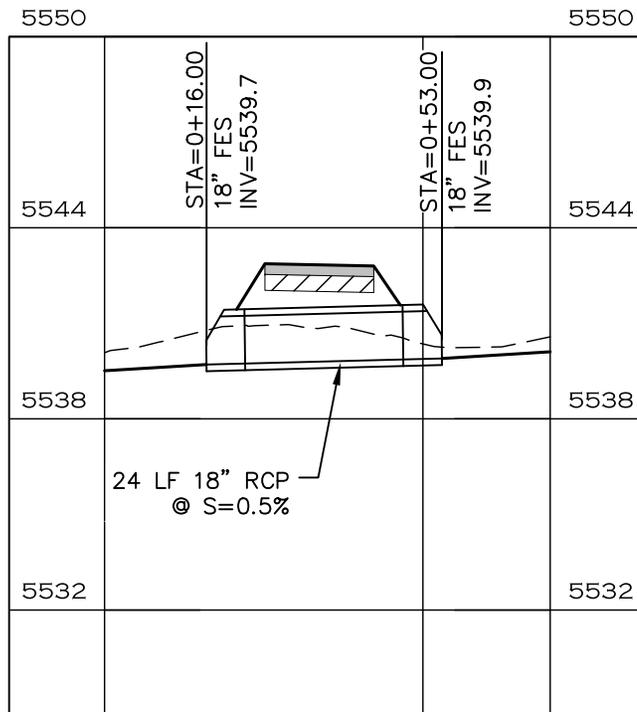




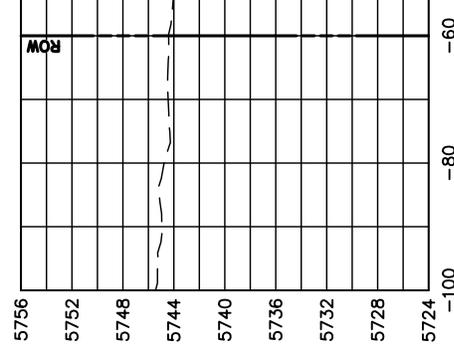
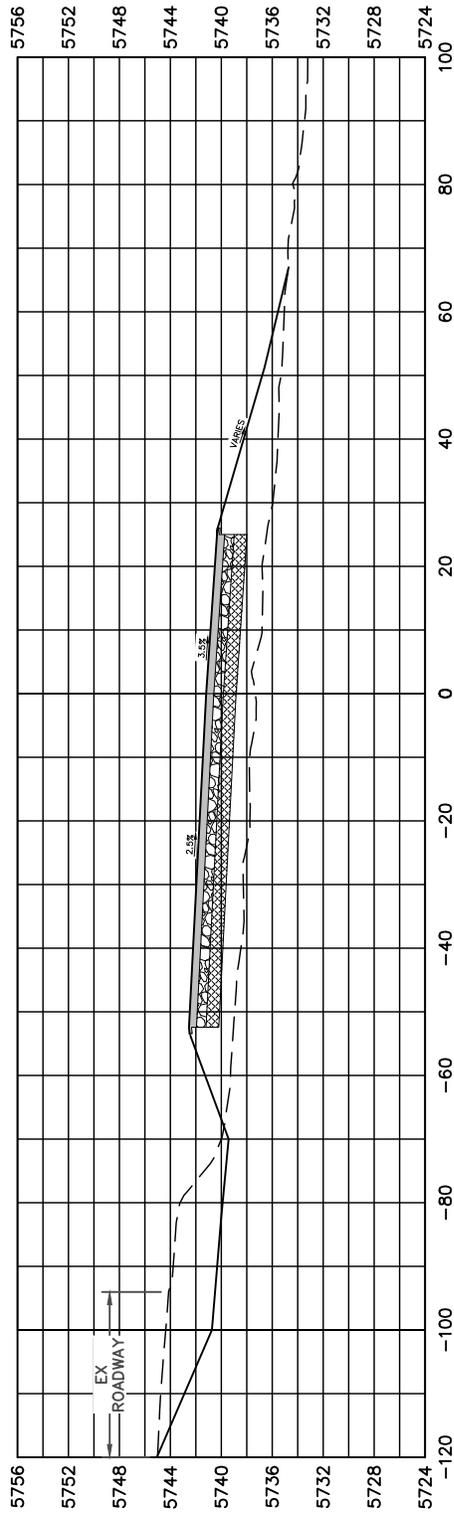
NOTE

1. RIPRAP PAD SHALL BE TYPE L RIPRAP D50=9" PER CDOT SECTION 506 PLACED ON APPROVED GEOTEXTILE FABRIC.
2. LENGTH OF PIPE DOES NOT INCLUDE FLARED END SECTION.

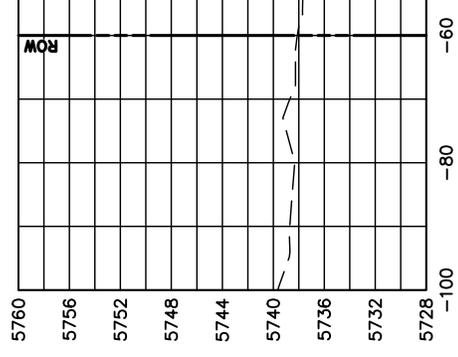
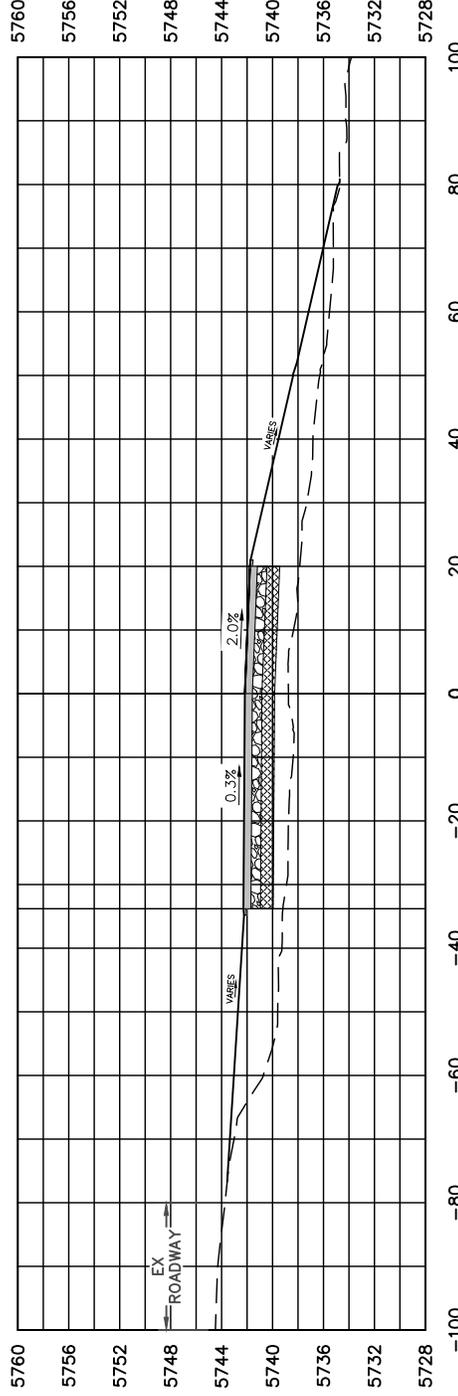
CULVERT 7



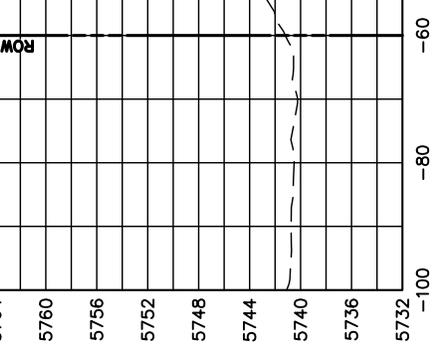
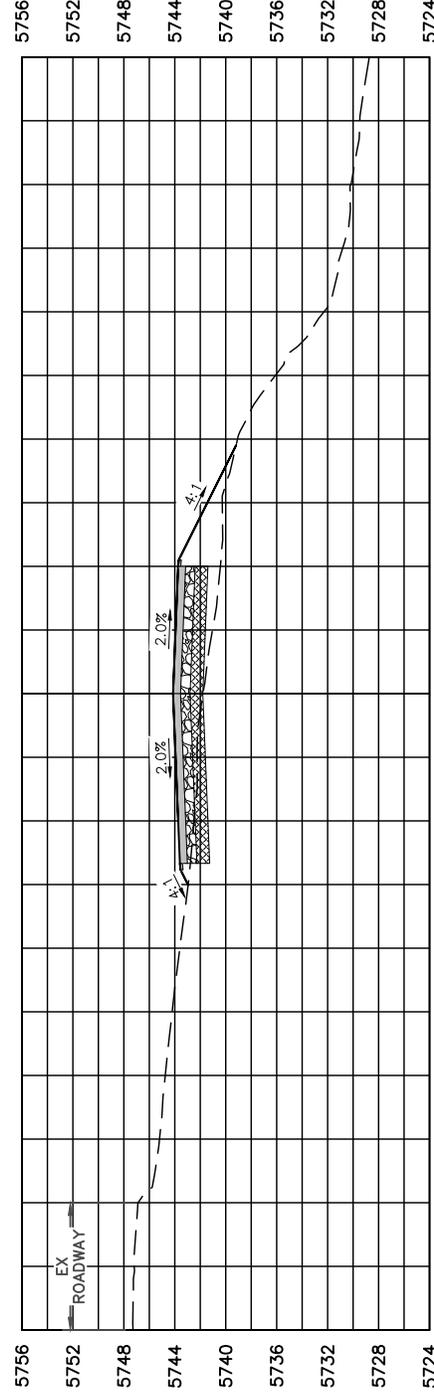
100+50



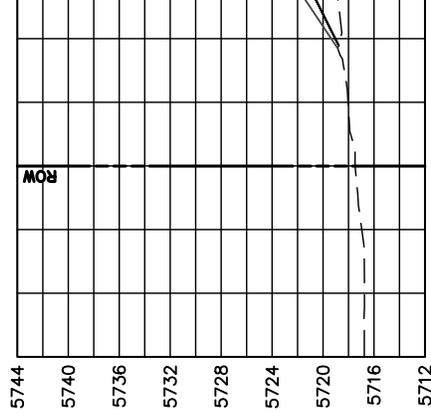
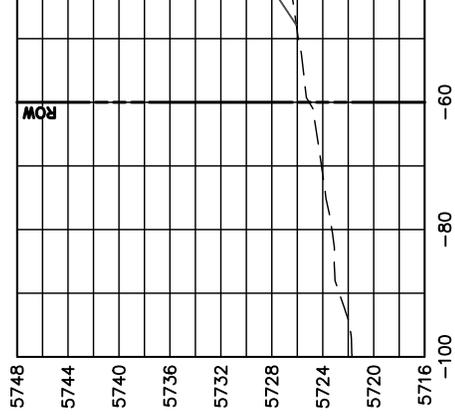
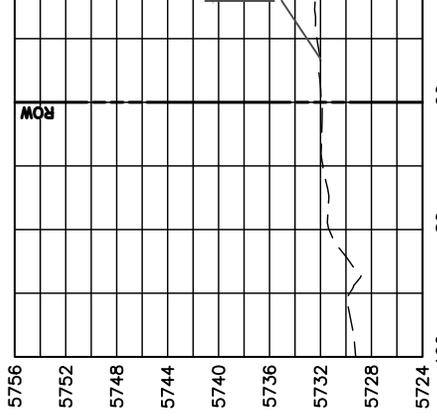
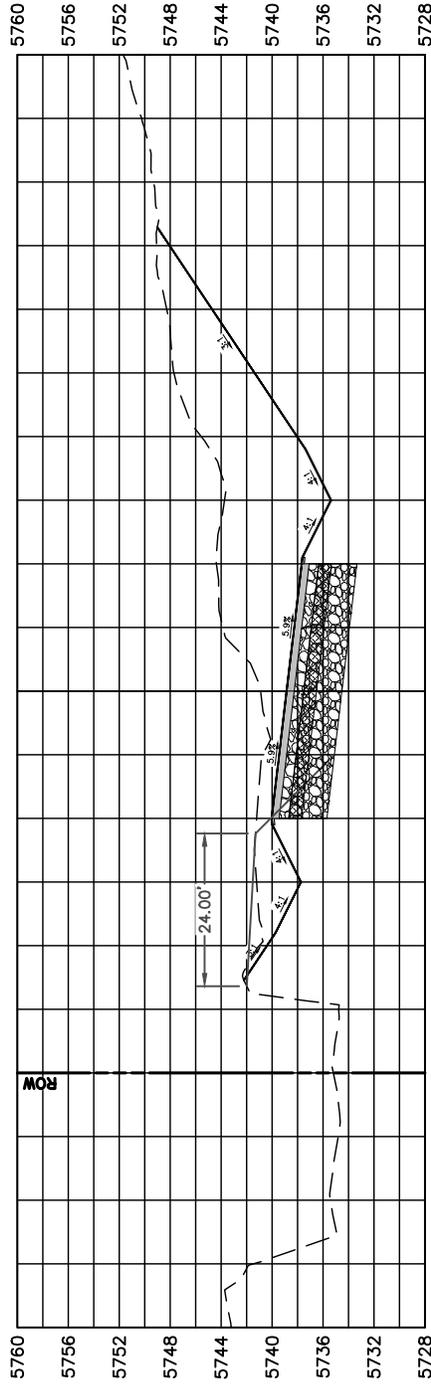
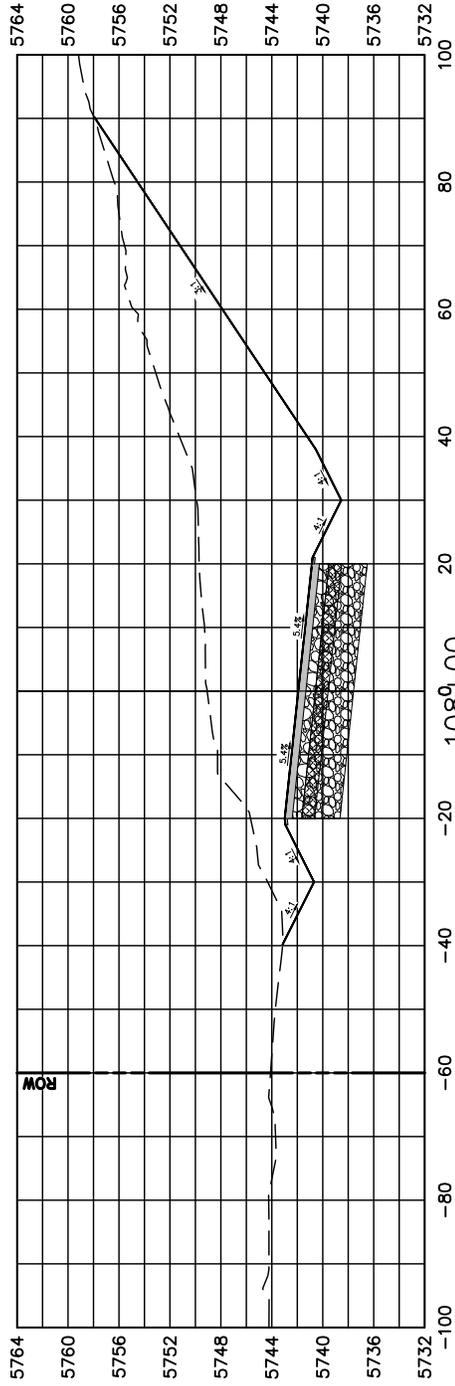
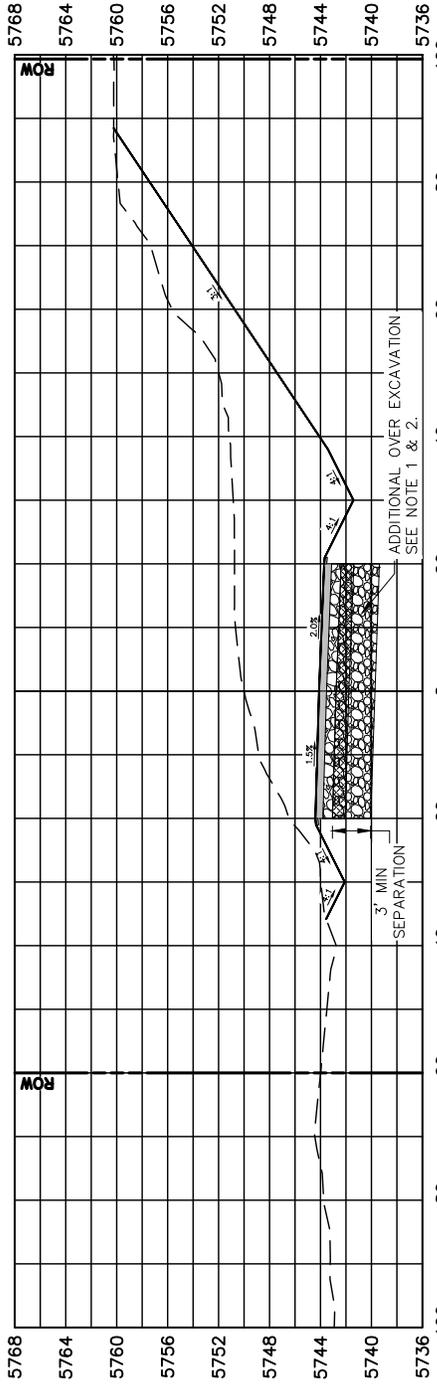
101+00



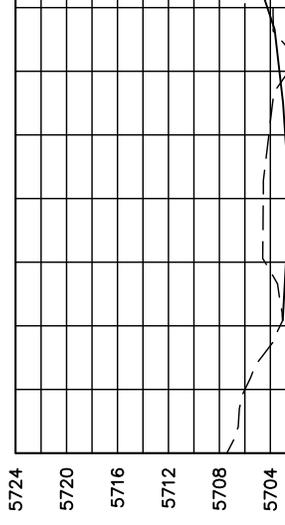
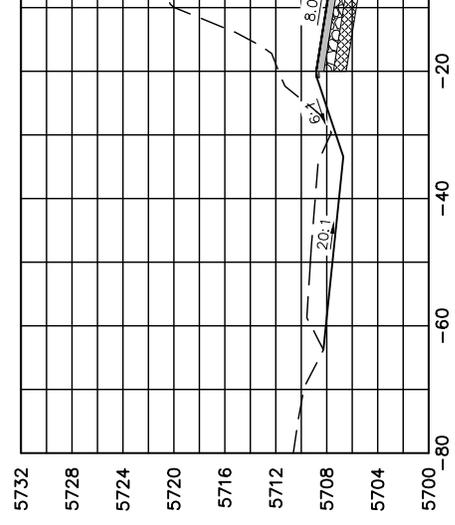
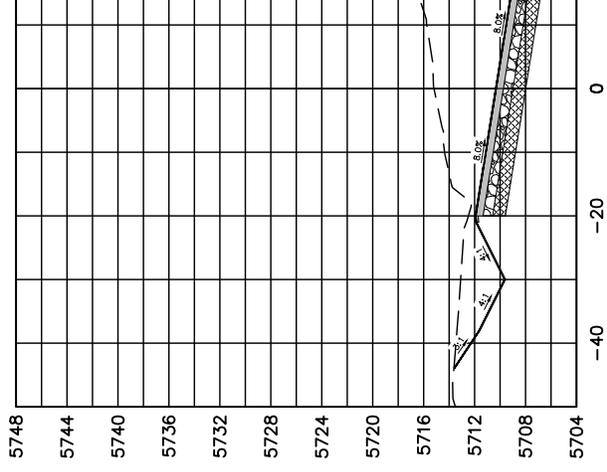
102+00



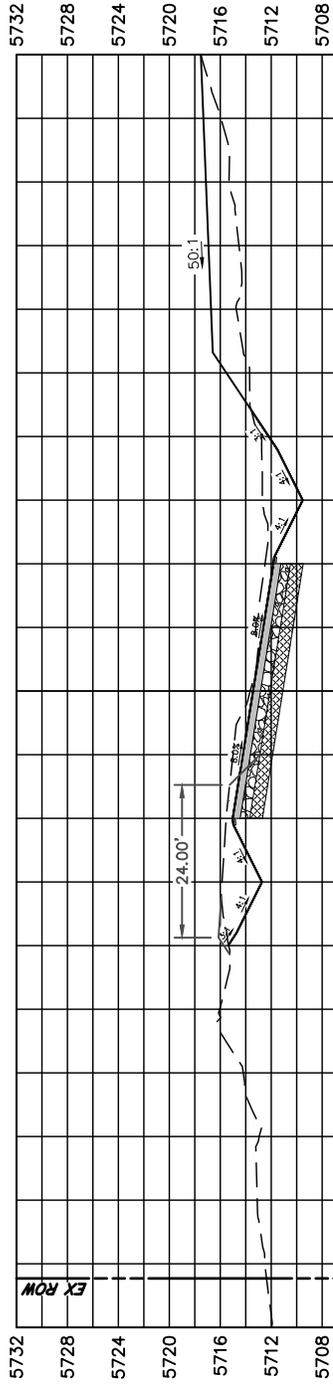
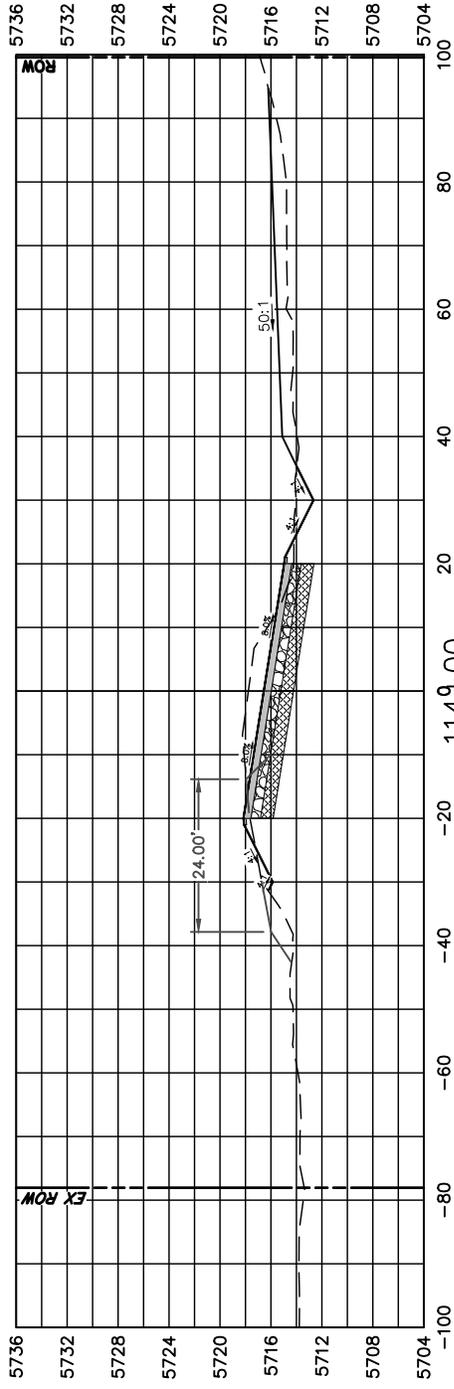
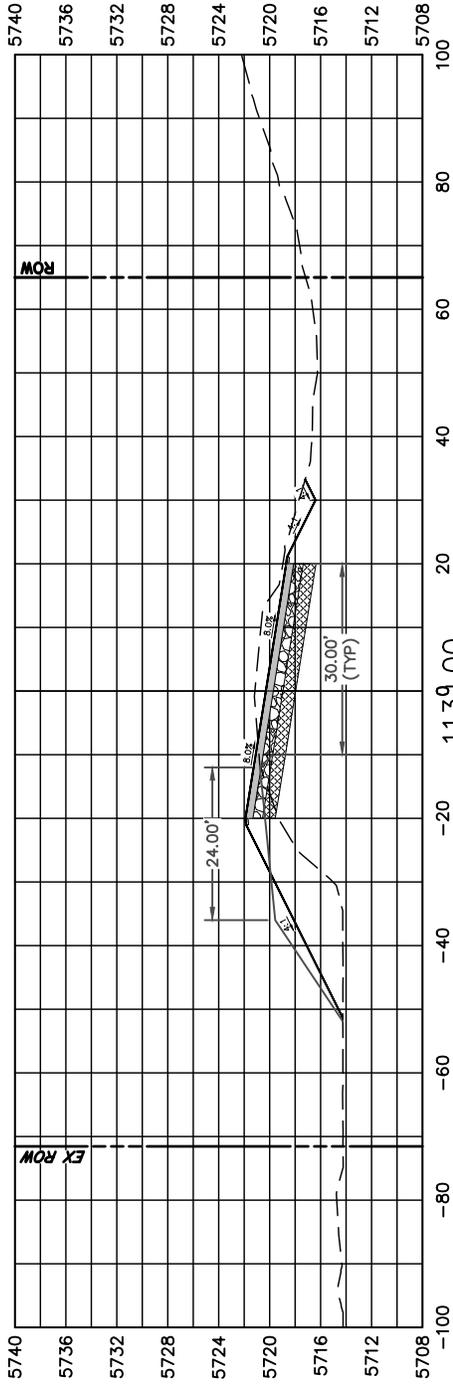
106+00



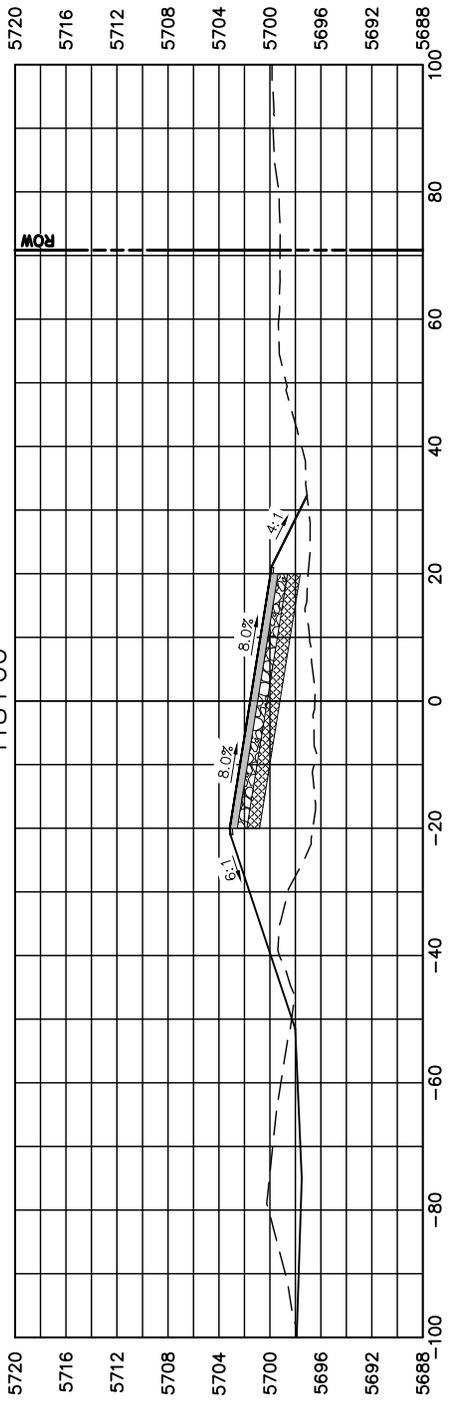
115+00



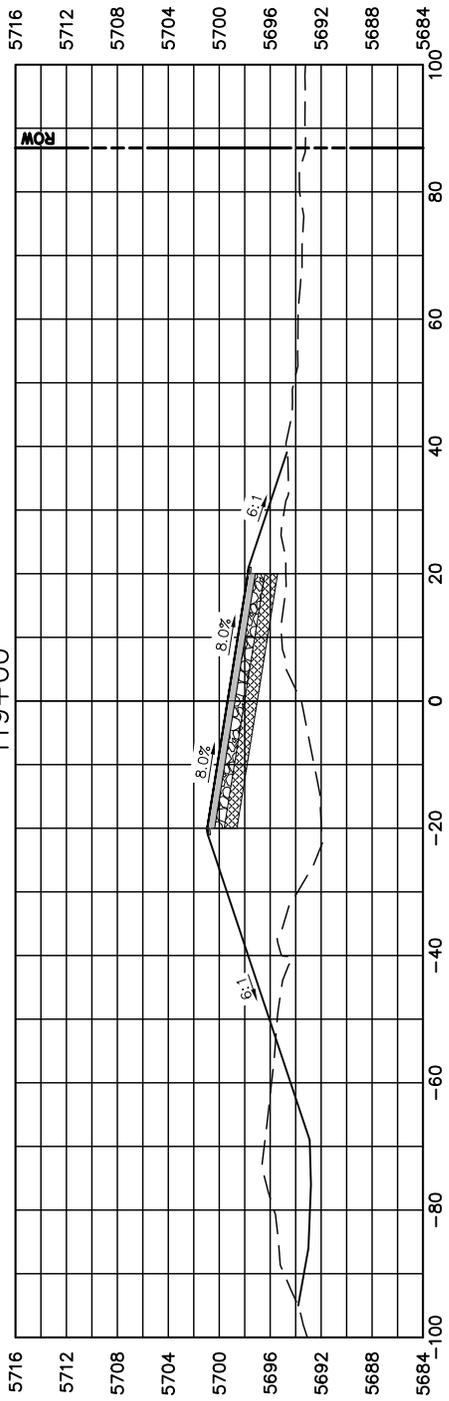
112+00



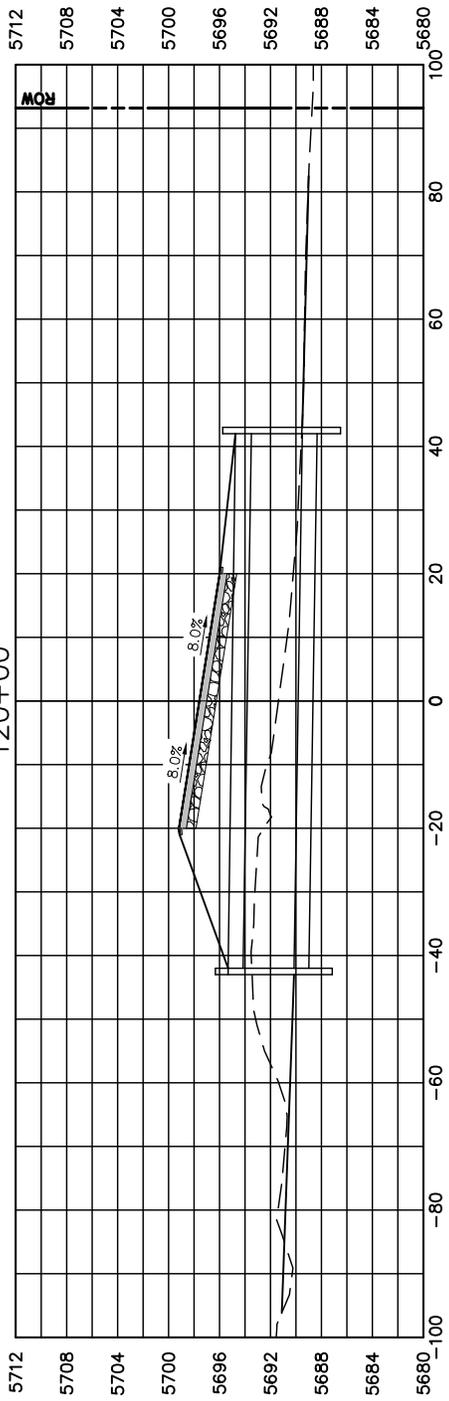
118+00



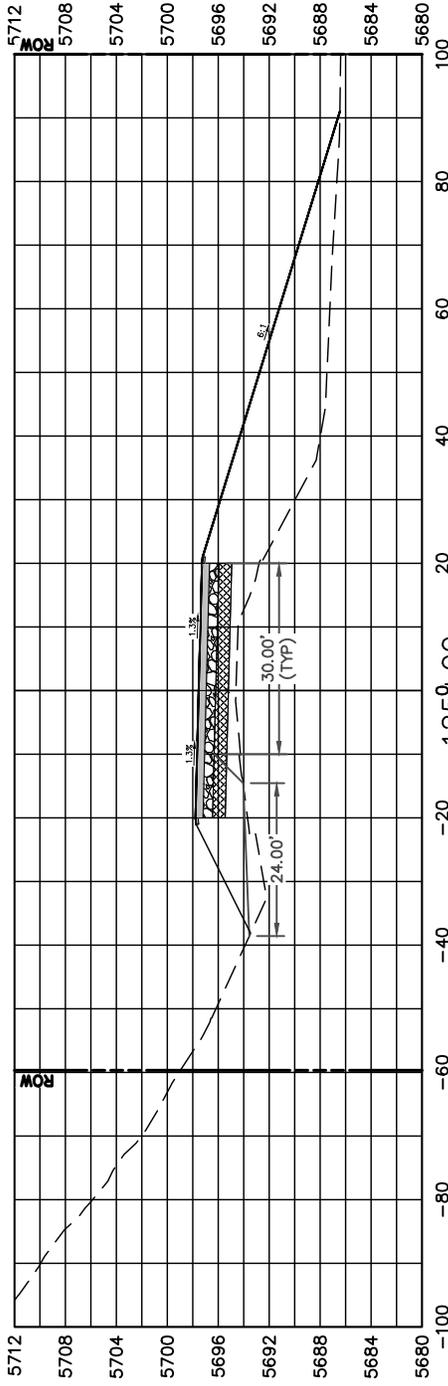
119+00



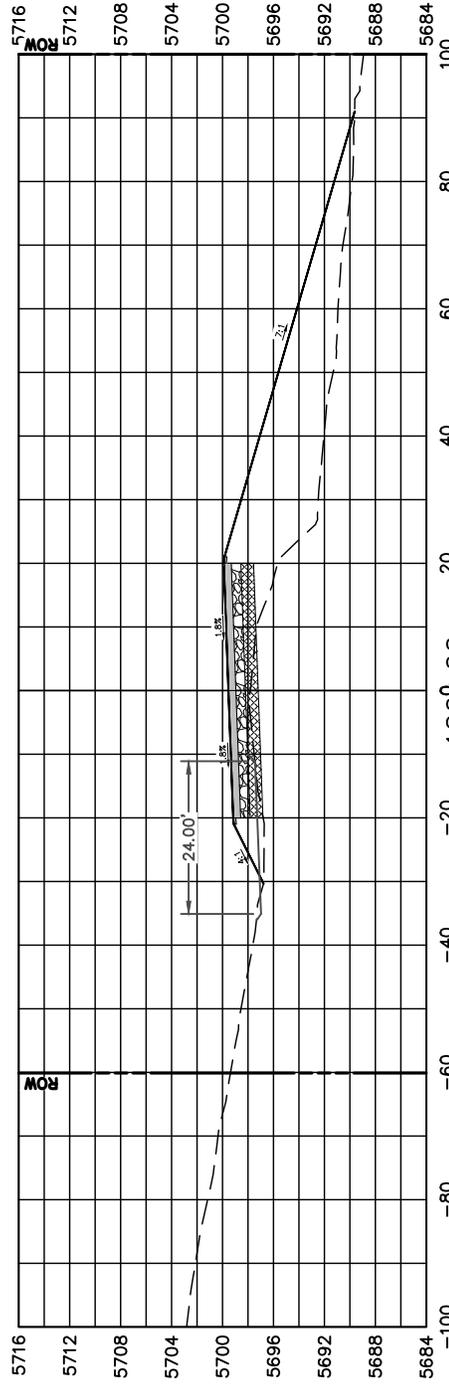
120+00



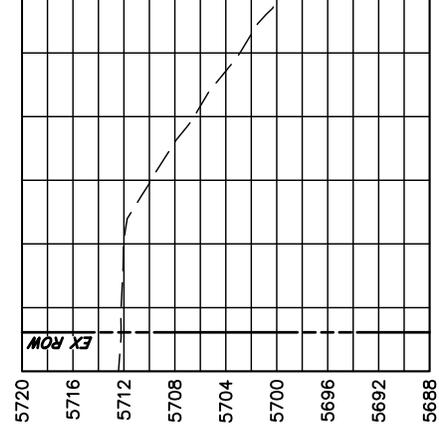
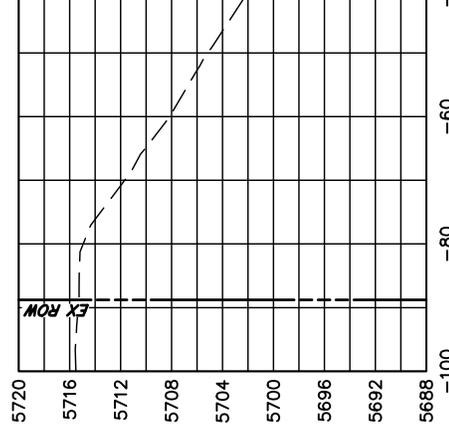
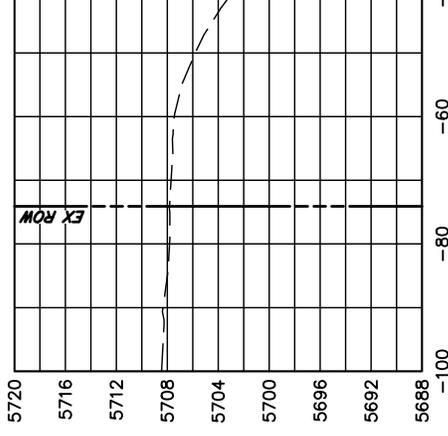
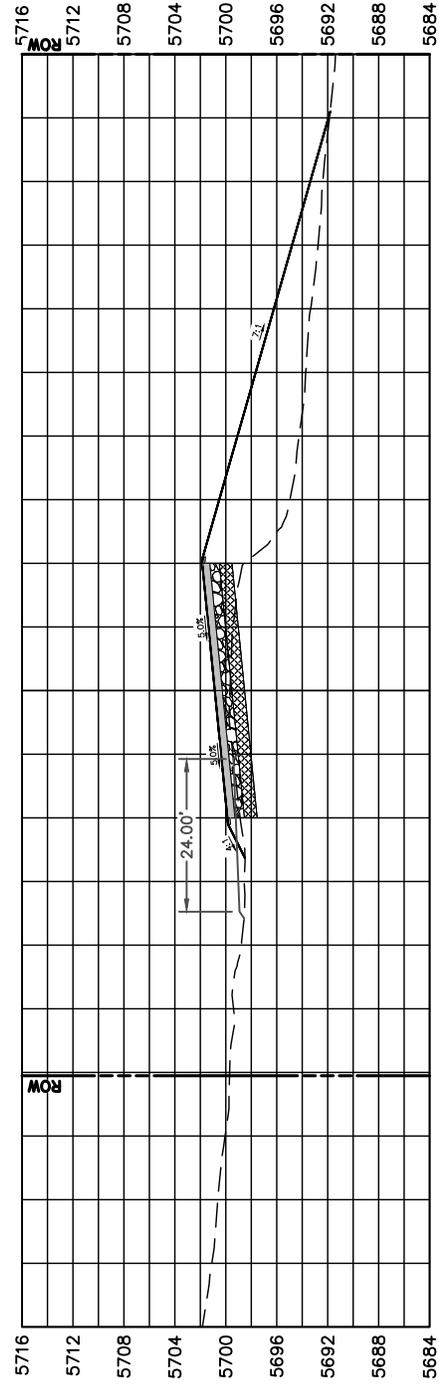
124+00



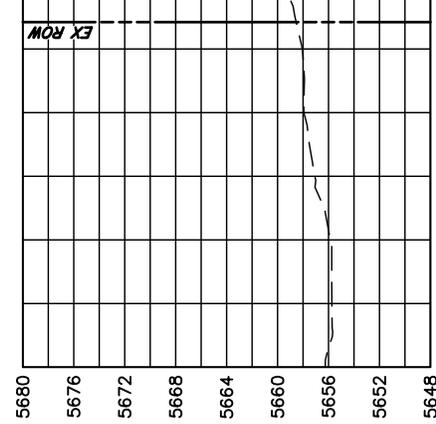
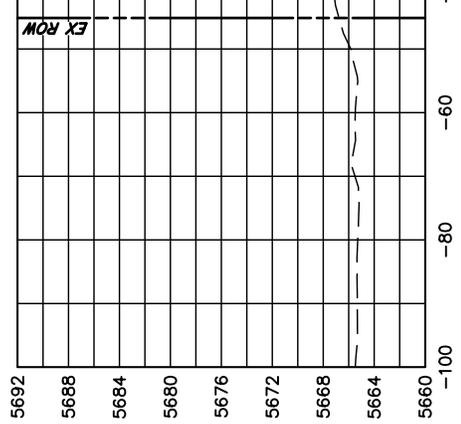
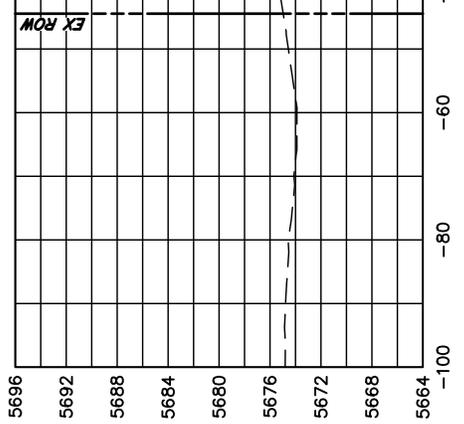
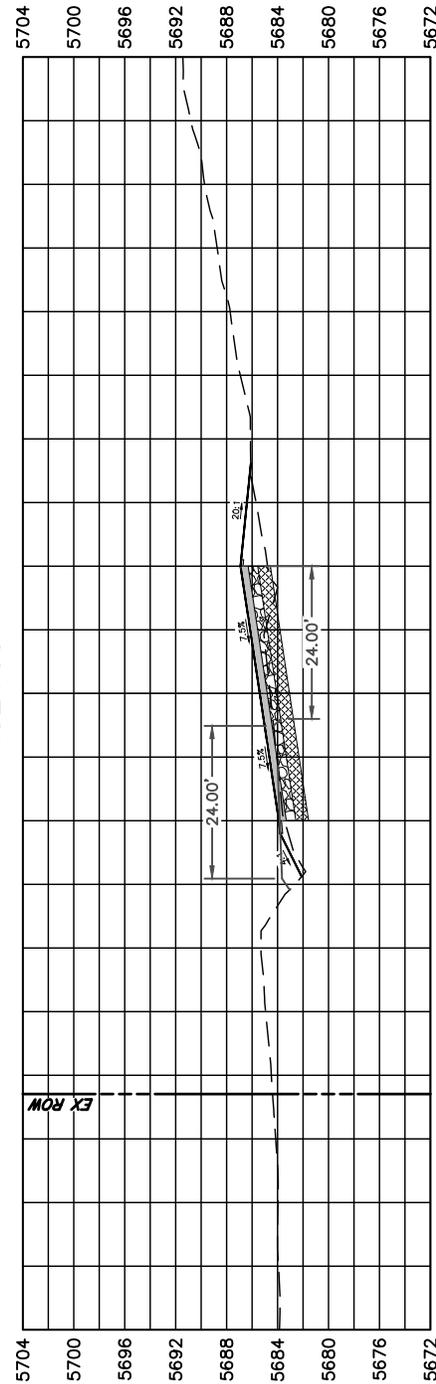
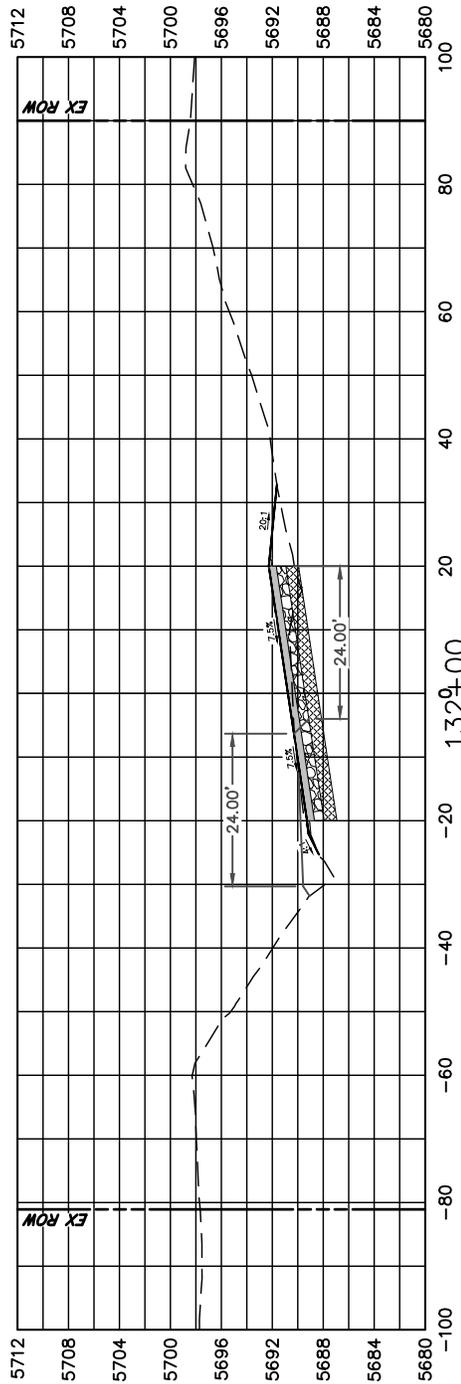
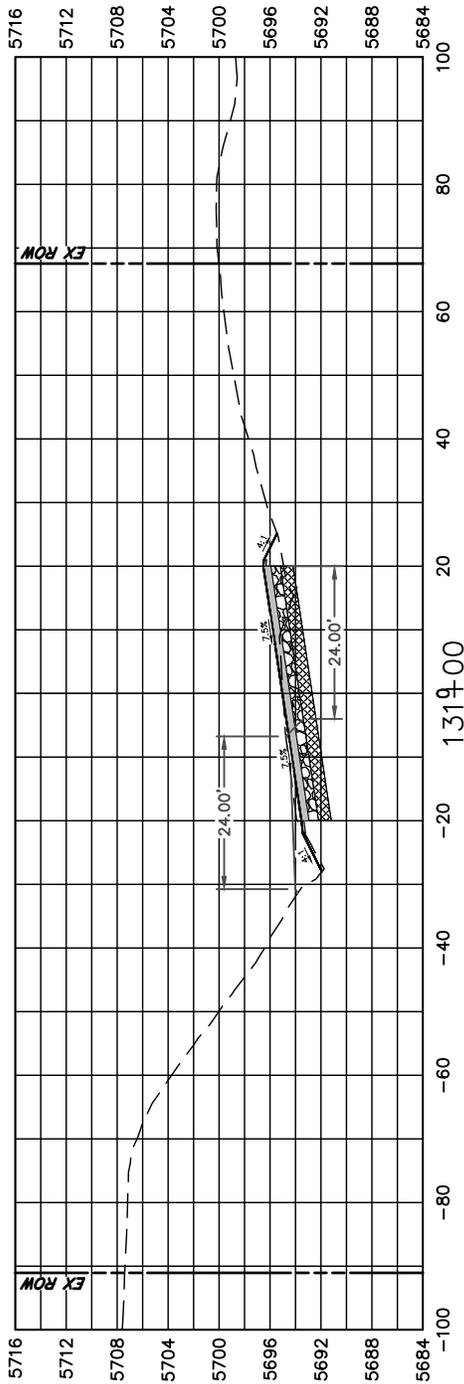
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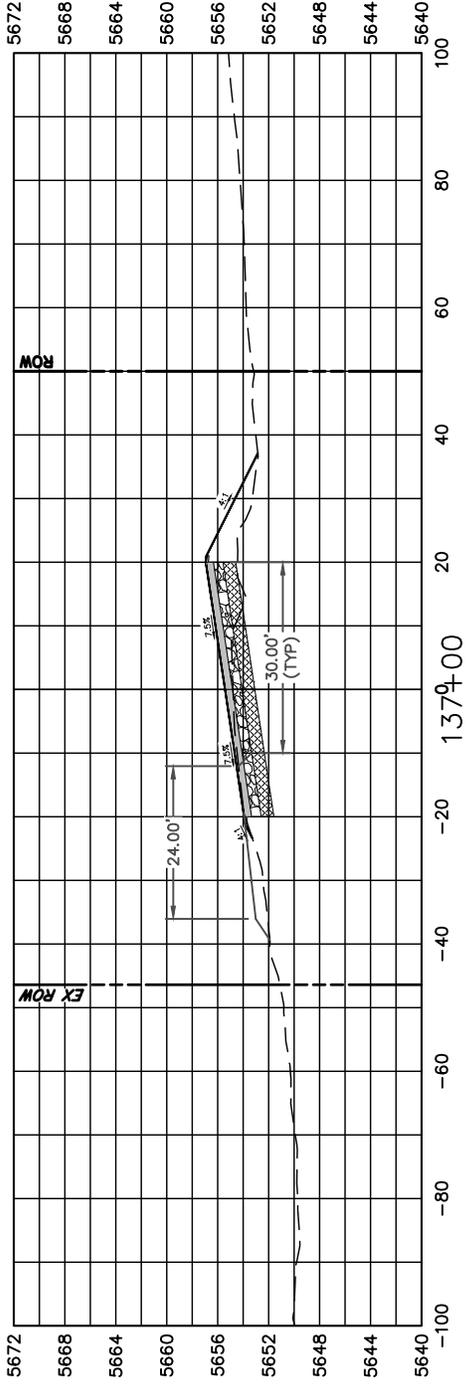
126+00



130+00



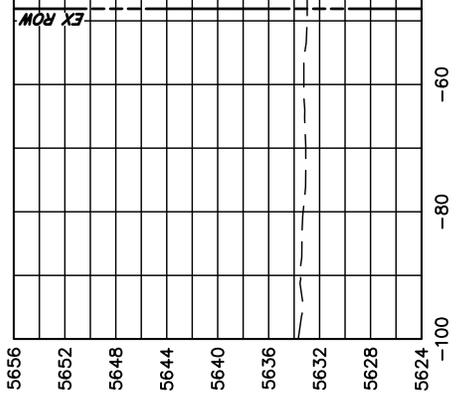
136+00



-60

-80

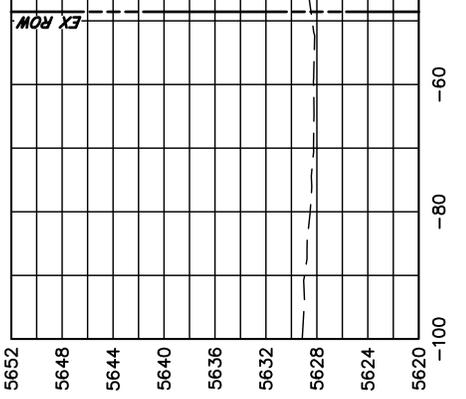
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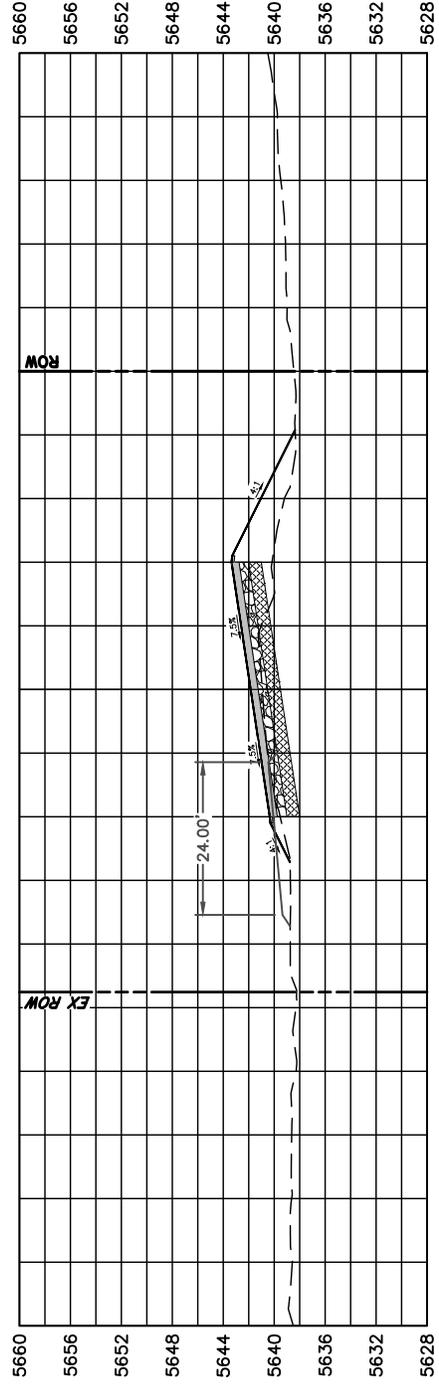
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-80

-100



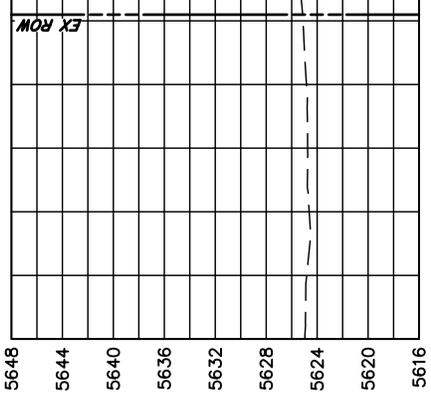
138+00



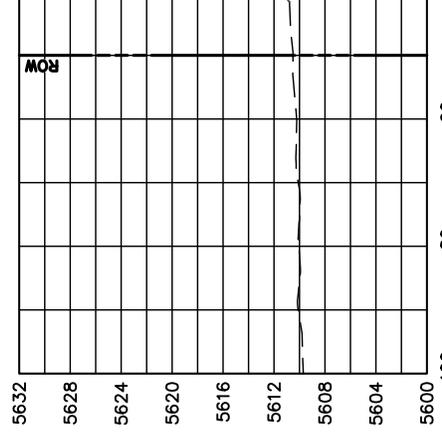
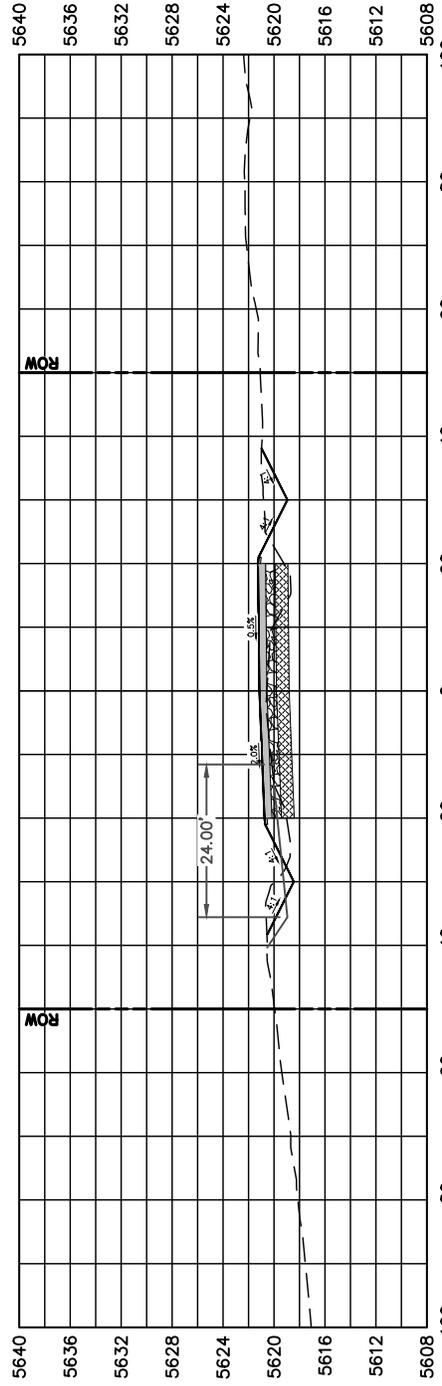
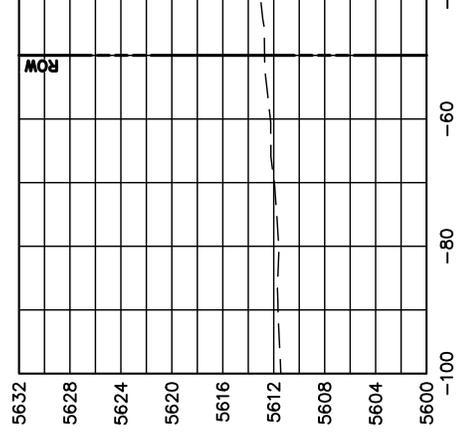
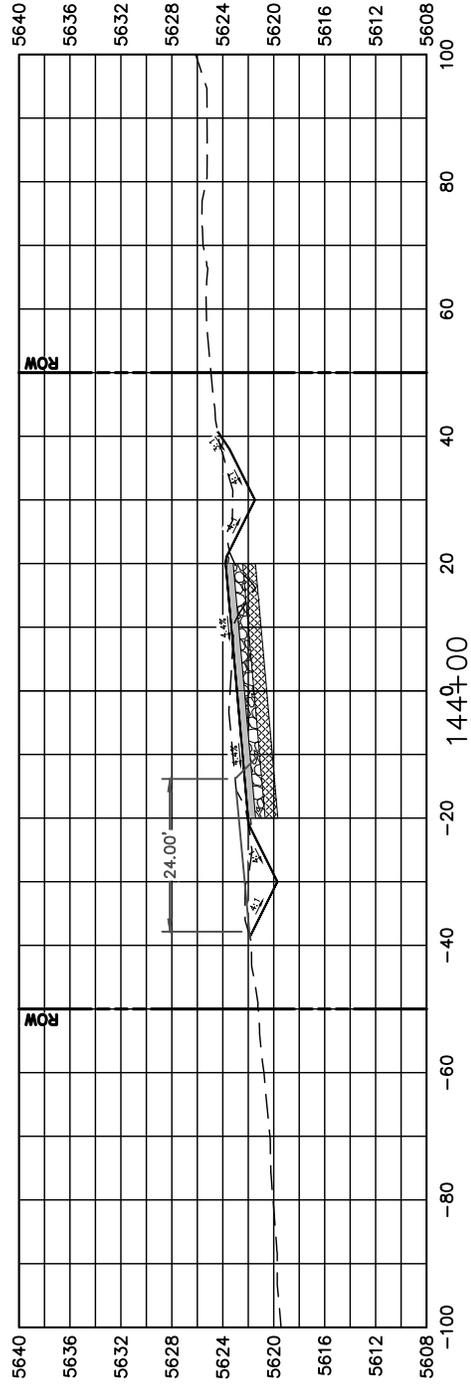
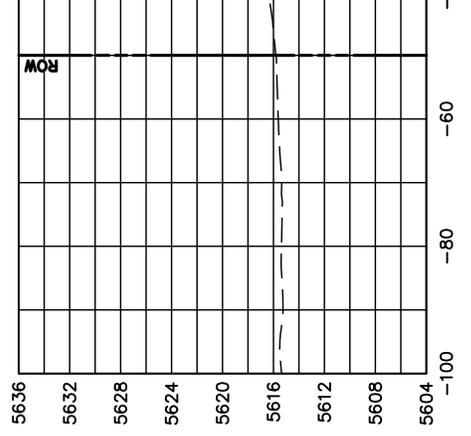
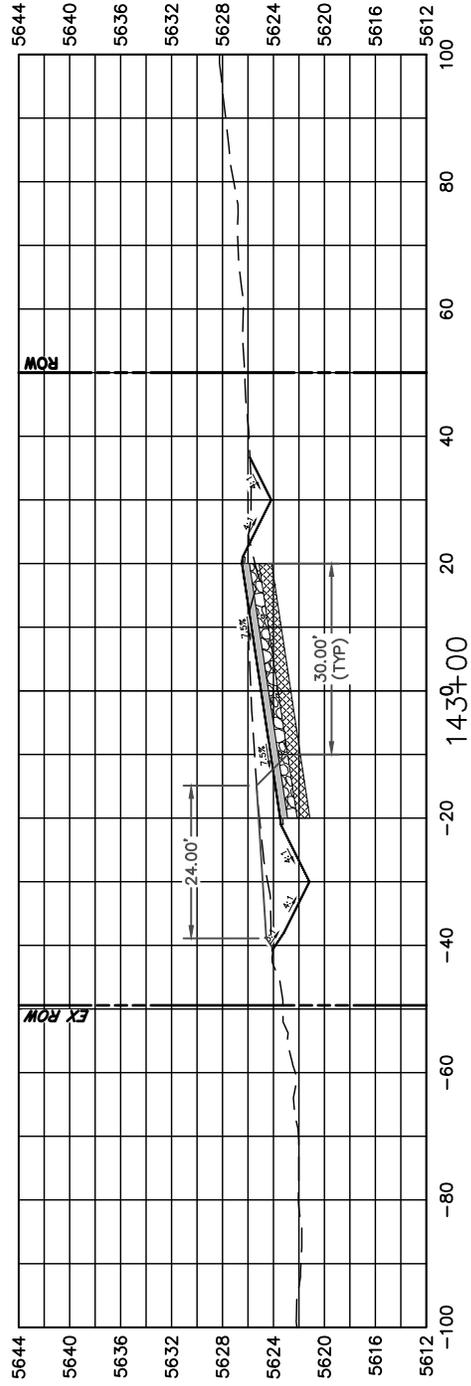
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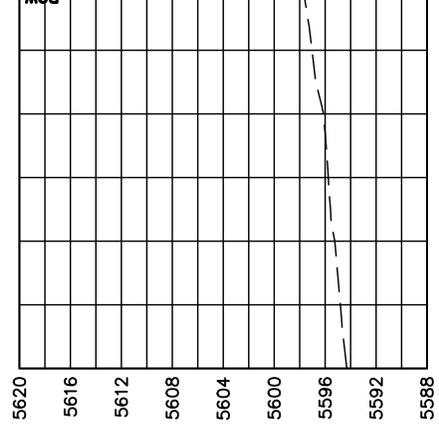
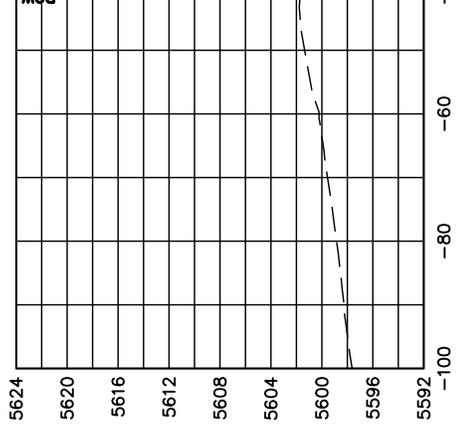
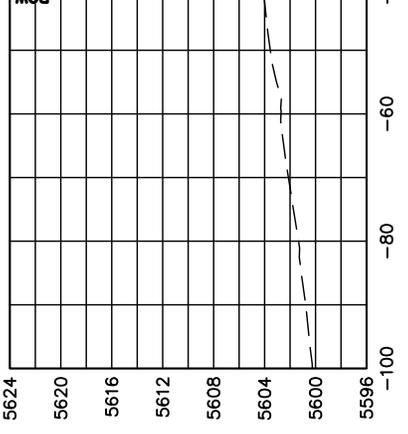
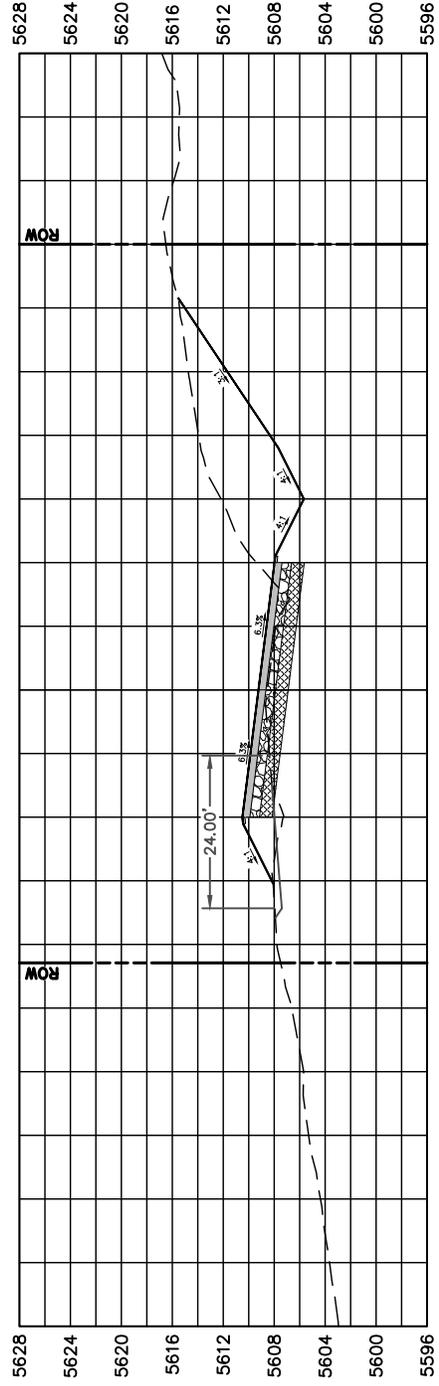
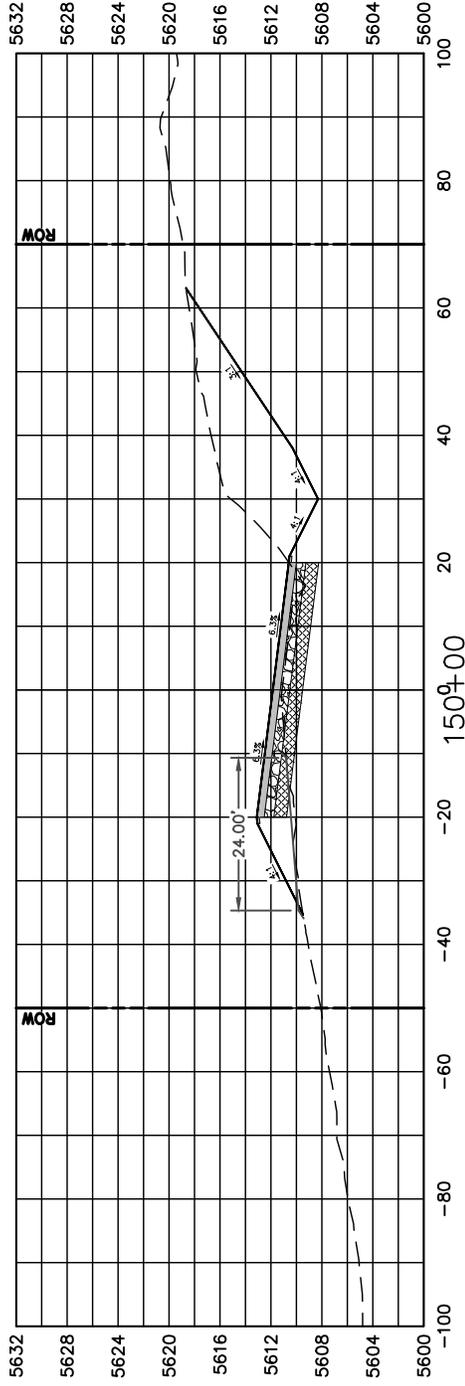
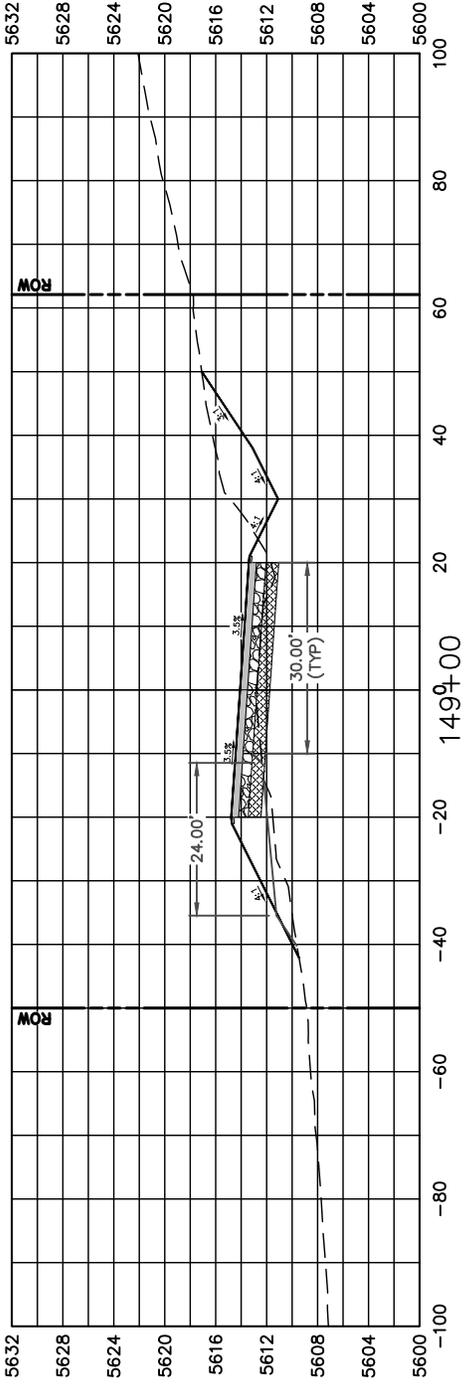
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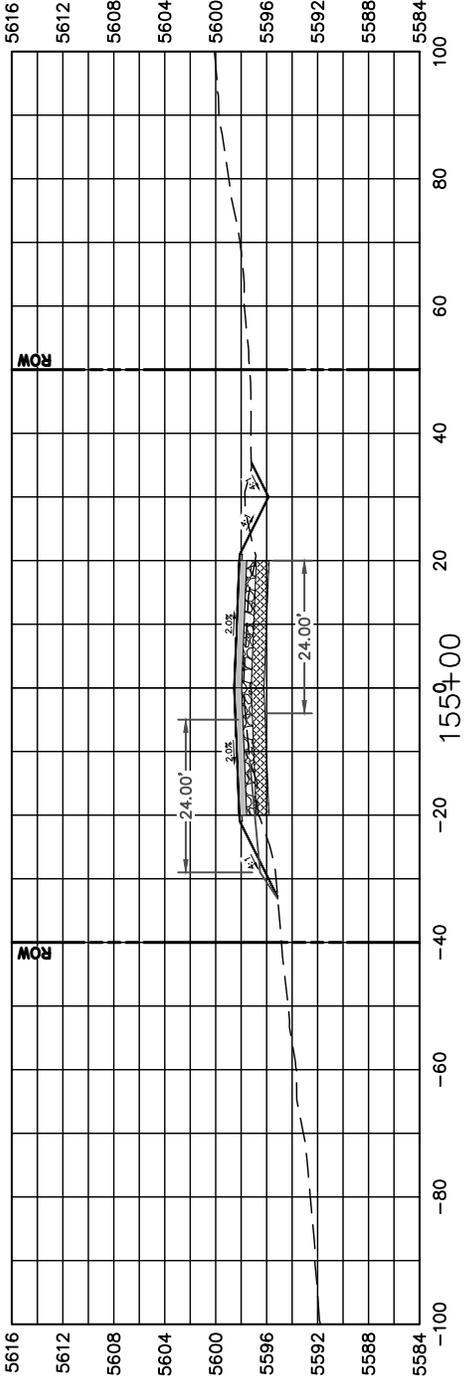
142+00



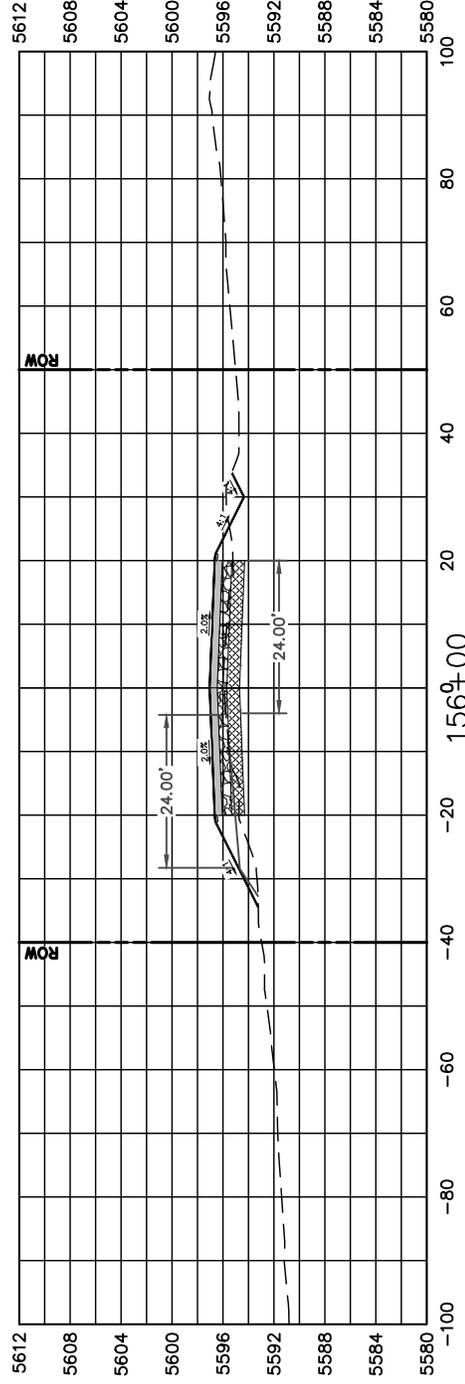
148+00



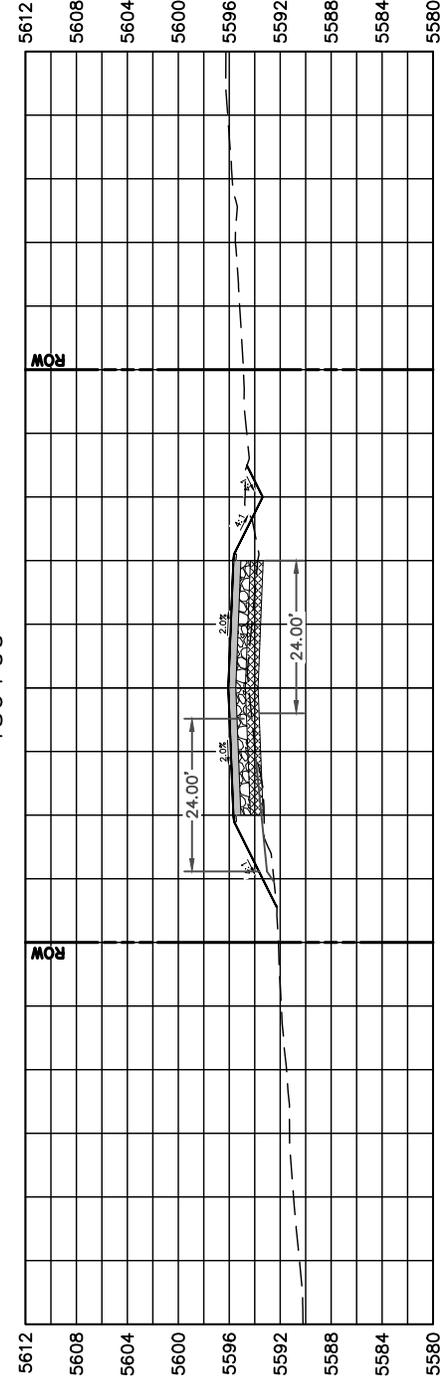
154+00



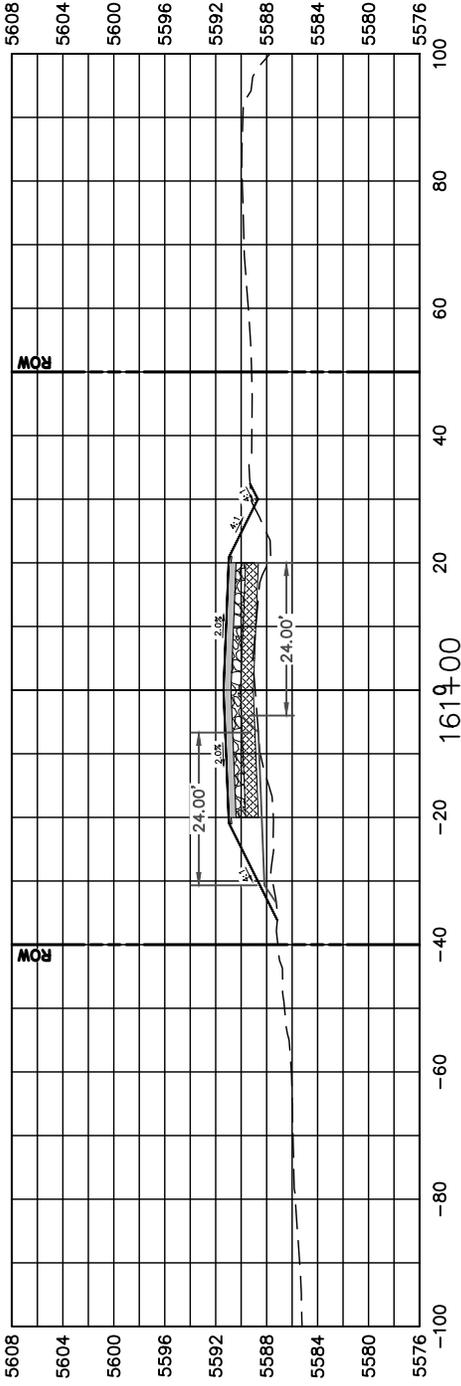
155+00



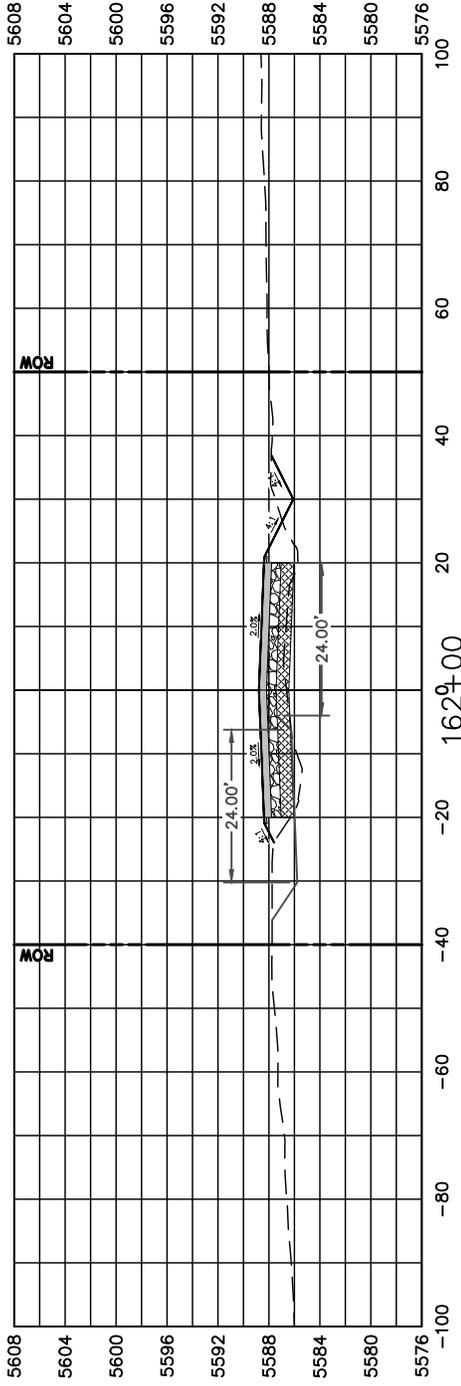
156+00



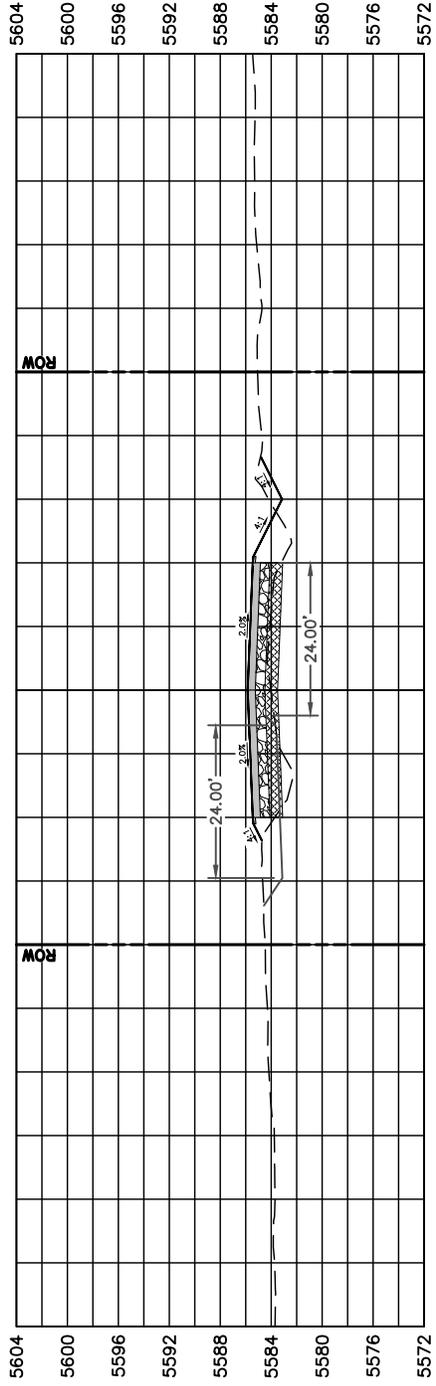
160+00



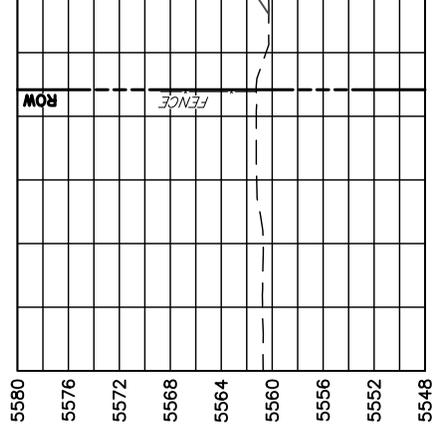
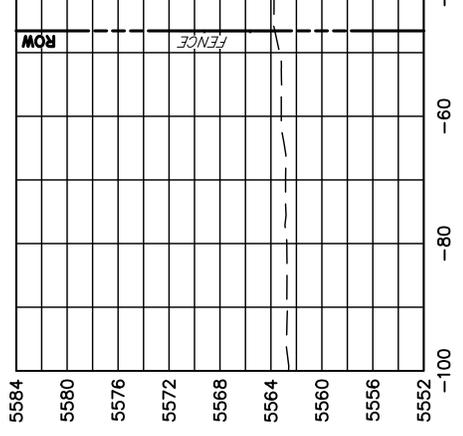
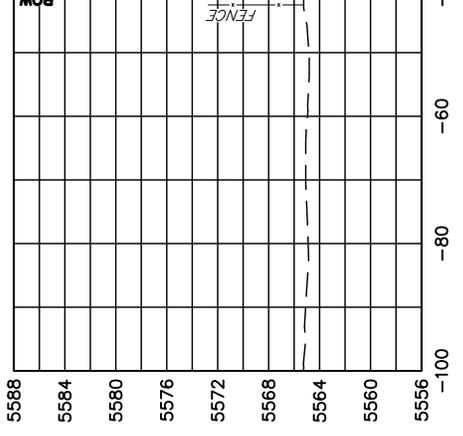
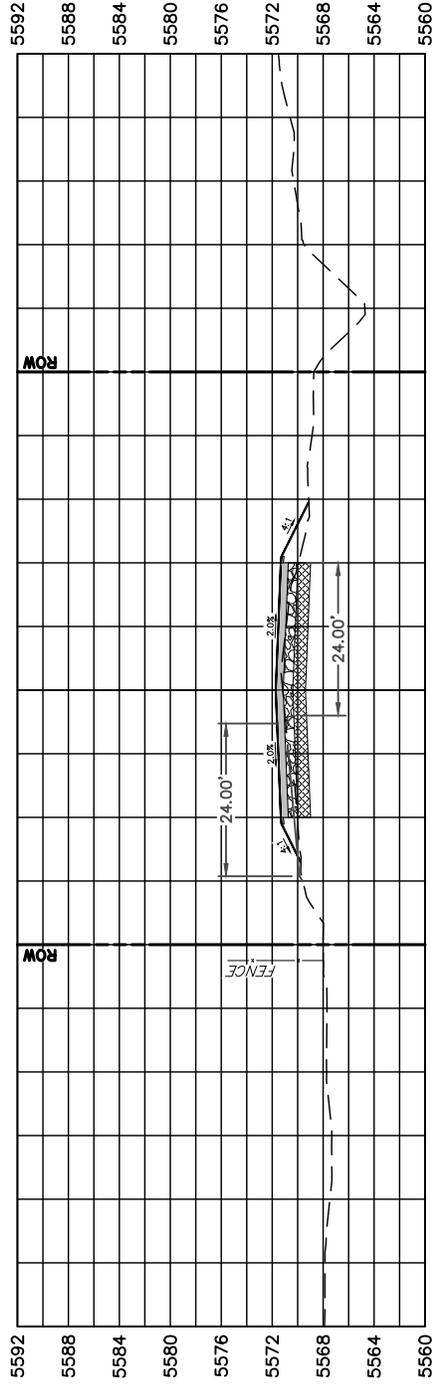
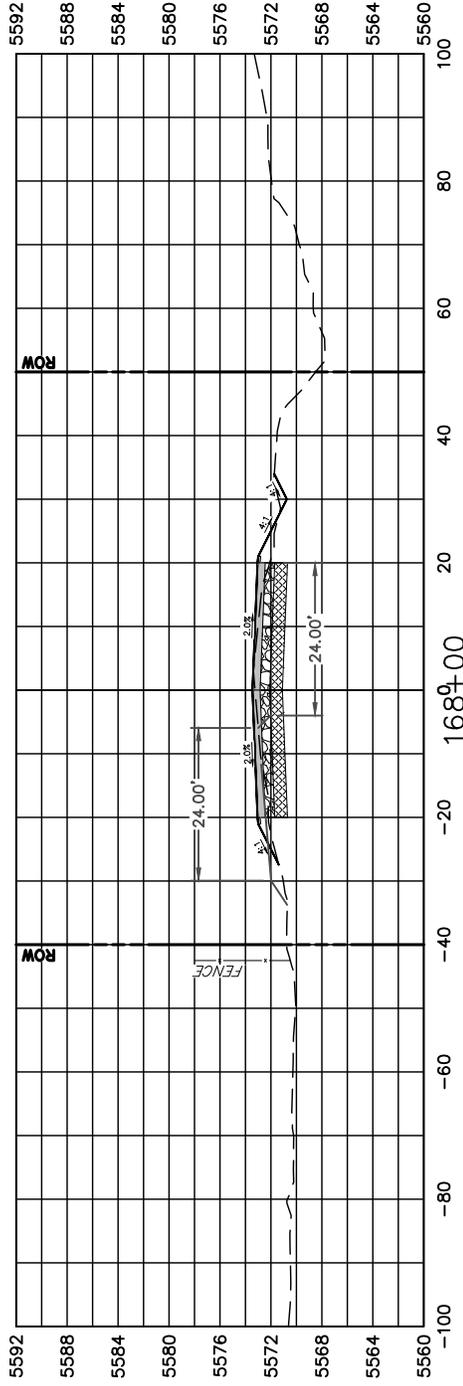
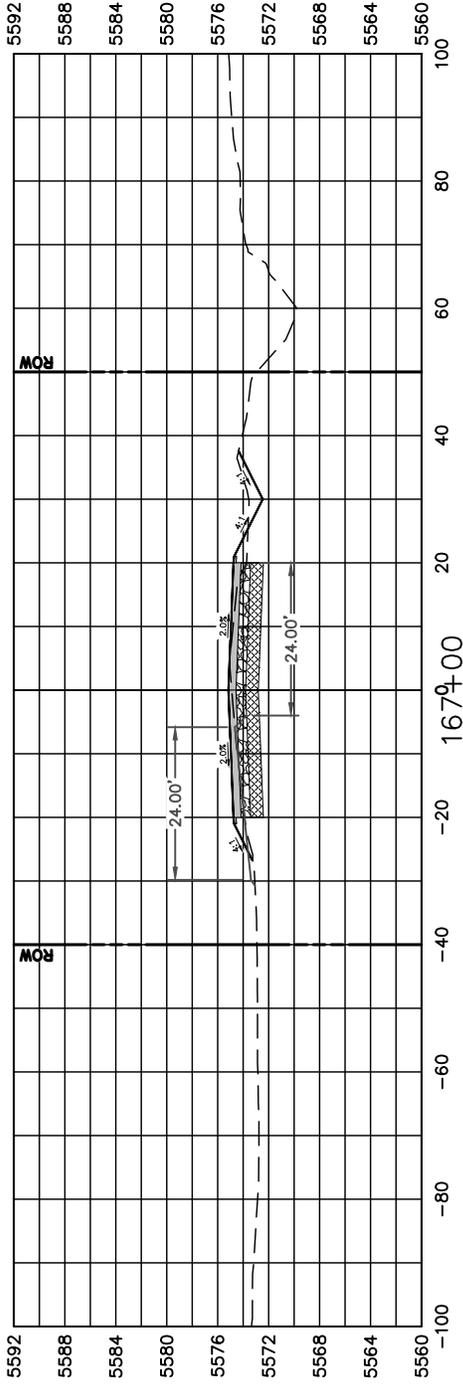
161+00



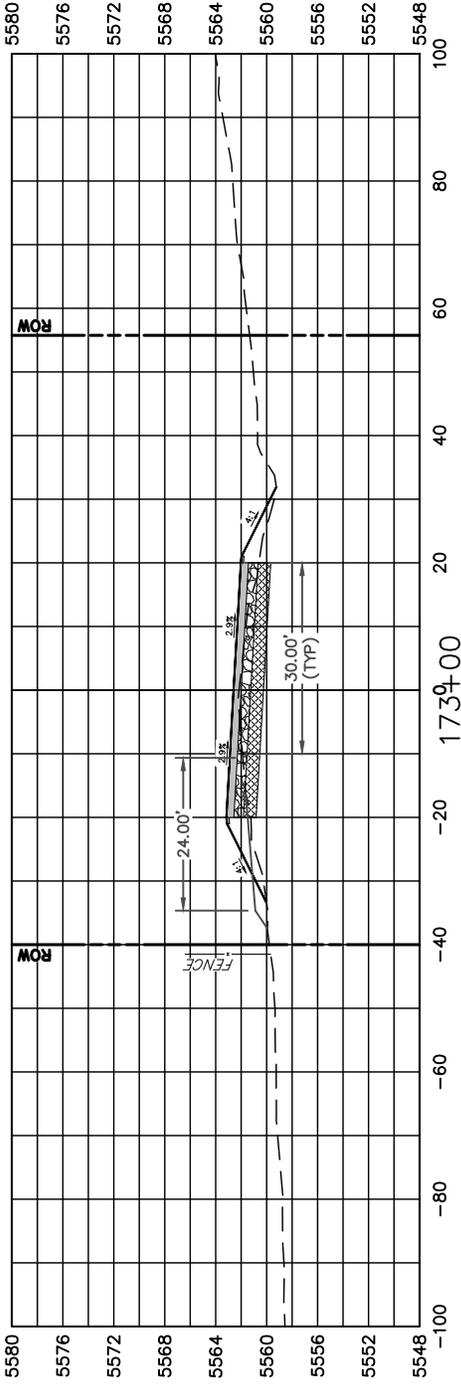
162+00



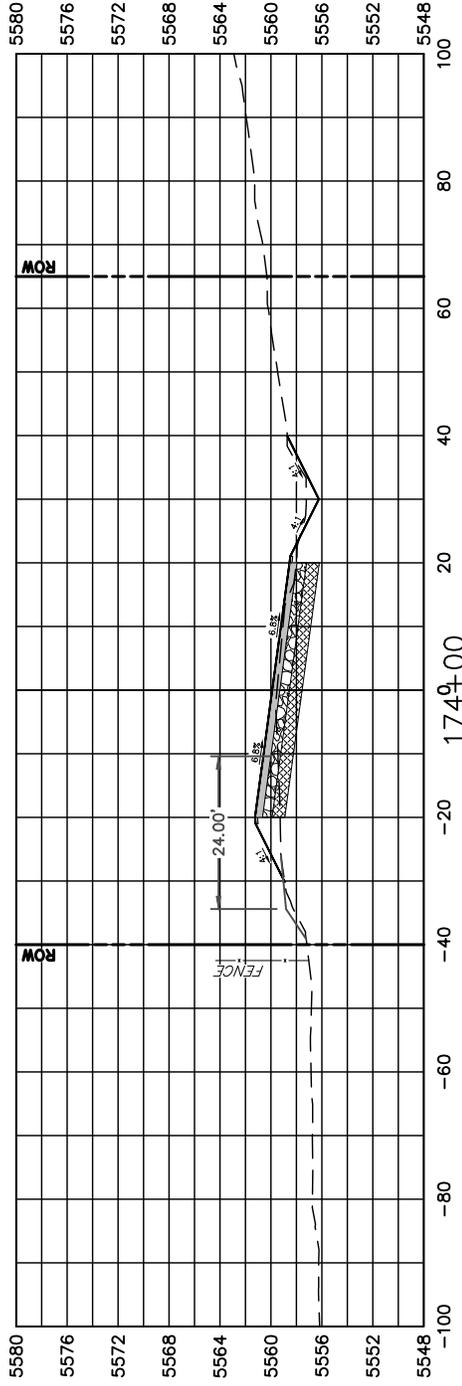
166+00



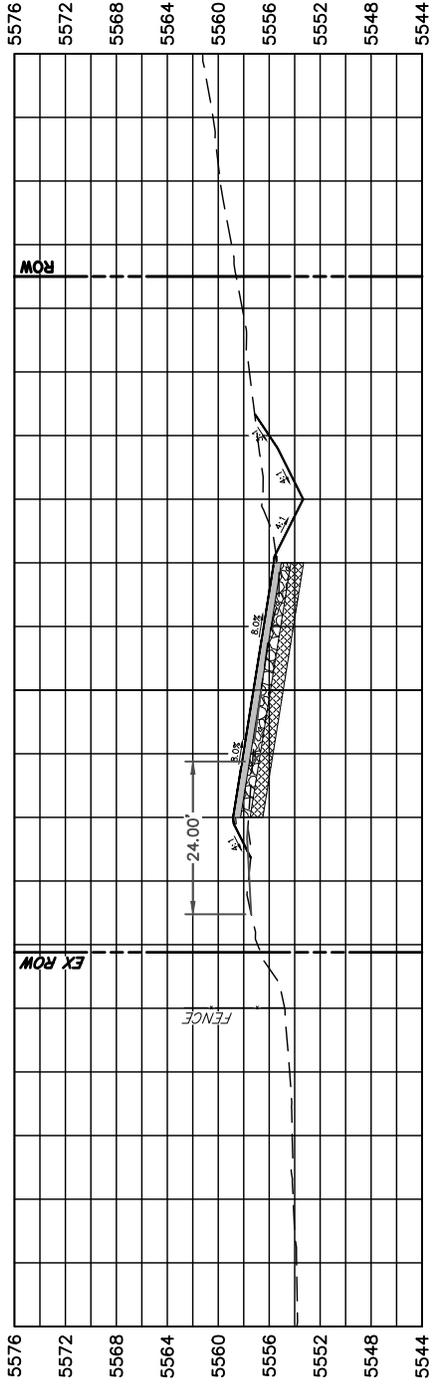
172+00



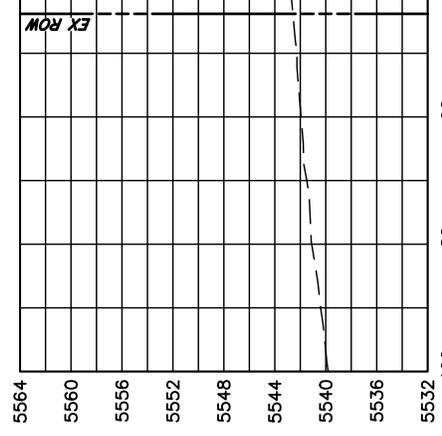
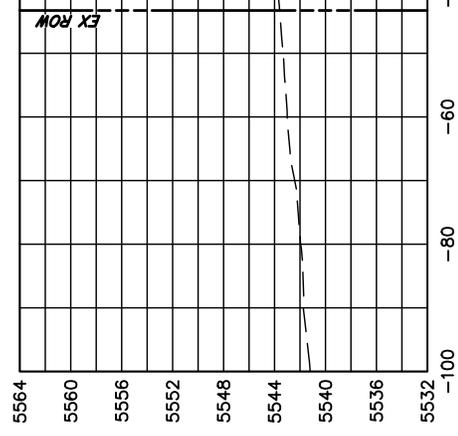
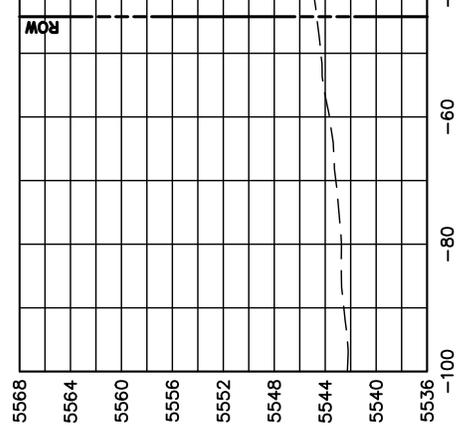
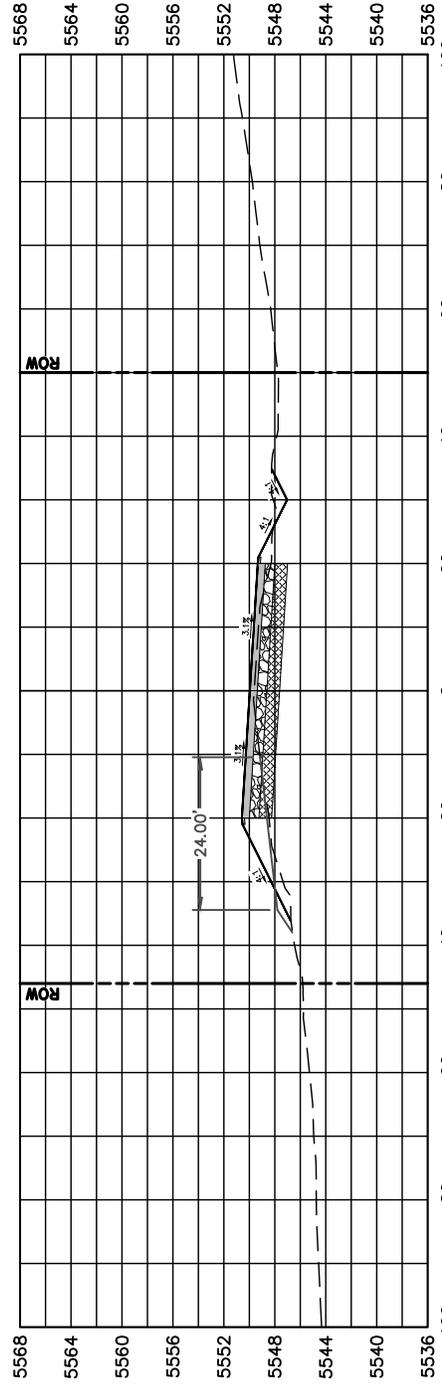
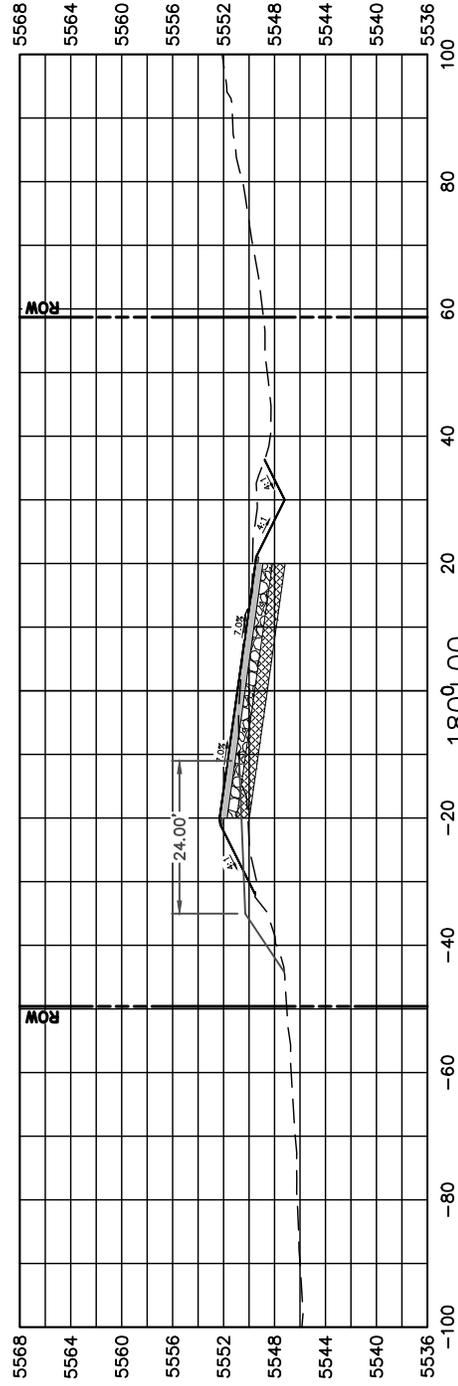
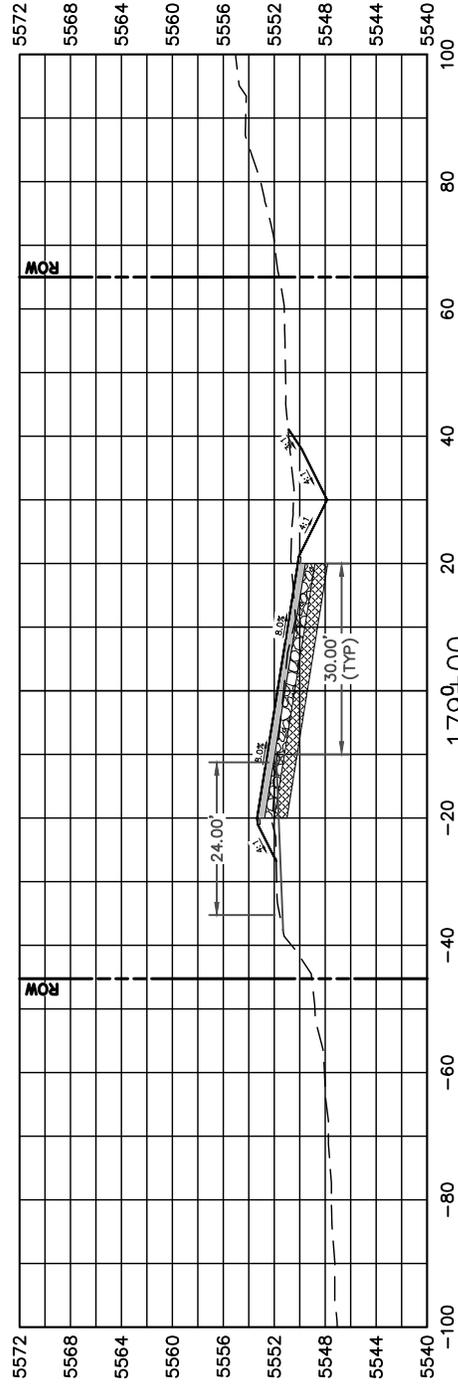
173+00



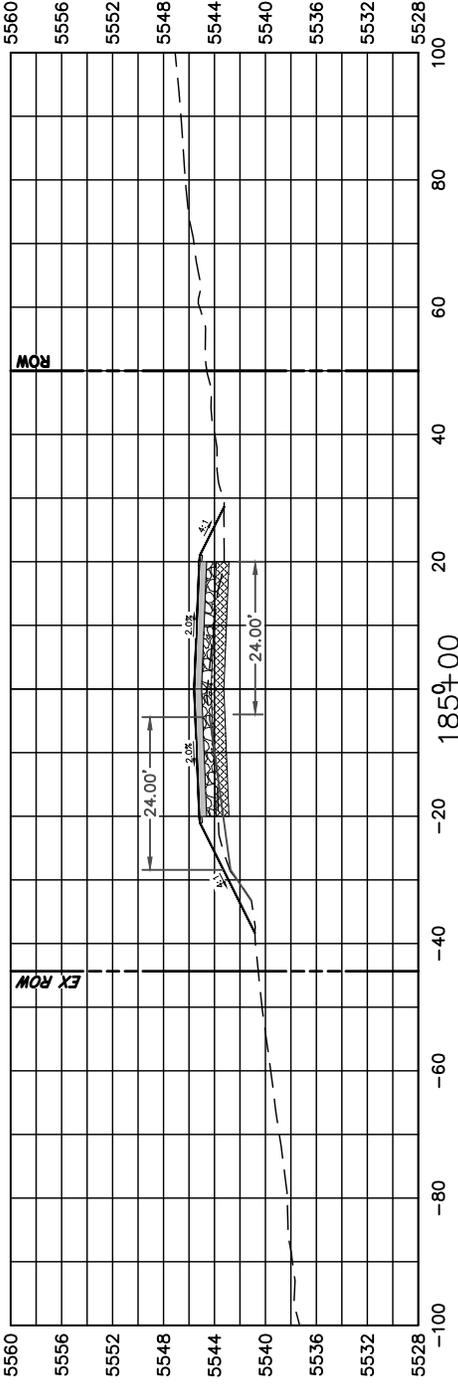
174+00



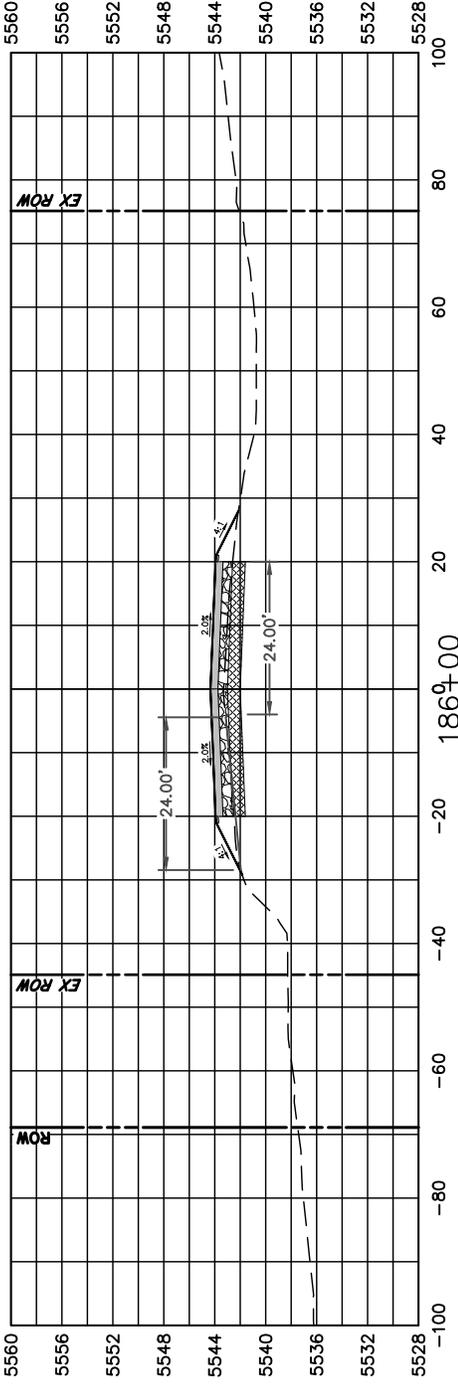
178+00



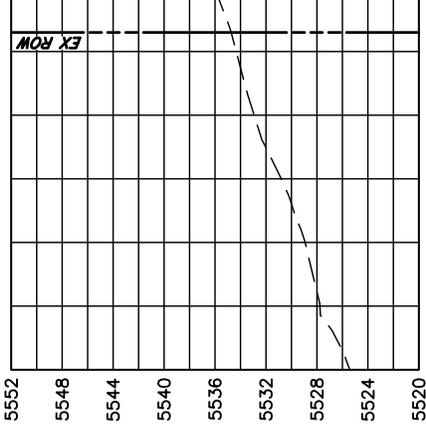
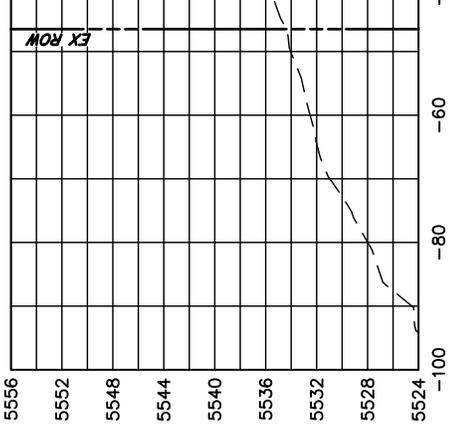
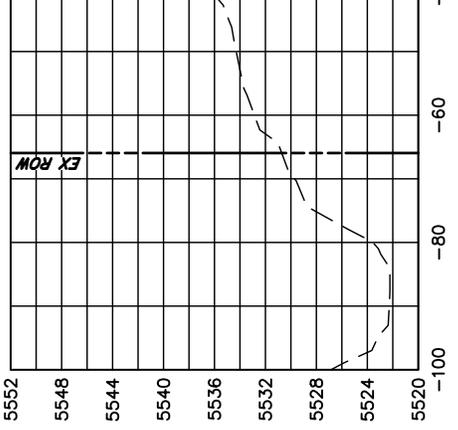
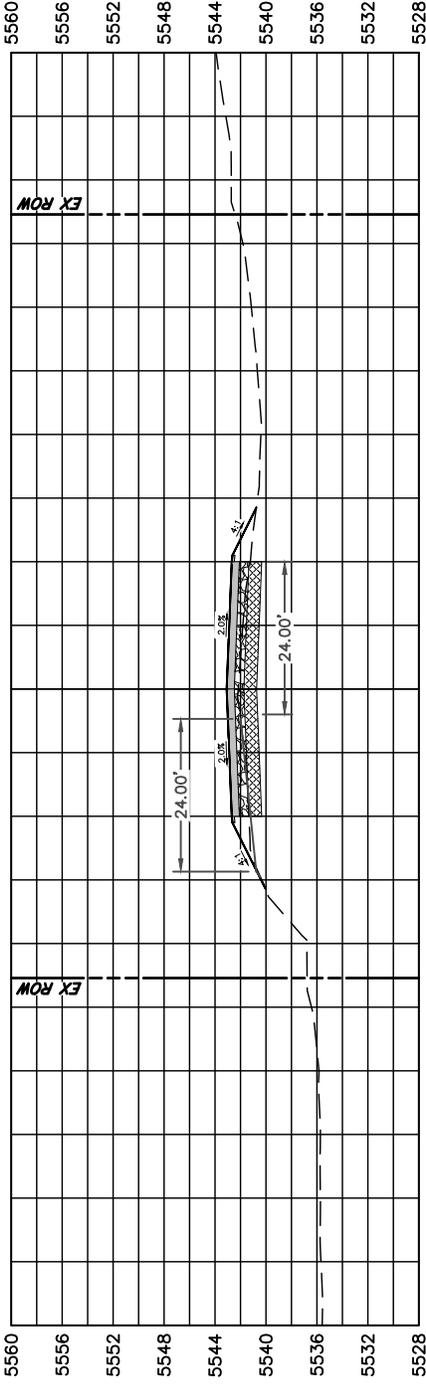
184+00



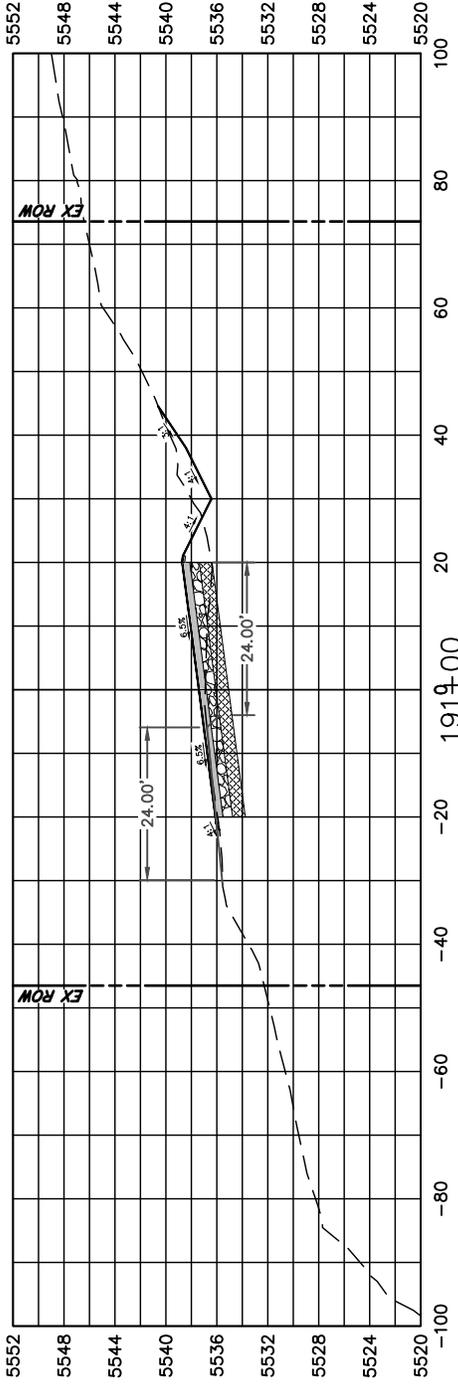
185+00



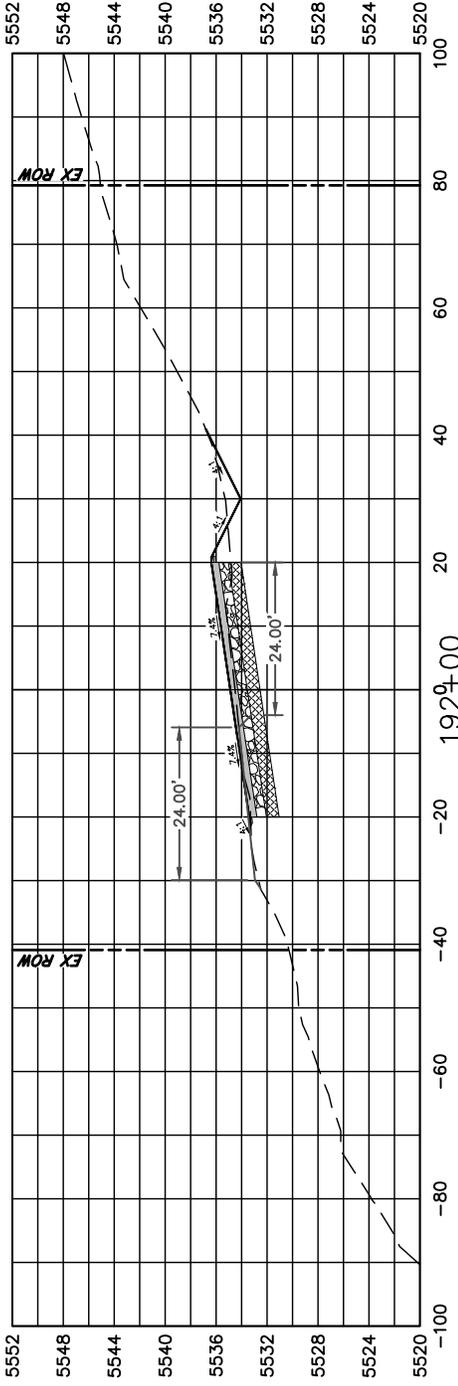
186+00



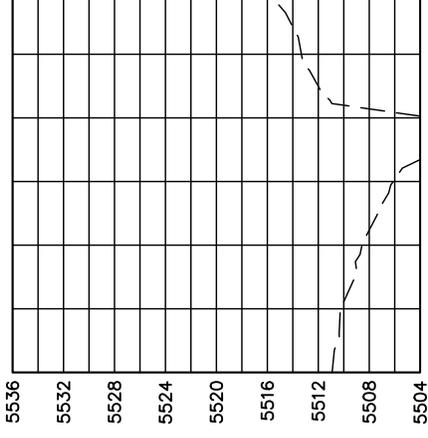
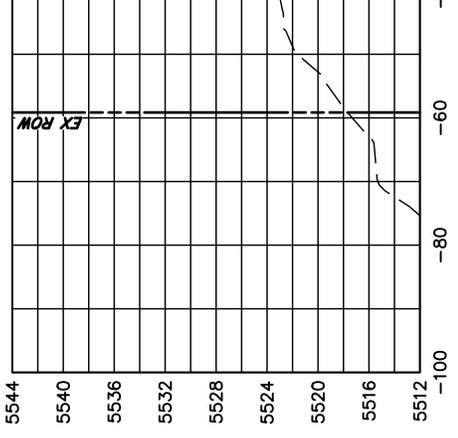
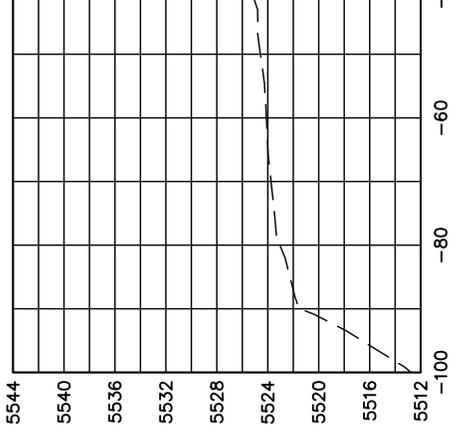
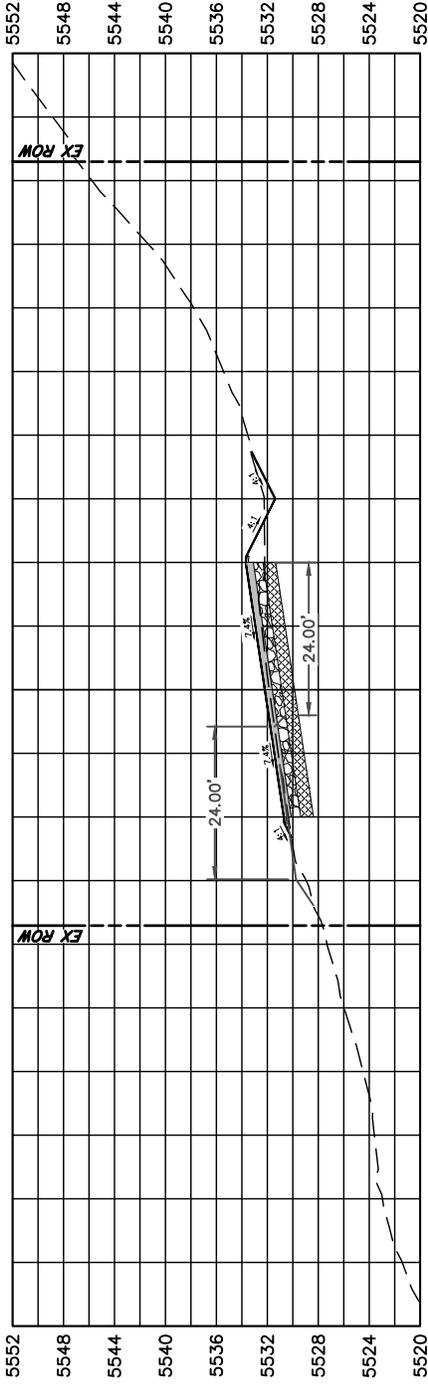
190+00



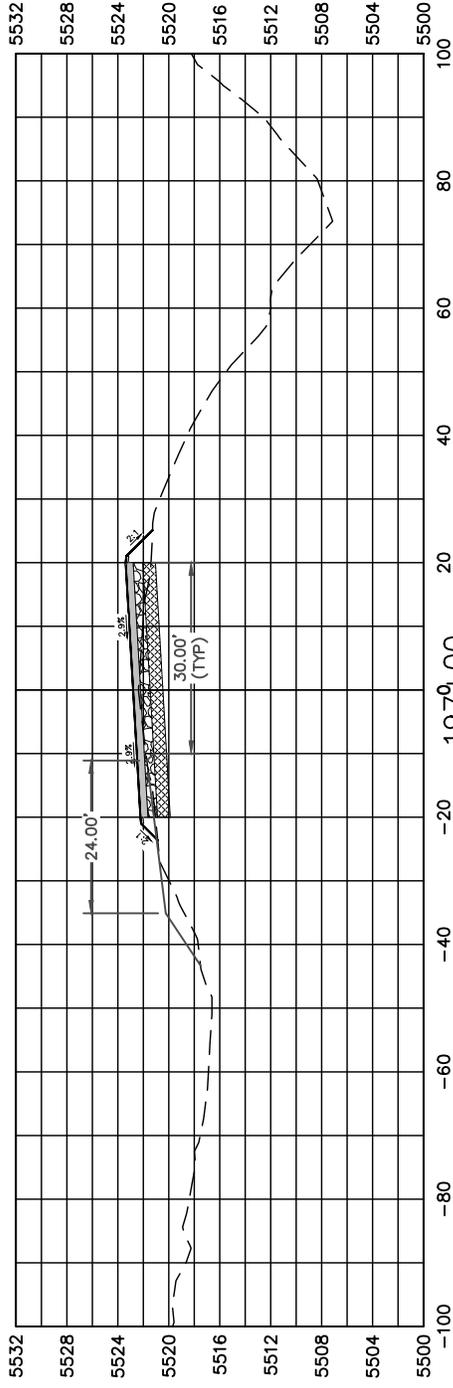
191+00



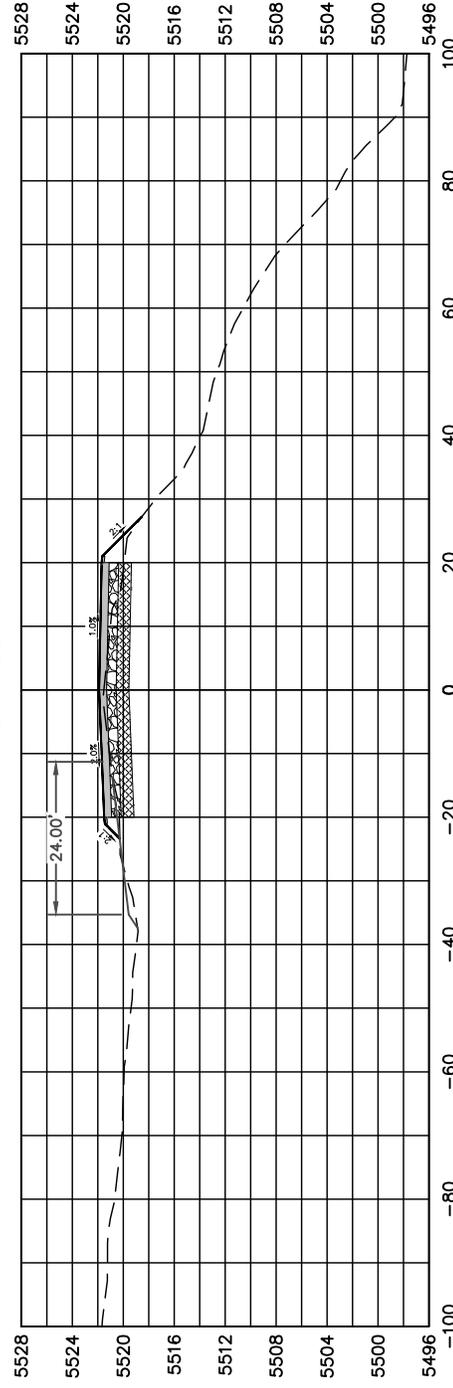
192+00



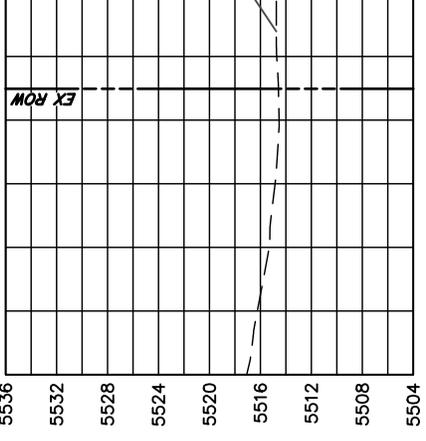
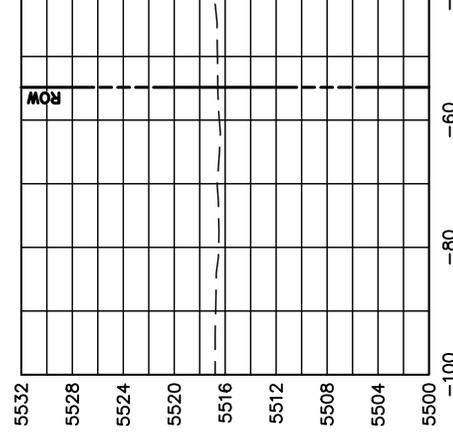
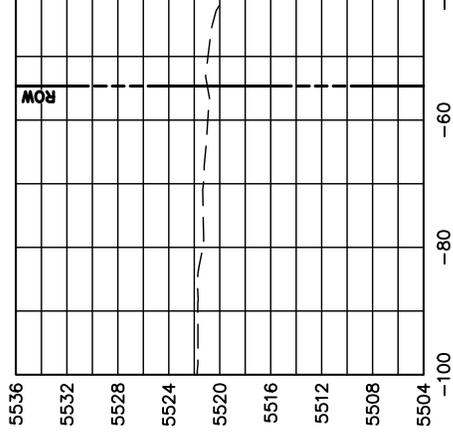
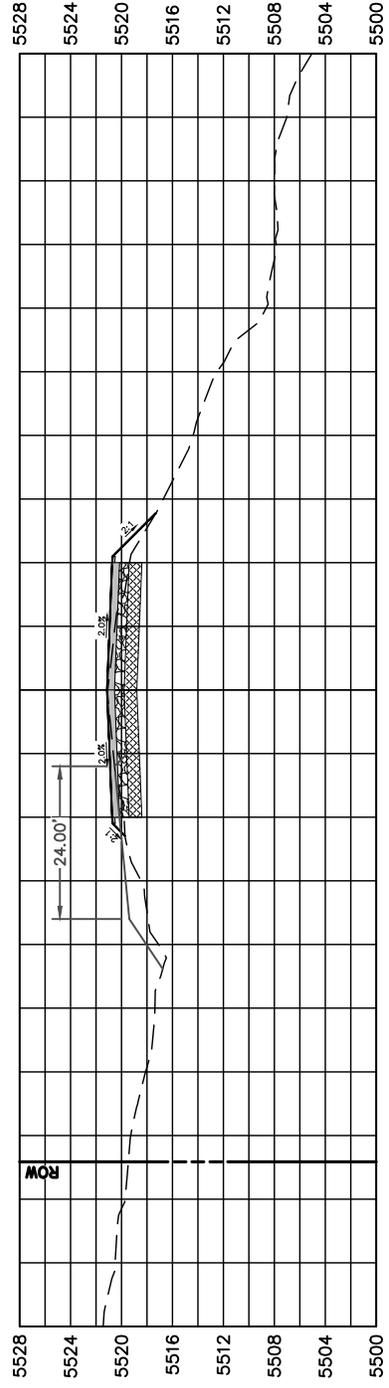
196+00



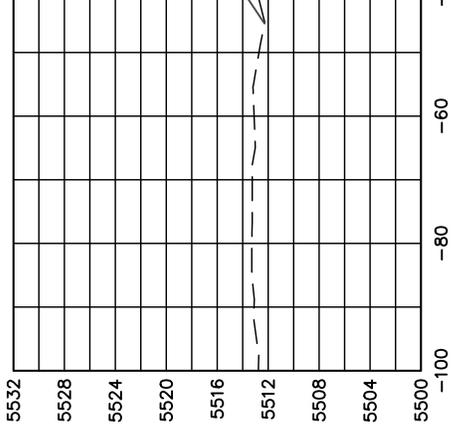
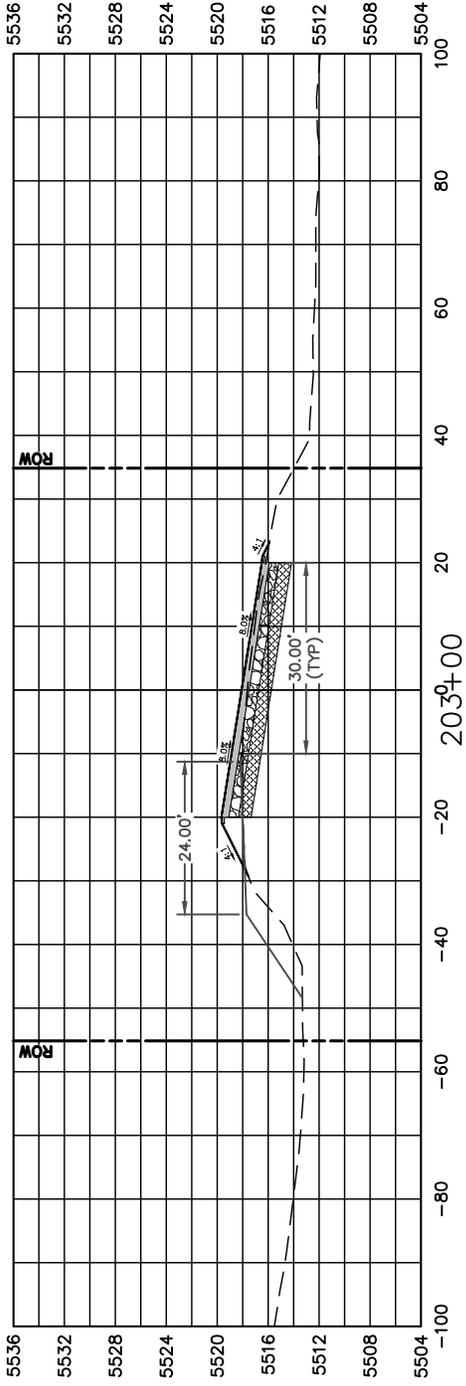
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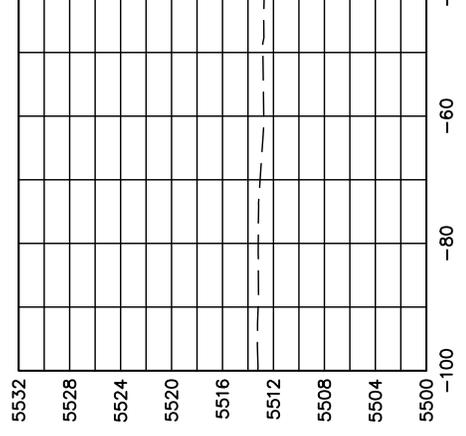
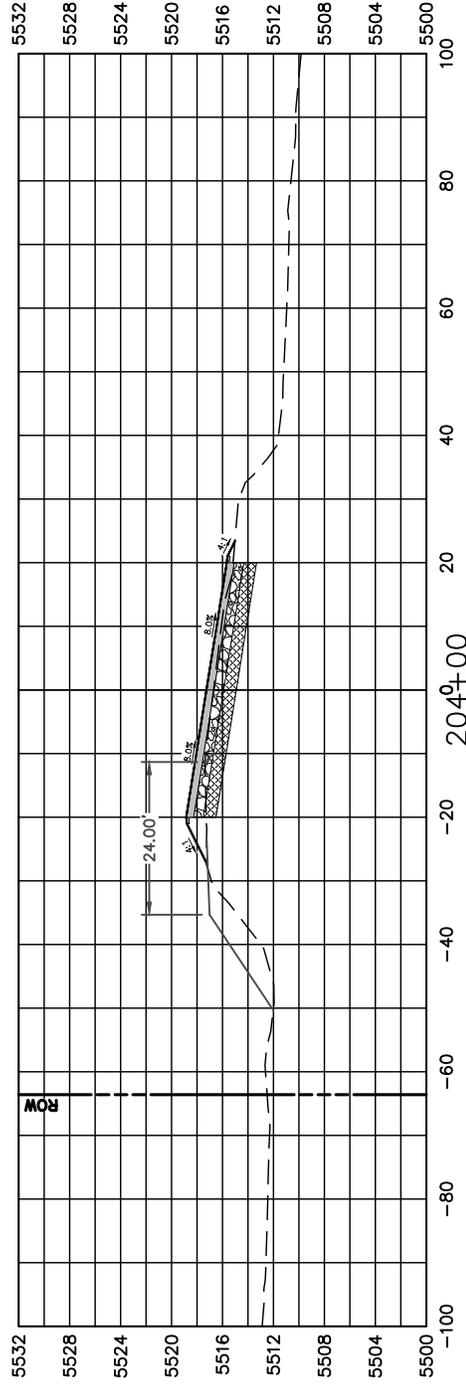
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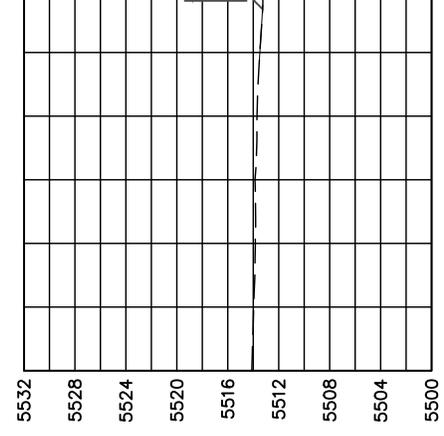
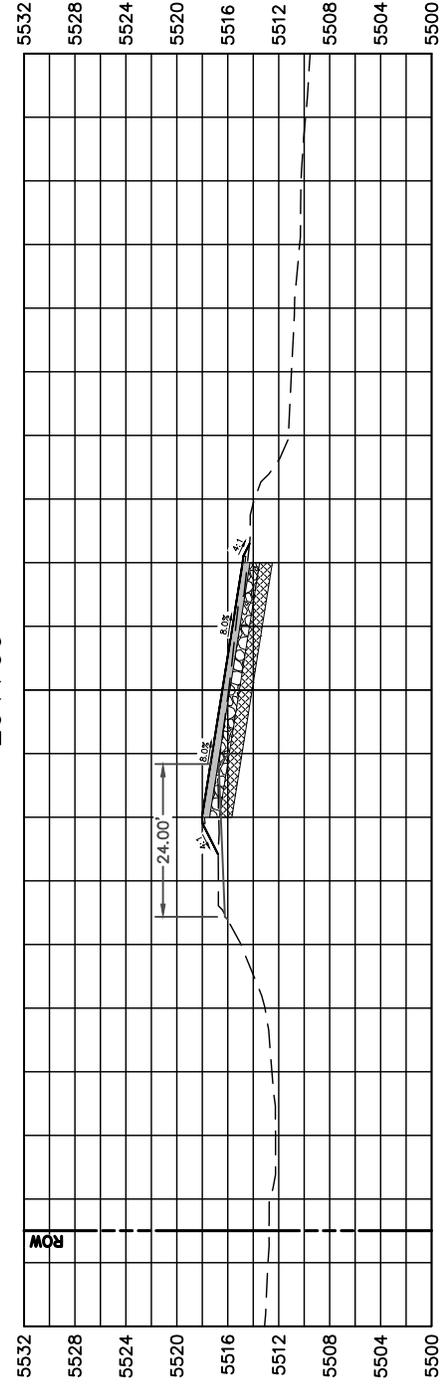
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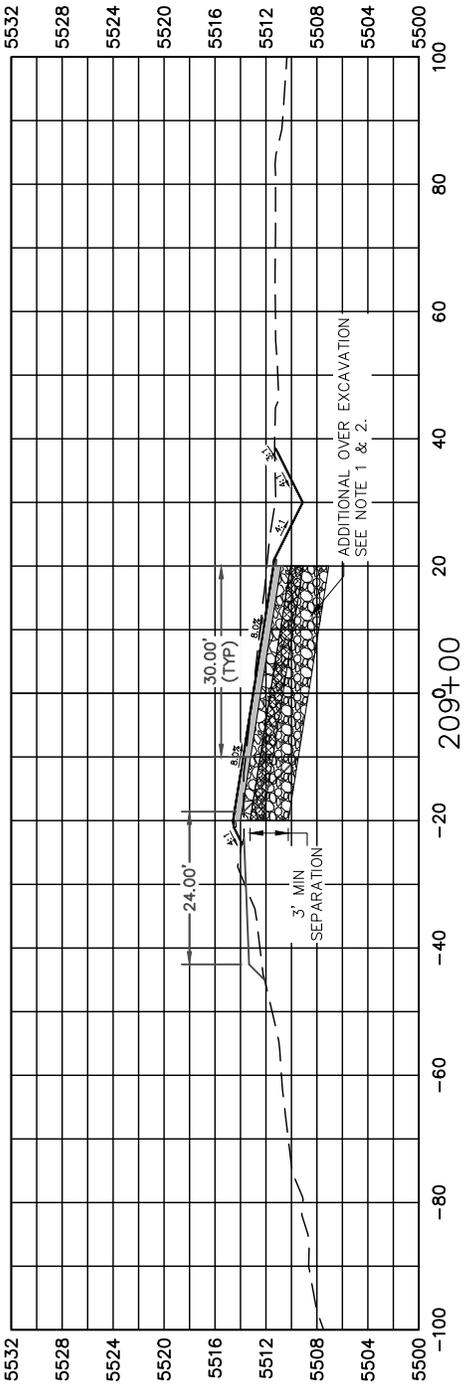
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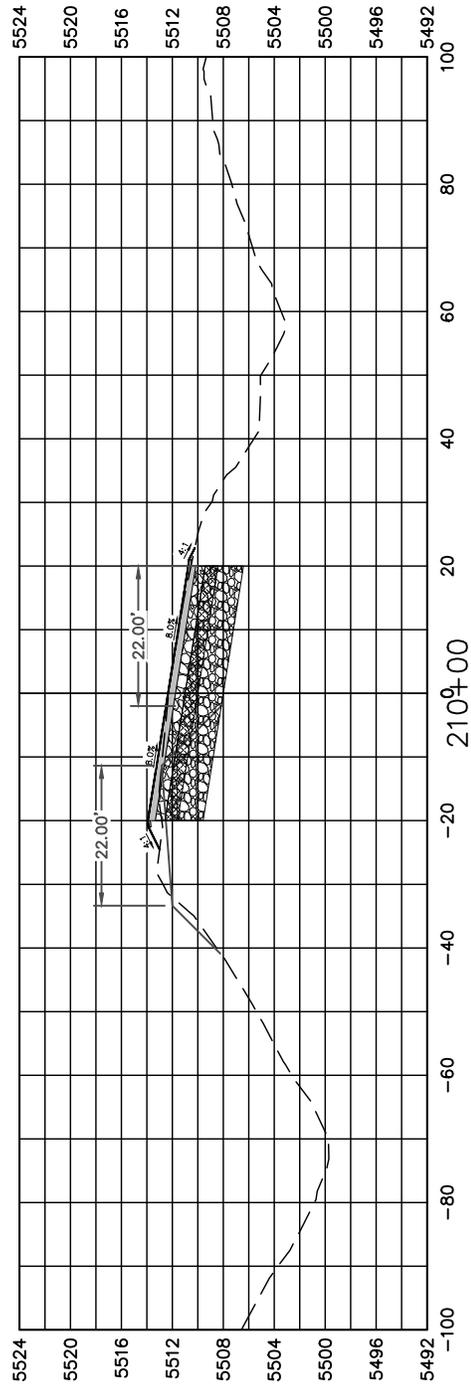
204+00



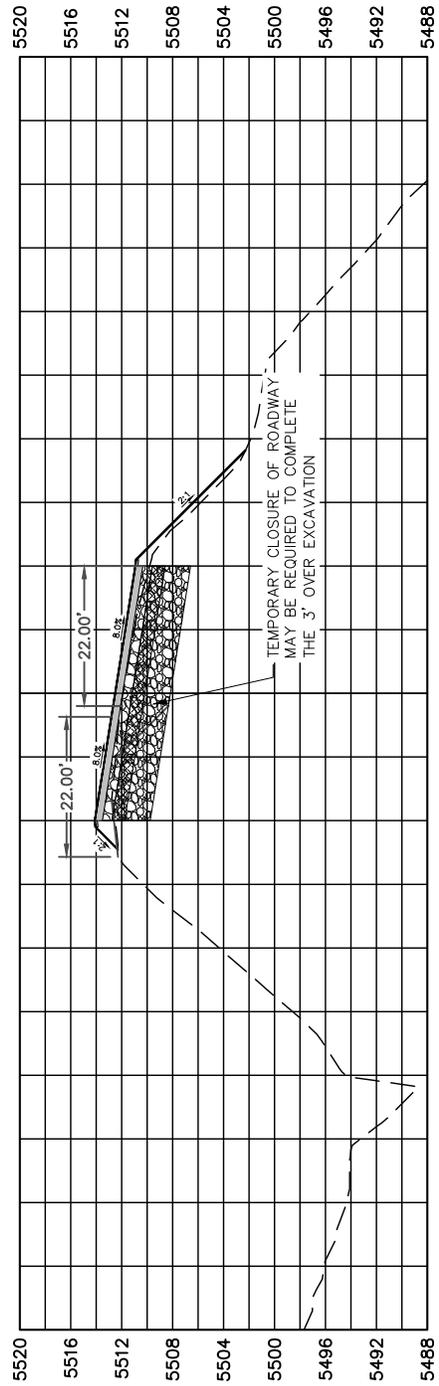
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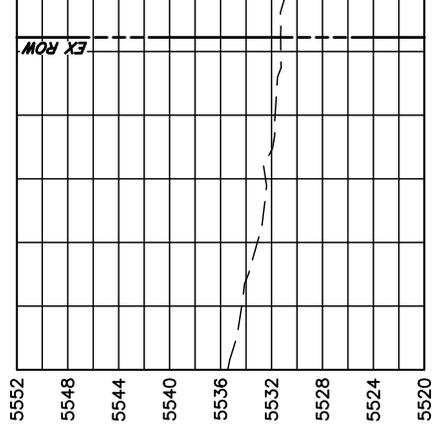
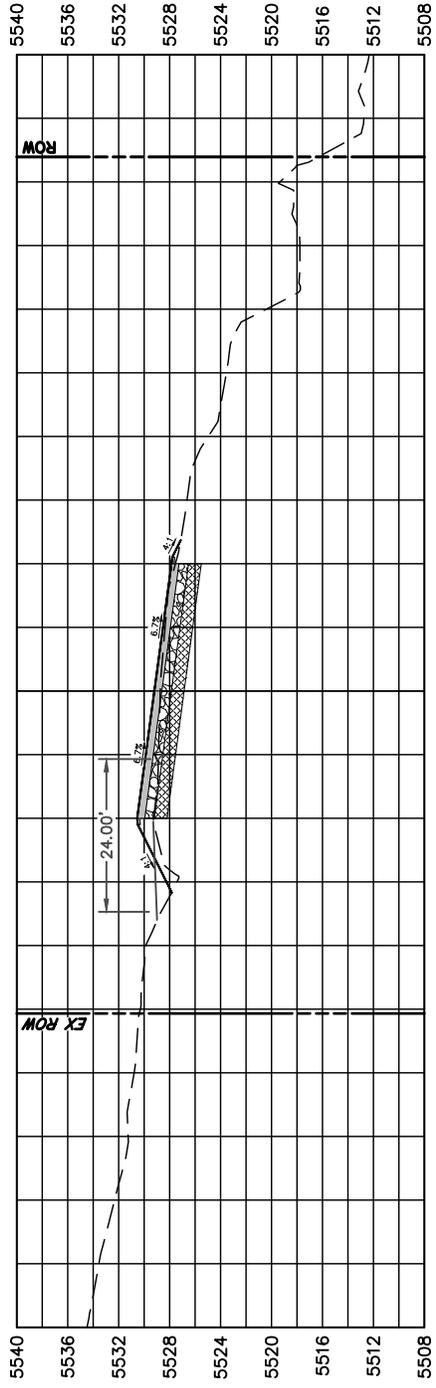
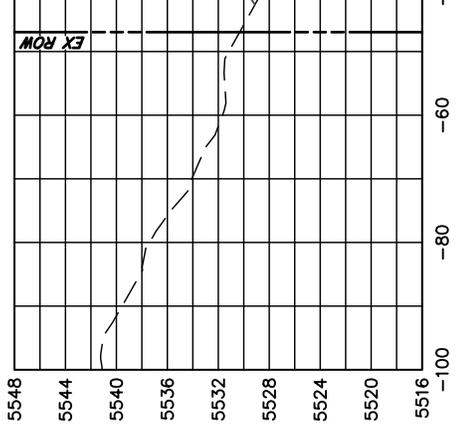
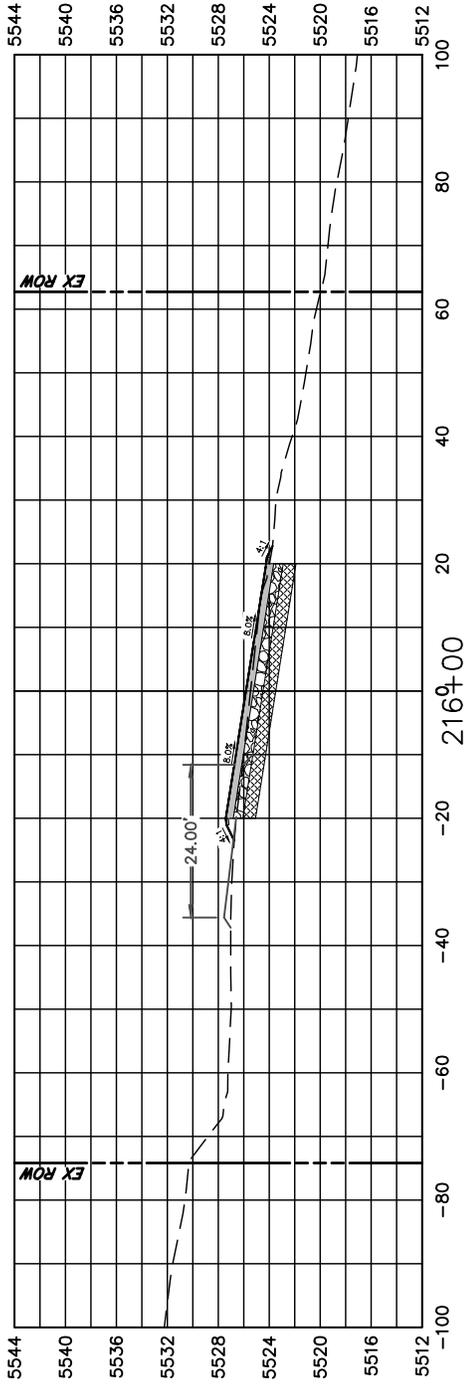
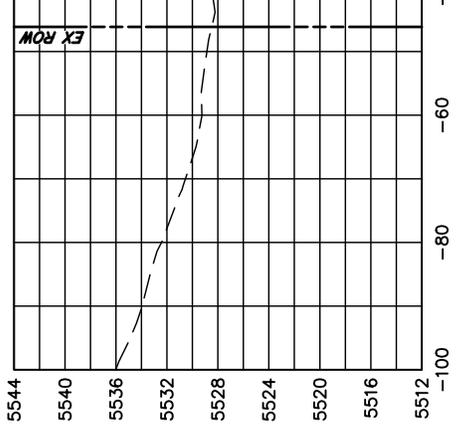
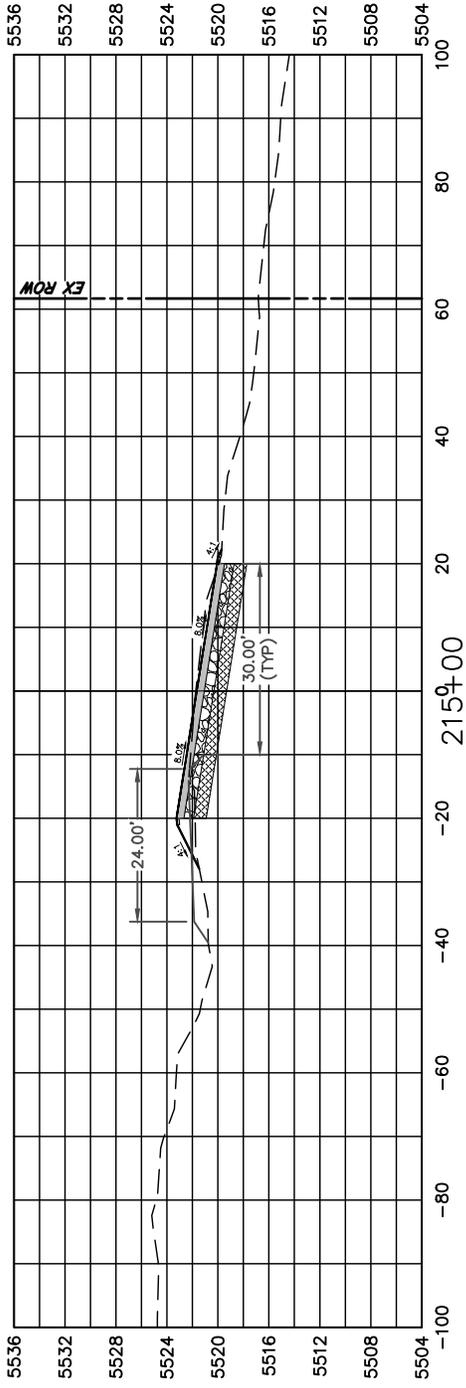
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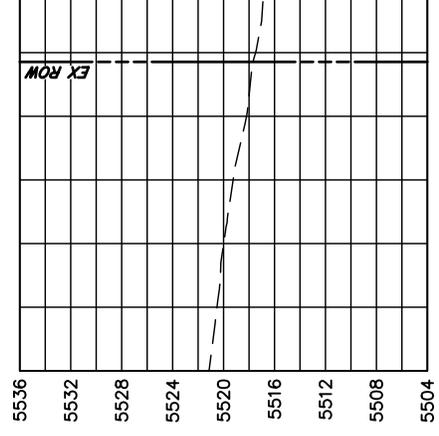
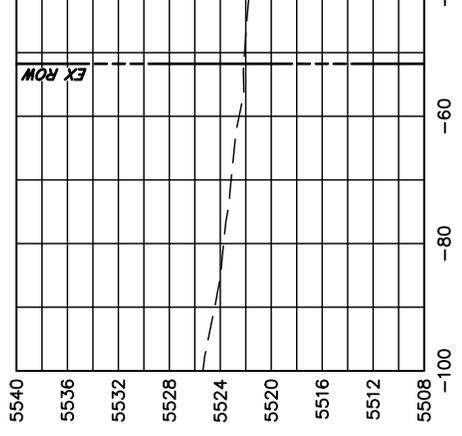
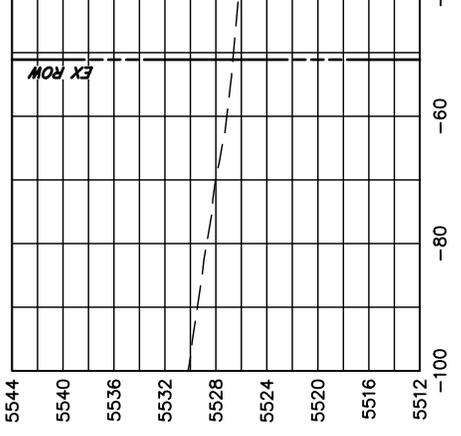
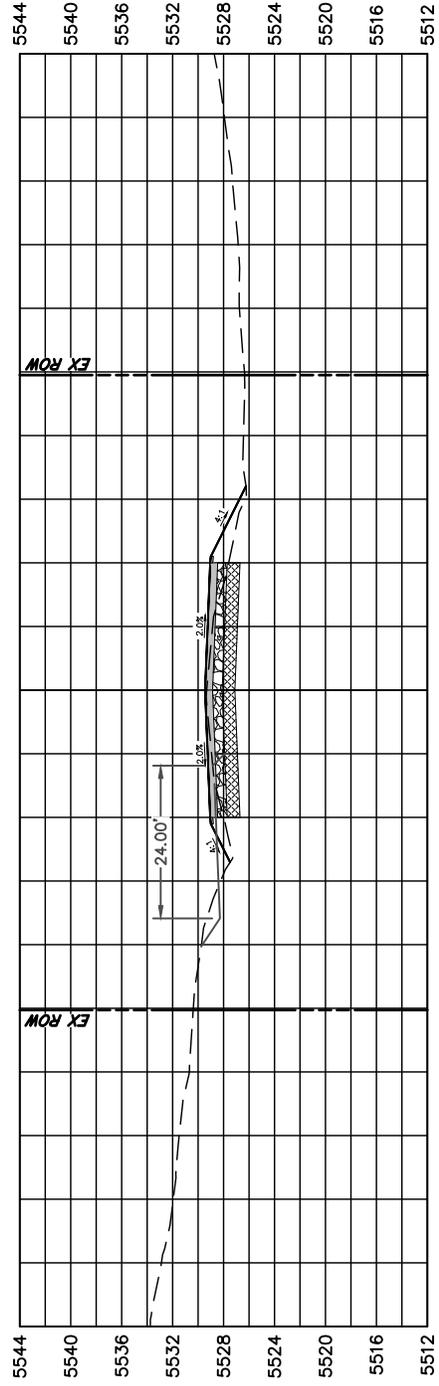
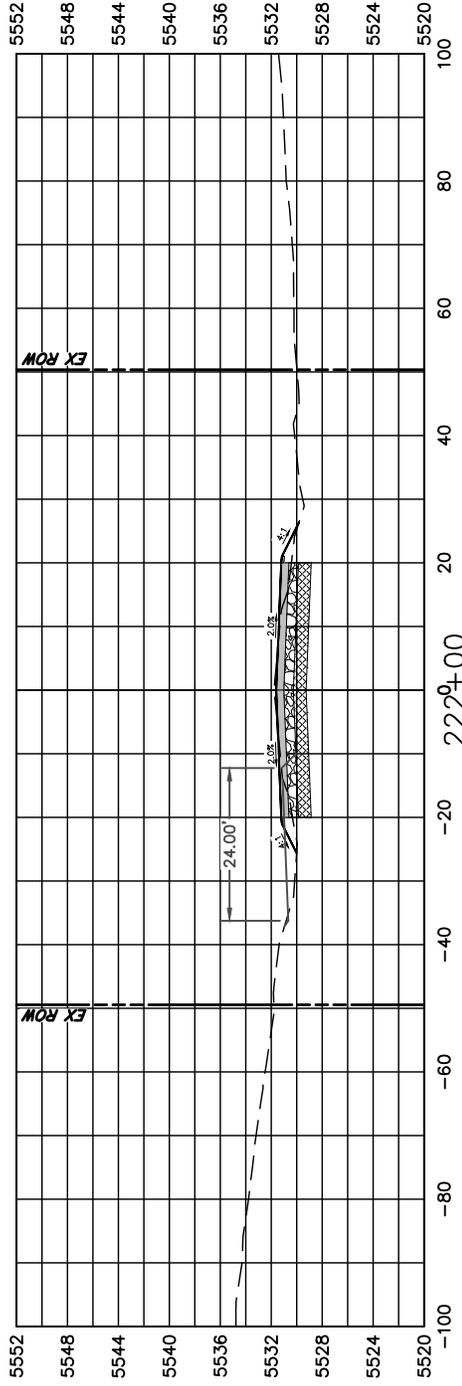
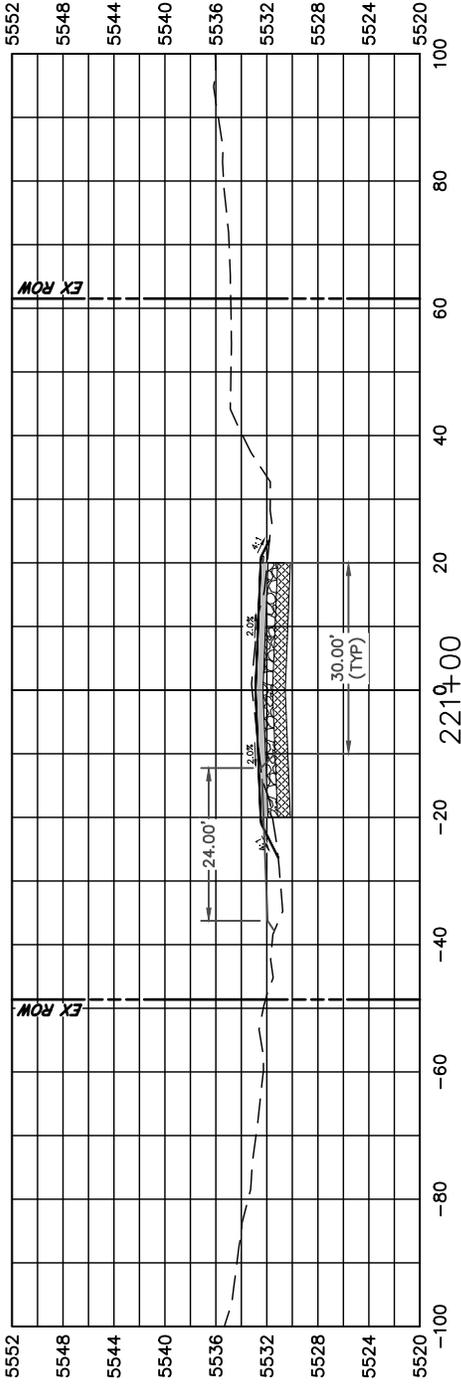
210+00



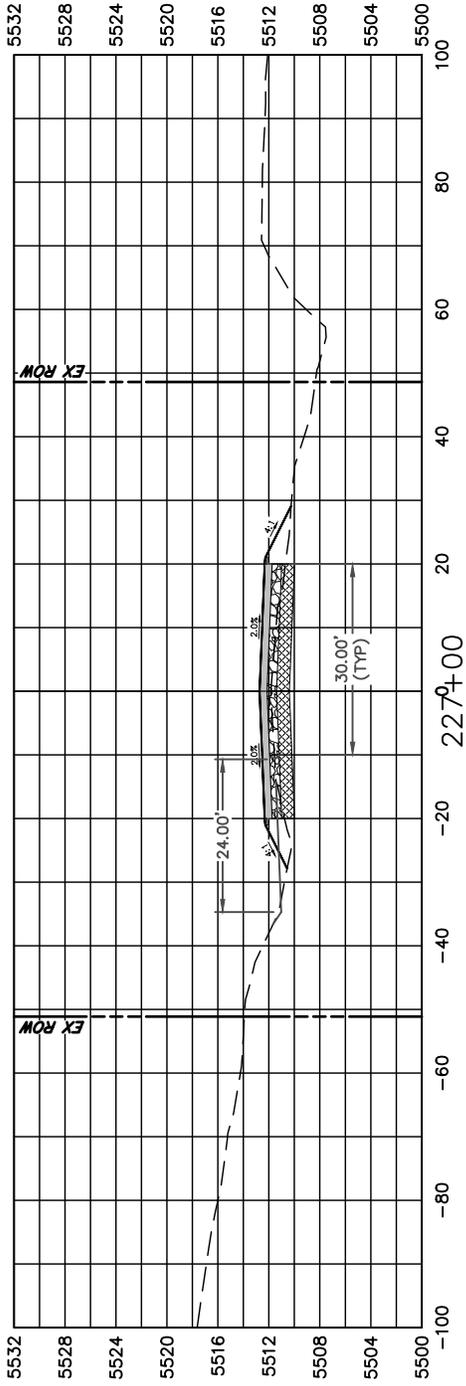
214+00



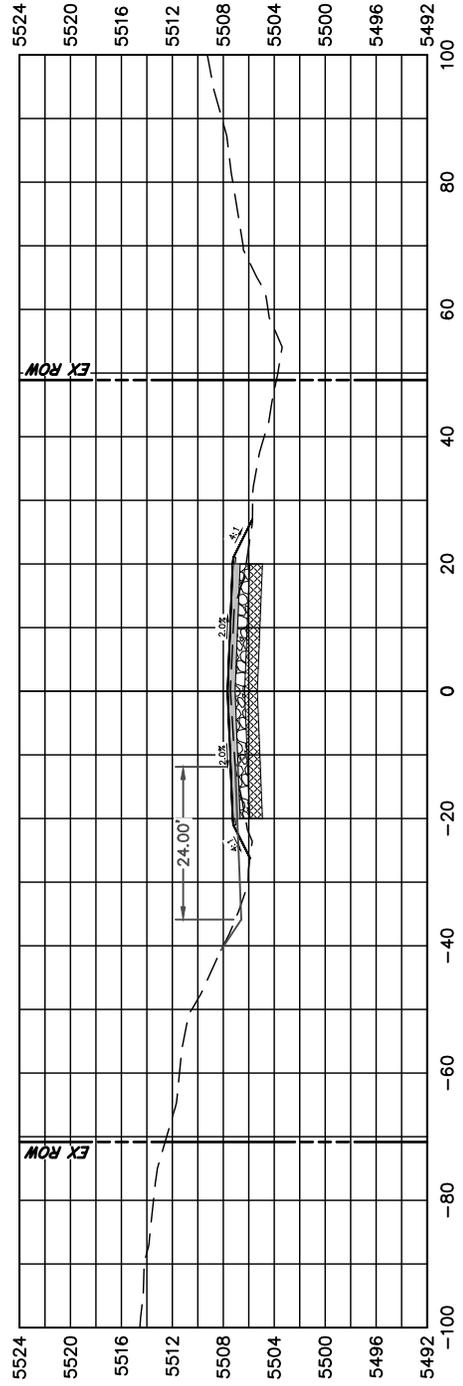
220+00



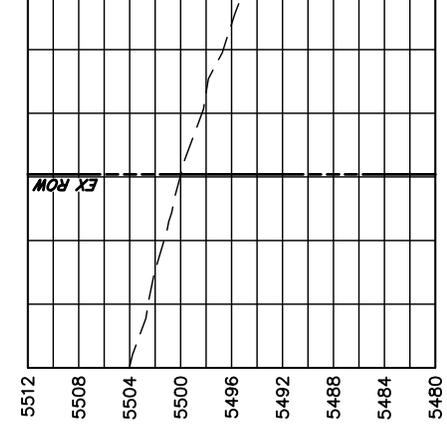
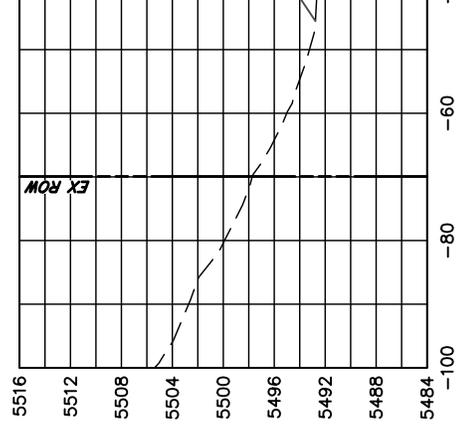
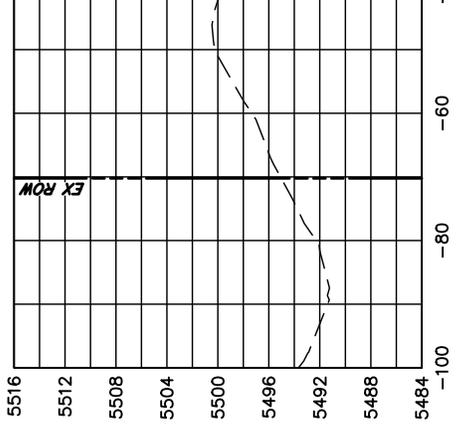
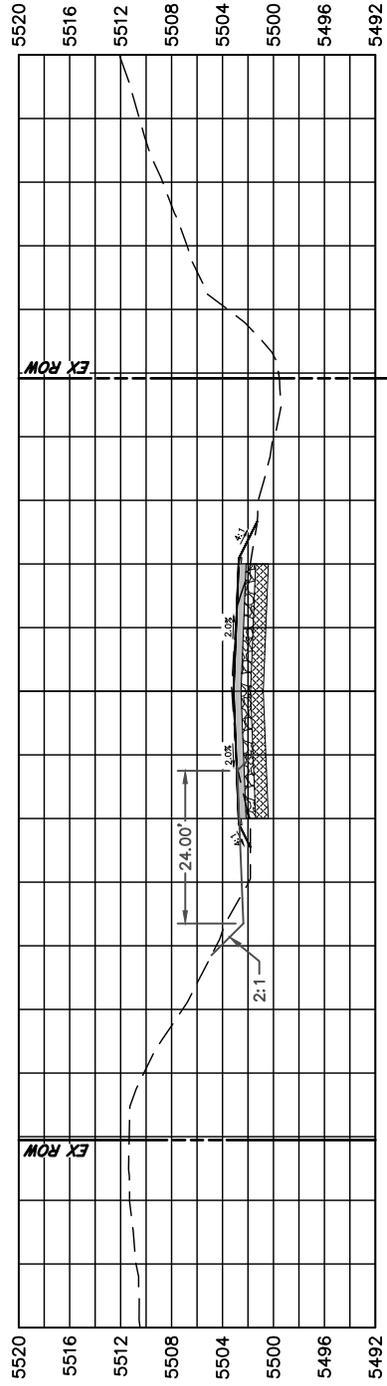
226+00



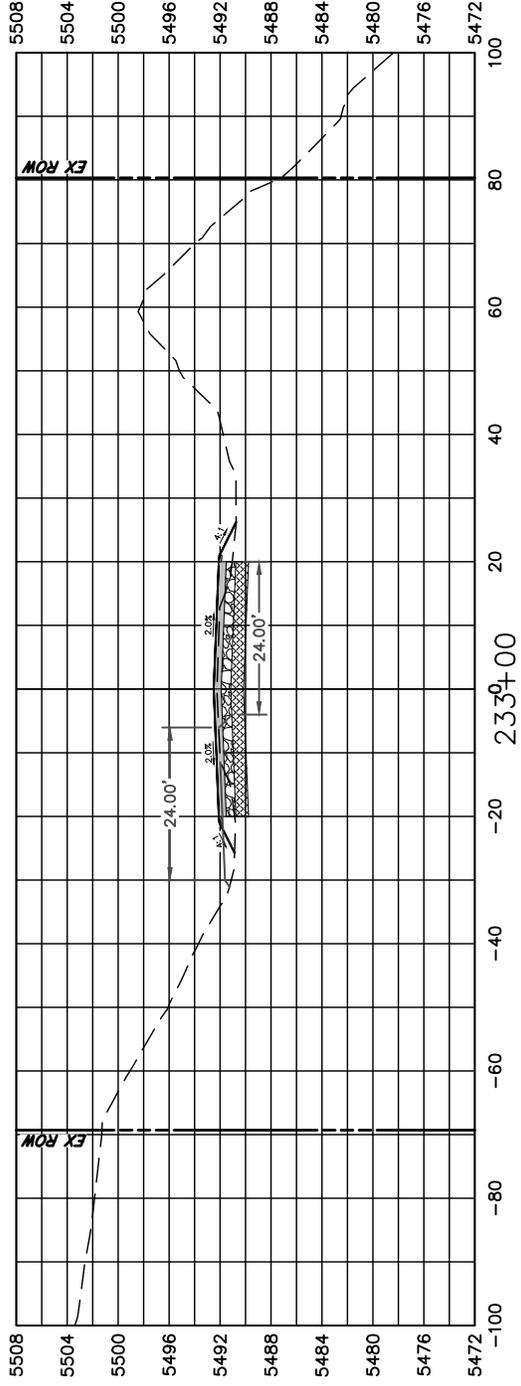
227+00



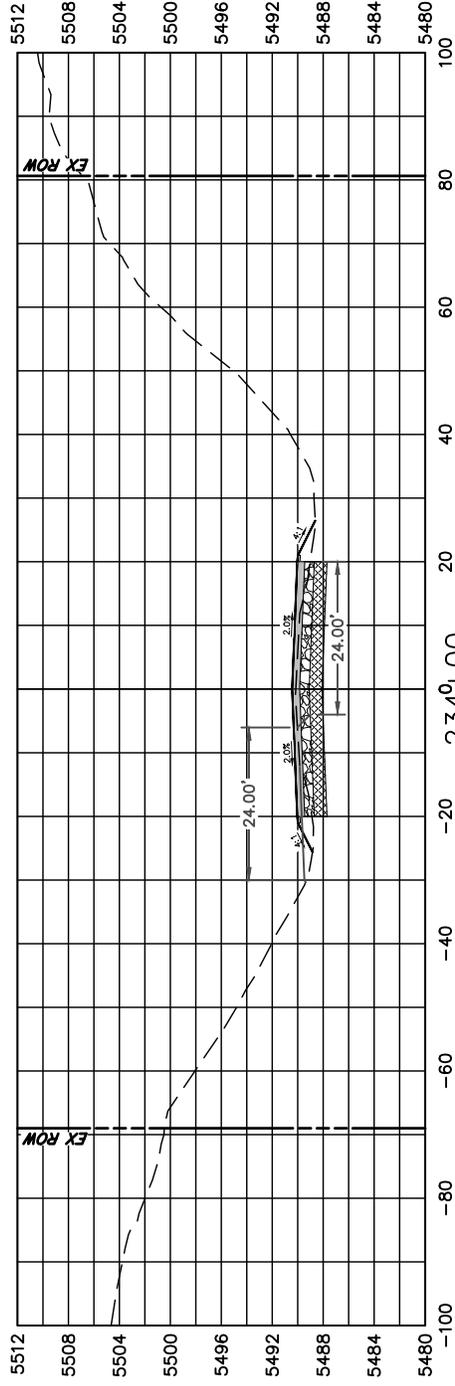
228+00



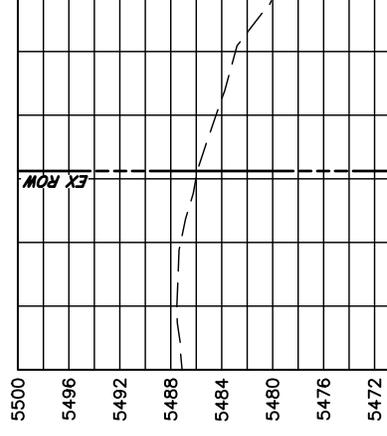
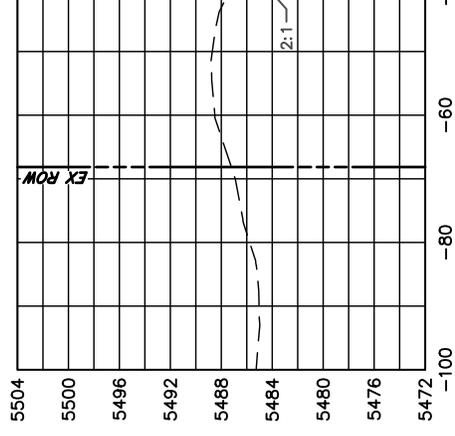
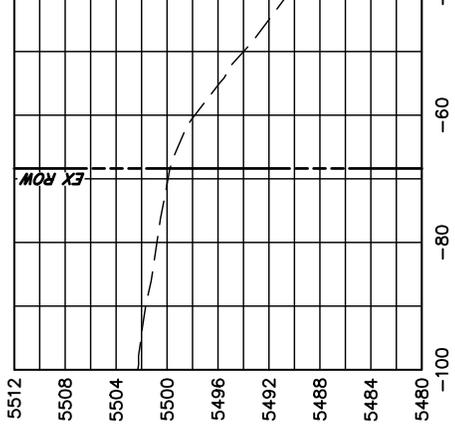
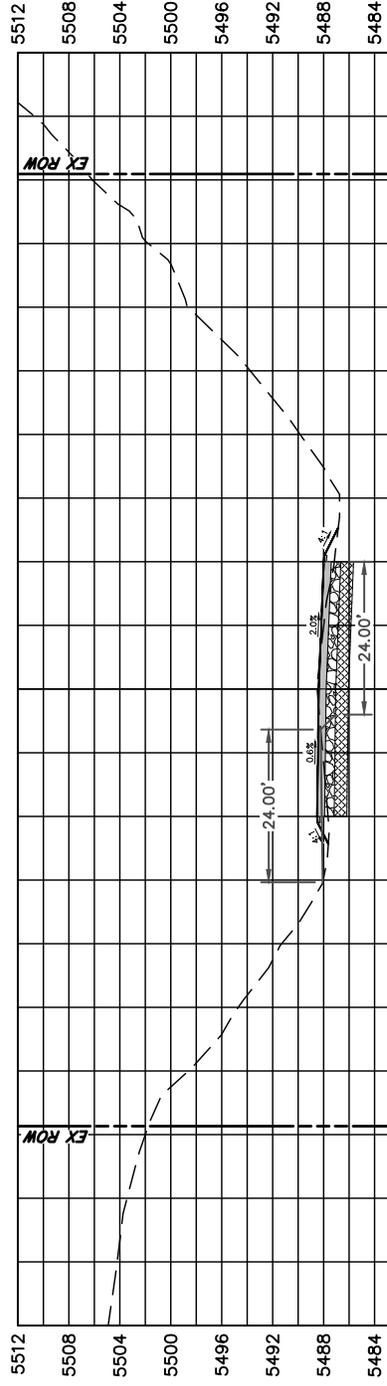
232+00



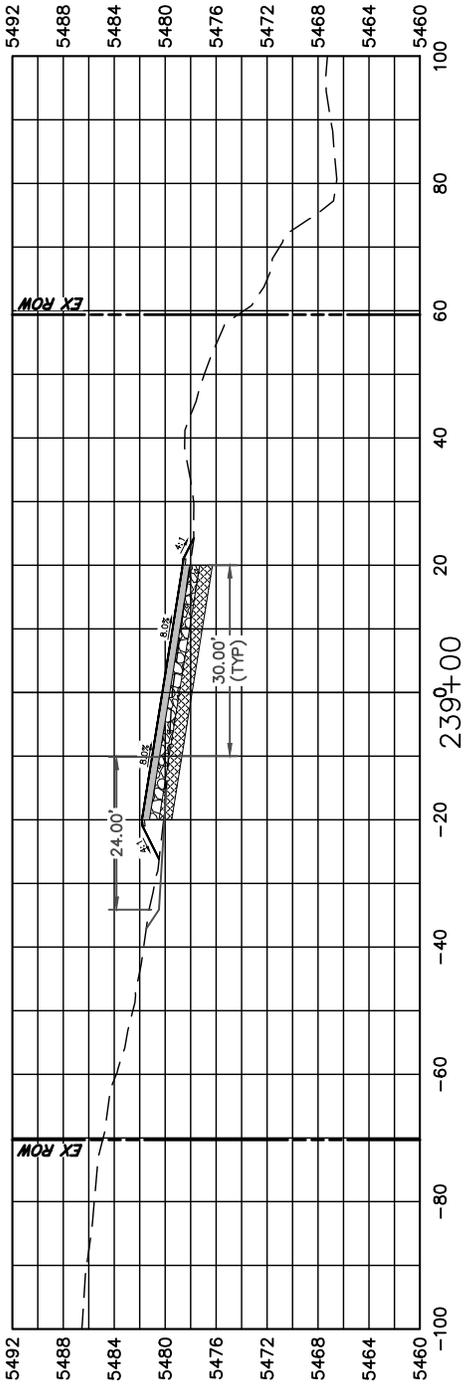
233+00



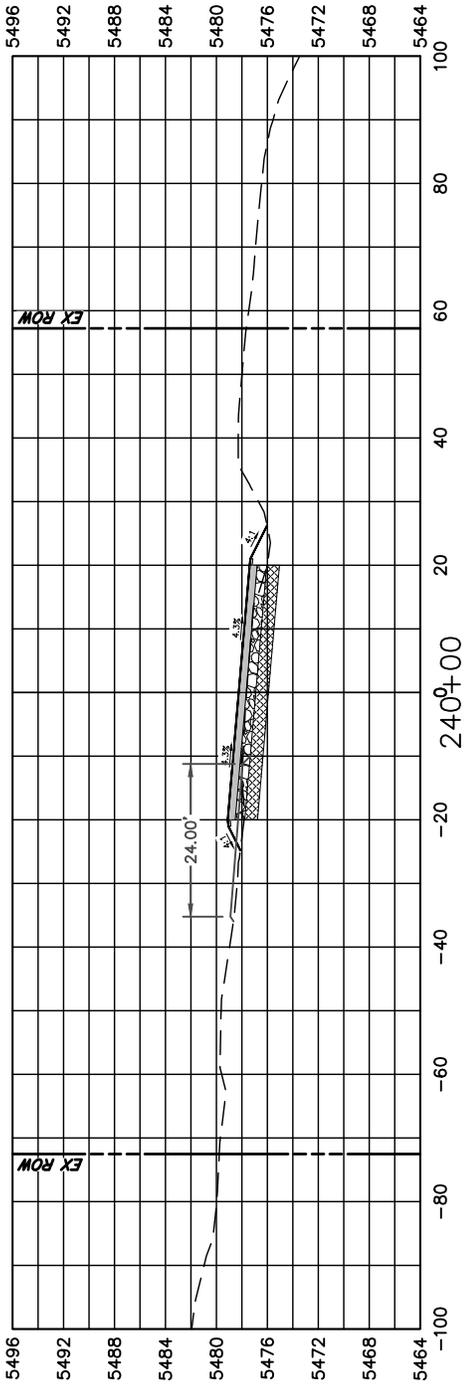
234+00



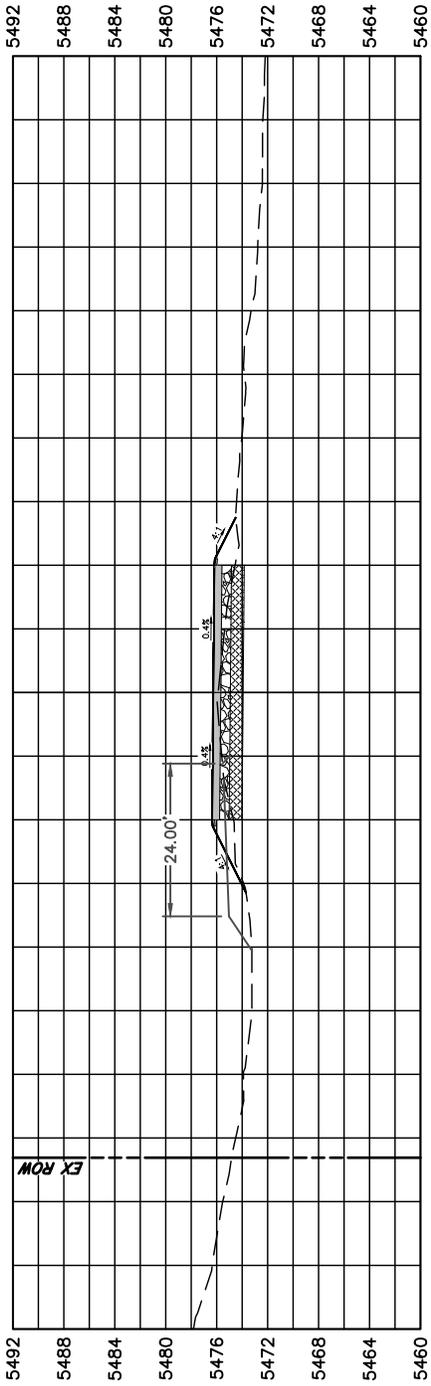
238+00



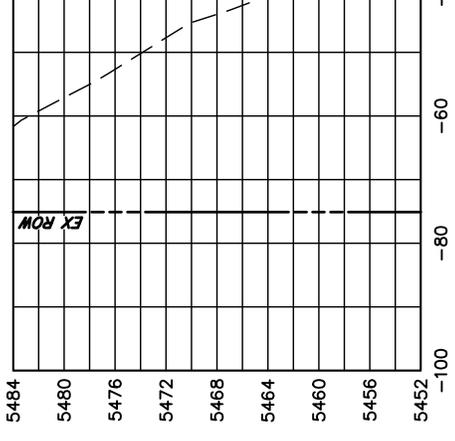
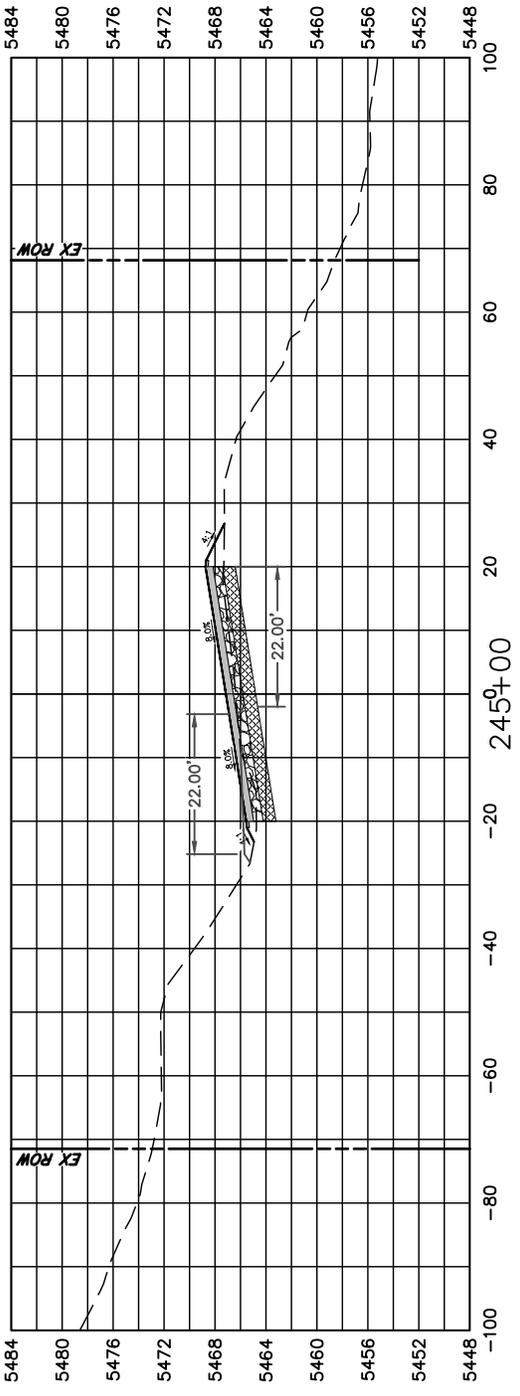
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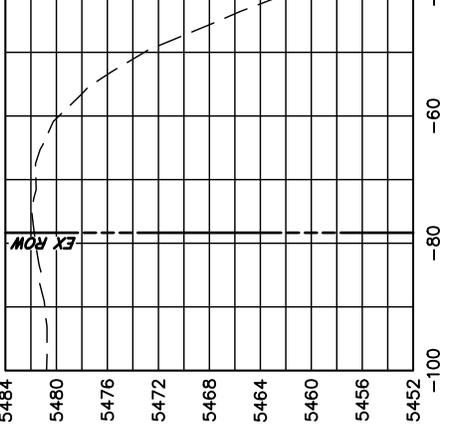
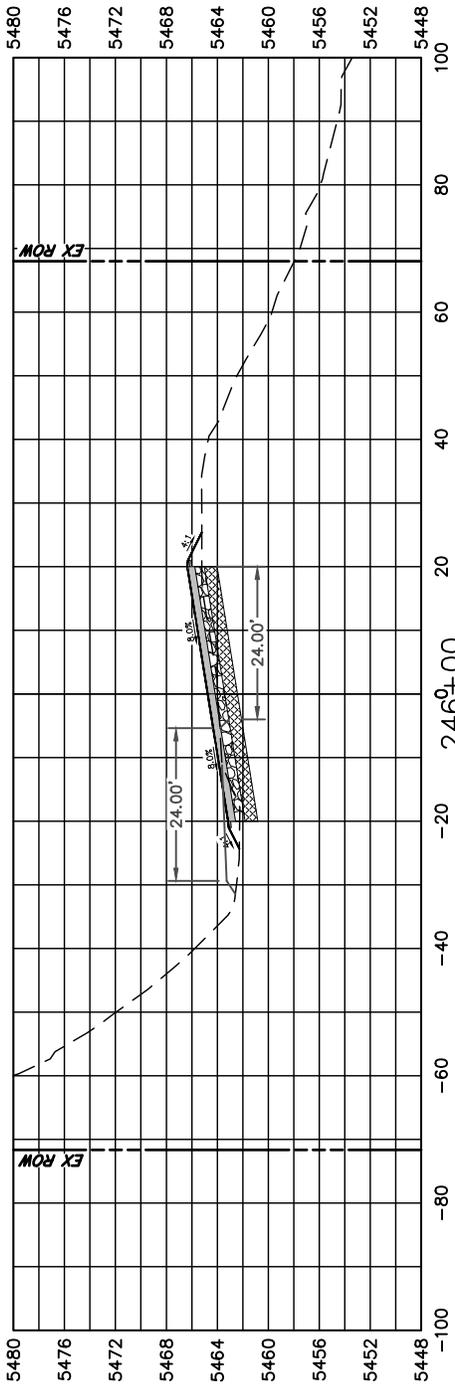
240+00



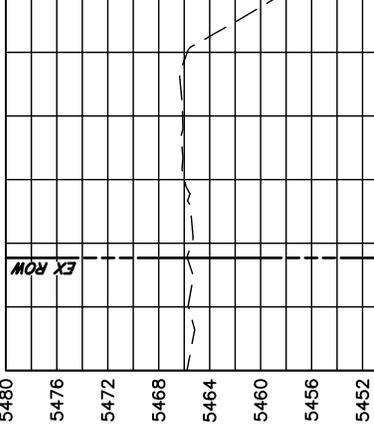
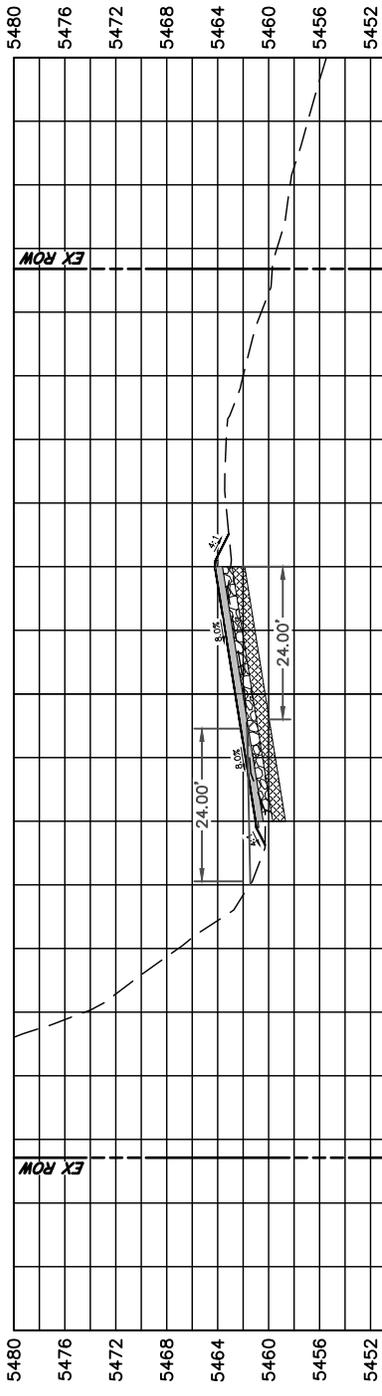
244+00



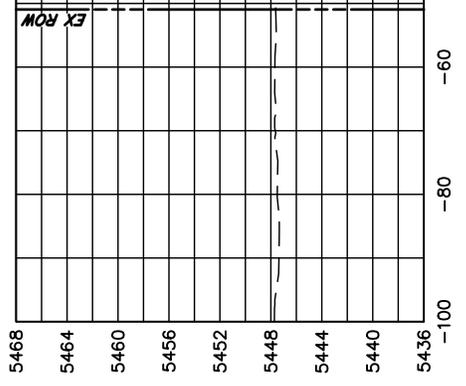
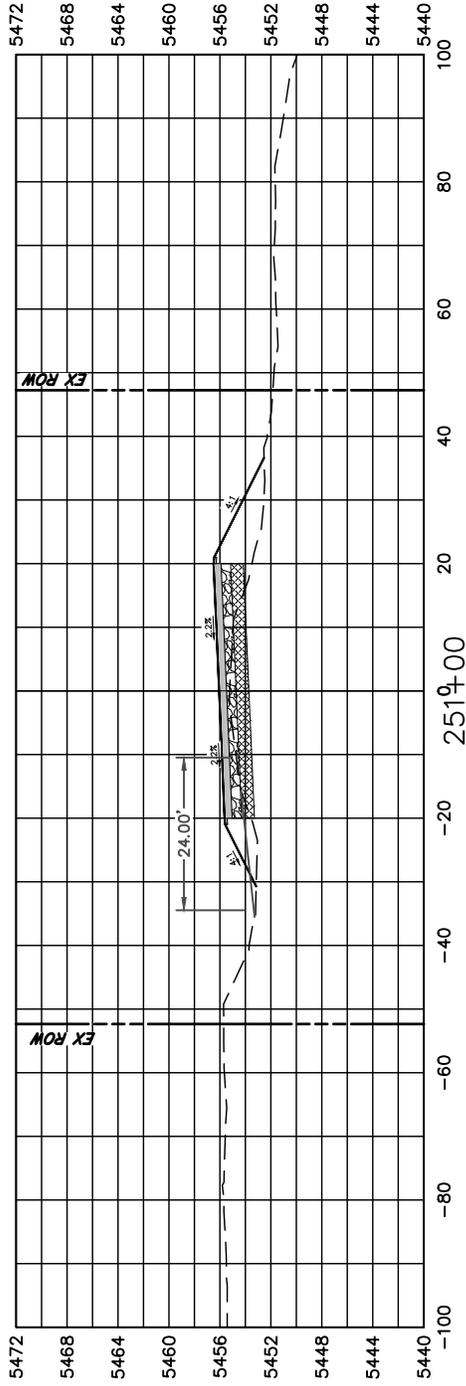
245+00



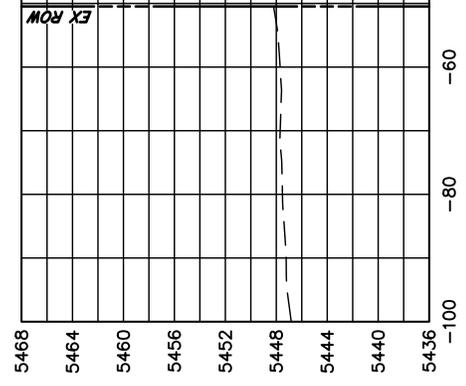
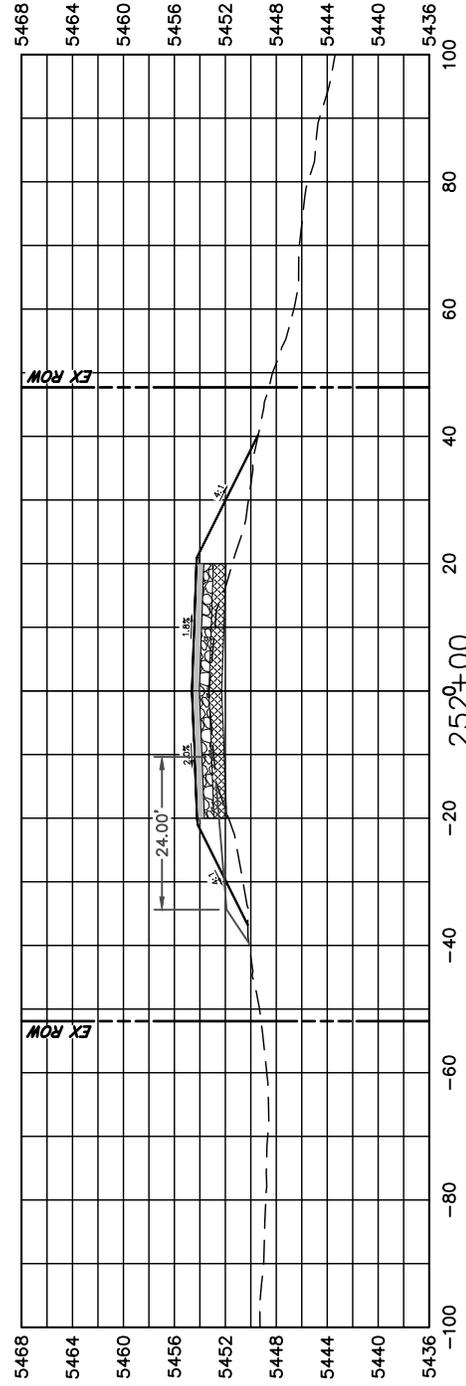
246+00



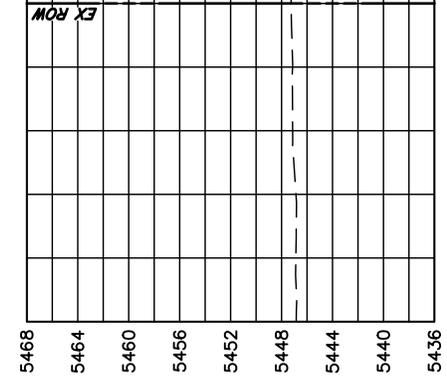
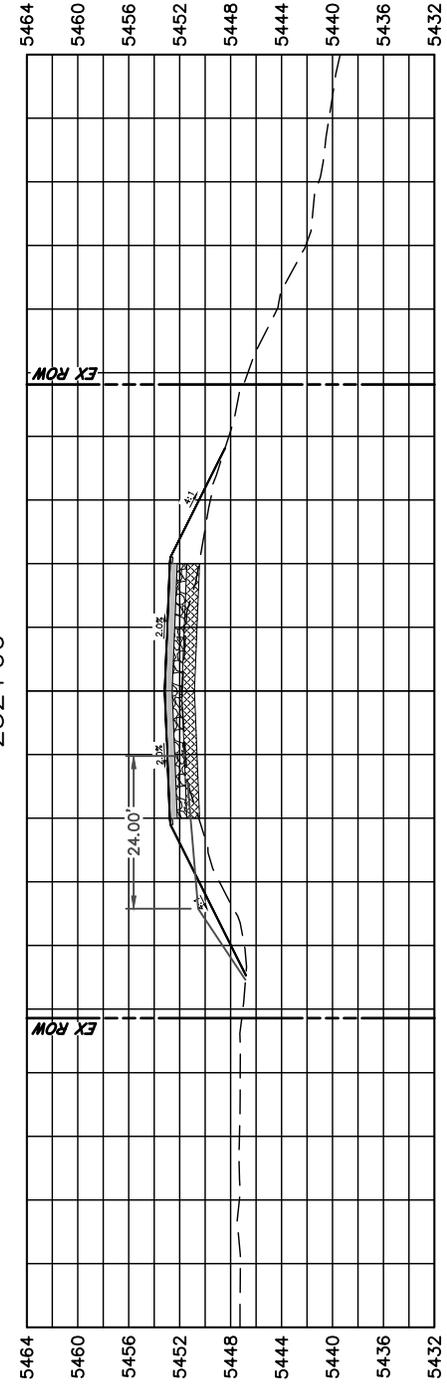
250+00



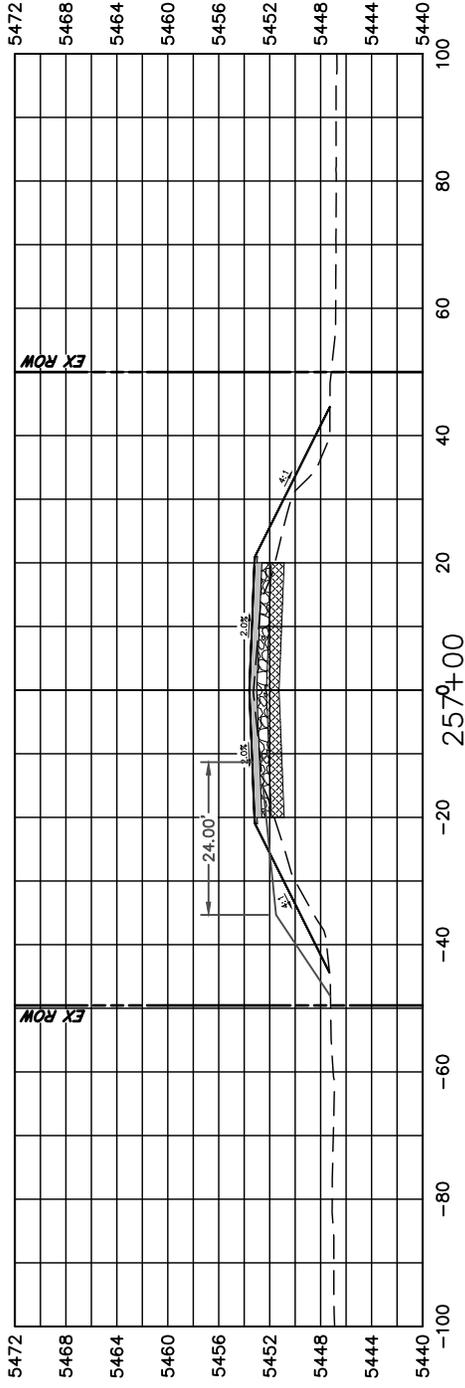
251+00



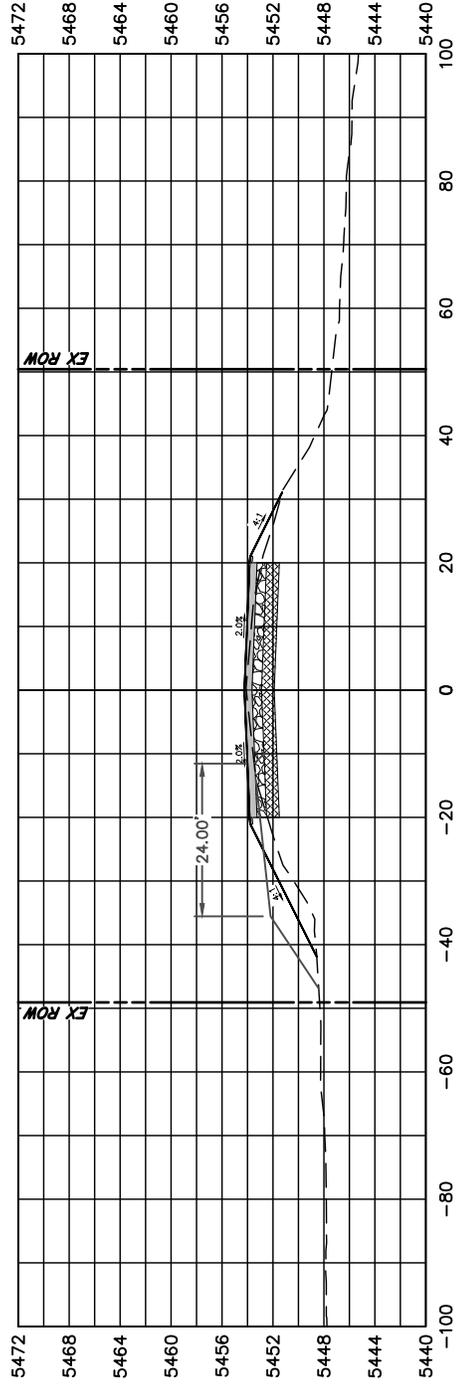
252+00

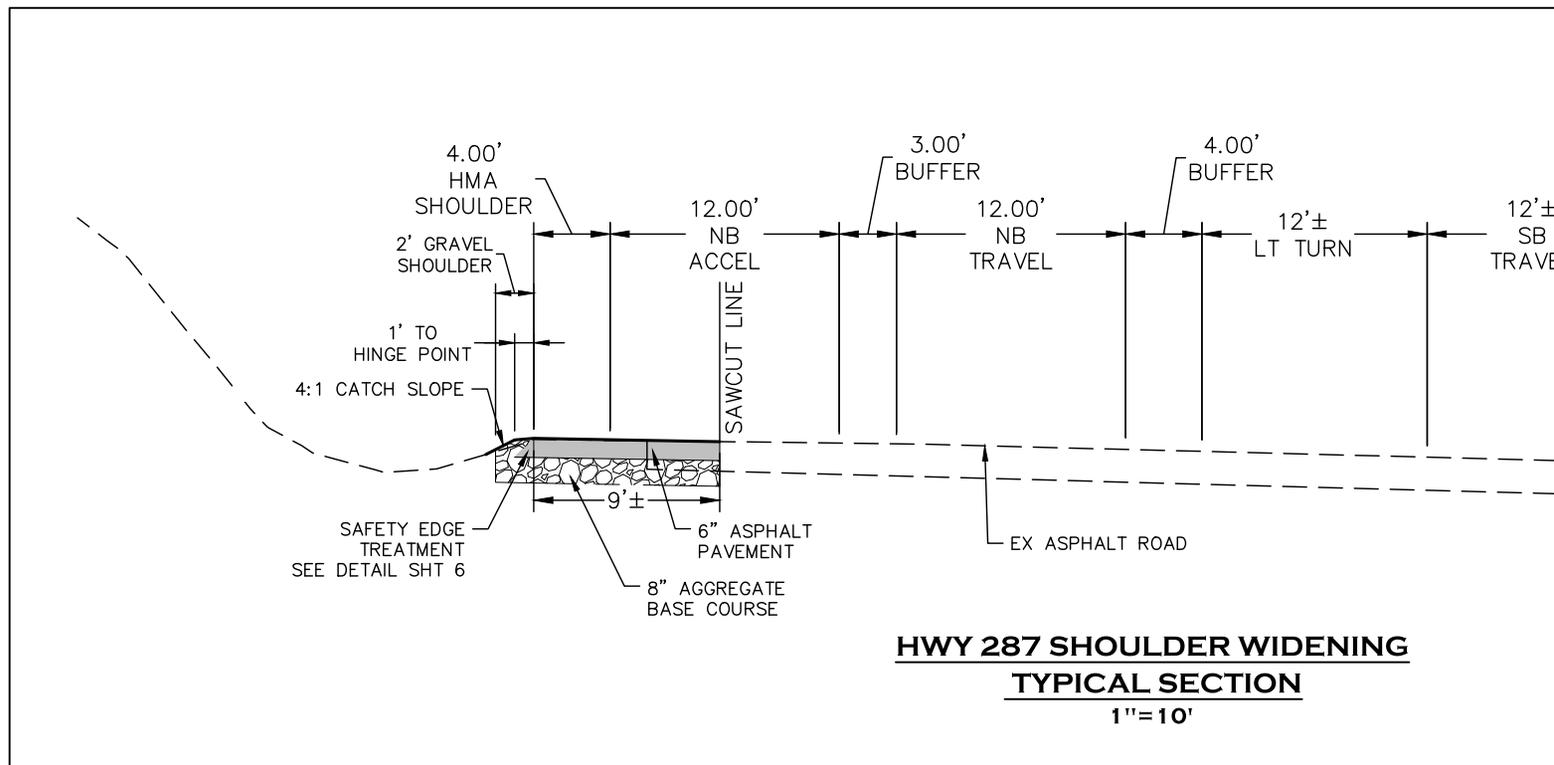


256+00



257+00





PAVEMENT SECTION:

FULL DEPTH ASPHALT SECTION

3" HOT MIX ASPHALT (GRADING SX)(ASPH)(75)(PG 64-22) RAP*

3" HOT MIX ASPHALT (GRADING S)(ASPH)(75)(PG 64-22) RAP*

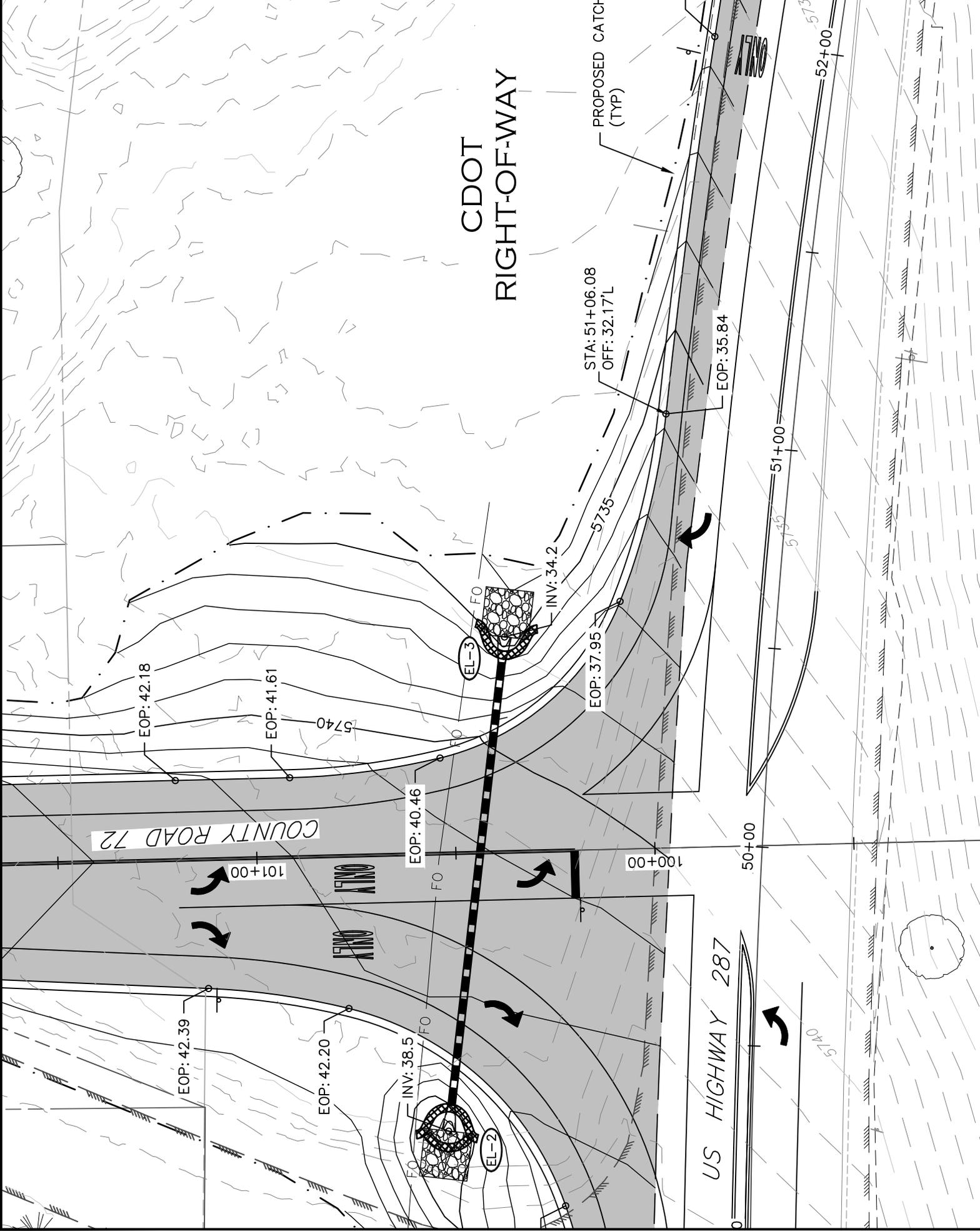
8" AGGREGATE BASE COURSE (CLASS 5)

*UP TO 20% RAP IN ALL LIFTS

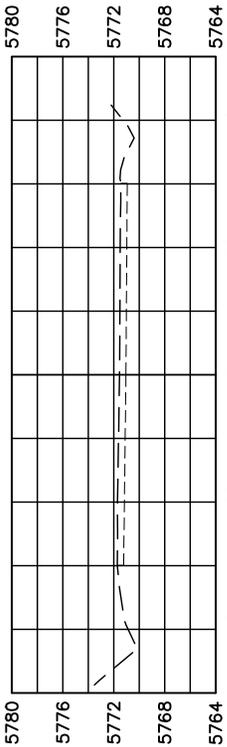
SHOULDER

AGGREGATE BASE COURSE (CLASS 5)

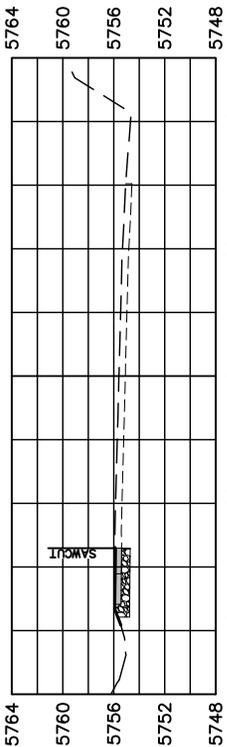
CDOT RIGHT-OF-WAY



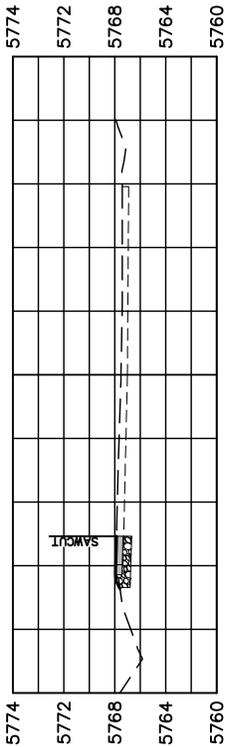
42+00



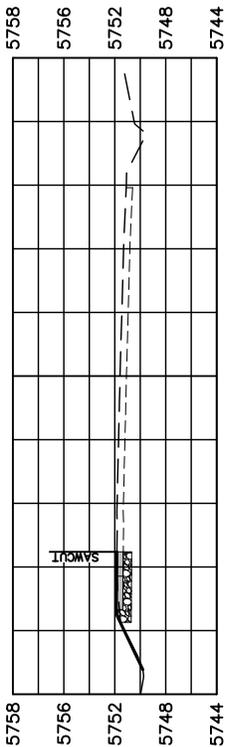
46+00



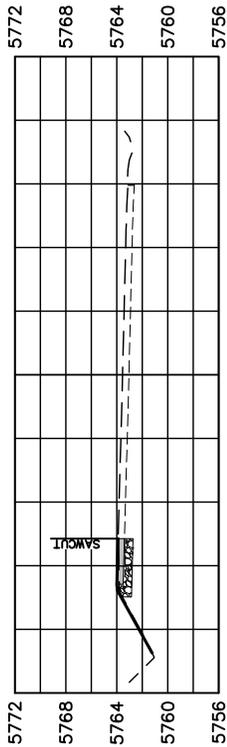
43+00



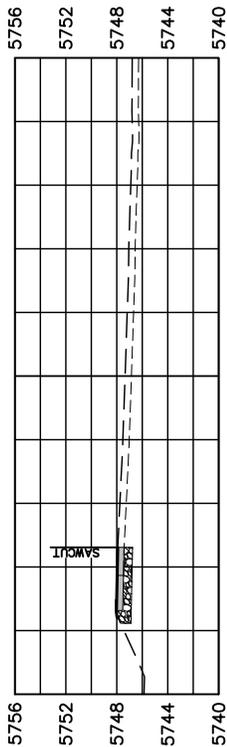
47+00



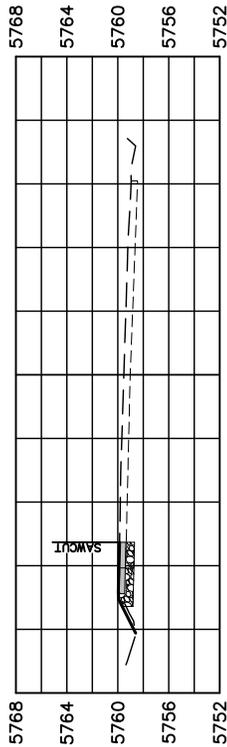
44+00



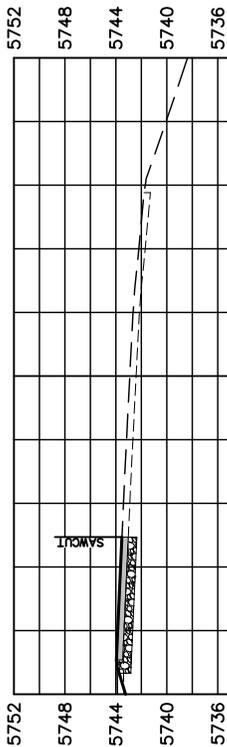
48+00

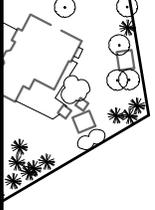


45+00

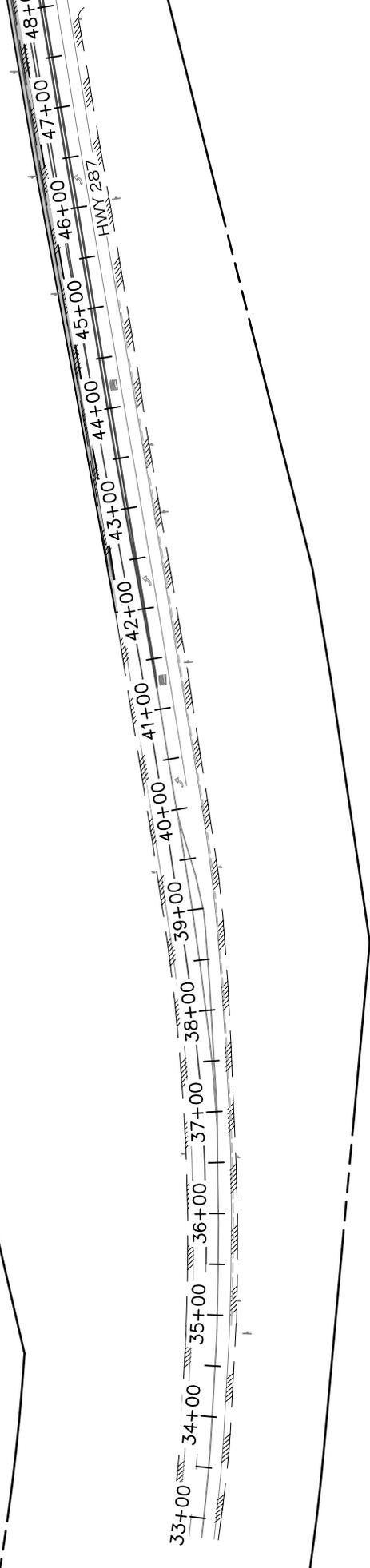


49+00



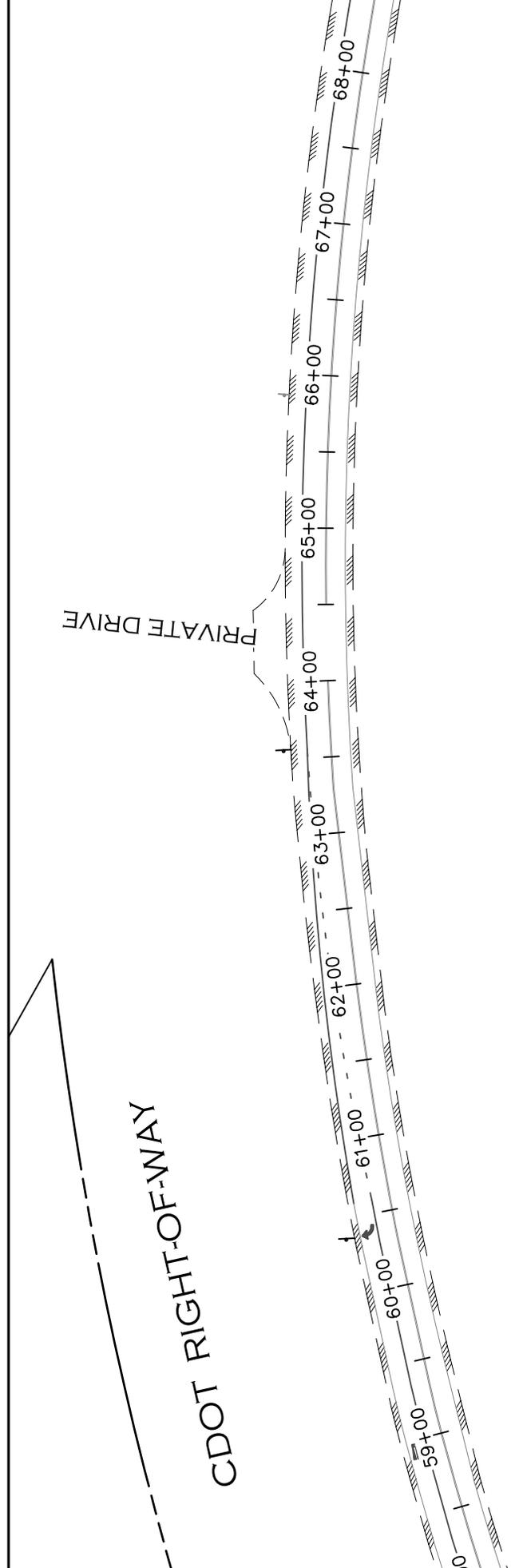


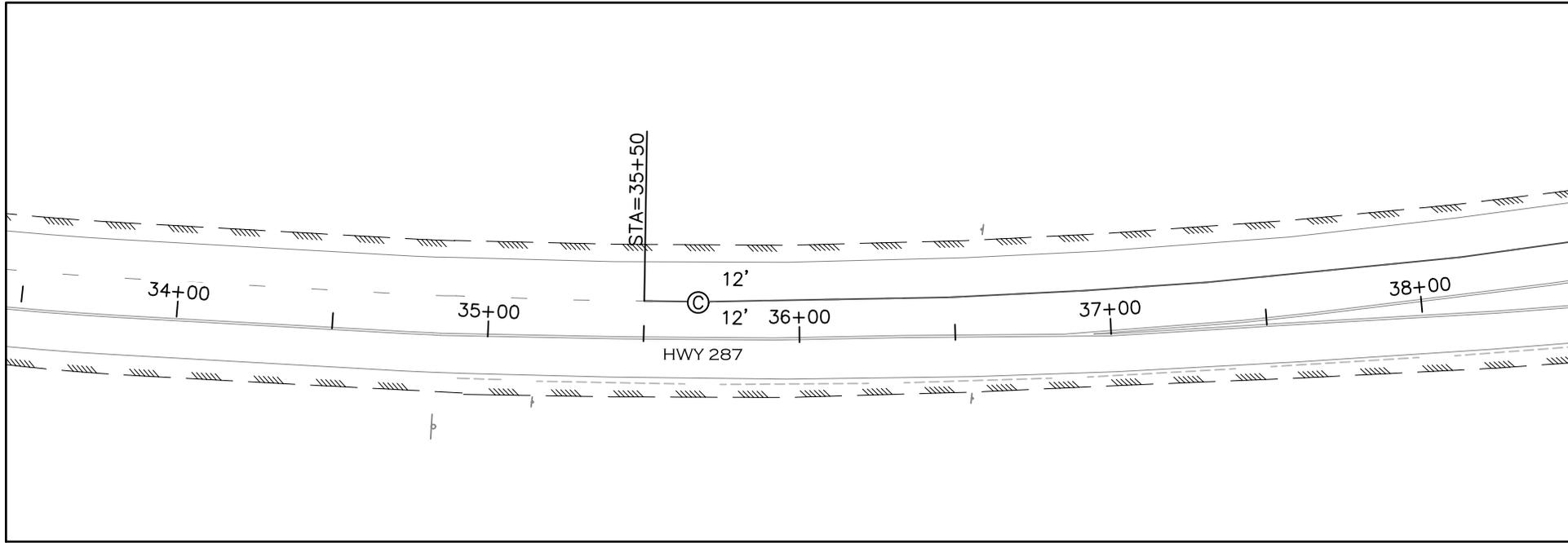
CDOT RIGHT-OF-WAY



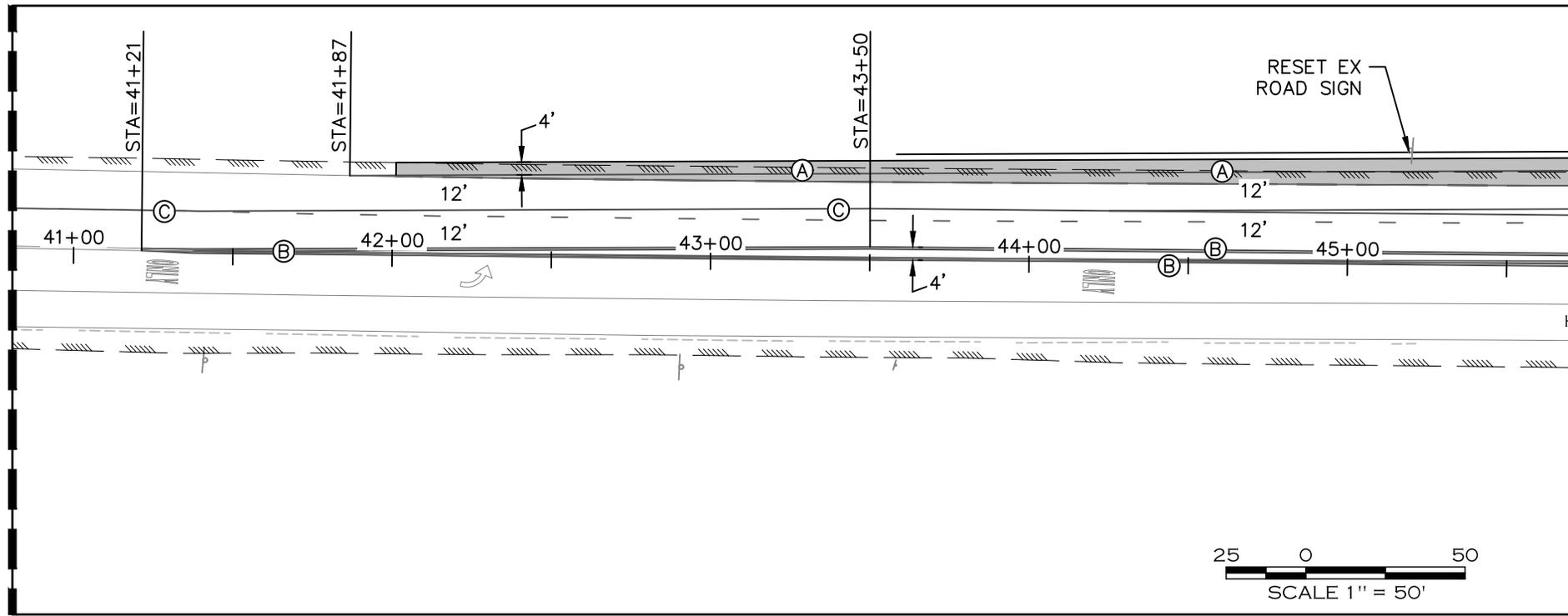
PRIVATE DRIVE

CDOT RIGHT-OF-WAY





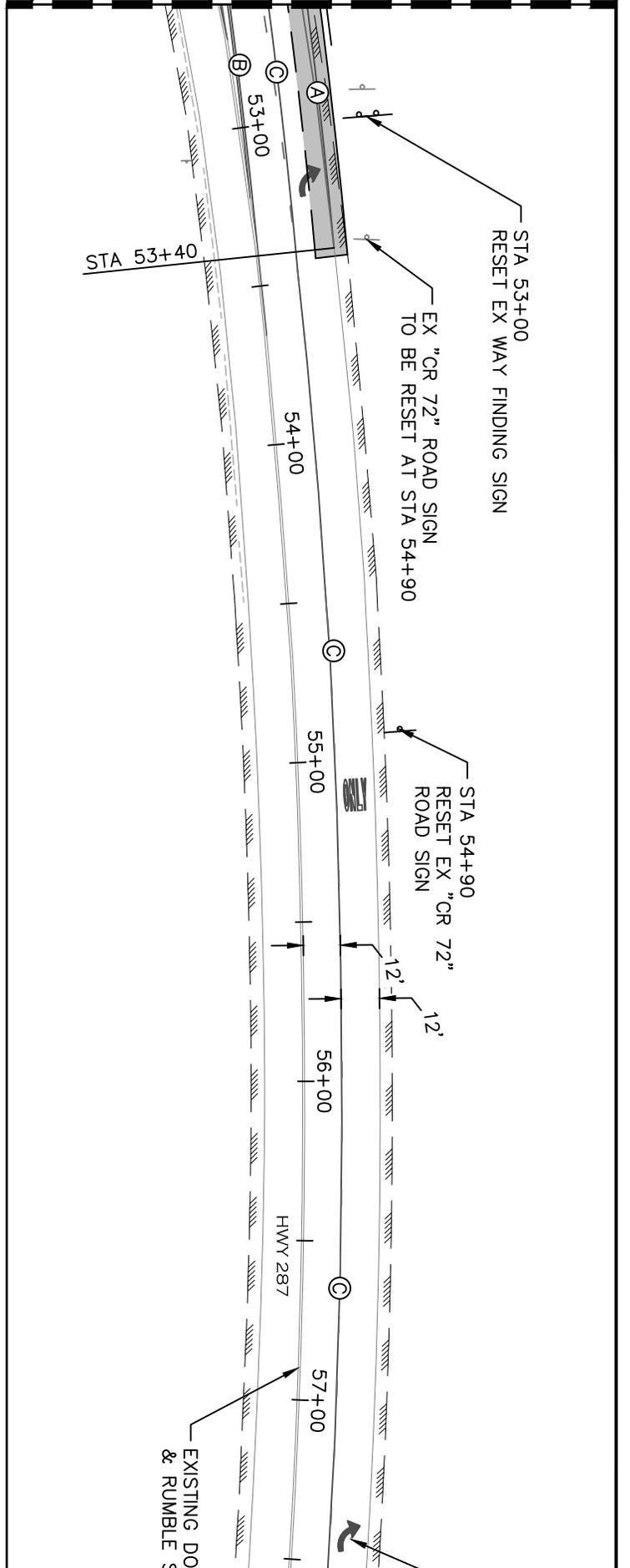
CONTINUATION LINE
STA 41+00



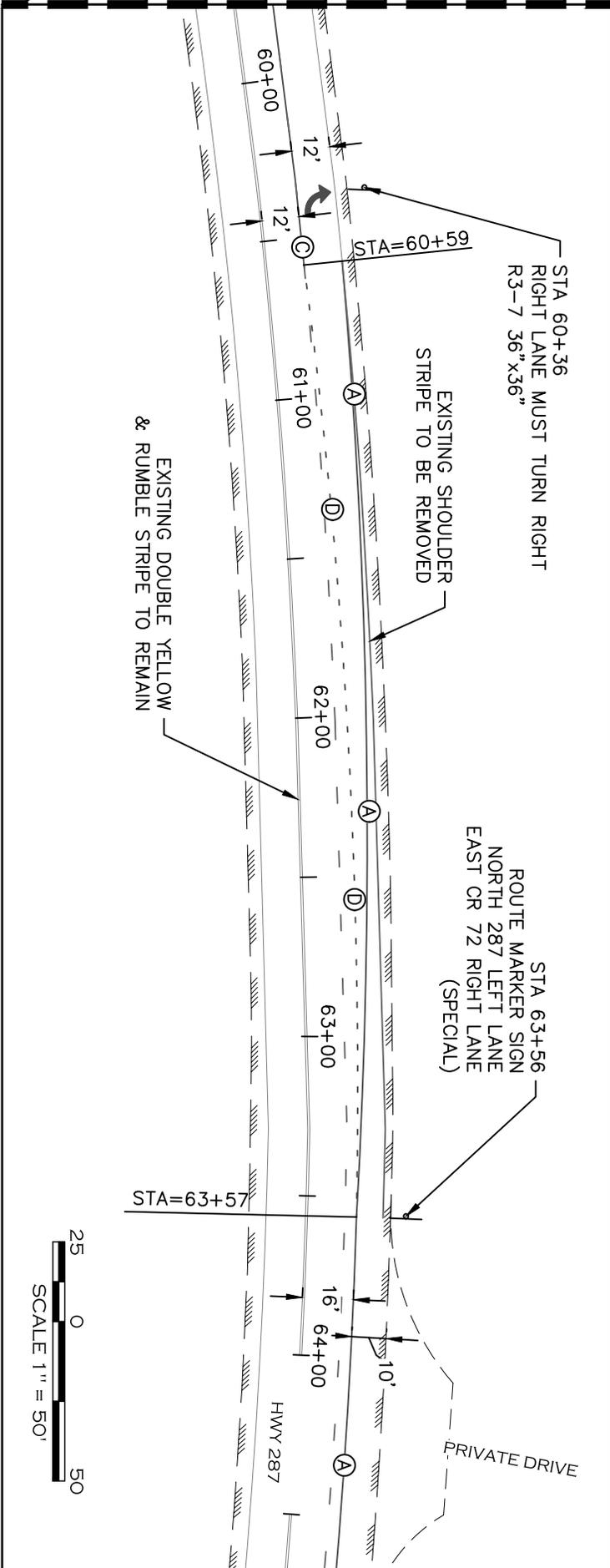
STRIPING LEGEND

NOTES:

CONTINUATION LINE
STA 52+50 SEE SHEET 137



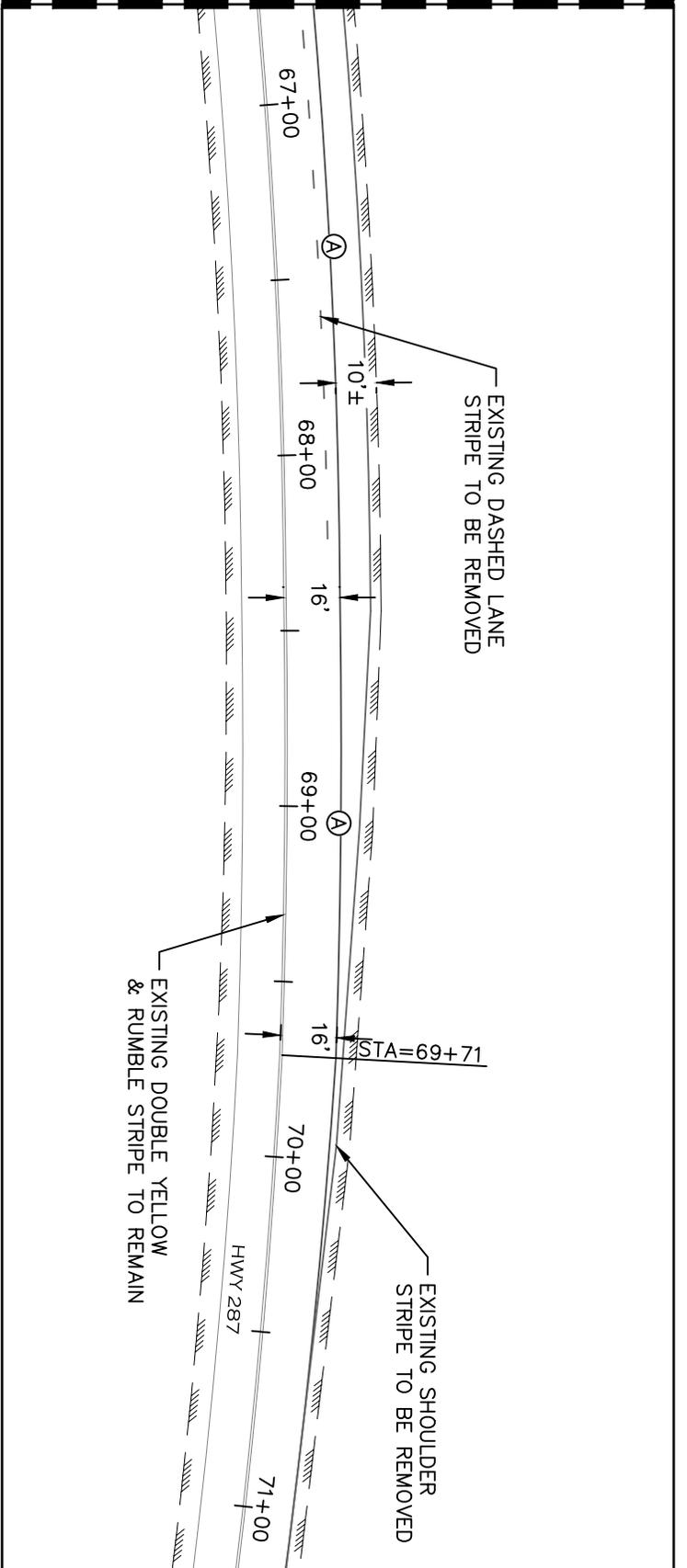
CONTINUATION LINE
STA 60+00



STRIPING LEGEND

NOTES:

CONTINUATION LINE
STA 67+0 SEE SHEET 138



STRIPING LEGEND

NOTES:

HERBERT SWARTZ

REGRADE AREA
TO DRAIN TO
NEW CBC

OWL CANYON TRAIL

RESET EX
CATTLE GRATE

15'Wx4'H
PRECAST CONC.
BOX CULVERT

TOP: 96.15
FG: 95.15
INV: 90.15

TOP: 92.0
FG: 91.50

TOP: 92.00
FG: 91.50

EOA: 99.42

EOA: 99.17

EOA: 98.15

EOA: 97.64

LP: 97.62

LP: 97.50

LP: 97.74

FG: 97.47

FG: 98.08

FG: 97.84

FG: 97.36

FG: 97.56

FG: 98.28

FG: 98.82

FG: 98.97

ME: 99.73

ME: 99.67

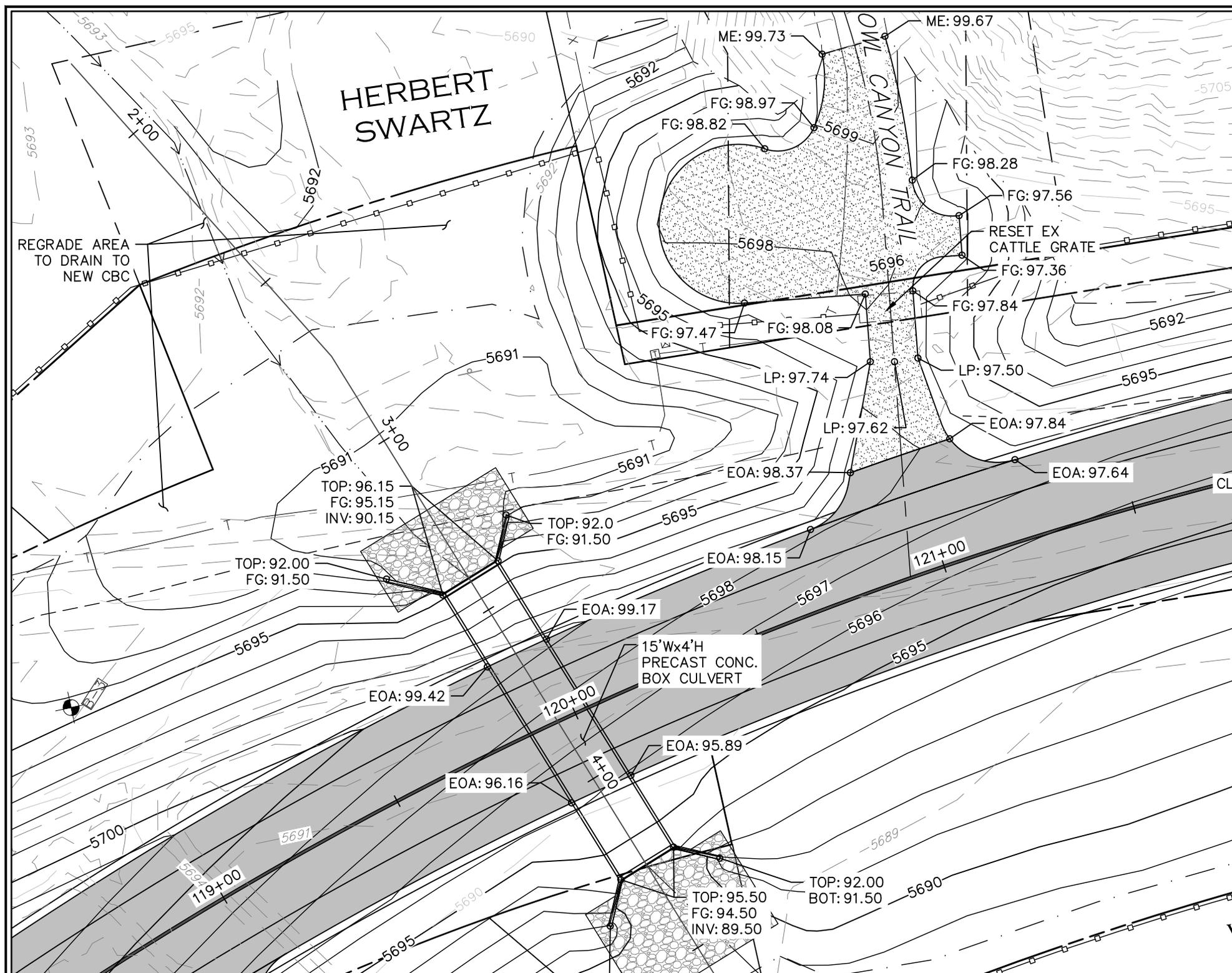
EOA: 98.37

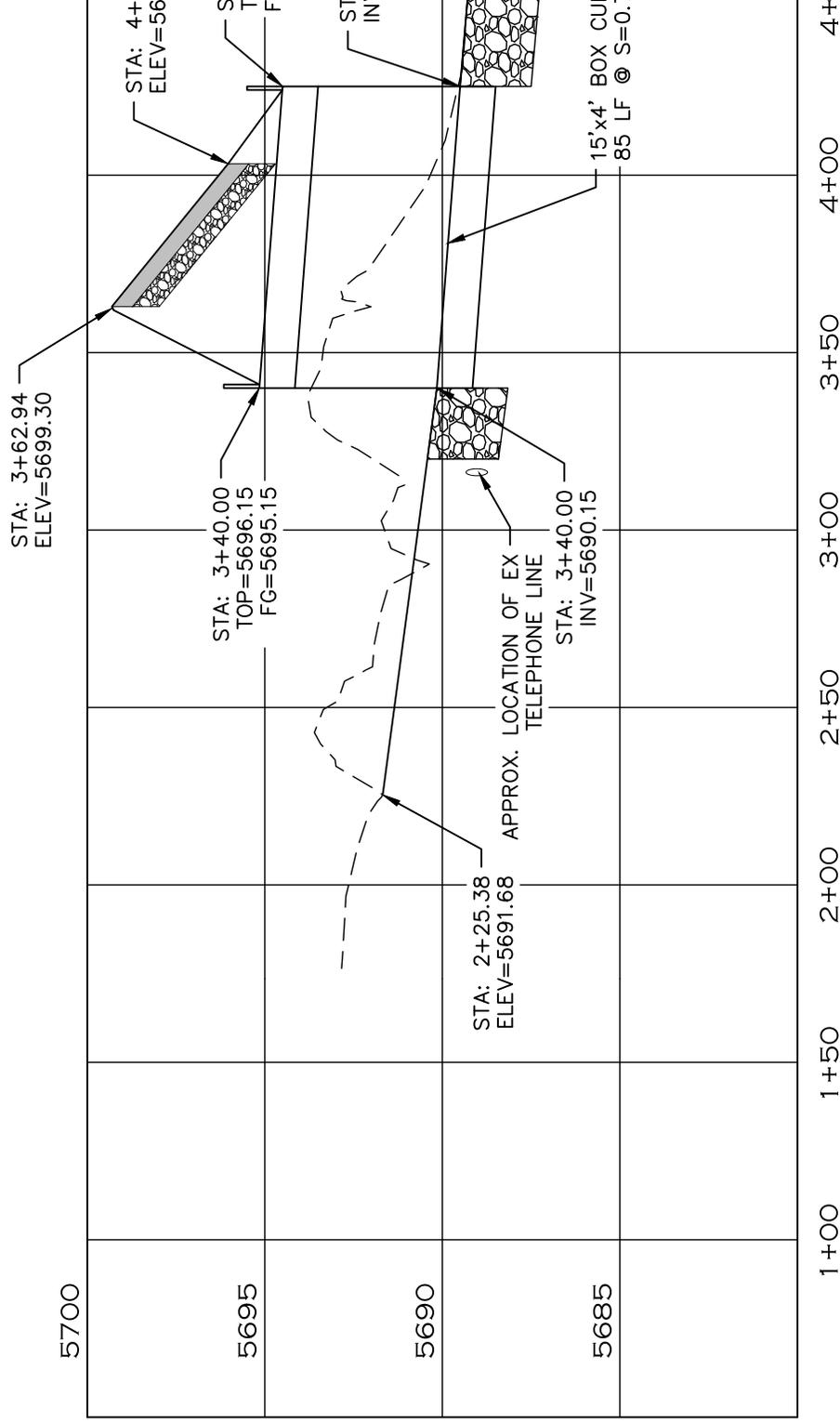
EOA: 96.16

EOA: 95.89

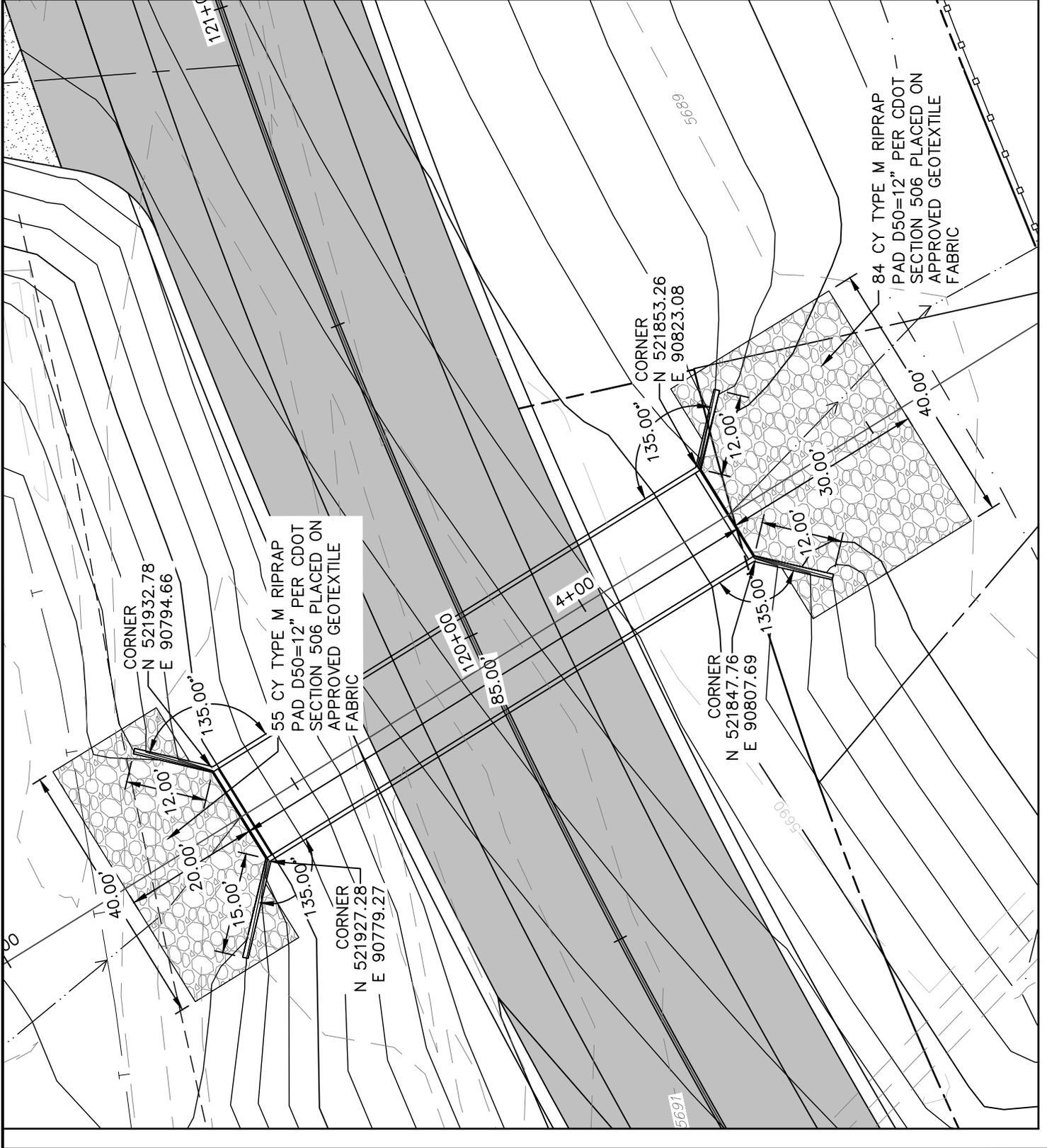
TOP: 92.00
BOT: 91.50

TOP: 95.50
FG: 94.50
INV: 89.50





BOXCULVERT PROFILE
 HORIZ. SCALE: 1"=50'
 VERT. SCALE: 1"=5'



NOTE:

1. DIMENSIONS OF THE DETERMINED BY THE
2. SUBGRADE PREPAR
- EXPLORATION - AD

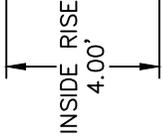
TOP

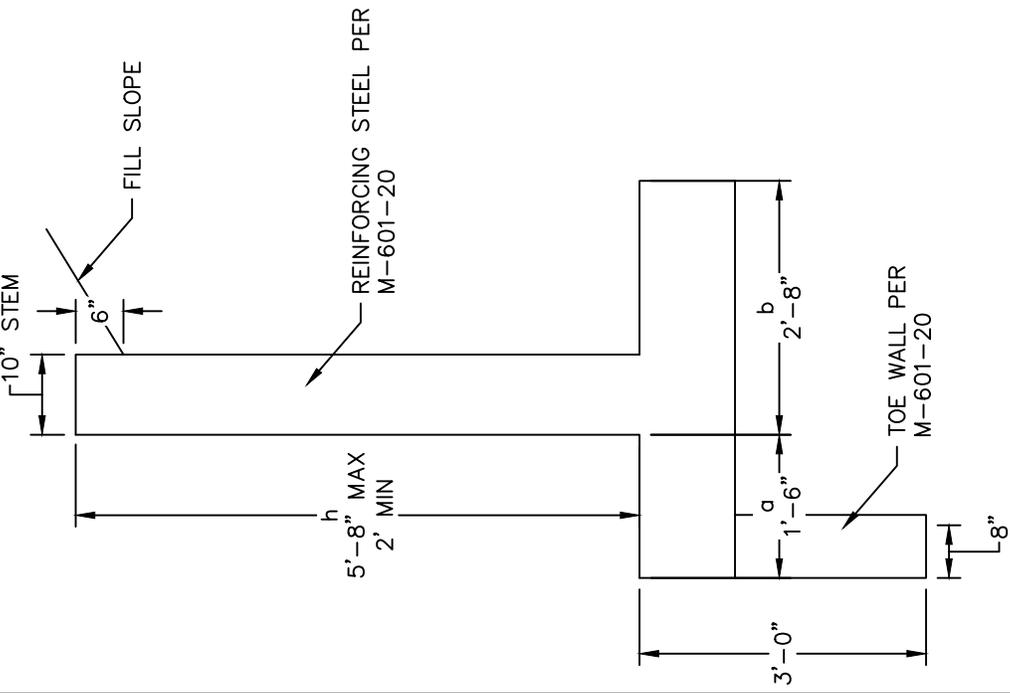
FG

REINFORCING STEEL PER
M-601-20

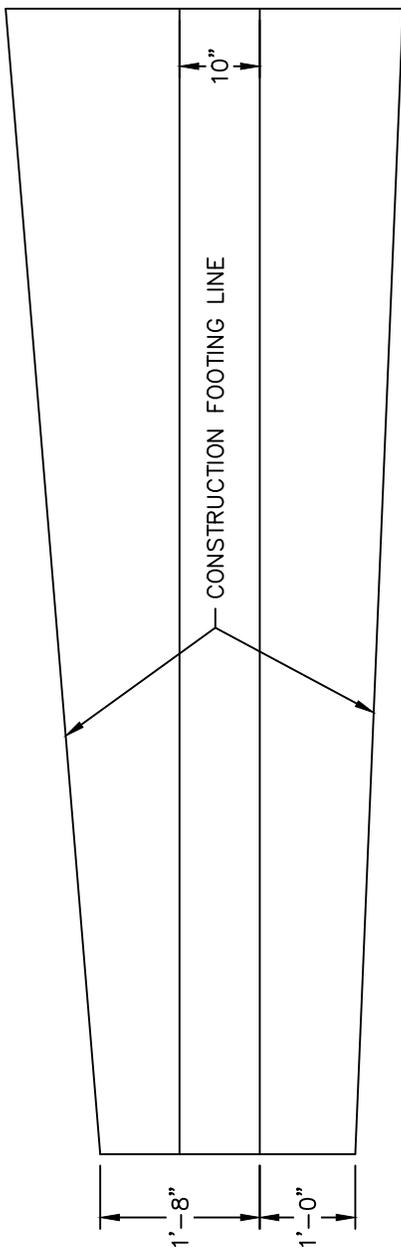
INV

3'-0"

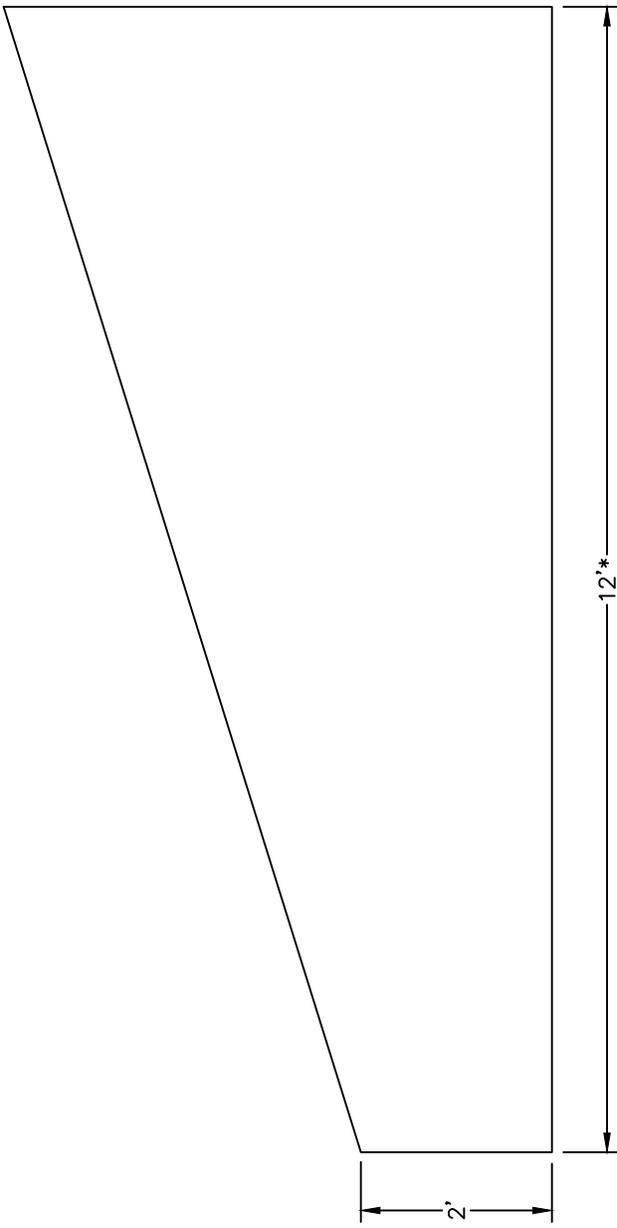




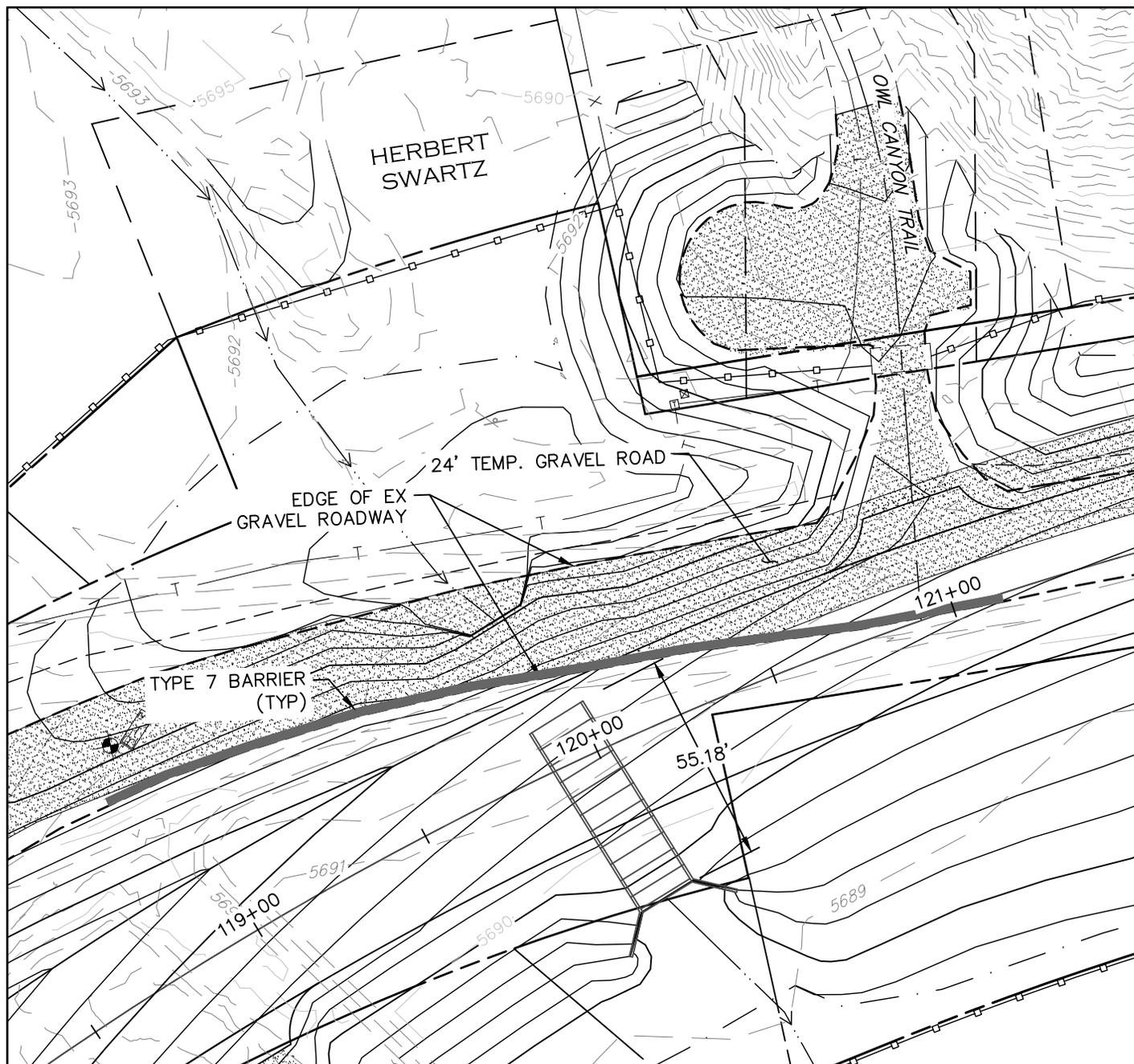
WINGWALL TYPICAL SECTION



WINGWALL PLAN

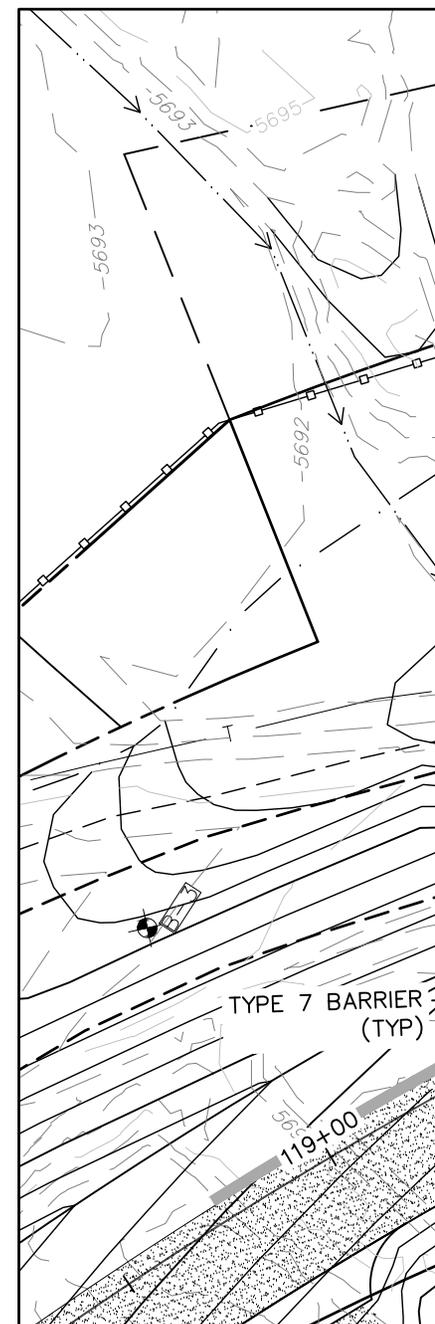


***NOTE:** WINGWALL IN NORTHWEST CORNER OF BOX IS 15' LONG.
WINGWALL ELEVATION



PHASE 1

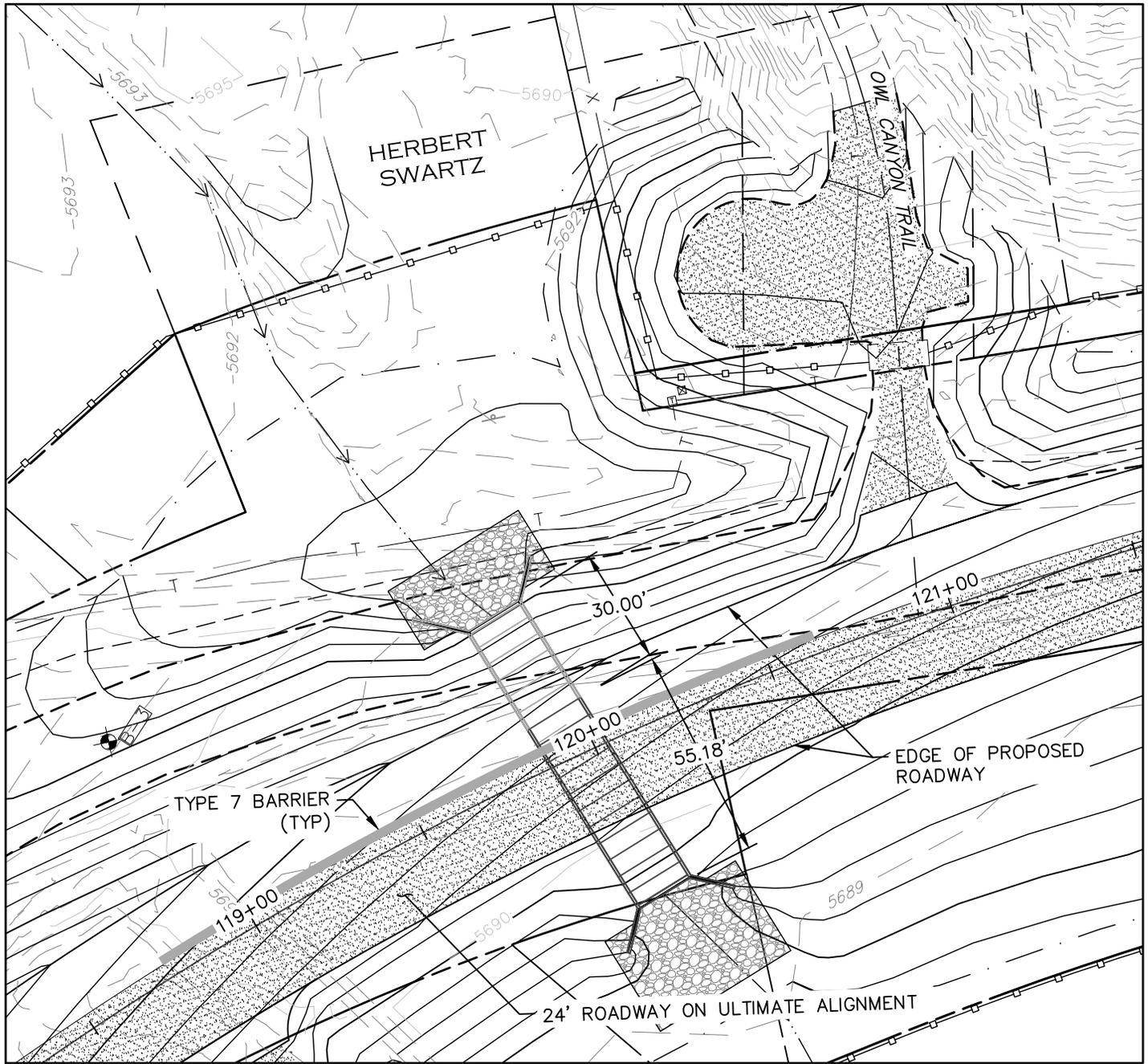
1. CONSTRUCT SOUTH PORTION OF THE BOX CULVERT AND WINGWALLS.
2. MAINTAIN 2 LANES OF TRAFFIC ON EXISTING GRAVEL ROAD. PROVIDE TYPE 7 BARRIERS AS



PHASE 2

1. BACKFILL OVER S
2. CONSTRUCT 24'





PHASE 3

1. CONSTRUCT NORTH PORTION OF THE BOX CULVERT AND WINGWALLS.
2. BACKFILL AROUND BOX CULVERT AND WINGWALLS TO FINAL GRADING.

