

STATE OF OKLAHOMA  
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED  
**COUNTY BRIDGE**  
FEDERAL PROJECT NO. STP-219D(056)CI  
BRIDGE AND APPROACH PLANS FOR  
**CREEK COUNTY**  
STATE JOB NO. 29407(04)  
BRIDGE "A" LOCATION 19N3650E0830002  
LATITUDE N35°48'42" LONGITUDE W96°30'43"  
EXISTING NBI NO. 01058; NEW NBI NO. 31864

DESCRIPTION	REVISIONS	DATE

THE FOLLOWING ODOT STANDARD DRAWINGS ARE REQUIRED

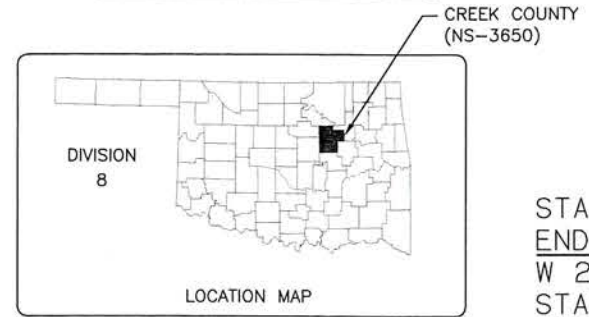
BRIDGE	ROADWAY	TRAFFIC	TRAFFIC MAINT.
CB26-I-SKO-ABUT-PC3-01E	SSS-1-1	DU1-1-00	GET-2-00
CB26-I-SKO-XSECT-PC234-01E	TSC2-3-2	DU2-1-00	GRH1-1-00
CB26-I-SKO-LSECT-PCB-01E	TSR-2-0	GMS1-1-00	GRH2-1-00
CB26-I-SKO-DKSLB-BLIST-PCB-01E	PSE-1-0	PM3-1-02	GRH3-1-00
CB26-I-SKO-PCB-III-65-01E	PUD-3-2	RSD1-1-00	
CB26-I-SKO-PCB-III-85-01E	RDI-3-1	SBS2-1-00	
CB26-I-SKO-DIA-ABUT-PC3-01E	CET4S-3-2	SSA1-1-00	
CB26-I-SKO-DIA-INTPR-PCB-01E	PCES-4-1	SSP1-1-02	
CB26-I-SKO-BRG-PC3-01E	GPI-4-0	TCS1-1-01	
CB26-I-SKO-SPR-QUAN-PCB-1-01E	SPI-4-1	TCS2-1-00	
CB26-I-SKO-SPR-QUAN-PCB-2-01E	SPB-1-4	TCS4-1-01	
CB26-I-SKO-AS-01E		TCS5-1-00	
CB26..32-I-SKO-WING-PC3-01E		TCS7-1-02	
CB26..32-I-SKO-ABUT-MISC-01E		TCS9-1-01	
CB26..32-C..I-SKO..30-PCB-DTL-1-01E		TCS14-1-00	
CB26..32-C..I-SKO..30-PCB-DTL-2-01E		TCS15-1-00	
CB26..32-C..I-SKO..30-GRAU-BC-00E			
HP1-2-01E			
TR3-2-01E			

**SURVEY CONTROL DATA**  
HORIZONTAL DATUM:  
OKLAHOMA NORTH ZONE (3501) NAD 83.  
BEARINGS ARE BASED ON STATE PLANE  
GRID, AND ARE NOT ASTRONOMIC.  
VERTICAL DATUM:  
NAVD 1988  
NO SCALE FACTOR

**DESIGN DATA**  
NS3650  
AADT 2016 = 100  
AADT 2036 = 181  
V = 35 MPH  
FLEX ESAL = 0.2 M

INDEX OF SHEETS

0001	TITLE SHEET
0002	TYPICAL SECTIONS
AB01	SUMMARY OF PAY QUANTITIES & NOTES (BRIDGE)
AR01	SUMMARY OF PAY QUANTITIES & NOTES (ROADWAY)
AX01	SUMMARY SHEET
B001	GENERAL PLAN & ELEVATION
B002	SUBSTRUCTURE STAKING DIAGRAM
B003-B004	DETAILS OF PIER
B005-B009	BORING LOGS
R001	STORMWATER MANAGEMENT PLAN
R002	SECTION 404 PERMIT COMPLIANCE
R003-R005	ALIGNMENT DATA
R006-R009	EROSION CONTROL
R0010-R017	PLAN AND PROFILE SHEETS
R018-R019	RETAINING WALL DETAILS
X001-X026	CROSS SECTIONS



SCALES  
1" = 20'  
1" = 20'  
1" = 5'  
1" = 5,280'

- CONVENTIONAL SYMBOLS
- PROPOSED ROAD
  - RAILROADS
  - RANGE & TOWNSHIP SECTION LINES
  - QUARTER SECTION LINES
  - FENCES
  - GROUND LINE
  - EXISTING ROADS
  - BASE LINE
  - GRADE LINES
  - TELEPHONE & TELEGRAPH
  - POWER LINES
  - BUILDINGS
  - OILWELL
  - DRAINAGE STRUCTURES - IN PLACE
  - DRAINAGE STRUCTURES - NEW
  - RIGHT-OF-WAY LINES - EXISTING
  - RIGHT-OF-WAY LINES - NEW
  - CONTROLLED ACCESS
  - MAILBOX
  - EXISTING CENTERLINE
  - EXISTING SANITARY SEWERS
  - EXISTING GAS LINES
  - EXISTING WATER LINES
  - EXISTING TELEPHONE CABLES UNDERGROUND

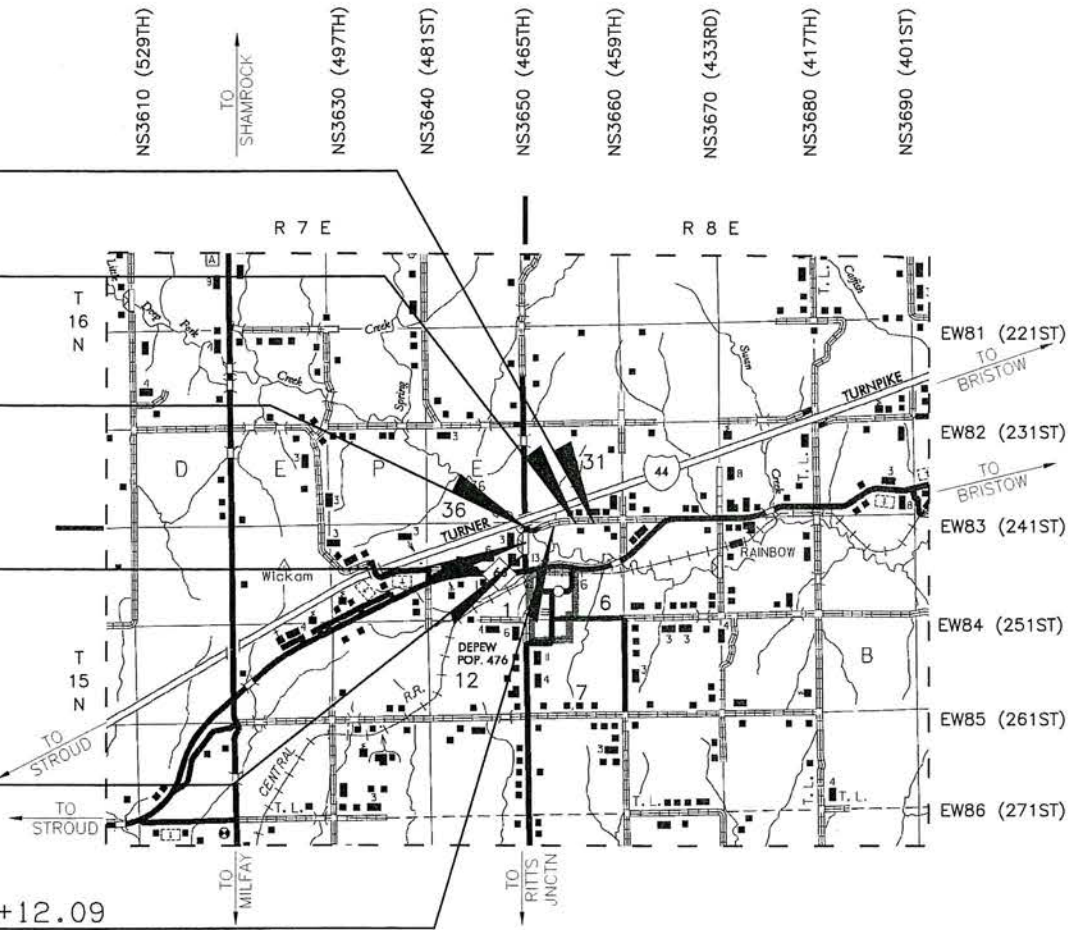
STA. 104+48.43  
END INCIDENTAL CONSTR.  
W 241ST ST S  
STATE JOB NO. 29407(04)

STA. 103+50.00  
END CONSTR. W 241ST ST S  
STATE JOB NO. 29407(04)

STA. 67+50.00  
END PROJECT S 465TH W AVE  
STATE JOB NO. 29407(04)

BRIDGE "A"  
BEGIN STA. 61+48.59  
END STA. 63+00.09  
LENGTH = 151'-6"

STA. 39+67.69  
BEGIN PROJECT S 465TH W AVE  
STATE JOB NO. 29407(04)



STA. 100+12.09  
BEGIN CONSTR. W 241ST ST S  
STATE JOB NO. 29407(04)

ROADWAY LENGTH (S 465TH W AVE)	2630.81 FT.	0.498 MI.
ROADWAY LENGTH (W 241ST ST S)	337.91 FT.	0.063 MI.
BRIDGE LENGTH	151.50 FT.	0.028 MI.
PROJECT LENGTH		0.589 MI.

EQUATIONS : NONE  
EXCEPTIONS : NONE

APPROVED  
THIS 31 DAY OF July 2017  
BOARD OF COUNTY COMMISSIONERS  
CREEK COUNTY, OKLAHOMA

CHAIRMAN  
MEMBER  
MEMBER  
ATTEST: COUNTY CLERK



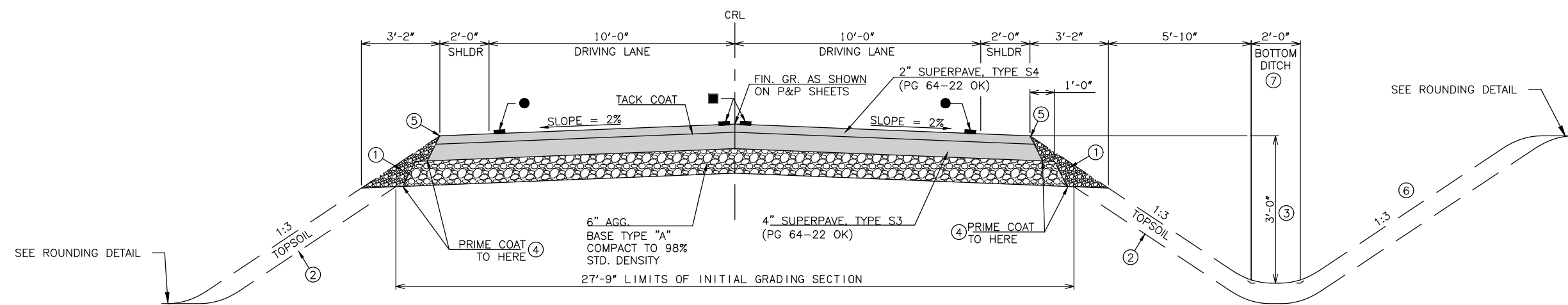
SUBMITTED BY  
**GUY ENGINEERING**  
Certificate of Authorization No. 1427  
Renewal Date: June 30, 2018  
7-31-17  
JOHN R. WORMAN, P.E. NO. 15497  
(THIS SEAL COVERS ALL SHEETS EXCEPT B003-B004)

OKLAHOMA DEPARTMENT OF TRANSPORTATION	DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION
DATE APPROVED	DATE APPROVED
BY	BY
CHIEF ENGINEER	DIVISION ADMINISTRATOR
PROJECT NO. STP-219D(056)CI	SHEET NO. 0001

2009 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION - ENGLISH  
GOVERN, APPROVED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY  
ADMINISTRATION, JANUARY 4, 2010.

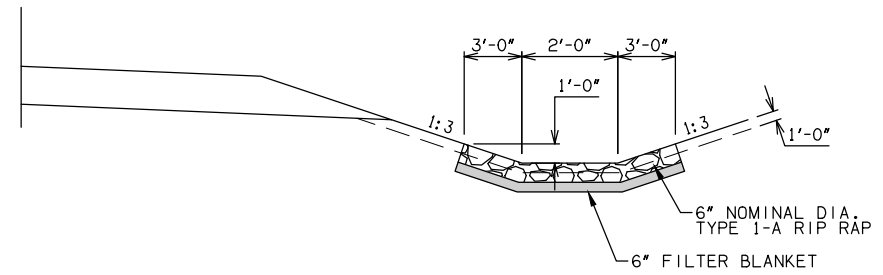
SHANNON SHEFFERT / JAMES PRUETT P.E. NO. 29417(01) LOCAL GOVERNMENT DIVISION COMMISSIONER LANE WHITEHOUSE DISTRICT 3, CREEK COUNTY

DESCRIPTION	REVISIONS	DATE

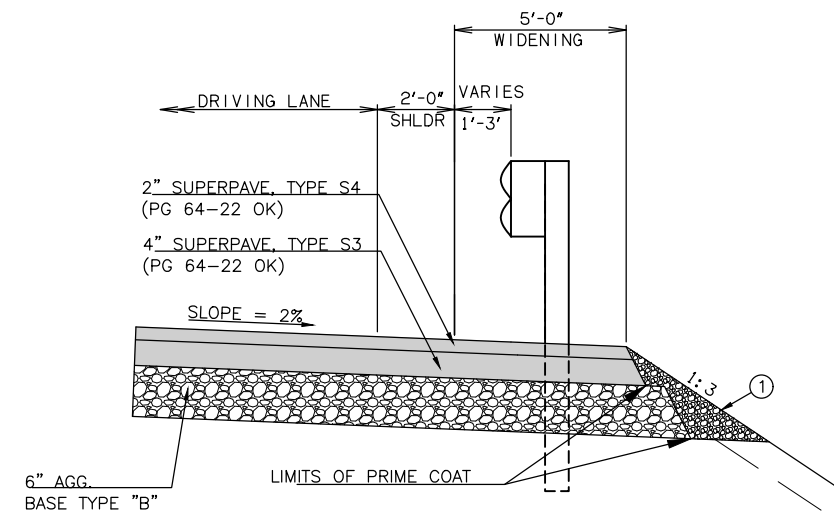


**TYPICAL SECTION #1** ⑧  
 STA. 39+67.69 TO STA. 61+28.59  
 STA. 63+20.09 TO STA. 67+50.00  
 STA. 100+12.09 TO STA. 103+50.00  
*Not to Scale*

- ⑨ ● 4" WIDE WHITE EDGE LINE
- 4" WIDE YELLOW LANE LINE



**TYPICAL RIP RAP LINED DITCH**  
*Not To Scale*



**DETAIL OF SHOULDER WIDENING** ⑧  
**FOR STANDARD GUARDRAIL**  
 STA. 60+13.77 TO STA. 61+28.59 RT.  
 STA. 60+51.25 TO STA. 61+28.59 LT.  
 STA. 63+20.09 TO STA. 63+97.43 RT.  
 STA. 63+20.09 TO STA. 64+33.55 LT.  
*Not To Scale*

⑧ **BACKFILL NOTE:**  
 THIS AREA TO BE BACKFILLED AND COMPACTED AS PART OF THE FINISHING OPERATIONS. COST TO BE INCLUDED IN TBSC TYPE E. PAYMENT WILL BE PAID AT A RATE NOT TO EXCEED 0.13 TONS PER LINEAR FOOT OF ROADWAY TYPICAL.

⑧ **TOPSOIL NOTE:**  
 THE CONTRACTOR SHALL STRIP ALL OF THE AVAILABLE TOPSOIL, STOCKPILE IT, AND PLACE IT BACK ON THE SECTION IN ACCORDANCE WITH SECTION 205 OF THE STANDARDS SPECIFICATION. RESERVED TOPSOIL SHALL BE SPREAD FIRST ON THE COMPLETED SLOPES OF THE CUT SECTIONS AND THE REMAINDER ON COMPLETED FILL SLOPES OR OTHER PRIORITY AREAS LOCATED BY THE ENGINEER. ALL ADDITIONAL COSTS ASSOCIATED WITH OPERATION SHALL BE INCLUDED IN THE PAY ITEM FOR SALVAGED TOPSOIL, LUMP SUM.

⑧ THE GRADING LINE AS SHOWN ON THE TYPICAL IS TO THE TOP OF THE TOPSOIL. EARTHWORK QUANTITIES WERE NOT ADJUSTED FOR SALVAGE AND THE TOPSOIL QUANTITY IS INCLUDED IN THE EARTHWORK BALANCE.

⑧ **DISTANCE MEASURED VERTICALLY FROM EDGE OF FINISHED GRADE SHOULDER.**

⑧ **PRIME COAT TO BE APPLIED TO THE SUBGRADE FOR FULL WIDTH OF STABILIZED SUBGRADE. 0.35 GAL/SY BELOW AGGREGATE BASE AND 0.25 GAL/SY ABOVE AGGREGATE BASE.**

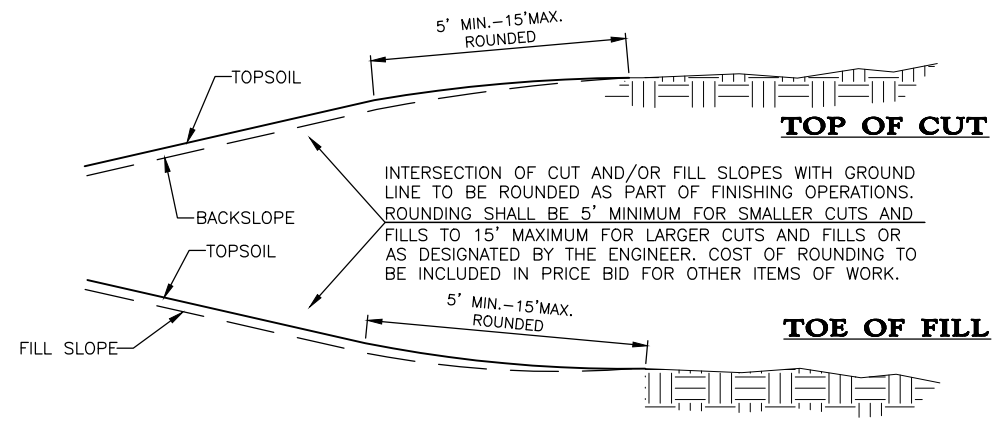
⑧ **CONSTRUCT ASPHALT SAFETY EDGE AS SHOWN IN SPECIAL PROVISION 411-14.**

⑧ **BACKSLOPES ARE 1:2 FROM 100+40.00 TO 103+00.00**

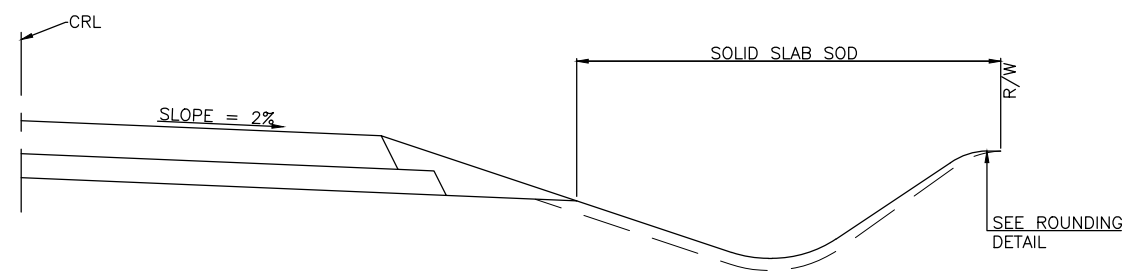
⑧ **4' DITCH BOTTOM FROM STA. 51+50 TO STA. 61+28.59 LT.**

⑧ **EXCEPTIONS:**  
 STA. 59+63.77 TO STA. 60+13.77 TRANSITION FROM TYP. TO GUARDRAIL WIDENING RT.  
 STA. 60+01.25 TO STA. 60+51.25 TRANSITION FROM TYP. TO GUARDRAIL WIDENING LT.  
 STA. 63+97.43 TO STA. 64+47.41 TRANSITION FROM GUARDRAIL WIDENING TO TYP. RT.  
 STA. 64+33.55 TO STA. 64+83.64 TRANSITION FROM GUARDRAIL WIDENING TO TYP. LT.  
 STA. 102+50.00 TO STA. 103+50.00 TRANSITION FROM TYP. TO EX. PAVT.

⑧ **TRAFFIC STRIPING SHALL BE AS FOLLOWS:**  
 ● 4" WHITE TRAFFIC STRIPE SHALL BE CONTINUOUS ON THE OUTSIDE OF THE DRIVING LANES.  
 ■ 4" DOUBLE YELLOW STRIPE ON THE CENTERLINE.



**ROUNDING DETAIL**  
*Not To Scale*



**TYPICAL SLAB SODDING**  
*Not To Scale*

DESIGN	BSF	07/17	<b>OKLAHOMA DEPARTMENT OF TRANSPORTATION</b> <b>GUY ENGINEERING SERVICES, INC.</b>  <b>TYPICAL SECTIONS</b>  STATE JOB NO. 29407(04) SHEET NO. 0002 CREEK COUNTY BR. 181A LITTLE DEEP FORK
DRAWN	BLP	07/17	
CHECKED	PAE	07/17	
APPROVED	JRW	07/17	
SQUAD			

Friday, July 28, 2017 10:12:13 AM  
 V:\13-850 Br 181A Little Deep Fork Ck - Creek 3\CIV3D\PLANS\850-TYPICALS.dwg

**GENERAL BRIDGE NOTES**

**SPECIFICATIONS:**

COMPLY WITH THE REQUIREMENTS OF THE 2009 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EXCEPT AS MODIFIED BY THE PLANS AND SPECIAL PROVISIONS.

**PILE DRIVING EQUIPMENT:**

USE A PILE DRIVING HAMMER OF THE SIZE AND TYPE CAPABLE OF CONSISTENTLY DELIVERING THE EFFECTIVE DYNAMIC ENERGY SUFFICIENT TO DRIVE THE PILES TO THE REQUIRED TIP ELEVATION AND TO ACHIEVE THE AXIAL LOAD RESISTANCE WITHOUT EXCEEDING THE LIMITATIONS SET ON THE ALLOWABLE DRIVING STRESSES IN ACCORDANCE WITH SECTION 514.03.A(2)(a)

**VENT HOLES:**

THE CONTRACTOR SHALL PROVIDE 2 INCH DIAMETER VENT HOLES IN THE DECK, ONE HOLE BETWEEN EACH BEAM LINE NEAR THE HIGH END OF EACH SPAN.

**ABUTMENT PILING CAPACITY:**

THE FACTORED REACTION FOR EACH HP 10X42 PILE AT ABUTMENT NO. 1 IS 78.0 TONS PER PILE AND AT ABUTMENT NO. 2 IS 73.50 TONS PER PILE. DRIVE ALL PILING UNTIL THE AXIAL LOAD RESISTANCE IS GREATER THAN THE FACTORED REACTION OF EACH PILE. THE FOLLOWING FORMULA (GATES EQUATION) SHALL BE USED TO DETERMINE THE AXIAL LOAD RESISTANCE OF THE DRIVEN PILES:

$$\text{AXIAL LOAD RESISTANCE} = \phi [(0.875 \sqrt{E} \text{ LOG}10 (10N)) -50] \text{ (TONS)}$$

WHERE:

$\phi$  = RESISTANCE FACTOR OF 0.4

E = ENERGY PRODUCED BY THE HAMMER PER BLOW IN FOOT-POUNDS. FOR GRAVITY AND SINGLE ACTING DIESEL HAMMERS, THE VALUE IS BASED ON THE ACTUAL RAM STROKE OBSERVED IN THE FIELD AND MEASURED IN FEET MULTIPLIED BY THE RAM WEIGHT IN POUNDS.

N = AVERAGE NUMBER OF HAMMER BLOWS PER INCH OF PILE PENETRATION FOR THE LAST 10 TO 20 BLOWS DELIVERED TO THE PILE HEAD.

THE ABOVE FORMULA IS ONLY APPLICABLE WHEN:

- THE PILE DRIVING HAMMER HAS A FREE FALL (GRAVITY & SINGLE ACTING HAMMERS ONLY).
- THE HEAD OF THE PILE IS NOT BROOMED, CRUSHED OR OTHERWISE DAMAGED.
- THE PENETRATION IS QUICK AND UNIFORM.
- THERE IS NO APPRECIABLE REBOUND OF THE HAMMER, AND
- A FOLLOWER IS NOT USED.

THE NUMBER OF BLOWS PER INCH OF PILE PENETRATION MAY BE MEASURED EITHER DURING INITIAL DRIVING OR BY RE-DRIVING WITH A WARM HAMMER OPERATED AT FULL ENERGY AFTER A PILE SET PERIOD, AS DETERMINED BY THE ENGINEER.

IF WATER JETS ARE USED IN CONNECTION WITH THE DRIVING, DETERMINE THE AXIAL LOAD RESISTANCE BY THE FORMULA SHOWN ONLY AFTER THE JETS HAVE BEEN WITHDRAWN.

**CONCRETE INTERMEDIATE DIAPHRAGMS:**

ONCE THE CONCRETE HAS BEEN PLACED FOR THE CONCRETE INTERMEDIATE DIAPHRAGMS, WAIT A MINIMUM OF 24 HOURS BEFORE REMOVING THE SIDE FORMS. DO NOT REMOVE THE BOTTOM FORM FOR A MINIMUM OF 3 DAYS, OR AT THE DISCRETION OF THE ENGINEER. THIS TIME CAN BE SHORTENED IF THE CONCRETE HAS ATTAINED 80% OF THE SPECIFIED COMPRESSIVE STRENGTH. DO NOT PLACE THE CONCRETE FOR THE DECK SLAB OR APPLY OTHER MASSIVE LOADS TO THE BEAMS OR DIAPHRAGMS UNTIL THE CONCRETE IN THE DIAPHRAGMS HAS BEEN IN PLACE FOR A MINIMUM OF 10 DAYS, OR AT THE DISCRETION OF THE ENGINEER. THIS TIME MAY BE SHORTENED IF THE CONCRETE HAS ATTAINED 80% OF THE SPECIFIED COMPRESSIVE STRENGTH.

**APPROACH SLAB:**

CLASS AA CONCRETE SHALL BE USED IN THE APPROACH SLABS. THE QUANTITY GIVEN IS BASED ON THE ACTUAL SQUARE YARDS OF THE APPROACH SLABS. ALL COSTS OF CONCRETE, REINFORCING STEEL, RAPID CURE JOINT SEALANT, EXCAVATION, LABOR, EQUIPMENT, AND OTHER INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SPECIFIED SHALL BE INCLUDED IN THE PRICE BID PER SQUARE YARD OF "APPROACH SLAB".

**RIPRAP:**

A 24" THICK LAYER OF TYPE I-A PLAIN RIPRAP WITH 6" THICK LAYER OF TYPE I-A FILTER BLANKET SHALL BE PLACED AT THE ABUTMENTS AS SHOWN IN THE PLANS. THE FILTER BLANKET SHALL BE PLACED IN ONE LAYER.

**PERFORATED PIPE UNDERDRAIN:**

ITEM "6" PERFORATED PIPE UNDERDRAIN - ROUND" INCLUDES 26 FEET OF PERFORATED PIPE AND 5 CUBIC YARDS OF PIPE UNDERDRAIN COVER MATERIAL FOR EACH ABUTMENT. THE INSTALLATION OF THE PERFORATED PIPE AND PIPE UNDERDRAIN MATERIAL SHALL BE AS SHOWN IN THE PLANS AND ON STANDARD PUD-3.

ALL COSTS OF THE PERFORATED PIPE UNDERDRAIN INSTALLATION INCLUDING BACKFILLING, MATERIAL, LABOR, EQUIPMENT, AND INCIDENTALS SHALL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF "6" PERFORATED PIPE UNDERDRAIN - ROUND".

**NON-PERFORATED PIPE UNDERDRAIN:**

ITEM "6" NON-PERFORATED PIPE UNDERDRAIN - ROUND" INCLUDES 20 FEET OF NON-PERFORATED PIPE AND 10 CUBIC YARDS OF TRENCH EXCAVATION AND 10 CUBIC YARDS OF STANDARD BEDDING MATERIAL FOR EACH ABUTMENT. THE INSTALLATION OF THE PERFORATED PIPE AND PIPE UNDERDRAIN COVER MATERIAL SHALL BE AS SHOWN ON THE PLANS AND ON STANDARD PUD-3.

ALL COSTS OF THE NON-PERFORATED PIPE UNDERDRAIN INSTALLATION INCLUDING BACKFILLING, MATERIAL, LABOR, EQUIPMENT, AND INCIDENTALS SHALL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF "6" NON-PERFORATED PIPE UNDERDRAIN - ROUND".

**BRIDGE PAY QUANTITY NOTES**

(R-1) PAYMENT FOR THIS ITEM WILL BE BASED ON PLAN QUANTITIES ONLY. SEE SECTION 109.01B OF THE OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

- 1) CONSTRUCTION STAKING SHALL INCLUDE ESTABLISH AND RE-ESTABLISH STAKING OF CENTERLINE, BENCHMARKS, AND RIGHT-OF-WAY. INCLUDES SLOPE STAKING, STRUCTURE AND BRIDGE STAKING, ROADWAY STAKING (DRIVEWAYS INCLUDED), BLUETOPPING, AND CHECKING ALIGNMENTS AND ELEVATIONS AS REQUIRED.
- 2) ALL PILES SHALL BE EQUIPPED WITH CAST STEEL-DRIVING TIPS. ALL COSTS FOR FURNISHING AND INSTALLING CAST STEEL-DRIVING TIPS TO BE INCLUDED IN OTHER ITEMS OF WORK.
- 3) 501(G) CLSM BACKFILL SHALL REPLACE GRANULAR BACKFILL ON STANDARD CB26-I-SK0-ABUT-PC3 AND CB26..32-C-SK0-ABUT-MISC.
- 4) ITEM "REMOVAL OF EXISTING BRIDGE STRUCTURE" CONSISTS OF REMOVAL AND DISPOSAL OF AN 72' PONY TRUSS SPANS, 13.7' CLEAR ROADWAY AT CL STA. 61+39.05 THE REMOVAL SHALL BE IN ACCORDANCE WITH SECTION 619.04.B(2) OF THE 2009 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND IN A MANNER APPROVED BY THE ENGINEER.
- 5) 24" THICKNESS

DESCRIPTION	REVISIONS	DATE

29407(04)					
PAY QUANTITIES					
0200 BRIDGE ITEMS - BRIDGE A: 65'-85' TYPE III P.C. BEAM SPAN x 26'-0"CLR. RDY., SK00, TR-3 RAILS					
ITEM		DESCRIPTION	PAY NOTES	UNIT	QUANTITY
501(B)	1307	SUBSTRUCTURE EXCAVATION COMMON	R-1	C.Y.	100
501(G)	6309	CLSM BACKFILL	R-1,3	C.Y.	56
503(A)	1312	PRESTRESSED CONCRETE BEAMS (TYPE III)	R-1	L.F.	448
504(A)	1304	APPROACH SLAB	R-1	S.Y.	115
504(B)	1305	SAW-CUT GROOVING	R-1	S.Y.	452
504(D)	6239	CONCRETE RAIL (TR3)	R-1	L.F.	357
506(A)	1322	STRUCTURAL STEEL	R-1	LB.	380
507(A)	6172	WEATHERING STEEL FIXED BEARING ASSEMBLY	R-1	EA.	6
507(B)	6176	WEATHERING STEEL EXPANSION BEARING ASSEMBLY	R-1	EA.	6
507(C)	6282	ELASTOMERIC BEARING PADS	R-1	EA.	6
509(A)	1326	CLASS AA CONCRETE	R-1	C.Y.	135
509(B)	1328	CLASS A CONCRETE	R-1	C.Y.	60
511(A)	1332	REINFORCING STEEL	R-1	LB.	38,580
514(A)	6010	PILES, FURNISHED (HP 10x42)	2	L.F.	324
514(B)	6292	PILES, DRIVEN (HP 10x42)		L.F.	324
514(K)	6260	(P.L) PILOT HOLES		L.F.	96
514(L)	6220	PILE SPLICE, H-PILE (NON-BIDDABLE)		EA.	1
516(A)	6094	DRILLED SHAFTS 48" DIAMETER		L.F.	108
601(B)	1353	TYPE I-A PLAIN RIPRAP	5	TON	1,163
601(C)	1355	TYPE I-A FILTER BLANKET		TON	124
613(H)	6204	6" PERFORATED PIPE UNDERDRAIN ROUND	R-1	L.F.	52
613(I)	6207	6" NON-PERF. PIPE UNDERDRAIN RND.		L.F.	40
619(D)	1397	REMOVAL OF EXISTING BRIDGE STRUCTURE	4	L. SUM	1
623(F)	5686	GUARDRAIL ANCHOR UNIT (TYPE D-BF)		EA.	4

29407(04)					
PAY QUANTITIES					
0600 STAKING					
ITEM		DESCRIPTION	PAY NOTES	UNIT	QUANTITY
642(B)	0096	CONSTRUCTION STAKING LEVEL II	1	L. SUM	1

29407(04)					
PAY QUANTITIES					
0640 CONSTRUCTION					
ITEM		DESCRIPTION	PAY NOTES	UNIT	QUANTITY
220	2800	SWPPP DOCUMENTATION AND MANAGEMENT		L. SUM	1
641	1399	MOBILIZATION		L. SUM	1

BR. 181A OVER LITTLE DEEP FORK CREEK COUNTY		Design	BSF	07/17
BRIDGE "A"		Detail	BLP	07/17
<b>SUMMARY OF PAY QUANTITIES &amp; NOTES (BRIDGE)</b>		Check	JRW	07/17
		Squad Engr.	GUY	
<b>STATE OF OKLAHOMA</b>	GUY ENGINEERING SERVICES, INC.			
JOB PIECE NO.	29407(04)		SHEET NO. ABO1	



SURFACING SUMMARY						
STATION EXTENTS	AGGREGATE BASE TYPE A 303(A)	TRAFFIC BOUND SURFACE COURSE TYPE E 402(E)	TACK COAT 407	PRIME COAT 408	SUPERPAVE. TYPE S3 (PG 64-22 OK) 411(B)	SUPERPAVE. TYPE S4 (PG 64-22 OK) 411(C)
	C.Y.	TONS	GAL.	GAL.	TONS	TONS
<b>W 241ST</b>						
100+12.09 TO 103+50.00	169	47	139	254	217	105
<b>NS 365</b>						
39+67.69 TO 61+28.59	1,091	298	906	1,637	1,415	684
63+20.09 TO 67+50.00	233	59	194	349	302	146
<b>TOTALS =</b>	<b>1,493</b>	<b>404</b>	<b>1,238</b>	<b>2,239</b>	<b>1,934</b>	<b>935</b>

SUMMARY OF DRIVES							
STATION	RETURN RADIUS	DRIVE WIDTH	* TRAFFIC BOUND SURFACE COURSE TYPE E 402(E)	TACK COAT 407	PRIME COAT 408	SUPERPAVE. TYPE S3 (PG 64-22 OK) 411(B)	SUPERPAVE. TYPE S4 (PG 64-22 OK) 411(C)
	FT.	FT.	TONS	GAL.	GAL.	TONS	TONS
40+16.00 LT.	25	24	33	11	52	46	23
54+50.00 RT.	25	20	27	9	42	38	19
59+25.22 LT.	25	12	46	15	73	66	33
<b>TOTALS =</b>			<b>106</b>	<b>35</b>	<b>167</b>	<b>150</b>	<b>75</b>

EARTHWORK SUMMARY				
STATION EXTENTS	UNCLASSIFIED EXCAVATION 202(A)	EMBANKMENT +15%	UNCLASSIFIED BORROW 202(D)	REMOVAL OF ASPHALT
	C.Y.	C.Y.	C.Y.	S.Y.
39+67.69 TO 67+50.00	11,807	18,253	6,446	38,506
100+12.11 TO 103+50.00	3,875	0	-3,875	0
<b>TOTALS =</b>	<b>15,682</b>	<b>18,253</b>	<b>2,571</b>	<b>38,506</b>

SUMMARY OF EROSION CONTROL					
STATIONS	TEMPORARY SILT FENCE	TEMPORARY SILT DIKE	SOLID SLAB SODDING	VEGETATIVE MULCHING	
	221(C)	221(F)	230(A)	233(A)	
FROM	TO	L.F.	L.F.	S.Y.	AC.
39+67.69	67+50.00	4,930	427	38,966	11.01
100+12.11	103+50.00	576	63	0	0.00
<b>TOTALS =</b>		<b>5,506</b>	<b>490</b>	<b>38,966</b>	<b>11.01</b>

SCHEDULE OF GUARDRAIL			
STATION EXTENTS	BEAM GUARDRAIL W-BEAM SINGLE 623(A)	GUARDRAIL END TREATMENT (GET) 623(G)	GUARDRAIL ANCHOR UNIT (TYPE D-BF) 623(F)
	L.F.	EA.	EA.
60+61.25 TO 61+36.25 LT.	0	1	1
63+12.41 TO 64+24.91 LT.	37.50	1	1
60+23.75 TO 61+36.25 RT.	37.50	1	1
63+12.41 TO 63+87.41 RT.	0	1	1
<b>TOTALS =</b>	<b>75</b>	<b>4</b>	<b>4</b>

SUMMARY OF PAVEMENT MARKINGS		
STATION EXTENTS	TRAFFIC STRIPE (MULTI-POLYMER) (4" WIDE) WHITE 856(A)	TRAFFIC STRIPE (MULTI-POLYMER) (4" WIDE) YELLOW 856(A)
	L.F.	L.F.
39+67.69 TO 67+50.00	5,565	5,565
100+12.09 TO 103+50.00	676	676
<b>TOTALS =</b>	<b>6,241</b>	<b>6,241</b>

FENCE SUMMARY	
STATION EXTENTS	FENCE-STYLE SWF (5 BARBED WIRE) 624(C)
	L.F.
45+13.71 TO 47+00.00 LT.	187
47+00.00 TO 53+00.00 LT.	619
102+25.31 TO 103+50.75 LT.	140
FENCE AT BRIDGE	171
<b>TOTALS =</b>	<b>1,117</b>

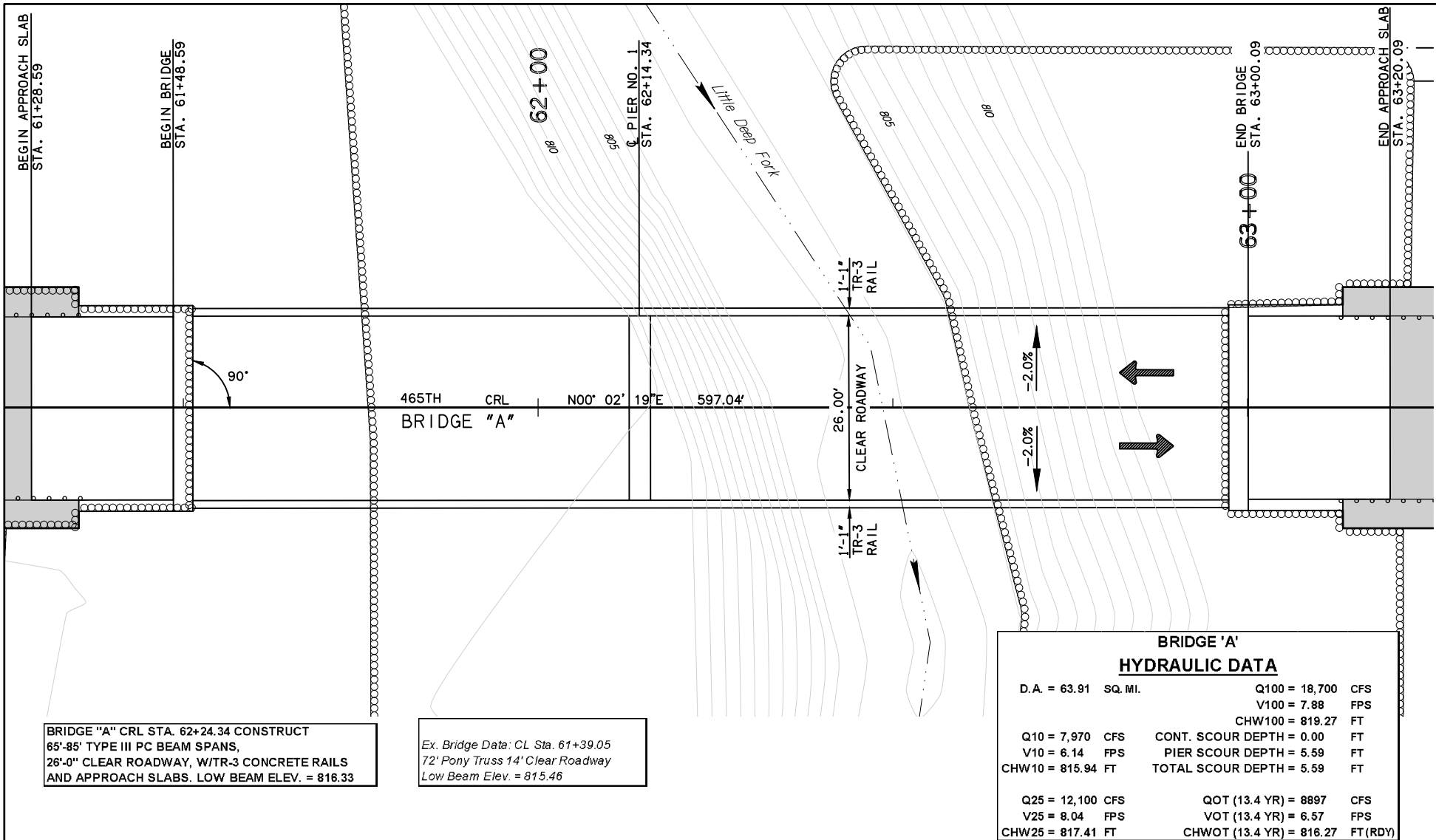
SIDEDRAIN SUMMARY										
STR. NO.	STATION	OFFSET	DESCRIPTION	DESIGN	FLOWLINE IN	FLOWLINE OUT	R.C.P. - ROUND	C.G.S.P. - ROUND	P.C.E.S. - ROUND	C.E.T. TYPE B4
							24"	24"	24"	613(A)
							L.F.	L.F.	EA.	EA.
3	54+50.00	RT.	CONSTR. 24" x 77' CGSP-ROUND W/ CET		808.29	807.91		77		2
4	59+25.22	LT.	CONSTR. 24" x 75' CGSP-ROUND W/ CET		805.87	805.50		75		2
5	66+00.00	RT.	CONSTR. 24" x 60' RCP-ROUND W/ PCES		816.29	815.70	60		2	
<b>TOTAL =</b>							<b>60</b>	<b>152</b>	<b>2</b>	<b>4</b>

DITCH TREATMENT SUMMARY					
STATION EXTENTS	TYPE	BOTTOM WIDTH	TYPE I-A PLAIN RIPRAP 601(B)	TYPE I-A FILTER BLANKET 601(C)	
			TON	TON	
100+15.00 TO 102+00.00 LT.	RIPRAP	2	96	48	
<b>TOTALS =</b>			<b>96</b>	<b>48</b>	

SIGN SUMMARY						
SIGN NO.	APPROX CRL STATION AND OFFSET LOCATION	DESCRIPTION	SIGN	SHEET ALUMINUM SIGNS 850(A)	2" SQUARE TUBE POST 851(C)	
				S.F.	L.F.	
1	41+00.00	12' RT.	SPEED LIMIT (35)	R2-1(35)	5.00	10
2	65+00.00	12' LT.	SPEED LIMIT (35)	R2-1(35)	5.00	10
3	100+20.00	12' LT.	STOP SIGN	R1-1	6.25	10
<b>TOTALS =</b>					<b>16.25</b>	<b>30</b>

CROSSDRAIN SUMMARY												
STR. NO.	STATION	DESCRIPTION	DESIGN	FLOWLINE IN	FLOWLINE OUT	INLET GPI TYPE 2 (DES. 12)	R.C.P. - ROUND		P.C.E.S. ROUND	C.E.T. TYPE A4	STANDARD BEDDING MATERIAL, CLASS C	TRENCH EXCAVATION
							18"	30"	30"	611(G)	613(A)	613(L)
						EA.	L.F.	L.F.	EA.	EA.	C.Y.	C.Y.
1	40+08.59	CONST. 18"X93' RCP W/GRATED DROP INLET DES. 12		814.34	814.00	1	93			1	26	85
2	44+50.00	CONST. 30"X71' RCP-ROUND W/PCES		813.43	813.20			71	2		36	56
<b>TOTALS =</b>						<b>1</b>	<b>93</b>	<b>71</b>	<b>2</b>	<b>1</b>	<b>62</b>	<b>140</b>

DESIGN	BSF	07/17	OKLAHOMA DEPARTMENT OF TRANSPORTATION GUY ENGINEERING SERVICES, INC.
DRAWN	BLP	07/17	
CHECKED	PAE	07/17	
APPROVED	JRW	07/17	
SQUAD			
<b>SUMMARY SHEET</b>			
STATE JOB NO. 29407(04) SHEET NO. AX01			



**LEGEND**

- BENCHMARK
- PROPOSED TBSC SURFACING
- PROPOSED RIP RAP
- GUARDRAIL

Benchmark - #4  
Sta. 61+09.76, 179.78' L.  
Ch. "X" on Wingwall  
ELEV=814.77  
N=298918  
E=2409612

Benchmark - #3  
Sta. 64+86.84, 178.89' L.  
800' In 12" Elm  
ELEV=815.37  
N=299271  
E=2409612

AT&T  
KYLE HUMBLE 918-596-4240

EAST CENTRAL OK ELEC. CO.  
STEVE BEAM 918-756-0873

LEVEL 3 COMMUNICATIONS  
CLINTON GRAY 918-547-3757

SPRINT FIBER OPTIC  
NICK JENKINS 918-622-9483

DESCRIPTION	REVISIONS	DATE

**SUMMARY OF QUANTITIES**

DESCRIPTION	UNIT	SUPER	PIER	ABUT.	TOTAL
SUBSTRUCTURE EXCAVATION COMMON	C.Y.				100
CLSM BACKFILL	C.Y.				56
PRESTRESSED CONCRETE BEAMS (TYPE III)	L.F.	448			448
APPROACH SLAB	S.Y.				115
SAW-CUT GROOVING	S.Y.	363.10			451.90
CONCRETE RAIL (TR3)	L.F.	303			356.60
STRUCTURAL STEEL	LB.	380			380
WEATHERING STEEL FIXED BEARING ASSEMBLY	EA.	6			6
WEATHERING STEEL EXPANSION BEARING ASSEM	EA.	6			6
ELASTOMERIC BEARING PADS	EA.	6			6
CLASS AA CONCRETE	C.Y.	134.60			134.60
CLASS A CONCRETE	C.Y.		19.90	39.20	59.10
REINFORCING STEEL	LB.	29,930	2,610	6,040	38,580
PILES, FURNISHED (HP 10x42)	L.F.				324
PILES, DRIVEN (HP 10x42)	L.F.				324
(PL) PILOT HOLES	L.F.				96
PILE SPLICE, H-PILE (NON-BIDDABLE)	EA.				1
DRILLED SHAFTS 48" DIAMETER	L.F.		108		108
TYPE I-A PLAIN RIPRAP	TON			1,163	1,163
TYPE I-A FILTER BLANKET	TON			124	124
6" PERFORATED PIPE UNDERDRAIN ROUND	L.F.			52	52
6" NON-PERF. PIPE UNDERDRAIN RND.	L.F.			40	40
REMOVAL OF EXISTING BRIDGE STRUCTURE	L. SUM				1
GUARDRAIL ANCHOR UNIT (TYPE D-BF)	EA.			4	4

**BRIDGE 'A'**

**HYDRAULIC DATA**

D.A. = 63.91	SQ. MI.	Q100 = 18,700	CFS
		V100 = 7.88	FPS
		CHW100 = 819.27	FT
Q10 = 7,970	CFS	CONT. SCOUR DEPTH = 0.00	FT
V10 = 6.14	FPS	PIER SCOUR DEPTH = 5.59	FT
CHW10 = 815.94	FT	TOTAL SCOUR DEPTH = 5.59	FT
Q25 = 12,100	CFS	QOT (13.4 YR) = 8897	CFS
V25 = 8.04	FPS	VOT (13.4 YR) = 6.57	FPS
CHW25 = 817.41	FT	CHWOT (13.4 YR) = 816.27	FT (RDY)

**LOAD AND RESISTANCE FACTOR DESIGN DATA**

CLASS AA CONCRETE	f'c = 4 KSI
CLASS A CONCRETE	f'c = 3 KSI
REINFORCING STEEL, AASHTO M 31(GRADE 60)	fy = 60 KSI
STRUCTURAL STEEL, AASHTO M 270 (GRADE 50W)	fy = 50 KSI

LOADING: HL-93 AND 20 P.S.F. FUTURE WEARING SURFACE,  
5 P.S.F. STAY-IN-PLACE FORMS.

DESIGN: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 5TH EDITION WITH  
2010 INTERIMS, EXCEPT AS MODIFIED BY CURRENT ODOT BRIDGE DIVISION  
DESIGN POLICIES.

ANSI / AASHTO / AWS D1.5 BRIDGE WELDING CODE

LFD OPERATING RATING: HS 38.2

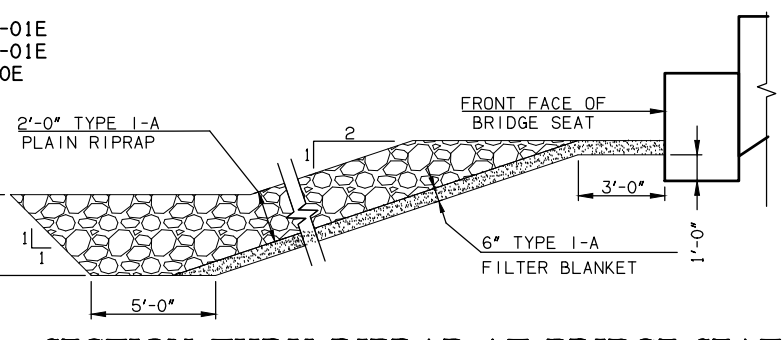
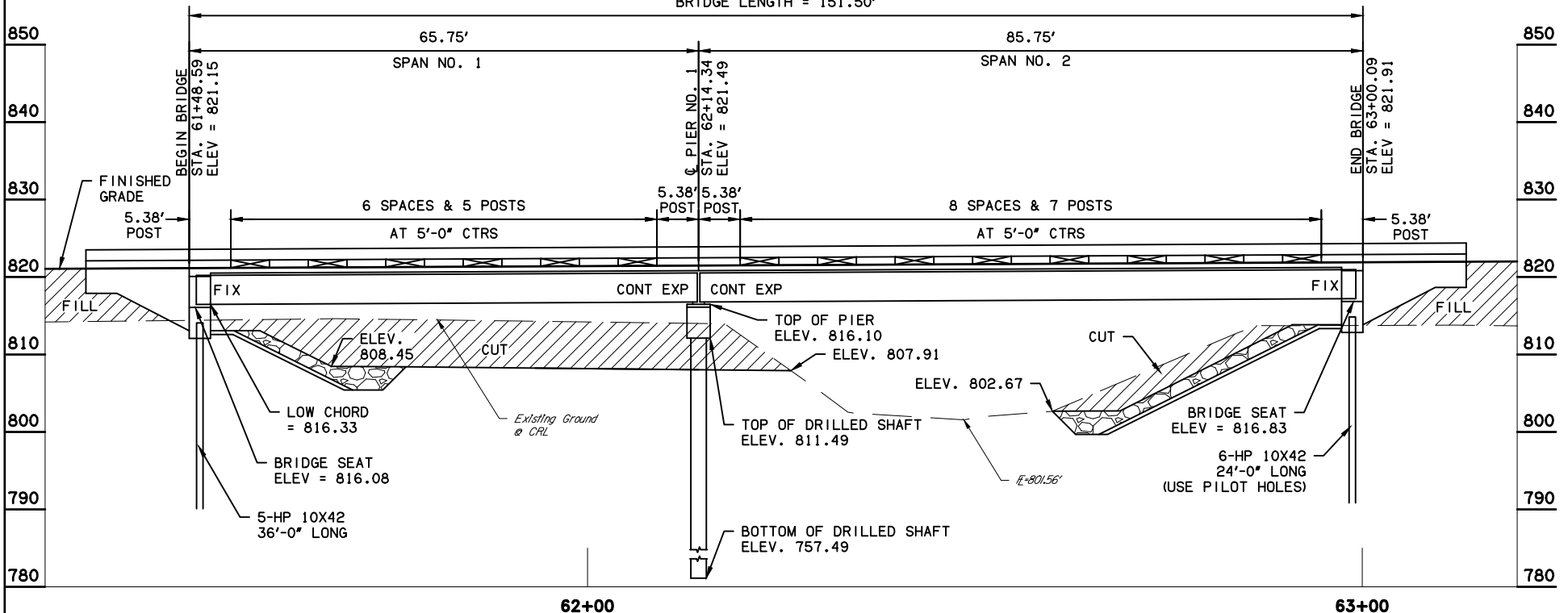
**STANDARDS**

- CB26-I-SKO-ABUT-PC3-01E
- CB26-I-SKO-XSECT-PC234-01E
- CB26-I-SKO-LSECT-PCB-01E
- CB26-I-SKO-DKSLB-BLIST-PCB-01E
- CB26-I-SKO-PCB-111-65-01E
- CB26-I-SKO-PCB-111-85-01E
- CB26-I-SKO-DIA-ABUT-PC3-01E
- CB26-I-SKO-DIA-INTPR-PCB-01E
- CB26-I-SKO-BRG-PC3-01E
- CB26-I-SKO-SPR-QUAN-PCB-1-01E
- CB26-I-SKO-SPR-QUAN-PCB-2-01E
- CB26-I-SKO-AS-01E
- CB26..32-I-SKO-WING-PC3-01E
- CB26..32-I-SKO-ABUT-MISC-01E
- CB26..32-C..I-SKO..30-PCB-DTL-1-01E
- CB26..32-C..I-SKO..30-PCB-DTL-2-01E
- CB26..32-C..I-SKO..30-GRAU-BC-00E
- HP1-2-00E
- TR3-2-01E
- PUD-3-2

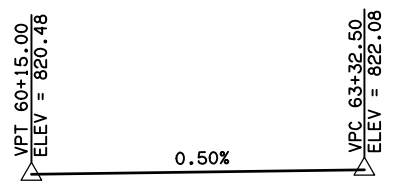
**ABUTMENTS (HP 10 X 42 PILING)**

FACTORED PILE REACTION = 78 TONS/PILE ABUTMENT NO. 1  
FACTORED PILE REACTION = 73.5 TONS/PILE ABUTMENT NO. 2

ALL ABUTMENT PILING SHALL BE DRIVEN THROUGH THE COMPACTED FILL. PILING SHALL BE DRIVEN TO POINT BEARING ON SOLID FOUNDATION MATERIAL AT THE APPROXIMATE ELEVATION SHOWN ON THE PLANS. IF THE ULTIMATE REQUIRED CAPACITY IS NOT OBTAINED AT THIS ELEVATION, DRIVING SHALL CONTINUE UNTIL THE REQUIRED ULTIMATE PILE CAPACITY IS OBTAINED. THE LENGTH OF STEEL PILING SHOWN ON THE PLANS IS FOR ESTIMATING PURPOSES ONLY.



**SECTION THRU RIPRAP AT BRIDGE SEAT**  
(DIMENSIONS ARE NORMAL TO BRIDGE SEAT)



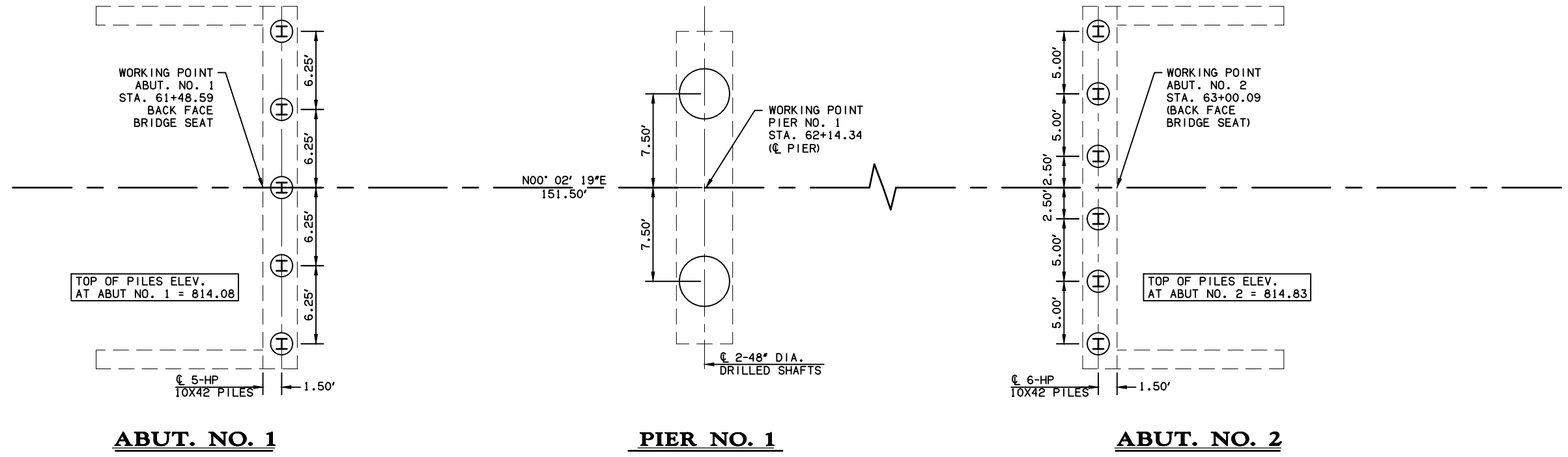
BR. 181A OVER LITTLE DEEP FORK CREEK COUNTY

**GENERAL PLAN AND ELEVATION**

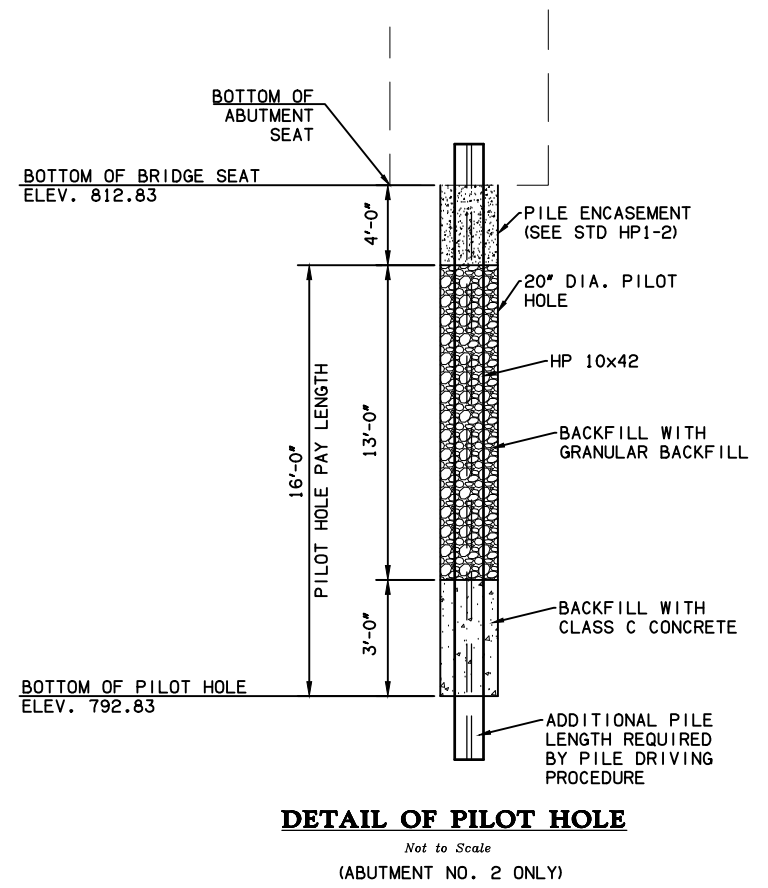
65'-85' TYPE III PC BEAM BRIDGE, 26'-0" CLR RDWY,  
W/TR-3 CONCRETE RAILS AND APPROACH SLABS

Design	BSF	07/17
Detail	BLP	07/17
Check	JRW	07/17
Squad	GUY	

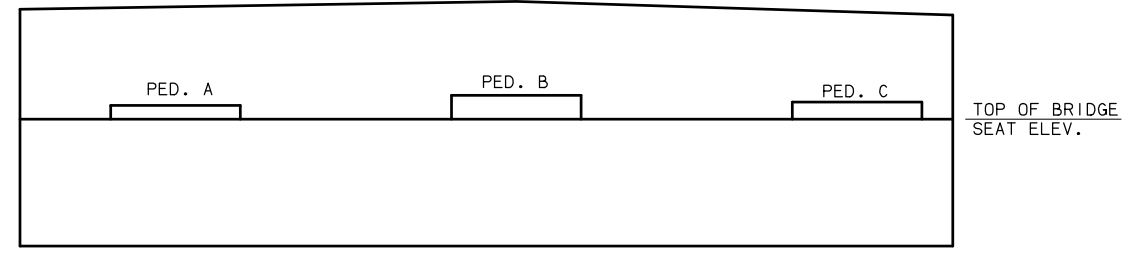
DESCRIPTION	REVISIONS	DATE



**STAKING DIAGRAM**  
Not to Scale



**DETAIL OF PILOT HOLE**  
Not to Scale  
(ABUTMENT NO. 2 ONLY)



**ABUTMENT ELEVATION**  
Not to Scale  
(LOOKING BACK ON STATION AT ABUTMENT NO. 1)  
(LOOKING AHEAD ON STATION AT ABUTMENT NO. 2)

ABUTMENT ELEVATIONS								
	TOP OF BRIDGE SEAT ELEVATION	LOW CHORD ELEV.	PEDESTAL A		PEDESTAL B		PEDESTAL C	
			ELEV. (ft)	HEIGHT (ft)	ELEV. (ft)	HEIGHT (ft)	ELEV. (ft)	HEIGHT (ft)
ABUTMENT NO. 1	816.08	816.33	816.25	0.17	816.45	0.37	816.25	0.17
ABUTMENT NO. 2	816.83		817.00	0.17	817.20	0.37	817.00	0.17

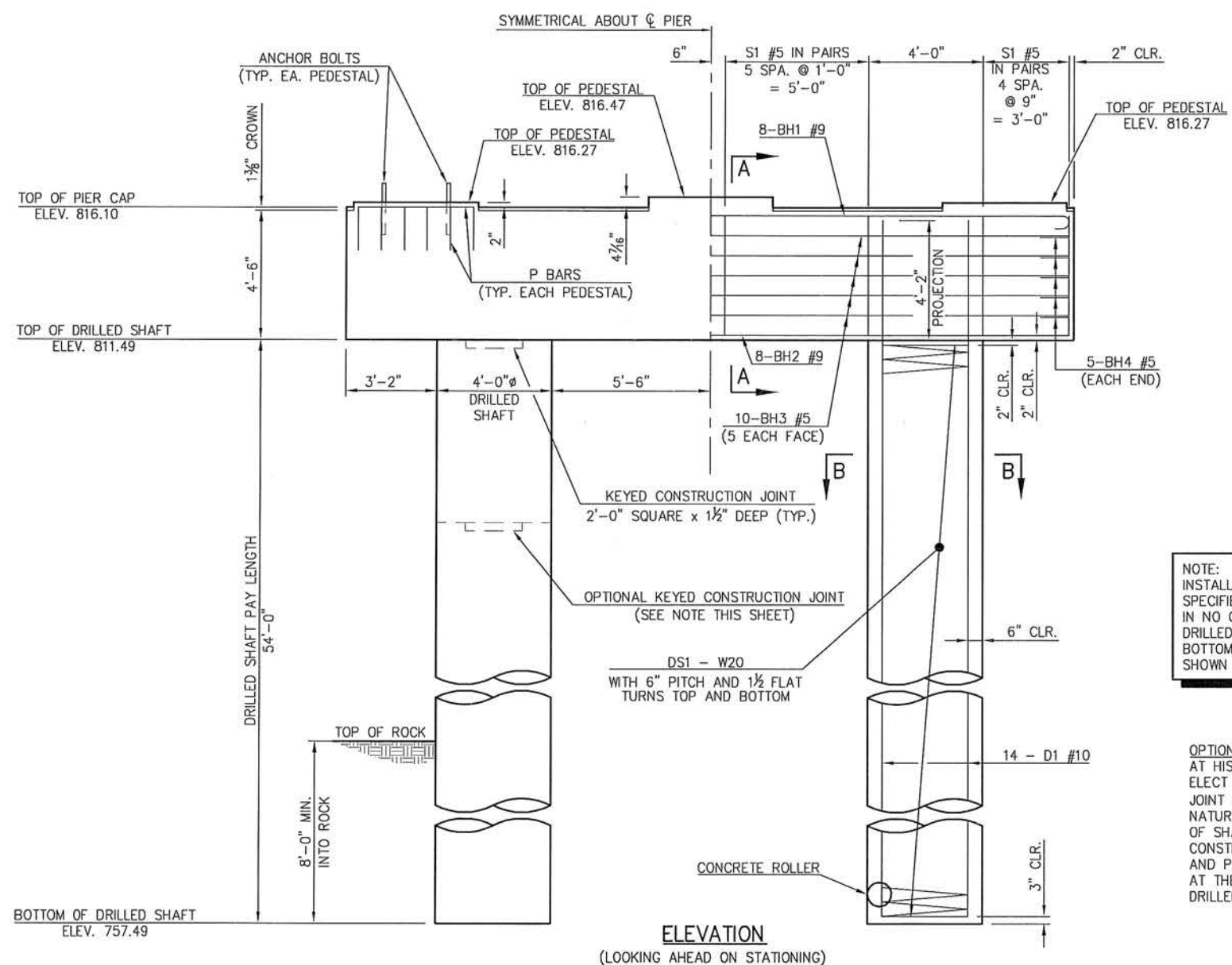
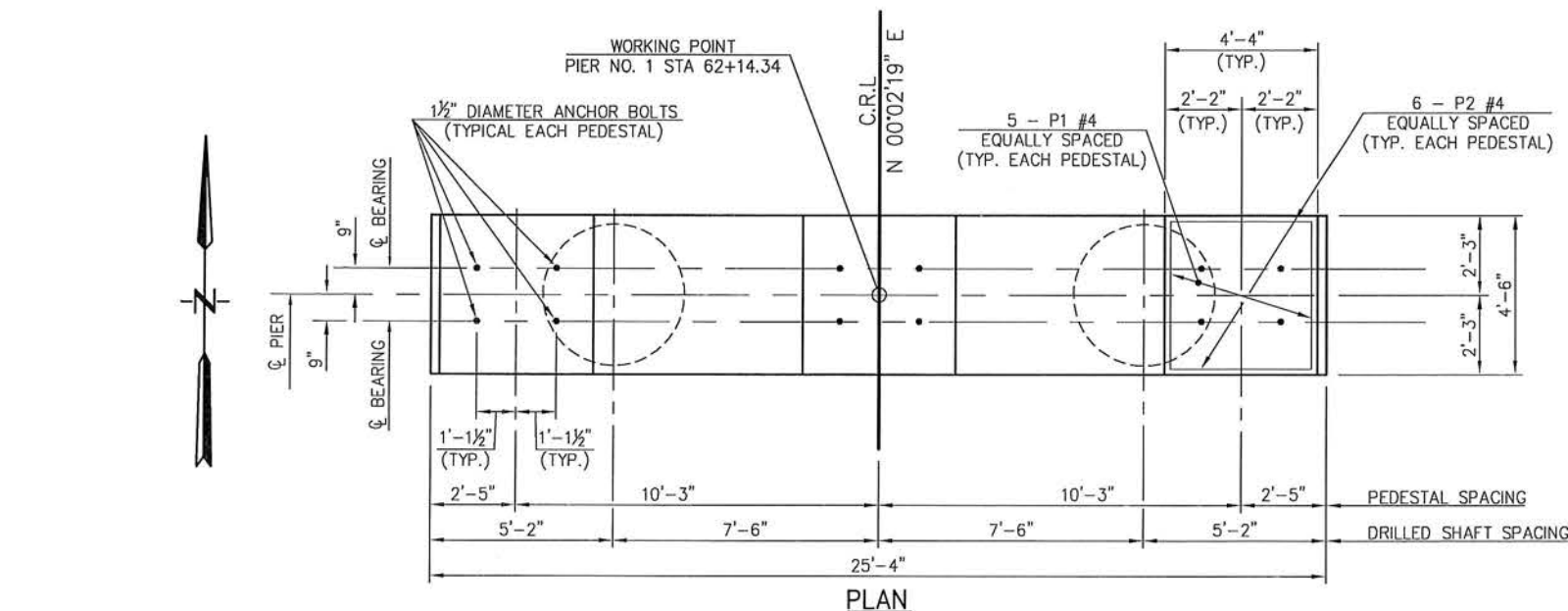
BR. 181A OVER LITTLE DEEP FORK CREEK COUNTY

Design BSF 07/17  
Detail BLP 07/17  
Check JRW 07/17  
Squad: Eng. GUY

**STATE OF OKLAHOMA** GUY ENGINEERING SERVICES, INC.  
JOB PIECE NO. 29407(04) SHEET NO. B002

Friday, July 28, 2017 10:13:53 AM  
 V:\13-850 Br 181A Little Deep Fork Ck - Creek 3\CIV3D\PLANS\850-SUBSTRUCTURE STAKING DIAGRAM.dwg

DESCRIPTION	REVISIONS	DATE



**NOTE:**  
INSTALL DRILLED SHAFTS AT LEAST THE SPECIFIED MINIMUM DISTANCE INTO ROCK. IN NO CASE SHALL THE BOTTOM OF THE DRILLED SHAFT BE HIGHER THAN THE BOTTOM OF DRILLED SHAFT ELEVATION SHOWN IN THE PLANS.

**OPTIONAL KEYED CONSTRUCTION JOINT:**  
AT HIS OPTION, THE CONTRACTOR MAY ELECT TO FORM A KEYED CONSTRUCTION JOINT A MINIMUM OF 1' ABOVE THE NATURAL GROUND LINE. THE PORTION OF SHAFT ABOVE THE OPTIONAL KEYED CONSTRUCTION JOINT SHALL BE FORMED AND POURED, AND SHALL BE PAID FOR AT THE UNIT PRICE PER LINEAR FOOT OF DRILLED SHAFT.

PIER QUANTITIES		
ITEM	UNIT	QUANTITY
CLASS A CONCRETE	C.Y.	19.90
REINFORCING STEEL	LB.	2,610.00
DRILLED SHAFTS 48" DIAMETER	LF.	108.00
CROSSHOLE SONIC LOGGING	EA.	1.00

*Michael B. Simmons*  
MICHAEL B. SIMMONS, P.E. NO. 24576  
6/13/2017

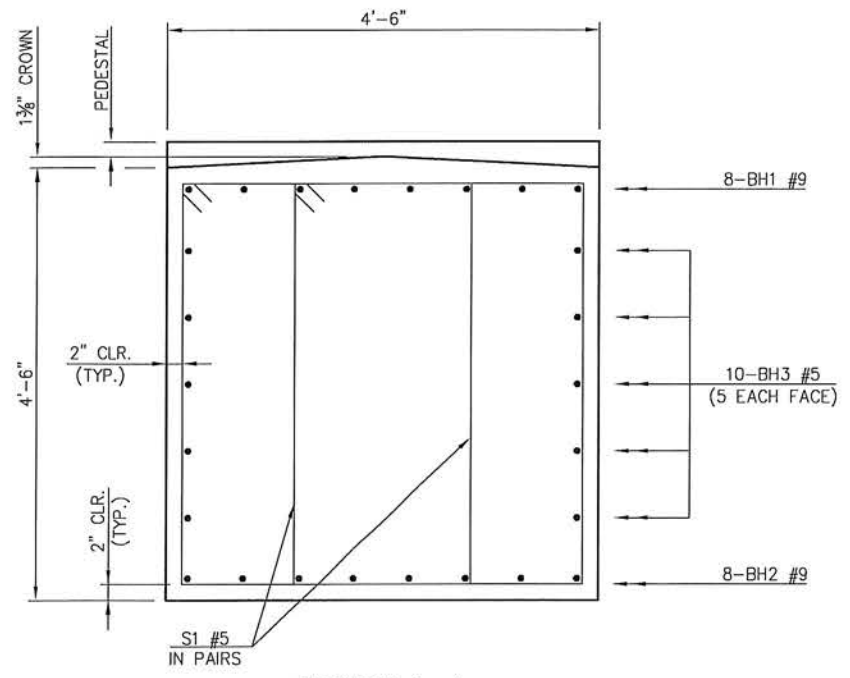


BR. 181A OVER LITTLE DEEP FORK BRIDGE "A"	CREEK COUNTY	Design	MZV	11/16
DETAILS OF PIER (SHEET NO. 1 OF 2)		Detail	MZV	11/16
		Check	MBS	11/16
STATE OF OKLAHOMA		Spood: Engr. GUY	GUY ENGINEERING SERVICES, INC.	
JOB PECE NO. 29407(04)		SHEET NO. B003		

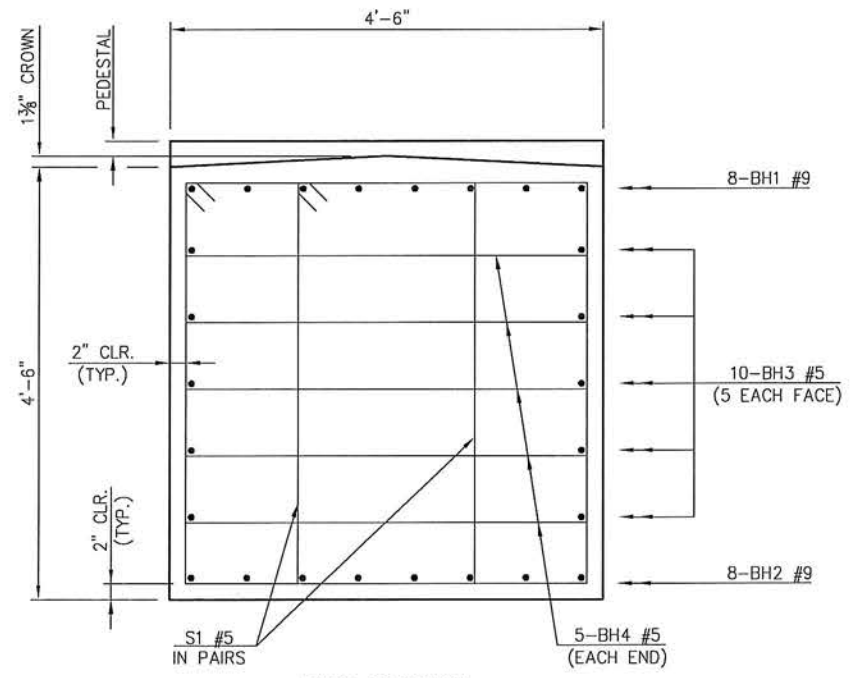
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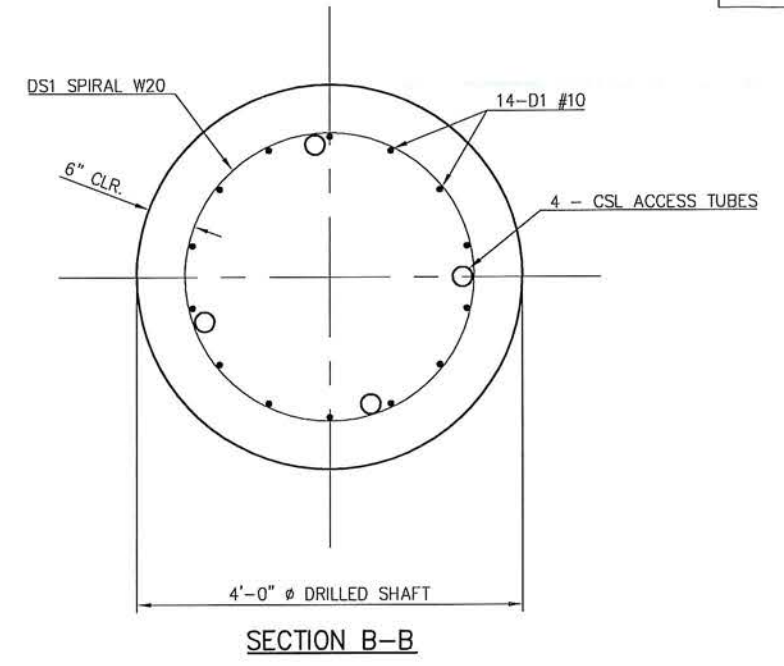
DESCRIPTION	REVISIONS	DATE



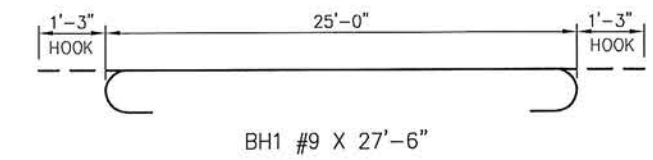
SECTION A-A



END SECTION

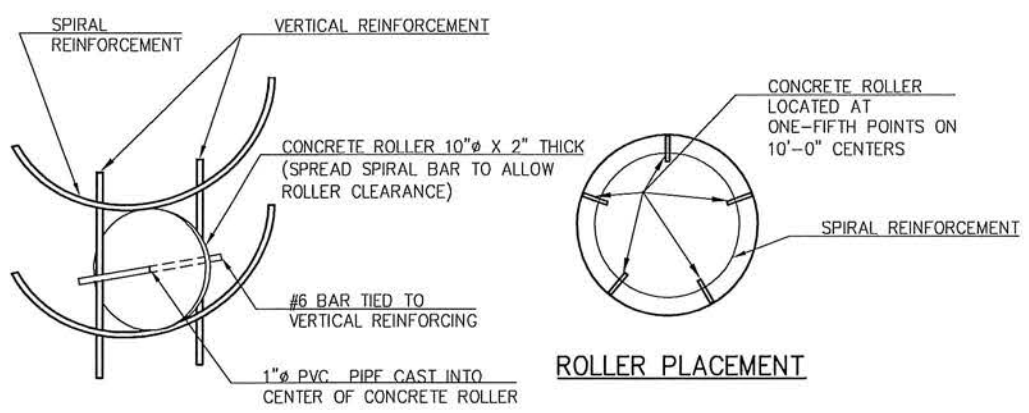
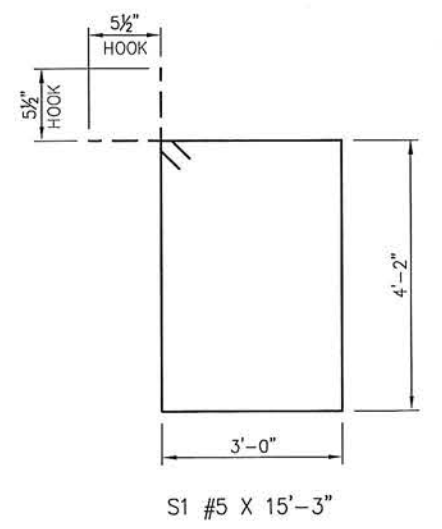
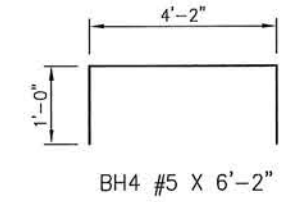
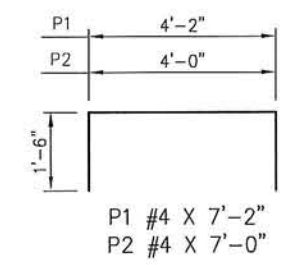


SECTION B-B



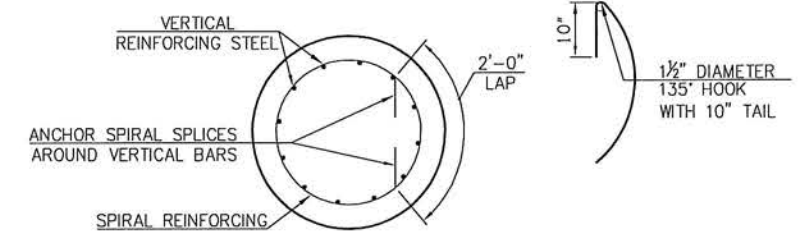
BAR LIST - PIER NO. 1				
MARK	SIZE	NO.	FORM	LENGTH
BH1	#9	8	BNT.	27'-6"
BH2	#9	8	STR.	25'-0"
BH3	#5	10	STR.	25'-0"
BH4	#5	10	BNT.	6'-2"
P1	#4	15	BNT.	7'-2"
P2	#4	18	BNT.	7'-0"
S1	#5	44	BNT.	15'-3"
TWO DRILLED SHAFTS ①				
D1	#10	28	STR.	57'-11"
DS1	W20	2	SPIRAL	1039'-9"

① INCLUDED IN PRICE BID PER LINEAR FOOT OF DRILLED SHAFT.



ROLLER INSTALLATION

**DETAIL OF CONCRETE ROLLER**  
 NOTE: CONCRETE USED IN THE CONCRETE ROLLERS SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4,000 P.S.I. SLAB BOLSTERS, HIGH CHAIRS AND PLASTIC ROLLERS SHALL NOT BE SUBSTITUTED FOR THE CONCRETE ROLLERS.



DETAIL OF SPIRAL REINFORCING SPLICE

NOTE: SPIRAL BARS SHALL CONFORM TO AASHTO M-32. SPIRAL BAR LENGTH DOES NOT INCLUDE LAP. IF LAP IS REQUIRED, THE LENGTH OF THE LAP SHALL BE AS SHOWN.

*Michael B. Simmons*  
 MICHAEL B. SIMMONS, P.E. NO. 24576  
 LICENSED PROFESSIONAL ENGINEER  
 MICHAEL B. SIMMONS  
 24576

BR. 181A OVER LITTLE DEEP FORK BRIDGE "A"	CREEK COUNTY	Design	MZV	11/16
		Detail	MZV	11/16
		Check	MBS	11/16
		Spood		
		Eng.	GUY	
<b>STATE OF OKLAHOMA</b>	GUY ENGINEERING SERVICES, INC.	JOB PRICE NO.	29407(04)	SHEET NO. B004

Monday, June 12, 2017 2:25:08 PM V:\13-850 Br 181A Little Deep Fork Ck - Creek 3\STRUCTURAL\DWG\850-PIER.dwg

### BORING LOG NO. B-1

PROJECT: Bridge 181A over Little Deep Fork Creek	CLIENT: Guy Engineering
SITE: Creek County, Oklahoma	

GRAPHIC LOG	LOCATION See Exhibit A-2 Station: 61+46 Offset: 7' RT Surface Elev.: 814.5 (Fl.) ELEVATION (Fl.)	DEPTH (FL.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	FIELD TEST RESULTS	UNCONFINED COMPRESSIVE STRENGTH (psf)	WATER CONTENT (%)	ATTERBERG LIMITS	
									LL-PL-PI	PERCENT FINES
3' Topsoil										
SILTY SAND (SM), brown, loose to medium dense										
		18			18	6-7-4 N=11		4		
		18			18	3-2-2 N=4		4	NP	30
		5								
		18			18	3-2-3 N=5		7		
		9.0								
		15			15	3-4-6 N=10		17		
		10								
		18			18	3-2-4 N=6		20	32-15-17	78
		20			18	3-4-4 N=8		21		

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEG SMART LOG-NO WELL 04155168 BORE LOGS.GPJ

Stratification lines are approximate. In-situ, the transition may be gradual. Hammer Type: Automatic  
 \*Classification estimated from disturbed samples. Core samples and petrographic analysis may reveal other rock types.

<b>Advancement Method:</b> Hollow Stem Auger to 30 feet Wash Boring below 30 feet	See Exhibit A-3 for description of field procedures. See Appendix B for description of laboratory procedures and additional data (if any).	<b>Notes:</b>	
<b>Abandonment Method:</b> Backfilled with cuttings above 4'; grouted 4' to 14'; backfilled with cuttings from 14' to termination depth.	See Appendix C for explanation of symbols and abbreviations.		

<b>WATER LEVEL OBSERVATIONS</b> 18 ft While Drilling 16.5 ft After Boring 13 ft After One Day	 9522 E 47th Pl, Ste D Tulsa, OK	Boring Started: 10/19/2016 Drill Rig: ATV 945 Project No.: 04155168	Boring Completed: 10/19/2016 Driller: KW Exhibit: A-4
--	--	---	---

### BORING LOG NO. B-1

PROJECT: Bridge 181A over Little Deep Fork Creek	CLIENT: Guy Engineering
SITE: Creek County, Oklahoma	

GRAPHIC LOG	LOCATION See Exhibit A-2 Station: 61+46 Offset: 7' RT Surface Elev.: 814.5 (Fl.) ELEVATION (Fl.)	DEPTH (FL.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	FIELD TEST RESULTS	UNCONFINED COMPRESSIVE STRENGTH (psf)	WATER CONTENT (%)	ATTERBERG LIMITS	
									LL-PL-PI	PERCENT FINES
		27.0								
		25			18	2-2-2 N=4		21		
		27.0								
		30			18	7-10-18 N=28		17	27-14-13	85
		34.0								
		35			12	26-50/6" 50/1 1/16" 50/1/2"		15		
		40								

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEG SMART LOG-NO WELL 04155168 BORE LOGS.GPJ


Stratification lines are approximate. In-situ, the transition may be gradual. Hammer Type: Automatic  
 \*Classification estimated from disturbed samples. Core samples and petrographic analysis may reveal other rock types.


<b>Advancement Method:</b> Hollow Stem Auger to 30 feet Wash Boring below 30 feet	See Exhibit A-3 for description of field procedures. See Appendix B for description of laboratory procedures and additional data (if any).	<b>Notes:</b>	
<b>Abandonment Method:</b> Backfilled with cuttings above 4'; grouted 4' to 14'; backfilled with cuttings from 14' to termination depth.	See Appendix C for explanation of symbols and abbreviations.		

<b>WATER LEVEL OBSERVATIONS</b> 18 ft While Drilling 16.5 ft After Boring 13 ft After One Day	 9522 E 47th Pl, Ste D Tulsa, OK	Boring Started: 10/19/2016 Drill Rig: ATV 945 Project No.: 04155168	Boring Completed: 10/19/2016 Driller: KW Exhibit: A-4
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DESCRIPTION	REVISIONS	DATE
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Friday, July 28, 2017 10:14:36 AM V:\13-850 Br 181A Little Deep Fork Ck - Creek 3\CIV3D\PLANS\850-BORING LOGS.dwg

BORING LOG NO. B-1 <span style="float: right;">Page 3 of 3</span>										
PROJECT: Bridge 181A over Little Deep Fork Creek					CLIENT: Guy Engineering					
SITE: Creek County, Oklahoma										
GRAPHIC LOG	LOCATION	DEPTH (FT.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	FIELD TEST RESULTS	UNCONFINED COMPRESSIVE STRENGTH (psf)	WATER CONTENT (%)	ATTERBERG LIMITS	PERCENT FINES
Station: 61+46 Offset: 7' RT Surface Elev.: 814.5 (FL) ELEVATION (FL)										
SHALE+ with sandstone seams, red, soft to moderately hard (continued)		45				50/3/8* 50/1/16*				
SANDSTONE+ brown, cemented		50				50/1 1/4* 50/0*				
Boring Terminated at 54.5 Feet		54.5				50/1/8* 50/0*				
Stratification lines are approximate. In-situ, the transition may be gradual. Hammer Type: Automatic *Classification estimated from disturbed samples. Core samples and petrographic analysis may reveal other rock types.										
Advancement Method: Hollow Stem Auger to 30 feet Wash Boring below 30 feet		See Exhibit A-3 for description of field procedures. See Appendix B for description of laboratory procedures and additional data (if any).			Notes:					
Abandonment Method: Backfilled with cuttings above 4'; grouted 4' to 14'; backfilled with cuttings from 14' to termination depth.		See Appendix C for explanation of symbols and abbreviations.			Boring Started: 10/19/2016 Boring Completed: 10/19/2016 Drill Rig: ATV 945 Driller: KW Project No.: 04155168 Exhibit: A-4					
<b>WATER LEVEL OBSERVATIONS</b> 18 ft While Drilling 16.5 ft After Boring 13 ft After One Day										

BORING LOG NO. B-2 <span style="float: right;">Page 1 of 4</span>										
PROJECT: Bridge 181A over Little Deep Fork Creek					CLIENT: Guy Engineering					
SITE: Creek County, Oklahoma										
GRAPHIC LOG	LOCATION	DEPTH (FT.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	FIELD TEST RESULTS	UNCONFINED COMPRESSIVE STRENGTH (psf)	WATER CONTENT (%)	ATTERBERG LIMITS	PERCENT FINES
Station: 62+15 Offset: 13' LT Surface Elev.: 814.7 (FL) ELEVATION (FL)										
3' topsoil SANDY SILT (ML), brown, loose to medium dense		18				3-5-6 N=11		8		
		18				6-5-5 N=10		7		
		18				4-5-4 N=9		5	NP	64
		18				4-3-3 N=6		4		
CLAYEY SAND (SC), grayish-brown, loose		18				3-2-4 N=6		20	25-13-12	27
		18				2-2-3 N=5		18		
Stratification lines are approximate. In-situ, the transition may be gradual. Hammer Type: Automatic *Classification estimated from disturbed samples. Core samples and petrographic analysis may reveal other rock types.										
Advancement Method: Hollow Stem Auger to 33.5 feet Wash Boring below 33.5 feet		See Exhibit A-3 for description of field procedures. See Appendix B for description of laboratory procedures and additional data (if any).			Notes:					
Abandonment Method: Backfilled with cuttings above 4'; grouted 4' to 14'; backfilled with cuttings from 14' to termination depth.		See Appendix C for explanation of symbols and abbreviations.			Boring Started: 10/20/2016 Boring Completed: 10/20/2016 Drill Rig: ATV 945 Driller: KW Project No.: 04155168 Exhibit: A-5					
<b>WATER LEVEL OBSERVATIONS</b> 13.5 ft While Sampling 13 ft After Boring										

BR. 181A OVER LITTLE DEEP FORK CREEK COUNTY		Design	BSF	07/17
BRIDGE "A"		Detail	BLP	07/17
<b>BORING LOGS</b> <b>SHEET 2 OF 5</b>		Check	JRW	07/17
		Squad	Eng. GUY	
<b>STATE OF OKLAHOMA</b>	GUY ENGINEERING SERVICES, INC.	JOB PIECE NO.	29407(04)	SHEET NO. B006

### BORING LOG NO. B-2

Page 2 of 4

PROJECT: Bridge 181A over Little Deep Fork Creek CLIENT: Guy Engineering  
 SITE: Creek County, Oklahoma

DEPTH (ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	FIELD TEST RESULTS	UNCONFINED COMPRESSIVE STRENGTH (psf)	WATER CONTENT (%)	ATTERBERG LIMITS	PERCENT FINES
23.5								
25			18	2-2-2 N=4		21	NP	36
30			18	2-1-2 N=3		23		
35			18	4-5-6 N=11		18		
40			18	6-8-10 N=18		17		

Stratification lines are approximate. In-situ, the transition may be gradual. Hammer Type: Automatic  
 \*Classification estimated from disturbed samples. Core samples and petrographic analysis may reveal other rock types.

Advancement Method: Hollow Stem Auger to 33.5 feet Wash Boring below 33.5 feet  
 Abandonment Method: Backfilled with cuttings above 4'; grouted 4' to 14'; backfilled with cuttings from 14' to termination depth.  
 See Exhibit A-3 for description of field procedures. See Appendix B for description of laboratory procedures and additional data (if any). See Appendix C for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS  
 13.5 ft While Sampling  
 13 ft After Boring

Terracon  
 9522 E 47th Pl, Ste D  
 Tulsa, OK

Boring Started: 10/20/2016 Boring Completed: 10/20/2016  
 Drill Rig: ATV 945 Driller: KW  
 Project No.: 04155168 Exhibit: A-5

### BORING LOG NO. B-2

Page 3 of 4

PROJECT: Bridge 181A over Little Deep Fork Creek CLIENT: Guy Engineering  
 SITE: Creek County, Oklahoma

DEPTH (ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in.)	FIELD TEST RESULTS	UNCONFINED COMPRESSIVE STRENGTH (psf)	WATER CONTENT (%)	ATTERBERG LIMITS	PERCENT FINES
45			18	3-6-10 N=16		20		
50			5	50/5" 50/3/8" 50/1/8"		12		
55				50/1/2" 50/1/8"				
60				50/7/16" 50/1/16"				

Stratification lines are approximate. In-situ, the transition may be gradual. Hammer Type: Automatic  
 \*Classification estimated from disturbed samples. Core samples and petrographic analysis may reveal other rock types.

Advancement Method: Hollow Stem Auger to 33.5 feet Wash Boring below 33.5 feet  
 Abandonment Method: Backfilled with cuttings above 4'; grouted 4' to 14'; backfilled with cuttings from 14' to termination depth.  
 See Exhibit A-3 for description of field procedures. See Appendix B for description of laboratory procedures and additional data (if any). See Appendix C for explanation of symbols and abbreviations.

WATER LEVEL OBSERVATIONS  
 13.5 ft While Sampling  
 13 ft After Boring

Terracon  
 9522 E 47th Pl, Ste D  
 Tulsa, OK

Boring Started: 10/20/2016 Boring Completed: 10/20/2016  
 Drill Rig: ATV 945 Driller: KW  
 Project No.: 04155168 Exhibit: A-5

Friday, July 28, 2017 10:14:46 AM  
 V:\13-850 Br 181A Little Deep Fork Ck - Creek 3\CIV3D\PLANS\850-BORING LOGS.dwg

BR. 181A OVER LITTLE DEEP FORK BRIDGE "A"	CREEK COUNTY	Design	BSF	07/17
		Detail	BLP	07/17
		Check	JRW	07/17
		Squad	Eng. GUY	
<b>STATE OF OKLAHOMA</b>	GUY ENGINEERING SERVICES, INC.	JOB PIECE NO.	29407(04)	SHEET NO. B007

### BORING LOGS SHEET 3 OF 5

DESCRIPTION	REVISIONS	DATE
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**BORING LOG NO. B-2**

Page 4 of 4

PROJECT: Bridge 181A over Little Deep Fork Creek CLIENT: Guy Engineering  
 SITE: Creek County, Oklahoma

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (FL)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in)	FIELD TEST RESULTS	UNCONFINED COMPRESSIVE STRENGTH (psf)	WATER CONTENT (%)	ATTERBERG LIMITS	PERCENT FINES	
	Station: 62+15 Offset: 13' LT Surface Elev.: 814.7 (FL)								LL-PL-PI		
	DEPTH ELEVATION (FL)										
	<b>SHALE+</b> with sandstone seams, red and gray, soft to moderately hard (continued)	65				50/9/16* 50/1/8"					
	69.2	745.6				50/1/2* 50/1/16"					
	Boring Terminated at 69.2 Feet										

Stratification lines are approximate. In-situ, the transition may be gradual. Hammer Type: Automatic  
 \*Classification estimated from disturbed samples. Core samples and petrographic analysis may reveal other rock types.

Advancement Method: Hollow Stem Auger to 33.5 feet Wash Boring below 33.5 feet  
 Abandonment Method: Backfilled with cuttings above 4'; grouted 4' to 14'; backfilled with cuttings from 14' to termination depth.

<p>See Exhibit A-3 for description of field procedures.          See Appendix B for description of laboratory procedures and additional data (if any).          See Appendix C for explanation of symbols and abbreviations.</p>	<p>Notes:</p>
<p><b>WATER LEVEL OBSERVATIONS</b></p> <p>▽ 13.5 ft While Sampling          ▽ 13 ft After Boring</p>	<p>Boring Started: 10/20/2016          Drill Rig: ATV 945          Project No.: 04155168</p>
<p><b>Terracon</b>          9522 E 47th Pl, Ste D          Tulsa, OK</p>	<p>Boring Completed: 10/20/2016          Driller: KW          Exhibit: A-5</p>

**BORING LOG NO. B-3**

Page 1 of 2

PROJECT: Bridge 181A over Little Deep Fork Creek CLIENT: Guy Engineering  
 SITE: Creek County, Oklahoma

GRAPHIC LOG	LOCATION See Exhibit A-2	DEPTH (FL)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in)	FIELD TEST RESULTS	UNCONFINED COMPRESSIVE STRENGTH (psf)	WATER CONTENT (%)	ATTERBERG LIMITS	PERCENT FINES
	Station: 63+05 Offset: 8' RT Surface Elev.: 813.8 (FL)								LL-PL-PI	
	DEPTH ELEVATION (FL)									
	<b>LEAN CLAY (CL)</b> with sand, brown, stiff	4.0			18	5-5-8 N=13		12	28-18-10	76
					18	7-5-3 N=8		9		
	<b>SILTY SAND (SM)</b> , light brown, loose	5			18	4-2-2 N=4		5	NP	43
					18	3-3-2 N=5		11	NP	9
	<b>POORLY GRADED SAND (SP)</b> , brown, loose	8.5			18	3-3-2 N=5		11	NP	9
					18	31-33-50/5"		12		
	<b>SANDSTONE+</b> , reddish-brown and gray, poorly cemented	14.0			18	50/1 3/8" 50/1 5/8"				
					18	50/2 5/16" 50/15/16"				

Stratification lines are approximate. In-situ, the transition may be gradual. Hammer Type: Automatic  
 \*Classification estimated from disturbed samples. Core samples and petrographic analysis may reveal other rock types.

Advancement Method: Hollow Stem Auger to 23.5 feet Wash Boring below 23.5 feet  
 Abandonment Method: Backfilled with cuttings above 4'; grouted 4' to 14'; backfilled with cuttings from 14' to termination depth.

<p>See Exhibit A-3 for description of field procedures.          See Appendix B for description of laboratory procedures and additional data (if any).          See Appendix C for explanation of symbols and abbreviations.</p>	<p>Notes:</p>
<p><b>WATER LEVEL OBSERVATIONS</b></p> <p>▽ 12 ft While Drilling          ▽ 12 ft After Boring</p>	<p>Boring Started: 10/20/2016          Drill Rig: ATV 945          Project No.: 04155168</p>
<p><b>Terracon</b>          9522 E 47th Pl, Ste D          Tulsa, OK</p>	<p>Boring Completed: 10/20/2016          Driller: KW          Exhibit: A-6</p>

Friday, July 28, 2017 10:14:56 AM V:\13-850 Br 181A Little Deep Fork Ck - Creek 3\CIV3D\PLANS\850-BORING LOGS.dwg

BR. 181A OVER LITTLE DEEP FORK CREEK COUNTY		Design	BSF	07/17
BRIDGE "A"		Detail	BLP	07/17
<b>BORING LOGS</b> <b>SHEET 4 OF 5</b>		Check	JRW	07/17
		Squad	Eng. GUY	
<b>STATE OF OKLAHOMA</b>	GUY ENGINEERING SERVICES, INC.	JOB PIECE NO.	29407(04)	SHEET NO. B008

DESCRIPTION	REVISIONS	DATE

**BORING LOG NO. B-3**

Page 2 of 2

**PROJECT:** Bridge 181A over Little Deep Fork Creek      **CLIENT:** Guy Engineering  
**SITE:** Creek County, Oklahoma

GRAPHIC LOG	LOCATION See Exhibit A-2 Station: 63+05    Offset: 8' RT Surface Elev.: 813.8 (FL) ELEVATION (FT)	DEPTH (FT)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	RECOVERY (in)	FIELD TEST RESULTS	UNCONFINED COMPRESSIVE STRENGTH (psf)	WATER CONTENT (%)	ATTERBERG LIMITS	
									LL-PL-PI	PERCENT FINES
		25				50/3 1/4" 50/7/8" 50/3"		11		
		30				50/3 3/4" 50/4 3/16"				
		35				50/1 1/4" 50/9/16" 50/3"		12		
<p>Boring Terminated at 35.4 Feet</p>										

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GED SMART LOG-NO WELL 04155168 BORE LOGS.GPJ

Advancement Method: Hollow Stem Auger to 23.5 feet Wash Boring below 23.5 feet		See Exhibit A-3 for description of field procedures. See Appendix B for description of laboratory procedures and additional data (if any). See Appendix C for explanation of symbols and abbreviations.		Notes: Hammer Type: Automatic *Classification estimated from disturbed samples. Core samples and petrographic analysis may reveal other rock types.	
Abandonment Method: Backfilled with cuttings above 4'; grouted 4' to 14'; backfilled with cuttings from 14' to termination depth.				Boring Started: 10/20/2016      Boring Completed: 10/20/2016 Drill Rig: ATV 945      Driller: KW Project No.: 04155168      Exhibit: A-6	
<b>WATER LEVEL OBSERVATIONS</b> ▽ 12 ft While Drilling ▽ 12 ft After Boring					

Friday, July 28, 2017 10:15:06 AM V:\13-850 Br 181A Little Deep Fork Ck - Creek 3\CIV3D\PLANS\850-BORING LOGS.dwg

BR. 181A OVER LITTLE DEEP FORK		CREEK COUNTY		Design	BSF	07/17
BRIDGE "A"				Detail	BLP	07/17
				Check	JRW	07/17
				Squad	Engr. GUY	
<b>STATE OF OKLAHOMA</b>		GUY ENGINEERING SERVICES, INC.				
JOB PIECE NO. 29407(04)		SHEET NO. B009				

# STORM WATER MANAGEMENT PLAN ▲



DESCRIPTION	REVISIONS	DATE
NEW SHEET FROM ODOT		8/18/17
UPDATE LAT-LON		9/7/17

## SITE DESCRIPTION

## EROSION AND SEDIMENT CONTROLS

PROJECT LIMITS: S 465TH W AVE OVER LITTLE DEEP FORK CREEK EXTENDING FROM 0.25 MILES NORTH OF DEPEW, OKLAHOMA TO INTERSTATE 44. W 241ST ST S FROM INTERSECTION WITH S 465TH W AVE TO 350' EAST OF INTERSECTION.

PROJECT DESCRIPTION: BRIDGE AND APPROACH ROADWAY PLANS FOR S 465TH W AVE OVER LITTLE DEEP FORK CREEK. PROJECT REPLACES A 72' PONY TRUSS SPAN WITH A TYPE III PC BEAM 65'-85' BRIDGE, SK00' WITH TR-3 RAILS.

SUGGESTED SEQUENCE OF EROSION CONTROL ACTIVITIES: \_\_\_\_\_  
 PRIOR TO INITIATING SOIL DISTURBING ACTIVITIES, THE CONTRACTOR WILL INSTALL ALL PERIMETER TEMPORARY SEDIMENT CONTROLS SPECIFIED. STRIP, STOCKPILE AND STABILIZE TOPSOIL. CLEAR AND GRUB ONLY IN NECESSARY AREAS, PRESERVING AS MUCH NATIVE VEGETATION AS POSSIBLE. INSTALL, MAINTAIN AND/OR MOVE TEMPORARY SEDIMENT ITEMS WITH CONSTRUCTION OPERATIONS AS PRACTICAL. IF DIRECTED BY THE ENGINEER, PLANT TEMPORARY SEEDING, REPLACE SALVAGED TOPSOIL AND DEVICES WHEN AN ACCEPTABLE VEGETATIVE COVER (AT LEAST 70%) HAS BEEN ATTAINED. AS SITE CONDITIONS WARRANT, THE CONTRACTOR MAY CHOOSE TO MODIFY THE TYPE OR ARRANGEMENT OF SPECIFIED PRACTICES TO IMPROVE THEIR EFFECTIVENESS AS APPROVED BY THE ENGINEER. THE CONTRACTOR WILL MAINTAIN A LOG OF MAJOR SOIL DISTURBANCE ACTIVITIES, AND ALSO THE DATES OF INSTALLATION OF EROSION CONTROL MEASURES.

SOIL TYPE: PULASKI FINE SANDY LOAM

TOTAL AREA OF THE CONSTRUCTION SITE: 11.01 ACRES (479,554 SF)

ESTIMATED AREA TO BE DISTURBED: 11.01 ACRES (479,554 SF)

OFFSITE AREA TO BE DISTURBED: \_\_\_\_\_  
 (FOR CONTRACTOR USE)

TOTAL IMPERVIOUS AREA PRE-CONSTRUCTION: 85,181.09 SF

TOTAL IMPERVIOUS AREA POST-CONSTRUCTION: 79242.16 SF

POST-CONSTRUCTION RUNOFF COEFFICIENT OF THE SITE: 0.42

LATITUDE & LONGITUDE OF CENTER OF PROJECT: 35.811860°, -96.512221° ▲

### PROJECT WILL DISCHARGE TO:

NAME OF RECEIVING WATERS: LITTLE DEEP FORK CREEK

SENSITIVE WATERS OR WATERSHEDS: YES  NO

303(d) IMPAIRED WATERS: YES  NO

IF YES, LIST IMPAIRMENT: TURBIDITY, ENTEROCOCC, E-COLI

LOCATED IN A TMDL: YES  NO

LAKE THUNDERBIRD TMDL: YES  NO

MS4 ENTITY: YES  NO

NOTE: IF YES, LOCATION: CREEK COUNTY

THIS SHEET SHOULD BE USED IN CONJUNCTION WITH A DRAINAGE MAP THAT ILLUSTRATES THE DRAINAGE PATTERNS/PATHWAYS AND RECEIVING WATERS FOR THIS PROJECT. THIS SHEET SHOULD ALSO BE USED WITH THE EROSION CONTROL SUMMARIES, PAY ITEMS, & NOTES.

### SOIL STABILIZATION PRACTICES:

- TEMPORARY SEEDING
- PERMANENT SODDING, SPRIGGING OR SEEDING
- VEGETATIVE MULCHING
- SOIL RETENTION BLANKET
- PRESERVATION OF EXISTING VEGETATION

NOTE: TEMPORARY EROSION CONTROL METHODS MUST BE USED ON ALL DISTURBED AREAS WHERE CONSTRUCTION ACTIVITIES HAVE CEASED FOR OVER 14 DAYS. METHODS USED WILL BE AS SHOWN ON PLANS, OR AS DIRECTED BY THE ENGINEER.

### STRUCTURAL PRACTICES:

- STABILIZED CONSTRUCTION EXIT
- TEMPORARY SILT FENCE
- TEMPORARY SILT DIKES
- TEMPORARY FIBER LOG
- DIVERSION, INTERCEPTOR OR PERIMETER DIKES
- DIVERSION, INTERCEPTOR OR PERIMETER SWALES
- ROCK FILTER DAMS
- TEMPORARY SLOPE DRAIN
- PAVED DITCH W/ DITCH LINER PROTECTION
- TEMPORARY DIVERSION CHANNELS
- TEMPORARY SEDIMENT BASINS
- TEMPORARY SEDIMENT TRAPS
- TEMPORARY SEDIMENT FILTERS
- TEMPORARY SEDIMENT REMOVAL
- RIP RAP
- INLET SEDIMENT FILTER
- TEMPORARY BRUSH SEDIMENT BARRIERS
- SANDBAG BERMS
- TEMPORARY STREAM CROSSINGS

### OFFSITE VEHICLE TRACKING:

- HAUL ROADS DAMPENED FOR DUST CONTROL
- LOADED HAUL TRUCKS TO BE COVERED WITH TARPULIN
- EXCESS DIRT ON ROAD REMOVED DAILY

### NOTES:

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THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE FOLLOWING:

### MAINTENANCE AND INSPECTION:

ALL EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED IN GOOD WORKING ORDER FROM THE BEGINNING OF CONSTRUCTION UNTIL AN ACCEPTABLE VEGETATIVE COVER IS ESTABLISHED. INSPECTION BY THE CONTRACTOR AND ANY NECESSARY REPAIRS SHALL BE PERFORMED ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT GREATER THAN 0.5 INCH AS RECORDED BY A NON-FREEZING RAIN GAUGE TO BE LOCATED ON SITE. POTENTIALLY ERODIBLE AREAS, DRAINAGEWAYS, MATERIAL STORAGE, STRUCTURAL DEVICES, CONSTRUCTION ENTRANCES AND EXITS ALONG WITH EROSION AND SEDIMENT CONTROL LOCATIONS ARE EXAMPLES OF SITES THAT NEED TO BE INSPECTED.

### WASTE MATERIALS:

PROPER MANAGEMENT AND DISPOSAL OF CONSTRUCTION WASTE MATERIAL IS REQUIRED BY THE CONTRACTOR. MATERIALS INCLUDE STOCKPILES, SURPLUS, DEBRIS AND ALL OTHER BY-PRODUCTS FROM THE CONSTRUCTION PROCESS. PRACTICES INCLUDE DISPOSAL, PROPER MATERIALS HANDLING, SPILL PREVENTION AND CLEANUP MEASURES. CONTROLS AND PRACTICES SHALL MEET THE REQUIREMENTS OF ALL FEDERAL, STATE AND LOCAL AGENCIES.

### HAZARDOUS MATERIALS:

PROPER MANAGEMENT AND DISPOSAL OF HAZARDOUS WASTE MATERIALS IS REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING MANUFACTURER'S RECOMMENDATIONS, STATE AND FEDERAL REGULATIONS TO ENSURE CORRECT HANDLING, DISPOSAL, SPILL PREVENTION AND CLEANUP MEASURES. EXAMPLES INCLUDE BUT ARE NOT LIMITED TO: PAINTS, ACIDS, CLEANING SOLVENTS, CHEMICAL ADDITIVES, CONCRETE CURING COMPOUNDS AND CONTAMINATED SOILS.

### GENERAL NOTES:

A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED TO COMPLY WITH THE OKLAHOMA POLLUTION DISCHARGE ELIMINATION SYSTEM (OPDES) REGULATIONS. THIS PLAN IS INITIATED DURING THE DESIGN PHASE, CONFIRMED IN THE PRE-WORK MEETINGS AND AVAILABLE ON THE JOB SITE ALONG WITH COPIES OF THE NOTICE OF INTENT (NOI) FORM AND PERMIT CERTIFICATE THAT HAVE BEEN FILED WITH THE OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ). THE PLAN MUST BE KEPT CURRENT WITH UP-TO-DATE AMENDMENTS DURING THE PROGRESSION OF THE PROJECT. ALL CONTRACTOR OFF-SITE OPERATIONS ASSOCIATED WITH THE PROJECT MUST BE DOCUMENTED IN THE SWPPP, I.E., BORROW PITS, WORK ROADS, DISPOSAL SITES, ASPHALT/CONCRETE PLANTS, ETC. THE BASIC GOAL OF STORM WATER MANAGEMENT IS TO IMPROVE WATER QUALITY BY REDUCING POLLUTANTS IN STORM WATER DISCHARGES. RUNOFF FROM CONSTRUCTION SITES HAS A POTENTIAL FOR POLLUTION DUE TO EXPOSED SOILS AND THE PRESENCE OF HAZARDOUS MATERIALS USED IN THE CONSTRUCTION PROCESS. THE PREVENTION OF SOIL EROSION, CONTAINMENT OF HAZARDOUS MATERIALS AND/OR THE INTERCEPTION OF THESE POLLUTANTS BEFORE LEAVING THE CONSTRUCTION SITE ARE THE BEST PRACTICES FOR CONTROLLING STORM WATER POLLUTION.

THE FOLLOWING SECTIONS OF THE 2009 ODOT STANDARD SPECIFICATIONS SHOULD BE NOTED:

- 103.05 BONDING REQUIREMENTS
- 104.10 FINAL CLEANING UP
- 104.12 CONTRACTOR'S RESPONSIBILITY FOR WORK
- 104.13 ENVIRONMENTAL PROTECTION
- 106.08 STORAGE AND HANDLING OF MATERIAL
- 107.01 LAWS, RULES AND REGULATIONS TO BE OBSERVED
- 107.20 STORM WATER MANAGEMENT
- 220 MANAGEMENT OF EROSION, SEDIMENTATION AND STORM WATER POLLUTION PREVENTION AND CONTROL
- 221 TEMPORARY SEDIMENT CONTROL

### IN ADDITION:

\*ODEQ GENERAL PERMIT (OKR10) FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES WITHIN THE STATE OF OKLAHOMA.\* ODEQ, WATER QUALITY DIVISION, SEPTEMBER 13, 2017.

DESIGN	BSF	09/17	OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN DIVISION
DRAWN	BLP	09/17	
CHECKED	PAE	09/17	
APPROVED	JRW	09/17	<b>STORMWATER MANAGEMENT PLAN</b>
SQUAD			

COUNTY: CREEK HIGHWAY: NS465 STATE JOB NO.: 29407(04) SHEET NO.: R001

Thursday, September 07, 2017 1:10:43 PM V:\13-850 Br 181A Little Deep Fork Ck-Creek 3\CIV3D\PLANS\850-STORMWATER MANAGEMENT PLAN.dwg

# SECTION 404 PERMIT COMPLIANCE

DESCRIPTION	REVISIONS	DATE

## SECTION 404 PERMIT COMPLIANCE

## SECTION 404 PERMIT COMPLIANCE

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**SEE NATIONWIDE PERMIT 14 IN THE CONTRACT**

## SECTION 404 PERMIT COMPLIANCE

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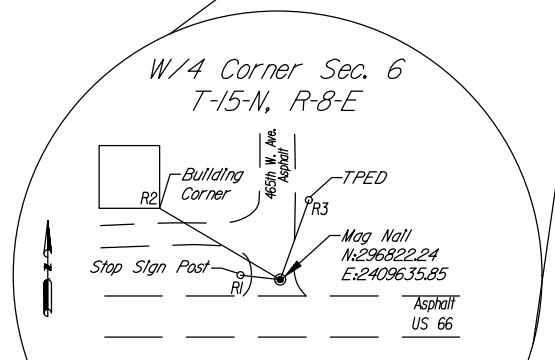
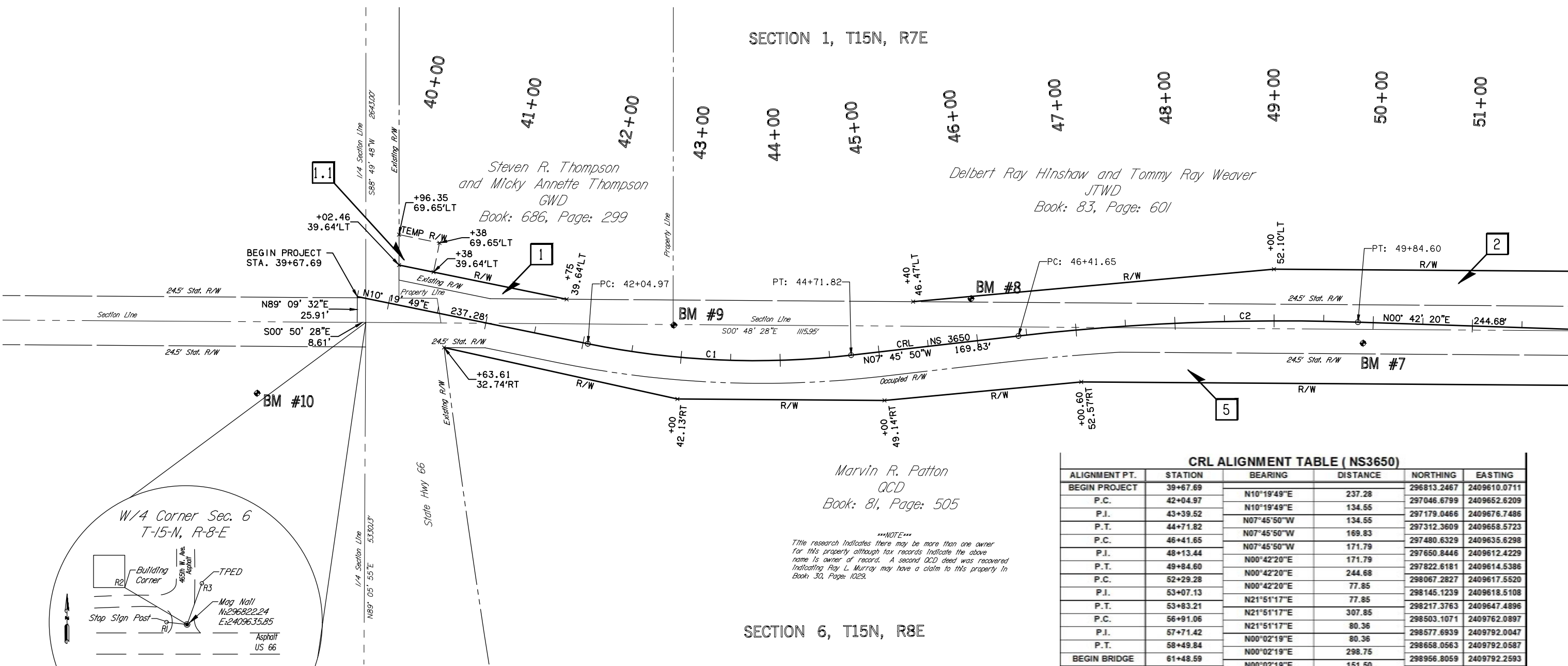
SECTION 404 PERMIT COMPLIANCE

DESIGN	BSF	07/17	OKLAHOMA DEPARTMENT OF TRANSPORTATION GUY ENGINEERING SERVICES, INC.
DRAWN	BLP	07/17	
CHECKED	PAE	07/17	SECTION 404 PERMIT COMPLIANCE
APPROVED	JRW	07/17	
SQUAD			
COUNTY _____ HIGHWAY/ROAD _____ STATE JOB NO. 29407(04) SHEET NO. R002			



Benchmark - *7 Sta. 49+90.49, 21.07' RT. 80d In 22" Pecan ELEV-814.38 N-297828 E-2409635	Benchmark - *8 Sta. 45+98.41, 42.80' LT. 80d In 30" Walnut ELEV-818.18 N-297432 E-2409599	Benchmark - *9 Sta. 42+89.47, 31.59' LT. 80d In 24" Elm ELEV-816.81 N-297132 E-2409632	Benchmark - *10 80d In PP ELEV-816.96 N-296714 E-2409709
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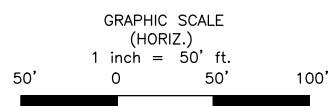
DESCRIPTION	REVISIONS	DATE
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LINE	BEARING	DIST.
R1	N 83° W	416'
R2	N 59° W	146.0'
R3	N 19° E	88.0'

ALIGNMENT PT.	STATION	BEARING	DISTANCE	NORTHING	EASTING
BEGIN PROJECT	39+67.69	N10°19'49"E	237.28	296813.2467	2409610.0711
P.C.	42+04.97	N10°19'49"E	134.55	297046.6799	2409652.6209
P.J.	43+39.52	N07°45'50"W	134.55	297179.0466	2409676.7486
P.T.	44+71.82	N07°45'50"W	169.83	297312.3609	2409658.5723
P.C.	46+41.65	N07°45'50"W	171.79	297480.6329	2409635.6298
P.I.	48+13.44	N00°42'20"E	171.79	297650.8446	2409612.4229
P.T.	49+84.60	N00°42'20"E	244.68	297822.6181	2409614.5386
P.C.	52+29.28	N00°42'20"E	77.85	298067.2827	2409617.5520
P.J.	53+07.13	N00°42'20"E	77.85	298145.1239	2409618.5108
P.T.	53+83.21	N21°51'17"E	77.85	298217.3763	2409647.4896
P.C.	56+91.06	N21°51'17"E	307.85	298503.1071	2409762.0897
P.J.	57+71.42	N21°51'17"E	80.36	298577.6939	2409792.0047
P.T.	58+49.84	N00°02'19"E	80.36	298658.0563	2409792.0587
BEGIN BRIDGE	61+48.59	N00°02'19"E	298.75	298956.8059	2409792.2593
END BRIDGE	63+00.09	N00°02'19"E	151.50	299108.3059	2409792.3611
P.C.	64+46.88	N00°02'19"E	146.79	299255.0938	2409792.4597
P.I.	65+04.33	N00°02'19"E	57.46	299312.5497	2409792.4982
P.T.	65+60.48	N21°05'42"W	57.46	299366.1552	2409771.8188
END PROJECT	67+50.00	N21°05'42"W	189.52	299542.9699	2409703.6090

CURVE NO.	P.I. STATION	Δ	D	R	T	L	E	P.C.		P.I.		C.C.		P.T.		DESIGN V MPH	FULL SUPER
								NORTHING	EASTING	NORTHING	EASTING	NORTHING	EASTING	NORTHING	EASTING		
C1	43+39.52	18°05'39.46"	06°46'50.04"	845.00	134.55	266.86	10.65	297046.6799	2409652.621	297179.0466	2409676.749	297198.2085	2408821.318	297312.3609	2409658.5723	35	3.60%
C2	48+13.44	08°28'10.48"	02°28'10.72"	2,320.00	171.79	342.95	6.35	297480.6329	2409635.6298	297650.8446	2409612.4229	297794.0456	2411934.3626	297822.6181	2409614.5386	45	2.60%
C3	53+07.13	21°08'56.31"	13°44'23.90"	417.00	77.85	153.92	7.20	298067.2827	2409617.5520	298145.1239	2409618.5108	298062.1471	2410034.5204	298217.3763	2409647.4896	45	7.60%
C4	57+71.42	21°48'58.03"	13°44'23.90"	417.00	80.36	158.78	7.67	298503.1071	2409762.0897	298577.6939	2409792.0047	298658.3363	2409375.0588	298658.0563	2409792.0587	45	7.60%
C5	65+04.33	21°08'01.00"	18°36'09.00"	308.00	57.46	113.61	5.31	299255.0938	2409792.4597	299312.5497	2409792.4982	299255.3006	2409484.4597	299366.1552	2409771.8188	35	6.20%



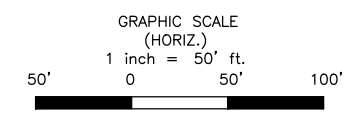
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DRAWN	BLP	07/17	
CHECKED	PAE	07/17	
APPROVED	JRW	07/17	
SQUAD			

**ALIGNMENT DATA**

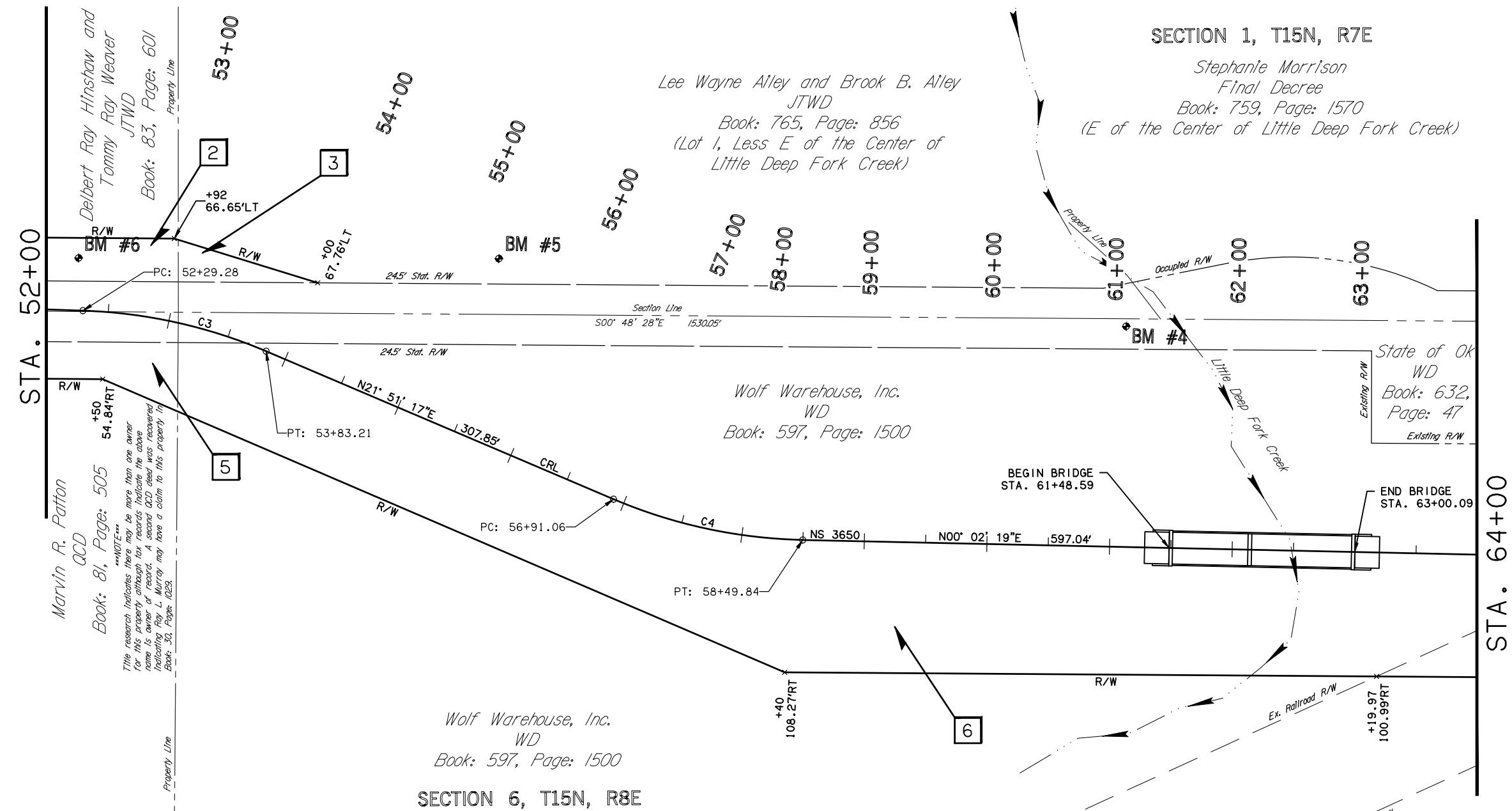
STATE JOB NO. 29407(04) SHEET NO. R003  
CREEK COUNTY BR. 181A LITTLE DEEP FORK

F:\1day, July 28, 2017 10:16:07 AM  
 V:\13-850 Br 181A Little Deep Fork Ck - Creek 3\CIV3D\PLANS\850-ALIGNMENT DATA SHEETS.dwg

Benchmark - *4 Sta. 61+09.76, 179.78' Lt. Ch. *X on Wingwall ELEV-814.77 N-298918 E-2409612	Benchmark - *5 Sta. 55+28.27, 143.78' Lt. 60d w/ Brace In 8' Elm ELEV-813.76 N-298905 E-2409568	Benchmark - *6 Sta. 52+24.36, 42.76' Lt. 80d In 2" Pecan ELEV-813.87 N-2989062 E-2409574
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DESCRIPTION	REVISIONS	DATE
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CRL ALIGNMENT TABLE ( NS3650)

ALIGNMENT PT.	STATION	BEARING	DISTANCE	NORTHING	EASTING
BEGIN PROJECT	39+67.69			296813.2467	2409610.0711
P.C.	42+04.97	N10°19'49"E	237.28	297046.6799	2409652.6209
P.I.	43+39.52	N10°19'49"E	134.55	297179.0466	2409676.7486
P.T.	44+71.82	N07°45'50"W	134.55	297312.3609	2409658.5723
P.C.	46+41.65	N07°45'50"W	169.83	297480.6329	2409635.6298
P.I.	48+13.44	N07°45'50"W	171.79	297650.8446	2409612.4229
P.T.	49+84.60	N00°42'20"E	171.79	297822.6181	2409614.5386
P.C.	52+29.28	N00°42'20"E	244.68	298067.2827	2409617.5520
P.I.	53+07.13	N00°42'20"E	77.85	298145.1239	2409618.5108
P.T.	53+83.21	N21°51'17"E	77.85	298217.3763	2409647.4896
P.C.	56+91.06	N21°51'17"E	307.85	298503.1071	2409762.0897
P.I.	57+71.42	N21°51'17"E	80.36	298577.6939	2409792.0047
P.T.	58+49.84	N00°02'19"E	80.36	298658.0563	2409792.0587
BEGIN BRIDGE	61+48.59	N00°02'19"E	298.75	298956.8059	2409792.2593
END BRIDGE	63+00.09	N00°02'19"E	151.50	299108.3059	2409792.3611
P.C.	64+46.88	N00°02'19"E	146.79	299255.0938	2409792.4597
P.I.	65+04.33	N00°02'19"E	57.46	299312.5497	2409792.4982
P.T.	65+60.48	N21°05'42"W	57.46	299366.1552	2409771.8188
END PROJECT	67+50.00	N21°05'42"W	189.52	299542.9699	2409703.6090

CRL CURVE DATA TABLE ( NS3650)

CURVE NO.	P.I. STATION	Δ	D	R	T	L	E	P.C.		P.I.		C.C.		P.T.		DESIGN V MPH	FULL SUPER
								NORTHING	EASTING	NORTHING	EASTING	NORTHING	EASTING	NORTHING	EASTING		
C1	43+39.52	18°05'39.46"	06°46'50.04"	845.00	134.55	266.86	10.65	297046.6799	2409652.621	297179.0466	2409676.749	297198.2085	2408821.318	297312.3609	2409658.5723	35	3.60%
C2	48+13.44	08°28'10.48"	02°28'10.72"	2,320.00	171.79	342.95	6.35	297480.6329	2409635.6298	297650.8446	2409612.4229	297794.0456	2411934.3626	297822.6181	2409614.5386	45	2.60%
C3	53+07.13	21°08'56.31"	13°44'23.90"	417.00	77.85	153.92	7.20	298067.2827	2409617.5520	298145.1239	2409618.5108	298062.1471	2410034.5204	298217.3763	2409647.4896	45	7.60%
C4	57+71.42	21°48'58.03"	13°44'23.90"	417.00	80.36	158.78	7.67	298503.1071	2409762.0897	298577.6939	2409792.0047	298658.3363	2409375.0588	298658.0563	2409792.0587	45	7.60%
C5	65+04.33	21°08'01.00"	18°36'09.00"	308.00	57.46	113.61	6.31	299255.0938	2409792.4597	299312.5497	2409792.4982	299255.3006	2409484.4597	299366.1552	2409771.8188	35	6.20%

DESIGN	BSF	11/16	OKLAHOMA DEPARTMENT OF TRANSPORTATION GUY ENGINEERING SERVICES, INC.
DRAWN	BLP	11/16	
CHECKED	PAE	11/16	
APPROVED	JRW	11/16	
SQUAD			

ALIGNMENT DATA

STATE JOB NO. 29407(04) SHEET NO. R004

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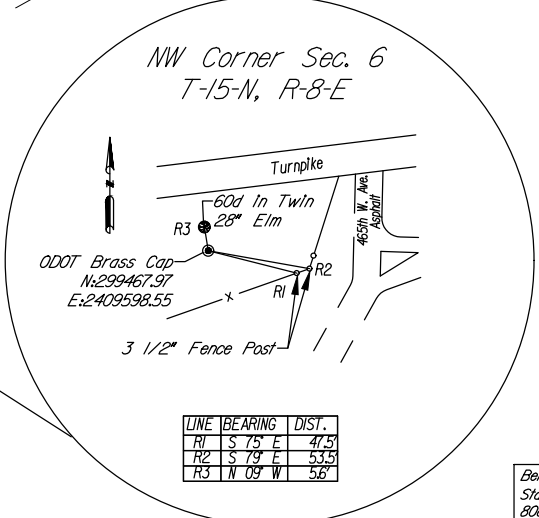
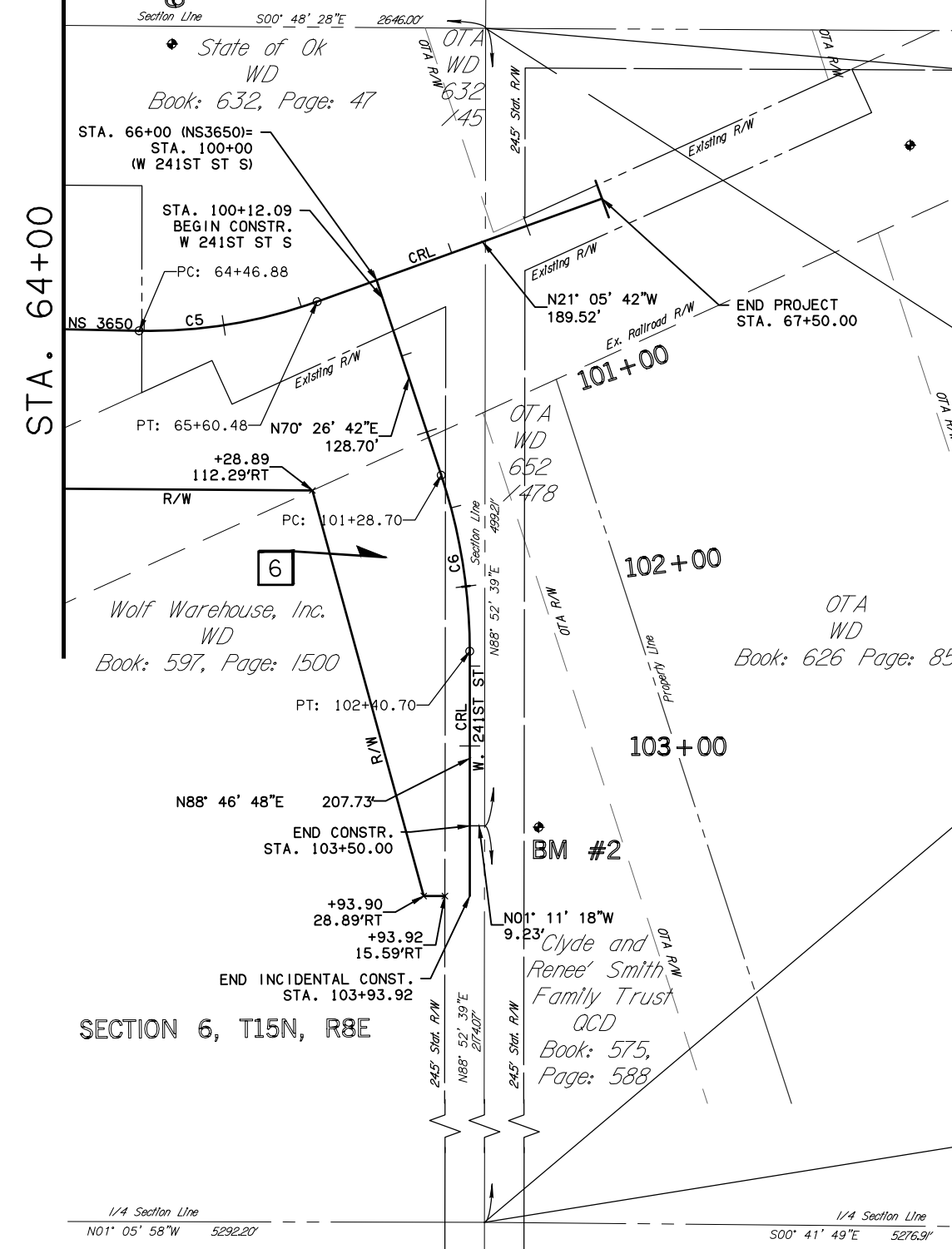
Stephanie Morrison  
Final Decree  
Book: 759, Page: 1570  
(E of the Center of Little  
Deep Fork Creek)

SECTION 36, T16N, R7E

Stephanie Morrison  
Transfer-on-Death Deed  
Book: 721, Page: 179  
(E/2 of the NE/4 and the SE/4 less approx. 1.51  
acres owned by OTA, of the Section 36, T-16-N, R-7-E)

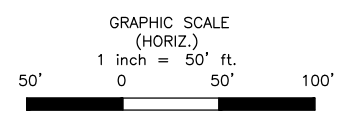
DESCRIPTION	REVISIONS	DATE

CURVE NO.	P.I. STATION	Δ	D	R	T	L	E	P.C.		P.I.		C.C.		P.T.		DESIGN V MPH	FULL SUPER
								NORTHING	EASTING	NORTHING	EASTING	NORTHING	EASTING	NORTHING	EASTING		
C5	65+04.33	21°08'01.00"	18°36'09.00"	308.00	57.46	113.61	5.31	299255.0938	2409792.4597	299312.5497	2409792.4982	299255.3006	2409484.4597	299366.1552	2409771.8188	35	6.20%

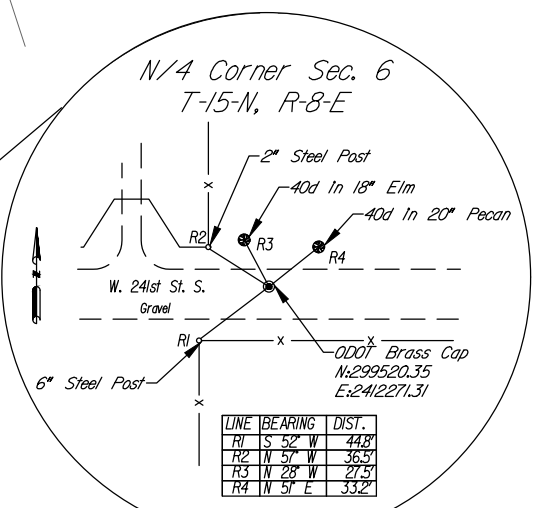


Timothy E. McCormick  
Correction JTWD  
Book: 898, Page: 514  
(Part of the NW/4 and SW/4, lying North  
of OTA ROW in Section 31, T-16-N, R-8-E)

Benchmark	Sta.	Dist.	Elev.
Benchmark - #3	Sta. 64+86.84	178.89' Lt.	80d In 12" Elm
Benchmark - #2	Sta. 103+50.86	43.16' Lt.	80d In 32" Sycamore



SECTION 31, T16N, R8E



ALIGNMENT PT.	STATION	BEARING	DISTANCE	NORTHING	EASTING
BEGIN PROJECT	39+67.69			296813.2467	2409610.0711
P.C.	42+04.97	N10°19'49"E	237.28	297046.6799	2409652.6209
P.I.	43+39.52	N10°19'49"E	134.55	297179.0466	2409676.7486
P.T.	44+71.82	N07°45'50"W	134.55	297312.3609	2409658.5723
P.C.	46+41.65	N07°45'50"W	169.83	297480.6329	2409635.6298
P.I.	48+13.44	N07°45'50"W	171.79	297650.8446	2409612.4229
P.T.	49+84.60	N00°42'20"E	244.68	297822.6181	2409614.5386
P.C.	52+29.28	N00°42'20"E	77.85	298067.2827	2409617.5520
P.I.	53+07.13	N00°42'20"E	77.85	298145.1239	2409618.5108
P.T.	53+83.21	N21°51'17"E	77.85	298217.3763	2409647.4896
P.C.	56+91.06	N21°51'17"E	307.85	298503.1071	2409762.0897
P.I.	57+71.42	N21°51'17"E	80.36	298577.6939	2409792.0047
P.T.	58+49.84	N00°02'19"E	80.36	298658.0563	2409792.0587
BEGIN BRIDGE	61+48.59	N00°02'19"E	298.75	298956.8059	2409792.2593
END BRIDGE	63+00.09	N00°02'19"E	151.50	299108.3059	2409792.3611
P.C.	64+46.88	N00°02'19"E	146.79	299255.0938	2409792.4597
P.I.	65+04.33	N00°02'19"E	57.46	299312.5497	2409792.4982
P.T.	65+60.48	N21°05'42"W	57.46	299366.1552	2409771.8188
END PROJECT	67+50.00	N21°05'42"W	189.52	299542.9699	2409703.6090

ALIGNMENT PT.	STATION	BEARING	DISTANCE	NORTHING	EASTING
BEGIN CRL	100+00.00			299403.0143	2409757.5997
P.C.	101+28.70	N70°26'42E	128.70	299446.0915	2409878.8767
P.I.	101+85.18	N70°26'42E	56.48	299464.9972	2409932.1027
P.T.	102+40.70	N88°46'48E	55.52	299466.1997	2409988.5739
END PROJECT	103+50.00	N88°46'48E	109.30	299468.5266	2410097.8466
END INCIDENTAL	103+93.92	N88°46'48E	43.92	299469.4616	2410141.7583

CURVE NO.	P.I. STATION	Δ	D	R	T	L	E	P.C.		P.I.		C.C.		P.T.		DESIGN V MPH	FULL SUPER
								NORTHING	EASTING	NORTHING	EASTING	NORTHING	EASTING	NORTHING	EASTING		
C6	101+85.18	18°20'06.07"	16°22'12.80"	350.00	56.48	112.00	4.53	299446.0915	2409878.8767	299464.9972	2409932.1027	299116.2790	2409996.0251	299466.1997	2409988.5739	35	6.00%

DESIGN	BSF	02/17	OKLAHOMA DEPARTMENT OF TRANSPORTATION GUY ENGINEERING SERVICES, INC.
DRAWN	BLP	02/17	
CHECKED	PAE	02/17	
APPROVED	JRW	02/17	
SQUAD			

**ALIGNMENT DATA**

STATE JOB NO. 29407(04) SHEET NO. R005  
CREEK COUNTY BR. 181A LITTLE DEEP FORK

File: July 28, 2017 10:16:31 AM  
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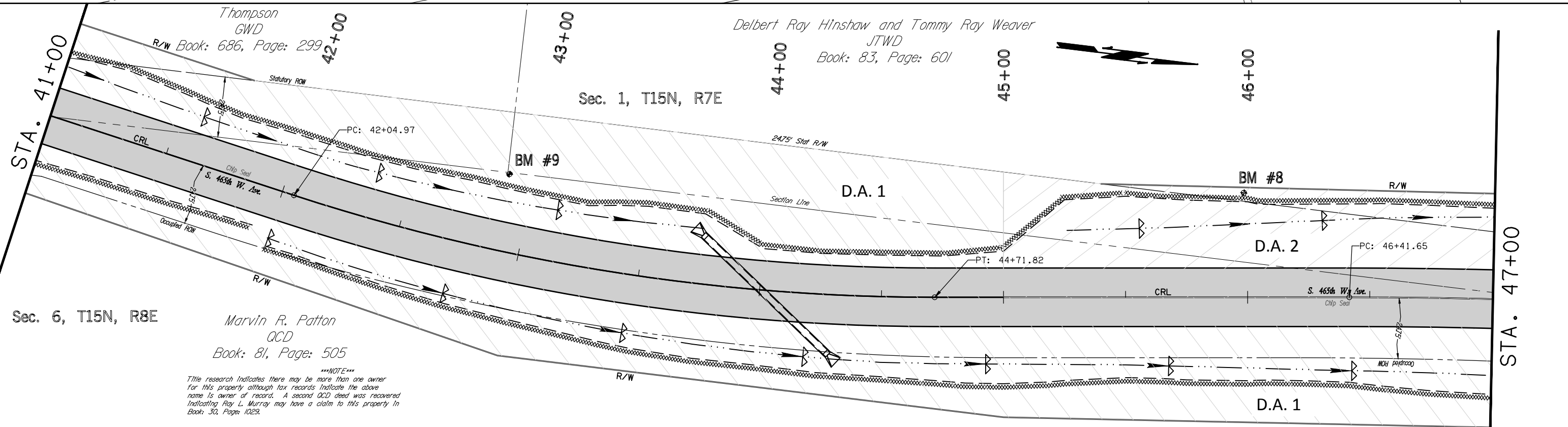
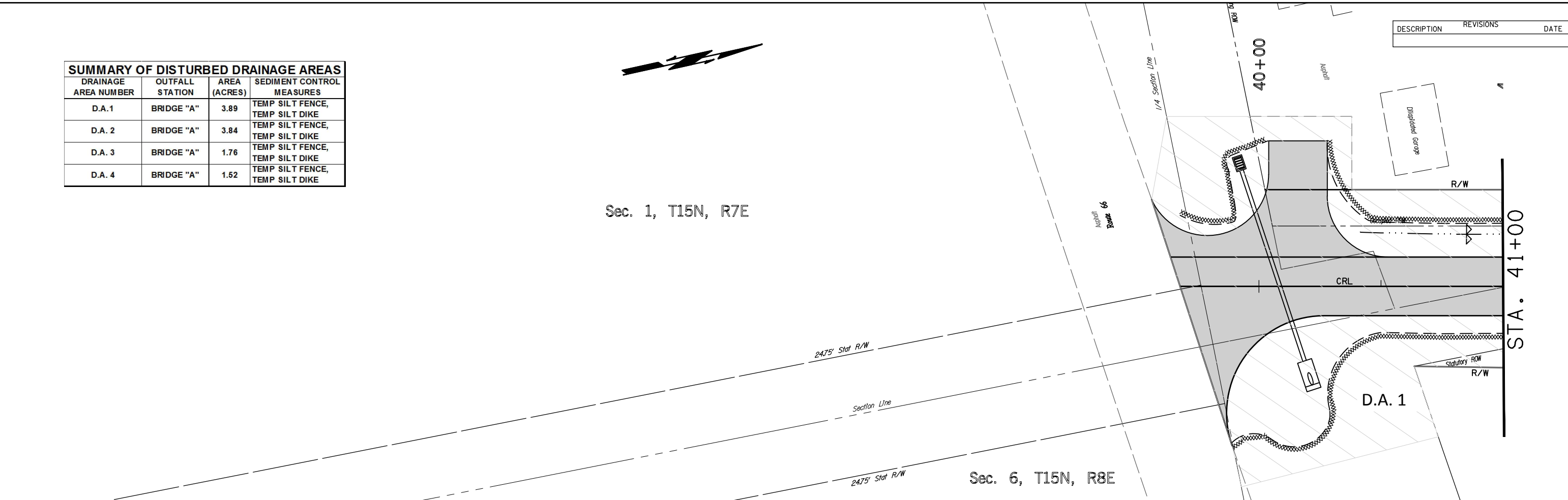
DESCRIPTION	REVISIONS	DATE

SUMMARY OF DISTURBED DRAINAGE AREAS			
DRAINAGE AREA NUMBER	OUTFALL STATION	AREA (ACRES)	SEDIMENT CONTROL MEASURES
D.A. 1	BRIDGE "A"	3.89	TEMP SILT FENCE, TEMP SILT DIKE
D.A. 2	BRIDGE "A"	3.84	TEMP SILT FENCE, TEMP SILT DIKE
D.A. 3	BRIDGE "A"	1.76	TEMP SILT FENCE, TEMP SILT DIKE
D.A. 4	BRIDGE "A"	1.52	TEMP SILT FENCE, TEMP SILT DIKE



Sec. 1, T15N, R7E

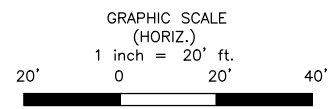
Sec. 6, T15N, R8E



\*\*\*NOTE\*\*\*  
Title research indicates there may be more than one owner for this property although tax records indicate the above name is owner of record. A second QCD deed was recovered indicating Roy L. Murray may have a claim to this property in Book: 30, Page: 1029.

**LEGEND**

- TEMPORARY SILT DIKE INSTALLATION
- TEMPORARY SILT FENCE INSTALLATION



DESIGN	BSF	07/17
DRAWN	BLP	07/17
CHECKED	PAE	07/17
APPROVED	JRW	07/17
SQUAD		

OKLAHOMA DEPARTMENT OF TRANSPORTATION  
GUY ENGINEERING SERVICES, INC.

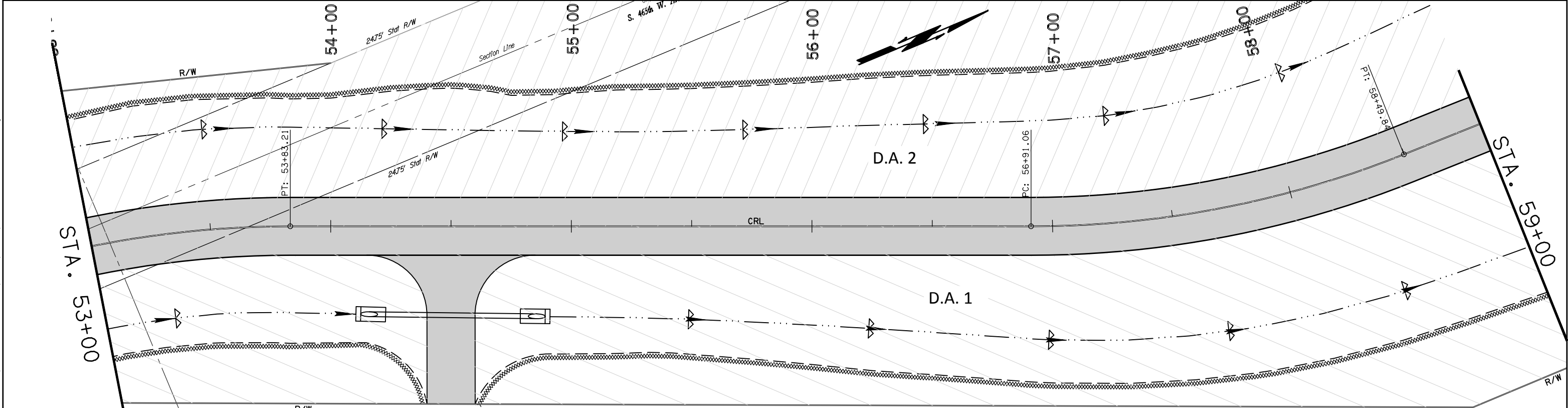
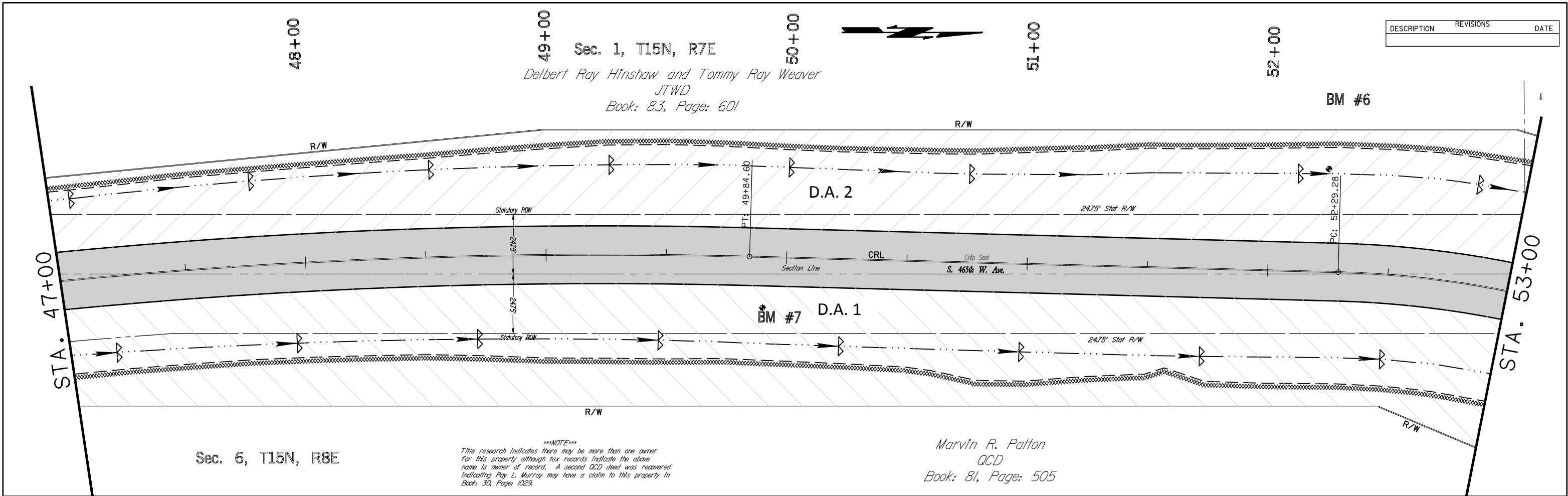
**EROSION CONTROL**

STATE JOB NO. 29407(04) SHEET NO. R006

CREEK COUNTY BR. 181A LITTLE DEEP FORK

Friday, July 28, 2017 10:17:07 AM V:\13-850 Br 181A Little Deep Fork Ck - Creek 3\CIV3D\PLANS\850-EROSION CONTROL.dwg

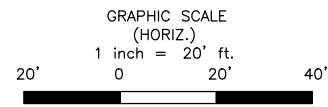
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 Friday, July 28, 2017 10:17:19 AM



**LEGEND**

	TEMPORARY SILT DIKE INSTALLATION
	TEMPORARY SILT FENCE INSTALLATION

Sec. 6, T15N, R8E  
 Wolf Warehouse, Inc.  
 WD  
 Book: 597, Page: 1500



DESIGN	BSF	11/16
DRAWN	BLP	11/16
CHECKED	PAE	11/16
APPROVED	JRW	11/16
SQUAD		

OKLAHOMA DEPARTMENT OF TRANSPORTATION  
GUY ENGINEERING SERVICES, INC.

**EROSION CONTROL**

STATE JOB NO. 29407(04) SHEET NO. ROOT

CREEK COUNTY BR. 181A LITTLE DEEP FORK

Lee Wayne Ailey and Brook B. Ailey  
 JTWD  
 Book: 765, Page: 856  
 (Lot 1, Less E of the Center of  
 Little Deep Fork Creek)  
 2475' Stat R/W

Sec. 1, T15N, R7E

Stephanie Morrison  
 Final Decree  
 Book: 759, Page: 1570  
 (E of the Center of Little Deep  
 Fork Creek)

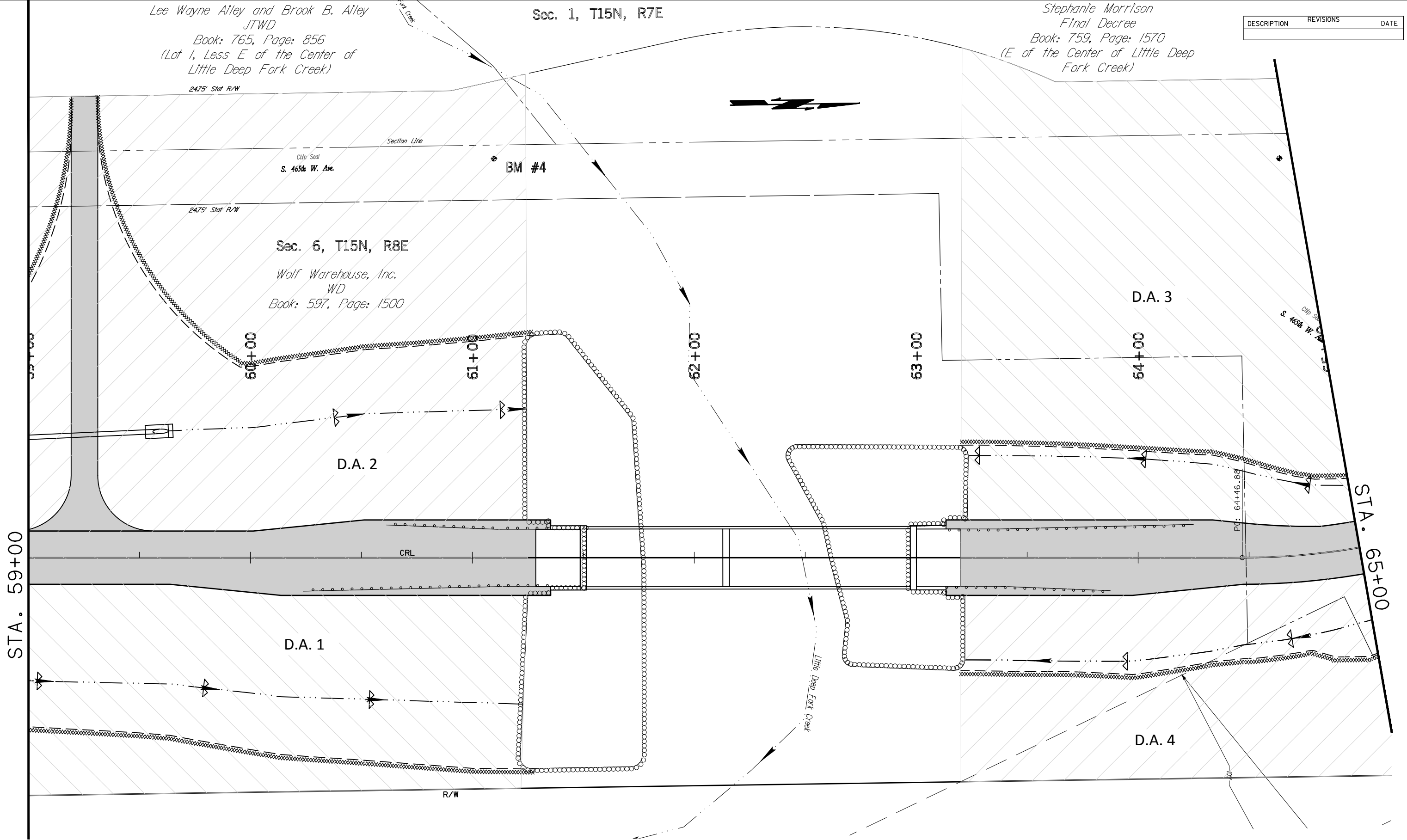
DESCRIPTION	REVISIONS	DATE

Sec. 6, T15N, R8E  
 Wolf Warehouse, Inc.  
 WD  
 Book: 597, Page: 1500

STA. 59+00

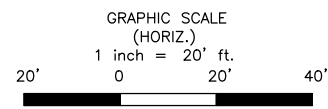
STA. 65+00

F:\13-850 Br 181A Little Deep Fork Ck - Creek 3\CIV3D\PLANS\850-EROSION CONTROL.dwg  
 Friday, July 28, 2017 10:17:28 AM



**LEGEND**

- TEMPORARY SILT DIKE INSTALLATION (HORIZ.)
- TEMPORARY SILT FENCE INSTALLATION



DESIGN	BSF	11/16
DRAWN	BLP	11/16
CHECKED	PAE	11/16
APPROVED	JRW	11/16
SQUAD		

OKLAHOMA DEPARTMENT OF TRANSPORTATION  
 GUY ENGINEERING SERVICES, INC.

**EROSION CONTROL**

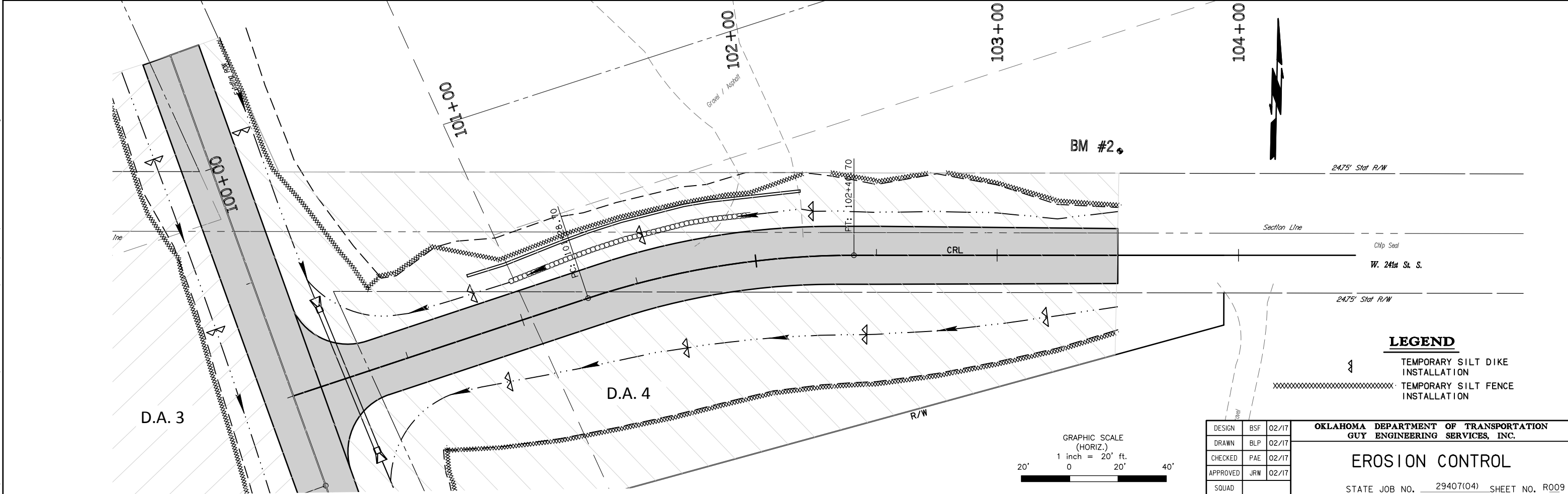
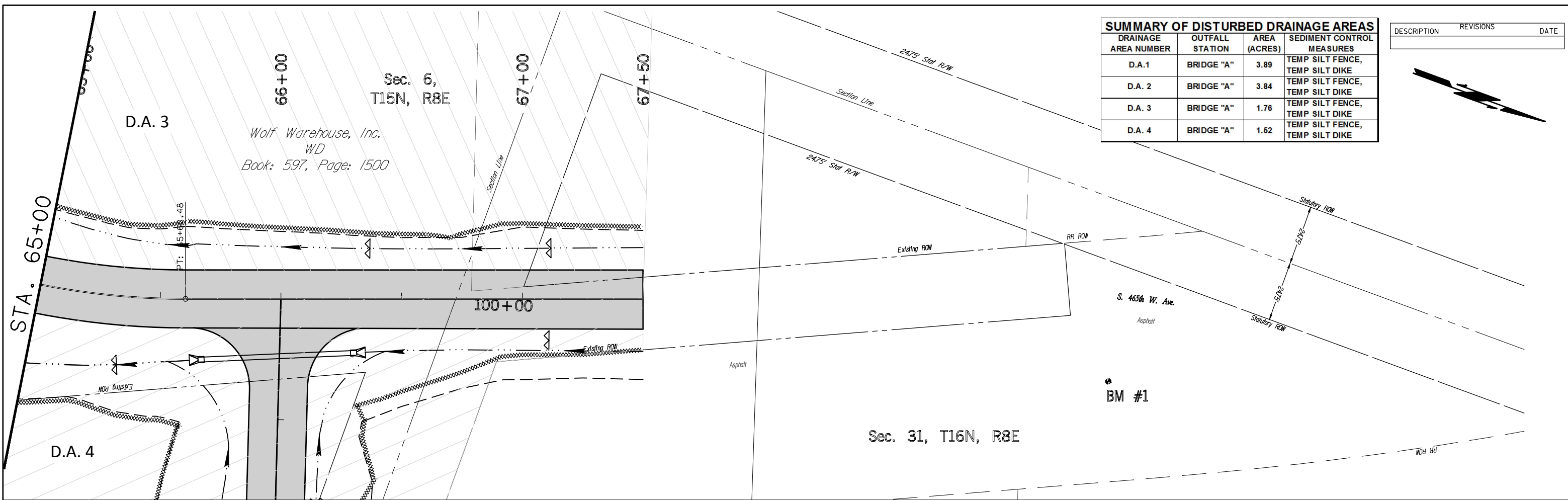
STATE JOB NO. 29407(04) SHEET NO. R008

CREEK COUNTY BR. 181A LITTLE DEEP FORK

Friday, July 28, 2017 10:17:41 AM  
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SUMMARY OF DISTURBED DRAINAGE AREAS			
DRAINAGE AREA NUMBER	OUTFALL STATION	AREA (ACRES)	SEDIMENT CONTROL MEASURES
D.A. 1	BRIDGE "A"	3.89	TEMP SILT FENCE, TEMP SILT DIKE
D.A. 2	BRIDGE "A"	3.84	TEMP SILT FENCE, TEMP SILT DIKE
D.A. 3	BRIDGE "A"	1.76	TEMP SILT FENCE, TEMP SILT DIKE
D.A. 4	BRIDGE "A"	1.52	TEMP SILT FENCE, TEMP SILT DIKE

DESCRIPTION	REVISIONS	DATE



DESIGN	BSF	02/17
DRAWN	BLP	02/17
CHECKED	PAE	02/17
APPROVED	JRW	02/17
SQUAD		

OKLAHOMA DEPARTMENT OF TRANSPORTATION  
GUY ENGINEERING SERVICES, INC.

## EROSION CONTROL

STATE JOB NO. 29407(04) SHEET NO. R009

CREEK COUNTY BR. 181A LITTLE DEEP FORK

AT&T -  
Kyle Humble 918-596-4240

ONG  
Jonathan Meadows 918-831-8215

East Central OK Elec. Co. -  
Steve Beam 918-756-0873

Level 3 Communications -  
Clinton Gray 918-547-3757

Sprint Fiber Optic -  
Wick Jenkins 918-622-9483

NOTE:  
ALL UTILITY LOCATIONS  
ARE APPROXIMATE.

**LEGEND**

BENCHMARK

PROPOSED ASPH. SURFACING

GRAPHIC SCALE  
(HORIZ.)  
1 inch = 20' ft.  
0 20' 40'

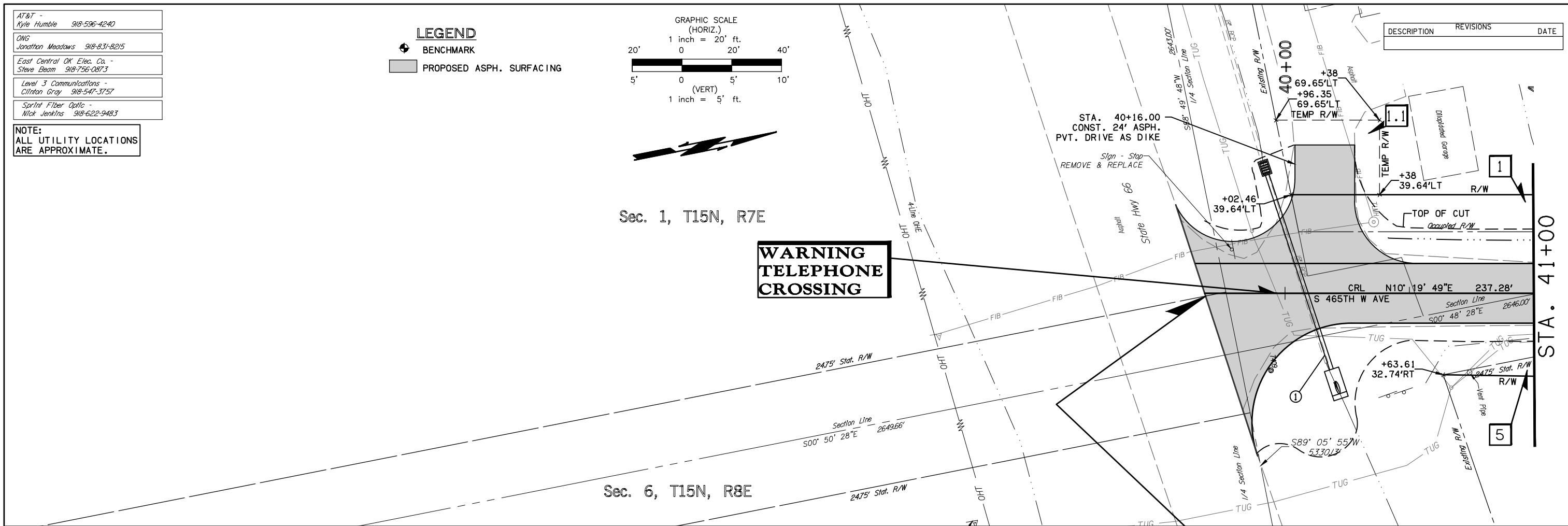
(VERT.)  
1 inch = 5' ft.  
5' 0 5' 10'

Sec. 1, T15N, R7E

**WARNING  
TELEPHONE  
CROSSING**

Sec. 6, T15N, R8E

DESCRIPTION	REVISIONS	DATE

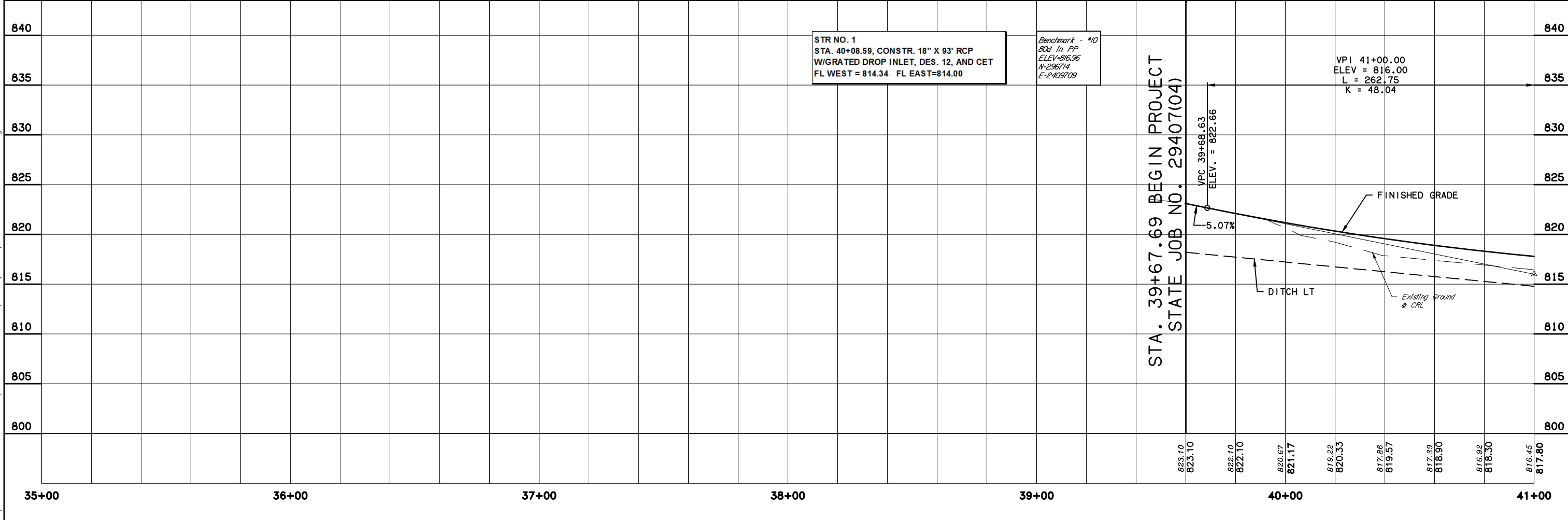


STR NO. 1  
STA. 40+08.59, CONSTR. 18" X 93' RCP  
W/GRATED DROP INLET, DES. 12, AND CET  
FL WEST = 814.34 FL EAST=814.00

Benchmark - \*10  
80d In PP  
ELEV=816.96  
N=296714  
E=2409709

VPI 41+00.00  
ELEV = 816.00  
L = 262.75  
K = 48.04

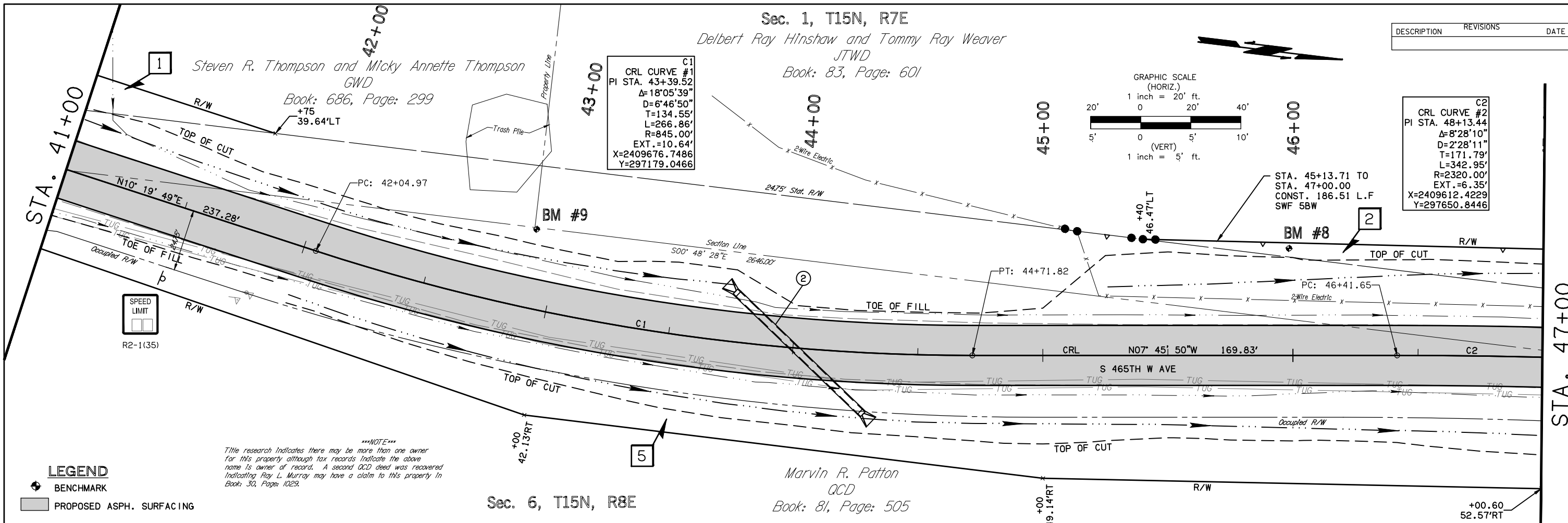
STA. 39+67.69 BEGIN PROJECT  
STATE JOB NO. 29407(04)



Friday, July 28, 2017 10:18:29 AM  
 W:\13-850 Br.181A Little Deep Fork Ck- Creek 3\CIV3D\PLANS\850-PLAN AND PROFILE.dwg



Friday, July 28, 2017 10:18:41 AM  
 W:\13-850 Br.181A Little Deep Fork Ck - Creek 3\CIV3D\PLANS\850-PLAN AND PROFILE.dwg



DESCRIPTION	REVISIONS	DATE

C1  
 CRL CURVE #1  
 PI STA. 43+39.52  
 $\Delta=18^{\circ}05'39''$   
 $D=6'46'50''$   
 $T=134.55'$   
 $L=266.86'$   
 $R=845.00'$   
 $EXT.=10.64'$   
 $X=2409676.7486$   
 $Y=2971179.0466$

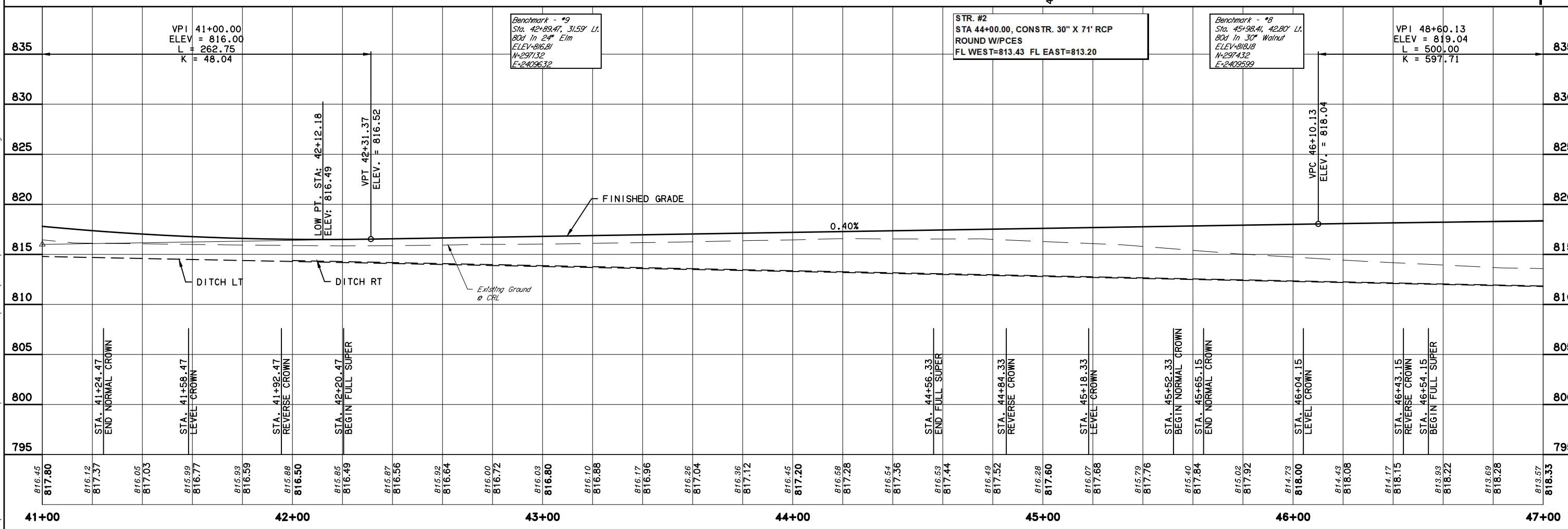
C2  
 CRL CURVE #2  
 PI STA. 48+13.44  
 $\Delta=8'28'10''$   
 $D=2'28'11''$   
 $T=171.79'$   
 $L=342.95'$   
 $R=2320.00'$   
 $EXT.=6.35'$   
 $X=2409612.4229$   
 $Y=297650.8446$

SPEED LIMIT  
 R2-1(35)

**LEGEND**  
 BENCHMARK  
 PROPOSED ASPH. SURFACING

\*\*\*NOTE\*\*\*  
 Title research indicates there may be more than one owner for this property although tax records indicate the above name is owner of record. A second QCD deed was recovered indicating Roy L. Murray may have a claim to this property in Book: 30, Page: 1029.

Sec. 6, T15N, R8E



Benchmark - #9  
 Sta. 42+89.47, 31.59' Lt.  
 80d In 2" Elm  
 ELEV=816.81  
 $N=297132$   
 $E=2409632$

STR. #2  
 STA 44+00.00, CONSTR. 30" X 71' RCP  
 ROUND W/C PIPES  
 FL WEST=813.43 FL EAST=813.20

Benchmark - #8  
 Sta. 45+98.41, 42.80' Lt.  
 80d In 30" Walnut  
 ELEV=818.18  
 $N=297432$   
 $E=2409599$

VPI 48+60.13  
 ELEV = 819.04  
 L = 500.00  
 K = 597.71

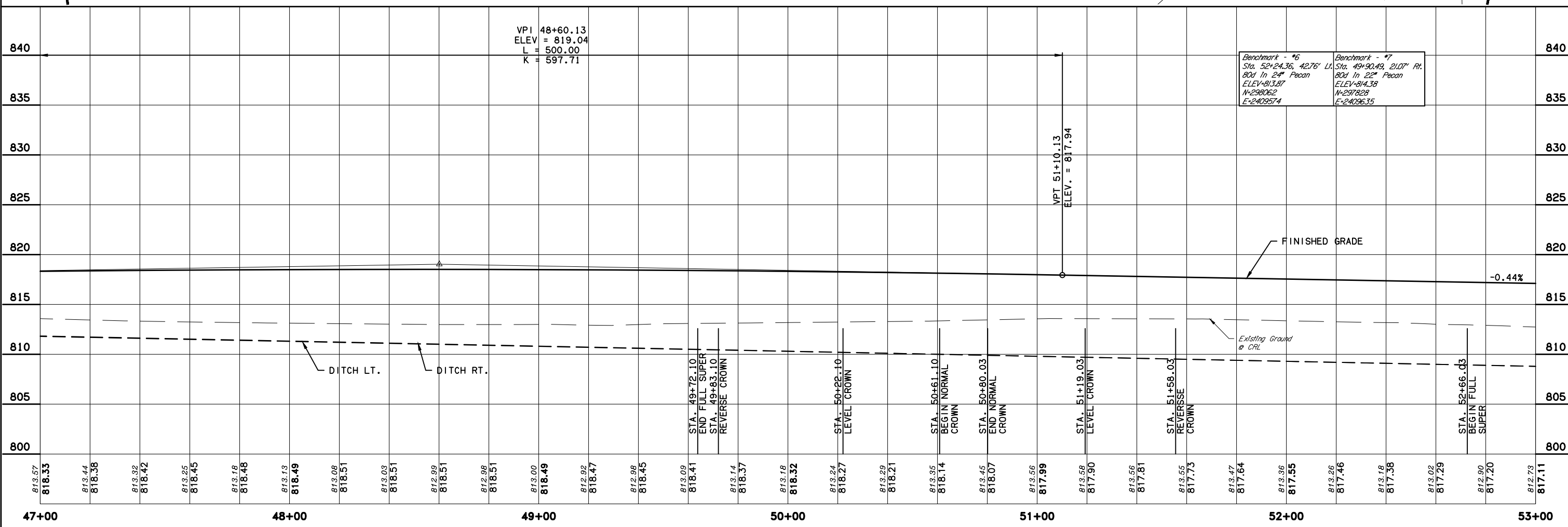
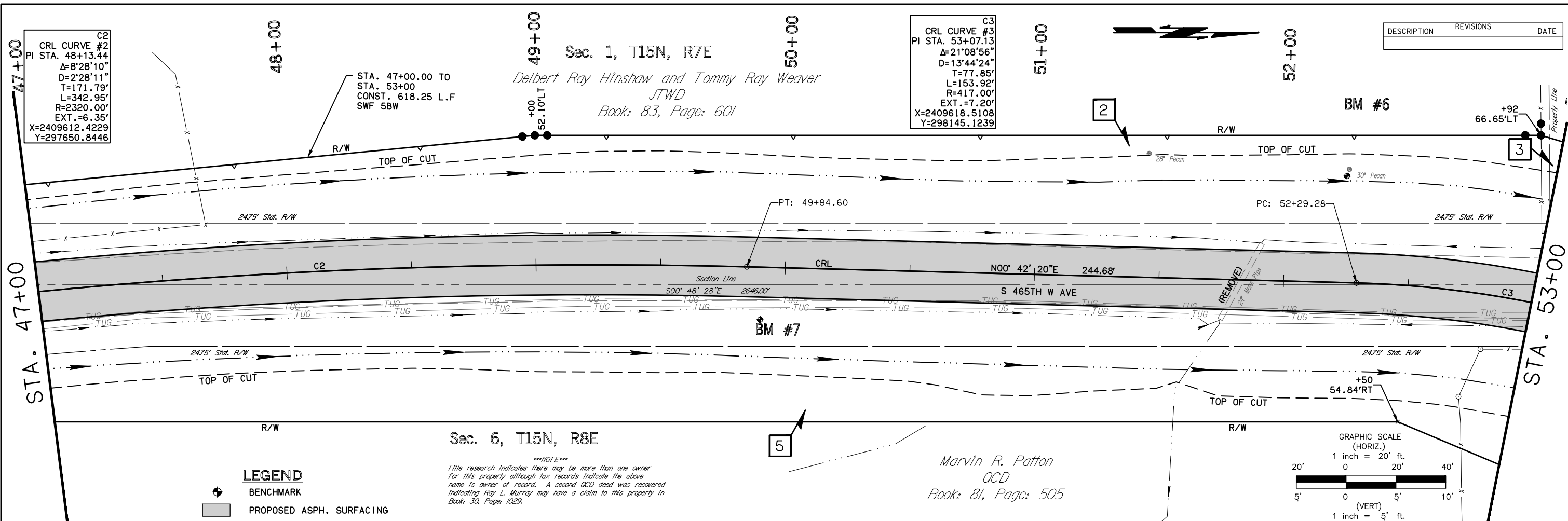
VPC 46+10.13  
 ELEV. = 818.04

STA. 41+24.47  
 END NORMAL CROWN  
 STA. 41+58.47  
 LEVEL CROWN  
 STA. 41+92.47  
 REVERSE CROWN  
 STA. 42+20.47  
 BEGIN FULL SUPER

STA. 44+56.33  
 END FULL SUPER  
 STA. 44+84.33  
 REVERSE CROWN  
 STA. 45+18.33  
 LEVEL CROWN  
 STA. 45+52.33  
 BEGIN NORMAL CROWN  
 STA. 45+65.15  
 END NORMAL CROWN

STA. 46+04.15  
 LEVEL CROWN  
 STA. 46+43.15  
 REVERSE CROWN  
 STA. 46+54.15  
 BEGIN FULL SUPER

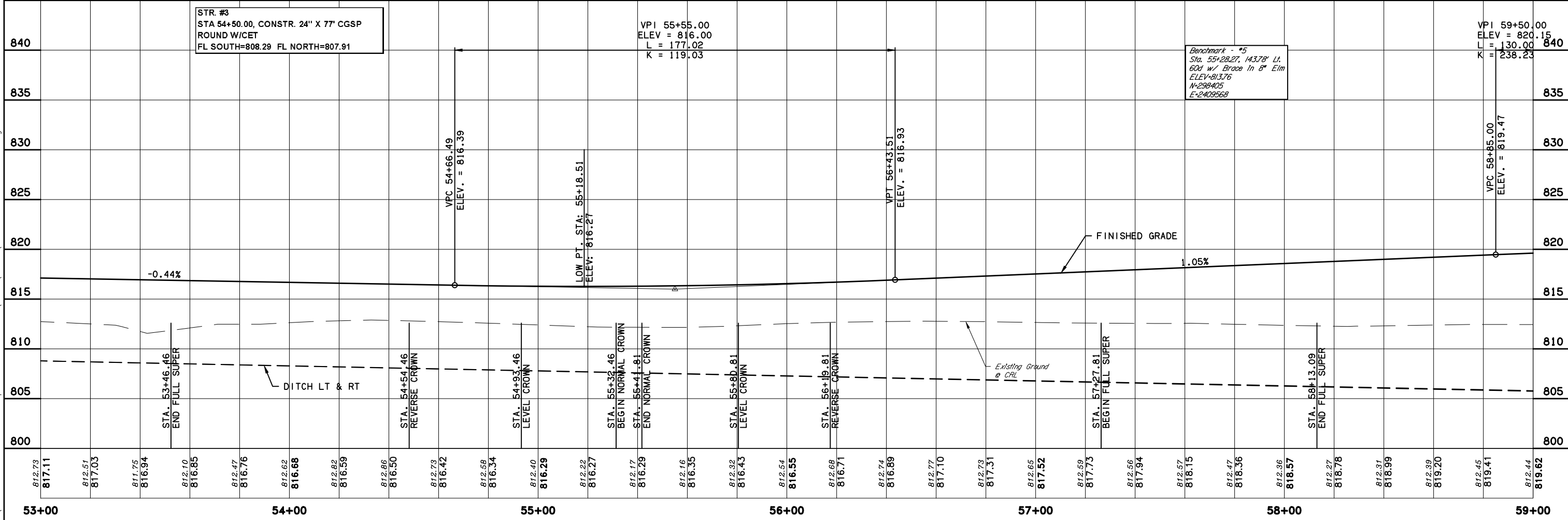
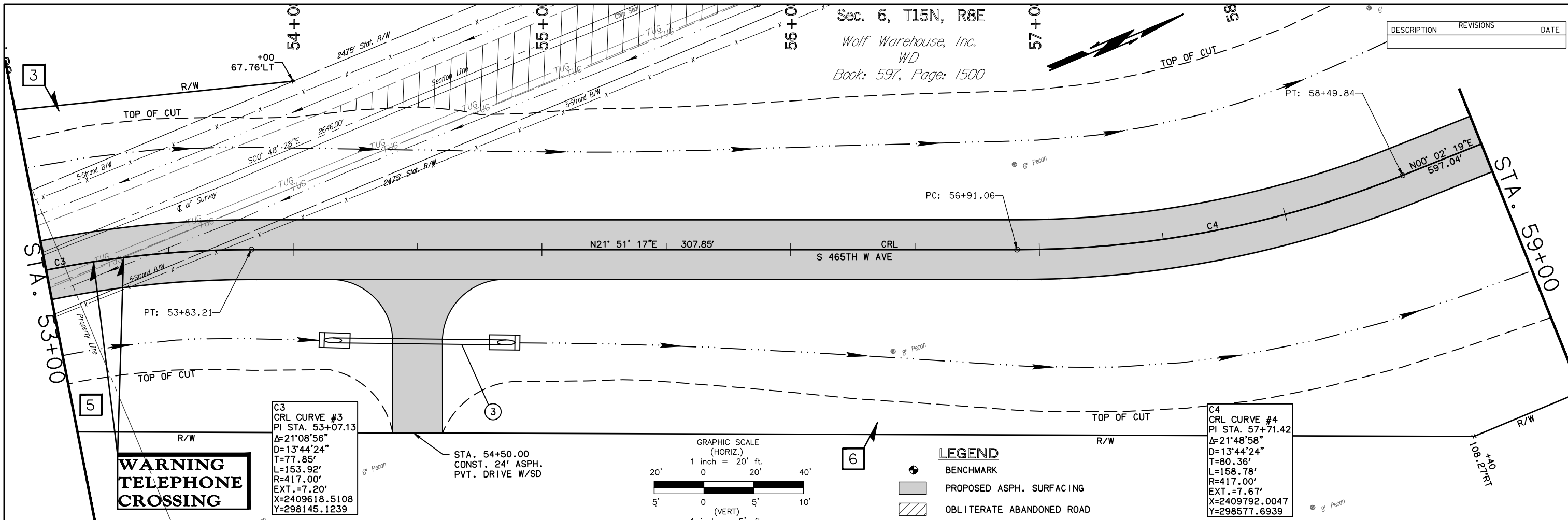
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Sec. 6, T15N, R8E

Wolf Warehouse, Inc.  
WD  
Book: 597, Page: 1500

DESCRIPTION	REVISIONS	DATE



Friday, July 28, 2017 10:19:12 AM  
W:\13-850 Br.181A Little Deep Fork Ck - Creek 3\CIV3D\PLANS\850-PLAN AND PROFILE.dwg

Sec. 1, T15N, R7E

Stephanie Morrison  
Final Decree  
Book: 759, Page: 1570  
(E of the Center of Little Deep  
Fork Creek)

DESCRIPTION	REVISIONS	DATE

Lee Wayne Alley and Brook B. Alley  
JTWD  
Book: 765, Page: 856  
(Lot 1, Less E of the Center of  
Little Deep Fork Creek)

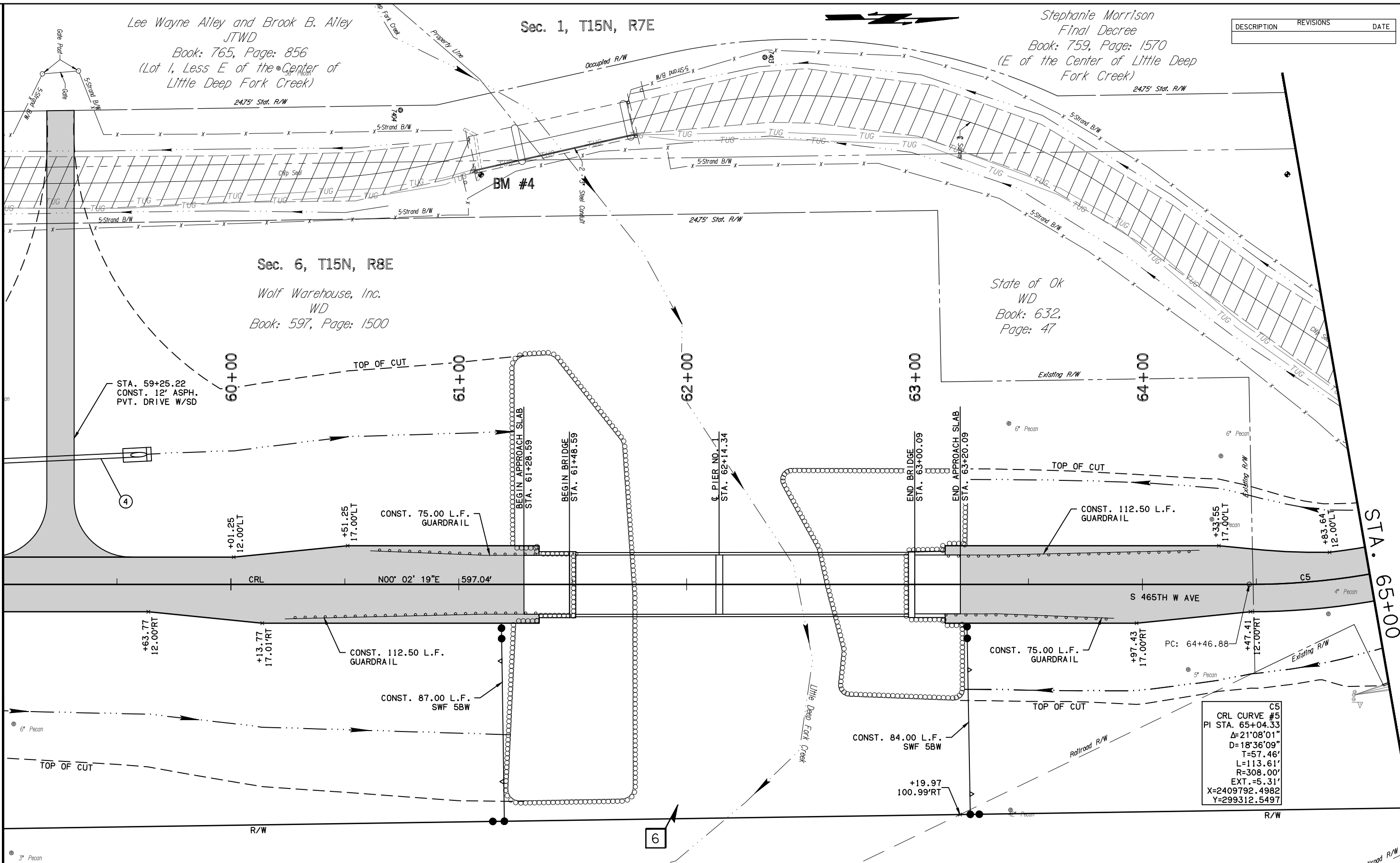
Sec. 6, T15N, R8E

Wolf Warehouse, Inc.  
WD  
Book: 597, Page: 1500

State of Ok  
WD  
Book: 632,  
Page: 47

STA. 59+00

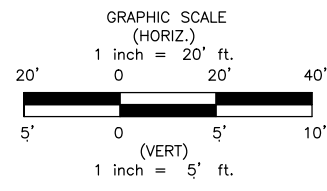
STA. 65+00



C5	
CRL CURVE #5	
PI STA. 65+04.33	
Δ=21°08'01"	
D=18°36'09"	
T=57.46'	
L=113.61'	
R=308.00'	
EXT.=5.31'	
X=2409792.4982	
Y=299312.5497	

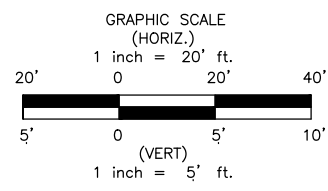
**LEGEND**

- BENCHMARK
- PROPOSED ASPH. SURFACING
- OBLITERATE ABANDONED ROAD

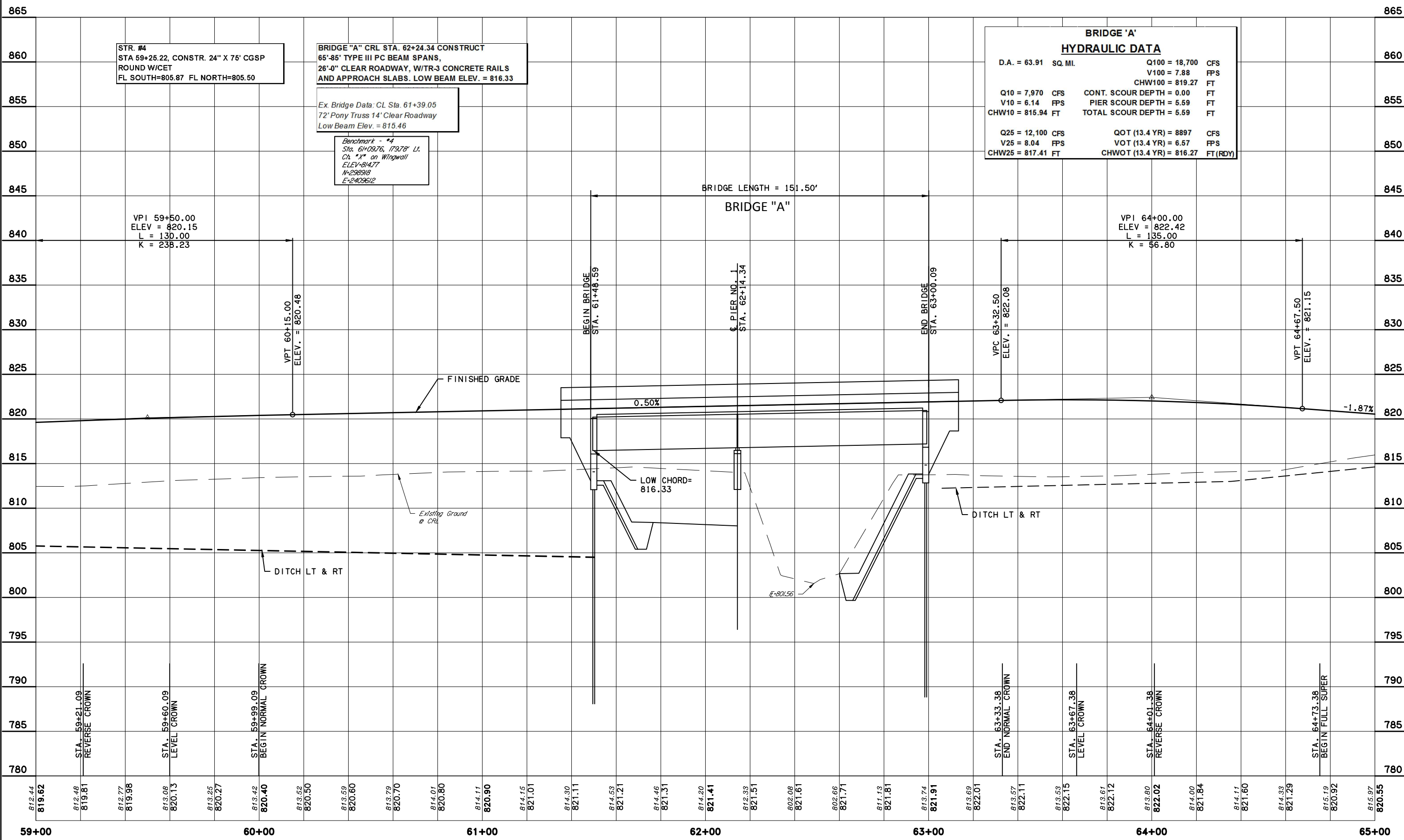


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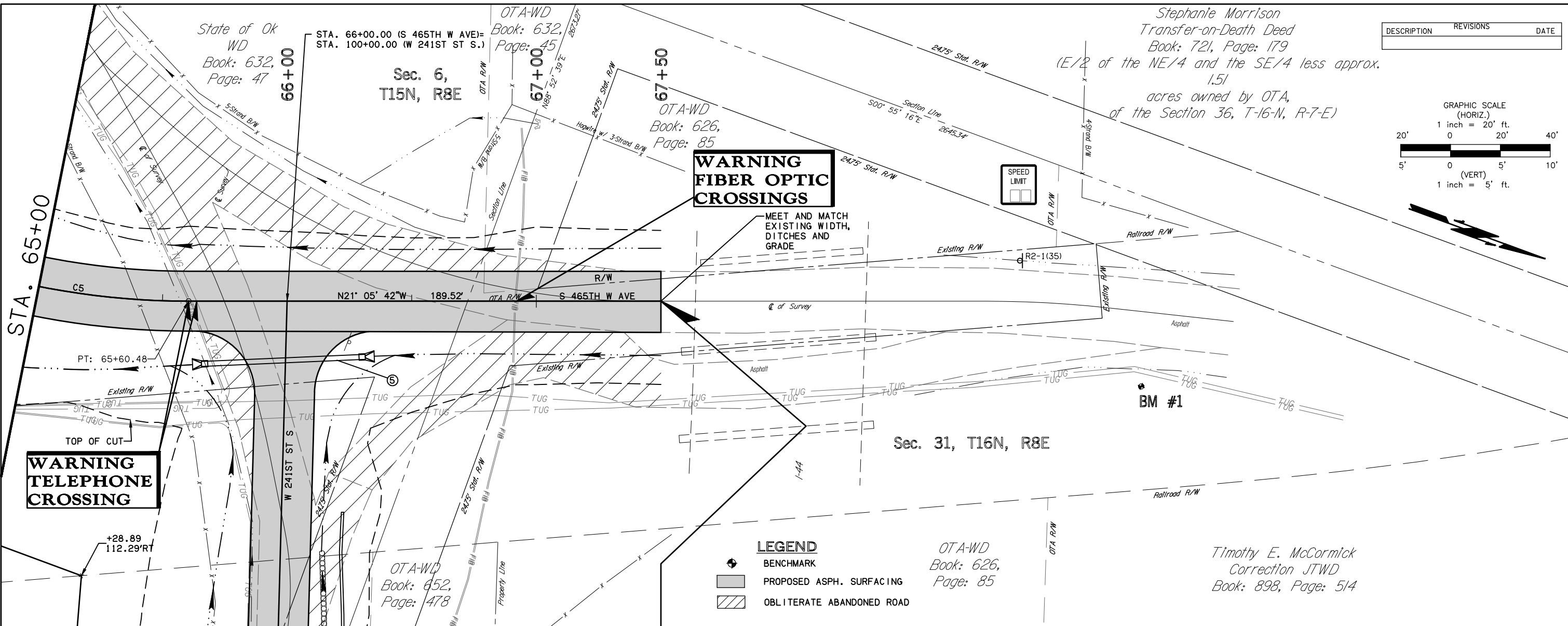
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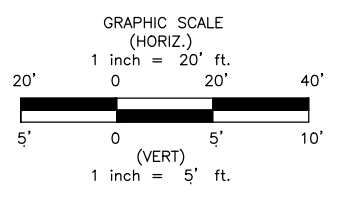
DESCRIPTION	REVISIONS	DATE



Friday, July 28, 2017 10:19:47 AM  
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DESCRIPTION	REVISIONS	DATE



**WARNING  
FIBER OPTIC  
CROSSINGS**

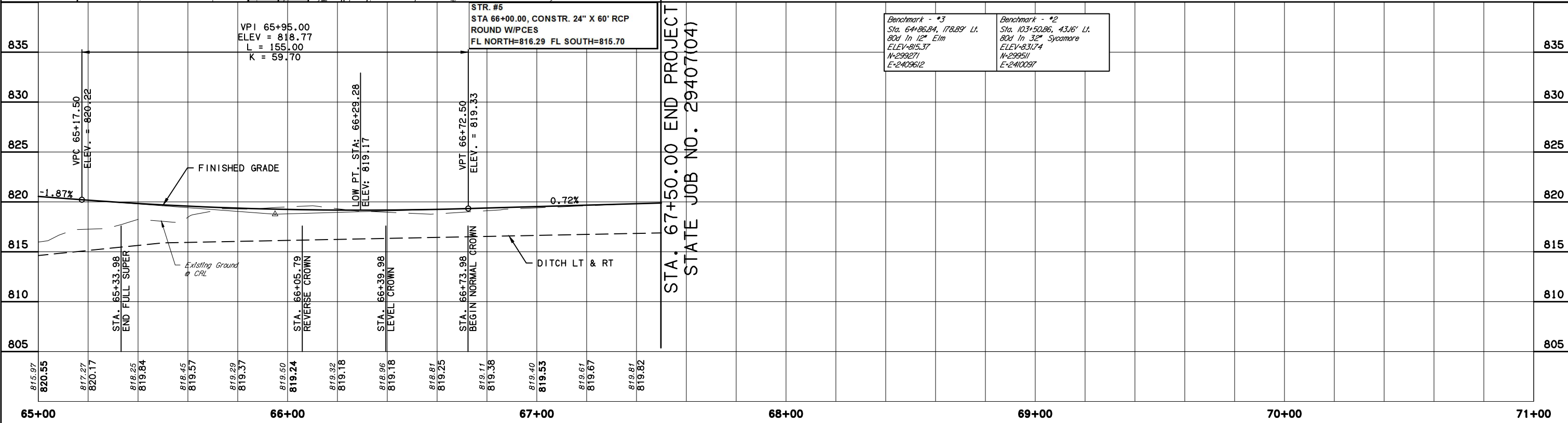
MEET AND MATCH  
EXISTING WIDTH,  
DITCHES AND  
GRADE

**WARNING  
TELEPHONE  
CROSSING**

- LEGEND**
- BENCHMARK
  - PROPOSED ASPH. SURFACING
  - OBLITERATE ABANDONED ROAD

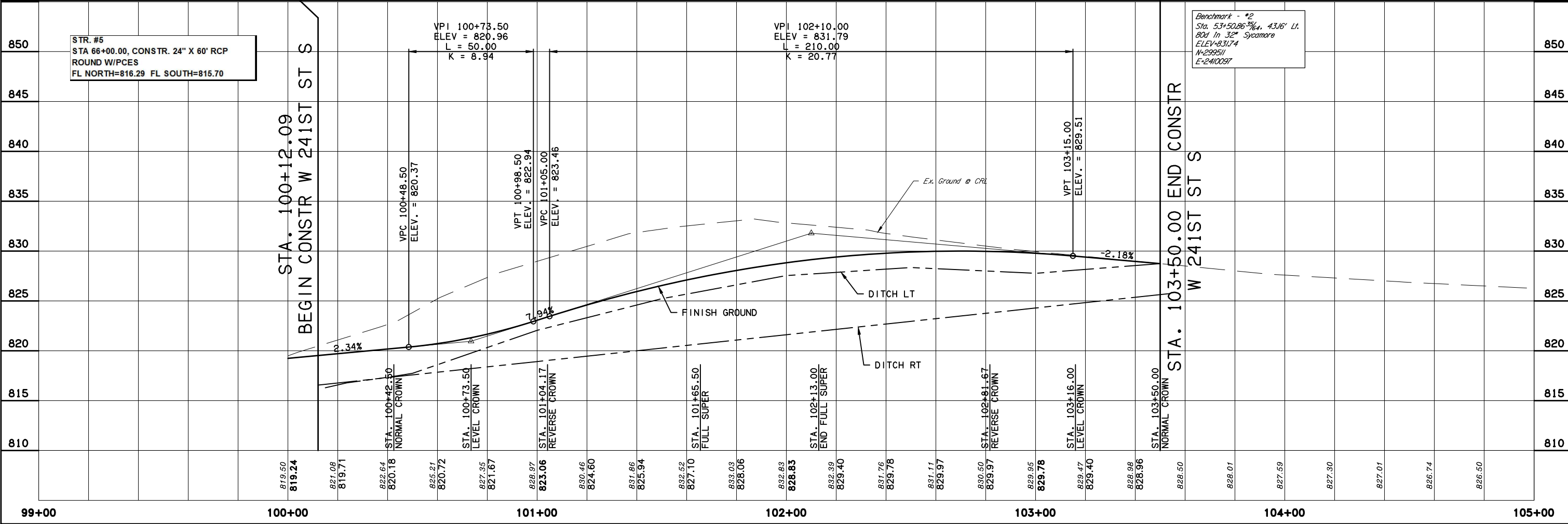
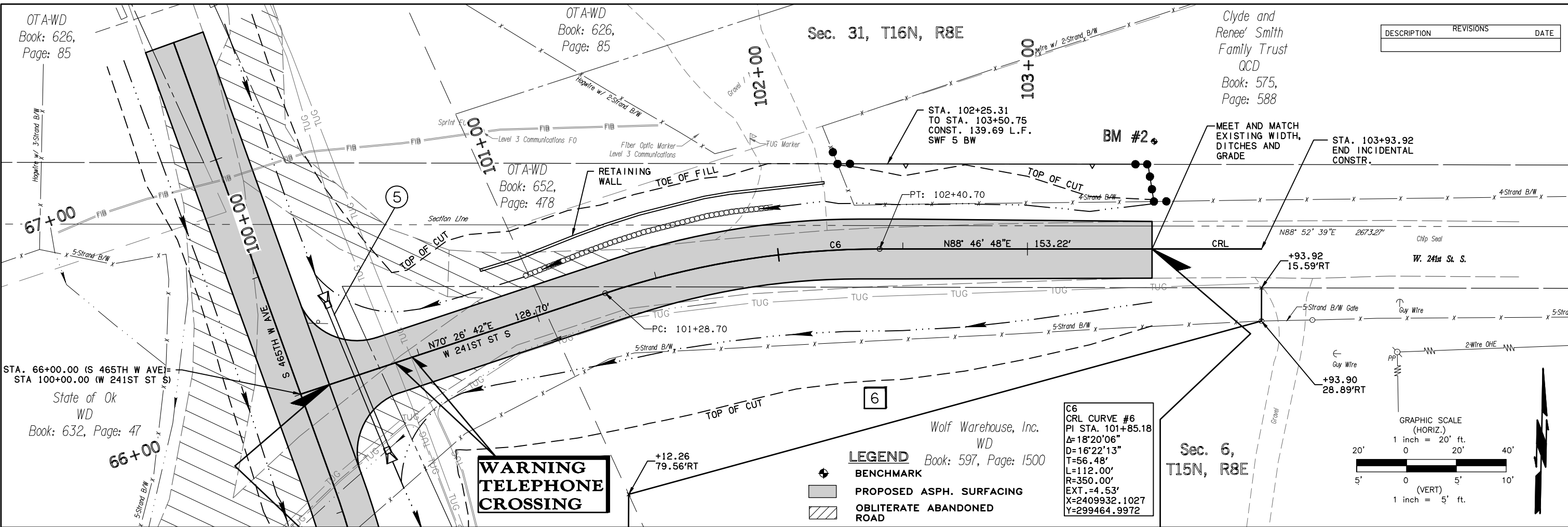
Benchmark - \*3  
 Sta. 64+86.84, 178.89' Lt.  
 80d In 12" Elm  
 ELEV=815.37  
 N=299271  
 E=2409612

Benchmark - \*2  
 Sta. 103+50.86, 43.16' Lt.  
 80d In 32" Sycamore  
 ELEV=831.74  
 N=299511  
 E=2410097



STA. 67+50.00 END PROJECT  
 STATE JOB NO. 29407(04)

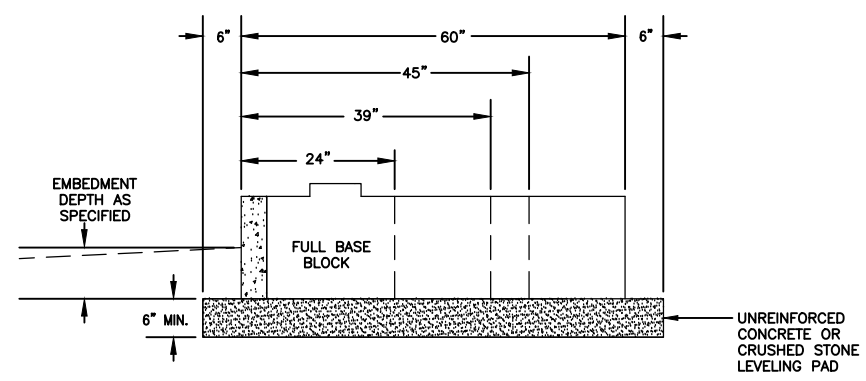
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 V:\13-850 Br 181A Little Deep Fork Ck- Creek 3\CIV3D\PLANS\850-PLAN AND PROFILE 241st.dwg





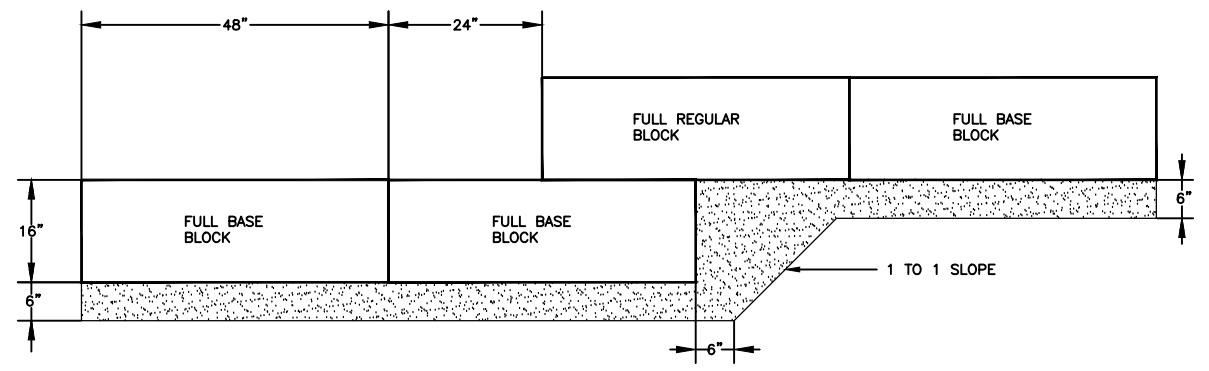


DESCRIPTION	REVISIONS	DATE



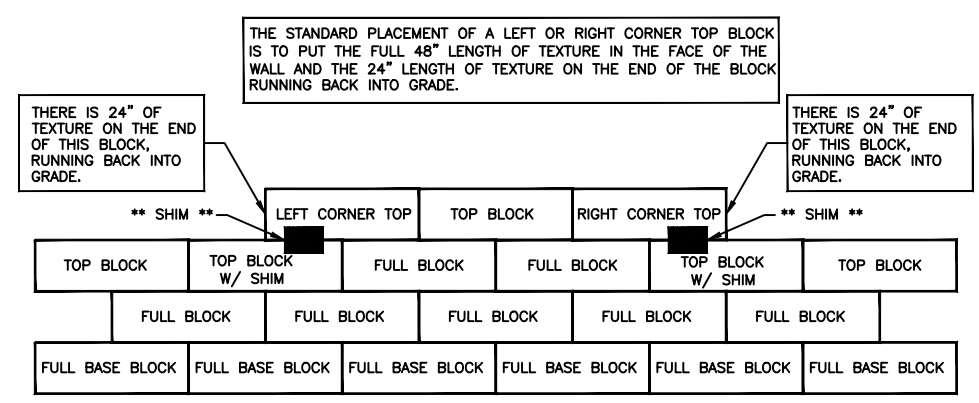
- NOTES:
- LEVELING PAD SHOULD BE AS SPECIFIED BY THE DESIGN ENGINEER IN THE PROJECT PLAN SET.
  - THE WIDTH OF THE LEVELING PAD MUST EXTEND 6" (MINIMUM) IN FRONT AND 6" (MINIMUM) IN BACK OF THE BASE BLOCK. AS A RESULT, THE TYPICAL WIDTH OF LEVELING PAD WOULD BE:  
 24" DEEP BASE BLOCK...LEVELING PAD WIDTH IS 36"  
 39" DEEP BASE BLOCK...LEVELING PAD WIDTH IS 51"  
 45" DEEP BASE BLOCK...LEVELING PAD WIDTH IS 57"  
 60" DEEP BASE BLOCK...LEVELING PAD WIDTH IS 72"
  - SET THE BASE BLOCK AND CHECK FOR LEVEL FROM FRONT TO BACK.
  - COMPACTION TO THE SPECIFIED EMBEDMENT DEPTH SHALL BE DONE IN FRONT OF THE BASE BLOCK BEFORE COMPACTION IS DONE BEHIND THE BASE BLOCK. THIS REDUCES THE CHANCE THAT COMPACTION BEHIND THE BASE BLOCK WILL ROLL THE BASE BLOCK FORWARD.
  - SEE BLOCK SPECIFICATION & INSTALLATION INSTRUCTIONS FOR MORE DETAILS.

**TYPICAL BASE BLOCK PLACEMENT**  
*Not To Scale*



NOTE: BLOCK MUST BE PLACED ON A MINIMUM OF 6" OF CRUSHED STONE (GENERALLY 3/4" DOWN OR CLASS 5) OR LEAN CONCRETE AS SPECIFIED IN THE SITE SPECIFIC WALL PLAN DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER. GENERALLY THE BASE MATERIAL MUST BE COMPACTED TO 95 PERCENT OF STANDARD PROCTOR.

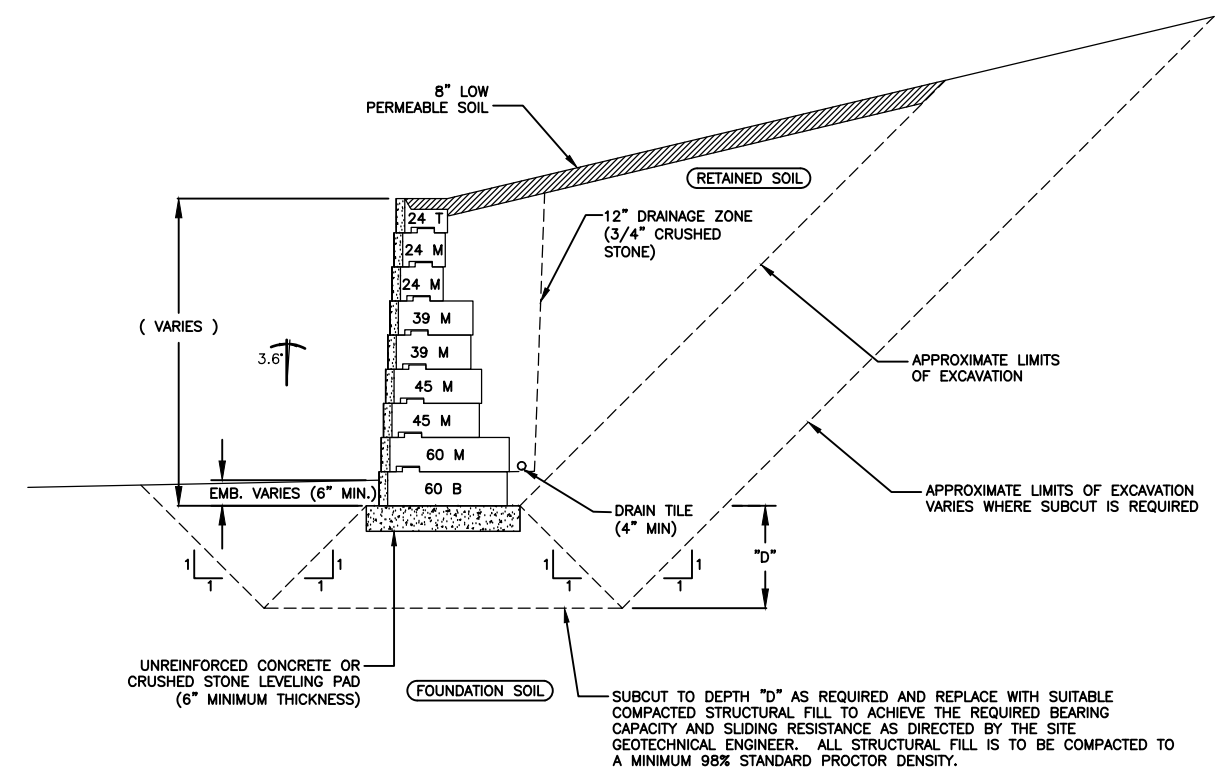
**TYPICAL BASE ROW STEP UP**  
*Not To Scale*



\*\* NOTE: A CONCRETE "SHIM" MUST BE PLACED BETWEEN THE TOP BLOCK AND A LEFT OR RIGHT CORNER TOP BLOCK AT EACH POINT IN THE WALL WHERE THE TOP OF THE WALL STEPS UP. USE A STANDARD CONCRETE MASONRY UNIT (CMU) FOR THE SHIM. THESE ARE GENERALLY AVAILABLE AT A LUMBER YARD, READY MIX PLANT OR MASONRY BLOCK PLANT. THE THICKNESS OF THE "SHIM" SHOULD BE 7 1/2" (YOU MAY NEED TO USE A CHOP SAW TO CUT 1/2" OFF AN 8" CMU). THE SHIM SHOULD BE GLUED TO BOTH THE TOP BLOCK ON WHICH IT IS PLACED AND ALSO TO THE LEFT OR RIGHT CORNER TOP BLOCK THAT IS PLACED ON TOP OF THE SHIM (PL PREMIUM IS THE RECOMMENDED CONCRETE ADHESIVE). ANY REMAINING VOID BETWEEN THE TOP BLOCK AND THE RIGHT CORNER TOP BLOCK SHOULD BE FILLED WITH CRUSHED STONE AND SILTS.

(FULL 48" TEXTURED FACE OF THE CORNER BLOCK (RIGHT OR LEFT) PLACED IN FACE OF THE WALL...STANDARD PLACEMENT)

**TOP OF WALL STEP UP STANDARD PLACEMENT**  
*Not To Scale*

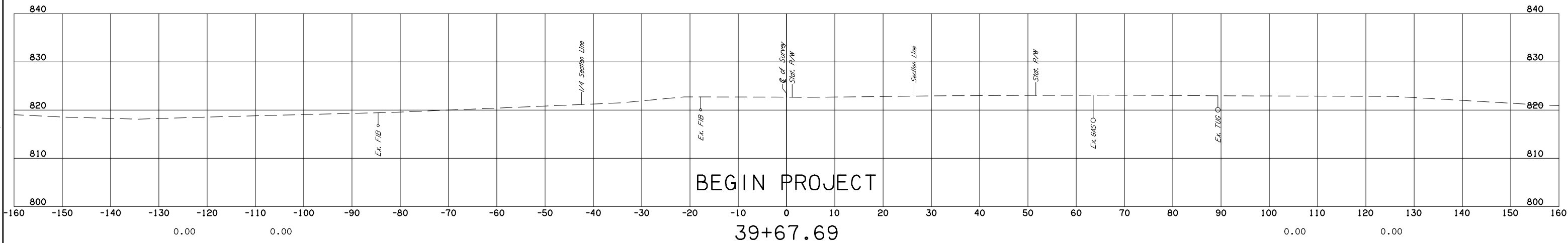
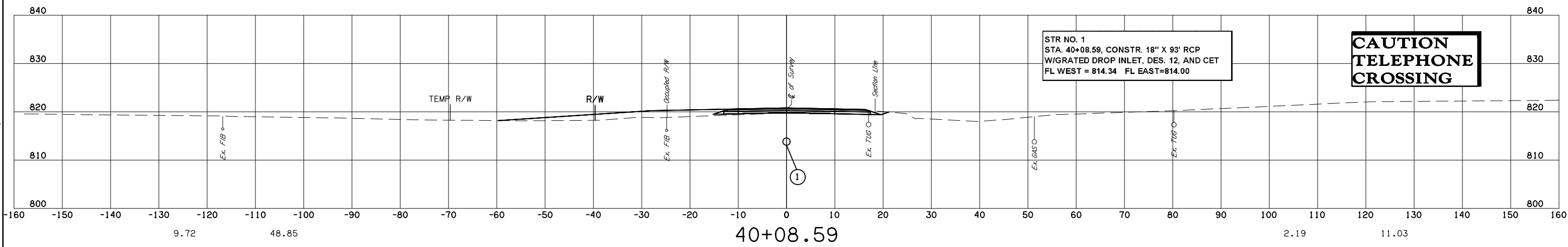
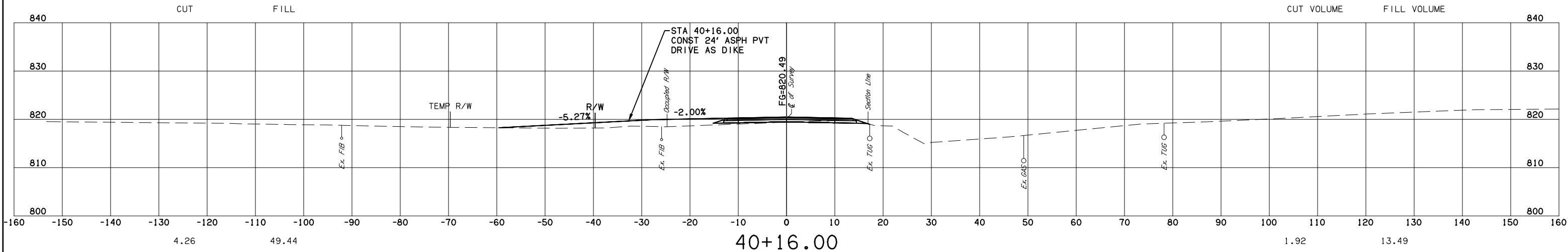


**TYPICAL GRAVITY WALL CROSS SECTION**  
*Not To Scale*

DESIGN	BSF	07/17	<b>OKLAHOMA DEPARTMENT OF TRANSPORTATION</b> <b>GUY ENGINEERING SERVICES, INC.</b>  <b>RETAINING WALL DETAILS</b>  STATE JOB NO. 29407(04) SHEET NO. R019 CREEK COUNTY BR. 181A LITTLE DEEP FORK
DRAWN	BLP	07/17	
CHECKED	PAE	07/17	
APPROVED	JRW	07/17	
SQUAD			

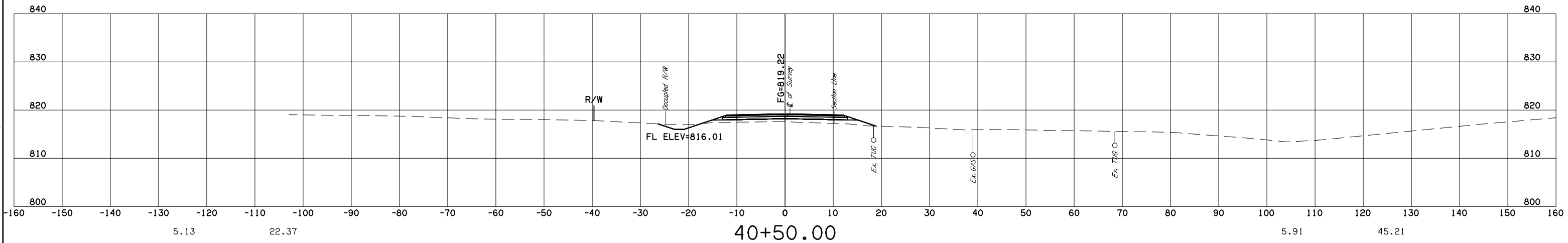
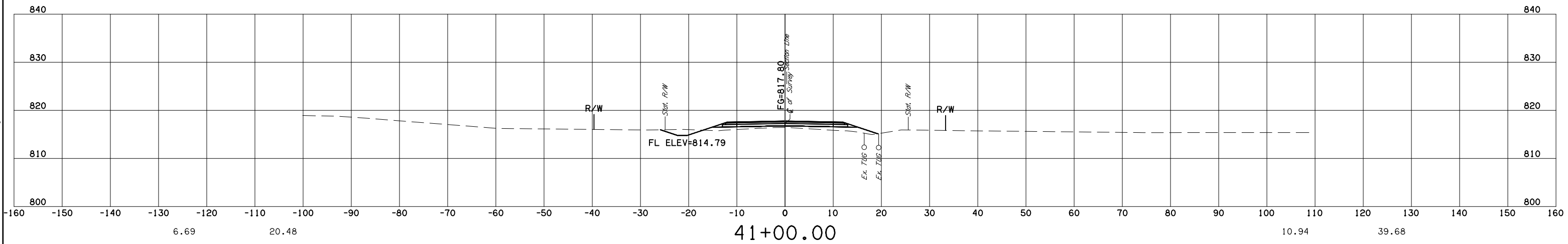
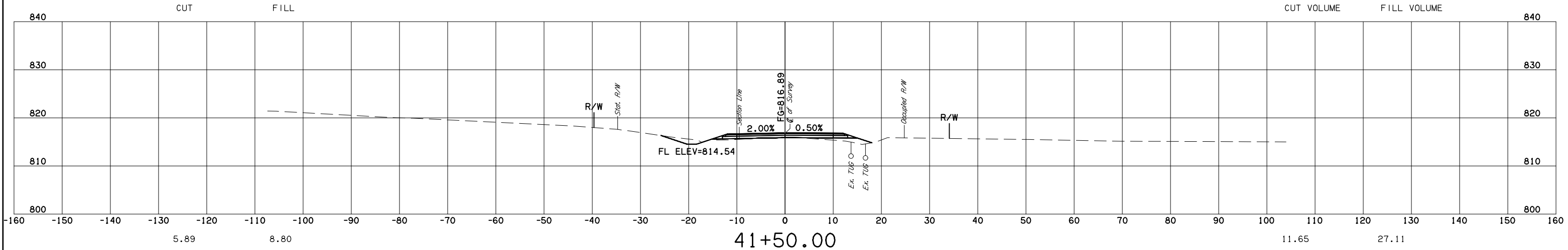
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DESCRIPTION	REVISIONS	DATE



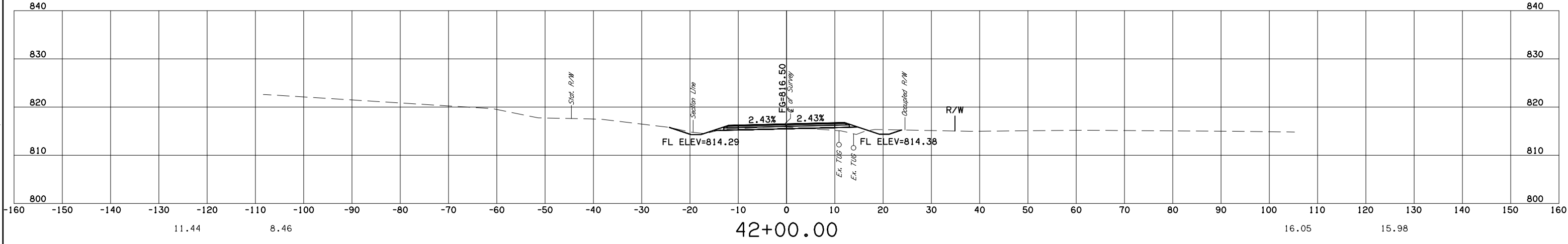
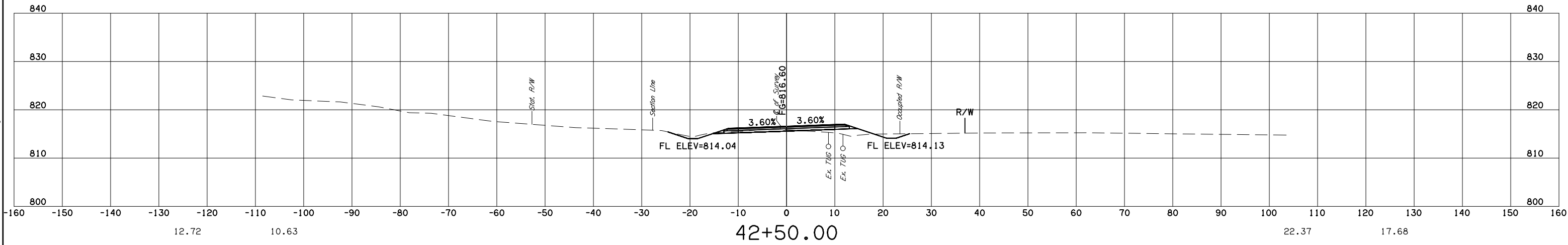
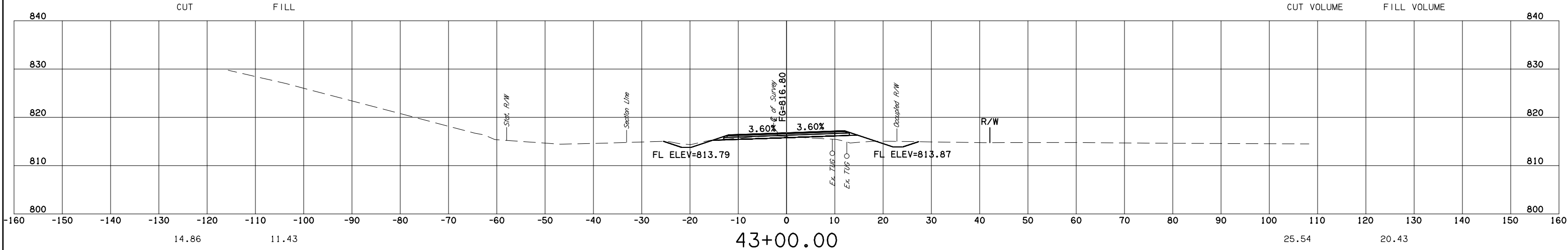
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DESCRIPTION	REVISIONS	DATE



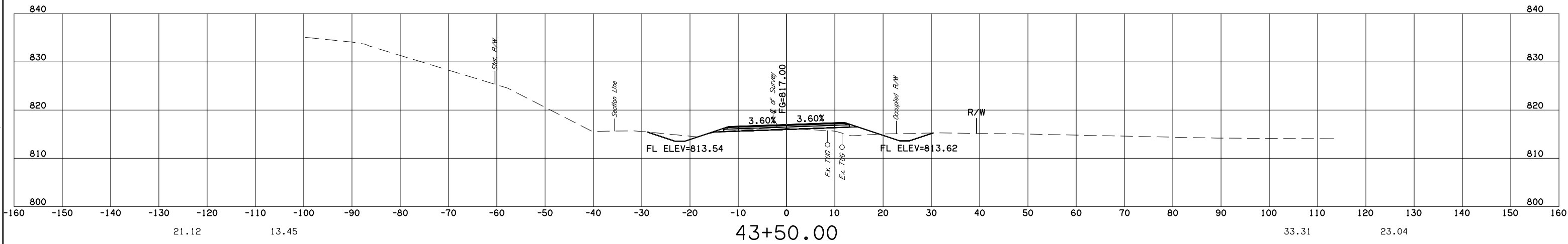
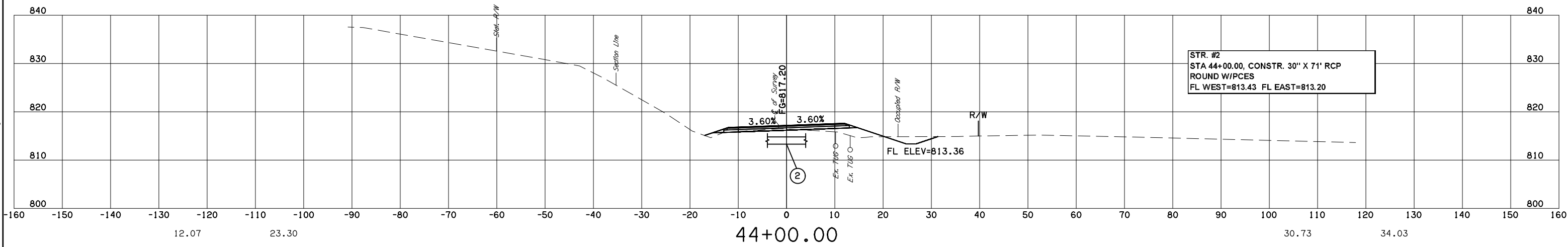
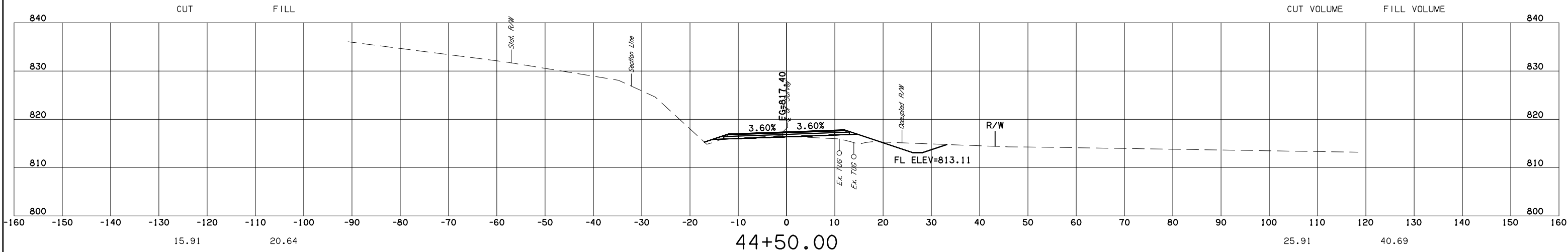
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DESCRIPTION	REVISIONS	DATE



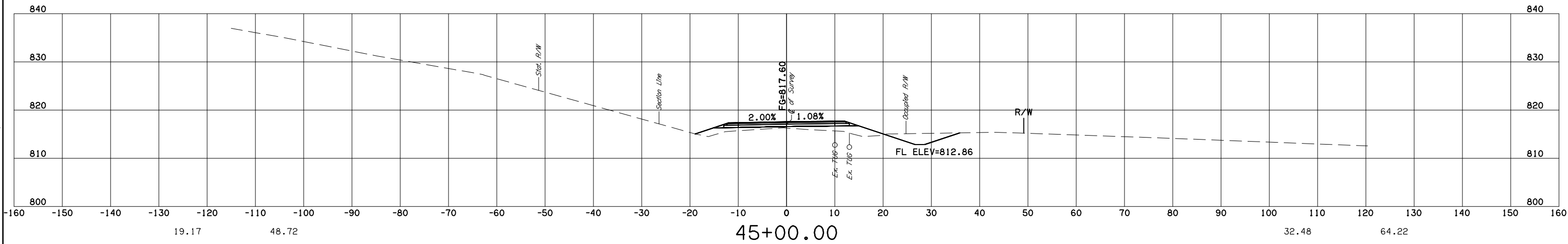
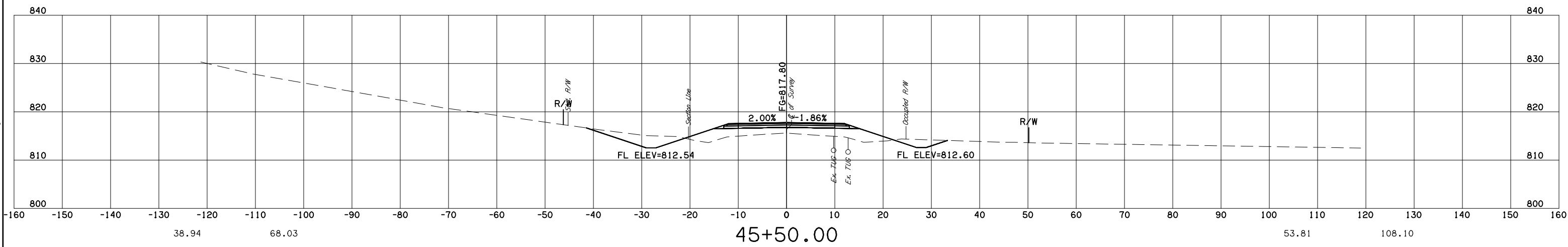
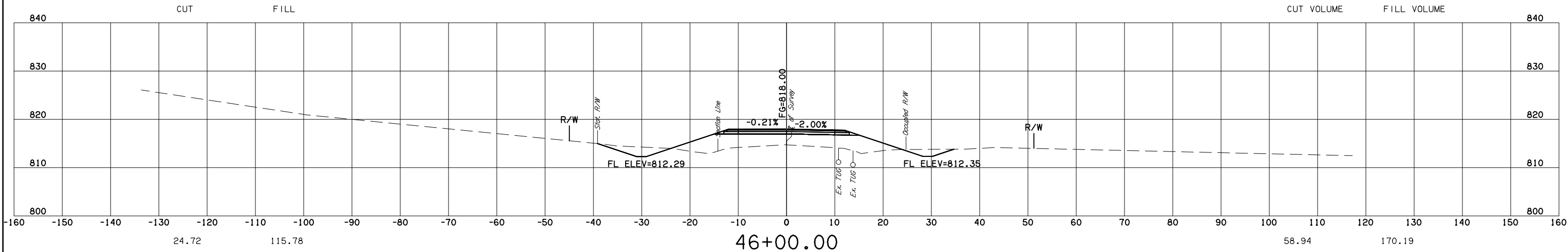
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DESCRIPTION	REVISIONS	DATE



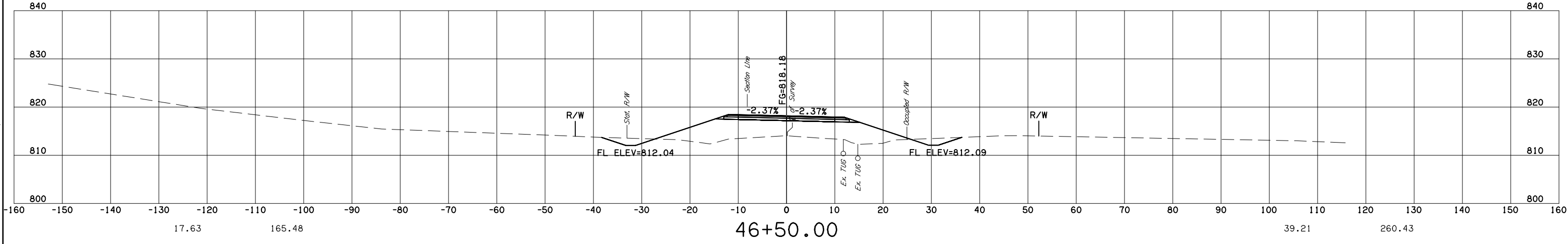
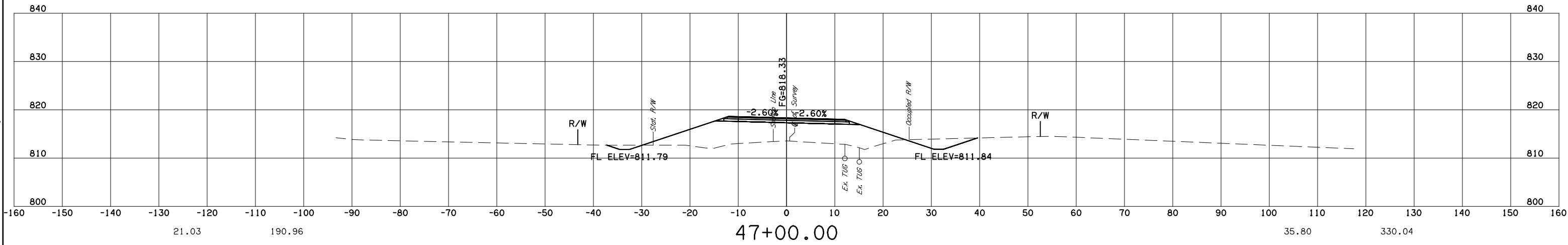
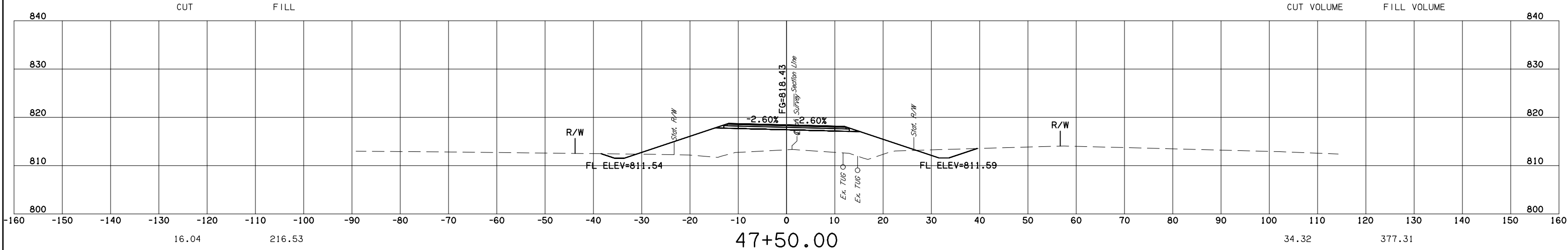
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DESCRIPTION	REVISIONS	DATE



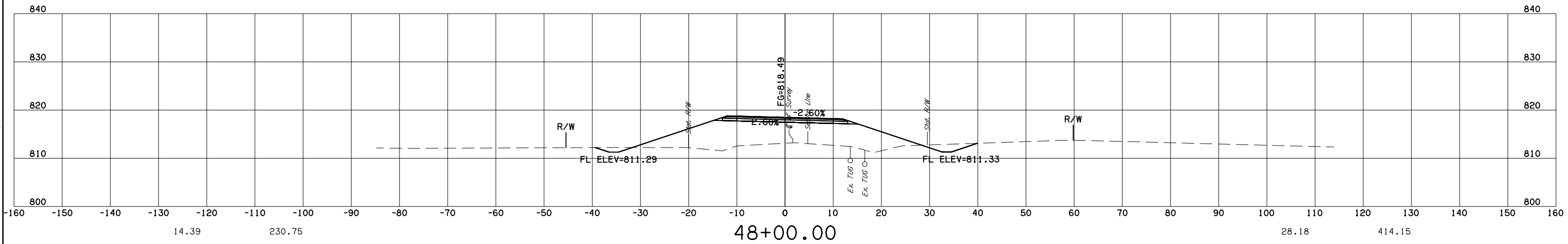
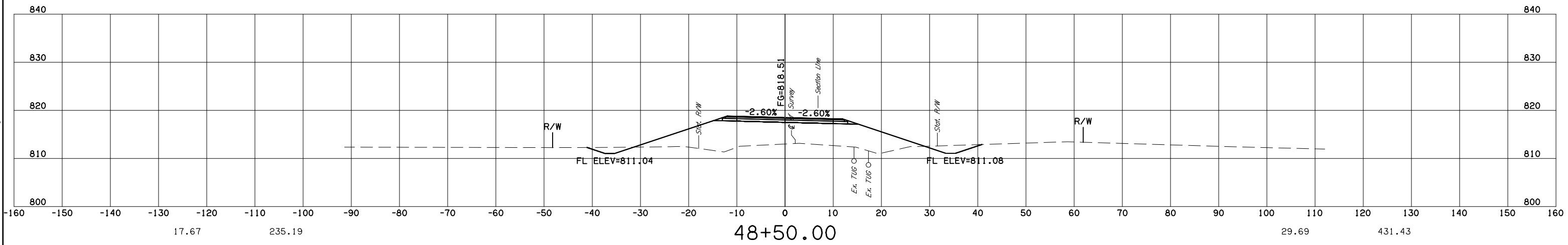
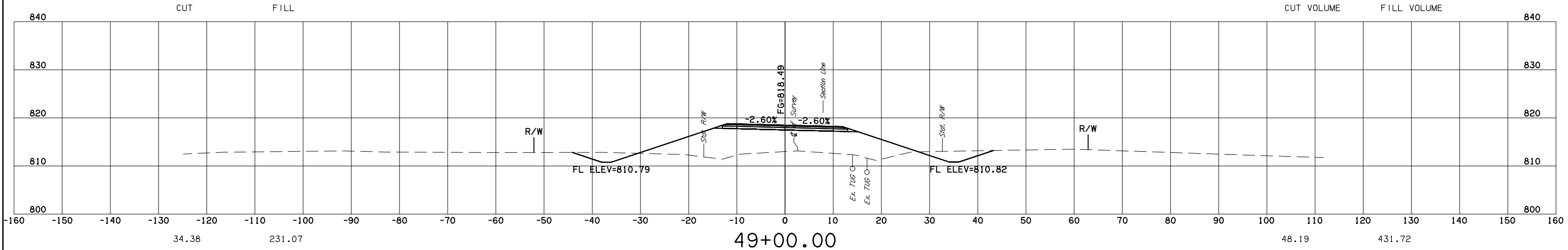
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DESCRIPTION	REVISIONS	DATE



Friday, July 28, 2017 10:23:11 AM  
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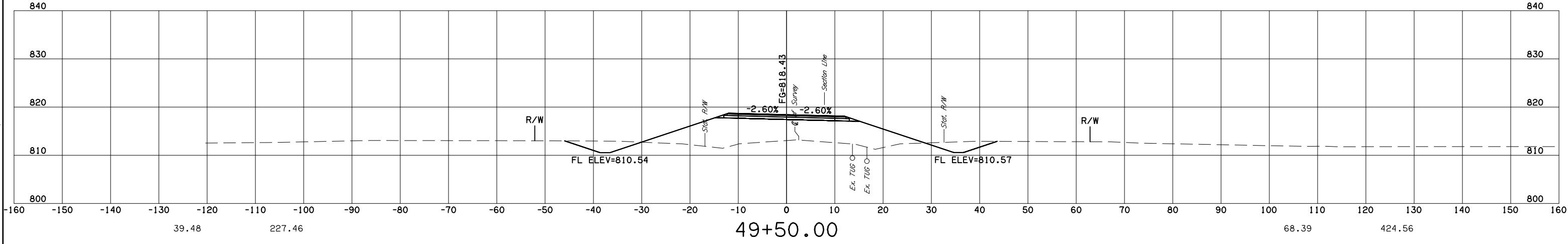
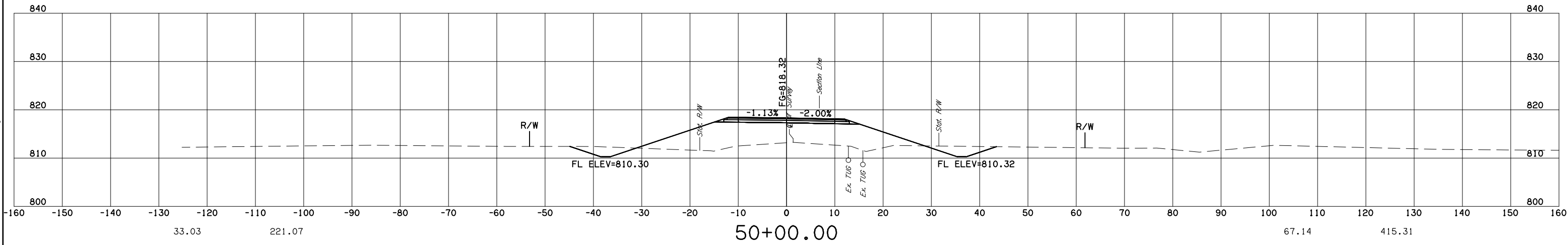
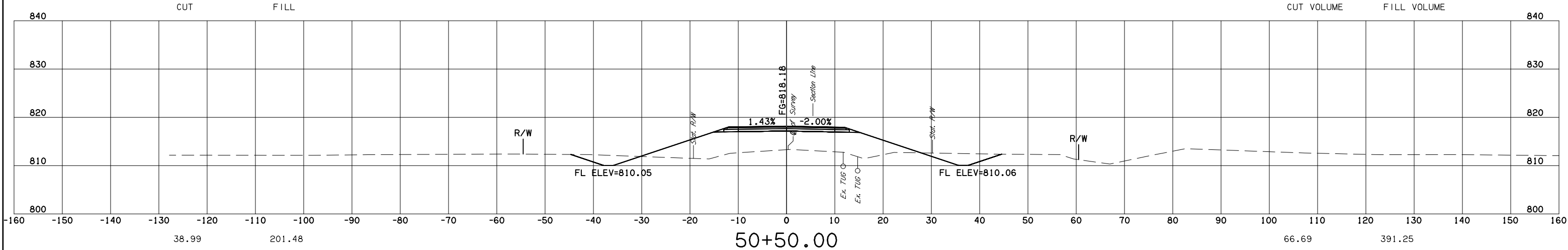
DESCRIPTION	REVISIONS	DATE



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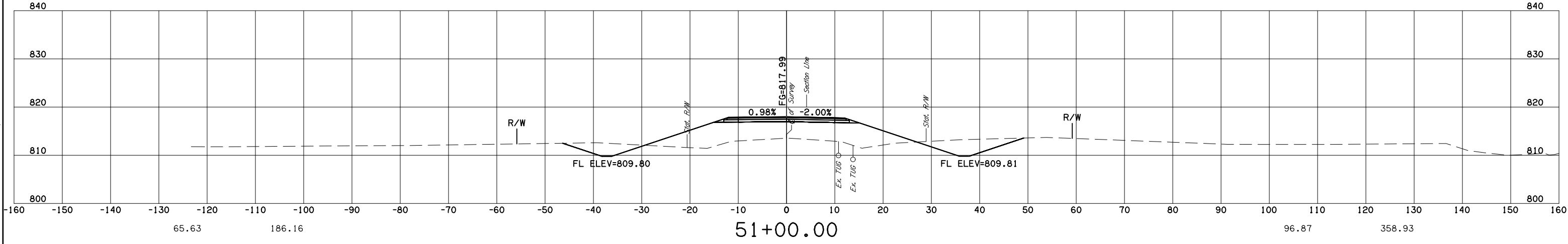
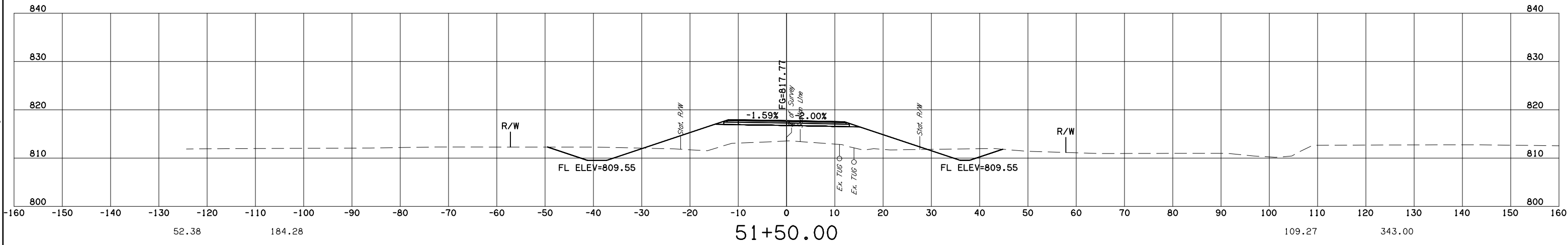
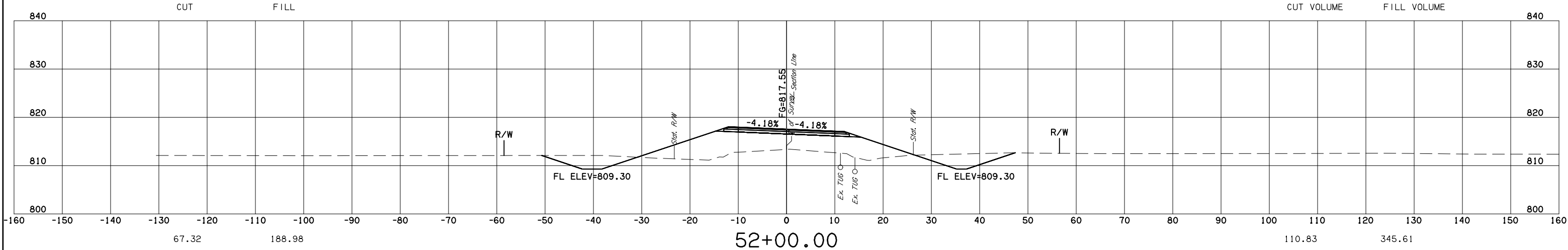


DESCRIPTION	REVISIONS	DATE



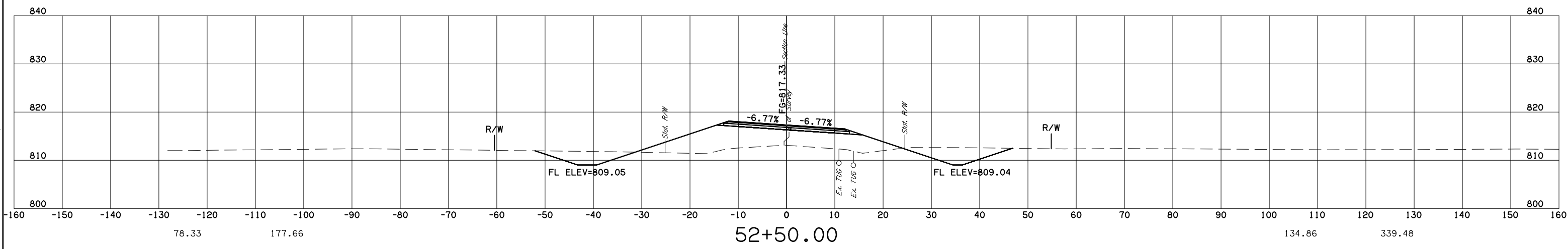
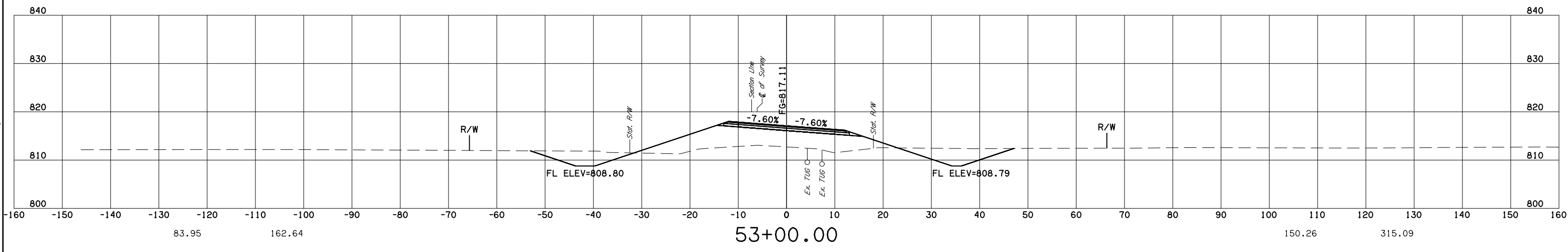
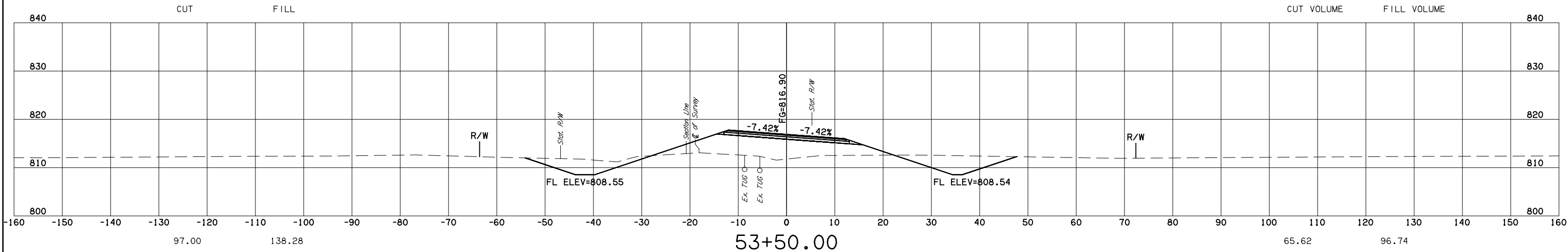
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DESCRIPTION	REVISIONS	DATE



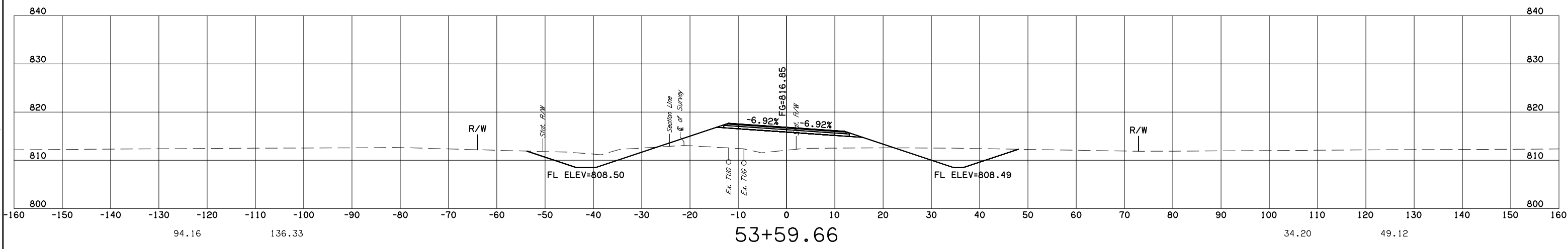
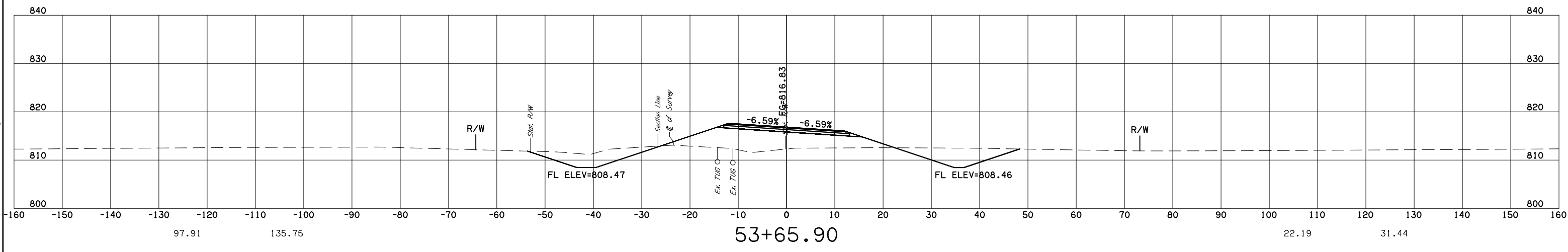
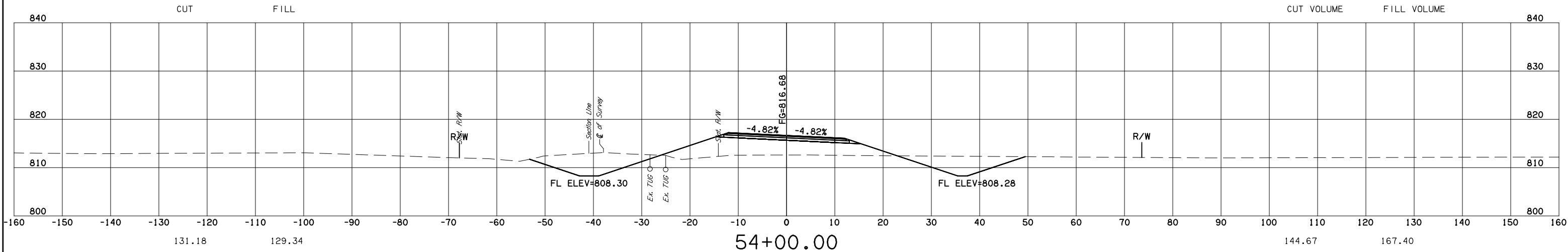
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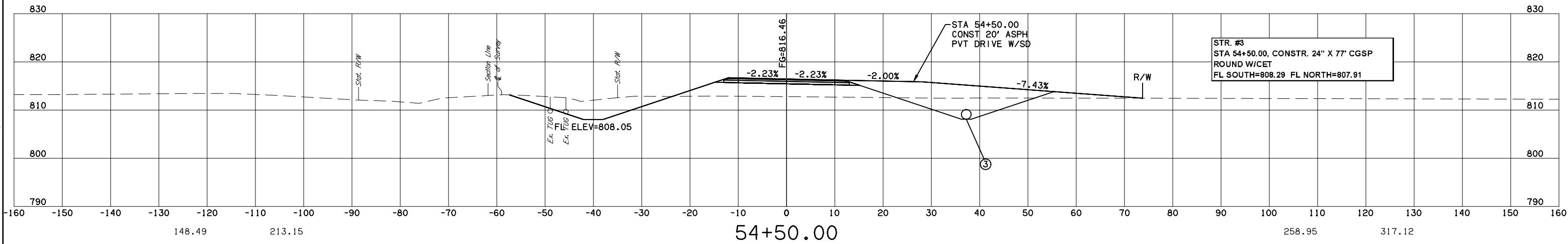
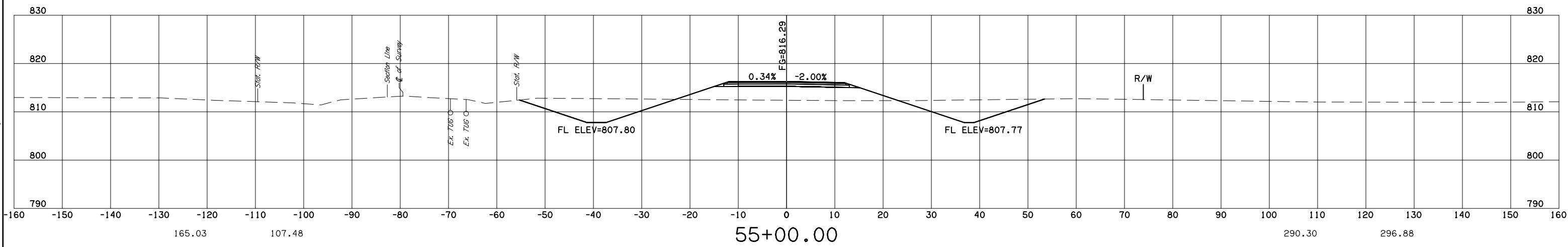
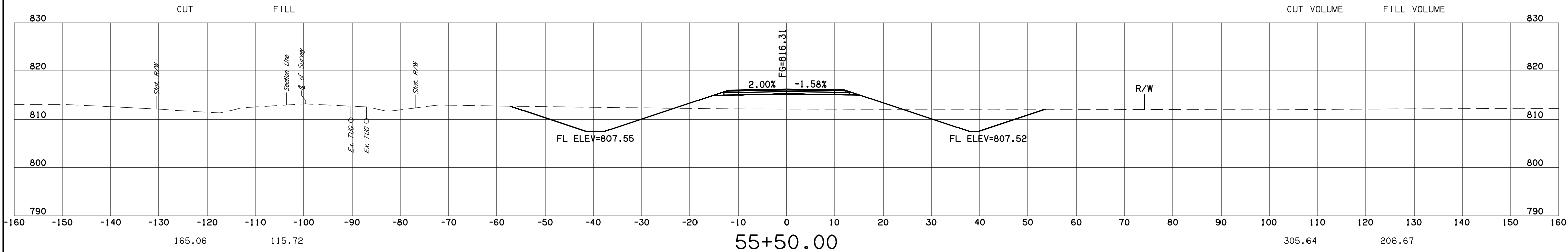
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DESCRIPTION	REVISIONS	DATE



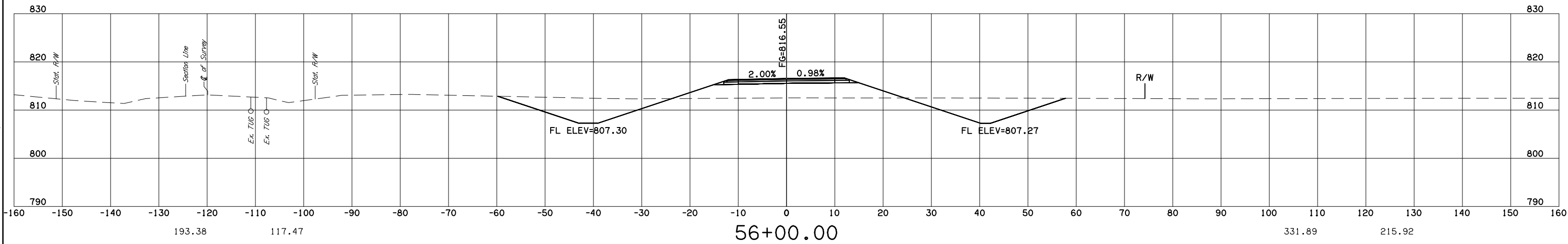
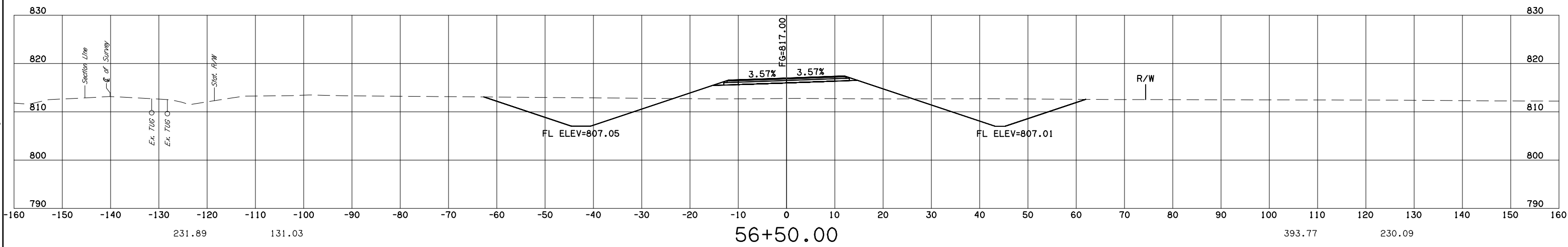
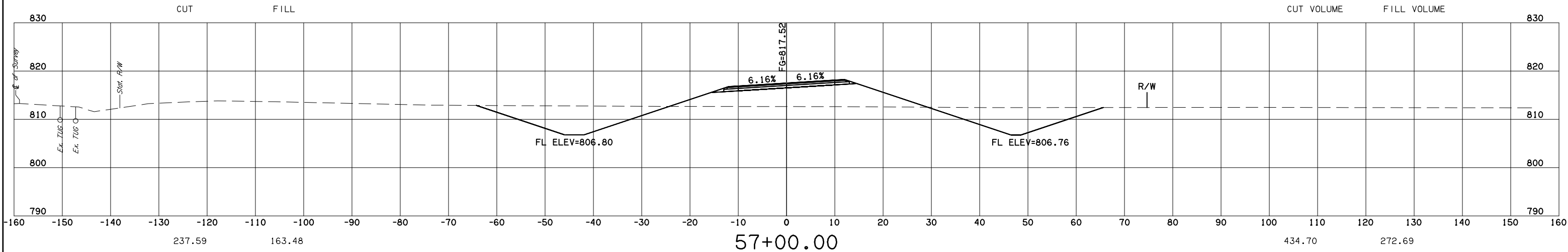
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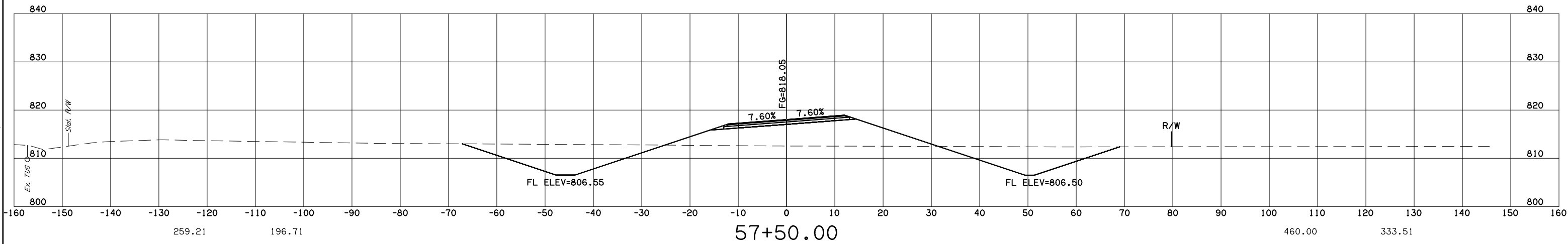
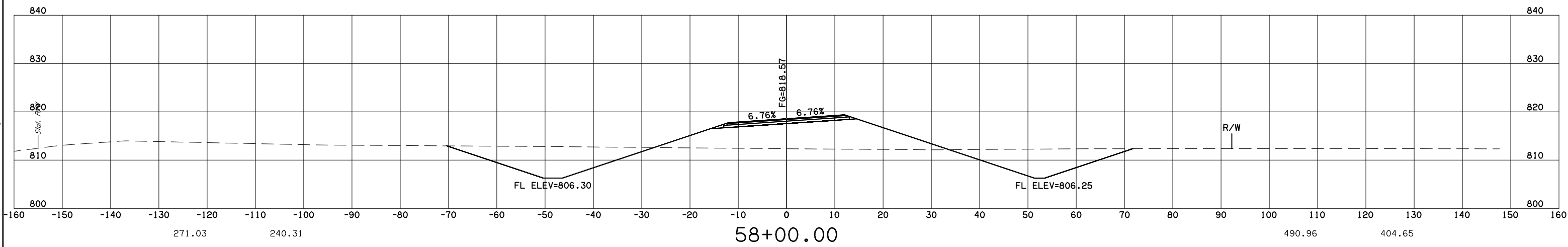
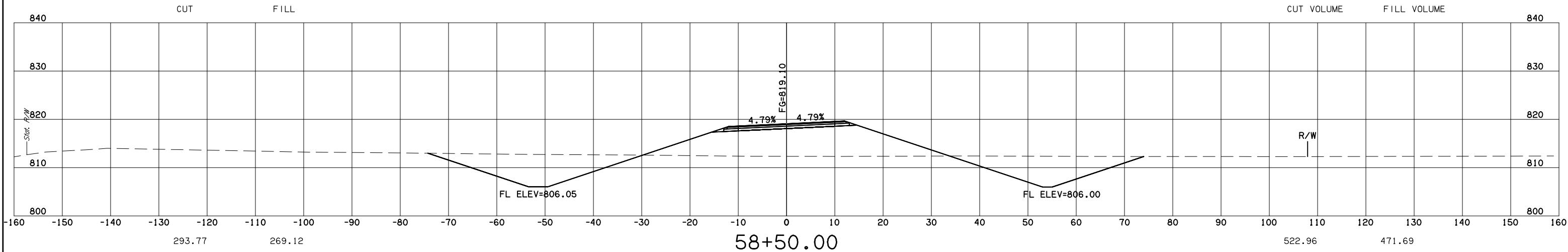
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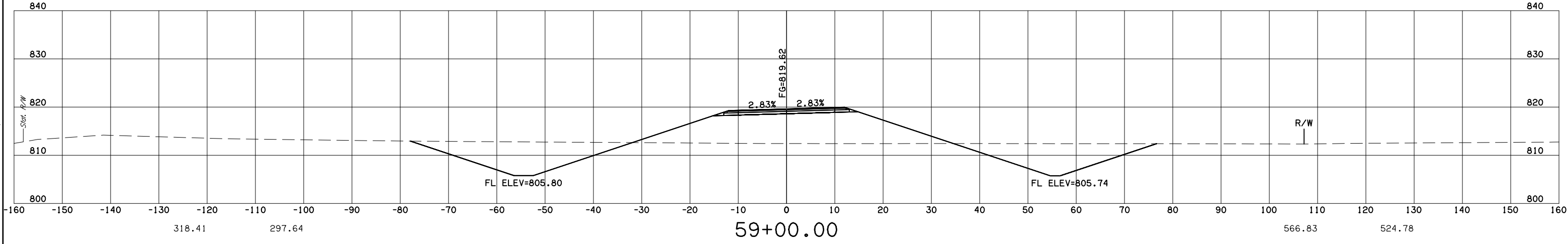
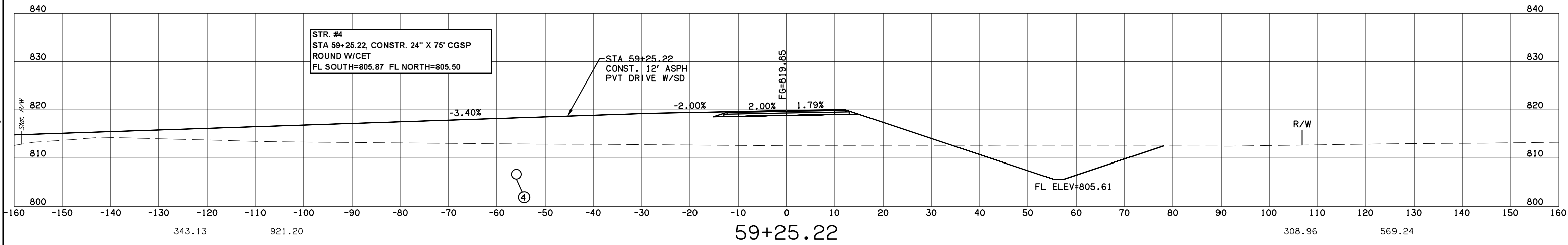
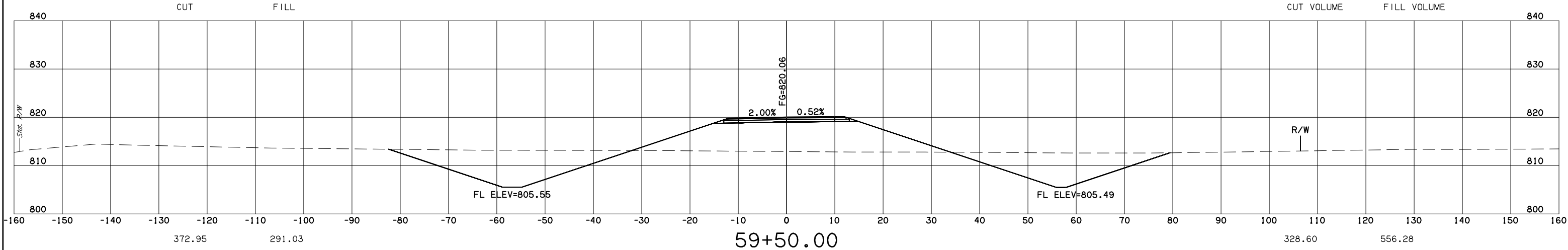
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DESCRIPTION	REVISIONS	DATE



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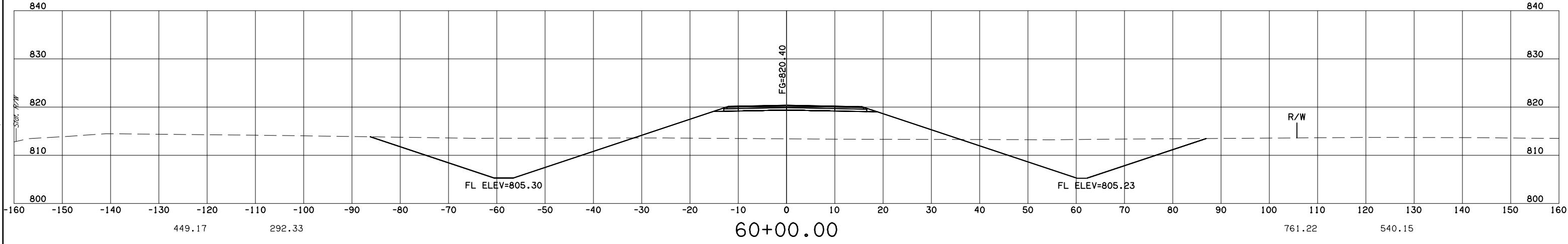
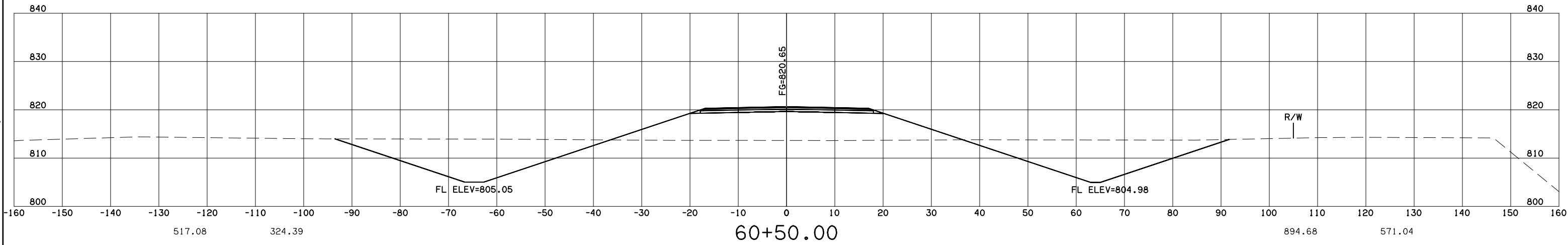
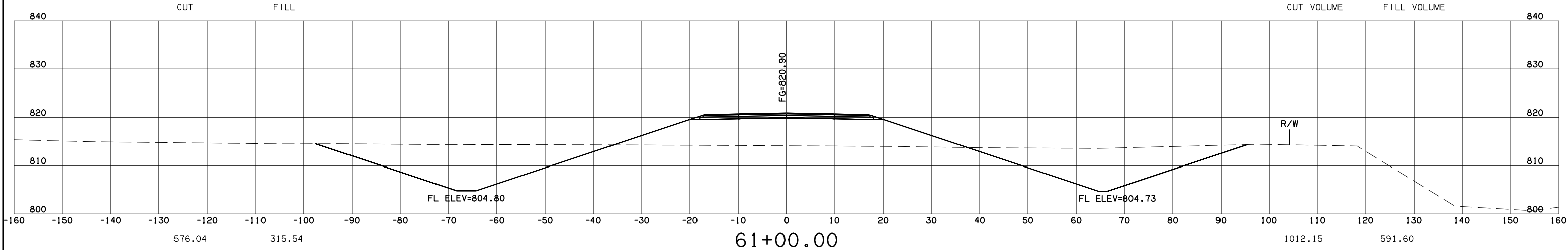
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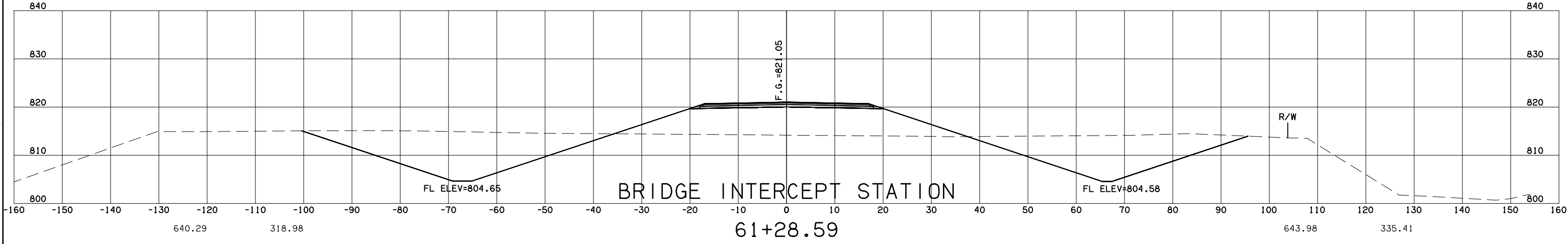
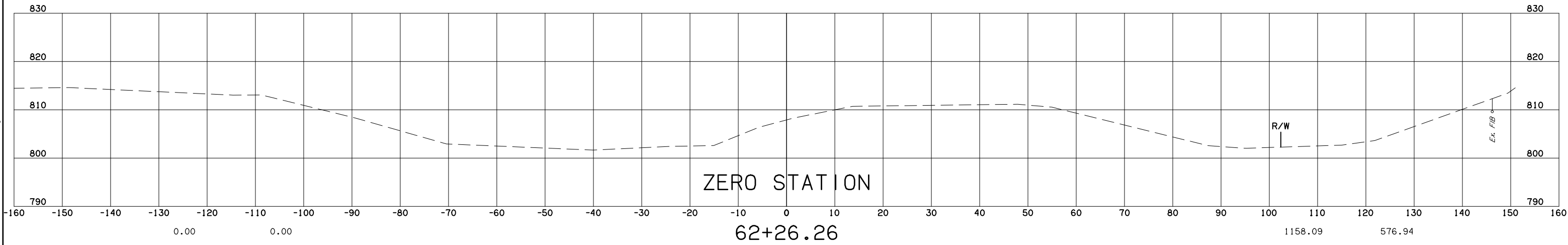
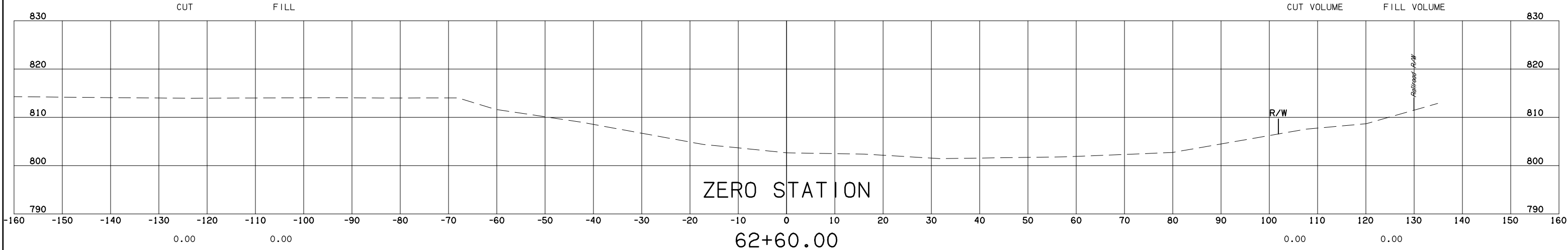


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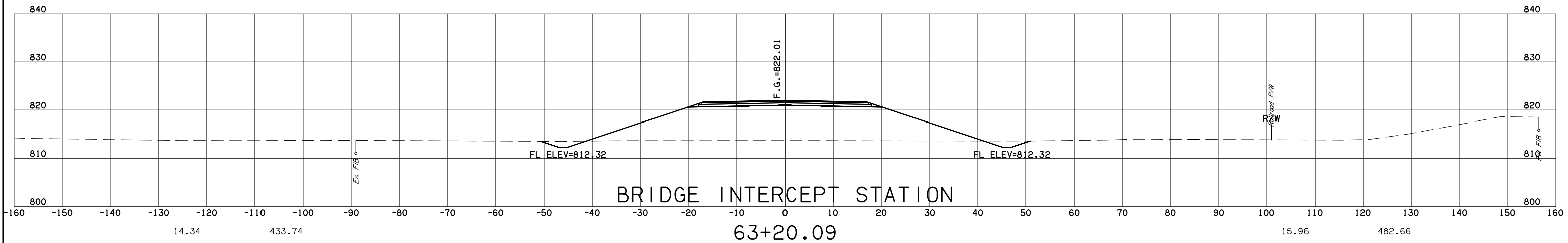
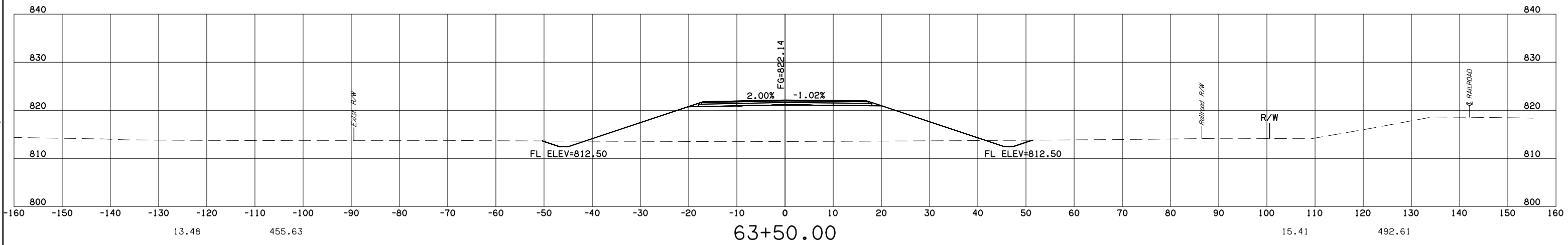
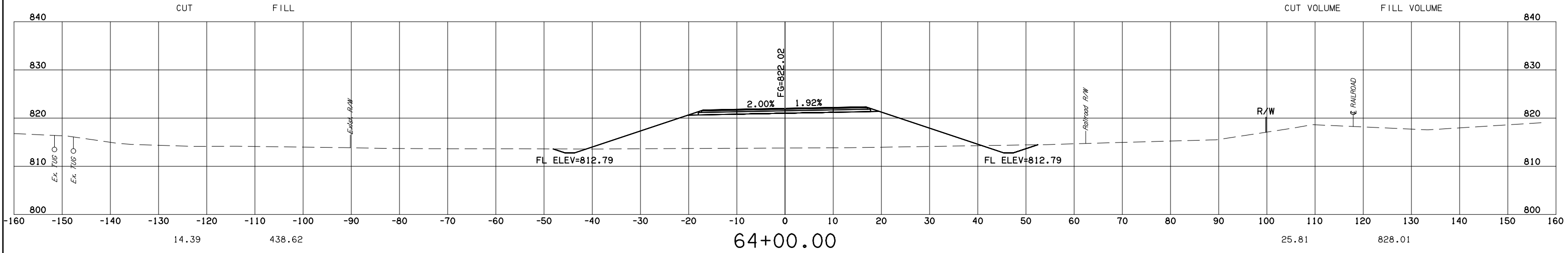
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DESCRIPTION	REVISIONS	DATE



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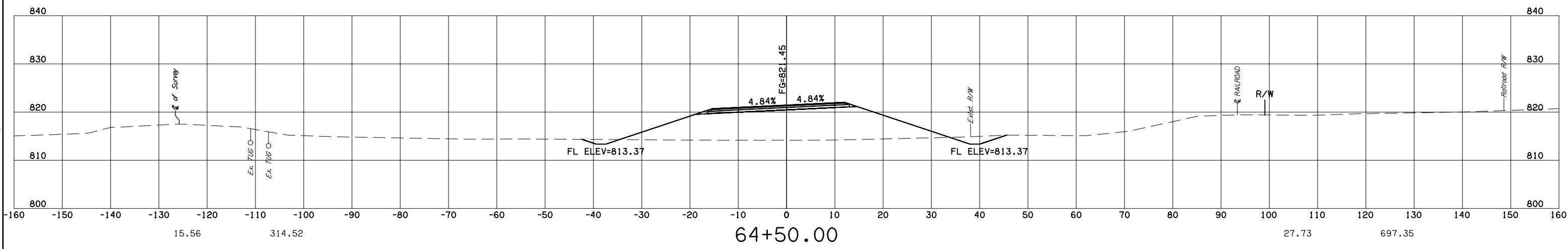
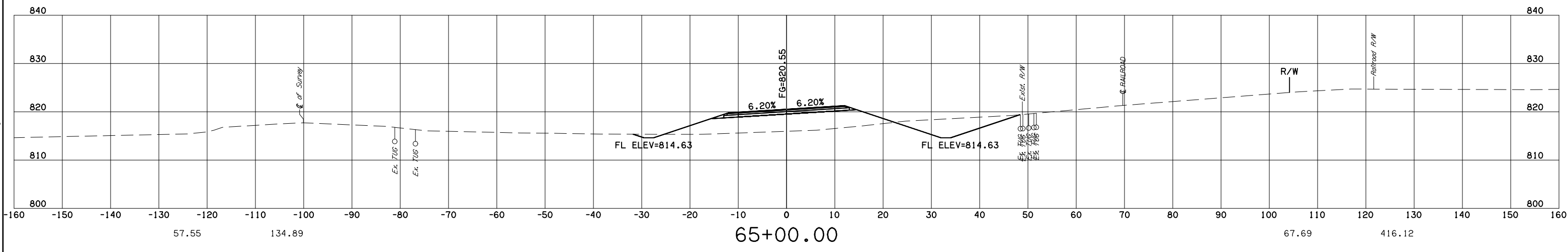
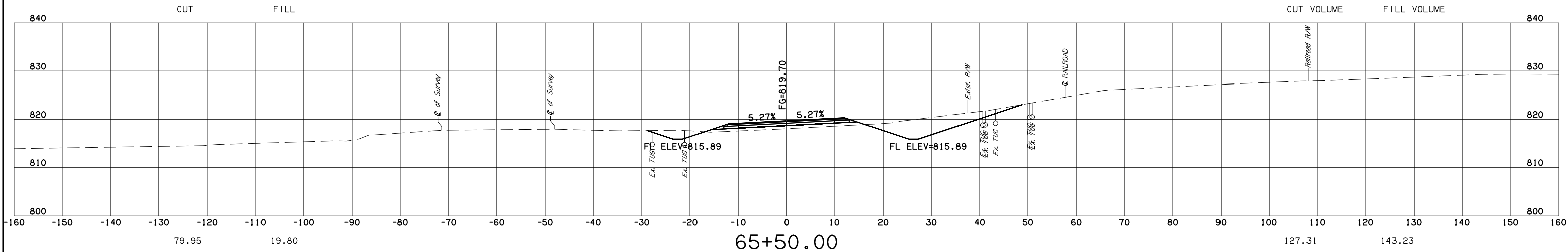
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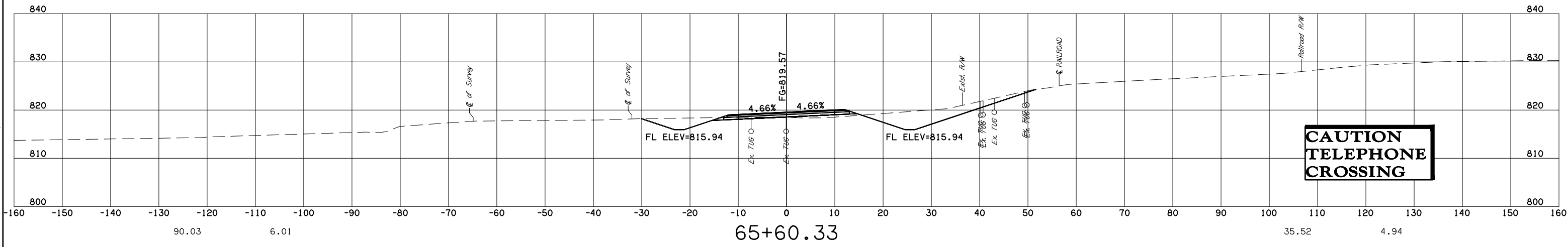
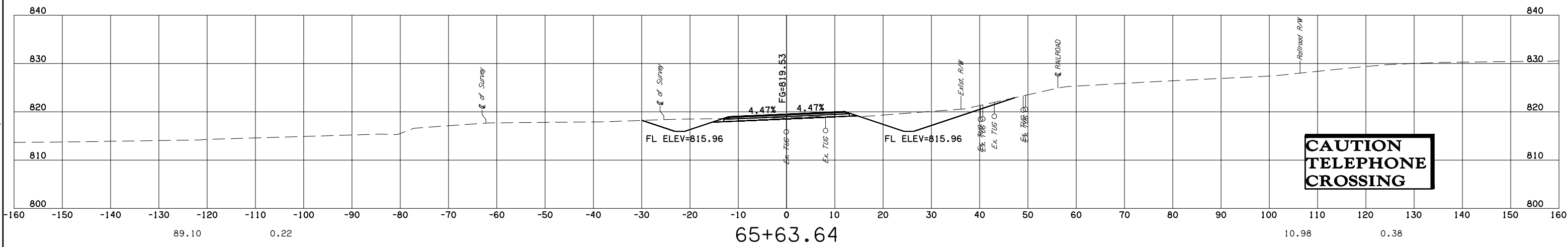
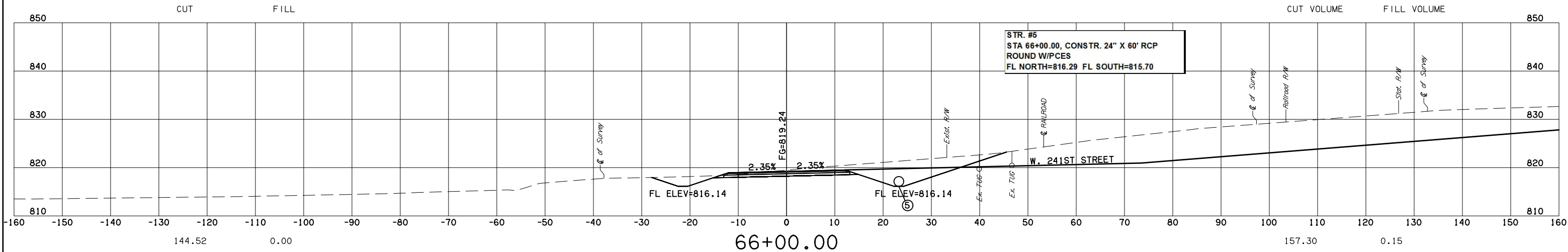
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DESCRIPTION	REVISIONS	DATE



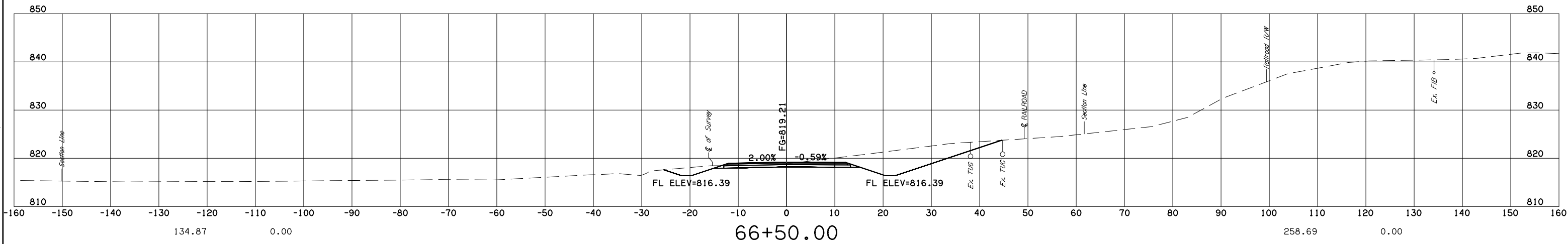
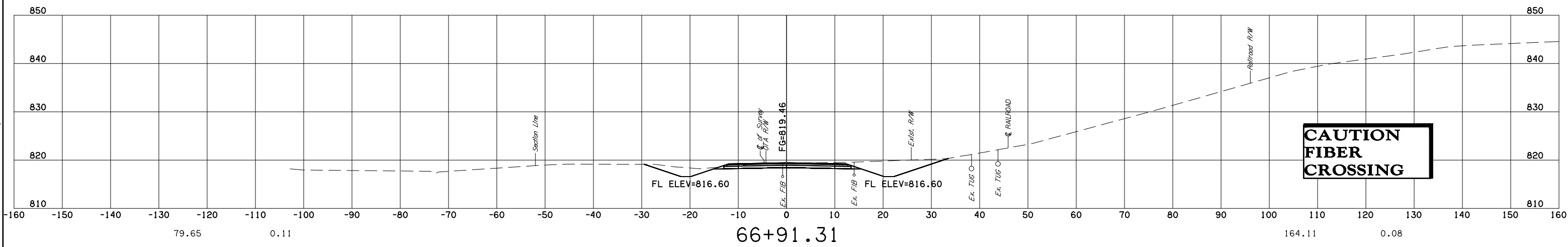
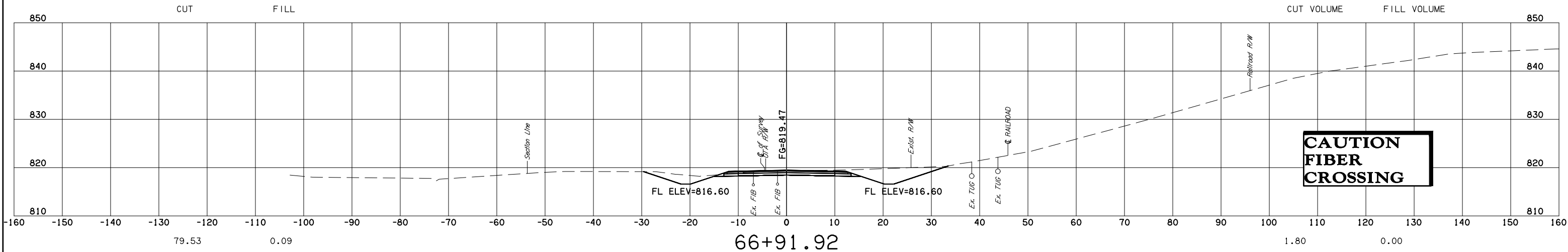
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DESCRIPTION	REVISIONS	DATE



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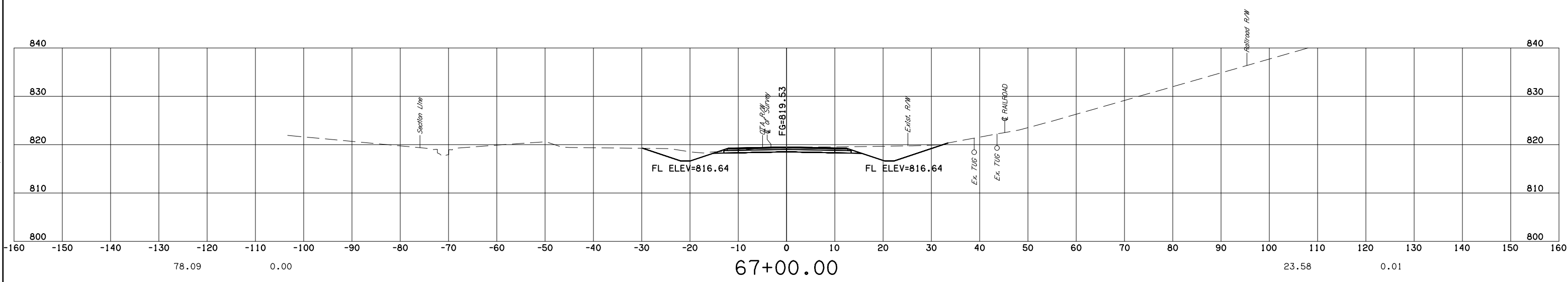
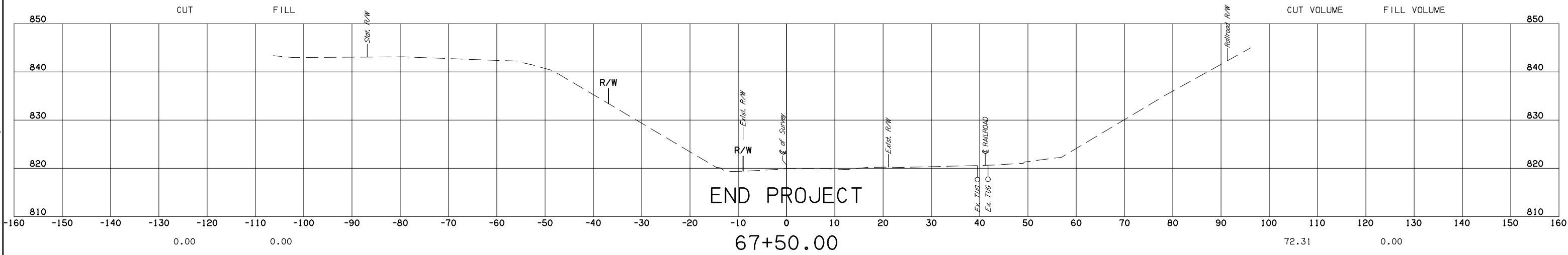
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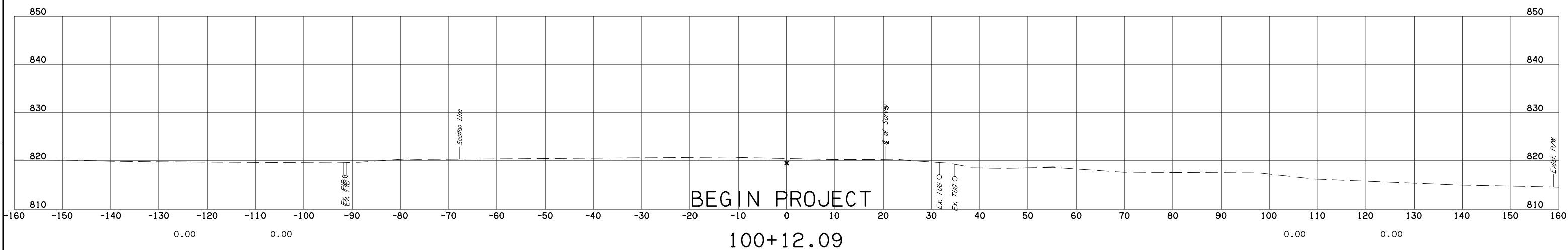
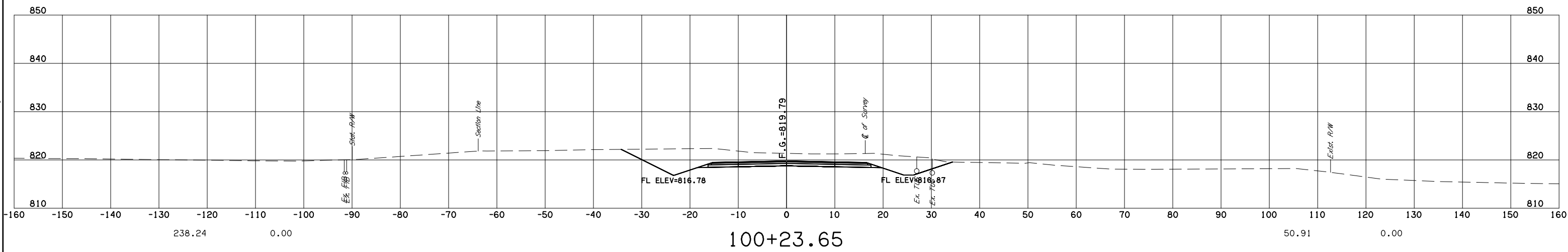
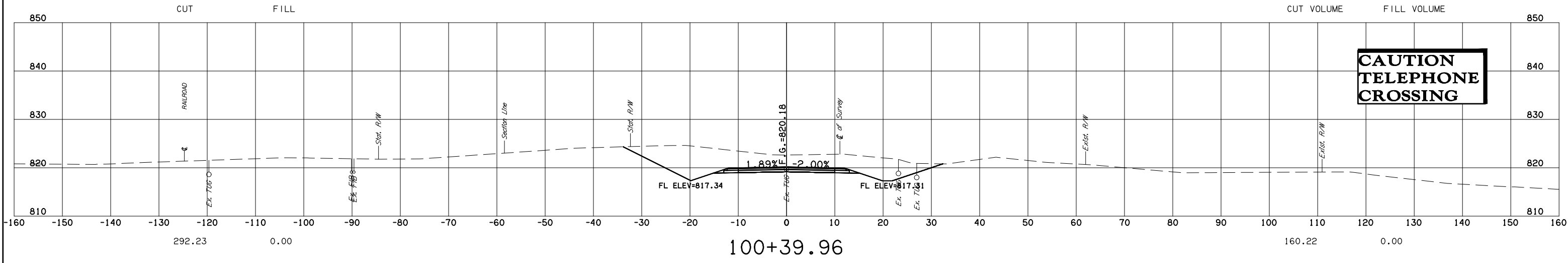
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DESCRIPTION	REVISIONS	DATE

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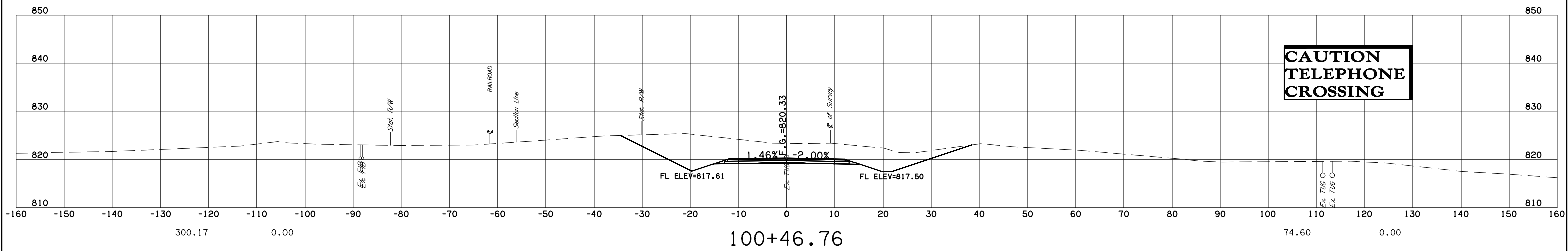
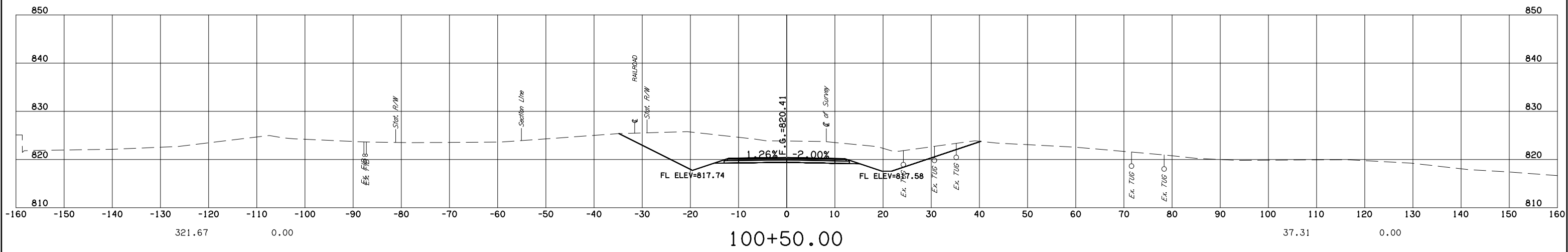
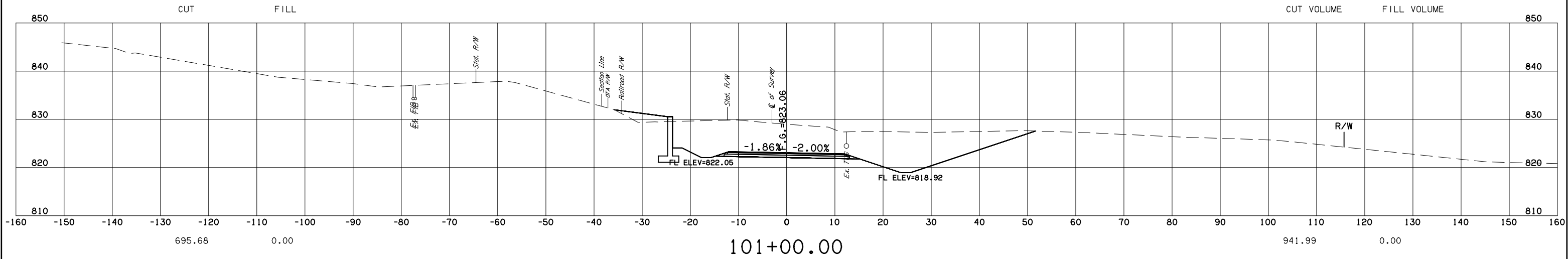
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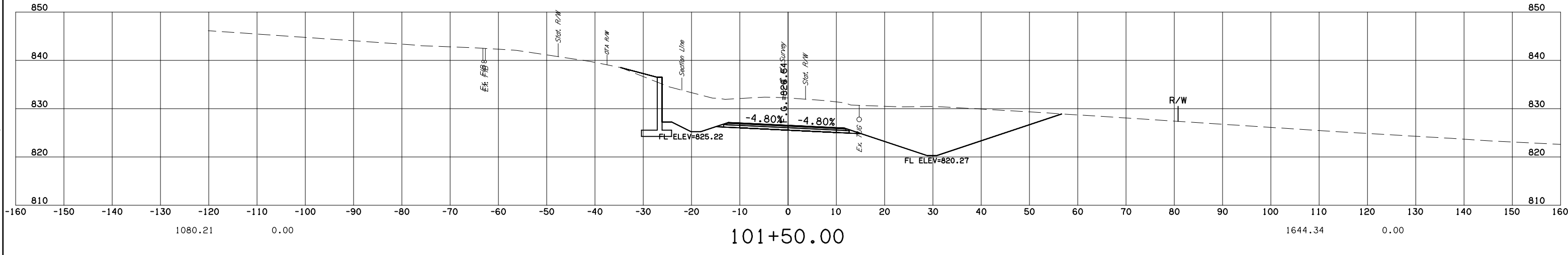
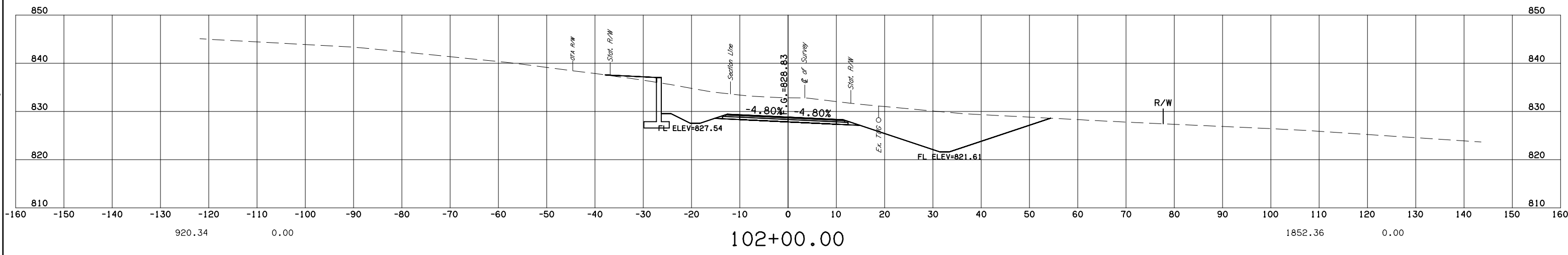
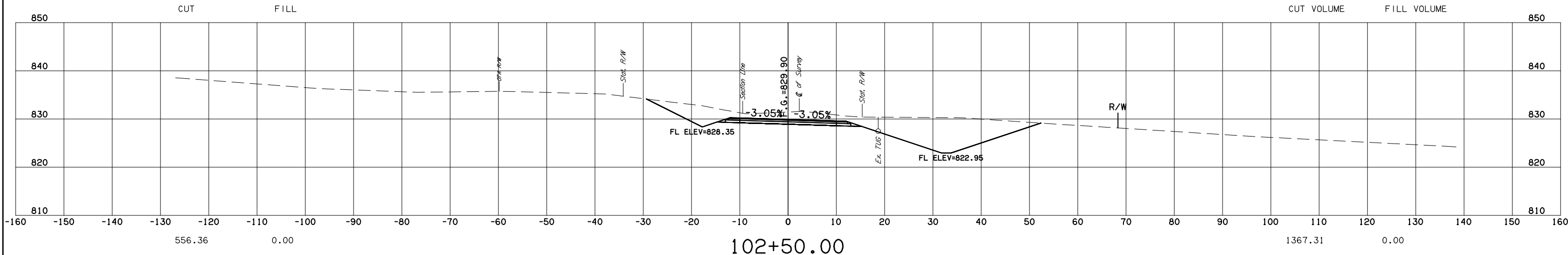


DESCRIPTION	REVISIONS	DATE



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DESCRIPTION	REVISIONS	DATE



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DESCRIPTION	REVISIONS	DATE

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