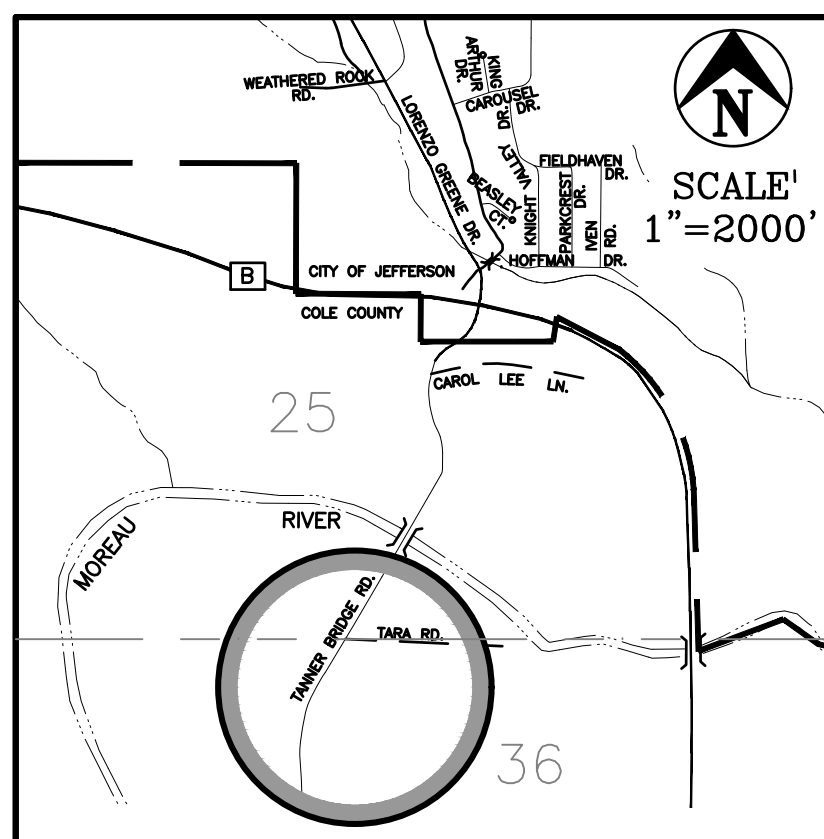


TANNER BRIDGE ROAD/TARA ROAD INTERSECTION IMPROVEMENTS

SE 1/4, SEC. 25 & NE 1/4 SEC. 36, T44N, R12W
COLE COUNTY, MISSOURI



SITE LOCATION MAP

BEARING BASE: GPS TIES TO MISSOURI STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, NAD83
VERTICAL DATUM: CITY OF JEFFERSON AND COUNTY OF COLE VERTICAL DATUM SYSTEM NAVD 1988

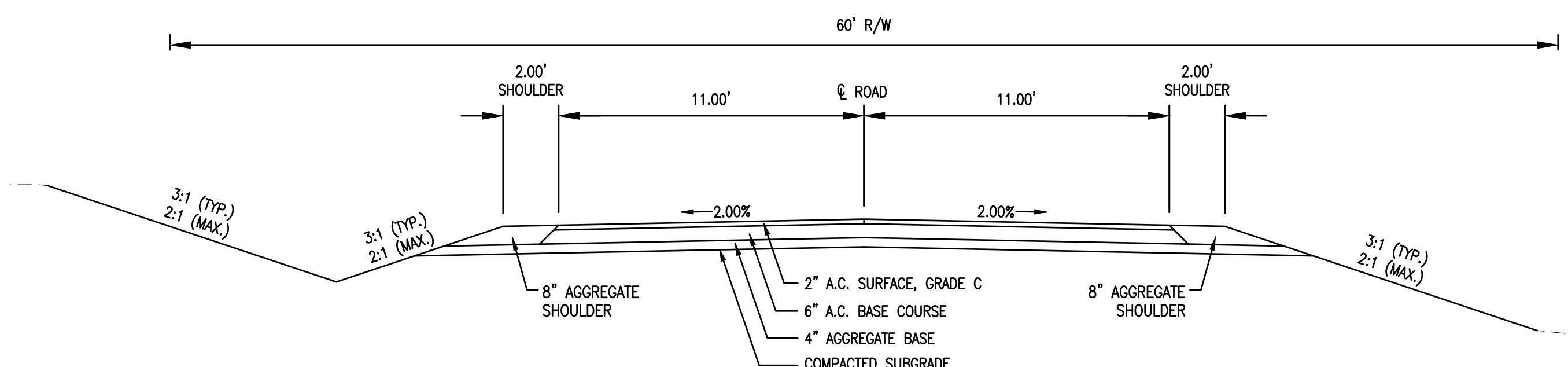
UTILITY COMPANIES
PWS# #2: CENTURYLINK; THREE RIVERS ELEC. COOP.: WATER FIBER OPTIC, TELEPHONE, TV ELECTRIC

SHEET INDEX

- 1 COVER SHEET
- 2 TABULATIONS OF QUANTITIES
- 3 REMOVALS
- 4 PLAN & PROFILE
- 5 PROFILES & DETAILS
- 6 PROFILES & DETAILS
- 7 GRADING & EROSION CONTROL PLANS
- 8 TRAFFIC CONTROL PLANS
- 9 DETAIL SHEET
- 10 CLEARING PLAN & FENCE DETAILS
- 1-9 TANNER BRIDGE RD. CROSS SECTIONS
- 1-2 TARA RD. CROSS SECTIONS

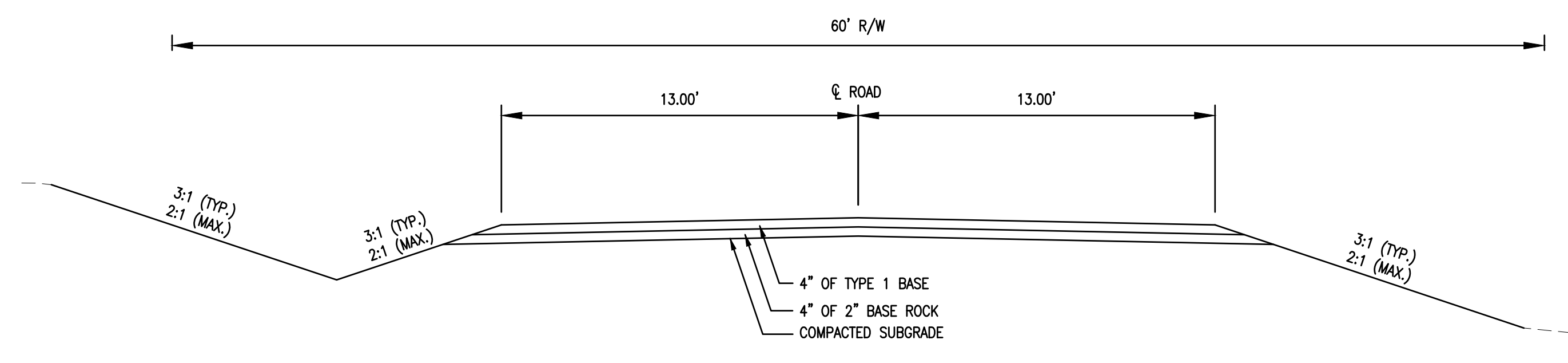
Note: Right of Way Plans and Easements by Separate Documents.

Control Point/ Benchmark Table				
Point #	Elevation	Northing	Easting	Description
15	617.26	979405.83	1727304.33	RP
8495	634.48	980247.59	1727556.58	RP
8502	636.82	980068.39	1727523.74	RP
10011	613.68	979379.60	1727266.44	RP



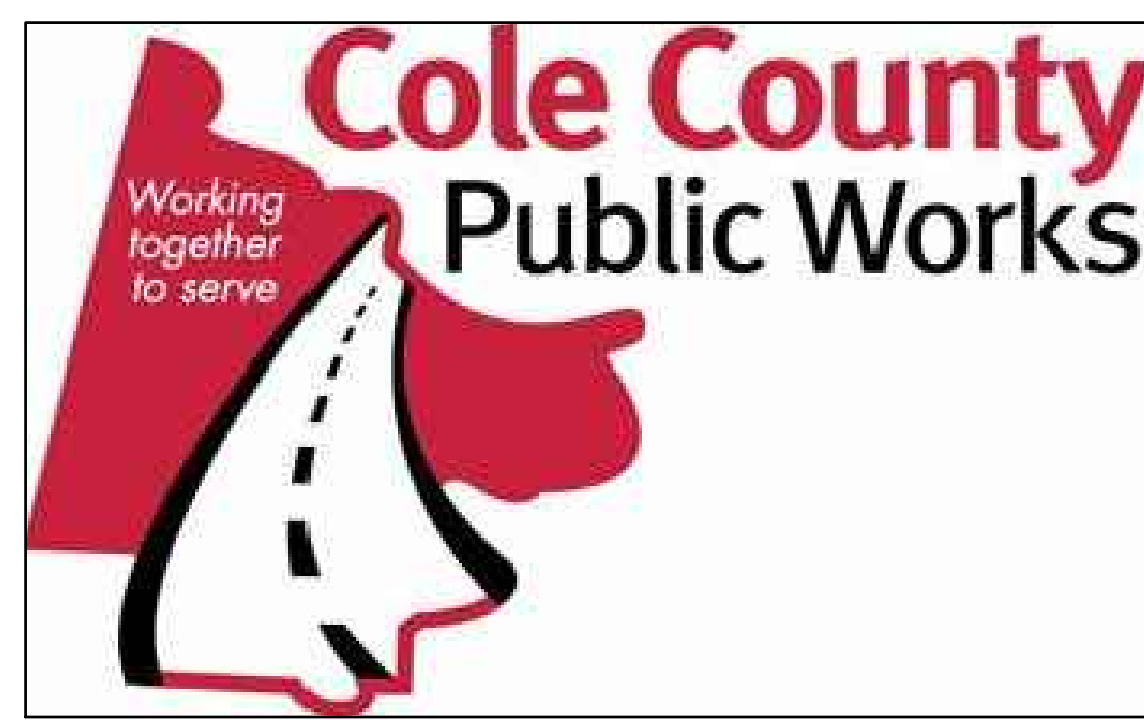
NOTE: SUPERELEVATION FROM STATION 4+82.44 TO 13+60.91
SEE SHEET 9 OF 10 FOR DETAILS

TYPICAL PAVEMENT SECTION
TANNER BRIDGE ROAD/TARA ROAD
STA. 3+49.25 TO STA. 12+30.00 - TANNER BRIDGE ROAD
STA. 0+11.00 TO STA. 1+25.00 - TARA ROAD
NO SCALE



TYPICAL AGGREGATE SECTION
TARA ROAD
STA. 1+25.00 TO STA. 2+33.92
NOT TO SCALE

LEGEND		
EXISTING (Light or Dashed)	TEL. PEDESTAL	MAIL BOX
PROPOSED (Heavy or Solid)	POWER POLE	PROPERTY CORNER
EASEMENT	GUY WIRE	TREE
CENTERLINE	WATER VALVE	SANITARY MANHOLE
APPROX. EXISTING PROPERTY LINE	FIRE HYDRANT	GAS VALVE
SECTION LINE	WATER METER	LIGHT POLE
FENCE	STREET SIGN	SATELLITE DISH
ELECTRIC LINE	ABBREVIATIONS: E-ELECTRIC, FO-FIBER OPTIC, G-GAS, S-SAN SEWER	
FIBER OPTIC LINE	SC-SIGNAL CABLE, T-TELEPHONE, W-WATER	
GAS LINE	PL-PROPERTY, CL-CENTER, R/W-RIGHT OF WAY	
SAN. SEWER LINE	Ø-DIAMETER, R-RADIUS, (R)-REMOVALS	
TELEPHONE LINE	UG-UNDERGROUND, O-OVERHEAD	
WATER LINE		



UTILITY STATEMENT:
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM VISIBLE FIELD SURVEY INFORMATION AND MISSOURI ONE-CALL MARKINGS IN PUBLIC RIGHT-OF-WAYS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE AND ONE-CALL MARKINGS. WHERE UTILITY ELEVATIONS ARE SHOWN ON THE PLANS, THE SURVEYOR HAS PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

APPROVED BY: *Eric Landwehr* Date: 8/6/2019
Eric Landwehr, P.E.
County Engineer

PRINTS ISSUED
8/6/2019
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(573) 634-8898

Patrick P. Kremer, PE - Engineer
MO# PE-2012018094

TANNER BRIDGE ROAD/TARA ROAD
INTERSECTION IMPROVEMENTS
COLE COUNTY PUBLIC WORKS

TANNER BRIDGE ROAD/TARA ROAD
COLE COUNTY, MISSOURI

CMPJS JOB No. 17-035

DRN. BY: PPK CKD. BY: CFB

SCALE:

SHEET TITLE
COVER SHEET

SHEET NUMBER
1

OF 10 SHEETS

REMOVAL OF IMPROVEMENTS									
CL STATION	CL STATION	OFFSET	LOCATION	QUANTITY	UNIT	DESCRIPTION	REMARKS		
10+53.6	TO 2+56.95	VARIABLE - LT	TANNER BRIDGE RD	1294	LF	FENCE AND FENCE POSTS	REMOVE		
2+56.95	TO 4+57.39	25.5' LT-21.4' LT	TANNER BRIDGE RD	200.44	LF	FENCE AND FENCE POSTS	REMOVE		
3+15.55	TO 3+44.46	18.2' RT-18.4' RT	TANNER BRIDGE RD	28.91	LF	FENCE AND FENCE POSTS	REMOVE		
3+34.67	TO 5+34.96	38.48' LT-41.05' LT	TANNER BRIDGE RD	200.00	LF	8" WATER MAIN/VALVE	REMOVE		
3+44.46	TO 3+49.25	18.4' RT-27.5' RT	TANNER BRIDGE RD	10.27	LF	FENCE AND FENCE POSTS	REMOVE		
4+51.72		14.4' LT	TANNER BRIDGE RD	1	EA	11 MAILBOXES	REMOVE AND RESET		
4+61.98		21.5' LT	TANNER BRIDGE RD	1	EA	STOP SIGN	REMOVE AND RETAIN FOR OWNER		
4+73.92		11.8' RT-26.0' RT	TANNER BRIDGE RD	17.5	SY	CONCRETE DRIVEWAY			
4+85.99	TO 4+89.85	46.5' LT-54.8' LT	TANNER BRIDGE RD	9.18	LF	FENCE AND FENCE POSTS	REMOVE		
4+97.54	TO 5+00.41	32.4' LT-25.2' LT	TANNER BRIDGE RD	7.81	LF	FENCE AND FENCE POSTS	REMOVE		
5+00.41	TO 5+08.62	25.2' LT-26.2' LT	TANNER BRIDGE RD	8.27	LF	FENCE AND FENCE POSTS	REMOVE		
6+30.97		2.7' RT	TANNER BRIDGE RD	1	EA	LEFT TURN WARNING SIGN	REMOVE AND RETAIN FOR OWNER		
9+58.45		0.98' RT	TANNER BRIDGE RD	45.67	EA	24" CMP			
10+54.50		12.9' LT	TANNER BRIDGE RD	1	EA	INTERSECTION WARNING SIGN	REMOVE AND RETAIN FOR OWNER		
11+57.29	TO 11+86.63	22.5' RT-21.4' RT	TANNER BRIDGE RD	30.00	LF	VINYL FENCING	REMOVE AND REPLACE		
12+36.00		13.50' LT	TANNER BRIDGE RD	1.00	EA	1 MAILBOX	REMOVE AND RESET		
12+49.06		11.5' RT - 51.7' RT	TANNER BRIDGE RD	112.00	SY	CONCRETE DRIVEWAY			
14+43.91	TO 17+88.75	42.21' LT-30.79' RT	TANNER BRIDGE RD	421.00	LF	8" WATER MAIN/VALVE/METER/FIRE HYDRANT	REMOVE		
14+82.16	TO 16+17.18	27.46 LT-49.24' RT	TANNER BRIDGE RD	155.00	LF	FENCE AND FENCE POSTS	REMOVE		
16+18.91		15.42' LT	TANNER BRIDGE RD	1	EA	1 MAILBOX	REMOVE AND RESET		
0+22.28	TO 2+97.36	22.4' RT-14.4' LT	TARA RD	316.53	LF	FENCE AND FENCE POSTS	REMOVE		
BID QUANTITY				1	LUMP SUM				

4" TYPE 5 AGGREGATE BASE					
STATION TO STATION	LOCATION	LENGTH (FT)	WIDTH (FT)	4" TYPE 5 AGGR. BASE (SY)	REMARKS
3+49.25	3+74.25	TANNER BRIDGE RD	CALCULATED AREA	80.53	
3+74.25	13+35.91	TANNER BRIDGE RD	961.66	31.32	3,346.58
13+35.91	13+60.91	TANNER BRIDGE RD	CALCULATED AREA		
0+11.00	1+25.00	TARA RD	CALCULATED AREA	479.60	
BID QUANTITY (SY)				3,985.3	

8" AGGREGATE SHOULDERS					
STATION TO STATION	LOCATION	LENGTH (FT)	WIDTH (FT)	6" TYPE 5 AGGR. BASE (SY)	REMARKS
3+49.25	3+74.25	TANNER BRIDGE RD - LT & RT	25.00	7.33	TAPER 0 TO 2.53'
3+74.25	3+78.00	TANNER BRIDGE RD - LT	3.75	2.64	1.10
3+74.25	3+87.94	TANNER BRIDGE RD - RT	13.69	2.64	4.02
4+18.01	4+61.59	TANNER BRIDGE RD - RT	43.58	2.64	12.78
4+85.95	11+67.50	TANNER BRIDGE RD - LT	681.55	2.64	199.92
4+86.93	8+93.08	TANNER BRIDGE RD - RT	406.15	2.64	119.14
9+06.92	12+33.66	TANNER BRIDGE RD - RT	326.74	2.64	95.84
12+25.07	13+35.91	TANNER BRIDGE RD - LT	110.84	2.64	32.51
12+62.72	13+35.91	TANNER BRIDGE RD - RT	73.19	2.64	21.47
13+35.91	13+60.91	TANNER BRIDGE RD - LT & RT	25.00	1.32	3.67 TAPER FROM 2.53' TO 0
0+11.00	1+25.00	TARA RD - LT & RT	273.09	2.64	80.11
BID QUANTITY (SY)				481.7	

4" OF TYPE 1 BASE					
STATION TO STATION	LOCATION	LENGTH (FT)	WIDTH (FT)	4" TYPE 1 AGGR. BASE (SY)	REMARKS
1+25.00	1+83.92	TARA RD	58.92	23.46	153.58
1+83.92	2+33.92	TARA RD	CALCULATED AREA	133.08	TAPER TO EXISTING WIDTH
BID QUANTITY (SY)				286.7	

4" OF 2" AGGREGATE BASE					
STATION TO STATION	LOCATION	LENGTH (FT)	WIDTH (FT)	4" OF 2" AGGR. BASE (SY)	REMARKS
1+25.00	1+83.92	TARA RD	58.92	25.59	167.53
1+83.92	2+33.92	TARA RD	CALCULATED AREA	144.86	TAPER TO EXISTING WIDTH
BID QUANTITY (SY)				312.4	

WATER MAIN RELOCATION (MATERIALS SUPPLIED BY PWSD #2)					
STATION TO STATION	LOCATION	OFFSET	RELOCATE 8" PVC WATER MAIN (LF)	CLASS III EXCAVATION (CY)	REMARKS
3+34.67	5+34.96	TANNER BRIDGE ROAD	38.48 LT. TO 41.05' LT.	200	50
14+43.91	17+88.75	TANNER BRIDGE ROAD	42.21 LT. TO 30.79' RT.	421	125 INCLUDES STREET CUT REPAIR
BID QUANTITY			621	175	

BITUMINOUS PAVEMENT											
STATION TO STATION	LOCATION	LENGTH (FT)	WIDTH (FT)	AREA (SY)	2" BITUMINOUS PAVEMENT WIDTH (FT)	AREA (SY)	6" BITUMINOUS BASE WIDTH (FT)	AREA (SY)	VARIABLE DEPTH BITUMINOUS PAVEMENT WIDTH (FT)	AREA (SY)	REMARKS
3+49.25	3+74.25	TANNER BRIDGE RD	25.00	21.82	60.60	22.49	62.46				PAVEMENT TRANSITION 21.29' TO 22.00'
3+74.25	13+35.91	TANNER BRIDGE RD	961.66	22.17	2368.89	22.83	2439.41				
13+35.91	13+60.91	TANNER BRIDGE RD	25.00	21.09	58.58	21.76	60.44				PAVEMENT TRANSITION 22.00' TO 20.97'
13+60.91	14+10.91	TANNER BRIDGE RD	50.00						10.40	57.78	ASPHALT WEDGING TRANSITION
0+11.00	1+25.00	TARA RD	114.00		404.70		411.10				CALCULATED AREA
BID QUANTITY				2892.8		2973.4		57.8			

DITCH LINERS						
STATION TO STATION	LOCATION	LENGTH (FT)	WIDTH (FT)	TURF REINFORCEMENT MAT TENSAR ROLLMAX P300 (SY)	ROCK DITCH LINER (CY)	REMARKS
2+77.50	3+81.50	TANNER BRIDGE ROAD LT.	104.00	8.00	92.44	STAPLE PATTERN E
3+24.50	3+86.00	TANNER BRIDGE ROAD RT.	61.50	8.00	54.67	STAPLE PATTERN E
4+84.00	11+73.50	TANNER BRIDGE ROAD LT.	689.50	8.00	612.89	STAPLE PATTERN E
4+92.00	8+85.23	TANNER BRIDGE ROAD RT.	393.23	8.00	349.54	STAPLE PATTERN E
9+16.89	9+67.50	TANNER BRIDGE ROAD RT.	50.61	8.00		2.00' DEPTH
9+70.00		TANNER BRIDGE ROAD RT.	20.00	10.00		2.00' DEPTH
9+76.00	11+85.00	TANNER BRIDGE ROAD LT.	209.00	8.00	185.78	STAPLE PATTERN E
16+66.32	18+17.29	TANNER BRIDGE ROAD LT.	150.97	8.00	134.20	STAPLE PATTERN E
BID QUANTITY				1295.3	45.6	

LUMP SUM ITEMS	
ITEM	QUANTITY (LS)
MOBILIZATION	1
CONSTRUCTION PHASING & TRAFFIC CONTROL	1
EROSION CONTROL	1

SEEDING, FERTILIZING & MULCH						
STATION TO STATION	LOCATION	SEED & MULCH (AC)	TEMP. SEED & MULCH (AC)	REMARKS		
-10+54	2+55	TANNER BRIDGE RD LT.	1.07	0.11	CARRENDER PROPERTY	
2+55	4+17	TANNER BRIDGE RD LT.	0.18	0.02		
3+16	4+19	TANNER BRIDGE RD RT.	0.05	0.00		
4+31	4+67	TANNER BRIDGE RD RT.	0.01	0.00		
4+48	11+84	TANNER BRIDGE RD LT.	0.58	0.06		
4+79	12+36	TANNER BRIDGE RD RT.	0.53	0.05		
12+10	13+61	TANNER BRIDGE RD LT.	0.05	0.01		
12+61	13+61	TANNER BRIDGE RD RT.	0.01	0.00		
14+44	16+38	TANNER BRIDGE RD LT.	0.15	0.02		
16+51	18+18	TANNER BRIDGE RD LT.	0.17	0.02		
17+88		TANNER BRIDGE RD RT.	0.01	0.00	WATERMAN CONNECTION	
0+53	2+83	TARA RD LT.	0.14	0.01		
0+49	2+97	TARA RD RT.	0.12	0.01		
BID QUANTITY			3.07	0.31		

ENTRANCES										
STATION	LOCATION	OFFSET	LENGTH (FT)	WIDTH (FT)	6" ASPHALT APPROACH (SY)	4" TYPE 1 AGGR. BASE (SY)	4" OF 2" AGGR. BASE (SY)	6" ASPHALT DRIVE (SY)	6" CONCRETE DRIVE (SY)	REMARKS
4+05.11	TANNER BRIDGE RD	RT	7.84	VARIES (28' TO 24')	10.26	23.44				
4+74.26	TANNER BRIDGE RD	RT	12.00	24.00	8.67				32.00	
9+00.00	TANNER BRIDGE RD	RT	60.00	10.00	4.01	51.25	51.25			
11+96.33	TANNER BRIDGE RD	LT	62.00	VARIES (26' TO 17')				170.09		
12+48.37	TANNER BRIDGE RD	RT	38.00	25.00	9.05				105.55	
16+40.00	TANNER BRIDGE RD	LT	77.68	VARIES	49.31					CONCRETE DRIVE BY OTHERS
BID QUANTITY (SY)					81.3	74.7	51.3	170.1	137.6	

STORM DRAINAGE PIPES							
STRUCTURE NO.	STATION TO STATION	LOCATION	ALUMINIZED CORRUGATED METAL PIPE (LF)	ALUMINIZED METAL END SECTION (EA)	CL III REINFORCED CONCRETE PIPE (LF)	REINF. CONC. F.E.S. (EA)	REMARKS
C-1	9+50.22 LT. TO 9+69.26 RT.	TANNER BRIDGE ROAD			66.04	2	
C-2	8+87.30 RT. TO 9+4.83 RT.	TANNER BRIDGE ROAD	28.8	2			
C-3	-0+95.20 TO -1+10.20 LT.	TANNER BRIDGE ROAD	15	2			
BID QUANTITY			43.8	4.0	66.0	2	

EARTHWORK			
LOCATION	EXCAVATION (CY)	FILL (CY)	REMARKS
TANNER BRIDGE RD	1,774	1,251	THE EARTHWORK QUANTITIES SHOWN ARE RAW VOLUMES FROM CROSS SECTION CALCULATIONS AND SHOULD BE CONSIDERED FOR INFORMATIONAL PURPOSES ONLY. VOLUMES ARE CALCULATED FROM EXISTING GRADES TO PROPOSED SUBGRADE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INCLUDING ANY ADJUSTMENTS NECESSARY TO ACCOUNT FOR PAVEMENT REMOVALS, ADDITIONAL EARTHWORK FOR ENTRANCES, TARA ROAD TIE IN, CONSTRUCTION PHASING, OR OTHER EARTHWORK NECESSARY TO COMPLETE THE PROJECT.
TARA RD	658	0	
TOTAL	2,432	1,251	
BID QUANTITY		1 LUMP SUM	

COLDMILLING ASPHALT PAVEMENT					
STATION TO STATION	LOCATION	LENGTH (FT)	WIDTH (FT)	AREA (SY)	REMARKS
13+60.91	14+10.91	TANNER BRIDGE RD	50.00	8.38	46.56 ASPHALT WEDGING
BID QUANTITY			46.6		

PAVEMENT MARKING							
STATION TO STATION	LOCATION	ACRYLIC WATERBORNE PAINT		PREFORMED MARKING TAPE			REMARKS
		4" SOLID WHITE (LF)	4" SOLID YELLOW (LF)	4" SOLID YELLOW (LF)	24" YELLOW HATCH (LF)	24" WHITE STOP BAR (LF)	
3+49.25	14+10.91	TANNER BRIDGE ROAD	C/L		2123		DOUBLE SOLID YELLOW
3+49.25	14+10.91	TANNER BRIDGE ROAD	RT.	2123			EDGE LINE
3+49.25	13+60.91	TANNER BRIDGE ROAD	LT.	2023			EDGE LINE
0+19		TARA ROAD				11	STOP BAR
0+19	1+25	TARA ROAD			212		CENTER ISLAND EDGELINES
0+19	1+25	TARA ROAD			38		45' HATCH
BID QUANTITY		4147	2123	212	38	11	

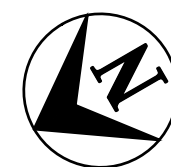
CLEARING, GRUBBING & TREE REMOVAL						
STATION TO STATION	LOCATION	CLEARING & GRUBBING (AC)	TREE REMOVAL EACH	REMARKS		
-10+54	2+55	TANNER BRIDGE RD LT	1.07		CARRENDER PROPERTY	
5+37	10+15	TANNER BRIDGE RD RT	0.15			
17+13	18+18	TANNER BRIDGE RD LT	0.06		LUTZ PROPERTY	
0+50	2+97	TARA RD	LT/RT	7.00		
BID QUANTITY			1.3	7.0		

FENCE AND GATES							
STATION TO STATION	LOCATION	FOUR STRAND BARBED WIRE FENCE (LF)	14.00' TUBULAR STEEL GATE (EA)	REPLACE VINYL FENCE (LF)	REMARKS		
-10+53.60	3+75.12	TANNER BRIDGE ROAD LT.	1415				
	2+68.00	TANNER BRIDGE ROAD LT.		1			
3+15.55	3+44.46	TANNER BRIDGE ROAD RT.	29				
11+57.29	11+86.63	TANNER BRIDGE ROAD RT.			30		
14+82.16	16+17.18	TANNER BRIDGE ROAD LT.	155				
0+31.45	2+97.36	TARA ROAD LT.	266				
	2+69	TARA ROAD LT.		1			
BID QUANTITY			1865	2	30		

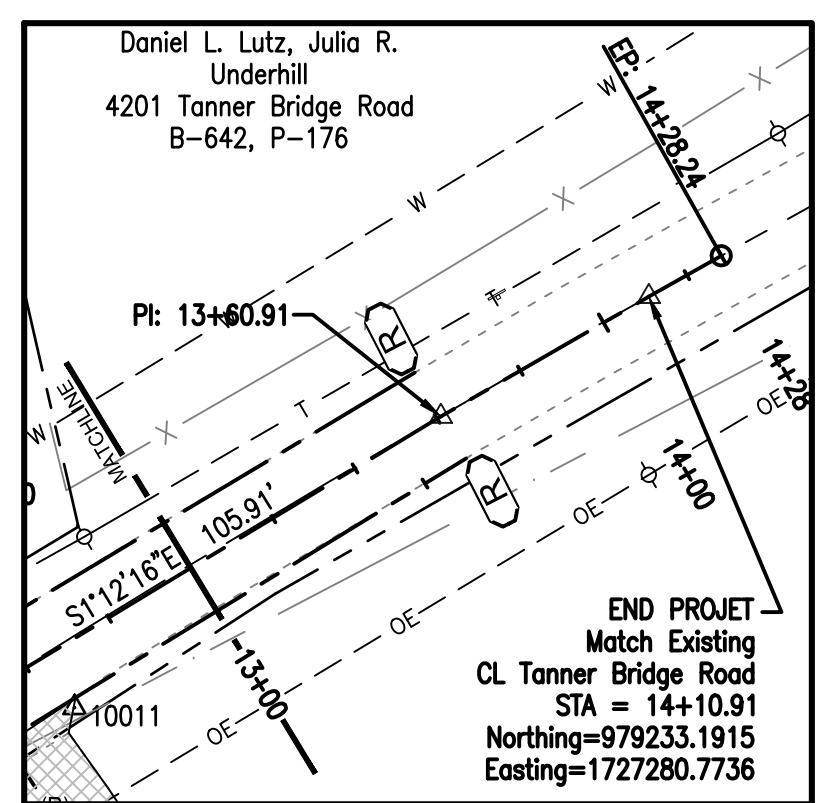
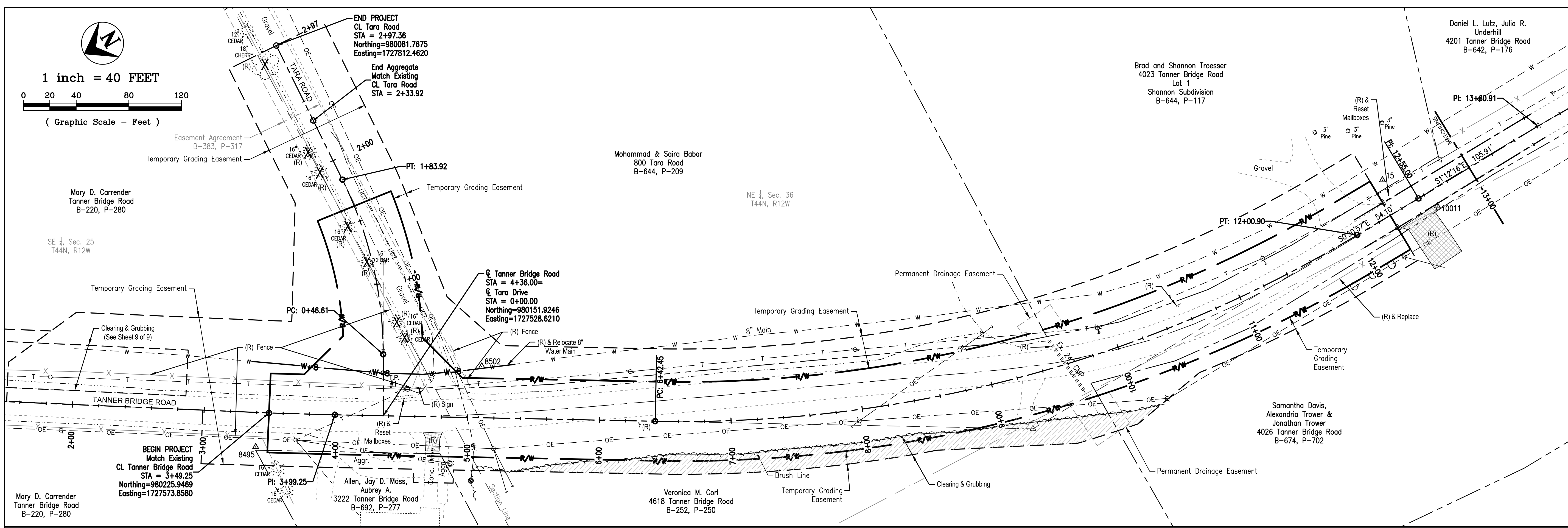
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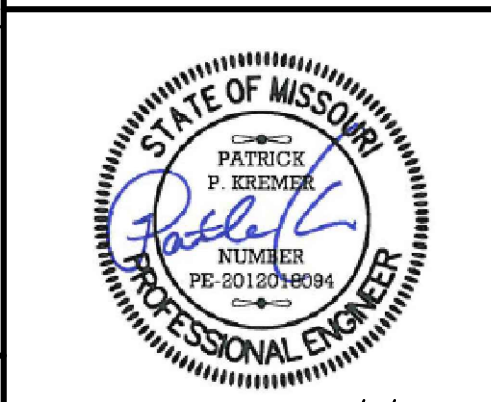
1 inch = 40 FEET
 0 20 40 80 120
 (Graphic Scale - Feet)



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8/6/2019
 Patrick P. Kremer, PE - Engineer
 MO# PE-2012018094

TANNER BRIDGE ROAD/TARA ROAD
 INTERSECTION IMPROVEMENTS
 COLE COUNTY PUBLIC WORKS
 TANNER BRIDGE ROAD/TARA ROAD
 COLE COUNTY, MISSOURI

CMPS JOB No. 17-035

DRN. BY: PPK CKD. BY: CFB

SCALE: 1"=40'

SHEET TITLE

REMOVALS

SHEET NUMBER

3

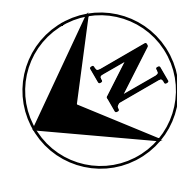
OF 10 SHEETS



CALL BEFORE YOU
 DIG - DRILL - BLAST
 1-800-344-7483
 (TOLL FREE)

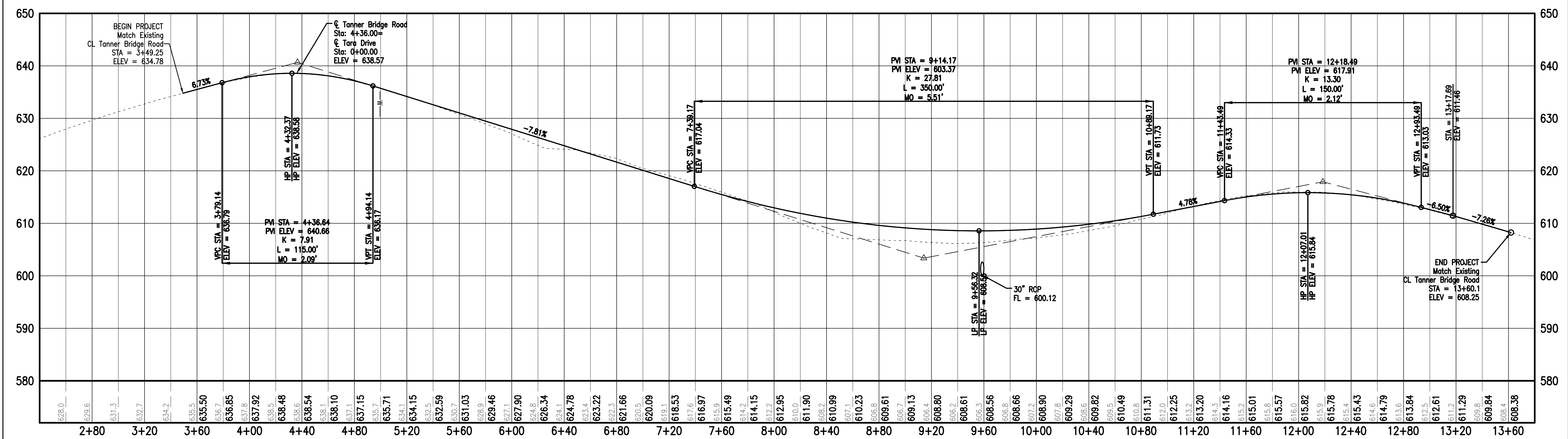
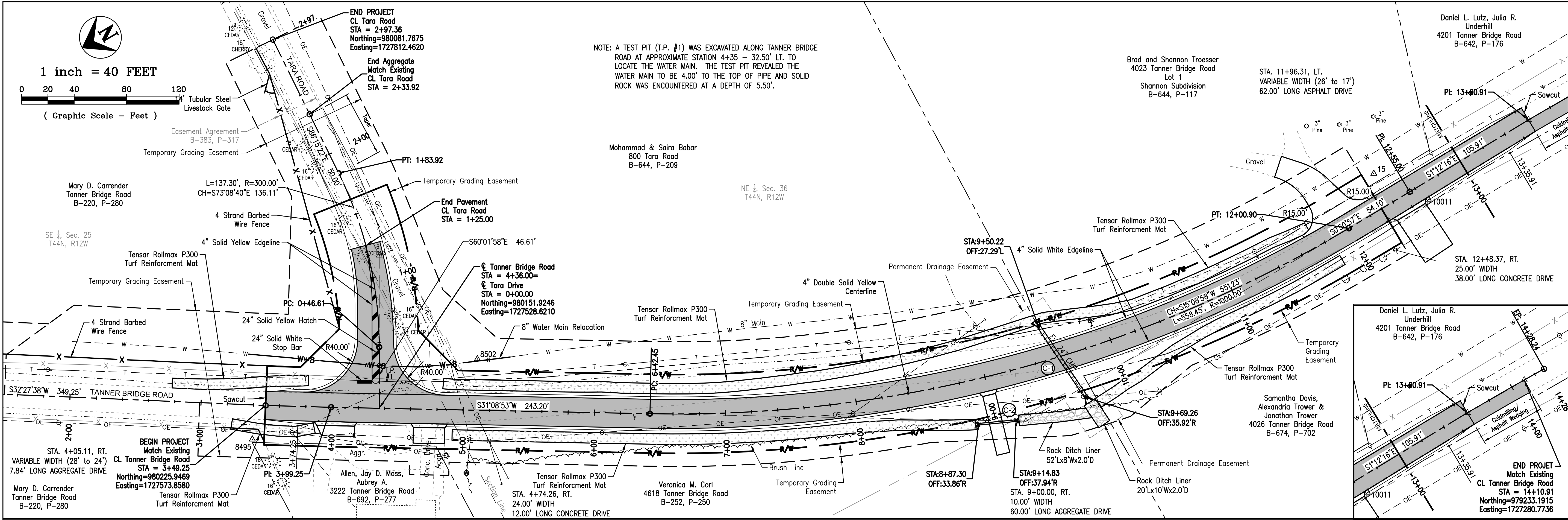
MISSOURI ONE CALL SYSTEM, INC.

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1 inch = 40 FEET

(Graphic Scale - Feet)



CALL BEFORE YOU DIG - DRILL - BLAST
1-800-344-7483
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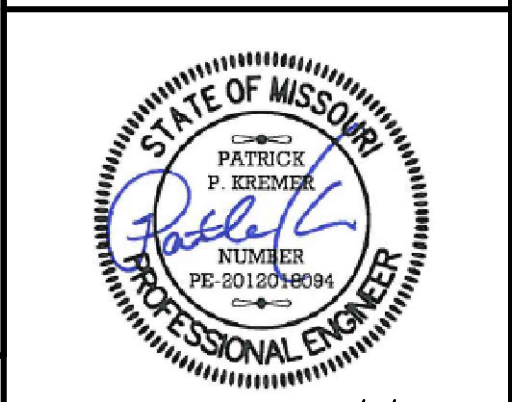
MISSOURI ONE CALL SYSTEM, INC.

UTILITY STATEMENT:
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM VISIBLE FIELD SURVEY INFORMATION AND MISSOURI ONE-CALL MARKINGS IN PUBLIC RIGHT-OF-WAYS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE AND ONE-CALL MARKINGS. WHERE UTILITY ELEVATIONS ARE SHOWN ON THE PLANS, THE SURVEYOR HAS PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

PRINTS ISSUED
8/6/2019

REVISIONS:

Central Missouri Professional Services, Inc.
ENGINEERING - SURVEYING - MATERIALS TESTING
2500 E. MCCARTY
JEFFERSON CITY, MISSOURI 65101
(573) 634-3455
(573) 634-8898



8/6/2019
Patrick P. Kremer, PE - Engineer
MO# PE-2012018094

TANNER BRIDGE ROAD/TARA ROAD
INTERSECTION IMPROVEMENTS
COLE COUNTY PUBLIC WORKS
TANNER BRIDGE ROAD/TARA ROAD
COLE COUNTY, MISSOURI

CMPS JOB No. 17-035

DRN. BY: PPK CKD. BY: CFB

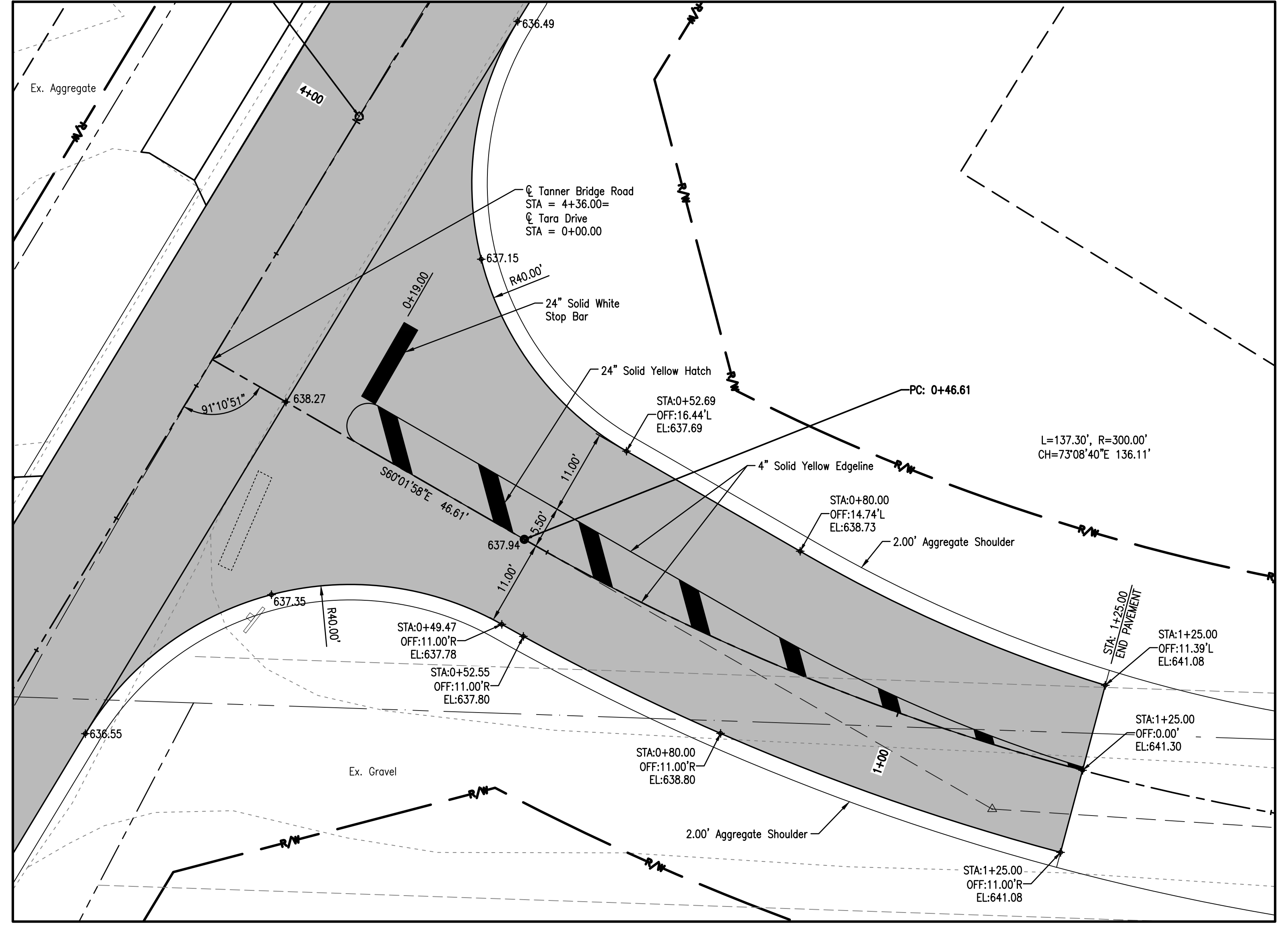
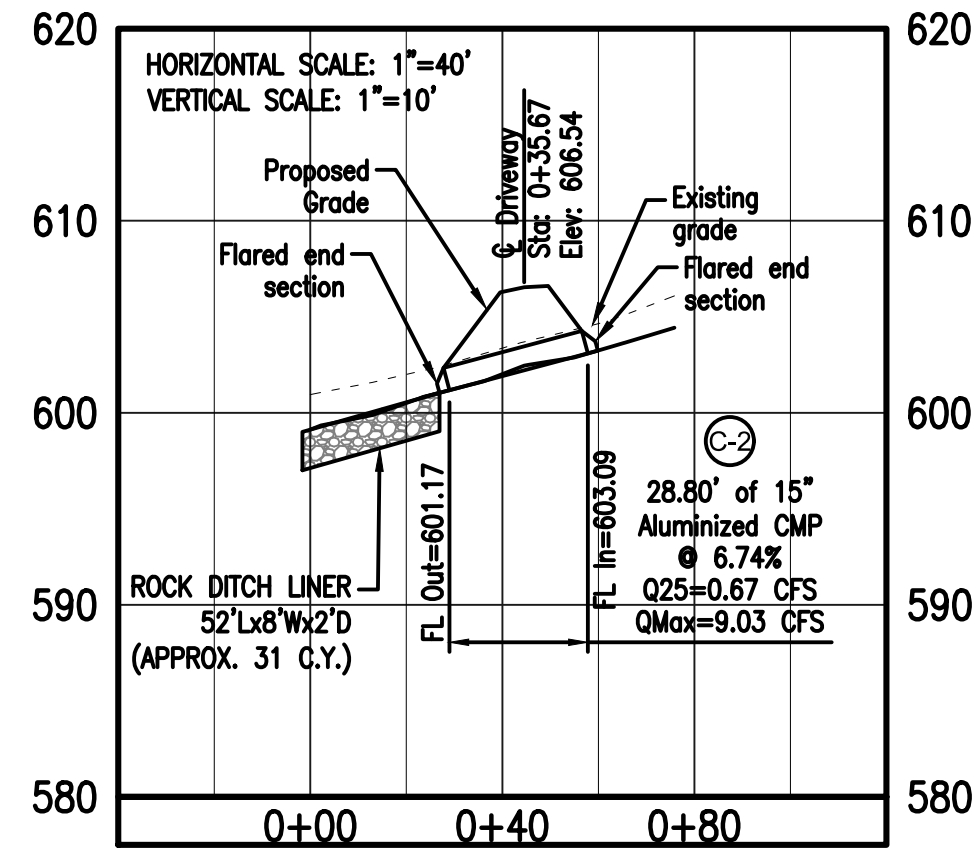
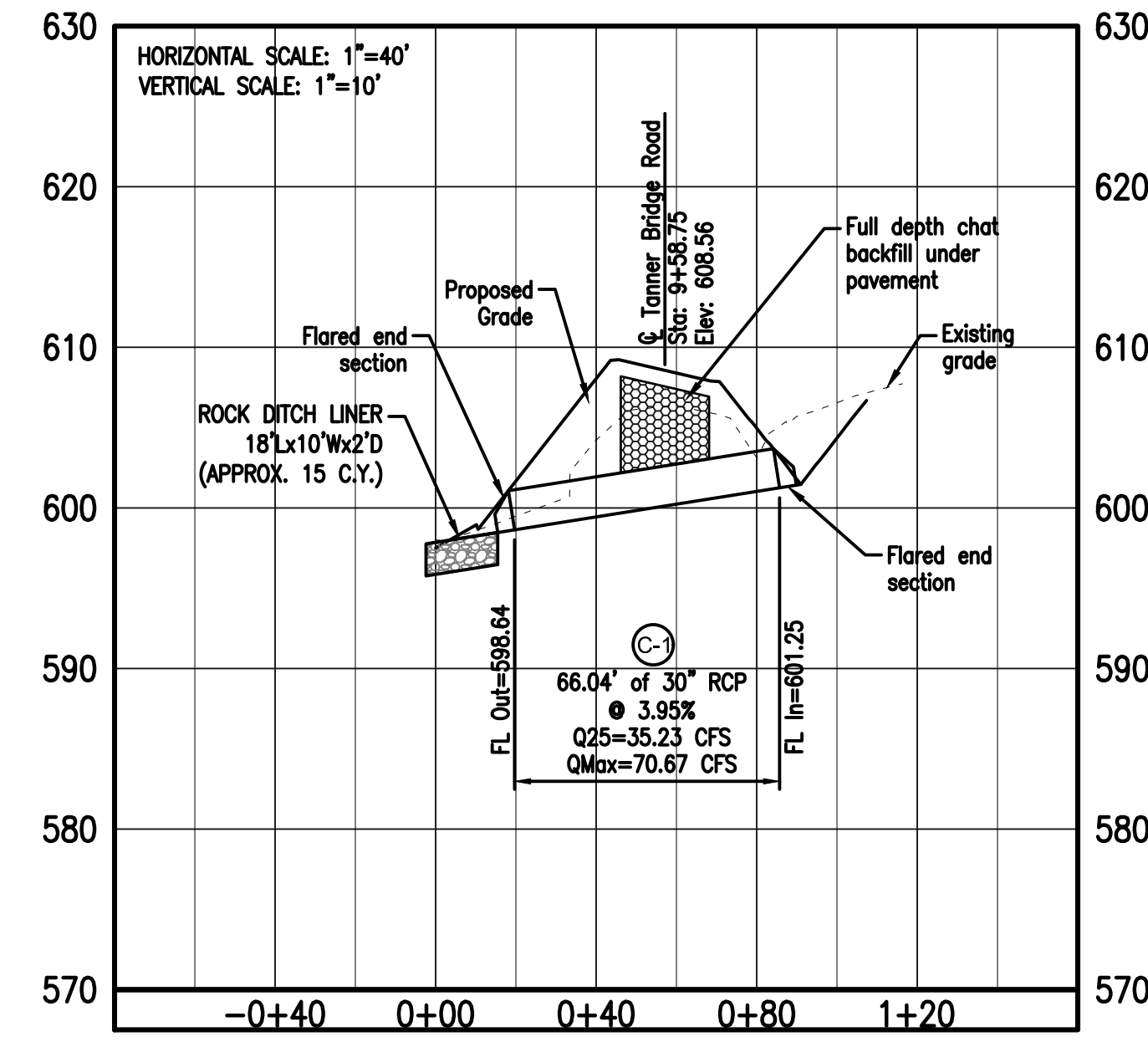
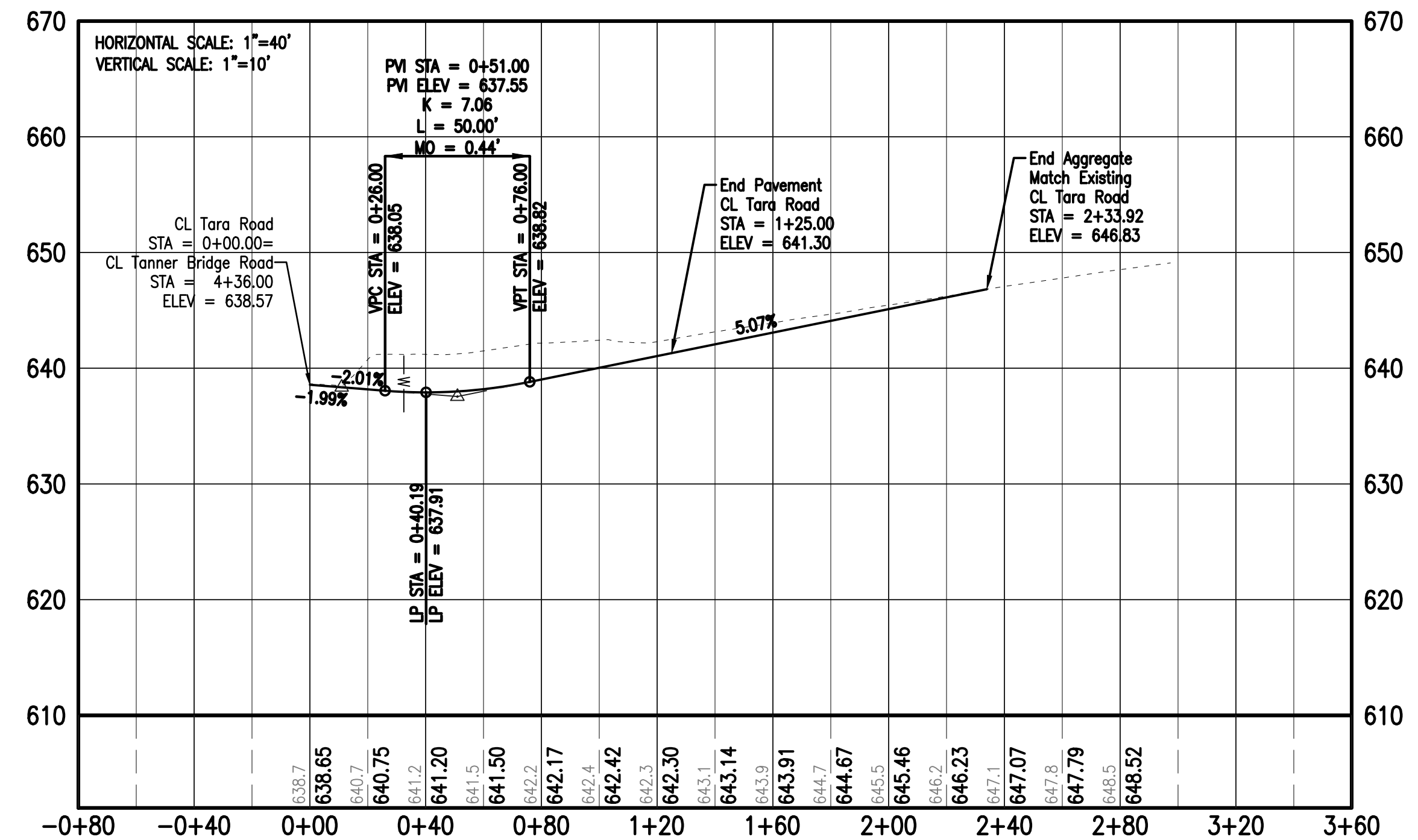
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SHEET TITLE

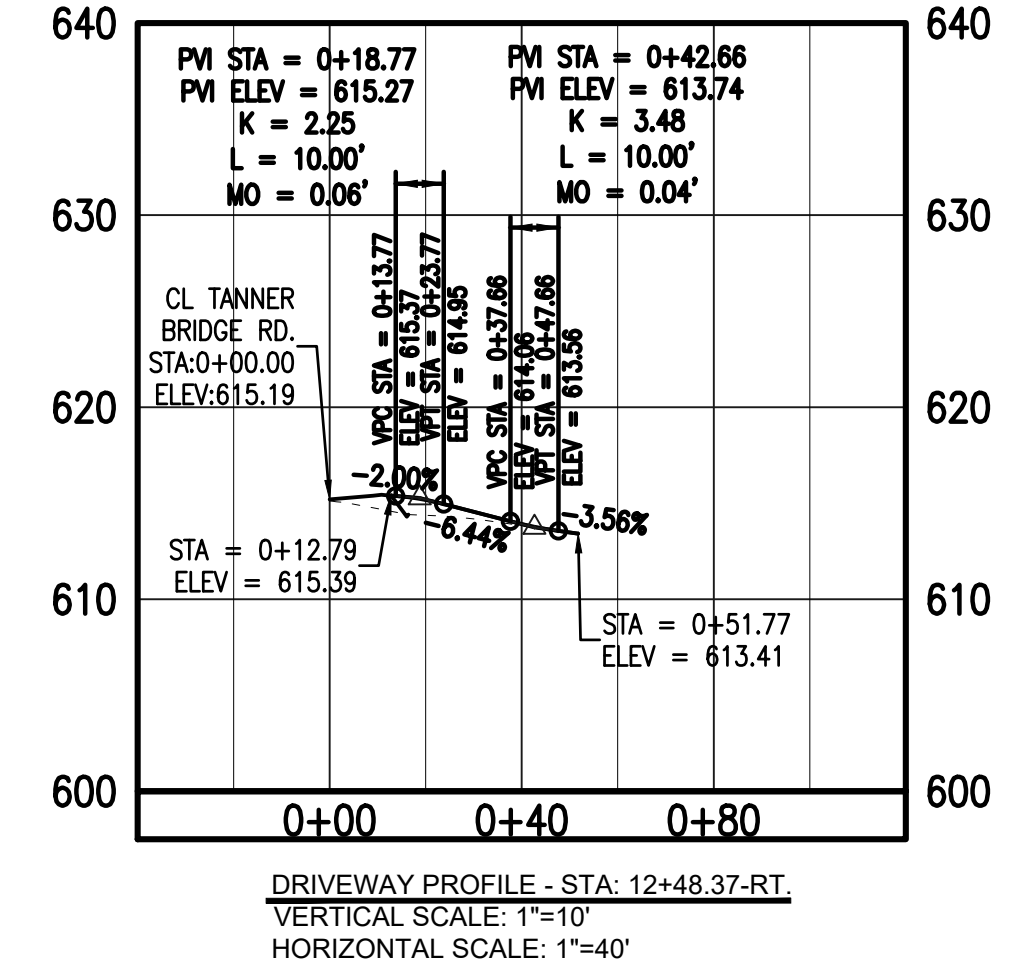
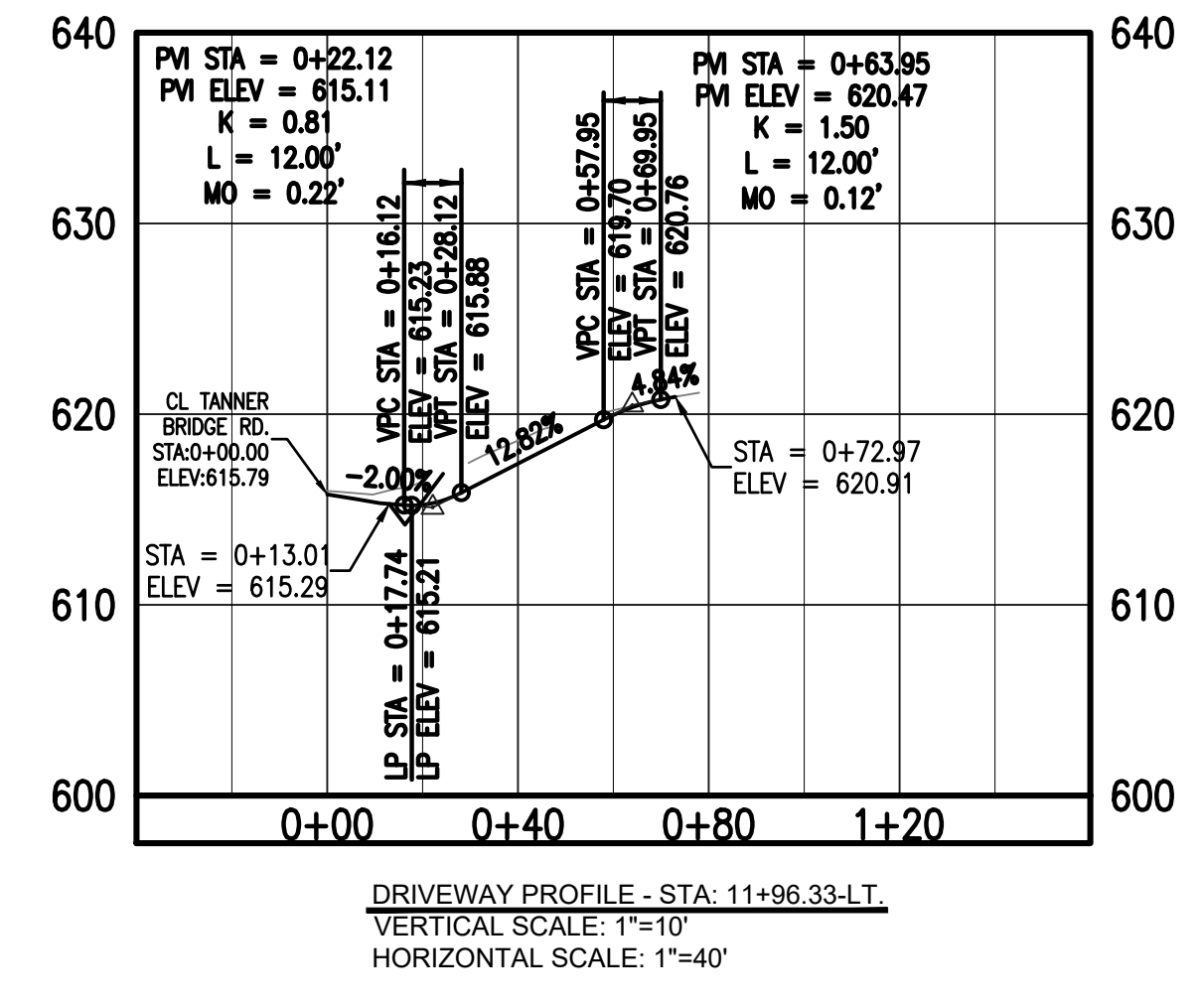
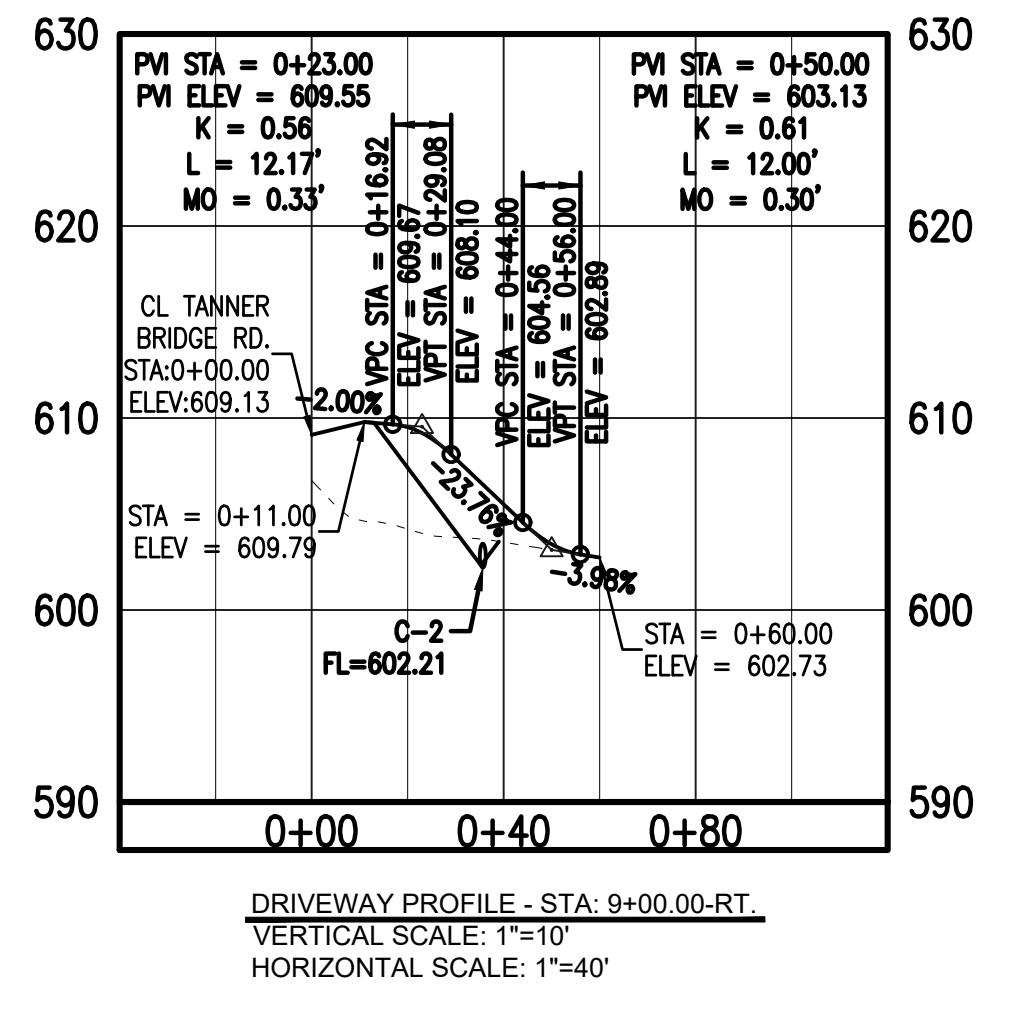
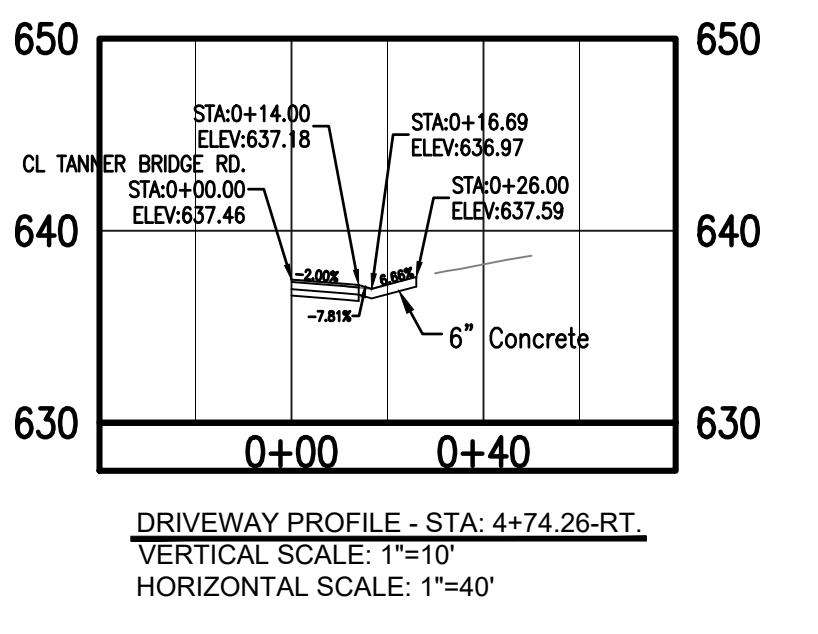
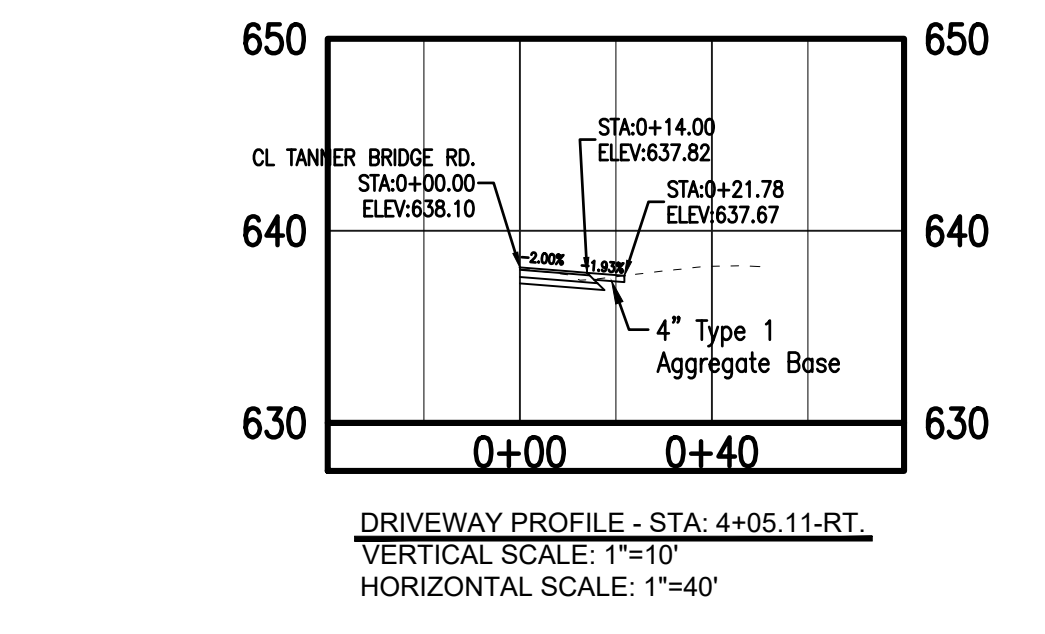
PLAN & PROFILE

SHEET NUMBER

4
OF 10 SHEETS



INTERSECTION DETAIL
SCALE: 1"=10'



UTILITY STATEMENT:
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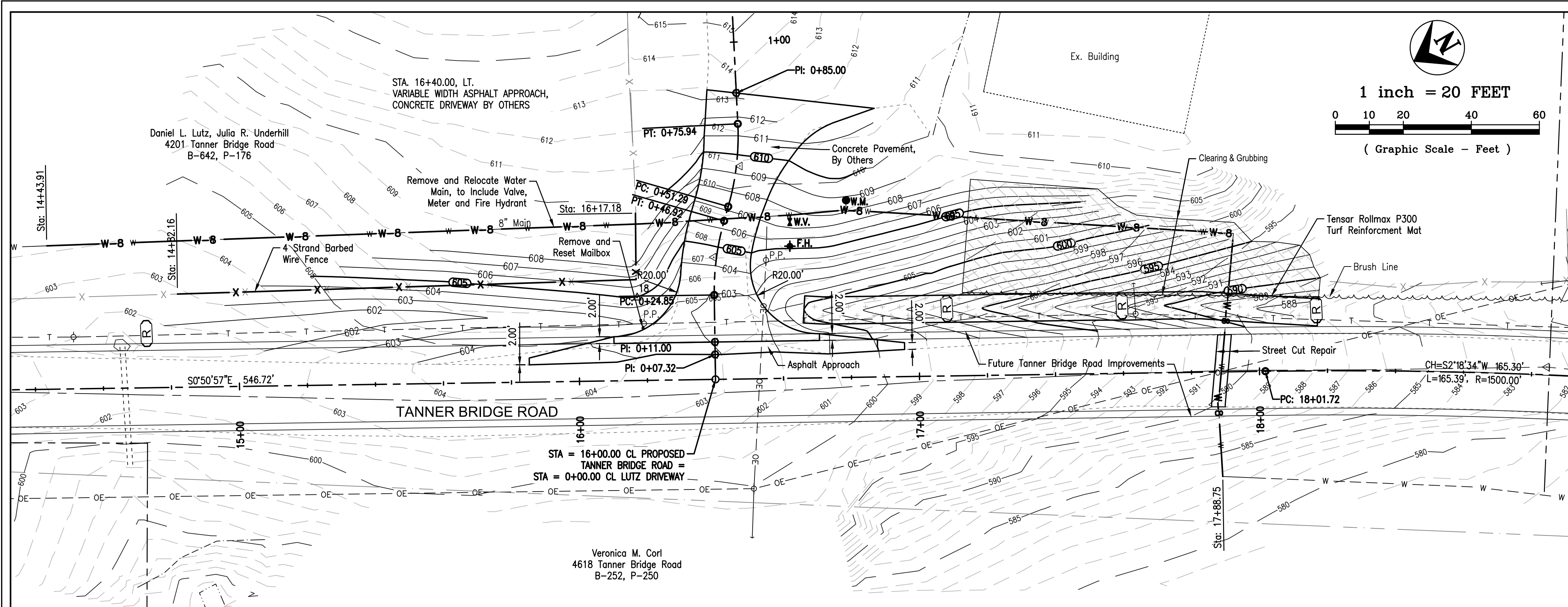
Central Missouri Professional Services, Inc.
ENGINEERING - SURVEYING - MATERIALS TESTING
2500 E. McCARTY
JEFFERSON CITY, MISSOURI 65101
(573) 634-3455
(573) 634-8898

STATE OF MISSOURI
PATRICK P. KREMER
NUMBER
PE 2012018094
PROFESSIONAL ENGINEER

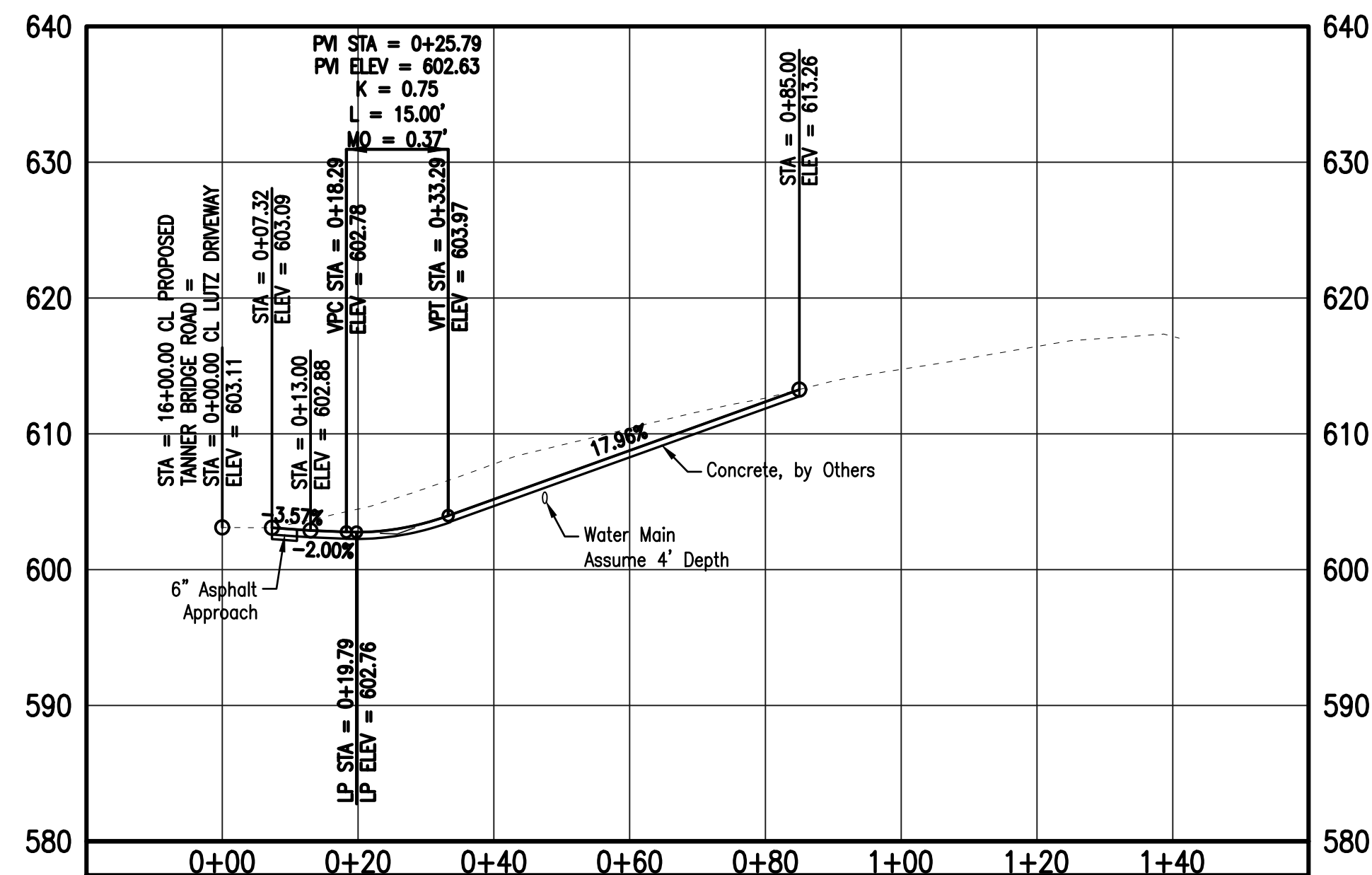
8/6/2019
Patrick P. Kremer, PE - Engineer
MO# PE-2012018094

**TANNER BRIDGE ROAD/TARA ROAD
INTERSECTION IMPROVEMENTS**
COLE COUNTY PUBLIC WORKS

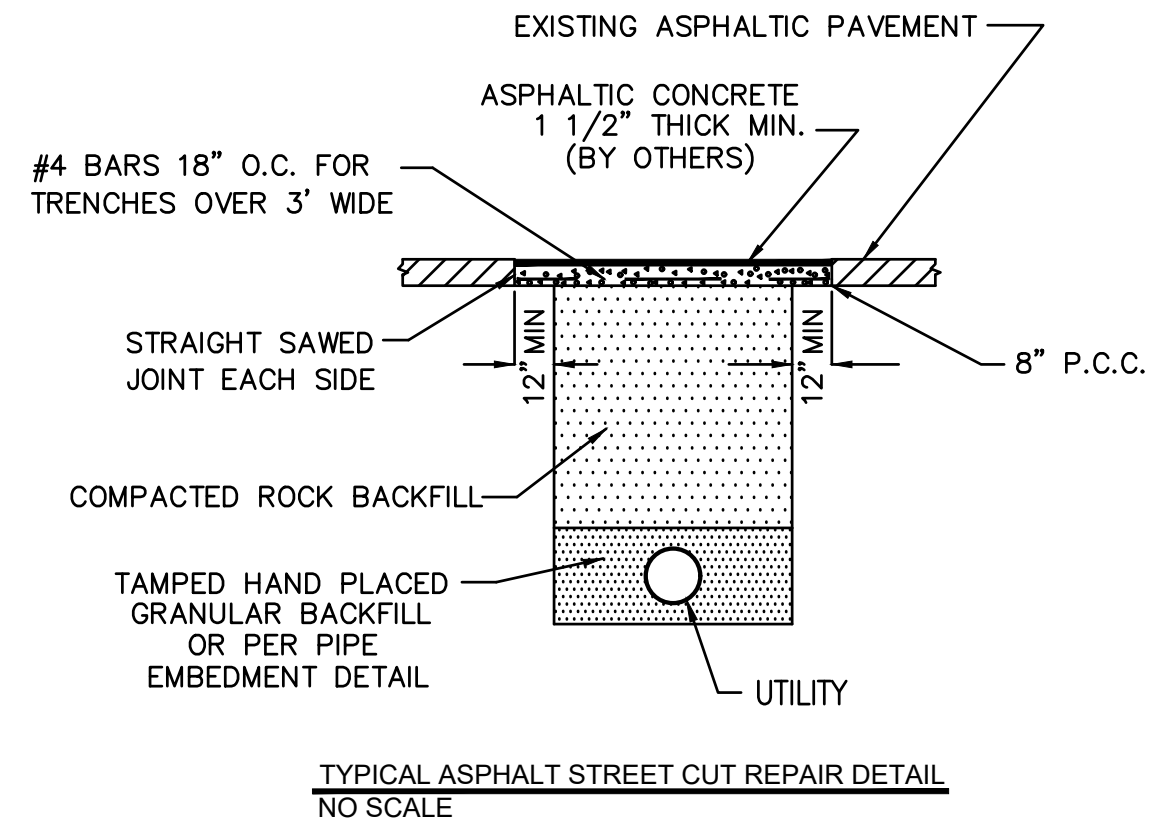
CMPS JOB No. 17-035
DRN. BY: PPK
CKD. BY: CFB
SCALE: AS INDICATED
SHEET TITLE
PROFILE & DETAILS
SHEET NUMBER
5
OF 10 SHEETS



DRIVEWAY PLAN, GRADING, REMOVALS
STA: 16+40.00-LT.



DRIVEWAY PROFILE - STA: 16+40.00-LT.
VERTICAL SCALE: 1"=10'
HORIZONTAL SCALE: 1"=20'



- NOTES:
1. ALL CONCRETE USED FOR PATCHING SHALL BE HIGH EARLY STRENGTH, AND MAY CONTAIN UP TO 4.0% NON-CALCIUM ACCELERATOR. (NON-CALCIUM ACCELERATOR SHALL BE APPROVED BY THE ENGINEER)
 2. ALL CONCRETE MIXES MUST CONTAIN AIR ENTRAINMENT.
 3. DURING WINTER MONTHS WHEN HOT MIX ASPHALT IS NOT AVAILABLE ONE OF TWO PROCESSES SHALL OCCUR FOR STREET CUTS:
 - A. IF EXISTING STREET OVERLAY IS MORE THAN 4 YEARS OLD: THE CONTRACTOR SHALL FILL THE STREET CUT TO THE SURFACE WITH CONCRETE AND NO ASPHALT CAP WILL BE PLACED. IN THIS CASE THE CONCRETE SHALL BE 9 1/2" THICK.
 - B. IF THE STREET HAS AN OVERLAY WHICH IS LESS THAN 4 YEARS OLD: THE CONTRACTOR SHALL CAP THE CUT WITH COLD MIX ASPHALT AND ILL THEN RETURN IN THE SPRING, WHEN HOT MIX IS AVAILABLE AND REPLACE THE COLD MIX WITH HOT MIX.



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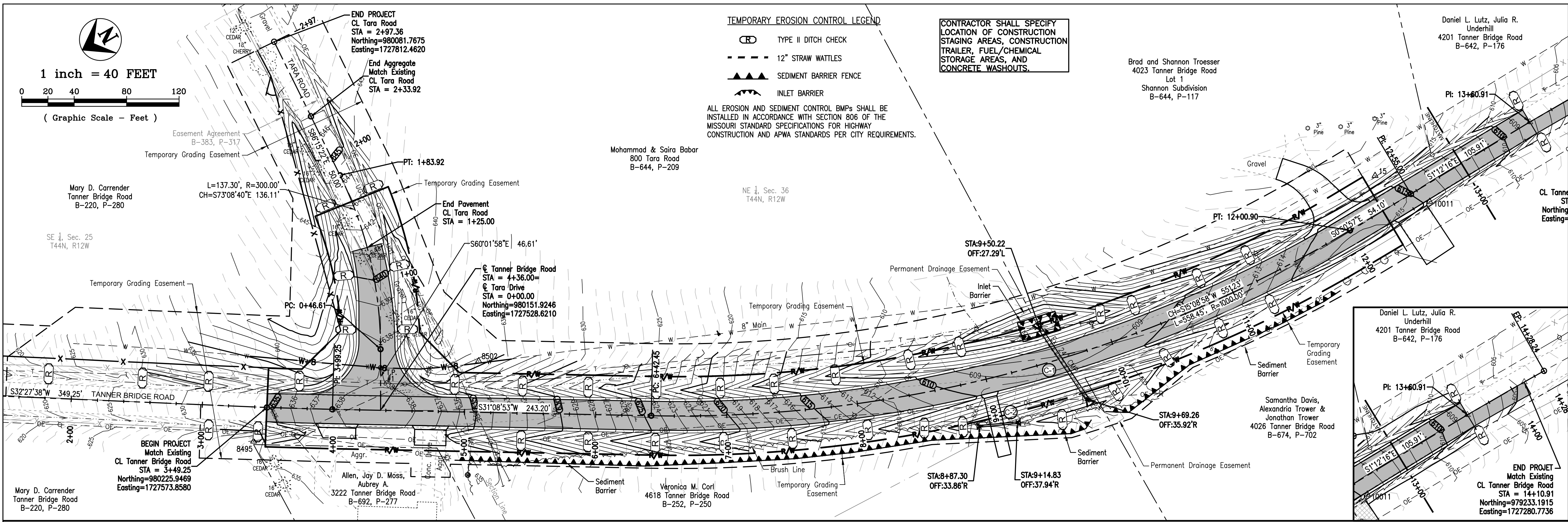
Patrick P. Kremer, PE - Engineer
MO# PE-2012018094

STATE OF MISSOURI
PATRICK P. KREMER
NUMBER
PE 2012018094
PROFESSIONAL ENGINEER

8/6/2019
Patrick P. Kremer, PE - Engineer
MO# PE-2012018094

TANNER BRIDGE ROAD
TARA ROAD INTERSECTION
COLE COUNTY PUBLIC WORKS
COLE COUNTY, MISSOURI

CMPS JOB No. 17-035	
DRN. BY: PPK	CKD. BY: RMB
SCALE: AS INDICATED	
SHEET TITLE PLAN, PROFILE & DETAILS	
SHEET NUMBER 6	
OF 10 SHEETS	

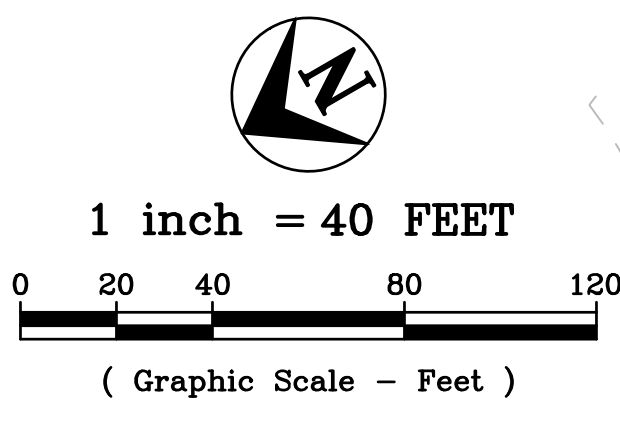


TEMPORARY EROSION CONTROL LEGEND

- TYPE II DITCH CHECK
- 12" STRAW WATTLES
- SEDIMENT BARRIER FENCE
- INLET BARRIER

ALL EROSION AND SEDIMENT CONTROL BMPs SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 806 OF THE MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND APWA STANDARDS PER CITY REQUIREMENTS.

CONTRACTOR SHALL SPECIFY LOCATION OF CONSTRUCTION STAGING AREAS, CONSTRUCTION TRAILER, FUEL/CHEMICAL STORAGE AREAS, AND CONCRETE WASHOUTS.



PRINTS ISSUED
8/6/2019

REVISIONS:

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2500 E. MCCARTY
JEFFERSON CITY, MISSOURI 65101
(573) 634-3455
(573) 634-8898

Central Missouri Professional Services, Inc.
Missouri State Certificate of Authority #001558

STATE OF MISSOURI
PATRICK P. KREMER
REGISTERED PROFESSIONAL ENGINEER
NUMBER PE 2012018094

8/6/2019
Patrick P. Kremer, PE - Engineer
MO# PE-2012018094

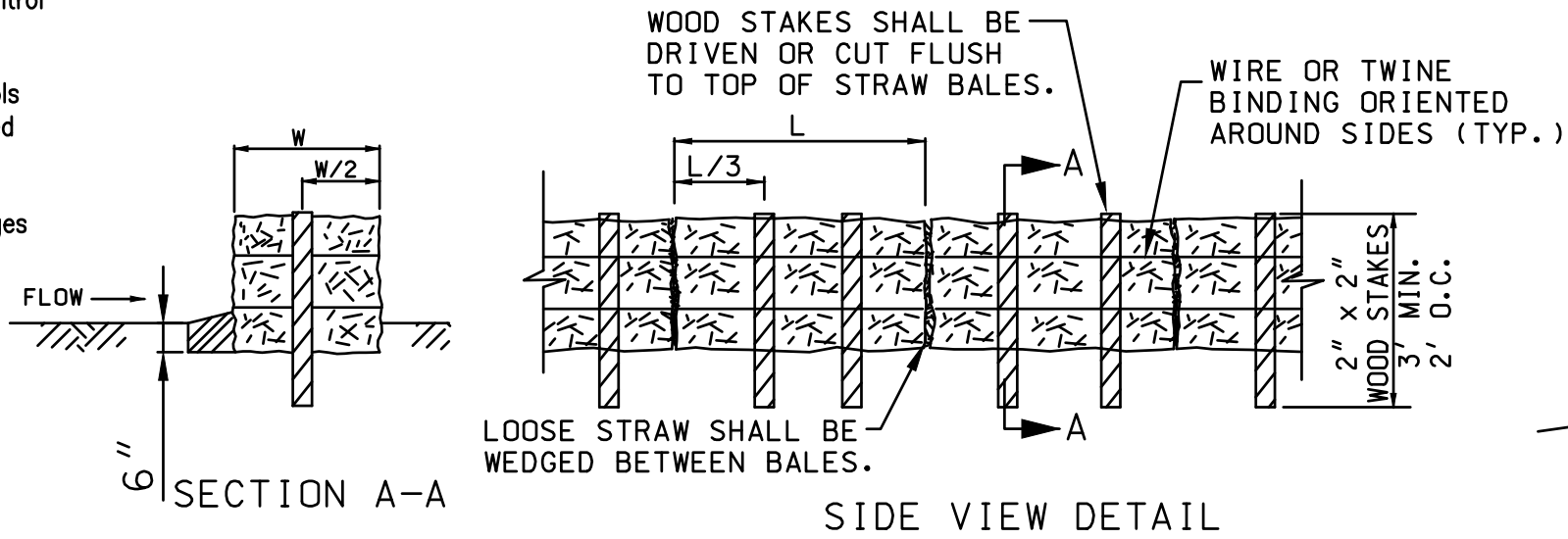
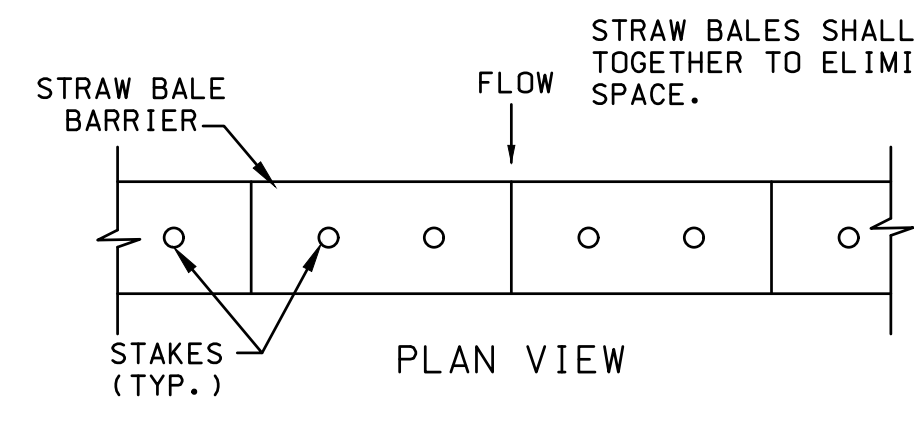
EROSION AND SEDIMENT CONTROL NOTES
This Site is greater than 1 acre and therefore requires a Missouri DNR Land Disturbance Permit. Land disturbance activities on this site are currently permitted under Missouri State Operating Permit #MOR100034, which falls under the County wide construction permit. A Stormwater Pollution Prevention Plan (SWPPP) has been developed for this property. An abridged SWPPP is outlined below.

The Erosion Control Items and details are not intended to dictate construction phasing but are intended to indicate Best Management Practices that should be in place during various phases of construction. The contractor shall be responsible for updating and modifying the Erosion Control Plan based on his construction sequence, and to address field conditions.

A construction staging area shall be chosen by the contractor at the time of construction. No fuel or chemicals shall be stored on site, unless a containment procedure is detailed and submitted to the county.

In addition, the contractor is encouraged to reference the document "Protecting Water Quality", January 2011 edition, as Prepared by the Missouri Department of Natural Resources for further guidance on installation and maintenance of construction site erosion, sediment and stormwater control practices.

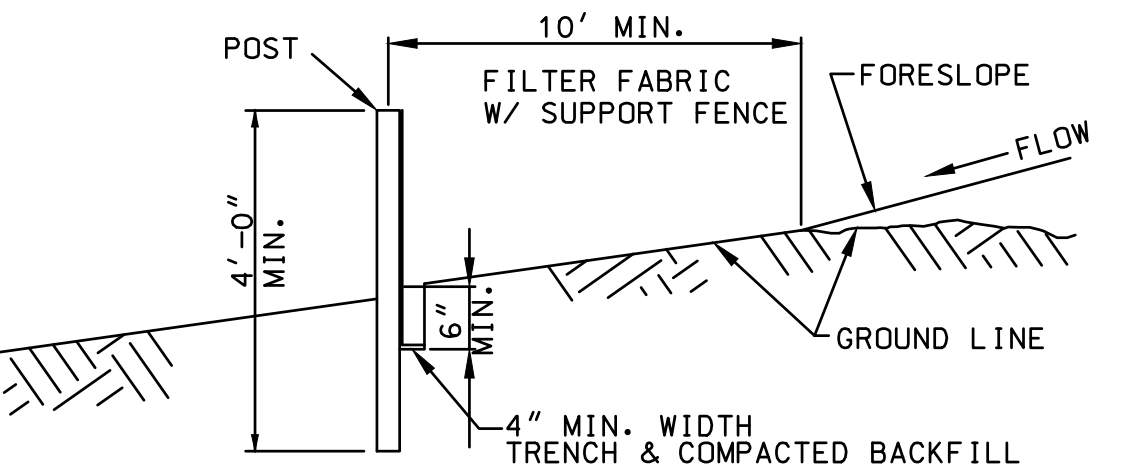
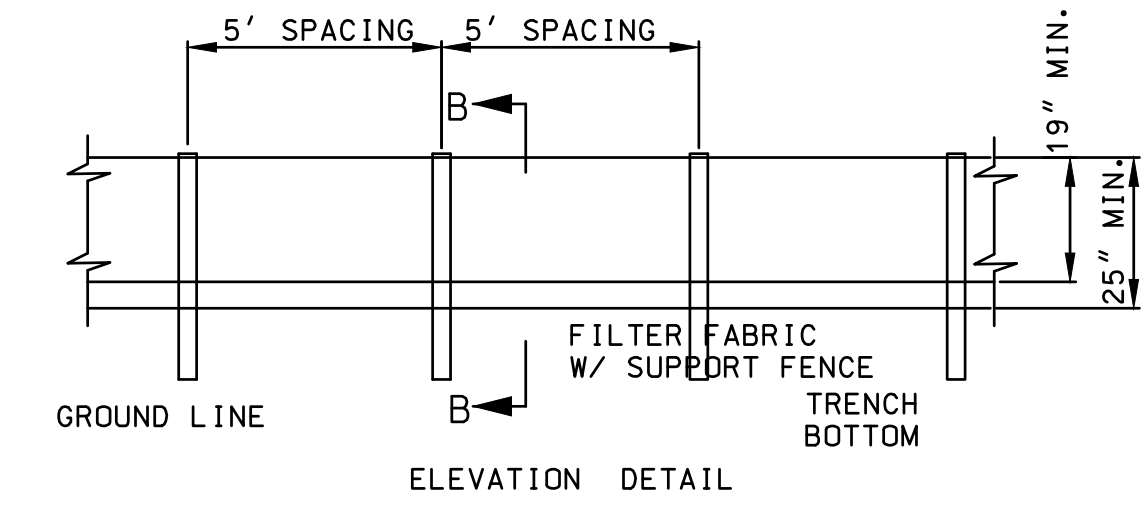
1. Contractor shall provide all materials, tools, equipment and labor as necessary to install and maintain adequate erosion and siltation controls required to prevent soil erosion from leaving the project site. It shall be the Contractor's sole responsibility to ensure that methods utilized are adequate and comply with requirements of the specifications and other governmental agencies having jurisdiction over the work.
2. The Contractor shall have the responsibility for resolving complaints in the event that complaints or damage claims are filed due to damages occurring adjacent to or downstream from property by sediment resulting from erosion on the project site.
3. The Contractor shall install erosion control measures as shown on the drawings prior to beginning earthwork operations.
4. The Contractor shall maintain and inspect all sediment control measures during construction as required by all applicable permits.
5. All sediment shall remain on site and surrounding streets shall be kept clear of all mud and debris.
6. The contractor shall phase grading operations to minimize the amount of disturbed area.
7. Sediment Barrier Fence, is to be installed as shown on the plans. The barrier shall be constructed of either:
(a.) A continuous line of silt fence securely staked to prevent movement. (b) A continuous line of straw bales securely staked to prevent movement.
8. Accumulated sediment shall be removed and the sedimentation barriers maintained as needed to prevent sedimentation bypass of the barrier. Removed sediment shall be disposed of in a location where sediment will not again erode into the construction area or into natural waterways.
9. Slopes shall be left in a rough condition during grading operations.
10. Stormwater Inlet Sedimentation Barriers are to be installed around inlets upon their installation at locations shown on the plans.
11. Erosion control measures are to remain in place until 70% ground cover has been established.
12. Sediment shall be removed from storm water drainage systems. Removed sediment shall be captured and disposed of in a location where sediment will not again erode into the construction area or into natural waterways.
13. Contractor shall be responsible for installing any additional erosion control measures as they, the engineer, or consultants deem necessary. Upon installing additional erosion control measures, or making modifications to the erosion control plan, the contractor shall update Erosion Control Plan.
14. Temporary seeding shall be used to stabilize disturbed areas that will not be brought to final grade within 30 days, or when the season is not suitable for permanent seeding. A qualified professional shall be consulted to recommend necessary soil amendments, and seeding mixtures.
15. At completion of site grading and other related construction activities, all disturbed areas within the project site shall be seeded, sodded, or landscaped.
16. The Contractor shall be responsible for conducting regular site inspections to assure proper function of soil erosion, sedimentation and stormwater control measures. Inspections should be conducted every seven calendar days and within 48 hours of a rainfall event resulting in runoff from the site.
17. Fuels, oils and other petroleum products or any other hazardous or toxic compounds should be stored under cover and not allowed to come in contact with stormwater on site. On-site storage should meet all local, state and federal secondary containment rules and regulations. Do not store hazardous chemicals, drums, or bagged materials directly on the ground. Place these items on a pallet and under cover in secondary containment.



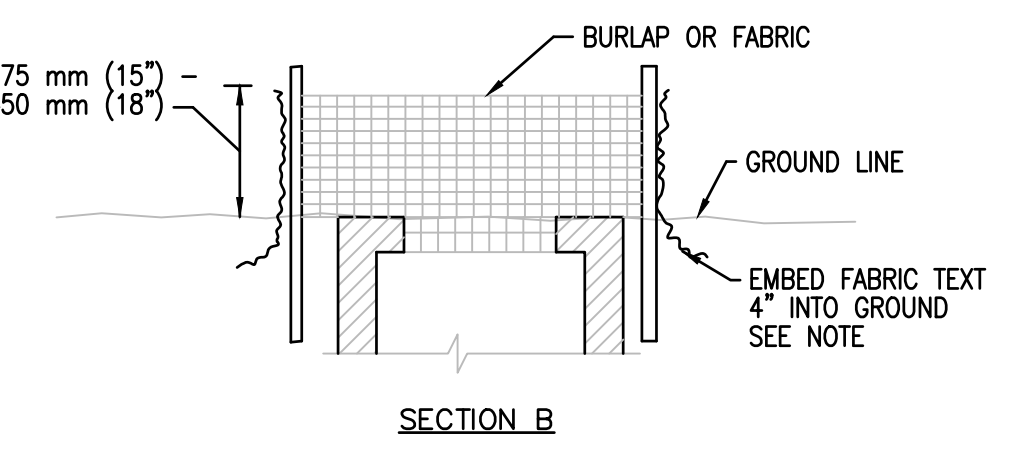
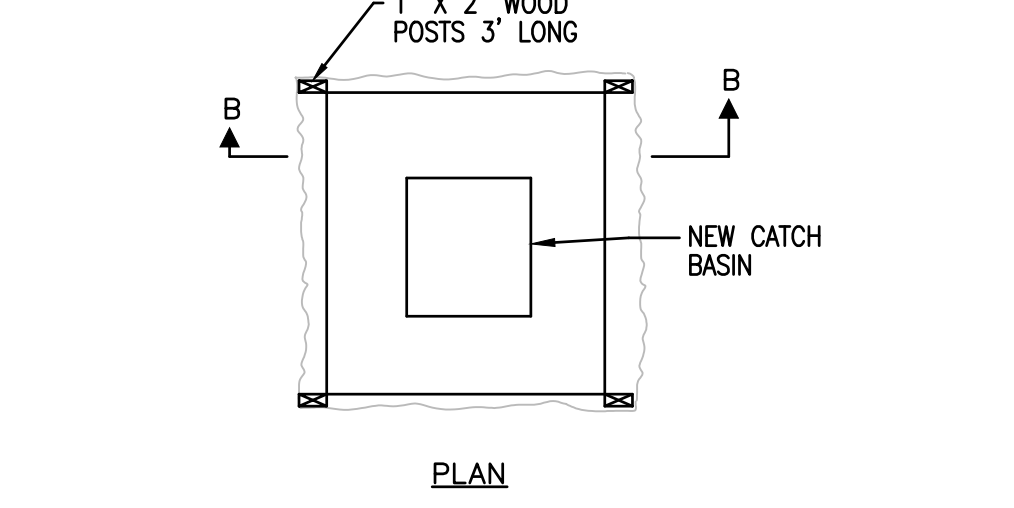
STRAW BALE SILT FENCE

SEDIMENT BARRIER FENCE

NOT TO SCALE



FABRIC SILT FENCE



- NOTE: 1. STRAW BALES MAY BE USED IN LIEU OF FABRIC AROUND CATCH BASINS. BALES SHALL BE EMBEDDED 4" INTO GROUND AND SECURELY STAKED IN PLACE.
2. THE ABOVE DRAWING REPRESENTS A GRATE INLET. USE STRAW BALES, STRAW WATTLES OR EQUIVALENT EROSION CONTROL DEVICE AROUND CURB INLETS, PIPES AND OTHER INLET DEVICES.
3. WEIGH DOWN STRAW BALES, WATTLES OR OTHER EROSION CONTROL DEVICES WITH SAND BAGS AS NECESSARY TO ALLOW PROPER FUNCTION.

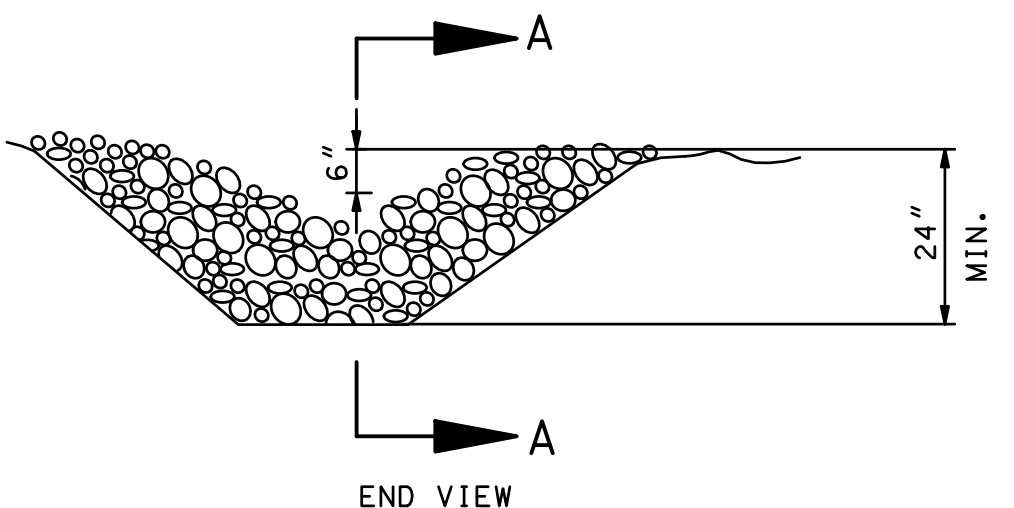
INLET PROTECTION DETAIL

NOT TO SCALE



CALL BEFORE YOU DIG - DRILL - BLAST
1-800-344-7483
(TOLL FREE)

MISSOURI ONE CALL SYSTEM, INC.



ROCK DITCH CHECK

NOT TO SCALE

TANNER BRIDGE ROAD/TARA ROAD
INTERSECTION IMPROVEMENTS
COLE COUNTY PUBLIC WORKS

TANNER BRIDGE ROAD/TARA ROAD
COLE COUNTY, MISSOURI

CMPS JOB No. 17-035

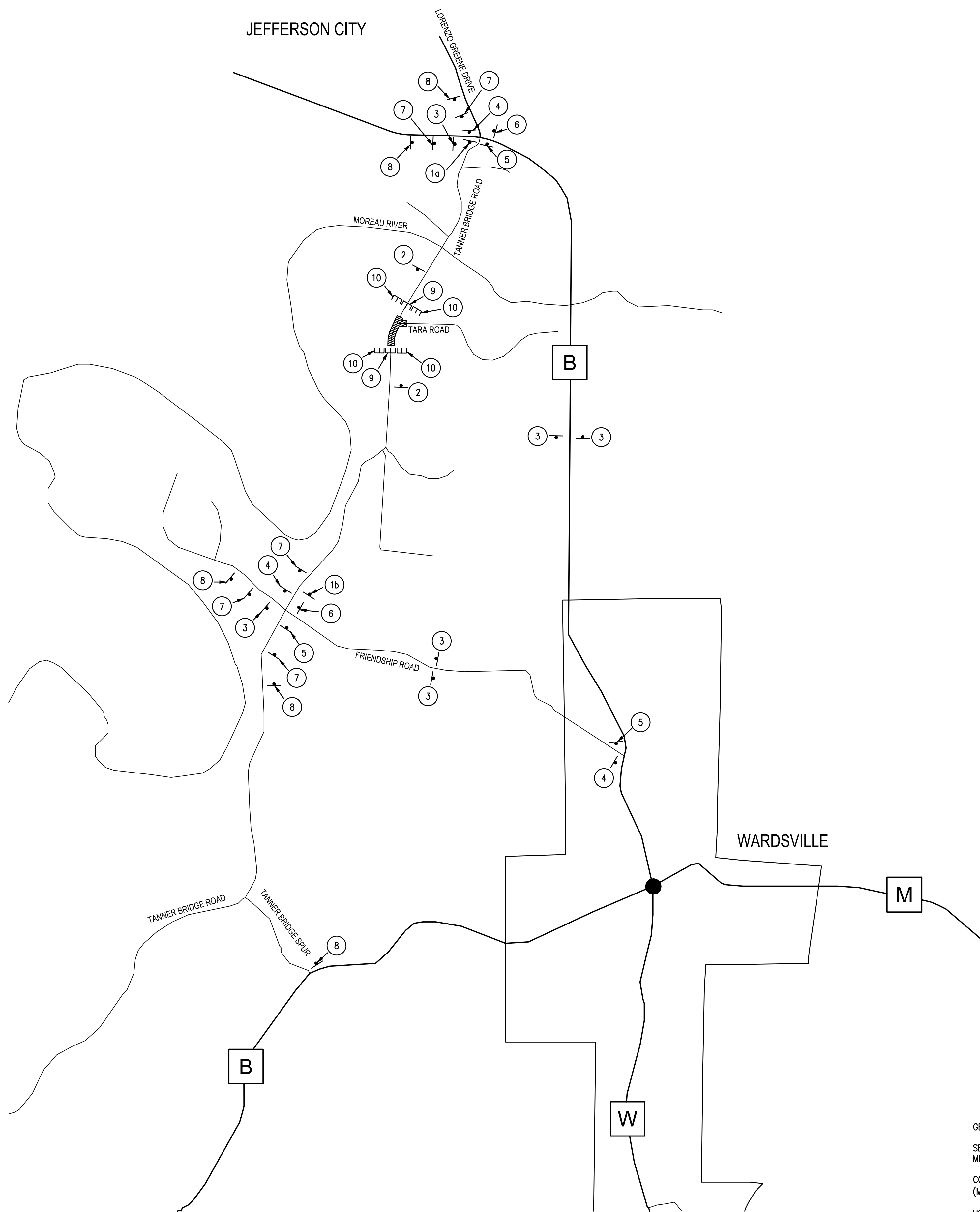
DRN. BY: PPK CKD. BY: CFB

SCALE: 1"=40'

SHEET TITLE
GRADING & EROSION CONTROL PLAN

SHEET NUMBER
7

OF 10 SHEETS



1a XX = 0.8
 1b XX = 1.2

ROAD CLOSED
XX MILES AHEAD
LOCAL TRAFFIC ONLY
 R11-3a *

ROAD CLOSED AHEAD
 W020-3
 2

DETOUR
 M04-8
TANNER BRIDGE ROAD
 (Black Lettering with Orange Background) 30"x24"
 ↑
 M6-3
 3

DETOUR
 M04-8
TANNER BRIDGE ROAD
 (Black Lettering with Orange Background) 30"x24"
 ←
 M6-1
 4

DETOUR
 M04-8
TANNER BRIDGE ROAD
 (Black Lettering with Orange Background) 30"x24"
 →
 M6-1
 5

END DETOUR
 M6-3
 6

DETOUR AHEAD
 W020-2
 7

TANNER BRIDGE ROAD CLOSED AT TARA ROAD
 (Black Lettering with Orange Background) 60"x30"
 8 *

TYPE "B" WARNING LIGHT

ROAD CLOSED
 R11-2

TYPE III MOVABLE BARRICADE
 9

TYPE III MOVABLE BARRICADE
 10

GENERAL NOTES:
 SEE JOB SPECIAL PROVISIONS AND STANDARDS NO. 616.10 AND NO. 903.03 OF THE MISSOURI STANDARD PLANS FOR HIGHWAY CONSTRUCTION FOR DETAILS NOT SHOWN.
 CONTRACTOR SHALL COMPLY WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR THE TRAFFIC CONTROL OF THIS PROJECT.
 USE A MINIMUM SIGN SPACING OF 500' OR AS DIRECTED BY THE ENGINEER.
 COVER ALL CONFLICTING SIGNS.
 * SIGN FURNISHED AND RETAINED BY COLE COUNTY. SEE JOB SPECIAL PROVISIONS.

LEGEND
 (25) d CONSTRUCTION SIGN W/SIGN NUMBER
 E TYPE III MOVABLE BARRICADE
 // WORK SPACE

PRINTS ISSUED
 8/6/2019
 REVISIONS:

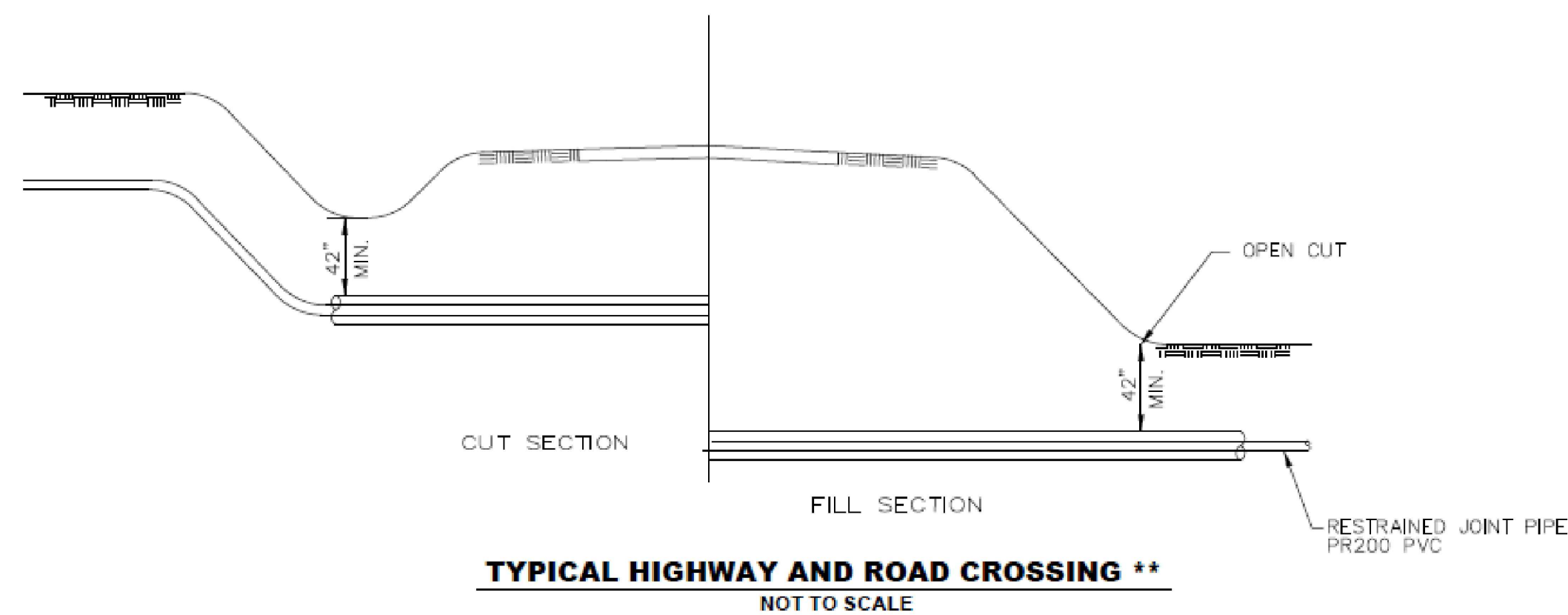
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STATE OF MISSOURI
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 PROFESSIONAL ENGINEER
 NUMBER PE 2012018094
 8/6/2019
 Patrick P. Kremer, PE - Engineer
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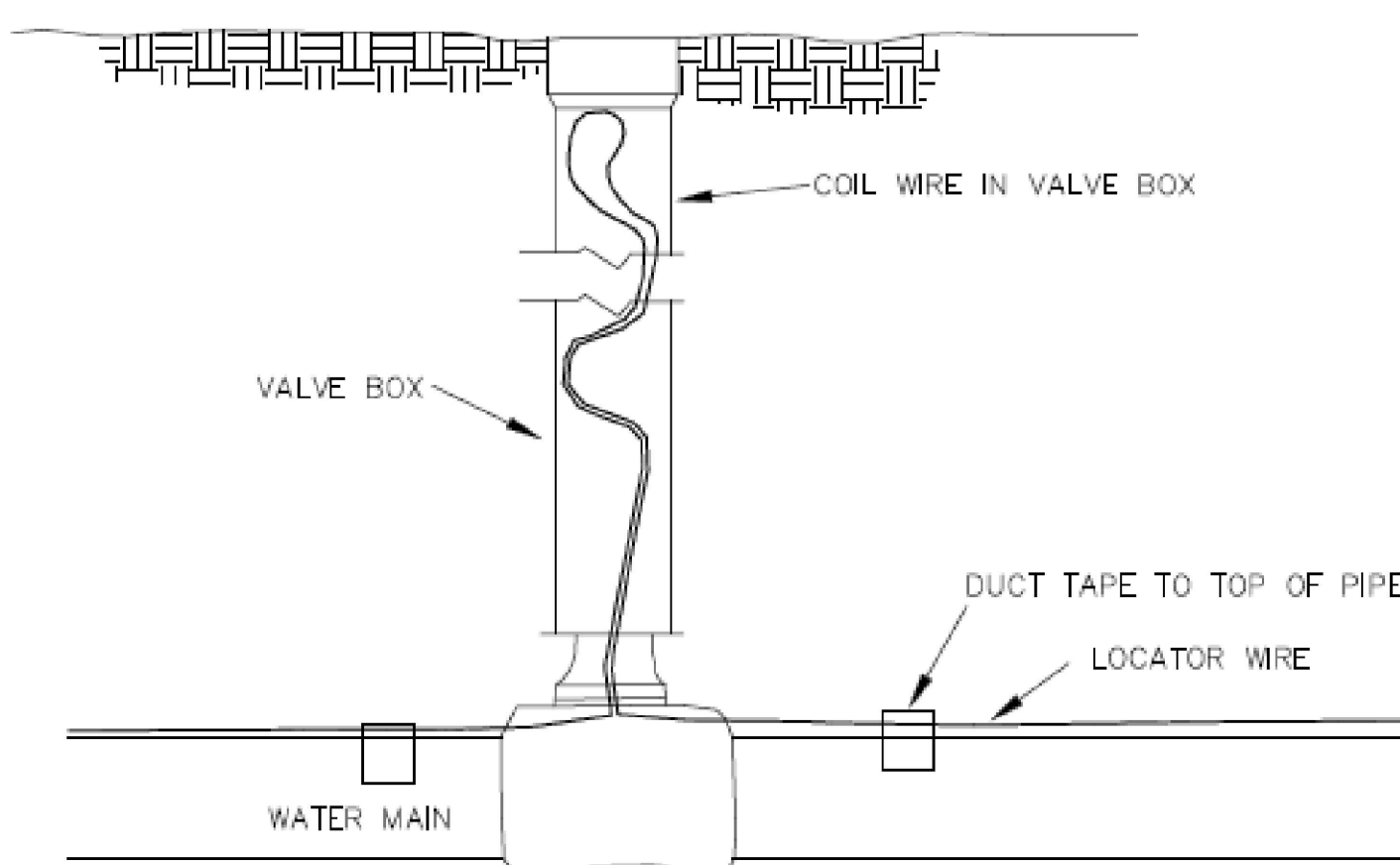
TANNER BRIDGE ROAD/TARA ROAD
 INTERSECTION IMPROVEMENTS
 COLE COUNTY PUBLIC WORKS

TANNER BRIDGE ROAD/TARA ROAD
 COLE COUNTY, MISSOURI

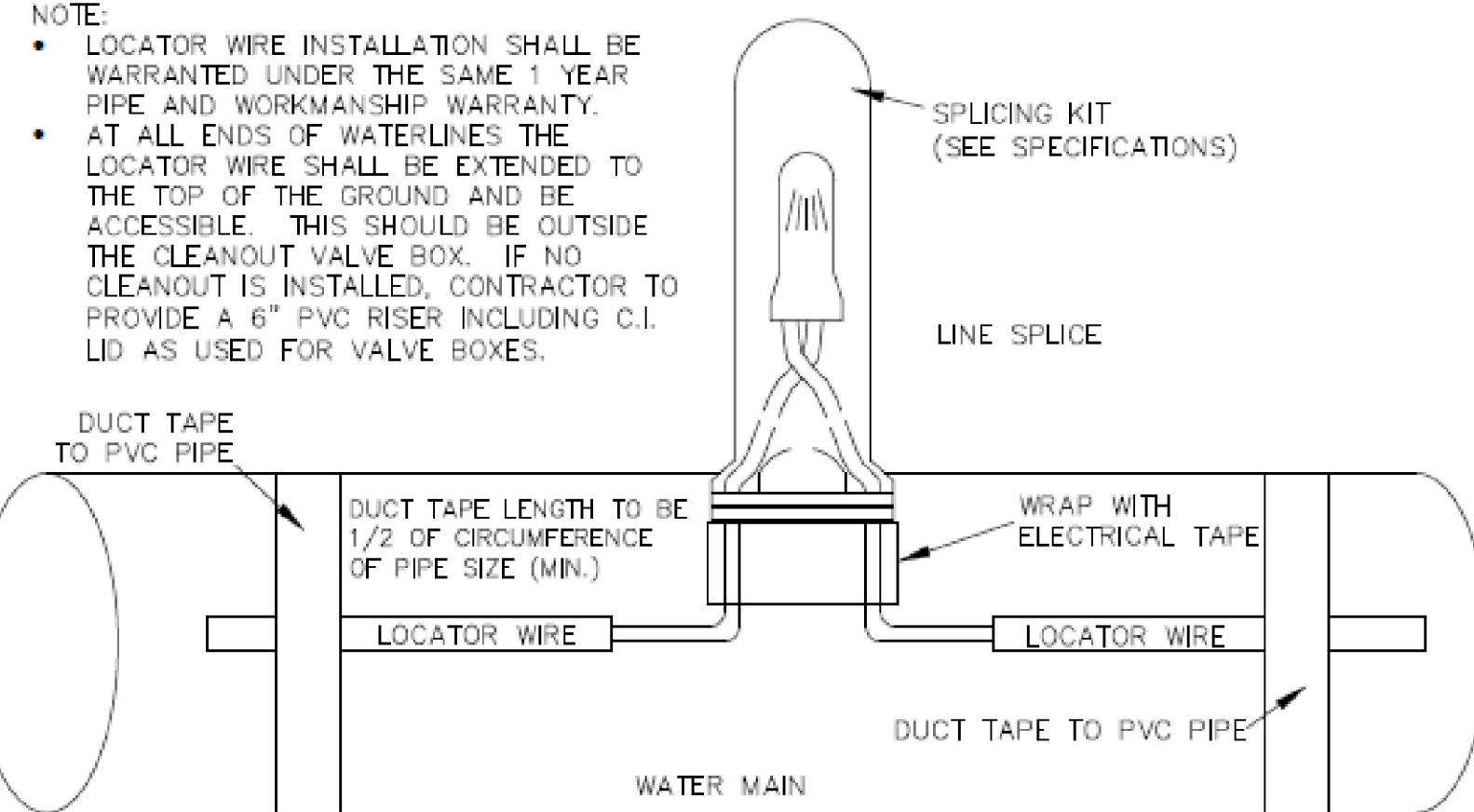
CMPS JOB No. 17-035
 DRN. BY: PPK CKD. BY: CFB
 SCALE: NO SCALE
 SHEET TITLE
TRAFFIC CONTROL PLAN
 SHEET NUMBER
8
 OF 10 SHEETS



TYPICAL HIGHWAY AND ROAD CROSSING **
NOT TO SCALE

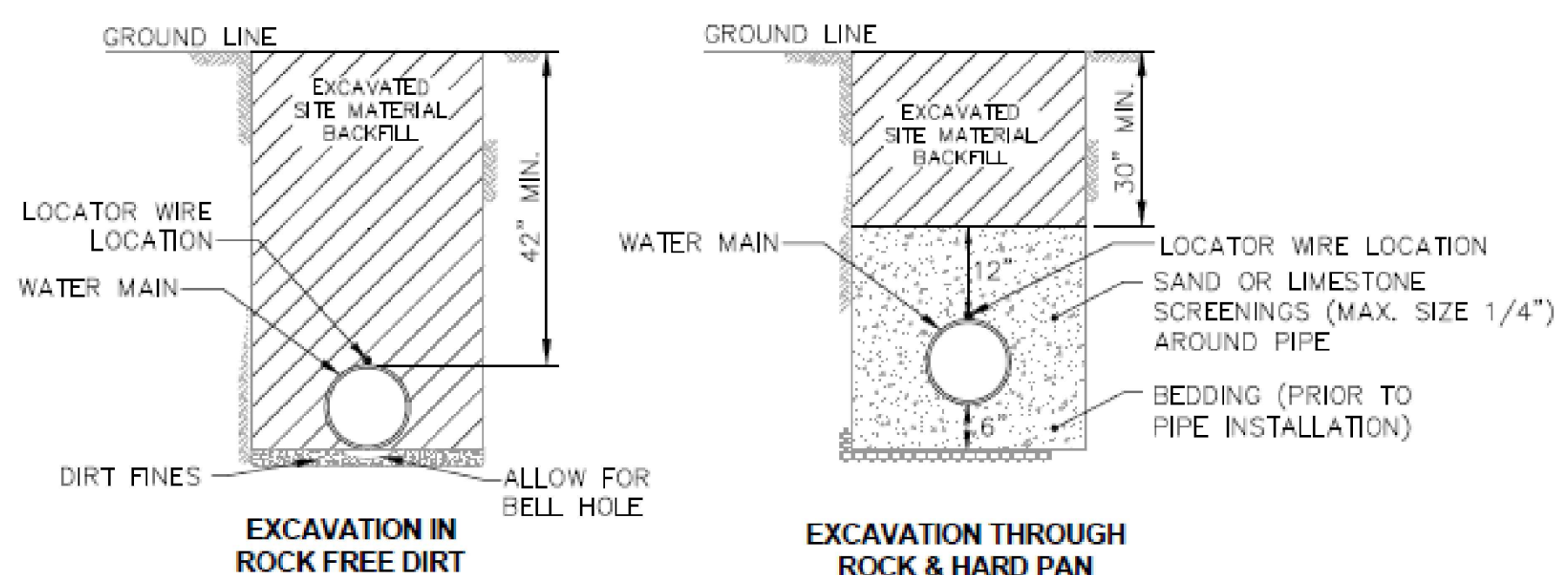


LOCATOR WIRE DETAIL
NOT TO SCALE

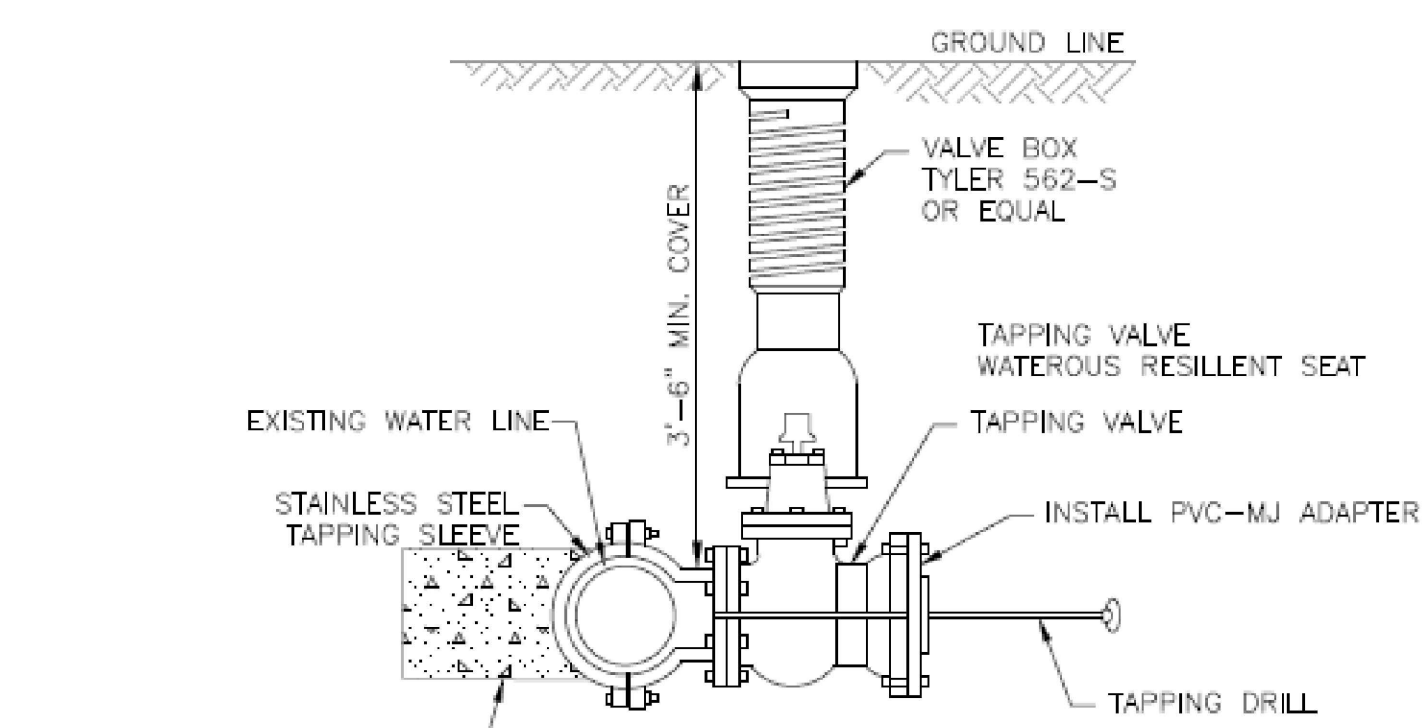


LOCATOR WIRE DETAIL
NOT TO SCALE

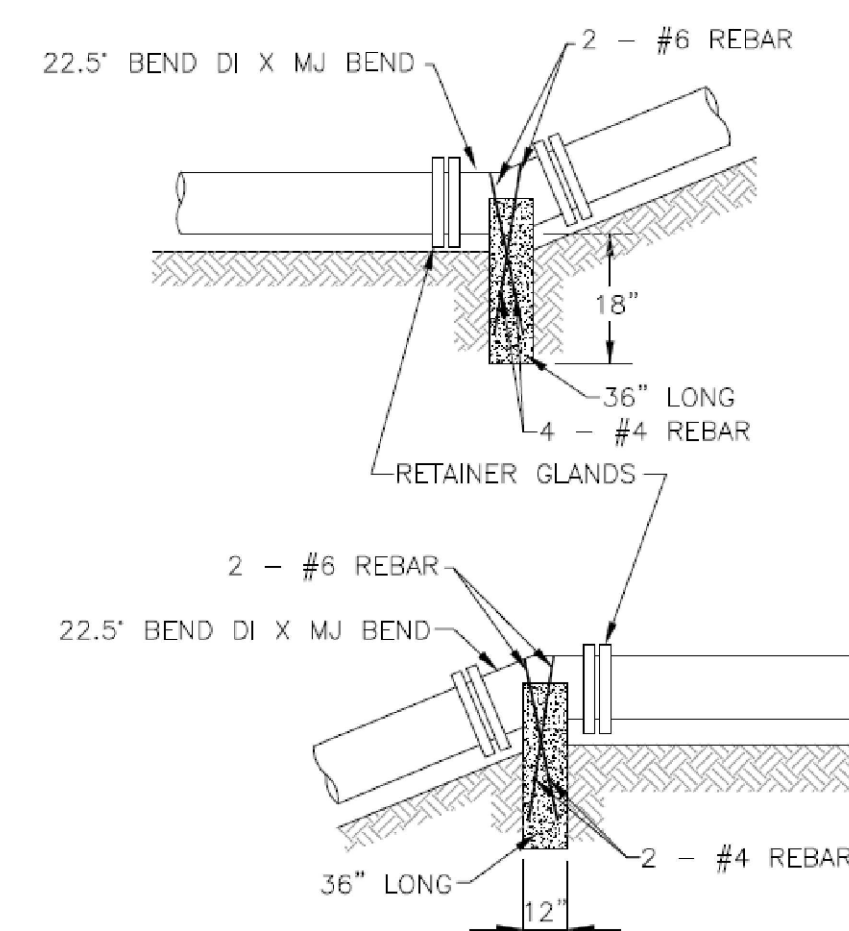
NOTE:
 • LOCATOR WIRE INSTALLATION SHALL BE WARRANTED UNDER THE SAME 1 YEAR PIPE AND WORKMANSHIP WARRANTY.
 • AT ALL ENDS OF WATERLINES THE LOCATOR WIRE SHALL BE EXTENDED TO THE TOP OF THE GROUND AND BE ACCESSIBLE. THIS SHOULD BE OUTSIDE THE CLEANOUT VALVE BOX. IF NO CLEANOUT IS INSTALLED, CONTRACTOR TO PROVIDE A 6" PVC RISER INCLUDING C.I. LID AS USED FOR VALVE BOXES.



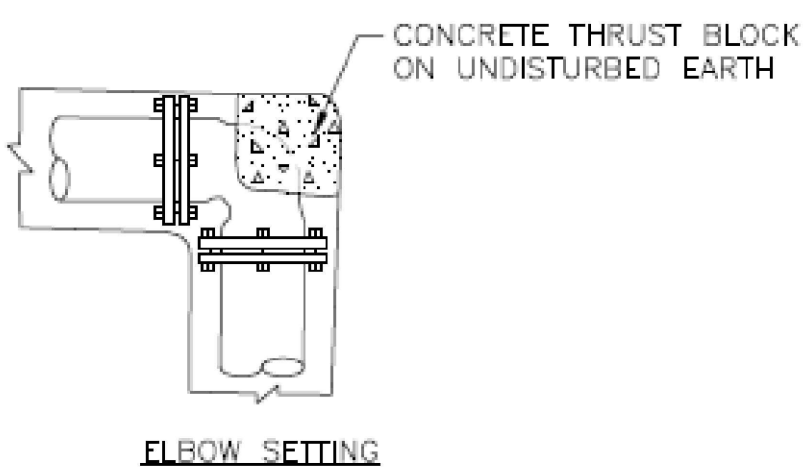
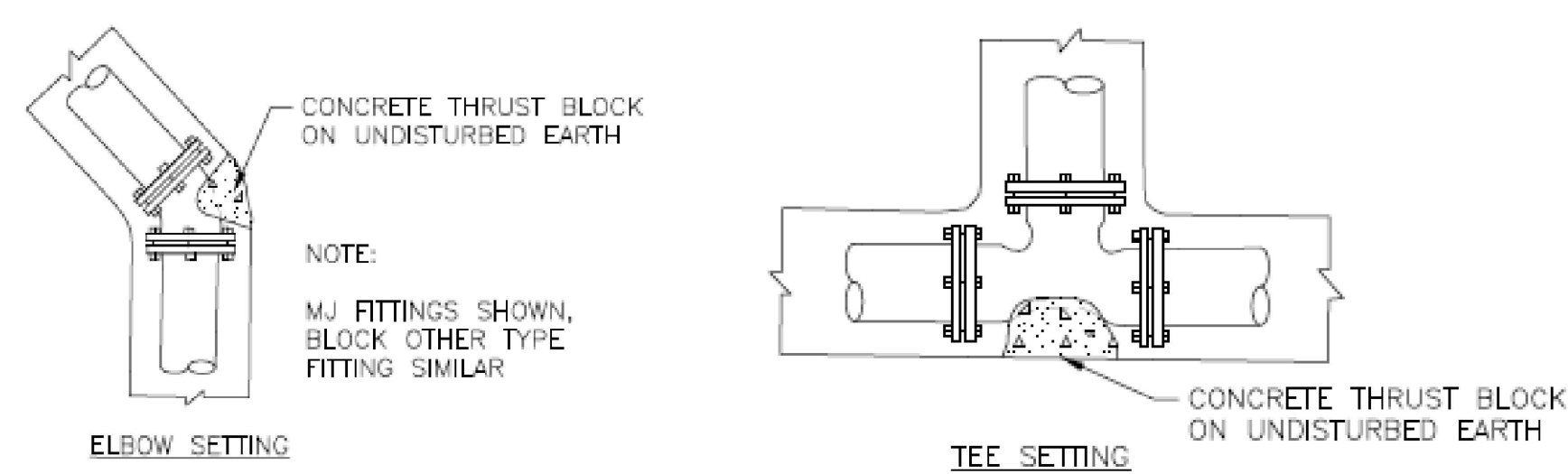
WATER MAIN INSTALLATION DETAILS
NOT TO SCALE



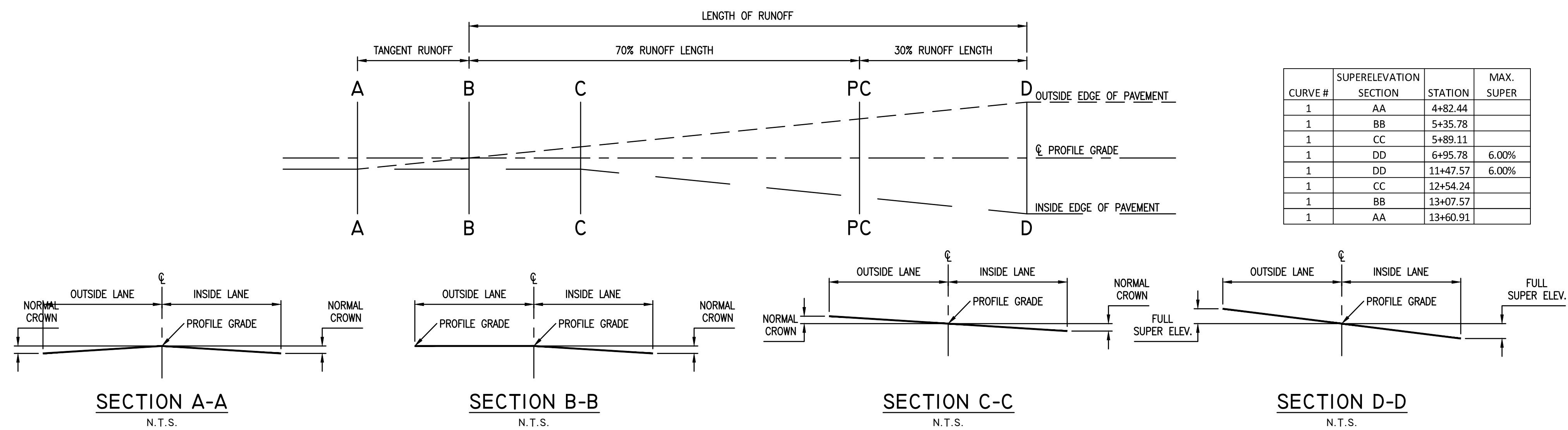
WET TAP DETAIL
NOT TO SCALE



DETAIL OF CONCRETE HOLD DOWN ON BENDS
NOT TO SCALE



THRUST BLOCKING
NOT TO SCALE



SUPERELEVATION DATA

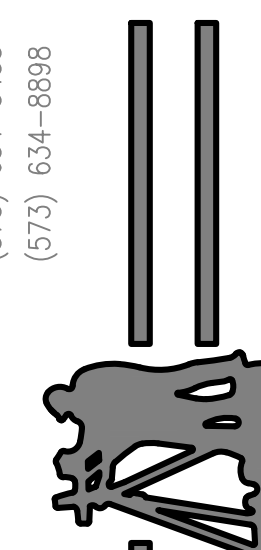
PRINTS ISSUED

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 Missouri State Certificate of Authority #001558



8/6/2019

Patrick P. Kremer, PE - Engineer
 MO# PE-2012018094

TANNER BRIDGE ROAD/TARA ROAD
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 COLE COUNTY PUBLIC WORKS
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CMPS JOB No. 17-035

DRN. BY: PPK CKD. BY: CFB

SCALE: NO SCALE

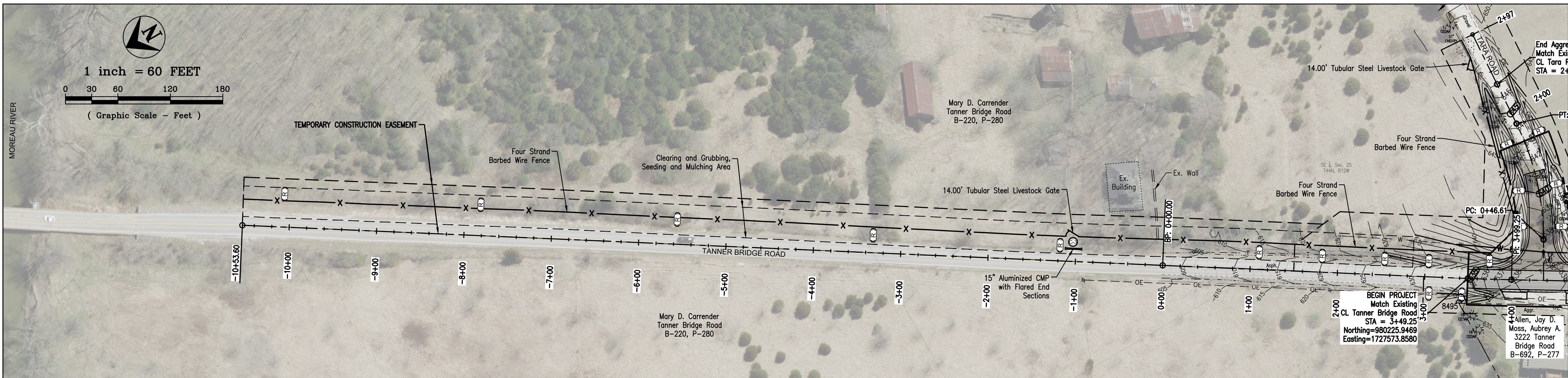
SHEET TITLE

DETAIL SHEET

SHEET NUMBER

9

OF 10 SHEETS



FENCE NOTES:
 All fence construction shall comply with federal, state and local fencing codes.

Fencing materials shall be of quality and durability that meets intended management objectives. Construction shall be performed in a manner that meets the intended management objective. Wire and hardware will be new, galvanized material.

Line Post - Maximum spacing between line posts shall be 16.50 feet.

Line posts shall be steel studded T-Post. Steel posts shall be new, and be painted or galvanized and weigh a minimum of 1.33 pounds per one foot of length. Post shall be driven a minimum of 18" in the ground or as specified by manufacturer. Every 50 feet or 4th post shall be wooden. Wooden posts shall be a minimum of 3 1/2" pressure treated pine or other wood of equal life and strength. Pressure treatment shall meet the requirements for ground contact. All wooden line posts shall be set at least 30" into the ground.

Brace Posts - Brace posts shall be set and maintained into a vertical position. All wooden brace posts shall be 5" minimum diameter and set 3 feet into the ground. Horizontal rail posts are to be 4" minimum diameter by 8 feet long and be installed 8"-12" below the top of the vertical brace post.

Corners and Braces - Refer to typical fence details for fence brace configurations and spacing.

Single H Brace - Single H Brace corners and end braces shall only be installed at the ends of straight fence spans of 165 feet or less.

Double H Braces - All corners, fence line ends and gate openings require Double H Brace assemblies, except that Single H Braces may be substituted in straight fence spans of 165 feet or less.

Double H Brace Pull Assemblies - Double H Brace pull assemblies are required in straight fence spans at a maximum spacing of 660 feet. Brace wire shall be high tensile, galvanized steel, or 9 gauge soft wire.

Adjoining Fences - A fence adjoining an existing fence must terminate in a brace assembly as required. Existing fence shall be attached to brace assembly.

Corners - A bend in the fence tighter than 20 degrees is considered a corner and not a straight pull brace. In an 8 foot long brace section, 20 degrees is approximately 3 feet off the straight line.

If hand set, all backfilled material shall be thoroughly tamped in 4" layers. Post holes shall be at least 6" larger than the diameter or side dimension of the posts. If concrete backfill is used, the concrete must be pre-mixed, and worked into place up to the ground surface. No stress shall be applied to posts set in concrete for at least 24 hours after the concrete has set.

Wire - All barbed wire shall consist of class 3 galvanized 4-point barbs spaced not more than 5" apart. Galvanized barbed wire shall be fabricated from 12 -1/2 gauge class 1 galvanized or better or 15-1/2 gauge class 3 galvanized strand wire and shall meet the requirements of ASTM A121. HT Class 3 barbed 15 1/2 gauge wire meeting the requirement of ASTM A121 may also be used.

Wire Placement - Wires shall be spaced according to typical wire spacing detail.

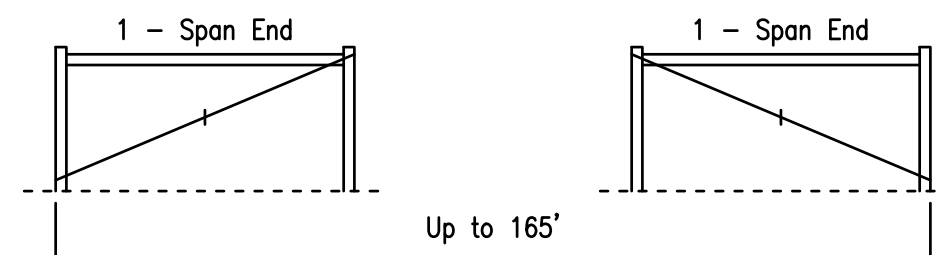
Stretching Wire - Barbed wire shall be pulled taut. In warm weather, a stretch of 100 feet (prior to attaching to posts) shall sag no more than 4" in the middle and no more than 2" in cold weather.

Attaching Fencing to Post - The fencing wire shall be placed on the livestock side of line post and on the outside of corner and posts in bends and braces in bends. Each stand of barbed wire shall be attached to each steel line post with either 2 turns of 14 gauge galvanized steel wire or the post manufacturer's special wire clips. Wire shall be attached to wooden post using 9-gauge galvanized 1 1/2" staples, driven diagonally with the grain of the wood and at a slight downward angle (except in dips). Staples shall not be driven tight to the post. Wire splices shall be crimped or spliced with 8 wraps around the other (Western Union Splice).

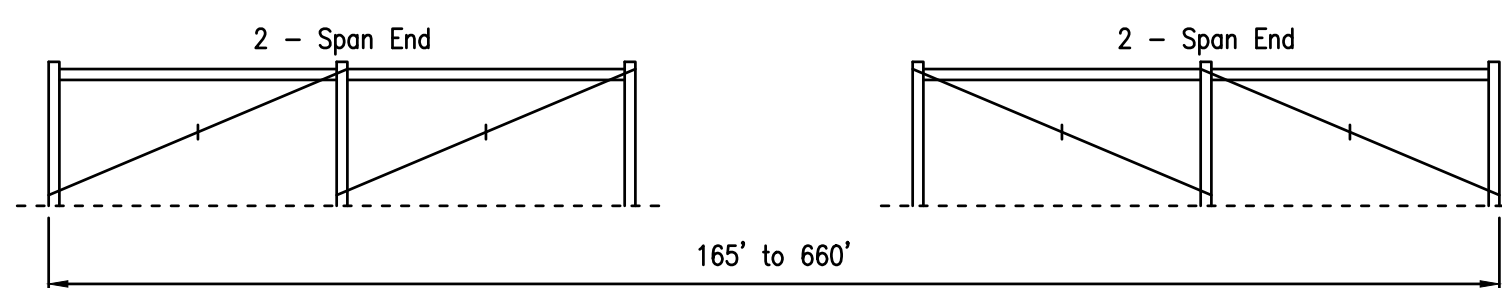
Gate - Gates shall be a minimum 14.00' in length and constructed of a minimum of 2", 14 gauge steel tubing with architectural grade powder coat finish and six rail configuration. Provide all H Brace assemblies as indicated above.

STRAIGHT FENCES ON FLAT LAND

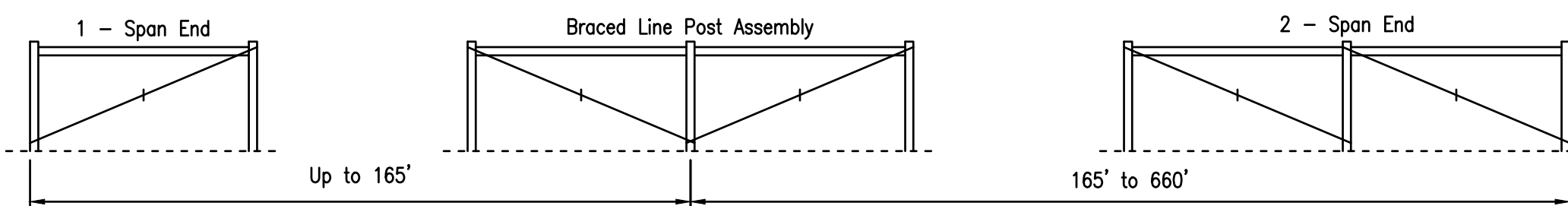
(A)



(B)

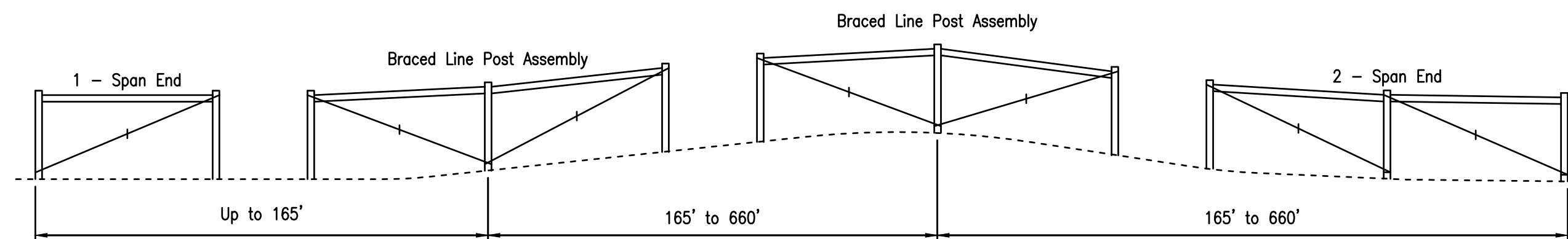


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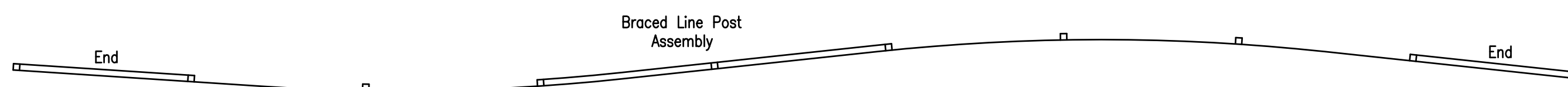
STRAIGHT FENCES ON ROLLING LAND

(D)



CURVED FENCES

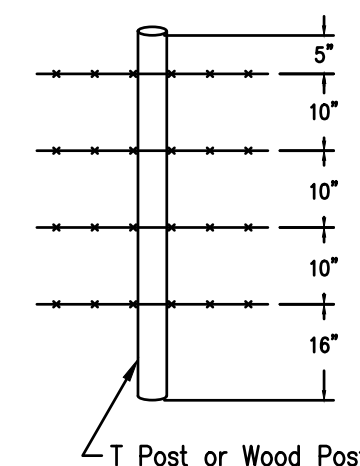
(E)



TYPICAL ANCHOR & BRACE ASSEMBLIES & LOCATIONS

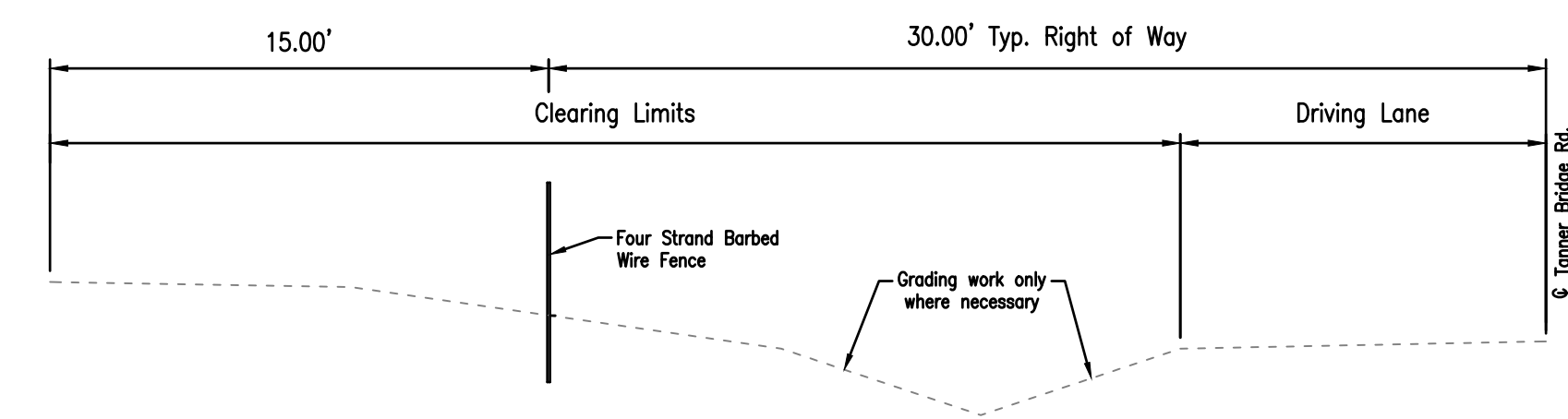
NOT TO SCALE

- (A) For fence lengths of 165 feet or less, use single-span end construction.
- (B) For fence lengths of 165 feet to 660 feet, use double span end construction.
- (C) For fences more than 660 feet long use a braced-line-post assembly to divide the fence lengths.
- (D) On rolling land, fence stretching is easier if braced line-post assemblies are located at the foot and top of each hill.
- (E) Contour fences, more than 330 feet long, should have a braced-line-post assembly installed to keep the stretches to 330 feet or less. Install straight section at least one post span away from a curve. Do not install on a curve.



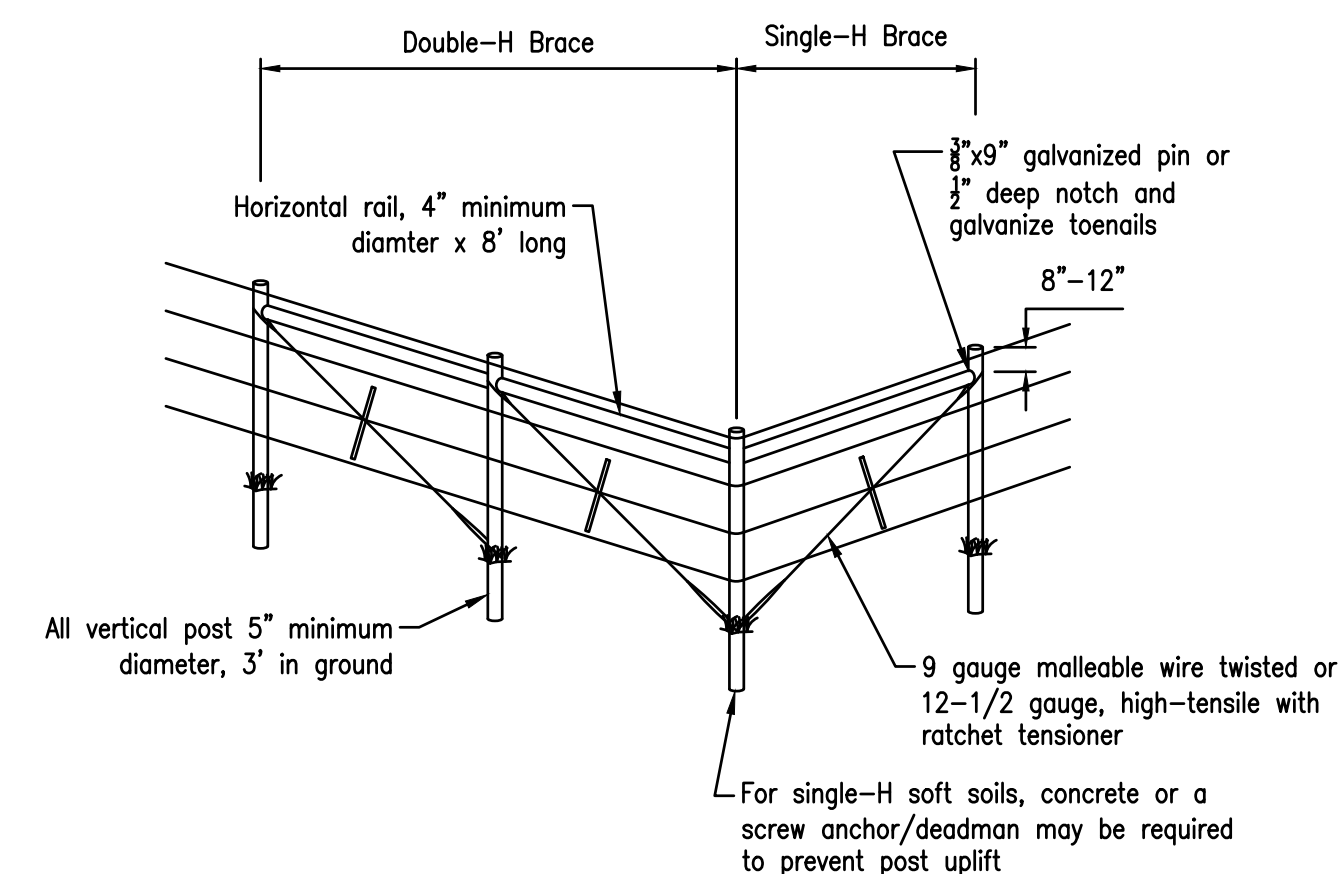
TYPICAL WIRE SPACING

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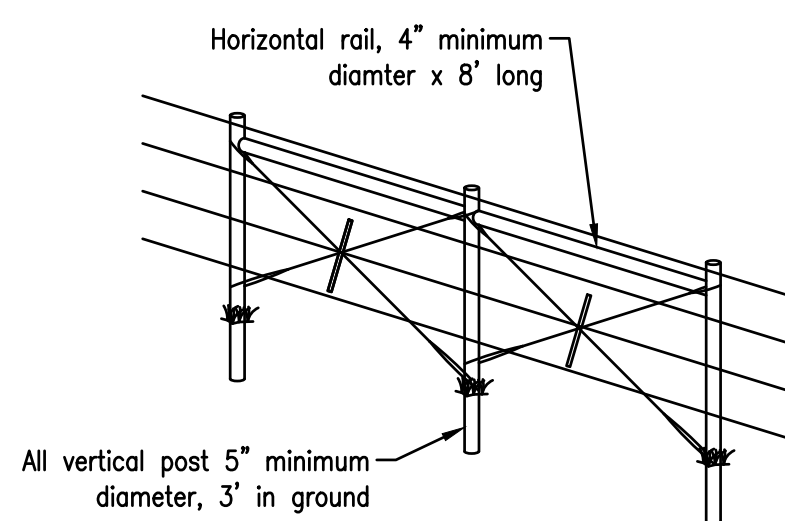
TYPICAL CLEARING & GRUBBING LIMITS

NOT TO SCALE



TYPICAL COMBINATION CORNER BRACE ASSEMBLY

NOT TO SCALE



DOUBLE-H BRACE PULL ASSEMBLY

NOT TO SCALE

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STATE OF MISSOURI
 PATRICK P. KREMER
 PROFESSIONAL ENGINEER
 NUMBER PE 2012018094

8/6/2019
 Patrick P. Kremer, PE - Engineer
 MO# PE-2012018094

TANNER BRIDGE ROAD/TARA ROAD
 INTERSECTION IMPROVEMENTS
 COLE COUNTY PUBLIC WORKS

TANNER BRIDGE ROAD/TARA ROAD
 COLE COUNTY, MISSOURI

CMPS JOB No. 17-035

DRN. BY: PPK CKD. BY: CFB

SCALE: AS INDICATED

SHEET TITLE
CLEARING PLAN & FENCE DETAILS

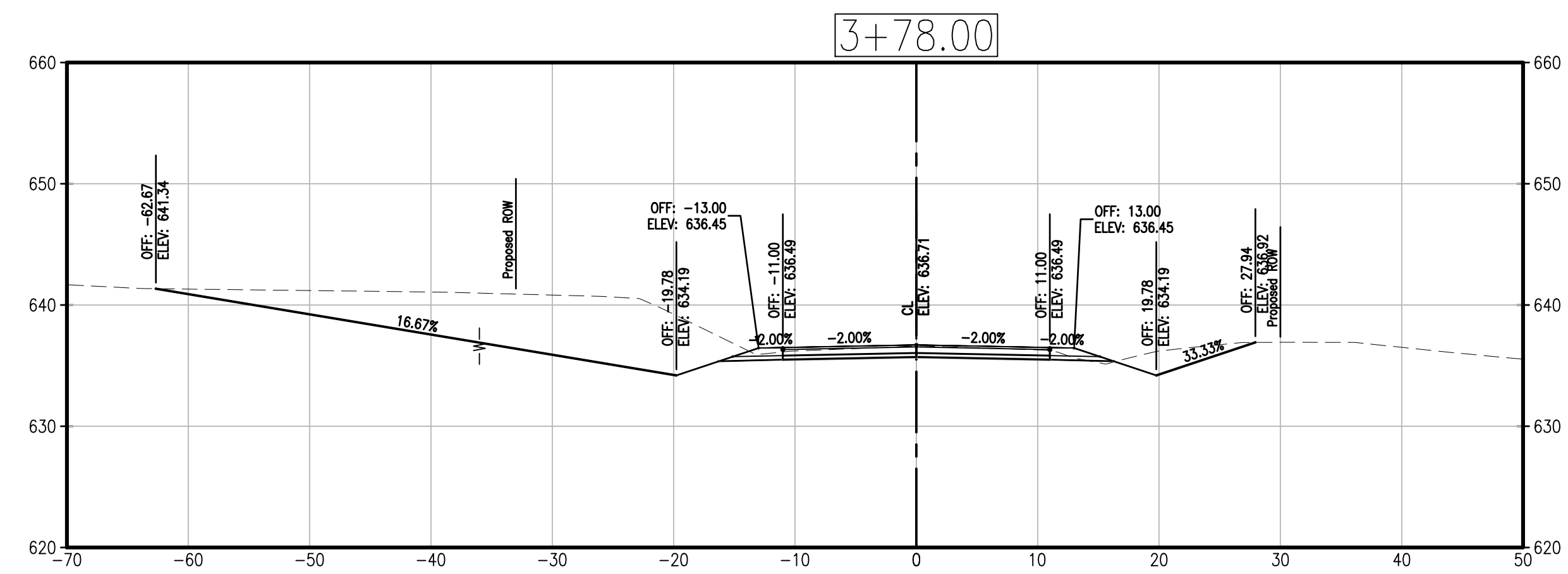
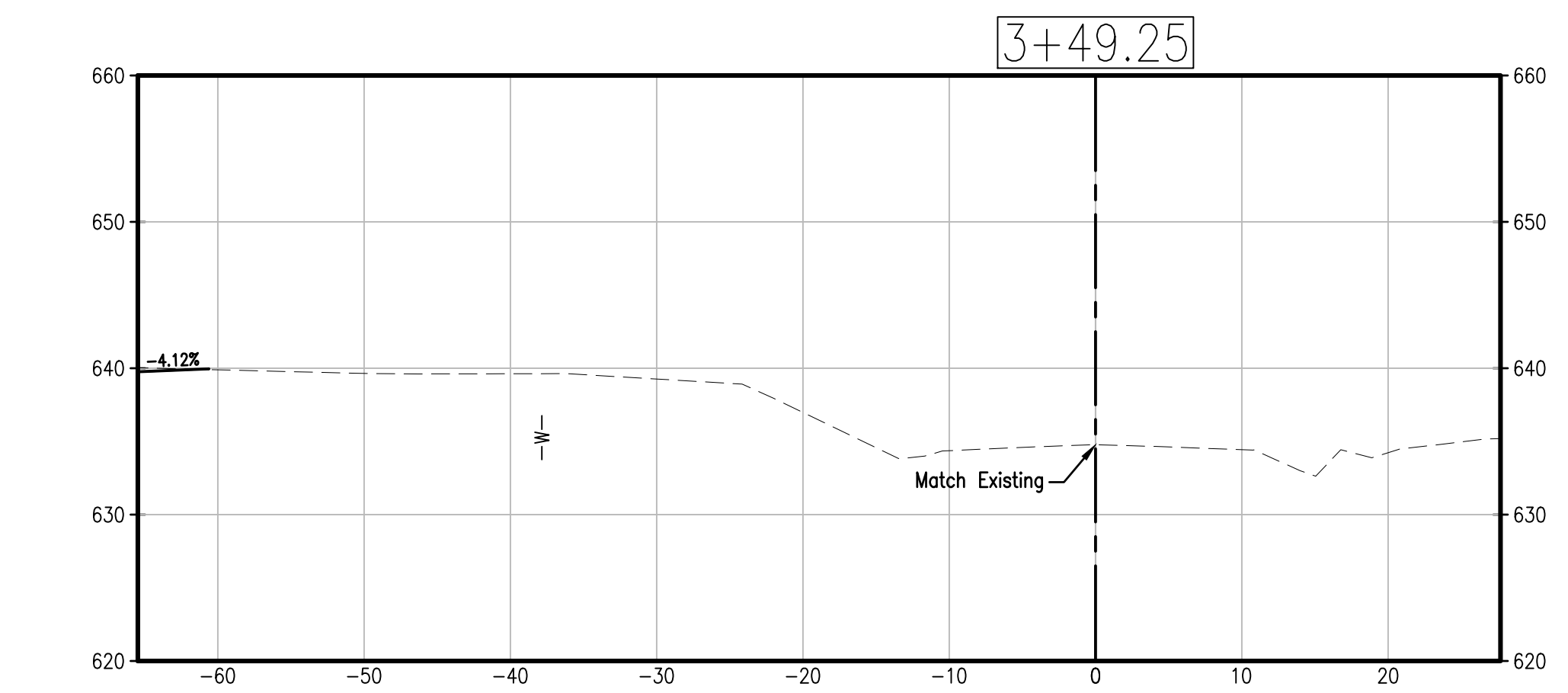
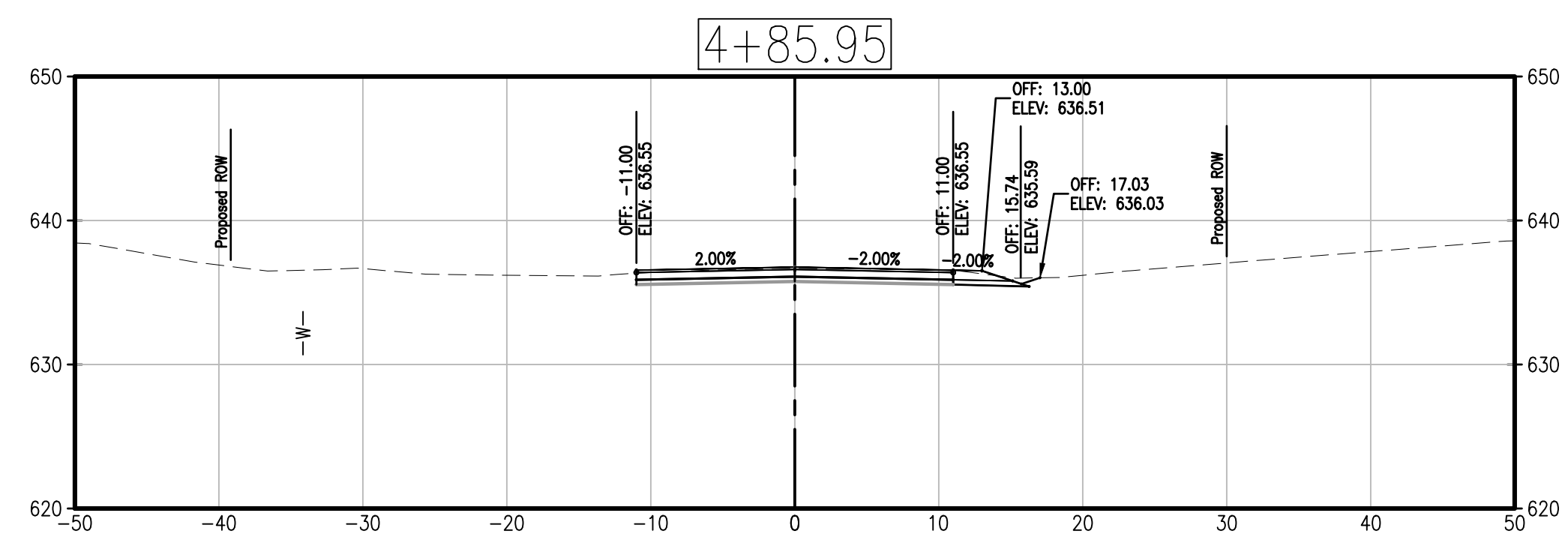
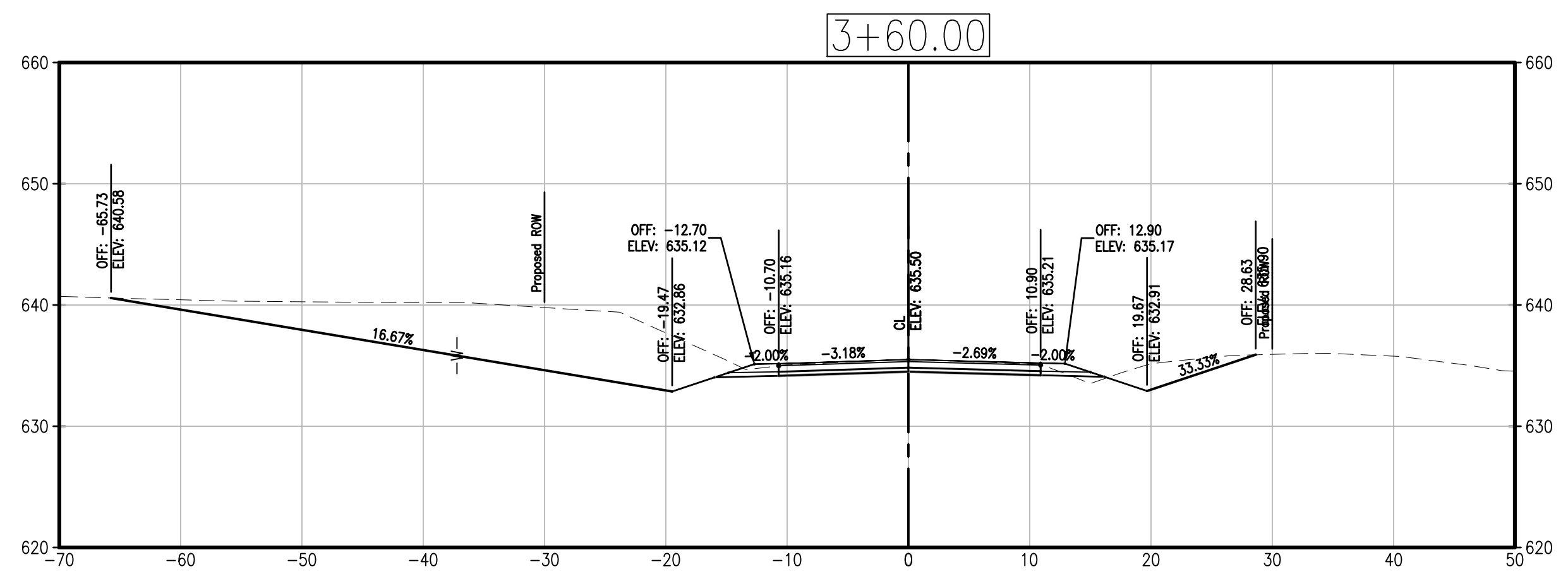
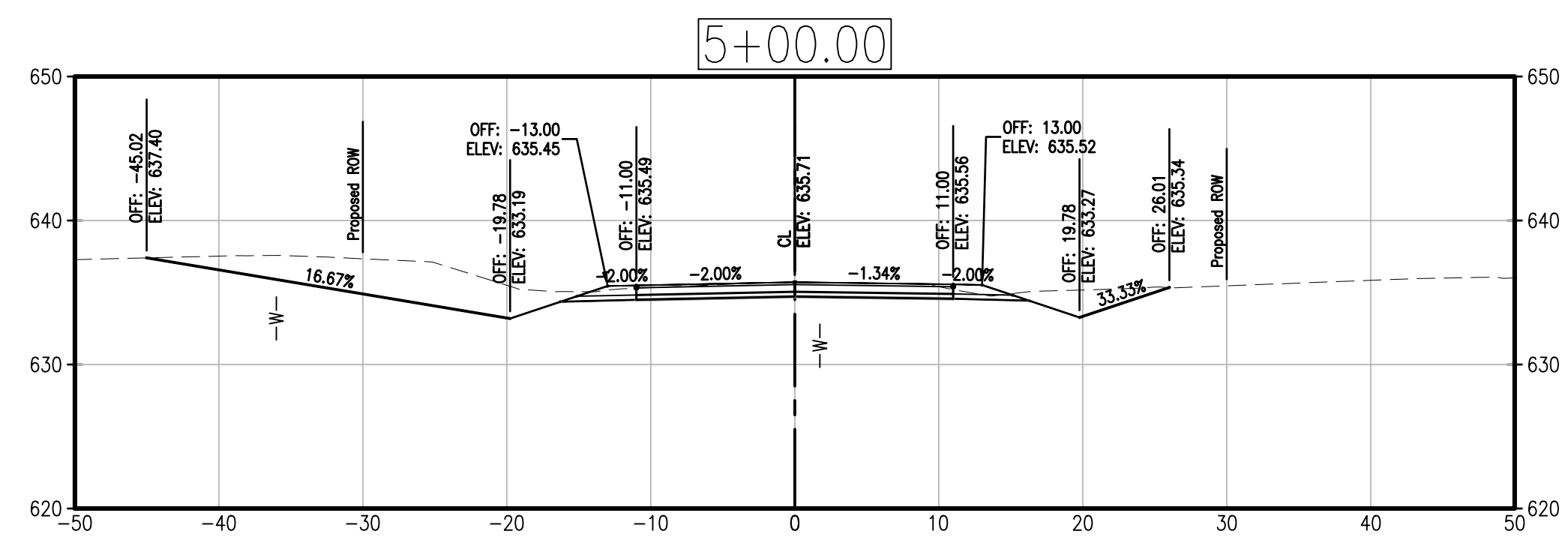
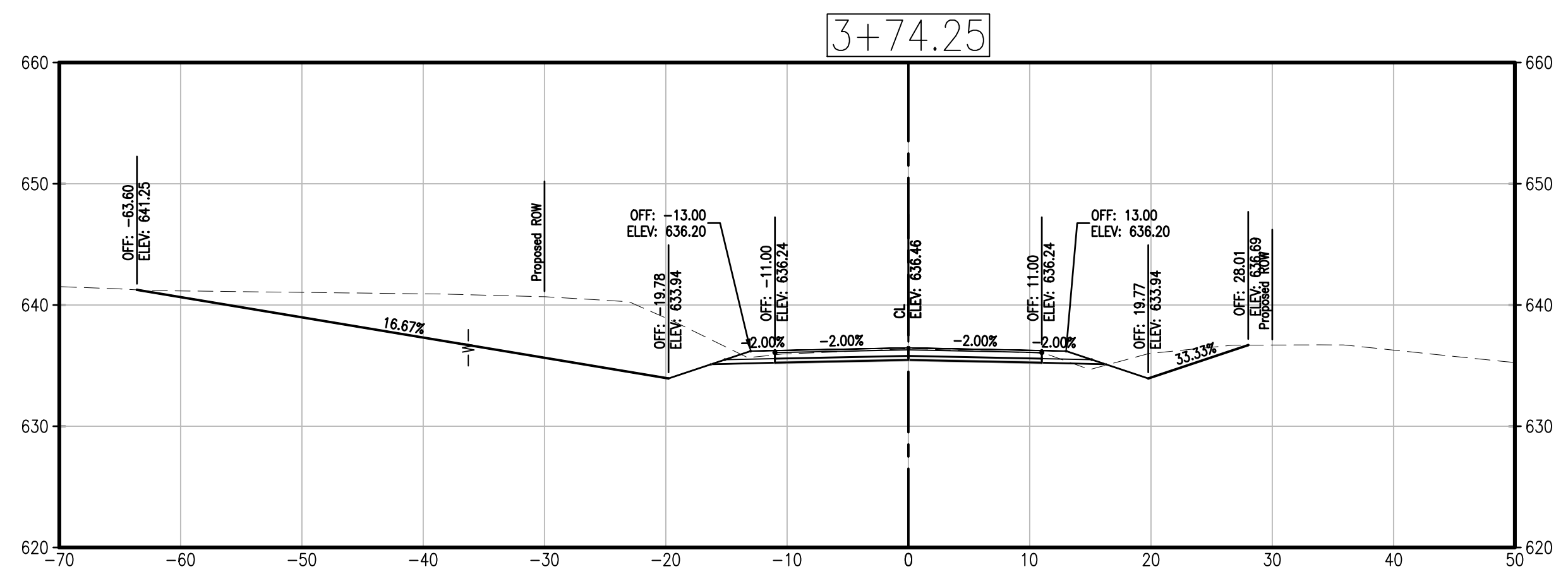
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 OF 10 SHEETS

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DRN. BY: PPK CKD. BY: CFB

SCALE: AS INDICATED

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SHEET NUMBER
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 OF 9 SHEETS

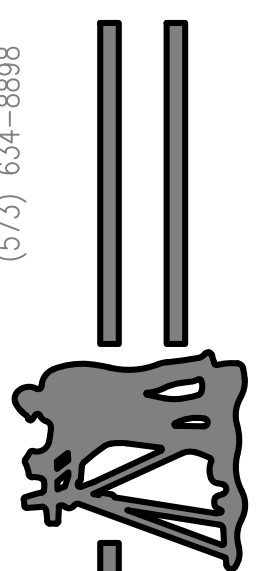
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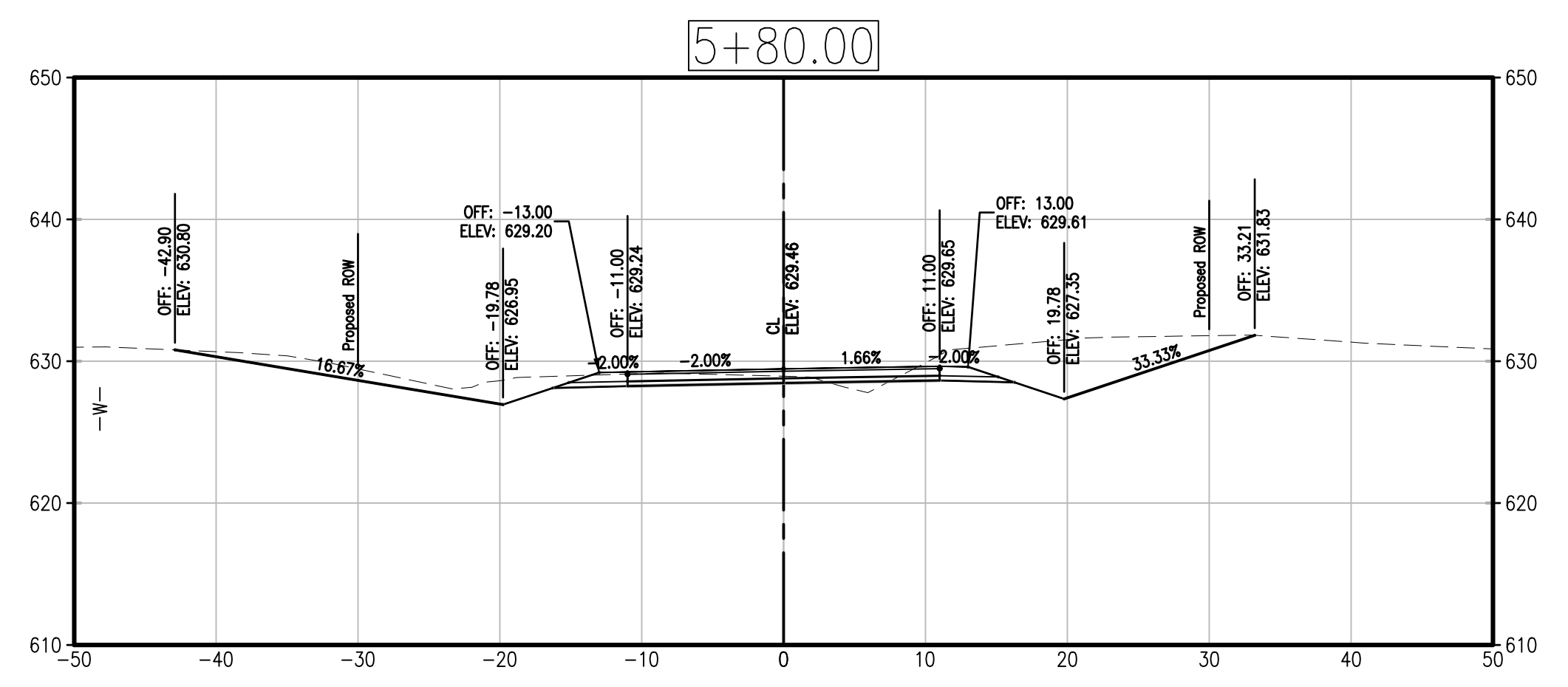
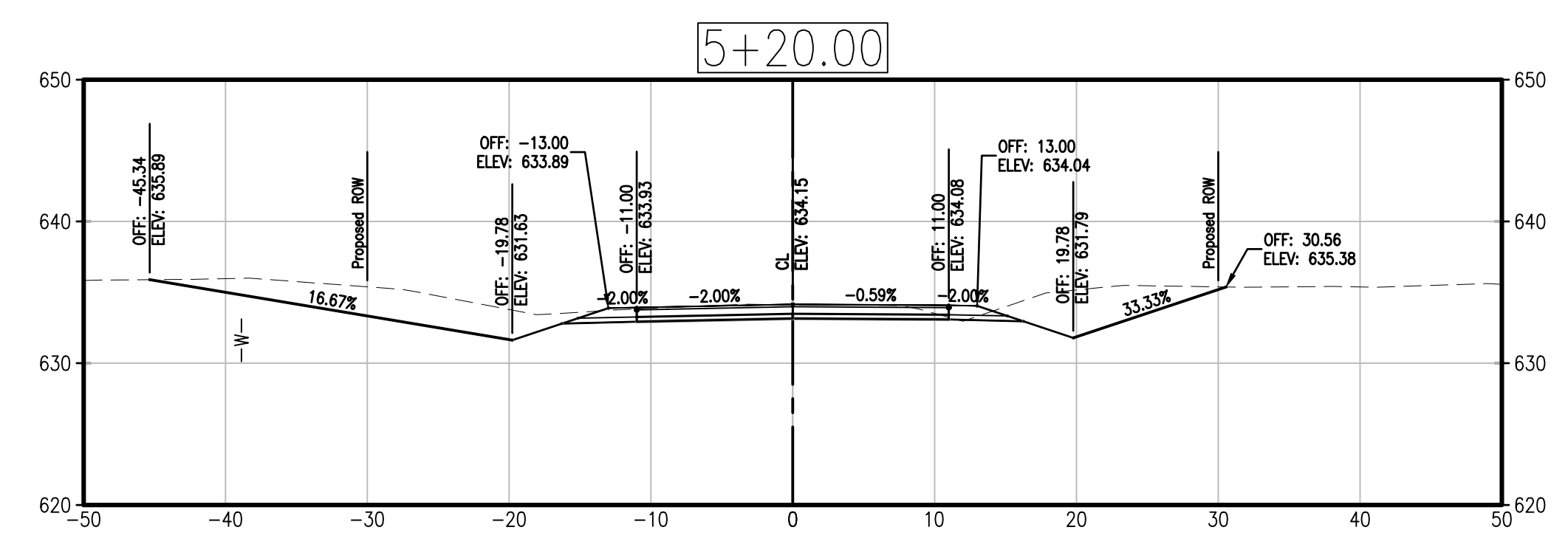
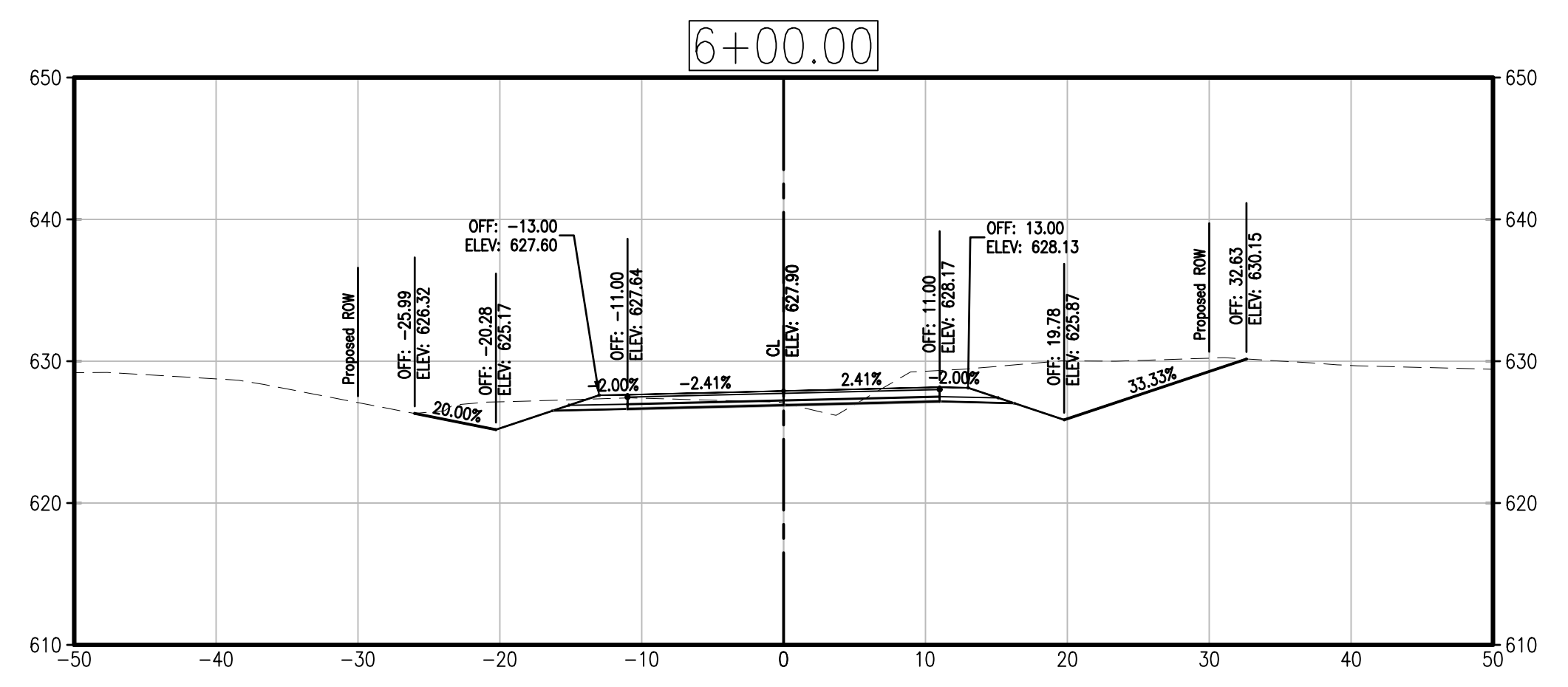
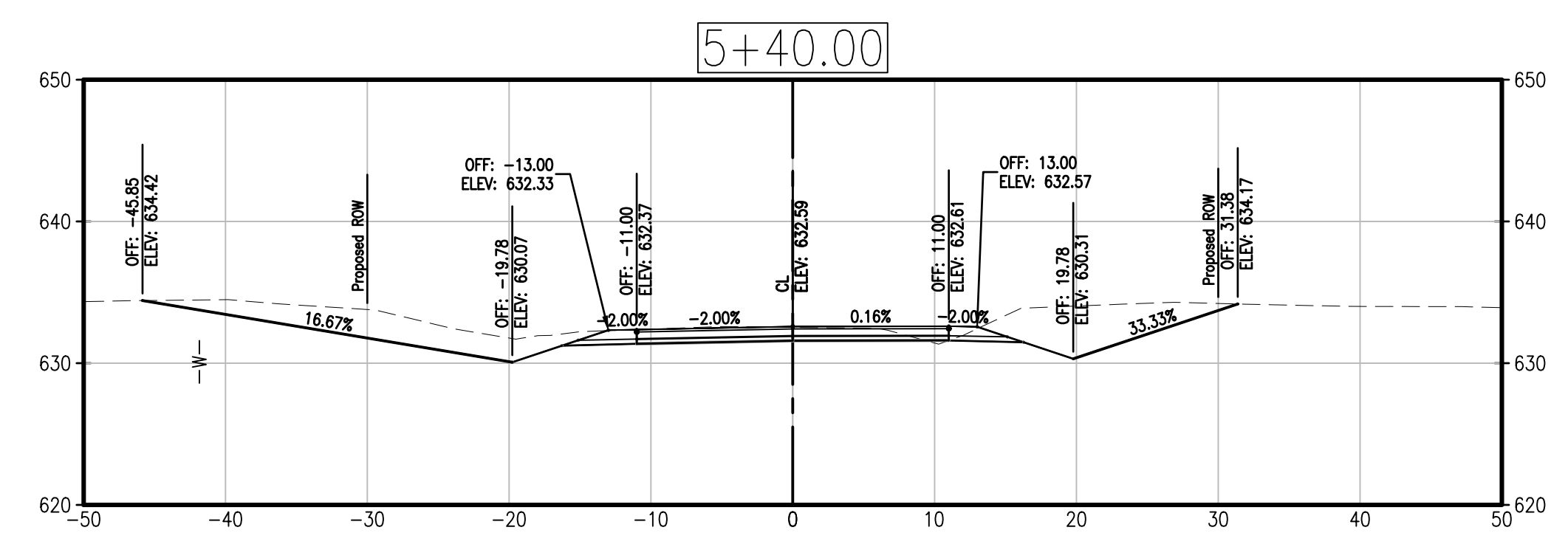
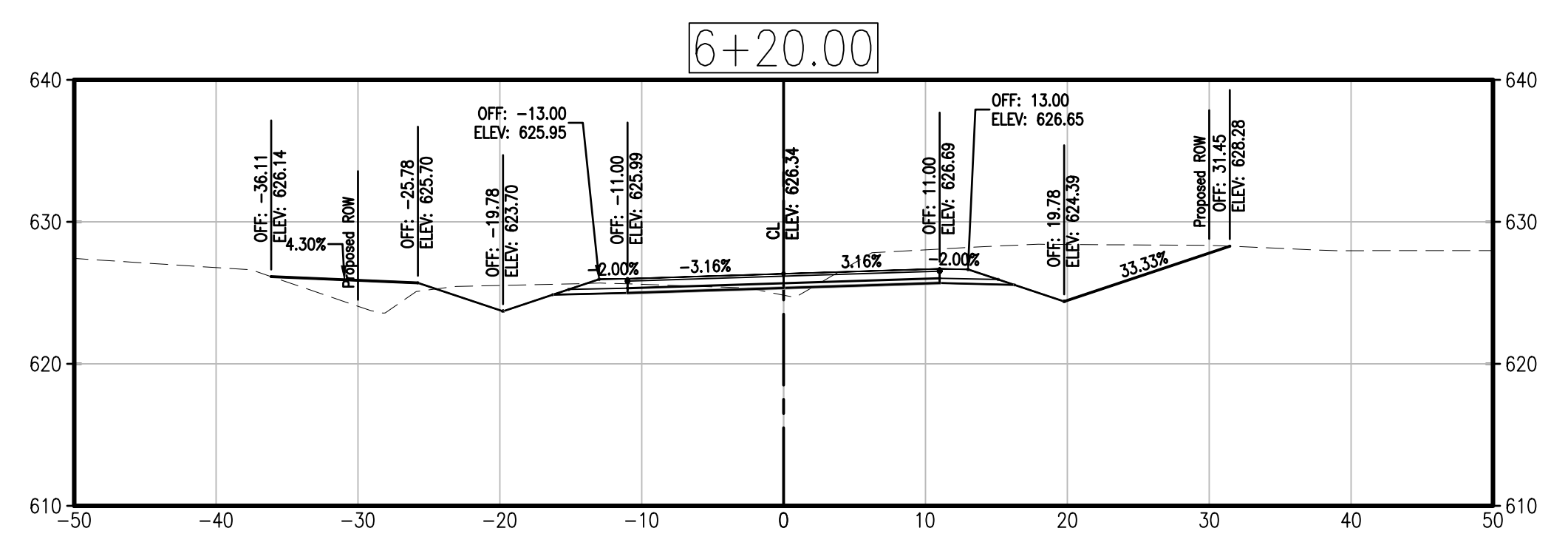
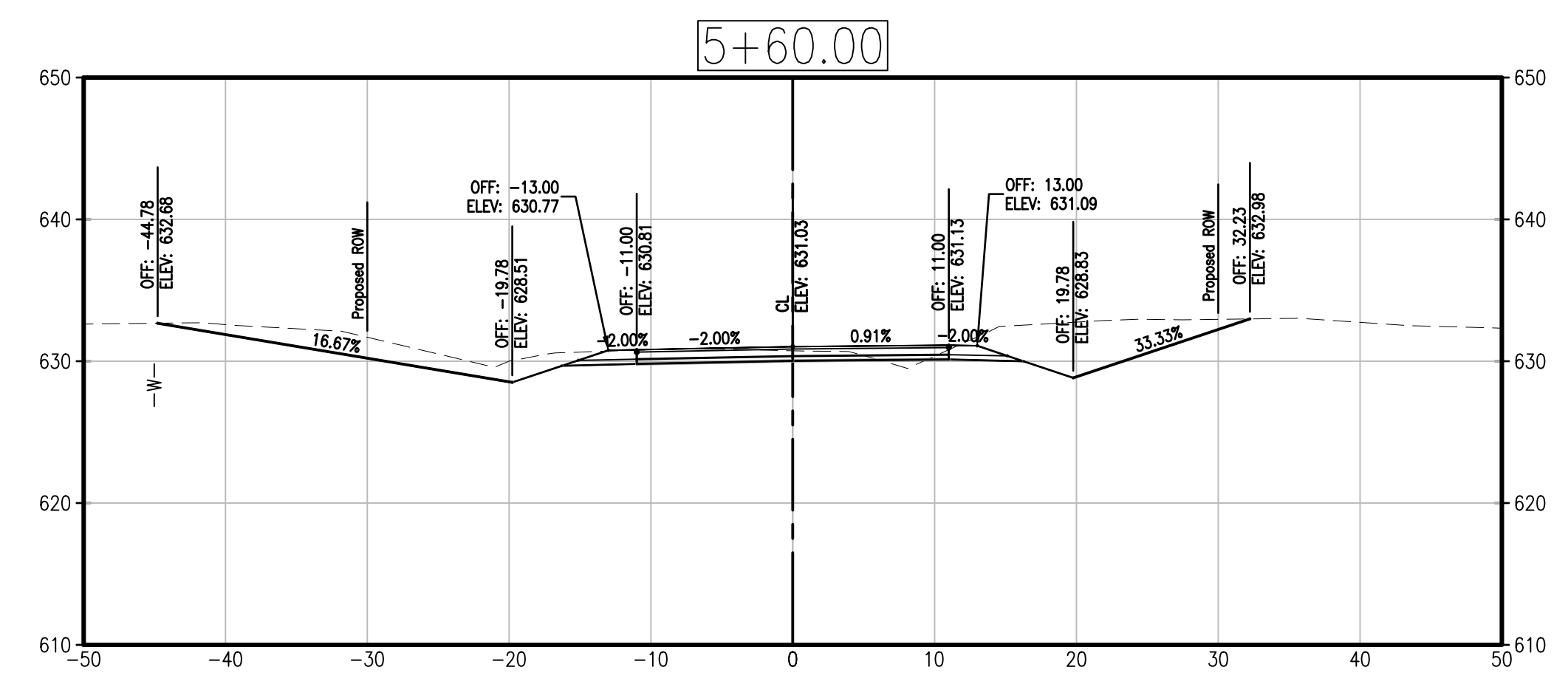
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SHEET TITLE
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SHEET NUMBER

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OF 9 SHEETS



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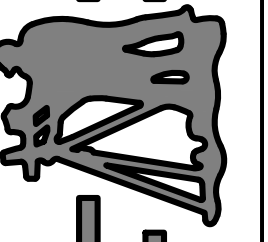
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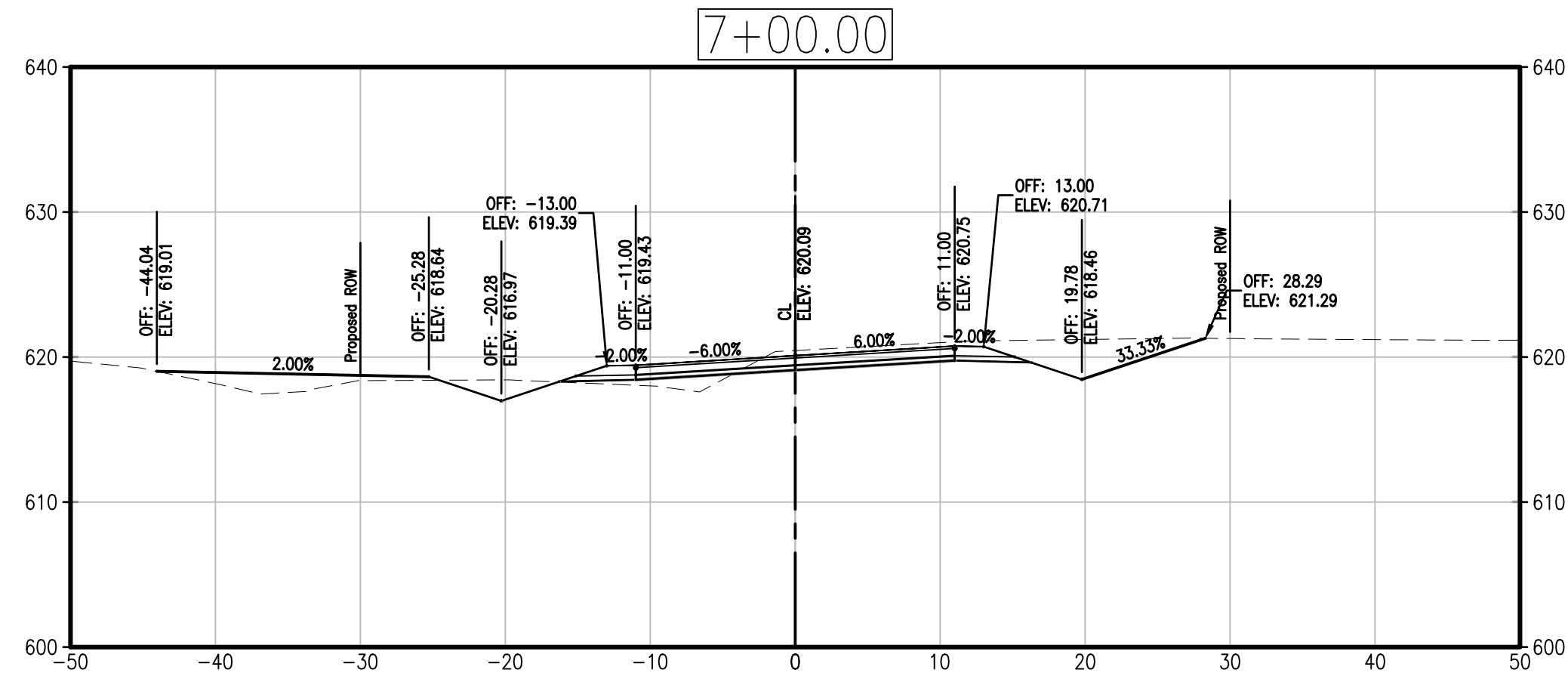
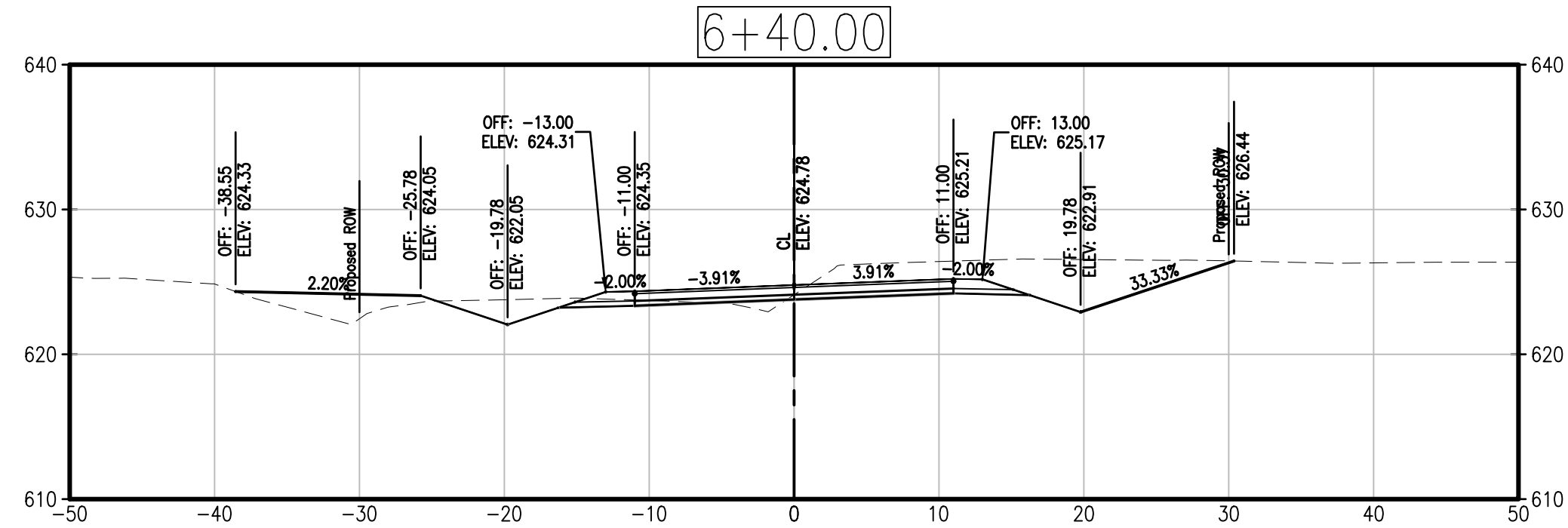
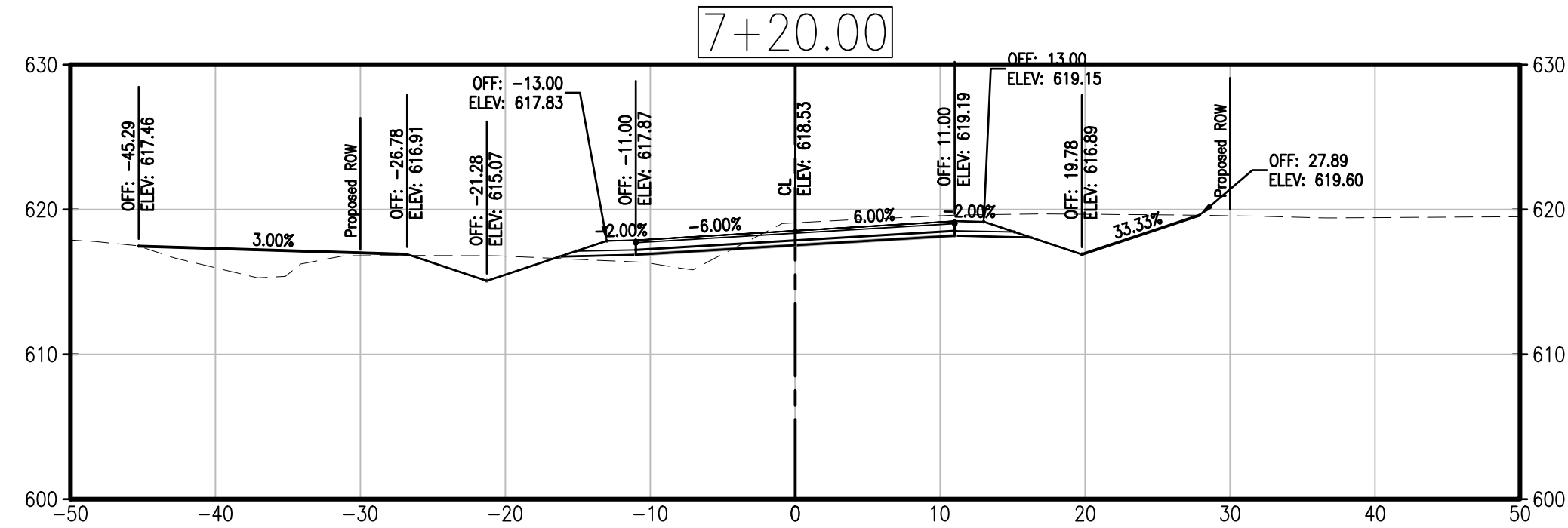
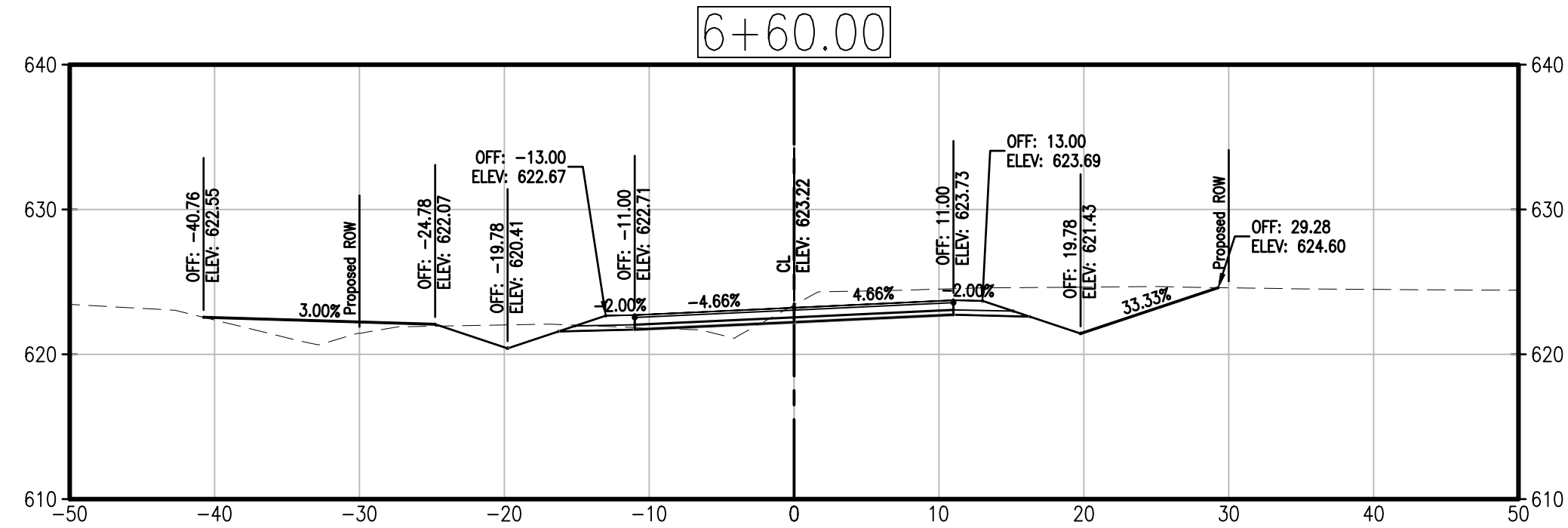
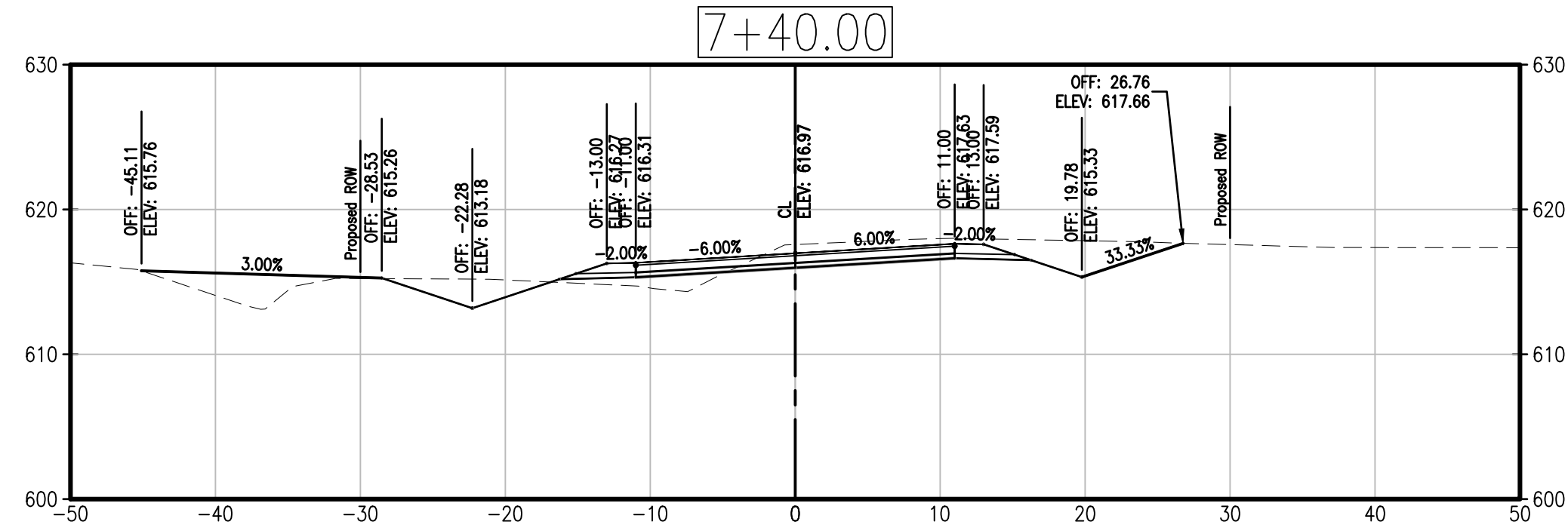
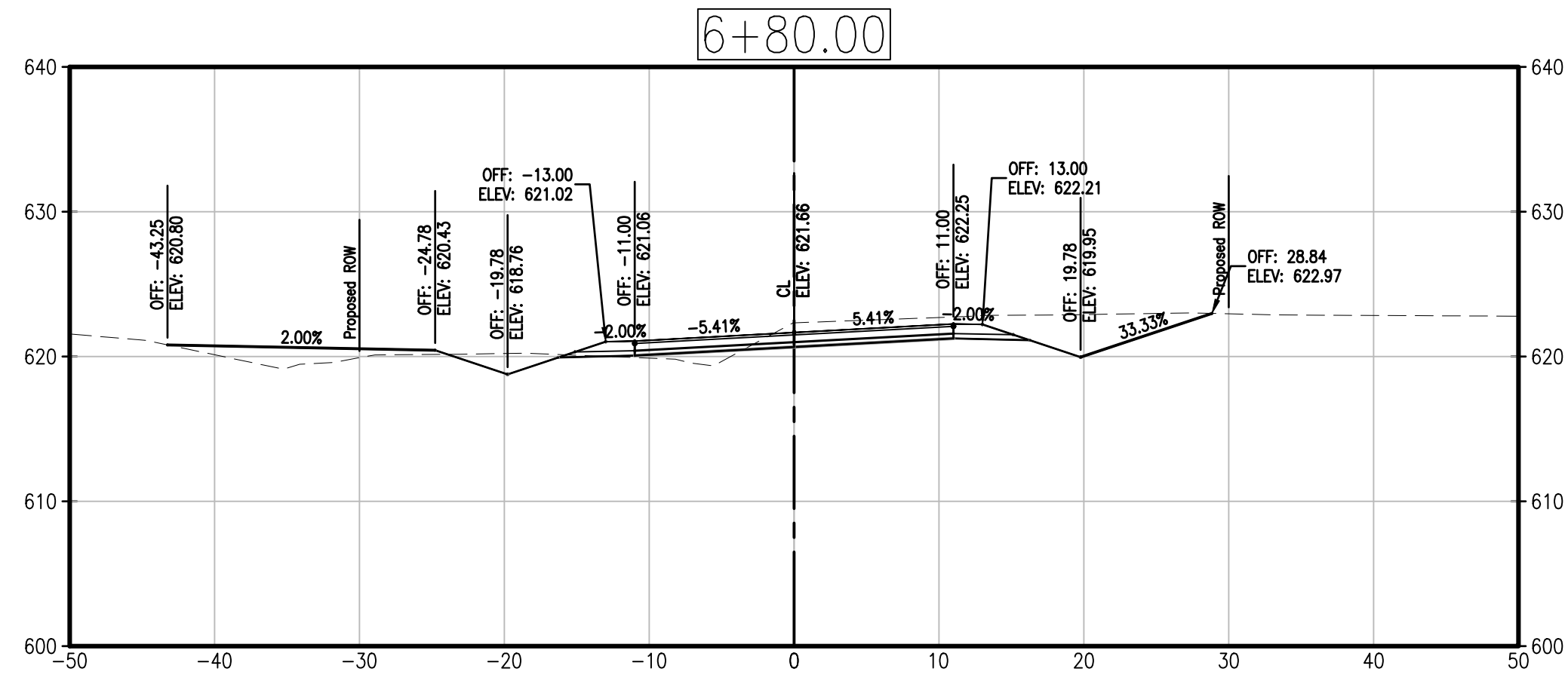
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 CROSS SECTIONS
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SHEET NUMBER

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OF 9 SHEETS



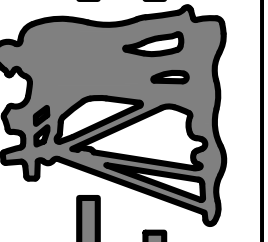
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CMPS JOB No. 17-035

DRN. BY: PPK

CKD. BY: CFB

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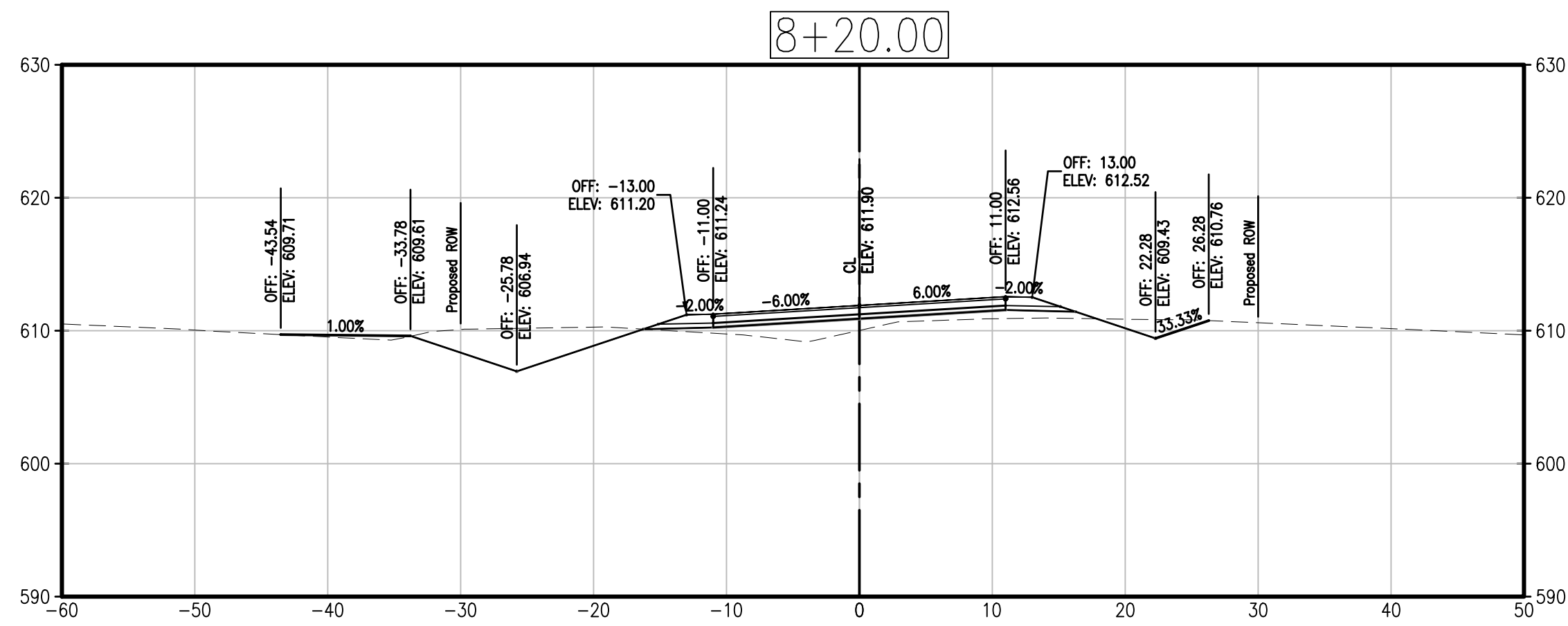
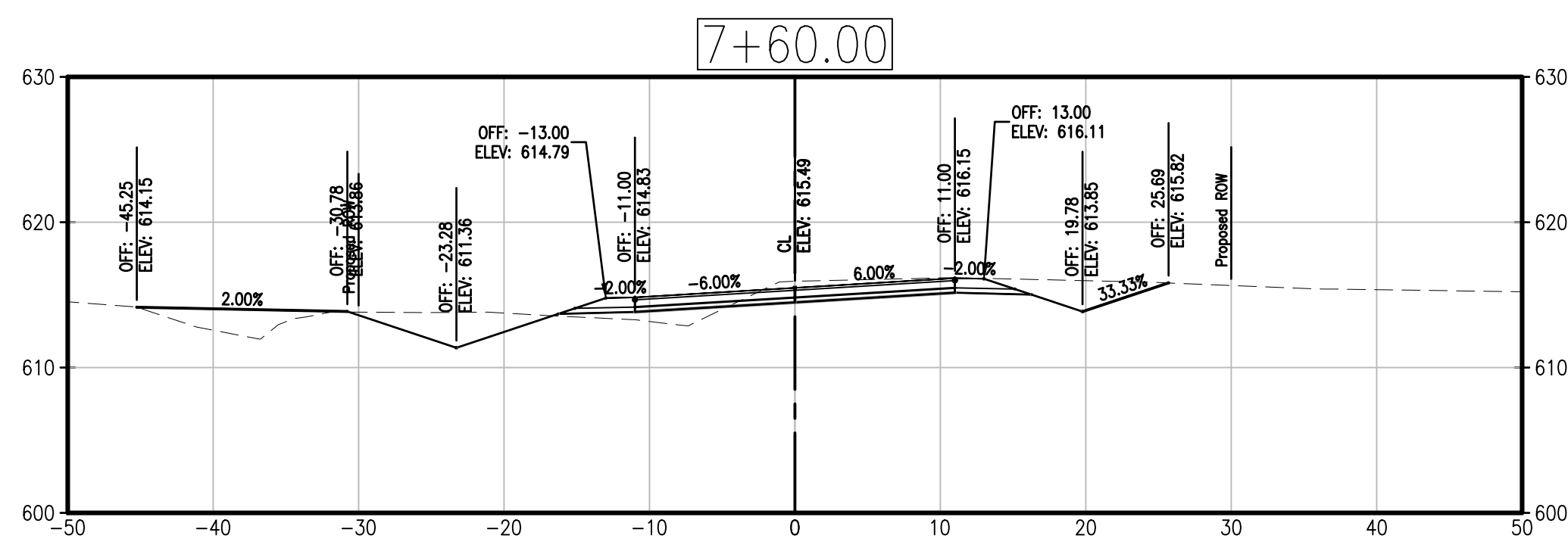
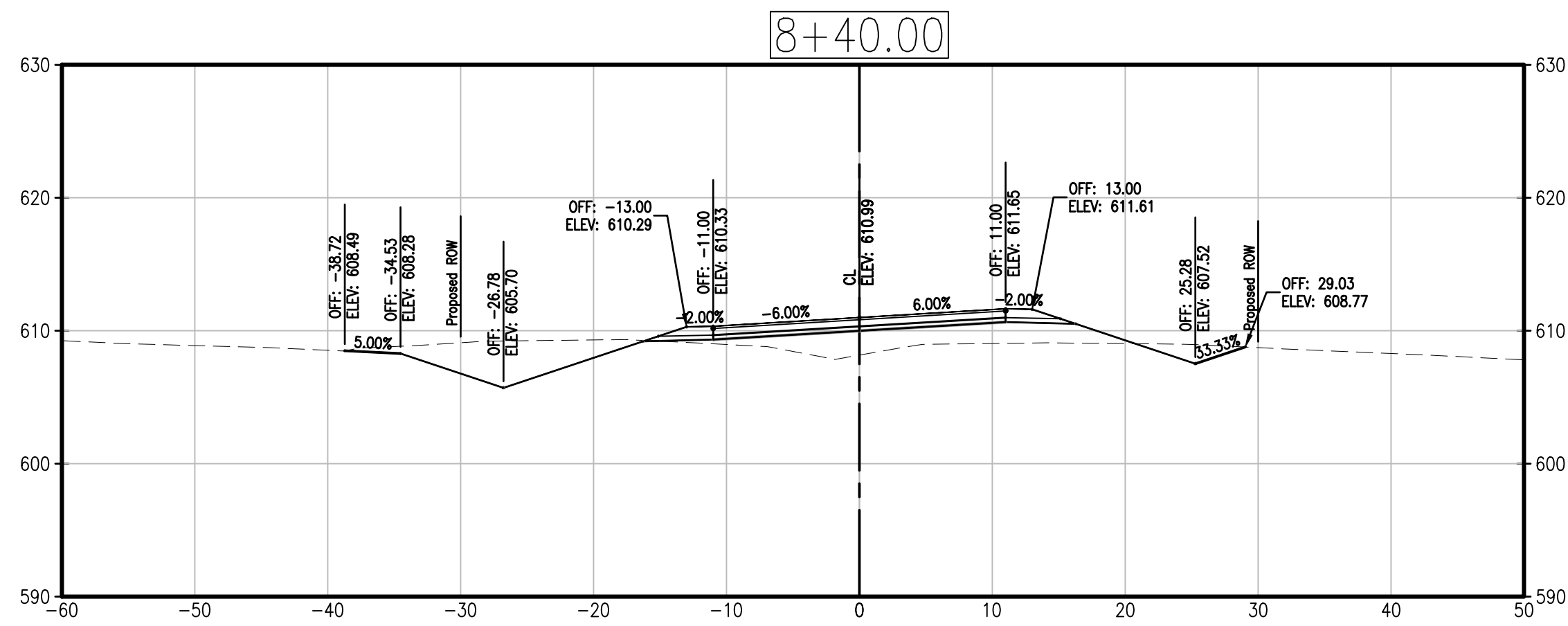
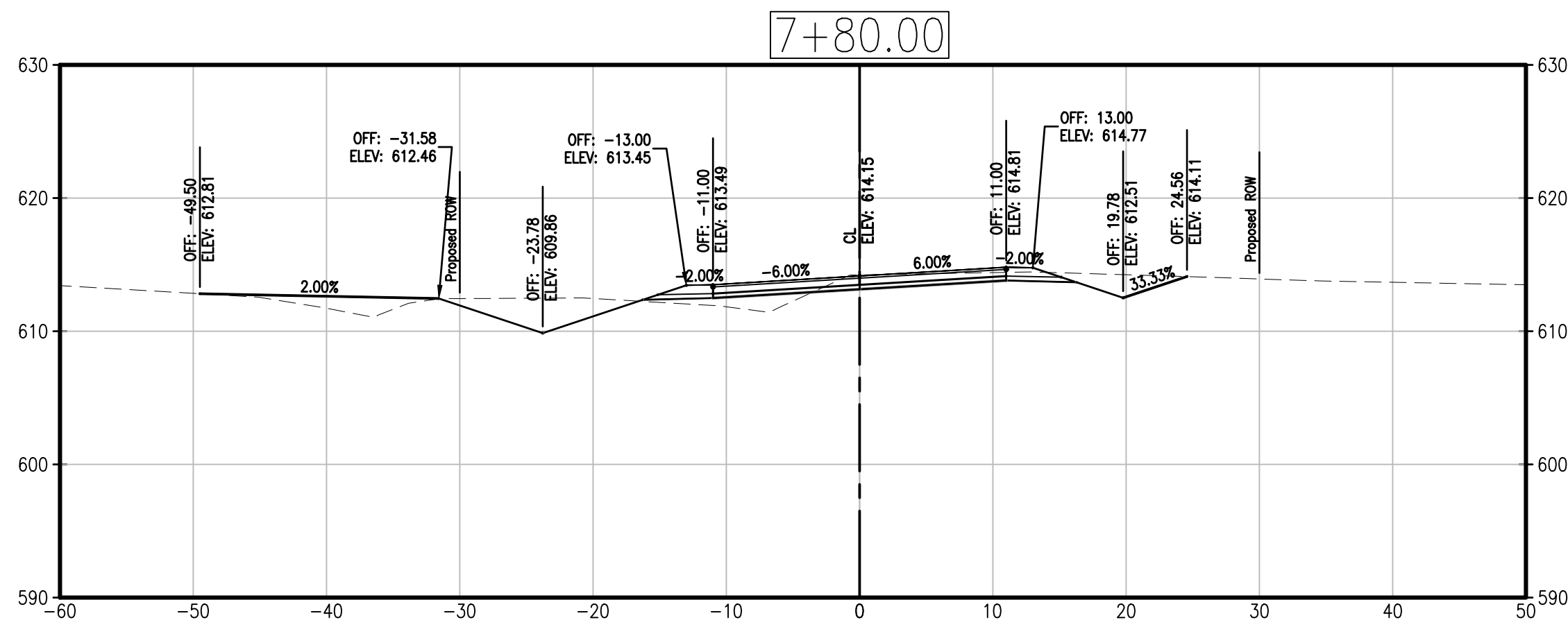
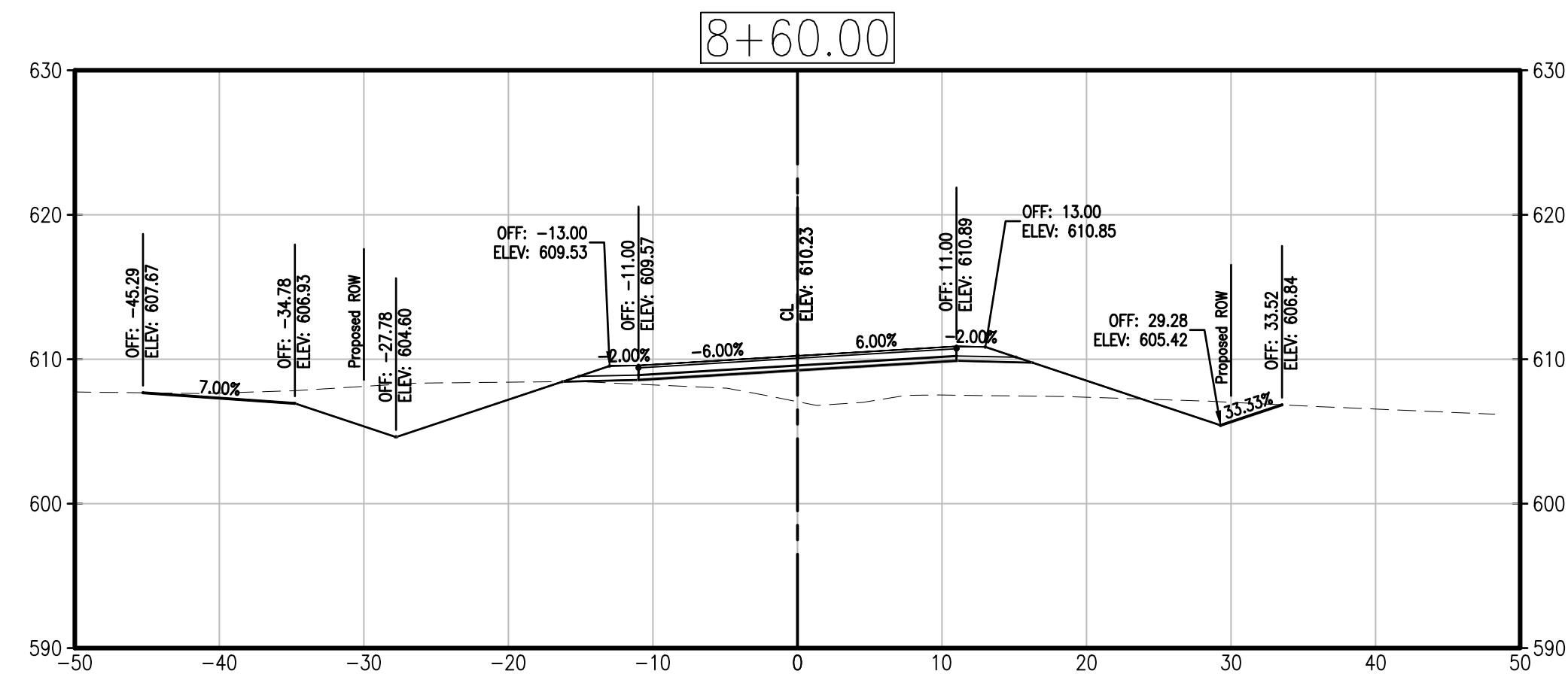
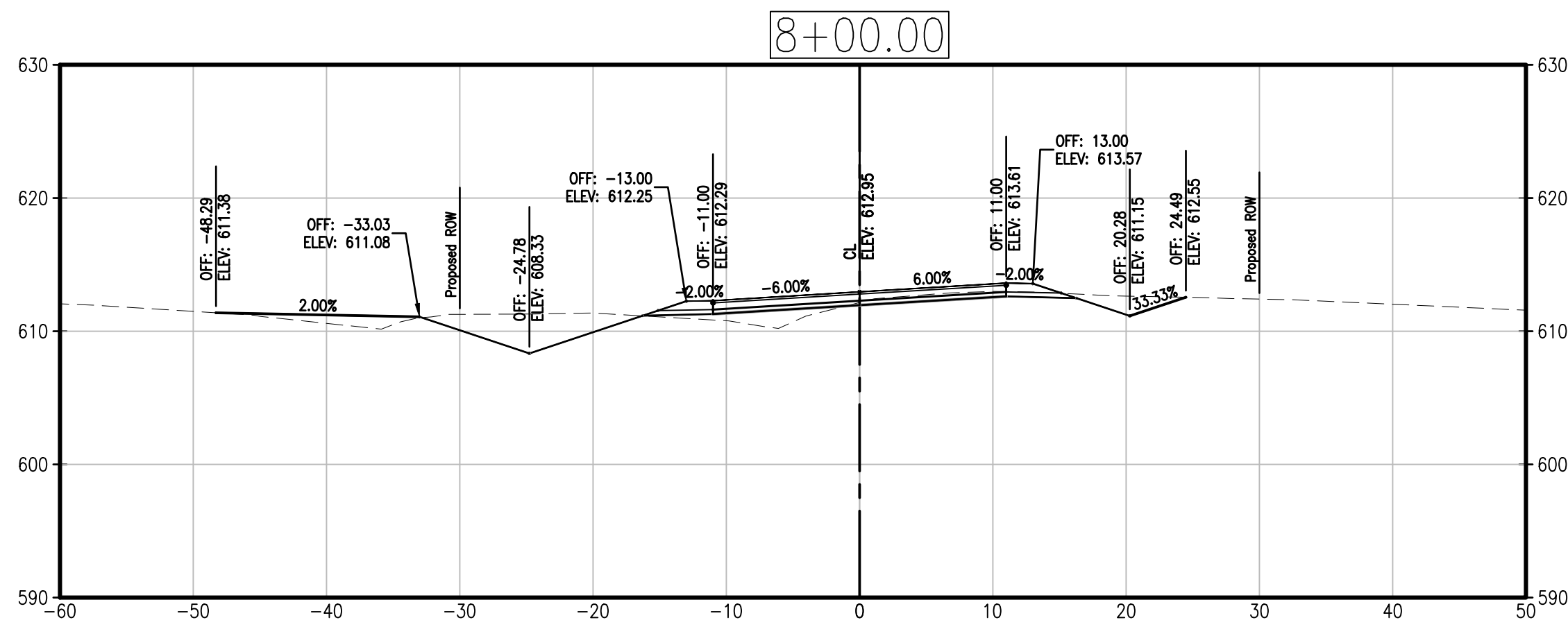
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CROSS SECTIONS
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SHEET NUMBER

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OF 9 SHEETS



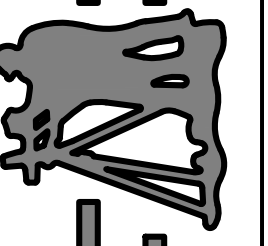
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CMPS JOB No. 17-035

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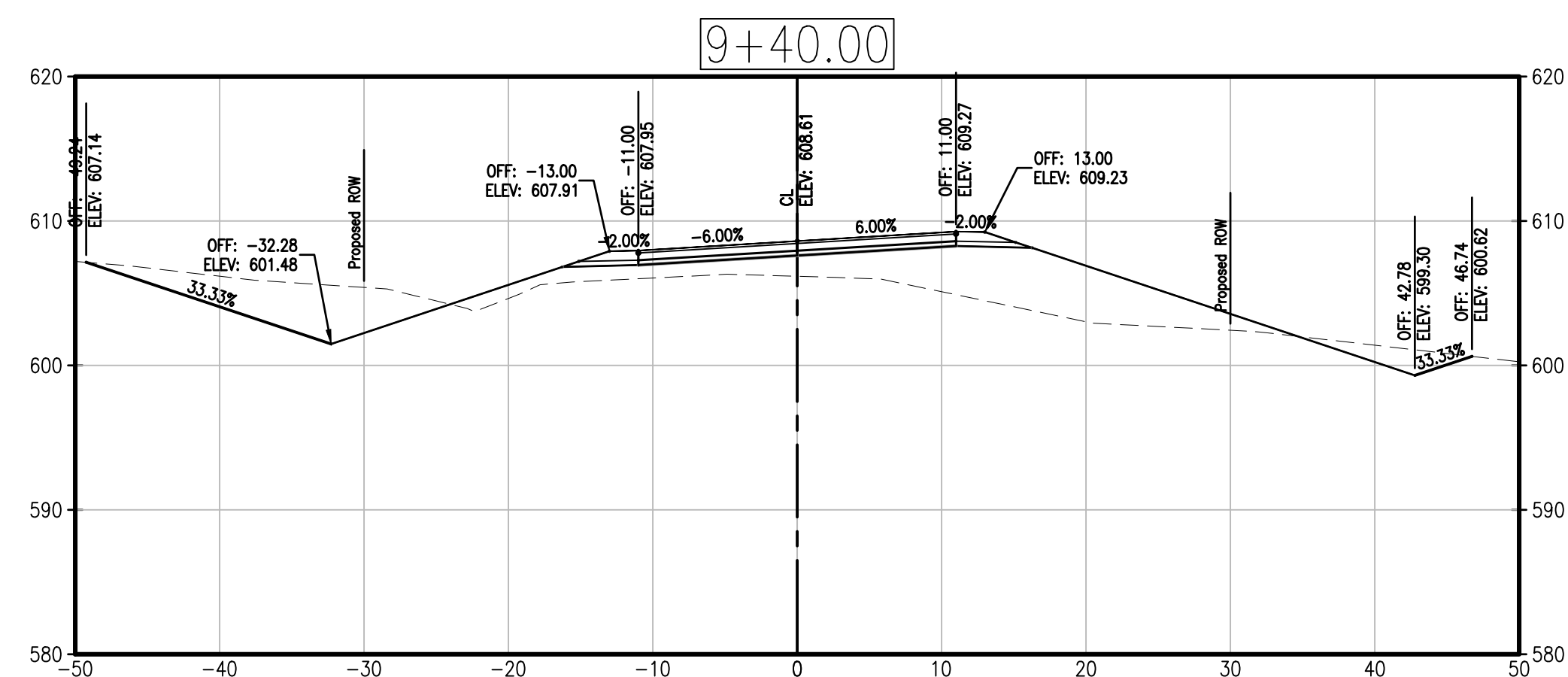
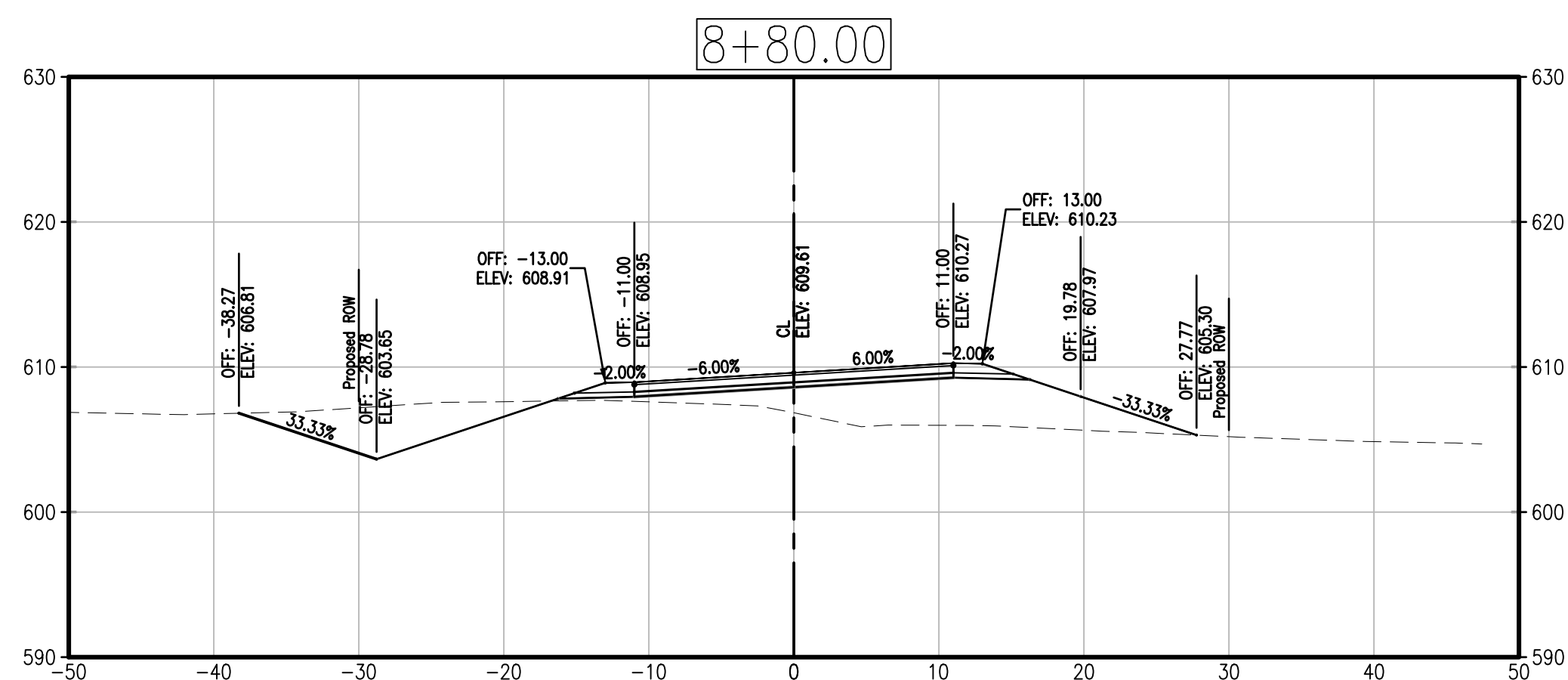
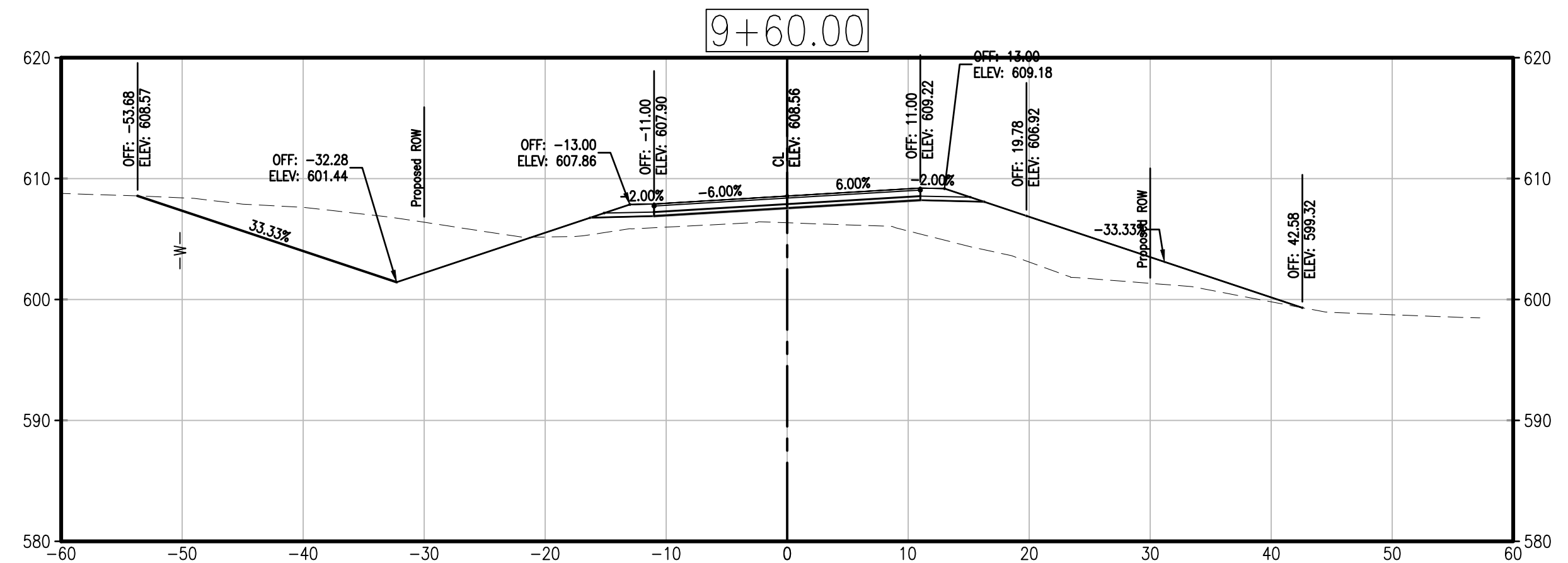
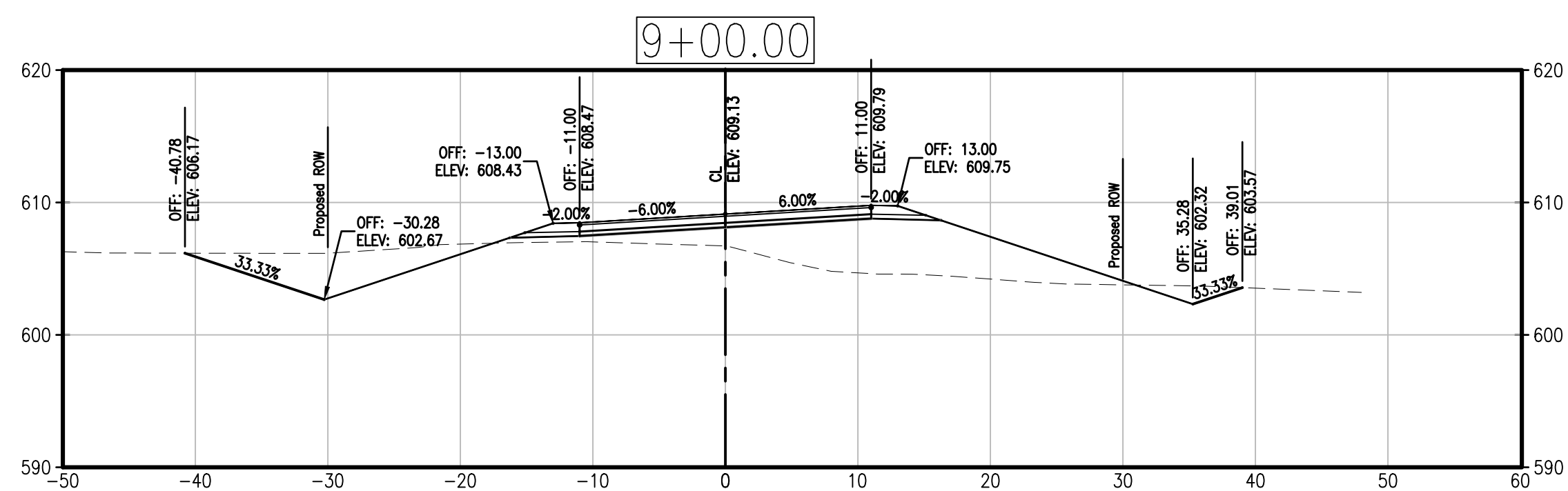
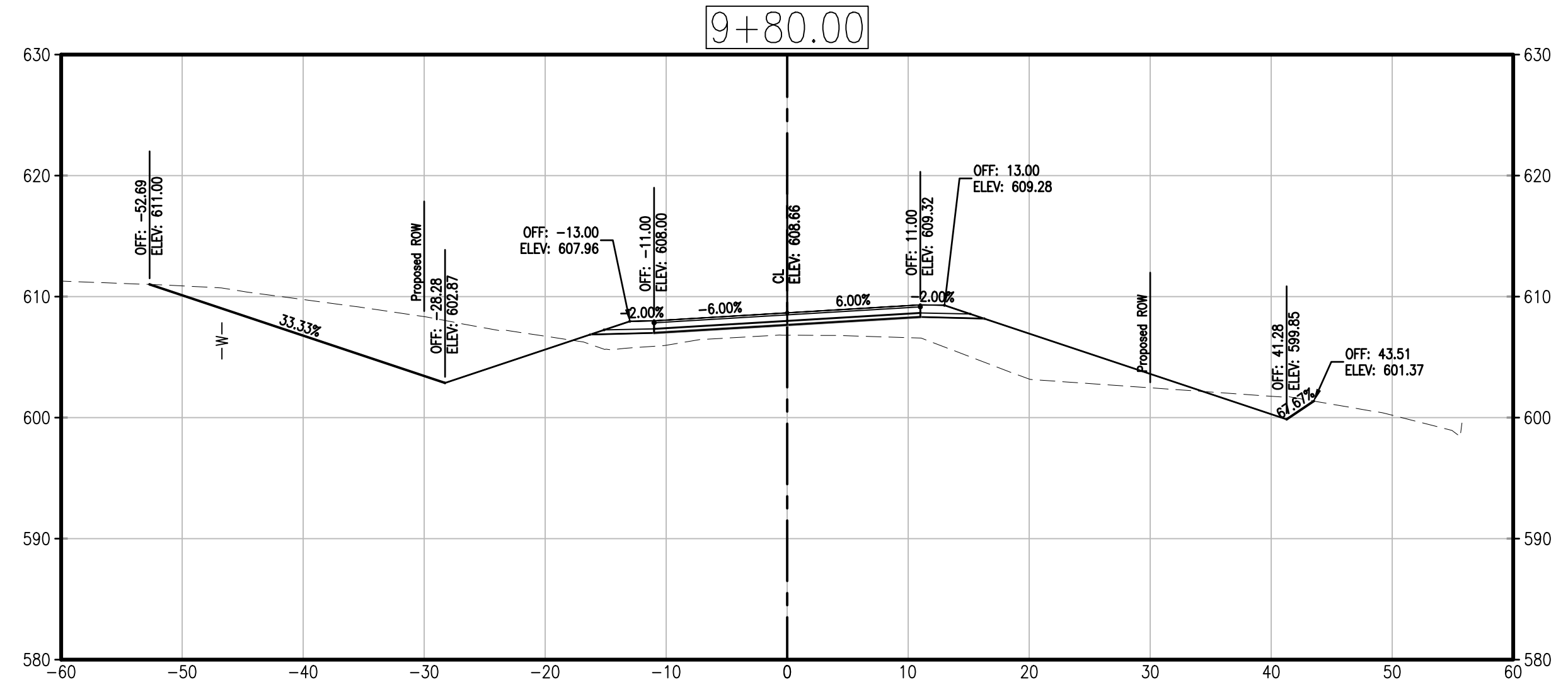
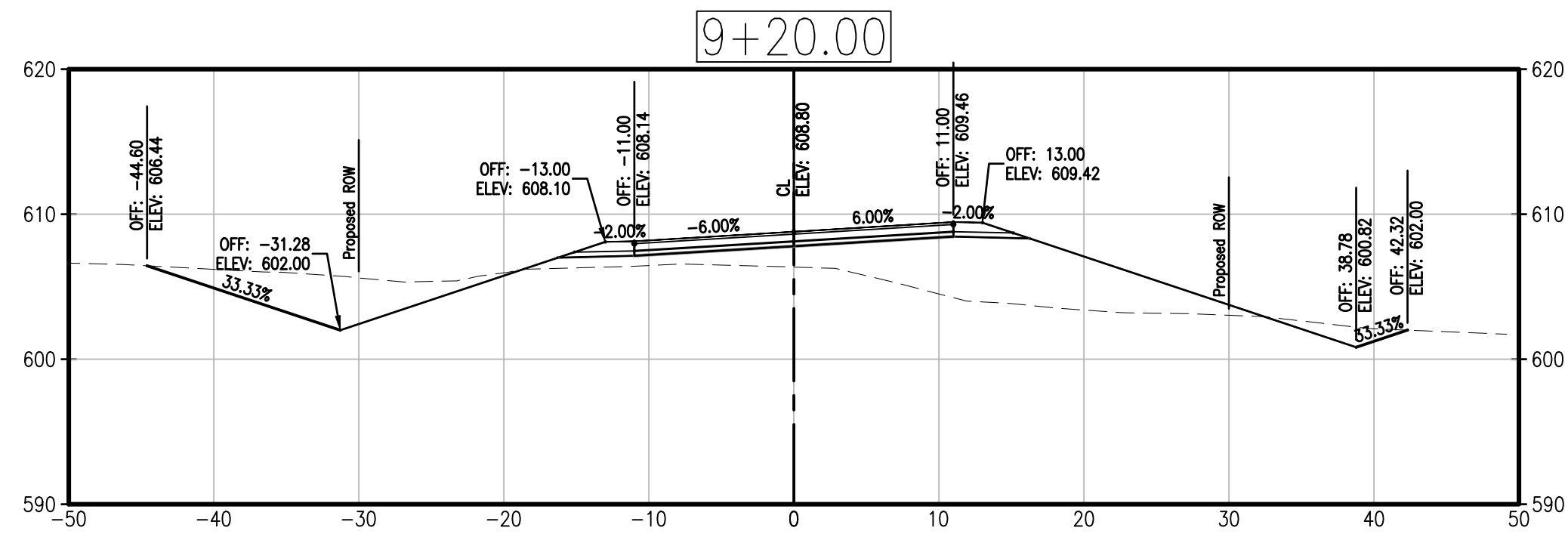
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**CROSS SECTIONS
 TANNER BRIDGE ROAD**

SHEET NUMBER

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OF 9 SHEETS



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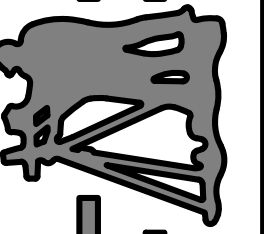
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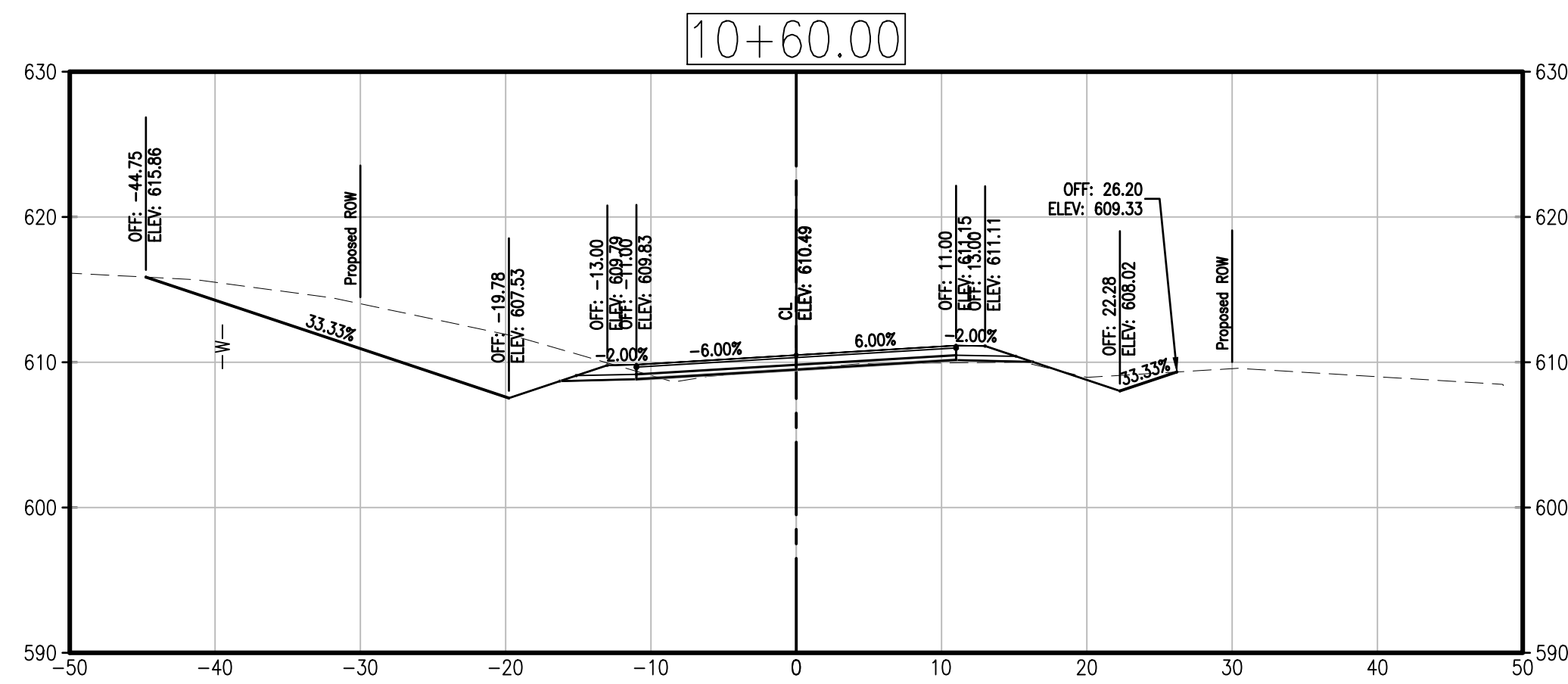
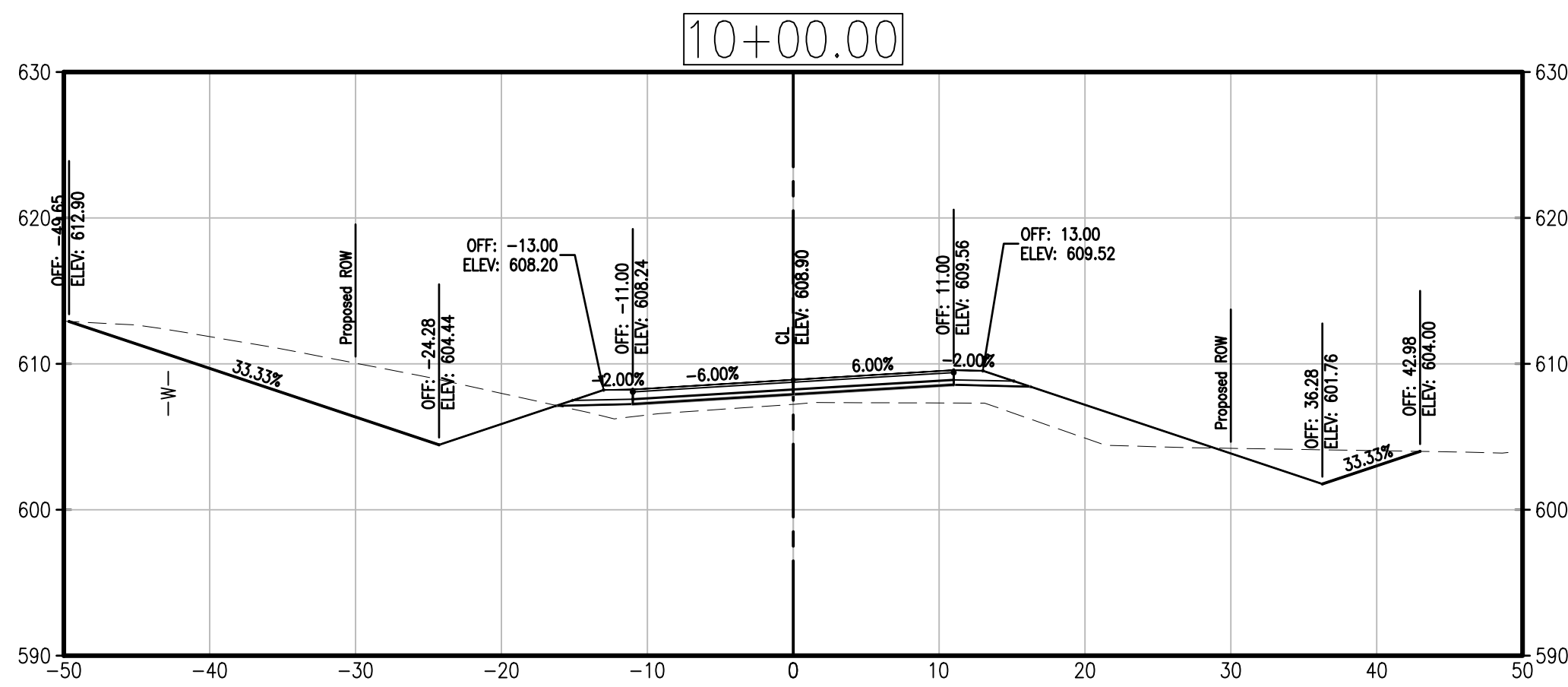
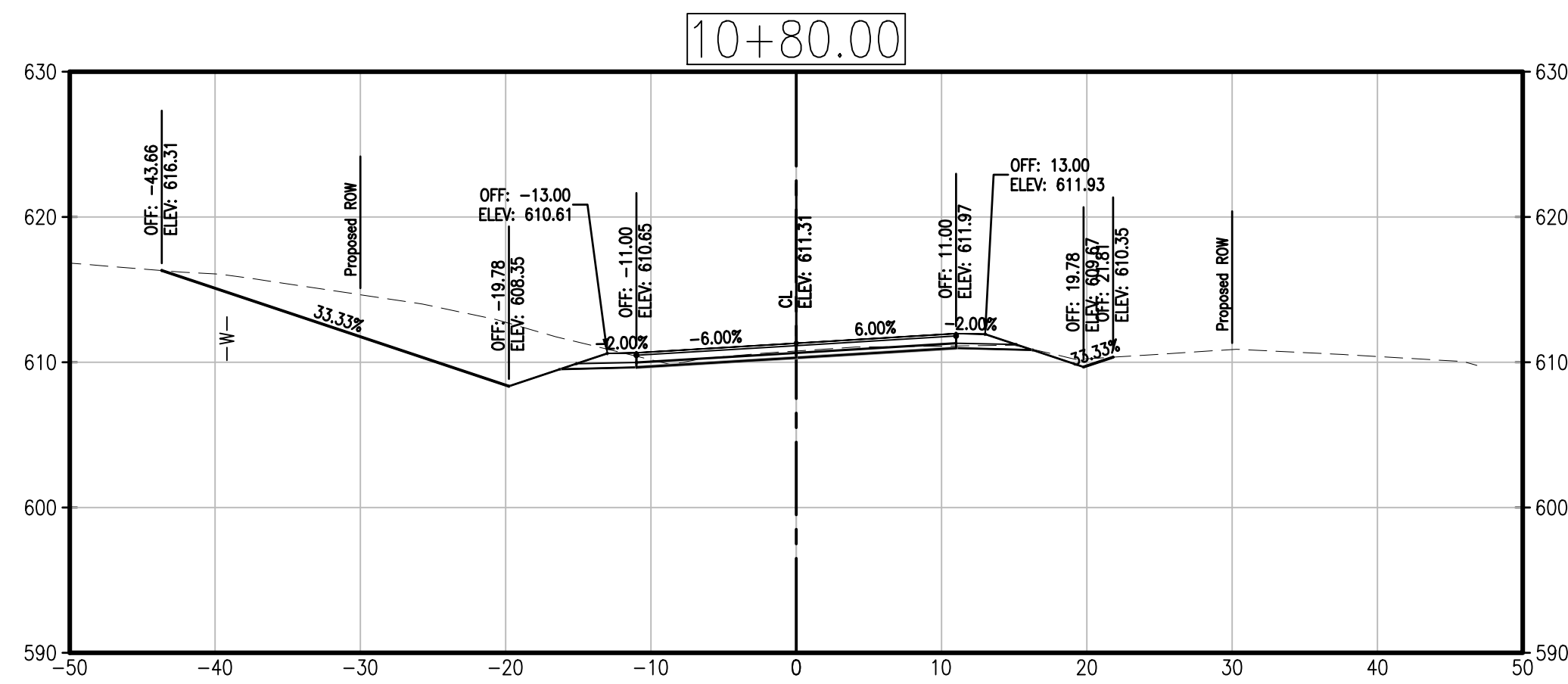
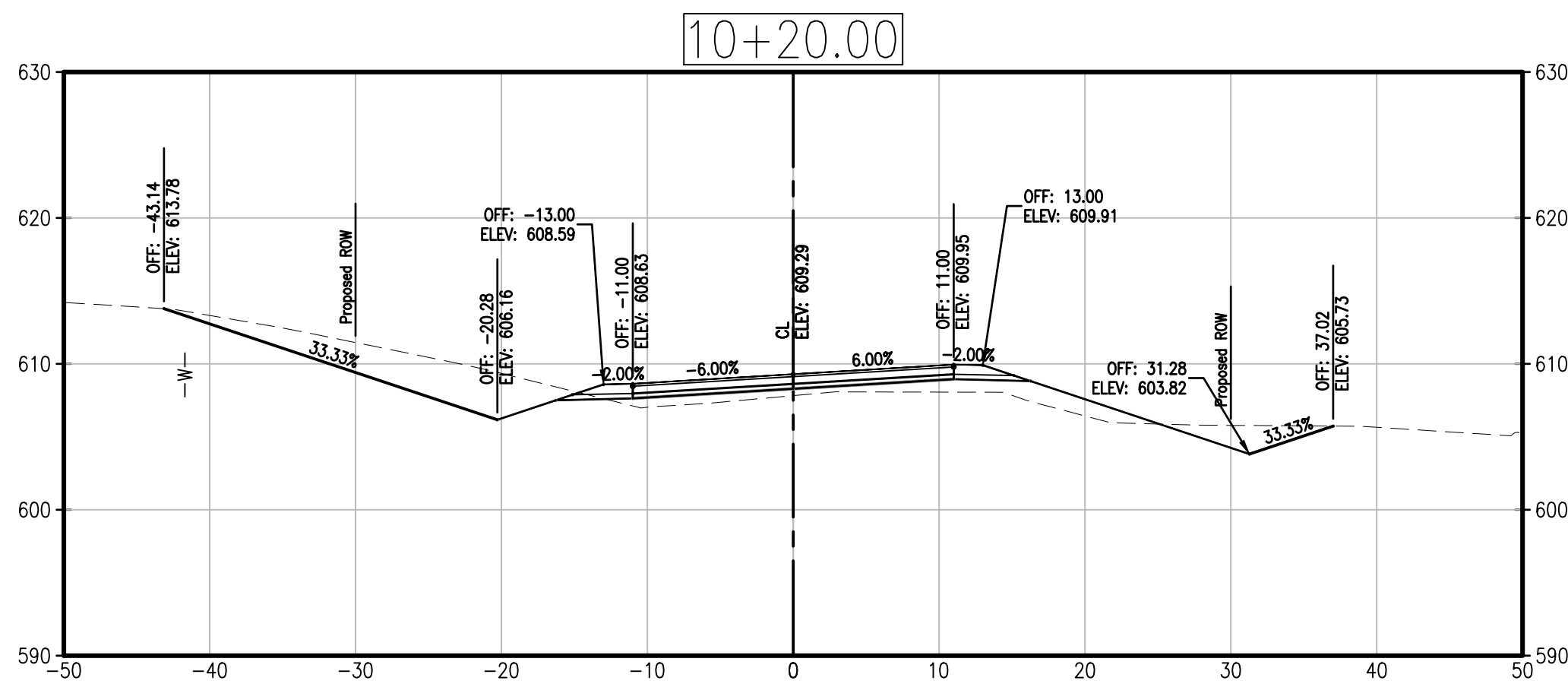
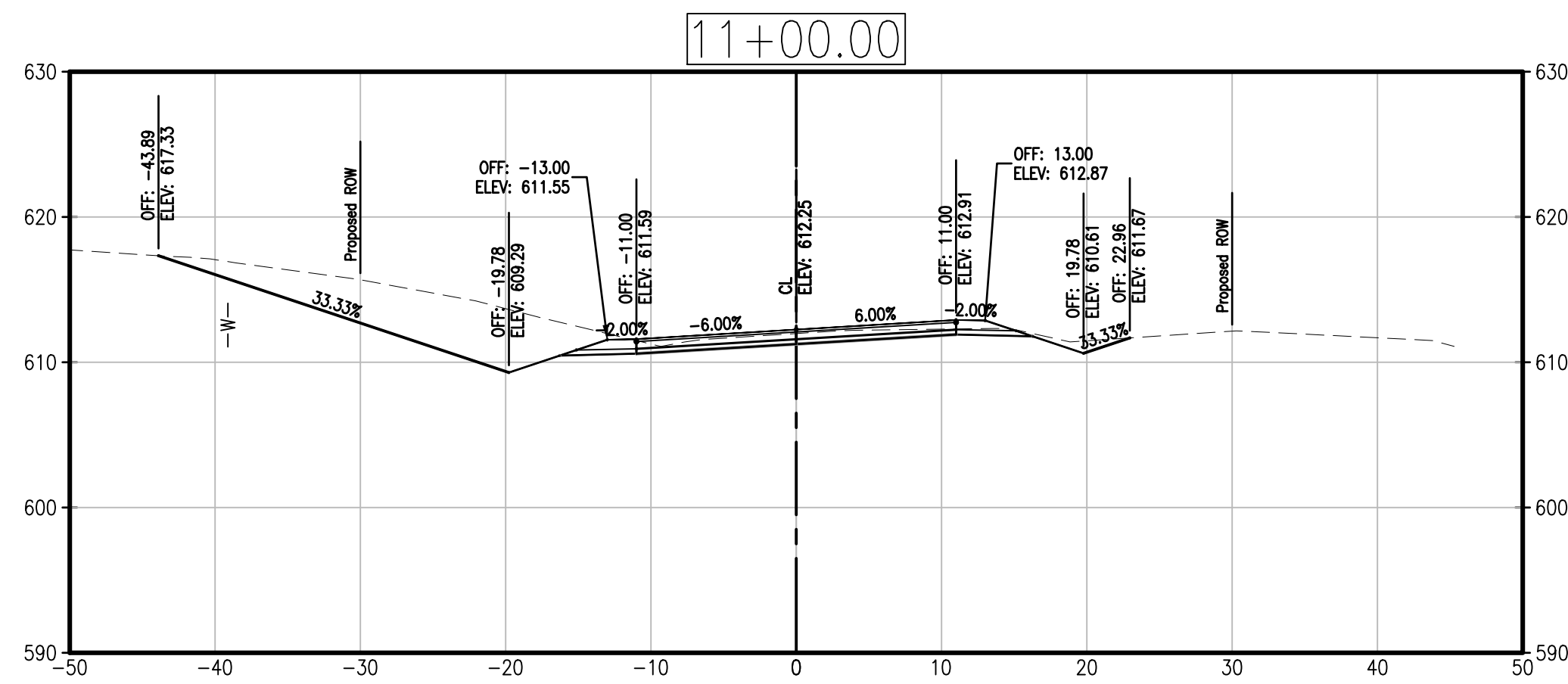
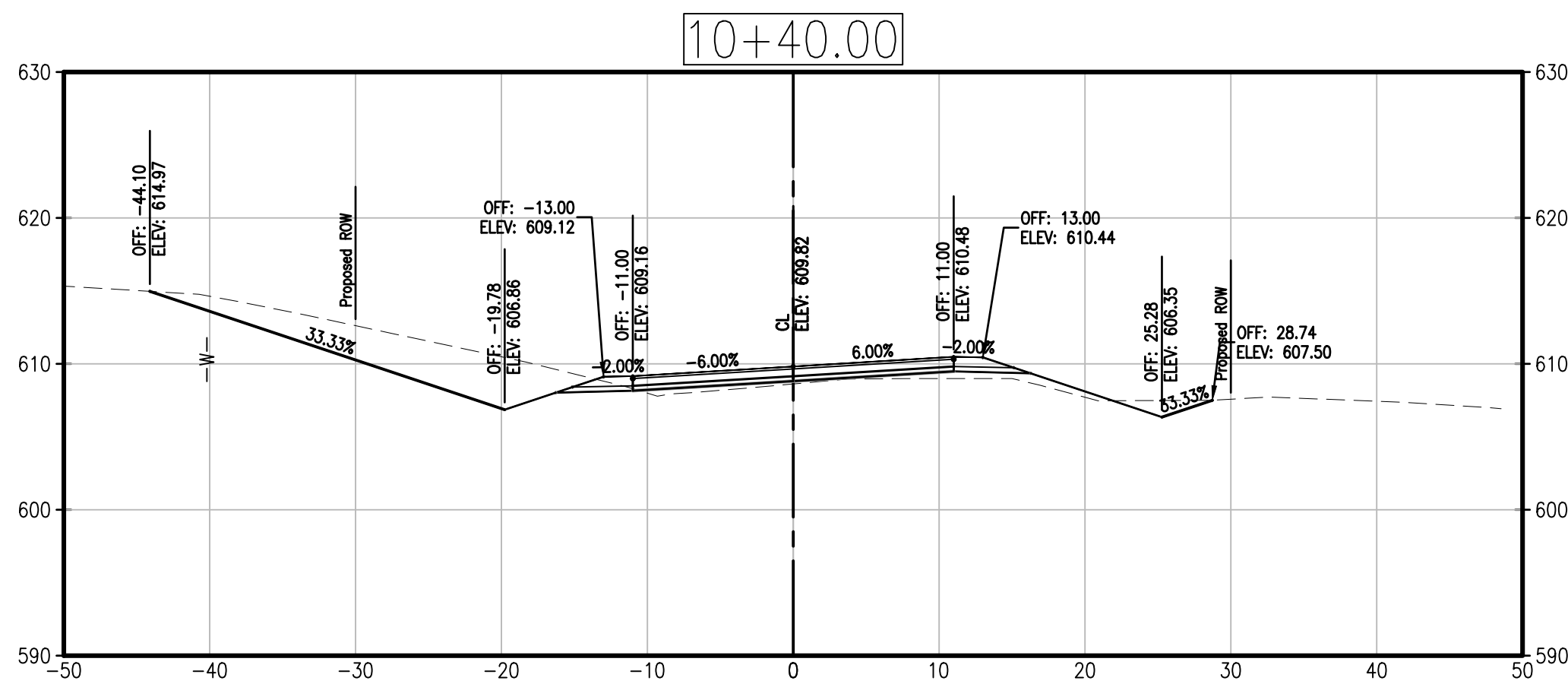
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 TANNER BRIDGE ROAD

SHEET NUMBER

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OF 9 SHEETS



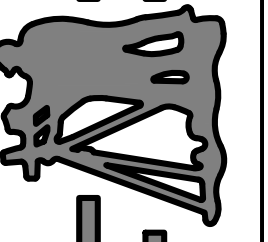
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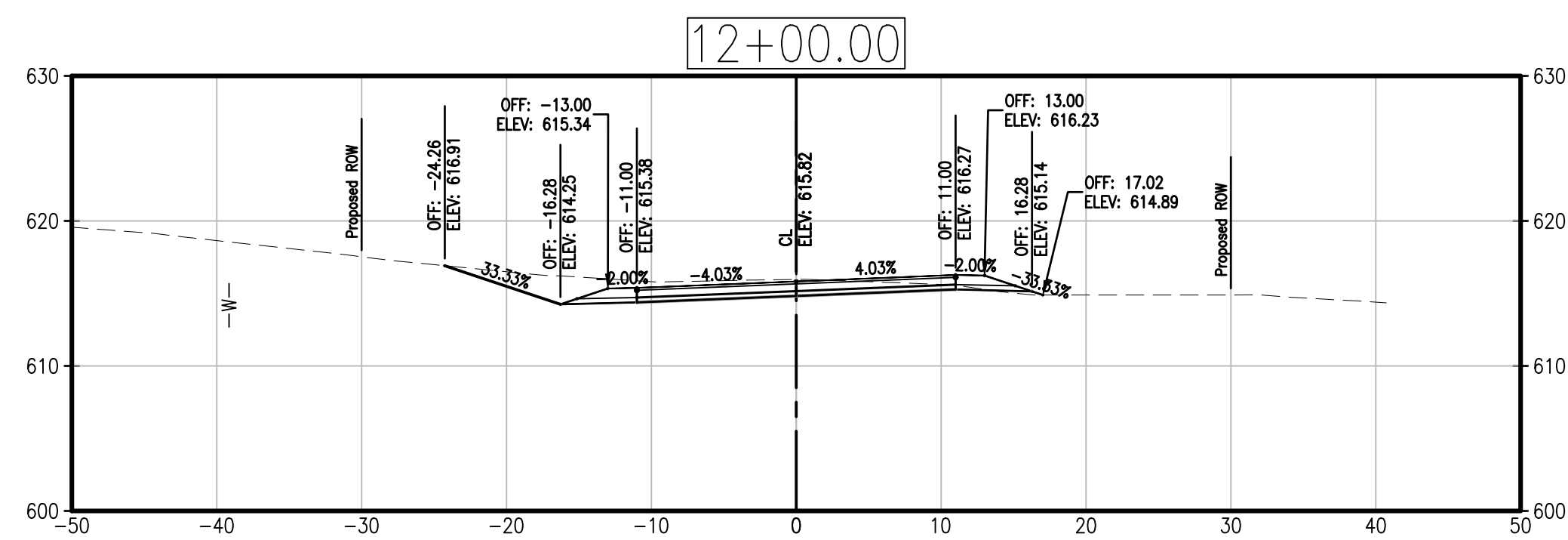
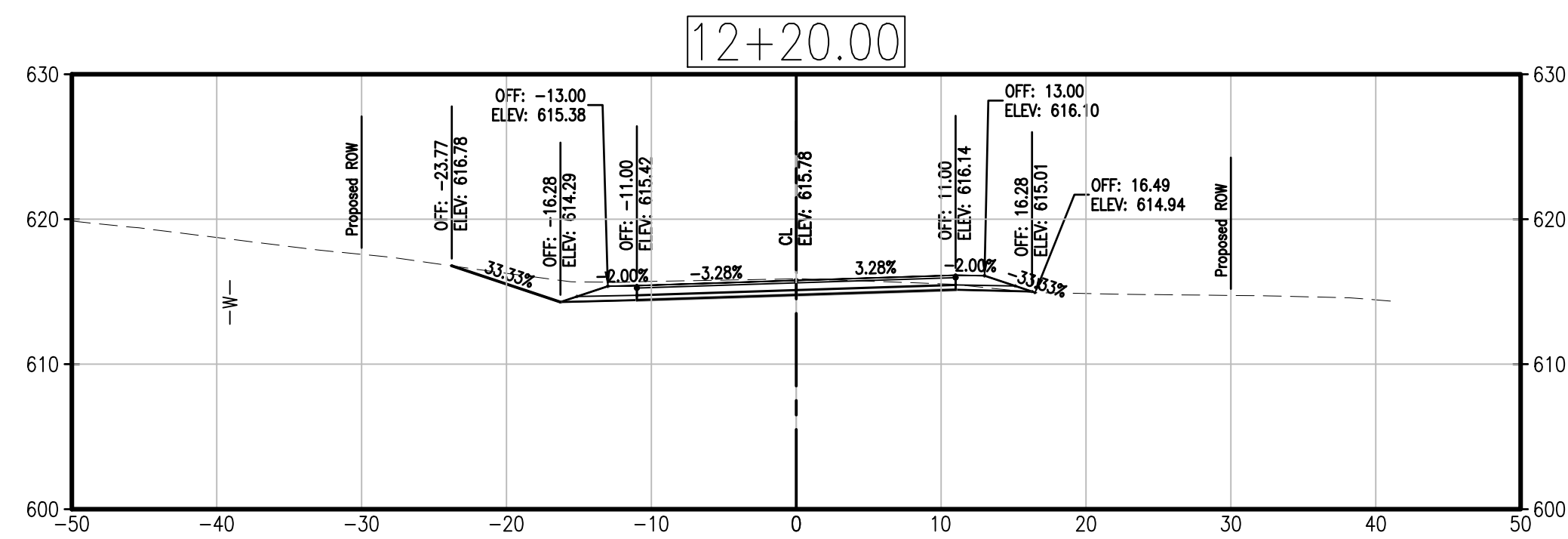
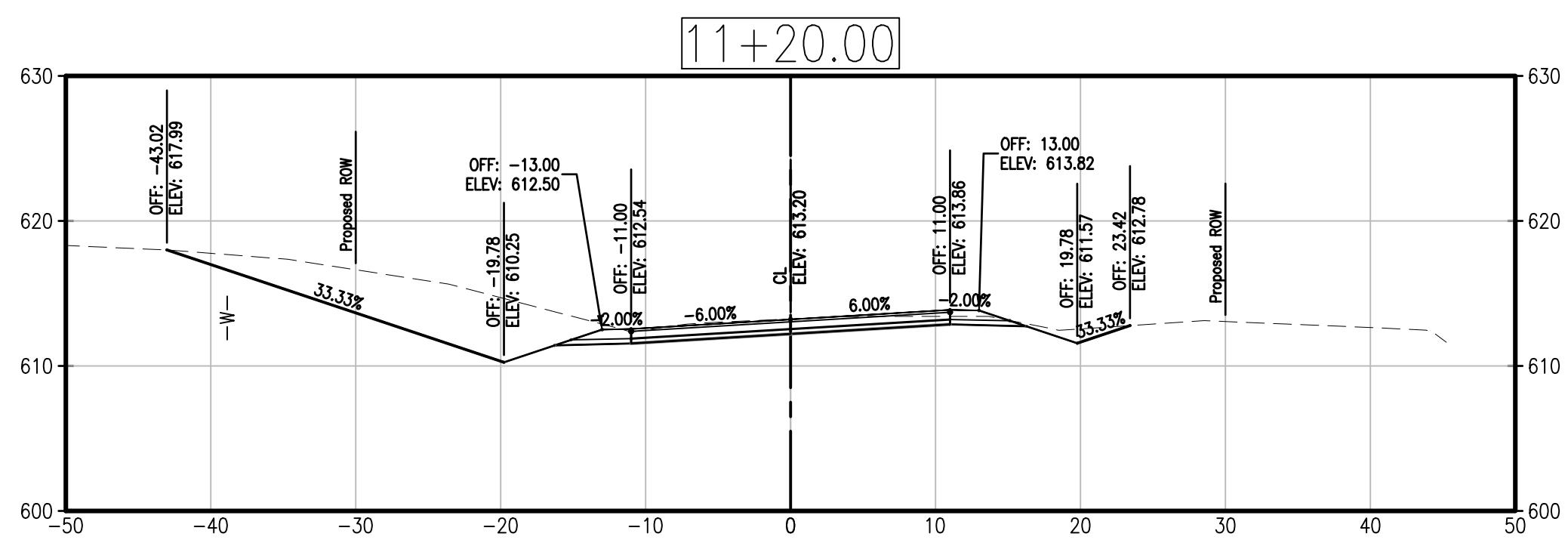
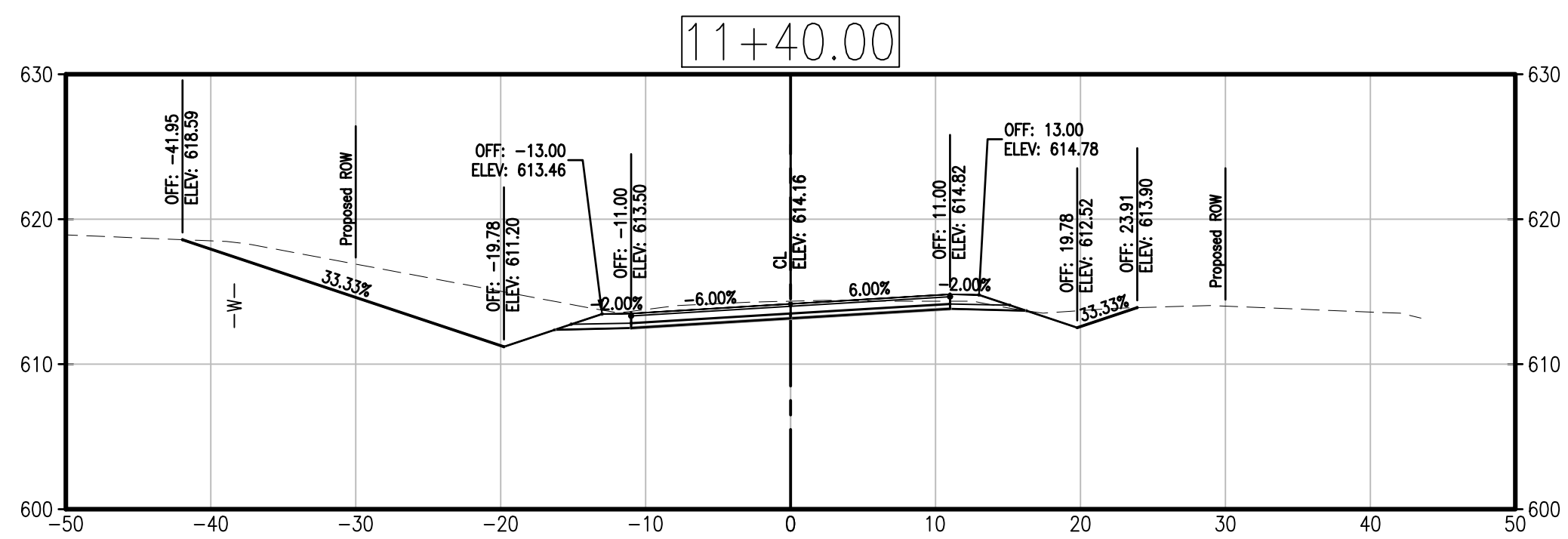
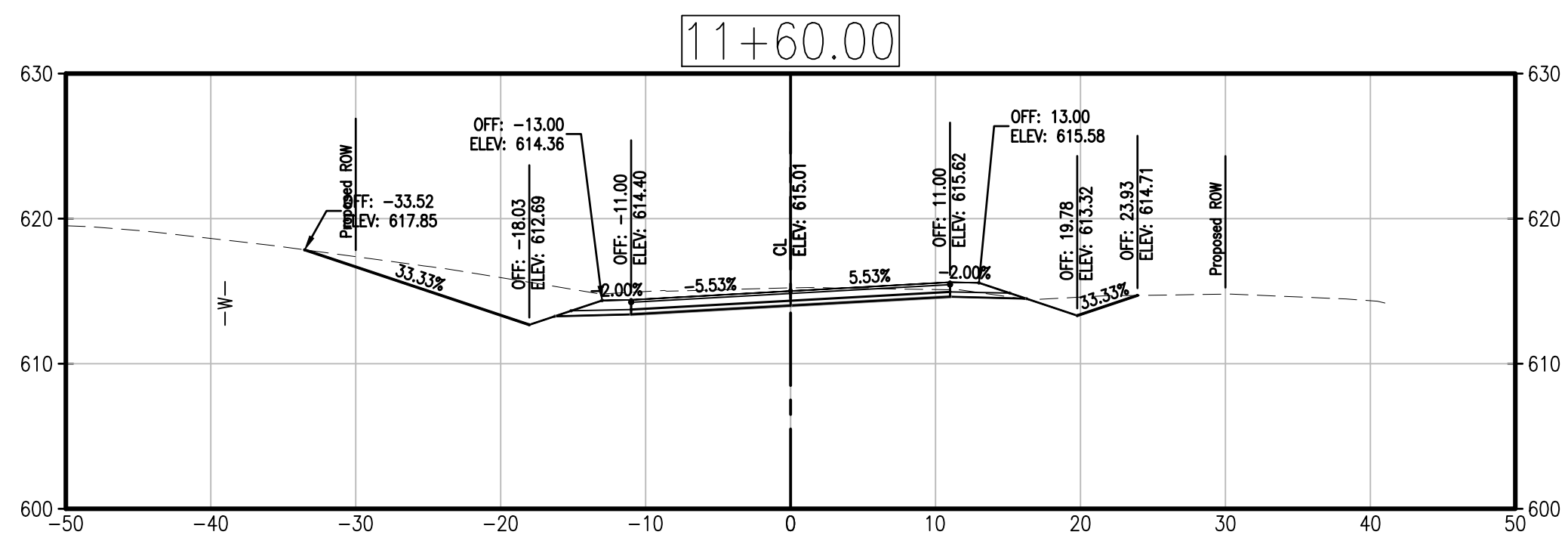
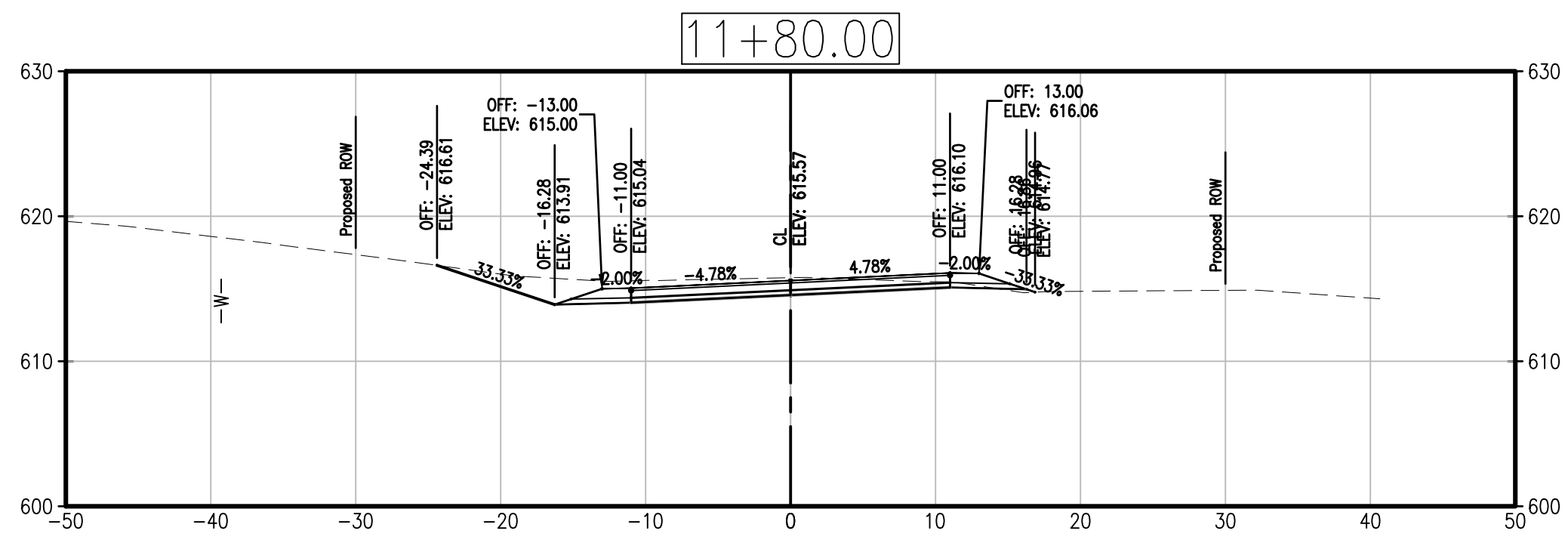
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CROSS SECTIONS
 TANNER BRIDGE ROAD

SHEET NUMBER

7

OF 9 SHEETS



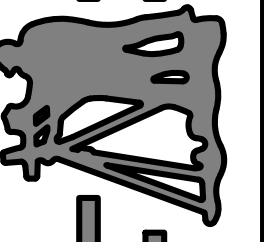
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REVISIONS:

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 2500 E. McCARTY
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 (573) 634-8898



Central Missouri Professional Services, Inc.
 Missouri State Certificate of Authority #001558



8/6/2019

Patrick P. Kremer, PE - Engineer
 MO# PE-2012018094

TANNER BRIDGE ROAD/TARA ROAD
 INTERSECTION IMPROVEMENTS
 COLE COUNTY PUBLIC WORKS
 TANNER BRIDGE ROAD/TARA ROAD
 COLE COUNTY, MISSOURI

CMPS JOB No. 17-035

DRN. BY: PPK CKD. BY: CFB

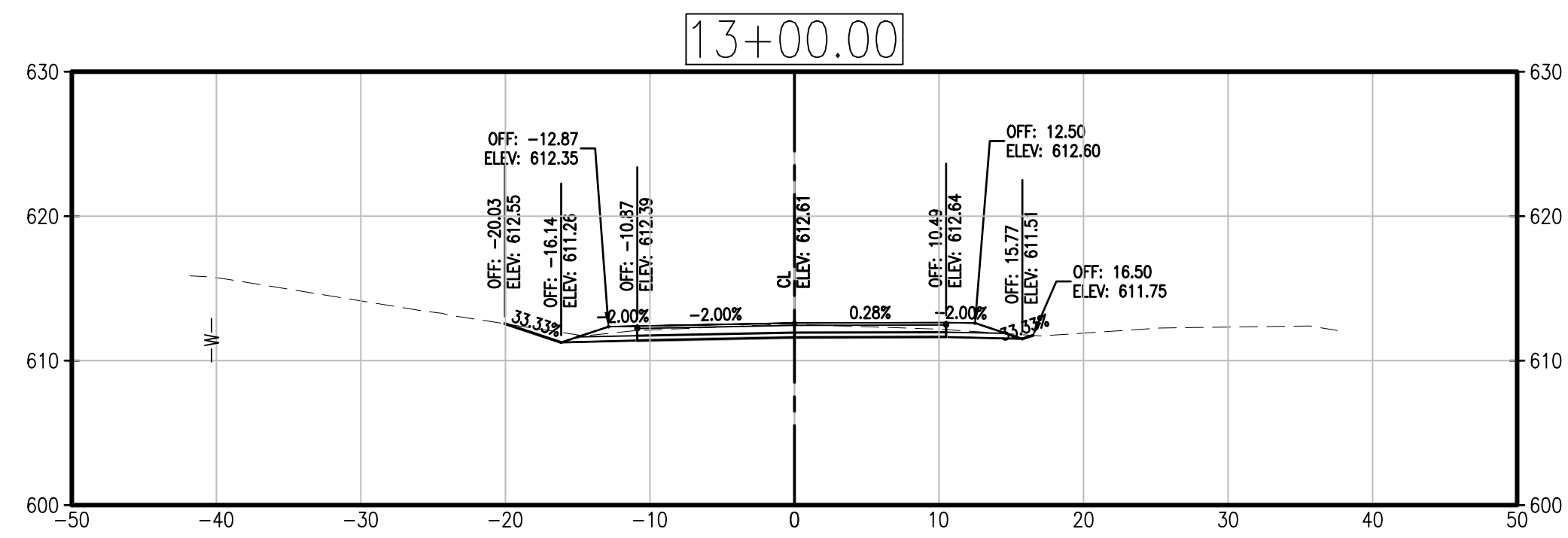
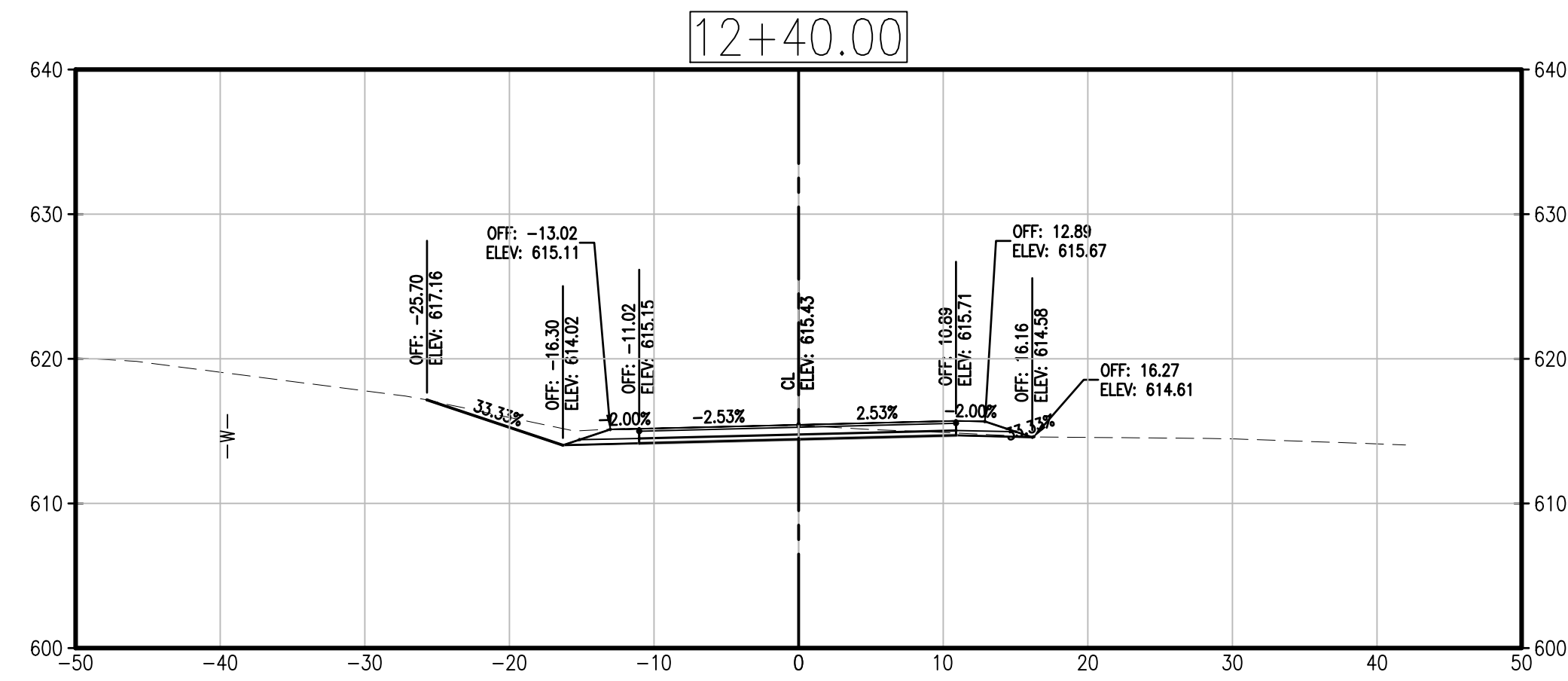
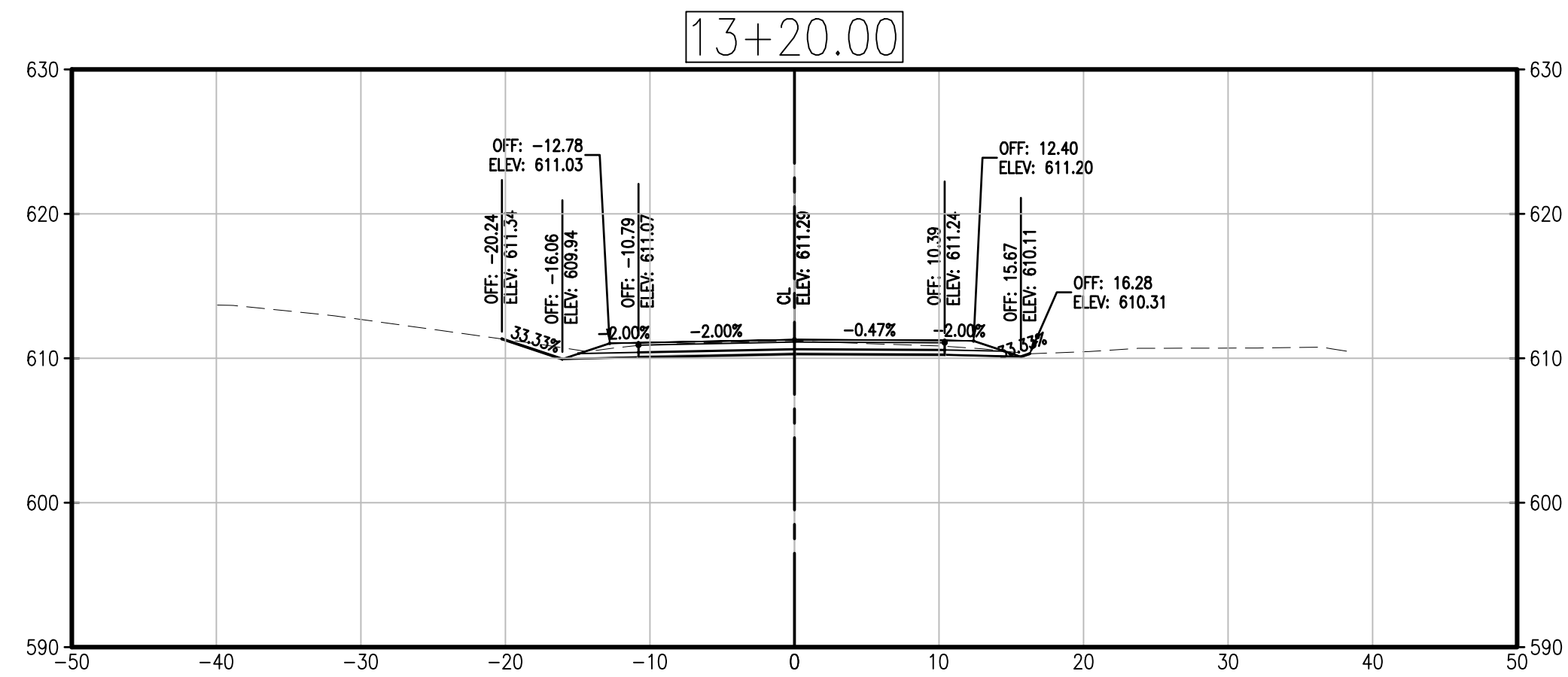
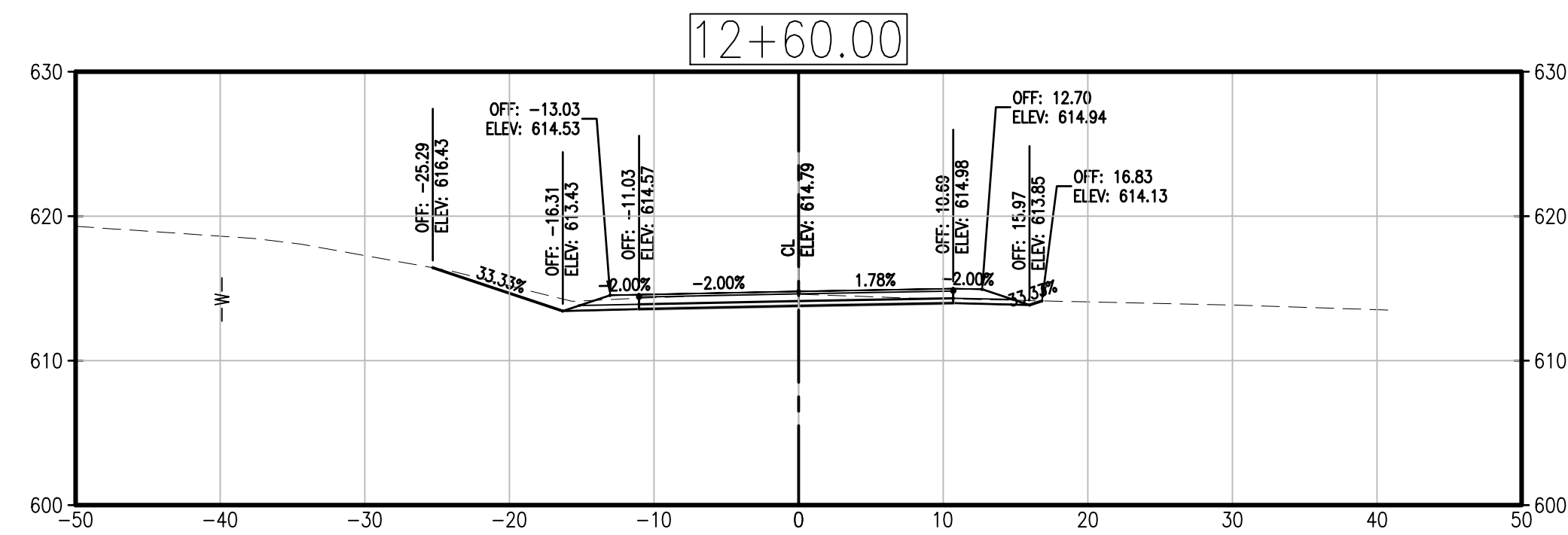
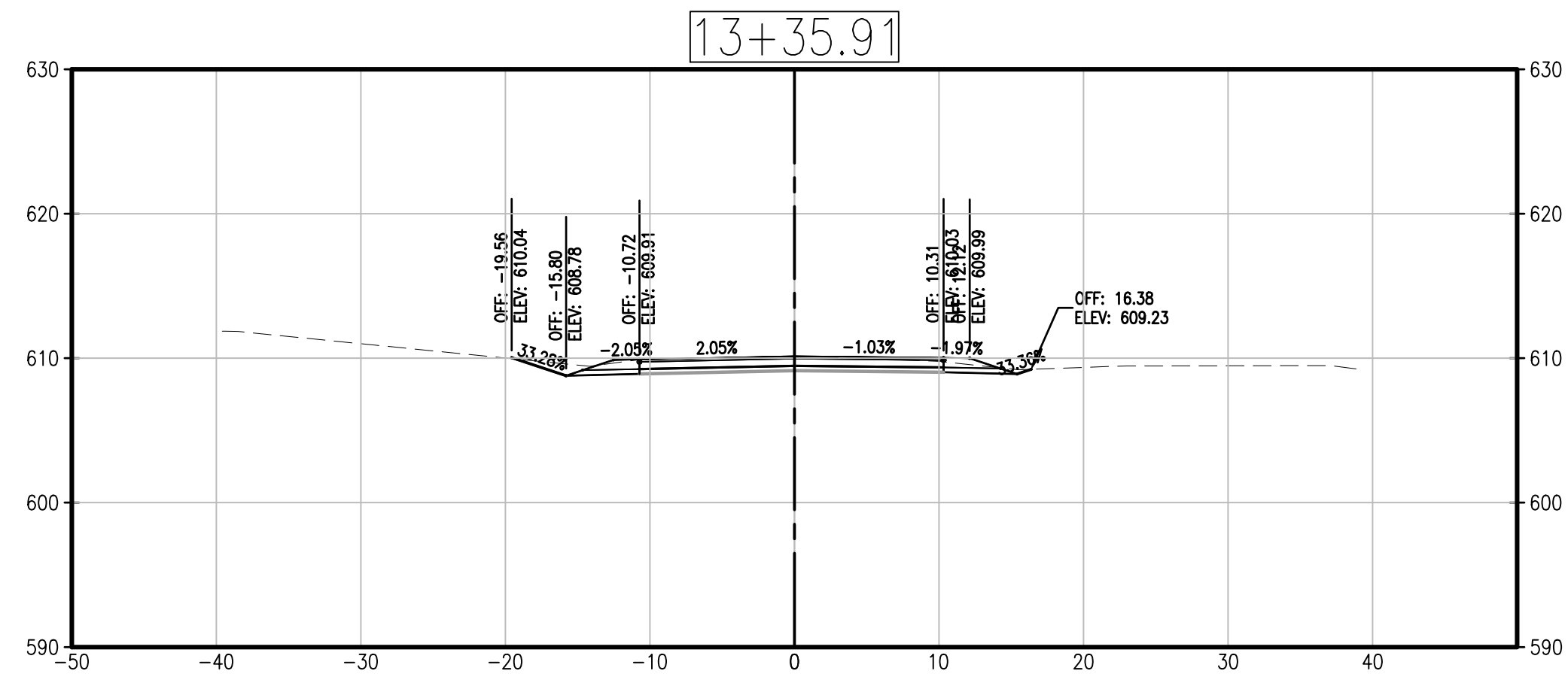
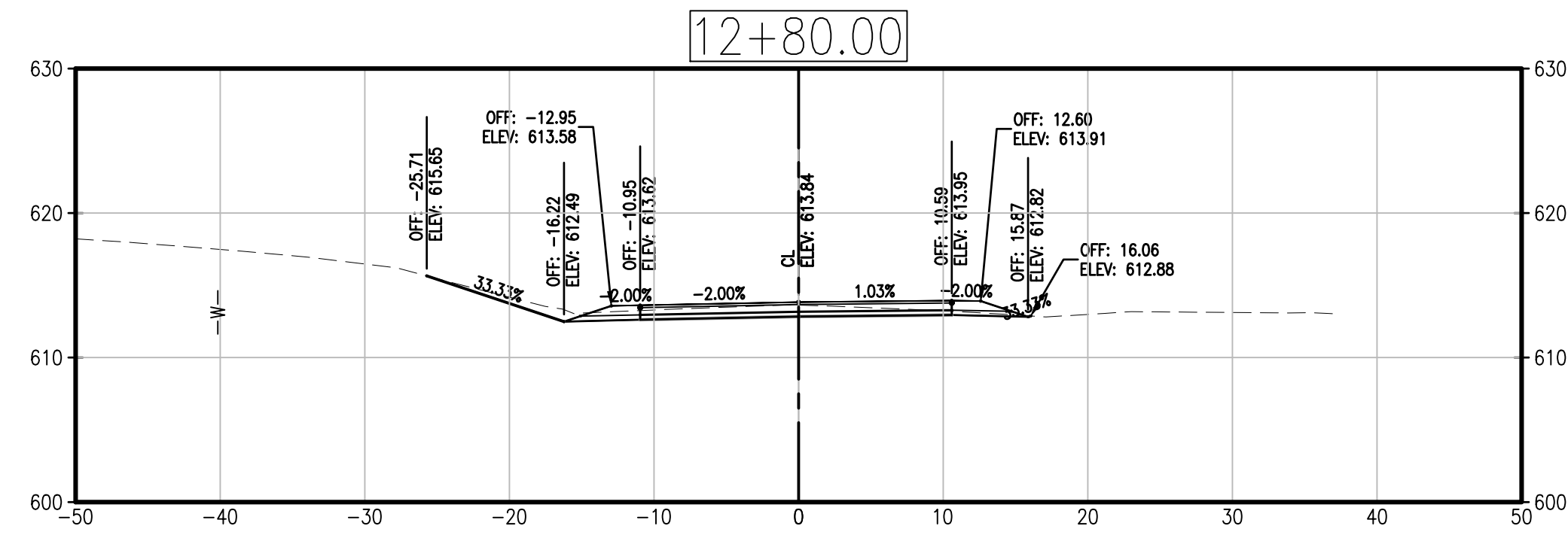
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SHEET TITLE
 CROSS SECTIONS
 TANNER BRIDGE ROAD

SHEET NUMBER

8

OF 9 SHEETS



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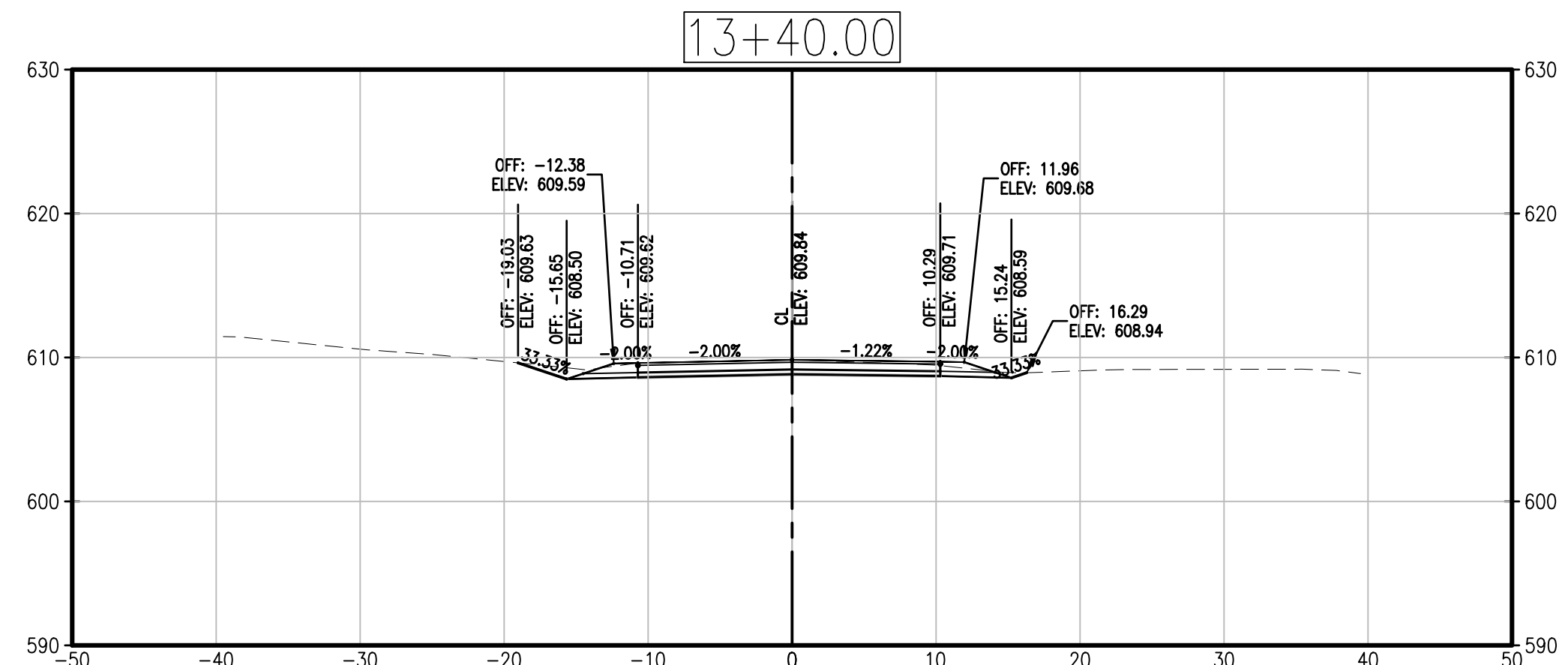
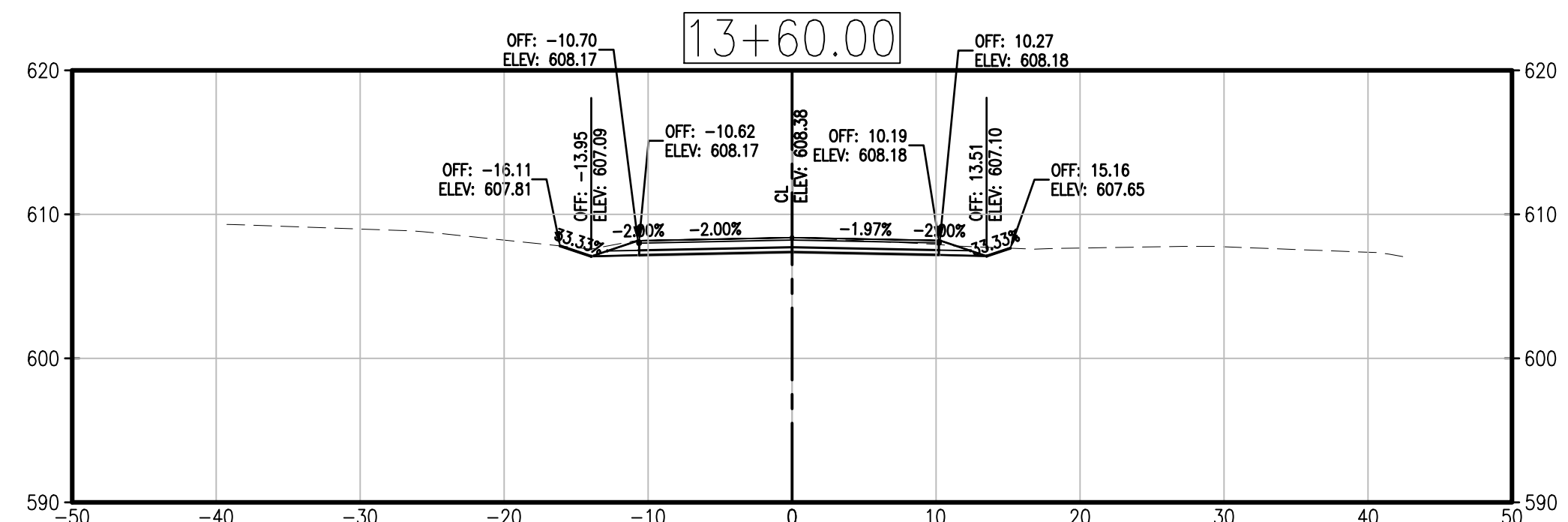
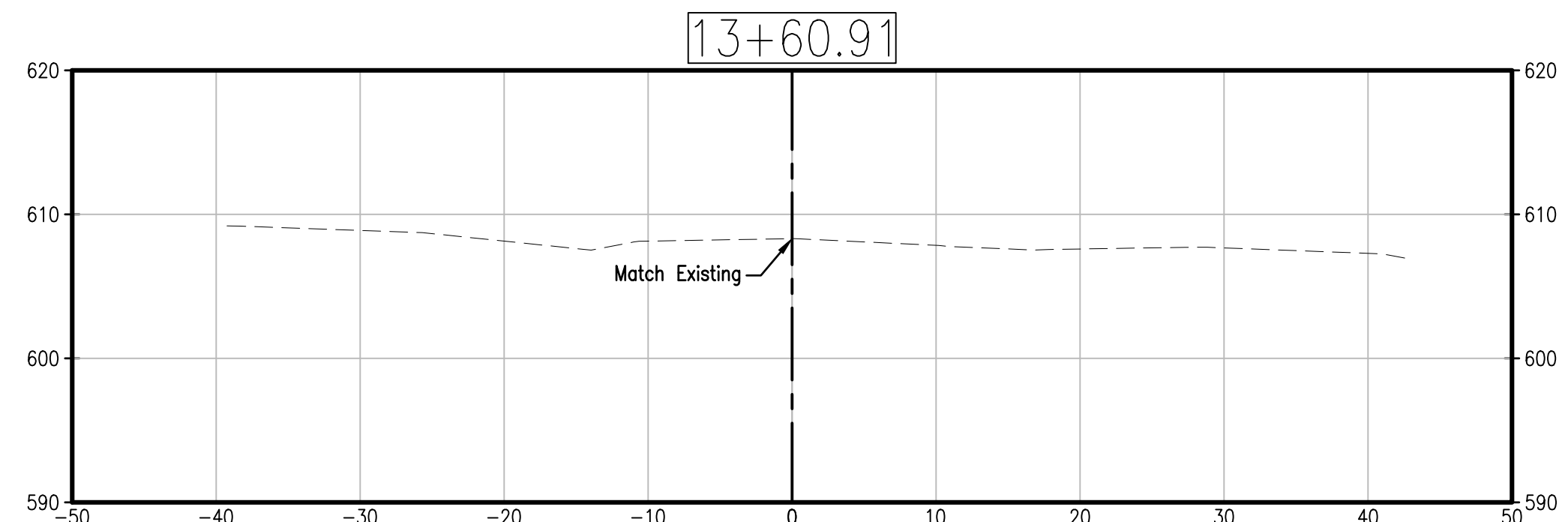
SCALE: AS INDICATED

SHEET TITLE
 CROSS SECTIONS
 TANNER BRIDGE ROAD

SHEET NUMBER

9

OF 9 SHEETS



Total Volume Table						
Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
3+49.25	5.97	151.38	0.00	0.00	0.00	0.00
3+60.00	5.60	122.33	2.30	54.49	2.30	54.49
3+74.25	8.07	165.23	3.61	75.89	5.91	130.37
3+78.00	8.00	165.44	1.12	22.95	7.03	153.32
4+05.11	2.43	0.79	5.24	83.47	12.27	236.79
4+74.26	0.56	1.24	3.83	2.60	16.10	239.39
4+85.95	11.14	20.14	2.53	4.63	18.63	244.02
5+00.00	3.89	64.03	3.91	21.91	22.55	265.92
5+20.00	4.62	76.49	3.15	52.04	25.69	317.97
5+40.00	5.63	80.17	3.80	58.02	29.49	375.99
5+60.00	9.44	75.02	5.58	57.48	35.07	433.46
5+80.00	12.64	75.03	8.18	55.57	43.25	489.04
6+00.00	14.01	66.56	9.87	52.44	53.12	541.48
6+20.00	26.19	66.04	14.89	49.11	68.00	590.59
6+40.00	27.33	60.41	19.82	46.83	87.83	637.42
6+60.00	26.41	49.05	19.57	40.89	107.40	678.31
6+80.00	29.32	39.92	20.23	33.28	127.63	711.59
7+00.00	30.19	33.39	21.59	27.44	149.22	739.03
7+20.00	34.26	38.16	23.36	26.74	172.58	765.78
7+40.00	33.77	37.71	24.63	28.26	197.21	794.04
7+60.00	31.46	34.47	23.62	26.74	220.83	820.78
7+80.00	33.20	29.35	23.49	23.48	244.32	844.25
8+00.00	37.96	32.63	26.01	22.66	270.33	866.91
8+20.00	53.21	36.17	33.59	25.06	303.93	891.97
8+40.00	73.95	42.55	47.07	28.62	351.00	920.58
8+60.00	91.08	49.33	61.24	33.38	412.24	953.97
8+80.00	110.75	37.77	75.07	31.53	487.31	985.50

Total Volume Table						
Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
9+00.00	131.54	46.66	90.32	30.51	577.63	1016.01
9+20.00	136.66	50.38	100.14	35.14	677.77	1051.15
9+40.00	140.39	61.37	103.47	40.48	781.24	1091.63
9+60.00	146.77	84.18	107.38	52.31	888.61	1143.94
9+80.00	114.24	104.17	97.67	67.59	986.28	1211.53
10+00.00	78.72	99.45	72.05	73.62	1058.33	1285.15
10+20.00	55.37	61.18	49.95	58.41	1108.28	1343.56
10+40.00	37.60	64.83	34.56	45.75	1142.84	1389.32
10+60.00	26.99	82.33	23.98	53.19	1166.82	1442.51
10+80.00	16.43	76.34	16.11	57.31	1182.94	1499.83
11+00.00	9.62	79.49	9.67	56.29	1192.61	1556.12
11+20.00	3.25	80.65	4.78	57.90	1197.39	1614.01
11+40.00	3.59	68.82	2.56	54.11	1199.95	1668.12
11+60.00	4.31	42.26	2.96	40.36	1202.90	1708.48
11+80.00	5.98	15.80	3.85	21.19	1206.75	1729.67
11+96.31	0.00	16.66	1.81	9.81	1208.56	1739.48
12+00.00	6.76	16.15	0.46	2.24	1209.02	1741.72
12+20.00	5.75	11.09	4.63	10.09	1213.65	1751.81
12+40.00	8.25	7.19	5.18	6.77	1218.84	1758.58
12+60.00	9.97	5.10	6.75	4.55	1225.58	1763.13
12+80.00	11.64	4.07	8.00	3.39	1233.58	1766.53
13+00.00	7.93	2.12	7.25	2.29	1240.83	1768.82
13+20.00	6.09	2.52	5.19	1.72	1246.02	1770.53
13+35.91	2.69	2.64	2.59	1.52	1248.61	1772.06
13+40.00	2.54	2.56	0.40	0.39	1249.00	1772.45
13+60.00	1.52	2.69	1.50	1.94	1250.50	1774.39
13+60.91	0.00	0.00	0.03	0.05	1250.53	1774.44

NOTE: THE EARTHWORK QUANTITIES SHOWN ARE RAW VOLUMES FROM CROSS SECTION CALCULATIONS AND SHOULD BE CONSIDERED FOR INFORMATIONAL PURPOSES ONLY. VOLUMES ARE CALCULATED FROM EXISTING GRADES TO PROPOSED SUBGRADE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INCLUDING ANY ADJUSTMENTS NECESSARY TO ACCOUNT FOR PAVEMENT REMOVALS, ADDITIONAL EARTHWORK FOR ENTRANCES, TARA ROAD TIE IN, CONSTRUCTION PHASING, OR OTHER EARTHWORK NECESSARY TO COMPLETE THE PROJECT.

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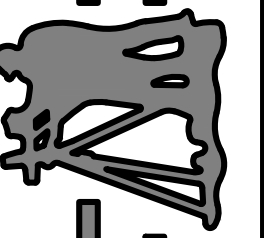
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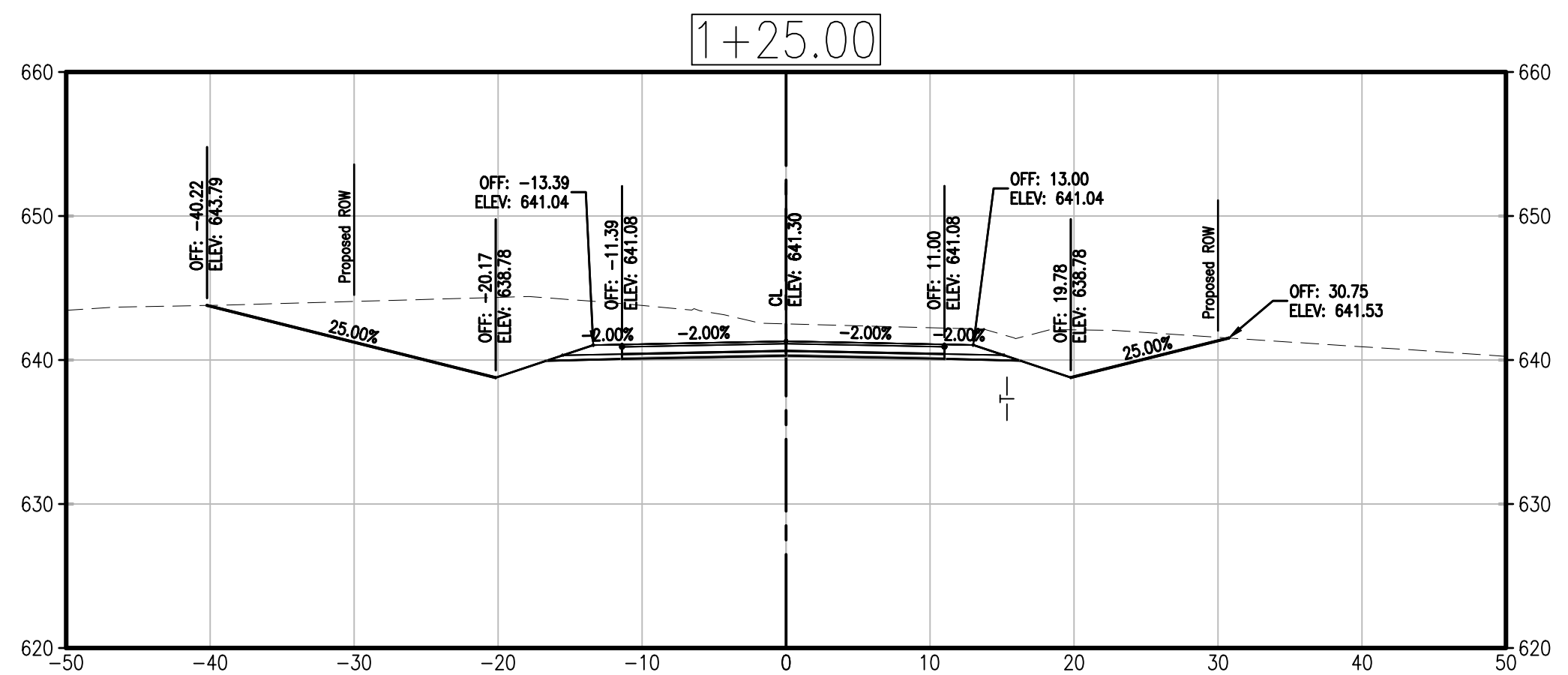
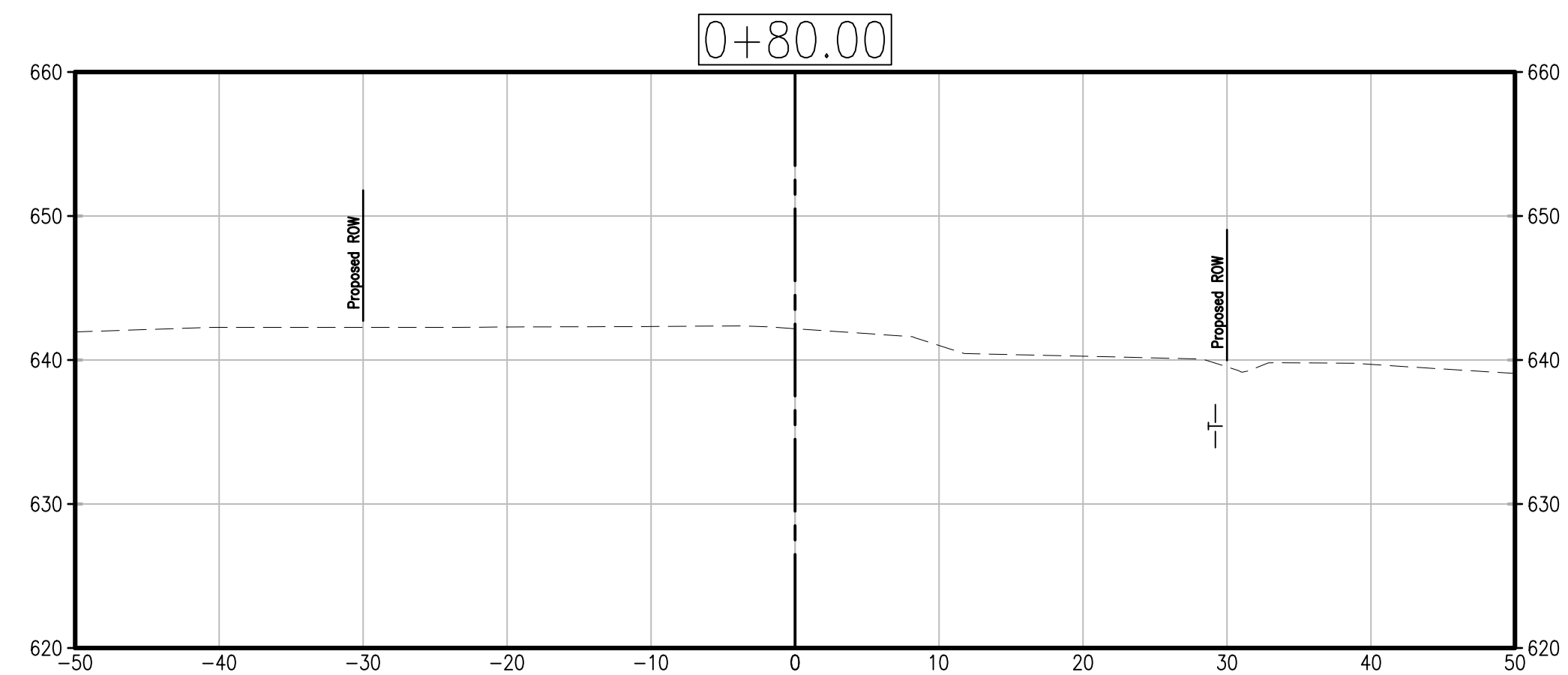
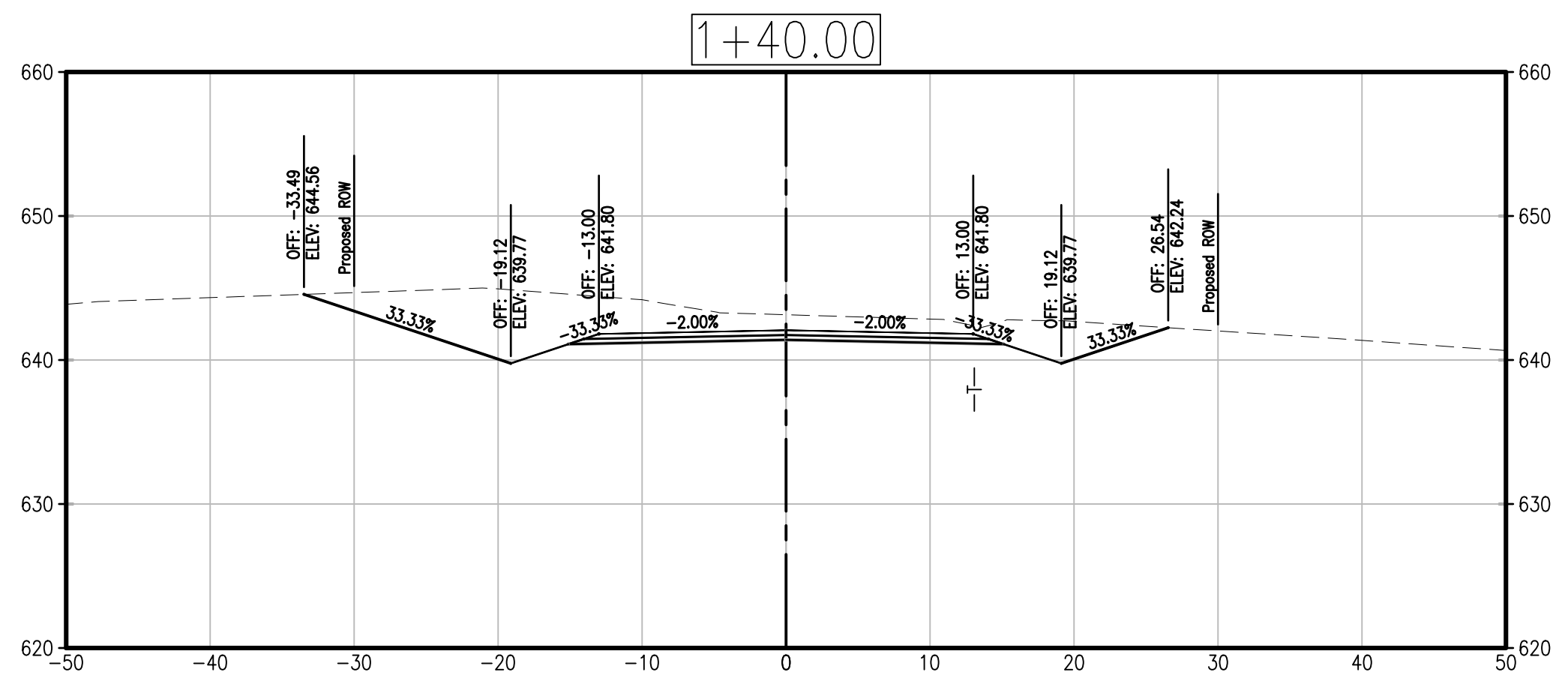
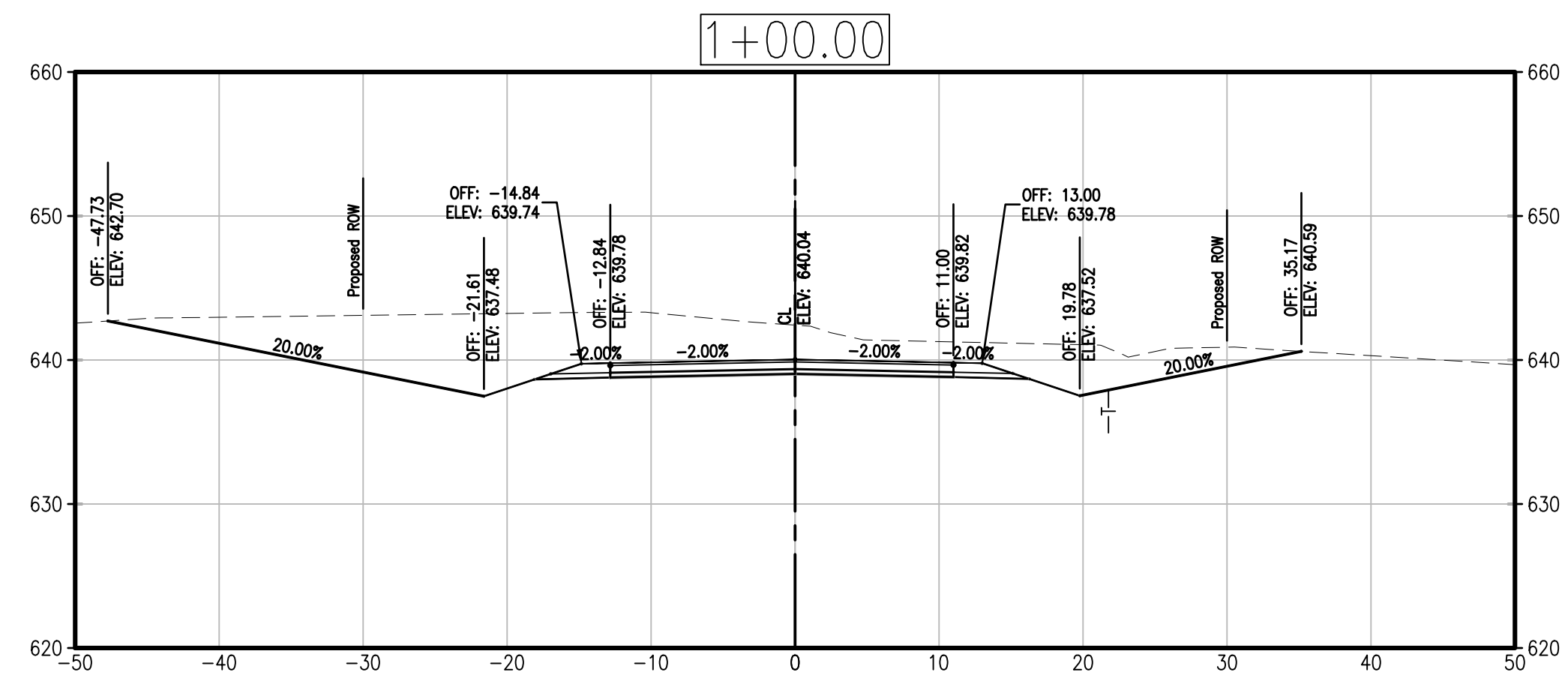
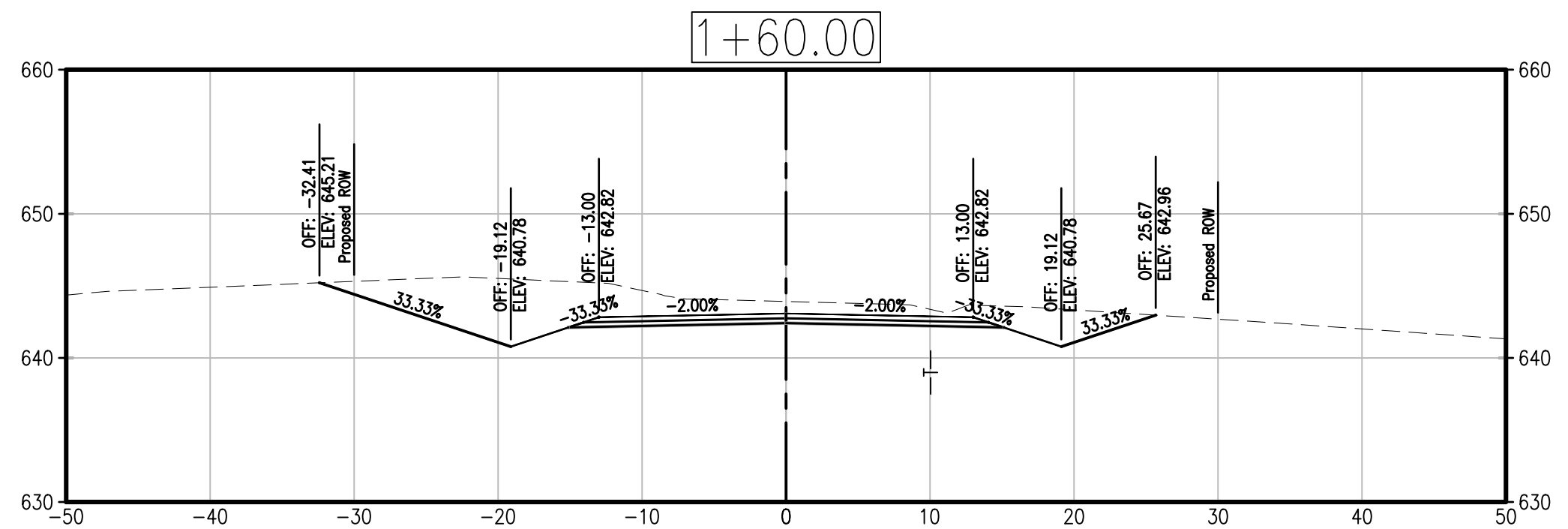
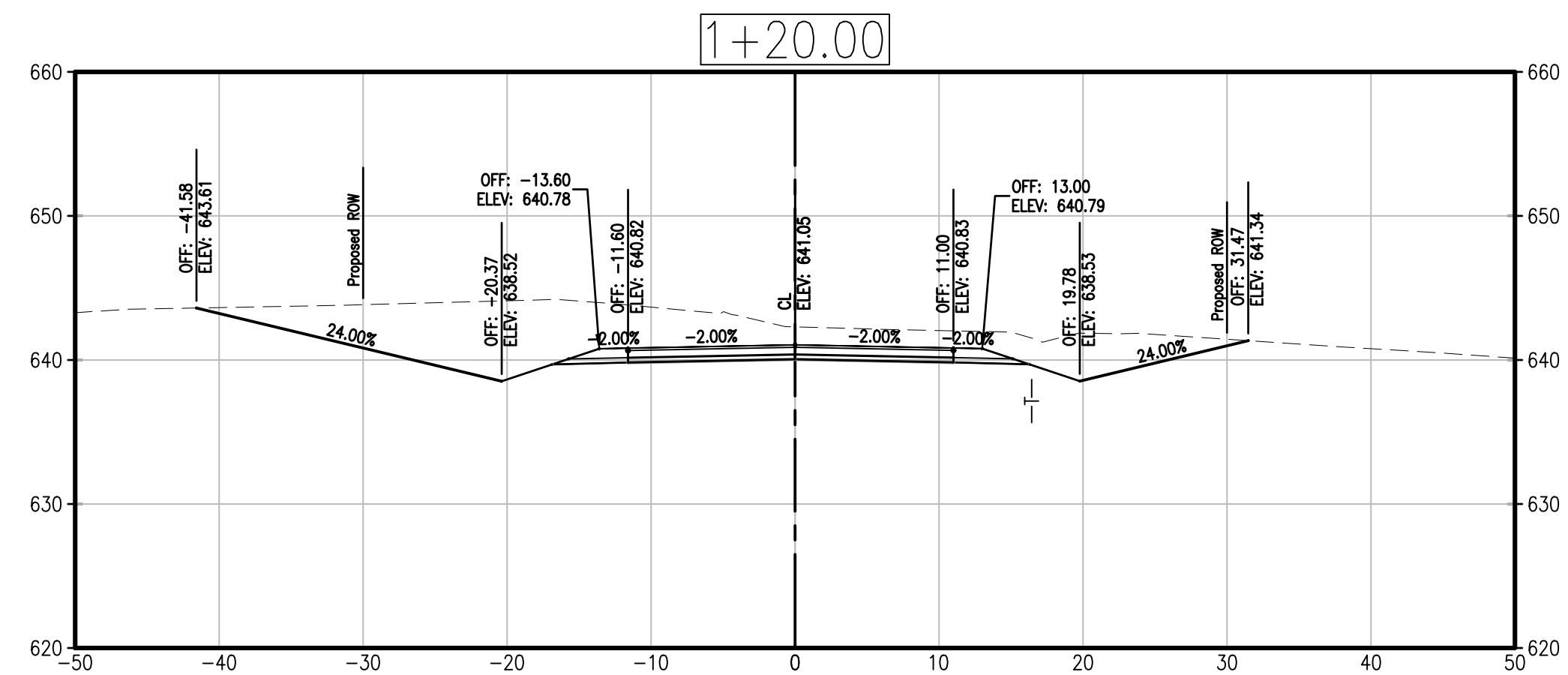
SHEET TITLE

CROSS SECTIONS
 TARA ROAD

SHEET NUMBER

1

OF 2 SHEETS



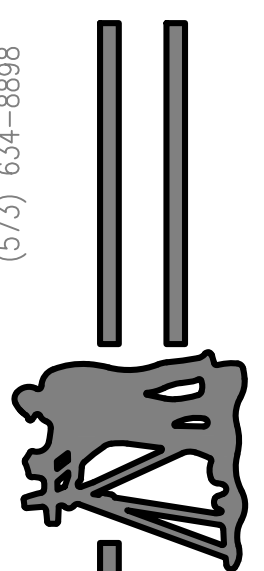
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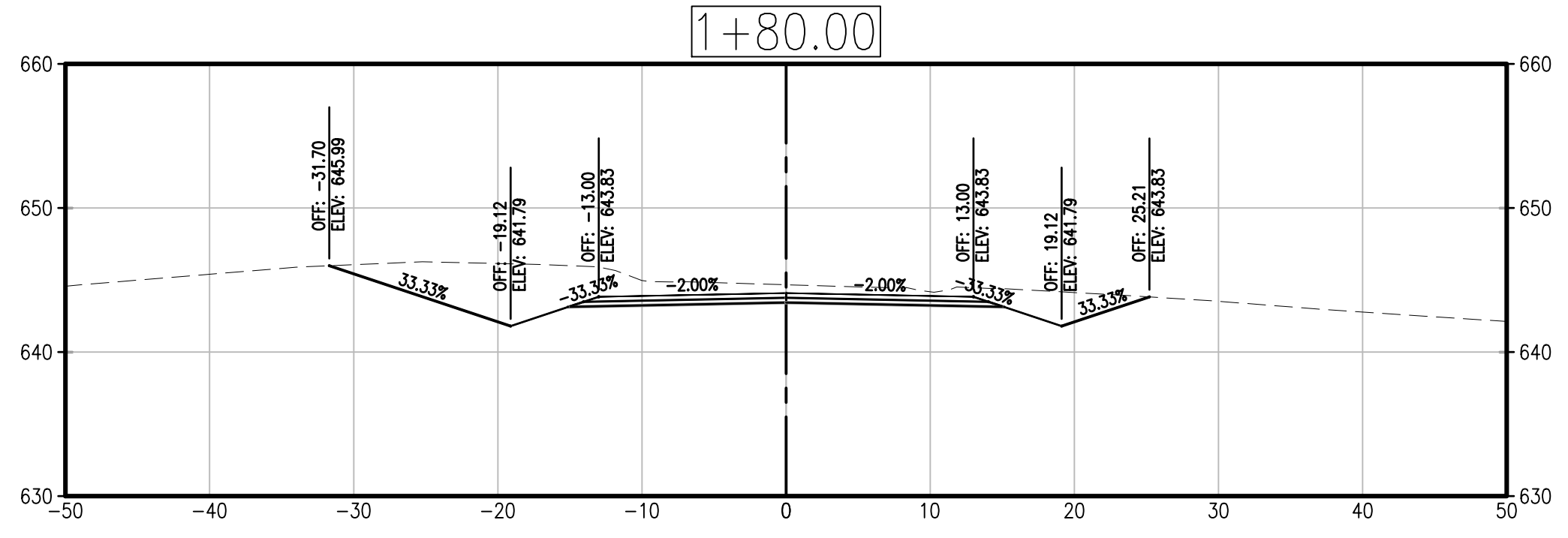
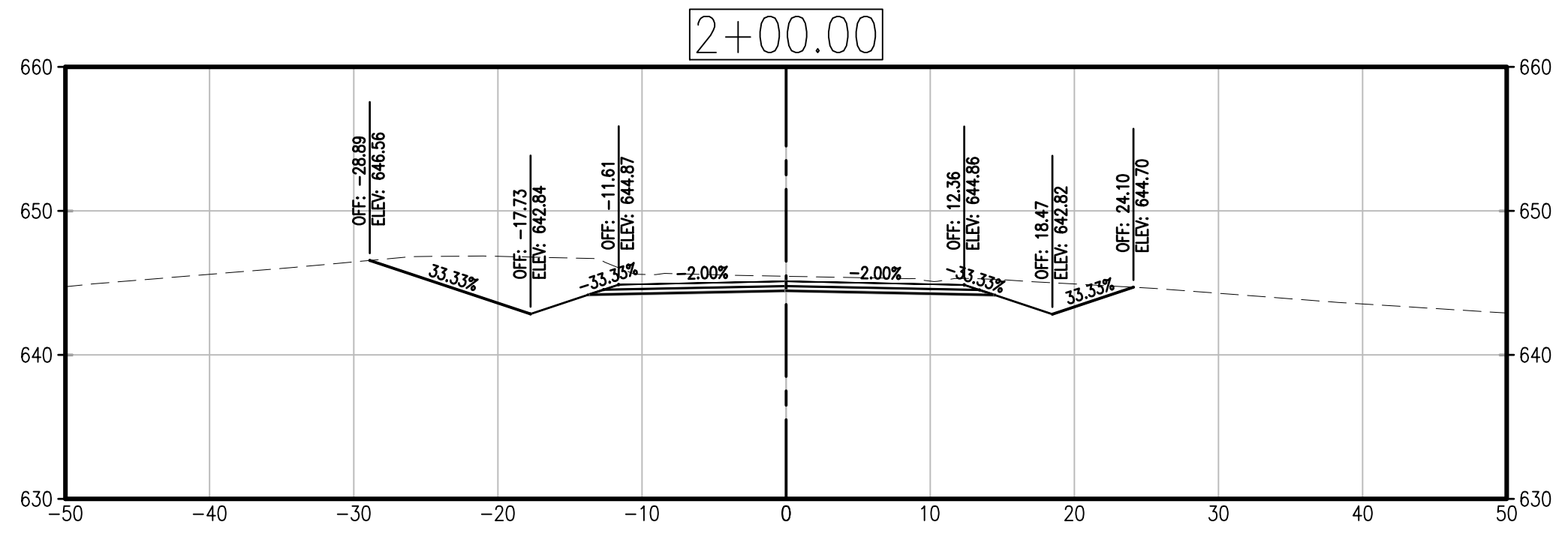
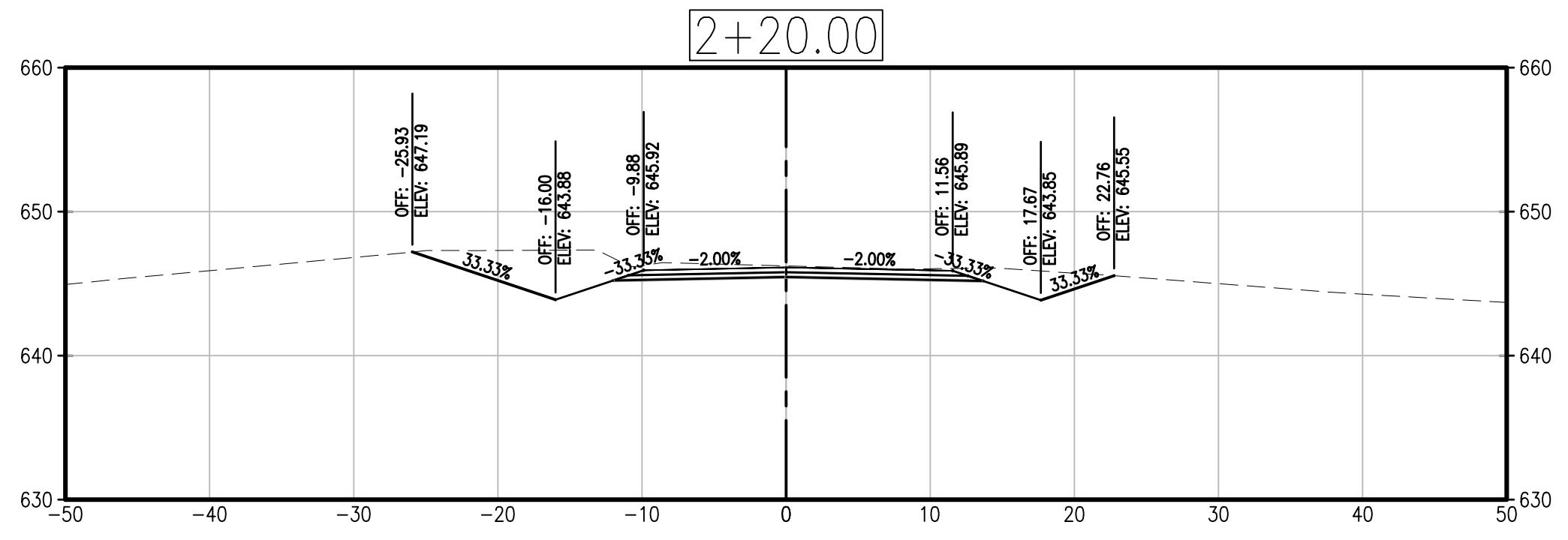
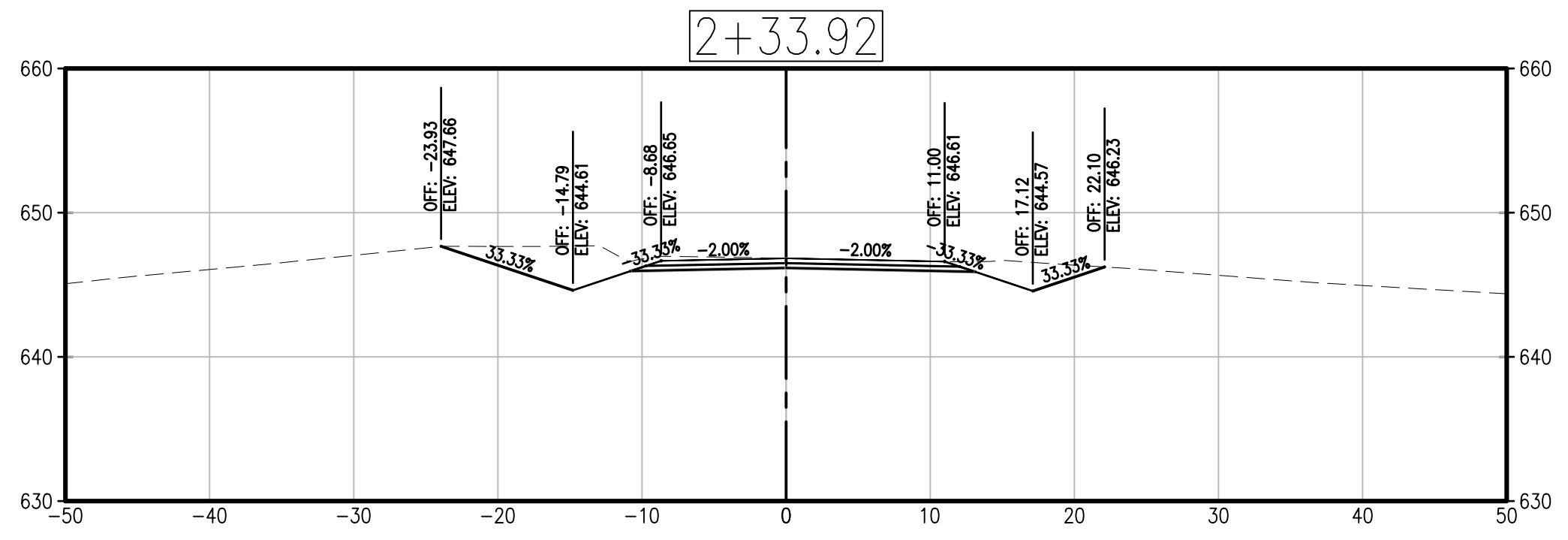
SHEET TITLE

CROSS SECTIONS
 TARA ROAD

SHEET NUMBER

2

OF 2 SHEETS



Total Volume Table						
Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
0+80.00	0.00	0.00	0.00	0.00	0.00	0.00
1+00.00	0.02	249.48	0.01	89.62	0.01	89.62
1+20.00	0.04	184.75	0.02	156.74	0.03	246.36
1+25.00	0.03	167.15	0.01	32.60	0.04	278.96
1+40.00	0.00	138.00	0.01	82.86	0.04	361.82
1+60.00	0.18	119.25	0.06	93.05	0.10	454.87
1+80.00	0.00	103.05	0.06	80.37	0.16	535.24
2+00.00	0.00	83.24	0.00	69.00	0.16	604.24
2+20.00	0.00	61.84	0.00	53.73	0.16	657.97
2+33.92	0.00	50.42	0.00	28.94	0.16	686.91

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