

MUSCOGEE (CREEK) NATION

PLANS FOR GREENLEAF CHURCH ROAD

BIA ROUTE NUMBER 1318 ROADWAY AND DRAINAGE IMPROVEMENTS

OKFUSKEE COUNTY

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SURVEY CONTROL DATA
 1. HORIZONTAL CONTROL FOR THIS SURVEY IS THE NGS OKLAHOMA STATE PLANE COORDINATE SYSTEM NAD 83, LAMBERT PROJECTION (SOUTHZONE).
 2. VERTICAL CONTROL IS LEVEL DATUM NAVD 88.

THE FOLLOWING OKLAHOMA DEPARTMENT OF TRANSPORTATION 2019 ROADWAY STANDARDS AND 2009 BRIDGE STANDARDS ARE REQUIRED TO CONSTRUCT THIS PROJECT:

SSS-2-1	TCS4-1 01	CITY OF OKC. PUBLIC WORKS DEPT. DRAWING NUMBER: D-406
RSF-0	TCS5-1 00	
TSD-0	TCS6-1 02	
SPI-5-2	TCS7-1 02	
FHTMPP-2-1	TCS8-1 00	
MI-4-2	TCS9-1 01	
RDI-4-1	TCS10-1 00	
RWF1-3-1	TCS11-1 01	
RWF2-3-1	TCS13-1 00	
PSE-2-1	TCS14-1 00	
ASCD-6-1	TCS15-1 00	
CSCD-6-2	TCS24-1 02	
PM3-1 02	FPI-4-2	
TCS1-1 01	CET4S-4-2	
TCS2-1 00		

DESIGN DATA

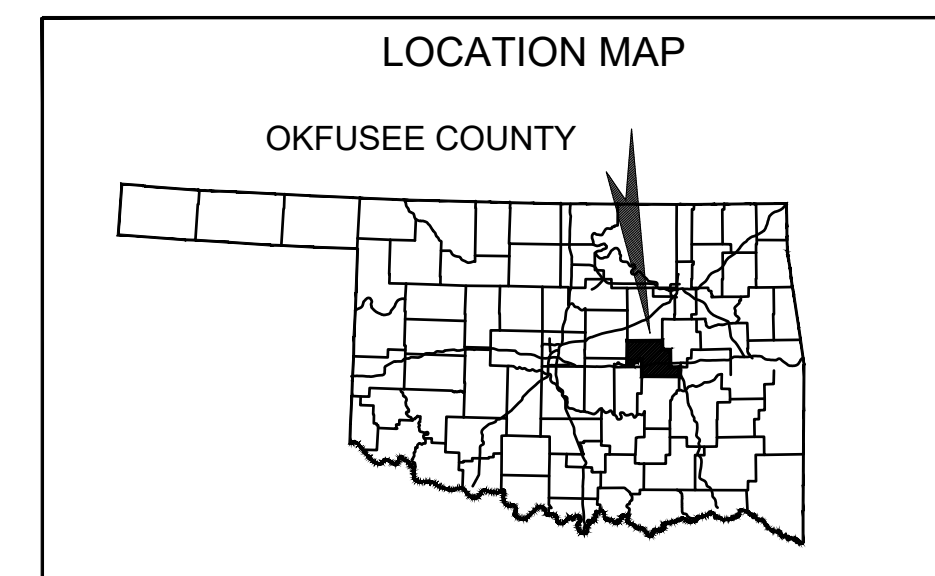
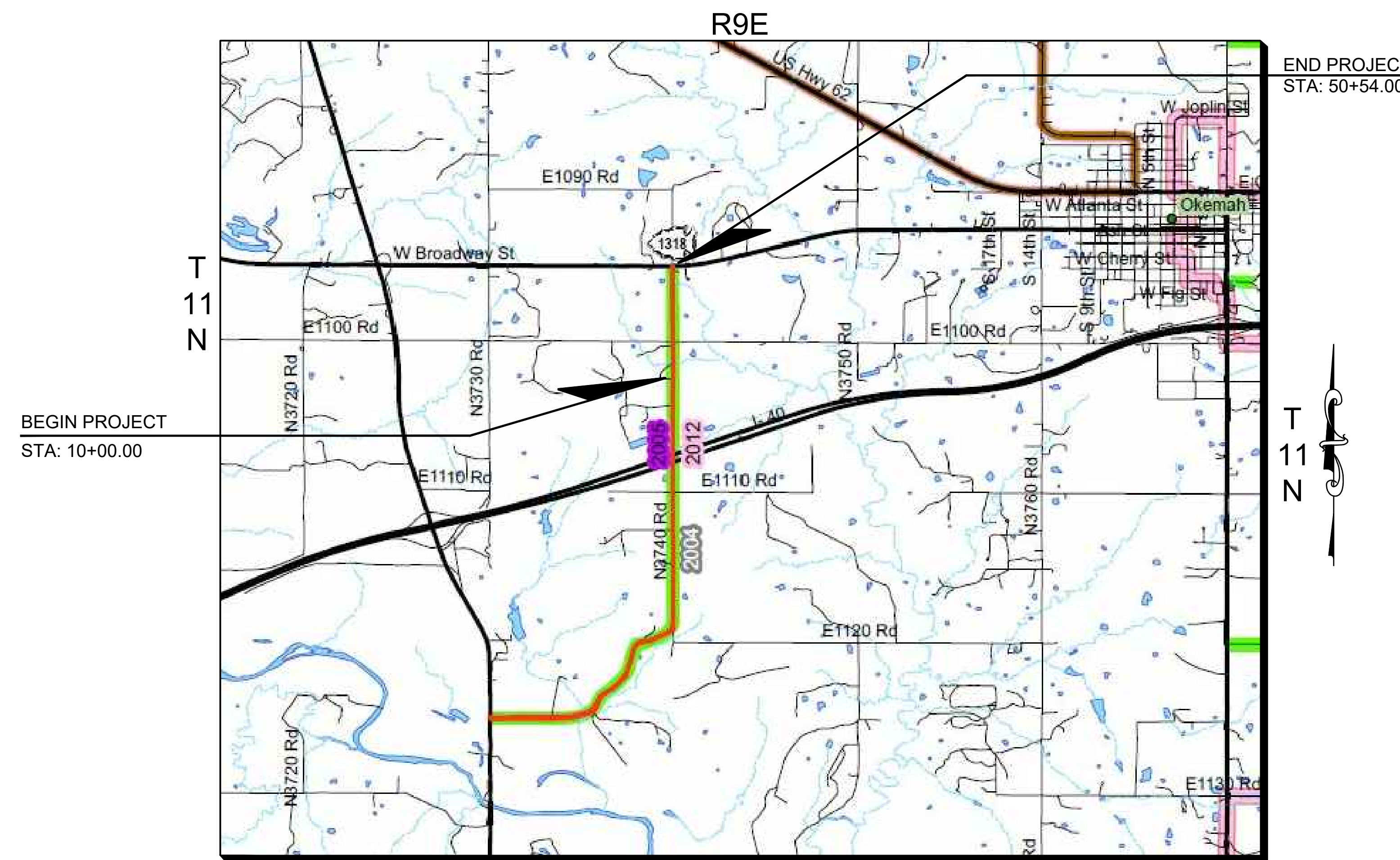
ADT 2017 = < 300 VPD
 Avg. Growth Rate = 2%
 V = 30 mph

VERTICAL CURVATURE
 (K VALUES)
 CREST = 10 (MIN)
 SAG = 33 (MIN)

HORIZONTAL CURVATURE
 (RADIUS)
 RADIUS = N/A

MAXIMUM GRADE
 ROLLING TERRAIN = 7%

EXCEPTIONS
 NONE



SCALES

PLAN 1"=50'
 PROFILE HOR. 1"=50'
 VER. 1"=5'
 LAYOUT MAP NTS

- CONVENTIONAL SYMBOLS**
- X — X — EXISTING FENCE
 - DHP — DHP — OVERHEAD POWER LINE
 - W — W — WATER LINE
 - — — — RIGHT OF WAY LINE (EXISTING)
 - R/W — — — RIGHT-OF-WAY LINE (NEW)
 - — — — TOE SLOPE/TOP CUT LINE
 - ⊕ POWER POLE
 - ⊛ POWER POLE W/LIGHT
 - ☎ TELEPHONE PEDESTAL
 - ⊕ WATER VALVE
 - ⊕ WATER METER
 - ☐ MAILBOX
 - ☐ ELECTRICAL BOX
 - ☐ TELEPHONE UNDER GROUND
 - ☐ TREE
 - ☐ SIGN
 - ☐ UTILITY MARKER

DESIGN INFORMATION

ROADWAY LENGTH 4054 FT. 0.77 MI

PROJECT IS BASED ON Q SURVEY

UTILITY CONTACTS

ELECTRIC
 EAST CENTRAL OKLAHOMA
 ELECTRIC COOPERATIVE
 PH: 918-682-7738

PHONE, INTERNET, CABLE
 AT&T
 PH: 918-758-4311

WATER
 OKFULSEE RWD #2
 PH: 918-623-2487

GAS
 ENABLE GAS GATHERING
 PH: 800-522-8040
 ENERFIN RESOURCES CO.
 PH: 405-382-3049

2019 OKLAHOMA STANDARD SPECIFICATIONS AND ROADWAY DESIGN STANDARD DRAWINGS (ENGLISH UNITS) SHALL GOVERN.



LOCATIONS OF UNDERGROUND UTILITIES WERE OBTAINED FROM THE UTILITY OWNERS. BEFORE DOING ANY WORK WITH HEAVY EQUIPMENT, THE CONTRACTOR SHALL NOTIFY THE UTILITY OWNERS OR "CALL OKIE (OKLAHOMA ONE-CALL)" NOT LESS THAN 48 HOURS IN ADVANCE AND SHALL ESTABLISH THE EXACT LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES.



P.O. BOX 67
 Alex, Oklahoma, 73002 Ph: (405) 222-8280

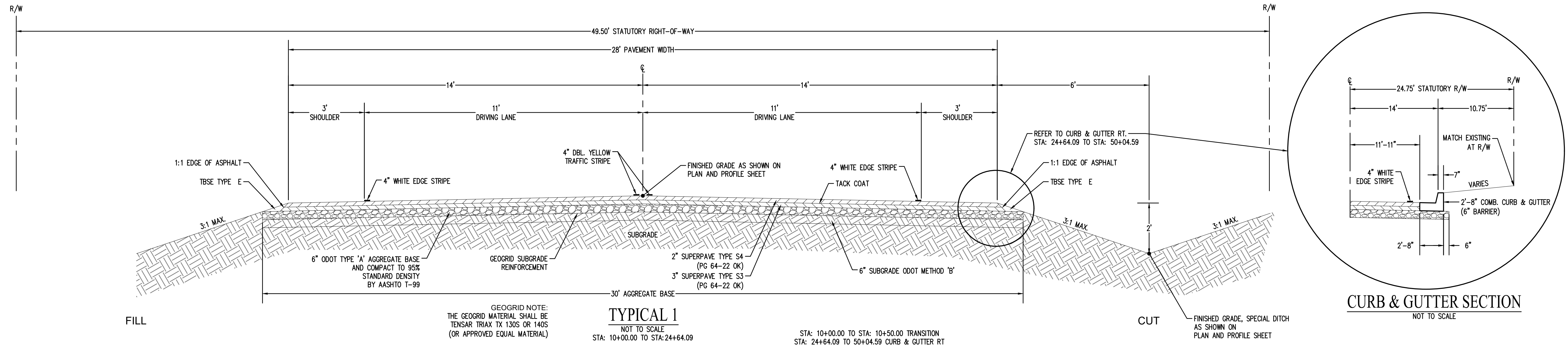
LEVEL 2 REVIEW BY:

RACHAEL COOPER, P.E.
 OKLAHOMA PE # 30920

ENGINEERING PROVIDED BY:

CROSS TIMBERS CONSULTING, LLC.
 P.O. BOX 67
 ALEX, OK 73002
 CA#6859 EXPIRES JUNE 30, 2024

RANDAL K. OBERLAG, P.E., S.E.
 OKLAHOMA PE # 20798



SURVEY NOTE:

THE CONTRACTOR WILL BE RESPONSIBLE FOR MEASUREMENT OF VOLUMES OF PAY QUANTITIES, SURVEY CONTROL OF PERMANENT FACILITIES, AND FOR STAKING LINE AND GRADE OF ALL CONSTRUCTION FEATURES. ALL RECORDED SURVEY MARKERS AND PROJECT SURVEY CONTROL DISTURBED DURING THE CONSTRUCTION BY THE CONTRACTOR OR HIS/HER SUBCONTRACTORS SHALL BE REESTABLISHED AT NO ADDITIONAL COST TO THE COUNTY, TRIBE OR GOVERNMENT. ALL ITEMS NOTED IN 642.04(A) AS DEPARTMENT RESPONSIBILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR TO BE PROVIDED NATURAL CROSS-SECTIONS BY ELECTRONIC MEDIA. CONTRACTOR SHALL INSURE THE ACCURACY PRIOR TO USE.

ENVIRONMENTAL PROTECTION:

THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL COMPLY WITH ALL TRIBAL, FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS CONTROLLING POLLUTION OF THE ENVIRONMENT. POLLUTION OF STREAMS, LAKES, PONDS, AND RESERVOIRS WITH FUELS, OILS, BITUMENS, CHEMICALS, OR OTHER HARMFUL MATERIALS AND POLLUTION OF THE ATMOSPHERE FROM PARTICULATE AND GASEOUS MATTER SHALL BE AVOIDED.

ENVIRONMENTAL PRACTICE:

THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL USE PROTECTIVE MEASURES OF AIR, NOISE, AND WATER QUALITY BY THE USE OF PRUDENT CONSTRUCTION PRACTICES SUCH AS DUST CONTROL, OPERATING EQUIPMENT ONLY IN DAYLIGHT HOURS, AND IMPLEMENT STORM WATER MANAGEMENT TO MEET OR EXCEED ALL PERMIT REQUIREMENTS ASSOCIATED WITH THE CONSTRUCTION OF THE PROJECT SITE AND ALL OFF-SITE FACILITIES.

ARCHAEOLOGICAL REQUIREMENT:

WHENEVER ENCOUNTERING ARCHAEOLOGICAL REMAINS DURING THE EXCAVATION OF AN APPROVED OFF-SITE FACILITY OR ON THE PROJECT SITE, THE CONTRACTOR SHALL IMMEDIATELY CEASE THE OPERATION IN THE NOTED AREA OF CONCERN AND NOTIFY THE TRIBAL PROJECT INSPECTOR AND THE ROADS PROGRAM DIRECTOR, WHO WILL CONTACT THE PROPER AUTHORITIES FOR AN EVALUATION.

ITEM 643 CONTRACTOR'S QUALITY CONTROL:

QUALITY CONTROL DURING THE PROGRESS OF CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR MAY PROVIDE QUALITY CONTROL PERSONNEL AND TESTING EQUIPMENT CERTIFIED IN THE APPROPRIATE AREAS BY THE OKLAHOMA HIGHWAY CONSTRUCTION MATERIALS TECHNICIAN CERTIFICATION BOARD OR MAY PROVIDE THE SERVICES OF A CERTIFIED INDEPENDENT TESTING FIRM.

ITEM 880 (J) "CONSTRUCTION TRAFFIC CONTROL":

INCLUDES ALL COST OF FURNISHING, INSTALLATION AND MAINTENANCE OF TRAFFIC CONTROL DEVICES NECESSARY TO CONTROL TRAFFIC DURING CONSTRUCTION. THIS ITEM SHALL BE PAID FOR AS LUMP SUM. TRAFFIC CONTROL SHALL BE IN ACCORDANCE TO STATE STANDARDS AND THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", CURRENT EDITION.

OFF-SITE FACILITIES:

CONTRACTOR SHALL OBEY ALL LAWS AND REGULATIONS WHEN ESTABLISHING OFF-SITE FACILITIES, INCLUDING PLANT SITES, BORROW PITS, WASTE AREAS, HAUL ROADS, STORAGE SITES, PARKING AREAS, AND SIMILAR AREAS ASSOCIATED WITH THE ACQUISITION, PRODUCTION, AND DELIVERY OF BORROW MATERIAL AND RELATED ROAD BUILDING MATERIALS.

SUBGRADE IN ROCK

IN AREAS OF ROCK CUT THE TOP 6" OF SUBGRADE SHALL MEET THE REQUIREMENTS OF SELECT BORROW, SECTION 705.01, COST SHALL BE INCLUDED IN PAY ITEM SUBGRADE METHOD B.

GENERAL NOTES

- (1) ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE OKLAHOMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, CURRENT EDITION, UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS.
- (2) THE CONTRACTOR SHALL GIVE NOTICE TO THE MUSCOKEE (CREEK) NATION IN WRITING FOURTEEN (14) DAYS BEFORE WORK BEGINS ON PROJECT.
- (3) TIME CHARGES SHALL BEGIN WHEN THE CONTRACTOR BEGINS WORK OR ON THE EFFECTIVE DATE OF THE NOTICE TO PROCEED WHICHEVER HAPPENS FIRST, AND SHALL END WHEN SUBSTANTIAL COMPLETION IS APPROVED BY THE MUSCOKEE (CREEK) NATION.
- (4) THE CONTRACTOR SHALL CONFINE HIS WORK WITHIN THE LIMITS OF RIGHT-OF-WAY. ANY DAMAGE CAUSED BY THE CONTRACTOR OUTSIDE OF THE LIMITS OF THE RIGHT-OF-WAY WILL BE REPAIRED OR RESTORED TO THE ORIGINAL CONDITION OR BETTER AT THE CONTRACTOR'S EXPENSE, TO THE SATISFACTION OF THE MUSCOKEE (CREEK) NATION.
- (5) SUBSTANTIAL COMPLETION IS DEFINED AS WHEN ALL PAVING OPERATIONS, STRIPING OPERATIONS, AND BACKFILL OPERATIONS HAVE BEEN COMPLETED TO THE SATISFACTION OF THE MUSCOKEE (CREEK) NATION.

GENERAL ROADWAY NOTES

- (G-1) IN ACCORDANCE WITH THE OKLAHOMA UNDERGROUND FACILITIES DAMAGE PREVENTION ACT, THE CONTRACTOR SHALL NOTIFY THE OKLAHOMA ONE-CALL SYSTEM, INC. 48 HOURS PRIOR TO BEGINNING EXCAVATION. OKLAHOMA ONE-CALL SYSTEM, INC. "CALL OKIE" 1-800-522-6543 OR 811
- (G-2) THIS PROJECT SHALL BE CONSTRUCTED WITHOUT CLOSING THE EXISTING ROAD TO LOCAL TRAFFIC. SEE STANDARD SPECIFICATIONS FOR MAINTENANCE OF LOCAL AND THROUGH TRAFFIC.
- (G-3) T.B.S.C. SURFACES SHALL BE SPRINKLED WITH WATER AND ROLLED WITH A PNEUMATIC ROLLER IN A MANNER APPROVED BY THE ENGINEER.

TOPSOIL NOTES

THE CONTRACTOR SHALL STRIP ALL OF THE AVAILABLE TOPSOIL WITHIN THE LIMITS OF CONSTRUCTION. STOCKPILE THE MATERIAL AND REPLACE THE TOPSOIL ON THE FINISHED SLOPES OF THE GRADING SECTION. ALL ADDITION COSTS NOT COVERED IN OTHER ITEMS SHALL BE INCLUDED IN THE LUMP SUM TOPSOIL ITEMS AS FOLLOWS:

EXCAVATION SECTION:

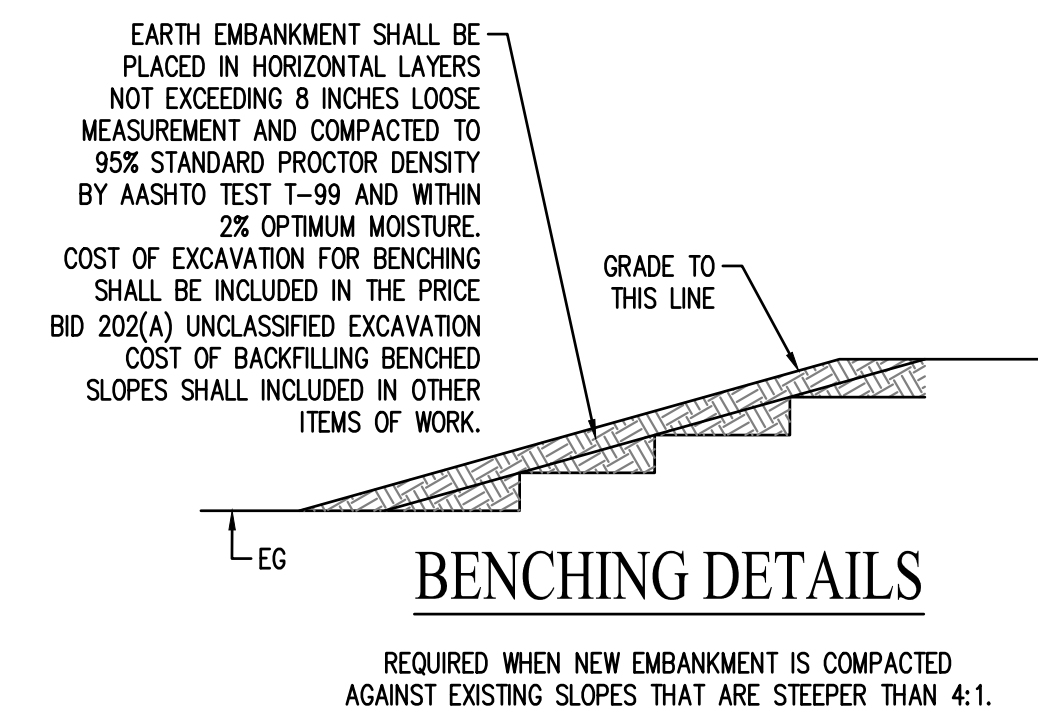
THE VOLUME OF TOPSOIL IS INCLUDED IN THE UNCLASSIFIED EXCAVATION QUANTITIES. CONTRACTORS ARE TO INCLUDE ANY ADDITIONAL COST TO REMOVE, STOCKPILE AND REPLACE THE MATERIAL ON THE FINISHED GRADE SLOPES IN THE LUMP SUM TOPSOIL ITEM.

EMBANKMENT SECTION:

DETERMINE THE AMOUNT OF TOPSOIL IN THESE AREAS AND INCLUDE ALL COSTS TO REMOVE, STOCKPILE AND REPLACE MATERIAL ON THE FINISHED GRADE SLOPES IN THE LUMP SUM TOPSOIL ITEM.

GENERAL TRAFFIC NOTES

- (C-1) ANY SIGNS AND/OR DELINEATORS WHICH ARE TO BE REMOVED DURING THIS PROJECT WILL BE STORED IN A PROTECTED AREA DESIGNATED BY THE ENGINEER, UNTIL SUCH A TIME THAT THEY ARE TO BE RESET BY THE CONTRACTOR. COST OF THIS WORK TO BE INCLUDED IN OTHER ITEMS OF WORK.



CROSS TIMBERS DRAWING FILEMCH-044_Cov. & Typ sect: SHT01-02.dwg

NO.	DATE	REVISIONS
1	7/12/23	ISSUED FOR PERMITS
2	7/12/23	REVISIONS FOR CHURCH ROAD
3	7/12/23	REVISIONS FOR CHURCH ROAD
4	7/12/23	REVISIONS FOR CHURCH ROAD
5	7/29/23	CHANG LINK FENCE & PAVEMENT

Drawn By: DJM
Date: JULY 12, 2023

PROJECT MCN-044

GENERAL CONSTRUCTION NOTES

Grading and Site work

- (G-5) FOR PROJECTS THAT INCLUDE WIDENING AND/OR RESURFACING, THE CONTRACTOR SHALL SCHEDULE OPERATIONS TO MINIMIZE POTENTIAL DROP-OFF HAZARDS AND SHALL SUBMIT A SEQUENCE OF CONSTRUCTION OPERATIONS TO THE RESIDENT ENGINEER FOR APPROVAL BEFORE OPERATIONS BEGIN. ANY PORTION OF THE CONSTRUCTION OPERATIONS, SUCH AS SUPERPAVE LAYING OPERATIONS, EXCAVATION FOR PAVEMENT WIDENING, OR EXTENSION OF ROADWAY STRUCTURES, SHALL BE LIMITED TO ONE SIDE AT A TIME, AND THE PROCEDURES OUTLINED IN THE TRAFFIC CONTROL DROP-OFF STANDARD TCS29-1 SHALL BE IMPLEMENTED. ONLY THAT AMOUNT OF OPEN TRENCH WILL BE ALLOWED THAT CAN BE SURFACED IN 1 (ONE) DAY'S TIME WITHOUT APPROVAL BY THE ENGINEER. LIGHTS, SIGNS AND BARRICADES SHALL BE MOVED AS WORK PROGRESSES.
- (G-6) ALL TREES, BRUSH, AND OTHER DEBRIS THAT MIGHT INTERFERE WITH THE FLOW OF WATER SHALL BE CLEANED OUT TO THE RIGHT-OF-WAY LINE, AT EACH STRUCTURE AND BRIDGE, IN A MANNER APPROVED BY THE ENGINEER. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.
- (G-7) THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY RIGHT-OF-WAY FENCE AS REQUIRED. WHEN THE PORTION OF THE PROJECT THAT REQUIRED THIS FENCE IS COMPLETED, THE TEMPORARY FENCE SHALL BE REMOVED, AND PERMANENT RIGHT-OF-WAY FENCING SHALL BE RESTORED OR INSTALLED IN A MANNER APPROVED BY THE ENGINEER. ALL COST TEMPORARY FENCING SHALL BE INCLUDED IN OTHER ITEMS OF WORK.
- (G-8) ALL FLOWLINES THAT ARE TO BE FILLED SHALL BE THOROUGHLY TAMPED BEFORE CONSTRUCTION OR EXTENSION OF DRAINAGE STRUCTURES. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.
- (G-9) IN ORDER TO ALLEVIATE DUST CONDITIONS DURING GRADING OPERATIONS AND BEFORE PAVEMENT WORK IS COMPLETED, THE CONTRACTOR SHALL SPRINKLE GRADING AT INTERVALS APPROVED BY THE ENGINEER. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.
- (G-11) THE CONTRACTOR SHALL NOT WASTE ANY EXCESS EXCAVATION UNTIL ALL PLANNED EMBANKMENTS AND BACKFILLS ARE COMPLETED. EXCESS UNCLASSIFIED EXCAVATION MATERIAL DETERMINED BY THE ENGINEER TO BE SUITABLE FOR BACKFILL SHALL BE USED TO REDUCE ANY UNCLASSIFIED BORROW NEEDED. COST OF SECOND HANDLING SHALL BE INCLUDED IN OTHER ITEMS OF WORK. ANY REMAINING EXCESS EXCAVATION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER.
- (G-13) THE CONTRACTOR SHALL KEEP THE OPEN TRENCH DRAINED. COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

Erosion Control

- (G-25) AT THE BEGINNING OF TURFING OPERATIONS, ANY AREAS INCLUDED IN PLANNED QUANTITIES THAT HAVE GROWN A SATISFACTORY VOLUNTEER TURF OF PERENNIAL GRASS, AS DETERMINED BY THE ENGINEER, SHALL BE FERTILIZED AND WATERED AS CALLED FOR ON THE PLANS, BUT SHALL NOT BE SEEDED, SODDED, OR SPRIGGED.

Mailboxes

- (G-27) THE CONTRACTOR SHALL REMOVE AND RESET MAILBOXES AS NECESSARY. MAILBOXES ARE TO BE MAINTAINED IN AN UPRIGHT POSITION AND ACCESSIBLE TO MAIL CARRIER'S CAR DURING CONSTRUCTION. ANY DAMAGE TO BOXES OR SUPPORTS SHALL BE REPAIRED BY THE CONTRACTOR. ALL COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

Surfacing

- (G-30) SURFACING OF RETURNS, UNLESS OTHERWISE SHOWN ON THE PLANS, SHALL BE OF THE SAME MATERIAL (BASE AND SURFACE) AS THAT OF THE ABUTTING SHOULDER OF THE MAINLINE. BASE AND SURFACE THICKNESS SHALL BE THE THICKNESS SHOWN ON PLANS.
- (G-31) T.B.S.C. SURFACES SHALL BE SPRINKLED WITH WATER AND ROLLED WITH A PNEUMATIC ROLLER IN A MANNER APPROVED BY THE ENGINEER.

Final Clean up

- (G-38) PRIOR TO FINAL ACCEPTANCE, ALL EXPOSED CURB SURFACES OR WINGWALL SURFACES SHALL BE CLEANED OF ALL DISCOLORATION SUCH AS ASPHALT STAIN, TIRE MARKS, OR OTHER DISFIGUREMENT.
- (G-39) EXCESS ASPHALT AT JOINTS AND CRACKS IN EXISTING PAVEMENT SHALL BE REMOVED FLUSH TO TOP OF PAVING IN A MANNER APPROVED BY THE ENGINEER.

TRAFFIC PAY ITEM NOTES

- (TC-25) ALL CONSTRUCTION TRAFFIC CONTROL WILL BE IMPLEMENTED ACCORDING TO CONSTRUCTION PLANS, AND INSTALLED IN A MANNER APPROVED BY THE ENGINEER, IN ACCORDANCE WITH CHAPTER VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (CURRENT EDITION), AND COMPLIANT WITH APPLICABLE O.D.O.T. STANDARD DRAWINGS. PRICE BID FOR THIS ITEM SHALL BE PAYMENT IN FULL FOR THE INSTALLATION, MAINTENANCE AND SUBSEQUENT REMOVAL OF ALL NECESSARY CONSTRUCTION TRAFFIC CONTROL DEVICES AND PAVEMENT MARKINGS REQUIRED FOR COMPLETION OF THE PROJECT.

ALL SIGNS AND BARRICADES, WHICH ARE SHOWN WITH TYPE 'A' LIGHTS IN THE STANDARD DRAWINGS SHALL HAVE THE CORRESPONDING LIGHT ATTACHED DURING NON-DAYLIGHT HOURS.
- (TS-19) QUANTITY SHOWN INCLUDES 8,108 L.F. TRAFFIC STRIPE (PLASTIC)(WHITE) AND 8,108 L.F. TRAFFIC STRIPE (PLASTIC)(YELLOW) AND WILL BE MEASURED BY THE LINEAR FOOT OF FOUR INCH (4") WIDE TRAFFIC STRIPE.

PAY QUANTITY NOTES

- (R-6) PRICE BID TO INCLUDE COST OF 10-20-10 FERTILIZER, ESTIMATED AT 200 POUNDS PER 1000 SQ. YDS.
- (R-7) PRICE BID TO INCLUDE COST OF WATERING, ESTIMATED AT 40 GALLONS PER SQ. YD.
- (R-20) ESTIMATED AT 120 LBS. PER CU. FT.
- (R-25) ESTIMATED AT 0.075 GALLONS PER SQUARE YARD OF ORIGINAL EMULSION OF TACK COAT (BEFORE DILUTION FOR APPLICATION) IN ACCORDANCE WITH SECTION 407 OF THE STANDARD SPECIFICATIONS.
- (R-26) ESTIMATED AT 112 LBS. PER SQ. YD. PER 1" THICK.
- (R-39) INCLUDES REMOVAL OF ALL EXISTING ROADWAY DRAINAGE STRUCTURES, HEADWALLS (UNLESS OTHERWISE SPECIFIED), INLETS, FENCES, AND OTHER STRUCTURES WITHIN THE RIGHT OF WAY.
- (R-40) TO BECOME THE PROPERTY OF AND BE DISPOSED OF BY THE CONTRACTOR IN A MANNER APPROVED BY THE ENGINEER.
- (R-41) MATERIALS REMOVED SHALL NOT BE MEASURED FOR PAYMENT UNDER SECTION 202.06 UNCLASSIFIED EXCAVATION.
- (R-44) ALL GATES AND GATE END POSTS FOR STRANDED WIRE FENCE (SWF) SHALL BE CONSTRUCTED AT THE SAME WIDTH AS THE EXISTING, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

ROADWAY PAY ITEM NOTES

- (1) ALL TRAFFIC CONTROL DEVICES, CONSTRUCTION SIGNING, BARRICADES, ETC., SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), CURRENT EDITION.
- (2) ALL CHANNELIZING DEVICES, TYPE-III BARRICADES, ETC., SHALL BE WEIGHTED DOWN WITH A NON-HAZARDOUS MATERIAL.
- (3) ALL ADVANCE WARNING SIGNS AND CHANNELIZING DEVICES SHALL REQUIRE TYPE-A STEADY BURN LIGHTS.
- (4) ALL TYPE-III BARRICADES SHALL REQUIRE A MINIMUM OF TWO (2) TYPE-A LOW INTENSITY FLASHING LIGHTS.
- (5) LUMP SUM EARTHWORK: INCLUDES ALL EXCAVATION, BORROW, AND EMBANKMENT TO COMPLETE THE ROADWAY PORTION OF THE PROJECT AS INTENDED BY THE PLANS AND SPECIFICATIONS. TRENCHING FOR PIPE INSTALLATIONS AND REINFORCED CONCRETE BOX IS ALSO INCLUDED IN THIS QUANTITY. A 10% COMPACTION FACTOR WAS ADDED TO THE EMBANKMENT QUANTITY. THE ESTIMATED QUANTITY OF EXCAVATION AND EMBANKMENT IS: (EXCAVATION ESTIMATE INCLUDES EXISTING ROADWAY)

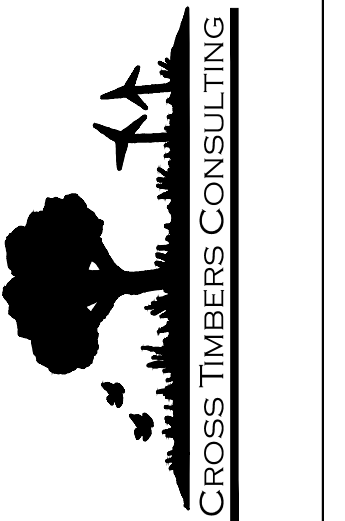
EXCAVATION:	UNCLASSIFIED BORROW:	EMBANKMENT:
(CU. YDS.)	(CU. YDS.)	(CU. YDS.)
3811	842	4653

- (6) PRIOR TO PAVEMENT REMOVAL, ALL PAVEMENT SHALL BE SAW CUT, FULL DEPTH.
- (7) THE PRICE BID FOR REMOVAL OF ASPHALT WILL INCLUDE THE ENTIRE EXISTING ROADWAY SHOWN ON THE PLANS, TO WHATEVER DEPTH IS ENCOUNTERED.
- (8) THE CONTRACTOR IS RESTRICTED FROM INCORPORATING ANY BORROW SOIL CONTAINING GYPSUM INTO THE SUBGRADE. RESTRICT BORROW SOILS W/SULFATE CONCENTRATION GREATER THAN 1000 PARTS PER MILLION (PPM).
- (9) MIXING WATER USED IN SUBGRADE STABILIZATION TO BE TESTED FOR SULFATES.
- (10) DOES NOT INCLUDE REMOVAL OF ASPHALT PAVEMENT QUANTITY INCLUDED IN ITEM 619(B) PER NOTE R-50.
- (11) CONTRACTOR SHALL REMOVE ALL SEDIMENTATION DEVICES FROM THE PROJECT LIMITS AFTER CONSTRUCTION IS ACCEPTED AS COMPLETE.
- (12) MEASURE FOR AGGREGATE BASE IS BASED ON THEORETICAL DIMENSIONS.
- (13) ESTIMATED AT 0.05 GAL. PER SQ. YD. PRIOR TO DILUTION.
- (14) PRIOR TO PAVEMENT REMOVAL ALL PAVEMENT SHALL BE SAW CUT TO FULL DEPTH. THE PRICE BID FOR REMOVAL OF ASPHALT WILL INCLUDE THE ENTIRE EXISTING ROADWAY AS SHOWN ON THE PLANS. TO WHATEVER DEPTH IS ENCOUNTERED.
- (15) INCLUDES 2 - 8' X 8' WOOD FENCE PRIVACY GATES.
- (16) COORDINATE WITH PROPERTY OWNER FOR TREE AND BRUSH REMOVAL. SALVAGE ALL TREES 5" DIAMETER AND GREATER. CUT INTO 24" SEGMENTS AND PLACE ON CHURCH PROPERTY.
- (17) TEMPORARY SWF, COORDINATE WITH PROPERTY OWNER. REMOVE WHEN ROW FRONTAGE IMPROVEMENTS ARE COMPLETED. TO BECOME PROPERTY OF THE CONTRACTOR.
- (18) TYPE 1 PLAN RIPRAP ESTIMATED AT 110 LBS PER C.F. - (2" THICK)
TYPE 1-A FILTER BLANKET ESTIMATED AT 105 LBS PER C.F. - (6" THICK)
- (19) THE WATERLINE ITEM IS A LUMP SUM ITEM THAT INCLUDES ALL WATERLINE, FITTINGS, TAPPING, VALVES, CONNECTIONS TO METERS, EXCAVATION AND BACKFILL, DISINFECTION AND TESTING AS REQUIRED BY THE RURAL WATER DISTRICT. THE CONTRACTOR SHALL COORDINATE THE NEW WATERLINE INSTALLATION WITH THE RURAL WATER DISTRICT AND SUBMIT A PLAN TO THE WATER DISTRICT FOR APPROVAL PRIOR TO BEGINNING INSTALLATION. THE WATER DISTRICT SHALL MONITOR AND APPROVE THE INSTALLATION OF THE WATERLINE.

SPEC NO.	ITEM NO.	ITEM DESCRIPTION	NOTES	UNIT	QUANTITY
201 (A)	1200	CLEARING AND GRUBBING	10,16	L.SUM	1
202 (H)	2900	EARTHWORK	5,8,9	L.SUM	1
220	1100	SWPP DOCUMENTATION & MANAGEMENT		L.SUM	1
221 (C)	2300	TEMPORARY SILT FENCE	11	LF	4836
221 (F)	2600	TEMPORARY SILT DIKE	11	LF	160
230 (A)	7200	SOLID SLAB SODDING	(R-6)(R-7)	SY	1210
303 (A)	1200	AGGREGATE BASE (TYPE A)	12	CY	2,003
310 (B)	5300	SUBGRADE METHOD "B"	9	SY	11,809
326 (B)	1300	GEOGRID REINFORCEMENT		SY	11,689
402 (E)	2600	T.B.S.C. TYPE E	(R-20)	TON	184
407 (B)	7300	TACK COAT	13,(R-25)	GAL	600.7
411 (B)	1330	SUPERPAVE TYPE S3 (PG 64-22 OK)	(R-26)	TON	2,047.4
411 (C)	1430	SUPERPAVE TYPE S4 (PG 64-22 OK)	(R-26)	TON	1,447.7
509 (A)	0200	CLASS AA CONCRETE		CY	1.37
509 (D)	0500	CLASS C CONCRETE		CY	2.20
511 (A)	2210	REINFORCING STEEL		LBS	85
601 (A)	1100	TYPE I PLAIN RIPRAP	18	TON	13.8
601 (C)	1300	TYPE I-A FILTER BLANKET	18	TON	3.3
609 (B)	4360	2'-8" COMB. CURB & GUTTER (6" BARRIER)		LF	2,590
610 (B)	5310	6" CONCRETE DRIVEWAY		SY	171
613 (A)	5314	24" R.C. PIPE CLASS V		LF	46
613 (EE)	5968	18" CORRUGATED POLYPROPYLENE PIPE		LF	287
613 (EE)	5620	24" CORRUGATED POLYPROPYLENE PIPE		LF	108
613 (EE)	5640	36" CORRUGATED POLYPROPYLENE PIPE		LF	30
613 (M)	6900	TYPE A3 CULVERT END TREATMENT		EA	10
613 (M)	6904	TYPE B3 CULVERT END TREATMENT		EA	5
613 (M)	690	TYPE C3 CULVERT END TREATMENT		EA	2
616	2100	(PL) WATER SYSTEM IMPROVEMENTS	19	L.SUM	1
619 (A)	6200	REMOVAL OF STRUCTURES & OBSTRUCTIONS	(R-39),(R-40)	L.SUM	1
619 (B)	6352	REMOVAL OF FENCE	17,(R-39),(R-40),(R-41)	LF	5295
619 (B)	6364	REMOVAL OF ASPHALT PAVEMENT	7,14,(R-40),(R-41)	SY	224
619 (C)	6600	SAWING PAVEMENT	6	LF	128.6
624	3110	(PL) WOOD PRIVACY FENCE	15,17	LF	153
624 (C)	3405	FENCE-STYLE SWF (5 BARRED WIRE)	17,(R-44)	LF	5295
624 (C)	3415	FENCE-STYLE SWF (4 SMOOTH WIRE)	17,(R-44)	LF	5295
624 (D)	3500	GATES - GALVANIZED STEEL		EA	2
624 (E)	3600	FENCE-STYLE CLF (4' HIGH, CLASS A)	17,(R-44)	LF	160
624 (F)	4292	FENCE-STYLE CLF (6' HIGH, CLASS A)	17,(R-44)	LF	1170
624 (D)	3500	GATE, GALVANIZED STEEL		EA	11
624 (F)	3757	GATES-STYLE CLF (6' HIGH X 8' LONG)		EA	6
641	2110	MOBILIZATION		LSUM	1
642 (B)	3300	CONSTRUCTION STAKING LEVEL II		LSUM	1
850 (A)	1200	SHEET ALUMINUM SIGNS		SF	22.38
851 (C)	2415	2" SQUARE TUBE POST		LF	30
855 (A)	7200	TRAFFIC STRIPE (PLASTIC) 4" WIDE	(TS-19)	LF	16216
855 (A)	7212	TRAFFIC STRIPE (PLASTIC) 12" STOP BAR	(TS-19)	LF	18
880 (I)	7110	CONSTRUCTION TRAFFIC CONTROL	1,2,3,4,(TC-25)	LSUM	1

SUMMARY OF PAY QUANTITIES
GREENLEAF CHURCH ROAD
SECTION 15,16,21,22 T-11-N R-9-E
OKFUSKEE COUNTY, OKLAHOMA

CROSS TIMBERS CONSULTING, LLC
P.O. BOX 87
Alex, Oklahoma, 73002
Phone: (405) 222-8280



REV.	DATE	DESCRIPTION
1	8/27/24	ISSUED FOR CONSTRUCTION
2	8/29/24	CHANGED CURB AND GUTTER SECTION FOR CHURCH ROAD
3	9/12/24	CHANGED CURB AND GUTTER SECTION FOR CHURCH ROAD
4	9/12/24	CHANGED CURB AND GUTTER SECTION FOR CHURCH ROAD
5	10/29/24	CHANGED CURB AND GUTTER SECTION FOR CHURCH ROAD

Drawn By: DJM
Date: JULY 12, 2023

PROJECT MCN-044

SHEET 3

EXISTING STRUCTURE REMOVAL	
STATION LOCATIONS	DESCRIPTIONS
10+58.15 CL	18" CGMP
11+04.73 LT	24" CGMP
12+35.78 CL	36" CGMP
16+39.40 LT	18" CGMP
22+44.20 LT	UNKNOWN CGMP
33+02.13 CL	42" CGMP
35+36.29 RT	UNKNOWN CGMP
45+91.32 CL	18" CGMP

EXISTING PAVEMENT REMOVAL					
BEGIN STATION	END STATION	APPROX. WIDTH (FT)	SAWING PAVEMENT 619 (C) (LF)	AREA (SY)	DESCRIPTION
50+12.28	50+54.00	23	128.6	224	Base on pavement area.
TOTAL			128.6	224	

SUMMARY OF SURFACING												
STATION TO STATION	(CRL)	ASPHALT TYPE S3 (PG 64-22 OK) 411 (A)	ASPHALT TYPE S4 (PG 64-22 OK) 411 (B)	SUBBASE METHOD "B" 310 (B)	GEOGRID REINFORCEMENT 326 (B)	AGG. BASE TYPE A 303 (A)	TACK COAT 407 (B)	T.B.S.C. TYPE E 403	2'-8" COMB. C & G (6" BARRIER) 609 (B)	CLASS C CONCRETE CURB OPENING 509 (D)	TRAFFIC STRIPE (PLASTIC) (4" Wide) 855 (A)	TRAFFIC STRIPE (PLASTIC) (12" STOP BAR) 855 (A)
		TON	TON	SY	SY	CY	GAL	TON	LF	CY	LF	LF
10+00.00 TO 15+42.50		283.55	189.03	1808.33	1687.78	216.37	84.39	32.55			2170	
15+42.50 TO 19+31.96		232.64	155.09				60.58	23.37			1558	
19+31.96 TO 24+64.09		278.13	185.42	1655.52	1655.52	275.92	82.78	31.93			2129	
24+64.09 TO 50+54.00		1253.10	835.40	8345.27	8345.27	1438.84	372.95	77.70	2589.91	2.20	10360	18
TOTAL		2047.4	1364.9	11809.1	11688.6	1931.1	600.7	165.5	2589.9	2.2	16216	18

SUMMARY OF EARTHWORK					
STATION BEGIN	STATION END	UNCLASSIFIED EXCAVATION 202.04	EMBANKMENT 202.4	UNCLASSIFIED BORROW 202.14	WASTE
		CU. YD.	CU. YD.	CU. YD.	CU. YD.
10+00	50+54	3811	4653	842.00	0
TOTAL		3811	4653	842	0

RIGHT-OF-WAY FENCING										
BEGIN STATION	END STATION	TEMP. STYLE SWF 624 (C) (LF)	STYLE SWF 624 (C) (LF)	STYLE CLF (4' HIGH, CLASS A) 624 (E) (LF)	STYLE CLF (6' HIGH, CLASS A) 624 (E) (LF)	WOOD PRIVACY FENCE (8' HIGH) (LF)	GATES-STYLE CLF (6' HIGHx8' LONG) 624 (F) (EA)	GALV. STEEL GATE (12') 624 (D) (EA)	WOOD PRIVACY FENCE GATE (8' HIGH X 8' WIDE) (EA)	
10+00	RT 22+88	1288	1288					2		
10+00	LT 21+70				1170		6			
24+38	RT 25+78			160						
24+50	LT 50+26	2576	2576					5		
34+40	RT 40+91	651	651					1		
40+91	RT 42+44					153			2	
42+44	RT 50+24	780	780					3		
TOTAL		5295	5295	160	1170	153	6	11	2	

SUMMARY OF DRIVE ACCESS						
STATION	SIDE		AGGR. BASE TYPE A 303 (A)	CONCRETE DRIVEWAY 610 (B)	SUPERPAVE TYPE S4 (PG 64-22 OK) 411 (C)	T.B.S.C. TYPE E 402 (E)
	LT	RT				
11+04.72	X		6.06		12.21	3.23
12+65.00	X		7.28		14.68	3.23
16+25.41	X				11.54	3.01
19+91.96		X			19.39	3.34
22+41.55	X		4.77		9.61	2.42
24+27.45	X		3.01			
26+08.96		X	3.27	19.60		
26+75.95		X	4.87	29.20		
35+36.29		X	4.01	24.08		
39+31.66	X		7.59		15.29	2.87
41+38.68		X	3.80	22.82		
43+00.00	X		4.89			
43+44.65		X	4.88	29.28		
48+79.07		X	7.63	45.78		
49+17.38	X		9.01			
TOTAL			71.1	170.8	82.7	18.1

SUMMARY OF SIGNS			
STATION	TYPE	SIGN AREA 880 (D,E,F) (SF)	2" SQUARE TUBE POSTS (LF)
12+55 LT	R1-1 STOP SIGN	7.46	10
15+92 LT	"CHURCH"	?	?
16+91 RT	WEIGHT LIMIT		
17+83 LT	WEIGHT LIMIT		
24+29 RT	R1-1 STOP SIGN	7.46	10
24+29 RT	(2) STREET NAME		NA
50+16 RT	R1-1 STOP SIGN	7.46	10
TOTAL		22.38	30

SUMMARY OF CROSS DRAINS																		
STR. NO.	STATION	DESCRIPTION	DESIGN	FLOW LINE ELEVATION		STRUCTURAL INSTALLATION (END SECTIONS)			CULVERT END TREATMENT 613 (M)	CULVERT END TREATMENT 613 (M)	TYPE 1 PLAIN RIPRAP 601 (A)	TYPE 1-A FILTER BLANKET 601 (C)	R.C. PIPE CLASS V 613 (A) LINEAR FEET ROUND (IN)	CORRUGATED HDPE PIPE 613 (EE) LINEAR FEET ROUND (IN)	CORRUGATED HDPE PIPE 613 (EE) LINEAR FEET ROUND (IN)			
						CLASS AA CONC. 509 (A)		REIN. STEEL 511 (A)								DESIGN	EACH ROUND (IN)	EACH ROUND (IN)
						LT.	RT.											
CD01	10+58.10	24" X 63' LG HDPE (SKEWED) 29' LT & 29' RT	SP-1	852.45	852.14				24"	36"	TON	TON	24"	24"	36"			
CD02	12+39.97	36" X 81' LG HDPE (SKEWED) 35' LT & 35' RT	SP-1	851.17	850.87				2	2				63	30			
CD03	45+91.26	24" X 46' LG RCP CLASS V (SKEWED) 29' LT & 17' RT	SPI-5-0	877.52	877.19	1.37	85.00	Attached	1		13.8	3.3	46					
TOTAL						1.37	85.0		3.0	2.0	13.8	3.3	46.0	63.0	30.0			

SUMMARY OF SIDE DRAINS								
STR. NO.	STATION	DESCRIPTION	DESIGN	APPROX. FLOW LINE ELEVATION		CULVERT END TREATMENT 613 (M)	CORRUGATED HDPE PIPE 613 (EE)	CORRUGATED HDPE PIPE 613 (EE)
				FL IN	FL OUT			
				EACH ROUND	EACH ROUND			
SD01	11+04.72	24" X 45.4' LG HDPE	SP-1	852.41	852.35	2		45.4
SD02	22+41.55	18" X 47.2' LG HDPE	SP-1	853.38	853.23		47.2	
SD03	24+11.68	18" X 90.3' LG HDPE	SP-1	855.65	854.97		90.3	
SD04	39+31.66	18" X 51.0' LG HDPE	SP-1	873.54	872.97		51.0	
SD05	43+00.00	18" X 44.4' LG HDPE	SP-1	879.60	879.52		44.4	
SD06	49+17.38	18" X 53.6' LG HDPE	SP-1	879.92	879.14		53.6	
TOTAL						10	2	286.5

SUMMARY OF SILT FENCE AND SILT DIKES					
STATION TO STATION	LOCATION	SILT FENCE L.F.	STATION	LOCATION	SILT DIKES L.F.
16+29 TO 18+12	LT	205.5	10+00 TO 50+00	EVERY 50' (LT & RT)	160
16+50 TO 18+12	RT	163.0			
23+25 TO 24+06	LT	93.0			
23+55 TO 23+93	RT	72.7			
24+31 TO 24+62	RT	102.9			
26+15 TO 26+65	RT	50			
26+87 TO 35+28	RT	841			
30+83 TO 34+54	RT	370.8			
30+83 TO 37+67	LT	683.1			
35+45 TO 41+33	RT	588			
41+44 TO 43+37	RT	193			
43+02 TO 50+49	LT	763.3			
43+52 TO 50+53	RT	709.4			
TOTAL		4835.7			160

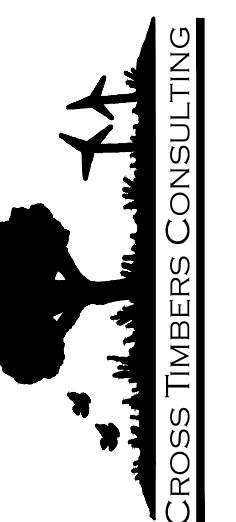
SUMMARY OF SPECIAL DITCH TREATMENT / SLOPE PROTECTION					
STATION BEGIN	STATION END	LOCATION	LENGTH	DITCH WIDTH / SIDE SLOPES	SOLID SLAB SODDING 230(A)
			L.F.	FT.	
10+00.00	10+84.97	LT	85.03	6	56.69
10+00.00	12+43.09	RT	243.25	6	162.17
12+82.80	14+36.71	LT	154.25	6	102.83
15+91.69	16+16.59	LT	25.00	6	16.67
16+50.00	17+23.36	RT	73.77	6	49.18
16+50.29	17+04.78	LT	55.92	6	37.28
17+50.17	18+11.54	LT	61.87	6	41.25
17+50.17	18+11.54	RT	61.87	6	41.25
23+25.00	23+82.00	LT	57.02	6	38.01
24+50.22	24+75.17	LT	25.00	6	16.67
38+60.00	39+12.42	LT	52.43	6	34.95
39+50.88	39+75.87	LT	25.00	6	16.67
41+56.81	42+83.90	LT	127.10	6	84.73
43+15.84	43+40.75	LT	25.00	6	16.67
43+61.68	43+85.75	RT	25.00	6	16.67
45+40.95	48+54.22	RT	313.41	6	208.94
45+41.95	48+95.12	LT	353.37	6	235.58
49+02.51	49+27.37	RT	25.00	6	16.67
49+38.63	49+63.55	LT	25.00	6	16.67
TOTAL			1814		1210

MAILBOXES			
STATION	OFFSET	MAILBOX QTY.	AGGREGATE BASE TYPE A 303 (CY)
22+24	16' LT	1	0.5
26+16	36' RT	1	0.5
TOTAL		2	1

SUMMARY OF QUANTITIES

GREENLEAF CHURCH ROAD
SECTION 15, 16, 21, 22 T-11-N R-9-E
OKFUSKEE COUNTY, OKLAHOMA

CROSS TIMBERS CONSULTING, LLC
P.O. BOX 87
Alex, Oklahoma, 73002
Phone: (405) 222-8280



REV.	DATE	BY	DESCRIPTION
1			ISSUED FOR PERMIT
2			REVISION FOR CHURCH ROAD
3			REVISION FOR CHURCH ROAD
4			REVISION FOR CHURCH ROAD
5			REVISION FOR CHURCH ROAD
6			REVISION FOR CHURCH ROAD
7			REVISION FOR CHURCH ROAD
8			REVISION FOR CHURCH ROAD
9			REVISION FOR CHURCH ROAD
10			REVISION FOR CHURCH ROAD

Drawn By: DJM
Date: JULY 12, 2023

STORMWATER POLLUTION PREVENTION PLAN

SITE DESCRIPTION

PROJECTS LIMITS: THE PROJECT BEGINS ON THE WEST SECTION LINE OF S 15, T 11 N, R 9 E AT
 THE INTERSECTION OF CR NS 374 AND SH 56, THEN PROCEEDS 1 MILE SOUTH
 TO A POINT ON THE WEST SECTION LINE OF S 22, T 11 N, R 9 E.

PROJECT DESCRIPTION: GRADING, DRAINAGE AND SURFACING OF AN EXISTING COUNTY
 ROAD: 22' WIDE ASPHALT ROADWAY WITH 3' ASPHALT SHOULDERS (28' TOTAL
 ROADWAY WIDTH).

SUGGESTED SEQUENCE OF CONSTRUCTION:

1. INSTALL TRAFFIC CONTROL.
2. CLEAR, GRUB AND STOCKPILE TOPSOIL.
3. BEGIN FENCING, INSTALLATION OF STRUCTURES AND GRADING.
4. INSTALL SEDIMENTATION CONTROLS AS AREAS BECOME DISTURBED.
5. COMPLETE ROADWAY GRADING.
6. INSTALL VEGETATIVE MULCHING.
7. CONSTRUCT ROADWAY BASE AND PAVING.
8. COMPLETE FINE GRADING AND INSTALL PERMANENT EROSION CONTROL.

SPECIAL INSTRUCTIONS: NONE

TOTAL AREA TO BE DISTURBED: APPROXIMATELY 5.67 ACRES

NOTE: THIS AREA IS TO BE CALCULATED AS "RW TO RW" FOR EXTENDS OF THE PROJECT.
 INCLUDING ANY INCIDENTAL CONSTRUCTION.

WEIGHTED RUNOFF COEFFICIENT: 0.38

NOTE: THIS SHOULD BE DETERMINED BY THE HYDRAULIC DESIGNER FOR THE PROJECT.
 THIS VALUE SHOULD BE THE AVERAGE "C" FACTOR USED ON THE PROJECT. IT SHOULD
 BE BASED ON THE ANTICIPATED FUTURE LAND USE.

NAME OF RECEIVED WATERS: OKMULGEE CREEK

NOTE: THIS SHOULD DESCRIBE EACH NAMED CREEK, RIVER OR BODY OF WATER
 WHICH IS RECEIVING STORM WATER RUNOFF.

EROSION AND SEDIMENT CONTROLS

SOIL STABILIZATION PRACTICES:

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

NOTE: TEMPORARY EROSION CONTROL METHODS ARE TO BE USED
 ON ALL DISTURBED AREAS WHERE CONSTRUCTION ACTIVITIES HAVE
 CEASED FOR OVER 21 DAYS. METHODS USED WILL BE AS SHOWN ON
 PLANS OR AS DIRECTED BY THE ENGINEER.

STRUCTURAL PRACTICES:

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

OFFSITE VEHICLE TRACKING:

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

NOTES:

CONTRACTOR SHALL REMOVE ALL SEDIMENT CONTROL DEVICES FROM PROJECT
 LIMITS AFTER CONSTRUCTION IS APPROVED AND COMPLETED.

REVISIONS WERE MADE TO THE MAINTENANCE AND INSPECTION PORTION OF THE
 CONTRACTORS RESPONSIBILITIES.

THE CONTRACTOR SHALL 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 seven (7) calendar days and within forty-eight (48) hours after any storm event greater than one-half (1/2) inches of rain within a twenty-four (24) hour period (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 location are examples of sites that need to be inspected.

WASTE MATERIALS:

Proper management and disposal of construction waste material is required by the Contractors. Materials include stockpiles, surplus, debris and 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 developed during the design phase, confirmed in the pre-work meeting and available on the job site, along with copies of the Notice of Intent (NOI) forms that have been filed with the Environmental Protection Agency (EPA). This basic goal of stormwater management management is to improve water quality by reducing pollutants in storm water discharges. Runoff from sites has a potential for pollution due to exposed soils and 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 they leave the construction site are the best practices for controlling storm water pollution.

The following Subsections of ODOT's Standard Specification book should be noted:

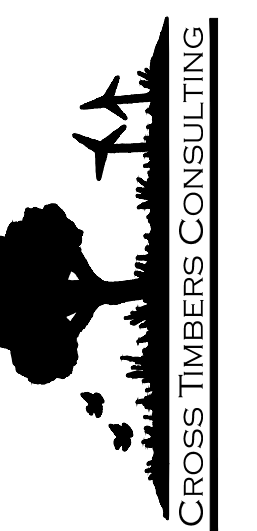
- 103.05 Bonding Requirements
- 104.08 Final Cleaning Up
- 106.06 Storage of Materials
- 107.01 Laws To Be Observed
- 107.15 Contractor's Responsibility for Work
- 220.01 & 220.04 Temporary Erosion and Sediment Control

In addition:
 "EPA - Final NPDES General Permits for Storm Water Discharges From Construction Sites: Notices"
 Federal Register, Wednesday, September 9, 1992 - Volume 57, Number 175

NOTE: NOTICE OF INTENT (NOI) SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN FROM THE ENVIRONMENTAL PROTECTION AGENCY (EPA). THE CONTRACTOR SHALL NOT PROCEED WITH PROJECT WORK UNTIL ENVIRONMENTAL PROTECTION AGENCY HAS NOTIFIED THE MUSCOGEE (CREEK) NATION OF APPROVAL. THE CONTRACTOR SHALL GIVE A COPY OF THE NOI TO THE MUSCOGEE (CREEK) NATION ROADS MANAGER AND A COPY SHALL BE POSTED ON THE PROJECT AT ALL TIMES.

STORMWATER POLLUTION PREVENTION PLAN
 GREENLEAF CHURCH ROAD
 SECTION 15, 16, 21, 22 T-11-N R-9-E
 OKFUSKEE COUNTY, OKLAHOMA

CROSS TIMBERS CONSULTING, LLC
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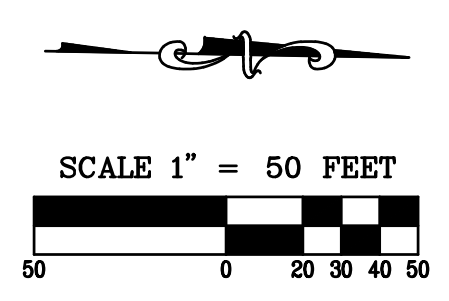
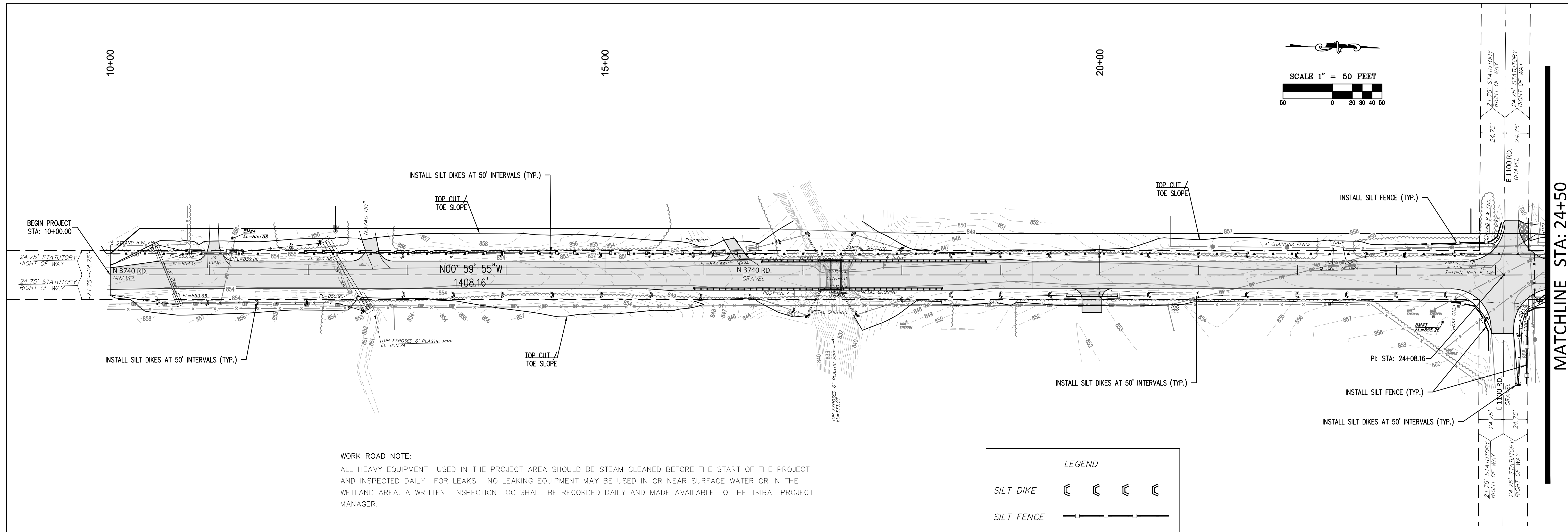
REV	DATE	DESCRIPTION
1	8/22/20	ISSUED AND OUTLET SECTION
2	8/25/20	FOR CHURCH ROAD
3	7/12/21	FOR CHURCH ROAD
4	7/12/21	FOR CHURCH ROAD
5	1/28/23	FOR CHURCH ROAD

Drawn By: DJM
 Date: JULY 12, 2023

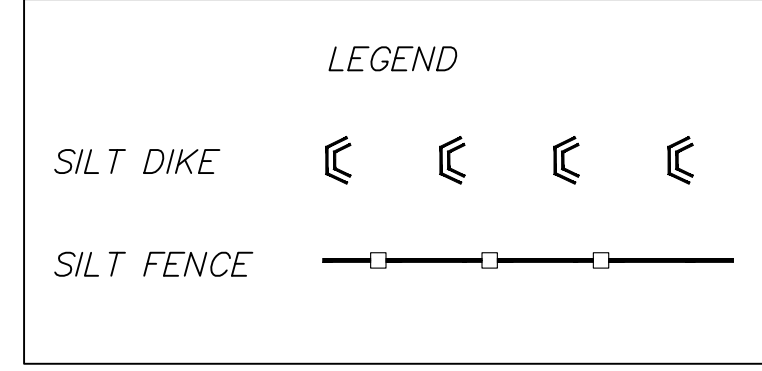
PROJECT MCN-044

SHEET **5**

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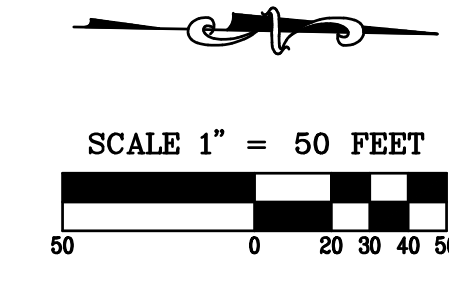
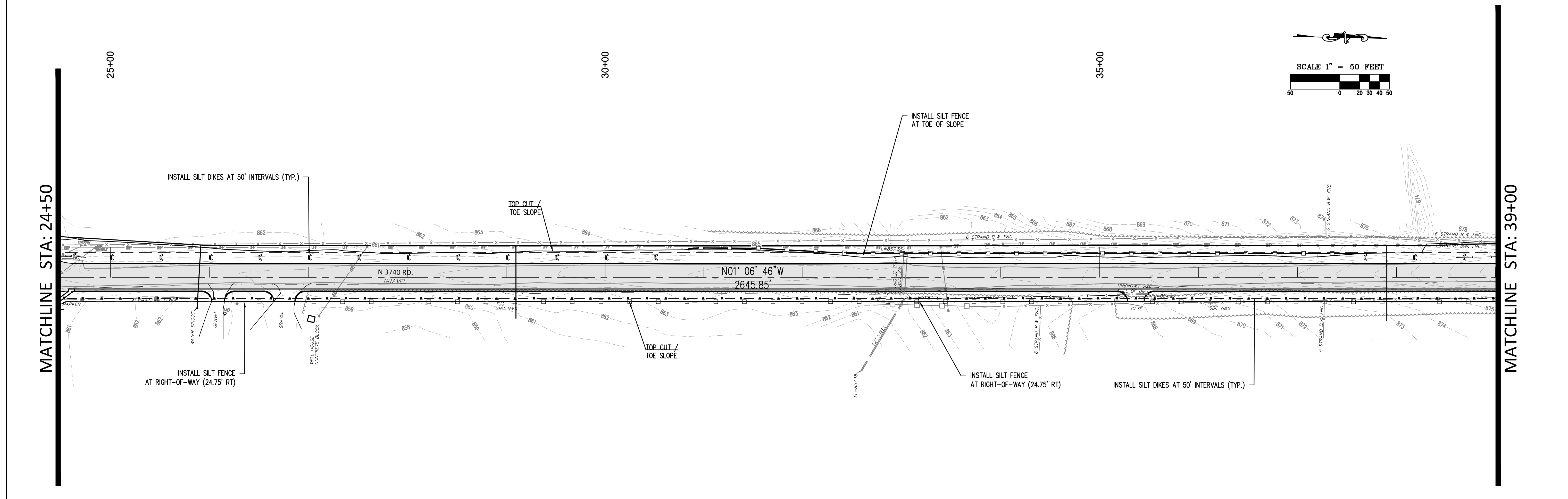


WORK ROAD NOTE:
 ALL HEAVY EQUIPMENT USED IN THE PROJECT AREA SHOULD BE STEAM CLEANED BEFORE THE START OF THE PROJECT AND INSPECTED DAILY FOR LEAKS. NO LEAKING EQUIPMENT MAY BE USED IN OR NEAR SURFACE WATER OR IN THE WETLAND AREA. A WRITTEN INSPECTION LOG SHALL BE RECORDED DAILY AND MADE AVAILABLE TO THE TRIBAL PROJECT MANAGER.



TEMPORARY EROSION CONTROL:
 EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO EXCAVATION AS REQUIRED BY THE EROSION CONTROL PLAN. WORK PERFORMED FOR INSTALLATION, MAINTENANCE, REMOVAL OR REPLACEMENT SHALL BE DOCUMENTED ON THE EROSION CONTROL PLAN SHEET WITH EACH PAY ESTIMATE, ANNOTATED/RED LINED TO SHOW THE EROSION CONTROL DEVICES THAT HAVE BEEN INSTALLED AND ARE BEING MAINTAINED. PRICE BID TO INCLUDE COST TO REPAIR, MAINTAIN, REMOVE AND RESTORATION OF ERODED SLOPES AS NECESSARY.

MATCHLINE STA: 24+50



MATCHLINE STA: 24+50

MATCHLINE STA: 39+00

EROSION CONTROL PLAN
 GREENLEAF CHURCH ROAD
 SECTION 15,16,21,22 T-11-N R-9-E
 OKFUSKEE COUNTY, OKLAHOMA

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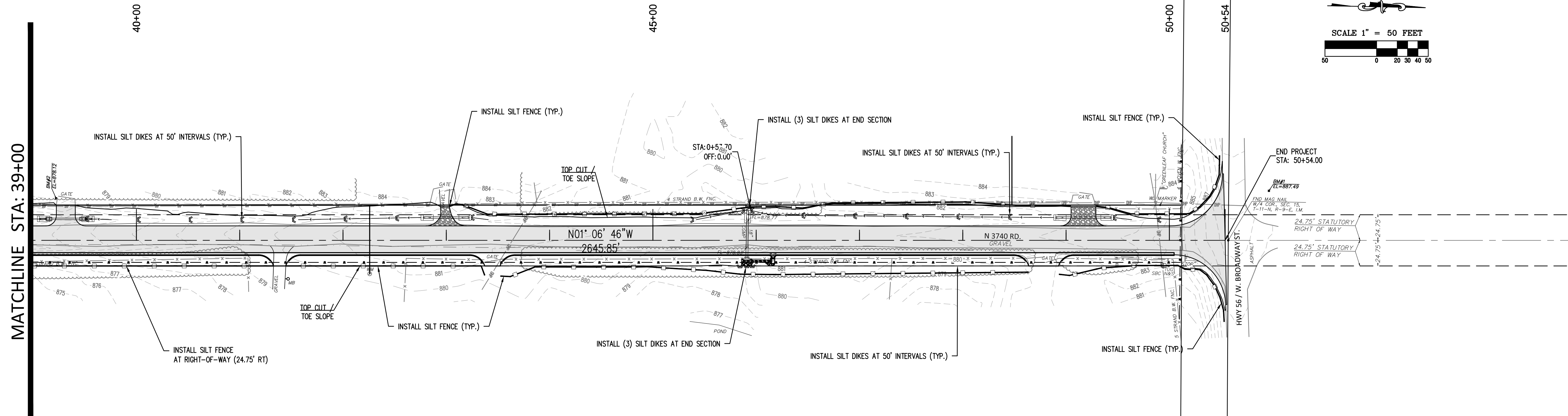


NO.	DATE	REVISIONS
1	8/27/23	ISSUED FOR PERMIT AND OUTLET SECTION
2	8/29/23	REVISED FOR CHURCH ROAD
3	9/12/23	REVISED FOR CHURCH ROAD
4	11/21/23	REVISED FOR CHURCH ROAD
5	1/29/24	REVISED FOR CHURCH ROAD

Drawn By: DJM
 Date: JULY 12, 2023

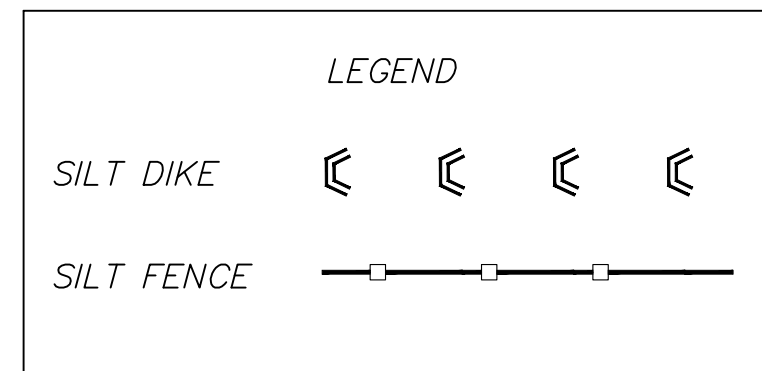
PROJECT MCN-044

SHEET 6



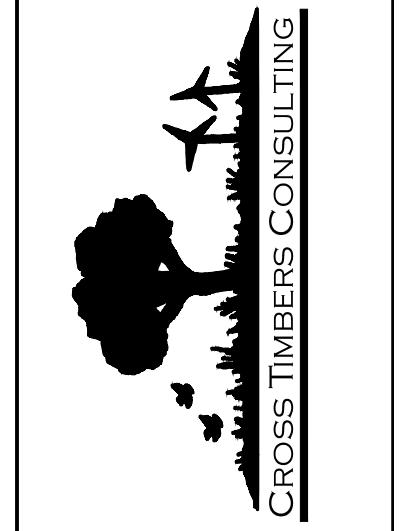
WORK ROAD NOTE:
 ALL HEAVY EQUIPMENT USED IN THE PROJECT AREA SHOULD BE STEAM CLEANED BEFORE THE START OF THE PROJECT AND INSPECTED DAILY FOR LEAKS. NO LEAKING EQUIPMENT MAY BE USED IN OR NEAR SURFACE WATER OR IN THE WETLAND AREA. A WRITTEN INSPECTION LOG SHALL BE RECORDED DAILY AND MADE AVAILABLE TO THE TRIBAL PROJECT MANAGER.

TEMPORARY EROSION CONTROL:
 EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO EXCAVATION AS REQUIRED BY THE EROSION CONTROL PLAN. WORK PERFORMED FOR INSTALLATION, MAINTENANCE, REMOVAL OR REPLACEMENT SHALL BE DOCUMENTED ON THE EROSION CONTROL PLAN FOR THE DURATION OF THE PROJECT. THE CONTRACTOR SHALL SUBMIT A COPY OF THE EROSION CONTROL PLAN SHEET WITH EACH PAY ESTIMATE, ANNOTATED/RED LINED TO SHOW THE EROSION CONTROL DEVICES THAT HAVE BEEN INSTALLED AND ARE BEING MAINTAINED. PRICE BID TO INCLUDE COST TO REPAIR, MAINTAIN, REMOVAL AND RESTORATION OF ERODED SLOPES AS NECESSARY.



EROSION CONTROL PLAN
 GREENLEAF CHURCH ROAD
 SECTION 15,16,21,22 T-11-N R-9-E
 OKFUSKEE COUNTY, OKLAHOMA

CROSS TIMBERS CONSULTING, LLC
 P.O. BOX 87
 Alex, Oklahoma, 73002
 Phone: (405) 222-8280

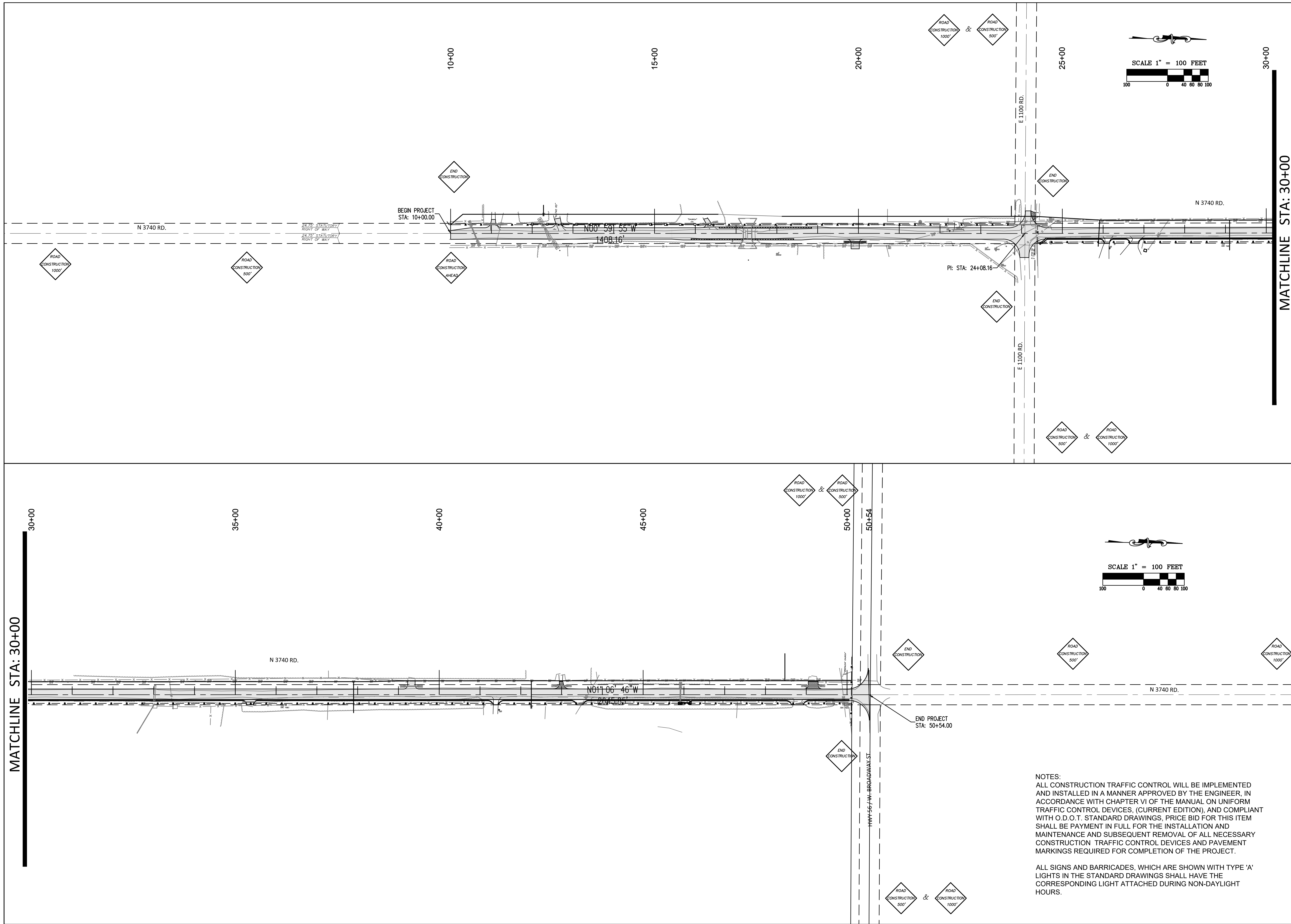


NO.	DATE	REVISIONS	BY
1	8/27/20	ISSUED FOR PERMITS AND OUTLET SECTION	DJM
2	8/27/20	CHANGE FOR CHURCH ROAD	DJM
3	7/12/21	CHANGE FOR CHANGE ORDER	DJM
4	7/12/21	CHANGE FOR CHANGE ORDER	DJM
5	1/29/23	CHANGE FOR CHANGE ORDER	DJM

Drawn By: DJM
 Date: JULY 12, 2023

PROJECT MCN-044

SHEET 7



TRAFFIC CONTROL PLAN
 GREENLEAF CHURCH ROAD
 SECTION 15,16,21,22 T-11-N R-9-E
 OKFUSKEE COUNTY, OKLAHOMA

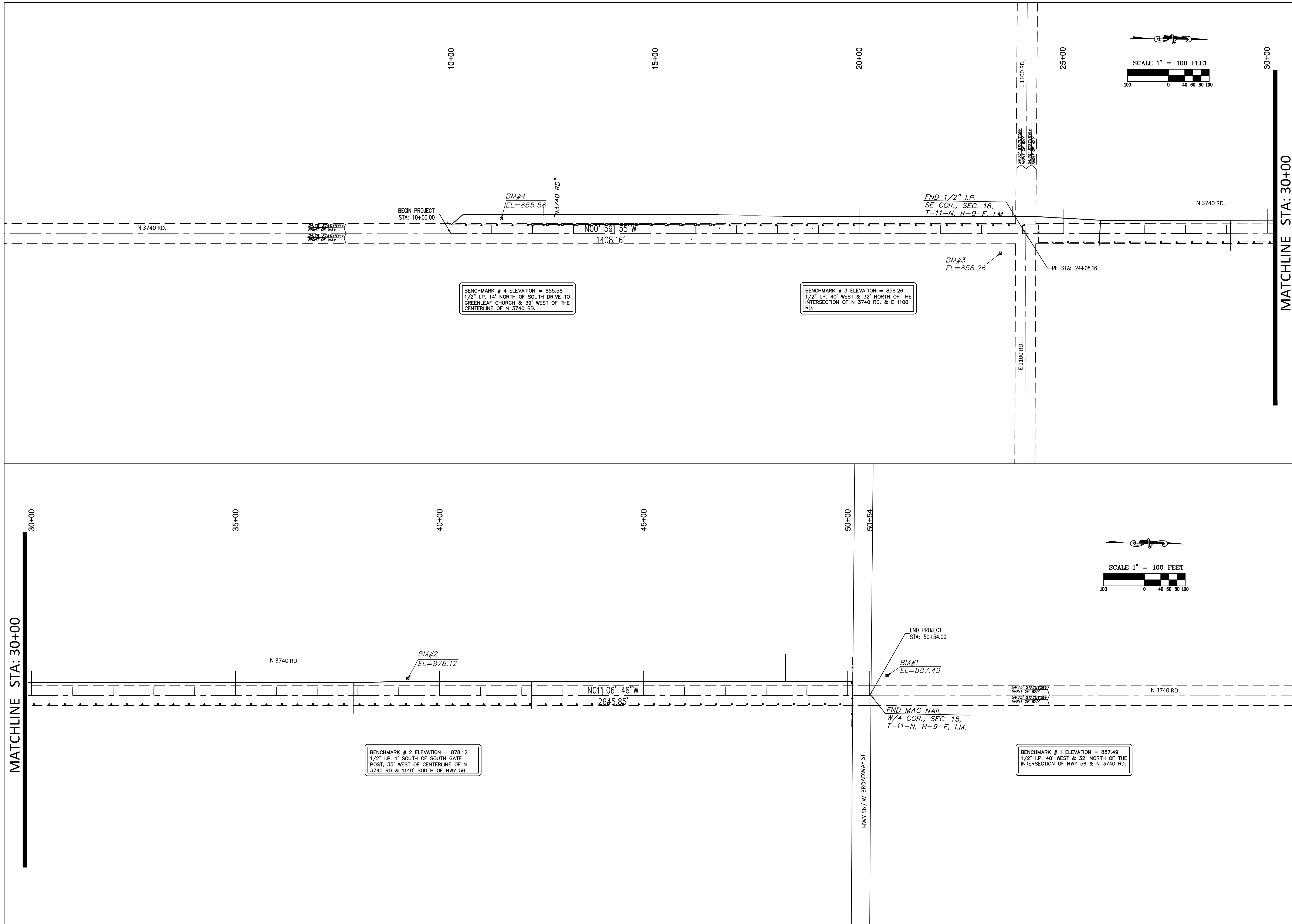
CROSS TIMBERS CONSULTING, LLC
 P.O. BOX 87
 Alex, Oklahoma, 73002
 Phone: (405) 222-8280

NO.	DATE	REVISIONS
1	8/27/23	ISSUED FOR PERMITS AND UTILITY SECTION
2	8/29/23	REVISED FOR CHURCH ROAD
3	9/12/23	REVISED FOR CHURCH ROAD
4	9/12/23	REVISED FOR CHURCH ROAD
5	10/27/23	REVISED FOR CHURCH ROAD

Drawn By: DJM
 Date: JULY 12, 2023
 PROJECT MCN-044
 SHEET **8**

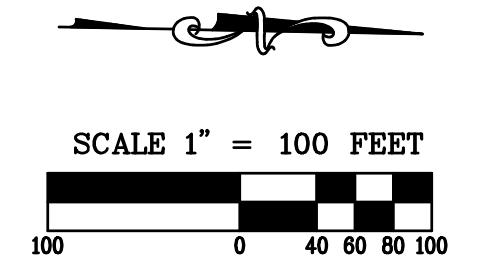
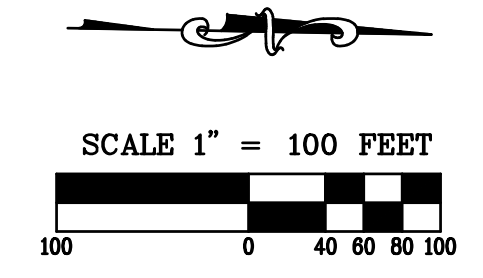
NOTES:
 ALL CONSTRUCTION TRAFFIC CONTROL WILL BE IMPLEMENTED AND INSTALLED IN A MANNER APPROVED BY THE ENGINEER, IN ACCORDANCE WITH CHAPTER VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (CURRENT EDITION), AND COMPLIANT WITH O.D.O.T. STANDARD DRAWINGS, PRICE BID FOR THIS ITEM SHALL BE PAYMENT IN FULL FOR THE INSTALLATION AND MAINTENANCE AND SUBSEQUENT REMOVAL OF ALL NECESSARY CONSTRUCTION TRAFFIC CONTROL DEVICES AND PAVEMENT MARKINGS REQUIRED FOR COMPLETION OF THE PROJECT.

ALL SIGNS AND BARRICADES, WHICH ARE SHOWN WITH TYPE 'A' LIGHTS IN THE STANDARD DRAWINGS SHALL HAVE THE CORRESPONDING LIGHT ATTACHED DURING NON-DAYLIGHT HOURS.



MATCHLINE STA: 30+00

MATCHLINE STA: 30+00



SURVEY CONTROL PLAN
 GREENLEAF CHURCH ROAD
 SECTION 15, 16, 21, 22 T-11-N R-9-E
 OKFUSKEE COUNTY, OKLAHOMA

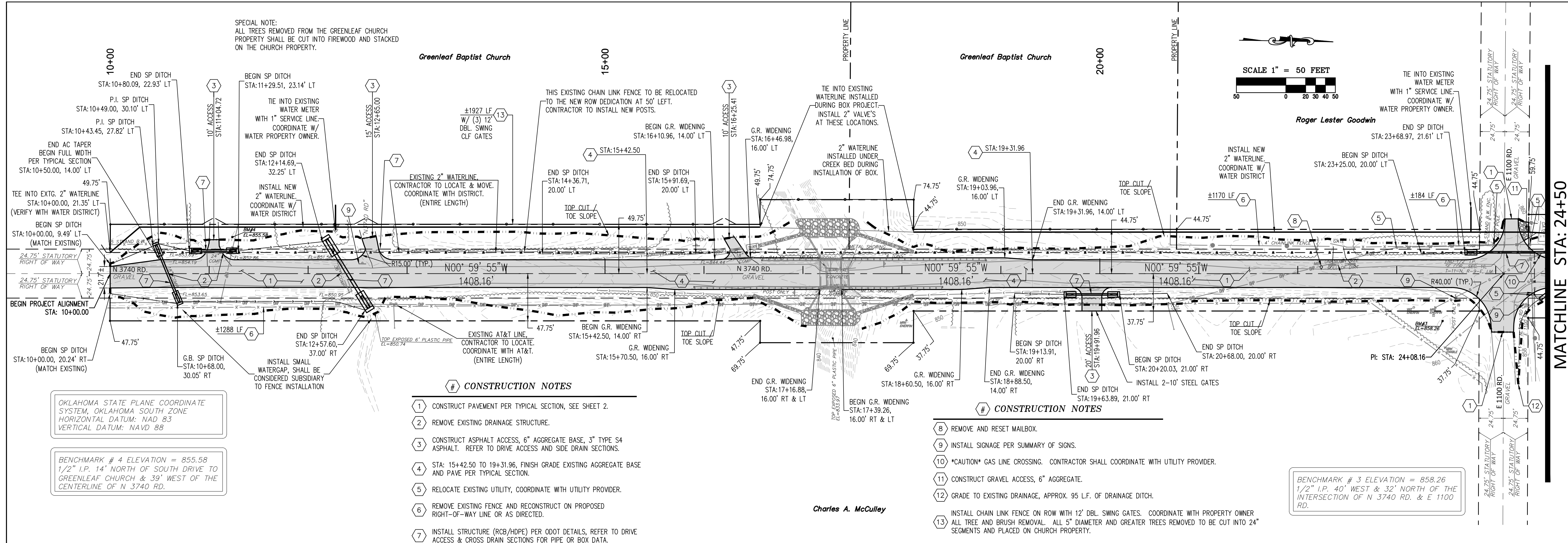
CROSS TIMBERS CONSULTING, LLC
 P.O. BOX 87
 Alex, Oklahoma, 73002
 Phone: (405) 222-8280

NO.	DATE	REVISIONS	BY	DATE
1	8/27/20	ISSUED FOR PERMITS AND OUTLET SECTION		
2	8/27/20	CHANGE FOR CHURCH ROAD		
3	7/12/21	CHANGE FOR CHURCH ROAD		
4	7/12/21	CHANGE FOR CHURCH ROAD		
5	1/29/23	CHANGE FOR CHURCH ROAD		

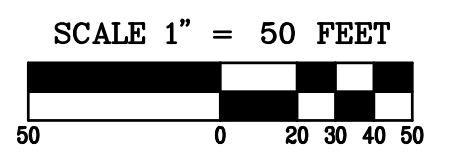
Drawn By: DJM
 Date: JULY 12, 2023

PROJECT MCN-044

SHEET **9**



SPECIAL NOTE:
ALL TREES REMOVED FROM THE GREENLEAF CHURCH PROPERTY SHALL BE CUT INTO FIREWOOD AND STACKED ON THE CHURCH PROPERTY.



OKLAHOMA STATE PLANE COORDINATE SYSTEM, OKLAHOMA SOUTH ZONE
HORIZONTAL DATUM: NAD 83
VERTICAL DATUM: NAVD 88

BENCHMARK # 4 ELEVATION = 855.58
1/2" I.P. 14' NORTH OF SOUTH DRIVE TO GREENLEAF CHURCH & 39' WEST OF THE CENTERLINE OF N 3740 RD.

BENCHMARK # 3 ELEVATION = 858.26
1/2" I.P. 40' WEST & 32' NORTH OF THE INTERSECTION OF N 3740 RD. & E 1100 RD.

CONSTRUCTION NOTES

- 1 CONSTRUCT PAVEMENT PER TYPICAL SECTION, SEE SHEET 2.
- 2 REMOVE EXISTING DRAINAGE STRUCTURE.
- 3 CONSTRUCT ASPHALT ACCESS, 6" AGGREGATE BASE, 3" TYPE S4 ASPHALT. REFER TO DRIVE ACCESS AND SIDE DRAIN SECTIONS.
- 4 STA: 15+42.50 TO 19+31.96, FINISH GRADE EXISTING AGGREGATE BASE AND PAVE PER TYPICAL SECTION.
- 5 RELOCATE EXISTING UTILITY, COORDINATE WITH UTILITY PROVIDER.
- 6 REMOVE EXISTING FENCE AND RECONSTRUCT ON PROPOSED RIGHT-OF-WAY LINE OR AS DIRECTED.
- 7 INSTALL STRUCTURE (RCB/HOPE) PER ODOT DETAILS, REFER TO DRIVE ACCESS & CROSS DRAIN SECTIONS FOR PIPE OR BOX DATA.

CONSTRUCTION NOTES

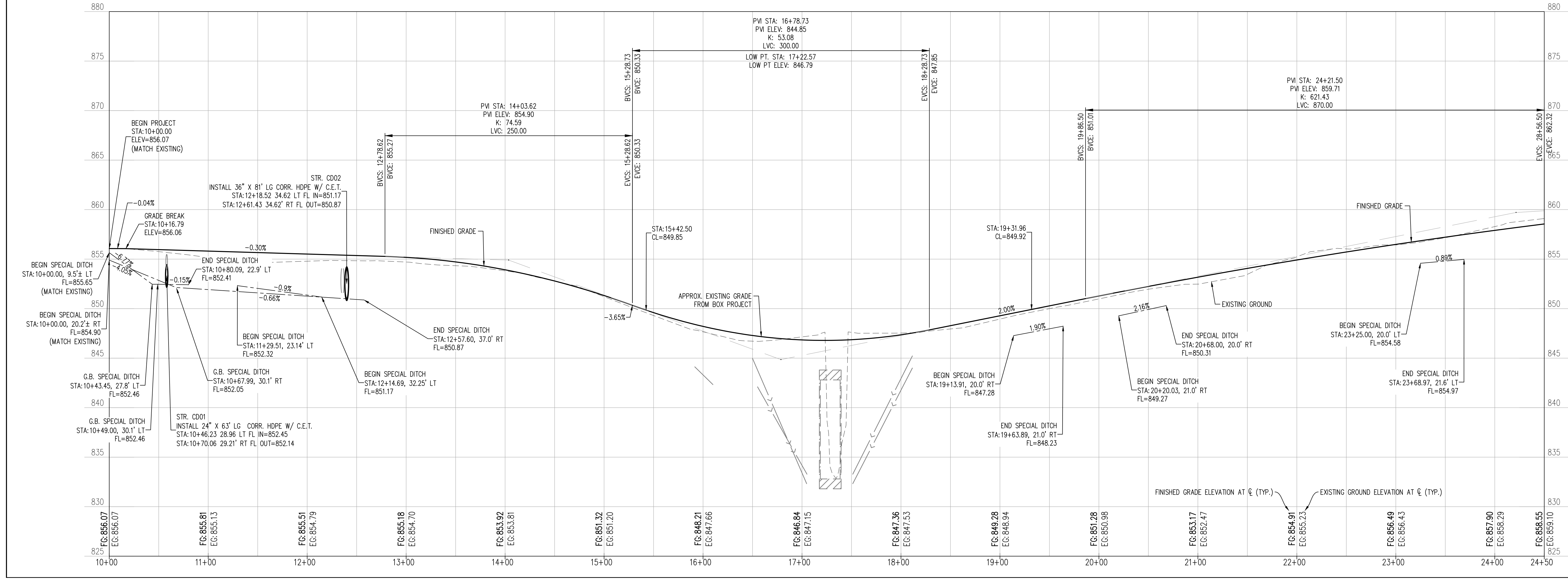
- 8 REMOVE AND RESET MAILBOX.
- 9 INSTALL SIGNAGE PER SUMMARY OF SIGNS.
- 10 *CAUTION* GAS LINE CROSSING. CONTRACTOR SHALL COORDINATE WITH UTILITY PROVIDER.
- 11 CONSTRUCT GRAVEL ACCESS, 6" AGGREGATE.
- 12 GRADE TO EXISTING DRAINAGE, APPROX. 95 LF. OF DRAINAGE DITCH.
- 13 INSTALL CHAIN LINK FENCE ON ROW WITH 12" DBL. SWING GATES. COORDINATE WITH PROPERTY OWNER ALL TREE AND BRUSH REMOVAL. ALL 3" DIAMETER AND GREATER TREES REMOVED TO BE CUT INTO 24" SEGMENTS AND PLACED ON CHURCH PROPERTY.

Charles A. McCulley

MATCHLINE STA: 24+50

ROADWAY PLAN AND PROFILE
GREENLEAF CHURCH ROAD
SECTION 15,16,21,22 T-11-N R-9-E
OKFUSKEE COUNTY, OKLAHOMA

CROSS TIMBERS CONSULTING, LLC
P.O. BOX 87
Alex, Oklahoma, 73002
Phone: (405) 222-8280



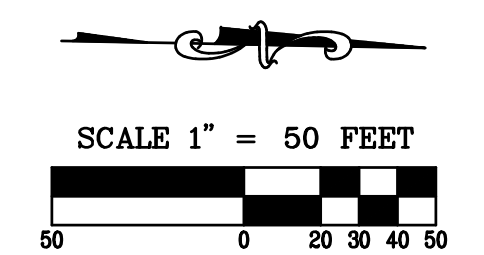
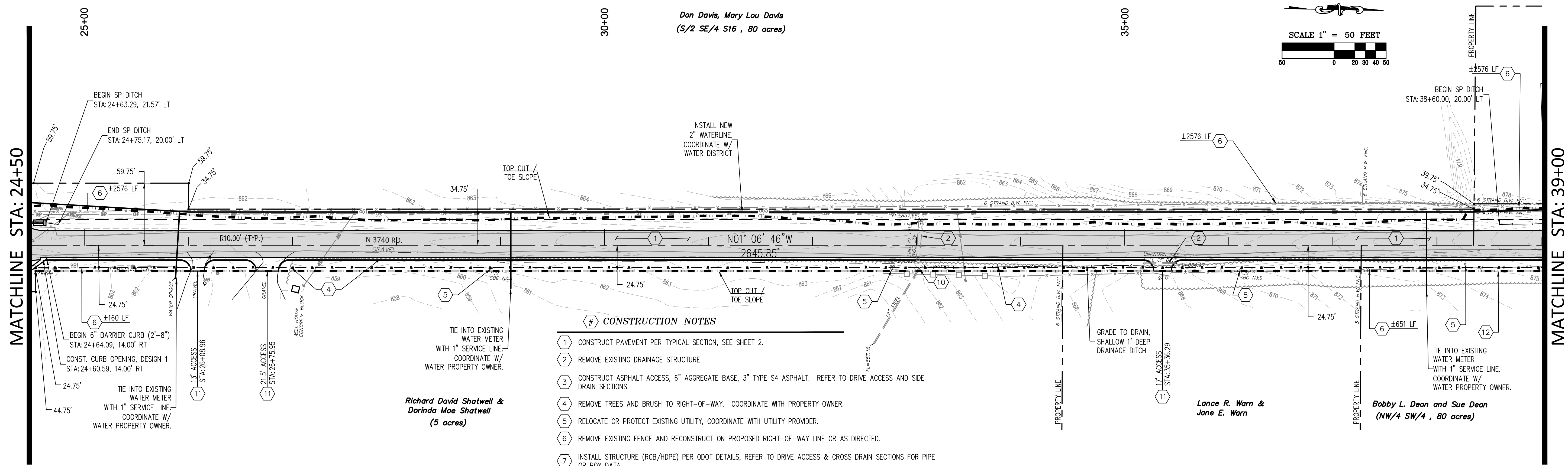
NO.	DATE	REVISIONS
1	8/27/23	ISSUED FOR PERMITTING
2	8/29/23	FOR CHURCH REVIEW
3	9/12/23	FOR CHURCH REVIEW
4	9/12/23	FOR CHURCH REVIEW
5	11/29/23	FOR CHURCH REVIEW

Drawn By: DJM
Date: JULY 12, 2023

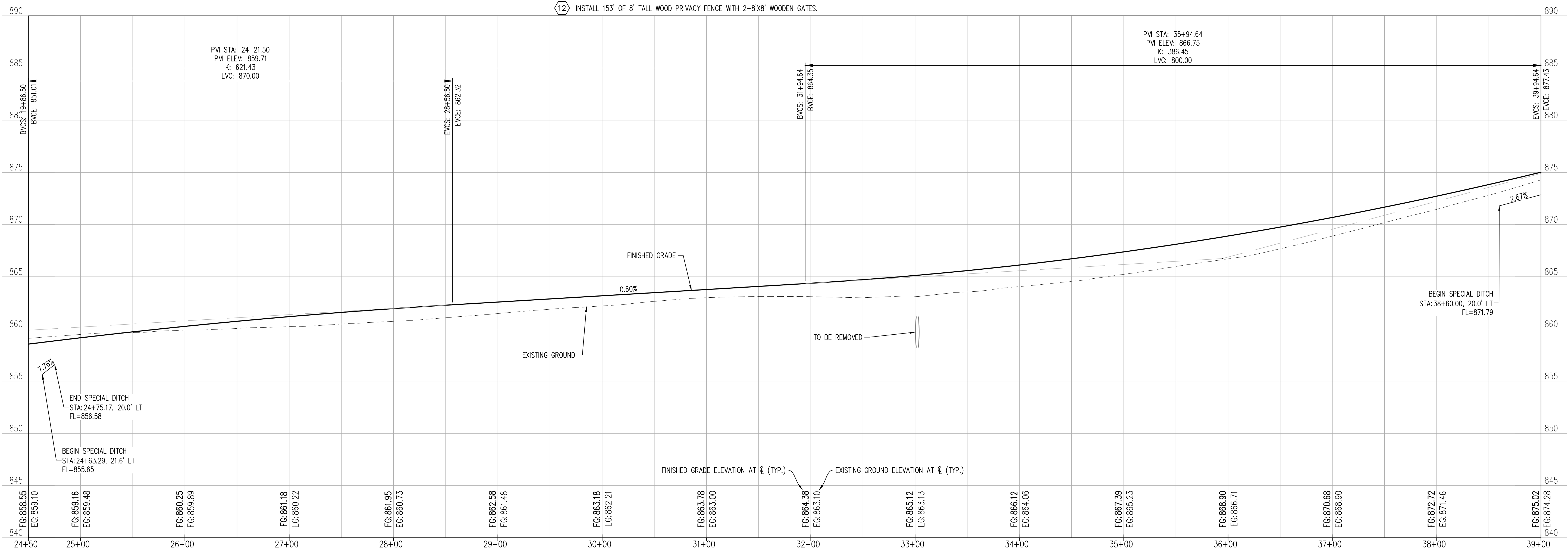
PROJECT MCN-044

SHEET 10

CROSS TIMBERS DRAWING FILE:MCN044_P&P - (1).dwg



- CONSTRUCTION NOTES**
1. CONSTRUCT PAVEMENT PER TYPICAL SECTION, SEE SHEET 2.
 2. REMOVE EXISTING DRAINAGE STRUCTURE.
 3. CONSTRUCT ASPHALT ACCESS, 6" AGGREGATE BASE, 3" TYPE S4 ASPHALT. REFER TO DRIVE ACCESS AND SIDE DRAIN SECTIONS.
 4. REMOVE TREES AND BRUSH TO RIGHT-OF-WAY. COORDINATE WITH PROPERTY OWNER.
 5. RELOCATE OR PROTECT EXISTING UTILITY, COORDINATE WITH UTILITY PROVIDER.
 6. REMOVE EXISTING FENCE AND RECONSTRUCT ON PROPOSED RIGHT-OF-WAY LINE OR AS DIRECTED.
 7. INSTALL STRUCTURE (RCB/HOPE) PER ODOT DETAILS, REFER TO DRIVE ACCESS & CROSS DRAIN SECTIONS FOR PIPE OR BOX DATA.
 8. REMOVE AND RESET MAILBOX.
 9. INSTALL SIGNAGE PER SUMMARY OF SIGNS.
 10. BEVEL END OF EXISTING 12" STEEL PIPE TO MATCH SLOPE.
 11. CONSTRUCT TYPE I CONCRETE RESIDENTIAL DRIVEWAY, ODOT DETAIL CSCD-5, 4" AGGREGATE BASE.
 12. INSTALL 15' OF 8' TALL WOOD PRIVACY FENCE WITH 2'-8\"/>



ROADWAY PLAN AND PROFILE
 GREENLEAF CHURCH ROAD
 SECTION 15,16,21,22 T-11-N R-9-E
 OKFUSKEE COUNTY, OKLAHOMA

CROSS TIMBERS CONSULTING, LLC
 P.O. BOX 87
 Alex, Oklahoma, 73002
 Phone: (405) 222-8280

NO.	DATE	REVISIONS	BY	CHKD
1	8/27/23	ISSUE FOR PERMITS AND UTILITY SECTION		
2	8/29/23	REVISED CURB AND GUTTER SECTION		
3	9/12/23	REVISED CURB AND GUTTER SECTION		
4	9/12/23	REVISED DRIVEWAY, RCB, HOPE, MAILBOX		
5	11/29/23	REVISED DRIVEWAY, RCB, HOPE, MAILBOX, FENCE & PAVEMENT		

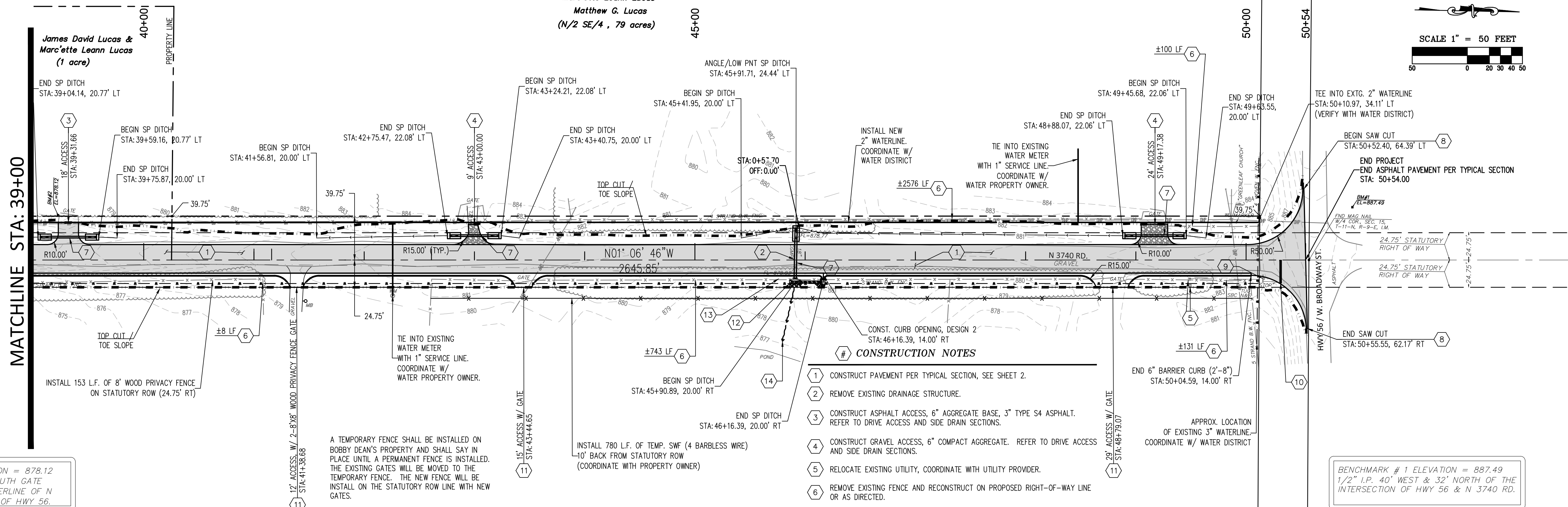
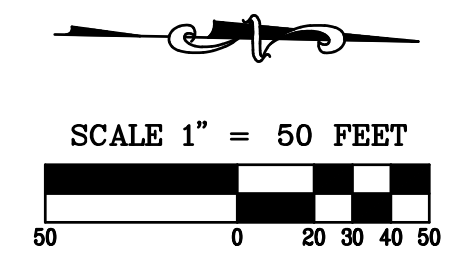
Drawn By: DJM
 Date: JULY 12, 2023

PROJECT MCN-044

SHEET **11**

James David Lucas,
Marc'ette Leann Lucas
Matthew G. Lucas
(N/2 SE/4, .79 acres)

45+00



MATCHLINE STA: 39+00

James David Lucas & Marc'ette Leann Lucas
(1 acre)

END SP DITCH STA: 39+04.14, 20.77' LT

BEGIN SP DITCH STA: 39+59.16, 20.77' LT

END SP DITCH STA: 39+75.87, 20.00' LT

BEGIN SP DITCH STA: 41+56.81, 20.00' LT

END SP DITCH STA: 42+75.47, 22.08' LT

BEGIN SP DITCH STA: 43+24.21, 22.08' LT

END SP DITCH STA: 43+40.75, 20.00' LT

BEGIN SP DITCH STA: 45+41.95, 20.00' LT

END SP DITCH STA: 45+57.70, 20.00' LT

BEGIN SP DITCH STA: 48+88.07, 22.06' LT

END SP DITCH STA: 49+63.55, 20.00' LT

BEGIN SP DITCH STA: 50+52.40, 64.39' LT

END SP DITCH STA: 50+54.00, 20.00' LT

BEGIN SAW CUT STA: 50+52.40, 64.39' LT

END PROJECT END ASPHALT PAVEMENT PER TYPICAL SECTION STA: 50+54.00

END SAW CUT STA: 50+55.55, 62.17' RT

TEE INTO EXTG. 2" WATERLINE STA: 50+10.97, 34.11' LT (VERIFY WITH WATER DISTRICT)

24.75' STATUTORY RIGHT OF WAY

24.75' STATUTORY RIGHT OF WAY

24.75' STATUTORY RIGHT OF WAY

24.75' STATUTORY RIGHT OF WAY

24.75' STATUTORY RIGHT OF WAY

24.75' STATUTORY RIGHT OF WAY

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24.75' STATUTORY RIGHT OF WAY

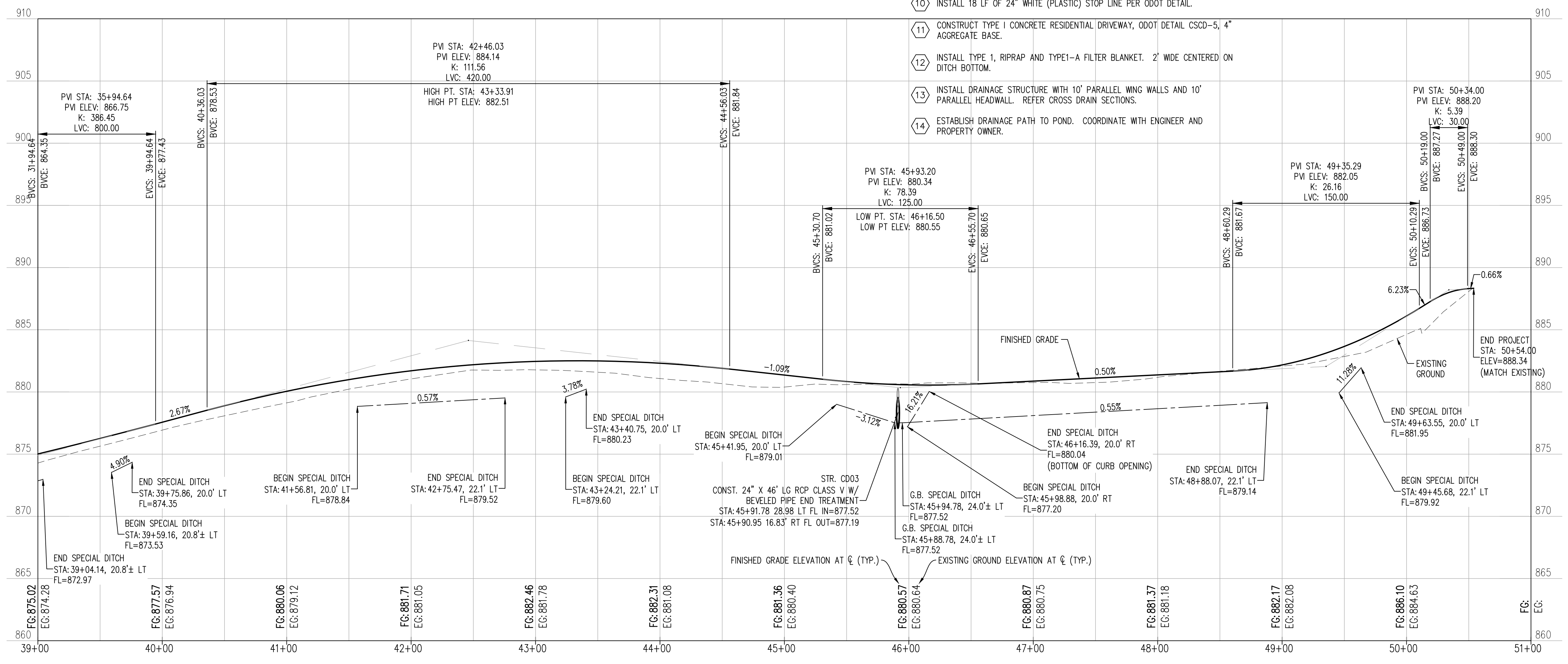
BENCHMARK # 2 ELEVATION = 878.12
1/2" I.P. 1' SOUTH OF SOUTH GATE POST, 35' WEST OF CENTERLINE OF N 3740 RD & 1140' SOUTH OF HWY 56.

BENCHMARK # 1 ELEVATION = 887.49
1/2" I.P. 40' WEST & 32' NORTH OF THE INTERSECTION OF HWY 56 & N 3740 RD.

CONSTRUCTION NOTES

- 1 CONSTRUCT PAVEMENT PER TYPICAL SECTION, SEE SHEET 2.
- 2 REMOVE EXISTING DRAINAGE STRUCTURE.
- 3 CONSTRUCT ASPHALT ACCESS, 6" AGGREGATE BASE, 3" TYPE S4 ASPHALT. REFER TO DRIVE ACCESS AND SIDE DRAIN SECTIONS.
- 4 CONSTRUCT GRAVEL ACCESS, 6" COMPACT AGGREGATE. REFER TO DRIVE ACCESS AND SIDE DRAIN SECTIONS.
- 5 RELOCATE EXISTING UTILITY, COORDINATE WITH UTILITY PROVIDER.
- 6 REMOVE EXISTING FENCE AND RECONSTRUCT ON PROPOSED RIGHT-OF-WAY LINE OR AS DIRECTED.
- 7 INSTALL STRUCTURE (RCB/HDPE) PER ODOT DETAILS, REFER TO DRIVE ACCESS & CROSS DRAIN SECTIONS AND BOX CULVERT PROFILES FOR PIPE OR BOX DATA.
- 8 SAW CUT 1.0' FROM EXISTING ASPHALT EDGE, FULL DEPTH AND MATCH EXISTING.
- 9 INSTALL SIGNAGE PER SUMMARY OF SIGNS.
- 10 INSTALL 18 LF OF 24" WHITE (PLASTIC) STOP LINE PER ODOT DETAIL.
- 11 CONSTRUCT TYPE 1 CONCRETE RESIDENTIAL DRIVEWAY, ODOT DETAIL CSCD-5, 4" AGGREGATE BASE.
- 12 INSTALL TYPE 1 RIPRAP AND TYPE-1A FILTER BLANKET. 2' WIDE CENTERED ON DITCH BOTTOM.
- 13 INSTALL DRAINAGE STRUCTURE WITH 10" PARALLEL WING WALLS AND 10" PARALLEL HEADWALL. REFER CROSS DRAIN SECTIONS.
- 14 ESTABLISH DRAINAGE PATH TO POND. COORDINATE WITH ENGINEER AND PROPERTY OWNER.

Bobby L. Dean and Sue Dean
(NW/4 SW/4, .80 acres)



910
905
900
895
890
885
880
875
870
865
860

910
905
900
895
890
885
880
875
870
865
860

39+00 40+00 41+00 42+00 43+00 44+00 45+00 46+00 47+00 48+00 49+00 50+00 51+00

ROADWAY PLAN AND PROFILE
GREENLEAF CHURCH ROAD
SECTION 15,16,21,22 T-11-N R-9-E
OKFUSKEE COUNTY, OKLAHOMA

CROSS TIMBERS CONSULTING, LLC
P.O. BOX 87
Alex, Oklahoma, 73002
Phone: (405) 222-8280

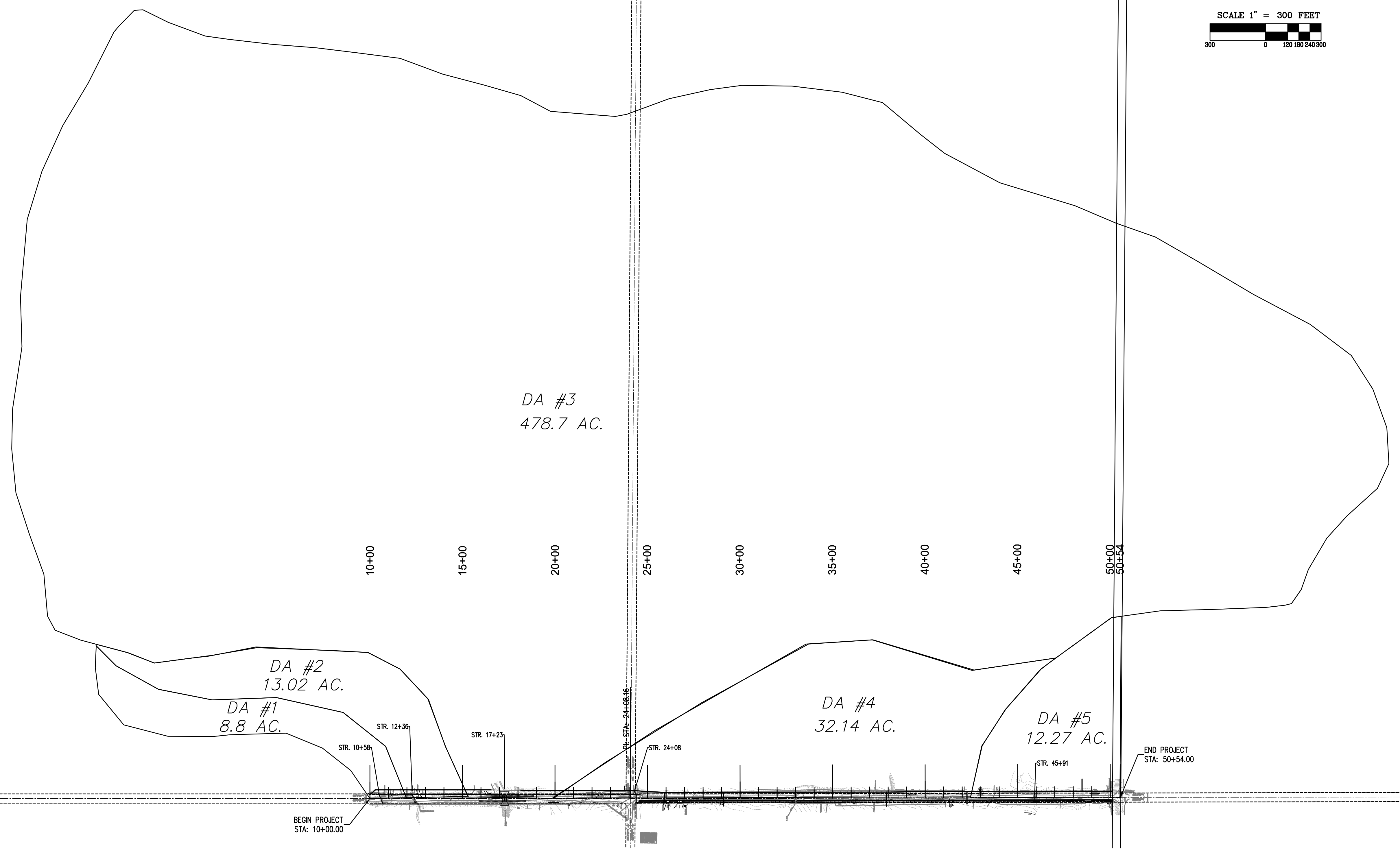
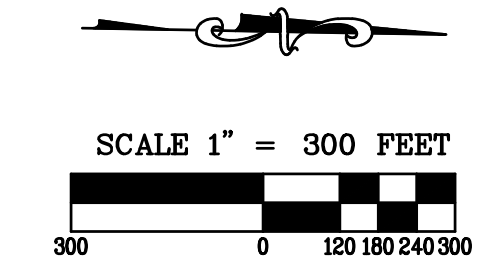
REV.	DATE	DESCRIPTION
1	7/12/23	ISSUE FOR PERMIT
2	7/12/23	REVISED FOR CHURCH ROAD
3	7/12/23	REVISED FOR CHURCH ROAD
4	7/12/23	REVISED FOR CHURCH ROAD
5	7/12/23	REVISED FOR CHURCH ROAD

Drawn By: DJM
Date: JULY 12, 2023

PROJECT MCN-044

SHEET 12

CROSS TIMBERS DRAWING FILE\MCN044 DRAINAGE BASIN MAP.dwg

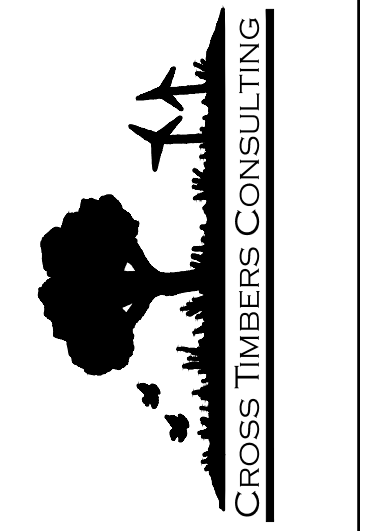


Drainage Area I.D.	Drainage Area Acres	Run-Off Factor "C"	t_c	Rainfall Intensity (iph)							Flow (cfs)						Description
				$I = a / (t_c + b)^c$							$Q = CIA$						
				a	b	c	I_2	I_5	I_{10}	I_{25}	I_{50}	I_{100}	Q_2	Q_5	Q_{10}	Q_{25}	
DA-1 - STR. 10+52	8.8	0.30	32.3	2.6	3.3	3.8	4.3	4.9	5.5	7.0	8.7	9.9	11.5	13.0	14.5		
DA-2 - STR. 12+30	13.0	0.30	34.0	2.6	3.2	3.6	4.2	4.8	5.3	10.0	12.5	14.2	16.5	18.8	20.8		
DA-3 - STR. 17+40	478.7									548.0	767.0	1172.0	1519.0	1860.0	REGIONAL REGRESSION EQUATIONS		
DA-4 - STR. 24+08 SIDEROAD	32.14	0.30	37.8	2.4	3.0	3.4	4.0	4.5	5.0	23.1	29.1	33.1	38.3	43.6	48.4		
DA-5 - STR. 45+91	12.27	0.30	23.4	3.2	3.9	4.4	5.1	5.8	6.5	11.7	14.3	16.3	18.9	21.5	23.9		

Drainage Area I.D.	$t_o = k(L^{0.37}/S^{0.2})$ Overland Flow				$t_s = k(L^2/S)^{0.385}$ Channel or Street Flow				Time of Concentration $t_c = t_o + t_s$
	K_o	L_o	S_o	T_o	K_s	L_s	S_s	T_s	
DA-1 - STR. 10+52	0.94	1971	2.64	32.3	0	0	0.0	0.0	32.3
DA-2 - STR. 12+30	0.94	2186	2.47	34.0	0	0	0.0	0.0	34.0
DA-4 - STR. 24+08 SIDEROAD	0.94	2510	1.87	37.8	0	0	0.0	0.0	37.8
DA-5 - STR. 45+91	0.94	1144	4.81	23.4	0	0	0.0	0.0	23.4

DRAINAGE BASIN MAP
 GREENLEAF CHURCH ROAD
 SECTION 15, 16, 21, 22 T-11-N R-9-E
 OKFUSKEE COUNTY, OKLAHOMA

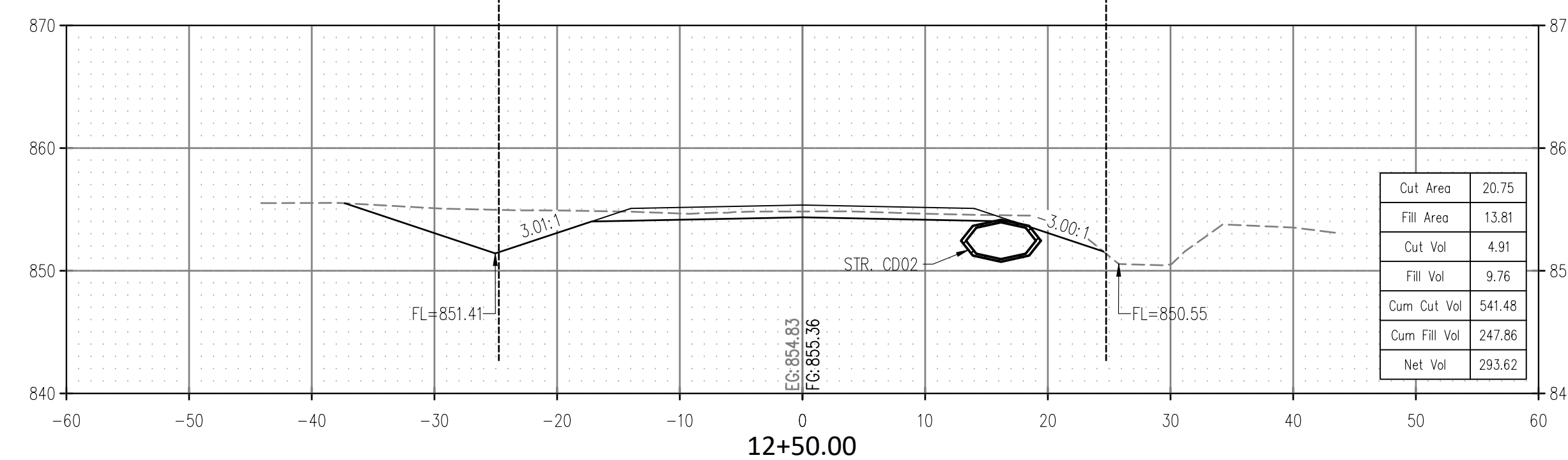
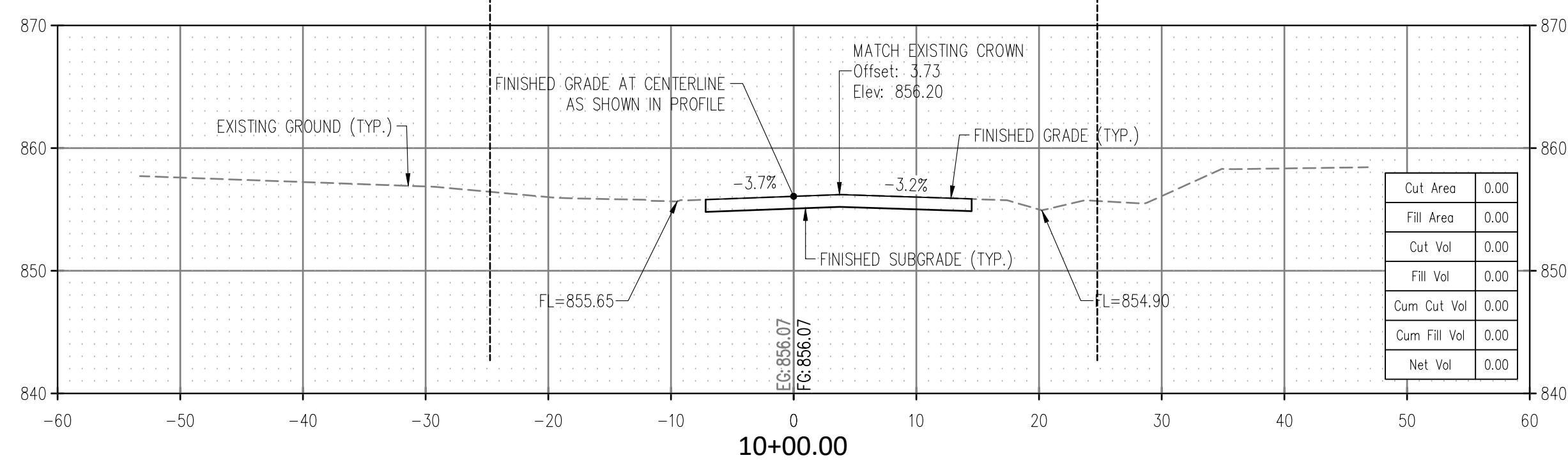
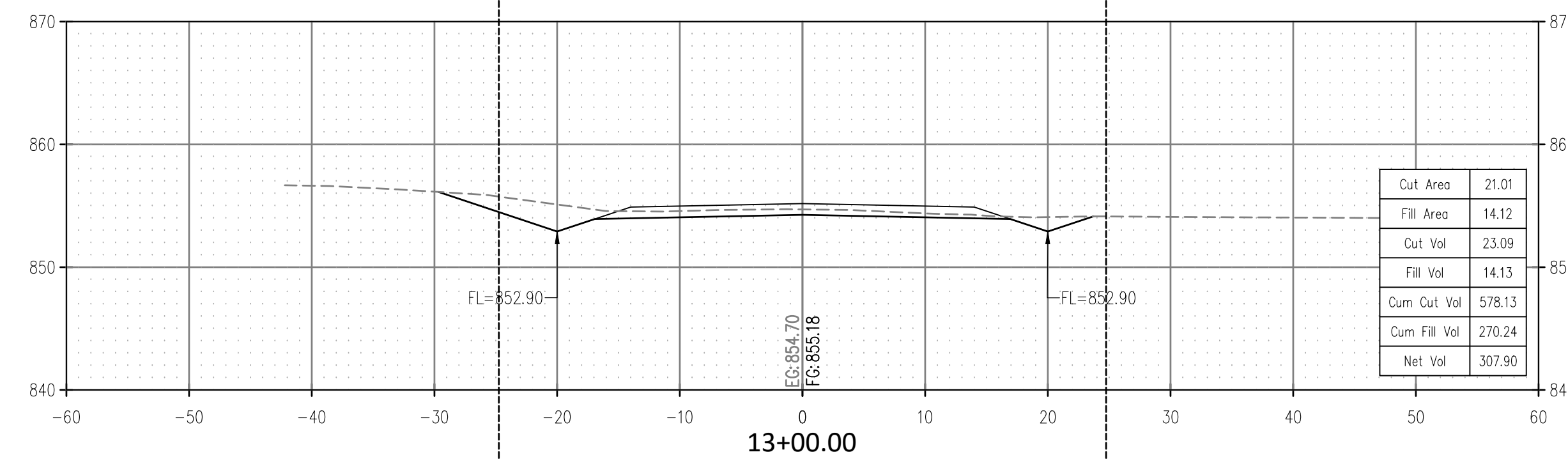
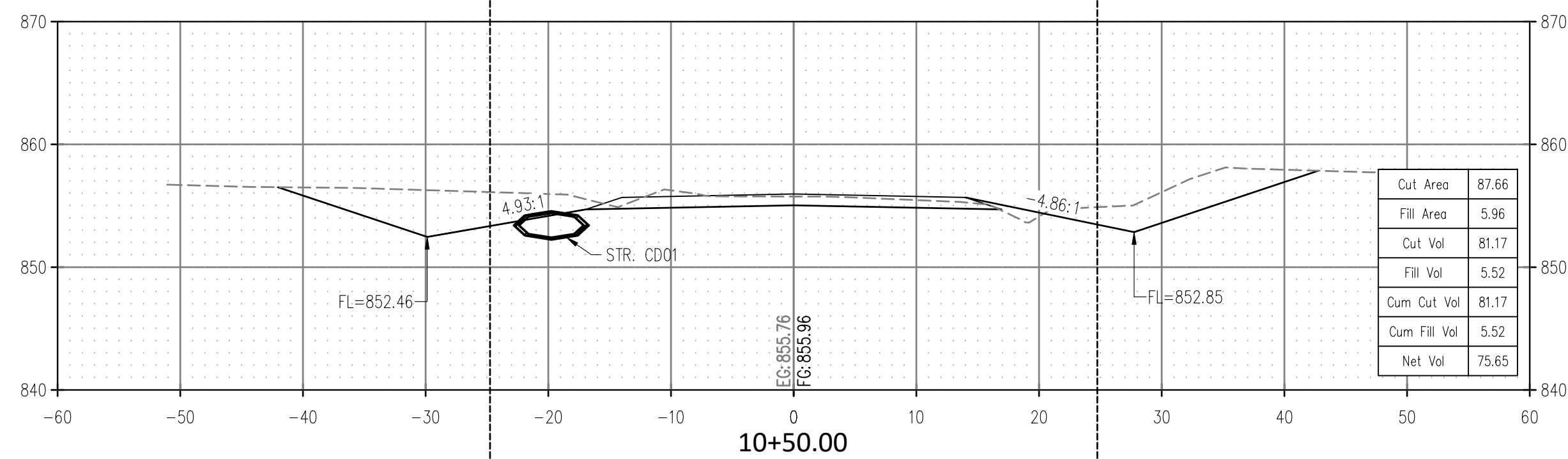
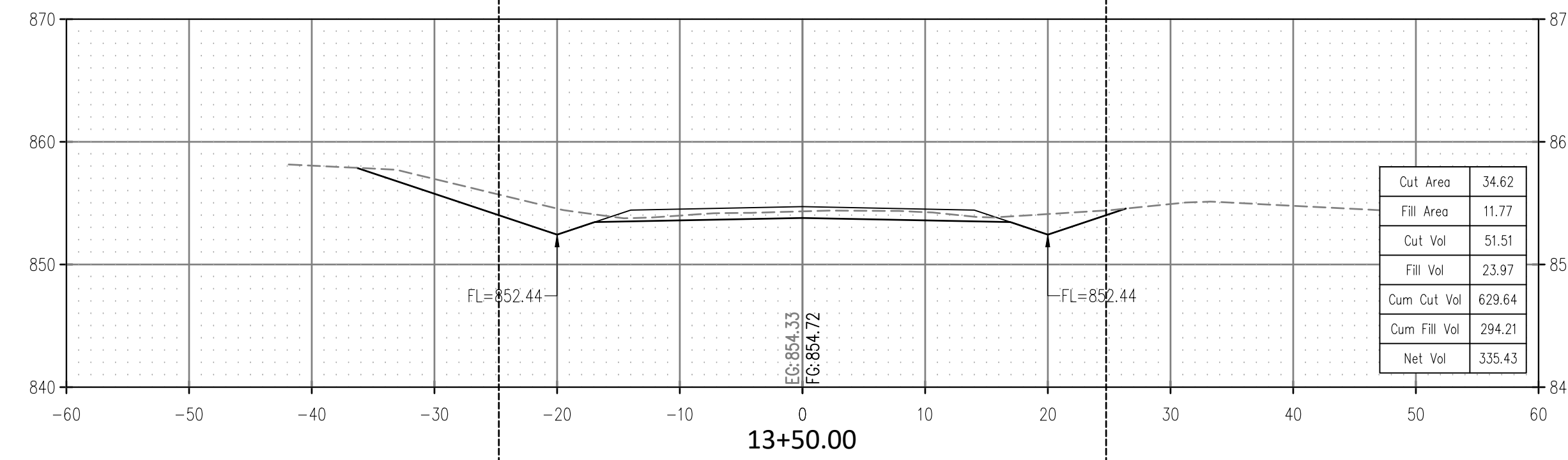
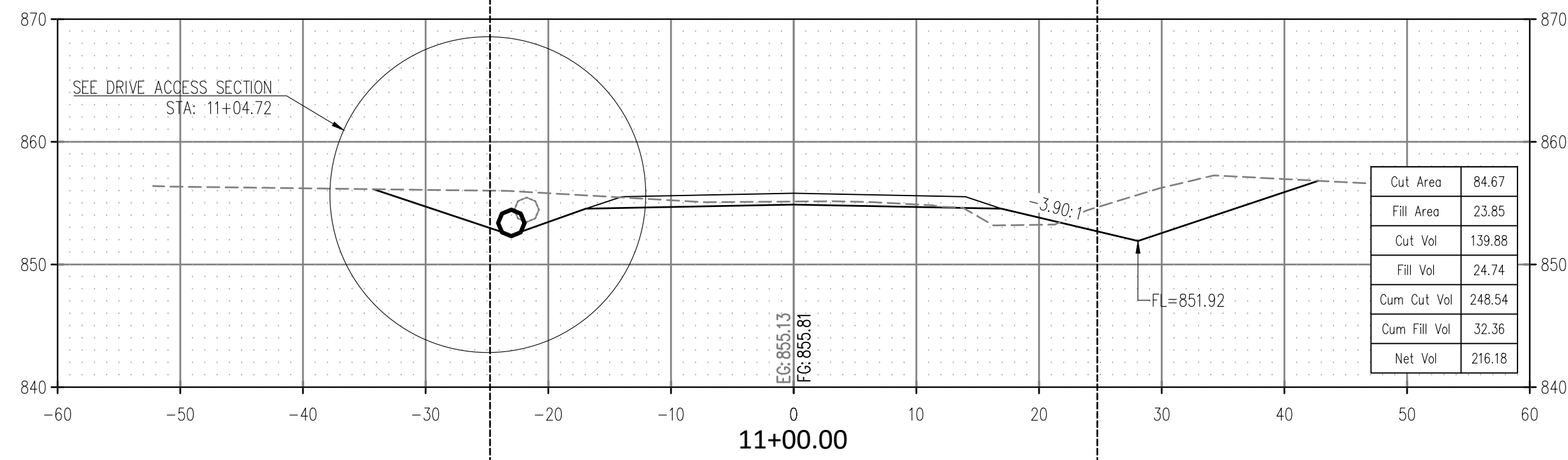
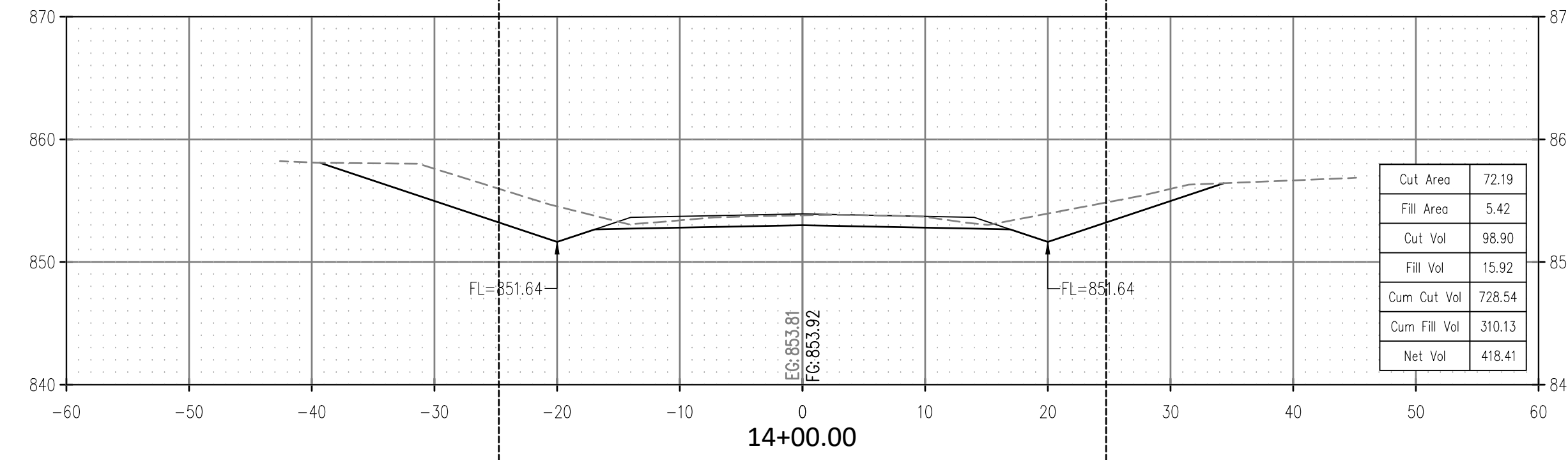
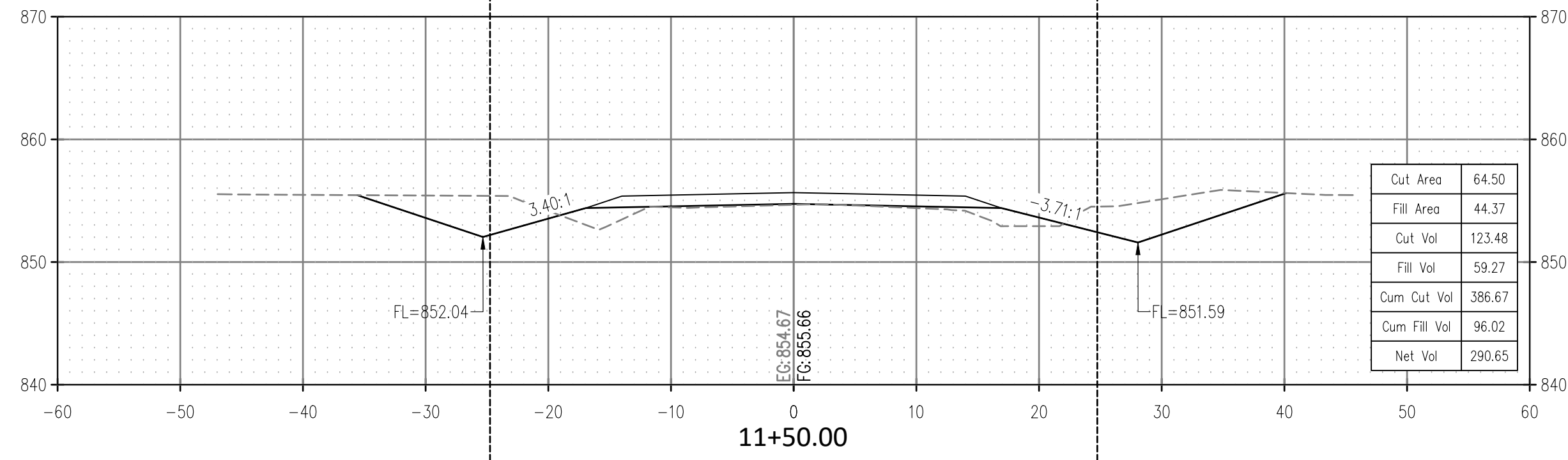
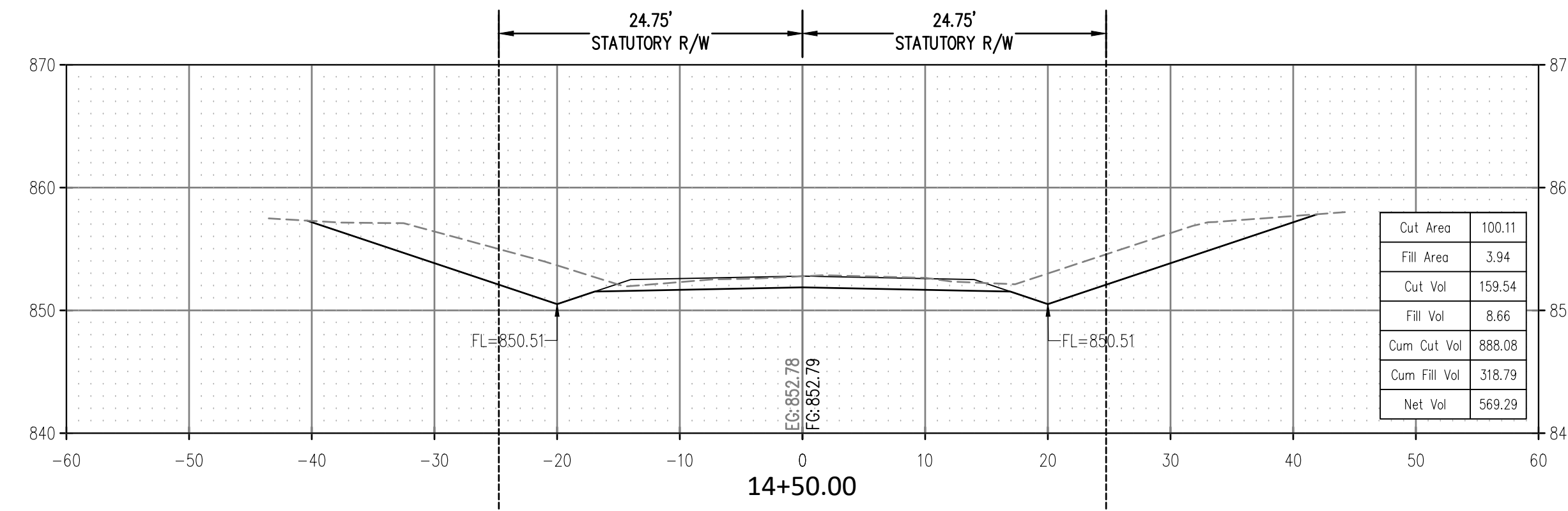
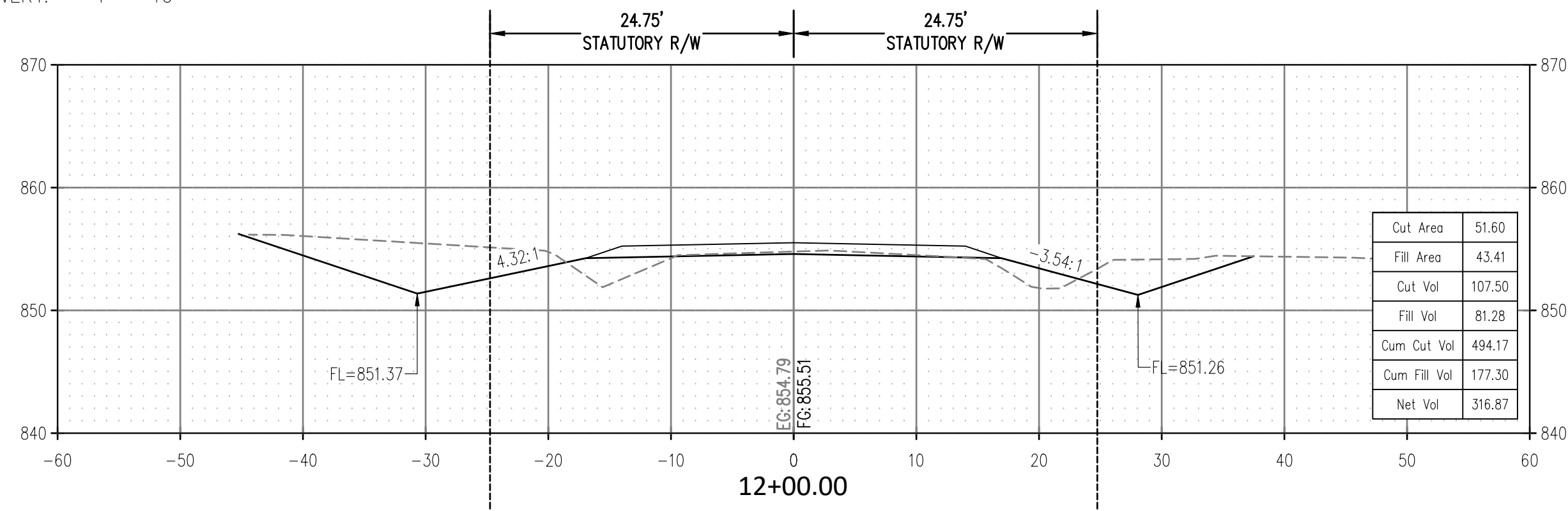
CROSS TIMBERS CONSULTING, LLC
 P.O. BOX 87
 Alex, Oklahoma, 73002
 Phone: (405) 222-8280



REV.	DATE	DESCRIPTION
1	8/22/23	ISSUED FOR PERMIT
2	8/22/23	FOR CHURCH ROAD
3	8/22/23	FOR CHURCH ROAD
4	8/22/23	FOR CHURCH ROAD
5	8/22/23	FOR CHURCH ROAD

Drawn By: DJM
 Date: JULY 12, 2023
 PROJECT MCN-044
 SHEET 13

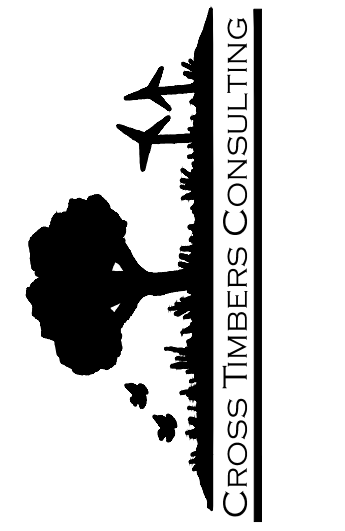
SCALE:
 HOR. 1" = 10'
 VERT. 1" = 10'



CROSS TIMBERS DRAWING FLEMING-044 ROAD SECTIONS.dwg

ROAD CROSS SECTIONS
 GREENLEAF CHURCH ROAD
 SECTION 15,16,21,22 T-11-N R-9-E
 OKFUSKEE COUNTY, OKLAHOMA

CROSS TIMBERS CONSULTING, LLC
 P.O. BOX 67
 Alex, Oklahoma, 73002
 Phone: (405) 222-8280



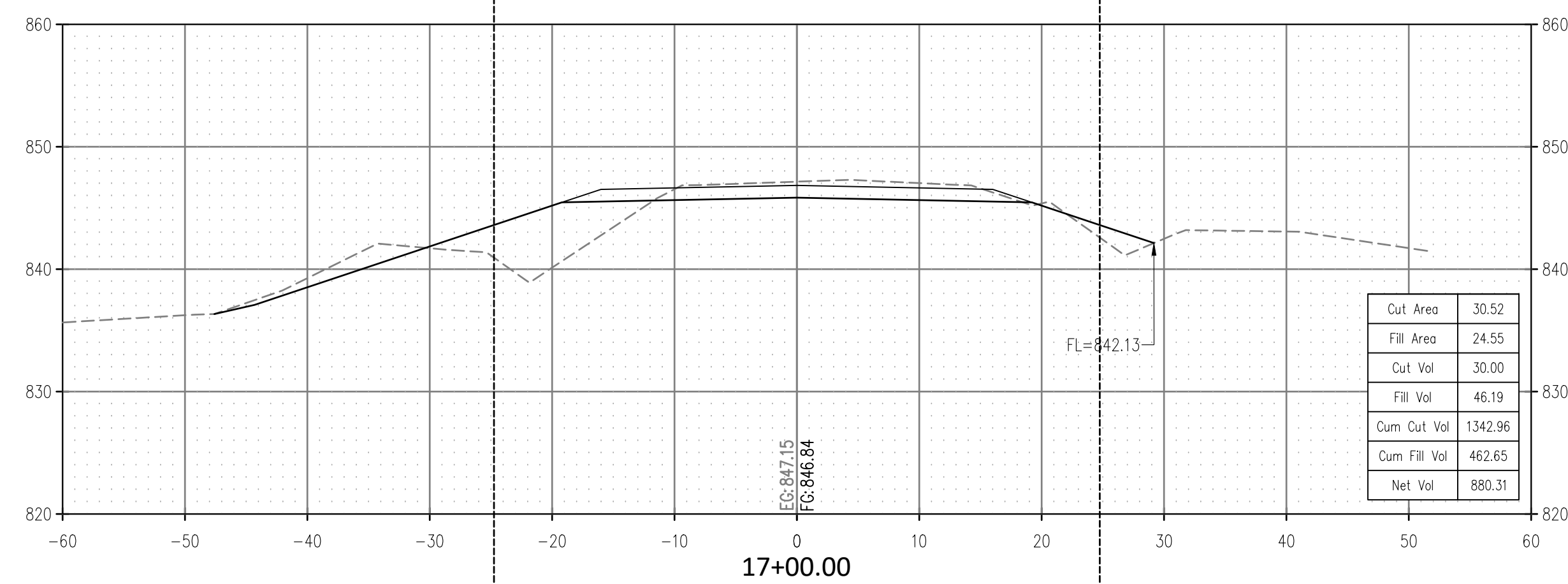
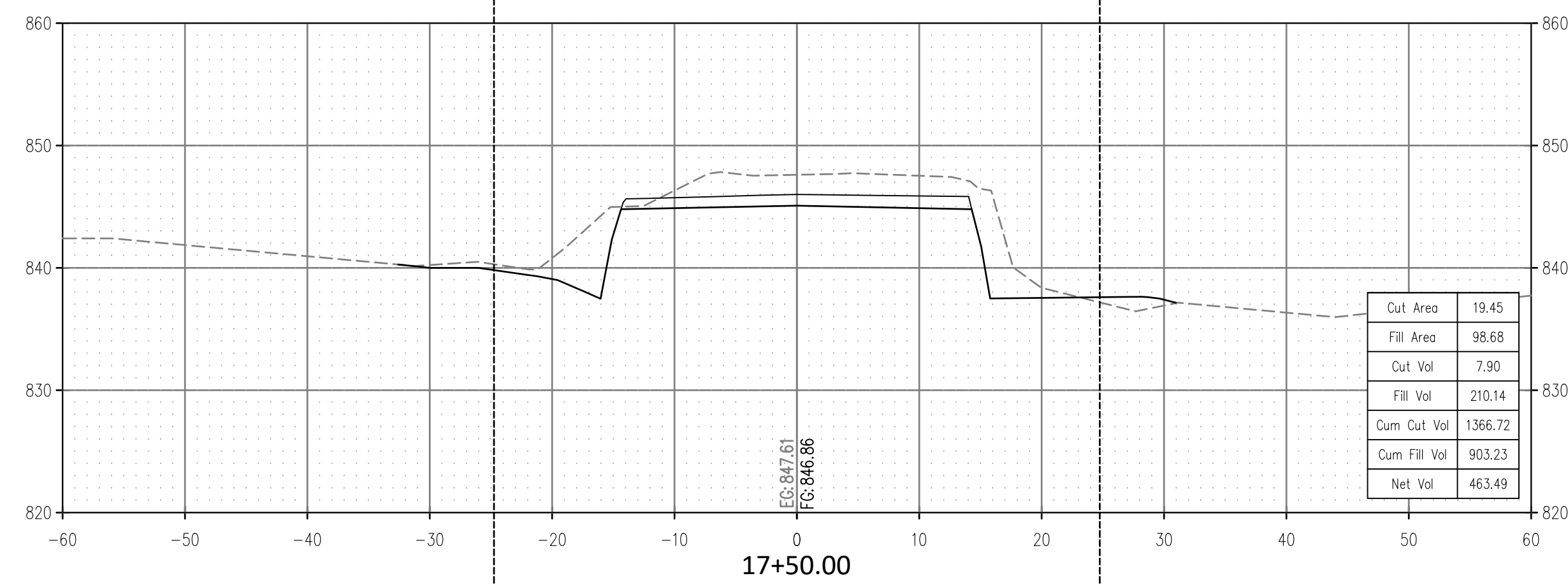
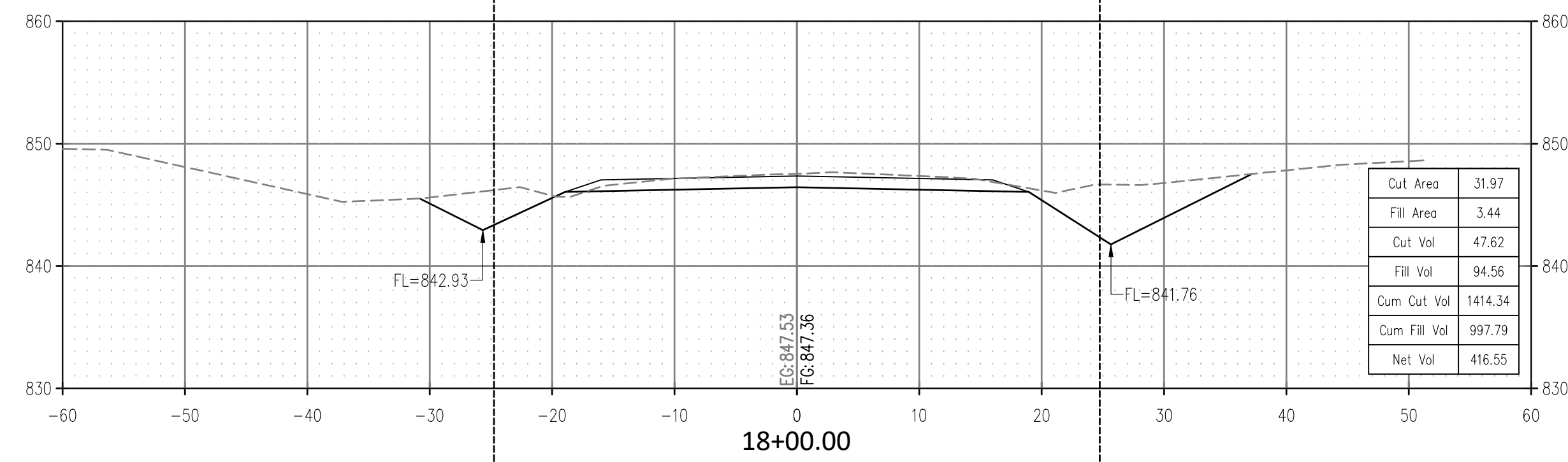
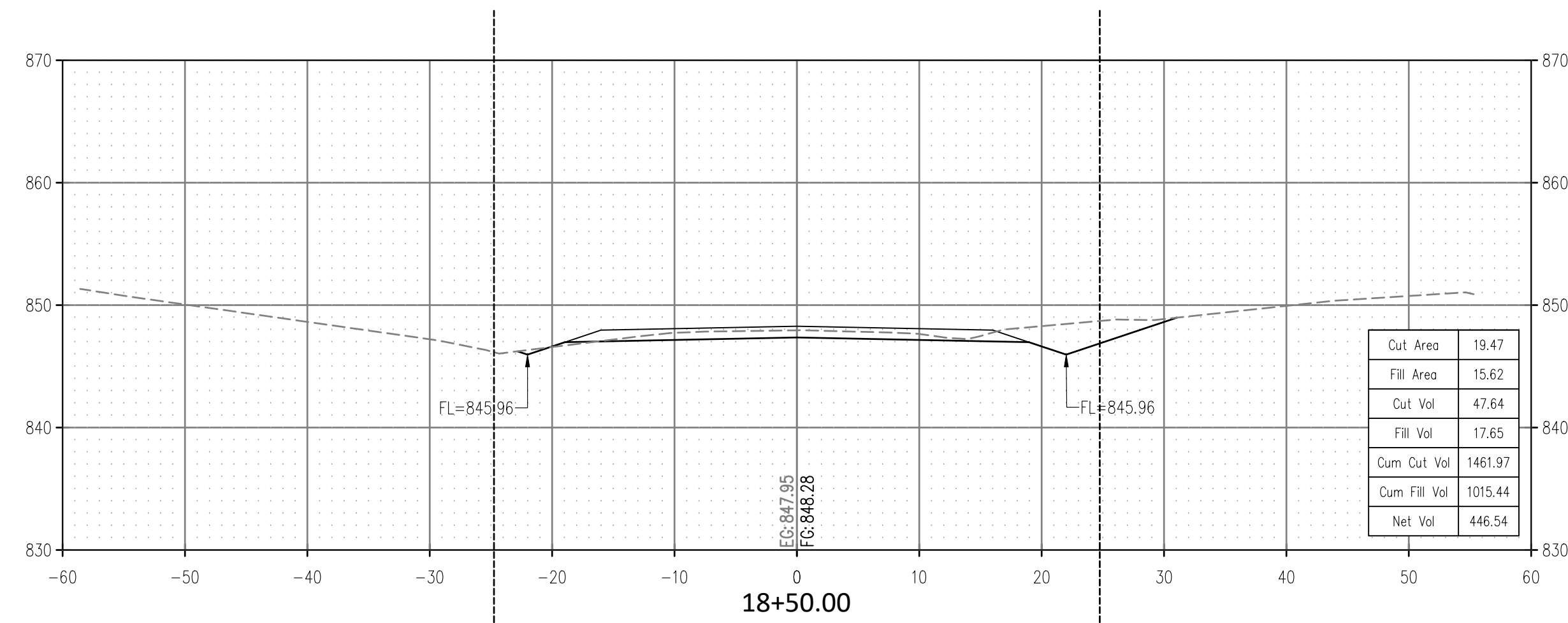
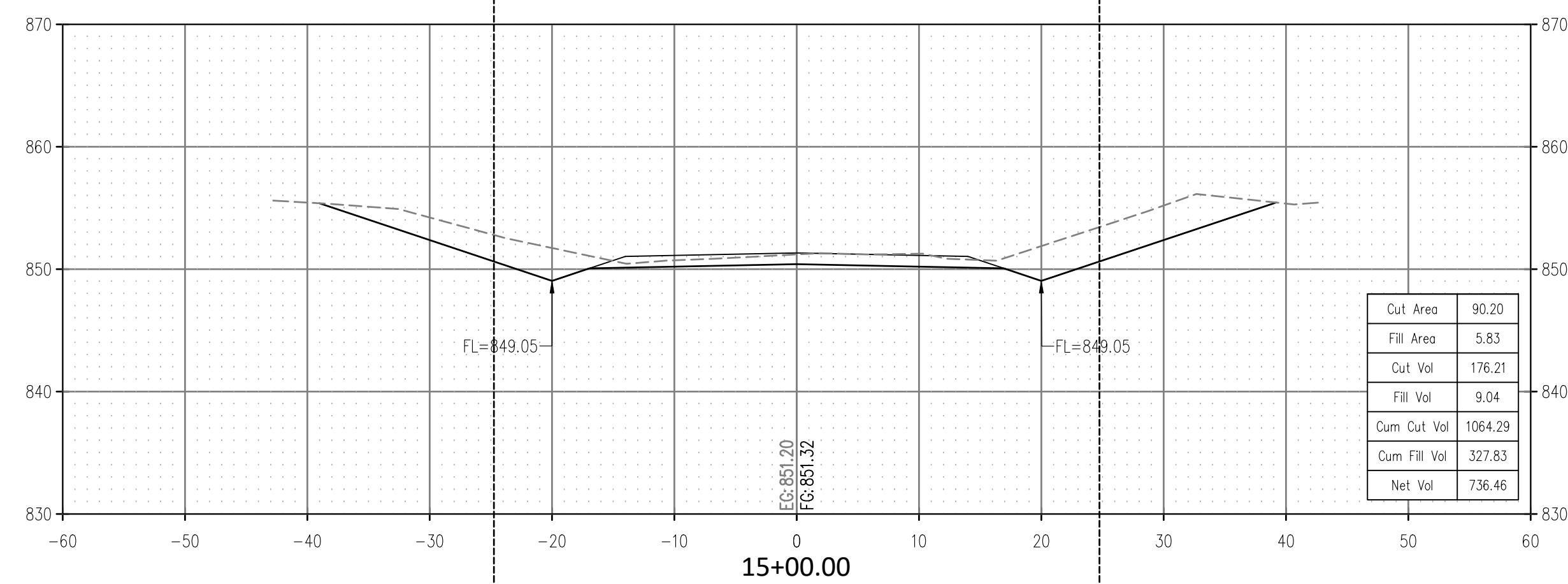
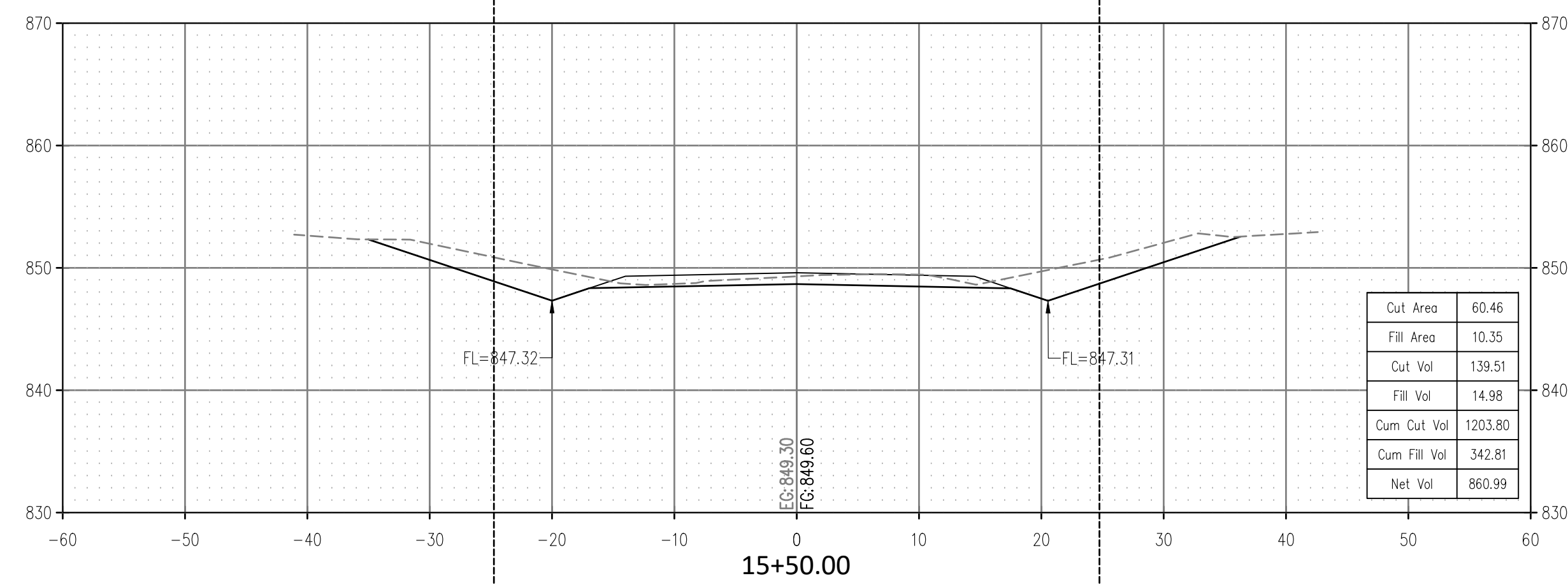
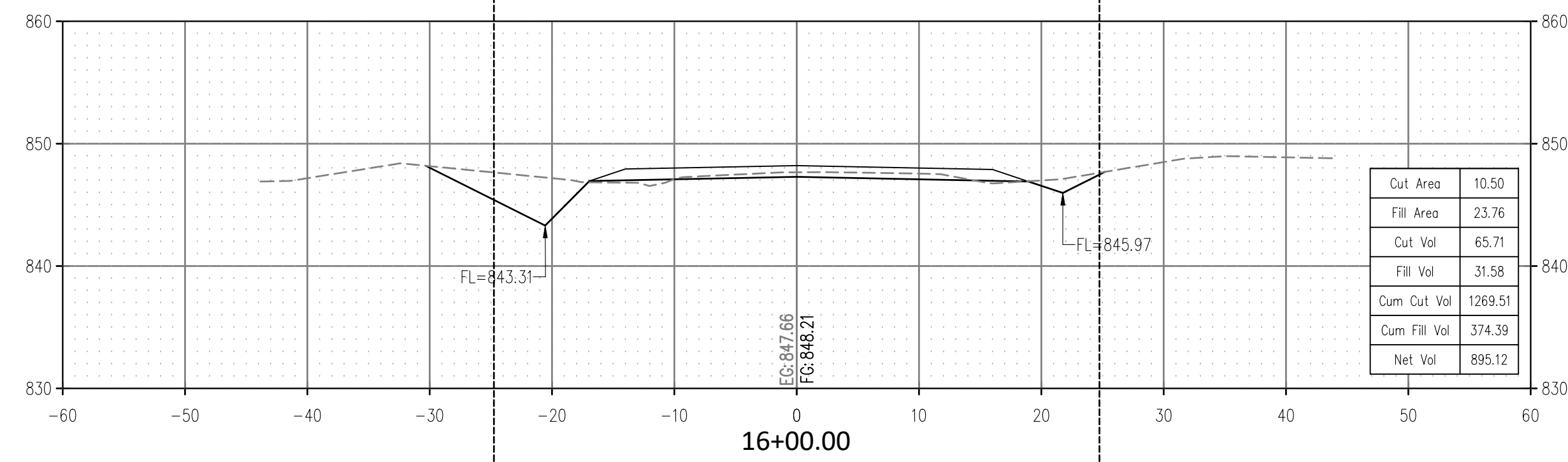
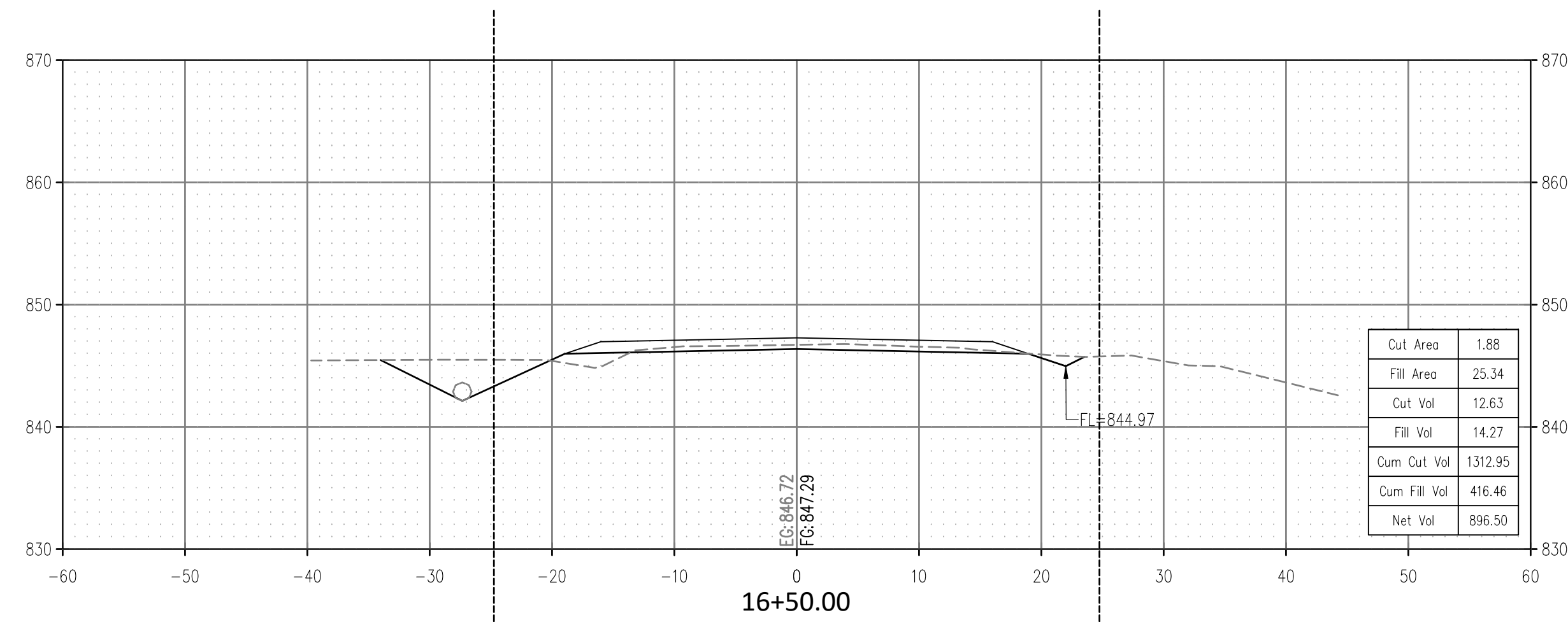
NO.	DATE	DESCRIPTION	BY	CHK
1	7/22/23	PLAN AND OUTER SECTION	DJM	
2	7/22/23	PLAN AND OUTER SECTION	DJM	
3	7/22/23	PLAN AND OUTER SECTION	DJM	
4	7/22/23	PLAN AND OUTER SECTION	DJM	
5	7/22/23	PLAN AND OUTER SECTION	DJM	

Drawn By: DJM
 Date: JULY 12, 2023

PROJECT MCN-044

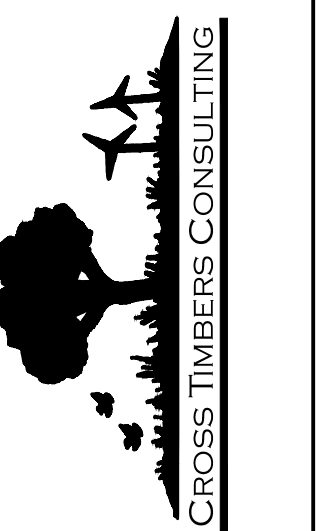
SHEET X01

SCALE:
 HOR. 1" = 10'
 VERT. 1" = 10'



ROAD CROSS SECTIONS
 GREENLEAF CHURCH ROAD
 SECTION 15,16,21,22 T-11-N R-9-E
 OKFUSKEE COUNTY, OKLAHOMA

CROSS TIMBERS CONSULTING, LLC
 P.O. BOX 67
 Alex, Oklahoma, 73002
 Phone: (405) 222-8280



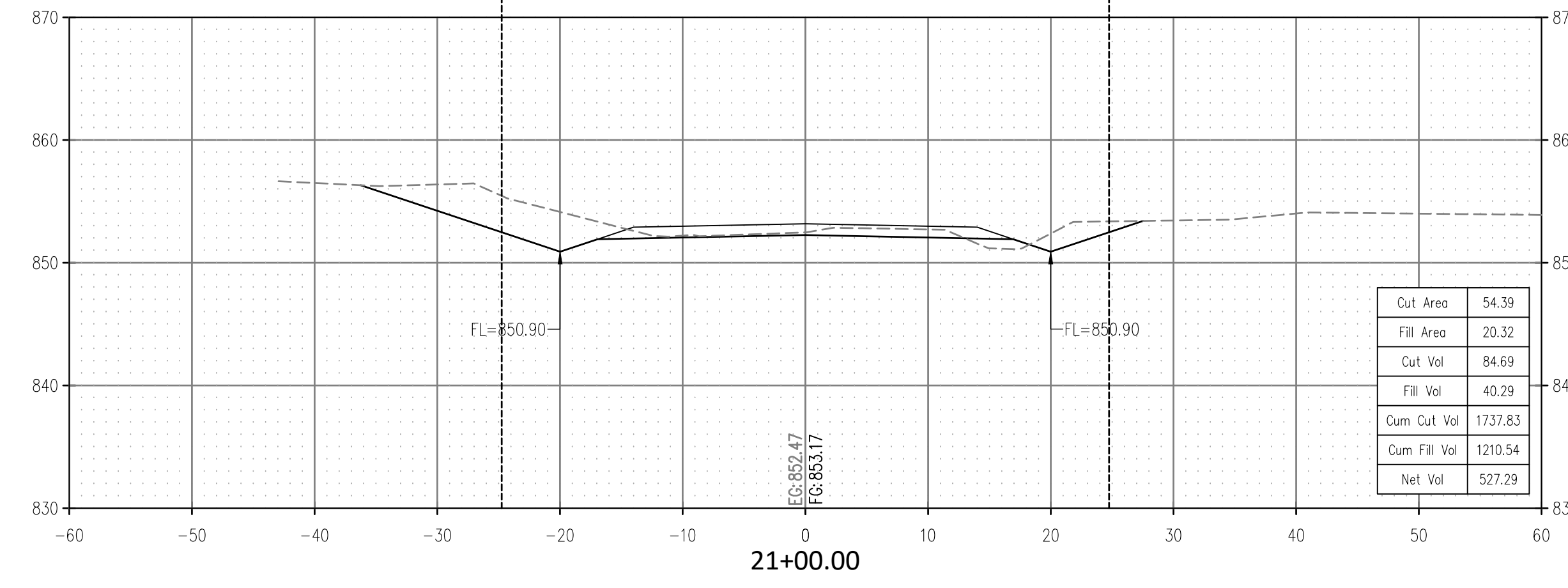
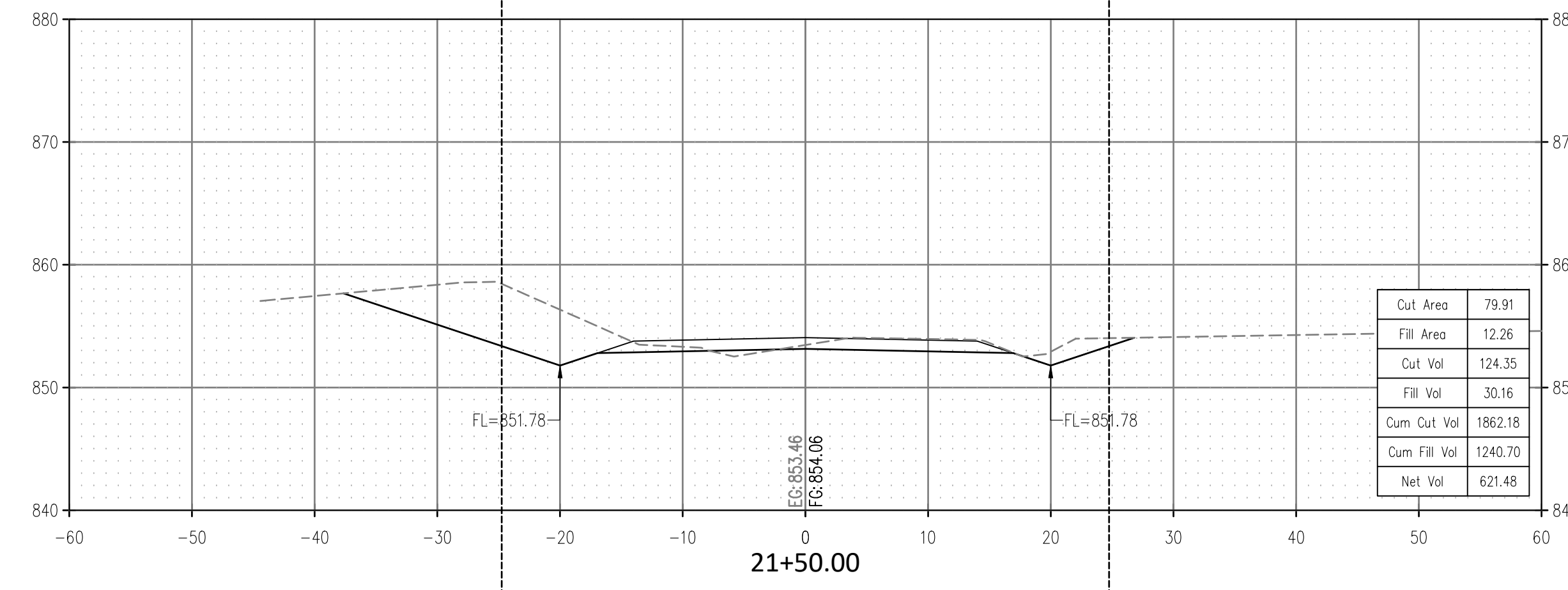
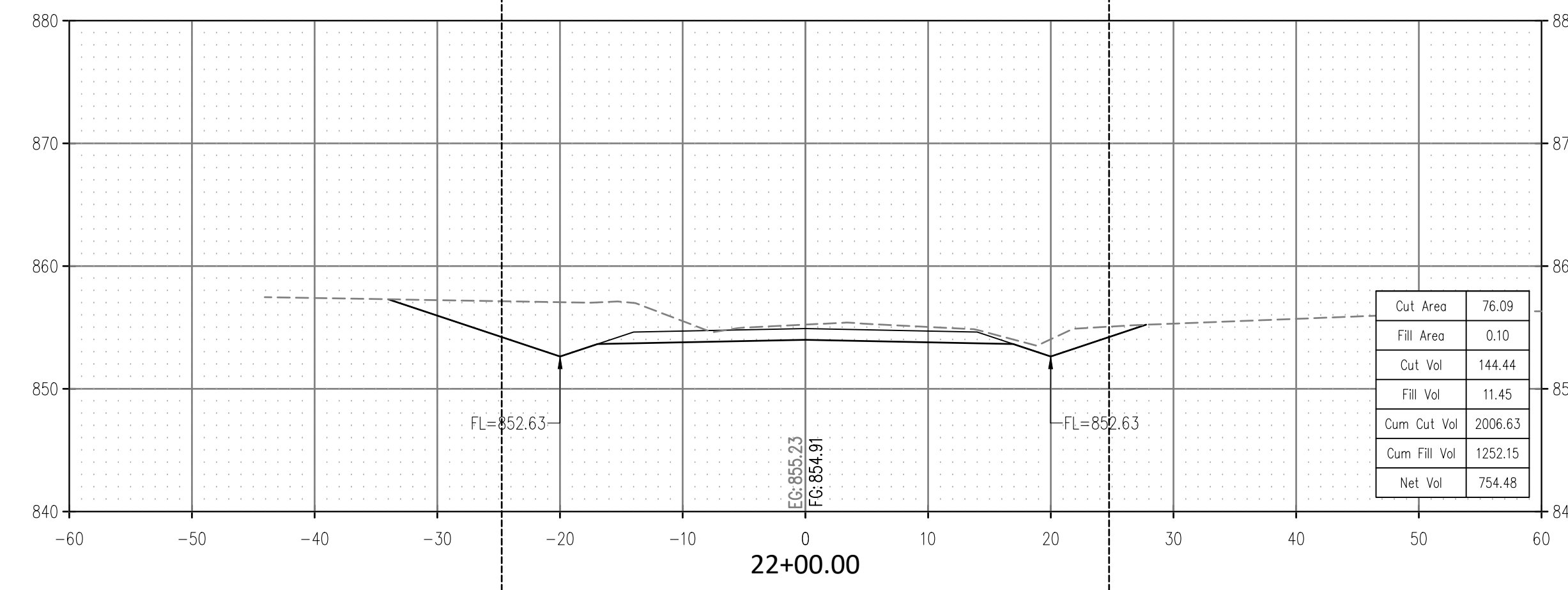
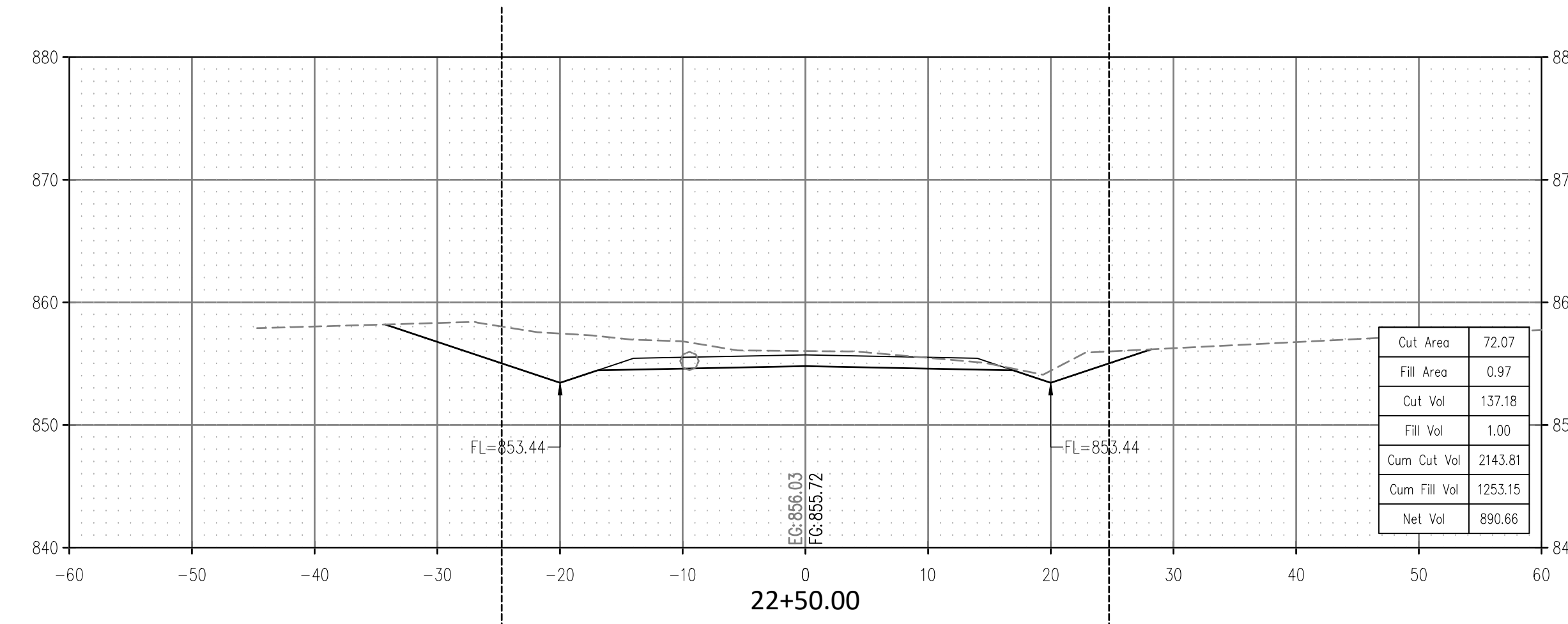
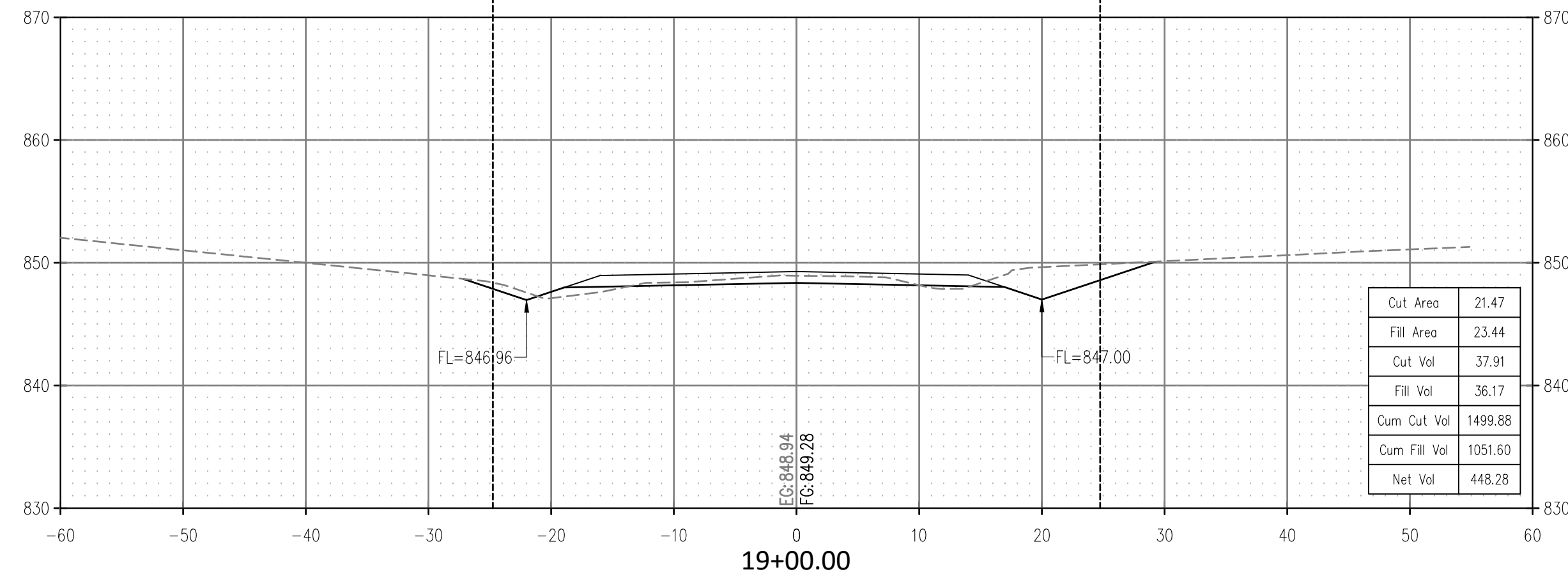
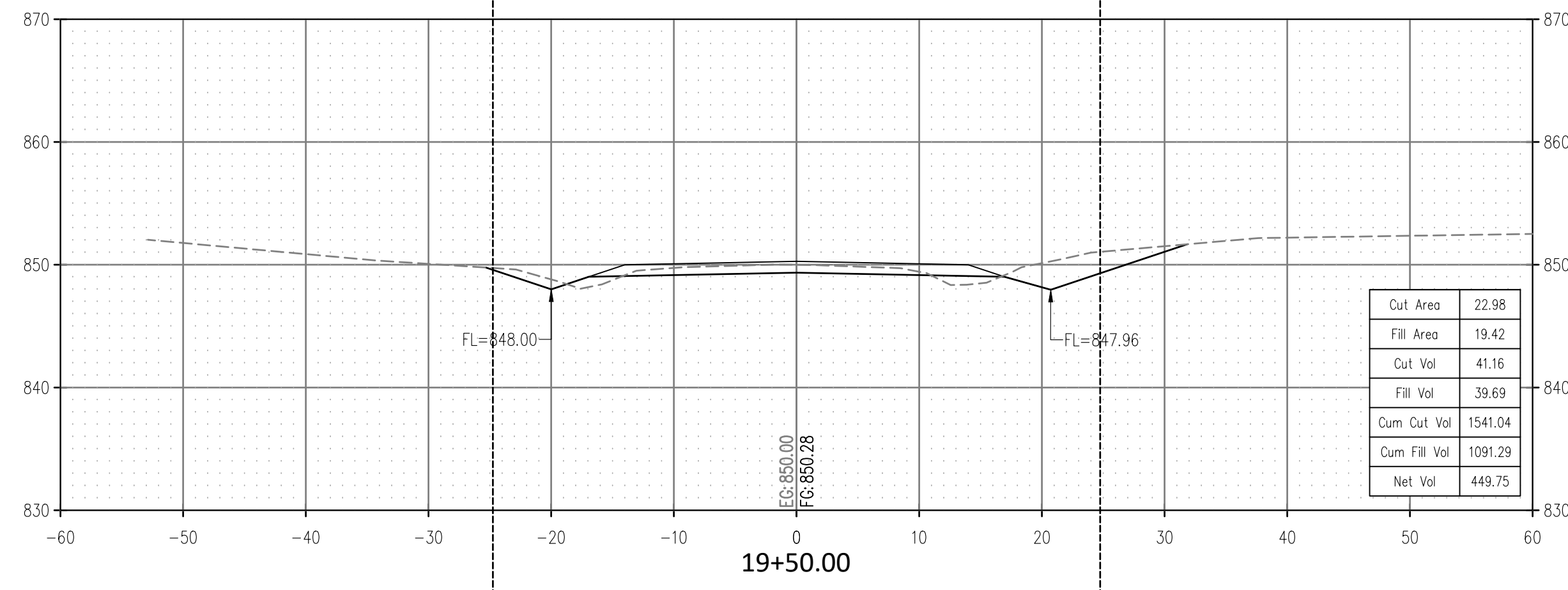
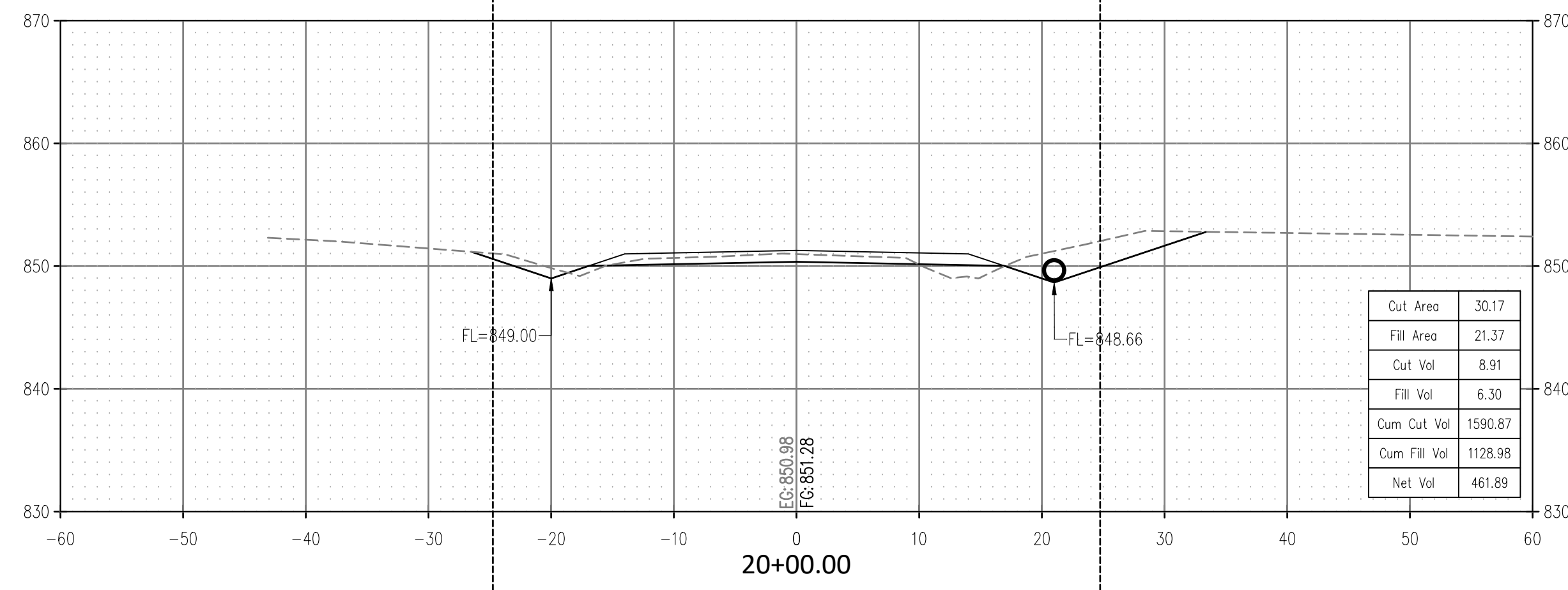
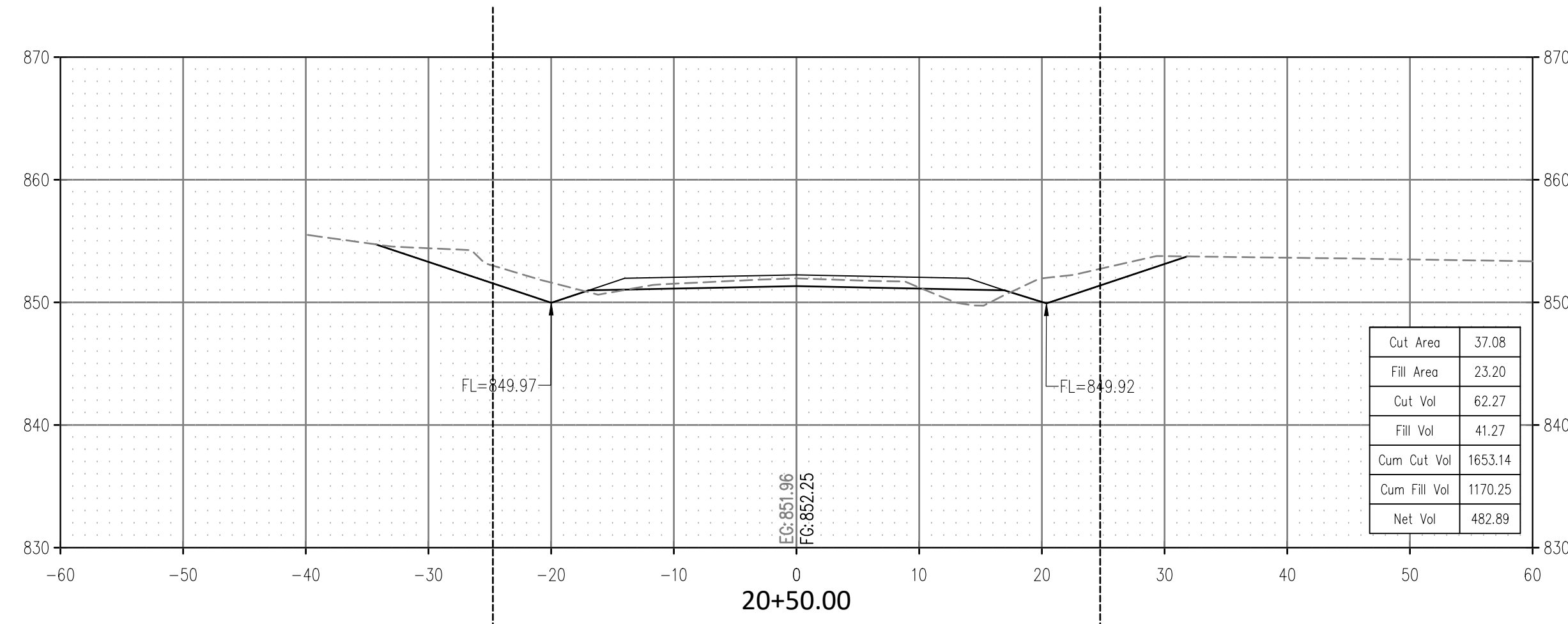
NO.	DATE	REVISIONS	DESCRIPTION	BY	CHK
1	7/12/23		PERMITS AND OUTER SECTION	DJM	
2	7/12/23		PERMITS AND OUTER SECTION	DJM	
3	7/12/23		PERMITS AND OUTER SECTION	DJM	
4	7/12/23		PERMITS AND OUTER SECTION	DJM	
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Drawn By: DJM
 Date: JULY 12, 2023

PROJECT MCN-044

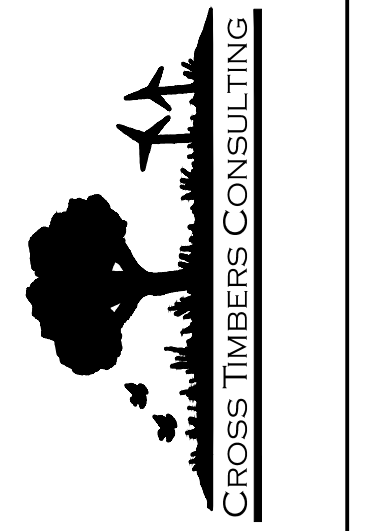
SHEET X02

SCALE:
 HOR. 1" = 10'
 VERT. 1" = 10'



ROAD CROSS SECTIONS
 GREENLEAF CHURCH ROAD
 SECTION 15,16,21,22 T-11-N R-9-E
 OKFUSKEE COUNTY, OKLAHOMA

CROSS TIMBERS CONSULTING, LLC
 P.O. BOX 67
 Alex, Oklahoma, 73002
 Phone: (405) 222-8280



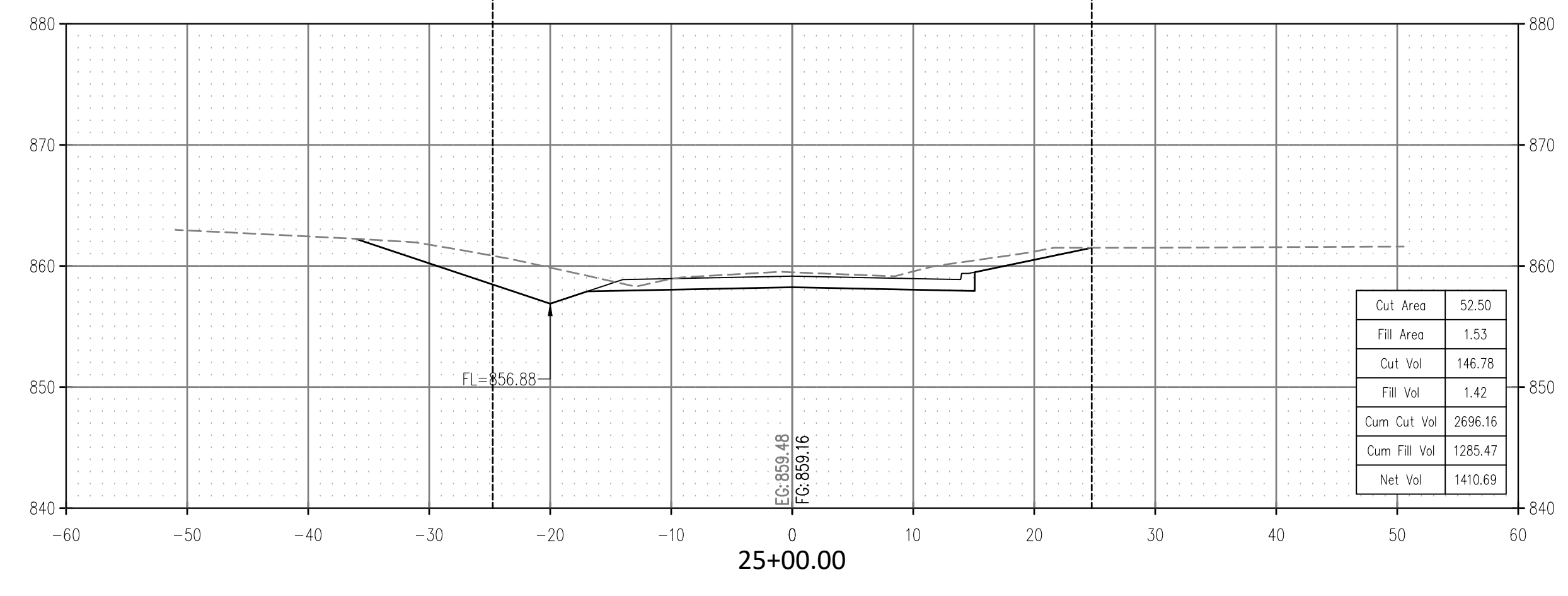
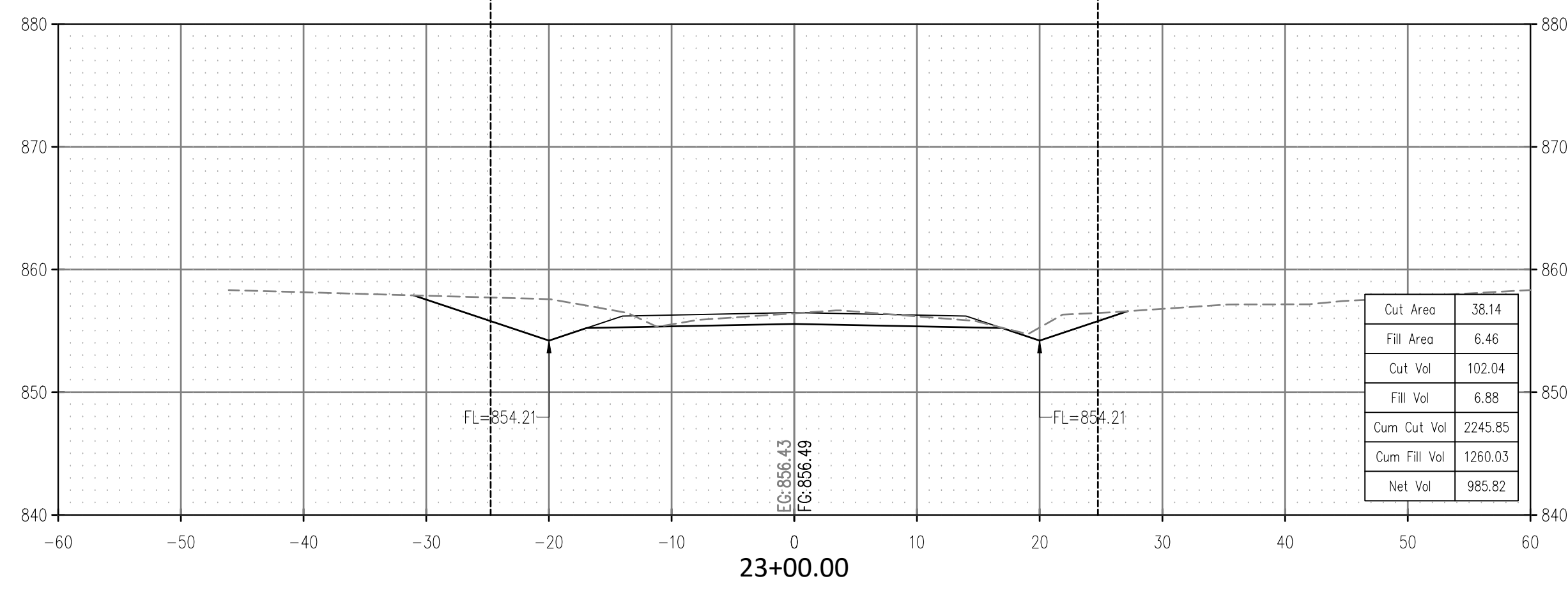
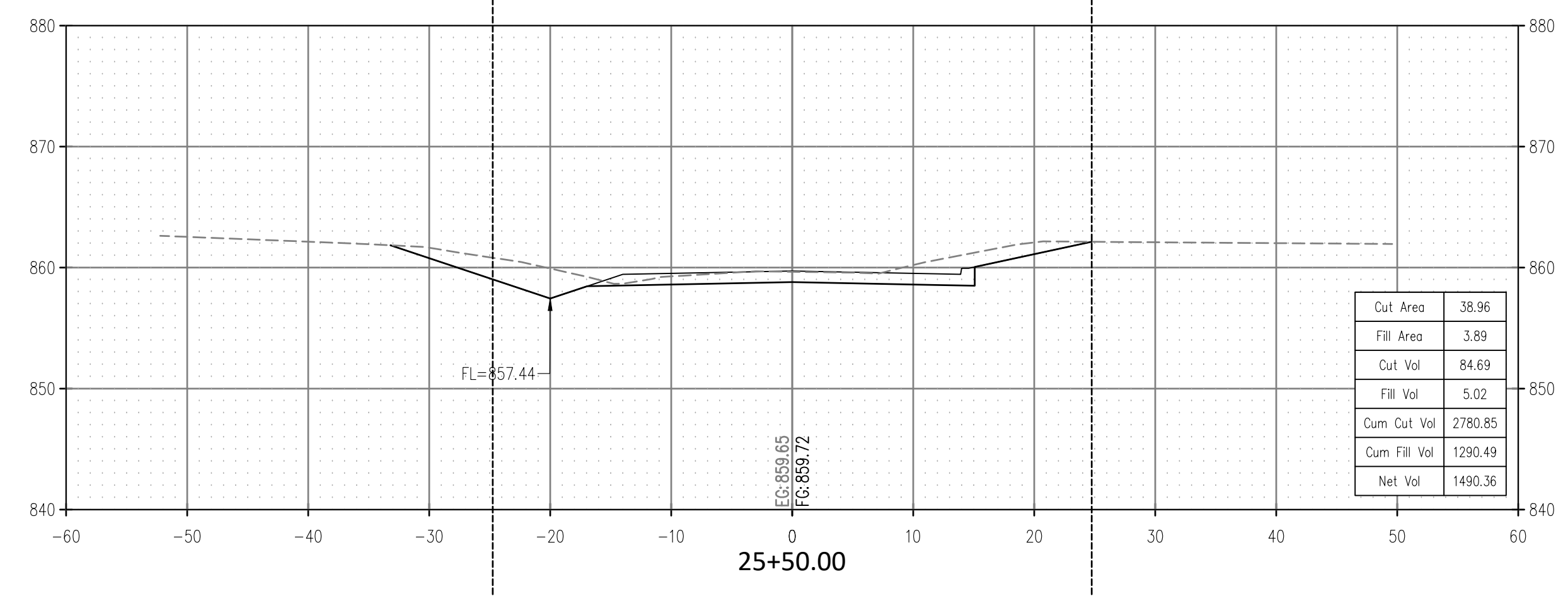
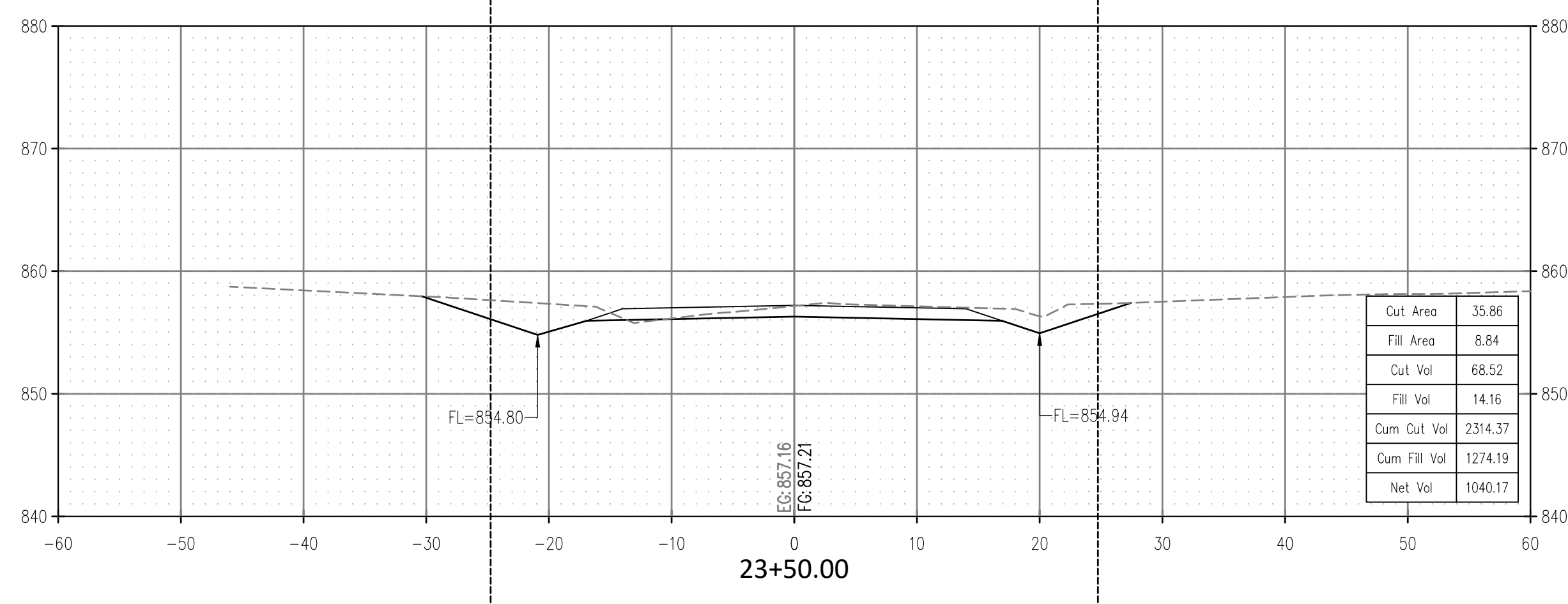
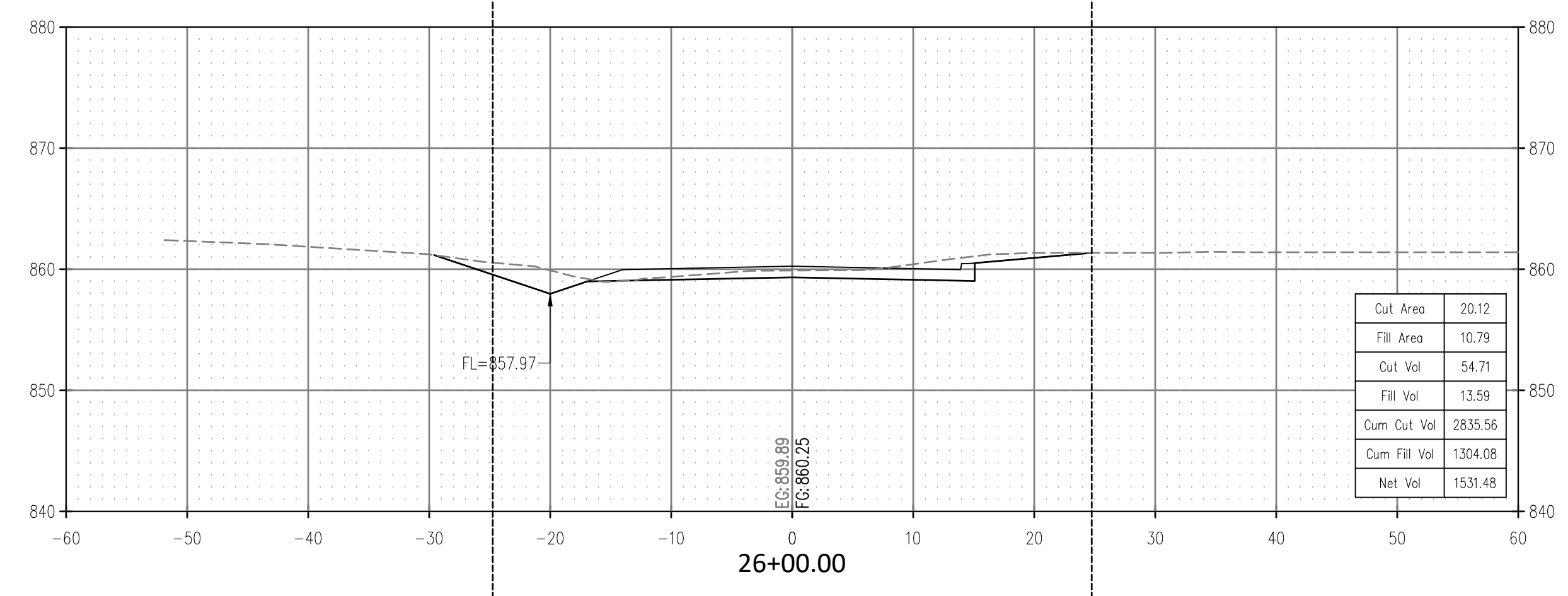
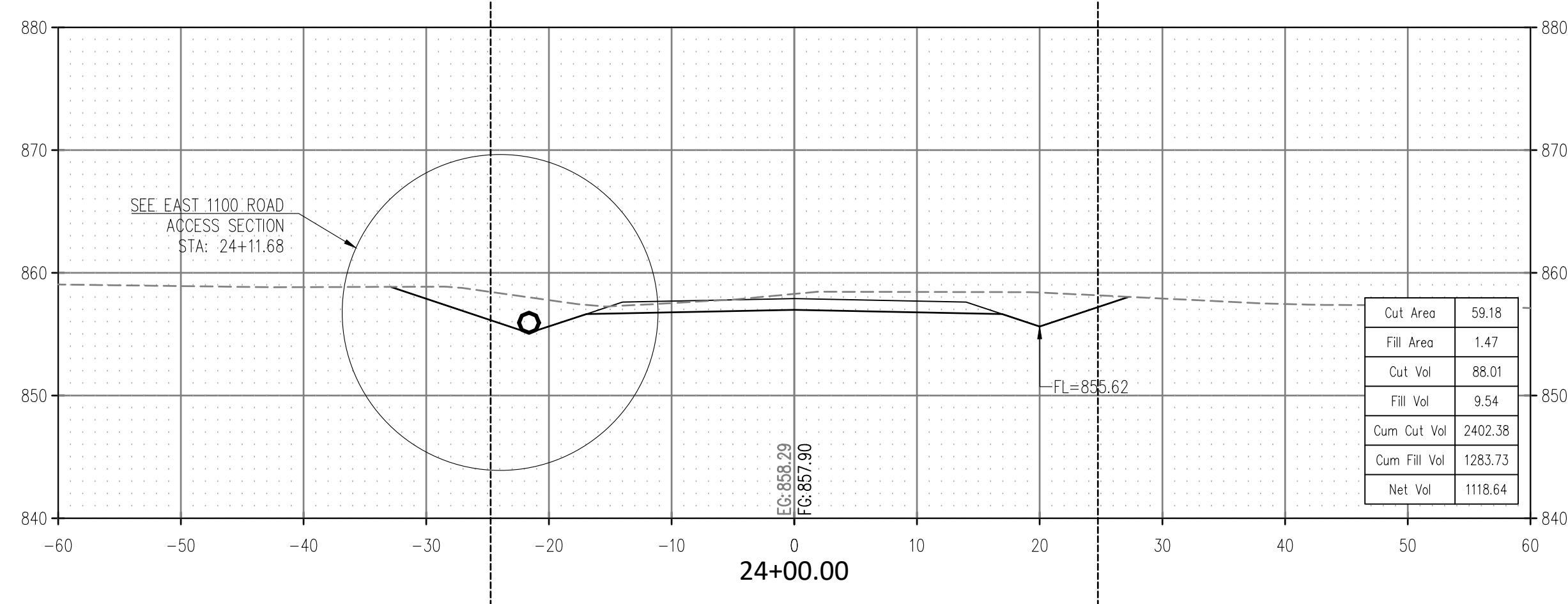
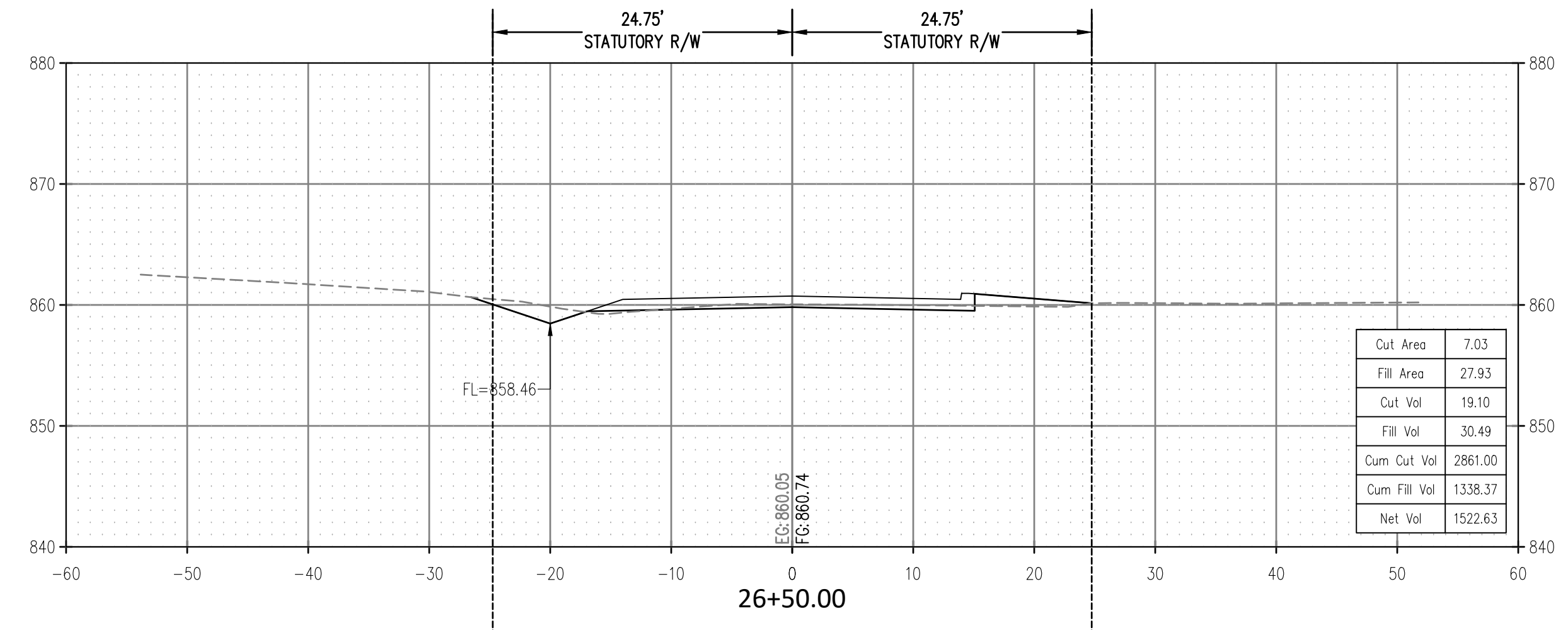
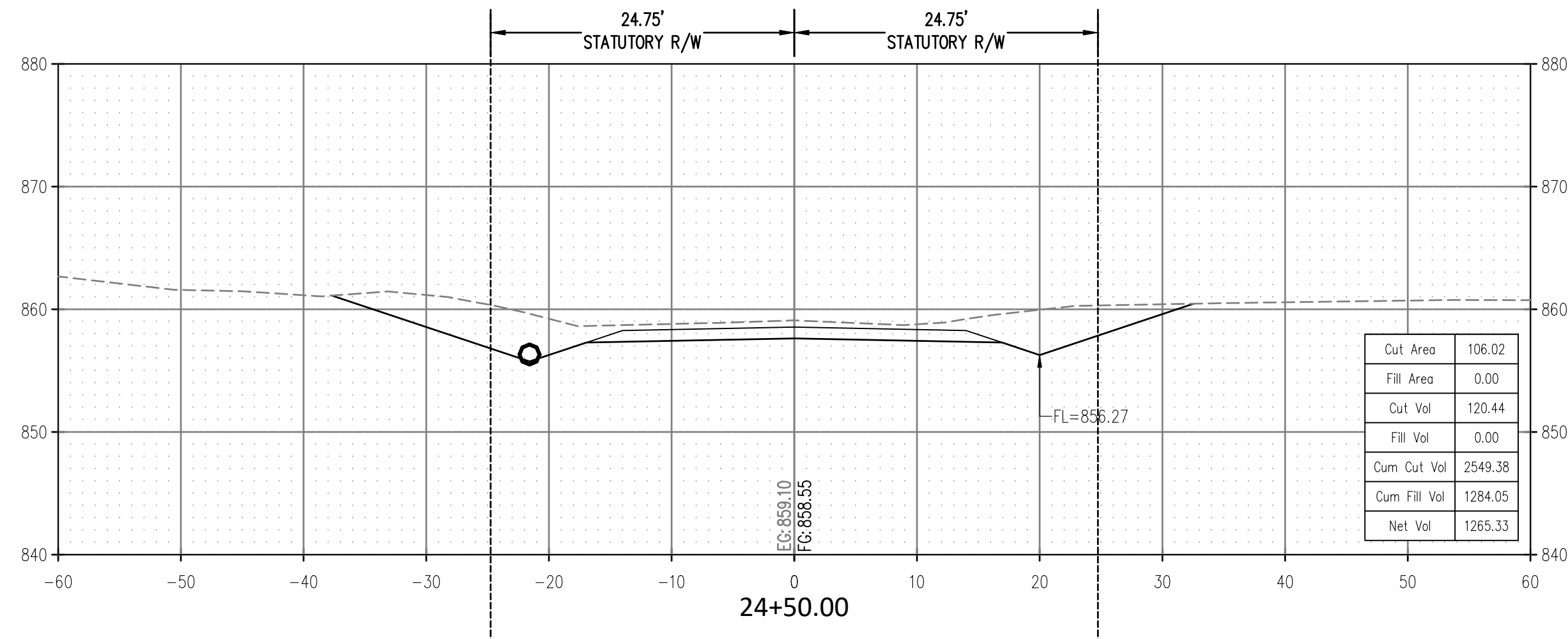
NO.	DATE	REVISIONS	DESCRIPTION	BY	CHK
1	7/12/23		PLANS AND QUOTE SECTION	DJM	
2	7/12/23		PLANS AND QUOTE SECTION	DJM	
3	7/12/23		PLANS AND QUOTE SECTION	DJM	
4	7/12/23		PLANS AND QUOTE SECTION	DJM	
5	7/12/23		PLANS AND QUOTE SECTION	DJM	

Drawn By: DJM
 Date: JULY 12, 2023

PROJECT MCN-044

SHEET X03

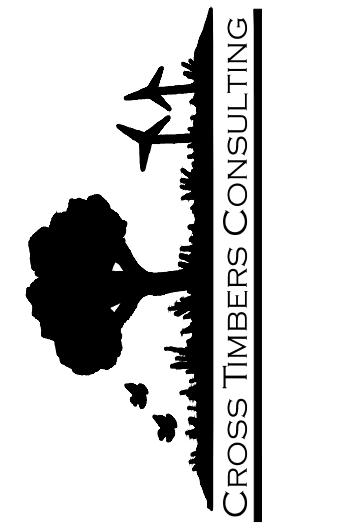
SCALE:
 HOR. 1" = 10'
 VERT. 1" = 10'



CROSS TIMBERS DRAWING FLEMING-044 ROAD SECTIONS.dwg

ROAD CROSS SECTIONS
 GREENLEAF CHURCH ROAD
 SECTION 15,16,21,22 T-11-N R-9-E
 OKFUSKEE COUNTY, OKLAHOMA

CROSS TIMBERS CONSULTING, LLC
 P.O. BOX 67
 Alex, Oklahoma, 73002
 Phone: (405) 222-8280



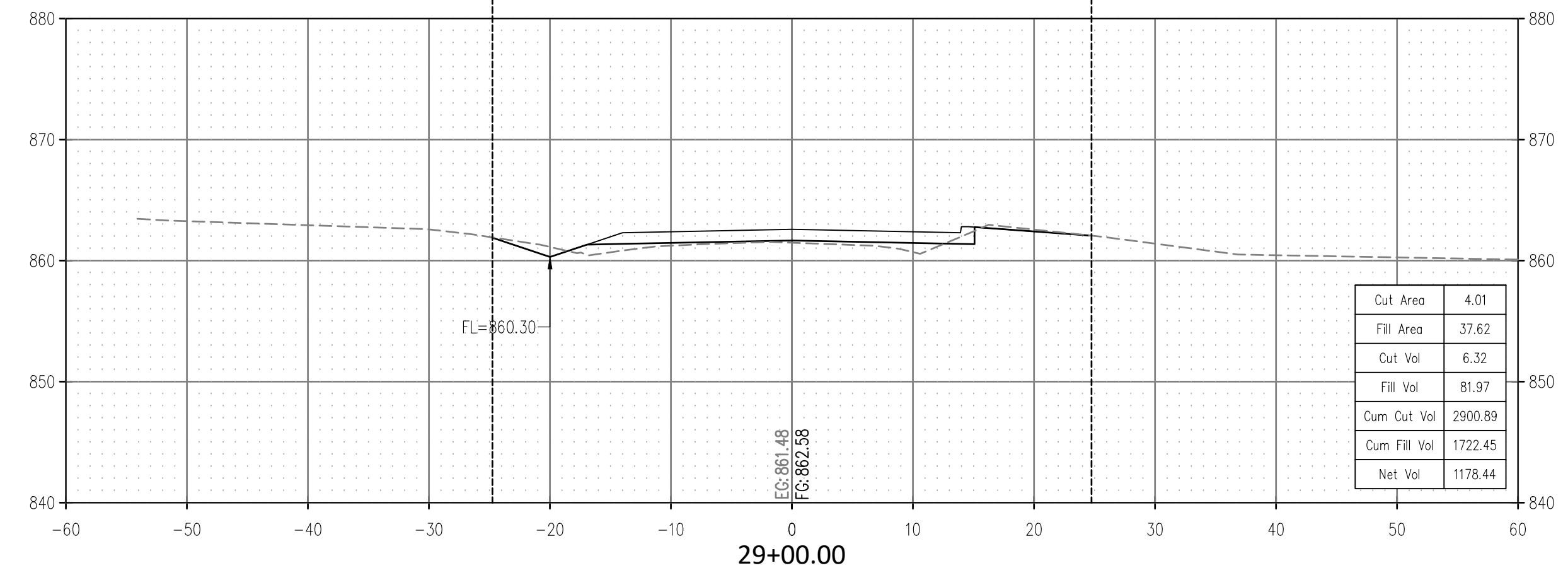
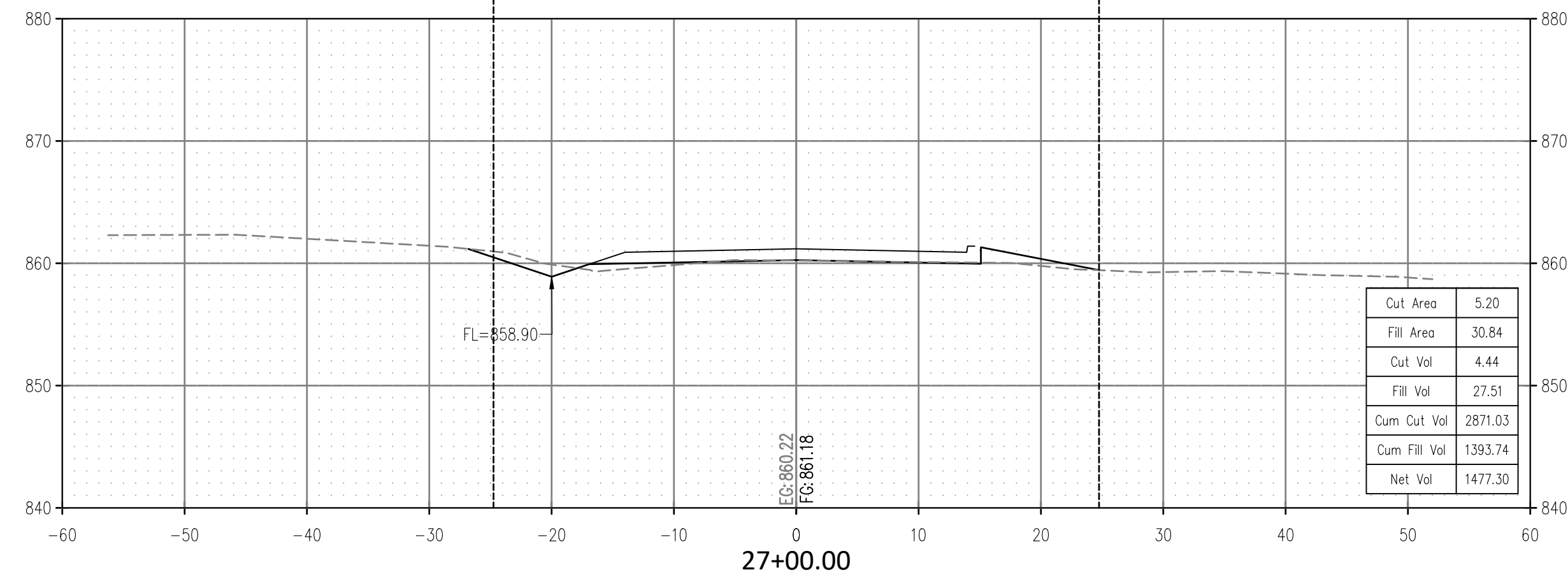
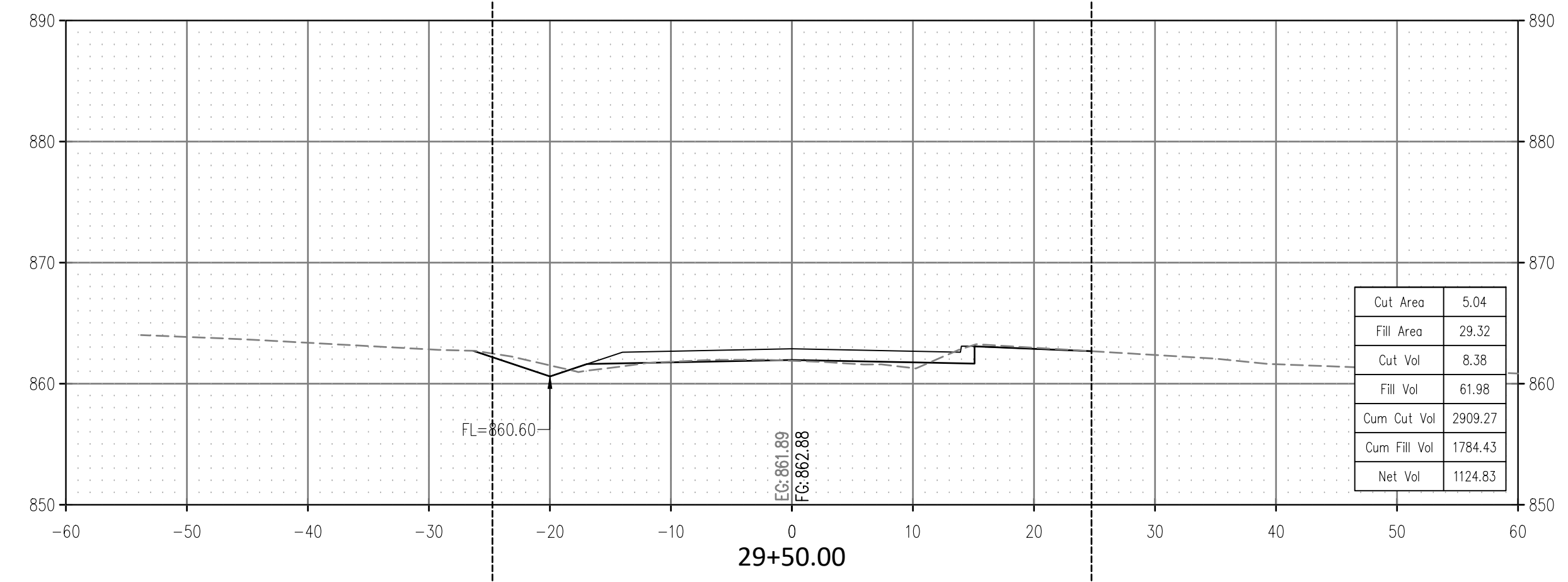
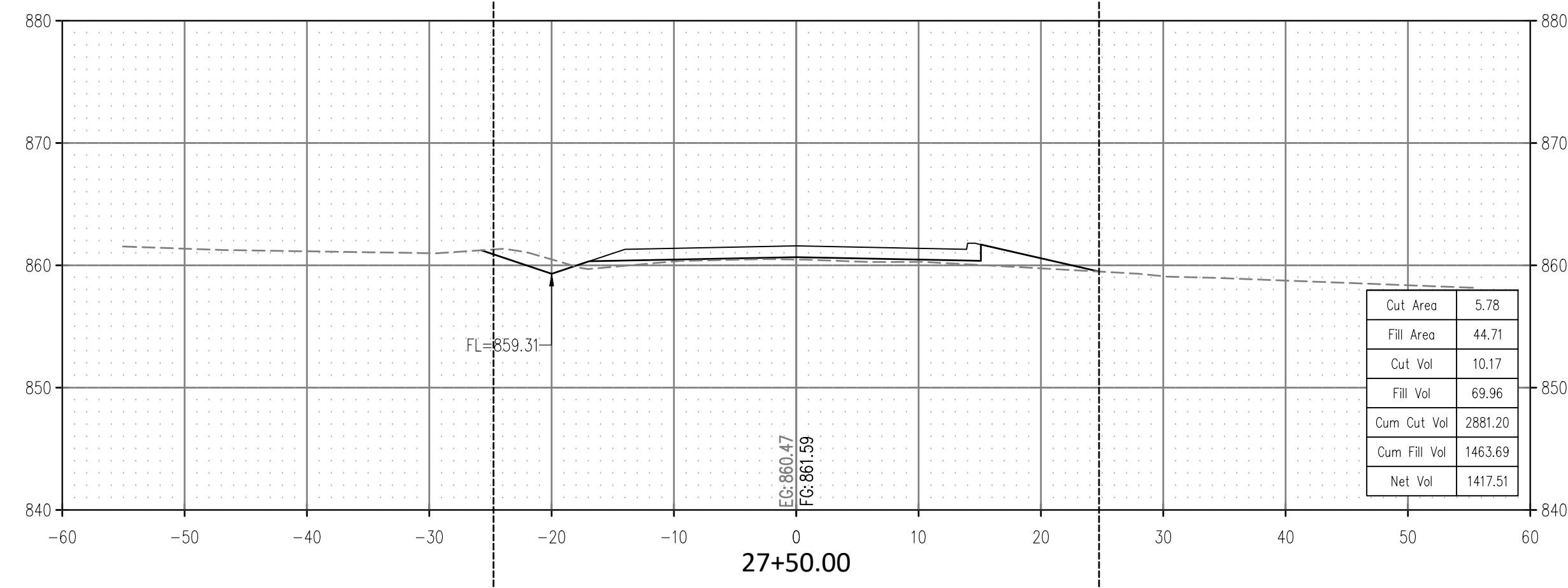
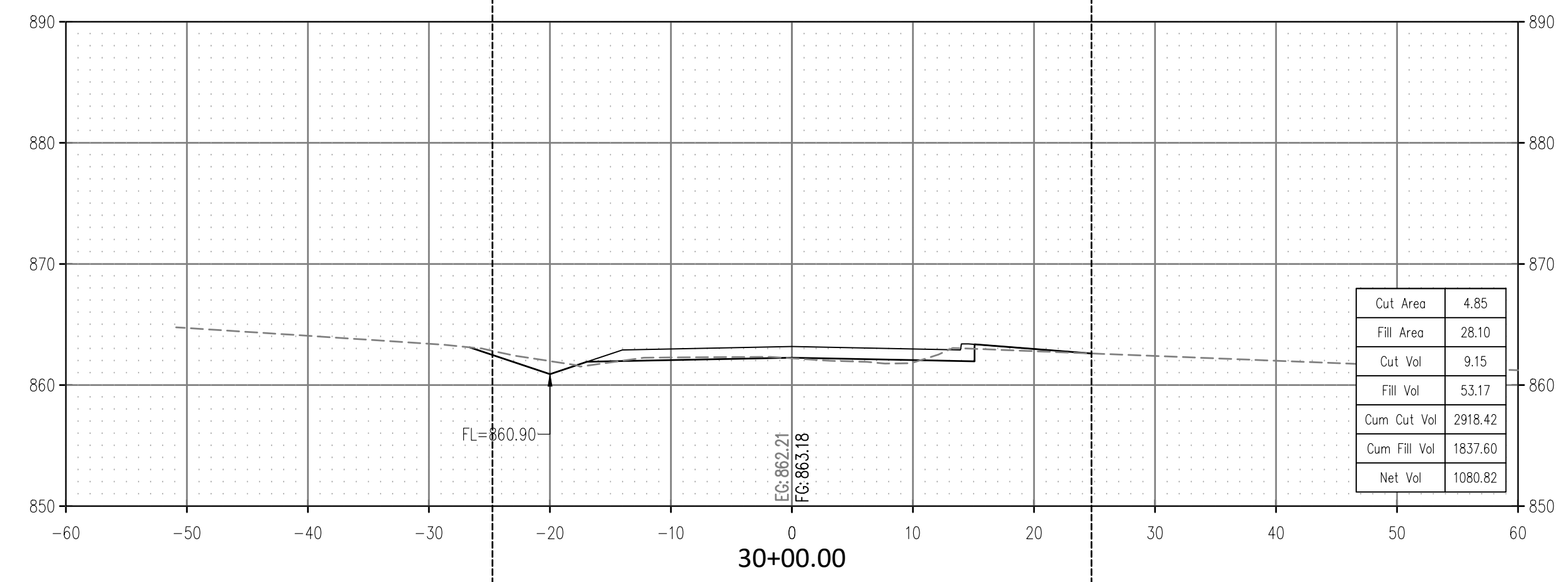
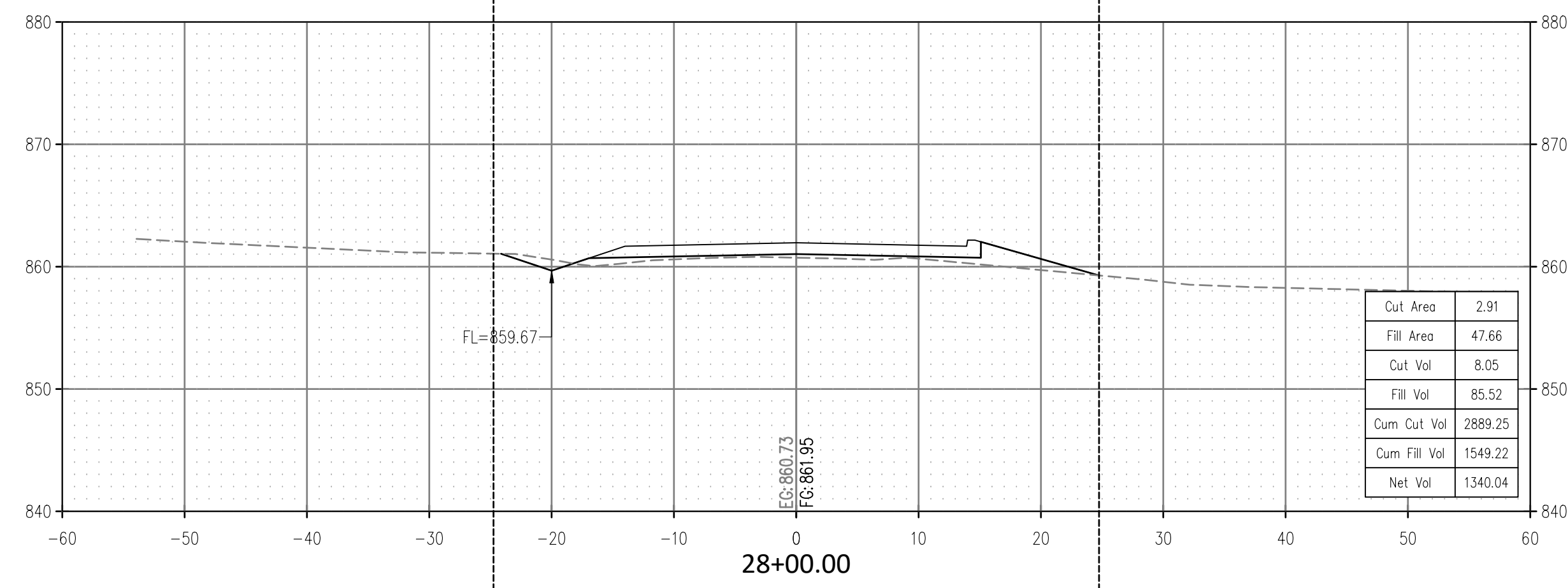
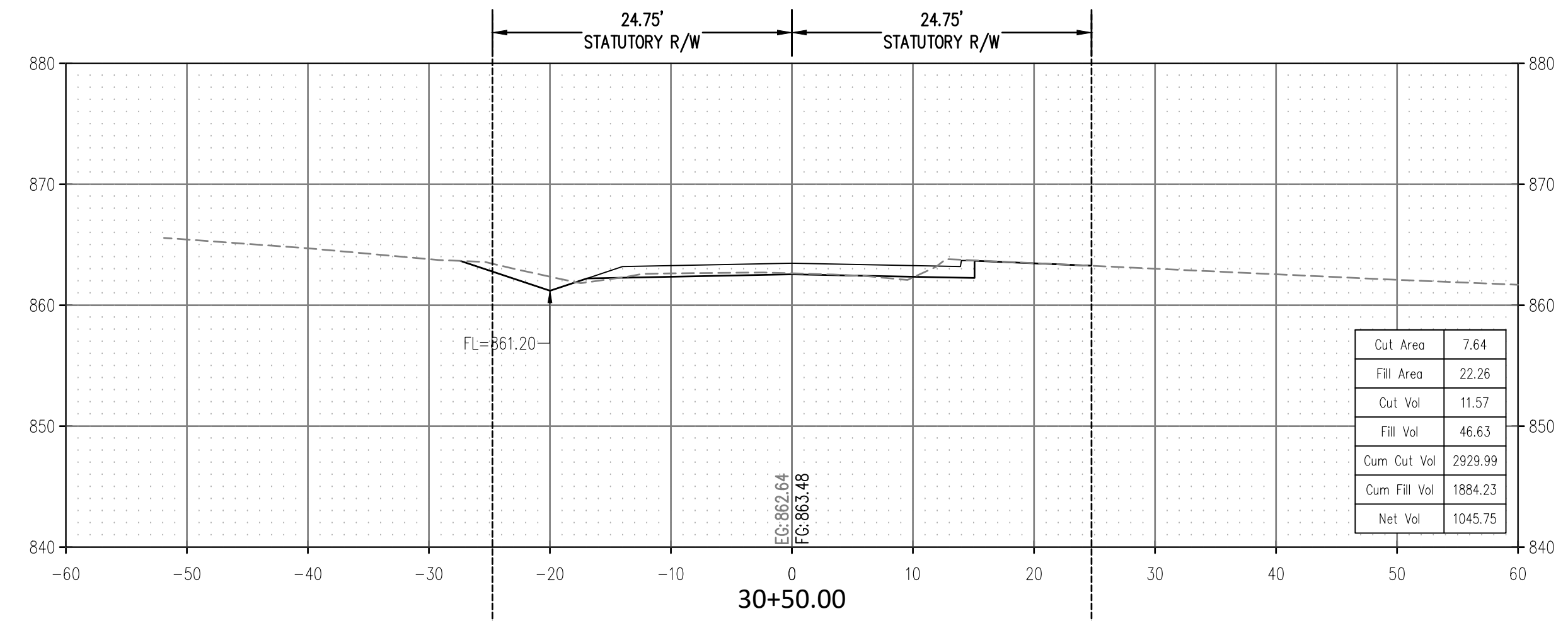
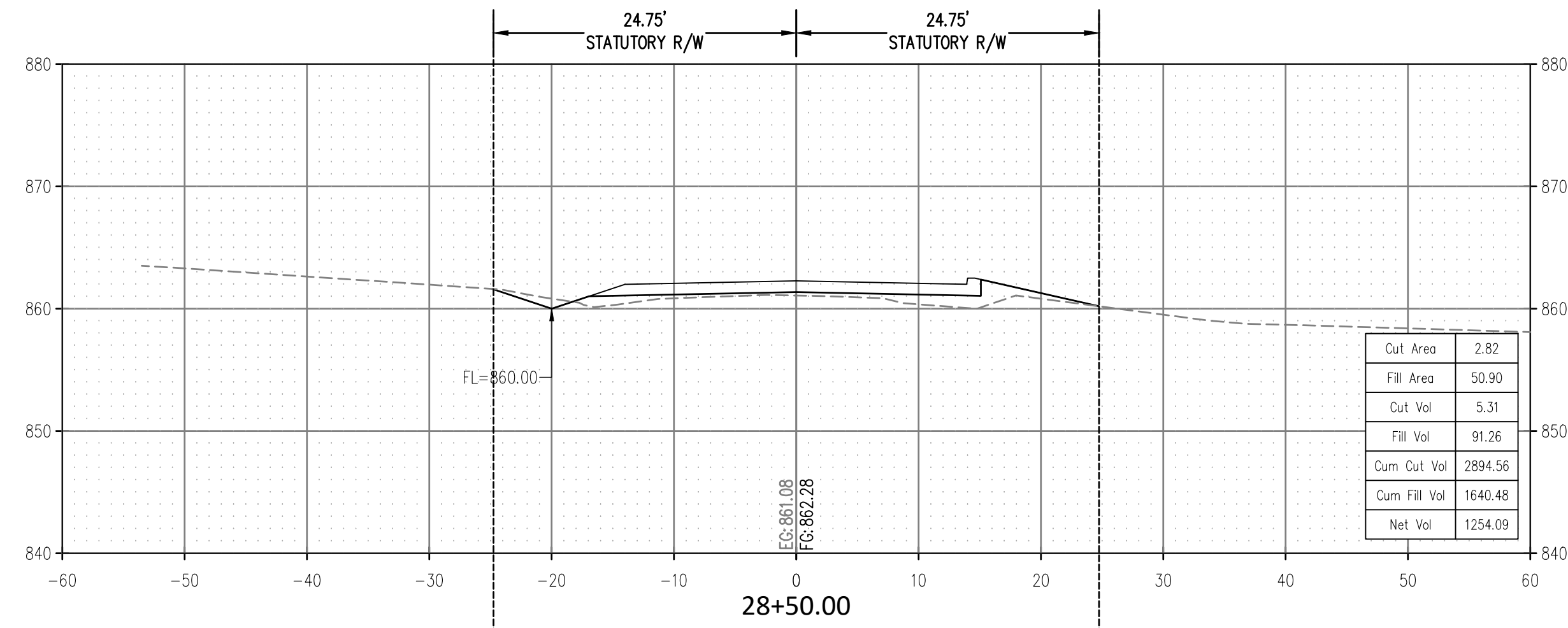
NO.	DATE	REVISIONS	DESCRIPTION	BY	CHK
1	8/22/23		CLUB AND OUTER SECTION		
2	8/22/23		CLUB AND OUTER SECTION		
3	8/22/23		CLUB AND OUTER SECTION		
4	8/22/23		CLUB AND OUTER SECTION		
5	8/22/23		CLUB AND OUTER SECTION		

Drawn By: DJM
 Date: JULY 12, 2023

PROJECT MCN-044

SHEET X04

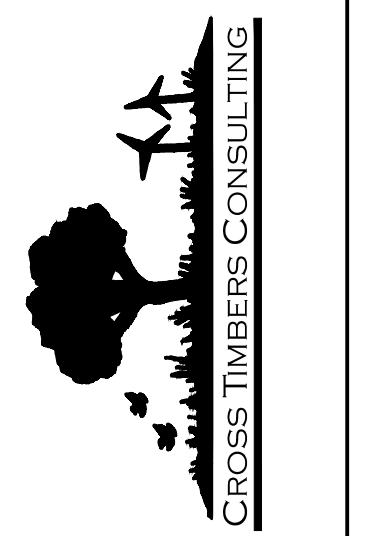
SCALE:
 HOR. 1" = 10'
 VERT. 1" = 10'



CROSS TIMBERS DRAWING FLEMING-044 ROAD SECTIONS.dwg

ROAD CROSS SECTIONS
 GREENLEAF CHURCH ROAD
 SECTION 15,16,21,22 T-11-N R-9-E
 OKFUSKEE COUNTY, OKLAHOMA

CROSS TIMBERS CONSULTING, LLC
 P.O. BOX 67
 Alex, Oklahoma, 73002
 Phone: (405) 222-8280



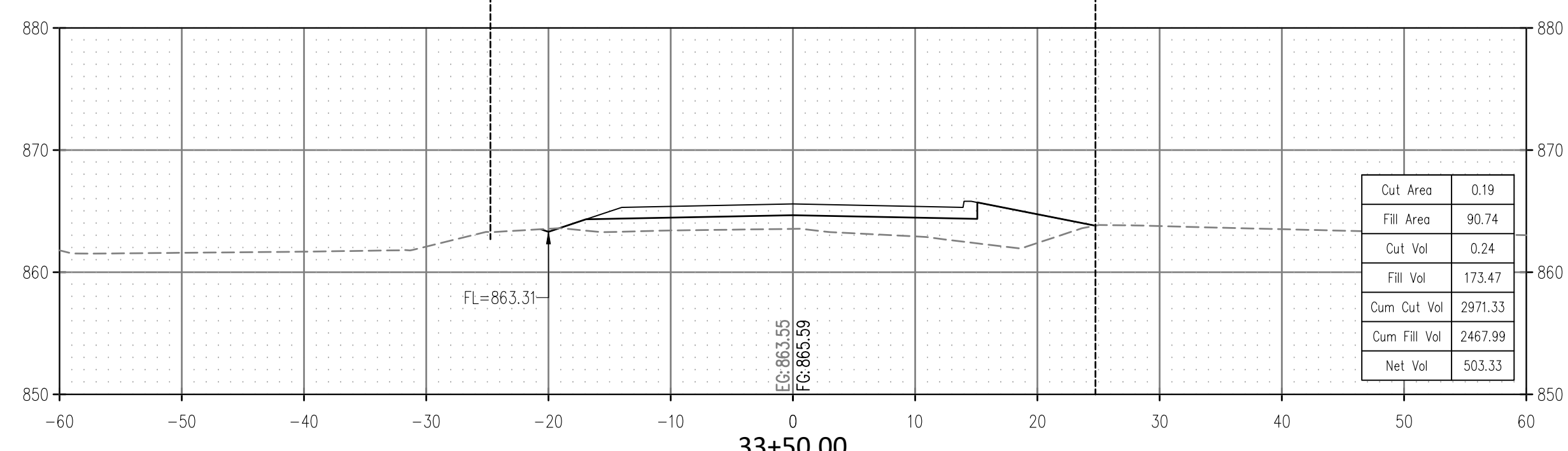
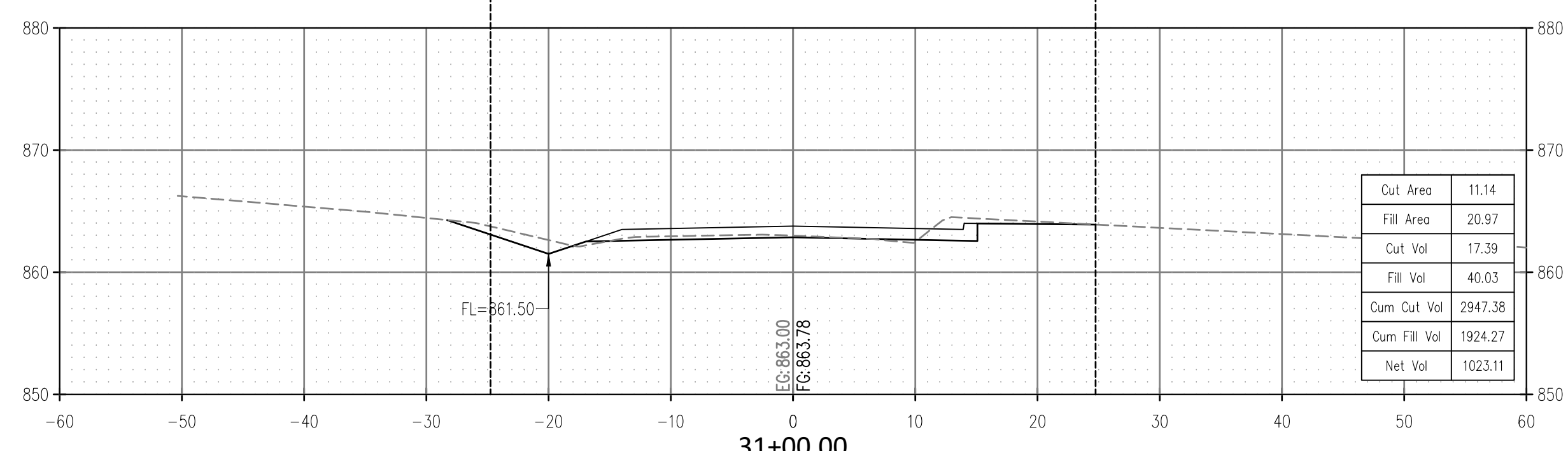
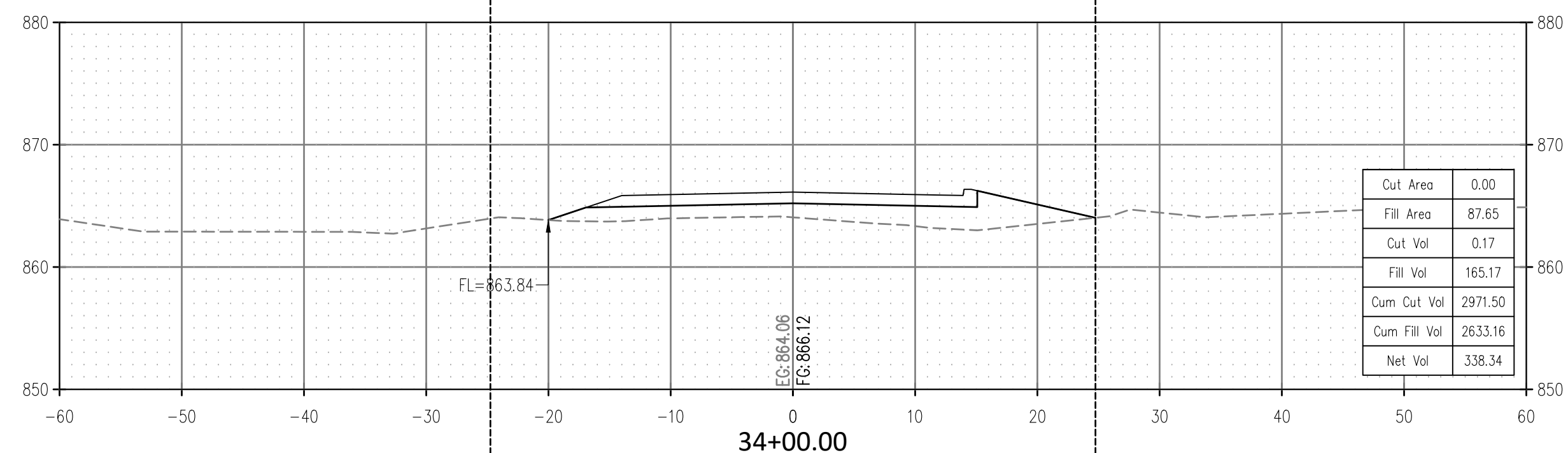
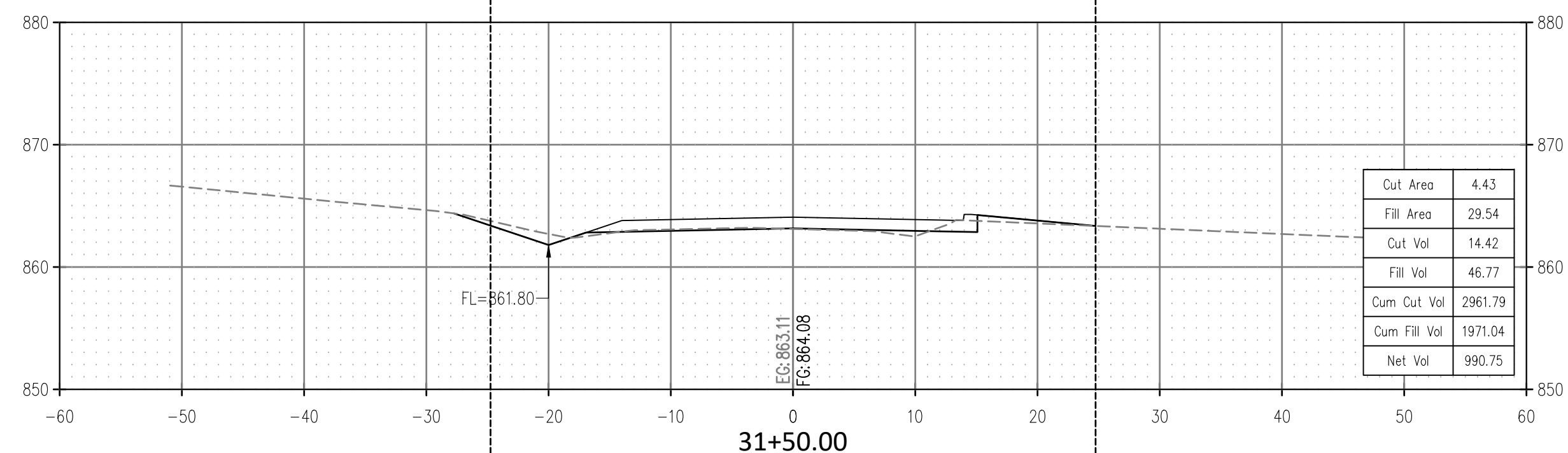
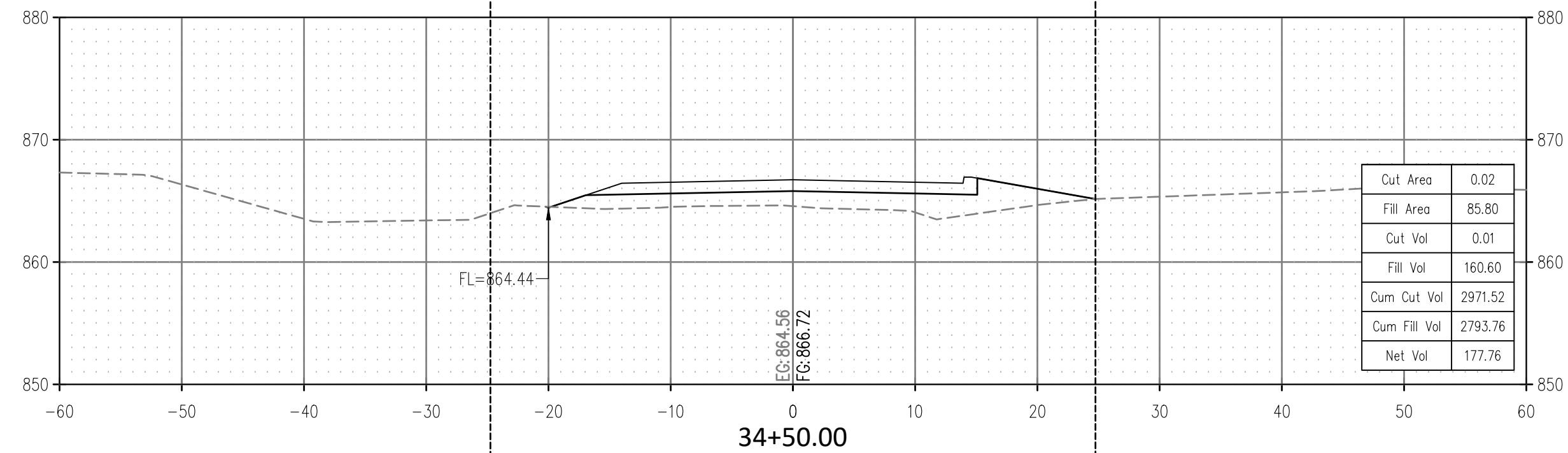
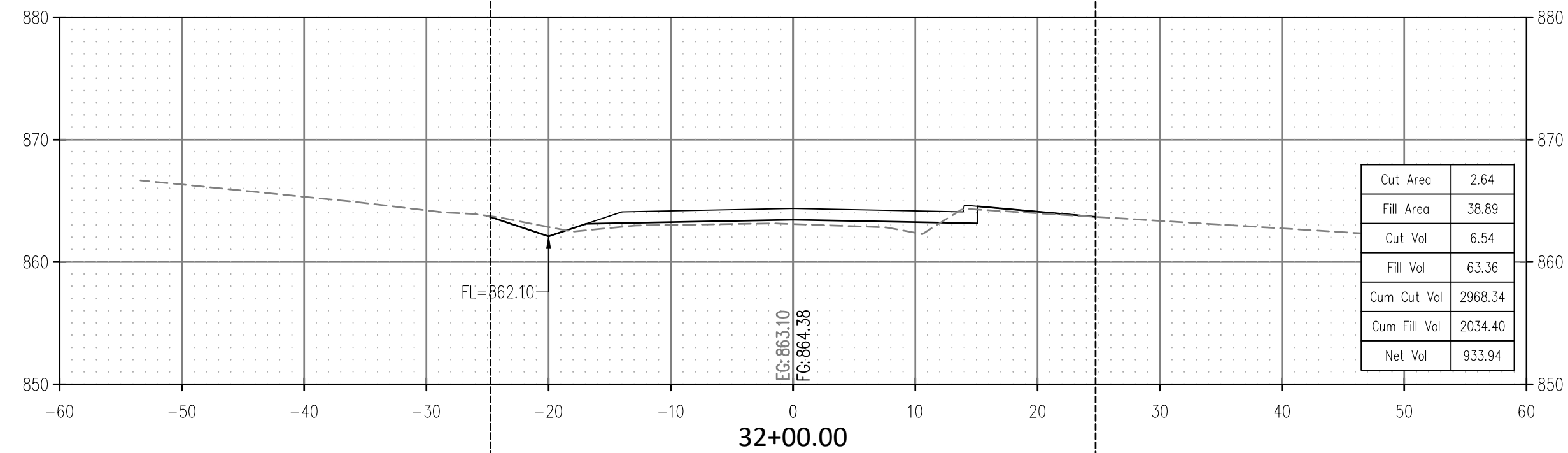
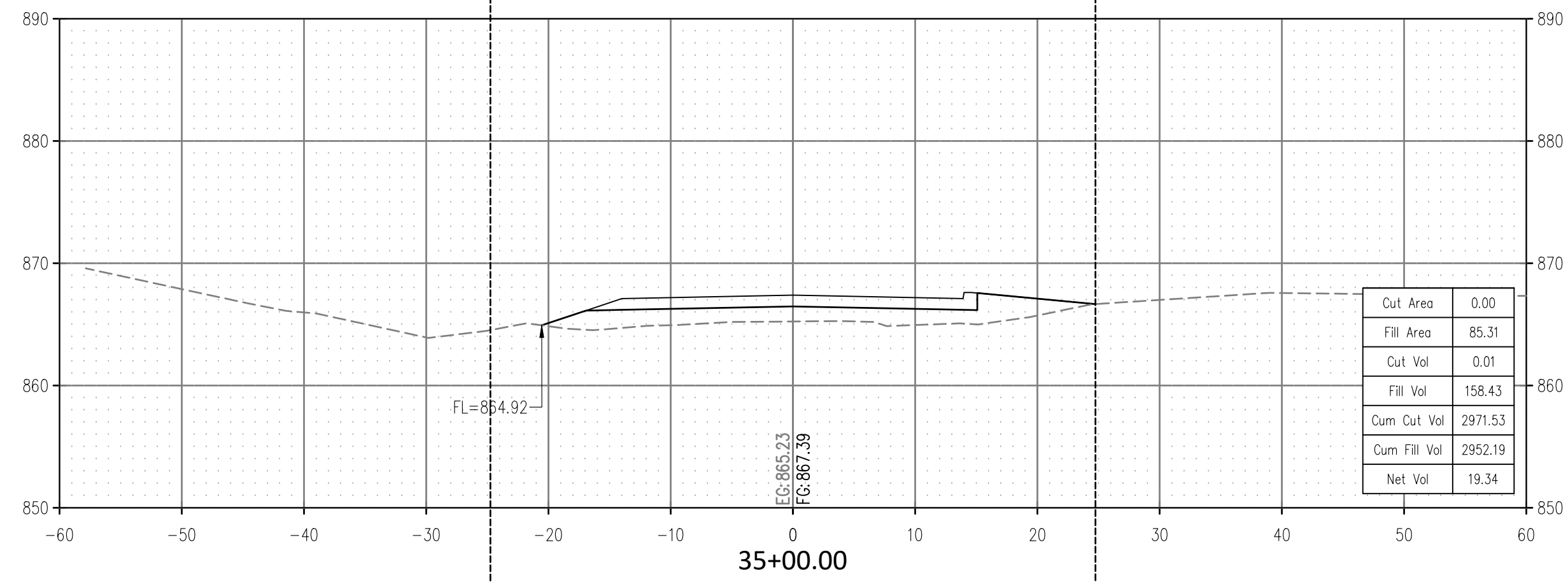
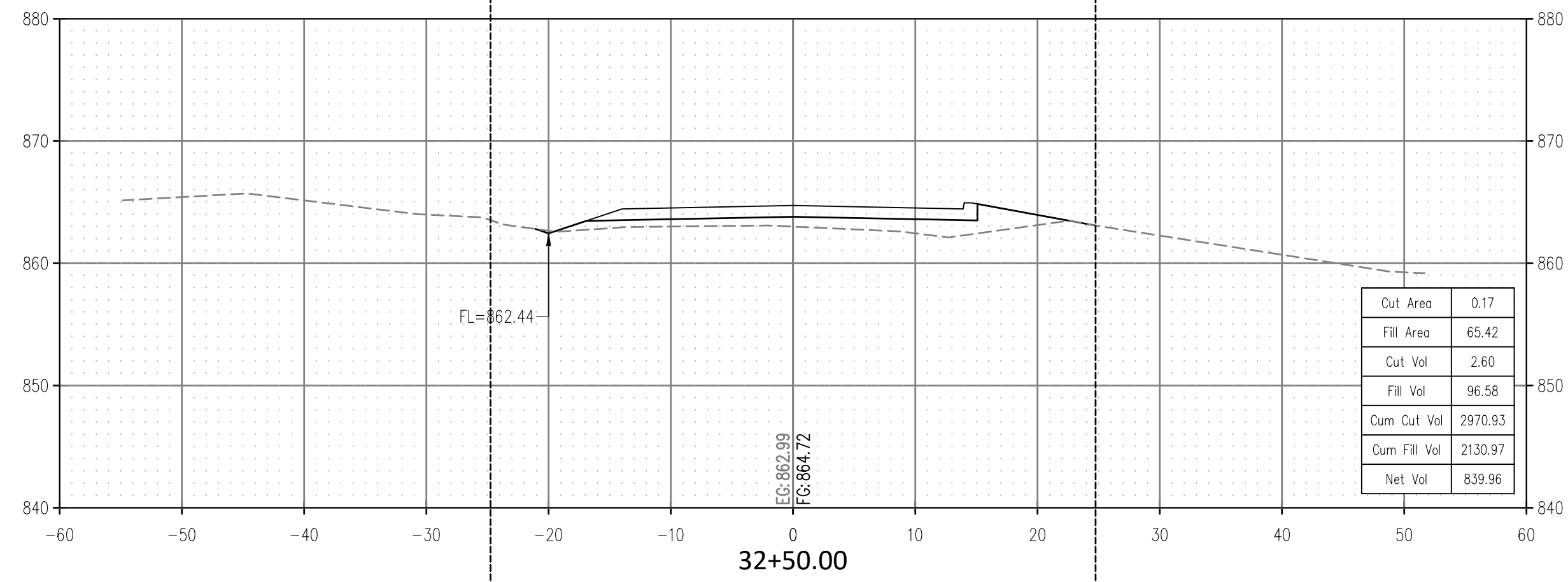
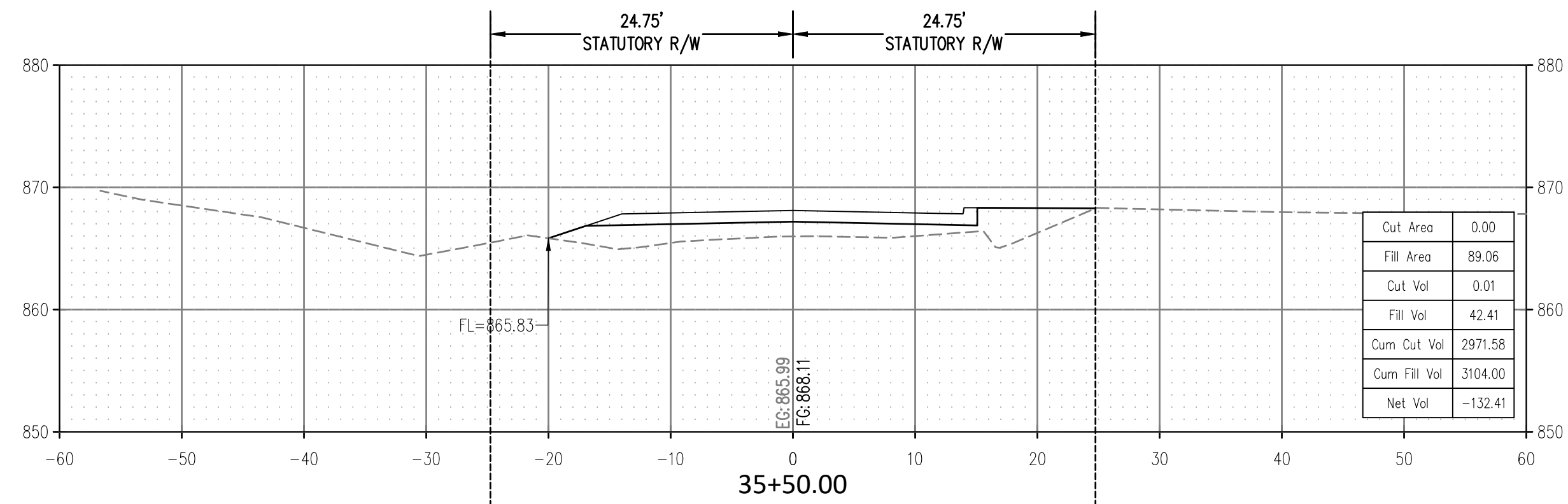
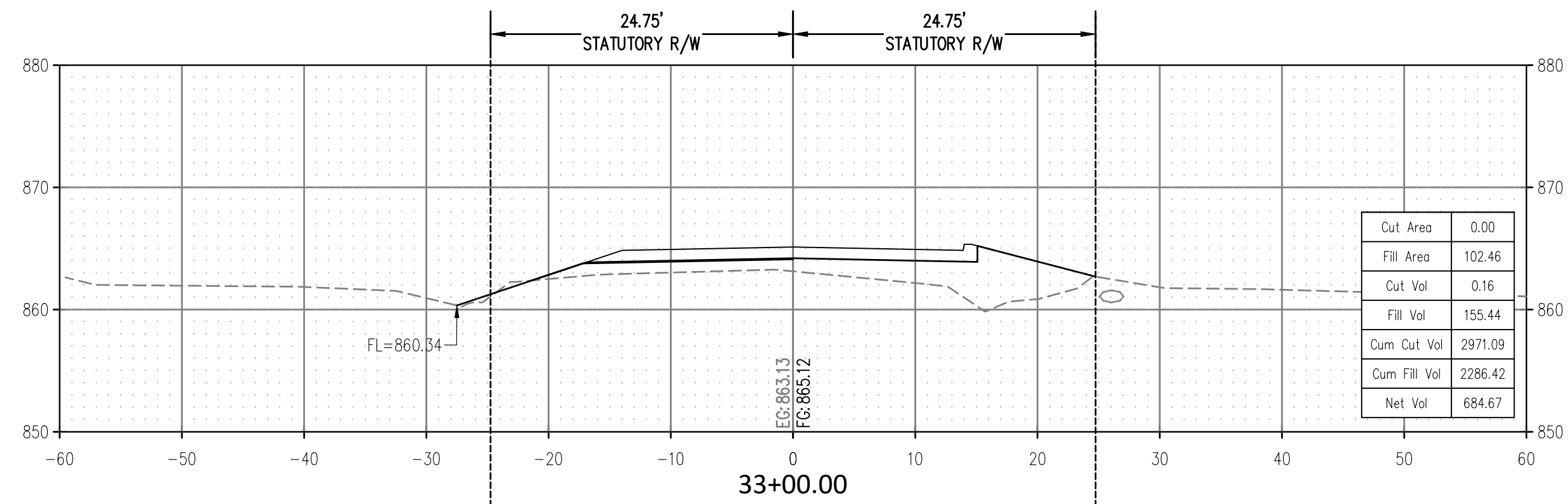
NO.	DATE	REVISIONS	DESCRIPTION	BY	CHK
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2	7/27/23		CLUB AND OUTER SECTION	DJM	
3	7/27/23		CLUB AND OUTER SECTION	DJM	
4	7/27/23		CLUB AND OUTER SECTION	DJM	
5	7/27/23		CLUB AND OUTER SECTION	DJM	

Drawn By: DJM
 Date: JULY 12, 2023

PROJECT MCN-044

SHEET X05

SCALE:
HOR. 1" = 10'
VERT. 1" = 10'



CROSS TIMBERS DRAWING FLEMING-044 ROAD SECTIONS.dwg

ROAD CROSS SECTIONS
GREENLEAF CHURCH ROAD
SECTION 15,16,21,22 T-11-N R-9-E
OKFUSKEE COUNTY, OKLAHOMA

CROSS TIMBERS CONSULTING, LLC
P.O. BOX 67
Alex, Oklahoma, 73002
Phone: (405) 222-8280



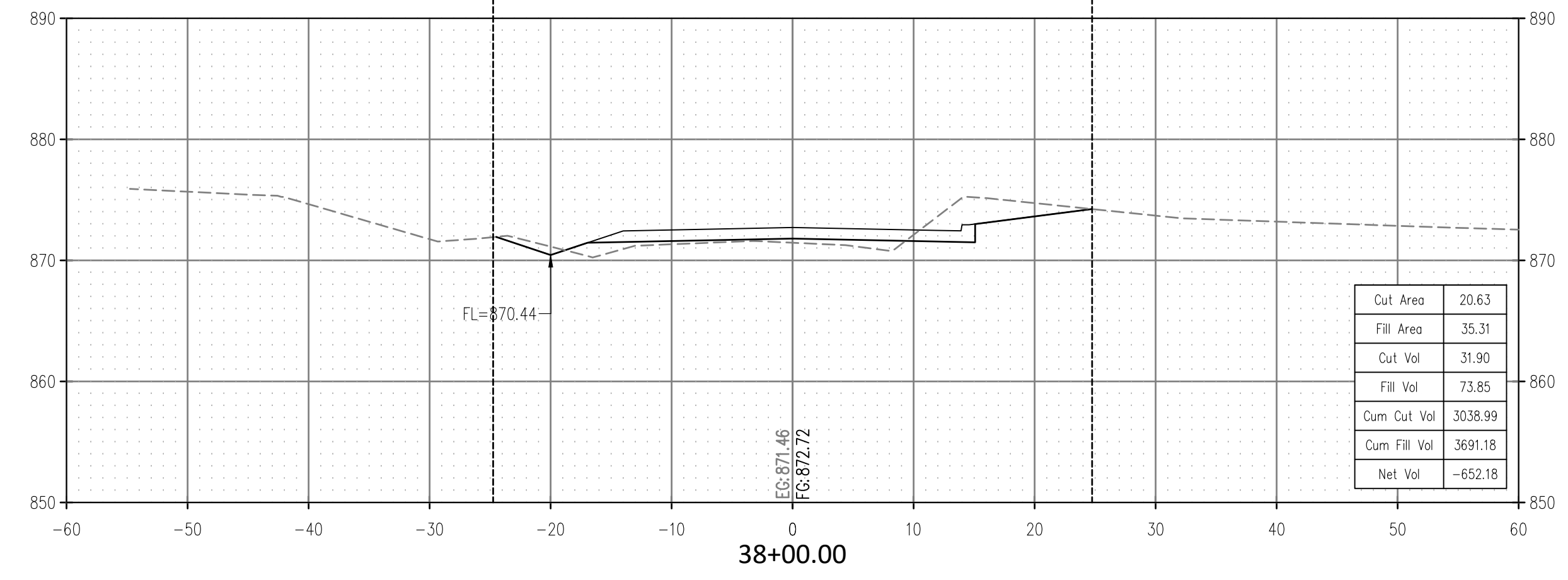
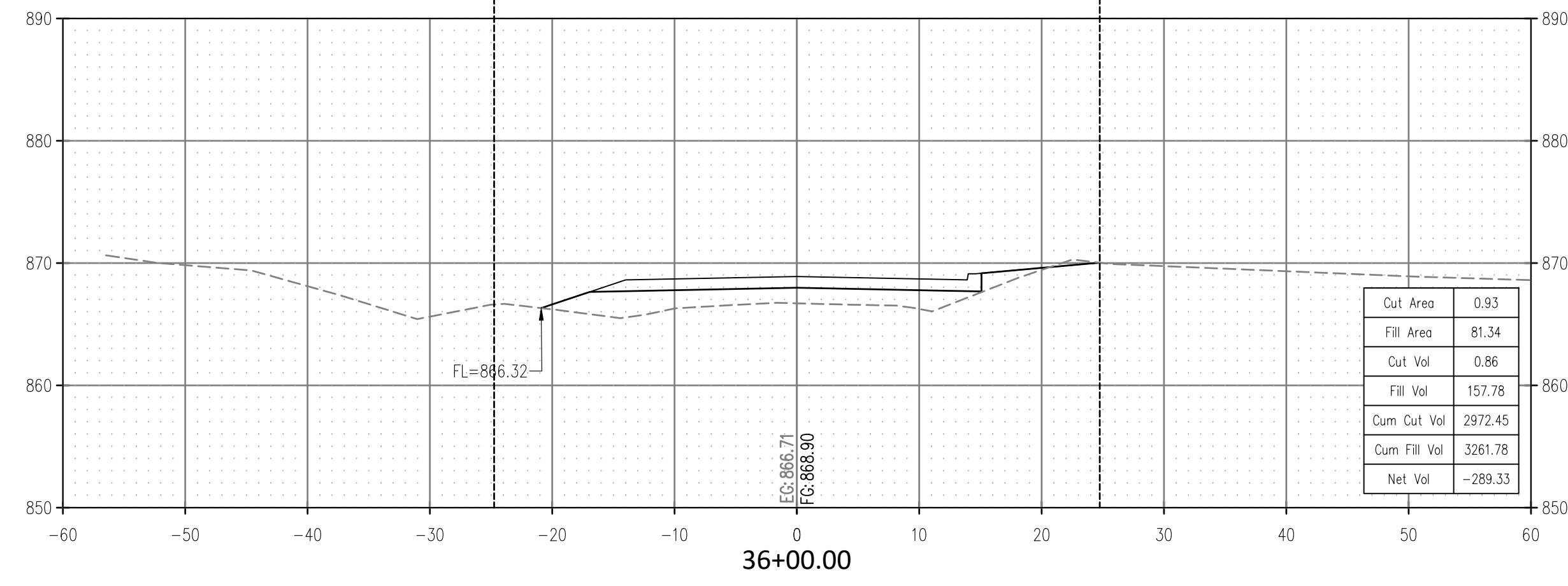
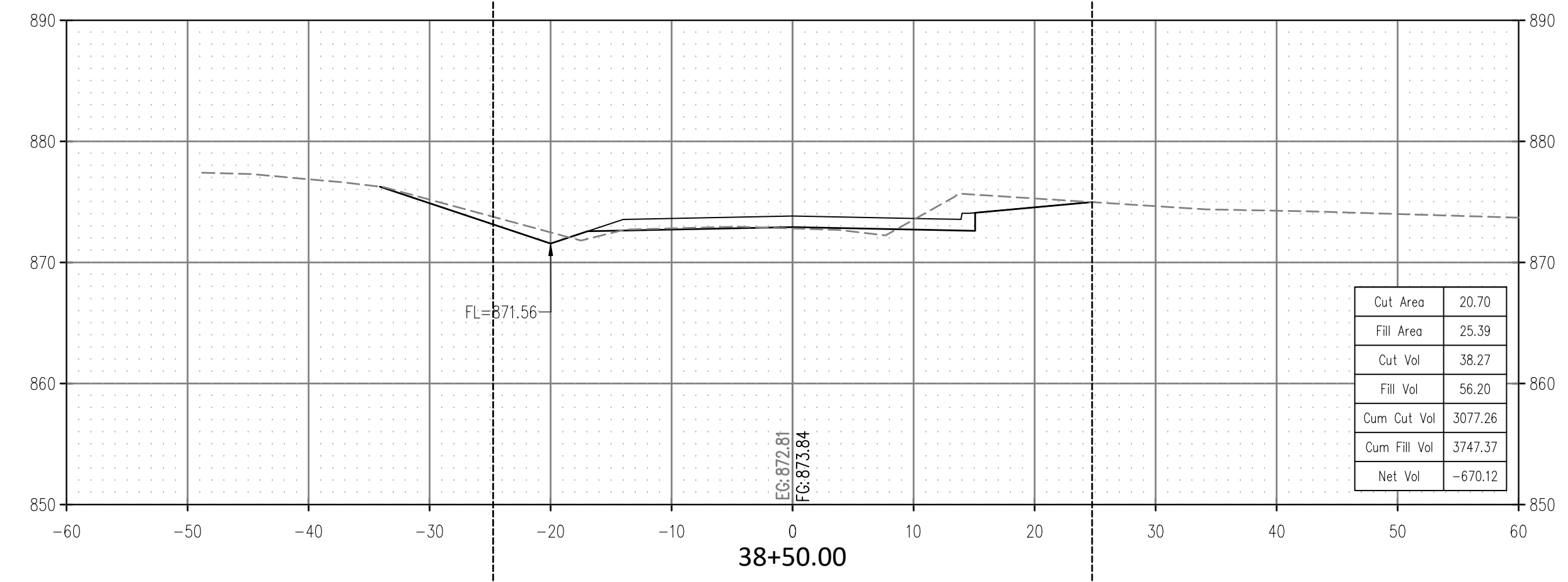
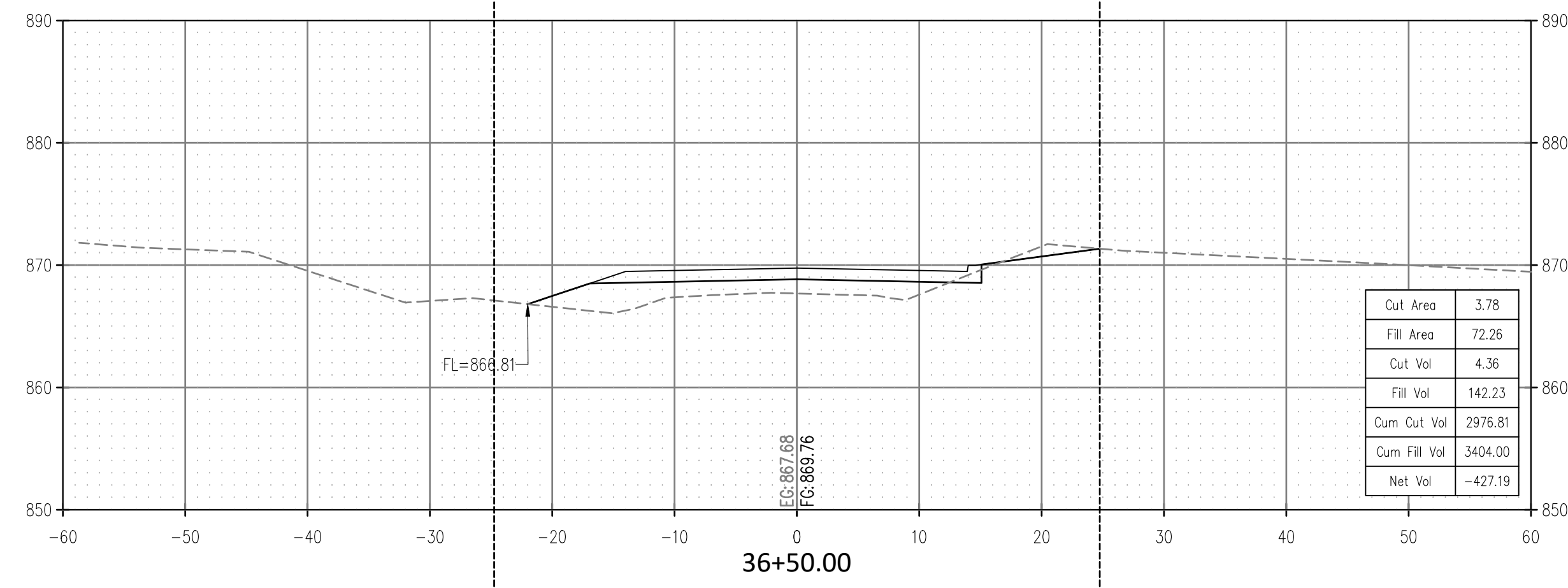
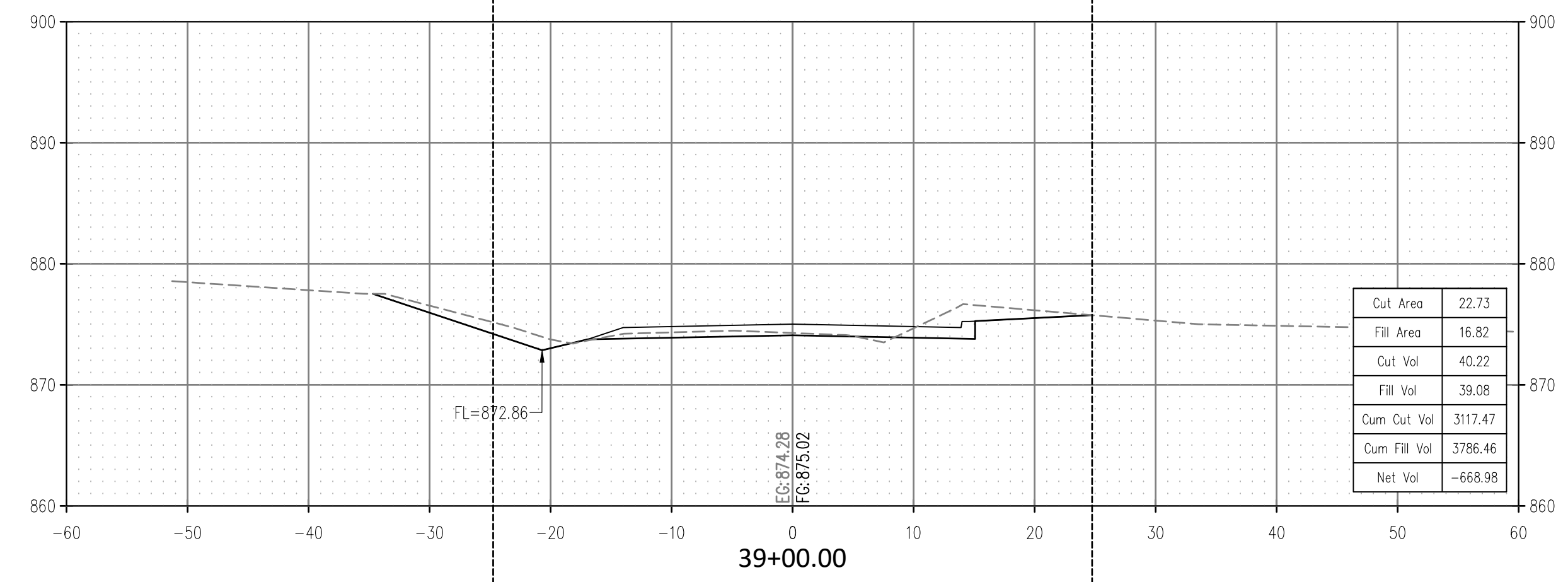
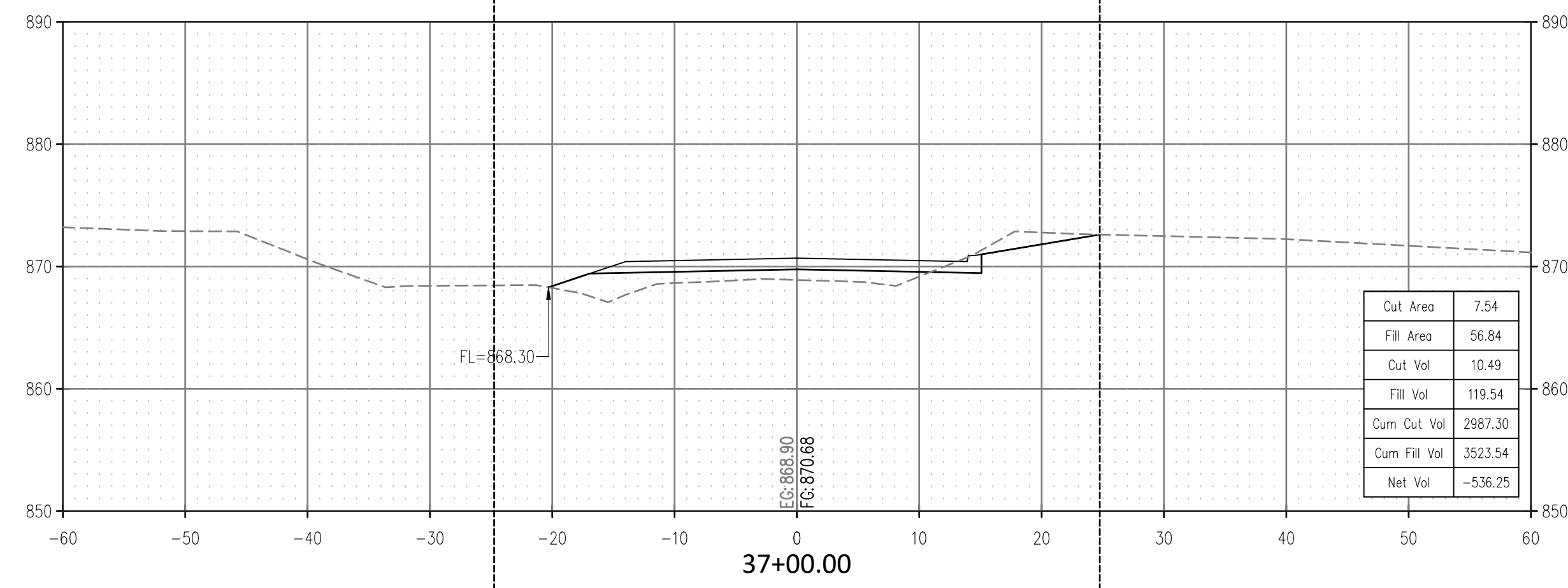
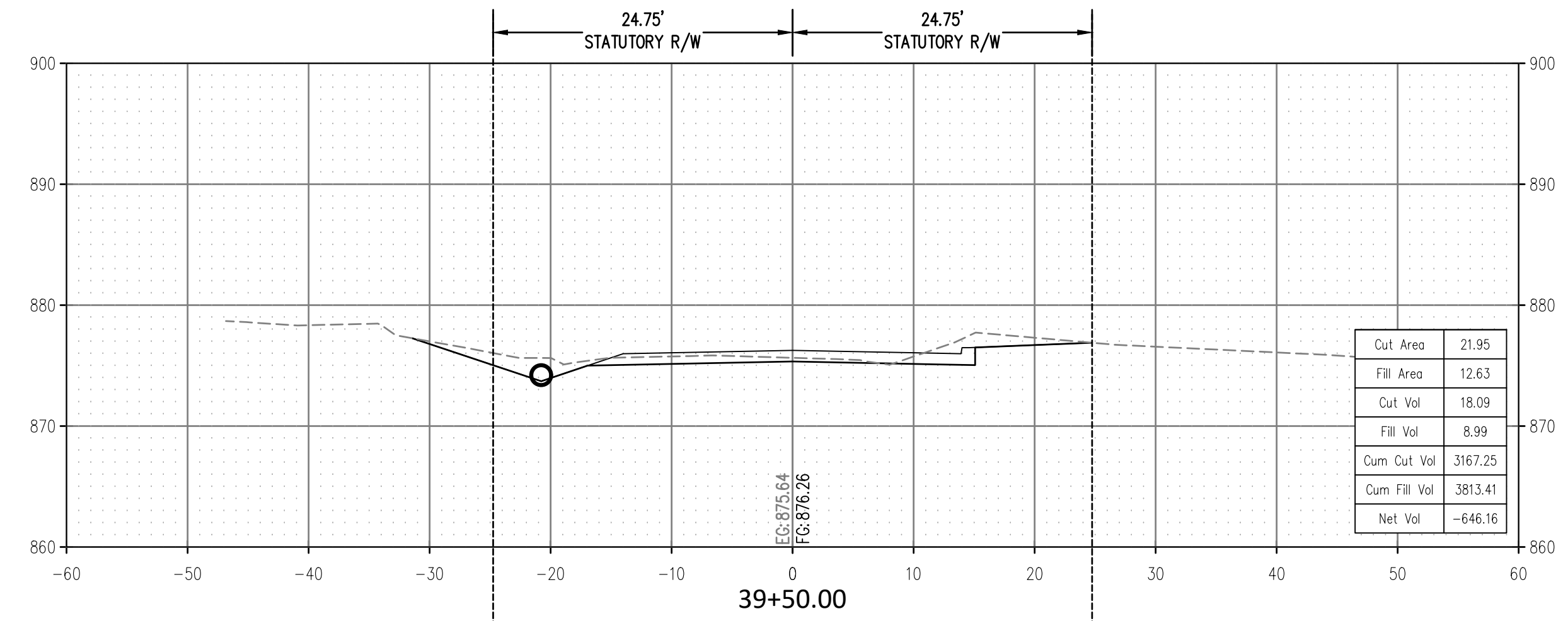
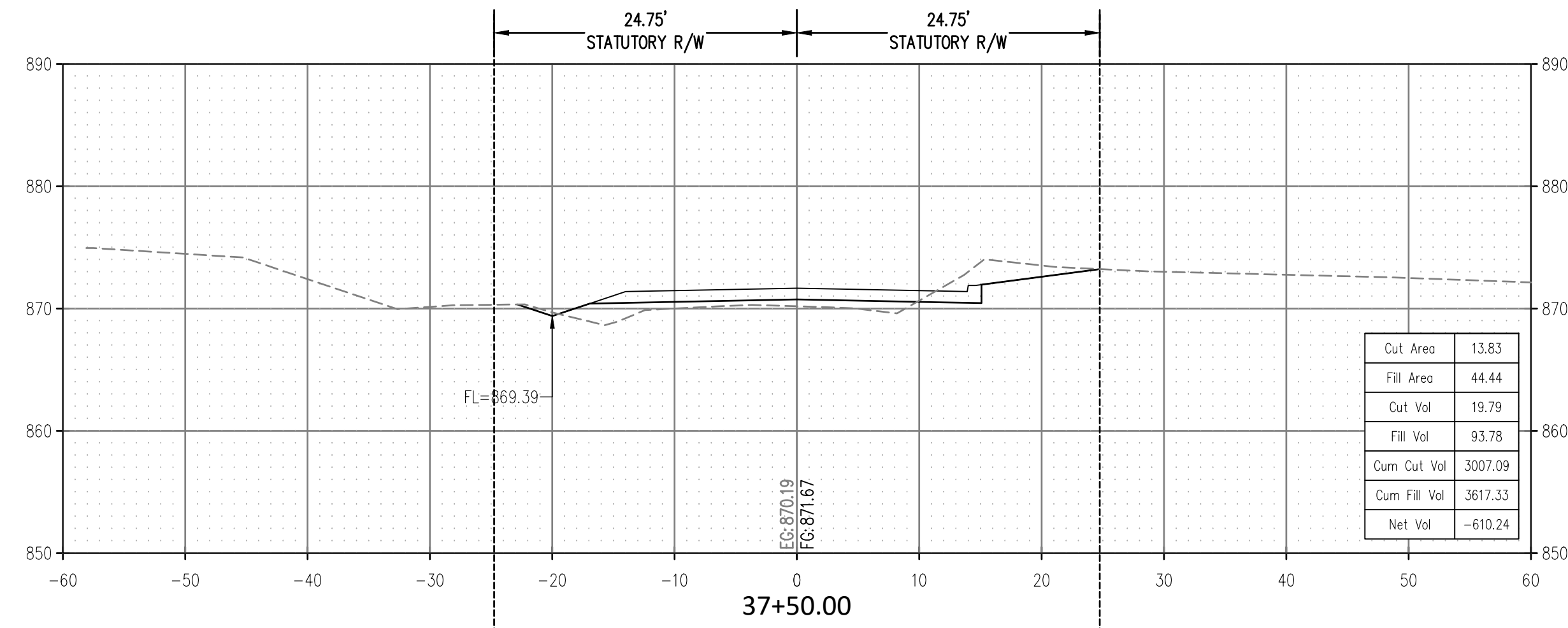
NO.	DATE	DESCRIPTION	BY
1	8/22/23	CURB AND OUTER SECTION	DJM
2	8/22/23	CURB AND OUTER SECTION	DJM
3	7/17/23	BARREL RISE DESCRIPTION	DJM
4	7/17/23	BARREL RISE DESCRIPTION	DJM
5	7/28/23	CONK LINK FENCE & PAVEMENT	DJM

Drawn By: DJM
Date: JULY 12, 2023

PROJECT MCN-044

SHEET X06

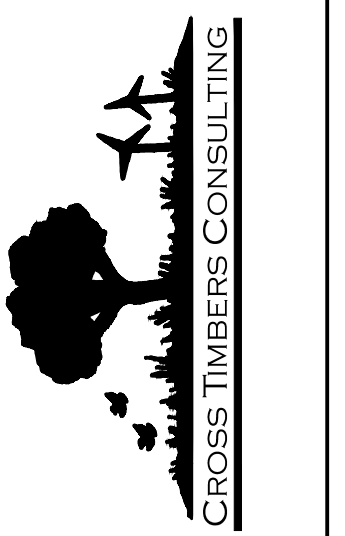
SCALE:
 HOR. 1" = 10'
 VERT. 1" = 10'



CROSS TIMBERS DRAWING FLEMING-044 ROAD SECTIONS.dwg

ROAD CROSS SECTIONS
 GREENLEAF CHURCH ROAD
 SECTION 15,16,21,22 T-11-N R-9-E
 OKFUSKEE COUNTY, OKLAHOMA

CROSS TIMBERS CONSULTING, LLC
 P.O. BOX 67
 Alex, Oklahoma, 73002
 Phone: (405) 222-8280



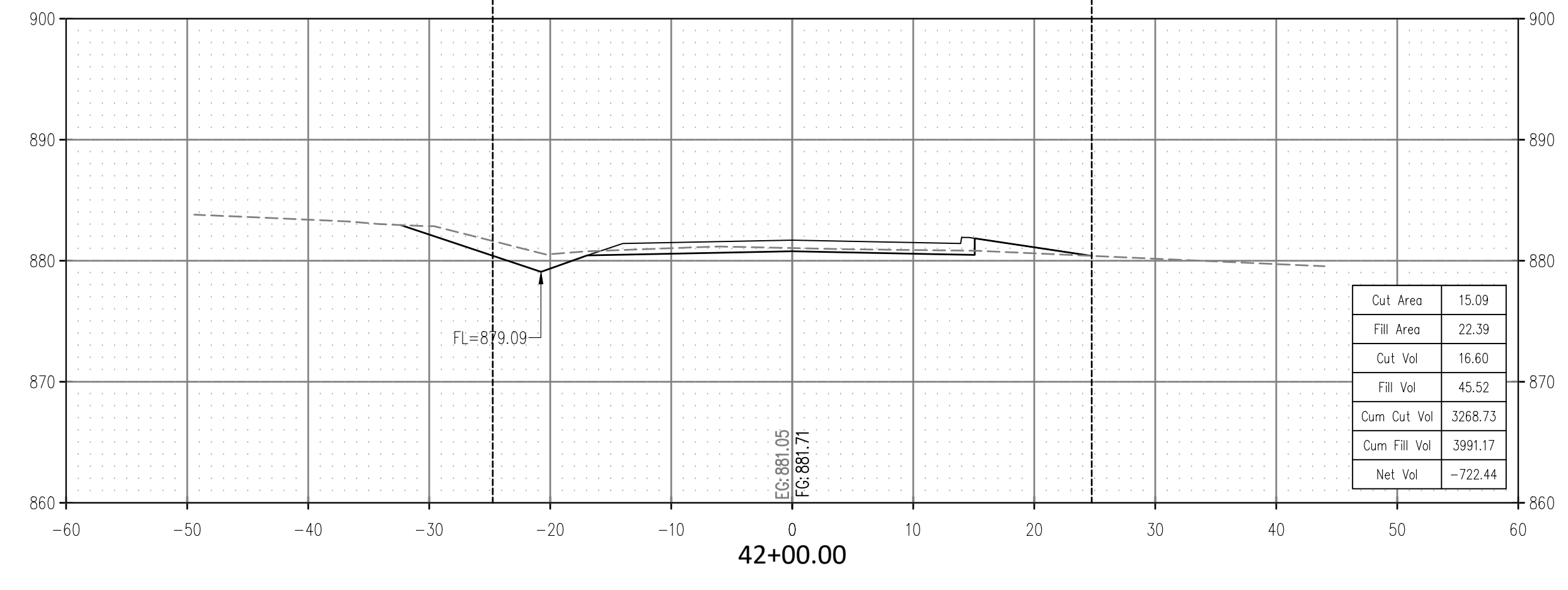
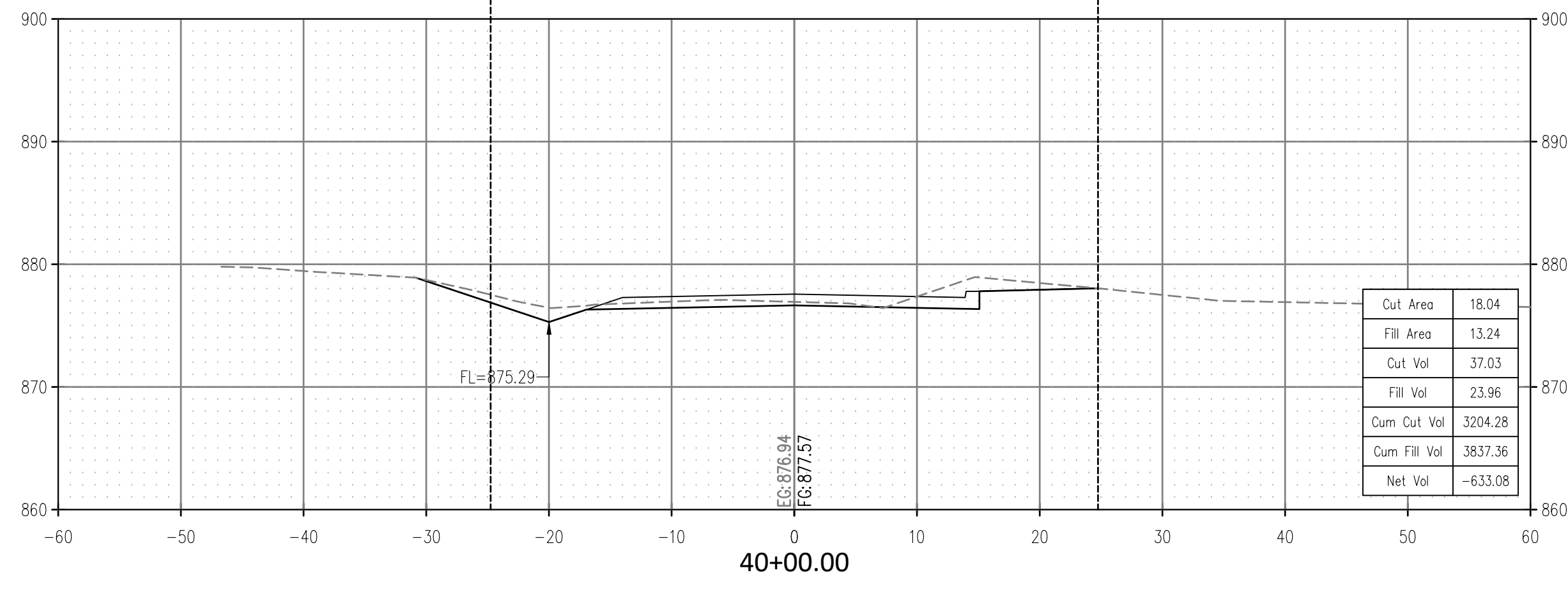
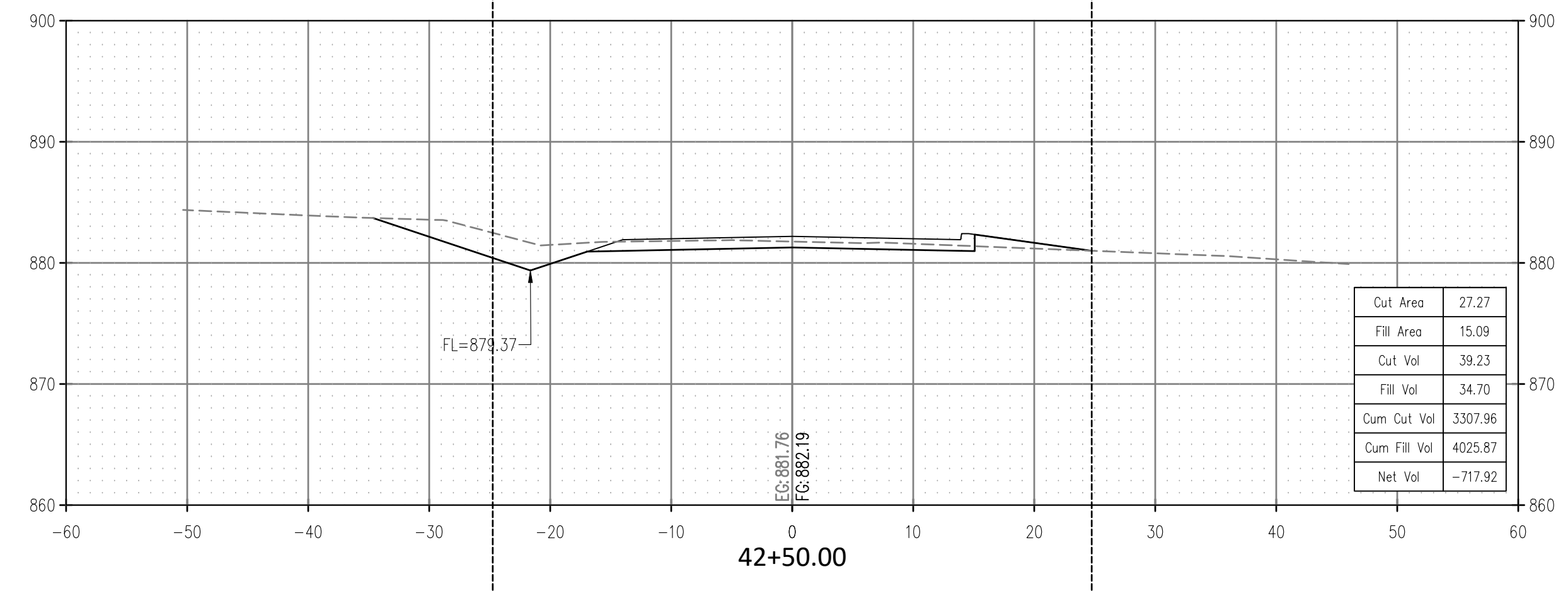
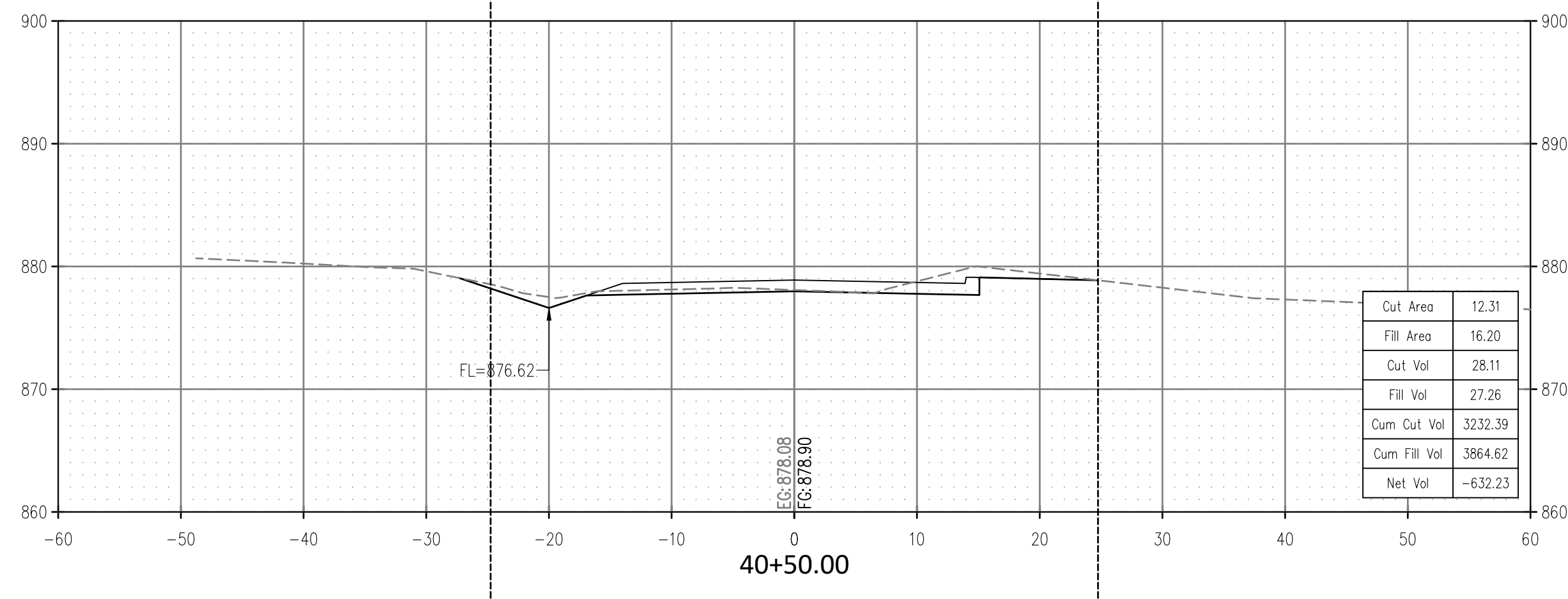
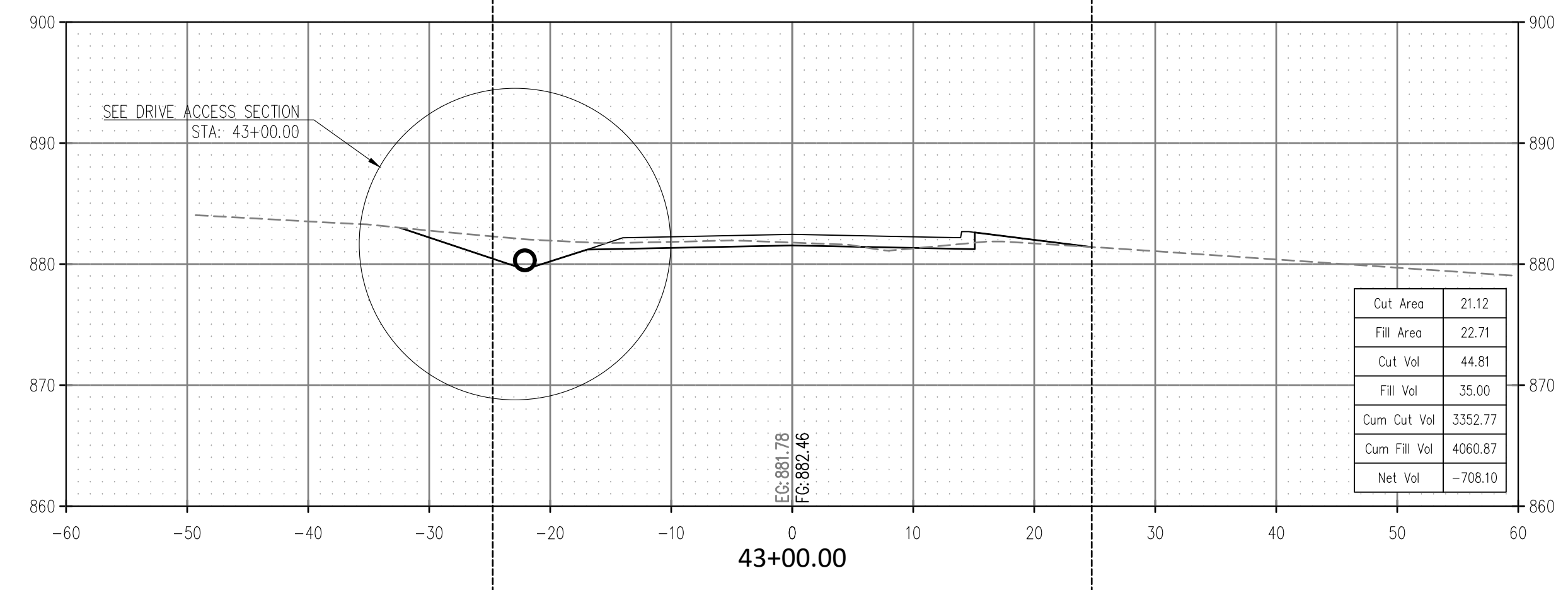
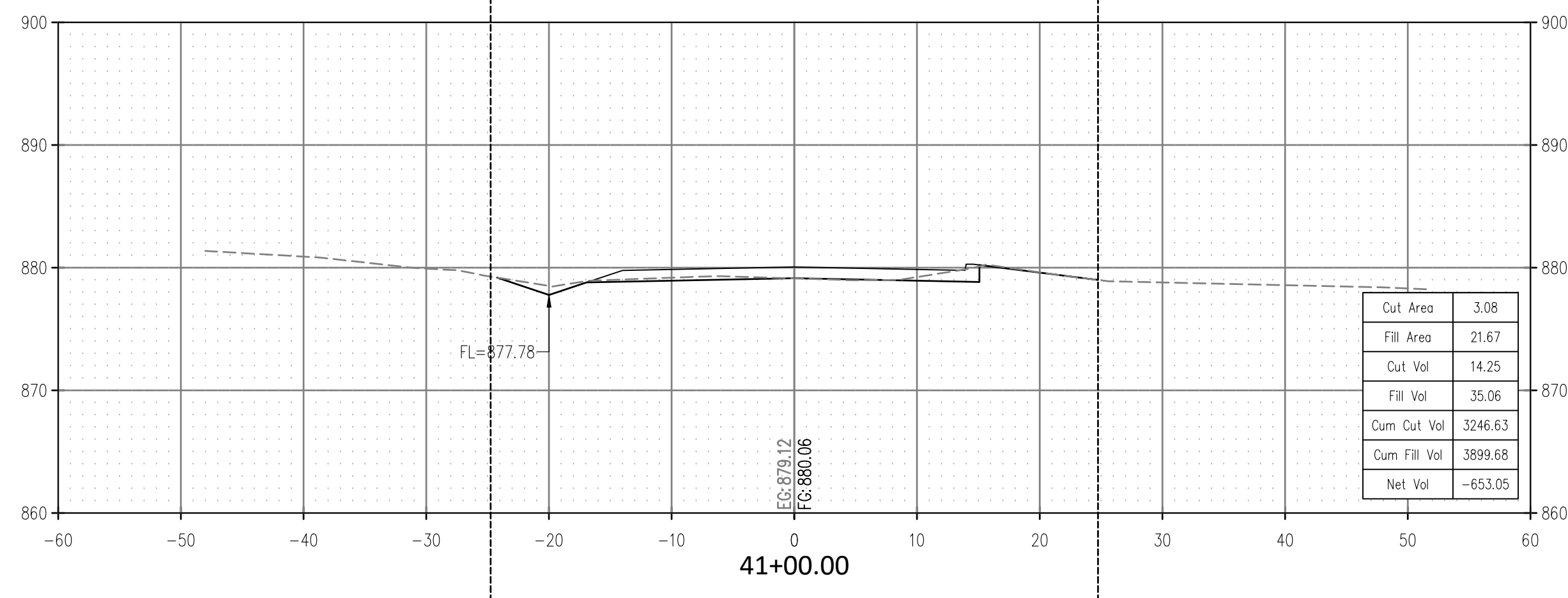
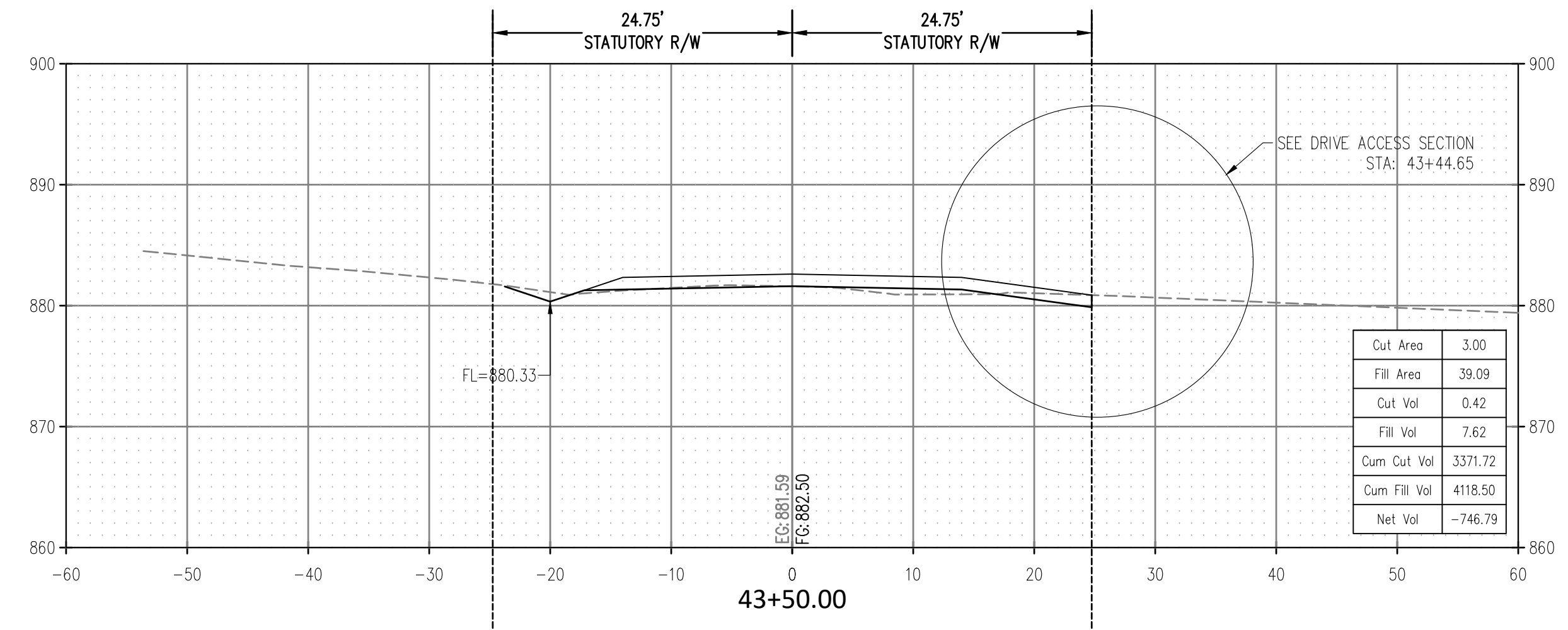
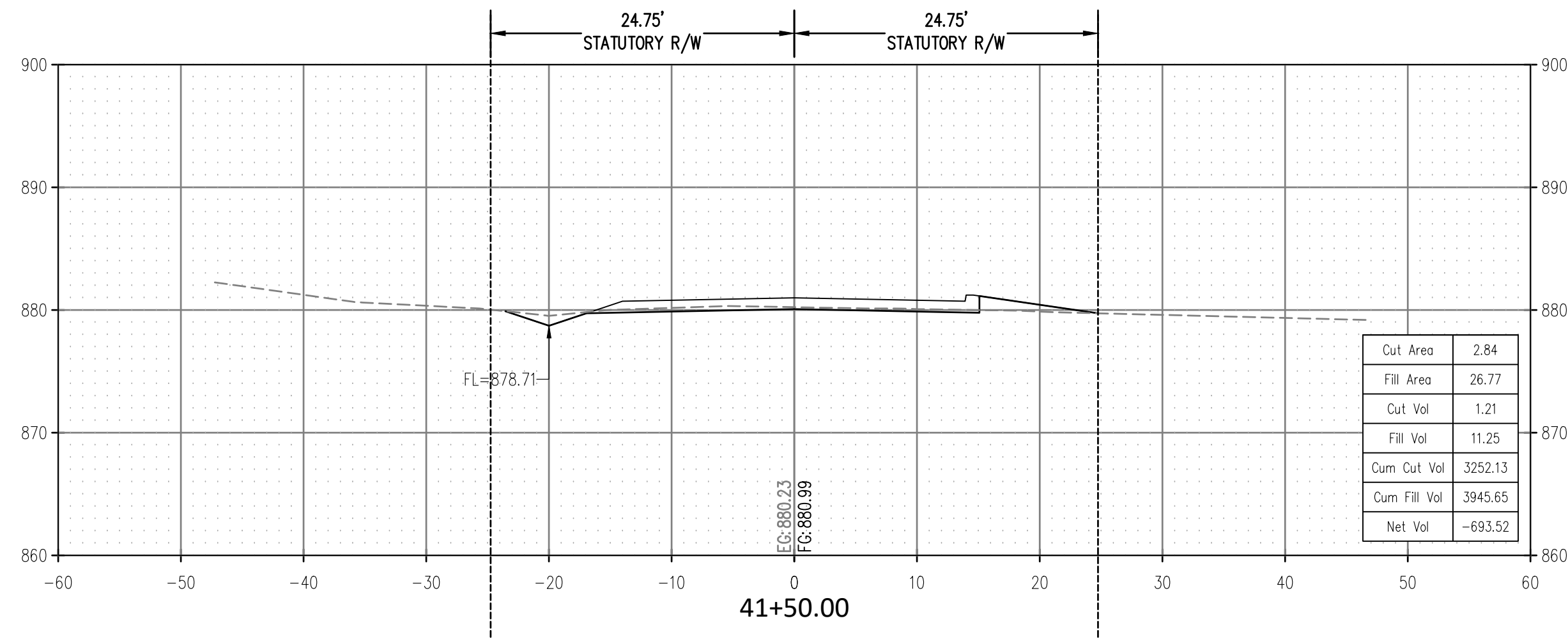
NO.	DATE	REVISIONS	DESCRIPTION	BY	CHK
1	7/27/23		PERMITS AND OUTER SECTION		
2	7/27/23		PERMITS AND OUTER SECTION		
3	7/27/23		PERMITS AND OUTER SECTION		
4	7/27/23		PERMITS AND OUTER SECTION		
5	7/27/23		PERMITS AND OUTER SECTION		

Drawn By: DJM
 Date: JULY 12, 2023

PROJECT MCN-044

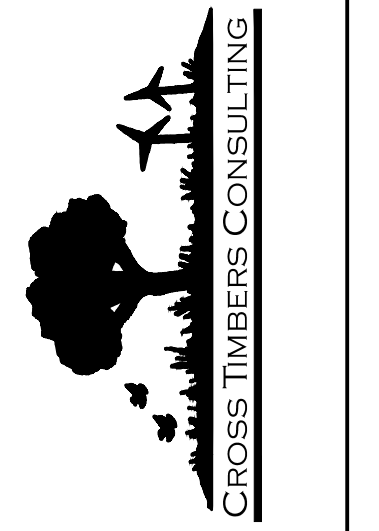
SHEET X07

SCALE:
 HOR. 1" = 10'
 VERT. 1" = 10'



ROAD CROSS SECTIONS
 GREENLEAF CHURCH ROAD
 SECTION 15,16,21,22 T-11-N R-9-E
 OKFUSKEE COUNTY, OKLAHOMA

CROSS TIMBERS CONSULTING, LLC
 P.O. BOX 67
 Alex, Oklahoma, 73002
 Phone: (405) 222-8280



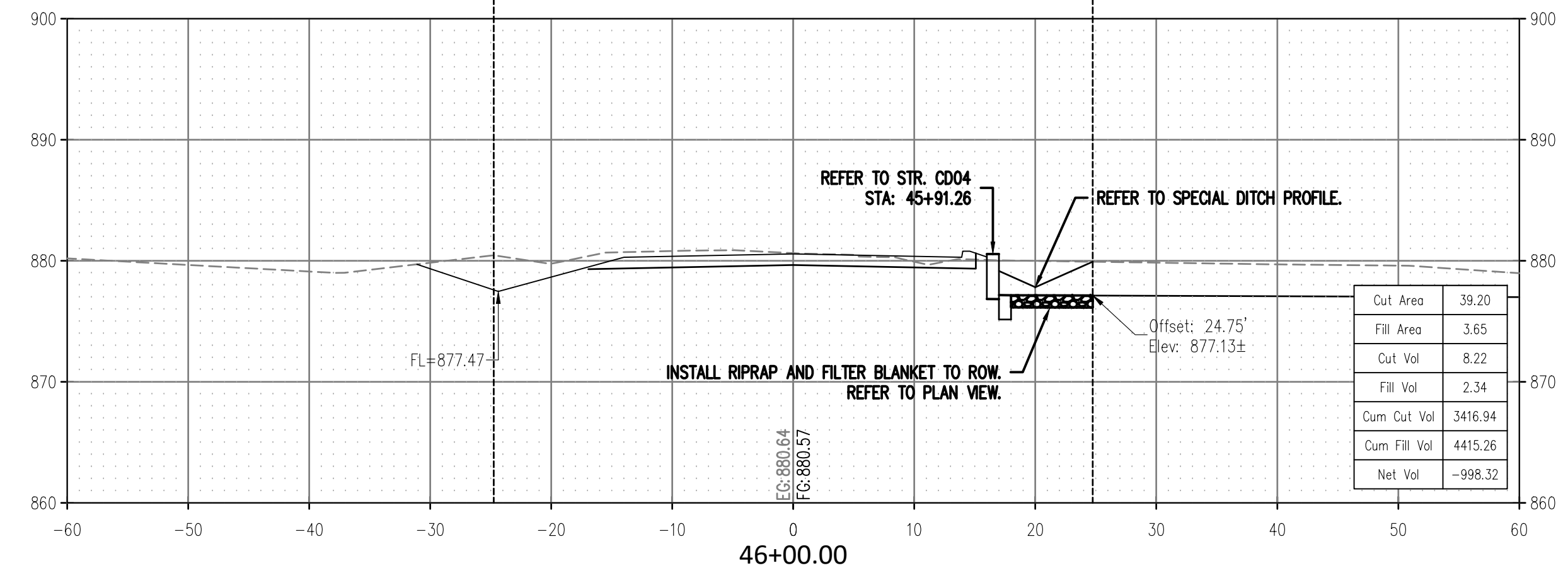
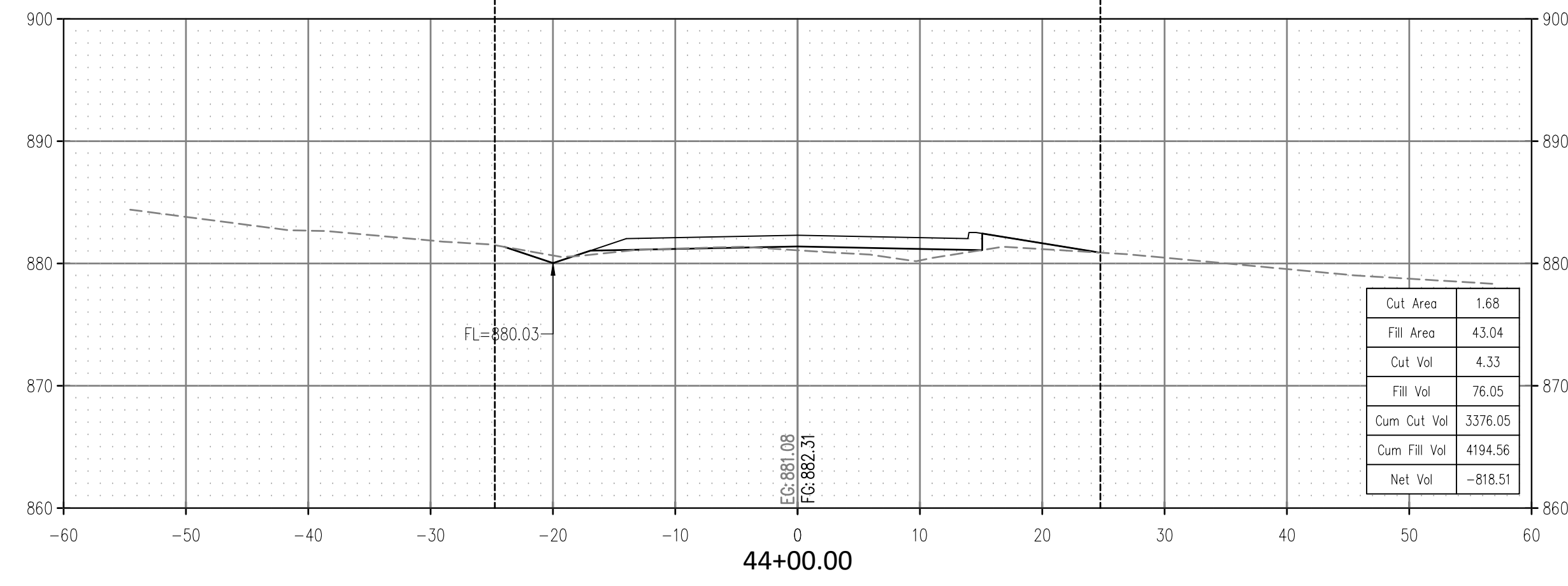
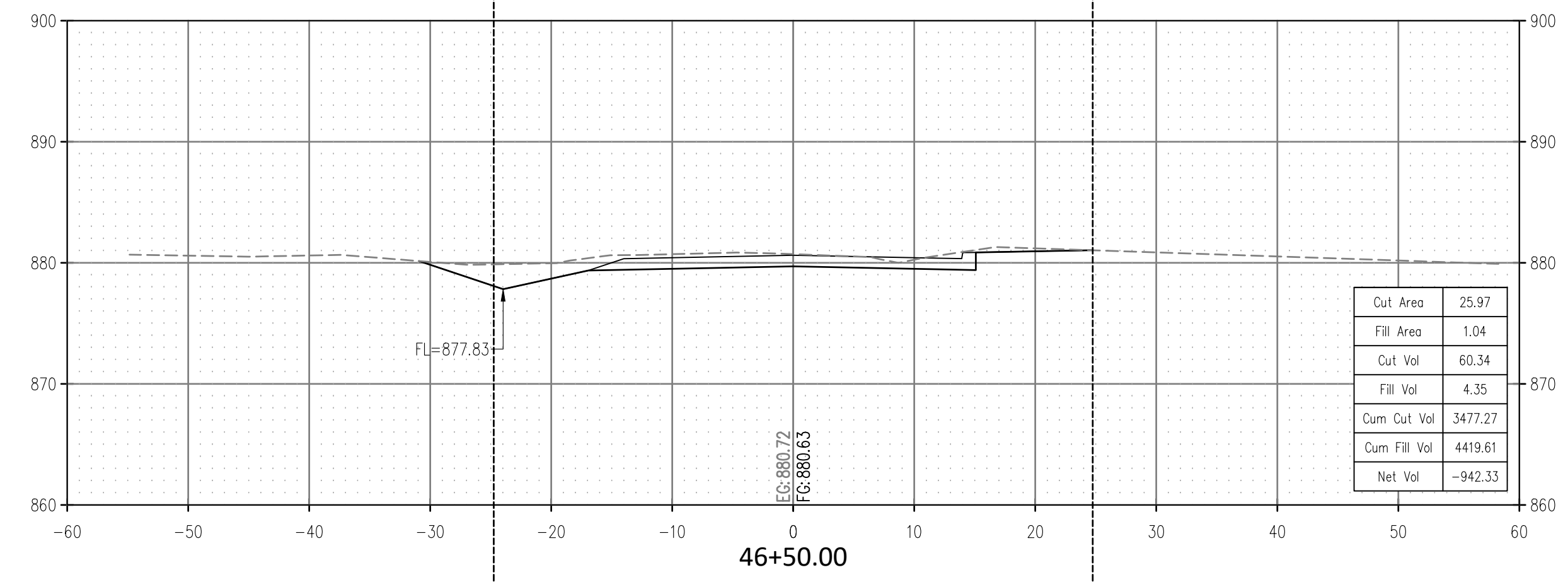
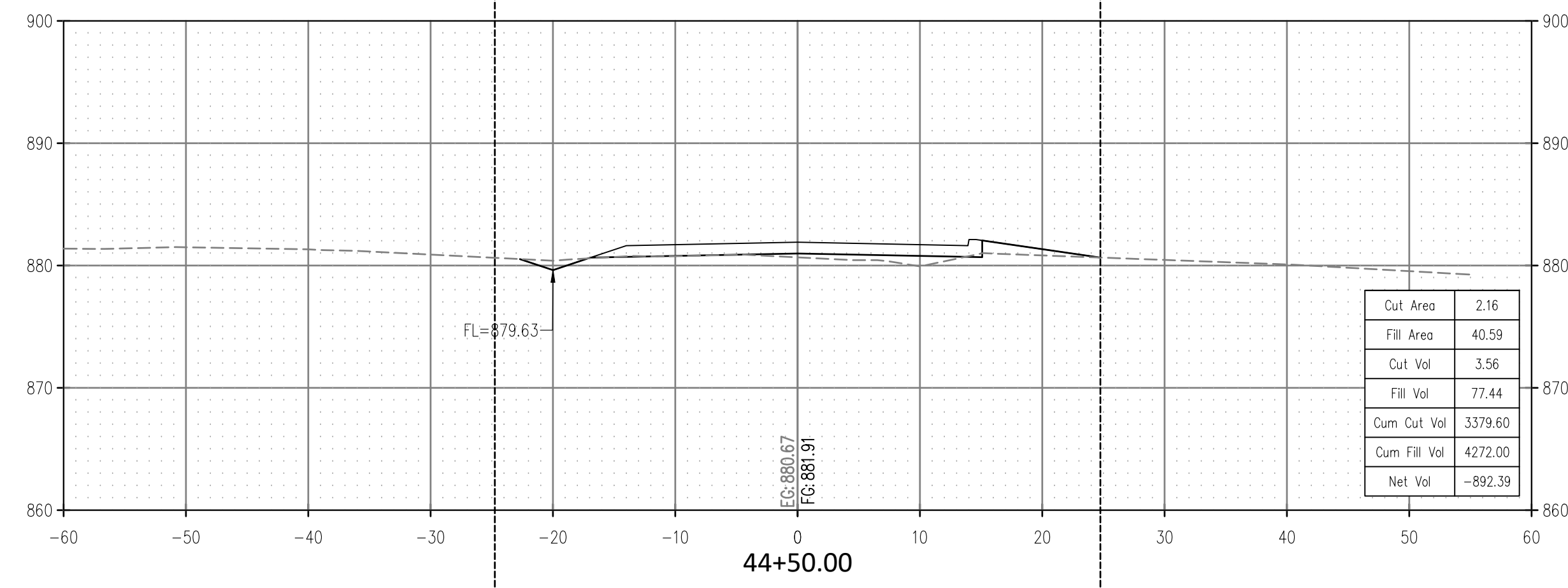
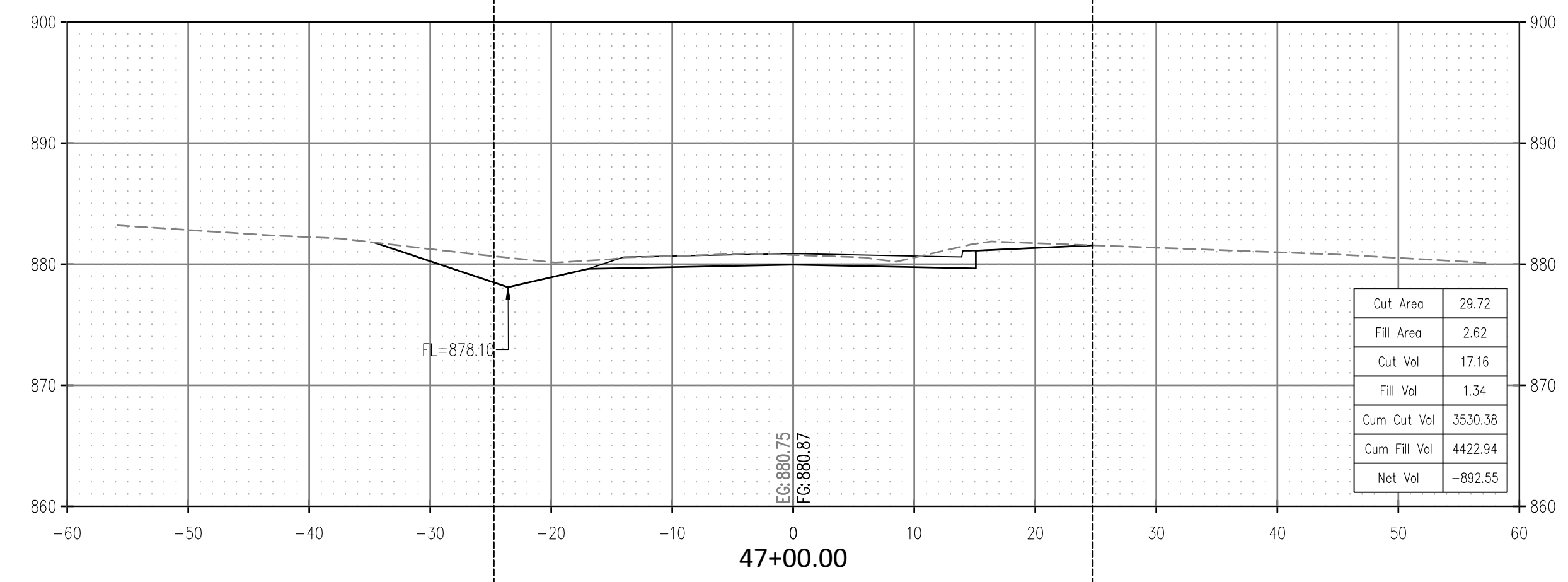
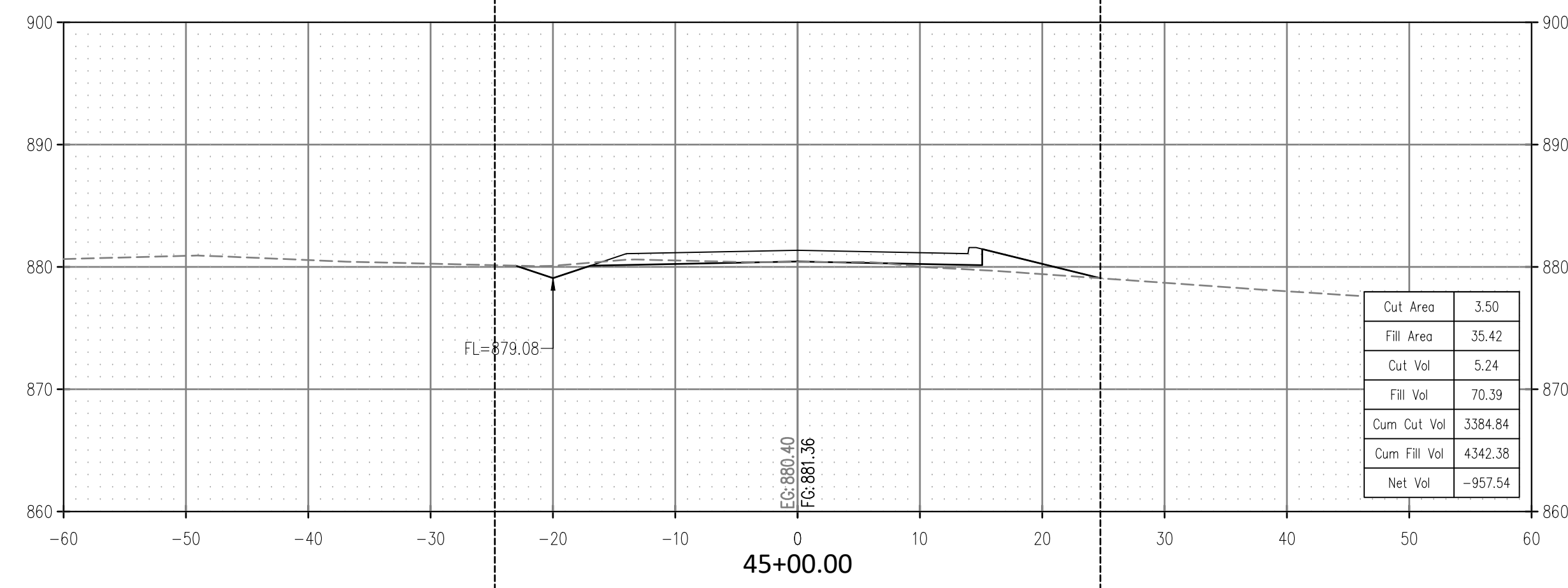
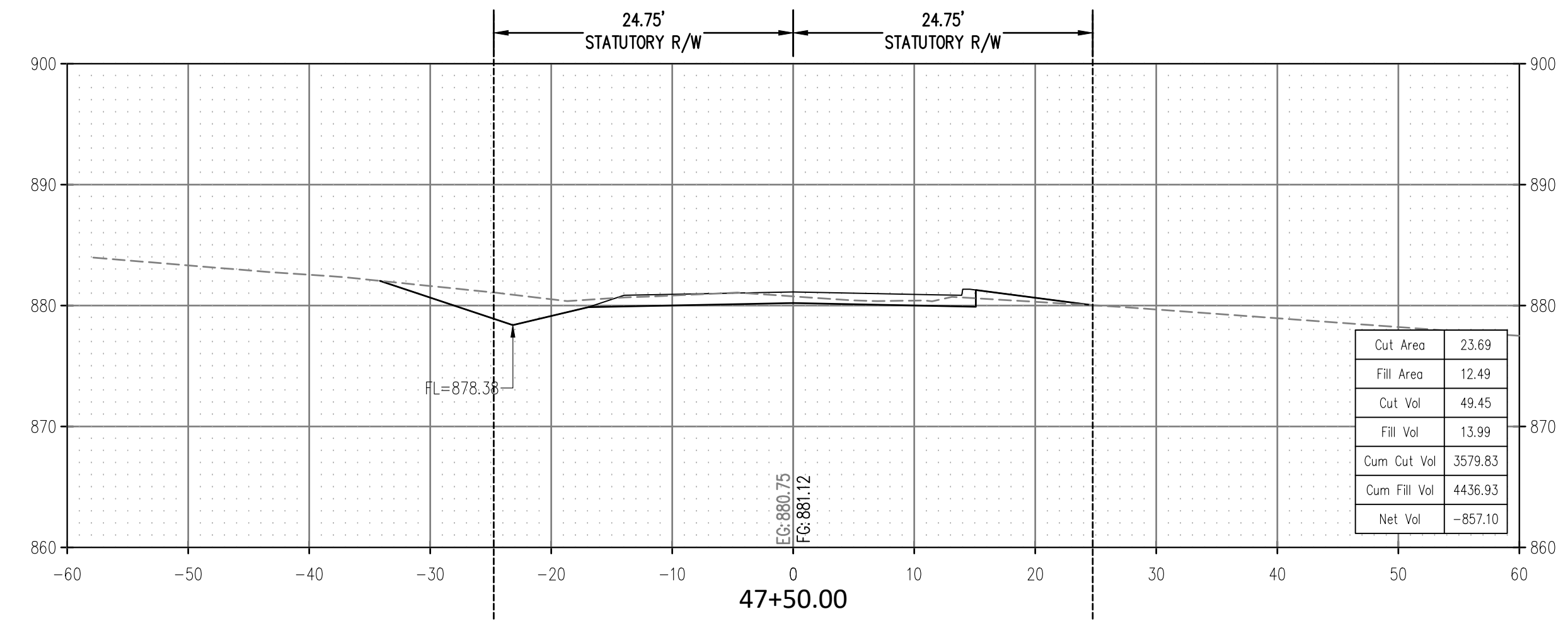
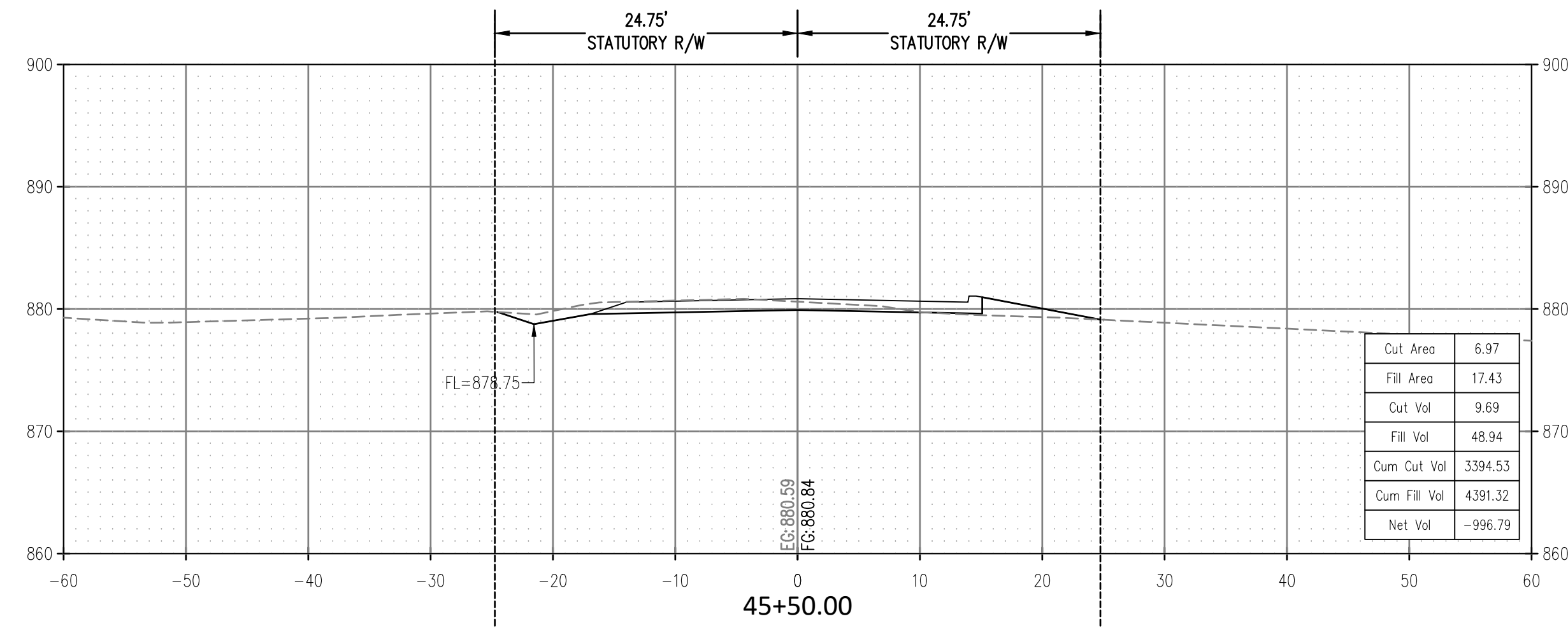
NO.	DATE	REVISIONS	DESCRIPTION	BY	CHK
1	7/27/23		CURB AND OUTER SECTION	DJM	
2	7/27/23		CURB AND OUTER SECTION	DJM	
3	7/27/23		CURB AND OUTER SECTION	DJM	
4	7/27/23		BARREL ROSE SECTION	DJM	
5	7/27/23		CONK LINK FENCE & PAVEMENT	DJM	

Drawn By: DJM
 Date: JULY 12, 2023

PROJECT MCN-044

SHEET X08

SCALE:
 HOR. 1" = 10'
 VERT. 1" = 10'



CROSS TIMBERS DRAWING FLEMING-044 ROAD SECTIONS.dwg

ROAD CROSS SECTIONS
 GREENLEAF CHURCH ROAD
 SECTION 15,16,21,22 T-11-N R-9-E
 OKFUSKEE COUNTY, OKLAHOMA

CROSS TIMBERS CONSULTING, LLC
 P.O. BOX 67
 Alex, Oklahoma, 73002
 Phone: (405) 222-8280

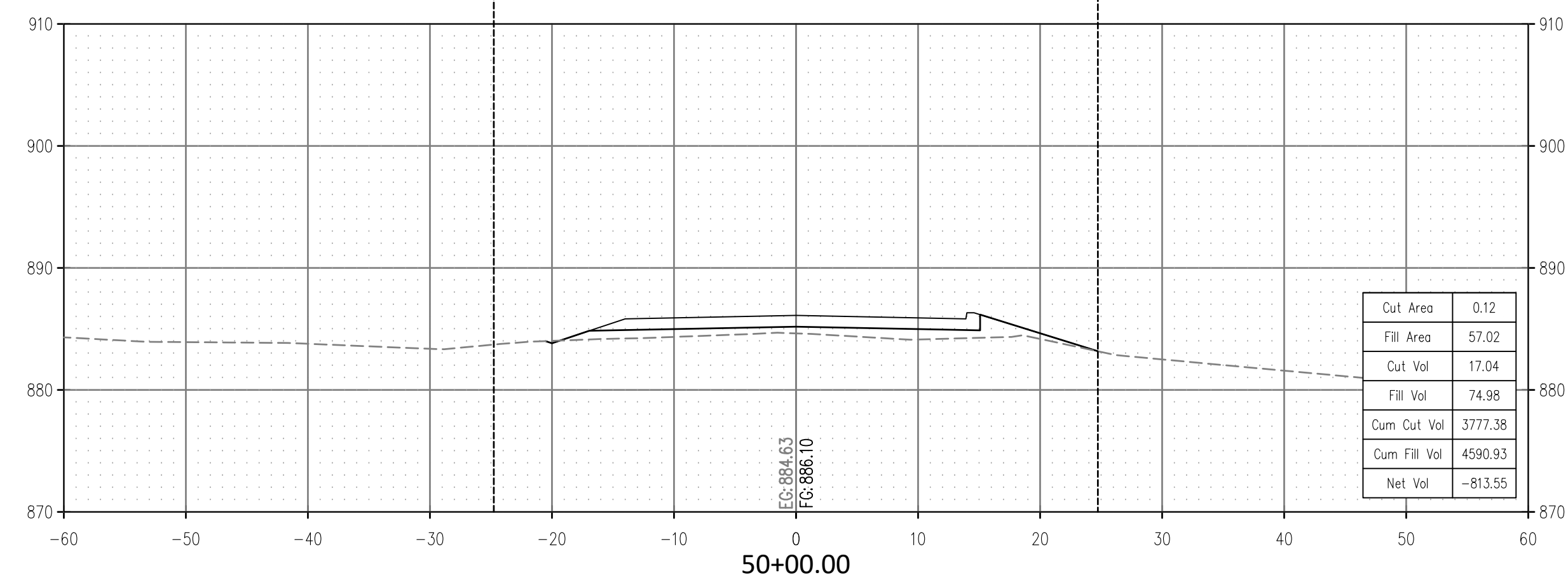
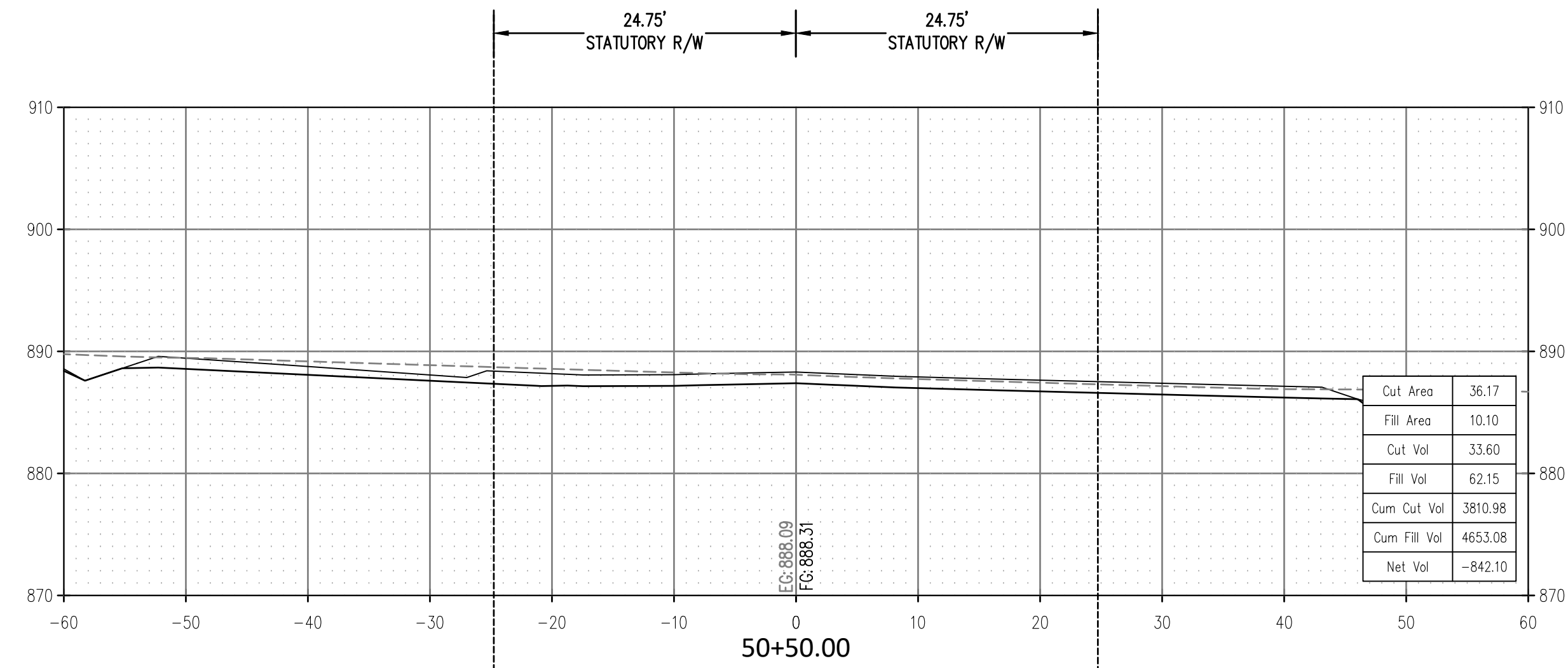
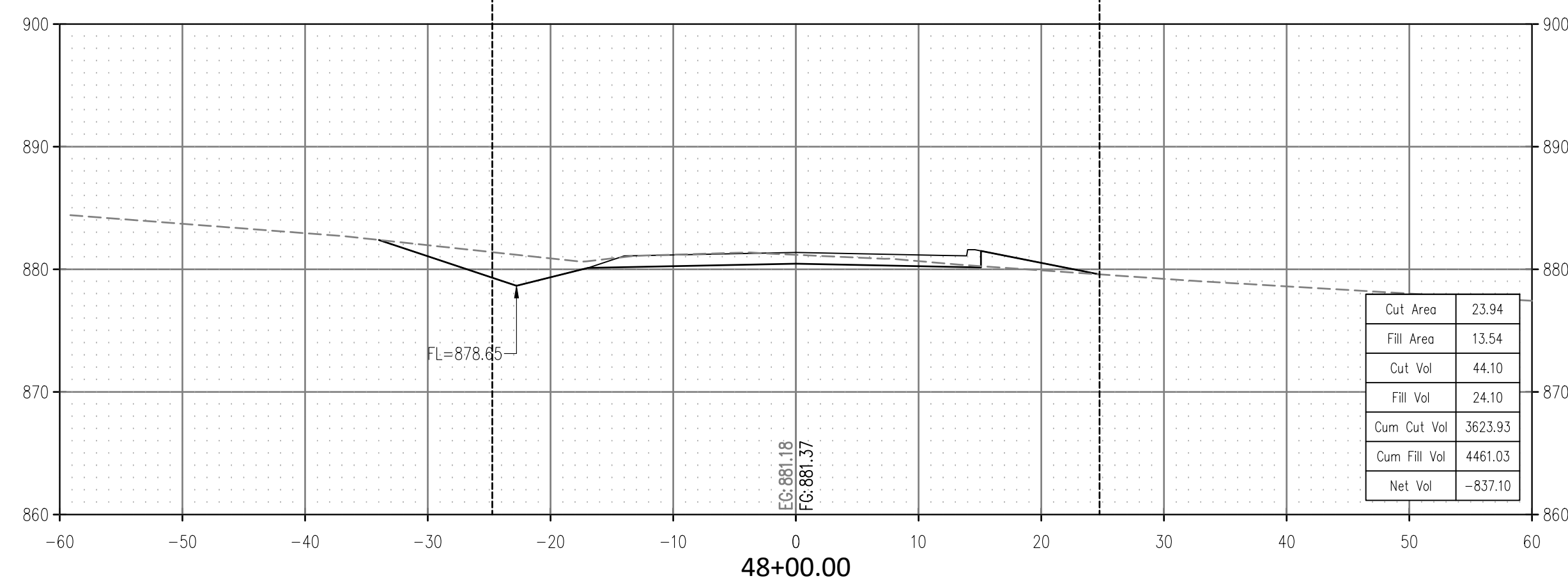
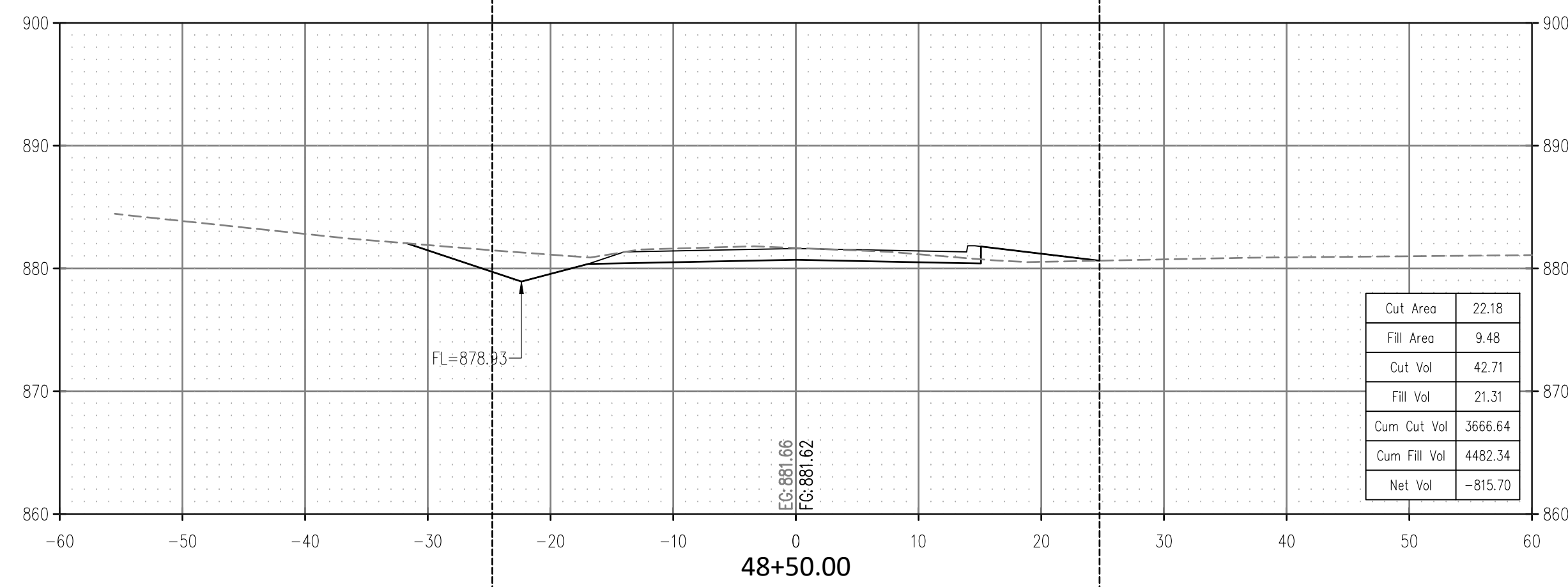
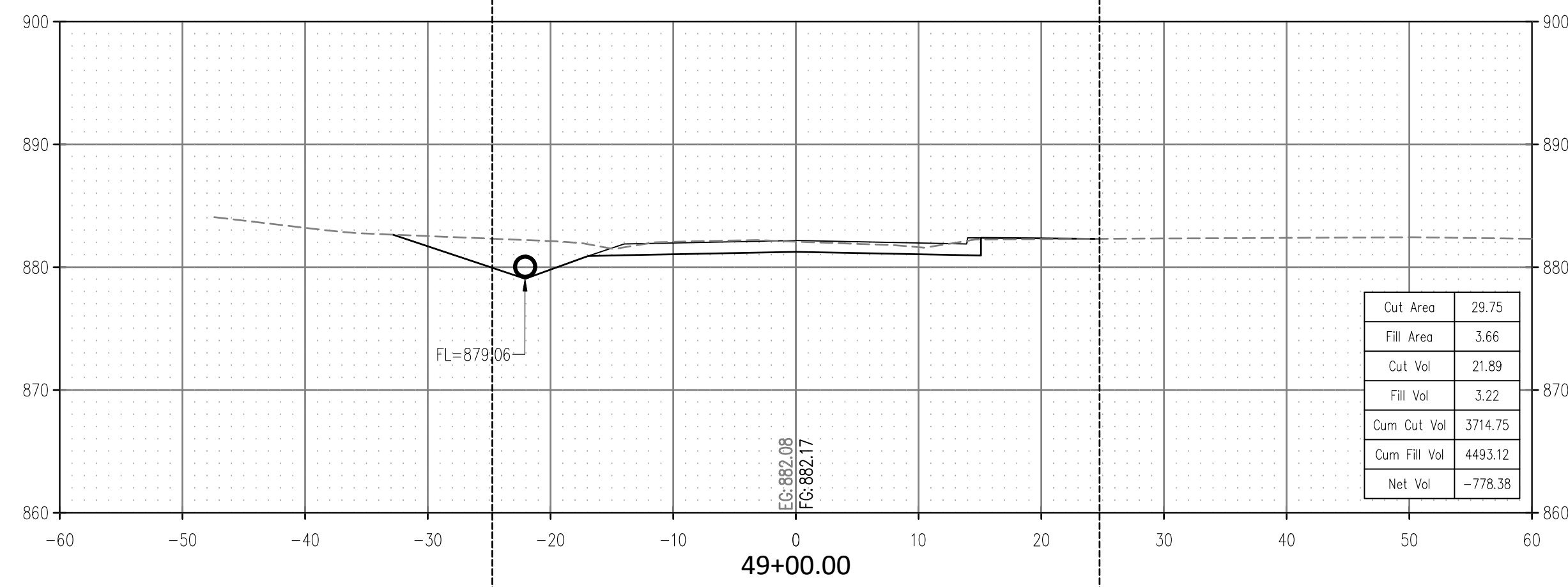
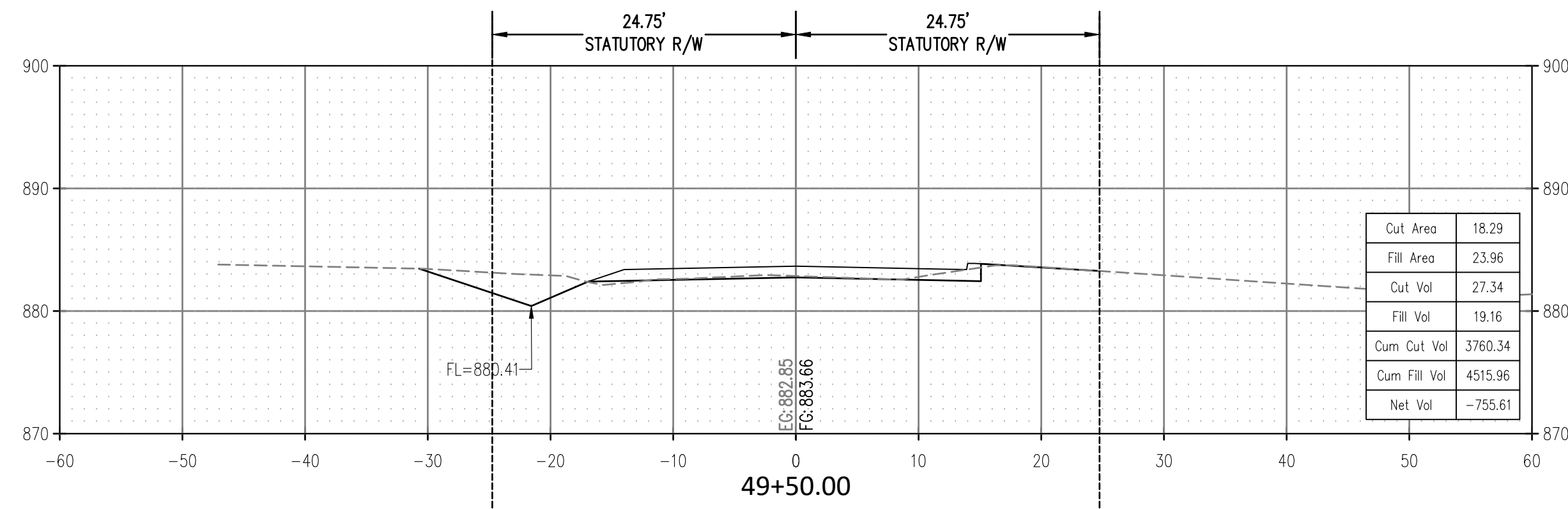
NO.	DATE	DESCRIPTION	BY	CHK
1	8/22/23	PLAN AND OUTER SECTION	DJM	
2	8/22/23	CROSS SECTION	DJM	
3	8/22/23	PLAN AND OUTER SECTION	DJM	
4	8/22/23	CROSS SECTION	DJM	
5	8/22/23	PLAN AND OUTER SECTION	DJM	

Drawn By: DJM
 Date: JULY 12, 2023

PROJECT MCN-044

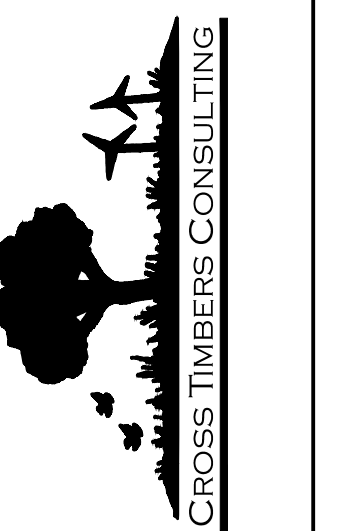
SHEET X09

SCALE:
 HOR. 1" = 10'
 VERT. 1" = 10'



ROAD CROSS SECTIONS
 GREENLEAF CHURCH ROAD
 SECTION 15,16,21,22 T-11-N R-9-E
 OKFUSKEE COUNTY, OKLAHOMA

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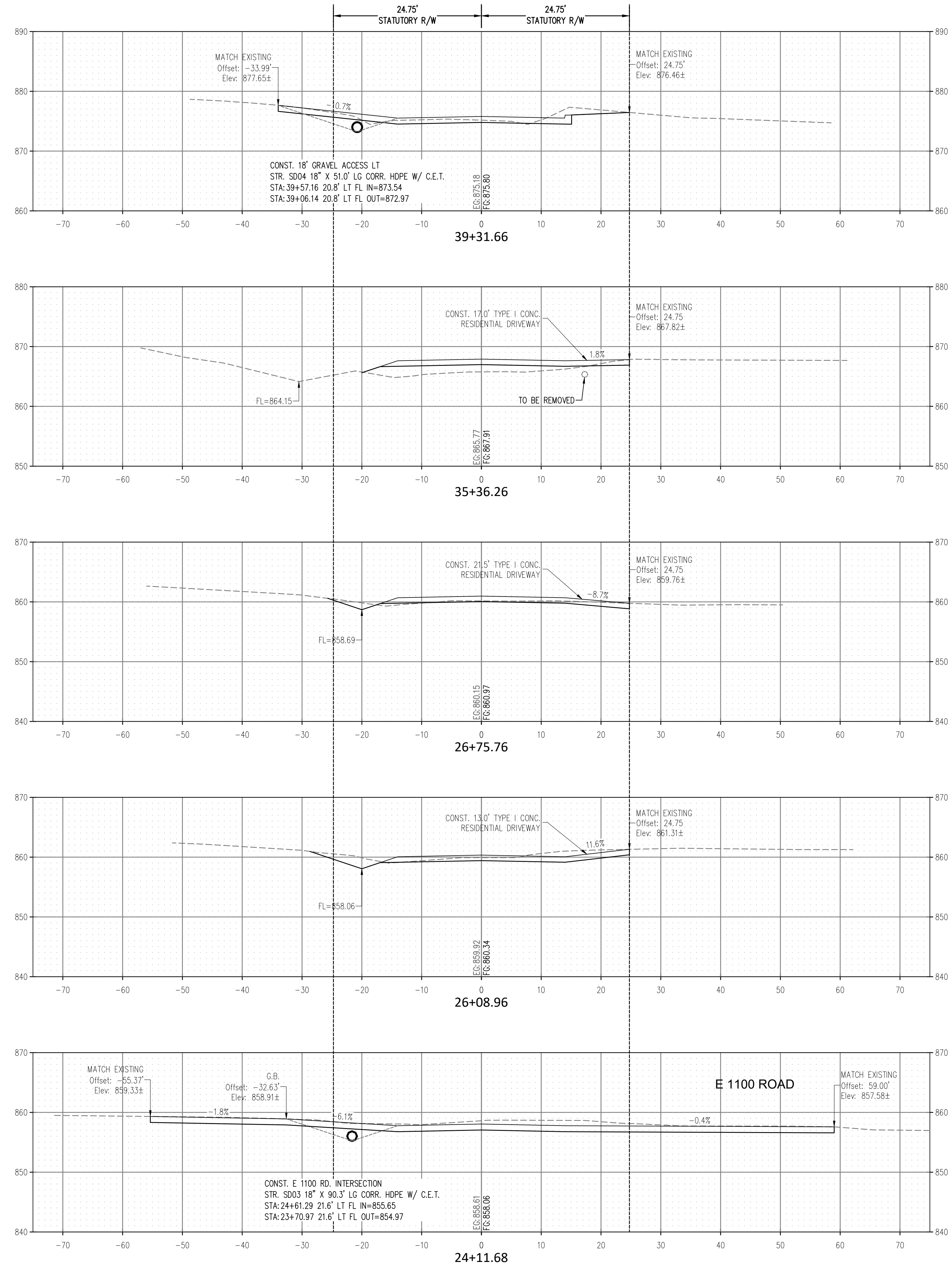
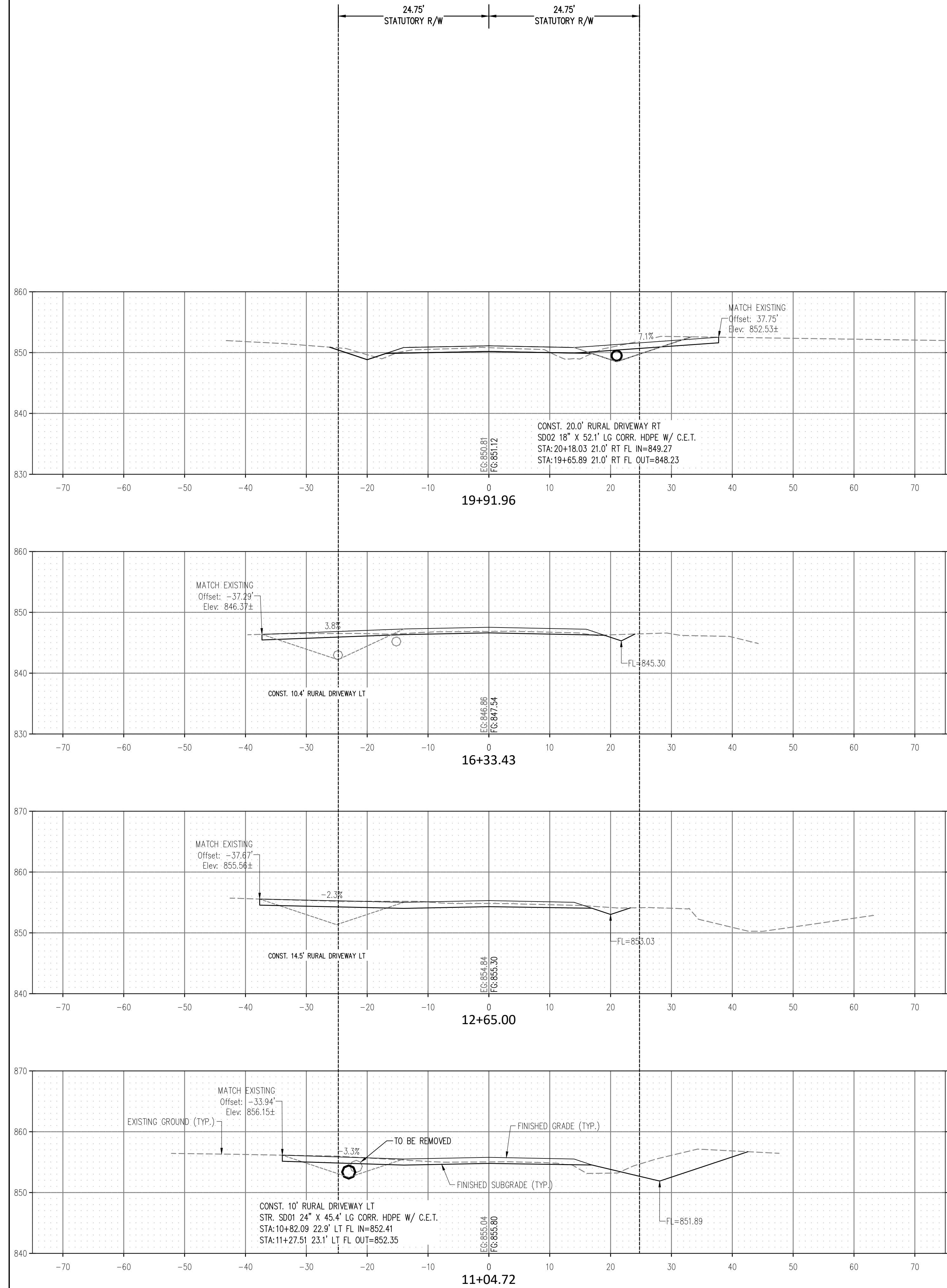
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1	8/22/23		CLRB AND OUTER SECTION	DJM	
2	8/22/23		CLRB AND OUTER SECTION	DJM	
3	8/22/23		CLRB AND OUTER SECTION	DJM	
4	8/22/23		CLRB AND OUTER SECTION	DJM	
5	8/22/23		CLRB AND OUTER SECTION	DJM	

Drawn By: DJM
 Date: JULY 12, 2023

PROJECT MCN-044

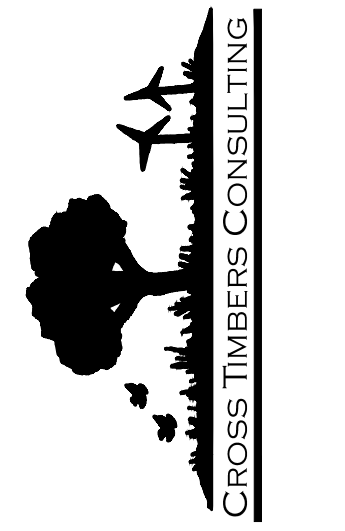
SHEET X10

SCALE:
 HOR. 1" = 10'
 VERT. 1" = 10'



**DRIVE ACCESS AND SIDE DRAINS
 CROSS SECTIONS
 GREENLEAF CHURCH ROAD
 SECTION 15,16,21,22 T-11-N R-9-E
 OKFUSKEE COUNTY, OKLAHOMA**

**CROSS TIMBERS
 CONSULTING, LLC**
 P.O. BOX 67
 Alex, Oklahoma, 73002
 Phone: (405) 222-8280



NO.	DATE	DESCRIPTION	BY
1	7/27/22	PLAN AND OUTER SECTION	DJM
2	7/27/22	PLAN AND OUTER SECTION	DJM
3	7/27/22	PLAN AND OUTER SECTION	DJM
4	7/27/22	PLAN AND OUTER SECTION	DJM
5	7/27/22	PLAN AND OUTER SECTION	DJM

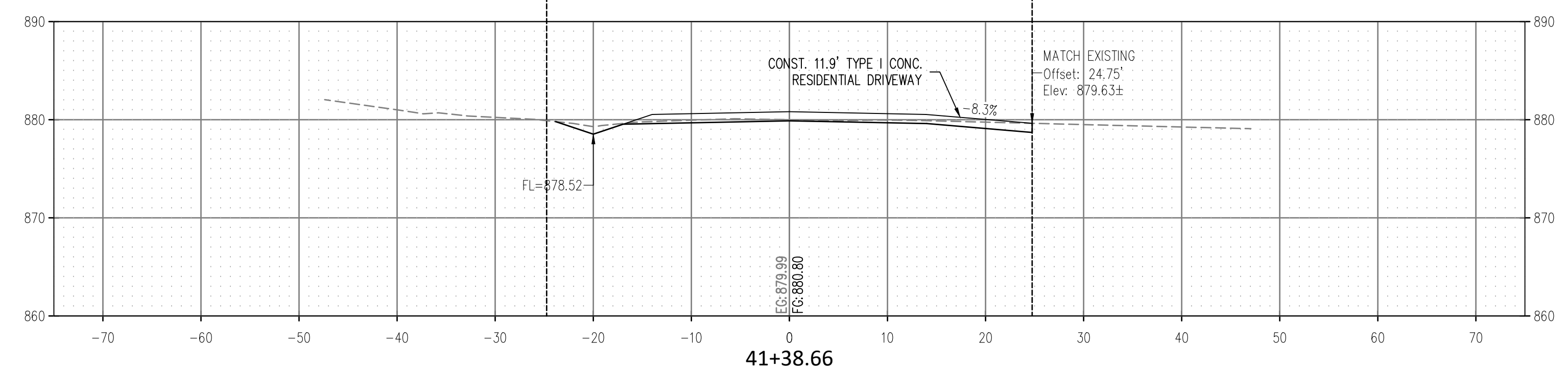
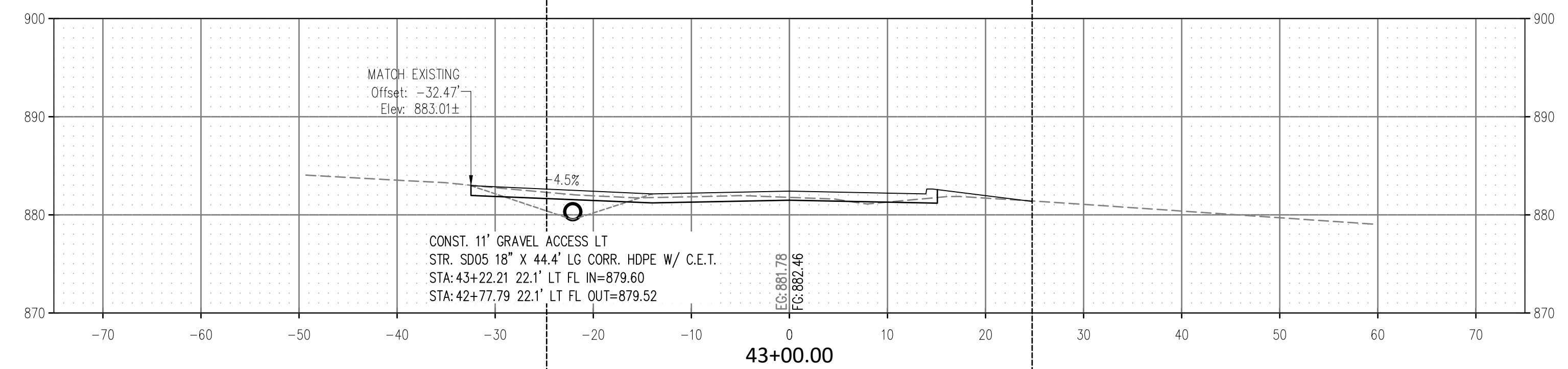
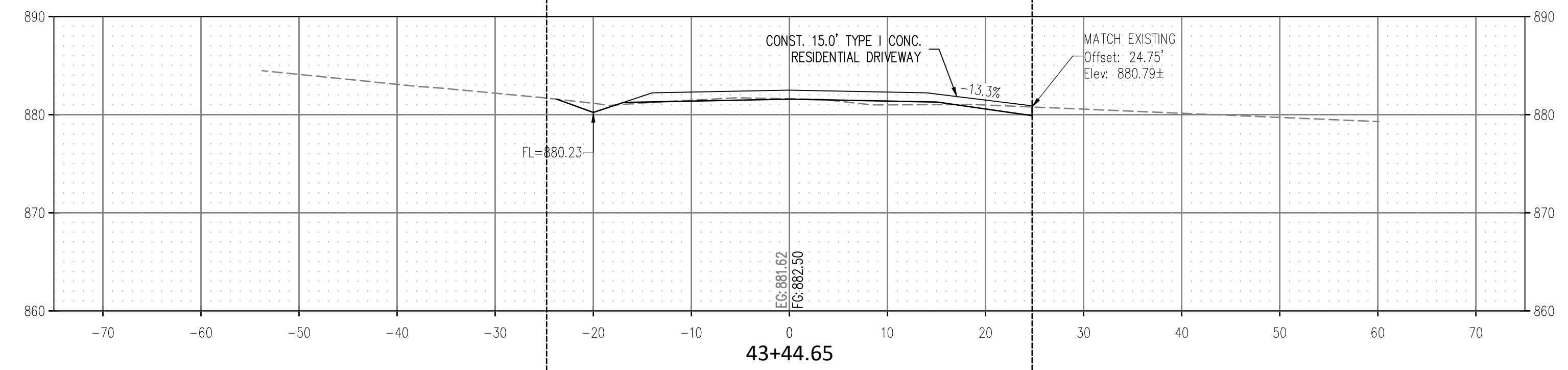
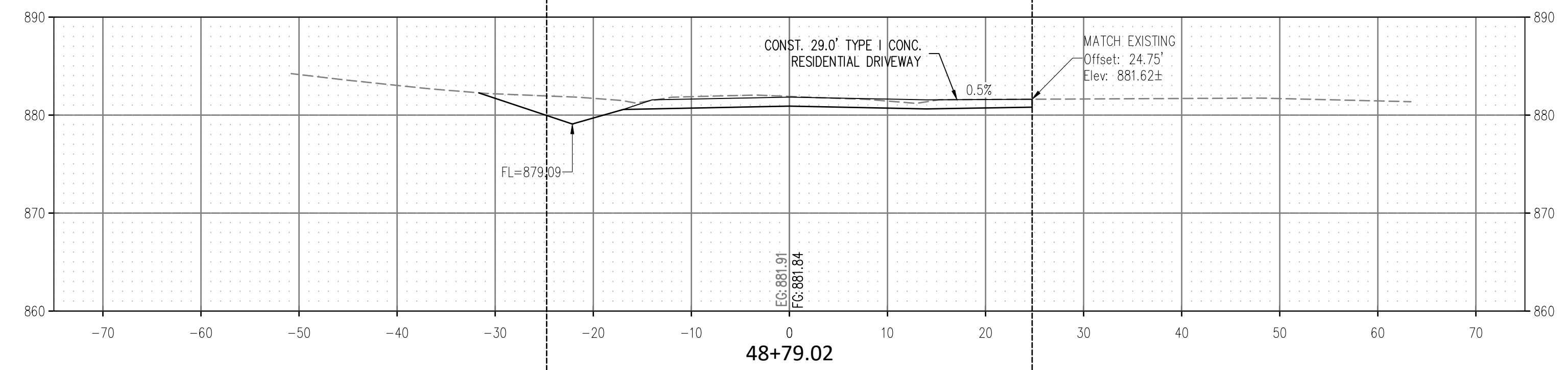
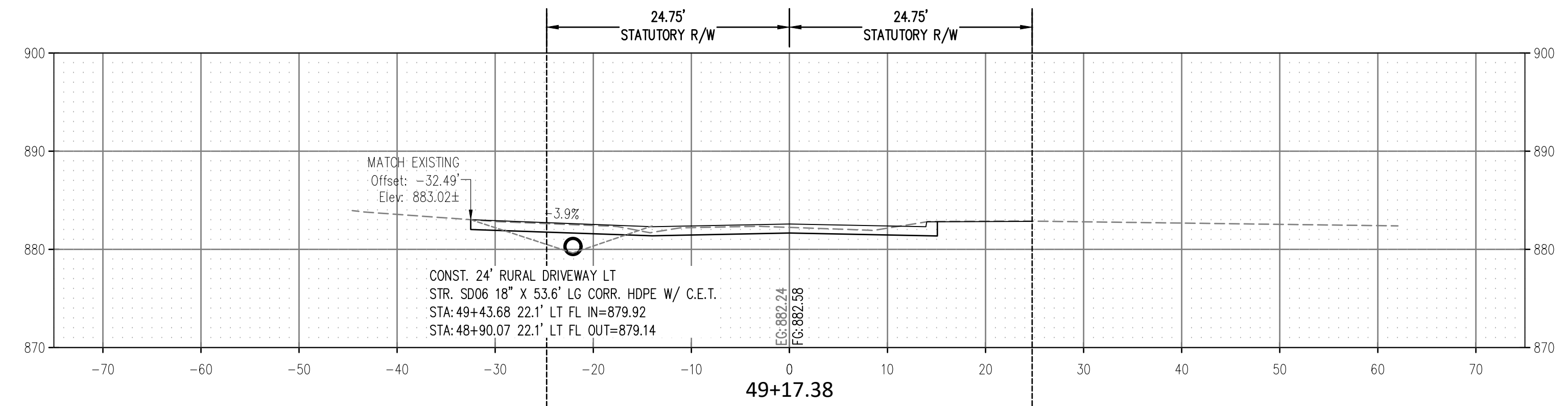
Drawn By: DJM
 Date: JULY 12, 2023

PROJECT MCN-044

SHEET X11

CROSS TIMBERS DRAWING FLEMING-044 ROAD SECTIONS.dwg

SCALE:
 HOR. 1" = 10'
 VERT. 1" = 10'



DRIVE ACCESS AND SIDE DRAINS
 CROSS SECTIONS
 GREENLEAF CHURCH ROAD
 SECTION 15,16,21,22 T-11-N R-9-E
 OKFUSKEE COUNTY, OKLAHOMA

CROSS TIMBERS
 CONSULTING, LLC
 P.O. BOX 67
 Alex, Oklahoma, 73002
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NO.	DATE	REVISIONS	DESCRIPTION	BY
1	7/27/23		PLAN CORRE AND OUTER SECTION	DJM
2	7/27/23		PLAN CORRE AND OUTER SECTION	DJM
3	7/27/23		PLAN CORRE AND OUTER SECTION	DJM
4	7/27/23		PLAN CORRE AND OUTER SECTION	DJM
5	7/27/23		PLAN CORRE AND OUTER SECTION	DJM

Drawn By: DJM
 Date: JULY 12, 2023

PROJECT MCN-044

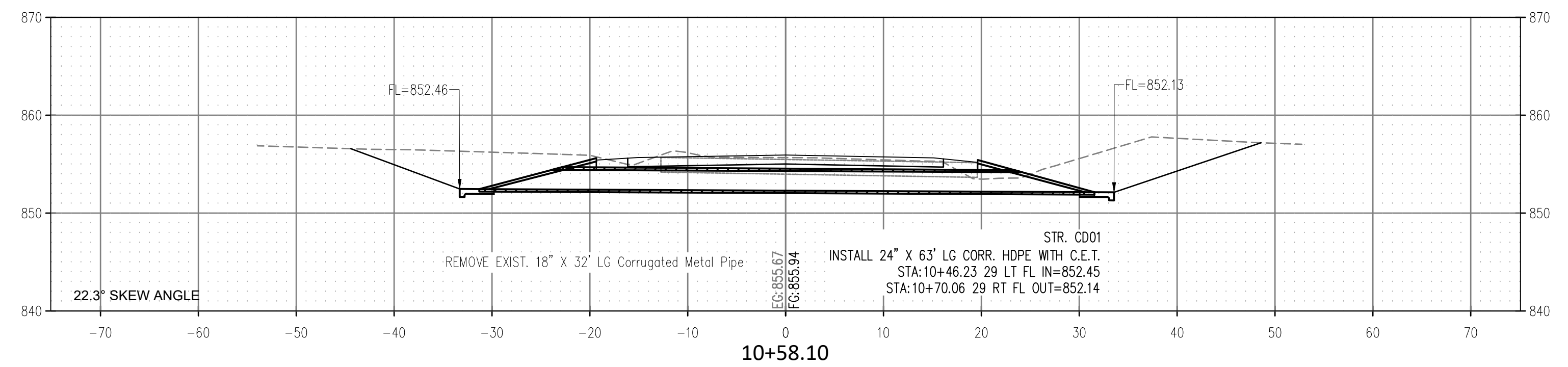
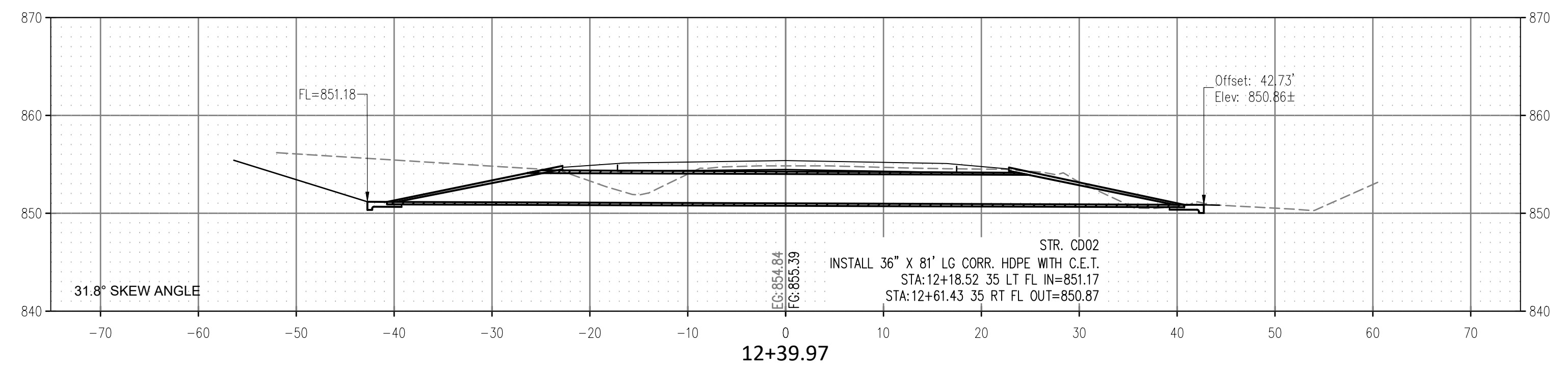
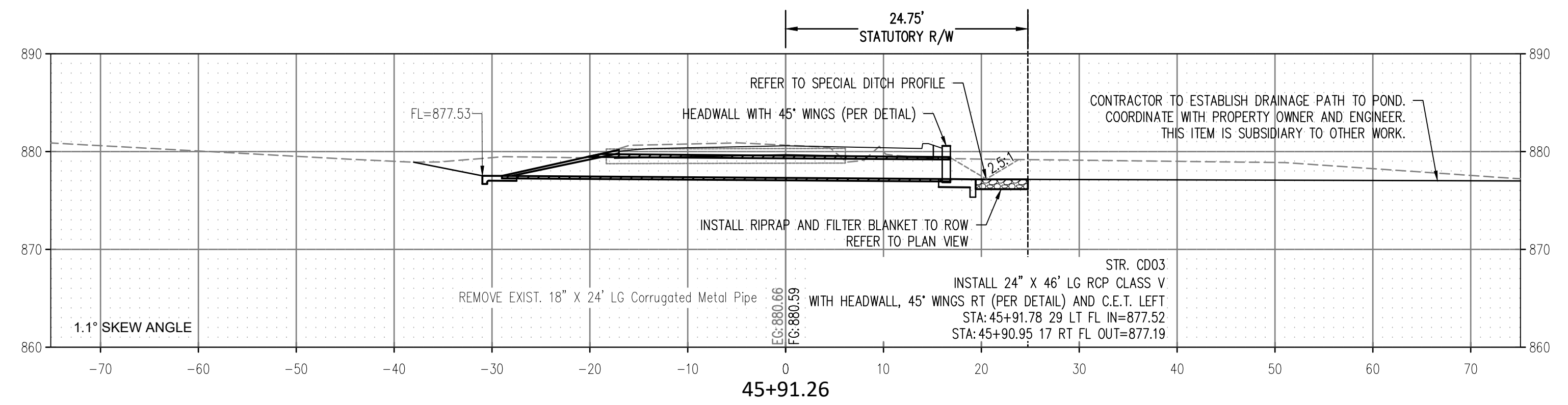
SCALE:
 HOR. 1" = 10'
 VERT. 1" = 10'

CROSS DRAIN SECTIONS
 GREENLEAF CHURCH ROAD
 SECTION 15,16,21,22 T-11-N R-9-E
 OKFUSKEE COUNTY, OKLAHOMA

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CROSS TIMBERS DRAWING FLEMING-044 ROAD SECTIONS.dwg



NO.	DATE	REVISIONS	DESCRIPTION	BY	CHK
1	8/22/23		ADD CURB AND OUTER SECTION	DJM	
2	8/22/23		ADD CURB AND OUTER SECTION	DJM	
3	8/22/23		ADD CURB AND OUTER SECTION	DJM	
4	7/12/23		REMOVE EXIST. RIPRAP	DJM	
5	7/28/23		INSTALL CONCRETE LINK FENCE & PAVEMENT	DJM	

Drawn By: DJM
 Date: JULY 12, 2023

PROJECT MCN-044

SHEET X13