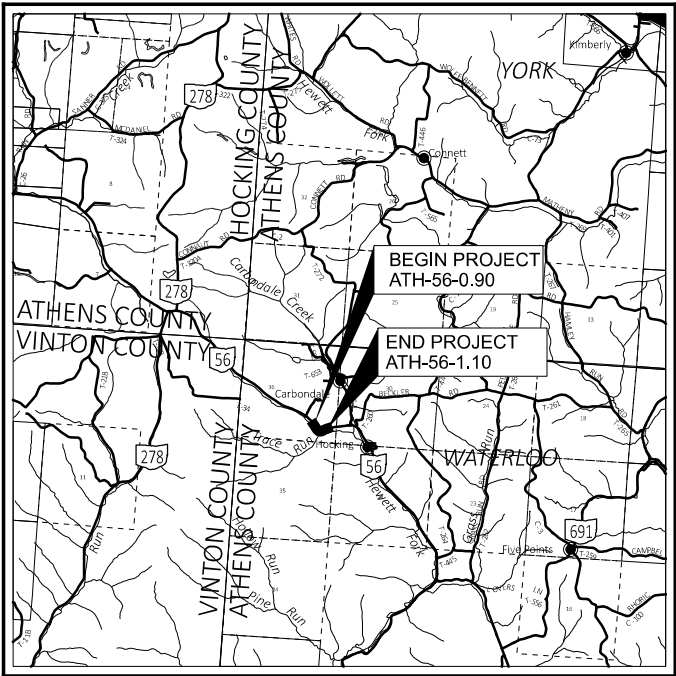




LOCATION MAP

LATITUDE: 39°22'14" LONGITUDE: -82°16'30"



PORTION TO BE IMPROVED	-----
INTERSTATE HIGHWAY	-----
FEDERAL ROUTES	-----
STATE ROUTES	-----
COUNTY & TOWNSHIP ROADS	-----
OTHER ROADS	-----

DESIGN DESIGNATION

CURRENT ADT (2025)	-----	500
DESIGN YEAR ADT (2045)	-----	500
DESIGN HOURLY VOLUME (2045)	-----	70%
DIRECTIONAL DISTRIBUTION	-----	53.7%
TRUCKS (24 HOUR B&C)	-----	8%
DESIGN SPEED	-----	55 MPH
LEGAL SPEED	-----	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:		
MAJOR COLLECTOR	-----	
NHS PROJECT	-----	NO

DESIGN EXCEPTIONS

NONE REQUIRED

ADA DESIGN WAIVERS

NONE REQUIRED

UNDERGROUND UTILITIES

Contact Two Working Days
Before You Dig


Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

PLAN PREPARED BY:
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT 10 - PLANNING AND ENGINEERING
MARIETTA, OHIO

ENGINEERS SEAL	STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS	
ROADWAY STATE OF OHIO KURT W. KLESKI E-87812 REGISTERED PROFESSIONAL ENGINEER SIGNED:  kklecki 2026.01.16 07:45:03 -05'00'	BP-3.1	1/21/22	MT-101.60	4/21/23	TC-41.20	10/18/13		800-2023	07/18/25	WATERWAY PERMIT 6/12/25
			MT-105.10	1/17/20	TC-41.30	4/21/23		832	7/21/23	
	DM-1.1	7/17/20			TC-42.20	10/18/13		902	7/19/19	
	DM-1.2	7/16/21			TC-52.10	10/18/13				
	DM-4.4	1/15/16			TC-52.20	1/15/21				
					TC-65.10	1/17/14				
	HW-2.1	7/15/22			TC-65.11	7/15/22				
	RM-1.1	1/20/23								

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

ATH-56-0.90

WATERLOO TOWNSHIP
ATHENS COUNTY

INDEX OF SHEETS:

TITLE SHEET	1
SCHEMATIC PLAN	2
TYPICAL SECTIONS	3-5
GENERAL NOTES	6-8
DETOUR PLAN	9
GENERAL SUMMARY	10-11
PAVEMENT SUBSUMMARY	12
SITE PLAN	13
PLAN VIEW SUB-SUMMARIES	14
PLAN AND PROFILE	15-18
ROADWAY CROSS SECTIONS	19-33
PAVEMENT PLANNING CROSS SECTIONS	34
SPECIAL BENCHING	35-36
SUPERELEVATION TABLE	47
CULVERT DETAILS	48-49
TRAFFIC CONTROL	50
GEOTECHNICAL PROFILE	51 - 67

FEDERAL PROJECT NUMBER

E240383

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

PROJECT TO ADDRESS FLOODING LOCATION BY IMPROVING DRAINAGE AND REALIGNING VERTICAL ROADWAY PROFILE AT ATH 56 0.90-1.10

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 3.9 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 1.7 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 5.6 ACRES

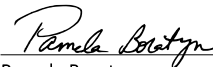
2023 SPECIFICATIONS

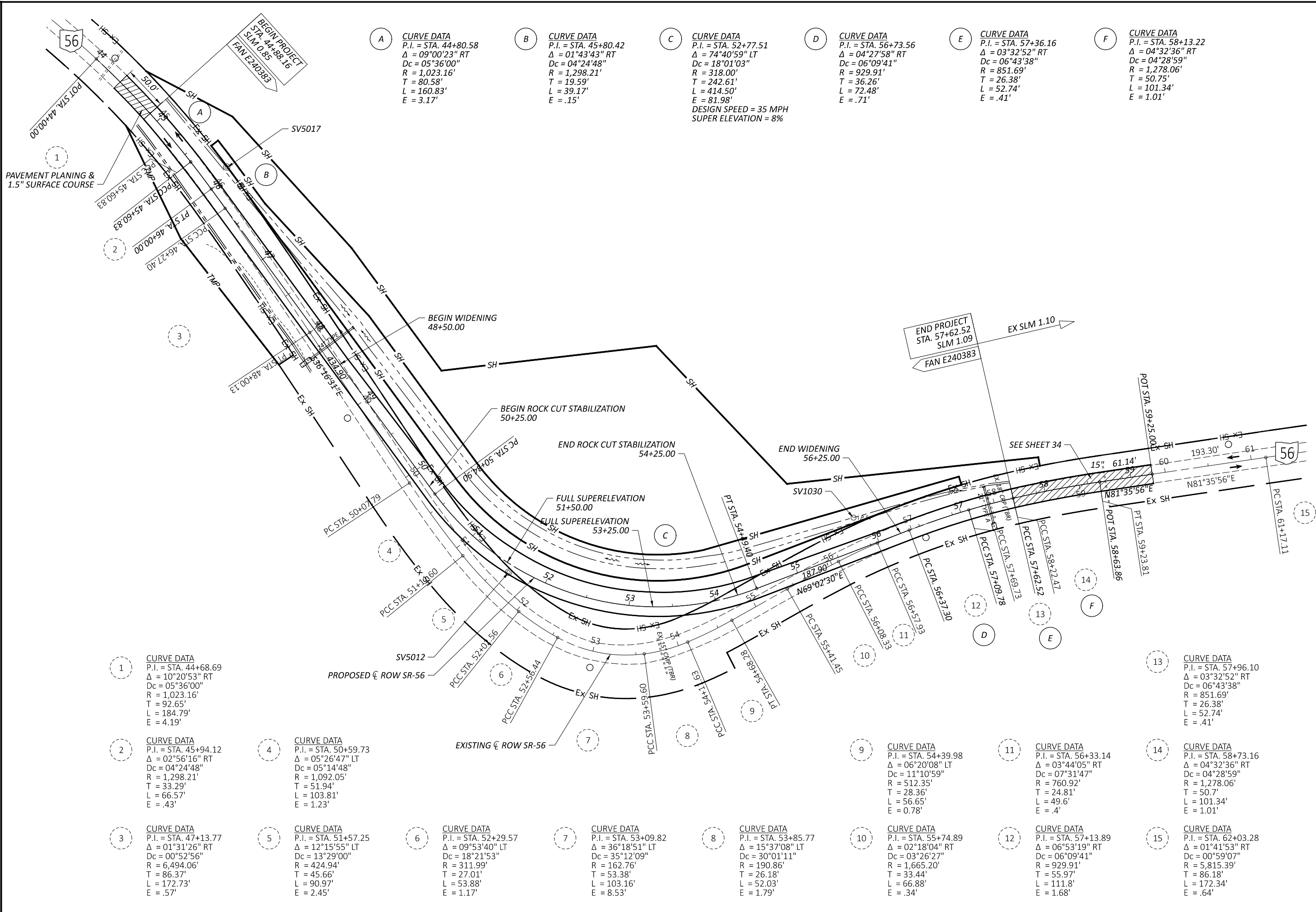
THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEET 9.




Rich Oster
District 10 Deputy Director


Pamela Boratyn
Director, Department of Transportation

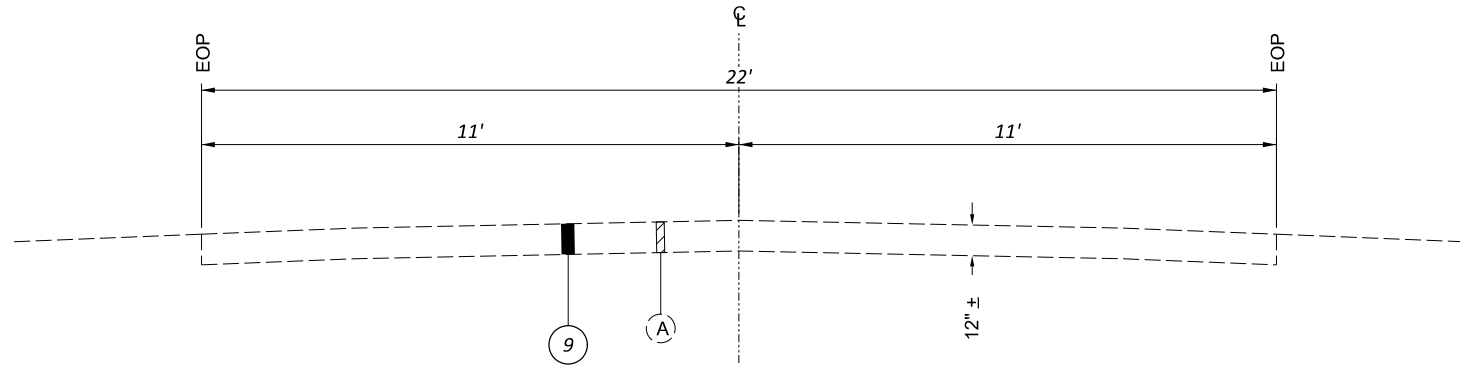


EXISTING LEGEND

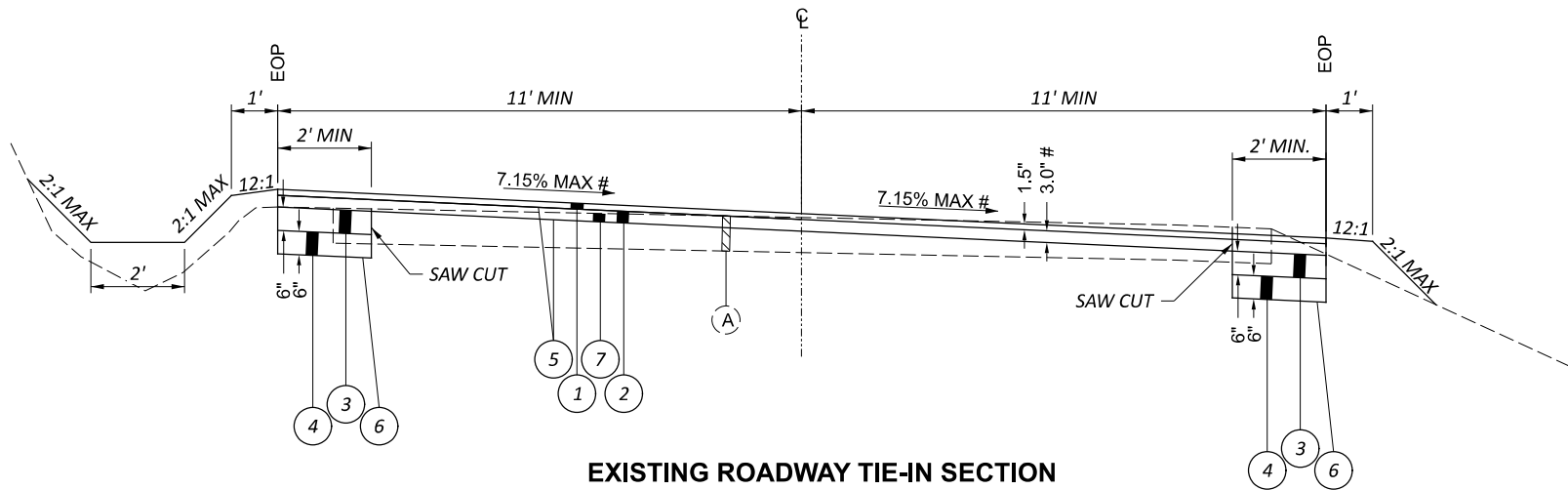
- (A) EXISTING ASPHALT CONCRETE

PROPOSED LEGEND

- (1) ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22
(2) ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449)
(3) ITEM 301 - ASPHALT CONCRETE BASE, PG64-22 (449)
(4) ITEM 304 - AGGREGATE BASE
(5) ITEM 407 - NON-TRACKING TACK COAT
(6) ITEM 204 - SUBGRADE COMPACTION
(7) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, VARIABLE
(8) ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, 1.50"
(9) ITEM 202 - PAVEMENT REMOVED

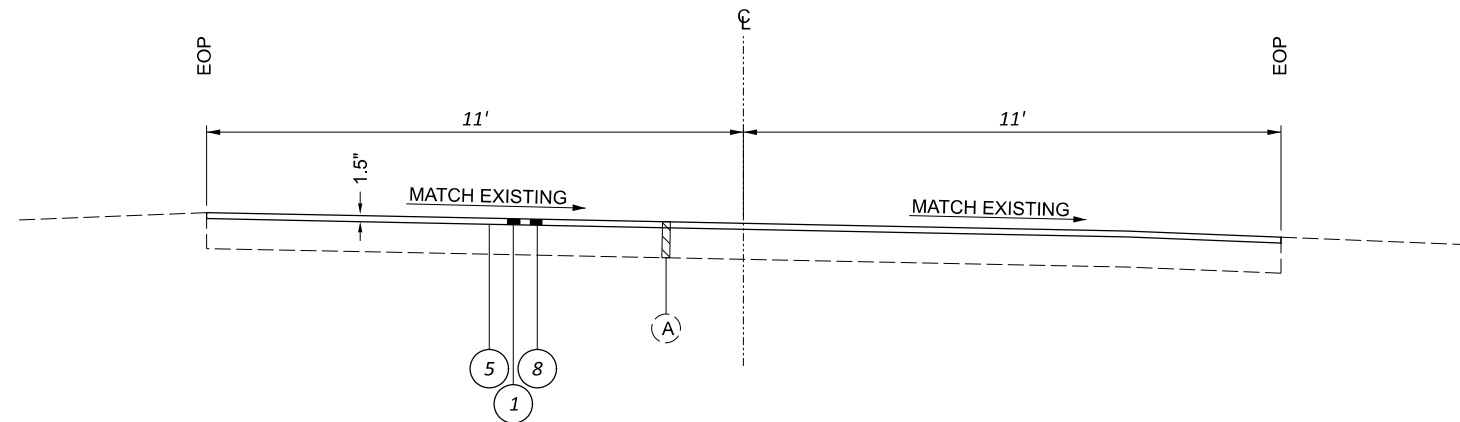
**EXISTING ROADWAY SECTION TO BE REMOVED**

SR-56 STA. 44+88.16 TO 57+62.52

**EXISTING ROADWAY TIE-IN SECTION**

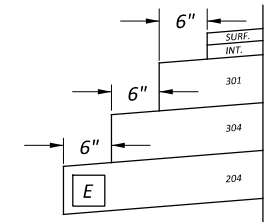
SR-56 STA. 57+62.52 TO 59+25.00

SEE X-SECTION SHEET 34 FOR DETAILS

**EXISTING ROADWAY TIE-IN SECTION**

SR-56 STA. 44+38.16 TO 44+88.16

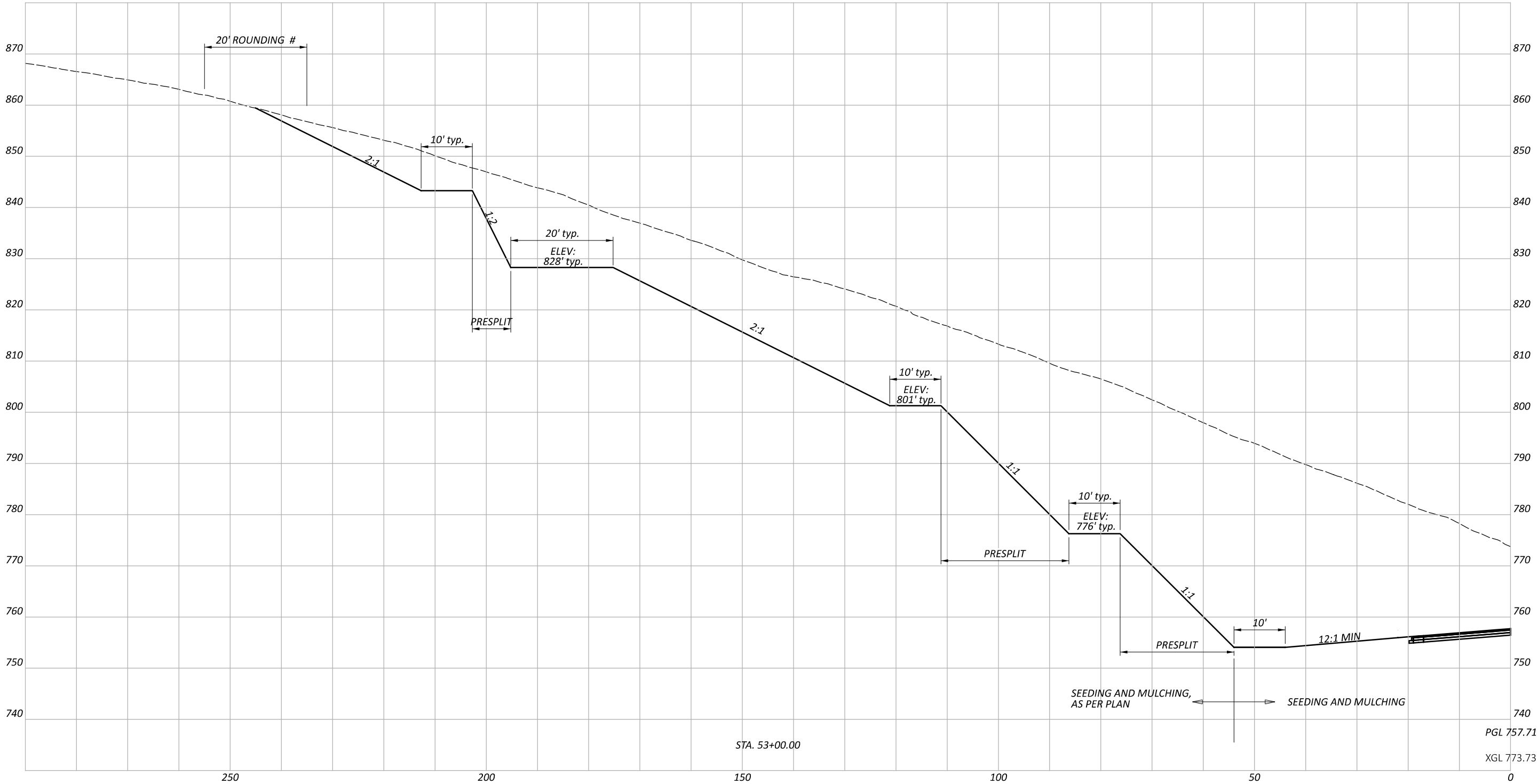




- ① ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22 (1.5")
- ② ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449) (1.75")
- ③ ITEM 301 - ASPHALT CONCRETE BASE, PG64-22, (449) (6")
- ④ ITEM 304 - AGGREGATE BASE (6")
- ⑤ ITEM 407 - NON-TRACKING TACK COAT (.05 GAL / SY)
- ⑥ ITEM 204 - SUBGRADE COMPACTION
- ⑦ ITEM 659 - SEEDING AND MULCHING
- ⑧ ITEM 204 - GRANULAR MATERIAL, TYPE B (GRADATION 703.17)
- ⑨ ITEM 605 - 6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC
- ⑩ ITEM 605 - 6" ROCK CUT UNDERDRAINS WITH GEOTEXTILE FABRIC
- ⑪ ITEM 204 - GEOTEXTILE FABRIC

- A** LOW SIDE SUPERELEVATION SHOULDER: WHEN PAVEMENT SLOPE IS GREATER THAN 4% THEN SHOULDER SLOPE IS EQUAL TO PAVEMENT SLOPE. WHEN PAVEMENT SLOPE IS LESS THAN 4% THEN SHOULDER SLOPE IS EQUAL TO 4%.
- B** HIGH SIDE SUPERELEVATION SHOULDER SHALL HAVE A SLOPE OF -4% UNLESS PAVEMENT SLOPE IS GREATER THAN 3% THEN:
PAVEMENT SLOPES = 3% TO 5% SHOULDER SLOPE TRANSITIONS FROM -4% TO 5%
PAVEMENT SLOPES = 5% TO 8%. SHOULDER SLOPE EQUAL PAVEMENT SLOPE
- C** WIDTH VARIES THROUGH CURVE WIDENING SECTION, SEE SHEET 47 FOR DETAILS. LONGITUDINAL CENTERLINE MARKING AND PAVEMENT JOINT SHALL BE PLACED EQUIDISTANT FROM EDGES OF PAVEMENT AND NOT ALONG THE PROPOSED CL CONSTRUCTION.
- D** SEE CROSS SECTIONS AND SPECIAL BENCHING CROSS SECTIONS.
- E** WHERE ROCK IS ENCOUNTERED SUBGRADE MAY BE LIMITED TO 12" BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT.





TYPICAL SECTION SHOWN AT STATION 53+00.00
PRESPLIT SLOPES 1:1 OR GREATER
20' ROUNDING TO EXISITNG SLOPES WITH OVERBURDEN LESS THAN 10'

SPECIAL BENCHING TYPICAL CROSS SECTION
STA. 50+00 TO STA. 54+00.00

DESIGN AGENCY



DESIGNER

PPP

REVIEWER

SAT 06/01/24

PROJECT ID

119908

SHEET

P.5

TOTAL

67

NOTIFICATION OF TRAFFIC RESTRICTIONS
THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM THE SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION TIME TABLE		
ITEM	DURATION OF CLOSURE	NOTICE DUE TO OFFICE OF COMMUNICATIONS
RAMP & ROAD CLOSURES	>= 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 12 HOURS	4 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

THE PROJECT ENGINEER WILL FORWARD THIS INFORMATION TO THE FOLLOWING:

DISTRICT PUBLIC INFORMATION OFFICER (PIO):
ASHLEY RITTENHOUSE
FAX: (740) 373-3953
EMAIL: ASHLEY.RITTENHOUSE@DOT.OHIO.GOV

DISTRICT PERMIT SECTION:
STEPHEN WELLS
FAX: (740) 568-3973
EMAIL: STEPHEN.WELLS@DOT.OHIO.GOV

CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION:
FAX: (614) 728-4099
EMAIL: HAULING.PERMITS@DOT.OHIO.GOV

THE PIO WILL, IN TURN, NOTIFY THE PUBLIC, THE LOCAL EMERGENCY SERVICES, AFFECTED SCHOOLS AND BUSINESSES, AND ANY OTHER IMPACTED LOCAL PUBLIC AGENCY OF THE ABOVE MENTIONED ITEMS VIA MEDIA SOURCES.

ITEM 614, MAINTAINING TRAFFIC
TRAFFIC SHALL BE MAINTAINED ON THE DETOUR DETAILED IN THIS PLAN. THE DETOUR SIGNING SHALL BE PERFORMED BY ODOT AND THE CONTRACTOR SHALL CONTACT THE ODOT ATHENS COUNTY MAINTENANCE GARAGE AT 740-568-4320 AT LEAST 14 DAYS PRIOR TO THE ROAD CLOSURE FOR ERECTION OF DETOUR SIGNING. WHEN THE DETOUR SIGNING IS NOT NEEDED THE CONTRACTOR SHALL COVER THE DETOUR SIGNS AND NOTIFY THE COUNTY MAITENANCE GARAGE FOR REMOVAL.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC UNLESS SEPARATELY ITEMIZED IN THE PLAN.

UTILITIES
LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

AMERICAN ELECTRIC POWER
38831 SR 7
REEDSVILLE, OH 45769
CLARKE SAUNDERS
614-312-5807

FRONTIER
500 LANCASTER PIKE
CIRCLEVILLE, OH 43113
TRAVIS BRANNON
740-835-6825

LE-AX WATER
PO BOX 97
THE PLAINS, OH 45780
TRAVIS ANDERSON
740-594-0123

CLEARING AND GRUBBING
TREES WILL BE REMOVED FROM THE PROJECT AREA PRIOR TO THE START OF CONSTRUCTION. STUMPS WILL NOT BE REMOVED AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. REMOVE ALL STUMPS WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201 CLEARING AND GRUBBING.

TIMBER RATTLESNAKE
THIS PROJECT IS WITHIN THE KNOWN RANGE OF THE TIMBER RATTLESNAKE (CROTALUS H. HORRIDUS), A FEDERALLY SPECIES OF CONCERN. SUITABLE HABITAT FOR THIS SPECIES WAS IDENTIFIED WITHIN OR ADJACENT TO THE PROJECT AREA, HOWEVER, A SURVEY FOR THE SPECIES DID NOT FIND ANY INDIVIDUAL WITHIN OR ADJACENT TO THE PROJECT AREA. IF A TIMBER RATTLESNAKE IS ENCOUNTERED IN THE WORK AREA(S) DURING CONSTRUCTION, AARON CRANK – EDGE ENGINEERING AND SCIENCE (740) 935-1880, DISTRICT STAFF (740) 568-4308, THE U.S. FISH AND WILDLIFE SERVICE (614-416-8993) AND ODOT OFFICE OF ENVIRONMENTAL SERVICES - ECOLOGICAL SECTION (614-466-5112) SHOULD BE CONTACTED IMMEDIATELY FOR GUIDANCE. ALL CONSTRUCTION OPERATIONS AT THE WORK AREA SHALL TEMPORARILY CEASE AND SHALL NOT RESUME UNTIL COORDINATION WITH USFWS HAS BEEN CONCLUDED OR THE SNAKE HAS SAFELY MOVED OUT OF HARM'S WAY UNDER ITS OWN VOLITION.

TIMBER RATTLESNAKE TRAINING AND START OF CONSTRUCTION
THE ENVIRONMENTAL CONSULTANT (EDGE CONSULTING) OR DISTRICT OFFICE WILL GIVE ONSITE TRAINING FOR TIMBER RATTLESNAKE IDENTIFICATION. THIS TRAINING WILL TAKE PLACE BEFORE CONSTRUCTION CAN START. EDGE CONSULTING WILL PROVIDE CONTACT CARDS AND INFORMATION SIGNS TO BE DISPLAYED ON-SITE DURING ACTIVE CONSTRUCTION DETAILING TIMBER RATTLESNAKE IDENTIFICATION AND SAFETY. EDGE CONSULTING SHALL BE NOTIFIED 2 WEEKS PRIOR TO THE NEEDED TRAINING. PLEASE CONTACT AARON CRANK AT 740-935-1880.

TIMBER RATTLESNAKE EXCLUSION FENCING
THE CONTRACTOR MUST INSTALL FILTER FABRIC FENCE FOR TIMBER RATTLESNAKE EXCLUSION AROUND THE PERIMTER OF THE PROJECT AREA NORTH OF STATE ROUTE 56 BEFORE THE CONSTRUCTION CAN START. ODOT DISTRICT AND/OR CENTRAL OFFICE STAFF WILL PERFORM WEEKLY INSPECTION OF THE EXCLUSION FENCE. DOWN OR DAMAGED FENCE MUST BE IMMEDIANTLY REINSTALLED. ONCE THE EXCLUSION AREA FENCE IS INSTALLED, EDGE CONSULTING AND/OR ODOT DISTRICT OR CENTRAL OFFICE WILL REVIEW THE CONSTRUCTION SITE FOR TIMBER RATTLESNAKES AND CONSTRUCTION WILL BE CLEARED TO START.

KNOWN BAT HABITAT
THIS PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT. NO TREES SHALL BE REMOVED UNDER THIS PROJECT FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT. FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS: A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

SECTION (4F) SPECIAL CONDITIONS
ACCESS TO ZALESKI STATE FOREST SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION ACTIVITIES VIA FLAGGING OPERATIONS AND/OR AN APPROVED DETOUR;

TEMPORARY CONSTRUCTION FENCING SHALL BE INSTALLED ALONG PROPOSED CONSTRUCTION LIMITS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES TO PROTECT THE EXISTING SECTION 4(F) PROPERTY AND THE PUBLIC;

APPROPRIATE SIGNAGE SHALL BE INSTALLED TO ALERT USERS OF ZALESKI STATE FOREST OF CONSTRUCTION ACTIVITIES, ACCESS RESTRICTIONS OR CLOSURES, AND TO DIRECT USERS TO SECONDARY ACCESS POINTS;

THE CONTRACTOR SHALL BE REQUIRED TO CLOSELY COORDINATE THE CONSTRUCTION SCHEDULE WITH ODOT AND ODNR PRIOR TO THE START OF CONSTRUCTION ACTIVITIES.

WORK LIMITS
THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

DUST CONTROL
THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616, WATER 100 MGAL

ROUNDING
THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS-SECTIONS, EVEN THOUGH OTHERWISE SHOWN.

GENERAL NOTES

SURVEYING PARAMETERS
PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE TABLE 1 FOR PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL
POSITIONING METHOD: STATIC GPS
MONUMENT TYPE: B
(¾" X 30" REBAR WITH ODOT DISTRICT 10 CONTROL CAP)

VERTICAL POSITIONING
ORTHOMETRIC HEIGHT DATUM: NAVD88
GEOID: 18

HORIZONTAL POSITIONING
REFERENCE FRAME: NAD83 (2011) (EPOCH 2010.0)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: ODOT ATHENS LDP

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH C&MS 623.

TABLE 1			
CONTROL PT.	EASTING	NORTHING	ELEV.
SV10	113975.99	336154.69	765.60
SV11	114243.50	335740.90	752.17
SV12	114522.31	335454.07	751.67
SV13	114908.90	335603.54	751.35
SV14	115256.95	335710.71	755.98
SV15	115580.45	335718.24	751.25

UNITS ARE IN U.S. SURVEY FEET.

MONUMENT ASSEMBLIES
CONSTRUCT MONUMENT ASSEMBLIES IN ACCORDANCE WITH THE DETAILS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON THE RIGHT OF WAY PLANS.

TOTALS CARRIED TO THE GENERAL SUMMARY:
12 REFERENCE MONUMENT, TYPE A



DESIGN AGENCY	
DESIGNER	KWK
REVIEWER	JDC
PROJECT ID	06/01/24
	119908
SHEET	TOTAL
P.6	67

ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING
CONSTRUCT THE SUBGRADE AS FOLLOWS AND IN THE FOLLOWING SEQUENCE:

1. SHAPE THE SUBGRADE TO WITHIN 0.2 FEET OF THE PLAN SUBGRADE ELEVATION.
2. EXCAVATE AND REPLACE UNSUITABLE SUBGRADE BEFORE PROOF ROLLING. THE EXCAVATION LIMITS ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSUITABLE SUBGRADE. UNSUITABLE SUBGRADE INCLUDES UNSUITABLE SOIL (A-4B, A-2-5, A-5, A-7-5, AND SOIL WITH A LIQUID LIMIT GREATER THAN 65) AND ANY COAL, SHALE, OR ROCK WHICH NEEDS TO BE REMOVED ACCORDING TO SECTION 204.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS).
3. COMPACT THE SUBGRADE ACCORDING TO C&MS 204.03.
4. APPROXIMATE LIMITS FOR EXCAVATION OF UNSTABLE SUBGRADE ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSTABLE SUBGRADE. THE ENGINEER WILL IDENTIFY THE ACTUAL LIMITS OF EXCAVATION FOR UNSTABLE SUBGRADE BASED ON THE PROOF ROLLING RESULTS AND VISUAL OBSERVATIONS.

IF THERE IS UNSUITABLE SUBGRADE IN A SHALLOW FILL LOCATION, EXCAVATE AND REPLACE THE UNSUITABLE SUBGRADE BEFORE CONSTRUCTING THE SHALLOW FILL AND SHAPING THE SUBGRADE.

PROOF ROLL THE COMPACTED SUBGRADE ACCORDING TO C&MS 204.06.

5. EXCAVATE UNSTABLE SUBGRADE AS DIRECTED BY THE ENGINEER AND STABILIZE BY REPLACING WITH THE SPECIFIED MATERIALS ACCORDING TO C&MS 204.07. EXCAVATIONS WILL EXTEND 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT, PAVED SHOULDERS, OR PAVED MEDIANS.
6. PROOF ROLL THE STABILIZED AREAS ACCORDING TO C&MS 204.06 TO VERIFY STABILITY.
7. FINE GRADE THE SUBGRADE TO THE SPECIFIED GRADE.

THE QUANTITIES FOR EXCAVATING THE UNSUITABLE SUBGRADE AND UNSTABLE SUBGRADE ARE BOTH PAID UNDER ITEM 204, EXCAVATION OF SUBGRADE.

SUBGRADE EXCAVATION			
STATION	DISTANCE	CUT	
		AREA (S.F)	VOL. (C.Y.)
44+88.16	0.00	79.5	0.0
45+00.00	11.84	80.2	35.0
45+50.00	50.00	73.4	142.2
46+00.00	50.00	48.3	112.7
46+50.00	50.00	21.4	64.5
47+00.00	50.00	0.0	19.8
56+00.00	0.00	0.0	0.0
56+50.00	50.00	14.7	13.6
57+00.00	50.00	60.5	69.6
57+50.00	50.00	79.9	130.0
57+62.52	12.52	80.4	37.2
TOTALS	374.36	624.7	

ITEM 204 - EXCAVATION OF SUBGRADE
625 CY

ITEM 204 - EMBANKMENT
625 CY
TOTALS CARRIED TO THE GENERAL SUMMARY

ITEM 204 - PROOF ROLLING
THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING.

ITEM 204 - PROOF ROLLING 3 HOUR.

GENERAL NOTES



DESIGN AGENCY	
DESIGNER	
KWK	
REVIEWER	
JDC	06/01/24
PROJECT ID	
119908	
SHEET	TOTAL
P.7	67

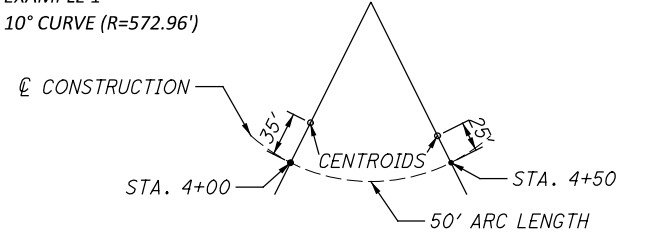
EARTHWORK CORRECTION FOR CURVATURE
IN COMPUTING THE EARTHWORK QUANTITIES, A CORRECTION HAS BEEN MADE IN THE VOLUMES DUE TO THE ALIGNMENT CURVATURE AS SHOWN IN THE EXAMPLES BELOW.

THE EARTHWORK CORRECTION IS USED WHENEVER THE CENTROID VOLUME OF THE COMBINED CUT AND FILL QUANTITIES DIFFERS BY MORE THAN ONE CUBIC YARD PER YARD OF CENTERLINE LENGTH FROM THE CENTERLINE LENGTH VOLUME. (50' CROSS SECTION SPACING = 16.67 CY OF VOLUME DIFFERENCE BEFORE THE CORRECTION IS APPLIED)

EARTHWORK CORRECTION FOR CURVATURE

EXAMPLE 1

10° CURVE (R=572.96')

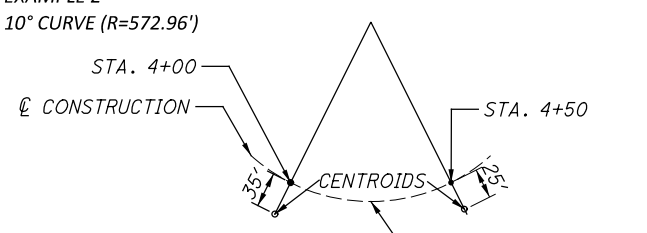


CORRECTED RADIUS = 572.96 - (35+25) / 2 = 542.96
ALIGNMENT FACTOR = 542.96 / 572.96 = 0.94764
CORRECTED ARC LENGTH = 50 x 0.94764 = 47.38'

BENCHING OF FOUNDATION SLOPES
ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. BENCH ALL OTHER SLOPED EMBANKMENT AREAS AS SET FORTH IN SECTION 203.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS). NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF SECTION 203.05.

EXAMPLE 2

10° CURVE (R=572.96')



CORRECTED RADIUS = 572.96 + (35+25) / 2 = 602.96
ALIGNMENT FACTOR = 602.96 / 572.96 = 1.05236
CORRECTED ARC LENGTH = 50 x 1.05236 = 52.62'

STATION	CUT		FILL		CUT FACTOR	TOTAL ADJUSTED CUT (C.Y.)	FILL FACTOR	TOTAL ADJUSTED FILL (C.Y.)
	AREA (S.F)	VOL. (C.Y.)	AREA (S.F)	VOL. (C.Y.)				
44+88.16	38.2		9.2		1.0	0.0	1.0	
45+00.00	49.7	19.3	8.3	3.8	1.0	19.3	1.0	3.8
45+50.00	52.5	94.6	23.8	29.7	1.0	94.6	1.0	29.7
46+00.00	67.5	111.1	100.2	114.8	1.0	111.1	1.0	114.8
46+50.00	57.9	116.1	181.4	260.7	1.0	116.1	1.0	260.7
47+00.00	75.1	123.1	209.2	361.7	1.0	123.1	1.0	361.7
47+50.00	130.0	189.9	226.4	403.4	1.0	189.9	1.0	403.4
48+00.00	76.0	190.8	229.4	422.1	1.0	190.8	1.0	422.1
48+50.00	87.8	151.7	242.5	437.0	1.0	151.7	1.0	437.0
49+00.00	0.0	81.3	284.0	487.5	1.0	81.3	1.0	487.5
49+50.00	0.0	0.0	304.7	545.1	1.0	0.0	1.0	545.1
50+00.00	671.8	622.0	237.9	502.5	1.0	622.0	1.0	502.5
50+50.00	1276.2	1803.7	216.9	421.2	0.9	1635.3	1.0	428.6
51+00.00	1676.5	2734.0	267.4	448.4	0.8	2189.9	1.0	468.5
51+50.00	2271.3	3655.4	296.0	521.7	0.8	2861.1	1.1	555.4
52+00.00	3852.3	5670.1	278.6	532.1	0.8	4276.5	1.1	580.1
52+50.00	5076.1	8267.1	215.5	457.5	0.7	6074.5	1.1	516.6
53+00.00	5067.9	9392.6	236.3	418.3	0.7	6912.4	1.2	484.4
53+50.00	3398.8	7839.5	304.5	500.8	0.7	5555.5	1.1	571.4
54+00.00	1280.7	4332.9	330.9	588.3	0.7	3149.5	1.1	643.8
54+50.00	244.9	1412.6	299.1	583.3	0.8	1143.4	1.1	615.9
55+00.00	108.7	327.4	258.3	516.1	0.9	302.6	1.0	527.0
55+50.00	6.0	106.2	287.5	505.4	1.0	106.2	1.0	505.4
56+00.00	87.4	86.4	182.4	435.1	1.0	86.4	1.0	435.1
56+50.00	10.4	90.5	89.8	252.1	1.0	90.5	1.0	252.1
57+00.00	23.9	31.7	22.2	103.7	1.0	31.7	1.0	103.7
57+50.00	28.4	48.5	19.1	38.2	1.0	48.5	1.0	38.2
57+62.52	8.0	8.4	15.5	8.0	1.0	8.4	1.0	8.0
58+00.00	5.0	9.0	17.5	22.9	1.0	9.0	1.0	22.9
58+50.00	6.0	10.2	10.6	26.0	1.0	10.2	1.0	26.0
58+63.86	6.0	3.1	11.6	5.7	1.0	3.1	1.0	5.7
59+00.00	0.0	4.0	4.2	10.5	1.0	4.0	1.0	10.5
59+25.00	0.0	0.0	0.0	1.9	1.0	0.0	1.0	1.9
TOTALS					36199		10370	

ITEM 659 - SEEDING AND MULCHING, AS PER PLAN
ADMINISTER A MODIFIED VERSION OF SEEDING AND MULCHING, CLASS 3C, CROWN VETCH MIXTURE TO ALL ROCK CUT SLOPES. THE MODIFIED CLASS 3C MIXTURE SHALL REPLACE CROWN VETCH (CORONILLA VARIA) WITH BLACK LOCUST (ROBINA PSEUDOACACIA) SEED. SUPPLY BLACK LOCUST (ROBINA PSEUDOACACIA) SEED WITH A 70% OR GREATER GERMINATION RATE. USE SCARIFIED SEED IF NECESSARY. THE LOCUST SEED SHALL BE SPREAD AT THE RATE OF ONE POUND PER ACRE. THE LOCUST SEED SHALL BE MIXED WITH THE GRASS SEED AND APPLIED IN ONE OPERATION.

ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT NOT TO BE SEEDED WITH THE MODIFIED CLASS 3C MIX, AS EXPLAINED ABOVE SHALL BE GERMINATED WITH SEEDING AND MULCHING, CLASS 2 ROAD SIDE MIXTURE. THE VARYING SEEDING AND MULCHING MIXTURES SHALL BE APPLIED AS DIRECTED BY THE ENGINEER.

659, SEEDING AND MULCHING, AS PER PLAN 6603 SQ. YD.

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, SEEDING AND MULCHING 10419 SQ. YD.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT- OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

659, SOIL ANALYSIS TEST
2 EACH

659, COMMERCIAL FERTILIZER
10419 S.Y. X 9 X 20 LBS / 1000 S.F. / 2000 = 0.94 TON
6603 S.Y. X 9 X 20 LBS / 1000 S.F. / 2000 = 0.60 TON
0.60 + 0.94 = 1.54 TON

659, LIME
10419 S.Y. / 4840 = 2.15 ACRES
6603 S.Y. / 4840 = 1.37 ACRES
1.37 + 2.15 = 3.52 ACRES

659, WATER
[10419 S.Y. X 9 X 300 GAL / 1000 S.F. / 1000] X 2 = 56.3 M. GAL.
[6603 S.Y. X 9 X 300 GAL / 1000 S.F. / 1000] X 2 = 35.7 M. GAL.
56.3 + 35.7 = 92.0 M.GAL

QUANTITIES CARRIED TO THE GENERAL SUMMARY

VEGETATED BIOFILTER

THIS PLAN UTILIZES VEGETATED BIOFILTER(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER ITEM 660 SODDING OR ITEM 659 SEEDING AND MULCHING WITH A 4-INCH LIFT OF TOPSOIL AS SHOWN IN THE PLANS TO ANY DISTURBED AREA ON THE SHOULDER AND FORESLOPE DRAINING TO A VEGETATED BIOFILTER. THE DITCH FOR EACH VEGETATED BIOFILTER SHALL BE TRAPEZOIDAL, AS SHOWN IN THE PLAN CROSS SECTIONS. PROVIDE ITEM 670 AS SPECIFIED IN THE PLANS.

659, TOP SOIL
FROM STATION 48+25.00 TO 52+87.00, LEFT GRASS SHOULDER FORESLOPE AND DITCH
(35' X 462' X 4" / 12) / 27 = 200 C.Y.

STATION	SEED WIDTH (FT)		SEED AREA (S.Y.)		
	LEFT	RIGHT	659	FACTOR	659, APP
44+88.16	22.7	17.8			
45+00.00	26.3	18.7	56.2		
45+50.00	32.7	26.5	289.4		
46+00.00	42.3	39.2	390.8		
46+50.00	38.8	44.5	457.8		
47+00.00	49.4	42.9	487.8		
47+50.00	66.8	42.7	560.6		
48+00.00	57.8	41.2	579.2		
48+50.00	62.6	18.8	501.1		
49+00.00	40.2	16.7	384.2		
49+50.00	35.3	19.5	310.3		
50+00.00	35.1	73.7	309.2		
50+50.00	35.1	105.5	26.9	0.9	451.3
51+00.00	35.1	149.5	21.8	0.8	567.4
51+50.00	35.1	144.9	22.3	0.8	640.1
52+00.00	35.1	229.2	45.2	0.8	783.8
52+50.00	35.1	231.0	60.6	0.7	939.3
53+00.00	35.1	230.0	68.0	0.7	942.4
53+50.00	35.1	238.8	57.9	0.7	922.8
54+00.00	35.1	167.6	43.6	0.7	820.6
54+50.00	31.9	32.9	35.7	0.8	450.8
55+00.00	71.6	0.0	28.0	0.9	84.5
55+50.00	27.9		22.0		
56+00.00	46.2	18.4	318.1		
56+50.00	24.2	17.8	296.1		
57+00.00	22.3	17.6	227.5		
57+50.00	14.6	17.2	199.2		
57+62.52	14.2	12.8	40.9		
58+00.00	12.0	5.1	91.8		
58+50.00	12.0	3.9	91.7		
59+00.00	11.9	6.0	93.9		
59+25.00	0.0	0.0	24.9		
TOTAL			10419	6603	

671, EROSION CONTROL MATS
PROVIDE TEMPORARY EROSION CONTROL MATS IN THE LEFT SIDE DITCH FROM STATION 48+25.00 TO 52+87.00

10' X 462' / 9 = 514 S.Y.

QUANTITIES CARRIED TO THE GENERAL SUMMARY

EROSION CONTROL

THE FOLLOWING ITEMS HAVE BEEN ADDED TO THE GENERAL SUMMARY FOR THE PURPOSE OF EROSION CONTROL.

ITEM 832 - STORM WATER PREVENTION PLAN, LS
ITEM 832 - STORM WATER PREVENTION INSPECTIONS, LS
ITEM 832 - STORM WATER PREVENTION INSPECTIONS SOFTWARE, LS
ITEM 832 - EROSION CONTROL, 35,000 EACH

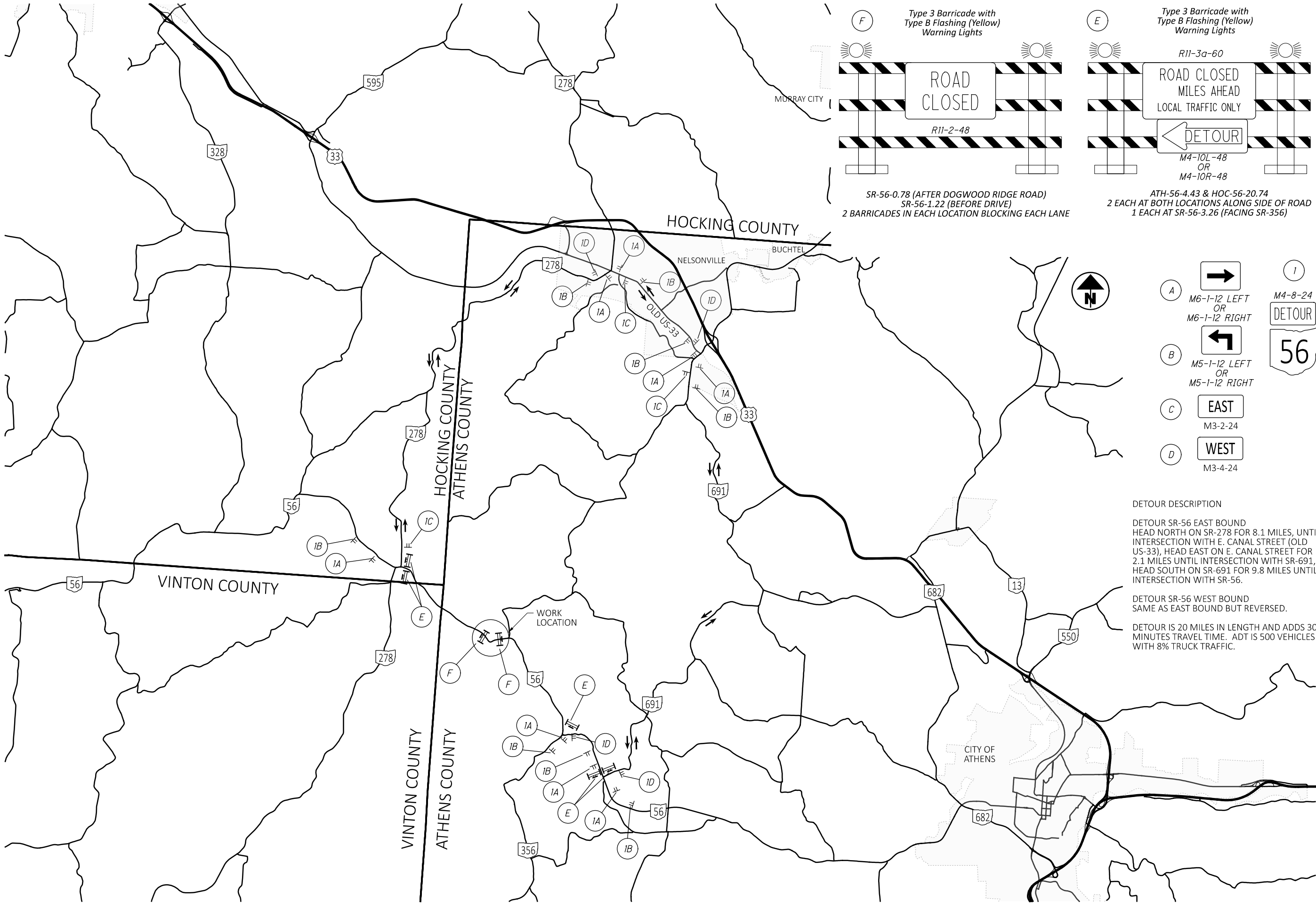
QUANTITIES CARRIED TO THE GENERAL SUMMARY

BLASTING

THE FOLLOWING ITEMS HAVE BEEN ADDED TO THE GENERAL SUMMARY FOR THE PURPOSE OF BLASTING.

ITEM 208 - AIR BLAST AND NOISE CONTROL, LS
ITEM 208 - BLASTING CONSULTANT, LS
ITEM 208 - PRE-BLAST CONDITION SURVEY, LS
ITEM 208 - VIBRATION CONTROL AND MONITORING, LS
ITEM 208 - HYDROLOGIST, LS
ITEM 208 - PRESPLITTING, 2712 SY
QUANTITIES CARRIED TO THE GENERAL SUMMARY





SHEET NUM.											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
6	7	8	12	14	50						01/STR/66								
LS														201	11000	LS		ROADWAY	
			3,427											202	23000	3,427	SY	CLEARING AND GRUBBING	
				85										202	35100	85	FT	PAVEMENT REMOVED	
				1										202	58100	1	EACH	PIPE REMOVED, 24" AND UNDER	
		36,199												203	10000	36,199	CY	CATCH BASIN REMOVED	
																		EXCAVATION	
		10,370												203	20000	10,370	CY	EMBANKMENT	
			4,459											204	10000	4,459	SY	SUBGRADE COMPACTION	
	625													204	13000	625	CY	EXCAVATION OF SUBGRADE	
	625													204	20000	625	CY	EMBANKMENT	
12			253											204	30010	253	CY	GRANULAR MATERIAL, TYPE B, (GRADATION 703.17), 6"	
	3													204	45000	3	HOUR	PROOF ROLLING	
			1,516											204	50000	1,516	SY	GEOTEXTILE FABRIC	
		LS												208	10000	LS		PRE-BLAST CONDITION SURVEY	
		LS												208	12000	LS		BLASTING CONSULTANT	
		LS												208	13000	LS		AIR BLAST AND NOISE CONTROL	
		LS												208	14000	LS		VIBRATION CONTROL AND MONITORING	
		2,712												208	15000	2,712	SY	PRESPLITTING	
		LS												208	16000	LS		HYDROLOGIST	
100														623	40500	12	EACH	REFERENCE MONUMENT, TYPE A	
																		EROSION CONTROL	
				6										601	32204	6	CY	ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC	
		2												616	10000	100	MGAL	WATER	
		200												659	00100	2	EACH	SOIL ANALYSIS TEST	
		10,419												659	00300	200	CY	TOPSOIL	
														659	10000	10,419	SY	SEEDING AND MULCHING	
		6,603												659	10001	6,603	SY	SEEDING AND MULCHING, AS PER PLAN	8
		1.54												659	20000	1.54	TON	COMMERCIAL FERTILIZER	
		3.52												659	31000	3.52	ACRE	LIME	
		92												659	35000	92	MGAL	WATER	
		514												670	00720	514	SY	DITCH EROSION PROTECTION MAT, TYPE B	
		LS												832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
		LS												832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
		LS												832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
		35,000												832	30000	35,000	EACH	EROSION CONTROL	
																		DRAINAGE	
				20.5										511	53010	20.5	CY	CLASS QC1 CONCRETE, MISC.:	
				1.7										602	20000	1.7	CY	CONCRETE MASONRY	
				400										605	13510	400	FT	6" ROCK CUT UNDERDRAINS WITH GEOTEXTILE FABRIC	
				1,116										605	14020	1,116	FT	6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
				118										611	00510	118	FT	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	
				45										611	08700	45	FT	21" CONDUIT, TYPE A	
				62										611	10200	62	FT	24" CONDUIT, TYPE A	
				1										611	99710	1	EACH	PRECAST REINFORCED CONCRETE OUTLET	
																		PAVEMENT	
			275											252	01500	275	FT	FULL DEPTH PAVEMENT SAWING	
			128											254	01000	128	SY	PAVEMENT PLANING, ASPHALT CONCRETE, 1.50"	
			470											254	01000	470	SY	PAVEMENT PLANING, ASPHALT CONCRETE, VARIABLE	
			696											301	56000	696	CY	ASPHALT CONCRETE BASE, PG64-22, (449), 6"	
			720											304	20000	720	CY	AGGREGATE BASE	
														407	20000	452	GAL	NON-TRACKING TACK COAT	
				452										441	70000	190	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22, 1.50"	
				190										441	70300	232	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449), 1.75"	
				232															

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

JDC 06/01/24

PROJECT ID

119908

SHEET

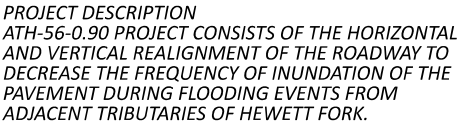
P.10

TOTAL

67

[illegible]

[illegible]



PROJECT DATA		
TOTAL AREA (RIGHT-OF-WAY)	1.76	ACRE
PROJECT EARTH DISTURBED AREA	3.87	ACRE
ESTIMATED CONTRACTOR EARTH DISTURBED AREA	1.70	ACRE
NOTICE OF INTENT EARTH DISTURBED AREA	5.57	ACRE
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE	0.74	ACRE
IMPERVIOUS (PAVED) AREA FOR POST CONSTRUCTION SITE	0.82	ACRE
RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE	56	
RUNOFF COEFFICIENT FOR POST CONSTRUCTION SITE	52	
IMMEDIATE RECEIVING WATERS	TRACE RUN	
SUBSEQUENT RECEIVING WATERS	HEWETT FORK	
POST CONSTRUCTION BMP	VEGETATED BIO FILTER	

BMP TYPE	LAT / LON				BMP WIDTH (FT)	EDA TREATMENT CREDIT (ACRE)
	BEGIN		END			
VEGETATED BIO FILTER 1	39.370896	-82.276052	39.37017	-82.27482	10	.75

**HORIZONTAL
SCALE IN FEET**



A horizontal scale bar with three segments. The first segment is black and labeled '25'. The second segment is white and labeled '50'. The third segment is black and labeled '100'.

SITE PLAN

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

IDC 06/01/24

PROJECT ID:

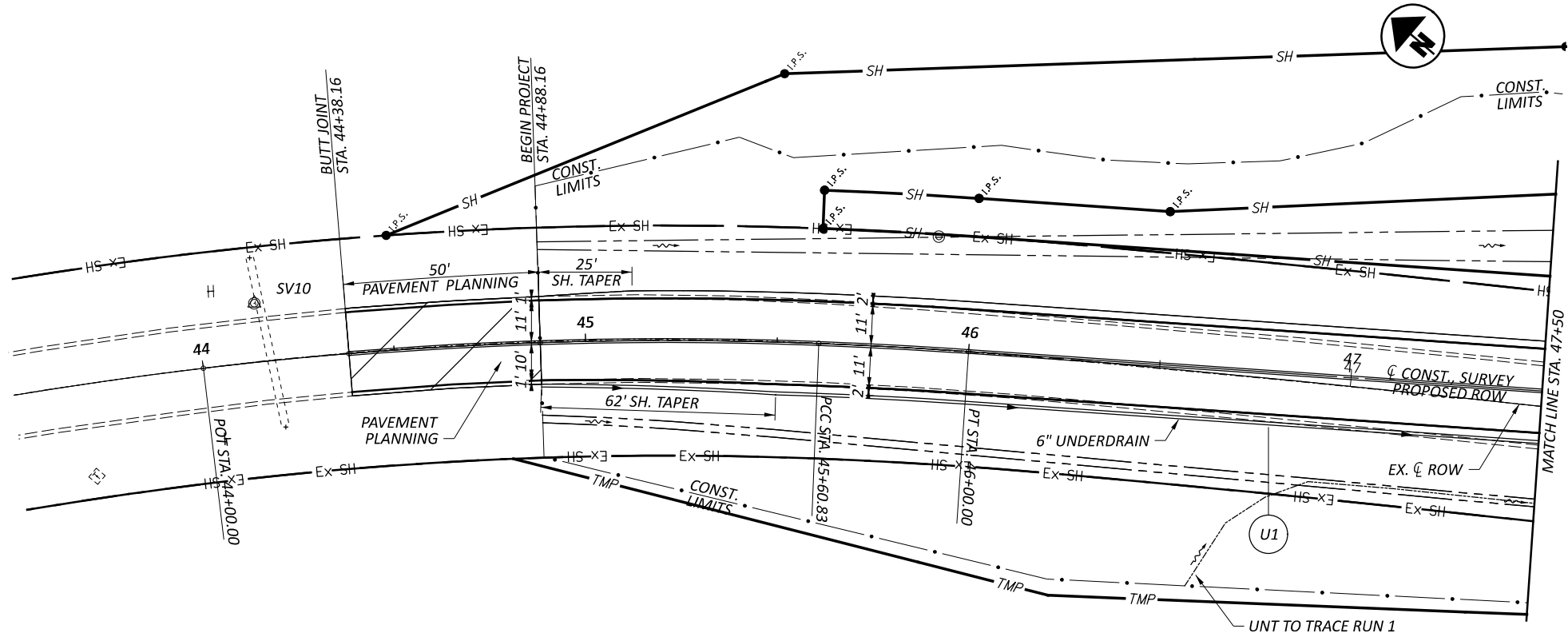
110008

119908

SHEET TOTAL

6

REFERENCE NUMBER	STATION TO STATION	SIDE	601	602	611	611	202	202	511										NOTES
			ROCK CHANNEL PROTECTION, TYPE C WITH GEOTEXTILE FABRIC	CONCRETE MASONRY	21" CONDUIT, TYPE A	24" CONDUIT, TYPE A	CATCH BASIN REMOVED	PIPE REMOVED, 24" AND UNDER	CLASS QC1 CONCRETE, MISC.:CULVERT BACKFILL AND BEDDING										
			CY	CY	FT	FT	EACH	FT	CY										
D-1	48+25.00	L / R	3.9	0.92		62			10.8										SEE SHEET 48
D-2	53+32 TO 53+42	R					1	45											CFN:1983050
D-3	57+33.43	L / R	1.9	0.78	45			40	9.7										SEE SHEET 49
TOTALS CARRIED TO GENERAL SUMMARY			6	1.7	45	62	1	85	20.5										
REFERENCE NUMBER	STATION TO STATION	SIDE	605	605	611	611	BEND AND BRANCHES												NOTES
			6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	6" ROCK CUT UNDERDRAINS WITH GEOTEXTILE FABRIC	PRECAST REINFORCED CONCRETE OUTLET	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	6" 90° BEND	6" 45° BEND	6" TEE	6" END CAP									
			FT	FT	EACH	FT	INFORMATION PURPOSES ONLY												
U-1	44+88.16 TO 48+22	R	334						1	1									
U-2	47+50 TO 48+22	L	72							1									
U-3	48+22	L / R				37	1												
U-4	48+27 TO 49+75	L	148							1									
U-5	49+75	L / R			1	44			1										
U-6	49+75 TO 50+25	L	50							1									
	50+25 TO 52+50	L		225															
U-7	52+50 TO 54+25	L		175						1									
	54+25 TO 57+31	L	306				1												
U-8	55+25 TO 57+31	R	206						1	1									
U-9	57+31	L / R				37													
TOTALS CARRIED TO GENERAL SUMMARY			1116	400	1	118	2	0	3	6									



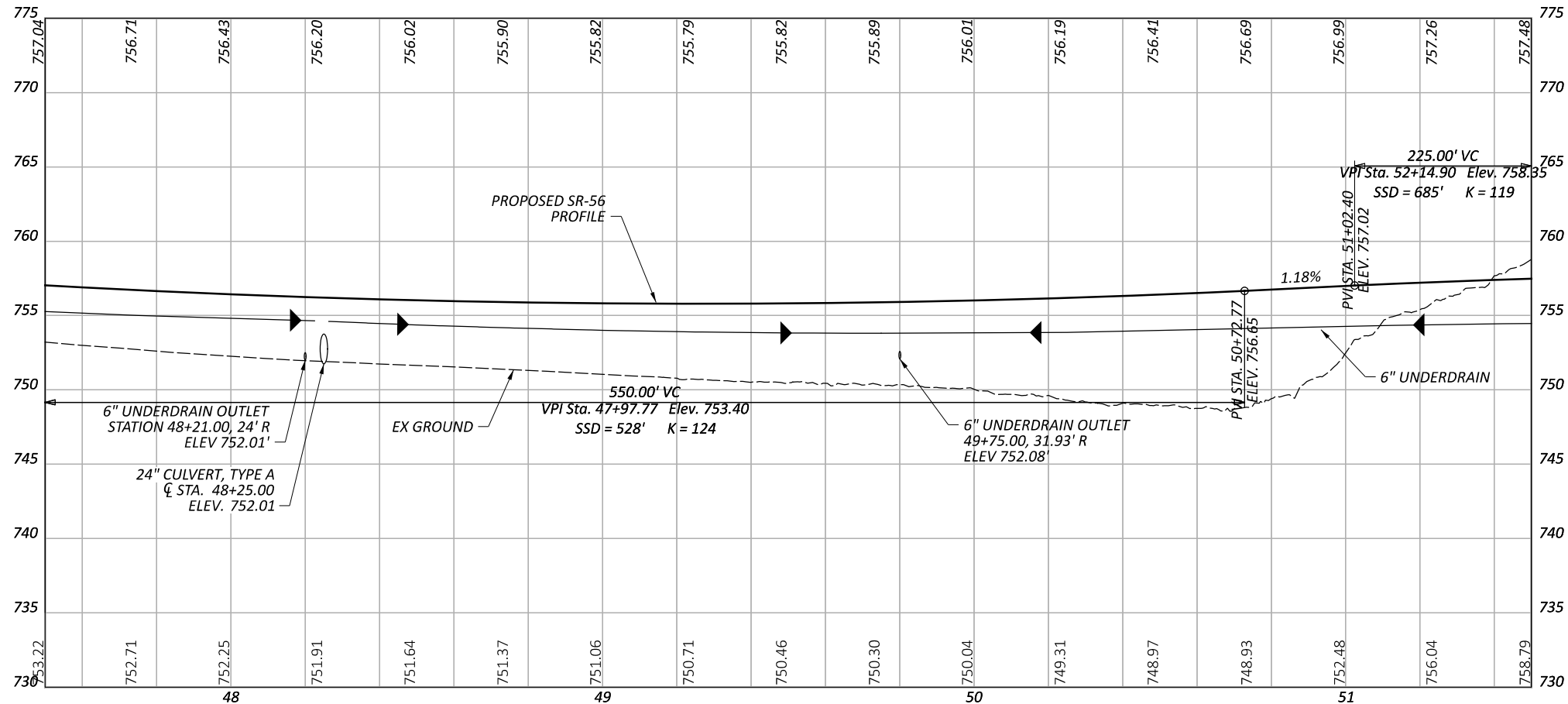
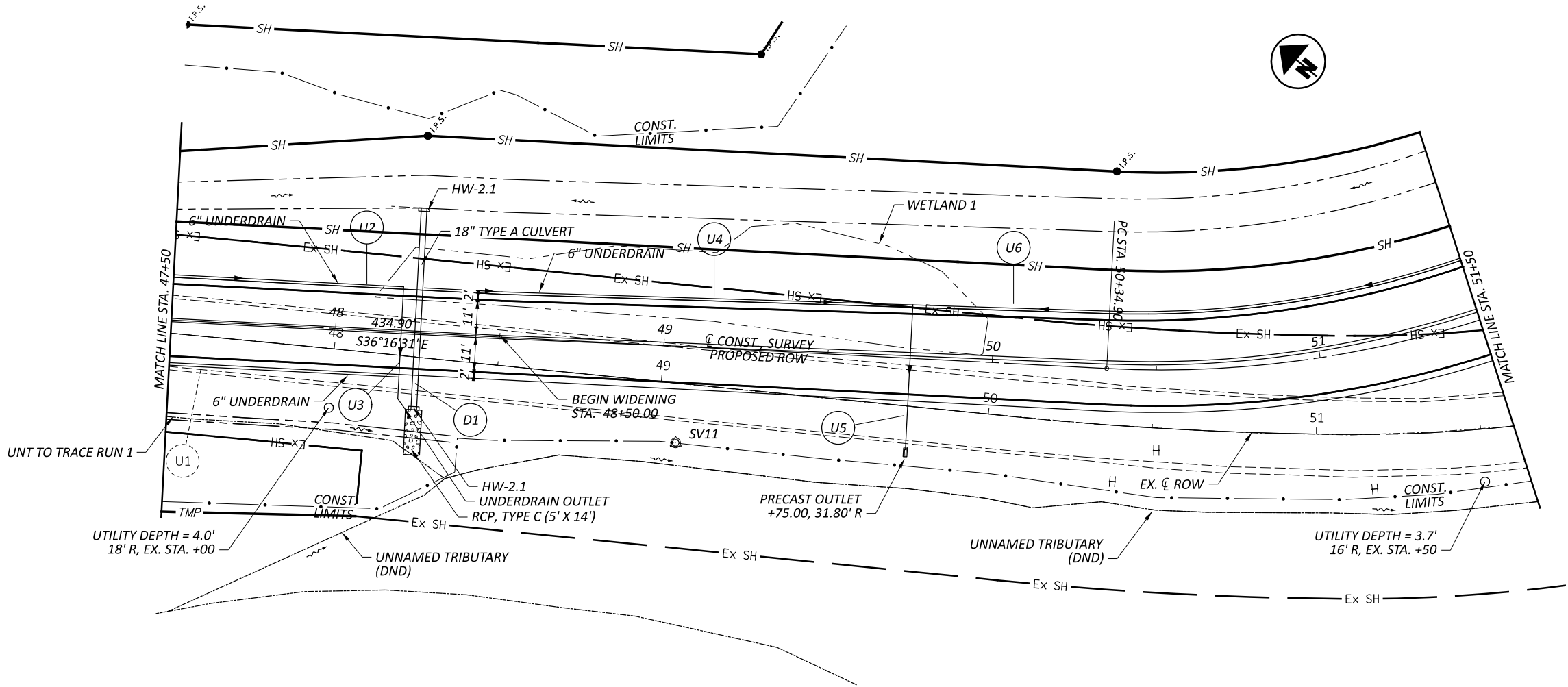
HORIZONTAL
SCALE IN FEET

A horizontal scale bar with alternating black and white segments. It is marked with 0, 10, 20, and 40.

SIGN AGENCY



SIGNER	
KWK	
REVIEWER	
OC 06/01/24	
PROJECT ID	
119908	
FEET	TOTAL
15	67



PLAN - PROFILE
SR-56 STATION 47+50 TO 51+50

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

JDC 06/01/24

PROJECT ID

119908

SHEET

P.16

TOTAL

67

FOR CULVERT DETAILS SEE SHEETS 48 - 49
FOR TRAFFIC CONTROL DETAIL SEE SHEET 50



PLAN - PROFILE
SR-56 STATION 51+50 TO 55+50

DESIGN AGENCY



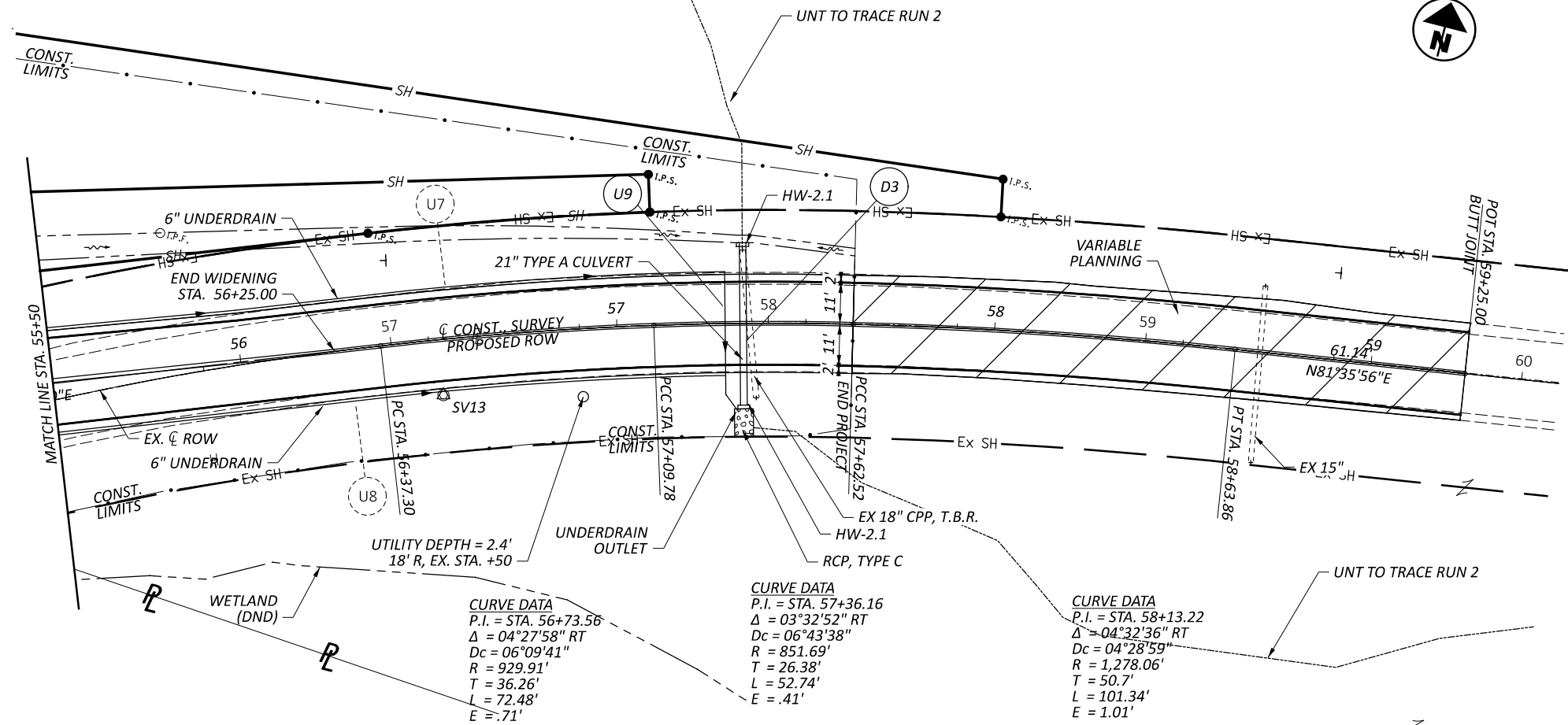
DESIGNER
KWK

REVIEWER
JDC 06/01/24

PROJECT ID
119908

SHEET	TOTAL
P.17	6

FOR CULVERT DETAILS SEE SHEETS 48 - 49
FOR TRAFFIC CONTROL DETAIL SEE SHEET 50



HORIZONTAL
SCALE IN FEET

A horizontal scale bar with a black and white checkerboard pattern. It is marked with '0' at the left end, '10' at the first tick mark, '20' at the second tick mark, and '40' at the right end.

PLAN - PROFILE
SR-56 STATION 55+50 TO 59+25

DESIGN AGENCY



DESIGNER

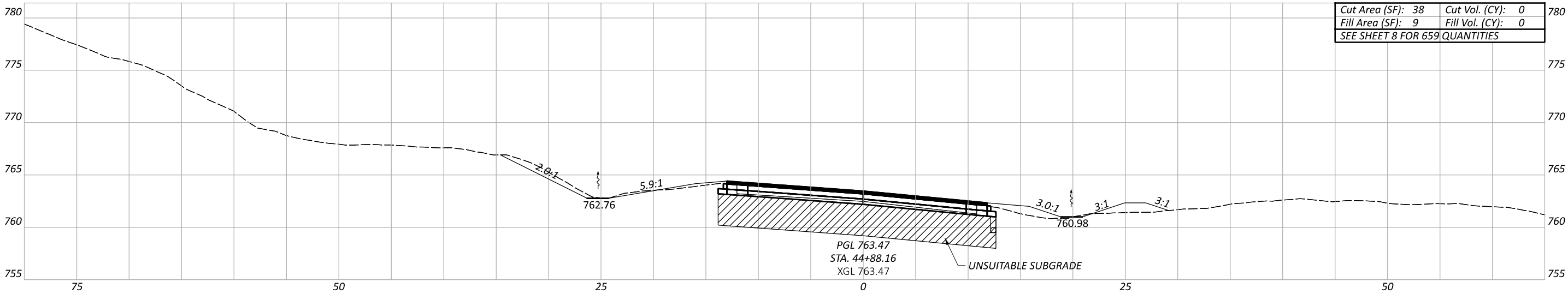
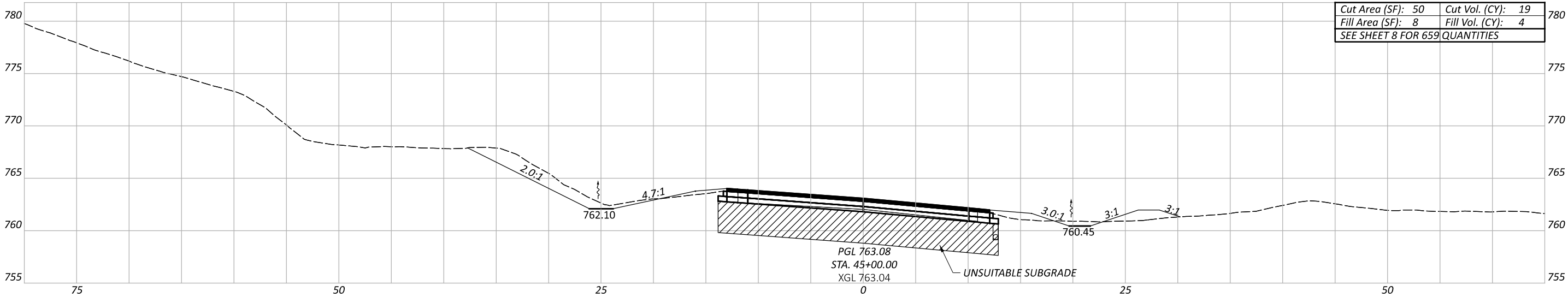
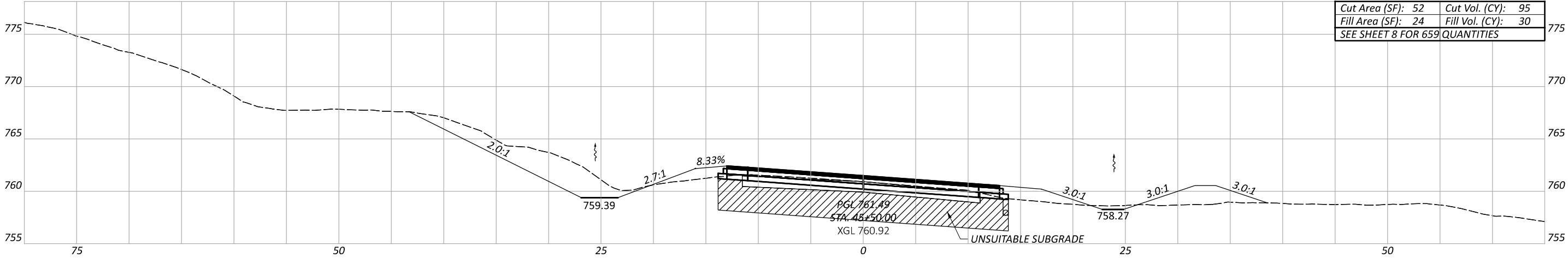
KW/K

REVIEWER

JDC 06/01/24

PROJECT ID	119908
------------	--------

SHEET	TOTAL
P.18	6



ROADWAY CROSS SECTION
SR-56 STATION 44+88.16 TO 45+50.00

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

JDC 06/01/24

PROJECT ID

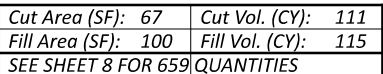
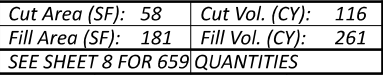
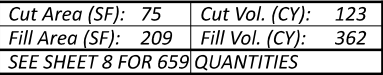
119908

SHEET

P.19

TOTAL

67



DESIGN AGENCY



KWK

REVIEWER

06/01/

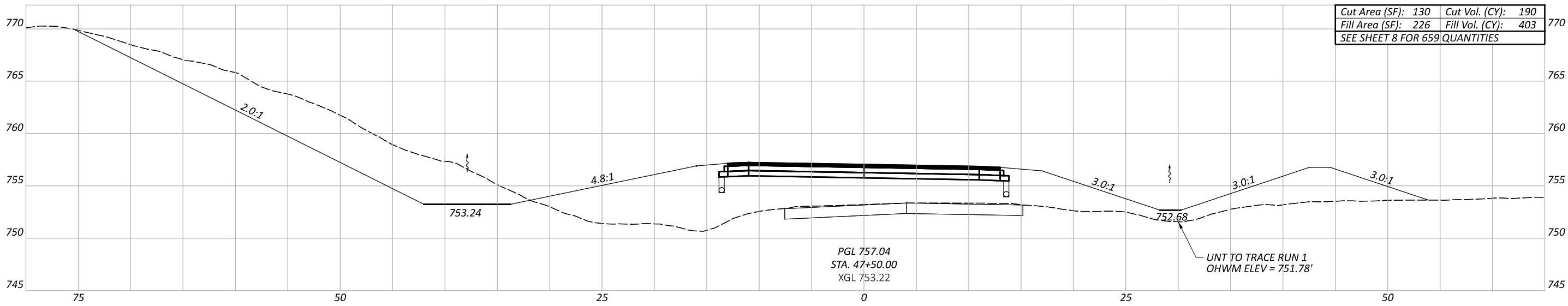
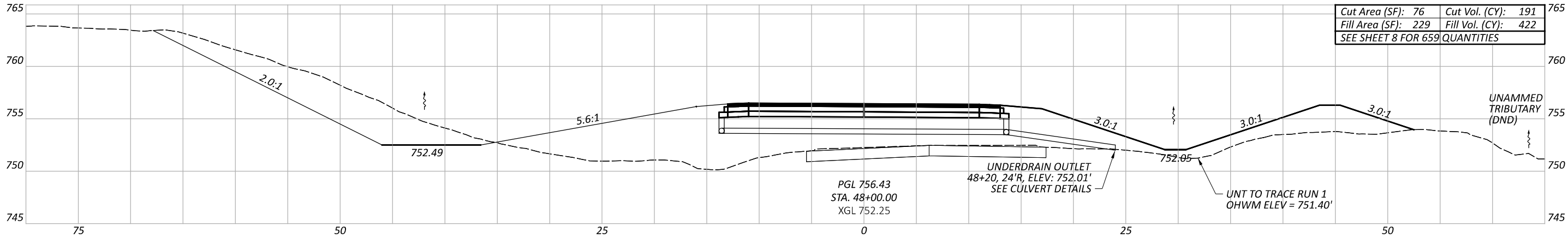
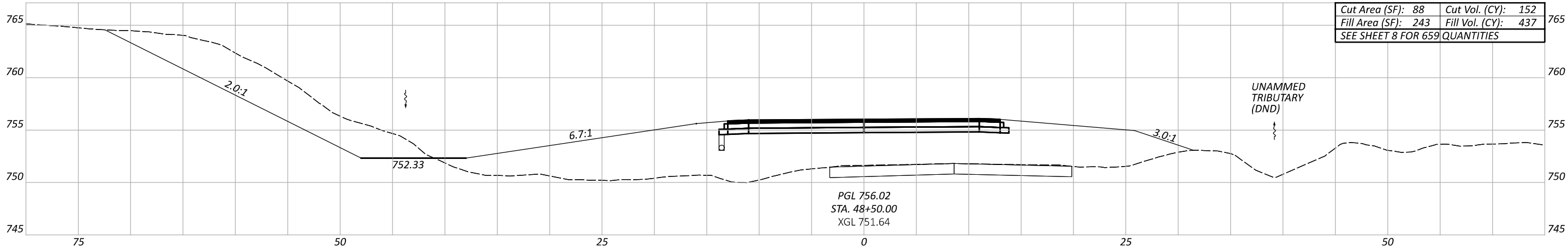
CT ID:

CTID
110008

119908

TOTAL

20 | 67



ROADWAY CROSS SECTION
SR-56 STATION 47+50.00 TO 48+50.00

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

JDC 06/01/24

PROJECT ID

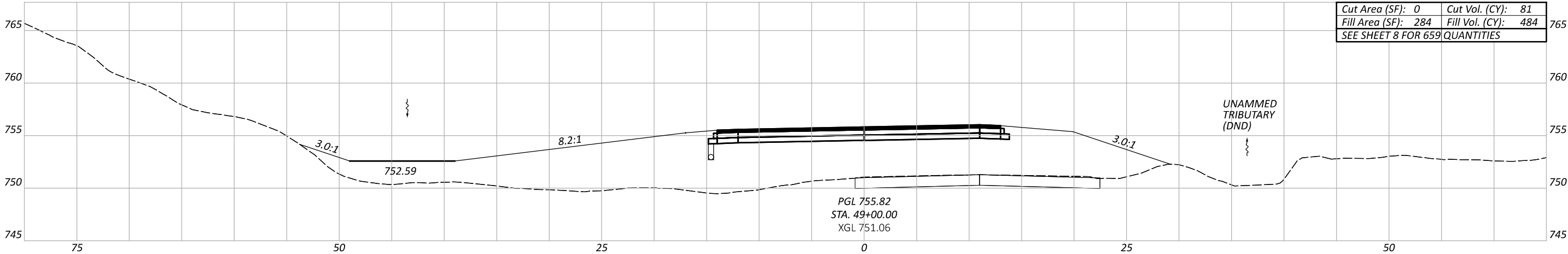
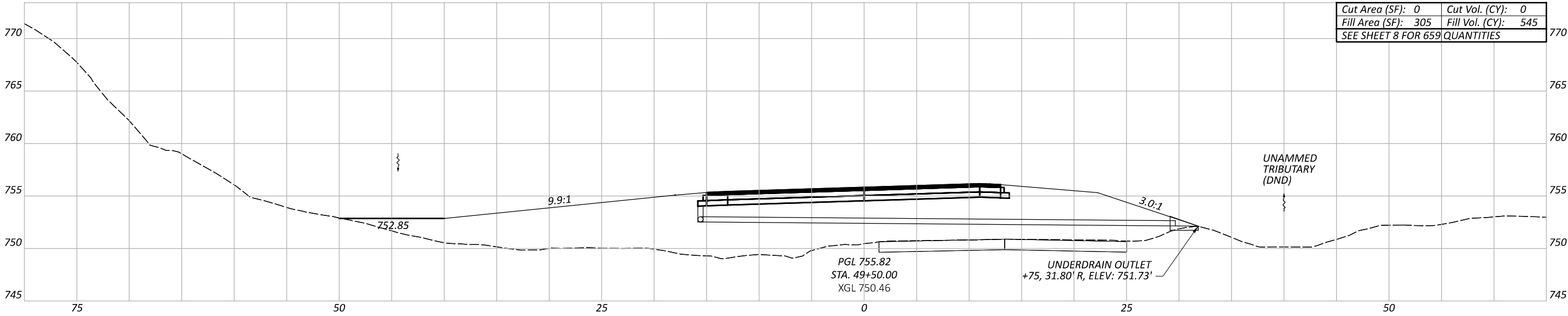
119908

SHEET

P.21

TOTAL

67



ROADWAY CROSS SECTION
SR-56 STATION 49+00.00 TO 48+50.00

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

JDC 06/01/24

PROJECT ID

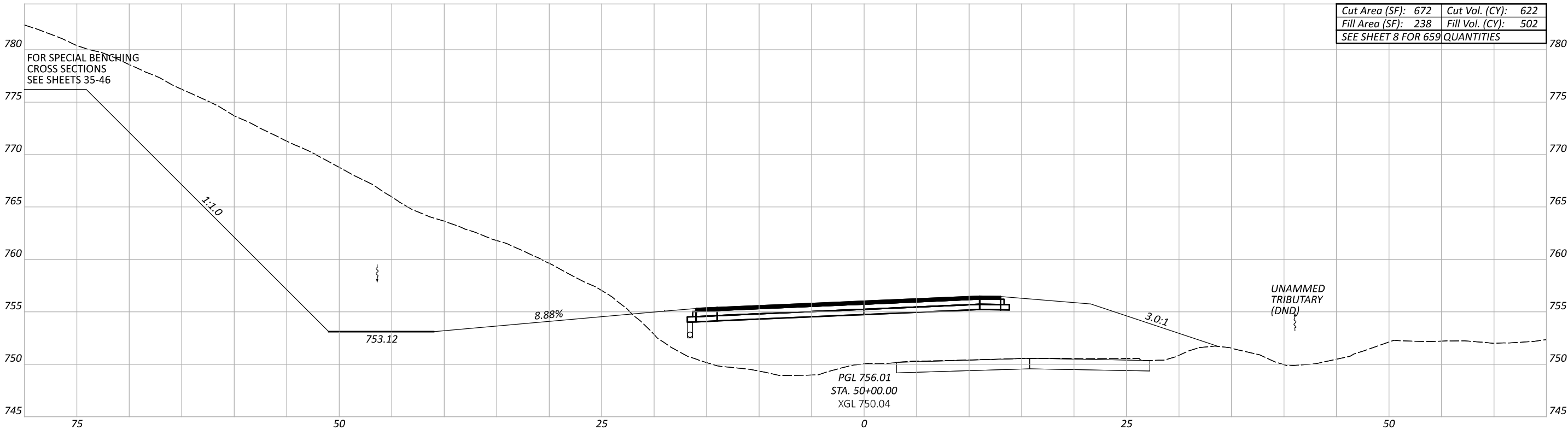
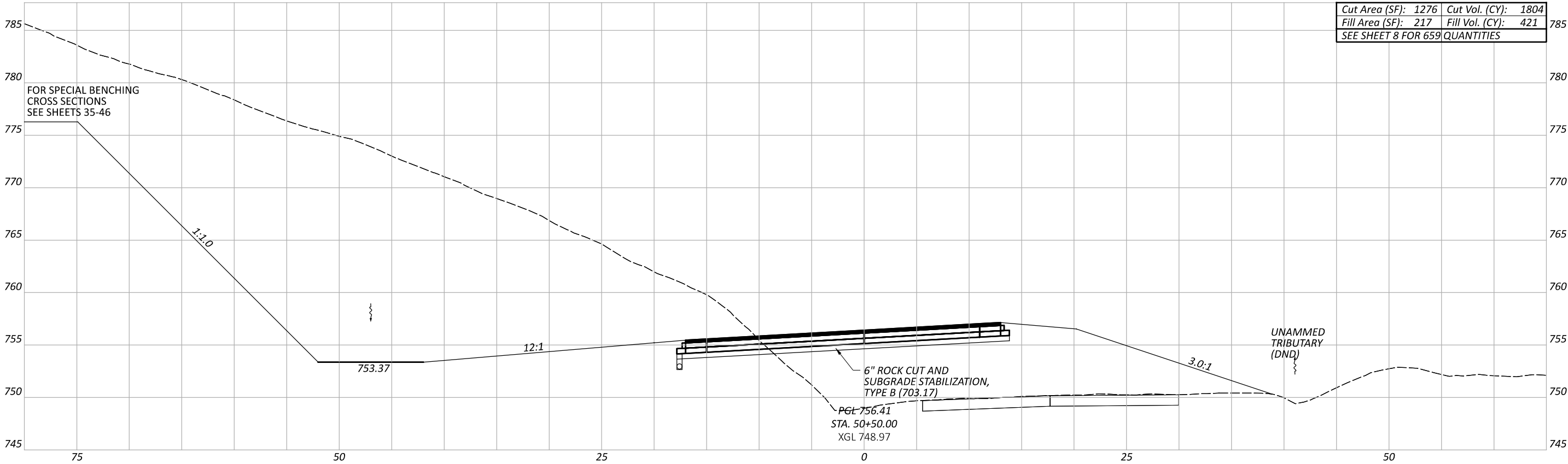
119908

SHEET

P.22

TOTAL

67



ROADWAY CROSS SECTION
SR-56 STATION 50+00.00 TO 50+50.00

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

JDC 06/01/24

PROJECT ID

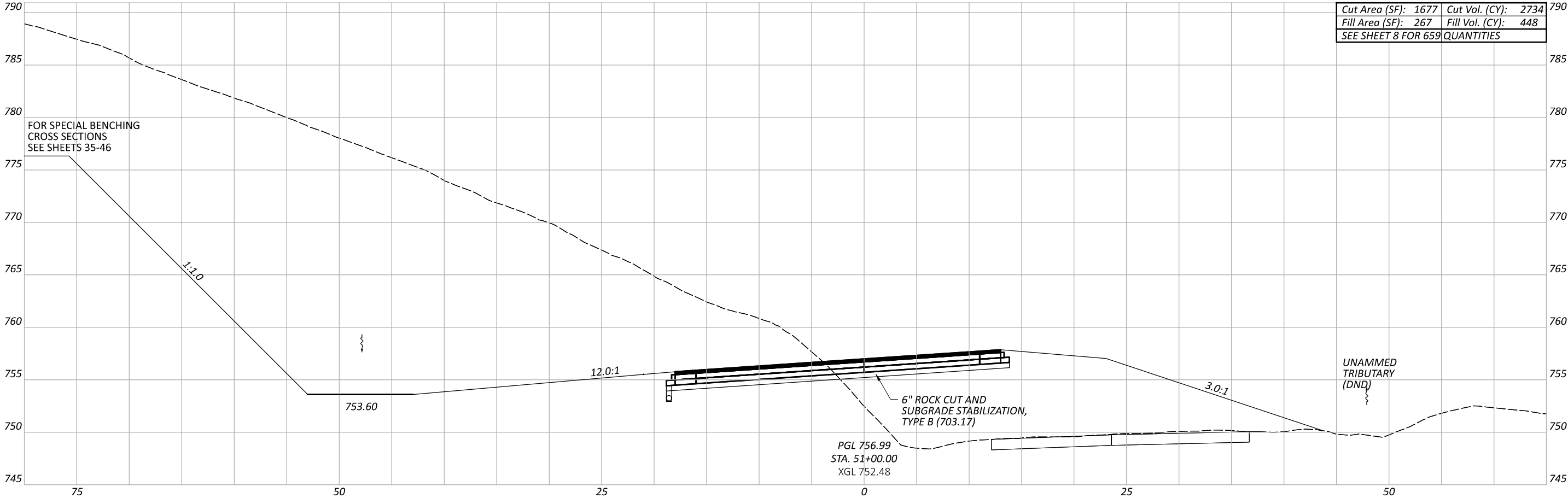
119908

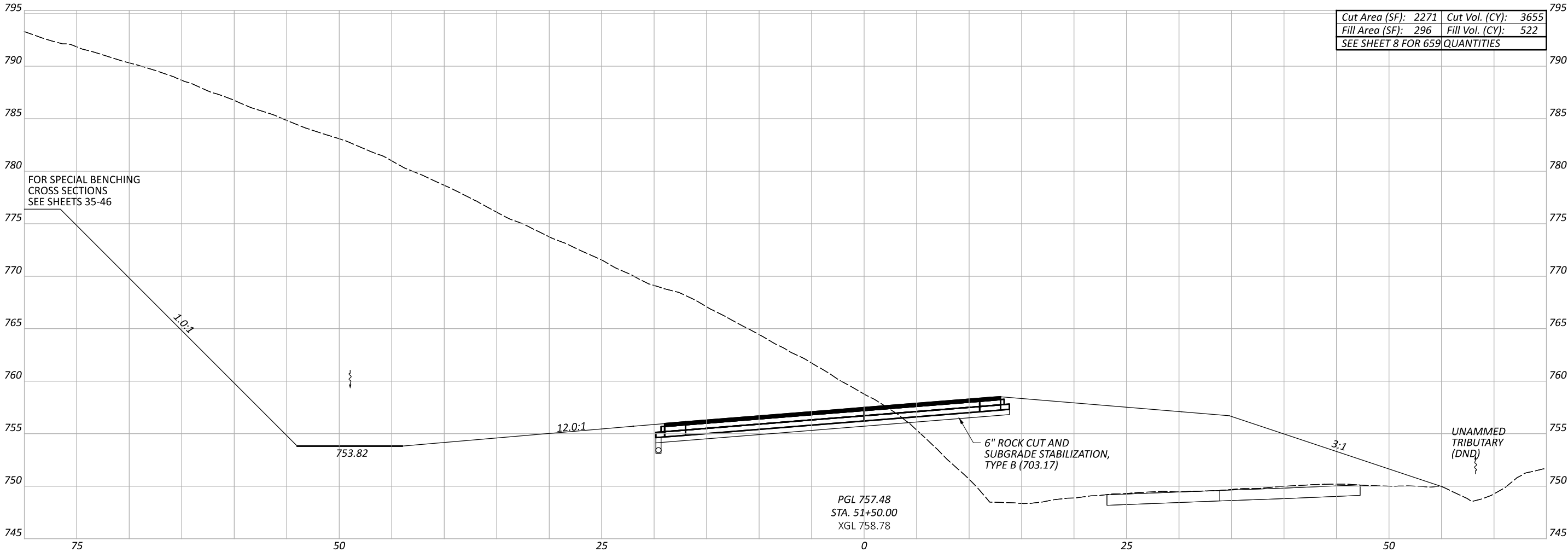
SHEET

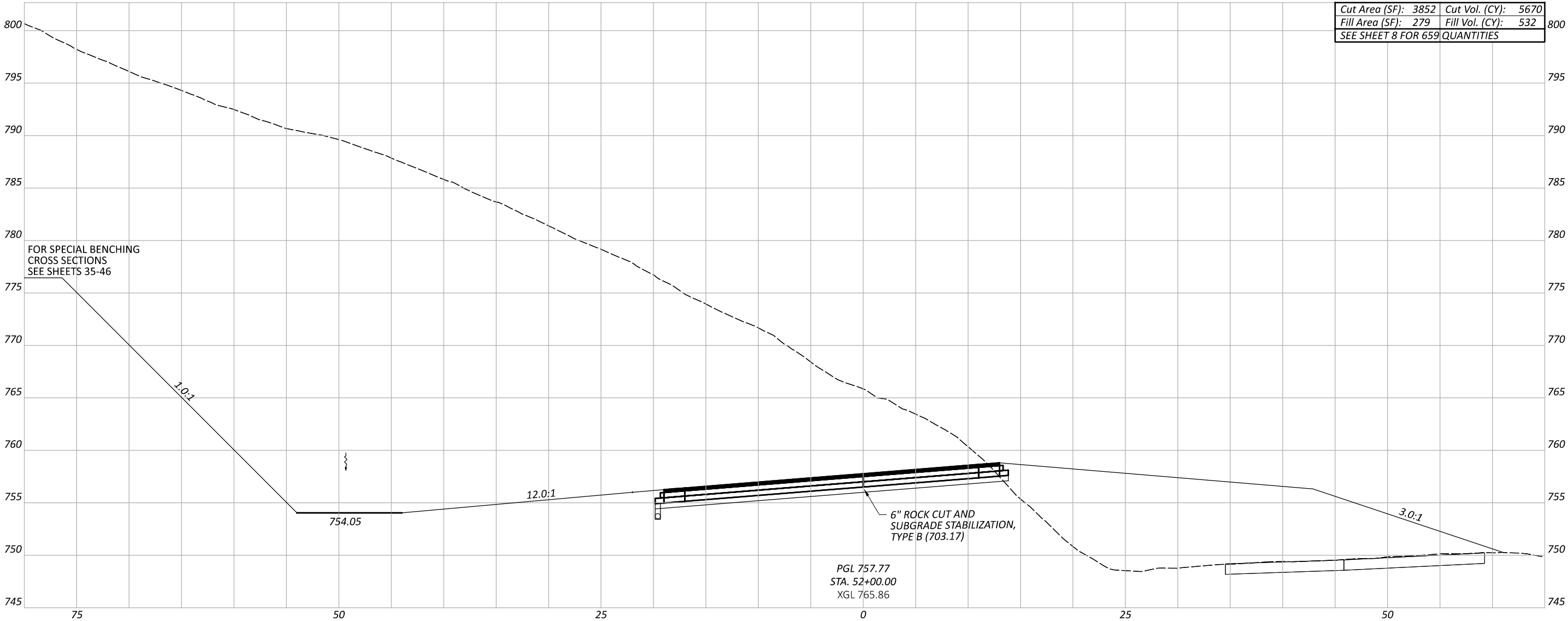
P.23

TOTAL

67







ROADWAY CROSS SECTION
SR-56 STATION 52+00.00

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

JDC 06/01/24

PROJECT ID

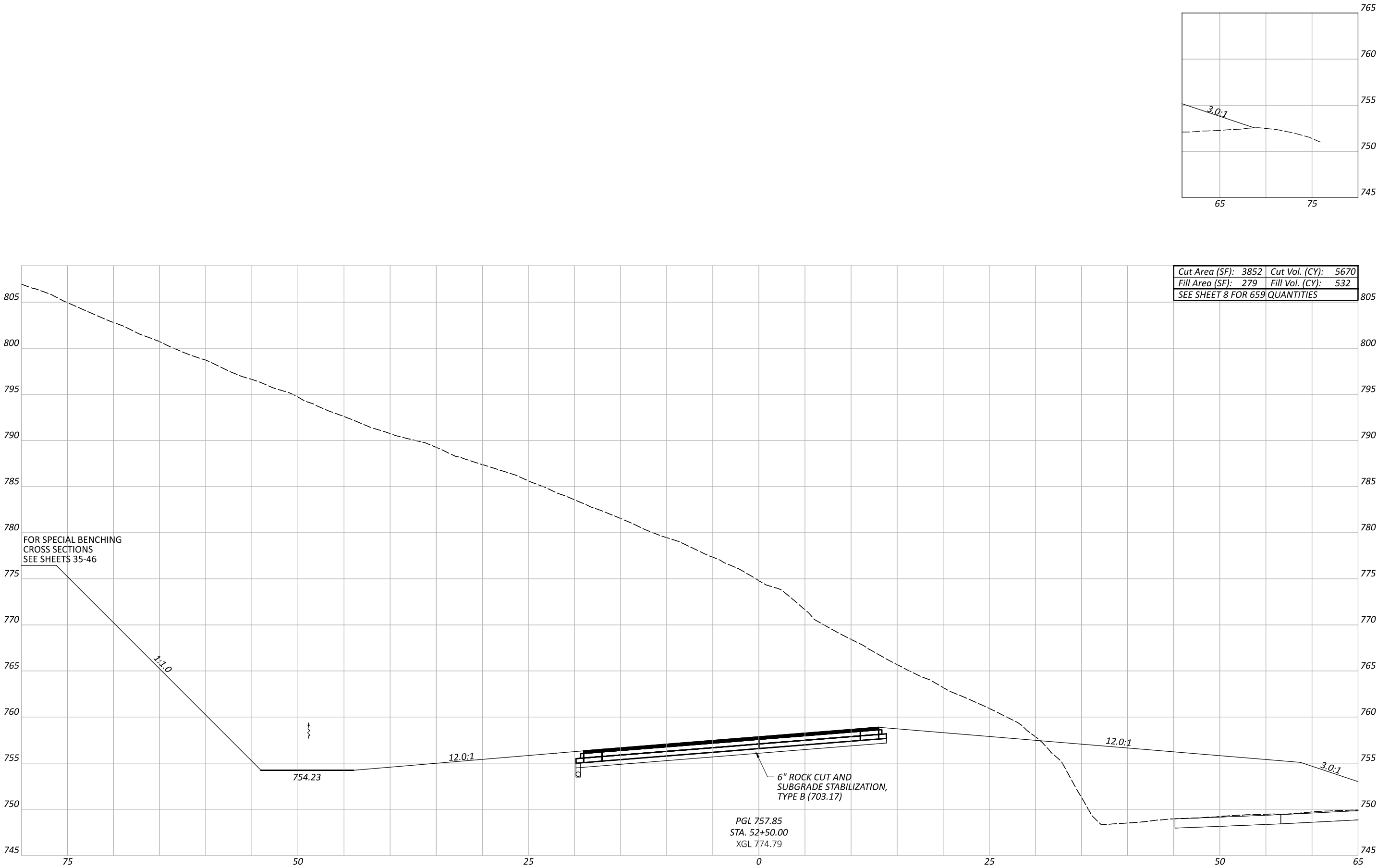
119908

SHEET

P.26

TOTAL

67



ROADWAY CROSS SECTION
SR-56 STATION 52+50.00

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

JDC 06/01/24

PROJECT ID

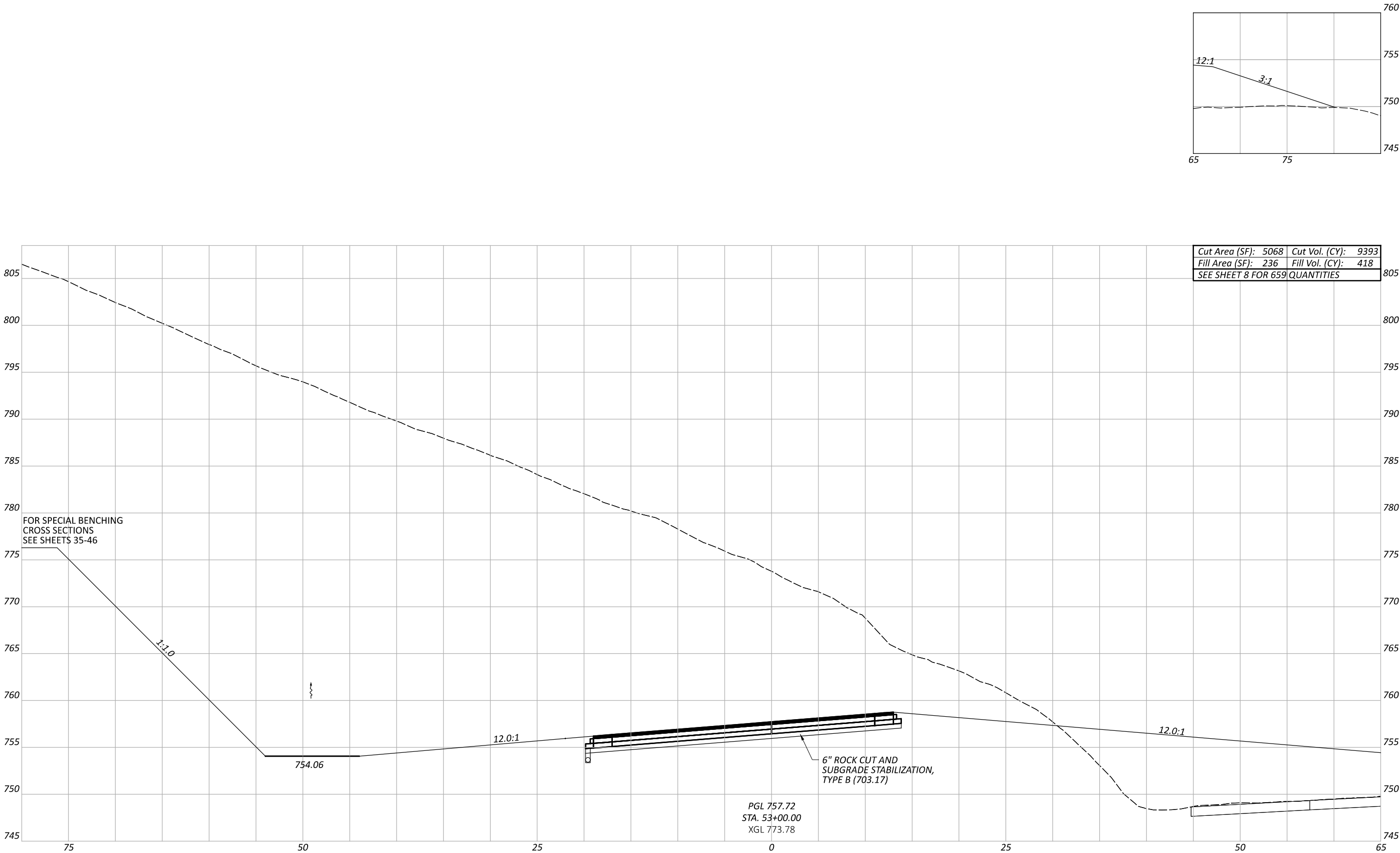
119908

SHEET

P.27

TOTAL

67



ROADWAY CROSS SECTION
SR-56 STATION 53+00.00

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

JDC 06/01/24

PROJECT ID

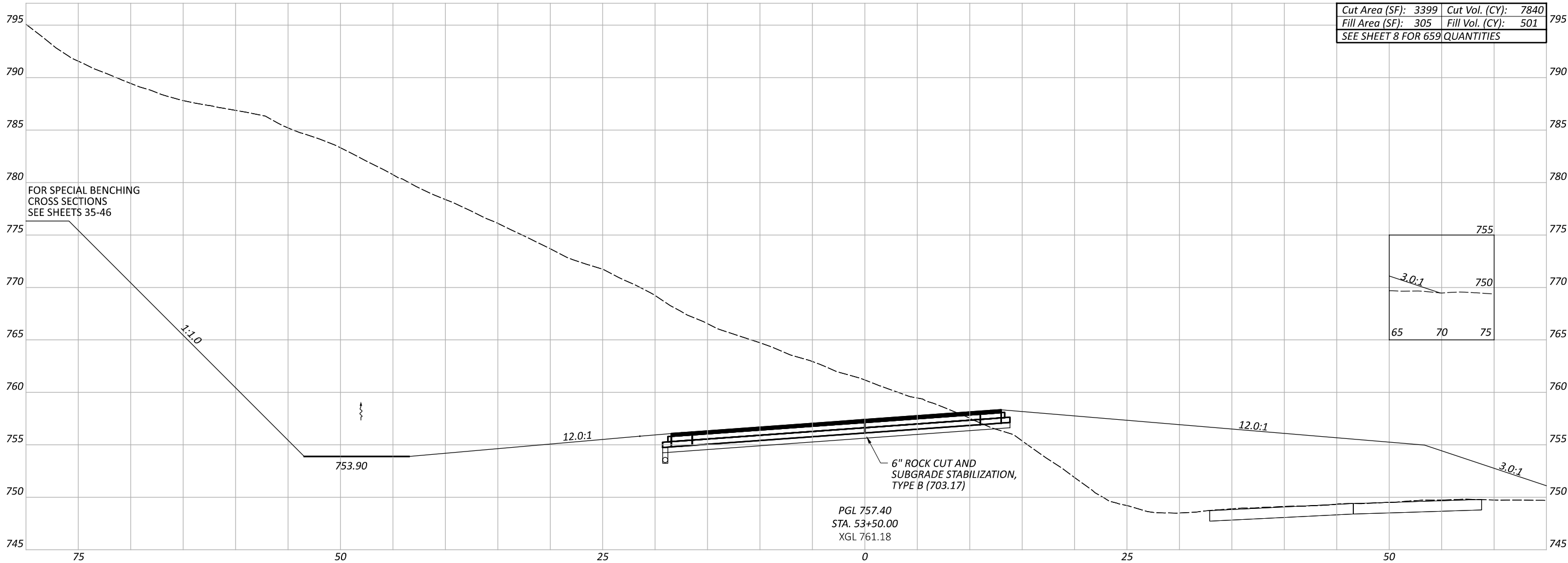
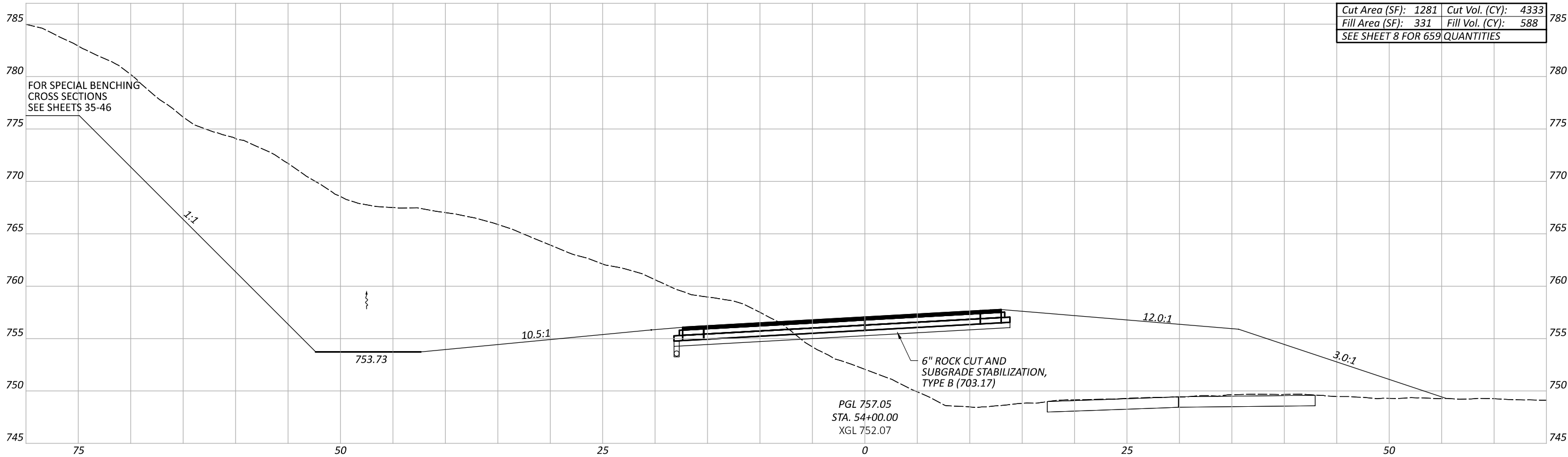
119908

SHEET

P.28

TOTAL

67



ROADWAY CROSS SECTION
SR-56 STATION 53+50.00 TO 54+00.00

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

JDC 06/01/24

PROJECT ID

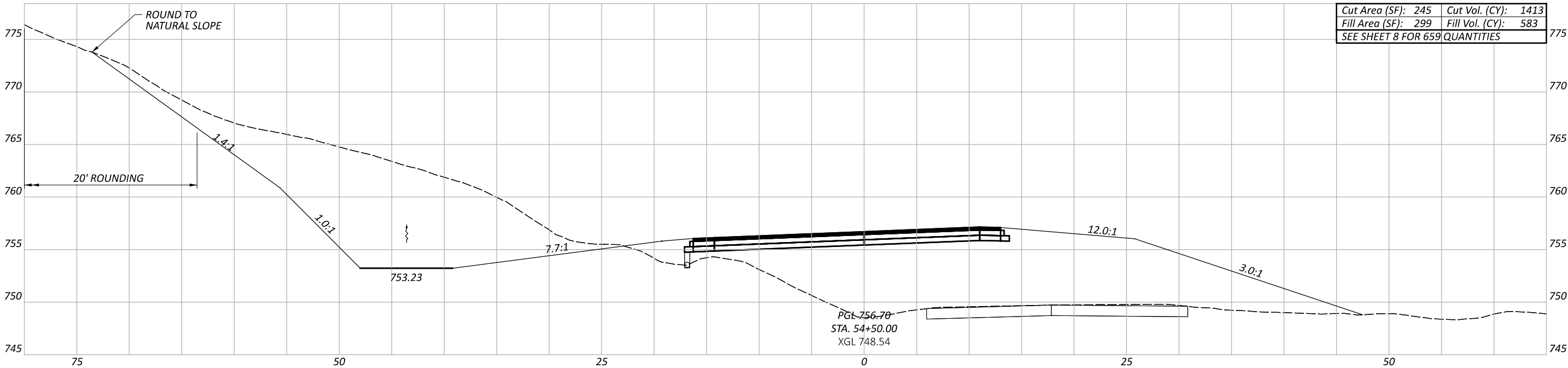
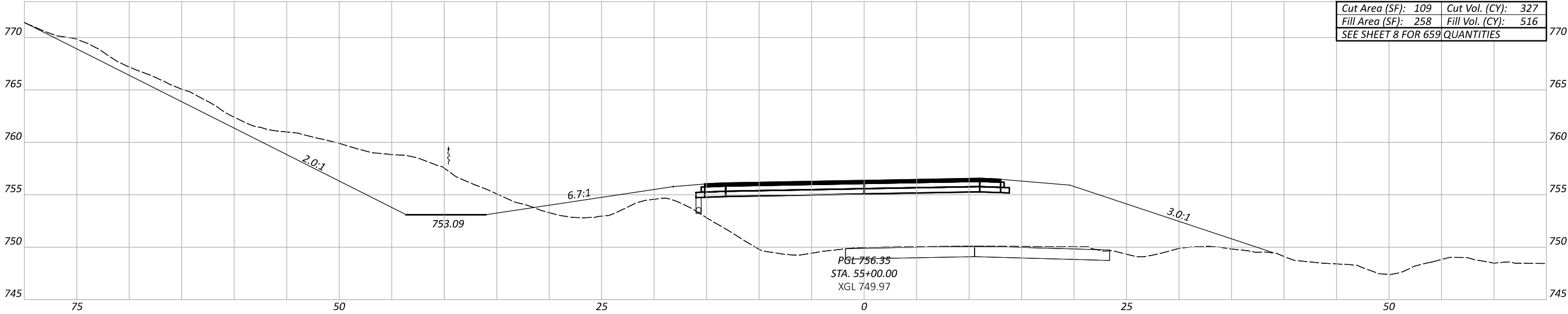
119908

SHEET

P.29

TOTAL

67



ROADWAY CROSS SECTION
SR-56 STATION 54+50.00 TO 55+00.00

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

JDC 06/01/24

PROJECT ID

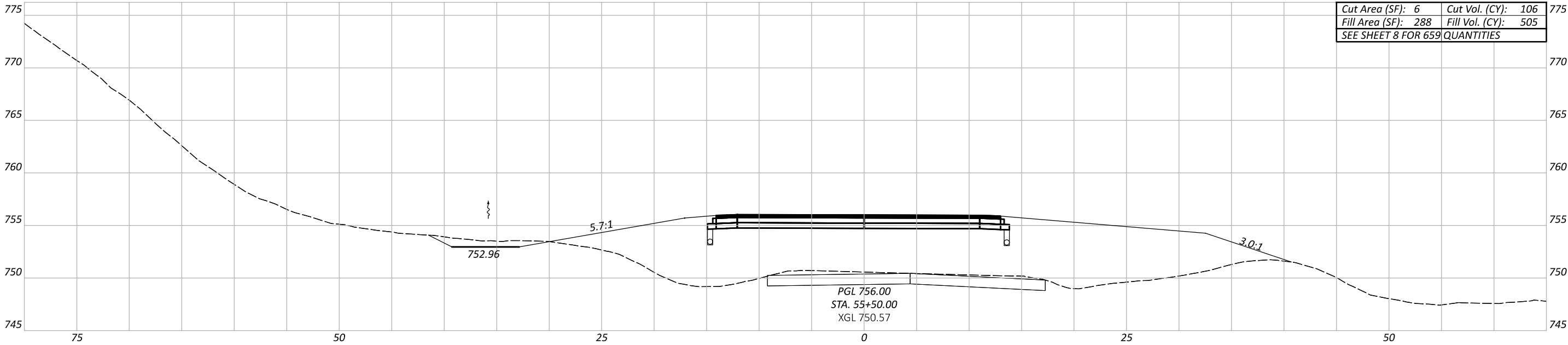
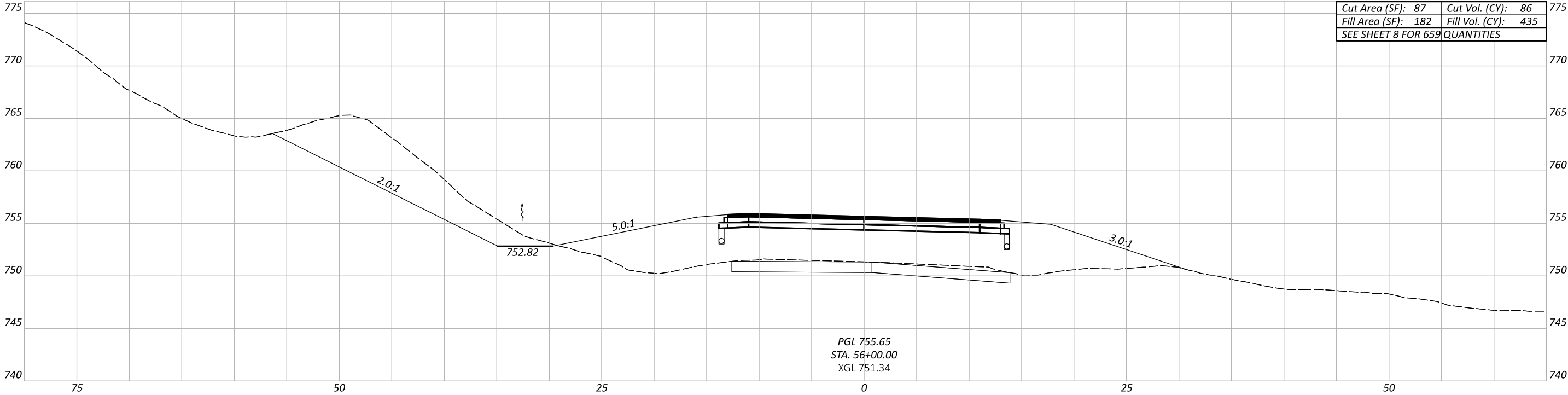
119908

SHEET

P.30

TOTAL

67



ROADWAY CROSS SECTION
SR-56 STATION 55+50.00 TO 56+00.00

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

JDC 06/01/24

PROJECT ID

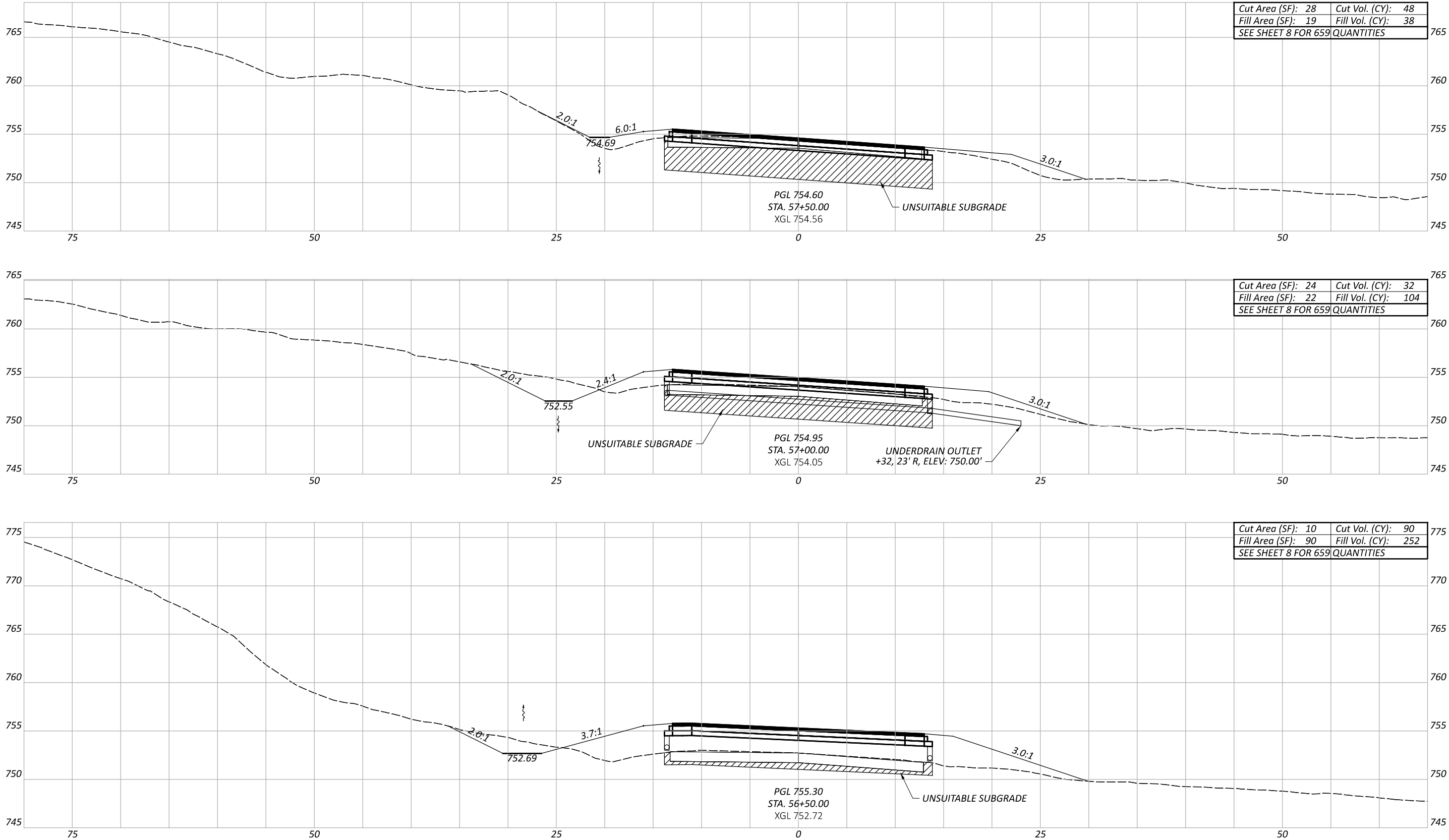
119908

SHEET

P.31

TOTAL

67



ROADWAY CROSS SECTION
SR-56 STATION 56+50.00 TO 57+50.00

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

JDC 06/01/24

PROJECT ID

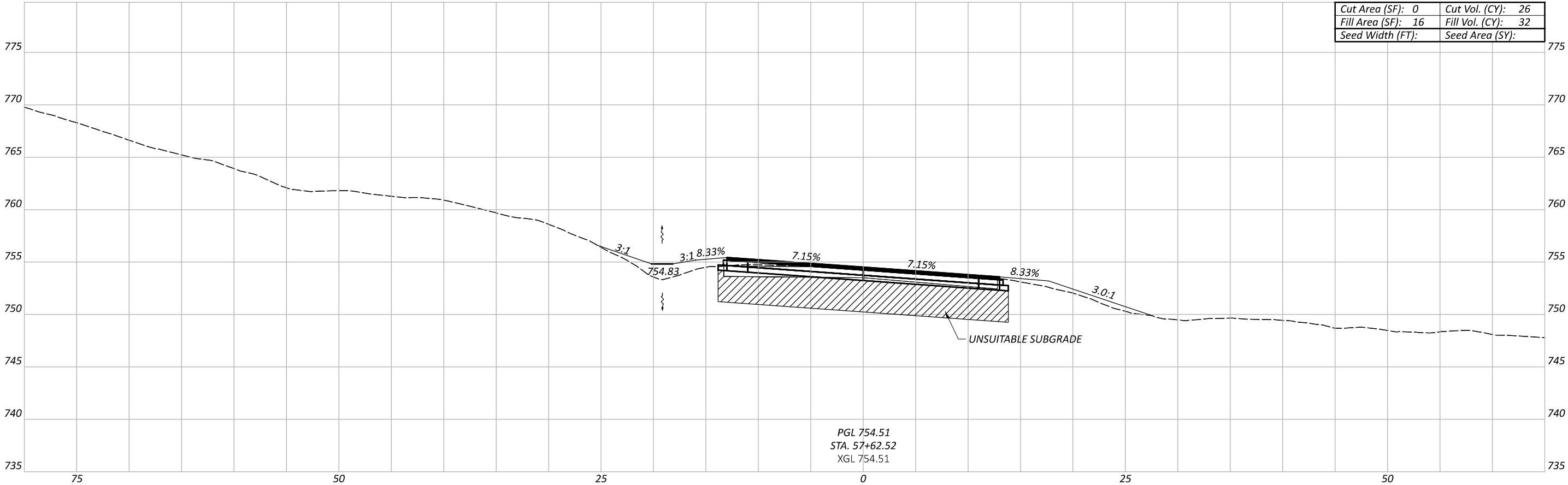
119908

SHEET

P.32

TOTAL

67



ROADWAY CROSS SECTION
SR-56 STATION 57+62.52

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

JDC 06/01/24

PROJECT ID

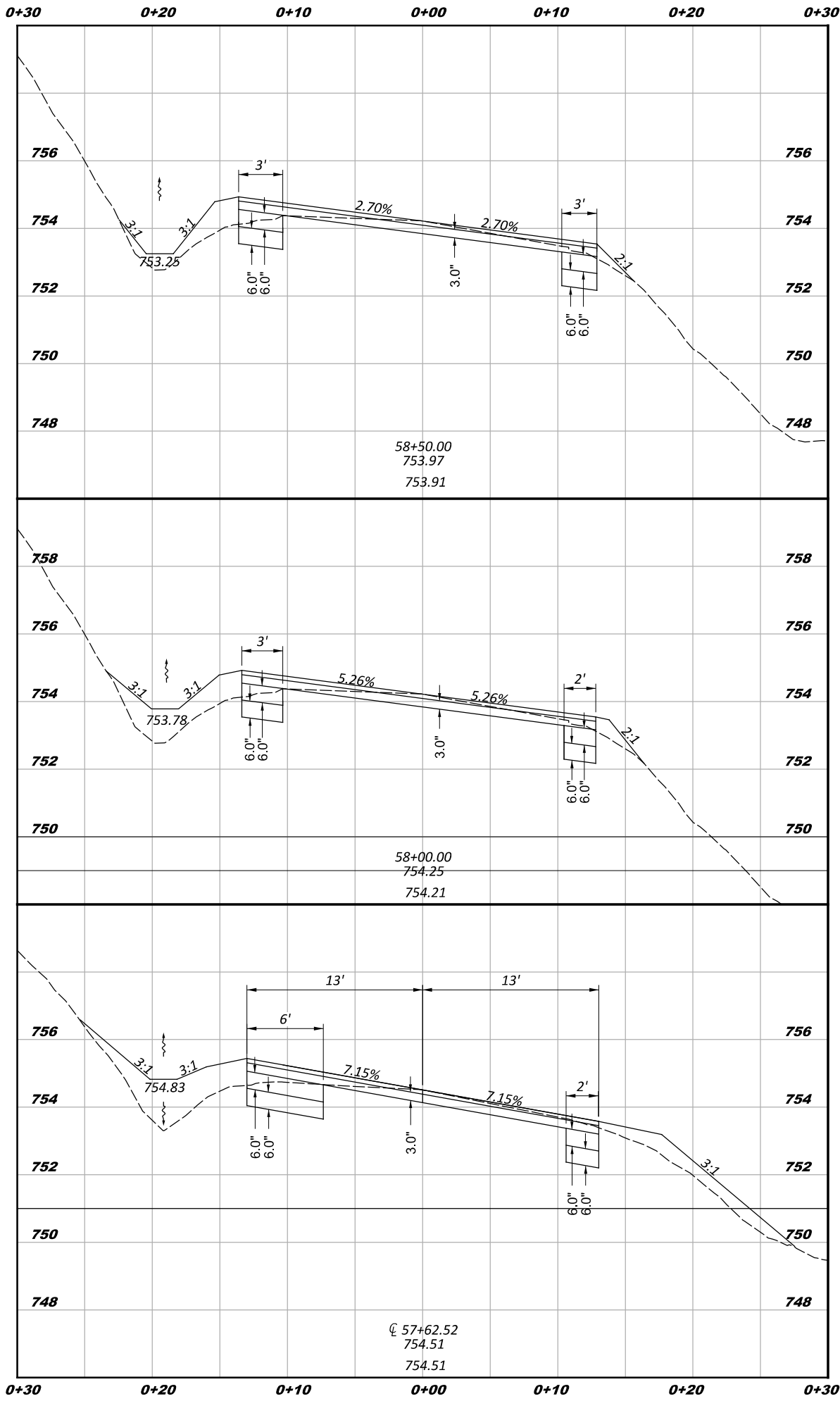
119908

SHEET

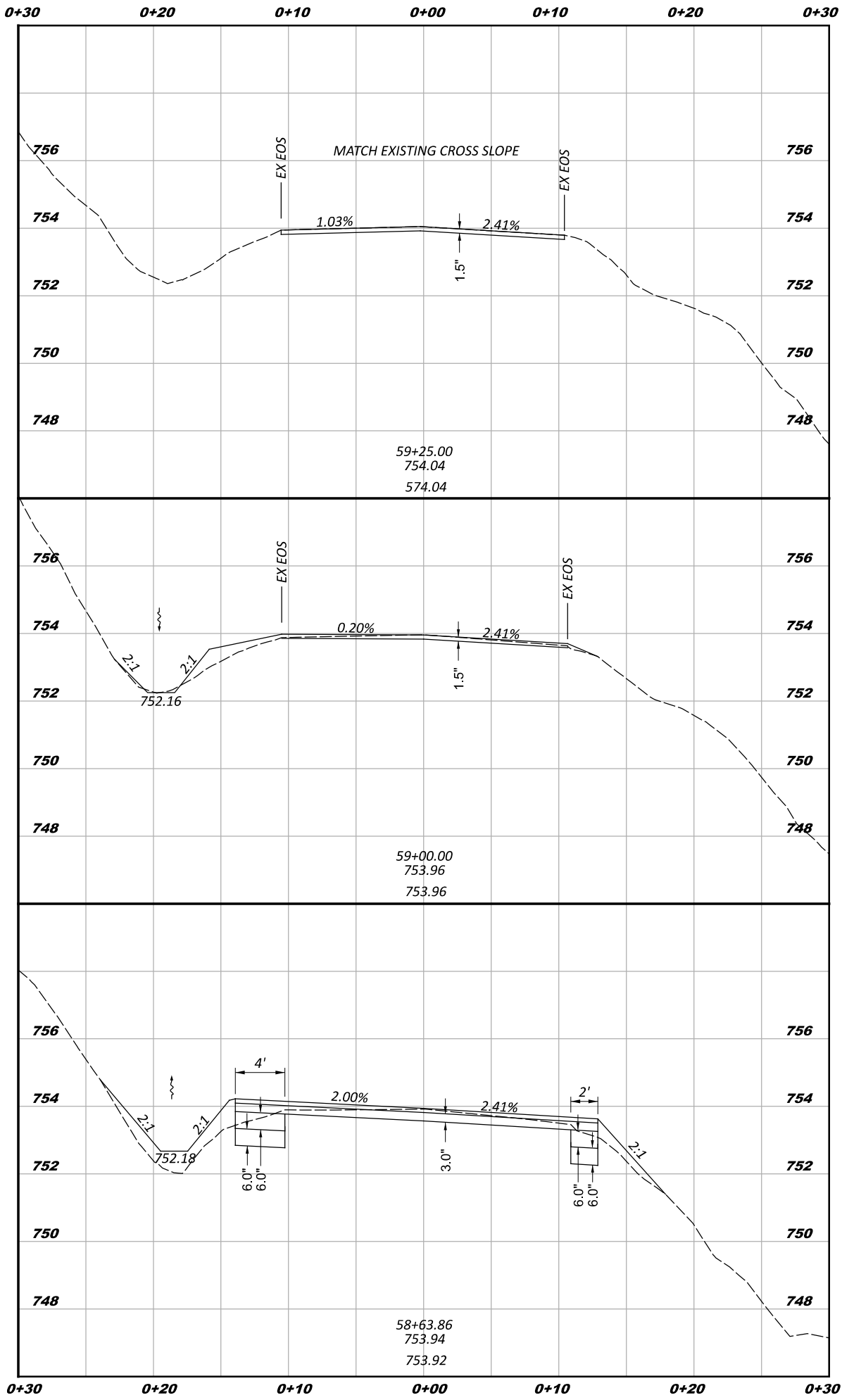
P.33

TOTAL

67



NOTE: SEE SHEET 3
EXISTING TYPICAL SECTION
(EXISTING ROADWAY TIE-IN SECTION)
SAW CUT AT LOCATIONS AS DIRECTED
BY ENGINEER



VARIABLE PLANNING CROSS SECTIONS
SR-56 STA. 57+62.52 TO 59+25.00

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

JDC 06/01/25

PROJECT ID

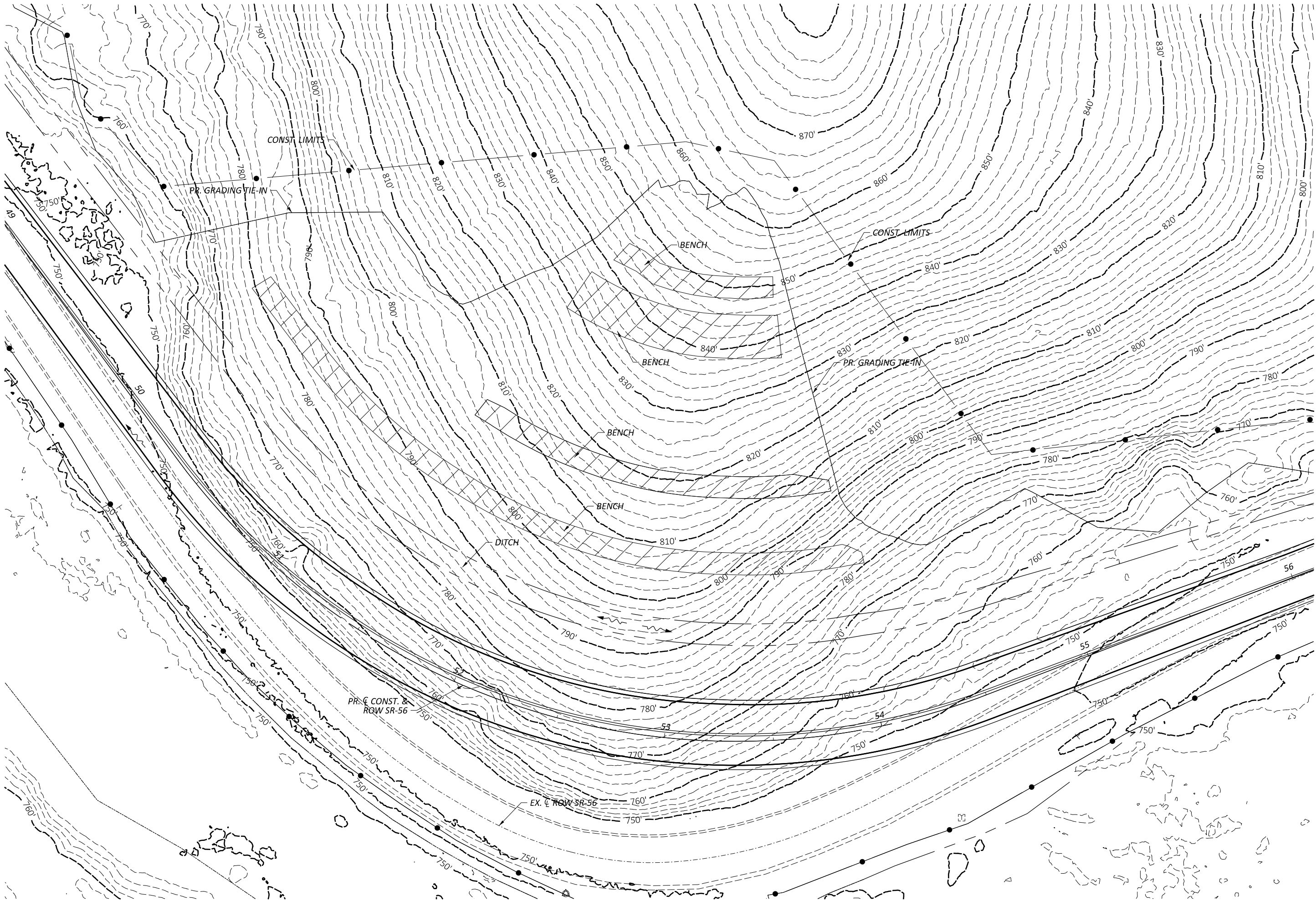
119908

SHEET

P.34

TOTAL

67



HORIZONTAL
SCALE IN FEET

0

25

50

100

PLAN VIEW

GRADING AND SPECIAL BENCHING

DESIGN AGENCY

DESIGNER

KWK

REVIEWER

ARM 03/01/24

PROJECT ID

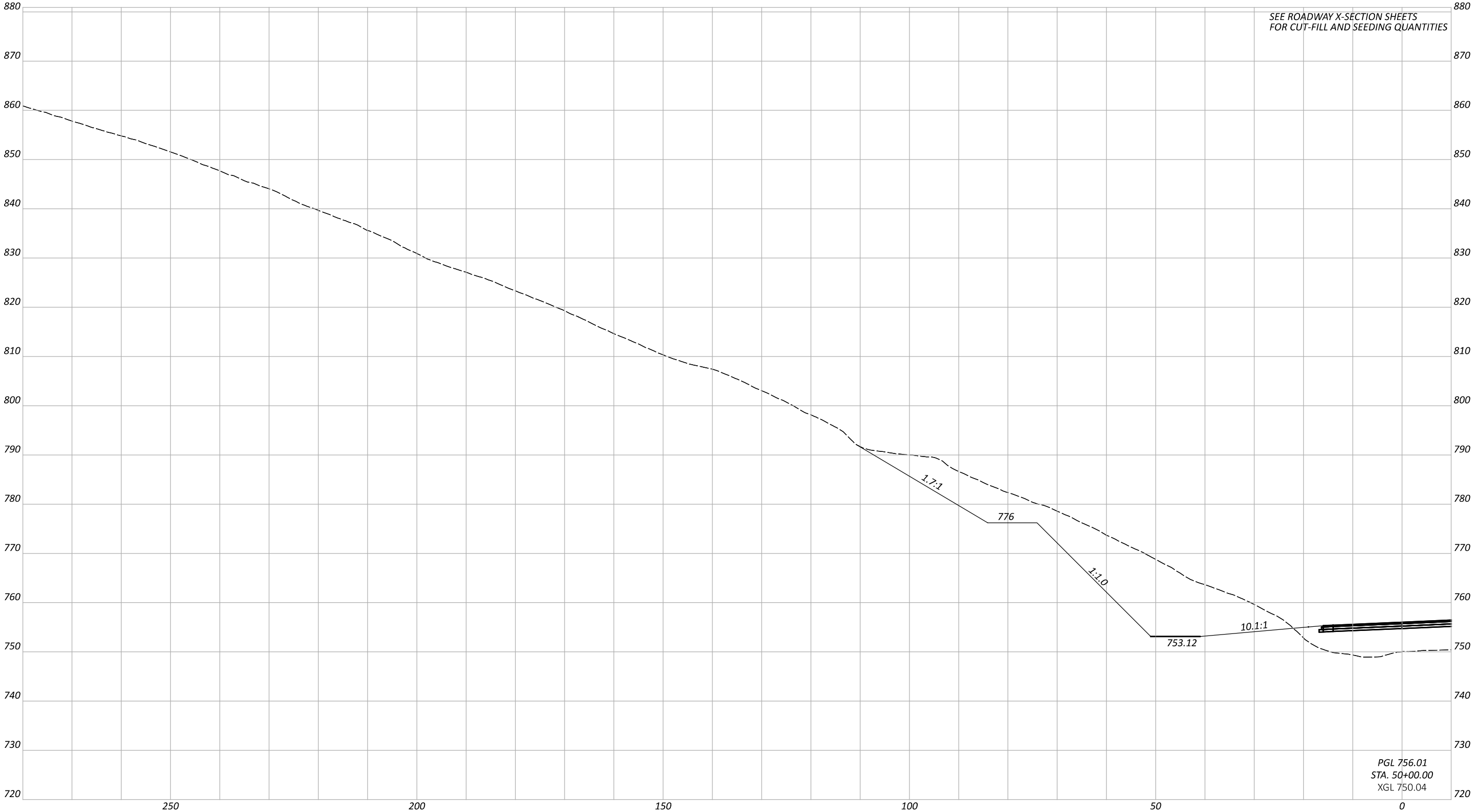
119908

SHEET

P.35

TOTAL

67



SPECIAL BENCHING CROSS SECTIONS
SR-56 STATION 50+00.00

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

ARM 03/01/24

PROJECT ID

119908

SHEET

P.36

TOTAL

67



SPECIAL BENCHING CROSS SECTIONS
SR-56 STATION 50+50.00

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

ARM 03/01/24

PROJECT ID

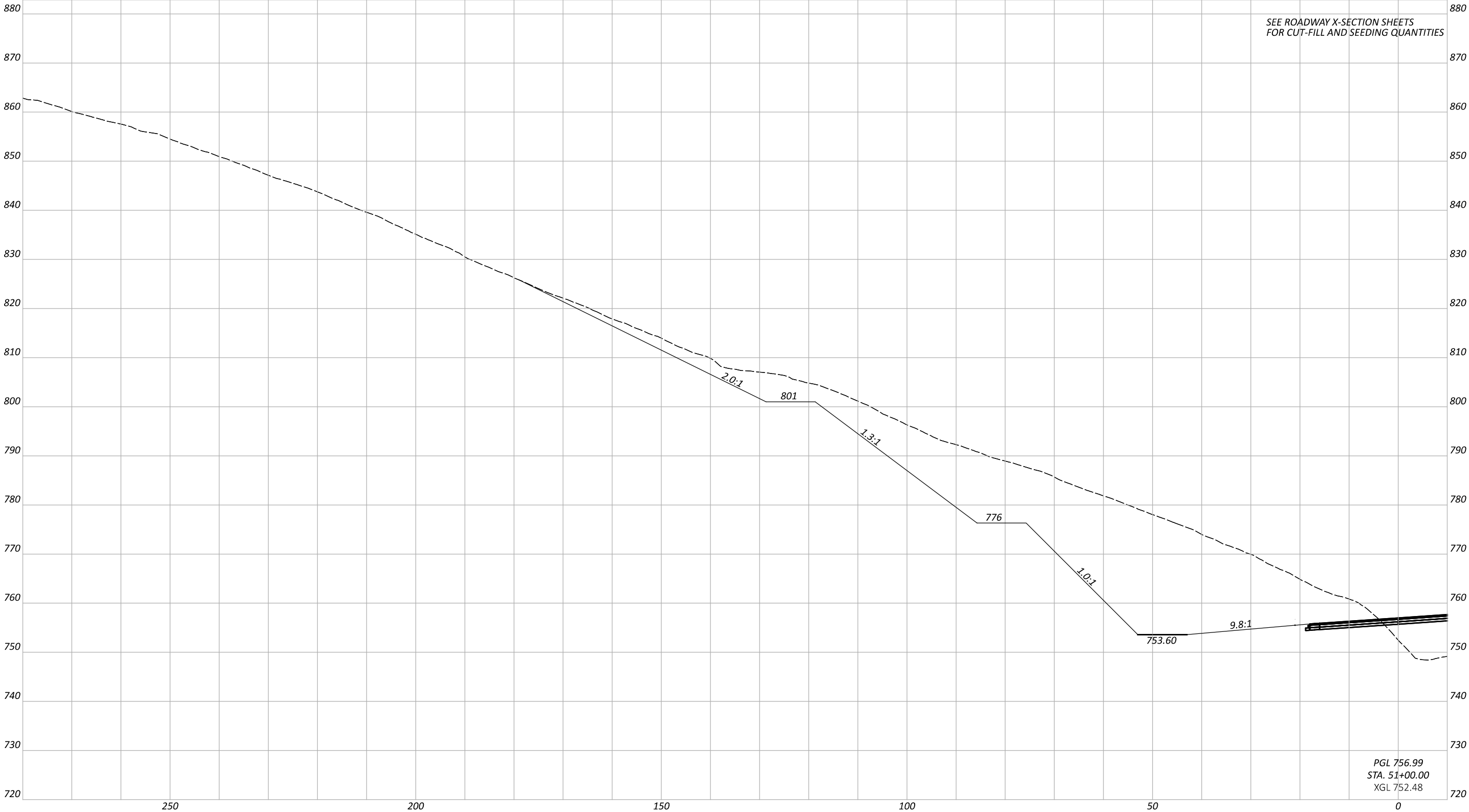
119908

SHEET

P.37

TOTAL

67



SPECIAL BENCHING CROSS SECTIONS
SR-56 STATION 51+00.00

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

ARM 03/01/24

PROJECT ID

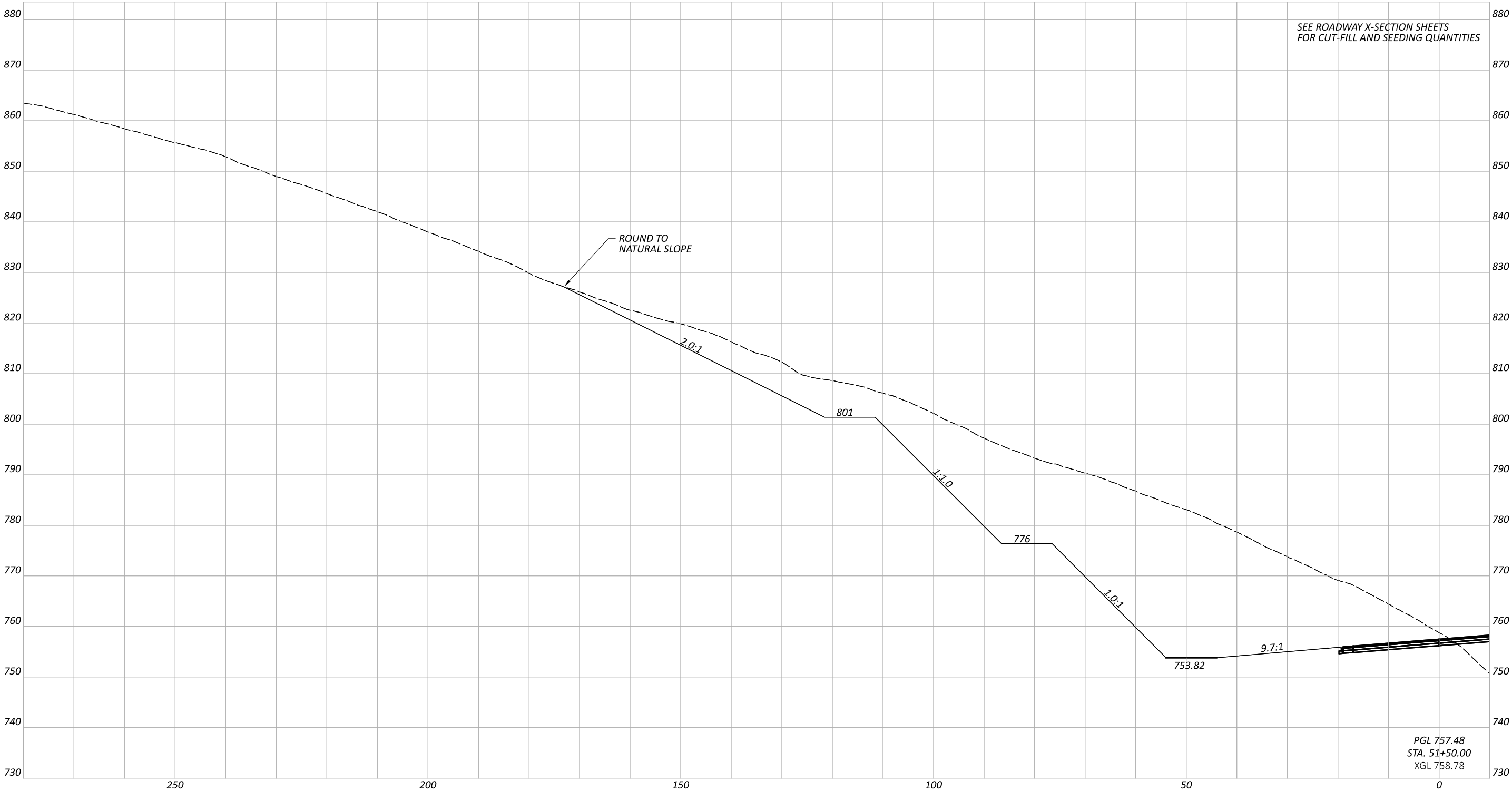
119908

SHEET

P.38

TOTAL

67



SPECIAL BENCHING CROSS SECTIONS
SR-56 STATION 51+50.00

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

ARM 03/01/24

PROJECT ID

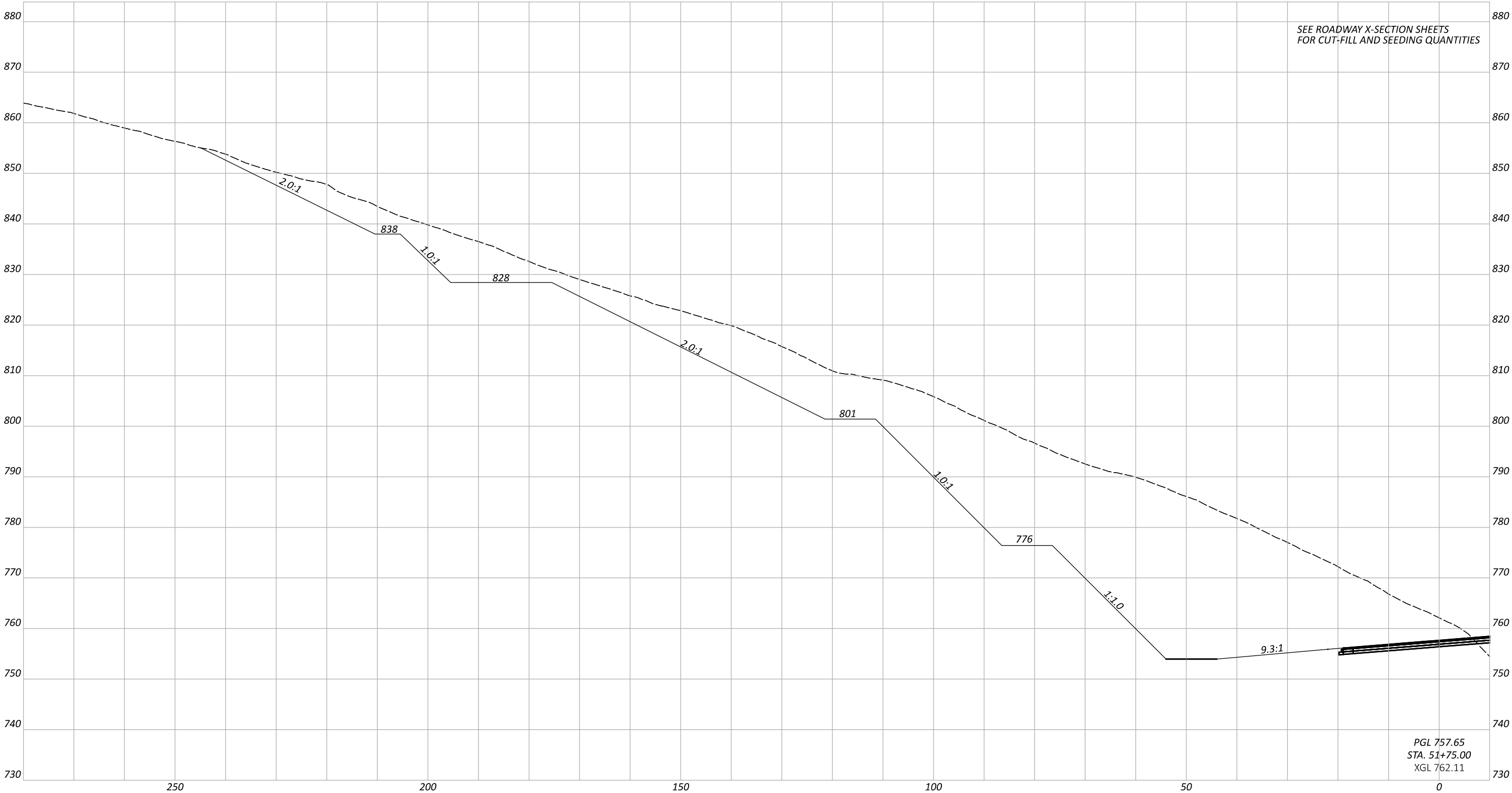
119908

SHEET

P.39

TOTAL

67



SPECIAL BENCHING CROSS SECTIONS
SR-56 STATION 51+75.00

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

ARM 03/01/24

PROJECT ID

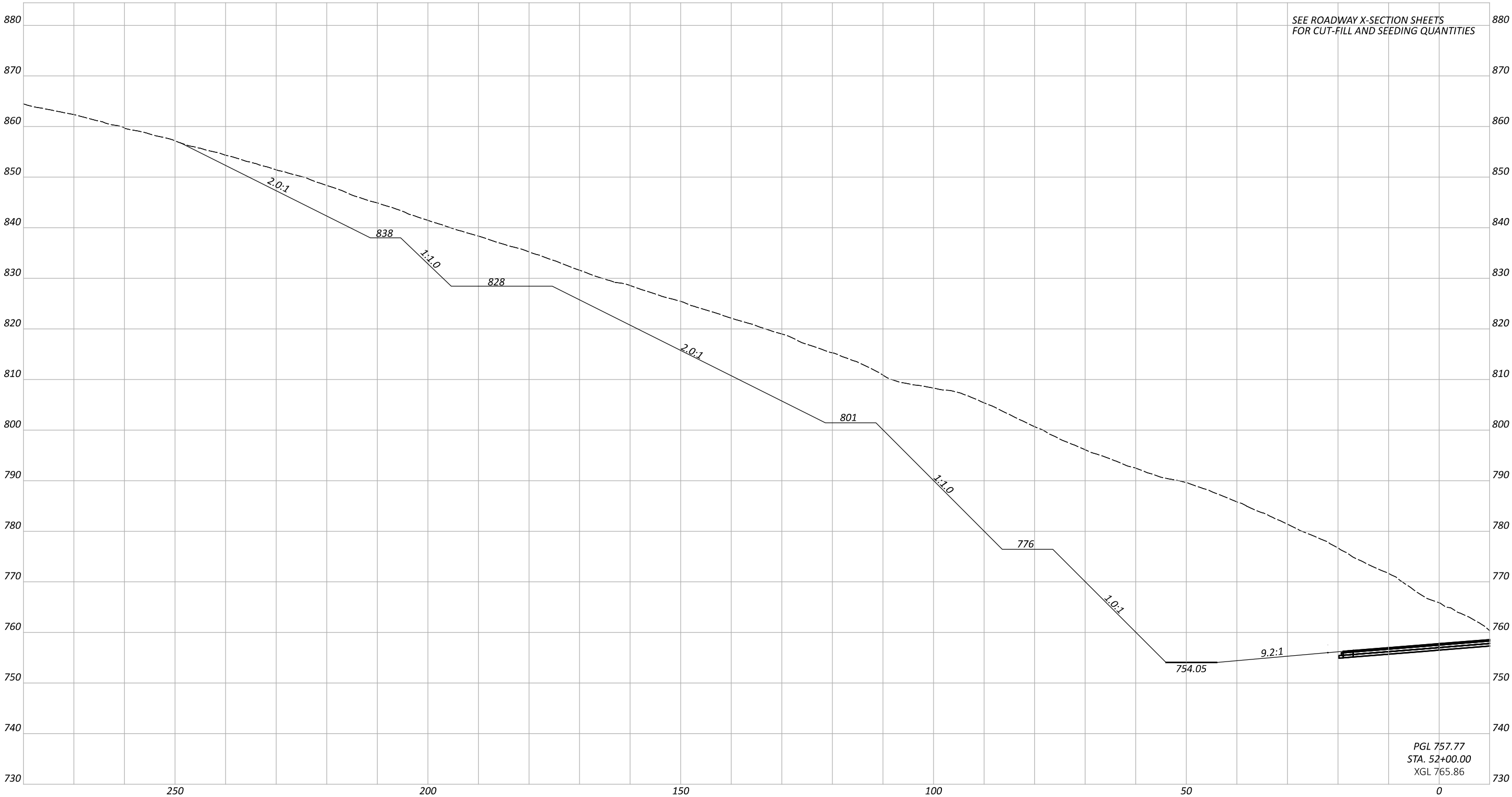
119908

SHEET

P.40

TOTAL

67



SPECIAL BENCHING CROSS SECTIONS
SR-56 STATION 52+00.00

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

ARM 03/01/24

PROJECT ID

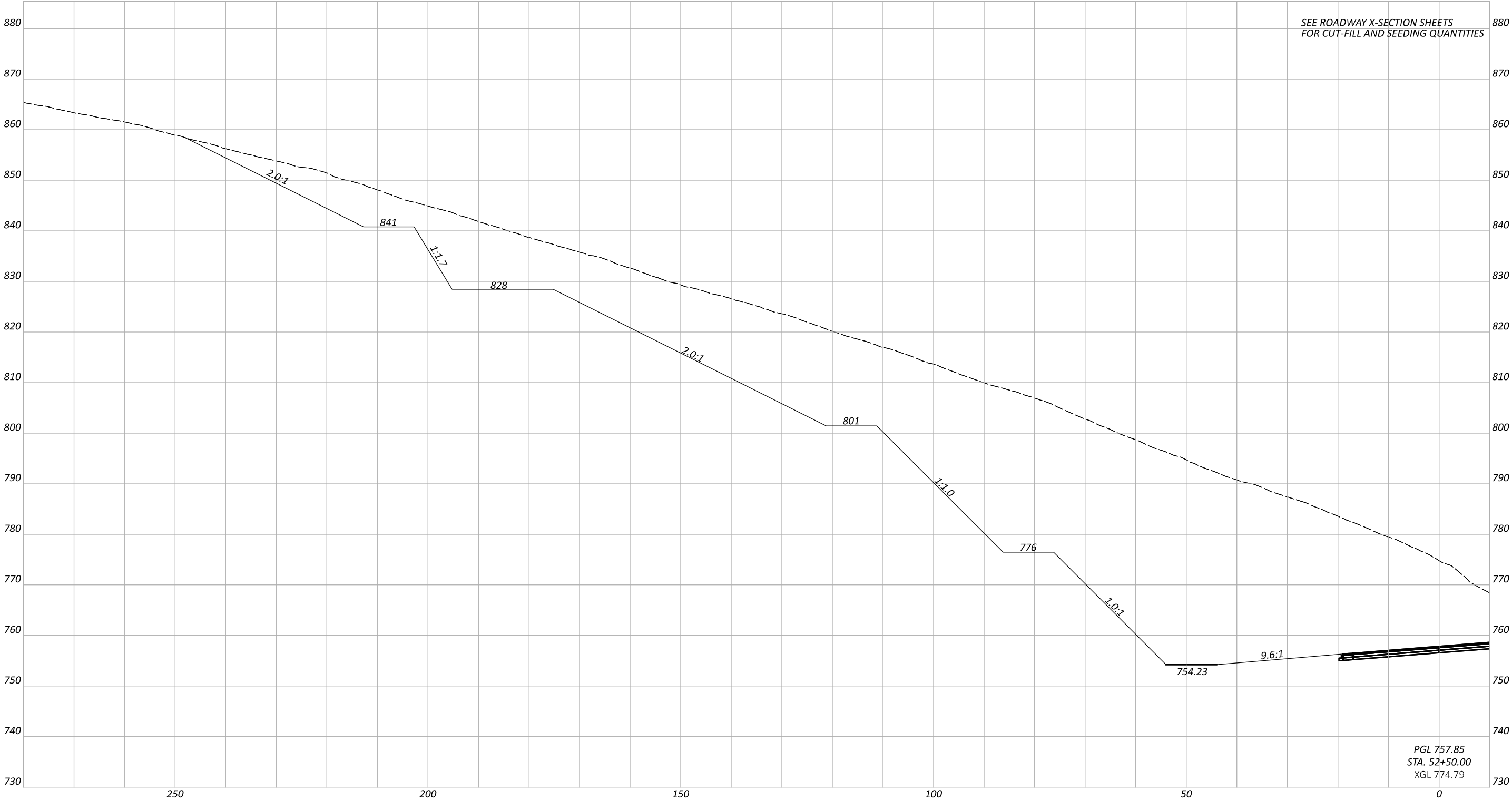
119908

SHEET

P.41

TOTAL

67



SPECIAL BENCHING CROSS SECTIONS
SR-56 STATION 52+50.00

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

ARM 03/01/24

PROJECT ID

119908

SHEET

P.42

TOTAL

67



SPECIAL BENCHING CROSS SECTIONS
SR-56 STATION 53+00.00

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

ARM 03/01/24

PROJECT ID

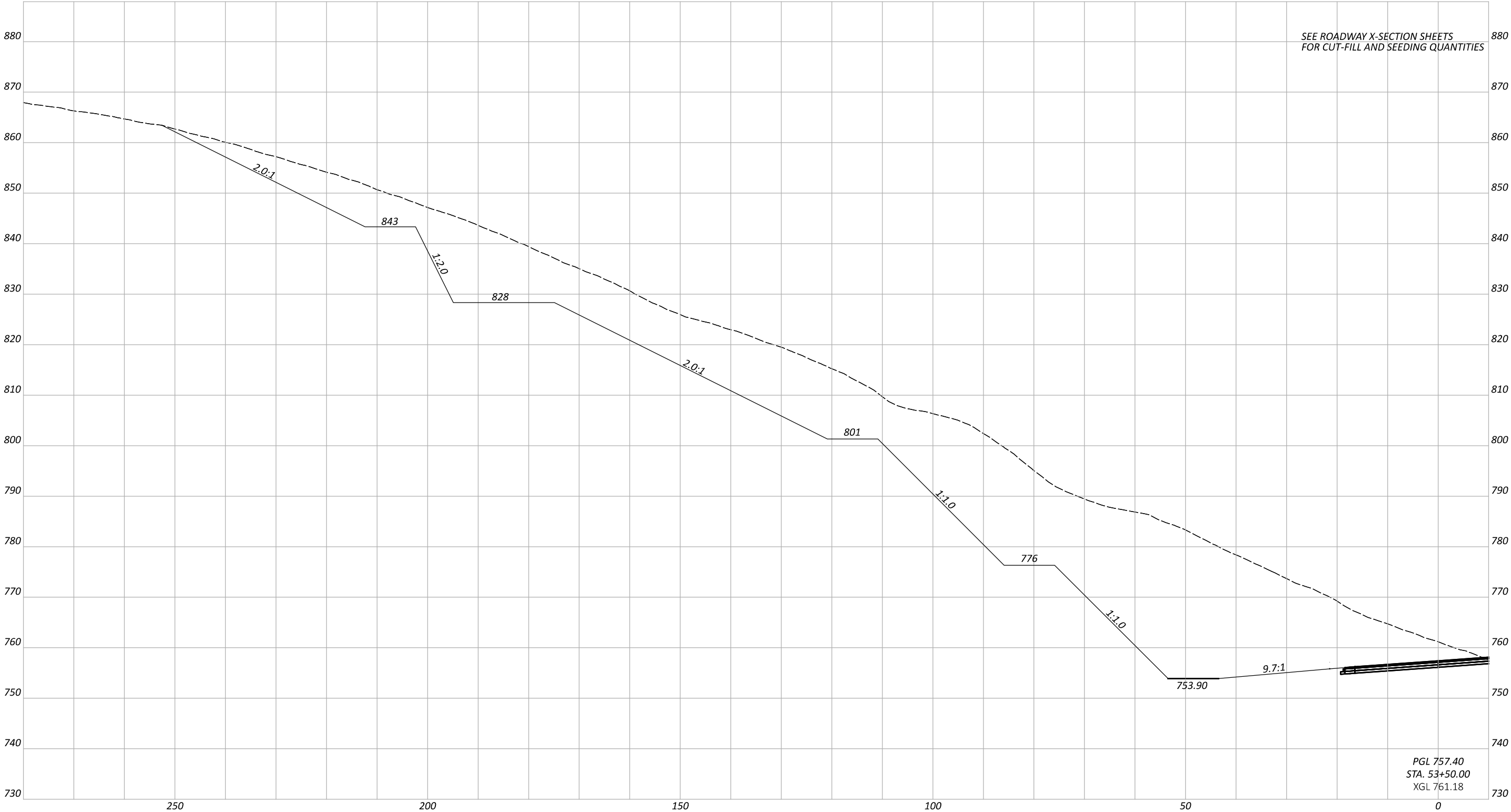
119908

SHEET

P.43

TOTAL

67



SPECIAL BENCHING CROSS SECTIONS
SR-56 STATION 53+50.00

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

ARM 03/01/24

PROJECT ID

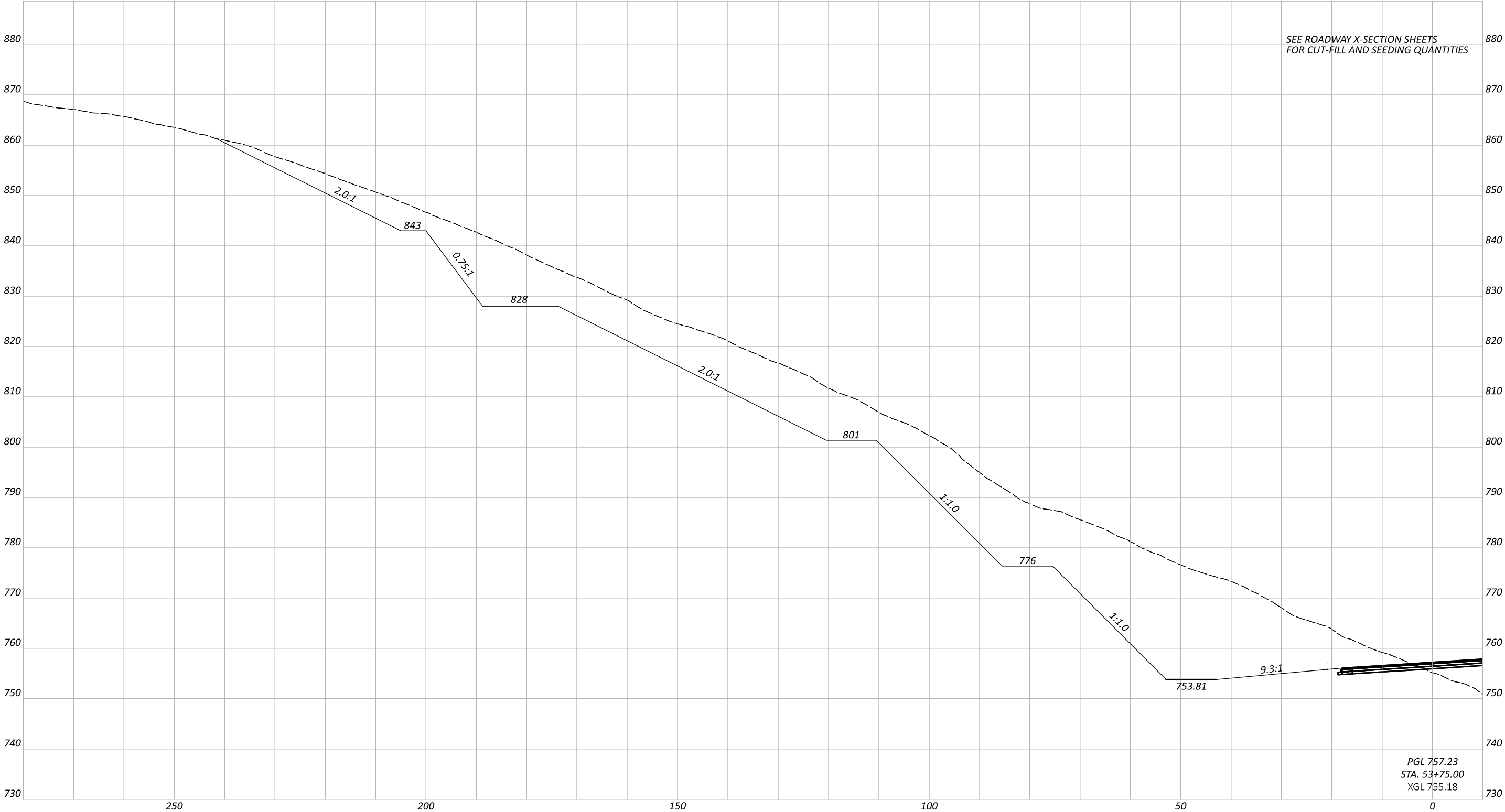
119908

SHEET

P.44

TOTAL

67



SPECIAL BENCHING CROSS SECTIONS
SR-56 STATION 53+75.00

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

ARM 03/01/24

PROJECT ID

119908

SHEET

P.45

TOTAL

67

MODEL: CLIP_10 - 54-00-00 [Sheet] PAPERSIZE: 17x11 (in.) DATE: 1/16/2026 TIME: 7:36:38 AM PLTDRV: OHDOT_PDF.pltcrfg PENTBL: OHDOT_Pen.tbl USER: Kurt.Kleski@dot.ohio.gov WORKSPACE: OHDOTCEv02 WORKSET: 119908 PRODUCT: OpenRoadsDesigner 24.00.00.2005
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\\Documents\\01 Active Projects\\District 10\\Athens\\119908\\400-Engineering\\Roadway\\Sheets\\119908_XS003.dgn



DESIGN AGENCY



DESIGNER	
KWK	
REVIEWER	
ARM 03/01/	
PROJECT ID	
119908	
SHEET	TOTAL
P.46	67

LEFT LANE					CROWN				SR-56 CENTERLINE		RIGHT LANE					NOTES
EDGE ELEVATION	ELEVATION CORRECTION	CROSS SLOPE %	TRANSITION RATE	WIDTH	CROWN ELEVATION	ELEVATION CORRECTION	CROSS SLOPE %	OFFSET	STATION SR-56 CENTERLINE CONSTRUCTION	PROFILE ELEVATION	WIDTH	TRANSITION RATE	CROSS SLOPE %	ELEVATION CORRECTION	EDGE ELEVATION	
764.28	0.82	7.28	250	11.04	763.47				44+88.16	763.47	9.83	250	-9.56	-0.94	762.52	POT
763.88	0.80	7.27		11.00	763.08				45+00.00	763.08	10.05		-9.09	-0.91	762.17	
763.07	0.80	7.25		11.00	762.27				45+25.00	762.27	10.52		-8.14	-0.86	761.41	
762.28	0.80	7.23		11.00	761.49				45+50.00	761.49	11.00		-7.23	-0.80	760.69	
761.91	0.75	6.84		11.00	761.16				45+60.83	761.16	11.00		-6.84	-0.75	760.41	PCC
761.45	0.70	6.32		11.00	760.75				45+75.00	760.75	11.00		-6.32	-0.70	760.06	
760.67	0.60	5.41		11.00	760.07				46+00.00	760.07	11.00		-5.41	-0.60	759.48	PT
759.97	0.53	4.80	373	11.00	759.44				46+25.00	759.44	11.00	373	-4.80	-0.53	758.91	
759.32	0.46	4.19		11.00	758.86				46+50.00	758.86	11.00		-4.19	-0.46	758.40	
758.72	0.39	3.58		11.00	758.33				46+75.00	758.33	11.00		-3.58	-0.39	757.93	
758.17	0.33	2.97		11.00	757.85				47+00.00	757.85	11.00		-2.97	-0.33	757.52	
757.68	0.26	2.36		11.00	757.42				47+25.00	757.42	11.00		-2.36	-0.26	757.16	
757.23	0.19	1.75		11.00	757.04				47+50.00	757.04	11.00		-1.75	-0.19	756.85	
756.83	0.13	1.14		11.00	756.71				47+75.00	756.71	11.00		-1.14	-0.13	756.58	
756.49	0.06	0.53	Varies	11.00	756.43				48+00.00	756.43	11.00	373	-0.53	-0.06	756.37	
756.19	-0.01	-0.08		11.00	756.20				48+25.00	756.20	11.00		0.08	0.01	756.21	
755.95	-0.08	-0.68		11.00	756.02	0.00	-0.68	0.00	48+50.00	756.02	11.00		0.68	0.08	756.10	BEGIN WIDENING
755.75	-0.15	-1.29		11.25	755.89	0.00	-1.29	0.25	48+75.00	755.90	11.00		1.29	0.14	756.04	
755.59	-0.22	-1.90		11.50	755.81	-0.01	-1.90	0.50	49+00.00	755.82	11.00		1.90	0.21	756.03	
755.48	-0.30	-2.51		11.75	755.77	-0.02	-2.51	0.75	49+25.00	755.79	11.00		2.51	0.28	756.07	
755.41	-0.37	-3.12		12.00	755.78	-0.03	-3.12	1.00	49+50.00	755.82	11.00		3.12	0.34	756.16	
755.39	-0.46	-3.73		12.25	755.84	-0.05	-3.73	1.25	49+75.00	755.89	11.00		3.73	0.41	756.30	
755.41	-0.54	-4.34		12.50	755.95	-0.07	-4.34	1.50	50+00.00	756.01	11.00		4.34	0.48	756.49	
755.47	-0.63	-4.95		12.75	756.10	-0.09	-4.95	1.75	50+25.00	756.19	11.00		4.95	0.54	756.73	
755.51	-0.67	-5.19		12.85	756.18	-0.10	-5.19	1.85	50+34.90	756.27	11.00		5.19	0.57	756.84	PC
755.58	-0.72	-5.56		13.00	756.30	-0.11	-5.56	2.00	50+50.00	756.42	11.00		5.56	0.61	757.03	
755.73	-0.82	-6.17		13.25	756.55	-0.14	-6.17	2.25	50+75.00	756.69	11.00		6.17	0.68	757.37	
755.90	-0.92	-6.78		13.50	756.82	-0.17	-6.78	2.50	51+00.00	756.99	11.00		6.78	0.75	757.73	
756.04	-1.02	-7.39	13.75	757.06	-0.20	-7.39	2.75	51+25.00	757.26	11.00	7.39	0.81	758.07			
756.12	-1.12	-8.00	14.00	757.24	-0.24	-8.00	3.00	51+50.00	757.48	11.00	8.00	0.88	758.36	FULL SUPERELEVATION / FULL WIDENING		
756.29	-1.12	-8.00	14.00	757.41	-0.24	-8.00	3.00	51+75.00	757.65	11.00	8.00	0.88	758.53			
756.41	-1.12	-8.00	14.00	757.53	-0.24	-8.00	3.00	52+00.00	757.77	11.00	8.00	0.88	758.65			
756.48	-1.12	-8.00	14.00	757.60	-0.24	-8.00	3.00	52+25.00	757.84	11.00	8.00	0.88	758.72			
756.49	-1.12	-8.00	14.00	757.61	-0.24	-8.00	3.00	52+50.00	757.85	11.00	8.00	0.88	758.73			
756.45	-1.12	-8.00	14.00	757.57	-0.24	-8.00	3.00	52+75.00	757.81	11.00	8.00	0.88	758.69			
756.36	-1.12	-8.00	14.00	757.48	-0.24	-8.00	3.00	53+00.00	757.72	11.00	8.00	0.88	758.60			
756.22	-1.12	-8.00	14.00	757.34	-0.24	-8.00	3.00	53+25.00	757.58	11.00	8.00	0.88	758.46	FULL SUPERELEVATION / FULL WIDENING		
756.21	-0.99	-7.20	13.75	757.20	-0.20	-7.20	2.75	53+50.00	757.40	11.00	7.20	0.79	758.19			
756.20	-0.86	-6.39	13.50	757.07	-0.16	-6.39	2.50	53+75.00	757.23	11.00	6.39	0.70	757.93			
756.18	-0.74	-5.59	13.25	756.93	-0.13	-5.59	2.25	54+00.00	757.05	11.00	5.59	0.61	757.67			
756.16	-0.62	-4.78	13.00	756.78	-0.10	-4.78	2.00	54+25.00	756.88	11.00	4.78	0.53	757.40			
756.13	-0.51	-4.00	12.76	756.64	-0.07	-4.00	1.76	54+49.40	756.71	11.00	4.00	0.44	757.15	PT		
756.12	-0.51	-3.97	Varies	12.75	756.63	-0.07	-3.97	1.75	54+50.00	756.70	11.00	283	3.97	0.44	757.14	
756.12	-0.36	-2.91		12.50	756.48	-0.04	-2.91	1.50	54+75.00	756.53	11.00		2.91	0.32	756.84	
756.10	-0.23	-1.84		12.25	756.33	-0.02	-1.84	1.25	55+00.00	756.35	11.00		1.84	0.20	756.55	
756.07	-0.09	-0.77		12.00	756.17	-0.01	-0.77	1.00	55+25.00	756.18	11.00		0.77	0.09	756.26	
756.04	0.03	0.29		11.75	756.00	0.00	0.29	0.75	55+50.00	756.00	11.00		-0.29	-0.03	755.97	
755.99	0.16	1.36		11.50	755.83	0.01	1.36	0.50	55+75.00	755.82	11.00		-1.36	-0.15	755.67	
755.93	0.27	2.43		11.25	755.66	0.01	2.43	0.25	56+00.00	755.65	11.00		-2.43	-0.27	755.38	
755.86	0.38	3.49		11.00	755.47	0.00	3.49	0.00	56+25.00	755.47	11.00		-3.49	-0.38	755.09	END WIDENING
755.83	0.44	4.02		11.00	755.39				56+37.30	755.39	11.00		-4.02	-0.44	754.95	PC
755.80	0.50	4.56		11.00	755.30				56+50.00	755.30	11.00		-4.56	-0.50	754.80	
755.74	0.62	5.63		11.00	755.12				56+75.00	755.12	11.00		-5.63	-0.62	754.50	
755.68	0.74	6.70		11.00	754.95				57+00.00	754.95	11.00		-6.70	-0.74	754.21	
755.66	0.78	7.11		11.00	754.88				57+09.78	754.88	11.00		-7.11	-0.78	754.10	PCC
755.66	0.79	7.15		11.00	754.87				57+10.64	754.87	11.00		-7.15	-0.79	754.09	
755.56	0.79	7.15	11.00	754.77				57+25.00	754.77	11.00	-7.15	-0.79	753.99			
755.38	0.79	7.15	11.00	754.60				57+50.00	754.60	11.00	-7.15	-0.79	753.81			
755.30	0.79	7.15	11.00	754.51				57+62.52	754.51	11.00	-7.15	-0.79	753.72	PCC		

SR-56
SUPER ELEVATION

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

JDC 06/01/24

PROJECT ID

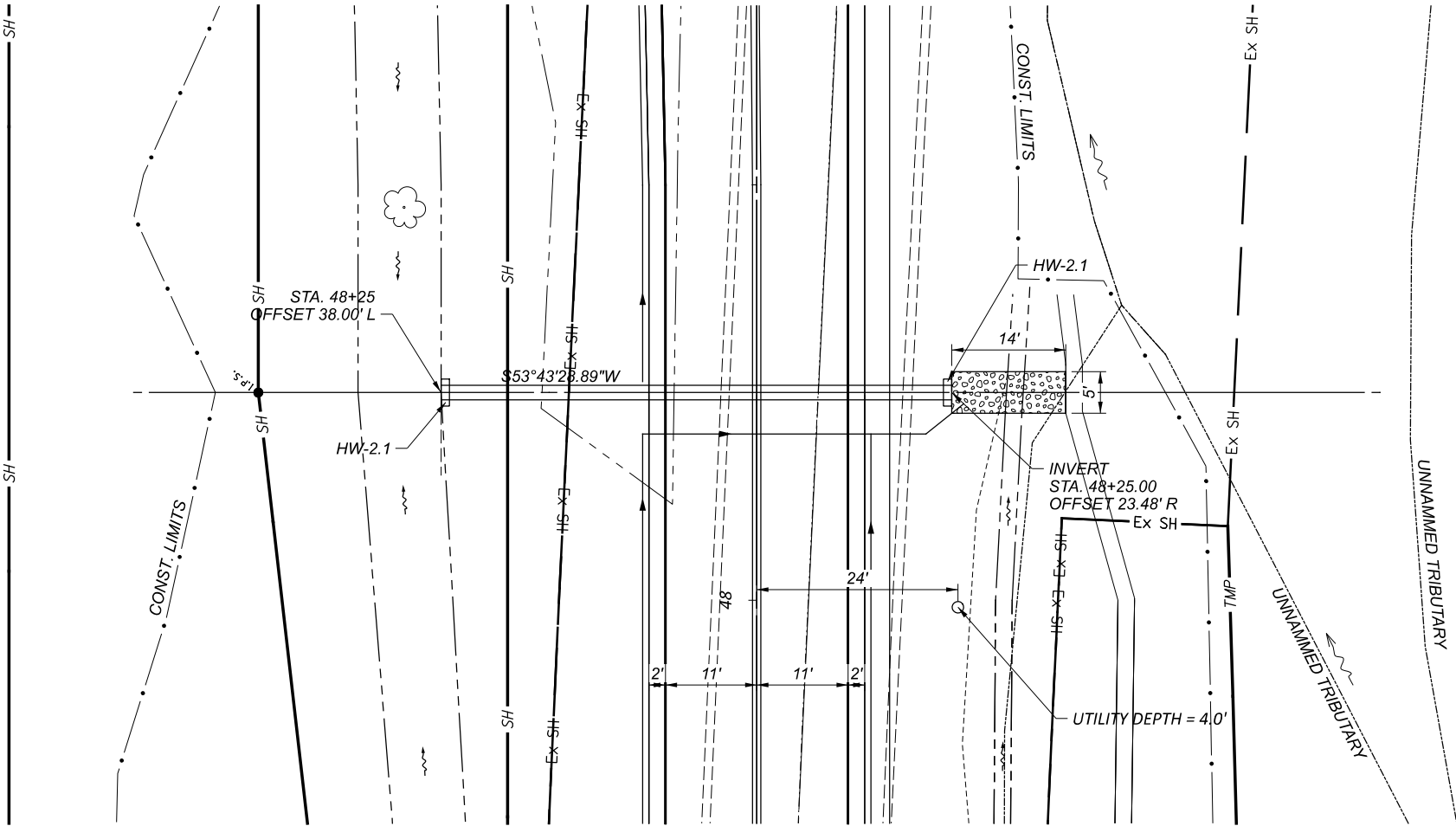
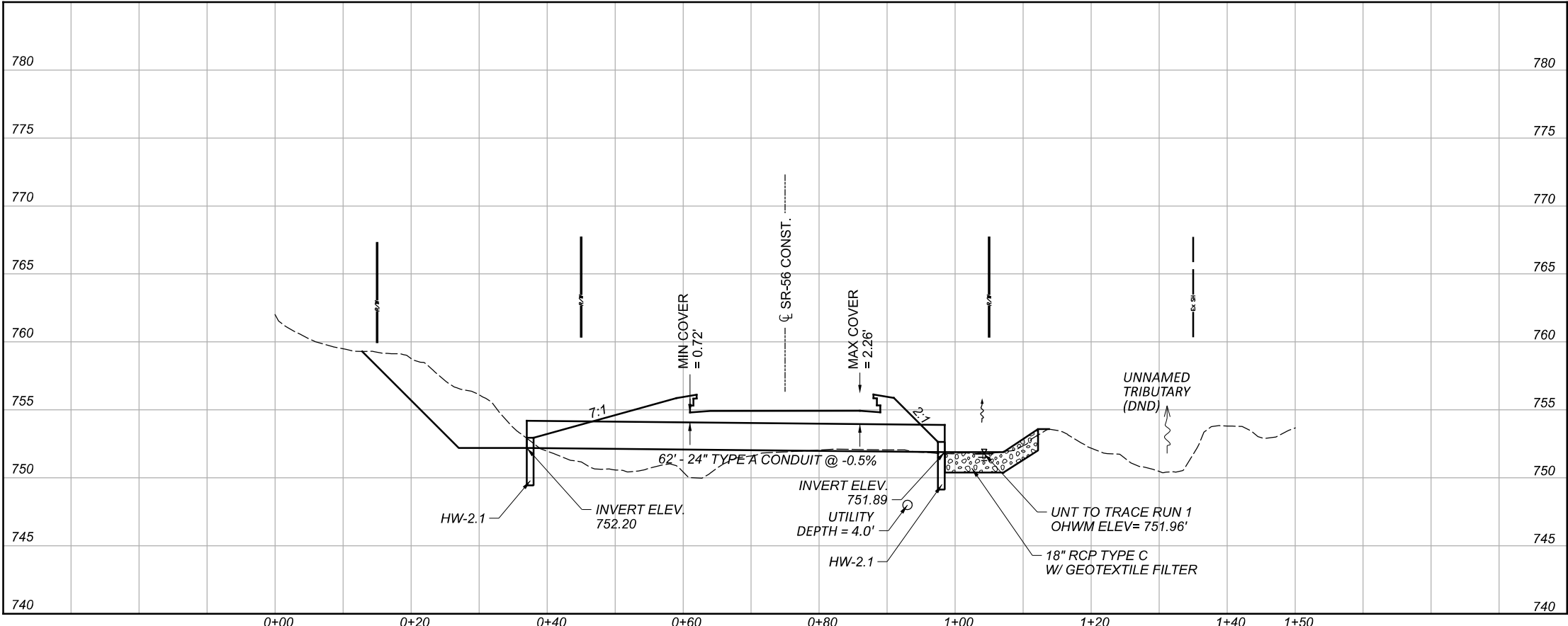
119908

SHEET

P.47

TOTAL

67



EXISTING CULVERT
N/A

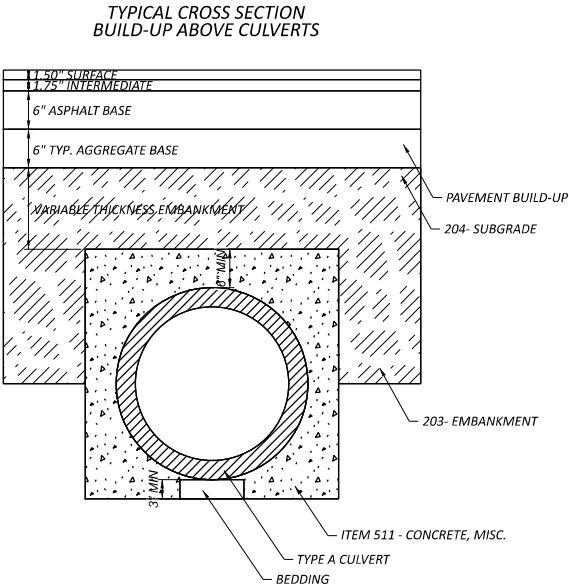
**D1
PROPOSED CULVERT**

CULVERT TYPE: 24" TYPE A, 62'
SKEW: 0° 0' 0"
ALIGNMENT: S53°43'28.89"W
PR. CULVERT FILE NUMBER: 1995482
D.A. 3.7 ACRES
Q₁₀ 12.64 CFS
Q₁₀₀ 17.10 CFS
HW₁₀ 754.28'
HW₁₀₀ 754.98'
V₁₀ 6.48 FT/S
V₁₀₀ 7.73 FT/S

CALCULATIONS

601 - RCP, TYPE C WITH GEOTEXTILE FILTER
14' X 5' X 1.5' / 27 ≈ 3.9 CY

511 - CONCRETE, MISC.
32' X [3.5' X 3.5' - π X (24" / 12 / 2)^2] / 27 = 10.8 CY



**CULVERT PLAN AND PROFILE
STATION 49+75.00**



DESIGN AGENCY



DESIGNER

KWK

REVIEWER

JDC 06/01/24

PROJECT ID

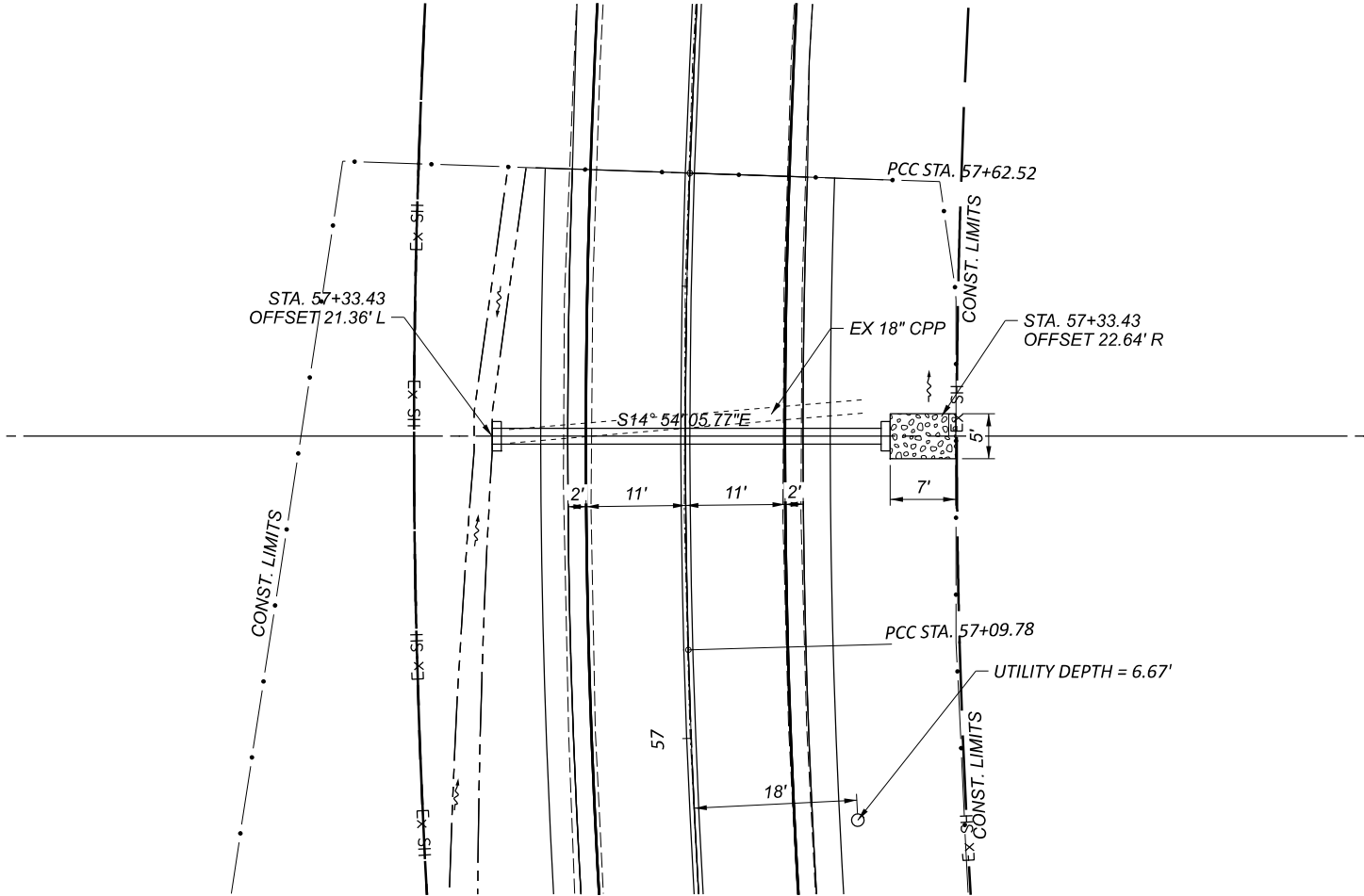
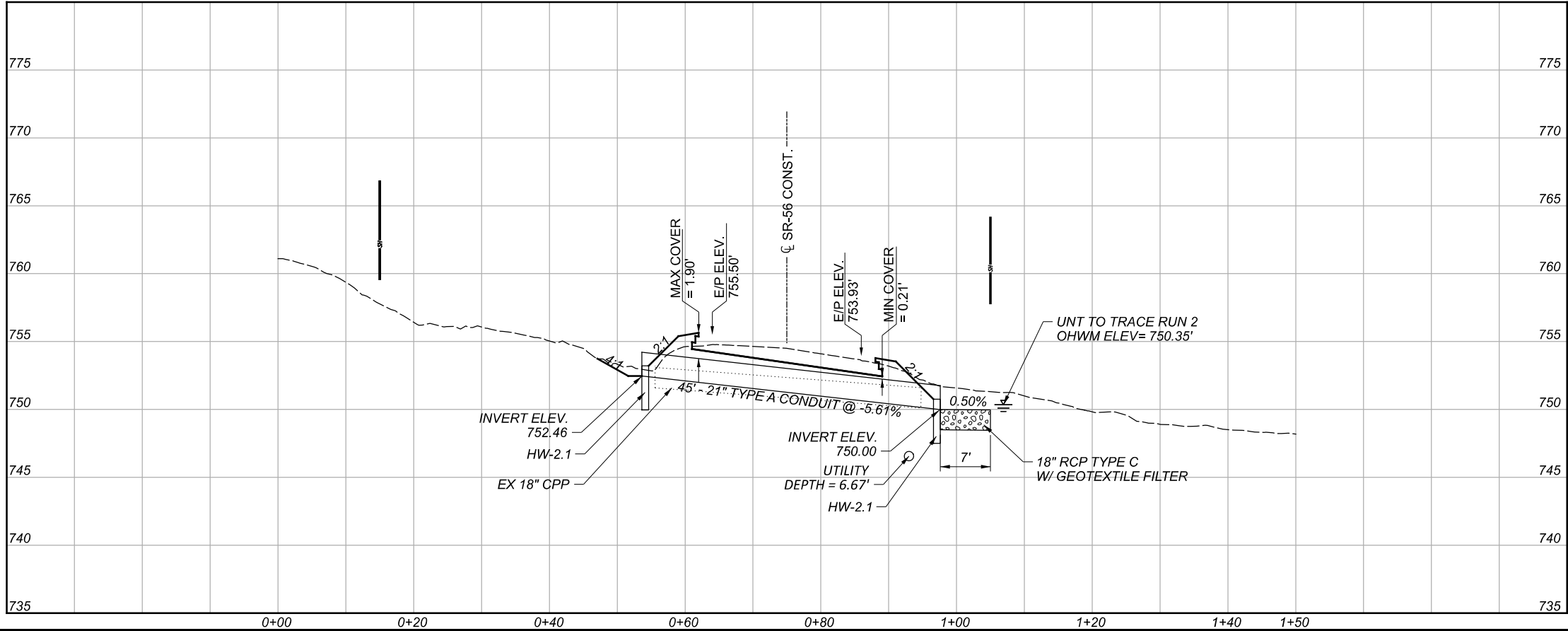
119908

SHEET

P.48

TOTAL

67



**D3
EXISTING CULVERT**

CULVERT TYPE: 18" CORRUGATED PLASTIC PIPE, 40'
SKEW: 4° 55' 35"
ALIGNMENT: S19°45'05.82"E
EX. CULVERT FILE NUMBER: 1853269

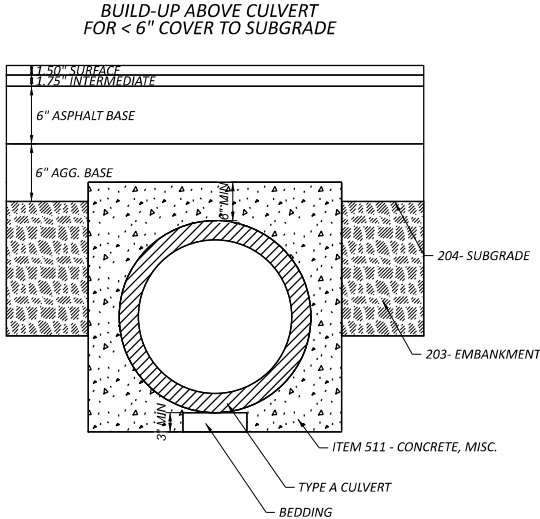
PROPOSED CULVERT

CULVERT TYPE: 21" TYPE A, 45'
SKEW: 0° 00' 00"
ALIGNMENT: S14° 54' 05.77"E
PR. CULVERT FILE NUMBER: 1995481
D.A. 9.1 ACRES
Q₁₀ 13.50 CFS
Q₁₀₀ 25.30 CFS
HW₁₀ 754.66'
HW₁₀₀ 757.08'
V₁₀ 16.21 FT/S
V₁₀₀ 17.01 FT/S

PAVEMENT CALCULATIONS

601 - RCP, TYPE C WITH GEOTEXTILE FILTER
7' X 5' X 1.5' / 27 = 1.9 CY

511 - CONCRETE, MISC.
32' X [3.25' X 3.25' - π X (21" / 12 / 2)^2] / 27 = 9.7 CY



**CULVERT PLAN AND PROFILE
STATION 57+33.43**

DESIGN AGENCY



DESIGNER

KWK

REVIEWER

JDC 06/01/24

PROJECT ID

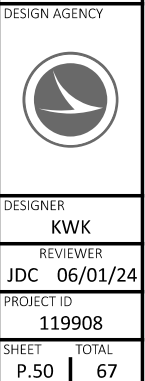
119908

SHEET

P.49

TOTAL

67



PROJECT DESCRIPTION

PROJECT TO ADDRESS FLOODING LOCATION BY IMPROVING DRAINAGE AND REALIGNING VERTICAL ROADWAY PROFILE AT ATH-56-0.90-1.10.

HISTORIC RECORDS

NO HISTORICAL GEOTECHNICAL RECORDS WERE FOUND FOR THIS PROJECT.

GEOLOGY

THE PROJECT IS LOCATED WITHIN THE NON-GLACIATED MUSKINGUM-PITTSBURGH PLATEAU PHYSIOGRAPHIC REGION WHICH IS CHARACTERIZED AS A MODERATE TO HIGH RELIEF DISSECTED PLATEAU WHICH HAVE BROAD MAJOR DRAINAGE VALLEYS. UNDERLYING THE OVERBURDEN SOILS PENNSYLVANIAN AGED SHALE, SILTSTONE, CLAYSTONE, SANDSTONE, LIMESTONE AND COAL BEDROCK ARE FOUND WITHIN THE PROJECT AREA. THE CONEMAUGH GROUP COMPRISES THE BEDROCK FOR THE HILLSIDES AND RIDGE TOPS AND THE ALLEGHENY AND POTTSVILLE GROUPS COMPRISES THE BEDROCK OF THE LOWER HILLSIDES AND VALLEY FLOORS.

RECONNAISSANCE

FIELD RECONNAISSANCE WAS COMPLETED BY PERSONNEL FROM THE DISTRICT AND OFFICE OF GEOTECHNICAL ENGINEERING (OGE) ON FEBRUARY 29, 2016. THE ROADWAY ELEVATION IS RELATIVELY FLAT WITH A SHARP HORIZONTAL CURVE WRAPPING AROUND THE NOSE OF A HILLSIDE. PAVEMENT WAS NOTED AS BEING FAIR CONDITION WITH A LONG MILL AND FILL PATCHING OF THE CURVE SECTION WITHIN THE WESTBOUND LANE. THE PROJECT AREA IS A STEEP WOODED HILLSIDE RISING ABOVE THE ROADWAY TO THE NORTH. LOCAL DRAINAGE FROM THE NORTH AND WEST PERIODICALLY FLOODS THE ROADWAY AT THE CURVE. THE WESTBOUND DITCH WAS PARTIALLY BLOCKED AND HELD STANDING WATER TO THE EDGE OF PAVEMENT. SOUTH OF THE ROADWAY IS LOW LYING GROUND AND WETLANDS. THE AREA WAS NOTED AS WELL VEGETATED WITH SHRUBS, TREES AND WETLAND VEGETATION. EVIDENCE OF ACID MINE DRAINAGE WAS NOTED WITHIN THE LOCAL DRAINAGE AND DITCHES.

ADDITIONAL FIELD RECONNAISSANCES WERE CARRIED OUT OCTOBER 3, 2023, BY OGE PERSONNEL FOR COMPLETION OF AN ADDITIONAL BORING. THE HILLSIDE WAS IN SIMILAR CONDITIONS AS NOTED DURING THE PREVIOUS RECONNAISSANCE WITH THE ROADWAY NOTED AS BEING IN VERY GOOD CONDITION DUE TO A RECENT RESURFACING PROJECT BEING COMPLETED. THE WESTBOUND DITCH WAS STILL NOT DRAINING PROPERLY AT THE CURVE AND HELD STANDING WATER TO THE EDGE OF PAVEMENT.

SUBSURFACE EXPLORATION

THIS GEOTECHNICAL EXPLORATION WAS COMPLETED IN TWO (2) PHASES. THE FIRST PHASE CONSISTED OF ONE (1) BORING, B-001-0-16, COMPLETED BETWEEN MARCH 15 AND 17, 2016, UTILIZING A TRACK MOUNTED CME 850 ROTARY DRILL RIG, USING 4.25-INCH I.D. HOLLOW STEM AUGERS TO ADVANCE THE BORINGS THROUGH THE SOIL. DISTURBED SAMPLES WERE COLLECTED IN ACCORDANCE WITH THE STANDARD PENETRATION TEST (AASHTO T206) AT 2.5-FOOT INTERVALS WITHIN THE OVERBURDEN SOILS AND INTO WEATHERED BEDROCK. THE HAMMER SYSTEM USED WAS CALIBRATED ON MAY 27, 2015, WITH AN AVERAGE DRILL ROD ENERGY RATIO (ER) OF 87%. THE BORING WAS ADVANCED INTO BEDROCK AND SAMPLED (AASHTO T225) USING AN N SERIES WIRELINE CORE BARREL, WATER METHOD.

THE SECOND PHASE OF THE EXPLORATION CONSISTED OF AN ADDITIONAL BORING, B-002-0-23, COMPLETED BETWEEN DECEMBER 5 AND 7, 2023, UTILIZING A TRACK MOUNTED CME 850 ROTARY DRILL RIG, USING 3.75-INCH I.D. HOLLOW STEM AUGERS TO ADVANCE THE BORING THROUGH THE SOIL. DISTURBED SAMPLES WERE COLLECTED IN ACCORDANCE WITH THE STANDARD PENETRATION TEST (AASHTO T206) AT 2.5-FOOT INTERVALS WITHIN THE OVERBURDEN SOILS AND INTO WEATHERED BEDROCK. THE HAMMER SYSTEM USED WAS CALIBRATED ON APRIL 25, 2023, WITH AN AVERAGE DRILL ROD ENERGY RATIO (ER) OF 89%. THE BORING WAS ADVANCED INTO BEDROCK AND SAMPLED (AASHTO T225) USING AN N SERIES WIRELINE CORE BARREL, WATER METHOD.

EXPLORATION FINDINGS

BOTH BORINGS WERE COMPLETED ALONG THE HILLSIDE LOCATED ABOVE THE CURRENT ROADWAY WITH B-001-0-16 DRILLED MID-SLOPE AND B-002-0-23 DRILLED NEAR THE TOP OF THE HILLSIDE. B-002-0-23 NOTED 4-INCHES OF TOPSOIL AT THE GROUND SURFACE. THE TOPSOIL WAS REMOVED AT B-001-0-16 DUE TO BENCHING FOR RIG ACCESS. OVERBURDEN SOILS CONSISTED OF RESIDUAL OR COLLUVIAL SOIL WHICH WERE VARIABLE. B-001-0-16 ENCOUNTERED MEDIUM DENSE STONE FRAGMENTS WITH SAND (A-1-b) AT THE GROUND SURFACE UNDERLAIN BY HARD SANDY SILT (A-4a) EXTENDING TO ELEVATION (EL.) 821.2 FEET (FT) WHEREAS B-002-0-23 ENCOUNTERED COARSE AND FINE SAND (A-3a) TO EL. 877.5 FT.

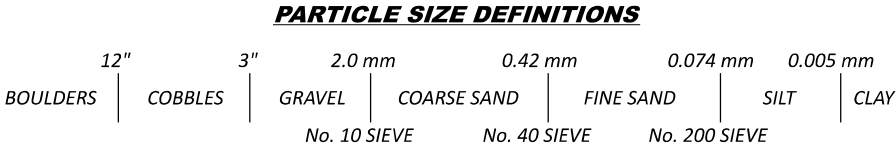
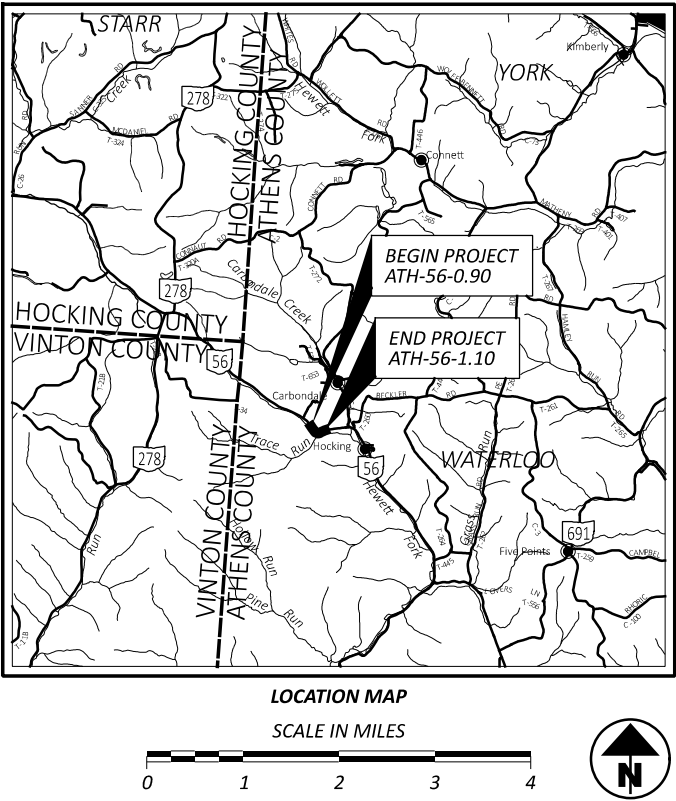
WITHIN B-002-0-23 THE SEVERELY WEATHERED SANDSTONE WAS INITIALLY SPLIT SPOON SAMPLED PRIOR TO CORING WHEN BECOMING HIGHLY WEATHERED. THE CORED SANDSTONE WAS DESCRIBED AS SLIGHTLY STRONG, MEDIUM TO COARSE GRAINED, AND MEDIUM TO THICK BEDDED WITH UNIT ROCK QUALITY DESIGNATION (RQD) OF 42% AND UNIT RECOVERY OF 91%. AT EL. 849.5 FT THE SANDSTONE BECAME SEVERELY WEATHERED AND WEAK TO SLIGHTLY STRONG WITH A UNIT RQD OF 14% AND UNIT RECOVERY OF 69% UNDERLAIN BY SILTSTONE IN MODERATELY WEATHERED CONDITION AND SLIGHTLY STRONG WITH A UNIT RQD OF 25% AND UNIT RECOVERY OF 97%.

BELOW EL. 836.8 FT B-002-0-23 PREDOMINANTLY ENCOUNTERED SANDSTONE IN A MODERATELY TO SLIGHTLY WEATHERED CONDITION AND MODERATELY STRONG TO VERY STRONG WITH UNIT RQD RANGING FROM 37% TO 88% AND UNIT RECOVERY RANGING FROM 84% TO 96%. CLAYSTONE WAS NOTED BETWEEN EL. 828.0 AND 824.1 FT AND AT EL. 814.0 FT INTO WHICH THE BORING WAS TERMINATED. THE CLAYSTONE WAS NOTED AS BEING IN MODERATELY WEATHERED CONDITION AND VERY WEAK WITH UNIT RQD RANGING FROM 0% TO 47% AND UNIT RECOVERY RANGING FROM 75% TO 92%. SHALE WAS ENCOUNTERED BETWEEN EL. 818.0 AND 816.2 FT IN HIGHLY WEATHERED CONDITION WITH A UNIT RQD OF 0% AND UNIT RECOVERY OF 100%.

EXPLORATION NOTES CONTINUED, SEE SHEET 2.

LEGEND		ODOT CLASS	CLASSIFIED MECH./VISUAL	
DESCRIPTION				
	STONE FRAGMENTS WITH SAND	A-1-b	-	1
	COARSE AND FINE SAND	A-3a	-	1
	SANDY SILT	A-4a	1	-
TOTAL				
	CLAYSTONE		VISUAL	
	COAL		VISUAL	
	LIMESTONE		VISUAL	
	SANDSTONE		VISUAL	
	SHALE		VISUAL	
	SILTSTONE		VISUAL	
	TOPSOIL = X = APPROXIMATE THICKNESS		VISUAL	
	BORING LOCATION - PLAN VIEW.			
	DRIVE SAMPLE AND ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.			
WC	INDICATES WATER CONTENT IN PERCENT.			
N ₆₀	INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.			
γ	INDICATES UNIT WEIGHT OF ROCK.			
Id ₂	INDICATES SLAKE DURABILITY TEST, ASTM D4644.			
NP	INDICATES A NON-PLASTIC SAMPLE.			
NQ	"N" SERIES ROCK CORE BARREL OF "Q" WIRELINE BIT SIZE.			
Qu	INDICATES UNCONFINED COMPRESSION TEST, ASTM D7012.			
Sc	INDICATES POINT LOAD STRENGTH VALUE, ASTM D5731.			
SS	INDICATES A SPLIT SPOON SAMPLE.			
TR	INDICATES TOP OF ROCK ELEVATION.			

INDEX OF SHEETS			
EXPLORATION NOTES (CONT.), SHEET 2.			
LOCATION FROM STA. TO STA.		PLAN VIEW	CROSS SECTION
CONST. S.R. 56			
48+50	56+50	3	-
53+00		-	4
BORING LOGS, SHEETS 5-8.			
ROCK CORE PHOTOS, SHEETS 9-17.			



RECON. -	PPP	02/29/16
	PPP	10/03/23
DRILLING -	DML	03/15-17/16
	JAS	12/05-07/23
DRAWN -	ARR	02/27/25
REVIEWED -	SAT	02/28/25

EXPLORATION FINDINGS, CONT.

B-001-0-16, COMPLETED MID-SLOPE, FIRST ENCOUNTERED HIGHLY WEATHERED SHALE WHICH WAS SPLIT SPOON SAMPLED PRIOR TO ENCOUNTERING LIMESTONE BETWEEN EL. 819.7 AND 816.9 FT IN HIGHLY WEATHERED CONDITION HAVE A UNIT RQD OF 26% AND UNIT RECOVERY OF 100%. SHALE WAS ENCOUNTERED BETWEEN EL. 816.9 AND 801.8 FT IN SEVERELY TO MODERATELY WEATHERED CONDITIONS AND WEAK TO MODERATELY STRONG WITH UNIT RQD RANGING FROM 13% TO 26% AND UNIT RECOVERY RANGING FROM 44% TO 71%. SANDSTONE WAS ENCOUNTERED BETWEEN EL. 808.3 AND 806.1 FT IN MODERATELY WEATHERED CONDITION WITH A UNIT RQD OF 69% AND UNIT RECOVERY OF 100%.

BELOW EL. 801.8 FT B-001-0-16 PREDOMINATELY ENCOUNTERED SANDSTONE IN MODERATELY TO SLIGHTLY WEATHERED CONDITIONS AND FROM SLIGHTLY TO MODERATELY STRONG WITH UNIT RQD RANGING FROM 78% TO 100% AND UNIT RECOVERY RANGING FROM 97% TO 100%. SILTSTONE WAS ENCOUNTERED BETWEEN EL. 785.3 AND 779.0 FT IN MODERATELY WEATHERED CONDITION AND COAL WAS ENCOUNTERED BETWEEN EL. 759.8 AND 756.2 FT. BORING B-001-0-16 WAS TERMINATED IN SANDSTONE BEDRCOK.

BEDROCK TESTING FOR STRENGTH AND SLAKE DURABILITY WERE COMPLETED WITHIN EACH DESIGN UNIT. TESTING RESULTS ARE PRESENTED ON THE BORING LOGS AND SUMMARIZED TABULAR FORM, SEE THE BEDROCK TEST SUMMARY TABLE.

SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JULY 2016.

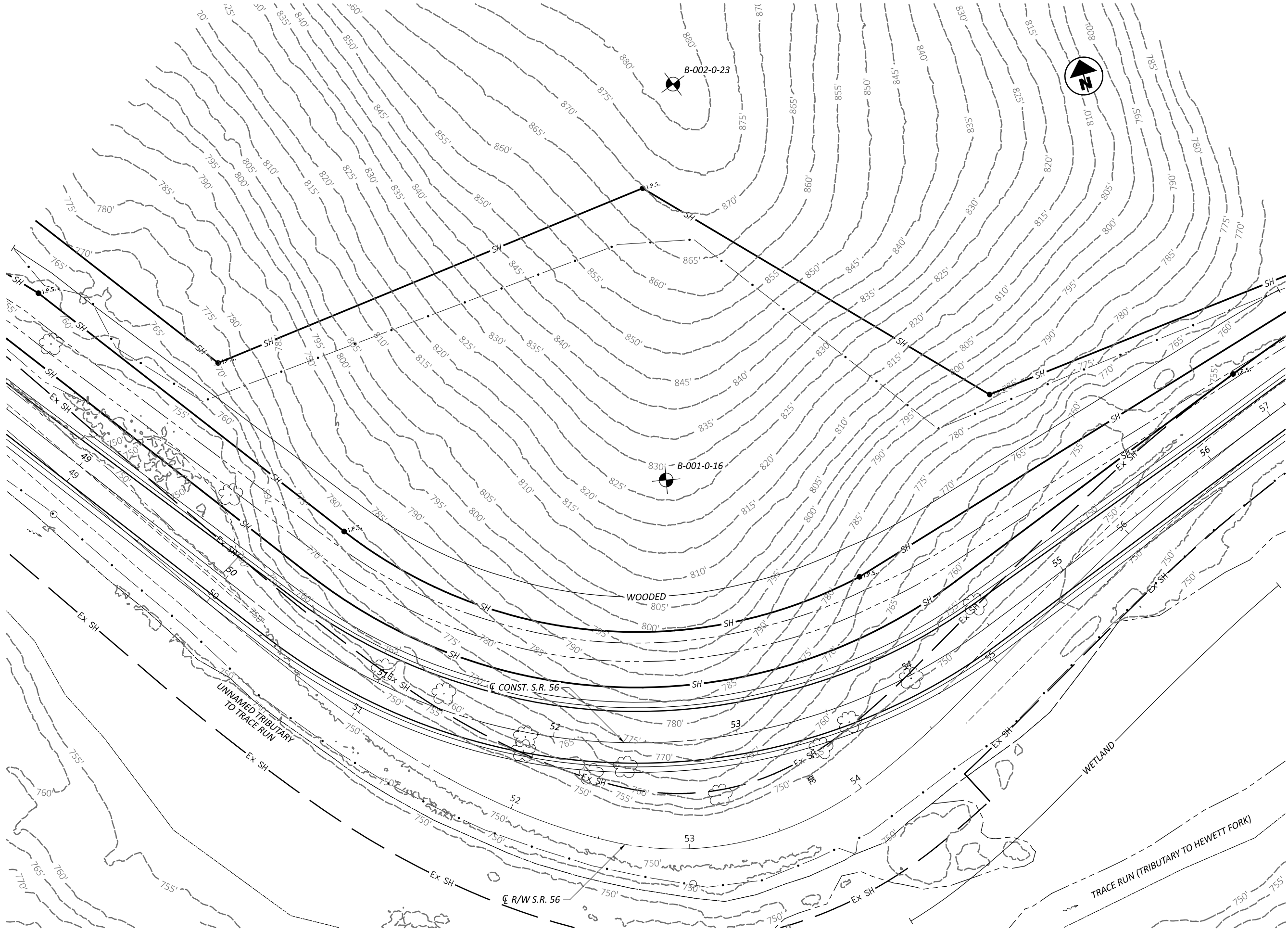
AVAILABLE INFORMATION

THE SOIL, BEDROCK, AND GROUNDWATER INFORMATION COLLECTED FOR THIS SUBSURFACE EXPLORATION THAT CAN BE CONVENIENTLY DISPLAYED ON THE GEOTECHNICAL PROFILE SHEETS HAS BEEN PRESENTED. GEOTECHNICAL REPORTS, IF PREPARED, ARE AVAILABLE FOR REVIEW ON THE OFFICE OF CONTRACT SALES WEBSITE.

BEDROCK TEST SUMMARY							
BORING ID	SAMPLE ELEVATION	SAMPLE DEPTH	Id2		Sc (PSI)	Qu (PSI)	LITHOLOGY
			(%)	TYPE			
B-001-0-16	819.0' - 818.5'	8.2' - 8.7'	-	-	6,430	-	LIMESTONE
	810.2' - 809.9'	17.0' - 17.3'	-	-	-	6,136	SHALE
	796.5' - 796.2'	30.7' - 31.0'	-	-	-	7,141	SANDSTONE
	790.4' - 790.1'	36.8' - 37.1'	-	-	-	2,649	SANDSTONE
	774.1' - 773.5'	53.1' - 53.7'	86.4	II	-	-	SANDSTONE
	761.7' - 761.4'	65.5' - 65.8'	-	-	-	4,034	SANDSTONE
	756.2' - 755.9'	71.0' - 71.3'	-	-	-	1,683	SANDSTONE
	754.9' - 754.2'	72.3' - 73.0'	94.4	II	-	-	SANDSTONE
	753.8' - 753.5'	73.4' - 73.7'	-	-	-	7,800	SANDSTONE
	749.2' - 748.9'	78.0' - 78.3'	-	-	-	6,849	SANDSTONE
	743.3' - 742.3'	83.9' - 84.9'	53.7	III	-	-	SANDSTONE
	740.4' - 739.5'	86.8' - 87.7'	98.0	I	-	-	SANDSTONE
	740.3' - 740.0'	86.9' - 87.2'	-	-	-	6,784	SANDSTONE
	734.0' - 733.7'	93.2' - 93.5'	-	-	-	8,664	SANDSTONE
B-002-0-23	865.5' - 865.1'	15.5' - 15.9'	-	-	-	3,252	SANDSTONE
	865.2' - 864.3'	15.8' - 16.7'	89.8	I	-	-	SANDSTONE
	863.7' - 863.4'	17.3' - 17.6'	-	-	-	2,650	SANDSTONE
	862.8' - 862.4'	18.2' - 18.6'	-	-	-	2,952	SANDSTONE
	857.4' - 856.5'	23.6' - 24.5'	76.8	I	-	-	SANDSTONE
	853.9' - 853.5'	27.1' - 27.5'	-	-	-	3,016	SANDSTONE
	848.0' - 846.8'	33.0' - 34.2'	67.5	I	-	-	SANDSTONE
	847.3' - 846.9'	33.7' - 34.1'	-	-	-	1,502	SANDSTONE
	844.2' - 841.6'	36.8' - 39.4'	90.0	I	-	-	SILTSTONE
	841.9' - 838.5'	39.1' - 42.5'	-	-	1,799	-	SILTSTONE
	836.8' - 836.4'	44.2' - 44.6'	-	-	-	3,652	SANDSTONE
	835.2' - 834.8'	45.8' - 46.2'	94.4	I	-	-	SANDSTONE
	827.8' - 826.3'	53.2' - 54.7'	2.4	III	-	-	CLAYSTONE
	823.3' - 822.8'	57.7' - 58.2'	-	-	-	4,955	SANDSTONE
	822.4' - 822.0'	58.6' - 59.0'	92.3	II	-	-	SANDSTONE
	818.0' - 814.2'	63.0' - 66.8'	76.7	II	-	-	SHALE
	818.0' - 815.6'	63.0' - 65.4'	-	-	1,662	-	SHALE
	815.3' - 814.9'	65.7' - 66.1'	-	-	-	17,391	SANDSTONE
	812.6' - 812.2'	68.4' - 68.8'	-	-	-	7,892	LIMESTONE
	810.9' - 808.4'	70.1' - 72.6'	25.6	III	-	-	CLAYSTONE



DESIGNER	
ARR	
REVIEWER	
SAT	02/28/25
PROJECT ID	
119908	
SUBSET	TOTAL
2	17
SHEET	TOTAL
P.52	67



GEOTECHNICAL PROFILE - ROADWAY
STA. 48+50 TO STA. 56+50 CONST. S.R. 56

DESIGN AGENCY



DESIGNER

ARR

REVIEWER

SAT 02/28/25

PROJECT ID

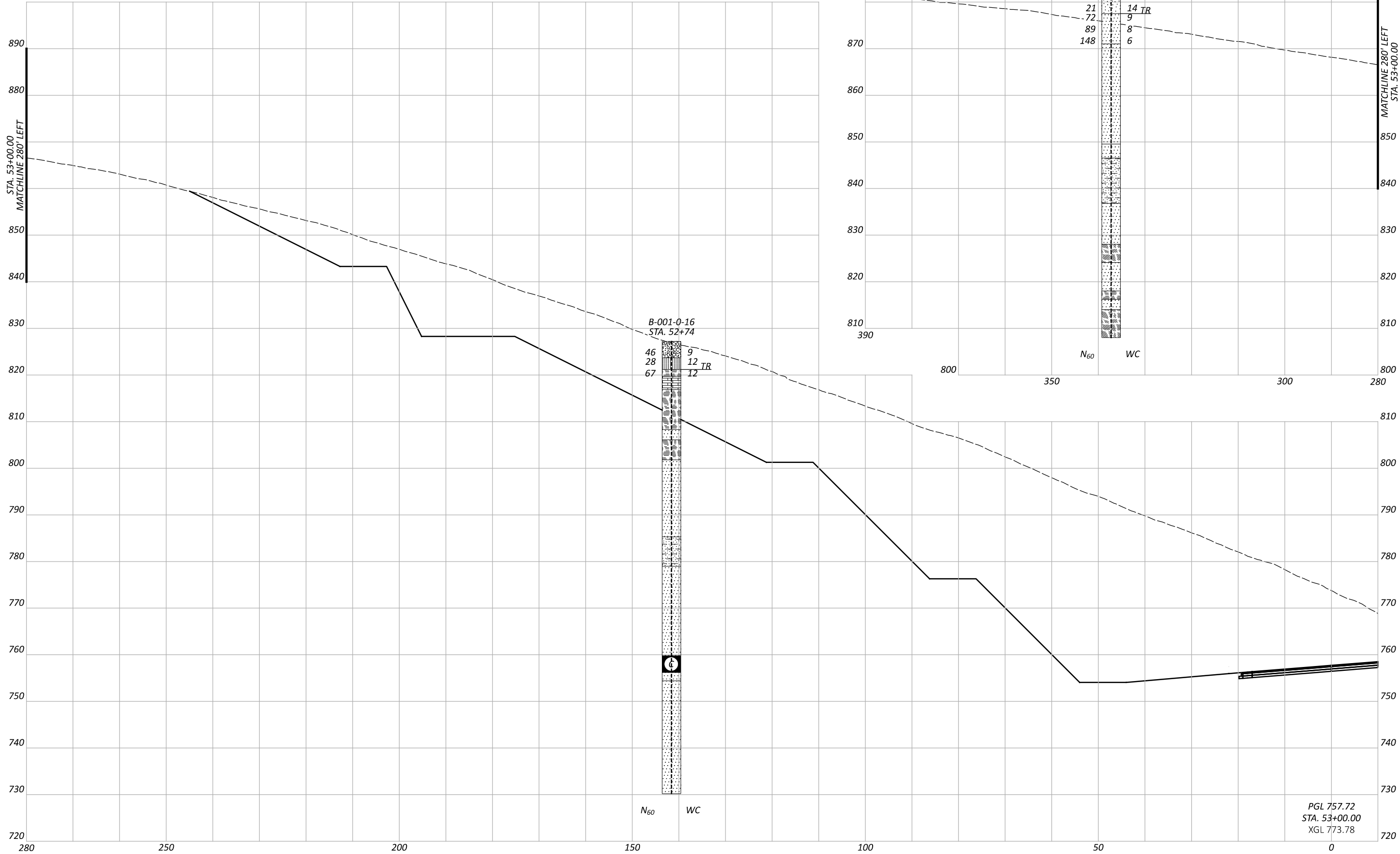
119908

SUBSET TOTAL

3 17

SHEET TOTAL

P.53 67



GEOTECHNICAL PROFILE - ROADWAY
CROSS SECTION STA. 53+00 CONST. S.R. 56

DESIGN AGENCY



DESIGNER

ARR

REVIEWER

SAT 02/28/25

PROJECT ID

119908

SUBSET TOTAL

4 17

SHEET TOTAL

P.54 67

ATH-56-0-90

MODEL: B-001-0-16 1of2 PAPER SIZE: 17x11 (in.) DATE: 1/16/2026 TIME: 7:37:49 AM PLOT DRV: OHDOT_PDF.plt Cfg: PENITBL: OHDOT_Pen.tbl USER: Kurt.Kliesh@dot.ohio.gov WORKSPACE: OHDOTCeV02 WORKSET: 119908 PRODUCT: OpenRoadsDesigner 24.00.00.205

pw:\ohiodot-pw.bentley.com\ohiodot-pw-02\Documents\01_Active Projects\District 10\Athens\119908\400-Engineering\Geotechnical\Sheets\119908_ID001.dgn

PROJECT: _____ ATH-56-00.90			DRILLING FIRM / OPERATOR: _____			ODOT / FAST			DRILL RIG: CME 850R TRACKED			STATION / OFFSET: 52+74, 142' LT.			EXPLORATION ID																																																																																																																																																																																																																																																																																																																																																																																																																																																												
TYPE: _____ ROADWAY			SAMPLING FIRM / LOGGER: _____			ODOT / LEWIS			HAMMER: CME AUTOMATIC			ALIGNMENT: CL CONST SR 56			B-001-0-16																																																																																																																																																																																																																																																																																																																																																																																																																																																												
PID: 119908 SFN: N/A			DRILLING METHOD: 4.25" HSA / NQ2						CALIBRATION DATE: 5/27/15			ELEVATION: 827.2 (ft) EOB: 97.0 ft.			PAGE																																																																																																																																																																																																																																																																																																																																																																																																																																																												
START: 3/15/16 END: 3/17/16			SAMPLING METHOD: SPT / NQ2						ENERGY RATIO (%): 87			LAT / LONG: 39.370692, -82.274988			1 OF 2																																																																																																																																																																																																																																																																																																																																																																																																																																																												
MATERIAL DESCRIPTION AND NOTES						ELEV.	DEPTHS	SPT/ RQD	N ₆₀	REC (%)	SAMPLE ID	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	PI	WC	ODOT CLASS (gl)	ABANDONED																																																																																																																																																																																																																																																																																																																																																																																																																																																				
MEDIUM DENSE, DARK BROWN, STONE FRAGMENTS WITH SAND , LITTLE SILT, TRACE CLAY, DAMP							827.2	1	21	46	89	SS-1	-	-	-	-	-	-	-	-	-	9	A-1-b (V)																																																																																																																																																																																																																																																																																																																																																																																																																																																				
																									HARD, YELLOWISH BROWN, SANDY SILT , LITTLE STONE FRAGMENTS, LITTLE CLAY, DAMP	823.7	2	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																																																																																																																																																																																																																																																																																																																																																																																																																												
																																																	SHALE, GRAY, HIGHLY WEATHERED, VERY WEAK TO WEAK, THINLY LAMINATED.	821.2	3	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-																																																																																																																																																																																																																																																																																																																																																																																																						
																																																																							LIMESTONE, BROWNISH GRAY, HIGHLY WEATHERED, MODERATELY STRONG, THICK BEDDED, JOINT, FRACTURED, OPEN, SLIGHTLY ROUGH; RQD 26%, REC 100%. @ 7.9' - 10.3': HIGH ANGLE FRACTURE WITH RUST STAINING AND PARTIALLY HEALED @ 8.2' - 8.7'; S _u = 6,430 psi	4	7	28	89	SS-2	4.50	-	-	-	-	-	-	-	-	-	-	-	12	A-4a (V)																																																																																																																																																																																																																																																																																																																																																																																	
																																																																																												SHALE, BROWNISH GRAY WITH YELLOWISH ORANGE. SEVERELY WEATHERED, MODERATELY STRONG, MEDIUM BEDDED, CALCAREOUS, JOINT, FRACTURED TO MODERATELY FRACTURED, TIGHT, SLIGHTLY ROUGH; CONTAINS VERY THIN LIMESTONE LAYERS; RQD 26%, REC 71%.	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	CORE																																																																																																																																																																																																																																																																																																																																																											
																																																																																																																	@ 17.0' - 17.3'; γ = 156 pcf; Qu = 6,136 psi	6	17	67	72	SS-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

PID:	119908	SFN:	N/A	PROJECT:	ATH-56-00-90	STATION / OFFSET:	52+74, 142' LT.	START:	3/15/16	END:	3/17/16	PG 2 OF 2	B-001-0-16											
MATERIAL DESCRIPTION AND NOTES						ELEV.	DEPTHS	SPT/ RQD	N ₆₀	REC (%)	SAMPLE ID	HP (tsf)	GRADATION (%)			ATTEMBERG	WC	ODOT CLASS (gl)	ABANDONED					
SANDSTONE , GRAY, MODERATELY WEATHERED, MODERATELY STRONG, VERY FINE GRAINED TO FINE GRAINED, THIN TO MEDIUM BEDDED, SLIGHTLY ARGILLACEOUS, JOINT, MODERATELY FRACTURED, NARROW TO OPEN, VERY ROUGH; BLOCKY, GOOD; RQD 93%, REC 100%. <i>(continued)</i> @58.4'; ARGILLACEOUS @65.3' - 65.5'; SHALE BED @65.5'; MEDIUM COARSE GRAINED, CONTAINS COAL STRINGERS @ 65.5' - 65.8'; γ = 148 pcf; Qu = 4,034 psi @67.3'; 0.1' FERRIC LAYER COAL , BLACK, SLIGHTLY WEATHERED, CLEATED; RQD 40%, REC 98%. @70.5'; BECOMES IMPURE SANDSTONE , GRAY, SLIGHTLY WEATHERED, SLIGHTLY STRONG, VERY FINE GRAINED TO FINE GRAINED, MEDIUM BEDDED, ARGILLACEOUS, INTACT; RQD 100%, REC 100%. @ 71.0' - 71.3'; γ = 161 pcf; Qu = 1,683 psi @ 72.3' - 73.0'; Id2 = 94.4% SANDSTONE , GRAY AND DARK GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG TO STRONG, VERY FINE GRAINED TO FINE GRAINED, LAMINATED TO VERY THIN BEDDED, SLIGHTLY ARENACEOUS, MICACEOUS; RQD 95%, REC 100%. @ 73.4' - 73.7'; γ = 161 pcf; Qu = 7,800 psi @77.4'; LOW ANGLE FRACTURE @ 78.0' - 78.3'; γ = 154 pcf; Qu = 6,849 psi @83.9' - 85.3'; SHALE LAYER, FRACTURED @ 83.9' - 84.9'; Id2 = 53.7% @85.3' - 87.6'; ARGILLACEOUS, SLIGHTLY FOSSILIFEROUS @ 86.8' - 87.7'; Id2 = 98.0% @ 86.9' - 87.2'; γ = 164 pcf; Qu = 6,784 psi @89.9' - 90.1'; LOW ANGLE FRACTURES @ 93.2' - 93.5'; γ = 158 pcf; Qu = 8,664 psi						767.2																		
							61																	
							62																	
							63																	
							64																	
							65																	
							66																	
							67	74	99	NQ2-7														CORE
							68																	
							69																	
	70																							
	71																							
	72																							
	73																							
	74																							
	75																							
	76																							
	77	100	100	NQ2-8														CORE						
	78																							
	79																							
	80																							
	81																							
	82																							
	83																							
	84																							
	85																							
	86																							
	87	88	99	NQ2-9														CORE						
	88																							
	89																							
	90																							
	91																							
	92																							
	93																							
	94																							
	95	100	100	NQ2-10														CORE						
	96																							
	97																							

STANDARD ODOT BORING LOG (11 X 17) - OH DOT.GDT - 2/25/25 12:43 - X:\GINT\PROJECTS\2016 COMPLETE\60204.GPJ

NOTES: S_c = POINT LOAD STRENGTH VALUES AS PER ASTM D 5731. LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS.
ABANDONMENT METHODS, MATERIALS, QUANTITIES: NOT RECORDED

ATH-56-0-90

MODEL: B-002-0-23 1of2 PAPER SIZE: 17x11 (in.) DATE: 1/16/2026 AM 10:27:38 USER: Kurt.Kliesh@dot.ohio.gov WORKSPACE: OHDOTCv02 WORKSET: 119908 PRODUCT: OpenRoadsDesigner 24.00.00.205

pw:\ohiodot-pw.bentley.com\ohiodot-pw-02\Documents\01 Active Projects\119908\400-Engineering\Geotechnical\Sheets\119908_ID001.dgn

PROJECT: _____ ATH-56-0-90			DRILLING FIRM / OPERATOR: _____			ODOT / LEWIS			DRILL RIG: CME 850R TRACKED			STATION / OFFSET: 54+88.337' LT.			EXPLORATION ID							
TYPE: _____ ROADWAY			SAMPLING FIRM / LOGGER: _____			ODOT / SPROUSE			HAMMER: CME AUTOMATIC			ALIGNMENT: CL CONST SR 56			B-002-0-23							
PID: 119908 SFN: N/A			DRILLING METHOD: 3.75" HSA / NQ2			SPT / NQ2			CALIBRATION DATE: 4/25/23			ELEVATION: 881.0 (ft) EOB: 73.0 ft			PAGE							
START: 12/5/23 END: 12/7/23			SAMPLING METHOD: _____			SPT / NQ2			ENERGY RATIO (%): 89			LAT / LONG: 39.371256, -82.274770			1 OF 2							
MATERIAL DESCRIPTION AND NOTES						ELEV.	DEPTHS	SPT/ RQD	N ₆₀	REC SAMPLE ID	HP (tsf)	GR	CS	FS	SI	CL	LL	PL	WC	ODOT CLASS (gl)	HOLE SEALED	
TOPSOIL (4") MEDIUM DENSE, REDDISH BROWN, COARSE AND FINE SAND, SOME STONE FRAGMENTS, LITTLE CLAY, LITTLE SILT, MOIST						881.0	TR															
						880.7		1														
SANDSTONE, REDDISH BROWN, SEVERELY WEATHERED, VERY WEAK, VERY FINE GRAINED TO FINE GRAINED.						877.5	2	3	21	61	SS-1	-	20	0	49	14	17	NP	NP	14	A-3a (0)	
							877.5	3	4	10												
@6.0'; LIGHT BROWN AND REDDISH BROWN, HIGHLY WEATHERED.							4	13	72	94	SS-2	-	-	-	-	-	-	-	-	9	Rock (V)	
								5	24	25												
@8.5'; GRAYISH BROWN AND BROWN, VERY FINE GRAINED, SLIGHTLY ARGILLACEOUS.						871.0	6	16	89	100	SS-3	-	-	-	-	-	-	-	8	Rock (V)		
								7	24	36												
SANDSTONE, YELLOWISH BROWN, HIGHLY WEATHERED, SLIGHTLY STRONG, MEDIUM TO COARSE GRAINED, MEDIUM TO THICK BEDDED, MICACEOUS, JOINT, HIGHLY FRACTURED TO FRACTURED, NARROW, SLIGHTLY ROUGH; BLOCKY, FAIR; RQD 42%, REC 91%.							9	26	148	83	SS-4	-	-	-	-	-	-	-	6	Rock (V)		
								10	47	53												
@13.4'-13.7'; CLAY SEAM							11	0	53	NQ2-1										CORE		
								12														
@14.6'; MODERATELY WEATHERED, SLIGHTLY FRACTURED							13													CORE		
								14														
@15.5' - 15.9'; γ = 135 pcf; Qu = 3,252 psi @15.8' - 16.7'; Id ₂ = 89.8%							15	53	100	NQ2-2										CORE		
								16														
@17.3' - 17.6'; γ = 133 pcf; Qu = 2,650 psi @18.2' - 18.6'; γ = 137 pcf; Qu = 2,952 psi							17															
								18														
@20.3' - 22.8'; HIGH ANGLE FRACTURE, SEVERELY TO HIGHLY WEATHERED, HIGHLY FRACTURED, CONTAINS CLAY INFILLING AND LOSS							20	33	60	NQ2-3										CORE		
								21														
@22.8'; YELLOWISH BROWN WITH OLIVE BLACK, HIGHLY WEATHERED, HIGHLY FRACTURED @23.6' - 24.5'; Id ₂ = 76.8%							23													CORE		
								24														
@23.8'; HIGHLY TO MODERATELY WEATHERED, MODERATELY FRACTURED							25	48	98	NQ2-4										CORE		
								26														
@27.1' - 27.5'; γ = 135 pcf; Qu = 3,016 psi							27															
								28														
SANDSTONE, YELLOWISH BROWN AND REDDISH BROWN, SEVERELY WEATHERED, WEAK TO SLIGHTLY STRONG, COARSE GRAINED, THIN BEDDED, FRIABLE, FERRIFEROUS, JOINT, FRACTURED TO MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; BLOCKY, FAIR; RQD 14%, REC 69% @33.0' - 34.2'; Id ₂ = 67.5% @33.7' - 34.1'; γ = 135 pcf; Qu = 1,502 psi						849.5	30	45	82	NQ2-5										CORE		
								31														
SILTSTONE, BLuish GRAY, MODERATELY WEATHERED, SLIGHTLY STRONG, VERY THIN TO THIN BEDDED, ARGILLACEOUS, SLIGHTLY ARENACEOUS, MICACEOUS, JOINT, FRACTURED TO MODERATELY FRACTURED, OPEN TO MARROW, SLIGHTLY ROUGH; BLOCKY, POOR; RQD 25%, REC 97% @36.8' - 39.4'; Id ₂ = 90.0% @37.6' - 38.4'; SEVERELY WEATHERED, HIGHLY FRACTURED @39.1' - 42.5'; S _u = 1,799 psi @39.7' - 40.9'; HIGH ANGLE FRACTURE WITH RUST STAINING							36	14	100	NQ2-6										CORE		
								37														
@43.6' - 44.2'; CLAY SEAM						836.8	41	58	94	NQ2-7											CORE	
								42														
SANDSTONE, GRAY, MODERATELY TO SLIGHTLY WEATHERED, MODERATELY STRONG, FINE TO COARSE GRAINED, THIN TO MEDIUM BEDDED, ARGILLACEOUS, MICACEOUS, JOINT, MODERATELY TO SLIGHTLY FRACTURED, NARROW, SLIGHTLY ROUGH; BLOCKY, GOOD; RQD 88%, REC 96% @44.2' - 44.6'; γ = 155 pcf; Qu = 3,652 psi @45.8' - 46.2'; Id ₂ = 94.4%							45	58	93	NQ2-8										CORE		
								46														
CLAYSTONE, DARK GRAY AND GRAY, HIGHLY TO MODERATELY WEATHERED, VERY WEAK, MEDIUM BEDDED, SLIGHTLY ARENACEOUS, JOINT, FRACTURED, NARROW, SLIGHTLY ROUGH; BLOCKY, POOR; RQD 0%, REC 75% @53.1' - 53.1'; CARRONACEOUS @53.2' - 54.7'; Id ₂ = 2.4%						828.0	50	97	100	NQ2-9										CORE		
								51														
SANDSTONE, GRAY, SLIGHTLY WEATHERED, MODERATELY STRONG, FINE TO MEDIUM GRAINED, THIN BEDDED, ARGILLACEOUS, MICACEOUS, JOINT, FRACTURED TO MODERATELY FRACTURED, NARROW, SLIGHTLY ROUGH; BLOCKY, GOOD; RQD 74%, REC 96%.							55	23	80	NQ2-10											CORE	
								56														
							57															
								58														
							59															

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 2/28/25 06:33 - X:\GINT\PROJECTS\2024 COMPLETE\1106.GPJ

GEOTECHNICAL PROFILE - ROADWAY
BORING LOG FOR B-002-0-23

DESIGN AGENCY	
DESIGNER	
ARR	
REVIEWER	
SAT 02/28/25	
PROJECT ID	
119908	
SUBSET	TOTAL
7	17
SHEET	TOTAL
P.57	67



Office of Geotechnical Engineering

B-001-0-16



Run #:	Depth		Recovery		RQD	
NQ2-1	7.5'	12.0'	43/54	80%	15/54	28%
ATH-56-0-90 PID 119908						



Office of Geotechnical Engineering

B-001-0-16

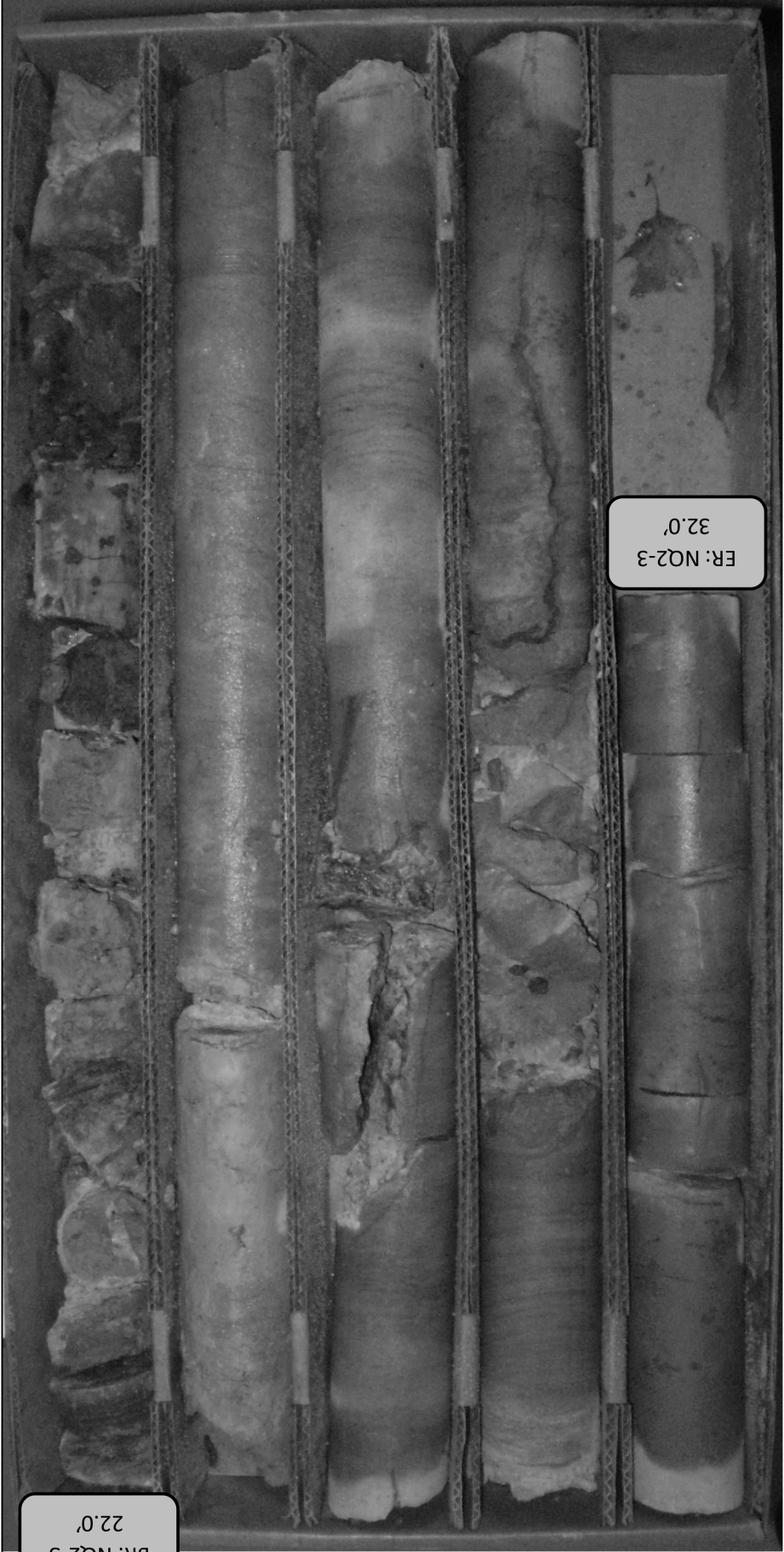


Run #:	Depth		Recovery		RQD	
NQ2-2	12.0'	22.0'	101/120	84%	46/120	38%
ATH-56-0-90 PID 119908						



Office of Geotechnical Engineering

B-001-0-16



Run #:	Depth		Recovery		RQD	
NQ2-3	22.0'	32.0'	110/120	92%	58/120	48%
ATH-56-0-90 PID 119908						



Office of Geotechnical Engineering

B-001-0-16



Run #:	Depth		Recovery		RQD	
NQ2-4	32.0'	42.0'	116/120	97%	104/120	87%
ATH-56-0-90 PID 119908						



Office of Geotechnical Engineering

B-001-0-16



Run #:	Depth		Recovery		RQD	
NQ2-5	42.0'	52.0'	94/120	78%	53/120	44%
ATH-56-0-90 PID 119908						



Office of Geotechnical Engineering

B-001-0-16

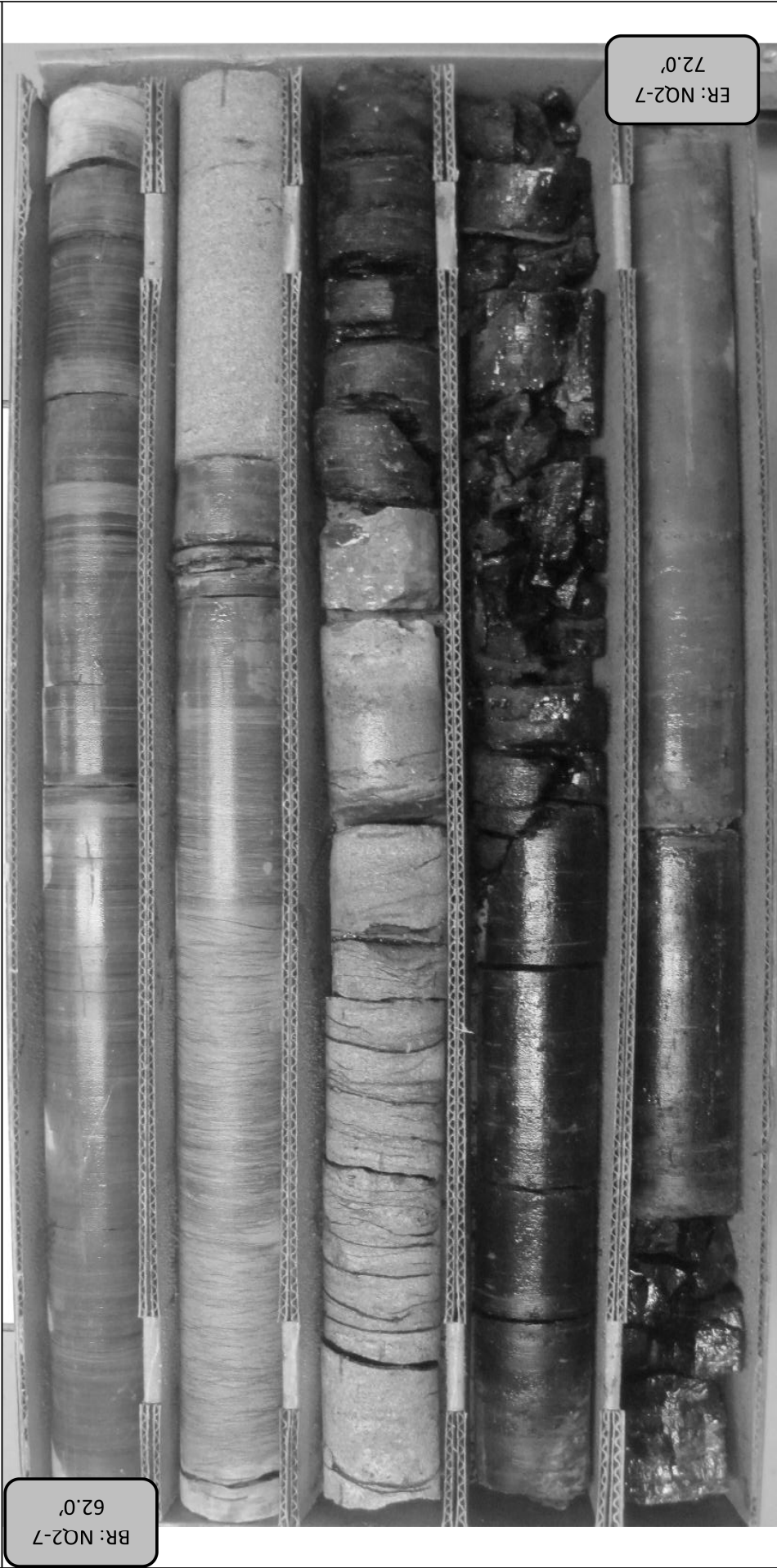


Run #:	Depth		Recovery		RQD	
NQ2-6	52.0'	62.0'	120/120	100%	109/120	91%
ATH-56-0-90 PID 119908						



Office of Geotechnical Engineering

B-001-0-16

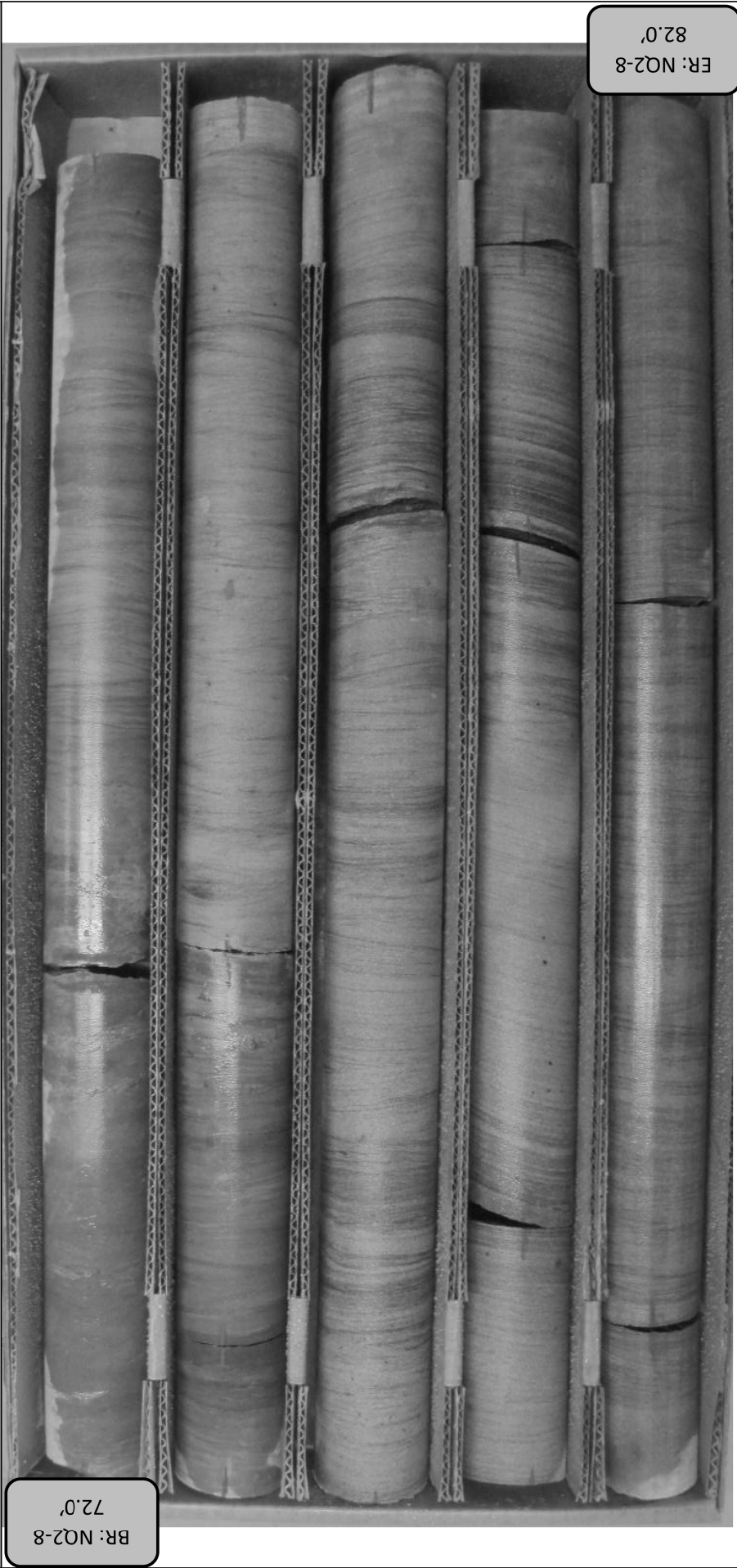


Run #:	Depth	Recovery	RQD
NQ2-7	62.0'	119/120	89/120
		99%	74%
ATH-56-0-90 PID 119908			



Office of Geotechnical Engineering

B-001-0-16



Run #:	Depth	Recovery	RQD
NQ2-8	72.0'	120/120	120/120
		100%	100%
ATH-56-0-90 PID 119908			



Office of Geotechnical Engineering

B-001-0-16



Run #:	Depth		Recovery		RQD	
NQ2-9	82.0'	92.0'	119/120	99%	106/120	88%
ATH-56-0-90 PID 119908						



Office of Geotechnical Engineering

B-001-0-16



Run #:	Depth		Recovery		RQD	
NQ2-10	92.0'	97.0'	60/60	100%	60/60	100%
ATH-56-0-90 PID 119908						



Office of Geotechnical Engineering

B-002-0-23



Run #:	Depth		Recovery		RQD	
NQ2-1	10.0'	13.0'	19/36	53%	0/36	0%
ATH-56-0-90 PID 119908						



Office of Geotechnical Engineering

B-002-0-23



Run #:	Depth		Recovery		RQD	
NQ2-2	13.0'	18.0'	60/60	100%	32/60	53%
NQ2-3	18.0'	23.0'	36/60	60%	20/60	33%
ATH-56-0-90 PID 119908						



Office of Geotechnical Engineering

B-002-0-23



Run #:	Depth		Recovery		RQD	
NQ2-4	23.0'	28.0'	59/60	98%	29/60	48%
NQ2-5	28.0'	33.0'	49/60	82%	27/60	45%
ATH-56-0-90 PID 119908						



Office of Geotechnical Engineering

B-002-0-23



Run #:	Depth		Recovery		RQD	
NQ2-6	33.0'	39.0'	72/72	100%	10/72	14%
NQ2-7	39.0'	43.0'	45/48	94%	28/48	58%
ATH-56-0-90 PID 119908						



DESIGNER		ARR	
SUBSET		REVIEWER	
15		SAT 02/28/25	
SHEET		PROJECT ID	
P.65		119908	
TOTAL		TOTAL	
17		67	



Office of Geotechnical Engineering

B-002-0-23



Run #:	Depth		Recovery		RQD	
NQ2-12	63.0'	68.0'	53/60	88%	14/60	23%
NQ2-13	68.0'	73.0'	55/60	92%	28/60	47%
ATH-56-0-90 PID 119908						



DESIGN AGENCY

DESIGNER

ARR

REVIEWER

SAT 02/28/25

PROJECT ID

119908

SUBSET

17

TOTAL

17

SHEET

P.67

TOTAL

67