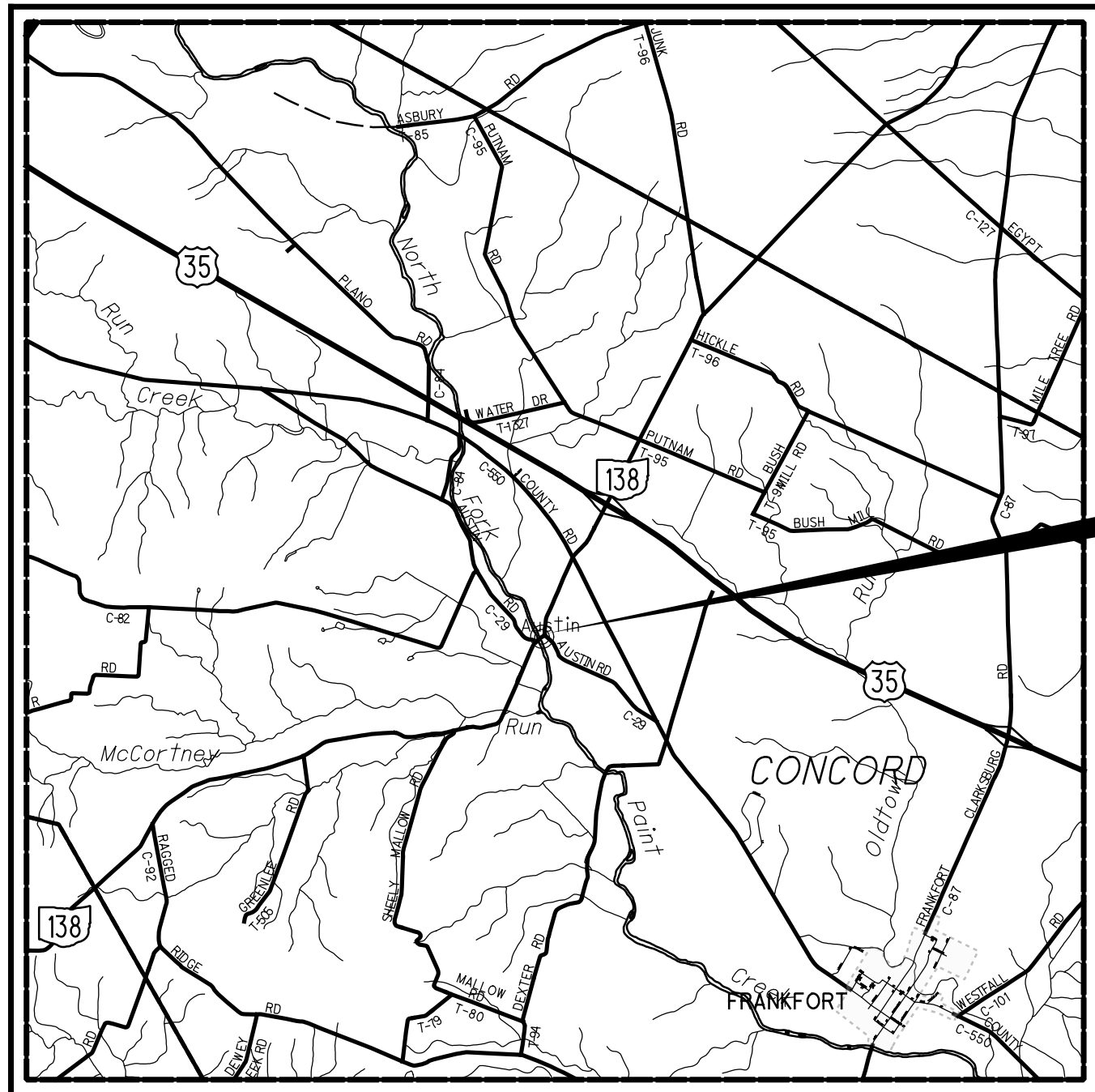


STATE OF OHIO DEPARTMENT OF TRANSPORTATION

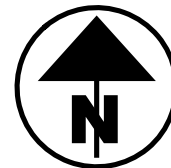
ROS-138-10.98

CONCORD TOWNSHIP ROSS COUNTY



LOCATION MAP

LATITUDE: 39° 28' 32" LONGITUDE: -83° 13' 20"



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

DESIGN DESIGNATION

CURRENT ADT (2024)	2500
DESIGN YEAR ADT (2044)	2500
DESIGN HOURLY VOLUME (2044)	300
DIRECTIONAL DISTRIBUTION	0.59
TRUCKS (24 HOUR B&C)	14%
DESIGN SPEED	55 MPH
LEGAL SPEED	55 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	
05 MAJOR COLLECTOR (RURAL)	
NHS PROJECT	NO

DESIGN EXCEPTIONS

NONE REQUIRED

ADA DESIGN WAIVER: NONE REQUIRED

UNDERGROUND UTILITIES
Contact Two Working Days
Before You Dig

OHIO811.org
Before You Dig

OHIO 811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

PLAN PREPARED BY:
BG ENGINEERING GROUP, LLC
5960 WILCOX PLACE, SUITE C
DUBLIN, OHIO, 43016

INDEX OF SHEETS:

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GENERAL SUMMARY	7-8
SUBSUMMARY	9
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CROSS SECTIONS - S.R. 138	11-21
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CULVERT PLAN AND PROFILE	27-28
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GEOTECHNICAL PROFILE - CULVERT	34-40
RIGHT OF WAY	

FEDERAL PROJECT NUMBER

NONE

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

REPLACEMENT OF THE EXISTING 30" CULVERT (CFN 1850766) CROSSING S.R. 138 AND THE EXISTING 30" CULVERT CROSSING THE PAINT CREEK RECREATIONAL TRAIL, DRAINING A UNIT OF NORTH PAINT CREEK. REMOVAL OF EXISTING RETAINING WALL AND REGRADING OF THE SLOPES IS INCLUDED IN THIS PROJECT. S.R. 138 TO BE REPLACED WITH FULL DEPTH PAVEMENT WITHIN PROJECT LIMITS.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	0.65 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.10 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	N/A (NOI NOT REQUIRED)

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 PLAN AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT THE DETOURS WILL BE PROVIDED AS INDICATED ON SHEET 6.

Michael G. Dombrowski
Michael G. Dombrowski
District 09 Deputy Director

Jack Marchbanks, PhD
Jack Marchbanks, PhD
Director, Department of Transportation

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS	
BP-3.1	1-19-24	HW-1.1	7-20-18	MT-97.10	4-19-19	800-2023	1/19/24	WATERWAY	
		HW-2.1	7-15-22	MT-101.60	4-21-23	832	7/21/23	PERMIT 4/28/23	
DM-4.4	1-15-16	HW-2.2	7-20-18	MT-101.90	7-17-20				
				MT-105.10	1-17-20				
MGS-1.1	7-16-21			TC-41.20	10-18-13				
MGS-2.1	1-19-18			TC-41.30	4-21-23				
MGS-5.3	7-15-16			TC-42.20	10-18-13				
RM-1.1	1-20-23			TC-52.10	10-18-13				
				TC-52.20	1-15-21				
				TC-61.30	7-19-19				
				TC-65.10	1-17-14				
				TC-65.11	1-19-24				
				TC-71.10	4-21-23				

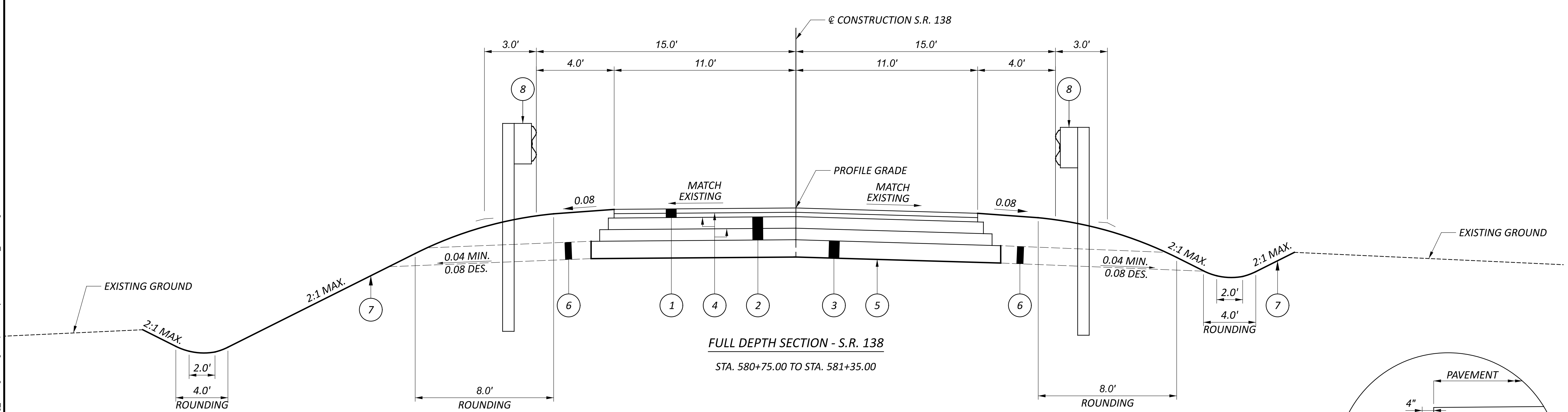
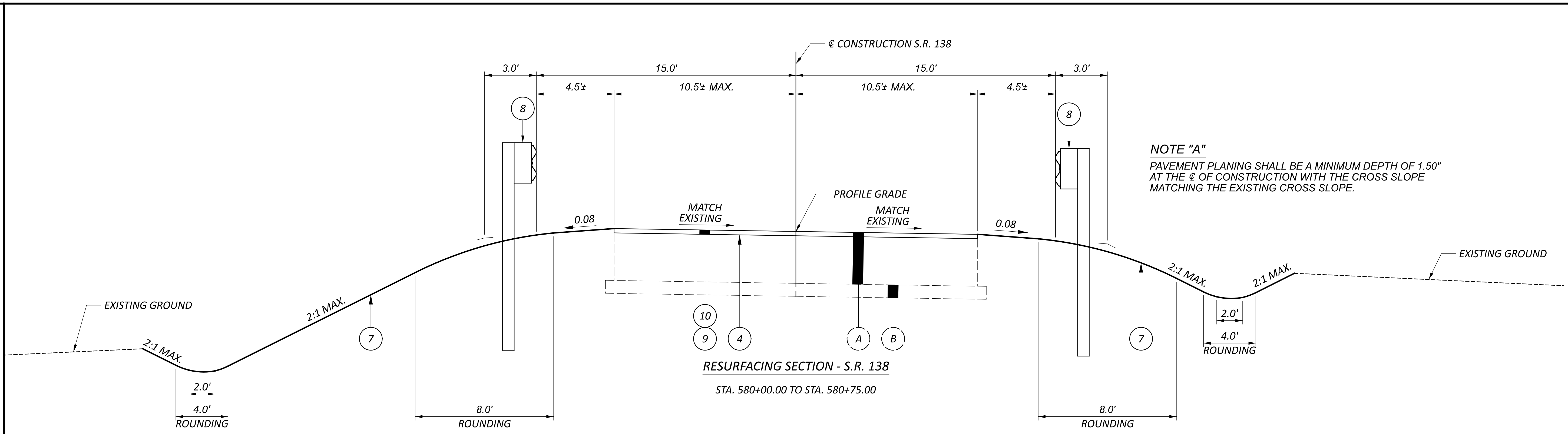
ENGINEER'S SEAL
ROADWAY

TITLE SHEET

ROS-138-10.98

MODEL: Sheet PAPER: 34x22 (in.) DATE: 2/13/2024 TIME: 1:21:10 PM USER: jperchinske P:\Transportation\Work\Seals\105103_ROS-138-10.98\402-Engineering_BG\Engineering\Group\Roadway\Sheets\105103_GT001.dgn

DESIGN AGENCY	BG ENGINEERING GROUP, LLC 5960 WILCOX PLACE, SUITE C DUBLIN, OHIO 43016
DESIGNER	JEP
REVIEWER	RG 02-12-24
PROJECT ID	105103
SHEET	TOTAL
1	40

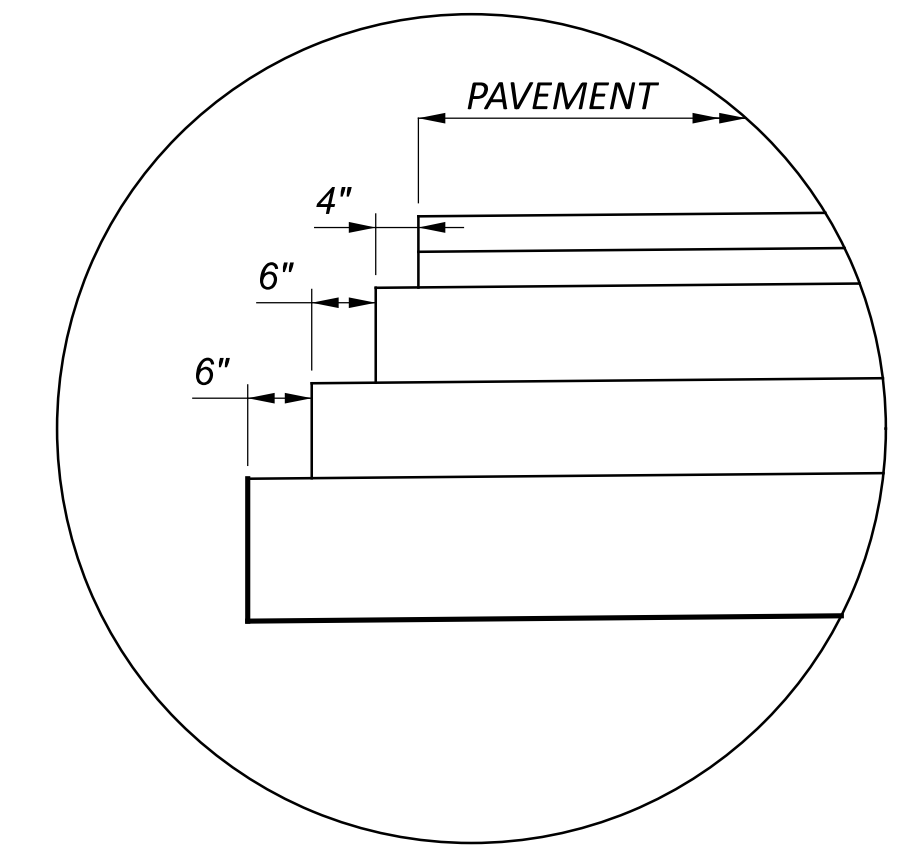


NOTE "A"
 PAVEMENT PLANING SHALL BE A MINIMUM DEPTH OF 1.50"
 AT THE ϕ OF CONSTRUCTION WITH THE CROSS SLOPE
 MATCHING THE EXISTING CROSS SLOPE.

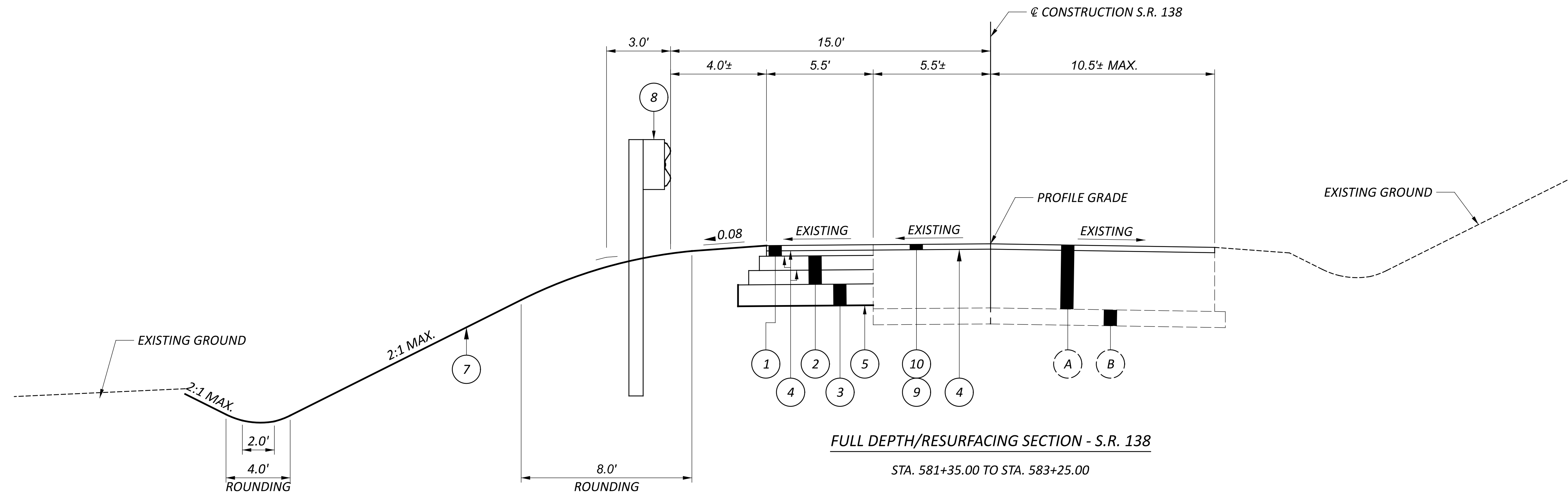
- LEGEND**
- 1 ITEM 441 - 3" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22 (2 LIFTS AT 1.5")
 - 2 ITEM 301 - 8" ASPHALT CONCRETE BASE, PG64-22, (449) (2 LIFTS AT 4")
 - 3 ITEM 304 - 6" AGGREGATE BASE
 - 4 ITEM 407 - TACK COAT
 - 5 ITEM 204 - SUBGRADE COMPACTION
 - 6 ITEM 605 - AGGREGATE DRAINS
 - 7 ITEM 659 - SEEDING AND MULCHING
 - 8 ITEM 606 - GUARDRAIL, TYPE MGS
 - 9 ITEM 441 - 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22
 - 10 ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (SEE NOTE "A")
 - 11 ITEM 301 - 3" ASPHALT CONCRETE BASE, PG64-22

- A 18"± EXISTING ASPHALT
- B EXISTING AGGREGATE
- C EXISTING TRAIL PAVEMENT

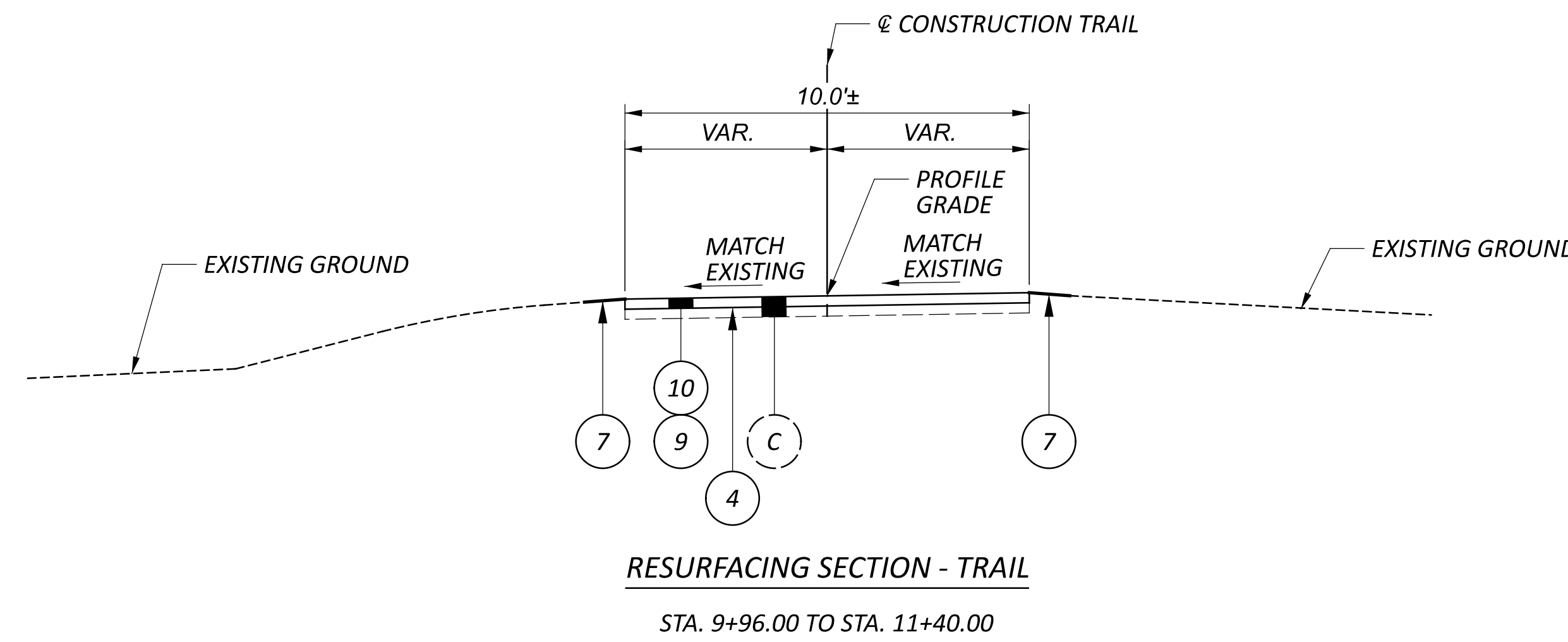
LT SIDE CROSS SLOPE	PAVEMENT WIDTH	STATION	PAVEMENT WIDTH	RT SIDE CROSS SLOPE
-0.007	10.5'	580+75	10.7'	-0.027
-0.029	11.0'	581+00	11.0'	-0.027
-0.014	11.0'	581+25	11.0'	-0.037
-0.008	11.0'	581+35	10.5'	-0.041
-0.002	5.5'	581+50		N/A
0.000	5.5'	582+00		N/A
0.000	5.5'	582+50		N/A
0.000	5.5'	583+00		N/A
0.009	4.4'	583+25		N/A



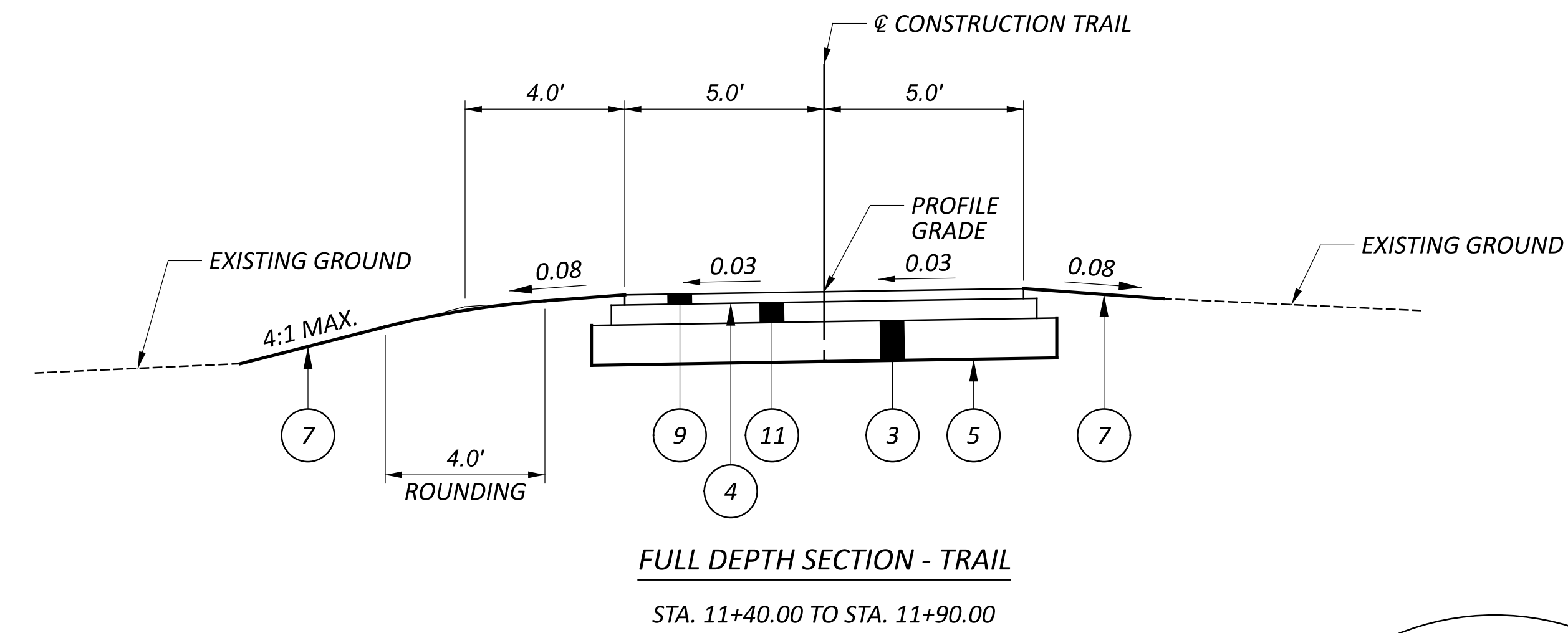
STEP AND SUBBASE DETAIL



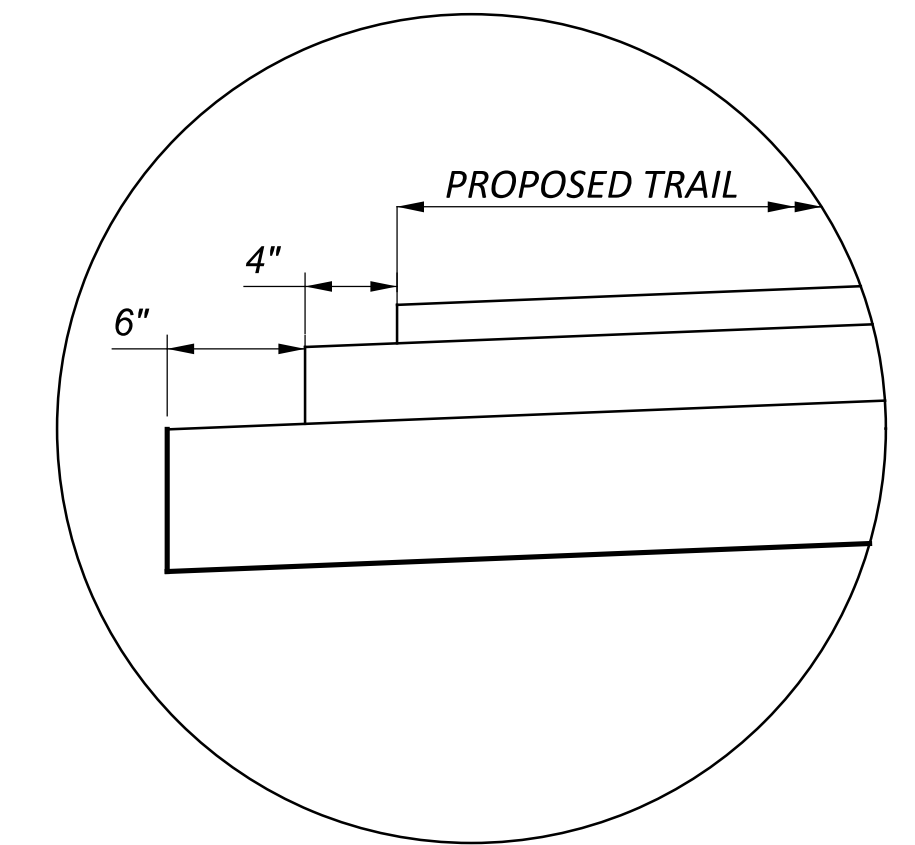
FULL DEPTH/RESURFACING SECTION - S.R. 138
 STA. 581+35.00 TO STA. 583+25.00



RESURFACING SECTION - TRAIL
 STA. 9+96.00 TO STA. 11+40.00



FULL DEPTH SECTION - TRAIL
 STA. 11+40.00 TO STA. 11+90.00



LEGEND

- | | |
|---|---|
| 1 ITEM 441 - 3" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22 (2 LIFTS AT 1.5") | 7 ITEM 659 - SEEDING AND MULCHING |
| 2 ITEM 301 - 8" ASPHALT CONCRETE BASE, PG64-22, (449) (2 LIFTS AT 4") | 8 ITEM 606 - GUARDRAIL, TYPE MGS |
| 3 ITEM 304 - 6" AGGREGATE BASE | 9 ITEM 441 - 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22 |
| 4 ITEM 407 - TACK COAT | 10 ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (SEE NOTE "A") |
| 5 ITEM 204 - SUBGRADE COMPACTION | 11 ITEM 301 - 3" ASPHALT CONCRETE BASE, PG64-22 |
| 6 ITEM 605 - AGGREGATE DRAINS | A 18"± EXISTING ASPHALT |
| | B EXISTING AGGREGATE |
| | C EXISTING TRAIL PAVEMENT |

ROUNDING

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

UTILITIES

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

SOUTH CENTRAL POWER COMPANY FRONTIER COMMUNICATIONS
 P.O. BOX 250 241 S. NELSON AVENUE
 LANCASTER, OH 43130 WILMINGTON, OH 45177
 MR. KEVIN CARO MR. DAVID LONGWORTH
 740-689-6150 937-283-5735

HORIZON CHILLICOTHE TELEPHONE ROSS COUNTY WATER COMPANY
 P.O. BOX 480 P.O. BOX 1690
 CHILLICOTHE, OH 45601 CHILLICOTHE, OH 45601
 MR. JIM MITCHELL MR. KEVIN CHESTER
 740-772-8264 740-701-0128

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE THIS SHEET FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

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

PROJECT CONTROL

POSITIONING METHOD: ODOT VRS
 MONUMENT TYPE: TYPE B, REBAR AND CAP
 VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD88
 GEIOD: GEIOD12A
 HORIZONTAL POSITIONING

REFERENCE FRAME: NAD83 (2011)
 ELLIPSOID: GRS80
 MAP PROJECTION: LAMBERT CONFORMAL CONIC
 COORDINATE SYSTEM: OHIO STATE PLANE, SOUTH ZONE
 COMBINED SCALE FACTOR: 1.00009502
 SYSTEM: (0, 0)

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 CMS 623.

UNITS ARE IN U.S. SURVEY FEET.

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.

CLEARING AND GRUBBING

ALL TRESS WITHIN THE WORK LIMITS HAVE BEEN REMOVED UNDER A SEPARATE CONTRACT TO ±4'-0" ABOVE EXISTING GROUND. ALL STUMPS THAT REMAIN ARE TO BE REMOVED. INCLUDE THE COST TO PERFORM THE ABOVE WITH THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF ±4'-0" TALL STUMPS THAT WILL NEED TO BE REMOVED.

SIZES	NO. TREES	NO. STUMPS	TOTAL
18" (OVER 12" TO 24")	0	6	6
30" (OVER 24" TO 36")	0	1	1

SEEDING AND MULCHING

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

659, TOPSOIL	262 CU. YD.
659, SEEDING AND MULCHING	2363 SQ. YD.
659, COMMERCIAL FERTILIZER	0.32 TON
659, LIME	0.49 ACRES
659, WATER	13 M. GAL.

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.

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE E, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

MONUMENT ASSEMBLIES

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

ENDANGERED BAT HABITAT REMOVAL

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 (ESA). FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS: A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK 3 INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

ITEM 605 - AGGREGATE DRAINS

AGGREGATE DRAINS SHALL BE PLACED AT 50 FOOT INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS, STAGGERED SO THAT EACH DRAIN IS 25 FEET FROM THE ADJACENT DRAIN ON THE OPPOSITE SIDE, AND AT 25 FOOT INTERVALS ON THE LOW SIDE ONLY OF SUPERELEVATED SECTIONS. AN AGGREGATE DRAIN SHALL BE PLACED AT THE LOW POINT OF EACH SAG VERTICAL CURVE.

S.R. 138		
580+75	LT	14'
581+00	RT	15'
581+25	RT	12'
581+50	LT	11'
582+00	LT	10'
582+50	LT	10'
583+00	LT	10'
583+25	LT	10'
		TOTAL
		92'

ITEM SPECIAL - MAILBOX REMOVED AND RESET

THE MAILBOX SHALL BE SECURELY AND NEATLY RESET BY THE CONTRACTOR. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.10. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

MAILBOX SUPPORTS, COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR ITEM SPECIAL MAILBOX REMOVED AND RESET.

ITEM 202 - REMOVAL MISC.: RETAINING WALL (SHEET PILING)

REMOVAL OF THE EXISTING SHEET PILING RETAINING WALL LOCATED ALONG THE LEFT SIDE OF S.R. 138 SHALL BE PAID FOR UNDER THE LUMP SUM ITEM 202, REMOVAL MISC.: RETAINING WALL (SHEET PILING). PAYMENT FOR ALL LABOR, EQUIPMENT, AND DISPOSAL OF MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE.

ITEM 202 - REMOVAL MISC.: RETAINING WALL (CONCRETE)

REMOVAL OF THE EXISTING CONCRETE RETAINING WALL LOCATED BETWEEN THE EXISTING CULVERT OUTLET (UNDER S.R. 138) AND THE EXISTING CULVERT INLET (UNDER THE TRAIL) SHALL BE PAID FOR UNDER THE LUMP SUM ITEM 202, REMOVAL MISC.: RETAINING WALL (CONCRETE). PAYMENT FOR ALL LABOR, EQUIPMENT, AND DISPOSAL OF MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE.

CENTERLINE REFERENCE - @ CONSTRUCTION S.R. 138				
STATION	OFFSET	NORTHING	EASTING	DESCRIPTION
577+14.13	0.00' @	524068.6404	1764551.3688	P.O.T.
578+76.61	0.00' @	524168.3267	1764679.6721	P.C.
578+93.89	2.26' RT	524178.9335	1764693.3239	P.I.
579+10.40	0.00' @	524194.9210	1764699.9024	P.C.C.
579+25.96	1.84' RT	524209.3139	1764705.8247	P.I.
579+40.95	0.00' @	524224.8282	1764704.5860	P.T.
579+77.54	0.00' @	524261.3040	1764701.6737	P.C.
580+47.90	3.53' LT	524331.4377	1764696.0741	P.I.
581+17.79	0.00' @	524401.2830	1764704.5438	P.T.
584+14.42	0.00' @	524695.7582	1764740.2528	P.C.
584+96.96	6.77' LT	524777.7019	1764750.1896	P.I.
585+78.03	0.00' @	524852.1037	1764785.9371	P.T.

CONTROL POINTS - GROUND COORDINATES (@ CONSTRUCTION S.R. 138)						
CONTROL POINT	STATION	OFFSET	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP#1	580+81.76	16.62' RT	524364.270	1764717.710	772.018	1/2" REBAR & CAP
CP#2	584+72.74	15.67' LT	524756.797	1764735.395	798.747	5/8" REBAR & CAP

ITEM 614, MAINTAINING TRAFFIC

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 30 CONSECUTIVE CALENDAR DAYS, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET 6. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$1,817 PER DAY FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT. CONTRACTOR MAY CHOOSE TO CLOSE BOTH WORK AREAS (S.R. 138 AND BIKE TRAIL) AND REMOVE THE EXISTING 30" CULVERTS AND CONSTRUCT THE 42" CULVERTS AT THE SAME TIME. THE 30 CONSECUTIVE CALENDAR DAY CLOSURE SHALL NOT BE COUNTED INDEPENDENTLY FOR EACH LOCATION.

CONTRACTOR SHALL MAINTAIN INGRESS AND EGRESS FOR THE RESIDENT THAT UTILIZES THE TRAIL TO ACCESS S.R. 138. CONTRACTOR SHALL PLACE WARNING SIGNAGE BEFORE AND AFTER THE TRAIL WORK AREA INCLUDING "ROAD WORK AHEAD" (W20-1-36) AND ANY SIGNS AT THE APPROVAL OF THE ENGINEER. CONTRACTOR SHALL COORDINATE THE TRAIL CLOSURE WITH THE ROSS COUNTY PARK DISTRICT (740-773-8794).

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

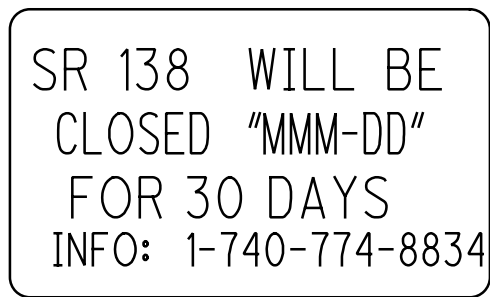
BEFORE THE WORK BEGINS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE NAME(S) AND TELEPHONE NUMBER(S) OF A PERSON OR PERSONS WHO CAN BE CONTACTED TWENTY-FOUR (24) HOURS PER DAY BY THE OHIO DEPARTMENT OF TRANSPORTATION AND ALL INTERESTED POLICE AGENCIES. THIS PERSON OR PERSONS SHALL BE RESPONSIBLE FOR PLACING OR REPLACING NECESSARY TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW.

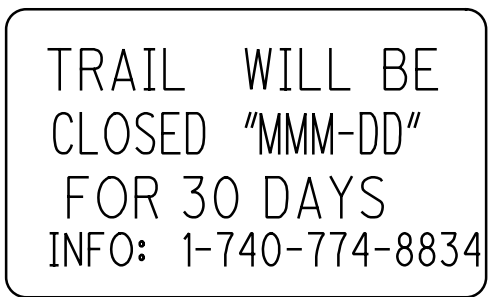
Table with 3 columns: ITEM, DURATION OF CLOSURE, SIGN DISPLAYED TO PUBLIC. Rows include ROAD CLOSURES for durations >= 2 WEEKS, > 12 HOURS & < 2 WEEKS, and <= 12 HOURS.

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE.

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS IS TO BE A SPECIFIC OFFICE WITHIN THE DISTRICT RATHER THAN THE GENERAL SWITCHBOARD NUMBER.



W20-H13-60



W20-H13-60

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48 X 30 INCH ROAD CLOSED SIGNS, SIGN SUPPORTS, BARRICADES AND LIGHTS, AS DETAILED IN SCD MT-101.60 AT THE FOLLOWING LOCATIONS DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC:

- AT THE LIMITS OF THE WORK AREA FOR S.R 138
- AT THE LIMITS OF THE WORK AREA FOR PAINT CREEK RECREATIONAL TRAIL

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN SIGNS AND SIGN SUPPORTS, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND TYPE III BARRICADES OF THE TYPE AND LOCATION AS FOLLOWS:

- SOUTHEAST CORNER OF S.R. 138 / S.R. 28 INTERSECTION
- NORTHWEST CORNER OF S.R. 138 / U.S. 35 INTERCHANGE

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.

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.

Table with 3 columns: ITEM ROAD CLOSURES, LANE CLOSURES & RESTRICTIONS, START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES. Rows show durations like >= 2 WEEKS, > 12 HOURS & < 2 WEEKS, <= 12 HOURS, >= 2 WEEKS, < 2 WEEKS, and N/A.

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

DETOUR SIGNING

THE CONTRACTOR SHALL ADVISE THE ROSS COUNTY ENGINEER'S DEPARTMENT (740-702-3130) AND THE ODOT DISTRICT 9 PUBLIC INFORMATION OFFICE (740-774-8834) FOURTEEN (14) DAYS IN ADVANCE OF WHEN THE DETOUR ROUTE SHOULD BE IN EFFECT. ALL WORK ZONE DEVICES REQUIRED SHALL BE FURNISHED, ERECTED, MAINTAINED AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. SEE SHEET 6 FOR THE STATE DETOUR PLAN. PAYMENT FOR ALL WORK ASSOCIATED WITH THE DETOUR SHALL BE INCLUDED UNDER THE LUMP SUM BID FOR:

ITEM 614, DETOUR SIGNING LUMP

DESIGNATED LOCAL DETOUR ROUTE

IN ADDITION TO THE OFFICIAL, SIGNED DETOUR ROUTE, A LOCAL ROUTE HAS BEEN DETERMINED TO BE THE SECONDARY, UNSIGNED DETOUR ROUTE OR "DESIGNATED LOCAL DETOUR ROUTE." THIS ROUTE IS SHOWN ON SHEET 6. DURING THE TIME THAT TRAFFIC IS DETOURED, THE CONTRACTOR SHALL MAINTAIN THIS ROUTE IN A CONDITION WHICH IS REASONABLY SMOOTH AND FREE FROM HOLES, RUTS, RIDGES, BUMPS, DUST AND STANDING WATER. ONCE THE DETOUR IS REMOVED AND TRAFFIC RETURNED TO ITS NORMAL PATTERN, THE DESIGNATED LOCAL DETOUR ROUTE SHALL BE RESTORED TO A CONDITION THAT IS EQUIVALENT TO THAT WHICH EXISTED PRIOR TO ITS USE FOR THIS PURPOSE. ALL SUCH WORK SHALL BE PERFORMED WHEN AND AS DETERMINED BY THE ENGINEER.

DURING THE TIME THAT TRAFFIC IS DETOURED, THOSE ROUTES THAT ARE PART OF THE OFFICIAL STATE DETOUR ROUTE THROUGH MUNICIPAL CORPORATIONS, THE CONTRACTOR SHALL MAINTAIN THESE ROUTES IN A CONDITION WHICH IS REASONABLY SMOOTH AND FREE FROM HOLES, RUTS, RIDGES, BUMPS, DUST, AND STANDING WATER.

THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED FOR USE AS DETERMINED BY THE ENGINEER TO MAINTAIN AND SUBSEQUENTLY RESTORE THE DESIGNATED STATE AND LOCAL DETOUR ROUTE.

Table with 2 columns: ITEM, QUANTITY. Rows include ITEM 253, PAVEMENT REPAIR (25 CU. YD.), ITEM 441, ASPHALT CONCRETE SURFACE COURSE (25 CU. YD.), ITEM 407, TACK COAT (50 GAL.), ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC (50 CU. YD.), ITEM 617, COMPACTED AGGREGATE (25 CU. YD.).

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE ODOT INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE ODOT, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

- DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

IN ADDITION TO THE REQUIREMENT OF C&MS 614 AND THE ODOT, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) MAY BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER:

- FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION OR AT THE POINT OF ROAD CLOSURE, AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS (CONTINUED)

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 16 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

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 8 M. GAL

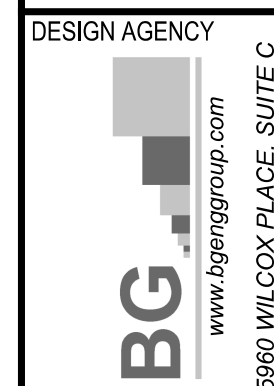
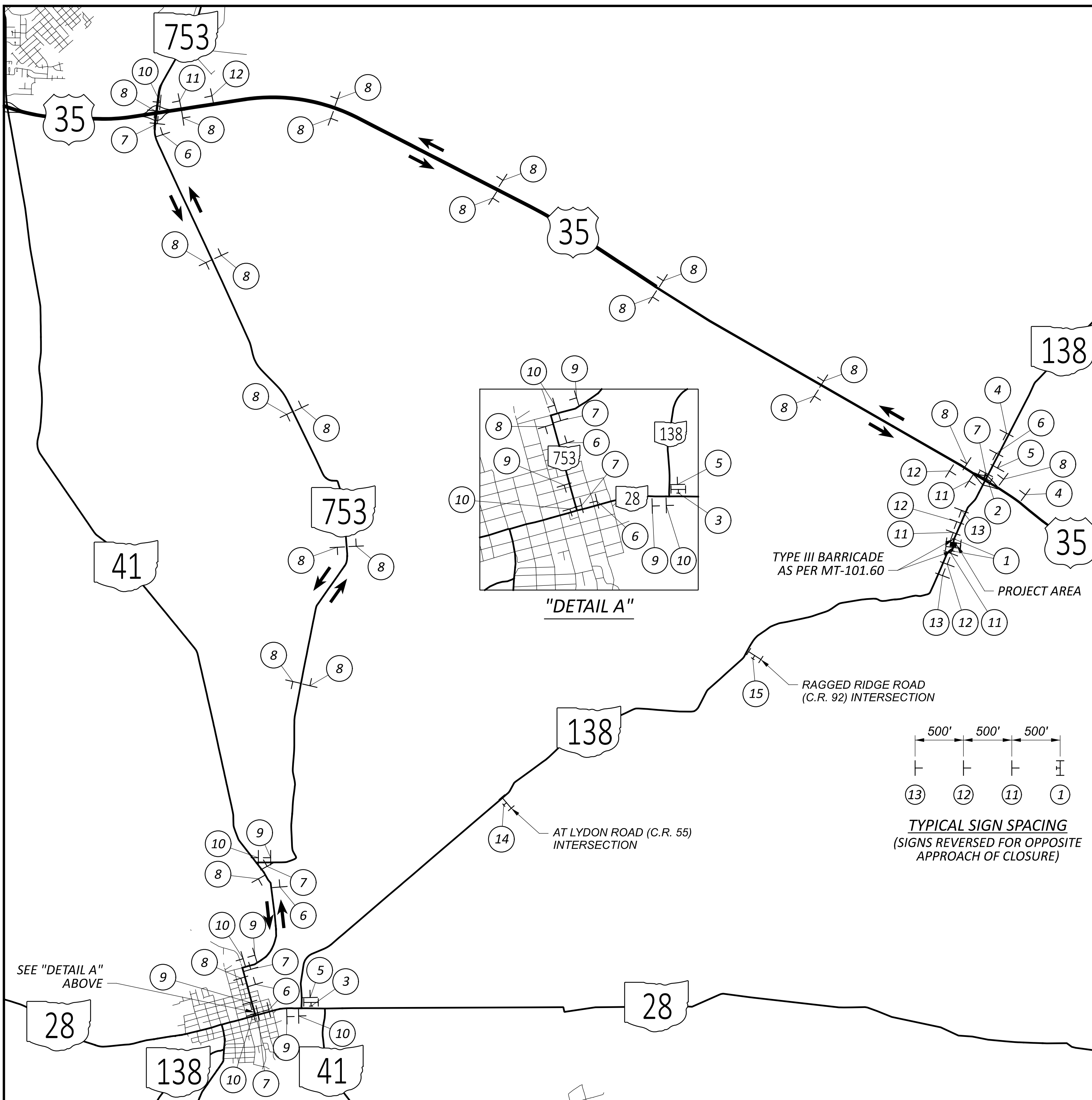


Table with 2 columns: DESIGNER (JEP), REVIEWER (RG), PROJECT ID (105103), SHEET (5), TOTAL (40).

NOTE B:
ALL SIGNS THAT ARE PLACED ON U.S. 35 MAINLINE
OR RAMPS SHALL BE SIZED AS THE FOLLOWING:

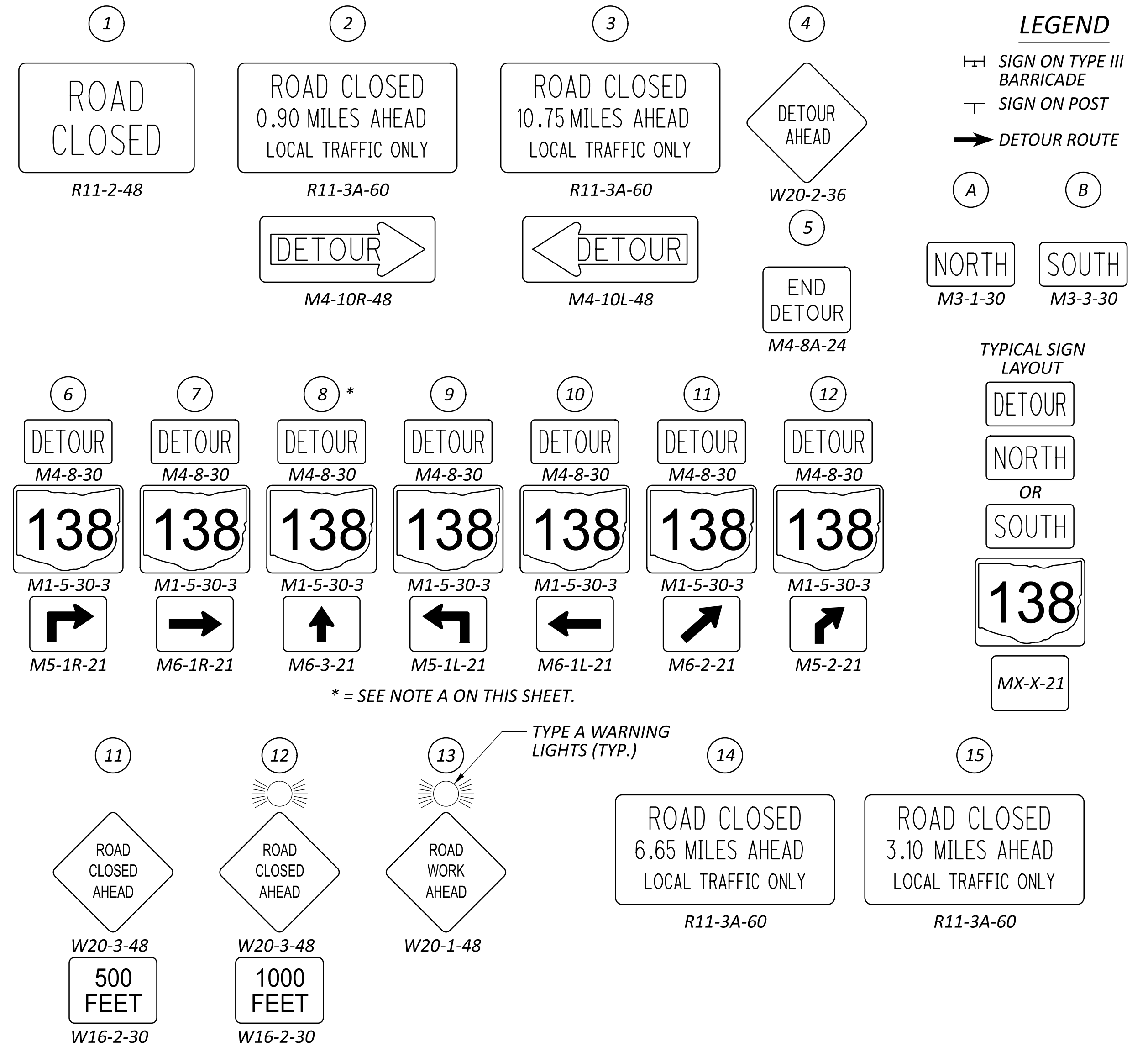
M5/6 = 30" X 21"
M1 = 45" X 36"
M4 = 36" X 18"



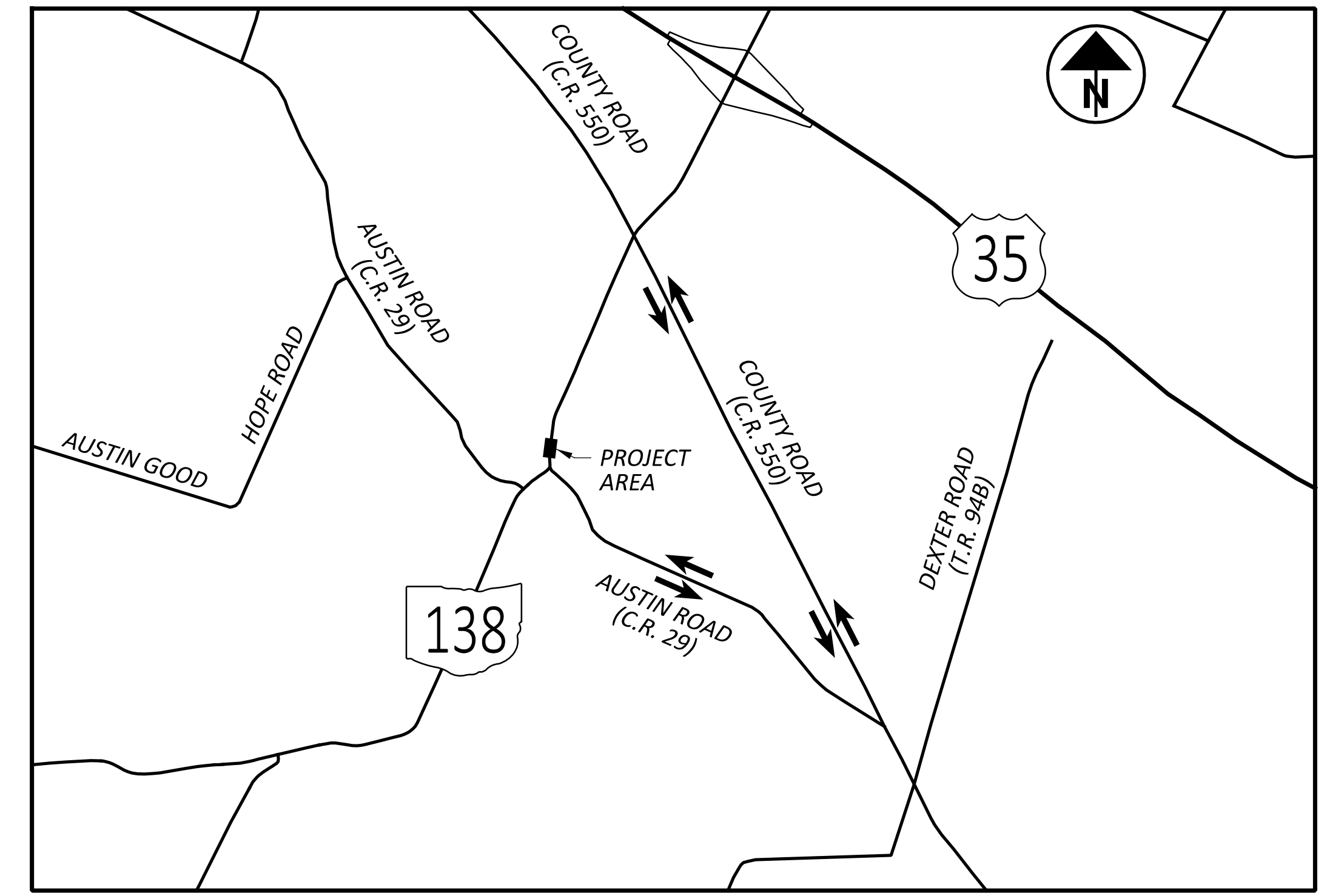
STATE DETOUR

ODOT ROSS COUNTY MAINTENANCE WILL SIGN THE DETOUR

NOTE A:
8A AND 8B REASSURANCE SIGNS SHALL BE ERECTED
AT INTERVALS NOT TO EXCEED 2 MILES ALONG THE
DETOUR ROUTE.



* = SEE NOTE A ON THIS SHEET.



LOCAL DETOUR

ROS-138-10.98

MODEL: Sheet PAPER SIZE: 34x22 (in.) DATE: 2/13/2024 TIME: 1:21:14 PM USER: jperchinske
P:\Transportation\Work\Seals\105103_ROS-138-10.98\402-Engineering_BGE\EngineeringGroup\WOT\Sheets\105103_MD001.dgn

DETOUR MAP

DESIGN AGENCY
BG
www.bgegroup.com
5560 WILCOX PLACE, SUITE C
DUBLIN, OHIO 43016

DESIGNER
JEP


REVIEWER
RG 02-12-24

PROJECT ID
105103

SHEET TOTAL
6 40

SHEET NUM.												PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.	
4		5		9		21	25		26	32	RW PLANS	OFFICE CALCS	01/STR/04	EXT	TOTAL				
ROADWAY																			
LS				2									LS	201	11000	LS		CLEARING AND GRUBBING	
				289									2	202	20010	2	EACH	HEADWALL REMOVED	
				177									289	202	23000	289	SY	PAVEMENT REMOVED	
				526									177	202	35200	177	FT	PIPE REMOVED, OVER 24"	
				LS									526	202	38000	526	FT	GUARDRAIL REMOVED	
				LS									LS	202	98000	LS		REMOVAL MISC.: RETAINING WALL (SHEET PILING)	
				LS									LS	202	98000	LS		REMOVAL MISC.: RETAINING WALL (CONCRETE)	
						803	77						880	203	10000	880	CY	EXCAVATION	
						1,645	31						1,676	203	20000	1,676	CY	EMBANKMENT	
												382	404	204	10000	404	SY	SUBGRADE COMPACTION	
													312.5	606	15050	312.5	FT	GUARDRAIL, TYPE MGS	
				4									4	606	26150	4	EACH	ANCHOR ASSEMBLY, MGS TYPE E (NCHRP 350/MASH 2016)	
											10		10	623	38500	10	EACH	MONUMENT ASSEMBLY, TYPE C	
											4		4	623	40500	4	EACH	REFERENCE MONUMENT, TYPE A	
											10		10	623	40520	10	EACH	RIGHT-OF-WAY MONUMENT, TYPE B	
				1									1	SPECIAL	69050350	1	EACH	MAILBOX REMOVED AND RESET	
EROSION CONTROL																			
									62				62	601	11000	62	SY	RIPRAP, TYPE D	
									10				10	601	32004	10	CY	ROCK CHANNEL PROTECTION, TYPE A WITH GEOTEXTILE FABRIC	
									9				9	601	32104	9	CY	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC	
262													262	659	00300	262	CY	TOPSOIL	
2,363													2,363	659	10000	2,363	SY	SEEDING AND MULCHING	
0.32													0.32	659	20000	0.32	TON	COMMERCIAL FERTILIZER	
0.49													0.49	659	31000	0.49	ACRE	LIME	
13													13	659	35000	13	MGAL	WATER	
													5,319	832	30000	5,319	EACH	EROSION CONTROL	
DRAINAGE																			
									LS				LS	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
									55				55	503	21100	55	CY	UNCLASSIFIED EXCAVATION	
									2,239				2,239	509	10000	2,239	LB	EPOXY COATED STEEL REINFORCEMENT	
									11				11	511	46010	11	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING	
									14				14	511	46510	14	CY	CLASS QC1 CONCRETE, FOOTING	
									25				25	512	10100	25	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
									4				4	518	21200	4	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	
									1.84				1.84	602	20000	1.84	CY	CONCRETE MASONRY	
92									177				92	605	31100	92	FT	AGGREGATE DRAINS	
													177	611	19200	177	FT	42" CONDUIT, TYPE A42" CONDUIT, TYPE A [707.01 OR 707.02 METALLIC COATED (ALUMINIZED), 706.02 REINFORCED CONCRETE CIRCULAR PIPE, OR 707.33 CORRUGATED POLYETHYLENE SMOOTH LINED PIPE]	
PAVEMENT																			
		25											25	253	02000	25	CY	PAVEMENT REPAIR	
												673	673	254	01000	673	SY	PAVEMENT PLANING, ASPHALT CONCRETE (1.50")	
												68	68	301	56000	68	CY	ASPHALT CONCRETE BASE, PG64-22, (449)	
				5									63	68	304	20000	68	CY	AGGREGATE BASE
		50											112	162	407	10000	162	GAL	TACK COAT
		25											53	78	441	70000	78	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22
		25											25	617	10100	25	CY	COMPACTED AGGREGATE	
TRAFFIC CONTROL																			
										6			6	621	00100	6	EACH	RPM	
										6			6	621	54000	6	EACH	RAISED PAVEMENT MARKER REMOVED	
										13			13	626	00112	13	EACH	BARRIER REFLECTOR, TYPE 3 (BI-DIRECTIONAL)	
										65.6			65.6	630	03100	65.6	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
										25.5			25.5	630	04100	25.5	FT	GROUND MOUNTED SUPPORT, NO. 4 POST	
										6			6	630	08600	6	EACH	SIGN POST REFLECTOR	
										17			17	630	85100	17	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	

GENERAL SUMMARY

DESIGN AGENCY

 www.bgengr.com
 5560 WILCOX PLACE, SUITE C
 DUBLIN, OHIO 43016

DESIGNER
 JEP


REVIEWER
 RG 02-12-24

PROJECT ID
 105103

SHEET TOTAL
 7 40

SHEET NUM.											PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
											01/STR/04	EXT	TOTAL				
	5									32							
											8	630	86002	8	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
											0.12	642	00104	0.12	MILE	EDGE LINE, 6", TYPE 1	
											0.06	642	00300	0.06	MILE	CENTER LINE, TYPE 1	
											1	642	01400	1	EACH	WORD ON PAVEMENT, 72", TYPE 1	
											1	642	01602	1	EACH	BIKE LANE SYMBOL MARKING, TYPE 1	
																MAINTENANCE OF TRAFFIC	
	16										16	614	11110	16	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
	LS										LS	614	12420	LS		DETOUR SIGNING	
	50										50	614	13000	50	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
	8										8	616	10000	8	MGAL	WATER	
																INCIDENTALS	
											LS	614	11000	LS		MAINTAINING TRAFFIC	
											4	619	16000	4	MNTH	FIELD OFFICE, TYPE A	
											LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
											LS	623	50000	LS		PRECONSTRUCTION SURVEY MONUMENT VERIFICATION AND REPORT	
											LS	623	51000	LS		POST CONSTRUCTION SURVEY MONUMENT VERIFICATION AND REPORT	
											LS	624	10000	LS		MOBILIZATION	

GENERAL SUMMARY



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RG 02-12-24

PROJECT ID
105103

SHEET TOTAL
8 40

REF. NO.	SHEET NO.	STATION TO STATION	SIDE	202						204		304		606		690
				HEADWALL REMOVED	PAVEMENT REMOVED	PIPE REMOVED, OVER 24"	GUARDRAIL REMOVED	REMOVAL MISC.: RETAINING WALL (SHEET PILING)	REMOVAL MISC.: RETAINING WALL (CONCRETE)	SUBGRADE COMPACTION	8" AGGREGATE BASE	GUARDRAIL, TYPE MGS	ANCHOR ASSEMBLY, MGS TYPE E	SPECIAL - MAILBOX REMOVED AND RESET		
				EACH	SQ YD	FEET	FEET	LS	LS	SQ YD	CU YD	FEET	EACH	EACH		
DR-1	10	11+58	RT							22	5					
GR-1	10	579+50.00 - 583+47.00	LT				401					300.0	2			
GR-2	10	580+70.25 - 581+83.77	RT				125					12.5	2			
R-1	10	579+49 - 579+55	LT													1
R-2	10	580+75 - 583+25	LT/RT		233											
R-3	10	580+75 - 583+37	LT					LS								
R-4	10	580+84 - 580+89	LT						LS							
R-5	10	581+01	LT/RT	1		73										
R-6	10	11+61.50	LT/RT	1		104										
R-7	10	11+40 - 11+90	LT/RT		56											
TOTALS CARRIED TO GENERAL SUMMARY				2	289	177	526	LS	LS	22	5	312.5	4			1

SUBSUMMARY

DESIGN AGENCY

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 DUBLIN, OHIO 43016

DESIGNER
 JEP

REVIEWER
 RG 02-12-24

PROJECT ID
 105103

SHEET TOTAL
 9 40

BENCHMARK DATA	
STA. 579+41.32	18.71' RT
BM #1	ELEV. 766.56
BENCH TIE ON PP NEAR NE CORNER OF AUSTIN RD AND S.R. 138	

E = ANCHOR ASSEMBLY, MGS TYPE E

- PROPOSED PAVEMENT
- PROPOSED RESURFACING
- PROPOSED GRAVEL DRIVE
- PROPOSED RCP
- PROPOSED RIPRAP

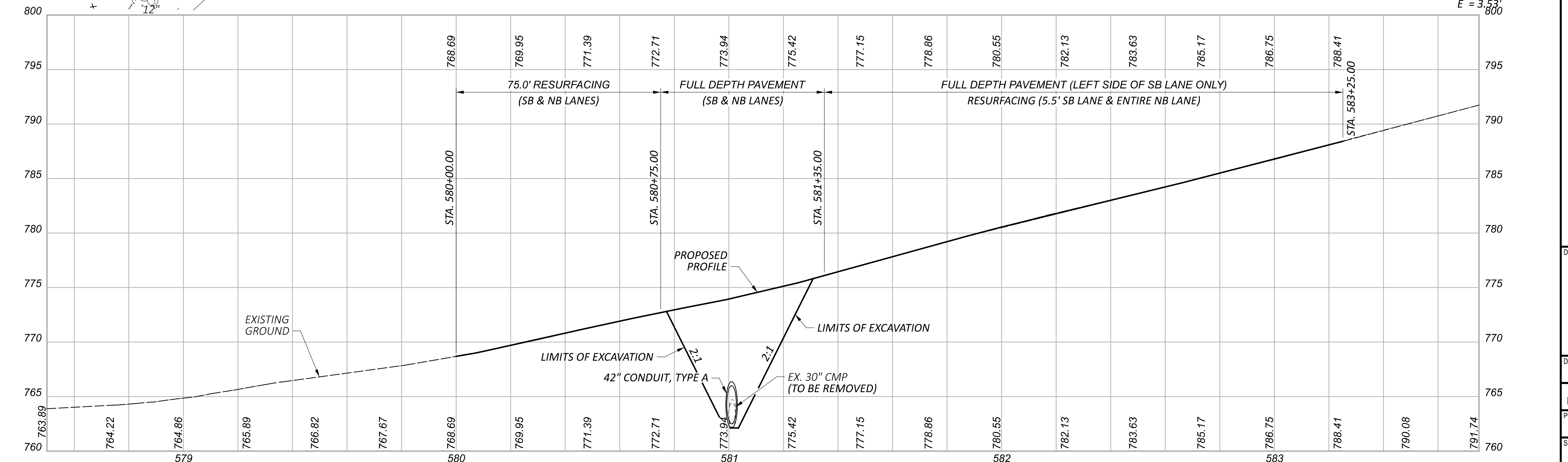
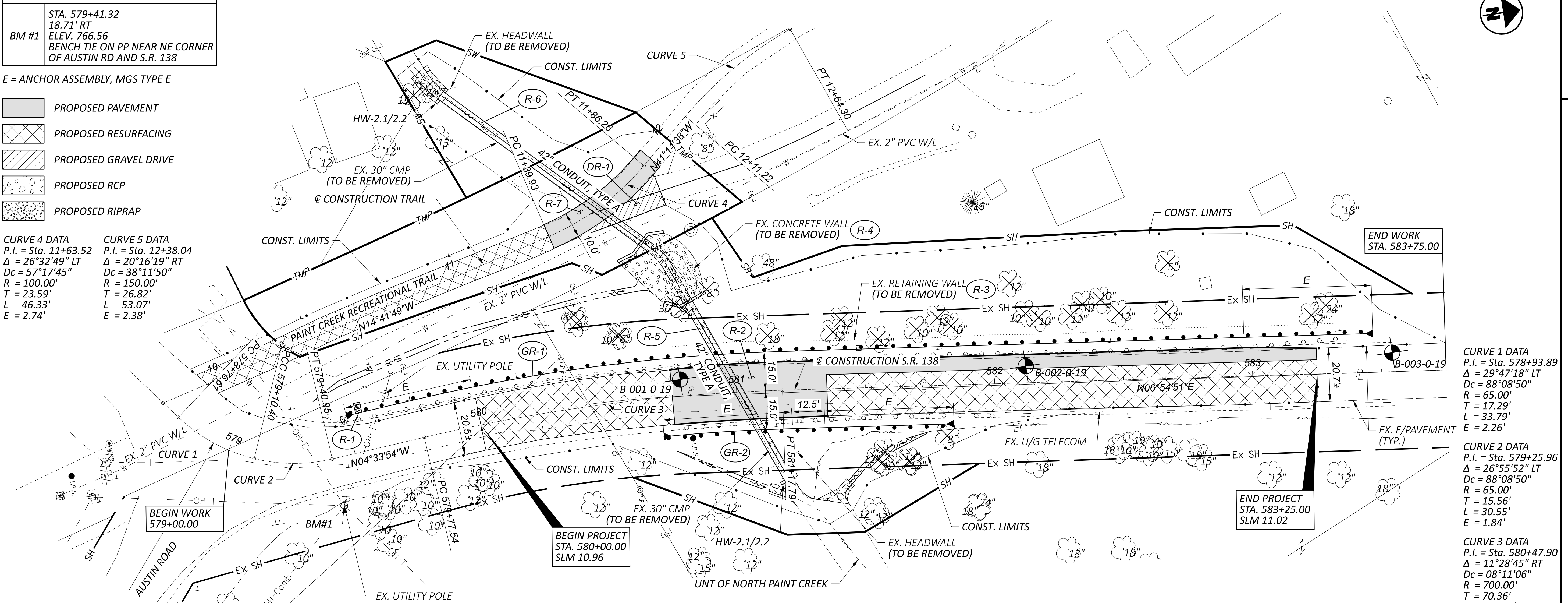
CURVE 4 DATA
 P.I. = Sta. 11+63.52
 $\Delta = 26^{\circ}32'49''$ LT
 $Dc = 57^{\circ}17'45''$
 $R = 100.00'$
 $T = 23.59'$
 $L = 46.33'$
 $E = 2.74'$

CURVE 5 DATA
 P.I. = Sta. 12+38.04
 $\Delta = 20^{\circ}16'19''$ RT
 $Dc = 38^{\circ}11'50''$
 $R = 150.00'$
 $T = 26.82'$
 $L = 53.07'$
 $E = 2.38'$

CURVE 1 DATA
 P.I. = Sta. 578+93.89
 $\Delta = 29^{\circ}47'18''$ LT
 $Dc = 88^{\circ}08'50''$
 $R = 65.00'$
 $T = 17.29'$
 $L = 33.79'$
 $E = 2.26'$

CURVE 2 DATA
 P.I. = Sta. 579+25.96
 $\Delta = 26^{\circ}55'52''$ LT
 $Dc = 88^{\circ}08'50''$
 $R = 65.00'$
 $T = 15.56'$
 $L = 30.55'$
 $E = 1.84'$

CURVE 3 DATA
 P.I. = Sta. 580+47.90
 $\Delta = 11^{\circ}28'45''$ RT
 $Dc = 08^{\circ}11'06''$
 $R = 700.00'$
 $T = 70.36'$
 $L = 140.24'$
 $E = 3.53'$



PLAN AND PROFILE
STA. 578+50.00 TO STA. 583+75.00



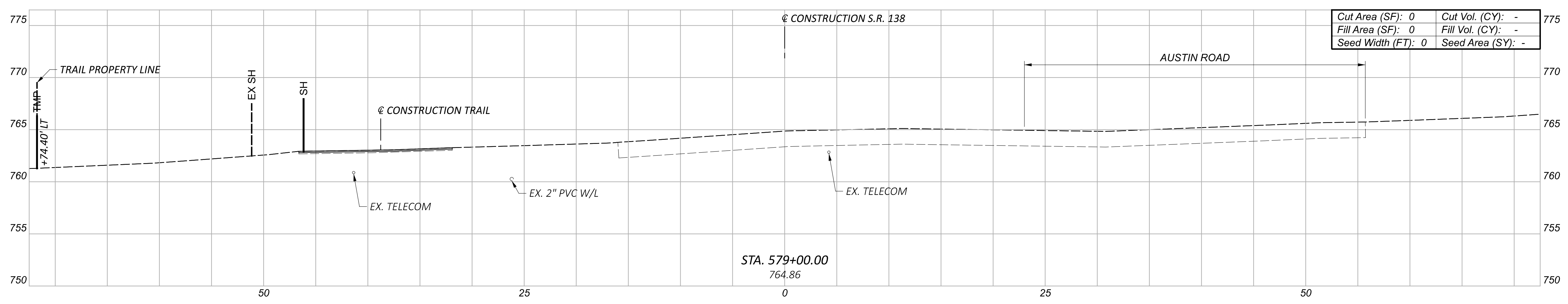
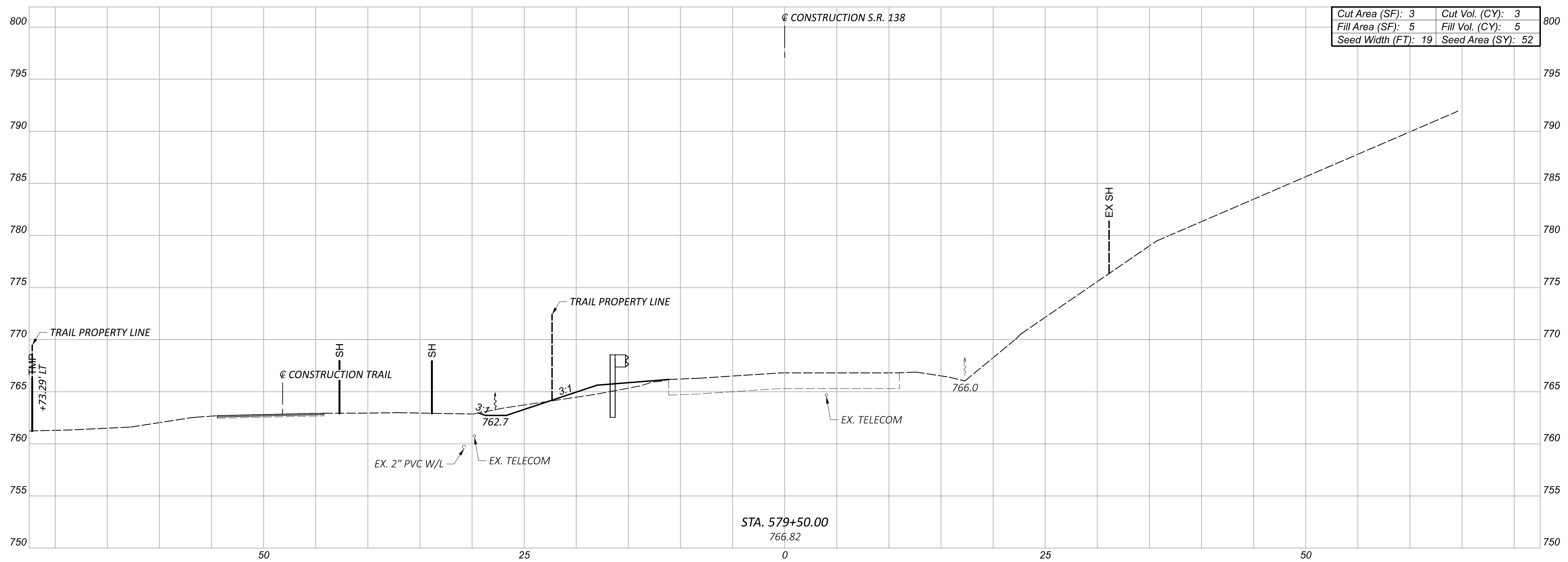
DESIGN AGENCY
BG
 www.bgengr.com
 5960 WILCOX PLACE, SUITE C
 DUBLIN, OHIO 43016

DESIGNER
JEP

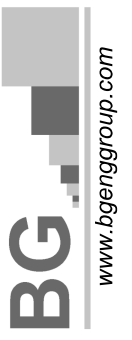
REVIEWER
RG 02-12-24

PROJECT ID
105103

SHEET TOTAL
 10 40



CROSS SECTIONS
 STA. 579+00.00 TO STA. 579+50.00

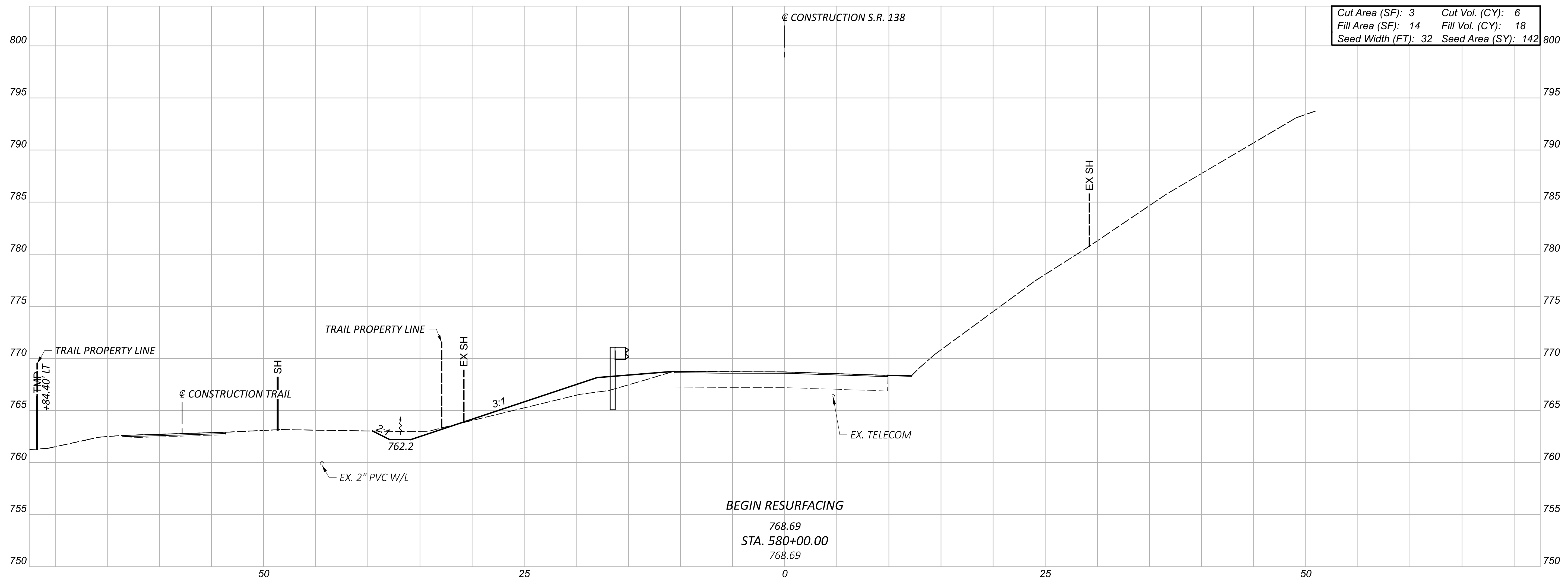
DESIGN AGENCY

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 5560 WILCOX PLACE, SUITE C
 DUBLIN, OHIO 43016

DESIGNER
 JEP

REVIEWER
 RG 02-12-24

PROJECT ID
 105103

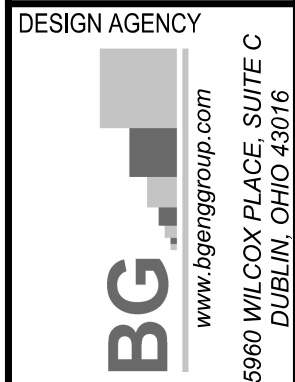
Sheet Totals			105103	
Seeding	Cut	Fill	SHEET	TOTAL
52	3	5	11	40



Cut Area (SF): 3	Cut Vol. (CY): 6
Fill Area (SF): 14	Fill Vol. (CY): 18
Seed Width (FT): 32	Seed Area (SY): 142

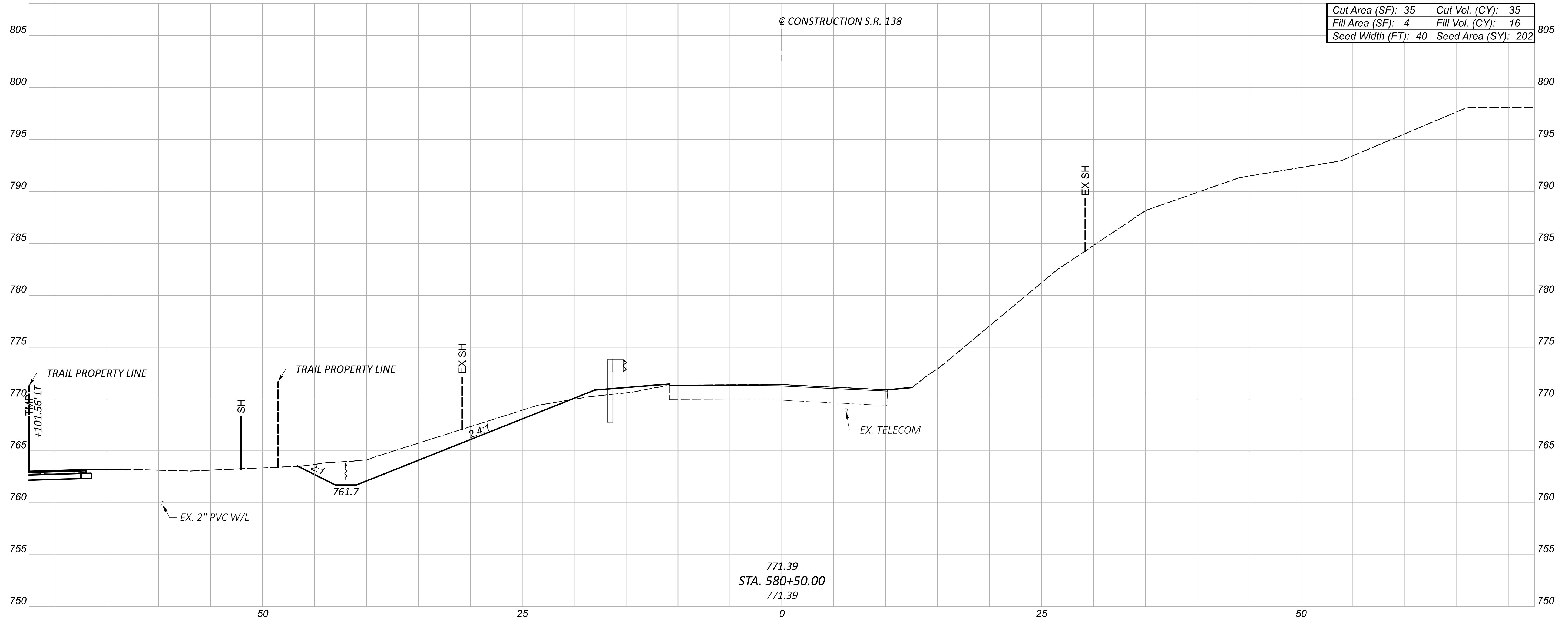
BEGIN RESURFACING
 768.69
 STA. 580+00.00
 768.69

CROSS SECTIONS
 STA. 580+00.00



DESIGNER: JEP
 REVIEWER: RG
 PROJECT ID: 105103

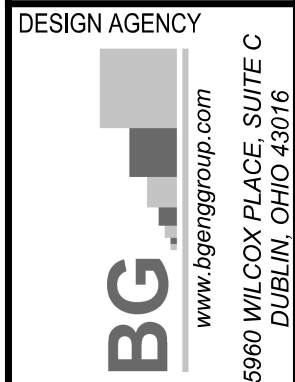
Sheet Totals			105103	
Seeding	Cut	Fill	SHEET	TOTAL
142	6	18	12	40



Cut Area (SF): 35	Cut Vol. (CY): 35
Fill Area (SF): 4	Fill Vol. (CY): 16
Seed Width (FT): 40	Seed Area (SY): 202

771.39
 STA. 580+50.00
 771.39

CROSS SECTIONS
 STA. 580+50.00

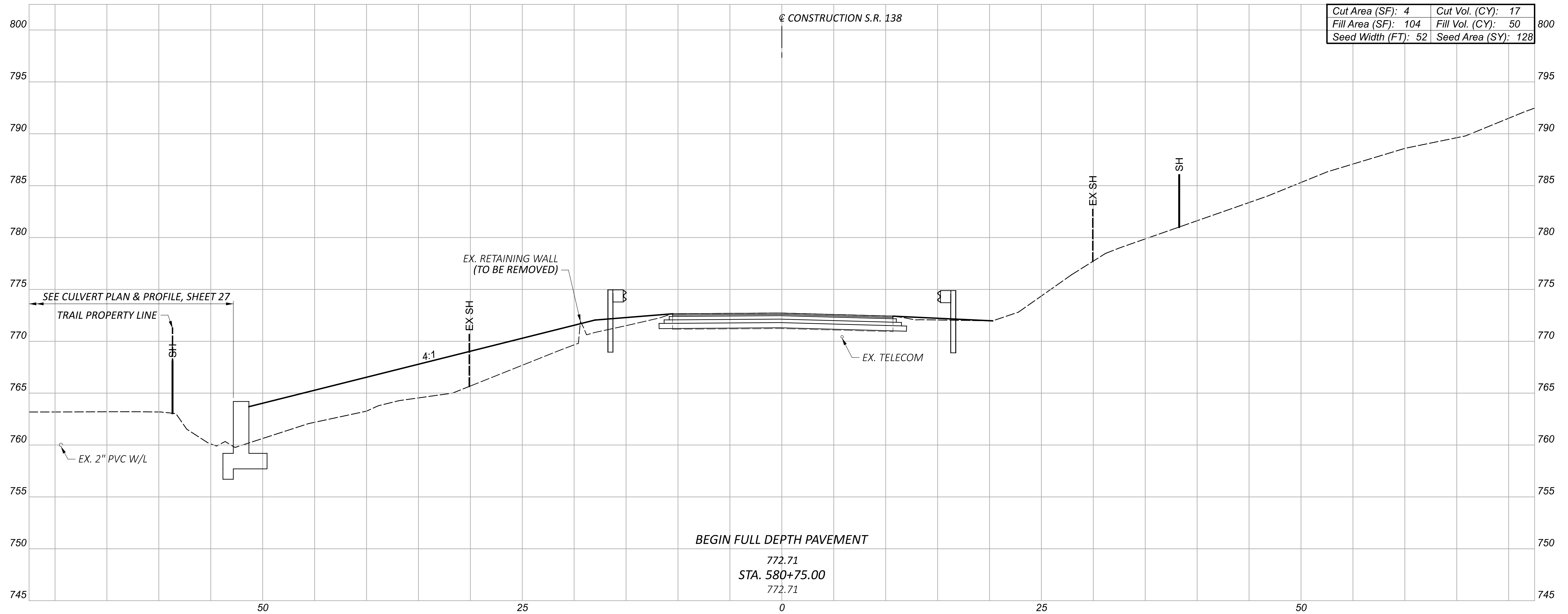


DESIGNER
 JEP

REVIEWER
 RG 02-12-24

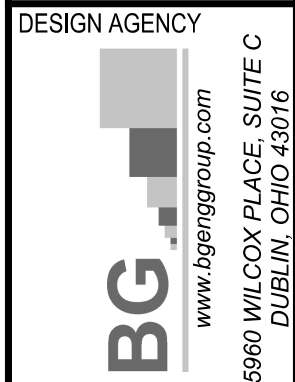
PROJECT ID
 105103

Sheet Totals			105103	
Seeding	Cut	Fill	SHEET	TOTAL
202	35	16	13	40



Cut Area (SF): 4	Cut Vol. (CY): 17
Fill Area (SF): 104	Fill Vol. (CY): 50
Seed Width (FT): 52	Seed Area (SY): 128

CROSS SECTIONS
 STA. 580+75.00



DESIGNER
 JEP

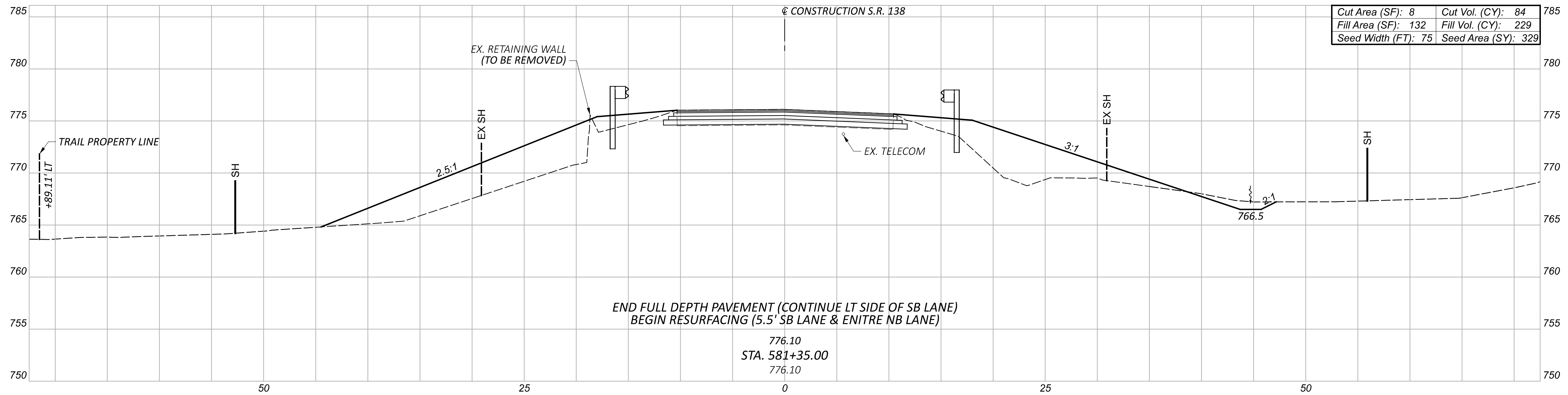
REVIEWER
 RG 02-12-24

PROJECT ID
 105103

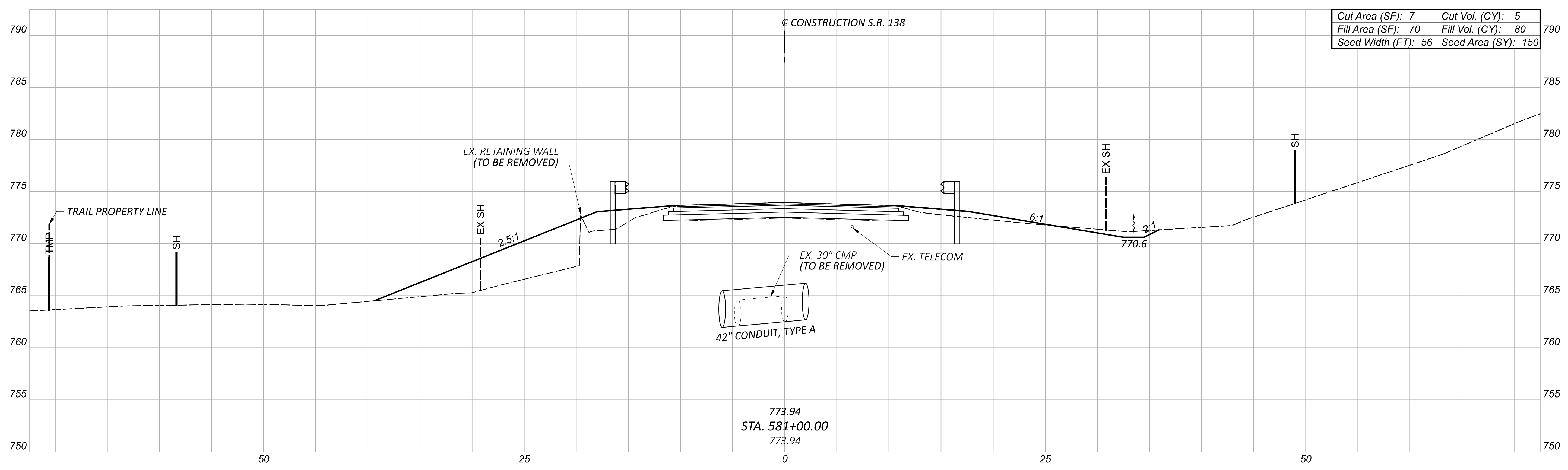
Sheet Totals		
Seeding	Cut	Fill
128	17	50

SHEET	TOTAL
14	40

BEGIN FULL DEPTH PAVEMENT
 772.71
 STA. 580+75.00
 772.71



Cut Area (SF): 8	Cut Vol. (CY): 84
Fill Area (SF): 132	Fill Vol. (CY): 229
Seed Width (FT): 75	Seed Area (SY): 329



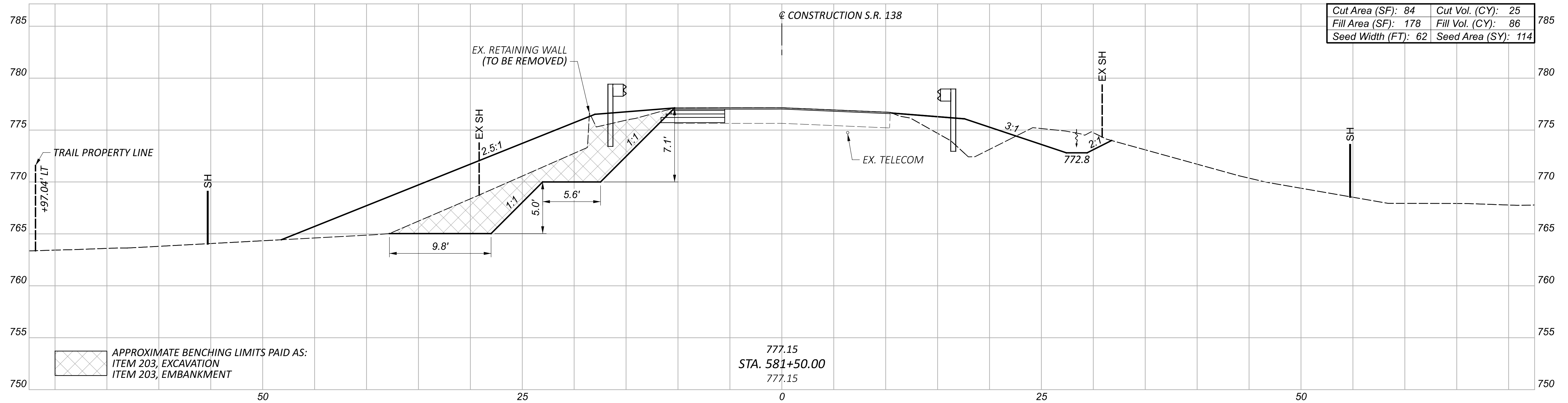
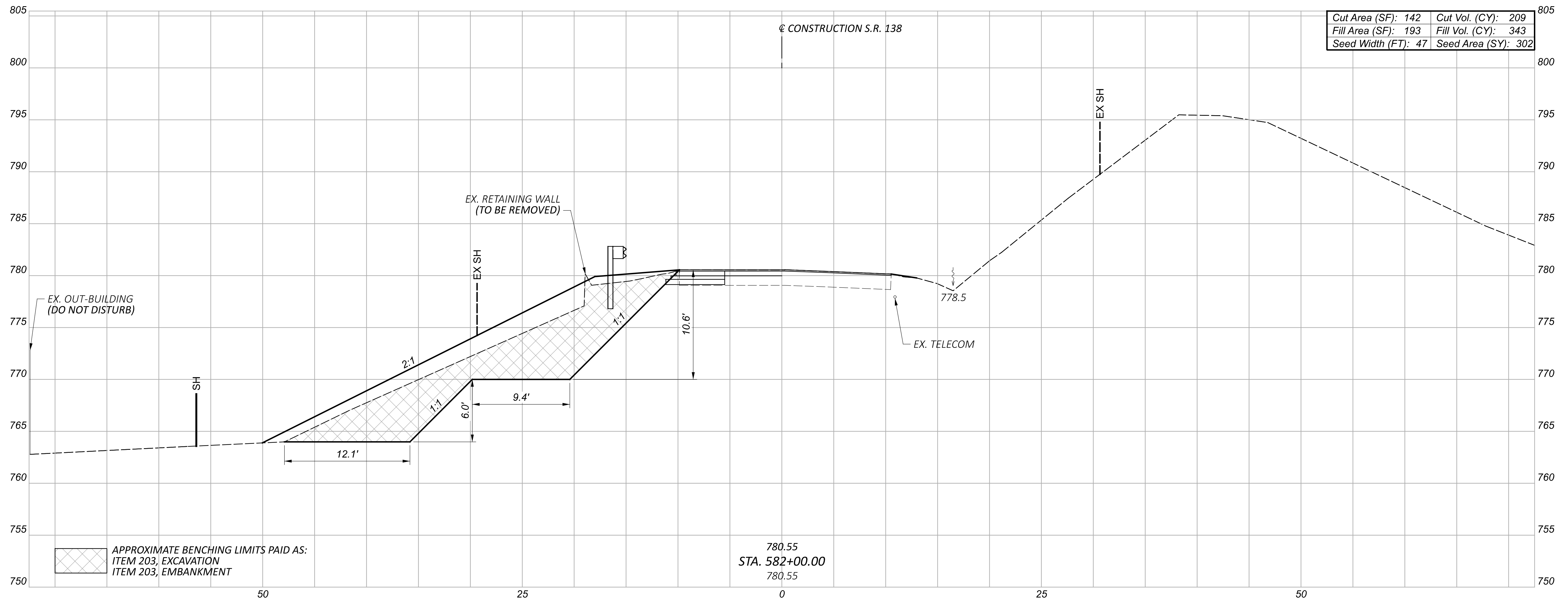
Cut Area (SF): 7	Cut Vol. (CY): 5
Fill Area (SF): 70	Fill Vol. (CY): 80
Seed Width (FT): 56	Seed Area (SY): 150

CROSS SECTIONS
 STA. 581+00.00 TO STA. 581+35.00



DESIGNER: JEP
 REVIEWER: RG
 PROJECT ID: 105103

Sheet Totals			105103	
Seeding	Cut	Fill	SHEET	TOTAL
479	89	309	15	40

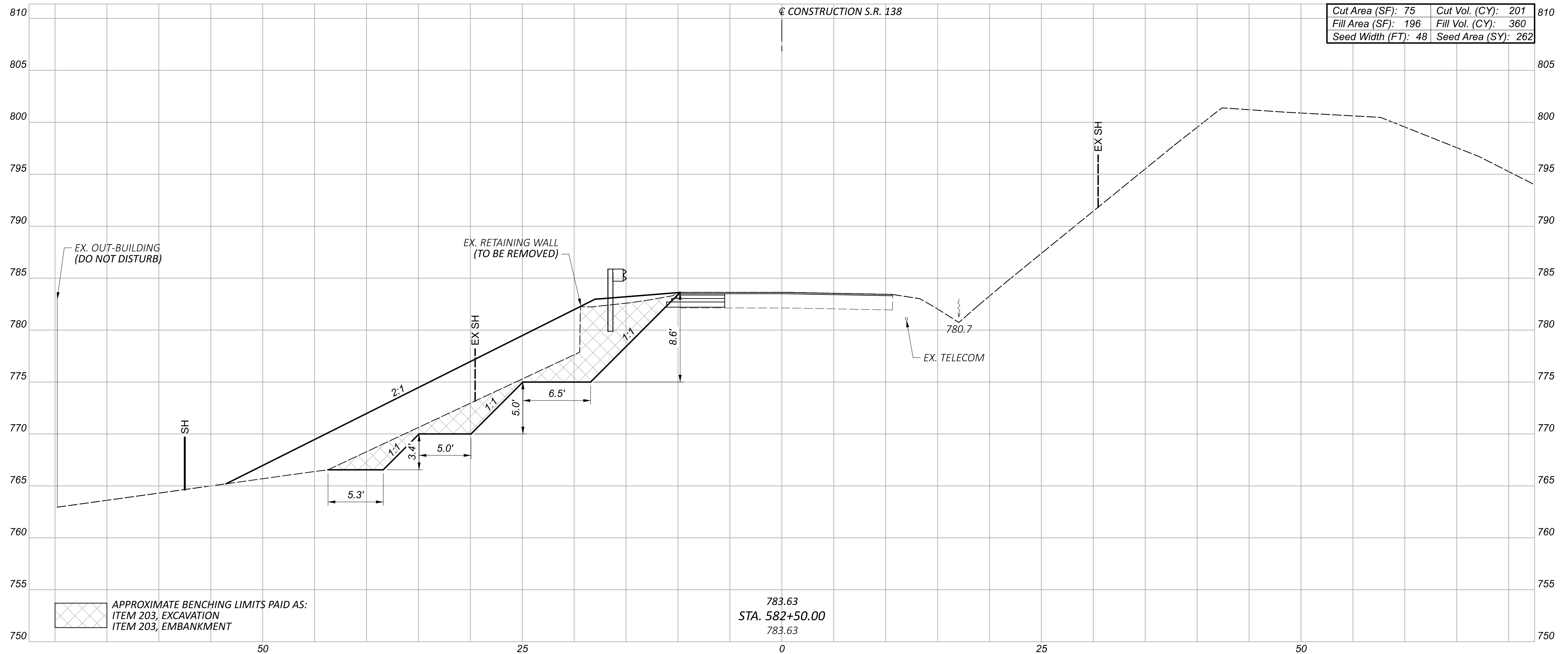


CROSS SECTIONS
STA. 581+50.00 TO STA. 582+00.00



DESIGNER
JEP
REVIEWER
RG 02-12-24
PROJECT ID
105103

Sheet Totals			105103	
Seeding	Cut	Fill	SHEET	TOTAL
416	234	429	16	40

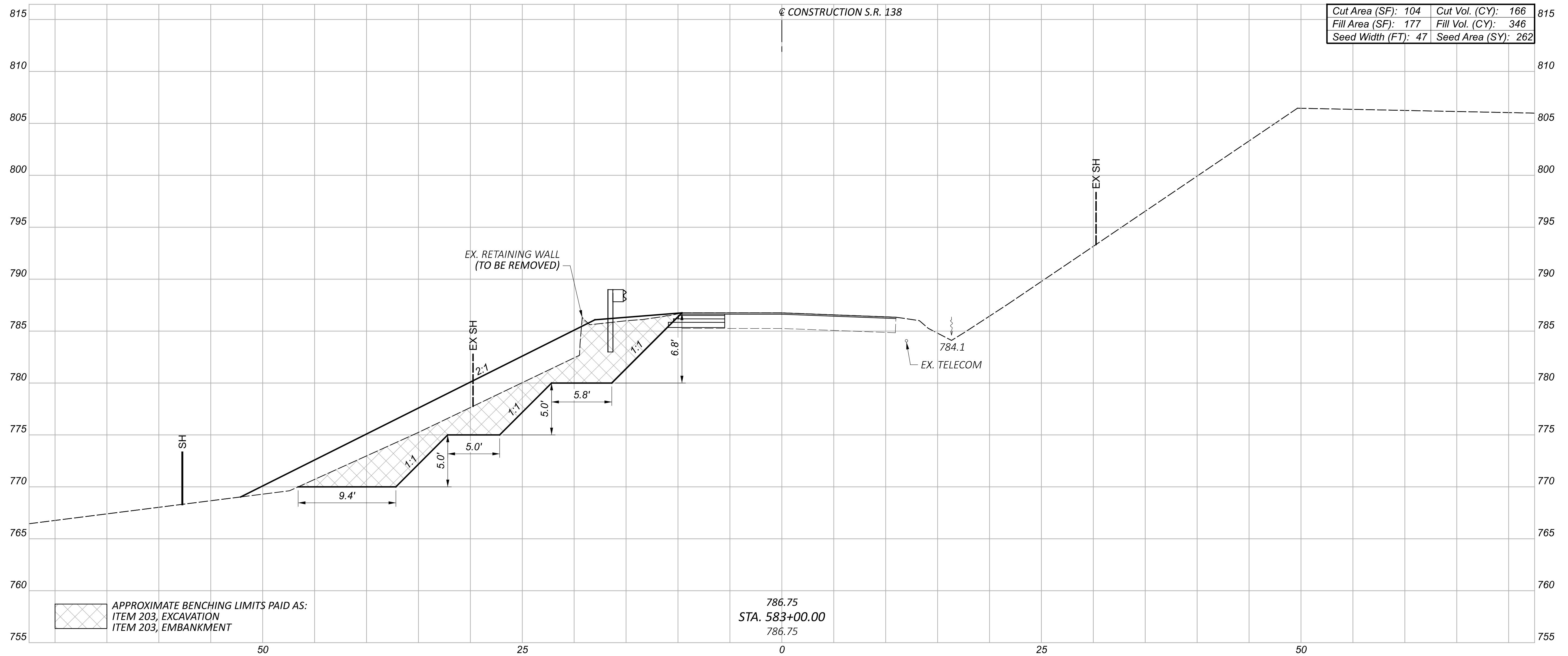


CROSS SECTIONS
 STA. 582+50.00

DESIGN AGENCY
BG
 www.bgengineering.com
 5560 WILCOX PLACE, SUITE C
 DUBLIN, OHIO 43016

DESIGNER: JEP
 REVIEWER: RG
 PROJECT ID: 105103

Sheet Totals			105103	
Seeding	Cut	Fill	SHEET	TOTAL
262	201	360	17	40



 APPROXIMATE BENCHING LIMITS PAID AS:
 ITEM 203, EXCAVATION
 ITEM 203, EMBANKMENT

786.75
 STA. 583+00.00
 786.75

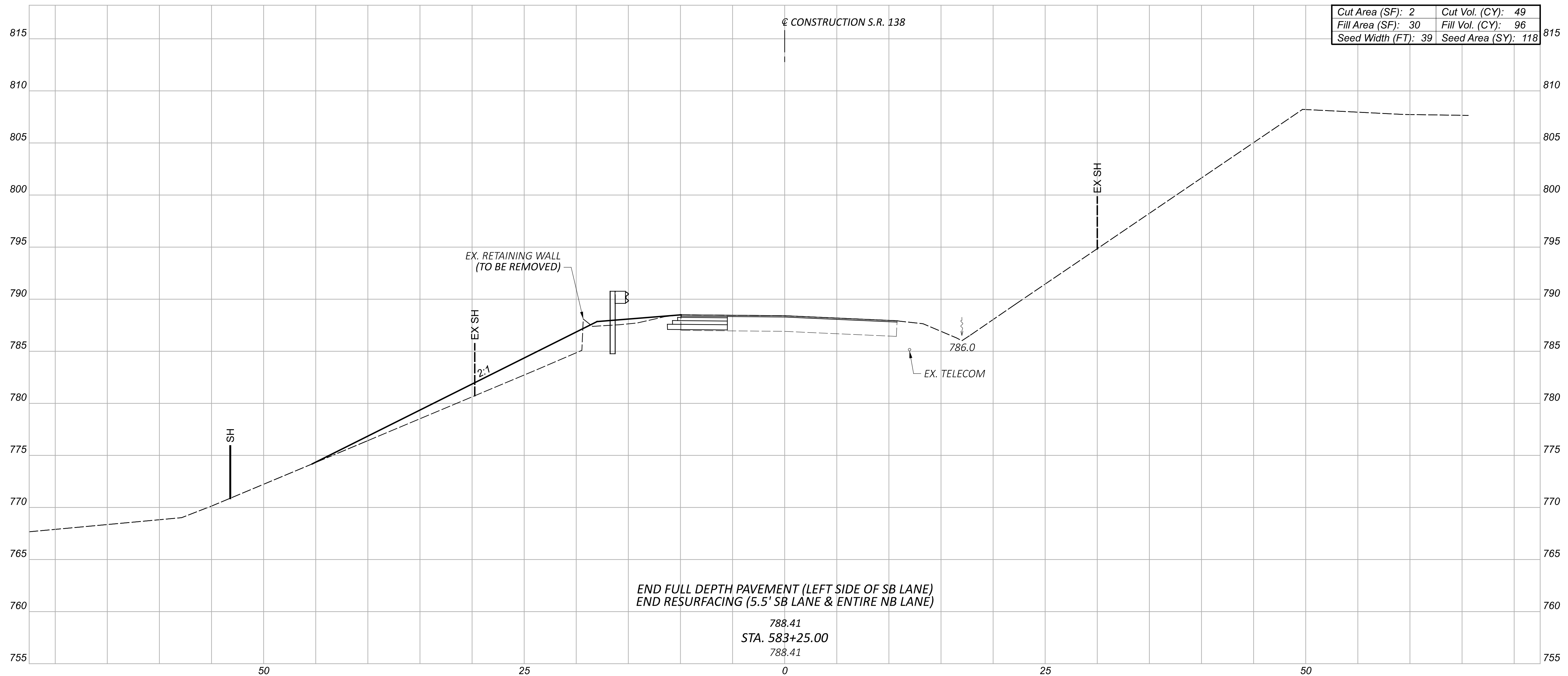
CROSS SECTIONS
 STA. 583+00.00

DESIGN AGENCY

 www.bgengineering.com
 5560 WILCOX PLACE, SUITE C
 DUBLIN, OHIO 43016

DESIGNER
 JEP
 REVIEWER
 RG 02-12-24
 PROJECT ID
 105103

Sheet Totals			105103	
Seeding	Cut	Fill	SHEET	TOTAL
262	166	346	18	40



END FULL DEPTH PAVEMENT (LEFT SIDE OF SB LANE)
 END RESURFACING (5.5' SB LANE & ENTIRE NB LANE)

788.41
 STA. 583+25.00
 788.41

CROSS SECTIONS
 STA. 583+25.00



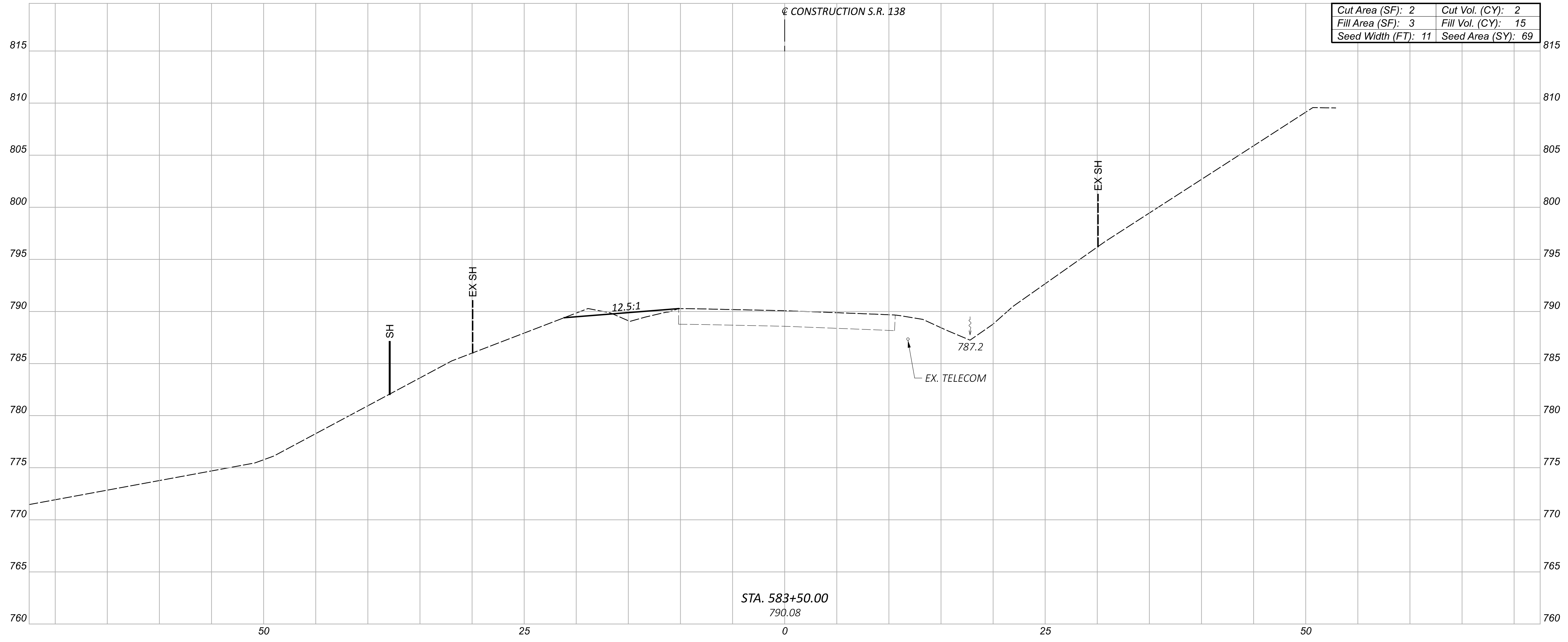
DESIGNER
 JEP

REVIEWER
 RG 02-12-24

PROJECT ID
 105103

Sheet Totals		
Seeding	Cut	Fill
118	49	96

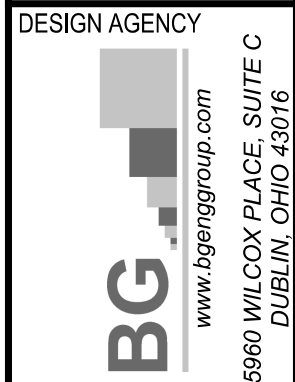
SHEET	TOTAL
19	40



Cut Area (SF): 2	Cut Vol. (CY): 2
Fill Area (SF): 3	Fill Vol. (CY): 15
Seed Width (FT): 11	Seed Area (SY): 69

STA. 583+50.00
790.08

CROSS SECTIONS
STA. 583+50.00



DESIGNER
JEP

REVIEWER
RG 02-12-24

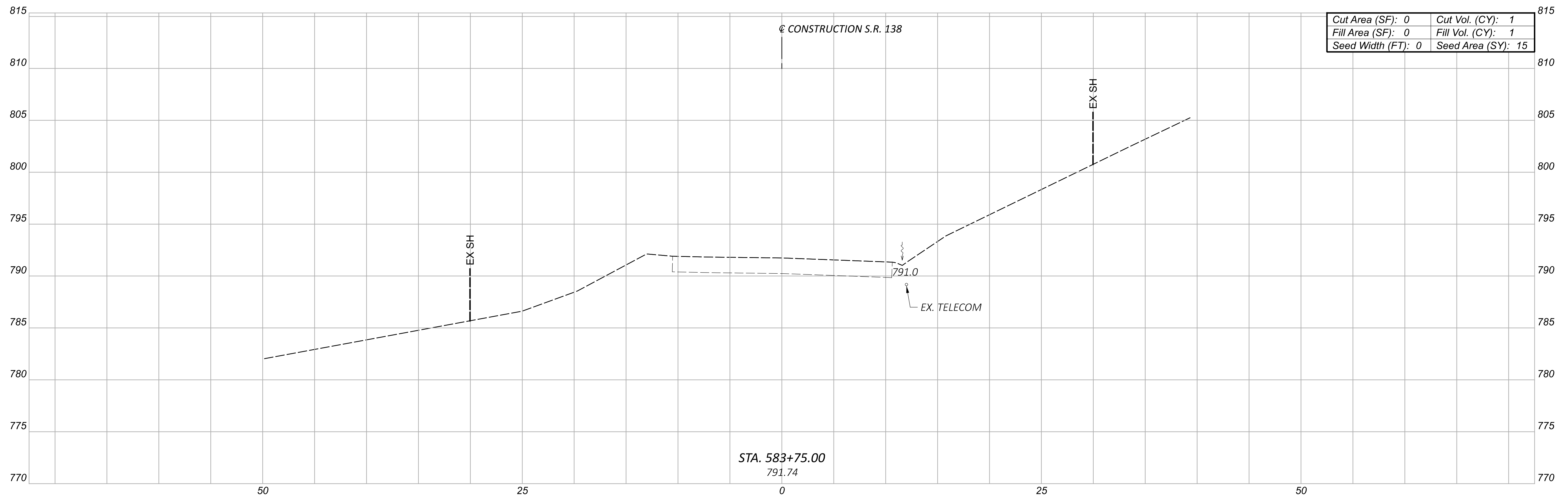
PROJECT ID
105103

Sheet Totals		
Seeding	Cut	Fill
69	1	15

SHEET	TOTAL
20	40

CROSS SECTION TOTALS	
S/M (SY):	2145*
CUT (CY):	803**
FILL (SY):	1645**

* = TOTALS CARRIED TO THE GENERAL NOTES
 ** = TOTALS CARRIED TO THE GENERAL SUMMARY



STA. 583+75.00
791.74

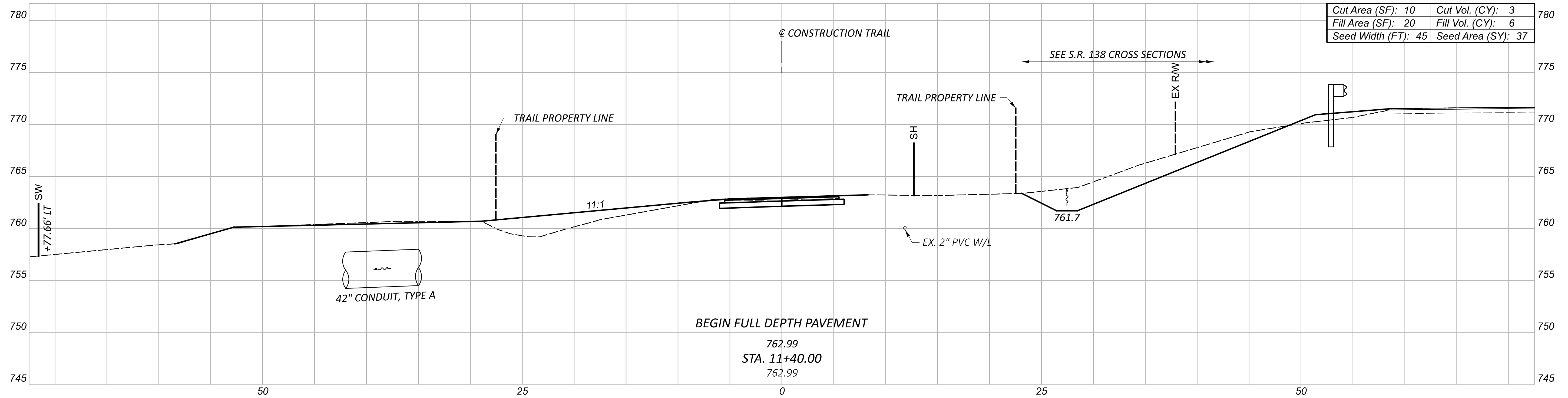


DESIGNER
JEP

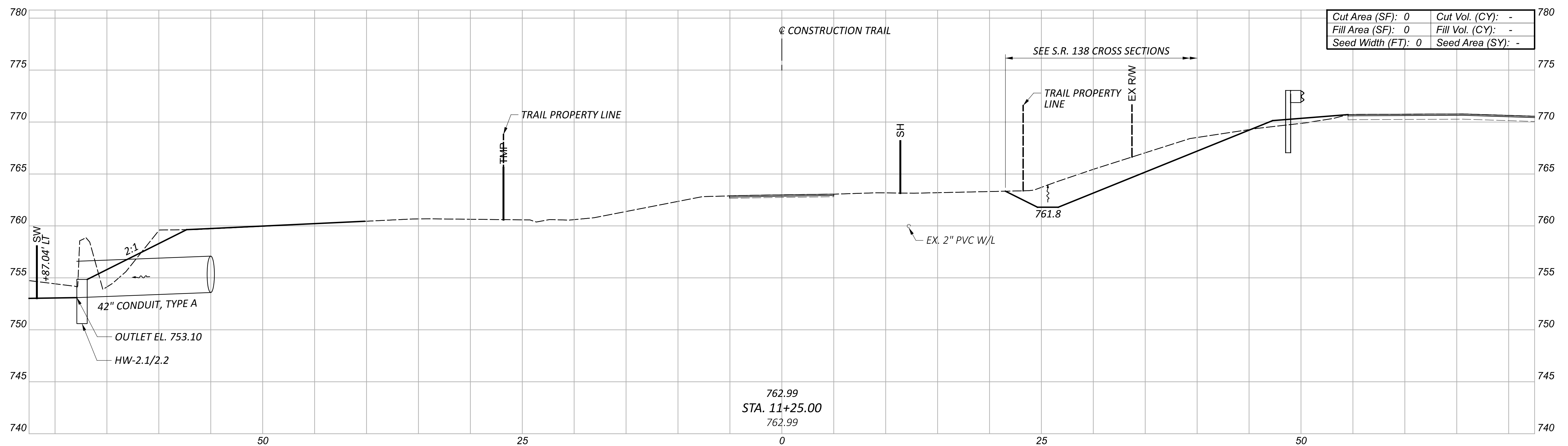
REVIEWER
RG 02-12-24

PROJECT ID
105103

Sheet Totals				SHEET	TOTAL
Seeding	Cut	Fill			
15	1	1		21	40

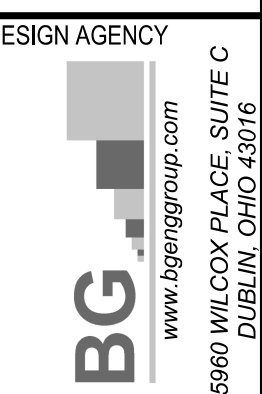


Cut Area (SF): 10	Cut Vol. (CY): 3
Fill Area (SF): 20	Fill Vol. (CY): 6
Seed Width (FT): 45	Seed Area (SY): 37



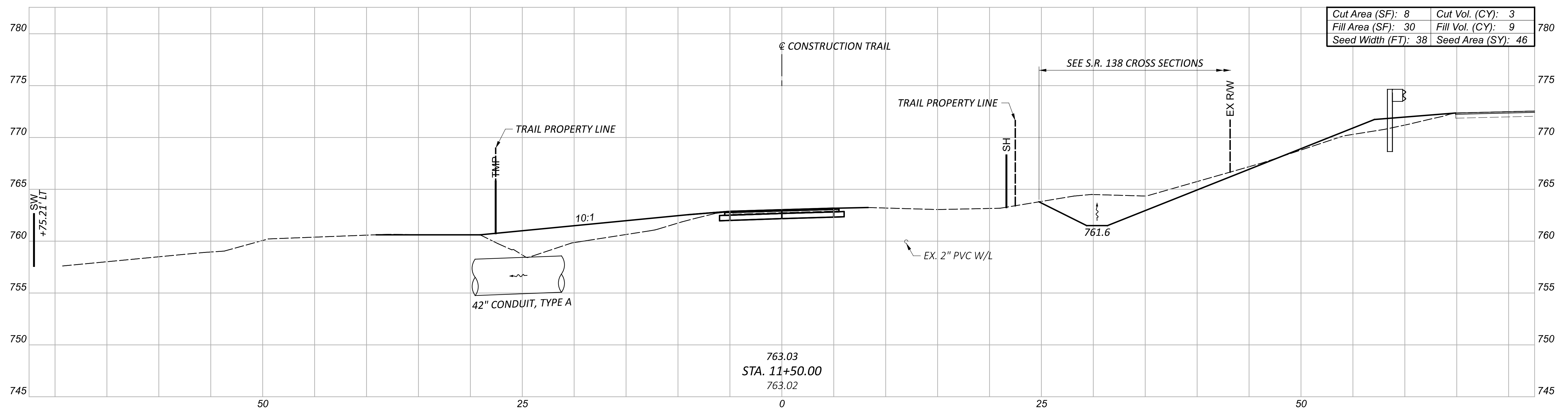
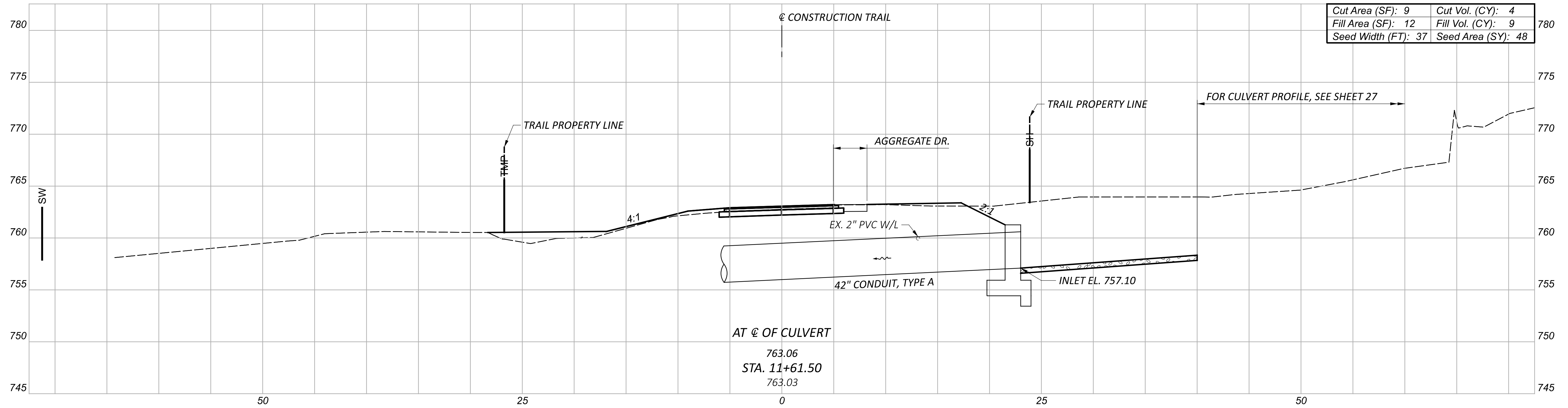
Cut Area (SF): 0	Cut Vol. (CY): -
Fill Area (SF): 0	Fill Vol. (CY): -
Seed Width (FT): 0	Seed Area (SY): -

CROSS SECTIONS - PAINT CREEK RECREATIONAL TRAIL
 STA. 11+25.00 TO STA. 11+40.00



DESIGNER
 JEP
 REVIEWER
 RG 02-12-24
 PROJECT ID
 105103

Sheet Totals			105103	
Seeding	Cut	Fill	SHEET	TOTAL
37	3	6	22	40



CROSS SECTIONS - PAINT CREEK RECREATIONAL TRAIL
 STA. 11+50.00 TO STA. 11+61.50

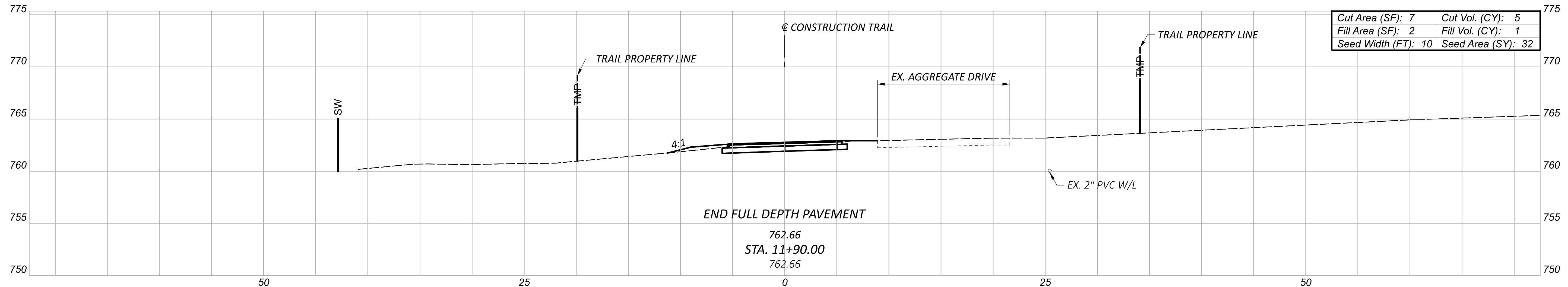


DESIGNER
 JEP

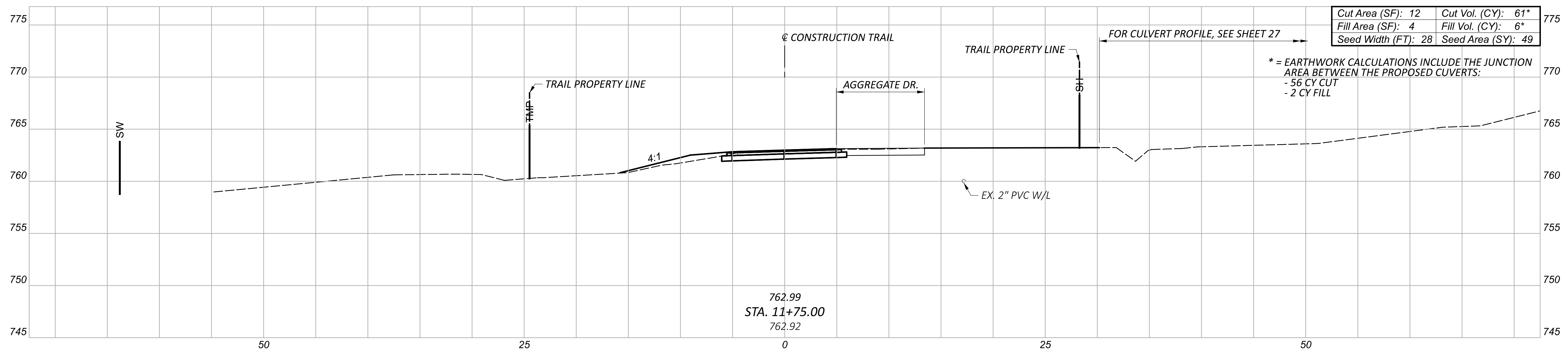
REVIEWER
 RG 02-12-24

PROJECT ID
 105103

Sheet Totals			105103	
Seeding	Cut	Fill	SHEET	TOTAL
94	7	18	23	40



Cut Area (SF): 7	Cut Vol. (CY): 5
Fill Area (SF): 2	Fill Vol. (CY): 1
Seed Width (FT): 10	Seed Area (SY): 32

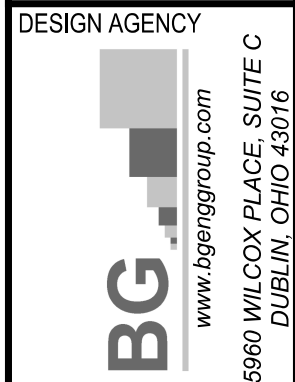


Cut Area (SF): 12	Cut Vol. (CY): 61*
Fill Area (SF): 4	Fill Vol. (CY): 6*
Seed Width (FT): 28	Seed Area (SY): 49

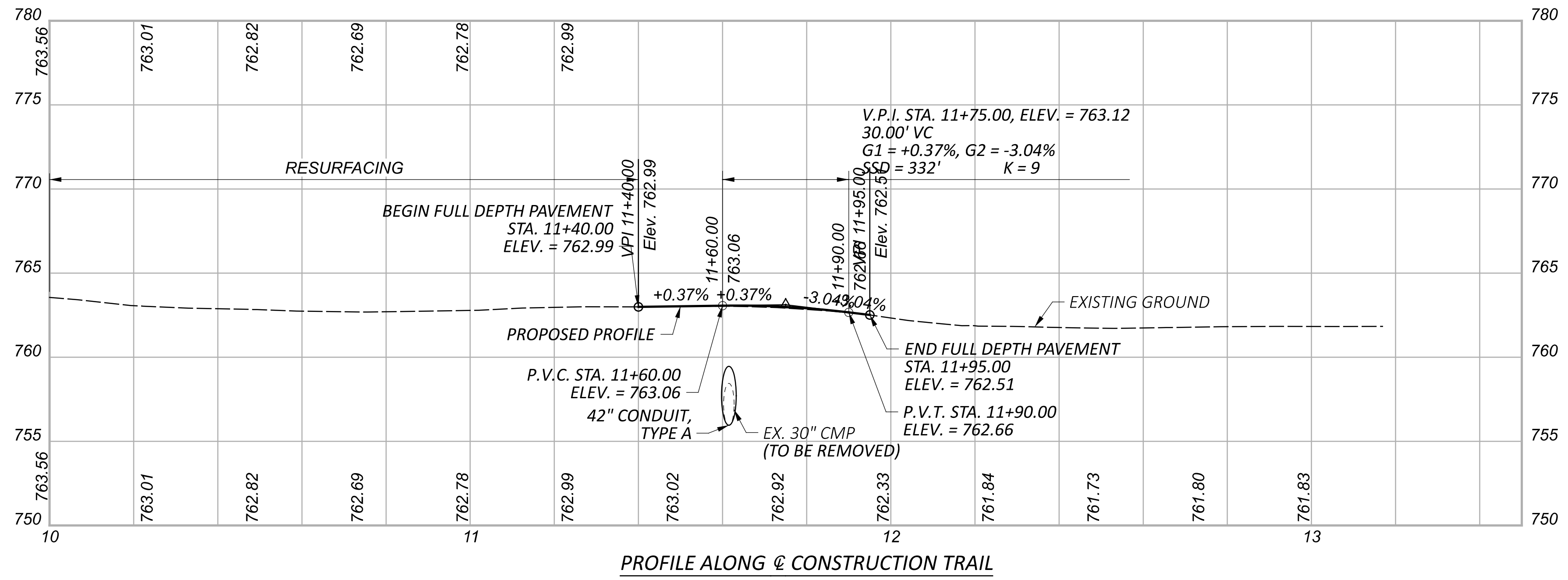
* = EARTHWORK CALCULATIONS INCLUDE THE JUNCTION AREA BETWEEN THE PROPOSED CULVERTS:
 - 56 CY CUT
 - 2 CY FILL

Sheet Totals			105103
Seeding	Cut	Fill	SHEET TOTAL
81	66	7	24 40

CROSS SECTIONS - PAINT CREEK RECREATIONAL TRAIL
 STA. 11+75.00 TO STA. 11+90.00

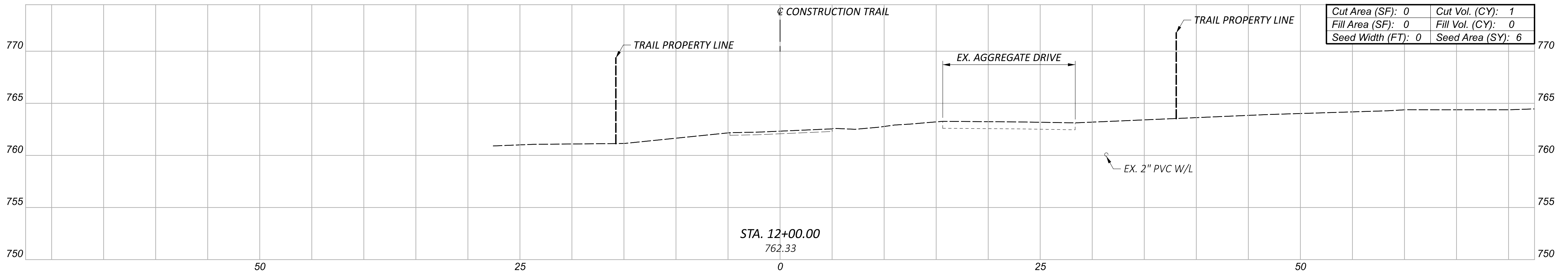


DESIGN AGENCY
 DESIGNER: JEP
 REVIEWER: RG
 PROJECT ID: 105103



CROSS SECTION TOTALS	
S/M (SY):	218*
CUT (CY):	77**
FILL (SY):	31**

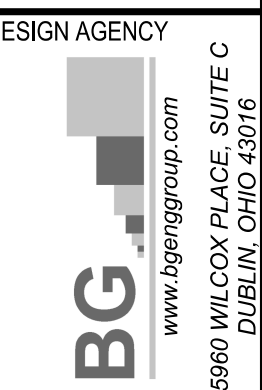
* = TOTALS CARRIED TO THE GENERAL NOTES
 ** = TOTALS CARRIED TO THE GENERAL SUMMARY



Cut Area (SF):	0	Cut Vol. (CY):	1
Fill Area (SF):	0	Fill Vol. (CY):	0
Seed Width (FT):	0	Seed Area (SY):	6

Sheet Totals			105103	
Seeding	Cut	Fill	SHEET	TOTAL
6	1	0	25	40

CROSS SECTIONS - PAINT CREEK RECREATIONAL TRAIL, STA. 12+00.00
 AND PROFILE ALONG CONSTRUCTION TRAIL



DESIGNER: JEP
 REVIEWER: RG 03-29-23

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD DRAWINGS:

- H.W-1.1 REVISED 07/20/2018
- H.W-2.1 REVISED 07/15/2022
- H.W-2.2 REVISED 07/20/2018

REFER TO THE FOLLOWING SPECIFICATIONS:

- 800-2023 DATED 01/19/2024

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATIONS OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 9TH EDITION, 2020, AND THE ODOT BRIDGE DESIGN MANUAL, 2020.

DESIGN DATA:

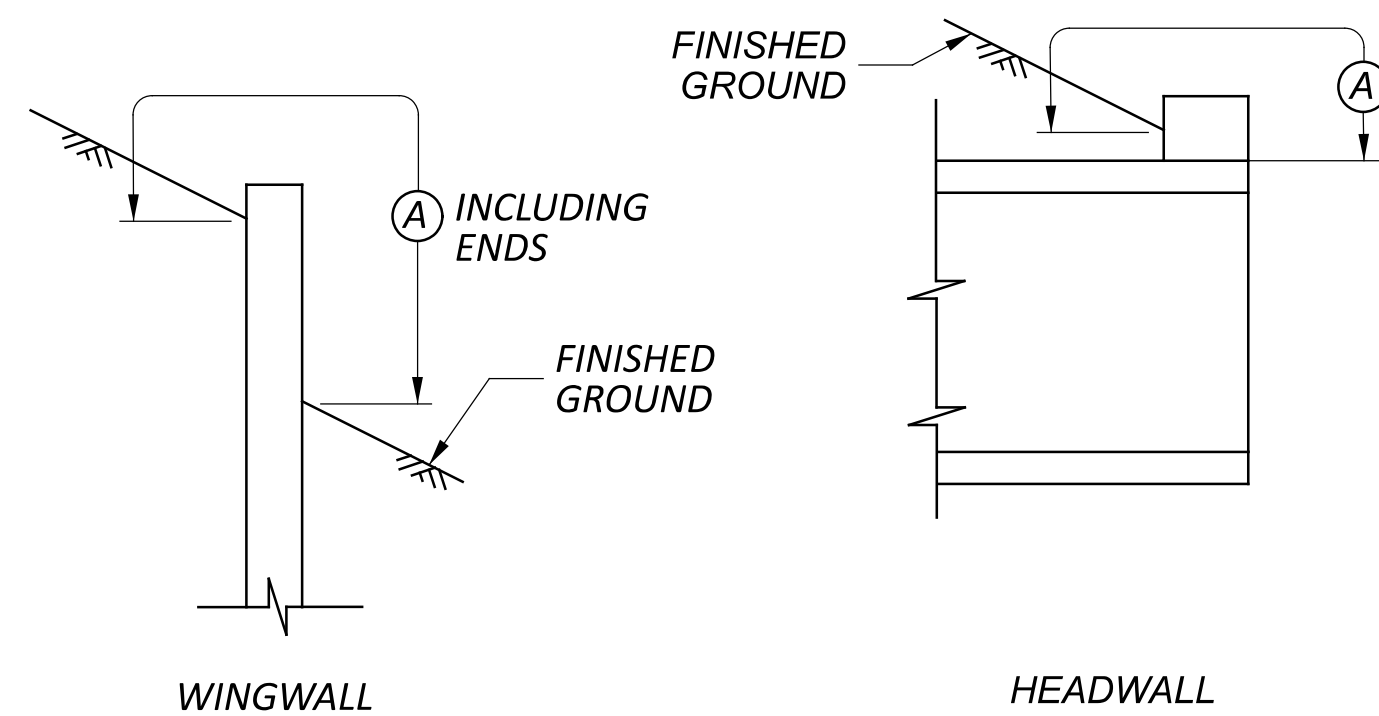
CONCRETE, CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (FOOTING, WINGWALL AND FORESLOPE WALL)
 REINFORCING STEEL - ASTM A615, A616 OR A617 GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI. (ALL REINFORCING STEEL SHALL BE EPOXY COATED.)

POROUS BACKFILL WITH GEOTEXTILE FABRIC:

POROUS BACKFILL WITH GEOTEXTILE FABRIC 1'-6" THICK SHALL BE REPLACED BEHIND THE WINGWALLS ONLY AND SHALL EXTEND TO 12" BELOW THE EMBANKMENT SURFACE. GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE POROUS BACKFILL AND REPLACED EXCAVATION ADJACENT TO THE STRUCTURE. IT SHALL TURN UNDER THE BOTTOM OF THE POROUS BACKFILL AND RETURN 6" ABOVE THE TOP ELEVATION OF THE WEEPHOLE. WEEPHOLES SHALL BE PLACED 6" TO 12" ABOVE THE NORMAL WATER ELEVATION OR GROUND LINE AND SHALL HAVE A MAXIMUM SPACING OF 10'-0". A MINIMUM OF ONE WEEPHOLE SHALL BE PROVIDED PER WINGWALL.

SEALING OF FORESLOPE WALL AND WINGWALLS:

ALL EXPOSED FORESLOPE WALL AND WINGWALL CONCRETE SHALL BE SEALED WITH EPOXY-URETHANE SEALER. THE LIMITS SHALL BE AS SHOWN IN THE DIAGRAMS BELOW. PAYMENT FOR THE EPOXY-URETHANE SEALER SHALL BE PER ITEM 512 - SEALING OF CONCRETE SURFACES, (EPOXY-URETHANE).



LIMITS OF ITEM 512-SEALING CONCRETE SURFACES WITH (EPOXY-URETHANE)


(A) - SEAL ENTIRE CONCRETE SURFACE AREA

ABBREVIATIONS:

- B - BOTTOM
- CL - CENTERLINE
- C.J. - CONSTRUCTION JOINT
- CLR. - CLEAR
- DIA. - DIAMETER
- E.F. - EACH FACE
- EL. - ELEVATION
- F.F. - FAR FACE
- FT. - FOOT OR FEET
- IN. - INCH
- INC. - INCREMENT
- INV. - INVERT LEVEL
- MAX. - MAXIMUM
- MIN. - MINIMUM
- N.F. - NEAR FACE
- P.E.J.F. - PREFORMED EXPANSION JOINT FILLER
- SER. - SERIES
- SPA. - SPACING
- STR. - STRAIGHT
- T - TOP
- T&B - TOP & BOTTOM
- TYP. - TYPICAL

ITEM	ESTIMATED QUANTITIES		TOTAL	UNIT	DESCRIPTION
	CULVERT 1 UNDER S.R. 138	CULVERT 2 UNDER PAINT CREEK TRAIL			
503			LUMP		COFFERDAMS AND EXCAVATION BRACING
503	11	44	55	CY	UNCLASSIFIED EXCAVATION
509	937	1302	2239	LB	EPOXY COATED STEEL REINFORCEMENT
511	3	8	11	CY	CLASS QC1 CONCRETE, RETAINING/WINGWALL NOT INCLUDING FOOTING
511	6	8	14	CY	CLASS QC1 CONCRETE, FOOTING
512	11	14	25	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
518	2	2	4	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC
601		62	62	SY	RIPRAP, TYPE D
601		10	10	CY	ROCK CHANNEL PROTECTION, TYPE A WITH GEOTEXTILE FABRIC
601	9		9	CY	ROCK CHANNEL PROTECTION, TYPE B WITH GEOTEXTILE FABRIC
602	0.92	0.92	1.84	CY	CONCRETE MASONRY
611	80	97	177	FT	42" CONDUIT, TYPE A

GENERAL NOTES
 S.R. 138 OVER UNT OF NORTH PAINT CREEK

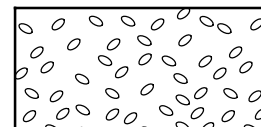

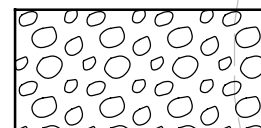
DESIGN AGENCY

 www.bgenggroup.com
 5560 WILCOX PLACE, SUITE C
 DUBLIN, OHIO 43016

DESIGNER
 JEP

REVIEWER
 RG 02-12-24

PROJECT ID
 105103

SHEET TOTAL
 26 40

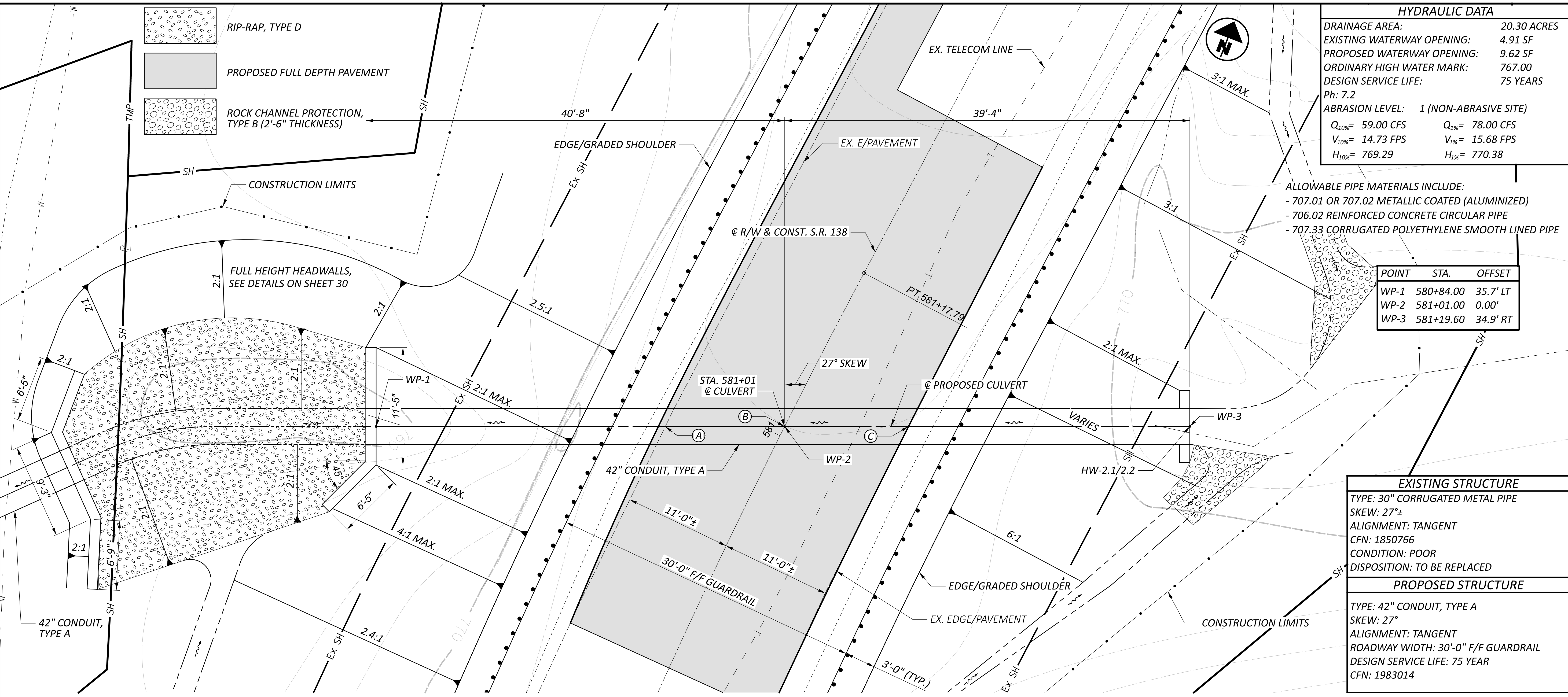
	RIP-RAP, TYPE D
	PROPOSED FULL DEPTH PAVEMENT
	ROCK CHANNEL PROTECTION, TYPE B (2'-6" THICKNESS)

HYDRAULIC DATA	
DRAINAGE AREA:	20.30 ACRES
EXISTING WATERWAY OPENING:	4.91 SF
PROPOSED WATERWAY OPENING:	9.62 SF
ORDINARY HIGH WATER MARK:	767.00
DESIGN SERVICE LIFE:	75 YEARS
Ph:	7.2
ABRASION LEVEL:	1 (NON-ABRASIVE SITE)
Q _{10%} =	59.00 CFS
Q _{1%} =	78.00 CFS
V _{10%} =	14.73 FPS
V _{1%} =	15.68 FPS
H _{10%} =	769.29
H _{1%} =	770.38

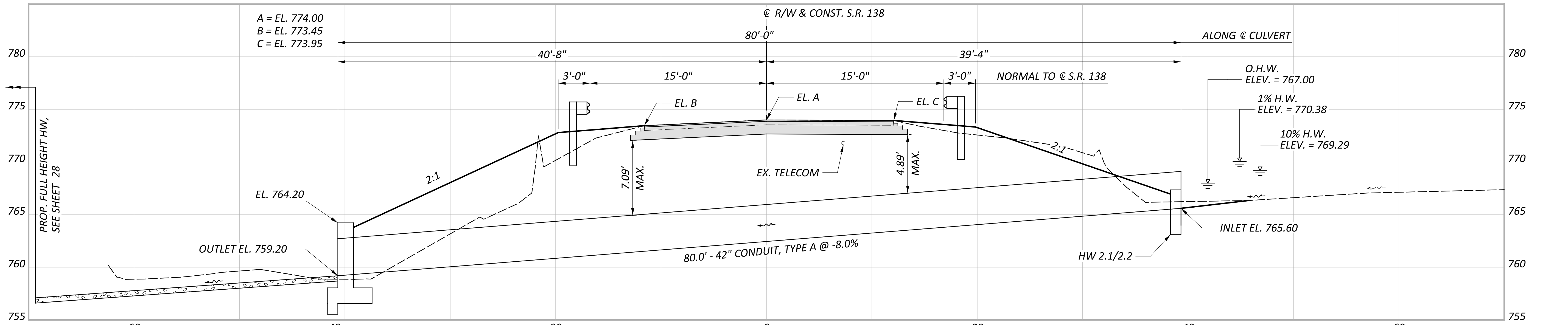
- ALLOWABLE PIPE MATERIALS INCLUDE:
- 707.01 OR 707.02 METALLIC COATED (ALUMINIZED)
 - 706.02 REINFORCED CONCRETE CIRCULAR PIPE
 - 707.33 CORRUGATED POLYETHYLENE SMOOTH LINED PIPE

POINT	STA.	OFFSET
WP-1	580+84.00	35.7' LT
WP-2	581+01.00	0.00'
WP-3	581+19.60	34.9' RT

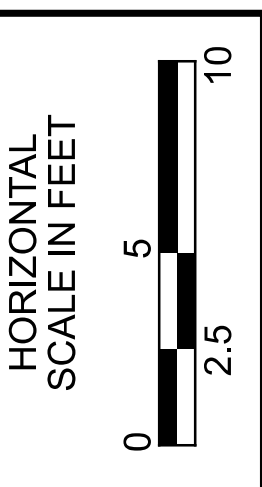
EXISTING STRUCTURE	
TYPE:	30" CORRUGATED METAL PIPE
SKEW:	27°±
ALIGNMENT:	TANGENT
CFN:	1850766
CONDITION:	POOR
DISPOSITION:	TO BE REPLACED
PROPOSED STRUCTURE	
TYPE:	42" CONDUIT, TYPE A
SKEW:	27°
ALIGNMENT:	TANGENT
ROADWAY WIDTH:	30'-0" F/F GUARDRAIL
DESIGN SERVICE LIFE:	75 YEAR
CFN:	1983014



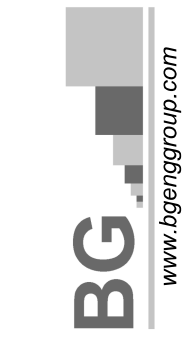
PLAN



PROFILE ALONG @ CULVERT



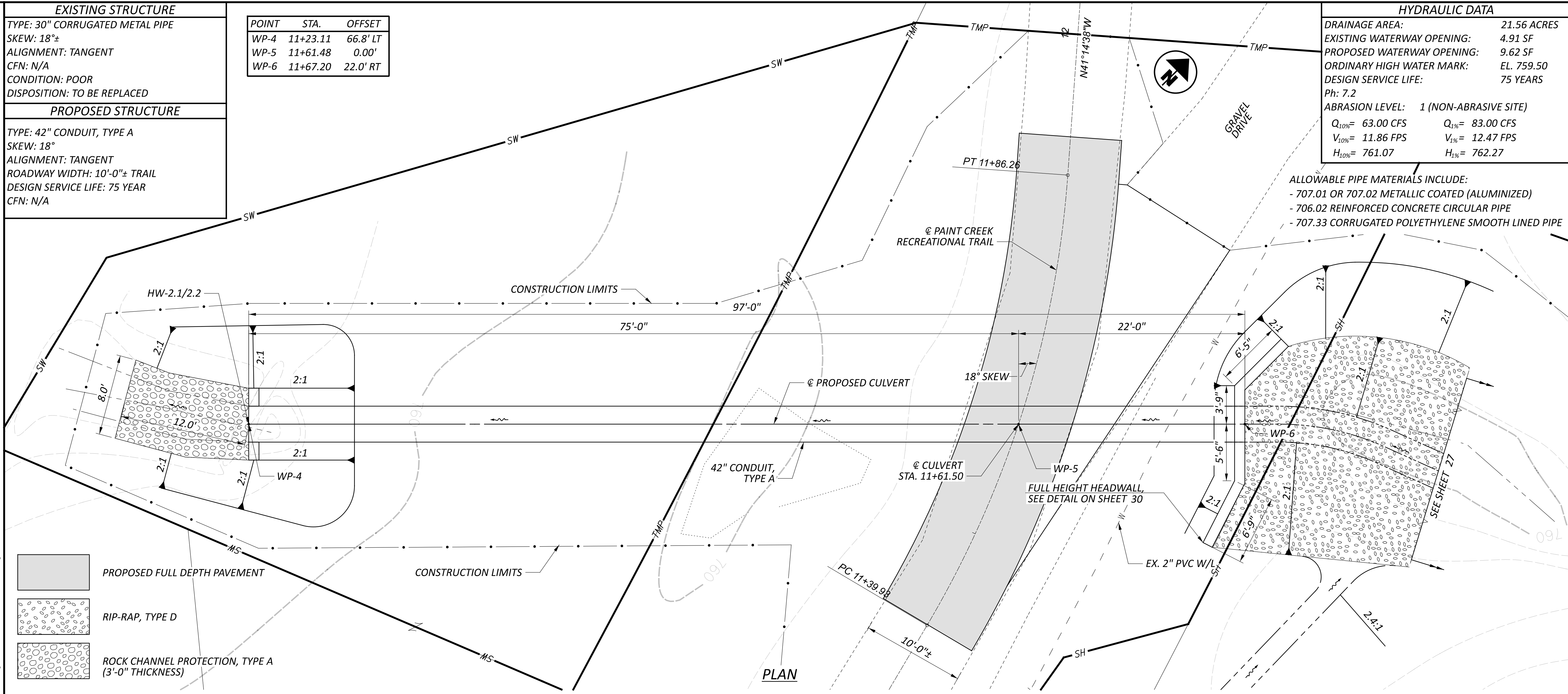
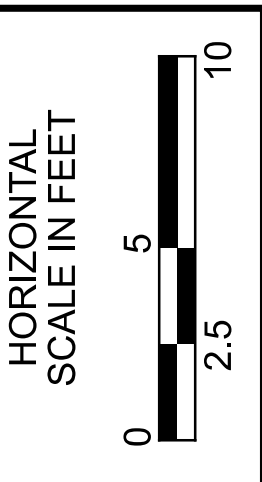
CULVERT PLAN AND PROFILE
 STA. 581+01.00

DESIGN AGENCY	
DESIGNER	JEP
REVIEWER	RG
PROJECT ID	105103
SHEET	27
TOTAL	40

EXISTING STRUCTURE	
TYPE: 30" CORRUGATED METAL PIPE	
SKEW: 18°±	
ALIGNMENT: TANGENT	
CFN: N/A	
CONDITION: POOR	
DISPOSITION: TO BE REPLACED	
PROPOSED STRUCTURE	
TYPE: 42" CONDUIT, TYPE A	
SKEW: 18°	
ALIGNMENT: TANGENT	
ROADWAY WIDTH: 10'-0"± TRAIL	
DESIGN SERVICE LIFE: 75 YEAR	
CFN: N/A	

POINT	STA.	OFFSET
WP-4	11+23.11	66.8' LT
WP-5	11+61.48	0.00'
WP-6	11+67.20	22.0' RT

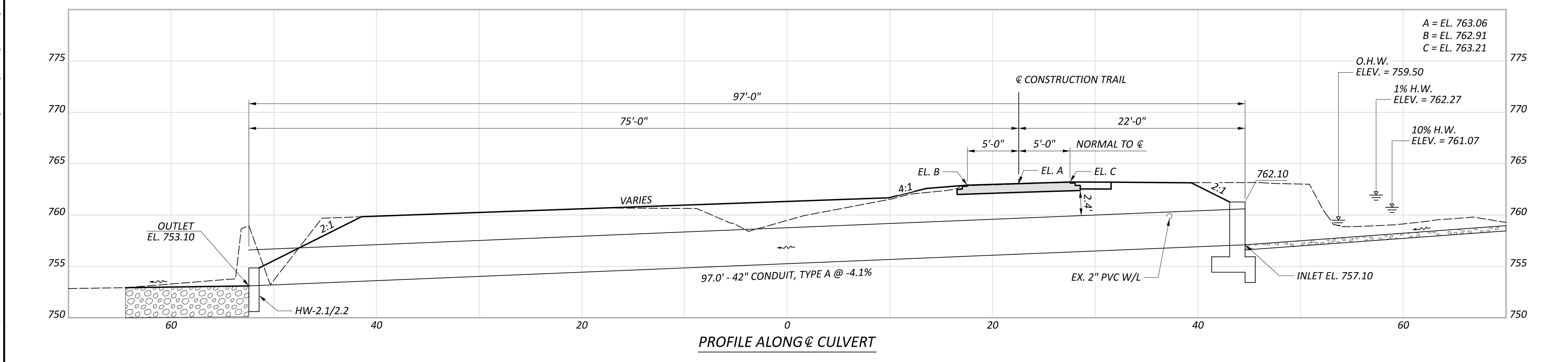
HYDRAULIC DATA	
DRAINAGE AREA:	21.56 ACRES
EXISTING WATERWAY OPENING:	4.91 SF
PROPOSED WATERWAY OPENING:	9.62 SF
ORDINARY HIGH WATER MARK:	EL. 759.50
DESIGN SERVICE LIFE:	75 YEARS
Ph:	7.2
ABRASION LEVEL:	1 (NON-ABRASIVE SITE)
Q _{10%} =	63.00 CFS
Q _{1%} =	83.00 CFS
V _{10%} =	11.86 FPS
V _{1%} =	12.47 FPS
H _{10%} =	761.07
H _{1%} =	762.27



- ALLOWABLE PIPE MATERIALS INCLUDE:
- 707.01 OR 707.02 METALLIC COATED (ALUMINIZED)
 - 706.02 REINFORCED CONCRETE CIRCULAR PIPE
 - 707.33 CORRUGATED POLYETHYLENE SMOOTH LINED PIPE

- PROPOSED FULL DEPTH PAVEMENT
- RIP-RAP, TYPE D
- ROCK CHANNEL PROTECTION, TYPE A (3'-0" THICKNESS)

PLAN



PROFILE ALONG @ CULVERT

CULVERT PLAN AND PROFILE
STA. 11+61.50 (PAINT CREEK RECREATIONAL TRAIL)

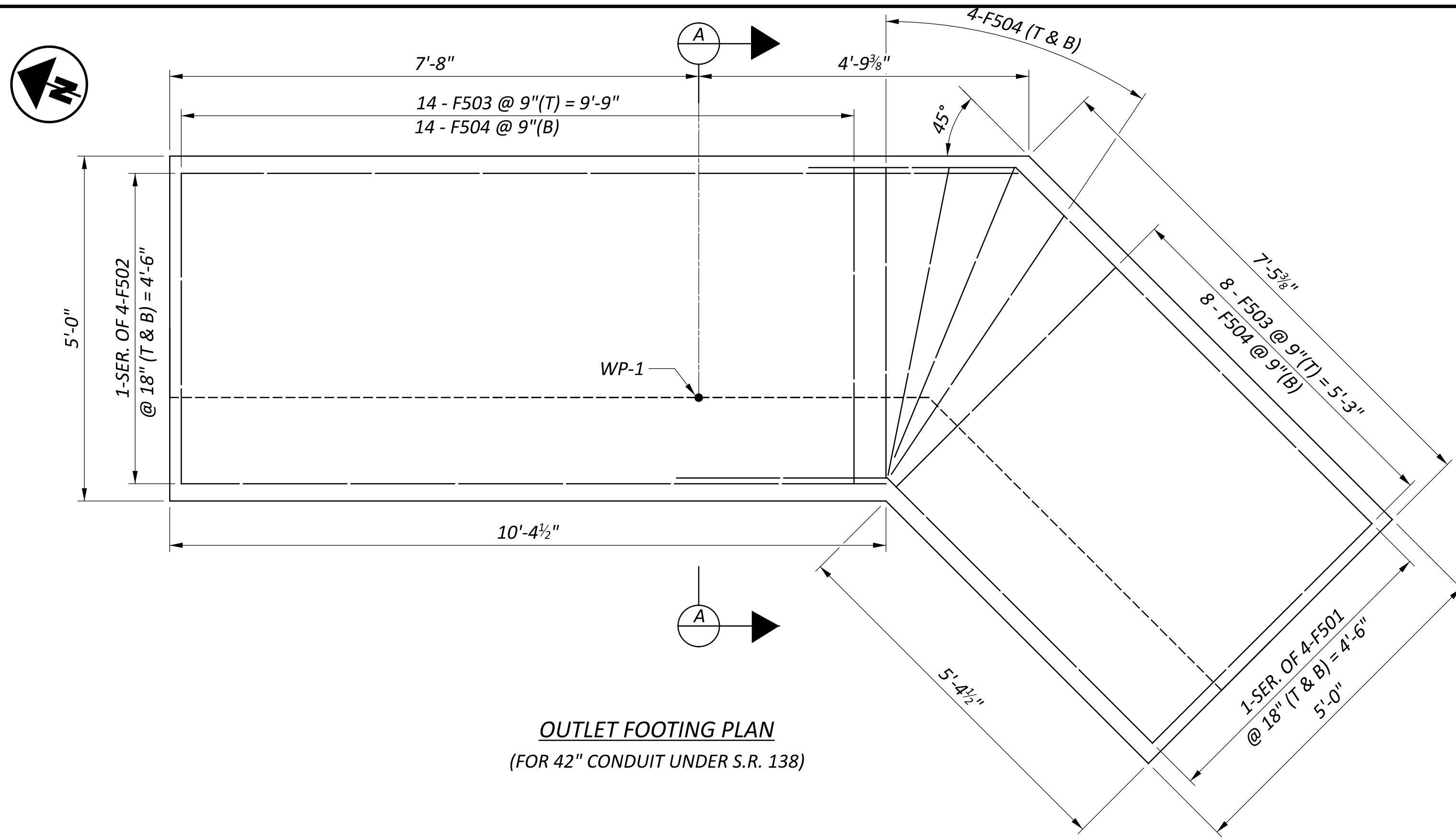
DESIGN AGENCY
BG
www.bgengineering.com
5560 WILCOX PLACE, SUITE C
DUBLIN, OHIO 43016

DESIGNER
JEP

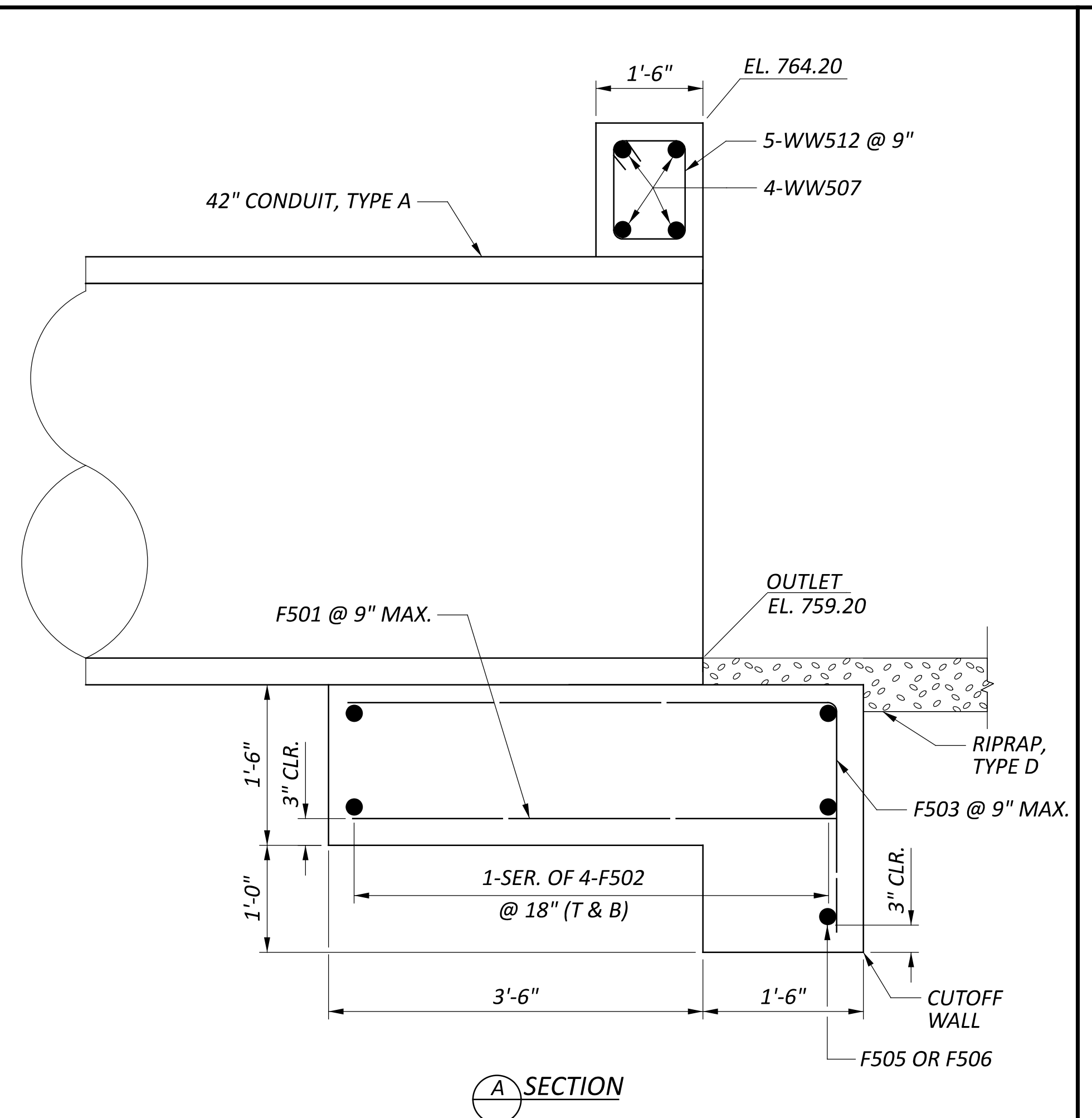
REVIEWER
RG 02-12-24

PROJECT ID
105103

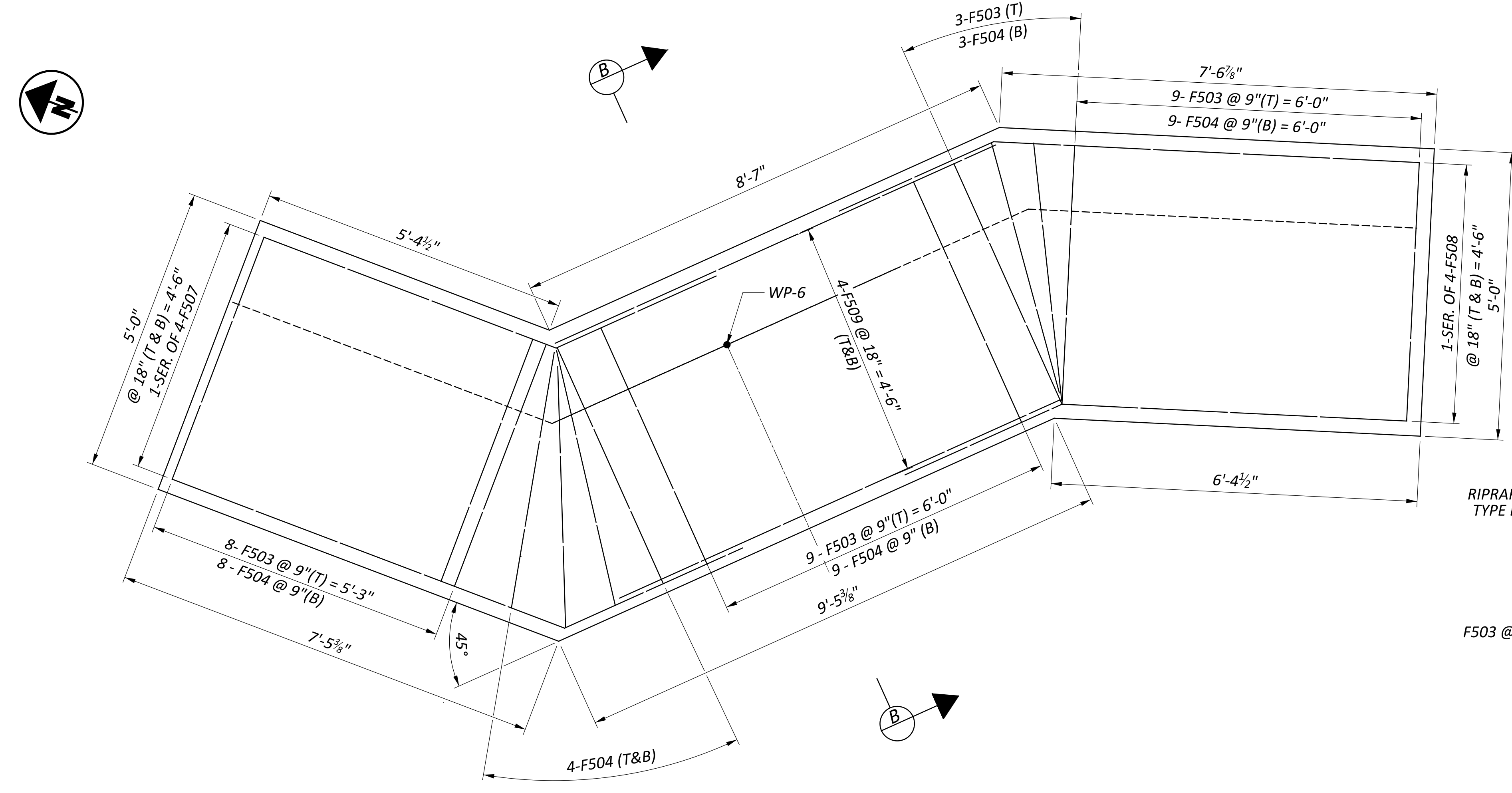
SHEET TOTAL
28 40



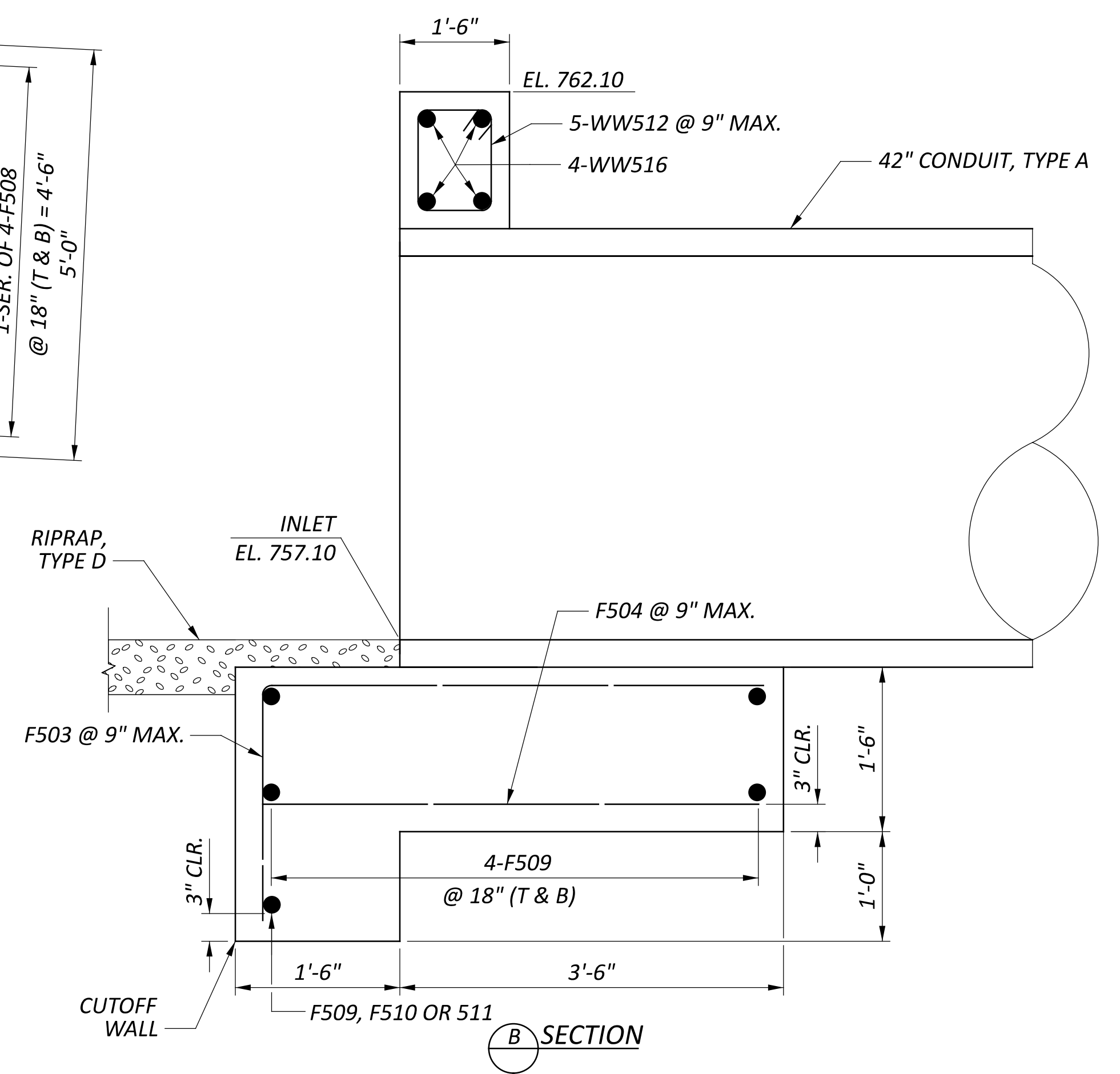
OUTLET FOOTING PLAN
 (FOR 42" CONDUIT UNDER S.R. 138)



A SECTION




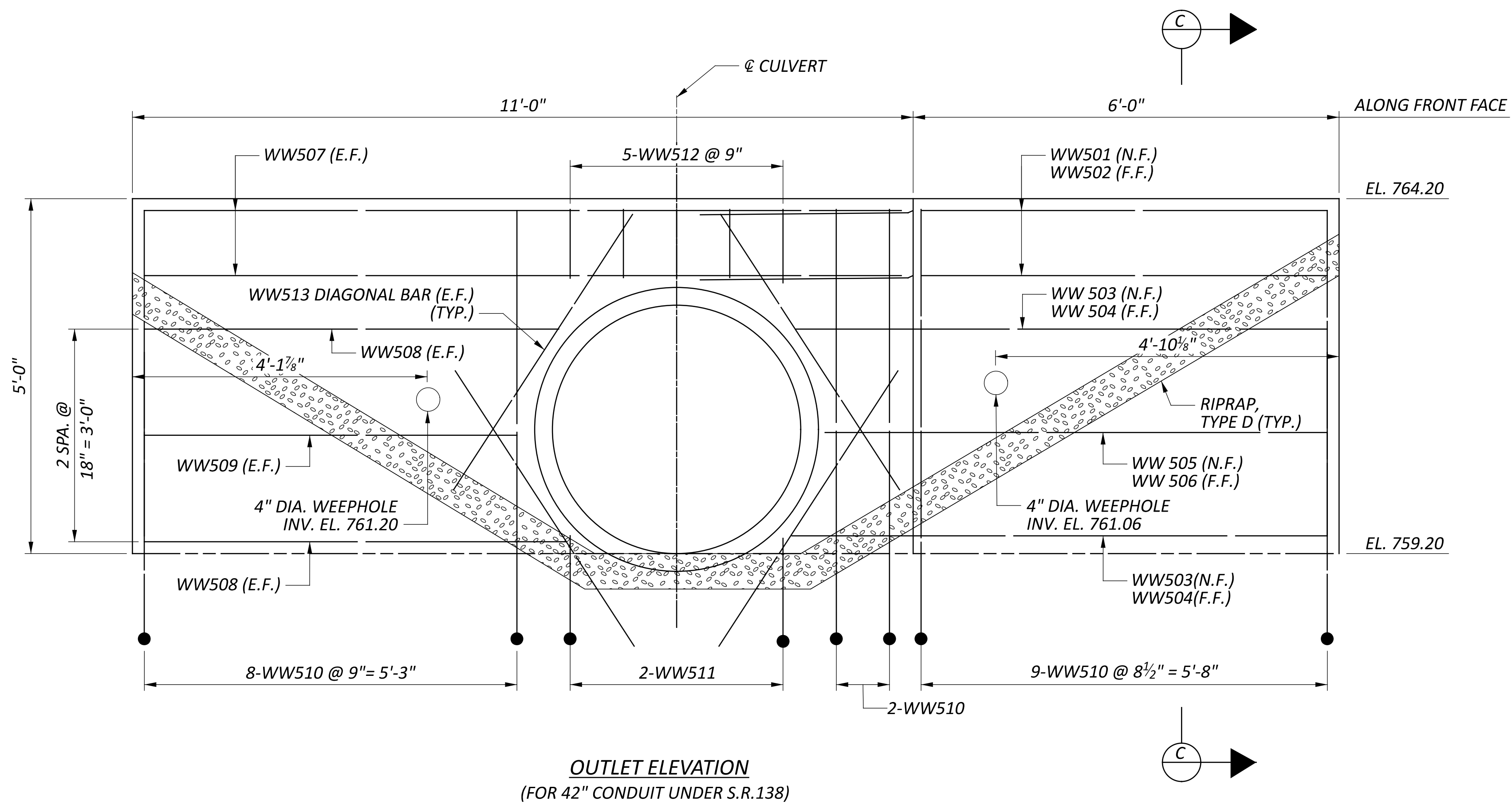
INLET FOOTING PLAN
 (FOR 42" CONDUIT UNDER PAINT CREEK RECREATIONAL TRAIL)



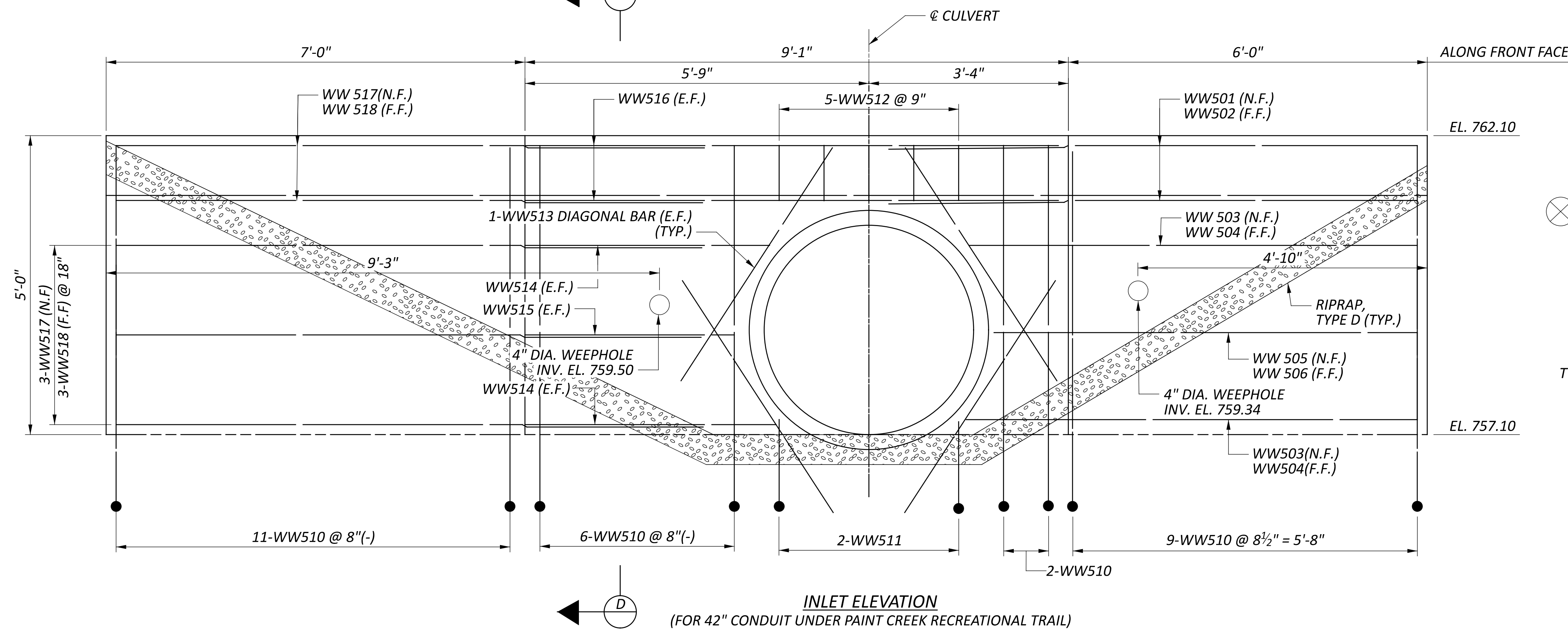
B SECTION

FOUNDATION DETAILS
S.R. 138 OVER UNT OF NORTH PAINT CREEK

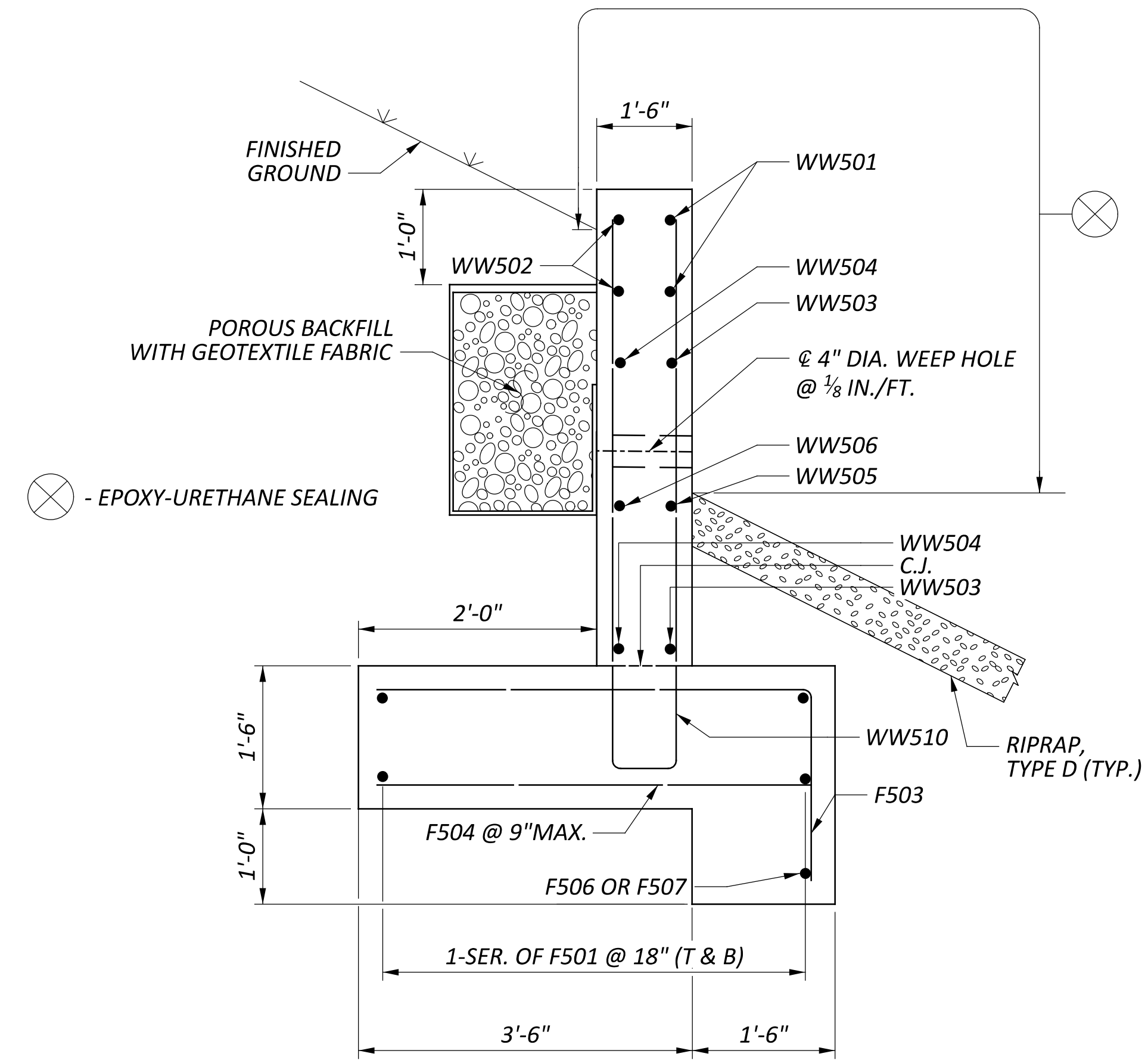
DESIGN AGENCY	
 www.bgengr.com 5560 WILCOX PLACE, SUITE C DUBLIN, OHIO 43016	
DESIGNER	
JEP	
REVIEWER	
RG 02-12-24	
PROJECT ID	
105103	
SHEET	TOTAL
29	40



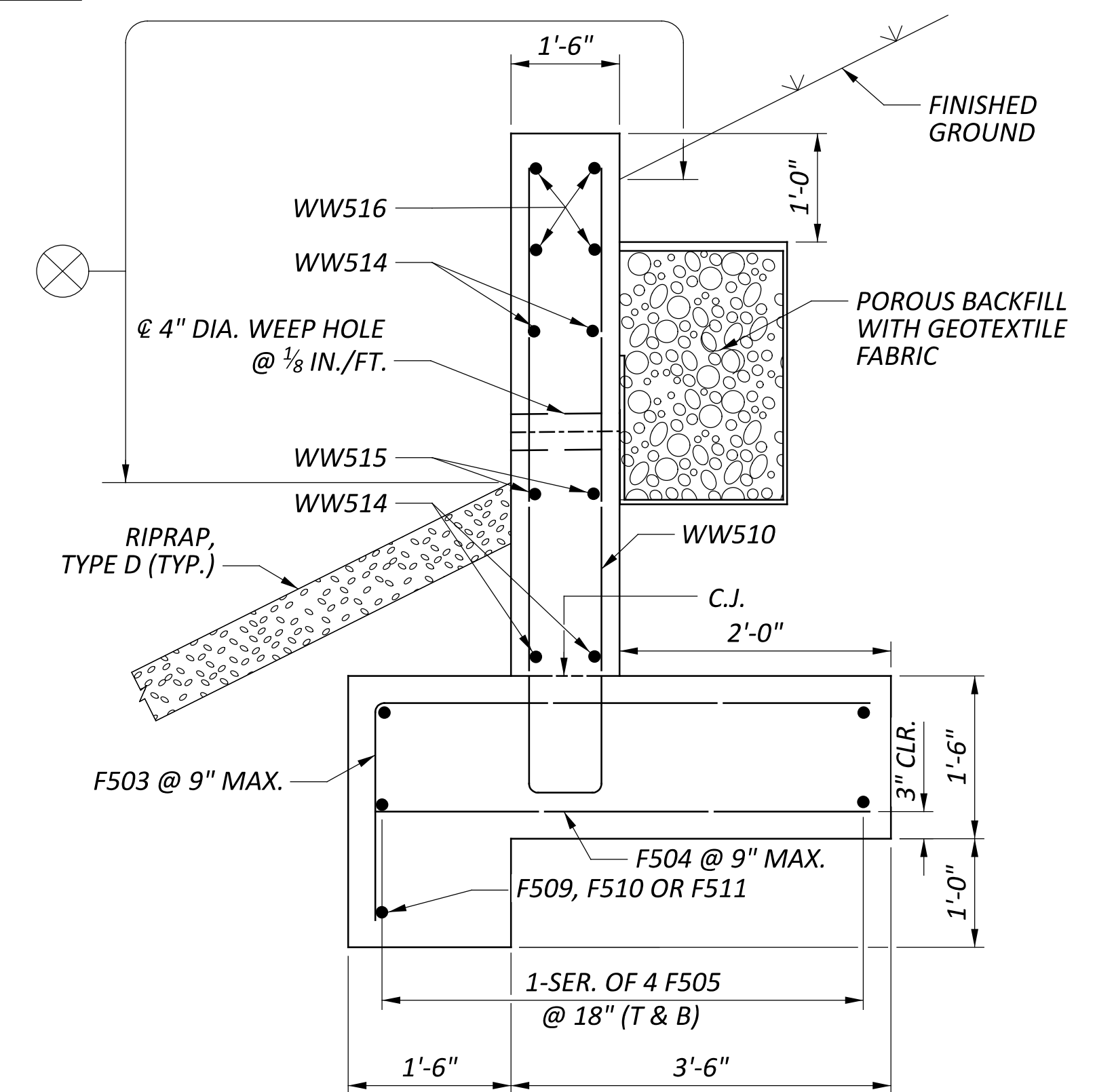
OUTLET ELEVATION
 (FOR 42" CONDUIT UNDER S.R.138)



INLET ELEVATION
 (FOR 42" CONDUIT UNDER PAINT CREEK RECREATIONAL TRAIL)



C SECTION

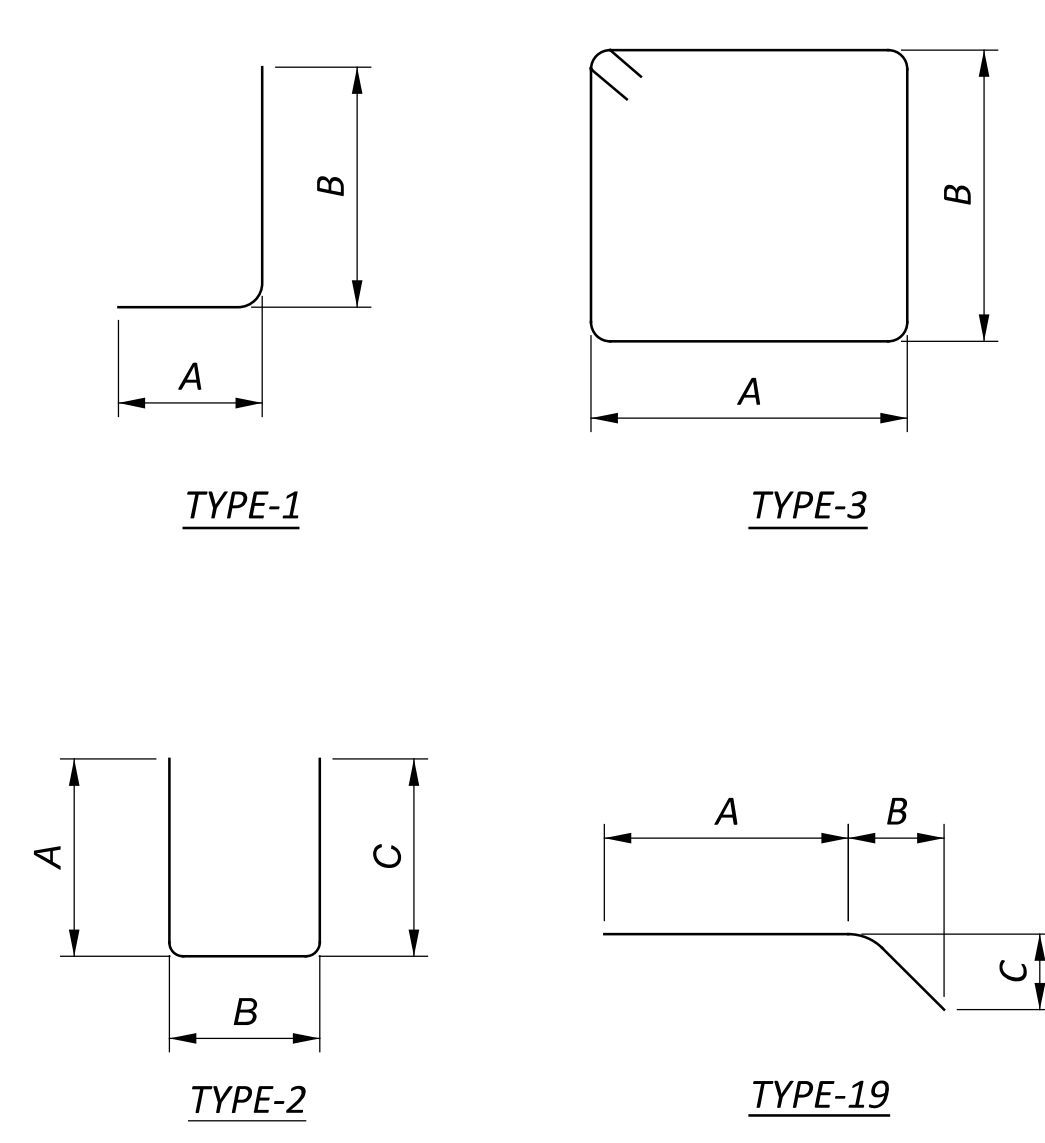


D SECTION

- NOTES:
- FOR CULVERT PLAN AND PROFILE, SEE SHEET 27 OF 40
 - THE LAP SPLICE LENGTHS USED IN THESE DETAILS ARE AS FOLLOWS: 2'-6" FOR #5 BARS.
 - DETAILS AND QUANTITIES ARE SHOWN FOR RIGID PIPE ONLY; WHEN USING CORRUGATED AND PLASTIC PIPE, ADJUST THE CONCRETE QUANTITIES.

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSION					INCR.
					A	B	C	D	E	
OUTLET WINGWALL (FOR 42" CONDUIT UNDER S.R.138)										
WW501	2	8'-5"	18	19	2'-6"	4'-2"	4'-2"			
WW502	2	8'-8"	18	19	2'-6"	4'-4"	4'-4"			
WW503	2	7'-6"	16	19	1'-7"	4'-2"	4'-2"			
WW504	2	8'-0"	17	19	1'-10"	4'-4"	4'-4"			
WW505	1	7'-1"	7	19	1'-2"	4'-2"	4'-2"			
WW506	1	7'-7"	8	19	1'-5"	4'-4"	4'-4"			
WW507	4	6'-3"	26	STR						
WW508	4	5'-10"	24	STR						
WW509	2	5'-3"	11	STR						
WW510	19	12'-7"	249	2	6'-1"	0'-8"	6'-1"			
WW511	2	3'-9"	8	2	1'-8"	0'-8"	1'-8"			
WW512	5	3'-4"	17	3	0'-8"	0'-8"				
WW513	8	4'-6"	38	STR						
SUB TOTAL			457							
OUTLET WINGWALL (FOR 42" CONDUIT UNDER PAINT CREEK RECREATIONAL TRAIL)										
WW501	2	8'-5"	18	19	2'-6"	4'-2"	4'-2"			
WW502	2	8'-8"	18	19	2'-6"	4'-4"	4'-4"			
WW503	2	7'-6"	16	19	1'-7"	4'-2"	4'-2"			
WW504	2	8'-0"	17	19	1'-10"	4'-4"	4'-4"			
WW505	1	7'-1"	7	19	1'-2"	4'-2"	4'-2"			
WW506	1	7'-7"	8	19	1'-5"	4'-4"	4'-4"			
WW510	28	12'-7"	367	2	6'-1"	0'-8"	6'-1"			
WW511	2	3'-9"	8	2	1'-8"	0'-8"	1'-8"			
WW512	5	3'-4"	17	3	0'-8"	0'-8"				
WW513	8	4'-6"	38	STR						
WW514	4	4'-1"	17	STR						
WW515	2	3'-6"	7	STR						
WW516	4	9'-2"	38	STR						
WW517	5	9'-2"	48	19	2'-6"	6'-0"	3'-1"			
WW518	5	9'-1"	47	19	2'-6"	5'-11"	3'-0"			
SUB TOTAL			671							


MARK	NUMBER REAR	LENGTH	WEIGHT	TYPE	DIMENSION					INCR.
					A	B	C	D	E	
FOOTING (FOR 42" CONDUIT UNDER S.R. 138)										
F501	2 SER. 4	7'-11" TO 9'-10"	74	19	2'-6" TO 2'-6"	3'-10" TO 5'-2"	3'-10" TO 5'-2"			0'-7 1/2"
F502	2 SER. 4	10'-2" TO 12'-2"	93	STR	TO	TO	TO			0'-8"
F503	22	6'-7"	151	1	2'-1"	4'-8"				
F504	30	4'-8"	146	STR						
F505	1	8'-1"	8	STR						
F506	1	7'-11"	8	19	2'-6"	3'-10"	3'-10"			
FOOTING TOTAL			480							
FOOTING (FOR 42" CONDUIT UNDER PAINY CREEK TRAIL)										
F503	29	6'-7"	199	1	2'-1"	4'-8"				
F504	37	4'-8"	180	STR						
F507	2 SER. 4	8'-0" TO 10'-11"	79	19	2'-6" TO 3'-7"	3'-11" TO 5'-2"	3'-11" TO 5'-2"			0'-11 1/2"
F508	2 SER. 4	8'-6" TO 9'-11"	77	19	2'-6" TO 2'-6"	2'-9" TO 3'-4"	5'-4" TO 6'-7"			0'-5 1/2"
F509	9	8'-5"	79	STR						
F510	1	8'-8"	9	19	2'-6"	4'-4"	4'-4"			
F511	1	8'-0"	8	19	2'-6"	2'-6"	4'-11"			
FOOTING TOTAL			631							



- NOTES:**
- ALL REINFORCING STEEL SHALL BE EPOXY COATED.
 - BAR SIZE: THE BAR SIZE IS INDICATED IN THE BAR MARK. THE MARK BEGINS WITH ONE OR TWO LETTERS THAT IDENTIFY THE BAR LOCATION. THE NEXT ONE OR TWO DIGITS INDICATE THE BAR SIZE, AND THE REMAINING TWO DIGITS ARE THE SEQUENCE NUMBER.
 EXAMPLE: F501
 F = FOOTING BAR
 5 = #5 BAR
 01 = BAR SEQUENCE NUMBER 1
 - BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS NOTED OTHERWISE.
 - "STR" IN THE BAR TYPE COLUMN INDICATES A STRAIGHT BAR.
 - INC INDICATES THE LENGTH INCREMENT FOR SERIES BARS.
 - SR INDICATES SERIES BARS.

SHEET NO.	REFERENCE NO.	STATION TO STATION			SIDE	CODE	SIZE (INCHES)	621		626		630				642					
								RPM (YELLOW/YELLOW)	RAISED PAVEMENT MARKER REMOVED			BARRIER REFLECTOR, TYPE 3 (BI-DIRECTIONAL)	GROUND MOUNTED SUPPORT, NO. 3 POST	GROUND MOUNTED SUPPORT, NO. 4 POST		SIGN POST REFLECTOR (YELLOW)	REMOVAL OF GROUND MOUNTED SIGN AND REECTION	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	WORD ON PAVEMENT, 72", TYPE 1	BIKE LANE SYMBOL MARKING, TYPE 1	EDGE LINE, 6", TYPE 1
							EACH	EACH	MILE		FEET	EACH	EACH	EACH	EACH	MILE	FEET				
33	BR-1	579+50	-	583+47	LT				9												
33	BR-2	580+70	-	581+84	RT				4												
33	BX-1	579+91	-	580+31	LT											1					
33	CLDS-1	580+00	-	583+25	CL		6	6										0.06			
33	EL-1	580+00	-	583+25	LT													0.06			
33	EL-2	580+00	-	583+25	RT													0.06			
33	S-1	579+25			LT						12.1		2	1							
33	S-2	579+75			LT						10.0	1	1	1							
33	S-3	579+75			LT						10.0	1	1	1							
33	S-4	580+55			LT						10.0	1	1	1							
33	S-5	581+15			RT						11.6	1	2	1							
33	S-6	581+80			LT						11.9		4	1							
33	S-7	582+45			LT							12.8	1	3	1						
33	S-8	583+35			LT							12.7	1	3	1						
33	W-1	10+41			RT										1						
TOTALS CARRIED TO GENERAL SUMMARY							6	6	13		65.6	25.5	6		17	8		1	1	0.12	0.06

TRAFFIC CONTROL SUBSUMMARY

DESIGN AGENCY

 www.bgengr.com
 5560 WILCOX PLACE, SUITE C
 DUBLIN, OHIO 43016








DESIGNER
 JEP

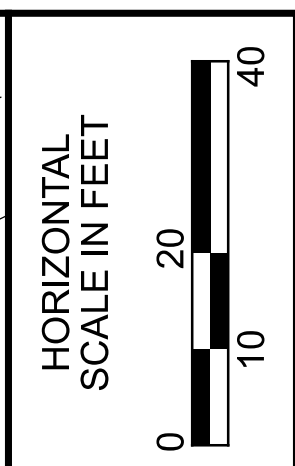
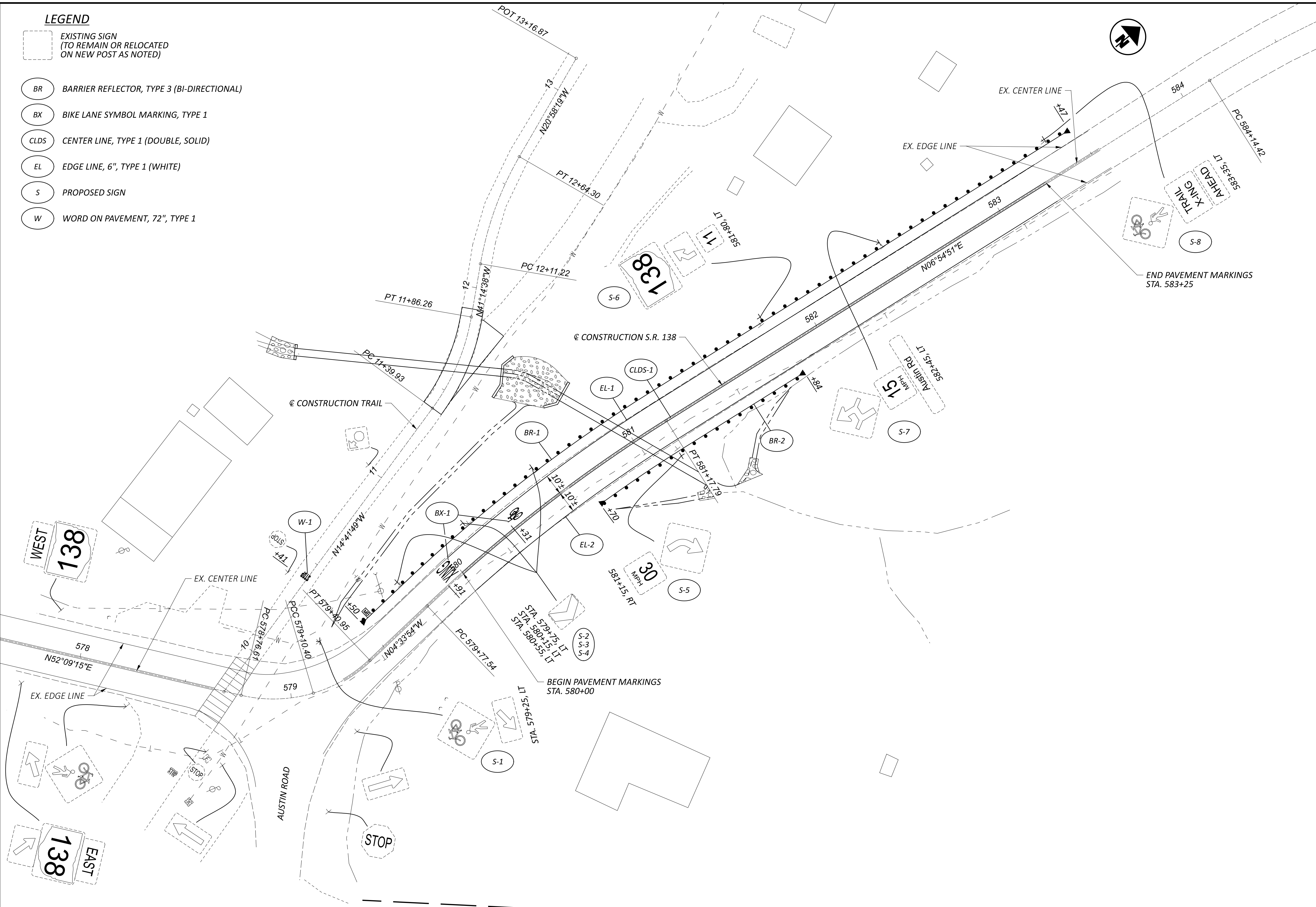
REVIEWER
 RG 02-12-24

PROJECT ID
 105103


SHEET TOTAL
 32 40

LEGEND

-  EXISTING SIGN
(TO REMAIN OR RELOCATED
ON NEW POST AS NOTED)
-  BR BARRIER REFLECTOR, TYPE 3 (BI-DIRECTIONAL)
-  BX BIKE LANE SYMBOL MARKING, TYPE 1
-  CLDS CENTER LINE, TYPE 1 (DOUBLE, SOLID)
-  EL EDGE LINE, 6", TYPE 1 (WHITE)
-  S PROPOSED SIGN
-  W WORD ON PAVEMENT, 72", TYPE 1



TRAFFIC CONTROL
STA. 577+75 TO STA. 584+50

 <small>5660 WILCOX PLACE, SUITE C DUBLIN, OHIO 43016</small>	
DESIGNER JEP	
REVIEWER RG 02-12-24	
PROJECT ID 105103	
SHEET 33	TOTAL 40

PROJECT DESCRIPTION

REPLACEMENT OF THE EXISTING 30" CULVERT (CFN 1850766) CROSSING S.R. 138 AND THE EXISTING 30" CULVERT CROSSING THE PAINT CREEK RECREATIONAL TRAIL, DRAINING A TRIBUTARY OF PAINT CREEK. REMOVAL OF EXISTING RETAINING WALL AND REGRADING OF THE SLOPES IS INCLUDED IN THIS PROJECT. S.R. 138 TO BE REPLACED WITH FULL DEPTH PAVEMENT WITHIN PROJECT LIMITS.

HISTORIC RECORDS

HISTORICAL RECORDS WERE OBTAINED FROM ODOT'S TRANSPORTATION INFORMATION MAPPING SYSTEM (TIMS) FOR ROS-138-10.98, SUB-BATCH 7653, COMPLETED IN 1955 FOR THE STRUCTURE OVER PAINT CREEK WHICH IS LOCATED SOUTHWEST OF THE CURRENT PROJECT. HISTORICAL RECORDS INDICATED HIGH SILT CONTENT SOILS WERE PRESENT. RESULTS OF THIS EXPLORATION ARE NOT SHOWN FOR CLARITY.

GEOLOGY

THE PROJECT IS LOCATED WITHIN THE SOUTHERN OHIO LOAMY TILL PLAIN PHYSIOGRAPHIC REGION WHICH IS CHARACTERIZED BY MODERATE RELIEF WITH END AND RECESSIONAL MORAINES WITH RELATIVELY FLAT GROUND MORAINES BETWEEN. BOULDER BELTS ARE PRESENT ALONG WITH OUTWASH FILLED PRE-GLACIAL VALLEYS. OVERBURDEN SOILS ARE PREDOMINATELY COHESIVE IN AREAS OF MORAINES AND NON-COHESIVE OUTWASH. MORE SPECIFICALLY, THE PROJECT IS LOCATED WITHIN THE DARBY PLAIN SUBREGION WHICH IS CHARACTERIZED BY BROADLY HUMMOCKY TERRAIN CONTAINING POORLY DRAINED SWALES. THE OVERBURDEN SOILS ARE UNDERLAIN BY DOLOMITE, SHALE, AND MINOR LIMESTONE OF SILURIAN- AND DEVONIAN-AGED BEDROCK.

RECONNAISSANCE

FIELD RECONNAISSANCE WAS COMPLETED ON FEBRUARY 25, 2020 BY PERSONNEL FROM THE OFFICE OF GEOTECHNICAL ENGINEERING (OGE). THE ROADWAY WAS NOTED AS BEING SIDE HILL CONSTRUCTION WITH A MINOR CUT ALONG THE EASTBOUND LANE AND AN EXISTING RETAINING WALL PRESENT ALONG THE WESTBOUND LANE. THE ROADWAY PAVEMENT APPEARS TO BE IN GOOD CONDITION EXCEPT FOR AN ISOLATED AREA OF PAVEMENT PATCHING IN THE WESTBOUND LANE. THE EXISTING RETAINING WALL WAS NOTED AS BEING IN POOR CONDITION WITH A CULVERT RUNNING BENEATH THE ROADWAY AND THROUGH THE WALL. THE SURROUNDING LAND USAGE WAS NOTED AS BEING PREDOMINATELY WOODED WITH RURAL RESIDENTIAL AREAS.

SUBSURFACE EXPLORATION

THREE (3) BORINGS, B-001-0-19 THROUGH B-003-0-19, WERE COMPLETED AS PART OF THE SUBSURFACE EXPLORATION BETWEEN MARCH 3 AND 10, 2020. THE BORINGS WERE DRILLED WITH A TRUCK MOUNTED CME 55 ROTARY DRILL RIG, USING 3.25-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. THE HAMMER SYSTEM USED WAS CALIBRATED ON APRIL 2, 2018, WITH AN AVERAGE DRILL ROD ENERGY RATIO (ER) OF 87%. B-001 WAS ADVANCED INTO BEDROCK AND SAMPLED (AASHTO T225) USING AN N SERIES WIRELINE CORE BARREL, WATER METHOD.

EXPLORATION FINDINGS

ALL BORINGS WERE COMPLETED WITHIN THE EXISTING PAVEMENT AND ENCOUNTERED BETWEEN 14 AND 18 INCHES OF ASPHALT. BENEATH THE SURFACE MATERIALS, B-001, B-002 AND B-003 ENCOUNTERED SANDY SILT (A-4a) IN MEDIUM STIFF TO HARD CONSISTENCY AND DRY TO MOIST CONDITION TO ELEVATION 744.3, 742.3, AND 750.6 FEET, RESPECTIVELY, IN WHICH B-002 AND B-003 WERE TERMINATED. B-001 ENCOUNTERED LIMESTONE AT ELEVATION 744.3 FEET WHICH WAS HIGHLY WEATHERED AND SLIGHTLY STRONG IN WHICH THE BORING WAS TERMINATED. UNCONFINED COMPRESSIVE STRENGTH TESTING ON LIMESTONE SAMPLES RANGED BETWEEN 3,041 AND 3,078 PSI.

PRIOR TO CORING OPERATIONS, WATER WAS REPORTED AT COMPLETION IN B-001 AT ELEVATION 756.5 FEET. B-002 WAS NOTED AS BEING DRY UPON COMPLETION. WATER AT COMPLETION AND FREE WATER WAS NOTED IN B-003 AT ELEVATION 759.3 AND 764.6 FEET, RESPECTIVELY.

SPECIFICATIONS

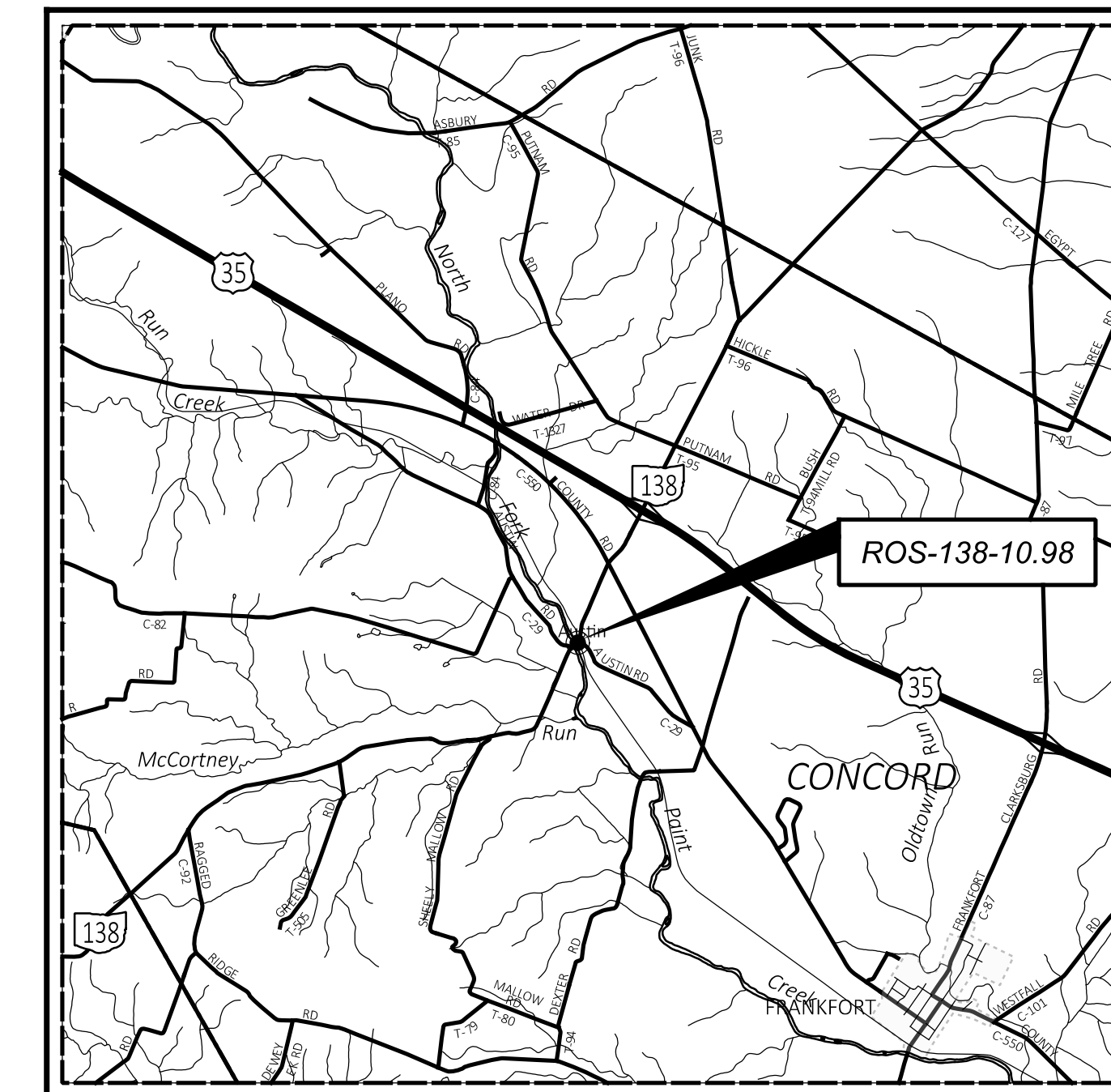
THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JANUARY 2020.

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.

LEGEND

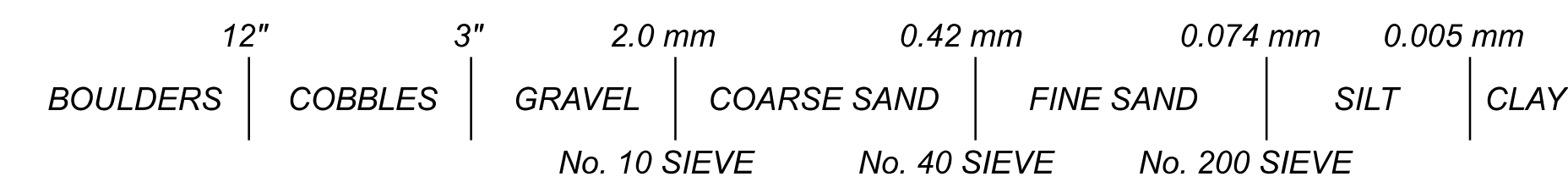
DESCRIPTION	ODOT CLASS	CLASSIFIED MECH./VISUAL	
SANDY SILT	A-4a	13	29
LIMESTONE	VISUAL		
PAVEMENT = X = APPROXIMATE THICKNESS	VISUAL		
BORING LOCATION - PLAN VIEW.			
DRIVE SAMPLE AND ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.			
WC	INDICATES WATER CONTENT IN PERCENT.		
N ₆₀	INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.		
X/D"	NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT); X/D" = NUMBER OF BLOWS (UNCORRECTED) FOR D" OF PENETRATION AT REFUSAL.		
X/Y/D"	NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT); X = NUMBER OF BLOWS FOR 6 INCHES (UNCORRECTED); Y/D" = NUMBER OF BLOWS (UNCORRECTED) FOR D" OF PENETRATION AT REFUSAL.		
INDICATES FREE WATER ELEVATION.			
INDICATES WATER AT COMPLETION.			
INDICATES UNIT WEIGHT OF ROCK.			
NQ	"N" SERIES ROCK CORE BARREL OF "Q" WIRELINE BIT SIZE.		
Qu	INDICATES UNCONFINED COMPRESSION TEST, ASTM D7012.		
SS	INDICATES A SPLIT SPOON SAMPLE.		
TR	INDICATES TOP OF ROCK ELEVATION.		



LOCATION MAP
SCALE IN MILES



PARTICLE SIZE DEFINITIONS



BEDROCK TEST SUMMARY

BORING ID	SAMPLE ELEVATION	SAMPLE DEPTH	Qu (PSI)	LITHOLOGY
B-001-0-19	742.5' - 742.1'	30.4' - 30.8'	3,041	LIMESTONE
	740.7' - 740.4'	32.2' - 32.5'	3,078	LIMESTONE

ROS-138-10.98

MODEL: Sheet PAPER:SIZE: 34x22 (in.) DATE: 2/12/2024 TIME: 12:58:21 PM USER: JPerchinske pvc:\ohiodot-pw-bentley.com\ohiodot-pw-02\Documents\01 Active Projects\District 09\Ros1\105103\400-Engineering\Geotechnical\Sheets\105103_ZC001.dgn

GEOTECHNICAL PROFILE

DESIGN AGENCY



DESIGNER

ARR

REVIEWER

SAT 12/27/22

PROJECT ID

105103

SUBSET

1

TOTAL

7

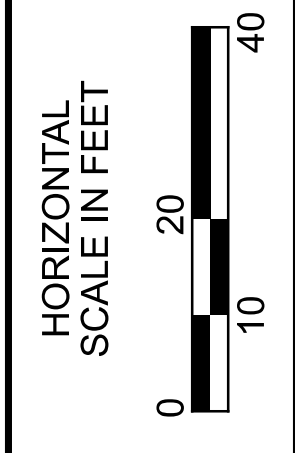
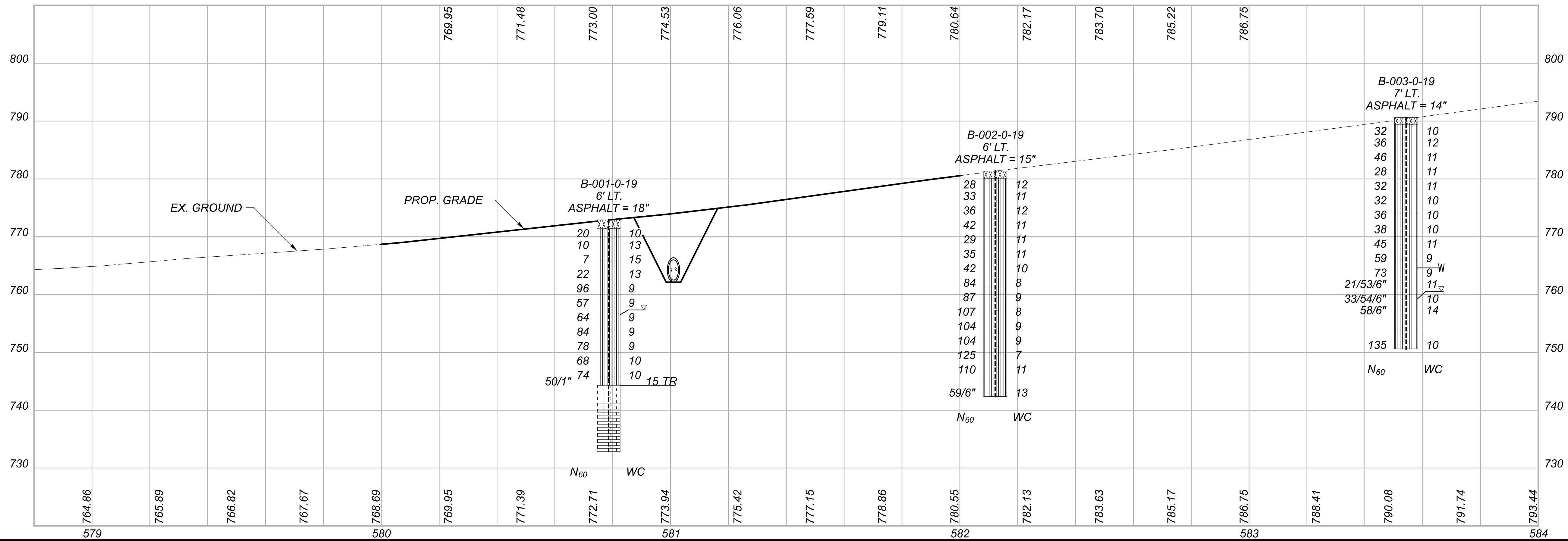
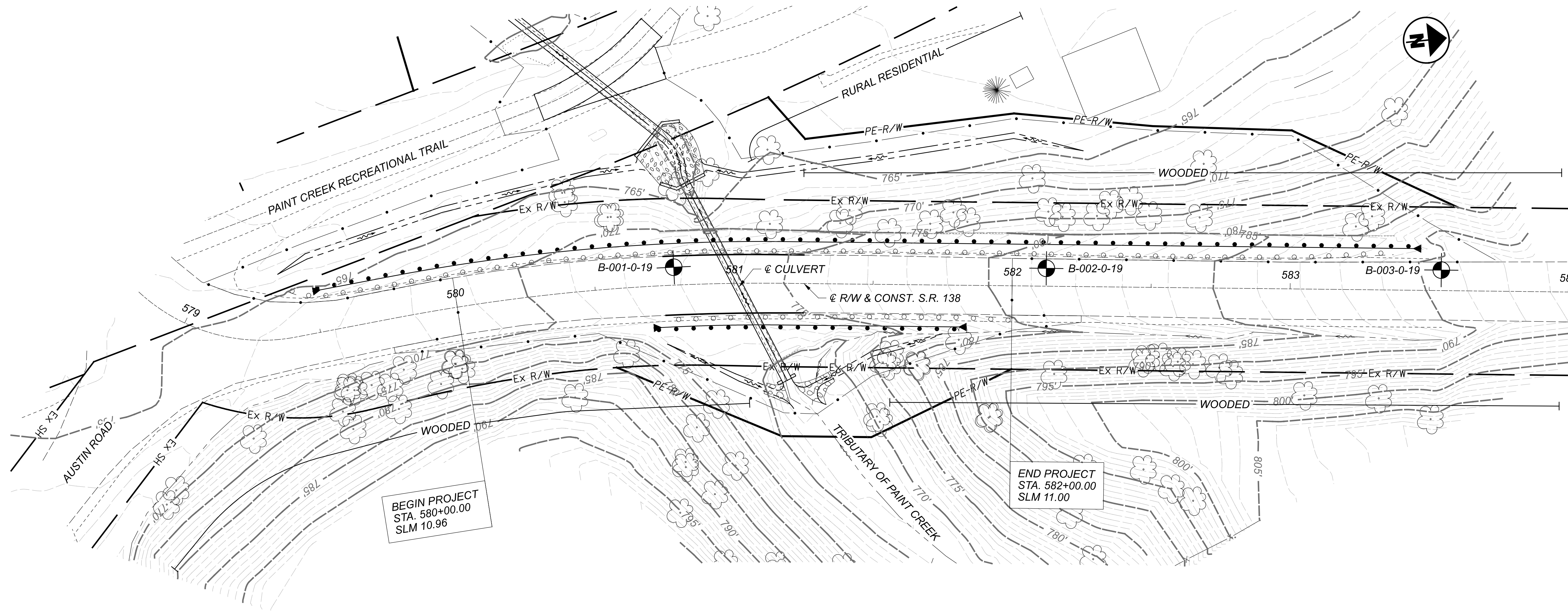
SHEET

34


TOTAL

40

RECON. - AMJ 02/25/20
 DRILLING - KAM 03/03-10/20
 DRAWN - ARR 12/23/22
 REVIEWED - SAT 12/27/22



GEOTECHNICAL PROFILE - RETAINING WALL
STA. 578+80 TO 584+00 S.R. 138

DESIGN AGENCY


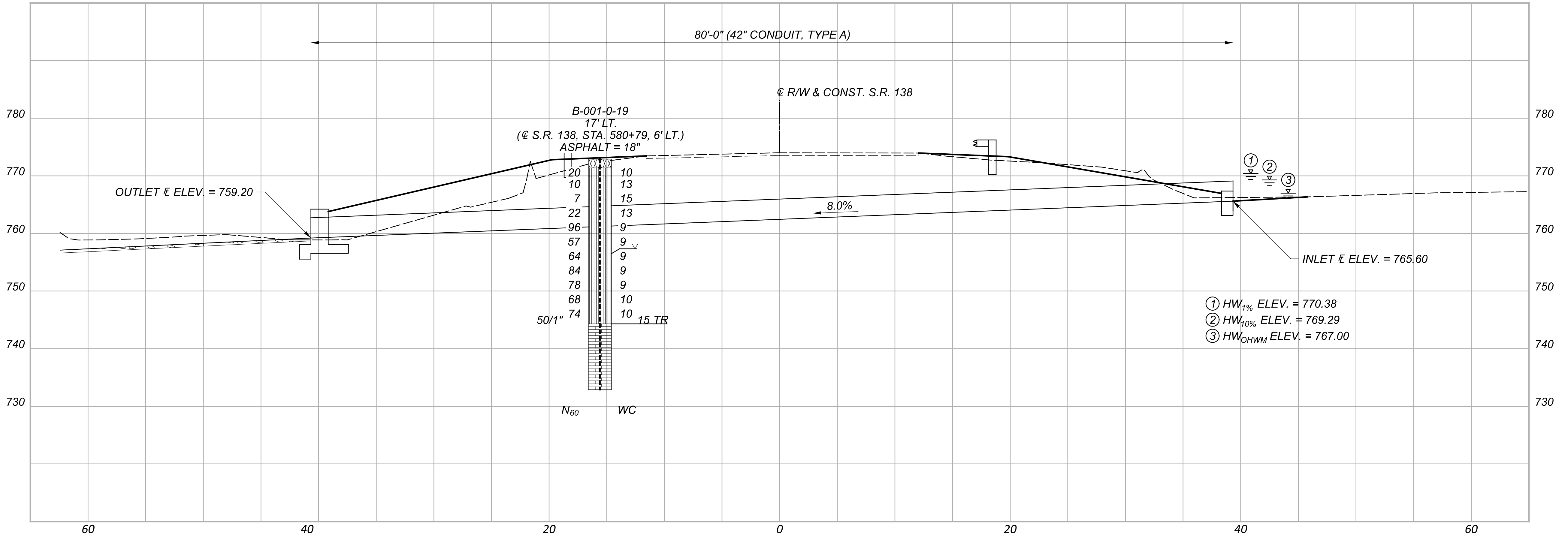
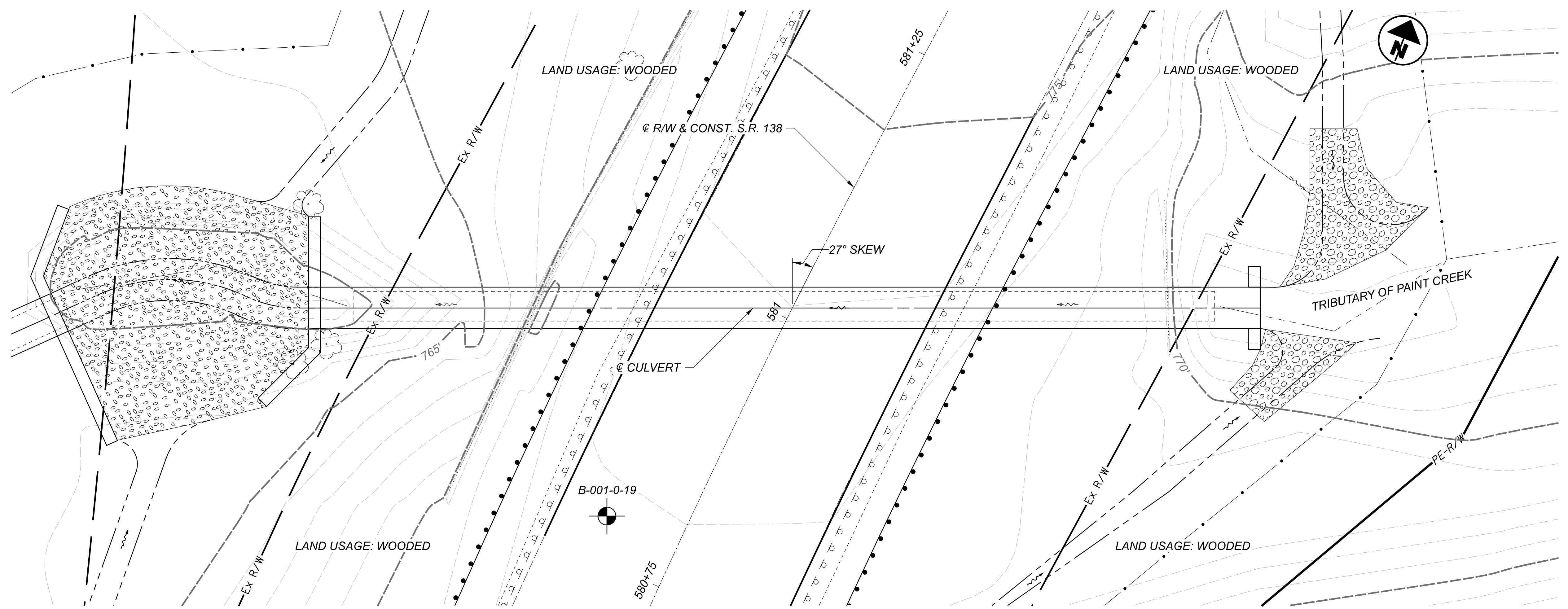
DESIGNER
ARR

REVIEWER
SAT 12/27/22

PROJECT ID
105103

SUBSET	TOTAL
2	7
SHEET	TOTAL
35	40

GEOTECHNICAL PROFILE - CULVERT
 CULVERT NO. ROS-138-1098 OVER TRIBUTARY OF PAINT CREEK



ROS-138-10.98


MODEL: Sheet PAPER: 34x22 (in.) DATE: 2/12/2024 TIME: 12:59:42 PM USER: JPerchinske
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PROJECT: ROS-138-10.98 DRILLING FIRM / OPERATOR: ODOT / CAREY ODOT / CAREY EXPLORATION ID B-001-0-19
 TYPE: CULVERT SAMPLING FIRM / LOGGER: ODOT / MCLEISH ODOT / MCLEISH
 PID: 105103 SFN: 1850766 (E) DRILLING METHOD: 3.25" HSA / NQ2 SAMPLING METHOD: SPT / NQ2 DEPTHS 1-40
 START: 3/3/20 END: 3/4/20 SAMPLING METHOD: SPT / NQ2 ELEV. 772.9 771.4 744.3 732.9
 DRILL RIG: CME 55 TRUCK STATION / OFFSET: 580+79.6' LT. CL SR 138
 HAMMER: CME AUTOMATIC ALIGNMENT: CL SR 138
 CALIBRATION DATE: 4/2/18 ELEVATION: 772.9 (ft) EOB: 40.0 ft.
 ENERGY RATIO (%): 87 LAT / LONG: 39.437325, -83.222213

DEPTH	ELEV.	MATERIAL DESCRIPTION AND NOTES	SPT/RQD	N ₆₀	REC SAMPLE (%)	HP (tsf)	GRADATION (%)										ODOT CLASS (G)	BACK FILL
							GR	CS	FS	SI	CL	LL	PL	PI	WC			
1	772.9	ASPHALT (18")																
2	771.4	HARD, BROWN, SANDY SILT, SOME GRAVEL AND STONE FRAGMENTS, LITTLE CLAY, DAMP	11	20	78	4.50	33	12	14	23	18	22	15	7	10	A-4a (1)		
3			7															
4		@3.5'; VERY STIFF, SOME CLAY	4	10	67	3.00	22	10	14	31	23	25	15	10	A-4a (4)			
5			3															
6		@6.0'; MEDIUM STIFF, MOIST	2	7	100	0.50	-	-	-	-	-	-	-	-	A-4a (V)			
7			2															
8			3															
9		@8.5'; VERY STIFF, DAMP	5	22	100	2.00	-	-	-	-	-	-	-	-	A-4a (V)			
10			6															
11		@11.0'; HARD	9															
12			29															
13			37															
14		@13.5'; GRAY, LITTLE GRAVEL AND STONE FRAGMENTS	12	57	100	4.50	12	11	18	37	22	21	13	8	A-4a (5)			
15			17															
16	756.5		22															
17			12	64	100	4.50	-	-	-	-	-	-	-	-	A-4a (V)			
18			17															
19			27															
20			14	84	100	4.50	-	-	-	-	-	-	-	-	A-4a (V)			
21			22															
22			36															
23			18	78	100	4.50	15	7	16	36	26	23	14	9	A-4a (5)			
24			22															
25			32															
26			10	68	100	4.50	-	-	-	-	-	-	-	-	A-4a (V)			
27			20															
28			27															
29	744.3	@28.5'; VERY STIFF, MOIST LIMESTONE, GRAYISH BROWN, HIGHLY WEATHERED, SLIGHTLY STRONG, THIN BEDDED, VUGGY, BLOCKY, GOOD; RQD 53%, REC 89%. @ 30.4' - 30.8'; $\gamma = 153$ pcf; $Q_u = 3,041$ psi	12	74	100	4.50	-	-	-	-	-	-	-	-	A-4a (V)			
30			20															
31			31															
32		@32.2' - 32.5'; $\gamma = 149$ pcf; $Q_u = 3,078$ psi	67		85	NQ2-1									CORE			
33		@33.9'; VERY BLOCKY, FAIR.																
34		@36.2' - 37.9'; CONGLOMERITIC																
35																		
36																		
37																		
38		@39.2'; DISINTEGRATED.	28		93	NQ2-2									CORE			
39																		
40	732.9																	

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 12/16/22 12:54 - X:\GINT\PROJECTS\2020 COMPLETE\600720.GPJ

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS.
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS MIXED WITH 50 LB. BENTONITE CHIPS

DESIGN AGENCY

 DESIGNER: ARR
 REVIEWER: SAT 12/27/22
 PROJECT ID: 105103
 SUBSET TOTAL: 4 7
 SHEET TOTAL: 37 40

GEOTECHNICAL PROFILE - CULVERT
 CULVERT NO. ROS-138-1098 OVER TRIBUTARY OF PAINT CREEK
 BORING LOG B-001-0-19

ROS-138-10.98

MODEL: Sheet PAPER: 34x22 (in.) DATE: 2/12/2024 TIME: 10:00:39 PM USER: jPerchinske
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PROJECT: ROS-138-10.98	DRILLING FIRM / OPERATOR: ODOT / CAREY	DRILL RIG: CME 55 TRUCK	STATION / OFFSET: 582+12.6' LT.	EXPLORATION ID
TYPE: RETAINING WALL	SAMPLING FIRM / LOGGER: ODOT / MCLEISH	HAMMER: CME AUTOMATIC	ALIGNMENT: CL SR 138	B-002-0-19
PID: 105103 SFN: N/A	DRILLING METHOD: 3.25" HSA	CALIBRATION DATE: 4/2/18	ELEVATION: 781.3 (ft) EOB: 39.0 ft.	PAGE
START: 3/4/20 END: 3/5/20	SAMPLING METHOD: SPT	ENERGY RATIO (%): 87	LAT / LONG: 39.437691, -83.222164	1 OF 1

DEPTH (ft)	SPT / RQD	N ₆₀	REC SAMPLE (%)	HP (tsf)	GRADATION (%)					WC	ODOT CLASS (GI)	BACK FILL	
					GR	CS	FS	SI	CL				LL
1												>>>>>	
2	9	28	100	4.00	6	14	17	37	26	23	15	8	A-4a (6)
3	10												>>>>>
4	7	33	100	4.50									A-4a (V)
5	12												>>>>>
6	8	36	78	4.50									>>>>>
7	11	36	78	4.50									>>>>>
8	14												>>>>>
9	9	42	100	4.50									A-4a (V)
10	15												>>>>>
11	7	29	100	4.00	22	10	12	32	24	25	15	10	A-4a (4)
12	9	29	100	4.00									>>>>>
13	11												>>>>>
14	7	35	78	4.50									A-4a (V)
15	10	35	78	4.50									>>>>>
16	14												>>>>>
17	8	42	100	4.50									A-4a (V)
18	12												>>>>>
19	12	84	100	4.50	16	10	17	36	21	20	14	6	A-4a (4)
20	23	35											>>>>>
21	20												>>>>>
22	25	87	100	4.50									A-4a (V)
23	35												>>>>>
24	20	107	100	4.50									A-4a (V)
25	36												>>>>>
26	38												>>>>>
27	20	104	100	4.50									A-4a (V)
28	33	39											>>>>>
29	23	104	100	4.50									A-4a (5)
30	30	42											>>>>>
31	21	125	100	4.50									A-4a (V)
32	34	52											>>>>>
33													>>>>>
34	17	110	100	4.50									A-4a (V)
35	28	48											>>>>>
36													>>>>>
37													>>>>>
38													>>>>>
39	59		83										A-4a (V)

ASPHALT (15")

VERY STIFF, BROWN, SANDY SILT, SOME CLAY, TRACE GRAVEL AND STONE FRAGMENTS, DAMP

@3.5'; HARD

@11.0'; VERY STIFF, GRAYISH BROWN, SOME GRAVEL AND STONE FRAGMENTS

@13.5'; HARD

@18.5'; LITTLE GRAVEL AND STONE FRAGMENTS, DRY

@33.5'; DAMP

@38.5'; MOIST

NOTES: HOLE DRY UPON COMPLETION. LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS.
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: SHOVELED SOIL CUTTINGS

DESIGN AGENCY	
DESIGNER	ARR
REVIEWER	SAT 12/27/22
PROJECT ID	105103
SUBSET	TOTAL
5	7
SHEET	TOTAL
38	40

GEOTECHNICAL PROFILE - RETAINING WALL
BORING LOG B-002-0-19

ROS-138-10.98

MODEL: Sheet PAPER: 34x22 (in.) DATE: 2/12/2024 TIME: 10:13:32 PM USER: JPerchinske
 pw:\ehlodot-pw\bentley.com\ehlodot-pw-02\Documents\01\Active Projects\105103_400-Engineer\105103_400-Engineer\105103_ZL1003.dgn

PROJECT: ROS-138-10.98 DRILLING FIRM / OPERATOR: ODOT / CAREY ODOT / CAREY EXPLORATION ID
 TYPE: RETAINING WALL SAMPLING FIRM / LOGGER: ODOT / MCLEISH ODOT / MCLEISH B-003-0-19
 PID: 105103 SFN: N/A DRILLING METHOD: 3.25" HSA SAMPLING METHOD: SPT DEPTHS 1-40
 START: 3/9/20 END: 3/10/20 MATERIAL DESCRIPTION AND NOTES

SPT/ RQD	N ₆₀	REC SAMPLE (%)	HP (tsf)	GRADATION (%)				ATTERBERG			ODOT CLASS (GI)	BACK FILL	
				GR	CS	FS	SI	CL	LL	PL			WC
10	32	44	4.50	31	12	14	25	18	22	14	8	10	A-4a (2)
6	36	100	4.50									12	A-4a (V)
9	46	100	4.50									11	A-4a (V)
6	28	67	4.50	22	8	14	31	25	22	13	9	11	A-4a (4)
7	32	100	4.50										A-4a (V)
7	32	100	4.50										A-4a (V)
6	38	100	4.50	12	10	19	36	23	20	14	6	10	A-4a (5)
8	45	100	4.50										A-4a (V)
6	59	100	4.50									9	A-4a (V)
16	73	100	4.50									9	A-4a (V)
21	53	100	4.50	20	9	17	33	21	20	14	6	11	A-4a (4)
33	54	100	4.50									10	A-4a (V)
58	50	50	4.50									14	A-4a (V)
26	41	135	4.50	26	6	14	31	23	22	14	8	10	A-4a (4)

STANDARD ODOT SOIL BORING LOG (11 X 17) - OH DOT.GDT - 12/16/22 12:58 - X:\GINT\PROJECTS\2020 COMPLETE\600720.GPJ

NOTES: LAT/LONG/ELEV FROM DISTRICT SURVEY GRADE INSTRUMENTS.
 ABANDONMENT METHODS, MATERIALS, QUANTITIES: AUGER CUTTINGS MIXED WITH 50 LB. BENTONITE CHIPS

DESIGN AGENCY:

DESIGNER: ARR

REVIEWER: SAT 12/27/22

PROJECT ID: 105103

SUBSET: 6 TOTAL: 7

SHEET: 39 TOTAL: 40

GEOTECHNICAL PROFILE - RETAINING WALL
BORING LOG B-003-0-19



Office of Geotechnical Engineering

B-001-0-19



Run #:	Depth	Recovery	RQD
NQ2-1	30.0'	51/60	40/60
NQ2-2	35.0'	56/60	17/60
		85%	67%
		93%	28%
ROS-138-10.98 PID 105103			

DESIGN AGENCY



DESIGNER

ARR

REVIEWER

SAT 12/27/22

PROJECT ID

105103

SUBSET

7

TOTAL

7

SHEET

40

TOTAL

40

GEOTECHNICAL PROFILE - CULVERT
 CULVERT NO. ROS-138-1098 OVER TRIBUTARY OF PAINT CREEK
 ROCK CORE PHOTO FOR B-001-0-19