

SPECIAL PROVISIONS

Waterway Permit Conditions

C-R-S: MAH-SR 46-13.55

PID: 120083

Date: 09/09/2026

Waterway Permits1. Waterway Permits Time Restrictions:

Regional General Permit (RGP), Section A (Linear Transportation Projects) is authorized for MAH-SR 46-13.55, PID: 120083. A copy of the RGP and authorization letter (USACE ID: LRH-2026-00439-MAH) shall be kept at the work site at all times and made available to all contractors and subcontractors. The permit is effective starting: August 28, 2026. The permit expires: February 11, 2030.

For authorized work in aquatic resources (including streams, wetlands, jurisdictional ditches, captured streams, lakes, ponds), the Department will consider the Contractor's submission of a reauthorization to the waterway permit expiration date based on project constraints. If more than one permit is authorized for the project, then all permits become invalid once the first permit expires. In order for the request to be considered, the Contractor must submit a justification to the Engineer at least 90 days prior to the waterway permit expiration date. The Engineer will submit the request for a time extension to the Ohio Department of Transportation, Office of Environmental Services, Waterway Permits Unit (ODOT-OES-WPU) for consideration and coordination with the U.S. Army Corps of Engineers (USACE), Ohio Environmental Protection Agency (OEPA), U.S. Coast Guard (USCG), U.S. Fish and Wildlife Service (USFWS), and Ohio Department of Natural Resources (ODNR) as appropriate.

2. Deviations From Permitted Construction Activities:

No deviation from the requirements for work in aquatic resources depicted in the plans, Special Provisions, and/or Working Drawings may be made unless a modification has been submitted to ODOT-OES-WPU and approved by the appropriate agencies (i.e., USACE, OEPA, USCG, ODNR, and USFWS).

NOTE: Plan sheets submitted with the Pre-Construction Notification were approved by the USACE in accordance with RGP A and are included in these Special Provisions.

For emergency situations resulting in unanticipated impacts to aquatic resources, provide notification (verbal or written) to the Engineer as soon as possible following discovery of the situation. Written notification to the Engineer and notification to the ODOT-OES-WPU (614-466-2159) must be made within 24 hours.

For non-emergency situations, notify the Engineer in writing for submission to the ODOT-OES-WPU (614-466-2159) for consideration and coordination with the appropriate agencies. Notification must be made at least 90 days prior to planned, non-permitted activities. Consideration of the requested deviation is at the discretion of the Director and must be coordinated with the appropriate regulatory agencies.

3. In-Stream Work Restrictions:

Work in the following aquatic resources is further restricted as follows:

Stream Name /Description	Location	Work restriction dates (No in-stream work permitted)
S-2	STA 7+60 to STA 8+20	None

In-stream work has been defined as the placement and/or removal of fill materials (temporary or permanent) below ordinary high water of a stream. Examples of "fill" include, but are not limited to: bridge piers, abutments, culverts, rock channel protection, scour protection, and temporary access fills.

Fills placed within a stream identified in the above table (outside of the work restriction dates) can continue to be worked from during the work restriction dates, but cannot be expanded, removed, or otherwise modified (below ordinary high water) until once again outside of the work restriction dates.

4. Materials:

Materials utilized in or adjacent to aquatic resources for temporary or permanent fill or bank protection shall consist of suitable material free from toxic contaminants in other than trace quantities. Asphalt products are specifically excluded for use as fill. Chromated Copper Arsenate (CCA), creosote, and other pressure treated lumber shall not be used in structures that are placed in aquatic resources.

5. Aquatic Resource Demarcation:

The tables attached (Table 3 and Table 4) include detailed fill quantities authorized within the aquatic resources. Aquatic resources not authorized for impact by these Special Provisions shall be demarcated in the field as per SS 832 prior to site disturbance. The fence shall remain in place and be maintained throughout the construction process. Following the completion of the project, the fence and posts shall be removed.

6. Spill containment:

Provide and Maintain an Oil Spill Kit with a minimum capacity of 65 gallons. The Spill Kit shall contain:

- 6 - 3 in. X 8 ft. oil only socks
- 4 - 18 in. X 18 in. oil only pillows
- 2 - 5 in. X 10ft. booms
- 50 - 16in. X 20 in. oil only pads
- 10 - disposable bags
- 1 - 65 gallon drum with lid
- 25 pounds of granular oil absorbent

The Oil Spill Kit shall be located within 150 feet of any equipment working in a stream or wetland. The oil Spill Kit shall be maintained for the life of the contract. Any materials utilized during the project will be replaced within 48 hours. All costs associated with furnishing and maintaining the above referenced spill containment kit are incidental to work.

7. Temporary Access Fills:

Definitions:

Hydraulic Opening

The cross-sectional area allowing an unimpeded discharge equal to twice the highest monthly flow without producing a rise in the backwater above the Ordinary High Water Mark (OHWM).

Standard Temporary Discharge

Discharge equal to twice the *highest monthly flow* without producing a rise in the backwater above the OHWM. The U.S. Geologic Service publication "Techniques for estimating Selected Streamflow

Characteristics of Rural Unregulated Streams in Ohio” provides equations that estimate monthly flow for Ohio Waterways. These flows are also available in a web application by USGS StreamStats, (<https://water.usgs.gov/osw/streamstats/ohio.html>). The highest monthly flow is the highest monthly mean discharge occurring in a 12-month period from January to December.

Average Monthly Flow

The average monthly flow represents the estimated “normal” flow.

Temporary Access Fills (TAFs)

Include, but are not limited to, dewatering fills, causeways, cofferdams, access pads, temporary bridges, etc. below the OHWM.

Requirements

21 calendar days prior to the initiation of any in-stream work, provide the Engineer with Working Drawings that include:

- Plan view drawing (50 scale or less) showing the location of all TAFs proposed for use on the project.
- Scaled cross section and profile drawing showing the OHWM and the proposed hydraulic opening.
- Identify the minimum diameter size, placement location and thickness of non-erodible Dumped Rock Fill material on the plan and profile.
- Calculations analyzing the hydraulic impacts of the TAF on the waterway. Include in the calculations an analysis of the hydraulic opening sized adequately to pass the Standard Temporary Discharge without producing a rise in backwater above the OHWM. Include, in the analysis, calculated channel velocities adjacent to the TAF, culvert exit velocities, calculated headwater and tailwater elevations, and any additional appropriate calculations to assess potential impacts to the waterway during normal and anticipated high flow (twice the highest monthly flow) events.
- A description of all temporary material to be placed below the OHWM elevation.
- A description of the installation and staging of all temporary fill over the life of the contract.
- Identify the protection methods and/or structural Best Management Practices for minimizing impacts to the waterway.
- Volume of temporary fill below the OHWM elevation.
- A description of the diversion ditches, equipment, conduits or means for maintaining normal flows in the waterway.
- A description of the removal of all temporary fill and restoration of the channel and all areas impacted by the TAFs.
- A schedule outlining the timing of the placement and removal of all temporary fill.
- Have competent individuals prepare and check the Working Drawings and hydraulic calculations. Provide a cover sheet containing the preparer(s) and checker(s): First Name, Last Name and Initials. The preparer(s) and checker(s) shall not be the same individual. Have an Ohio Registered Engineer review, approve, sign, seal and date the Working Drawings and hydraulic calculations according to ORC 4733 and OAC 4733-35. Include the following statement on the Working Drawings:

“These Working Drawings were prepared in compliance with the terms of these Special Provisions and all contract documents.”

Do not begin in-stream work until the Engineer has accepted the Working Drawings and hydraulic calculations.

The design and construction of the Contractor’s TAF must minimize impacts to water bodies, stream banks, stream beds, and riparian zones to the maximum extent practicable.

Fording of waterways and other aquatic resources is prohibited.

Construct TAFs in such a manner that will maintain flows, minimize upstream flooding, and avoid overtopping the TAF on a regular basis. ***TAFs shall be designed and constructed so that the hydraulic opening provides capacity for a discharge equal to twice the highest monthly flow without producing a rise in the backwater above the (OHWM).***

If the Contractor proposes a TAF which does not meet all the requirements of these Special Provisions, the Contractor must submit a request in writing for a modified TAF to the Engineer. The request must include all Working Drawings and hydraulic calculations required by these Special Provisions. The Department makes no guarantee to grant the request. The Contractor's proposed TAF request will be coordinated by OES with the USACE and the OEPA, as appropriate. The time frame allowed for the coordination of the contractor's proposed TAF will be a minimum of 60 days.

Installation of any temporary fill without appropriate authorization is strictly prohibited. All direct coordination with the USACE and/or OEPA will be performed through OES.

TAFs Construction and Payment

Begin planning and installing causeways and access fills as early in construction as possible to avoid conflicts with these Special Provisions or other environmental commitments that have been included in the construction plans.

TAFs in Streams and Rivers may include, but are not limited to, causeways, cofferdams, access pads, sheet piling, temporary bridges, etc. The Contractor must make every attempt to minimize disturbance to waterbodies, stream banks, stream beds and riparian zones during the construction, maintenance, and removal of the TAF. Construct the TAFs as narrow as practical. Install in-stream conduits parallel to the stream banks. Make the TAFs in shallow areas rather than deep pools where possible. Minimize clearing, grubbing, and excavation of stream banks, and approach sections. Construct the TAFs as to not cause erosion or allow sediment deposits in the waterway.

Prior to the initiation of any in-stream work, establish a monument upstream of the proposed TAF to visually monitor the water elevation in the waterway where the fill is permitted. Maintain the monument throughout the project. Provide a visual mark on the monument that identifies the elevation 1 foot above the OHWM. Ensure that the monument can be read from the bank of the waterway. Have this elevation set and certified by an Ohio Registered Surveyor. All costs associated with furnishing and maintaining the above referenced monument are incidental to the work.

Should the surface water elevation exceed the elevation 1 foot above OHWM, the Department will compensate the Contractor for repair of any resulting damage to the TAF up to the elevation of 1 foot above the OHWM, except as noted. The Department will recognize this event as an excusable, non-compensable delay in accordance with Section 108.06 B. of the Construction & Materials Specifications.

Follow the requirements in Item 502 for Structures for Maintaining Traffic and in Item 503 for Cofferdams and Excavation Bracing and any modifications to these items as shown in the plans. The Department will not pay for repair and maintenance of TAFs associated with Items 502 and 503 as a result of surface water elevation exceeding 1 foot above the OHWM. Compensation for damages associated with waterway flows will be provided as described in Items 502 and 503.

Construct the TAFs, not including Items 502 and 503, to a water elevation at least 1 foot (0.3 m) above the OHWM. If more than one-third the width of the stream is filled, then use culvert pipes to allow the movement of aquatic life. Ensure that any ponding of water behind the TAF will not damage property, flood roadways, or threaten human health and safety.

The following minimum requirements apply to TAFs where culverts are used:

- A. Furnish culverts on the existing stream bottom.
- B. Avoid a drop in water elevation at the downstream end of the culvert that would result in an adverse impact to the waterway.
- C. Furnish a sufficient number of culverts in addition to stream openings to provide a discharge equal to twice the highest monthly flow without producing a rise in the backwater above the OHWM.
- D. Furnish culverts with a minimum diameter of 18 inches (0.5 m).

All TAFs must be constructed of suitable materials. Causeways and access fills must be encapsulated with clean, non-erodible, nontoxic Dumped Rock Fill, Type A, B, C, or D, meeting the requirements of C&MS 703.19.B. Utilize appropriately sized Dumped Rock Fill determined by the Contractor's engineer for encapsulating the sides of the TAF. Encapsulate all sides of the TAF with the non-erodible material. For causeways, contractors may use clean aggregate meeting C&MS 703.01 Size Number 1 and 2 for creating a working surface above the OHWM. Extend the non-erodible encapsulating material to at least the elevation of the top of the working surface. Extend clean aggregate up the slope from the original stream bank for 50 feet (10 m) to remove erodible material and prevent tracking from equipment onto the TAF.

When the work requiring TAF is complete, all portions of the TAF (including all rock and culverts) will be removed in its entirety. Do not dispose of TAF material in other aquatic resources or where erosion into another aquatic resource is possible. The stream bottom affected by the TAFs will be restored to its pre-construction elevations. The TAFs will not be paid as a separate item but will be included by the Contractor as part of the total project cost.

Unless specific TAF compensation is included in the plans, all environmental protection and control associated with the authorized activities are incidental to the work within the boundaries of the aquatic resources.

8. Excavation Activities:

Excavated material will be placed at an upland site and disposed of in such a manner that sediment and runoff to streams and other aquatic resources is controlled and minimized. Additionally, no more than incidental fallback into aquatic resources is permitted during the excavation process. If any changes to the proposed work are deemed necessary, notify the Engineer who will immediately contact the ODOT-District Environmental Coordinator and ODOT-OES-WPU at 614-466-2159.

10. Demolition Debris:

The intentional discharge of demolition debris from any structure (including but not limited to bridges, culverts, abutments, wing walls, piers) is not authorized for this project. If any demolition debris inadvertently falls into aquatic resources, it must be removed immediately. Notify the Engineer immediately in writing of any inadvertent fill discharged into aquatic resources. The Engineer will immediately contact ODOT-OES-WPU at 614-466-2159 if any unintentional discharge occurs.

11. Construction Completion Certification:

Upon completion of the work, notify the Engineer. The USACE Construction Completion Certification must be completed and signed by the Engineer then provided via US mail or email to:

Waterway Permits Program Manager
ODOT - Office of Environmental Services
1980 West Broad Street, Mail Stop 4170

Columbus, Ohio 43223
Adrienne.Earley@dot.ohio.gov

A copy of the certification has been attached to these Special Provisions.

Version: July 2026

TABLE 3. STREAM DISCHARGE AND FILL QUANTITIES

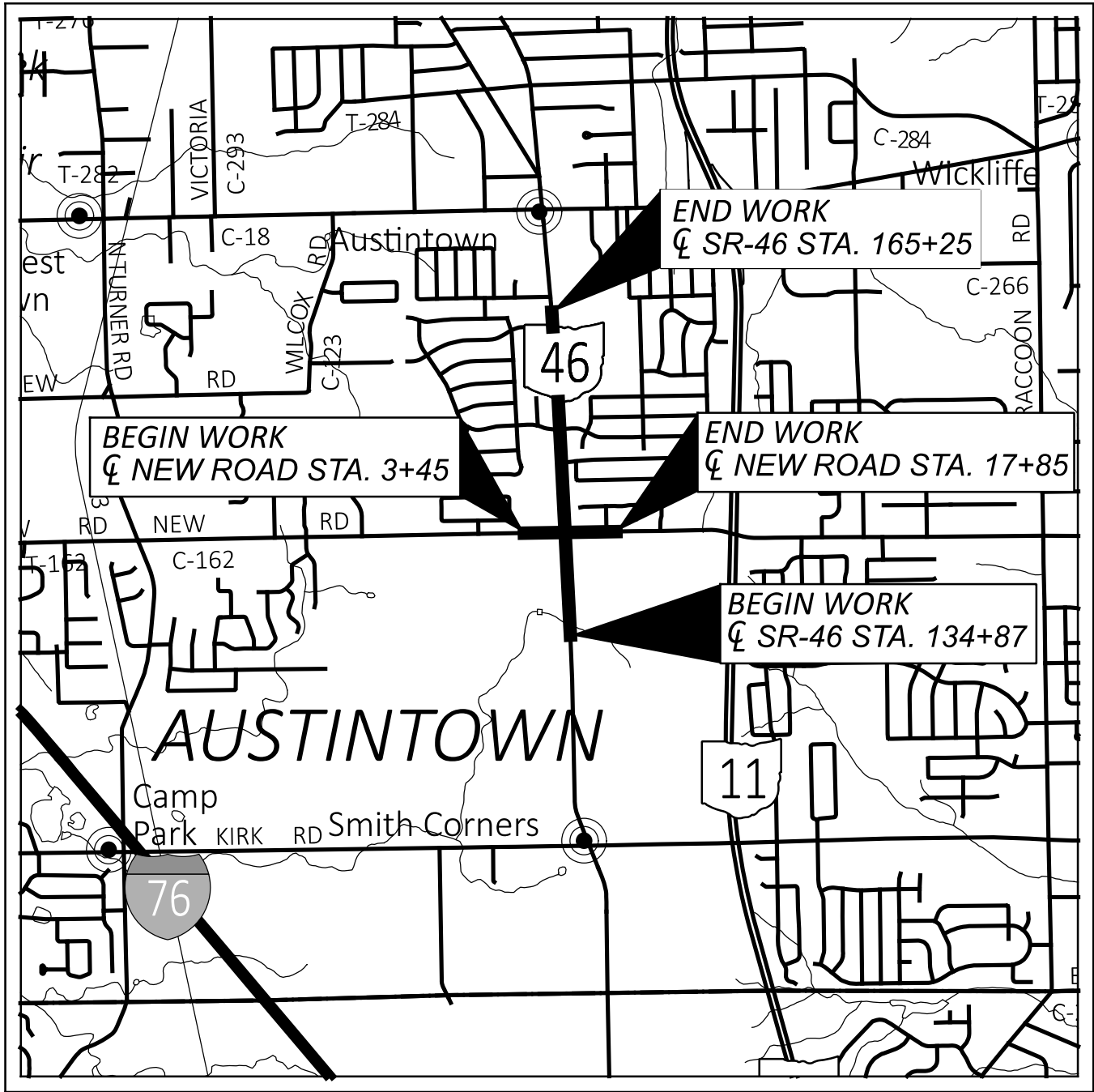
Stream	Station	Description of Impacts	Length (LF)	Width (LF)	Depth (LF)	Existing Culvert	Culvert Overlap	Permanent Fill Below OHWM												Total Permanent Fill			Total Temporary Fill			Total Impact Length
								Proposed Concrete (Includes Culvert, Piers, Walls, Abutments, etc.)			Proposed RCP			Proposed Earthen, Granular, or Embankment Fill			Proposed Other (Steel, Etc.)									
								Length (LF)	Length (LF)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)
S-2 S&C 2*	7+60 to 8+20	Roadway Expansion (Roundabout)	73	4.6	0.9	NA	NA	NA	NA	NA	NA	NA	NA	73	0.008	11.2	NA	NA	NA	73	0.008	11.2	25	0.003	3.1	73
SUM:						0	0	0	0	0	0	0	73	0.008	11.2	0	0	0	73	0.008	11.2	25	0.003	3.1	73	

*Single and Complete Project (See Figure 4)
LF = linear feet; AC = acres; CY = cubic yards; RCP = rock channel protection or the like (specify if different, i.e.. concrete block matting); NA = Not Applicable

TABLE 4. WETLAND DISCHARGE AND FILL QUANTITIES

Wetland	Station	Description of Impacts	Acreage (AC)	Depth (LF)	Permanent Fill Within Wetland Boundary								Total Permanent Fill		Total Temporary Fill		Total Impact Acreage
					Proposed Concrete (Includes Culvert, Piers, Walls, Abutments, etc.)		Proposed RCP		Proposed Earthen, Granular, or Embankment Fill		Proposed Other (Steel, Etc.)						
					Area (AC)	Volume (CY)	Area (AC)	Volume (CY)	Area (AC)	Volume (CY)	Area (AC)	Volume (CY)	Area (AC)	Volume (CY)	Area (AC)	Volume (CY)	Area (AC)
W-2 S&C 1*	137+60 to 138+75	Grading	0.017	1	NA	NA	NA	NA	0.017	27.4	NA	NA	0.017	27.4	NA	NA	0.017
W-3 S&C 3*	149+50 to 150+60	Grading	0.099	1	NA	NA	NA	NA	0.093	150	NA	NA	0.093	150	NA	NA	0.093
W-4 S&C 2*	7+25 to 7+90	Grading, Culvert Installation + RCP	0.078	1	0.003	4.4	0.002	2.8	0.050	80.7	NA	NA	0.055	87.9	NA	NA	0.055
SUM:					0.003	4.4	0.002	2.8	0.160	258.1	NA	NA	0.165	265.3	NA	NA	0.165

*Single and Complete Project (See Figure 4)
LF = linear feet; AC = acres; CY = cubic yards; RCP = rock channel protection or the like (specify if different, i.e.. concrete block matting); NA = Not Applicable



LOCATION MAP

LATITUDE: 41°05'02" LONGITUDE: -80°45'46"



PORTION TO BE IMPROVED _____

INTERSTATE HIGHWAY _____

FEDERAL ROUTES _____

STATE ROUTES _____

COUNTY & TOWNSHIP ROADS _____

OTHER ROADS _____

DESIGN DESIGNATION

	SR 46 NORTH LEG	SR 46 SOUTH LEG	NEW ROAD
CURRENT ADT (2026)	17,050		8,409
DESIGN YEAR ADT (2046)	17,050		8,409
TRUCKS (24 HOUR B&C)	9%		3%
DESIGN SPEED	50 MPH	45 MPH	35 MPH
LEGAL SPEED	45 MPH	40 MPH	40 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	MINOR ARTERIAL (URBAN)	MINOR ARTERIAL (URBAN)	MINOR COLLECTOR (URBAN)
NHS PROJECT	NO		

DESIGN EXCEPTIONS

NONE REQUIRED

ADA DESIGN WAIVERS

NONE REQUIRED

UNDERGROUND UTILITIES

Contact Two Working Days
Before You Dig


Before You Dig

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

PLAN PREPARED BY:
JOHNSON, MIRIMIRAN & THOMPSON, INC.
4215 WORTH AVENUE, STE. K-230
COLUMBUS, OHIO 43219

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

MAH-46-13.55 PART 1

FOR PART 2 SEE MAH-46-10.85

AUSTINTOWN TOWNSHIP

COUNTY OF MAHONING

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RIGHT OF WAY	

FEDERAL PROJECT NUMBER

E240 (772)

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

PROVIDE SAFETY IMPROVEMENTS WITH THE DESIGN OF A ROUNDABOUT AT SR 46 AND NEW ROAD INTERSECTION IN AUSTINTOWN TOWNSHIP. THE PROJECT ALSO INCLUDES IMPROVING THE DRAINAGE, PAVEMENT, SIGNING, STREET MARKINGS, LIGHTING, AND A SIGNAL AND A U-TURN BULB OUT AT THE SR-46 AND NOTRE DAME AVENUE INTERSECTION.

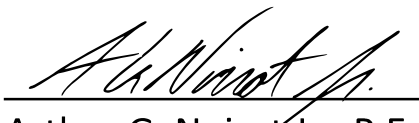
EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	5.57 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.25 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	5.82 ACRES

2023 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS, CHANGES LISTED IN THE PROPOSAL, AND THE SUPPLEMENTAL SPECIFICATION 800 VERSION INDICATED ON THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

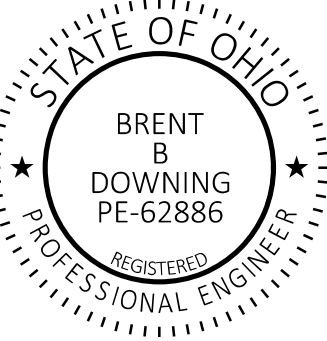
I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEETS P.25 - P.28, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.


Arthur G. Noiro Jr., P.E.
District 04 Deputy Director


Pamela Boratyn
Director, Department of Transportation

STANDARD CONSTRUCTION DRAWINGS								SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS	
BP-1.1	7/28/00	RM-1.1	7/18/25	MT-95.30	7/18/25	TC-16.22	7/18/25	800-2023	1/16/26		
BP-3.1	1/19/24	RM-3.1	7/20/18	MT-95.31	7/18/25	TC-21.21	7/18/25	809	1/16/26		
BP-3.2	1/18/19			MT-95.32	7/18/25	TC-22.22	7/18/25	813	7/21/23		
BP-4.1	7/19/13	HL-10.11	1/16/26	MT-95.40	7/18/25	TC-41.20	10/18/13	821	4/20/12		
BP-5.1	7/18/25	HL-10.12	1/16/26	MT-95.41	7/18/25	TC-41.40	1/16/26	825	7/19/24		
BP-7.1	7/18/25	HL-10.13	1/20/23	MT-96.11	7/18/25	TC-42.20	10/18/13	832	7/18/25		
		HL-20.11	1/16/26	MT-97.10	7/18/25	TC-52.10	10/18/13	897	1/16/15		
CB-2-2A, 2B, 2C	7/19/24	HL-30.11	1/16/26	MT-97.12	7/18/25	TC-52.20	1/15/21	913	4/16/21		
CB-3A	7/19/24	HL-30.21	4/17/20	MT-98.20	4/19/19	TC-65.10	1/16/26	921	7/19/24		
		HL-30.22	1/17/25	MT-99.20	4/19/19	TC-65.11	1/17/25	961	4/17/20		
DM-1.1	1/17/25	HL-40.10	1/16/26	MT-101.60	1/17/25	TC-71.10	1/16/26				
DM-1.2	1/17/25	HL-50.11	1/16/15	MT-101.70	7/19/24	TC-72.20	7/18/25				
DM-4.3	1/15/16	HL-50.21	7/15/22	MT-101.75	7/21/23	TC-74.10	1/16/26				
DM-4.4	1/15/16	HL-60.11	7/21/17	MT-101.90	7/17/20	TC-81.22	1/17/25				
		HL-60.12	1/16/26	MT-102.20	4/19/19	TC-83.20	1/16/26				
MH-3	7/19/24	HL-60.31	1/16/26	MT-105.10	1/17/20	TC-85.20	4/21/23				

ENGINEER'S SEAL



DESIGN AGENCY	 4215 Worth Avenue, Suite K-200 Columbus, OH 43219
DESIGNER	CO
REVIEWER	BD 02/27/26
PROJECT ID	120083
SHEET	P.1
TOTAL	182

UTILITIES

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

CITY OF YOUNGSTOWN
ATTN: VINNY NATAL
26 SOUTH PHELPS STREET
YOUNGSTOWN, OH 44503
330-742-8765
330-301-9578
vnatal@youngstownohio.gov

MAHONING COUNTY SANITARY ENG
ATTN: PHILIP TATE
761 INDUSTRIAL ROAD
YOUNGSTOWN, OH 44509
(330) 793-5514 EXT. 8212
philip.tate@mahoningcountyoh.gov

ODOT 4 TRAFFIC
ATTN: DAVID C. KONEVAL
2088 SOUTH ARLINGTON ROAD
AKRON, OH 44306
(330) 786-2267
d04.oups.traffic@dot.ohio.gov

ELECTRIC:
OHIO EDISON
ATTN: TIM MARKULIN
730 SOUTH AVENUE
YOUNGSTOWN, OH 44502
(330) 786-3146
tmarkulin@firstenergycorp.com

GAS:
ENBRIDGE GAS OHIO DBA DOMINION ENERGY
ATTN: RYAN BOND
SUPERVISOR - GAS OPERATIONS
DISTRIBUTION DESIGN
320 SPRINGSIDE DRIVE
AKRON, OH 44333
(330) 807-2285 CELL
ryan.a.bond@dominionenergy.com

GAS:
OWS ACQUISITION CO.
ATTN: CHASE LASH
2321 ENERGY DRIVE SUITE 300
LOUISVILLE, OH 44641
(330) 602-5551
clash@owsacq.com

TELECOMMUNICATION:
ARMSTRONG CABLE
ATTN: ROB WOLTERS
9328 WOODWORTH RD.
NORTH LIMA, OH 44452
(330) 953-0705 EXT. 224
rwolters@agoc.com

TELECOMMUNICATION:
AT&T
ATTN: TORRICE ROBINSON
50 W BOWERY ST, FLOOR 6
ASHTABULA, OH 44004
P: (330) 384-9851
C: (330) 734-5117
tr3463@att.com

SURVEYING PARAMETERS - OHIO STATE PLANE NORTH

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 2 OF THE PLANS 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: STATIC
MONUMENT TYPE: B

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM: NAVD 88
GEOID: 2018

HORIZONTAL POSITIONING

REFERENCE FRAME: NAD 83 (2011) (EPOCH: 2010.0000)
ELLIPSOID: GRS80
MAP PROJECTION: SIGNAL PARALLEL LAMBERT CONIC CONFORMAL
COORDINATE SYSTEM:
COMBINED SCALE FACTOR: 1.000041
ORIGIN OF COORDINATE SYSTEM: N 41-09-00
E 279-15-00

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.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF 9 PM AND 6 AM. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

MONUMENT ASSEMBLIES

CONSTRUCT MONUMENT ASSEMBLIES IN ACCORDANCE WITH THE DETAILS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON P.14, 20 & 24 OF THE RIGHT-OF-WAY PLANS

ITEM 623 - MONUMENT ASSEMBLY, TYPE C 3 EACH

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICIALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

SEEDING AND MULCHING

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

659, TOPSOIL	1197 CY
659, SEEDING AND MULCHING	10785 SY
659, REPAIR SEEDING AND MULCHING	539 SY
659, INTER-SEEDING	539 SY
659, COMMERCIAL FERTILIZER	1.51 TON
659, LIME	2.23 ACRE
659, WATER	60 MGAL

APPLY SEEDING AND MULCHING 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.

ROUNDING

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

ITEM 204 - PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING. SEE PLAN SHEET NO. P.6 - P.11 FOR ADDITIONAL INFORMATION.

ITEM 204 - PROOF ROLLING 13 HOUR

POST CONSTRUCTION STORM WATER TREATMENT

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

VEGETATED BIOFILTER

THIS PLAN UTILIZES VEGETATED BIOFILTER(S) FOR POST CONSTRUCTION STORM WATER TREATMENT. PLACE EITHER 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.

ITEM 609 - COMBINATION CURB AND GUTTER TYPE 9, AS PER PLAN

THE ITEM 609 TYPE 9 CURB, AS PER PLAN, SHALL FOLLOW ALL OF THE SPECIFICATIONS OF 609 AND SCD BP-5.1, EXCEPT THAT THE WIDTH OF THE GUTTER SHALL BE 2.0' AND THE SLOPE SHALL BE 2.00%. FOR MORE INFORMATION, SEE DETAIL B ON SHEET P.11

EXISTING PLANS

EXISTING PLANS ENTITLED MAH-46-13.48 MAY BE INSPECTED IN THE ODOT DISTRICT 4 OFFICE IN AKRON.

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.

ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN

IN LOW SHOULDER AREAS EXCEEDING 1", OR AS DIRECTED BY THE ENGINEER, RECYCLED ASPHALT PAVEMENT (RAP) SHALL BE USED IN AREAS ADJACENT TO THE PAVED BERM. THE RAP SHALL HAVE A MINIMUM PG CONTENT OF 4.5% AND MEET THE FOLLOWING GRADATION. ONCE THE STOCKPILE MEETS THE GRADATION, THE PG CONTENT OF THE RAP SHALL BE DETERMINED PER 441.03. THE RAP ANALYSIS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO USE. METHOD OF MEASUREMENT SHALL BE AS PER 617.06. PLACEMENT AND COMPACTION SHALL MEET THE REQUIREMENTS OF ITEM 617. ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 617 COMPACTED AGGREGATE, AS PER PLAN.

MODIFIED GRADATION SHALL APPLY:

SIEVE	TOTAL PERCENT PASSING
1- 1/2"	100
3/4"	50-100
NO. 4	35-70
NO. 30	9-33
NO. 200	0-13

MANHOLES, CATCH BASINS AND INLETS REMOVED OR ABANDONED

CAREFULLY REMOVE AND STORE ALL CASTINGS WITHIN THE RIGHT OF WAY FOR SALVAGE BY ODOT DISTRICT 4 MAINTENANCE STAFF. CONTACT ANDY JACKSON (330-786-4843) WHEN READY FOR PICKUP.

PAYMENT FOR ALL OF THE ABOVE IS INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 202 ITEM.

DESIGN AGENCY



4215 North Ave Suite K-230
Columbus, OH 43219

DESIGNER

CO

REVIEWER

BD 02/27/26

PROJECT ID

120083

SHEET

P.12

TOTAL

182

ITEM SPECIAL - PAVEMENT OVERLAY FABRIC COMPOSITE

DESCRIPTION. THIS WORK SHALL CONSIST OF FURNISHING AND INSTALLING PAVEMENT OVERLAY FABRIC COMPOSITE AS SHOWN ON THE PLANS AND AT LOCATIONS DESIGNATED BY THE ENGINEER. THIS FABRIC COMPOSITE MAY BE PLACED ON A MILLED SURFACE.

MATERIALS. PAVEMENT OVERLAY FABRIC COMPOSITE SHALL BE CONSTRUCTED OF LONG CHAIN SYNTHETIC POLYMERS COMPOSED OF AT LEAST 85 PERCENT OF POLYOLEPHINES, POLYESTERS, AND POLYAMIDES BY WEIGHT, SHALL BE RESISTANT TO CHEMICAL ATTACK, MILDEW, ROT, AND ATTACHED TO A FIBERGLASS GRID. COMPOSITE SHALL MEET THE FOLLOWING PHYSICAL REQUIREMENTS:

PROPERTY PAVING FABRIC:	SPECIFICATION TEST METHOD GLASSGRID CG200 OR APPROVED EQUAL	
GRAB TENSILE STRENGTH, LBS.	90 MIN.	ASTM D 1682
GRAB ELONGATION, PRECENT	50 MIN.	ASTM D 1682
ASPHALT RETENTION GAL./SY.	0.20 MIN.	AASHTO M-288
COMPOSITE ULTIMATE TENSILE STRENGTH (LBS/FT)	MD 6720 MIN. XD 13440 MIN.	ASTM D 6637
MAXIMUM ELONGATION	LESS THAN 3%	ASTM D 6637
PERCENT OPEN AREA	>50 TEX-621-J "TESTING GEOGRIDS"	
MELTING POINT MIN (DEGREES F)	1000	ASTM C338
LOSS ON IGNITION %	>15 TEX-621-J "TESTING GEOGRIDS"	
MASS/UNIT AREA	16.0 OZ./SY MIN.	ASTM D 5261-92

THE COMPOSITE FABRIC SHALL NOT BE EXPOSED TO ULTRAVIOLET RADIATION FOR MORE THAN 7 DAYS. THE FABRIC SHALL BE AT LEAST 60 INCHES BUT NO MORE THAN 150 INCHES IN WIDTH AND FURNISHED IN ROLLS OF APPROXIMATELY 104 YARDS IN LENGTH. THE FABRIC CAN BE CUT TO A 30 INCH WIDTH IF A 30 INCH WIDTH IS SPECIFIED IN THE PLAN.

THE ASPHALT SEALANT SHALL BE PG64-22 MEETING THE REQUIREMENTS OF 702.01.

CERTIFICATION SHALL BE FURNISHED IN ACCORDANCE WITH 101.061 BEFORE THE FABRIC IS PLACED. THE ENGINEER MAY REQUIRE SAMPLING FOR TESTING PURPOSES AS DIRECTED BY THE LABORATORY.

EQUIPMENT. THE CONTRACTOR SHALL PROVIDE EQUIPMENT FOR HEATING AND APPLYING BITUMINOUS MATERIAL. HEATING EQUIPMENT AND DISTRIBUTORS SHALL MEET THE REQUIREMENTS OF 407.

THE MECHANICAL LAYDOWN EQUIPMENT SHALL BE MOUNTED ON A FOUR-WHEELED VEHICLE THAT IS CAPABLE OF DRIVING OVER THE FABRIC WHILE IT IS BEING INSTALLED TO CONTROL THE TENSION ON THE MATERIAL. THE LAYDOWN MACHINE SHALL BE EQUIPPED WITH CLUTCHES TO ADJUST THE ROLL TENSION AND BROOMS TO SMOOTH OUT WRINKLES DURING INSTALLATION. MANUAL LAYDOWN MAY ONLY BE USED IN AREAS INACCESSIBLE TO THE LAYDOWN MACHINE.

CONSTRUCTION DETAILS

1. SURFACE PREPARATION: THE CRACKS AND ENTIRE ROAD SURFACE TO BE TREATED, AND AT LEAST ONE ADDITIONAL FOOT ON EACH SIDE, SHALL BE CLEANED BY SWEEPING, BLOWING, OR OTHER METHODS UNTIL ALL DUST, MUD, CLAY LUMPS, VEGETATION, AND FOREIGN MATERIAL ARE REMOVED ENTIRELY FROM THE PAVEMENT BEFORE THE BITUMINOUS MATERIAL IS APPLIED. CARE SHALL BE EXERCISED TO PREVENT MATERIAL SO REMOVED FROM BECOMING MIXED WITH THE NEW SURFACE. LARGE CRACKS AND POTHOLES SHOULD BE FILLED.

2. APPLICATION OF ASPHALT SEALANT: THE APPLICATION OF THE ASPHALT SEALANT SHALL CONFORM TO THE APPLICABLE PORTIONS OF 407. THE ASPHALT SEALANT SHALL BE UNIFORMLY SPRAYED OVER THE AREA TO BE COVERED BY FABRIC AT A RATE OF 0.25 TO 0.30 GALLON PER SQUARE YARD.

THE QUANTITY APPLIED WILL VARY WITH THE SURFACE CONDITION OF THE EXISTING PAVEMENT (DEGREE OF POROSITY, FOR EXAMPLE). THE FABRIC ALONE, UNDER HEAT OF THE OVERLAY, WILL ABSORB AT LEAST 0.20 GALLON PER SQUARE YARD. WITHIN INTERSECTIONS OR OTHER ZONES WHERE VEHICLE BRAKING IS COMMON PLACE, THE APPLICATION SHALL BE REDUCED 20 PERCENT. THE SEALANT SHALL BE APPLIED TO AN AREA TWO TO SIX INCHES WIDER THAN THE WIDTHS OF THE FABRIC BEING PLACED, BUT RESTRICTED TO THE AREA OF IMMEDIATE FABRIC LAYDOWN. APPLICATION SHALL BE BY DISTRIBUTOR WITH HAND SPRAYING ALLOWED ONLY WHERE THE DISTRIBUTOR CANNOT BE USED. ASPHALT SPILLS SHALL BE CLEANED FROM THE ROAD SURFACE TO AVOID FLUSHING AND POSSIBLE MOVEMENT AT THESE ASPHALT RICH AREAS.

THE ASPHALT CEMENT USED AS A SEALANT SHALL HAVE DISTRIBUTOR TANK TEMPERATURE BETWEEN 300 DEGREES AND 350 DEGREES F. APPLICATION TEMPERATURE IS NOT CRITICAL AFTER THE ASPHALT IS SPRAYED ON THE PAVEMENT. IF THE FABRIC IS TO BE OVER-SPRAYED, DISTRIBUTOR TANK TEMPERATURES SHOULD NOT EXCEED 350 DEGREES F TO AVOID DAMAGE TO THE FABRIC.

3. COMPOSITE FABRIC PLACEMENT: THE COMPOSITE FABRIC SHALL BE PLACED ON THE ASPHALT SEALANT AS SOON AS PRACTICAL AND BEFORE THE TACKINESS OF THE SEALANT IS LOST. THE COMPOSITE SHALL BE PLACED AS SMOOTHLY AS POSSIBLE TO AVOID WRINKLES. IT SHALL BE UNROLLED SO THAT THE SOFT SIDE IS UNWOUND INTO THE SEALANT AND THE GRID SIDE UP, THUS PROVIDING OPTIMUM BOND BETWEEN FABRIC AND PAVEMENT DURING THE CONSTRUCTION PROCESS. WRINKLES SEVERE ENOUGH TO CAUSE "FOLDS" SHALL BE SLIT AND LAID FLAT. SMALL WRINKLES, WHICH FLATTEN UNDER COMPACTION ARE NOT DETRIMENTAL TO PERFORMANCE. THE COMPOSITE SHALL BE BROOMED OR SQUEEGEED TO REMOVE AIR BUBBLES AND MAKE COMPLETE CONTACT WITH THE ROAD SURFACE AS RECOMMENDED BY THE FABRIC MANUFACTURER. THE FABRIC SHALL BE LAID STRAIGHT, WITHIN THE SEALANT AREA. MODERATE CURVES CAN BE NEGOTIATED BY STRETCHING THE FABRIC ON THE OUTSIDE OF THE CURVE BY ADJUSTING THE DRAG ON THE BRAKES OF THE LAYDOWN EQUIPMENT. TRANSVERSE JOINTS SHALL BE "SHINGLED" IN THE DIRECTION OF PAVING.

LONGITUDINAL JOINTS SHALL BE MADE BY OVERLAPPING THE FABRIC ONE TO TWO INCHES. TRANSVERSE JOINTS SHALL BE MADE BY OVERLAPPING THE FABRIC MINIMUM OF FOUR INCHES. ADDITIONAL SEALANT (ABOUT 0.20 GAL. PER SQ. YD.) SHALL BE ADDED TO THE JOINTS AS REQUIRED. THE ADDITIONAL SEALANT FOR TRANSVERSE JOINTS MAY BE APPLIED BY HAND SPRAYING OR WITH MOP AND BUCKET IF EXTREME CARE IS TAKEN TO NOT EXCEED THE SPECIFIED RATE.

TO ENHANCE THE BOND OF THE FABRIC WITH THE EXISTING PAVEMENT AND TO SMOOTH OUT ANY WRINKLES FOR FOLDS IN THE FABRIC, THE CONTRACTOR MAY BE REQUIRED TO PNEUMATICALLY ROLL THE FABRIC AFTER IT IS PLACED.

4. TREATMENT OF THE APPLIED COMPOSITE PRIOR TO PLACEMENT OF ASPHALT CONCRETE: TACK COAT THE FABRIC PRIOR TO PLACEMENT OF THE ASPHALT CONCRETE OVERLAY. TACK COAT SHALL BE APPLIED AT A RATE OF 0.02 TO 0.05 GALLON PER SQUARE YARD. PLACEMENT OF THE ASPHALT CONCRETE OVERLAY SHALL CLOSELY FOLLOW FABRIC LAYDOWN. IN THE EVENT THAT THE SEALANT BLEEDS THROUGH THE FABRIC BEFORE THE ASPHALT CONCRETE IS PLACED, IT MAY BE NECESSARY TO BLOT THE SEALANT BY SPREADING SAND OR ASPHALT CONCRETE OVER THE AFFECTED AREAS. THIS WILL PREVENT ANY TENDENCY FOR CONSTRUCTION EQUIPMENT TO PICK UP THE FABRIC WHEN DRIVING OVER IT.

TURNING OF THE PAVER AND OTHER VEHICLES SHALL BE GRADUAL TO AVOID MOVEMENT OR DAMAGE TO THE COMPOSITE. UNESSENTIAL TRAFFIC ON COMPOSITE SHOULD BE ELIMINATED. IF IT IS NECESSARY TO OPEN THE ROAD TO TRAFFIC AFTER FABRIC PLACEMENT, BUT PRIOR TO PAVING, IT IS ADVISABLE TO SPREAD A SMALL AMOUNT OF SAND OVER THE MEMBRANE TO PREVENT TIRES FROM STICKING TO THE SEALANT OR PULLING UP THE COMPOSITE. THIS PRACTICE IS TO BE AVOIDED IF POSSIBLE TO PREVENT DAMAGE TO THE MEMBRANE. QUICK STOPS AND SHARP TURNS MAY DAMAGE THE MATERIAL. IF RAIN PRIOR TO THE OVERLAY SHOULD CAUSE A BLISTERED APPEARANCE AND SOME BOND LOSS THROUGHOUT THE MEMBRANE, IT SHOULD BE CORRECTED BY PNEUMATIC ROLLING UNTIL ADHESION IS RESTORED.

5. ASPHALT CONCRETE: THE ASPHALT CONCRETE OVERLAY SHALL CONFORM TO 401 SPECIFICATION WITH A MINIMUM THICKNESS OF 1.25". AN ONE COURSE OVERLAY IS PREFERRED.

METHOD OF MEASUREMENT. THE ACCEPTED FABRIC COMPOSITE PLACED IN ACCORDANCE WITH THESE SPECIFICATIONS AND AS DIRECTED WILL BE MEASURED BY THE SQUARE YARD OF ROADWAY, RAMPS, AND TURNOUTS COVERED BY THE COMPOSITE FABRIC. LAPS IN COMPOSITE FABRIC WILL NOT BE MEASURED.

BLOTTING THE SEALANT, SPREADING SAND OR ASPHALT CONCRETE OVER THE MEMBRANE TO PREVENT TIRES FROM STICKING TO THE SEALANT OR PULLING UP THE FABRIC, ROLLING TO RESTORE BOND, OR APPLICATION OF A TACK COAT WILL NOT BE MEASURED FOR DIRECT PAYMENT BUT SHALL BE CONSIDERED A NECESSARY PART OF THE CONSTRUCTION INVOLVED AND THE COST THEREFORE SHALL BE INCLUDED IN OTHER APPROPRIATE CONTRACT UNIT PRICES.

BASIS OF PAYMENT. THE ACCEPTED QUANTITIES OF PAVEMENT OVERLAY FABRIC COMPOSITE WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR FURNISHING ALL LABOR, MATERIALS (INCLUDING ASPHALT SEALANT AND OVERLAP), TOOLS, EQUIPMENT AND INCIDENTALS FOR DOING ALL THE WORK INVOLVED IN FURNISHING AND PLACING THE COMPOSITE COMPLETE IN PLACE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

ITEM UNIT DESCRIPTION	
SPECIAL PAVEMENT OVERLAY FABRIC COMPOSITE	472 SY

ITEM SPECIAL – MAILBOX SUPPORT

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS, AND ATTACHING AN OWNER-SUPPLIED MAILBOX AT LOCATIONS SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

WOOD POSTS SHALL BE NOMINAL 4 INCHES BY 4 INCHES SQUARE OR 4.5 INCHES DIAMETER ROUND, AND CONFORM TO 710.14.

STEEL POSTS SHAL BE NOMINAL PIPE SIZE 2 INCHES I.D., AND CONFORM TO AASHTO M 181.

ALL HARDWARE INCLUDING BUT NOT LIMITED TO PLATES, SCREWS, BOLTS, AND ETC. SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

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

IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW 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 SUPPORT SYSTEM, (SINGLE) (DOUBLE).

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY:
ITEM SPECIAL, MAILBOX SUPPORT 4 EACH

REVIEW OF DRAINAGE FACILITIES

PRIOR TO THE START OF WORK AND AGAIN BEFORE FINAL ACCEPTANCE, PERFORM AN INSPECTION WITH REPRESENTATIVES OF THE DEPARTMENT, CONTRACTOR AND LOCALS OF ALL EXISTING DRAINAGE FACILITIES THAT ARE TO REMAIN IN SERVICE WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES IS DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION ARE MAINTAINED BY THE DEPARTMENT.

CONFIRM ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE-MENTIONED PARTIES ARE MAINTAINED AND LEFT IN A CONDITION COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. THE CONTRACTOR IS RESPONSIBLE TO CORRECT ANY CHANGE IN THE CONDITION RESULTING FROM THEIR OPERATIONS AS DIRECTED AND APPROVED BY THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE IS INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

DESIGN AGENCY	
	
4215 North Ave Suite K-230 Columbus, OH 43219	
DESIGNER	
SLF	
REVIEWER	
BD 02/27/26	
PROJECT ID	
120083	
SHEET	TOTAL
P.13	182

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, NOTIFY THE ENGINEER BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, NOTIFY THE ENGINEER BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE IS INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

PIPE CONNECTIONS TO CORRUGATED METAL STRUCTURES

PROVIDE CONNECTIONS OF PROPOSED LONGITUDINAL DRAINAGE TO CORRUGATED METAL STRUCTURES BY MEANS OF A SHOP FABRICATED OR FIELD WELDED STUB ON THE STRUCTURE. FURNISH A STUB MEETING THE REQUIREMENTS OF 707 WITH A MINIMUM LENGTH OF 2 FEET AND A MINIMUM WALL THICKNESS OF 0.064 INCHES.

THE LOCATION AND ELEVATION OF THE STUB ARE TO BE CONSIDERED APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER TO AVOID CUTTING THROUGH JOINTS IN THE STRUCTURE.

THOROUGHLY CLEAN AND REGALVANIZE OR OTHERWISE SUITABLY REPAIR THE FIELD WELDED JOINT, IF USED. MEET WELDING REQUIREMENTS OF 513.21.

PROVIDE A MASONRY COLLAR PER STANDARD CONSTRUCTION DRAWING DM-1.1, TO CONNECT THE LONGITUDINAL DRAINAGE TO THE STUB, WHEN PIPE OTHER THAN CORRUGATED METAL IS USED FOR THE LONGITUDINAL DRAINAGE.

PAYMENT FOR CUTTING INTO THE STRUCTURE AND PROVIDING THE CONNECTION DESCRIBED, IS INCLUDED IN THE CONTRACT PRICE FOR ITEM 611 OR 522.

CATCH BASIN 3A, AS PER PLAN

PROVIDE SPECIAL FRAME AND GRATE FOR CATCH BASIN 3A PROPOSED ALONG MOUNTABLE CURB WITHIN ROUNDABOUT LIMITS. USE ITEM 'INLET FOR ROLL TYPE CURB R-3501-TL' OR 'INLET FOR ROLL TYPE CURB R-3501-TR' FURNISHED BY NEENAH FOUNDRY OR APPROVED EQUAL. IF NECESSARY, CURB HEIGHT AND SHAPE TRANSITIONS IN AND OUT OF AS PER PLAN CASTINGS SHALL BE INCIDENTAL TO THE APPLICABLE ITEM 609.

CATCH BASIN 3, AS PER PLAN

PROVIDE SPECIAL FRAME AND GRATE FOR CATCH BASIN 3 PROPOSED ALONG MOUNTABLE CURB WITHIN ROUNDABOUT LIMITS. PROVIDE TWO OF ITEM 'R-3270: ROLL TYPE INLET FRAME, GRATE' FURNISHED BY NEENAH FOUNDRY OR APPROVED EQUAL. IF NECESSARY, CURB HEIGHT AND SHAPE TRANSITIONS IN AND OUT OF AS PER PLAN CASTINGS SHALL BE INCIDENTAL TO THE APPLICABLE ITEM 609.

ITEM SPECIAL - MISCELLANEOUS METAL

EXISTING CASTINGS MAY PROVE TO BE UNSUITABLE FOR REUSE, AS DETERMINED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE THE CASTINGS OF THE REQUIRED TYPE, SIZE AND STRENGTH (HEAVY OR LIGHT DUTY) FOR THE PARTICULAR STRUCTURE IN QUESTION. FURNISH MATERIALS PER 611 WITH PRIOR APPROVAL OF THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

ITEM SPECIAL, MISCELLANEOUS METAL 400 LB

REPLACE EXISTING CASTINGS DAMAGED BY CONTRACTOR NEGLIGENCE, AS DETERMINED BY THE ENGINEER, AT THE EXPENSE OF THE CONTRACTOR.

FARM DRAINS

PROVIDE UNOBSTRUCTED OUTLETS TO ALL FARM DRAINS ENCOUNTERED DURING CONSTRUCTION. REPLACE EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY WITHIN THE CONSTRUCTION LIMITS WITH ITEM 611, CONDUIT, TYPE B, ONE COMMERCIAL SIZE LARGER THAN THE EXISTING CONDUIT.

OUTLET EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES INTO THE ROADWAY DITCH USING ITEM 611, TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION IS ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. INTERCEPT LATERAL FIELD TILES WHICH CROSS THE ROADWAY WITH ITEM 611, TYPE E CONDUIT, AND CARRY IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING. THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS IS DETERMINED BY THE ENGINEER AND PAYMENT MADE ON FINAL MEASUREMENTS.

PROVIDE EROSION CONTROL PADS AT THE OUTLET END OF ALL FARM DRAINS PER STANDARD CONSTRUCTION DRAWING DM-1.1, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE.

PAYMENT FOR THE EROSION CONTROL PADS AND ANY NECESSARY BENDS OR BRANCHES IS INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEMS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

611	6" CONDUIT, TYPE B	50 FT
611	6" CONDUIT, TYPE E	100 FT
611	6" CONDUIT, TYPE F	10 FT
601	ROCK CHANNEL PROTECTION TYPE C WITH FILTER	2 CU. YD

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. 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).

EXCAVATE AND REPLACE BLAST FURNACE SLAG ENCOUNTERED IN THE SUBGRADE. EXCAVATION LIMITS ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSUITABLE SUBGRADE.

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.

3. COMPACT THE SUBGRADE ACCORDING TO C&MS 204.03.

4. THE ENGINEER WILL IDENTIFY THE LIMITS OF EXCAVATION FOR UNSTABLE SUBGRADE BASED ON THE PROOF ROLLING RESULTS AND VISUAL OBSERVATIONS.

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

5. EXCAVATE UNSTABLE SUBGRADE AS DIRECTED BY THE ENGINEER AND STABILIZE BYREPLACING 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 QUANTITY FOR EXCAVATING THE UNSUITABLE SUBGRADE IS PAID UNDER ITEM 204 EXCAVATION OF SUBGRADE, AS PER PLAN AND UNSTABLE SUBGRADE IS PAID UNDER ITEM 204 EXCAVATION OF SUBGRADE.

ITEM 204 - EXCAVATION OF SUBGRADE, AS PER PLAN
ITEM 204 - EMBANKMENT, APP

THE CROSS SECTIONS INDICATE AREAS OF UNDERCUT. THESE AREAS INDICATE UNSUITABLE MATERIAL THAT MUST BE REMOVED AND DISPOSED OF OFF THE PROJECT SITE IN ACCORDANCE WITH ENVIRONMENTAL REGULATIONS THAT MAY GOVERN THIS MATERIAL.

THIS ITEM OF WORK SHALL CONSIST OF REMOVING AND DISPOSING OF ALL UNSUITABLE MATERIAL BY EXCAVATING THE EXISTING SUBGRADE AND SUBBASE TO AN AVERAGE DEPTH OF 24 INCHES OR AS DIRECTED BY THE ENGINEER. EXACT LIMITS OF REMOVAL SHALL BE DETERMINED BY THE ENGINEER. ALL EQUIPMENT, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THESE ITEMS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 204 EXCAVATION OF SUBGRADE, AS PER PLAN AND FOR ITEM 204 EMBANKMENT.

ITEM 620 - DELINEATOR, POST GROUND MOUNTED, AS PER PLAN

A GROUND POST MOUNTED DELINEATOR SHALL BE PLACED AT THE OUTLET OF THE UNDERDRAINS WHERE THE OUTLET IS NOT TO A DRAINAGE STRUCTURE (MANHOLE, CATCH BASIN, INLET, ETC). THE COLOR OF THE REFLECTIVE SHEETING SHALL BE BLUE.

ITEM 621 - RPM, AS PER PLAN
ITEM 621 - RAISED PAVEMENT MARKER REMOVED, AS PER PLAN
ITEM 644 - LANE LINE, 6", AS PER PLAN
ITEM 644 - CENTER LINE, AS PER PLAN
ITEM 644 - CHANNELIZING LINE, 12", AS PER PLAN
ITEM 644 - STOP LINE, AS PER PLAN
ITEM 644 - LANE ARROW, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 621 FOR RPMS AND 646 FOR EPOXY PAVEMENT MARKINGS, ALL PAVEMENT MARKINGS IN THE RESUFACING AREA WILL BE REPLACED AS IT CURRENTLY IS IF NOT MARKED ON THE PLAN SHEETS. THE CONTRACTOR SHALL REPLACE THE LANE LINES, CENTER TWO WAY LEFT TURN LANE LINES AND ARROWS AND THE LEFT TURN LANE AT THE INTERSECTION OF NOTRE DAME AND WILLOW CREST. THE APPROPRIATE RPMS SHALL ALSO BE INSTALLED BY THE CONTRACTOR FOLLOWING TC-65.10 AND TC-65.11.

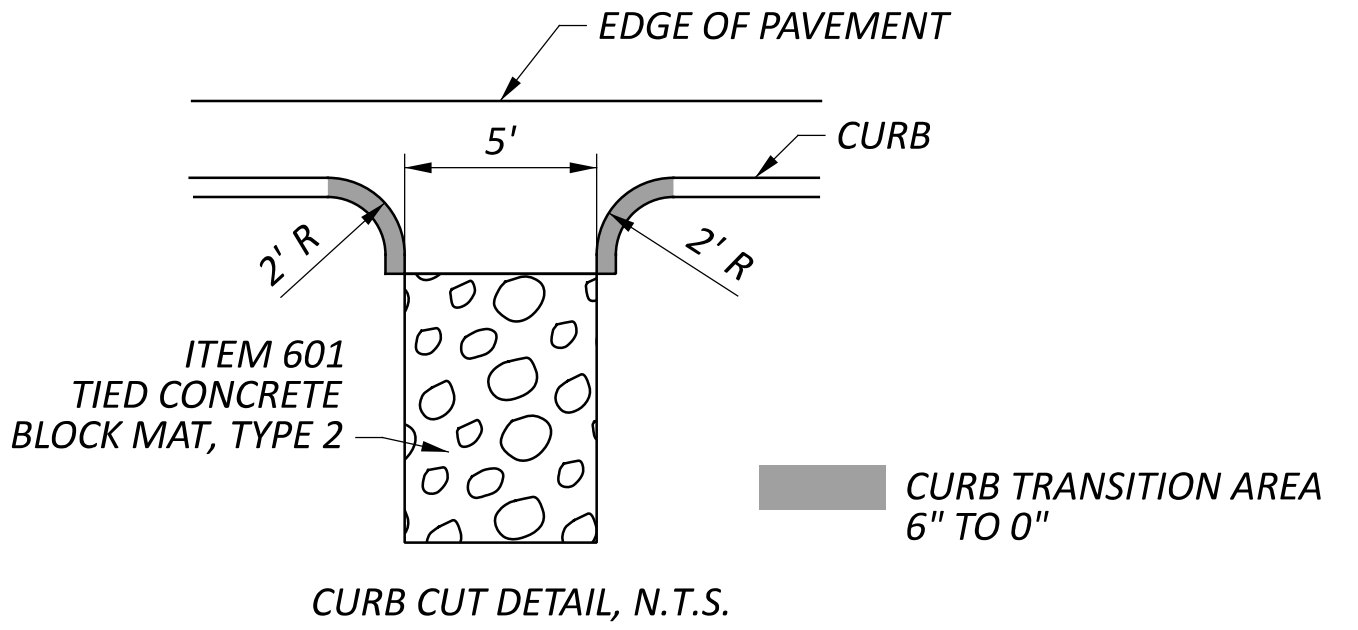
PAYMENT WILL INCLUDE REMOVAL OF THE EXISTING MATERIAL, INSTALLATION AND FURNISHING OF NEW PAVEMENT MARKINGS, AND ALL LABOR AND MATERIALS REQUIRED TO COMPLETE THIS ITEM OF WORK AS DESCRIBED.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 621, RPM, AS PER PLAN	61 EACH
ITEM 621, RAISED PAVEMENT MARKER REMOVED, AS PER PLAN	61 EACH
ITEM 646, LANE LINE 6", AS PER PLAN	0.11 MILE
ITEM 646, CENTER LINE, AS PER PLAN	0.47 EACH
ITEM 646, CHANNELIZING LINE, 12", AS PER PLAN	215 FT
ITEM 646, STOP LINE, AS PER PLAN	24 FT
ITEM 646, LANE ARROW, AS PER PLAN	6 EACH

CURB CUT

WHEN PROPOSING A ROADWAY CURB CUT, PROVIDE A 5' WIDE CURB OPENING (4' MINIMUM) TO ALLOW CONVEYANCE OF ROADWAY RUNOFF. THE CONCRETE SLOPE WILL MATCH PROPOSED GUTTER CROSS SLOPE. PROVIDE A 2' CURB RADIUS THAT ALLOWS FOR A CURB HEIGHT TRANSITION FROM 6" TO 0" THAT MATCHES PROPOSED GRADE. THE CURB DROP AND OPENING IS ALL INCIDENTAL TO THE CURB PAY ITEM. PROVIDE TIED CONCRETE BLOCK MAT, TYPE 2, AT THE DOWNSTREAM END OF THE CURB OPENING.



ITEM 452 - 4" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P, AS PER PLAN
ITEM 452 - 9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P, AS PER PLAN

THIS WORK SHALL CONSIST OF CONSTRUCTING THE CONCRETE INCLUDING A DYED COLORING FOR THE ROUNDABOUT SPLITTER ISLANDS AND TRUCK APRON(S).

MATERIALS:

- A. CONCRETE SHALL BE IN ACCORDANCE WITH THE PLANS AND SECTION 452 OF THE ODOT CMS. CONCRETE SHALL BE CLASS QC 1P.
- B. FOLLOW THE MANUFACTURER'S MIXING AND INSTALLATION REQUIREMENTS FOR COLORIZED CONCRETE. PROVIDE ONE OF THE FOLLOWING OR APPROVED EQUAL:
 - a. COLORFLO 417 "PAVER RED" AS MANUFACTURED BY SOLOMON COLORS (1-800-624-0261)
 - b. MIX-READY 160 "BRICK RED" AS MANUFACTURED BY DAVIS COLORS (1-844-341-4780 EXT. 1)
 - c. SIKACOLOR U33 "HAMPSHIRE RED" AS MANUFACTURED BY SIKA CORPORATION (1-201-933-8800)
- C. COLORED CONCRETE WILL BE AN INTEGRAL COLORING APPLICATION, WITH COLORING ADDITIVES MIXED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. MIX UNTIL COLOR ADDITIVES ARE UNIFORMLY DISPERSED THROUGHOUT MIXTURE. COLOR SHALL BE UNIFORM THROUGHOUT THE CONCRETE.
- D. CURING COMPOUND FOR COLORED CONCRETE SHALL COMPLY WITH ASTM C309 AND BE APPROVED BY COLOR ADDITIVE MANUFACTURER FOR USE WITH COLORED CONCRETE. PROVIDE JS CLEAR COAT SEALER OR APPROVED EQUAL ON ALL SURFACES IN MATCHING COLOR.
- E. ADMIXTURES: DO NOT USE CALCIUM CHLORIDE ADMIXTURES.

CONSTRUCTION REQUIREMENTS:

- A. PROVIDE ONE FIELD SAMPLE OF THE COLOR SPECIFIED FOR APPROVAL BY THE ENGINEER BEFORE BEGINNING WORK. THE SAMPLE SHALL BE 4'x8' MINIMUM IN SIZE AND BE CONSTRUCTED USING THE SAME TECHNIQUE AND MATERIALS INTENDED FOR THE FINAL PAVED SURFACE.
- B. PREPARE SUBGRADE AND INSTALL COLORED CONCRETE IN ACCORDANCE WITH THE PLANS AND SECTION 452 OF THE ODOT C&MS, EXCEPT AS NOTED HEREIN.
- C. CURING: APPLY CURING COMPOUND FOR COLORED CONCRETE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. APPLY CURING COMPOUND AT CONSISTENT TIME FOR EACH POUR TO MAINTAIN CLOSE COLOR CONSISTENCY.
- D. PROTECT ADJACENT FINISHED SURFACES FROM SPLATTERS.
- E. DO NOT ADD WATER TO CONCRETE AT JOB SITE, FOG OR SPRAY SURFACE WITH WATER, OR PUT INTO PUMPS OR ONTO TOOLS OR BROOMS.
- F. DO NOT APPLY COLOR ADDITIVES MEANT FOR INTEGRAL COLORING TO SURFACE OF CONCRETE.
- G. TRANSVERSE CONCRETE JOINTS SHALL BE SAWCUT AT 10' INTERVALS MEASURED PERPENDICULAR TO THE CENTERLINE OF THE ROAD TO A MINIMUM OF 2" DEPTH. DOWELS ARE NOT REQUIRED AT THE JOINTS.

PAYMENT WILL INCLUDE THE COST OF FURNISHING AND PLACING ALL OF THE MATERIALS, FINISHING, AND TESTING. ODOT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE PER SQUARE YARD FOR ITEM 452 - 9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P, AS PER PLAN AND FOR ITEM 452 - 6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P, AS PER PLAN.

ITEM 609 - COMBINATION CURB & GUTTER, TYPE 2, AS PER PLAN

ALL CURBING FOR THIS PROJECT SHALL CONFORM TO ITEM 609 OF THE CURRENT ODOT CMS AND TO STANDARD DRAWING BP-5.1 (SEE TYPICAL SECTIONS) EXCEPT THAT THE CURB SHALL BE DROPPED TO 2".

ITEM SPECIAL - FILTER FABRIC, HEAVY DUTY
ITEM 203 - ROADWAY MISC.: #4 WASHED LANDSCAPE GRAVEL, (T = 4")
PROVIDE #4 SIZE AGGREGATE IN ACCORDANCE WITH C&MS 703 AND TABLE 703-01-1 THAT HAS BEEN WASHED TO REMOVE DIRT AND DEBRIS. PLACE THE MATERIAL OVER THE FILTER FABRIC TO A DEPTH OF 4" THICK AND RAKE THE GRAVEL LEVEL TO ENSURE EVEN DEPTH.

PAVEMENT RESURFACING

RESURFACING OF THE ROADWAY BETWEEN STATION 151+50.00 TO 164+21.64 SHALL BE COMPLETED WITH THE PAVEMENT BUILD UP SHOWN ON TYPICAL SECTIONS SHEET P.9. THIS WORK IS NOT SHOWN IN PLANS AND CROSS SECTIONS.

THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED FOR THE PAVEMENT RESURFACING OF THE ROADWAY BETWEEN STA. 151+50.00 TO 164+21.64

ITEM 897 - PAVEMENT PLANING, ASPHALT CONCRETE, CLASS A (T=1 1/4")	8455 SY
ITEM 424 - FINE GRADED POLYMER ASPHALT CONCRETE, TYPE B, (448) (T=1 1/4")	294 CY
ITEM 407 - NON-TRACKING TACK COAT	677 GAL
ITEM 611 - CATCH BASIN ADJUSTED TO GRADE	9 EACH
ITEM 638 - VALVE BOX ADJUSTED TO GRADE	1 EACH
ITEM 623 - MONUMENT ASSEMBLY ADJUSTED TO GRADE	1 EACH

ITEM 203 - EXCAVATION, AS PER PLAN

REMOVE ALL BASE MATERIAL AND ALL BLAST FURNACE SLAG BENEATH THE PAVEMENT. A TOTAL DEPTH OF 24 INCHES HAS BEEN USED FOR ESTIMATING. THE ACTUAL DEPTH SHALL BE AS DIRECTED BY THE ENGINEER IN THE FIELD.

THE EXCAVATED MATERIAL SHALL NOT BE REUSED ON THE PROJECT. DISPOSE OF THE MATERIAL OFF OF THE PROJECT SITE ACCORDING TO 105.16 & 105.17 OF THE CMS AND AN OTHER REGULATIONS THAT MIGHT GOVERN THE MATERIAL.

PAYMENT IS FULL COMPENSATION FOR ALL WORK INVOLVED IN THE REMOVAL AND DISPOSAL OF THE MATERIAL. METHOD OF MEASUREMENT SHALL BE THE NUMBER OF CUBIC YARDS OF MATERIAL ACCEPTABLY EXCAVATED AND DISPOSED OF.

BACKFILL THE EXCAVATION TO THE LIMITS SHOWN OF THE CROSS SECTIONS. REPLACEMENT MATERIAL SHALL BE ITEM 203 - EMBANKMENT.

ENDANGERED SPECIES HABITAT

INDIANA BAT/NORTHERN LONG-EARED BAT/TRI-COLORED BAT: THE PROJECT SITE IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT, NORTHERN LONG-EARED BAT AND TRI-COLORED BAT. NO TREES SHALL BE REMOVED AT THIS LOCATION 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.

ITEM SPECIAL - RESTORE TIMBER AND MULCH

RESTORE THE TIMBER AND MULCH AROUND THE TOWNSHIP SIGN AT STA. 137+51.86 OF ¢ CONST. SR-46 AFTER THE PIPE INSTALLATION, AND RESTORE THE TIMBER AND MULCH AROUND THE BUSINESS SIGN AT STA. 164+17.35 OF ¢ CONST. SR-46 AFTER CONSTRUCTION.

ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID ITEM.

ITEM SPECIAL – SURVEY CONTROL VERIFICATION

THE CONTRACTOR SHALL PERFORM THIS WORK TO VERIFY THE PROVIDED SURVEY CONTROL. THE CONTRACTOR WILL PERFORM THE VERIFICATION USING ONE OF THE TWO METHODS BELOW DEPENDENT UPON THE CONTRACTOR’S CHOSEN MEANS OF SURVEY CONTROL TO BE USED ON THE PROJECT. THE WORK SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF AN OHIO LICENSED SURVEYOR.

- 1) IF USING GPS DEVICES TO ESTABLISH AND OR PROVIDE SUPPLEMENTAL HORIZONTAL AND VERTICAL SURVEY CONTROL
 - a. LOCATE VERTICAL CONTROL POINTS PROVIDED IN THE PLANS AND PERFORM A DIFFERENTIAL LEVEL CIRCUIT.
 - b. PERFORM A SITE CALIBRATION UTILIZING THE AVAILABLE HORIZONTAL AND VERTICAL CONTROL POINTS PROVIDED IN THE PLAN.
 - c. PROVIDE A REPORT, SIGNED BY AN OHIO LICENSED SURVEYOR, TO THE PROJECT ENGINEER COMPARING THE OBSERVED DATA TO THE PLAN DATA ALONG WITH A NARRATIVE DETAILING ANY DISCREPANCIES FOUND.
- 2) IF USING CONVENTIONAL SURVEY INSTRUMENTATION TO ESTABLISH AND OR PROVIDE SUPPLEMENTAL HORIZONTAL AND VERTICAL SURVEY CONTROL
 - a. LOCATE VERTICAL CONTROL POINTS PROVIDED IN THE PLANS AND PERFORM A DIFFERENTIAL LEVEL CIRCUIT.
 - b. LOCATE AND OBSERVE ANGLE AND DISTANCE TO ALL AVAILABLE HORIZONTAL CONTROL POINTS PROVIDE IN THE PLAN
 - c. PROVIDE A REPORT, SIGNED BY AN OHIO LICENSED SURVEYOR, TO THE PROJECT ENGINEER COMPARING THE OBSERVED DATA TO THE PLAN DATA ALONG WITH A NARRATIVE DETAILING ANY DISCREPANCIES FOUND.

ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID ITEM.

STREAM AVOIDANCE

NO FILL MATERIAL (INCLUDING ROCK, COFFERDAMS, ETC.) SHALL BE PLACED BELOW THE ORDINARY HIGH-WATER MARK (OHWM) OF STREAM 1 DEPICTED IN THE PROJECT PLANS AND/OR THE ECOLOGICAL RESOURCES MAPPING AVAILABLE FOR VIEWING AT THE ODOT DISTRICT 4 OFFICE LOCATED AT 2088 SOUTH ARLINGTON ROAD, AKRON, OHIO. UNDER NO CIRCUMSTANCES SHALL ANY MECHANICAL EQUIPMENT (LIFT, SCAFFOLDING, BACKHOE, EARTH MOVING EQUIPMENT, ETC.) AND/OR MATERIALS ENTER STREAM 1. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DEMOLITION DEBRIS, CONSTRUCTION MATERIALS, WASTE MATERIALS, WATER CHEMICALS OR OTHER SUBSTANCES USED TO CONSTRUCT THE PROJECT FROM ENTERING THIS STREAM.

WETLAND AVOIDANCE

NO EXCAVATION, GRADING, OR FILLING OPERATIONS SHALL BE PERFORMED IN WETLAND 1 DELINEATED BEYOND THE PROJECT CONSTRUCTION LIMITS AND DEPICTED IN THE PROJECT PLANS AND/OR THE ECOLOGICAL RESOURCES MAPPING AVAILABLE FOR VIEWING AT THE ODOT DISTRICT 4 OFFICE LOCATED AT 2088 SOUTH ARLINGTON ROAD, AKRON, OHIO. A FILTER FABRIC FENCE AND TEMPORARY CONSTRUCTION FENCE PER SUPPLEMENTAL SPECIFICATION 832 SHALL BE INSTALLED, MAINTAINING A 1 FOOT BUFFER BETWEEN THE FENCE AND THE WETLAND BOUNDARY PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES AND SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT PROJECT CONSTRUCTION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE EQUIPMENT (LIFT, BACKHOE, EARTH MOVING EQUIPMENT, ETC.) AND/OR MATERIALS IN ANY WETLANDS, ETC. ODOT CONSTRUCTION AND MATERIALS SPECIFICATIONS SECTION 107.10 (PROTECTION OF PROPERTY) PROHIBIT THE CONTRACTOR FROM CREATING STAGING AREAS NEAR STREAMS AND/OR WETLANDS.

ITEM SPECIAL - AS-BUILT CONSTRUCTION PLANS

PRIOR TO FINAL ACCEPTANCE OF THE WORK, THE CONTRACTOR SHALL FURNISH THE DEPARTMENT FORMAL AS-BUILT CONSTRUCTION PLANS. THE FORMAL AS-BUILT CONSTRUCTION PLANS SHALL INCLUDE ALL RED-LINED CHANGES. RED-LINE CHANGE SHALL BE DENOTED UTILIZING CLOUDING IN MICROSTATION (OR OTHER CAD SOFTWARE) OR CLOUDING IN PDF EDITING SOFTWARE. THE AS-BUILT CONSTRUCTION PLANS SHALL HAVE A SIGNED VERIFICATION ON THE TITLE SHEET FROM THE CONTRACTOR INDICATING THAT ALL RED-LINED AND FIELD CHANGES HAVE BEEN INCORPORATED INTO AS-BUILT CONSTRUCTION PLANS. THE CONTRACTOR’S VERIFICATION STATEMENT INDICATES ALL KNOWN FIELD MODIFICATIONS MADE HAVE BEEN INCLUDED IN THE FORMAL AS-BUILT CONSTRUCTION PLANS. THE CONTRACTOR’S VERIFICATION STATEMENT SHALL BE SIGNED BY THE CONTRACTOR’S PROJECT MANAGER (OR ACCEPTABLE REPRESENTATIVE). IN ADDITION TO THE INFORMATION SHOWN ON THE CONSTRUCTION PLANS, THE ASBUILT CONSTRUCTION PLANS SHALL SHOW THE FOLLOWING:

- 1. ALL DEVIATIONS FROM THE ORIGINAL APPROVED CONSTRUCTION PLANS WHICH RESULT IN A CHANGE OF LOCATION, MATERIAL, TYPE OR SIZE OF WORK.
- 2. ANY UTILITIES, PIPES, WELLHEADS, ABANDONED PAVEMENTS, FOUNDATIONS OR OTHER MAJOR OBSTRUCTIONS DISCOVERED AND REMAINING IN PLACE WHICH ARE NOT SHOWN, OR DO NOT CONFORM TO LOCATIONS OR DEPTHS SHOWN IN THE PLANS. UNDERGROUND FEATURES SHALL BE SHOWN AND LABELED ON THE AS-BUILT CONSTRUCTION PLANS IN TERMS OF STATION, OFFSET AND ELEVATION.
- 3. THE FINAL OPTION AND SPECIFICATION NUMBER SELECTED FOR THOSE ITEMS WHICH ALLOW SEVERAL MATERIAL OPTIONS UNDER THE SPECIFICATION (E.G., CONDUIT).
- 4. CHANGES TO THE PAY ITEMS AND FINAL QUANTITIES AS PAID SHALL BE SHOWN ON THE GENERAL SUMMARY AND SUBSUMMARIES.
- 5. ADDITIONAL PLAN SHEETS MAY BE NEEDED IF NECESSARY TO SHOW WORK NOT INCLUDED IN THE CONSTRUCTION PLANS. IF ADDITIONAL PLAN SHEETS ARE NEEDED, THEY ARE REQUIRED TO BE PREPARED IN CONFORMANCE WITH THE LOCATION AND DESIGN MANUAL, VOLUME 3, SECTION 1200 - PLAN PREPARATION.

NOTATION SHALL ALSO BE MADE OF LOCATIONS AND THE EXTENT OF USE OF MATERIALS, OTHER THAN SOIL, FOR EMBANKMENT CONSTRUCTION (ROCK, BROKEN CONCRETE WITHOUT REINFORCING STEEL, ETC.). THE PLAN INDEX SHALL SHOW THE PLAN SHEETS WHICH HAVE CHANGES APPEARING ON THEM. TWO COPIES OF THE AS-BUILT CONSTRUCTION PLANS SHALL BE DELIVERED TO THE PROJECT ENGINEER FOR APPROVAL UPON COMPLETION OF THE PHYSICAL WORK BUT PRIOR TO THE REQUEST FOR FINAL PAYMENT. AFTER THE DEPARTMENT HAS APPROVED THE AS-BUILT CONSTRUCTION PLANS, THE ASSOCIATED ELECTRONIC FILES SHALL BE DELIVERED TO THE DISTRICT CAPITAL PROGRAMS ADMINISTRATOR. ACCEPTANCE OF THESE PLANS AND DELIVERY OF THE ASSOCIATED ELECTRONIC FILES IS REQUIRED PRIOR TO THE WORK BEING ACCEPTED AND THE FINAL ESTIMATE APPROVED.

PAYMENT FOR ALL THE ABOVE SHALL BE LUMP SUM UPON PROPER EXECUTION OF ALL WORK OF THIS ITEM AS DETERMINED BY THE PROJECT ENGINEER.

VEGETATED BIOFILTER LIMITS

THE TREATMENT GOAL FOR THE PROJECT SITE IS 1.83 ACRES (32.83% OF PROJECT EDA). THE 1.83 ACRES MUST BE COMPRISED OF DRAINAGE AREAS WITHIN ODOT R/W. THE PROJECT IS REQUIRED TO TREAT WATER QUALITY.

FOR WATER QUALITY, IT IS THE INTENT TO UTILIZE VEGETATED BIOFILTERS (VBF) TO TREAT THE REQUIRED ACREAGE FOR THE PROJECT.

THERE ARE THREE LOCATIONS WHERE VBFs HAVE BEEN PLACED. PER ODOT'S L&D VOL. 2 SECTION 1113.2.2, VBFs CONSISTED OF THE GRASSED PORTION OF GRADED SHOULDER, GRASSED FORESLOPE, AND FLAT GRASSED DITCH. THESE DITCHES ALLOW RUNOFF TO SPREAD OUT AND MOVE SLOWLY THROUGH GRASSED CONVEYANCE. VBFs MUST BE DESIGNED WITH A MINIMUM ENHANCED BANKFULL WIDTH (EBW) OF 4 FT. THE AREA (ACREAGE) THAT CAN BE COUNTED FOR WATER QUALITY TREATMENT IS ANY DRAINAGE THAT SHEET FLOWS OR FLOWS THROUGH A CURB CUT OFF THE ROADWAY INTO THE GRASSED VBFs. BELOW IS AN OUTLINE OF THE LOCATIONS OF THE VBFs.

VBF NO. 1: LOCATED OFF THE EDGE OF ROAD IN THE SW QUADRANT OF THE ROUNDABOUT, ADJACENT TO NEW ROAD WEST. THIS VBF IS CONSTRUCTED ADJACENT TO EXISTING FARMLAND TOWARDS THE SOUTH APPROXIMATELY FROM NEW ROAD STA. 4+25.00 TO 7+43.42. THE EBW OF THIS VBF IS 4 FT AND IS CONSISTENT THROUGHOUT THE LENGTH OF THIS CHANNEL. VBF #1 PROVIDES 0.40 ACRES OF TREATMENT CREDIT.

VBF NO. 2: LOCATED OFF THE EDGE OF ROAD IN THE SW QUADRANT OF THE ROUNDABOUT, ADJACENT TO NEW ROAD WEST AND SOUTH LEG OF SR 46. THIS VBF IS CONSTRUCTED ADJACENT TO EXISTING FARMLAND TOWARDS THE SOUTH AND WEST APPROXIMATELY FROM SR 46 STA. 142+35.00 TO STA. 145+38.20. THE EBW OF THIS VBF IS 4 FT AND IS CONSISTENT THROUGHOUT THE LENGTH OF THIS CHANNEL. VBF #3 PROVIDES 0.89 ACRES OF TREATMENT CREDIT.

VBF NO. 3: LOCATED OFF THE EDGE OF ROAD IN THE SE QUADRANT OF THE ROUNDABOUT, ADJACENT TO NEW ROAD EAST AND THE SOUTH LEG OF SR 46. THIS VBF IS CONSTRUCTED FROM NEW ROAD EAST STA. 12+69.22 TO STA. 10+63.45. THE EBW OF THE VBF IS 4 FT AND IS CONSISENT THROUGHOUT THE LENGTH OF THIS CHANNEL. THIS VBF PROVIDES 0.41 ACRES OF TREATMENT CREDIT.

VBF NO. 4: LOCATED OFF THE EDGE OF ROAD IN THE SE QUADRANT OF THE ROUNDABOUT, ADJACENT TO NEW ROAD EAST AND THE SOUTH LEG OF SR 46. THIS VBF IS CONSTRUCTED FROM SR 46 STA. 143+27.01 TO STA. 143+51.98. THE EBW OF THE VBF IS 4 FT AND IS CONSISENT THROUGHOUT THE LENGTH OF THIS CHANNEL. THIS VBF PROVIDES 0.17 ACRES OF TREATMENT CREDIT.

THE COMBINED ACREAGE FOR THE VBFs IS 1.87 ACRES AND IS A SUFFICIENT ACREAGE FOR TREATMENT OF THE PROJECT.

BMP TYPE	LATITUDE/LONGITUDE				STATION		VBF WIDTH (FT)	VBF LENGTH (FT)	EDA TREATMENT CREDIT (ACRES)
	BEGIN		END		BEGIN	END			
QUALITY TREATMENT- VEGETATED BIOFILTER									
VBF NO. 1	-80.764861	41.083972	-80.763722	41.083778	4+25.00	7+43.42	4	313	0.40
VBF NO. 2	-80.762889	41.082889	-80.763528	41.083750	142+35.00	145+38.20	4	448	0.89
VBF NO. 3	-80.761789	41.083856	-80.762575	41.083256	12+69.22	10+63.45	4	351	0.41
VBF NO. 4	-80.762575	41.083164	-80.762583	41.083239	143+27.01	143+51.98	4	28	0.17
TREATMENT PROVIDED									1.87
TREATMENT REQUIRED									1.83

VEGETATED BIOFILTER DRAINAGE AREAS		
VBF NO.	TOTAL AREA	AREA COUNTED TOWARD TREATMENT CREDITS
1	0.51	0.40
2	0.89	0.89
3	1.47	0.41
4	0.41	0.17
TOTAL TREATMENT CREDIT (ACRES)		1.87

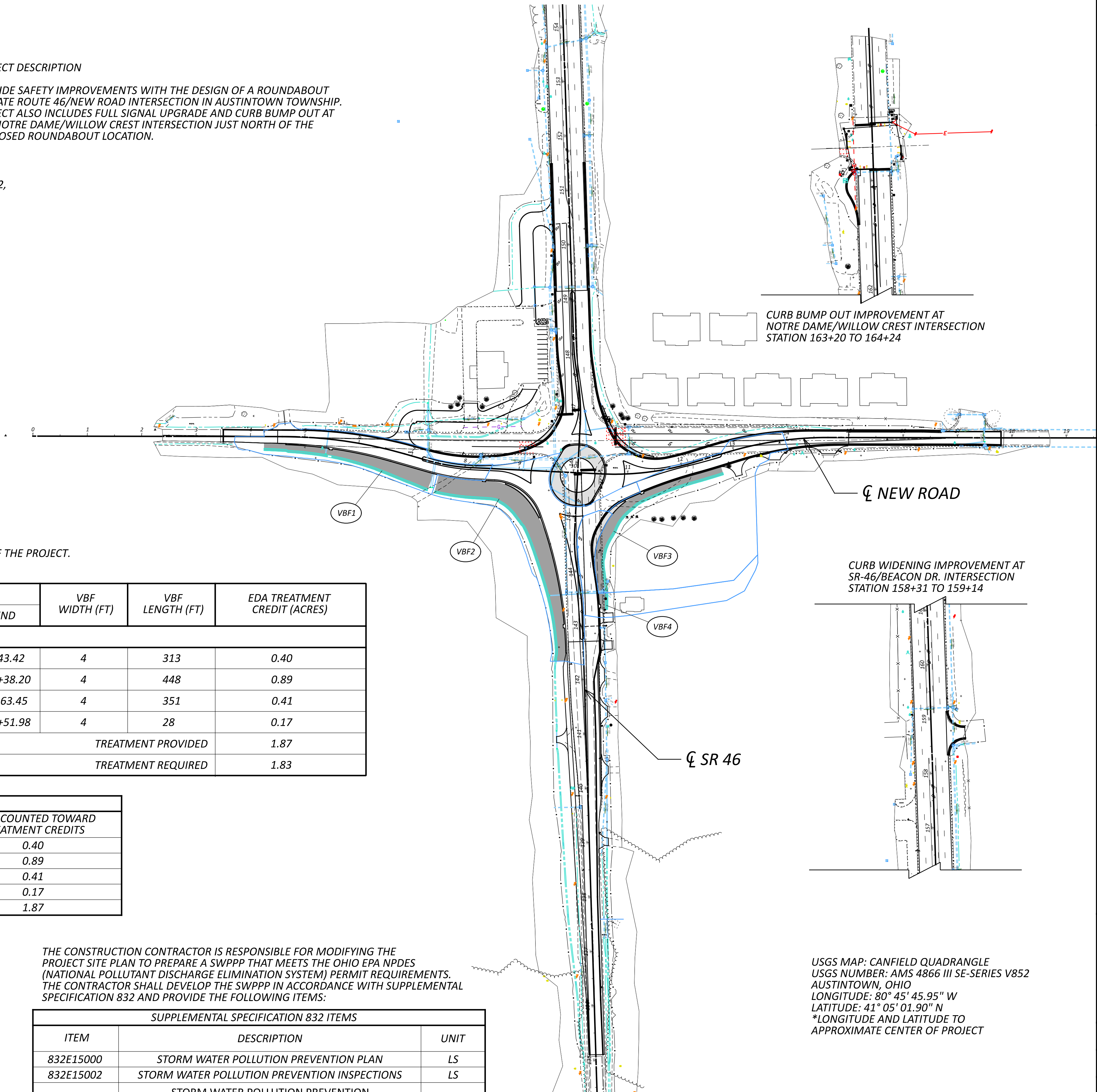
PROJECT DATA	
TOTAL AREA (RIGHT OF WAY) (ACRES)	11.29
PROJECT EARTH DISTURBED AREA (ACRES)	5.57
ESTIMATED CONTRACTOR EARTH DISTURBED AREA (ACRES)	0.25
NOTICE OF INTENT EARTH DISTURBED AREA (ACRES)	5.82
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE (ACRES)	3.26
IMPERVIOUS (PAVED) AREA FOR POST-CONSTRUCTION SITE (ACRES)	4.09
RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE	0.69
RUNOFF COEFFICIENT FOR POST-CONSTRUCTION SITE	0.75
POST CONSTRUCTION BMP: VBF (VEGETATED BIOFILTER)	
IMMEDIATE RECEIVING WATERS: UNNAMED FARM DITCH	
SUBSEQUENT RECEIVING WATERS: MEANDER CREEK	

PROJECT DESCRIPTION

PROVIDE SAFETY IMPROVEMENTS WITH THE DESIGN OF A ROUNDABOUT AT STATE ROUTE 46/NEW ROAD INTERSECTION IN AUSTINTOWN TOWNSHIP. PROJECT ALSO INCLUDES FULL SIGNAL UPGRADE AND CURB BUMP OUT AT THE NOTRE DAME/WILLOW CREST INTERSECTION JUST NORTH OF THE PROPOSED ROUNDABOUT LOCATION.

THE CONSTRUCTION CONTRACTOR IS RESPONSIBLE FOR MODIFYING THE PROJECT SITE PLAN TO PREPARE A SWPPP THAT MEETS THE OHIO EPA NPDES (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM) PERMIT REQUIREMENTS. THE CONTRACTOR SHALL DEVELOP THE SWPPP IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 832 AND PROVIDE THE FOLLOWING ITEMS:

SUPPLEMENTAL SPECIFICATION 832 ITEMS		
ITEM	DESCRIPTION	UNIT
832E15000	STORM WATER POLLUTION PREVENTION PLAN	LS
832E15002	STORM WATER POLLUTION PREVENTION INSPECTIONS	LS
832E15010	STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	LS



USGS MAP: CANFIELD QUADRANGLE
USGS NUMBER: AMS 4866 III SE-SERIES V852
AUSTINTOWN, OHIO
LONGITUDE: 80° 45' 45.95" W
LATITUDE: 41° 05' 01.90" N
*LONGITUDE AND LATITUDE TO APPROXIMATE CENTER OF PROJECT

REF NO.	SHEET NO.	STATION TO STATION			SIDE	601	601	602	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611	611		
						ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT	CONCRETE MASONRY	4" CONDUIT, TYPE C	12" CONDUIT, TYPE B	12" CONDUIT, TYPE C	12" CONDUIT, TYPE D	15" CONDUIT, TYPE B	18" CONDUIT, TYPE B	18" CONDUIT, TYPE D	24" CONDUIT, TYPE B	24" CONDUIT, TYPE C	36" CONDUIT, TYPE B	36" CONDUIT, TYPE B, 706.02	CATCH BASIN, NO. 3	CATCH BASIN, NO. 3, AS PER PLAN	CATCH BASIN, NO. 3A	CATCH BASIN, NO. 3A, AS PER PLAN	CATCH BASIN, NO. 2-2B	CATCH BASIN ADJUSTED TO GRADE	MANHOLE, NO. 3
		SR 46																								
D-28	P.88	137+62.53	TO	137+20.50	RT			0.4					43													
D-29	P.88	137+20.50			RT			0.4																		
D-25	P.89	142+94.28	TO	142+94.04	RT					7									1							
D-26	P.89	142+94.04	TO	142+29.74	RT						63										1					
D-27	P.89	138+86.76	TO	140+51.85	RT			0.2			165															
D-32	P.89	141+07.56	TO	140+73.83	LT			0.2			34															
D-33	P.89	140+73.83			LT			0.2																		
		NEW RD																								
D-1	P.90	11+21.42	TO	10+63.00	LT					72											1					
D-2	P.90	10+63.00	TO	10+19.09	LT					40											1					
D-3	P.90	10+19.09	TO	9+65.89	LT					25														1		
D-4	P.90	9+65.89	TO	9+07.68	LT			0.3									55	16						1		
D-5	P.90	9+07.68	TO	7+44.15	LT												159							1		
D-8	P.90	10+43.58	TO	10+63.00	LT					43											1					
D-9	P.90	9+60.81	TO	9+66.54	LT&RT					33									1							
D-10	P.90	9+10.30	TO	9+07.68	LT					35											1					
D-31	P.90	9+03.22	TO	9+31.14	LT			0.2		33																
D-34	P.90	10+21.06	TO	9+66.54	LT					68											1					
D-35	P.90	10+15.75	TO	10+19.09	LT					33										1						
D-36	P.90	10+20.94	TO	9+60.81	RT					65											1					
		SR 46																								
D-23	P.90	143+54.26	TO	143+58.27	LT&RT				3	48													1			
D-24	P.90	143+61.84			LT			0.2																		
D-37	P.90	144+44.18	TO	143+58.27	LT&RT					66											1					
D-38	P.90	143+58.27	TO	143+61.84	LT					54														1		
D-19	P.91	148+90.37	TO	149+24.60	LT					33											1					
D-20	P.91	149+24.60	TO	149+23.04	LT					26											1					
D-21	P.91	149+23.04	TO	149+97.32	LT							66						1								
D-22	P.91	149+79.76	TO	149+97.23	RT					13								1								
D-41	P.91	149+97.32			LT																		1			
D-42	P.91	149+97.23			RT																		1			
D-17	P.92	164+02.16	TO	164+17.60	LT					19								1								
D-18	P.92	164+17.60	TO	164+15.79	LT			0.1		7										1						
D-30	P.92	158+51.21	TO	158+41.18	RT			0.2							18									1		
D-39	P.92	158+41.18	TO	158+33.38	RT			0.3			16				6									1		
		NEW RD																								
D-6	P.94	7+44.07	TO	7+48.44	LT&RT												45							1		
D-7	P.94	7+48.44	TO	7+48.83	RT	2.78		0.7																		
D-11	P.94	7+25.61	TO	7+44.07	LT									24				1								
D-12	P.94	7+20.36	TO	7+25.61	LT			0.5							21											
D-13	P.94	7+01.56	TO	7+18.63	LT			0.4			58															
D-14	P.94	7+18.63	TO	7+20.36	LT	1.95		0.4																		
D-15	P.94	5+42.54	TO	5+41.26	LT&RT					43								1								
D-16	P.94	5+41.26			RT			0.2																		
D-43	P.94	6+92.00			LT		4																			
D-44	P.142	7+75.00			LT		4																			
D-45	P.96	17+50.19	TO	17+55.08	RT			0.2	5	5																
TOTALS CARRIED TO GENERAL SUMMARY						5	8	6	8	728	40	262	82	58	43	24	45	259	16	5	1	6	6	2	2	7

DRAINAGE SUBSUMMARY

DESIGN AGENCY



4215 North Ave Suite K-230
Columbus, OH 43219

DESIGNER

WKE

REVIEWER

CJM 02/27/26

PROJECT ID

120083

SHEET

P.84

TOTAL

182

MAH-46-13.55

MODEL: Sheet, SurfVI PAPER SIZE: 34x22 (in.) DATE: 5/22/2026 TIME: 12:48:40 PM USER: SFrink
 www\jimt-pw.bentley.com\jimt-pw-01\Documents\Projects\2023\23-02825-00\1120083\400-Engineering\Drainage\Sheets\120083_DS002.dgn

REF NO.	SHEET NO.	STATION TO STATION			SIDE	202	202	202	202	202	601	611	670											
						HEADWALL REMOVED	PIPE REMOVED, 24" DIAMETER AND UNDER	PIPE REMOVED, OVER 24" DIAMETER	MANHOLE REMOVED	CATCH BASIN REMOVED	TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT	MANHOLE ADJUSTED TO GRADE	DITCH EROSION PROTECTION MAT, TYPE B											
						EACH	FT	FT	EACH	EACH	SY	EACH	SY											
		SR 46																						
RD-1	P.88	136+78.99	TO	136+55.08	LT		25																	
RD-2	P.88	137+64.03	TO	137+23.24	RT		42																	
RD-3	P.89	139+65.38			LT		46			1														
RD-4	P.89	140+50.13	TO	138+77.25	RT		174																	
RD-5	P.90	143+72.36	TO	143+57.87	RT		39			1														
RD-6	P.90	143+57.87	TO	143+63.57	LT&RT		64			1														
RD-7	P.90	143+63.57	TO	145+72.44	LT		211			1														
RD-8	P.90	145+72.44	TO	145+81.31	LT		32		1															
RD-9	P.90	146+03.26	TO	145+99.58	LT			133	1															
RD-10	P.90	146+69.20	TO	146+20.35	RT		73			1														
RD-11	P.90	146+20.35	TO	146+03.98	LT&RT		132			1														
RD-12	P.90	146+74.87	TO	146+96.41	LT	1	64			1														
RD-13	P.90	148+44.86	TO	148+44.56	LT		6			1														
RD-14	P.91	149+94.06	TO	149+24.99	LT		71																	
RD-15	P.92	164+16.21			LT					1														
RD-22	P.92	158+50.70			RT		45		1															
		NEW ROAD																						
RD-16	P.94	8+71.79	TO	9+04.39	LT	1	33																	
RD-17	P.94	8+22.50	TO	7+74.98	LT	2	31																	
RD-18	P.94	8+28.43	TO	8+27.95	LT		3			1														
RD-19	P.94	8+27.95	TO	8+15.16	LT			15	1															
RD-20	P.94	7+25.90	TO	7+30.37	LT		82		1															
RD-21	P.94	6+78.91	TO	7+14.54	LT		37			1														
VBF-1	P.94,95	4+25.00	TO	7+43.42	LT						4.0		260											
VBF-3	P.90,91	12+69.22	TO	10+63.45	RT						4.0		291											
		SR 46																						
VBF-2	P.90,91,95	142+35.00	TO	145+38.20	RT						8.0		370											
VBF-4	P.90,91	143+27.01	TO	143+51.98	RT						4.0		24											
D-40	P.91	149+23.04			LT							1												
RD-23	P.96	17+50.19	TO	17+55.08	RT		10			1														

DRAINAGE SUBSUMMARY

DESIGN AGENCY	
 4215 Worth Ave Suite K-230 Columbus, OH 43219	
DESIGNER	
WKE	
REVIEWER	
CJM 02/27/26	
PROJECT ID	
120083	
SHEET	TOTAL
P.85	182

MAH-46-13.55

MODEL: Sheet, SurfVI PAPER SIZE: 34x22 (in.) DATE: 5/22/2026 TIME: 12:48:50 PM USER: SFrink
 www.jlmt-pw.bentley.com/jlmt-pw-01/Documents/Projects/2023/23-02825-00/1120083/400-Engineering/Drainage/Sheets/120083_DS0003.dgn

REF NO.	SHEET NO.	STATION TO STATION			SIDE	601	605	605	611	611	620									BENDS AND BRANCHES				
						TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT	6" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	6" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	PRECAST REINFORCED CONCRETE OUTLET	DELINEATOR, POST GROUND MOUNTED, AS PER PLAN									FOR INFORMATION ONLY				
																				6"x45° BEND	6"x90° BEND	6"x6" TEE	6"x6" WYE	6"x6" CROSS
					SY	FT	FT	FT	EACH	EACH									EACH	EACH	EACH	EACH	EACH	
		SR46																						
UD-1	P.88	141+50.00	TO	135+09.89	LT	1.8		635	10	1	1									1	1			
UD-30	P.88	141+50.00	TO	137+60.00	LT			397												1				
UD-2	P.89	139+85.99	TO	140+51.90	RT		67		10											1				
UD-3	P.89	141+50.00	TO	142+92.51	LT	1.8		143	10	1	1								1		1			
UD-31	P.89	141+50.00	TO	142+24.82	LT			82												1				
UD-4	P.89	140+52.25	TO	142+92.52	RT				10											1				
UD-5	P.89	144+66.66	TO	142+92.94	LT			179												2				
		SR46/NEW RD																			1			
UD-6	P.89	14+00.52	TO	142+96.01	RT			562	10															
		ROUNDAABOUT																						
UD-7	P.90	202+46.92	TO	201+52.69	LT			80	10															
UD-27	P.90	201+48.76	TO	200+78.17	LT			59	10															
UD-28	P.90	202+48.18	TO	202+95.00	LT			36	10															
UD-29	P.90	202+99.20	TO	200+72.36	LT			107	10															
		SR46																						
UD-8	P.90	146+19.98	TO	146+67.88	RT			65	10															
UD-9	P.90	146+88.87	TO	148+41.77	LT			143	10															
UD-10	P.90	147+06.64	TO	149+78.04	RT			261	10															
		NEW RD																						
UD-18	P.90	9+55.53	TO	5+57.14	RT			448																
UD-21	P.90	9+71.75	TO	9+05.65	LT			83	10															
		SR46																						
UD-25	P.90	146+70.12	TO	147+03.58	RT			31	10															
UD-26	P.90	146+55.00	TO	146+93.32	RT			32	10															
UD-32	P.90	147+16.14	TO	146+95.90	RT		12		10															
UD-11	P.91	148+47.80	TO	149+75.84	LT			118	10															
UD-12	P.91	149+94.05	TO	149+81.48	RT			3	10															
UD-13	P.91	149+94.18	TO	149+79.28	LT			5	10															
UD-14	P.91	151+50.12	TO	150+00.19	RT			141	10															
UD-15	P.91	151+50.00	TO	150+00.29	LT			140	10															
		NEW RD																						
UD-16	P.93	4+65.14	TO	5+57.52	RT	1.8	8	83	10	1	1									1				
UD-17	P.93	4+50.11	TO	5+40.82	LT			82	10															
UD-19	P.94	7+22.62	TO	5+44.23	LT			170	10															
UD-20	P.94	9+01.5	TO	7+28.61	LT			166	10															
UD-22	P.95	14+00.52	TO	17+79.94	RT		28	349	10															
UD-23	P.95	13+99.60	TO	11+24.54	LT			267	10															
UD-24	P.95	13+99.60	TO	16+69.96	LT		6	271	10															

DRAINAGE SUBSUMMARY

DESIGN AGENCY



4215 Worth Ave Suite K-230
Columbus, OH 43219

DESIGNER

WKE

REVIEWER

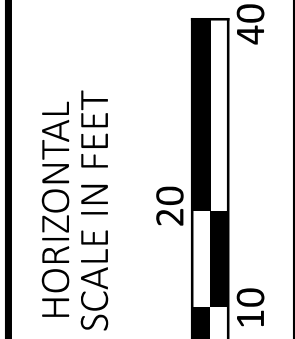
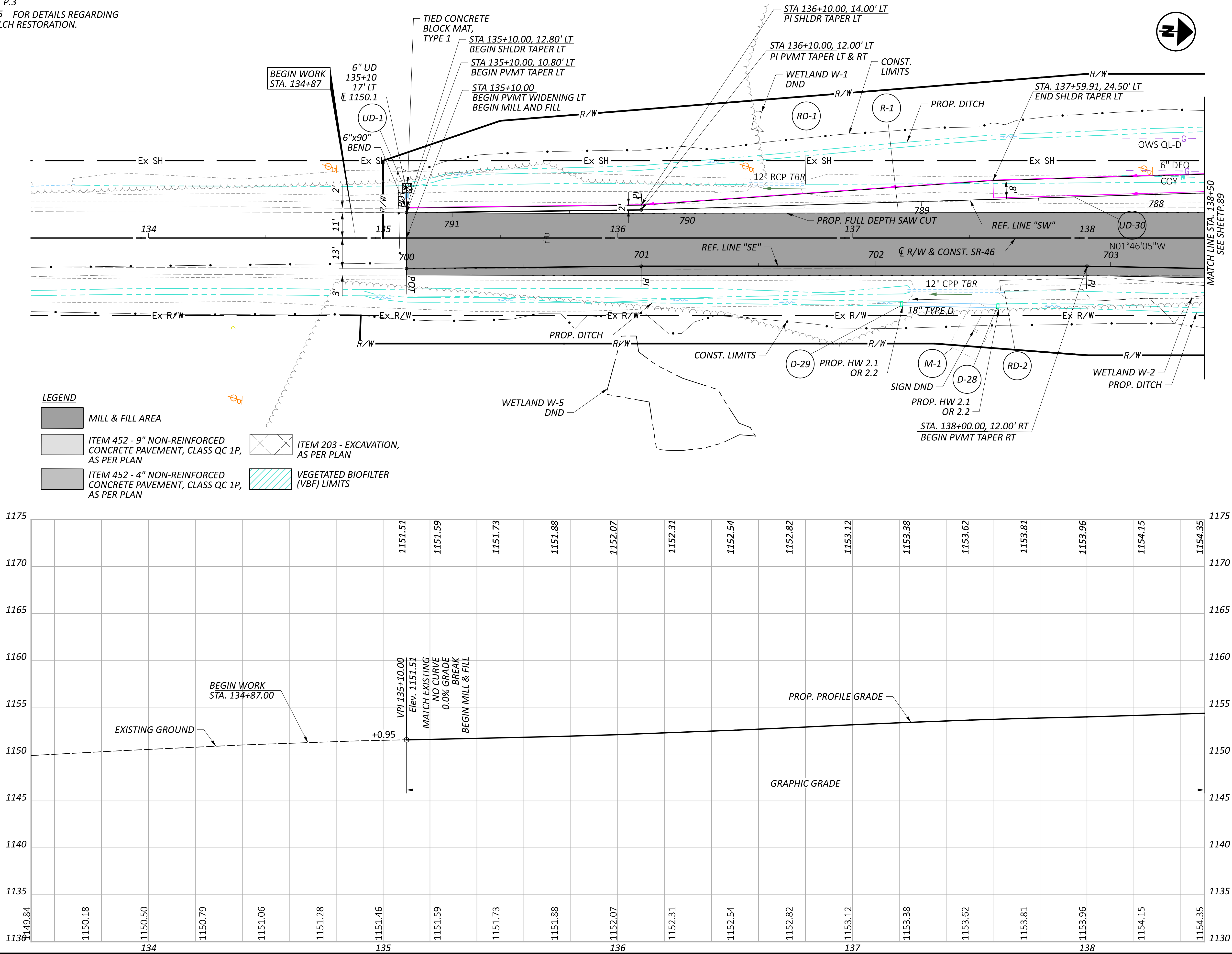
CJM C

120083

SHEET

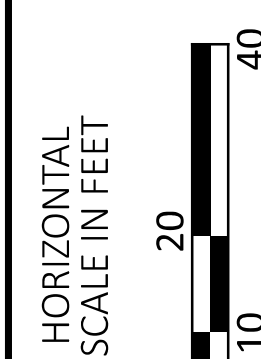
TOTAL

FOR CURVE DATA
SEE SHEETS P.2 - P.3
SEE NOTE ON P.15 FOR DETAILS REGARDING
TIMBER AND MULCH RESTORATION.



PLAN AND PROFILE - SR-46
STA. 133+50.00 TO STA. 138+50.00

FOR CURVE DATA
SEE SHEETS P.2 - P.3

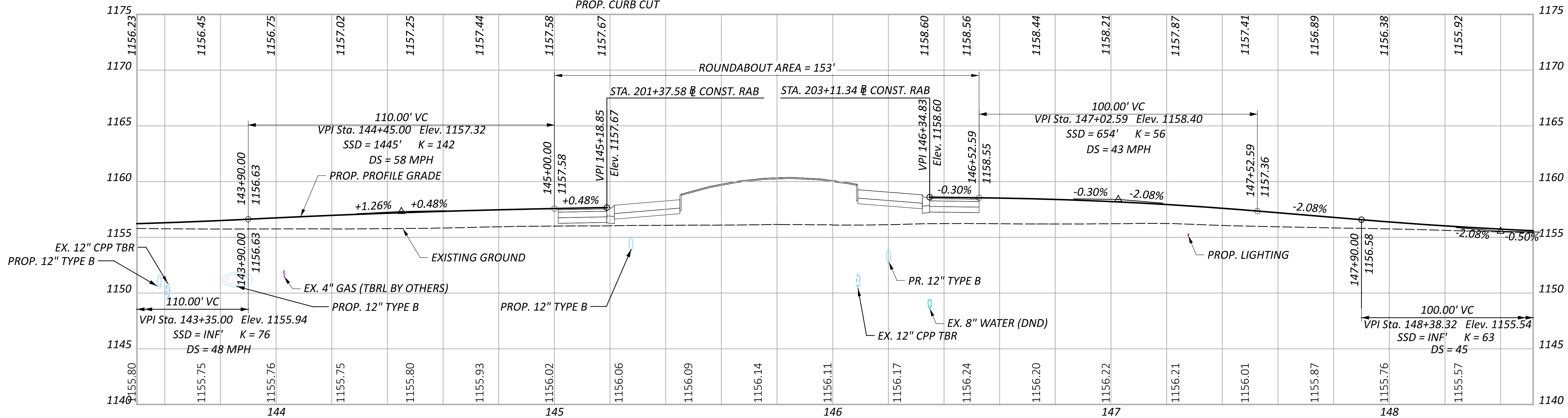


PLAN AND PROFILE - SR-46
STA. 138+50.00 TO STA. 143+50.00

SHEET	TOTAL
P.89	182

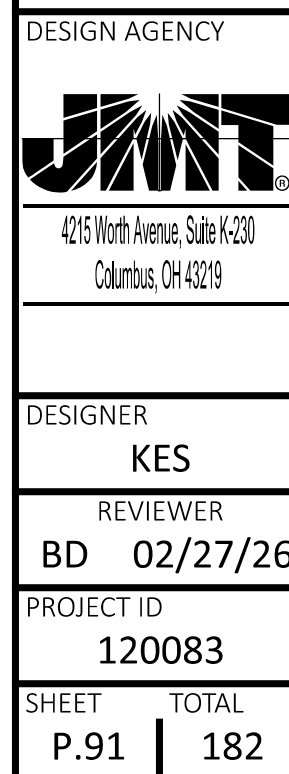
MAH-46-13.55

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pw: \\jint-pw-bentley.com:jint-pw-01\Documents\Projects\2023\23-02825-001\120083\400-Engineering\Roadway\Sheets\120083_GP002.dgn



The profile view displays the proposed road profile (solid line) and existing ground (dashed line). Key features include:

- Vertical Curve Data:**
 - VC Length: 100.00'
 - VC Station: 148+38.32
 - SSD = INF' K = 63
 - DS = 45 MPH
- Proposed Profile Grade:**
 - Grades: -0.50%, -0.45%, -0.45%, +0.54%
 - Match Point: VPI 151+50.00, Elev. 1155.49
- Existing Ground:**
 - Station 148+88.32, Elev. 1155.29
 - Station 149+00.00, Elev. 1155.23
- Other Notes:**
 - END PROJECT END FULL DEPTH PVTM BEGIN MILL & FILL STA. 149+15.00
 - EX. 27" CPP TO REMAIN
 - GRAPHIC GRADE



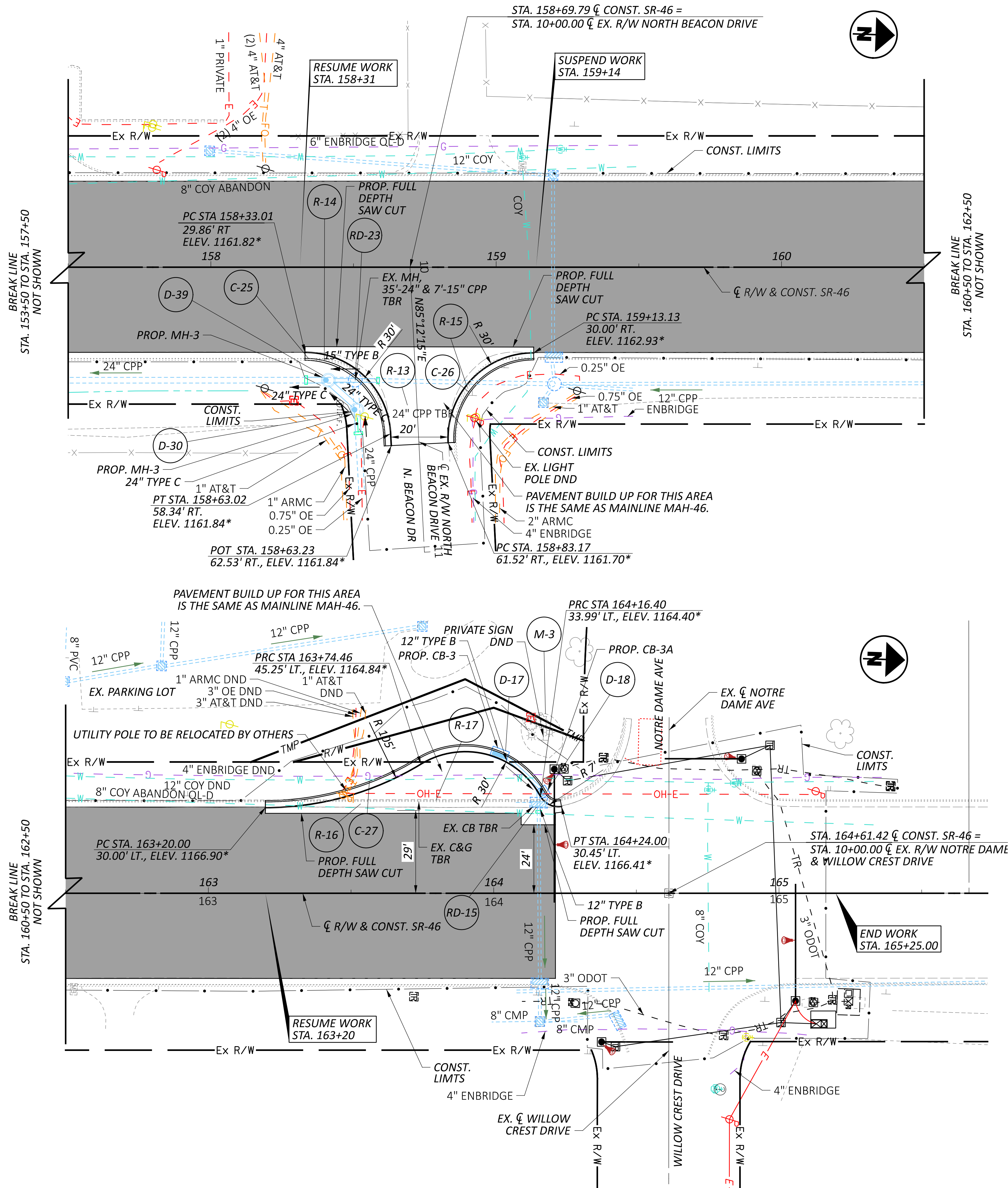
NOTE: TRANSITION CURB AND GUTTER
TO MATCH EXISTING OVER 10'

FOR CURVE DATA
SEE SHEETS P.2 - P.3

SEE NOTE ON P.15 FOR DETAILS REGARDING
RESURFACING FROM STA. 153+50.00 TO 164+21.64

* MATCH EXISTING

SEE NOTE ON P.15 FOR DETAILS REGARDING
TIMBER AND MULCH RESTORATION.



LEGEND
MILL & FILL AREA

NOTE:
THE CONTRACTOR SHALL CONTINUE THE EXISTING
CROSS SLOPE FROM SR-46 TO THE GUTTER OF THE
LOON AT NOTRE DAME.



PLAN - SR-46
STA. 157+50 TO STA. 164+50

DESIGN AGENCY



4215 North Avenue, Suite 420
Columbus, OH 43219

DESIGNER

KES

REVIEWER

BD 02/27/26

PROJECT ID

120083

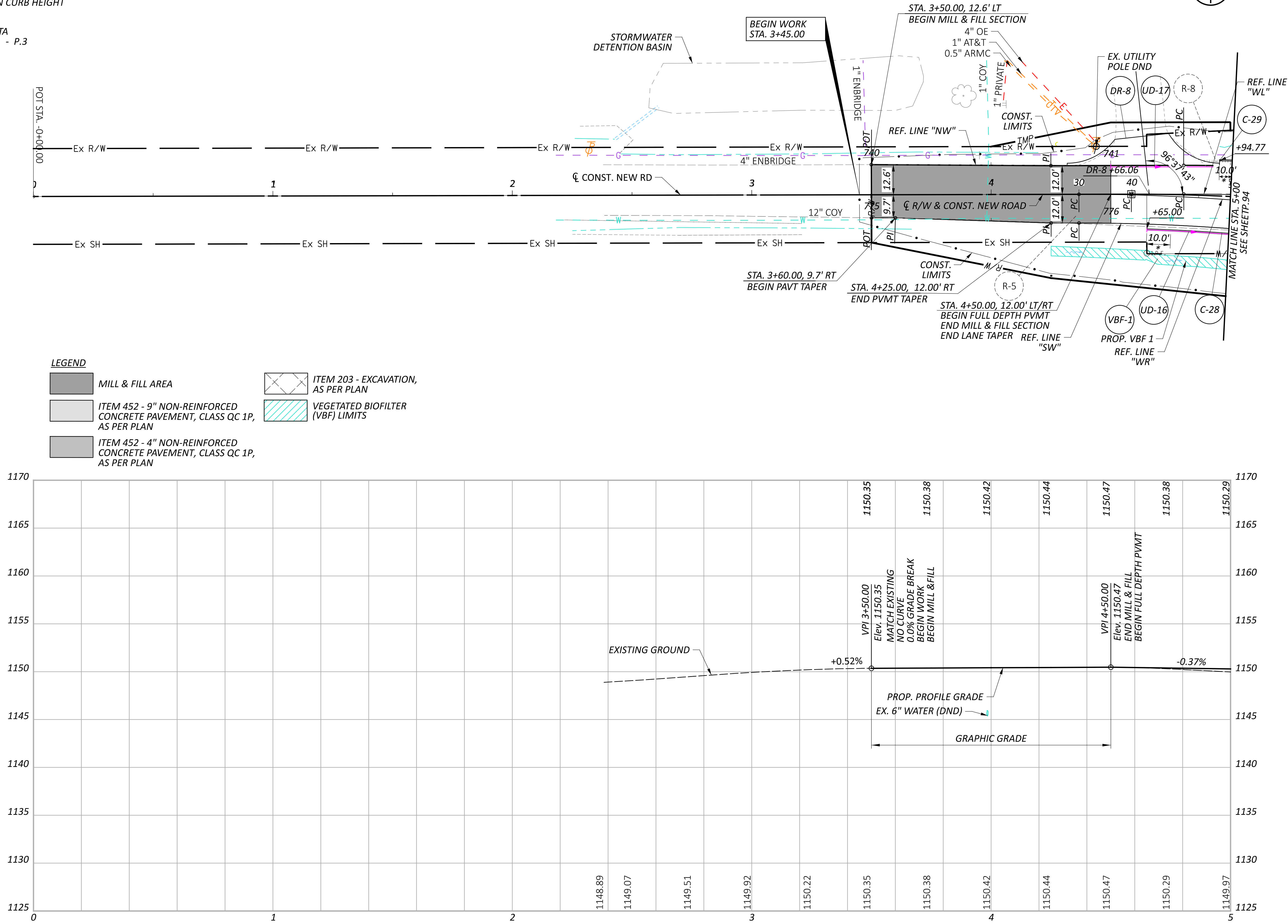
SHEET

P.92

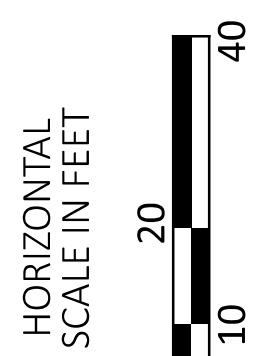
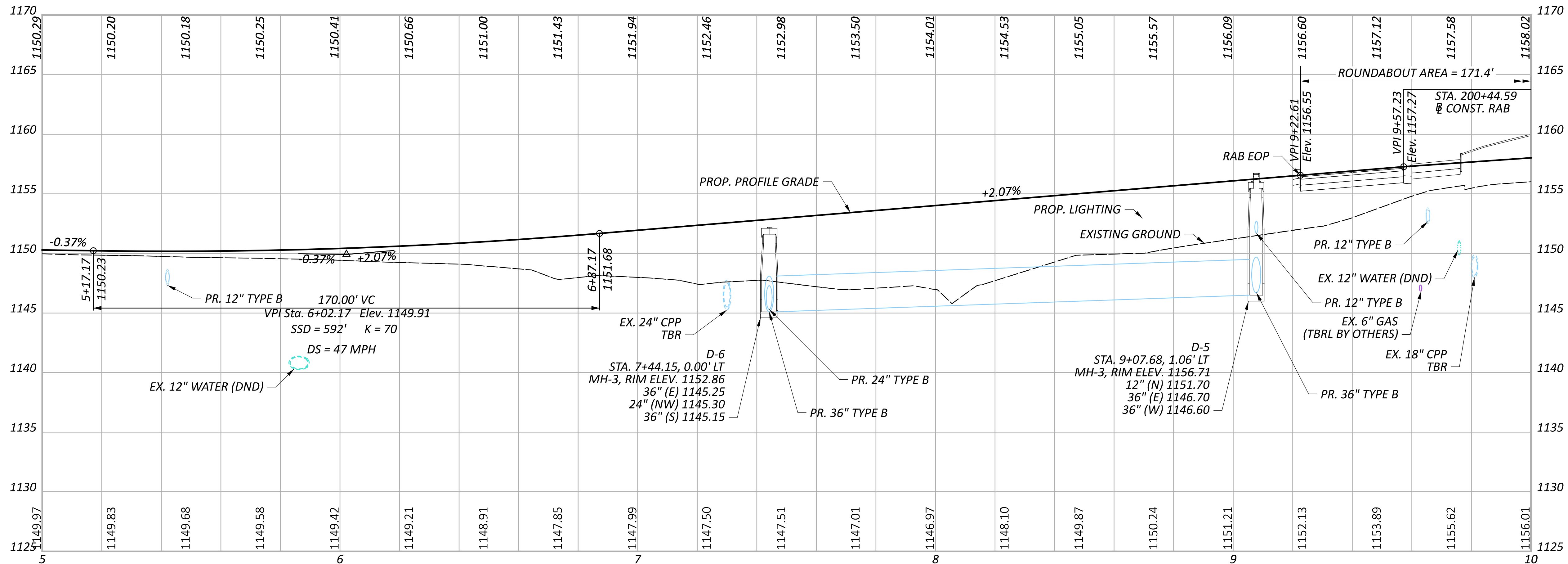
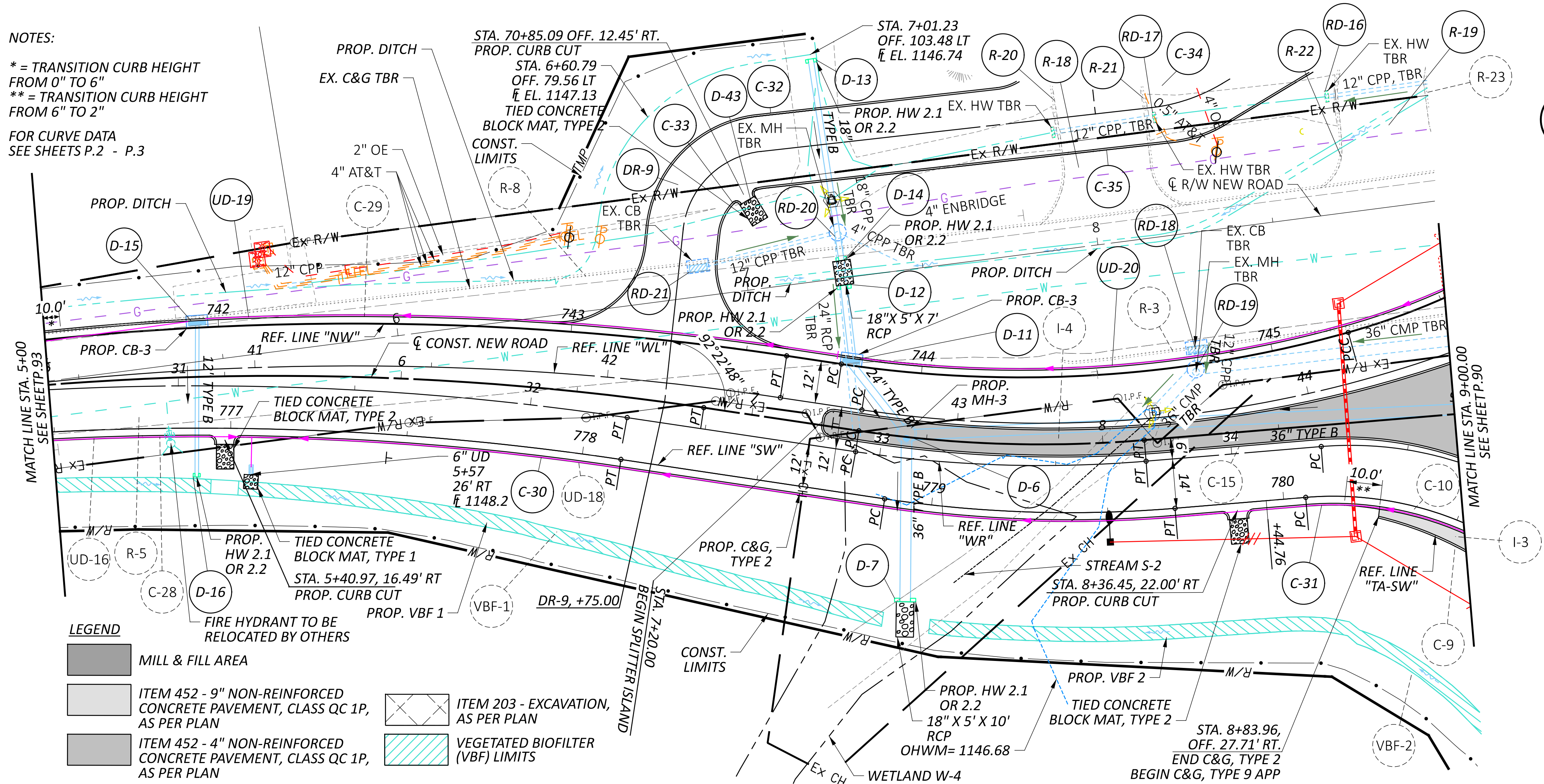
TOTAL

182

NOTES:
* = TRANSITION CURB HEIGHT
FROM 0" TO 6"
FOR CURVE DATA
SEE SHEETS P.2 - P.3



PLAN AND PROFILE - NEW ROAD
STA. 0+00.00 TO STA. 5+00.00



PLAN AND PROFILE - NEW ROAD
STA. 5+00.00 TO STA. 10+00.00



DESIGN AGENCY	JMT
DESIGNER	KES
REVIEWER	BD
DATE	02/27/26
PROJECT ID	120083
SHEET	P.94
TOTAL	182

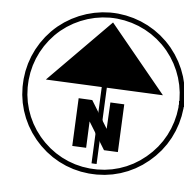
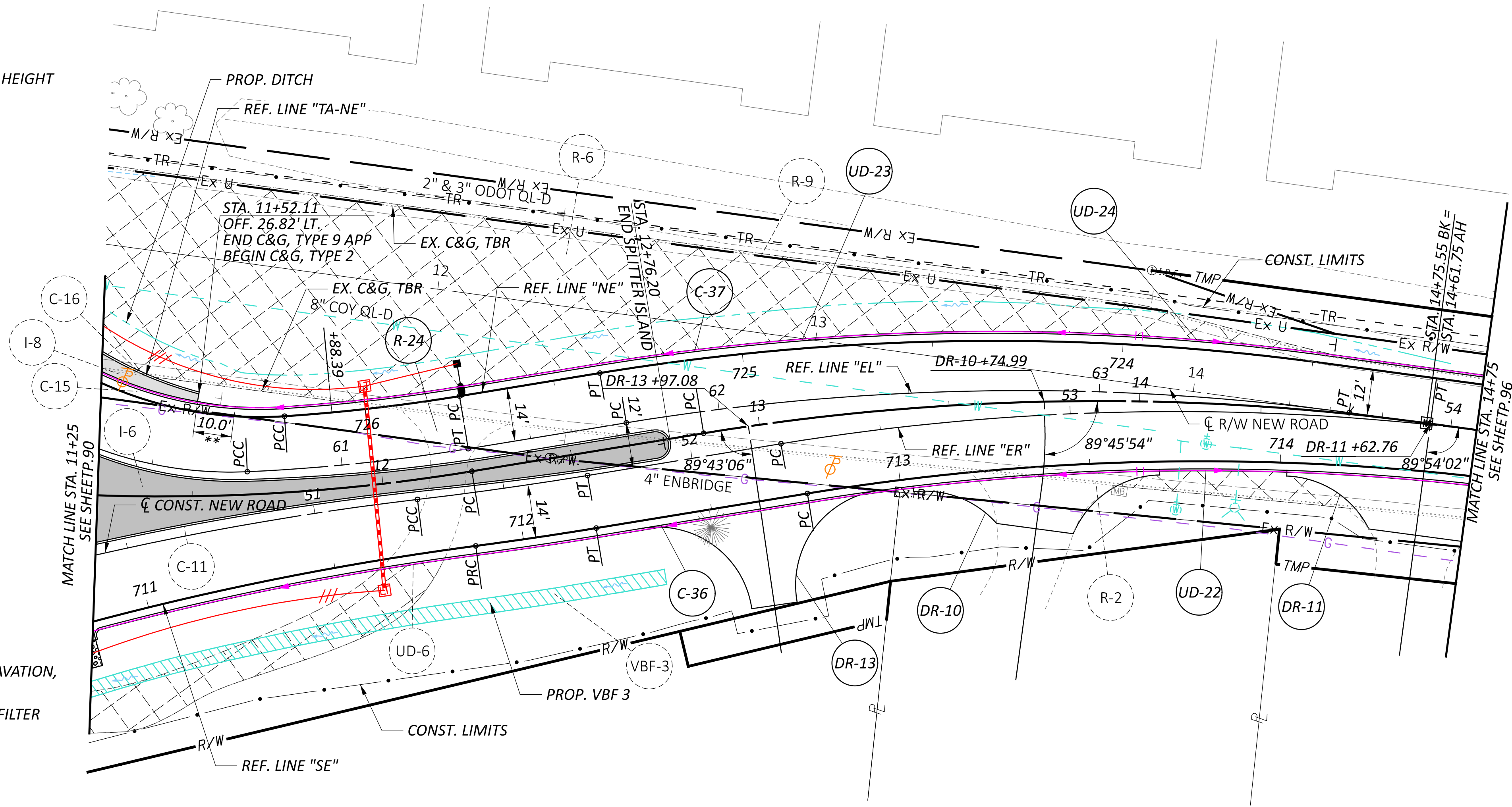
LEGEND

- MILL & FILL AREA
- ITEM 452 - 9" NON-REINFORCED
CONCRETE PAVEMENT, CLASS QC 1P,
AS PER PLAN
- ITEM 452 - 4" NON-REINFORCED
CONCRETE PAVEMENT, CLASS QC 1P,
AS PER PLAN
- ITEM 203 - EXCAVATION,
AS PER PLAN
- VEGETATED BIOFILTER
(VBF) LIMITS

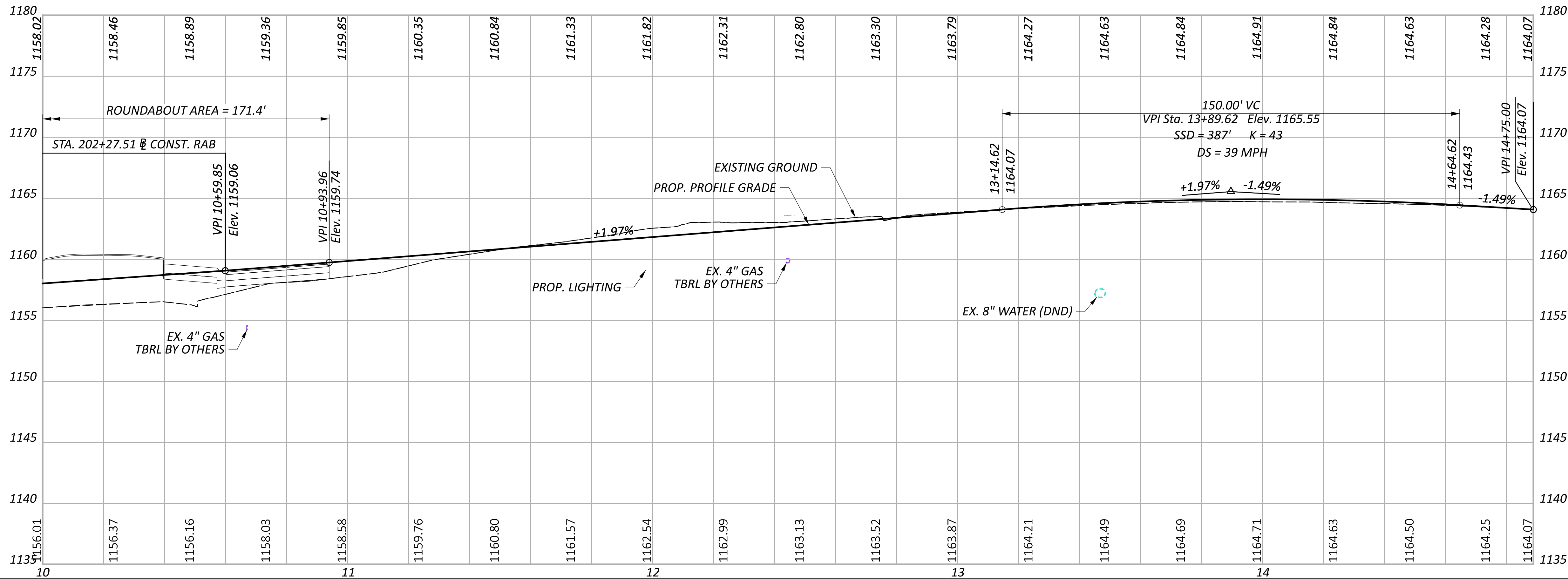
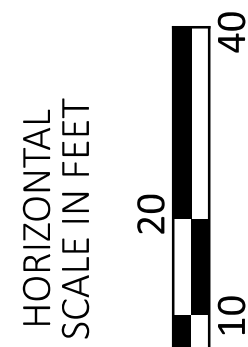
NOTES:

** = TRANSITION CURB HEIGHT
FROM 2" TO 6"

FOR CURVE DATA
SEE SHEETS P.2 - P.3



PLAN AND PROFILE - NEW ROAD
STA. 10+00.00 TOT STA. 14+75



DESIGN AGENCY



4215 North Avenue, Suite K-200
Columbus, OH 43219

DESIGNER

KES

REVIEWER

BD 02/27/26

PROJECT ID

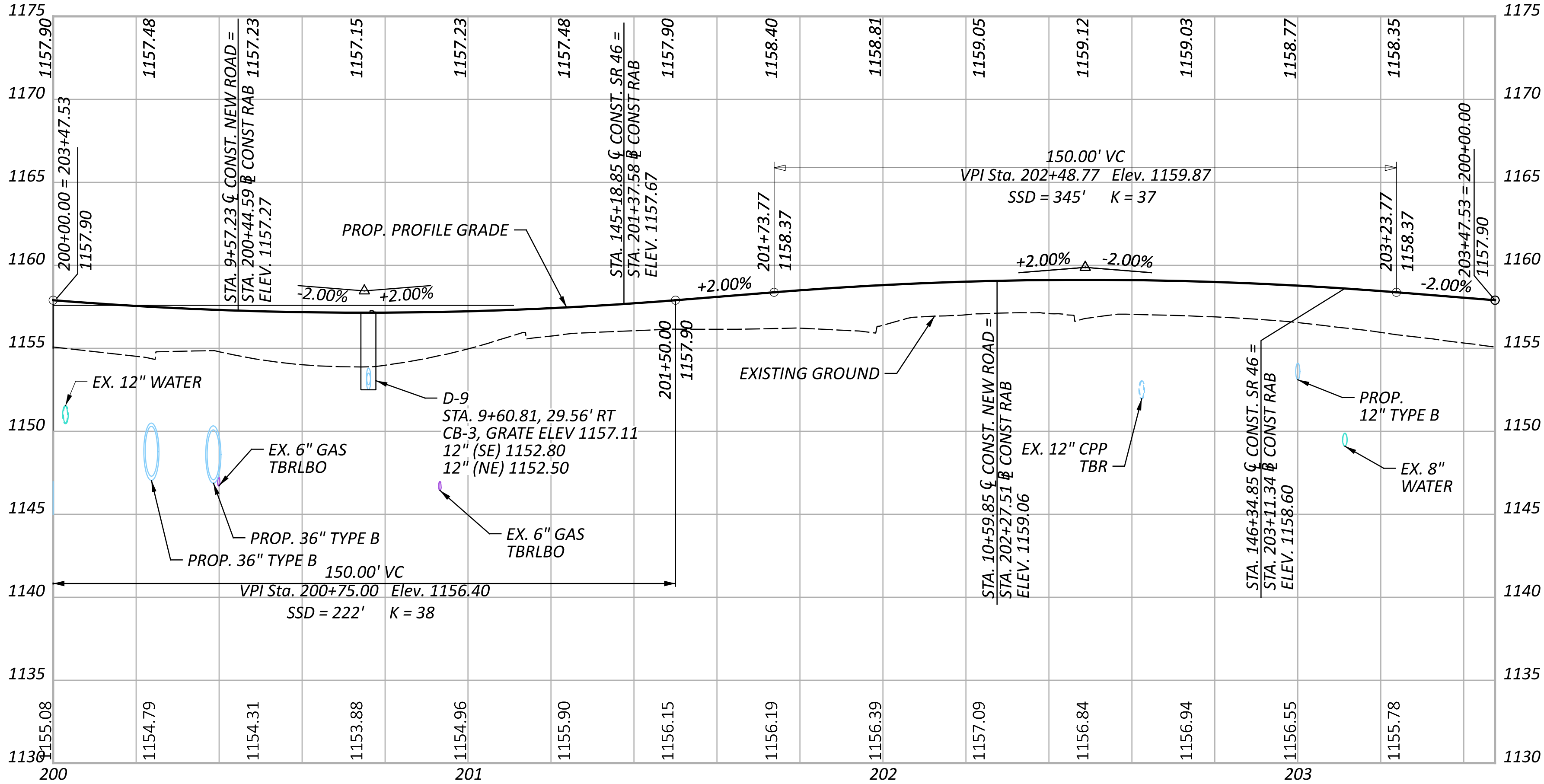
120083

SHEET TOTAL

P.95 182

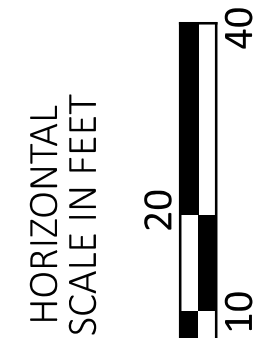
This profile view shows a road section with a proposed profile grade and existing ground. The vertical axis represents elevation in feet, ranging from 1130 to 1175. The horizontal axis represents stationing, ranging from 15 to 19. The proposed profile grade is shown as a solid black line, and the existing ground is shown as a dashed black line. The profile starts at station 15+00.00 with an elevation of 1163.72. It has a -1.40% grade until station 15+80.00, where it meets the existing ground. From station 15+80.00 to station 17+00.00, the grade is 0.00%. From station 17+00.00 to station 17+80.00, the grade is -1.88%. The profile ends at station 17+80.00 with an elevation of 1158.67. Various utility lines are shown, including a 6" unclassified underdrain, a 6" LT. EL. 1158.35 EX. 6" WATER (DND), a 6" LT. EL. 1158.30 EX. 12" SPP TO REMAIN, a 6" RT. EL. 1156.00 EX. 6" GAS (TBRL BY OTHERS), and a 6" RT. EL. 1156.30. The profile also shows a 6" UNCLASSIFIED UNDERDRAIN and a 6" LT. EL. 1158.35 EX. 6" WATER (DND). The profile is labeled with stationing and elevations at various points, including 1163.72, 1163.32, 1162.91, 1162.49, 1162.03, 1161.60, 1161.16, 1160.74, 1160.17, 1159.68, 1159.22, 1158.76, 1158.67, 1158.32, 1157.81, 1157.27, and 1156.90.

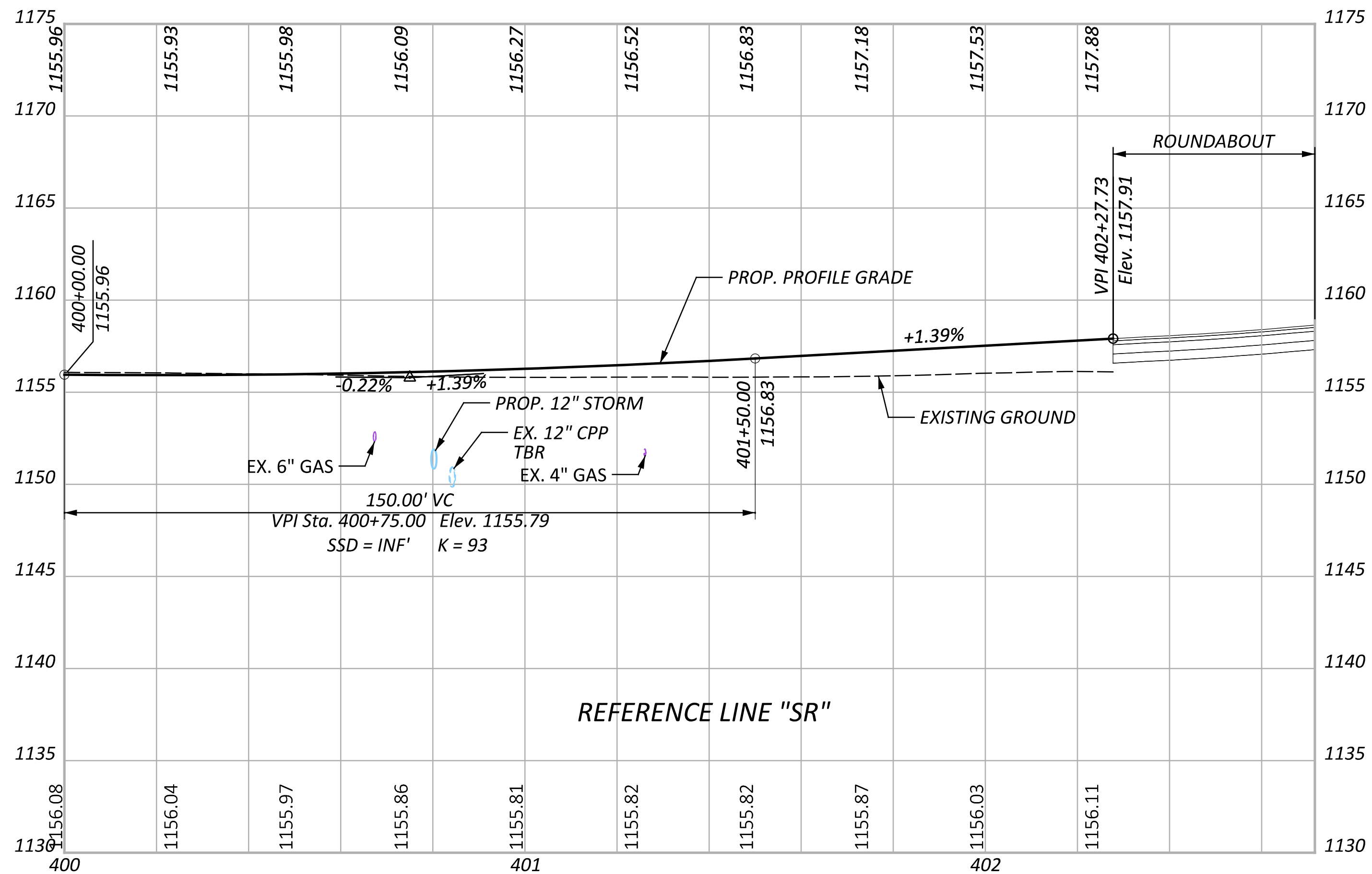
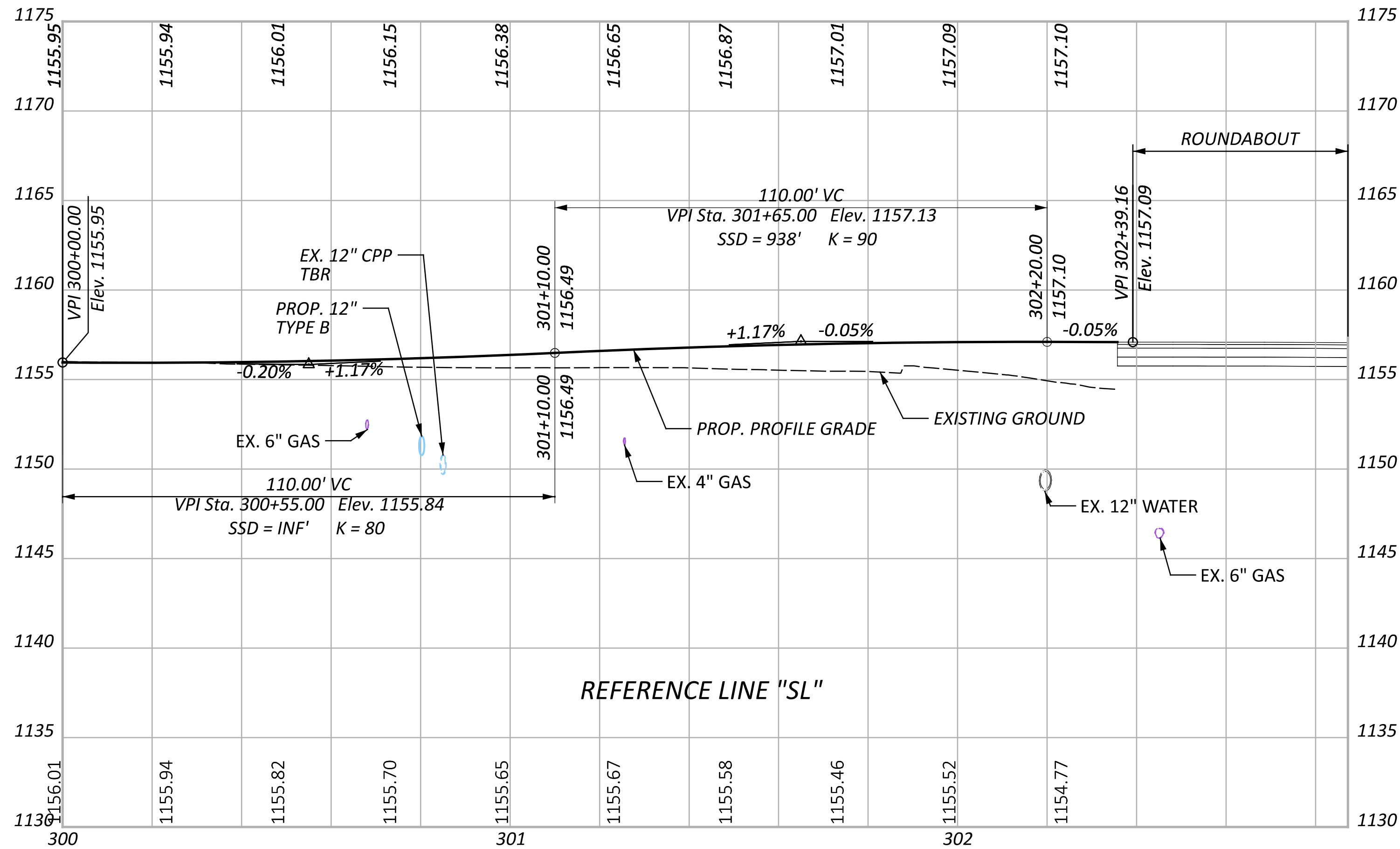
DESIGN AGENCY	
	
4215 North Avenue, Suite K-230 Columbus, OH 43219	
DESIGNER	
KES	
REVIEWER	
BD	02/27/2
PROJECT ID	
120083	
SHEET	TOTAL
P. 96	182



PROFILE - ROUNDABOUT BASELINE
STA. 200+00.00 TO STA. 203+64.42

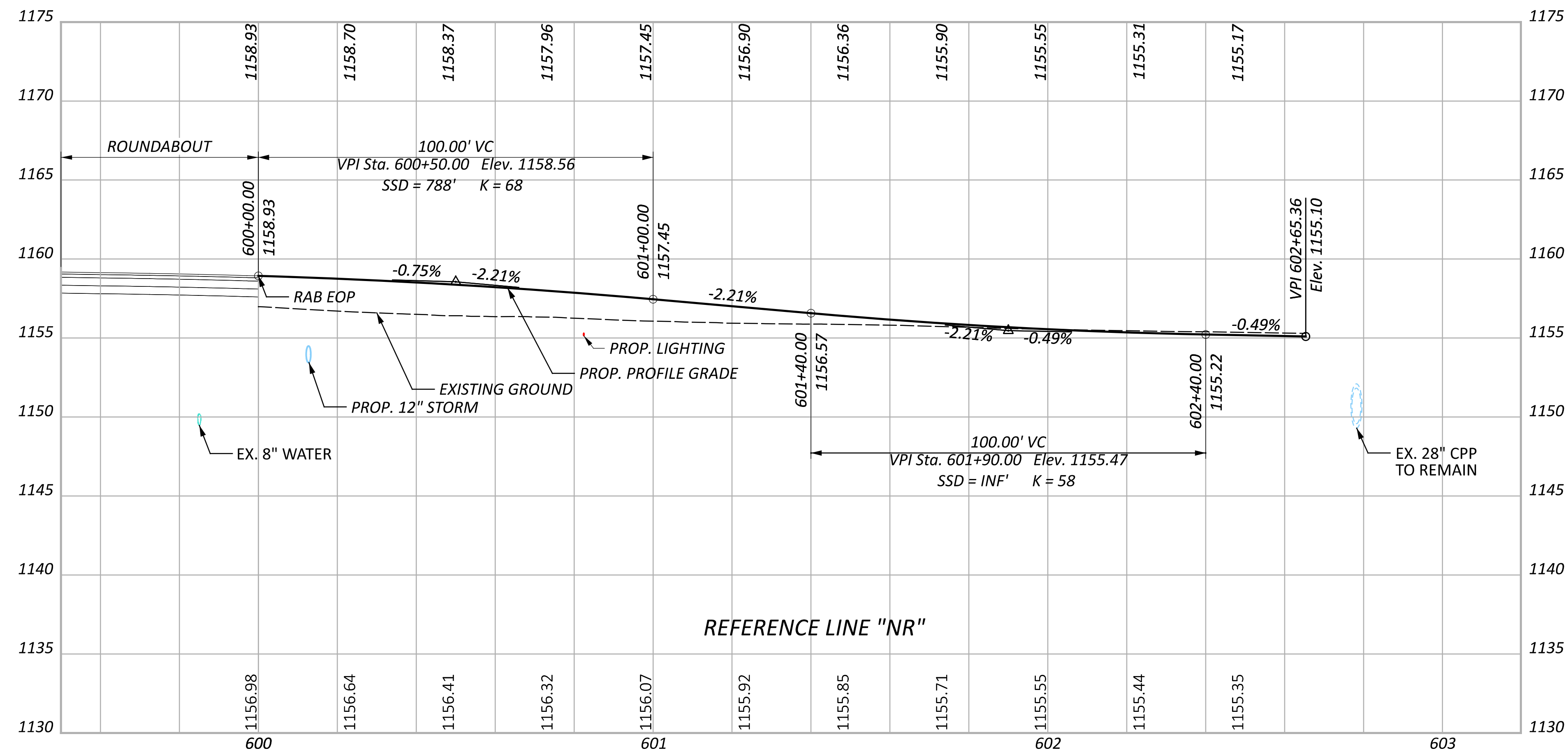
DESIGN AGENCY	
 4215 North Avenue, Suite K-200 Columbus, OH 43219	
DESIGNER	
KES	
REVIEWER	
BD 02/27/26	
PROJECT ID	
120083	
SHEET	TOTAL
P.97	182





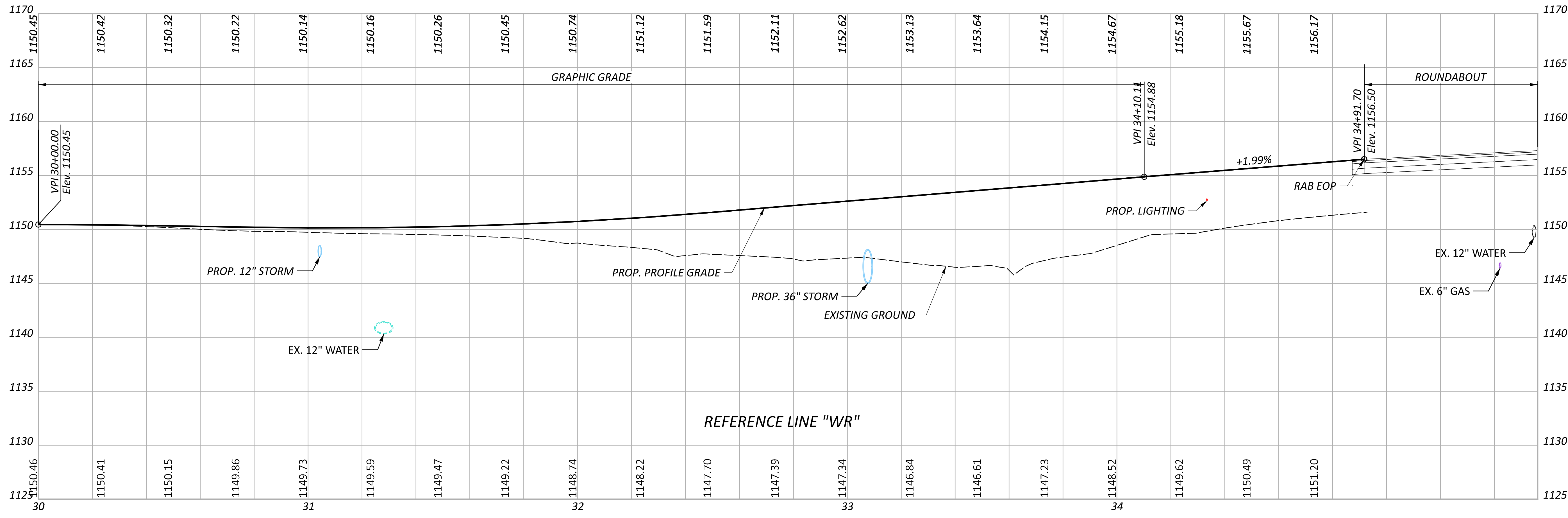
ROUNDABOUT PROFILES
SOUTH LEG

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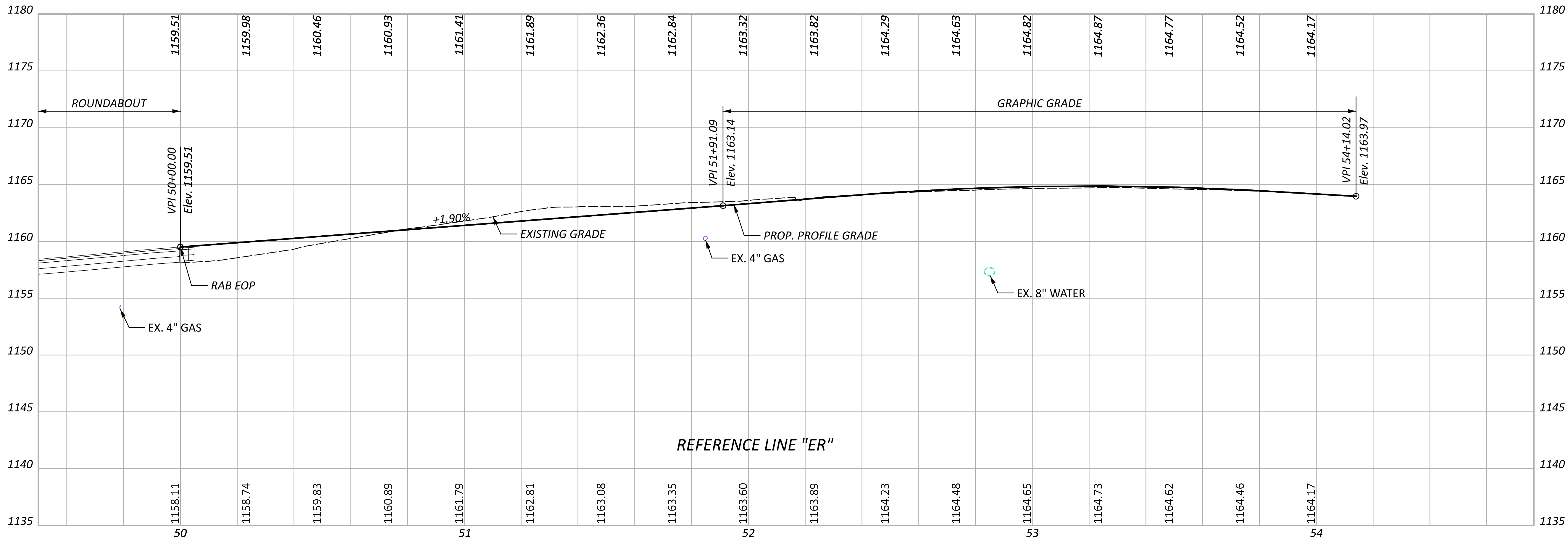
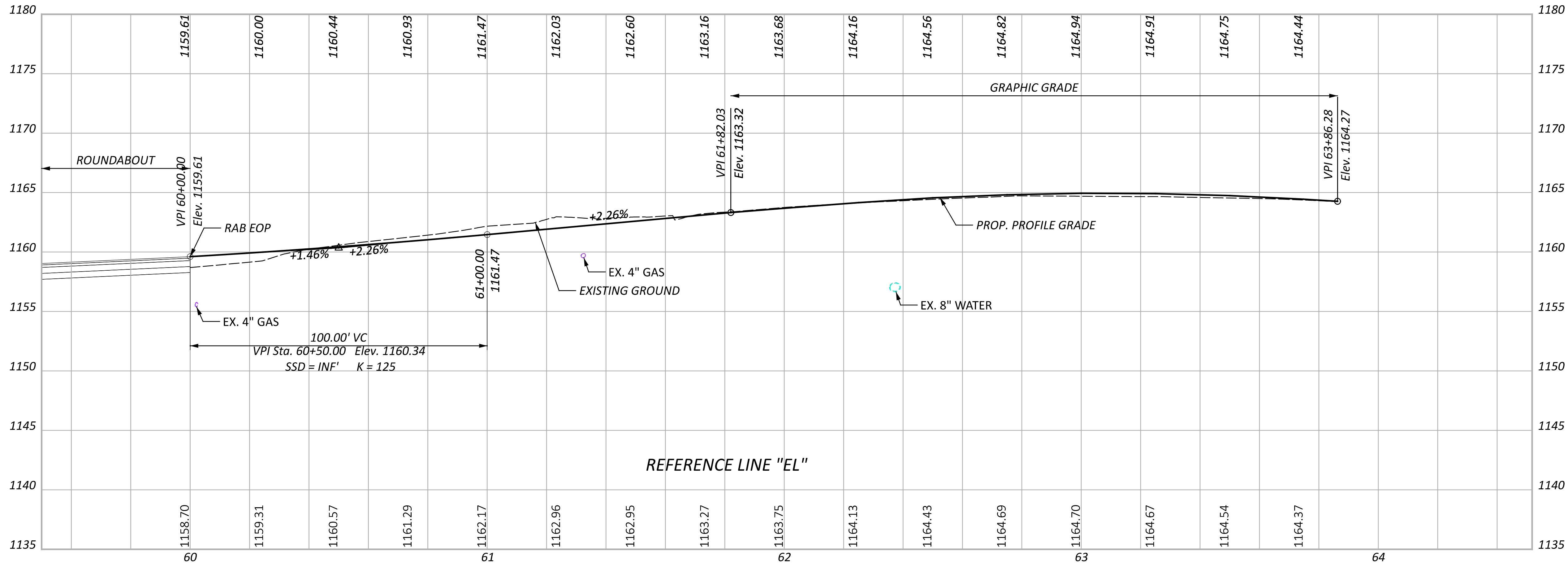


DESIGN AGENCY	
4215 North Avenue, Suite K-200 Columbus, OH 43219	
DESIGNER	
KES	
REVIEWER	
BD	02/27/26
PROJECT ID	
120083	
SHEET	TOTAL
P.99	182

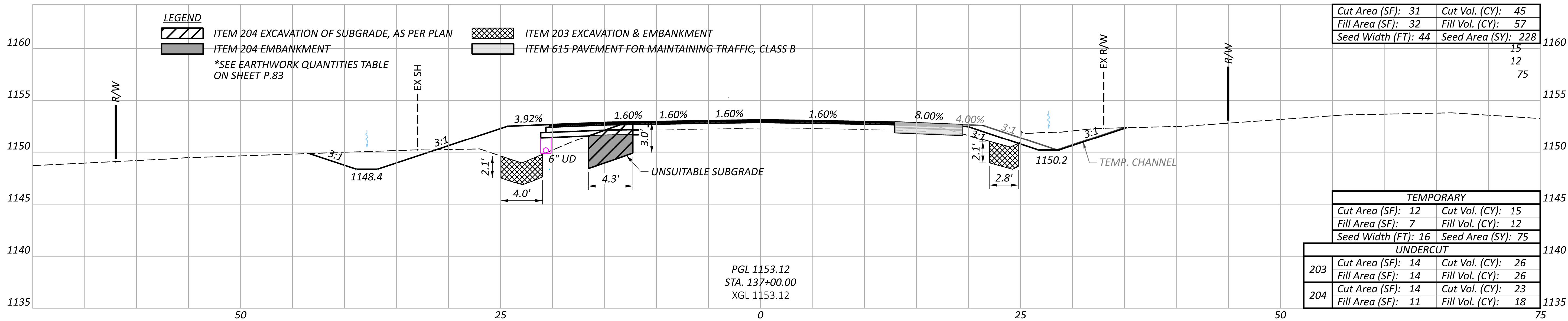
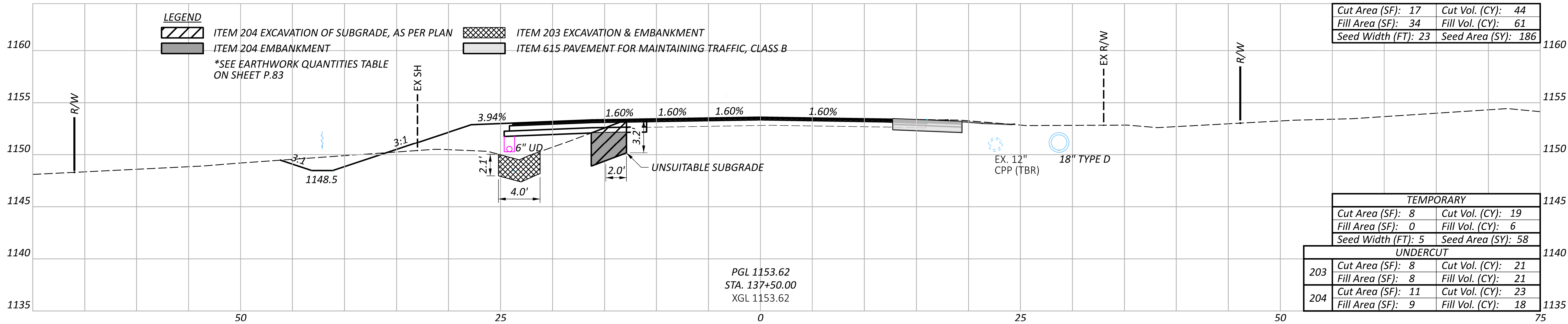
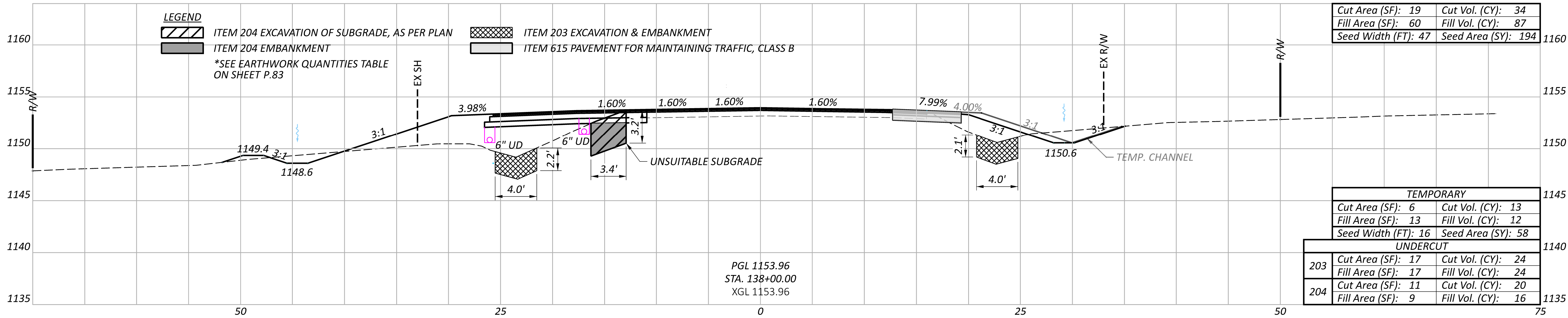
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pw:\\jint-pw-01\Documents\Projects\2023\23-02825-001\120083 (400-Engineering)\Roadway\Sheets\120083_GPD13.dgn



DESIGN AGENCY	
 4215 North Avenue, Suite K-200 Columbus, OH 43219	
DESIGNER	
KES	
REVIEWER	
BD	02/27/26
PROJECT ID	
120083	
SHEET	TOTAL
P.100	182



ROUNDABOUT PROFILES
EAST LEG



Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
608	123	205	P.104	182

CROSS SECTIONS - SR-46 SOUTH LEG
STA. 137+00.00 TO STA. 138+00.00

DESIGN AGENCY


4215 North Ave Suite K-230
Columbus, OH 43219

DESIGNER

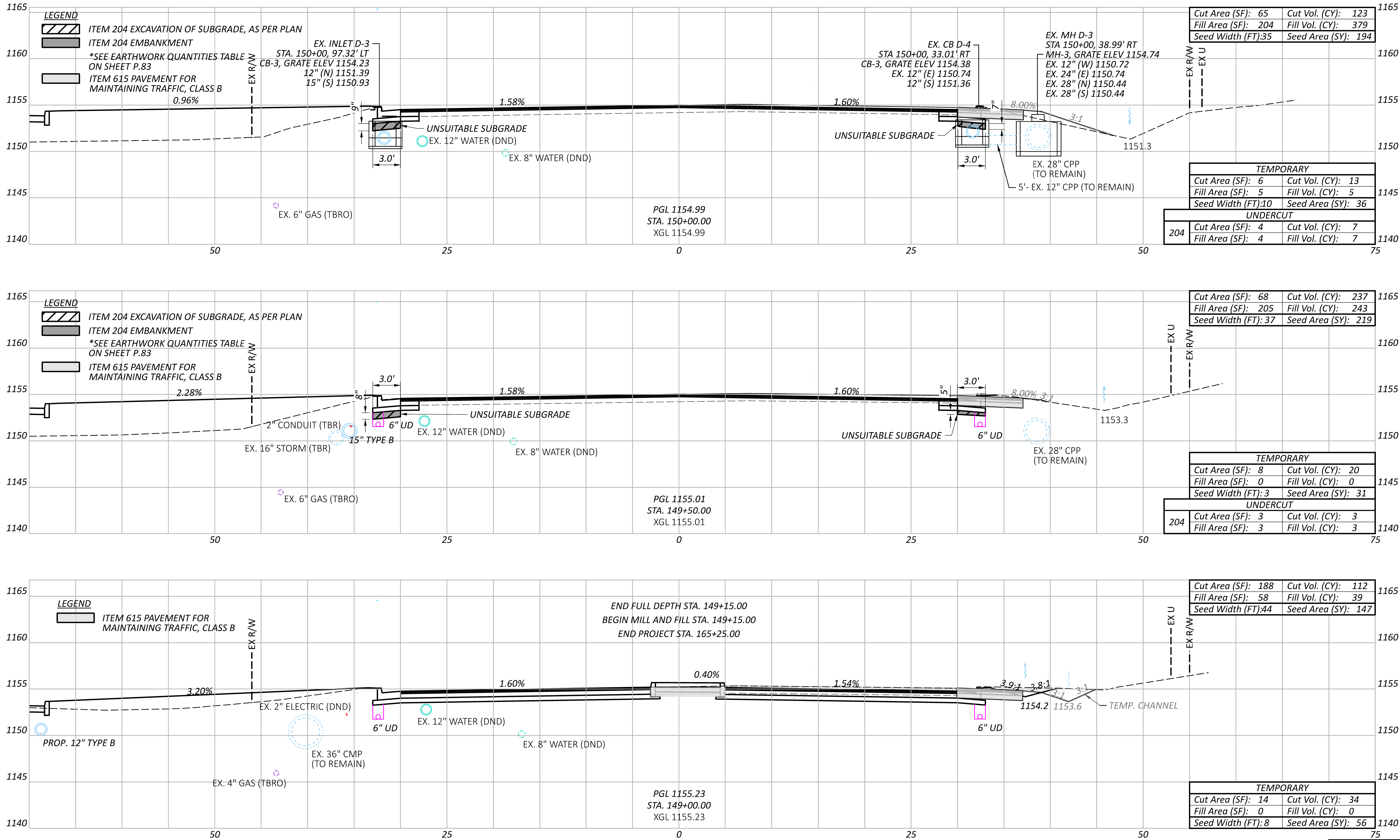
SKG

REVIEWER

BBD 02/27/26

PROJECT ID

120083

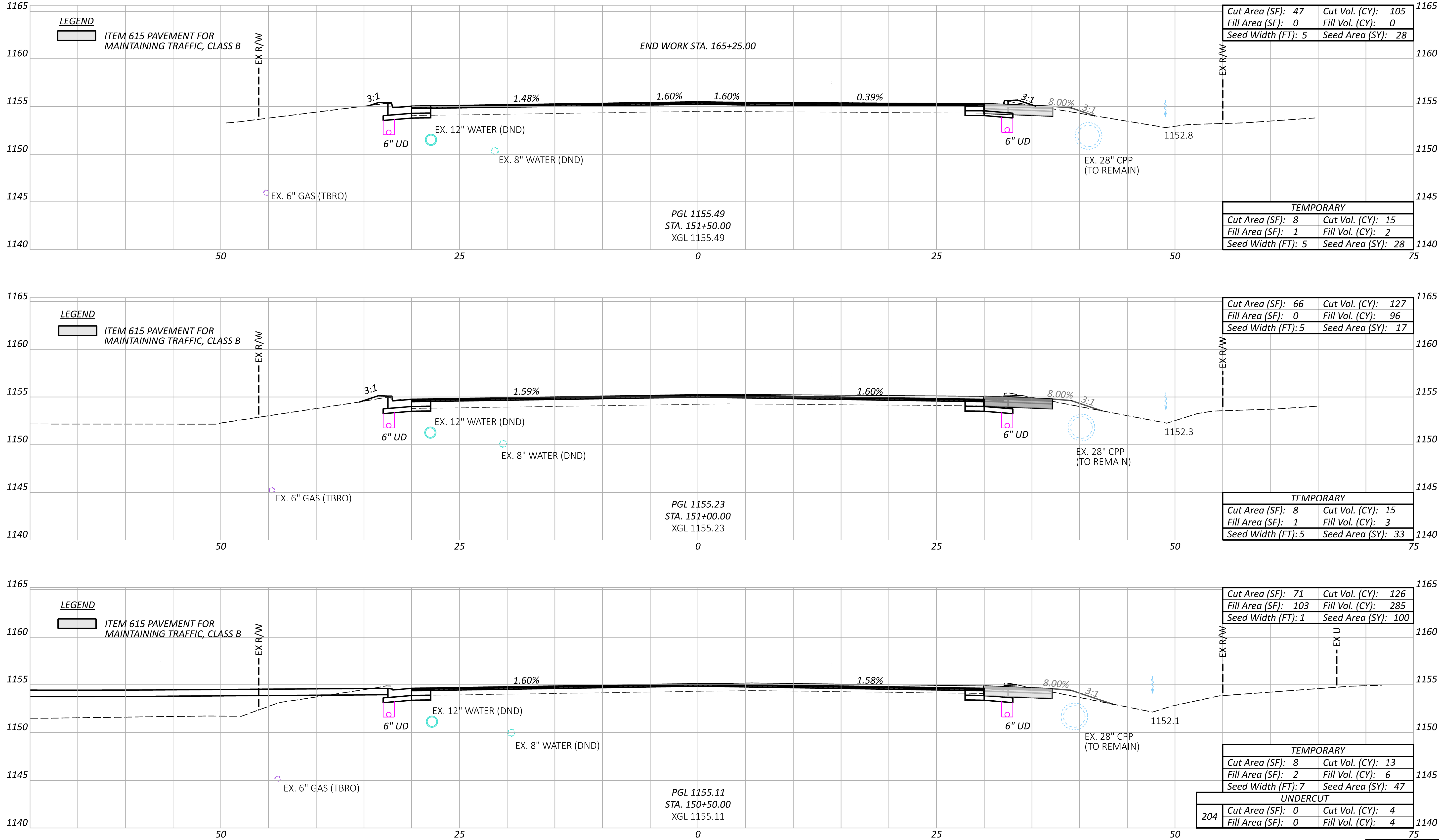


CROSS SECTIONS - SR-46 NORTH LEG
STA. 149+00.00 TO STA. 150+00.00

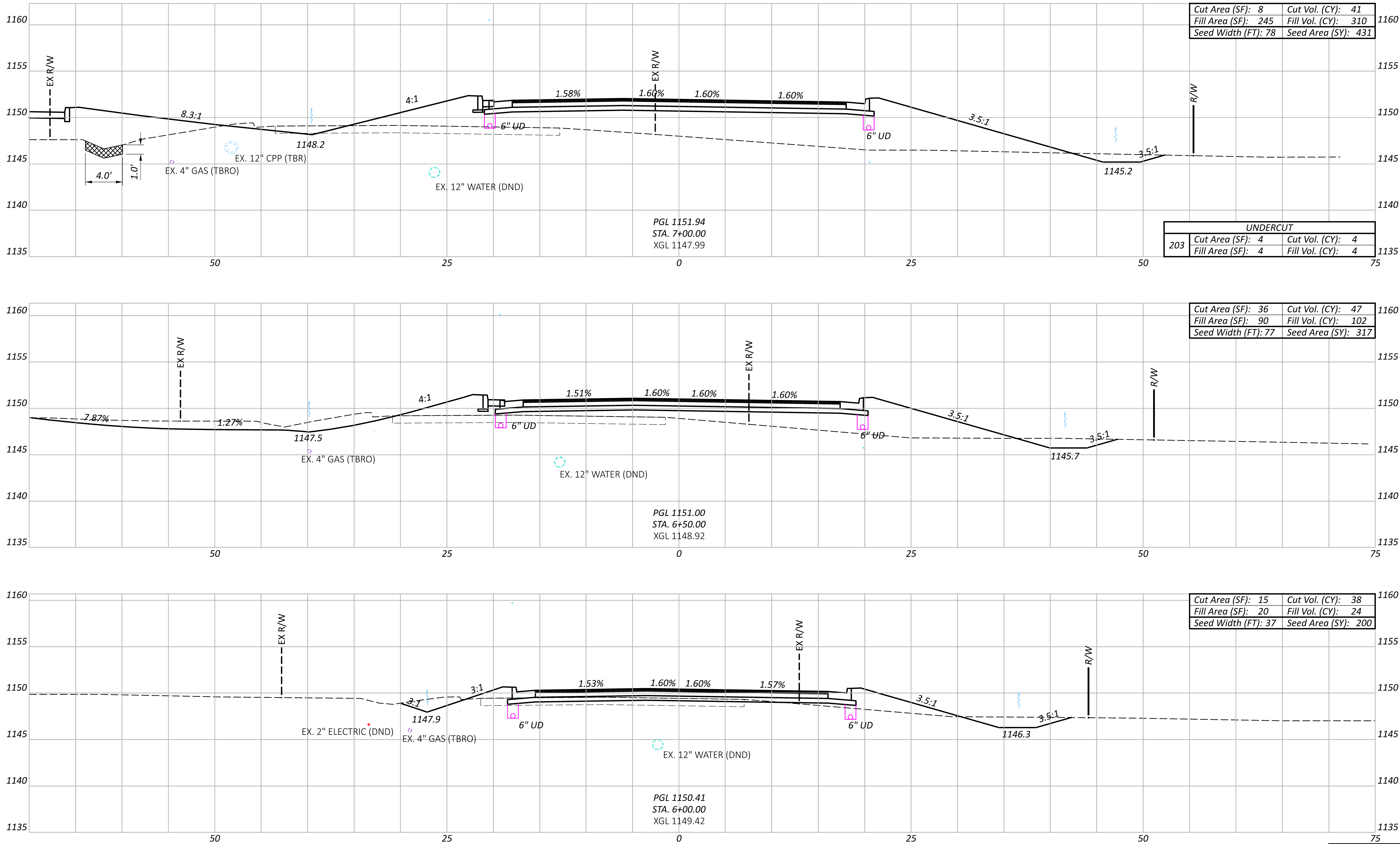


DESIGNER	KES
REVIEWER	BD
DATE	02/27/26
PROJECT ID	120083
SHEET	P.113
TOTAL	182

Sheet Totals	560	243	331
Seeding	560	243	331



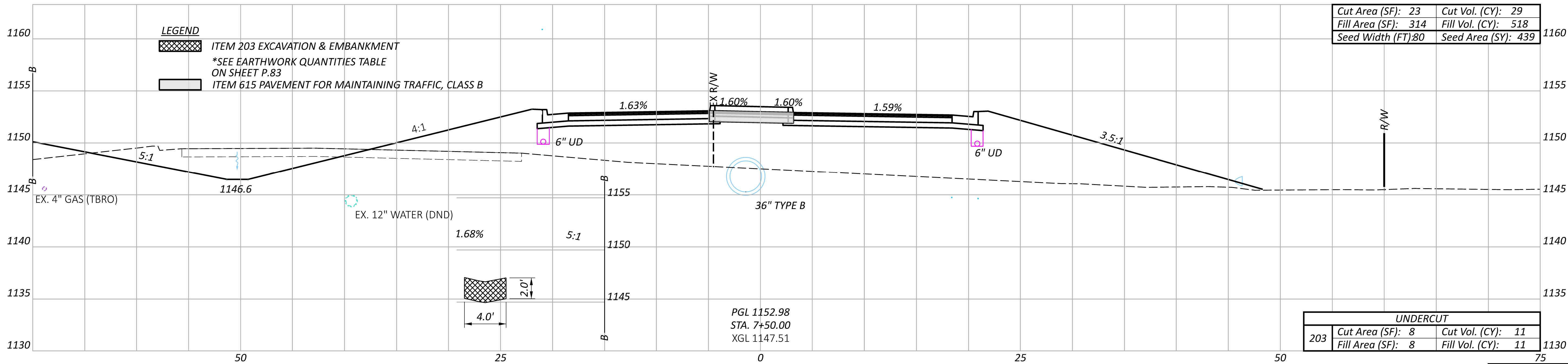
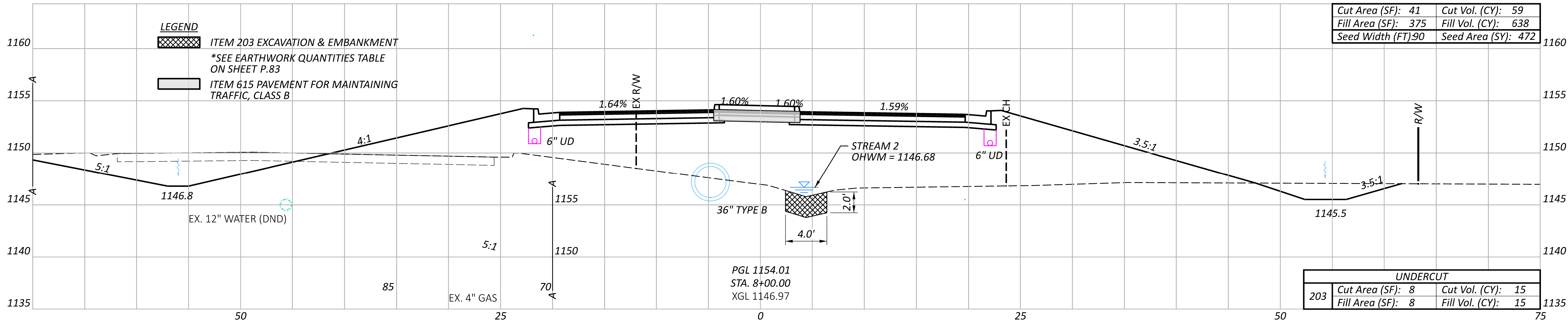
Sheet Totals		
Seeding	Cut	Fill
145	193	182



CROSS SECTIONS - NEW ROAD
STA. 6+00.00 TO STA. 7+00.00



DESIGN AGENCY	JMT
DESIGNER	KES
REVIEWER	BD
PROJECT ID	120083
SHEET	P.117
TOTAL	182



Sheet Totals		
Seeding	Cut	Fill
911	88	1156

CROSS SECTIONS - NEW ROAD
STA. 7+50.00 TO STA. 8+00.00

DESIGN AGENCY


4215 North Ave Suite K-230
Columbus, OH 43219

DESIGNER

KES

REVIEWER

BD 02/27/26

PROJECT ID

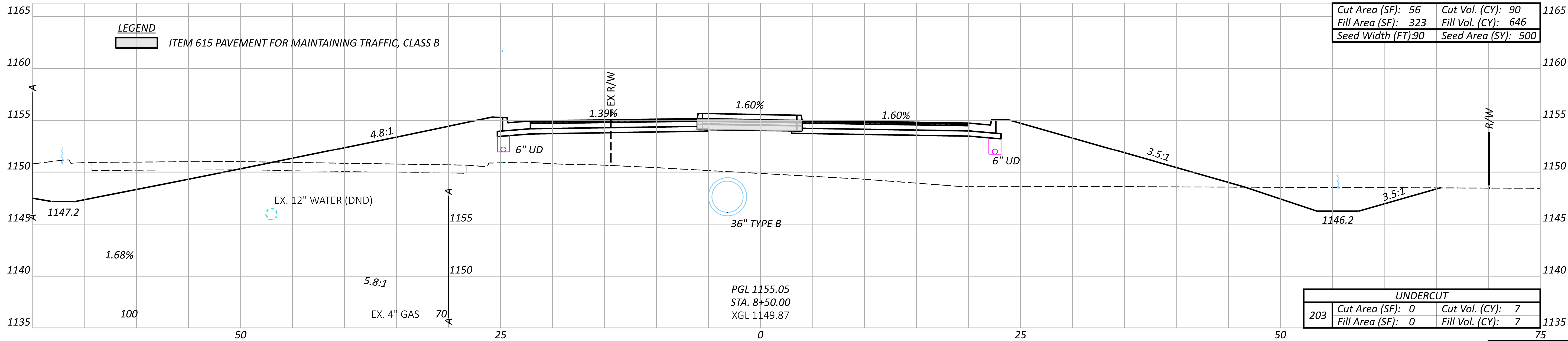
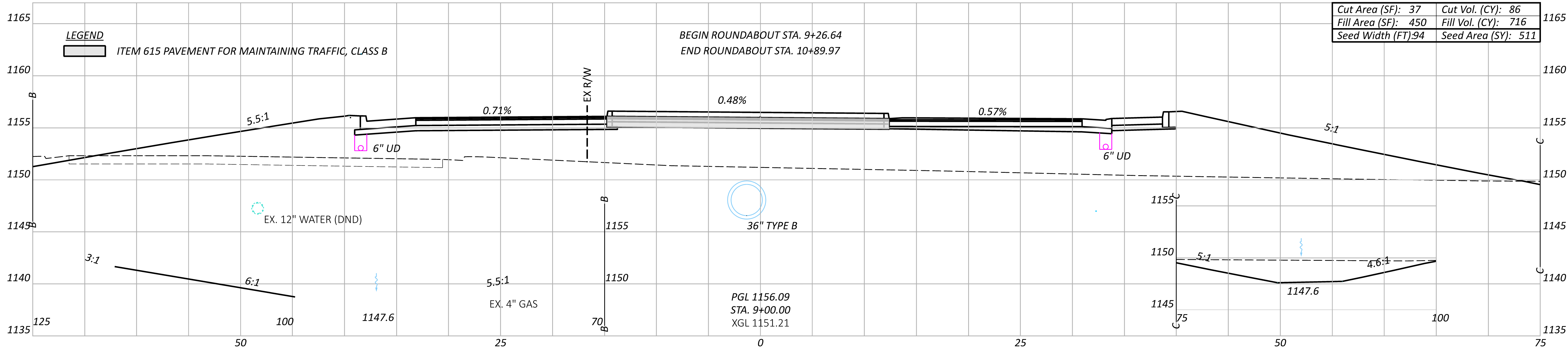
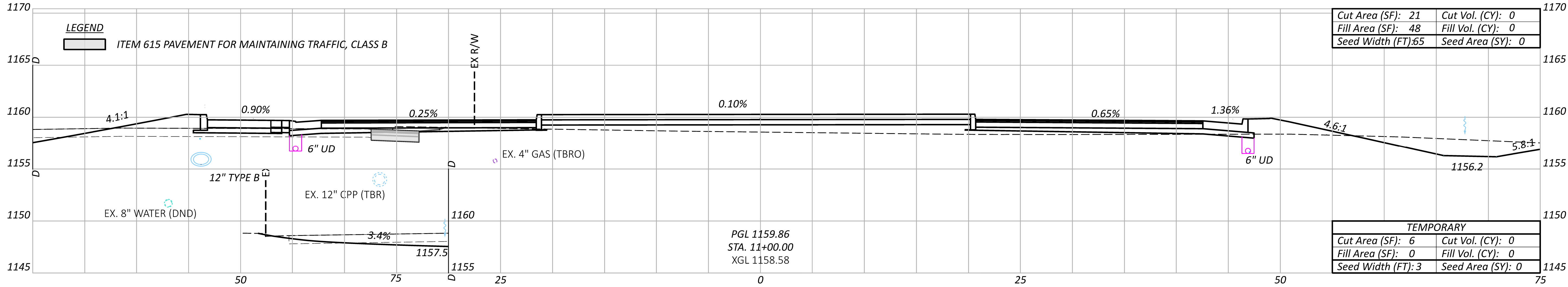
120083

SHEET

P.118

TOTAL

182



Sheet Totals			SHEET	TOTAL
Seeding	Cut	Fill		
1011	176	1362	P.119	182

CROSS SECTIONS - NEW ROAD
STA. 8+50.00 TO STA. 11+00.00

DESIGN AGENCY

JMT

4215 North Ave Suite K-230
Columbus, OH 43219

DESIGNER

KES

REVIEWER

BD 02/27/26

PROJECT ID

120083



**US Army Corps of Engineers
Huntington District**

Permit Number: 2026-00439-MAH

Name of Permittee: Ohio Department of Transportation

Date of Issuance: August 28, 2026

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

U.S. Army Corps of Engineers - Huntington District
502 Eighth Street
Huntington, West Virginia 25701-2070

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

Date